# DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI



### TITLE OF THE JOB

RE-TENDER
CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY
FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI
REF NO: DUHS/W&S/2020/065

NIT # DUHS/W&S/2020/160 DATED: AUGUST 18, 2020

OFFICE OF PROJECT DIRECTOR WORKS & SERVICES
DOW UNIVERSITY OF HEALTH SCIENCES,
BABA-E-URDU ROAD, BESIDES CIVIL HOSPITAL, KARACHI
TEL / FAX # 021-99216065

E-MAIL: rahim.khan@duhs.edu.pk

# **INVITATION FOR BIDS**

# **RE-TENDER NOTICE**

#### No. DUHS/W&S/2020/160

Sealed tenders from interested Engineering Firm / Contractor having registration with Federal Board of Revenue (FBR), Income Tax Department, Sindh Revenue Service Board, Sales Tax and Pakistan Engineering Council (PEC) in appropriate category / code as per SPPRA rules for following work.

S. No.	NAME OF WORK	ESTIMATE COST	METHOD OF PROCUREMENT	COMPLETION PERIOD
1.	Construction of G+1 (4 Blocks) of ISOLATION FACILITY FOR COMBATING COVID-19 at Ojha Campus, DUHS, Karachi REF NO; DUHS/W&S/2020/065	Quoted Rate	Single Stage Single Envelope	04 Months

Tender Fee	Rs. 2,000/- (Rupees Two Thousand Only) Non-Refundable in shape of Pay Order / Demand Draft in favor of Dow University of Health Sciences, Karachi.		
Bid Security		2% of the Total Bid Value.	
Purchasing Date & Time		19-08-2020 to 05-09-2020 (11:00 a.m to 02 p.m)	
Bids Delivery & Opening Date & Time		07-09-2020 at 11:00 a.m & 11:30 a.m	

Detailed Specification are mentioned in the prescribed tender documents alongwith terms and conditions. Bidding documents can be obtained from the Office of the Project Director, Works & Services, 5th Floor, Administration Block, Dow University of Health Sciences, Karachi and download from SPPRA website or Dow University of Health Sciences, website. Conditional Bids, Telegraphic Bids, Bids not accompanied by Bid Security of required amount and form, bids received after specific date and time and bids of Black Listed firms will be rejected. In case of any unforeseen situation or government holiday resulting in closure of office on the date of opening, bids shall be submitted / opened on next working day at the given time.

The Dow University of Health Sciences, Karachi (DUHS) reserves the right to reject any or all the bids subject to the relevant provisions of SPP Rules 2010 (Amended upto date).

### PROJECT DIRECTOR

Works & Services Department, Dow University of Health Sciences, Karachi www.duhs.edu.pk

Dated: August 18, 2020

Rabe e-Urdu Road, Karachi - 74200 Pakistan, Tel: 021-99216065 Fax: 021-99216065



# INSTRUCTIONS TO BIDDERS

### INSTRUCTION TO BIDDERS

#### A. GENERAL

#### IB.1 Scope of Bid

1.1 The Employer as defined below hereinafter called "the Employer" wishes to receive bids for the construction and completion works as described below and summarized referred to as the "Works".

Name and Address of the Employer:

# The Employer is "DOW UNIVERSITY OF HEALTH SCIENCES, BABA-E-URDU ROAD, BESIDES CIVIL HOSPITAL, KARACHI,"

Phone: (9221) 9921-6065-68 Fax No. (9221) 9921-6065

Name of the Project & Summary of the Works:

# "CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI"

The work involves Construction of Civil, Electrical, and Plumbing and allied Works in accordance with the design, Drawings, Technical Specifications, Bill of Quantities and Instructions of the Client/ Consultant with special emphasis on Quantity and Quality control ethics.

1.2 The successful bidder will be expected to complete the works within the time specified in Appendix-A to Bid.

#### **IB.2** Source of Funds

2.1 The Employer has arranged funds from University Development Working Party (UDWP) and it is intended that part of the proceeds of this will be applied to eligible payments under the Contract for which these Bidding Documents are issued.

#### **IB.3** Eligible Bidders

- 3.1 This invitation for Bids is open to all Bidders meeting the following requirements:
  - a. Duly licensed by the Pakistan Engineering Council (PEC) in appropriate category / code and their license should be valid for the current calendar year.
  - b. Technically and Financially capable firm having adequate managerial capacity.
  - c. Valid Registration with FBR, SRB and NTN.

#### IB.4 One Bid per Bidder

4.1 Each bidder shall submit only one bid either by himself, or as a partner in a joint venture. A bidder who submits or participates in more than one bid (other than alternatives pursuant to Clause IB.16) will be disqualified.

#### **IB.5** Cost of Bidding

5.1 The bidders shall bear all costs associated with the preparation and submission of their respective bids 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.7** Contents of Bidding Documents

- 7.1 The Bidding Documents, in addition to invitation for bids, are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9.
  - 1. Instructions to Bidders.
  - 2. Bidding Data.
  - 3. General Conditions of Contract, Part-I (GCC).
  - 4. Particular Conditions of Contract, Part-II (PCC).
  - 5. Specifications Special Provisions.
  - 6. Specifications Technical Provisions.
  - 7. Form of Bid & Appendices to Bid.
  - 8. Bill of Quantities (Appendix-D to Bid).
  - 9. Form of Bid Security.
  - 10. Form of Contract Agreement.
  - 11. Forms of Performance Security and Mobilization Advance Guarantee/Bond.
  - 12. Drawings.
- The bidders are expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the Bidder's own risk. Pursuant to Clause IB.26, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

#### **IB.8 Clarification of Bidding Documents**

8.1 Any prospective bidder requiring any clarification (s) in respect of the Bidding Documents may notify the Employer in writing at the Employer's address indicated in the Invitation for Bids. The Employer will respond to any request for clarification which he receives earlier than (07) Seven days prior to the deadline for submission of bids.

Copies of the Employer's response will be forwarded to all purchasers of the Bidding Documents, including a description of the enquiry but without identifying its source.

#### **IB.9** Amendment of Bidding Documents

- 9.1 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.
- Any addendum thus issued shall be part of the Bidding Documents pursuant to Sub- Clause 7.1 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.
- 9.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend the deadline for submission of bids in accordance with Clause IB.20

#### C. PREPARATION OF BIDS

#### **IB.10** Language of Bid

10.1 The bid and all correspondence and documents related to the bid exchanged by a bidder and the Employer shall be in the bid language stipulated in the Bidding Data (English) and Particular Conditions of Contract. Supporting documents and printed literature furnished by the bidders may be in any other language provided the same are accompanied by an accurate translation of the relevant parts in the bid language, in which case, for purposes of evaluation of the bid, the translation in bid language shall prevail.

#### 11.1 Each bidder shall:

- (a) submit a written power of attorney authorizing the signatory of the bid to act for and on behalf of the bidder;
- (b) update the information indicated and listed in the Bidding Data and previously submitted with the application for prequalification, and continue to meet the minimum criteria set out in the prequalification documents which as a minimum, would include the following:
  - (i) Evidence of access to financial resources along with average annual construction turnover:
  - (ii) Financial predictions for the current year and the two following years including the effect of known commitments;
  - (iii) Work commitments since prequalification;
  - (iv) Current litigation information; and
  - (v) Availability of critical equipment.
- (c) furnish a technical proposal taking into account the various Appendices to Bid specially the following:

Appendix-E to Bid Proposed Construction Schedule Appendix-F to Bid Method of Performing the Work Appendix-G to Bid List of Major Equipment Appendix-K to Bid Organization Chart for Supervisory Staff and other pertinent information such as mobilization programme etc.

- Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements:
  - (a) the bid and in case of a successful bid, the Form of Contract Agreement shall be signed so as to be legally binding on all partners;
  - (b) one of the joint venture partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the joint venture partners;
  - (c) the partner-in-charge shall always be duly authorized to deal with the Employer regarding all matters related with and/or incidental to the execution of Works as per the terms and Conditions of Contract and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the joint venture;
  - (d) all partners of the joint venture shall at all times and under all circumstances be liable jointly and severally for the execution of the Contract in accordance with the Contract terms and a statement to this effect shall be included in the authorization mentioned under Sub-Para(b) above as well as in the Form of Bid and in the Form of Contract Agreement (in case of a successful bid); and
  - (e) a copy of the agreement entered into by the joint venture partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the Contract and can give valid receipts on behalf of the joint venture, the proportionate participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. No amendments / modifications whatsoever in the joint venture agreement shall be agreed to between the joint venture partner without prior written consent of the Employer.
- Bidders shall also submit proposals of work methods and schedule, in sufficient detail to demonstrate the adequacy of the Bidders' proposals to meet the technical specifications and the completion time referred to in Sub-Clause 1.2 hereof.

#### **IB.12 Bid Prices**

Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole of the Works as described in Sub-Clause 1.1 hereof, based on the unit rates and / or prices submitted by the bidder.

- The bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a bidder will not be paid for by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.
- All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 days prior to the deadline for submission of bids shall be included in the rates and prices and the total Bid Price submitted by a bidder.

Additional / reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be reimbursed / deducted as per Sub-Clause 70.2 of the General Conditions of Contract Part-I.

- General Condition refer to page # 19-A
- The rates and prices quoted by the bidders are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 70 of the Conditions of Contract. The bidders shall furnish the prescribed information for the price adjustment formulae in Appendix-C to Bid, and shall submit with their bids such other supporting information as required under the said Clause.

#### **IB.13** Currencies of Bid and Payment

13.1 The unit rates and the prices shall be quoted by the bidder entirely in Pak rupees. The Employer shall make payment only in Pak Rupees and no foreign currency payments are admissible. A bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country shall bear all the costs and risks for arranging the requirements of such currencies through his own resources.

#### **IB.14 Bid Validity**

- 14.1 Bids shall remain valid for the **90 Days** after the Date of Bid Opening specified in Clause IB.23.
- In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period which shall in no case be more than the original bid validity period. The request and the responses thereto shall be made in writing. A bidder may refuse the request without forfeiting his Bid Security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause IB.15 in all respects.

#### **IB.15 Bid Security**

- Each bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in the Bidding Data in Pak Rupees (2% of Bid Price in the form of Pay Order/ Bank Draft).
- 15.2 The Pay order shall be, at the option of the bidder, in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan or from a foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan in favor of the Employer valid for a period 28 days beyond the Bid Validity date.
- 15.3 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.
- The bid securities of unsuccessful bidders will be returned as promptly as possible, but not later than 28 days after the expiration of the period of Bid Validity.
- 15.5 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security and signed the Contract Agreement.
- 15.6 The Bid Security may be forfeited:

- (a) if the bidder withdraws his bid except as provided in Sub-Clause 22.1;
- (b) if the bidder does not accept the correction of his Bid Price pursuant to Sub-Clause 27.2 hereof; or
- (c) In the case of successful bidder, if he fails within the specified time limit to:
  - (i) furnish the required Performance Security; or
  - (ii) sign the Contract Agreement.

#### **IB.16** Alternate Proposals by Bidder

Alternate Proposals by bidder are not invited. Bidder will only quote for the drawings and Design as provided in the Bidding Documents

#### **IB.17 ERRORS, OMISSIONS & QUERIES:**

- 17.2 (a) The bidder shall notify "the Employer" of any inconsistencies, errors and omissions found in the Bid Documents, prior to the Bid Opening Date. Withholding of any such information which will later materially affect the contract price during construction may be considered as sufficient grounds for rejection of the Bid. All queries shall be directed to the Project Director, CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI.
- 17.2 (b) The DUHS, Karachi is not responsible for any verbal communications or instructions to the bidders or Acceptable of the Bid Documents.

#### **IB.18** Format and Signing of Bid

- 18.1 Bidders are particularly directed that the amount entered on the Form of Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.
- All appendices to Bid are to be properly completed and signed and stamped.
- No alteration is to be made in the Form of Bid nor in the Appendices thereto except in filling up the blanks as directed. If any such alterations be made or if these instructions be not fully complied with, the bid may be rejected.
- 18.4 Each bidder shall prepare by filling out the forms completely and without alterations one (1) original and two copies, specified in the Bidding Data, of the documents comprising the bid as described in Clause IB.7 and clearly mark them "ORIGINAL" and 'COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.
- The original and all copies of the bid shall be typed or written in indelible ink (in the case of copies, Photostats are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the bidder pursuant to Sub- Clause 11.1(a) hereof. All pages of the bid shall be initialed and stamped by the person or persons signing the bid.
- The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the Employer, or as are necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.
- Bidders shall indicate in the space provided in the Form of Bid their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent. Bids shall be prepared and submitted on the form of "the Bid "provided. All blank spaces must be filled in and completed form must be without interlineations or literation of the original wording. Bids with incomplete and /or unsigned Form of Bid may be rejected/ considered Non Responsive. The bidder shall stamp and sign each page of Bid Documents for the purpose of identification and acknowledgement of acceptance thereof. The bids must Conform in all respects to the Bid Documents.
- 188 Bidders should retain a copy of the Bidding Documents as their file copy.

#### D. SUBMISSION OF BIDS IB.19

#### Sealing and Marking of Bids

- 19.1 Each bidder shall submit his bid as under:
  - (a) ORIGINAL and each copy of the Bid shall be separately sealed and put in separate envelopes and marked as such.
  - (b) The envelopes containing the ORIGINAL and copies will be put in one sealed envelope and addressed / identified as given in Sub- Clause 19.2 hereof.
- 19.2 The inner and outer envelopes shall:
  - (a) be addressed to the PROJECT DIRECTOR (W&S) DUHS, KARACHI PHONE: (92-21)9921-6065
  - (b) bear the name and identification number of the contract as defined in the Bidding Data; and "CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI"
  - (c) provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data.
- In addition to the identification required in Sub- Clause 19.2 hereof, the inner envelope shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared "late" pursuant to Clause IB.21

#### 19.4 Single Stage- One Envelope Procedure

- a) Notice inviting tenders and bidding documents of this method shall contain the following eligibility criteria:
  - i. Relevant experience;
  - ii. Turn-over of at least three years;
  - iii. Registration with Income Tax, Sales Tax, SRB and Pakistan Engineering Council (where applicable);
  - iv. Any other factor deemed to be relevant by the procuring agency subject to provision of Rule 44;
- b) Each bid shall comprise one single envelope containing the financial proposal and required information mentioned at clause (a) above;
- c) All bids received shall be opened and evaluated in the manner prescribed in the Notice Inviting Tenders or bidding Document

#### **IB.20 Deadline for Submission of Bids**

- 20.1 (a) Bids must be received by the Employer at the address specified no later than the time and date stipulated in the Bidding Data.
  - (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of bids. No claims will be entertained for refund of such expenses.
  - (c) Where delivery of a bid is by mail and the bidder wishes to receive an acknowledgment of receipt of such bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed bid package.
  - (d) Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by messenger.
- The Employer may, at his discretion, extend the deadline for submission of bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

#### **IB.21 Late Bids**

21.1 (a) Any bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.20 will be returned unopened to such bidder.

(b) Delays in the mail, delays of person in transit, or delivery of a bid to the wrong office shall not be accepted as an excuse for failure to deliver a bid at the proper place and time. It shall be the bidder's responsibility to determine the manner in which timely delivery of his bid will be accomplished either in person, by messenger or by mail.

#### IB.22 Modification, Substitution and Withdrawal of Bids

- 22.1 Any bidder may modify, substitute or withdraw his bid after bid submission provided that the modification, substitution or written notice of withdrawal is received by the Employer prior to the deadline for submission of bids.
- The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 22.3 No bid may be modified by a bidder after the deadline for submission of bids except in accordance with Sub-Clauses 22.1 and 27.2.
- 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 in pursuance to Clause IB.15.

#### E. BID OPENING AND

#### **EVALUATION IB.23 Bid Opening**

- 23.1 The Employer will open the bids, including withdrawals, substitution and modifications made pursuant to Clause IB.22, in the presence of bidders' representatives who choose to attend, at the time, date and location stipulated in the Bidding Data. The bidders' representatives who are present shall sign a register evidencing their attendance.
- 23.2 Envelopes marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause IB.22 shall not be opened.
- 23.3 The bidder's name, total Bid Price and price of any Alternate Proposal(s), any discounts, bid modifications, substitution and withdrawals, the presence or absence of Bid Security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening of bids.
- The Consultant on behalf of Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with the Sub-Clause 23.3.

#### **IB.24 Process to be Confidential**

24.1 Information relating to the examination, clarification, evaluation and comparison of bid and recommendations for the award of a contract shall not be disclosed to bidders or any other person not officially concerned with such process Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of such bidder's bid

#### **IB.25** Clarification of Bids

25.1 To assist in the examination, evaluation and comparison of bids, the Employer may, at his discretion, ask any bidder for clarification of his bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause IB.28.

#### IB.26 Examination of Bids and Determination of Responsiveness

- 26.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid is substantially responsive to the requirements of the Bidding Documents.
- 26.2 A substantially responsive bid is one which (i) meets the eligibility criteria;
  - (ii) has been properly signed; (iii) is accompanied by the required Bid Security; and (iv) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; or (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- 26.3 If a bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

#### **IB.27 Correction of Errors**

- 27.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
  - (a) where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
  - (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.
- The amount stated in the Form of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and with the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected Bid Price, his Bid will be rejected, and the Bid Security shall be forfeited in accordance with Sub- Clause 15.6(b) hereof.

#### **IB.28** Evaluation and Comparison of Bids

- 28.1 The Consultant on behalf of Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause IB.26.
- 28.2 In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
  - (a) making any correction for errors pursuant to Clause IB.27;
  - (b) excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including competitively priced Day work; and
  - (c) making an appropriate adjustment for any other acceptable variation or deviation.
- 28.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.
- 28.4 If the Bid of the successful bidder is seriously unbalanced in relation to the Employer's estimate of the cost of work to be performed under the Contract, the Employer may require the bidder to produce detailed price analyses for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After

evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in Clause IB.32 be increased at the expense of the successful bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the Contract.

A bid with highly inflated or unworkable rates of any BOQ items may be considered nonconforming and rejected. The Employer may also disqualify such bidder from participating in the subsequent bids who submits such unbalanced and/or unworkable rates of major items of work.

#### F. AWARD OF CONTRACT

#### IB.29 Award

- **29.1** Subject to Clauses IB.30 and IB.34, 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 eligible in accordance with the provisions of Clause IB.3 and qualify pursuant to Sub-Clause IB 29.2.
- 29.2 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 therefor in writing. They shall form part of the records of that bid evaluation report.

#### IB.30 Employer's Right to Accept any Bid and to Reject any or all Bids

- 30.1 Notwithstanding Clause IB.29, 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 except that the grounds for rejection of all bids shall upon request be communicated to any bidder who submitted a bid, without justification of grounds. Rejection of all bids shall be notified to all bidders promptly.
- 30.2 DUHS reserves the right to add or absolute any BOQ item as required of project.

#### **IB.31 Notification of Award**

- 31.1 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. This letter shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Contract Price").
- No Negotiation with the bidder having evaluated as lowest responsive or any other bidder shall be permitted, however, Employer may have clarification meetings to get clarify any item in the bid evaluation report.
- 31.3 The notification of award and its acceptance by the bidder will constitute the formation of the Contract, binding the Employer and the bidder till signing of the formal Contract Agreement.
- 31.3 Upon furnishing by the successful bidder of a Performance Security, the Employer will promptly notify the other bidders that their Bids have been unsuccessful and return their bid securities.

#### **IB.32 Performance Security**

32.1 The performance security shall be equal to an amount of 10% of the contract Price stated in the Letter of Acceptance. Such Security shall be in the Form of unconditional, irrevocable Bank Guarantee from any scheduled Bank of Pakistan acceptable to the Employer in favor of Dow

University of Health Sciences, Karachi or an insurance company having at least AA rating from PACRA/JCR. The performance security will be valid for a period (up to the completion of the Project) after the date of issue of Defect Liability Certificate.

.32.2 Failure of the successful bidder to comply with the requirements of Sub-Clause IB.32.1 or Clauses IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

#### **IB.33 Signing of Contract Agreement**

- Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send the successful bidder the Contract Agreement in the form provided in the Bidding Documents, incorporating all agreements between the parties.
- The formal Agreement between the Employer and the successful bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful bidder from the Employer.

#### **IB.34** General Performance of the Bidders

The Employer reserves the right to obtain information regarding performance of the bidders on their previously awarded contracts/works. The Employer may in case of consistent poor performance of any Bidder as reported by the employers of the previously awarded contracts, interiliac, reject his bid and/or refer the case to the Pakistan Engineering Council (PEC). Upon such reference, PEC in accordance with its rules, procedures and relevant laws of the land take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for similar works.

#### **IB.35 Integrity Pact**

The Bidder shall sign and stamp the Integrity Pact provided at Appendix-L to Bid in the Bidding Documents for all Federal Government procurement contracts exceeding Rupees ten million. Failure to provide such Integrity Pact shall make the bidder non-responsive.

#### **IB.36 Instructions not Part of Contract**

Bids shall be prepared and submitted in accordance with these Instructions which are provided to assist bidders in preparing their bids, and do not constitute part of the Bid or the Contract Documents.

## BIDDING DATA

#### [NOTES ON BIDDING DATA]

This Section is intended to assist the Employer in providing the specific information in relation to corresponding clauses in Instructions to Bidders and should be prepared to suit each individual contract.

The Employer should provide in the Bidding Data information and requirements specific to the circumstances of the Employer, the processing of the Bid, the applicable rules regarding Bid Price and currency, and the Bid evaluation criteria that will apply to the Bids. In preparing this section, the following aspects should be checked:

- (a) Information that specifies and complements the provisions of section; Instruction to Bidders must be incorporated.
- (b) Amendments and/or supplements, if any, to the provisions of Instructions to Bidders, necessitated by the circumstances of each individual contract, can be introduced only in this section since Instructions to Bidders will remain unchanged.]

#### **Bidding Data**

#### 1.1 Name and address of the Employer:

The Employer is Dow University of Health Sciences, Karachi Phone / Fax: (9221) 9921-6065

#### Name of the Project & Summary of the Works:

CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI

The work involves CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI execution of Civil, Electrical, Plumbing and allied Works in accordance with the design, Drawings, Technical Specifications, Bill of Quantities and Instructions of the Client/ Consultant with special emphasis on Quantity and Quality control ethics.

#### **IB.2** Source of Funds:

The Employer has arranged funds from University Development Working Party (UDWP) and it is intended that part of the proceeds of this will be applied to eligible payments under the Contract for which these Bidding Documents are issued.

#### **IB.3** Eligible Bidders

As notified in NIT

#### **IB.8.1** Time limit for clarification:

The Employer will respond to any request for clarification which he receives earlier than (07) Seven Days prior to the deadline for submission of bids

#### IB.10 Bid language:

The bid and all correspondence and documents related to the bid exchanged by a bidder and the Employer shall be in the English Language.

#### IB.11.1(c) Furnish Technical Proposal:

The bidder to submit a technical proposal in sufficient detail to demonstrate the adequacy of the bid in meeting requirements for timely completion of the Works and taking into account the various appendices to Bid specified into instructions to Bidder.

#### IB.13.1 Currencies of Bid and Payment

The unit rates and the prices shall be quoted by the bidder entirely in Pak rupees. The Employer shall make payment only in Pak Rupees and no foreign currency payments are admissible. A bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country shall bear all the costs and risks for arranging the requirements of such currencies through his own resources.

#### **IB.14.1** Period of Bid Validity:

Bids shall remain valid for the 90 Days after the date of bid opening.

#### **IB.15.1** Amount of Bid Security:

Minimum 2% of Bid Price in the form of Pay Order/ Bank Draft

#### **IB.18.4** Number of copies of the Bid to be completed and submitted: One (1)

original and two copies.

#### **IB.19 Sealing and Marking of Bids**

#### 19.2(a) Employer's address for the purpose of Bid Submission

The Project Director (W&S) at DUHS, Karachi; Phone/Fax: (92-21) 9921-6065

#### 19.2 (a) (b) Name and number of the Contract

bear the contract name "CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI".

#### **IB. 20.1(a)** Deadline for submission of bids:

As notified in "Invitation to Bids"

#### IB. 23.1 Venue, Time and Date of Bid opening:

As notified in "Invitation to Bids"

#### I.B.32.1 Standard form and amount of Performance Security acceptable to the Employer:

The performance security shall be equal to an amount of 10% of the contract Price stated in the Letter of Acceptance. Such Security shall be in the Form of unconditional, irrevocable Bank Guarantee from any scheduled Bank of Pakistan acceptable to the Employer in favor of Dow University of Health Sciences, Karachi or an insurance company having at least AA rating from PACRA/JCR. The performance security will be valid for a period (up to the completion of the Project) after the date of issue of Defect Liability Certificate.

#### **CONTRACT/BIDDING DATA**

The following specific data for the works to be tendered shall complement, amend, or supplement the provisions in the Instructions to Bidders. Wherever there is a conflict, the provisions herein shall prevail over those in the Instructions to Bidders.

Instructions to Bidders

Clause Reference

1.1.1 Name and address of the procuring agency:

Project Director (W&S), DUHS, Karachi Phone: (92-21)9921-6065

1.2 Name of the Project and Summary of the works:

"CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI".

2.1 Amount and Type of Financing/Scheme Cost and Allocated Funds.

**Approximate PKR 370 Million** 

8.1 Time limit for clarification:

3 working days prior to last date of submission

10.1 Bid language:

**English** 

11.1 (a) Pregualification Information to be updated (where applicable):

Not applicable

11.1 (b) Furnish Company Profile for Single Stage One Envelope:

#### Following are minimum Mandatory requirement

- The bidder has successfully completed as main CONTRACTOR at least three contracts of the scope of work and complexity comparable to the proposed contract, in PUBLIC / LARGE PRIVATE SECTOR ORGANIZATIONS, over a five-year period ending on the deadline for bid submission (Please submit copy of Notification of Award and Contract Agreement and Completion Certificate).
- ii. Average Annual Turnover during the last three financial years of the bidder as on closing of last fiscal year should not be less than Rs.300 million and same shall be reflected in the Audited Accounts or Income Tax Returns or Original Turn-over Certificate issued by any Schedule Bank of Pakistan.
- iii. Bidder must submit undertaking on 100/- legal stamp paper confirming he is not declared black listed by any procuring agency of Pakistan if proved blacklisted his bid security shall be forfeited.
- iv. Bidder must be available on 'List of Active Tax Payers' of FBR (for Income Tax and GST) and SRB (For Sales Tax) websites.
- v. PEC Registration in at least category C3 with the following codes CE09 CE10 EE02 EE04 ME02.
- vi. The bidder may apply one or more buildings.
- 32.3 Stamp duty

0.35% will be paid by successful bidder as stamp duty.

# FORM OF BID AND APPENDICES TO BID

### FORM OF BID

Bid R	leference No		
To:	(Name of Contract/Works)		
Gentl	em <del>an,</del>		
1.	Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditio of Contract. Specifications, Drawings and Bill of Quantities and Addenda Nosfor the execution of the above-named Works, we, the undersigned, offer to execute and complete such Works and remeating defects therein in conformity with the Conditions of Contract. Specifications, Drawings, Bill Quantities and Addenda for the sum of Rs(Rupees) or such other sum as may be ascertained in accordance with the said conditions.		
2.	We understand that all the Appendices attached hereto form part of this Bid.		
	we understand that an the Appendices attached hereto form part of this Bid.		
3.	As security for due performance of the undertakings and obligations of this Bid, we submit herewith Bid Security in the amount of Rupees		
	(Rs) drawn in your favor or made payable to you and valid for a period of days beginning from the date Bids are opened.		
4.	We undertake, if our Bid is accepted, to commence the Works and to complete the whole of the Work comprised in the Contract within the time stated in Appendix-A to Bid.		
5.	We agree to abide by this Bid for the period ofdays 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 writte acceptance thereof, shall constitute a binding contract between us.		
7.	We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.		
8.	We understand that you are not bound to accept the lowest or any Bid you may receive.		
	Dated thisday of20		
	Signature:		
	in the capacity ofduly authorized to sign Bids for and on behalf of		
	(Name of		
	Bidder in Block Capitals) (Seal)		
	Address:		
	Witness:		

lignature: Name:			
vame.			
Address.			
Occupation			

# SPECIAL STIPULATIONS CLAUSE CONDITIONS OF CONTRACT

	T	ı	-
1.	Engineer's Authority to issue Variation in emergency	2.1	The variation amount shall not exceed overall 2% of the Contract Price during the currency of the Contract
2.	Amount of Performance Security	10.1	10% of Contract Price stated in the Letter of Acceptance in the form of bank guarantee issued by a Scheduled Bank of Pakistan or Insurance companies having at least AA Rating from PACRA/ JCR
3.	Time for Furnishing Programme	14.1	Within 7 days from the date of receipt of Letter of Acceptance.
4.	Minimum amount of Third Party Insurance	23.2	Rs. 500,000 per occurrence with number of occurrences unlimited.
5.	Time for Commencement	41.1	Within 14 days from the date of receipt of Engineer's Notice to Commence.
6.	Time for Completion	43.1, 48.2	02 months from the date of receipt of Engineer's Notice to Commence.
7.	Amount of Liquidated Damages	47.1	One tenth of one percent (0.10%) for each day of delay in completion of the Works subject to a maximum of 10% of Contract Price stated in the Letter of Acceptance.
8.	Defects Liability Period	49.1	180 days from the effective date of Taking Over Certificate.
9.	Percentage of Retention Money	60.2	5 % of the amount of Interim Payment Certificate.
10.	Limit of Retention Money	60.2	10 % of Contract Price stated in the Letter of Acceptance.
11.	Minimum amount of Interim Payment Certificates (Running Bills)	60.2	Rs. (05) Five Million
12	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	60.10	(28) Twenty Eight days(No interest shall be paid in case of any delay in payment).
13	Mobilization Advance * (Interest Free)	60.12	10 % of Contract Price stated in the Letter of Acceptance against unconditional and irrevocable bank guarantee from a scheduled bank of Pakistan

# PRICE ADJUSTMENT UNDER CLAUSE 70 OF CONDITIONS OF CONTRACT

The source of indices and the weightages or coefficients for use in the adjustment formula under Clause 70 shall be as follows:

(To be filled by the Employer)

Description	Weightages	Applicable index
2	3	4
Fixed Portion	0.60	
Local Labor	0.12	Government of Pakistan (GP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
Cement – in bags	0.06	
Reinforcing Steel	0.20	" "
High Speed Diesel (HSD)	0.02	" "
		٠٠
Total	1,000	
	Fixed Portion Local Labor  Cement – in bags Reinforcing Steel	2 3  Fixed Portion 0.60  Local Labor 0.12  Cement – in bags 0.06  Reinforcing Steel 0.20  High Speed Diesel (HSD) 0.02

#### **Notes:**

- Indices for "(ii)" to "(vii)" are taken from the Government of Pakistan Federal Bureau of Statistics, Monthly Statistical Bulletin. The base cost indices or prices shall be those applying 28 days prior to the latest day for submission of bids. Current indices or prices shall be those applying 28 days prior to the last day of the billing period.
- 2) Any fluctuation in the indices or prices of materials other than those given above shall not be subject to adjustment of the Contract Price.
- Fixed portion shown here is for typical road project, Employer to determine the weightage of Fixed Portion considering only those cost elements having cost impact of seven (7) percent or more on his specific project.

(Employers using this price adjustment provisions may add or delete any elements as deemed appropriate to the project.)

#### **BILL OF QUANTITIES**

#### A. Preamble

- 1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
- 2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices entered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix as per the Contract.
- 3. The rates and prices entered in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract include all costs of Contractor's plant, labor, supervision, materials, execution, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract. Furthermore, all duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 days prior to deadline for submission of Bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.
- 4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
- 5. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, 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.
- 6. General directions and description of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Bidding Documents shall be made before entering prices against each item in the priced Bill of Quantities.
- 7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clause 58.2 of Part I, General Conditions of Contract.

#### PROPOSED CONSTRUCTION SCHEDULE

Pursuant to Sub-Clause 43.1 of the General Conditions of Contract, the Works shall be completed on or before the date stated in Appendix-A to Bid. The Bidder shall provide as Appendix-E to Bid, the Construction Schedule in the bar chart (CPM, PERT or any other to be specified herein) showing the sequence of work items and the period of time during which he proposes to complete each work item in such a manner that his proposed programme for completion of the whole of the Works and parts of the Works may meet Employer's completion targets in days noted below and counted from the date of receipt of Engineer's Notice to Commence (Attach sheets as required for the specified form of Construction Schedule):

	<u>Description</u>	Time for Completion
a)	Whole Works	days
b)	Part-A (Structural Work Civil)	days
c)	Part-B (Electrical Work)	days
d)	Part-C (Plumbing Work)	days
e)	Part-D (Finishing Work Civil, Electrical & Plumbing Works	days

#### METHOD OF PERFORMING THE WORK

[The Bidder is required to submit a narrative outlining the method of performing the Work. The narrative should indicate in detail and include but not be limited to:

- 1. Organization Chart indicating head office and field office personnel involved in management and supervision, engineering, equipment maintenance and purchasing.
- 2. Mobilization in Pakistan, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for storage, communications, security and other services to be used.
- 3. The method of executing the Works, the procedures for installation of equipment and machinery and transportation of equipment and materials to the site.]

### LIST OF MAJOR EQUIPMENT – RELATED ITEMS

[The Bidder will provide on Sheet 2 of this Appendix 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

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

#### CONSTRUCTION CAMP AND HOUSING FACILITIES

The Contractor in accordance with Clause 34 of the Conditions of Contract shall provide description of his construction camp's facilities and staff housing requirements.

The Contractor shall be responsible for pumps, electrical power, water and electrical distribution systems, and sewerage system including all fittings, pipes and other items necessary for servicing the Contractor's construction camp.

The Bidder shall list or explain his plans for providing these facilities for the service of the Contract as follows:

- 1. Site Preparation (clearing, land preparation, etc.).
- 2. Provision of Services.
  - a) Power (expected power load, etc.).
  - b) Water (required amount and system proposed).
  - c) Sanitation (sewage disposal system, etc.).
- 3. Construction of Facilities
  - a) Contractor's Office. Workshop and Work Areas (areas required and proposed layout, type of construction of buildings, etc.).
    - b) Warehouses and Storage Areas (area required, type of construction and layout).
    - c) Housing and Staff Facilities (Plans for housing for proposed staff, layout, type of construction, etc.).
- 4. Construction Equipment Assembly and Preparation (detailed plans for carrying out this activity).
- 5. Other Items Proposed (Security services, etc.)
- 6. The Contractor's responsibility to arrange the water for construction work or wherever water require for the execution of work. The client will not provide the water and contractor arrange outside from the university premises on his own basis. Before use water, contractor should submit the test report from PCSIR laboratory.
- 7. Contractor will arrange electricity source on its own basis or use an alternate of source of electricity (like Generator) or contractor can take temporary connection from university. Connection would be on sub meter. Contractor will liable to pay bill to university for the temporary connection.

### ESTIMATED PROGRESS PAYMENTS

Bidder's estimate of the value of work which would be executed by him during each of the periods stated below, based on his Programme of the Works and the Rates in the Bill of Quantities, expressed in thousands of Pakistani Rupees:

Quarter/ Year/ Period	Amounts (1000 Rs.)
1	2
1st Quarter	
2nd Quarter	
3rd Quarter	
4th Quarter	
5th Quarter	
6th Quarter	
Bid Price	

### BK-1 Appendix-K to Bid

### ORGANIZATION CHART FOR THE SUPERVISORY STAFF

# (INTEGRITY PACT) DECLARATION OF FEES, COMISSION AND BROKERAGE ETC. PAYABLE BY CONTRACTORS.

(FOR CONTRACTS WORTH RS. 20.00 MILLION OR MORE) Contract No. \_\_\_\_\_Dated \_\_\_\_\_ Contract Value: \_\_\_\_ Contract Title: (Name of Contractor) hereby declares that it has not obtained or induce the procurement of any contract, right, interest, privilege or other obligation or benefit from government of Sindh (GoS) or any administrative subdivision or agency thereof any other entity owned or controlled by it (GoS) through any corrupt business practice. Without limiting the generality of the foregoing (Name of contractor) 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 judicial 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 including the procurement of a contract, right, interest privilege or other obligation or benefits in whatsoever from, procuring agency (PA) except that has been expressly declared pursuant hereto. (Name of Contractor) accepts full responsibility and strict liability that it has made and will make full disclosure of all agreements and arrangements with all person in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty. (Name of Contractor) accepts full responsibilities and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of 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 rights and remedies available to PA under any law, contract or other instrument, be voidable at the option of PA. Notwithstanding any rights and remedies exercised by PA in this regards, (Name of supplier/Contractor/Consultant) agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by (name of contractor) as aforesaid for purpose of obtaining or including the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from PA.

(CONTRACTOR)

(PROCURING AGENCY)

### **FORMS**

BID SECURITY PERFORMANCE SECURITY CONTRACT AGREEMENT MOBILIZATION ADVANCE GUARANTEE/BOND

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

Security Executed on			
	(Date)		
Name of Surety (Bank) with Address:			
•	(Scheduled)	Bank in Pakista	n)
Name of Principal (Bidder) with Address			
Penal Sum of Security Rupees	(Rs		)
Bid Reference No.			
KNOW ALL MEN BY THESE PRESENTS said Principal (Bidder) we, the Surety above	named, are held and firmly bou	nd unto	
(hereinafter called the 'Employer') in the sur made, we bind ourselves, our heirs, executors presents.	1 0		•
THE CONDITION OF THIS OBLIGATION	IS SUCH, that whereas the Bic	lder has submitt	ted the accompanying
Bid dated	for Bid No	for	_ (Particulars of Bid)
to the said Employer; and			
WHEREAS the Employer has required as a	a condition for considering said	Rid that the R	idder furnishes a Rid

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 therefor, 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
[Letter by the Guarantor to the Employer]	Expiry date
Name of Guarantor (Bank) with address:	
	(Scheduled Bank in Pakistan)
Name of Principal (Contractor) with address:	
-	
Penal Sum of Security (express in words and figure	es)
• • •	
Letter of Acceptance No.	Dated
said Letter of Acceptance (hereinafter called the I Guarantor above named, are held and firmly bound Employer) in the penal sum of the amount stated at	n pursuance of the terms of the Bidding Documents and above Documents) and at the request of the said Principal we, the unto the
ž *	SUCH, that whereas the Principal has accepted  Letter of Acceptance for  ame of Contract) for the
(Na	me 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 defenses
under the Contract, do hereby irrevocably and in the Employer's first written demand without ca to show grounds or reasons for such demand Employer's written declaration that the Principal	adependently guarantee to pay to the Employer without delay upon avil or arguments and without requiring the Employer to prove or I any sum or sums up to the amount stated above, against the I has refused or failed to perform the obligations under the Contract or to Employer's designated Bank & Account Number.
(Contractor) has duly performed his obligations and the Guarantor shall pay without objection a	I be the sole and final judge for deciding whether the Principal s under the Contract or has defaulted in fulfilling said obligations any sum or sums up to the amount stated above upon first written out any reference to the Principal or any other person.
	Guarantor has executed this Instrument under its seal on the date the Guarantor being hereto affixed and these presents duly signed uthority of its governing body.
Witness:	Guarantor (Bank)
1	Signature
Corporate Secretary (Seal)	Name
, , , , , , , , , , , , , , , , , , , ,	Title
2	

Name, Title & Address

Corporate Guarantor (Seal)

#### FORM OF CONTRACT AGREEMENT

	11115	ONTRACT	day	of				20_	-	between
(hereaf	ter ca	alled the	"Empl	oyer")	of (here	the eafter calle	one	part Contracto	and or") of the	other part.
execute	d by the	Employer is a Contractor and emedying of an	d has accept	ted a Bid b						should be
NOW t	his Agree	ment witnesse	ed as follows	s:						
1.		Agreement word to them in the							respectiv	ely
2.		lowing documers shall be dec								g to Instructions , viz:
	(a)	The Contra	ct Agreeme	nt;						
	(b)	The Letter	of Acceptan	ice;						
	(c)	The comple	eted Form o	f Bid;						
	(d)	Special Stip	pulations (A	ppendix-A	to Bid	);				
	(e)	The Particu	ılar Conditio	ons of Cont	ract – l	Part II;				
	(f)	The Genera	al Condition	s – Part I;						
	(g)	The priced	Bill of Qua	ntities (App	endix-	D to Bid);				
	(h)	The comple	eted Append	lices to Bid	(B, C,	E to L);				
	(i)	The Drawin	ngs;							
	(j)	The Specifi	ications.							
	(k)	-				(any ot				

- 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	Signature of Employer	
(Seal)	(Seal)	
Signed, Sealed and Delivered in the presence of:		
Witness:	Witness:	
		_
(Name, Title and Address)	(Name, Title and Address)	

#### MOBILIZATION ADVANCE GUARANTEE/BOND

Guarantee No							
WHEREAS		(hereinafter called	I the 'Employer'	) has entered	into a Contra	act for _	
	(here	Particula (Particula einafter called the	rs of Contract) v "Contractor").	vith_			
AND WHEREAS, the of Rupees_		•				uest, an which	amount
of Rupeesshall be advanced to the	e Contractor a	s per provisions o	f the Contract.				
AND WHEREAS, the for the performance of				arantee to sec	cure the mobi	lization	advance
AND WHEREAS,							
	eduled Bank is ontractor and i	n Pakistan accepta n consideration of					
NOW, THEREFORE, of above mentioned Cothe advance payment aforementioned amount	ontract and if he is made, the	ne fails and commi	ts default in fulf	filment of any	y of his oblig	ations fo	or which
Notice in writing of a Contractor, shall be gimade by the Guaranto without any objection.	ven by the Em	ployer to the Guar	antor, and on su	ich first writt	en demand, p	ayment	shall be
This Guarantee shall rethe Interim	emain in force Payment	until the advance Certificates		he Con	nents from tractor	or	until
	(Date)						
The Guarantor's liabili	ty under this C	Suarantee shall not	•				
			(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. 2. 3.	Signature Name Title	
TNESS			
Corporate Secretary (Seal)			
(Name Title & Address)		Corporate Guaran	tor(Seal)

# **BILL OF QUANTITIES**

# "CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI".

# **GRAND ABSTRACT OF COST**

S. No.	Description	Amount
1	YELLOW BLOCK CIVIL WORK, ELECTRICAL & PLUMBING	
2	BLUE BLOCK CIVIL WORK, ELECTRICAL & PLUMBING	
3	GREEN BLOCK CIVIL WORK, ELECTRICAL & PLUMBING	
4	ORANGE BLOCK CIVIL WORK, ELECTRICAL & PLUMBING	
5	EXTERNAL ELECTRIFICATION WORK (OPTIONAL)	
	GRAND TOTAL RS.	

CONTRACTOR	

# "CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI".

# **YELLOW BLOCK**

S. No.	Description	Amount
1	CIVIL WORK	
2	ELECTRICAL & ALLIED WORKS	
3	PLUMBING & FIRE FIGHTING WORKS	
	GRAND TOTAL RS.	

CONTRACTOR	

S. No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	EXCAVATION AND BACKFILLING				
1.1	Excavation for foundations, plinth beams etc in any strata upto required depth from natural ground level, including back filling and compacting in 150mm thick layers, wherever required with all leads, lift with suitable excavated material. Excavated material suitable for use as back filling material shall be stockpiled, if required, within the site of work or as directed by Engineer in charge, this stockpile material shall be transported back to places required fill or back fill. Surplus material unsuitable for use as filling material shall be disposed off away from site by dumpers. (No extra payment will be made in this regard). Complete in all respect as per drawing, specifications and directed by Engineer – in – charge.				
	( only the size of lean concrete will be calculate for payment ).	765	Cum		
2.1	CONCRETE OF SUB – STRUCTURE  Providing, mixing, depositing, curing and compacting using S.R. cement lean concrete under foundations, plinth beams etc, as shown on the drawings with clean local sand and crushed stone, graded as specified, including formwork where required etc., complete in all respects as per				
	drawing, specifications and directed by Engineer-in- charge.  A. Lean Concrete 1:4:8  B. 1:3:6 Cast in situ (under plinth beams)	70 14	Cum Cum		
2.2	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in sub-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) at 28 days using Sulphate Resistance (S.R cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.				
	<ul> <li>A. Footings (f' c = 4 ksi)</li> <li>B. Foundation beams (f' c = 4 ksi)</li> <li>C. Plinth beams (f' c = 3 ksi)</li> <li>D. Columns upto Plinth level (f' c = 4 ksi)</li> <li>E. Lift shear walls upto plinth level (f' c = 4 ksi)</li> </ul>	198 5 14 25 15	Cum Cum Cum Cum Cum		

3	STEEL REINFORCEMENTS.				
3.1	Supplying, cutting, bending, binding and fixing in position <b>Ribbed Deformed Bars</b> , confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling marging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be paid).				
		36000	Kg		
	TO	OTAL COS	T OF SEC	- A Rs.	
	SECTION – B: PLINTH LEVEL TO 1ST FLOOR S	LAB (- 75 I	LEVEL TO	+ 3825 LE	VEL)
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	CONCRETE OF SUPER – STRUCTURE				
1.1	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in super-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) as mentioned at 28 days using Ordinary Portland (O.P cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.  A) Columns (f'c = 4 ksi)  B) Lift/ Shear walls (f'c = 4 ksi)  C) Beams (f'c = 3 ksi)  D) Slabs (f'c = 3 ksi)	32 24 36 95 14	Cum Cum Cum Cum		
2.1	STEEL REINFORCEMENTS.  Supplying, cutting, bending, binding and fixing in position Ribbed Deformed Bars, confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling merging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be paid).	37800	Kg		
		TOTAL C	OST OF SE	CC - B Rs.	

## SECTION – C: FROM 1<sup>ST</sup> FLOOR SLAB TO 2<sup>ND</sup> FLOOR SLAB (+3825 TO +7725 LEVEL)

0.55		0===			
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.1	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in super-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) as mentioned at 28 days using Ordinary Portland (O.P cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.				
	A) Columns (f' c = 4 ksi) B) Lift / Shear walls (f' c = 4 ksi) C) Beams (f' c = 3 ksi) D) Slabs (f' c = 3 ksi) E) Staircase steps, landing etc (f' c = 3 ksi)	32 24 36 95	Cum Cum Cum Cum		
2.1	STEEL REINFORCEMENTS.  Supplying, cutting, bending, binding and fixing in position Ribbed Deformed Bars, confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling merging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be paid).	37800	Kg		
	TOTAL COST OF SEC	· C Rs.			

	ARCHITEC	TURE			
Item No.	Description	Unit	Quantity	Unit	Amount
1	Masonry Provide and Lay machine made solid block (800 psi) masonry walls set in 1:6 cement sand mortar including curing complete with scaffolding at any height. As shown on Drg & detail				
	200mm thick solid wall	$m^2$	239		
	150mm thick solid wall 100mm thick solid wall	$m^2 \ m^2$	1395 139		
2	<b>Cavity Wall with Concrete Masonry Unit</b>				
	Block masonry cavity wall in 1:6 cement and sand mortar, including welded M.S. Steel 9mm dia ties in approved size and 50mm thick Polystyrene board insulation (Diamond Jumbolen or as approved) in the cavity; as per drawings.				
	a) 100 + 50 + 150 mm	$m^2$	58		
3	Provide and lay CC1:2:4 pad between cavity wall and precast lowers complete in all respect as per drawing	m	65		
4	Provide and make precast vertical louvres1:2:4 counter including form work and steel finish and fixing arrangement complete in all respect as per drawing				
	Elevation 3.26 mm high	Nos	300		
5	Staircase 3.3 mm high  Provide and fix glass block in 200 x 200 mm as approved including fix in adhesive and all respect fixing arrangement complete in all	Nos	80		
	respect as as per drawing No	m <sup>2</sup>	28		
6	Provide and casting RCC 1:2:4 tie beam including steel complete in all respect as per Drawing.	m3	20		
7	Provide and fabricating M.S. polish vertical solid bar 25 x 25 and 12mm x 12mm horizontal welded to vertical bar including 60mm red miranti wood hand rail finish with hammer paint with polish including anti rust complete in all respect as per drawing No  Provide and fabricating M.S. hand railing for	m	90		
U	staircase with fixing arrangement with anti- rust paint including fixing 60mm red miranti wood gola finish with paint and polish n all respect as per drawing No	m	114		

9	Roof Finishing			
a)	Provide and laying 1:3:6 75 mm roof screed			
	laid in slop and panel complete in all respect			
	as per drawing	$m^2$	810	
b)	Provide and laying two coats of hot bitumen			
,	grade complete on all respect as per drawing			
	@. Kg per Sft. With approved polythene			
	sheet complete on all respect as per drawing	$m^2$	729	
c)	Provide and laying 1:2:4 50mm thick			
	complete on all respect as per drawing	$m^2$	729	
d)	Provide and laying 25mm thick thermopile			
	installation complete on all respect as per	2	720	
10	drawing	m <sup>2</sup>	729	
10	Ground Floor finishes	2	-0-	
a)	Provide and lay 150 mm thick stone soling	$m^2$	705	
b)	Provide and lay 75mm thick screed	$m^2$	705	
c)	Provide and lay 3 coats of hot bitumen	$m^2$	705	
d)	Provide and lay 75mm thick sub floor	$m^2$	705	
e)	Provide and lay 75mm thick finish floor	$m^2$	705	
f)	Provide and laying imported earth filling as			
	approved	$m^2$	705	
11	<b>Expansion Joint Cover Assemblies</b>			
	Provide and fix expansion joint cover of			
	aluminum sections including 25mm x 25mm			
	thick polysulphide with baker strip and			
	impregnated fiber board as approved by			
	Structural Engineer where ever required, including filling sealant; as per drawing			
a)	Vertical	m	60	
b)	Horizontal	m	14	
12		111	14	
12	Doors and Frames  Provide and install door with G. I. frame (10)			
	Provide and install door with G.I. frame (10 SWG) including fix glass in position			
	thickness as shown in drawing filling,			
	concrete 1:6 in gape between frame and			
	masonry wall in line, level and plumb, apply			
	3 coats metal paint finish, as required			
	complete as per detail shown on Drg #			
	D-01 - 1500 x 2750	Nos	4	
	D-02 - 1350 x 2750	Nos	16	
	D-03 - 1200 x 2750	Nos	4	
	D-04 - 1200 x 2750	Nos	5	
	D-05 - 1100 x 2750	Nos	5	
	D-06 - 1050 x 2750	Nos	2	
	D-07 - 900 x 2750	Nos	8	
	D-08 - 750 x 2750	Nos	34	
	D-09 - 700 x 200	Nos	10	
	DW-10 - 1150 x 2150	Nos	2	
		_,,55	_	

13	Flush Door				
	Provide and make 1 1/2" thick solid core				
	flush door with 2 1/2" Wide partal wood				
	frame all round 6 x 1 1/4" partal wood mid				
	rail in two pieces partal wood for lock fitting				
	all shutter with 3/4" x 1" 1/4" x 10" partal				
	wood pieces Formica finish over 1/8" thick				
	ply in all respect as per drawing No				
	D-01 - 1500 x 2750	Nos	4		
	D-02 - 1350 x 2750	Nos	16		
	D-03 - 1200 x 2750	Nos	4		
	D-04 - 1200 x 2750	Nos	6		
	D-05 - 1100 x 2750	Nos	2		
	D-06 - 1050 x 2750	Nos	2		
	D-07 - 900 x 2750	Nos	4		
		Nos			
			34		
	D-09 - 700 x 200	Nos	10		
4.4	DW-10 - 1150 x 2150	Nos	2		
14	Aluminum Anodized Windows				
	Provide and install bronze Aluminum				
	anodized windows using approved section				
	for frame glazed and wire mesh shutter with cost of light tinted glass, refer schedule given				
	in Drg No for manufacturing and fitting				
	details complete with cost of sealant etc. as				
	required by Architect.				
a)	W-02 - 750 x 1400 - Size	Nos	4		
b)	V-01 - 600 X 900 - Size	Nos	8		
15	Aluminum Powder Ventilators & Doors	1105	Ŭ.		
	Provide and install bronze Aluminum				
	powder coated windows using approved				
	section for frame glazed and wire mesh				
	shutter with cost of light tinted glass, refer				
	schedule given in Drg No for				
	manufacturing and fitting details complete				
	with cost of sealant etc. as required by				
	Architect.				
	PV-1a - 670 x 550 - Size	Nos	12		
	PV-2a - 600 x 550 - Size	Nos	32		
	PV-3a - 520 x 550 - Size	Nos	20		
	PV-5a - 470 x 550 - Size	Nos	4		
	PV-6a - 940 x 550 - Size	Nos	2		
	PV-7a - 790 x 550 - Size	Nos	9		
	PV-8a - 640 x 550 - Size	Nos	34		
	PW-05 - 600 x 991 - Size	Nos	16		
	PW-4a - 700 x 550 - Size	Nos	16		
	DW-05 - 2100 x 2750 - Size	Nos	16		
	D-1a - 1500 x 2750 - Size	Nos	2		
	D-7a - 900 x 2750 - Size	Nos	5		
1	10 / A 2/30 - BILC	1102	ı ,	1	

	W-03 - 750 x 1591 - Size	Nos	2		
	V-02 - 450 x 450 - Size	Nos	14		
16		1108	14		
10	Portland Cement Plastering				
	Provide and apply12 mm thick plaster to				
	internal beams, wall and jambs surfaces in				
	1:4 cement sand mortar include cost of				
	200mm wide expanded lath metal as				
	approved fixed with steel nail as per drawing	$m^2$	3533		
17	and specifications. Ground to 4th floor	III	3333		
17	12 mm thick ceiling plaster in 1:4 cement sand mortar as per drawing and				
	specifications.	$m^2$	1720		
18	12mm thick Cement plaster to waist of stair	111	1720		
10	case and pardi on both side of steps in 1:4				
	cement sand mortar as per drawing and				
	specifications.	$m^2$	106		
19	Applying 20 mm thick external cement	111	100		
	plaster in 1:4 cement sand mortar rough				
	including all bends, recesses, corners, jambs,				
	grooves pattas with additional thickness and				
	provision of drip moulds, complete with				
	hacking the reinforced concrete surfaces,				
	filling back the chases, fixing G.I. expanded				
	metal lath as per approved sample over				
	chases, electrical PVC pipes and joints				
	between brick and RCC masonry, curing				
	complete at any height plaster as per				
	drawings and specifications.	$m^2$	1173		
20	Apply Color Crete plaster in approved				
	thickness and color using approved pigment				
	with required texture finish including all				
	installation arrangement; complete all as per	_			
	drawings and specifications.	$m^2$	1173		
21	ALUMINUIM COMPOSITE PANEL				
	CLADDING				
	Provide and installation aluminum				
	composite cladding sheet including wooden				
	frame and CC plaster for water spout channel				
	(alucobond or equalant) Exterior wall and				
	columns as required 4mm or as per mention in drawing, including all tools and plant				
	scaffolding and complete as per approved				
	sample detail as per drawings and				
	specifications.	$m^2$	75		
22	Plastic Tiling	111	13		
	Provide and lay Gizri stone facing on				
	external plinth up to 1200 mm as required				
	(sample and size to be approved by the				
	Architect) laid in 1:2 cement sand mortar				
	with deep cut joint complete in all respect as				
	per drawings and specifications.	$\mathrm{m}^2$	186		
	1			1	l .

23	Provide and lay glazed tile for bathroom			
	fixing with dry bond including grouting;			
	complete in all respect as per drawings			
	Wall	$m^2$	366	
24	Provide and lay Porcelain tile on wall and			
	staircase dado with dry bond including			
	grouting; complete in all respect as per			
	drawings and specifications.	_		
a)	up to 1200	$m^2$	1052	
b)	up to 2100	$m^2$	258	
25	Provide and lay Porcelain tile on floor made			
	with 1:4 cement sand mortar bed and dry			
	bond including grouting; complete in all			
	respect as per drawings and specifications.			
a)	400 x 400	$m^2$	1615	
b)	300 x 300	$m^2$	188	
c)	Skirting	m	131	
26	Provide and lay National Industries glazed			
	tiles of approved color and size for floor over			
	75mm average 1:2:4 concrete bed and dry			
	bond including grouting: complete in all			
	respect as per drawings			
a)	Floor	$m^2$	38	
b)	Skirting	m	75	
27	Acoustical Tile Ceiling			
	Dampa (Thermal or equivalent) Ceiling			
	System, 600 mm x600 mm of size with			
	suspension system including making			
	opening for AC ducts & lights etc. complete			
	in all respect as per drawing and			
	specification.	$m^2$	1024	
28	Provide and Fix 1/2" thick GYPSUM box			
	panel paint finish as approve with Metal			
	framing inside, all wood to be termite	2		
20	treated, as per design, details and drawing	m <sup>2</sup>	138	
29	Interior Painting			
	Plastic Emulsion paint wall and ceiling for			
	interior surface including all base work	2	4.60.6	
20	complete as per drawings	m <sup>2</sup>	4686	
30	Provide and install epoxy paint finish all in strict accordance with manufacturer's			
	instruction with minimum strength complete in all respect as per drawing	$m^2$	185	
31	Marble	111	103	
31				
	Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement			
	sand mortar complete in all respect as per			
	drawings and specifications.			
	On step	Per/step	52	
a)	On Landing	m <sup>2</sup>	18	
b)	Skirting	m2	55	

32	Provide and lay pre polish marble nosing					
	18mm thick 100mm wide and porcelain tile					
	on tread and riser laid in 1:2 cement sand					
	mortar complete in all respect as per					
	drawings					
a)	On step1	Per/step	52			
b)	On Landing	$m^2$	18			
33	Provide and lay marble border complete in					
	all respect as per drawings	m	243			
34	Provide and lay granite dado lift lobby as per					
	sample approved by the Architect laid in dry					
	bond of required thickness with grooves,	t laid in dry th grooves,				
	rounding edges, polish finished as required.	$m^2$	66			
35	Provide and lay marble on landing complete					
	in all respect as per drawings	m	18			
	TOTAL CIVIL WORK					
	GI	RAND TO	TAL CIVII	L WORK		

### **ELECTRICAL WORK**

S.#	DESCRIPTION	SUPPLY (Rs.)	INSTALLATION (Rs.)	TOTAL (Rs.)
1	SECTION - A WIRING & WIRING ACCESSORIES			
2	SECTION - B Cable Containment			
3	SECTION - C SWITCHES & SOCKETS			
4	SECTION - D Lighting fixtures			
5	SECTION - E MAIN / SUBMAIN CABLES			
6	SECTION - F DISTRIBUTION BOARDS			
7	SECTION - G Earthing & Grounding System			
8	SECTION - H VOICE & DATA COMMUNICATION SYSTEM			
9	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM			
10	SECTION - J WIRING FOR LOW CURRENT SYSTEMS			
11	SECTION - K AS-BUILT DRAWINGS			
	Total Amount (Rs.)			

#### Note:

- Contractor is advised to inform missing items (if any) in BOQ at time of submitting this tender. No escalation will be considered at time of execution of work.
- Owner can supply any material of Contractor scope at any stage and its cost will be completely deleted from Contractor scope without any kind of adjustment.
- Contractor should mark the selected brands and vendors in approved manufacturer list with submission of Tender Documents.
- Owner / Consultant have all the rights to select any brand / vendor from provided approved manufacturer list, Contractor shall not finalize any brand / vendor without written approval from consultant / owner.

				SU	JPPLY	INSTA	LLATION	
S.#	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	AMOUNT (Rs.)
	SECTION - A WIRING & WIRING ACCESSORIES							
	Supply, installation, testing and commissioning of following items including all material, tools, labor & accessories required for completion of work as per description & drawings. Complete in all respects. As shown on drawings.  Note:  1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.  2) The circuit wire drop and busway plug / tapoff to light / power point riser shall be sufficient as per false ceiling levels and shall be in flexible GI conduit with PVC coating.  3) Megger Test of each circuit to be done by contractor.  4) Wiring for Occupancy Sensor shall be included							
1	in light wiring.  Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia PVC conduit as shown in drawings.	50	No.					
2	Wiring for light point from switch board / Dimmer board to first light point with phase 1.5 Sq.mm, common neutral 2.5 Sq.mm and common ECC 2.5 Sq.mm, in 25mm dia PVC conduit as shown in drawings. as shown on drawings.	276	No.					
а	Same as above item but wiring from light <b>point to point.</b>	213	No.					
3	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia PVC conduit as shown on drawings.	14	No.					
а	Same as above item but wiring from light <b>point to point.</b>	66	No.					
4	Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia uPVC conduit as shown in drawings. (Avg Length: 50 Rm)	2	No.					
5	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia uPVC conduit as shown on drawings.	3	No.					
а	Same as above item but wiring from light <b>point to point.</b>	21	No.					
6	Wiring of 13A/15A Switch Socket units (RAW Power) from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.							
а	2x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.	22	No.					
b	Same as above item, but wiring from <b>outlet to outlet.</b>	220	No.					

Wiring of 13A/15A Switch Socket units for Queue Management System from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2x4 Symm Gu/PVC + ECC 1x4 Symm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WIFI Outlet from DB to first outlet with following size of wires in already installed PVC conduit via coble fray as shown in the drawings.  2 x 2.5 Symm Cu/PVC + ECC 1x2.5 Sq.mm 6 No.  2 x 2.5 Symm Cu/PVC + ECC 1x2.5 Sq.mm 6 No.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 7 No.  3 Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 15A DP Isolator for VRF Indoor AC / Split ACS from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 7 No.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 8 No.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 9 No.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 10 DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  3 Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4 Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.	n DB to first outlet with in 25mm dia of PVC loor as shown in the
7 following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WiFl Outlet from Db to first outlet with following size of wires in already installed PVC conduit via cable tray as shown in the drawings.  2 x 2.5 Sqmm Cu/PVC + ECC 1 x 2.5 Sq.mm Cu/PVC  Wiring of 20A Switched Socket for Hand Dryer from Db to Socket for with following size of wires in 25mm dia of PVC conduit.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 13A DP Isolator for VRF Indoor AC / Split Viring of 13A International Outlet  Wiring of 13A DP Isolator for VRF Indoor AC / Split Viring from Db to Sirst outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 13A DP Isolator for Indoor VRF Units from Db to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Indoor VRF Units from Db to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Indoor VRF Units from Db to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from Db to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.	in 25mm dia of PVC loor as shown in the
conduits under wall / floor as shown in the drawings.  2x4 Samm Cu/PVC + ECC 1x4 Samm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet with following size of wires in allowing installed PVC conduit via cable tray as shown in the drawings.  a Cu/PVC  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm Cu/PVC  Same as above item, but wiring from outlet to outlet.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm Cu/PVC  Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm b 10 DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.	loor as shown in the
drawings.   2x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC   Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.   Wiring of 13A/15A Switch Socket units for WiFl Outlet from D8 to first outlet with following size of wires in already installed PVC conduit via cable tray as shown in the drawings.   2 x 2.5 Sqmm Cu/PVC + ECC 1x2.5 Sq.mm	
2x4 Samm Cu/PVC + ECC 1x4 Samm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WIFI Outlet from DB to first outlet with following size of wires in already installed PVC conduit via cable fray as shown in the drawings.  a 2x2.5 Samm Cu/PVC + ECC 1x2.5 Sq.mm Cu/PVC  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 2x4 Sq.mm Cu/PVC + ECC 1x4 Sq.mm Cu/PVC  Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACS from DB to first outlet with following size of wires in in 25mm dia PVC conduit.  ACS from DB to first outlet with following size of wires in in 25mm dia PVC conduits under wall / floor as shown in the drawings.  a 2x4 Sq.mm Cu/PVC + ECC 1x4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2x4 Sq.mm Cu/PVC + ECC 1x4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Sqmm Cu/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2x4 Sq.mm Cu/PVC + ECC 1x4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.	1x4 Samm Cu/PVC
a Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WiFl Outlet from DB to first outlet with following size of wires in already installed PVC conduit via cable fray as shown in the drawings.  a 2 x 2 S Samm Cu/PVC + ECC 1x2.5 Samm Cu/PVC  b outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm 4 No.  Cu/PVC  b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm 24 No.  Wiring of 16A DP Isolator for VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm 24 No.  Wiring of 20A AP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm 24 No.  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm dia of PVC conduits under wall / floor as shown in the drawings.  b 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm dia of PVC conduits under wall / floor as shown in the drawings.  Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.	1x4 Samm Cii/PVC
anot be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WIFI Outlet from D8 to first outlet with following size of wires in already installed PVC conduit via cable tray as shown in the drawings.  a 2 x 2.5 Samm Cu/PVC + ECC 1x2.5 Sq.mm 6 No.  Cu/PVC  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from D8 to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Spilf ACS from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Sq.mm Cu/PVC/PVC + ECC 1 C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC/PVC + ECC 1 C 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from D8 to first outlet with following size of wires in in 25mm dia of upvC conduits under wall / floor as 5mown in 25mm dia of upvC conduits under wall / floor as 5mown in 25mm dia of upvC conduits under wall / floor as 5mown in 25mm dia of upvC conduits under wall / floor as 5mown in 25mm dia of upvC conduits under wall / floor as 5mown in 25mm dia of upvC conduits under wall / floor as 5mown in 25mm dia of upvC conduits	
not be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WIFI Outlet from DB to first outlet with following size of wires in already installed PVC conduit via cable tray as shown in the drawings.  a 2 x 2.5 Samm Cu/PVC + ECC 1x2.5 Sa,mm 6. No. Cu/PVC  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sa,mm Cu/PVC + ECC 1 x 4 Sa,mm 4 No. Cu/PVC  Same as above item but wiring from 20A Switch to 13A International Outlet with following size of wires in in 25mm dia PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa,mm Cu/PVC + ECC 1 x 4 Sa,mm 24 No.  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa,mm Cu/PVC + ECC 1 x 4 Sa,mm 24 No.  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Samm Cu/PVC/PVC + ECC 1 C-4 Samm Cu/PVC Conduits under wall / floor as shown in the drawings.  a 4C-4 Samm Cu/PVC/PVC + ECC 1 C-4 Samm 1 No.  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa,mm Cu/PVC + ECC 1 x 4 Sa,mm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of upvC conduits under wall / floor as 5mm dia of upvC conduits under wall / floor as 5mm dia of upvC conduits under wall / floor as 5mm dia of upvC conduits under wall / floor as 5mm dia of upvC conduits under wall / floor as 5mm dia of upvC conduits under wall / floor as 5mm dia of upvC conduits under wall / floor as 5mm dia of upvC conduits under wal	
Wiring of 13A/15A Switch Socket units for WIFI Outlet from DB to first outlet with following size of wires in already installed PVC conduit via cable tray as shown in the drawings.  a 2 x 2.5 Samm Cu/PVC + ECC 1x2.5 Sa.mm 6 No. Cu/PVC  b Same as above item, but wiring from outlet to outlet. Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sa.mm Cu/PVC + ECC 1 x 4 Sa.mm 4 No.  b Same as above item but wiring from 20A Switch to 13A International Outlet Wiring of 16A DP Isolator for VRF Indoor AC / Split AC from DB to first outlet with following size of wires in in 25mm dia PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa.mm Cu/PVC + ECC 1 x 4 Sa.mm 24 No.  Wiring of 10A P Isolator for VRF Indoor AC / Split AC from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa.mm Cu/PVC + ECC 1 x 4 Sa.mm 24 No.  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Samm Cu/PVC/PVC + ECC 1 C-4 Samm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Samm Cu/PVC/PVC + ECC 1 C-4 Samm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa,mm Cu/PVC + ECC 1 x 4 Sa,mm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as	iy and its cost must be
8 Outlet from DB to first outlet with following size of wires in already installed PVC conduit via cable tray as shown in the drawings.  a 2 x 2.5 Sqmm Cu/PVC + ECC 1 x 2.5 Sq.mm 6 No.  Cu/PVC  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  Cu/PVC  b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 14A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 24 No.  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blacks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 C - 4 Sqmm 1 No.  Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blacks from DB to first outlet with followings size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 C + 4 Sq.mm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as 5 No.	
wires in already installed PVC conduit via cable tray as shown in the drawings.  a 2 x 2.5 Samm Cu/PVC + ECC 1x2.5 Sq.mm 6 No.  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 24 No.  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Sq.mm Cu/PVC/PVC + ECC 1 C-4 Sq.mm 1 No.  Wiring of 20A DP Isolator for Hot Water Geyser inside Toillet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 2 No.  Wiring of 20A DP Isolator for Hot Water Geyser inside Toillet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of upVC conduits under wall / floor as shown in the drawings.	
wires in already installed PVC conduit via cable tray as shown in the drawings.  a 2 x 2.5 Samm Cu/PVC + ECC 1x2.5 Sq.mm 6 No.  B Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  Cu/PVC  b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 24 No.  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Sqmm Cu/PVC + ECC 1 C-4 Sqmm 1 No.  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC/PVC + ECC 1 C 4 Sq.mm 1 No.  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as 5 No.	
a 2 x 2.5 Sqmm Cu/PVC + ECC 1 x 2.5 Sq.mm 6 No. Cu/PVC  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No. Cu/PVC  b Same as above item but wiring from 20A Switch to 13A International Outlet 4 No. Wiring of 16A DP Isolator for VRF Indoor AC / Split No. The first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 24 No. Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm 1 No. Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No. Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No. Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as 5mm dia of uPVC conduits under wall / floor as 5mm dia of uPVC conduits under wall / floor as 5mm dia of uPVC conduits under wall / floor as 5mm dia of uPVC conduits under wall / floor as 5mm dia of uPVC conduits under wall / floor as 5mm dia of uPVC conduits under wall / floor as 5mm dia of uPVC conduits under wall / floor as 5mm dia of uPVC conduits under wall / floor	
Cu/PVC   Same as above item, but wiring from outlet to outlet.	
Bosme as above item, but wiring from outlet to outlet.	CC 1x2.5 Sq.mm
Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.   Acs from DB to first outlet with following size of wires in 13A International Outlet   No.	
Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a	wiring from <b>outlet to</b>
9 from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm	
in 25mm dia PVC conduit.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  Cu/PVC  b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	
a 2 x 4 \$q.mm Cu/PVC + ECC 1 x 4 \$q.mm	
Same as above item but wiring from 20A Switch to 13A International Outlet	
b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 \$a,mm Cu/PVC + ECC 1 x 4 \$a,mm	C 1 x 4 Sq.mm
to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm dia of PVC conduits under wall / floor as shown in the drawings.  4 Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in 125mm dia of uPVC conduits under wall / floor as shown in 125mm dia of uPVC conduits under wall / floor as shown in 13 Sp. first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as 13 No.	4 110.
to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm dia of PVC conduits under wall / floor as shown in the drawings.  4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in 125mm dia of uPVC conduits under with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	wiring from 20A Switch
ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 \$q.mm Cu/PVC + ECC 1 x 4 \$q.mm Cu/PVC Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 \$qmm Cu/PVC/PVC + ECC 1 C-4 \$qmm Cu/PVC Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 \$q.mm Cu/PVC + ECC 1 x 4 \$q.mm Cu/PVC + ECC 1 x 4 \$q.mm Cu/PVC Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as for wires in in 25mm dia of uPVC conduits under wall / floor as for wires in in 25mm dia of uPVC conduits under wall / floor as	
wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 \$q.mm Cu/PVC + ECC 1 x 4 \$q.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 \$qmm Cu/PVC/PVC + ECC 1C-4 \$qmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 \$q.mm Cu/PVC + ECC 1 x 4 \$q.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	or VRF Indoor AC / Split
wires in in 25mm aid of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	
a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	
a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	wings.
Cu/PVC   Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings    a   4C-4 Samm Cu/PVC/PVC + ECC 1C-4 Samm Cu/PVC	ClydSamm
DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Samm Cu/PVC/PVC + ECC 1C-4 Samm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	' 24   No.
DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Samm Cu/PVC/PVC + ECC 1C-4 Samm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	or Indoor VRF Units from
25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Samm Cu/PVC/PVC + ECC 1C-4 Samm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa.mm Cu/PVC + ECC 1 x 4 Sa.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	
shown in the drawings  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	
a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	
Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	+ ECC 1C-4 Samm
Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	'   1   No.
inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	for Hot Water Geyser
conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm   Cu/PVC    Wiring of 20A DP Isolator for Plumbing Pump from   DB to first outlet with following size of wires in in   25mm dia of uPVC conduits under wall / floor as	
conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm   Cu/PVC    Wiring of 20A DP Isolator for Plumbing Pump from   DB to first outlet with following size of wires in in   25mm dia of uPVC conduits under wall / floor as	in 25mm dia of PVC
drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	
a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	
Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	C 1 x 4 Sa.mm
Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	4   No.
DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as	or Plumbing Pump from
25mm dia of uPVC conduits under wall / floor as	
3.13 W. 1.113 G. G. W. 1.193	
a 3C-4 Sgmm Cu/PVC/PVC 2 No.	2 No
Wiring of 63A 4P Isolator for Outdoor VRF Units at	
Roof from DB to Socket for with following size of	
wires in already installed conduit via cable tray,	σοπαυτί για cable tray,
as shown in drawings.	2 - 500 10 17 5
a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm 1 No.	, + ECC 1C-16 Sqmm   1   No.
Cu/PVC	- Outdoor VDF Heite et
Wiring of 80A 4P Isolator for Outdoor VRF Units at	
Roof from DB to Socket for with following size of	
Wires in direday installed conduit via cable tray,	
as shown in drawings.	conduit via cable tray,
a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm 1 No.	
CU/PVC	C + FCC 1C-16 Samm
Wiring of 32A 4P Isolator for Fresh Air Units from DB	C + ECC 1C-16 Sqmm 1 No.
L to Socket torwith tellowing size of wires in already.	C + ECC 1C-16 Sqmm 1 No.
16 to Socket for with following size of wires in already	C + ECC 1C-16 Sqmm 1 No.  r Fresh Air Units from DB g size of wires in already
16 To socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.	C + ECC 1C-16 Sqmm 1 No.  r Fresh Air Units from DB g size of wires in already

а	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	1	No.			
17	Wiring of 32A 4P Isolator for Medical Equipment from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.					
а	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	2	No.			
	Note:  1) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.  2) The ECC to be run with each circuit shall be loop-in and loop-out type, joints are not allowed. It will be green in color (Refer detail drawings)  3) All the cables shall be color coded according to phases / types of services.  4) Wires color of UPS circuits should be different from RAW Power  5) Wiring for outgoing circuits of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.					
	Total Amount (Rs.) Sec - A (CARRIED FORWARD TO SUMMARY)					
	SECTION - B CABLE CONTAINMENT					
1	Supply & Installation of following sizes of PVC/UPVC Conduits including all accessories such as bends, sockets, j-boxes, flexible conduits, metal saddles e.t.c for Main / Sub Main Power, Telephone & Data Cables, concealed / surface on wall as per design drawings. Provide MS Pull boxes where ever required.					
а	25mm dia PVC Conduit	550	Rm.			
b	32mm dia PVC Conduit	50	Rm.			
С	38mm dia PVC Conduit	50	Rm.			
2	Supply & Installation of following M.S powder coated Ceiling / Floor / Wall Pull Boxes for data / voice / power / UPS circuits, recessed on wall or column as per design drawings. Complete in all respect.					
а	200mm x 200mm x 75mm	25	No.			
b	300mm x 300mm x 75mm	1	No.			
3	Supply & installation of following sizes of 16 SWG MS Powder Coated with 18 SWG cover (4 feet covers) duly Painted after degreesing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects. Note:  - Color Printed Tags to be provided at every 3 Meter Length.  - Imported C-Channel Hanger to be used for hanging from ceiling.  - Wall Hanger Supports to be provided moving with walls.  - U-shaped fishcer plates to be used for joints  - Earth bonding to be done with every joint  - Only imported mounting accessories to be used make mungo, fischer or equivalent.  - Color to be decided with consent of architect.					
а	300mm x 100mm (2 Partition)	75	Rm.			
b	150mm x 100mm	10	Rm.			

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	Supply & installation of following sizes of 16 SWG						
	GI Cable Tray with 18 SWG cover (4 feet covers)						
	duly Painted after degreesing, derusting,						
	phosphating and antirust primer including all						
	installation accessories such as rawal bolts e.t.c.						
	Complete in all respects.						
	Note:						
	- Color Printed Tags to be provided at every 3						
4	Meter Length.						
	- Imported C-Channel Hanger to be used for						
	hanging from ceiling.						
	- Wall Hanger Supports to be provided moving						
	with walls.						
	- U-shaped fishcer plates to be used for joints						
	- Earth bonding to be done with every joint						
	- Only imported mounting accessories to be used						
	make mungo, fischer or equivalent.						
	- Color to be decided with consent of architect. 300mm x 100mm (2 Partition) (To be placed on		1				
а	Floor at Roof)	1	Rm.				
1.	•	1					
b	300mm x 100mm (Roof)	1	Rm.				
	Supply & installation of following sizes of 14 SWG						
	G.I Cable Ladder with 16 SWG cover (4 feet						
	covers) duly Painted after degreesing, derusting,						
	phosphating and antirust primer including all						
	installation accessories such as rawal bolts e.t.c.						
	Complete in all respects.  Note:						
	- Color Printed Tags to be provided at every 3						
	Meter Length.						
5	- Imported C-Channel Hanger to be used for						
	hanging from ceiling.						
	- Wall Hanger Supports to be provided moving						
	with walls.						
	- U-shaped fishcer plates to be used for joints						
	- Earth bonding to be done with every joint						
	- Only imported mounting accessories to be used						
	make mungo, fischer or equivalent.						
	- Color to be decided with consent of architect.						
а	450mm x 100mm (Vertical) (GF to Roof)	10	Rm.				
b	300mm x 100mm (Vertical) (GF to Roof)	10	Rm.				
	Supply & Installation of Imported Linear Outlet		131114				
	Boxes without face plates made of Aluminum,						
6	mounted on wall or punched in furniture as per						
	design drawings. The linear outlet boxes are to						
	be provided with appropriate sizes of knockouts.						
a	450mm x 100mm	34	No.				
	Supply & installation of Imported Floor Outlet	04	1,0.	<del>                                     </del>			
	Boxes without face plates made of 16 SWG G.						
7	Sheet, recessed in ground as per design	4	No.				
	drawings.						
	Note: Contractor is advised to confirm the sizes,		1				
	running lengths and termination as per site						
	conditions before commencement of work. All						
	the conduits / cable tray crossings through						
	partition walls shall be properly sealed by fire						
	retardant material after installation.						
	Total Amount (Rs.) Sec - B						
	(CARRIED FORWARD TO SUMMARY)						
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	SECTION - C SWITCHES & SOCKETS					
	Supply & Installation of following 10 Amps switches or 10/13/15/20 Amps socket outlets make including 16 SWG sheet steel back boxes recessed / surface on wall or as per design drawings.  (Clipsal C-Vivace for Switches & Sockets Outlets or Equivalent)					
1	10A, 220V One Gang Switch Unit	37	No.			
2	10A, 220V Two Gang Switch Unit	61	No.			
3	10A, 220V Three Gang Switch Unit	18	No.			
4	One Gang Fan Dimmer	1	No.			
5	Two Gang Fan Dimmer	4	No.			
6	Three Gang Dimmer	18	No.			
7	13A, International Switch Socket unit	324	No.			
8	15A, Round 3 pin Switch Socket unit	4	No.			
9	20A Switched Socket for Hand Dryer	4	No.			
10	16A DP Isolator (Split Unit)	24	No.			
11	20A 4P Isolator (Indoor VRF)	1	No.			
12	20A DP Isolator (Hot Water Gyeser)	4	No.			
13	20A DP Isolator (Plumbing Pump)	2	No.			
14	80A 4P Isolator (Outdoor VRF)	1	No.			
15	63A 4P Isolator (Outdoor VRF)	1	No.			
16	32A 4P Isolator (Fresh Air Units)	1	No.			
17	32A 4P Isolator (Medical Equipment)	2	No.			
18	60A TP Isolator (Lifts)	1	No.			
19	32A 5-Pin (Three Phase) Industrial Socket with Plug (for Communication Racks)	2	No.			
	,					
	Total Amount (Rs.) Sec - C (CARRIED FORWARD TO SUMMARY)					
	SECTION - D LIGHTING FIXTURES					
	Supply, Installation, Testing & Commissioning of the following lighting fixtures complete with driver and specified lamps with installation and hanging accessories upto 1 meter length for all pendant lights.  Note:  1) Power factor of all light fixture shall not be less than 0.9. 2) Efficacy >100lm/W and CRI > 90. 3) All down light shall have COB ship. 4) Fixture must be made of die-cast aluminum with aluminum heat sink. 5) All light fixture shall be finalized after taking approval from architect/consultant 6) Minimum 3 year warranty required from date of successful commissioning of light and driver both.					
1	Surface Mounted Down Light with 18W LED Lamp Color 4000K Diffused Glass	244	No.			
2	Surface Mounted Down Light with 12W LED Lamp Color 4000K Diffused Glass	12	No.			
3	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	6	No.			

Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	7	No.					
Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	152	No.					
Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	32	No.					
Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	54	No.					
	23	No					
Hygiene 40W Jumbo Flying Insect Killer UV Tube	20	No.					
Exhaust Fan 24"	8	No.					
Total Amount (Rs.) Sec - D (CARRIED FORWARD TO SUMMARY)	-						
SECTION - E MAIN / SUBMAIN CABLES							
Supply & Installation, testing and commissioning of following sizes of Main / Sub main (MV / LV) Cables in already installed cable tray, conduit etc. Including all accessories, lugs, glands etc. complete in all respect as shown on drawing.							
From MDB-BLUE to SMDB-G 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
From MDB-BLUE to SMDB-F 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	15	Rm.					
From MDB-BLUE to SMDB-HVAC 4C-95 Sqmm Cu/PVC/PVC + ECC 1C-50 Sqmm Cu/PVC	10	Rm.					
From SMDB-G to LPDB-GF-1 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
From SMDB-G to LPDB-GF-2 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.					
From SMDB-F to LPDB-FF-1 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
From SMDB-F to LPDB-FF-2 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.					
From SMDB-F to LPDB-R 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	15	Rm.					
From MDB-BLUE to 60A TP Isolator (Lift) 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	25	Rm.					
Note:  1- Contractor is instructed to confirm the cable running lengths and termination as per site conditions before commencement of work.  2- Imported Lugs and Connectors shall be used in LV Cables.  3) Merger Test of each circuit to be done by contractor.  Total Amount (Rs.) Sec - E							
(CARRIED I ORWARD TO SUMMART)							
FOR FIGURE OF CHACLE OF COLORS FOR CHACLE OF CHACLE OF CHACLE OF CHACLE OF COLORS FOR CHACLE OF CHACL	Pack Unit And Direction Sign (Maintained) Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 200% Sulk Head Emergency Light with 10W LED With 30vilt-In Battery Back-Up (Non Maintained) Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 200% Sulk Head Light Ceiling Fan 48" Hygiene 40W Jumbo Flying Insect Killer UV Tube Catcher Zapper Repellent Light Exhaust Fan 24"  Total Amount (Rs.) Sec - D (CARRIED FORWARD TO SUMMARY)  SECTION - E MAIN / SUBMAIN CABLES Supply & Installation, testing and commissioning of following sizes of Main / Sub main (MV / LV) Cables in already installed cable tray, conduit etc. Including all accessories, lugs, glands etc. complete in all respect as shown on drawing. From MDB-BLUE to SMDB-G 4C-35 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From MDB-BLUE to SMDB-F 4C-35 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From MDB-BLUE to SMDB-F 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-G to LPDB-GF-1 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-G to LPDB-FF-1 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-1 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-1 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-1 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-1 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-2 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-2 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-2 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-2 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-2 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-2 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-2 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-2 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC From SMDB-F to LPDB-FF-1 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm C	Pack Unit And Direction Sign (Maintained)  Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 20%  Bulk Head Emergency Light with 10W LED With 3uilt-In Battery Back-Up (Non Maintained)  Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 20%  Bulk Head Light 23  Ceiling Fan 48"  439jeine 40W Jumbo Flying Insect Killer UV Tube Catcher Zapper Repellent Light Exhaust Fan 24"  Total Amount (Rs.) Sec - D (CARRIED FORWARD TO SUMMARY)  SECTION - E MAIN / SUBMAIN CABLES  Supply & Installation, testing and commissioning of following sizes of Main / Sub main (MV / LV)  Cables in already installed cable tray, conduit etc. Including all accessories, lugs, glands etc. complete in all respect as shown on drawing.  From MDB-BLUE to SMDB-G 4C-35 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From MDB-BLUE to SMDB-F 4C-35 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  GC-95 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  GC-96 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-G to LPDB-GF-1  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-FF-1  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-FF-2  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 20/PVC  From SMDB-F to LPDB-R  4C-16 Samm	Cack Unit And Direction Sign (Maintained)  Ceiling Recessed 45W LED Panel 600 x 600mm rixture of Diffused Glass Color Temp 4000K CRI 20%  Bulk Head Emergency Light with 10W LED With 80Hit-In Battery Back-Up (Non Maintained)  Ceiling Recessed 45W LED Panel 600 x 300mm rixture of Diffused Glass Color Temp 4000K CRI 20%  Bulk Head Light 23 No.  Ceiling Fan 48"  100%  Sulk Head Light 23 No.  Ceiling Fan 48"  100%  Celling Fan 48"  100%  Celling Fan 48"  100%  Celling Fan 48"  100%  Corporate Aby Jumbo Flying Insect Killer UV Tube 20 No.  Celling Fan 48"  100%  Celling Fan 48"  Celling Fan 48"  Celling Fan 48"  Celling Fan 48"  Celling Fan	Cack Unit And Direction Sign (Maintained)  Ceiling Recessed 45W LED Panel 600 x 600mm inture of Diffused Glass Color Temp 4000K CRI 152 No. 2008.  30llk Head Emergency Light with 10W LED With 2008.  30llk Head Emergency Light with 10W LED With 2008.  30llk Head Emergency Light with 10W LED With 2008.  30llk Head Emergency Light with 10W LED With 2008.  30llk Head Light 23 No. 2008.  30llk Head Light 24 No. 2008.  30llk Head Light 25 No. 2008.  30llk Head Light 25 No. 2008.  30llk Head Light 26 No. 2009.  30llk Head Light 26 No. 2009.  30llk Head Light 27 No. 2009.  30llk Head Light 28 No. 2009.  30llk Head Light 29 No. 2009.  30llk Head Light 29 No. 2009.  30llk Head Light 20 No. 2009.  30llk Head Light	Ceiling Recessed 45W LED Panel 600 x 600mm inture of Diffused Glass Color Temp 4000K CRI 152 No. 1076  Built-In Battley Back-Up (Non Maintained) 32 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm inture of Diffused Glass Color Temp 4000K CRI 54 No. 1076  Built-In Battley Back-Up (Non Maintained) 54 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm inture of Diffused Glass Color Temp 4000K CRI 54 No. 1076  Ceiling Fan 48" 63 No. 1076  Ceiling Fan 48" 63 No. 1076  Ceiling Fan 48" 63 No. 1076  Ceiling Fan 48" 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 70 No. 1076  Ceiling Recessed 45W LED Panel 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 45W LED Panel 600 x 300mm 70 No. 1076  Ceiling Recessed 450 LPBs-Ff-1 No. 1076  Ceiling Recesse	Pack Unit And Direction Sign (Maintained)    100.	Pack Unit And Direction Sign (Maintained)  Celling Recessed 45W LED Panel 600 x 600mm inture of Diffused Glass Color Temp 4000K CRI  152  No.  Diffused Emergency Light with 10W LED With 30H head Emergency Light with 10W LED With 30H had battery Back-Up (Non Maintained)  Celling Recessed 45W LED Panel 600 x 300mm inture of Diffused Glass Color Temp 4000K CRI  154  No.  Diffused Light 23  No.  Celling Fon 48"  155  Celling Fon 48"  163  No.  Celling Fon 48"  164  No.  Celling Fon 48"  175  No.  Celling Fon 48"  185  No.  Celling Fon 48"  186  No.  Celling Fon 48"  187  No.  Celling Fon 48"  187  No.  Celling Fon 48"  187  No.  Celling Fon 48"  188  No.  Total Amount (Rs.) Sec - D  (CARRIED FORWARD TO SUMMARY)  SECTION - E  MAIN / SUBMAIN CABLES  Supply & Installation, testing and commissioning of following size of Main / Sub main (MV / LV)  Cables in circady installed coble tray, conduit alc. Including all accessories, lugs, glonds elc.  Complete in all respect as shown on drowing.  From MDB-BIUE to SMDB-G  CC-35 Samm CU/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From MDB-BIUE to SMDB-HVAC  CC-95 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-G to IPDB-GF-1  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-G to IPDB-GF-1  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-FF-1  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-FF-2  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-R  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-R  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-R  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-R  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-R  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-F-2  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/PVC  From SMDB-F to IPDB-F-2  CC-16 Samm Cu/PVC/PVC + ECC IC-16 Samm  Cu/P

	SECTION - F DISTRIBUTION BOARDS					
	Supply, Installation, testing & commissioning of following Distribution Boards as shown on drawing made with 14 SWG sheet steel housing including all installation accessories such as Rawal bolt etc. Complete in all respects.					
	Note: (Refer Single Line Diagram)  1) All the DB should be front accessible and maintainable.  2) Cost of Lighting Control Relays & Power Supplies should be Included in Distribution Boards.  3) The transportation and placement of DBs upto dedicated location is also included in the work scope, complete in all respects including leveling, grouting etc.  4) Laser engraved tags required as mention in SLDs  5) Space for circuit tagging required with permanent installation on protective sheet via rivets  6) 20% space required in DB for future provision  7) Tin platted Imported Cu bus bar with heat shrink color coded sleeves to be used.  8) Hindged protective metallic door required with knob/handle.  9) Braided Door earth required.  10) Lockable handle required for main door.  11) As-built drawing pocket.  12) Cable hanging arrangement.					
	Minimum One Year Warranty Required from date of successful commissioning on site.					
1	MDB BLUE	1	No.			
2	SMDB-G	1	No.			
3	SMDB-F	1	No.			
4	SMDB-HVAC	1	No.			
5	LPDB-GF-1	1	No.			
6	LPDB-GF-2	1	No.			
7	LPDB-FF-1	1	No.			
8	LPDB-FF-2	1	No.			
9	LPDB-R	1	No.			
10	80A Weather Proof TP Boxes	1	No.			
11	Note: 1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.	1	No.			
	Total Amount (Rs.) Sec - F (CARRIED FORWARD TO SUMMARY)					
	SECTION - G EARTHING & GROUNDING SYSTEM					
	Supply, installation, testing and commissioning of following items for Earthing Lightning Protection System for lightning protection and grounding of other systems including all material, boring, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					

1	Chemical Enhanced Earth using 38 mm dia copper pipe filled with soil conditioning material including 6" dia, 11' deep boring and back filled chemical to enhance conductivity material. Complete with termination clamps, 12" dia heavy duty tin plated round cover as per details given in drawings.	2	No.			
2	Earth Connecting Point or Equipotential bar made with 300mm wide, 50mm high and 80mm thick tin plated Copper, as shown in drawings. Bar shall be provided with holes suitable for installation of 6 No. 70/95 sqmm bare copper conductor. ECP shall be enclosed in 350mm x 100mm x 100mm MS Painted Powder Coated Metal Enclosure with front accessible Cover.	2	No.			
3	Supply, installation, testing and commissioning of following size of Single core PVC Cables from ECP to several equipment's in following sizes of PVC Conduit or as per details given in tender drawings, including all material, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					
а	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	50	Rm.			
4	Stranded bare copper conductors of following sizes in clipped on retaining wall from B1 to B4 from ECP to Earth Station as shown in drawings. Complete in all respects including termination at both ends.					
а	95 Sq.mm Bare Copper Conductor	50	Rm.			
5	Allow for any other item required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ.  Note: Contractor is advised to confirm the cable running lengths and termination as per site	1	Job			
	conditions before commencement of work.					
	<b>Total Amount (Rs.) Sec - G</b> (CARRIED FORWARD TO SUMMARY)					
	SECTION - H VOICE & DATA COMMUNICATION SYSTEM					
1	Supply, Installation, testing and commissioning of following items for voice and data communication system including all material, labor, tools, accessories etc. Complete in all respects. Quantities for cables shown in BOQ are estimated and taken from drawings. Contractor is advised to take measurement at site before commencement of works. Different colors of voice and data cables shall be used. (Selected Series for Face plates is Clipsal C-Vivace or equivalent)  Simplex Face plate with 1 No. CAT-6 RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins, labels and all accessories	42	No.			
	including 16 SWG sheet steel back box. Complete in all respects.	· <u>-</u>	1.5.			

2	Simplex Face plate with 1 No. CAT-6 RJ-45 I/O for WIFI, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	8	No.			
3	<b>Duplex Face plate</b> with <b>1 No. CAT-6</b> RJ-45 I/O for Data & <b>1 No. CAT-6</b> RJ-45 I/O for Voice white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	34	No.			
4	TV Outlet with face plate	8	No.			
5	<b>1x8 way Splitter</b> including 18 SWG M.S Sheet powder coated Box for RG-6 Connectivity.	2	No.			
6	Supply and Wiring of CAT-6 UTP Cables for Voice communication system from Com Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects. Different colors of cables shall be used for Voice (Coil =305 Rm.)	12	Coil			
7	Supply and Wiring of CAT-6 UTP Cables for Data communication system from Com Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects. Different colors of cables shall be used for Voice (Coil =305 Rm.)	6	Coil			
8	Supply and Wiring of Co-axial cable RG-6 for CATV system in 25mm dia PVC Conduit from each T.V point to Splitter as per drawings including terminations. Complete in all respect.	120	Rm.			
9	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Fiber Optic Cable as per standard specifications, all termination accessories up to entire satisfaction of IT Engineer, in already installed PVC conduit / cable tray including termination and tagging at both ends. Complete in all respects.	30	Rm.			
10	<b>Programming, testing and commissioning</b> of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job			
11	Fluke / OTDR Testing of each communication cable with calibrated fluke tester	1	Job			
	<b>Note:</b> Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec - H (CARRIED FORWARD TO SUMMARY)					
	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM					
	<b>Supply, installation, testing &amp; commissioning</b> of Addressable Fire Alarm System comprising of following equipment's including all accessories required for the completion of the system in all respects.					
1	Addressable Fire Alarm Control Panel of 2-loops expandable upto 4 Loops having minimum 127 devices per loop. The FACP shall be self powered with built in 12V batteries for 24 Hrs backup with charging unit, Built-in GSM Module and Self Printing Function. It can be programmed using Windows based software for peripheral devices like display unit, printers and soft zoning etc.	1	No.			

						,
2	Addressable Multi Detectors incorporating an LED indication located in labyrinth with in the housing of the detector. Sensing of the detector shall be adjustable via software between 0-90 seconds. The detector shall have built in short circuit isolators on both inputs.	73	No.			
3	Addressable Break Glass Type Manual Call Point having a built in short circuit isolator and built in microprocessor to ensure a response time of max 1 second. It also incorporates an indication LED, flashed after pressing the button to acknowledge the activation and a key operation facility for testing purposes.	12	No.			
4	Addressable Type Indoor Loop Powered electronic sounder and minimum sound output 100 dB at 1 meter with frequencies for variety of sounds as required. Souder shall be loop wired and loop signaled, built in short circuit isolator, configured via software.	17	No.			
5	<b>Supply and wiring</b> for <b>FACP Power</b> from <b>DB</b> to FACP with 2C, 2.5 Sq.mm fire resistant cable in 25mm dia PVC Conduit. Complete in all respect.	20	Rm.			
6	Supply and wiring of 2C, 1.5 Sq.mm Fire Resistant Shielded Cable (Fire rating for 2 hours at 950 C) in 25mm dia PVC conduit from fire alarm control panel to all sensors & devices including all installation accessories complete in all respect.	720	Rm.			
7	Addressable Interface Module for integration of Fire Alarm System with Power Panels, PA System, Elevators, Fire Fighting System etc.	4	No.			
8	<b>Networking</b> of all the Fire alarm control panels of all the OPD Buildings along with integration with the existing control room including IO modules, wiring, conducting, complete in all respect.	1	Job			
9	<b>Programming, testing and commissioning</b> of the complete system as per client's requirements permissible for the FACP with training sessions of maintenance personnel's.	1	Job			
10	Allow for <b>any other item</b> required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ.	1	Job			
	Note:  1) The Bidder shall provide the complete Technical Literature for the system offered.  2) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec - I (CARRIED FORWARD TO SUMMARY)					
	SECTION - J WIRING FOR LOW CURRENT SYSTEMS					
Α	PUBLIC ADDRESS SYSTEM					
1	Supply and wiring for Public Address System using 2C, 2.5 flexible Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	300	Rm.			

	Wiring for Microphone outlet using Cat-6 STP					
2	Cable in 25mm dia PVC conduit. as shown in	50	Rm.			
_	drawings. Complete in all respects.		1			
В	CCTV SYSTEM					
	Supply and Wiring of CAT-6 UTP Cables for					
	Cameras from each camera to NVR in already					
	installed PVC conduit via cable tray as per					
3	drawings including termination and tagging at	4	Coil			
	both ends. Complete in all respects. (Coil =305					
	Rm.)					
С	QUEUE MANAGEMENT SYSTEM					
	Supply and Wiring of CAT-6 UTP Cables for Queue					
	Management System from Communication					
	Rack to each outlet in 25mm dia PVC Conduit as					
4	per drawings including termination and tagging	3	Coil			
	at both ends. Complete in all respects.					
	(Coil =305 Rm.)					
	Supply and wiring for Queue Management					
5	Speakers using 2C, 2.5 Speaker Cable as per	150	Rm.			
3	zoning layout shown in drawings in 25mm dia	130	KIII.			
	PVC conduit. Complete in all respects.					
D	WIFI SYSTEM					
	Supply and Wiring of CAT-6 UTP Cables for					
	Wireless Access Points from Communication					
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends.	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the	3	Coil			
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.					
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft	3	Coil			
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final					
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final commissioning of project. Approval of final bills					
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final commissioning of project. Approval of final bills are subject to completion of as built drawings.					
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final commissioning of project. Approval of final bills					

# **SUMMARY OF PLUMBING AND FIREFIGHTING WORKS**

S.No	Activity	Amount Rs.
А	TOILET FITTING AND ACCESSORIES	
В	COLD WATER SUPPLY SYSTEM	
С	SOIL, WASTE AND VENT PIPE SYSTEM	
D	EXTERNAL WATER SUPPLY SYSTEM	
Е	FIRE FIGHTING SYSTEM	
F	SEWERAGE SYSTEM	
	TOTAL COST OF PLUMBING & FIREFIGHTING WORKS	

#### **LIST OF APPROVED MANUFACTURERS**

S.No.	ITEM	MAKE
	PLUMBING WOR	KS
1	European Water Closet (Floor Mounted)	PortaHD-12N
2	Wash Basin (Half Pedestal)	Porta HDLP203AH
3	Wash Basin (Counter Top)	Porta HD-3
4	Basin Mixer	Zilver E-D109
5	Bottle Trap	Zilver E-X024
6	Bibcock	Zilver E-\$03F
7	Toilet Paper Holder	Zilver 033-2
8	Cloth Hook	Zilver 033-1
9	T-Stop Cock	Zilver GX 7016
10	Double Bibcock With Muslim Shower	Zilver E-S08 + VRH FX 40NS
11	Poly-propylene Pipe (Water Supply)	Dadex
12	Polypropylene Pipe Fittings (Water Supply)	Dadex
13	Polyethylene Pipe and Fittings (Water Supply)	Dadex
14	Valves And Strainers	Kitz / Haterslay
15	uPVC Pipe (Drainage)	Dadex
16	uPVC Fittings (Drainage)	Dadex
17	uPVC Clean out	Dadex
18	Teflon Tape	Imported
19	Floor Drain / Floor Gully	Dadex
20	Vent Cowl	Dadex
21	Floor Drain Grating	Alpine
22	Manhole Frame & Cover (CI)	Alpine
23	Gully Trap	Dadex
24	Pump	Lowara / Grundfos / Wilo
	FIRE FIGHTING WC	DRKS
25	Fire Hose Cabinet (S/S) with Reel	NAFFCO / SFFECO
26	Fire Extinguishers	NAFFCO / SFFECO
27	Fire Hydrant with Hose	NAFFCO / SFFECO
28	Siamese Connection	NAFFCO / SFFECO
29	Seamless Black Steel Pipe & Fittings	LONTRIN / Approved Equivalent
30	Hanger and Supports	Norm / Mungo
31	Gate Valves	Kitz / Haterslay
32	Pump	NAFFCO / SFFECO
33	Paint	ICI

### <u>Note.</u>

Before quoting the rates, the contractor should first visit the site.

Above mentioned approved manufacturers list is to be maintained

S. NO.		DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	TOILE	T FITTING AND ACCESSORIES				
1	Providin Closet w accessor thimble, cover, te service necessar with non complete a) For G b) For H	g and fixing European Type Water with coupled flushing cistern, including all ies and fittings, C.P flexible pipe, waste and traps, including seat and ies stop cock with check nut, all joints to and drains, plugging and screwing as y to the structure, filling sleeve opening in-shrink grout, and coated with epoxy, is in all respect.  The energy including seat and including seat and included in the structure of t	16 2	Nos. Nos.		
2	with all a cock wi pipe, wa including service necessar with nor	g and fixing Counter Top Wash Basin accessories such as, basin mixer, tee stop th check nuts, CP flexible pipe, waste ste coupling, bracket set, etc. Complete g bottle trap, silicon sealant, all joint to and drain, plugging and screwing as y to the structure, filling sleeve opening n-shrink grout, and coated with epoxy. e in all respect.	25	Nos.		
3	mixer, to pipe, wa Complete joint to sa nece	g and fixing Wash Basin with Half with all accessories such as, basin the stop cock with check nuts, CP flexible steepipe, waste coupling, bracket set, etc. the including bottle trap, silicon sealant, all service and drain, plugging and screwing ssary to the structure, filling sleeve with non-shrink grout complete in all	23	1105.		
	a) For G	eneral toilets	20	Nos.		
		andicapped toilet	2	Nos.		
4	Providin including	g and fixing bathroom accessories g fixing with rawal plug of approved omplete in all respect.				
	I	Toilet paper holder	18	Nos.		
	II	Soap Dispenser	52	Nos.		
	III	Double bibcock with muslim shower	18	Nos.		
	IV	Cloth hook	18	Nos.		
	V	Bibcock (Janitor Area)	2	Nos.		
				SUI	B TOTAL-A	

В	COI	LD WATER	R SUPP	PLY SYSTEM				
1	Polyp		ld Wate Foilets	er Piping for the				
	per DIN fittings a tees, elbe clamps, wall or l slab as per providing	8077 / 8078 s per DIN 16 ows bends, rehanger collaburied in was er specification.	(PN 20 962 (PN educer pars, supp lls or su ons included	ly propylene pipe as ) including specials (25) such as socket, olug and union etc), ports, supported on uspended from roof uding color tagging, esting @ 150 psi,				
	I	25	mm	Ø	262	RM		
	II	32	mm	Ø	106	RM		
	III	40	mm	Ø	22	RM		
	IV	50	mm	Ø	18	RM		
	V	63	mm	Ø	68	RM		
2	VI	75	mm	vay <b>Gate Valves</b> of	9	RM		
	ends and for 4" Ø. with all complete specifica	cast iron boo (100 mm) an additional e installatio tion and as I by the engin	dy bronz d above materi n as shown o	Ø. With threaded the trim flanged ends for 125 psi together all required for a described in the ton drawings and as				
	I	1/2"		Ø	33	Nos.		
	II	3/4"		Ø	7	Nos.		
	III	1"		Ø	4	Nos.		
	IV	3"		Ø	1	No.		
	V	4"		Ø	3	Nos.	D. TOTAL D	
	50	II WASTI	ZANID	VENT DIDE		<b>SU</b> .	B TOTAL-B	
C	SU		STEM	VENT PIPE				
1	fit type e from slal plugs, cl (bend, te of holes making structure grout, la complete	g and fixing is mbedded in a cor clamped amps, hange es, Y-tee etc in walls and good the s, filling sleep belling and e in all respect	n position and to floor and collars.  Making floors ame as we open testing to the collars.	on uPVC pipes push d wall or suspended and wall including s, supports, specials ng requisite number where required and necessary to the ang with non-shrink to 8'ft water height				
	I	50	mm	Ø	70	RM		
	II	82	mm	Ø	269	RM		
	III	110	mm	Ø	143	RM		

2	solvent j embedde slab or cl clamps, l tees, Y-t holes in making structure grout, lal complete	oint type pind in floor and amped to floor hanger collar tee etc.). Make walls and good the solid pind filling sleet belling and the solid pind all respective.	pe for rend wall or and was, suppositions verifications were assive opening to the and as	rain water drainage, or suspended from vall including plugs, orts, specials (bend, equisite number of where required and necessary to the ing with non-shrink o 8' ft water height shown in drawings.				
	I	82	mm	Ø	6	RM		
	II	110	mm	Ø	45	RM		
3	of approrequisite for pipe of necessary opening	ved design of number of he connection are to the structure with nor g gasket and o	with S/s noles in nd makin ructure n-shrink					
	I	82	mm	Ø	25	Nos.		
5	plinth or good the filling s complete  I  II  Providing	floor for pi same as nec leeve opening including ru 82 110 g and fixing u	pe connects of the connects of	er of holes in walls, nection and making to the structure and non-shrink grout sket and clamp.  Ø Clean Out Plug with g good the same as	13 5	Nos.		
				with rubber gasket,				
		in all respec		8				
	I	82	mm	Ø	18	Nos.		
	II	110	mm	Ø	5	Nos.		
6	of the f	following Ø in all respec	includ	Cowl for vent pipe ing all accessories				
	I	82	mm	Ø	4	Nos.		
	II	110	mm	Ø	3	Nos.		
7	design v number of connection necessary including respect.	vith uPVC of holes in von and may to the structure.	grating vall plin king g cture wi	Drain of approved including requisite th or floor for pipe ood the same as th non-shrink grout p complete in all				
	I	110 n	nm Ø (S	Scupper Drain)	5	Nos.		
							Sub Total-C	

D	EXTERNAL WATER SUPPLY SYSTEM	1		
1	Providing. installing, testing and commissioning	-		
	Booster <b>Pump for top 2 floors</b> water supply of			
	approved make including (100 litres) tank, gat			
	valves, check valves, foot valves, gauges, contro			
	panel (with the system for increase in flow the second pump should kick in), pressure switch for			
	adjusting pressure from 35 to 50 psi for a flow of			
	50Gpm (each pump), as per drawing, complete i			
	all respect. (Note: 01set = 02Nos pumps)	1	Set.	
2	Providing and fixing C.I Manhole Cover for		200	
	underground and overhead water tank. (weight			
	52kg)			
	I 600x600 mm	2	Nos.	
3	Providing, fixing <b>C.I Goose Neck</b> with wire mes			
	over the underground water tank & overhead			
	water tank as per drawing & engineer's approva			
	I 110 mm Ø	1	Nos.	
4	Shop Drawings as per specifications.	1	Job	
5	As Built Drawings as per specifications.	1	Job	
	Sub Total-D			
E	FIRE FIGHTING SYSTEM			
<b>E</b>	FIRE FIGHTING SYSTEM Providing, laying, jointing and testing Blace	k		
	Providing, laying, jointing and testing Blac Steel Seamless Piping schedule 40 for	or		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder	or ed		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support	or ed s,		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating	or ed s, g		
-	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respectives.	or ed s, g g ct		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the	or ed s, g g ct		
	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respectives.	or od s, g g ct ne	RM	
	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.	or od sk, s, sg ct ae	RM RM	
	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coatin (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø	or od s, g g ct ne	RM RM RM	
-	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø	or od s, , , , , , , , , , , , , , , , , , ,	RM	
-	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coatin (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø	or od s, g g et ae 12 33 32 42	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader	or od s, g g ct ae 12 33 32 42 of ed	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged ends	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4" Ø. (100 mm) and above for 125 psi together	or od s, gg ct ae 12 33 32 42 of od ds er	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged ender for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for	or od s, g g et ue 12 33 32 42 of ed ds er a	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the specification and as shown on drawings and a	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	

	D '1' 1 C' ' 1 11 4 4 E'			
3	Providing and fixing double compartment <b>Fire</b>			
	Hose Cabinet with (3/4" Ø, 100 ft long, high			
	pressure rubber hose, 180° rotation). Complete			
	with 1"Ø PRV, 1 no. 25mm dia. plastic nozzle has			
	jet / spray / shut-off operations. Type: Swing			
	Automatic (Automatic Hose Reel has integrated			
	automatic stop valve which will open after 3			
	revolution of the reel). Standard size: 25mm dia.,			
	Length: 30m, Maximum working pressure: 15			
	Bar, Red Color, Manufacture standard: BS EN			
	671-1.	4	Nos.	
4	Providing and fixing <b>Dry Chemical Powder</b> , fire			
	extinguisher 6Kg capacity, powder coated in red			
	color, complete with pressure gauge and wall			
	bracket.	9	Nos.	
5	Providing and fixing CO <sub>2</sub> Type Fire			
	<b>Extinguisher</b> 2Kg capacity, powder coated in red			
	color, complete with wall bracket and all other			
	accessories.	9	Nos.	
6	Providing, Installing and commission 2 Way		1,007	
	<b>Breeching Inlet</b> unit for wet riser including all			
	accessories and material complete in all respect as			
	shown on drawings / specifications.	1	No	
7	<b>J</b>	1	No.	
7	Providing and installing Automatic Air Vent			
	with all accessories and material as specified			
	complete in all respect as shown on drawings /			
		_		
	specifications.	2	Nos.	
	specifications.  DRAWINGS	2	Nos.	
8	specifications.	2	Nos.	
8	specifications.  DRAWINGS	2	Nos.	
8	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect,	2	Nos.	
8	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains	2	Nos.	
8	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.			
	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect,	1	Job	
9	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.			
9	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.	1	Job	
9	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.	1	Job	
9	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.	1	Job	
9 10	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM ∅	1 1	Job Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM Ø  Providing and fixing 225 x 225mm uPVC Gully	1 1	Job Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM Ø  Providing and fixing 225 x 225mm uPVC Gully Trap with Frame and cover including uPVC gully	1 1	Job Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM Ø  Providing and fixing 225 x 225mm uPVC Gully	1 1	Job Job	

3	Construction and making Manhole complete in all respect including excavation, backfilling, compaction, block masonry benching, manhole cover (weight: 52kg) with frame complete as per drawing and satisfaction to the engineer, including testing. (Note: All material to be supplied by the contractor)				
	For depth 0-3'ft (600mm x 600mm)				
	,	4	Nos		
4	Shop Drawings as per specifications.	1	Job		
5	As Built Drawings as per specifications.	1	Job		
SUB TOTAL-F					
TOTAL					

# "CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI".

# **BLUE BLOCK**

S. No.	Description	Amount
1	CIVIL WORK	
2	ELECTRICAL & ALLIED WORKS	
3	PLUMBING & FIRE FIGHTING WORKS	
	GRAND TOTAL RS.	

CONTRACTOR	

S. No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	EXCAVATION AND BACKFILLING				
1.1	Excavation for foundations, plinth beams etc in any strata upto required depth from natural ground level, including back filling and compacting in 150mm thick layers, wherever required with all leads, lift with suitable excavated material. Excavated material suitable for use as back filling material shall be stockpiled, if required, within the site of work or as directed by Engineer in charge, this stockpile material shall be transported back to places required fill or back fill. Surplus material unsuitable for use as filling material shall be disposed off away from site by dumpers. (No extra payment will be made in this regard). Complete in all respect as per drawing, specifications and directed by Engineer – in – charge.				
	( only the size of lean concrete will be calculate for payment ).	765	Cum		
2.1	Providing, mixing, depositing, curing and compacting using S.R. cement lean concrete under foundations, plinth beams etc, as shown on the drawings with clean local sand and crushed stone, graded as specified, including formwork where required etc., complete in all respects as per drawing, specifications and directed by Engineer-incharge.  A. Lean Concrete 1:4:8	70	Cum		
2.2	B. 1:3:6 Cast in situ (under plinth beams)  Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in sub-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) at 28 days using Sulphate Resistance (S.R cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.	14	Cum		
	<ul> <li>A. Footings (f' c = 4 ksi)</li> <li>B. Foundation beams (f' c = 4 ksi)</li> <li>C. Plinth beams (f' c = 3 ksi)</li> <li>D. Columns upto Plinth level (f' c = 4 ksi)</li> <li>E. Lift shear walls upto plinth level (f' c = 4 ksi)</li> </ul>	198 5 14 25 15	Cum Cum Cum Cum		

3	STEEL REINFORCEMENTS.				
3.1	Supplying, cutting, bending, binding and fixing in position <b>Ribbed Deformed Bars</b> , confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling marging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be paid).				
		36000	Kg		
	TO	OTAL COS	T OF SEC	- A Rs.	
	SECTION – B: PLINTH LEVEL TO 1 <sup>ST</sup> FLOOR S	LAB (- 75 I	LEVEL TO	+ 3825 LE	VEL)
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	CONCRETE OF SUPER – STRUCTURE				
1.1	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in super-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) as mentioned at 28 days using Ordinary Portland (O.P cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.  A) Columns (f'c = 4 ksi)  B) Lift/ Shear walls (f'c = 4 ksi)  C) Beams (f'c = 3 ksi)  E) Staircase steps, landing etc (f'c = 3 ksi)	32 24 36 95 14	Cum Cum Cum Cum		
2.1	STEEL REINFORCEMENTS. Supplying, cutting, bending, binding and fixing in position Ribbed Deformed Bars, confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling merging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be paid).				
		37800	Kg		
		TOTAL C	OST OF SE	EC - B Rs.	

### SECTION – C: FROM 1<sup>ST</sup> FLOOR SLAB TO 2<sup>ND</sup> FLOOR SLAB (+3825 TO +7725 LEVEL)

CN	DECODIDATON	OFE	TINITE	DAME	AMOUNT
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.1	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in super-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) as mentioned at 28 days using Ordinary Portland (O.P cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.  A) Columns (f' c = 4 ksi)  B) Lift / Shear walls (f' c = 4 ksi)  C) Beams (f' c = 3 ksi)  D) Slabs (f' c = 3 ksi)  E) Staircase steps, landing etc (f' c = 3 ksi)	32 24 36 95	Cum Cum Cum Cum Cum		
2.1	STEEL REINFORCEMENTS.  Supplying, cutting, bending, binding and fixing in position Ribbed Deformed Bars, confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling marging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be paid).	37800	Kg		
	TOTAL COST OF SEC	· C Rs.			

	ARCHITECTURE						
Item No.	Description	Unit	Quantity	Unit	Amount		
1	Masonry Provide and Lay machine made solid block (800 psi) masonry walls set in 1:6 cement sand mortar including curing complete with scaffolding at any height. As shown on Drg & detail						
	200mm thick solid wall	$m^2$	239				
	150mm thick solid wall 100mm thick solid wall	$m^2$ $m^2$	1395 139				
2	Cavity Wall with Concrete Masonry Unit						
	Block masonry cavity wall in 1:6 cement and sand mortar, including welded M.S. Steel 9mm dia ties in approved size and 50mm thick Polystyrene board insulation (Diamond Jumbolen or as approved) in the cavity; as per drawings.						
	a) 100 + 50 + 150 mm	$m^2$	58				
3	Provide and lay CC1:2:4 pad between cavity wall and precast lowers complete in all respect as per drawing	m	65				
4	Provide and make precast vertical louvres1:2:4 counter including form work and steel finish and fixing arrangement complete in all respect as per drawing						
	Elevation 3.26 mm high	Nos	300				
5	Staircase 3.3 mm high  Provide and fix glass block in 200 x 200 mm as approved including fix in adhesive and all respect fixing arrangement complete in all	Nos	80				
	respect as per drawing No	m <sup>2</sup>	28				
6	Provide and casting RCC 1:2:4 tie beam including steel complete in all respect as per Drawing.	m3	20				
7	Provide and fabricating M.S. polish vertical solid bar 25 x 25 and 12mm x 12mm horizontal welded to vertical bar including 60mm red miranti wood hand rail finish with hammer paint with polish including anti rust complete in all respect as per drawing No	m	90				
8	Provide and fabricating M.S. hand railing for staircase with fixing arrangement with antirust paint including fixing 60mm red miranti wood gola finish with paint and polish n all respect as per drawing No	m	114				

9	Roof Finishing				
a)	Provide and laying 1:3:6 75 mm roof screed				
	laid in slop and panel complete in all respect				
	as per drawing	$m^2$	810		
b)	Provide and laying two coats of hot bitumen				
,	grade complete on all respect as per drawing				
	@. Kg per Sft. With approved polythene				
	sheet complete on all respect as per drawing	$m^2$	729		
c)	Provide and laying 1:2:4 50mm thick				
	complete on all respect as per drawing	$m^2$	729		
d)	Provide and laying 25mm thick thermopile				
	installation complete on all respect as per	2	<b>72</b> 0		
10	drawing	m <sup>2</sup>	729		
10	<b>Ground Floor finishes</b>				
a)	Provide and lay 150 mm thick stone soling	$m^2$	705		
b)	Provide and lay 75mm thick screed	$m^2$	705		
c)	Provide and lay 3 coats of hot bitumen	$m^2$	705		
d)	Provide and lay 75mm thick sub floor	$m^2$	705		
e)	Provide and lay 75mm thick finish floor	$m^2$	705		
f)	Provide and laying imported earth filling as				
	approved	$m^2$	705		
11	<b>Expansion Joint Cover Assemblies</b>				
	Provide and fix expansion joint cover of				
	aluminum sections including 25mm x 25mm				
	thick polysulphide with baker strip and				
	impregnated fiber board as approved by				
	Structural Engineer where ever required, including filling sealant; as per drawing				
a)	Vertical	m	60		
b)	Horizontal	m			
12		m	14		
12	Doors and Frames				
	Provide and install door with G.I. frame (10				
	SWG) including fix glass in position thickness as shown in drawing filling,				
	concrete 1:6 in gape between frame and				
	masonry wall in line, level and plumb, apply				
	3 coats metal paint finish, as required				
	complete as per detail shown on Drg #				
	D-01 - 1500 x 2750	Nos	4		
	D-02 - 1350 x 2750	Nos	16		
	D-03 - 1200 x 2750	Nos	4		
	D-04 - 1200 x 2750	Nos	5		
	D-05 - 1100 x 2750	Nos	5		
	D-06 - 1050 x 2750	Nos	2		
	D-07 - 900 x 2750	Nos	8		
	D-08 - 750 x 2750	Nos	34		
	D-09 - 700 x 200	Nos	10		
	DW-10 - 1150 x 2150	Nos	2		
	2 11 10 1130 X 2130	1403	<i>_</i>		
	i .		i	1	1

13	Flush Door			
	Provide and make 1 1/2" thick solid core			
	flush door with 2 1/2" Wide partal wood			
	frame all round 6 x 1 1/4" partal wood mid			
	rail in two pieces partal wood for lock fitting			
	all shutter with 3/4" x 1" 1/4" x 10" partal			
	wood pieces Formica finish over 1/8" thick			
	ply in all respect as per drawing No			
	D-01 - 1500 x 2750	Nos	4	
	D-02 - 1350 x 2750	Nos	16	
	D-03 - 1200 x 2750	Nos	4	
	D-04 - 1200 x 2750	Nos	6	
	D-05 - 1100 x 2750	Nos	2	
	D-06 - 1050 x 2750	Nos	2	
	D-07 - 900 x 2750	Nos	4	
	D-08 - 750 x 2750	Nos	34	
	D-09 - 700 x 200	Nos	10	
	DW-10 - 1150 x 2150	Nos	2	
14	Aluminum Anodized Windows	1108	<u> </u>	
14	Provide and install bronze Aluminum			
	anodized windows using approved section			
	for frame glazed and wire mesh shutter with			
	cost of light tinted glass, refer schedule given			
	in Drg No for manufacturing and fitting			
	details complete with cost of sealant etc. as			
	required by Architect.			
a)	W-02 - 750 x 1400 - Size	Nos	4	
b)	V-01 - 600 X 900 - Size	Nos	8	
15	Aluminum Powder Ventilators & Doors			
	Provide and install bronze Aluminum			
	powder coated windows using approved			
	section for frame glazed and wire mesh			
	shutter with cost of light tinted glass, refer			
	schedule given in Drg No for			
	manufacturing and fitting details complete with cost of sealant etc. as required by			
	Architect.			
	PV-1a - 670 x 550 - Size	Nos	12	
	PV-2a - 600 x 550 - Size	Nos	32	
	PV-3a - 520 x 550 - Size	Nos	20	
	PV-5a - 470 x 550 - Size	Nos	4	
	PV-6a - 940 x 550 - Size	Nos	2	
	PV-7a - 790 x 550 - Size	Nos	9	
			34	
	PV-8a - 640 x 550 - Size	Nos		
	PW-05 - 600 x 991 - Size	Nos	16	
	PW-4a - 700 x 550 - Size	Nos	16	
	DW-05 - 2100 x 2750 - Size	Nos	16	
	D-1a - 1500 x 2750 - Size	Nos	2	
	D-7a - 900 x 2750 - Size	Nos	5	

	W-03 - 750 x 1591 - Size	Nos	2		
	V-02 - 450 x 450 - Size	Nos	14		
16		1108	14		
10	Portland Cement Plastering				
	Provide and apply12 mm thick plaster to				
	internal beams, wall and jambs surfaces in				
	1:4 cement sand mortar include cost of				
	200mm wide expanded lath metal as				
	approved fixed with steel nail as per drawing	$m^2$	3533		
17	and specifications. Ground to 4th floor	III	3333		
17	12 mm thick ceiling plaster in 1:4 cement sand mortar as per drawing and				
	specifications.	$m^2$	1720		
18	12mm thick Cement plaster to waist of stair	111	1720		
10	case and pardi on both side of steps in 1:4				
	cement sand mortar as per drawing and				
	specifications.	$m^2$	106		
19	Applying 20 mm thick external cement	111	100		
17	plaster in 1:4 cement sand mortar rough				
	including all bends, recesses, corners, jambs,				
	grooves pattas with additional thickness and				
	provision of drip moulds, complete with				
	hacking the reinforced concrete surfaces,				
	filling back the chases, fixing G.I. expanded				
	metal lath as per approved sample over				
	chases, electrical PVC pipes and joints				
	between brick and RCC masonry, curing				
	complete at any height plaster as per				
	drawings and specifications.	$m^2$	1173		
20	Apply Color Crete plaster in approved				
	thickness and color using approved pigment				
	with required texture finish including all				
	installation arrangement; complete all as per	_			
	drawings and specifications.	$m^2$	1173		
21	ALUMINUIM COMPOSITE PANEL				
	CLADDING				
	Provide and installation aluminum				
	composite cladding sheet including wooden				
	frame and CC plaster for water spout channel				
	(alucobond or equalant) Exterior wall and				
	columns as required 4mm or as per mention in drawing, including all tools and plant				
	scaffolding and complete as per approved				
	sample detail as per drawings and				
	specifications.	$m^2$	75		
22	Plastic Tiling	111	13		
	Provide and lay Gizri stone facing on				
	external plinth up to 1200 mm as required				
	(sample and size to be approved by the				
	Architect) laid in 1:2 cement sand mortar				
	with deep cut joint complete in all respect as				
	per drawings and specifications.	$\mathrm{m}^2$	186		
			1	1	1

23	Provide and lay glazed tile for bathroom				
	fixing with dry bond including grouting;				
	complete in all respect as per drawings.				
	Wall	$m^2$	366		
24	Provide and lay Porcelain tile on wall and				
	staircase dado with dry bond including				
	grouting; complete in all respect as per				
	drawings and specifications.				
a)	up to 1200	$m^2$	1052		
b)	up to 2100	$m^2$	258		
25	Provide and lay Porcelain tile on floor made				
	with 1:4 cement sand mortar bed and dry				
	bond including grouting; complete in all				
	respect as per drawings and specifications.	_			
a)	400 x 400	$m^2$	1615		
b)	300 x 300	$m^2$	188		
c)	Skirting	m	131		
26	Provide and lay National Industries glazed				
	tiles of approved color and size for floor over				
	75mm average 1:2:4 concrete bed and dry				
	bond including grouting: complete in all				
	respect as per drawings				
a)	Floor	$m^2$	38		
b)	Skirting	m	75		
27	Acoustical Tile Ceiling				
	Dampa (Thermal or equivalent) Ceiling				
	System, 600 mm x600 mm of size with				
	suspension system including making				
	opening for AC ducts & lights etc. complete				
	in all respect as per drawing and	2			
	specification.	m <sup>2</sup>	1024		
28	Provide and Fix 1/2" thick GYPSUM box				
	panel paint finish as approve with Metal				
	framing inside, all wood to be termite	2	120		
20	treated, as per design, details and drawing	m <sup>2</sup>	138		
29	Interior Painting				
	Plastic Emulsion paint wall and ceiling for				
	interior surface including all base work	$m^2$	4686		
30	complete as per drawings  Provide and install epoxy paint finish all in	111	4000		
30	strict accordance with manufacturer's				
	instruction with minimum strength complete				
	in all respect as per drawing	$m^2$	185		
31	Marble	111	100		
	Provide and lay pre polish marble 18mm				
	thick on tread and riser laid in 1:2 cement				
	sand mortar complete in all respect as per				
	drawings and specifications.				
	On step	Per/step	52		
a)	On Landing	$m^2$	18		
b)	Skirting	m2	55		
	· 0	1112		]	

32	Provide and lay pre polish marble nosing				
	18mm thick 100mm wide and porcelain tile				
	on tread and riser laid in 1:2 cement sand				
	mortar complete in all respect as per				
	drawings				
a)	On step1	Per/step	52		
b)	On Landing	$m^2$	18		
33	Provide and lay marble border complete in				
	all respect as per drawings	m	243		
34	Provide and lay granite dado lift lobby as per				
	sample approved by the Architect laid in dry				
	bond of required thickness with grooves,				
	rounding edges, polish finished as required.	$m^2$	66		
35	Provide and lay marble on landing complete				
	in all respect as per drawings	m	18		
TOTAL CIVIL WORK					

#### **ELECTRICAL WORK**

S.#	DESCRIPTION	SUPPLY (Rs.)	INSTALLATION (Rs.)	TOTAL (Rs.)
1	SECTION - A WIRING & WIRING ACCESSORIES			
2	SECTION - B Cable Containment			
3	SECTION - C SWITCHES & SOCKETS			
4	SECTION - D Lighting fixtures			
5	SECTION - E MAIN / SUBMAIN CABLES			
6	SECTION - F DISTRIBUTION BOARDS			
7	SECTION - G Earthing & Grounding System			
8	SECTION - H VOICE & DATA COMMUNICATION SYSTEM			
9	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM			
10	SECTION - J WIRING FOR LOW CURRENT SYSTEMS			
11	SECTION - K AS-BUILT DRAWINGS			
	Total Amount (Rs.)			

#### Note:

- Contractor is advised to inform missing items (if any) in BOQ at time of submitting this tender. No escalation will be considered at time of execution of work.
- Owner can supply any material of Contractor scope at any stage and its cost will be completely deleted from Contractor scope without any kind of adjustment.
- Contractor should mark the selected brands and vendors in approved manufacturer list with submission of Tender Documents.
- Owner / Consultant have all the rights to select any brand / vendor from provided approved manufacturer list, Contractor shall not finalize any brand / vendor without written approval from consultant / owner.

			SUPPLY INSTALLATIO				ALLATION	
S.#	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	AMOUNT (Rs.)
	SECTION - A WIRING & WIRING ACCESSORIES							
	Supply, installation, testing and commissioning of following items including all material, tools, labor & accessories required for completion of work as per description & drawings. Complete in all respects. As shown on drawings.  Note:  1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.  2) The circuit wire drop and busway plug / tapoff to light / power point riser shall be sufficient as per false ceiling levels and shall be in flexible GI conduit with PVC coating.  3) Merger Test of each circuit to be done by contractor.  4) Wiring for Occupancy Sensor shall be included							
1	in light wiring.  Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia PVC conduit as shown in drawings.	50	No.					
2	Wiring for light point from switch board / Dimmer board to first light point with phase 1.5 Sq.mm, common neutral 2.5 Sq.mm and common ECC 2.5 Sq.mm, in 25mm dia PVC conduit as shown in drawings. as shown on drawings.	276	No.					
а	Same as above item but wiring from light <b>point to point.</b>	213	No.					
3	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia PVC conduit as shown on drawings.	14	No.					
а	Same as above item but wiring from light <b>point to point.</b>	66	No.					
4	Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia uPVC conduit as shown in drawings. (Avg Length: 50 Rm)	2	No.					
5	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia uPVC conduit as shown on drawings.	3	No.					
а	Same as above item but wiring from light <b>point to point.</b>	21	No.					
6	Wiring of 13A/15A Switch Socket units (RAW Power) from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.							
а	2x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.	22	No.					
b	Same as above item, but wiring from <b>outlet to outlet.</b>	220	No.					

wing of 13A/15A switch Socket units for Queue Management System from Dis for first outled with following size of wires in in Zimmr dia of PVC condults under wall / floor cs shown in the dowlegs.  Zed Symmo (VPVC + ECC 13A Symm Cu/PVC dowlegs in cost of first outlet.  Wing of 13A/15A Switch Socket units for will on the charged spiparately and its cash must be inclusive in cost of first outlet.  Wing of 13A/15A Switch Socket units for Will Outlet from Dis to first outlet.  Wing of 13A/15A Switch Socket units for Will outlet from Dis to first outlet.  Wing of 13A/15A Switch Socket units for Will outlet.  Wing of 13A/15A Switch Socket units for Will outlet.  Wing of 13A/15A Switch Socket units for Will outlet.  Wing of 20A Switched Socket for Hand Dryer from Dis to Socket for with following size of wires in 25mm dia PVC condulit.  Zx 45 symm Cu/PVC + ECC 1x/2 symm Out/PVC  Same as above item but wiring from outlet to outlet.  Zx 45 symm Cu/PVC + ECC 1x/2 symm Out/PVC  Same as above item but wiring from 20A switch to 13A International Outlet Wiring of 15A DP Isolator for VRF Indoor AC / Spill ACS from Dis to first outlet with following size of writes in 125mm dia of PVC condults under wall / floor as shown in the drawings.  Zx 45 symm Cu/PVC + ECC 1x/4 Symm Out/PVC  Wing of 20A AP Isolator for Indoor VRF Units from Dis to first outlet with following size of wires in in 25mm dia of PVC condults under wall / floor as shown in the drawings.  Zx 45 symm Cu/PVC + ECC 1x/4 Symm Out/PVC  Wing of 20A DP Isolator for Humbing Pump from Dis to first outlet with following size of wires in in 25mm dia of PVC condults under wall / floor as shown in the drawings.  Zx 45 symm Cu/PVC + ECC 1x/4 Symm Out/PVC  Wing of 30A DP Isolator for Windoor VRF Units of District outlet with following size of wires in in 25mm dia of PVC condults under wall / floor as shown in the drawings.  Zx 45 symm Cu/PVC + ECC 1x/4 Symm Out/PVC  Wing of 30A DP Isolator for Fumbing Pump from Dis to first outlet with following size of wires in in 25mm dia of PVC					1	1	
7 following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drowings.  2x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of fist outlet.  Wiring of 13A/15A Switch Socket units for WiFi Outlet from DB to first outlet with following size of wires in citizedy installed PVC conduit via actole tray as shown in the drawings.  2 x 2.5 Sqmm Cu/PVC + ECC 1x2.5 Sq.mm  Cu/PVC  Same as above lifem, but wiring from outlet for outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  2 x 4.5 Sq.mm Cu/PVC + ECC 1x4.5 Sq.mm  Cu/PVC  Wiring of 16A DP isolator for VRF Indoor AC / Split ACs is nor DB to first outlet with following size of wires in 25mm dia PVC conduits with following size of wires in 25mm dia PVC conduits under wall / floor as shown in the drowings.  2 x 4.5 Sq.mm Cu/PVC + ECC 1x4.5 Sq.mm  Wiring of 16A DP isolator for VRF Indoor AC / Split ACs is nor DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drowings.  2 x 4.5 Sq.mm Cu/PVC + ECC 1x4.5 Sq.mm  10 Ming of 20A AP isolator for Indoor VKF Units from DB to first outlet with tolowing size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drowings.  4 x 4.5 Sq.mm Cu/PVC + ECC 1x4.4 Sq.mm  2 x 4.5 Sq.mm Cu/PVC / PVC + ECC 1x4.4 Sq.mm  2 x 4.5 Sq.mm Cu/PVC / PVC + ECC 1x4.4 Sq.mm  3 x 4.5 Sq.mm Cu/PVC / PVC + ECC 1x4.4 Sq.mm  4 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  5 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  6 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  7 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  8 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  9 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  10 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  11 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  12 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 Sq.mm  13 x 5.5 Sq.mm Cu/PVC / PVC + ECC 1x4.5 S		Wiring of 13A/15A Switch Socket units for Queue					
conduits under wall / floor as shown in the drawings.  2 x4 Saymm Cu/PVC + ECC 1x4 Saymm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for Wiff Outlet from Dis to first outlet with following size of wires in already installed PVC conduit via cable toy as shown in the drawings.  2 x2.2.5 Saymm Cu/PVC + ECC 1x2.5 Saymm 6 No.  2 x2.2.5 Saymm Cu/PVC + ECC 1x2.5 Saymm 6 No.  2 x2.5 Saymm Cu/PVC + ECC 1x2.5 Saymm 7 No.  2 x4.5 Saymm Cu/PVC + ECC 1x4.5 Saymm 7 No.  2 x4.5 Saymm Cu/PVC + ECC 1x4.5 Saymm 8 No.  2 x4.5 Saymm Cu/PVC + ECC 1x4.5 Saymm 9 No.  2 x4.5 Saymm Cu/PVC + ECC 1x4.5 Saymm 10 No.  2 x4.5 Saymm Cu/PVC + ECC 1x4.5 Saymm 10 No.  3 xme as above item but wiring from outlet to outlet.  2 x4.5 Saymm Cu/PVC + ECC 1x4.5 Saymm 10 No.  3 xme as above item but wiring from 20.4 Switch 10 No.  4 No.  10 13A International Outlet  Wiring of 15A.D Pt isolator for VFF Indoor AC / Split No.  2 x4.5 Saymm Cu/PVC + ECC 1x4.5 Saymm 10 No.  2 x4.5 Saymm Cu/PVC 15C 1x4.5 Saymm 10 No.  3 xm 2 xm 2 No.  3 xm 2 xm 2 No.  4 No.  5 xm 2 xm 2 No.  5 xm 2 xm 2 No.  6 xm 2 xm 2 No.  6 xm 2 xm 2 No.  7 xm 2 xm 2 No.  7 xm 2 xm 2 No.  8 xm 2 xm 2 No.  8 xm 2 xm 2 No.  9 xm 2 xm 2 No.  10 No.  11 No.  12 xm 3 xm 2 No.  13 No.  14 No.  15 xm 3 xm 2 No.  16 xm 2 No.  17 No.  18 xm 2 xm 2 No.  19 xm 2 xm 2 No.  19 xm 2 xm 2 No.  10 xm 2 xm 2 No.  10 xm 2 xm 2 No.  10 xm 2 xm 2 No.  11 No.  12 xm 3 xm 2 No.  12 xm 3 xm 2 No.  13 xm 3 xm 2 No.  14 No.  15 xm 3 xm 3 xm 2 No.  16 xm 3 xm	_						
drowings.  2x4 Symm Cu/PVC + ECC 1x4 Symm Cu/PVC Note: Any outlet corning within range of 2m will on be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WIFI Outlet from D8 to first outlet with following size of wires in afterday installed PVC conduit via cable tray as shown in the drowings.  2 x 2.5 Symm Cu/PVC + ECC 1x2.5 Symm  Cu/PVC Same as above item, but witing from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from D8 to Socket for with following size of wires in 25mm dis PVC conduit.  2 x 4 Symm Cu/PVC Cu/PVC  Wiring of 18A DP Isolator for VRF Indoor AC / Split ACs than D8 to Isrd outlet with following size of wires in 25mm dis PVC conduits.  3 x 4 Symm Cu/PVC + ECC 1x 4 Symm  Wiring of 18A DP Isolator for VRF Indoor AC / Split ACs than D8 to Isrd outlet with following size of wires in in 25mm dis of PVC conduits under wall / floor as shown in the drowings.  3 x 4 Symm Cu/PVC + ECC 1x 4 Symm  Cu/PVC  Wiring of 20A AP isolator for indoor VRF Units from D8 to Isrd outlet with following size of wires in in 25mm dis of PVC conduits under wall / floor as shown in the drowings.  4 x 4 Symm Cu/PVC + ECC 1x 4 Symm  Cu/PVC  Wiring of 20A AP isolator for Net Welter Geyser Inside foller Blocks from D8 to Isrd outlet with following size of wires in in 5mm did of PVC conduits under wall / floor as shown in the drowings.  3 x 4 Symm Cu/PVC/PVC + ECC 1x 4 Symm  Cu/PVC  Wiring of 20A AP isolator for Hot Water Geyser Inside foller Blocks from D8 to Isrd outlet with following size of wires in in 25mm did of PVC conduits under wall / floor as shown in the drowings.  3 x 4 Symm Cu/PVC/PVC + ECC 1x 4 Symm  Cu/PVC  Wiring of 30A AP isolator for PVC has been promised as shown in the drowings.  4 x 1 Symm Cu/PVC/PVC + ECC 1x 1 Symm  10 Socket for with following size of wires in in accopy installed conduit via cable froy, shown in drowings.	/						
2.4 Signm Cu/PVC + ECC 1s4 Signm Cu/FVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WIFI Outlet from Bit of first outlet with following size of wires in already installed PVC conduit via cable tray as shown in the drawings.  2. 2 x 2.5 Samm Cu/PVC + ECC 1s2,5 Samm Cu/PVC Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from Dis to Socket for with following size of wires in 25mm dia PVC conduit.  2. x 4 Samm Cu/PVC + ECC 1s 4 Samm Cu/PVC Same as above item but wiring from 20A Switch to 13A International Outlet Wiring of 16A DP isolator for VFF Indoor AC / Spilt ACs from Dis to first outlet with following size of wires in in 25mm dia PVC conduits under wall / floor as shown in the drawings.  2. x 4 Samm Cu/PVC + ECC 1s 4 Samm Cu/PVC Wiring of 20A 4P isolator for Indoor VRF Units from Dis to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4.4-5 spmm Cu/PVC/PVC + ECC 1s 4 Samm Cu/PVC Wiring of 20A OP Isolator for Indoor VRF Units from Dis to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4.4-5 spmm Cu/PVC/PVC + ECC 1s 4 Samm Cu/PVC Conduits under wall / floor as shown in the drawings.  4.4-5 spmm Cu/PVC/PVC + ECC 1s 4 Samm Cu/PVC Wiring of 20A DP Isolator for Plumbing Pump from Dis to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4.5-16 spmm Cu/PVC/PVC + ECC 1s 4 Samm Cu/PVC Wiring of 30A AP Isolator for Outdoor VRF Units at Roof from Dis to Socket for with following size of wires in intended vinstalled conduit via cable troy, as shown in the drawings.  4.15 spmm Cu/PVC/PVC + ECC 1c-16 Samm Cu/PVC Wiring of 30A AP Isolator for Outdoor VRF Units at Roo							
Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.  Wiring of 13A/15A Switch Socket units for WIFI Outlet from D8 to first outlet with following size of wires in incleady installed PVC conduit via cable tray as shown in the drawings.  2 x 2.5 Symm Cu/PVC + ECC 1x 2.5 Sq.mm  Cu/PVC  Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dyrer from D8 to Socket for with following size of wires in 25mm dia PVC conduit.  2 x 4.4 Sq.mm Cu/PVC + ECC 1 x 4.4 Sq.mm  Cu/PVC  Some as above item but wiring from 20A Switch to 13A International Outlet.  Wiring of 16A DP toolator for VRF Indoor AC / Split Acs. International Outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4.5 Sq.mm Cu/PVC + ECC 1 x 4.4 Sq.mm  Cu/PVC  Wiring of 20A 4 Isolator for Indoor VRF Units from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  3 x 4.5 Sq.mm Cu/PVC + ECC 1 x 4.4 Sq.mm  Cu/PVC  Wiring of 20A DP Isolator for Indoor VRF Units from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  3 x 4.5 Sq.mm Cu/PVC/PVC + ECC 1 x 4 Sq.mm  Cu/PVC  Wiring of 20A DP Isolator for Hor Water Geyser inside Toilet Blocks from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  3 x 4.5 Sq.mm Cu/PVC/PVC + ECC 1 x 4 Sq.mm  Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  3 x 4.5 Sq.mm Cu/PVC/PVC + ECC 1 x 4 Sq.mm  Cu/PVC  Wiring of 30A PP Isolator for Plumbing Pump from D8 to first outlet with following size of wires in indeady installed conduit via cable froy, sshown in drawings.  4 x 1.5 Sq.mm Cu/PVC/PVC + ECC 1 x 1.6 Sq.mm  Cu/PVC							
and the charged separately and its cost must be inclusive in cost of life toutlet.  Wiring of 13A/15A Switch Socket units for WiFl Outlet from Bit of list outlet with following size of wires in already installed PVC conduit via cable tray as shown in the drawings.  2 x 2.5 Samm Cu/PVC + ECC 1x2.5 Samm 6 No. 2 Cu/PVC Cu/PVC Some as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from Dis to Socket for with following size of wires in 25mm dia PVC conduit.  2 x 4 Samm Cu/PVC + ECC 1x 4 Samm 4 No. 2 Cu/PVC Some as above item but wiring from 20A Switch 10 No. 3 Some as above item but wiring from 20A Switch 10 No. 3 Some as above item but wiring from 20A Switch 10 No. 1							
inclusive in cost of first outlet.  Wiring of 13A/15A Wilch Socket units for WiFi Outlet from Bit to first outlet with following size of wires in already installed PVC conduit via cable toy as shown in the drawings.  2 x 2 S Symm Cu/PVC + ECC 1 x 2 S g,mm Cu/PVC Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dyer from Dist to Socket for with following size of wires in 25mm dis PVC conduit.  2 x 4 S g,mm Cu/PVC + ECC 1 x 4 S g,mm Cu/PVC Same as above item but wiring from 20A Switch to 13A International Outlet.  3 x 4 S g,mm Cu/PVC + ECC 1 x 4 S g,mm Cu/PVC Wiring of 16A D Isolator for VRF Indoor AC / Spill ACs from Dist to its outlet with following size of wires in in 25mm dist of PVC conduits under wall / floor as shown in the drawings.  2 x 4 S g,mm Cu/PVC + ECC 1 x 4 S g,mm Cu/PVC Wiring of 20A P Isolator for Indoor VRF Units from Dist to fist outlet with following size of wires in in 25mm dist of PVC conduits under wall / floor as shown in the drawings.  3 x 4 S g,mm Cu/PVC + ECC 1 x 4 S g,mm Cu/PVC Wiring of 20A D Isolator for Indoor VRF Units from Dist of its outlet with following size of wires in in 25mm dist of PVC conduits under wall / floor as shown in the drawings.  4 x 4 S g,mm Cu/PVC + ECC 1 x 4 S g,mm Cu/PVC Wiring of 20A D Isolator for Hol Water Geyser inside Pottlet Blocks from Dist to fist outlet with following size of wires in in 25mm dist of PVC conduits under wall / floor as shown in the drawings.  3 x 4 S g,mm Cu/PVC + ECC 1 x 4 S g,mm Cu/PVC Wiring of 30A DF Isolator for Plumbing Pump from Dist to first outlet with following size of wires in in Eddowings.  3 x 4 S g,mm Cu/PVC + ECC 1 x 4 S g,mm Cu/PVC Wiring of 30A PF Isolator for Plumbing Pump from S g,mm and G of PVC conduits with following size of wires in in the drawings.  4 x 1 S g,mm Cu/PVC + ECC 1 x 4 S g,mm Cu/PVC Wiring of 30A PF Isolator for Plumbing Pump from Dist outlet with followings size of wires in diready installed conduit via cable froy, sshown in drawings.	а		2	No.			
Wiring of 13A/15A Switch Socket units for WiFi Outlet from DB to first outlet with following size of wires in circady installed PVC conduit via cable from a shown in the drawings.  2 x 2.5 Samm CU/PVC + ECC 1x2.5 Sq.mm Cu/PVC  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dyrer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACS in on DB to fist outlet with following size of wires in in 25mm dia PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Wiring of 20A P Isolator for VRF Units from DB to fist outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4 No.  Cu/PVC  Wiring of 20A P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4 C4-4 Samm Cu/PVC/PVC + ECC 1 C-4 Samm Cu/PVC  Wiring of 20A DP Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC PVC + ECC 1 C-4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for BB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Pumbling Pump from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  3 2-4 Sq.mm Cu/PVC/PVC 2 Q No.  Wiring of 30A 4P Isolator for Outdoor VRF Units of Roof from DB to Socket for with following size of wires in in 25mm dia of uPVC conduits under wall / cooled froy, sishown in the drawings.		· · · · · ·					
Souther from DB to first outlet with following size of wires in incready instolled PVC conduit via cable tray as shown in the drawings.  2 x 2.5 Samm CU/PVC + ECC 1x 2.5 sq.mm Cu/PVC  Same as above litem, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Same as above litem but wiring from 20A Switch to 13A International Outlet Wiring of 16A DP Isolator for VRF Indoor AC / Spill ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / Hoor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 11 DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 3 x 4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 5 x 4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 6 x 4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 7 x 4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 8 x 4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 9 x 4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 10 x 4 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 11 x 5 x 5 x 5 x 5 x 5 x 5 x 5 x 5 x 5 x							
wires in already installed PVC conduit via cable tray as shown in the drawings.  2 x 2.5. Samm CU/PVC + ECC 1 x 2.5 sq.mm  b Same as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  2 x 4 sq.mm Cu/PVC + ECC 1 x 4 sq.mm  cu/PVC  b Same as above item but wiring from 20A Switch in 13A International Outlet.  Wiring of 16A DP isolator for VRF Indoor AC / Split ACs from DB to fist outlet with following size of wires in in 25mm dia of PVC conduits under wall.  If the conduits with a conduits under wall.  If the conduits with following size of wires in in 25mm dia of PVC conduits under wall.  If the conduits under world / floor as shown in the drawings.  4 4.2 sq.mm Cu/PVC/PVC + ECC 1 x 4 sq.mm  cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x x sq.mm cu/PVC/PVC + ECC 1 x 4 sq.mm  cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x x sq.mm cu/PVC + ECC 1 x 4 sq.mm  cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of evC conduits under wall / floor as shown in the drawings.  2 x x sq.mm cu/PVC + ECC 1 x 4 sq.mm  cu/PVC  Wiring of 20A DP Isolator for Outdoor VRF Units at Roof from DB to Sacket for with following size of wires in in 25mm dia of evC conduits under wall / floor as shown in the drawings.  4 C-1 sq.mm cu/PVC/PVC + ECC 1 c-1 6 sq.mm  cu/PVC  Wiring of 83A 4P Isolator for Outdoor VRF Units at Roof from DB to Sacket for with following size of wires in clready installed conduit via cable tray, as shown in drawings.							
tray as shown in the drawings.  a 2 x 2.5 samm CU/PVC + ECC 1x 2.5 samm  cu/PVC  Same as above Item, but wiring from outlet to outlet.  b some as above Item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dyer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 samm cu/PVC + ECC 1 x 4 samm  cu/PVC  Same as above Item but wiring from 20A Switch to 13A International Outlet.  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in 125mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 samm cu/PVC + ECC 1 x 4 samm  cu/PVC  Wiring of 20A AP Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4 c4 samm cu/PVC + ECC 1 x 4 samm  cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blacks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 samm cu/PVC + ECC 1 x 4 samm  cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blacks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 samm cu/PVC + ECC 1 x 4 samm  cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of the VC conduits under wall / floor as shown in the drawings.  3 x 4 samm cu/PVC + ECC 1 x 4 samm  cu/PVC  Wiring of 30A AP Isolator for Plumbing Pump from DB to first outlet with following size of wires in oir advance of the conduits under wall / floor as shown in the drawings.  3 x 4 samm cu/PVC/PVC + ECC 1 x 4 samm  cu/PVC  Wiring of 30A AP Isolator for Plumbing Pump from DB to first outlet with following size of wires in oir advance samm curve years and ye	8						
a 2 x 2.5 Samm Cu/PVC + ECC 1 x 2.5 Samm 6 No.  b Cu/PVC b Same as above item, but wiring from outlet to outlet.  wiring of 20A Switched Socket for Hand Dryer from Bb to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm 4 No.  Cu/PVC b Same as above item but wiring from 20A Switch to 13A International Outlet 4 No.  Wiring of 14A DP Isolator for VRF Indoor AC / Split ACs from Bb to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC+ ECC 1 x 4 Samm 24 No.  Wiring of 20A AP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 AG-4 Samm Cu/PVCPVC + ECC 1 C-4 Samm 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 3 AG-4 Samm Cu/PVCPVC + ECC 1 Samm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm 4 No.  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Samm Cu/PVC + ECC 1 x 4 Samm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of teVC conduits under wall / floor as shown in the drawings.  a 3 c-4 Samm Cu/PVC/PVC 2 No.  Wiring of 33A 4P Isolator for Outdoor VRF Units at Roof from DB to Sacket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4 c-1 & Samm Cu/PVC/PVC + ECC 1 C-1 & Samm 1 No.  Wiring of 80A 4P Isolator for Putholowing size of wires in already installed conduit via cable tray, as shown in from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.		·					
CU/PVC  b Some as above item, but wiring from outlet to outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm		2 x 2.5 Sqmm Cu/PVC + ECC 1x2.5 Sq.mm	,	No			
outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sq.mm CU/PVC + ECC 1 x 4 Sq.mm	a	Cu/PVC	0	NO.			
outlet.  Wiring of 20A Switched Socket for Hand Dryer from DB to Socket for with following size of wires in 25mm dia PVC conduit.  2 2 x 4 Sq.mm CU/PVC + ECC 1 x 4 Sq.mm	h	Same as above item, but wiring from <b>outlet to</b>	10	No			
9 from DB to Socket for with following size of wires in 25mm dia PVC conduit.  a 2 x 4 Sq.mm CU/PVC + ECC 1 x 4 Sq.mm			10	110.			
in 25mm dia PVC conduit.  a 2 x 4 Sq.mm Cu/PVC +ECC 1 x 4 Sq.mm  cu/PVC  b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Spiti  ACs from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / Ifloor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC +ECC 1 x 4 Sq.mm  cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with tollowing size of wires in in 25mm dia of PVC conduits under wall / Ifloor as shown in the drawings.  a 4C-4 Sq.mm Cu/PVC/PVC +ECC 1C-4 Sq.mm  cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / Ifloor as shown in the drawings.  a 2x 4 Sq.mm Cu/PVCPVC +ECC 1C x 4 Sq.mm  cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from D8 to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / Ifloor as shown in the drawings.  a 2x 4 Sq.mm Cu/PVC +ECC 1 x 4 Sq.mm  cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / Ifloor as shown in the drawings.  a 3C-4 Sq.mm Cu/PVC/PVC +ECC 1 x 4 Sq.mm  cu/PVC  Wiring of 3AA AP Isolator for Outdoor VRF Units at Roof from D8 to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sq.mm Cu/PVC/PVC +ECC 1C-16 Sq.mm  cu/PVC  Wiring of 3AA AP Isolator for Outdoor VRF Units at Roof from D8 to Socket for with following size of wires in already installed conduit via cable tray, as shown in for south in a cable tray, as shown in for with following size of wires in already installed conduit via cable tray, as shown in for with following size of wires in already installed conduit via cable tray, as shown in foreign in a conduit on a cable tray, as shown in foreign in a cable tray, as shown in foreign in a cable	_						
a 2x4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  b Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Sqmm Cu/PVC + ECC 1 C-4 Sqmm 1 No.  Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2x 4 Sq.mm Cu/PVC/PVC + ECC 1 C-4 Sqmm 1 No.  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC 2 No.  Wiring of 3AA 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1 C-16 Sqmm 1 No.  Cu/PVC  Wiring of 30A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1 C-16 Sqmm 1 No.  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.	9						
B Same as above item but wiring from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Spilit ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm							
b Same as above item but witing from 20A Switch to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A AP Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Samm Cu/PVC/PVC + ECC 1 C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser Inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC  Wiring of 30A 4P Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC  Wiring of 33A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm 1 No.  Wiring of 80A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, in the size in already installed conduit via cable tray, in th	а		4	No.			
b to 13A International Outlet  Wiring of 16A DP Isolator for VRF Indoor AC / Split ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  4 C-4 Sqmm Cu/PVC/PVC + ECC 1 C-4 Sqmm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from drawings.  2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  3 C-4 Sqmm Cu/PVC/PVC + ECC 1 x 4 Sq.mm Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  3 C-4 Sqmm Cu/PVC/PVC  Wiring of 33A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  4 C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  4 C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.							
ACs from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  2 x 4 Sa,mm Cu/PVC + ECC 1 x 4 Sa,mm	b	to 13A International Outlet	4	No.			
wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2x 4 Sq.mm CU/PVC + ECC 1 x 4 Sq.mm							
wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 \$a,mm Cu/PVC + ECC 1 x 4 \$a,mm 24 No.  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 \$a,mm Cu/PVC/PVC + ECC 1C-4 \$a,mm cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with flowing size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 \$a,mm Cu/PVC + ECC 1 x 4 \$a,mm cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 \$a,mm Cu/PVC wires in a 25mm dia of pvC wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 \$a,mm Cu/PVC/PVC + ECC 1C-16 \$a,mm 15 wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 \$a,mm Cu/PVC/PVC + ECC 1C-16 \$a,mm 15 wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 \$a,mm Cu/PVC/PVC + ECC 1C-16 \$a,mm 1 No.  Cu/PVC  Wiring of 32A 4P Isolator for Fesh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in	10						
a 2x48a,mm Cu/PVC + ECC 1 x 4 Sq.mm 24 No.  Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm Cu/PVC Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC brief or first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC 2 No.  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.							
Wiring of 20A 4P isolator for Indoor VRF Units from   DB to first outlet with following size of wires in in   25mm dia of PVC conduits under wall / floor as shown in the drawings.   4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm   1 No.							
Wiring of 20A 4P Isolator for Indoor VRF Units from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings    AC-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm	а		24	No.			
DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 4C-4 Samm Cu/PVC/PVC + ECC 1C-4 Samm 1 No.  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa,mm Cu/PVC + ECC 1 x 4 Sa,mm 2 Yev 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of a PVC conduits under wall / floor as shown in the drawings.  a 3C-4 Samm Cu/PVC + ECC 1 x 4 Sa,mm 2 No.  Wiring of 30A PP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of a PVC conduits under wall / floor as shown in the drawings.  a 3C-4 Samm Cu/PVC/PVC 2 No.  Wiring of 33A PP Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm 1 No.  Wiring of 80A PP Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Samm Cu/PVC/PVC + ECC 1C-16 Samm 1 No.  Wiring of 80A PP Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in brooker for wires in already installed conduit via cable tray, as shown in hor could be tray.							
25mm dia of PVC conduits under wall / floor as shown in the drawings  a 4C-4 Samm Cu/PVC/PVC + ECC 1C-4 Samm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toillet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sa,mm Cu/PVC + ECC 1 x 4 Sa,mm 4 No.  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Samm Cu/PVC/PVC 2 No.  Wiring of 33A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Samm Cu/PVC/PVC + ECC 1C-16 Samm 1 No.  Cu/PVC  Wiring of 80A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray, as shown in horse in already installed conduit via cable tray.							
shown in the drawings  a Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm  Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-14 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  b 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.	11						
a 4C-4 Samm Cu/PVC/PVC + ECC 1C-4 Samm Cu/PVC  Wiring of 20A DP Isolator for Hot Water Geyser inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.							
Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm   Cu/PVC    Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC    Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm   Cu/PVC    Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm   Cu/PVC    Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.							
Wiring of 20A DP Isolator for Hot Water Geyser inside Tollet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC builts of UPVC conduits under wall / floor as shown in the drawings.  b to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC 2 No.  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.	а		1	No.			
inside Toilet Blocks from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm		•					
conduits under wall / floor as shown in the drawings.  a 2 x 4 Sq,mm Cu/PVC + ECC 1 x 4 Sq,mm							
drawings.  a 2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC  Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in	12	following size of wires in in 25mm dia of PVC					
a 2 x 4 \$q.mm Cu/PVC + ECC 1 x 4 \$q.mm		conduits under wall / floor as shown in the					
Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Samm Cu/PVC/PVC  2 No.  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Samm Cu/PVC/PVC + ECC 1C-16 Samm Cu/PVC  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in							
Wiring of 20A DP Isolator for Plumbing Pump from DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC  2 No.  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in	а		4	No			
DB to first outlet with following size of wires in in 25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC 2 No.  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.				110.			
25mm dia of uPVC conduits under wall / floor as shown in the drawings.  a 3C-4 Sqmm Cu/PVC/PVC 2 No.  Wiring of 63A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 80A 4P Isolator for Outdoor VRF Units at Roof from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.  a 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC  Wiring of 32A 4P Isolator for Fresh Air Units from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.							
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installed conduit via cable tray, as snown in	16						
arawings.							
		arawings.		1			

а	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	1	No.			
17	Wiring of 32A 4P Isolator for Medical Equipment from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.					
а	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	2	No.			
	Note:  1) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.  2) The ECC to be run with each circuit shall be loop-in and loop-out type, joints are not allowed. It will be green in color (Refer detail drawings)  3) All the cables shall be color coded according to phases / types of services.  4) Wires color of UPS circuits should be different from RAW Power  5) Wiring for outgoing circuits of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.					
	Total Amount (Rs.) Sec - A (CARRIED FORWARD TO SUMMARY)					
	SECTION - B CABLE CONTAINMENT					
1	Supply & Installation of following sizes of PVC/UPVC Conduits including all accessories such as bends, sockets, j-boxes, flexible conduits, metal saddles e.t.c for Main / Sub Main Power, Telephone & Data Cables, concealed / surface on wall as per design drawings. Provide MS Pull boxes where ever required.					
а	25mm dia PVC Conduit	550	Rm.			
b	32mm dia PVC Conduit	50	Rm.			
С	38mm dia PVC Conduit	50	Rm.			
2	Supply & Installation of following M.S powder coated Ceiling / Floor / Wall Pull Boxes for data / voice / power / UPS circuits, recessed on wall or column as per design drawings. Complete in all respect.					
а	200mm x 200mm x 75mm	25	No.			
b	300mm x 300mm x 75mm	1	No.			
3	Supply & installation of following sizes of 16 SWG MS Powder Coated with 18 SWG cover (4 feet covers) duly Painted after degreesing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects. Note:  - Color Printed Tags to be provided at every 3 Meter Length.  - Imported C-Channel Hanger to be used for hanging from ceiling.  - Wall Hanger Supports to be provided moving with walls.  - U-shaped fishcer plates to be used for joints  - Earth bonding to be done with every joint  - Only imported mounting accessories to be used make mungo, fischer or equivalent.  - Color to be decided with consent of architect.					
а	300mm x 100mm (2 Partition)	75	Rm.			
b	150mm x 100mm	10	Rm.			

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	Supply & installation of following sizes of 16 SWG							
	GI Cable Tray with 18 SWG cover (4 feet covers)							
	duly Painted after degreesing, derusting,							
	phosphating and antirust primer including all							
	installation accessories such as rawal bolts e.t.c.							
	Complete in all respects.							
	Note:							
	- Color Printed Tags to be provided at every 3							
4	Meter Length.							
'	- Imported C-Channel Hanger to be used for							
	hanging from ceiling.							
	- Wall Hanger Supports to be provided moving							
	with walls.							
	- U-shaped fishcer plates to be used for joints							
	- Earth bonding to be done with every joint							
	- Only imported mounting accessories to be used							
	make mungo, fischer or equivalent.							
	- Color to be decided with consent of architect.		-					
а	300mm x 100mm (2 Partition) (To be placed on Floor at Roof)	1	Rm.					
	•	,	_	-				
b	300mm x 100mm (Roof)	1	Rm.					
	Supply & installation of following sizes of 14 SWG							
	G.I Cable Ladder with 16 SWG cover (4 feet							
	covers) duly Painted after degreesing, derusting,							
	phosphating and antirust primer including all							
	installation accessories such as rawal bolts e.t.c.							
	Complete in all respects.  Note:							
	- Color Printed Tags to be provided at every 3							
	Meter Length.							
5	- Imported C-Channel Hanger to be used for							
	hanging from ceiling.							
	- Wall Hanger Supports to be provided moving							
	with walls.							
	- U-shaped fishcer plates to be used for joints							
	- Earth bonding to be done with every joint							
	- Only imported mounting accessories to be used							
	make mungo, fischer or equivalent.							
	- Color to be decided with consent of architect.							
а	450mm x 100mm (Vertical) (GF to Roof)	10	Rm.					
b	300mm x 100mm (Vertical) (GF to Roof)	10	Rm.					
	Supply & Installation of Imported Linear Outlet		<u> </u>					
	Boxes without face plates made of Aluminum,							
6	mounted on wall or punched in furniture as per			1				
	design drawings. The linear outlet boxes are to							
	be provided with appropriate sizes of knockouts.							
а	450mm x 100mm	34	No.					
	Supply & installation of Imported Floor Outlet							
_	Boxes without face plates made of 16 SWG G.I	,	<b>.</b>					
7	Sheet, recessed in ground as per design	4	No.					
	drawings.							
	Note: Contractor is advised to confirm the sizes,							
	running lengths and termination as per site							
	conditions before commencement of work. All							
	the conduits / cable tray crossings through			1				
	partition walls shall be properly sealed by fire			1				
	retardant material after installation.							
	Total Amount (Rs.) Sec - B				·			
	(CARRIED FORWARD TO SUMMARY)							
				l		<u> </u>		

	SECTION - C					
	SWITCHES & SOCKETS					
	Supply & Installation of following 10 Amps switches or 10/13/15/20 Amps socket outlets make including 16 SWG sheet steel back boxes recessed / surface on wall or as per design					
	drawings. (Clipsal C-Vivace for Switches & Sockets Outlets or Equivalent)					
1	10A, 220V One Gang Switch Unit	37	No.			
2	10A, 220V Two Gang Switch Unit	61	No.			
3	10A, 220V Three Gang Switch Unit	18	No.			
4	One Gang Fan Dimmer	1	No.			
5	Two Gang Fan Dimmer	4	No.			
6	Three Gang Dimmer	18	No.			
7	13A, International Switch Socket unit	324	No.			
8	15A, Round 3 pin Switch Socket unit	4	No.			
9	20A Switched Socket for Hand Dryer	4	No.			
10	16A DP Isolator (Split Unit)	24	No.			
11	20A 4P Isolator (Indoor VRF)	1	No.			
12	20A DP Isolator (Hot Water Gyeser)	4	No.			
13	20A DP Isolator (Plumbing Pump)	2	No.			
14	80A 4P Isolator (Outdoor VRF)	1	No.			
15	63A 4P Isolator (Outdoor VRF)	1	No.			
16	32A 4P Isolator (Fresh Air Units)	1	No.			
17	32A 4P Isolator (Medical Equipment)	2	No.			
18	60A TP Isolator (Lifts)	1	No.			
19	32A 5-Pin (Three Phase) Industrial Socket with Plug (for Communication Racks)	2	No.			
	Total Amount (Rs.) Sec - C (CARRIED FORWARD TO SUMMARY)					
	SECTION - D LIGHTING FIXTURES					
	Supply, Installation, Testing & Commissioning of the following lighting fixtures complete with driver and specified lamps with installation and hanging accessories upto 1 meter length for all pendant lights.  Note:  1) Power factor of all light fixture shall not be less than 0.9.  2) Efficacy >100lm/W and CRI > 90.  3) All down light shall have COB ship.  4) Fixture must be made of die-cast aluminum with aluminum heat sink.  5) All light fixture shall be finalized after taking approval from architect/consultant 6) Minimum 3 year warranty required from date of successful commissioning of light and driver both.					
1	Surface Mounted Down Light with 18W LED Lamp Color 4000K Diffused Glass Surface Mounted Down Light with 12W LED Lamp	244	No.			
2	Color 4000K Diffused Glass	12	No.			
3	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	6	No.			

			ı	1	1	1	1	1
4	Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	7	No.					
5	Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	152	No.					
6	Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	32	No.					
7	Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	54	No.					
8	Bulk Head Light	23	No.					
9	Ceiling Fan 48"	63	No.					
10	Hygiene 40W Jumbo Flying Insect Killer UV Tube Catcher Zapper Repellent Light	20	No.					
11	Exhaust Fan 24"	8	No.					
	Total Amount (Rs.) Sec - D (CARRIED FORWARD TO SUMMARY)							
	SECTION - E MAIN / SUBMAIN CABLES							
	Supply & Installation, testing and commissioning of following sizes of Main / Sub main (MV / LV)  Cables in already installed cable tray, conduit etc. Including all accessories, lugs, glands etc. complete in all respect as shown on drawing.							
1	From MDB-BLUE to SMDB-G 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
2	From MDB-BLUE to SMDB-F 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	15	Rm.					
3	From MDB-BLUE to SMDB-HVAC 4C-95 Sqmm Cu/PVC/PVC + ECC 1C-50 Sqmm Cu/PVC	10	Rm.					
4	From SMDB-G to LPDB-GF-1 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
5	From SMDB-G to LPDB-GF-2 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.					
6	From SMDB-F to LPDB-FF-1 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
7	From SMDB-F to LPDB-FF-2 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.					
8	From SMDB-F to LPDB-R 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	15	Rm.					
9	From MDB-BLUE to 60A TP Isolator (Lift) 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	25	Rm.					
	Note:  1- Contractor is instructed to confirm the cable running lengths and termination as per site conditions before commencement of work.  2- Imported Lugs and Connectors shall be used in LV Cables.  3) Megger Test of each circuit to be done by contractor.  Total Amount (Rs.) Sec - E (CARRIED FORWARD TO SUMMARY)							

	SECTION - F					
	DISTRIBUTION BOARDS					
	Supply, Installation, testing & commissioning of following Distribution Boards as shown on drawing made with 14 SWG sheet steel housing including all installation accessories such as Rawal bolt etc. Complete in all respects.					
	Note: (Refer Single Line Diagram)  1) All the DB should be front accessible and maintainable.  2) Cost of Lighting Control Relays & Power Supplies should be Included in Distribution Boards.  3) The transportation and placement of DBs upto dedicated location is also included in the work scope, complete in all respects including leveling, grouting etc.  4) Laser engraved tags required as mention in SLDs  5) Space for circuit tagging required with permanent installation on protective sheet via rivets  6) 20% space required in DB for future provision  7) Tin platted Imported Cu bus bar with heat shrink color coded sleeves to be used.  8) Hindged protective metallic door required with knob/handle.  9) Braided Door earth required.  10) Lockable handle required for main door.  11) As-built drawing pocket.  12) Cable hanging arrangement.					
	Minimum One Year Warranty Required from date of successful commissioning on site.					
1	MDB BLUE	1	No.			
2	SMDB-G	1	No.			
3	SMDB-F	1	No.			
4	SMDB-HVAC	1	No.			
5	LPDB-GF-1	1	No.			
6	LPDB-GF-2	1	No.			
7	LPDB-FF-1	1	No.			
8	LPDB-FF-2	1	No.			
9	LPDB-R	1	No.			
10	80A Weather Proof TP Boxes	1	No.			
11	100A Weather Proof TP Boxes	1	No.			
	Note: 1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.					
	<b>Total Amount (Rs.) Sec - F</b> (CARRIED FORWARD TO SUMMARY)					
	SECTION - G EARTHING & GROUNDING SYSTEM					
	Supply, installation, testing and commissioning of following items for Earthing Lightning Protection System for lightning protection and grounding of other systems including all material, boring, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					

1	Chemical Enhanced Earth using 38 mm dia copper pipe filled with soil conditioning material including 6" dia, 11' deep boring and back filled chemical to enhance conductivity material. Complete with termination clamps, 12" dia heavy duty tin plated round cover as per details given in drawings.	2	No.			
2	Earth Connecting Point or Equipotential bar made with 300mm wide, 50mm high and 80mm thick tin plated Copper, as shown in drawings. Bar shall be provided with holes suitable for installation of 6 No. 70/95 sqmm bare copper conductor. ECP shall be enclosed in 350mm x 100mm x 100mm MS Painted Powder Coated Metal Enclosure with front accessible Cover.	2	No.			
3	Supply, installation, testing and commissioning of following size of Single core PVC Cables from ECP to several equipment's in following sizes of PVC Conduit or as per details given in tender drawings, including all material, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					
а	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	50	Rm.			
4	Stranded bare copper conductors of following sizes in clipped on retaining wall from B1 to B4 from ECP to Earth Station as shown in drawings. Complete in all respects including termination at both ends.					
а	95 Sq.mm Bare Copper Conductor	50	Rm.			
5	Allow for any other item required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ.  Note: Contractor is advised to confirm the cable running lengths and termination as per site	1	Job			
	conditions before commencement of work.					
	<b>Total Amount (Rs.) Sec - G</b> (CARRIED FORWARD TO SUMMARY)					
	SECTION - H VOICE & DATA COMMUNICATION SYSTEM					
1	Supply, Installation, testing and commissioning of following items for voice and data communication system including all material, labor, tools, accessories etc. Complete in all respects. Quantities for cables shown in BOQ are estimated and taken from drawings. Contractor is advised to take measurement at site before commencement of works. Different colors of voice and data cables shall be used. (Selected Series for Face plates is Clipsal C-Vivace or equivalent)  Simplex Face plate with 1 No. CAT-6 RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins, labels and all accessories	42	No.			
1	including 16 SWG sheet steel back box. Complete in all respects.	42	INO.			

2	Simplex Face plate with 1 No. CAT-6 RJ-45 I/O for WIFI, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	8	No.			
3	<b>Duplex Face plate</b> with <b>1 No. CAT-6</b> RJ-45 I/O for Data & <b>1 No. CAT-6</b> RJ-45 I/O for Voice white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	34	No.			
4	TV Outlet with face plate	8	No.			
5	<b>1x8 way Splitter</b> including 18 SWG M.S Sheet powder coated Box for RG-6 Connectivity.	2	No.			
6	Supply and Wiring of CAT-6 UTP Cables for Voice communication system from Com Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects.  Different colors of cables shall be used for Voice (Coil =305 Rm.)	12	Coil			
7	Supply and Wiring of CAT-6 UTP Cables for Data communication system from Com Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects. Different colors of cables shall be used for Voice (Coil =305 Rm.)	6	Coil			
8	Supply and Wiring of Co-axial cable RG-6 for CATV system in 25mm dia PVC Conduit from each T.V point to Splitter as per drawings including terminations. Complete in all respect.	120	Rm.			
9	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Fiber Optic Cable as per standard specifications, all termination accessories up to entire satisfaction of IT Engineer, in already installed PVC conduit / cable tray including termination and tagging at both ends. Complete in all respects.	30	Rm.			
10	<b>Programming, testing and commissioning</b> of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job			
11	Fluke / OTDR Testing of each communication cable with calibrated fluke tester	1	Job			
	<b>Note:</b> Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec - H (CARRIED FORWARD TO SUMMARY)					
	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM					
	<b>Supply, installation, testing &amp; commissioning</b> of Addressable Fire Alarm System comprising of following equipment's including all accessories required for the completion of the system in all respects.					
1	Addressable Fire Alarm Control Panel of 2-loops expandable upto 4 Loops having minimum 127 devices per loop. The FACP shall be self powered with built in 12V batteries for 24 Hrs backup with charging unit, Built-in GSM Module and Self Printing Function. It can be programmed using Windows based software for peripheral devices like display unit, printers and soft zoning etc.	1	No.			

						,
2	Addressable Multi Detectors incorporating an LED indication located in labyrinth with in the housing of the detector. Sensing of the detector shall be adjustable via software between 0-90 seconds. The detector shall have built in short circuit isolators on both inputs.	73	No.			
3	Addressable Break Glass Type Manual Call Point having a built in short circuit isolator and built in microprocessor to ensure a response time of max 1 second. It also incorporates an indication LED, flashed after pressing the button to acknowledge the activation and a key operation facility for testing purposes.	12	No.			
4	Addressable Type Indoor Loop Powered electronic sounder and minimum sound output 100 dB at 1 meter with frequencies for variety of sounds as required. Souder shall be loop wired and loop signaled, built in short circuit isolator, configured via software.	17	No.			
5	<b>Supply and wiring</b> for <b>FACP Power</b> from <b>DB</b> to FACP with 2C, 2.5 Sq.mm fire resistant cable in 25mm dia PVC Conduit. Complete in all respect.	20	Rm.			
6	Supply and wiring of 2C, 1.5 Sq.mm Fire Resistant Shielded Cable (Fire rating for 2 hours at 950 C) in 25mm dia PVC conduit from fire alarm control panel to all sensors & devices including all installation accessories complete in all respect.	720	Rm.			
7	Addressable Interface Module for integration of Fire Alarm System with Power Panels, PA System, Elevators, Fire Fighting System etc.	4	No.			
8	<b>Networking</b> of all the Fire alarm control panels of all the OPD Buildings along with integration with the existing control room including IO modules, wiring, conducting, complete in all respect.	1	Job			
9	<b>Programming, testing and commissioning</b> of the complete system as per client's requirements permissible for the FACP with training sessions of maintenance personnel's.	1	Job			
10	Allow for <b>any other item</b> required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ.	1	Job			
	Note:  1) The Bidder shall provide the complete Technical Literature for the system offered.  2) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec - I (CARRIED FORWARD TO SUMMARY)					
	SECTION - J WIRING FOR LOW CURRENT SYSTEMS					
Α	PUBLIC ADDRESS SYSTEM					
1	Supply and wiring for Public Address System using 2C, 2.5 flexible Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	300	Rm.			

2	Wiring for Microphone outlet using Cat-6 STP Cable in 25mm dia PVC conduit. as shown in drawings. Complete in all respects.	50	Rm.			
В	CCTV SYSTEM					
3	Supply and Wiring of CAT-6 UTP Cables for Cameras from each camera to NVR in already installed PVC conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)	4	Coil			
С	QUEUE MANAGEMENT SYSTEM					
4	Supply and Wiring of CAT-6 UTP Cables for Queue Management System from Communication Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)	3	Coil			
5	Supply and wiring for Queue Management Speakers using 2C, 2.5 Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	150	Rm.			
D	WIFI SYSTEM					
6	Supply and Wiring of CAT-6 UTP Cables for Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)	3	Coil			
	Complete in direspects. (Coli -303 km.)					
	Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)					
	Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS					
1	Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY) SECTION - K	1	Job			

# **SUMMARY OF PLUMBING AND FIREFIGHTING WORKS**

S.No	Activity	Amount Rs.
А	TOILET FITTING AND ACCESSORIES	
В	COLD WATER SUPPLY SYSTEM	
С	SOIL, WASTE AND VENT PIPE SYSTEM	
D	EXTERNAL WATER SUPPLY SYSTEM	
Е	FIRE FIGHTING SYSTEM	
F	SEWERAGE SYSTEM	
	TOTAL COST OF PLUMBING & FIREFIGHTING WORKS	

#### **LIST OF APPROVED MANUFACTURERS**

S.No.	ITEM	MAKE
	PLUMBING WOR	KS
1	European Water Closet (Floor Mounted)	PortaHD-12N
2	Wash Basin (Half Pedestal)	Porta HDLP203AH
3	Wash Basin (Counter Top)	Porta HD-3
4	Basin Mixer	Zilver E-D109
5	Bottle Trap	Zilver E-X024
6	Bibcock	Zilver E-\$03F
7	Toilet Paper Holder	Zilver 033-2
8	Cloth Hook	Zilver 033-1
9	T-Stop Cock	Zilver GX 7016
10	Double Bibcock With Muslim Shower	Zilver E-S08 + VRH FX 40NS
11	Poly-propylene Pipe (Water Supply)	Dadex
12	Polypropylene Pipe Fittings (Water Supply)	Dadex
13	Polyethylene Pipe and Fittings (Water Supply)	Dadex
14	Valves And Strainers	Kitz / Haterslay
15	uPVC Pipe (Drainage)	Dadex
16	uPVC Fittings (Drainage)	Dadex
17	uPVC Clean out	Dadex
18	Teflon Tape	Imported
19	Floor Drain / Floor Gully	Dadex
20	Vent Cowl	Dadex
21	Floor Drain Grating	Alpine
22	Manhole Frame & Cover (CI)	Alpine
23	Gully Trap	Dadex
24	Pump	Lowara / Grundfos / Wilo
	FIRE FIGHTING WC	DRKS
25	Fire Hose Cabinet (S/S) with Reel	NAFFCO / SFFECO
26	Fire Extinguishers	NAFFCO / SFFECO
27	Fire Hydrant with Hose	NAFFCO / SFFECO
28	Siamese Connection	NAFFCO / SFFECO
29	Seamless Black Steel Pipe & Fittings	LONTRIN / Approved Equivalent
30	Hanger and Supports	Norm / Mungo
31	Gate Valves	Kitz / Haterslay
32	Pump	NAFFCO / SFFECO
33	Paint	ICI

### <u>Note.</u>

Before quoting the rates, the contractor should first visit the site.

Above mentioned approved manufacturers list is to be maintained

S. NO.		DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	TOILE	T FITTING AND ACCESSORIES				
1	Providin Closet w accessor thimble, cover, te service a necessar with nor complete a) For Go	g and fixing European Type Water ith coupled flushing cistern, including all ies and fittings, C.P flexible pipe, waste and traps, including seat and e stop cock with check nut, all joints to and drains, plugging and screwing as y to the structure, filling sleeve opening and in-shrink grout, and coated with epoxy, e in all respect.	16	Nos.		
	b) For H	andicapped toilet	2	Nos.		
2	with all a cock wit pipe, wa including service necessary with nor	g and fixing Counter Top Wash Basin accessories such as, basin mixer, tee stop th check nuts, CP flexible pipe, waste ste coupling, bracket set, etc. Complete g bottle trap, silicon sealant, all joint to and drain, plugging and screwing as y to the structure, filling sleeve opening ashrink grout, and coated with epoxy. e in all respect.	25	N		
3	Drovidin	g and fixing Wash Basin with Half	25	Nos.		
3	Pedestal mixer, te pipe, was Complet joint to s as neces	with all accessories such as, basin be stop cock with check nuts, CP flexible ste pipe, waste coupling, bracket set, etc. e including bottle trap, silicon sealant, all ervice and drain, plugging and screwing stary to the structure, filling sleeve with non-shrink grout complete in all				
	a) For G	eneral toilets	20	Nos.		
		andicapped toilet	2	Nos.		
4	Providing including	g and fixing bathroom accessories g fixing with rawal plug of approved omplete in all respect.				
	I	Toilet paper holder	18	Nos.		
	II	Soap Dispenser	52	Nos.		
	III	Double bibcock with muslim shower	18	Nos.		
	IV	Cloth hook	18	Nos.		
	V	Bibcock (Janitor Area)	2	Nos.		
				SUI	B TOTAL-A	

В	COI	LD WATER	R SUPP	LY SYSTEM				
1	Polyp		ld Wate Foilets	er Piping for the				
	Providing, fixing, jointing, poly propylene pipe as per DIN 8077 / 8078 (PN 20) including specials fittings as per DIN 16962 (PN 25) such as socket, tees, elbows bends, reducer plug and union etc), clamps, hanger collars, supports, supported on wall or buried in walls or suspended from roof slab as per specifications including color tagging, providing sleeve in wall, testing @ 150 psi, complete in all respect.							
	I	25	mm	Ø	262	RM		
	II	32	mm	Ø	106	RM		
	III	40	mm	Ø	22	RM		
	IV	50	mm	Ø	18	RM		
	V	63	mm	Ø	68	RM		
	VI	75	mm	Ø	9	RM		
	bronze trim up to 3" (75 mm) Ø. With threaded ends and cast iron body bronze trim flanged ends for 4" Ø. (100 mm) and above for 125 psi together with all additional material required for a complete installation as described in the specification and as shown on drawings and as approved by the engineer.							
	I	1/2"		Ø	33	Nos.		
	II	3/4"		Ø	7	Nos.		
	III	1"		Ø	4	Nos.		
	IV	3"		Ø	1	No.		
	V	4"		Ø	3	Nos.		
							B TOTAL-B	
С	SO	· ·		VENT PIPE				
1	Providing and fixing in position uPVC pipes push fit type embedded in floor and wall or suspended from slab or clamped to floor and wall including plugs, clamps, hanger collars, supports, specials (bend, tees, Y-tee etc). Making requisite number of holes in walls and floors where required and making good the same as necessary to the structure, filling sleeve opening with non-shrink grout, labelling and testing to 8'ft water height complete in all respect.  I 50 mm Ø				70	RM		
	II	82	mm	Ø	269	RM		
	III	110	mm	Ø	143	RM		

2	solvent j embedde slab or cl clamps, l tees, Y-t holes in making structure grout, lal complete	oint type pid in floor aramped to floor hanger collar tee etc.). May walls and good the son filling sleeve belling and to an all respection.	pe for and wall or and was, supposed aking refloors value as we open esting tand as	rain water drainage, or suspended from vall including plugs, orts, specials (bend, equisite number of where required and necessary to the ing with non-shrink o 8' ft water height shown in drawings.				
	I	82	mm	Ø	6	RM		
	II	110	mm	Ø	45	RM		
3	of approrequisite for pipe of necessary opening	ved design of number of he connection are to the structure with nor g gasket and o	with S/oles in ad makiructure					
	I	82	mm	Ø	25	Nos.		
5	plinth or good the filling s complete  I	r floor for pi same as nec leeve opening including ru 82	pe connects of the control of the co	er of holes in walls, nection and making to the structure and non-shrink grout sket and clamp.  Ø  Clean Out Plug with	13 5	Nos.		
	cover for necessary complete	r pipe roding	, makin acture v t. mm	g good the same as with rubber gasket,	18	Nos.		
	II		mm		5	Nos.		
6	the foll	owing Ø in all respec	includir t.	Cowl for vent pipe of ag all accessories				
	I	82	mm	Ø	4	Nos.		
	II	110	mm	,-	3	Nos.		
7	design v number of connection necessary including respect.	vith uPVC of holes in von and may to the structure.	grating vall plin king g cture wi	Drain of approved including requisite th or floor for pipe ood the same as th non-shrink grout p complete in all				
	I	110 n	nm Ø (S	Scupper Drain)	5	Nos.		
							Sub Total-C	

D	EXTERNAL WATER SUPPLY SYSTEM	1		
1	Providing. installing, testing and commissioning	-		
	Booster <b>Pump for top 2 floors</b> water supply of			
	approved make including (100 litres) tank, gat			
	valves, check valves, foot valves, gauges, contro			
	panel (with the system for increase in flow the second pump should kick in), pressure switch for			
	adjusting pressure from 35 to 50 psi for a flow of			
	50Gpm (each pump), as per drawing, complete i			
	all respect. (Note: 01set = 02Nos pumps)	1	Set.	
2	Providing and fixing C.I Manhole Cover for		200	
	underground and overhead water tank. (weight			
	52kg)			
	I 600x600 mm	2	Nos.	
3	Providing, fixing <b>C.I Goose Neck</b> with wire mes			
	over the underground water tank & overhead			
	water tank as per drawing & engineer's approva			
	I 110 mm Ø	1	Nos.	
4	Shop Drawings as per specifications.	1	Job	
5	As Built Drawings as per specifications.	1	Job	
	Sub Total-D			
E	FIRE FIGHTING SYSTEM			
<b>E</b>	FIRE FIGHTING SYSTEM Providing, laying, jointing and testing Blace	k		
	Providing, laying, jointing and testing Blac Steel Seamless Piping schedule 40 for	or		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder	or ed		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support	or ed s,		
-	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating	or ed s, g		
-	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respectives.	or ed s, g g ct		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the	or ed s, g g ct		
	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respectives.	or od s, g g ct ne	RM	
	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.	or od sk, gg et he 12	RM RM	
	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coatin (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø	or od s, g g ct ne	RM RM RM	
-	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø	or od s, , , , , , , , , , , , , , , , , , ,	RM	
-	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coatin (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø	or od s, g g et ae 12 33 32 42	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader	or od s, g g ct ae 12 33 32 42 of ed	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged ends	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4" Ø. (100 mm) and above for 125 psi together	or od s, gg ct ae 12 33 32 42 of od ds er	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged ender for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for	or od s, g g et ue 12 33 32 42 of ed ds er a	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the specification and as shown on drawings and a	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	

3	Providing and fixing double compartment <b>Fire</b>			
3				
	Hose Cabinet with (¾" Ø, 100 ft long, high			
	pressure rubber hose, 180° rotation). Complete			
	with 1"Ø PRV, 1 no. 25mm dia. plastic nozzle has			
	jet / spray / shut-off operations. Type: Swing			
	Automatic (Automatic Hose Reel has integrated			
	automatic stop valve which will open after 3			
	revolution of the reel). Standard size: 25mm dia.,			
	Length: 30m, Maximum working pressure: 15			
	Bar, Red Color, Manufacture standard: BS EN			
	671-1.	4	Nos.	
4	Providing and fixing <b>Dry Chemical Powder</b> , fire			
	extinguisher 6Kg capacity, powder coated in red			
	color, complete with pressure gauge and wall			
	bracket.	9	Nos.	
5	Providing and fixing CO <sub>2</sub> Type Fire			
	Extinguisher 2Kg capacity, powder coated in red			
	color, complete with wall bracket and all other			
	accessories.	9	Nos.	
6	Providing, Installing and commission 2 Way		11001	
	<b>Breeching Inlet</b> unit for wet riser including all			
	accessories and material complete in all respect as			
	shown on drawings / specifications.	1	N.T	
7		1	No.	
7	Providing and installing Automatic Air Vent			
	i with all accessories and material as specified i			
	with all accessories and material as specified			
	complete in all respect as shown on drawings /			
	=	2	Nos.	
	complete in all respect as shown on drawings /	2	Nos.	
8	complete in all respect as shown on drawings / specifications.	2	Nos.	
8	complete in all respect as shown on drawings / specifications.  DRAWINGS	2	Nos.	
8	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia	2	Nos.	
8	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains	2	Nos.	
8	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.			
9	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.	1	Job	
	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.			
9	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.	1	Job	
9	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.	1	Job	
9	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E	1	Job	
9 10 <b>F</b>	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM	1	Job	
9 10	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe	1	Job	
9 10 <b>F</b>	complete in all respect as shown on drawings / specifications.  DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sewerage System  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sewerage System  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer.	1 1	Job Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM ∅	1	Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM Ø  Providing and fixing 225 x 225mm uPVC Gully	1 1	Job Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  Sub Total-E  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM Ø  Providing and fixing 225 x 225mm uPVC Gully Trap with Frame and cover including uPVC gully	1 1	Job Job	
9 10 <b>F</b>	DRAWINGS  Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.  Shop Drawings as per specifications.  As-Built Drawings as per specifications.  SEWERAGE SYSTEM  Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM Ø  Providing and fixing 225 x 225mm uPVC Gully	1 1	Job Job	

3	Construction and making Manhole complete in				
	all respect including excavation, backfilling,				
	compaction, block masonry benching, manhole				
	cover (weight: 52kg) with frame complete as per				
	drawing and satisfaction to the engineer,				
	including testing. (Note: All material to be				
	supplied by the contractor)				
	For depth 0-3'ft (600mm x 600mm)				
		4	Nos		
4	Shop Drawings as per specifications.	1	Job		
5	As Built Drawings as per specifications.	1	Job		
			SU	B TOTAL-F	
				TOTAL	

# "CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI".

# **GREEN BLOCK**

S. No.	Description	Amount
1	CIVIL WORK	
2	ELECTRICAL & ALLIED WORKS	
3	PLUMBING & FIRE FIGHTING WORKS	
	GRAND TOTAL RS.	

CONTRACTOR	

S. No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	EXCAVATION AND BACKFILLING				
1.1	Excavation for foundations, plinth beams etc in any strata upto required depth from natural ground level, including back filling and compacting in 150mm thick layers, wherever required with all leads, lift with suitable excavated material. Excavated material suitable for use as back filling material shall be stockpiled, if required, within the site of work or as directed by Engineer in charge, this stockpile material shall be transported back to places required fill or back fill. Surplus material unsuitable for use as filling material shall be disposed off away from site by dumpers. (No extra payment will be made in this regard). Complete in all respect as per drawing, specifications and directed by Engineer – in – charge.				
	payment).	765	Cum		
2.1	Providing, mixing, depositing, curing and compacting using S.R. cement lean concrete under foundations, plinth beams etc, as shown on the drawings with clean local sand and crushed stone, graded as specified, including formwork where required etc., complete in all respects as per drawing, specifications and directed by Engineer-incharge.  A. Lean Concrete 1:4:8  B. 1:3:6 Cast in situ (under plinth beams)	70 14	Cum Cum		
2.2	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in sub-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) at 28 days using Sulphate Resistance (S.R cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.  A. Footings (f' c = 4 ksi)  B. Foundation beams (f' c = 4 ksi)  C. Plinth beams (f' c = 3 ksi)	198 5 14	Cum Cum Cum		
	<ul><li>C. Plinth beams (f' c = 3 ksi)</li><li>D. Columns upto Plinth level (f' c = 4 ksi)</li></ul>	14 25	Cum Cum		
	<ul><li>E. Lift shear walls upto plinth level (f' c = 4 ksi)</li></ul>	15	Cum		
	1 1 (	-			

3	STEEL REINFORCEMENTS.				
3.1	Supplying, cutting, bending, binding and fixing in position <b>Ribbed Deformed Bars</b> , confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling merging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be paid).				
		36000	Kg		
	TO	OTAL COS	T OF SEC	- A Rs.	
	SECTION – B: PLINTH LEVEL TO 1 <sup>ST</sup> FLOOR S	LAB (- 75 I	LEVEL TO	+ 3825 LE	VEL)
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	CONCRETE OF SUPER – STRUCTURE				
1.1	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in super-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) as mentioned at 28 days using Ordinary Portland (O.P cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.  A) Columns (f'c = 4 ksi)  B) Lift/ Shear walls (f'c = 4 ksi)  C) Beams (f'c = 3 ksi)  D) Slabs (f'c = 3 ksi)  E) Staircase steps, landing etc (f'c = 3 ksi)	32 24 36 95 14	Cum Cum Cum Cum Cum		
2.1	STEEL REINFORCEMENTS. Supplying, cutting, bending, binding and fixing in position Ribbed Deformed Bars, confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling merging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be				
	paid).	37800	Kg		
		TOTAL C	OST OF SE	EC - B Rs.	

#### SECTION - C: FROM 1<sup>ST</sup> FLOOR SLAB TO 2<sup>ND</sup> FLOOR SLAB (+3825 TO +7725 LEVEL) S.No UNIT **AMOUNT** DESCRIPTION **QTY** RATE **CONCRETE OF SUPER – STRUCTURE** Providing, mixing, depositing, vibrating and curing , reinforced cement, concrete, in super-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) as mentioned at 28 days using Ordinary Portland 1.1 (O.P cement) as under including water shuttering fixing and removing etc., but excluding the cost of reinforcing steel.. Complete in all respect at any depth and any level. Complete per specifications, drawings and all to the approval of Engineer - in - charge. A) Columns (f' c = 4 ksi)32 Cum B) Lift / Shear walls (f' c = 4 ksi) 24 Cum C) Beams (f' c = 3 ksi)36 Cum D) Slabs 95 (f' c = 3 ksi)Cum E) Staircase steps, landing etc (f' c = 3 ksi) 14 Cum STEEL REINFORCEMENTS. Supplying, cutting, bending, binding and fixing in position Ribbed Deformed Bars, confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling marging, binding wire, etc., 2.1 complete in all respect as per drawings, specifications and to all approval of the Engineer -

37800

TOTAL COST OF SEC - C Rs.

Kg

in -charge. complete upto any floor and any height. (unspecified Overlaps pin and chairs etc not to be

paid).

ARCHITECTURE					
Item No.	Description	Unit	Quantity	Unit	Amount
1	Masonry Provide and Lay machine made solid block (800 psi) masonry walls set in 1:6 cement sand mortar including curing complete with scaffolding at any height. As shown on Drg & detail				
	200mm thick solid wall	$m^2$	239		
	150mm thick solid wall 100mm thick solid wall	$m^2$ $m^2$	1395 139		
2	<b>Cavity Wall with Concrete Masonry Unit</b>				
	Block masonry cavity wall in 1:6 cement and sand mortar, including welded M.S. Steel 9mm dia ties in approved size and 50mm thick Polystyrene board insulation (Diamond Jumbolen or as approved) in the cavity; as per drawings.				
	a) 100 + 50 + 150 mm	$m^2$	58		
3	Provide and lay CC1:2:4 pad between cavity wall and precast lowers complete in all respect as per drawing	m	65		
4	Provide and make precast vertical louvres1:2:4 counter including form work and steel finish and fixing arrangement complete in all respect as per drawing				
	Elevation 3.26 mm high	Nos	300		
5	Staircase 3.3 mm high  Provide and fix glass block in 200 x 200 mm as approved including fix in adhesive and all respect fixing arrangement complete in all	Nos	80		
6	respect as as per drawing No	m <sup>2</sup>	28		
6	Provide and casting RCC 1:2:4 tie beam including steel complete in all respect as per Drawing.	m3	20		
7	Provide and fabricating M.S. polish vertical solid bar 25 x 25 and 12mm x 12mm horizontal welded to vertical bar including 60mm red miranti wood hand rail finish with hammer paint with polish including anti rust complete in all respect as per drawing No	m	90		
8	Provide and fabricating M.S. hand railing for staircase with fixing arrangement with antirust paint including fixing 60mm red miranti wood gola finish with paint and polish n all respect as per drawing No	m	114		

9	Roof Finishing				
a)	Provide and laying 1:3:6 75 mm roof screed				
	laid in slop and panel complete in all respect				
	as per drawing	$m^2$	810		
b)	Provide and laying two coats of hot bitumen				
,	grade complete on all respect as per drawing				
	@. Kg per Sft. With approved polythene				
	sheet complete on all respect as per drawing	$m^2$	729		
c)	Provide and laying 1:2:4 50mm thick				
	complete on all respect as per drawing	$m^2$	729		
d)	Provide and laying 25mm thick thermopile				
	installation complete on all respect as per	2	<b>72</b> 0		
10	drawing	m <sup>2</sup>	729		
10	<b>Ground Floor finishes</b>				
a)	Provide and lay 150 mm thick stone soling	$m^2$	705		
b)	Provide and lay 75mm thick screed	$m^2$	705		
c)	Provide and lay 3 coats of hot bitumen	$m^2$	705		
d)	Provide and lay 75mm thick sub floor	$m^2$	705		
e)	Provide and lay 75mm thick finish floor	$m^2$	705		
f)	Provide and laying imported earth filling as				
	approved	$m^2$	705		
11	<b>Expansion Joint Cover Assemblies</b>				
	Provide and fix expansion joint cover of				
	aluminum sections including 25mm x 25mm				
	thick polysulphide with baker strip and				
	impregnated fiber board as approved by				
	Structural Engineer where ever required, including filling sealant; as per drawing				
a)	Vertical	m	60		
b)	Horizontal	m			
12		m	14		
12	Doors and Frames				
	Provide and install door with G.I. frame (10				
	SWG) including fix glass in position thickness as shown in drawing filling,				
	concrete 1:6 in gape between frame and				
	masonry wall in line, level and plumb, apply				
	3 coats metal paint finish, as required				
	complete as per detail shown on Drg #				
	D-01 - 1500 x 2750	Nos	4		
	D-02 - 1350 x 2750	Nos	16		
	D-03 - 1200 x 2750	Nos	4		
	D-04 - 1200 x 2750	Nos	5		
	D-05 - 1100 x 2750	Nos	5		
	D-06 - 1050 x 2750	Nos	2		
	D-07 - 900 x 2750	Nos	8		
	D-08 - 750 x 2750	Nos	34		
	D-09 - 700 x 200	Nos	10		
	DW-10 - 1150 x 2150	Nos	2		
	2 11 10 1130 X 2130	1403	<i>_</i>		
	i .		i	1	1

13	Flush Door			
	Provide and make 1 1/2" thick solid core			
	flush door with 2 1/2" Wide partal wood			
	frame all round 6 x 1 1/4" partal wood mid			
	rail in two pieces partal wood for lock fitting			
	all shutter with 3/4" x 1" 1/4" x 10" partal			
	wood pieces Formica finish over 1/8" thick			
	ply in all respect as per drawing No			
	D-01 - 1500 x 2750	Nos	4	
	D-02 - 1350 x 2750	Nos	16	
	D-03 - 1200 x 2750	Nos	4	
	D-04 - 1200 x 2750	Nos	6	
	D-05 - 1100 x 2750	Nos	2	
	D-06 - 1050 x 2750	Nos	2	
	D-07 - 900 x 2750	Nos	4	
	D-08 - 750 x 2750	Nos	34	
	D-09 - 700 x 200	Nos	10	
	DW-10 - 1150 x 2150	Nos	2	
14	Aluminum Anodized Windows			
	Provide and install bronze Aluminum			
	anodized windows using approved section			
	for frame glazed and wire mesh shutter with			
	cost of light tinted glass, refer schedule given			
	in Drg No for manufacturing and fitting			
	details complete with cost of sealant etc. as			
-	required by Architect.	<b>3.</b> 7	4	
a)	W-02 - 750 x 1400 - Size	Nos	4	
b)	V-01 - 600 X 900 - Size	Nos	8	
15	Aluminum Powder Ventilators & Doors			
	Provide and install bronze Aluminum			
	powder coated windows using approved section for frame glazed and wire mesh			
	shutter with cost of light tinted glass, refer			
	schedule given in Drg No for			
	manufacturing and fitting details complete			
	with cost of sealant etc. as required by			
	Architect.			
	PV-1a - 670 x 550 - Size	Nos	12	
	PV-2a - 600 x 550 - Size	Nos	32	
	PV-3a - 520 x 550 - Size	Nos	20	
	PV-5a - 470 x 550 - Size	Nos	4	
	PV-6a - 940 x 550 - Size	Nos	2	
	PV-7a - 790 x 550 - Size	Nos	9	
	PV-8a - 640 x 550 - Size	Nos	34	
	PW-05 - 600 x 991 - Size	Nos	16	
	PW-4a - 700 x 550 - Size	Nos	16	
	DW-05 - 2100 x 2750 - Size	Nos	16	
	D-1a - 1500 x 2750 - Size	Nos	2	
	D-7a - 900 x 2750 - Size	Nos	5	
1	D-10 - 900 x 2/30 - Size	INOS	J	

	W-03 - 750 x 1591 - Size	Nos	2		
	V-02 - 450 x 450 - Size	Nos	14		
16		1108	14		
10	Portland Cement Plastering				
	Provide and apply12 mm thick plaster to				
	internal beams, wall and jambs surfaces in				
	1:4 cement sand mortar include cost of				
	200mm wide expanded lath metal as				
	approved fixed with steel nail as per drawing	$m^2$	3533		
17	and specifications. Ground to 4th floor	III	3333		
17	12 mm thick ceiling plaster in 1:4 cement sand mortar as per drawing and				
	specifications.	$m^2$	1720		
18	12mm thick Cement plaster to waist of stair	111	1720		
10	case and pardi on both side of steps in 1:4				
	cement sand mortar as per drawing and				
	specifications.	$m^2$	106		
19	Applying 20 mm thick external cement	111	100		
17	plaster in 1:4 cement sand mortar rough				
	including all bends, recesses, corners, jambs,				
	grooves pattas with additional thickness and				
	provision of drip moulds, complete with				
	hacking the reinforced concrete surfaces,				
	filling back the chases, fixing G.I. expanded				
	metal lath as per approved sample over				
	chases, electrical PVC pipes and joints				
	between brick and RCC masonry, curing				
	complete at any height plaster as per				
	drawings and specifications.	$m^2$	1173		
20	Apply Color Crete plaster in approved				
	thickness and color using approved pigment				
	with required texture finish including all				
	installation arrangement; complete all as per	_			
	drawings and specifications.	$m^2$	1173		
21	ALUMINUIM COMPOSITE PANEL				
	CLADDING				
	Provide and installation aluminum				
	composite cladding sheet including wooden				
	frame and CC plaster for water spout channel				
	(alucobond or equalant) Exterior wall and				
	columns as required 4mm or as per mention in drawing, including all tools and plant				
	scaffolding and complete as per approved				
	sample detail as per drawings and				
	specifications.	$m^2$	75		
22	Plastic Tiling	111	13		
	Provide and lay Gizri stone facing on				
	external plinth up to 1200 mm as required				
	(sample and size to be approved by the				
	Architect) laid in 1:2 cement sand mortar				
	with deep cut joint complete in all respect as				
	per drawings and specifications.	$m^2$	186		
			1	1	1

fixing with dry bond including grouting; complete in all respect as per drawings wall  24 Provide and lay Porcelain tile on wall and staircase dado with dry bond including grouting; complete in all respect as per drawings and specifications.  a) up to 1200 m² 258  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 m² 258  b) 300 x 300 m² 188  c) Skirting m 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings  a) Floor m² 38  Floor m² 1024  Flooride and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing m² 138  Interior Painting  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings and specifications.  The provide and Fix 1/2" thick GYPSUM box panel paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings and specifications.  The provide and fixer laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step Provide and fixer laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step Provide	23	Provide and lay glazed tile for bathroom			
Wall   Provide and lay Porcelain tile on wall and staircase dado with dry bond including grouting; complete in all respect as per drawings and specifications.   m²   1052   m²   258		fixing with dry bond including grouting;			
24 Provide and lay Porcelain tile on wall and staircase dado with dry bond including grouting: complete in all respect as per drawings and specifications.  a) up to 1200 m² 1052 m² 2558  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting: complete in all respect as per drawings and specifications.  a) 400 x 400 m² 1615 m² 188 m 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2* thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting  29 Interior Painting  29 Interior Painting  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing and specification.  30 Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawing and specifications.  On step  40 DaLanding  Per/step 52  a) On Landing  Per/step 52  a) On Landing		complete in all respect as per drawings			
staircase dado with dry bond including grouting; complete in all respect as per drawings and specifications.  a) up to 1200 m² 258  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 m² 188 m² 188 m² 188 m² 188 m² 188 m² 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:24 concrete bed and dry bond including grouting; complete in all respect as per drawings m² 38 m² 75  30 Floor ma verage 1:24 concrete bed and dry bond including grouting; complete in all respect as per drawings m² 75  31 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing m² 138  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and fix all epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step 52  a) On Landing  Postide and and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing		Wall	$m^2$	366	
grouting: complete in all respect as per drawings and specifications.  a) up to 1200  b) up to 2100  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting: complete in all respect as per drawings and specifications.  a) 400 x 400  b) 300 x 300  c) Skirting  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor  Acoustical Tile Ceiling  Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Deiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface, including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing and specifications.  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  a) On Landing  Per/step  52  m²  18	24				
drawings and specifications.  up to 1200  up to 1200  up to 2100  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400  30 x 300  30 x 300  30 Skirting  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings  a) Floor  Board Acoustical Tile Ceiling  Dampa (Thermal or equivalent) Ceiling  System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  27 Acoustical Tile Ceiling  Dampa (Thermal or equivalent) Ceiling  System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  31 Marble  Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  40 Del Landing  Per/step  52  40 Del Landing  Per/step  52  48  Porticap  48  Per/step  52  48  48  48  48  48  48  48  48  48  4		· · · · · · · · · · · · · · · · · · ·			
a) up to 1200 b) up to 2100 c) Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 c) Skirting c) Skirting c) Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings a) Floor c) Skirting c) Mary Chermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing c) Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings c) Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing c) m² 185  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect and and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing Per/step 52 m² 18					
b) up to 2100  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 m² 188 m² 188 m² 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m² 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 m² 18			_		
Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 b) 300 x 300 c) Skirting c) Skirting c) Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings a) Floor c) Skirting c) Racoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing c) Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings a) Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  a) Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step On Landing  Per/step 52 a) On Landing  Per/step 52 a) On Landing	a)	up to 1200		1052	
with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 b) 300 x 300 c) Skirting 26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor b) Skirting 27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC duets & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 a) On Landing  Per/step 52 a) On Landing	b)	up to 2100	$m^2$	258	
bond including grouting; complete in all respect as per drawings and specifications.  a) 40 x 400 b) 300 x 300 c) Skirting  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings  a) Floor b) Skirting  27 Acoustical Tile Celling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 a) On Landing  Per/step 52 a) On Landing  Povide and lay pre Per/step 52 a) On Landing	25	Provide and lay Porcelain tile on floor made			
respect as per drawings and specifications.  a) 400 x 400  b) 300 x 300  c) Skirting  Description of the provide and lay National Industries glazed titles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor  Skirting  Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  181  1615  m²  188  131  Ball  m 152  1615  m²  188  188  189  180  180  181  181  182  184  185  186  186  187  187  188  188  188  188		with 1:4 cement sand mortar bed and dry			
a) 400 x 400 m² 1615 m² 188 m² 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m² 38 m 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 a) On Landing  Pref/step 52 m² 18		bond including grouting; complete in all			
b) 300 x 300 c) Skirting d) Skirting 131 26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings a) Floor m² 38 b) Skirting m 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 a) On Landing  Provide and lay pre polish marble 18mm Per/step 52 a) On Landing		respect as per drawings and specifications.			
c) Skirting m 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  10 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  Per/step  52  a) On Landing  Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  Per/step  Per/step  52  a) On Landing	a)	400 x 400	$m^2$	1615	
Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor may assume the complete in all respect as per drawing and specification.  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step 52 a) On Landing  Provide and lay Date of the marble and the special part of the spe	b)	300 x 300	$m^2$	188	
Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m² 75  Ploor Skirting m² 75  Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  Per/step  Per/step  52  m² 18	c)	Skirting	m	131	
tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 B) Skirting m 75  27 Acoustical Tile Ceiling	26	8			
75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m² 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step  52  m² 18		,			
bond including grouting: complete in all respect as per drawings  a) Floor m² 38  Floor m² 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 m² 18		= =			
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b) Skirting m 75  27 Acoustical Tile Ceiling   Dampa (Thermal or equivalent) Ceiling   System, 600 mm x600 mm of size with   suspension system including making   opening for AC ducts & lights etc. complete   in all respect as per drawing and   specification. m² 1024  28 Provide and Fix 1/2" thick GYPSUM box   panel paint finish as approve with Metal   framing inside, all wood to be termite   treated, as per design, details and drawing m² 138  29 Interior Painting   Plastic Emulsion paint wall and ceiling for   interior surface including all base work   complete as per drawings m² 4686  30 Provide and install epoxy paint finish all in   strict accordance with manufacturer's   instruction with minimum strength complete   in all respect as per drawing m² 185  31 Marble   Provide and lay pre polish marble 18mm   thick on tread and riser laid in 1:2 cement   sand mortar complete in all respect as per   drawings and specifications.   On step Per/step 52   a) On Landing Person of the provide and provided in all respect as per   drawings and specifications.   On step Per/step 52   a) On Landing Person of the provided in all respect as per   drawings and specifications.					
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27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step 52 a) On Landing  Provide and land respect as per drawings and specifications.	b)		m	75	
Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step  Per/step  52 m² 18		•		, , ,	
System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete in all respect as per drawings  m² 4686  185  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  52  m² 18					
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specification. m² 1024  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing m² 138  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings m² 4686  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m² 185  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step 52  a) On Landing  Provide and Fix 1/2" thick GYPSUM box panel finish all m² 138  ### ### ### ### ### ### ### ### ### #					
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panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  4686  Per/step 52  a) On Landing  Per/step 52  m² 18	28	1			
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complete as per drawings m <sup>2</sup> 4686  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m <sup>2</sup> 185  31 Marble  Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  52  a) On Landing  Per/step  18		_			
Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m² 185  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step Per/step On Landing Per/step 52 a) On Landing			$m^2$	4686	
strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m <sup>2</sup> 185  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  On Landing  Per/step 52  a) On Landing  Per/step 52	30				
in all respect as per drawing m <sup>2</sup> 185  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  On Landing  Per/step 52 m <sup>2</sup> 18					
31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step Per/step a) On Landing Per/step 18					
Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  52  m²  18		in all respect as per drawing	$m^2$	185	
thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  18	31	Marble			 
sand mortar complete in all respect as per drawings and specifications. On step  a) On Landing  Per/step  m²  18		Provide and lay pre polish marble 18mm			
drawings and specifications. On step  On Landing  On Landing  Der/step  m²  18		thick on tread and riser laid in 1:2 cement			
On step On Landing  Per/step 52 m² 18		sand mortar complete in all respect as per			
a) On Landing m <sup>2</sup> 18		<u> </u>			
		On step	Per/step	52	
b) Skirting m2 55	a)	On Landing	$m^2$	18	
	b)	Skirting	m2	55	

32	Provide and lay pre polish marble nosing						
	18mm thick 100mm wide and porcelain tile						
	on tread and riser laid in 1:2 cement sand						
	mortar complete in all respect as per						
	drawings						
a)	On step1	Per/step	52				
b)	On Landing	$m^2$	18				
33	Provide and lay marble border complete in						
	all respect as per drawings	m	243				
34	Provide and lay granite dado lift lobby as per						
	sample approved by the Architect laid in dry						
	bond of required thickness with grooves,						
	rounding edges, polish finished as required.	$m^2$	66				
35	Provide and lay marble on landing complete						
	in all respect as per drawings	m	18				
	TOTAL CIVIL WORK						

## **ELECTRICAL WORK**

S.#	DESCRIPTION	SUPPLY (Rs.)	INSTALLATION (Rs.)	TOTAL (Rs.)
1	SECTION - A WIRING & WIRING ACCESSORIES			
2	SECTION - B Cable Containment			
3	SECTION - C SWITCHES & SOCKETS			
4	SECTION - D Lighting fixtures			
5	SECTION - E MAIN / SUBMAIN CABLES			
6	SECTION - F DISTRIBUTION BOARDS			
7	SECTION - G Earthing & Grounding System			
8	SECTION - H VOICE & DATA COMMUNICATION SYSTEM			
9	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM			
10	SECTION - J WIRING FOR LOW CURRENT SYSTEMS			
11	SECTION - K AS-BUILT DRAWINGS			
	Total Amount (Rs.)			

#### Note:

- Contractor is advised to inform missing items (if any) in BOQ at time of submitting this tender. No escalation will be considered at time of execution of work.
- Owner can supply any material of Contractor scope at any stage and its cost will be completely deleted from Contractor scope without any kind of adjustment.
- Contractor should mark the selected brands and vendors in approved manufacturer list with submission of Tender Documents.
- Owner / Consultant have all the rights to select any brand / vendor from provided approved manufacturer list, Contractor shall not finalize any brand / vendor without written approval from consultant / owner.

		SUPPLY INSTA			ALLATION	4440UNIT		
S.#	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	AMOUNT (Rs.)
	SECTION - A WIRING & WIRING ACCESSORIES							
	Supply, installation, testing and commissioning of following items including all material, tools, labor & accessories required for completion of work as per description & drawings. Complete in all respects. As shown on drawings. Note:  1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.  2) The circuit wire drop and busway plug / tapoff to light / power point riser shall be sufficient as per false ceiling levels and shall be in flexible GI conduit with PVC coating.  3) Merger Test of each circuit to be done by contractor.  4) Wiring for Occupancy Sensor shall be included							
1	in light wiring.  Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia PVC conduit as shown in drawings.	50	No.					
2	Wiring for light point from switch board / Dimmer board to first light point with phase 1.5 Sq.mm, common neutral 2.5 Sq.mm and common ECC 2.5 Sq.mm, in 25mm dia PVC conduit as shown in drawings. as shown on drawings.	276	No.					
а	Same as above item but wiring from light <b>point to point.</b>	213	No.					
3	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia PVC conduit as shown on drawings.	14	No.					
а	Same as above item but wiring from light <b>point to point.</b>	66	No.					
4	Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia uPVC conduit as shown in drawings. (Avg Length: 50 Rm)	2	No.					
5	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia uPVC conduit as shown on drawings.	3	No.					
а	Same as above item but wiring from light <b>point to point.</b>	21	No.					
6	Wiring of 13A/15A Switch Socket units (RAW Power) from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.							
а	2x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.	22	No.					
b	Same as above item, but wiring from <b>outlet to outlet.</b>	220	No.					

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	Wiring of 13A/15A Switch Socket units for Queue							
_	Management System from DB to first outlet with							
7	following size of wires in in 25mm dia of PVC							
	conduits under wall / floor as shown in the							
	drawings.							
	2x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC							
а	Note: Any outlet coming within range of 2m will	2	No.					
	not be charged separately and its cost must be							
	inclusive in cost of first outlet.							
	Wiring of 13A/15A Switch Socket units for WIFI							
8	Outlet from DB to first outlet with following size of							
	wires in already installed PVC conduit via cable							
	tray as shown in the drawings.							
а	2 x 2.5 Sqmm Cu/PVC + ECC 1x2.5 Sq.mm	6	No.					
	Cu/PVC		1,0.					
b	Same as above item, but wiring from <b>outlet to</b>	10	No.					
	outlet.		110.					
	Wiring of 20A Switched Socket for Hand Dryer							
9	from DB to Socket for with following size of wires							
	in 25mm dia PVC conduit.							
а	2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm	4	No.					
<u> </u>	Cu/PVC	٢	140.					
ь	Same as above item but wiring from <b>20A Switch</b>	4	No.					
	to 13A International Outlet	7	140.					
	Wiring of 16A DP Isolator for VRF Indoor AC / Split							
10	ACs from DB to first outlet with following size of							
10	wires in in 25mm dia of PVC conduits under wall							
	/ floor as shown in the drawings.							
~	2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm	24	No					
а	Cu/PVC	24	No.					
	Wiring of 20A 4P Isolator for Indoor VRF Units from							
11	DB to first outlet with following size of wires in in							
' '	25mm dia of PVC conduits under wall / floor as							
	shown in the drawings							
~	4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm	1	No.					
а	Cu/PVC	ı	140.					
	Wiring of 20A DP Isolator for Hot Water Geyser							
	inside Toilet Blocks from DB to first outlet with							
12	following size of wires in in 25mm dia of PVC							
	conduits under wall / floor as shown in the							
	drawings.							
-	2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm	4	NIa					
а	Cu/PVC	4	No.					
	Wiring of 20A DP Isolator for Plumbing Pump from							
13	DB to first outlet with following size of wires in in							
13	25mm dia of uPVC conduits under wall / floor as							
	shown in the drawings.			<u></u>				
а	3C-4 Sgmm Cu/PVC/PVC	2	No.					
	Wiring of 63A 4P Isolator for Outdoor VRF Units at		1			+		
	Roof from DB to Socket for with following size of							
14	wires in already installed conduit via cable tray,							
	as shown in drawings.							
	4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm					1		
а	Cu/PVC	1	No.					
	Wiring of 80A 4P Isolator for Outdoor VRF Units at		1			+		
	Roof from DB to Socket for with following size of							
15	wires in already installed conduit via cable tray,							
	as shown in drawings.							
	4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm					+		
а	Cu/PVC	1	No.					
	Wiring of 32A 4P Isolator for Fresh Air Units from DB		-			+		
	to Socket for with following size of wires in already							
16	installed conduit via cable tray, as shown in							
	drawings.							
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а	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	1	No.			
17	Wiring of 32A 4P Isolator for Medical Equipment from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.					
а	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	2	No.			
	Note:  1) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.  2) The ECC to be run with each circuit shall be loop-in and loop-out type, joints are not allowed. It will be green in color (Refer detail drawings)  3) All the cables shall be color coded according to phases / types of services.  4) Wires color of UPS circuits should be different from RAW Power  5) Wiring for outgoing circuits of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.					
	Total Amount (Rs.) Sec - A (CARRIED FORWARD TO SUMMARY)					
	SECTION - B CABLE CONTAINMENT					
1	Supply & Installation of following sizes of PVC/UPVC Conduits including all accessories such as bends, sockets, j-boxes, flexible conduits, metal saddles e.t.c for Main / Sub Main Power, Telephone & Data Cables, concealed / surface on wall as per design drawings. Provide MS Pull boxes where ever required.					
а	25mm dia PVC Conduit	550	Rm.			
b	32mm dia PVC Conduit	50	Rm.			
С	38mm dia PVC Conduit	50	Rm.			
2	Supply & Installation of following M.S powder coated Ceiling / Floor / Wall Pull Boxes for data / voice / power / UPS circuits, recessed on wall or column as per design drawings. Complete in all respect.					
а	200mm x 200mm x 75mm	25	No.			
b	300mm x 300mm x 75mm	1	No.			
3	Supply & installation of following sizes of 16 SWG MS Powder Coated with 18 SWG cover (4 feet covers) duly Painted after degreesing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.  Note:  - Color Printed Tags to be provided at every 3 Meter Length.  - Imported C-Channel Hanger to be used for hanging from ceiling.  - Wall Hanger Supports to be provided moving with walls.  - U-shaped fishcer plates to be used for joints  - Earth bonding to be done with every joint  - Only imported mounting accessories to be used make mungo, fischer or equivalent.  - Color to be decided with consent of architect.					
а	300mm x 100mm (2 Partition)	75	Rm.			
b	150mm x 100mm	10	Rm.			

	Supply & installation of following sizes of 16 SWG				 	
	GI Cable Tray with 18 SWG cover (4 feet covers) duly Painted after degreesing, derusting,					
	phosphating and antirust primer including all					
	installation accessories such as rawal bolts e.t.c.					
	Complete in all respects.					
	Note:					
	- Color Printed Tags to be provided at every 3					
4	Meter Length Imported C-Channel Hanger to be used for					
	hanging from ceiling.					
	- Wall Hanger Supports to be provided moving					
	with walls.					
	- U-shaped fisher plates to be used for joints					
	<ul> <li>Earth bonding to be done with every joint</li> <li>Only imported mounting accessories to be used</li> </ul>					
	make mungo, fischer or equivalent.					
	- Color to be decided with consent of architect.					
а	300mm x 100mm (2 Partition) (To be placed on	1	Rm.			
	Floor at Roof)					
b	300mm x 100mm (Roof)  Supply & installation of following sizes of 14 SWG	1	Rm.			
	G.I Cable Ladder with 16 SWG cover (4 feet					
	covers) duly Painted after degreesing, derusting,					
	phosphating and antirust primer including all					
	installation accessories such as rawal bolts e.t.c.					
	Complete in all respects.  Note:					
	- Color Printed Tags to be provided at every 3					
_	Meter Length.					
5	- Imported C-Channel Hanger to be used for					
	hanging from ceiling.					
	- Wall Hanger Supports to be provided moving with walls.					
	- U-shaped fishcer plates to be used for joints					
	- Earth bonding to be done with every joint					
	- Only imported mounting accessories to be used					
	make mungo, fischer or equivalent Color to be decided with consent of architect.					
а	450mm x 100mm (Vertical) (GF to Roof)	10	Rm.			
b	300mm x 100mm (Vertical) (GF to Roof)	10	Rm.			
	Supply & Installation of Imported Linear Outlet					
	Boxes without face plates made of Aluminum,					
6	mounted on wall or punched in furniture as per					
	design drawings. The linear outlet boxes are to be provided with appropriate sizes of knockouts.					
a	450mm x 100mm	34	No.			
	Supply & installation of Imported Floor Outlet	J †	.,			
7	Boxes without face plates made of 16 SWG G.I	4	No.			
'	Sheet, recessed in ground as per design	4	110.			
	drawings.  Note: Contractor is advised to confirm the sizes,					
	running lengths and termination as per site					
	conditions before commencement of work. All					
	the conduits / cable tray crossings through					
	partition walls shall be properly sealed by fire					
	retardant material after installation.					
	Total Amount (Rs.) Sec - B					
	(CARRIED FORWARD TO SUMMARY)					
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	SECTION - C SWITCHES & SOCKETS					
	Supply & Installation of following 10 Amps switches or 10/13/15/20 Amps socket outlets make including 16 SWG sheet steel back boxes recessed / surface on wall or as per design drawings.  (Clipsal C-Vivace for Switches & Sockets Outlets or Equivalent)					
1	10A, 220V One Gang Switch Unit	37	No.			
2	10A, 220V Two Gang Switch Unit	61	No.			
3	10A, 220V Three Gang Switch Unit	18	No.			
4	One Gang Fan Dimmer	1	No.			
5	Two Gang Fan Dimmer	4	No.			
6	Three Gang Dimmer	18	No.			
7	13A, International Switch Socket unit	324	No.			
8	15A, Round 3 pin Switch Socket unit	4	No.			
9	20A Switched Socket for Hand Dryer	4	No.			
10	16A DP Isolator (Split Unit)	24	No.			
11	20A 4P Isolator (Indoor VRF)	1	No.			
12	20A DP Isolator (Hot Water Gyeser)	4	No.			
13	20A DP Isolator (Plumbing Pump)	2	No.			
14	80A 4P Isolator (Outdoor VRF)	1	No.			
15	63A 4P Isolator (Outdoor VRF)	1	No.			
16	32A 4P Isolator (Fresh Air Units)	1	No.			
17	32A 4P Isolator (Medical Equipment)	2	No.			
18	60A TP Isolator (Lifts)	1	No.			
19	32A 5-Pin (Three Phase) Industrial Socket with Plug (for Communication Racks)	2	No.			
	,					
	Total Amount (Rs.) Sec - C (CARRIED FORWARD TO SUMMARY)					
	SECTION - D LIGHTING FIXTURES					
	Supply, Installation, Testing & Commissioning of the following lighting fixtures complete with driver and specified lamps with installation and hanging accessories upto 1 meter length for all pendant lights.  Note:  1) Power factor of all light fixture shall not be less than 0.9. 2) Efficacy >100lm/W and CRI > 90. 3) All down light shall have COB ship. 4) Fixture must be made of die-cast aluminum with aluminum heat sink. 5) All light fixture shall be finalized after taking approval from architect/consultant 6) Minimum 3 year warranty required from date of successful commissioning of light and driver both.					
1	Surface Mounted Down Light with 18W LED Lamp Color 4000K Diffused Glass	244	No.			
2	Surface Mounted Down Light with 12W LED Lamp Color 4000K Diffused Glass	12	No.			
3	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	6	No.			

4	Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	7	No.			
5	Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	152	No.			
6	Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	32	No.			
7	Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	54	No.			
8	Bulk Head Light	23	No.			
9	Ceiling Fan 48"	63	No.			
10	Hygiene 40W Jumbo Flying Insect Killer UV Tube Catcher Zapper Repellent Light	20	No.			
11	Exhaust Fan 24"	8	No.			
	Total Amount (Rs.) Sec - D (CARRIED FORWARD TO SUMMARY)					
	SECTION - E MAIN / SUBMAIN CABLES					
	Supply & Installation, testing and commissioning of following sizes of Main / Sub main (MV / LV) Cables in already installed cable tray, conduit etc. Including all accessories, lugs, glands etc. complete in all respect as shown on drawing.					
1	From MDB-BLUE to SMDB-G 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.			
2	From MDB-BLUE to SMDB-F 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	15	Rm.			
3	From MDB-BLUE to SMDB-HVAC 4C-95 Sqmm Cu/PVC/PVC + ECC 1C-50 Sqmm Cu/PVC	10	Rm.			
4	From SMDB-G to LPDB-GF-1 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.			
5	From SMDB-G to LPDB-GF-2 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.			
6	From SMDB-F to LPDB-FF-1 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.			
7	From SMDB-F to LPDB-FF-2 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.			
8	From SMDB-F to LPDB-R 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	15	Rm.			
9	From MDB-BLUE to 60A TP Isolator (Lift) 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	25	Rm.			
	Note:  1- Contractor is instructed to confirm the cable running lengths and termination as per site conditions before commencement of work.  2- Imported Lugs and Connectors shall be used in LV Cables.  3) Merger Test of each circuit to be done by contractor.  Total Amount (Rs.) Sec - E (CARRIED FORWARD TO SUMMARY)					

	SECTION - F DISTRIBUTION BOARDS					
	Supply, Installation, testing & commissioning of following Distribution Boards as shown on drawing made with 14 SWG sheet steel housing including all installation accessories such as Rawal bolt etc. Complete in all respects.					
	Note: (Refer Single Line Diagram)  1) All the DB should be front accessible and maintainable.  2) Cost of Lighting Control Relays & Power Supplies should be Included in Distribution Boards.  3) The transportation and placement of DBs upto dedicated location is also included in the work scope, complete in all respects including leveling, grouting etc.  4) Laser engraved tags required as mention in SLDs  5) Space for circuit tagging required with permanent installation on protective sheet via rivets  6) 20% space required in DB for future provision  7) Tin platted Imported Cu bus bar with heat shrink color coded sleeves to be used.  8) Hindged protective metallic door required with knob/handle.  9) Braided Door earth required.  10) Lockable handle required for main door.  11) As-built drawing pocket.  12) Cable hanging arrangement.					
	Minimum One Year Warranty Required from date of successful commissioning on site.					
1	MDB BLUE	1	No.			
2	SMDB-G	1	No.			
3	SMDB-F	1	No.			
4	SMDB-HVAC	1	No.			
5	LPDB-GF-1	1	No.			
6	LPDB-GF-2	1	No.			
7	LPDB-FF-1	1	No.			
8	LPDB-FF-2	1	No.			
9	LPDB-R	1	No.			
10	80A Weather Proof TP Boxes	1	No.			
11	100A Weather Proof TP Boxes	1	No.			
	Note: 1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.					
	Total Amount (Rs.) Sec - F (CARRIED FORWARD TO SUMMARY)					
	SECTION - G EARTHING & GROUNDING SYSTEM					
	Supply, installation, testing and commissioning of following items for Earthing Lightning Protection System for lightning protection and grounding of other systems including all material, boring, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					

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1	Chemical Enhanced Earth using 38 mm dia copper pipe filled with soil conditioning material including 6" dia, 11' deep boring and back filled chemical to enhance conductivity material. Complete with termination clamps, 12" dia heavy duty tin plated round cover as per details given in drawings.	2	No.			
2	Earth Connecting Point or Equipotential bar made with 300mm wide, 50mm high and 80mm thick tin plated Copper, as shown in drawings. Bar shall be provided with holes suitable for installation of 6 No. 70/95 sqmm bare copper conductor. ECP shall be enclosed in 350mm x 100mm x 100mm MS Painted Powder Coated Metal Enclosure with front accessible Cover.	2	No.			
3	Supply, installation, testing and commissioning of following size of Single core PVC Cables from ECP to several equipment's in following sizes of PVC Conduit or as per details given in tender drawings, including all material, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					
а	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	50	Rm.			
4	Stranded bare copper conductors of following sizes in clipped on retaining wall from B1 to B4 from ECP to Earth Station as shown in drawings. Complete in all respects including termination at both ends.					
а	95 Sq.mm Bare Copper Conductor	50	Rm.			
5	Allow for any other item required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ.  Note: Contractor is advised to confirm the cable running lengths and termination as per site	1	Job			
	conditions before commencement of work.					
	Total Amount (Rs.) Sec - G (CARRIED FORWARD TO SUMMARY)					
	SECTION - H VOICE & DATA COMMUNICATION SYSTEM					
	Supply, Installation, testing and commissioning of following items for voice and data communication system including all material, labor, tools, accessories etc. Complete in all respects. Quantities for cables shown in BOQ are estimated and taken from drawings. Contractor is advised to take measurement at site before commencement of works. Different colors of voice and data cables shall be used. (Selected Series for Face plates is Clipsal C-Vivace or equivalent)  Simplex Face plate with 1 No. CAT-6 RJ-45 I/O for Data, white / off white finish, complete with shuttered click installables and all accessories	42	No			
1	shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	42	No.			

2	Simplex Face plate with 1 No. CAT-6 RJ-45 I/O for WIFI, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	8	No.			
3	<b>Duplex Face plate</b> with <b>1 No. CAT-6</b> RJ-45 I/O for Data & <b>1 No. CAT-6</b> RJ-45 I/O for Voice white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	34	No.			
4	TV Outlet with face plate	8	No.			
5	<b>1x8 way Splitter</b> including 18 SWG M.S Sheet powder coated Box for RG-6 Connectivity.	2	No.			
6	Supply and Wiring of CAT-6 UTP Cables for Voice communication system from Com Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects.  Different colors of cables shall be used for Voice (Coil =305 Rm.)	12	Coil			
7	Supply and Wiring of CAT-6 UTP Cables for Data communication system from Com Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects. Different colors of cables shall be used for Voice (Coil =305 Rm.)	6	Coil			
8	Supply and Wiring of Co-axial cable RG-6 for CATV system in 25mm dia PVC Conduit from each T.V point to Splitter as per drawings including terminations. Complete in all respect.	120	Rm.			
9	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Fiber Optic Cable as per standard specifications, all termination accessories up to entire satisfaction of IT Engineer, in already installed PVC conduit / cable tray including termination and tagging at both ends. Complete in all respects.	30	Rm.			
10	<b>Programming, testing and commissioning</b> of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job			
11	Fluke / OTDR Testing of each communication cable with calibrated fluke tester	1	Job			
	<b>Note:</b> Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec - H (CARRIED FORWARD TO SUMMARY)					
	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM					
	Supply, installation, testing & commissioning of Addressable Fire Alarm System comprising of following equipment's including all accessories required for the completion of the system in all respects.					
1	Addressable Fire Alarm Control Panel of 2-loops expandable upto 4 Loops having minimum 127 devices per loop. The FACP shall be self powered with built in 12V batteries for 24 Hrs backup with charging unit, Built-in GSM Module and Self Printing Function. It can be programmed using Windows based software for peripheral devices like display unit, printers and soft zoning etc.	1	No.			

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	Addressable Multi Detectors incorporating an						
	LED indication located in labyrinth with in the						
2	housing of the detector. Sensing of the detector	73	No.				
	shall be adjustable via software between 0-90	7.5	140.				
	seconds. The detector shall have built in short						
	circuit isolators on both inputs.						
	Addressable Break Glass Type Manual Call Point						
	having a built in short circuit isolator and built in						
	microprocessor to ensure a response time of max						
3	1 second. It also incorporates an indication LED,	12	No.				
	flashed after pressing the button to						
	acknowledge the activation and a key						
	operation facility for testing purposes.						
	Addressable Type Indoor Loop Powered						
	electronic sounder and minimum sound output						
	100 dB at 1 meter with frequencies for variety of						
4	sounds as required. Souder shall be loop wired	17	No.				
	and loop signaled, built in short circuit isolator,						
	configured via software.						
	Supply and wiring for FACP Power from DB to						
5	FACP with 2C, 2.5 Sq.mm fire resistant cable in	20	Rm.				
	25mm dia PVC Conduit. Complete in all respect.	20	IXIII.				
	Supply and wiring of 2C, 1.5 Sq.mm Fire Resistant						
	Shielded Cable (Fire rating for 2 hours at 950 C) in						
6	25mm dia PVC conduit from fire alarm control	720	Rm.				
	panel to all sensors & devices including all	720	IXIII.				
	installation accessories complete in all respect.						
	Addressable Interface Module for integration of						
7	Fire Alarm System with Power Panels, PA System,	4	No.				
/	Elevators, Fire Fighting System etc.	4	110.				
	<b>Networking</b> of all the Fire alarm control panels of						
8	all the OPD Buildings along with integration with	1	Job				
	the existing control room including IO modules,						
	wiring, conducting, complete in all respect.						
	<b>Programming, testing and commissioning</b> of the						
9	complete system as per client's requirements	1	Job				
	permissible for the FACP with training sessions of						
	maintenance personnel's.						
	Allow for any other item required for completion						
	of system not covered in BOQ or specifications /						
	drawings in accordance with the same						
10	standards and brands shown and approved by	1	Job				
	consultant. All such items shall be covered in this		300				
	item but complete description, item rates,						
	quantity required and brands shall be mentioned						
	separately and to be attached with the BOQ.						
	Note:						
	1) The Bidder shall provide the complete						
	Technical Literature for the system offered.						
	2) Contractor is advised to confirm the cable						
	running lengths and termination as per site						
	conditions before commencement of work.						
	Total Amount (Rs.) Sec - I						
	(CARRIED FORWARD TO SUMMARY)						
<del>                                     </del>	, ,						
	SECTION - J						
<u> </u>	WIRING FOR LOW CURRENT SYSTEMS						
Α	PUBLIC ADDRESS SYSTEM			 			
	Supply and wiring for Public Address System			 			
1	using 2C, 2.5 flexible Speaker Cable as per	300	Rm.				
'	zoning layout shown in drawings in 25mm dia	300	IXIII.				
	PVC conduit. Complete in all respects.						

	Wiring for Microphone outlet using Cat-6 STP					
2	Cable in 25mm dia PVC conduit. as shown in	50	Rm.			
_	drawings. Complete in all respects.		1			
В	CCTV SYSTEM					
	Supply and Wiring of CAT-6 UTP Cables for					
	Cameras from each camera to NVR in already					
	installed PVC conduit via cable tray as per					
3	drawings including termination and tagging at	4	Coil			
	both ends. Complete in all respects. (Coil =305					
	Rm.)					
С	QUEUE MANAGEMENT SYSTEM					
	Supply and Wiring of CAT-6 UTP Cables for Queue					
	Management System from Communication					
	Rack to each outlet in 25mm dia PVC Conduit as					
4	per drawings including termination and tagging	3	Coil			
	at both ends. Complete in all respects.					
	(Coil =305 Rm.)					
	Supply and wiring for Queue Management					
5	Speakers using 2C, 2.5 Speaker Cable as per	150	Rm.			
3	zoning layout shown in drawings in 25mm dia	130	KIII.			
	PVC conduit. Complete in all respects.					
D	WIFI SYSTEM					
	Supply and Wiring of CAT-6 UTP Cables for					
	Wireless Access Points from Communication					
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends.	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the	3	Coil			
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.					
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft	3	Coil			
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final					
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final commissioning of project. Approval of final bills					
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final commissioning of project. Approval of final bills are subject to completion of as built drawings.					
	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS  Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final commissioning of project. Approval of final bills					

# **SUMMARY OF PLUMBING AND FIREFIGHTING WORKS**

S.No	Activity	Amount Rs.
А	TOILET FITTING AND ACCESSORIES	
В	COLD WATER SUPPLY SYSTEM	
С	SOIL, WASTE AND VENT PIPE SYSTEM	
D	EXTERNAL WATER SUPPLY SYSTEM	
Е	FIRE FIGHTING SYSTEM	
F	SEWERAGE SYSTEM	
	TOTAL COST OF PLUMBING & FIREFIGHTING WORKS	

### **LIST OF APPROVED MANUFACTURERS**

S.No.	ITEM	MAKE
	PLUMBING WOR	rks
1	European Water Closet (Floor Mounted)	PortaHD-12N
2	Wash Basin (Half Pedestal)	Porta HDLP203AH
3	Wash Basin (Counter Top)	Porta HD-3
4	Basin Mixer	Zilver E-D 109
5	Bottle Trap	Zilver E-X024
6	Bibcock	Zilver E-S03F
7	Toilet Paper Holder	Zilver 033-2
8	Cloth Hook	Zilver 033-1
9	T-Stop Cock	Zilver GX 7016
10	Double Bibcock With Muslim Shower	Zilver E-S08 + VRH FX 40NS
11	Poly-propylene Pipe (Water Supply)	Dadex
12	Polypropylene Pipe Fittings (Water Supply)	Dadex
13	Polyethylene Pipe and Fittings (Water Supply)	Dadex
14	Valves And Strainers	Kitz / Haterslay
15	uPVC Pipe (Drainage)	Dadex
16	uPVC Fittings (Drainage)	Dadex
17	uPVC Clean out	Dadex
18	Teflon Tape	Imported
19	Floor Drain / Floor Gully	Dadex
20	Vent Cowl	Dadex
21	Floor Drain Grating	Alpine
22	Manhole Frame & Cover (CI)	Alpine
23	Gully Trap	Dadex
24	Pump	Lowara / Grundfos / Wilo
	FIRE FIGHTING WO	ORKS
25	Fire Hose Cabinet (\$/\$) with Reel	NAFFCO / SFFECO
26	Fire Extinguishers	NAFFCO / SFFECO
27	Fire Hydrant with Hose	NAFFCO / SFFECO
28	Siamese Connection	NAFFCO / SFFECO
29	Seamless Black Steel Pipe & Fittings	LONTRIN / Approved Equivalent
30	Hanger and Supports	Norm / Mungo
31	Gate Valves	Kitz / Haterslay
32	Pump	NAFFCO / SFFECO
33	Paint	ICI

## <u>Note.</u>

Before quoting the rates, the contractor should first visit the site.

Above mentioned approved manufacturers list is to be maintained

S. NO.		DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	TOILE	T FITTING AND ACCESSORIES				
1	Providin Closet w accessor thimble, cover, te service necessar with non complete a) For G b) For H	g and fixing European Type Water with coupled flushing cistern, including all ies and fittings, C.P flexible pipe, waste and traps, including seat and ies stop cock with check nut, all joints to and drains, plugging and screwing as y to the structure, filling sleeve opening in-shrink grout, and coated with epoxy, is in all respect.  The energy including seat and including seat and included in the structure of t	16 2	Nos. Nos.		
2	with all a cock wi pipe, wa including service necessar with nor	g and fixing Counter Top Wash Basin accessories such as, basin mixer, tee stop th check nuts, CP flexible pipe, waste ste coupling, bracket set, etc. Complete g bottle trap, silicon sealant, all joint to and drain, plugging and screwing as y to the structure, filling sleeve opening n-shrink grout, and coated with epoxy. e in all respect.	25	Nos.		
3	mixer, to pipe, wa Complete joint to sa nece	g and fixing Wash Basin with Half with all accessories such as, basin the stop cock with check nuts, CP flexible steepipe, waste coupling, bracket set, etc. the including bottle trap, silicon sealant, all service and drain, plugging and screwing ssary to the structure, filling sleeve with non-shrink grout complete in all	23	1105.		
	a) For G	eneral toilets	20	Nos.		
		andicapped toilet	2	Nos.		
4	Toilet Accessories  Providing and fixing bathroom accessories including fixing with rawal plug of approved quality complete in all respect.					
	I	Toilet paper holder	18	Nos.		
	II	Soap Dispenser	52	Nos.		
	III	Double bibcock with muslim shower	18	Nos.		
	IV	Cloth hook	18	Nos.		
	V	Bibcock (Janitor Area)	2	Nos.		
				SUI	B TOTAL-A	

В	COI	LD WATER	R SUPP	PLY SYSTEM				
1	Polyp		ld Wate Foilets	er Piping for the				
	per DIN fittings a tees, elbe clamps, wall or l slab as per providing	8077 / 8078 s per DIN 16 ows bends, rehanger collaburied in was er specification.	(PN 20 962 (PN educer pars, supp lls or suppons included wall, t	ly propylene pipe as ) including specials (25) such as socket, olug and union etc), ports, supported on uspended from roof uding color tagging, esting @ 150 psi,				
	I	25	mm	Ø	262	RM		
	II	32	mm	Ø	106	RM		
	III	40	mm	Ø	22	RM		
	IV	50	mm	Ø	18	RM		
	V	63	mm	Ø	68	RM		
2	VI	75	mm	vay <b>Gate Valves</b> of	9	RM		
	ends and for 4" Ø. with all complete specifica	cast iron boo (100 mm) an additional e installatio tion and as I by the engin	dy bronz d above materi n as shown o	Ø. With threaded the trim flanged ends for 125 psi together all required for a described in the ton drawings and as				
	I	1/2"		Ø	33	Nos.		
	II	3/4"		Ø	7	Nos.		
	III	1"		Ø	4	Nos.		
	IV	3"		Ø	1	No.		
	V	4"		Ø	3	Nos.	D. TOTAL D	
	50	II WASTI	ZANID	VENT DIDE		<b>SU</b> .	B TOTAL-B	
C	SU		STEM	VENT PIPE				
1	fit type e from slal plugs, cl (bend, te of holes making structure grout, la complete	g and fixing is mbedded in a cor clamped amps, hange es, Y-tee etc in walls and good the s, filling sleep belling and e in all respect	n position and to floor and collars.  Making floors ame as we open testing to the collars.	on uPVC pipes push d wall or suspended and wall including s, supports, specials ng requisite number where required and necessary to the ang with non-shrink to 8'ft water height				
	I	50	mm	Ø	70	RM		
	II	82	mm	Ø	269	RM		
	III	110	mm	Ø	143	RM		

2	solvent j embedde slab or cl clamps, l tees, Y-t holes in making structure grout, lal complete	oint type pid in floor aramped to floor hanger collar tee etc.). May walls and good the son filling sleeve belling and to an all respection.	pe for rend wall or and was, suppositions verifications were assive opening to the and as	rain water drainage, or suspended from vall including plugs, orts, specials (bend, equisite number of where required and necessary to the ing with non-shrink o 8' ft water height shown in drawings.				
	I	82	mm	Ø	6	RM		
	II	110	mm	Ø	45	RM		
3	of approrequisite for pipe of necessary opening	ved design of number of he connection are to the structure with nor g gasket and o	with S/s noles in nd makin ructure n-shrink					
	I	82	mm	Ø	25	Nos.		
5	plinth or good the filling s complete  I  II  Providing	floor for pi same as nec leeve opening including ru 82 110 g and fixing u	pe connects of the connects of	er of holes in walls, nection and making to the structure and non-shrink grout sket and clamp.  Ø Clean Out Plug with g good the same as	13 5	Nos.		
				with rubber gasket,				
		in all respec		8				
	I	82	mm	Ø	18	Nos.		
	II	110	mm	Ø	5	Nos.		
6	of the f	following Ø in all respec	includ	Cowl for vent pipe ing all accessories		-		
	I	82	mm	Ø	4	Nos.		
	II	110	mm	Ø	3	Nos.		
7	design v number of connection necessary including respect.	vith uPVC of holes in von and may to the structure.	grating vall plin king g cture wi	Drain of approved including requisite th or floor for pipe ood the same as th non-shrink grout p complete in all				
	I	110 n	nm Ø (S	Scupper Drain)	5	Nos.		
							Sub Total-C	

D	EXTERNAL WATER SUPPLY SYSTEM	1		
1	Providing. installing, testing and commissioning	-		
	Booster <b>Pump for top 2 floors</b> water supply of			
	approved make including (100 litres) tank, gat			
	valves, check valves, foot valves, gauges, contro			
	panel (with the system for increase in flow the second pump should kick in), pressure switch for			
	adjusting pressure from 35 to 50 psi for a flow of			
	50Gpm (each pump), as per drawing, complete i			
	all respect. (Note: 01set = 02Nos pumps)	1	Set.	
2	Providing and fixing C.I Manhole Cover for		200	
	underground and overhead water tank. (weight			
	52kg)			
	I 600x600 mm	2	Nos.	
3	Providing, fixing <b>C.I Goose Neck</b> with wire mes			
	over the underground water tank & overhea			
	water tank as per drawing & engineer's approva			
	I 110 mm Ø	1	Nos.	
4	Shop Drawings as per specifications.	1	Job	
5	As Built Drawings as per specifications.	1	Job	
	Sub Total-D			
E	FIRE FIGHTING SYSTEM			
<b>E</b>	FIRE FIGHTING SYSTEM Providing, laying, jointing and testing Blace	k		
	Providing, laying, jointing and testing Blac Steel Seamless Piping schedule 40 for	or		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder	or ed		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support	or ed s,		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating	or ed s, g		
-	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respectives.	or ed s, g g ct		
-	Providing, laying, jointing and testing <b>Blac Steel Seamless Piping</b> schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the	or ed s, g g ct		
	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respectives.	or od s, g g ct ne	RM	
	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.	or od sk, gg et he 12	RM RM	
	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coatin (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø	or od s, g g ct ne	RM RM RM	
-	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø	or od s, , , , , , , , , , , , , , , , , , ,	RM	
-	Providing, laying, jointing and testing Blace Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coatin (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø	or od s, g g et ae 12 33 32 42	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader	or od s, g g et ne	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged ends	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4" Ø. (100 mm) and above for 125 psi together	or od s, gg ct ae 12 33 32 42 of od ds er	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged ender for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for	or od s, g g et ue 12 33 32 42 of ed ds er a	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the specification and as shown on drawings and a	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	
1	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welder fittings, hardware clamps, hangers, support welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  IV 4"Ø  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threader ends and cast iron body bronze trim flanged end for 4"Ø. (100 mm) and above for 125 psi together with all additional material required for complete installation as described in the	or od s, , , , , , , , , , , , , , , , , , ,	RM RM	

3	Providing and fixing double compartment <b>Fire Hose Cabinet</b> with (¾" Ø, 100 ft long, high pressure rubber hose, 180° rotation). Complete with 1"Ø PRV, 1 no. 25mm dia. plastic nozzle has jet / spray / shut-off operations. Type: Swing Automatic (Automatic Hose Reel has integrated automatic stop valve which will open after 3 revolution of the reel). Standard size: 25mm dia., Length: 30m, Maximum working pressure: 15 Bar, Red Color, Manufacture standard: BS EN 671-1.	4	Nos.	
4	Providing and fixing <b>Dry Chemical Powder</b> , fire extinguisher 6Kg capacity, powder coated in red color, complete with pressure gauge and wall bracket.	9	Nos.	
5	Providing and fixing CO <sub>2</sub> Type Fire Extinguisher 2Kg capacity, powder coated in red color, complete with wall bracket and all other accessories.	9	Nos.	
6	Providing, Installing and commission 2 Way Breeching Inlet unit for wet riser including all accessories and material complete in all respect as shown on drawings / specifications.	1	No.	
7	Providing and installing <b>Automatic Air Vent</b> with all accessories and material as specified complete in all respect as shown on drawings / specifications.	2	Nos.	
	DRAWINGS			
8	Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.			
9	Shop Drawings as per specifications.	1	Job	
10	As-Built Drawings as per specifications.	1	Job	
	Sub Total-E			
F	SEWERAGE SYSTEM			
1	Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM Ø	30	RM	
2	Providing and fixing 225 x 225mm uPVC Gully Trap with Frame and cover including uPVC gully trap chambers as per drawing complete in all respect.	4	Nos.	

3	Construction and making Manhole complete in				
	all respect including excavation, backfilling,				
	compaction, block masonry benching, manhole				
	cover (weight: 52kg) with frame complete as per				
	drawing and satisfaction to the engineer,				
	including testing. (Note: All material to be				
	supplied by the contractor)				
	For depth 0-3'ft (600mm x 600mm)				
		4	Nos		
4	Shop Drawings as per specifications.	1	Job		
5	As Built Drawings as per specifications.	1	Job		
			SU	B TOTAL-F	
				TOTAL	

# "CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI".

# **ORANGE BLOCK**

S. No.	Description	Amount
1	CIVIL WORK	
2	ELECTRICAL & ALLIED WORKS	
3	PLUMBING & FIRE FIGHTING WORKS	
	GRAND TOTAL RS.	

CONTRACTOR	

S. No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	EXCAVATION AND BACKFILLING				
1.1	Excavation for foundations, plinth beams etc in any strata upto required depth from natural ground level, including back filling and compacting in 150mm thick layers, wherever required with all leads, lift with suitable excavated material. Excavated material suitable for use as back filling material shall be stockpiled, if required, within the site of work or as directed by Engineer in charge, this stockpile material shall be transported back to places required fill or back fill. Surplus material unsuitable for use as filling material shall be disposed off away from site by dumpers. (No extra payment will be made in this regard). Complete in all respect as per drawing, specifications and directed by Engineer – in – charge.				
	( only the size of lean concrete will be calculate for payment ).	765	Cum		
2.1	CONCRETE OF SUB – STRUCTURE  Providing, mixing, depositing, curing and compacting using S.R. cement lean concrete under foundations, plinth beams etc, as shown on the drawings with clean local sand and crushed stone, graded as specified, including formwork where required etc., complete in all respects as per drawing, specifications and directed by Engineer-incharge.  A. Lean Concrete 1:4:8  B. 1:3:6 Cast in situ (under plinth beams)	70 14	Cum Cum		
2.2	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in sub-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) at 28 days using Sulphate Resistance (S.R cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.  A. Footings (f' c = 4 ksi)  B. Foundation beams (f' c = 4 ksi)	198 5	Cum Cum		
	<ul><li>C. Plinth beams (f' c = 3 ksi)</li><li>D. Columns upto Plinth level (f' c = 4 ksi)</li></ul>	14 25	Cum Cum		

			1	1	
	E. Lift shear walls upto plinth level (f' $c = 4 \text{ ksi}$ )	15	Cum		
			<u>I</u>	<u>I</u>	
3	STEEL REINFORCEMENTS.				
	Supplying, cutting, bending, binding and fixing				
	in position <b>Ribbed Deformed Bars</b> , confirming to ASTM A615-76a having minimum yield strength				
	of 60,000 psi, including, wastage, unspecified laps,				
3.1	steel chairs, rolling marging, binding wire, etc., complete in all respect as per drawings,				
	specifications and to all approval of the Engineer –				
	in –charge. Complete upto any floor and any height. (Unspecified Overlaps pin and chairs etc not to be				
	paid).				
		36000	Kg		
	TO	OTAL COS	T OF SEC	- A Rs.	
	SECTION – B: PLINTH LEVEL TO 1ST FLOOR S	LAB (- 75 l	LEVEL TO	+ 3825 LE	VEL)
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	CONCRETE OF SUPER – STRUCTURE				
	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in super-structure				
	using crushing stone and sand to relevant				
	B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) as				
1.1	mentioned at 28 days using Ordinary Portland				
1.1	(O.P cement) as under including water tight shuttering fixing and removing etc., but				
	excluding the cost of reinforcing steel Complete				
	in all respect at any depth and any level. Complete as per specifications, drawings and all to the				
	approval of Engineer – in – charge.				
	A) Columns $(f' c = 4 ksi)$	32	Cum		
	B) Lift/ Shear walls (f' c = 4 ksi)  (C) Province $(S_1 = 2 \ln i)$	24	Cum		
	C) Beams (f' c = 3 ksi) D) Slabs (f' c = 3 ksi)	36 95	Cum Cum		
	, , ,				
	E) Staircase steps, landing etc ( $f'$ c = 3 ksi)	14	Cum		
2	STEEL REINFORCEMENTS.				
	Supplying, cutting, bending, binding and fixing				
	in position <b>Ribbed Deformed Bars</b> , confirming to ASTM A615-76a having minimum yield strength				
	of 60,000 psi, including, wastage, unspecified laps,				
	steel chairs, rolling merging, binding wire, etc.,				
2.1	complete in all respect as per drawings, specifications and to all approval of the Engineer –				
2.1	in –charge. Complete upto any floor and any height.				
	(Unspecified Overlaps pin and chairs etc not to be paid).				
		37800	Kg		

### TOTAL COST OF SEC - B Rs.

# SECTION – C: FROM $1^{ST}$ FLOOR SLAB TO $2^{ND}$ FLOOR SLAB ( + 3825 TO + 7725 LEVEL)

S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	CONCRETE OF SUPER – STRUCTURE				
1.1	Providing, mixing, depositing, vibrating and curing, reinforced cement, concrete, in super-structure using crushing stone and sand to relevant B.S.S/ASTM specifications with minimum compressive Cylinder strength (f'c in ksi) as mentioned at 28 days using Ordinary Portland (O.P cement) as under including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel Complete in all respect at any depth and any level. Complete as per specifications, drawings and all to the approval of Engineer – in – charge.				
	A) Columns (f' c = 4 ksi)  B) Lift / Shear walls (f' c = 4 ksi)  C) Beams (f' c = 3 ksi)  D) Slabs (f' c = 3 ksi)  E) Staircase steps, landing etc (f' c = 3 ksi)	32 24 36 95 14	Cum Cum Cum Cum Cum		
2.1	STEEL REINFORCEMENTS.  Supplying, cutting, bending, binding and fixing in position <b>Ribbed Deformed Bars</b> , confirming to ASTM A615-76a having minimum yield strength of 60,000 psi, including, wastage, unspecified laps, steel chairs, rolling marging, binding wire, etc., complete in all respect as per drawings, specifications and to all approval of the Engineer – in –charge. complete upto any floor and any height. (unspecified Overlaps pin and chairs etc not to be paid).	37800	Kg		
	TOTAL COST OF SEC	· C Rs.			

	ARCHITECTURE						
Item No.	Description	Unit	Quantity	Unit	Amount		
1	Masonry Provide and Lay machine made solid block (800 psi) masonry walls set in 1:6 cement sand mortar including curing complete with scaffolding at any height. As shown on Drg & detail						
	200mm thick solid wall	$m^2$	239				
	150mm thick solid wall 100mm thick solid wall	$m^2$ $m^2$	1395 139				
2	<b>Cavity Wall with Concrete Masonry Unit</b>						
	Block masonry cavity wall in 1:6 cement and sand mortar, including welded M.S. Steel 9mm dia ties in approved size and 50mm thick Polystyrene board insulation (Diamond Jumbolen or as approved) in the cavity; as per drawings.						
	a) 100 + 50 + 150 mm	$m^2$	58				
3	Provide and lay CC1:2:4 pad between cavity wall and precast lowers complete in all respect as per drawing	m	65				
4	Provide and make precast vertical louvres1:2:4 counter including form work and steel finish and fixing arrangement complete in all respect as per drawing						
	Elevation 3.26 mm high	Nos	300				
5	Staircase 3.3 mm high  Provide and fix glass block in 200 x 200 mm as approved including fix in adhesive and all respect fixing arrangement complete in all	Nos	80				
6	respect as as per drawing No	m <sup>2</sup>	28				
6	Provide and casting RCC 1:2:4 tie beam including steel complete in all respect as per Drawing.	m3	20				
7	Provide and fabricating M.S. polish vertical solid bar 25 x 25 and 12mm x 12mm horizontal welded to vertical bar including 60mm red miranti wood hand rail finish with hammer paint with polish including anti rust complete in all respect as per drawing No	m	90				
8	Provide and fabricating M.S. hand railing for staircase with fixing arrangement with antirust paint including fixing 60mm red miranti wood gola finish with paint and polish n all respect as per drawing No	m	114				

9	Roof Finishing			
a)	Provide and laying 1:3:6 75 mm roof screed			
	laid in slop and panel complete in all respect			
	as per drawing	$m^2$	810	
b)	Provide and laying two coats of hot bitumen			
	grade complete on all respect as per drawing			
	@. Kg per Sft. With approved polythene	2		
	sheet complete on all respect as per drawing	$m^2$	729	
c)	Provide and laying 1:2:4 50mm thick	$m^2$	720	
d)	complete on all respect as per drawing	m-	729	
u)	Provide and laying 25mm thick thermopile installation complete on all respect as per			
	drawing	$m^2$	729	
10	Ground Floor finishes	111	12)	
a)	Provide and lay 150 mm thick stone soling	$m^2$	705	
b)	Provide and lay 75mm thick screed	$m^2$	705	
c)	Provide and lay 3 coats of hot bitumen	$m^2$	705	
d)	•		705	
	Provide and lay 75 mm thick sub floor	$\frac{m^2}{2}$		
e)	Provide and lay 75mm thick finish floor	$m^2$	705	
f)	Provide and laying imported earth filling as	$m^2$	705	
11	approved  Even Agambling	III	703	
11	<b>Expansion Joint Cover Assemblies</b> Provide and fix expansion joint cover of			
	aluminum sections including 25mm x 25mm			
	thick polysulphide with baker strip and			
	impregnated fiber board as approved by			
	Structural Engineer where ever required,			
	including filling sealant; as per drawing			
a)	Vertical	m	60	
b)	Horizontal	m	14	
12	Doors and Frames			
	Provide and install door with G.I. frame (10			
	SWG) including fix glass in position			
	thickness as shown in drawing filling,			
	concrete 1:6 in gape between frame and			
	masonry wall in line, level and plumb, apply			
	3 coats metal paint finish, as required			
	complete as per detail shown on Drg # D-01 - 1500 x 2750	Maa	4	
		Nos	4	
	D-02 - 1350 x 2750	Nos	16	
	D-03 - 1200 x 2750	Nos	4	
	D-04 - 1200 x 2750	Nos	5	
	D-05 - 1100 x 2750	Nos	5	
	D-06 - 1050 x 2750	Nos	2	
	D-07 - 900 x 2750	Nos	8	
	D-08 - 750 x 2750	Nos	34	
	D-09 - 700 x 200	Nos	10	
	DW-10 - 1150 x 2150	Nos	2	

13	Flush Door			
	Provide and make 1 1/2" thick solid core			
	flush door with 2 1/2" Wide partal wood			
	frame all round 6 x 1 1/4" partal wood mid			
	rail in two pieces partal wood for lock fitting			
	all shutter with 3/4" x 1" 1/4" x 10" partal			
	wood pieces Formica finish over 1/8" thick			
	ply in all respect as per drawing No			
	D-01 - 1500 x 2750	Nos	4	
	D-02 - 1350 x 2750	Nos	16	
	D-03 - 1200 x 2750	Nos	4	
	D-04 - 1200 x 2750	Nos	6	
	D-05 - 1100 x 2750	Nos	2	
	D-06 - 1050 x 2750	Nos	2	
	D-07 - 900 x 2750	Nos	4	
	D-08 - 750 x 2750	Nos	34	
	D-09 - 700 x 200	Nos	10	
	DW-10 - 1150 x 2150	Nos	2	
14	Aluminum Anodized Windows	1108	<u> </u>	
14	Provide and install bronze Aluminum			
	anodized windows using approved section			
	for frame glazed and wire mesh shutter with			
	cost of light tinted glass, refer schedule given			
	in Drg No for manufacturing and fitting			
	details complete with cost of sealant etc. as			
	required by Architect.			
a)	W-02 - 750 x 1400 - Size	Nos	4	
b)	V-01 - 600 X 900 - Size	Nos	8	
15	Aluminum Powder Ventilators & Doors			
	Provide and install bronze Aluminum			
	powder coated windows using approved			
	section for frame glazed and wire mesh			
	shutter with cost of light tinted glass, refer			
	schedule given in Drg No for			
	manufacturing and fitting details complete with cost of sealant etc. as required by			
	Architect.			
	PV-1a - 670 x 550 - Size	Nos	12	
	PV-2a - 600 x 550 - Size	Nos	32	
	PV-3a - 520 x 550 - Size	Nos	20	
	PV-5a - 470 x 550 - Size	Nos	4	
	PV-6a - 940 x 550 - Size	Nos	2	
	PV-7a - 790 x 550 - Size	Nos	9	
			34	
	PV-8a - 640 x 550 - Size	Nos		
	PW-05 - 600 x 991 - Size	Nos	16	
	PW-4a - 700 x 550 - Size	Nos	16	
	DW-05 - 2100 x 2750 - Size	Nos	16	
	D-1a - 1500 x 2750 - Size	Nos	2	
	D-7a - 900 x 2750 - Size	Nos	5	

	W-03 - 750 x 1591 - Size	Nos	2		
	V-02 - 450 x 450 - Size	Nos	14		
16		1108	14		
10	Portland Cement Plastering				
	Provide and apply12 mm thick plaster to				
	internal beams, wall and jambs surfaces in				
	1:4 cement sand mortar include cost of				
	200mm wide expanded lath metal as				
	approved fixed with steel nail as per drawing	$m^2$	3533		
17	and specifications. Ground to 4th floor	III	3333		
17	12 mm thick ceiling plaster in 1:4 cement sand mortar as per drawing and				
	specifications.	$m^2$	1720		
18	12mm thick Cement plaster to waist of stair	111	1720		
10	case and pardi on both side of steps in 1:4				
	cement sand mortar as per drawing and				
	specifications.	$m^2$	106		
19	Applying 20 mm thick external cement	111	100		
17	plaster in 1:4 cement sand mortar rough				
	including all bends, recesses, corners, jambs,				
	grooves pattas with additional thickness and				
	provision of drip moulds, complete with				
	hacking the reinforced concrete surfaces,				
	filling back the chases, fixing G.I. expanded				
	metal lath as per approved sample over				
	chases, electrical PVC pipes and joints				
	between brick and RCC masonry, curing				
	complete at any height plaster as per				
	drawings and specifications.	$m^2$	1173		
20	Apply Color Crete plaster in approved				
	thickness and color using approved pigment				
	with required texture finish including all				
	installation arrangement; complete all as per	_			
	drawings and specifications.	$m^2$	1173		
21	ALUMINUIM COMPOSITE PANEL				
	CLADDING				
	Provide and installation aluminum				
	composite cladding sheet including wooden				
	frame and CC plaster for water spout channel				
	(alucobond or equalant) Exterior wall and				
	columns as required 4mm or as per mention in drawing, including all tools and plant				
	scaffolding and complete as per approved				
	sample detail as per drawings and				
	specifications.	$m^2$	75		
22	Plastic Tiling	111	13		
	Provide and lay Gizri stone facing on				
	external plinth up to 1200 mm as required				
	(sample and size to be approved by the				
	Architect) laid in 1:2 cement sand mortar				
	with deep cut joint complete in all respect as				
	per drawings and specifications.	$\mathrm{m}^2$	186		
			1	1	1

fixing with dry bond including grouting; complete in all respect as per drawings wall  24 Provide and lay Porcelain tile on wall and staircase dado with dry bond including grouting; complete in all respect as per drawings and specifications.  a) up to 1200 m² 258  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 m² 258  b) 300 x 300 m² 188  c) Skirting m 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings  a) Floor m² 38  Floor m² 1024  Flooride and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing m² 138  Interior Painting  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings and specifications.  The provide and Fix 1/2" thick GYPSUM box panel paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings and specifications.  The provide and fixer laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step Provide and fixer laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step Provide	23	Provide and lay glazed tile for bathroom			
Wall   Provide and lay Porcelain tile on wall and staircase dado with dry bond including grouting; complete in all respect as per drawings and specifications.   m²   1052   m²   258		fixing with dry bond including grouting;			
24 Provide and lay Porcelain tile on wall and staircase dado with dry bond including grouting: complete in all respect as per drawings and specifications.  a) up to 1200 m² 1052 m² 2558  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting: complete in all respect as per drawings and specifications.  a) 400 x 400 m² 1615 m² 188 m 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2* thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting  29 Interior Painting  29 Interior Painting  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing and specification.  30 Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawing and specifications.  On step  40 DaLanding  Per/step 52  a) On Landing  Per/step 52  a) On Landing		complete in all respect as per drawings			
staircase dado with dry bond including grouting; complete in all respect as per drawings and specifications.  a) up to 1200 m² 258  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 m² 188 m² 188 m² 188 m² 188 m² 188 m² 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:24 concrete bed and dry bond including grouting; complete in all respect as per drawings m² 38 m² 75  30 Floor ma verage 1:24 concrete bed and dry bond including grouting; complete in all respect as per drawings m² 75  31 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing m² 138  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and fix all epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step 52  a) On Landing  Postide and and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing		Wall	$m^2$	366	
grouting: complete in all respect as per drawings and specifications.  a) up to 1200  b) up to 2100  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting: complete in all respect as per drawings and specifications.  a) 400 x 400  b) 300 x 300  c) Skirting  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor  Acoustical Tile Ceiling  Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Deiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface, including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing and specifications.  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  a) On Landing  Per/step  52  m²  18	24				
drawings and specifications.  up to 1200  up to 1200  up to 2100  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400  30 x 300  30 x 300  30 Skirting  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings  a) Floor  Board Acoustical Tile Ceiling  Dampa (Thermal or equivalent) Ceiling  System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  27 Acoustical Tile Ceiling  Dampa (Thermal or equivalent) Ceiling  System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  31 Marble  Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  40 Del Landing  Per/step  52  40 Del Landing  Per/step  52  48  Porticap  48  Per/step  52  48  48  48  48  48  48  48  48  48  4		· · · · · · · · · · · · · · · · · · ·			
a) up to 1200 b) up to 2100 c) Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 c) Skirting c) Skirting c) Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings a) Floor c) Skirting c) Mary Chermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing c) Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings c) Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing c) m² 185  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect and and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing Per/step 52 m² 18					
b) up to 2100  25 Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 m² 188 m² 188 m² 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m² 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 m² 18			_		
Provide and lay Porcelain tile on floor made with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 b) 300 x 300 c) Skirting c) Skirting c) Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings a) Floor c) Skirting c) Racoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing c) Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings a) Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  a) Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step On Landing  Per/step 52 a) On Landing  Per/step 52 a) On Landing	a)	up to 1200		1052	
with 1:4 cement sand mortar bed and dry bond including grouting; complete in all respect as per drawings and specifications.  a) 400 x 400 b) 300 x 300 c) Skirting 26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor b) Skirting 27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC duets & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 a) On Landing  Per/step 52 a) On Landing	b)	up to 2100	$m^2$	258	
bond including grouting; complete in all respect as per drawings and specifications.  a) 40 x 400 b) 300 x 300 c) Skirting  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting; complete in all respect as per drawings  a) Floor b) Skirting  27 Acoustical Tile Celling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 a) On Landing  Per/step 52 a) On Landing  Povide and lay pre Per/step 52 a) On Landing	25	Provide and lay Porcelain tile on floor made			
respect as per drawings and specifications.  a) 400 x 400  b) 300 x 300  c) Skirting  Description of the provide and lay National Industries glazed titles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor  Skirting  Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  181  1615  m²  188  131  Ball  m 152  1615  m²  188  188  189  180  180  181  181  182  184  185  186  186  187  187  188  188  188  188		with 1:4 cement sand mortar bed and dry			
a) 400 x 400 m² 1615 m² 188 m² 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m² 38 m 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 a) On Landing  Pref/step 52 m² 18		bond including grouting; complete in all			
b) 300 x 300 c) Skirting d) Skirting 131 26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings a) Floor m² 38 b) Skirting m 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 a) On Landing  Provide and lay pre polish marble 18mm Per/step 52 a) On Landing		respect as per drawings and specifications.			
c) Skirting m 131  26 Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  10 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  Per/step  52  a) On Landing  Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  Per/step  Per/step  52  a) On Landing	a)	400 x 400	$m^2$	1615	
Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor may assume the complete in all respect as per drawing and specification.  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step 52 a) On Landing  Provide and lay Date of the marble and the special part of the spe	b)	300 x 300	$m^2$	188	
Provide and lay National Industries glazed tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m² 75  Ploor Skirting m² 75  Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  Per/step  Per/step  52  m² 18	c)	Skirting	m	131	
tiles of approved color and size for floor over 75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 B) Skirting m 75  27 Acoustical Tile Ceiling	26	8			
75mm average 1:2:4 concrete bed and dry bond including grouting: complete in all respect as per drawings  a) Floor m² 38 m² 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step  52  m² 18		,			
bond including grouting: complete in all respect as per drawings  a) Floor m² 38  Floor m² 75  27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 m² 18		= =			
respect as per drawings  a) Floor  Billoor  Skirting  Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step On Landing  Per/step 52 m² 18		· ·			
b) Skirting m 75  27 Acoustical Tile Ceiling   Dampa (Thermal or equivalent) Ceiling   System, 600 mm x600 mm of size with   suspension system including making   opening for AC ducts & lights etc. complete   in all respect as per drawing and   specification. m² 1024  28 Provide and Fix 1/2" thick GYPSUM box   panel paint finish as approve with Metal   framing inside, all wood to be termite   treated, as per design, details and drawing m² 138  29 Interior Painting   Plastic Emulsion paint wall and ceiling for   interior surface including all base work   complete as per drawings m² 4686  30 Provide and install epoxy paint finish all in   strict accordance with manufacturer's   instruction with minimum strength complete   in all respect as per drawing m² 185  31 Marble   Provide and lay pre polish marble 18mm   thick on tread and riser laid in 1:2 cement   sand mortar complete in all respect as per   drawings and specifications.   On step Per/step 52   a) On Landing Person of the provide and provided in all respect as per   drawings and specifications.   On step Per/step 52   a) On Landing Person of the provided in all respect as per   drawings and specifications.					
Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step 52 a) On Landing  Provide and land required the specifications on the sum of the specifications of the sum of	a)	Floor	$m^2$	38	
27 Acoustical Tile Ceiling Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step 52 a) On Landing  Provide and land respect as per drawings and specifications.	b)		m	75	
Dampa (Thermal or equivalent) Ceiling System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step  Per/step  52 m² 18		•		, , ,	
System, 600 mm x600 mm of size with suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Plastic Emulsion paint wall and ceiling for interior surface including all base work complete in all respect as per drawings  m² 4686  185  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  52  m² 18					
suspension system including making opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Povide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  Per/step  52  m²  1024  188					
opening for AC ducts & lights etc. complete in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  4086  1024  1024  138  138  148  158  158  168  179  189  180  180  180  180  180  180  18					
in all respect as per drawing and specification.  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  4686  31 On Landing  Per/step 52 a) On Landing					
specification. m² 1024  28 Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing m² 138  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings m² 4686  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m² 185  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step 52  a) On Landing  Provide and Fix 1/2" thick GYPSUM box panel finish all m² 138  ### ### ### ### ### ### ### ### ### #					
Provide and Fix 1/2" thick GYPSUM box panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing m <sup>2</sup> 138  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings m <sup>2</sup> 4686  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m <sup>2</sup> 185  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  Per/step  Per/step  52  a) On Landing  Per/step  72  18			$m^2$	1024	
panel paint finish as approve with Metal framing inside, all wood to be termite treated, as per design, details and drawing  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  4686  Per/step 52  a) On Landing  Per/step 52  m² 18	28	1			
framing inside, all wood to be termite treated, as per design, details and drawing m² 138  29 Interior Painting Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings m² 4686  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m² 185  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  a) On Landing  Per/step 52  a) On Landing  Per/step 52  a) On Landing					
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Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  On Landing  Per/step  52  a)  On Landing  Per/step  52  m²  18			$m^2$	138	
Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble  Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  4686  Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawings and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  Per/step  52  a) On Landing  Per/step  18	29	1 0			
interior surface including all base work complete as per drawings  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing  31 Marble  Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  Per/step  On Landing  page 4686   185  185					
complete as per drawings m <sup>2</sup> 4686  30 Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m <sup>2</sup> 185  31 Marble  Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  52  a) On Landing  Per/step  18		_			
Provide and install epoxy paint finish all in strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m² 185  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step Per/step On Landing Per/step 52 a) On Landing			$m^2$	4686	
strict accordance with manufacturer's instruction with minimum strength complete in all respect as per drawing m <sup>2</sup> 185  31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  On Landing  Per/step 52  a) On Landing  Per/step 52	30				
in all respect as per drawing m <sup>2</sup> 185  Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step  On Landing  Per/step 52 m <sup>2</sup> 18					
31 Marble Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications. On step Per/step a) On Landing Per/step 18					
Provide and lay pre polish marble 18mm thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  52  m²  18		in all respect as per drawing	$m^2$	185	
thick on tread and riser laid in 1:2 cement sand mortar complete in all respect as per drawings and specifications.  On step  On Landing  Per/step  18	31	Marble			 
sand mortar complete in all respect as per drawings and specifications. On step  a) On Landing  Per/step  m²  18		Provide and lay pre polish marble 18mm			
drawings and specifications. On step  On Landing  On Landing  Der/step  m²  18		thick on tread and riser laid in 1:2 cement			
On step On Landing  Per/step 52 m² 18		sand mortar complete in all respect as per			
a) On Landing m <sup>2</sup> 18		<u> </u>			
		On step	Per/step	52	
b) Skirting m2 55	a)	On Landing	$m^2$	18	
	b)	Skirting	m2	55	

32	Provide and lay pre polish marble nosing					
	18mm thick 100mm wide and porcelain tile					
	on tread and riser laid in 1:2 cement sand					
	mortar complete in all respect as per					
	drawings					
a)	On step1	Per/step	52			
b)	On Landing	$m^2$	18			
33	Provide and lay marble border complete in					
	all respect as per drawings	m	243			
34	Provide and lay granite dado lift lobby as per					
	sample approved by the Architect laid in dry					
	bond of required thickness with grooves,					
	rounding edges, polish finished as required.	$m^2$	66			
35	Provide and lay marble on landing complete					
	in all respect as per drawings	m	18			
	TOTAL CIVIL WORK					

#### **ELECTRICAL WORK**

S.#	DESCRIPTION	SUPPLY (Rs.)	INSTALLATION (Rs.)	TOTAL (Rs.)
1	SECTION - A WIRING & WIRING ACCESSORIES			
2	SECTION - B Cable Containment			
3	SECTION - C SWITCHES & SOCKETS			
4	SECTION - D Lighting fixtures			
5	SECTION - E MAIN / SUBMAIN CABLES			
6	SECTION - F DISTRIBUTION BOARDS			
7	SECTION - G Earthing & Grounding System			
8	SECTION - H VOICE & DATA COMMUNICATION SYSTEM			
9	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM			
10	SECTION - J WIRING FOR LOW CURRENT SYSTEMS			
11	SECTION - K AS-BUILT DRAWINGS			
	Total Amount (Rs.)			

#### Note:

- Contractor is advised to inform missing items (if any) in BOQ at time of submitting this tender. No escalation will be considered at time of execution of work.
- Owner can supply any material of Contractor scope at any stage and its cost will be completely deleted from Contractor scope without any kind of adjustment.
- Contractor should mark the selected brands and vendors in approved manufacturer list with submission of Tender Documents.
- Owner / Consultant have all the rights to select any brand / vendor from provided approved manufacturer list, Contractor shall not finalize any brand / vendor without written approval from consultant / owner.

				SU	JPPLY	INSTA	LLATION	
S.#	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	AMOUNT (Rs.)
	SECTION - A WIRING & WIRING ACCESSORIES							
	Supply, installation, testing and commissioning of following items including all material, tools, labor & accessories required for completion of work as per description & drawings. Complete in all respects. As shown on drawings. Note:  1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.  2) The circuit wire drop and busway plug / tapoff to light / power point riser shall be sufficient as per false ceiling levels and shall be in flexible GI conduit with PVC coating.  3) Megger Test of each circuit to be done by contractor.  4) Wiring for Occupancy Sensor shall be included							
1	in light wiring.  Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia PVC conduit as shown in drawings.	50	No.					
2	Wiring for light point from switch board / Dimmer board to first light point with phase 1.5 Sq.mm, common neutral 2.5 Sq.mm and common ECC 2.5 Sq.mm, in 25mm dia PVC conduit as shown in drawings. as shown on drawings.	276	No.					
а	Same as above item but wiring from light <b>point to point</b> .	213	No.					
3	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia PVC conduit as shown on drawings.	14	No.					
а	Same as above item but wiring from light <b>point to point.</b>	66	No.					
4	Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia uPVC conduit as shown in drawings. (Avg Length: 50 Rm)	2	No.					
5	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia uPVC conduit as shown on drawings.	3	No.					
а	Same as above item but wiring from light <b>point to point.</b>	21	No.					
6	Wiring of 13A/15A Switch Socket units (RAW Power) from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.							
а	2x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.	22	No.					
b	Same as above item, but wiring from <b>outlet to outlet.</b>	220	No.					

			1	1			T	1
	Wiring of 13A/15A Switch Socket units for Queue							
_	Management System from DB to first outlet with							
7	following size of wires in in 25mm dia of PVC							
	conduits under wall / floor as shown in the							
	drawings.							
	2x4 Sqmm Cu/PVC + ECC 1x4 Sqmm Cu/PVC							
а	Note: Any outlet coming within range of 2m will	2	No.					
	not be charged separately and its cost must be							
	inclusive in cost of first outlet.							
	Wiring of 13A/15A Switch Socket units for WIFI							
8	<b>Outlet</b> from DB to first outlet with following size of							
	wires in already installed PVC conduit via cable							
	tray as shown in the drawings.							
а	2 x 2.5 Sqmm Cu/PVC + ECC 1x2.5 Sq.mm	6	No.					
	Cu/PVC		1,0.					
b	Same as above item, but wiring from <b>outlet to</b>	10	No.					
	outlet.		110.					
	Wiring of 20A Switched Socket for Hand Dryer							
9	from DB to Socket for with following size of wires							
	in 25mm dia PVC conduit.							
а	2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm	4	No.					
<u> </u>	Cu/PVC	٢	140.					
ь	Same as above item but wiring from <b>20A Switch</b>	4	No.					
	to 13A International Outlet	7	140.					
	Wiring of 16A DP Isolator for VRF Indoor AC / Split							
10	ACs from DB to first outlet with following size of							
10	wires in in 25mm dia of PVC conduits under wall							
	/ floor as shown in the drawings.							
~	2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm	24	No					
а	Cu/PVC	24	No.					
	Wiring of 20A 4P Isolator for Indoor VRF Units from							
11	DB to first outlet with following size of wires in in							
' '	25mm dia of PVC conduits under wall / floor as							
	shown in the drawings							
~	4C-4 Sqmm Cu/PVC/PVC + ECC 1C-4 Sqmm	1	No.					
а	Cu/PVC	ı	140.					
	Wiring of 20A DP Isolator for Hot Water Geyser							
	inside Toilet Blocks from DB to first outlet with							
12	following size of wires in in 25mm dia of PVC							
	conduits under wall / floor as shown in the							
	drawings.							
-	2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm	4	NIa					
а	Cu/PVC	4	No.					
	Wiring of 20A DP Isolator for Plumbing Pump from							
13	DB to first outlet with following size of wires in in							
13	25mm dia of uPVC conduits under wall / floor as							
	shown in the drawings.			<u></u>				
а	3C-4 Sgmm Cu/PVC/PVC	2	No.					
	Wiring of 63A 4P Isolator for Outdoor VRF Units at		1			+		
	Roof from DB to Socket for with following size of							
14	wires in already installed conduit via cable tray,							
	as shown in drawings.							
	4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm					1		
а	Cu/PVC	1	No.					
	Wiring of 80A 4P Isolator for Outdoor VRF Units at					+		
	Roof from DB to Socket for with following size of							
15	wires in already installed conduit via cable tray,							
	as shown in drawings.							
	4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm					+		
а	Cu/PVC	1	No.					
	Wiring of 32A 4P Isolator for Fresh Air Units from DB		-			+		
	to Socket for with following size of wires in already							
16	installed conduit via cable tray, as shown in							
	drawings.							
<u> </u>	ara ** 11 193.		<u> </u>	l	L	ı	1	l

а	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	1	No.			
17	Wiring of 32A 4P Isolator for Medical Equipment from DB to Socket for with following size of wires in already installed conduit via cable tray, as shown in drawings.					
а	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	2	No.			
	Note:  1) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.  2) The ECC to be run with each circuit shall be loop-in and loop-out type, joints are not allowed. It will be green in color (Refer detail drawings)  3) All the cables shall be color coded according to phases / types of services.  4) Wires color of UPS circuits should be different from RAW Power  5) Wiring for outgoing circuits of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.					
	Total Amount (Rs.) Sec - A (CARRIED FORWARD TO SUMMARY)					
	SECTION - B CABLE CONTAINMENT					
1	Supply & Installation of following sizes of PVC/UPVC Conduits including all accessories such as bends, sockets, j-boxes, flexible conduits, metal saddles e.t.c for Main / Sub Main Power, Telephone & Data Cables, concealed / surface on wall as per design drawings. Provide MS Pull boxes where ever required.					
а	25mm dia PVC Conduit	550	Rm.			
b	32mm dia PVC Conduit	50	Rm.			
С	38mm dia PVC Conduit	50	Rm.			
2	Supply & Installation of following M.S powder coated Ceiling / Floor / Wall Pull Boxes for data / voice / power / UPS circuits, recessed on wall or column as per design drawings. Complete in all respect.					
а	200mm x 200mm x 75mm	25	No.			
b	300mm x 300mm x 75mm	1	No.			
3	Supply & installation of following sizes of 16 SWG MS Powder Coated with 18 SWG cover (4 feet covers) duly Painted after degreesing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects. Note:  - Color Printed Tags to be provided at every 3 Meter Length.  - Imported C-Channel Hanger to be used for hanging from ceiling.  - Wall Hanger Supports to be provided moving with walls.  - U-shaped fishcer plates to be used for joints  - Earth bonding to be done with every joint  - Only imported mounting accessories to be used make mungo, fischer or equivalent.  - Color to be decided with consent of architect.					
а	300mm x 100mm (2 Partition)	75	Rm.			
b	150mm x 100mm	10	Rm.			

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	Supply & installation of following sizes of 16 SWG							
	GI Cable Tray with 18 SWG cover (4 feet covers)							
	duly Painted after degreesing, derusting,							
	phosphating and antirust primer including all							
	installation accessories such as rawal bolts e.t.c.							
	Complete in all respects.							
	Note:							
	- Color Printed Tags to be provided at every 3							
4	Meter Length.							
'	- Imported C-Channel Hanger to be used for							
	hanging from ceiling.							
	- Wall Hanger Supports to be provided moving							
	with walls.							
	- U-shaped fishcer plates to be used for joints							
	- Earth bonding to be done with every joint							
	- Only imported mounting accessories to be used							
	make mungo, fischer or equivalent.							
	- Color to be decided with consent of architect.		-					
а	300mm x 100mm (2 Partition) (To be placed on Floor at Roof)	1	Rm.					
	•	,	_	-				
b	300mm x 100mm (Roof)	1	Rm.					
	Supply & installation of following sizes of 14 SWG							
	G.I Cable Ladder with 16 SWG cover (4 feet							
	covers) duly Painted after degreesing, derusting,							
	phosphating and antirust primer including all							
	installation accessories such as rawal bolts e.t.c.							
	Complete in all respects.  Note:							
	- Color Printed Tags to be provided at every 3							
	Meter Length.							
5	- Imported C-Channel Hanger to be used for							
	hanging from ceiling.							
	- Wall Hanger Supports to be provided moving							
	with walls.							
	- U-shaped fishcer plates to be used for joints							
	- Earth bonding to be done with every joint							
	- Only imported mounting accessories to be used							
	make mungo, fischer or equivalent.							
	- Color to be decided with consent of architect.							
а	450mm x 100mm (Vertical) (GF to Roof)	10	Rm.					
b	300mm x 100mm (Vertical) (GF to Roof)	10	Rm.					
	Supply & Installation of Imported Linear Outlet		<u> </u>					
	Boxes without face plates made of Aluminum,							
6	mounted on wall or punched in furniture as per							
	design drawings. The linear outlet boxes are to							
	be provided with appropriate sizes of knockouts.							
а	450mm x 100mm	34	No.					
	Supply & installation of Imported Floor Outlet							
_	Boxes without face plates made of 16 SWG G.I	,	<b>.</b>					
7	Sheet, recessed in ground as per design	4	No.					
	drawings.							
	Note: Contractor is advised to confirm the sizes,							
	running lengths and termination as per site							
	conditions before commencement of work. All							
	the conduits / cable tray crossings through			1				
	partition walls shall be properly sealed by fire			1				
	retardant material after installation.							
	Total Amount (Rs.) Sec - B				·			
	(CARRIED FORWARD TO SUMMARY)							
				l		<u> </u>		

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	SECTION - C SWITCHES & SOCKETS					
	Supply & Installation of following 10 Amps switches or 10/13/15/20 Amps socket outlets make including 16 SWG sheet steel back boxes recessed / surface on wall or as per design drawings.  (Clipsal C-Vivace for Switches & Sockets Outlets or Equivalent)					
1	10A, 220V One Gang Switch Unit	37	No.			
2	10A, 220V Two Gang Switch Unit	61	No.			
3	10A, 220V Three Gang Switch Unit	18	No.			
4	One Gang Fan Dimmer	1	No.			
5	Two Gang Fan Dimmer	4	No.			
6	Three Gang Dimmer	18	No.			
7	13A, International Switch Socket unit	324	No.			
8	15A, Round 3 pin Switch Socket unit	4	No.			
9	20A Switched Socket for Hand Dryer	4	No.			
10	16A DP Isolator (Split Unit)	24	No.			
11	20A 4P Isolator (Indoor VRF)	1	No.			
12	20A DP Isolator (Hot Water Geyser)	4	No.			
13	20A DP Isolator (Plumbing Pump)	2	No.			
14	80A 4P Isolator (Outdoor VRF)	1	No.			
15	63A 4P Isolator (Outdoor VRF)	1	No.			
		1				
16	32A 4P Isolator (Fresh Air Units)		No.			
17	32A 4P Isolator (Medical Equipment)	2	No.			
18	60A TP Isolator (Lifts)  32A 5-Pin (Three Phase) Industrial Socket with	1	No.			
19	Plug (for Communication Racks)	2	No.			
	Takel Amazink (Ba ) Saa					
	Total Amount (Rs.) Sec - C (CARRIED FORWARD TO SUMMARY)					
	SECTION - D LIGHTING FIXTURES					
	Supply, Installation, Testing & Commissioning of the following lighting fixtures complete with driver and specified lamps with installation and hanging accessories upto 1 meter length for all pendant lights.  Note:  1) Power factor of all light fixture shall not be less than 0.9.  2) Efficacy >100lm/W and CRI > 90.  3) All down light shall have COB ship.  4) Fixture must be made of die-cast aluminum with aluminum heat sink.  5) All light fixture shall be finalized after taking approval from architect/consultant  6) Minimum 3 year warranty required from date of successful commissioning of light and driver both					
1	both. Surface Mounted Down Light with 18W LED Lamp	244	No.			
2	Color 4000K Diffused Glass Surface Mounted Down Light with 12W LED Lamp	12	No.			
	Color 4000K Diffused Glass  Emergency Exit Light Fixture with Built-In Battery					
3	Pack Unit (Maintained)	6	No.			

			ı	1	1	1	1	1
4	Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	7	No.					
5	Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	152	No.					
6	Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	32	No.					
7	Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	54	No.					
8	Bulk Head Light	23	No.					
9	Ceiling Fan 48"	63	No.					
10	Hygiene 40W Jumbo Flying Insect Killer UV Tube Catcher Zapper Repellent Light	20	No.					
11	Exhaust Fan 24"	8	No.					
	Total Amount (Rs.) Sec - D (CARRIED FORWARD TO SUMMARY)							
	SECTION - E MAIN / SUBMAIN CABLES							
	Supply & Installation, testing and commissioning of following sizes of Main / Sub main (MV / LV)  Cables in already installed cable tray, conduit etc. Including all accessories, lugs, glands etc. complete in all respect as shown on drawing.							
1	From MDB-BLUE to SMDB-G 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
2	From MDB-BLUE to SMDB-F 4C-35 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	15	Rm.					
3	From MDB-BLUE to SMDB-HVAC 4C-95 Sqmm Cu/PVC/PVC + ECC 1C-50 Sqmm Cu/PVC	10	Rm.					
4	From SMDB-G to LPDB-GF-1 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
5	From SMDB-G to LPDB-GF-2 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.					
6	From SMDB-F to LPDB-FF-1 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	10	Rm.					
7	From SMDB-F to LPDB-FF-2 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	45	Rm.					
8	From SMDB-F to LPDB-R 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	15	Rm.					
9	From MDB-BLUE to 60A TP Isolator (Lift) 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	25	Rm.					
	Note:  1- Contractor is instructed to confirm the cable running lengths and termination as per site conditions before commencement of work.  2- Imported Lugs and Connectors shall be used in LV Cables.  3) Megger Test of each circuit to be done by contractor.  Total Amount (Rs.) Sec - E (CARRIED FORWARD TO SUMMARY)							

	SECTION - F DISTRIBUTION BOARDS					
	Supply, Installation, testing & commissioning of following Distribution Boards as shown on drawing made with 14 SWG sheet steel housing including all installation accessories such as Rawal bolt etc. Complete in all respects.					
	Note: (Refer Single Line Diagram)  1) All the DB should be front accessible and maintainable.  2) Cost of Lighting Control Relays & Power Supplies should be Included in Distribution Boards.  3) The transportation and placement of DBs upto dedicated location is also included in the work scope, complete in all respects including leveling, grouting etc.  4) Laser engraved tags required as mention in SLDs  5) Space for circuit tagging required with permanent installation on protective sheet via rivets  6) 20% space required in DB for future provision  7) Tin platted Imported Cu bus bar with heat shrink color coded sleeves to be used.  8) Hindged protective metallic door required with knob/handle.  9) Braided Door earth required.  10) Lockable handle required for main door.  11) As-built drawing pocket.  12) Cable hanging arrangement.					
	Minimum One Year Warranty Required from date of successful commissioning on site.					
1	MDB BLUE	1	No.			
2	SMDB-G	1	No.			
3	SMDB-F	1	No.			
4	SMDB-HVAC	1	No.			
5	LPDB-GF-1	1	No.			
6	LPDB-GF-2	1	No.			
7	LPDB-FF-1	1	No.			
8	LPDB-FF-2	1	No.			
9	LPDB-R	1	No.			
10	80A Weather Proof TP Boxes	1	No.			
11	100A Weather Proof TP Boxes	1	No.			
	Note: 1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.					
	Total Amount (Rs.) Sec - F (CARRIED FORWARD TO SUMMARY)					
	SECTION - G EARTHING & GROUNDING SYSTEM					
	Supply, installation, testing and commissioning of following items for Earthing Lightning Protection System for lightning protection and grounding of other systems including all material, boring, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					

1	Chemical Enhanced Earth using 38 mm dia copper pipe filled with soil conditioning material including 6" dia, 11' deep boring and back filled chemical to enhance conductivity material. Complete with termination clamps, 12" dia heavy duty tin plated round cover as per details given in drawings.	2	No.			
2	Earth Connecting Point or Equipotential bar made with 300mm wide, 50mm high and 80mm thick tin plated Copper, as shown in drawings. Bar shall be provided with holes suitable for installation of 6 No. 70/95 sqmm bare copper conductor. ECP shall be enclosed in 350mm x 100mm x 100mm MS Painted Powder Coated Metal Enclosure with front accessible Cover.	2	No.			
3	Supply, installation, testing and commissioning of following size of Single core PVC Cables from ECP to several equipments in following sizes of PVC Conduit or as per details given in tender drawings, including all material, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					
а	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	50	Rm.			
4	Stranded bare copper conductors of following sizes in clipped on retaining wallt from B1 to B4 from ECP to Earth Station as shown in drawings. Complete in all respects including termination at both ends.					
а	95 Sq.mm Bare Copper Conductor	50	Rm.			
5	Allow for any other item required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ.  Note: Contractor is advised to confirm the cable running lengths and termination as per site	1	Job			
	conditions before commencement of work.					
	Total Amount (Rs.) Sec - G (CARRIED FORWARD TO SUMMARY)					
	SECTION - H VOICE & DATA COMMUNICATION SYSTEM					
	Supply, Installation, testing and commissioning of following items for voice and data communication system including all material, labor, tools, accessories etc. Complete in all respects. Quantities for cables shown in BOQ are estimated and taken from drawings. Contractor is advised to take measurement at site before commencement of works. Different colors of voice and data cables shall be used. (Selected Series for Face plates is Clipsal C-Vivace or equivalent)  Simplex Face plate with 1 No. CAT-6 RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins labels and all accessories	12	No			
1	shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	42	No.			

2	Simplex Face plate with 1 No. CAT-6 RJ-45 I/O for WIFI, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	8	No.			
3	<b>Duplex Face plate</b> with <b>1 No. CAT-6</b> RJ-45 I/O for Data & <b>1 No. CAT-6</b> RJ-45 I/O for Voice white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	34	No.			
4	TV Outlet with face plate	8	No.			
5	<b>1x8 way Splitter</b> including 18 SWG M.S Sheet powder coated Box for RG-6 Connectivity.	2	No.			
6	Supply and Wiring of CAT-6 UTP Cables for Voice communication system from Com Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects.  Different colors of cables shall be used for Voice (Coil =305 Rm.)	12	Coil			
7	Supply and Wiring of CAT-6 UTP Cables for Data communication system from Com Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects. Different colors of cables shall be used for Voice (Coil =305 Rm.)	6	Coil			
8	Supply and Wiring of Co-axial cable RG-6 for CATV system in 25mm dia PVC Conduit from each T.V point to Splitter as per drawings including terminations. Complete in all respect.	120	Rm.			
9	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Fiber Optic Cable as per standard specifications, all termination accessories up to entire satisfaction of IT Engineer, in already installed PVC conduit / cable tray including termination and tagging at both ends. Complete in all respects.	30	Rm.			
10	<b>Programming, testing and commissioning</b> of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job			
11	Fluke / OTDR Testing of each communication cable with calibrated fluke tester	1	Job			
	<b>Note:</b> Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec - H (CARRIED FORWARD TO SUMMARY)					
	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM					
	Supply, installation, testing & commissioning of Addressable Fire Alarm System comprising of following equipment's including all accessories required for the completion of the system in all respects.					
1	Addressable Fire Alarm Control Panel of 2-loops expandable upto 4 Loops having minimum 127 devices per loop. The FACP shall be self-powered with built in 12V batteries for 24 Hrs backup with charging unit, Built-in GSM Module and Self Printing Function. It can be programmed using Windows based software for peripheral devices like display unit, printers and soft zoning etc.	1	No.			

						,
2	Addressable Multi Detectors incorporating an LED indication located in labyrinth with in the housing of the detector. Sensing of the detector shall be adjustable via software between 0-90 seconds. The detector shall have built in short circuit isolators on both inputs.	73	No.			
3	Addressable Break Glass Type Manual Call Point having a built in short circuit isolator and built in microprocessor to ensure a response time of max 1 second. It also incorporates an indication LED, flashed after pressing the button to acknowledge the activation and a key operation facility for testing purposes.	12	No.			
4	Addressable Type Indoor Loop Powered electronic sounder and minimum sound output 100 dB at 1 meter with frequencies for variety of sounds as required. Souder shall be loop wired and loop signaled, built in short circuit isolator, configured via software.	17	No.			
5	<b>Supply and wiring</b> for <b>FACP Power</b> from <b>DB</b> to FACP with 2C, 2.5 Sq.mm fire resistant cable in 25mm dia PVC Conduit. Complete in all respect.	20	Rm.			
6	Supply and wiring of 2C, 1.5 Sq.mm Fire Resistant Shielded Cable (Fire rating for 2 hours at 950 C) in 25mm dia PVC conduit from fire alarm control panel to all sensors & devices including all installation accessories complete in all respect.	720	Rm.			
7	Addressable Interface Module for integration of Fire Alarm System with Power Panels, PA System, Elevators, Fire Fighting System etc.	4	No.			
8	<b>Networking</b> of all the Fire alarm control panels of all the OPD Buildings along with integration with the existing control room including IO modules, wiring, conducting, complete in all respect.	1	Job			
9	<b>Programming, testing and commissioning</b> of the complete system as per client's requirements permissible for the FACP with training sessions of maintenance personnel's.	1	Job			
10	Allow for <b>any other item</b> required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ.	1	Job			
	Note:  1) The Bidder shall provide the complete Technical Literature for the system offered.  2) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec - I (CARRIED FORWARD TO SUMMARY)					
	SECTION - J WIRING FOR LOW CURRENT SYSTEMS					
Α	PUBLIC ADDRESS SYSTEM					
1	Supply and wiring for Public Address System using 2C, 2.5 flexible Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	300	Rm.			

2	<b>Wiring</b> for <b>Microphone outlet</b> using Cat-6 STP Cable in 25mm dia PVC conduit. as shown in drawings. Complete in all respects.	50	Rm.			
В	CCTV SYSTEM					
3	Supply and Wiring of CAT-6 UTP Cables for Cameras from each camera to NVR in already installed PVC conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)	4	Coil			
С	QUEUE MANAGEMENT SYSTEM					
4	Supply and Wiring of CAT-6 UTP Cables for Queue Management System from Communication Rack to each outlet in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)	3	Coil			
5	Supply and wiring for Queue Management Speakers using 2C, 2.5 Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	150	Rm.			
D	WIFI SYSTEM					
	Committee and Military of CAT / HTD Codeles for					
6	Supply and Wiring of CAT-6 UTP Cables for Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends.	3	Coil			
6	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K AS-BUILT DRAWINGS	3	Coil			
1	Wireless Access Points from Communication Rack to each outlet in already installed PVC Conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Coil =305 Rm.)  Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)  SECTION - K	1	Coil			

### **SUMMARY OF PLUMBING AND FIREFIGHTING WORKS**

S.No	Activity	Amount Rs.
А	TOILET FITTING AND ACCESSORIES	
В	COLD WATER SUPPLY SYSTEM	
С	SOIL, WASTE AND VENT PIPE SYSTEM	
D	EXTERNAL WATER SUPPLY SYSTEM	
Е	FIRE FIGHTING SYSTEM	
F	SEWERAGE SYSTEM	
	TOTAL COST OF PLUMBING & FIREFIGHTING WORKS	

#### **LIST OF APPROVED MANUFACTURERS**

S.No.	ITEM	MAKE
	PLUMBING WOR	rks
1	European Water Closet (Floor Mounted)	PortaHD-12N
2	Wash Basin (Half Pedestal)	Porta HDLP203AH
3	Wash Basin (Counter Top)	Porta HD-3
4	Basin Mixer	Zilver E-D 109
5	Bottle Trap	Zilver E-X024
6	Bibcock	Zilver E-S03F
7	Toilet Paper Holder	Zilver 033-2
8	Cloth Hook	Zilver 033-1
9	T-Stop Cock	Zilver GX 7016
10	Double Bibcock With Muslim Shower	Zilver E-S08 + VRH FX 40NS
11	Poly-propylene Pipe (Water Supply)	Dadex
12	Polypropylene Pipe Fittings (Water Supply)	Dadex
13	Polyethylene Pipe and Fittings (Water Supply)	Dadex
14	Valves And Strainers	Kitz / Haterslay
15	uPVC Pipe (Drainage)	Dadex
16	uPVC Fittings (Drainage)	Dadex
17	uPVC Clean out	Dadex
18	Teflon Tape	Imported
19	Floor Drain / Floor Gully	Dadex
20	Vent Cowl	Dadex
21	Floor Drain Grating	Alpine
22	Manhole Frame & Cover (CI)	Alpine
23	Gully Trap	Dadex
24	Pump	Lowara / Grundfos / Wilo
	FIRE FIGHTING WO	ORKS
25	Fire Hose Cabinet (\$/\$) with Reel	NAFFCO / SFFECO
26	Fire Extinguishers	NAFFCO / SFFECO
27	Fire Hydrant with Hose	NAFFCO / SFFECO
28	Siamese Connection	NAFFCO / SFFECO
29	Seamless Black Steel Pipe & Fittings	LONTRIN / Approved Equivalent
30	Hanger and Supports	Norm / Mungo
31	Gate Valves	Kitz / Haterslay
32	Pump	NAFFCO / SFFECO
33	Paint	ICI

#### <u>Note.</u>

Before quoting the rates, the contractor should first visit the site.

Above mentioned approved manufacturers list is to be maintained

S. NO.		DESCRIPTION	QTY	UNIT	RATE	AMOUNT
A	TOILE	T FITTING AND ACCESSORIES				
1	Providin Closet w accessor thimble, cover, te service a necessar with nor complete a) For Go	g and fixing European Type Water ith coupled flushing cistern, including all ies and fittings, C.P flexible pipe, waste and traps, including seat and e stop cock with check nut, all joints to and drains, plugging and screwing as y to the structure, filling sleeve opening and in-shrink grout, and coated with epoxy, e in all respect.	16	Nos.		
	b) For H	andicapped toilet	2	Nos.		
2	with all a cock wit pipe, wa including service necessary with nor	g and fixing Counter Top Wash Basin accessories such as, basin mixer, tee stop th check nuts, CP flexible pipe, waste ste coupling, bracket set, etc. Complete g bottle trap, silicon sealant, all joint to and drain, plugging and screwing as y to the structure, filling sleeve opening ashrink grout, and coated with epoxy. e in all respect.	25	N		
3	Drovidin	g and fixing Wash Basin with Half	25	Nos.		
3	Pedestal mixer, te pipe, was Complet joint to s as neces	with all accessories such as, basing the stop cock with check nuts, CP flexible aster pipe, waste coupling, bracket set, etc. the including bottle trap, silicon sealant, all the ervice and drain, plugging and screwing assary to the structure, filling sleeve with non-shrink grout complete in all				
	a) For G	eneral toilets	20	Nos.		
		andicapped toilet	2	Nos.		
4	Toilet Accessories  Providing and fixing bathroom accessories including fixing with rawal plug of approved quality complete in all respect.					
	I	Toilet paper holder	18	Nos.		
	II	Soap Dispenser	52	Nos.		
	III	Double bibcock with muslim shower	18	Nos.		
	IV	Cloth hook	18	Nos.		
	V	Bibcock (Janitor Area)	2	Nos.		
				SUI	B TOTAL-A	

В	COI	LD WATER	R SUPP	PLY SYSTEM				
1	Polyp		ld Wate Foilets	er Piping for the				
	per DIN fittings a tees, elbe clamps, wall or l slab as per providing	8077 / 8078 s per DIN 16 ows bends, rehanger collaburied in was er specification.	(PN 20 962 (PN educer pars, supp lls or su ons included	ly propylene pipe as ) including specials (25) such as socket, olug and union etc), ports, supported on uspended from roof uding color tagging, esting @ 150 psi,				
	I	25	mm	Ø	262	RM		
	II	32	mm	Ø	106	RM		
	III	40	mm	Ø	22	RM		
	IV	50	mm	Ø	18	RM		
	V	63	mm	Ø	68	RM		
2	VI	75	mm	vay <b>Gate Valves</b> of	9	RM		
	bronze trim up to 3" (75 mm) Ø. With threaded ends and cast iron body bronze trim flanged ends for 4" Ø. (100 mm) and above for 125 psi together with all additional material required for a complete installation as described in the specification and as shown on drawings and as approved by the engineer.							
	I	1/2"		Ø	33	Nos.		
	II	3/4"		Ø	7	Nos.		
	III	1"		Ø	4	Nos.		
	IV	3"		Ø	1	No.		
	V	4"		Ø	3	Nos.	D. T.O.T.A.I. D.	
	50	II WASTI	ZANID	VENT DIDE		<b>SU</b> .	B TOTAL-B	
C	SU			VENT PIPE				
1	Providing and fixing in position uPVC pipes push fit type embedded in floor and wall or suspended from slab or clamped to floor and wall including plugs, clamps, hanger collars, supports, specials (bend, tees, Y-tee etc). Making requisite number of holes in walls and floors where required and making good the same as necessary to the structure, filling sleeve opening with non-shrink grout, labelling and testing to 8'ft water height complete in all respect.							
	I	50	mm	Ø	70	RM		
	II	82	mm	Ø	269	RM		
	III	110	mm	Ø	143	RM		

	1						1	
2				osition uPVC pipes				
	solvent j	oint type pi	ipe for 1	rain water drainage,				
	embedde	ed in floor a	nd wall	or suspended from				
				all including plugs,				
				orts, specials (bend,				
		tees, Y-tee etc.). Making requisite number of						
				where required and				
	making good the same as necessary to the							
	structure, filling sleeve opening with non-shrink							
	grout, la	belling and t	testing t	o 8' ft water height				
	complete	in all respec	et and as	shown in drawings.				
	1							
	I	82	mm	Ø	6	RM		
	II	110	mm	Ø	45	RM		
				, and the second	43	KIVI		
3				<b>Drain</b> / Floor Gully				
				S grating including				
				wall plinth or floor				
	for pipe of	connection ar	nd maki	ng good the same as				
	necessar	y to the st	ructure	and filling sleeve				
	opening	with nor	n-shrink	grout complete				
		g gasket and						
	I	82	mm	Ø	25	Nos.		
1	1			<u> </u>	23	1105.		
4				Clean Out with				
				er of holes in walls,				
				nection and making				
				to the structure and				
				n non-shrink grout				
	complete	e including ru	ıbber ga	sket and clamp.				
	I	82	mm	Ø	13	Nos.		
	II	110	mm	Ø	5	Nos.		
5	Providin	g and fiving i	PVC (	Clean Out Plug with		1105.		
		1 1		g good the same as				
		•		with rubber gasket,				
		in all respec	ı	- ~				
	I	82	mm	Ø	18	Nos.		
	II	110	mm	Ø	5	Nos.		
6	Providin	g and fixing	uPVC	Cowl for vent pipe				
				ing all accessories				
		e in all respec						
	-	82		Ø	<u> </u>	N.T.		
	I		mm		4	Nos.		
	II	110	mm	Ø	3	Nos.		
7	Providin	g and fixing	Rain	<b>Drain</b> of approved				
				including requisite				
	_							
	number of holes in wall plinth or floor for pipe connection and making good the same as necessary to the structure with non-shrink grout including gooket and clamp complete in all							
	including gasket and clamp complete in all							
	respect.	110	Ch 15	1		N.T		
	1	110 n	nm Ø (S	Scupper Drain)	5	Nos.		
							Sub Total-C	

Providing. installing, testing and commission Booster <b>Pump for top 2 floors</b> water supply approved make including (100 litres) tank, g valves, check valves, foot valves, gauges, companel (with the system for increase in flow second pump should kick in), pressure switch adjusting pressure from 35 to 50 psi for a flow 50Gpm (each pump), as per drawing, complete all respect. (Note: 01set = 02Nos pumps)  Providing and fixing <b>C.I Manhole Cover</b>	of of cate crol the for of			
		Set.		
underground and overhead water tank. (weight 52kg)  I 600x600 mm		Nos.		
over the underground water tank & overh- water tank as per drawing & engineer's approx	ead val.	Noc		
110 mm &				
FIRE FIGHTING SYSTEM				
Steel Seamless Piping schedule 40 firefighting as per BSS 1387 including weld fittings, hardware clamps, hangers, suppowelding, jointing material, protective coat (Red color in two coats), complete in all resp	for ded rts, ing ect			
I 1"Ø	12	RM		
II 1-1/4"Ø	33	RM		
III 3"Ø	32	RM		
IV 4"Ø	42	RM		
bronze trim up to 3" (75 mm) Ø. With thread ends and cast iron body bronze trim flanged ends are 4" Ø. (100 mm) and above for 125 psi toget with all additional material required for	ded nds her a the			
	Providing, fixing C.I Goose Neck with wire mover the underground water tank & overhowater tank as per drawing & engineer's approved in the second of the Engineer.  FIRE FIGHTING SYSTEM  Providing, laying, jointing and testing Blace Seamless Piping schedule 40 firefighting as per BSS 1387 including weld fittings, hardware clamps, hangers, suppowelding, jointing material, protective coat (Red color in two coats), complete in all resp as per drawings and specification and to approval of the Engineer.  I 1"Ø  II 1-1/4"Ø  III 3"Ø  Providing and fixing of full way Gate Valves bronze trim up to 3" (75 mm) Ø. With thread ends and cast iron body bronze trim flanged en for 4"Ø. (100 mm) and above for 125 psi toget with all additional material required for complete installation as described in	Providing, fixing C.I Goose Neck with wire mesh over the underground water tank & overhead water tank as per drawing & engineer's approval.  I 110 mm Ø 1 Shop Drawings as per specifications. 1 As Built Drawings as per specifications. 1  FIRE FIGHTING SYSTEM  Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welded fittings, hardware clamps, hangers, supports, welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø 12 II 1-1/4"Ø 33 III 3"Ø 32 IV 4"Ø 42  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threaded ends and cast iron body bronze trim flanged ends for 4" Ø. (100 mm) and above for 125 psi together with all additional material required for a complete installation as described in the	Providing, fixing C.I Goose Neck with wire mesh over the underground water tank & overhead water tank as per drawing & engineer's approval.  I 110 mm Ø 1 Nos.  Shop Drawings as per specifications. 1 Job  As Built Drawings as per specifications. 1 Job  Sub Total-D  FIRE FIGHTING SYSTEM  Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welded fittings, hardware clamps, hangers, supports, welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø 12 RM  II 1-1/4"Ø 33 RM  III 3"Ø 32 RM  IV 4"Ø 42 RM  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threaded ends and cast iron body bronze trim flanged ends for 4" Ø. (100 mm) and above for 125 psi together with all additional material required for a complete installation as described in the	Providing, fixing C.I Goose Neck with wire mesh over the underground water tank & overhead water tank as per drawing & engineer's approval.  I 110 mm Ø 1 Nos.  Shop Drawings as per specifications. 1 Job  As Built Drawings as per specifications. 1 Job  Sub Total-D  FIRE FIGHTING SYSTEM  Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for firefighting as per BSS 1387 including welded fittings, hardware clamps, hangers, supports, welding, jointing material, protective coating (Red color in two coats), complete in all respect as per drawings and specification and to the approval of the Engineer.  I 1"Ø 12 RM  II 1-1/4"Ø 33 RM  IV 4"Ø 42 RM  Providing and fixing of full way Gate Valves of bronze trim up to 3" (75 mm) Ø. With threaded ends and cast iron body bronze trim flanged ends for 4" Ø. (100 mm) and above for 125 psi together with all additional material required for a complete installation as described in the

3	Providing and fixing double compartment <b>Fire Hose Cabinet</b> with (¾" Ø, 100 ft long, high pressure rubber hose, 180° rotation). Complete with 1"Ø PRV, 1 no. 25mm dia. plastic nozzle has jet / spray / shut-off operations. Type: Swing Automatic (Automatic Hose Reel has integrated automatic stop valve which will open after 3 revolution of the reel). Standard size: 25mm dia., Length: 30m, Maximum working pressure: 15 Bar, Red Color, Manufacture standard: BS EN 671-1.	4	Nos.	
4	Providing and fixing <b>Dry Chemical Powder</b> , fire extinguisher 6Kg capacity, powder coated in red color, complete with pressure gauge and wall bracket.	9	Nos.	
5	Providing and fixing CO <sub>2</sub> Type Fire Extinguisher 2Kg capacity, powder coated in red color, complete with wall bracket and all other accessories.	9	Nos.	
6	Providing, Installing and commission 2 Way Breeching Inlet unit for wet riser including all accessories and material complete in all respect as shown on drawings / specifications.	1	No.	
7	Providing and installing <b>Automatic Air Vent</b> with all accessories and material as specified complete in all respect as shown on drawings / specifications.	2	Nos.	
	DRAWINGS			
8	Providing, installation of brass tags of 40mm dia tags for equipment and fixed with chains including all accessories, complete in all respect, as per drawing and specification.			
9	Shop Drawings as per specifications.	1	Job	
10	As-Built Drawings as per specifications.	1	Job	
	Sub Total-E			
F	SEWERAGE SYSTEM			
1	Providing, laying and jointing UPVC sewer pipe including excavation backfilling, compaction bedding, lowering in Trenches to correct alignment and grade, jointing, cutting pipes where necessary, finishing and testing complete as per drawing and satisfaction to the engineer. I 200 MM Ø	30	RM	
2	Providing and fixing 225 x 225mm uPVC Gully Trap with Frame and cover including uPVC gully trap chambers as per drawing complete in all respect.	4	Nos.	

3	Construction and making Manhole complete in						
	all respect including excavation, backfilling,						
	compaction, block masonry benching, manhole						
	cover (weight: 52kg) with frame complete as per						
	drawing and satisfaction to the engineer,						
	including testing. (Note: All material to be						
	supplied by the contractor)						
	For depth 0-3'ft (600mm x 600mm)						
	1 of depth 0-3 ft (obolinii x doolinii)	4	Nec				
		4	Nos				
4	Shop Drawings as per specifications.						
		1	Job				
5	As Built Drawings as per specifications.						
		1	Job				
	SUB TOTAL-F						
				TOTAL			

# EXTERNAL ELECTRIFICATION WORK (OPTIONAL)

				SU	JPPLY	INSTALLATION		
S.#	DESCRIPTION	QTY	UNIT	RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	AMOUNT (Rs.)
	SECTION - A WIRING & WIRING ACCESSORIES							
	Supply, installation, testing and commissioning of following items including all material, tools, labor & accessories required for completion of work as per description & drawings. Complete in all respects. As shown on drawings.  Note:  1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.  2) The circuit wire drop and busway plug / tap-off to light / power point riser shall be sufficient as per false ceiling levels and shall be in flexible GI conduit with PVC coating.							
	<ul><li>3) Merger Test of each circuit to be done by contractor.</li><li>4) Wiring for Occupancy Sensor shall be included in light wiring.</li></ul>							
1	Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm dia PVC conduit as shown in drawings.	2	No.					
2	Wiring for light point from switch board / Dimmer board to first light point with phase 1.5 Sq.mm, common neutral 2.5 Sq.mm and common ECC 2.5 Sq.mm, in 25mm dia PVC conduit as shown in drawings. as shown on drawings.	3	No.					
a	Same as above item but wiring from light <b>point to point.</b>	3	No.					
3	Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia PVC conduit as shown on drawings.	1	No.					
a	Same as above item but wiring from light <b>point to point.</b>	6	No.					
4	Emergency Circuit wiring from DB to switch board including any wiring from switch board to switch board with 2x2.5 Sq.mm + ECC 1x2.5 Sqmm, 1-core PVC wires in 25mm PVC conduit as shown in drawings.	1	No.					
5	Emergency Wiring for light point from switch board / Dimmer board to first light point with phase 1.5 Sq.mm, common neutral 2.5 Sq.mm and common ECC 2.5 Sq.mm, in 25mm dia PVC conduit as shown in drawings. as shown on drawings.	2	No.					
a	Same as above item but wiring from light <b>point to point.</b>	2	No.					
6	Emergency Wiring for Group Control light fixtures from DB to first light point with 2x2.5 Sq.mm + ECC 1x2.5 Sq.mm in 25mm dia PVC conduit as shown on drawings.	1	No.					
a	Same as above item but wiring from light <b>point to point.</b>	1	No.					
7	Wiring of 13A/15A Switch Socket units (RAW Power) from DB to first outlet with following size of wires in in 25mm dia of PVC conduits under wall / floor as shown in the drawings.							
a	2x4 Sq.mm + ECC 1x4 Sq.mm  Note: Any outlet coming within range of 2m will not be charged separately and its cost must be inclusive in cost of first outlet.	2	No.					
b	Same as above item, but wiring from <b>outlet to outlet.</b>	4	No.					

8	Wiring of 16A DP Isolator for Split ACs from DB to Socket for with following size of wires in 25mm dia PVC conduit.					
a	2 x 4 Sq.mm Cu/PVC + ECC 1 x 4 Sq.mm Cu/PVC	2	No.			
	Note:  1) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.  2) The ECC to be run with each circuit shall be loop-in and loop-out type, joints are not allowed. It will be green in color (Refer detail drawings)  3) All the cables shall be color coded according to phases / types of services.  4) Wires color of UPS circuits should be different from RAW Power  5) Wiring for outgoing circuits of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.					
	Total Amount (Rs.) Sec - A (CARRIED FORWARD TO SUMMARY)					
	SECTION - B SWITCHES & SOCKETS					
	Supply & Installation of following 10 Amps switches or 10/13/15/20 Amps socket outlets make including 16 SWG sheet steel back boxes recessed / surface on wall or as per design drawings. (Clipsal C-Vivace for Switch & Sockets Outlets or Equivalent)					
1	10A, 220V One Gang Switch Unit	2	No.			
2	10A, 220V Two Gang Switch Unit	2	No.			
3	10A, 220V Three Gang Switch Unit	5	No.			
4	One Gang Fan Dimmer	1	No.			
5	Two Gang Fan Dimmer	1	No.			
6	Three Gang Dimmer	1	No.			
7	13A, International Switch Socket unit	10	No.			
8	15A, Round 3 pin Switch Socket unit	1	No.			
9	16A DP Isolator (Split Unit)	2	No.			
	Total Amount (Rs.) Sec - B (CARRIED FORWARD TO SUMMARY)					
	SECTION - C LIGHTING FIXTURES					
	Supply, Installation, Testing & Commissioning of the following lighting fixtures complete with driver and specified lamps with installation and hanging accessories upto 1 meter length for all pendant lights.Note: 1) Power factor of all light fixture shall not be less than 0.9.2) Efficacy >100lm/W and CRI > 90.3) All down light shall have COB ship.4) Fixture must be made of die-cast aluminum with aluminum heat sink.5) All light fixture shall be finalized after taking approval from architect/consultant 6) Minimum 3 year warranty required from date of successful commissioning of light and driver both.					
1	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	2	No.			
2	Wall mounted 36W Pacific Lighting Fixture	6	No.			
3	Bulk Head Light	4	No.			
4	Exhaust Fan of 3' dia	2	No.			
	Total Amount (Rs.) Sec - C (CARRIED FORWARD TO SUMMARY)					

	SECTION - D MAIN / SUBMAIN CABLES					
	Supply & Installation, testing and commissioning of following sizes of Main / Sub main (MV / LV) Cables in already installed cable tray, conduit etc. Including all accessories, lugs, glands etc. complete in all respect as shown on drawing.					
1	Incoming Main Power Cable from Power House to LV Panel Main 11 No. 1C-300 Sqmm Cu/PVC/PVC + 2 No. ECC 1C-95 Sqmm Cu/PVC	300	Rm.			
2	From LV Panel Main to MDB-YELLOW 4 No. 1C-300 Sqmm Cu/PVC/PVC + 2 No. ECC 1C-95 Sqmm Cu/PVC	100	Rm.			
3	From LV Panel Main to MDB-BLUE 4 No. 1C-300 Sqmm Cu/PVC/PVC + 1 No. ECC 1C-95 Sqmm Cu/PVC	70	Rm.			
4	From LV Panel Main to MDB-GREEN 4 No. 1C-300 Sqmm Cu/PVC/PVC + 1 No. ECC 1C-95 Sqmm Cu/PVC	80	Rm.			
5	From LV Panel Main to MDB-ORANGE 4 No. 1C-300 Sqmm Cu/PVC/PVC + 1 No. ECC 1C-95 Sqmm Cu/PVC	120	Rm.			
6	From LV Panel Main to MCC-FIRE PUMP 4C-70 Sqmm Cu/XLPE/PVC + ECC 1C-50 Sqmm Cu/PVC	50	Rm.			
7	From LV Panel Main to Plumbing MCC 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	30	Rm.			
8	From LV Panel Main to DB-SS 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.			
	Note: 1- Contractor is instructed to confirm the cable running lengths and termination as per site conditions before commencement of work. 2- Imported Lugs and Connectors shall be used in LV Cables. 3) Megger Test of each circuit to be done by contractor. 4) Contractor shall multiple the number of cable per phase with the unit per meter rate and than mentioned this amount in the supply and installation boxes.					
	Total Amount (Rs.) Sec - D (CARRIED FORWARD TO SUMMARY)					

			1		1	1	
	SECTION - EDISTRIBUTION BOARDS						
	<b>Supply, Installation, testing</b> & <b>commissioning</b> of following <b>Distribution Boards</b> as shown on drawing made with <b>14 SWG sheet steel housing</b> including all installation accessories such as Rawal bolt etc. Complete in all respects.						
	Note: (Refer Single Line Diagram)  1) All the DB should be front accessible and maintainable.  2) Cost of Lighting Control Relays & Power Supplies should be Included in Distribution Boards.  3) The transportation and placement of DBs upto dedicated location is also included in the work scope, complete in all respects including leveling, grouting etc.  4) Laser engraved tags required as mention in SLDs  5) Space for circuit tagging required with permanent installation on protective sheet via rivets  6) 20% space required in DB for future provision  7) Tin platted Imported Cu bus bar with heat shrink color coded sleeves to be used.  8) Hindged protective metallic door required with knob/handle.  9) Braided Door earth required.  10) Lockable handle required for main door.  11) As-built drawing pocket.  12) Cable hanging arrangement.  Minimum One Year Warranty Required from date of						
	successful commissioning on site.						
1	MAIN LV PANEL	1	No.				
2	DB-SS	1	No.				
	Note: 1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.						
	<b>Total Amount (Rs.) Sec - E</b> (CARRIED FORWARD TO SUMMARY)						
	SECTION - F EARTHING / GROUNDING SYSTEM						
	<b>Supply, installation, testing and commissioning</b> of following items for Earthing / Grounding System for lightning protection and grounding of other systems including all material, boring, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.						
1	Chemical Enhanced Earth using 38 mm dia copper pipe filled with soil conditioning material including 6" dia, 11' deep boring and back filled chemical to enhance conductivity material. Complete with termination clamps, 12" dia heavy duty tin plated round cover as per details given in drawings.	4	No.				
2	Earth Connecting Point or Equipotential bar made with 300mm wide, 50mm high and 80mm thick tin plated Copper, as shown in drawings. Bar shall be provided with holes suitable for installation of 6 No. 70/95 sqmm bare copper conductor. ECP shall be enclosed in 350mm x 100mm x 100mm MS Painted Powder Coated Metal Enclosure with front accessible Cover.	5	No.				
3	Earth Test Point (ETP) or Equipotential bar made with 150mm wide, 50mm high and 8mm thick tin plated Copper, as shown in drawings. Bar shall be provided with holes suitable for installation of 1 No. 70/95 Sqmm bare copper conductor. ETP shall be enclosed in 200mm x 100mm x 100mm MS Painted Powder Coated Metal Enclosure with front accessible Cover.	1	No.				

					1	1
4	Earthing Mesh (600mm x 600 mm 3mm Thick Perforated Cu Plate), work includes digging, excavation and backfilling as per description shown in drawings. Each Mesh shall be connected using 70 sqmm bare copper conductors with the earthing rods.	1	No.			
5	Supply, installation, testing and commissioning of following size of Single core PVC Cables from ECP to several equipments in following sizes of PVC Conduit or as per details given in tender drawings, including all material, labor, tools, transportation, accessories etc. Complete in all respects with detailed test reports.					
a	1C, 95 Sq.mm PVC (Green) in 50mm dia PVC Conduit	1	Rm.			
b	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	1	Rm.			
6	<b>Stranded bare copper conductors</b> of following sizes in clipped on retaining wallt from B1 to B4 from ECP to Earth Station as shown in drawings. Complete in all respects including termination at both ends.					
a	95 Sq.mm Bare Copper Conductor	200	Rm.			
	<b>Note:</b> Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec - F (CARRIED FORWARD TO SUMMARY)					
	SECTION - G VOICE & DATA COMMUNICATION SYSTEM					
	Supply, Installation, testing and commissioning of following items for voice and data communication system including all material, labor, tools, accessories etc. Complete in all respects. Quantities for cables shown in BOQ are estimated and taken from drawings. Contractor is advised to take measurement at site before commencement of works. Different colors of voice and data cables shall be used. (Selected Series for Face plates is Clipsal C-Vivace or equivalent)					
1	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Outdoor rated Fiber Optic Cable as per standard specifications, all termination accessories up to entire satisfaction of IT Engineer, in already installed PVC conduit / cable tray including termination and tagging at both ends. Complete in all respects.	1	Rm.			
2	Supply & Wiring of 12 Core, 9/125um Single Mode Armoured OS2,982,9652D External rated Fiber Optic Cable (from Existing Control room) as per standard specifications, all termination accessories up to entire satisfaction of IT Engineer, in already installed PVC conduit / cable tray including termination and tagging at both ends. Complete in all respects.	700	Rm.			
3	Supply & Wiring of 24 Core, 9/125um Single Mode Armoured OS2,982,9652D External rated Fiber Optic Cable (from Existing Data Center) as per standard specifications, all termination accessories up to entire satisfaction of IT Engineer, in already installed PVC conduit / cable tray including termination and tagging at both ends. Complete in all respects.	700	Rm.			
4	Fluke / OTDR Testing of each communication cable with calibrated fluke tester	1	Job			
	Note: Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.					
	Total Amount (Rs.) Sec – G (CARRIED FORWARD TO SUMMARY)					

	SECTION - H AS-BUILT DRAWINGS					
1	Preparation of as-built drawings of all electrical and allied works after final approval from the consultant/client.  Note: Submission of as-built drawings 3 sets & soft copy of complete electrical works after final commissioning of project. Approval of final bills are subject to completion of as built drawings.	1	Job			
	Total Amount (Rs.) Sec -H (CARRIED FORWARD TO SUMMARY)					



# DOW UNIVERSITY OF HEALTH SCIENCES KARACHI.

## TENDER DRAWING ARCHITECTURAL

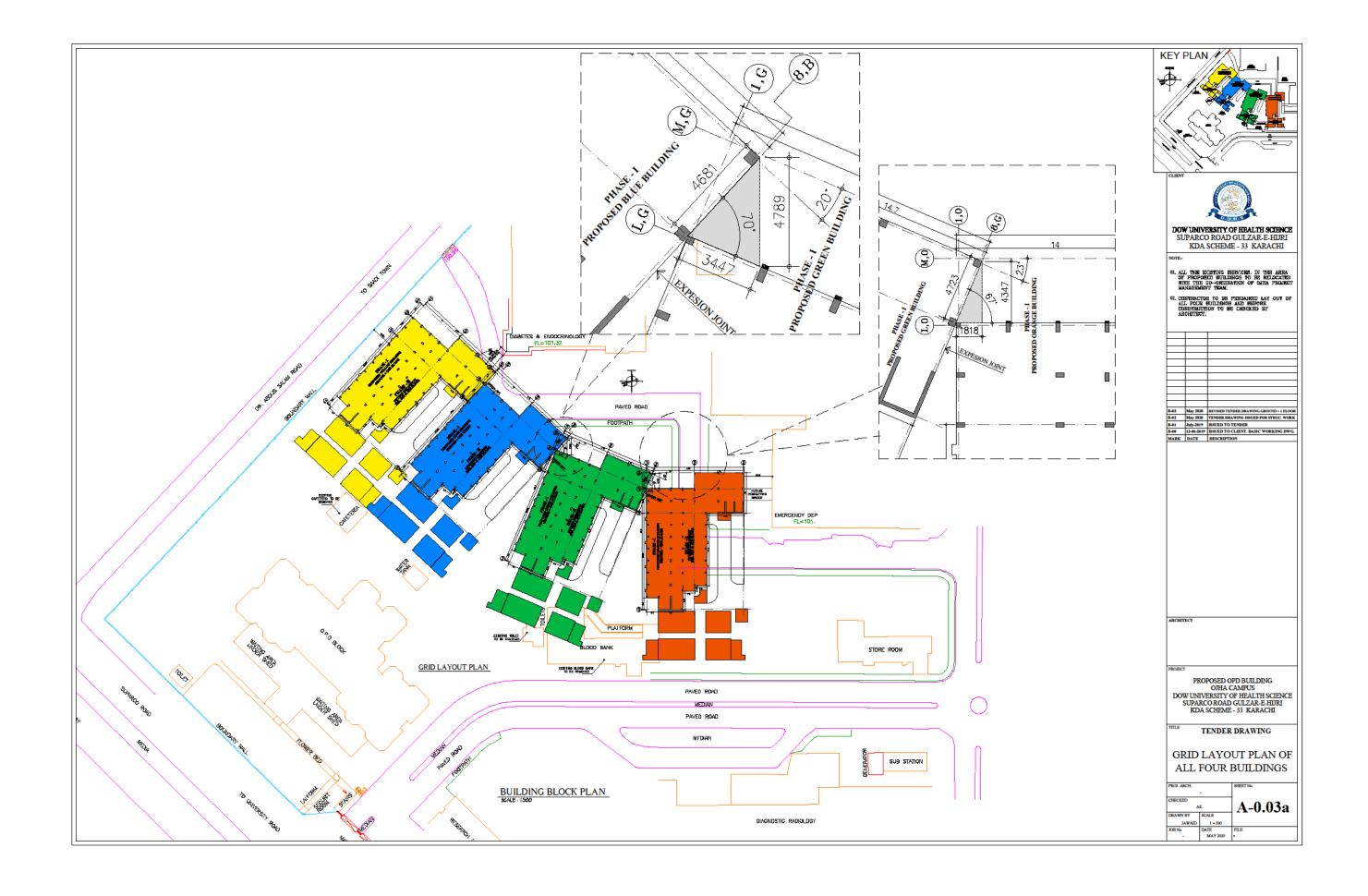
(GROUND + ONE FLOOR)

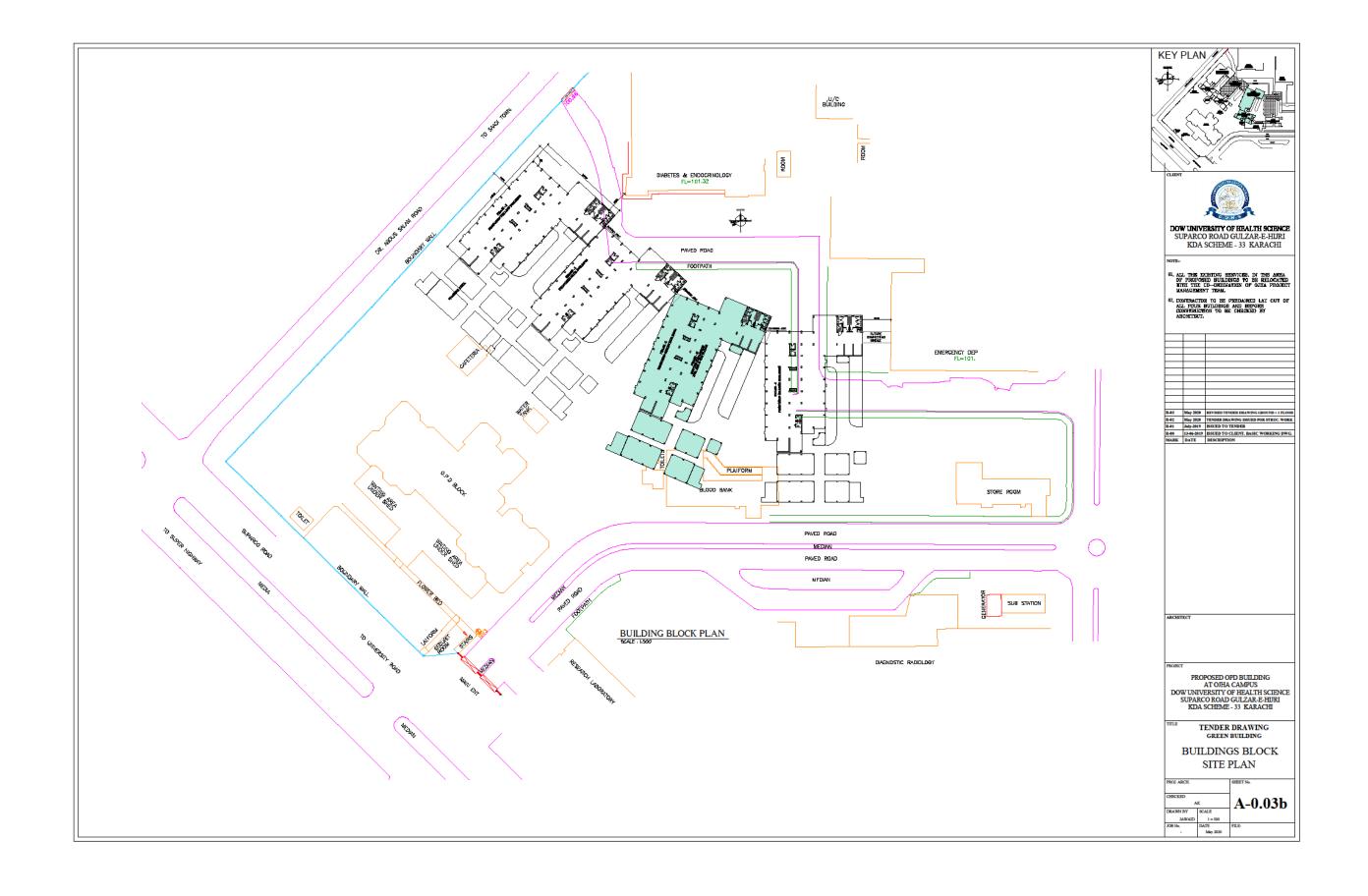
GREEN BUILDING

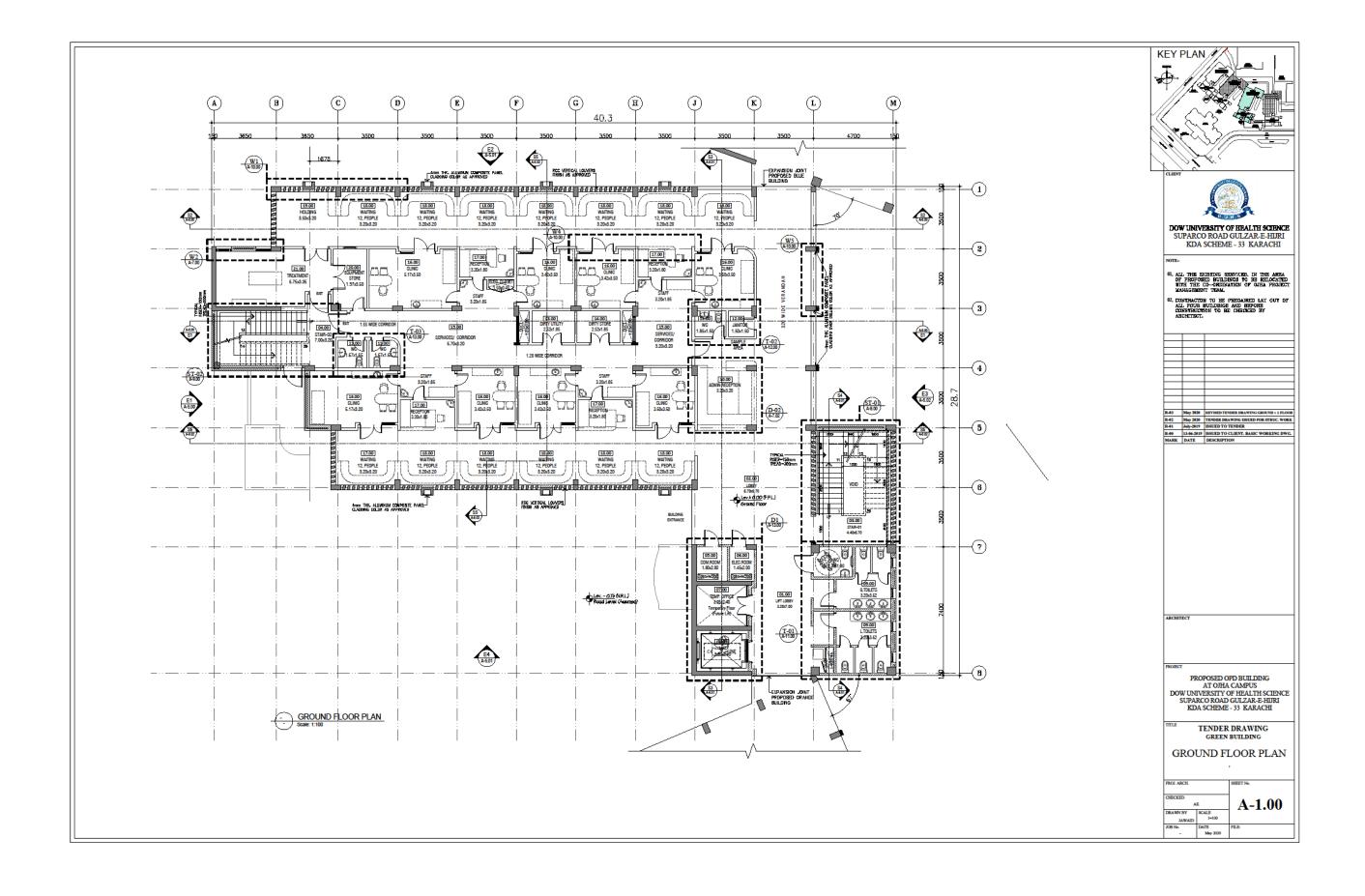
DATE := MAY 2020

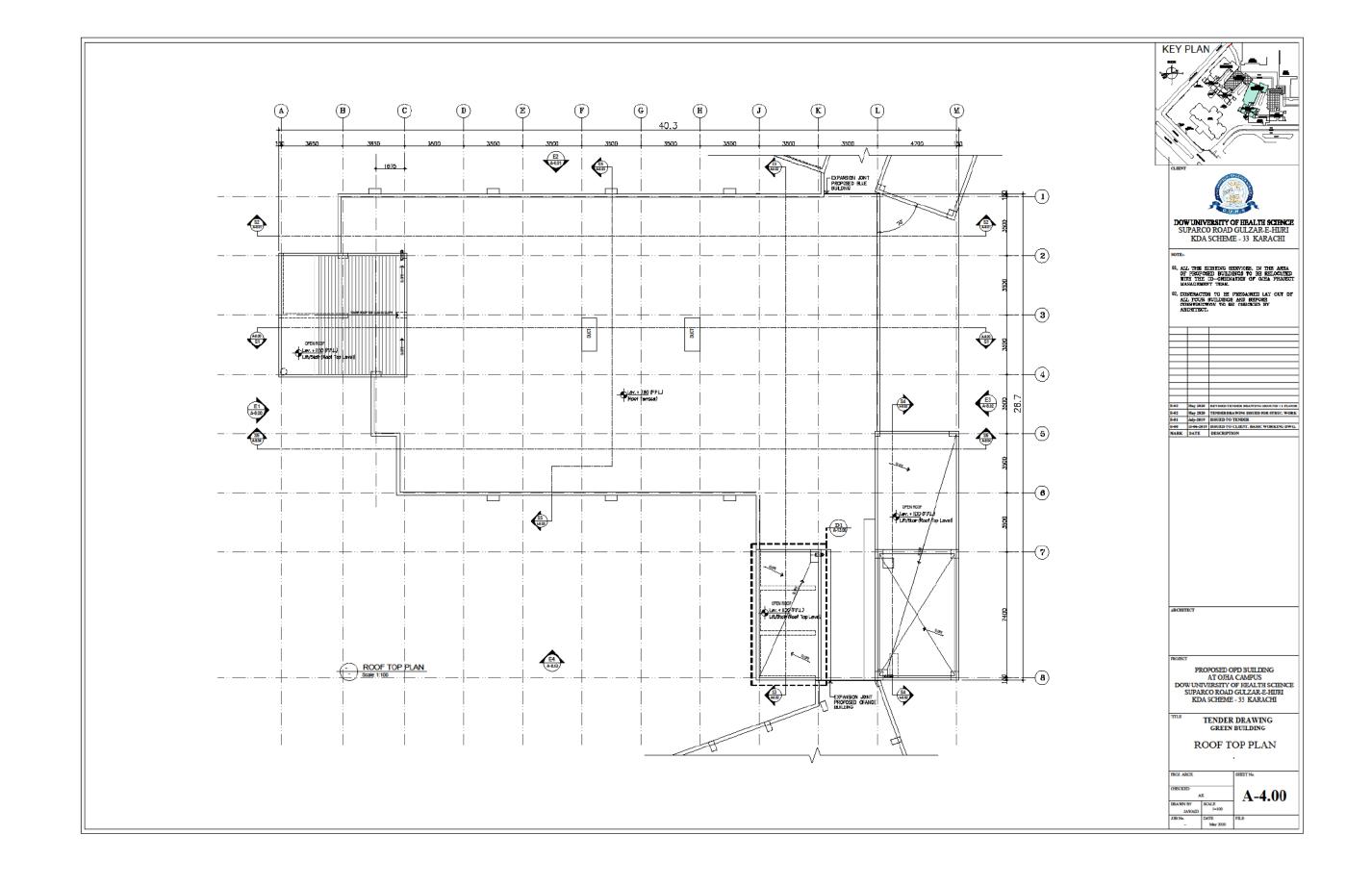
PROPOSED OPD BUILDING AT OJHA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI

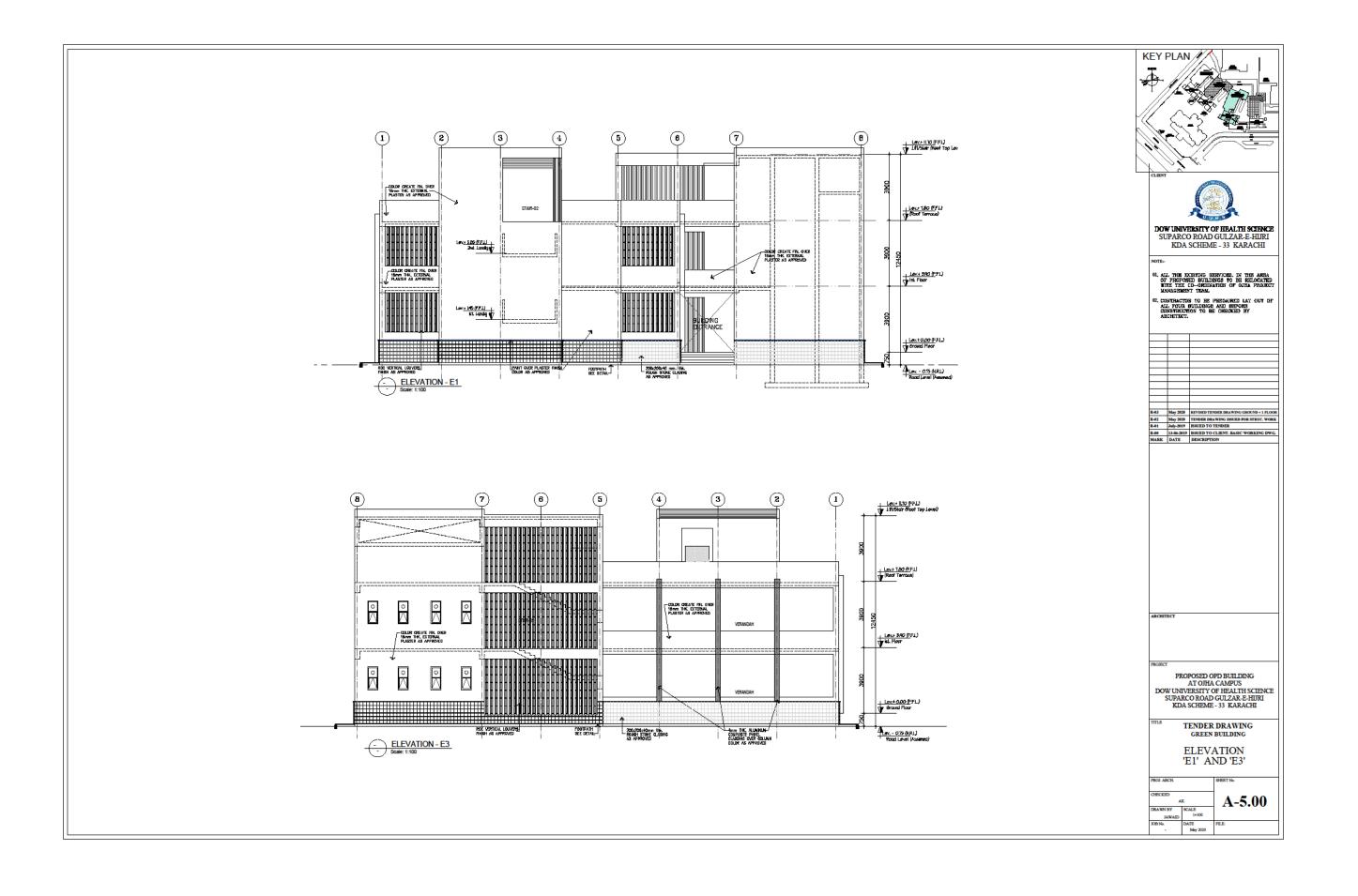
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ROOM NO:		9 - 300mm RG (54498) 9 - 8 - 800mm RG 71LC) 100mm/SQ 6 - 800mm RD P0UBH 100mm/SQ 6 - 800mm RG 100mm/SQ 6 - 800mm RG 100mm/SQ 6 - 800mm RG	IIC TILE SE + MOODEN FLOOR B-ENDERNE A-FERTING ST	A-SCORIN SO B-SCORIN SO ITERIAL Torkett P- Option Juni	Ę.	IE (300mwi300mm) /PRS (ENVICRETE)		R ON M.S FRAME A - NABLE R - PROSIAN THE WITH NABBLE FINE	A - MARIE B - PRAZIMI TE POET T-TE	m HIGH b - 600min	NC TILE W-BHE ENDIT		S W/PIGNENT BERISED SYGRING	INDISTRIAL GLAZING	SPET THE THE THE THE THE THE THE THE THE T		( SIZE AS PER DARWING TO SUMM SQ.	C Fromm C Fromm Sown	E (SIZE AS PER DARWING	OPET PARKLE		- a - 450mm - b - 600mm	JIE	AC TLE	N ICI OR ROBILAC	G-G.055Y M-MATT. FN.	a	APOSITE PANEL	SYSTEM (6COMMXBDOMMTLES		D WITH PAINT 24 VEHEER	RI ICI OR EQUIVALANT SION Q-GLOSSY	M=MAT, FIN, D PAINT			COLOR SCHEME			LIINT TO SERVICE THE PROPERTY OF THE PROPERTY
		O CRAVITE TILE O MANBLE TILE	A GUAZED CERMI	GLASS WINTL A	P.C.	B 8	TO SHARE THE 20 SERVING THE 20 SERVI	S Is	18 E	N GRANITE 150mm	GEA2D	O CLASS TIE	CO P.C.C. SYMETHY	TWINDLYN 14 1	SYNTHETIC MADDLE CKI	PORCE AIN	$\rightarrow$	A GRANITE COPING A MARBLE COPING A WOOD COPING	CO NOOD PANELLI	-	ENAME	T PORCELAIN THE	GLASS I	THE GLAZED CERAIN	ANNY EMULSION	ENAN	TI NEATHERSHIEL	STORE FACING ON DE STORE FACINC	DAMPA CELINC	TO LATH PLASTER	Un CYPSUM BOAR		HEATHERSHIEL TO 1	THE FEW PAINT 1 12 13					DOW UNIVERSITY OF HEALT
	GROUND FLOOR (00)																																						SUPARCO ROAD GULZAF
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4th Londing

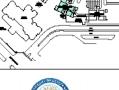
5rd Landig ▲ Lanc+5555 (F31)

2nd Lordigar

let. Landig ▲ Lavir 1850 (FFII)

- ELEVATION - E2
Scale: 1:100

CONNECTING CORRIDOR

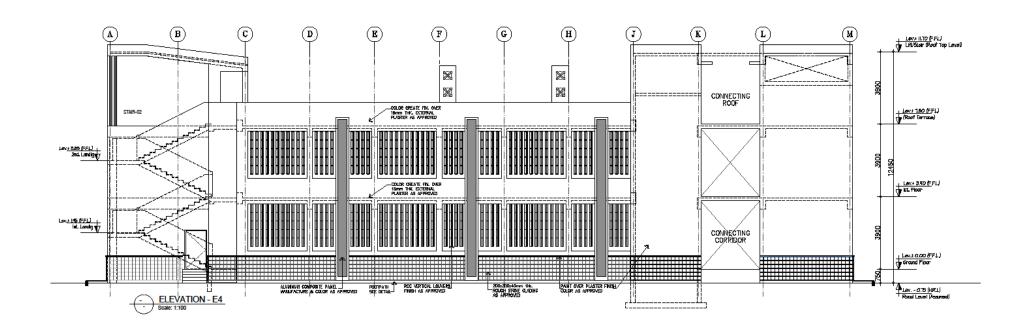


DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI

(Poor Terrose)

Lev.+ 3.90 (FFL)

ALEX. - 0.75 (KRL)
Road Level (Assumer



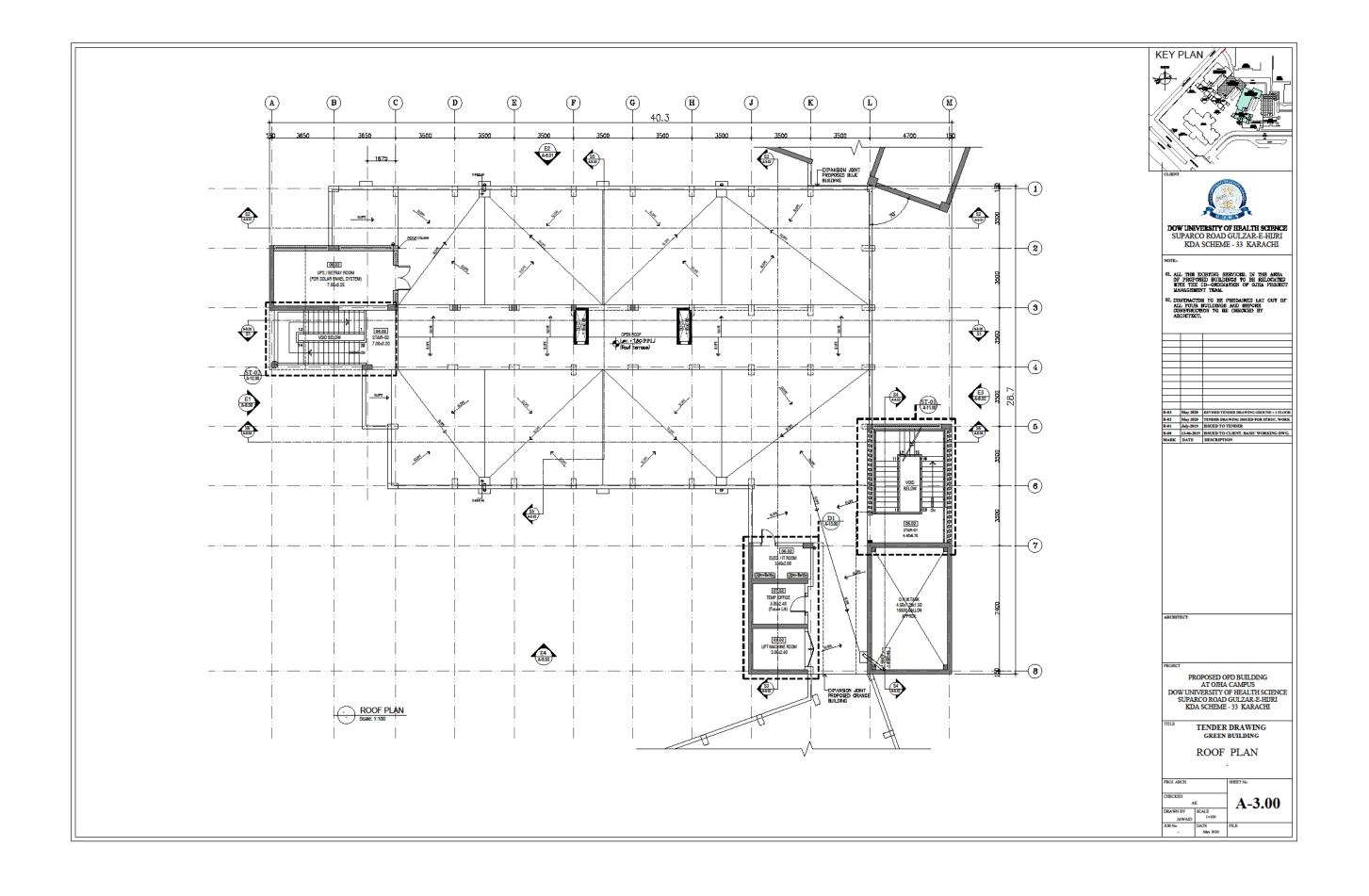
200x200x40mm fek. ROLOH STONE CLADING AS APPROVED

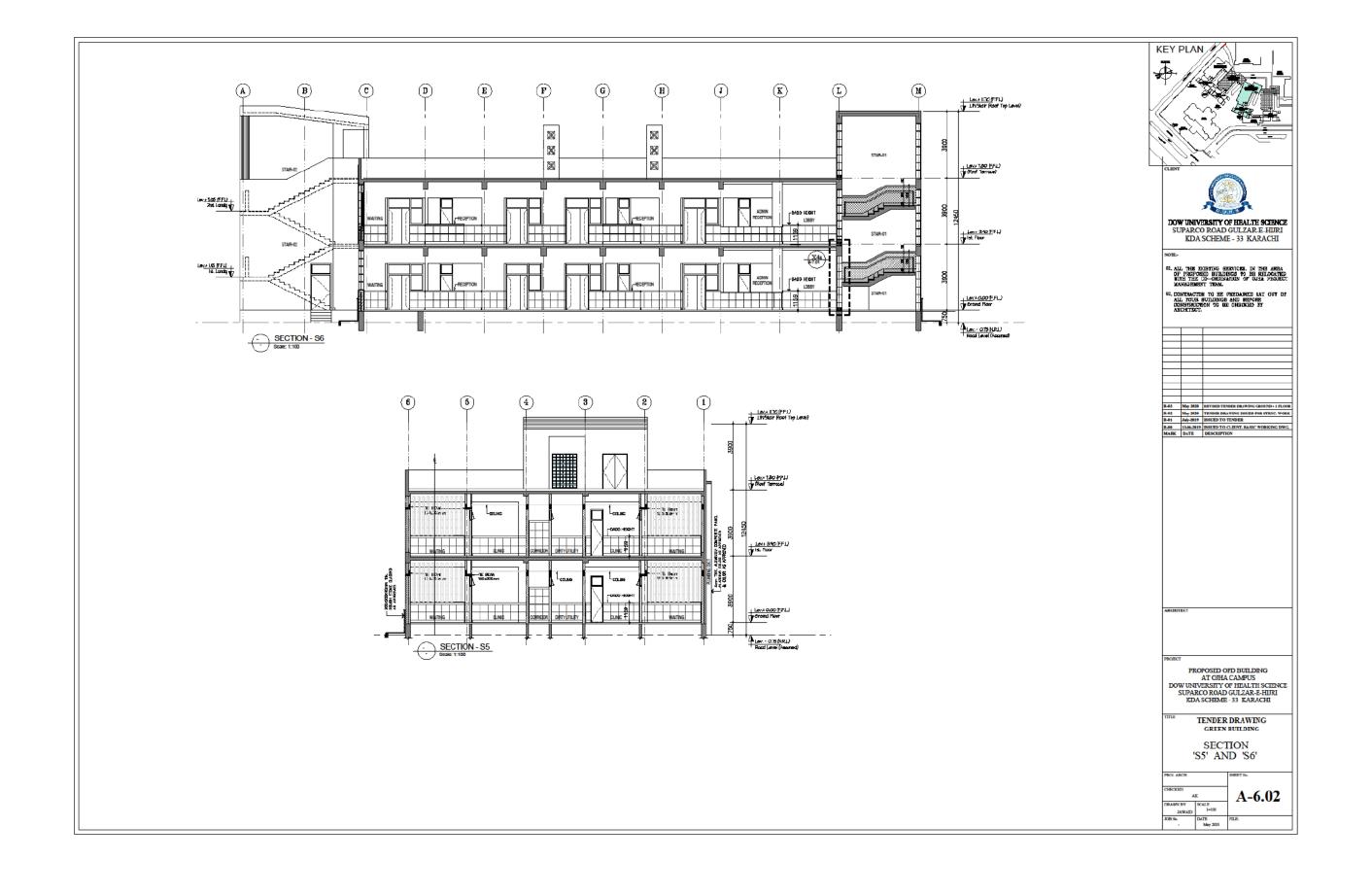
PROPOSED OPD BUILDING
AT OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HIJRI
KDA SCHEME - 33 KARACHI

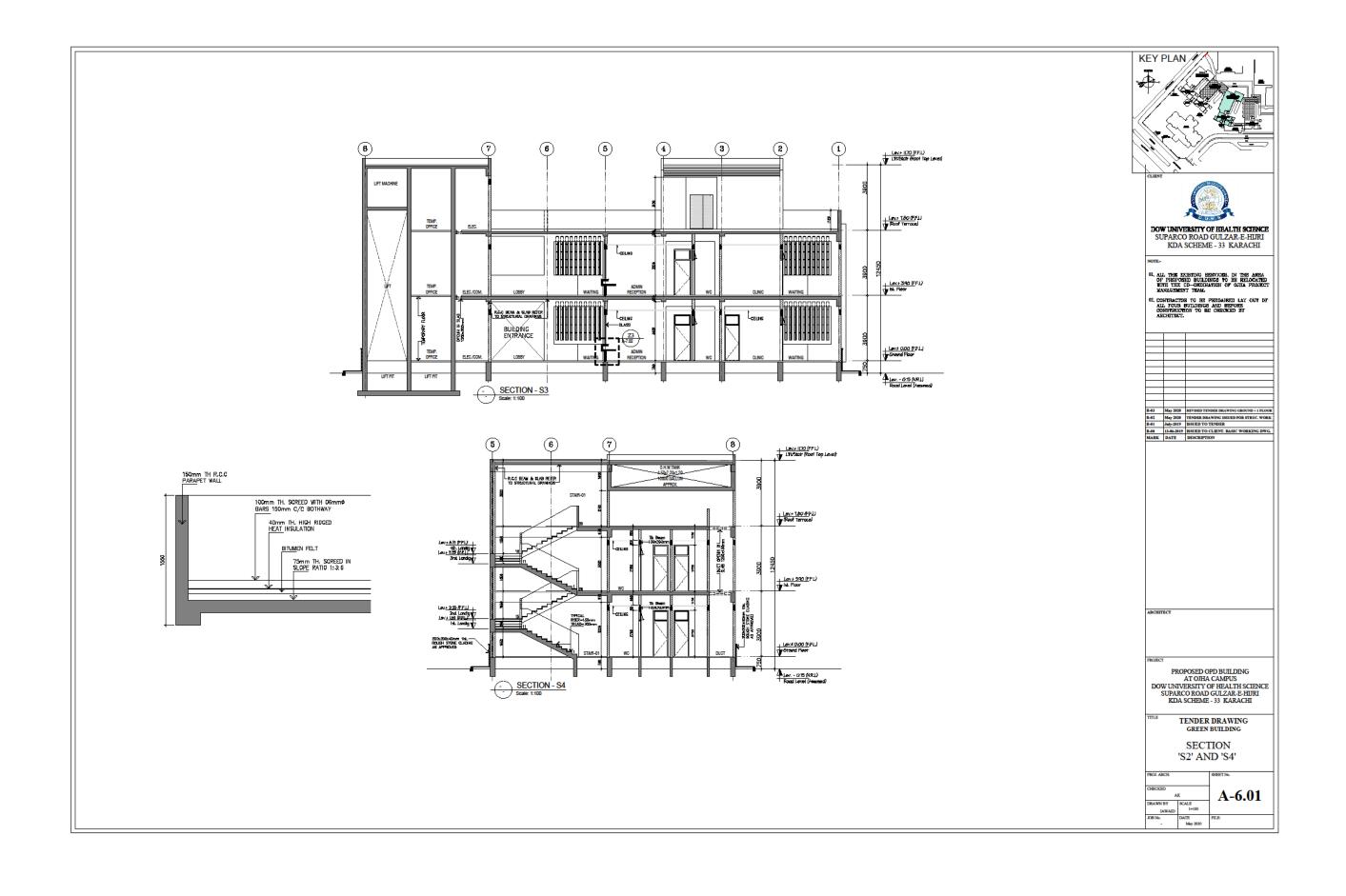
TENDER DRAWING GREEN BUILDING

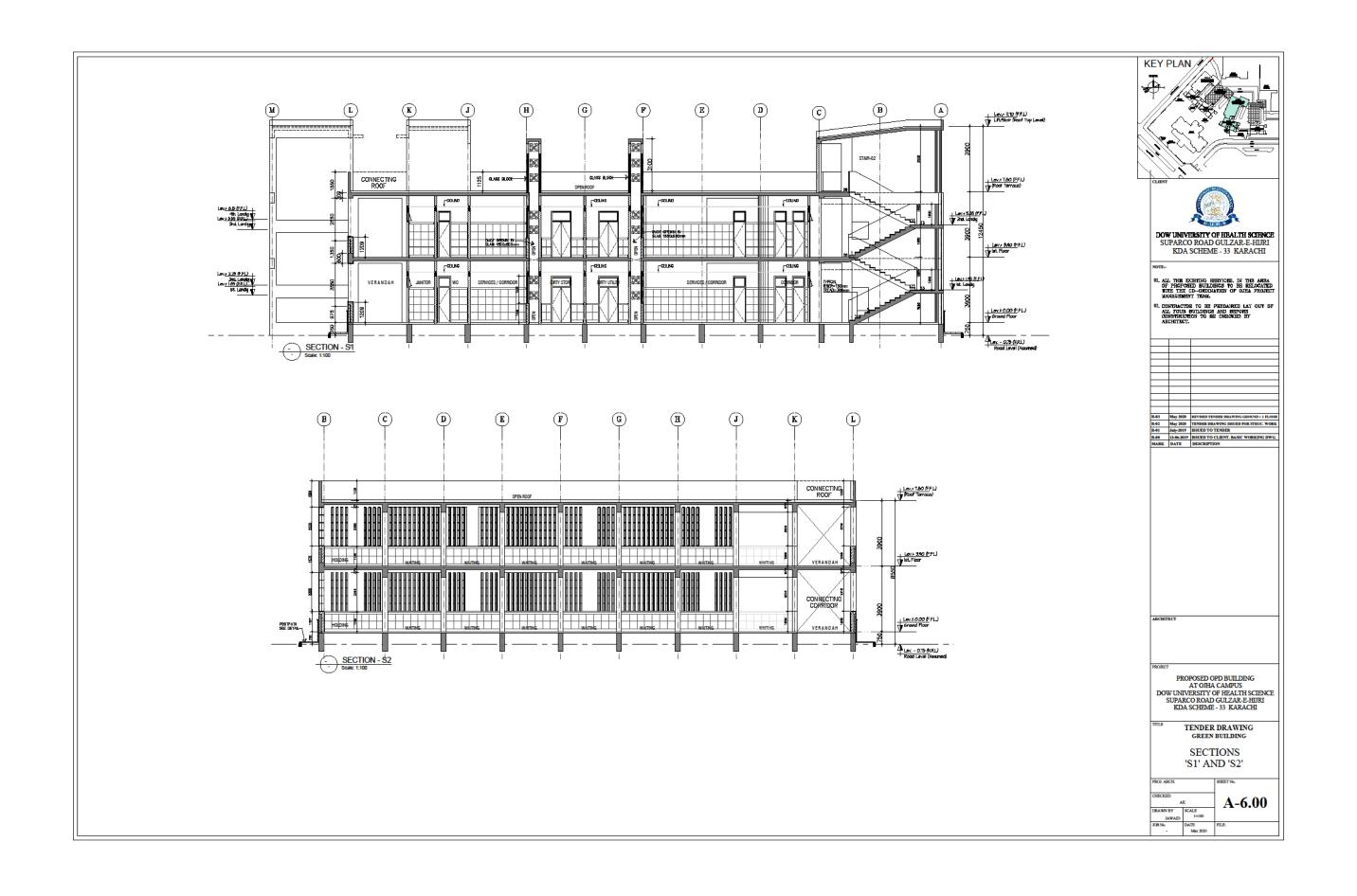
ELEVATION 'E2' AND 'E4'

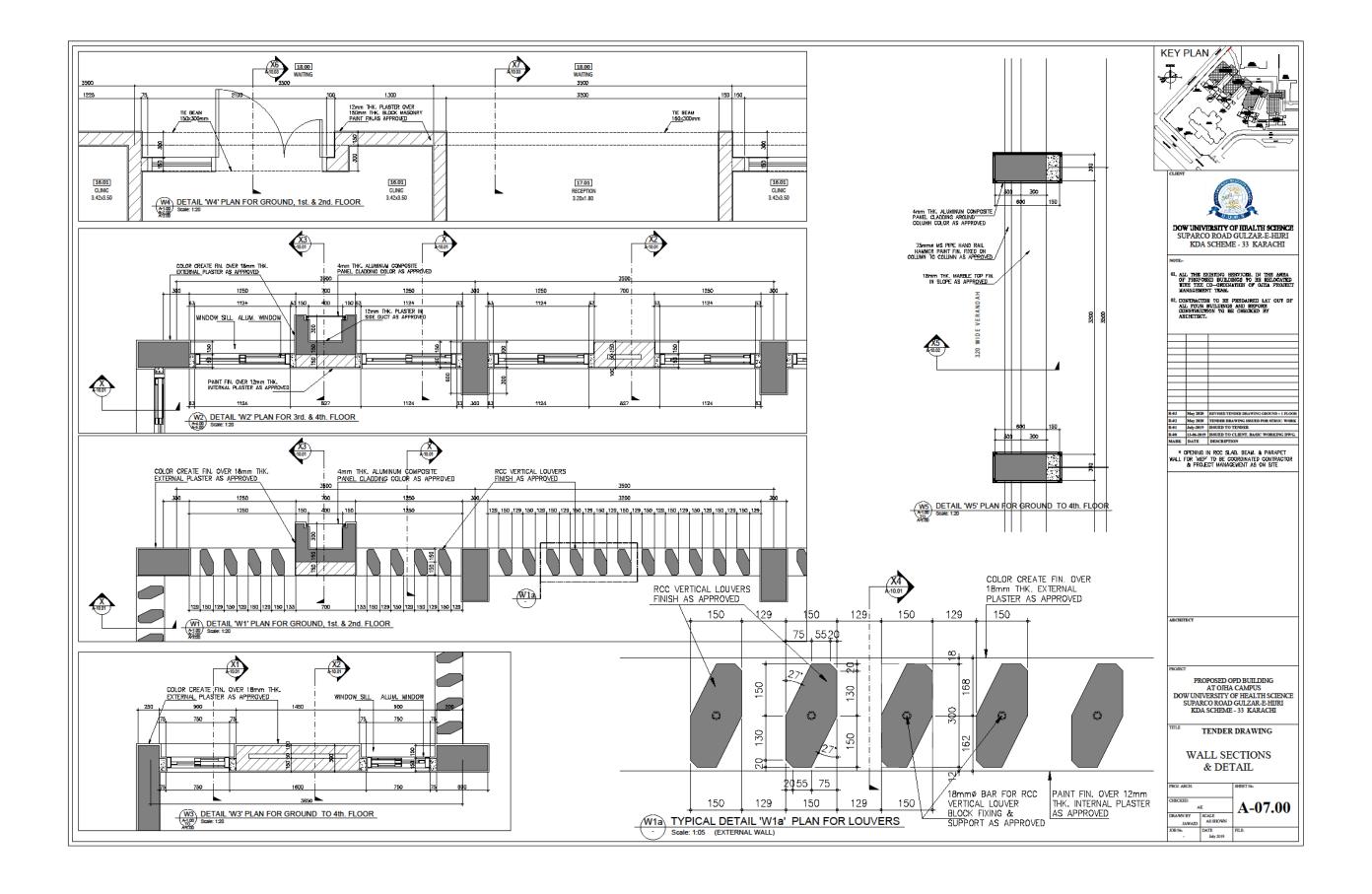
PROJ. ARCH.		SHEET No.
CHECKED	K	A-5.01
DRAWN BY JAWAID	SCALE 1=100	12 0102
JOB No.	DATE May 2020	FILE:

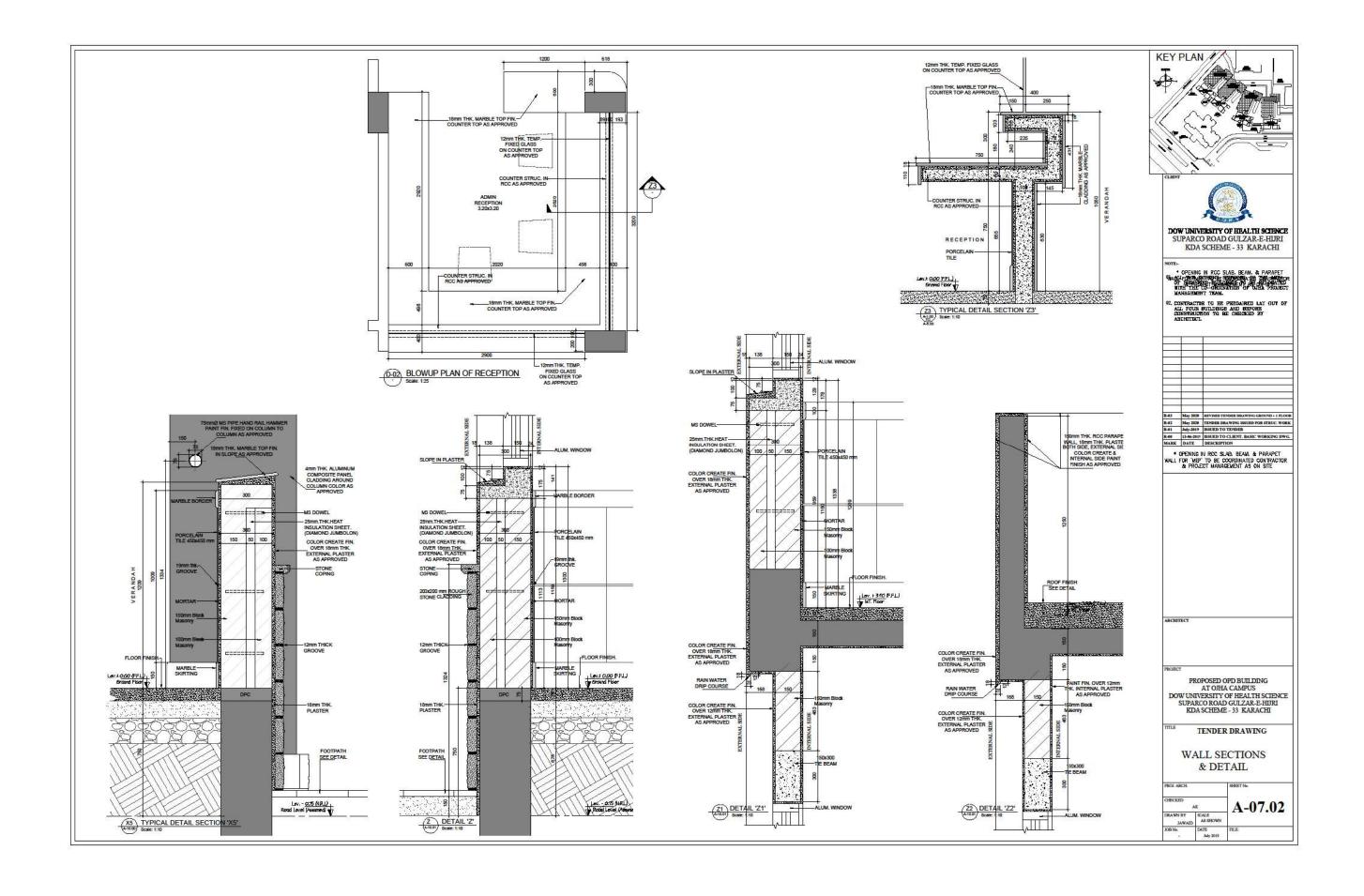


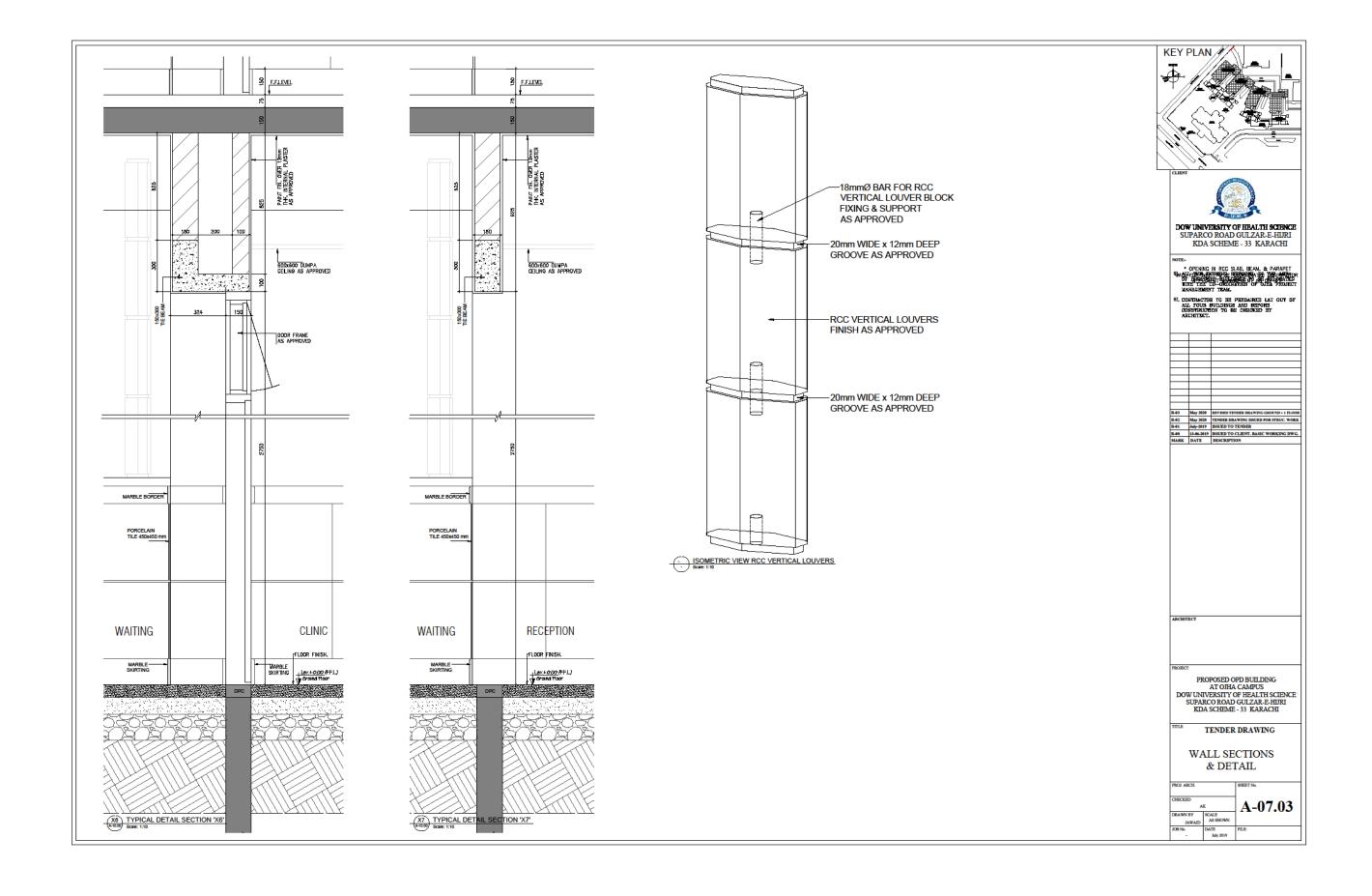


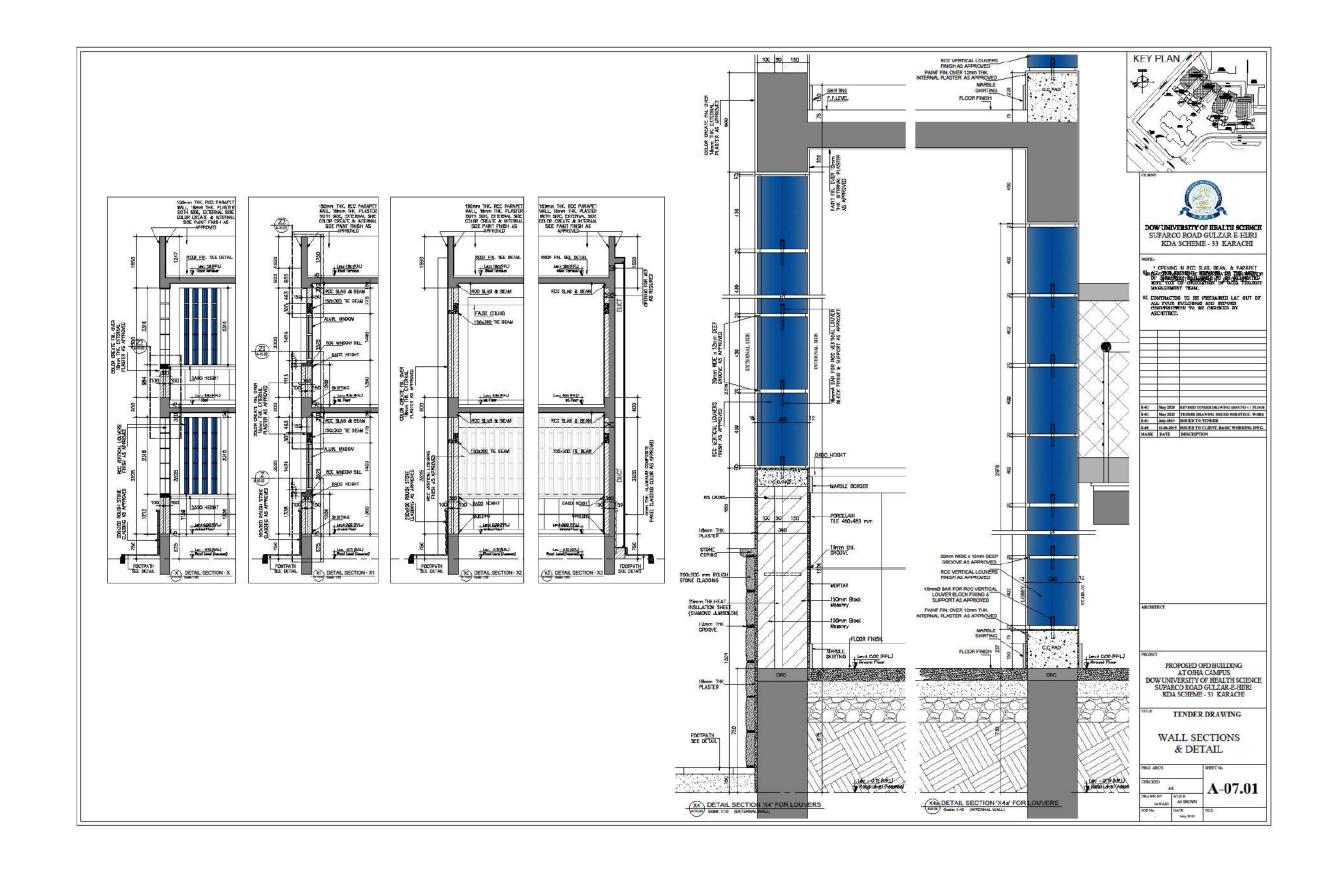


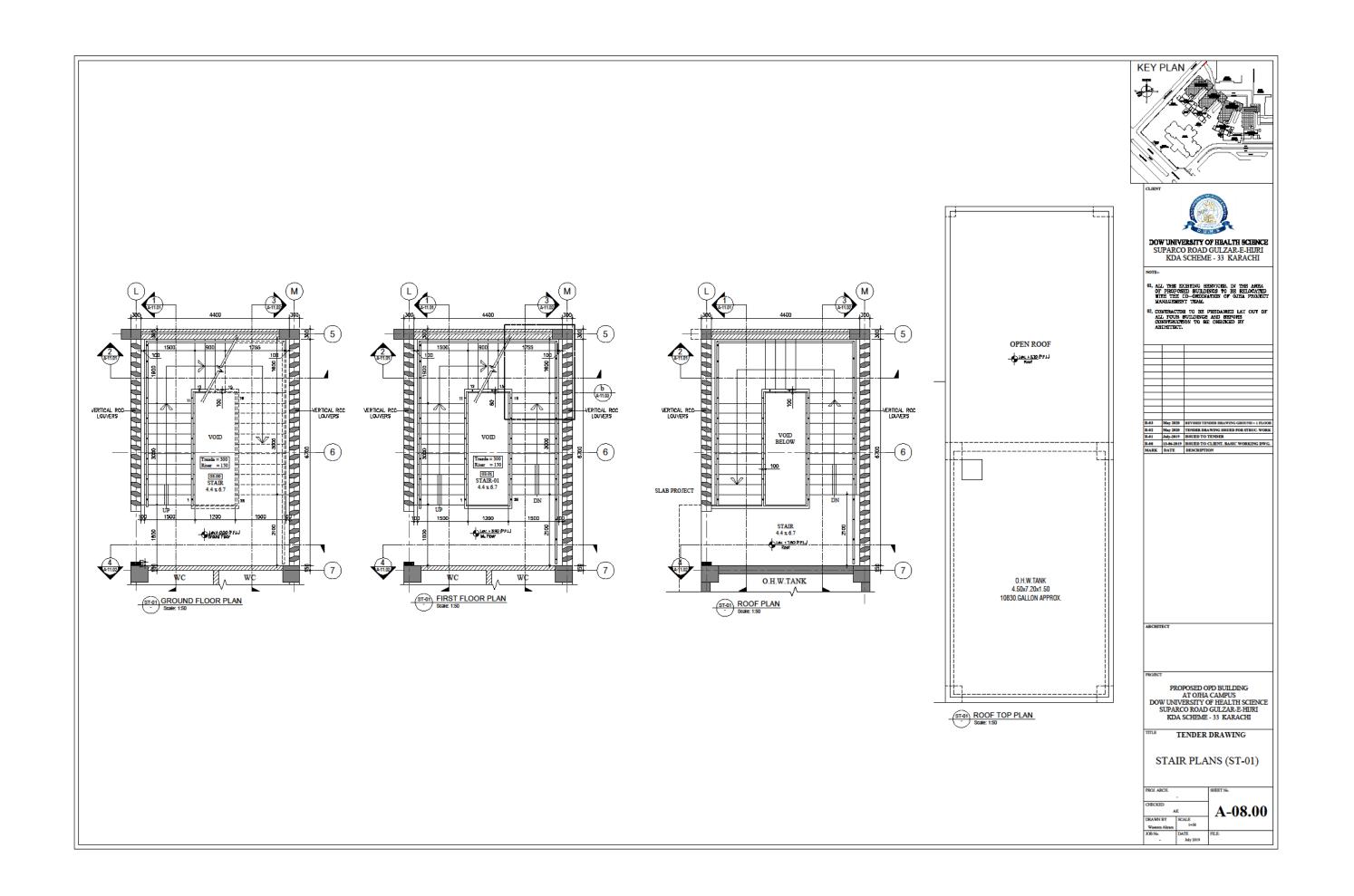


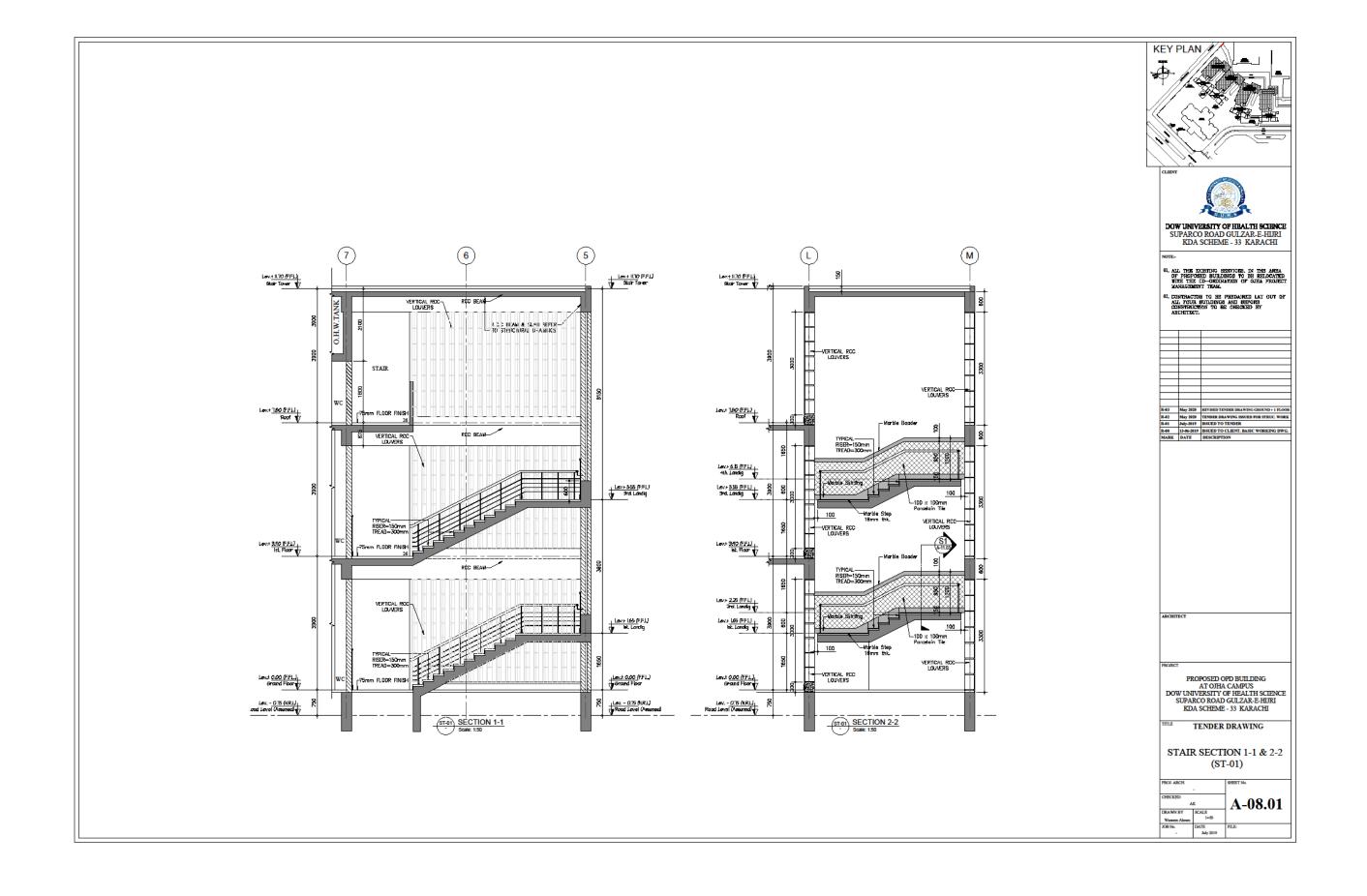


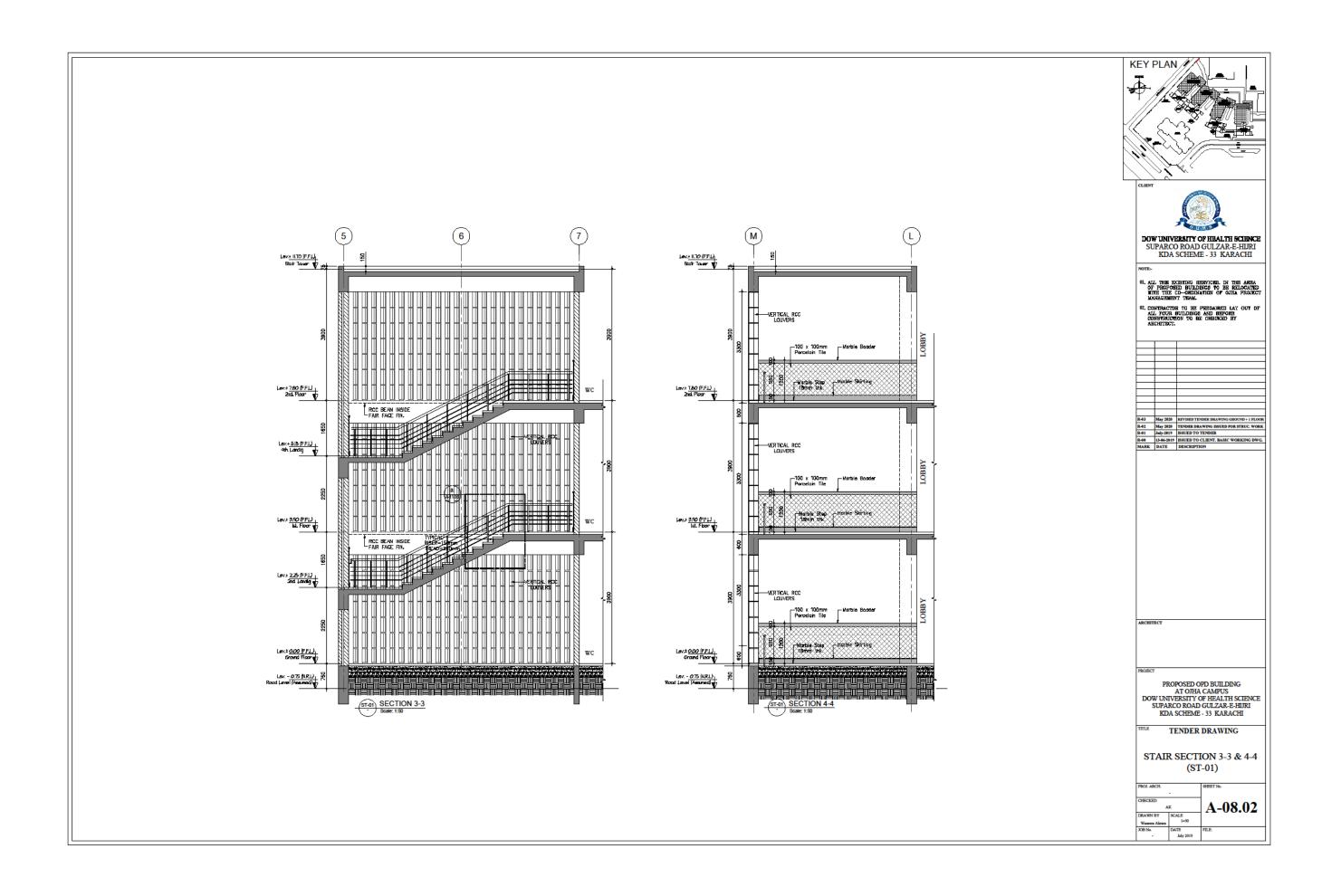


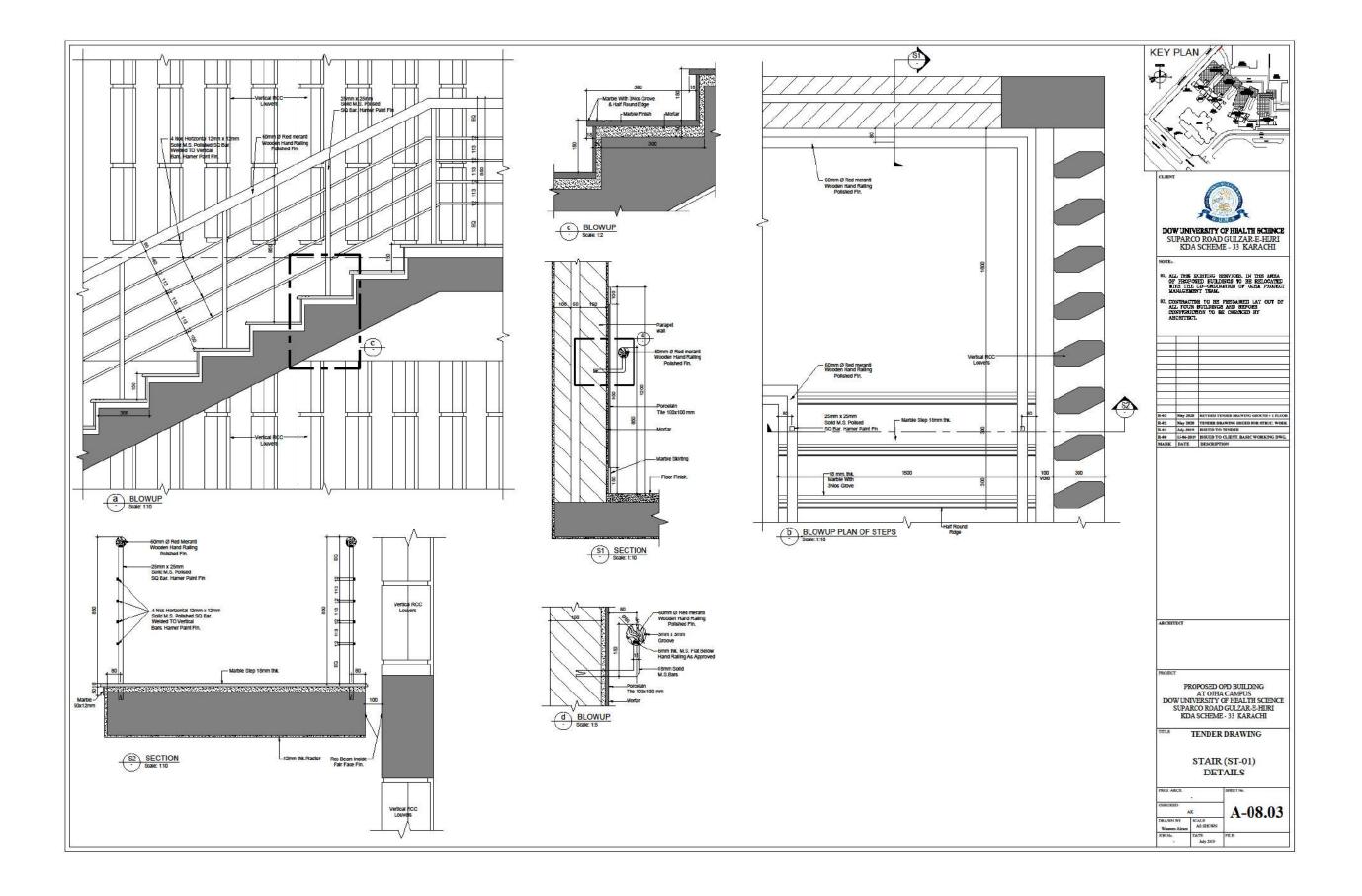


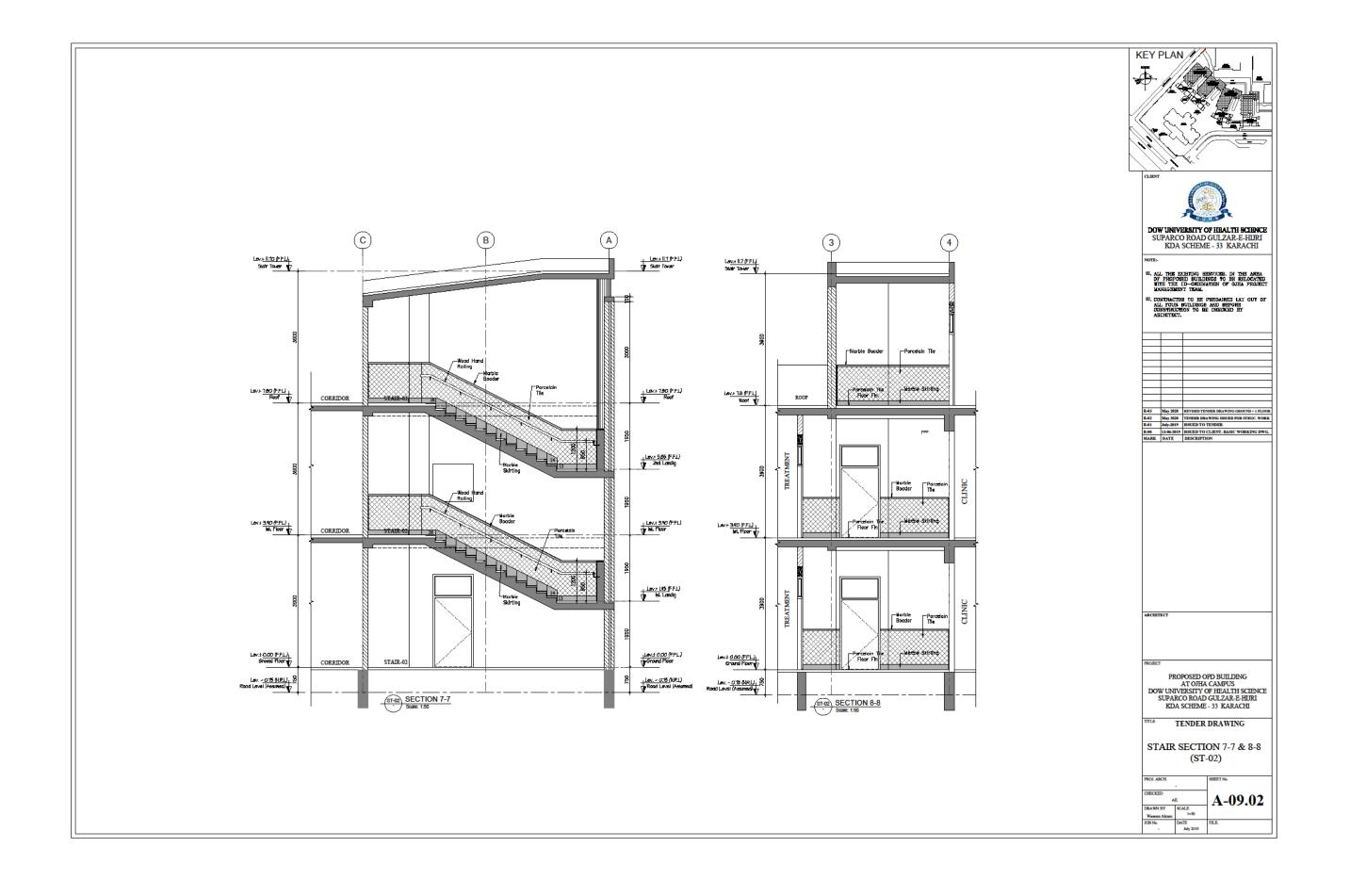


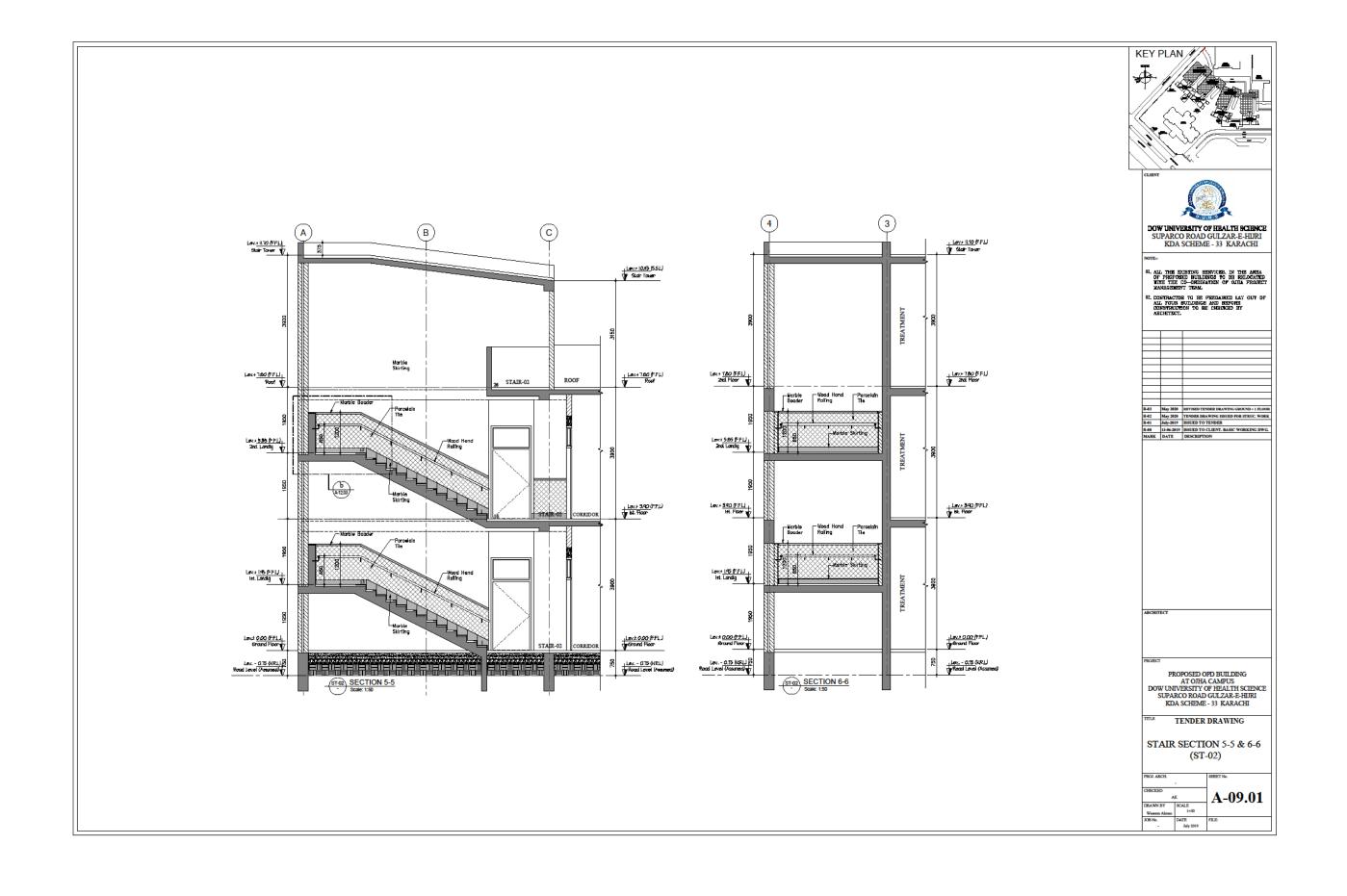


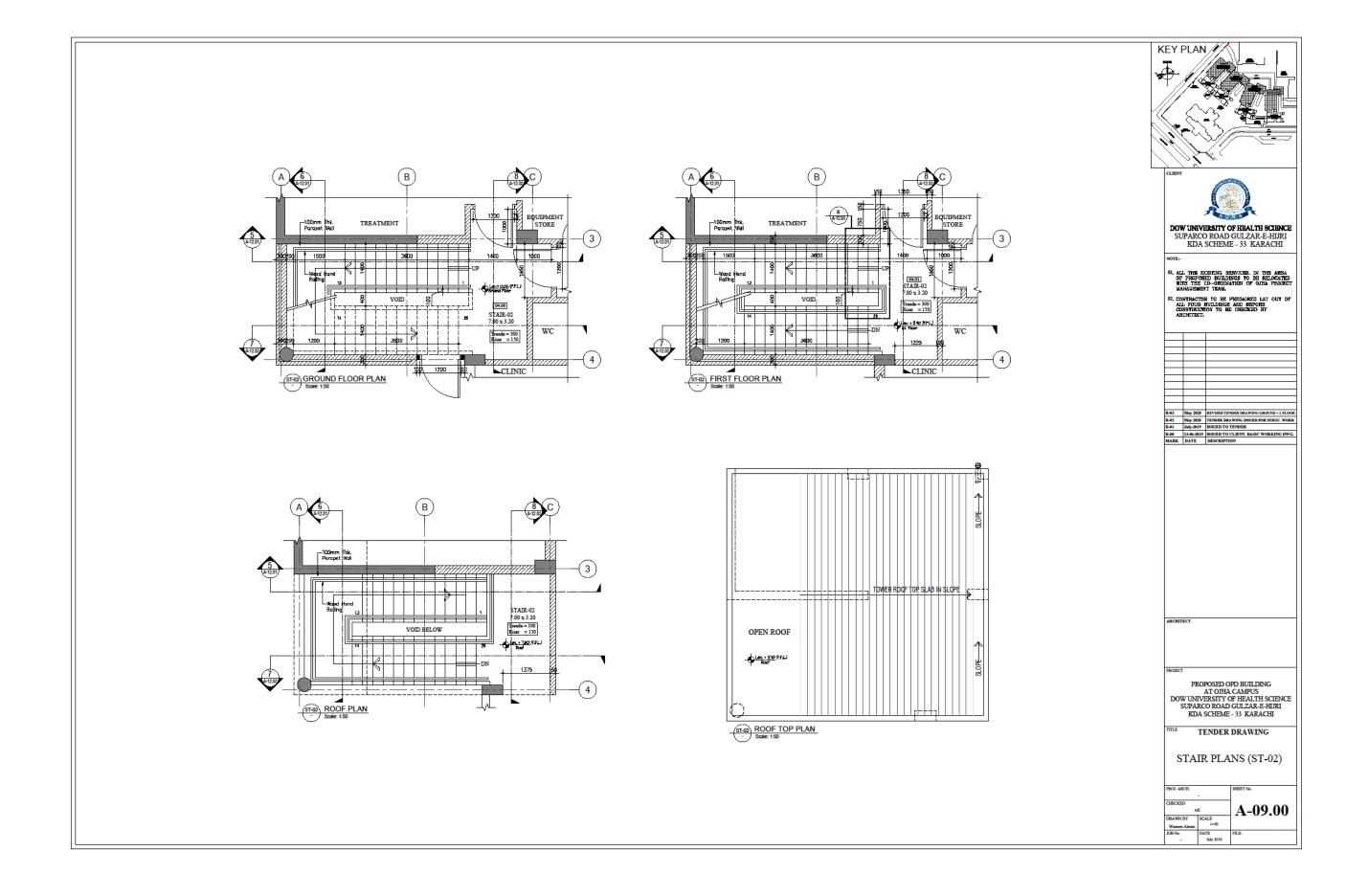


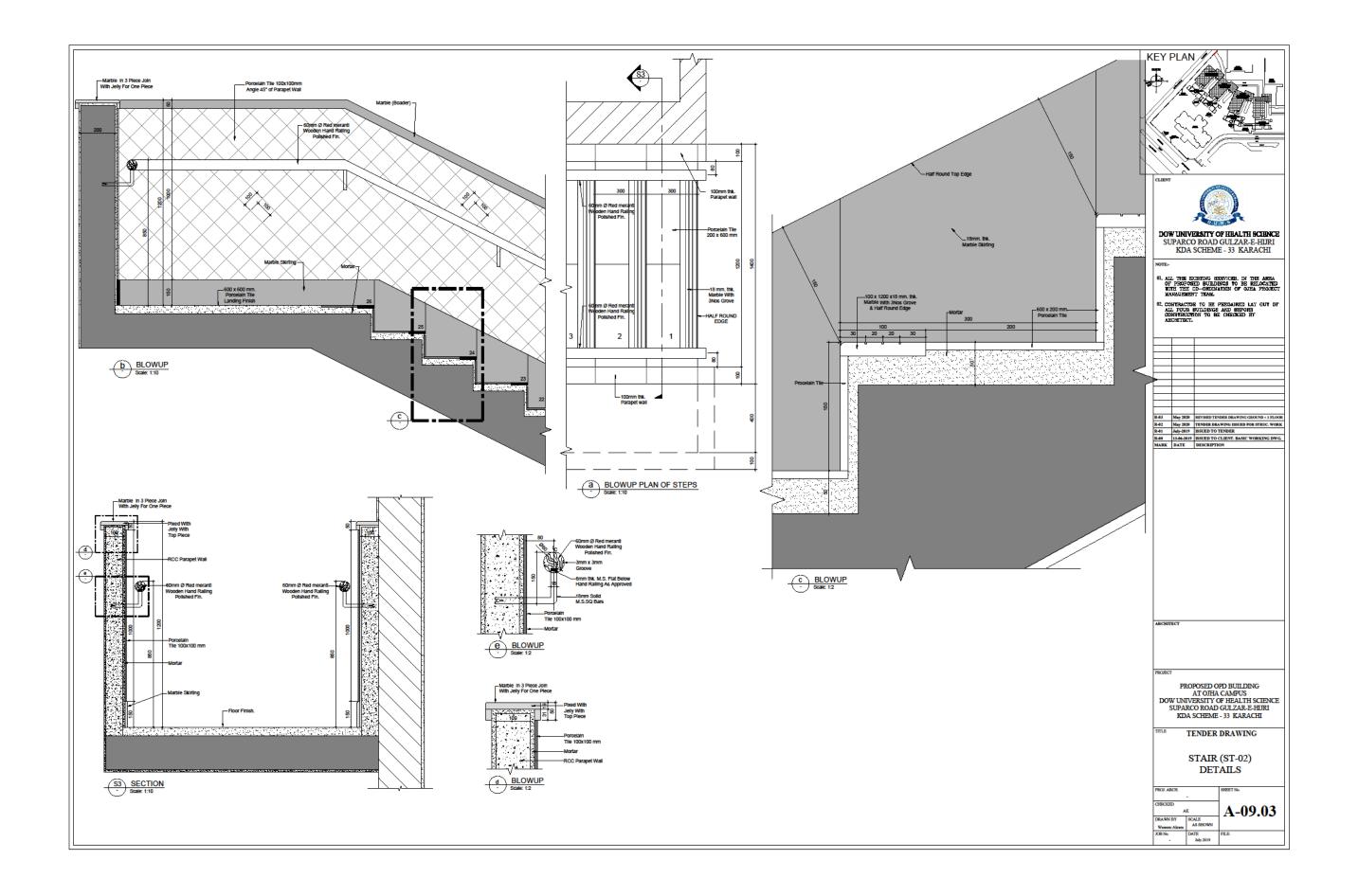


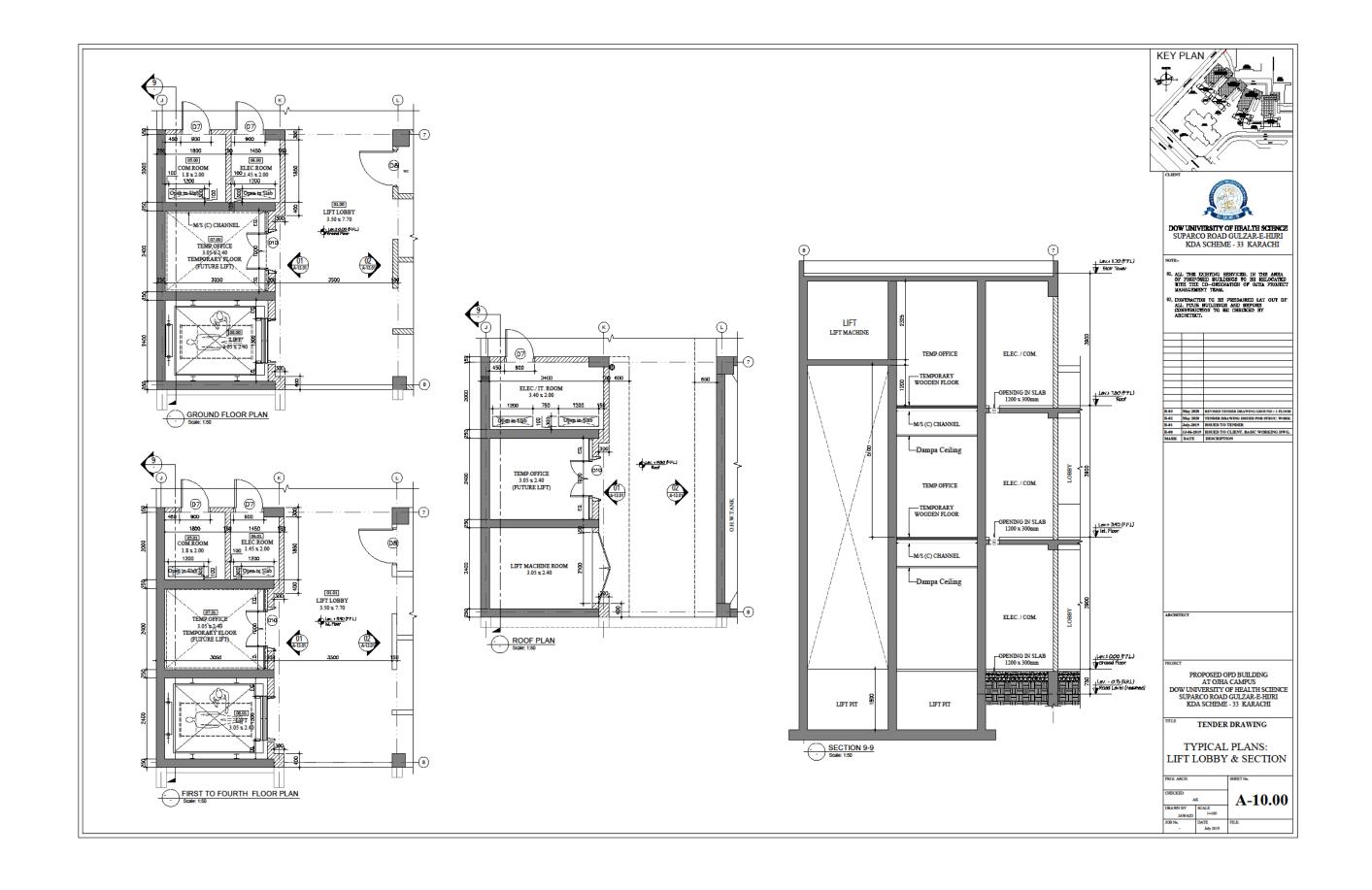




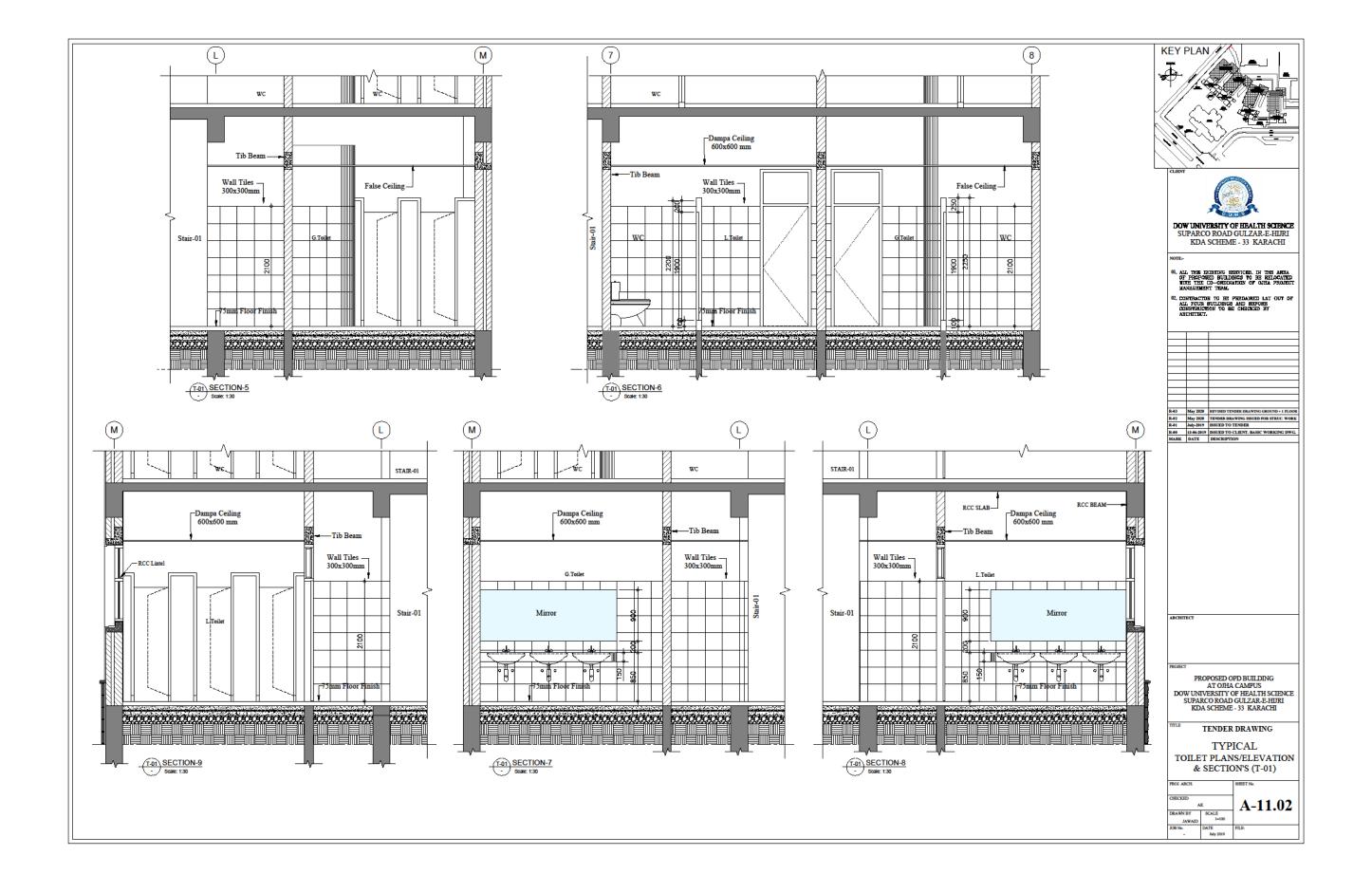


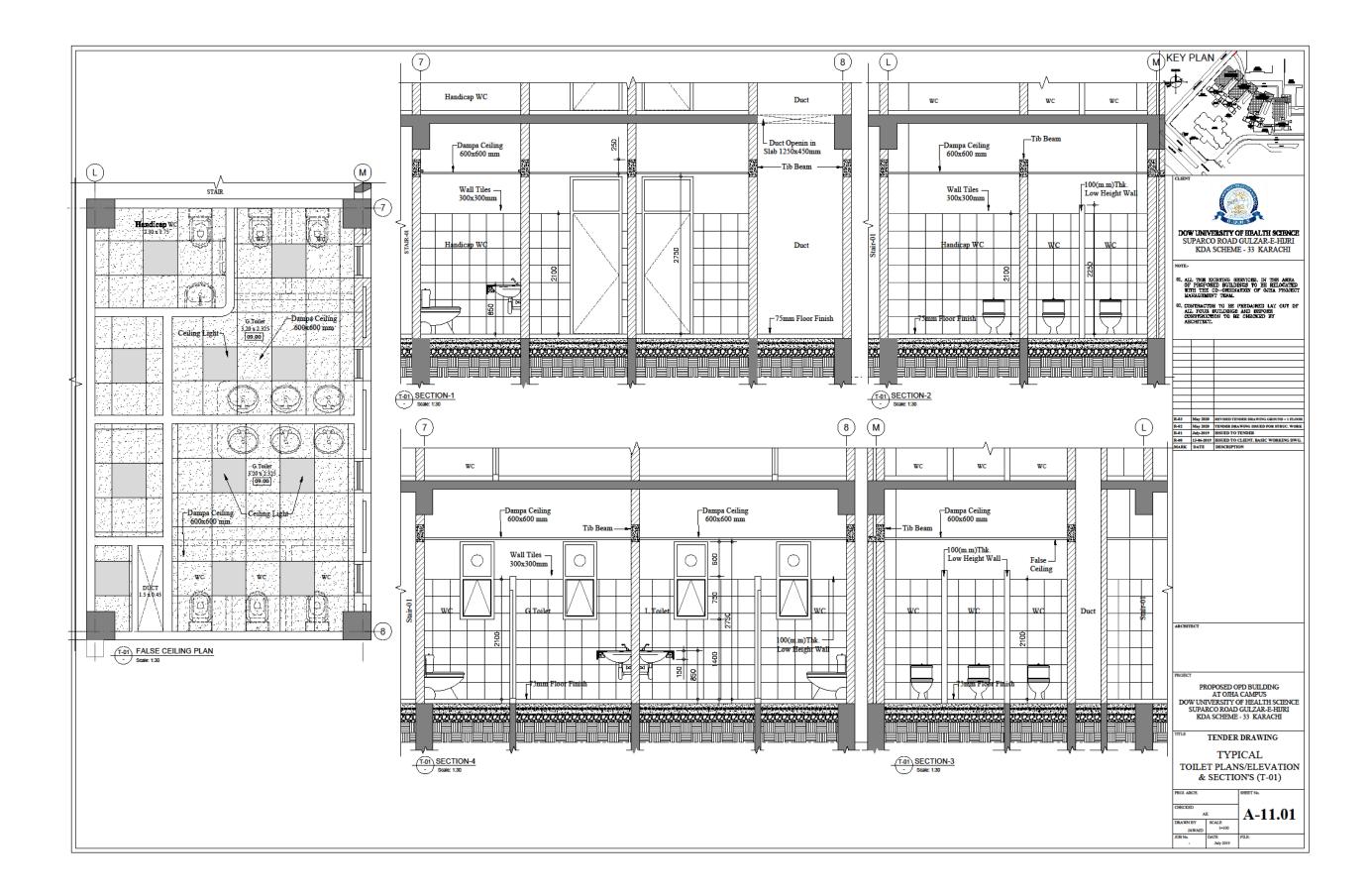


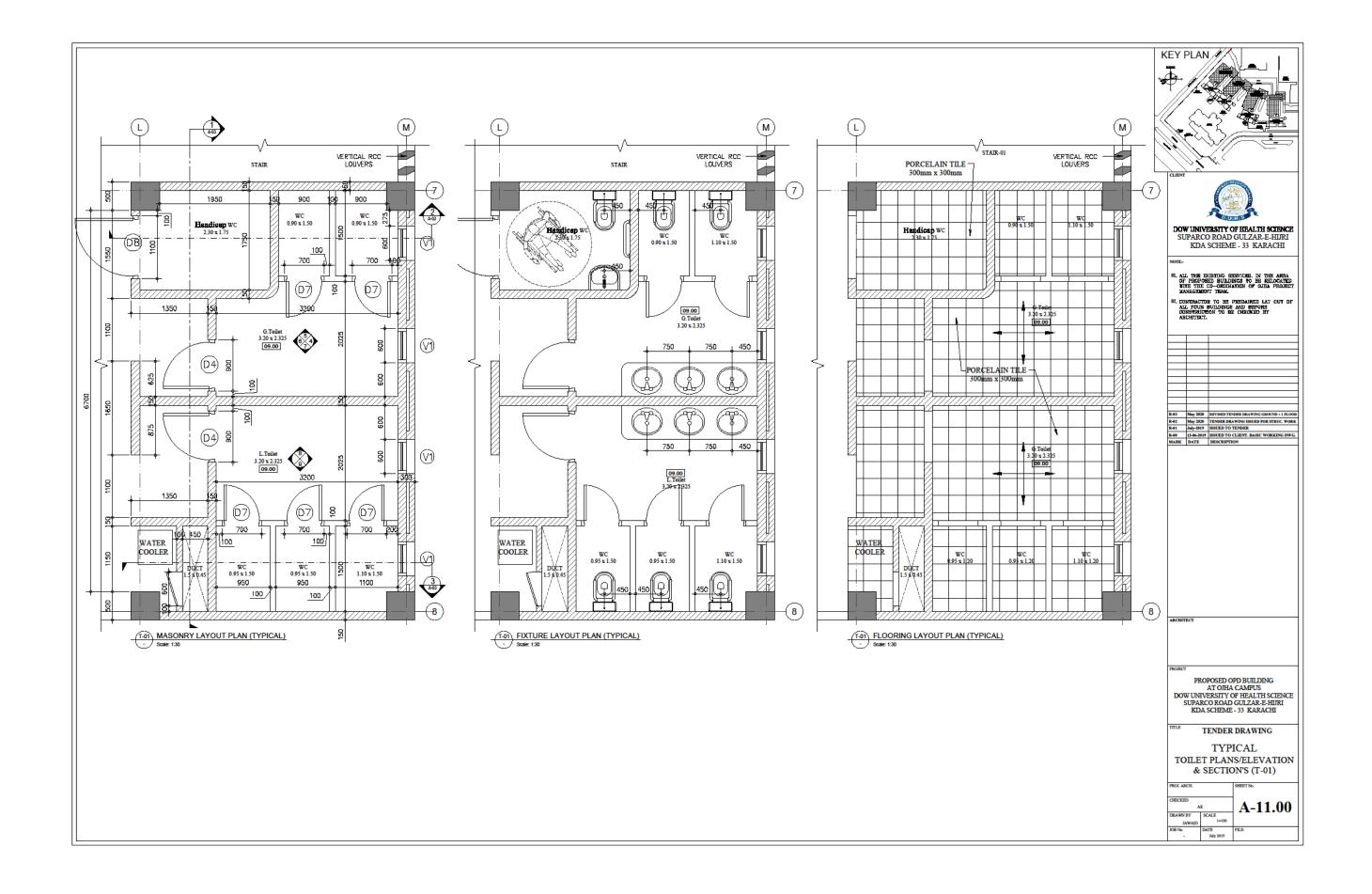


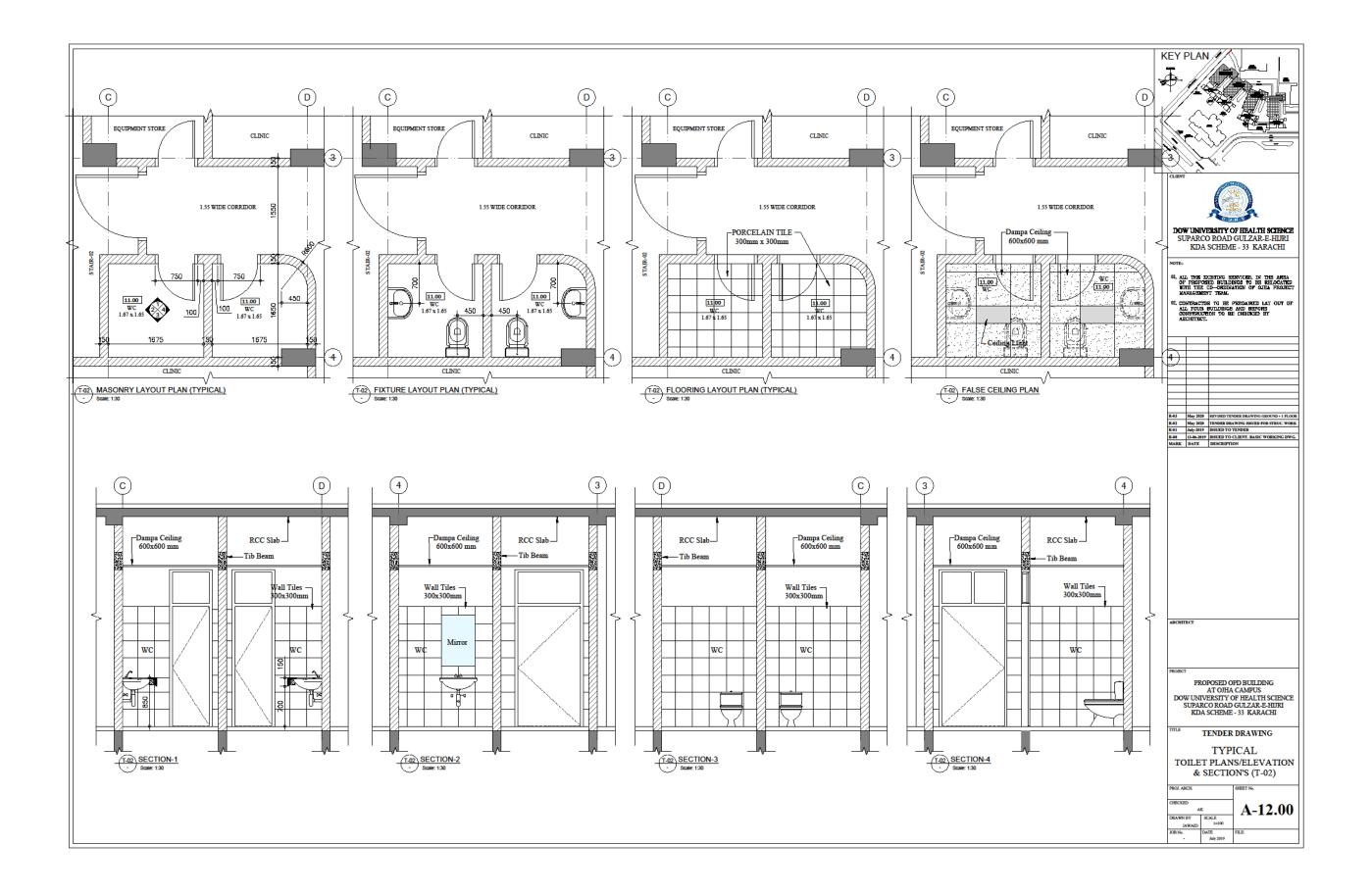


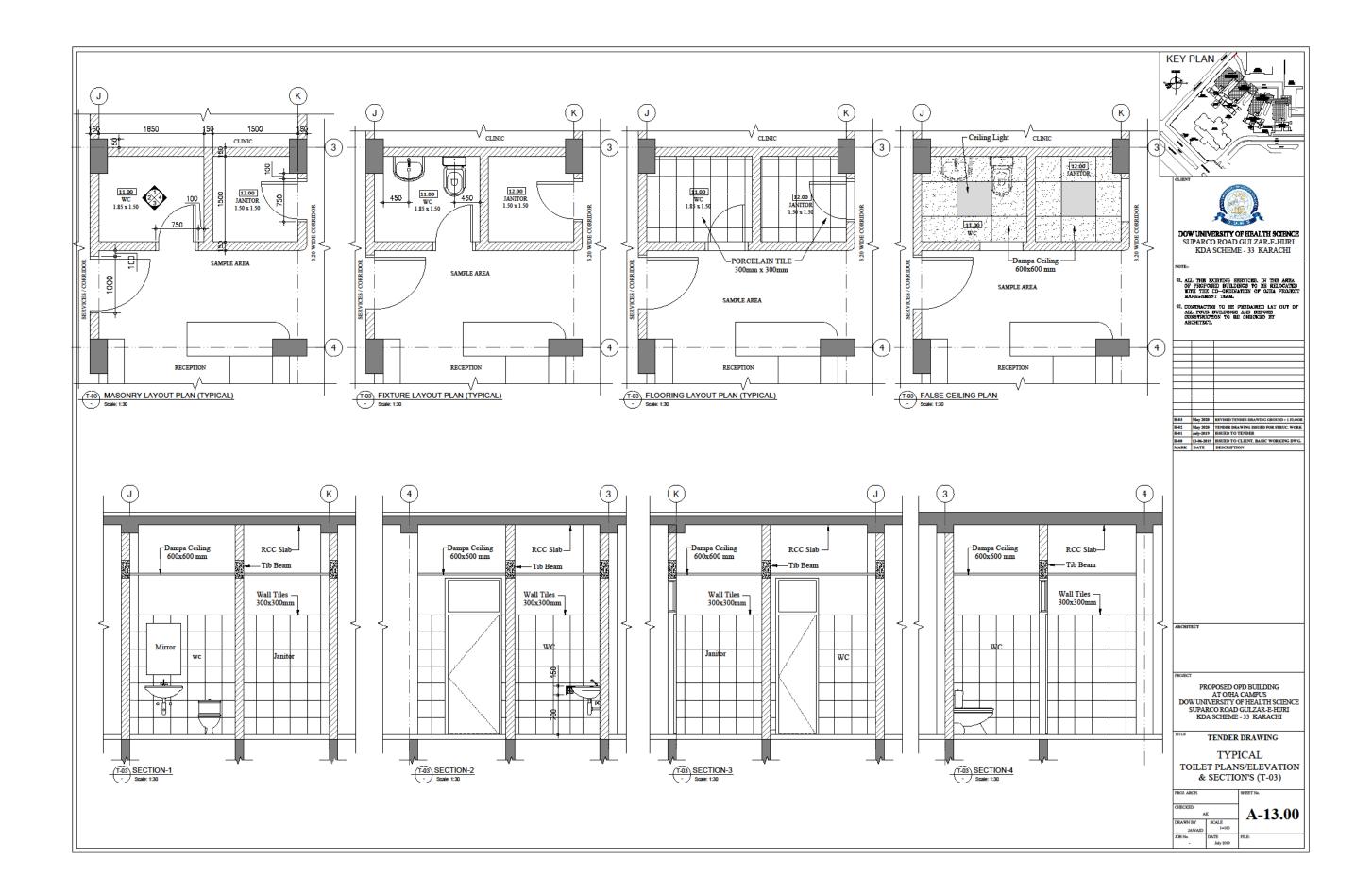


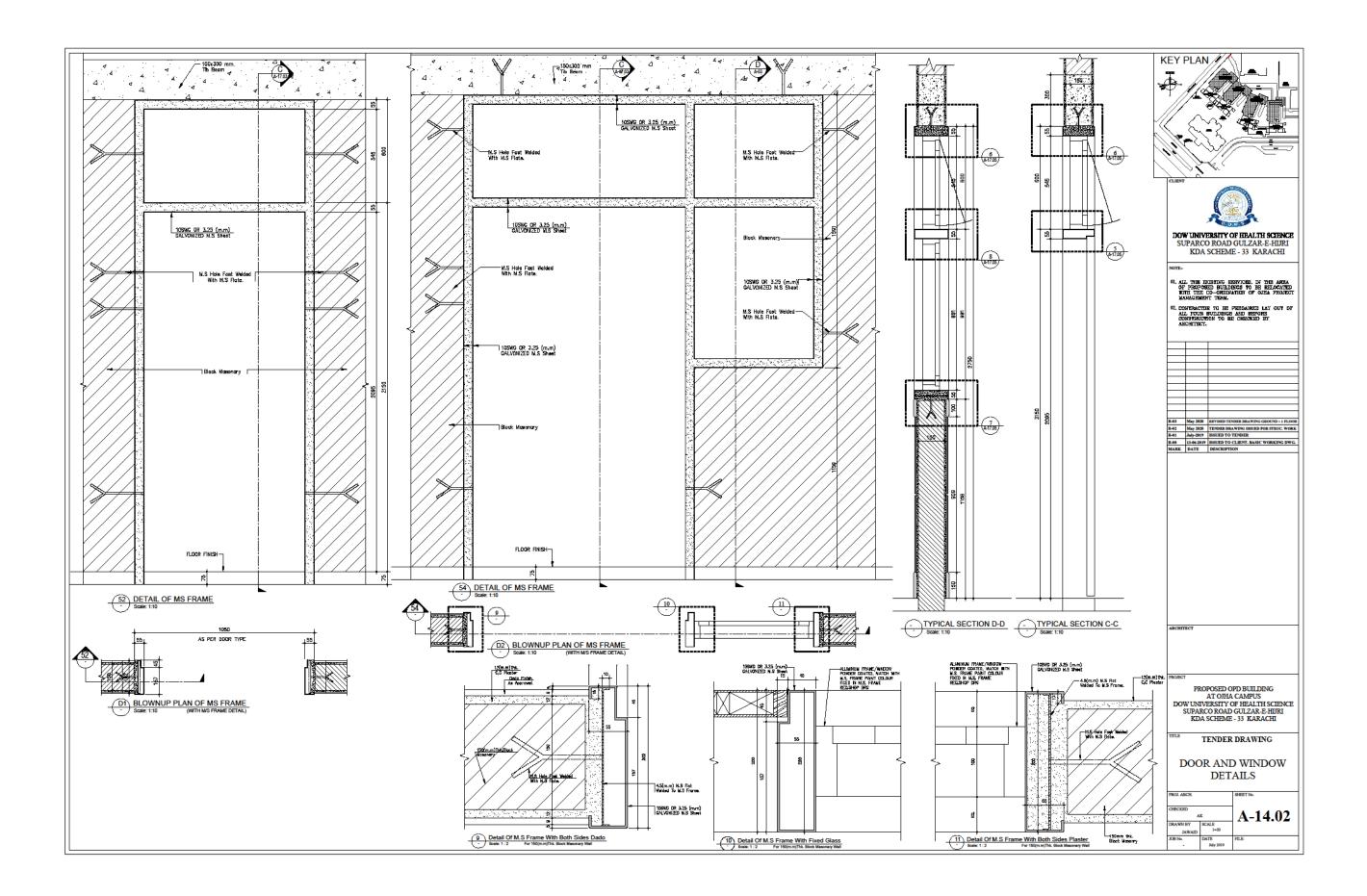


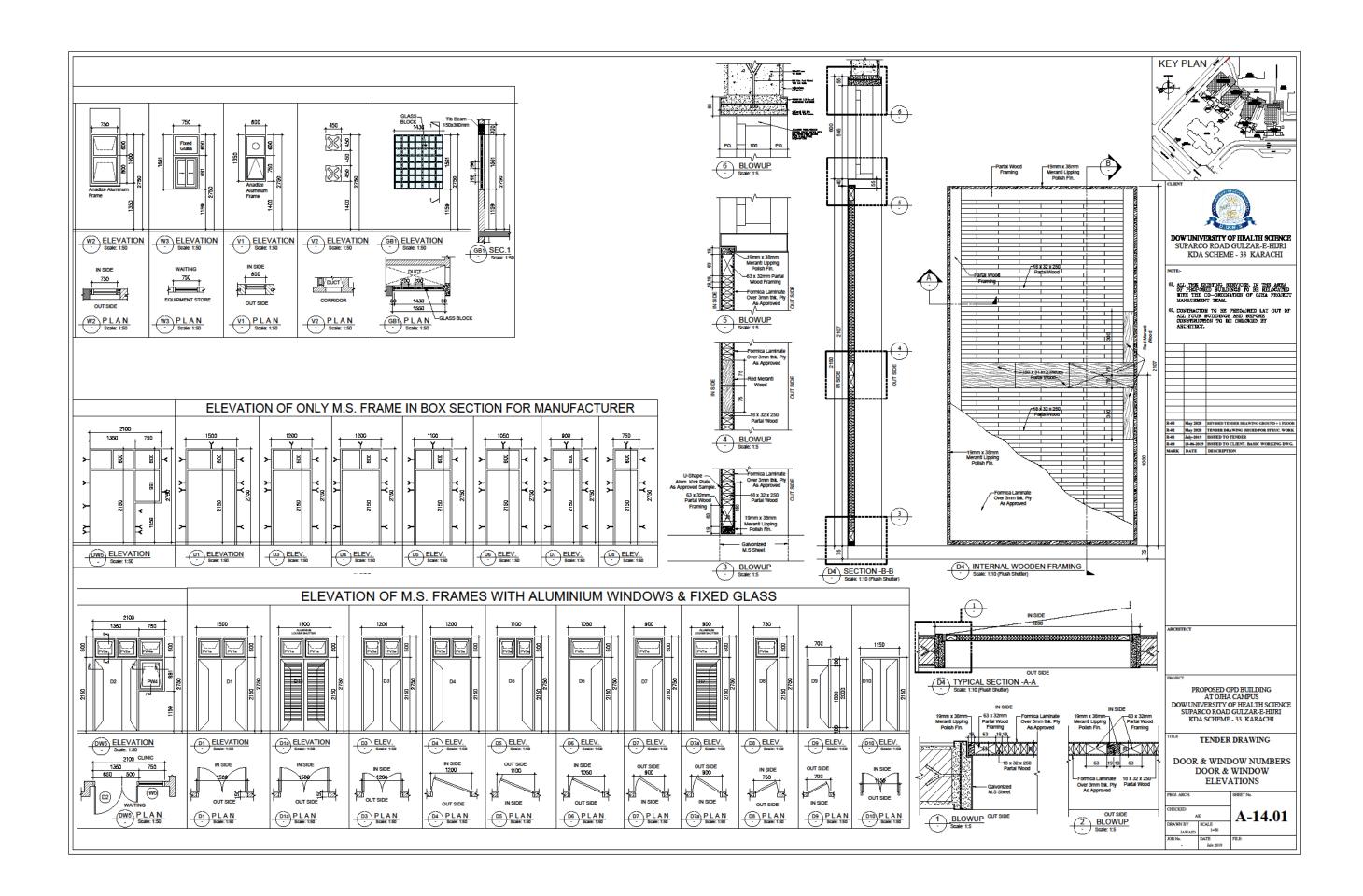


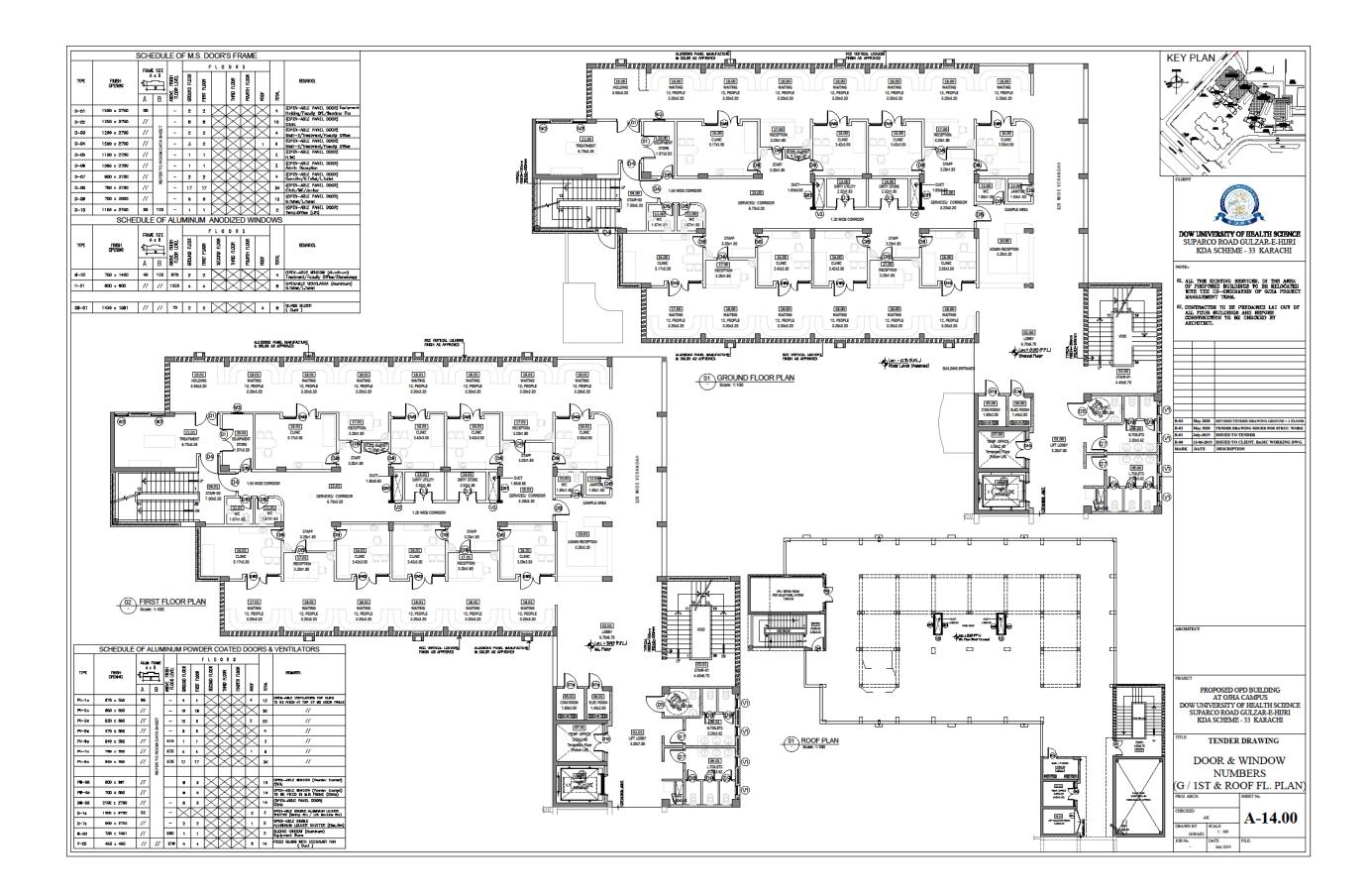


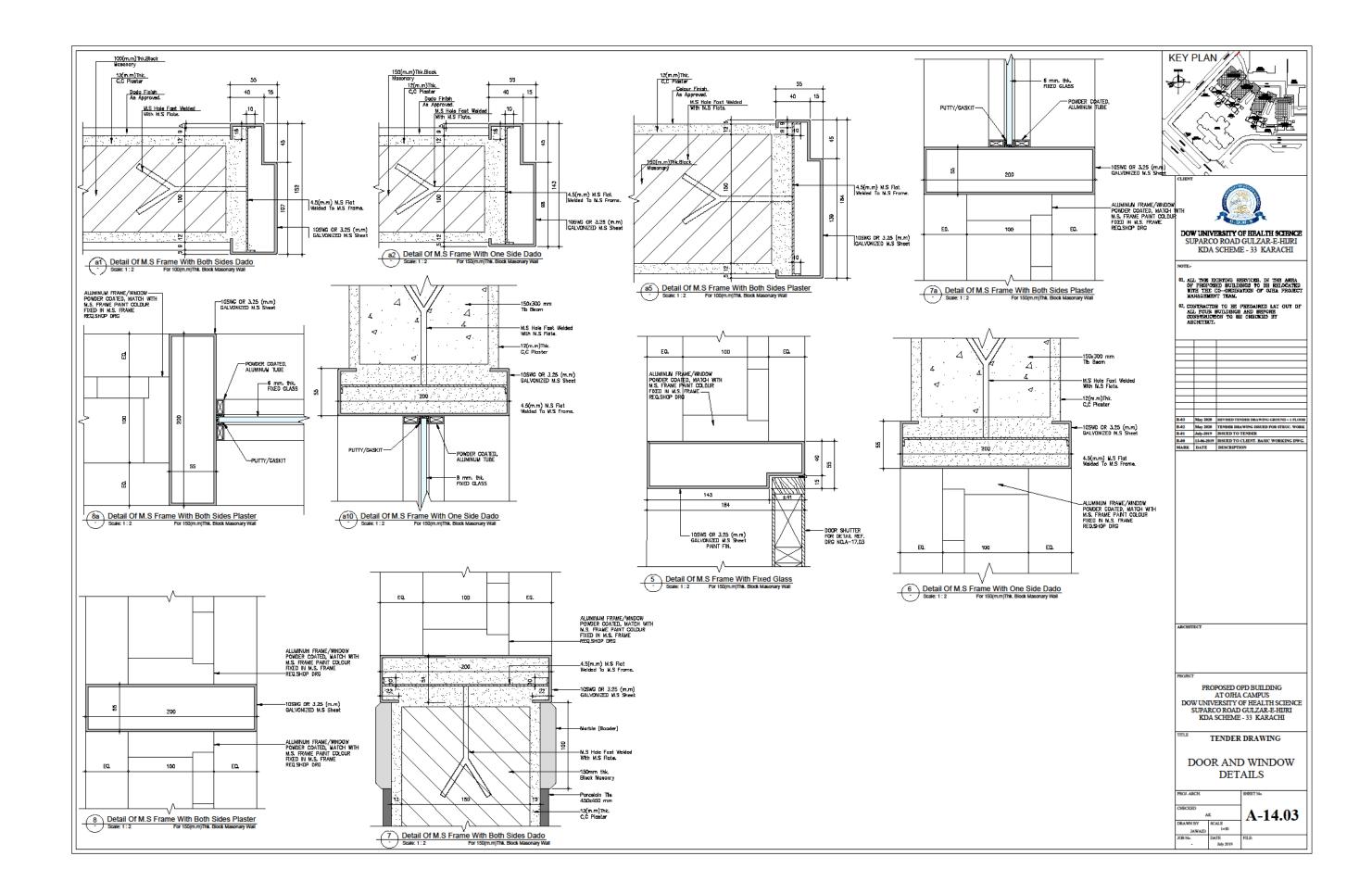


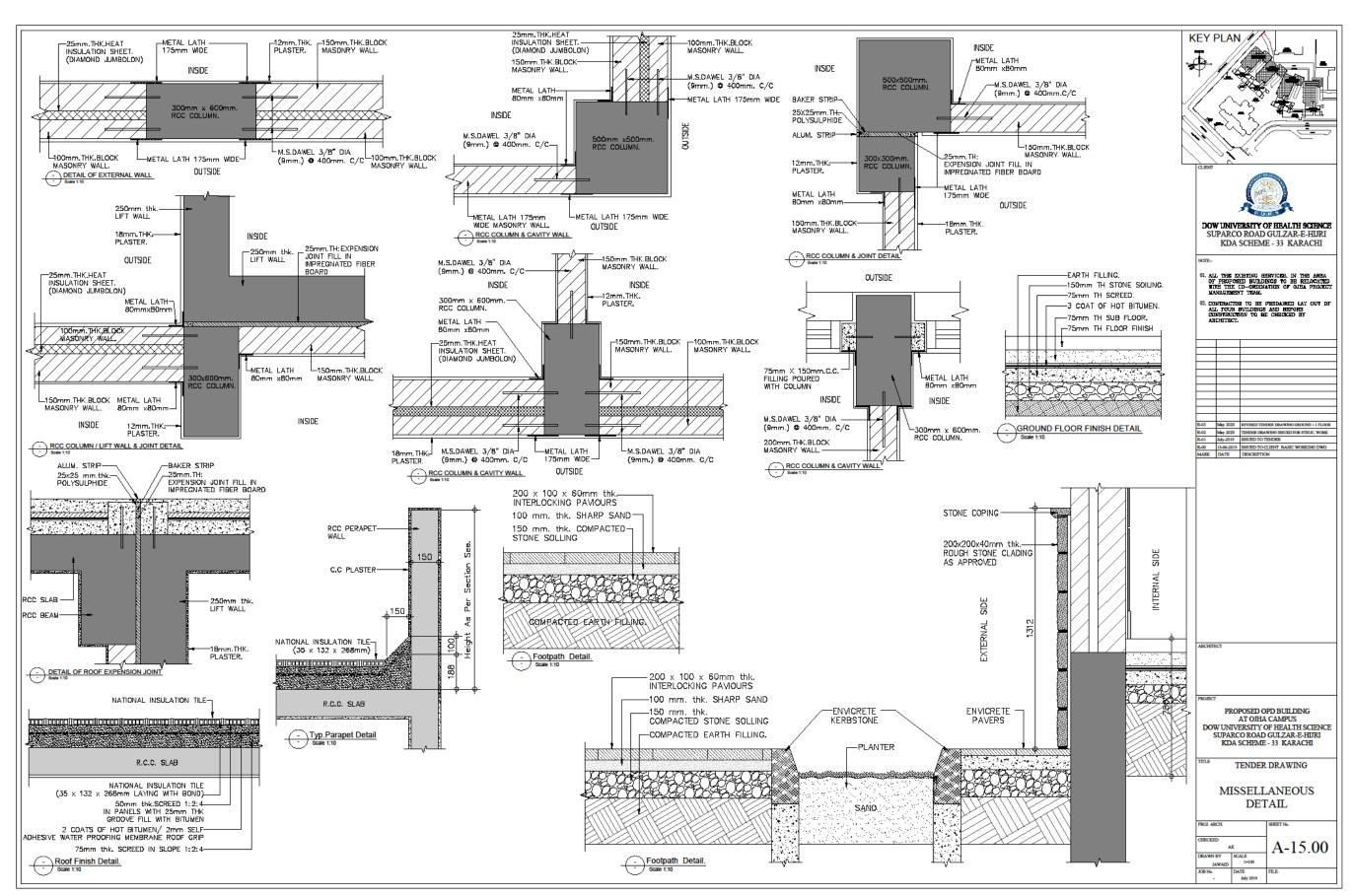


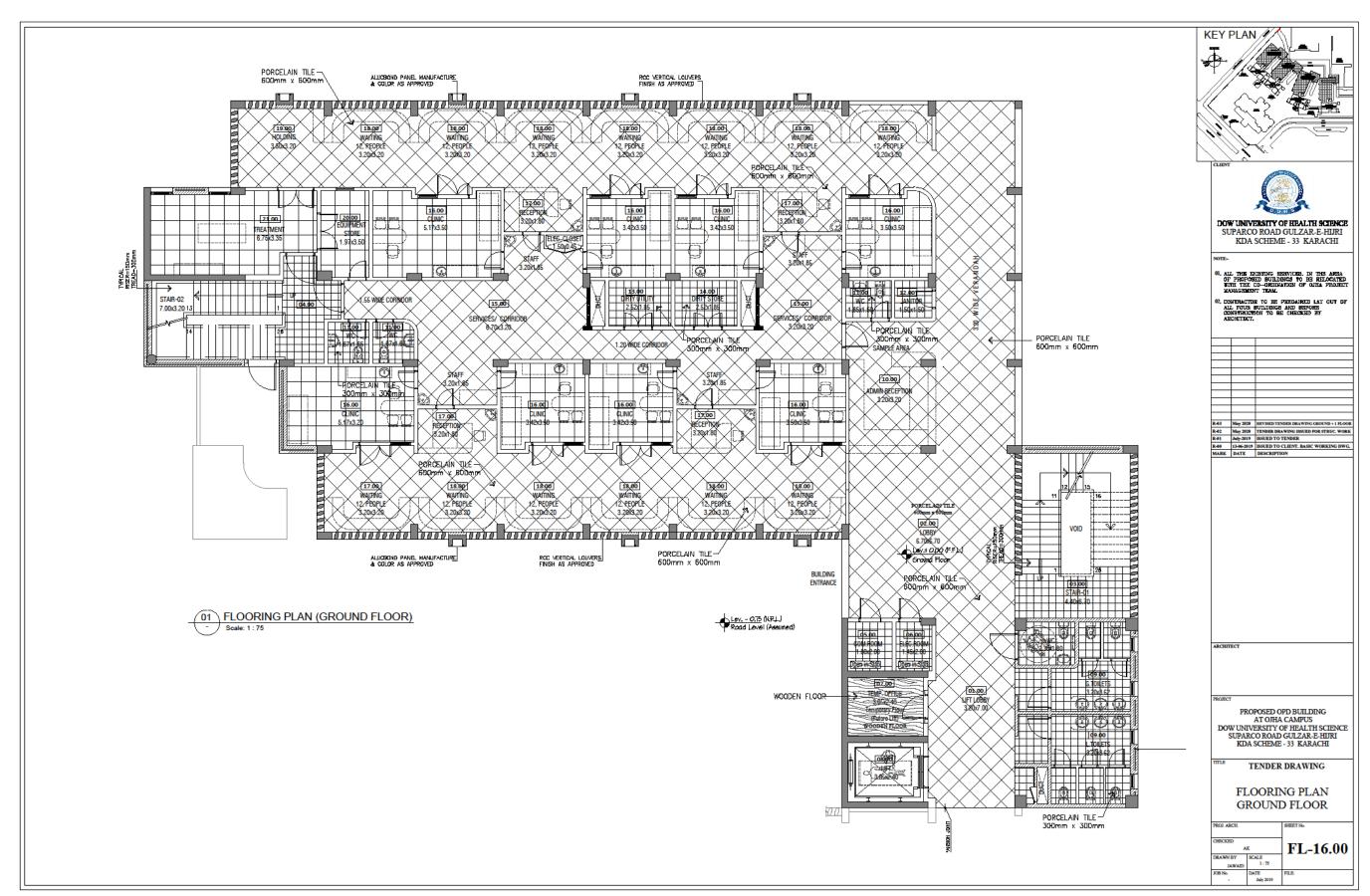


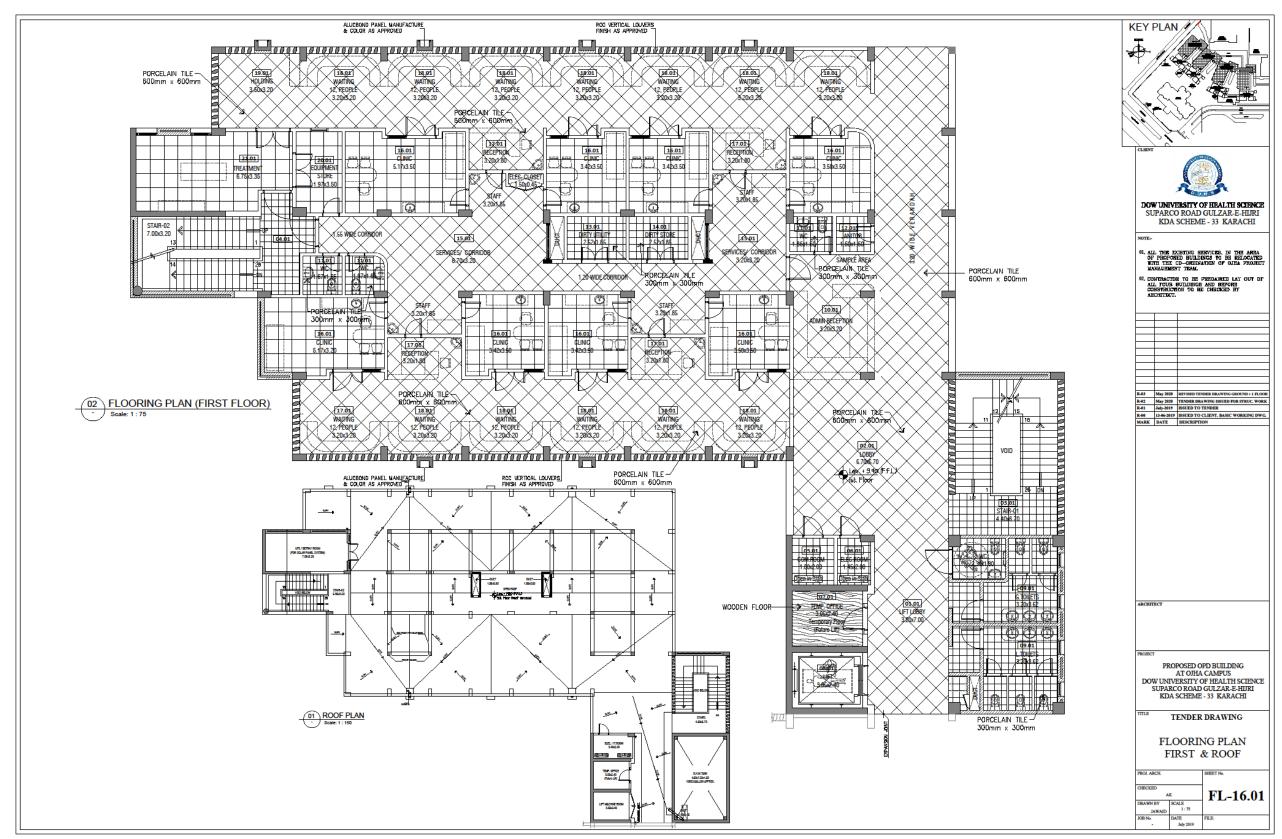




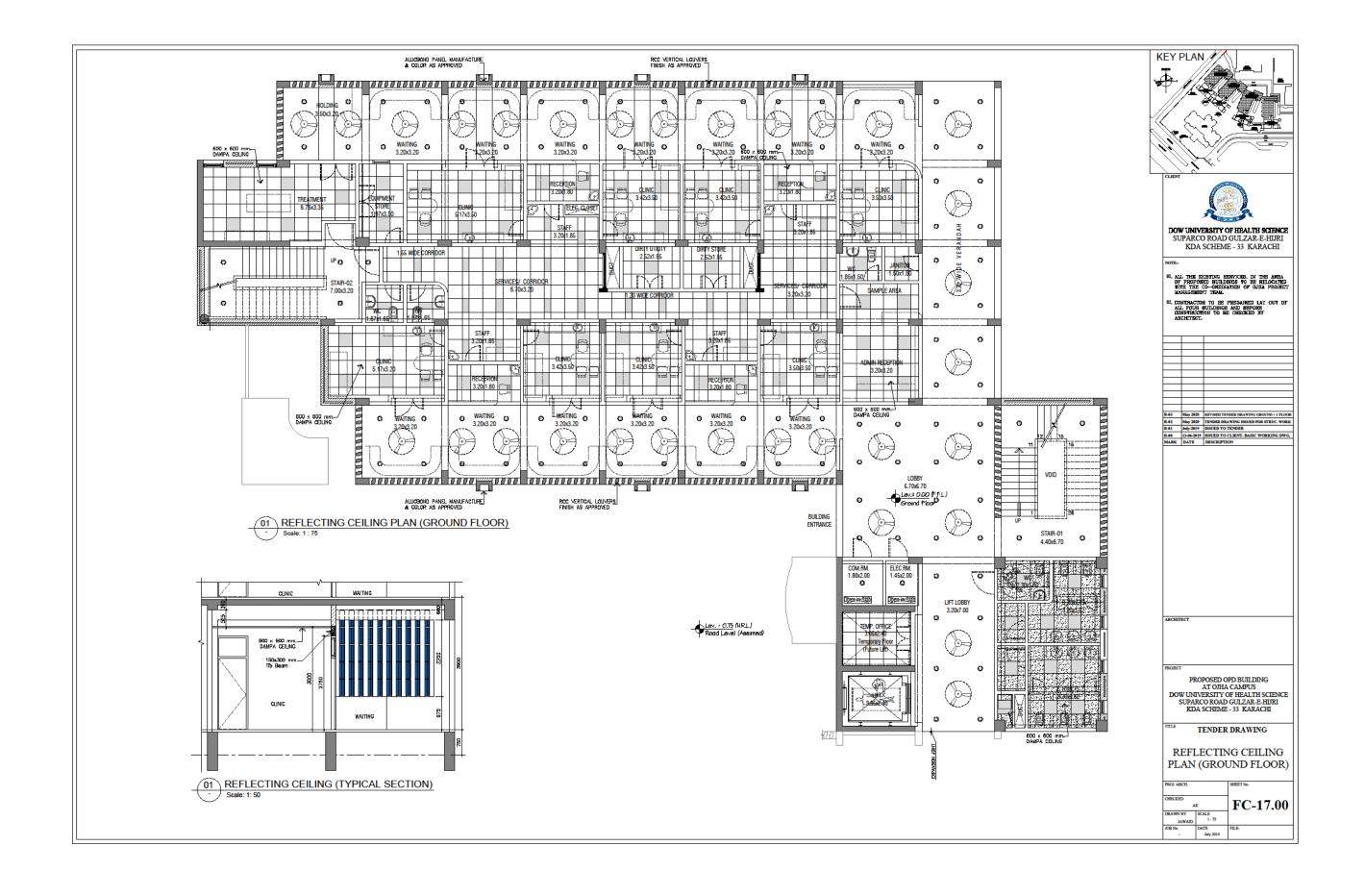


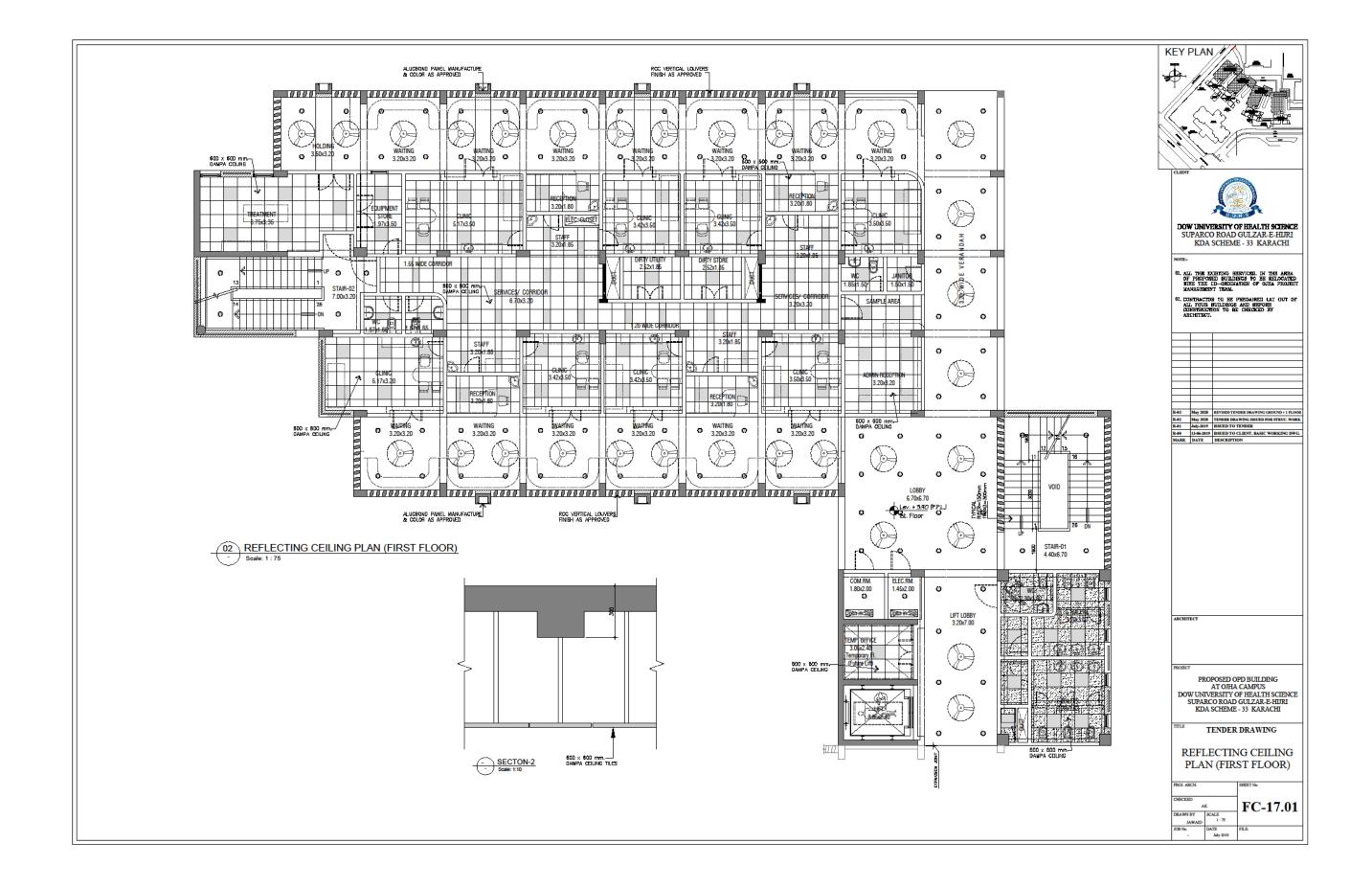


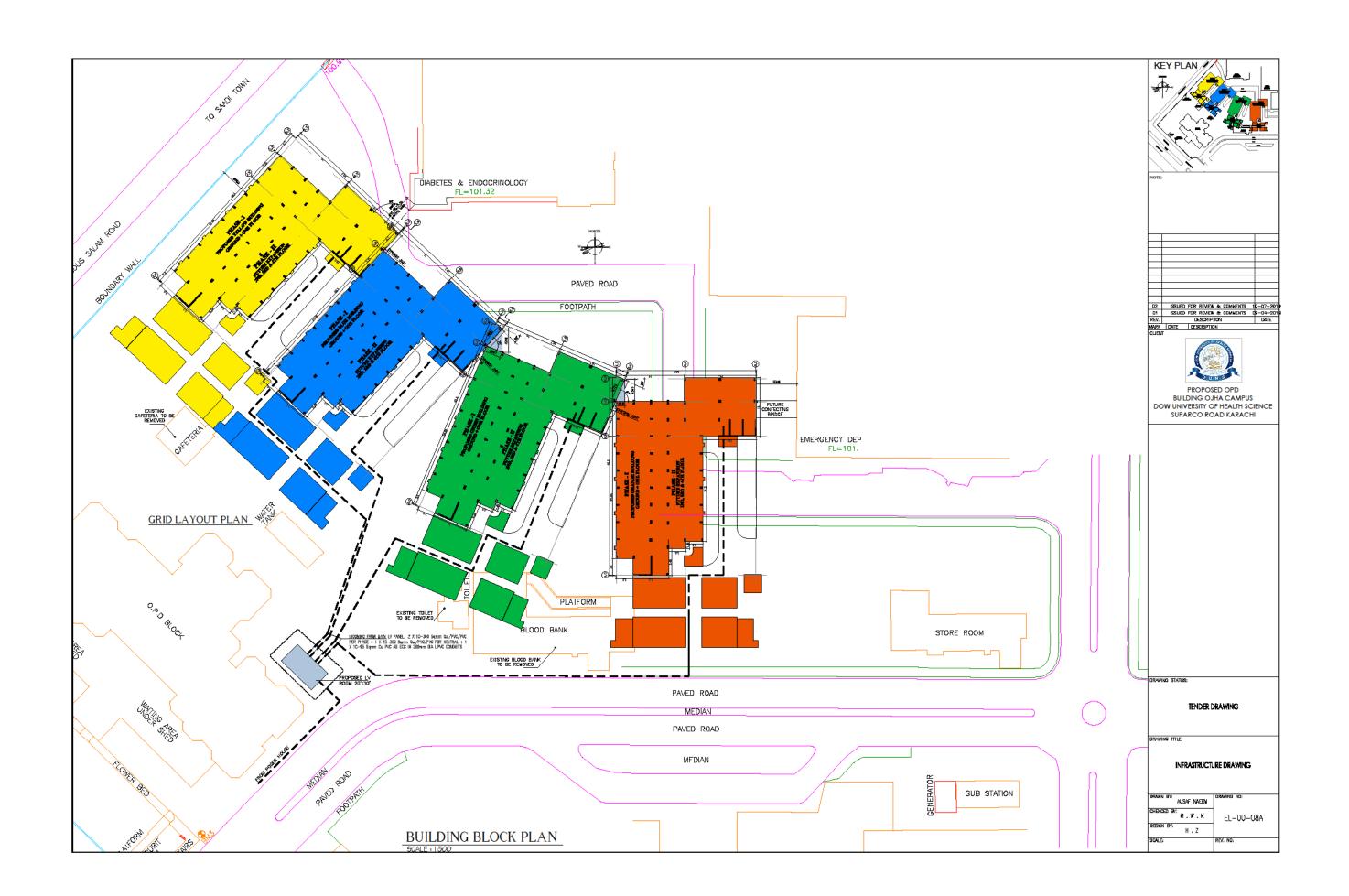


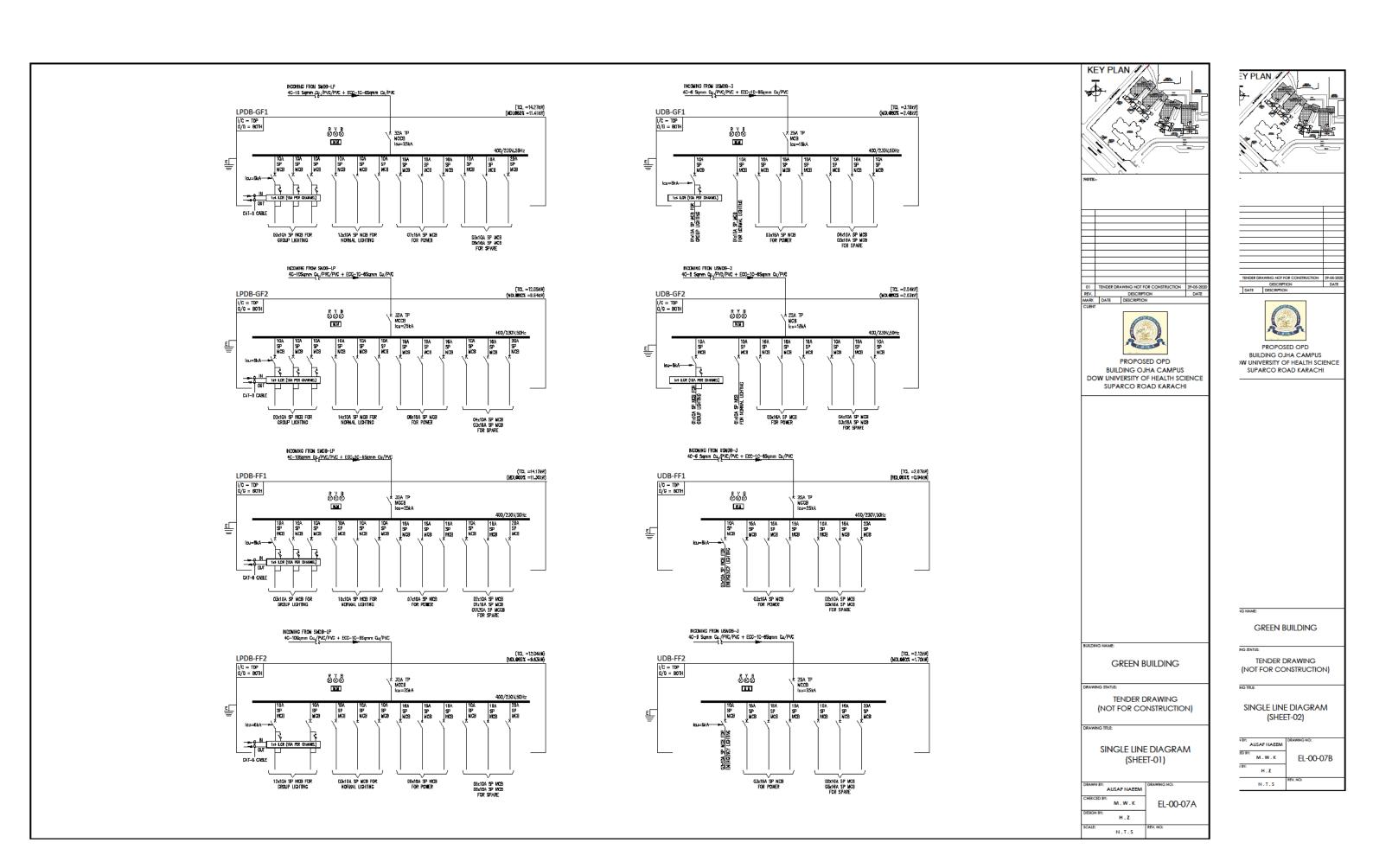


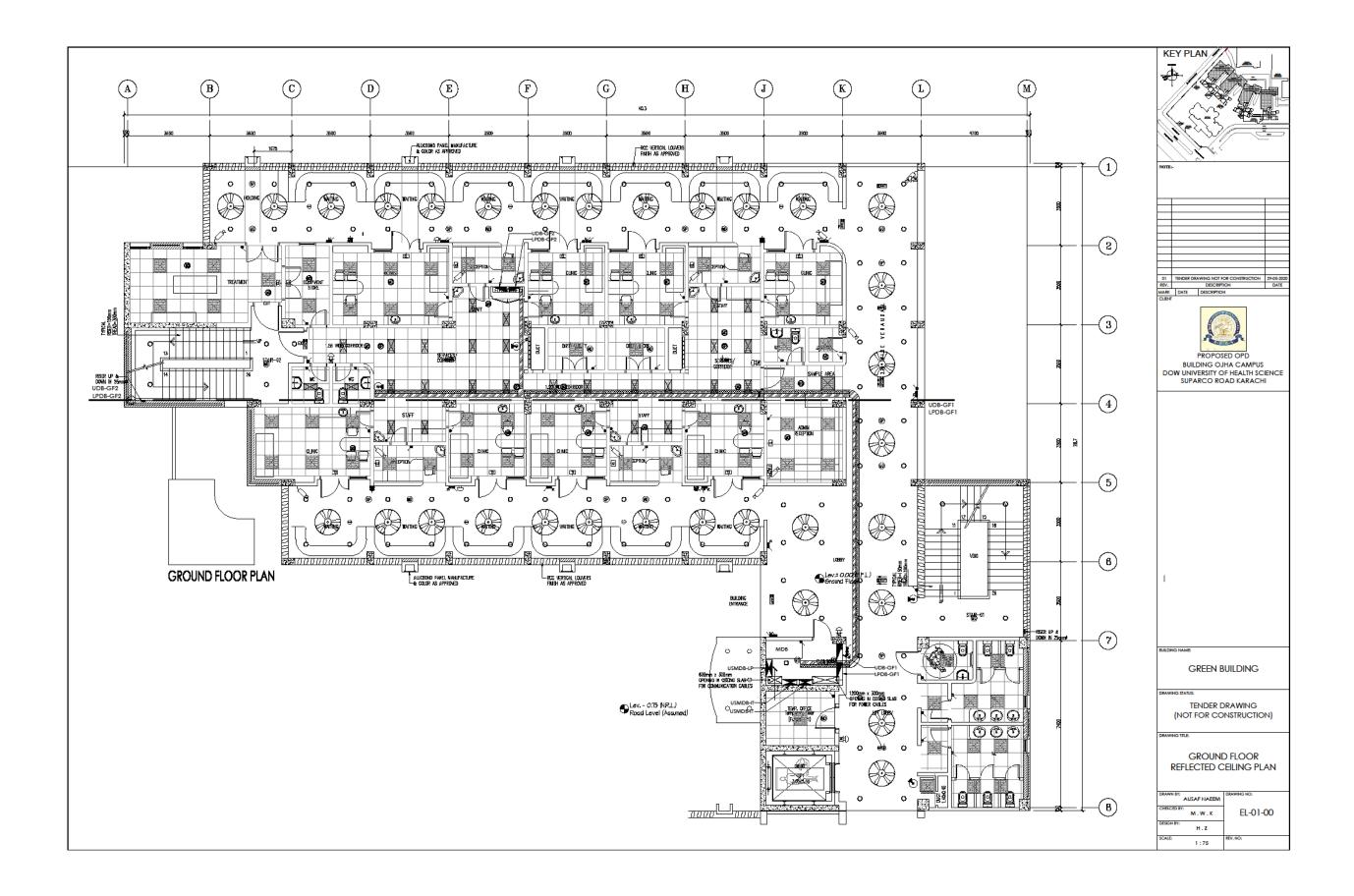
E:\001 WASEEM AKRAM\047 OJHA OPD\003 ARCHITECTURE DRAWING (23-05-2019)\04-TENDER DRAWINGS G. & ROOF (15-05-2020)\REVISED DETEILS (15-05-2020)\FL-16.00 FLOORING PATTERN\FL-16.00 FLOORING PLANS.DWG, 5/1

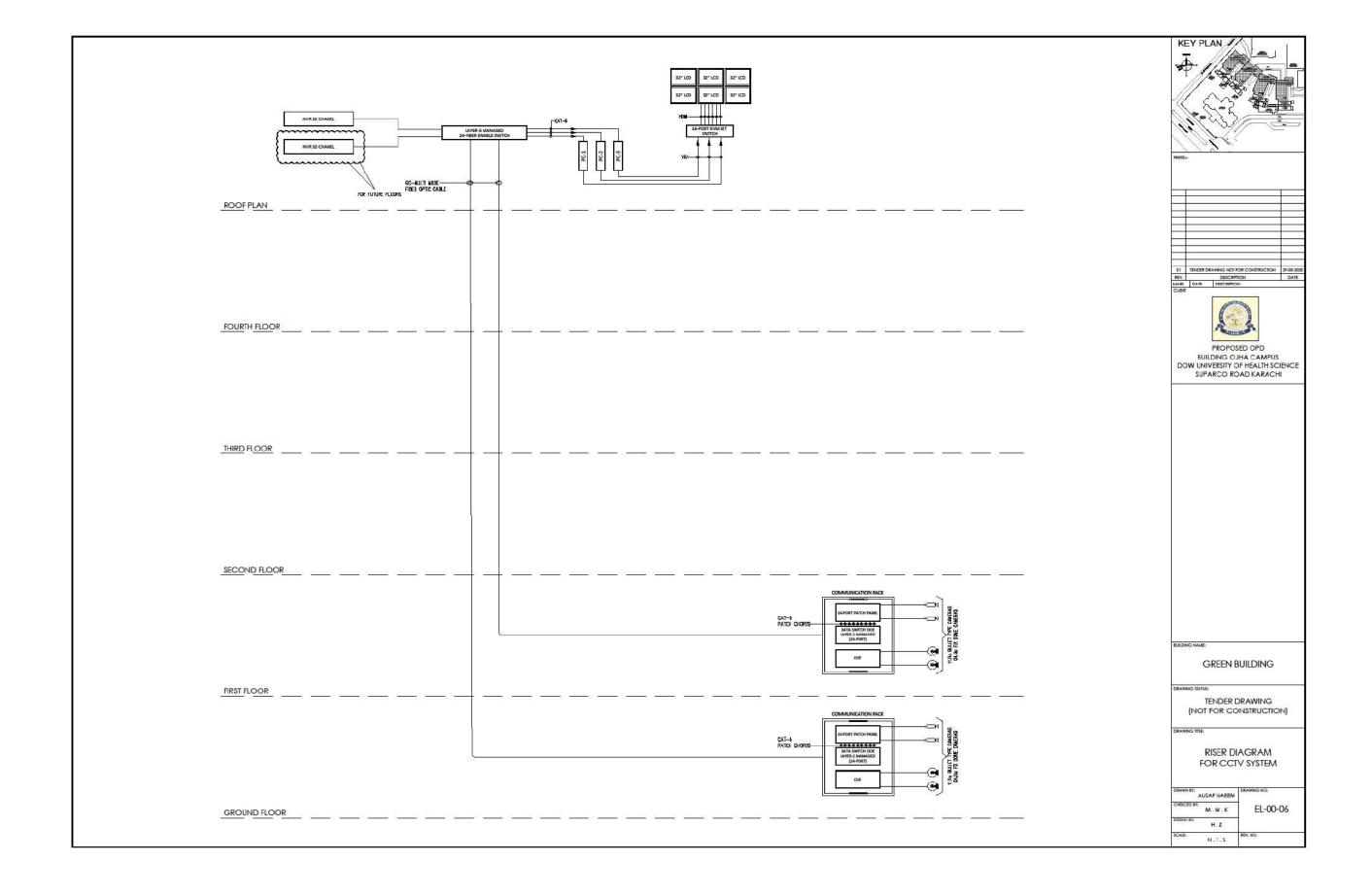


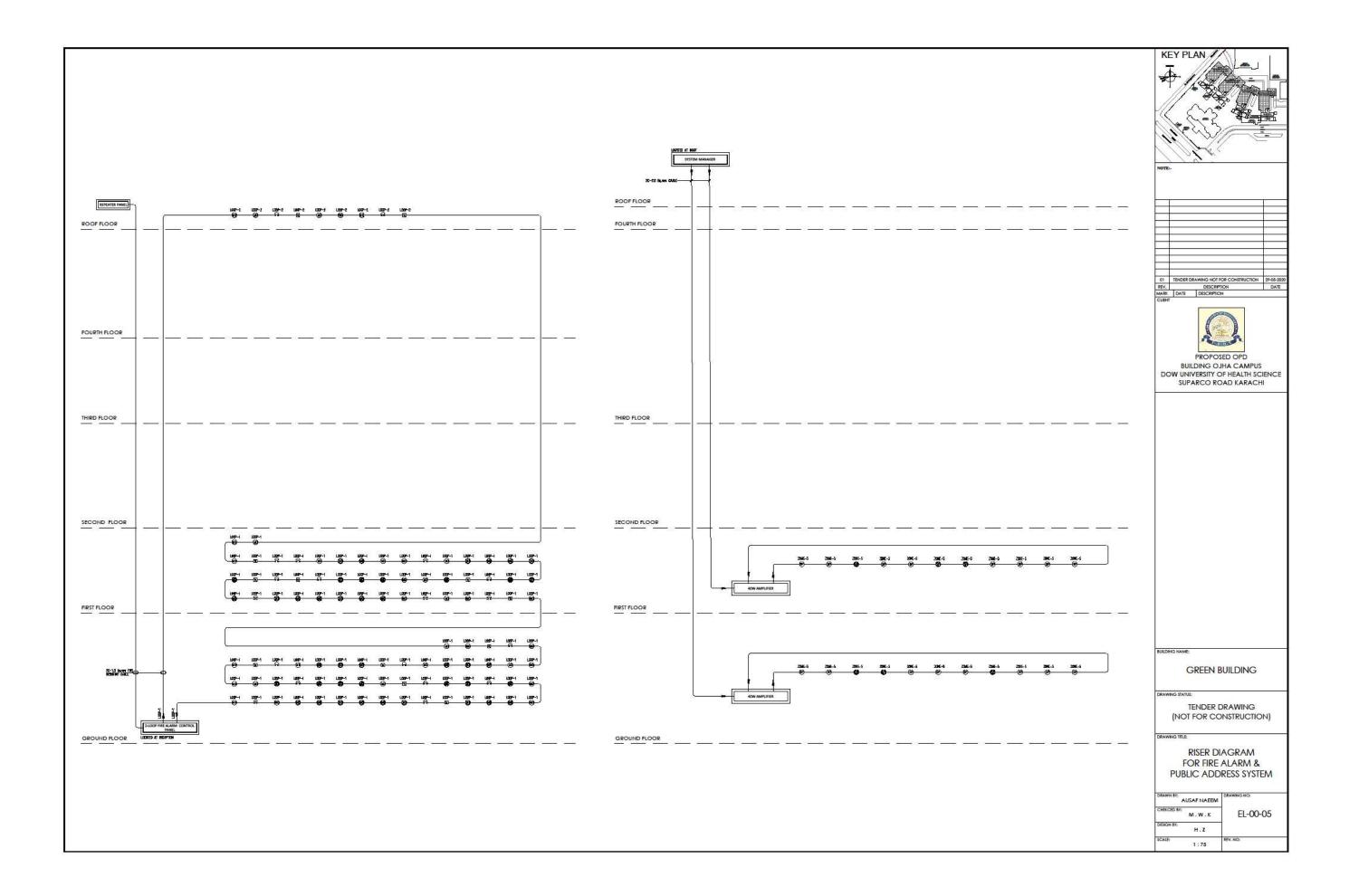


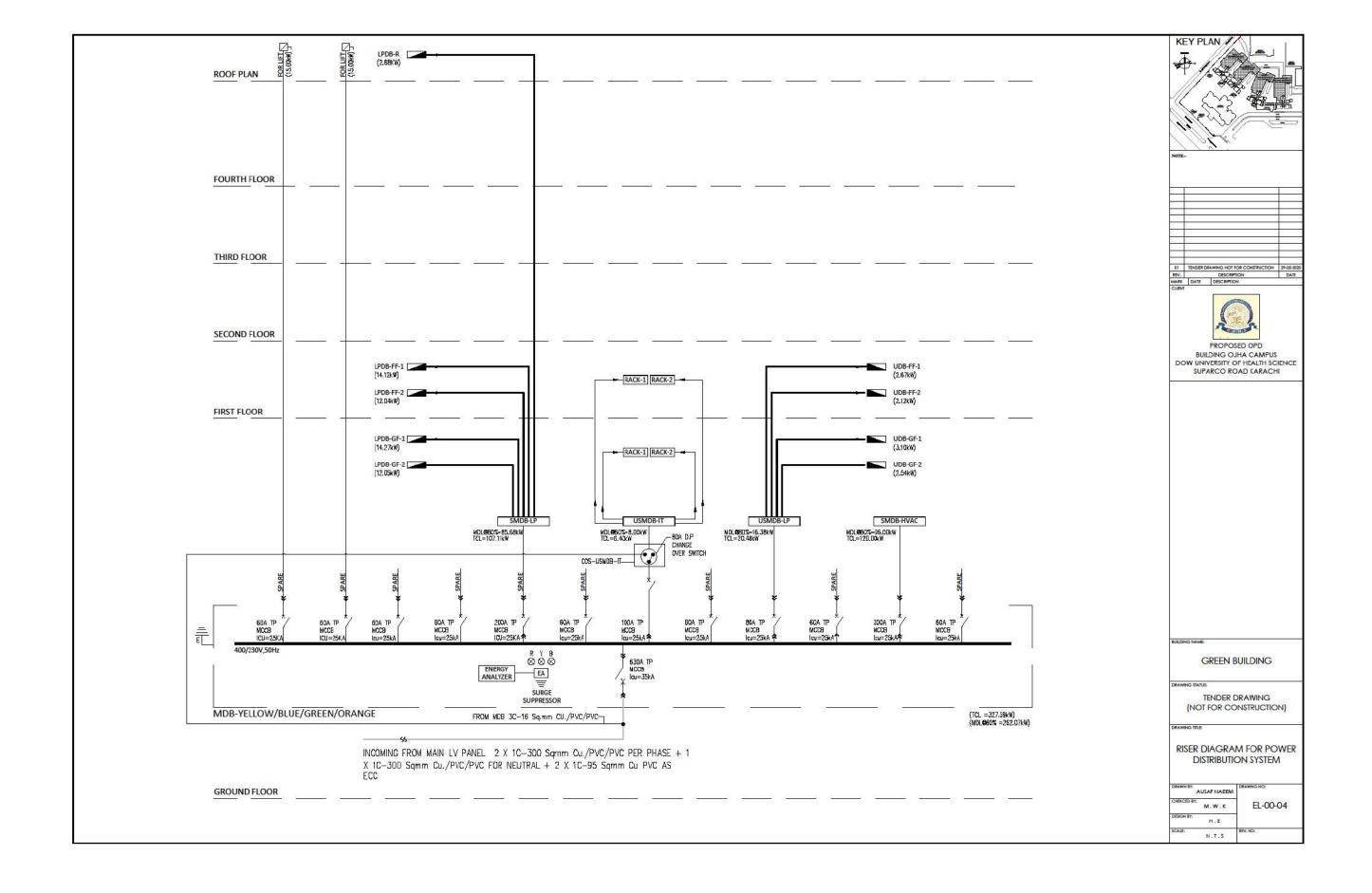












#### MOUNTING HEIGHT LIGHTING SURFACE MOUNTED DOWN LIGHT WITH 18W LED LAMP COLOR 4000K DIFFUSED GLASS AT CEILING SLAB SURFACE MOUNTED DOWN LIGHT WITH 12W LED LAMP COLOR 4000K DIFFUSED GLASS AT CEILING SLAB /CEILING REGESSED 45W LED PANEL 1200x300mm FIXTURE OF DIFFUSED GLASS DOLOR TEMP 4000K CRI 90% AT FALSE CEILING CEILING RECESSED 45W LED PANEL 600x600mm FIXTURE OF DIFFUSED GLASS COLOR TEMP 4000K CRI 90% AT FALSE CEILING 故 BULK HEAD LIGHT AT D'-O" A.F.F.L CEILING FAN (36°0, 48°0, 56°0) AT CEILING SLAB BULK HEAD EMERGENCY LIGHT WITH 10W LED WITH BUILT-IN BATTERY BACK-UP (NON MAINTAINED) 콜 AT CEILING SLAB - 311 EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT (MAINTAINED) AT CEILING SLAB AT CEILING SLAB 450 EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED) स्ट्रम EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED) AT COLING SLAB AT 3'-6" A.F.F.L LOW CURRENT SYSTEM 0 MULTI DETECTOR (F.C) AT FALSE CEILING (id) MULTI DETECTOR AT CEILING SLAB ELECTRONIC BELL FOR FIRE ALARM SYSTEM AT 6'-6" A.F.F.L GLASS BREAK MANUAL CALL POINT • AT 4'-6" A.F.F.L ூ 8W CEILING SPEAKER (F.C) AT FALSE CEILING ® 6W CELLING SPEAKER AT CEILING SLAB ⊢v 10W WALL MOUNTED SPEAKER AT 7'-0" AF.F.L ₩ WIFI CEILING MOUNTED AT FALSE CEILING WIFT WALL MOUNTED AT WALL MOUNTED **⊚**• DOME TYPE CCTV CAMERA AT CEILING SLAB нШ⊠ WALL BRACKET CCTV CAMERA AT 7'-6" A.F.F.L Q. MATIC SYSTEM PUSH BUTTON SCREEN SCREEN TICKET DISPENSER AT 0'-9" / 3'-8" A.F.F.L 13A INTERNATIONAL SWITCH SOCKET / AT COUNTER HEIGHT 6/4 AT 0'-9" A.F.F.L 13A FLAT PIN SIMPLEX SWITCH SOCKET Ġ 15A 3-PIN SWITCH SOCKET AT D'-9" A.F.F.L AT 4-0" A.F.F.L ۵ 20A DP SWITCH SOCKET FOR HAND DRYER ô INDUSTRIAL SOCKET AT 1'-6" A.F.F.L 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 0'-9" A.F.F.L Ф 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 3-6" AFFL 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 7'-0" AF.F.L • INO. 13A INTERNATIONAL ON RAW POWER, INO. 13A FLAT PIN DUPLEX ON UPS POWER & 2NO. RJ-45 DUPLEX FOR VOICE & DATA AT 0'-9" A.F.F.L Ш ዕ⁄**ዕ** RJ-45 SIMPLEX DATA OUTLET / AT COUNTER HEIGHT AT 0-9" / 3'-6" A.F.F.L AT 4-0" AFFL DISTRIBUTION BOARD $\mathbf{X}$ MAIN DISTRIBUTION BOARD COMMUNICATION RACK UPS POWER BUSWAY CABLE TRAY FOR POWER & DATA CABLE (EACH TWO PARTITION)

ELECTRICAL LEGEND

### GENERAL NOTES

- THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS. IF THE SITE CONDITIONS NECESSITATE ANY ALTERATIONS OR DEVIATIONS THE DIRECTIONS OF THE CONSULTANT SHALL BE FOLLOWED.
- ALL WIRING OF LIGHTING AND POWER SHALL BE WITH MULTI CORE PVC INSULATED WIRES FOR SINGLE PHASE CIRCUIT. THE VOLTAGE GRADE OF WIRE SHALL BE 300/500V, WHERE AS FOR THREE PHASE CIRCUIT IT WILL BE 600/1000 VOLTS.
- DIMENSION GIVEN IN LAYOUT AND DETAIL DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO MEASURE DIMENSIONS ACCORDING TO ARCHITECTURAL AND STRUCTURAL DRAWING.
- 4. CIRCUIT WIRING SHALL BE DONE IN ACCORDANCE WITH THE WIRING SCHEDULE LINLESS OTHERWISE INDICATED.
- 5. WIRING SHALL BE DONE AFTER THE COMPLETION OF CONDUCTING WORK IN ALL RESPECTS INCLUDING THE INSTALLATION OF BACK BOXES, CUTLET BOXES ETC.
- 6. WIRING SHALL BE CONTINUOUS LODPING IN TYPE AND NO JOINT IN WIRES SHALL BE ALLOWED.
- ARRANGEMENT OF ELECTRICAL EQUIPMENT ON ELECTRICAL DRAWINGS ARE TENTATIVE. EXACT ARRANGEMENT OF EQUIPMENT SHALL BE MADE IN MEW OF ITS PHYSICAL DIMENSIONS.
- 8. BEFORE DETERMINING THE CUIT LENGTH OF CABLE THE ACTUAL MEASUREMENTS BE TAKEN AT SITE AND PROVISIONS OF SLACK (3%) AT TERMINATION OF SWITCH BOARD (5'0" APPROX.) AND SPARE LOOP SHALL BE TAKEN INTO ACCOUNT.
- 9. MOUNTING HEIGHT OF MISCELLANEOUS OUTLETS FROM FINISHED FLOOR LEVEL ARE SHOWN ON GIVEN SCHEDULE ( REFER DRAWINGS ).
- 10. CONDUIT LINDER FLOOR SHALL HAVE A MINIMUM DEPTH OF 50mm MEASURED FROM FINISH FLOOR LEVEL TO TOP OF CONDUIT.
- 11. MINIMUM SIZE OF CONDUIT SHALL BE 25mm/, UNLESS OTHERWISE INDICATED.
- 12. BACK BOXES FOR SWITCHES, SOCKETS AND TELEPHONE ETC. SHALL BE MADE WITH 165WC SHEET STEEL.
- 13. WIRE AS ECC SHALL BE GREEN IN COLOR OR GREEN / YELLOW IN COLOR.
- 14. CONDUIT AND CABLES TO BE LAID UNDER FLOOR SHALL BE IN CODRIDINATION WITH OTHERS SERVICES.
- 15. INCASE OF ANY DEMATION FROM DESIGN DRAWINGS AT ANY INSTANT THE CONTRACTOR MUST TAKE APPROVAL FROM CONSULTANT BEFORE COMMENCEMENT OF WORK AT SITE.
- 16. FOR TELEPHONE WIRING, CAT-6 CABLE SHALL BE USED WITH GREY COLOR.
- 17. FOR NETWORKING CAT-6 CABLE SHALL BE USED WITH BLUE COLOR OR ANY COLOR DISTINCT FROM TELEPHONE CAT-6 CABLE.,
- 18. FOR CCTV CAT-6 CABLE SHALL BE USED.

# OI TENDER DRAWING NOT RESERVE DESCRIPTION MARK DATE DESCRIPTION CLIENT

KEY PLAN ///

PROPOSED OPD
BUILDING OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD KARACHI

### WIRING SCHEDULE

DB TO SMITCH BOARD / 1ST LIGHT POINT	2 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
LIGHT POINT TO LIGHT POINT	1 x 1.5 Sq.mm
AS NEUTRAL COMMON FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
DB TO SMITCH BOARD / 1ST LIGHT POINT	2 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
LIGHT POINT TO LIGHT POINT	1 x 1.5 Sq.mm
AS NEUTRAL COMMON FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.rnm + ECC 1 x 2.5 Sq.rnm
13A INTERNATIONAL SWITCH SOCKET OUTLET	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm
15A 3-PIN ROUND SWITCH SOCKET OUTLET	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FOR POWER
13A 3-PIN FLAT SWITCH SOCKET DUTLET ( UPS )	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FDR POWER

BUILDING NAM

GREEN BUILDING

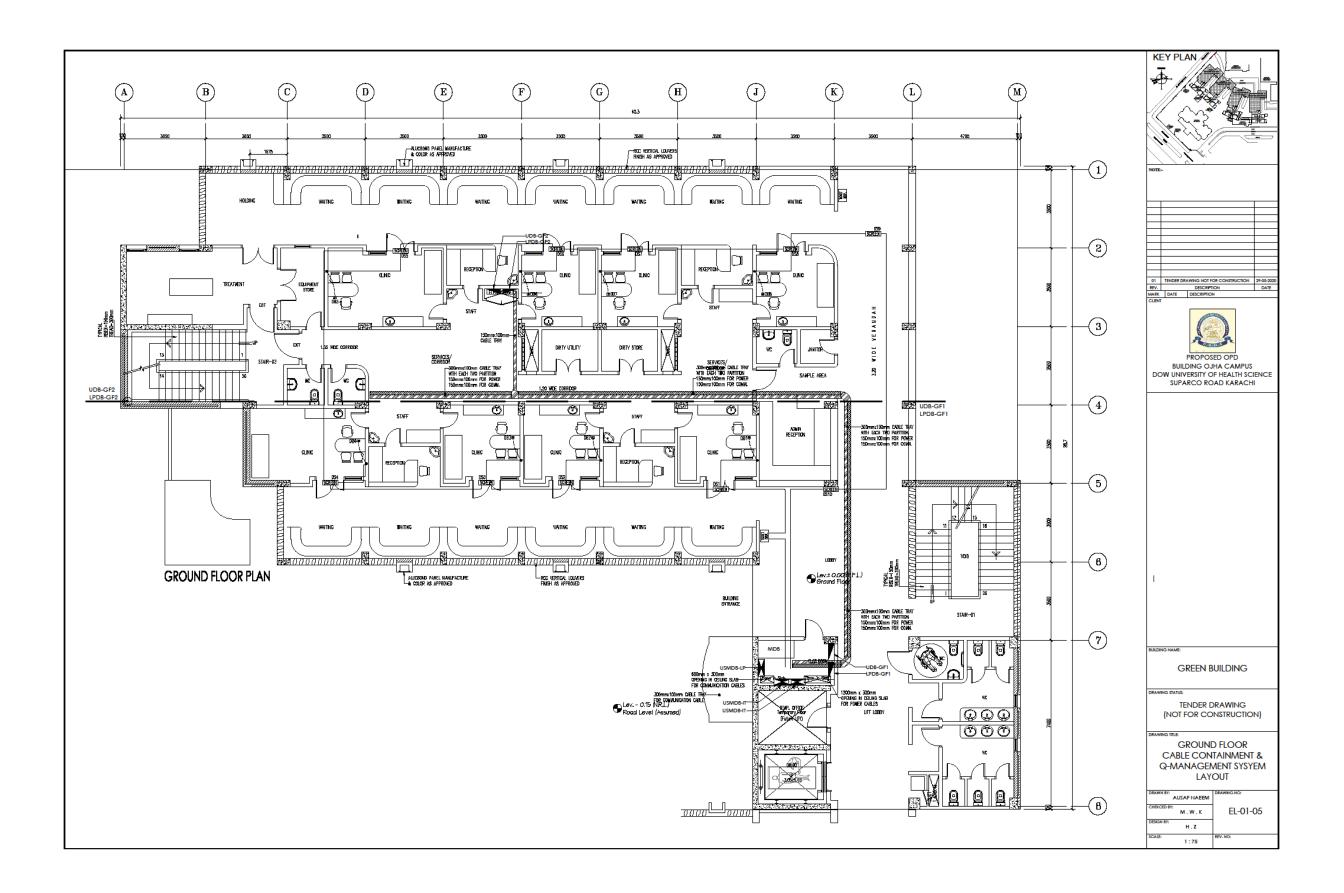
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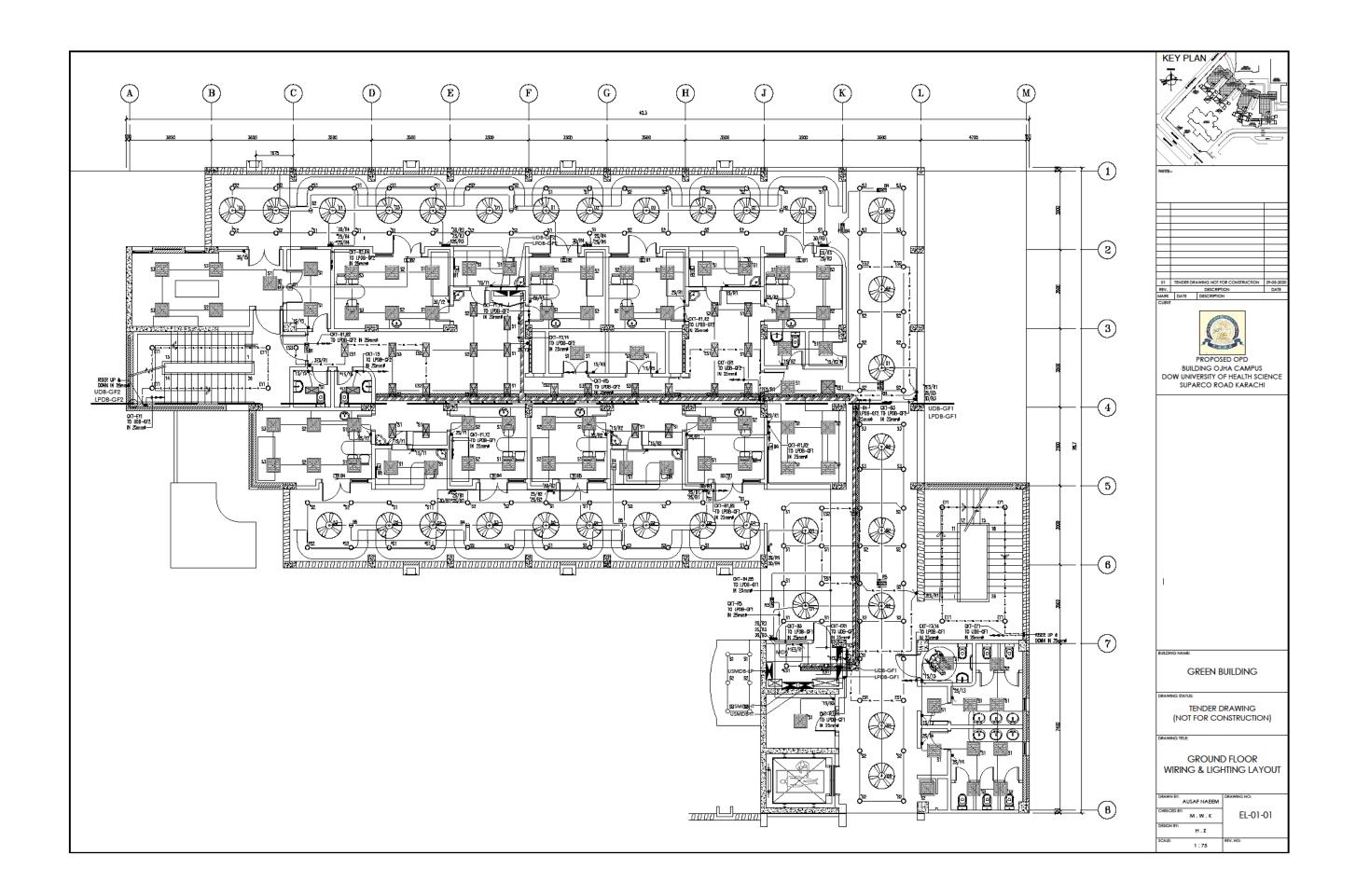
TENDER DRAWING (NOT FOR CONSTRUCTION)

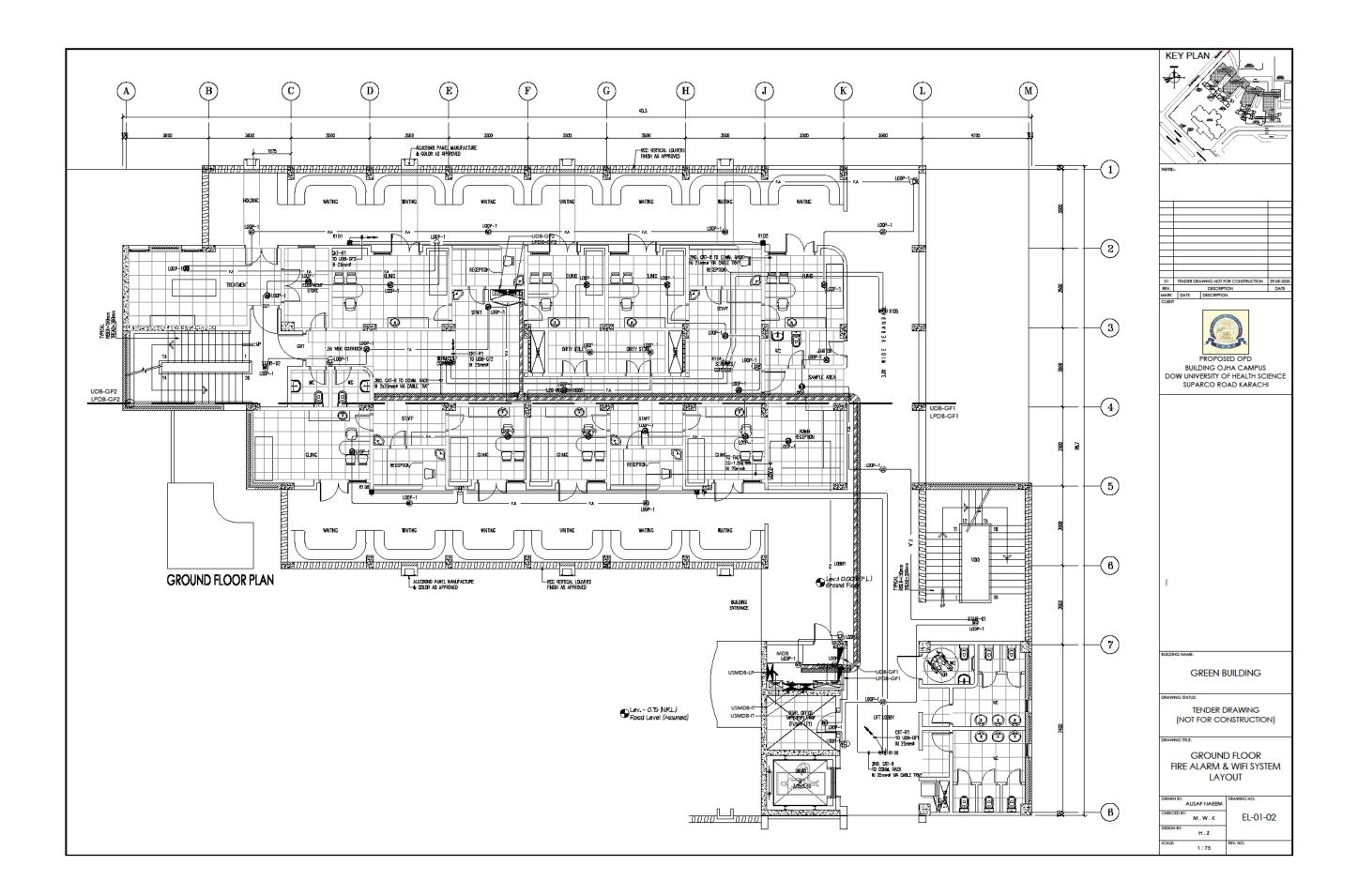
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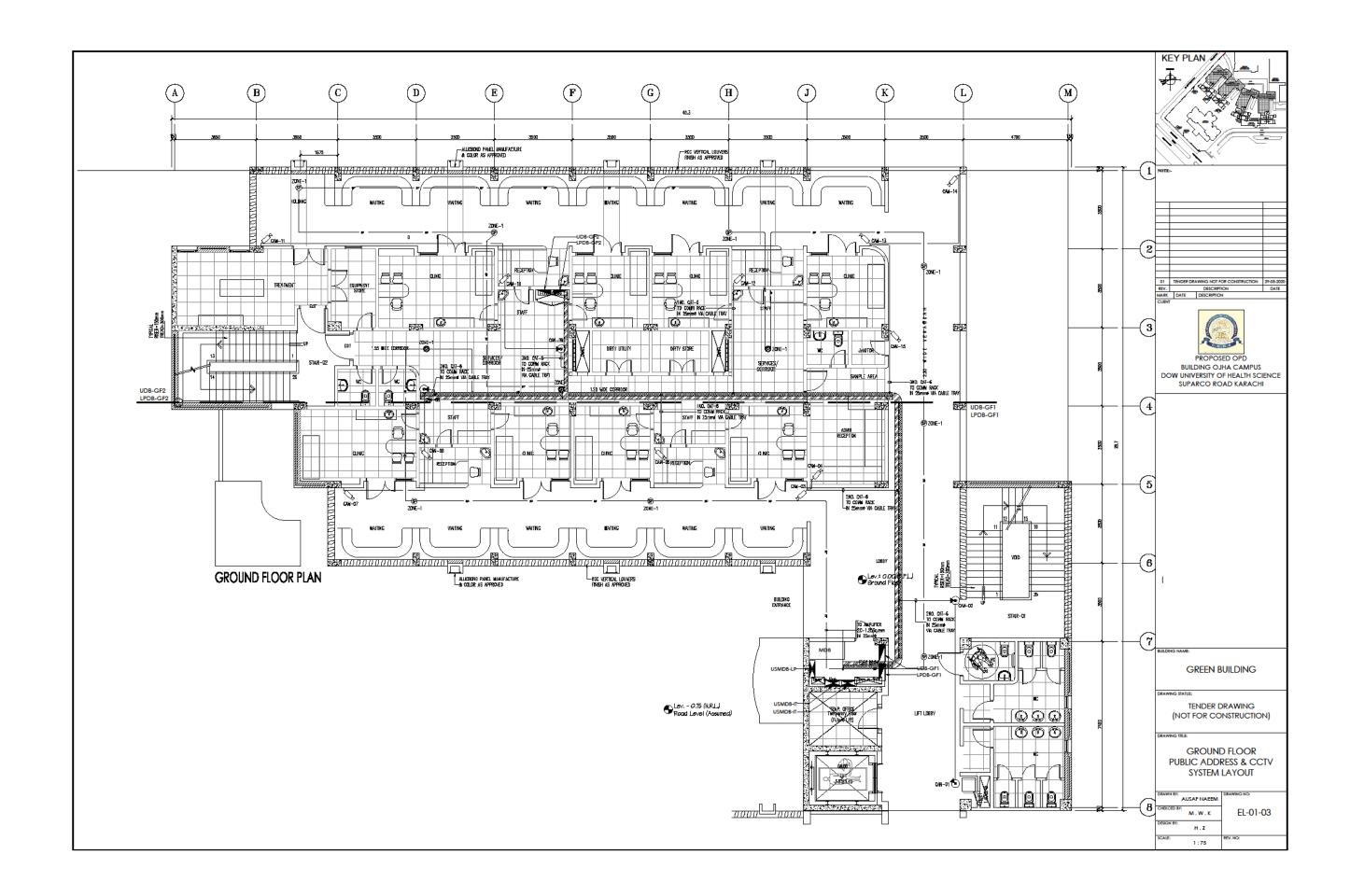
ELECTRICAL LEGENDS

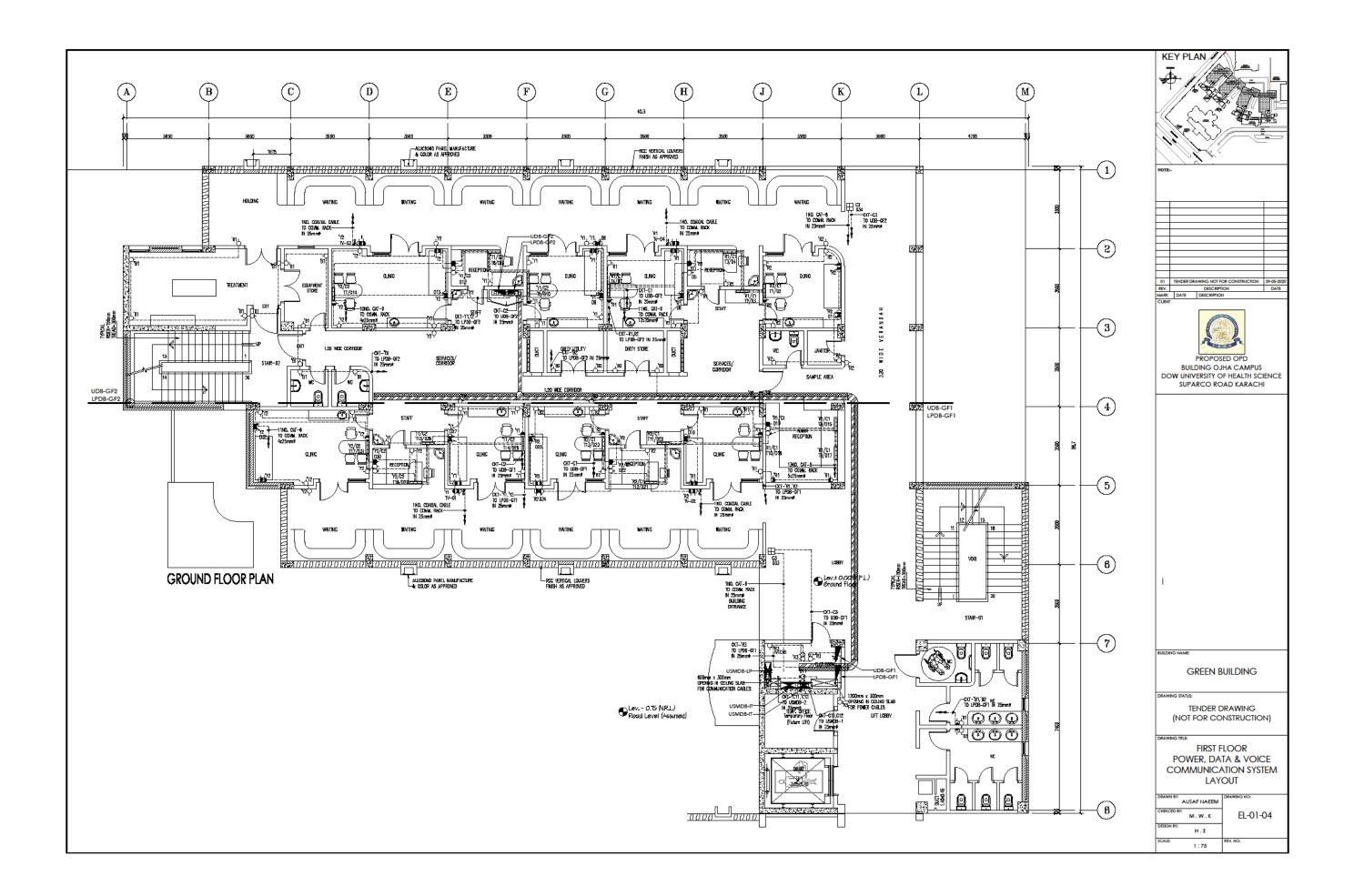
AUSAF NAEEM	DRAWING NO:
CHEXCED BY: M.W.K	EL-00-02
DESIGN BY: H . Z	
SCALE: N.T.S	REV. NO:

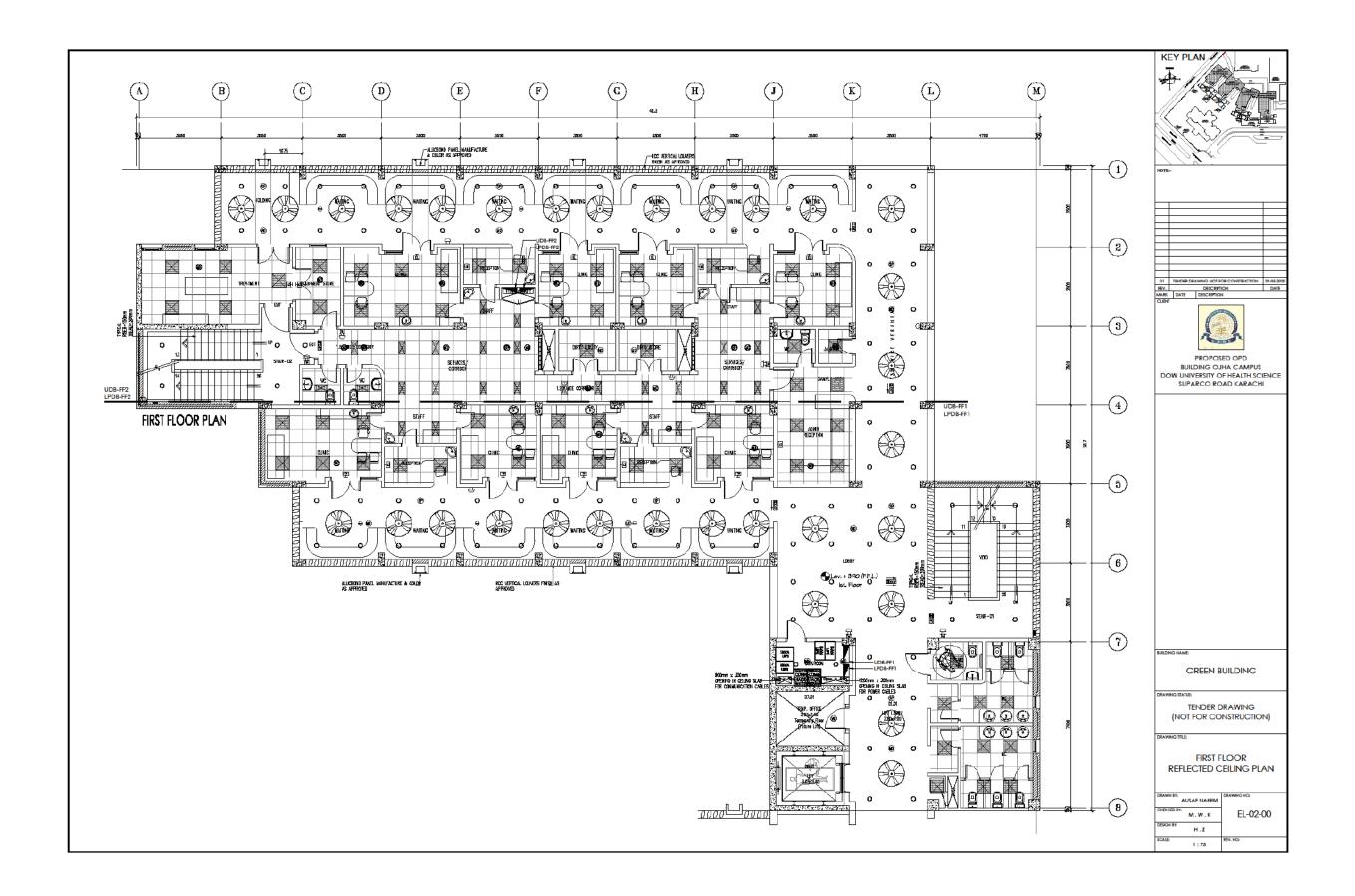


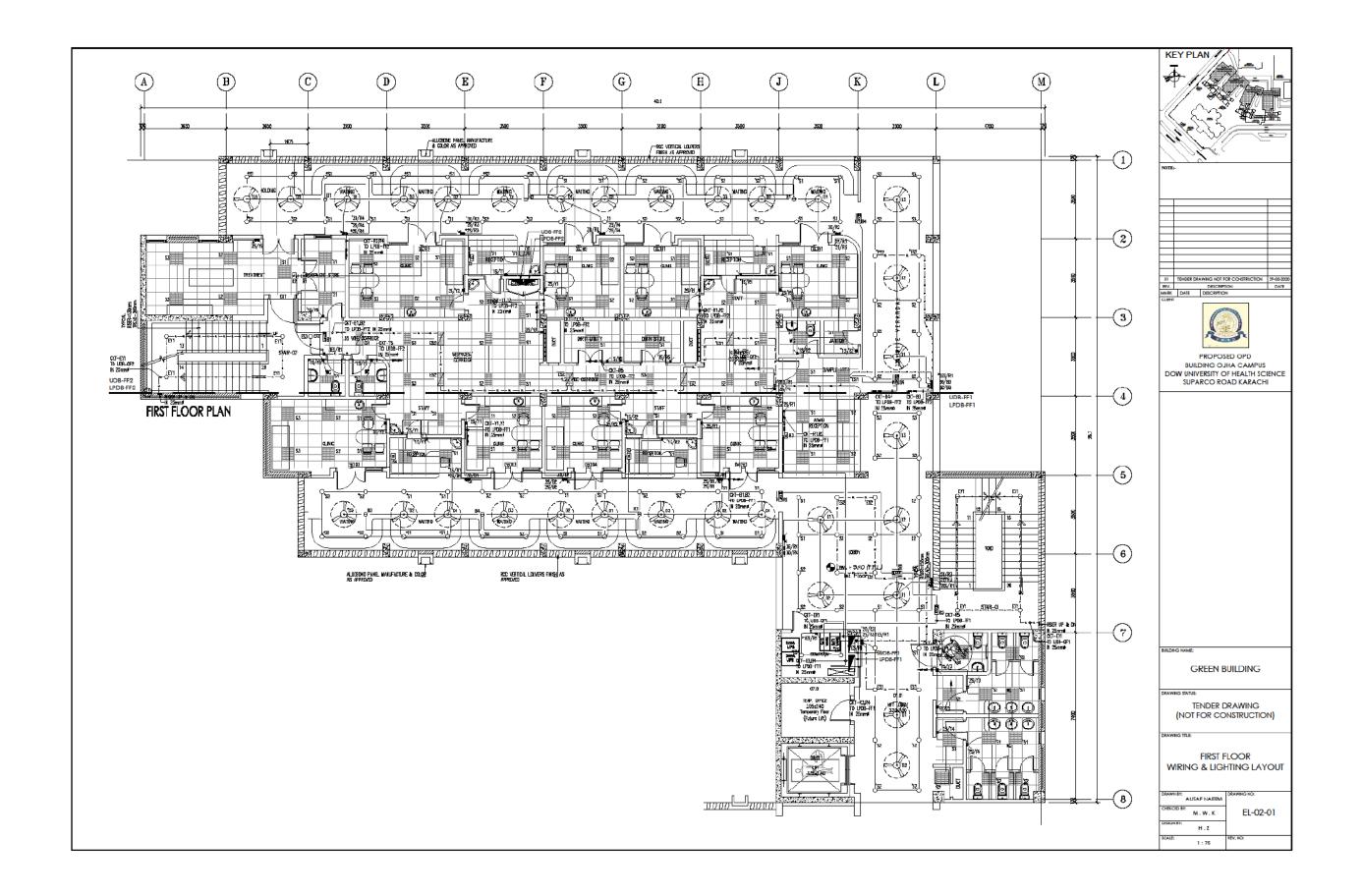


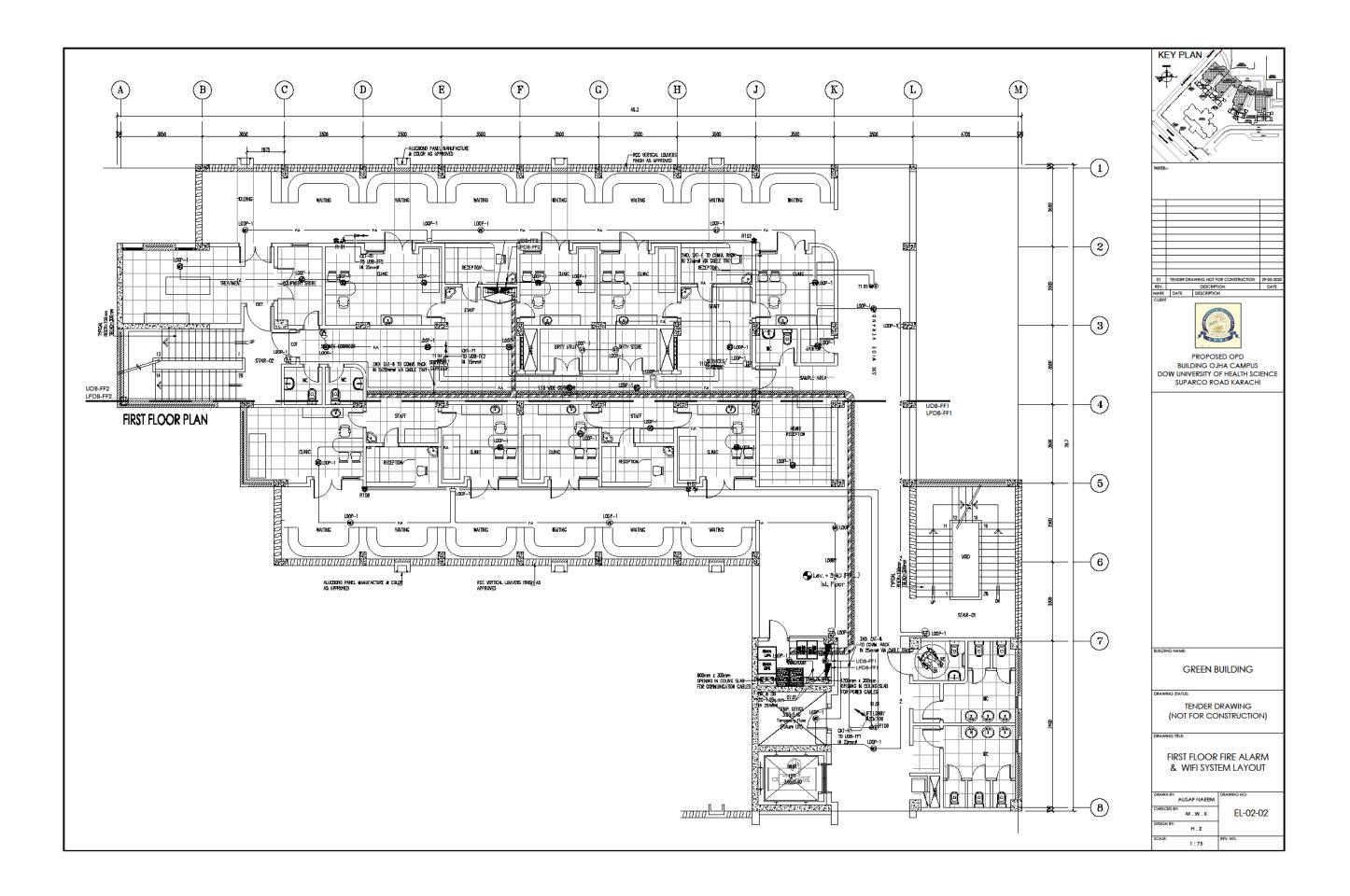


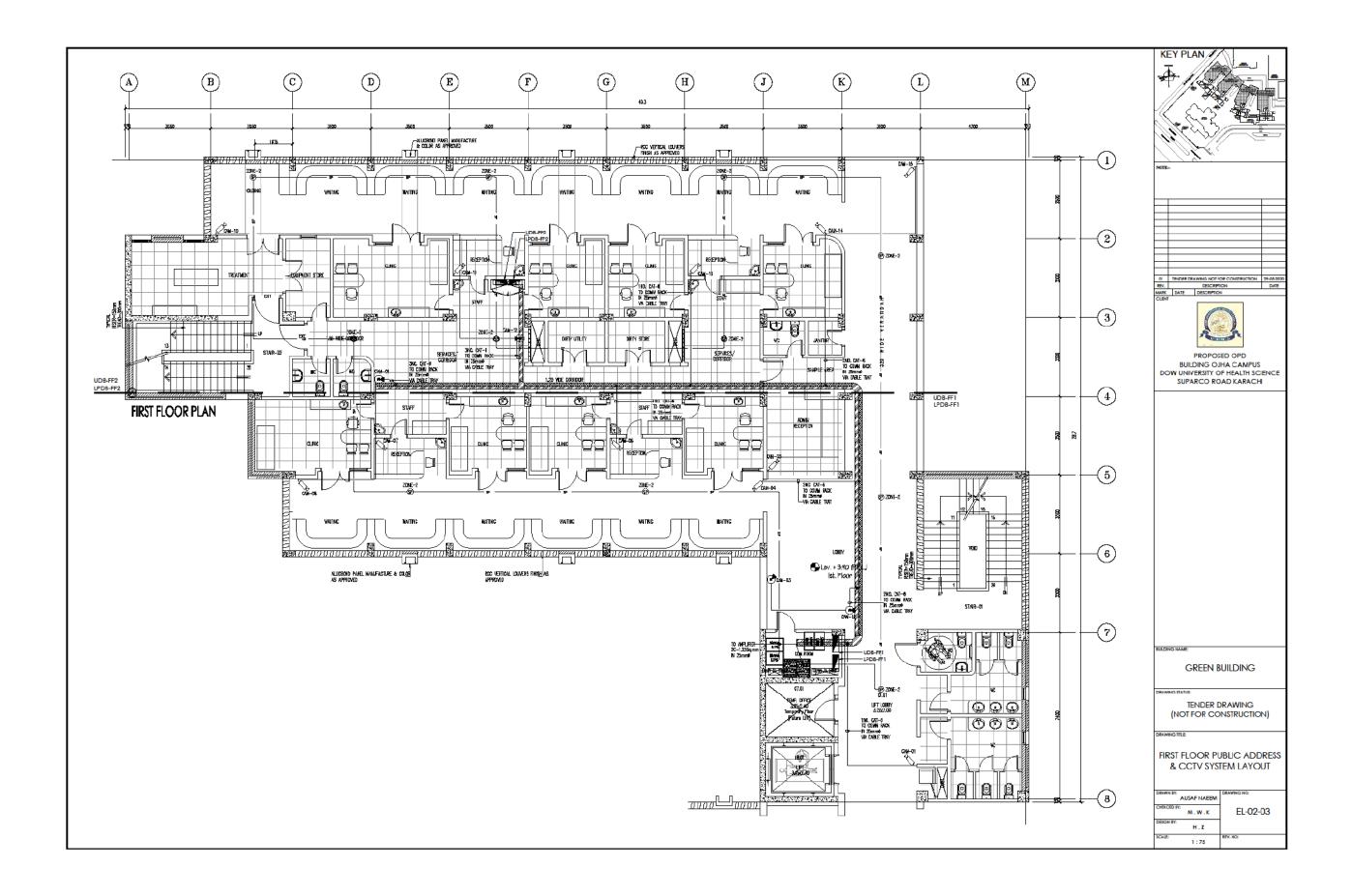


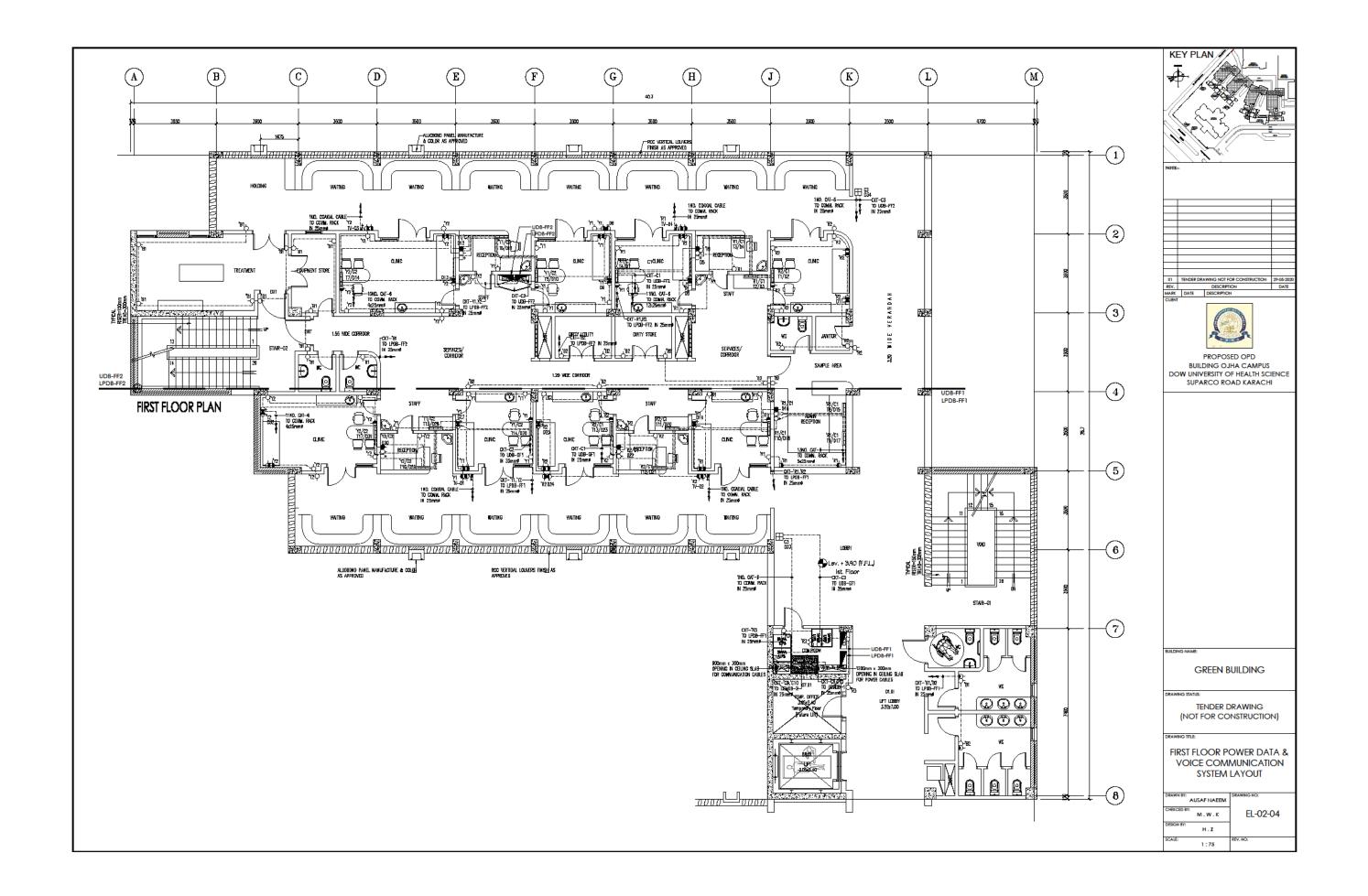


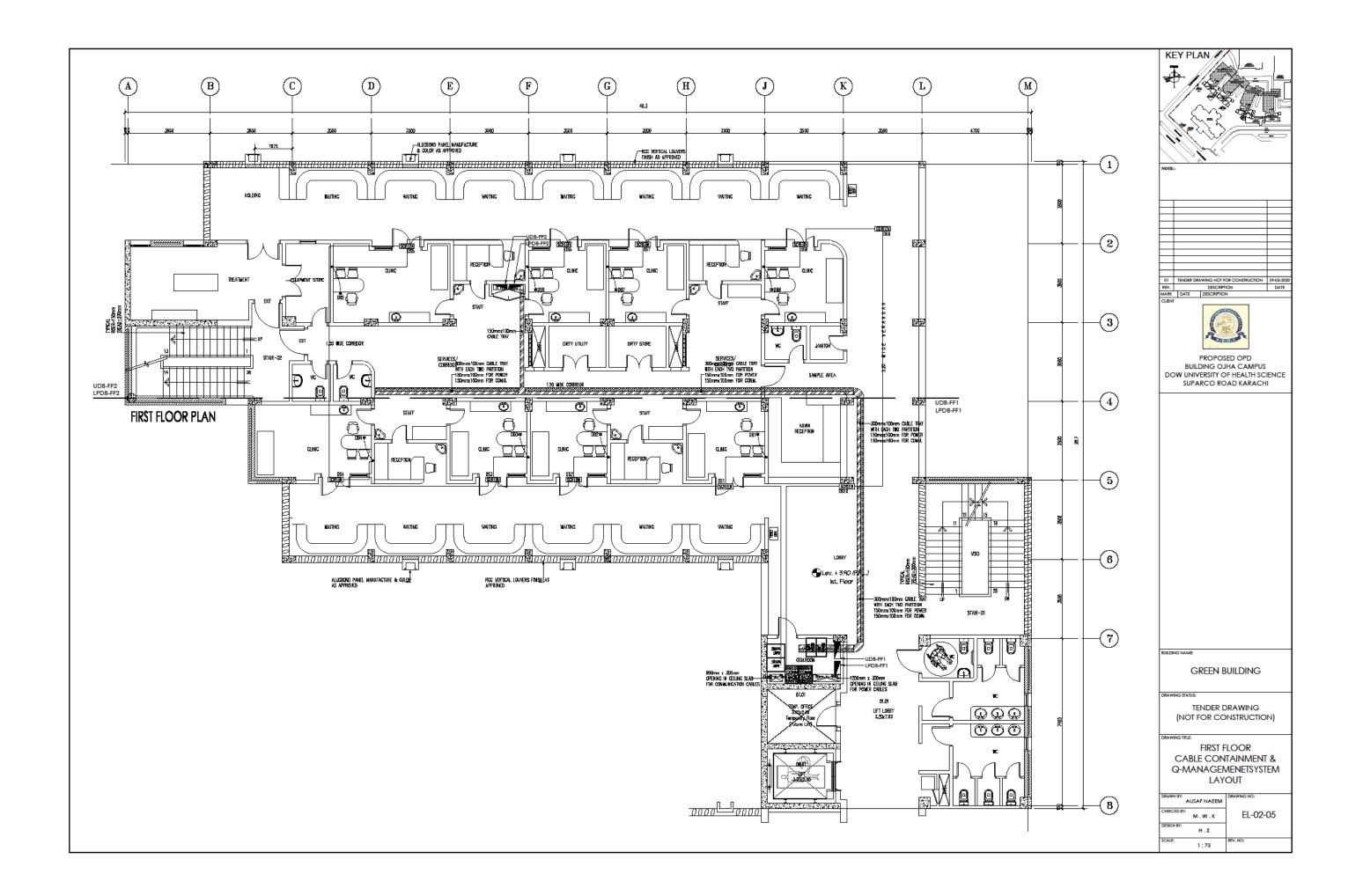


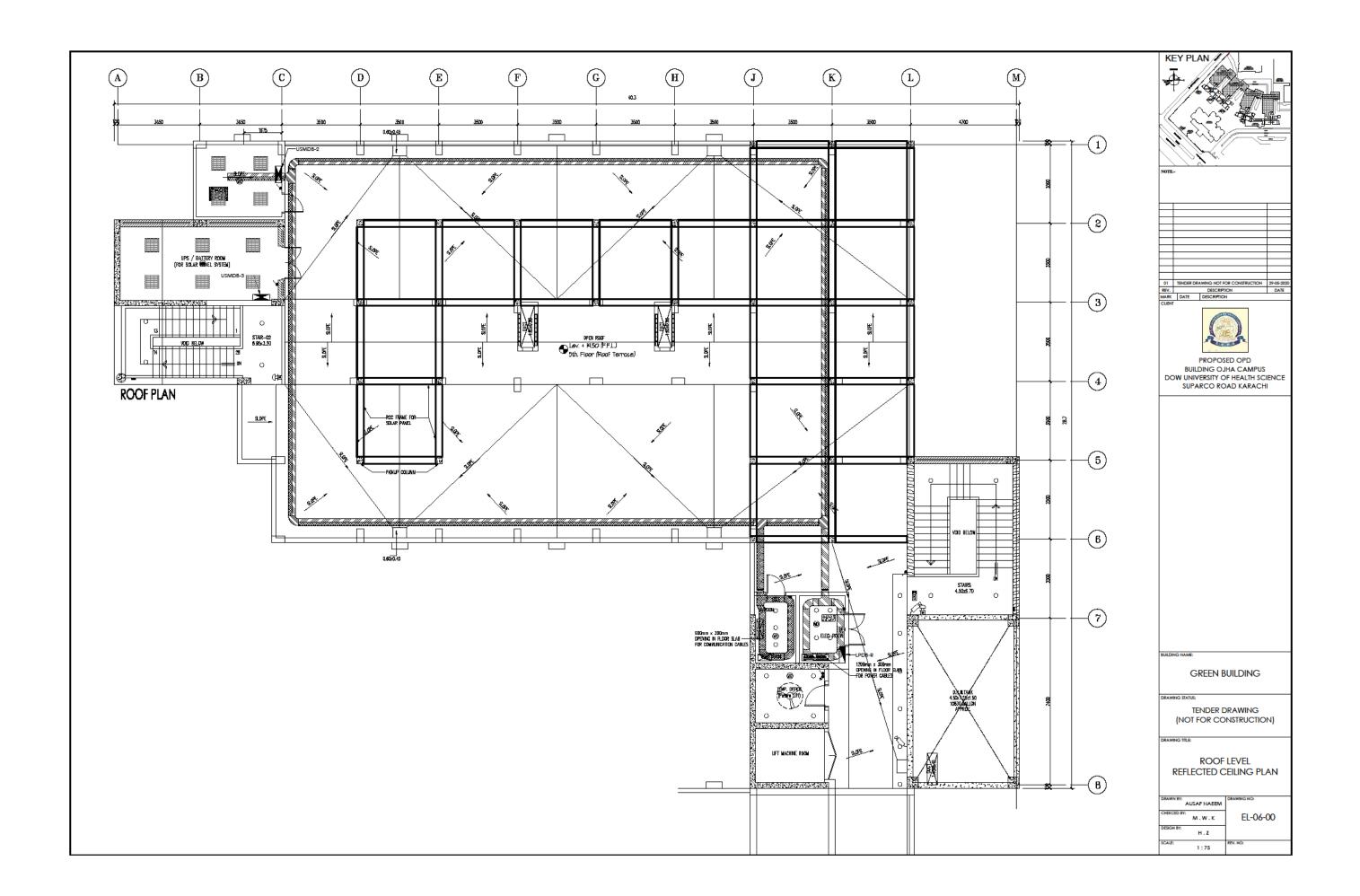


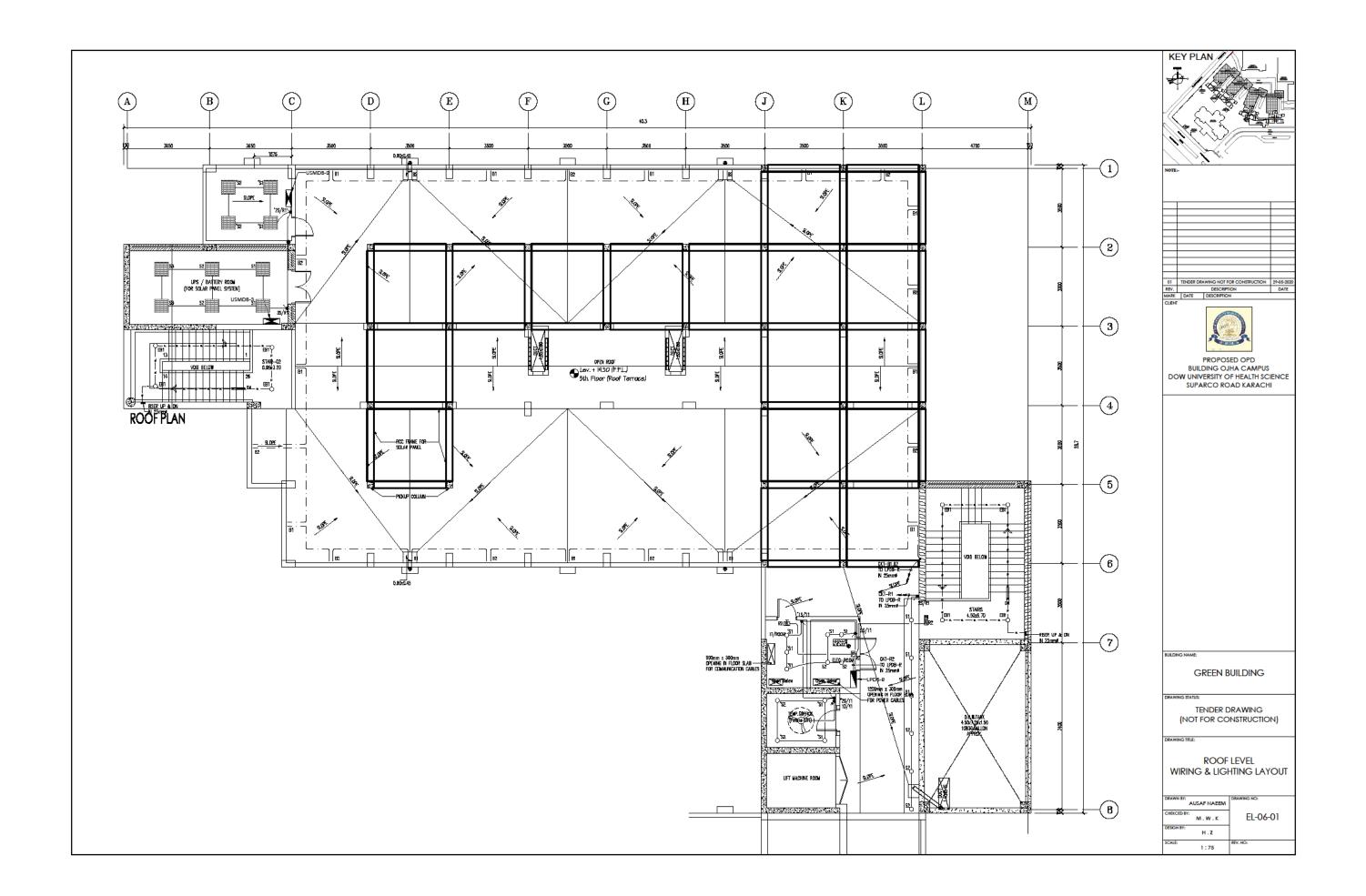


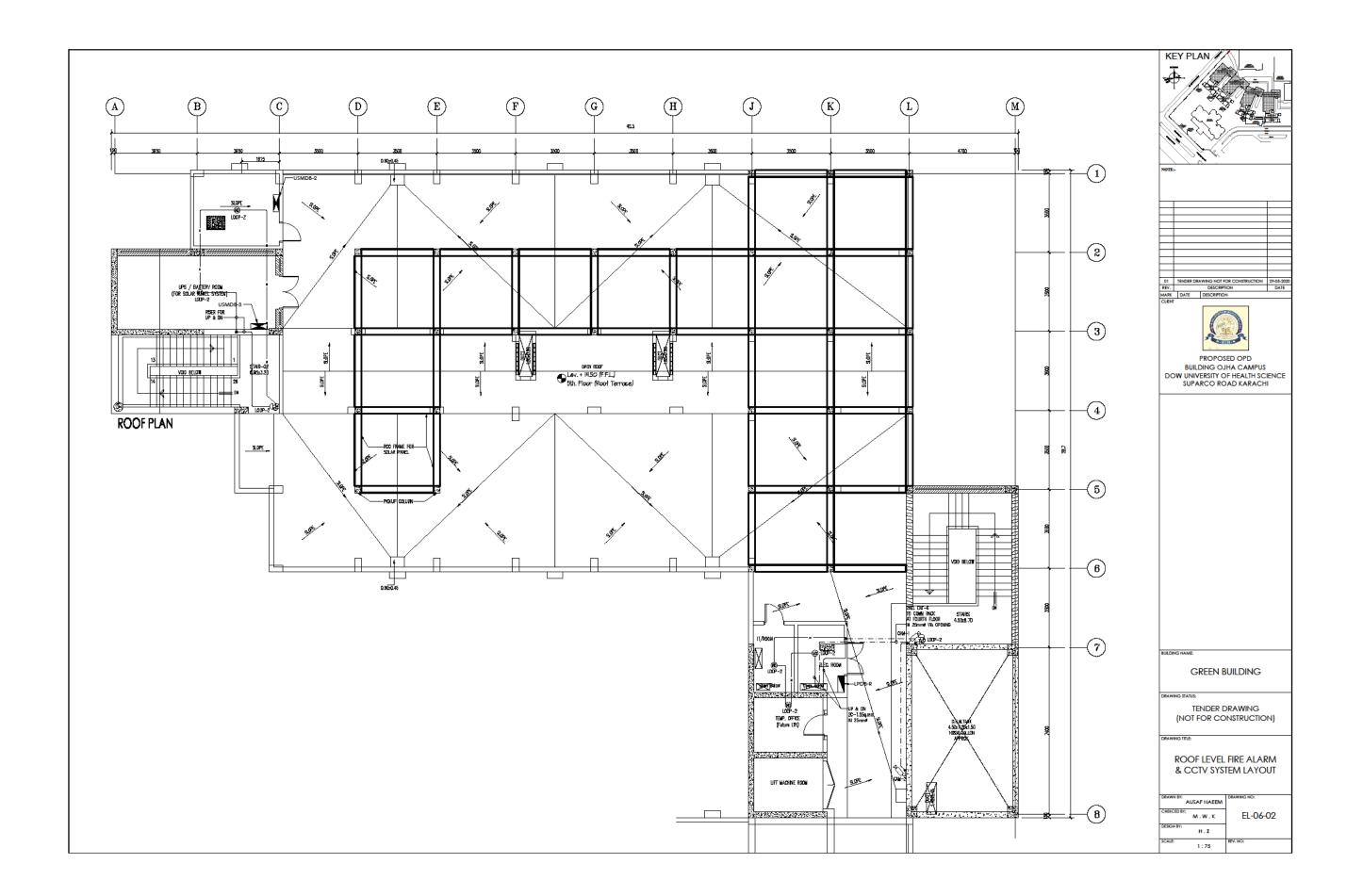


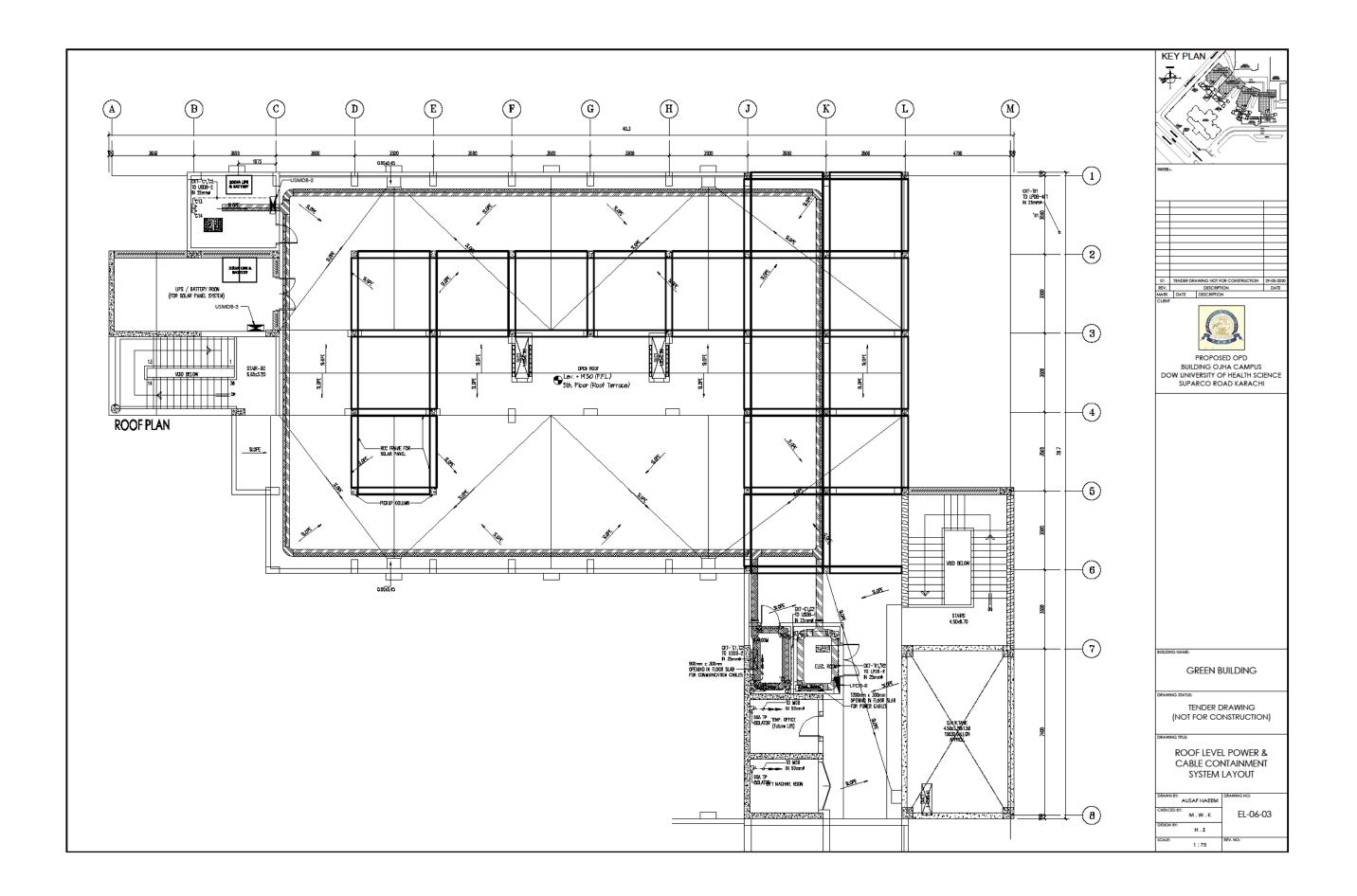


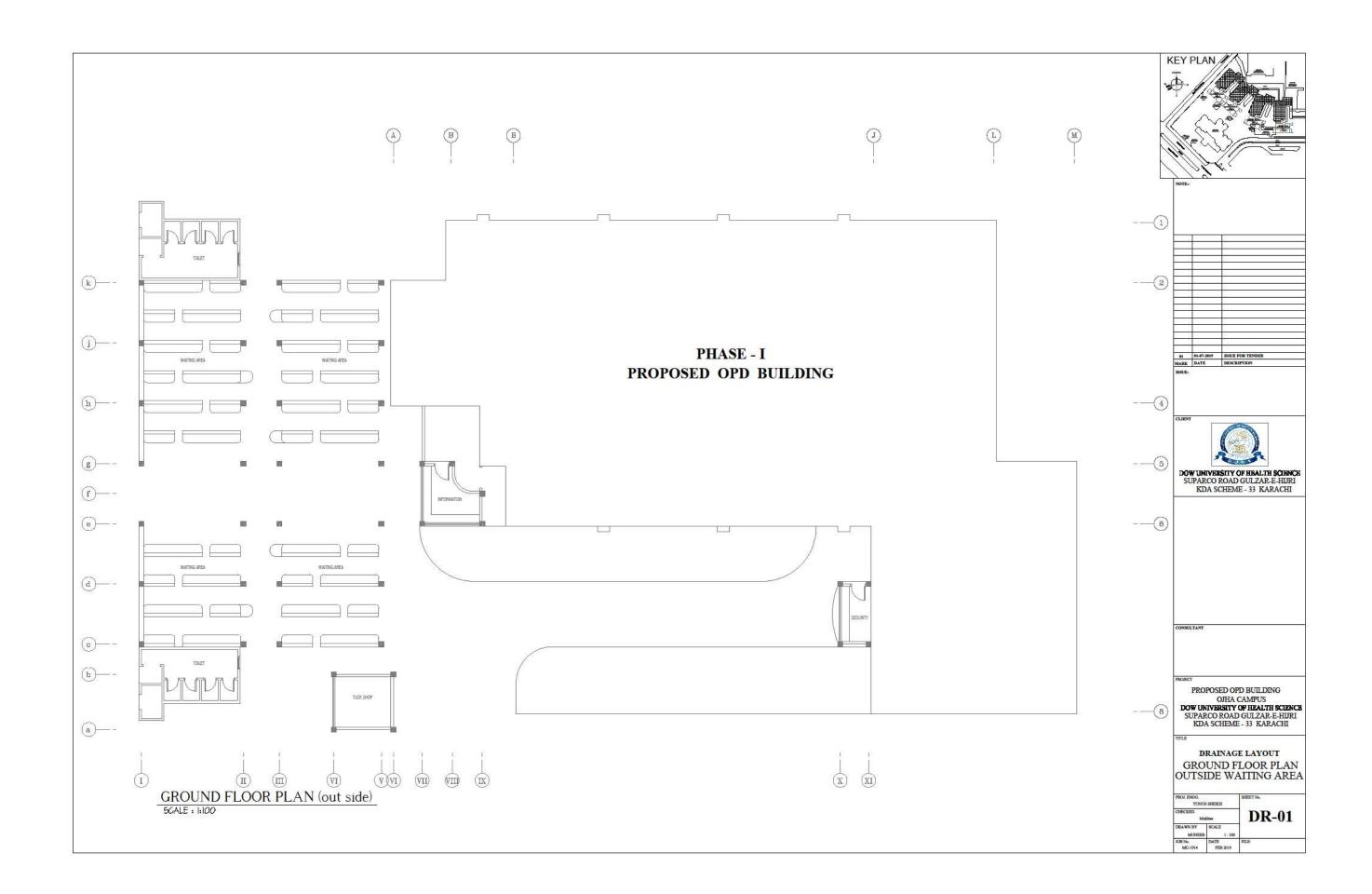


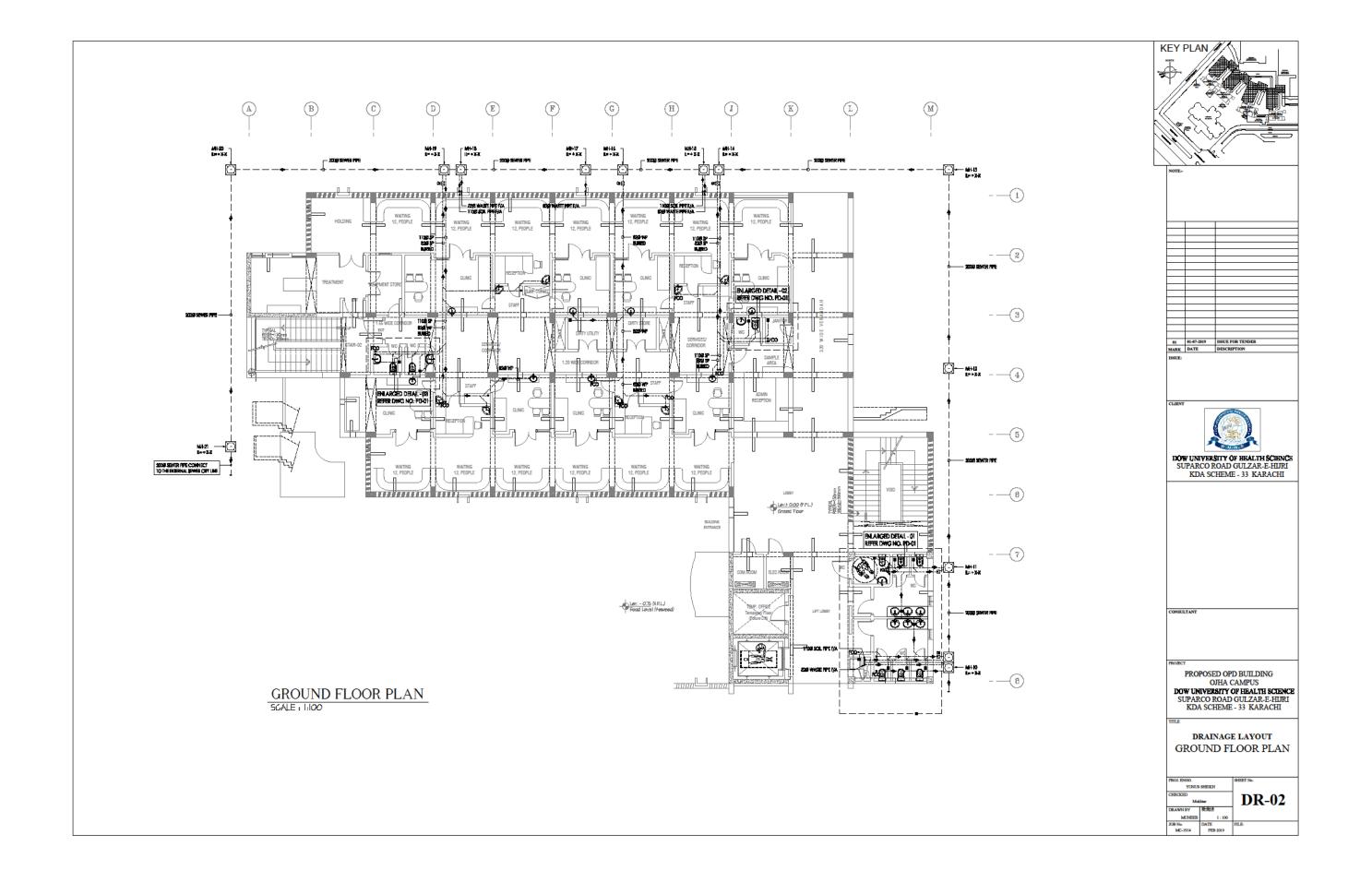


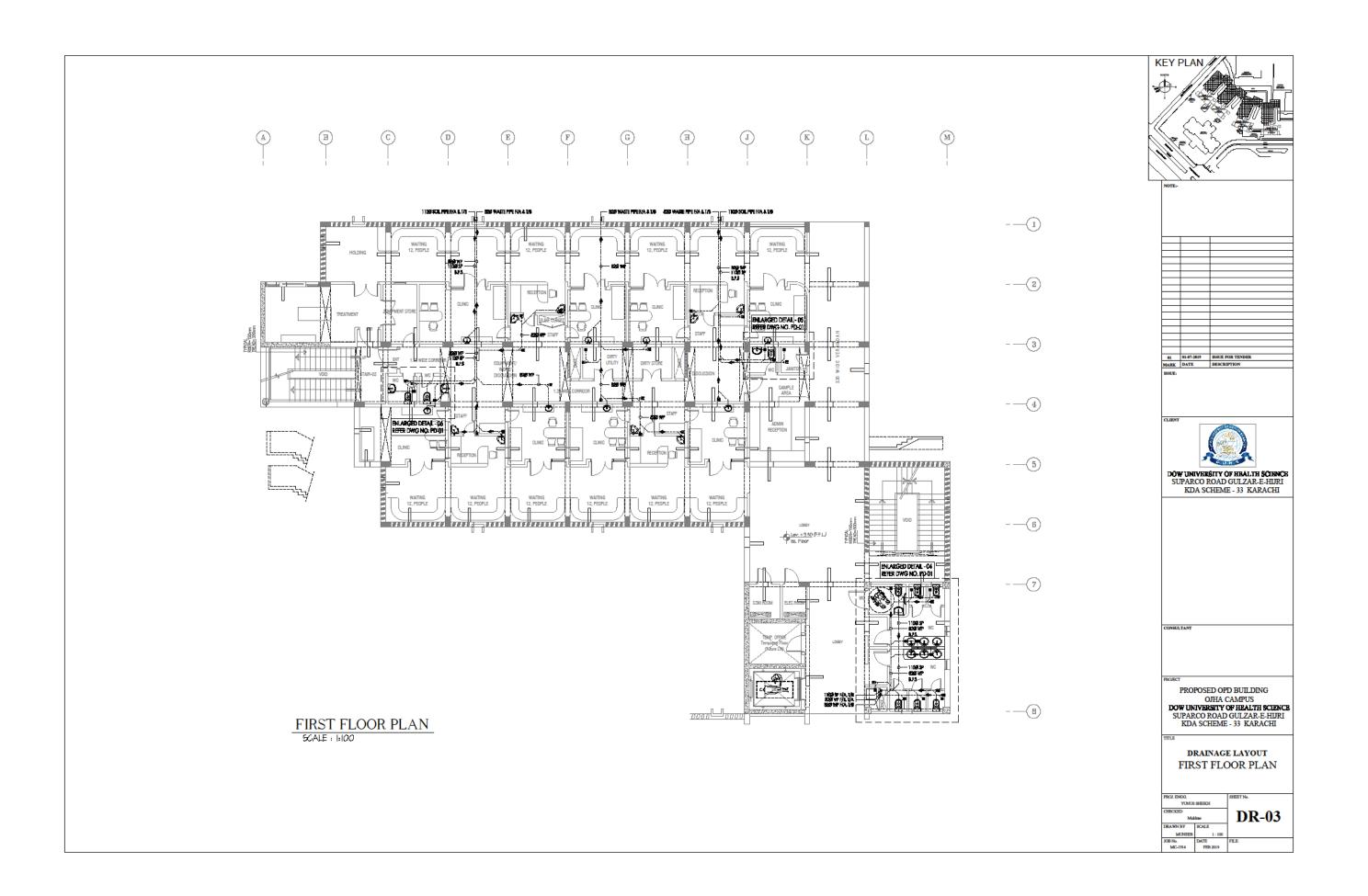


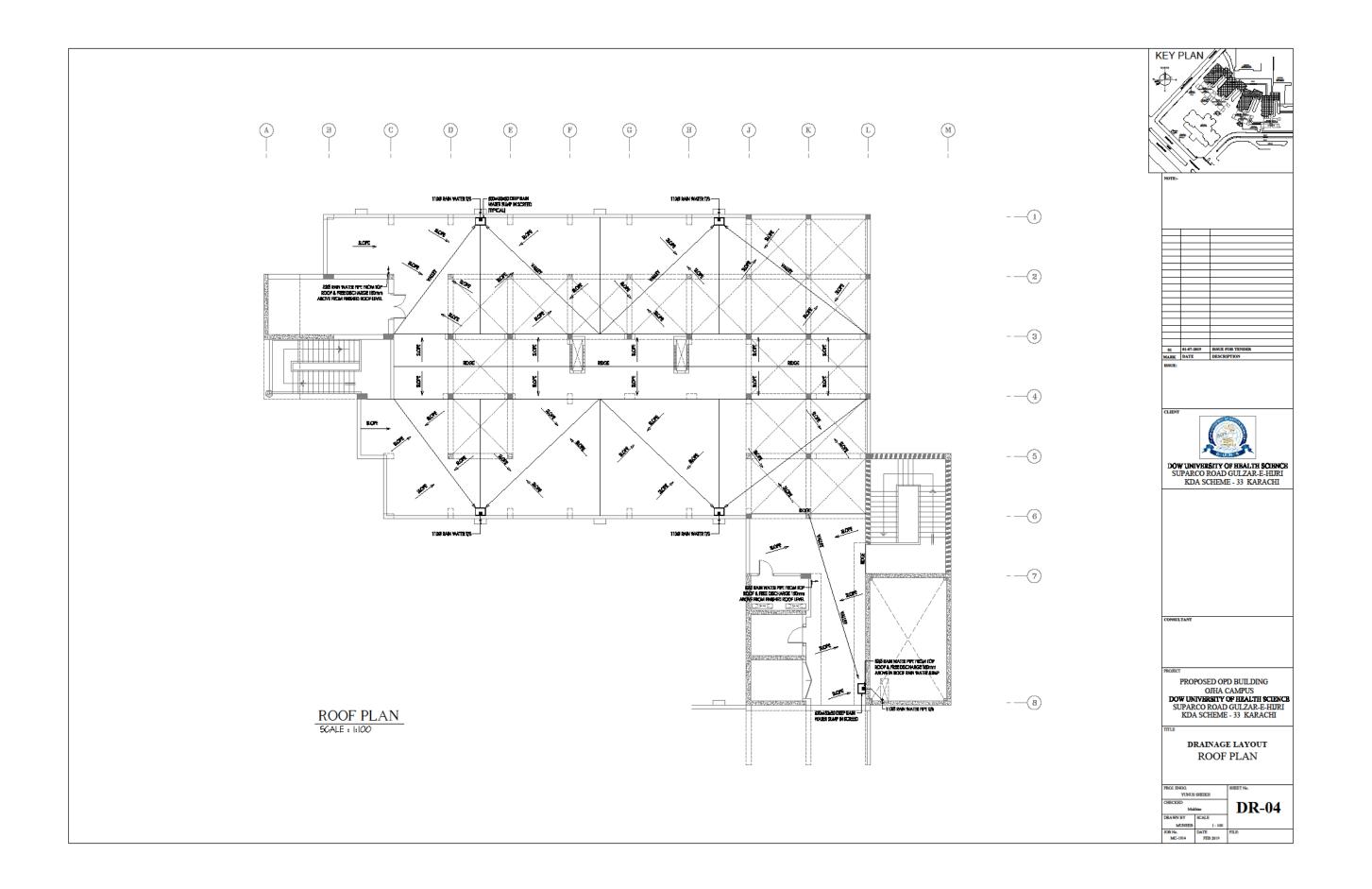


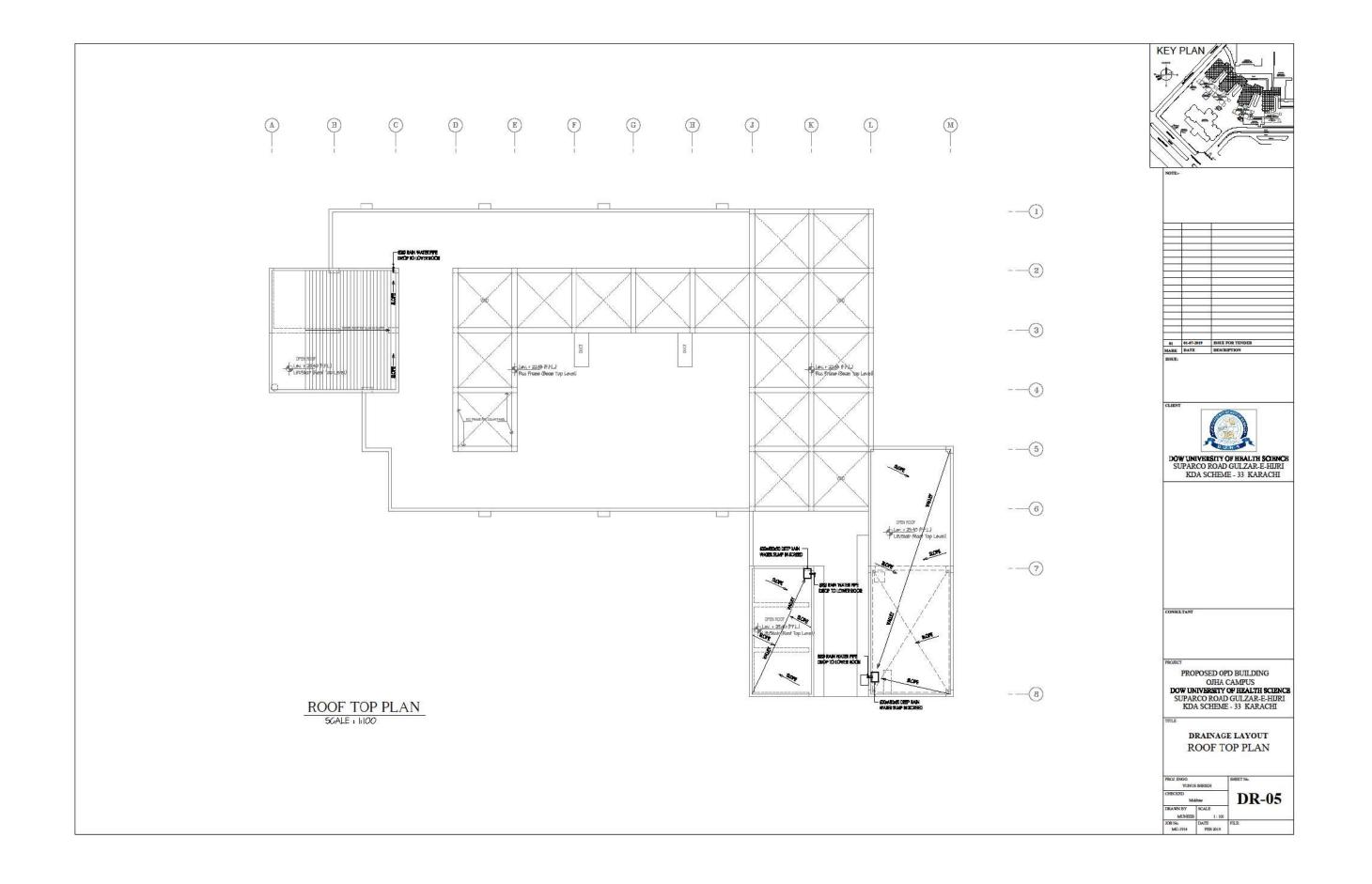


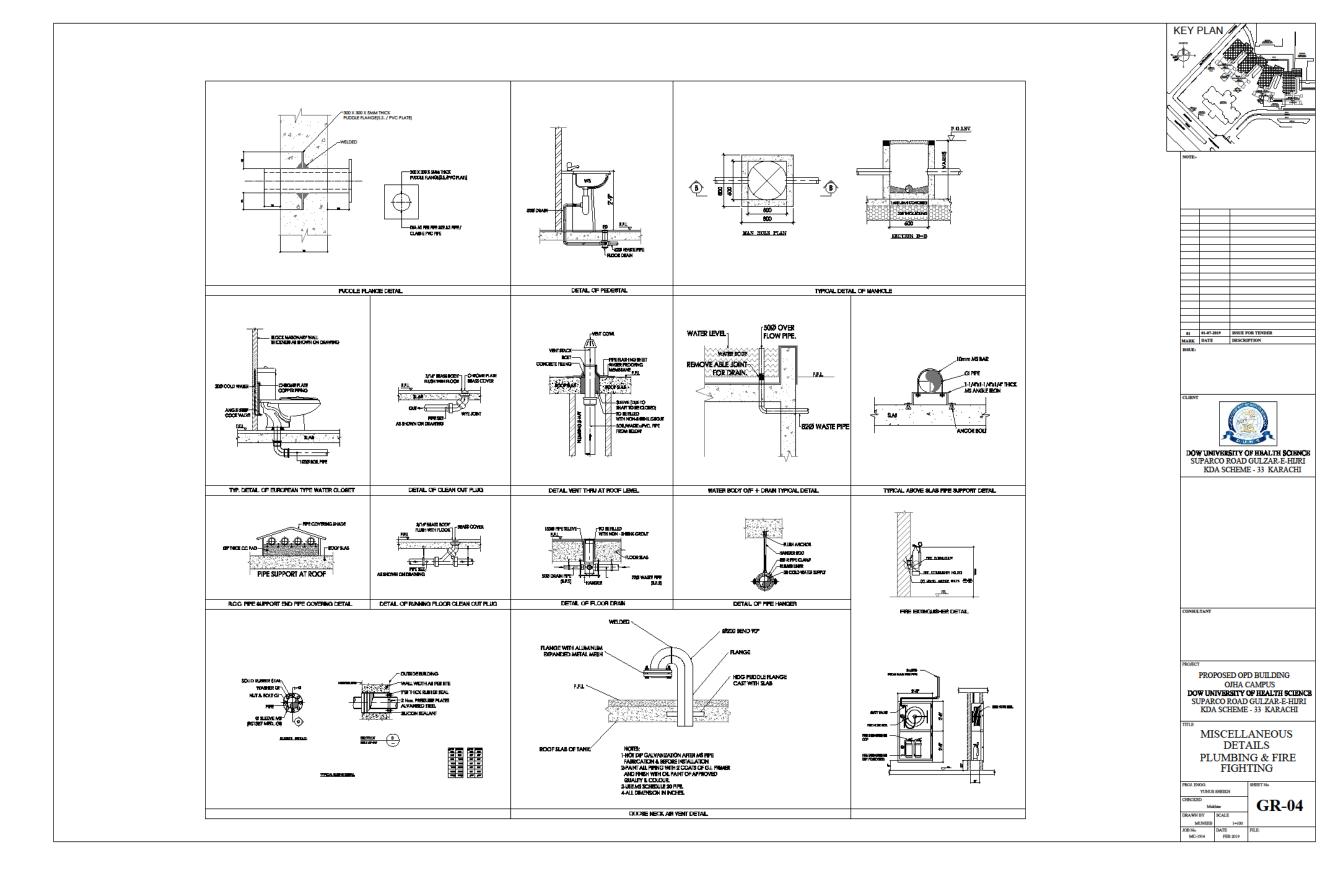


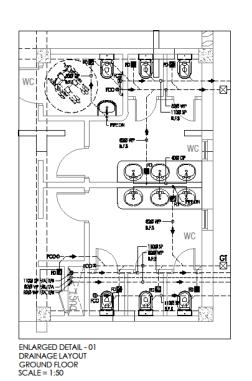


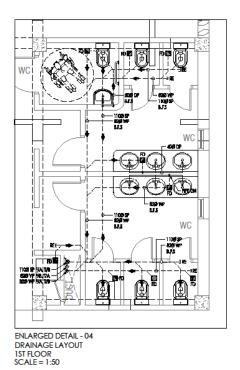


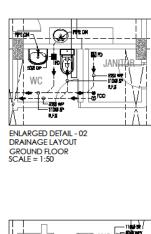


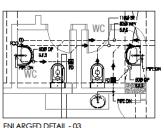


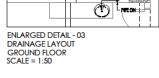


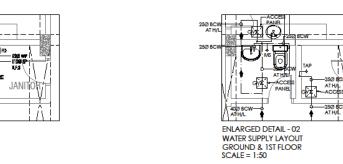


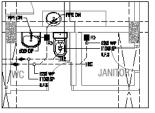






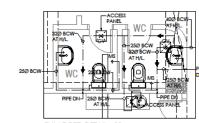






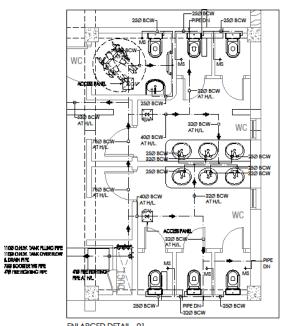
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ENLARGED DETAIL - 06 DRAINAGE LAYOUT 1ST FLOOR SCALE = 1:50

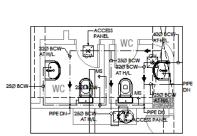


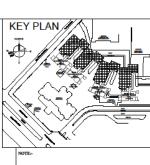


ENLARGED DETAIL - 03 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



ENLARGED DETAIL - 01 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50





01	01-07-2019	ISSUE FOR TENDER
MARK	DATE	DESCRIPTION
ISSUE:		

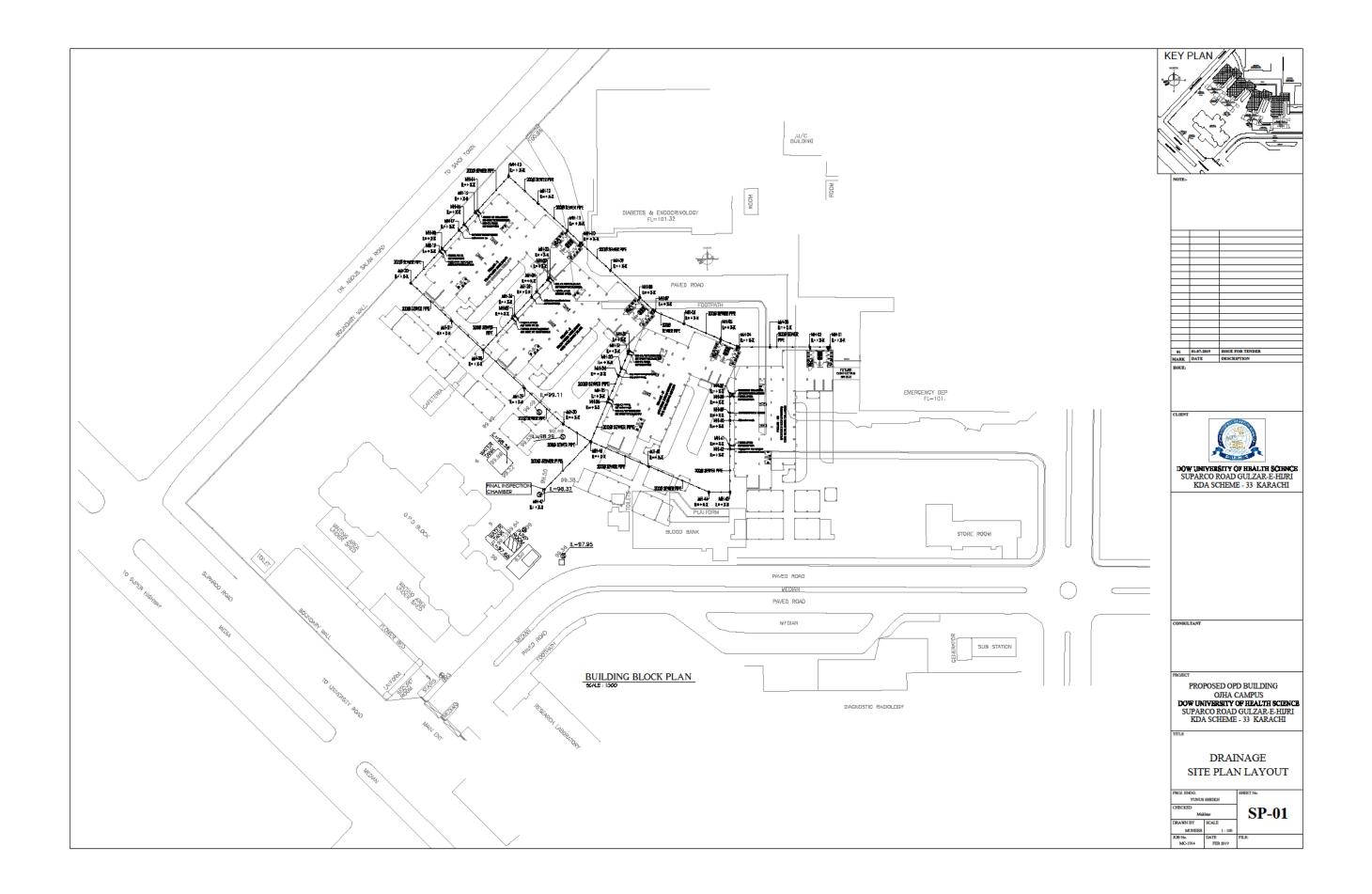
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KDA	SCHEME - 33 KA	RACHI

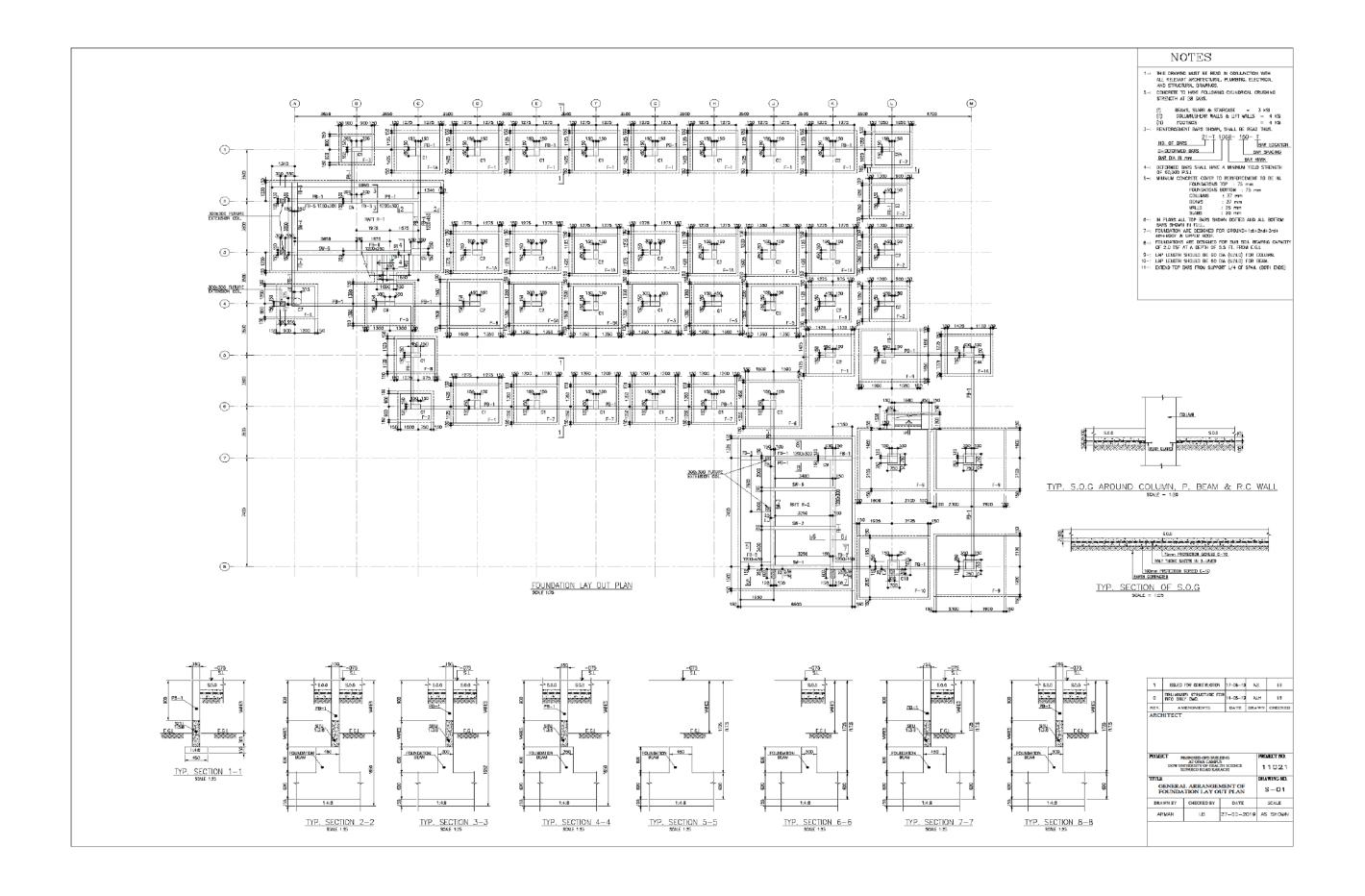
CONSULTANT

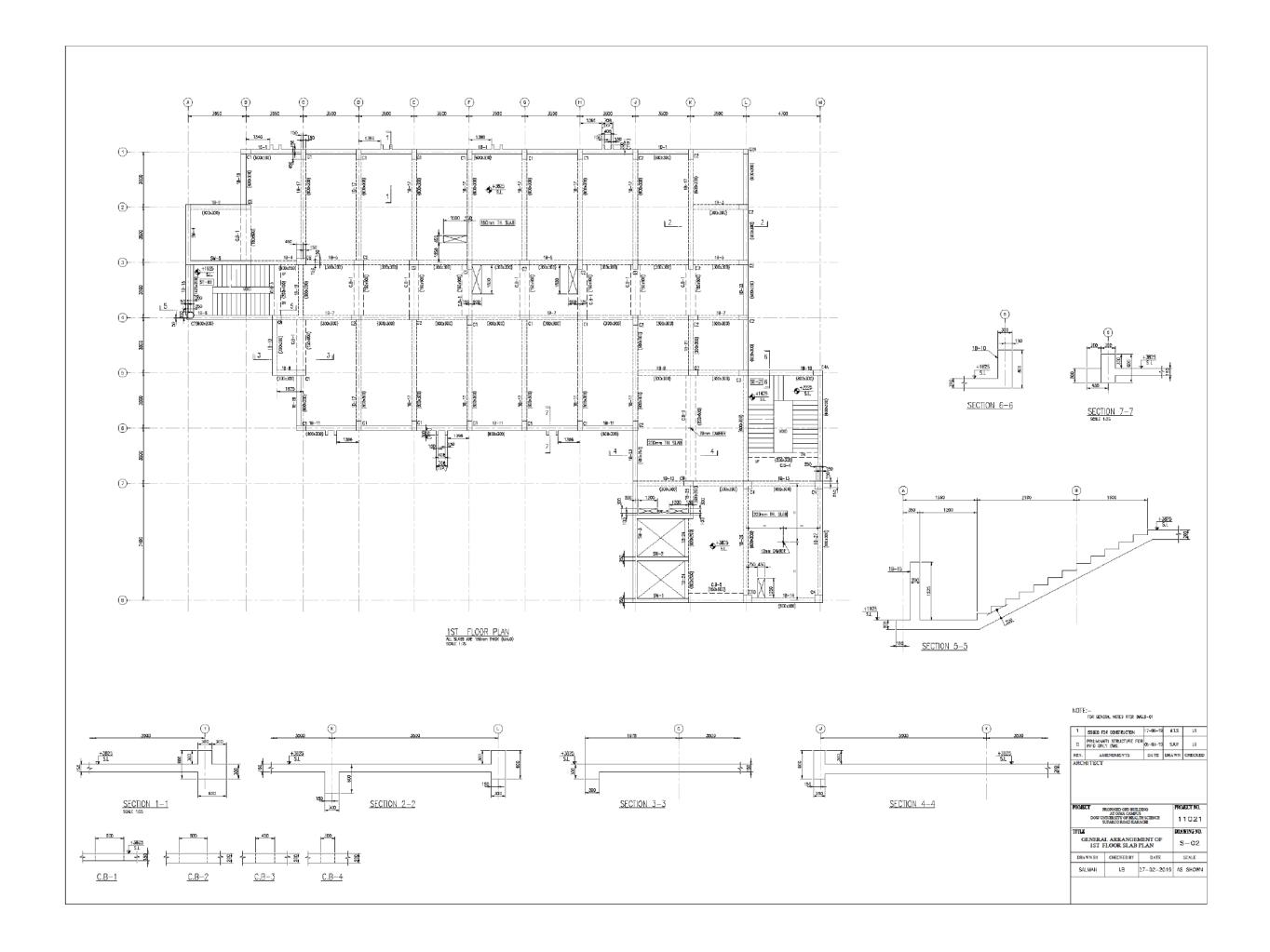
PROPOSED OPD BUILDING
OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HURI
KDA SCHEME - 33 KARACHI

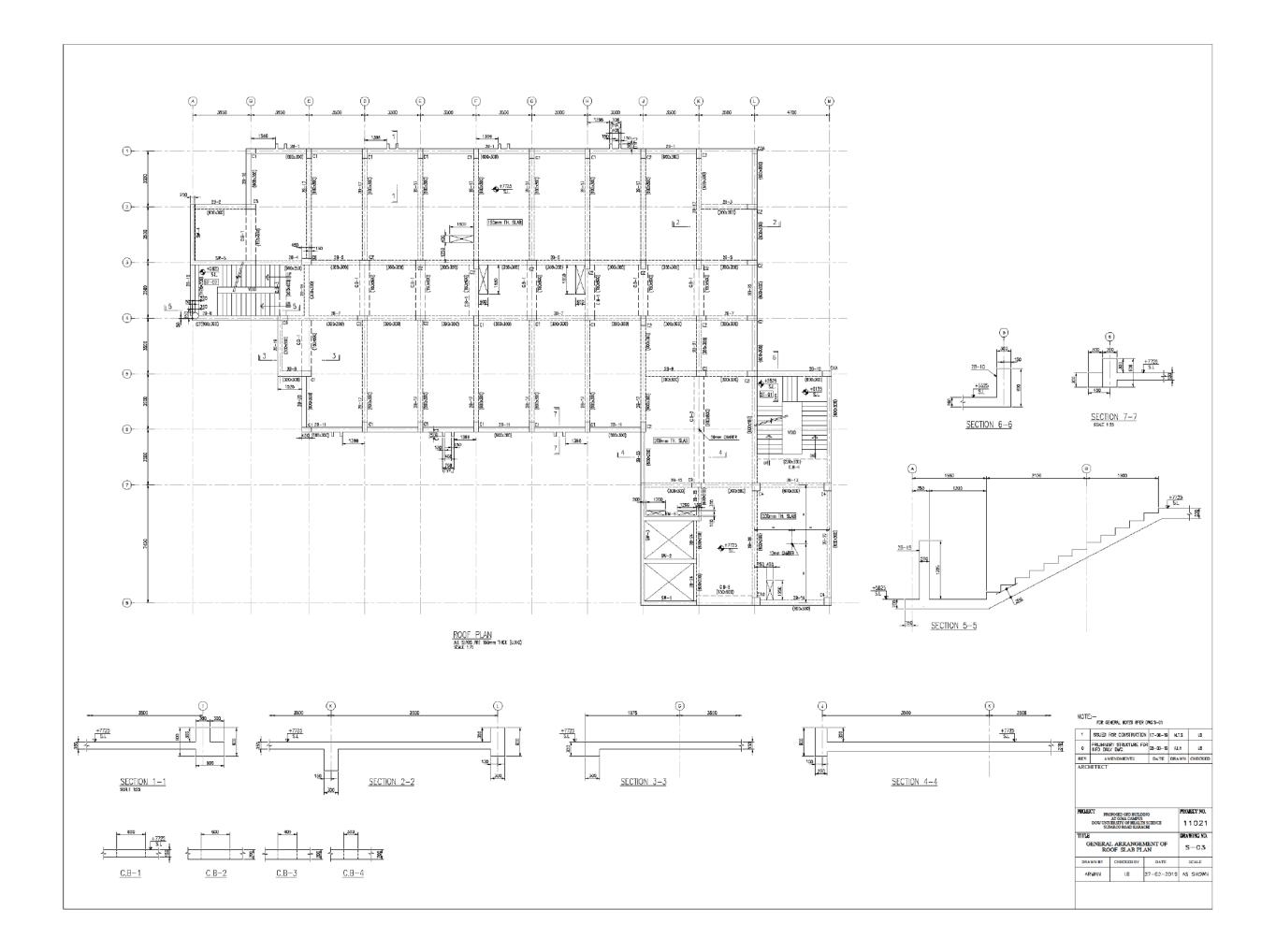
ENLARGED DETAILS DRAINAGE & WATER SUPPLY

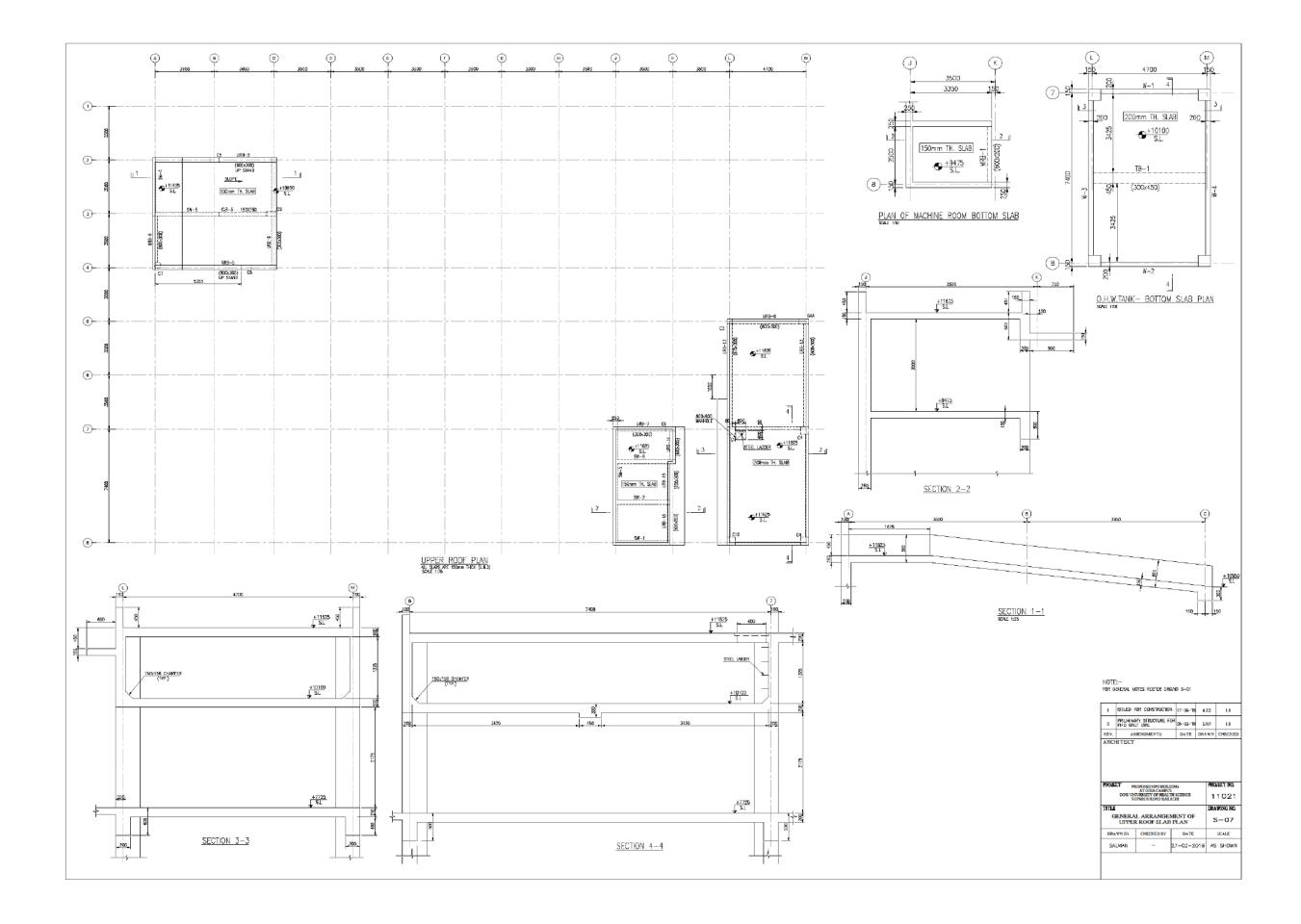
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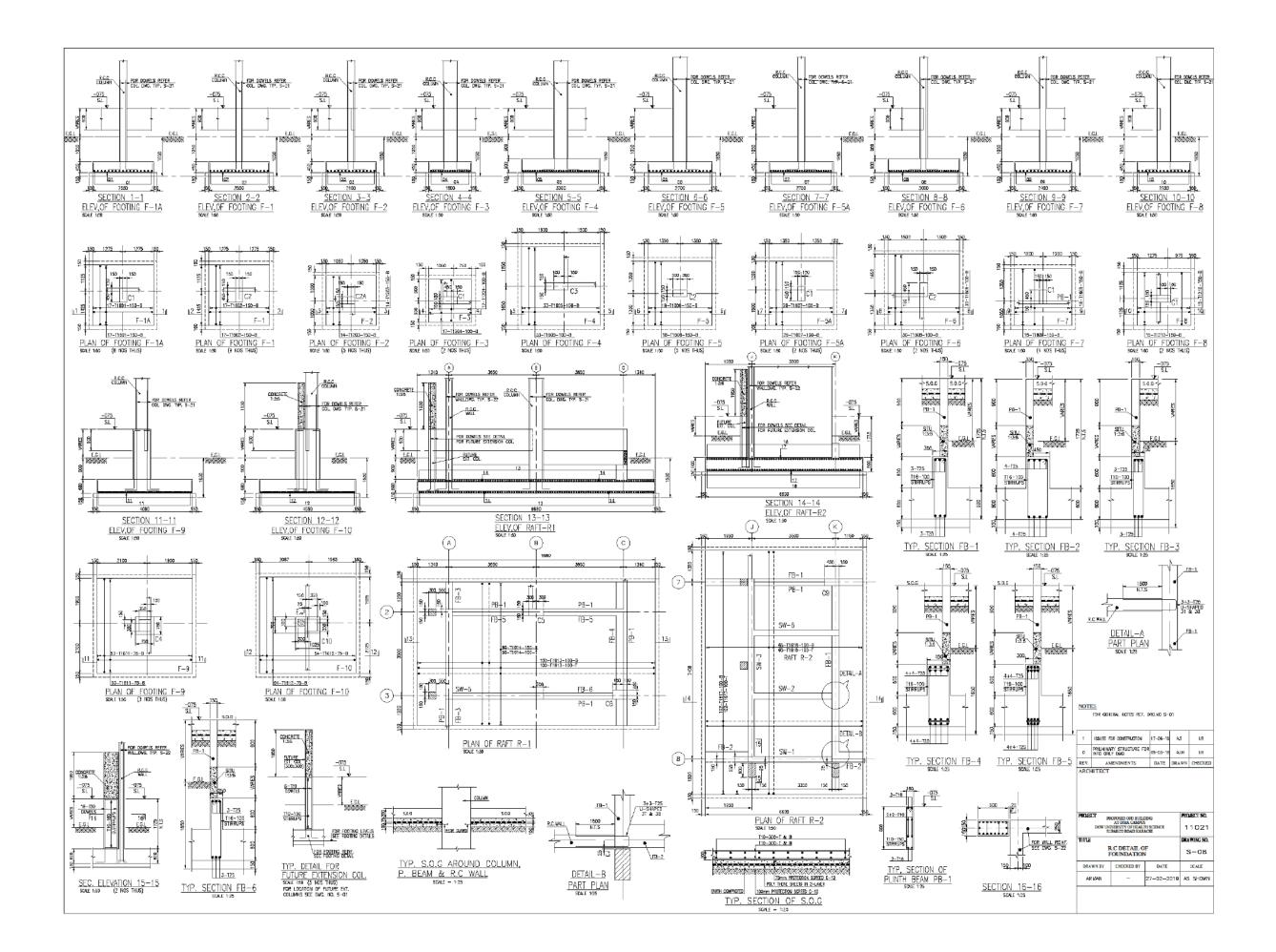


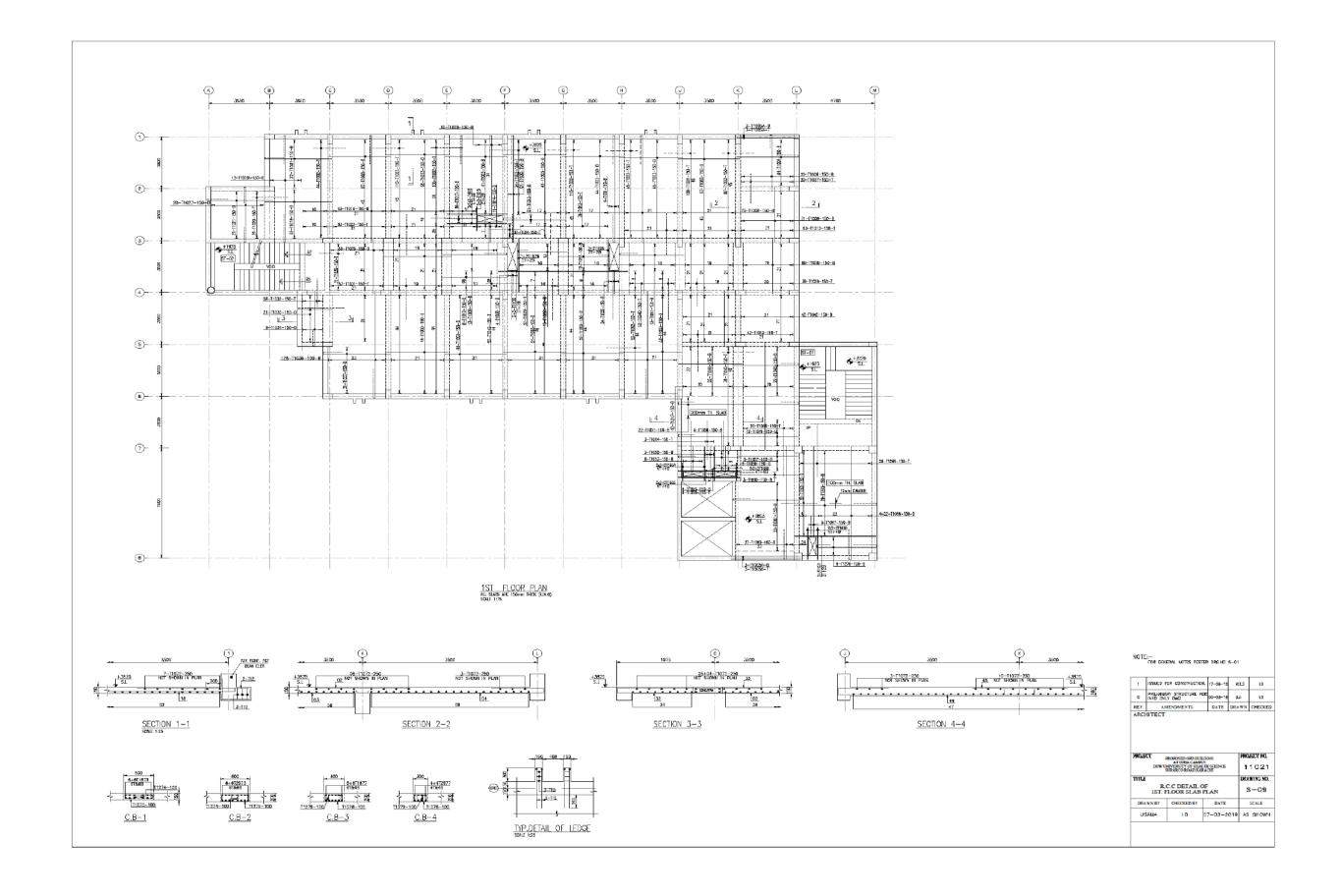


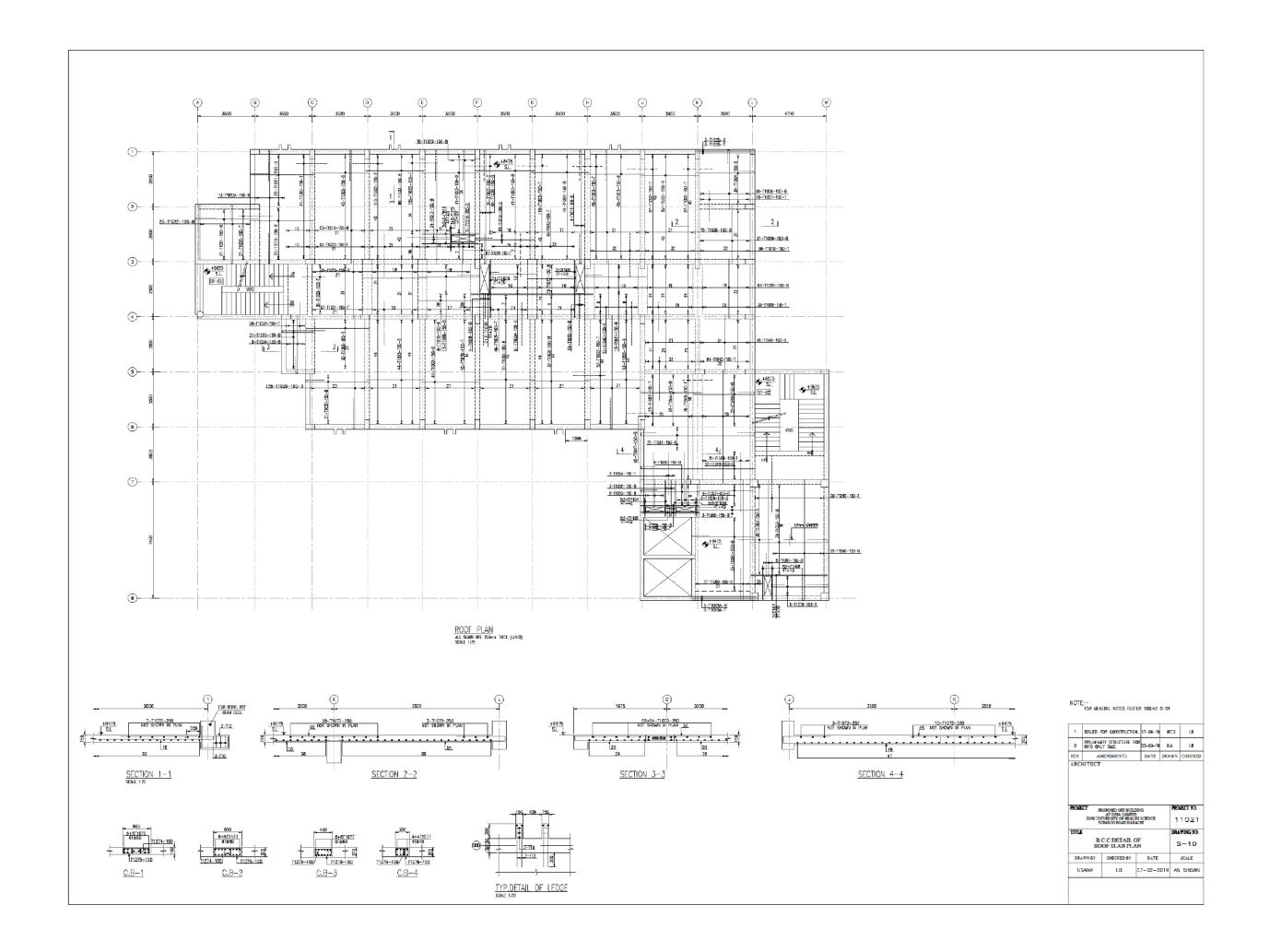


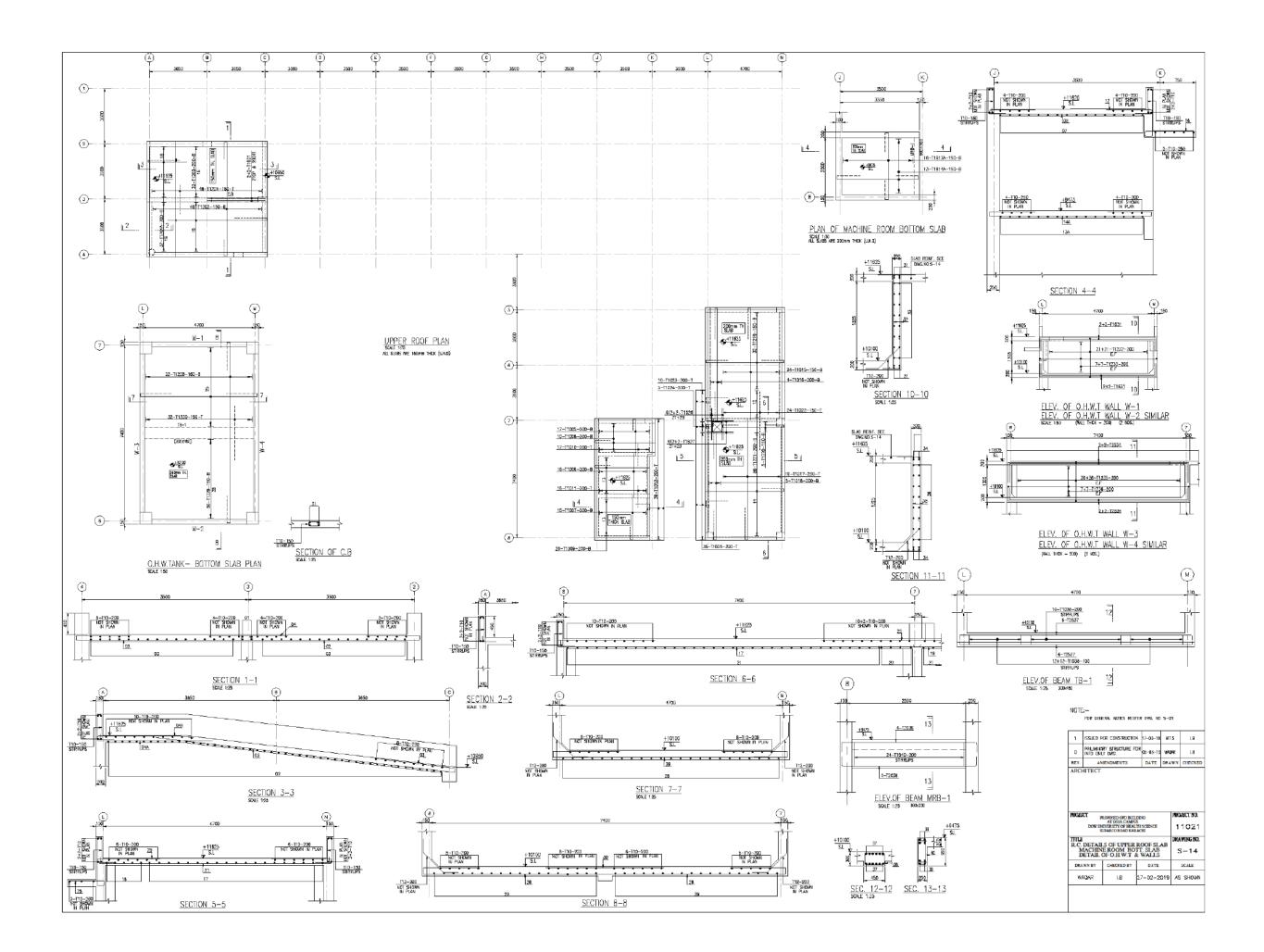


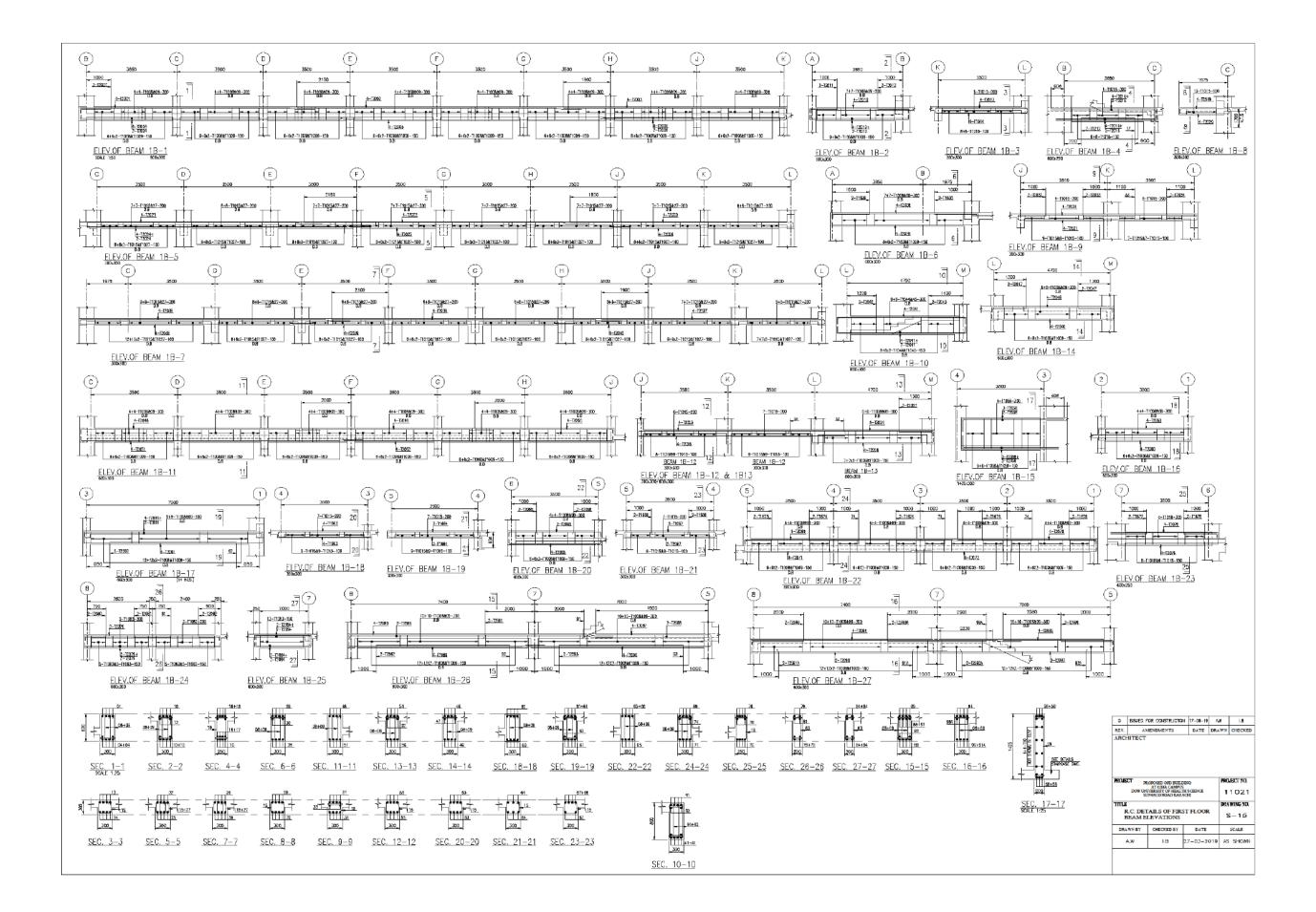


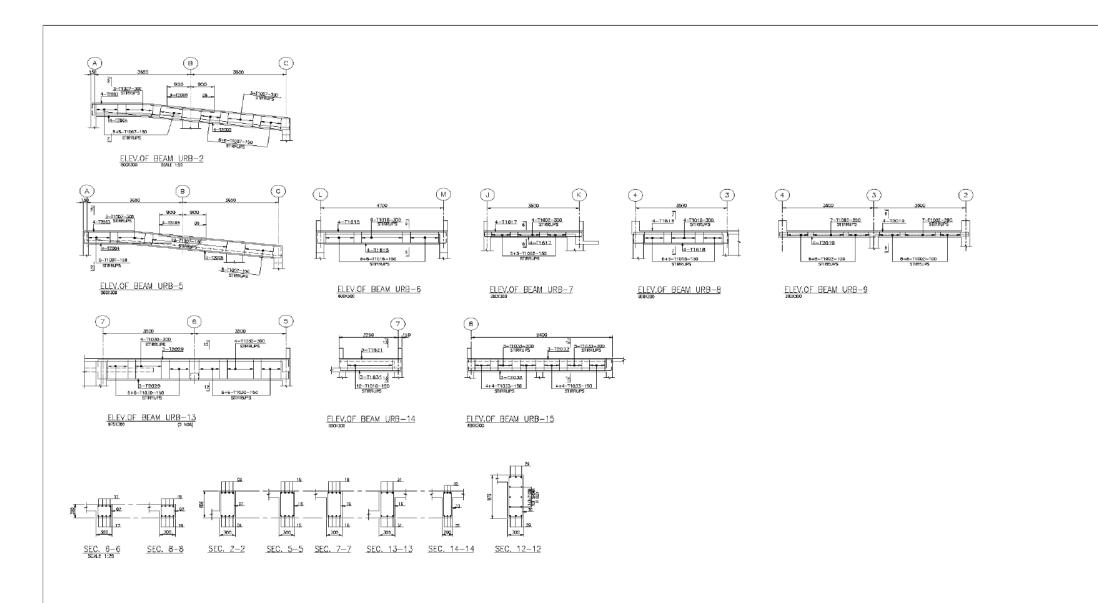












0	ISSUED FOR CONSTRUCTION	17-06-19	AJH	1.8
REV.	AMENDMENTS	DATE	DRAWN	CHECKE

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	.C. DETAILS (		DRAWING NO. S-20
DRAWN BY	CHECKED BY	DATE	SCALE
AHMED	I.B	28-3-2019	AS SHOWN



DOW UNIVERSITY
OF HEALTH SCIENCES
KARACHI.

## TENDER DRAWING ARCHITECTURAL

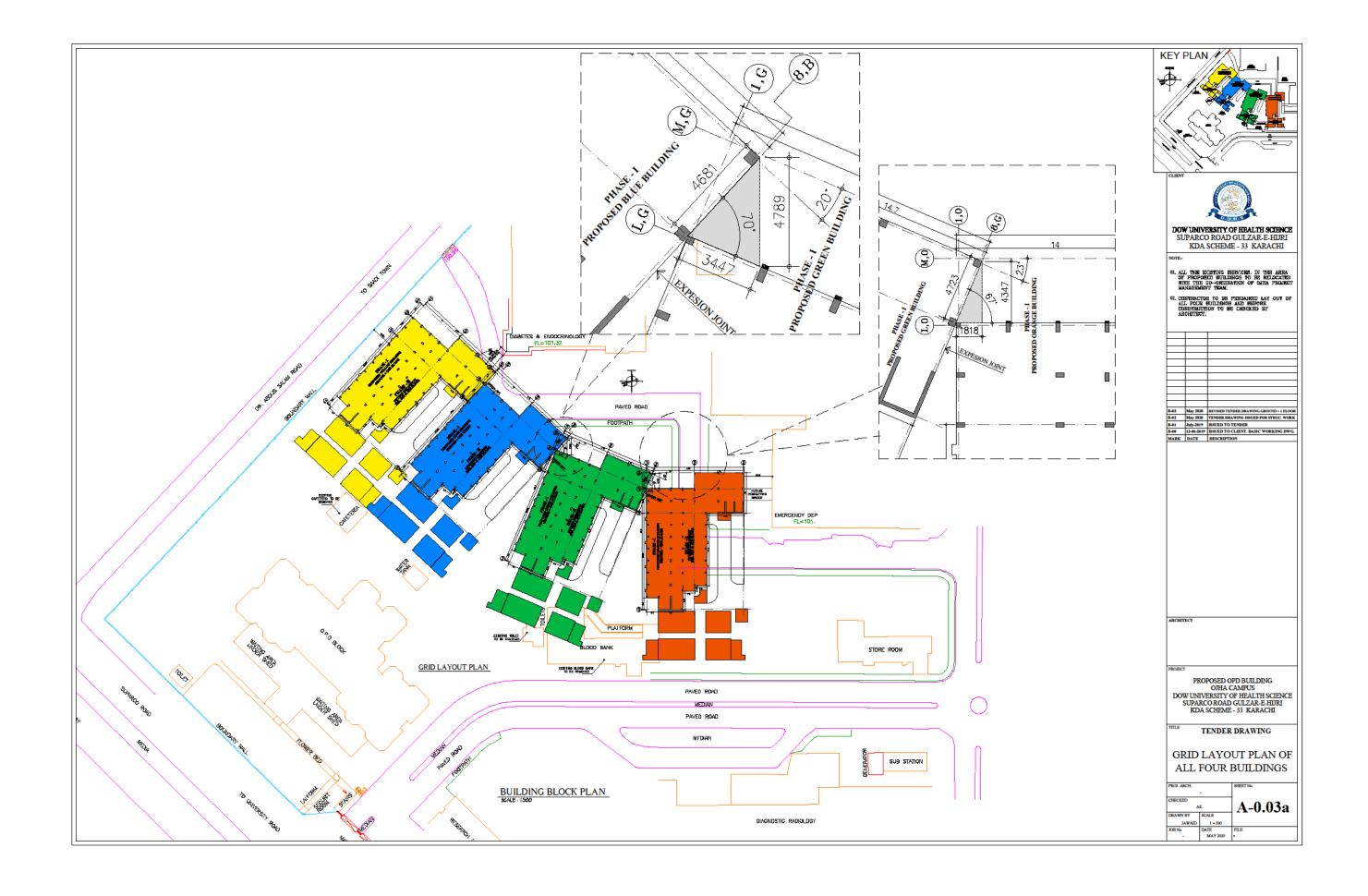
(GROUND + ONE FLOOR)

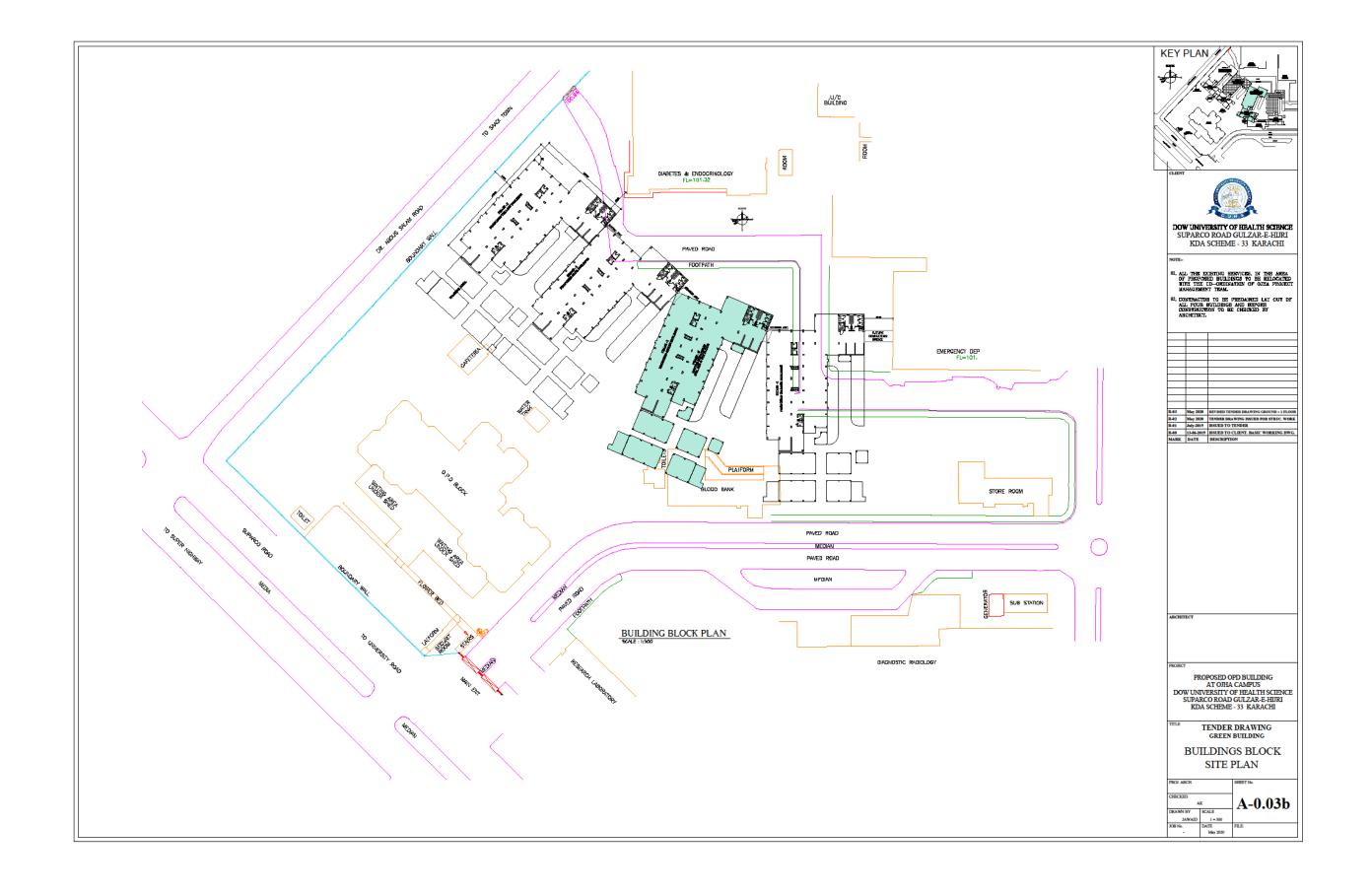
BLUE BUILDING

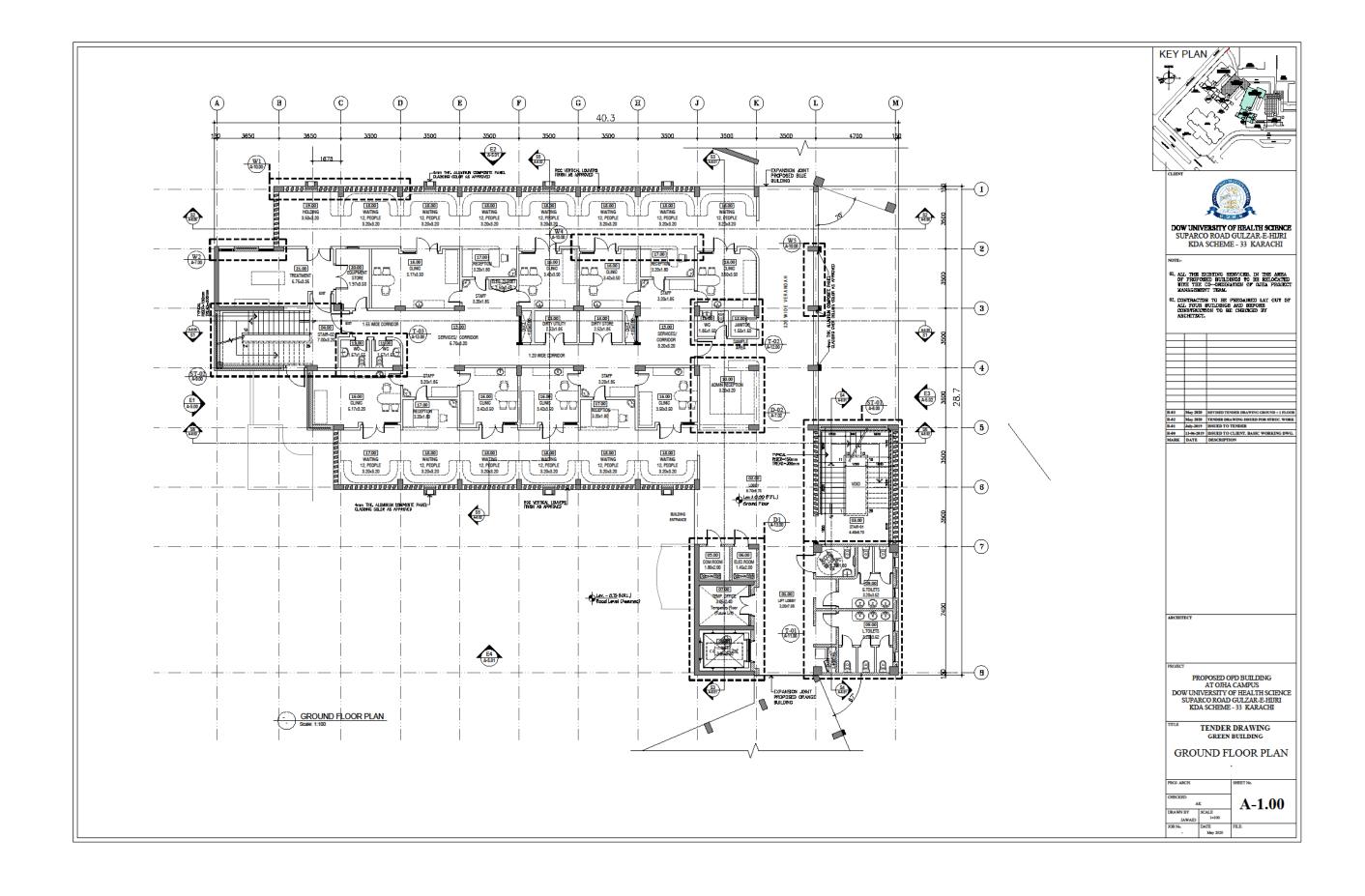
DATE :- MAY 2020

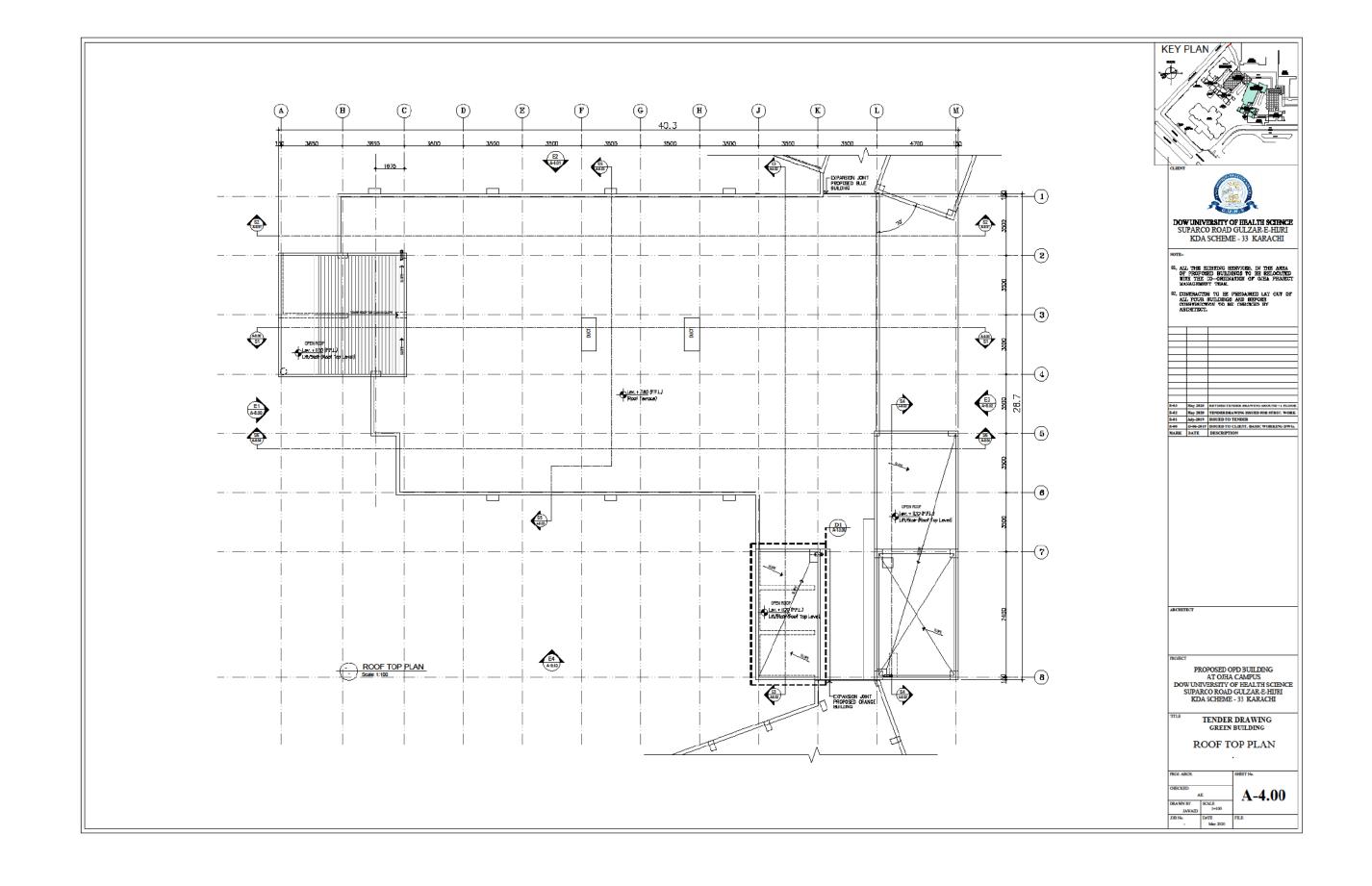
PROPOSED OPD BUILDING AT OJHA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI

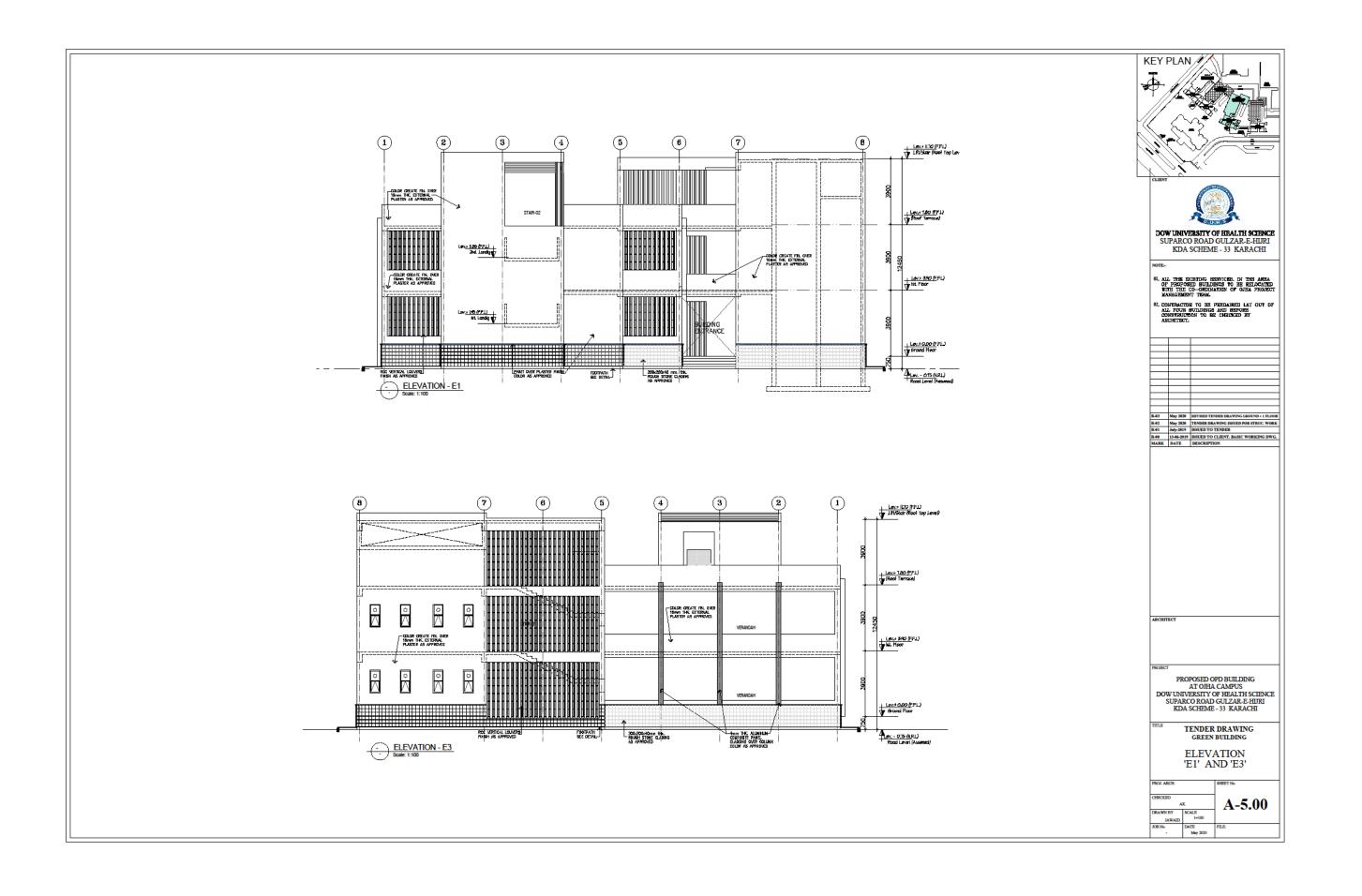
OPD XMS	BUILDING OJHA CAM	PUS DOW	FLOORS		SITY	KAKA	HI			C H I	י ע פ	) L	K _		COTS D		NI	SHES	i .	WAL	15				_	CEILI	NO.					
ZOING	ROOM NAME	М	ATERIALS							MATERIALS	,			MATE		AUO		HT.		MATER					MATER		NG		M	ST. SUSP.HT RE	MARKS	
ROOM NO:		0	A-Somm 80 B-Somm 80 8/AL Terkett 9- Optim 2mm	FLOOR (300mm300mm)	S (ENVICRETE) m SQ (MATRIC) THE (25mm x 25mm)	YSTRIAL GLAZING R M.S FRAME NARBLE	NAME TO THE WIN WANTE EXE.  TO THE THE WANTE TO THE TANK	Sonn High sonn High	TILE G-WETE DENDIT TILE G-WEY CENDIT E-DANIEDED R-SOLD R-SOLD	KB W/PIGMENT	ISED SYDETING III SIQ (MATRIC)	All Tarkett Propertions	1 STD 1	( SIZE AS PER DARWING )	100mm 100mm 100mm 100mm	(SIZE AS PER DARWING)	7 P-701.	a - 480mm	9 - Buumm	JIE	CI OR ROBILAC	G-G-055Y M-MATT, FIN.		STE PAND.	YSTEM (BOOmmXBDOmmTLES)		ATH PAIRT VEHEER CI OR EQUIVALARIT	C-CLUSSY N=MAT, FIR,	ылт	DUR SCHEME	, ,	GLINT CHARLES TO SERVICE AND ADDRESS OF THE PARTY OF THE
		- PORCELAIR TILE OR GRAVITE TILE 6001 LA MARBLE TILE 6001 A MARBLE TILE 6001 CONGRETE BASE -	O GLASS TILE UNIYL ANTIBACTEP	D FOAM CONCRETE DIDENTIFE	CONCRETE PAVERS TO PABLE TILE ZODM TO CARAZED CERANIC	NO HOOLA VACODEN 122 123 124 125 125 125 125 125 125 125 125 125 125	LANDING SYNTHETIC CAR	GRANITE 150mm	A GLAZED CERAMIC A WOODEN SQIFTING	CLASS TILE PLASTER SKIRTIN P.C.C. SYGRTING	PABLE TILE 200	SHITHERD CARROTTE	12 MAPBLE SKINTNG OF	GRANITE	Co MARBLE COPING	A G.CERAMIC TILE  MOOD PANELLING	SWITHER CARTE	בו ב	C MARBLE TILE	A GLAZED CERAMIC	A WINT EMULSION II	D ENAMEL PAINT	THE MEATHERSHIELD	ALIMIRUM COMPO	DAMPA CELING S' ACCOUSTICAL TILE	A CLASS SKY LIGHT	THE EMPLESON IN WHILE EMPLESON IN	D ENAME PANT	CD MEATHERSHIELD P			
	GROUND FLOOR (00)	12373	0 /	0 5 10	11 12 10	11 13 10	17/10	121.	7 7 3	0 / 0	3 12 1	7 10 10	17	2 3	5 0	/	9 10 1	<del>'   </del>	2 3	7 3	5 / 6	3 10	11112	13 14 1	J 1 2	7 7	3 0 7	0 5	14 11 12	13		DOW UNIVERSITY OF HEALTH SUPARCO ROAD GULZAR
		1ь						,	3				1a		5b			1a=1200mm 2 =2400mm			8		12					8	11			KDA SCHEME - 33 KA
		1b 1b				+++		1 3	3				1a	-	5b 5b			1200mm			8	_	12		++-		-	8 B	11			NOTE:-
		1ь	+	+	++	+++	+++	113	3		+++	+	17 1c	-	5a	++	+	1200mm	+	+	8	-	12	++	+	+	++	8	11			01, ALL THE EXISTING SERVICES, IN OF PROPOSED HULLINGS TO HE MITH THE CO-ORDINATION OF ON MANAGEMENT TEAM.
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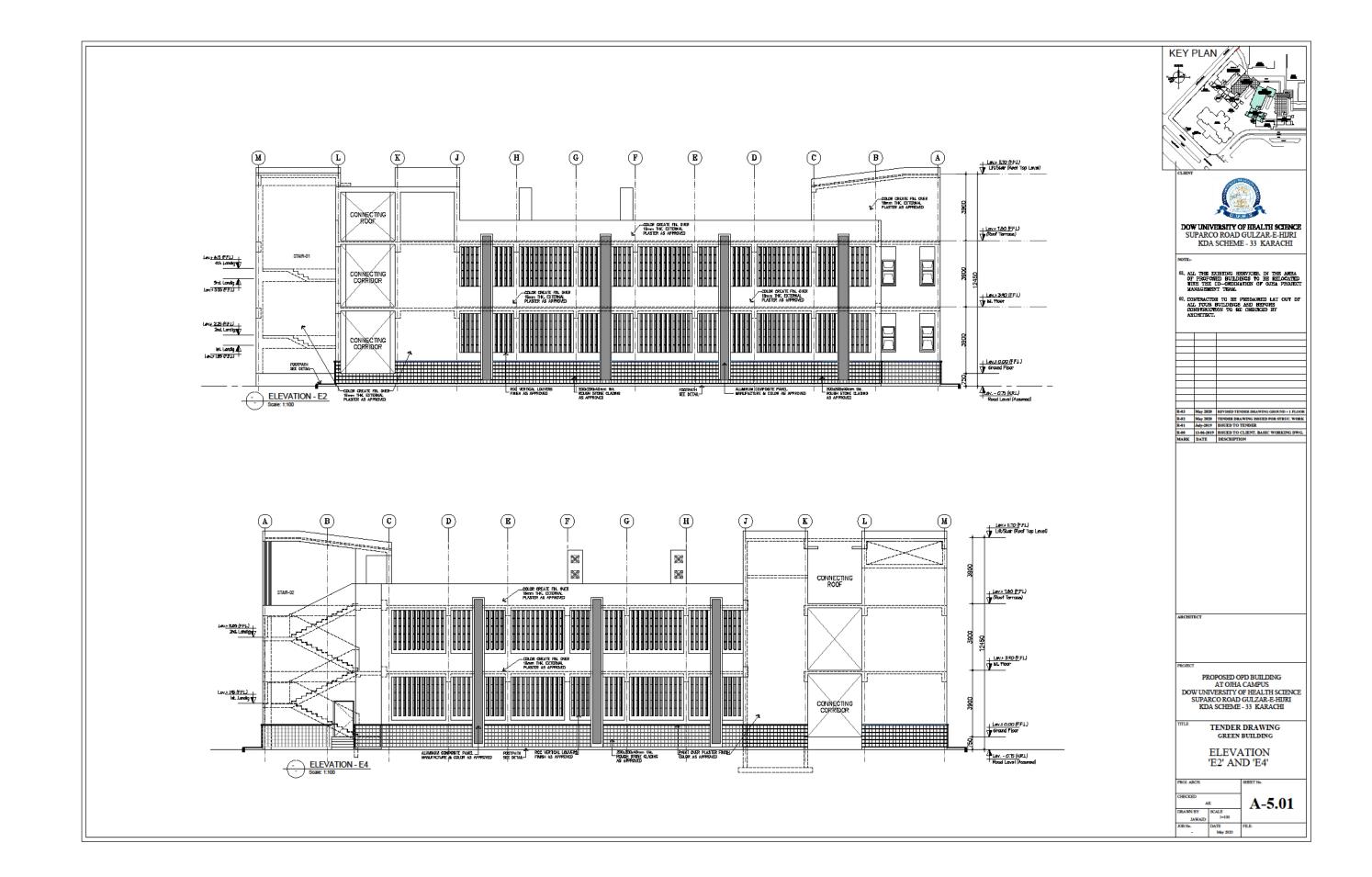


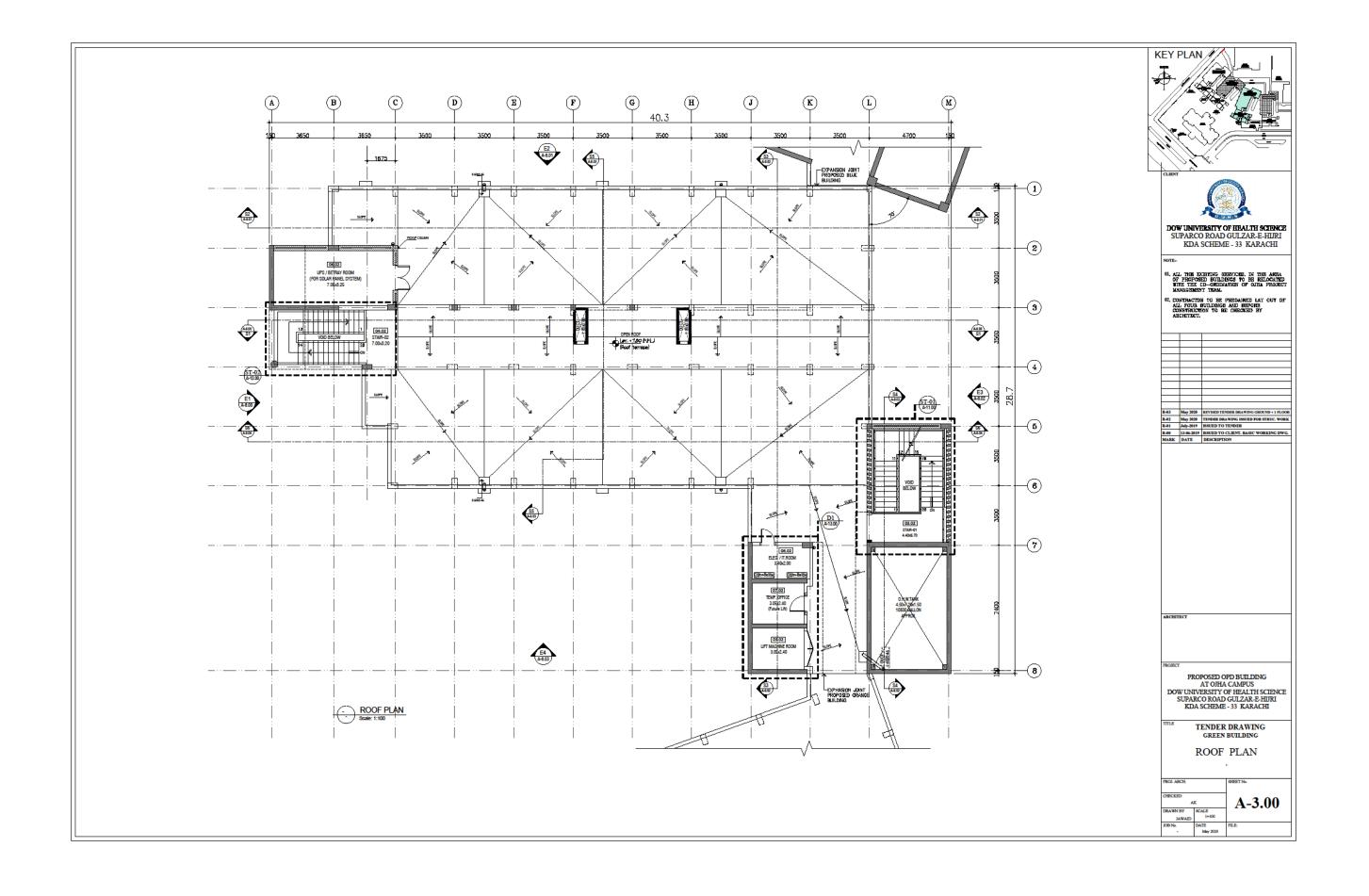


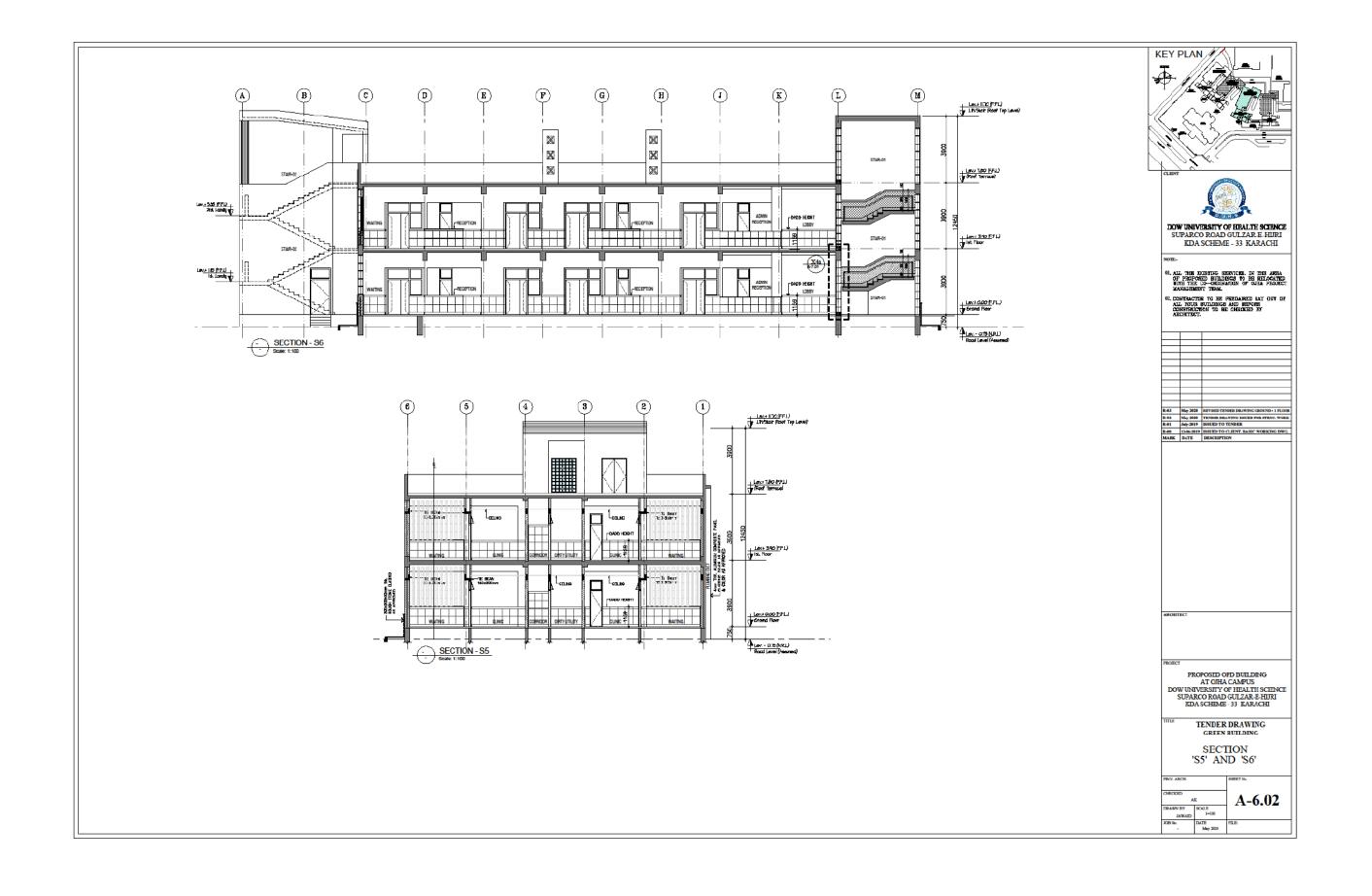


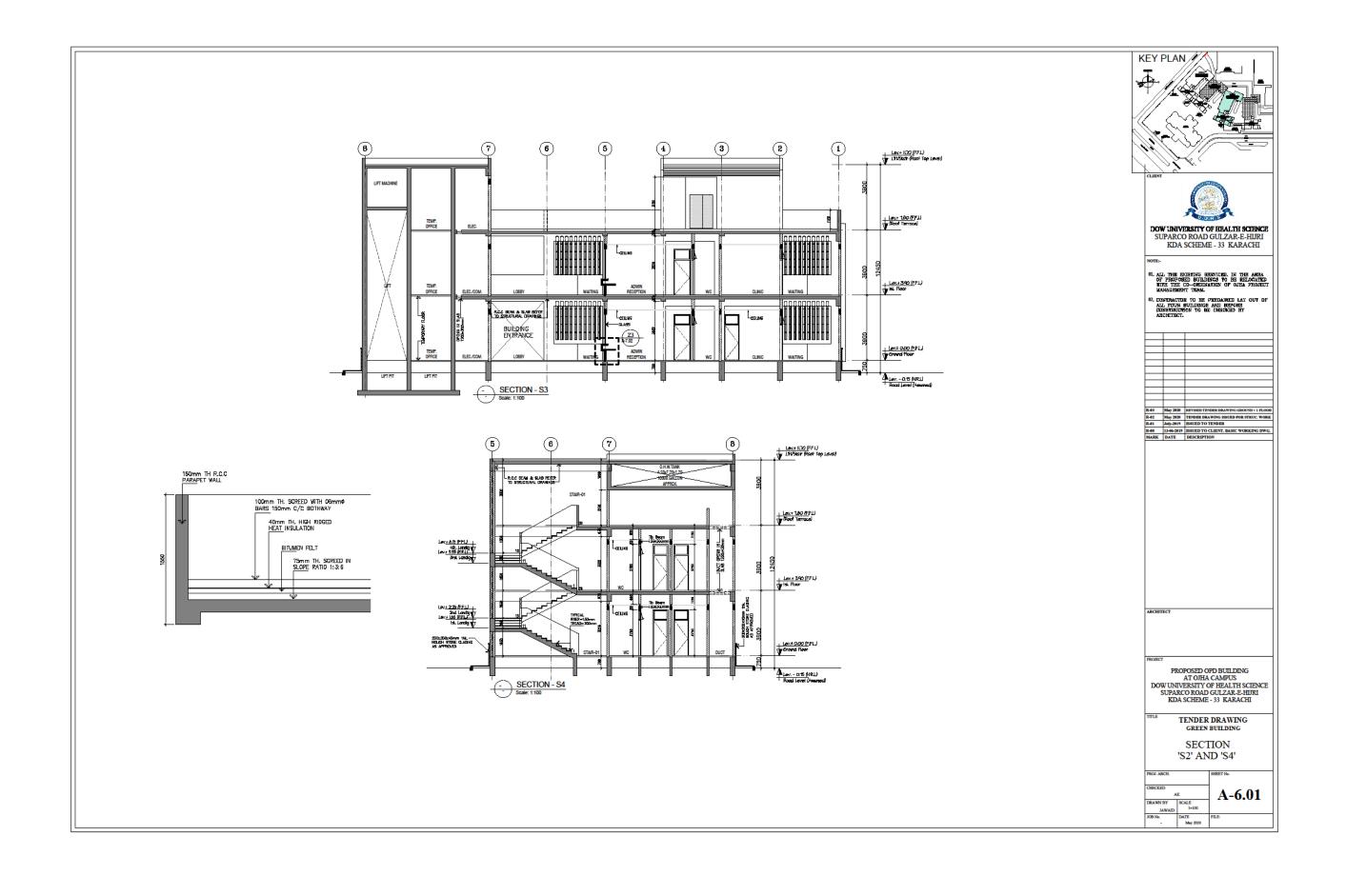


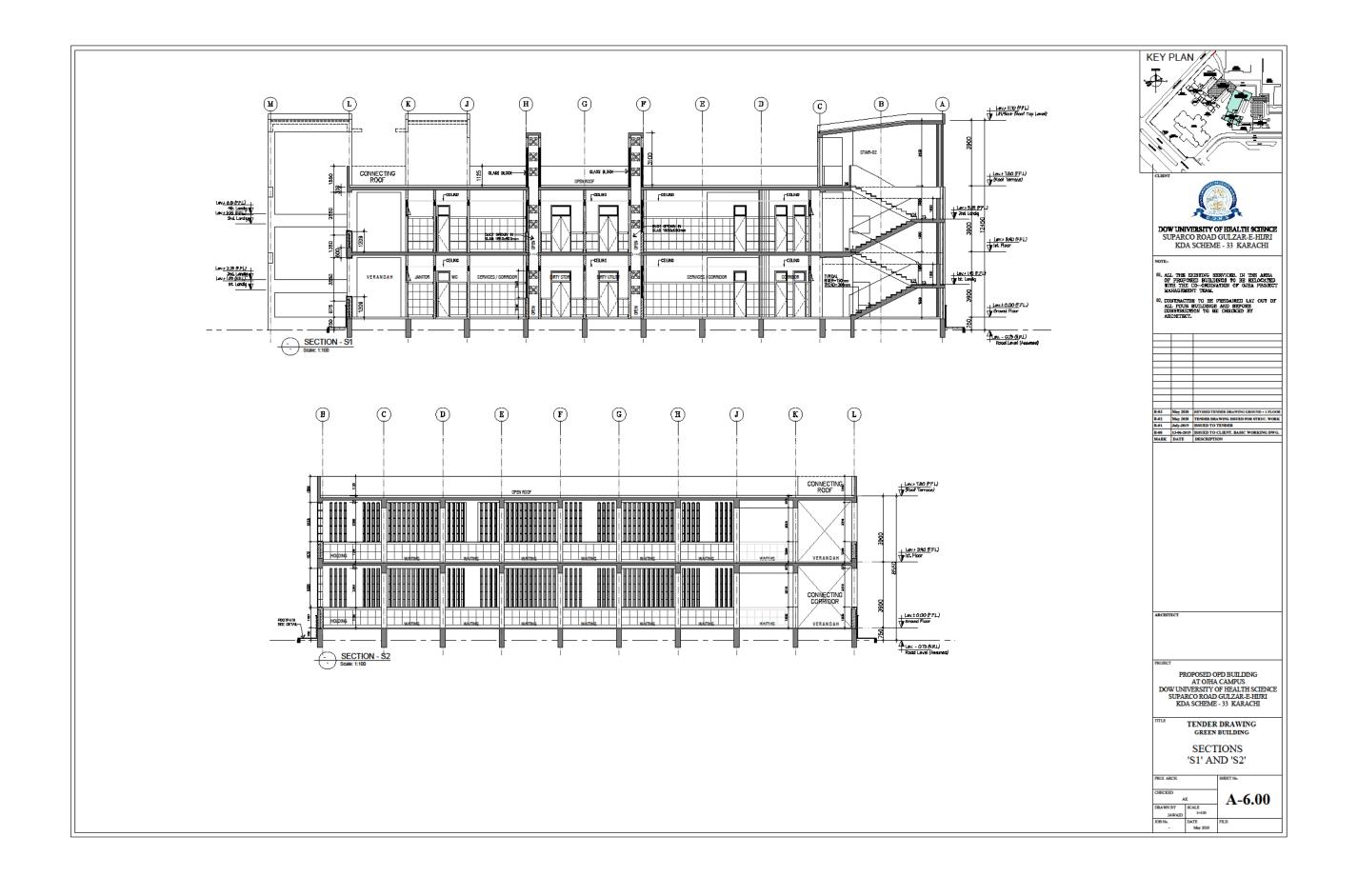


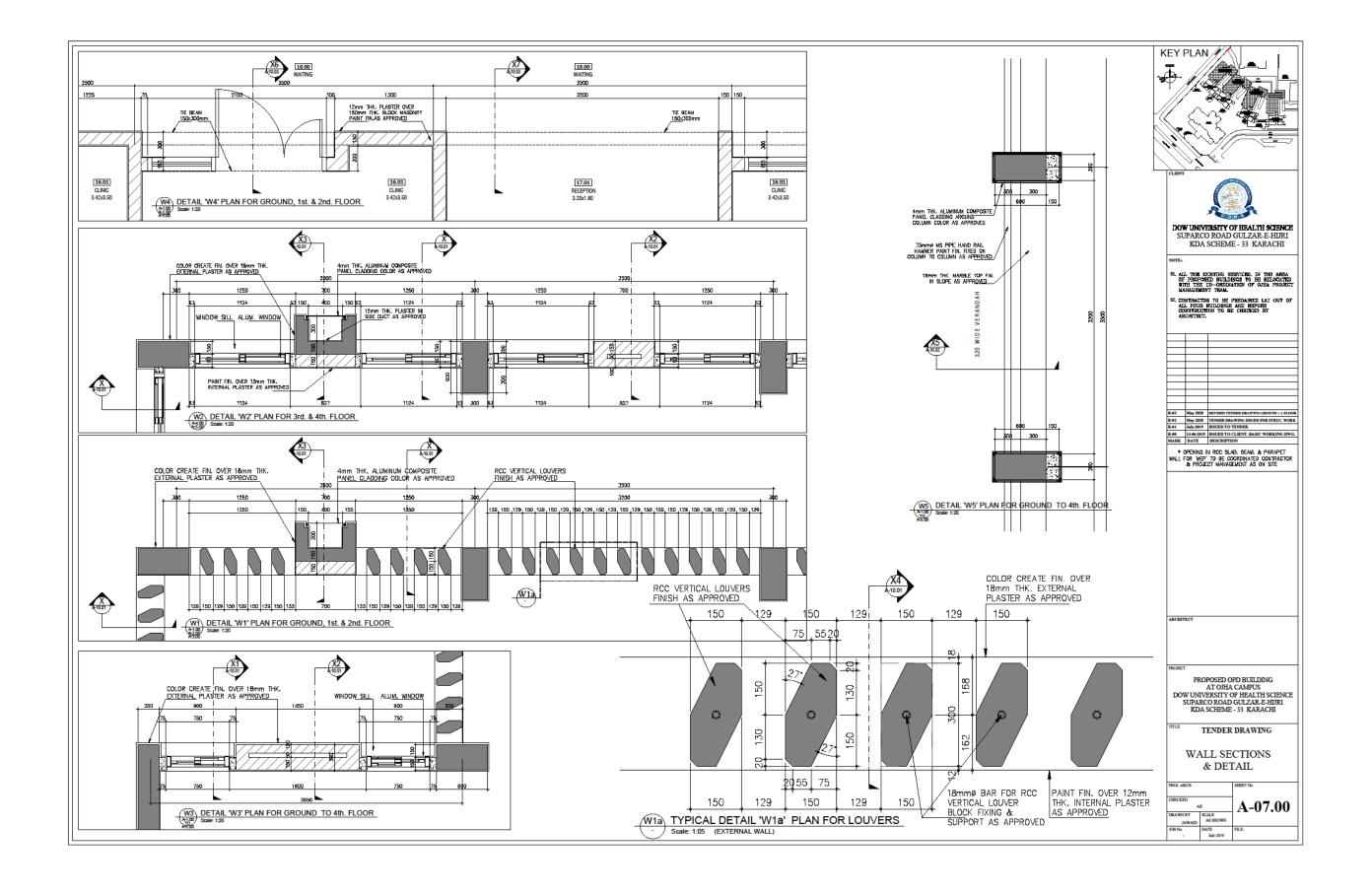


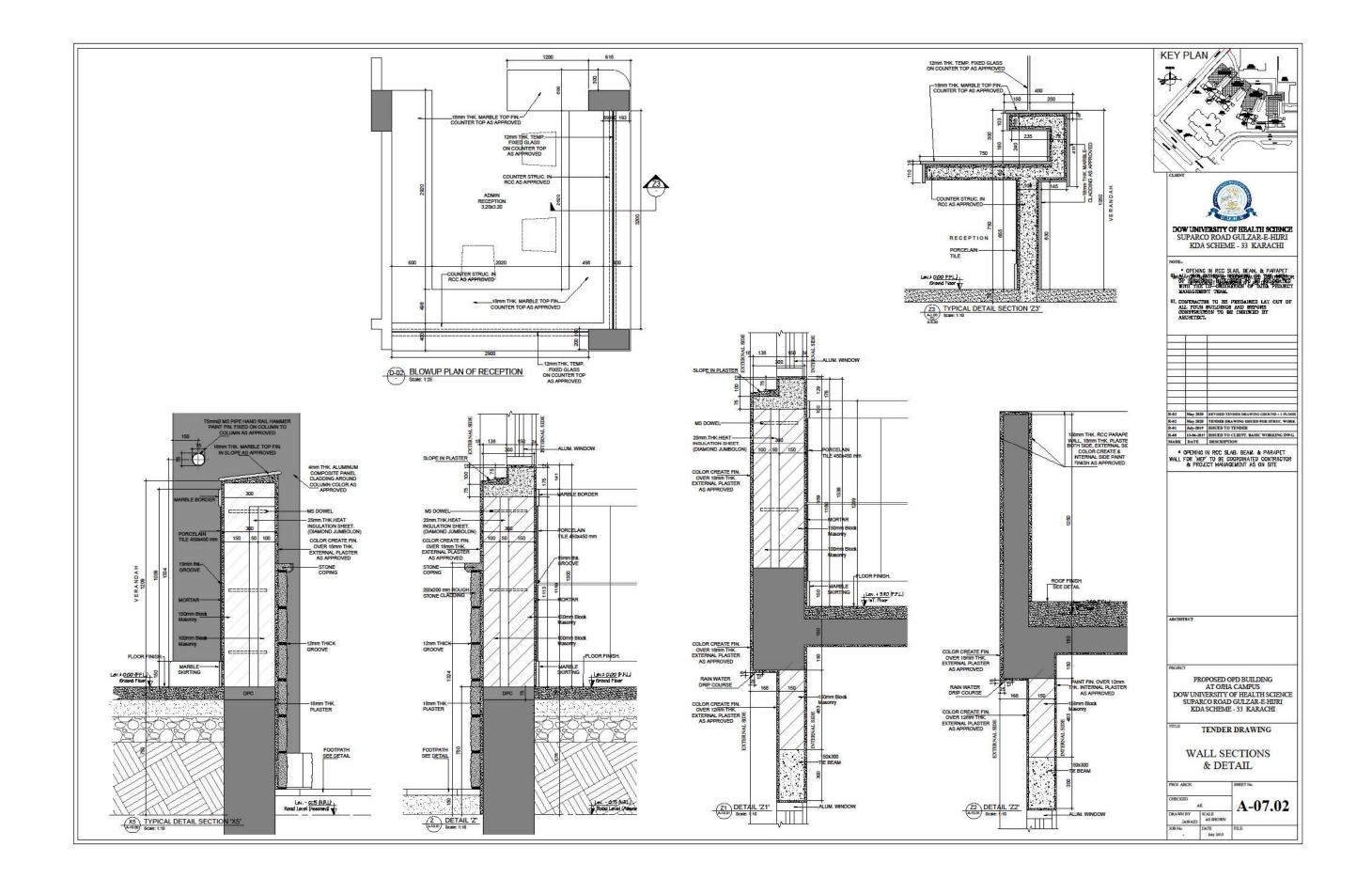


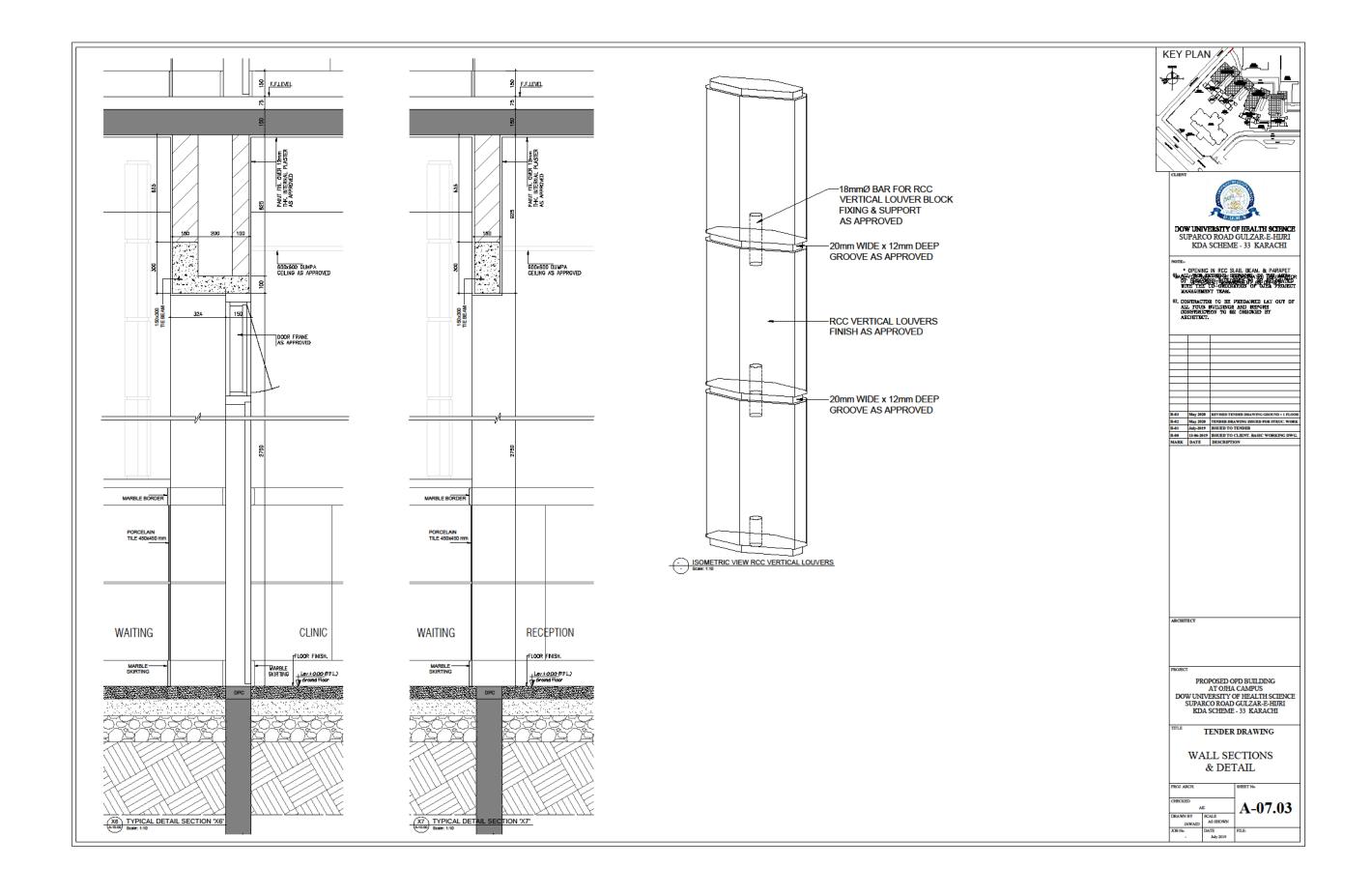


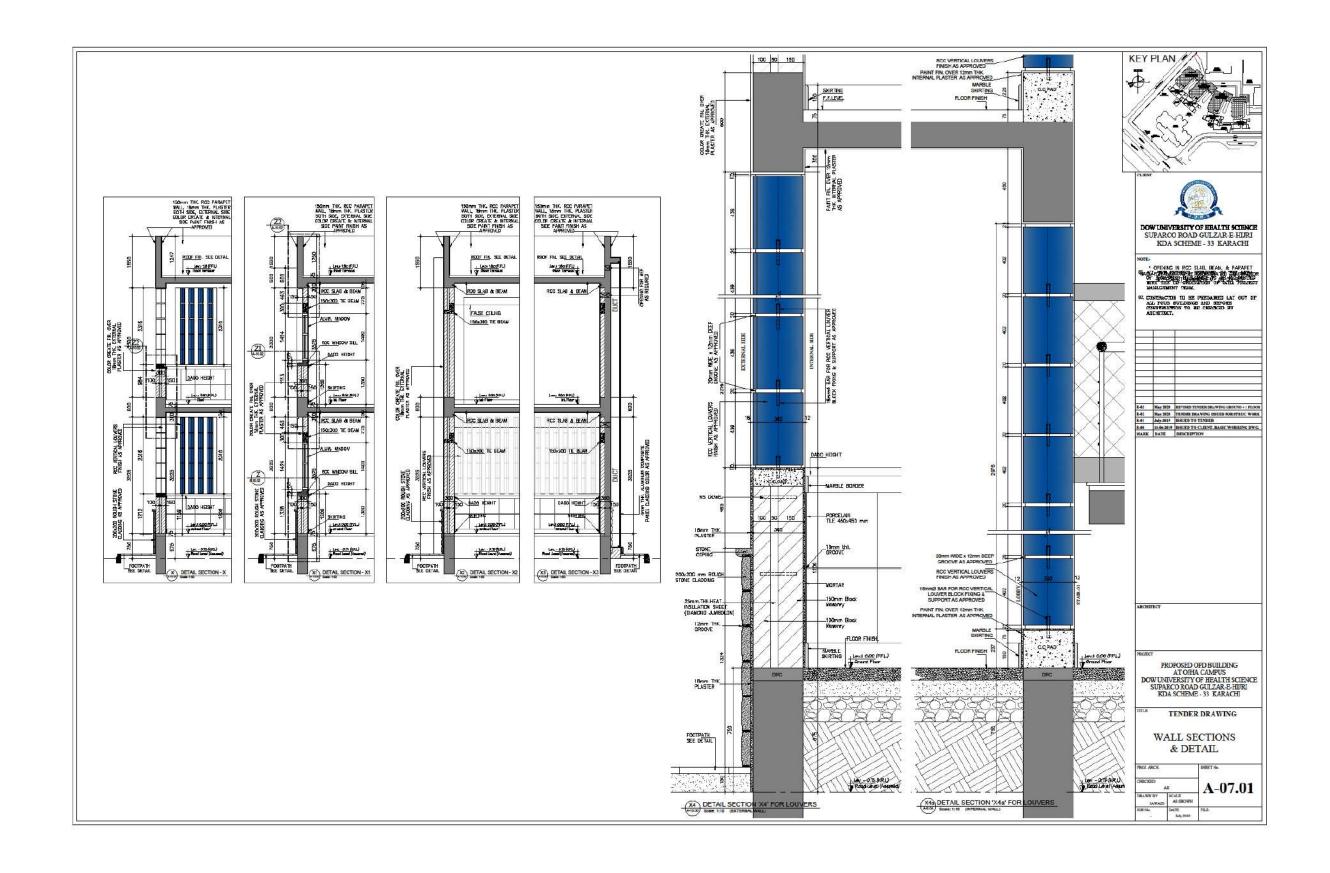


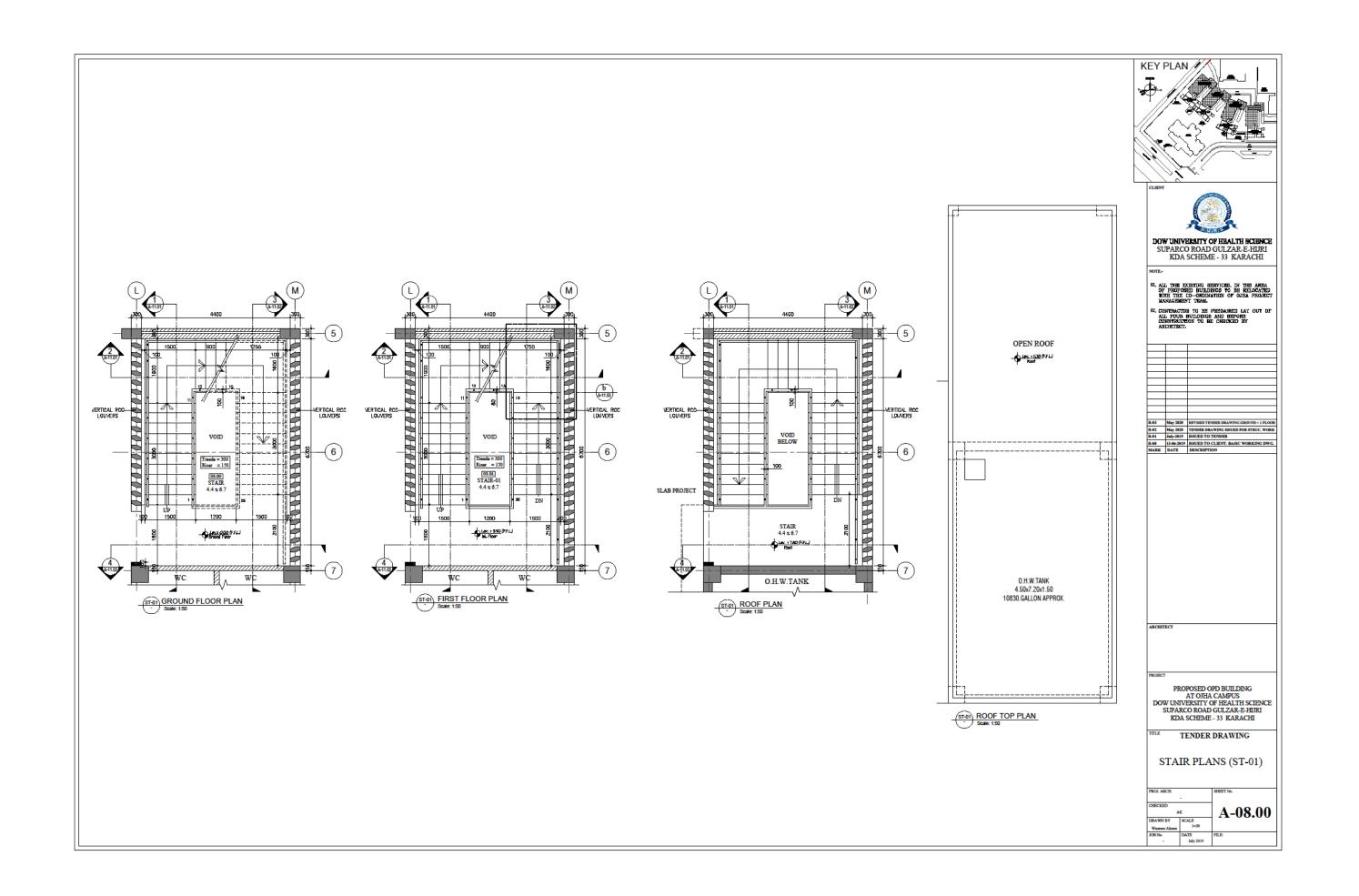


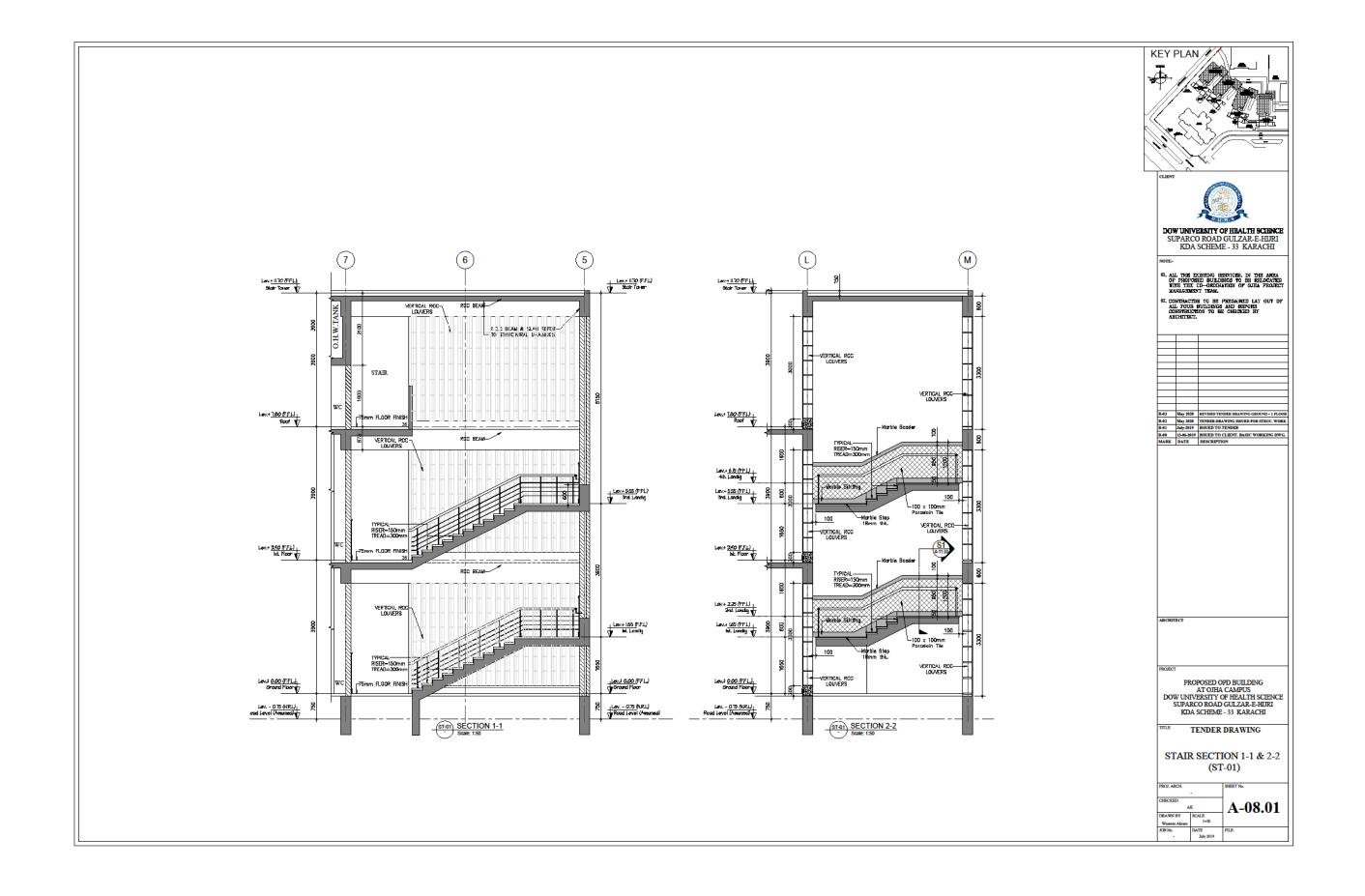


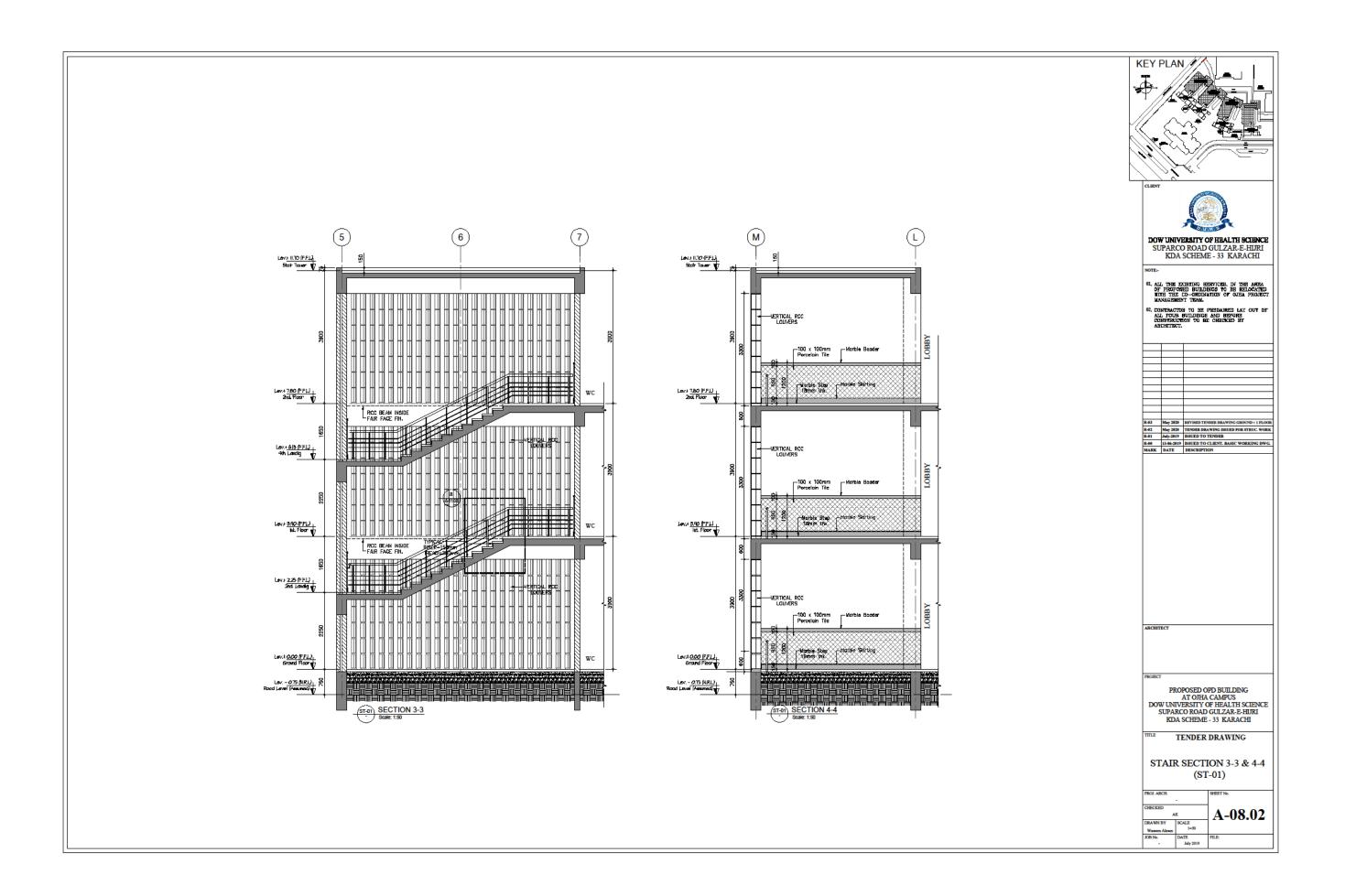


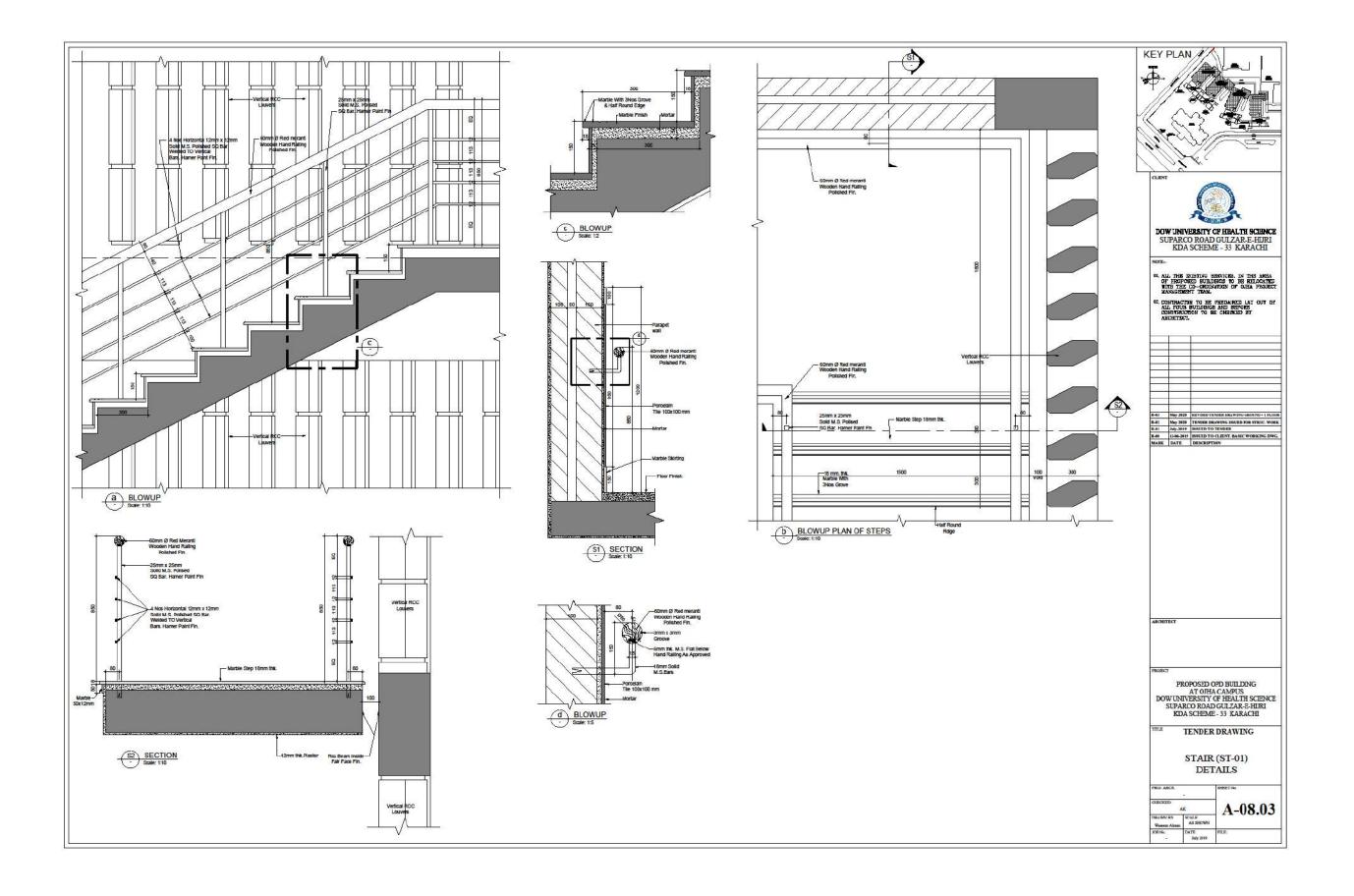


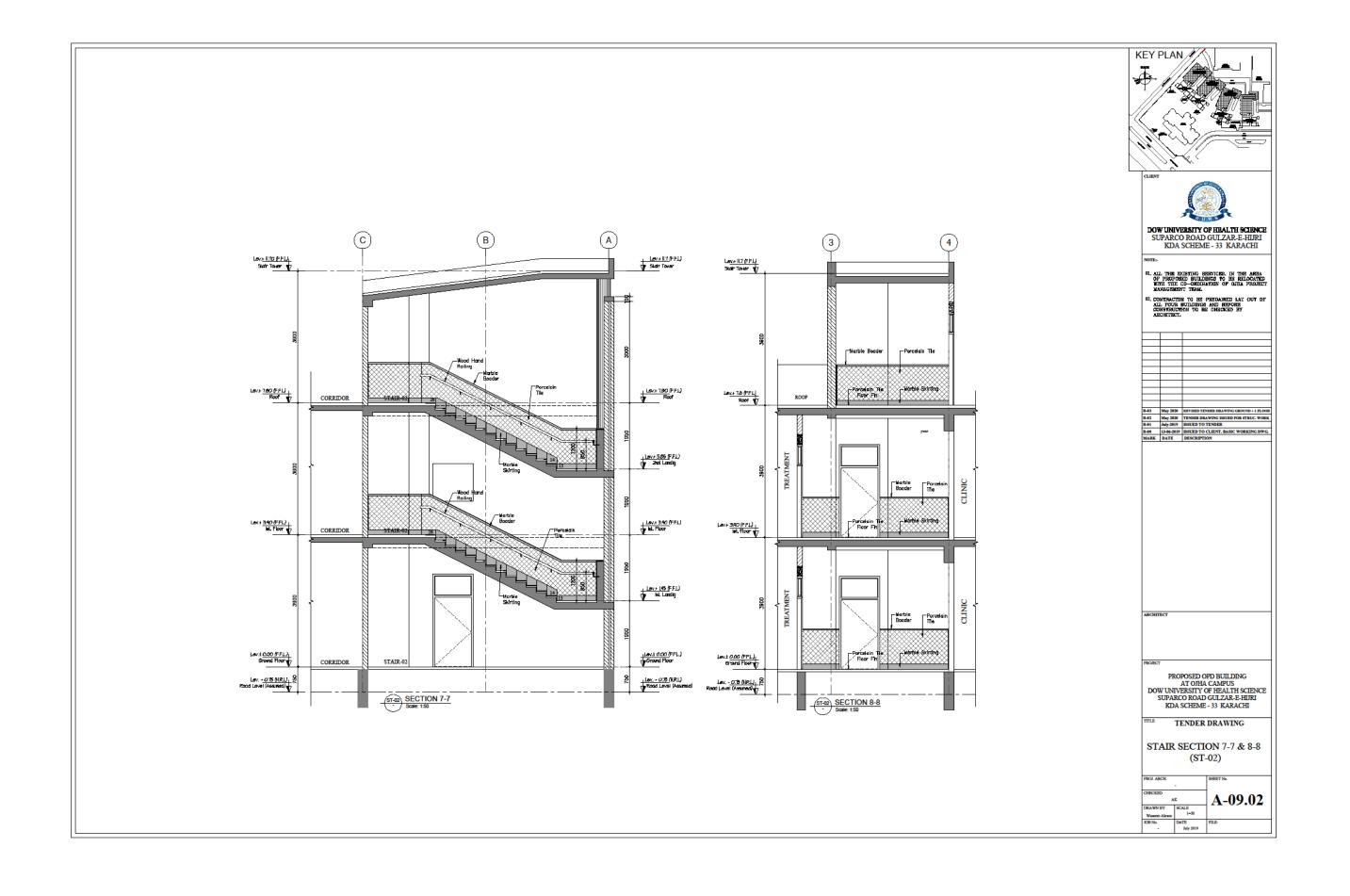


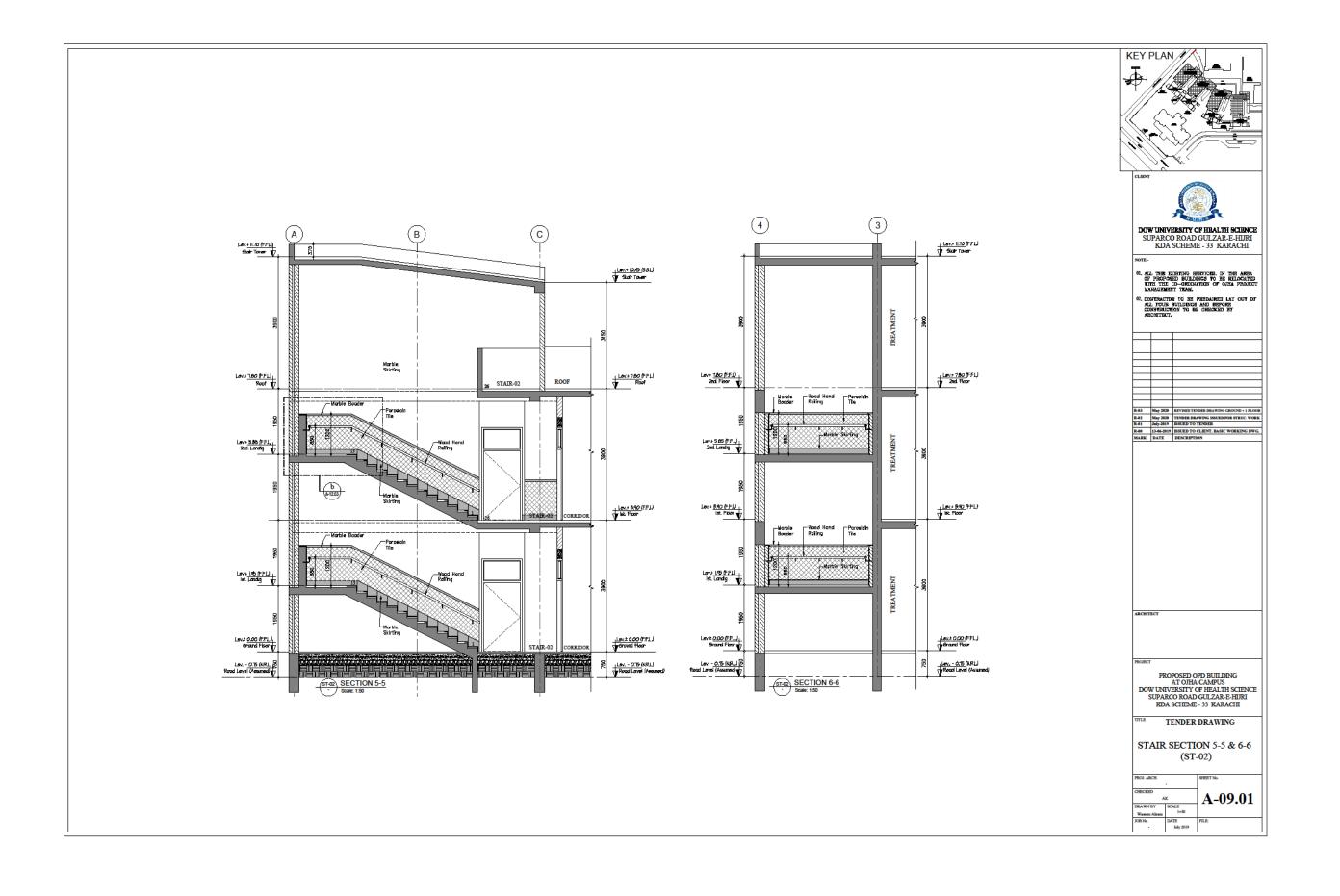


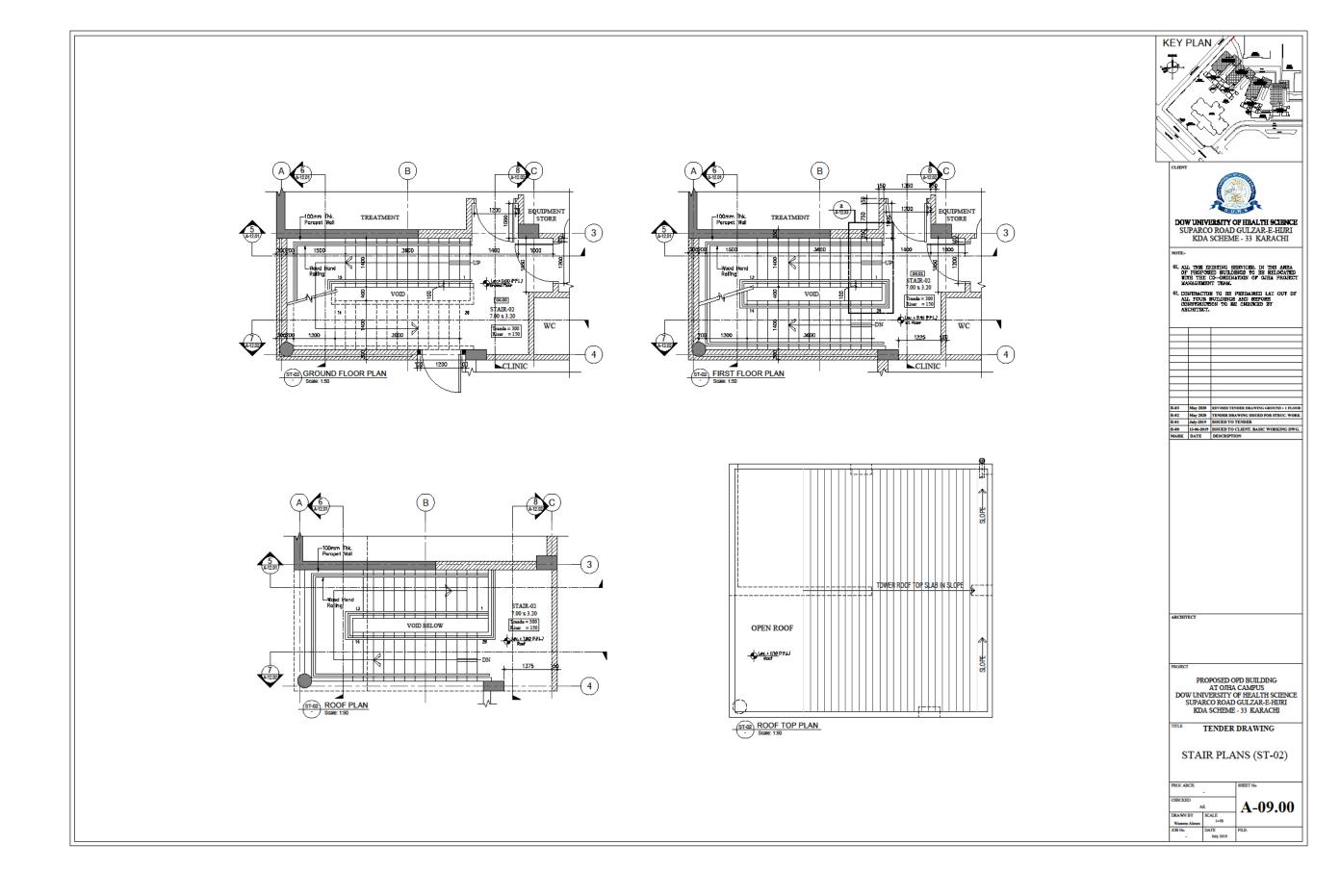


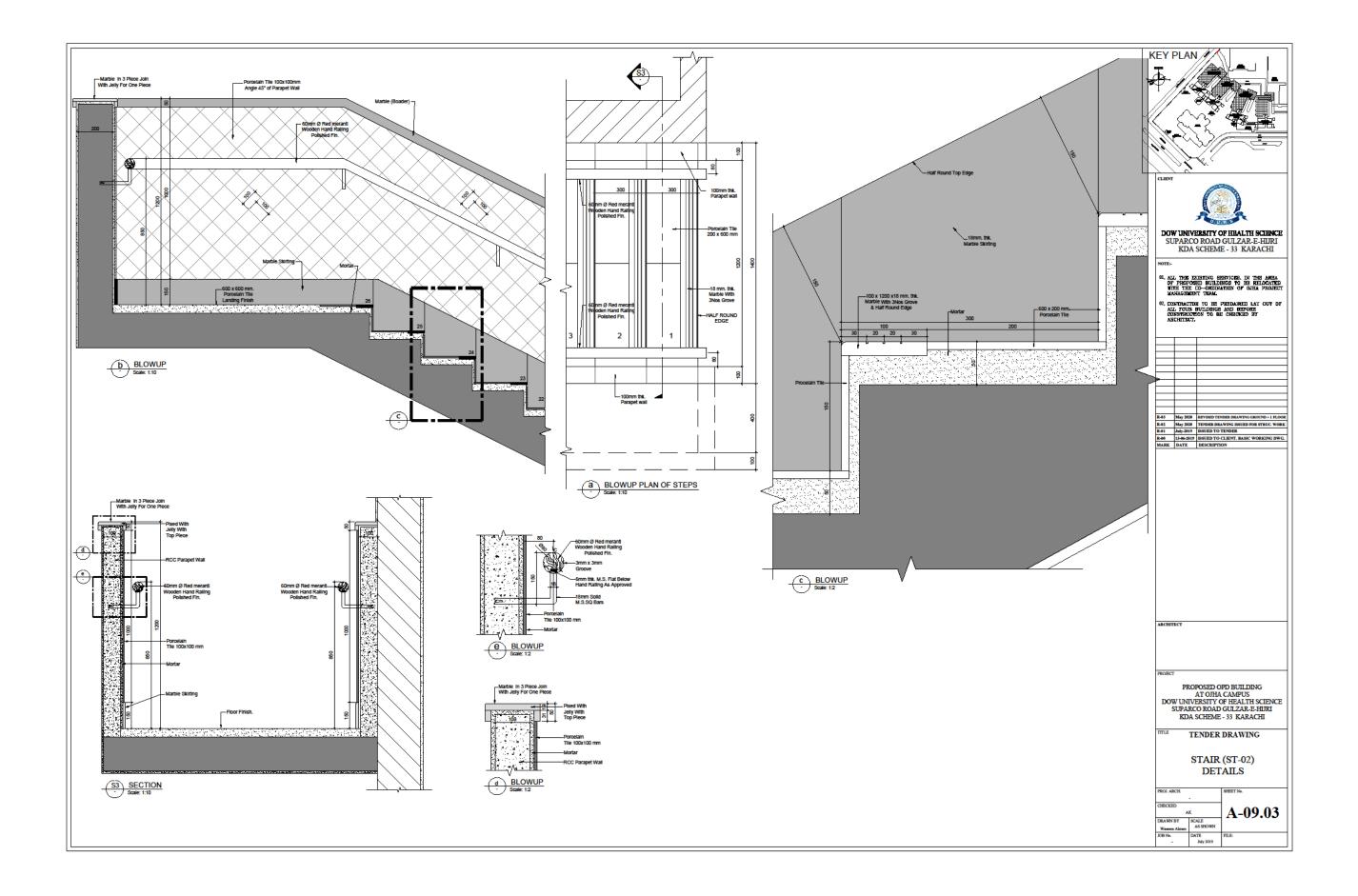


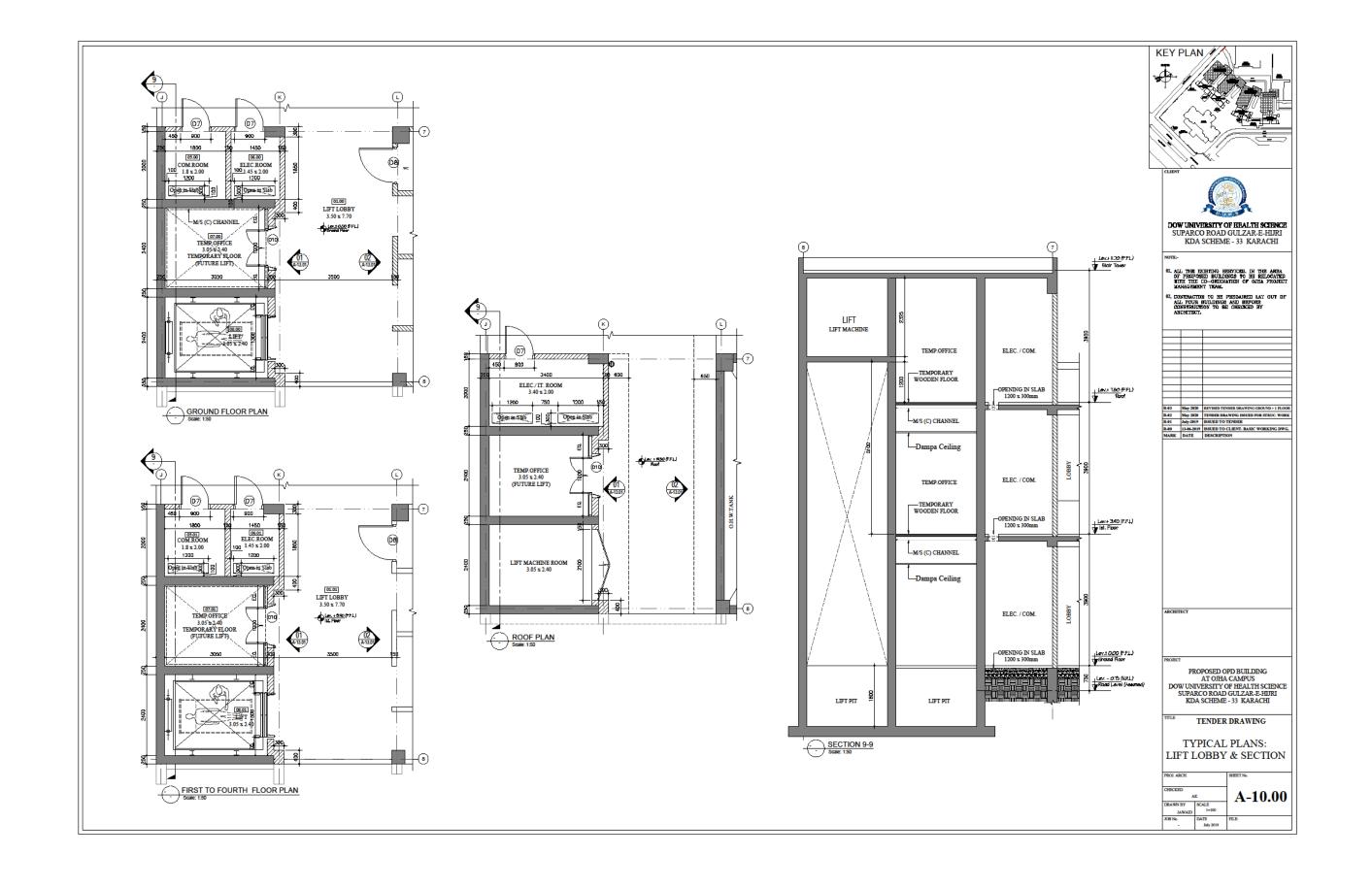




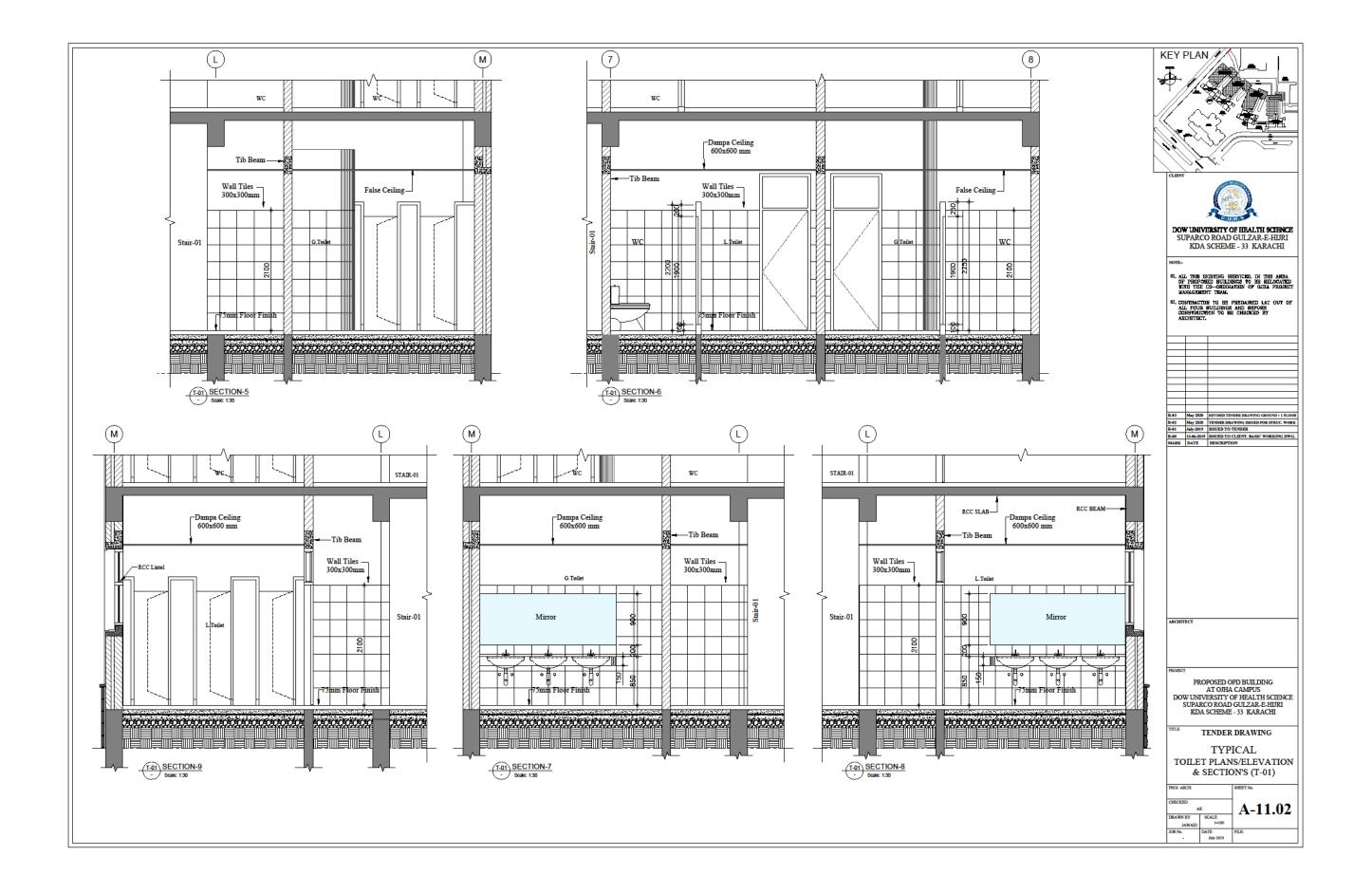


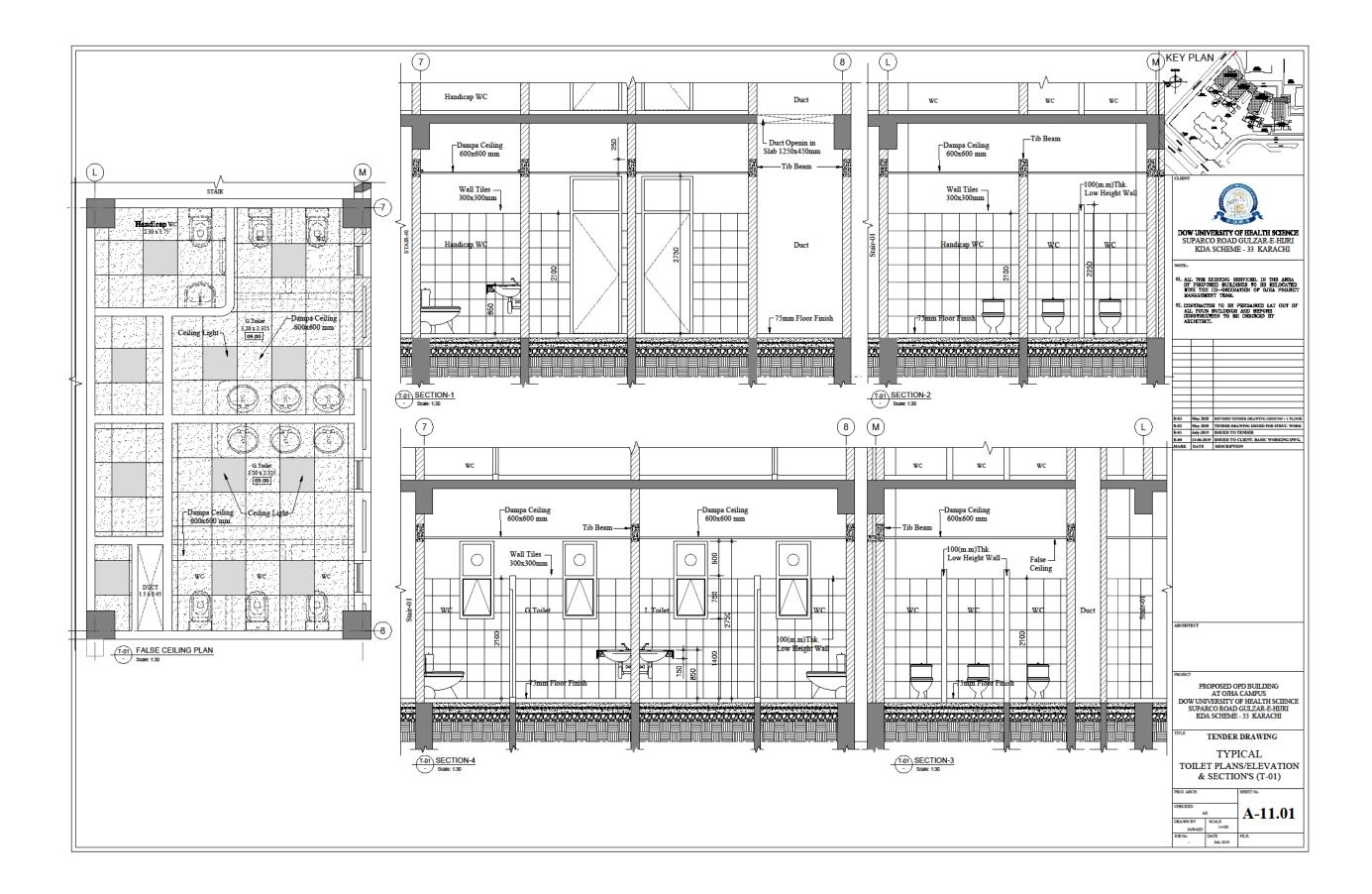


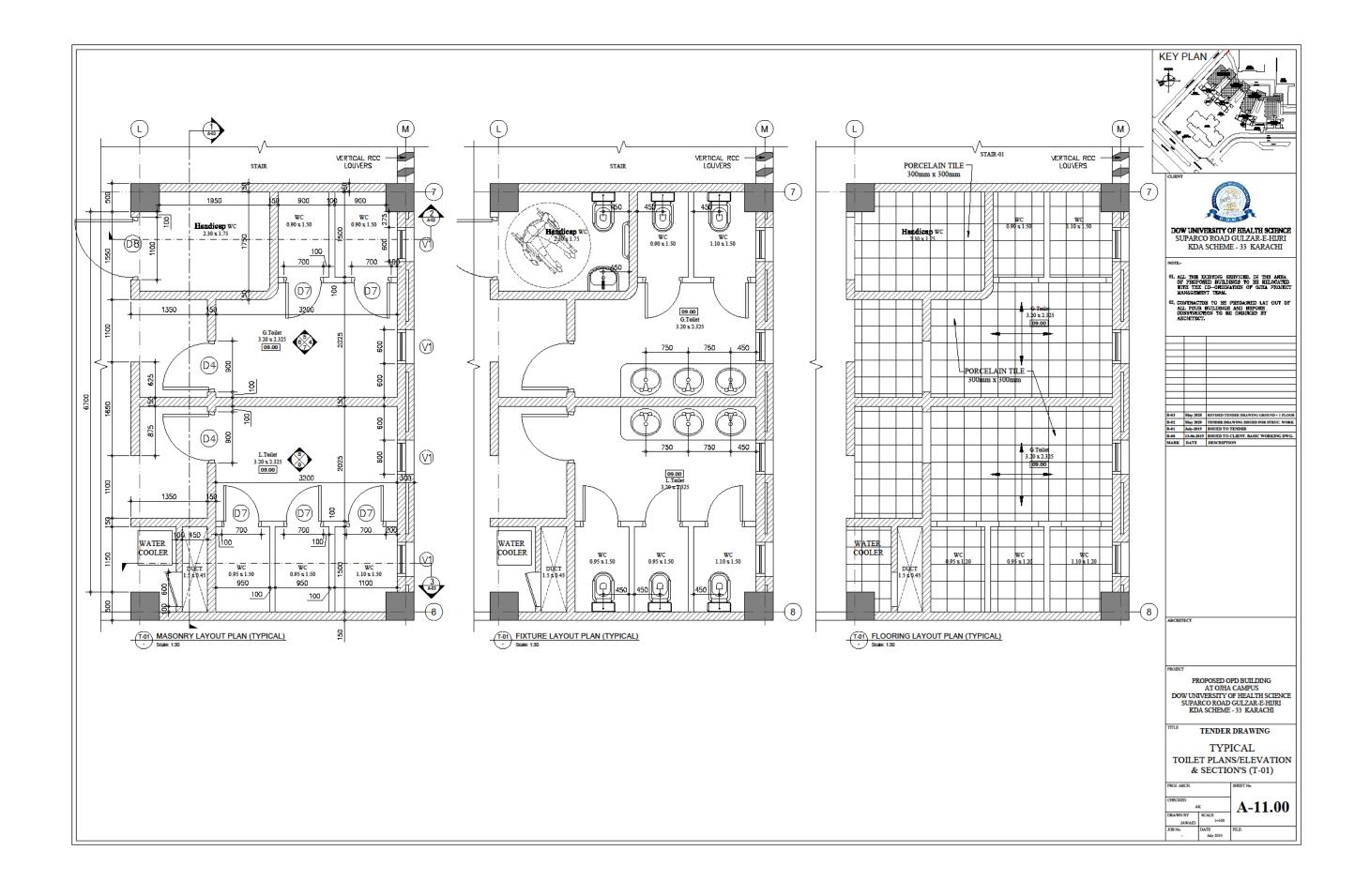


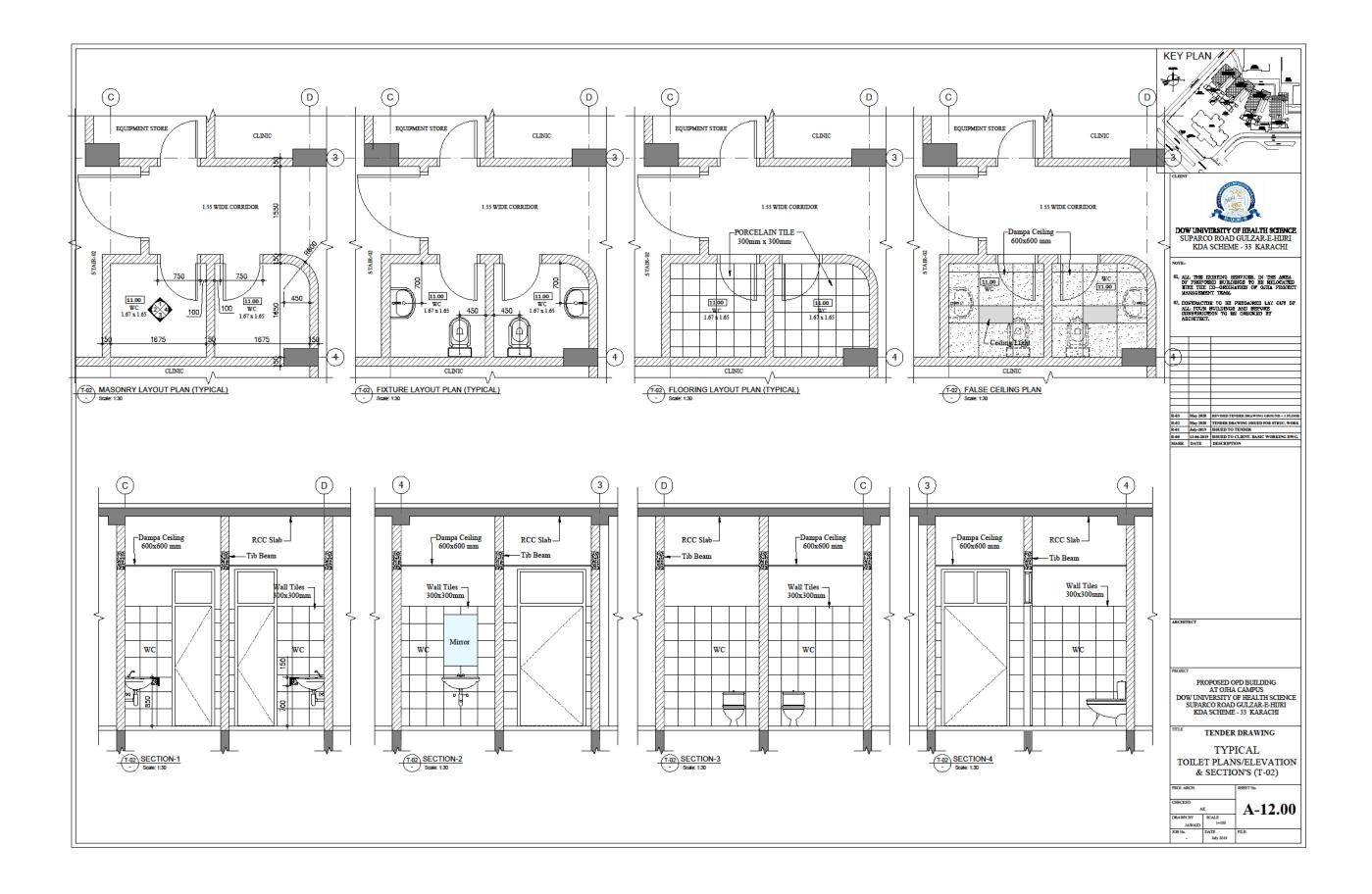


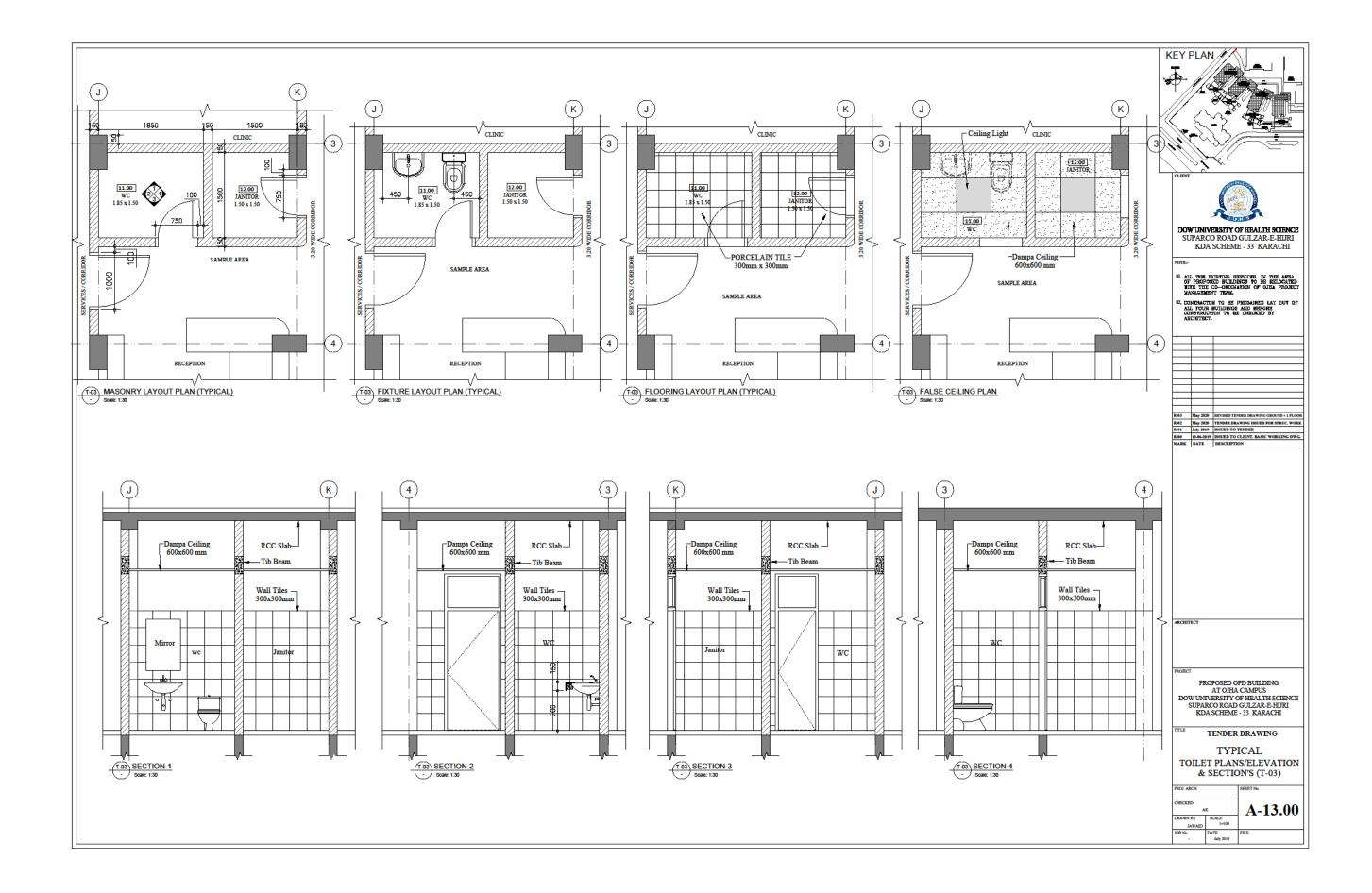


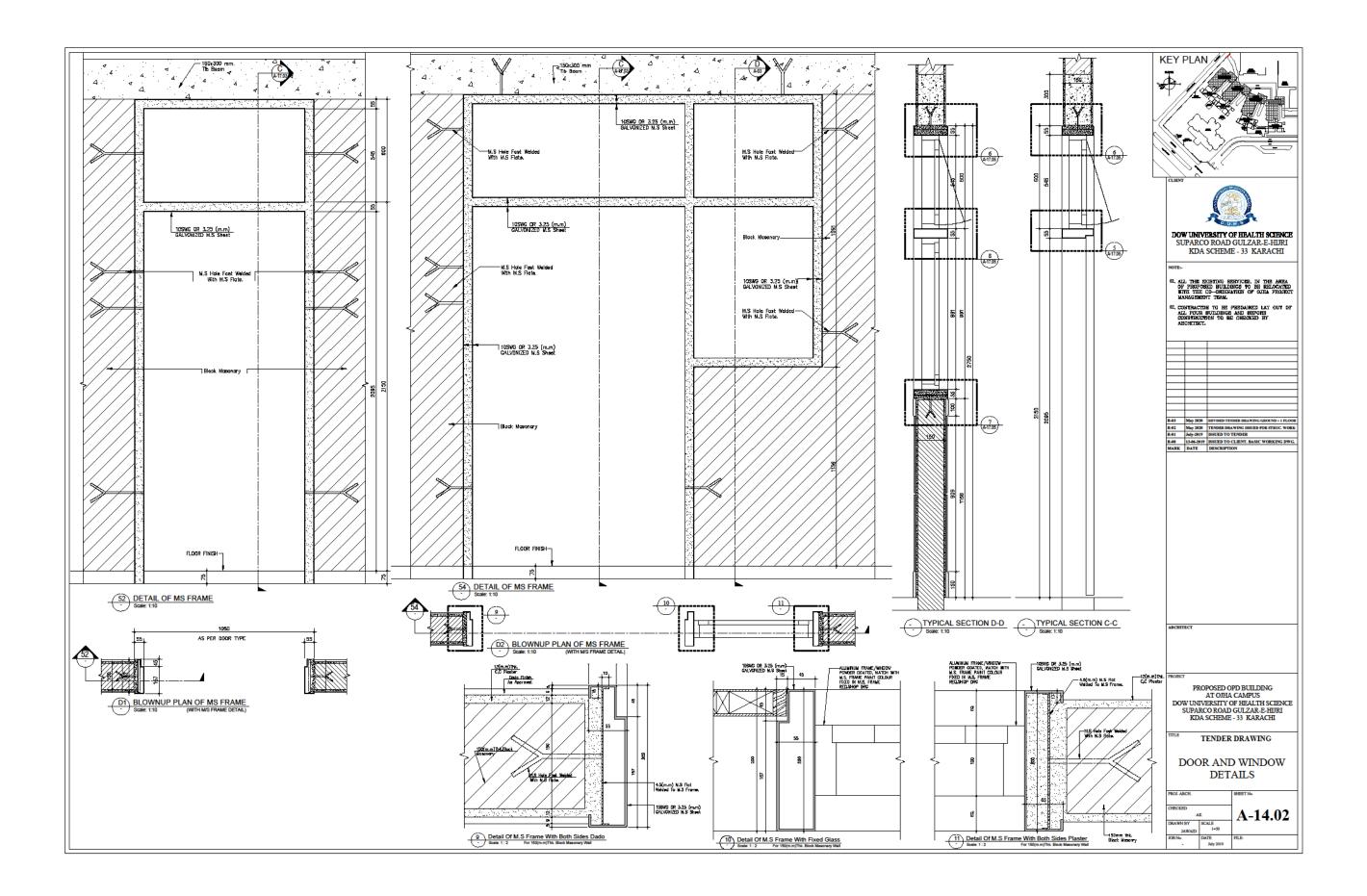


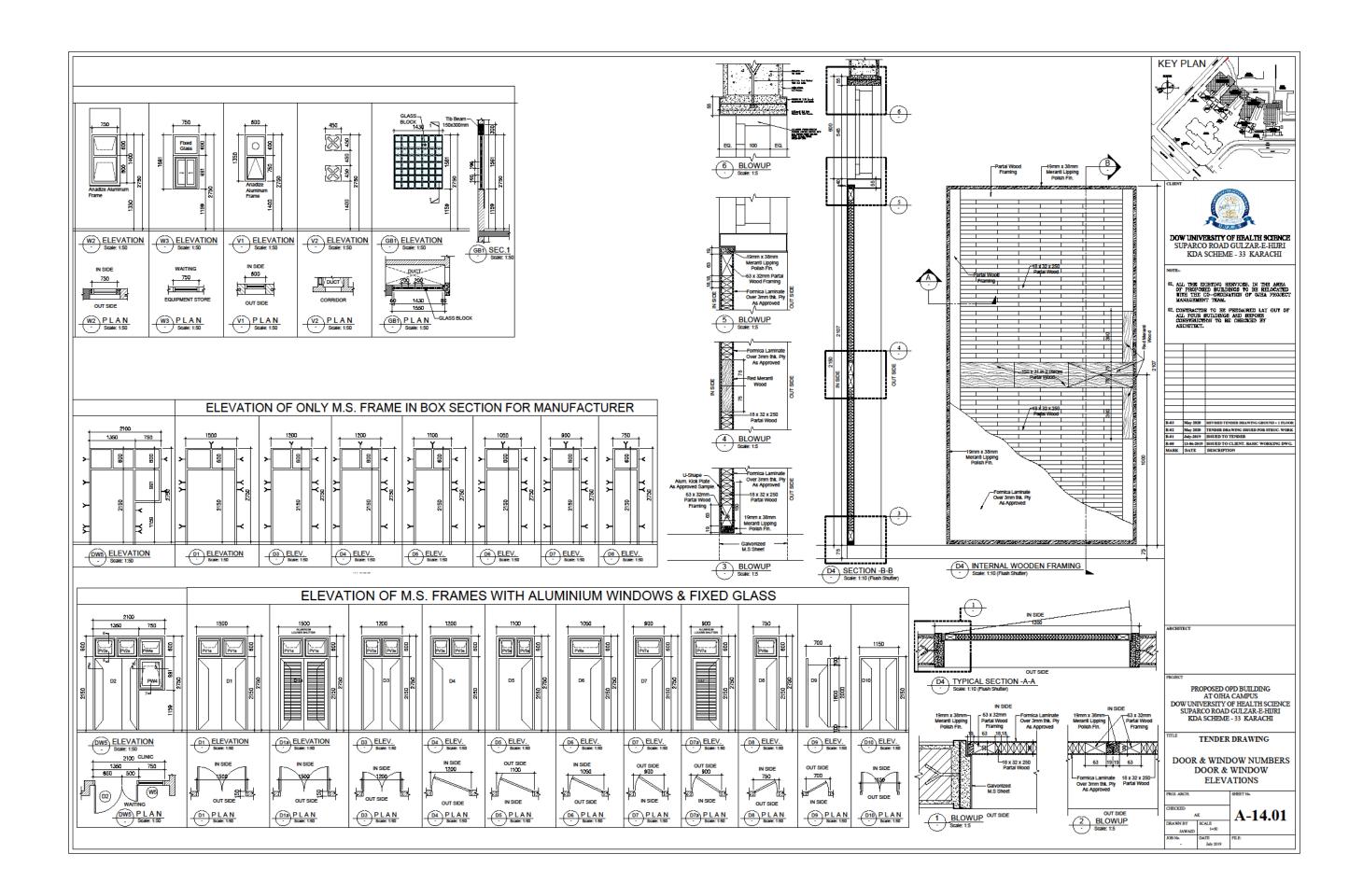


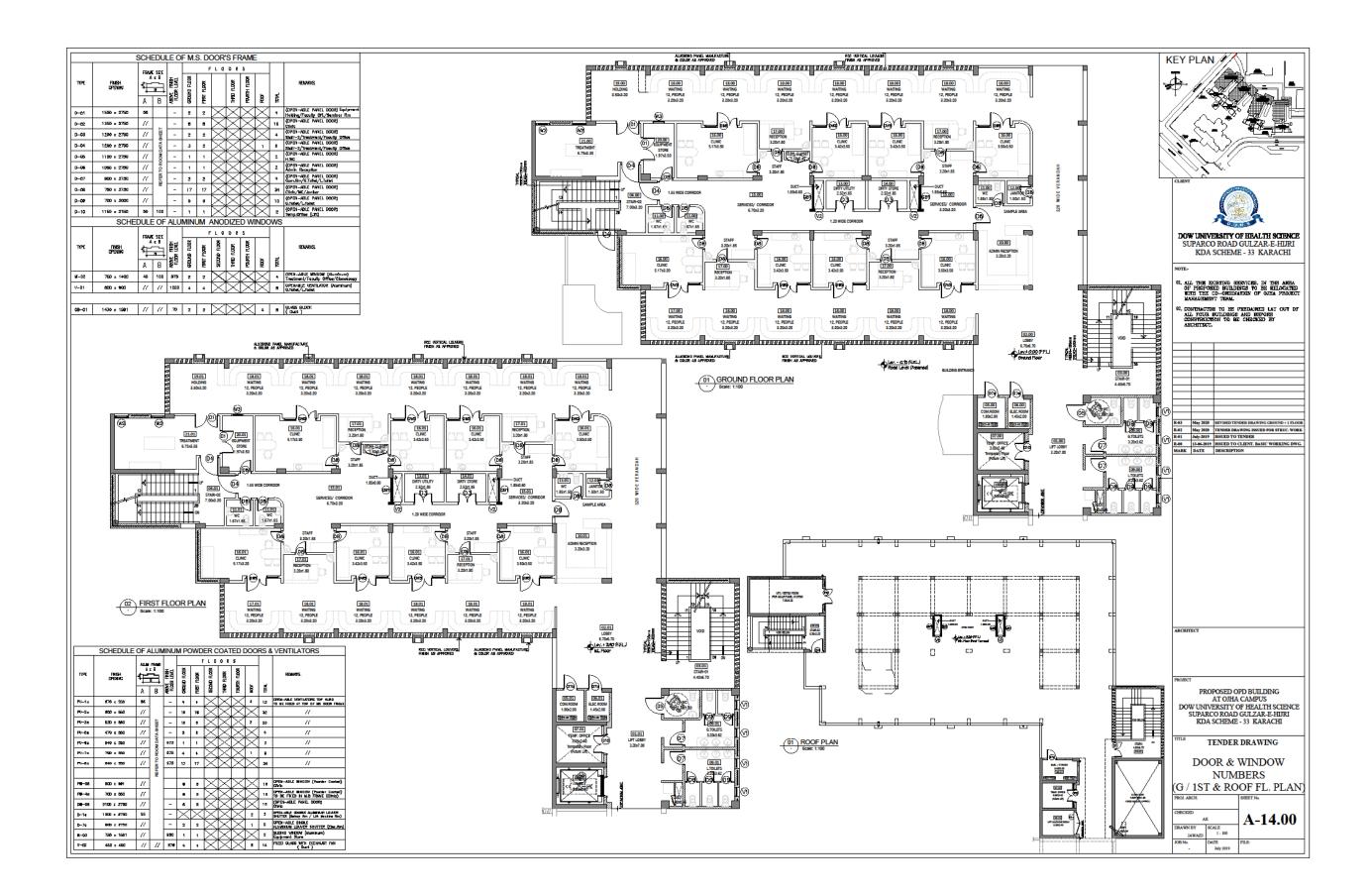


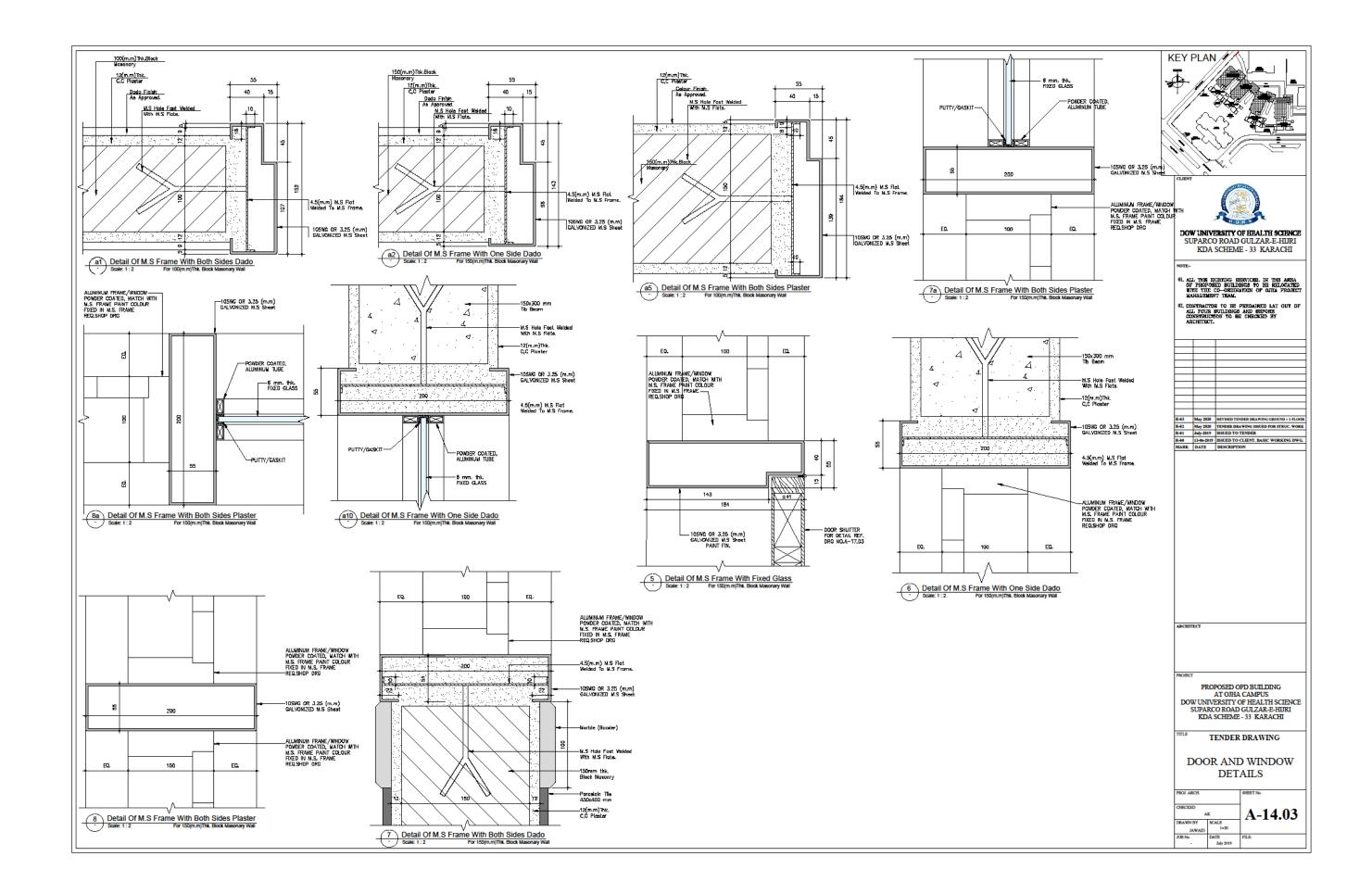


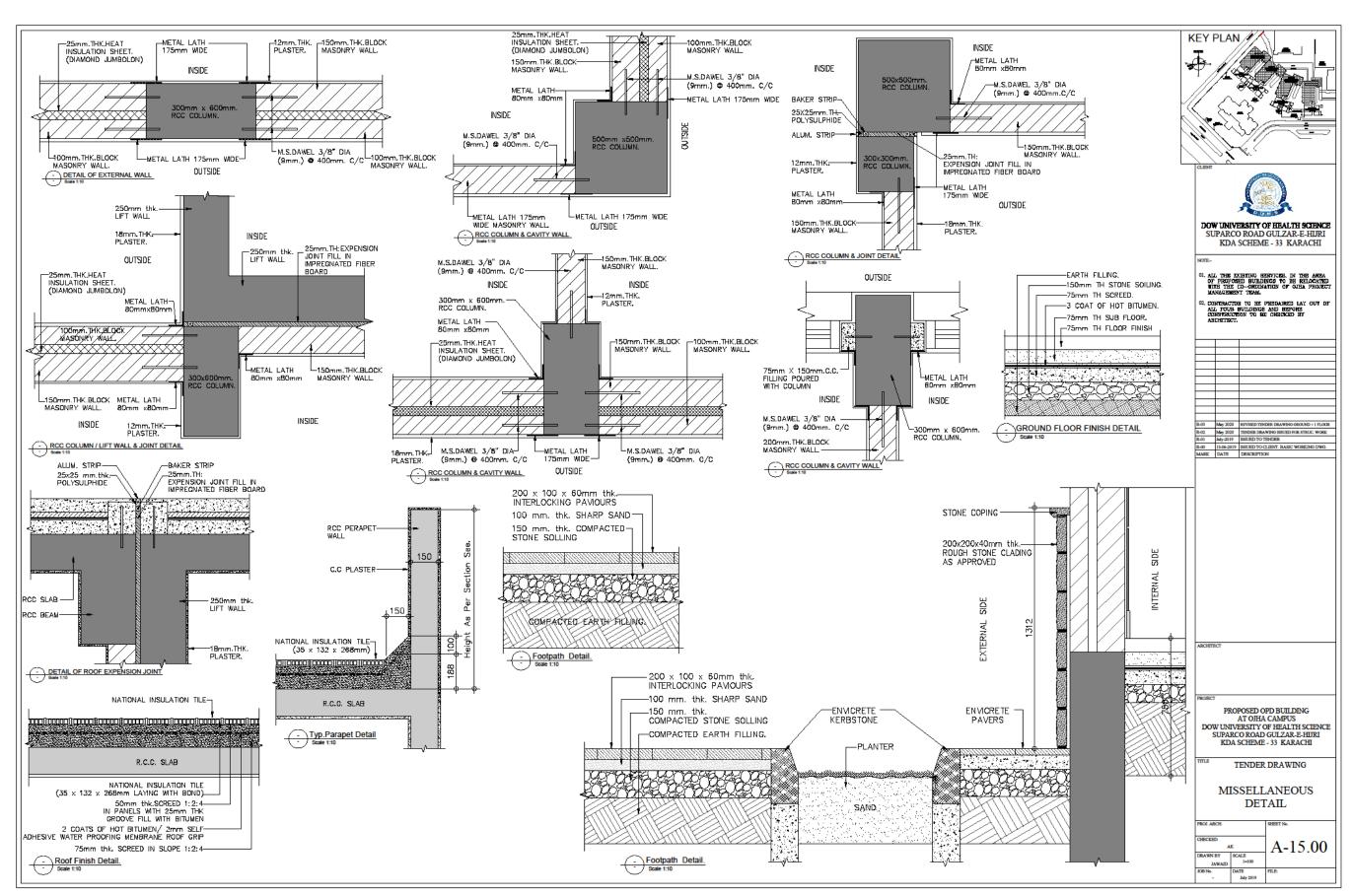


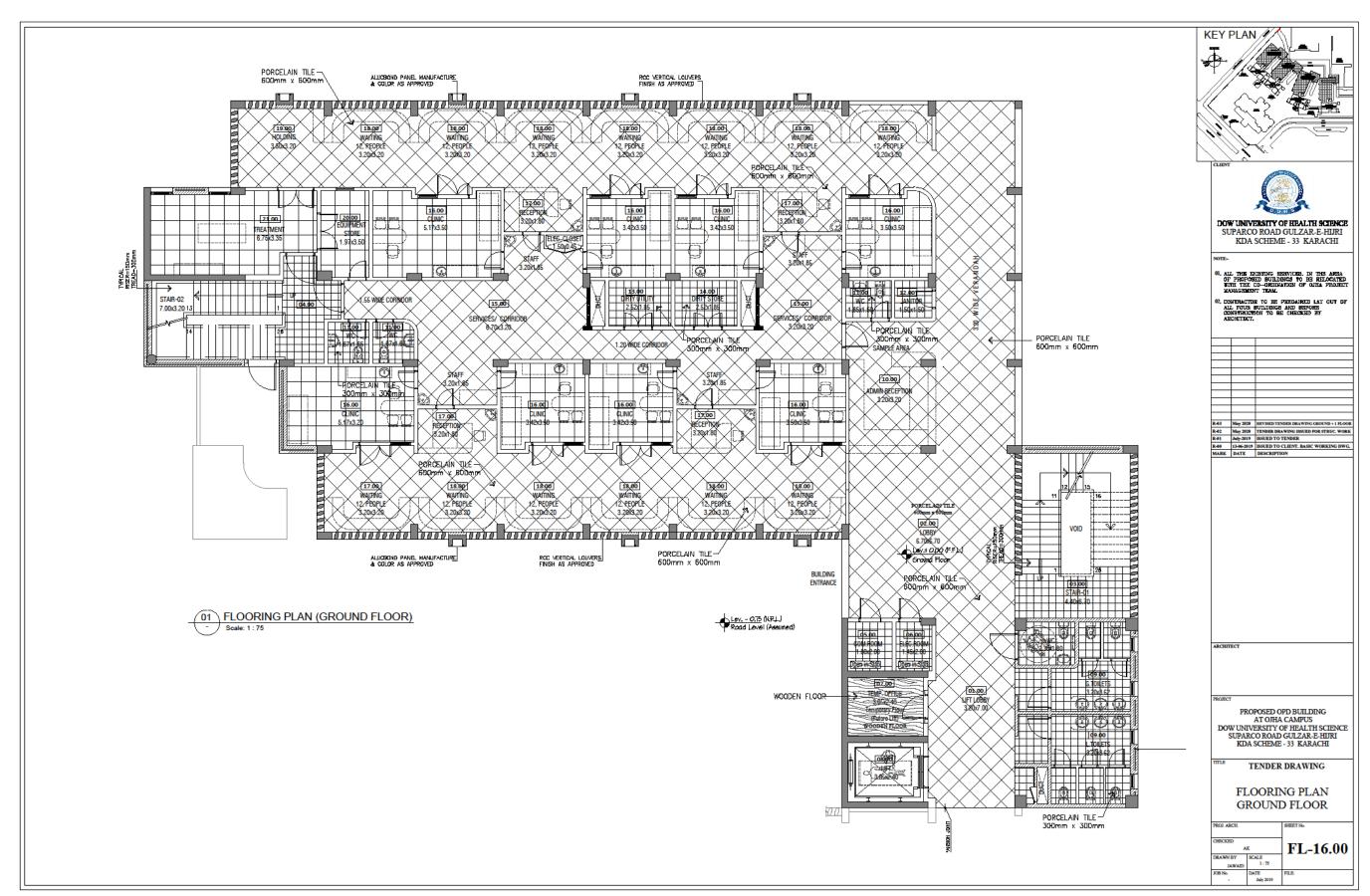


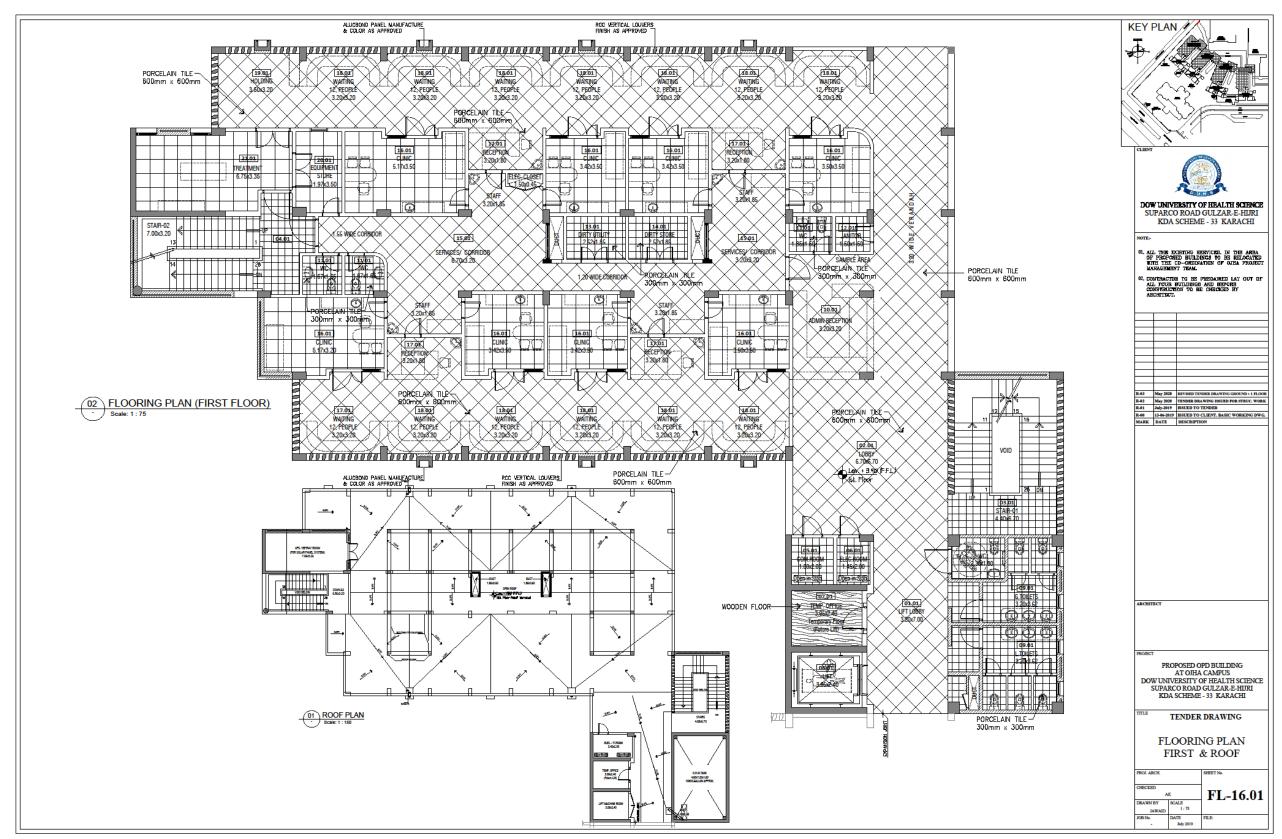




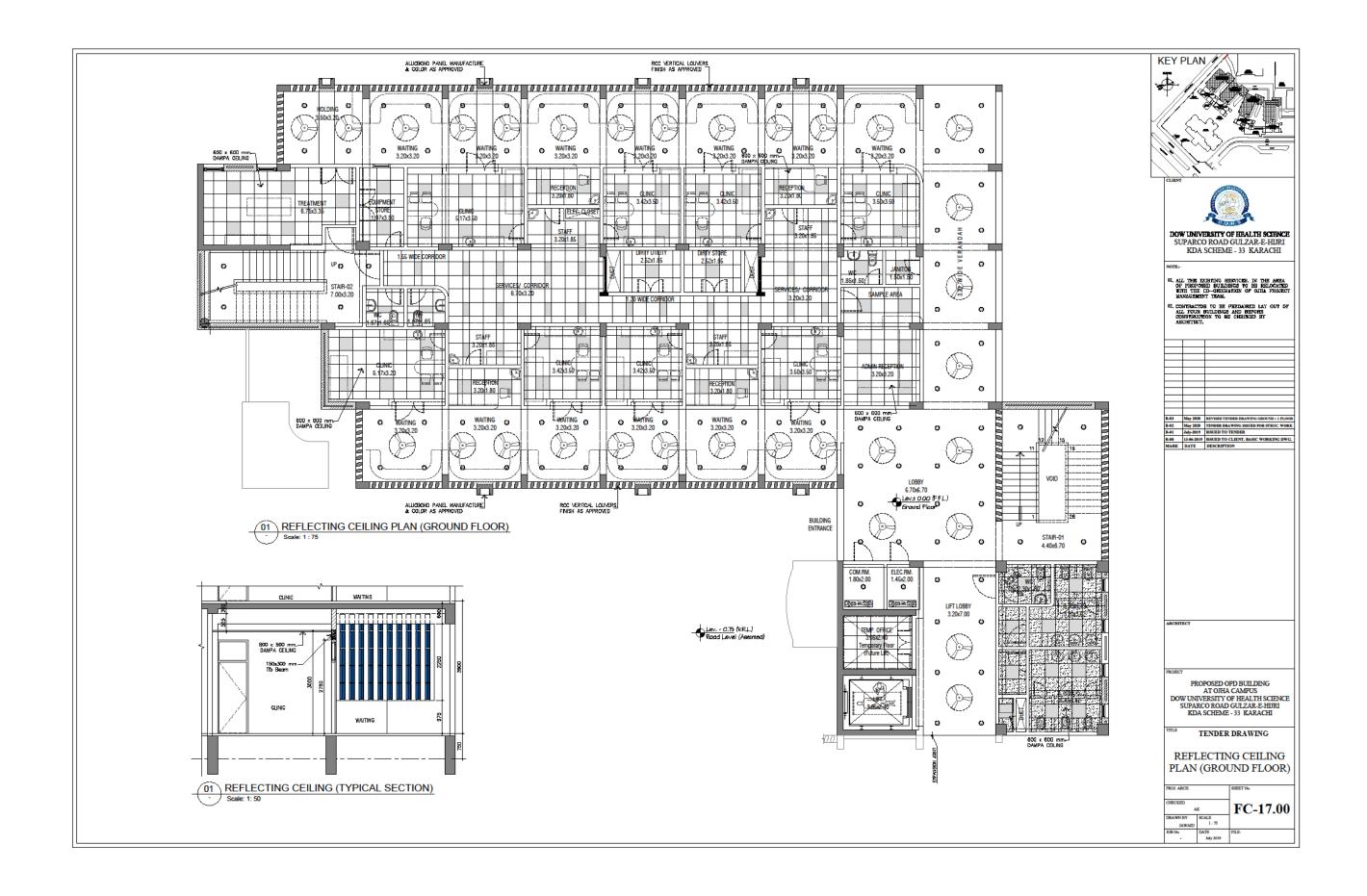


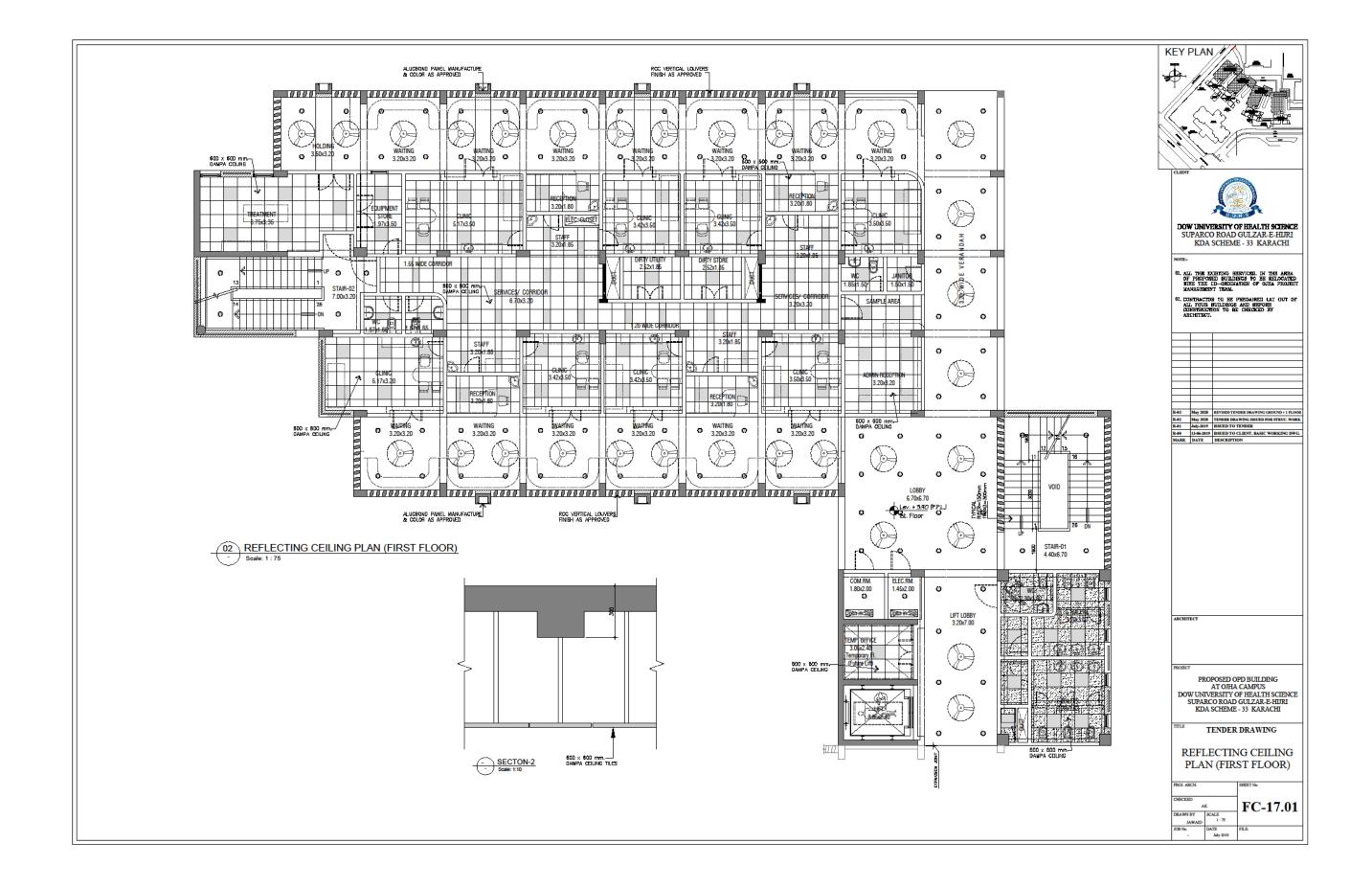


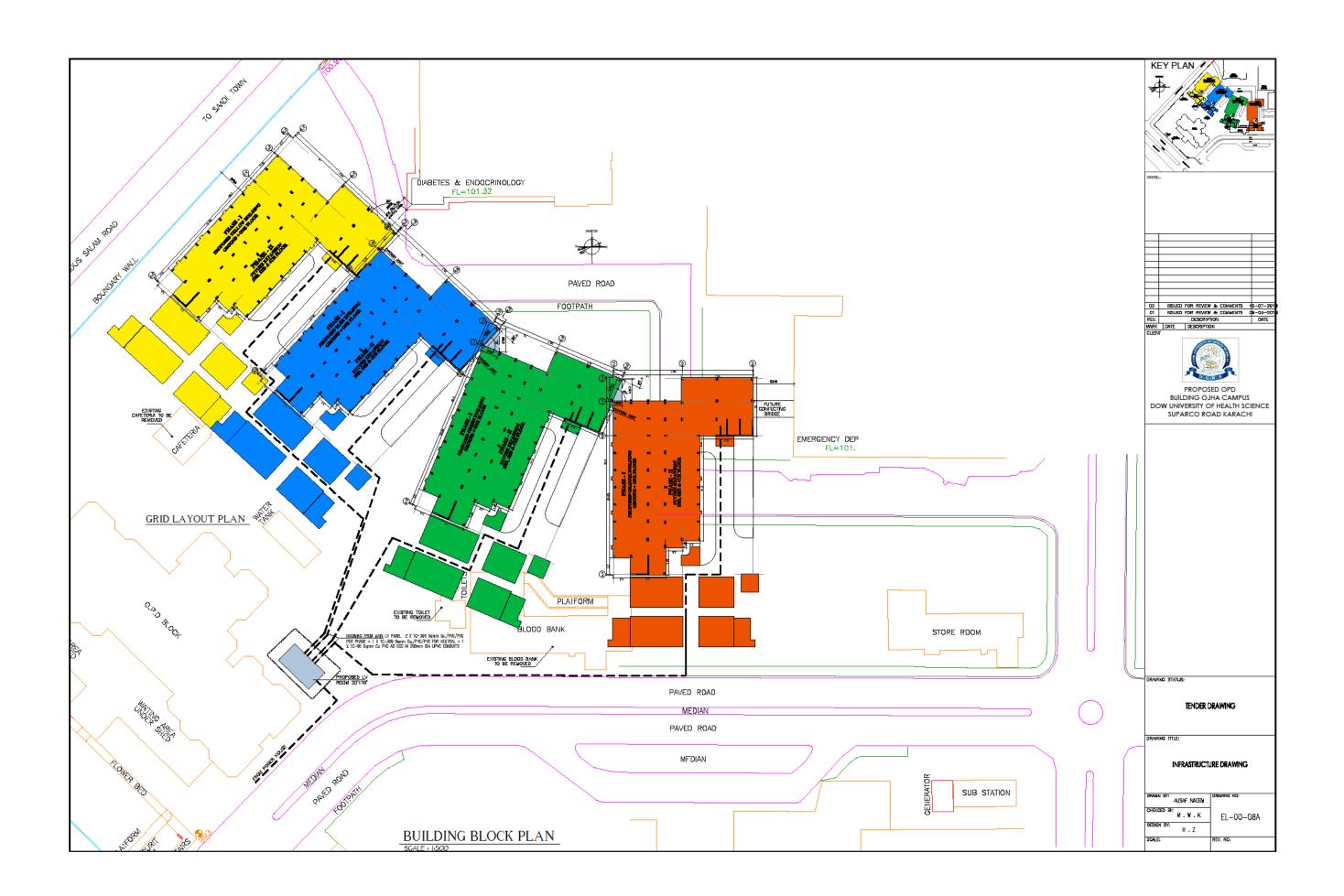


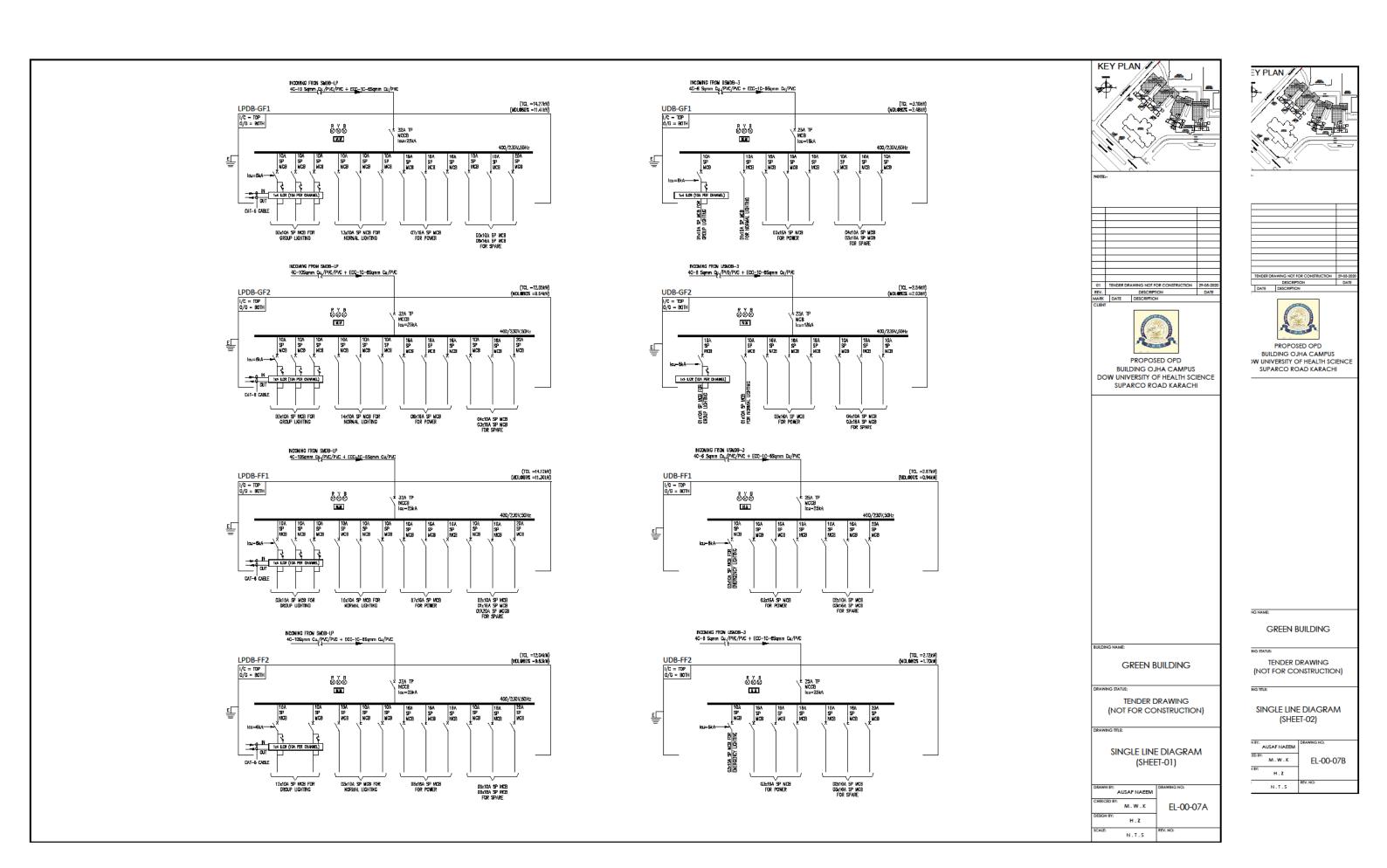


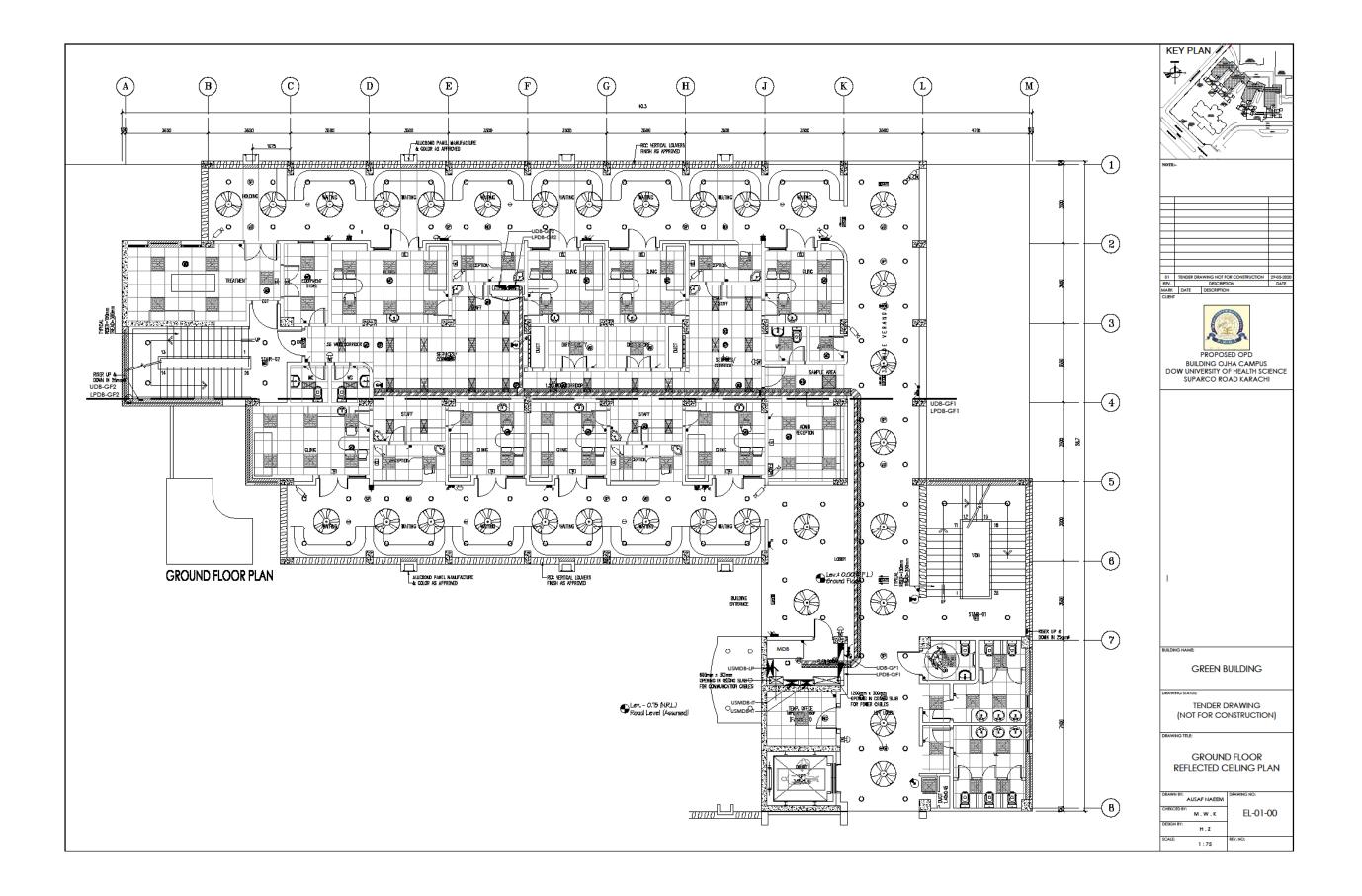
E:\001 WASEEM AKRAM\047 OJHA OPD\003 ARCHITECTURE DRAWING (23-05-2019)\04-TENDER DRAWINGS G. & ROOF (15-05-2020)\REVISED DETEILS (15-05-2020)\FL-16.00 FLOORING PATTERN\FL-16.00 FLOORING PLANS.DWG, 5/19

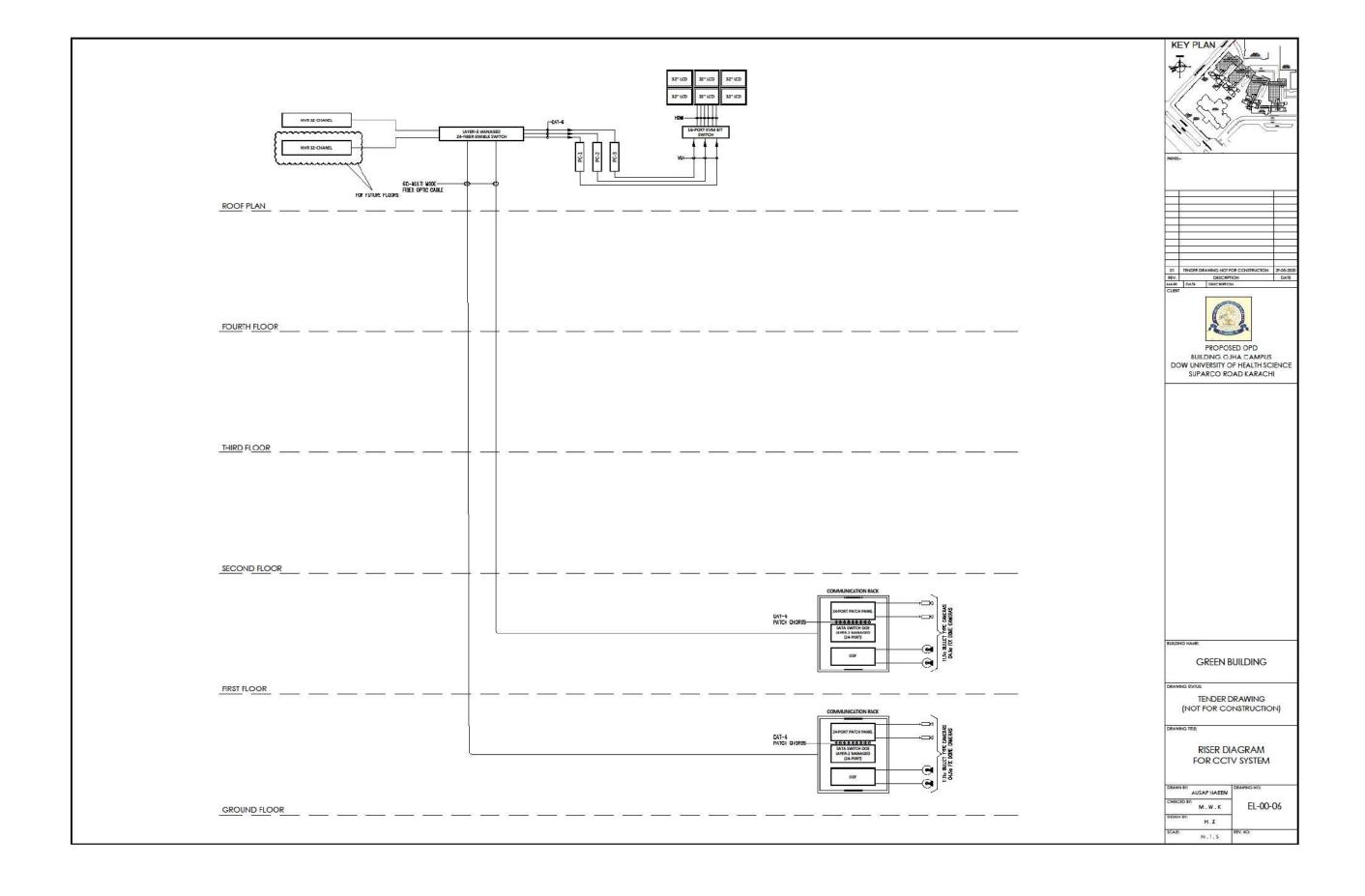


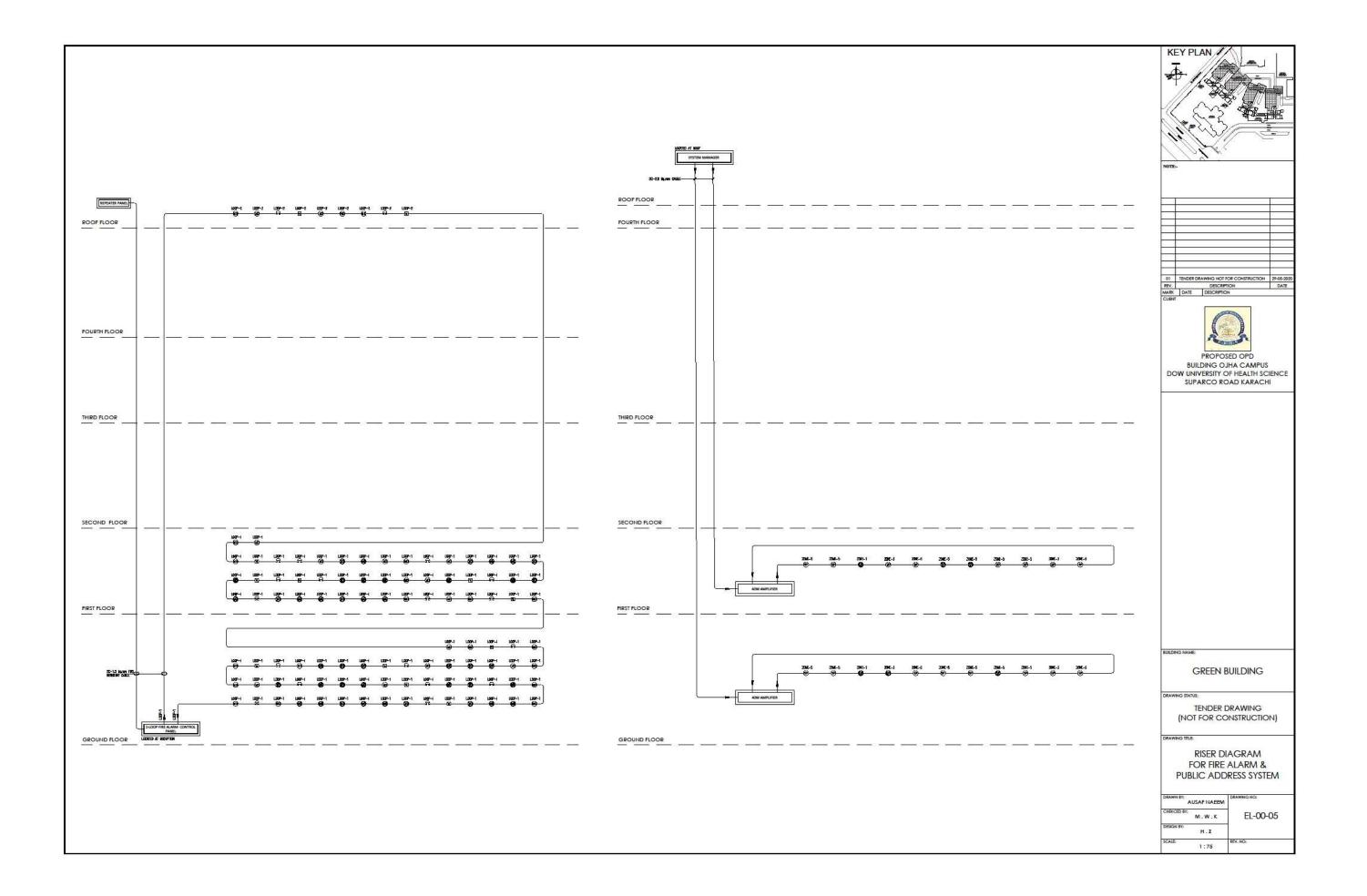


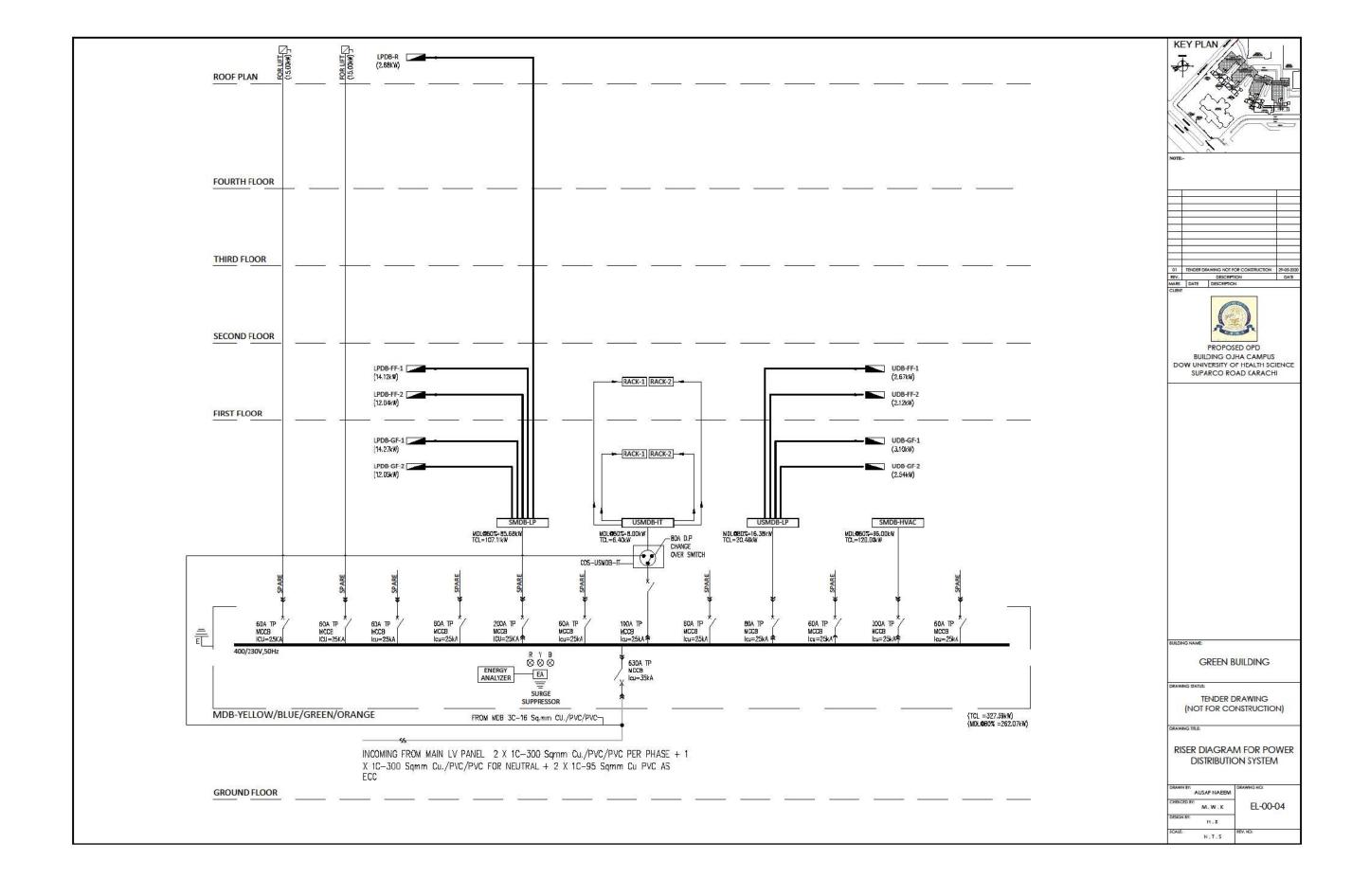












## DESCRIPTION LIGHTING 0 SURFACE MOUNTED DOWN LIGHT WITH 18W LED LAMP COLOR 4000K DIFFUSED GLASS AT CEILING SLAB SURFACE MOUNTED DOWN LIGHT WITH 12W LED LAMP COLOR 4000K DIFFUSED GLASS AT CELLING SLAB /CEILING RECESSED 45W LED PANEL 1200x300mm FIXTURE OF DIFFUSED GLASS DOLOR TEMP 4000K CRI 90% AT FALSE CEILING CEILING RECESSED 45W LED PANEL 600x600mm FIXTURE OF DIFFUSED GLASS COLOR TEMP 4000K CRI 90% AT FALSE CEILING BULK HEAD LIGHT 兹 AT D'-0" A.F.F.L CEILING FAN (36°0 , 48°0 , 56°0) AT CEILING SLAB ᅽ BULK HEAD EMERGENCY LIGHT WITH 10W LED WITH BUILT-IN BATTERY BACK-UP (NON MAINTAINED) AT CELLING SLAB **-**≘π EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT (MAINTAINED) AT CELLING SLAB 450 EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED) AT CELLING SLAB स्ट्रा EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED) AT CEILING SLAB ✓ ✓ ■ 10A 220V ONE WAY SWITCH / DIMMER FOR FAN AT 3'-6" A.F.F.L LOW CURRENT SYSTEM MULTI DETECTOR (F.C) AT FALSE CEILING **(10)** AT CELLING SLAB $\mathcal{L}$ ELECTRONIC BELL FOR FIRE ALARM SYSTEM AT 6'-6" A.F.F.L GLASS BREAK MANUAL CALL POINT NO. AT 4'-6" A.F.F.L 8W CEILING SPEAKER (F.C) AT FALSE CEILING ❷ ՛Ֆ 6W COLING SPEAKER AT CELLING SLAB ⊢<mark>∽</mark> 10W WALL MOUNTED SPEAKER AT 7'-0° A.F.F.L ₩ WIFI CEILING MOUNTED AT FALSE CEILING WIFI WALL MOUNTED AT WALL MOUNTED **⊚**• DDME TYPE CCTV CAMERA AT CEILING SLAB нШКІ WALL BRACKET CCTV CAMERA AT 7-6 AFFL Q. MATIC SYSTEM SCREEN SCREEN TICKET DISPENSER 13A INTERNATIONAL SWITCH SOCKET / AT COUNTER HEIGHT AT 0'-9" / 3'-8" A.F.F.L o' / o் • 13A FLAT PIN SIMPLEX SWITCH SOCKET AT 0'-9" A.F.F.L AT 0'-9" A.F.F.L 15A 3-PIN SWITCH SOCKET Ь AT 4'-0" AFFL ۵ 20A DP SWITCH SOCKET FOR HAND DRYER AT 13-6" A.F.F.L ô INDUSTRIAL SOCKET Ф 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 0'-9" A.F.F.L 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 3'-6" AFFL 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 7'-0" A.F.F.L INO. 13A INTERNATIONAL ON RAW POWER, INO. 13A FLAT PIN DUPLEX ON UPS POWER & 2NO. RJ-45 DUPLEX FOR VOICE & DATA П AT 0'-9" A.F.F.L

RJ-45 SIMPLEX DATA OUTLET / AT COUNTER HEIGHT

CABLE TRAY FOR POWER & DATA CABLE (EACH TWO PARTITION)

TELEVISION OUTLET

DISTRIBUTION EDARD

MAIN DISTRIBUTION BOARD

COMMUNICATION RACK

UPS POWER BUSWAY

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ELECTRICAL LEGEND

## GENERAL NOTES

- THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS. IF THE SITE CONDITIONS NECESSITATE ANY ALTERATIONS OF DEVIATIONS THE DIRECTIONS OF THE CONSULTANT SHALL BE FOLLOWED.
- ALL WIRING OF LIGHTING AND POWER SHALL BE WITH MULTI CORE PVC INSULATED WIRES FOR SINGLE PHASE CIRCUIT. THE VOLTAGE GRADE OF WIRE SHALL BE 300/500V, WHERE AS FOR THREE PHASE CIRCUIT IT WILL BE 600/1000 VOLTS.
- DIMENSION GIVEN IN LAYOUT AND DETAIL DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO MEASURE DIMENSIONS ACCORDING TO ARCHITECTURAL AND STRUCTURAL DRAWING.
- 4. CIRCUIT WIRING SHALL BE DONE IN ACCORDANCE WITH THE WIRING SCHEDULE LINLESS OTHERWISE INDICATED.
- 5. WIRING SHALL BE DONE AFTER THE COMPLETION OF CONDUCTING WORK IN ALL RESPECTS INCLUDING THE INSTALLATION OF BACK BOXES, OUTLET BOXES ETC.
- 6. WIRING SHALL BE CONTINUOUS LODPING IN TYPE AND NO JOINT IN WIRES SHALL BE ALLOWED.
- ARRANGEMENT OF ELECTRICAL EQUIPMENT ON ELECTRICAL DRAWINGS ARE TENTATIVE, EXACT ARRANGEMENT OF EQUIPMENT SHALL BE MADE IN MEW OF ITS
  PHYSICAL DIMENSIONS.
- BEFORE DETERMINING THE CUIT LENGTH OF CABLE THE ACTUAL MEASUREMENTS BE TAKEN AT SITE AND PROVISIONS OF SLACK (3%) AT TERMINATION OF SWITCH BOARD (5°0" APPROX.) AND SPARE LOOP SHALL BE TAKEN INTO ACCOUNT.
- 9. MOUNTING HEIGHT OF MISCELLANEOUS OUTLETS FROM FINISHED FLOOR LEVEL ARE SHOWN ON GIVEN SCHEDULE ( REFER DRAWINGS ).
- 10. CONDUIT UNDER FLOOR SHALL HAVE A MINIMUM DEPTH OF 50mm MEASURED FROM FINISH FLOOR LEVEL TO TOP OF CONDUIT.
- 11. MINIMUM SIZE OF CONDUIT SHALL BE 25mmø, UNLESS OTHERWISE INDICATED.
- 12. BACK BOXES FOR SWITCHES, SOCKETS AND TELEPHONE ETC. SHALL BE MADE WITH 165WC SHEET STEEL.
- 13. WIRE AS ECC SHALL BE GREEN IN COLOR OR GREEN / YELLOW IN COLOR.
- 14. CONDUIT AND CABLES TO BE LAID UNDER FLOOR SHALL BE IN CODROMATION WITH OTHERS SERVICES.
- 15. INCASE OF ANY DEVIATION FROM DESIGN DRAWINGS AT ANY INSTANT THE CONTRACTOR MUST TAKE APPROVAL FROM CONSULTANT BEFORE COMMENCEMENT OF WORK AT SITE.
- 16. FOR TELEPHONE WIRING, CAT-6 CABLE SHALL BE USED WITH GREY COLOR.
- 17. FOR NETWORKING CAT-6 CABLE SHALL BE USED WITH BLUE COLOR OR ANY COLOR DISTINCT FROM TELEPHONE CAT-6 CABLE..
- 18. FOR CCTV CAT-6 CABLE SHALL BE USED.

## WIRING SCHEDULE

AT 0-9" / 3'-6" A.F.F.L

AT 4-0" AFFL

DB TO SWITCH BOARD / 1ST LIGHT POINT	2 x 15 Sq.mm + ECC 1 x 15 Sq.mm
LIGHT POINT TO LIGHT POINT	1 x 1.5 Sq.mm
AS NEUTRAL COMMON FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
DB TO SWITCH BOARD / 1ST LIGHT POINT	2 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
LIGHT POINT TO LIGHT POINT	1 x 1.5 Sq.mm
AS NEUTRAL COMMEN FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.rnm + ECC 1 x 2.5 Sq.rnm
13A INTERNATIONAL SWITCH SOCKET OUTLET	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm
15A 3-PIN ROUND SWITCH SOCKET CUTLET	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FOR POWER
13A 3-PIN FLAT SWITCH SOCKET DUTLET ( UPS )	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FOR POWER



NOTE:-

01 TENDER DRAWING NOT FOR CONSTRUCTION 2

 01
 TENDER DRAWING NOT FOR CONSTRUCTION
 29-05-20:

 REV.
 DESCRIPTION
 DATE

 MARK
 DATE
 DESCRIPTION



PROPOSED OPD
BUILDING OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD KARACHI

BUILDING NAME:

GREEN BUILDING

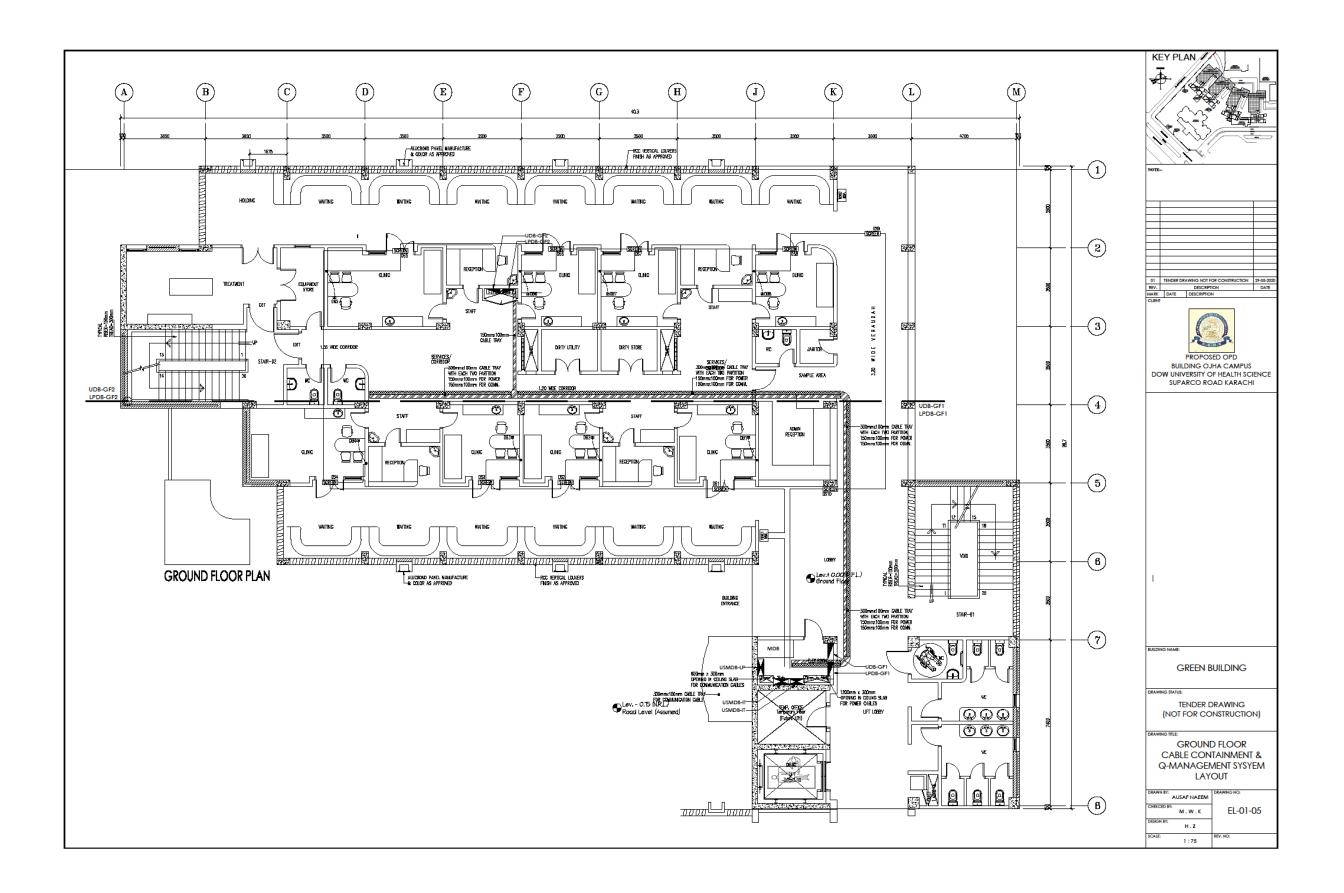
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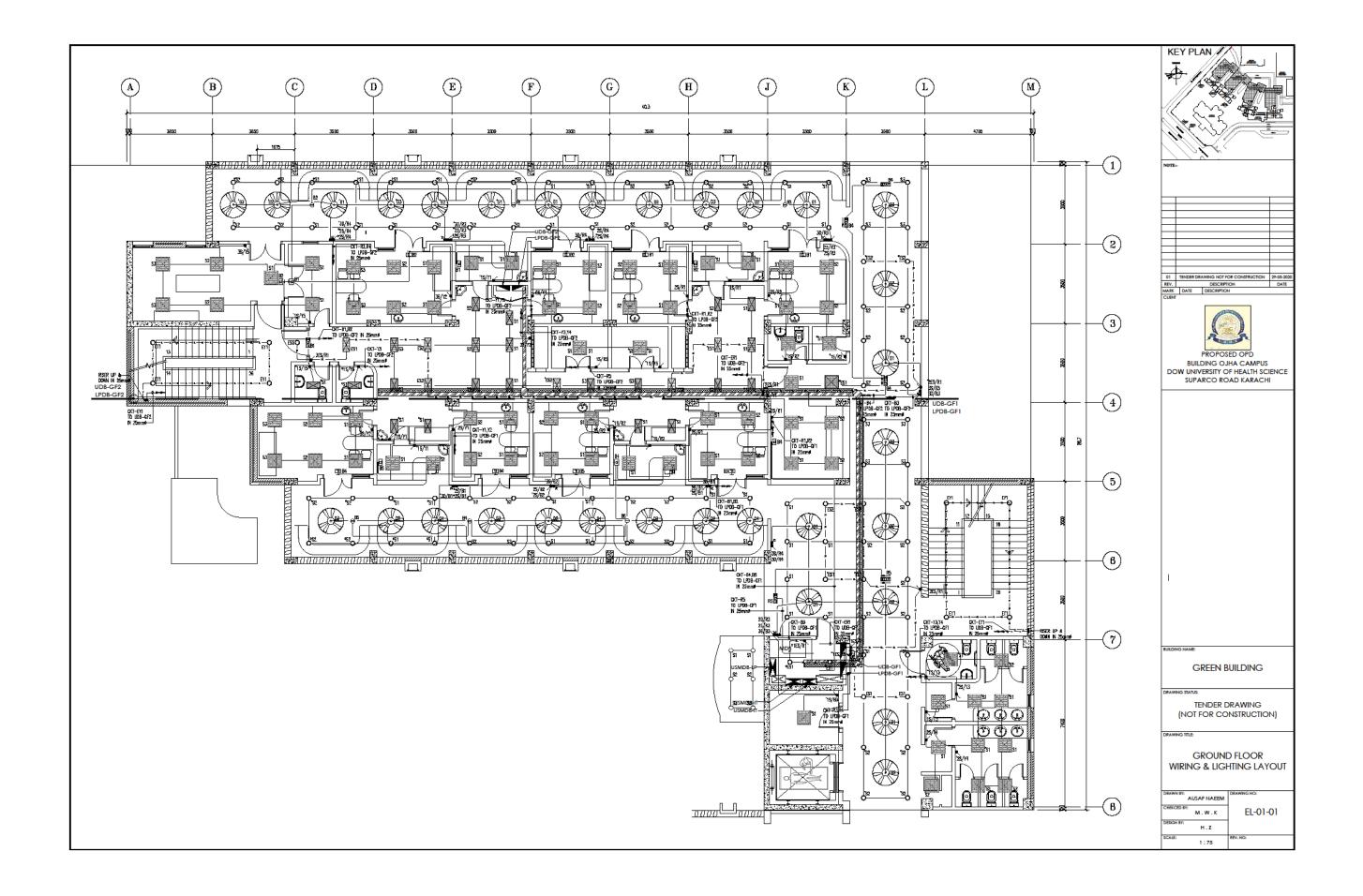
TENDER DRAWING (NOT FOR CONSTRUCTION)

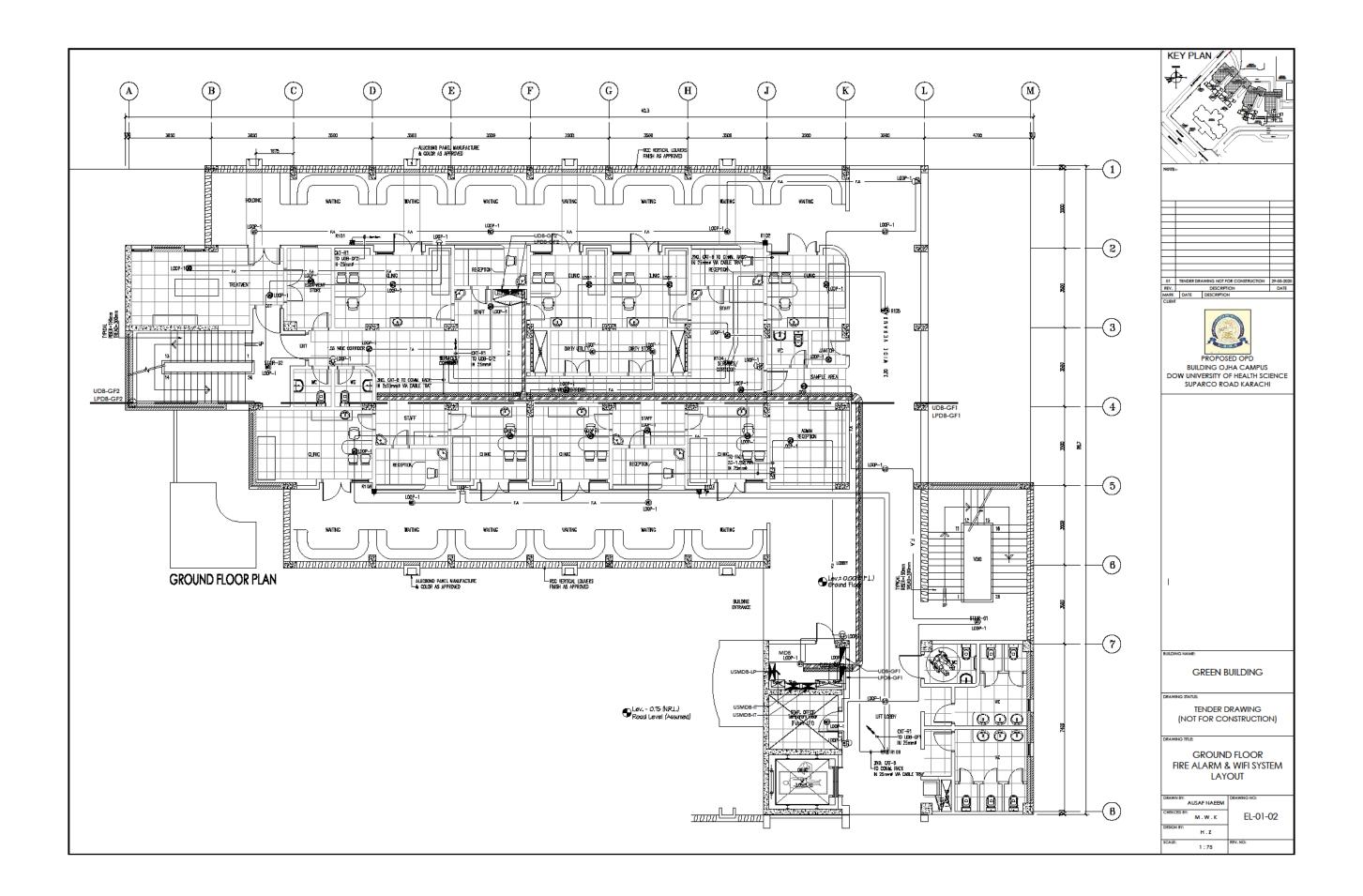
RAWING TITLE:

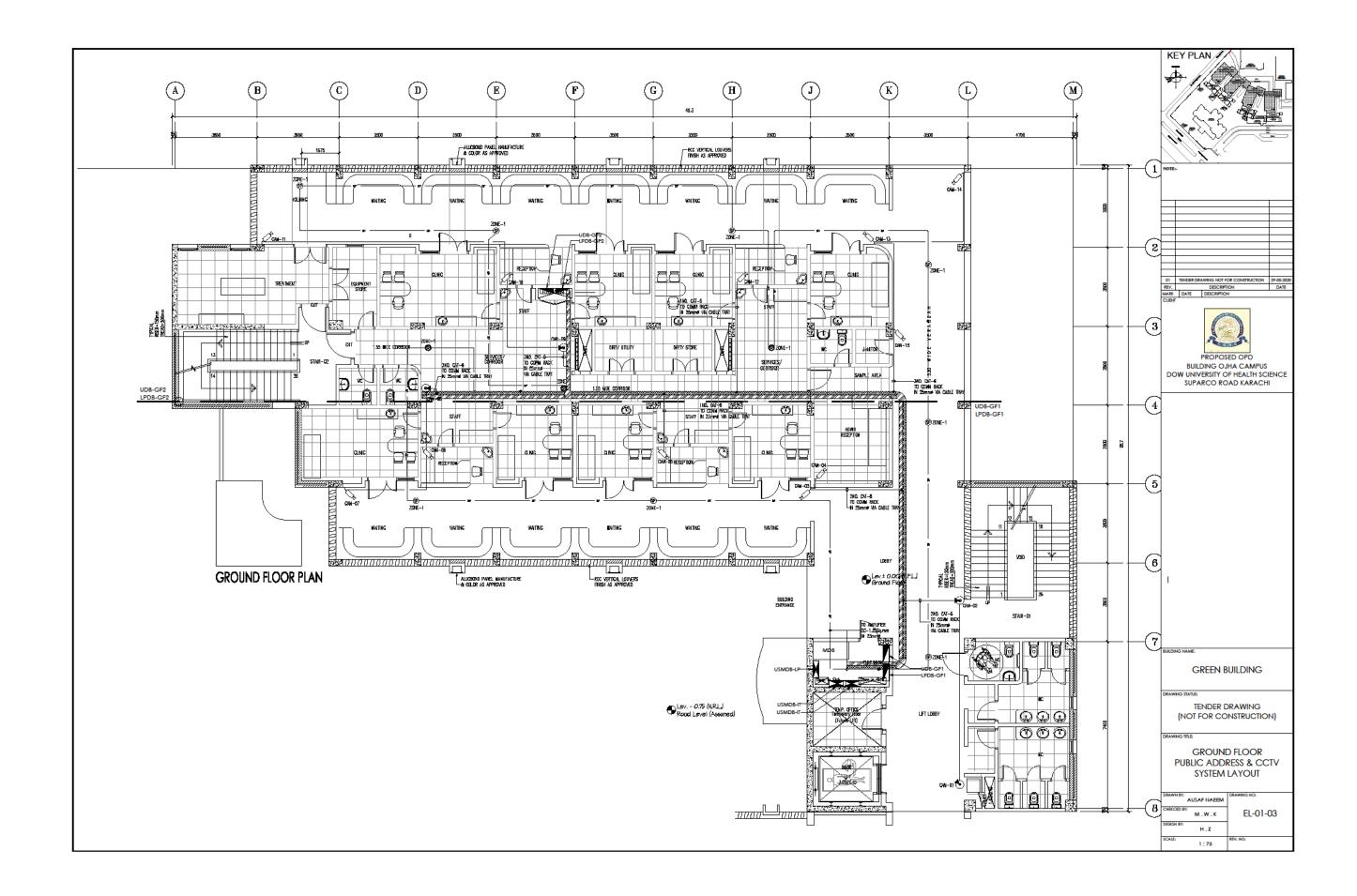
**ELECTRICAL LEGENDS** 

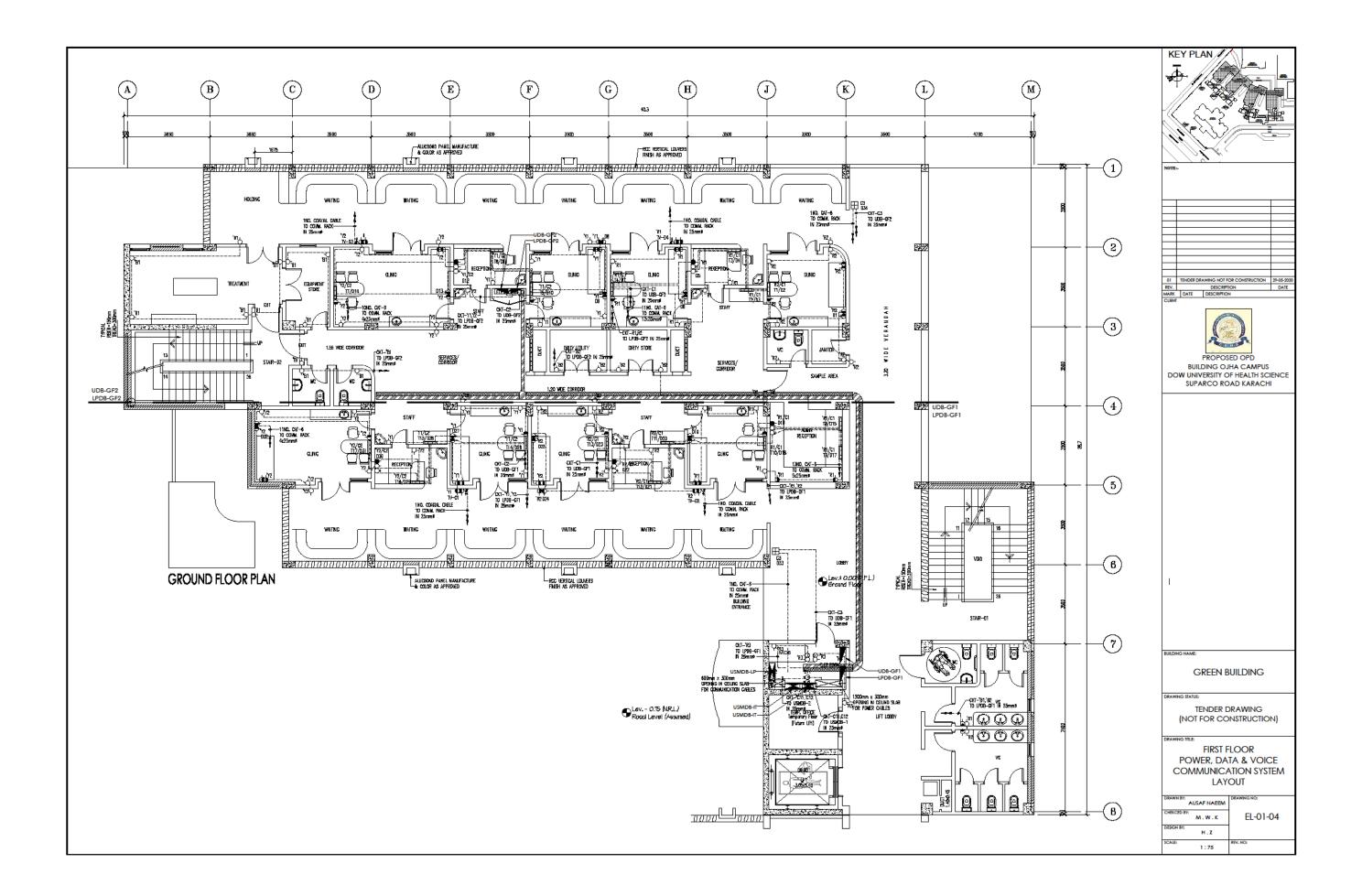
AUSAF NAEEM	DRAWING NO:
M.W.K	EL-00-02
ESIGN BY: H . Z	
CALE: N.T.S	REV. NO:

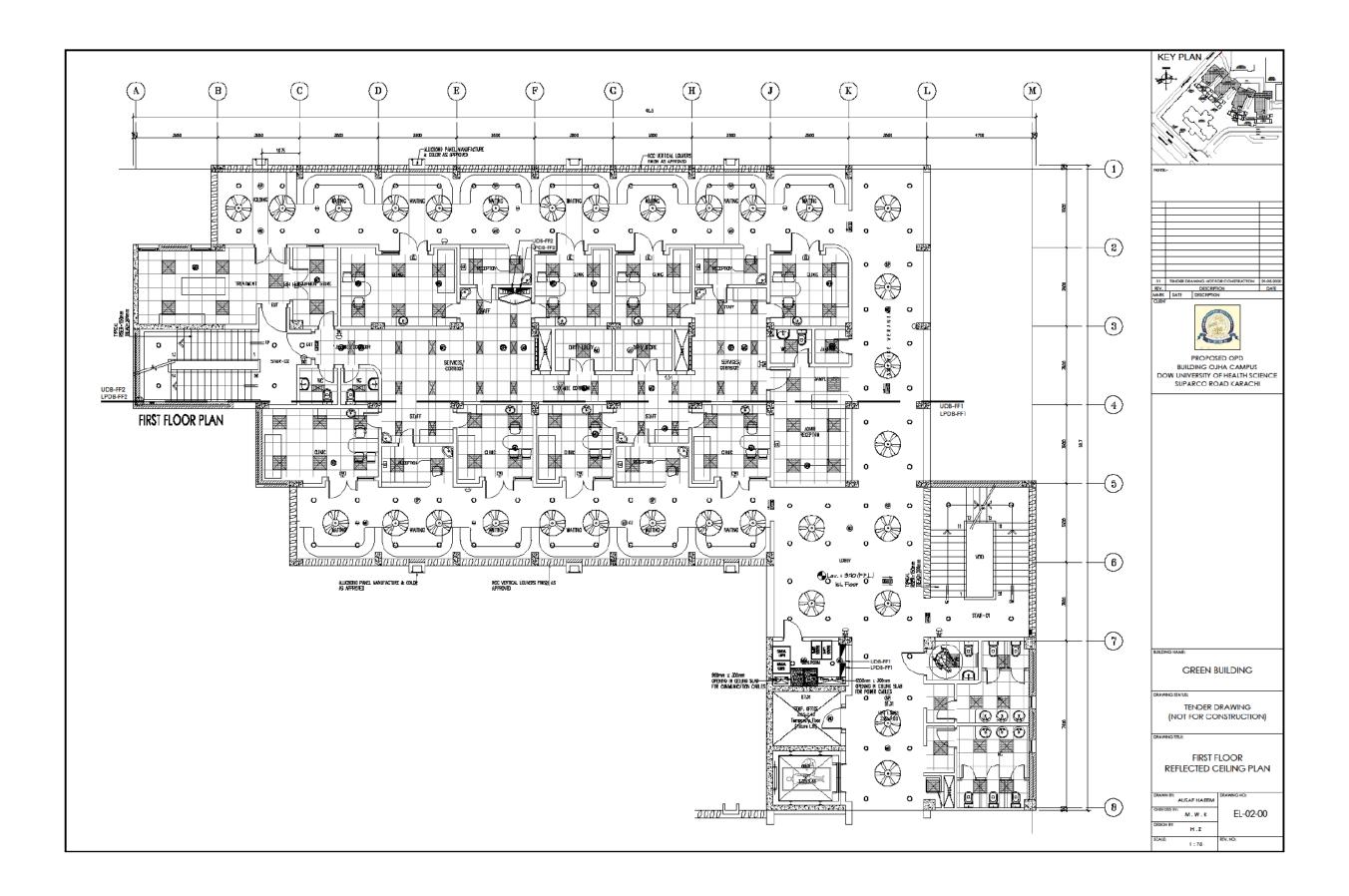


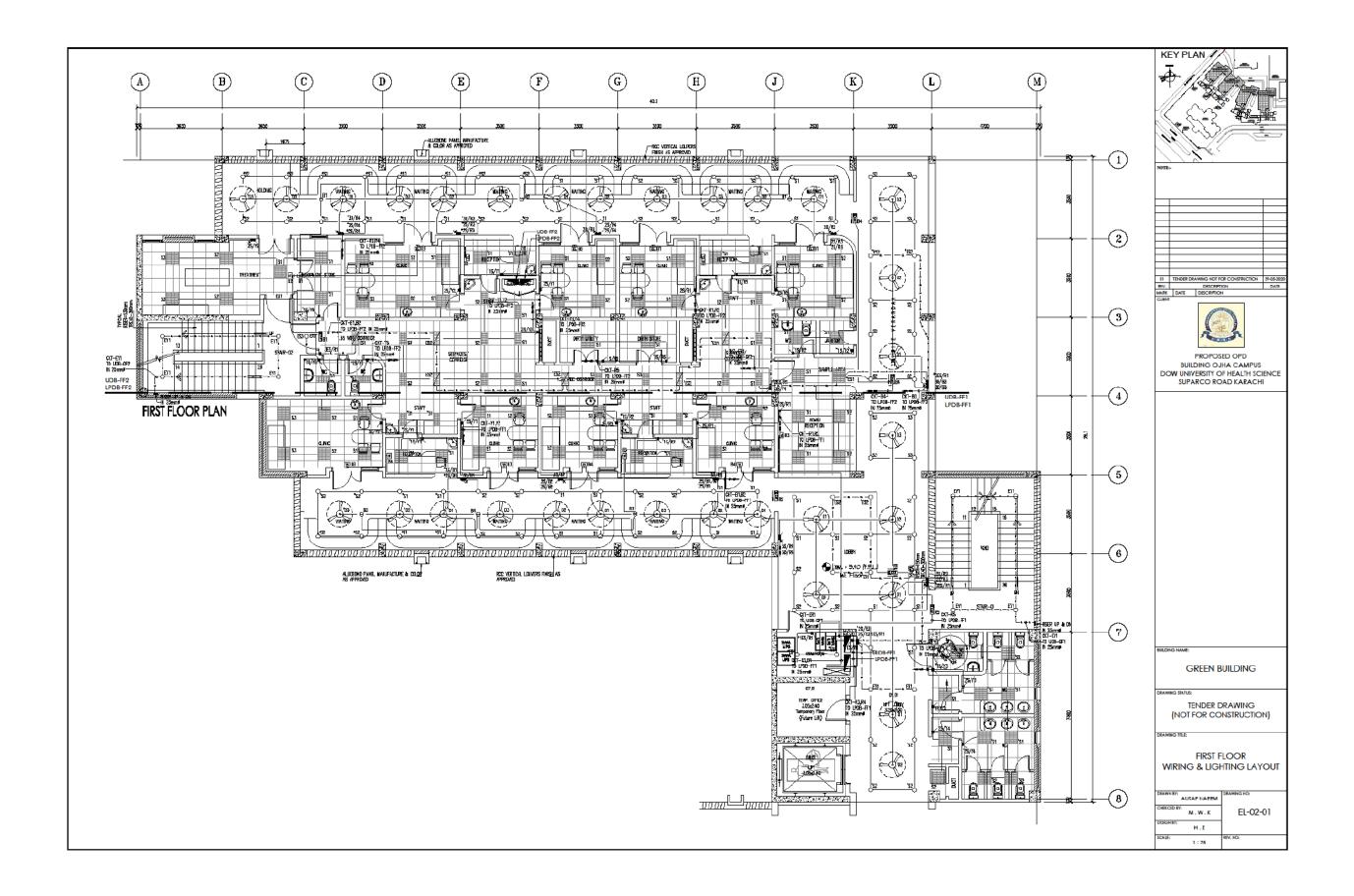


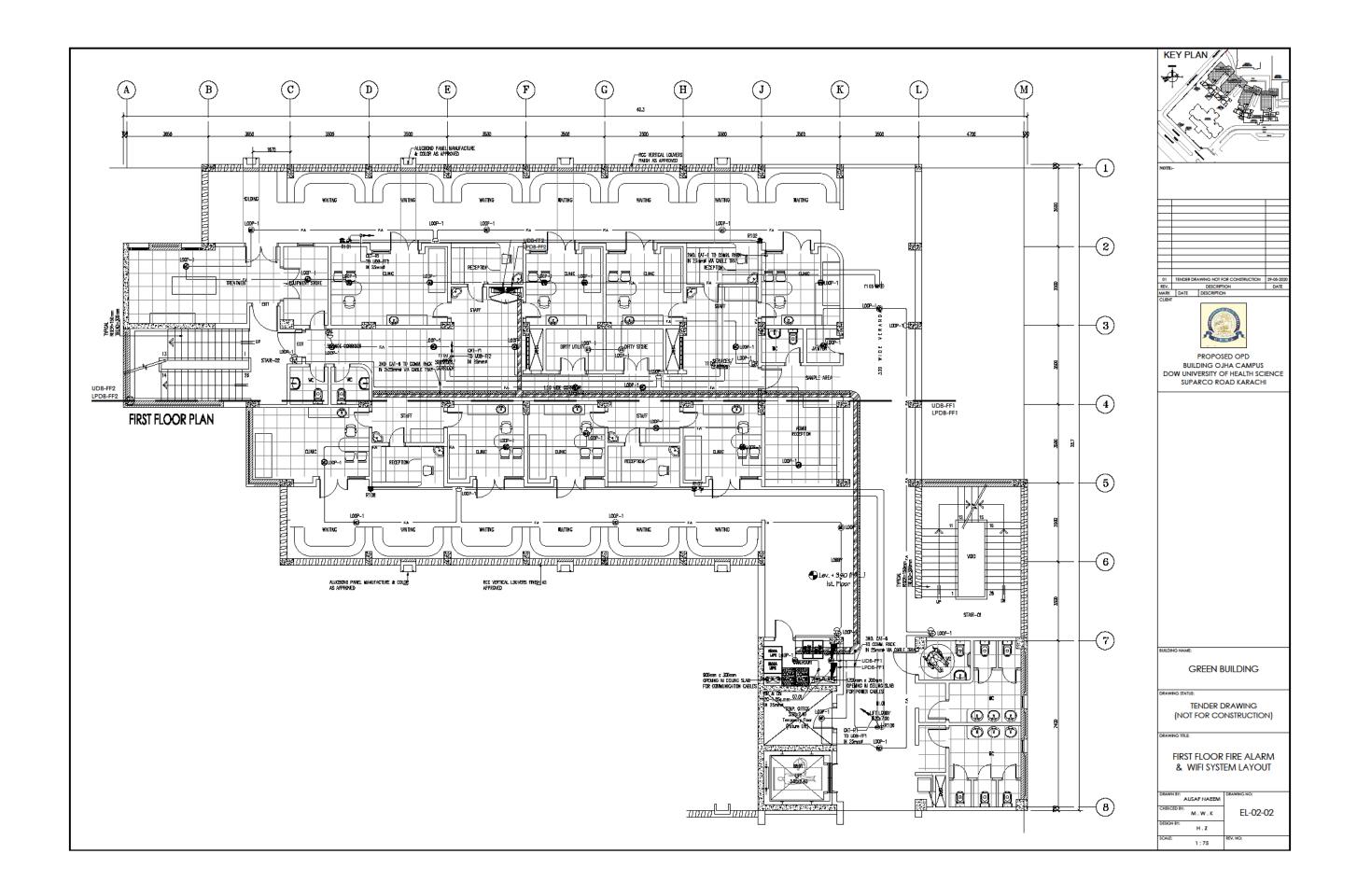


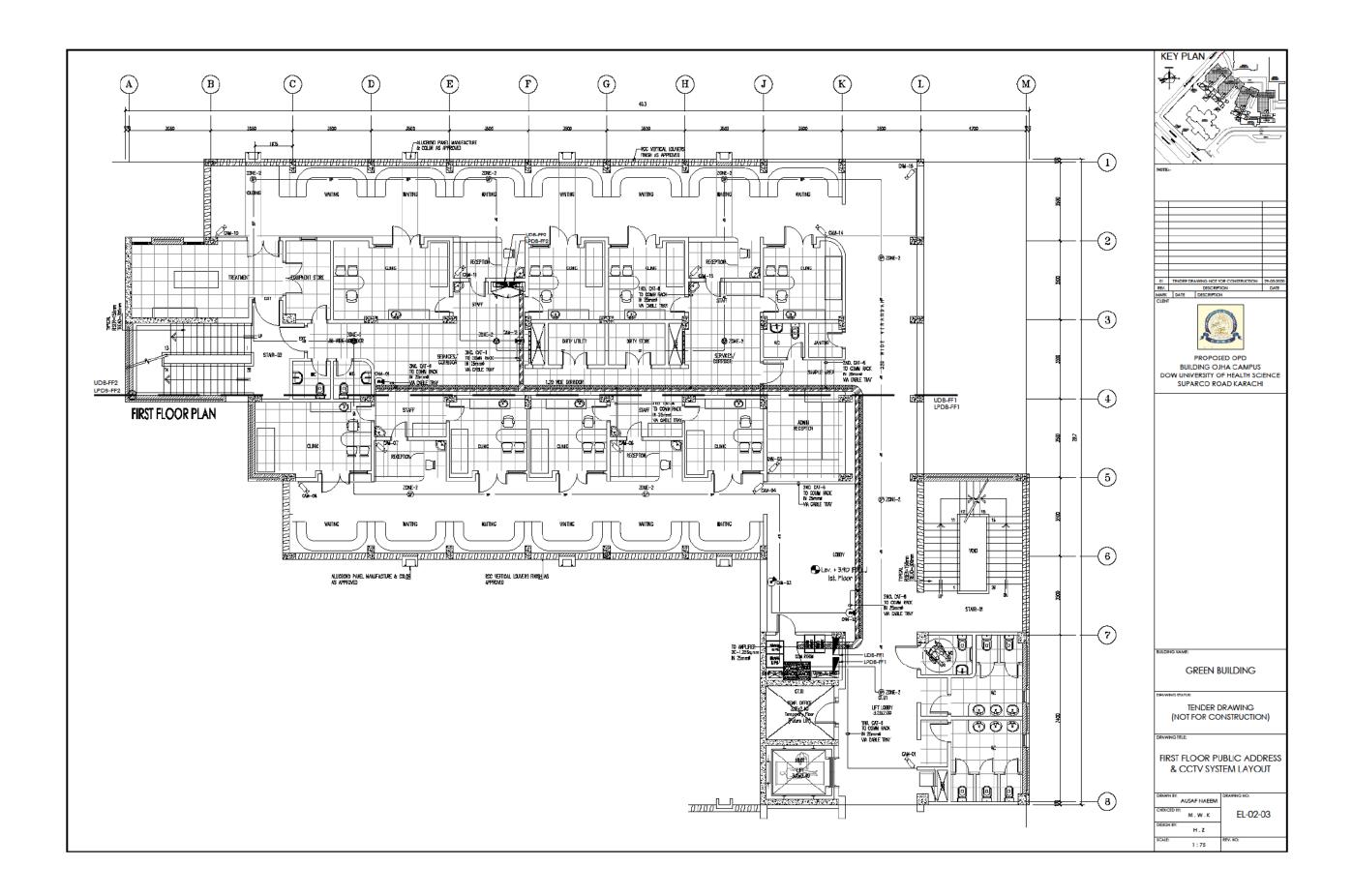


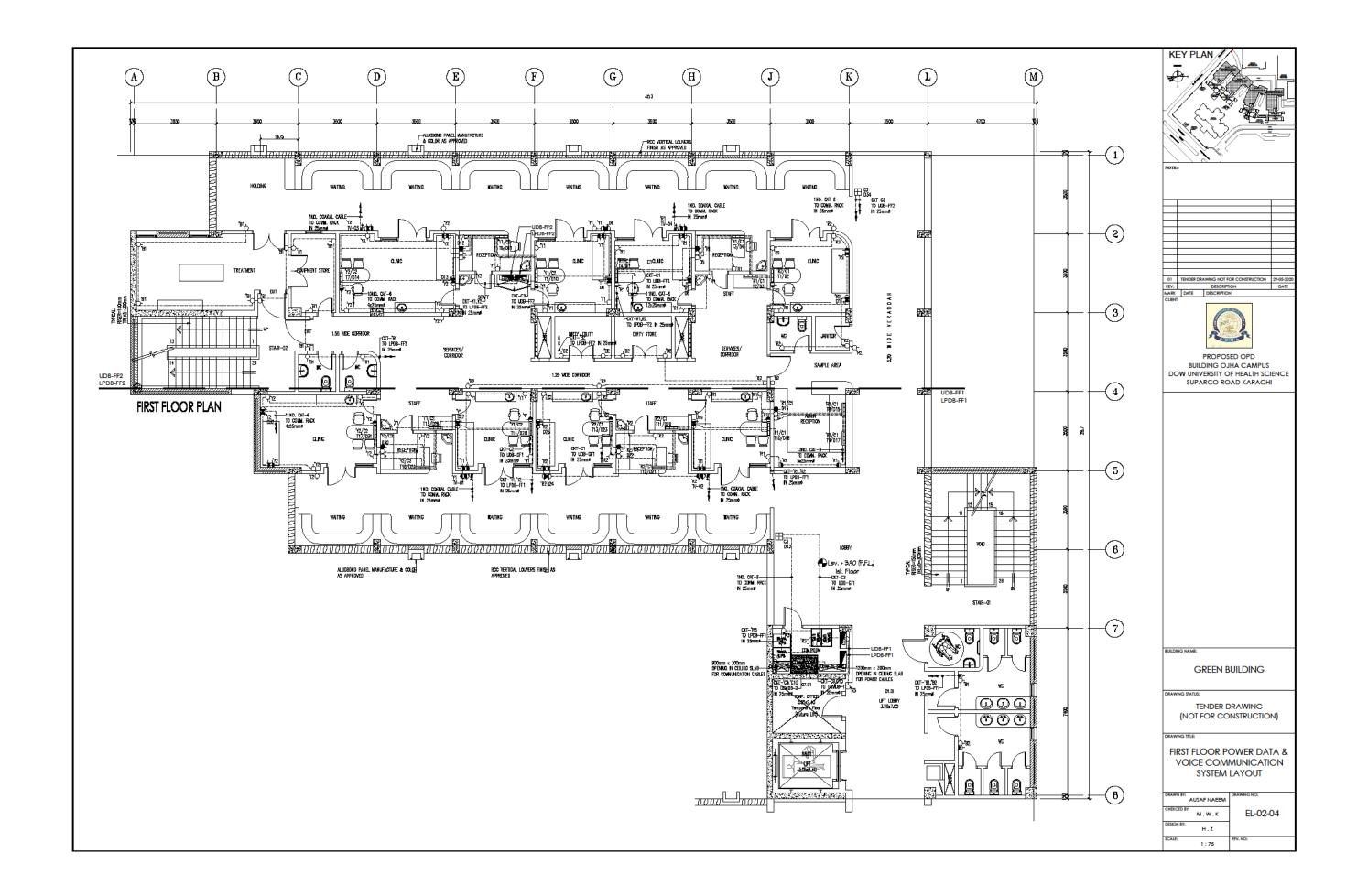


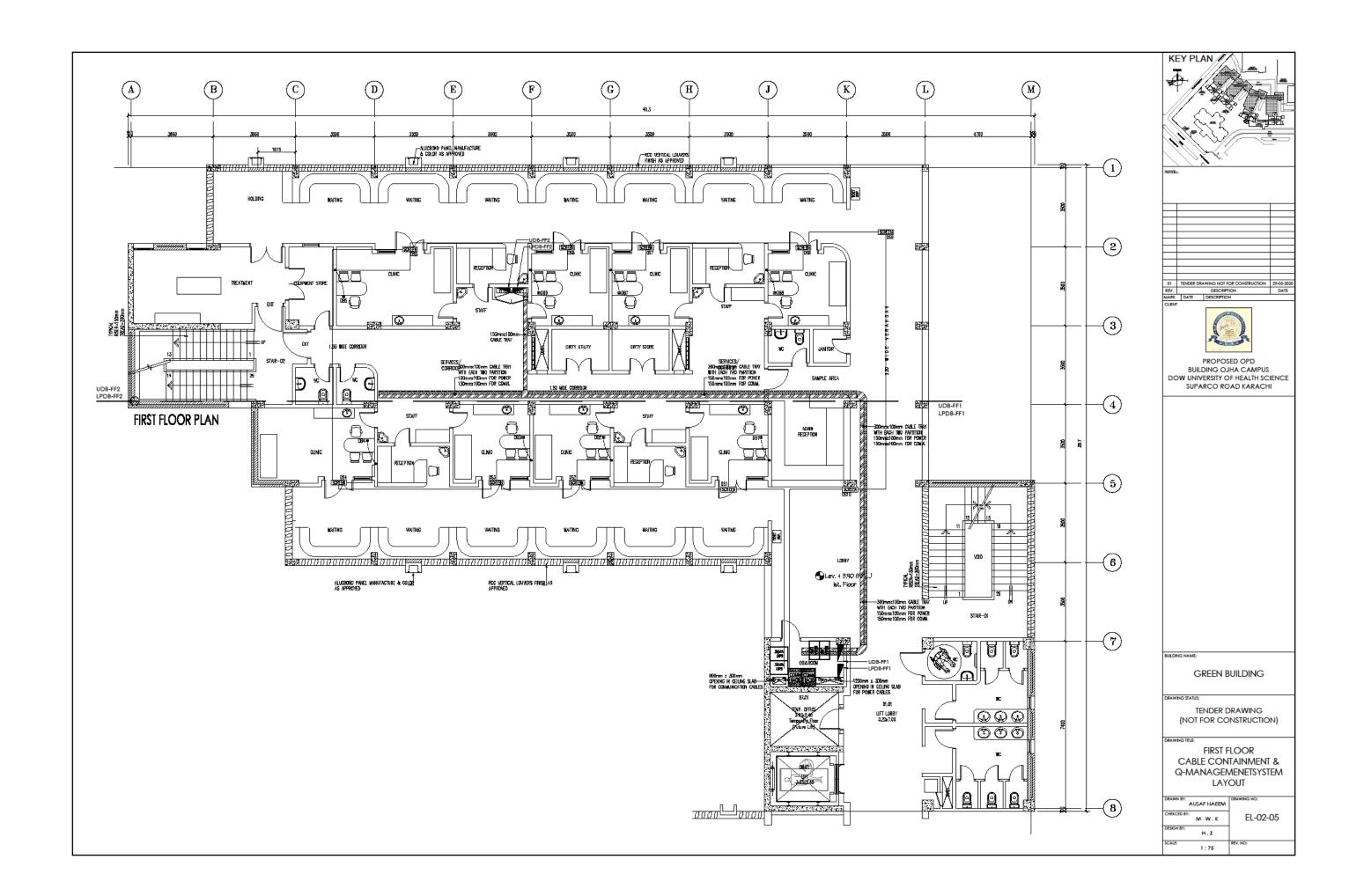


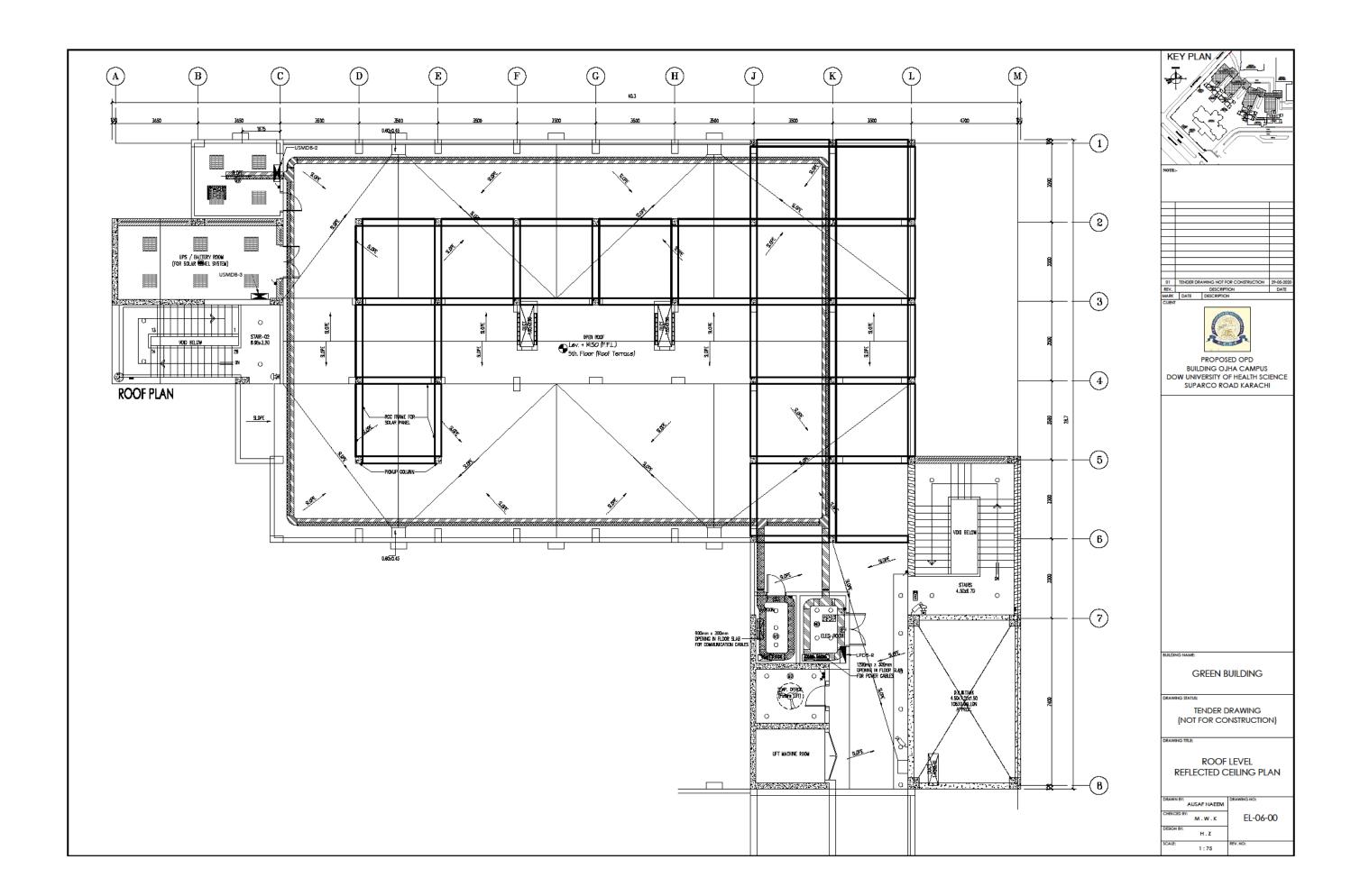


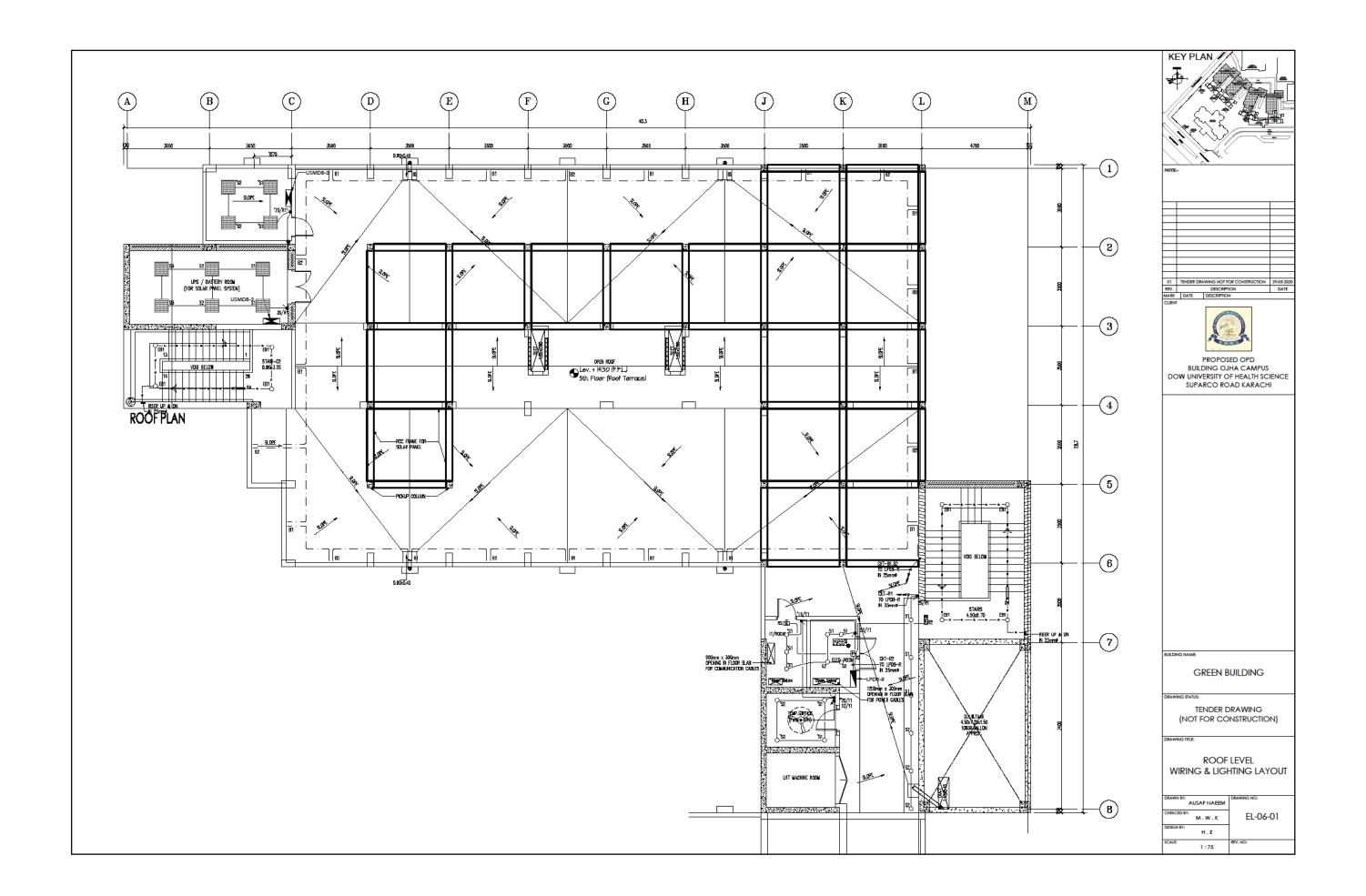


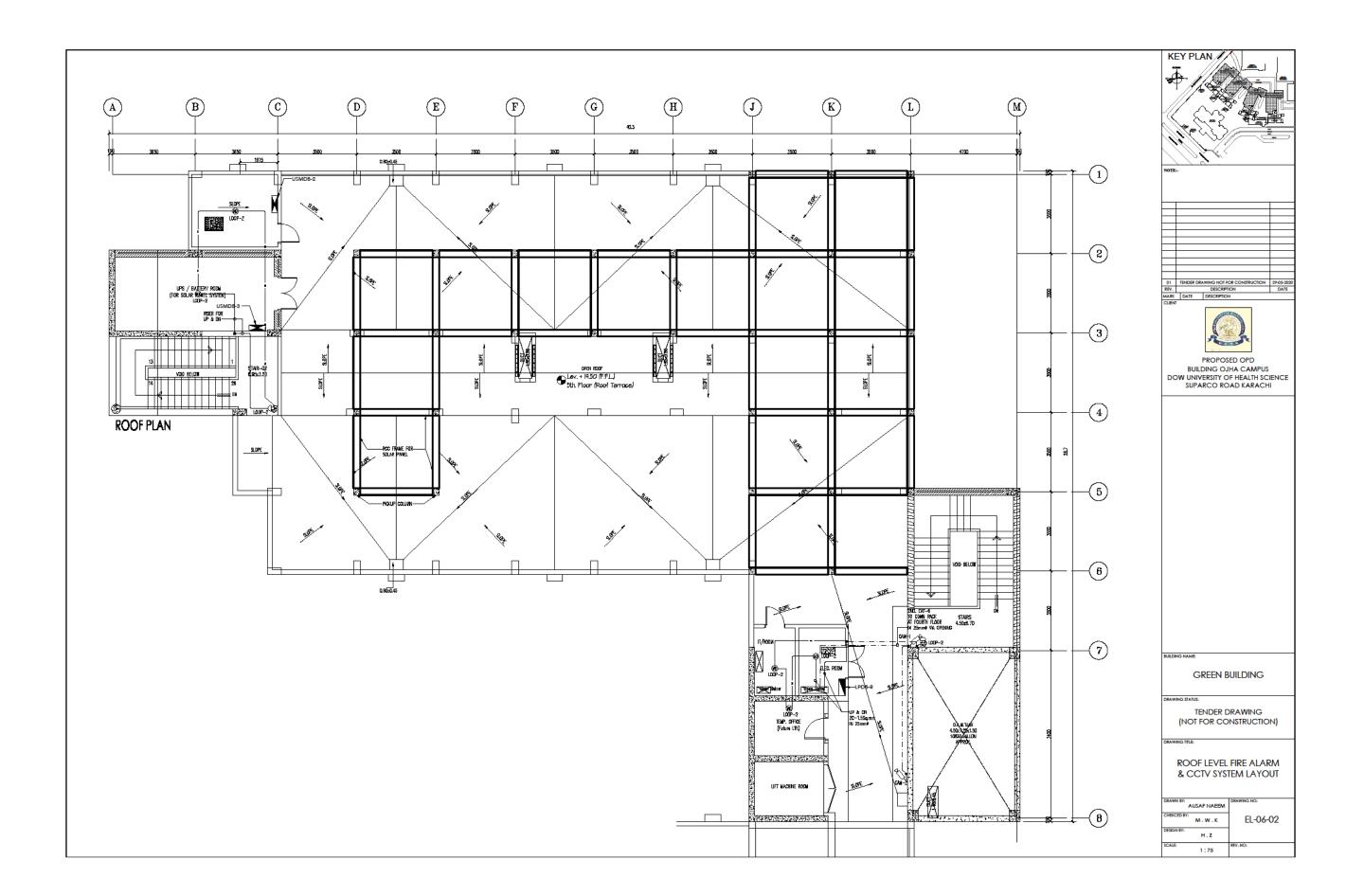


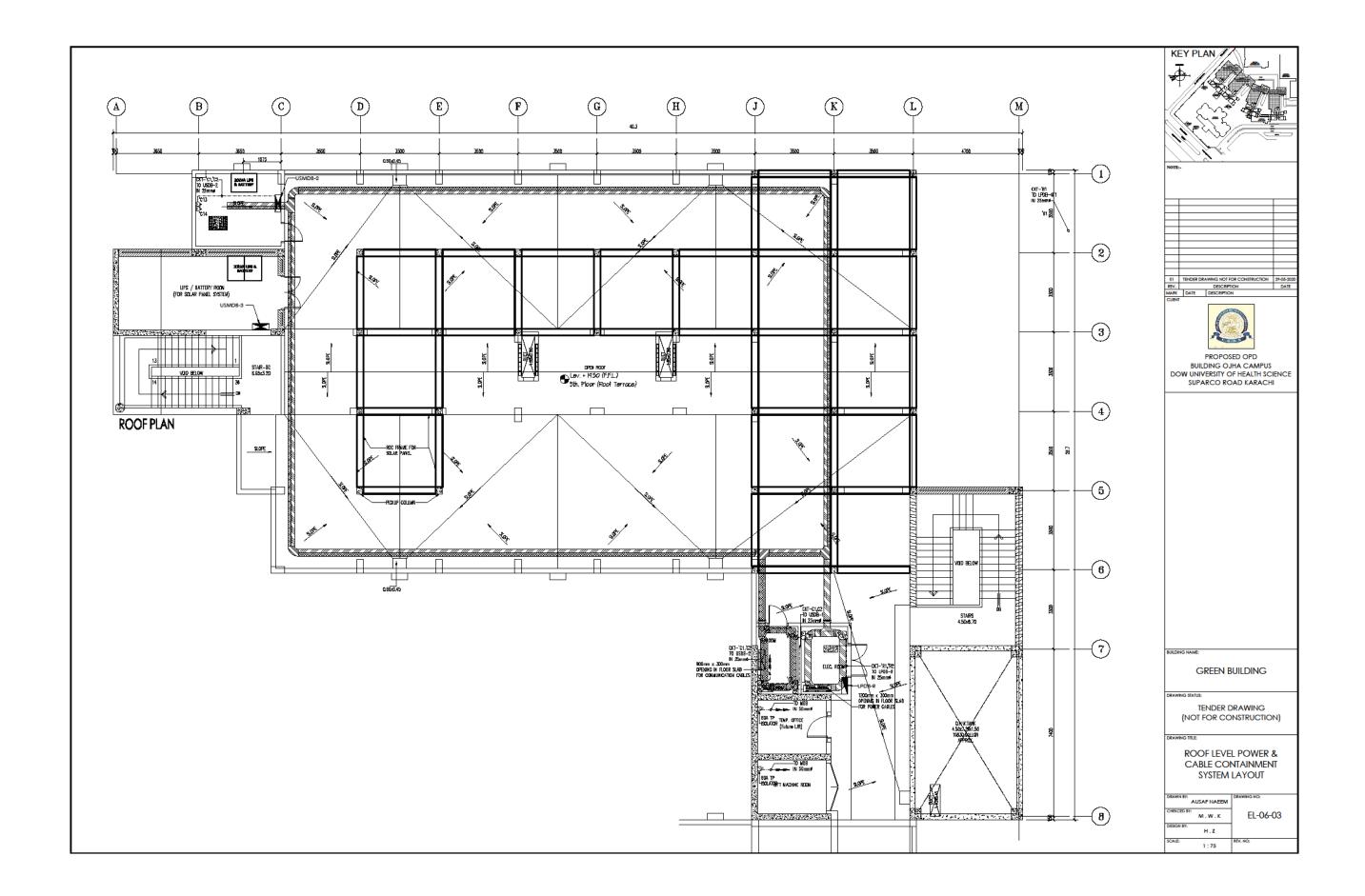


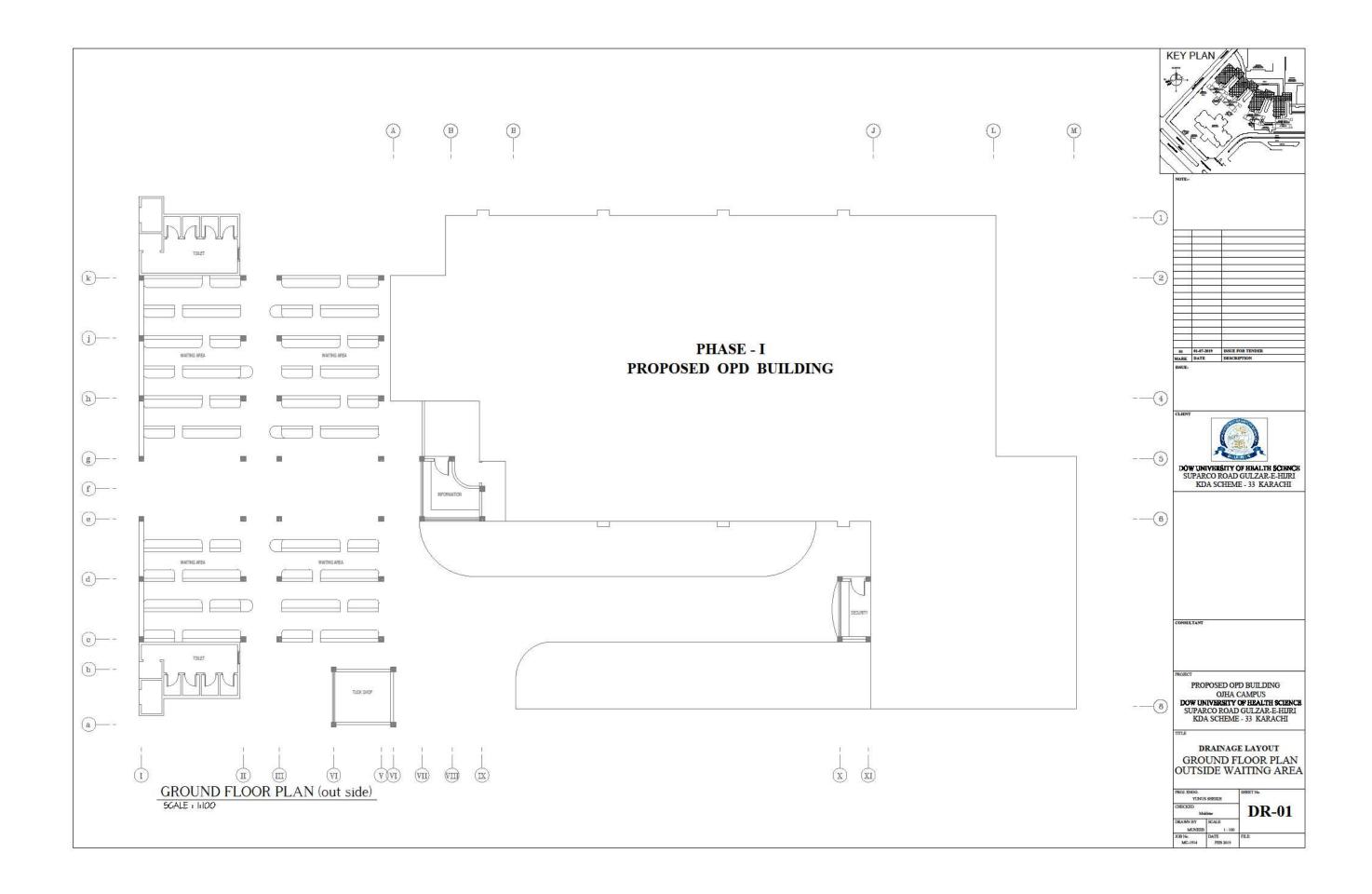


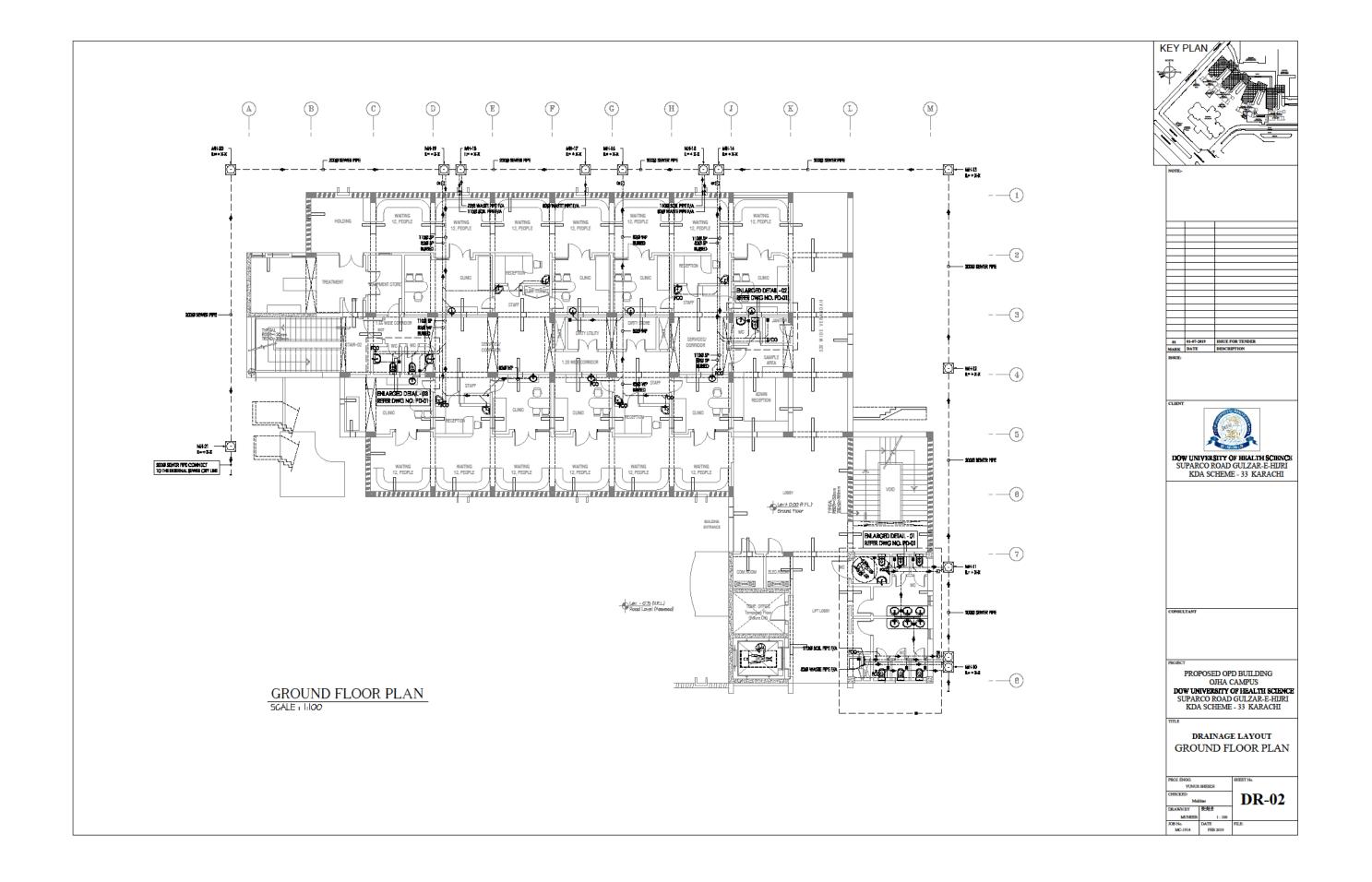


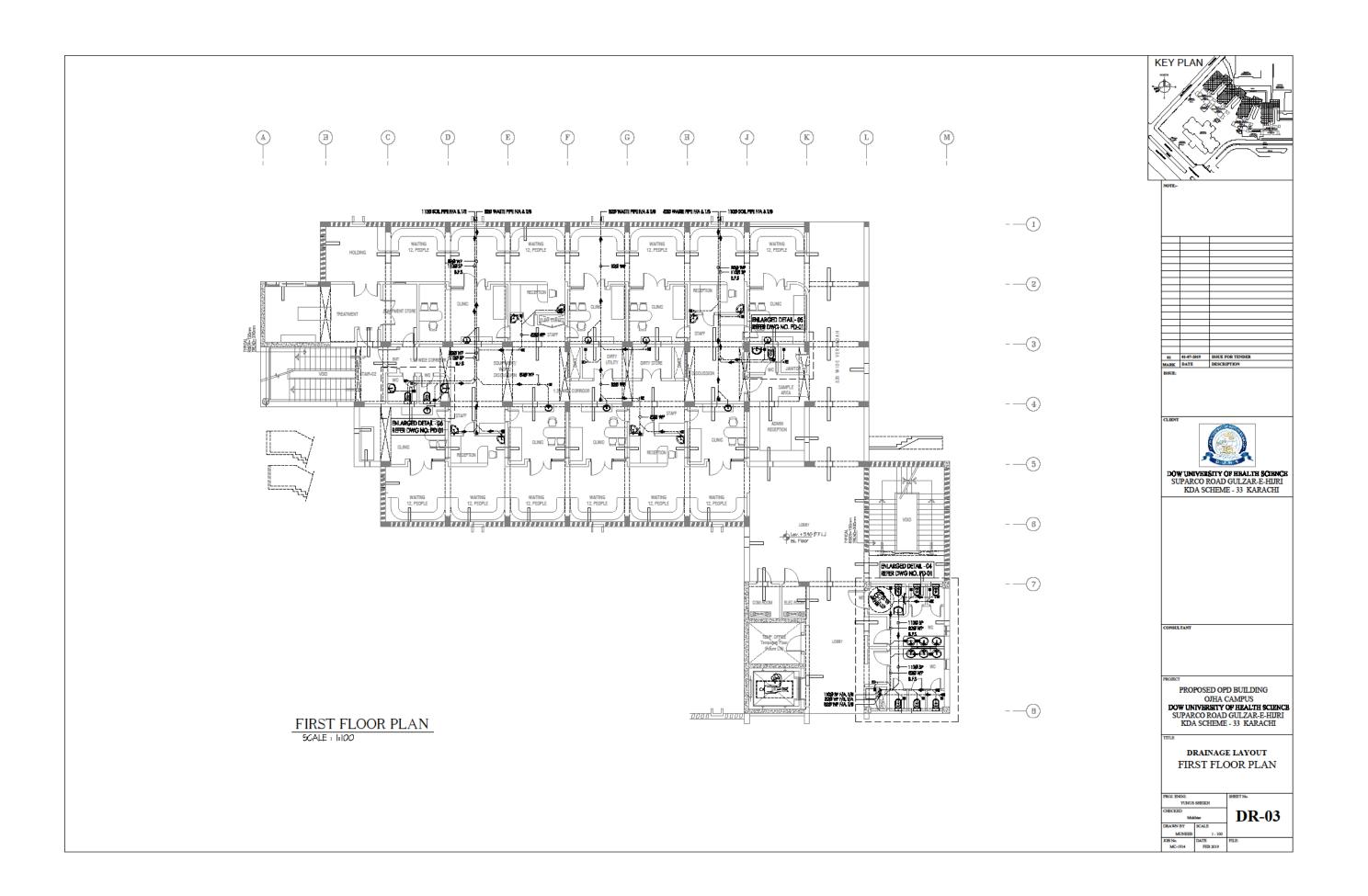


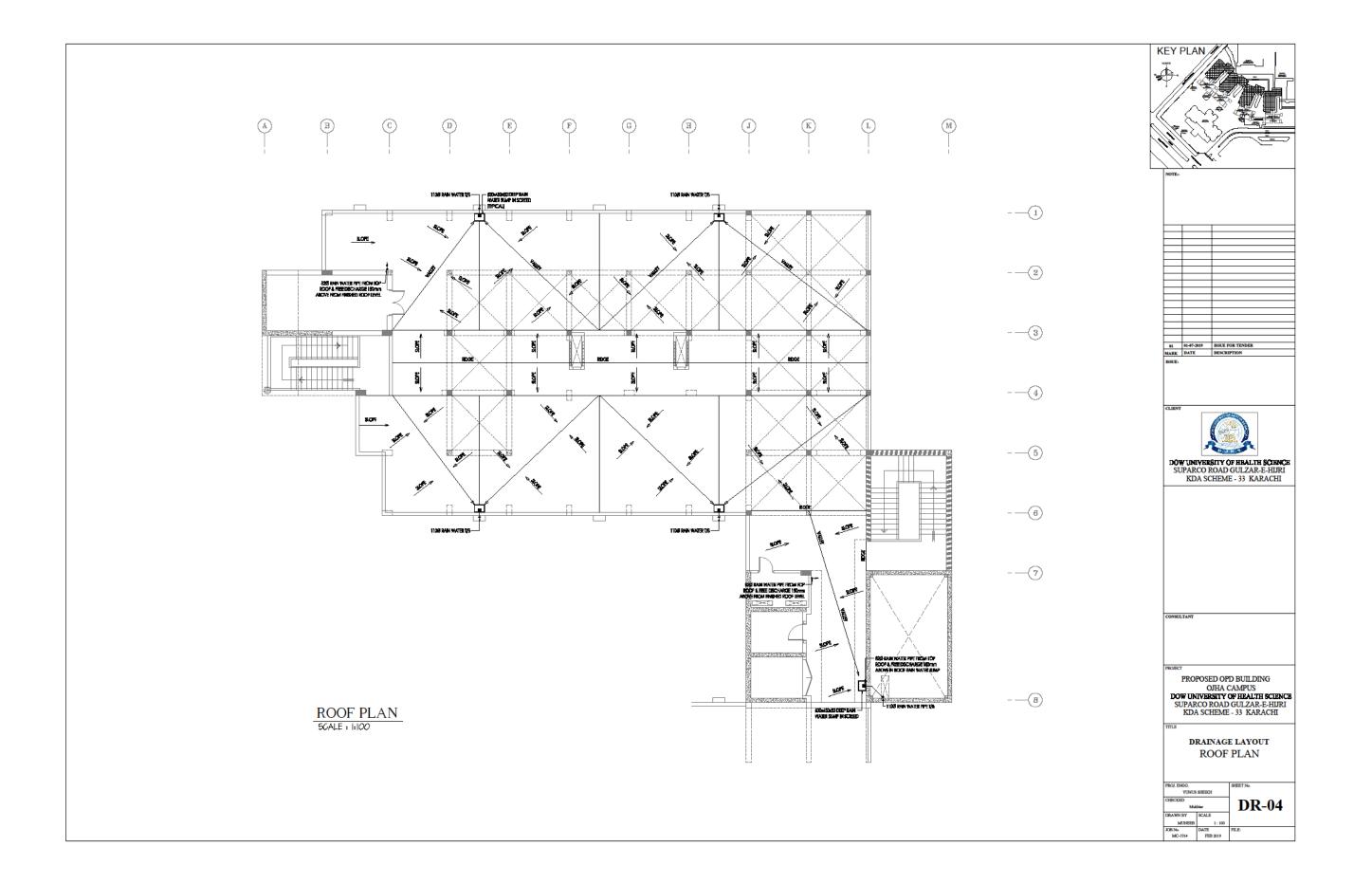


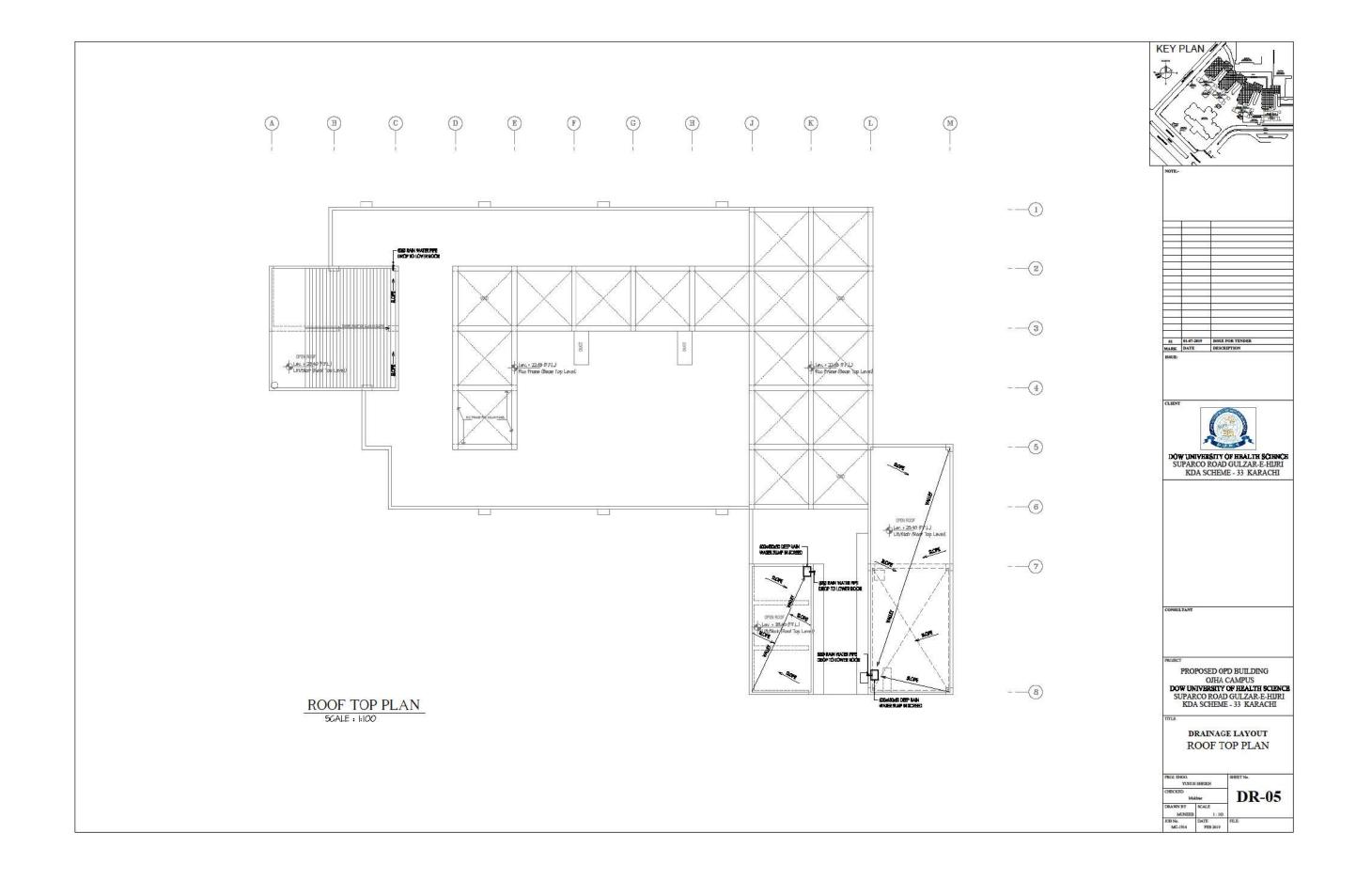


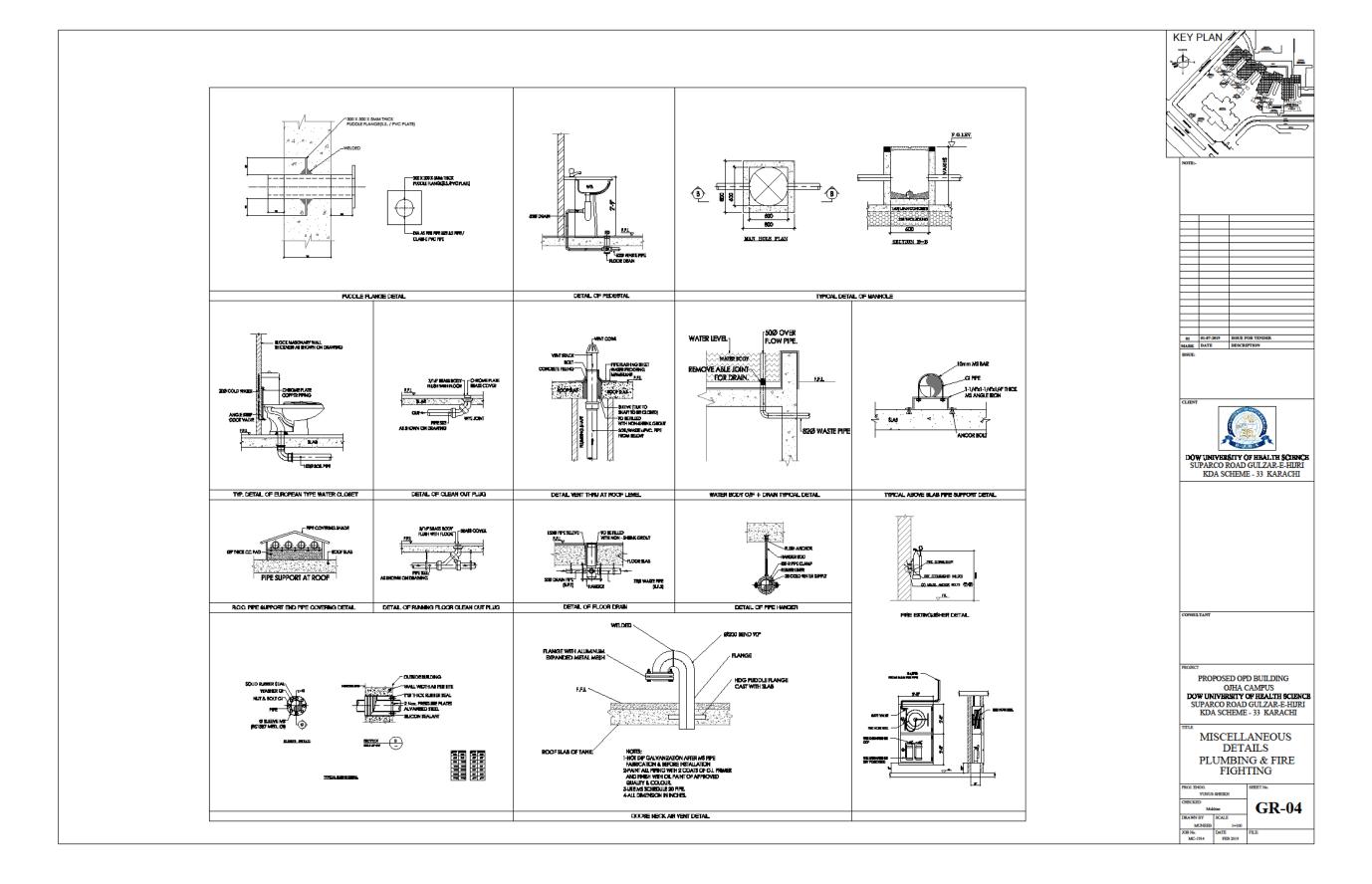


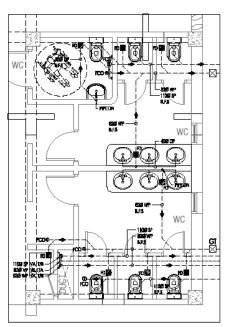




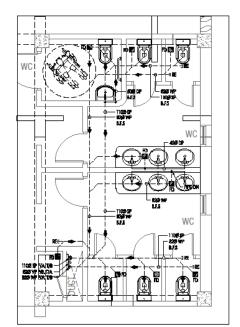




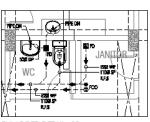




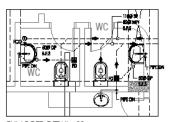
ENLARGED DETAIL - 01 DRAINAGE LAYOUT GROUND FLOOR SCALE = 1:50



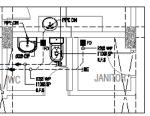
ENLARGED DETAIL - 04 DRAINAGE LAYOUT 1ST FLOOR SCALE = 1:50



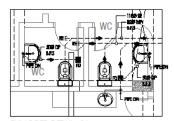
ENLARGED DETAIL - 02 DRAINAGE LAYOUT GROUND FLOOR SCALE = 1:50



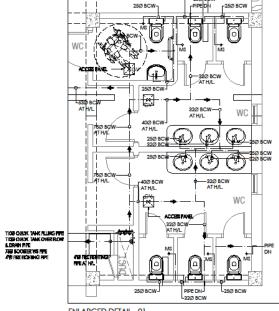
ENLARGED DETAIL - 03 DRAINAGE LAYOUT GROUND FLOOR SCALE = 1:50



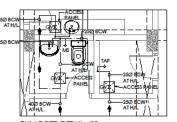
ENLARGED DETAIL - 05
DRAINAGE LAYOUT
1ST FLOOR
SCALE = 1:50



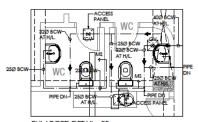
ENLARGED DETAIL - 06 DRAINAGE LAYOUT 1ST FLOOR SCALE = 1:50



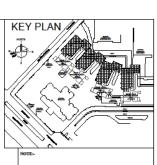
ENLARGED DETAIL - 01 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



ENLARGED DETAIL - 02 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



ENLARGED DETAIL - 03 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



01	01-07-2019	ISSUE FOR TENDER
MARK	DATE	DESCRIPTION
ISSUE:		



DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI

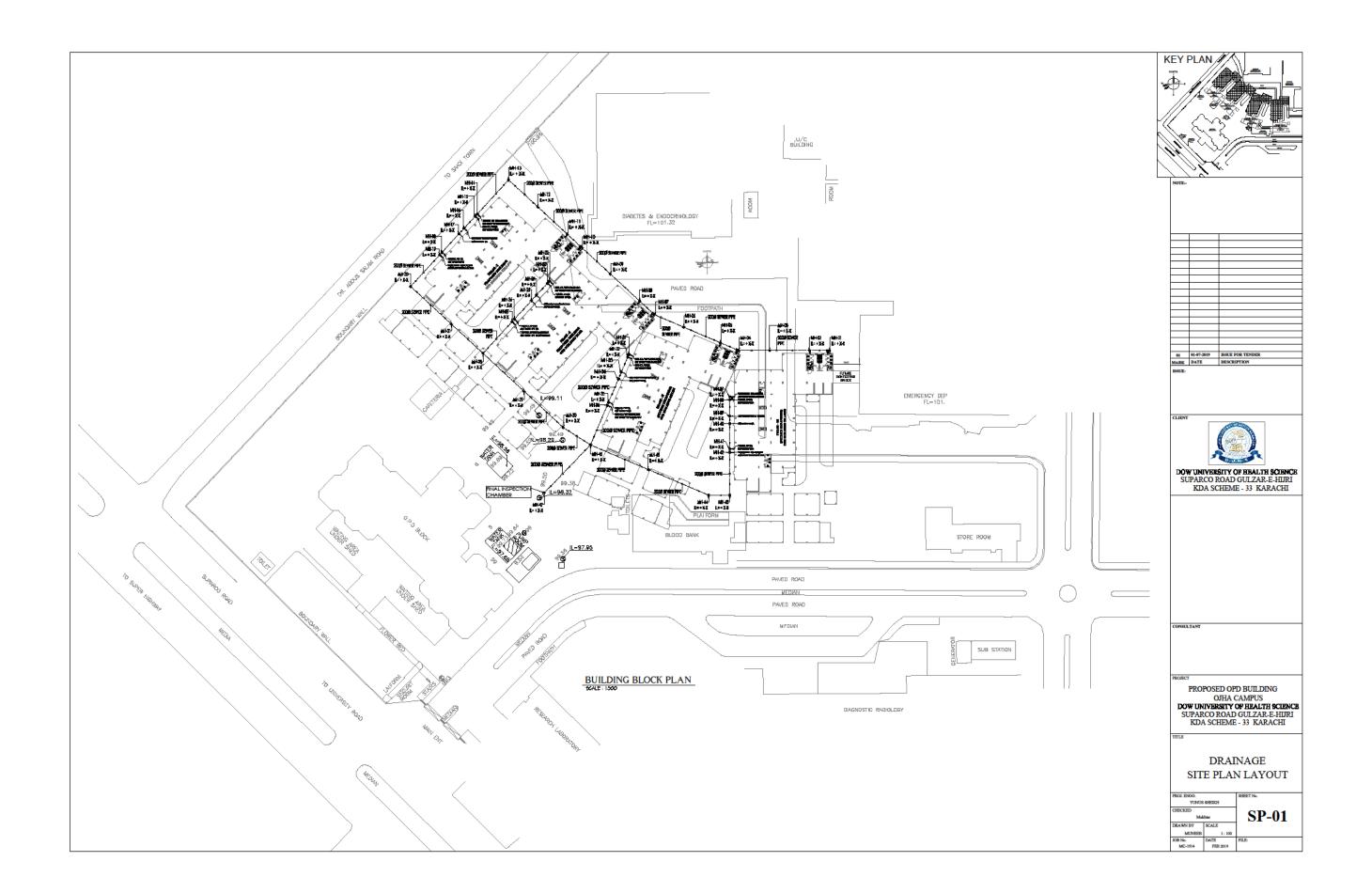
CONSULTANT

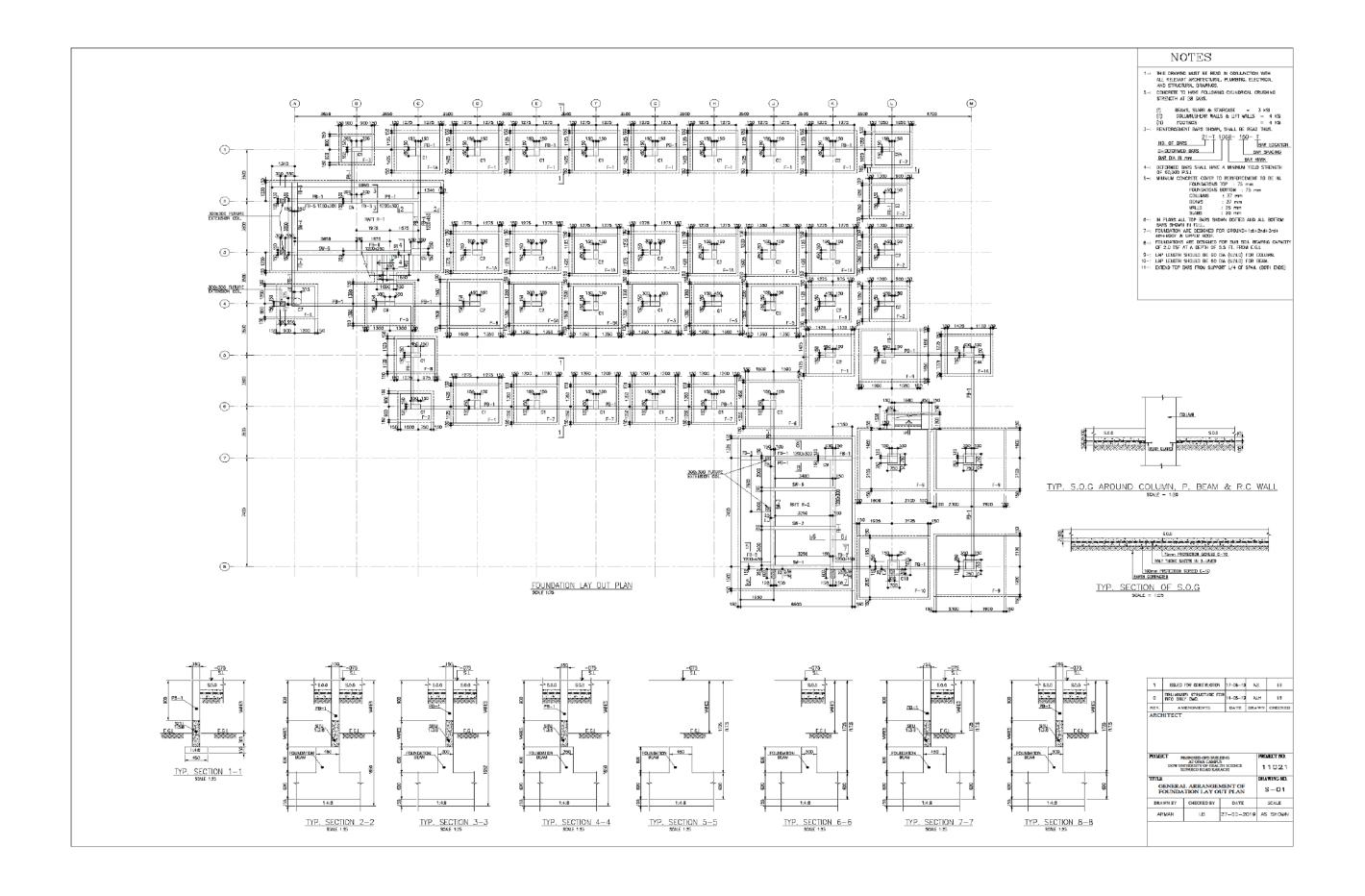
PROPOSED OPD BUILDING
OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HURI
KDA SCHEME - 33 KARACHI

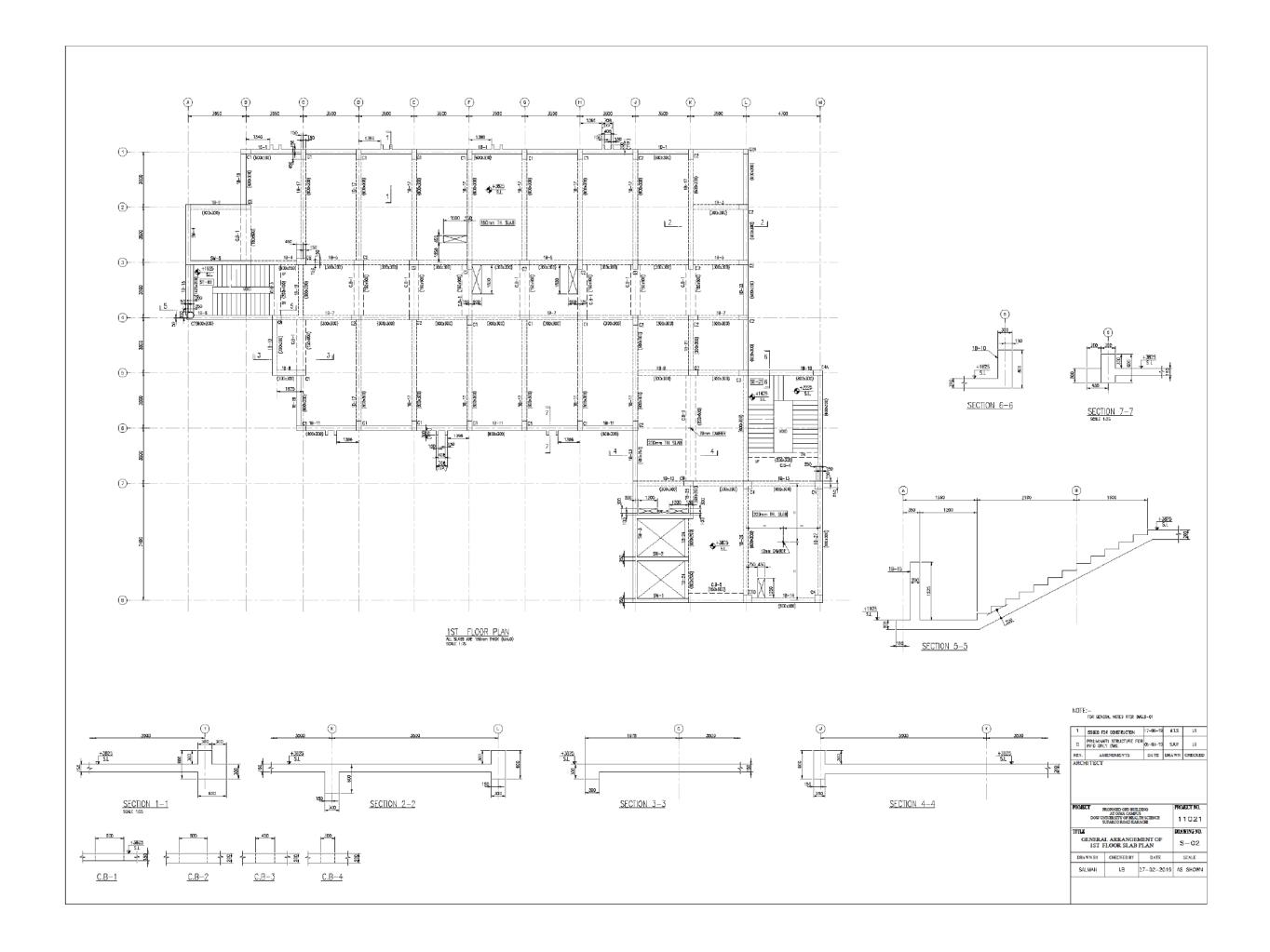
ENLARGED DETAILS

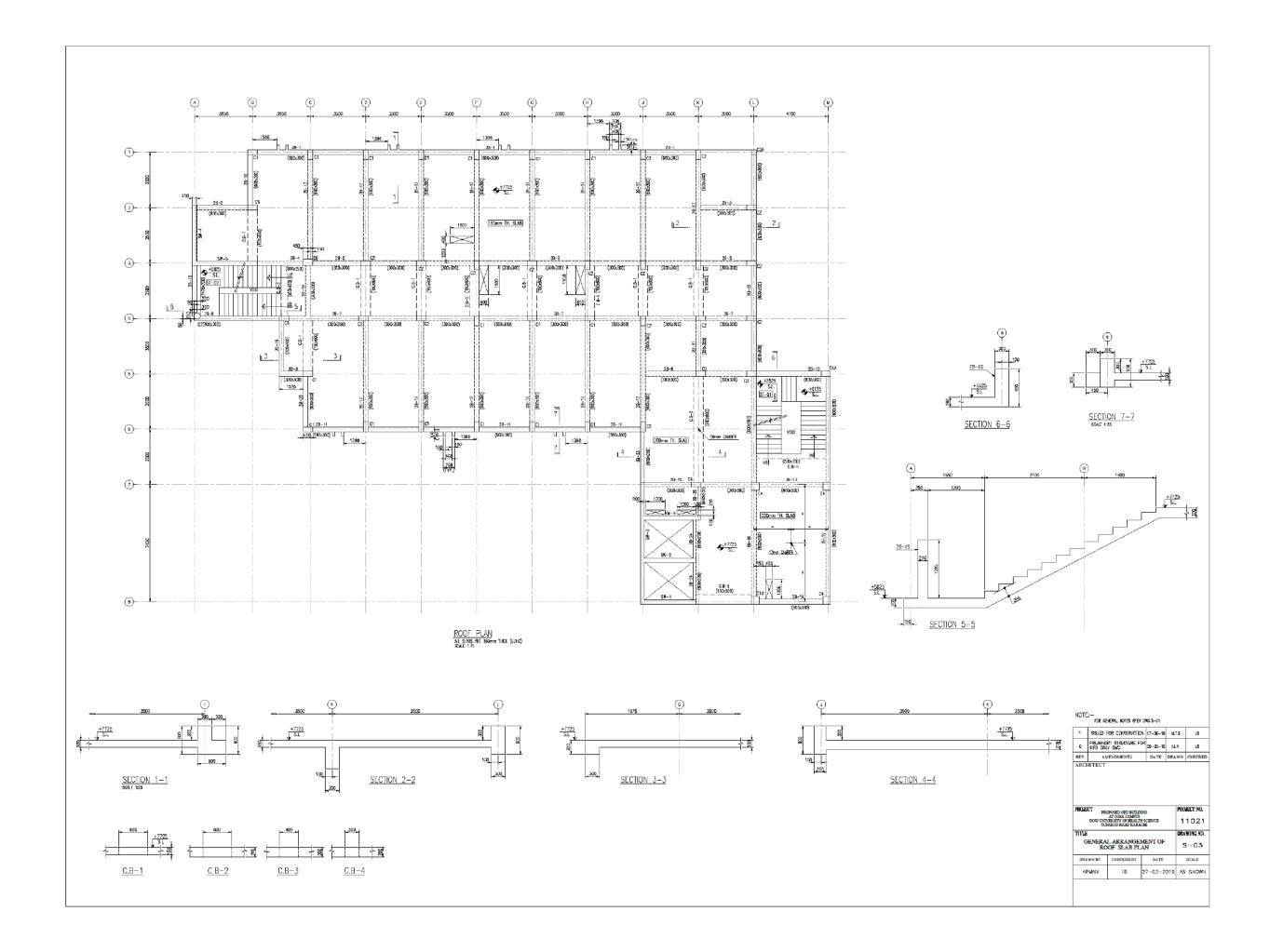
DRAINAGE &
WATER SUPPLY

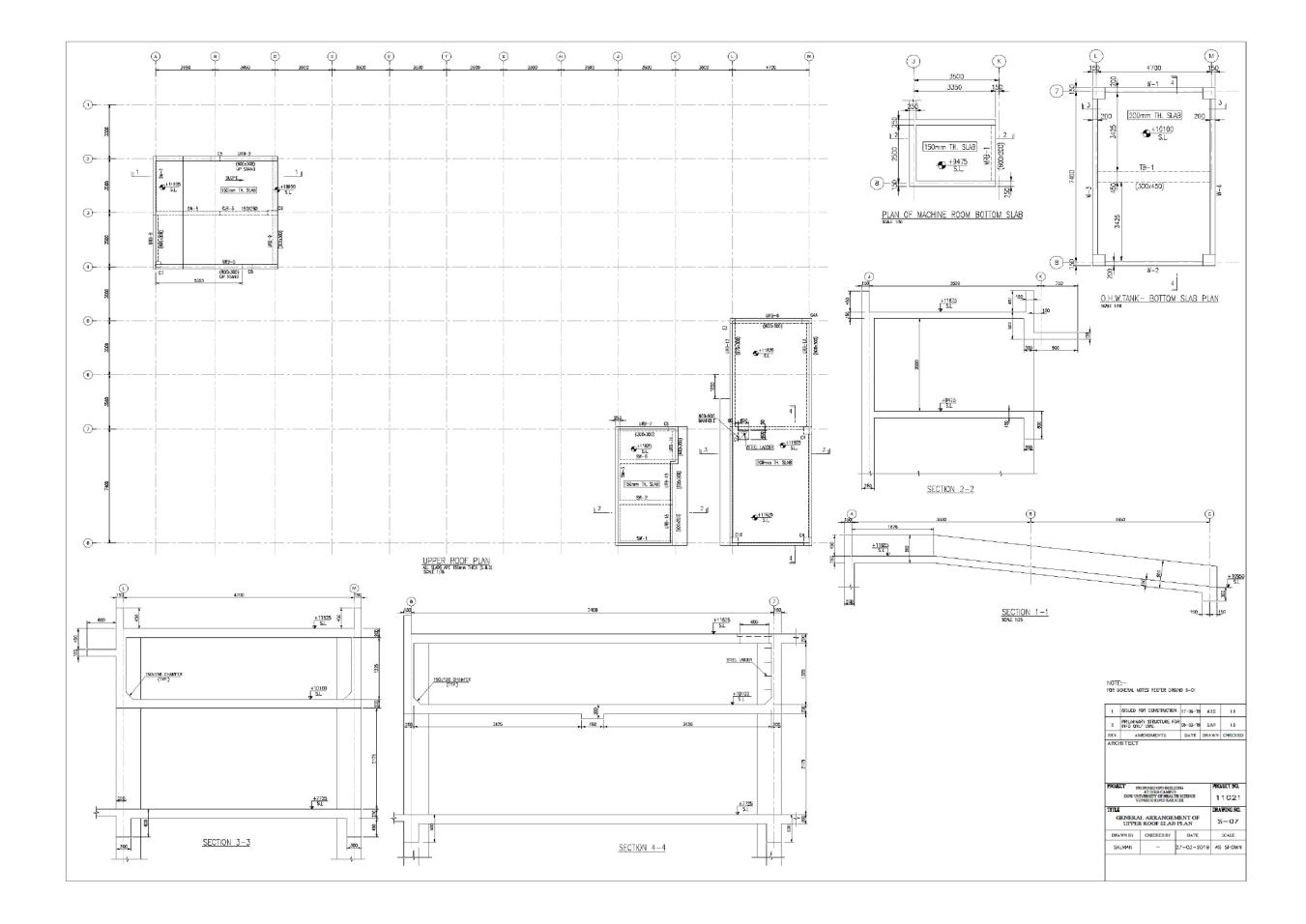
YOUNS SHEIKH		SHEET No.
CHECKED MUKHTAR		PD-01
DRAWN BY	SCALE	1
MUNEEB	1=100	
JOB No.	DATE	FILE:
MC-1914	FEB 2019	

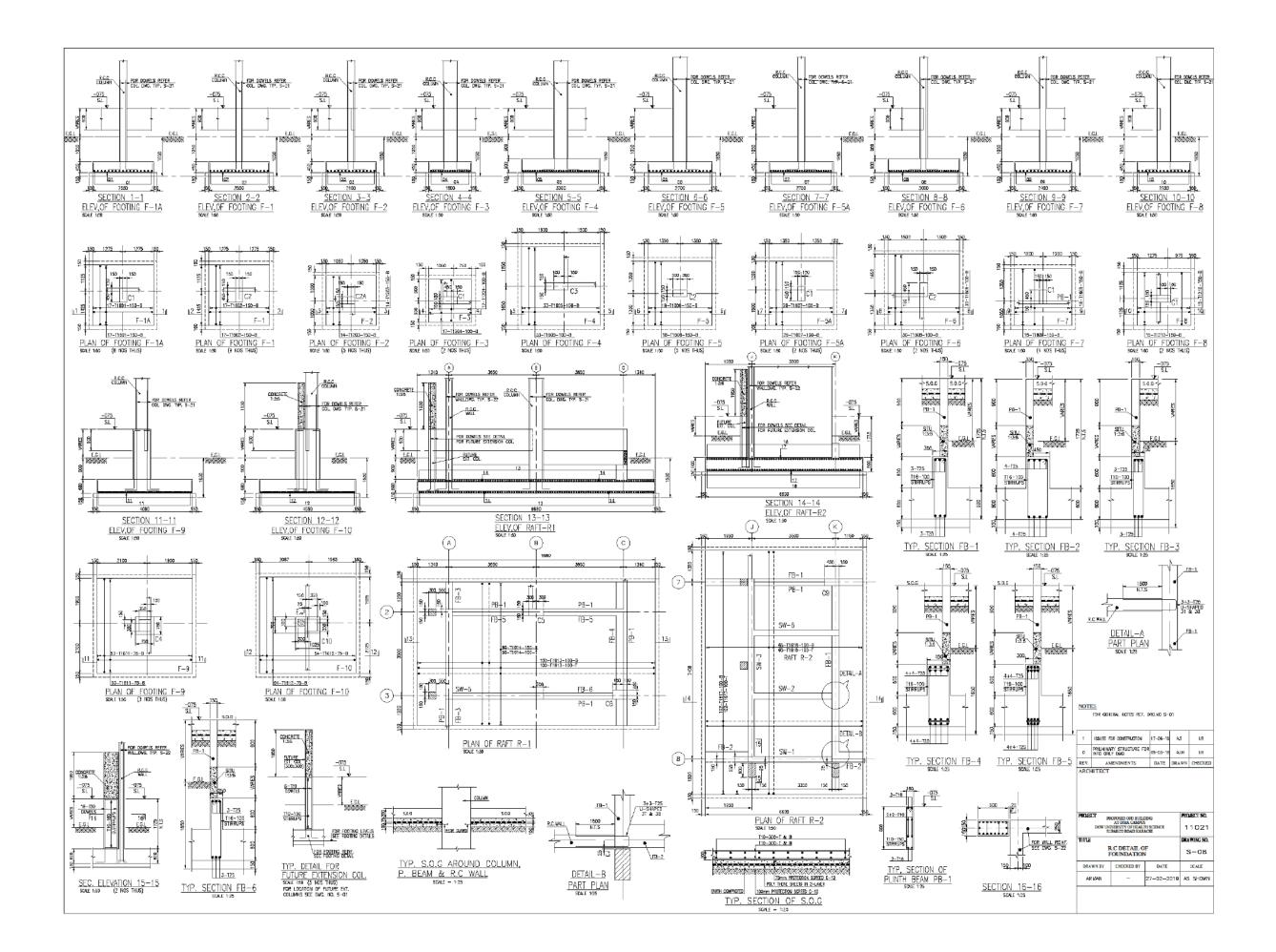


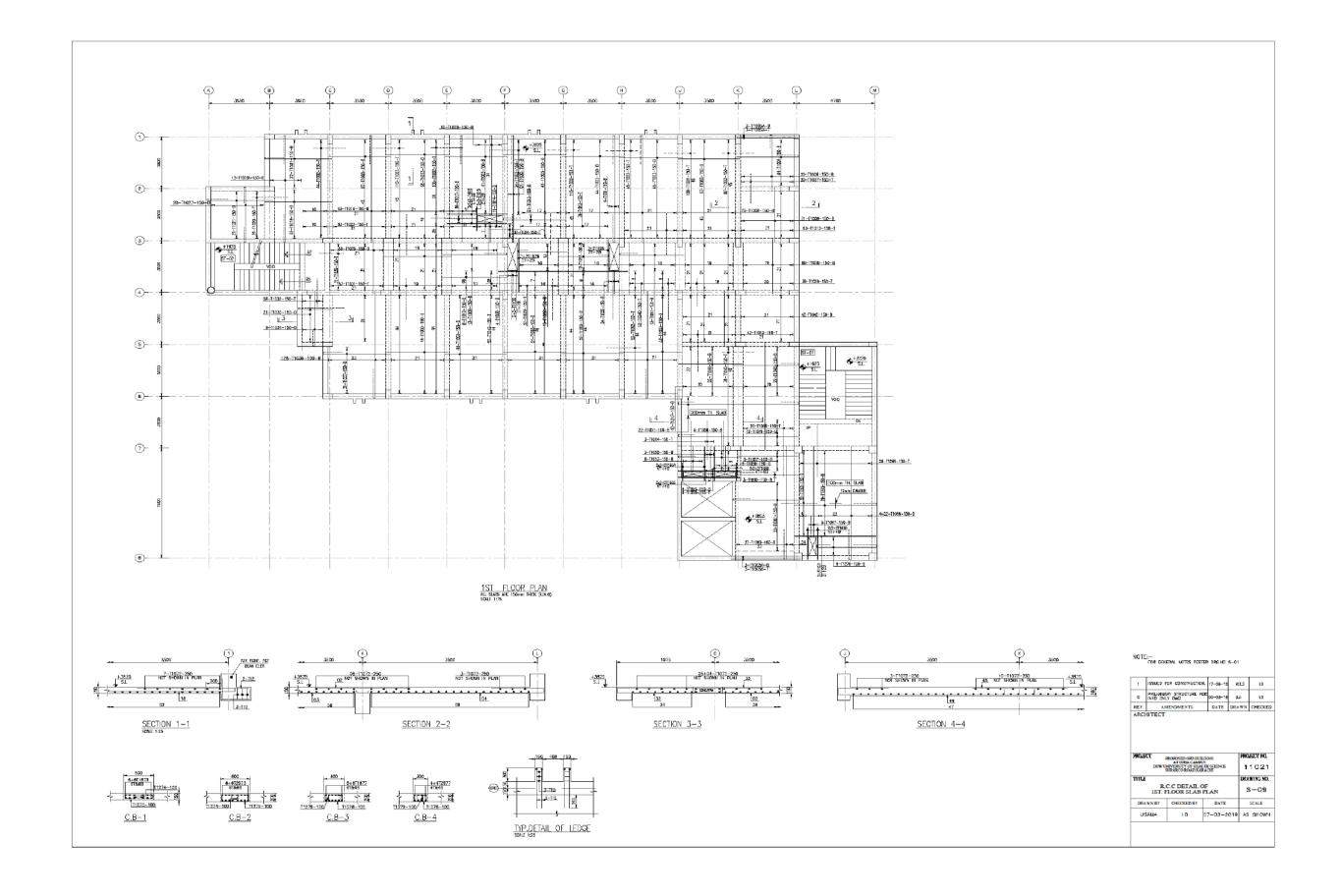


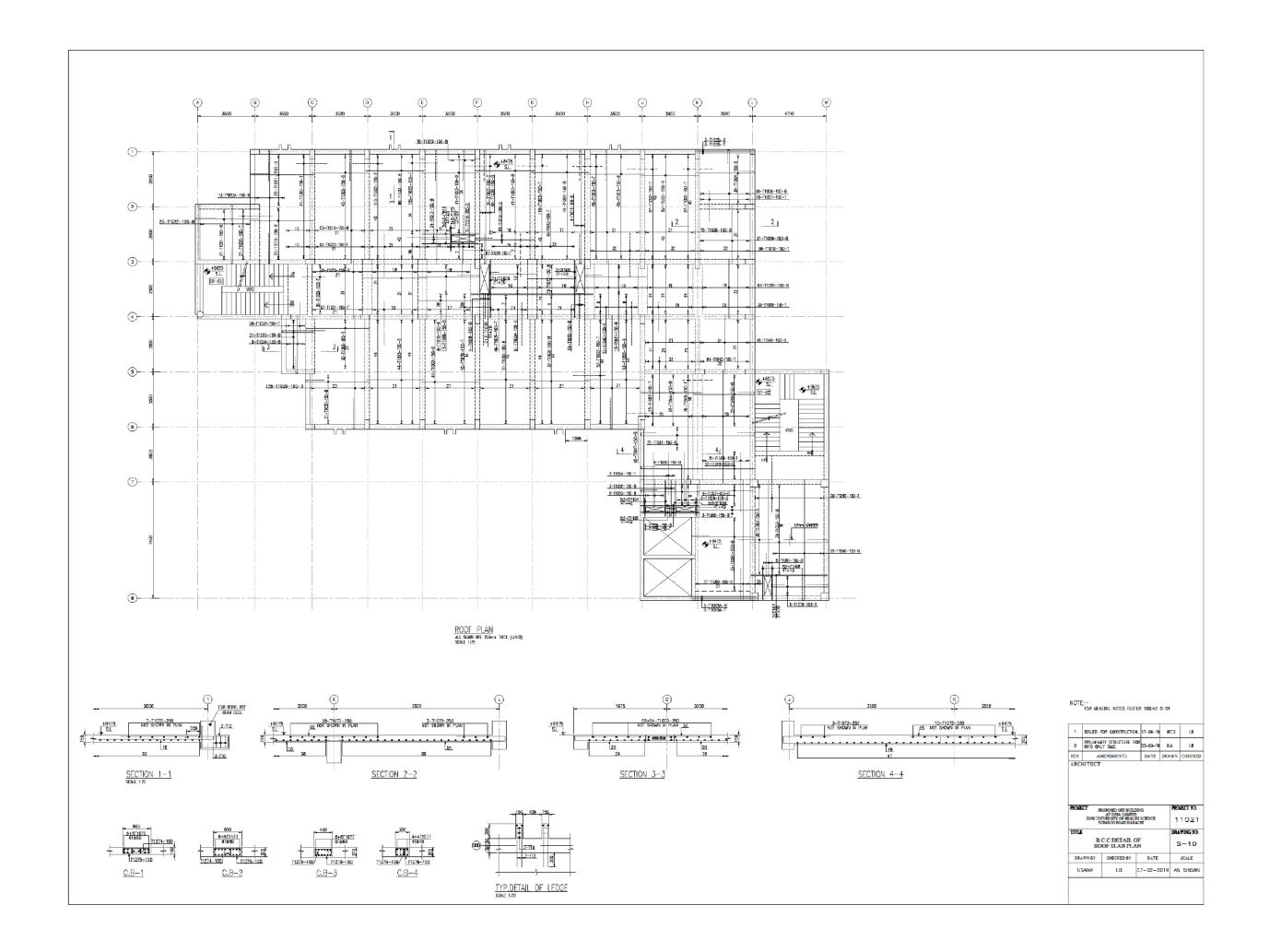


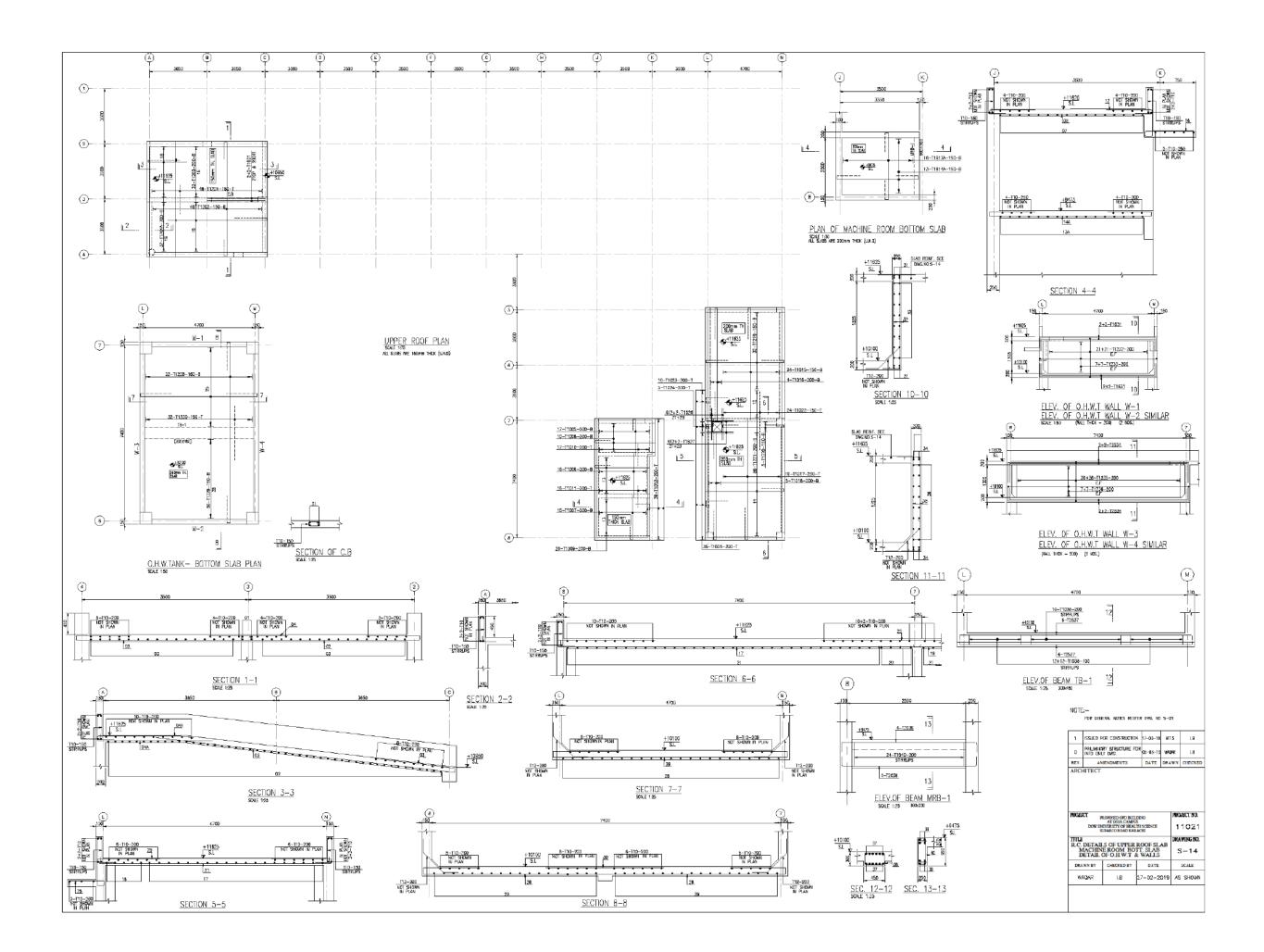


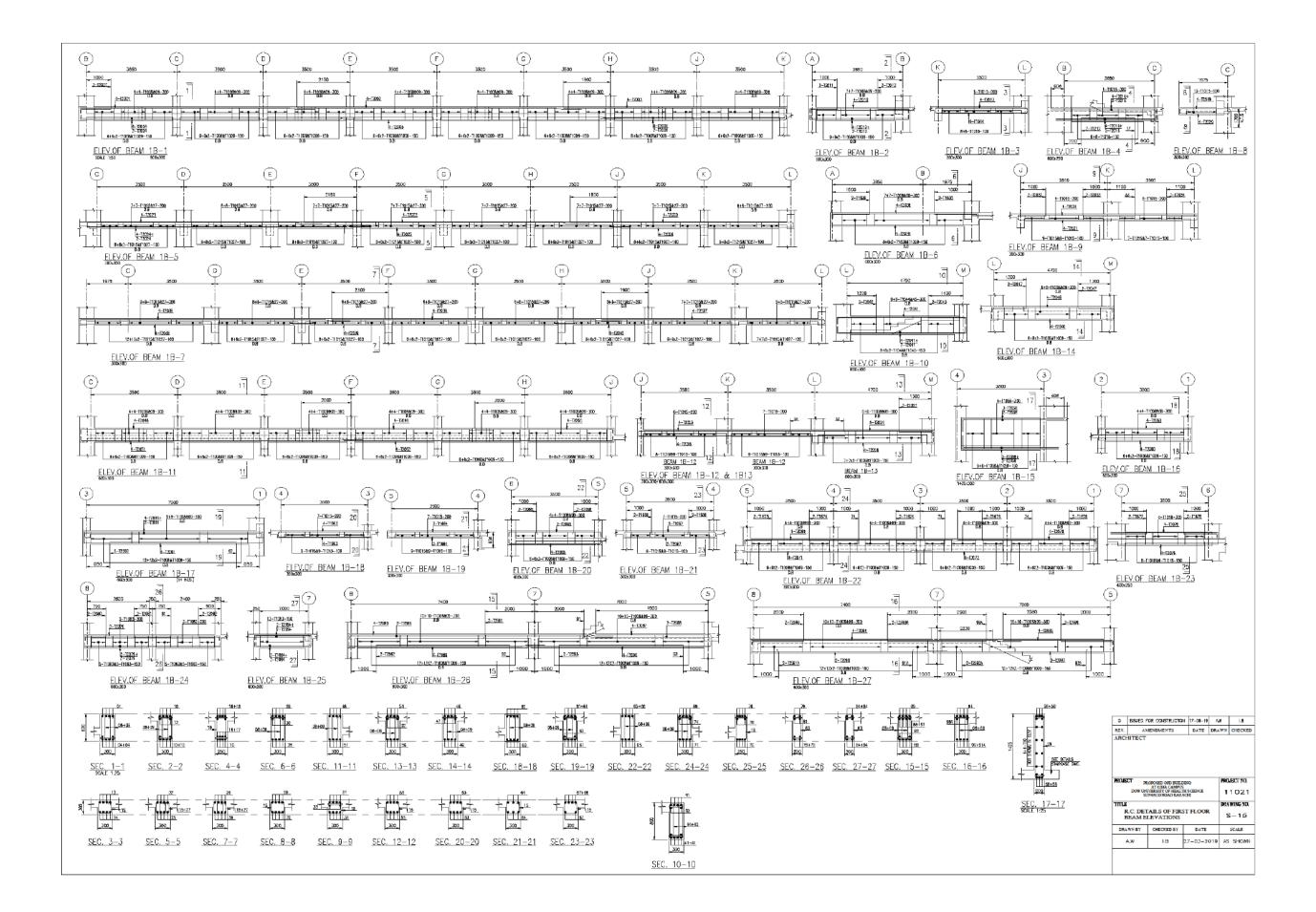


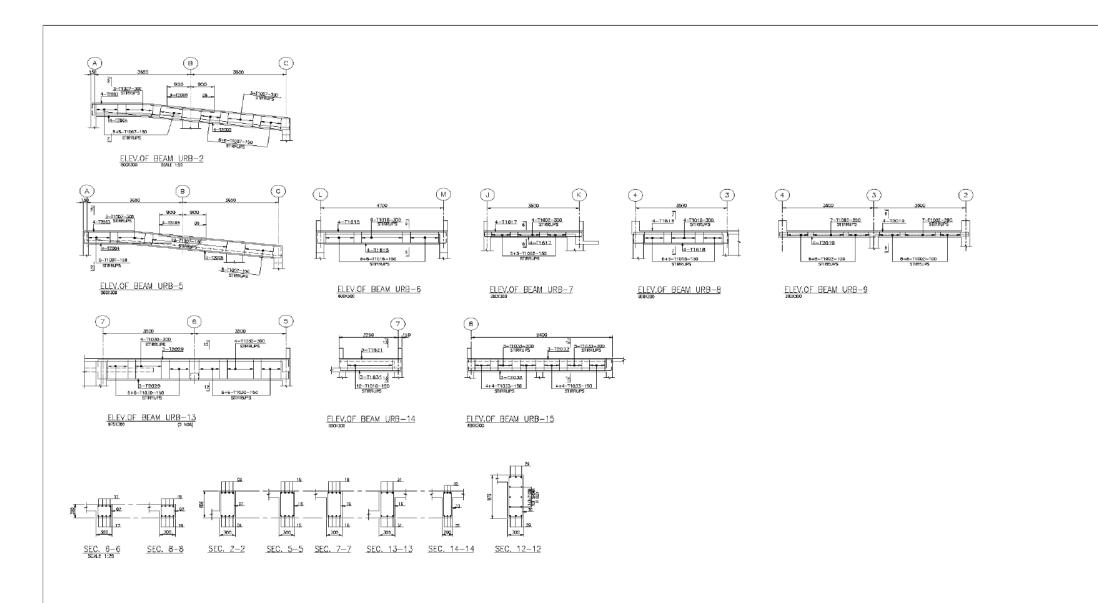












0	ISSUED FOR CONSTRUCTION	17-06-19	AJH	1.8		
REV.	AMENDMENTS	DATE	DRAWN	CHECKE		

DOWLD	ROPOSED OF DBUIL AT OTHA CAMPU IVERSITY OF HEAL UPARCO ROAD KAR	TH SCIENCE	11021
	.C. DETAILS (		DRAWING NO. S-20
DRAWN BY	CHECKED BY	DATE	SCALE
AHMED	I.B	28-3-2019	AS SHOWN



## DOW UNIVERSITY OF HEALTH SCIENCES KARACHI.

## TENDER DRAWING ARCHITECTURAL

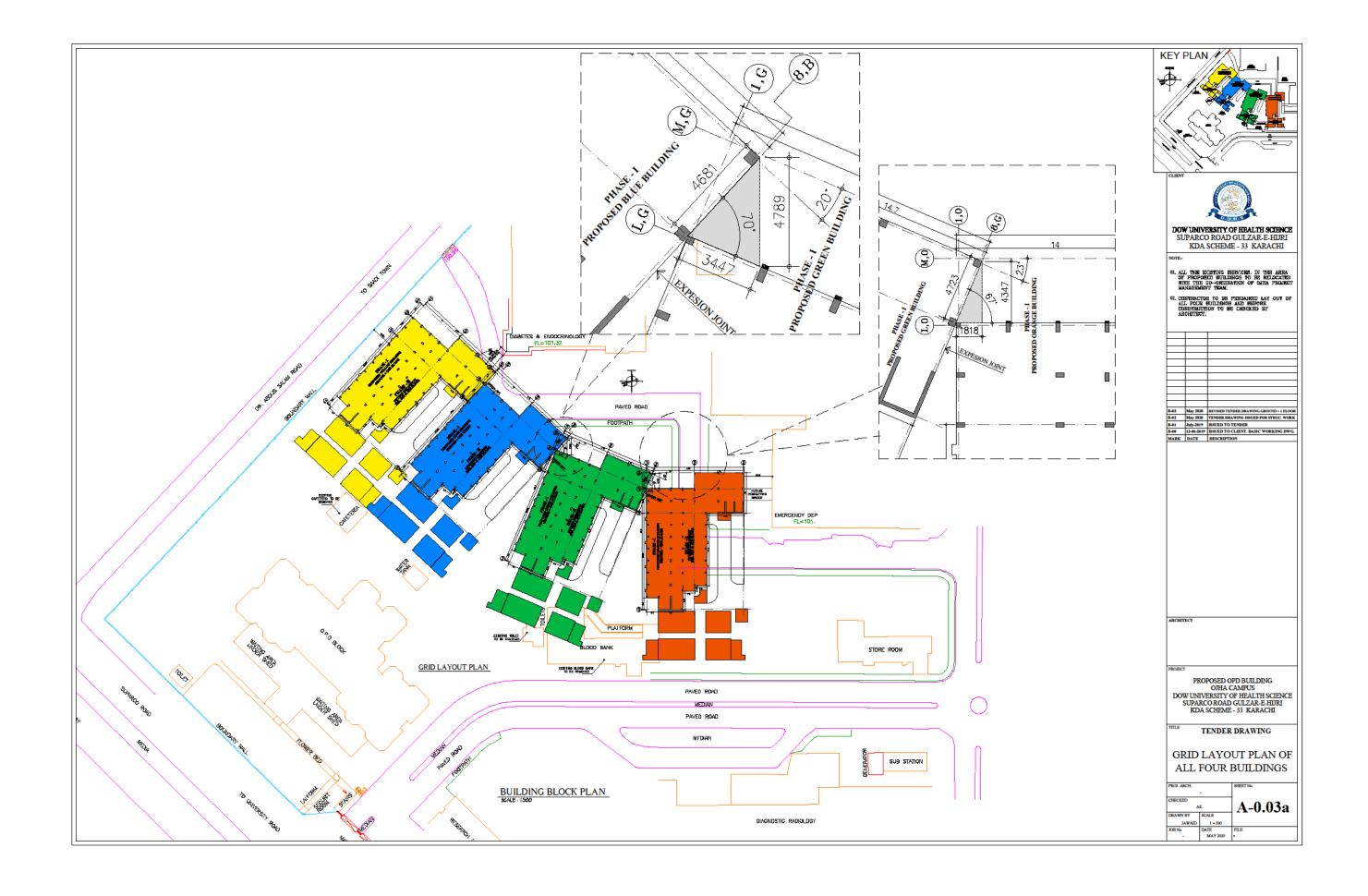
(GROUND + ONE FLOOR)

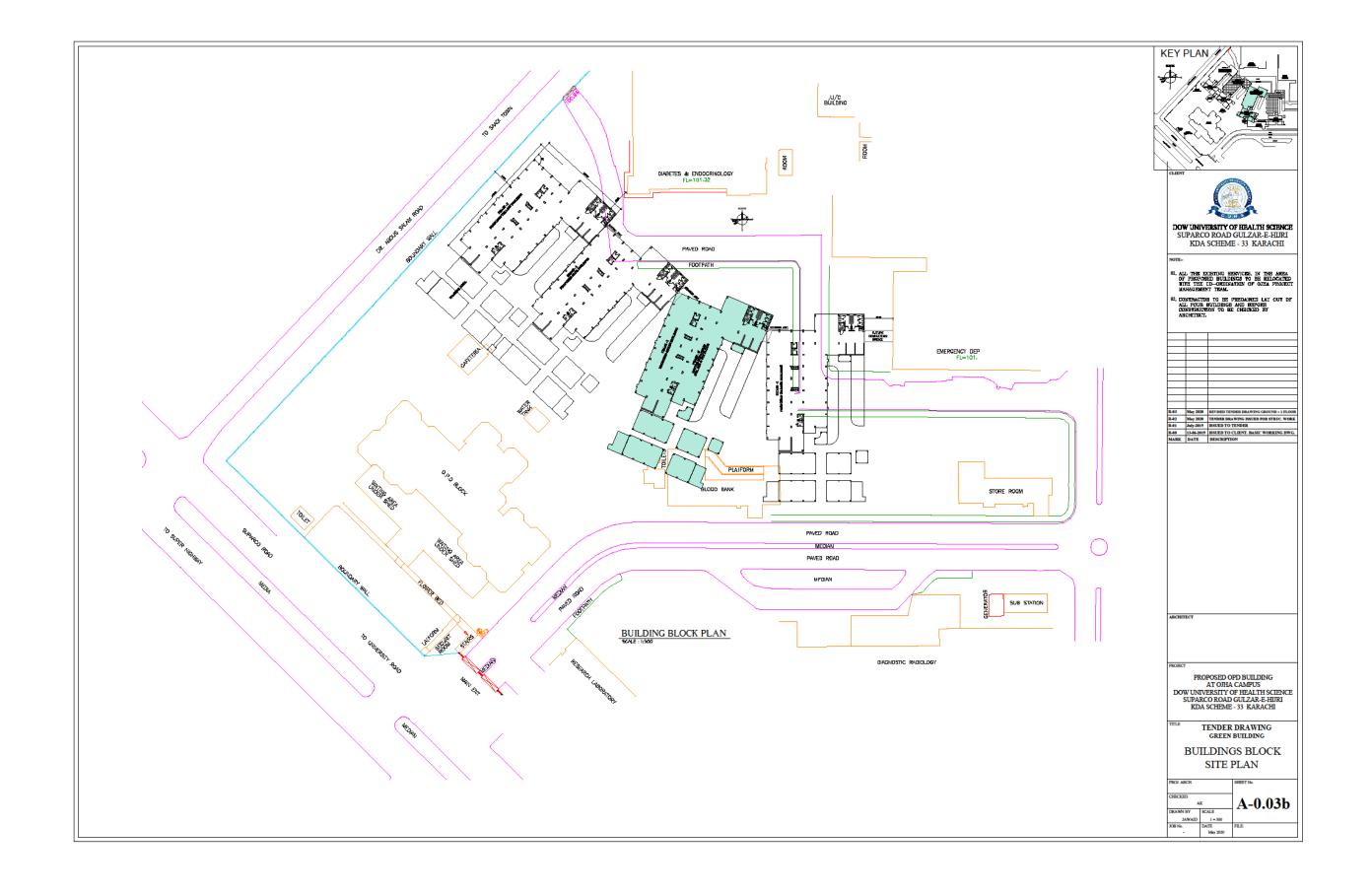
YELLOW BUILDING

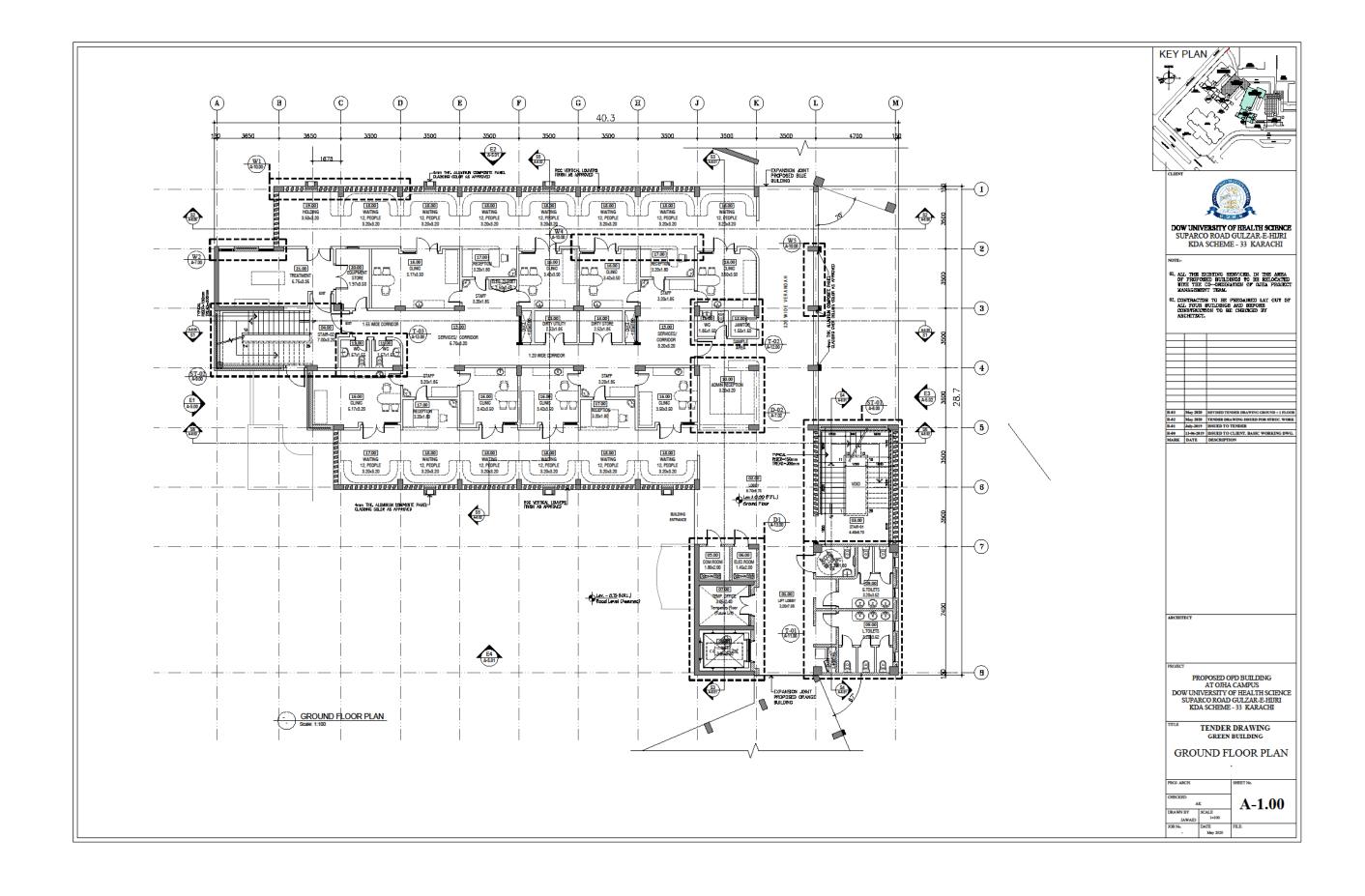
DATE :- MAY 2020

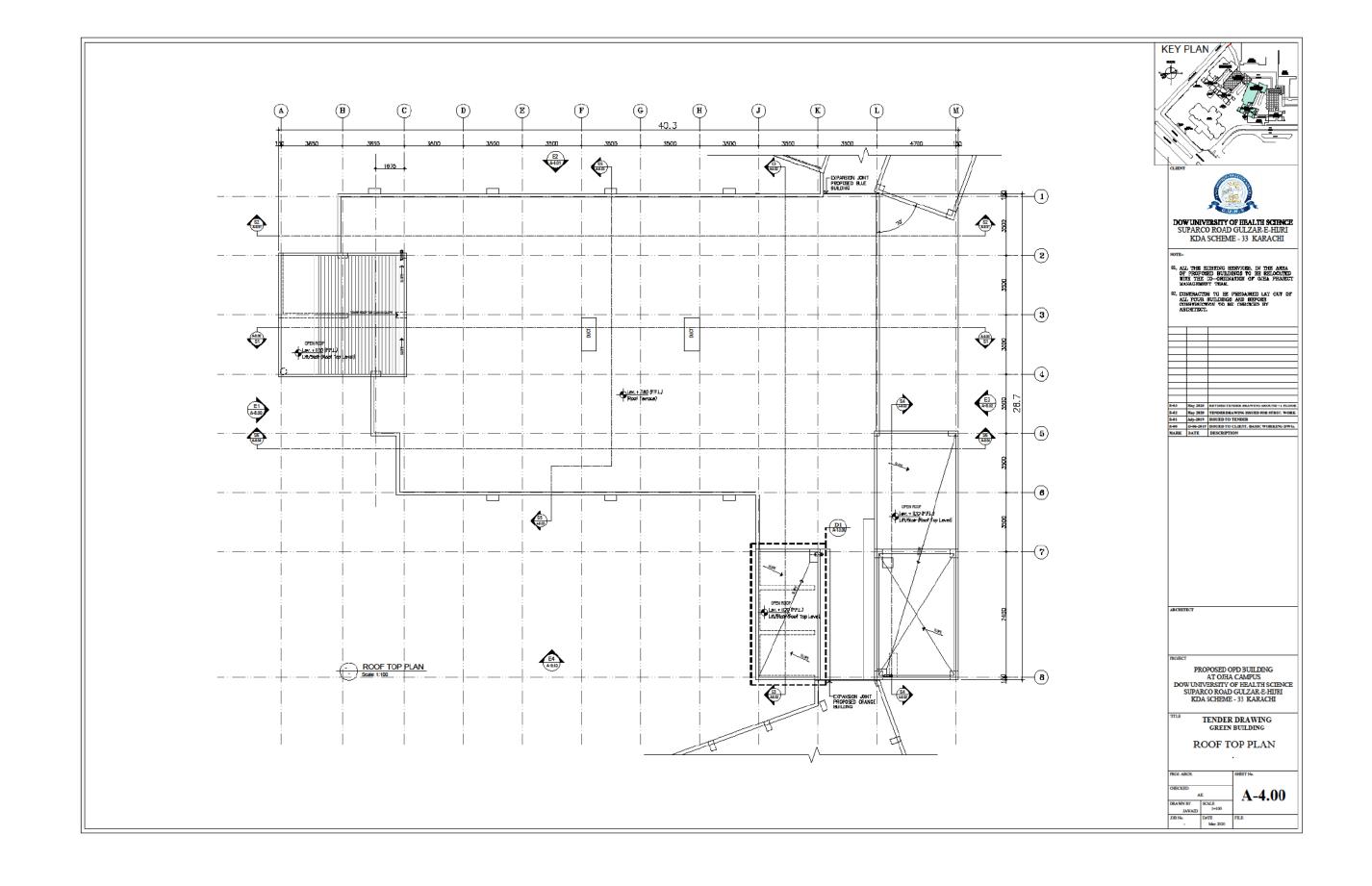
PROPOSED OPD BUILDING AT OJHA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI

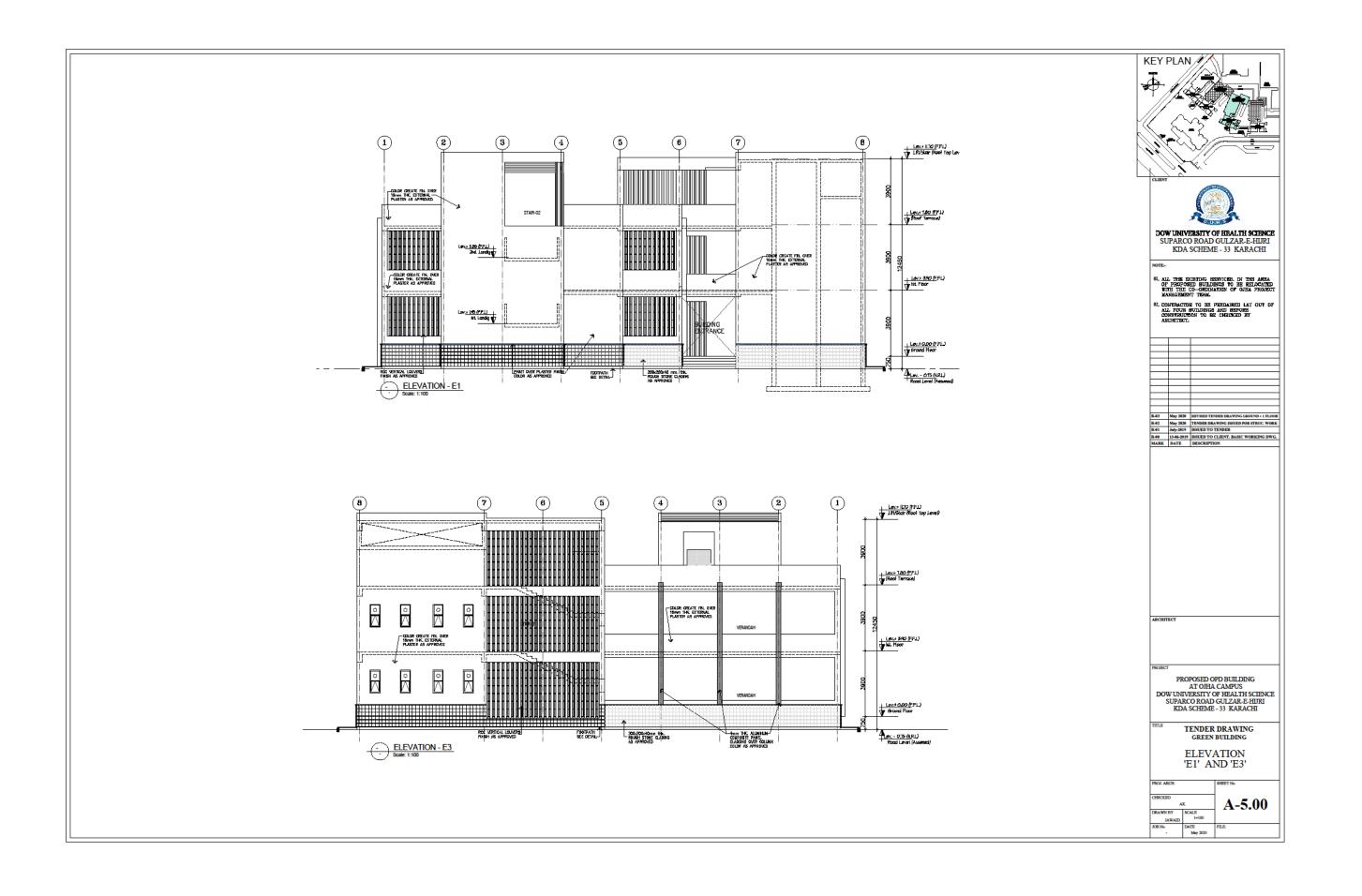
OPD XMS	BUILDING OJHA CAM		FLOORS	IVERS	ITY I	SAKAU	HI	S	C H		O L	K _		COTS D		N I 3	SHES	5	WALI	5				1	CEILIN	10				—— I'	
ZOING	ROOM NAME		ATERIALS	;					MATERIAL				MATER		ADO		HT.		MATERI					MATERI		VG		MC	ST. SUSP.HT REM	ARKS	
ROOM NO:			FECONIM SO BESTORM BO SIAL Terkett P. Option June B. Omniborations	FLOOR (300mm300mm)	S (ENVICRETE) m SQ (MATRIC) TILE (25mm x 25mm)	NSTRIAL GLAZING R M.S FRAME NARBLE EDGE PRESIDENT TE WITH NARBLE EDGE	MARRIE PORCELAN TE T T-TE SCHIM HIGH 8 - SCOMM	HIGH HIGH THE GARRY CHAIT	8-900 8-900	ISED SYRTHIC IN SIR (MATRIC)	NSTRIAL GLAZING ALAL Torkett B- Opher Ann The Tarkett Transportson	4 STEP 20	( SIZE AS PER DARWING )	F 100mm	( SIZE AS PER DARMING )	가 가 게도	.a - 450mm	- Buumm 3	TLE .	CI OR RDBILAC	G-G-055Y M-MAIT, FIN.		STE PANO.	YSTEM (BOOMINXBDOMINTLES)	THAN DANT	NIT FAIR I VEHEER CI OR EQUIVALARIT	O-CLUSSY M=MAT, FIR.	мят	NOR SCHEME		CLIDY CLIDY
		- PORCELAIR TILE 600 - GRAVITE TILE 600 - MARBLE TILE 600 - GAZED CERPAIC - GAZED CERPAIC - GAZED CERPAIC	O CLASS TILE  VINYL AUTBACTER	D FOAM CONCRETE  ORESSED STORE	CONCRETE PAVER TO PABLE TILE ZODM	A NOODEN FLOOR ON STEP	17 CANDING AND THE TO CARPE TO THE	MARBLE 190mm I	MOODEN SWIFTING	CONORETE RUBE PABLE TILE 2001	SWITHERD CARROLLINE IN 121	A MAPBLE SKINTNG OF PORCELAIN TIE .	GRANITE MARBLE GRANITE G	MARBLE COPING SO	A G.CERAMIC TILE  WOOD PAVIDLING  A ACT TILE	CALASS TILE STATINETIC CARTE	JIL MY GOODS	MARBLE TILE	A GLAZED CERANIC A EPOXY PAINT A ASS THE	WINT EMILSION I	D ENAMEL PAINT COLOUR CRETE	C PLASTER  STONE FAZING	ALIMINUM COMPO	DAMPA CELING S ACCOUSTICAL TILE	A CLASS SKY LIGHT	PLYMODO BEECH		THE PRINCIP IN THE PR			
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		1ь						3				1a		5b			10=1200mm 2 =2400mm			8		12				-	8	11			KDA SCHEME - 33 KAI
		1b 1b						3				1a	-	5b 5b			1200mm	+++		8 8	$\overline{}$	12		+++		+	8 B	11			NOTE:-
		1ь	++	+	+		+	3		+++	+	17 1c	-	50	++	++	1200mm	++	+	8	+	12	++	++	+	-	8	11			01. ALL THE EXISTING SERVICES, IN OF PROPOSED BUILDINGS TO HE NITH THE CO-ORDINATION OF ON MANAGEMENT TEAM.
5.00	сом.коом	1ь	Ш					3							$\perp \perp$		-	Ш		8	$\rightarrow$	12	ш			-	В	11			
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7.00 8.00	TEMP.OFFICE		+++	+++	++	15	+	++	5E	+++	++	$\vdash\vdash$	++	+++	+	++		+++	++	8	++	12	++	+	++	+++	+	11	3000 mm		ARCHITECT.
-	TOILETS	10	++	+++	++		1b	++		+++	++	$\vdash$	++	+++	7	++	2150 mm	+++	++	8	++	12	++	1	++	+++	+	11 12	3000 mm		
0.00	ADMIN RECEPTION	1ь	Ш					3					3				1200 mm	Ш	$\perp \! \! \perp$	8	$\rightarrow$	12		1				11 12	3000 mm		
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_		1b	$\vdash$	+				3				10		5b	$\dashv$		1200 mm	+++	++	8	+	12	++	+++	++	-	В	11 12 11 12			R-01 July-2019 ISSUED TO TENDER R-00 13-06-2019 ISSUED TO CLIENT. BASIC V
-		1b						3				10		5ь			1200 mm			8		12					8	11 12			MARK DATE DESCRIPTION
1.GD	TREATMENT	1b						3											5			12		1	+		+	11 12	3000 mm		
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1.01	FIRST FLOOR (01)	16	+++	+	++		+	3	+++	+++	++	1a	2	5b	++	++	14-1200mm	++	++	8	++	12	+	+++	+	+++	8	11			
		1b	++	+++	++		+++	3	+++	+++	++	1a		5b	++	++	1a-1200mm 2 -2400mm 1200 mm	+++	++	8	++	12	++	+++	++	-	8	11			
		1Ь	Ш					3				15	-	5b			1200 mm	Ш		8		12				-	а	11			
		1b	Ш	$\Box$	$\perp \Gamma$		$\prod$	3		$\Box$		17 1c	ЦΤ	50	$\Box$	$\bot$ Т	1200 mm	Ш	$\bot$ $\bot$	8	Ш	12	$\Box$	$\Box$	$\perp \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$	-	В	11			
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-	ELECTRIC ROOM TEMP.OFFICE	1b	++	+++	++		+++	3		+++	++	$\vdash\vdash$	++	+++	++	++		+++	++	8	++	12	++	+++	++	+++	8	11			
8.01					$\pm \pm$					1				$\pm \Box$					+	$\perp \vdash \vdash$		12			$\pm \pm$			11			
9.01	TOILETS	10	Ш	$\Box$			1b	$\Box$						Ш	7	$\Box$	2150 mm	Ш	$\Box$	8		12	$\Box$	1	ш	Ш		11 12			
-		1ь	$\vdash \vdash$	+	+			3	+++	+++	++	$\vdash\vdash$	3	+	+	+	1200 mm	++	+	8	++	12	+	1	+	+++	+	11 12			
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4.01	DIRTY STORE	1a	Ш				1ь								7		2150 mm	ш	$\perp$	8		12	-	1	ш		Ш	11 12	3000 mm		
		1Ь	$\sqcup \sqcup$	$+$ $\square$	$\perp$		$\Box$	3	$\prod$	+	$\perp$	10	-	5Ь	$\perp$	$\perp$	2150 mm	$\coprod$	6		-	12	-	1	+	+	$\perp \! \! \perp$	11 12			
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9.01	HOLDING	1ь						3				10		5b			1200 mm			8	$\overline{}$	12					В	11 12			AT OJHA CAMPUS DOW UNIVERSITY OF HEALTH
		1ь	Ш				Щ	3		Ш		10		5ь	$\Box$		1200 mm	Ш	Ţ	8	Ш	12	$\prod$	ЦΠ		$\Box$	8	11 12			SUPARCO ROAD GULZAR-I KDA SCHEME - 33 KARA
1.01	TREATMENT	1ь	++	+	+		+	3	+++	+++	+	$\vdash\vdash$	++	+	+	$+\!\!+\!\!\!+$	-	++	5	+++	$\vdash$	12	++	1	++	+++	+	11 12	3000 mm		KDA SCHEME - 33 KARA
+			++	+++	++		+++	++		+++	++	$\vdash\vdash$	++	+++	++	++		+++	++	+++	++	++	++	+++	++	+++	+	+			TENDER DRAWIN
$\dashv$	ROOF		$\Box$	+++	+		+++	+		+++	+	$\vdash$	++	+	+	+		+++	+	++	$\Box$	+	++	+++	+	+++	+	+			GREEN BUILDING
1.02	LIFT LOBBY / MACHINE ROOM	1Ь	ш					3				10	2	5b			1g=1200mm 2 =2400mm	Ш		8		12	ш			Ш	8	11			SCHEDULE OF FIN
		1Ь	Ш	$\Box$			ЦΠ	3		+ TT		1c		5b			1200 mm	$\Box\Box$		8	$\rightarrow$	12	$\prod$	$\Box$			8	11			
		16	+++	+	+		+	3	+++	+++	+	17 1c	++	50	+	$+\!\!+\!\!\!+$	1200 mm	++	+	8		12	++	+++	++		8 8	11			
	UPS / BETRAY ROOM/ELECTRIC RM TEMP.OFFICE	1ь	++	+++	++	15	+++	+-	5E	+++	++	$\vdash\vdash$	++	+++	+	++		+++	++	8		12 12	++	1	++	+++	0	11 12			PROJ. ARCH. SHEET No.
		+++	$\Box$	+	+	<del>- 12   -</del>	-	+		+	+	$\vdash$	++	+	$\rightarrow$	+		++	++	+ + -	$\rightarrow$	1.5	+	+++	+	+++	$\rightarrow$	11.2			CHECKED AK A-0

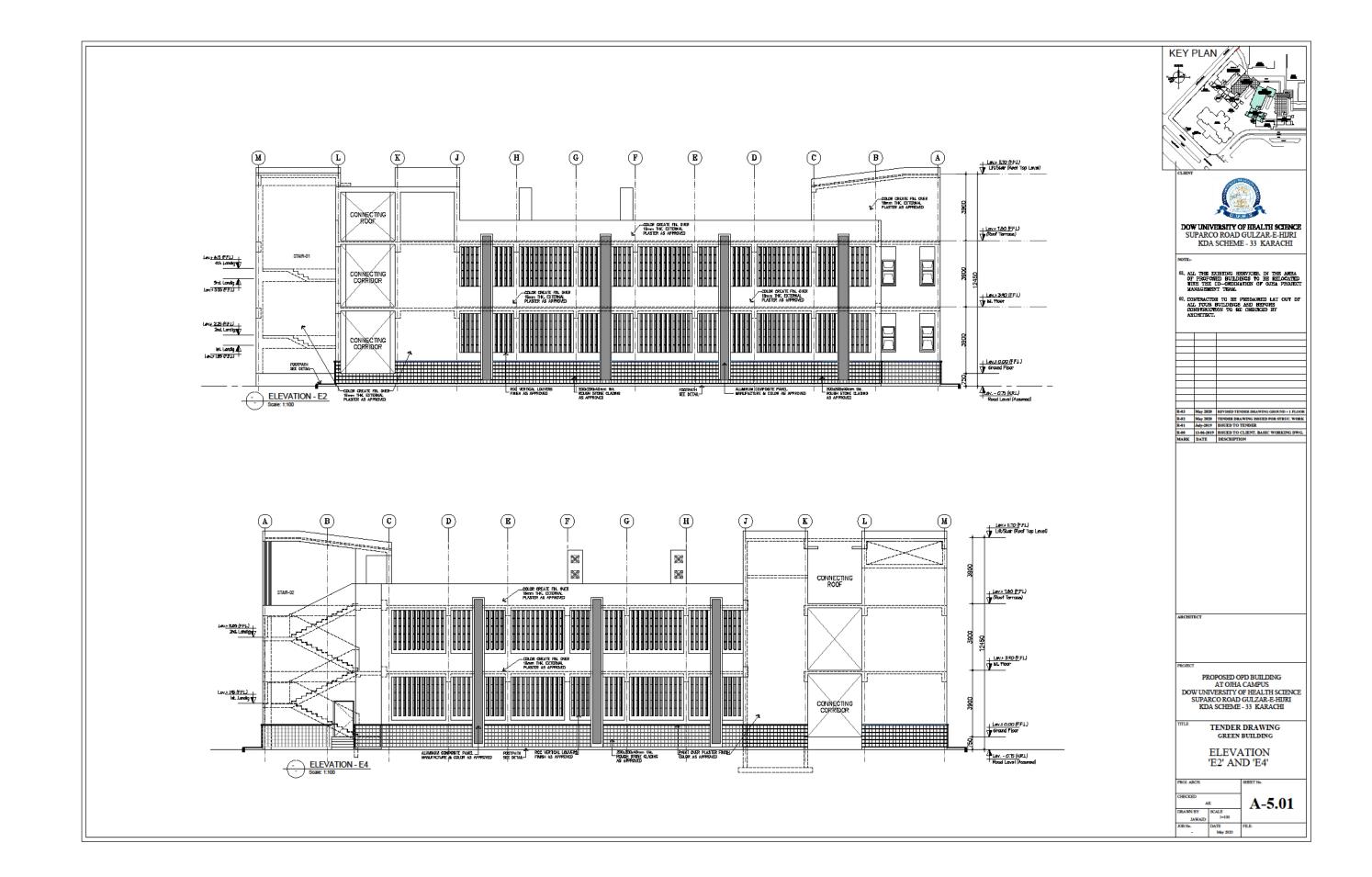


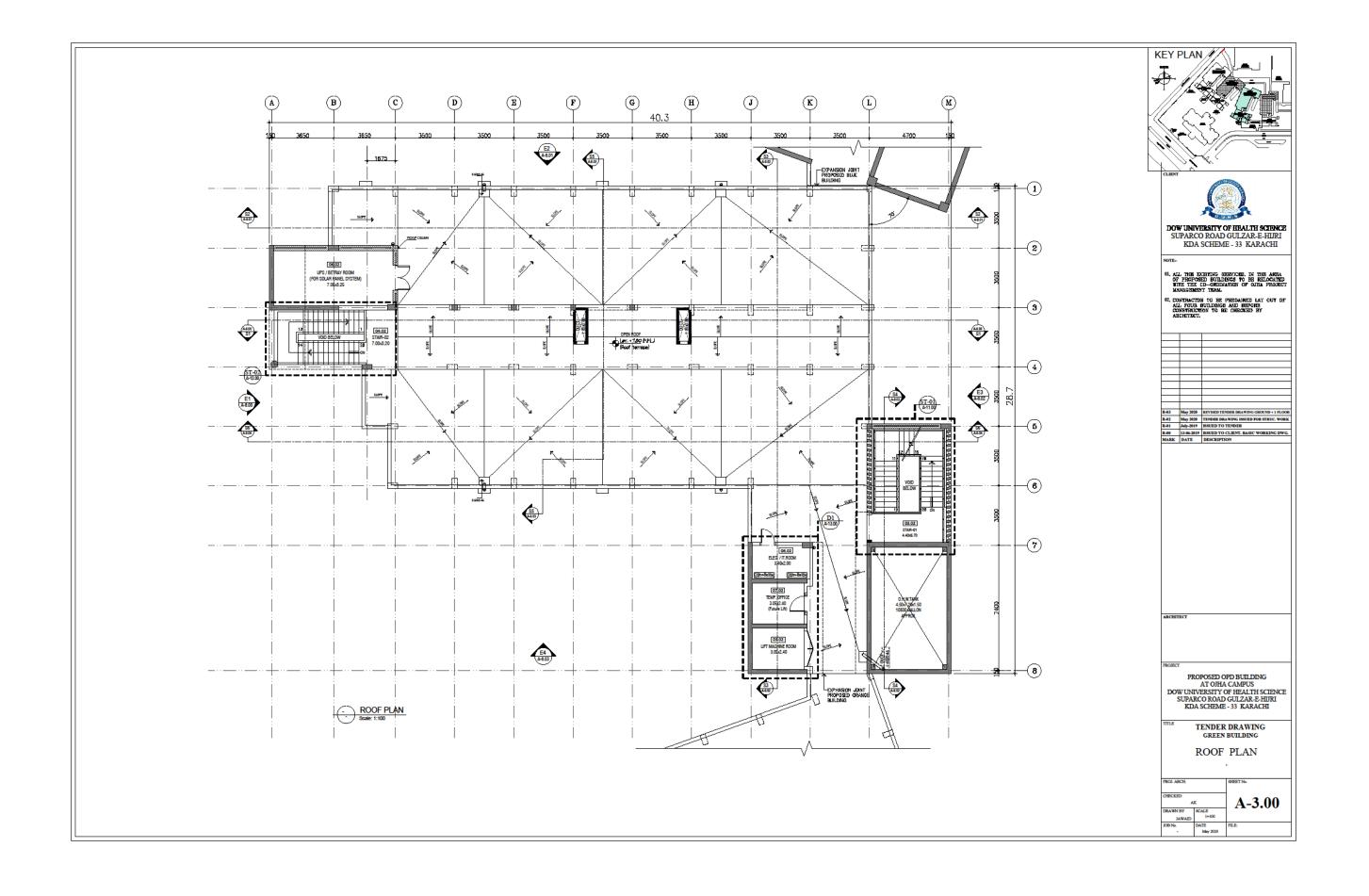


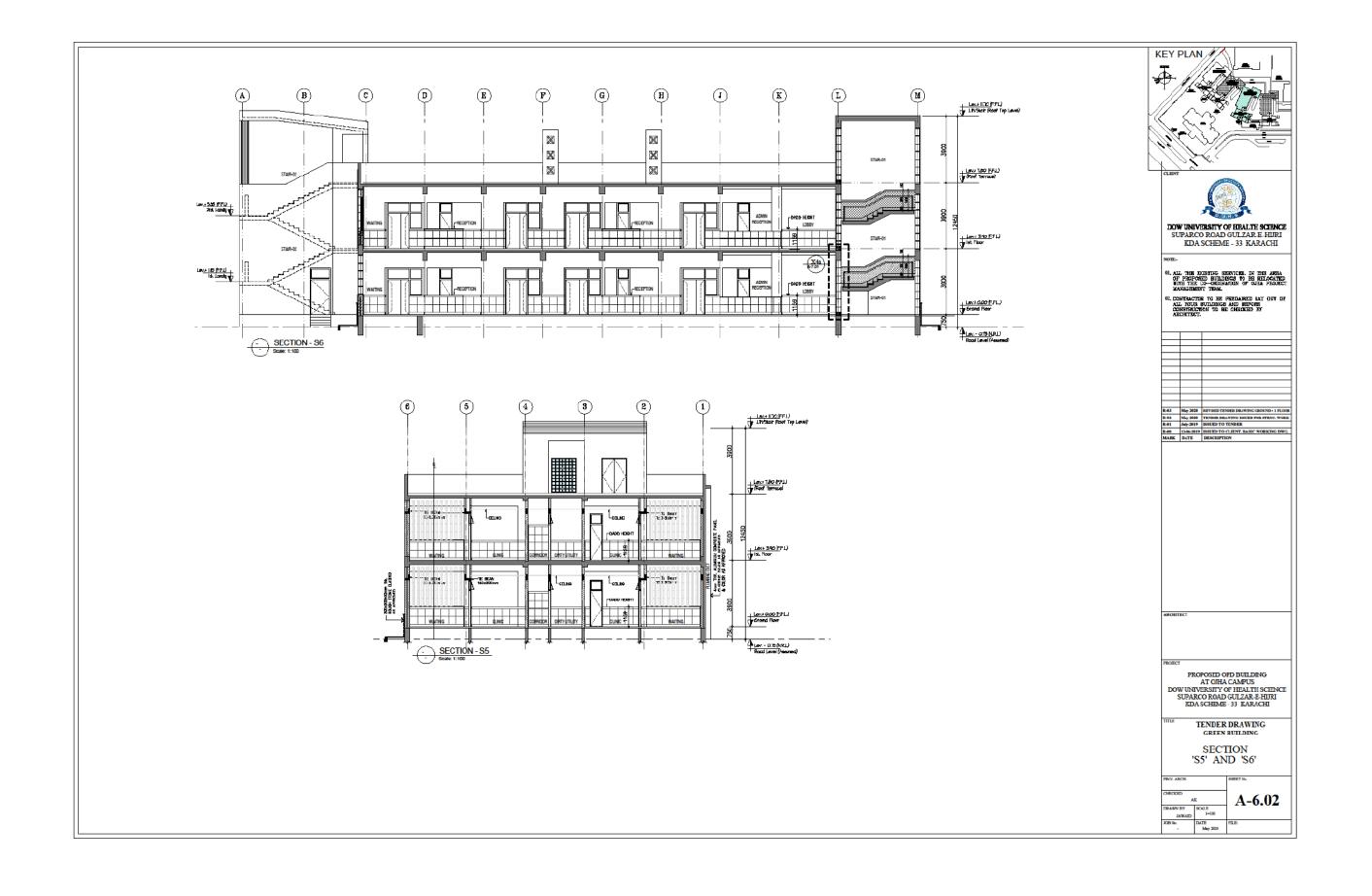


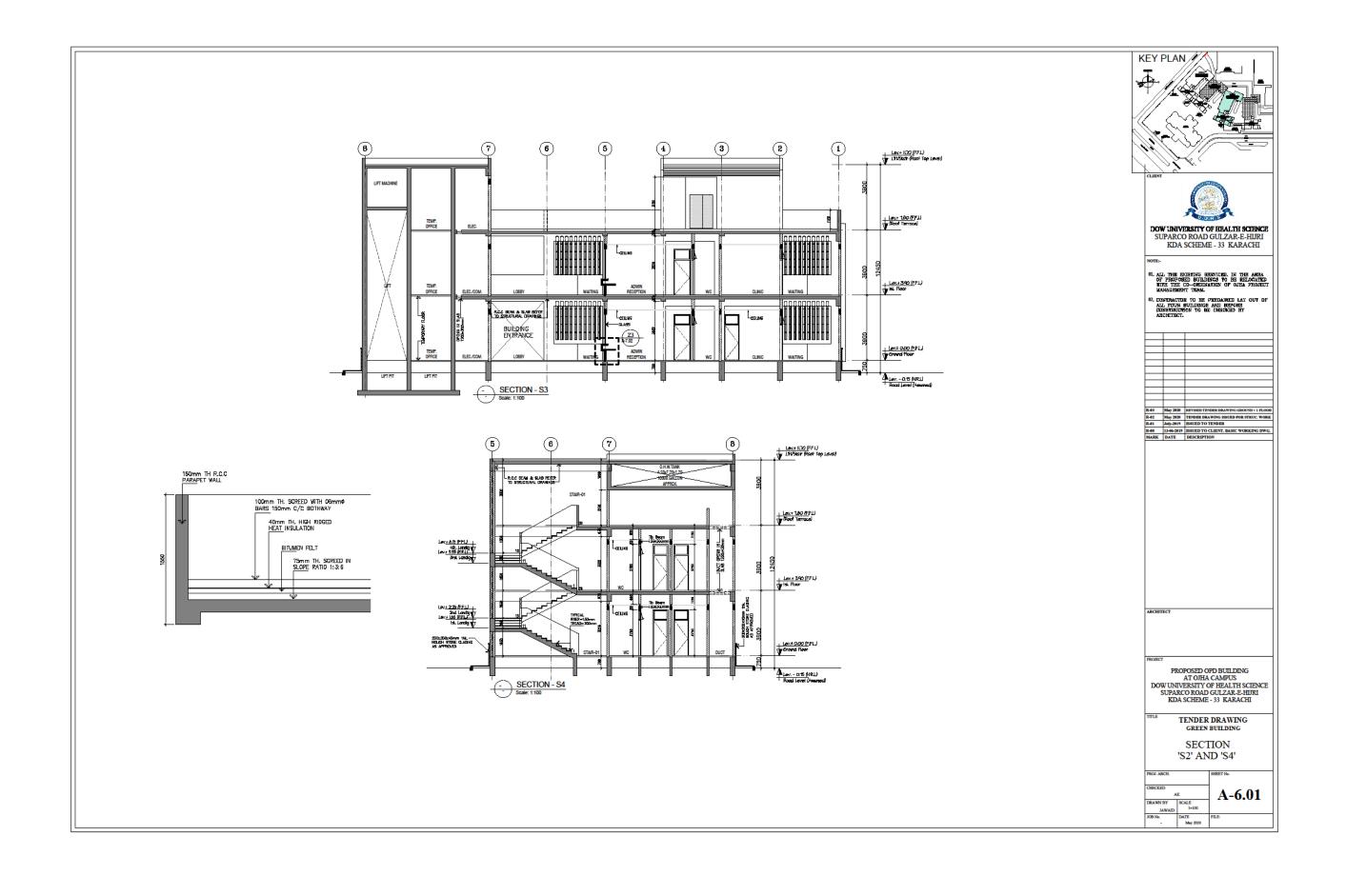


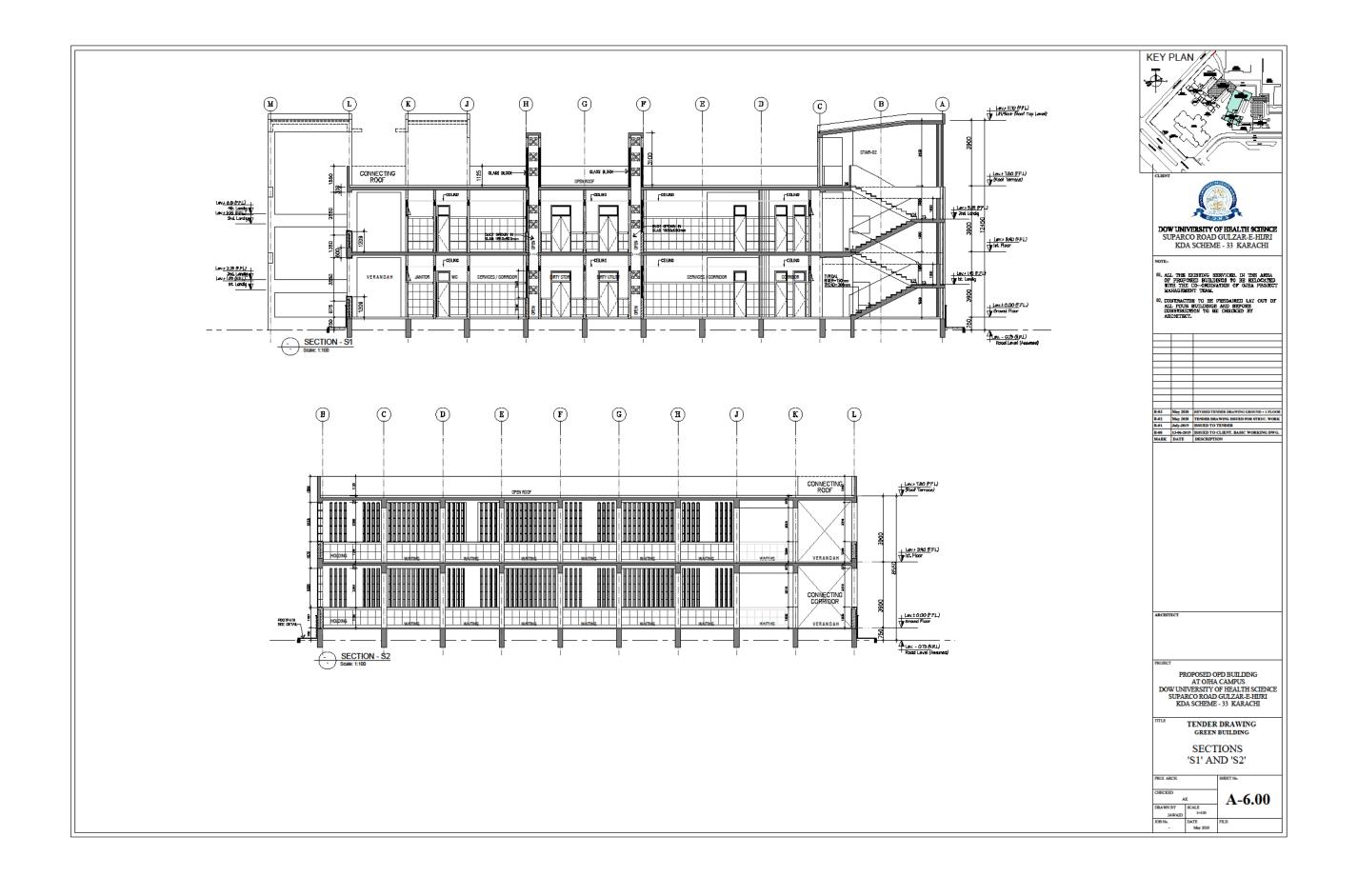


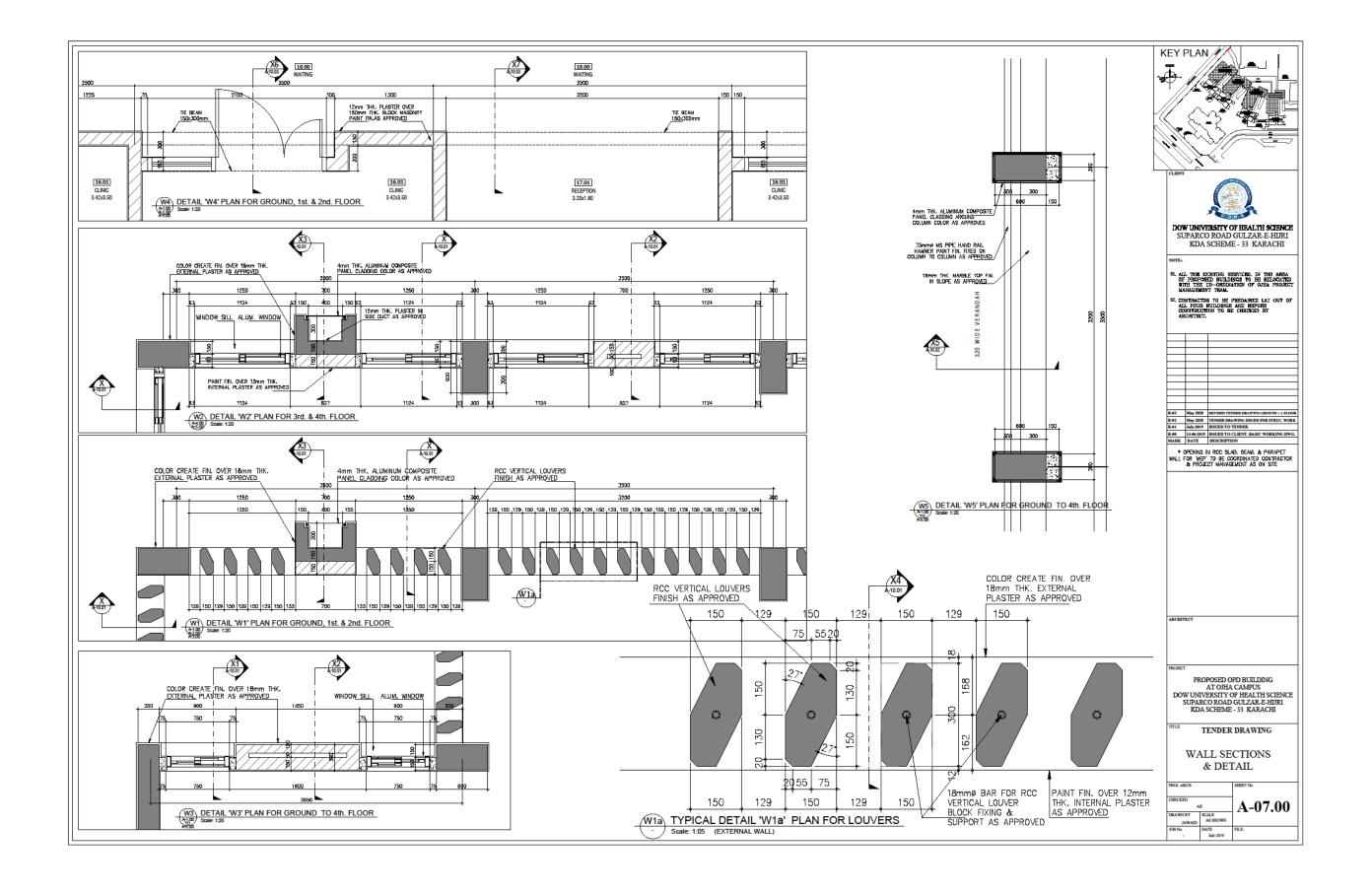


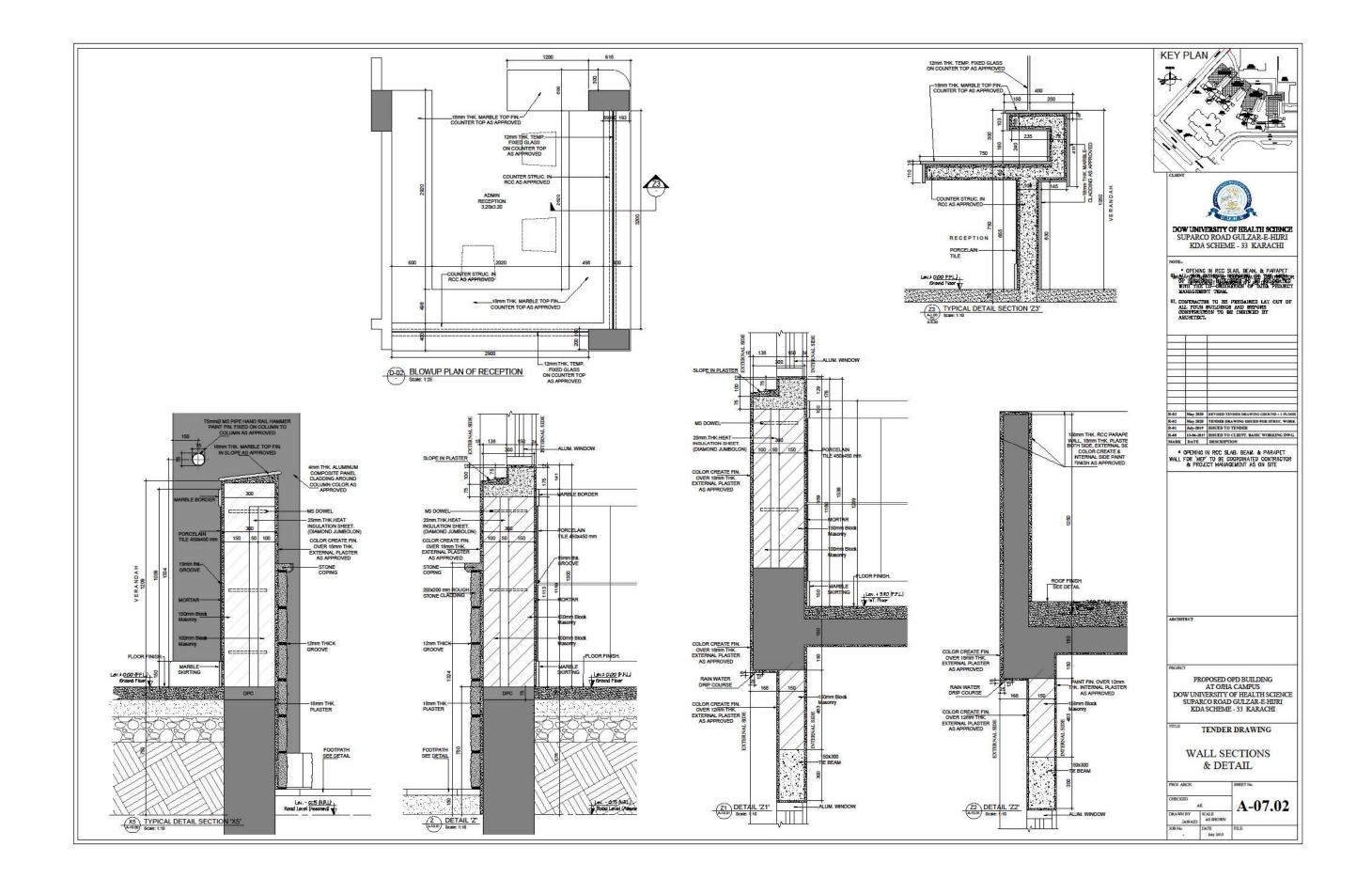


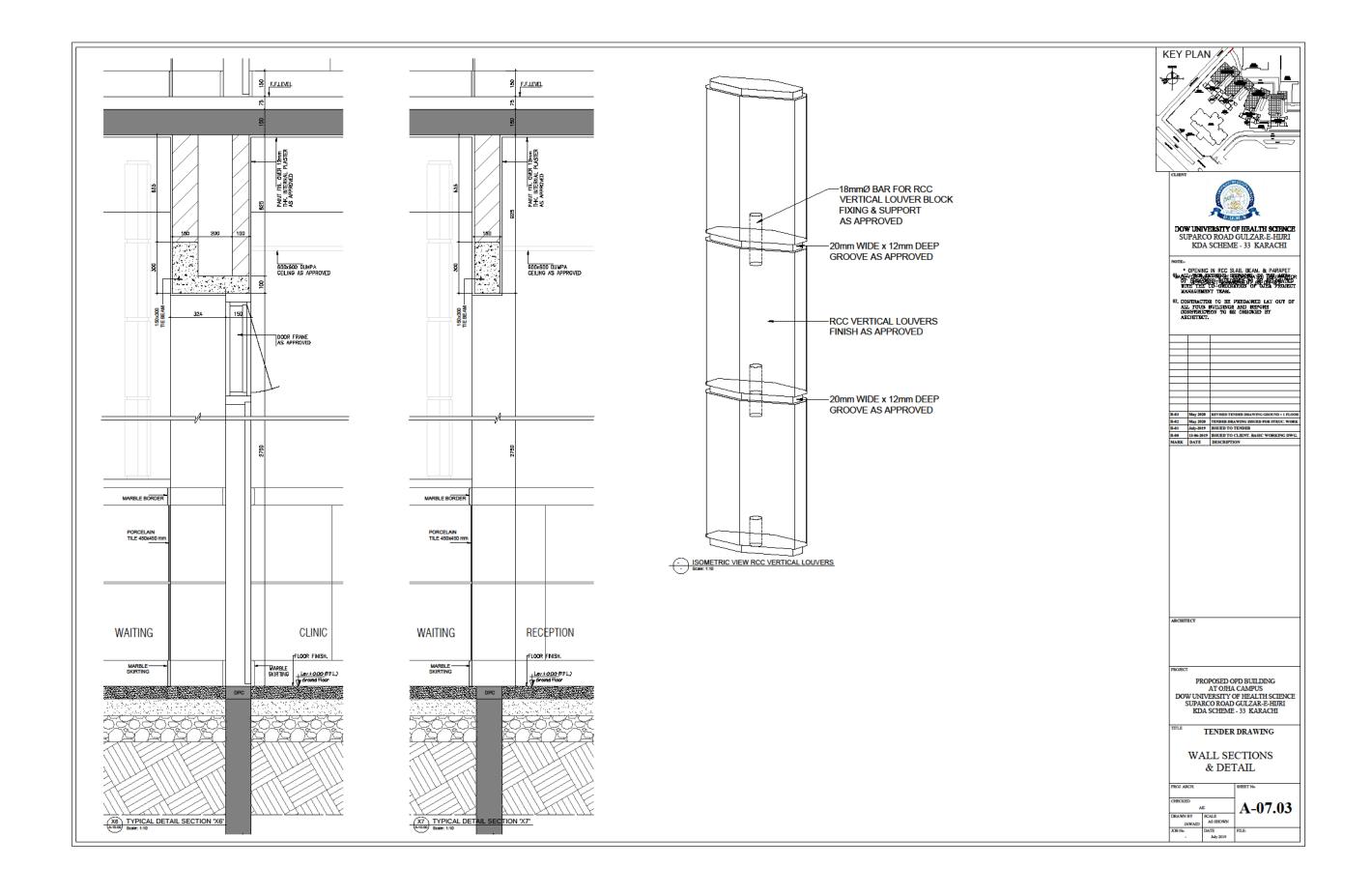


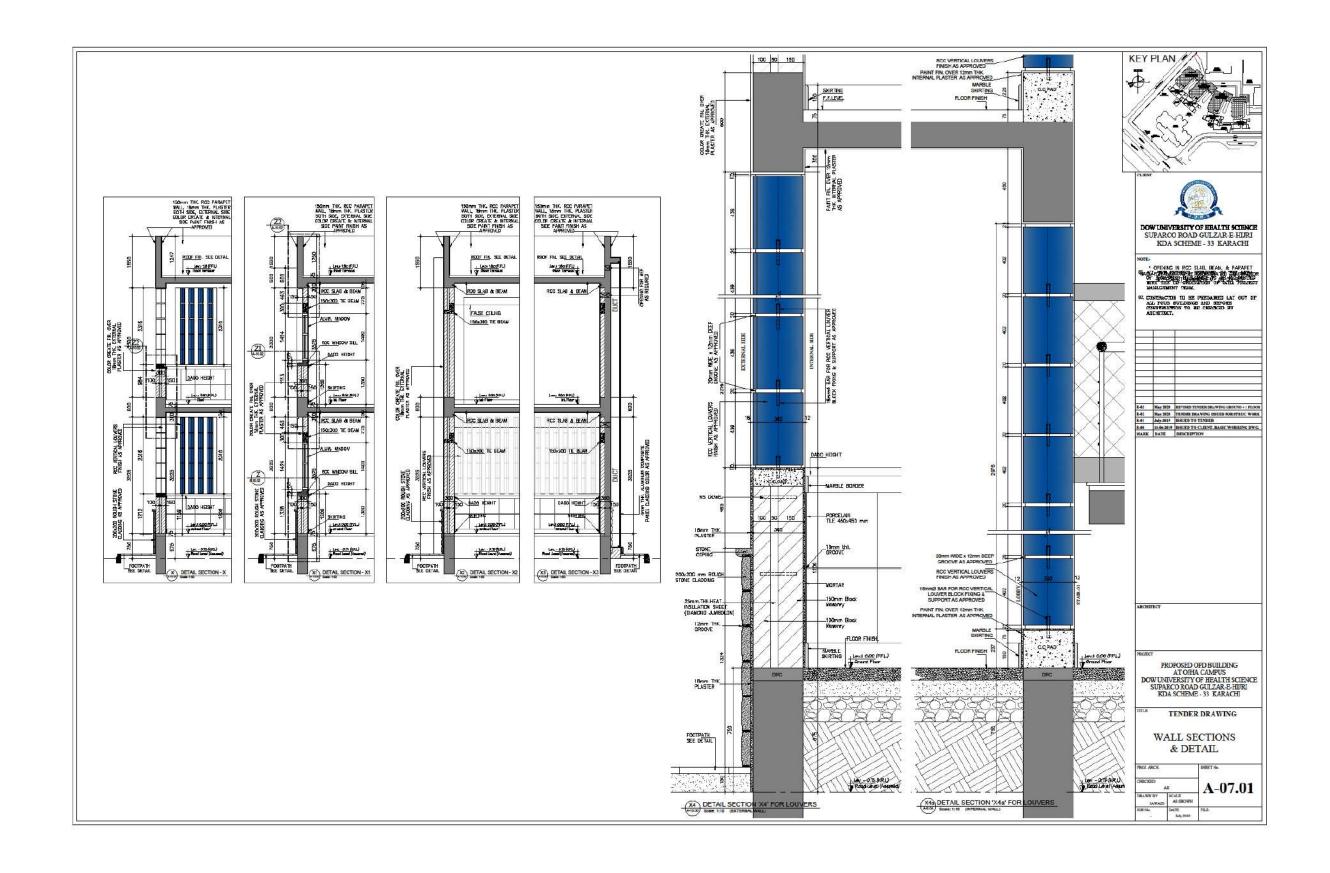


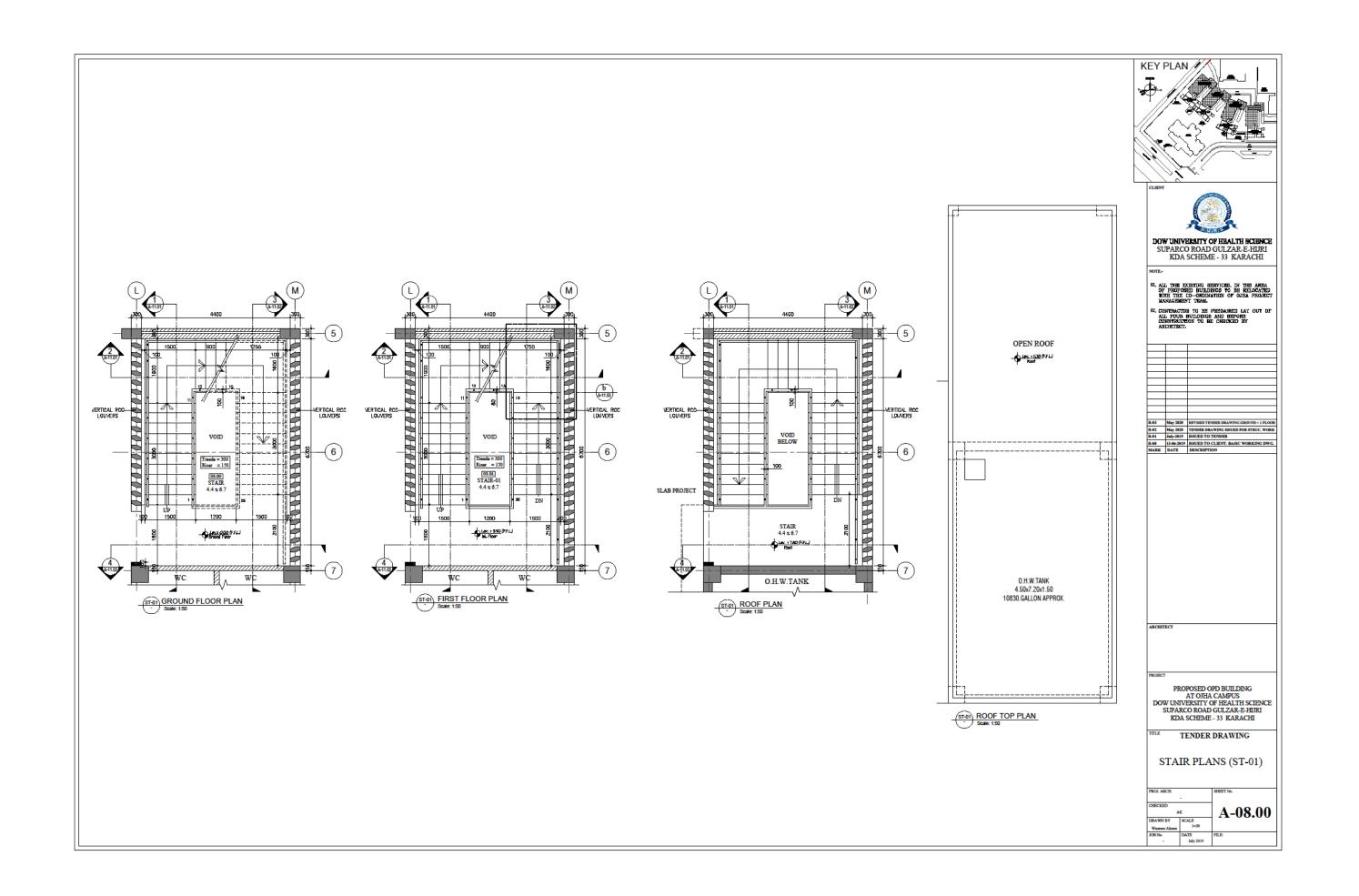


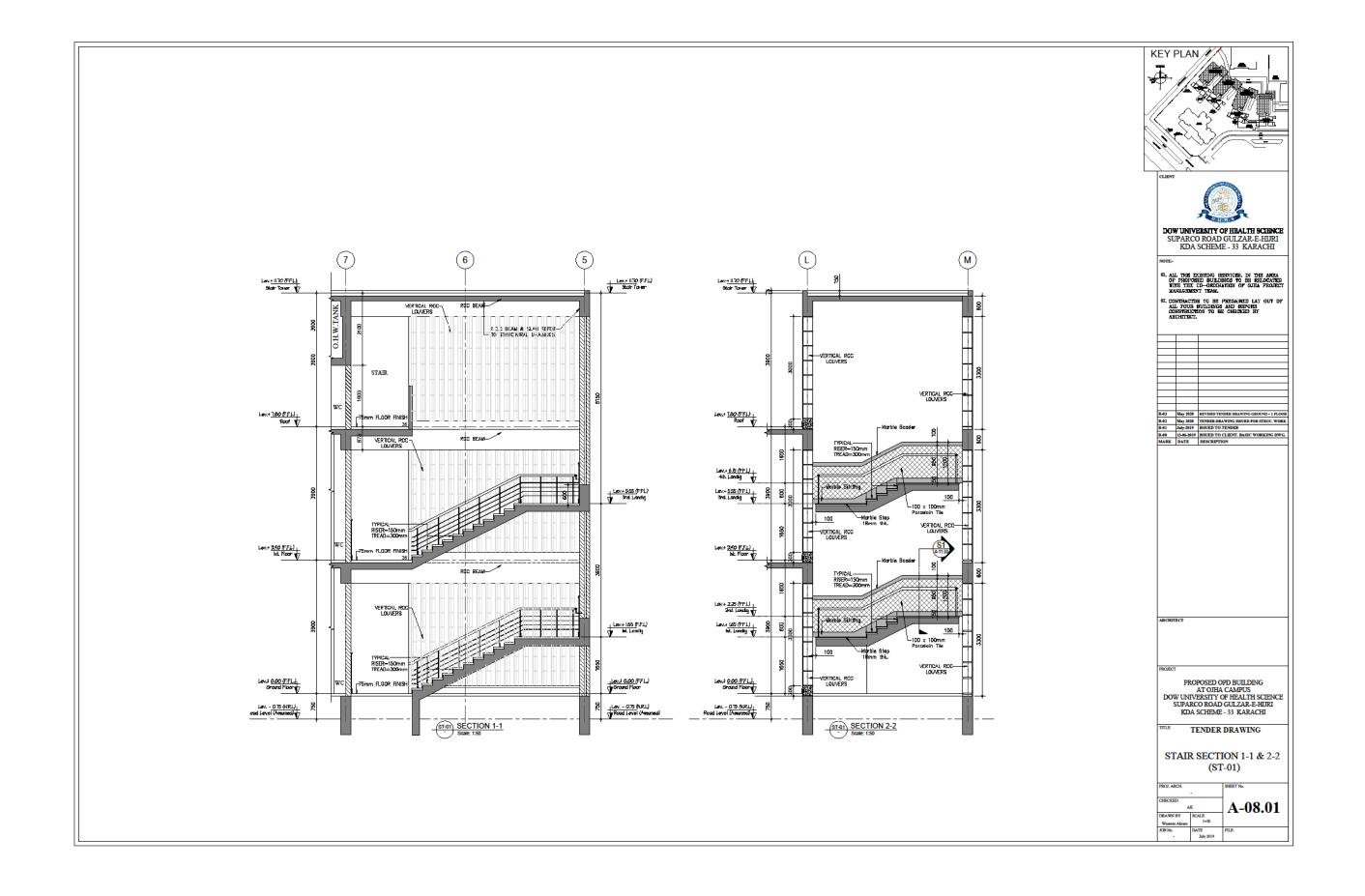


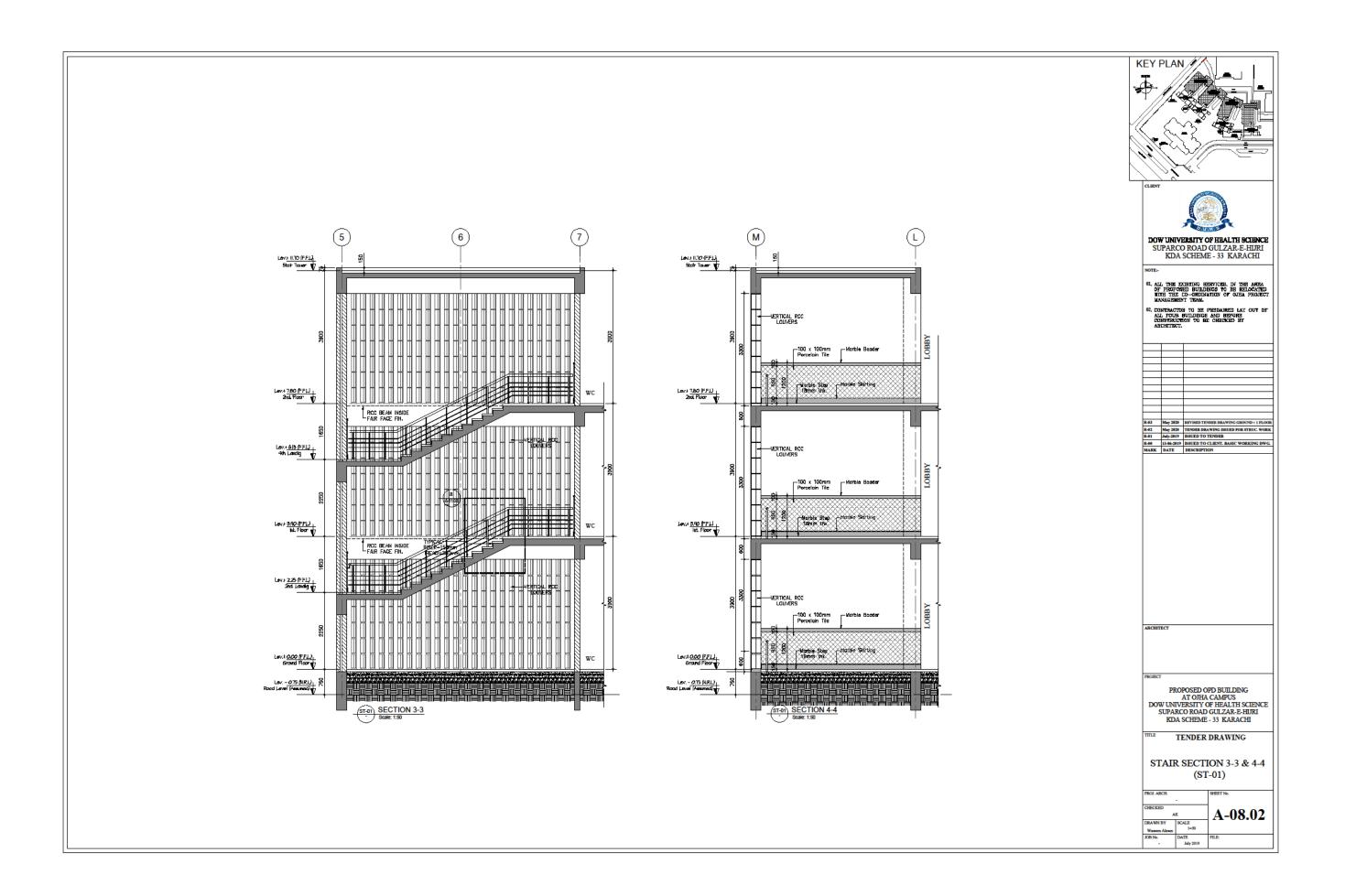


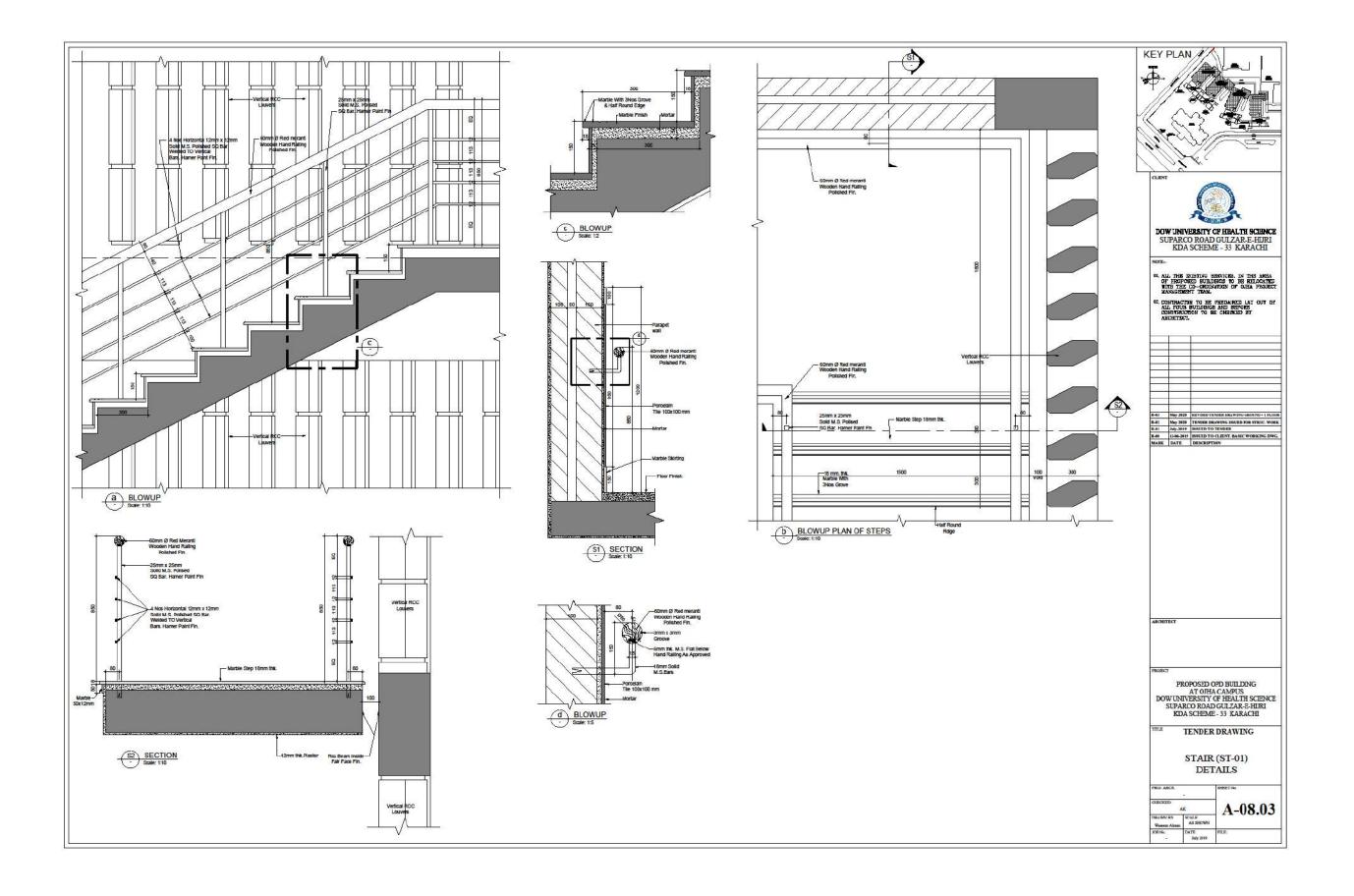


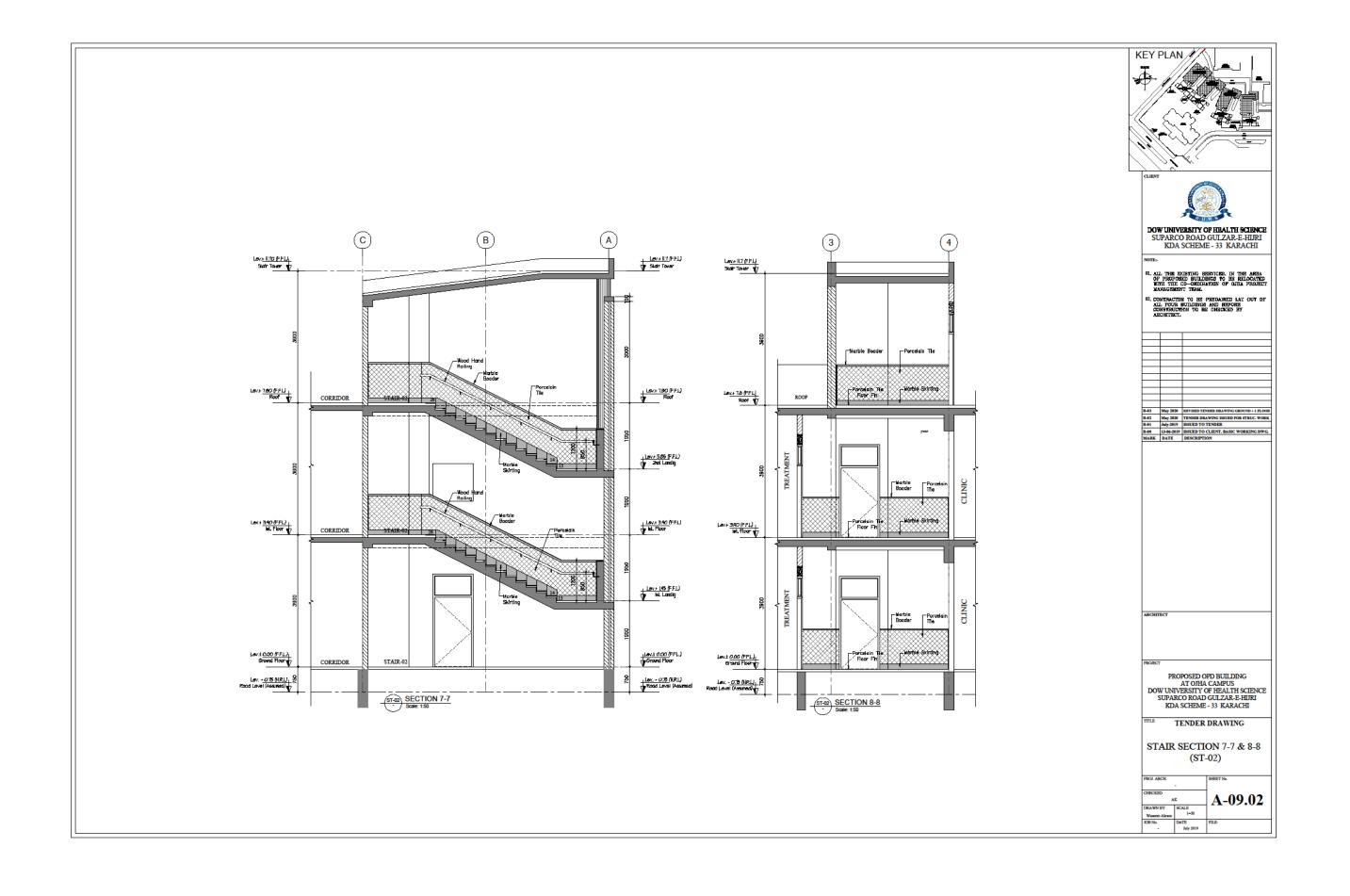


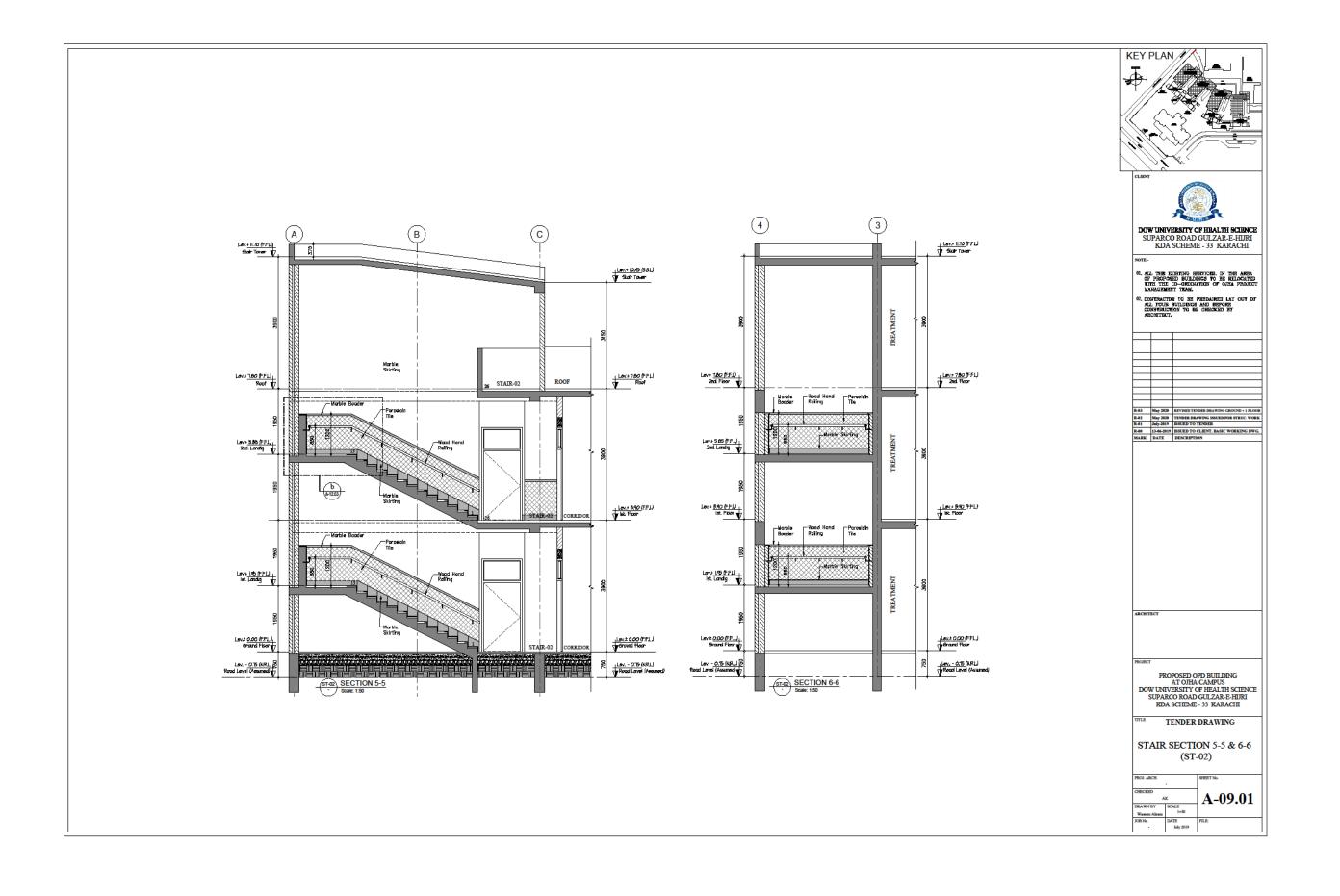


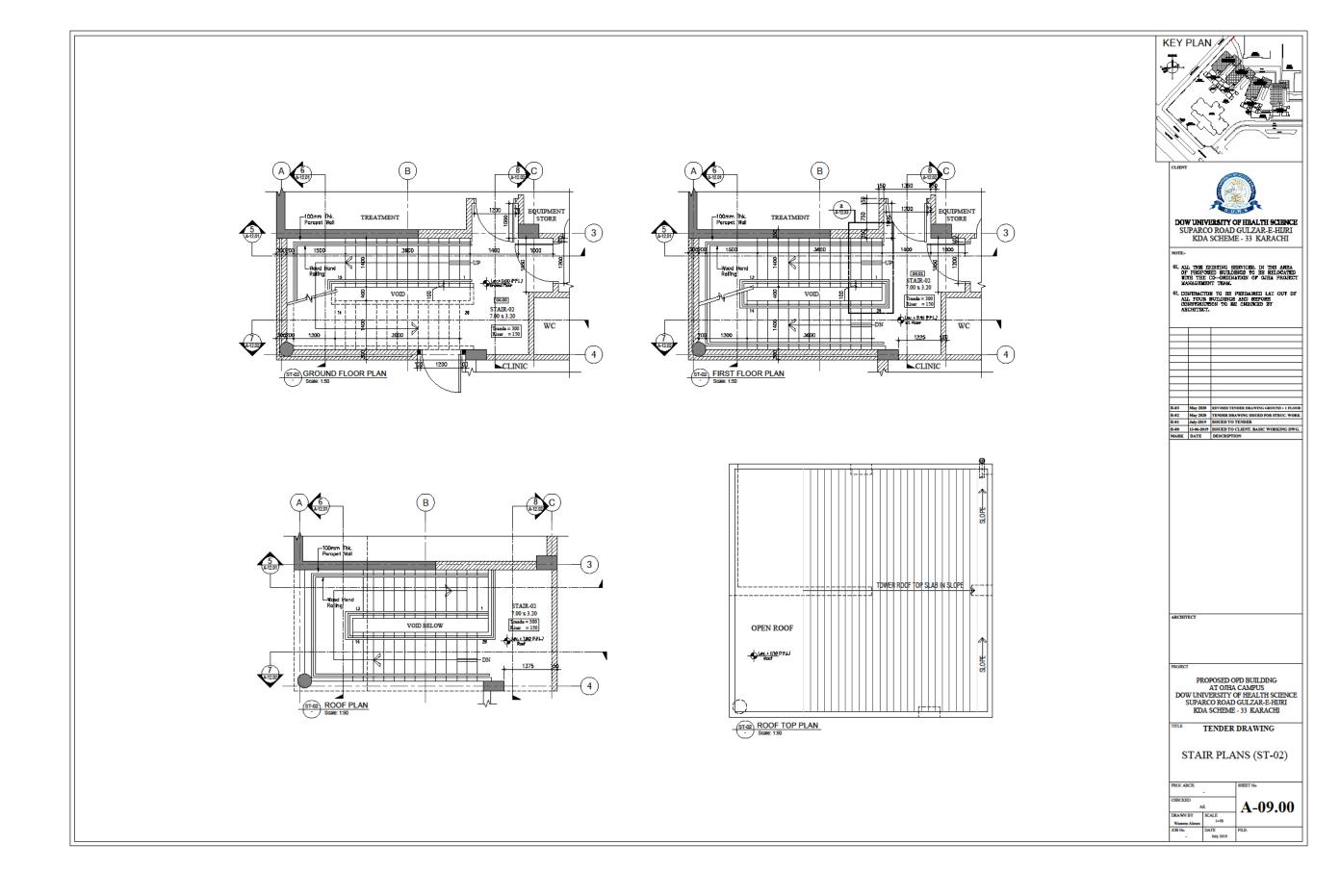


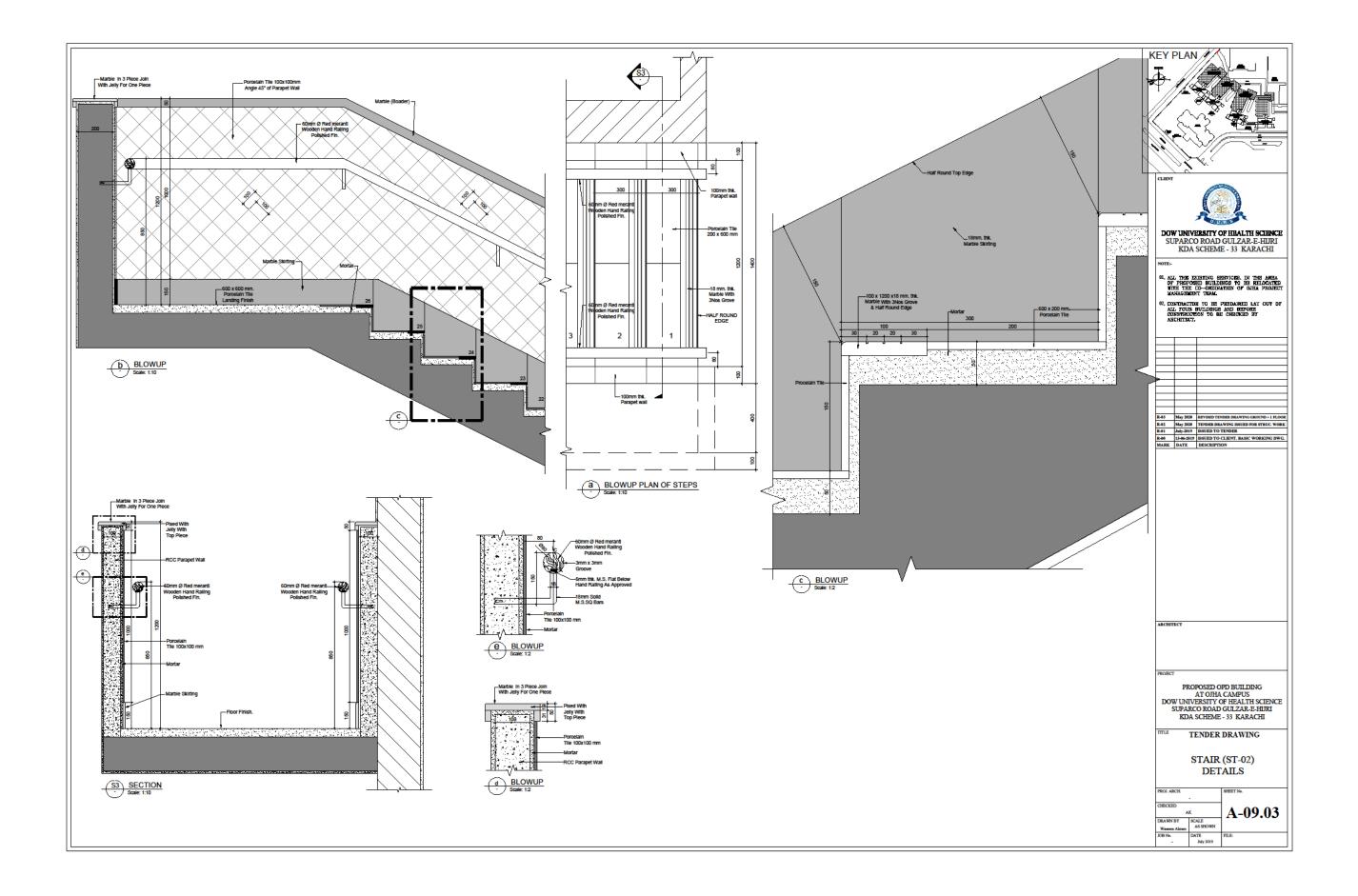


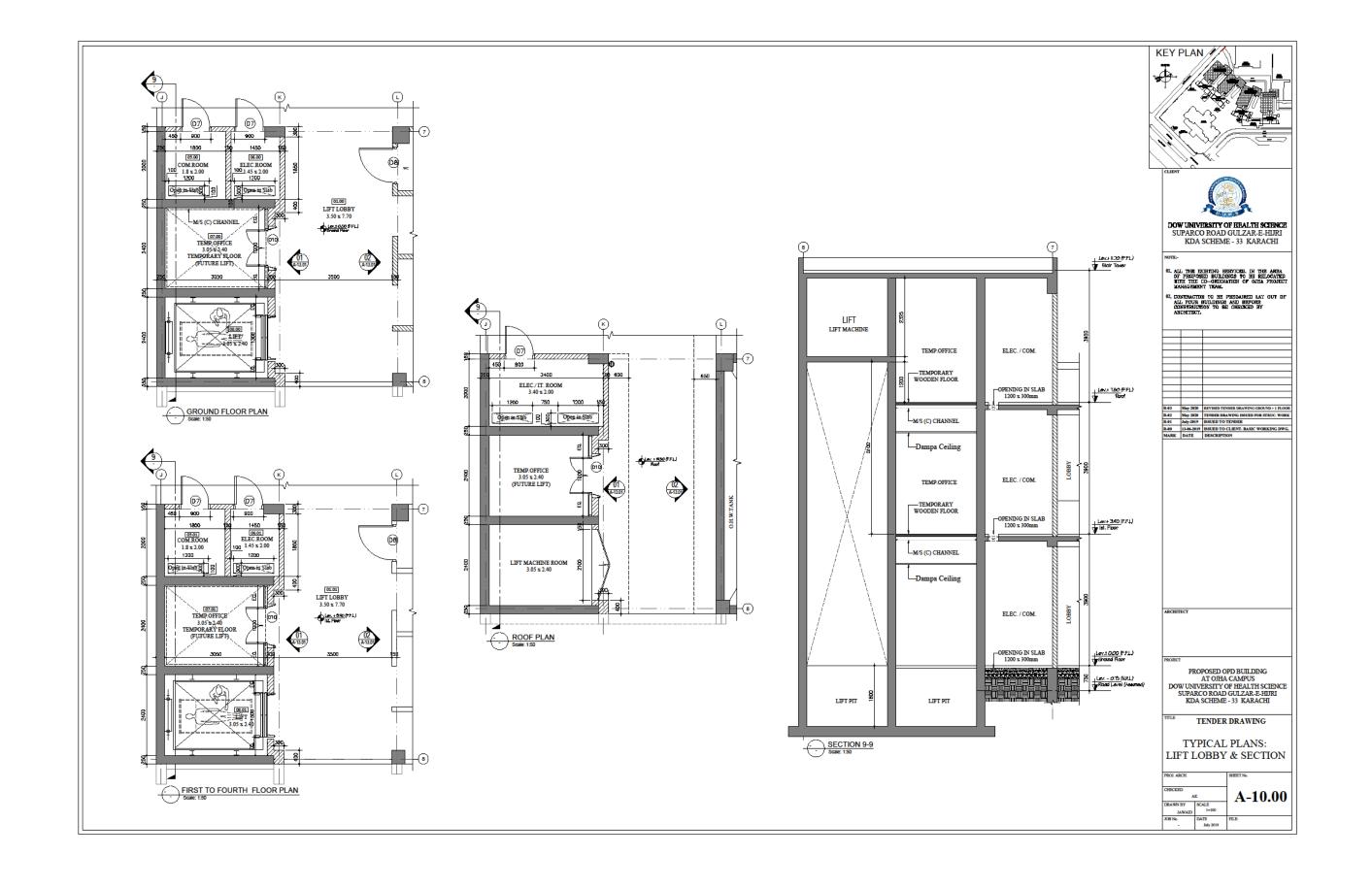




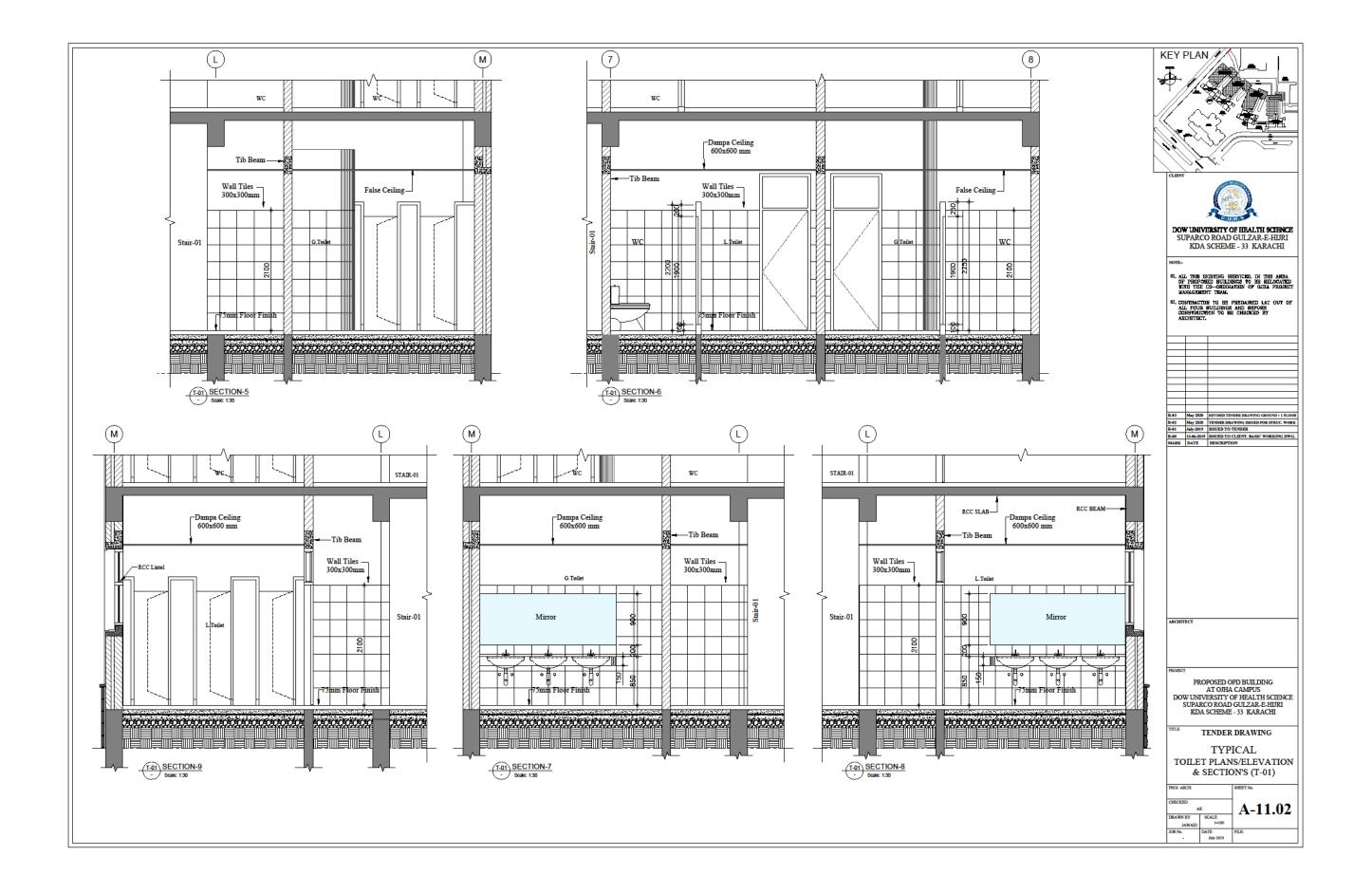


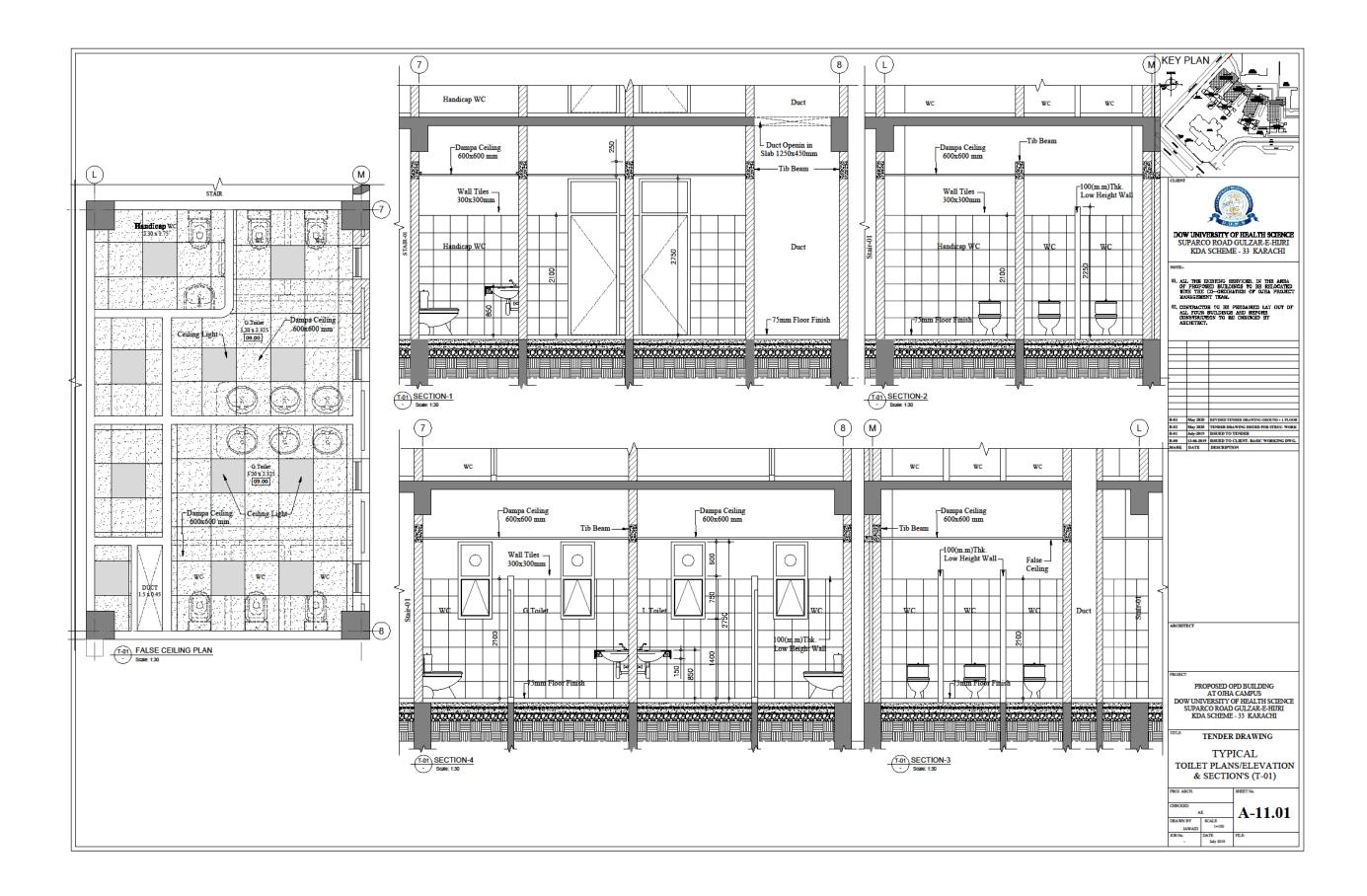


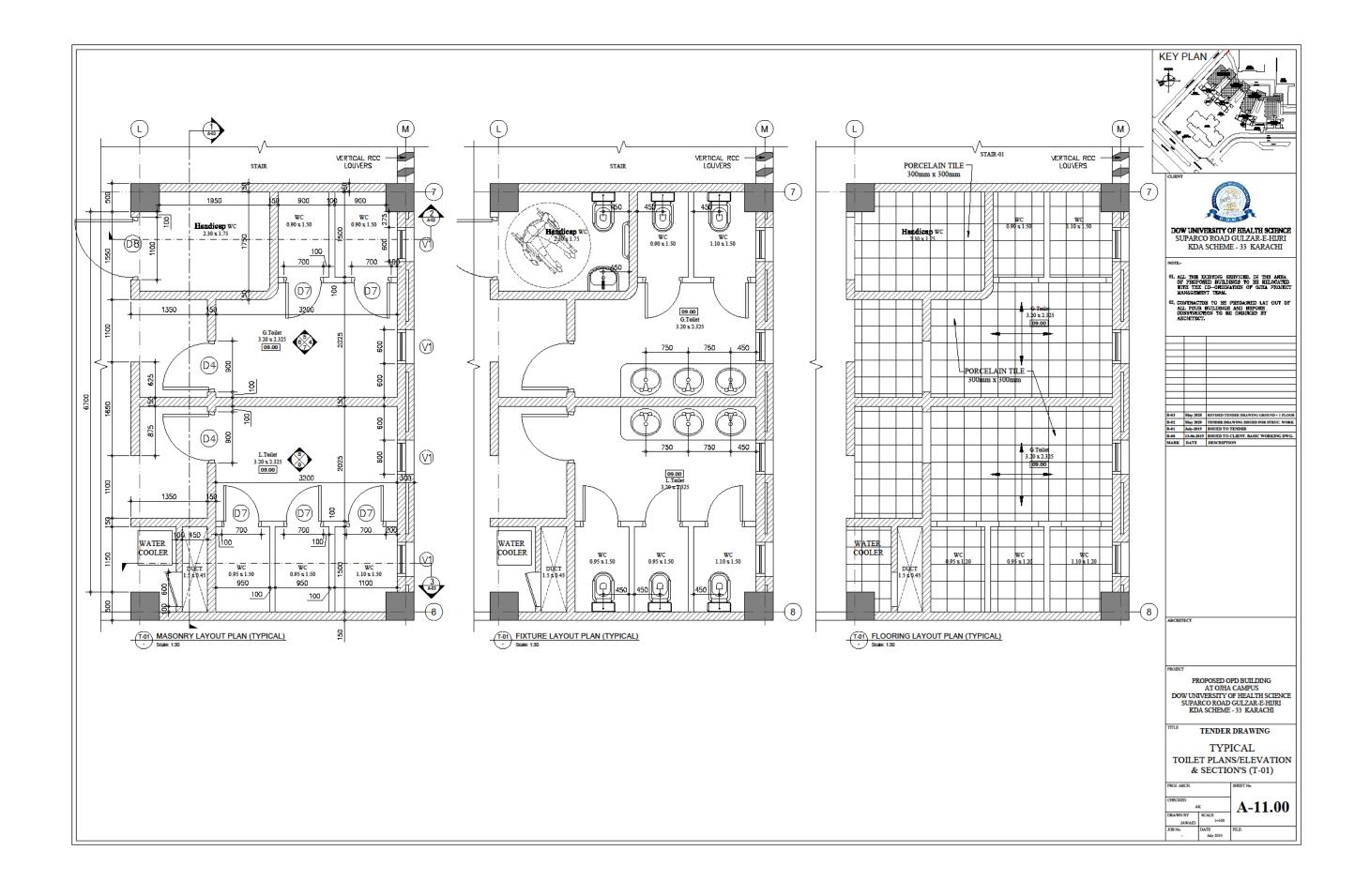


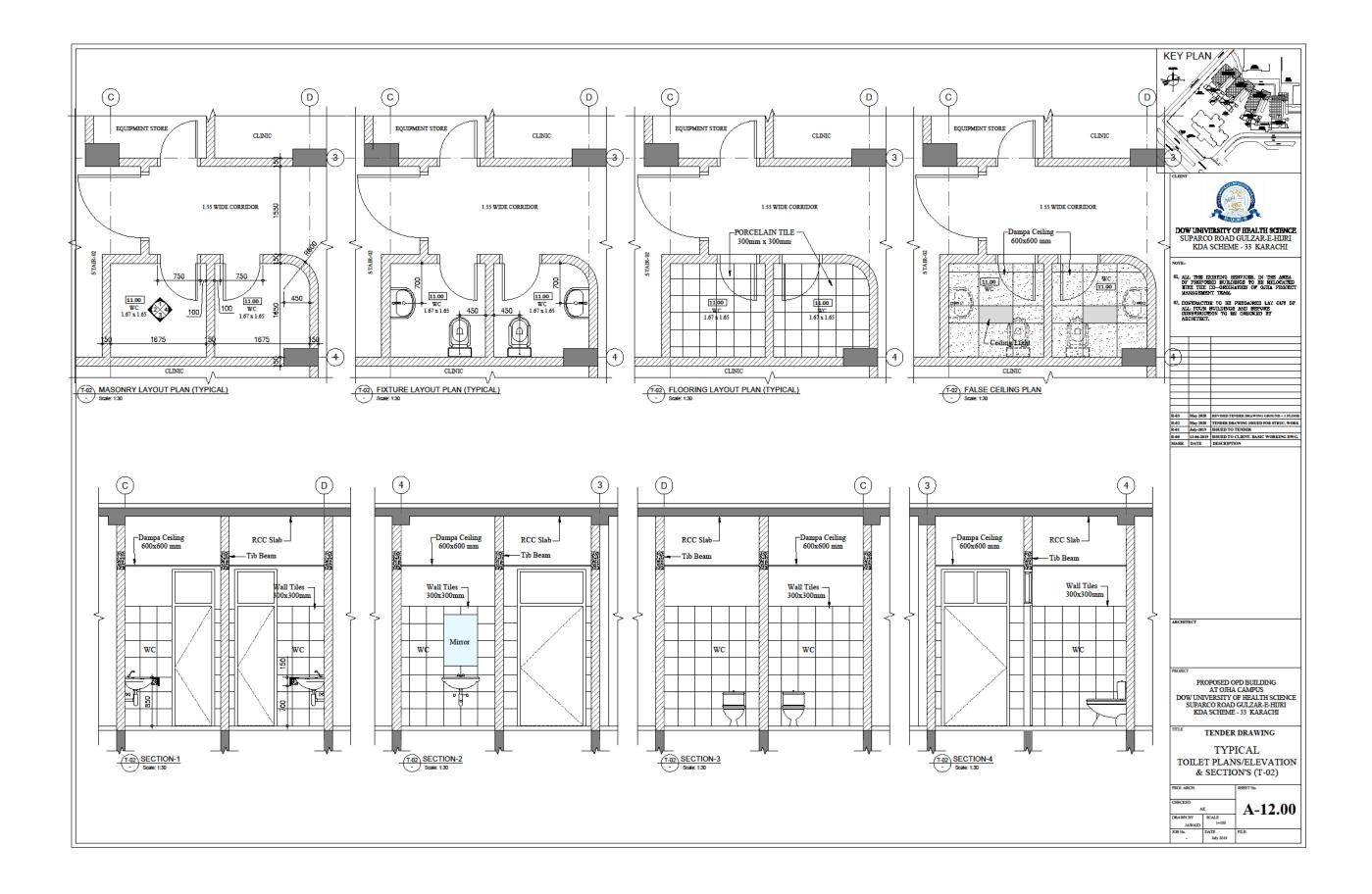


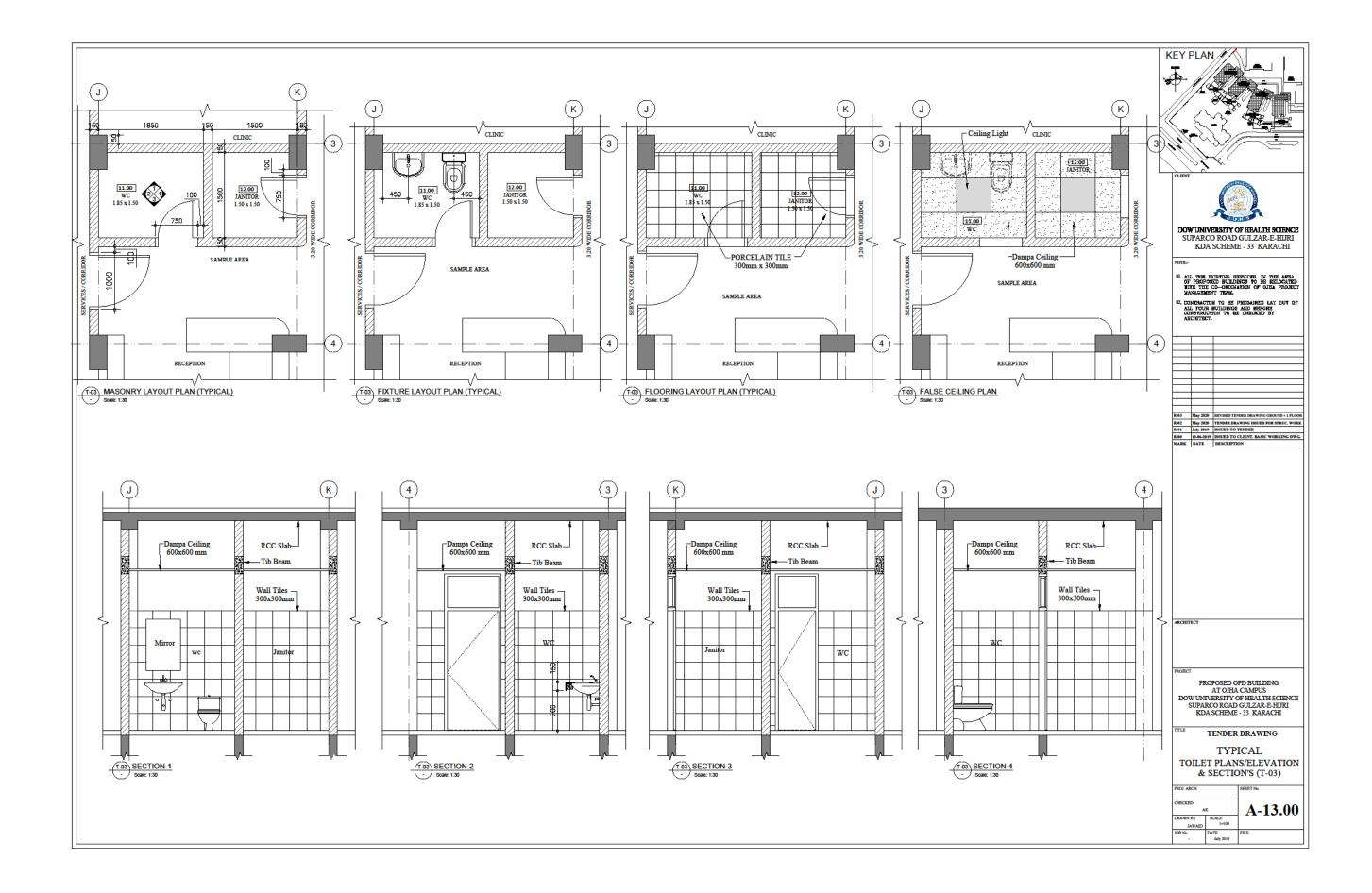


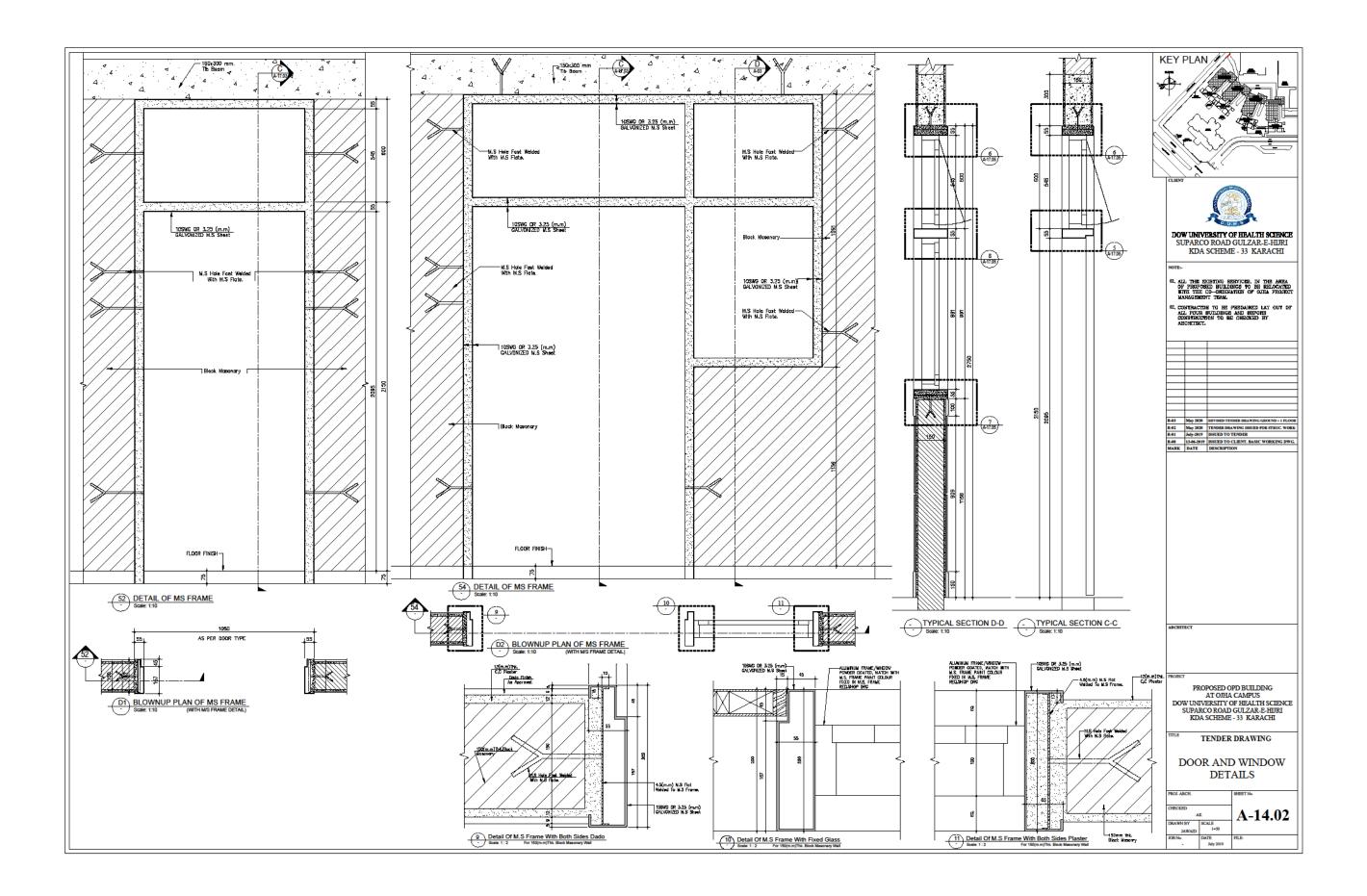


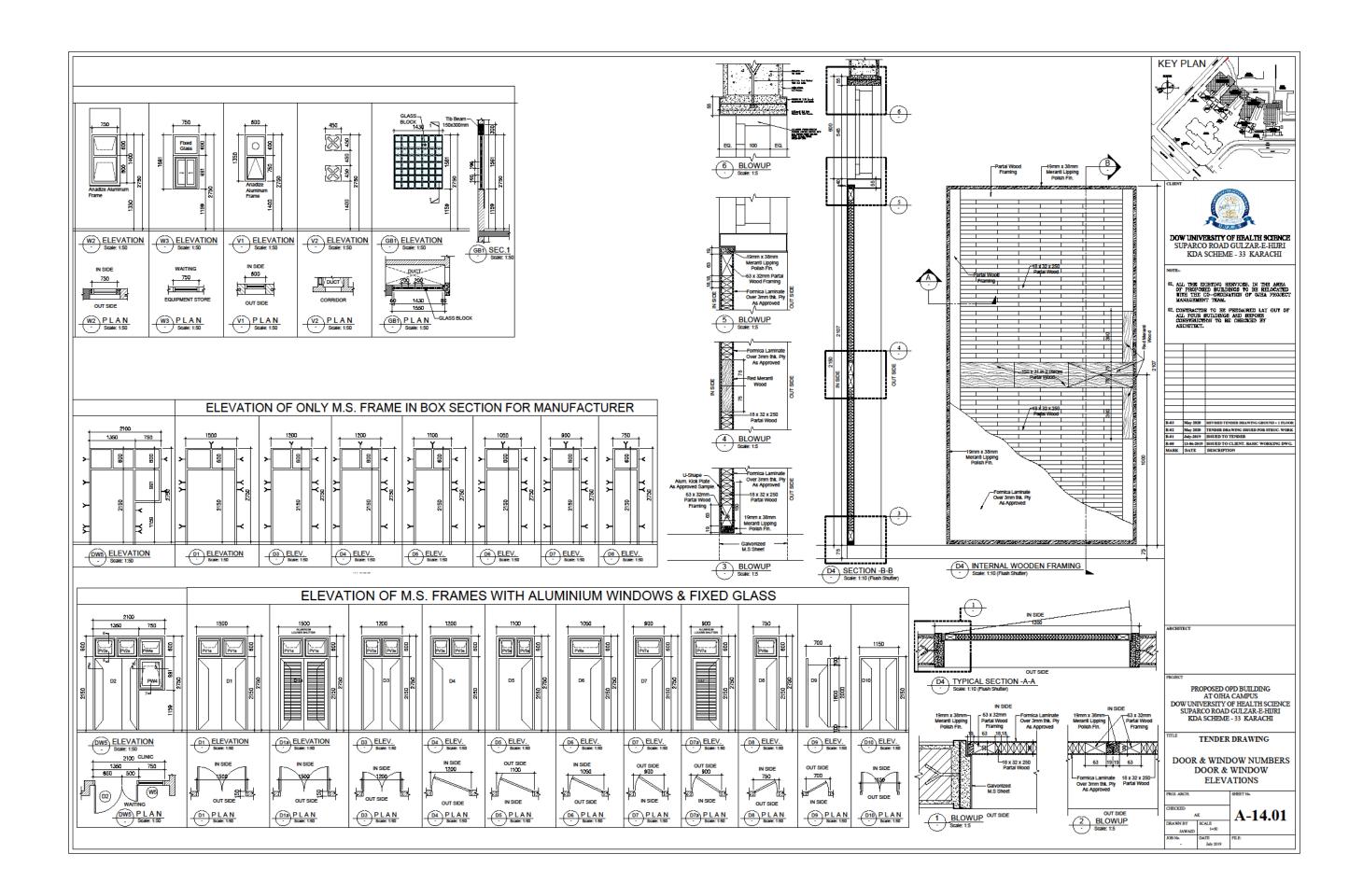


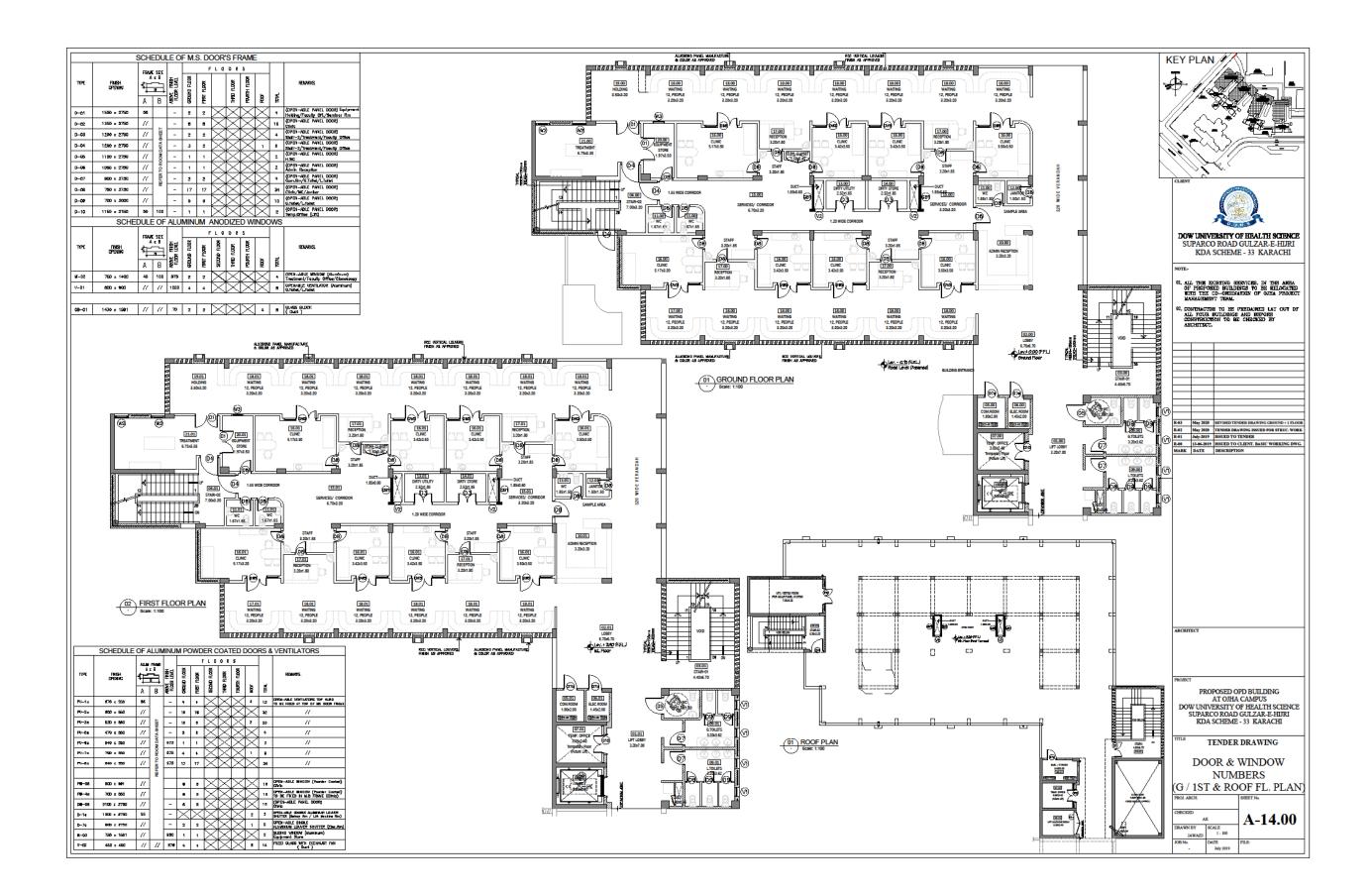


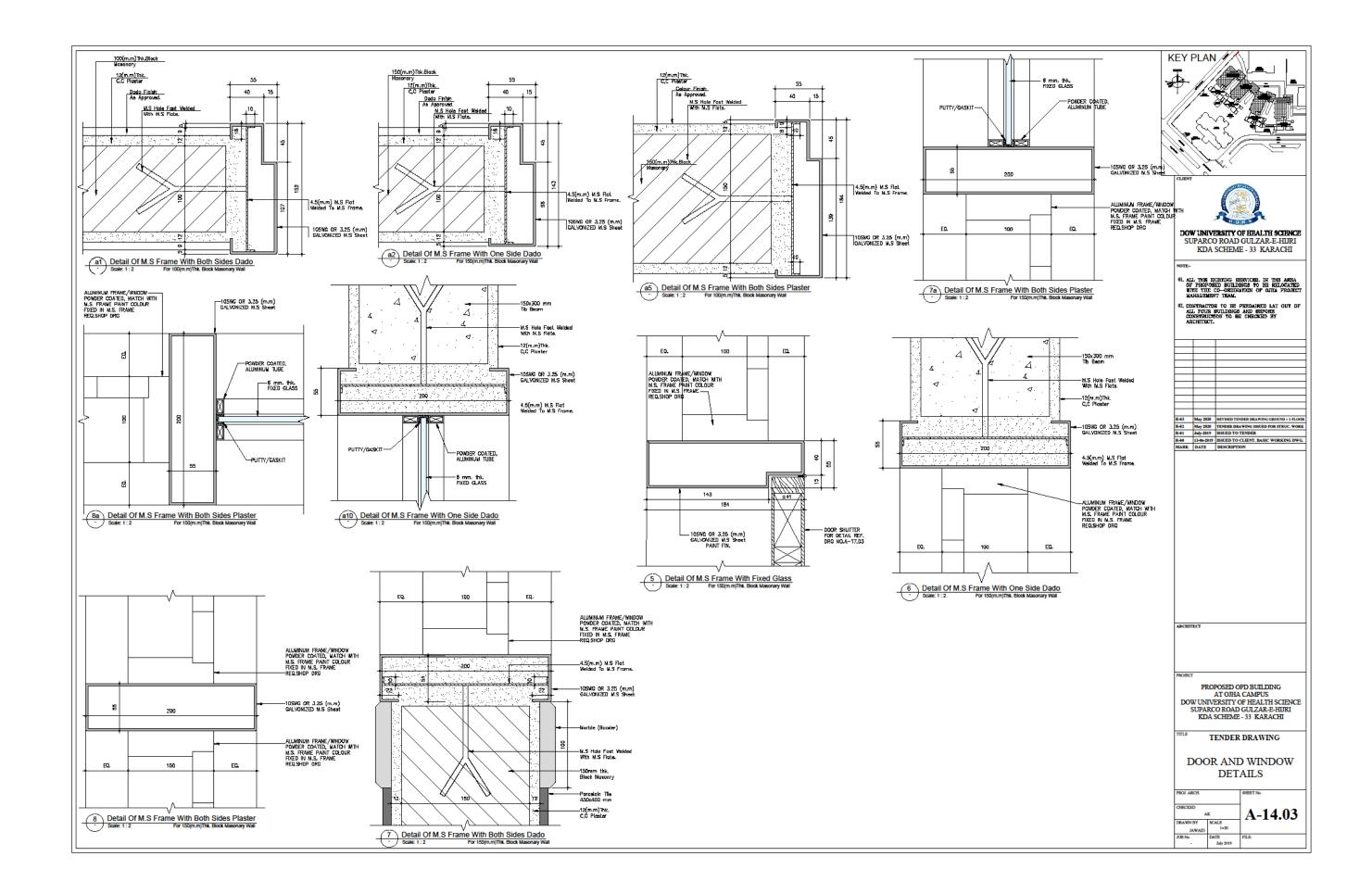


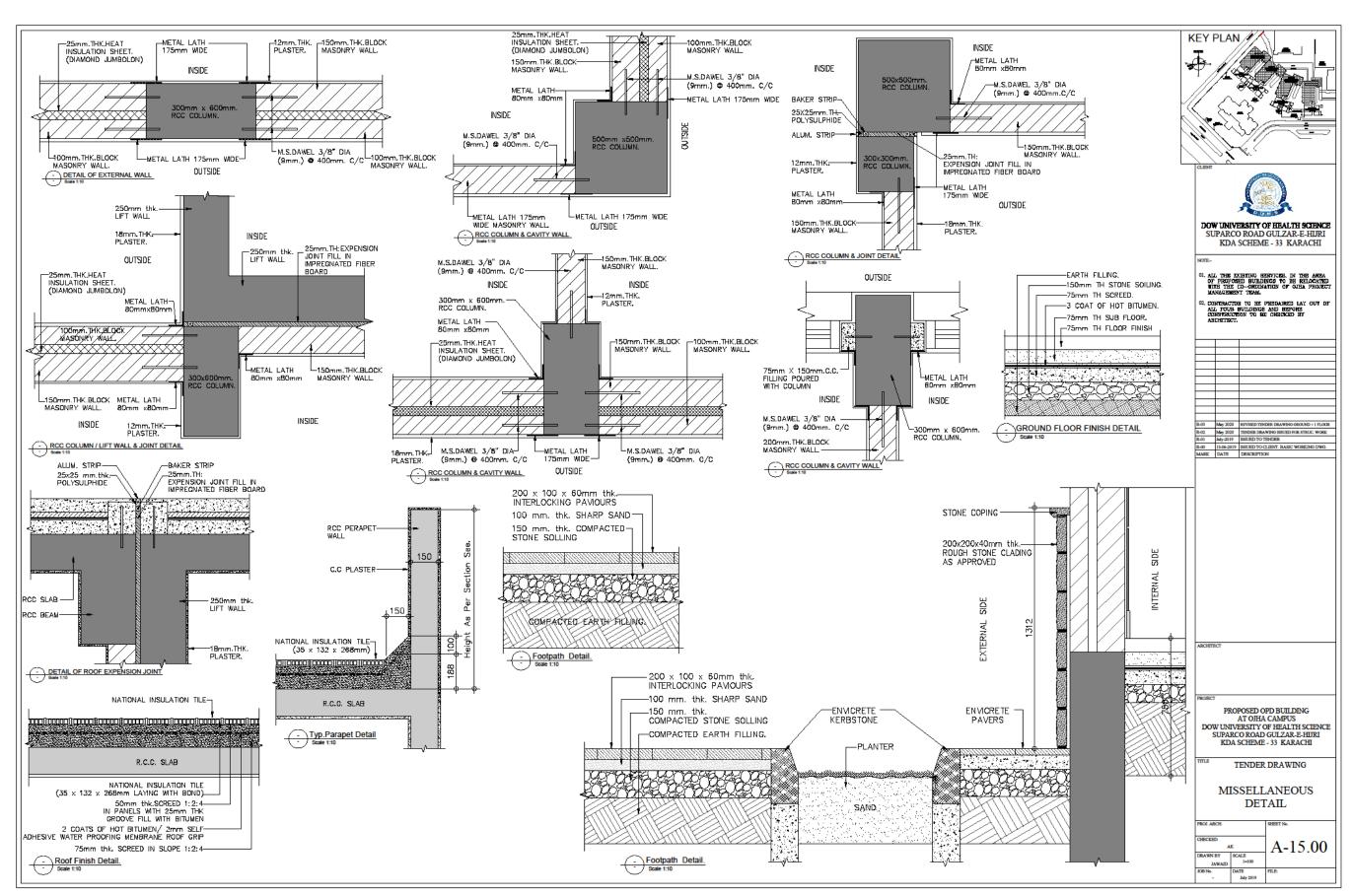


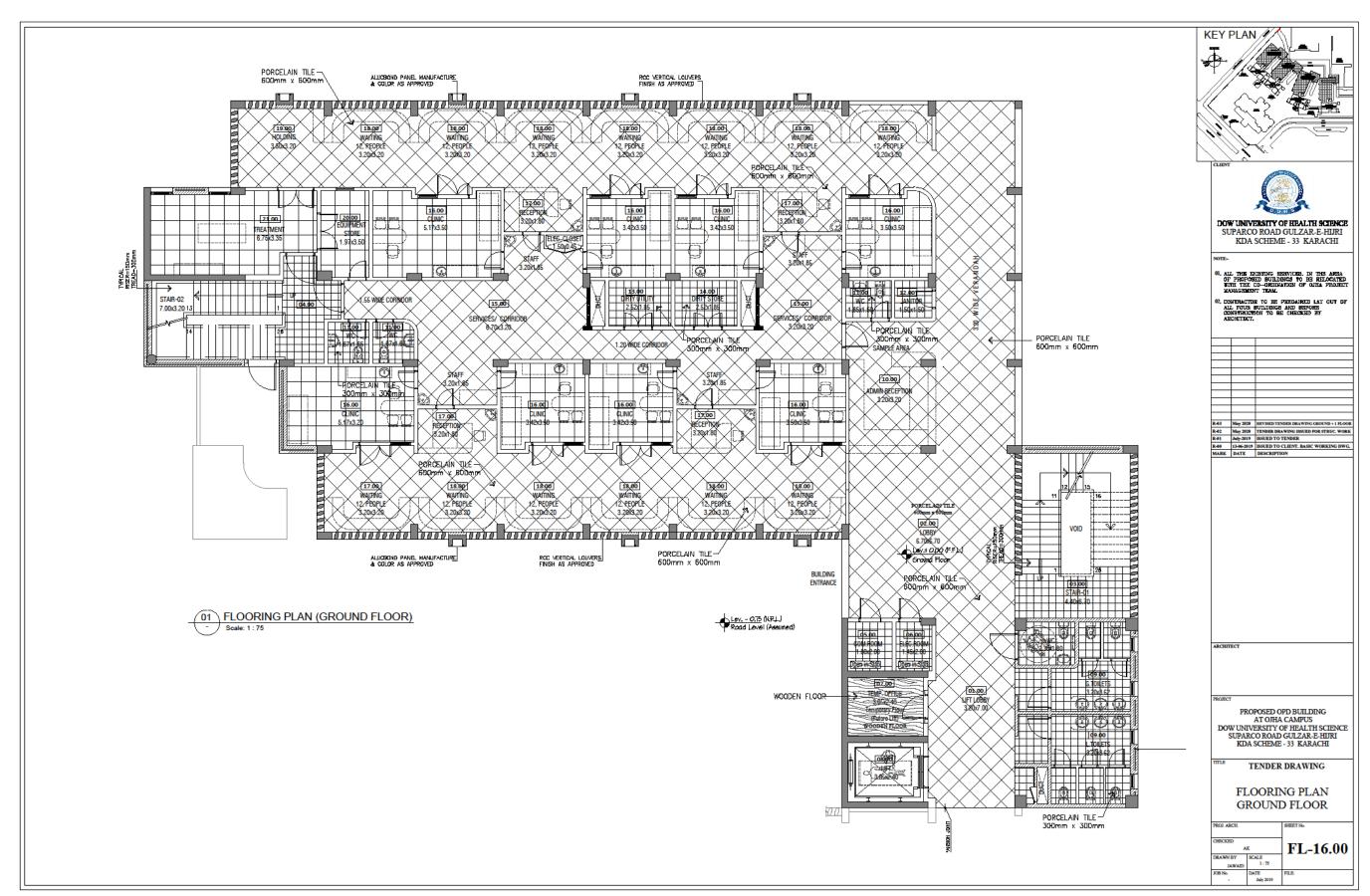


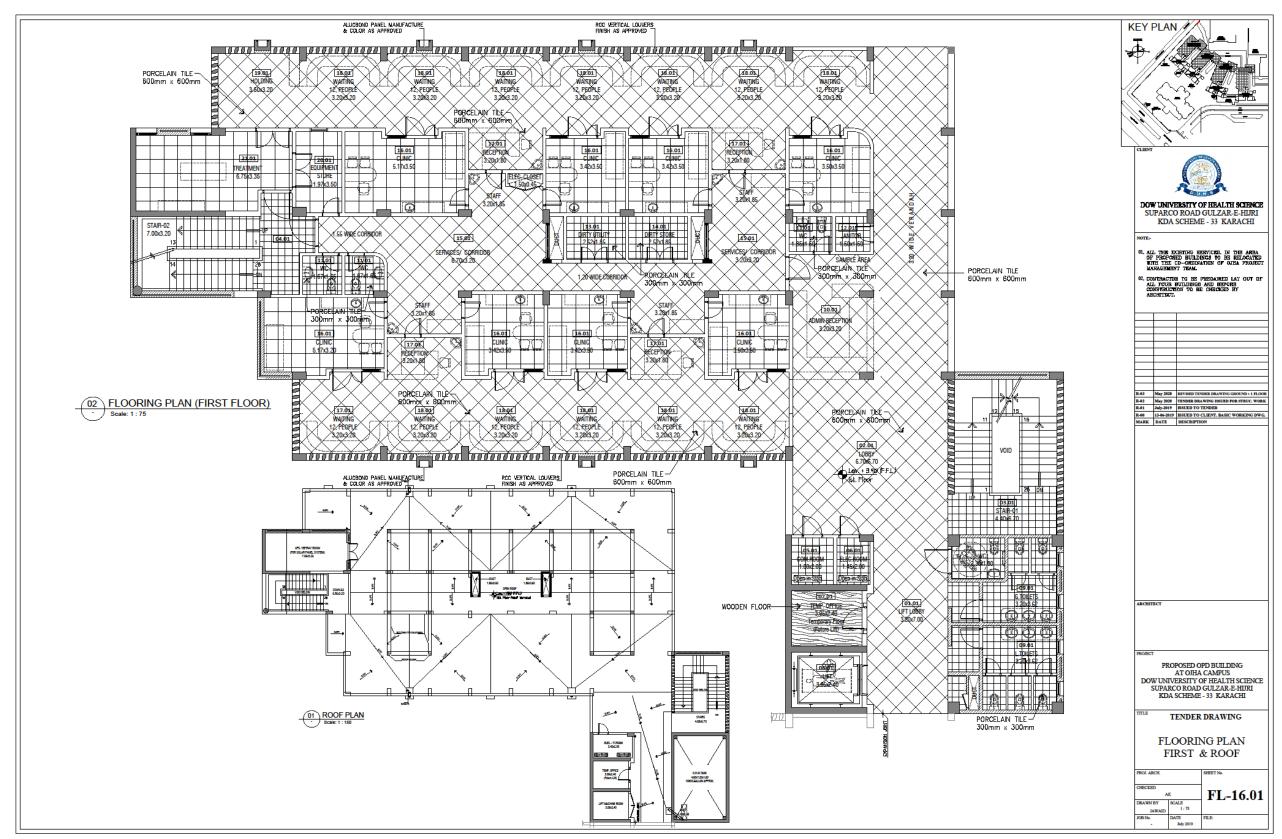




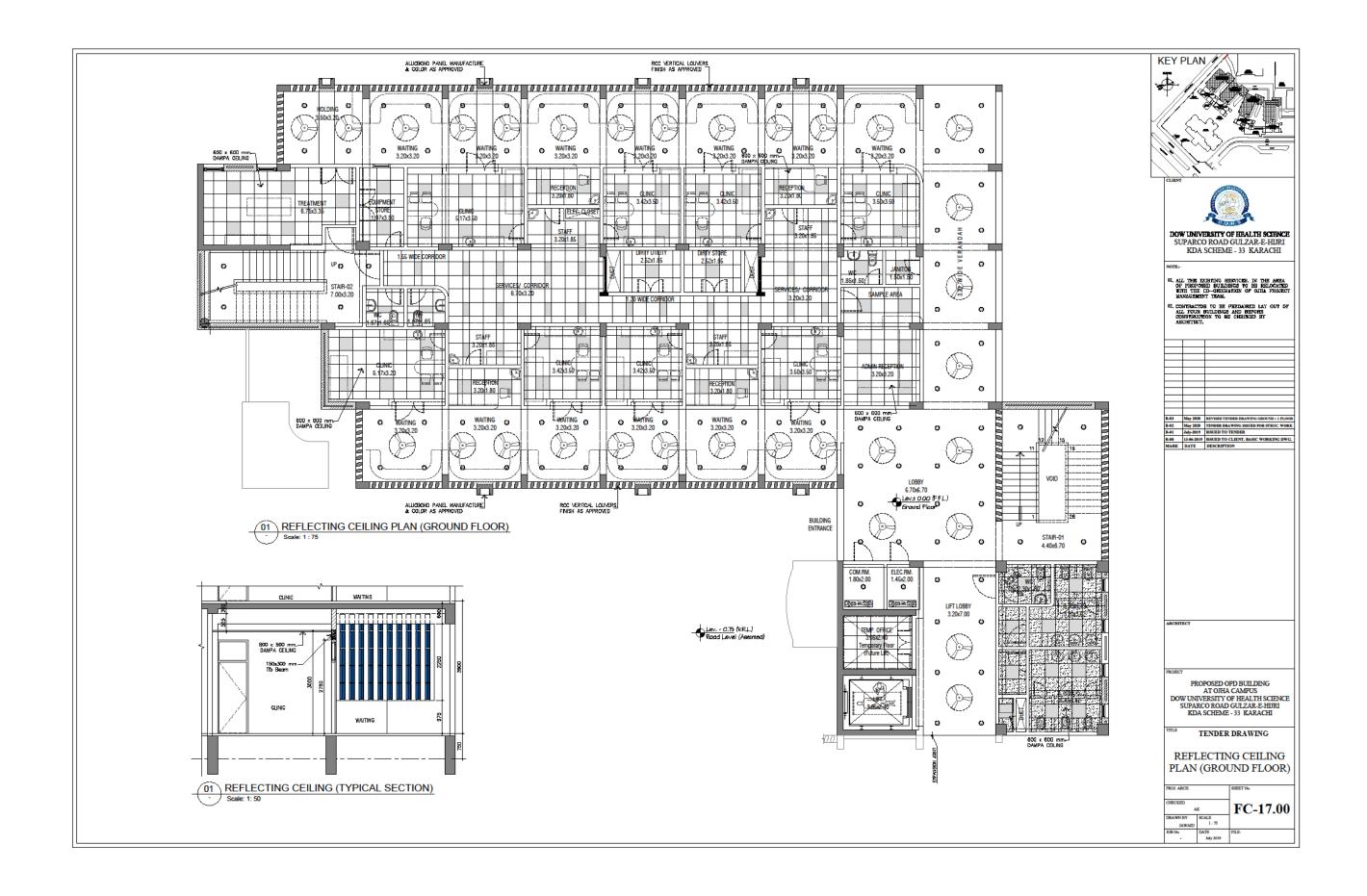


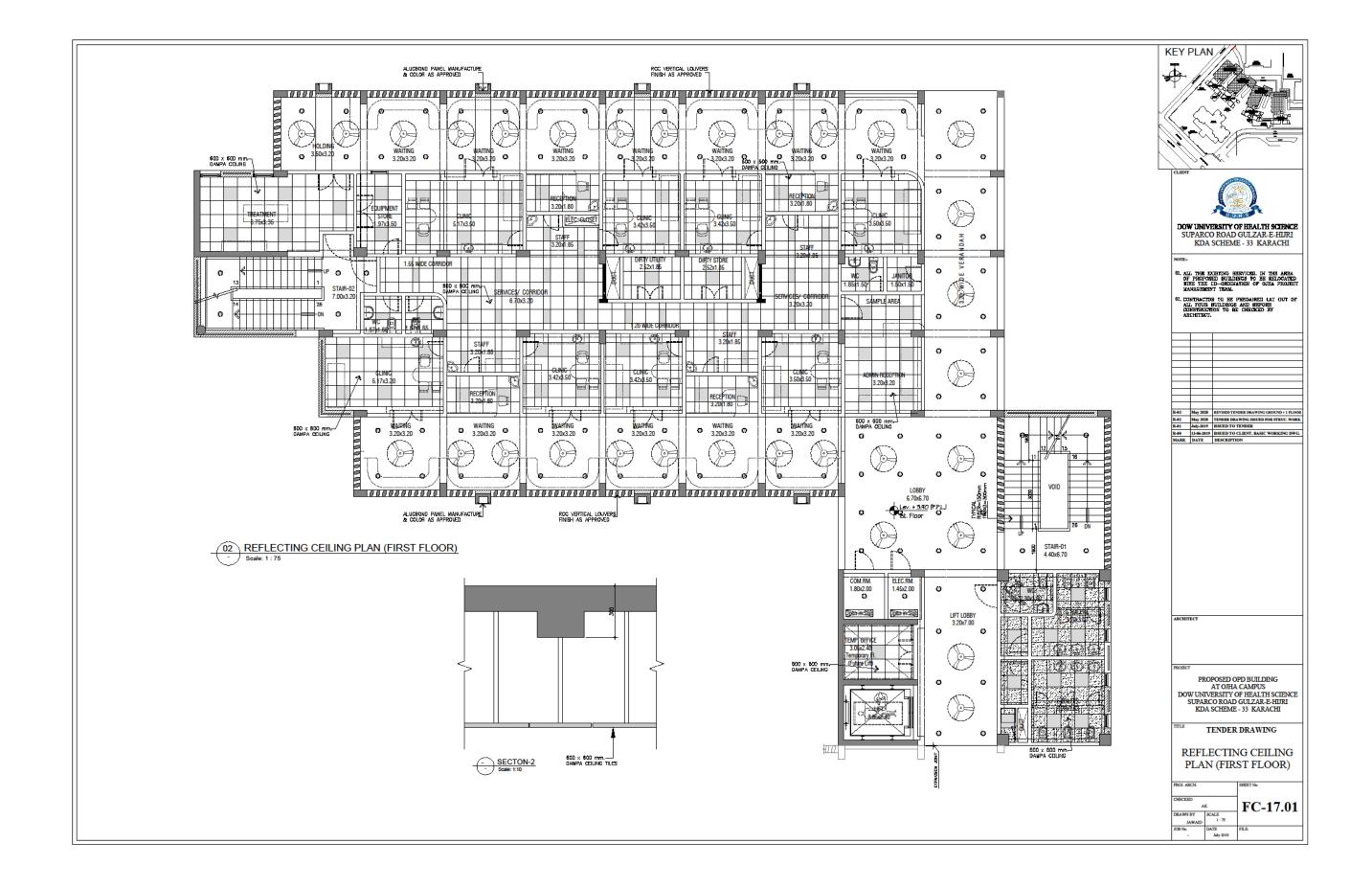


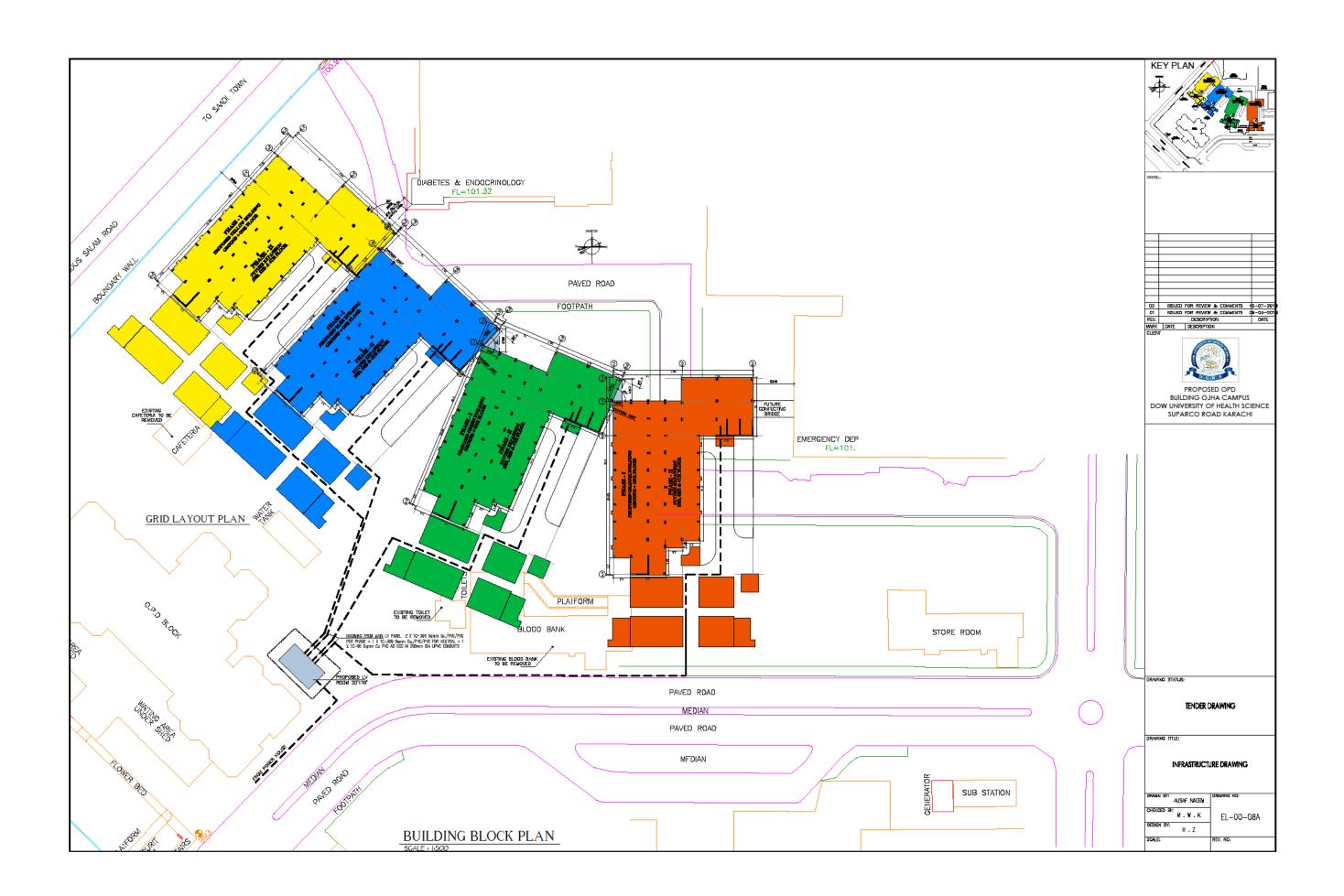


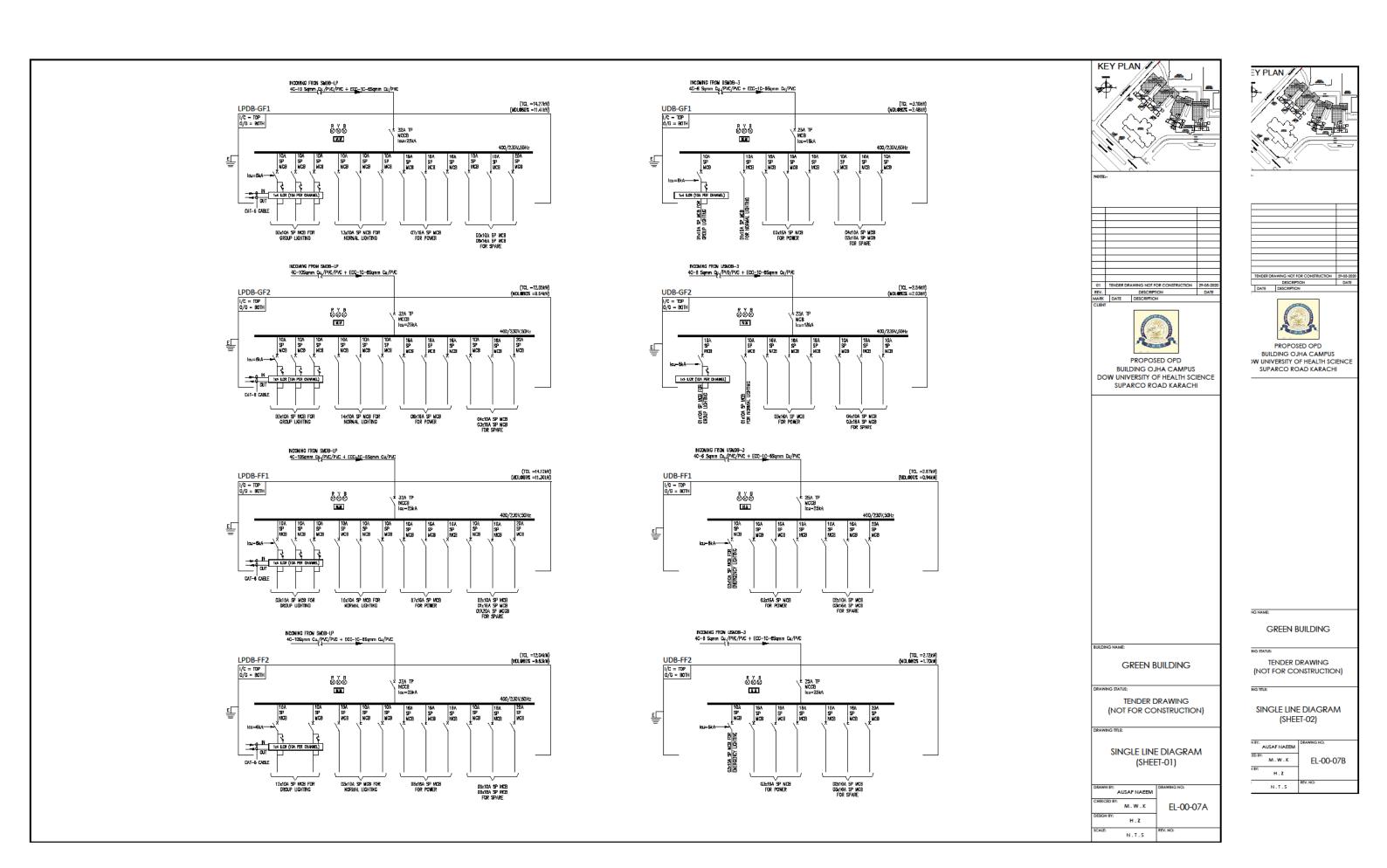


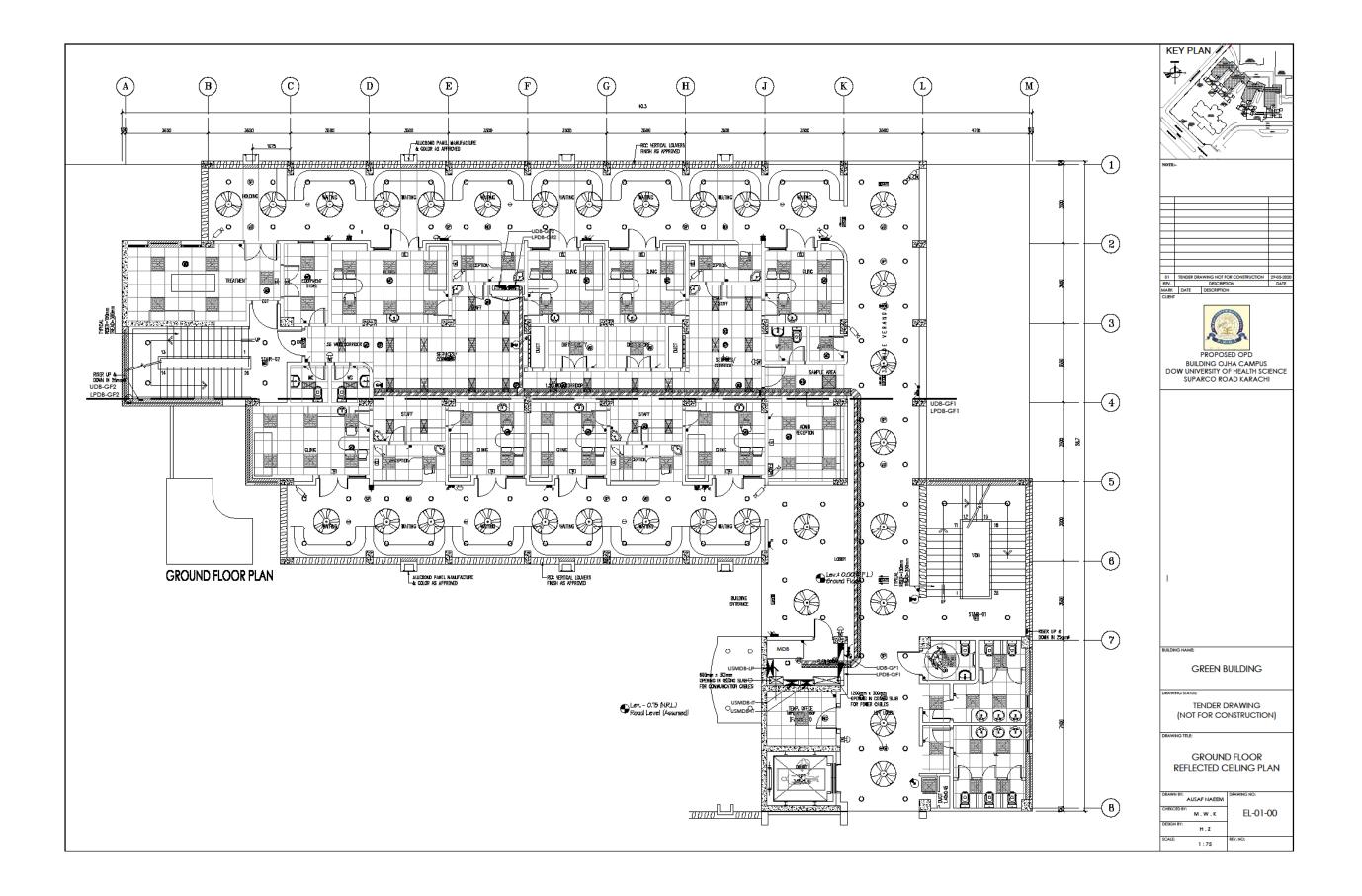
E:\001 WASEEM AKRAM\047 OJHA OPD\003 ARCHITECTURE DRAWING (23-05-2019)\04-TENDER DRAWINGS G. & ROOF (15-05-2020)\REVISED DETEILS (15-05-2020)\FL-16.00 FLOORING PATTERN\FL-16.00 FLOORING PLANS.DWG, 5/19

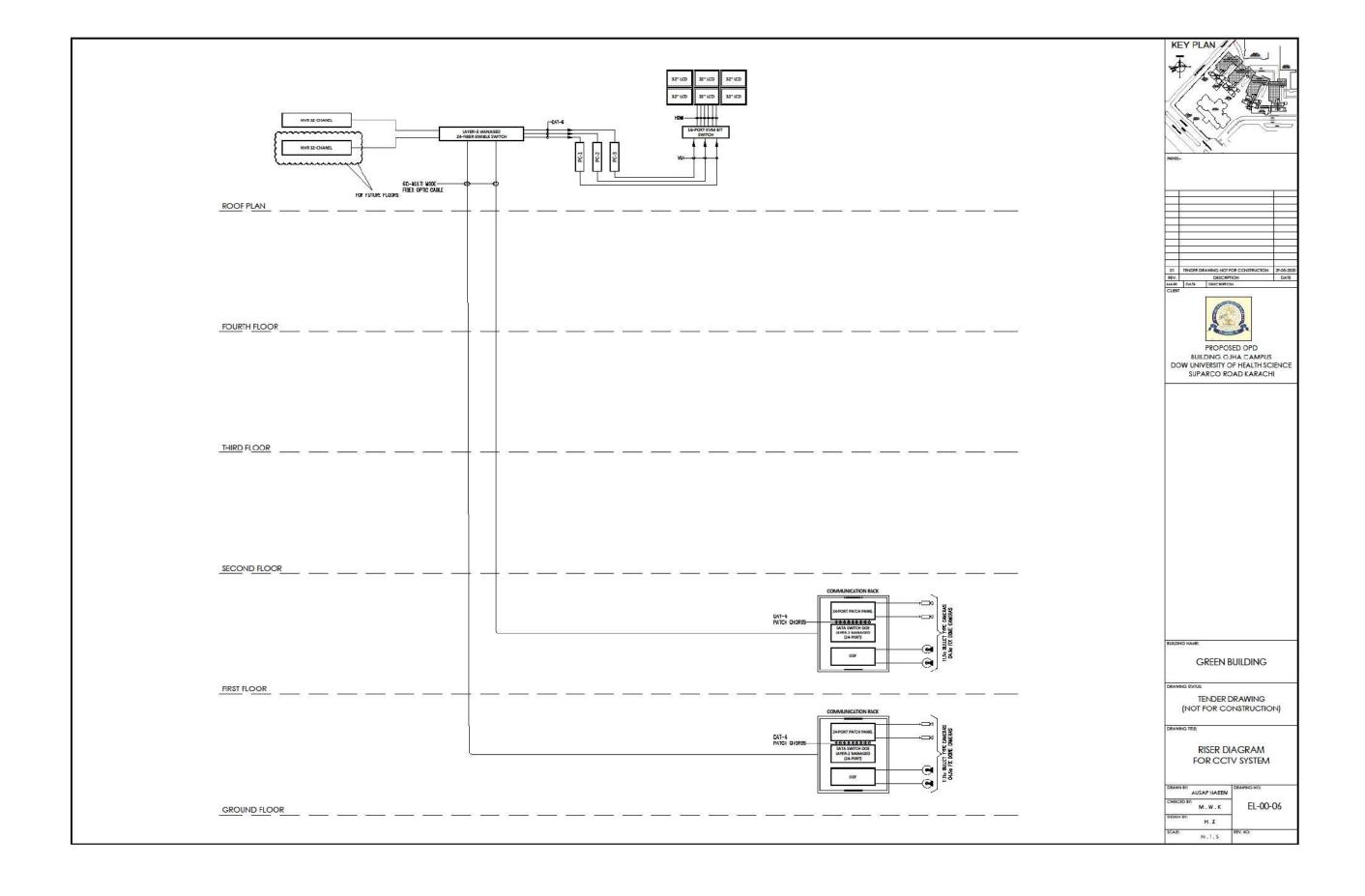


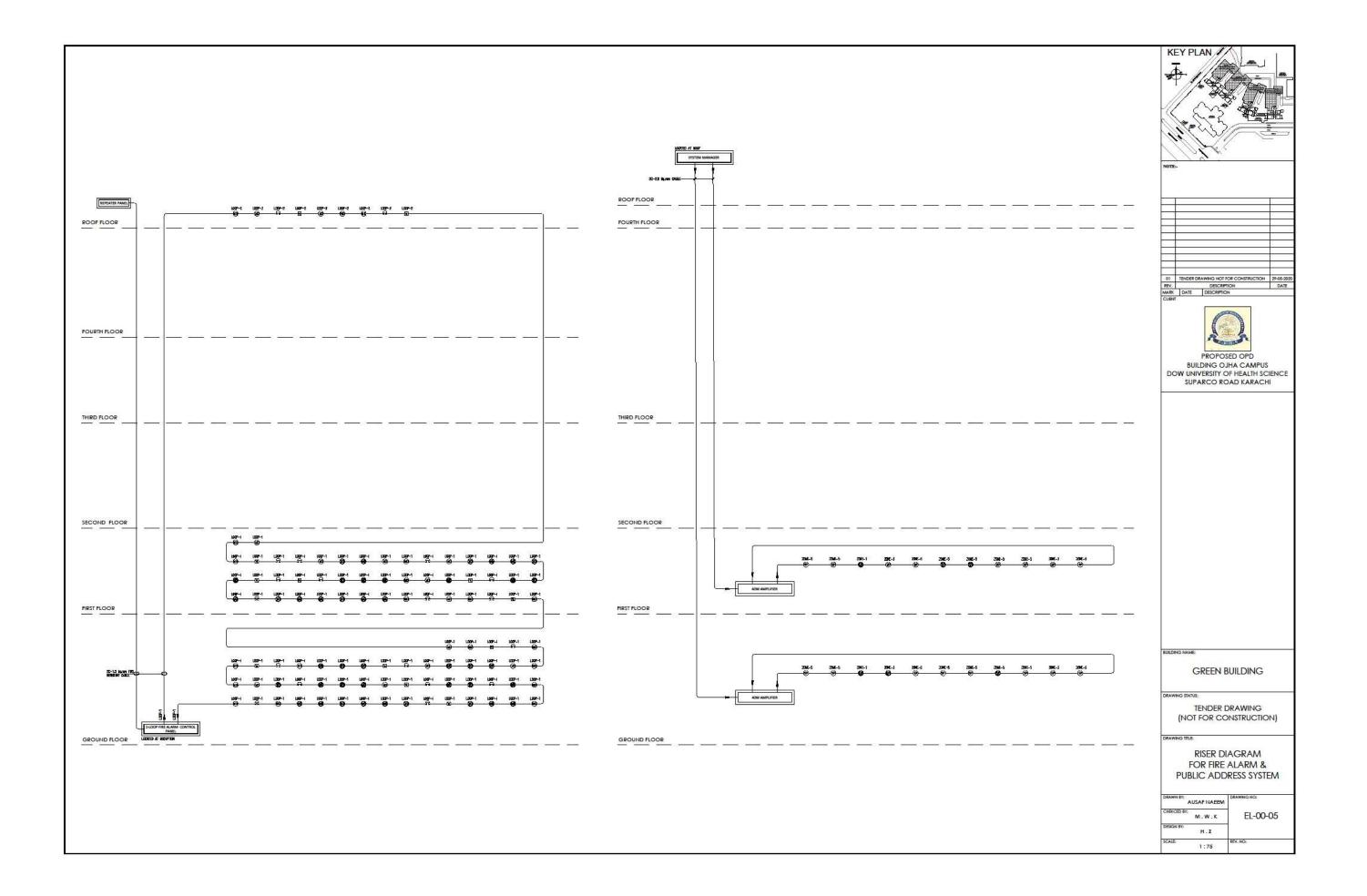


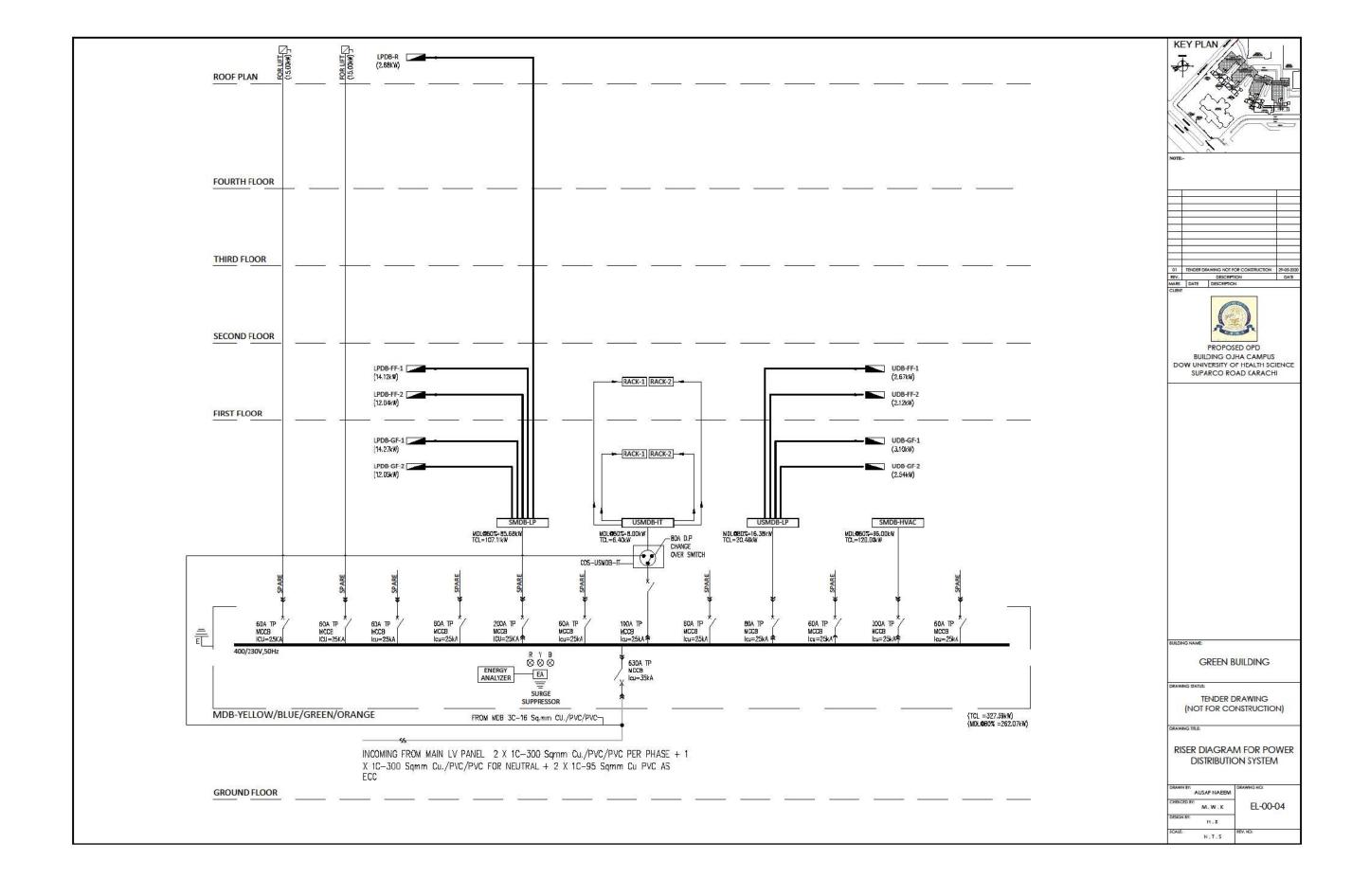












## DESCRIPTION LIGHTING 0 SURFACE MOUNTED DOWN LIGHT WITH 18W LED LAMP COLOR 4000K DIFFUSED GLASS AT CEILING SLAB SURFACE MOUNTED DOWN LIGHT WITH 12W LED LAMP COLOR 4000K DIFFUSED GLASS AT CELLING SLAB /CEILING RECESSED 45W LED PANEL 1200x300mm FIXTURE OF DIFFUSED GLASS DOLOR TEMP 4000K CRI 90% AT FALSE CEILING CEILING RECESSED 45W LED PANEL 600x600mm FIXTURE OF DIFFUSED GLASS COLOR TEMP 4000K CRI 90% AT FALSE CEILING BULK HEAD LIGHT 兹 AT D'-0" A.F.F.L CEILING FAN (36°0 , 48°0 , 56°0) AT CEILING SLAB ᅽ BULK HEAD EMERGENCY LIGHT WITH 10W LED WITH BUILT-IN BATTERY BACK-UP (NON MAINTAINED) AT CELLING SLAB **-**31 EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT (MAINTAINED) AT CELLING SLAB 450 EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED) AT CELLING SLAB स्ट्रा EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED) AT CEILING SLAB ✓ ✓ ■ 10A 220V ONE WAY SWITCH / DIMMER FOR FAN AT 3'-6" A.F.F.L LOW CURRENT SYSTEM MULTI DETECTOR (F.C) AT FALSE CEILING **(10)** AT CELLING SLAB £ ELECTRONIC BELL FOR FIRE ALARM SYSTEM AT 6'-6" A.F.F.L GLASS BREAK MANUAL CALL POINT NO. AT 4'-6" A.F.F.L 8W CEILING SPEAKER (F.C) AT FALSE CEILING ❷ ՛Ֆ 6W COLING SPEAKER AT CELLING SLAB ⊢<mark>∽</mark> 10W WALL MOUNTED SPEAKER AT 7'-0° A.F.F.L ₩ WIFI CEILING MOUNTED AT FALSE CEILING WIFI WALL MOUNTED AT WALL MOUNTED **⊚** DDME TYPE CCTV CAMERA AT CEILING SLAB нШКІ WALL BRACKET CCTV CAMERA AT 7-6 AFFL Q. MATIC SYSTEM SCREEN SCREEN TICKET DISPENSER 13A INTERNATIONAL SWITCH SOCKET / AT COUNTER HEIGHT AT 0'-9" / 3'-8" A.F.F.L o' / o் • 13A FLAT PIN SIMPLEX SWITCH SOCKET AT 0'-9" A.F.F.L AT 0'-9" A.F.F.L 15A 3-PIN SWITCH SOCKET Ь AT 4'-0" AFFL ۵ 20A DP SWITCH SOCKET FOR HAND DRYER AT 13-6" A.F.F.L ô INDUSTRIAL SOCKET Ф 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 0'-9" A.F.F.L 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 3'-6" AFFL 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 7'-0" A.F.F.L INO. 13A INTERNATIONAL ON RAW POWER, 1NO. 13A FLAT PIN DUPLEX ON UPS POWER & 2NO. RJ-45 DUPLEX FOR VOICE & DATA П AT 0'-9" A.F.F.L

RJ-45 SIMPLEX DATA OUTLET / AT COUNTER HEIGHT

CABLE TRAY FOR POWER & DATA CABLE (EACH TWO PARTITION)

TELEVISION OUTLET

DISTRIBUTION EDARD

MAIN DISTRIBUTION BOARD

COMMUNICATION RACK

UPS POWER BUSWAY

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ELECTRICAL LEGEND

## GENERAL NOTES

- THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS. IF THE SITE CONDITIONS NECESSITATE ANY ALTERATIONS OF DEVIATIONS THE DIRECTIONS OF THE CONSULTANT SHALL BE FOLLOWED.
- ALL WIRING OF LIGHTING AND POWER SHALL BE WITH MULTI CORE PVC INSULATED WIRES FOR SINGLE PHASE CIRCUIT. THE VOLTAGE GRADE OF WIRE SHALL BE 300/500V, WHERE AS FOR THREE PHASE CIRCUIT IT WILL BE 600/1000 VOLTS.
- DIMENSION GIVEN IN LAYOUT AND DETAIL DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO MEASURE DIMENSIONS ACCORDING TO ARCHITECTURAL AND STRUCTURAL DRAWING.
- 4. CIRCUIT WIRING SHALL BE DONE IN ACCORDANCE WITH THE WIRING SCHEDULE LINLESS OTHERWISE INDICATED.
- 5. WIRING SHALL BE DONE AFTER THE COMPLETION OF CONDUCTING WORK IN ALL RESPECTS INCLUDING THE INSTALLATION OF BACK BOXES, OUTLET BOXES ETC.
- 6. WIRING SHALL BE CONTINUOUS LODPING IN TYPE AND NO JOINT IN WIRES SHALL BE ALLOWED.
- ARRANGEMENT OF ELECTRICAL EQUIPMENT ON ELECTRICAL DRAWINGS ARE TENTATIVE, EXACT ARRANGEMENT OF EQUIPMENT SHALL BE MADE IN MEW OF ITS
  PHYSICAL DIMENSIONS.
- BEFORE DETERMINING THE CUIT LENGTH OF CABLE THE ACTUAL MEASUREMENTS BE TAKEN AT SITE AND PROVISIONS OF SLACK (3%) AT TERMINATION OF SWITCH BOARD (5'0" APPROX.) AND SPARE LOOP SHALL BE TAKEN INTO ACCOUNT.
- 9. MOUNTING HEIGHT OF MISCELLANEOUS OUTLETS FROM FINISHED FLOOR LEVEL ARE SHOWN ON GIVEN SCHEDULE ( REFER DRAWINGS ).
- 10. CONDUIT UNDER FLOOR SHALL HAVE A MINIMUM DEPTH OF 50mm MEASURED FROM FINISH FLOOR LEVEL TO TOP OF CONDUIT.
- 11. MINIMUM SIZE OF CONDUIT SHALL BE 25mmø, UNLESS OTHERWISE INDICATED.
- 12. BACK BOXES FOR SWITCHES, SOCKETS AND TELEPHONE ETC. SHALL BE MADE WITH 165WC SHEET STEEL.
- 13. WIRE AS ECC SHALL BE GREEN IN COLOR OR GREEN / YELLOW IN COLOR.
- 14. CONDUIT AND CABLES TO BE LAID UNDER FLOOR SHALL BE IN CODROMATION WITH OTHERS SERVICES.
- 15. INCASE OF ANY DEVIATION FROM DESIGN DRAWINGS AT ANY INSTANT THE CONTRACTOR MUST TAKE APPROVAL FROM CONSULTANT BEFORE COMMENCEMENT OF WORK AT SITE.
- 16. FOR TELEPHONE WIRING, CAT-6 CABLE SHALL BE USED WITH GREY COLOR.
- 17. FOR NETWORKING CAT-6 CABLE SHALL BE USED WITH BLUE COLOR OR ANY COLOR DISTINCT FROM TELEPHONE CAT-6 CABLE..
- 18. FOR CCTV CAT-6 CABLE SHALL BE USED.

## WIRING SCHEDULE

AT 0-9" / 3'-6" A.F.F.L

AT 4-0" AFFL

DB TO SWITCH BOARD / 1ST LIGHT POINT	2 x 15 Sq.mm + ECC 1 x 15 Sq.mm
LIGHT POINT TO LIGHT POINT	1 x 1.5 Sq.mm
AS NEUTRAL COMMON FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
DB TO SWITCH BOARD / 1ST LIGHT POINT	2 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
LIGHT POINT TO LIGHT POINT	1 x 1.5 Sq.mm
AS NEUTRAL COMMEN FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.rnm + ECC 1 x 2.5 Sq.rnm
13A INTERNATIONAL SWITCH SOCKET OUTLET	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm
15A 3-PIN ROUND SWITCH SOCKET CUTLET	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FOR POWER
13A 3-PIN FLAT SWITCH SOCKET DUTLET ( UPS )	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FOR POWER



NOTE:-

01 TENDER DRAWING NOT FOR CONSTRUCTION 2

 01
 TENDER DRAWING NOT FOR CONSTRUCTION
 29-05-20:

 REV.
 DESCRIPTION
 DATE

 MARK
 DATE
 DESCRIPTION



PROPOSED OPD
BUILDING OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD KARACHI

BUILDING NAME:

GREEN BUILDING

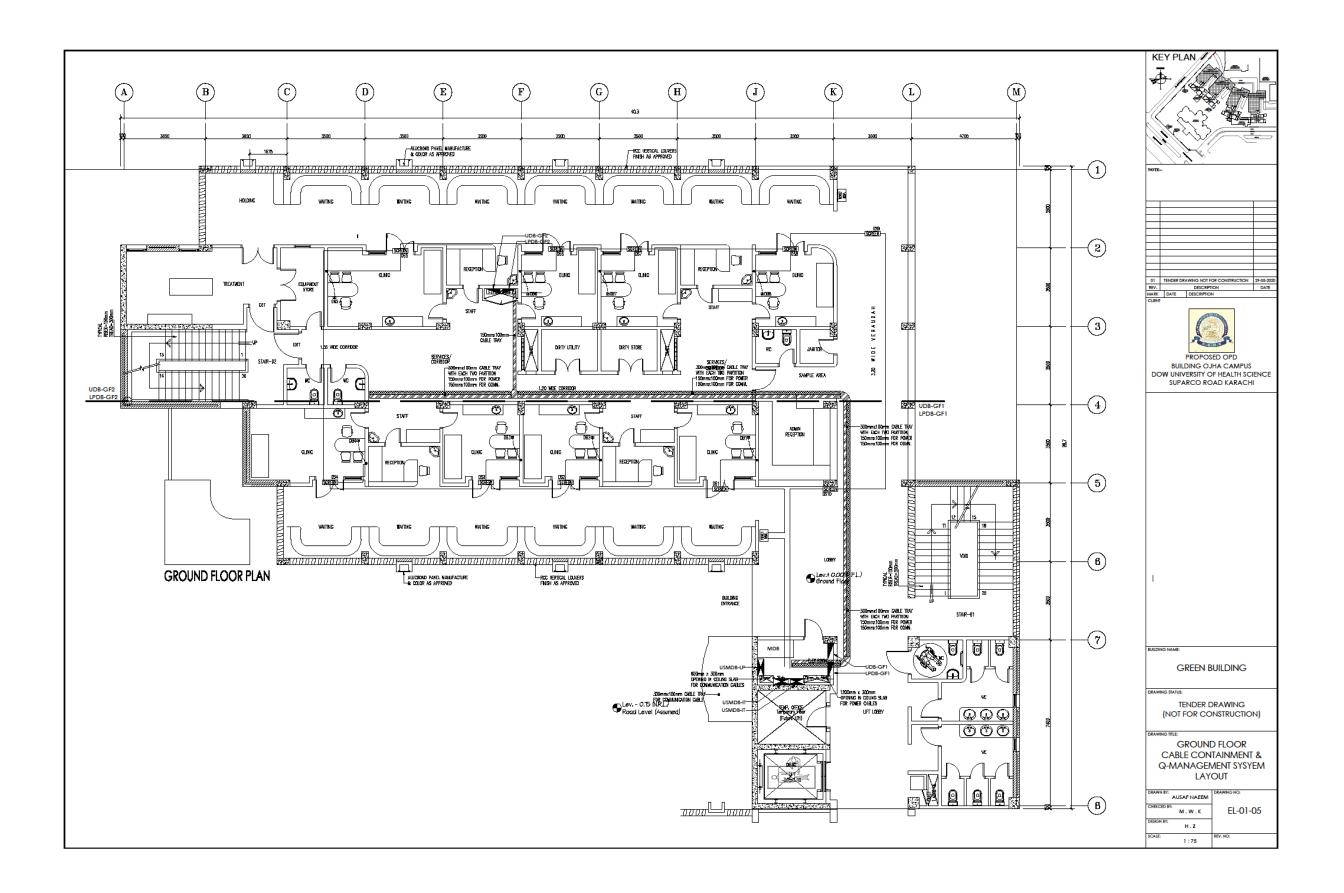
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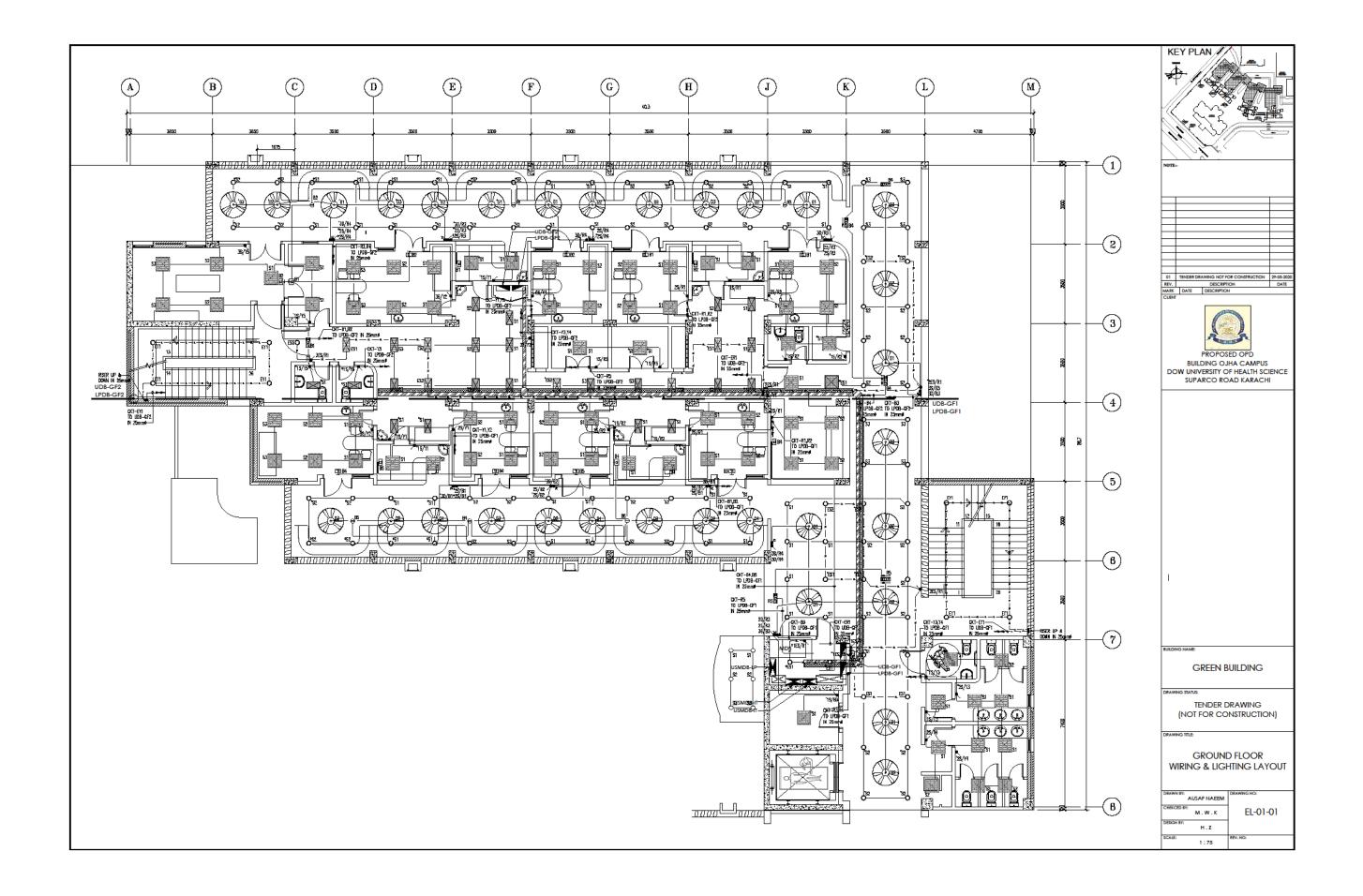
TENDER DRAWING (NOT FOR CONSTRUCTION)

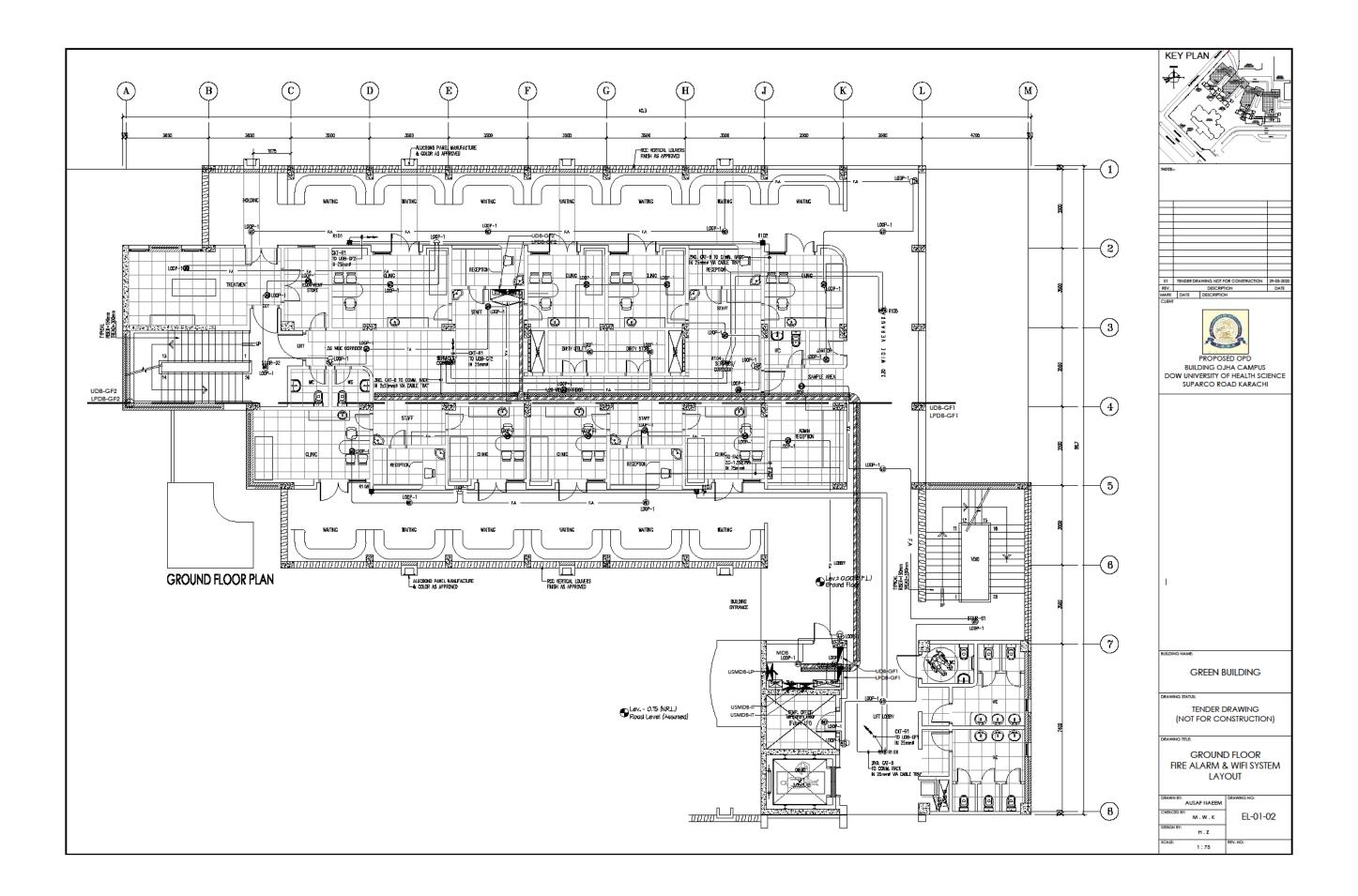
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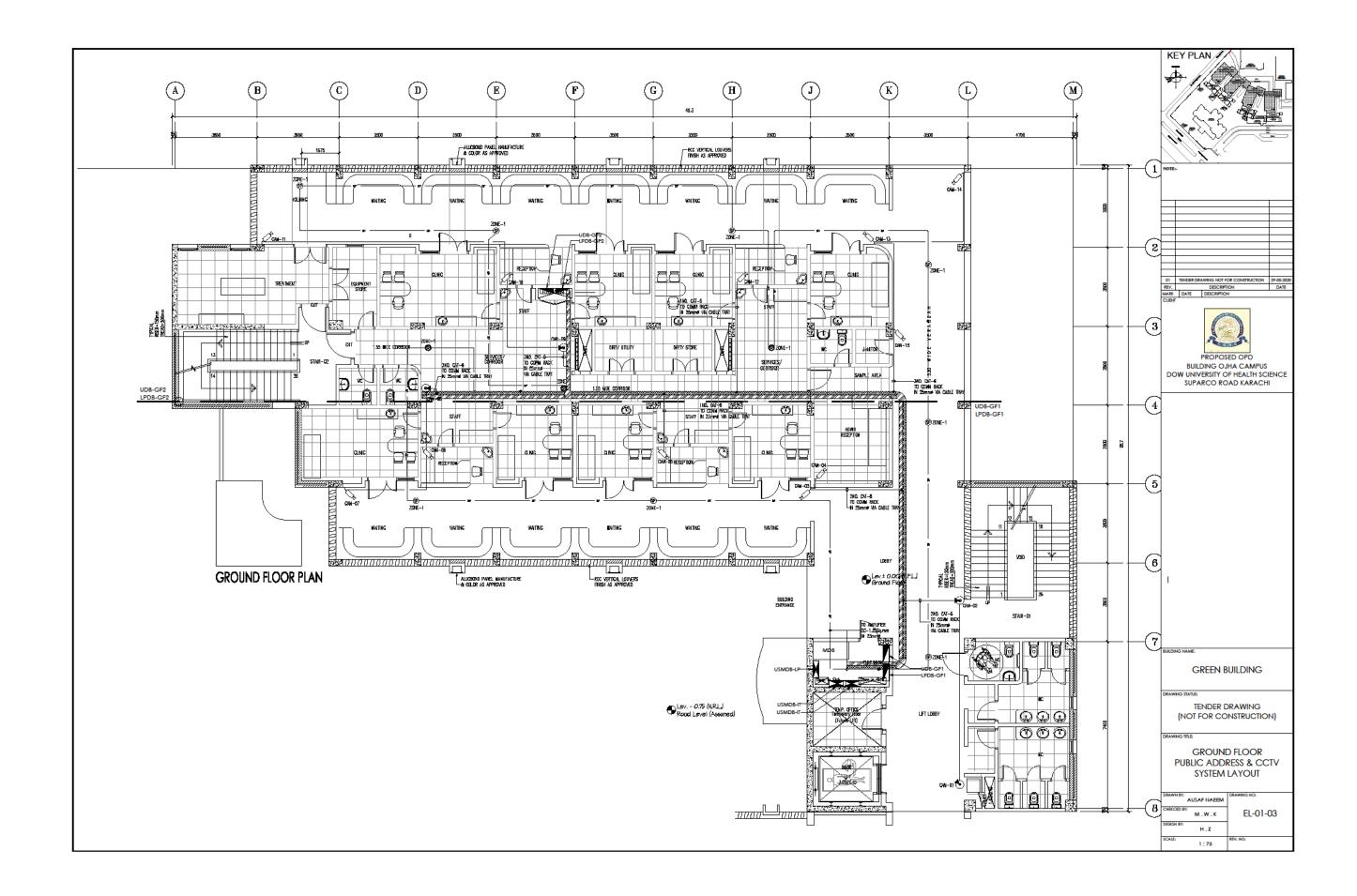
**ELECTRICAL LEGENDS** 

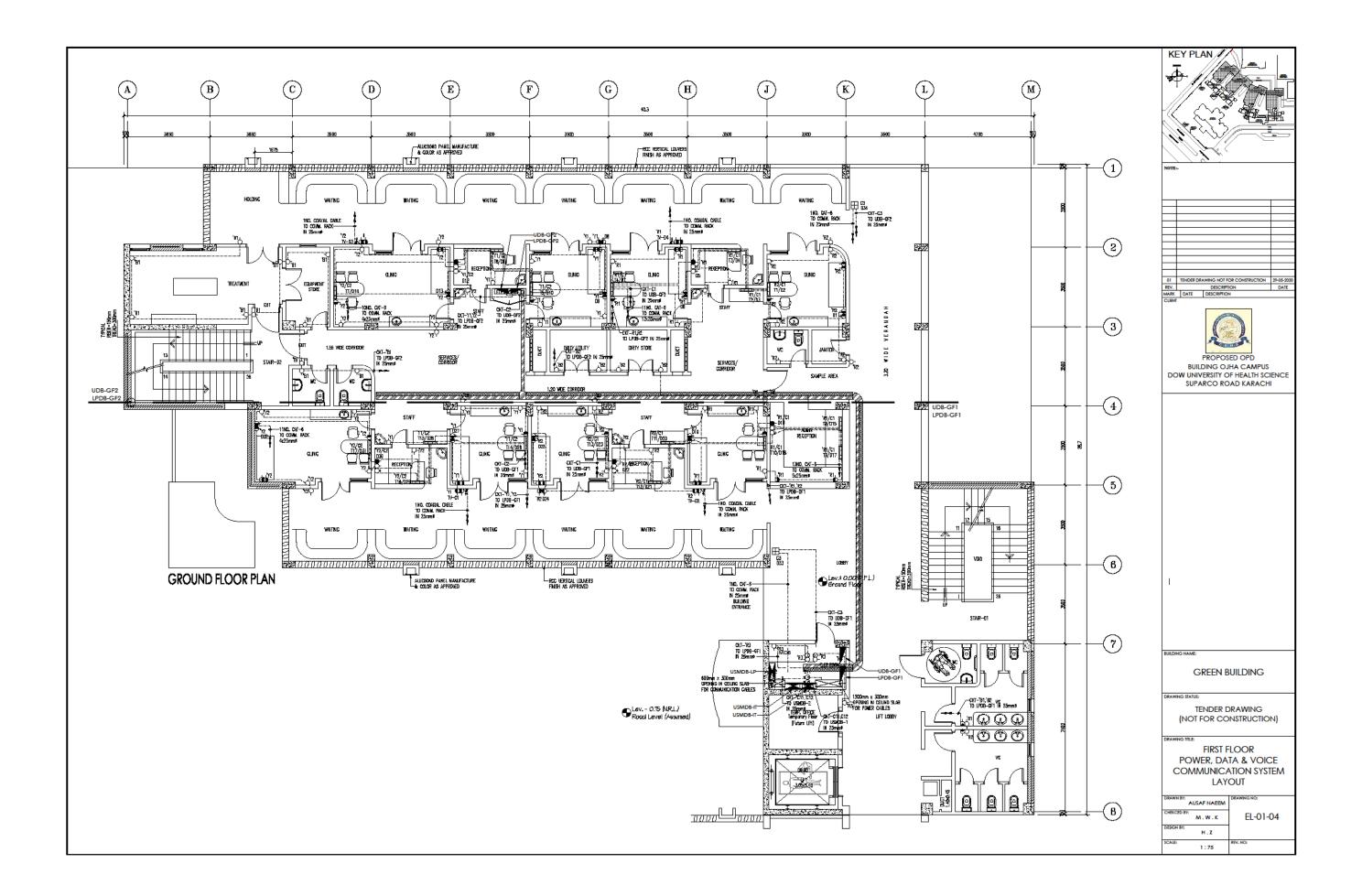
AUSAF NAEEM	DRAWING NO:
M.W.K	EL-00-02
ESIGN BY: H . Z	
CALE: N.T.S	REV. NO:

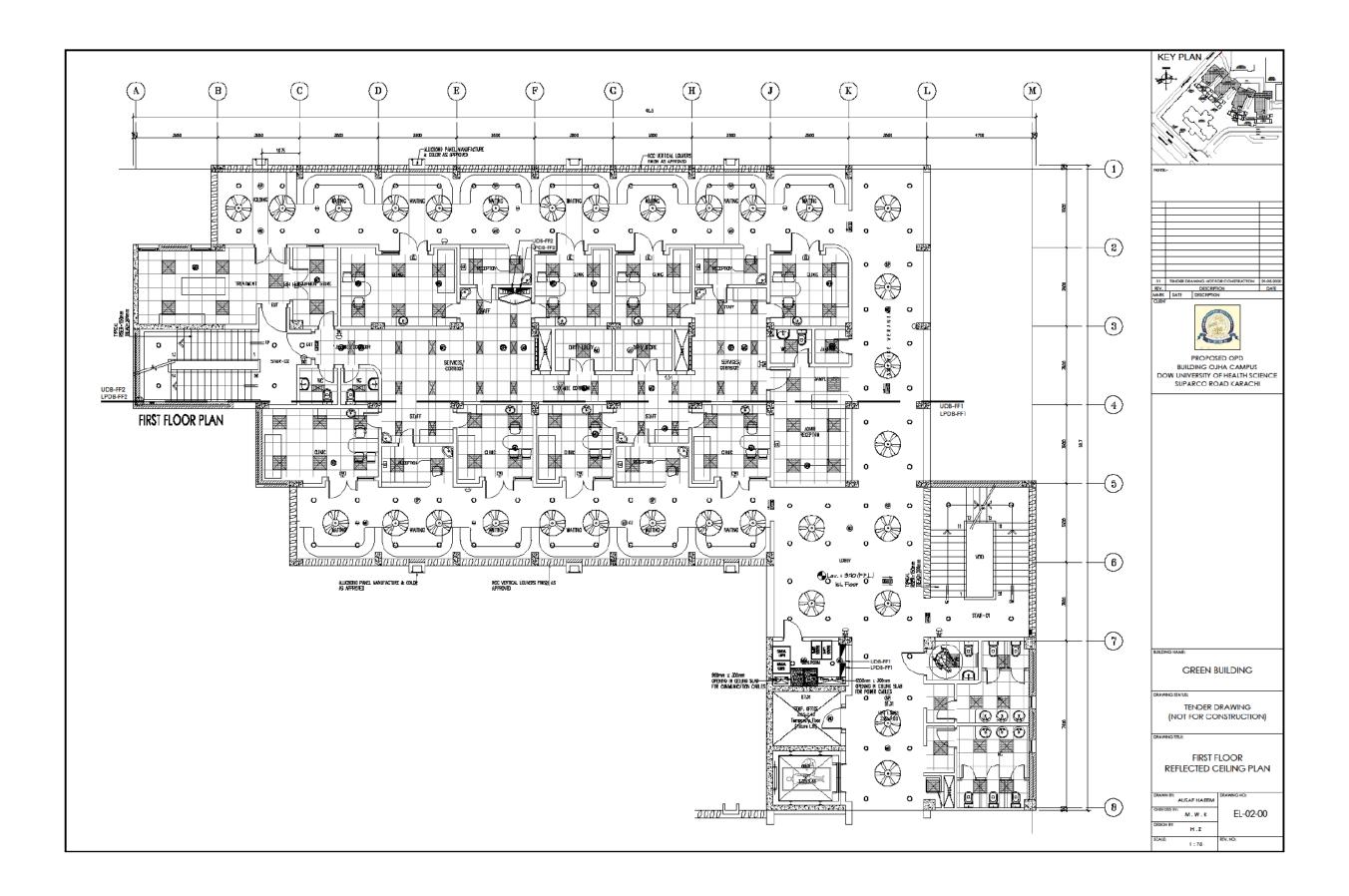


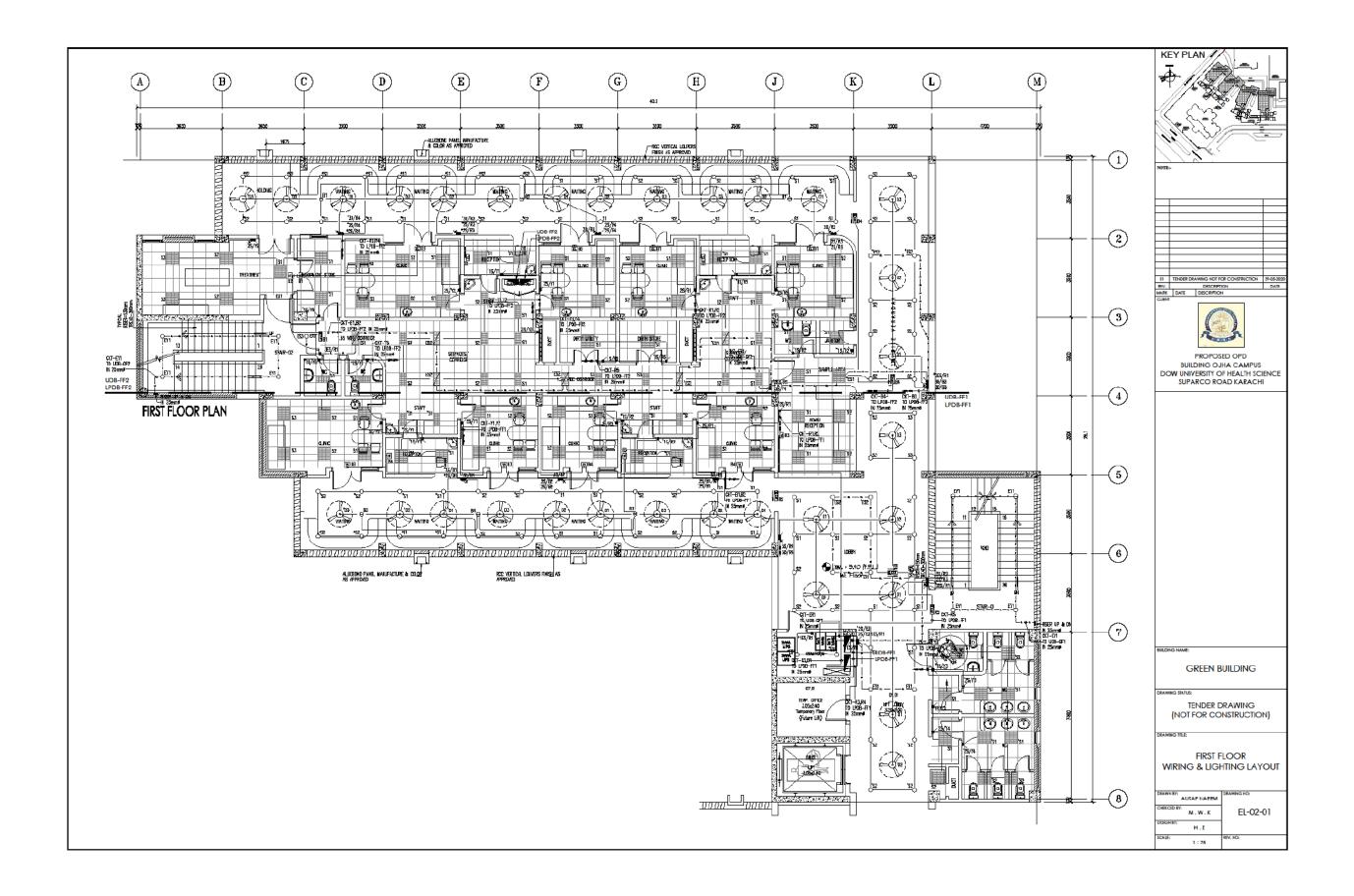


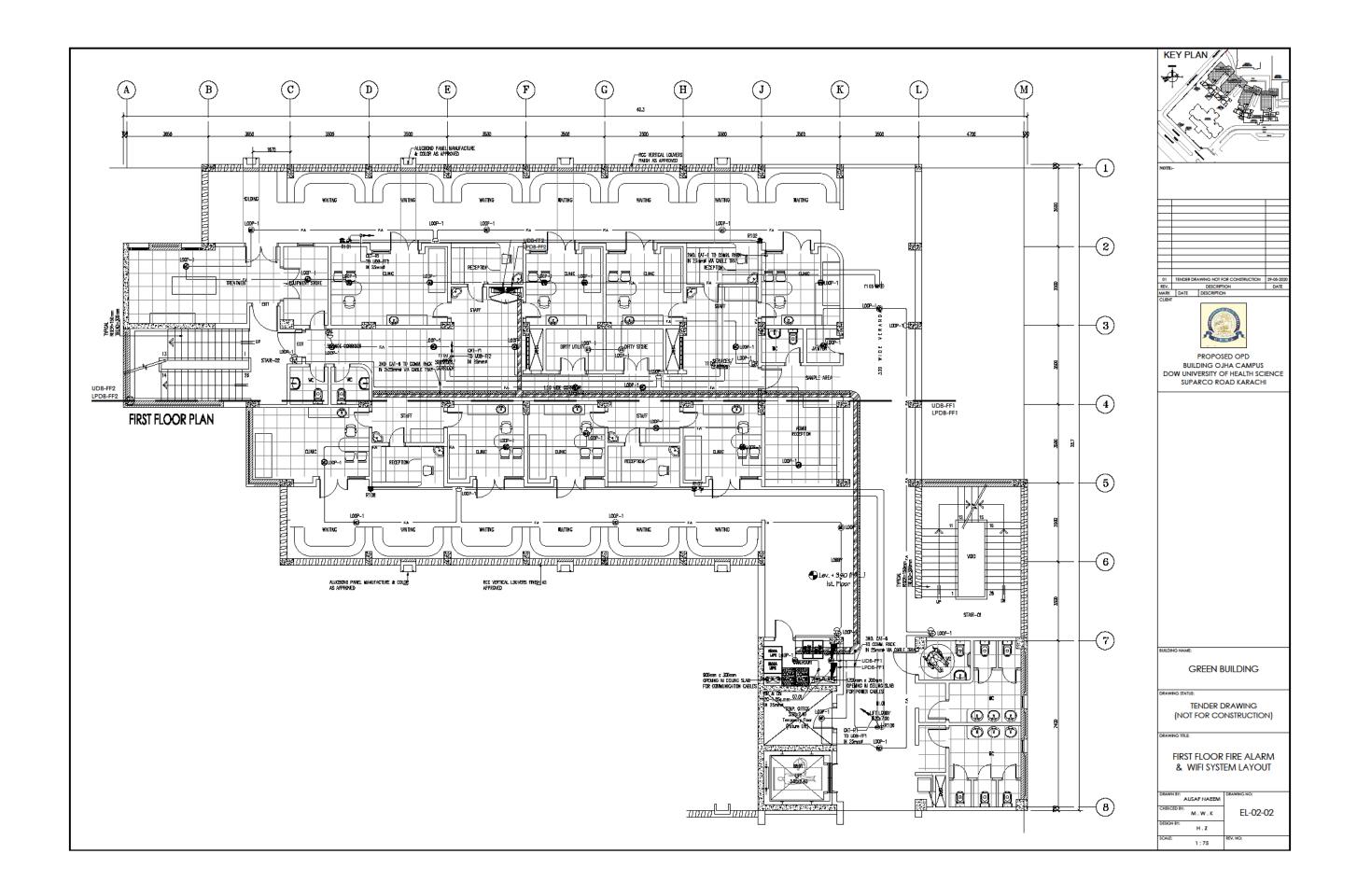


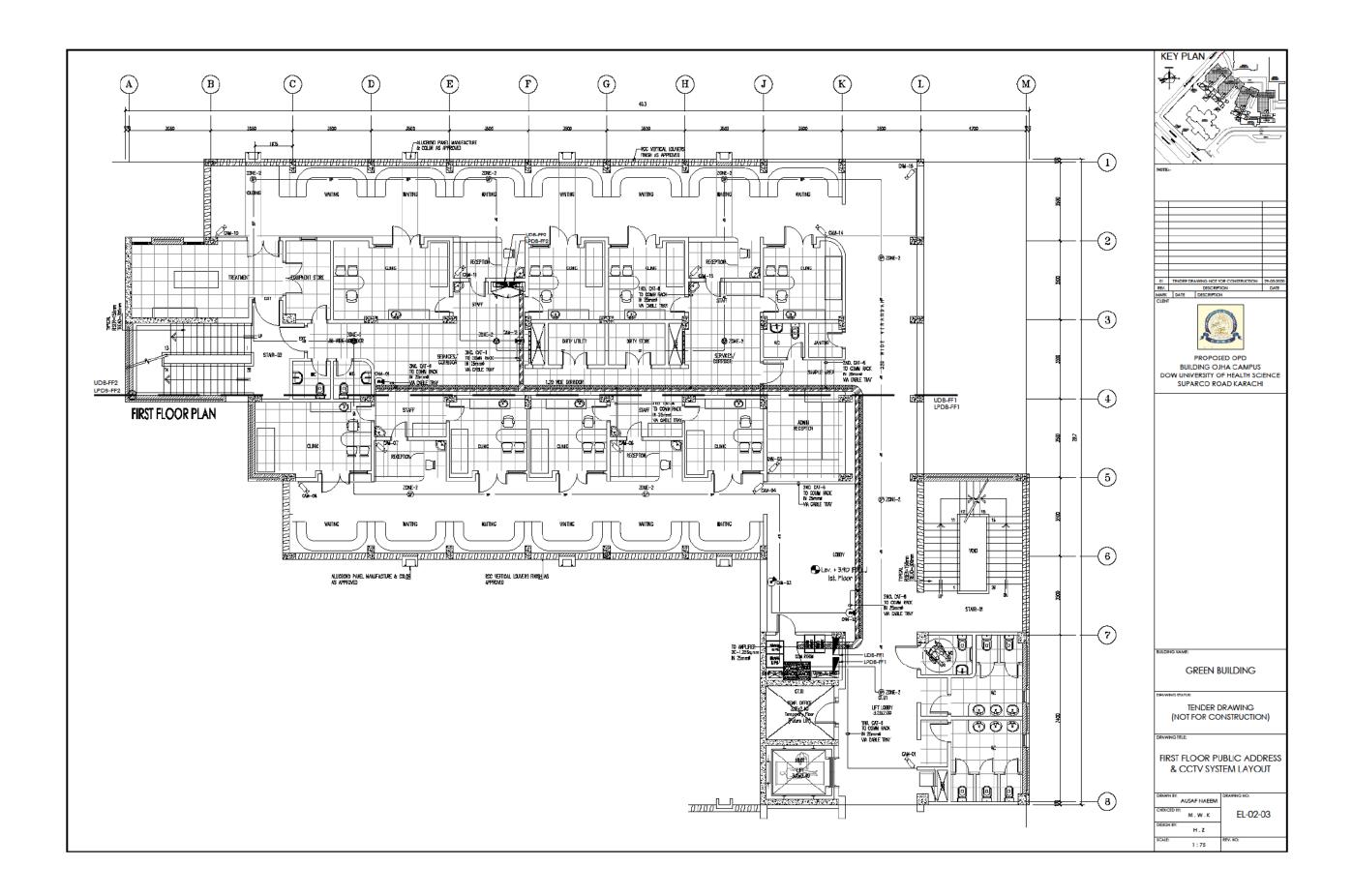


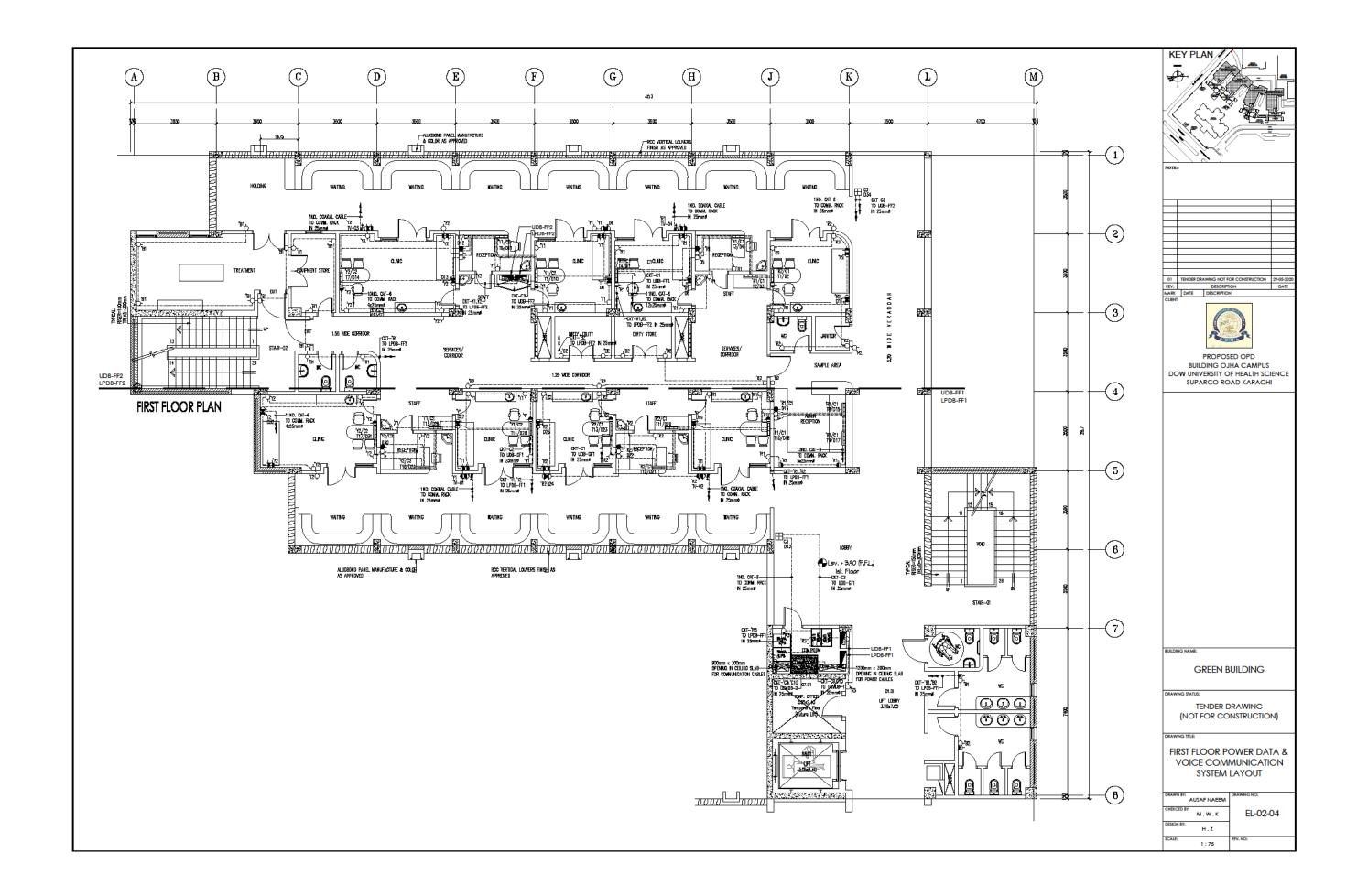


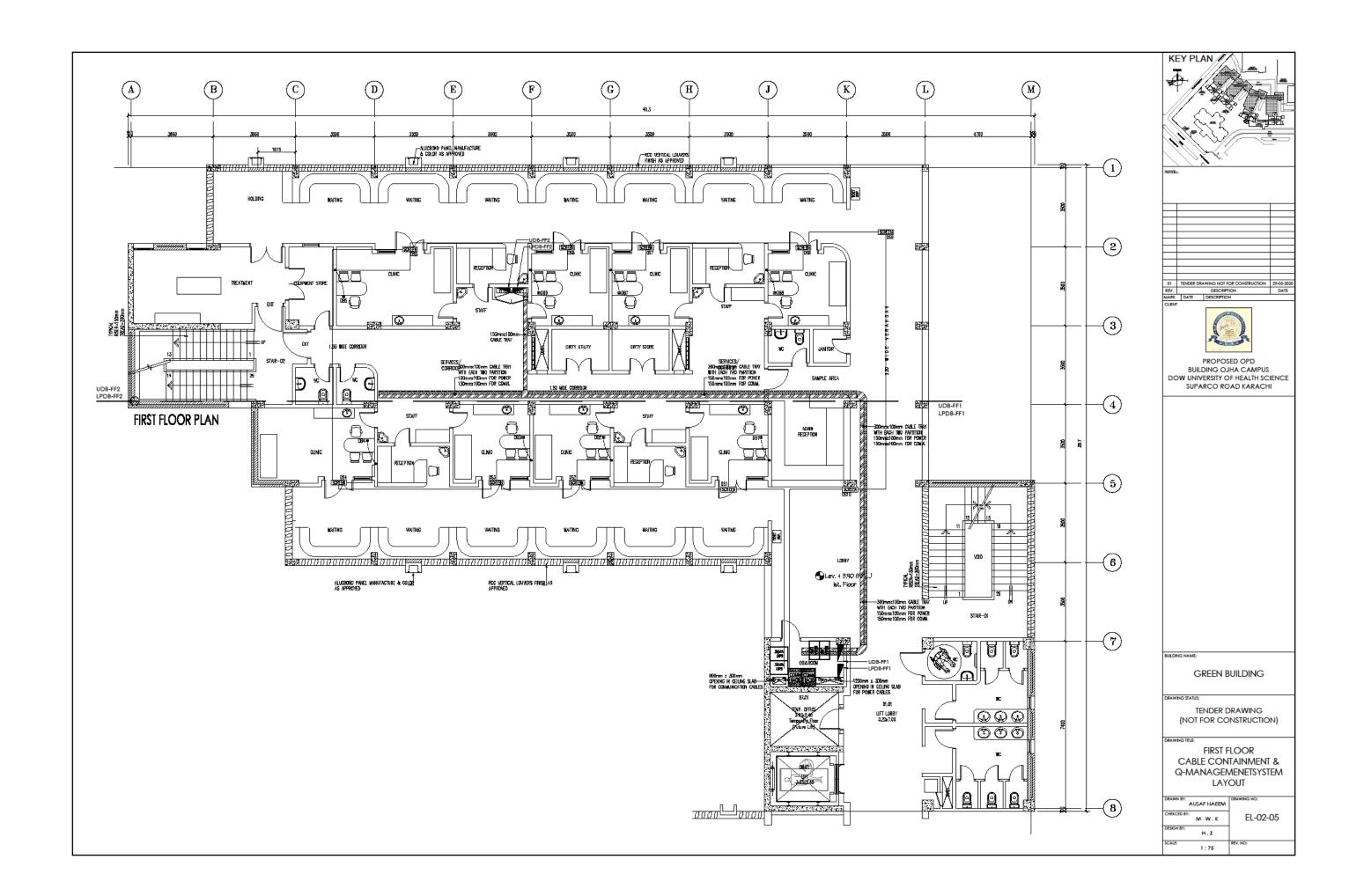


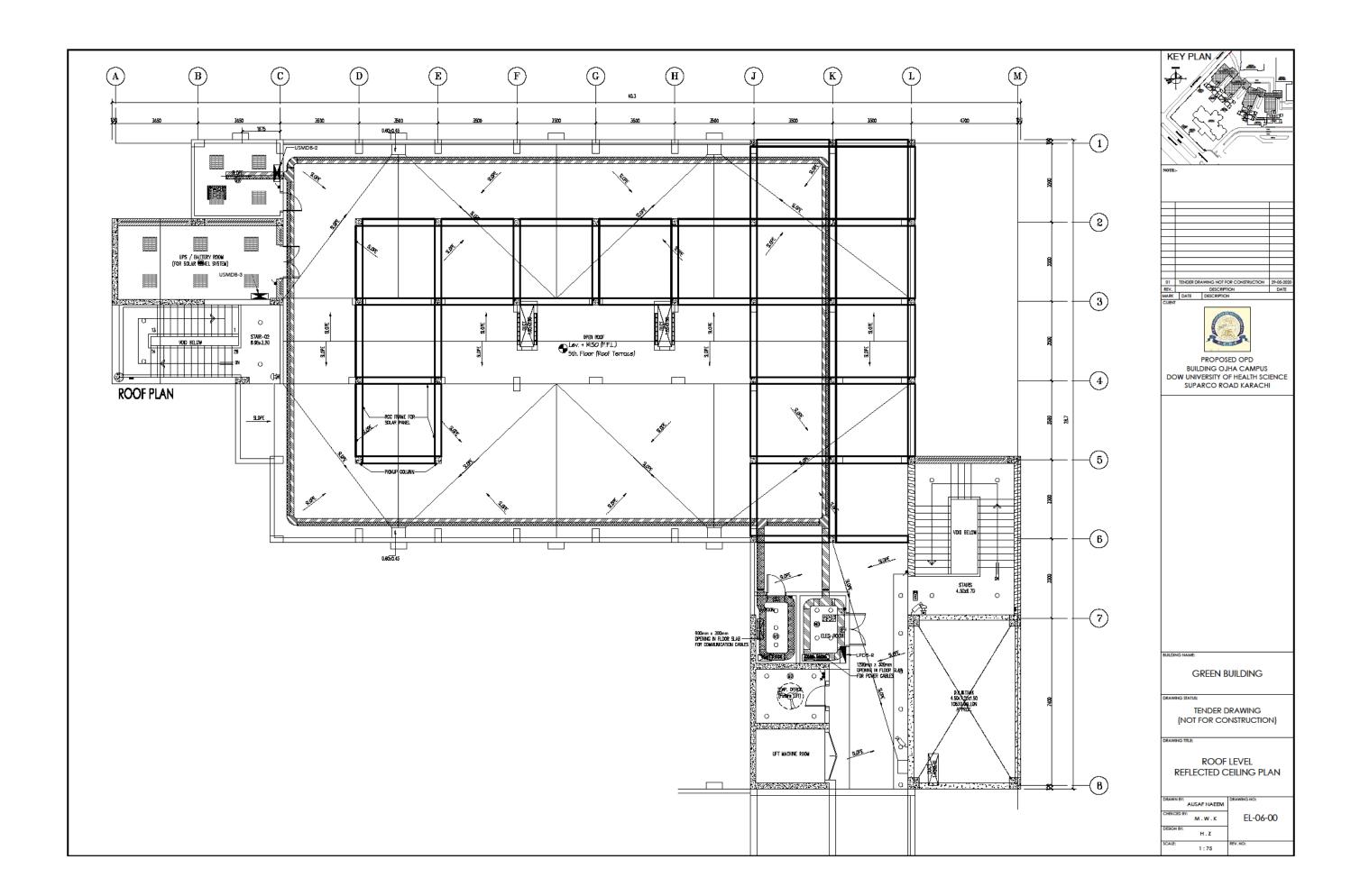


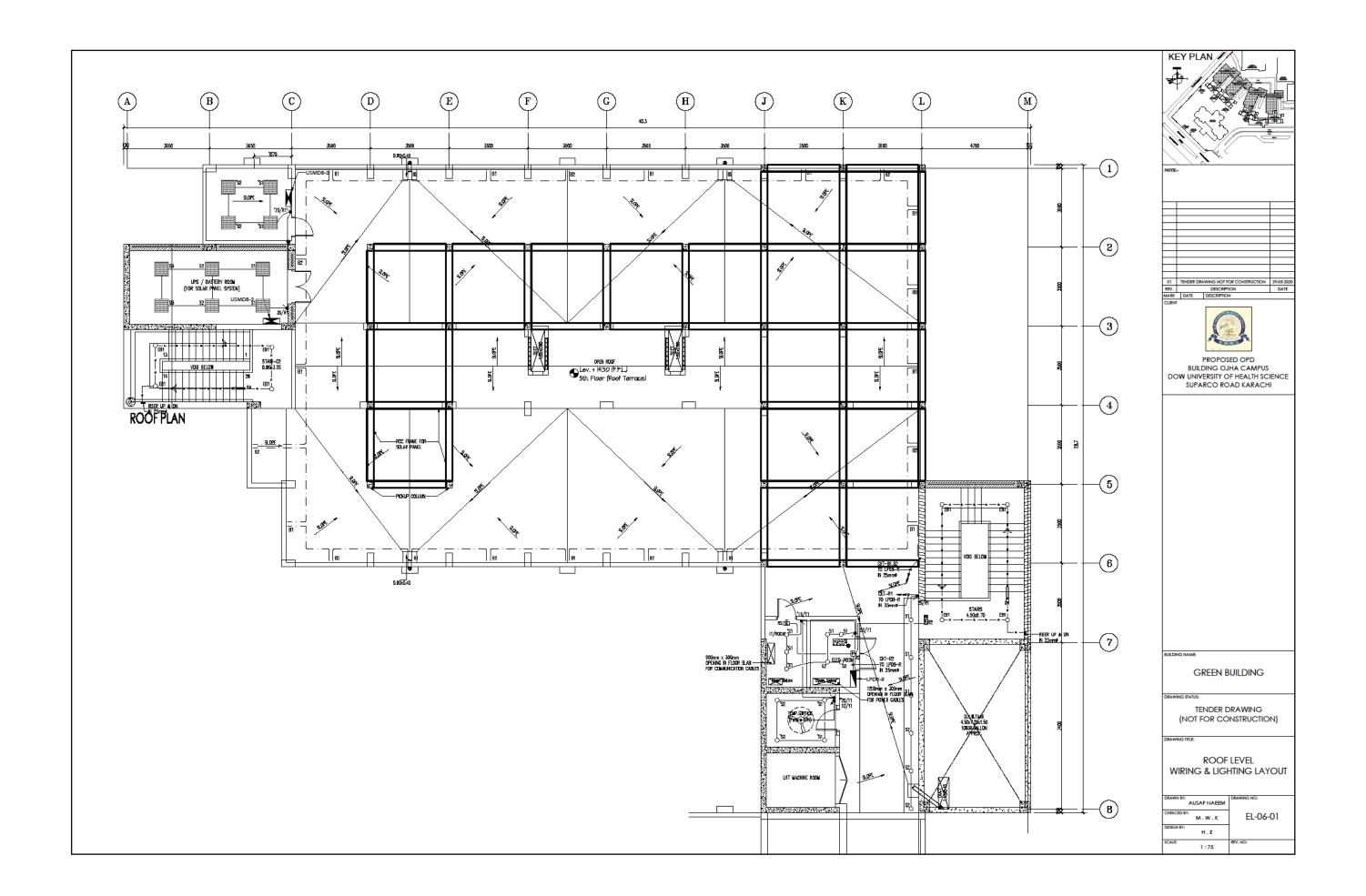


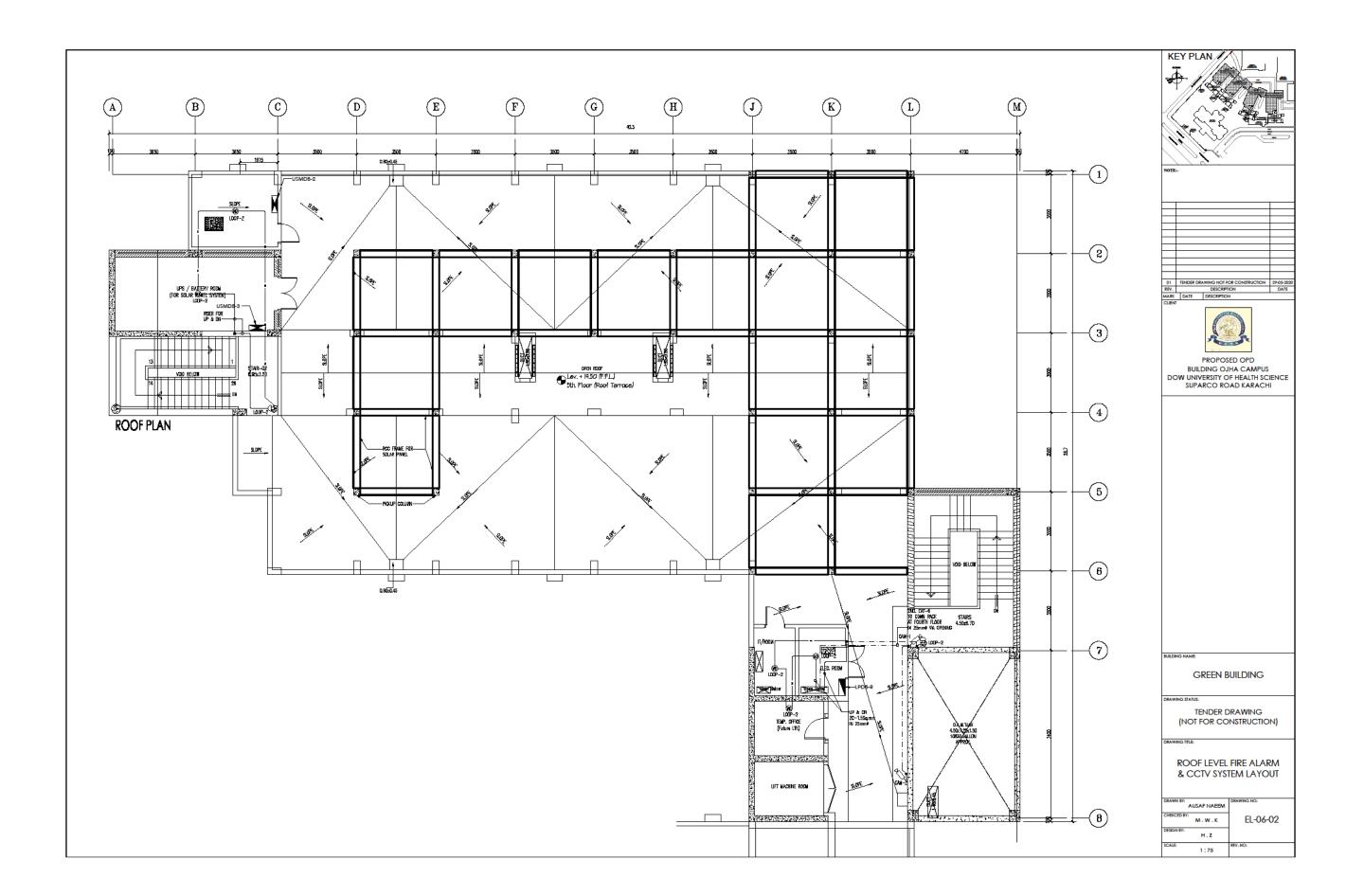


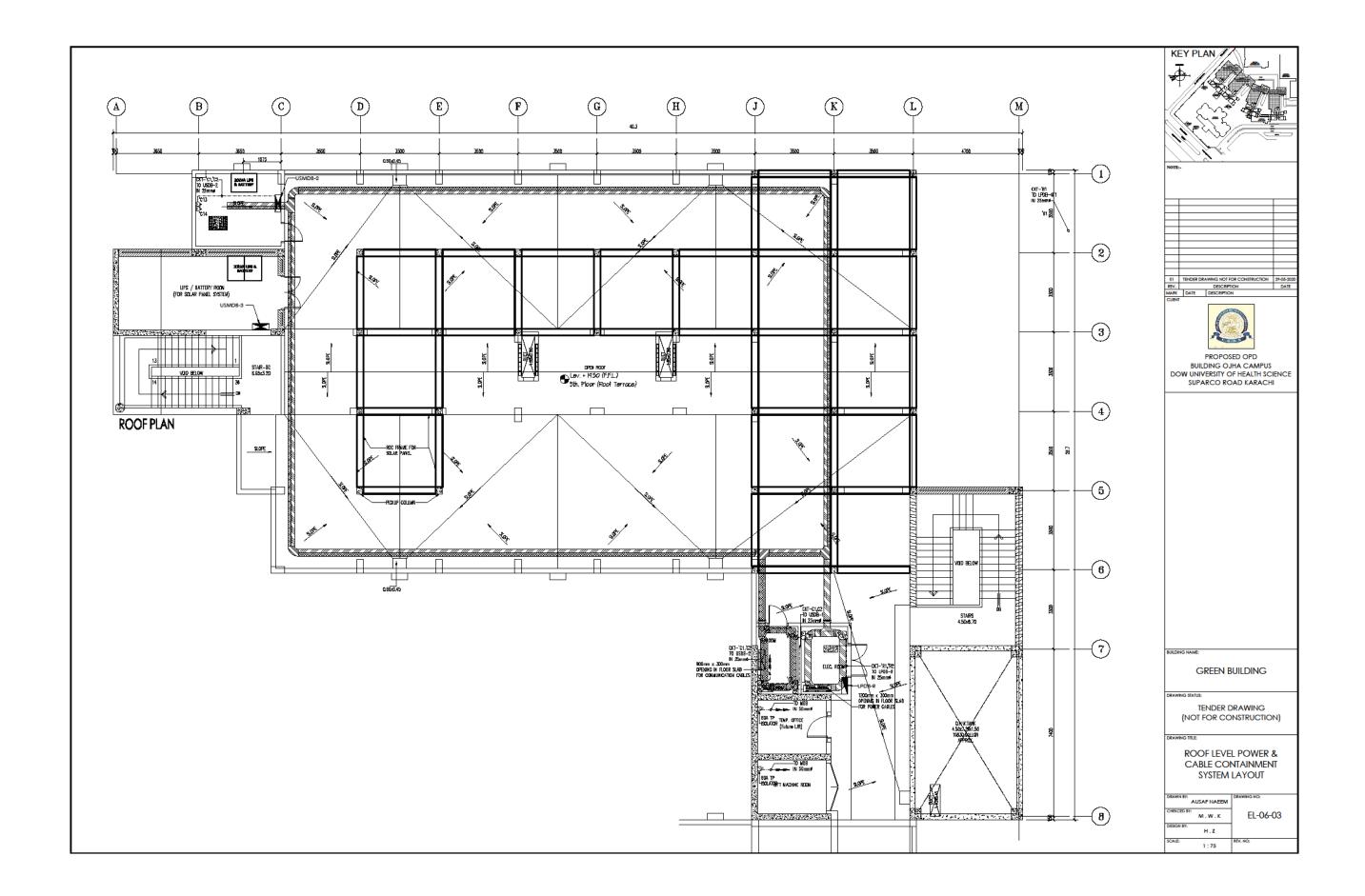


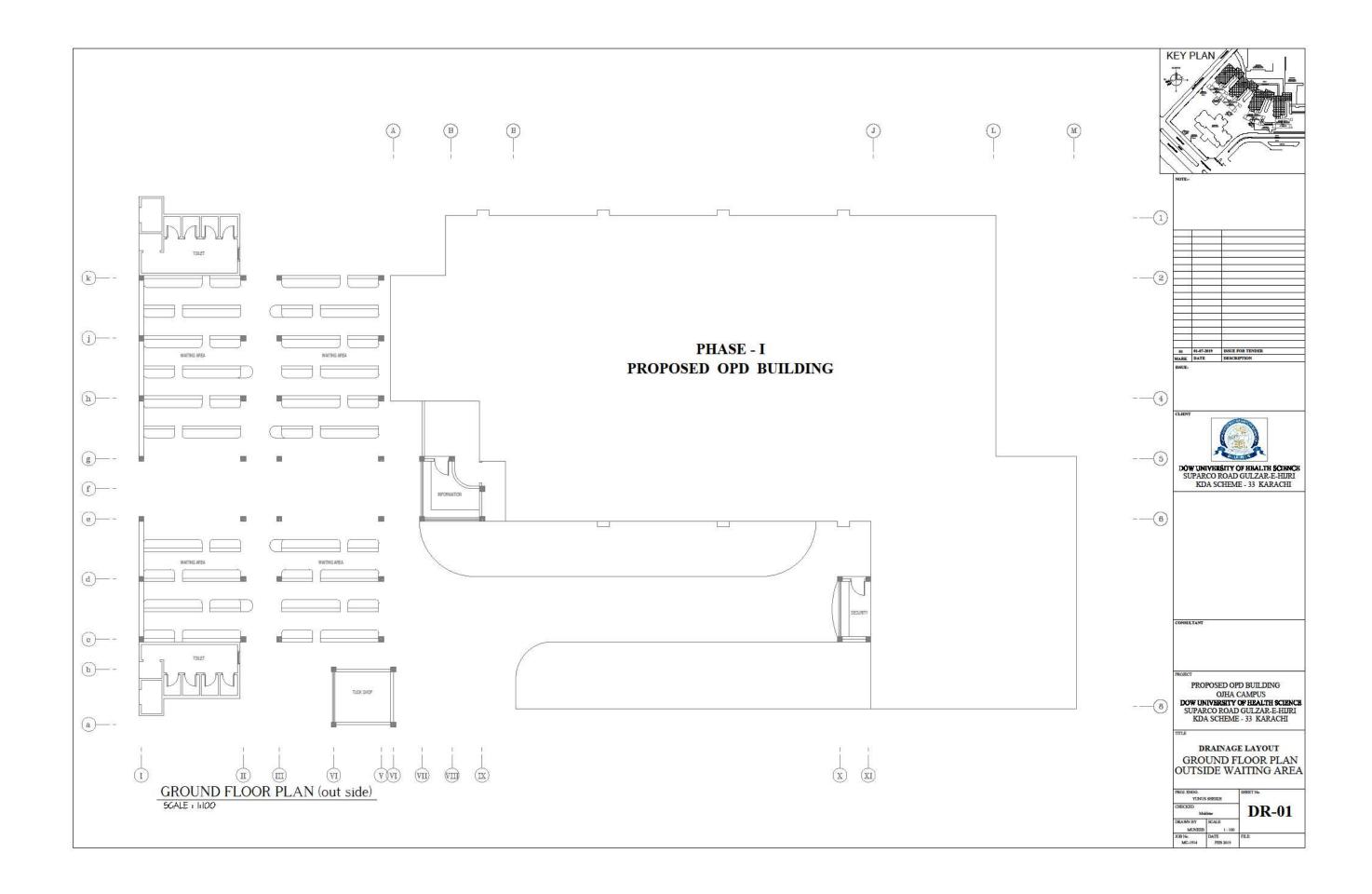


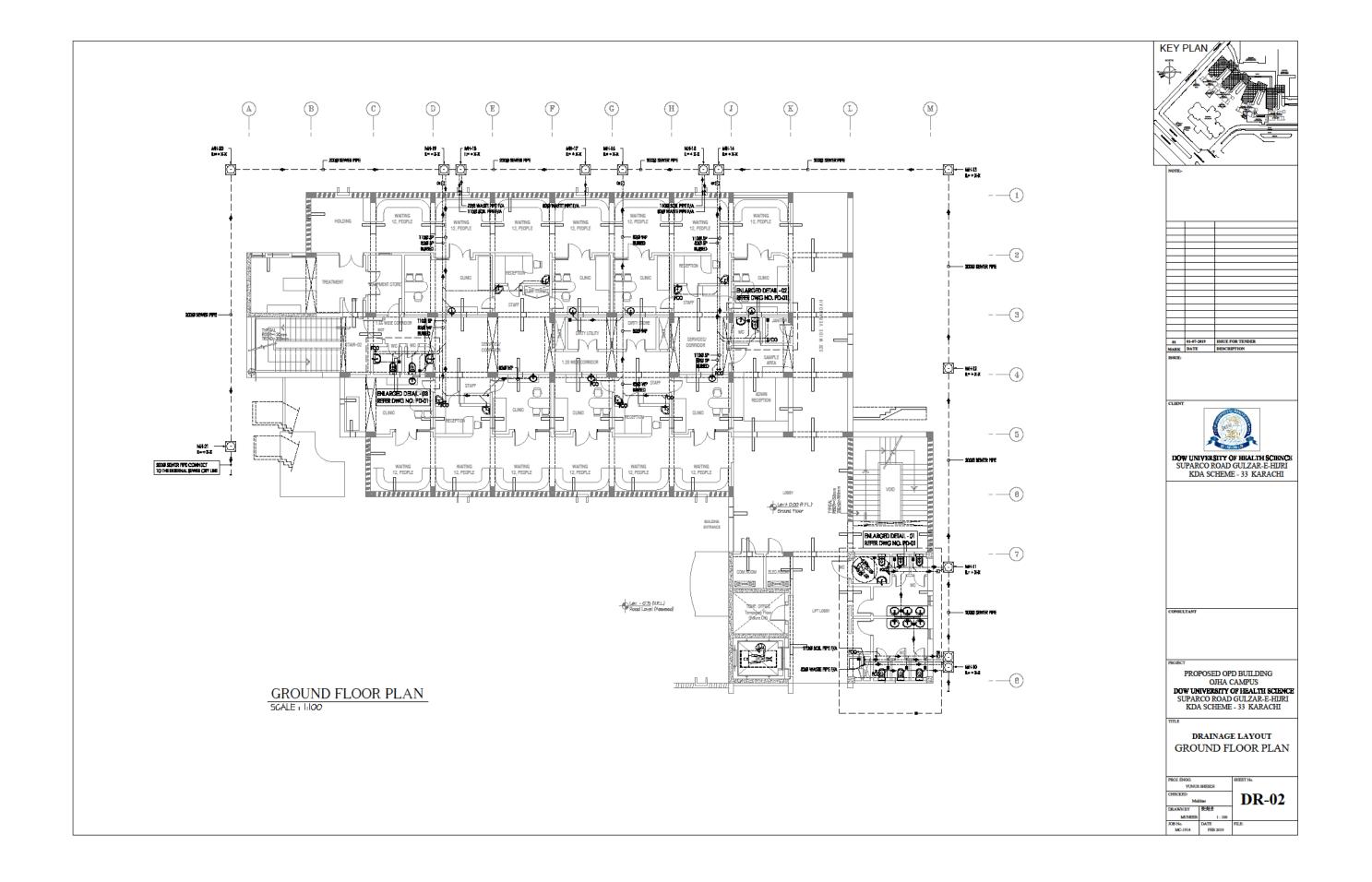


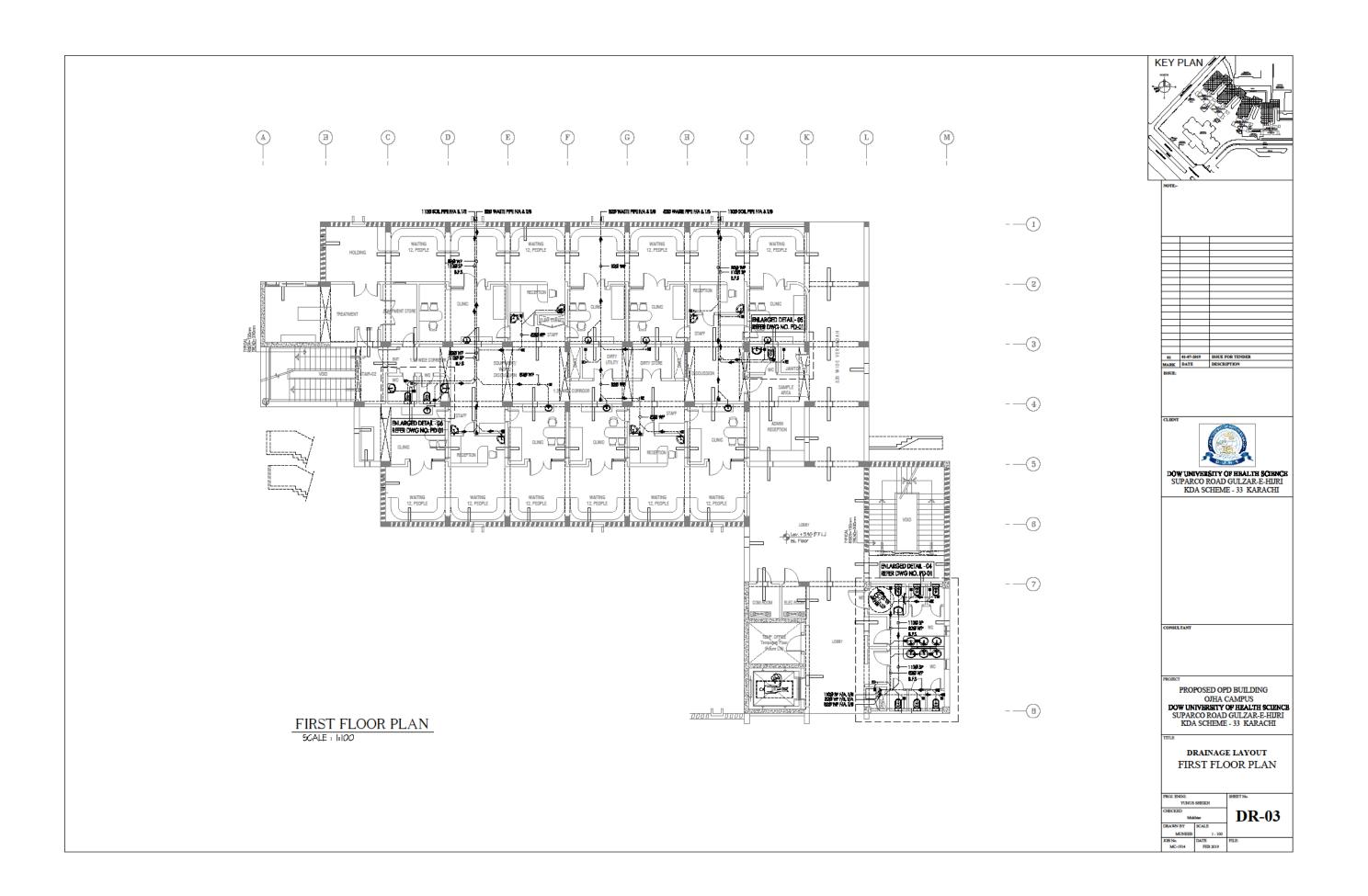


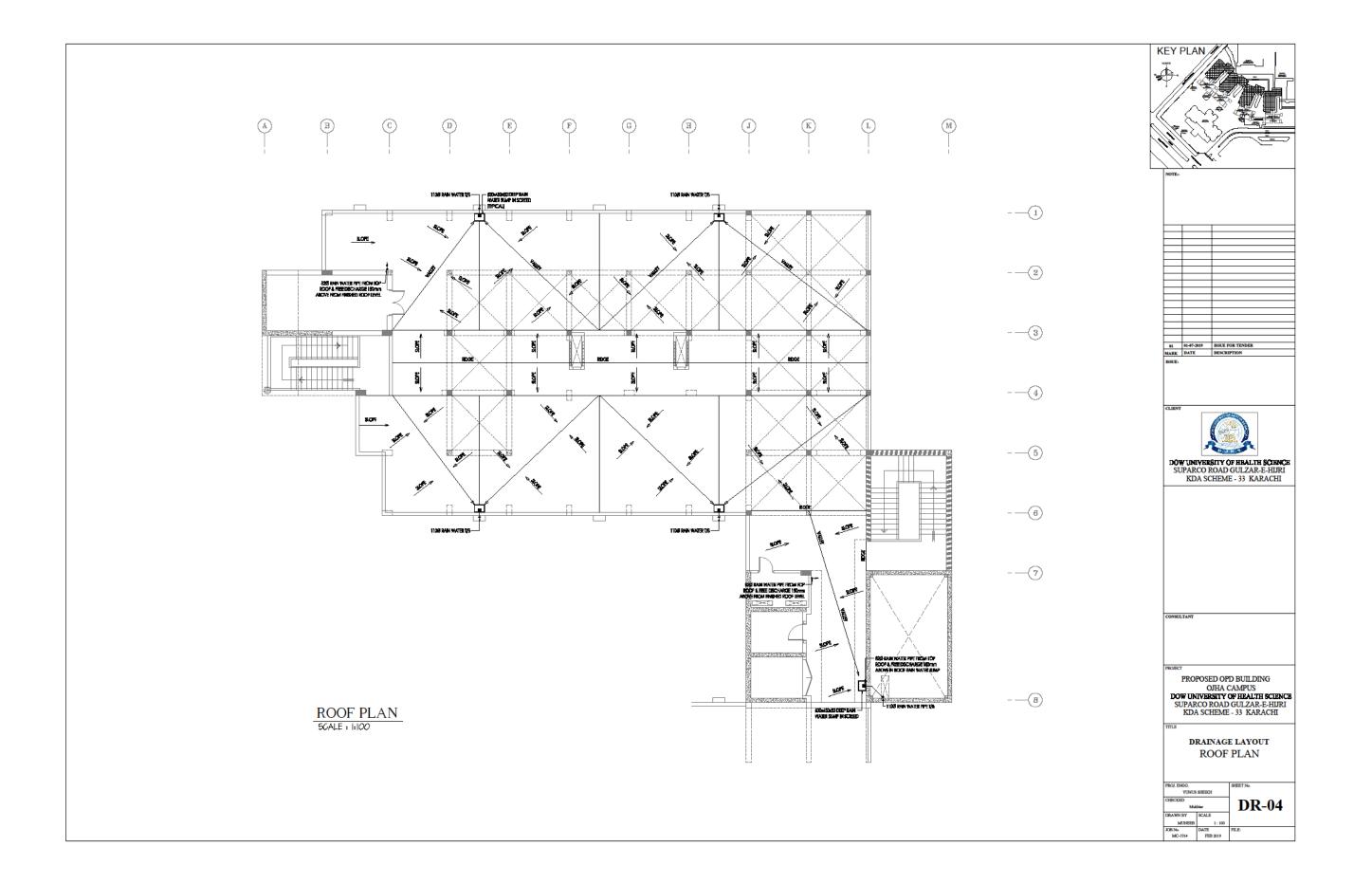


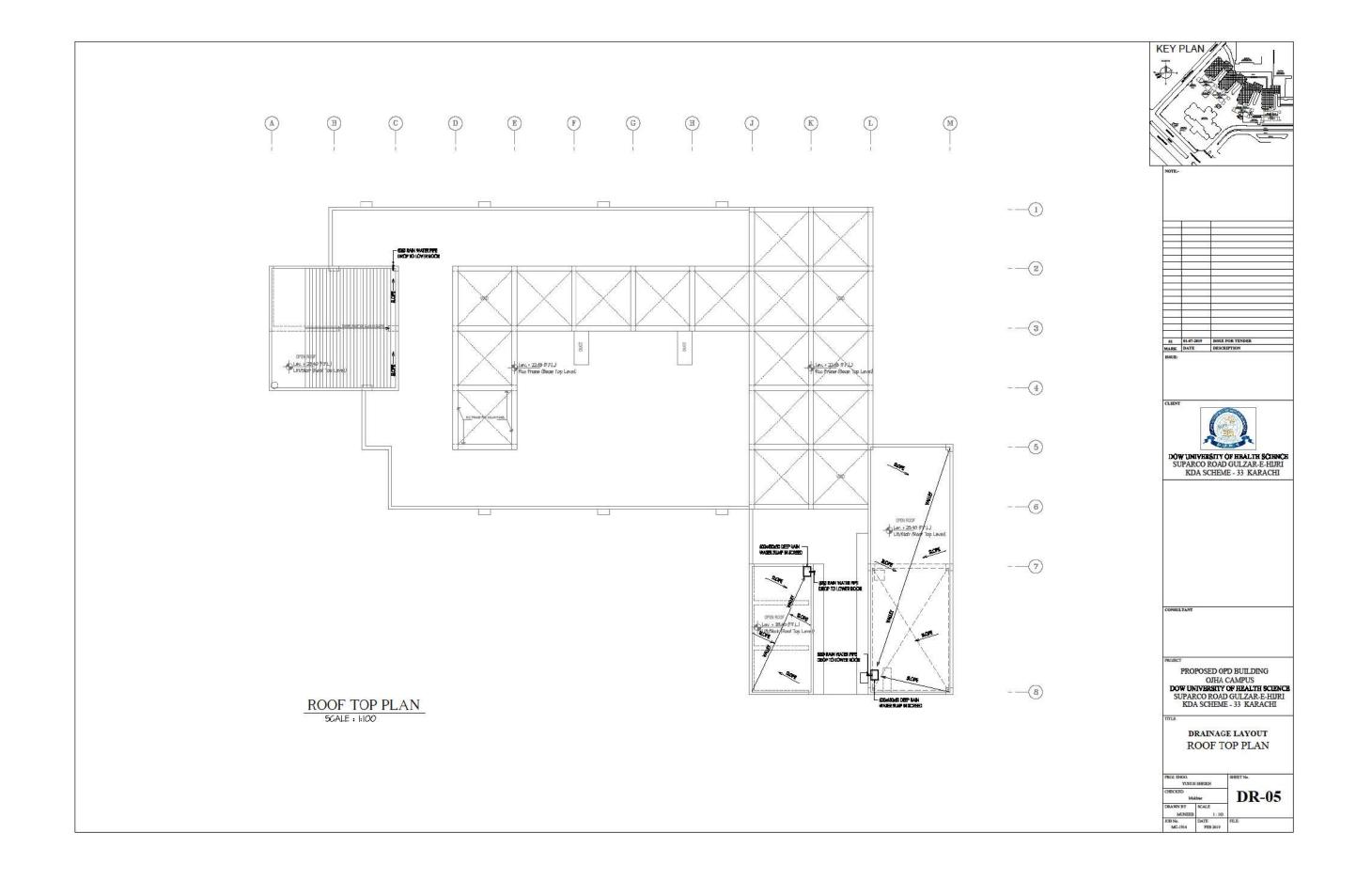


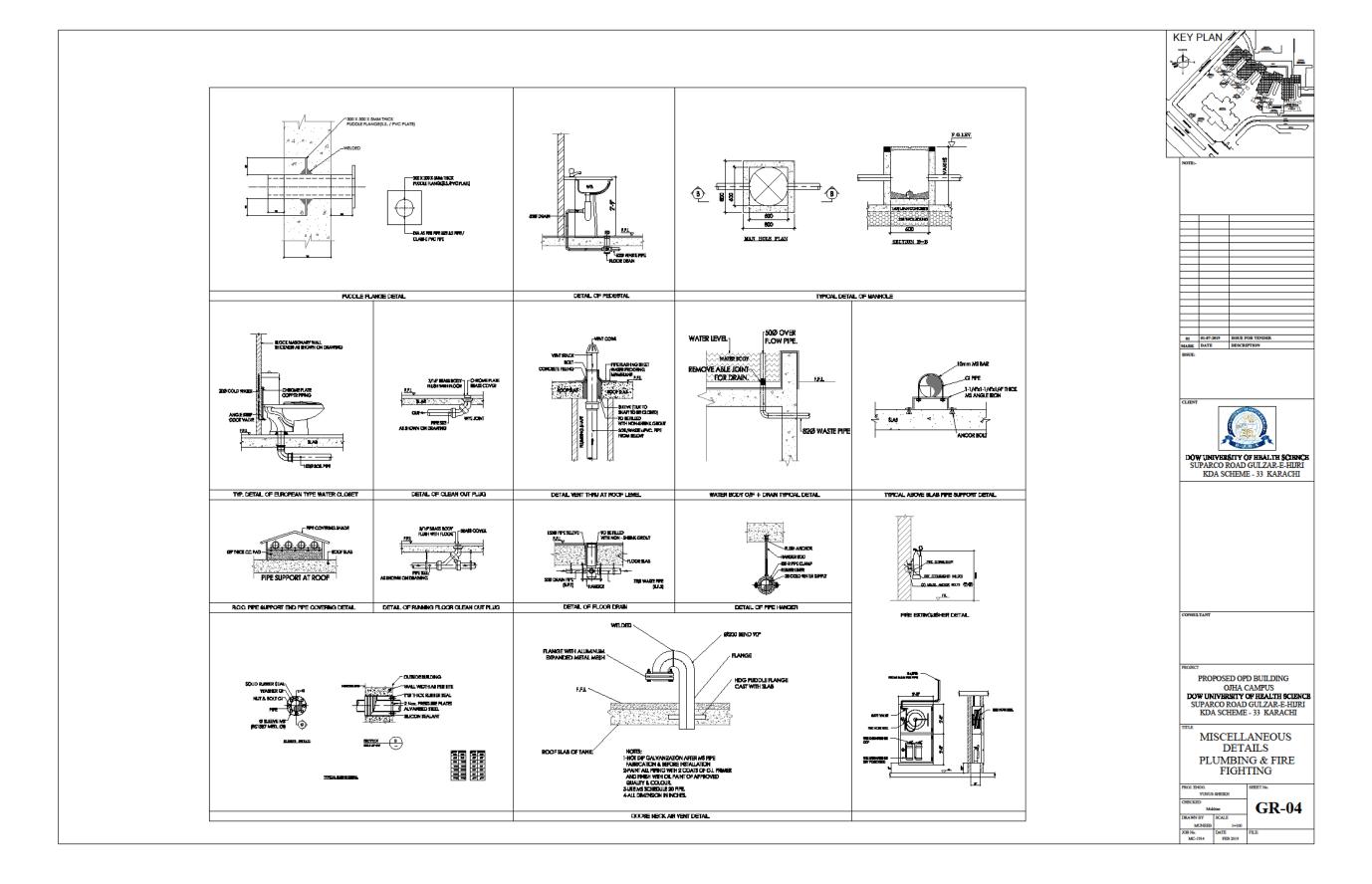


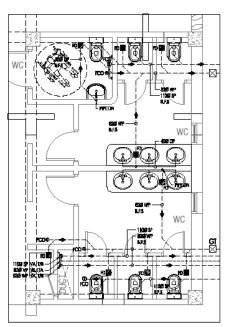




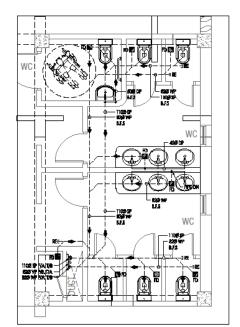




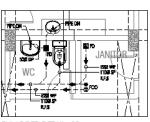




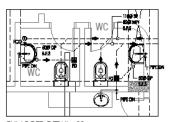
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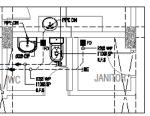
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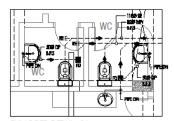
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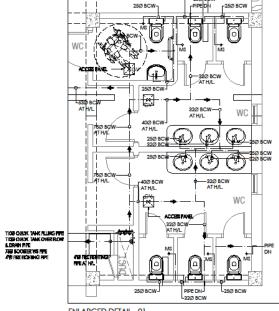
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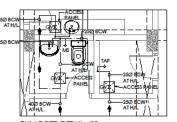
ENLARGED DETAIL - 05
DRAINAGE LAYOUT
1ST FLOOR
SCALE = 1:50



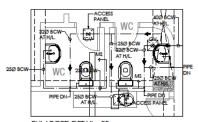
ENLARGED DETAIL - 06 DRAINAGE LAYOUT 1ST FLOOR SCALE = 1:50



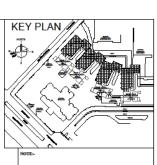
ENLARGED DETAIL - 01 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



ENLARGED DETAIL - 02 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



ENLARGED DETAIL - 03
WATER SUPPLY LAYOUT
GROUND & 1ST FLOOR
SCALE = 1:50



01	01-07-2019	ISSUE FOR TENDER
MARK	DATE	DESCRIPTION
ISSUE:		



DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI

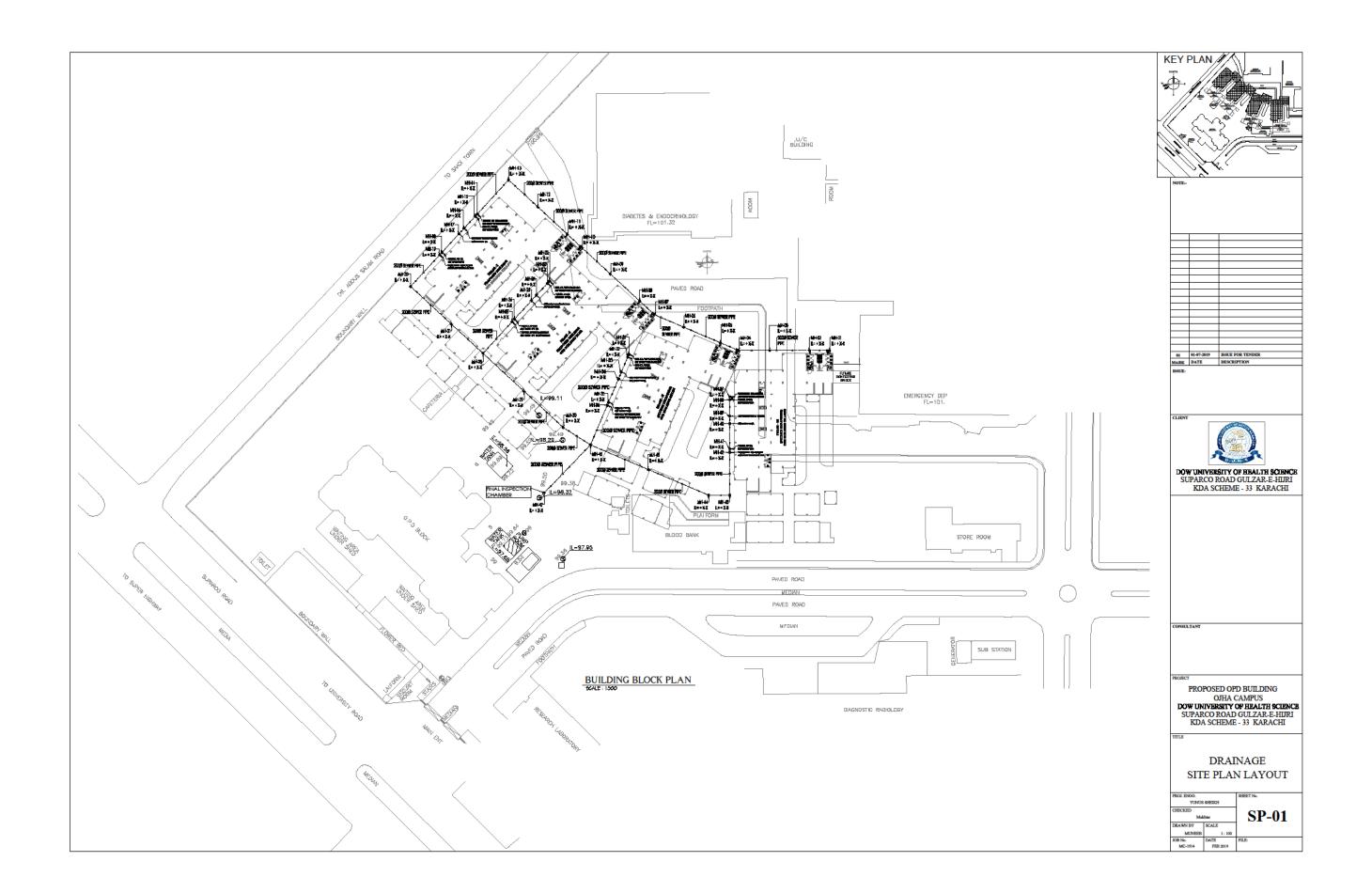
CONSULTANT

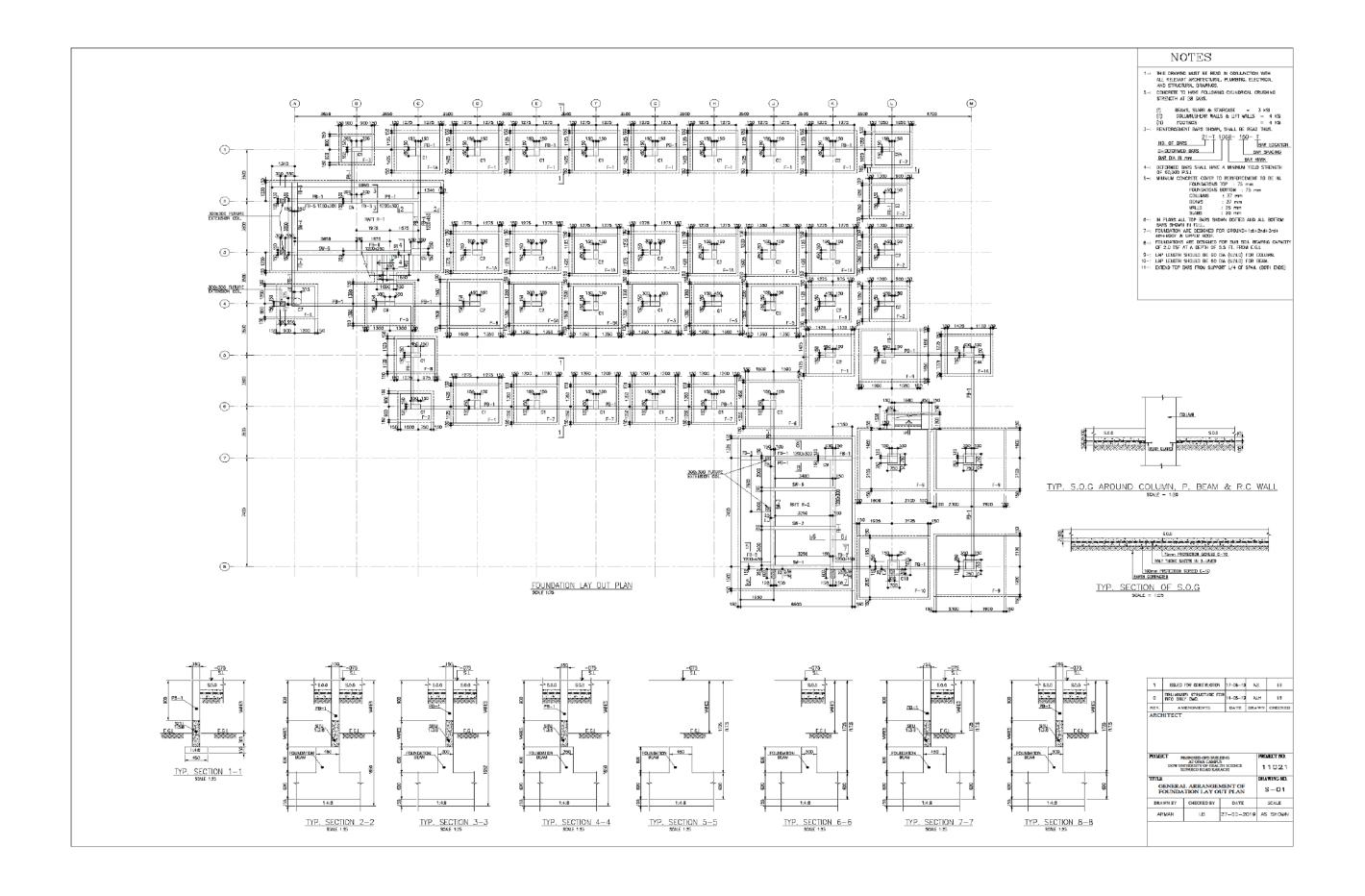
PROPOSED OPD BUILDING
OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HURI
KDA SCHEME - 33 KARACHI

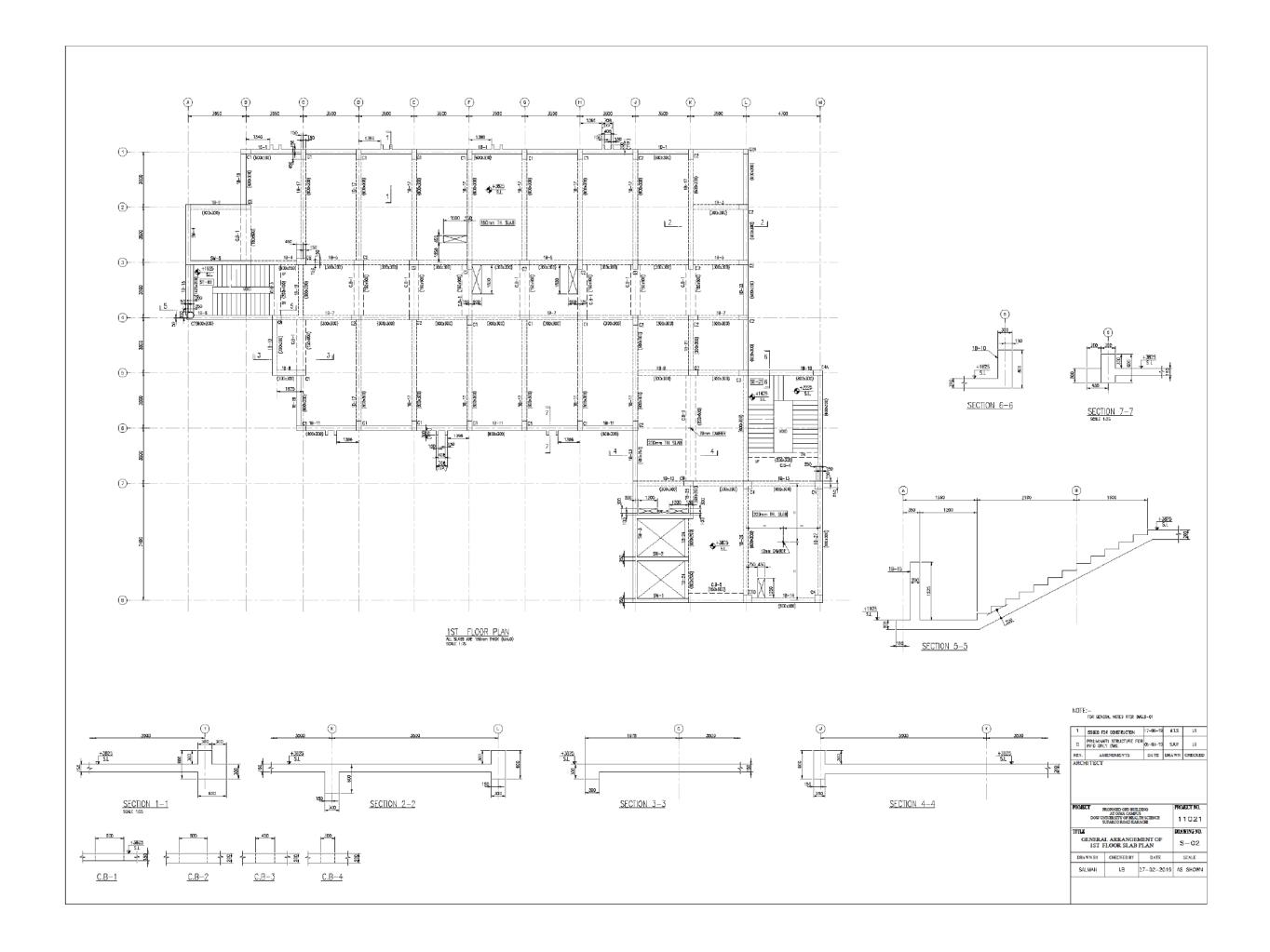
ENLARGED DETAILS

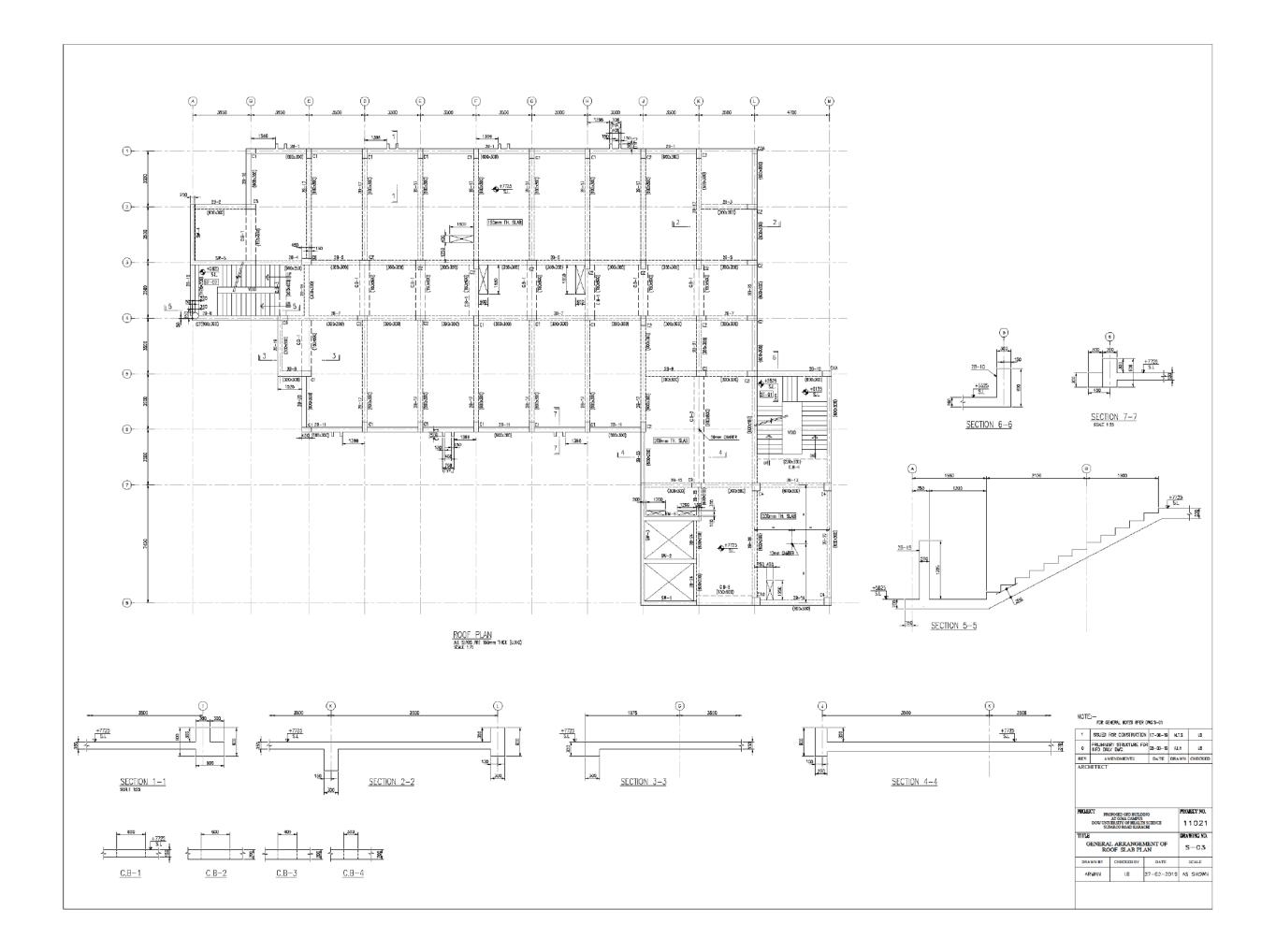
DRAINAGE &
WATER SUPPLY

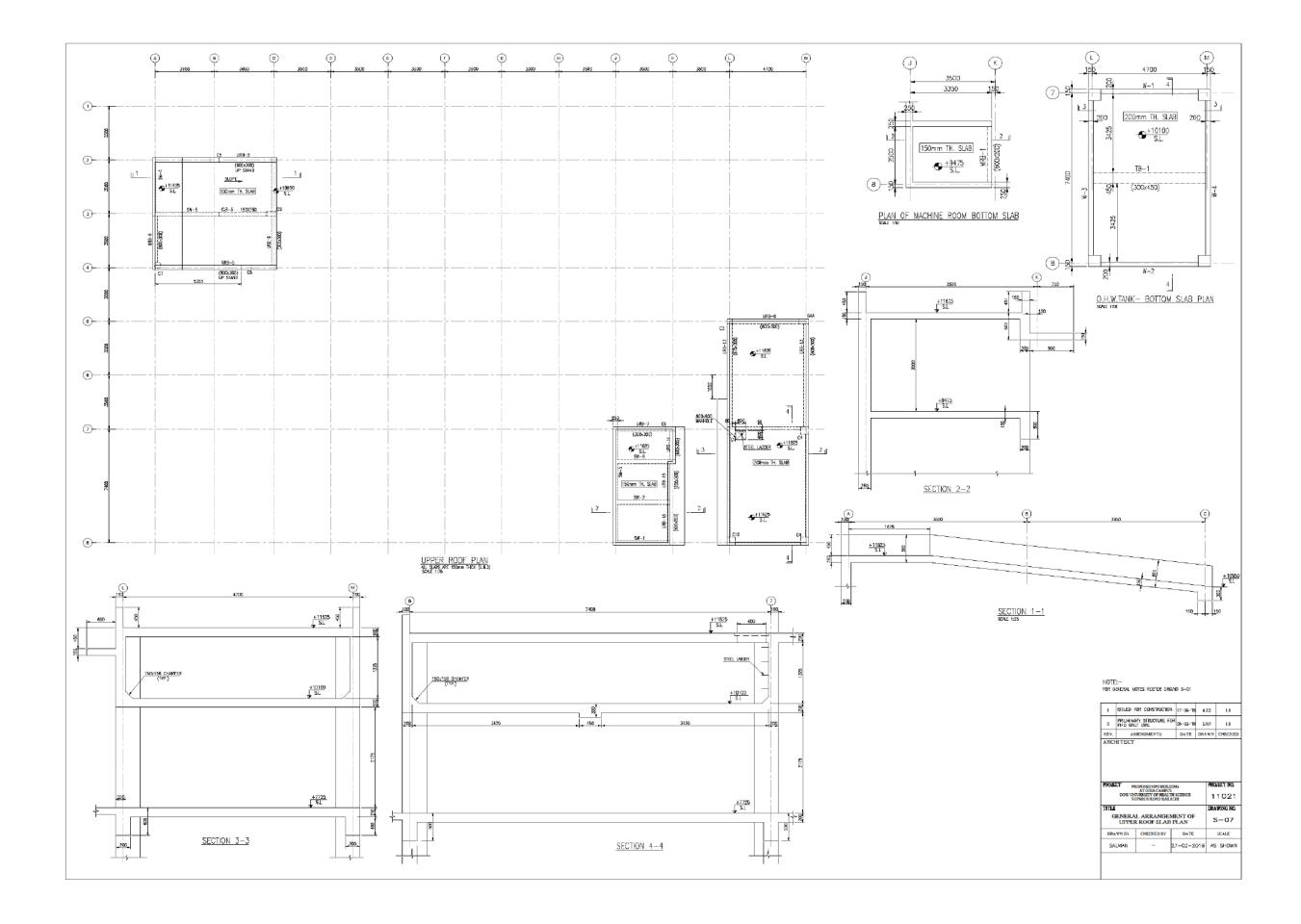
YOUNS	SHEIKH	SHEET No.
CHECKED MUKI		PD-01
DRAWN BY	SCALE	1
MUNEEB	1=100	
JOB No.	DATE	FILE:
MC-1914	FEB 2019	

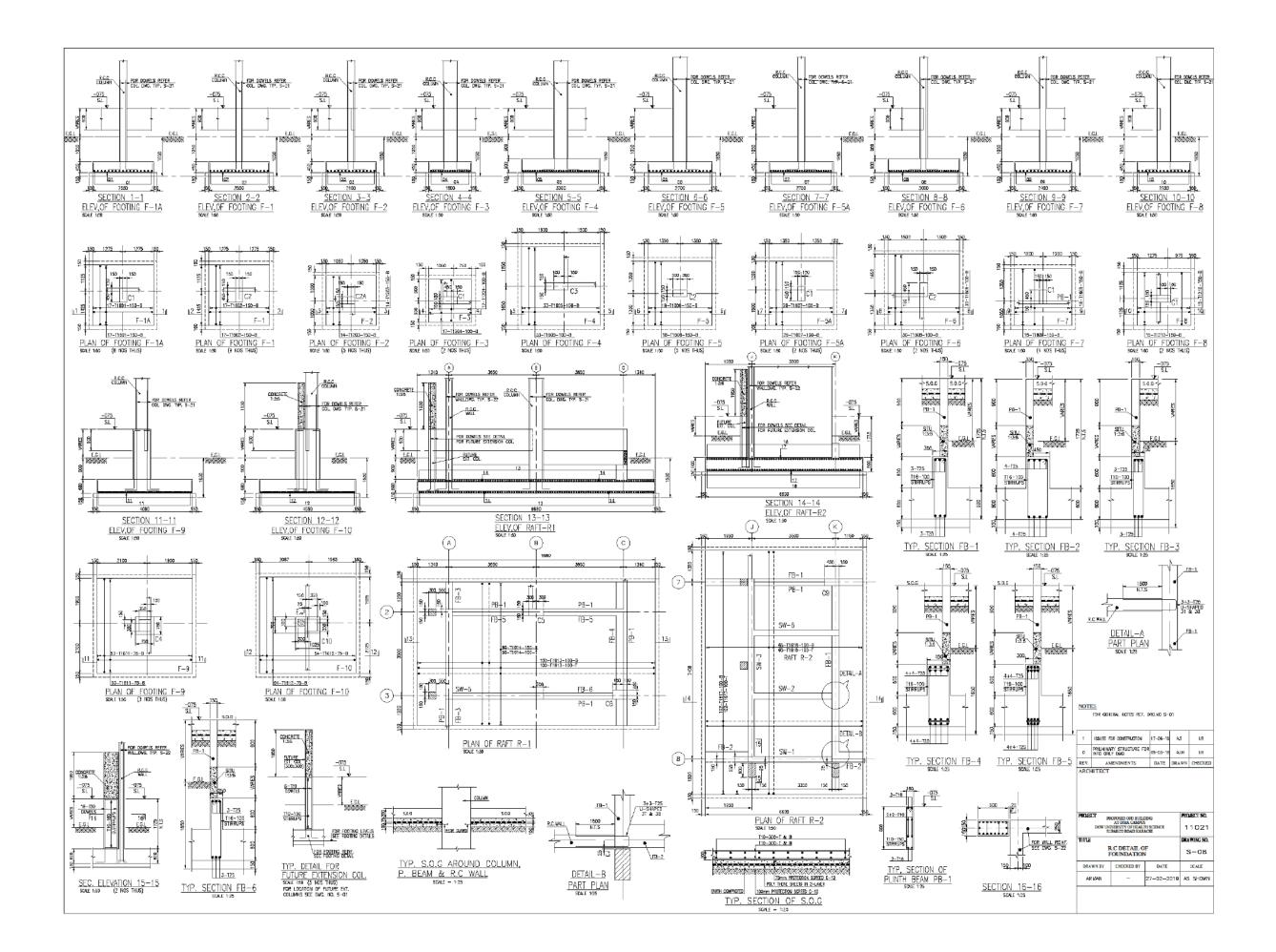


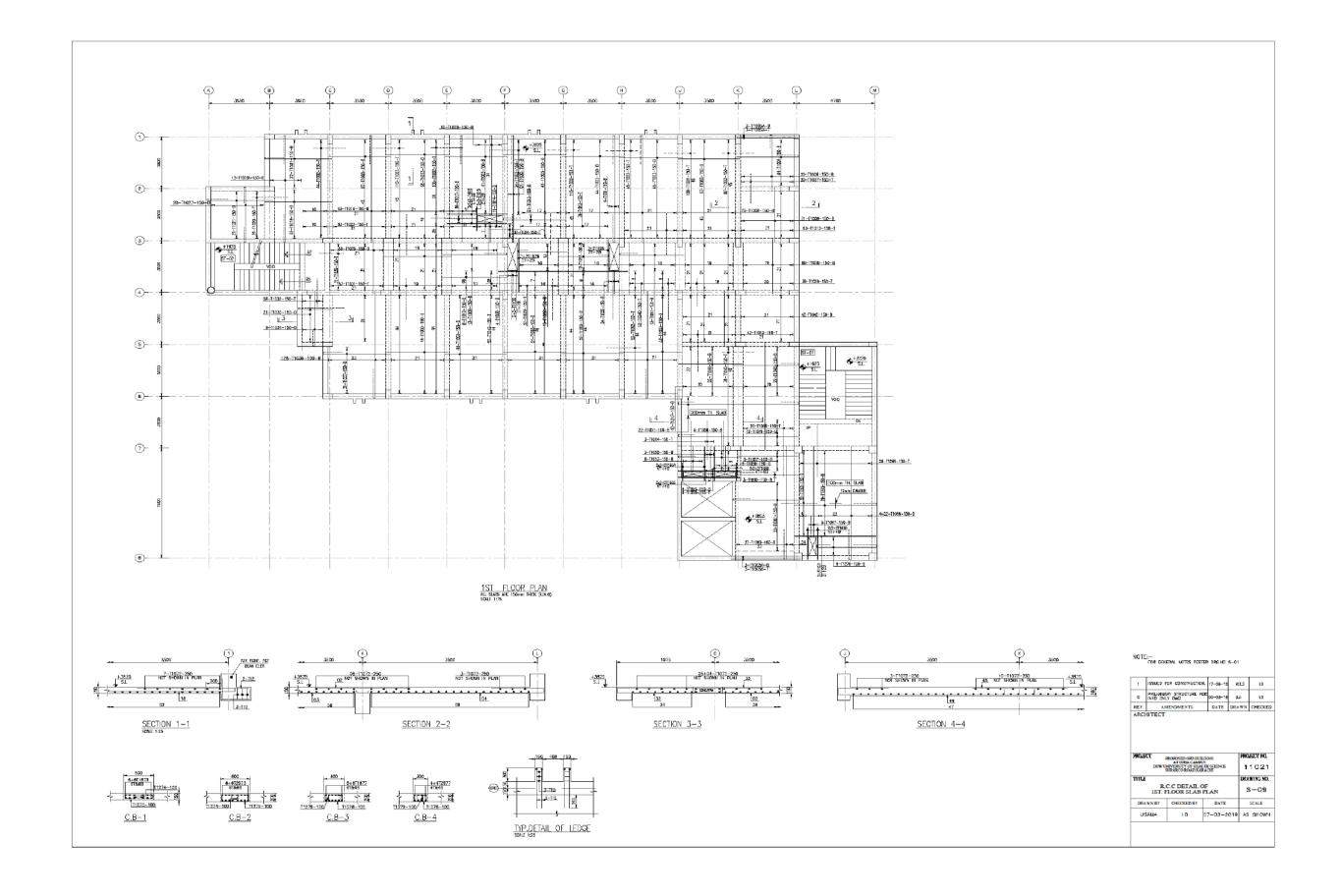


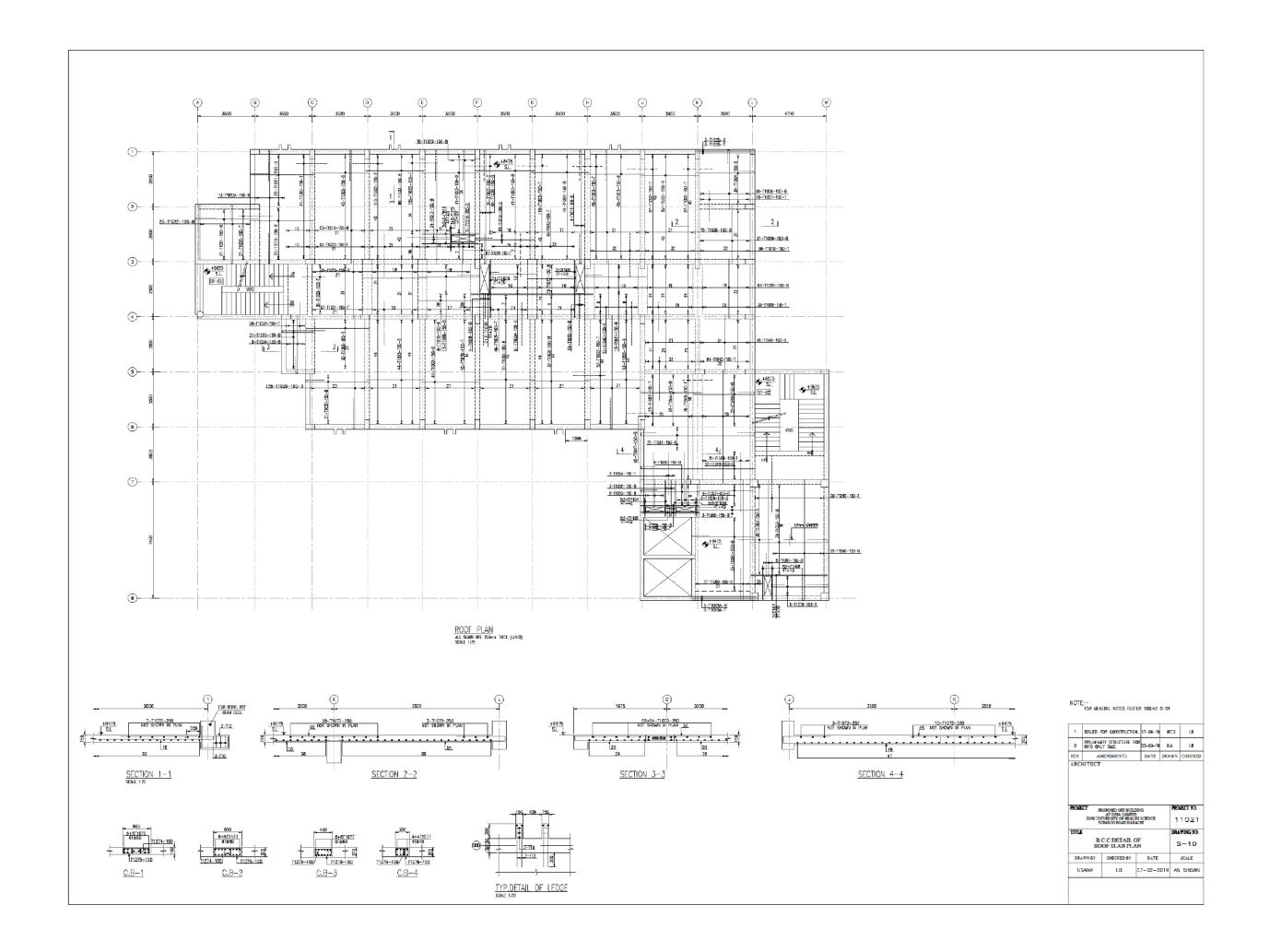


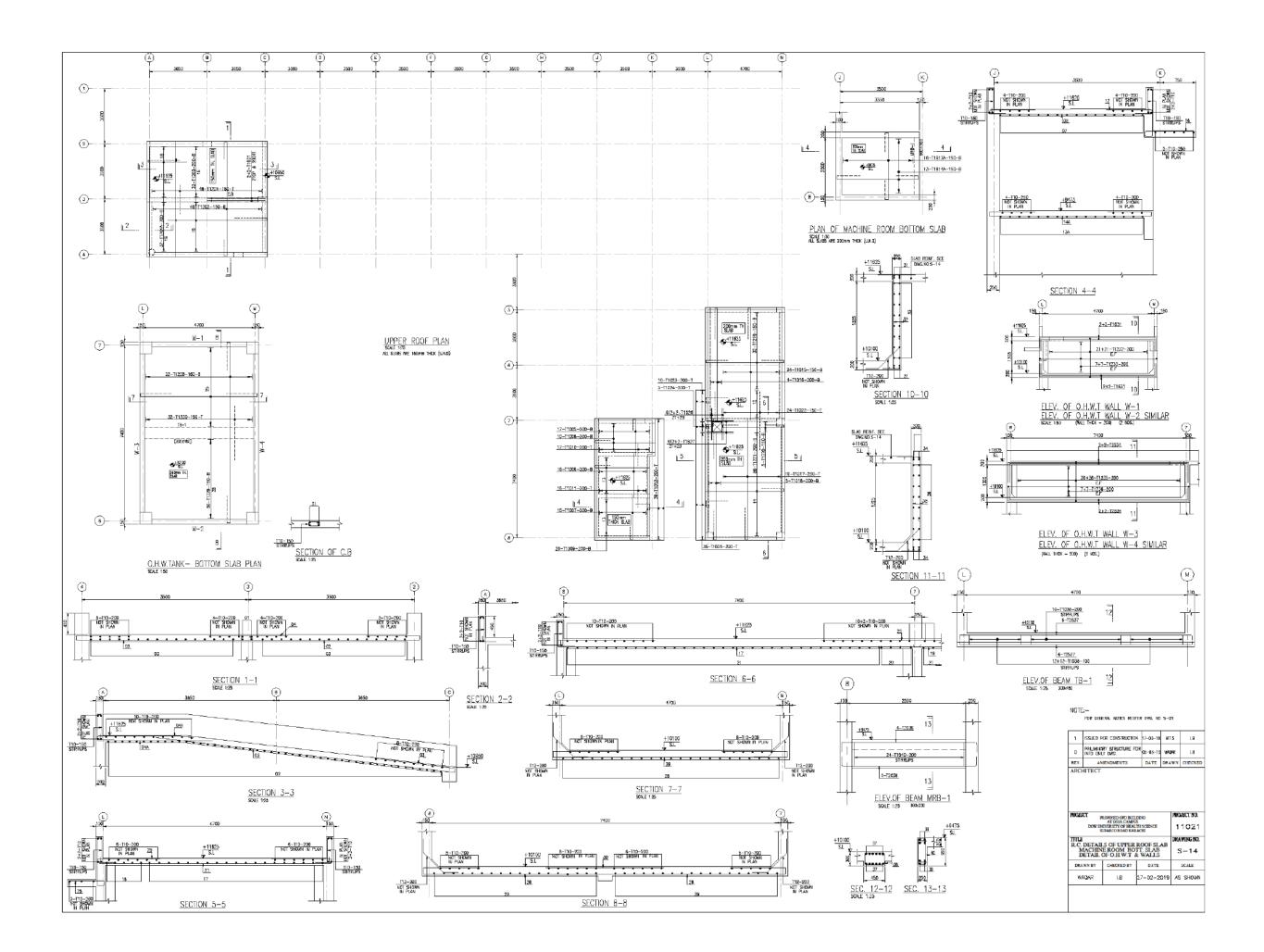


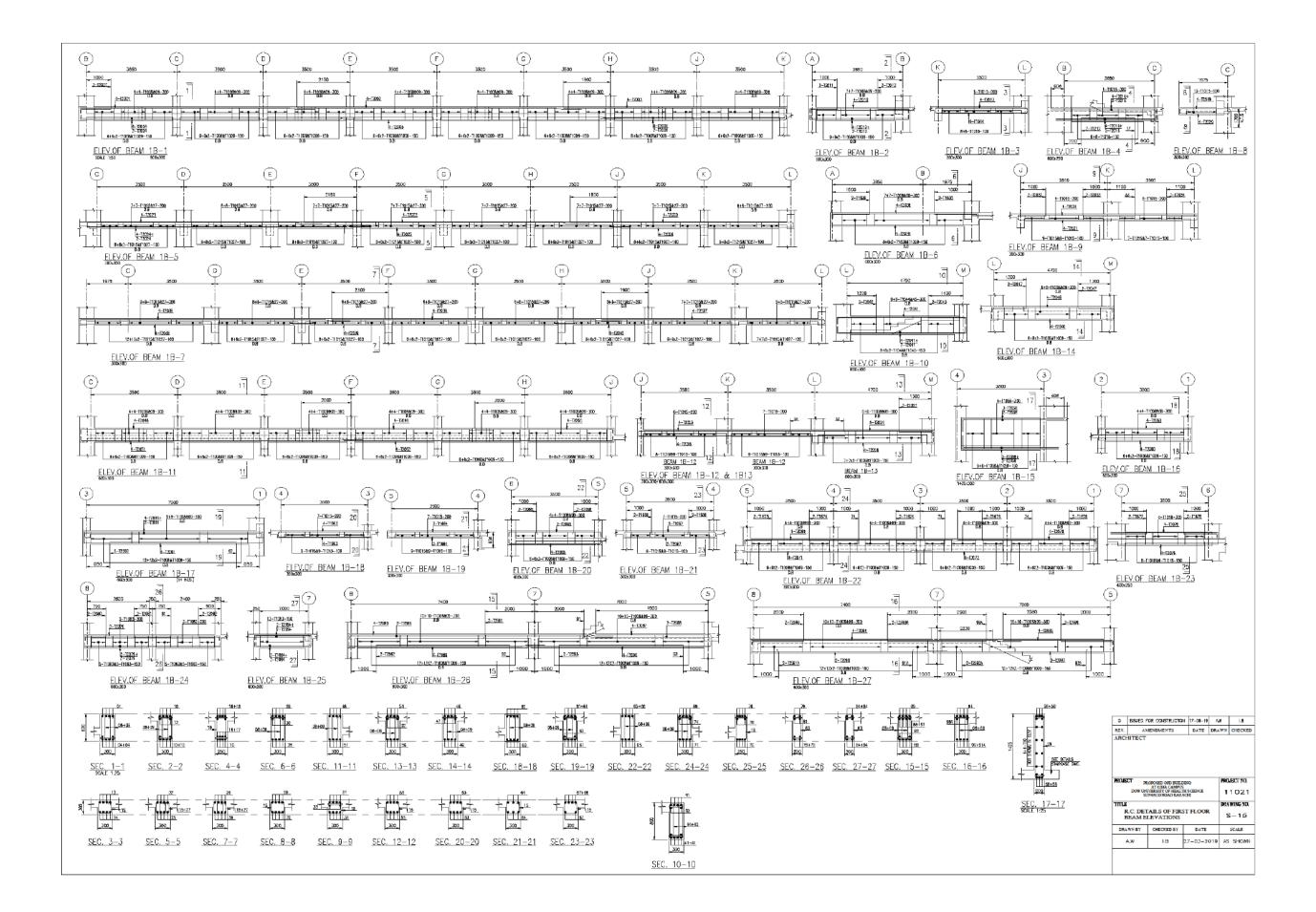


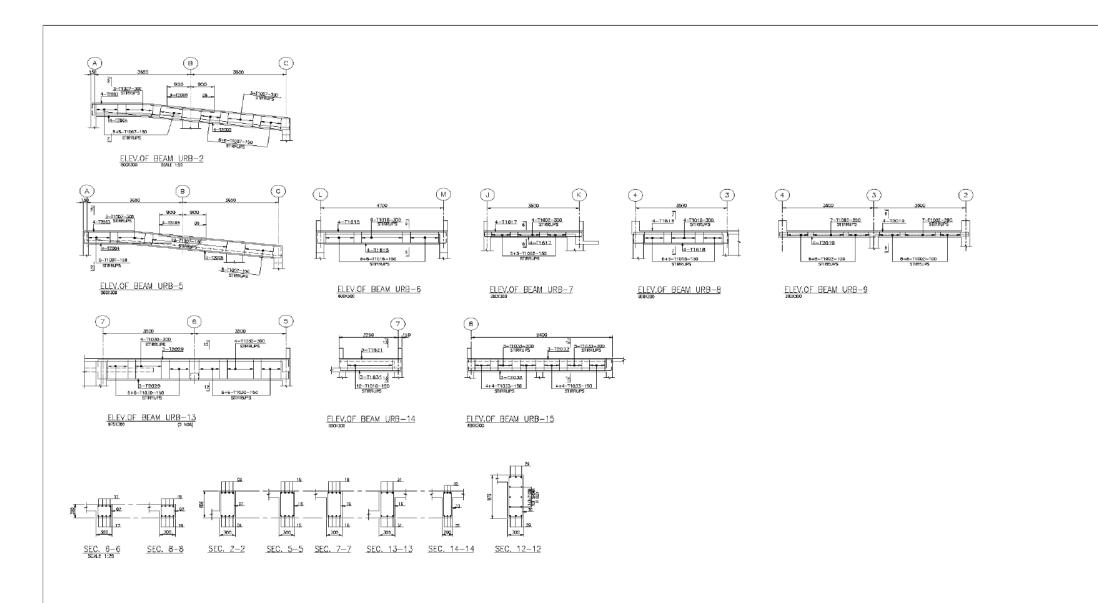












0	ISSUED FOR CONSTRUCTION	17-06-19	AJH	1.8		
REV.	AMENDMENTS	DATE	DRAWN	CHECKE		

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	.C. DETAILS (		DRAWING NO. S-20
DRAWN BY	CHECKED BY	DATE	SCALE
AHMED	I.B	28-3-2019	AS SHOWN



DOW UNIVERSITY
OF HEALTH SCIENCES
KARACHI.

## TENDER DRAWING ARCHITECTURAL

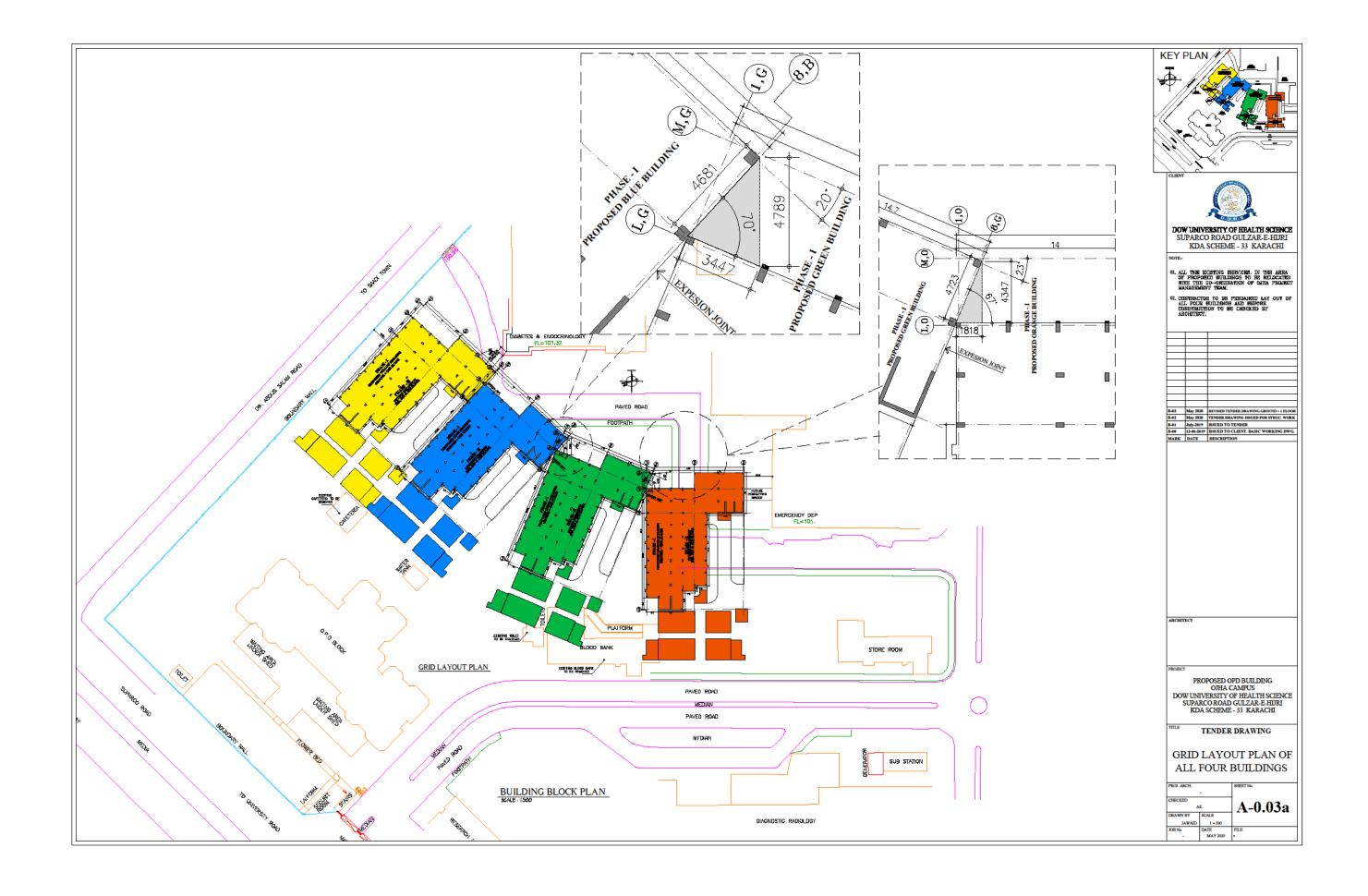
(GROUND + ONE FLOOR)

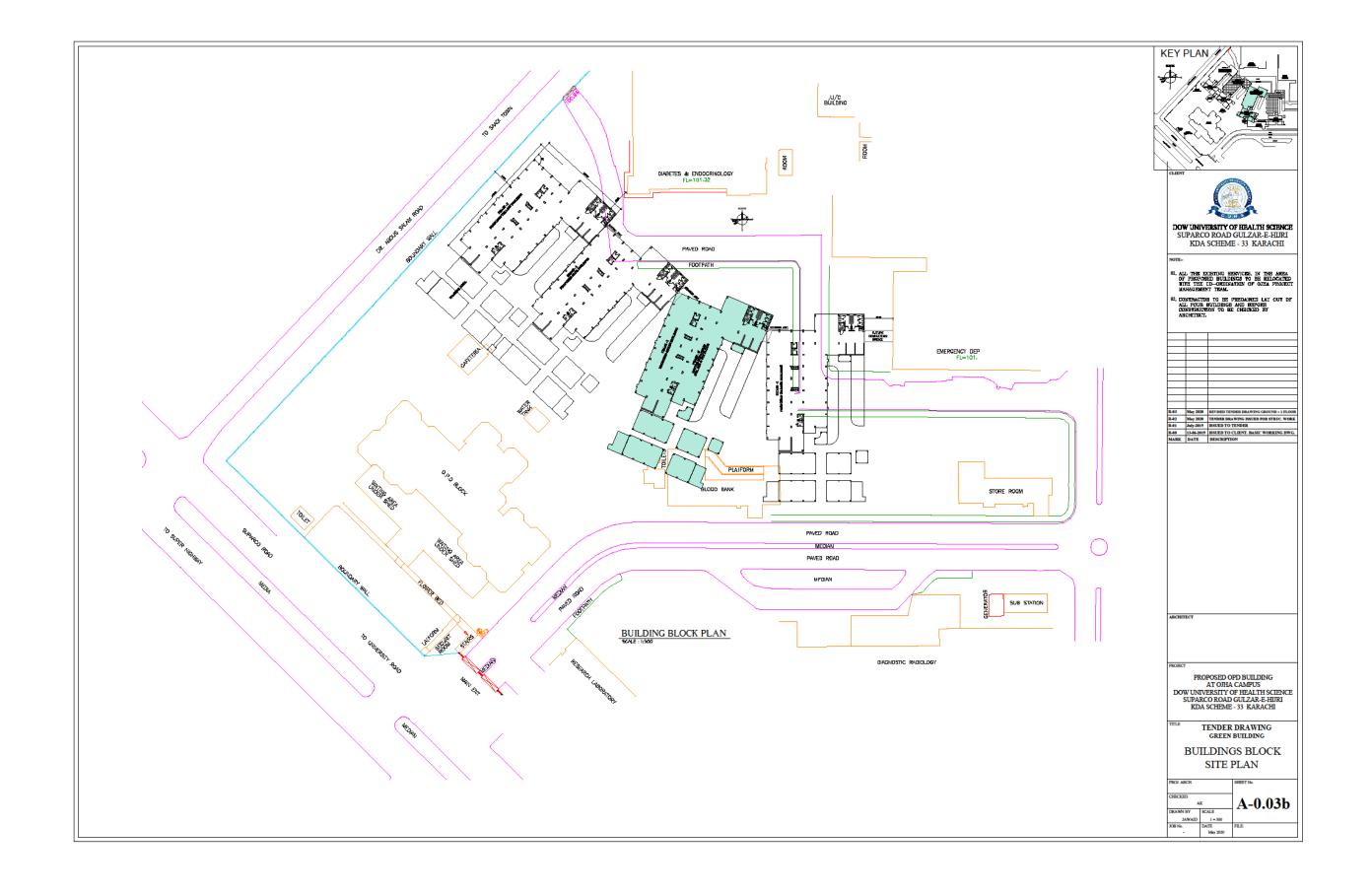
ORANGE BUILDING

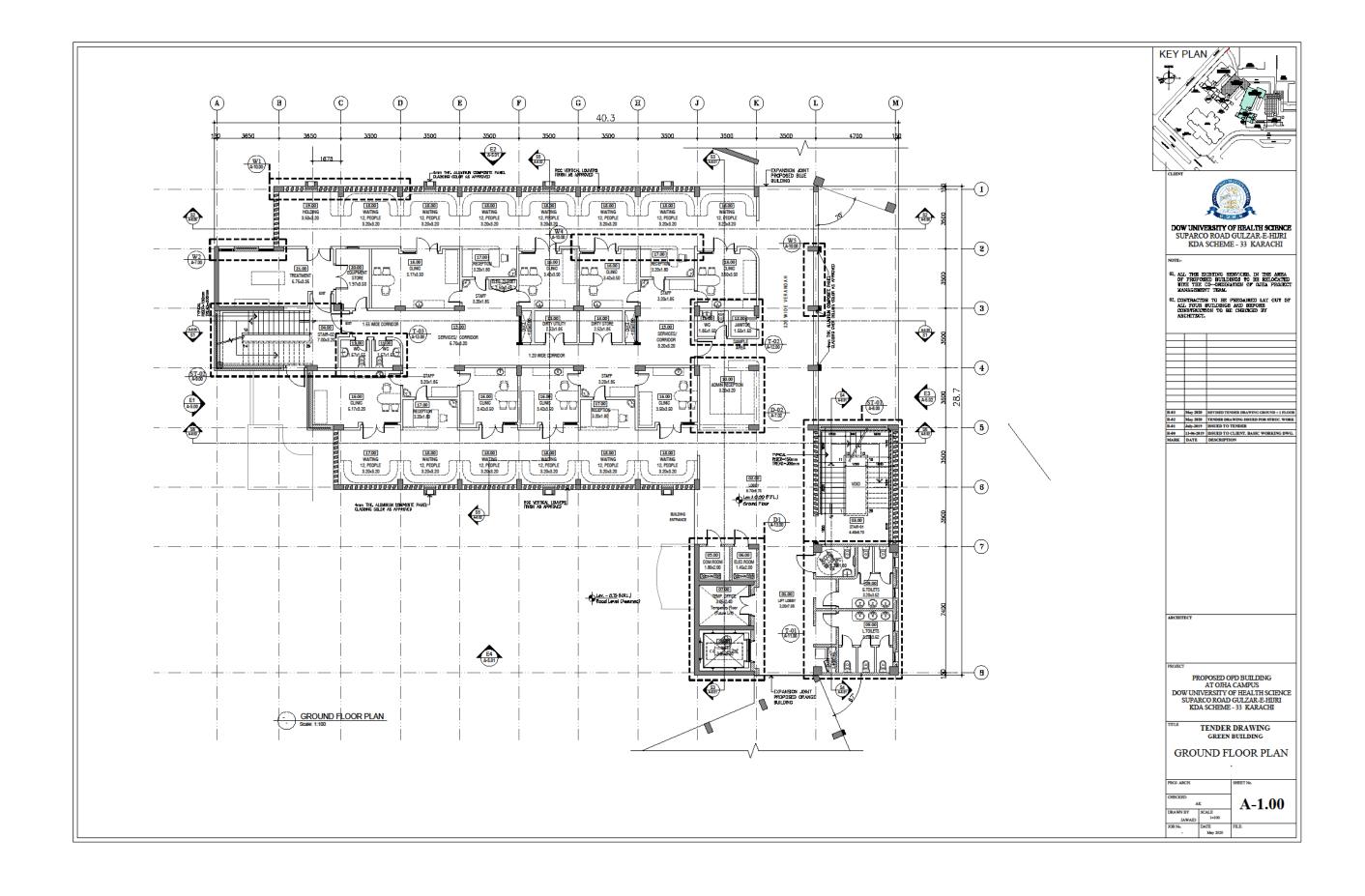
DATE :- MAY 2020

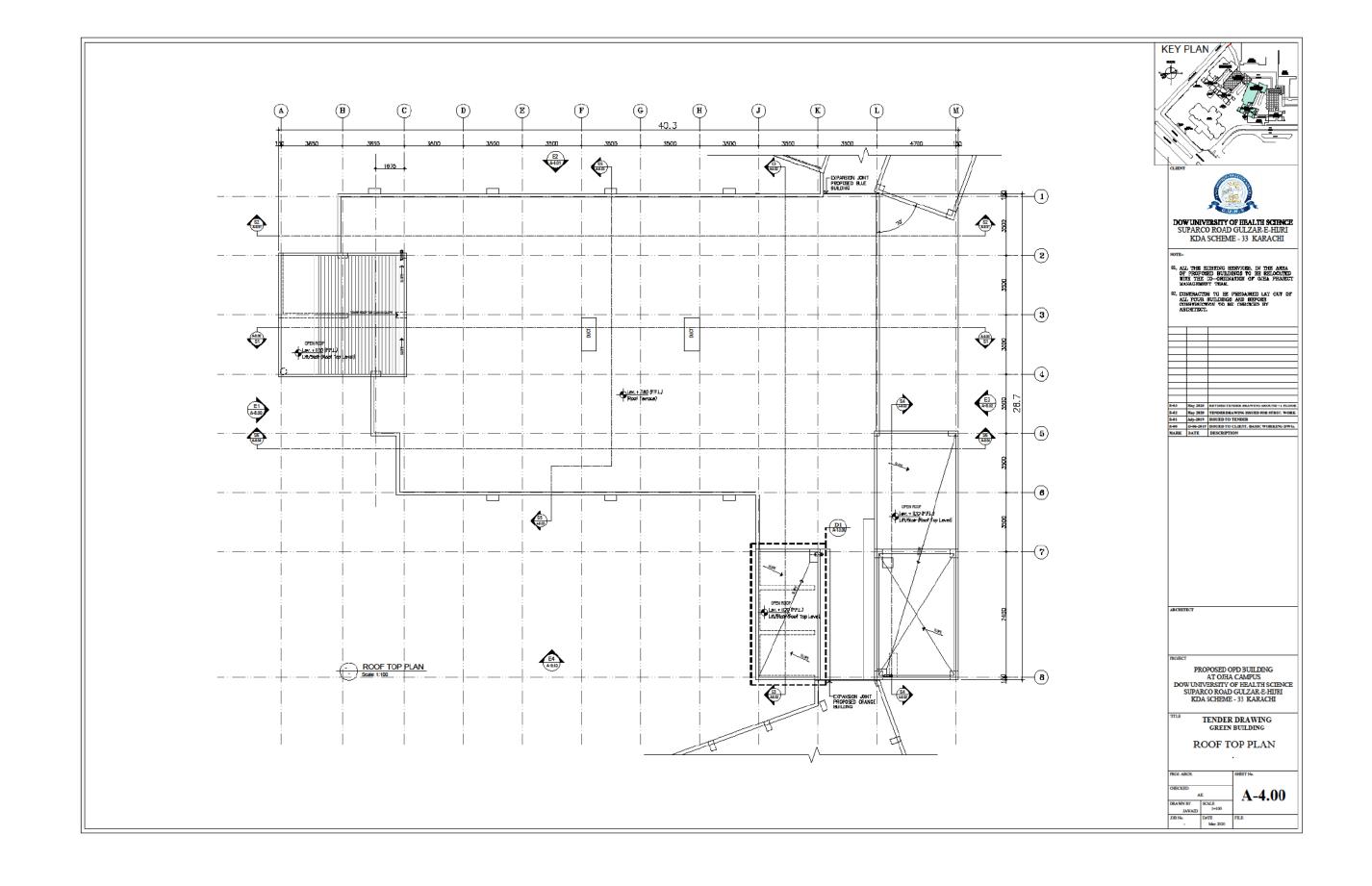
PROPOSED OPD BUILDING AT OJHA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI

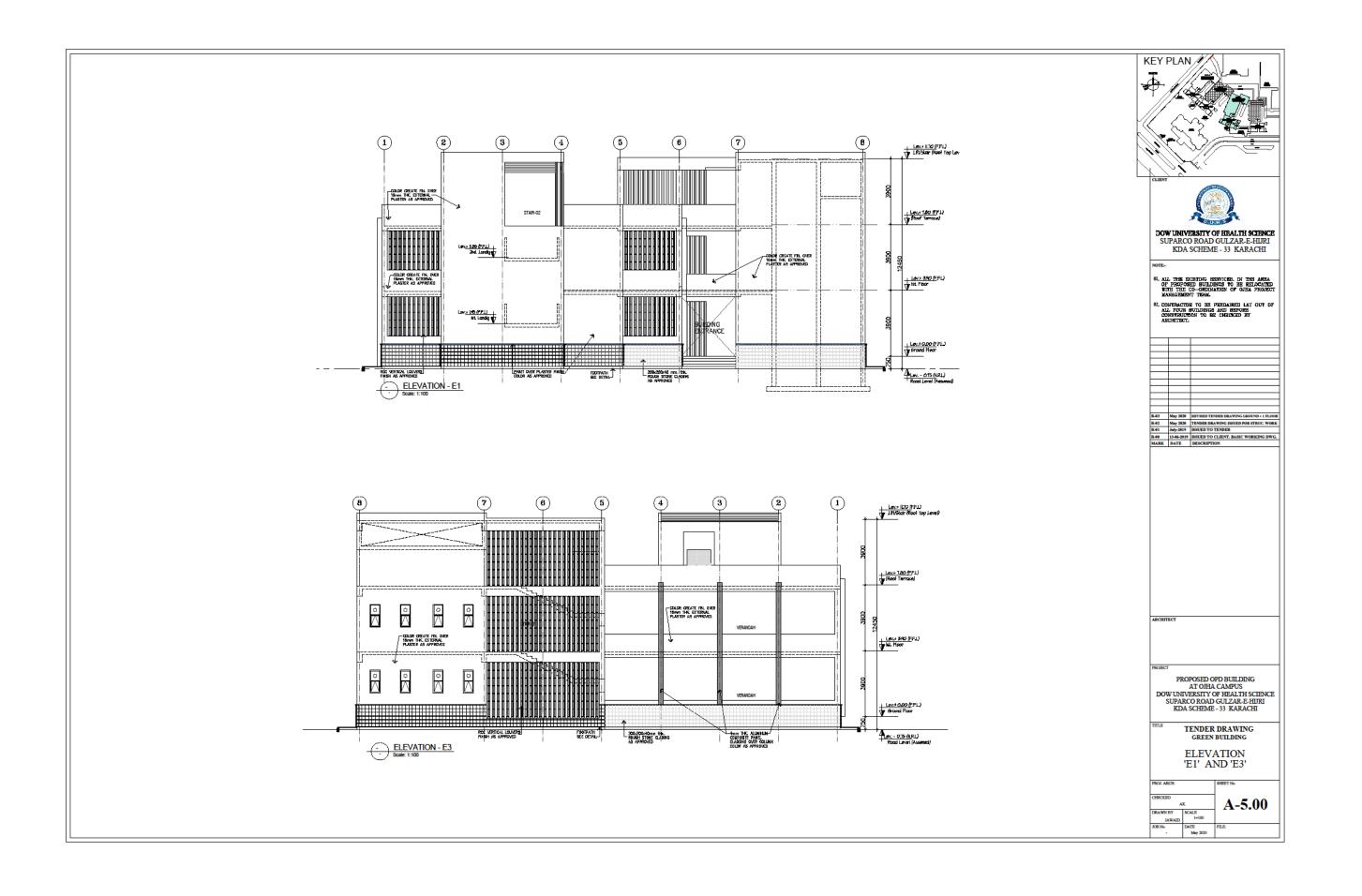
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ZOING	ROOM NAME		ATERIALS	;					MATERIAL				MATER		AUO		HT.		MATERI					MATERI		VG		MC	ST. SUSP.HT REM	ARKS	
ROOM NO:			FECONIM SO BESTORM BO SIAL Terkett P. Option June B. Omniborations	FLOOR (300mm300mm)	S (ENVICRETE) m SQ (MATRIC) TILE (25mm x 25mm)	NSTRIAL GLAZING R M.S FRAME NARBLE EDGE PRESIDENT TE WITH NARBLE EDGE	MARRIE PORCELAN TE T T-TE SCHIM HIGH 8 - SCOMM	HIGH HIGH THE GARRY CHAIT	8-900 8-900	ISED SYRTHIC IN SIR (MATRIC)	NSTRIAL GLAZING ALAL Torkett B- Opher Ann The Tarkett Transportson	4 STEP 20	( SIZE AS PER DARWING )	F 100mm	( SIZE AS PER DARMING )	가 가 게도	.a - 450mm	- Buumm 3	TLE .	CI OR RDBILAC	G-G-055Y M-MAIT, FIN.		STE PANO.	YSTEM (BOOMINXBDOMINTLES)	THAN DANT	NIT FAIR I VEHEER CI OR EQUIVALARIT	O-CLUSSY M=MAT, FIR.	мят	NOR SCHEME		CLIDY CLIDY
		- PORCELAIR TILE 600 - GRAVITE TILE 600 - MARBLE TILE 600 - GAZED CERPAIC - GAZED CERPAIC - GAZED CERPAIC	O CLASS TILE  VINYL AUTBACTER	D FOAM CONCRETE  ORESSED STORE	CONCRETE PAVER TO PABLE TILE ZODM	A NOODEN FLOOR ON STEP	17 CANDING AND THE TO CARPE TO THE	MARBLE 190mm I	MOODEN SWIFTING	CONORETE RUBE PABLE TILE 2001	SWITHERD CARROLLINE IN 121	A MAPBLE SKINTNG OF PORCELAIN TIE .	GRANITE MARBLE GRANITE G	MARBLE COPING SO	A G.CERAMIC TILE  WOOD PAVIDLING  A ACT TILE	CALASS TILE STATINETIC CARTE	JIL MY GOODS	MARBLE TILE	A GLAZED CERANIC A EPOXY PAINT A ASS THE	WINT EMILSION I	D ENAMEL PAINT COLOUR CRETE	C PLASTER  STONE FAZING	ALIMINUM COMPO	DAMPA CELING S ACCOUSTICAL TILE	A CLASS SKY LIGHT	PLYMODO BEECH		THE PRINCIP IN THE PR			
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		1ь						3				1a		5b			10=1200mm 2 =2400mm			8		12				-	8	11			KDA SCHEME - 33 KAI
		1b 1b						3				1a	-	5b 5b			1200mm	+++		8 8	$\overline{}$	12		+++		-	8 B	11			NOTE:-
		1ь	++	+	+		+++	3		+++	+	17 1c	-	50	++	++	1200mm		+	8	+	12	++	++	+	-	8	11			01. ALL THE EXISTING SERVICES, IN OF PROPOSED BUILDINGS TO HE NITH THE CO-ORDINATION OF ON MANAGEMENT TEAM.
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_		1b	$\vdash$	+				3				10		5b	$\dashv$		1200 mm	+++	++	8	+	12	++	+++	++	-	В	11 12 11 12			R-01 July-2019 ISSUED TO TENDER R-00 13-06-2019 ISSUED TO CLIENT. BASIC V
-		1b						3				10		5ь			1200 mm			8		12					8	11 12			MARK DATE DESCRIPTION
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1.01	TREATMENT	1ь	++	+	+		+	3	+++	+++	+	$\vdash\vdash$	++	+	+	$+\!\!+\!\!\!+$	-	++	5	+++	$\vdash$	12	++	1	++	+++	+	11 12	3000 mm		KDA SCHEME - 33 KARA
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1.02	LIFT LOBBY / MACHINE ROOM	1Ь	ш					3				10	2	5b			1g=1200mm 2 =2400mm	Ш		8		12	ш			Ш	8	11			SCHEDULE OF FIN
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		+	$\Box$	+	+	<del>- 12   -</del>	-	+		+	+	$\vdash$	++	+	$\rightarrow$	+		++	++	+ + -	$\rightarrow$	1.5	+	+++	+	+++	$\rightarrow$	11.2			CHECKED AK A-0

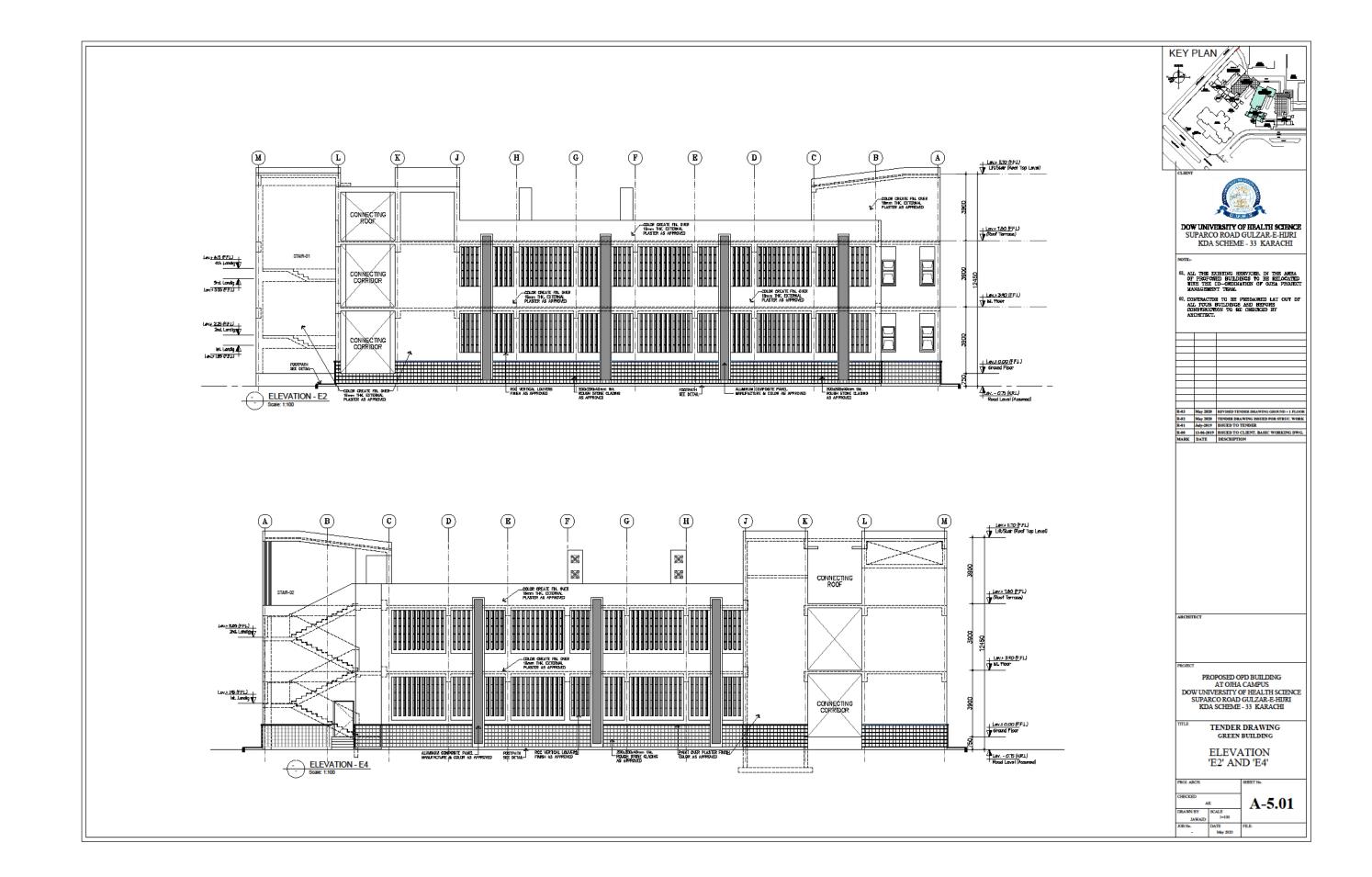


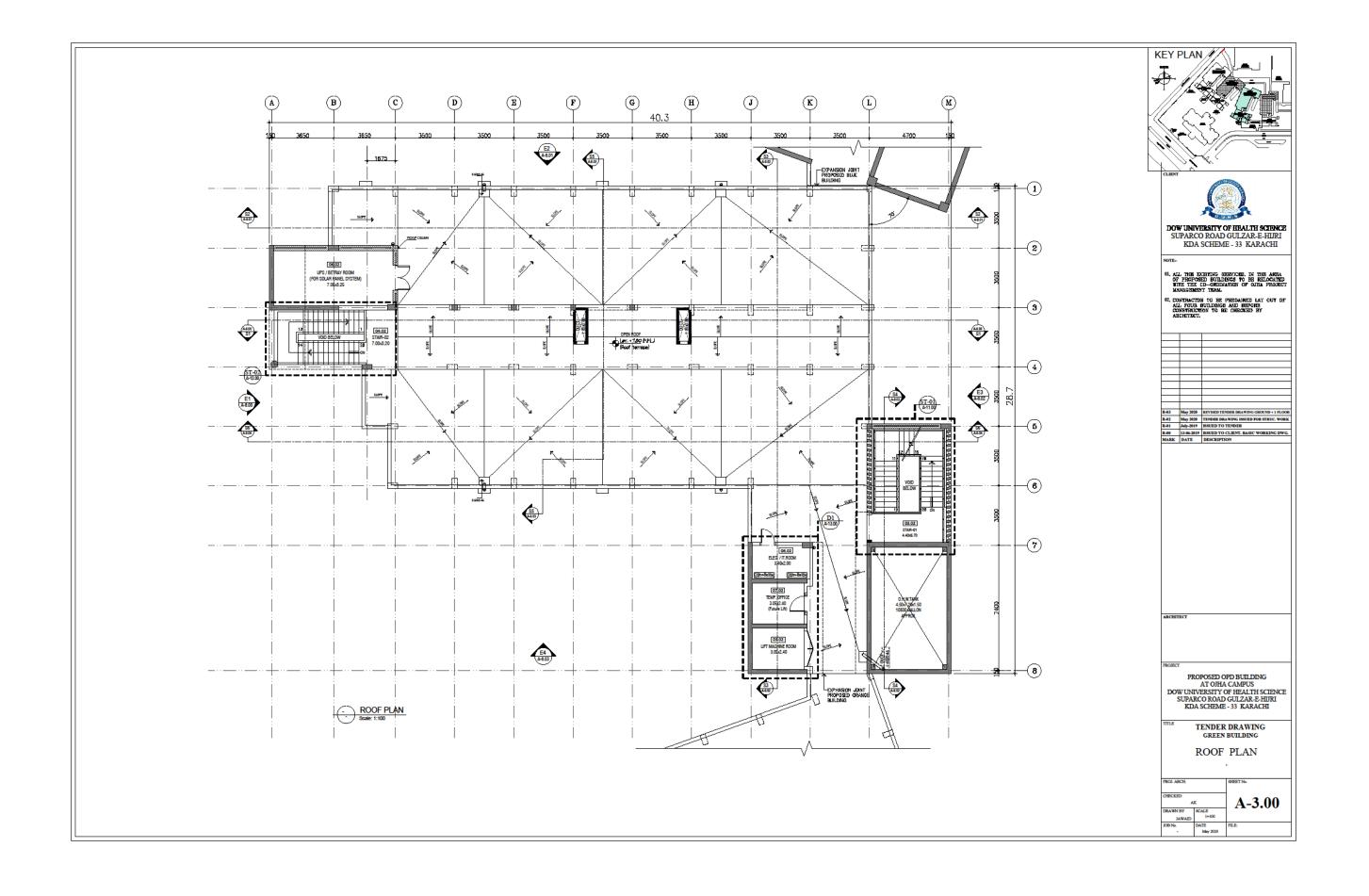


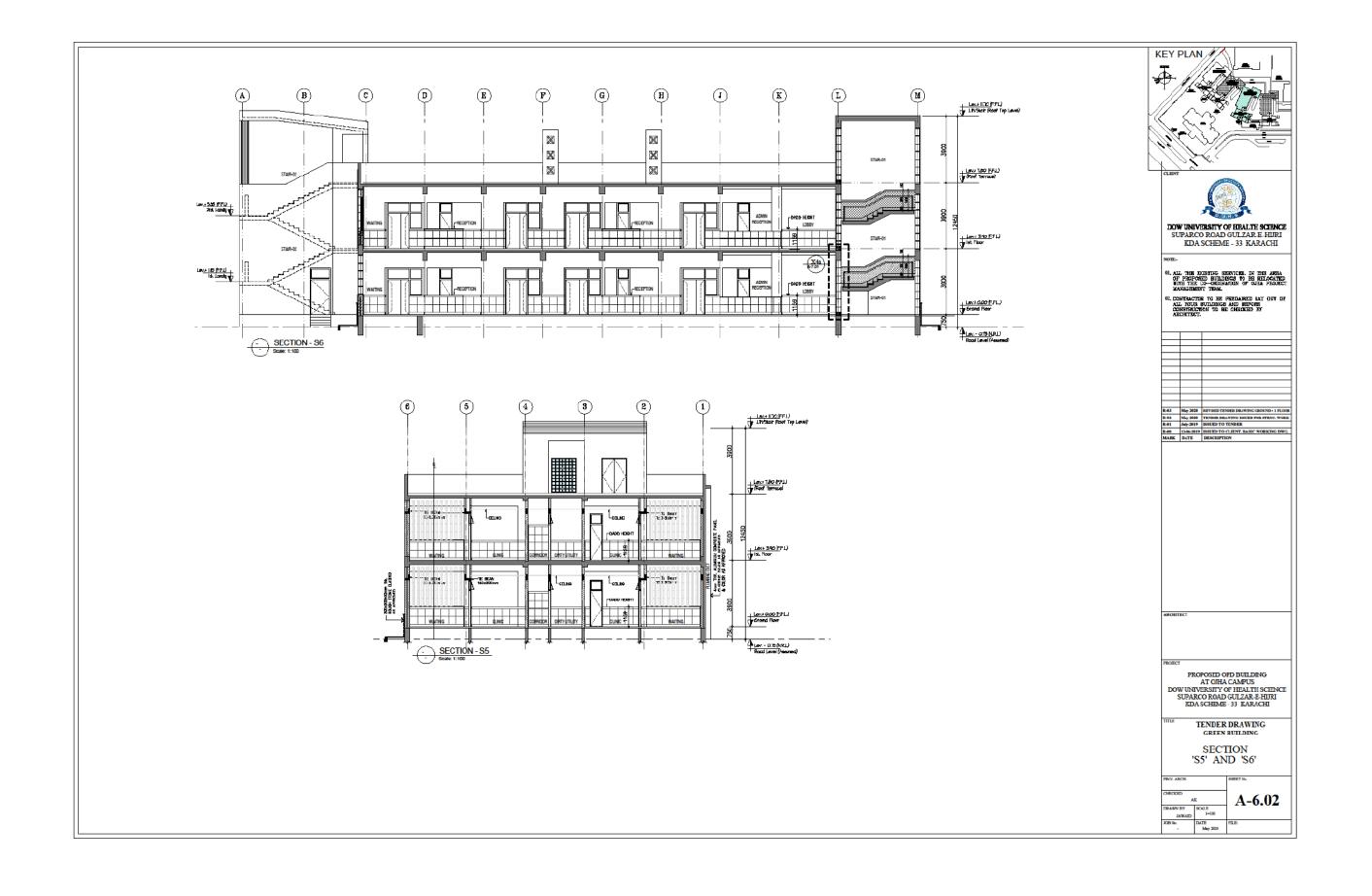


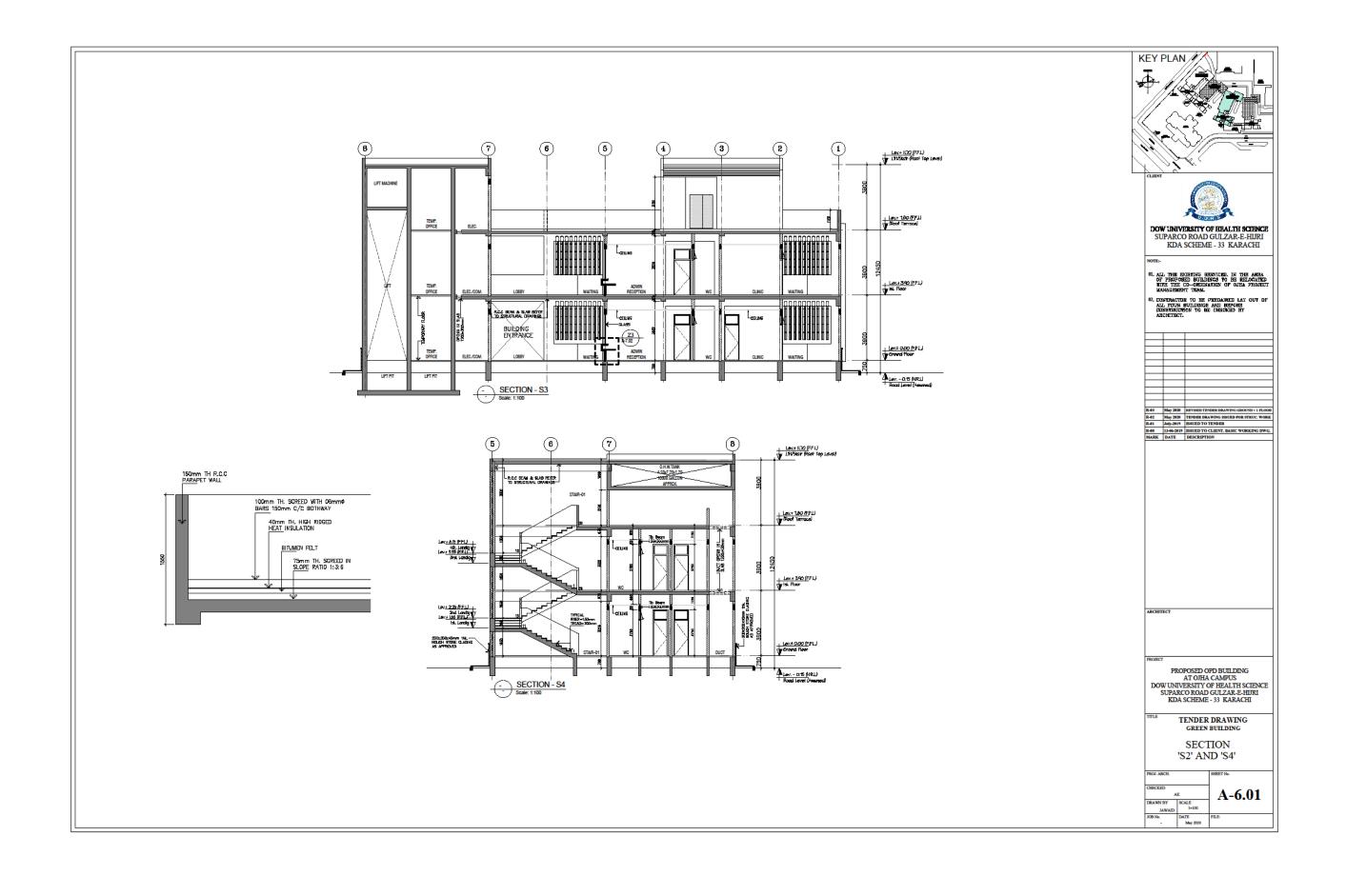


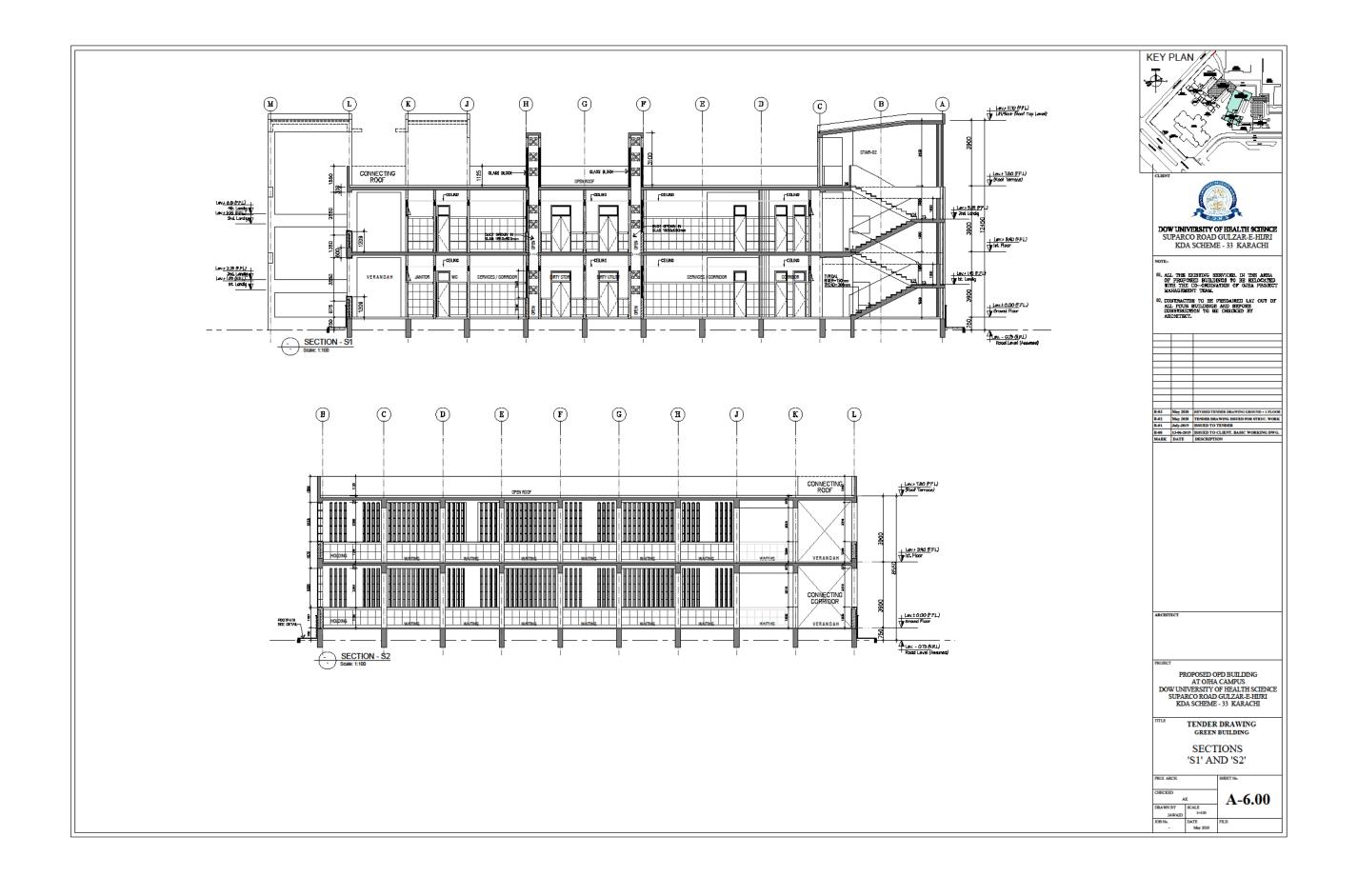


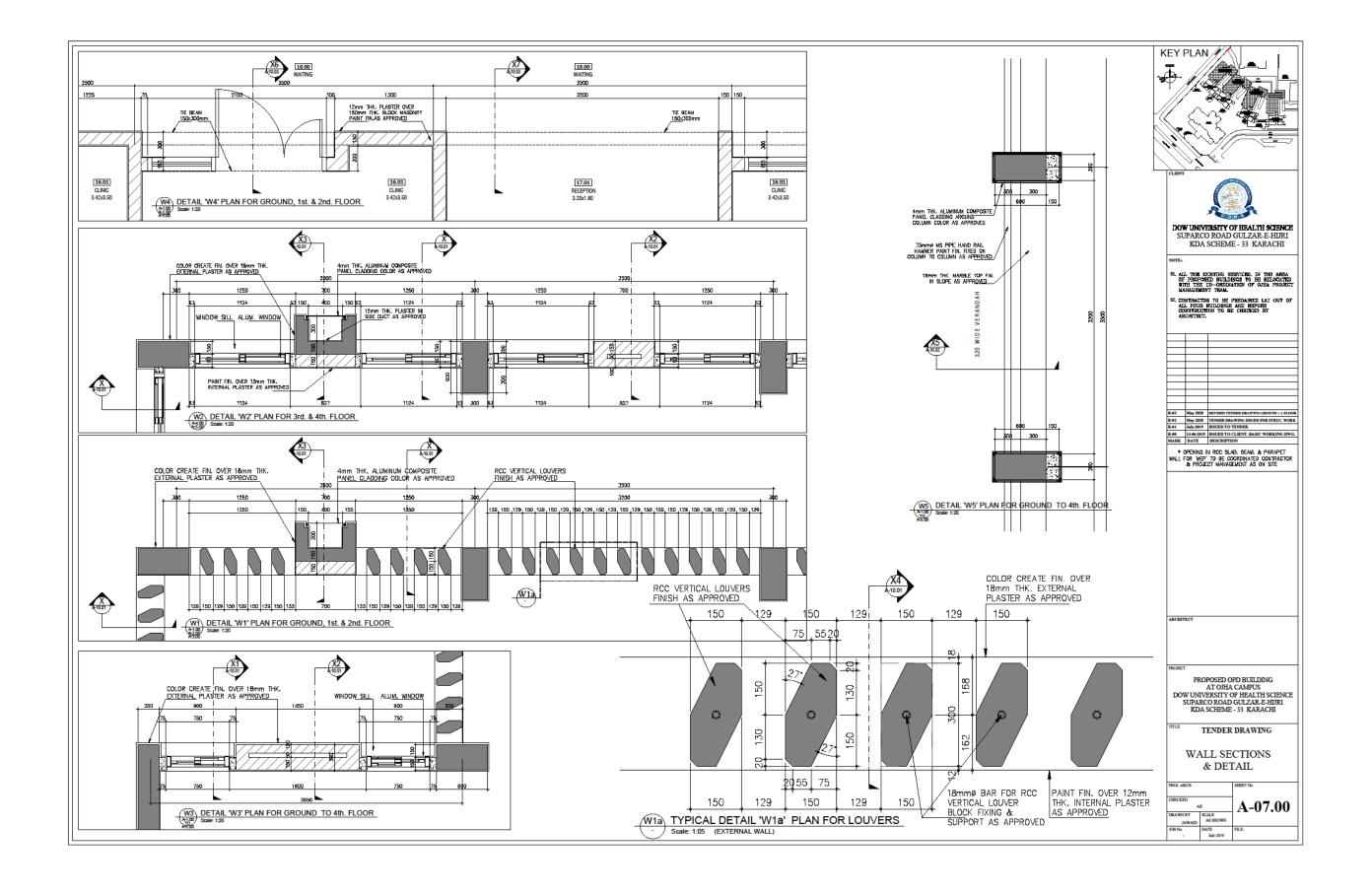


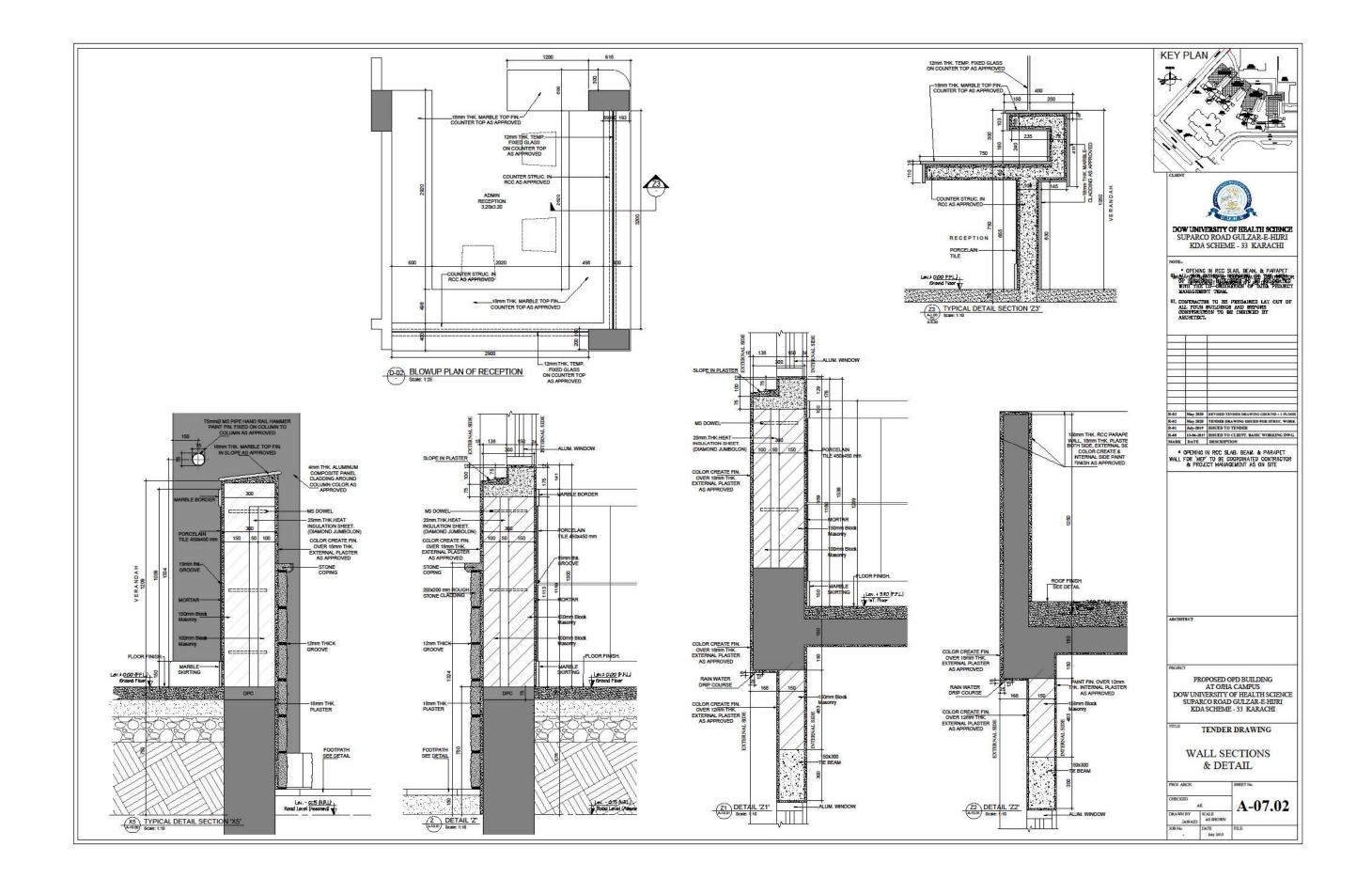


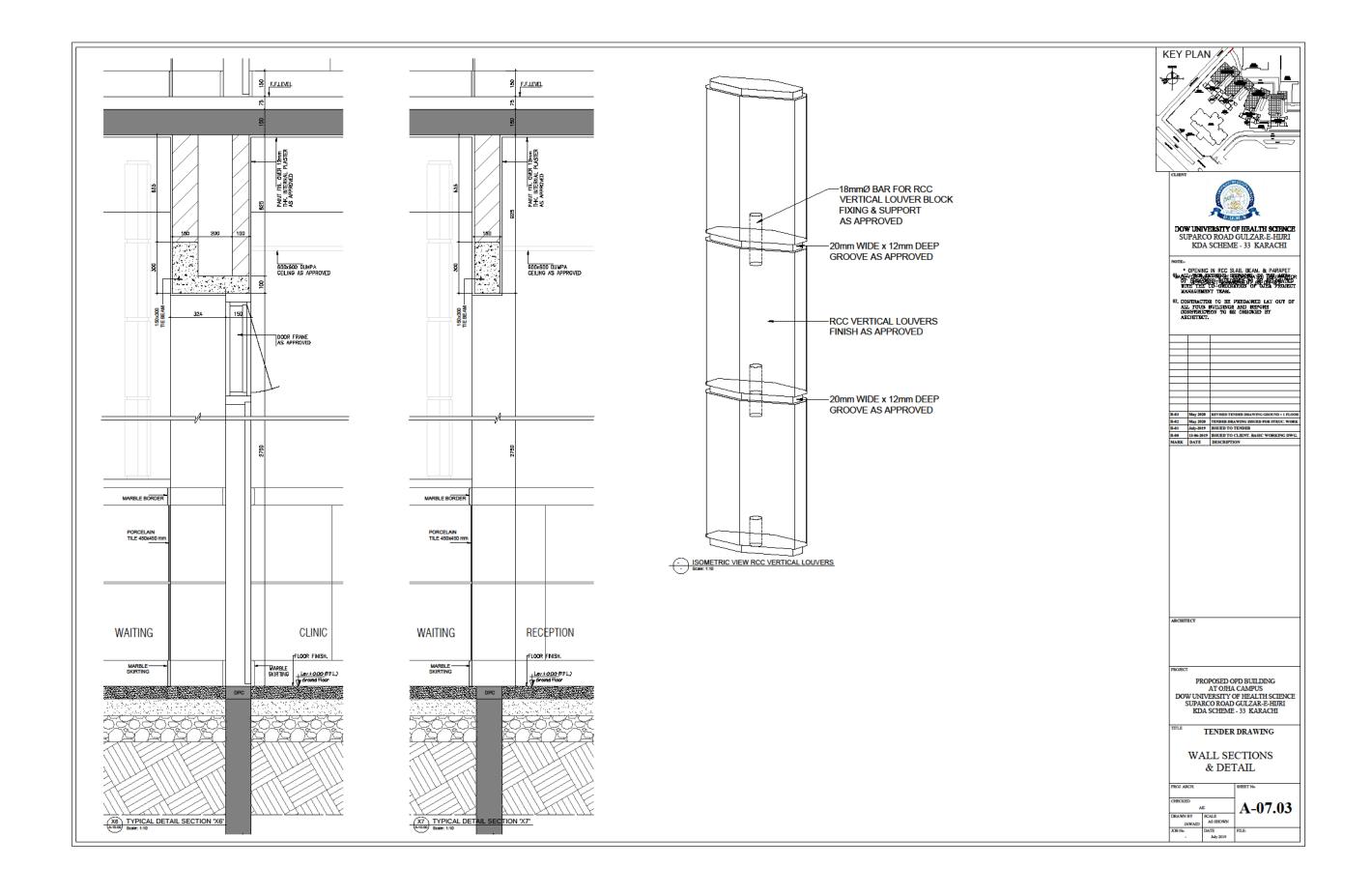


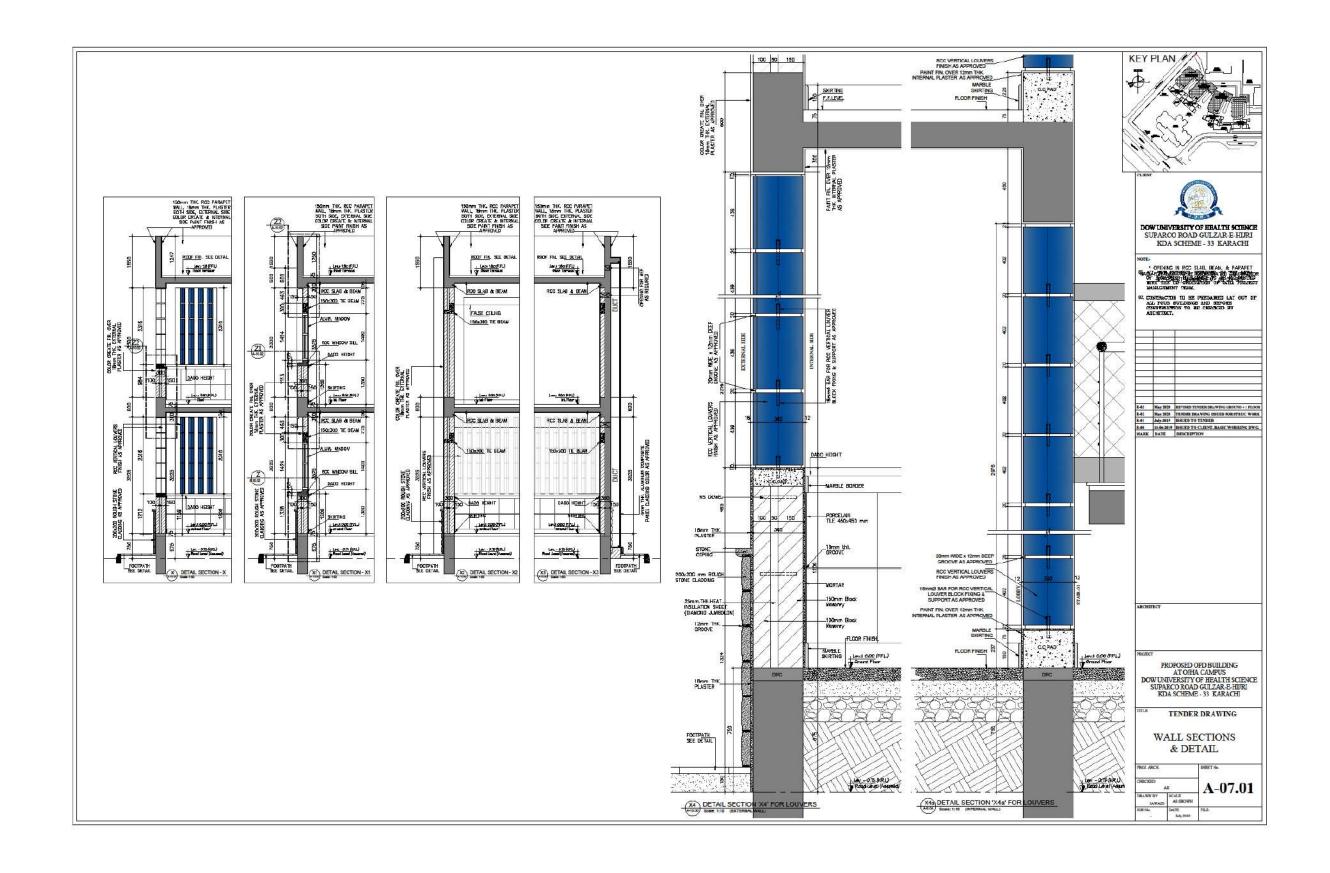


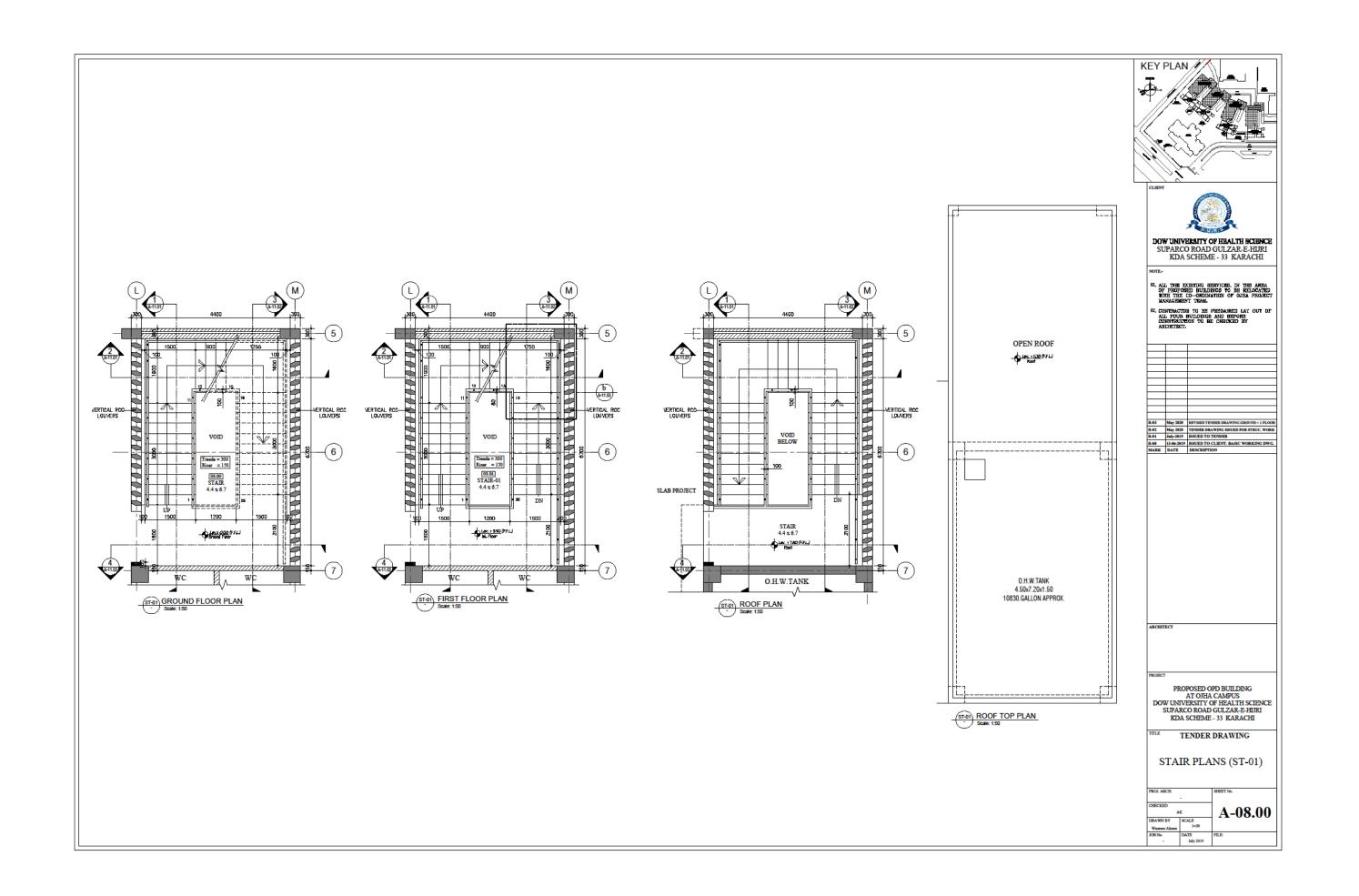


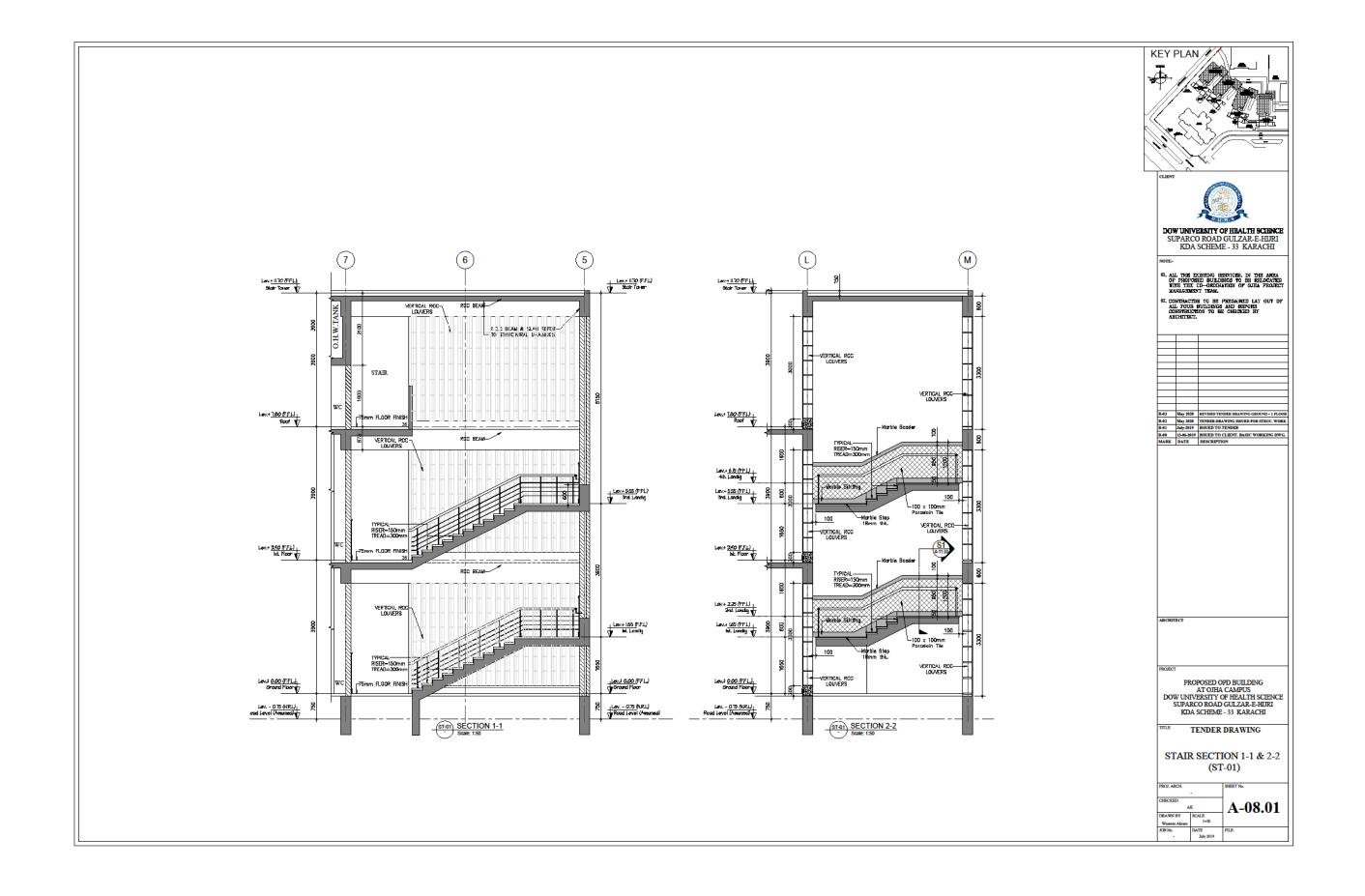


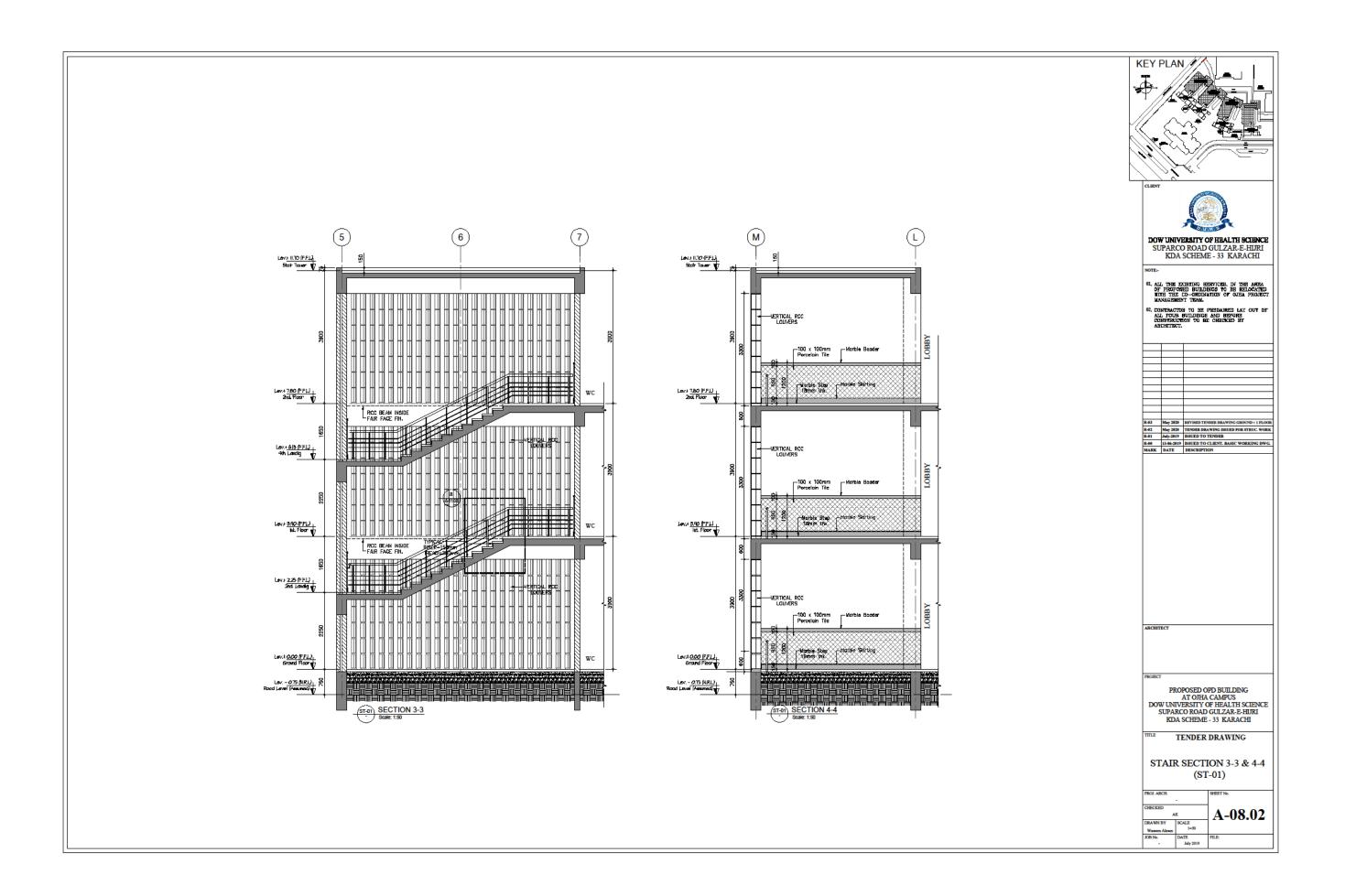


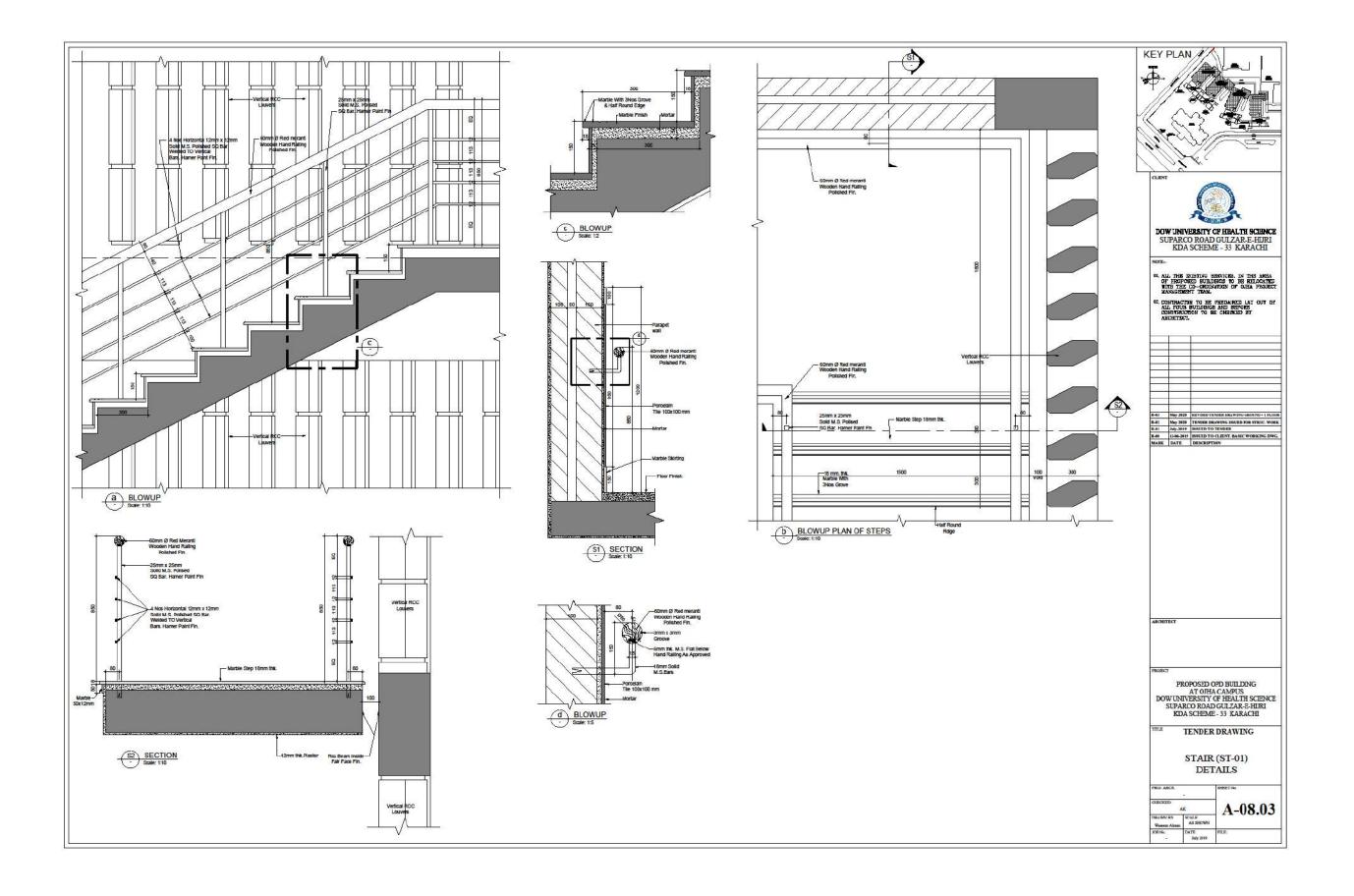


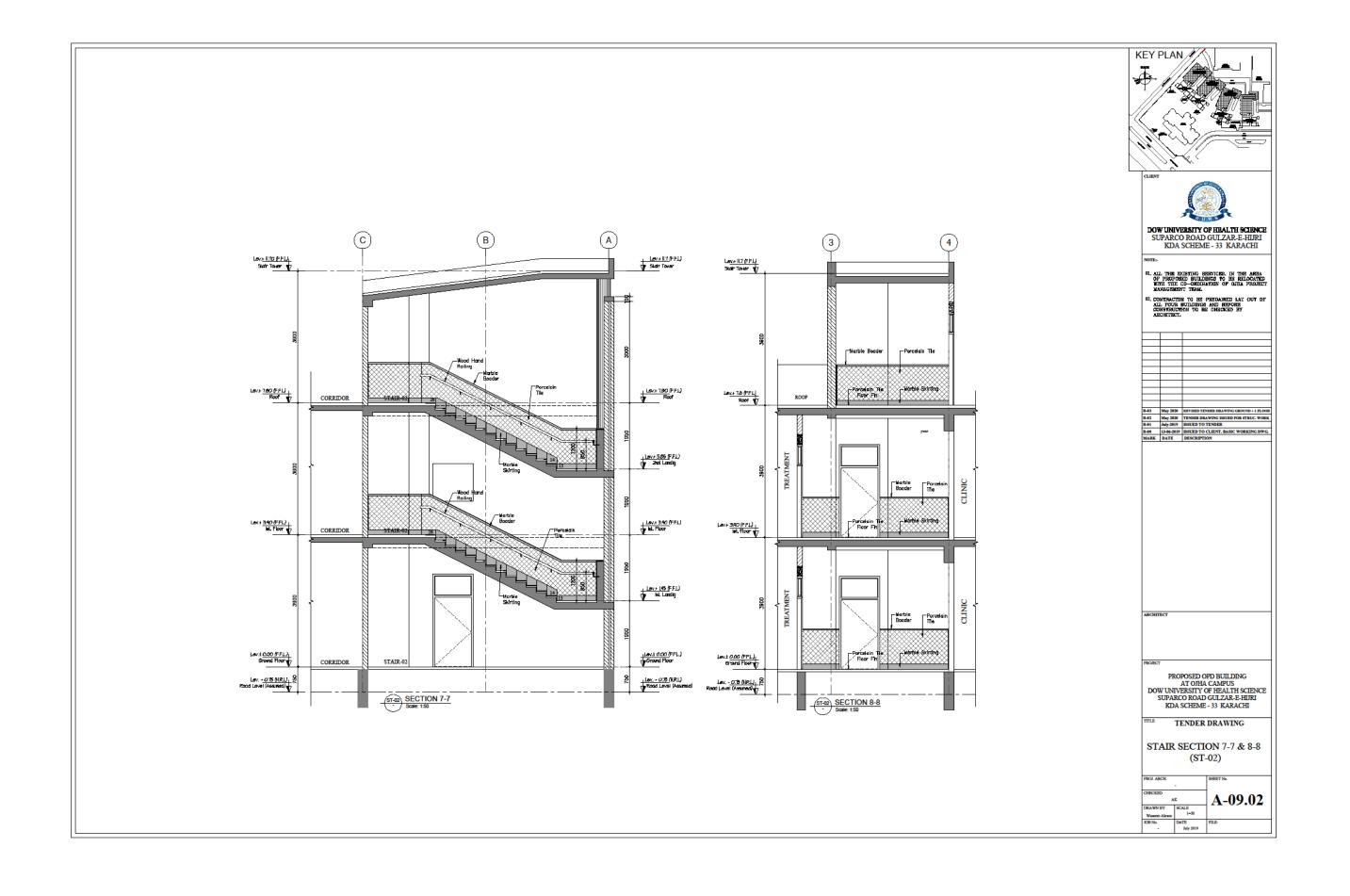


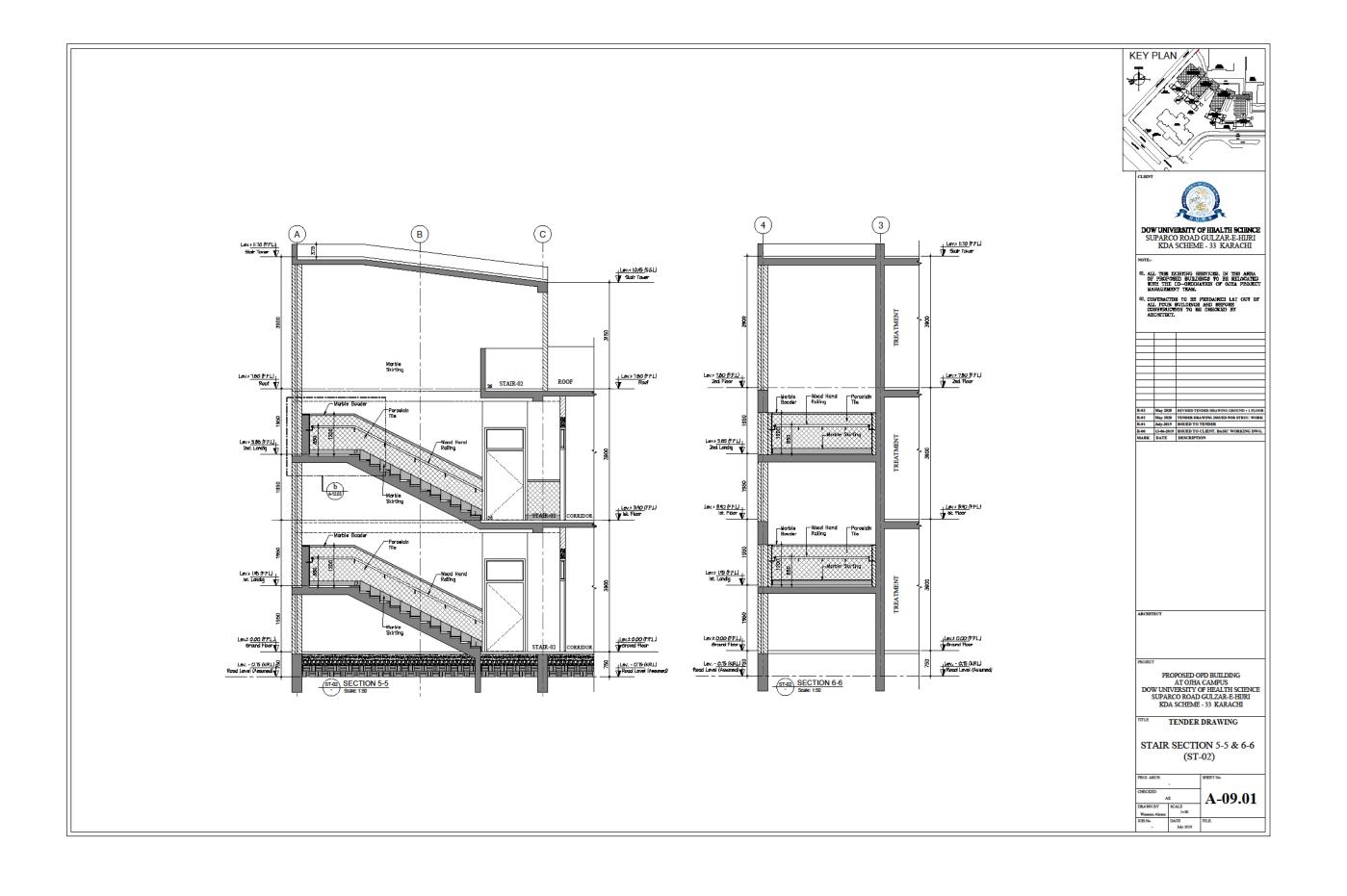


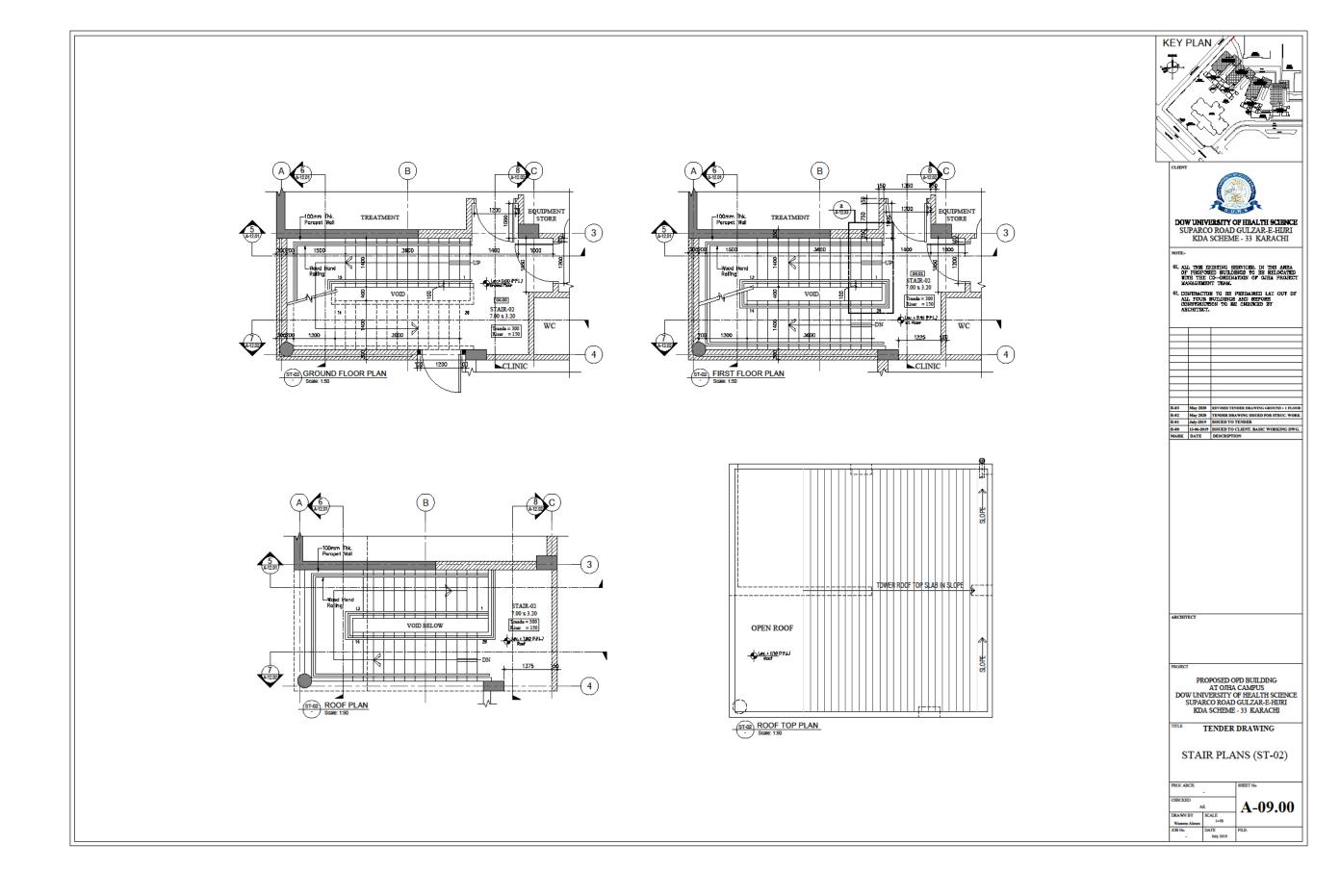


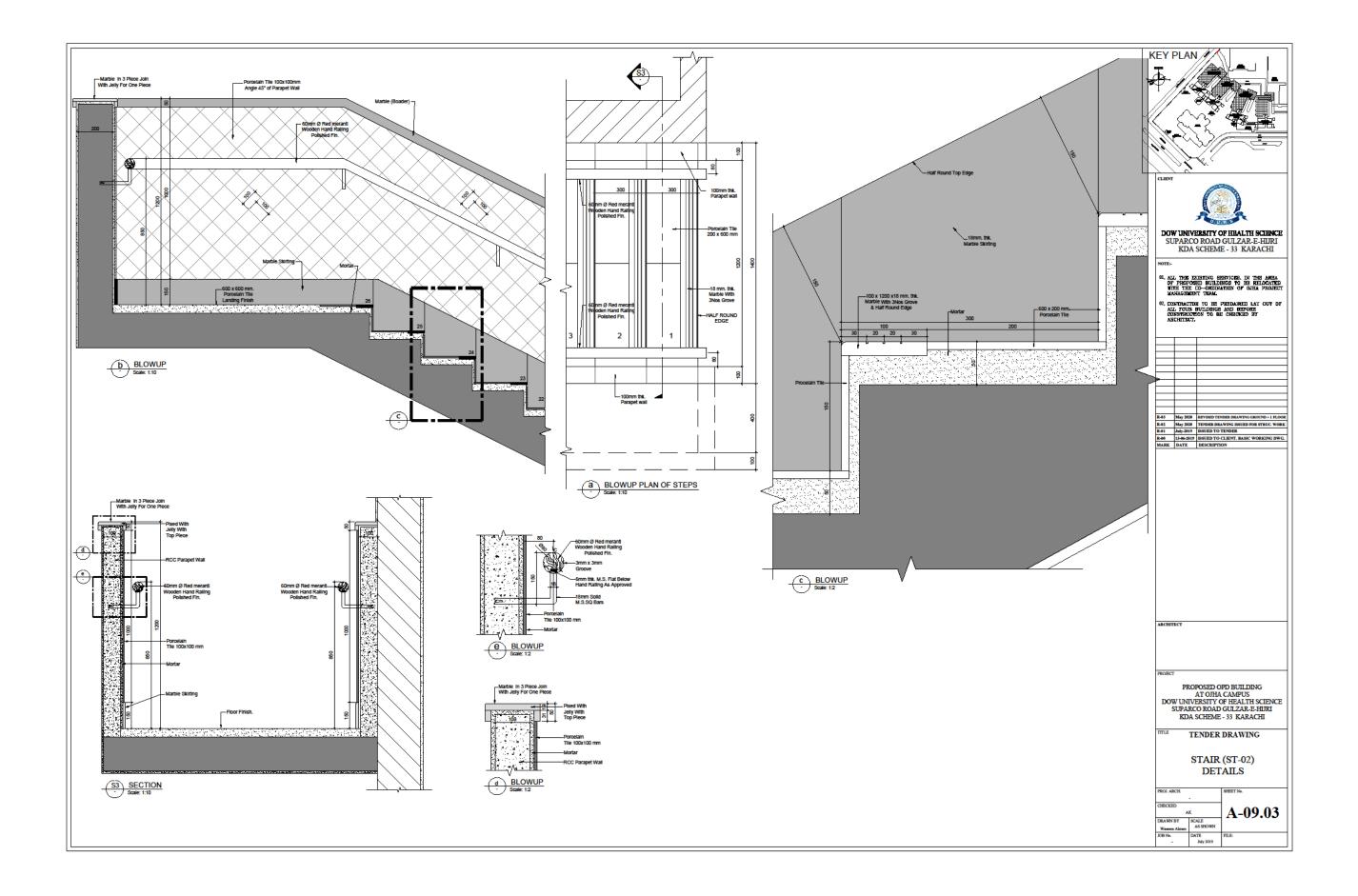


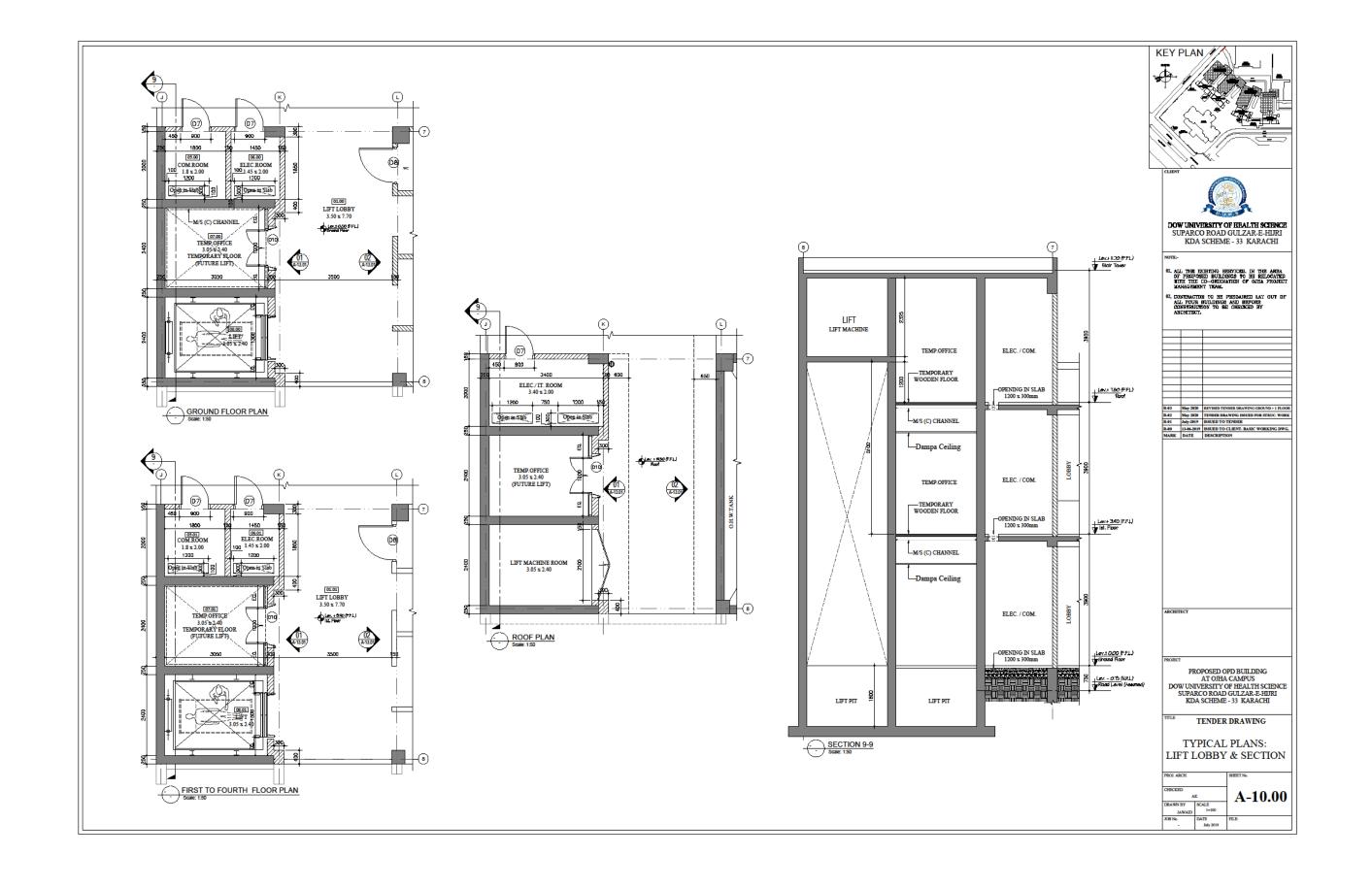




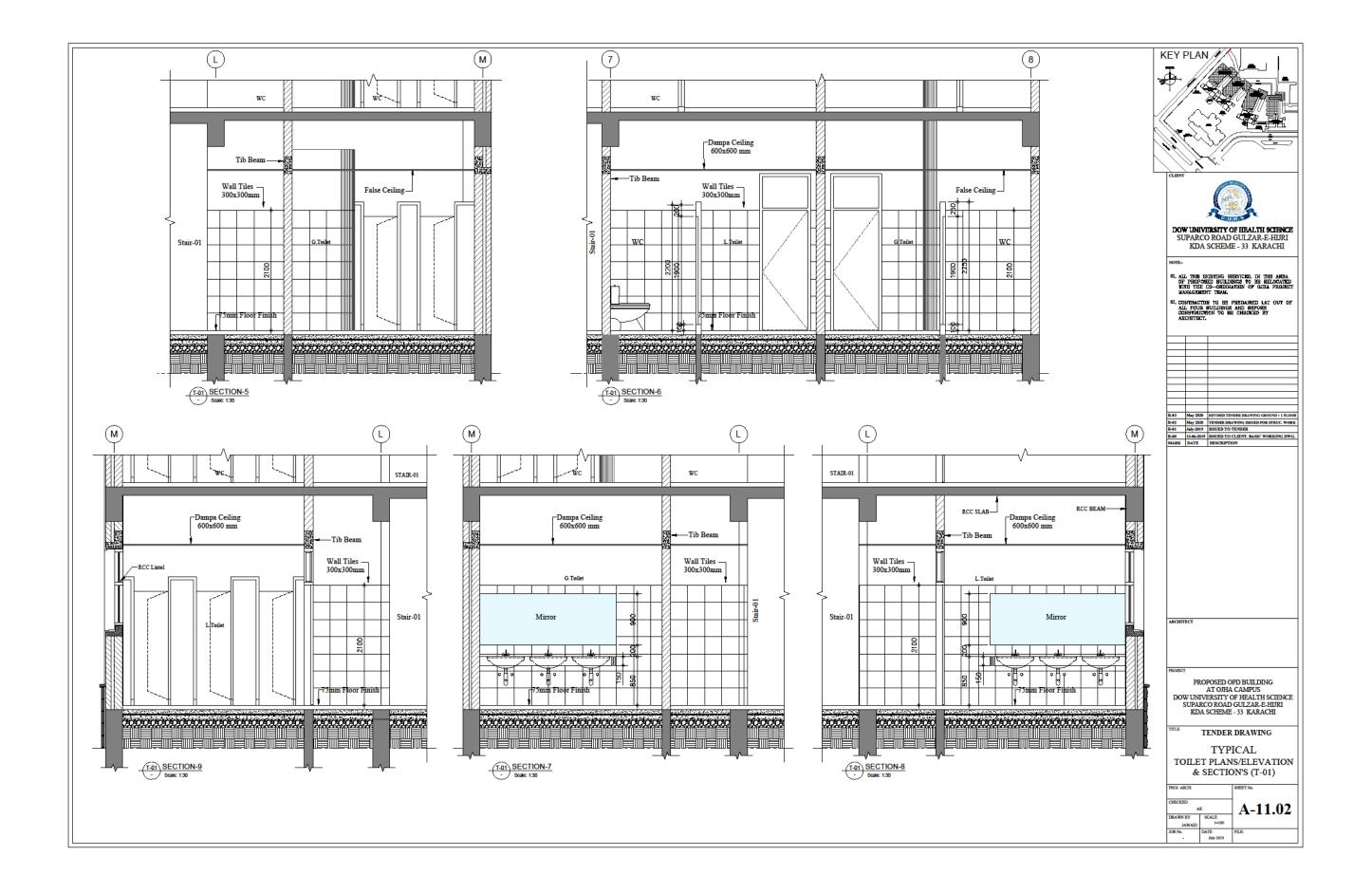


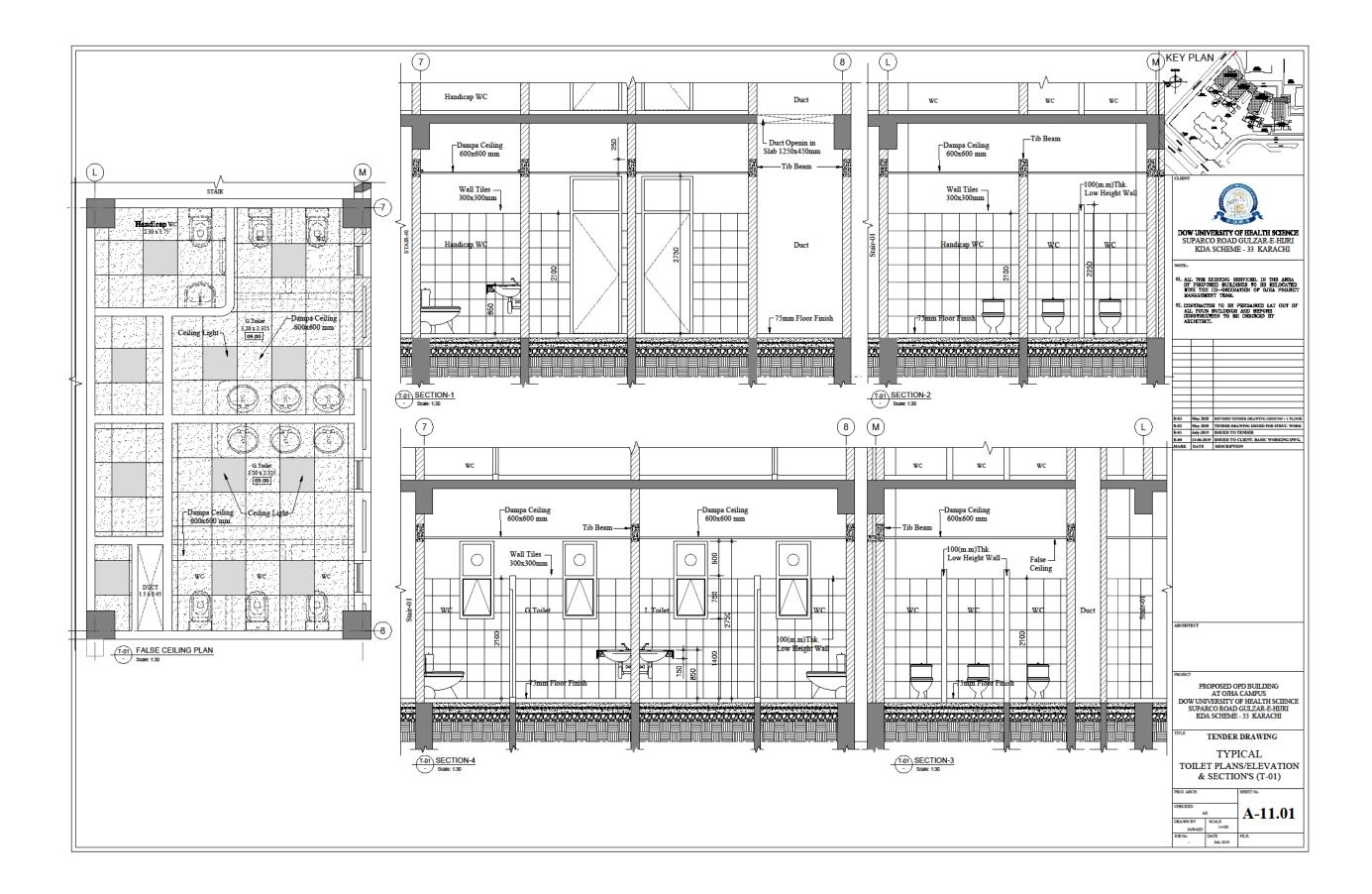


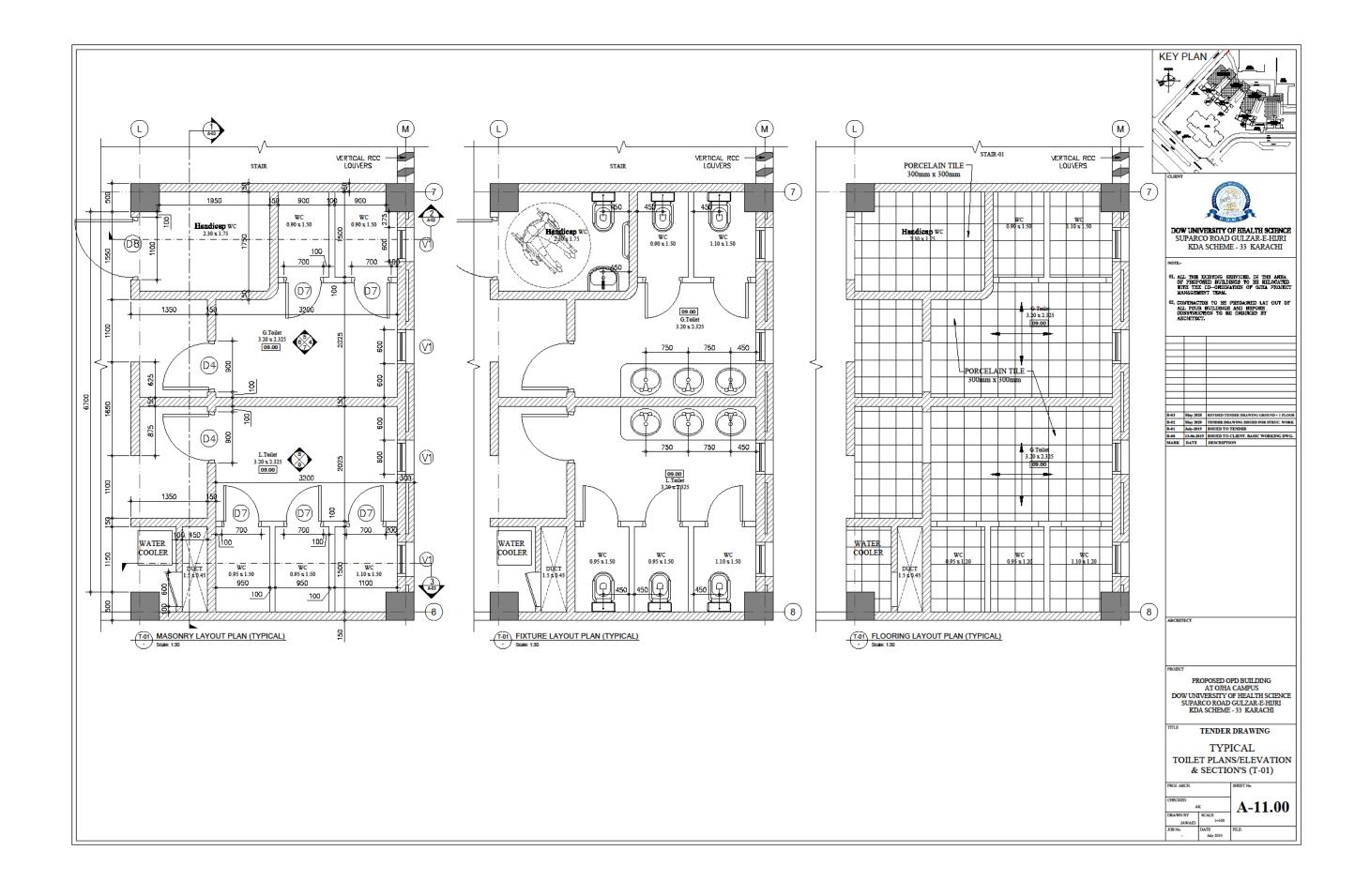


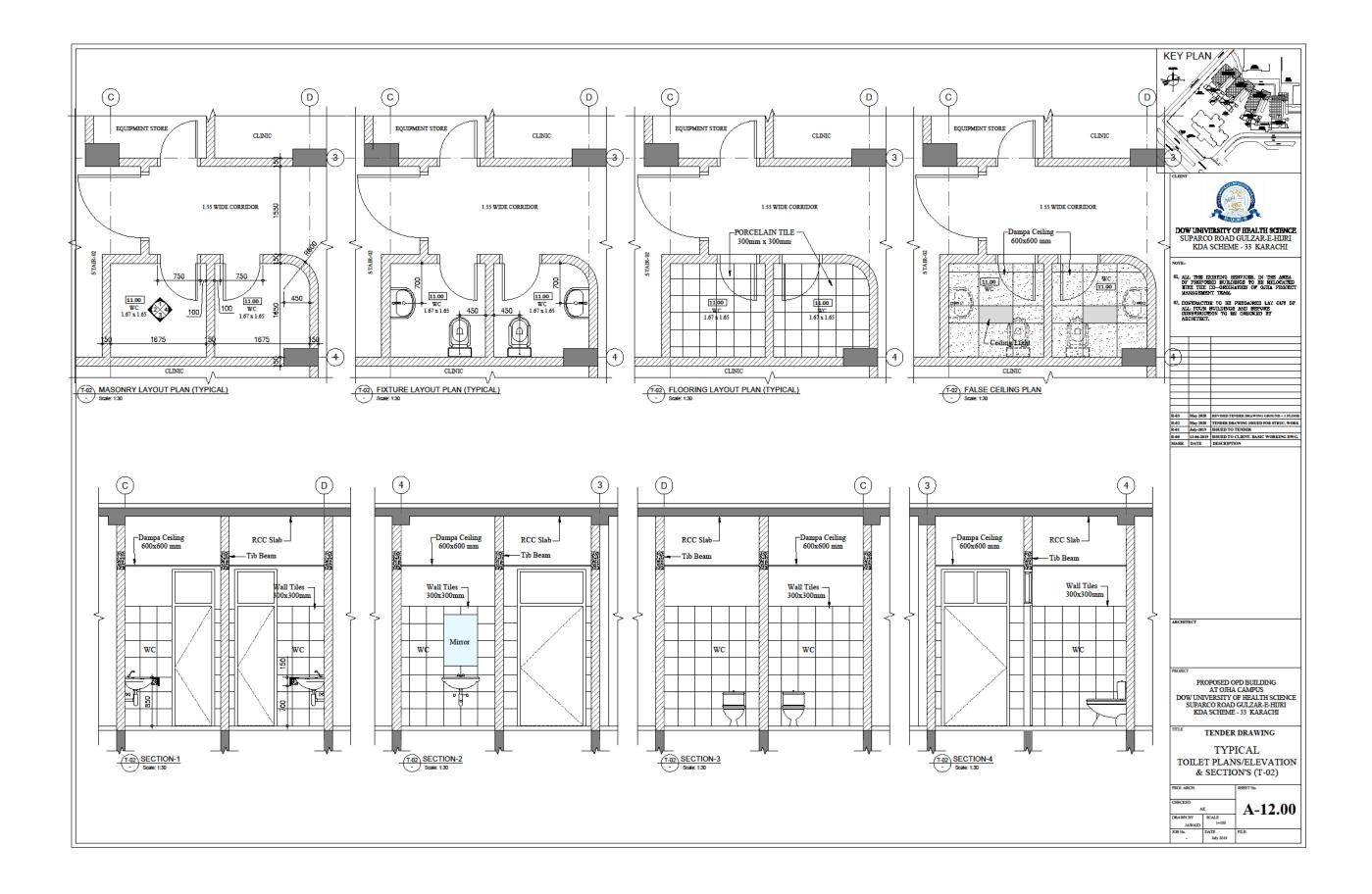


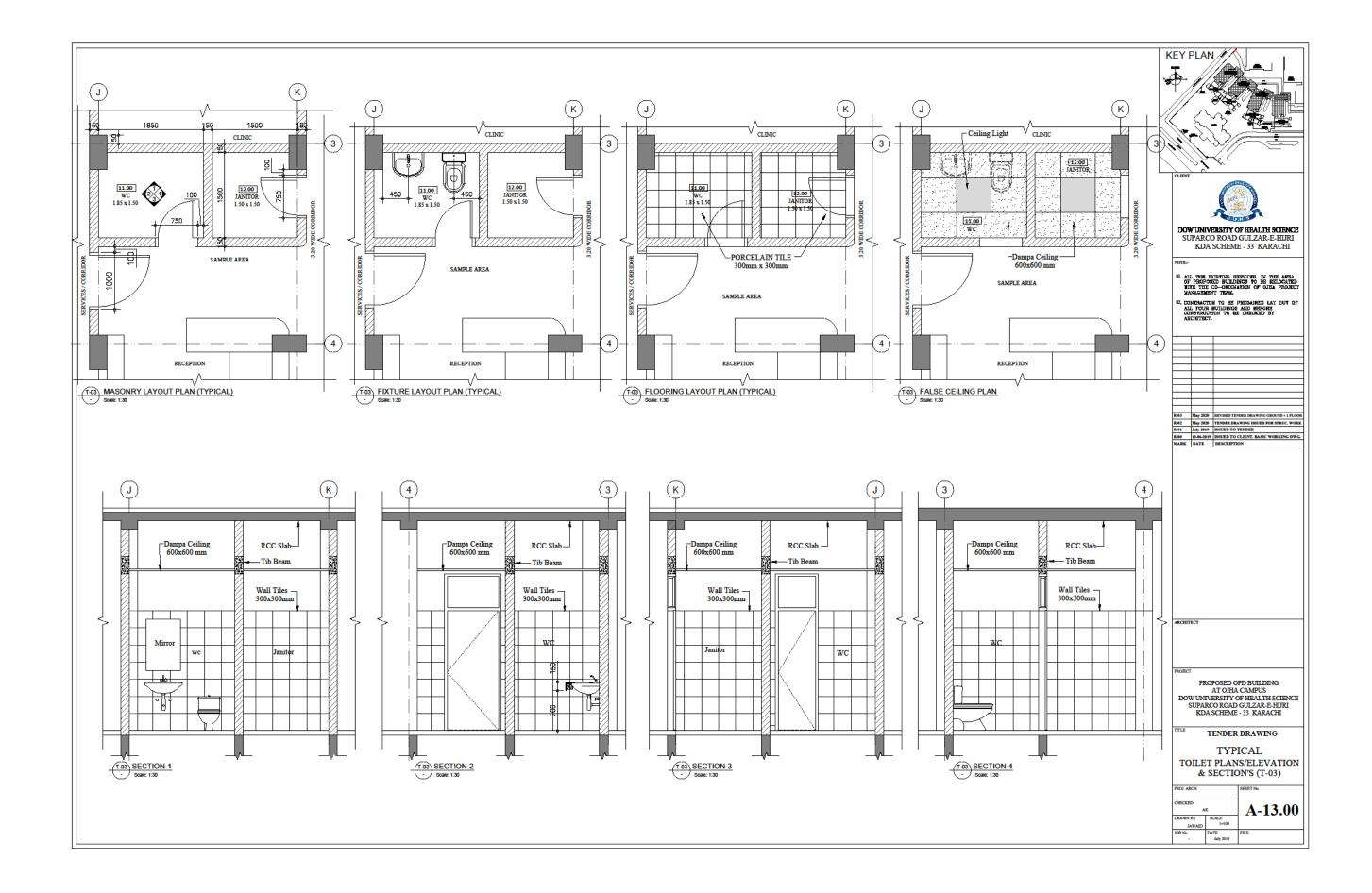


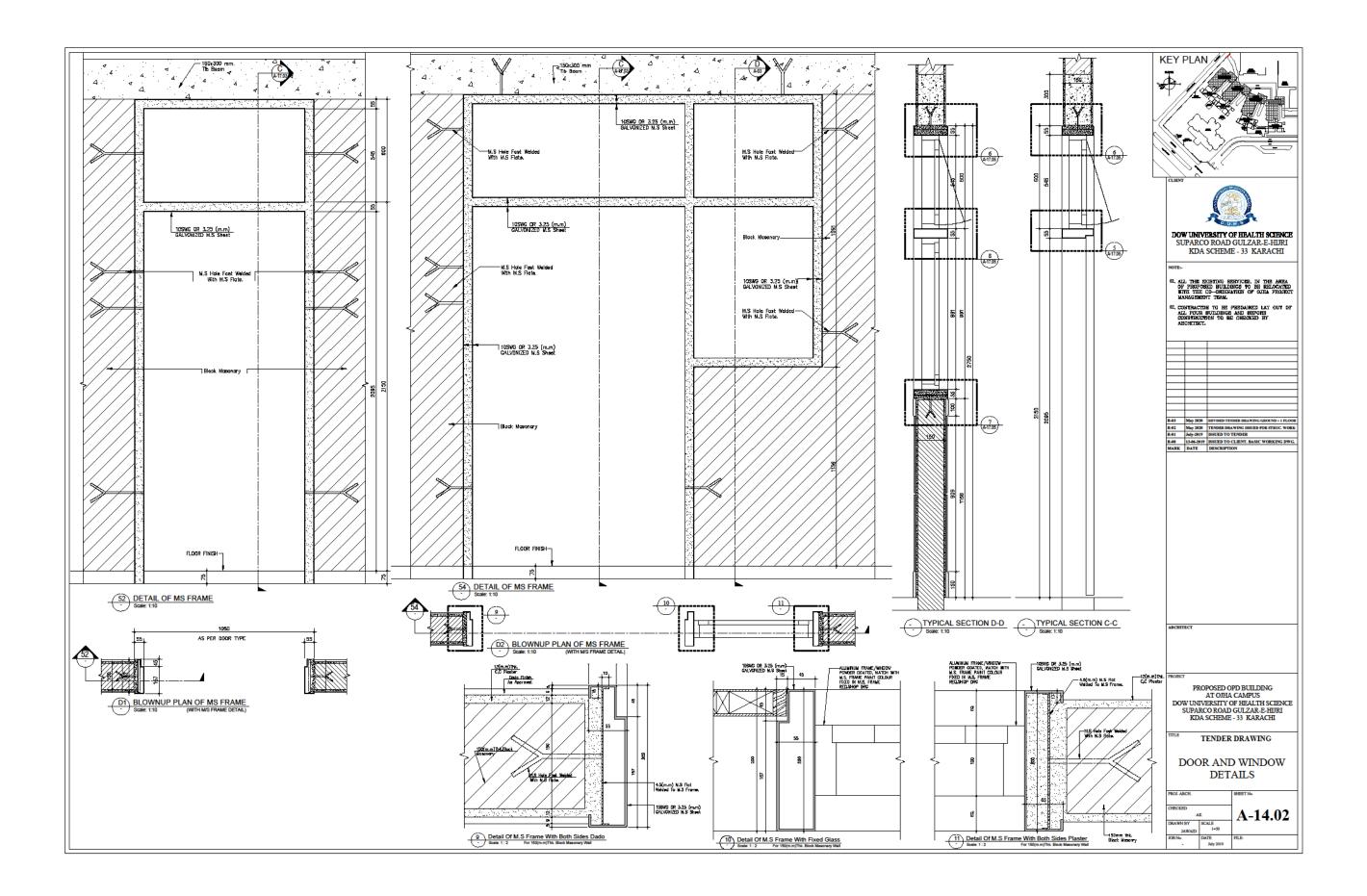


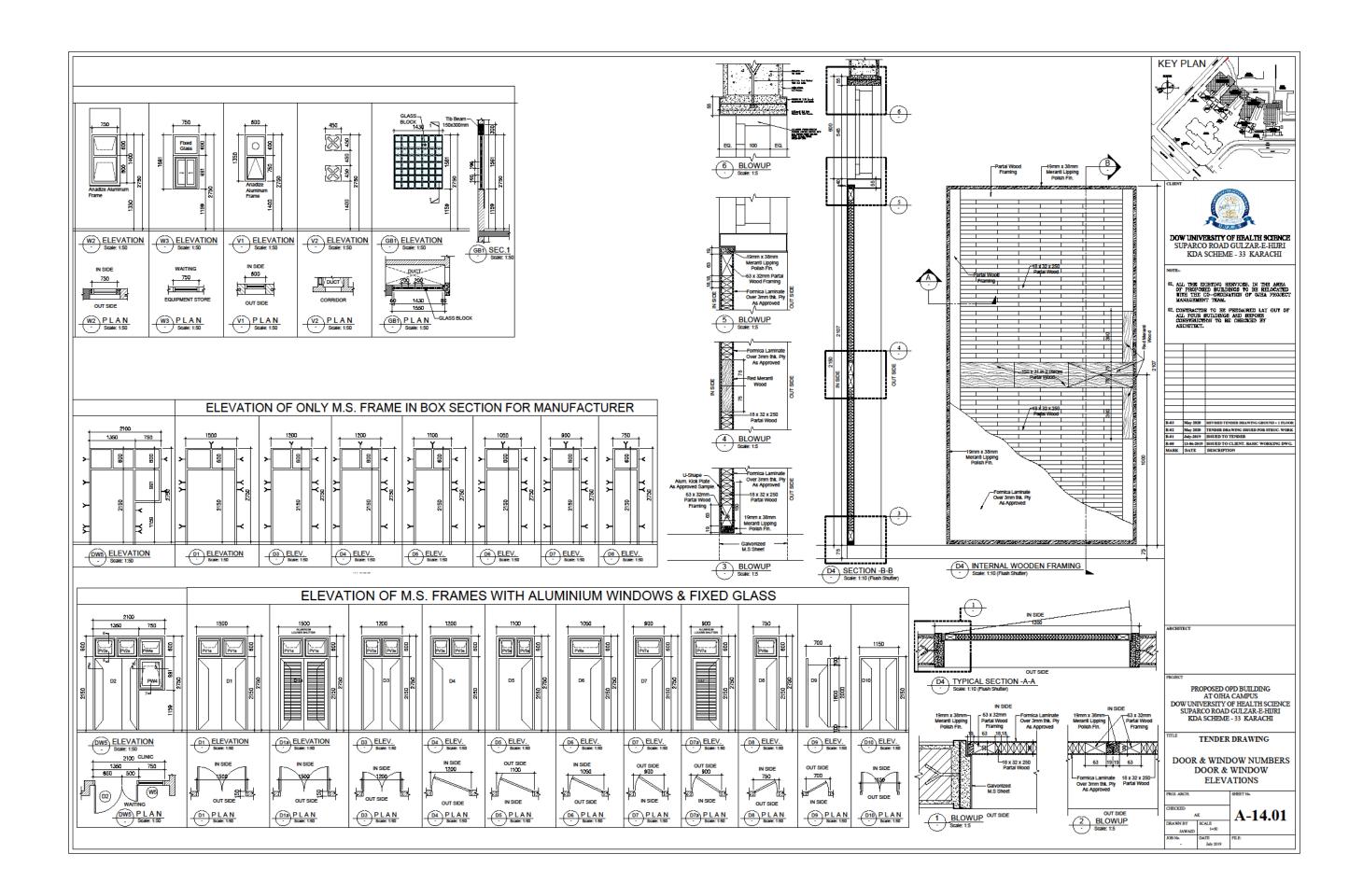


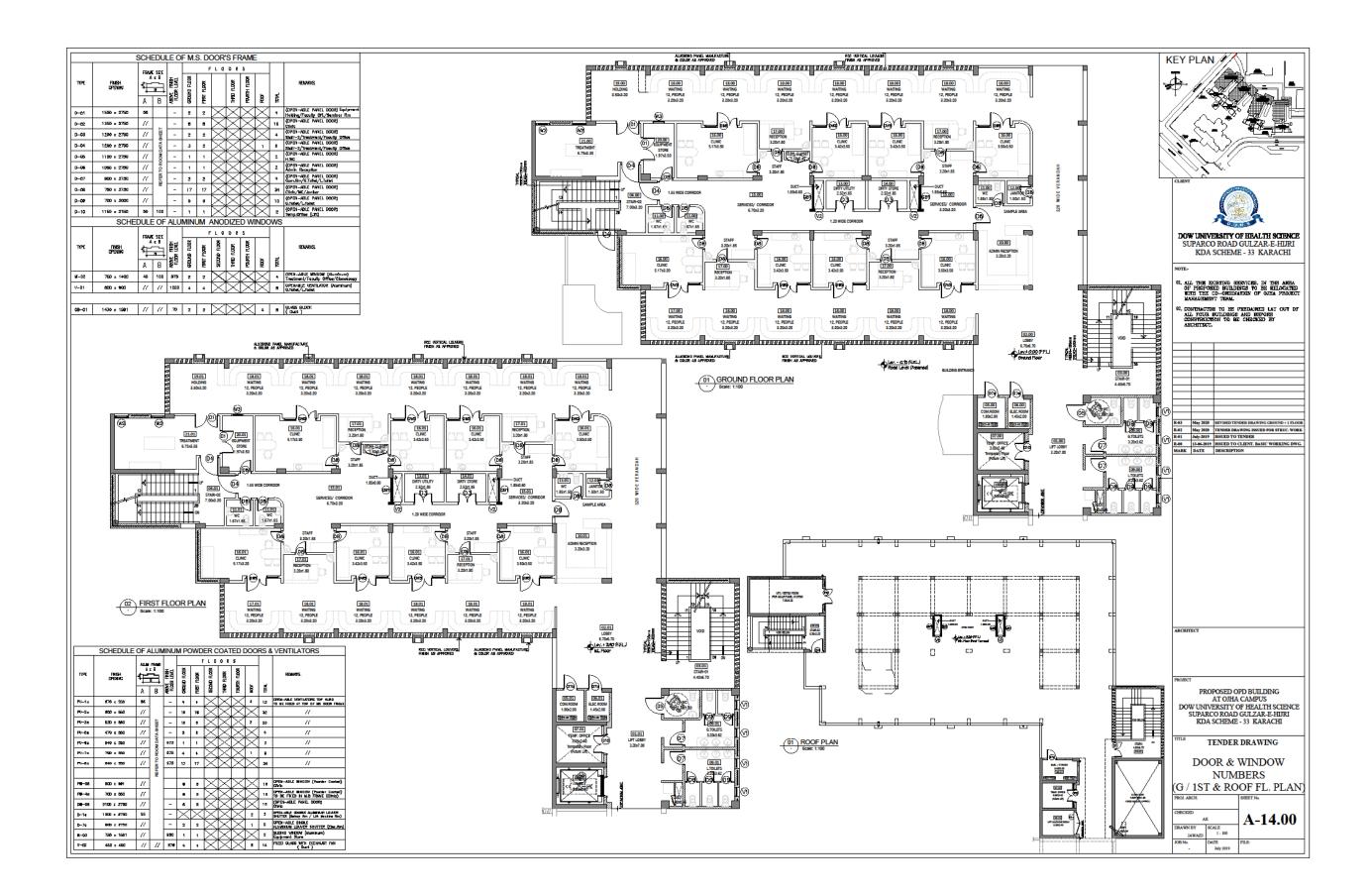


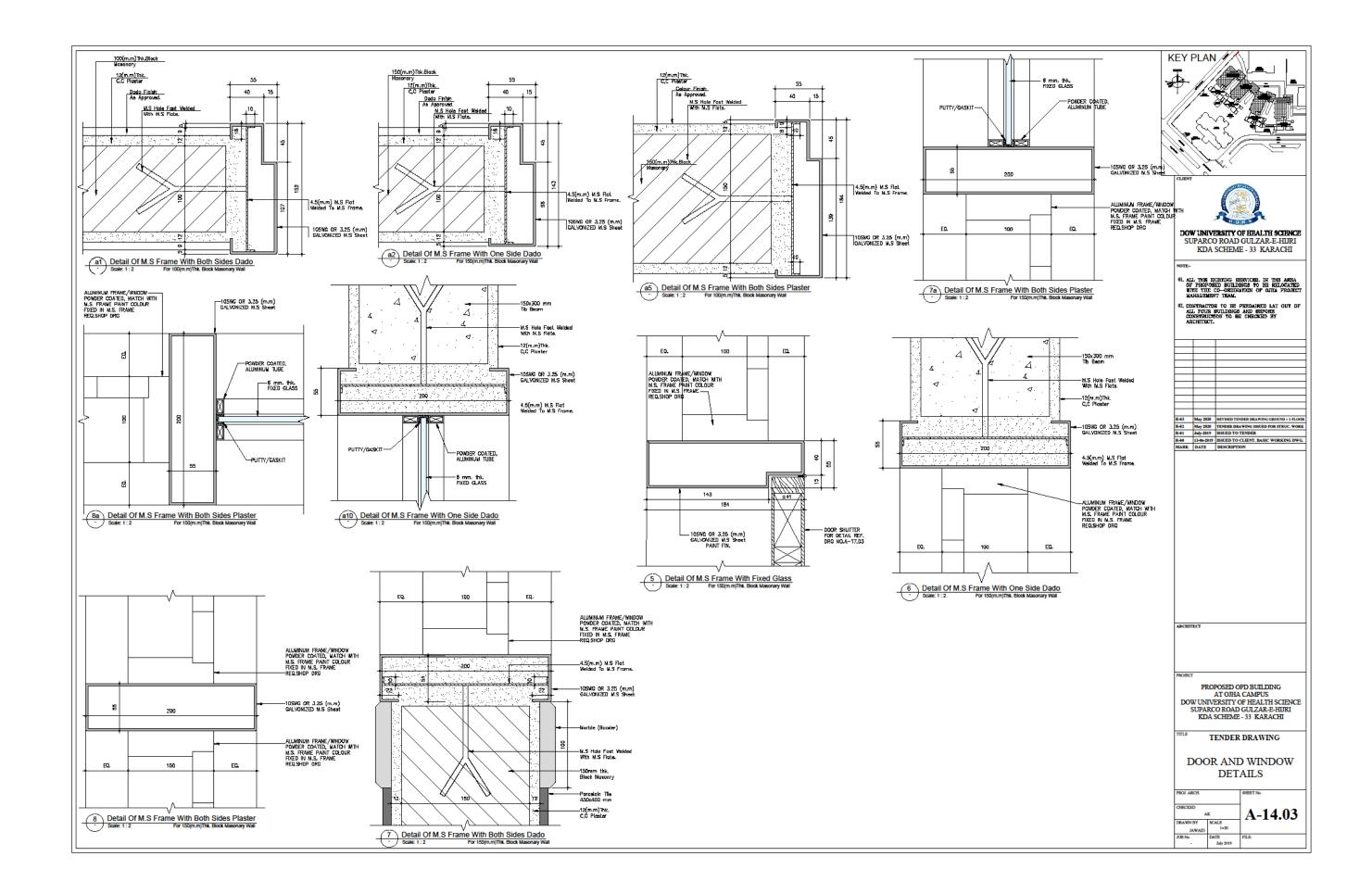


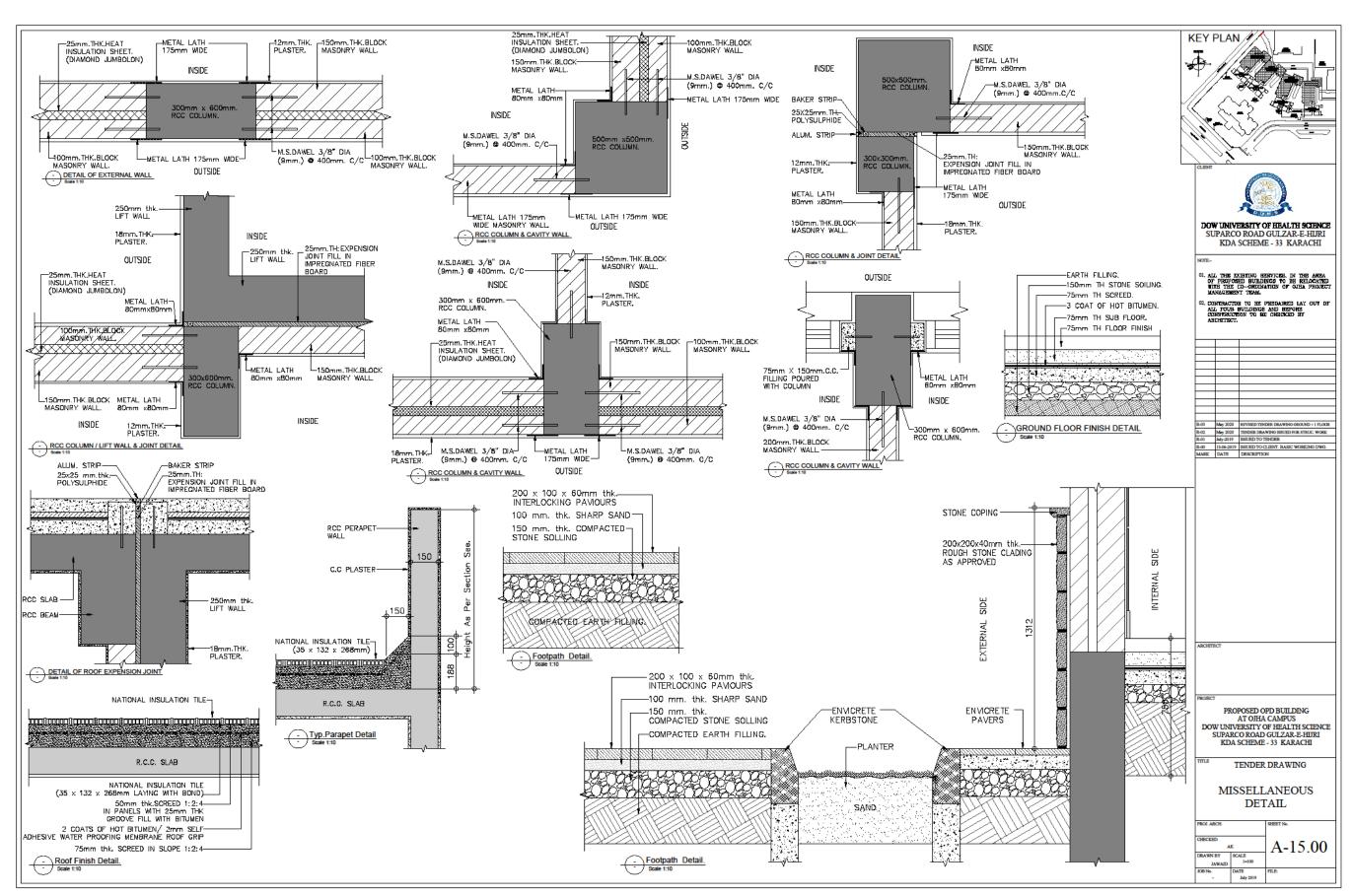


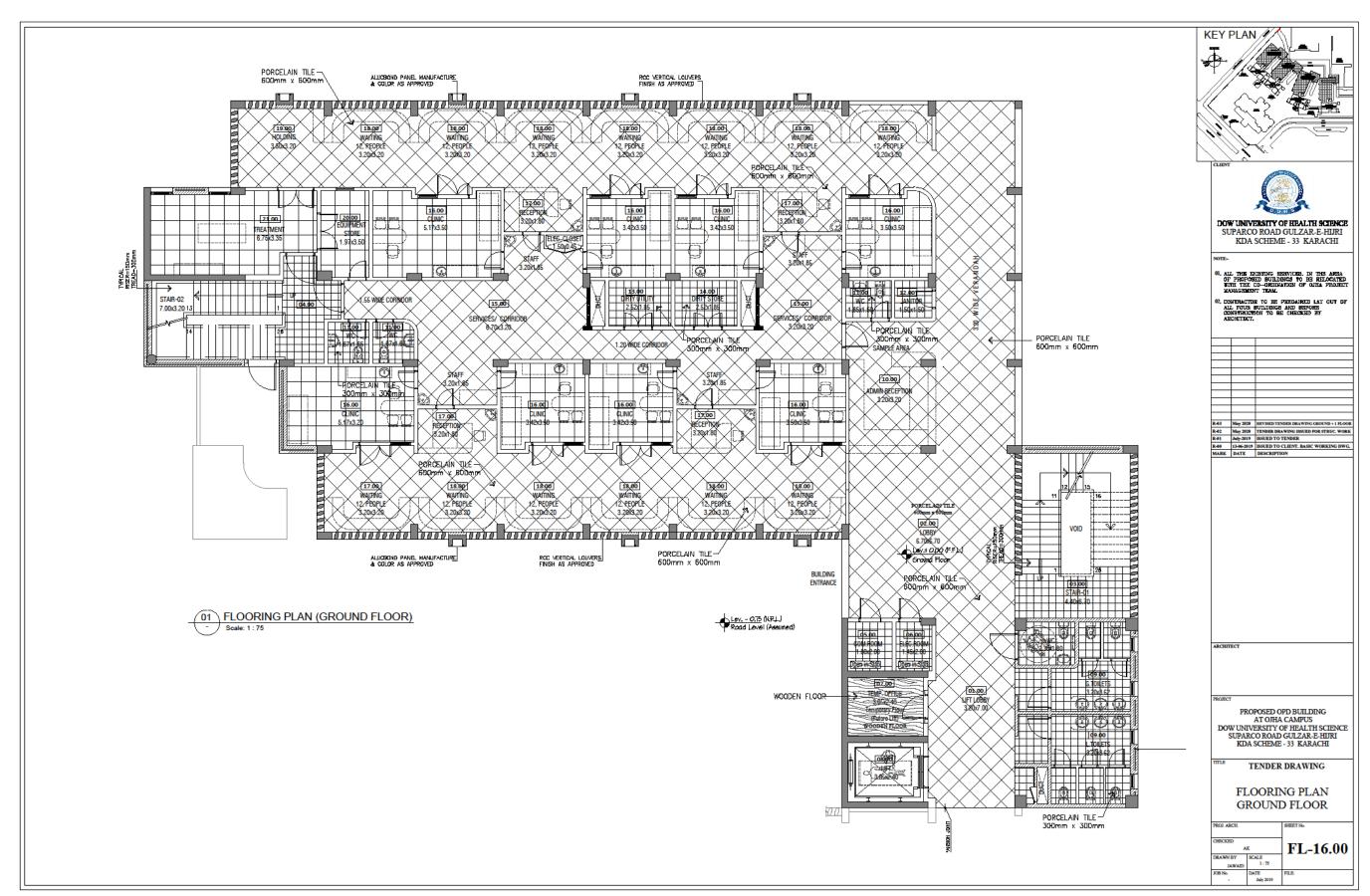


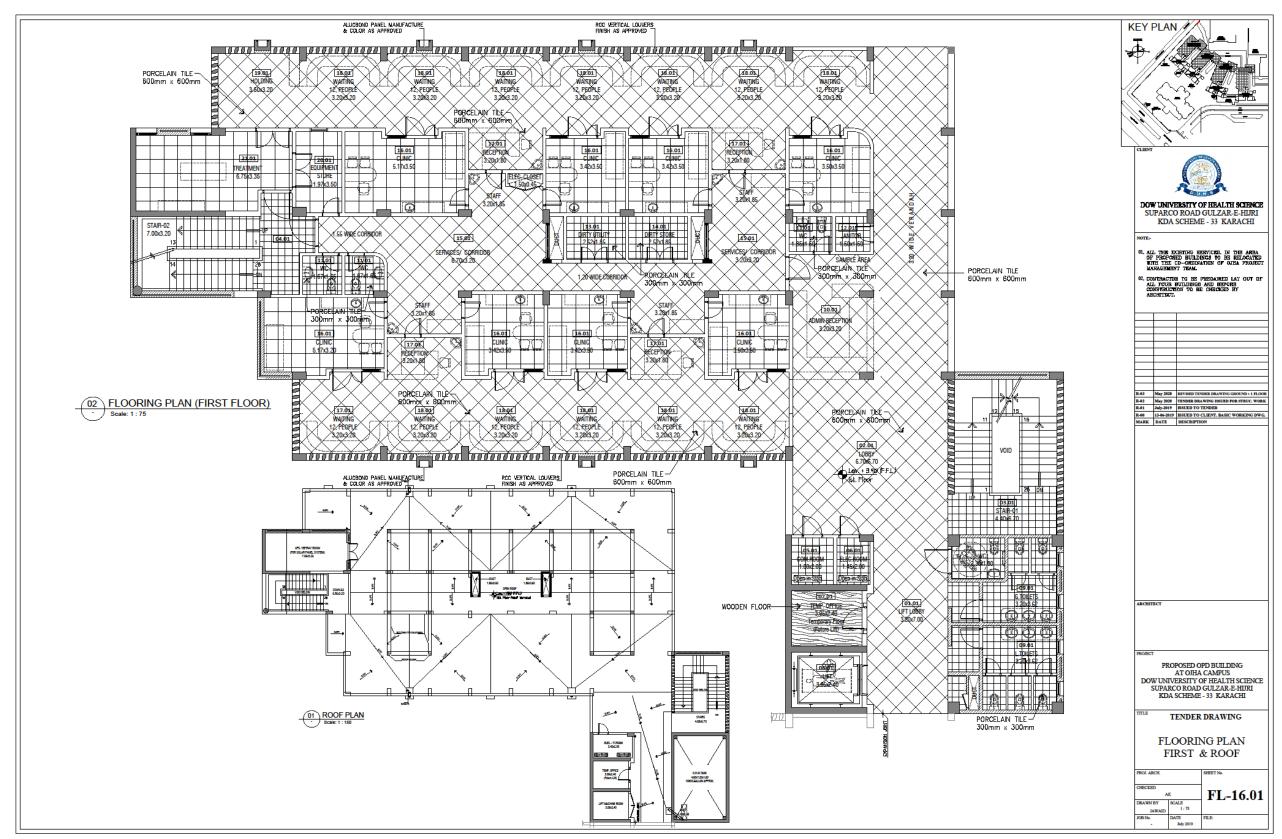




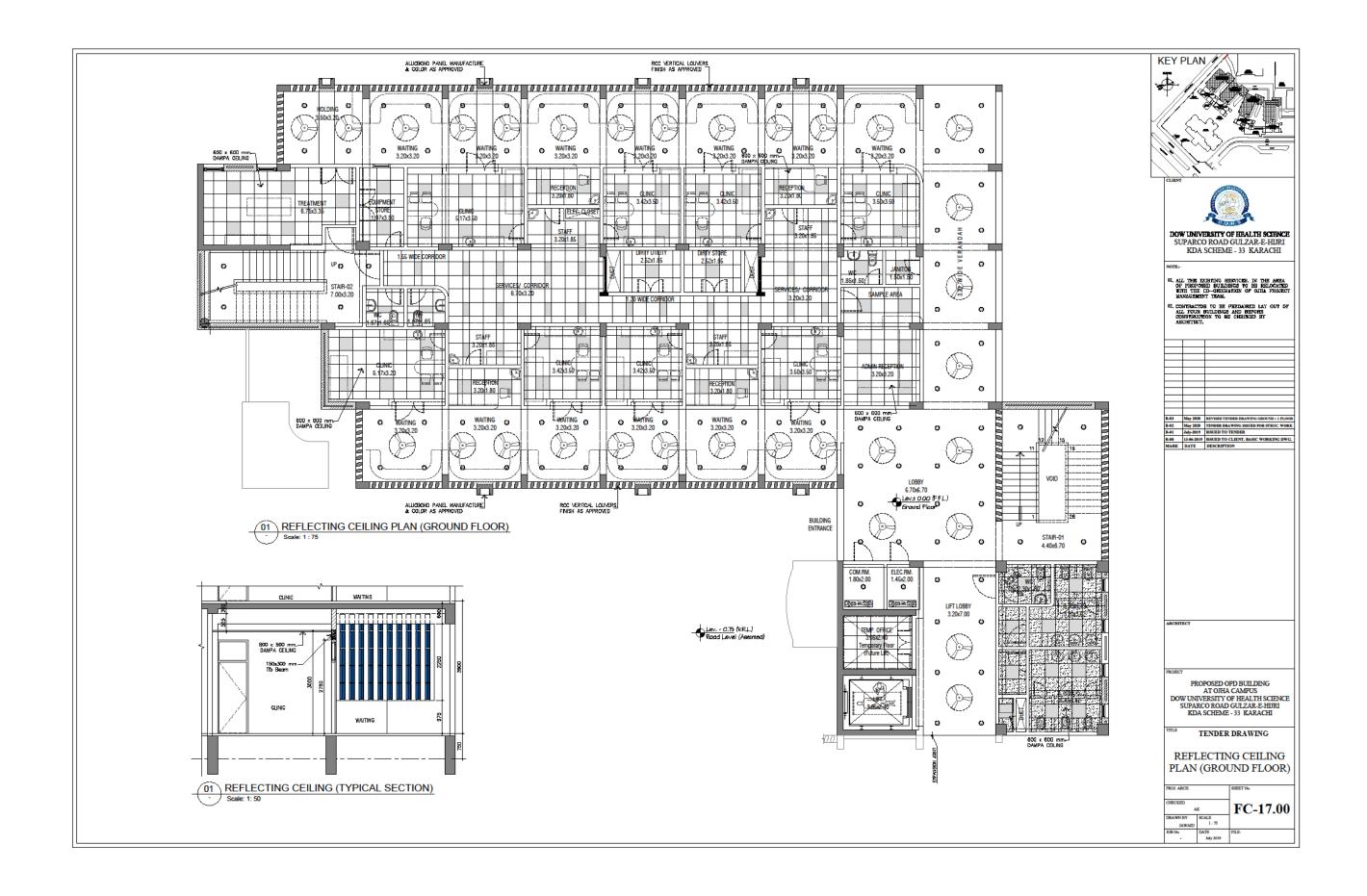


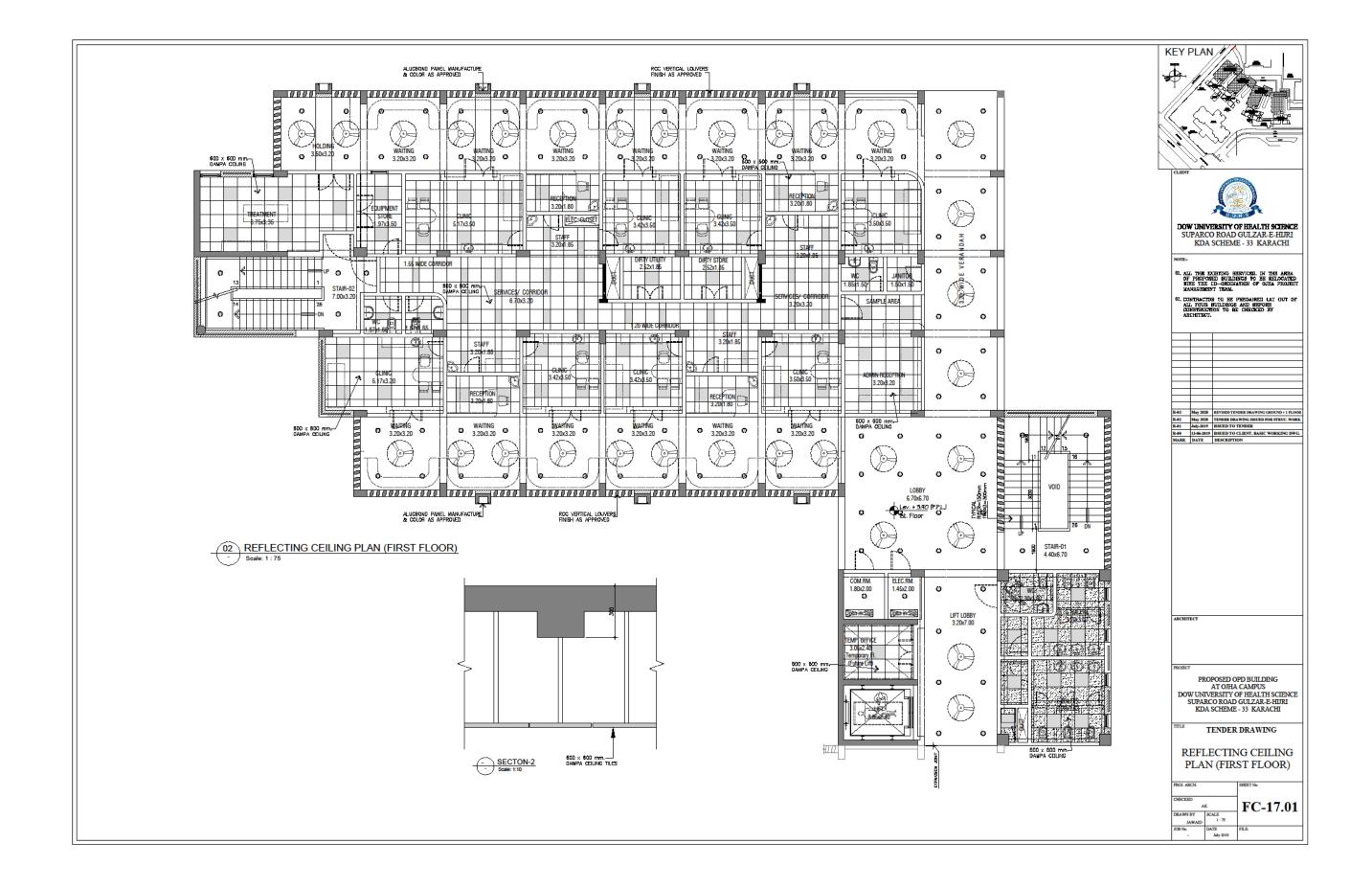


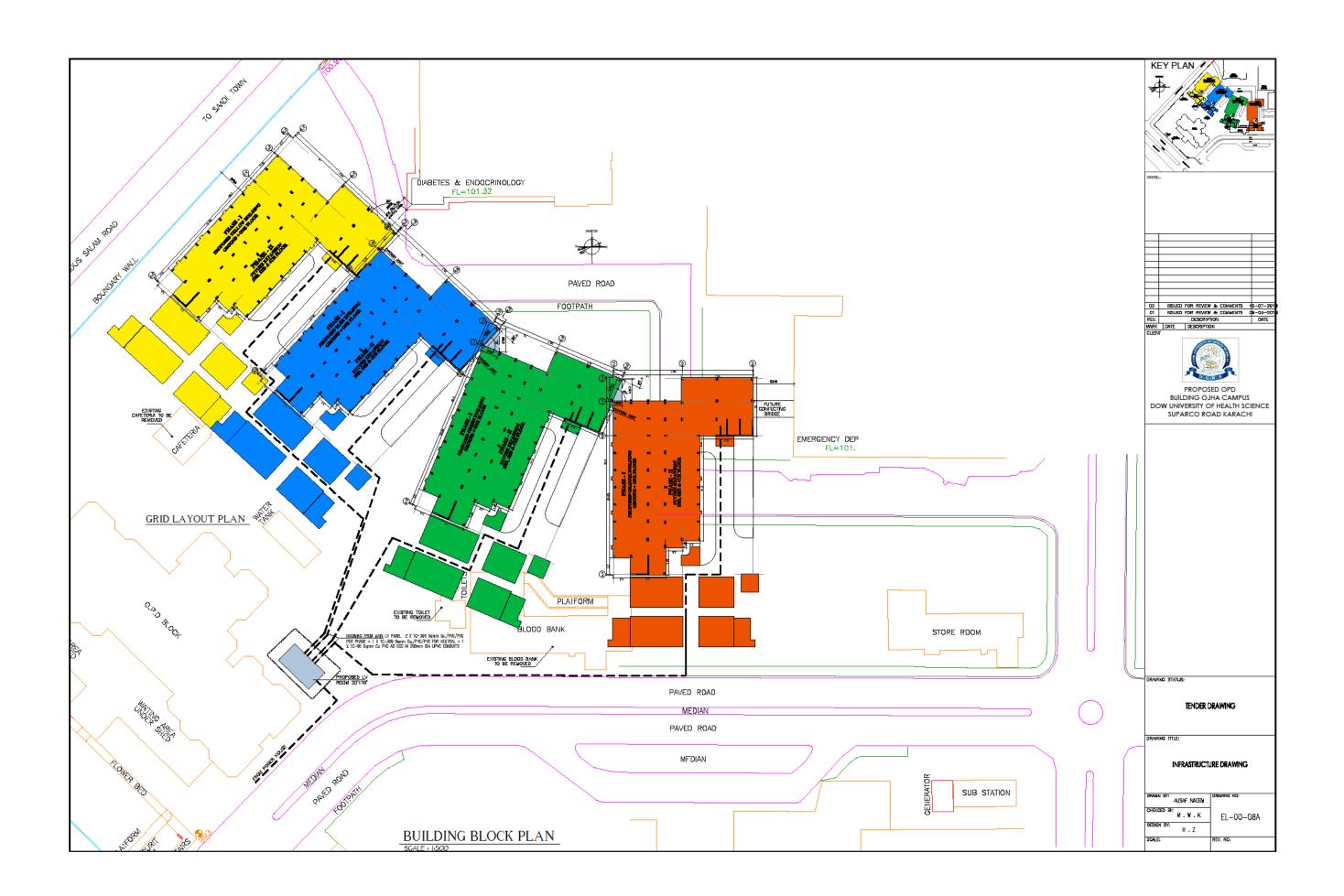


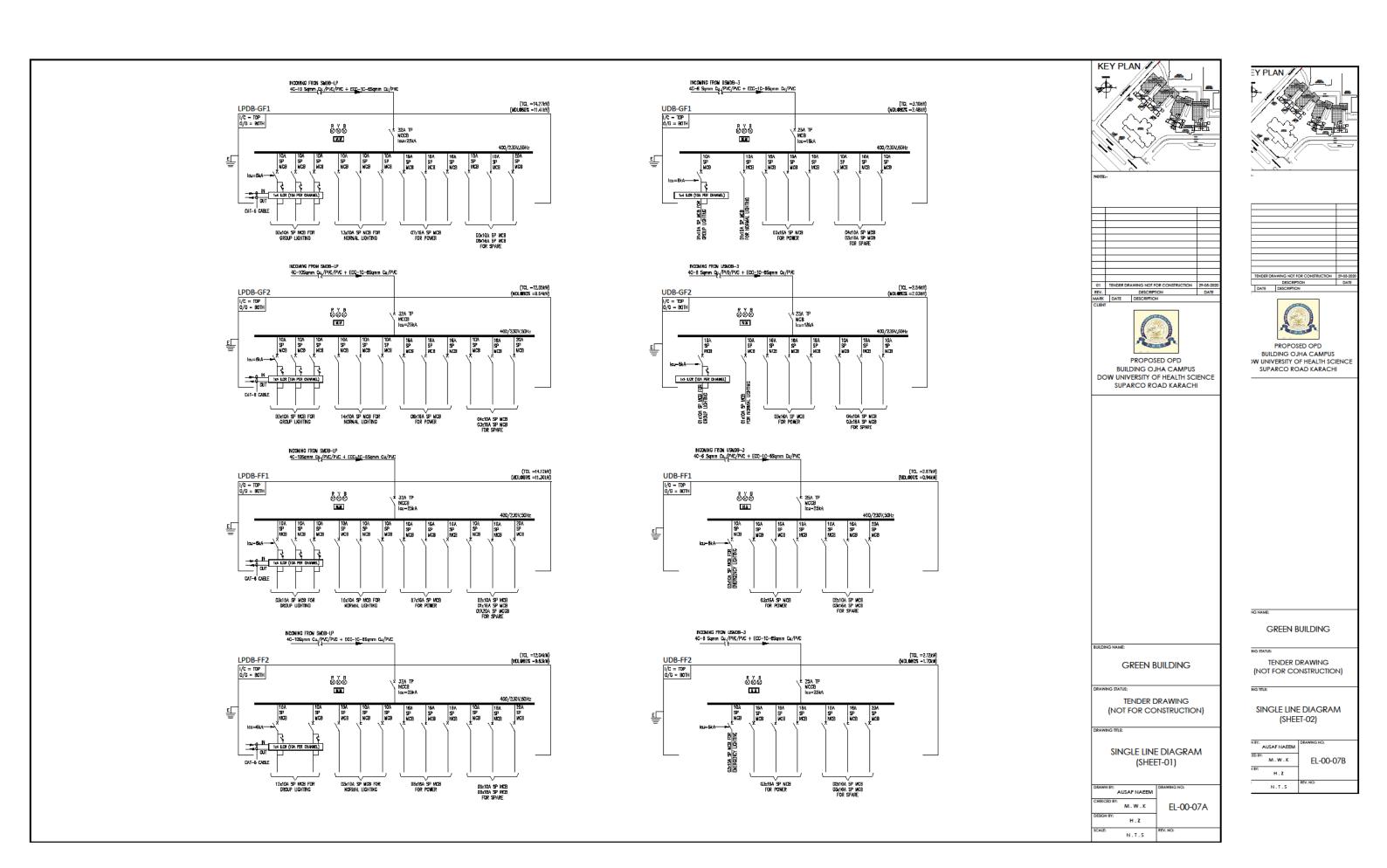


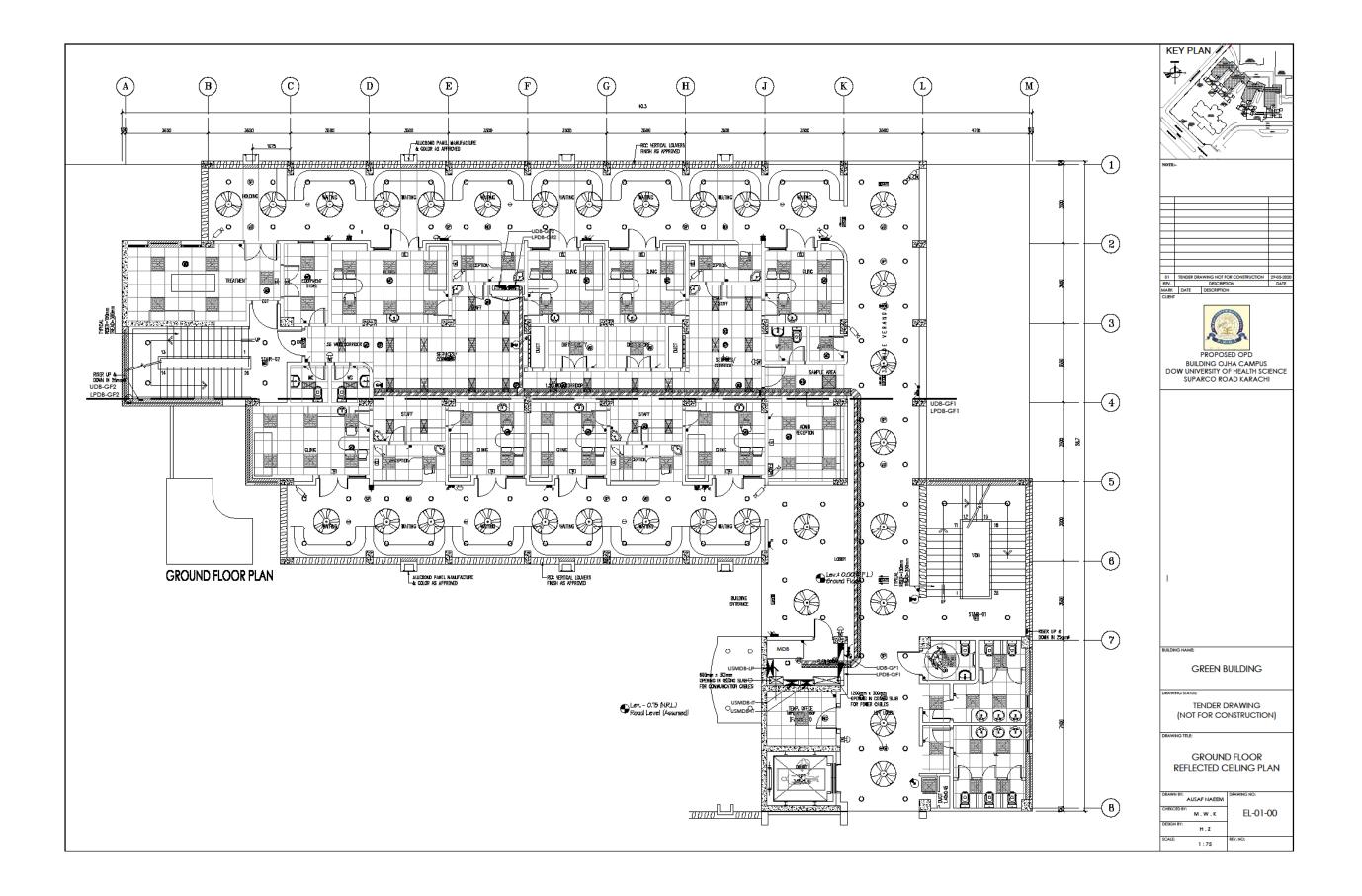
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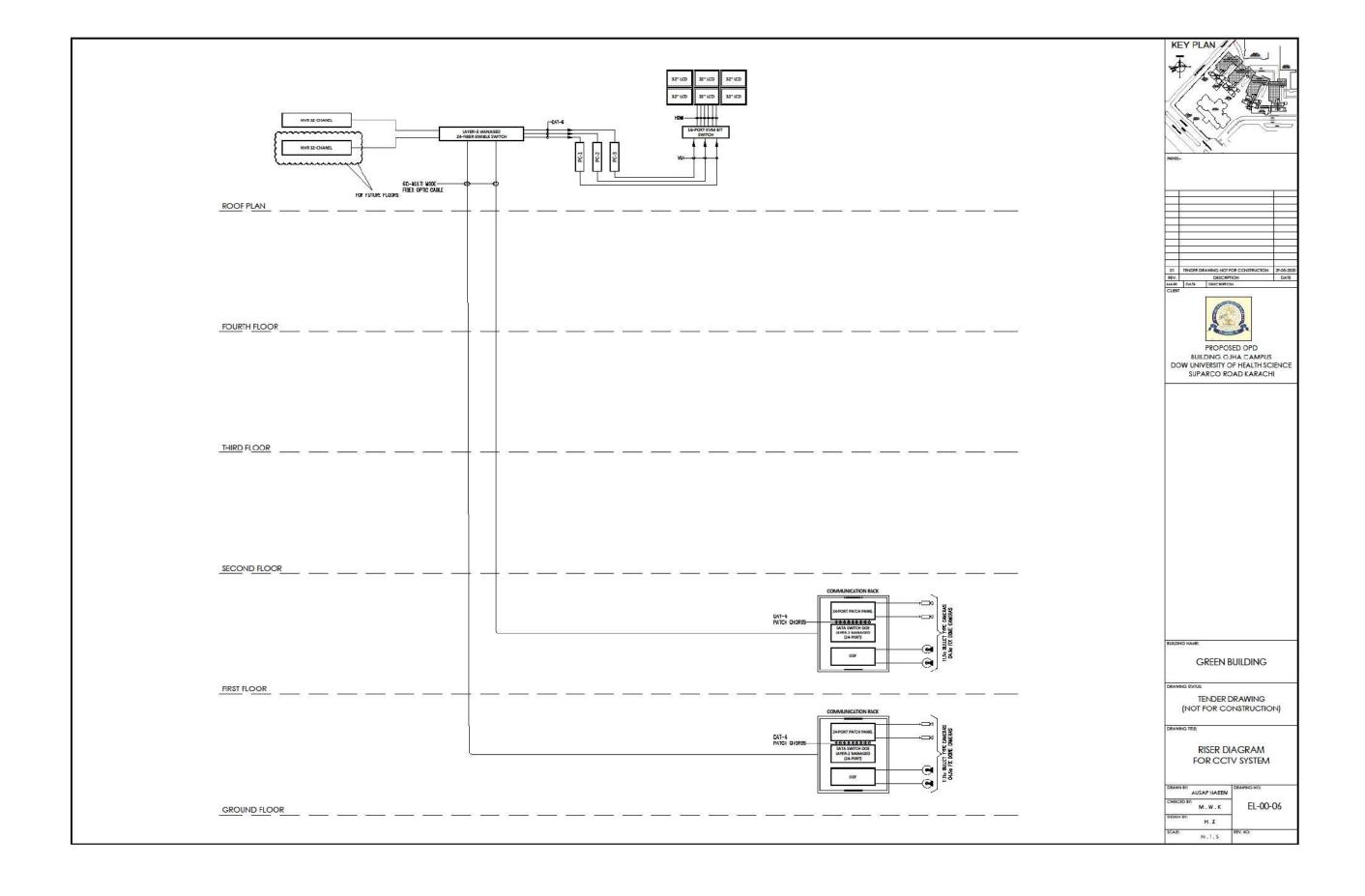


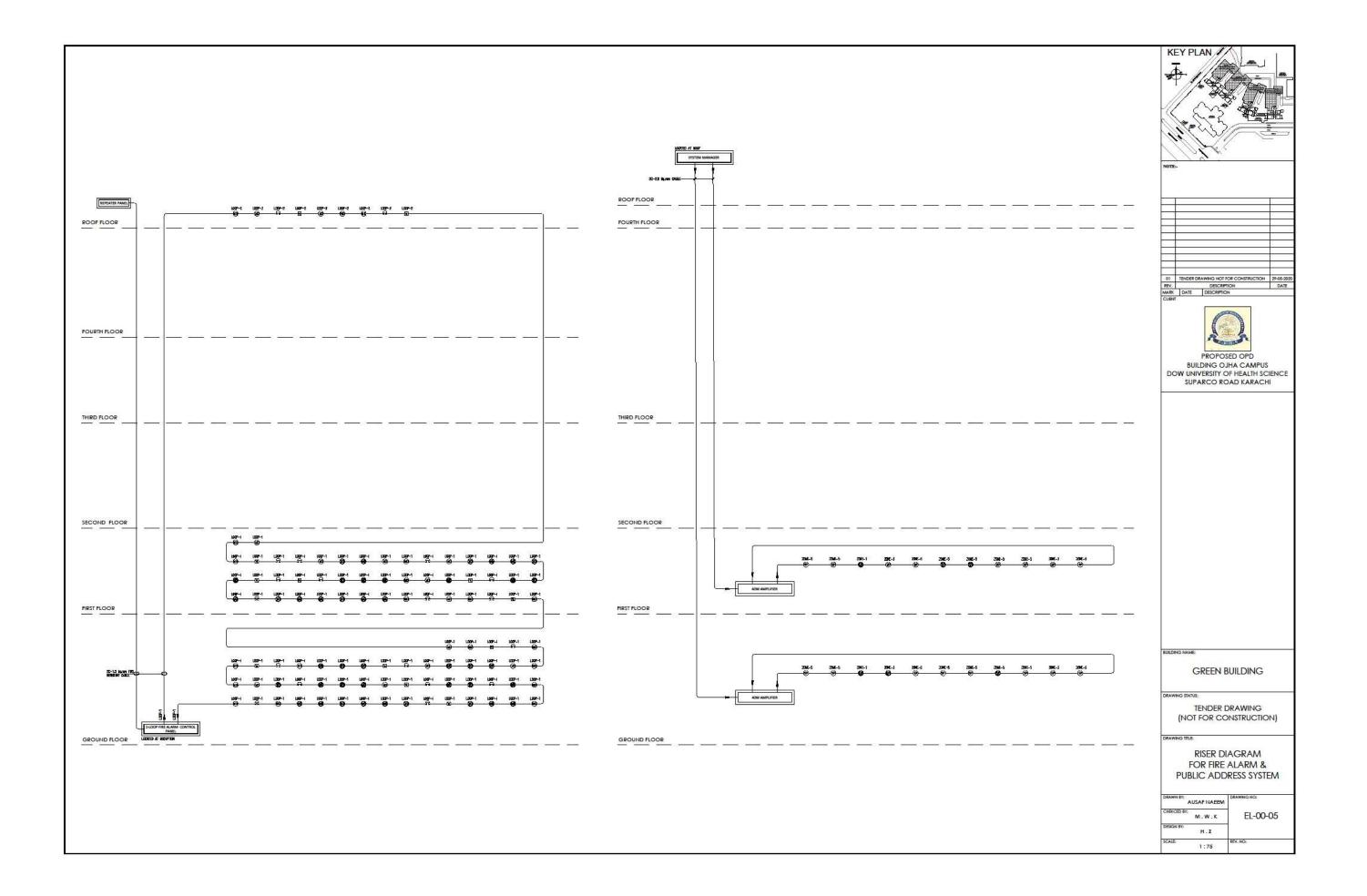


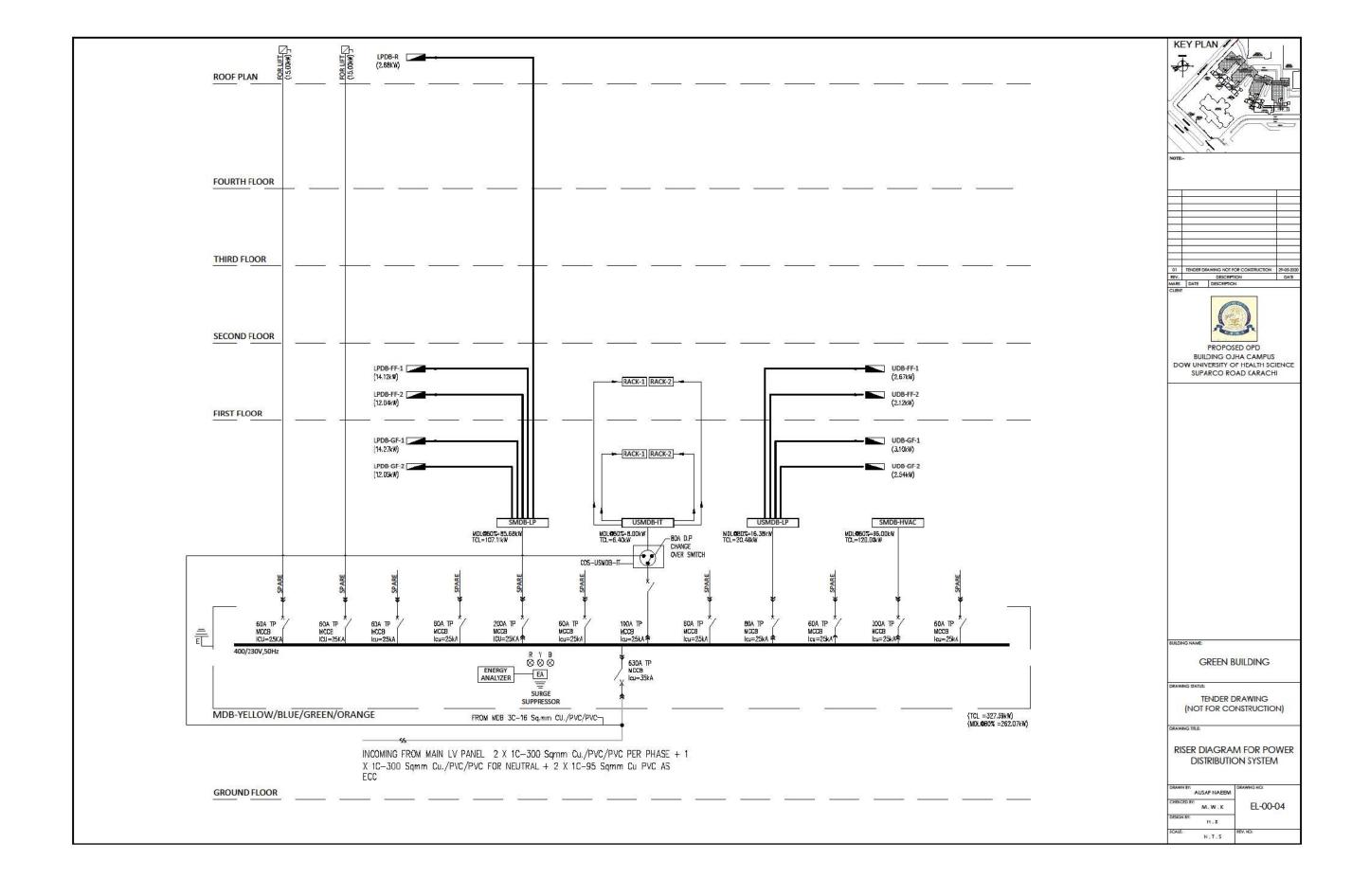












## DESCRIPTION LIGHTING 0 SURFACE MOUNTED DOWN LIGHT WITH 18W LED LAMP COLOR 4000K DIFFUSED GLASS AT CEILING SLAB SURFACE MOUNTED DOWN LIGHT WITH 12W LED LAMP COLOR 4000K DIFFUSED GLASS AT CELLING SLAB /CEILING RECESSED 45W LED PANEL 1200x300mm FIXTURE OF DIFFUSED GLASS DOLOR TEMP 4000K CRI 90% AT FALSE CEILING CEILING RECESSED 45W LED PANEL 600x600mm FIXTURE OF DIFFUSED GLASS COLOR TEMP 4000K CRI 90% AT FALSE CEILING BULK HEAD LIGHT 兹 AT D'-0" A.F.F.L CEILING FAN (36°0 , 48°0 , 56°0) AT CEILING SLAB ᅽ BULK HEAD EMERGENCY LIGHT WITH 10W LED WITH BUILT-IN BATTERY BACK-UP (NON MAINTAINED) AT CELLING SLAB **-**31 EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT (MAINTAINED) AT CELLING SLAB 450 EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED) AT CELLING SLAB स्ट्रा EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED) AT CEILING SLAB ✓ ✓ ■ 10A 220V ONE WAY SWITCH / DIMMER FOR FAN AT 3'-6" A.F.F.L LOW CURRENT SYSTEM MULTI DETECTOR (F.C) AT FALSE CEILING **(10)** AT CELLING SLAB £ ELECTRONIC BELL FOR FIRE ALARM SYSTEM AT 6'-6" A.F.F.L GLASS BREAK MANUAL CALL POINT NO. AT 4'-6" A.F.F.L 8W CEILING SPEAKER (F.C) AT FALSE CEILING ❷ ՛Ֆ 6W COLING SPEAKER AT CELLING SLAB ⊢<mark>∽</mark> 10W WALL MOUNTED SPEAKER AT 7'-0° A.F.F.L ₩ WIFI CEILING MOUNTED AT FALSE CEILING WIFI WALL MOUNTED AT WALL MOUNTED **⊚** DDME TYPE CCTV CAMERA AT CEILING SLAB нШКІ WALL BRACKET CCTV CAMERA AT 7-6 AFFL Q. MATIC SYSTEM SCREEN SCREEN TICKET DISPENSER 13A INTERNATIONAL SWITCH SOCKET / AT COUNTER HEIGHT AT 0'-9" / 3'-8" A.F.F.L o' / o் • 13A FLAT PIN SIMPLEX SWITCH SOCKET AT 0'-9" A.F.F.L AT 0'-9" A.F.F.L 15A 3-PIN SWITCH SOCKET Ь AT 4'-0" AFFL ۵ 20A DP SWITCH SOCKET FOR HAND DRYER AT 13-6" A.F.F.L ô INDUSTRIAL SOCKET Ф 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 0'-9" A.F.F.L 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 3'-6" AFFL 13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX AT 7'-0" A.F.F.L INO. 13A INTERNATIONAL ON RAW POWER, 1NO. 13A FLAT PIN DUPLEX ON UPS POWER & 2NO. RJ-45 DUPLEX FOR VOICE & DATA П AT 0'-9" A.F.F.L

RJ-45 SIMPLEX DATA OUTLET / AT COUNTER HEIGHT

CABLE TRAY FOR POWER & DATA CABLE (EACH TWO PARTITION)

TELEVISION OUTLET

DISTRIBUTION EDARD

MAIN DISTRIBUTION BOARD

COMMUNICATION RACK

UPS POWER BUSWAY

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ELECTRICAL LEGEND

## GENERAL NOTES

- THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS. IF THE SITE CONDITIONS NECESSITATE ANY ALTERATIONS OF DEVIATIONS THE DIRECTIONS OF THE CONSULTANT SHALL BE FOLLOWED.
- ALL WIRING OF LIGHTING AND POWER SHALL BE WITH MULTI CORE PVC INSULATED WIRES FOR SINGLE PHASE CIRCUIT. THE VOLTAGE GRADE OF WIRE SHALL BE 300/500V, WHERE AS FOR THREE PHASE CIRCUIT IT WILL BE 600/1000 VOLTS.
- DIMENSION GIVEN IN LAYOUT AND DETAIL DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO MEASURE DIMENSIONS ACCORDING TO ARCHITECTURAL AND STRUCTURAL DRAWING.
- 4. CIRCUIT WIRING SHALL BE DONE IN ACCORDANCE WITH THE WIRING SCHEDULE LINLESS OTHERWISE INDICATED.
- 5. WIRING SHALL BE DONE AFTER THE COMPLETION OF CONDUCTING WORK IN ALL RESPECTS INCLUDING THE INSTALLATION OF BACK BOXES, OUTLET BOXES ETC.
- 6. WIRING SHALL BE CONTINUOUS LODPING IN TYPE AND NO JOINT IN WIRES SHALL BE ALLOWED.
- ARRANGEMENT OF ELECTRICAL EQUIPMENT ON ELECTRICAL DRAWINGS ARE TENTATIVE, EXACT ARRANGEMENT OF EQUIPMENT SHALL BE MADE IN MEW OF ITS
  PHYSICAL DIMENSIONS.
- BEFORE DETERMINING THE CUIT LENGTH OF CABLE THE ACTUAL MEASUREMENTS BE TAKEN AT SITE AND PROVISIONS OF SLACK (3%) AT TERMINATION OF SWITCH BOARD (5'0" APPROX.) AND SPARE LOOP SHALL BE TAKEN INTO ACCOUNT.
- 9. MOUNTING HEIGHT OF MISCELLANEOUS OUTLETS FROM FINISHED FLOOR LEVEL ARE SHOWN ON GIVEN SCHEDULE ( REFER DRAWINGS ).
- 10. CONDUIT UNDER FLOOR SHALL HAVE A MINIMUM DEPTH OF 50mm MEASURED FROM FINISH FLOOR LEVEL TO TOP OF CONDUIT.
- 11. MINIMUM SIZE OF CONDUIT SHALL BE 25mmø, UNLESS OTHERWISE INDICATED.
- 12. BACK BOXES FOR SWITCHES, SOCKETS AND TELEPHONE ETC. SHALL BE MADE WITH 165WC SHEET STEEL.
- 13. WIRE AS ECC SHALL BE GREEN IN COLOR OR GREEN / YELLOW IN COLOR.
- 14. CONDUIT AND CABLES TO BE LAID UNDER FLOOR SHALL BE IN CODROMATION WITH OTHERS SERVICES.
- 15. INCASE OF ANY DEVIATION FROM DESIGN DRAWINGS AT ANY INSTANT THE CONTRACTOR MUST TAKE APPROVAL FROM CONSULTANT BEFORE COMMENCEMENT OF WORK AT SITE.
- 16. FOR TELEPHONE WIRING, CAT-6 CABLE SHALL BE USED WITH GREY COLOR.
- 17. FOR NETWORKING CAT-6 CABLE SHALL BE USED WITH BLUE COLOR OR ANY COLOR DISTINCT FROM TELEPHONE CAT-6 CABLE..
- 18. FOR CCTV CAT-6 CABLE SHALL BE USED.

## WIRING SCHEDULE

AT 0-9" / 3'-6" A.F.F.L

AT 4-0" AFFL

DB TO SWITCH BOARD / 1ST LIGHT POINT	2 x 15 Sq.mm + ECC 1 x 15 Sq.mm
LIGHT POINT TO LIGHT POINT	1 x 1.5 Sq.mm
AS NEUTRAL COMMON FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
DB TO SWITCH BOARD / 1ST LIGHT POINT	2 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
LIGHT POINT TO LIGHT POINT	1 x 1.5 Sq.mm
AS NEUTRAL COMMEN FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.rnm + ECC 1 x 2.5 Sq.rnm
13A INTERNATIONAL SWITCH SOCKET OUTLET	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm
15A 3-PIN ROUND SWITCH SOCKET CUTLET	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FOR POWER
13A 3-PIN FLAT SWITCH SOCKET DUTLET ( UPS )	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FOR POWER



NOTE:-

01 TENDER DRAWING NOT FOR CONSTRUCTION 2

 01
 TENDER DRAWING NOT FOR CONSTRUCTION
 29-05-20:

 REV.
 DESCRIPTION
 DATE

 MARK
 DATE
 DESCRIPTION



PROPOSED OPD
BUILDING OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD KARACHI

BUILDING NAME:

GREEN BUILDING

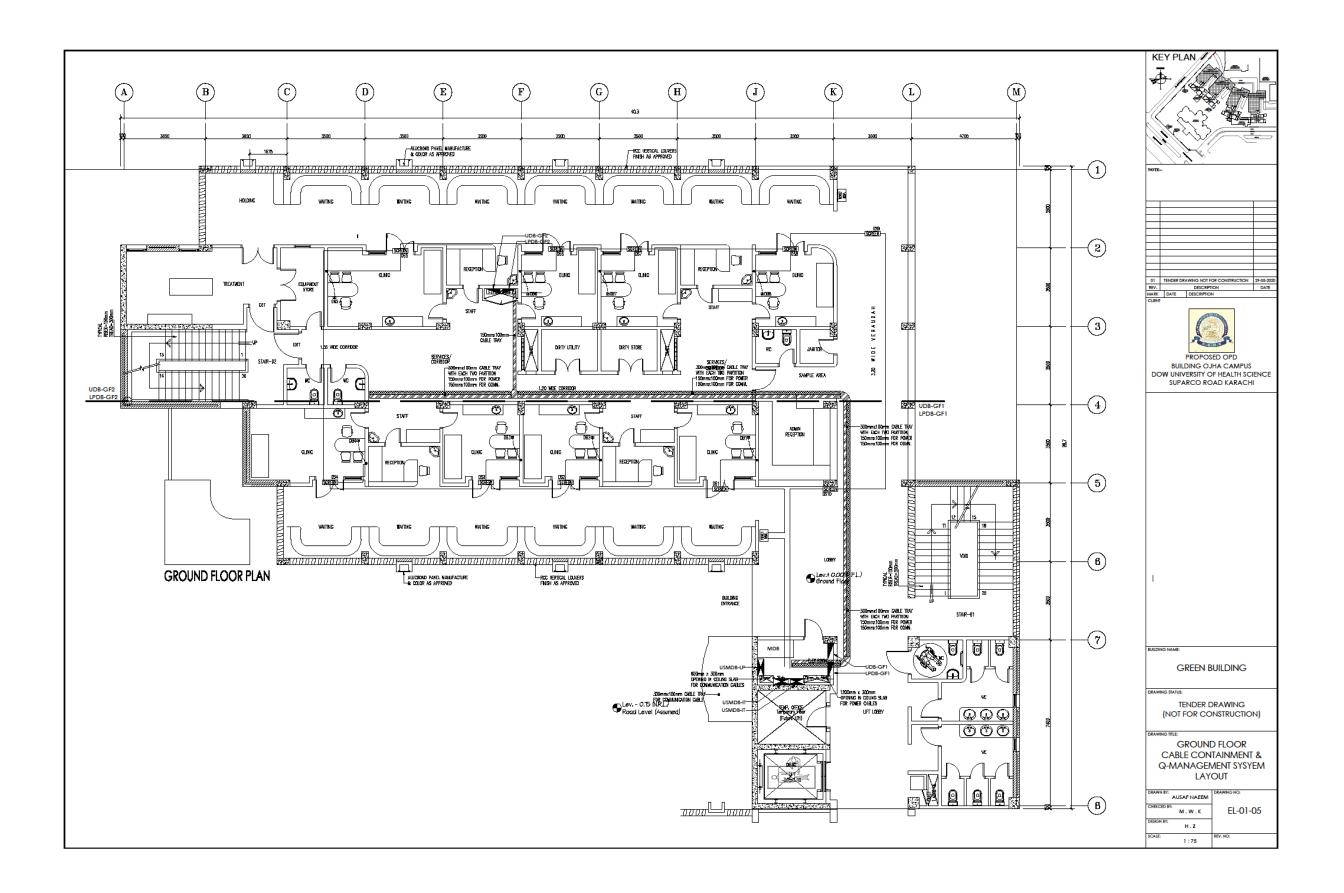
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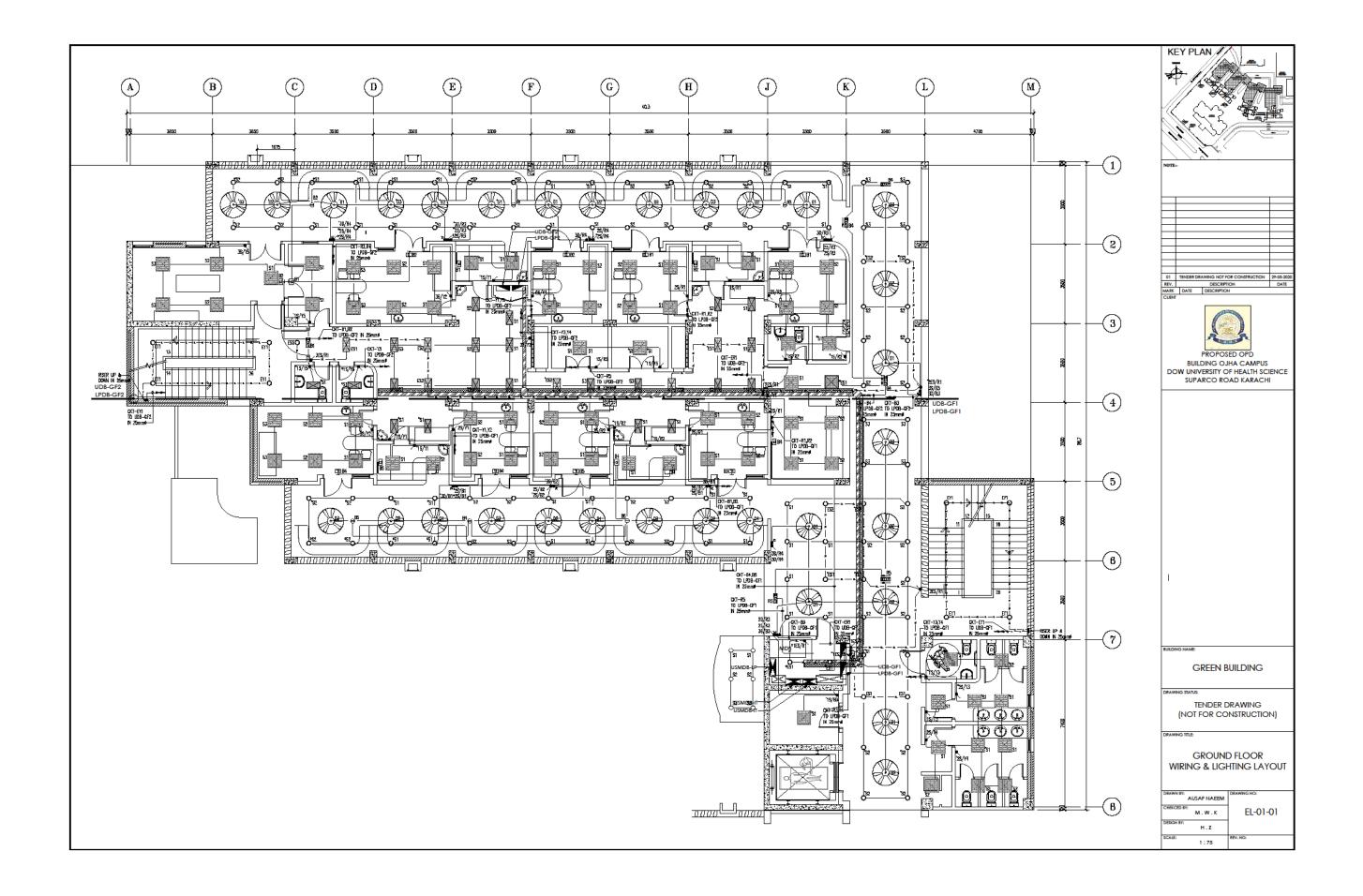
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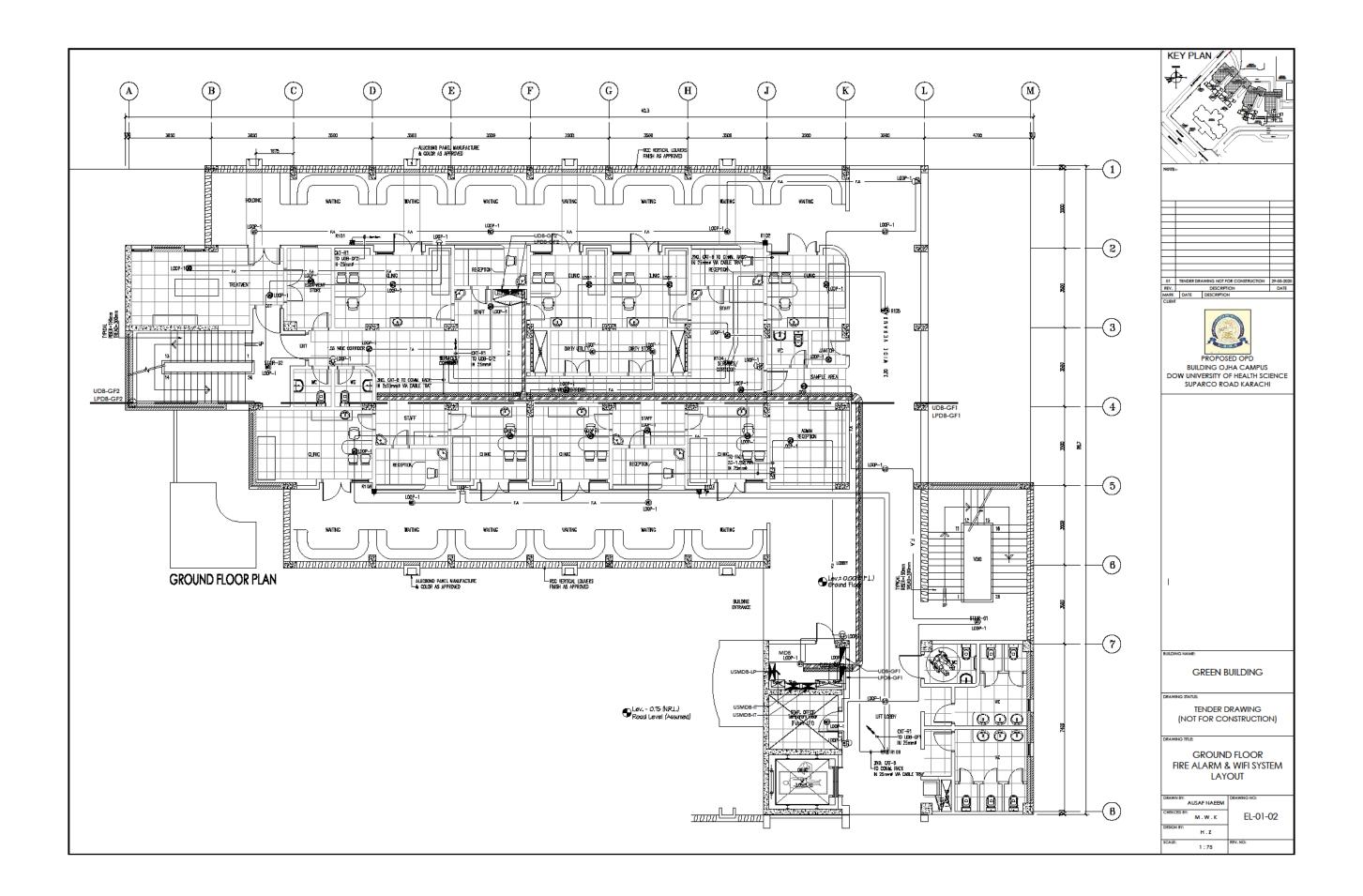
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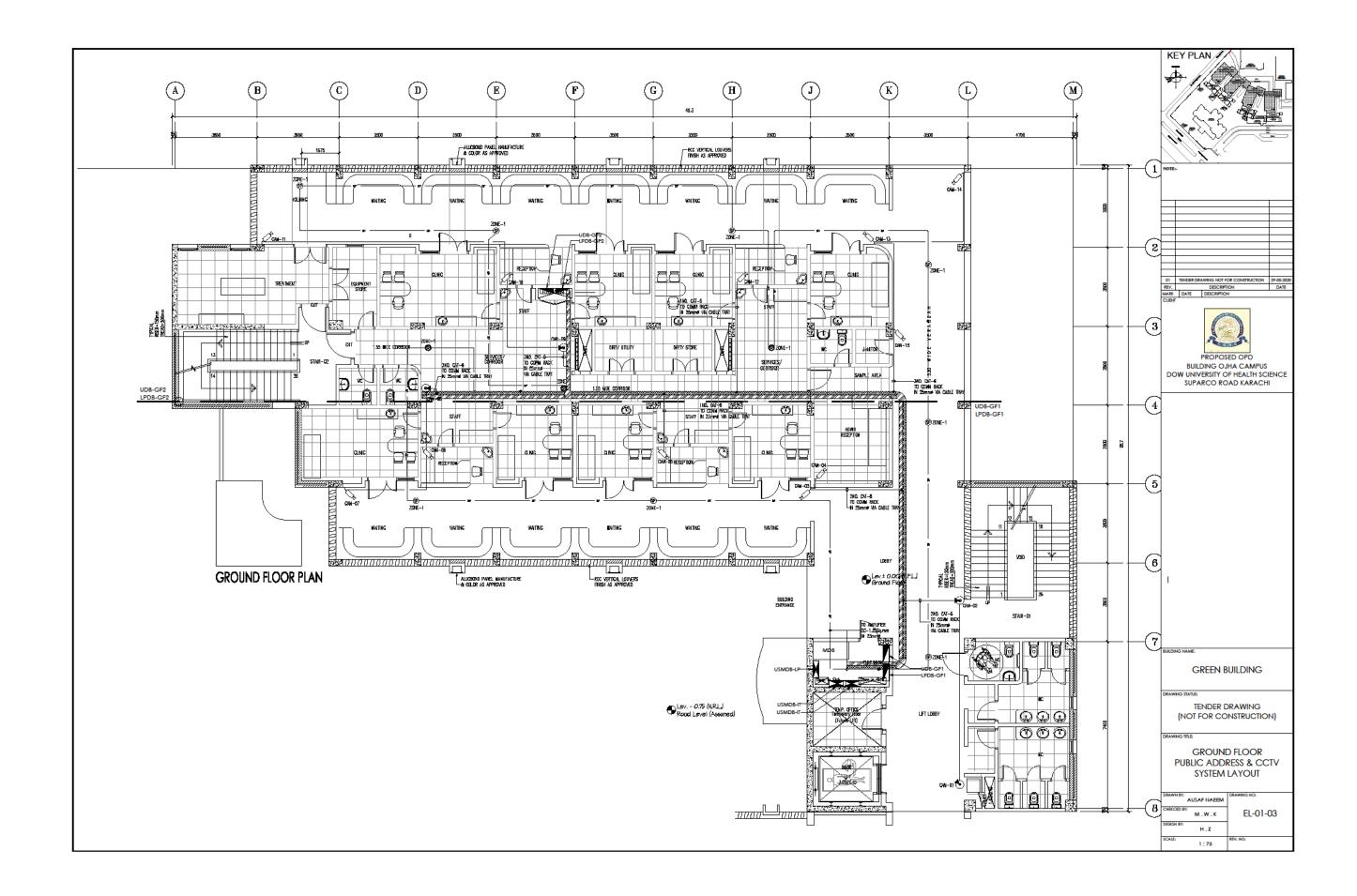
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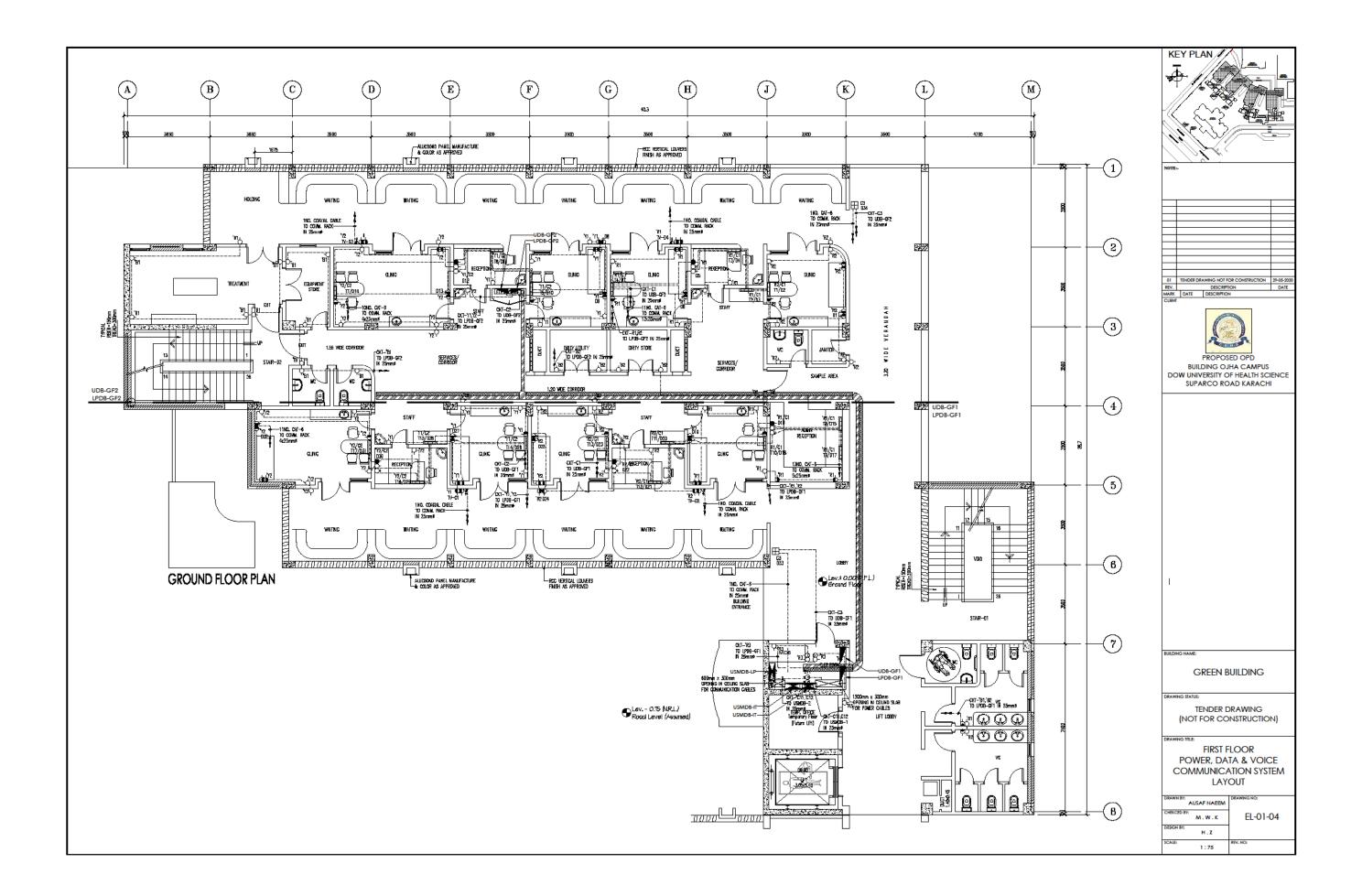
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ESIGN BY: H . Z	
CALE: N.T.S	REV. NO:

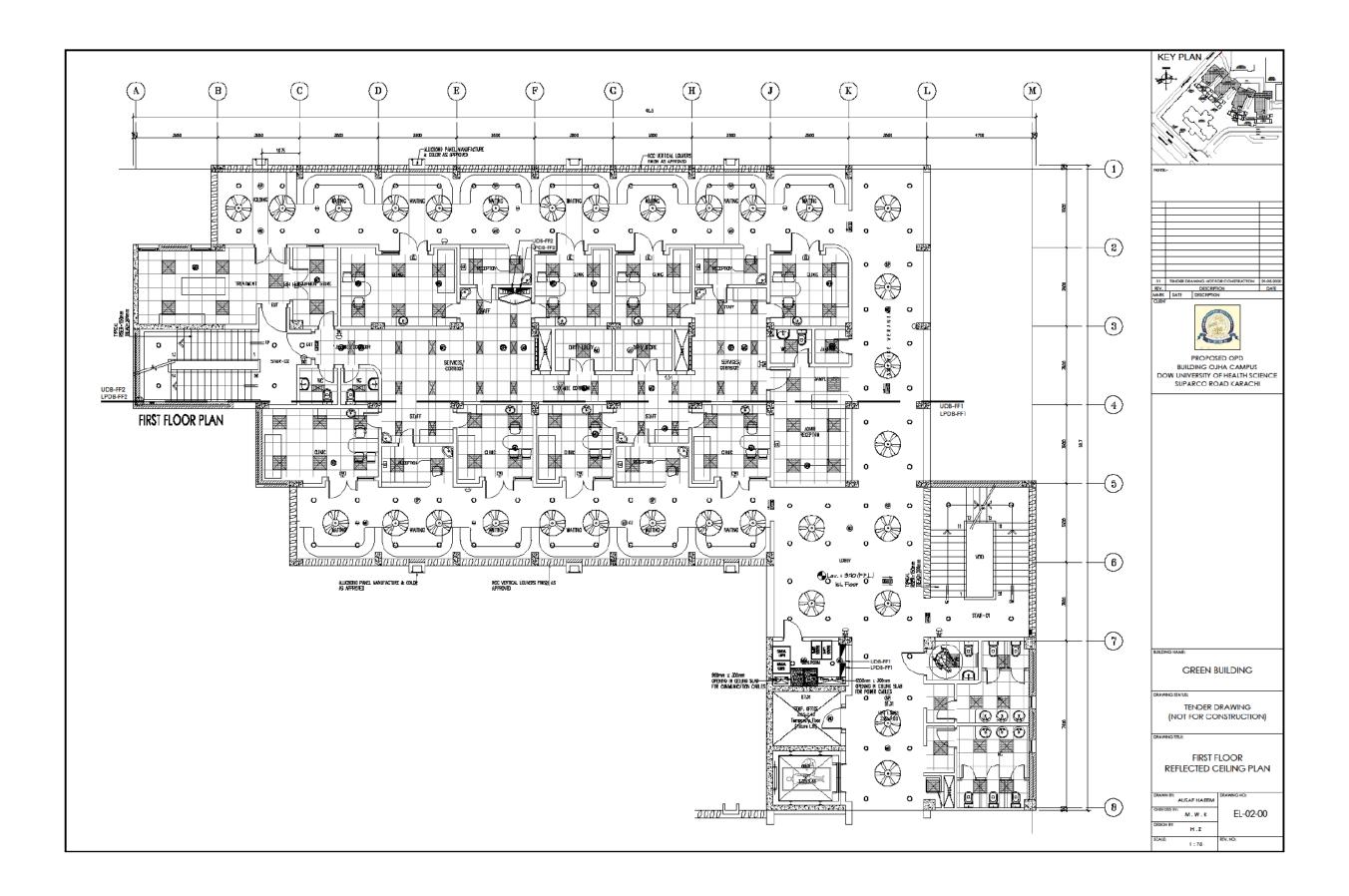


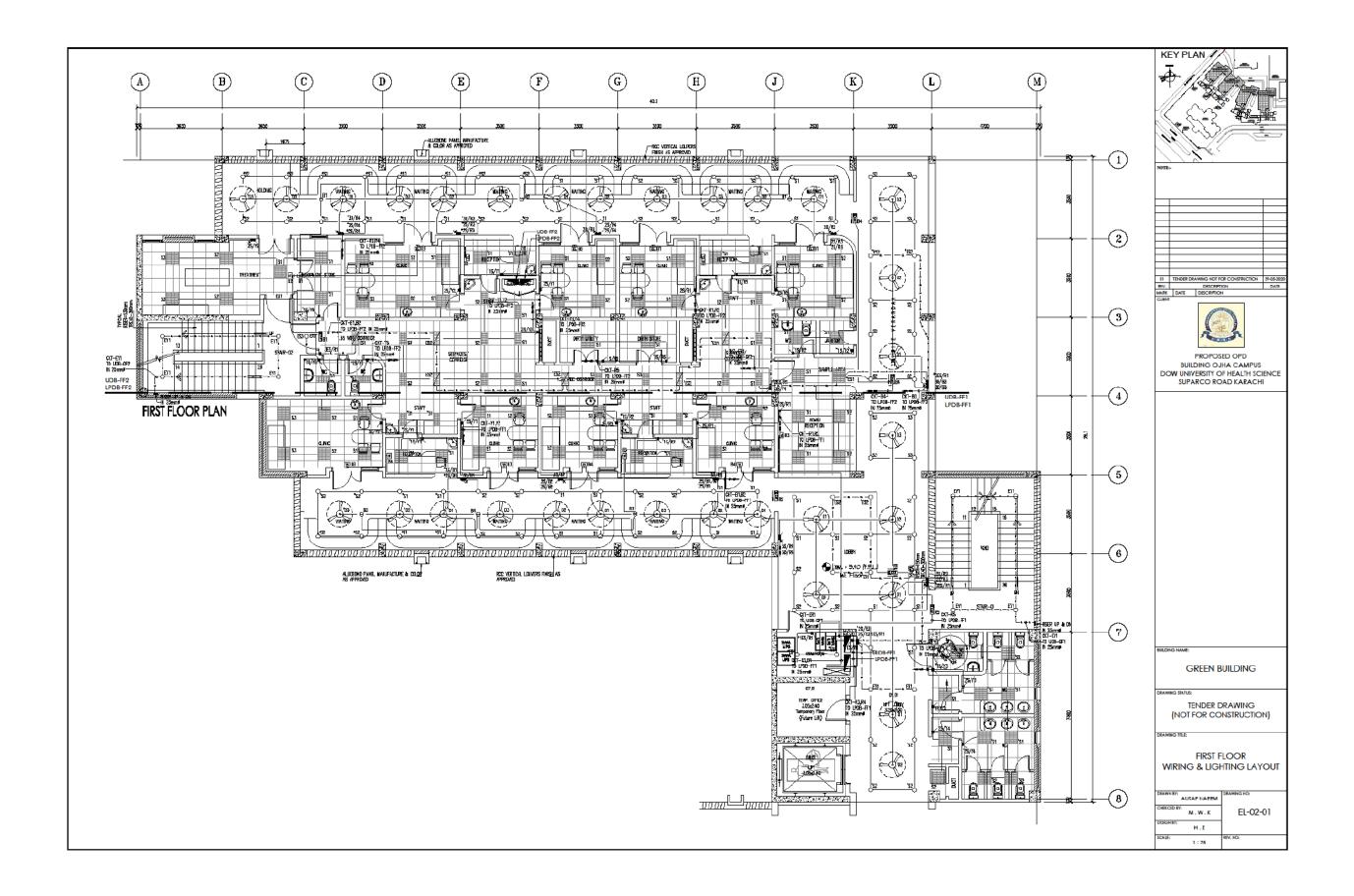


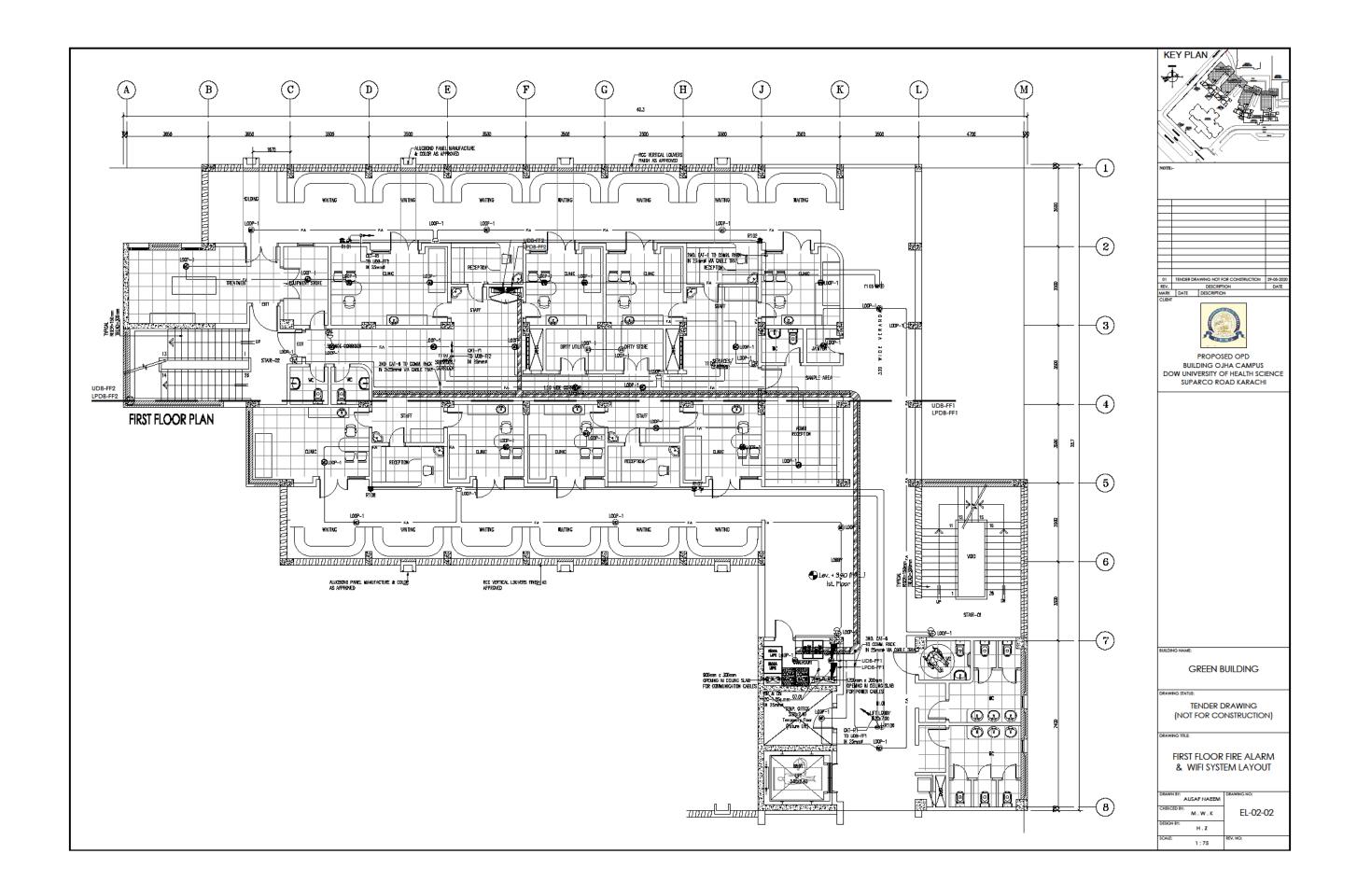


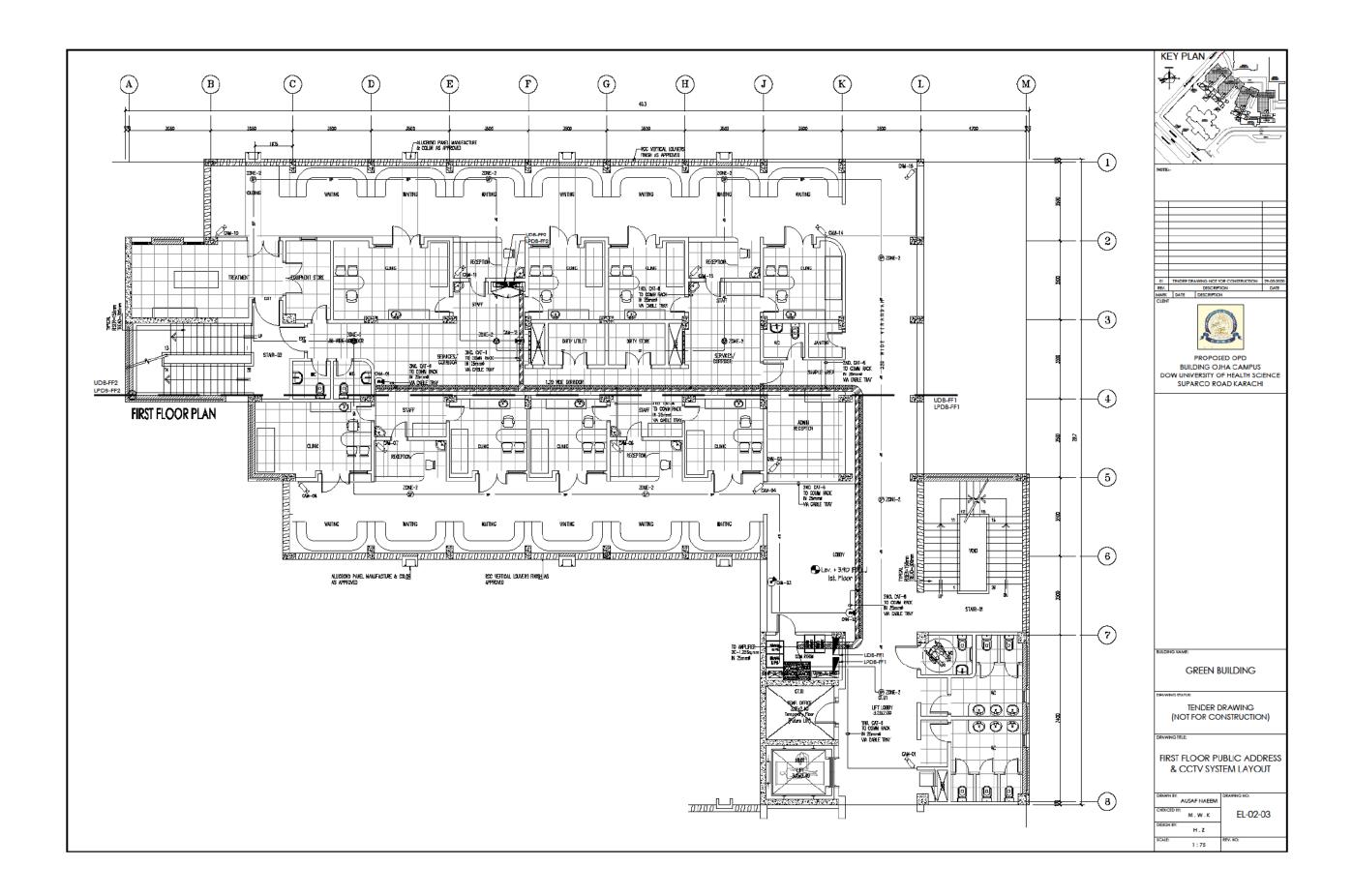


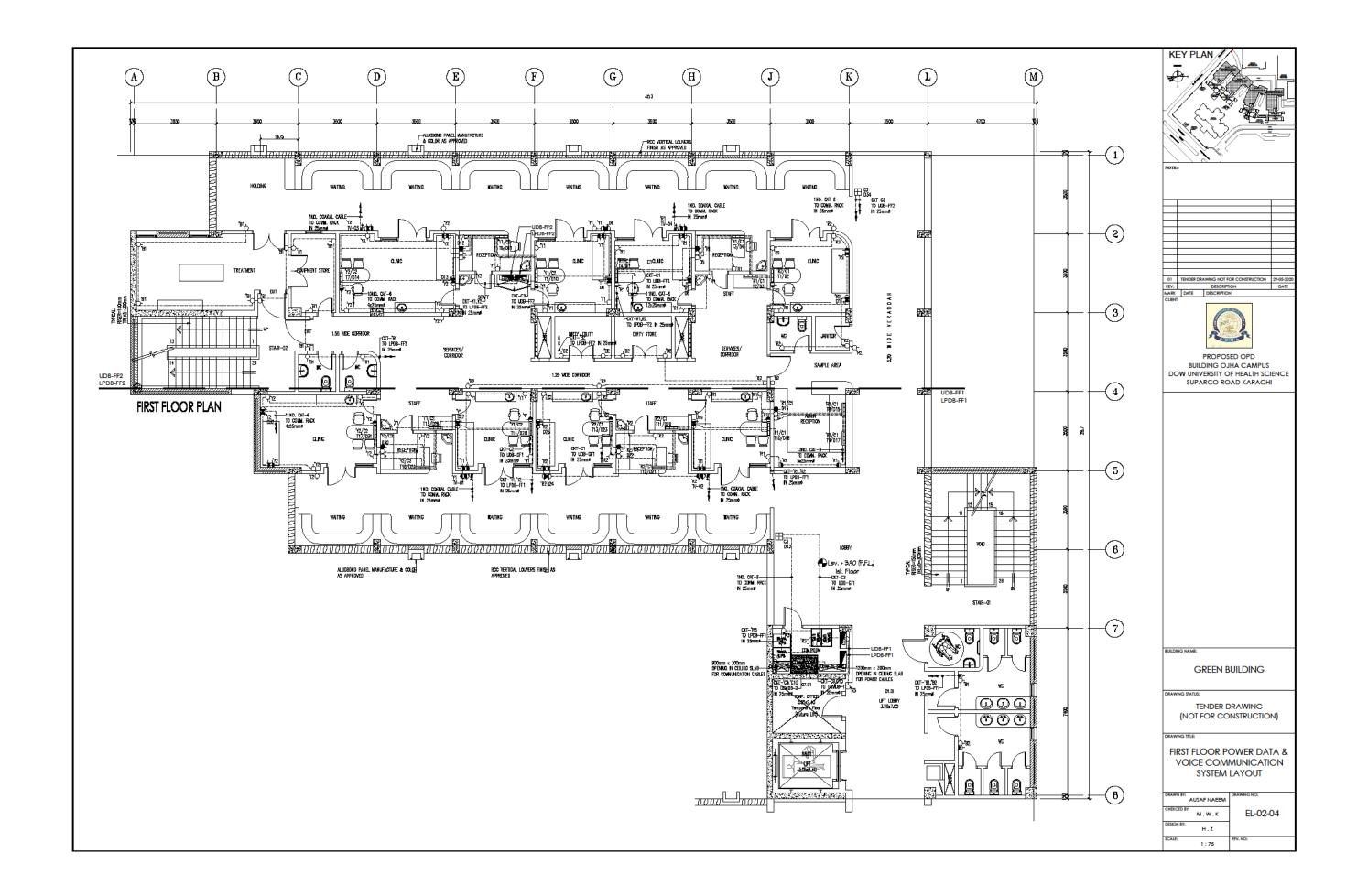


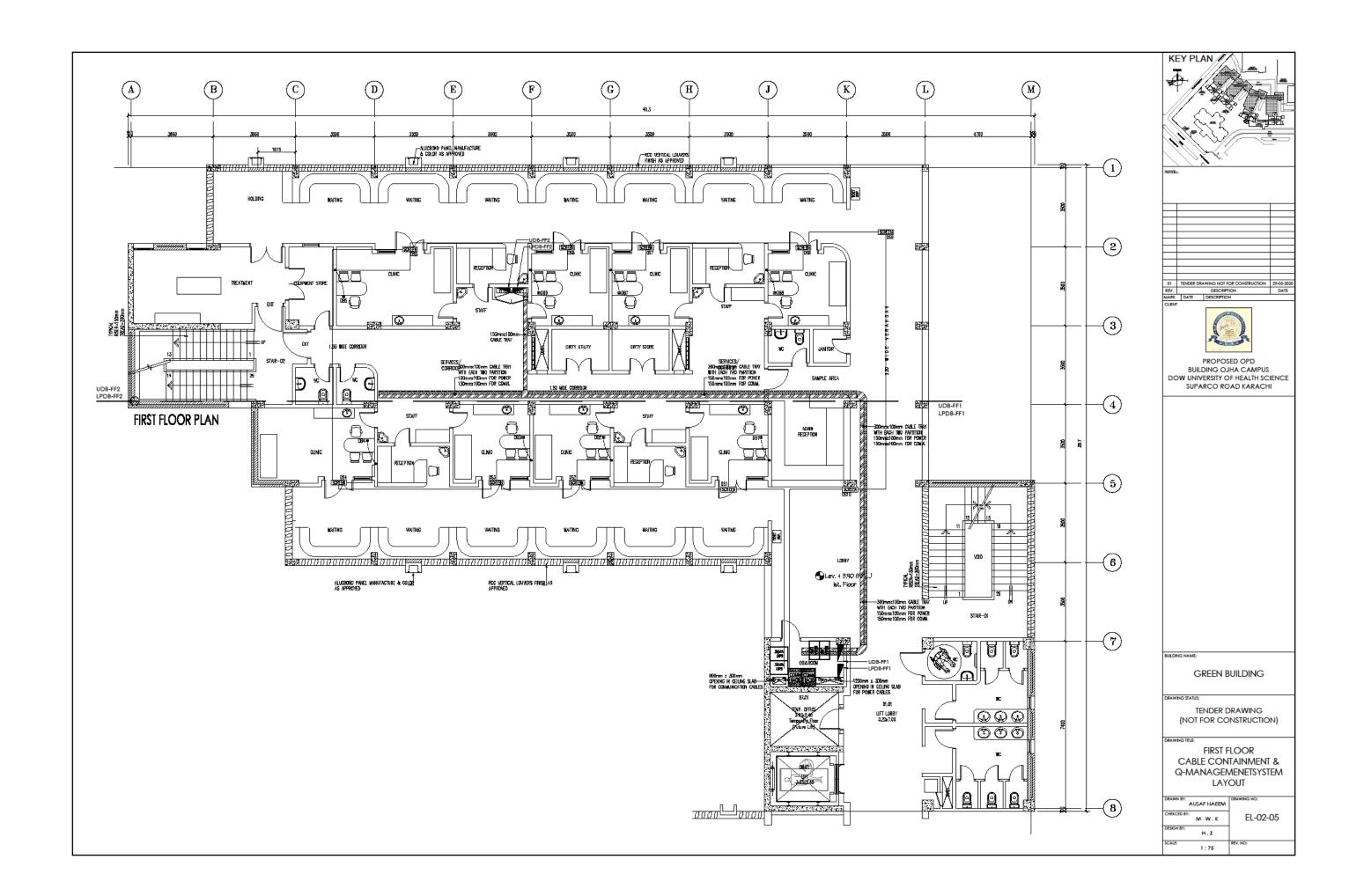


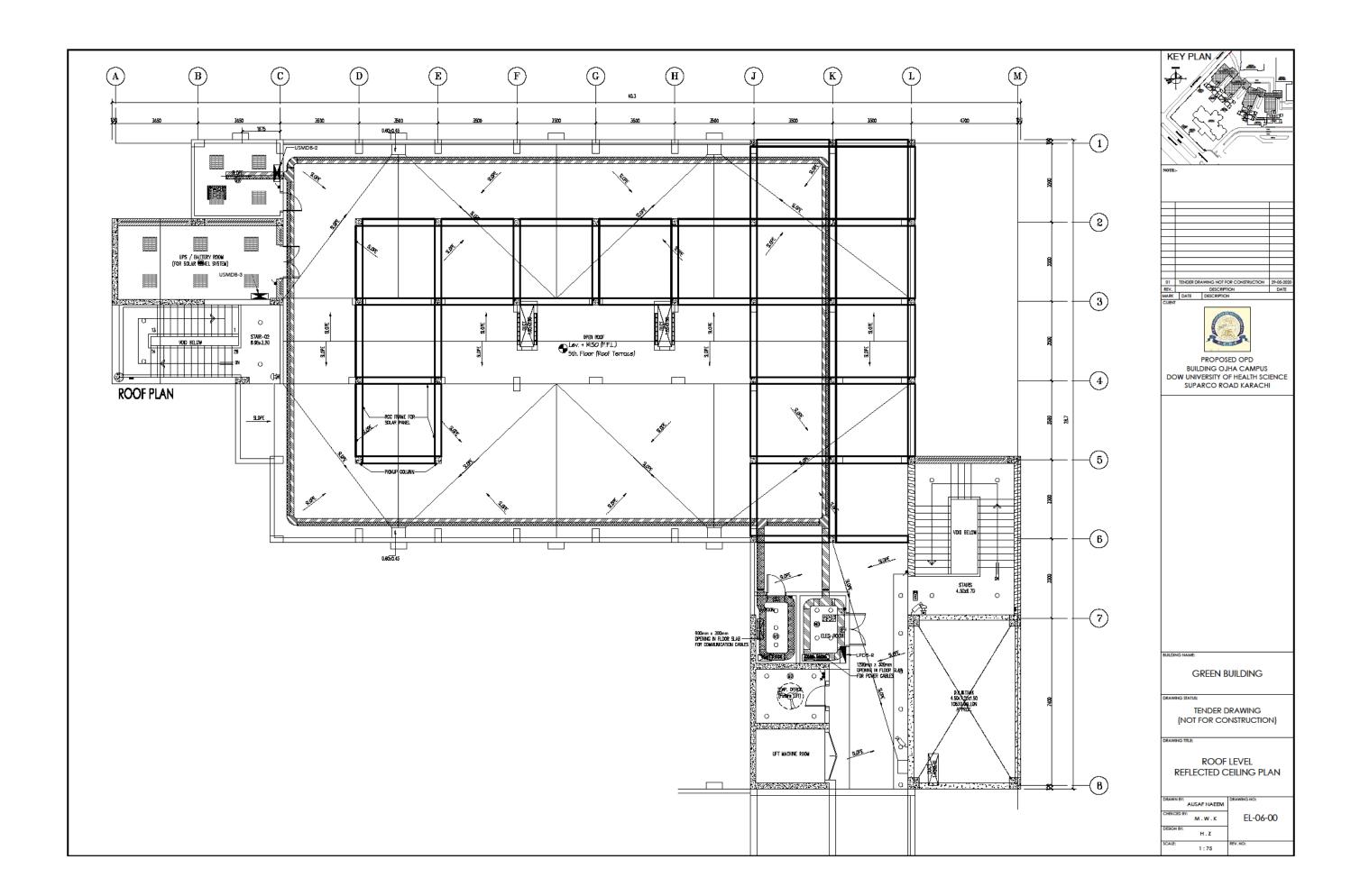


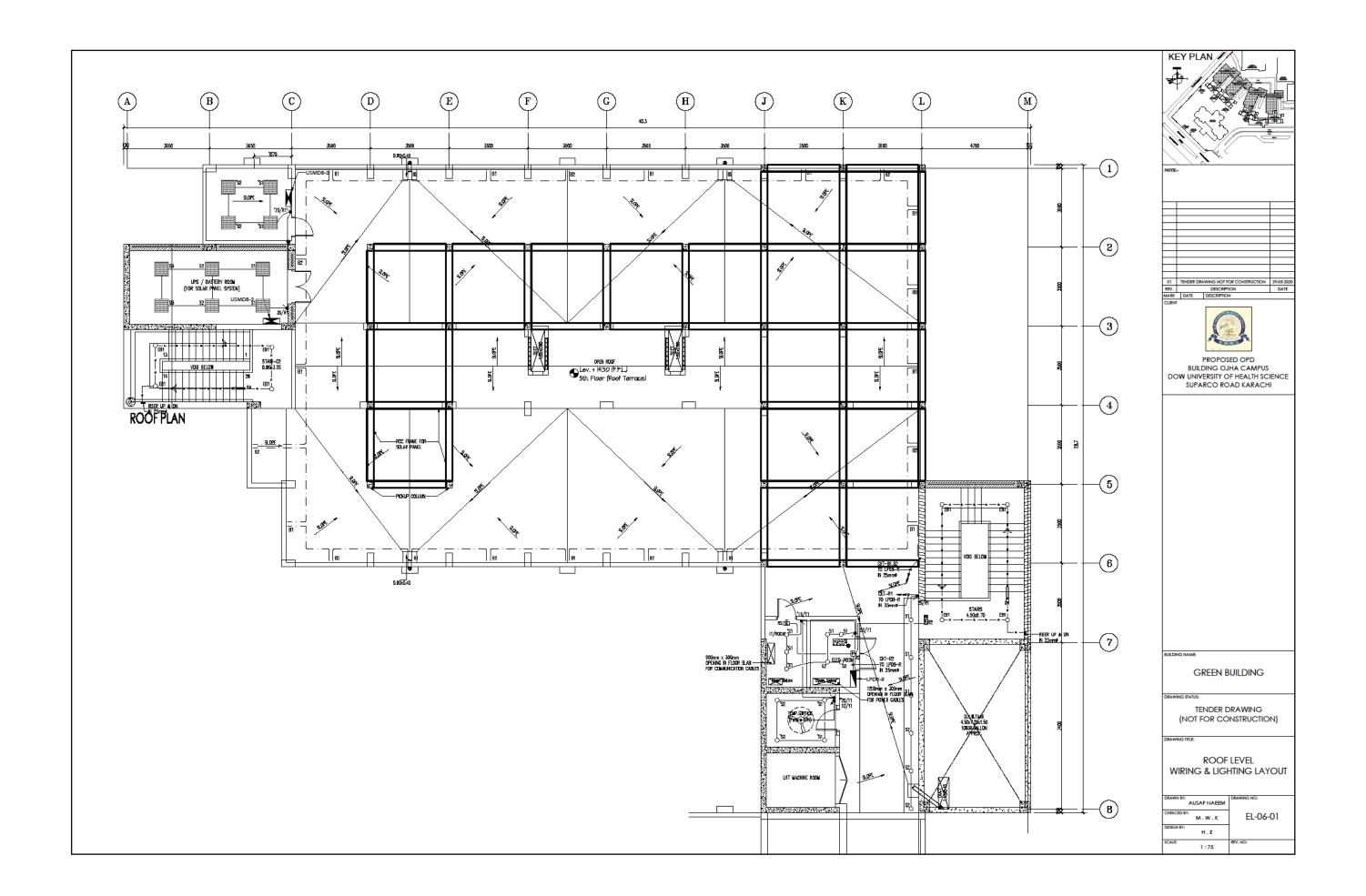


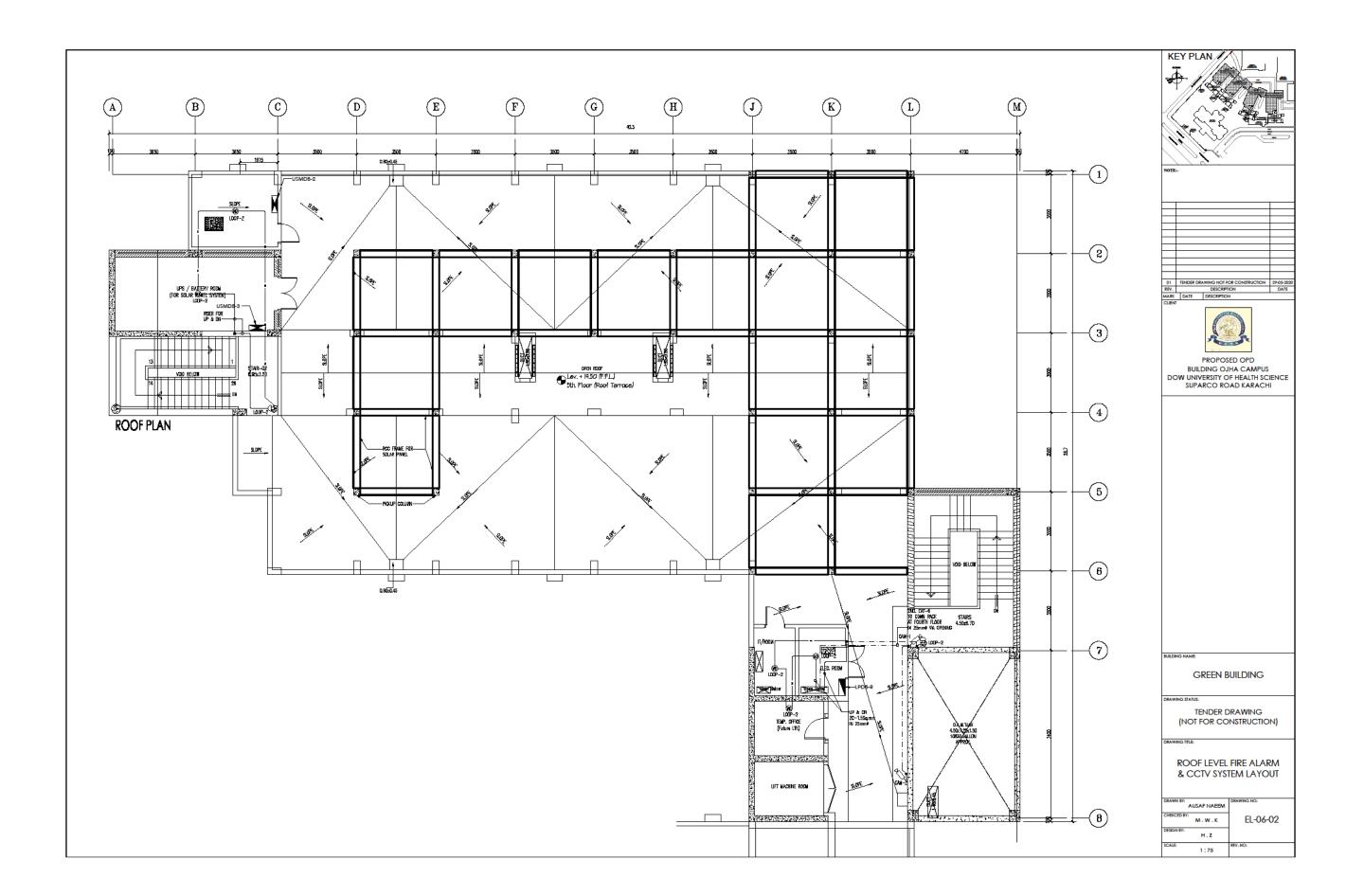


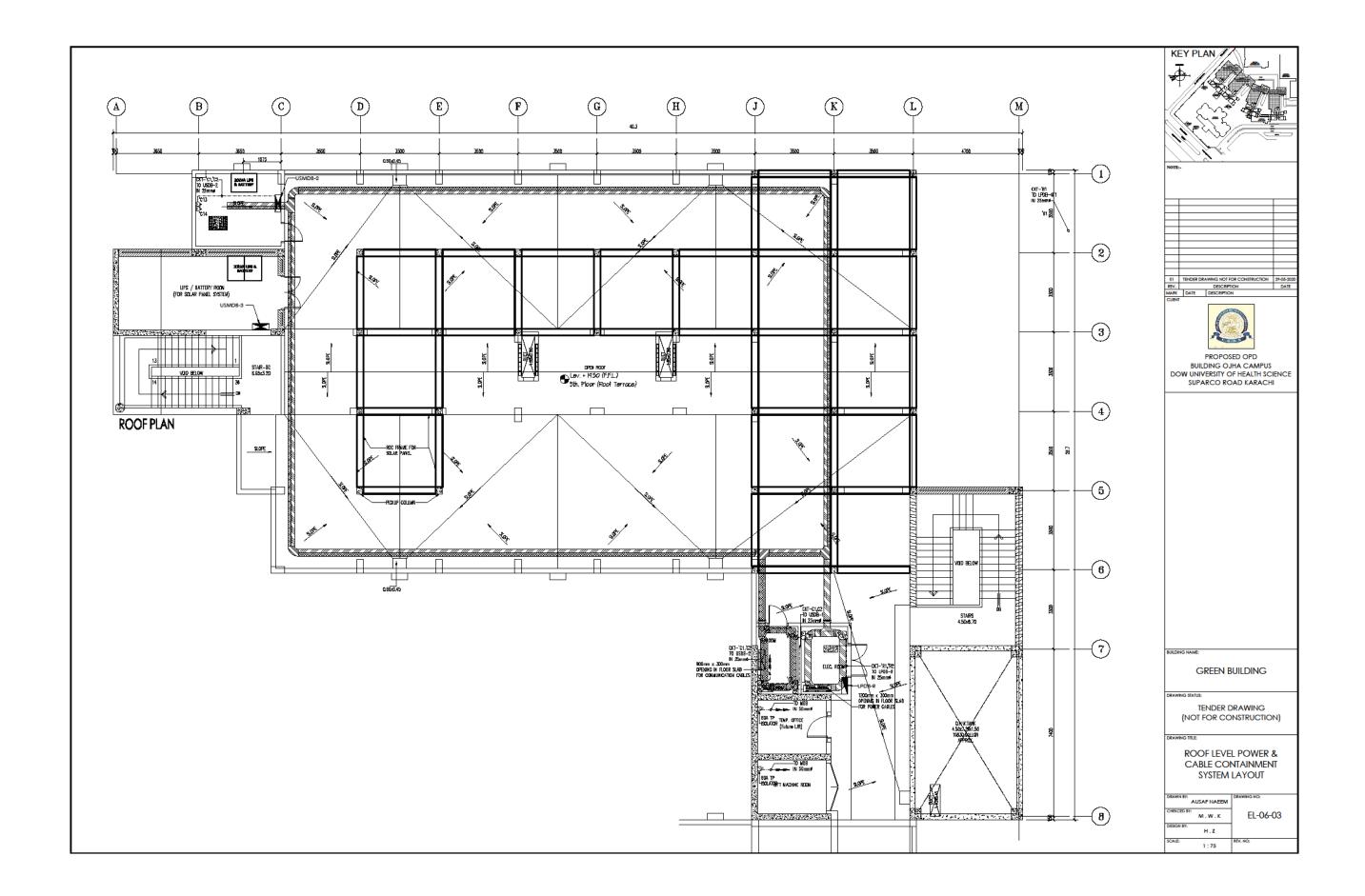


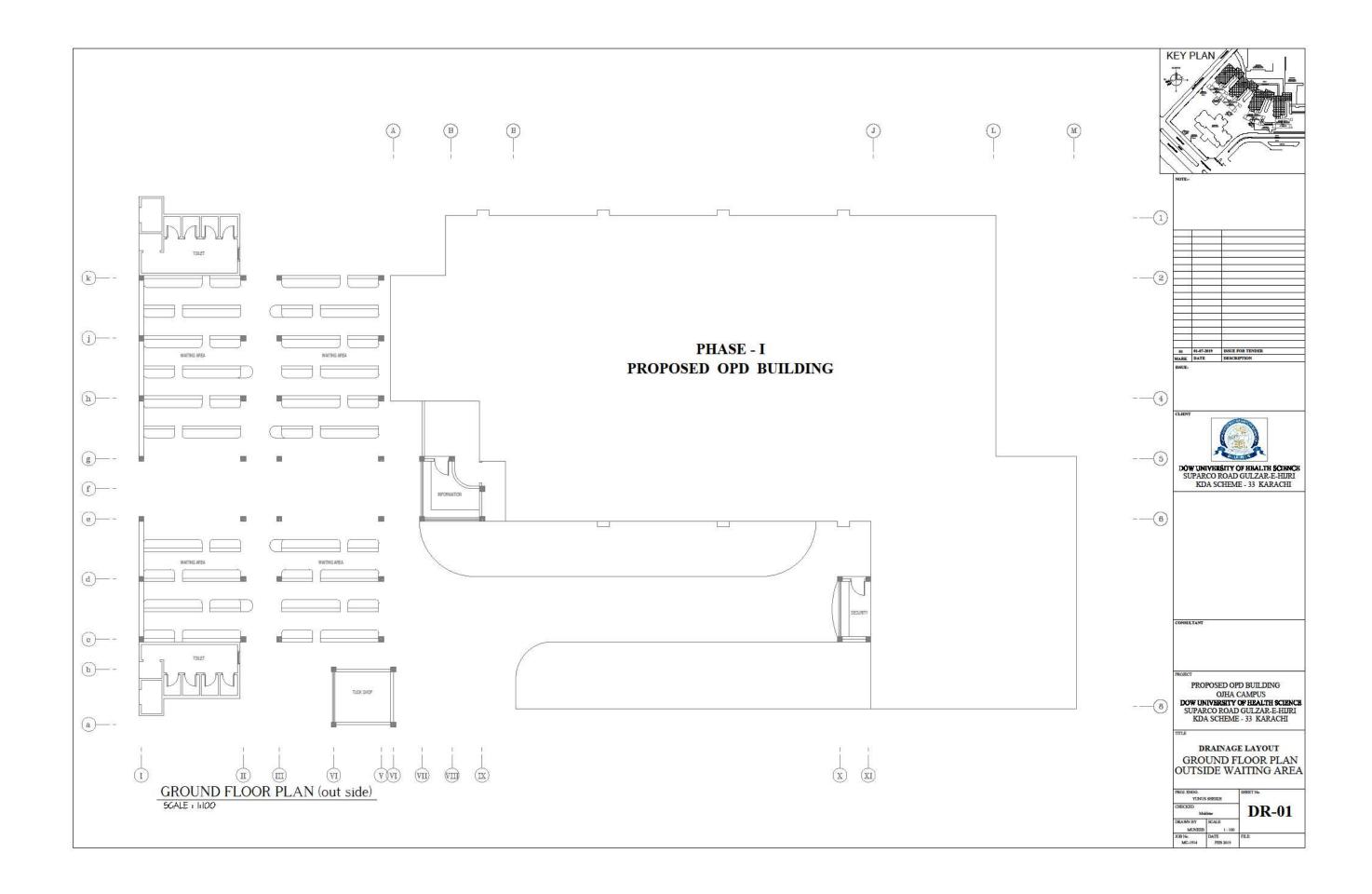


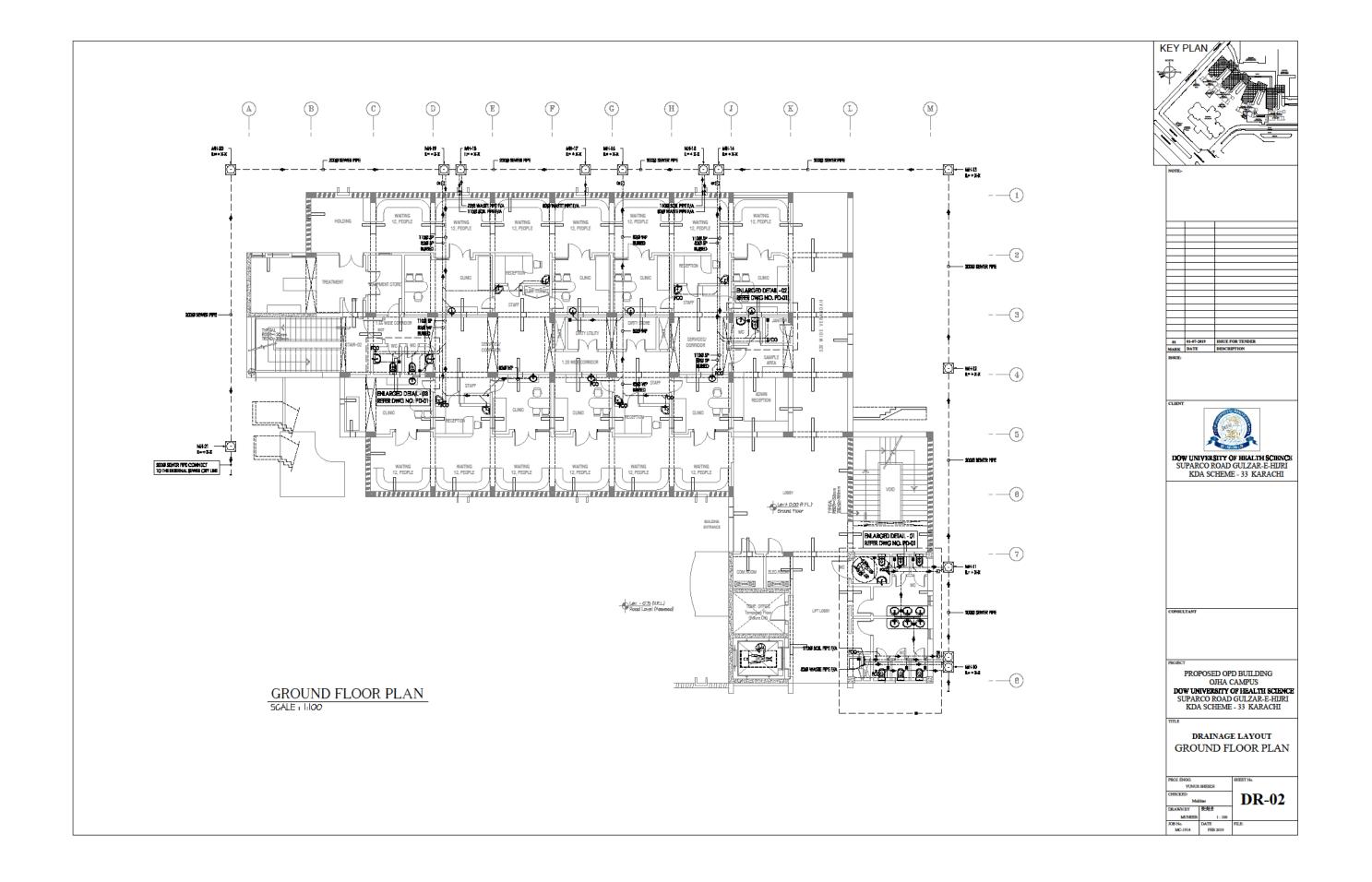


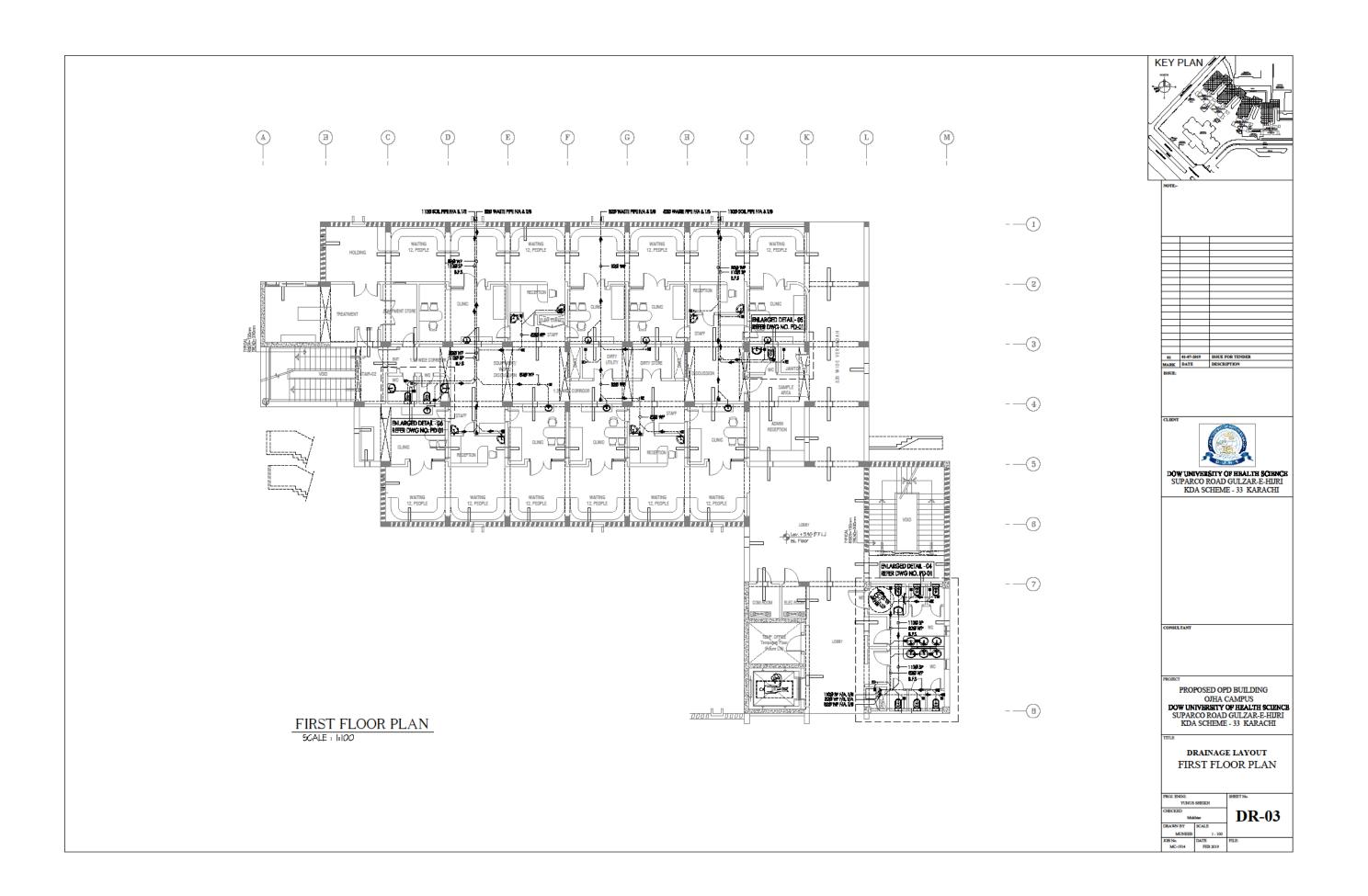


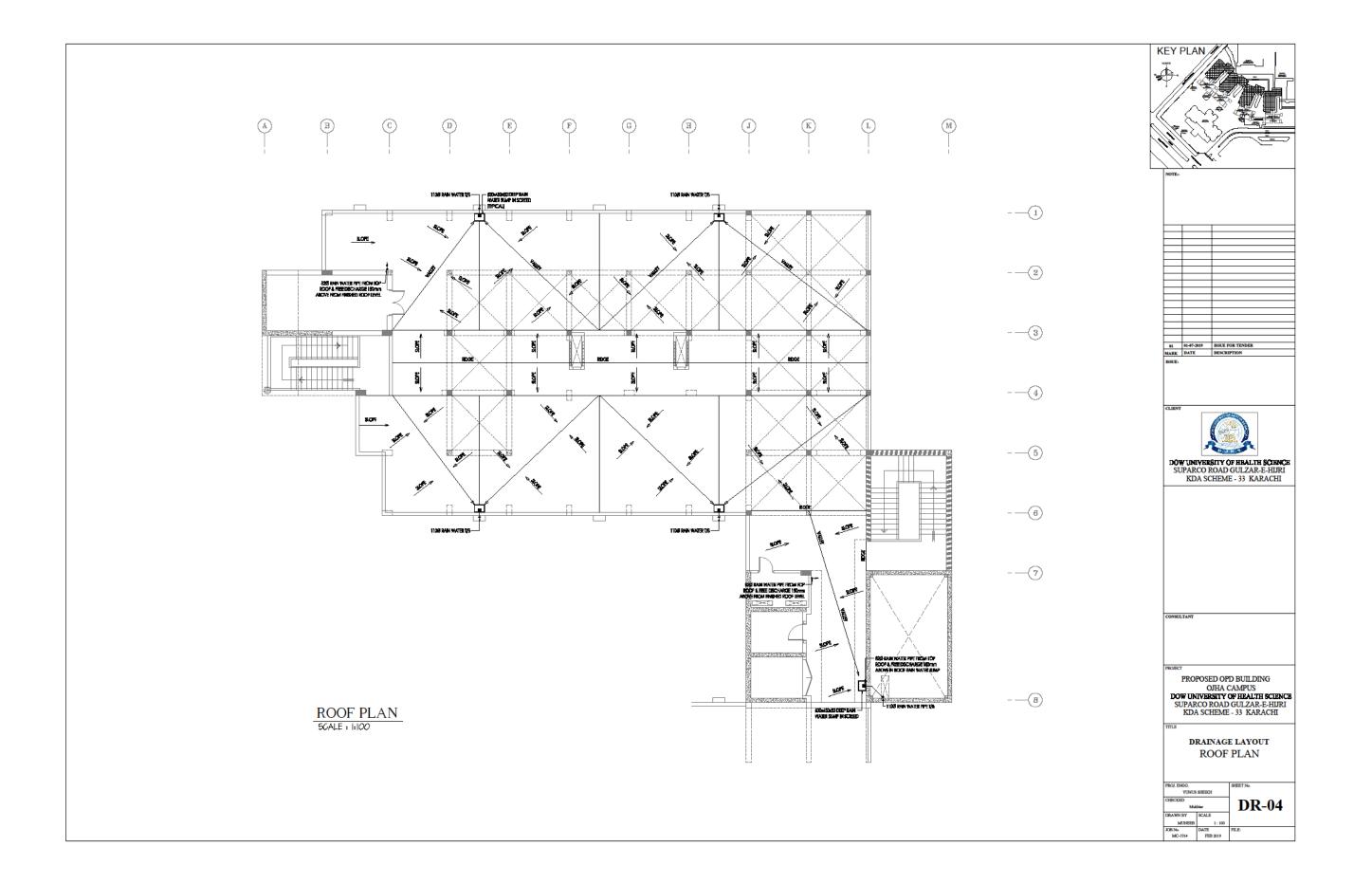


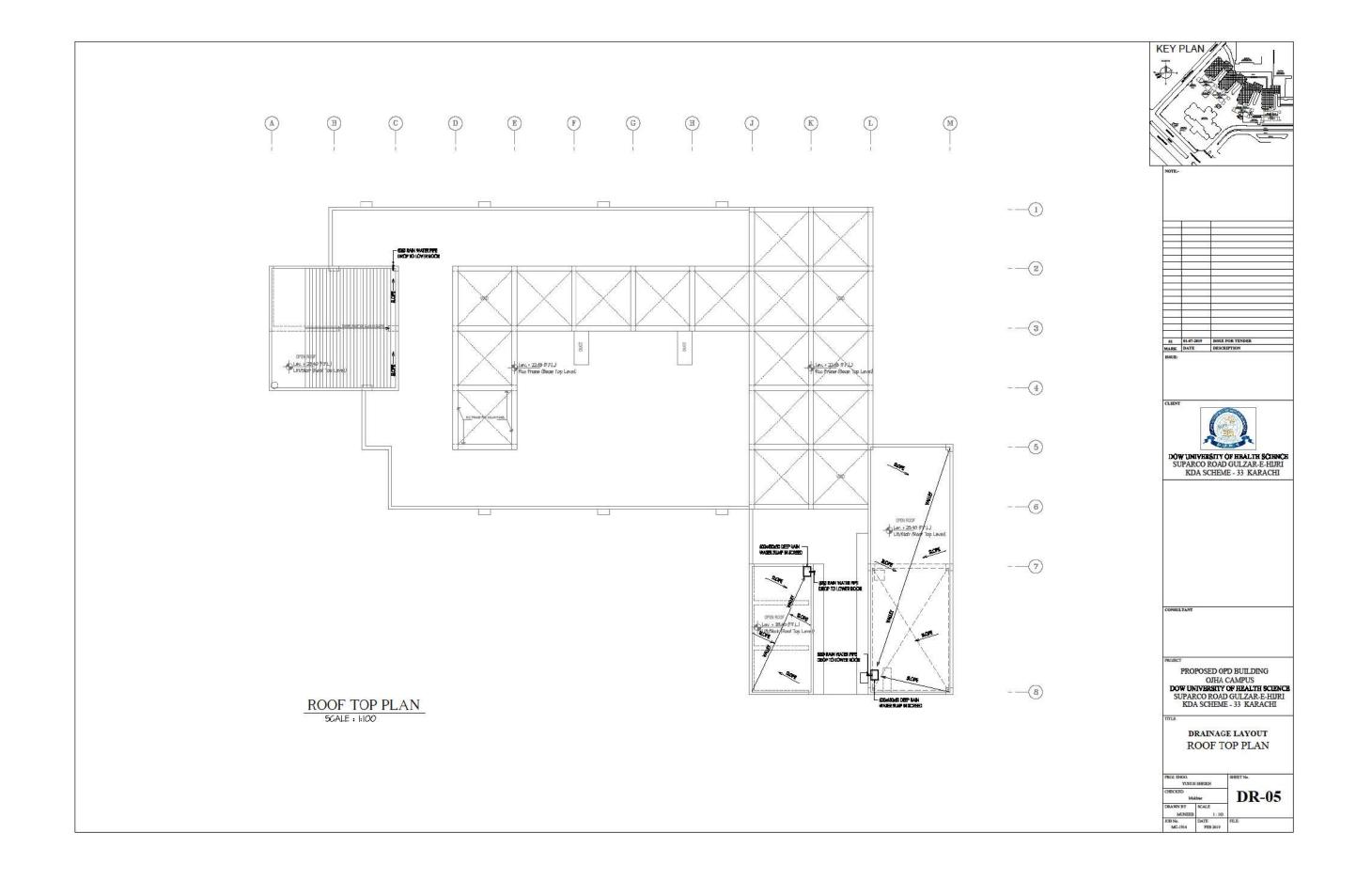


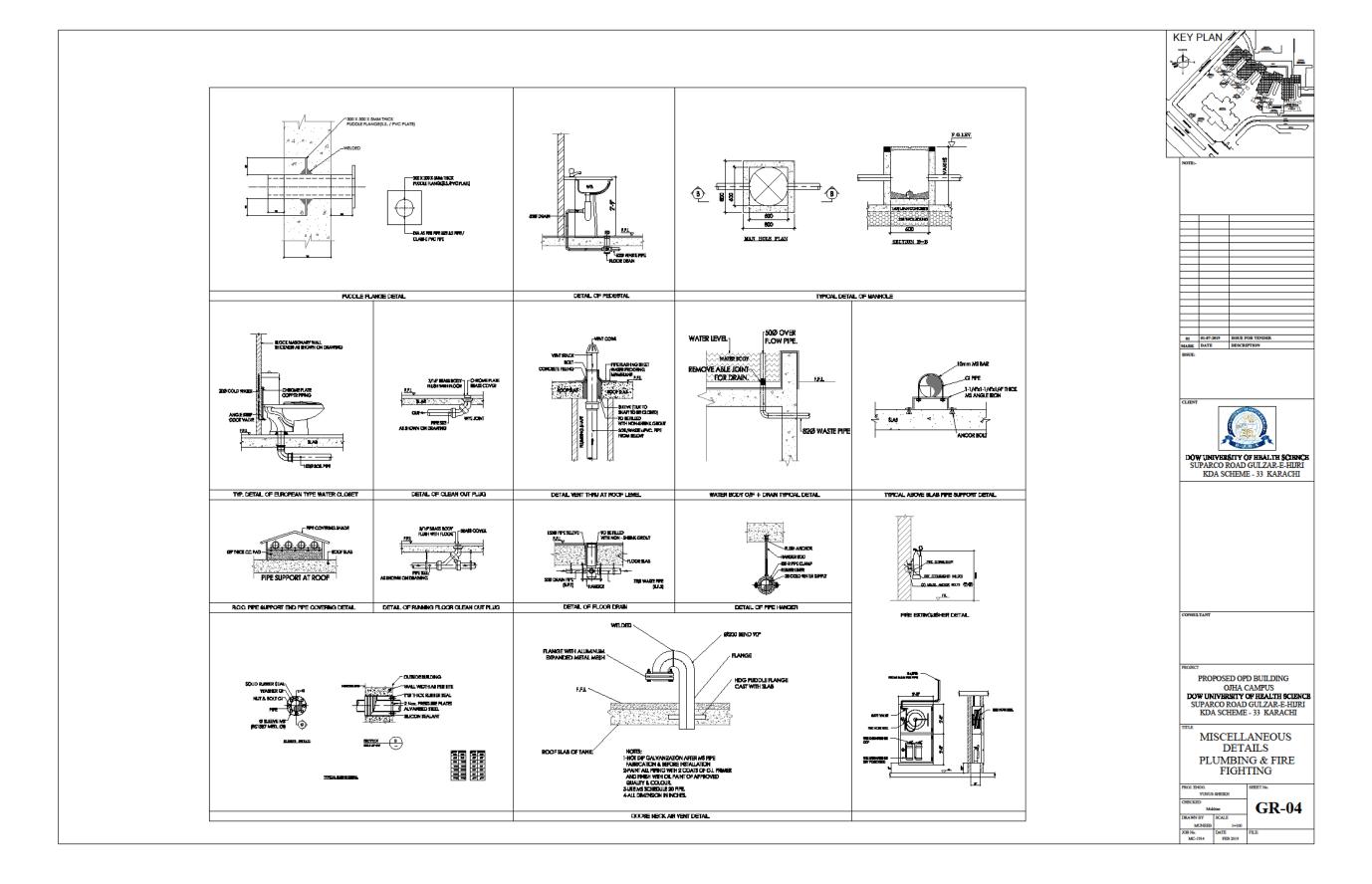


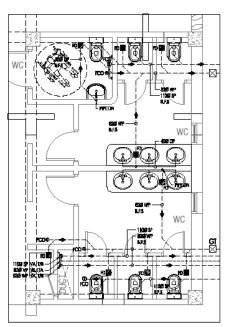




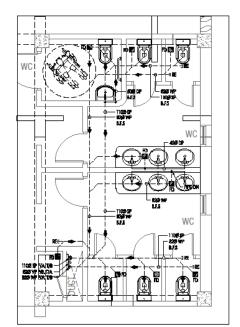




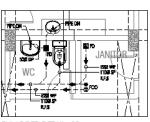




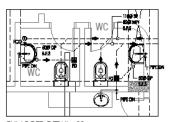
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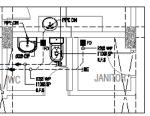
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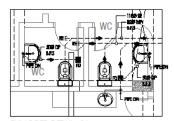
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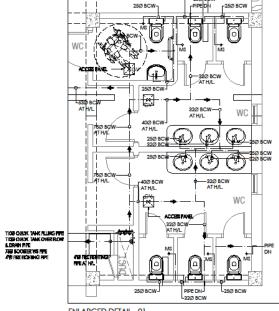
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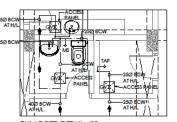
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DRAINAGE LAYOUT
1ST FLOOR
SCALE = 1:50



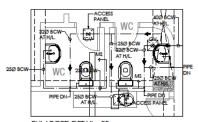
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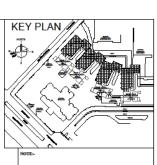
ENLARGED DETAIL - 01 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



ENLARGED DETAIL - 02 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



ENLARGED DETAIL - 03 WATER SUPPLY LAYOUT GROUND & 1ST FLOOR SCALE = 1:50



01	01-07-2019	ISSUE FOR TENDER
MARK	DATE	DESCRIPTION
ISSUE:		



DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI

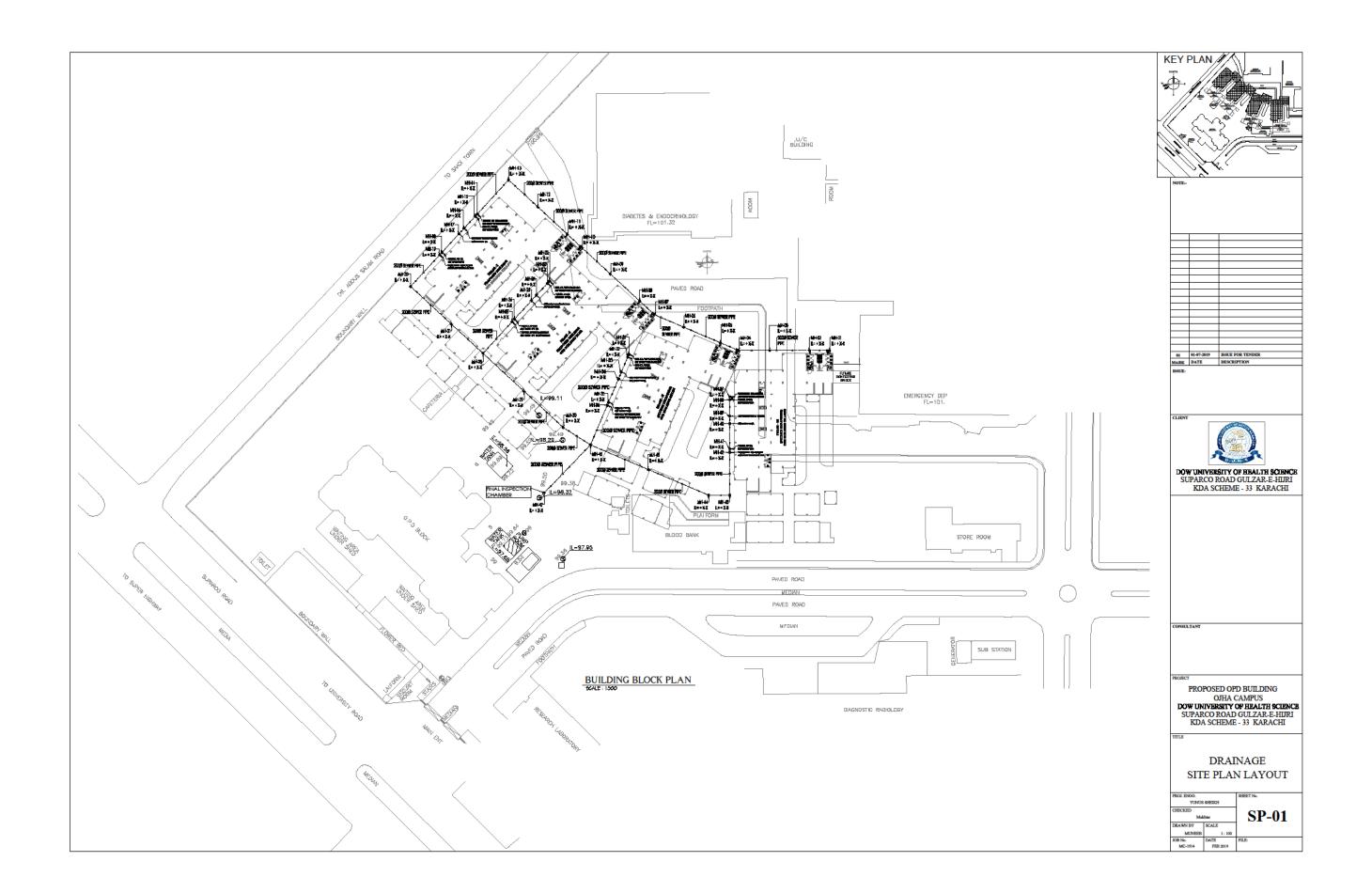
CONSULTANT

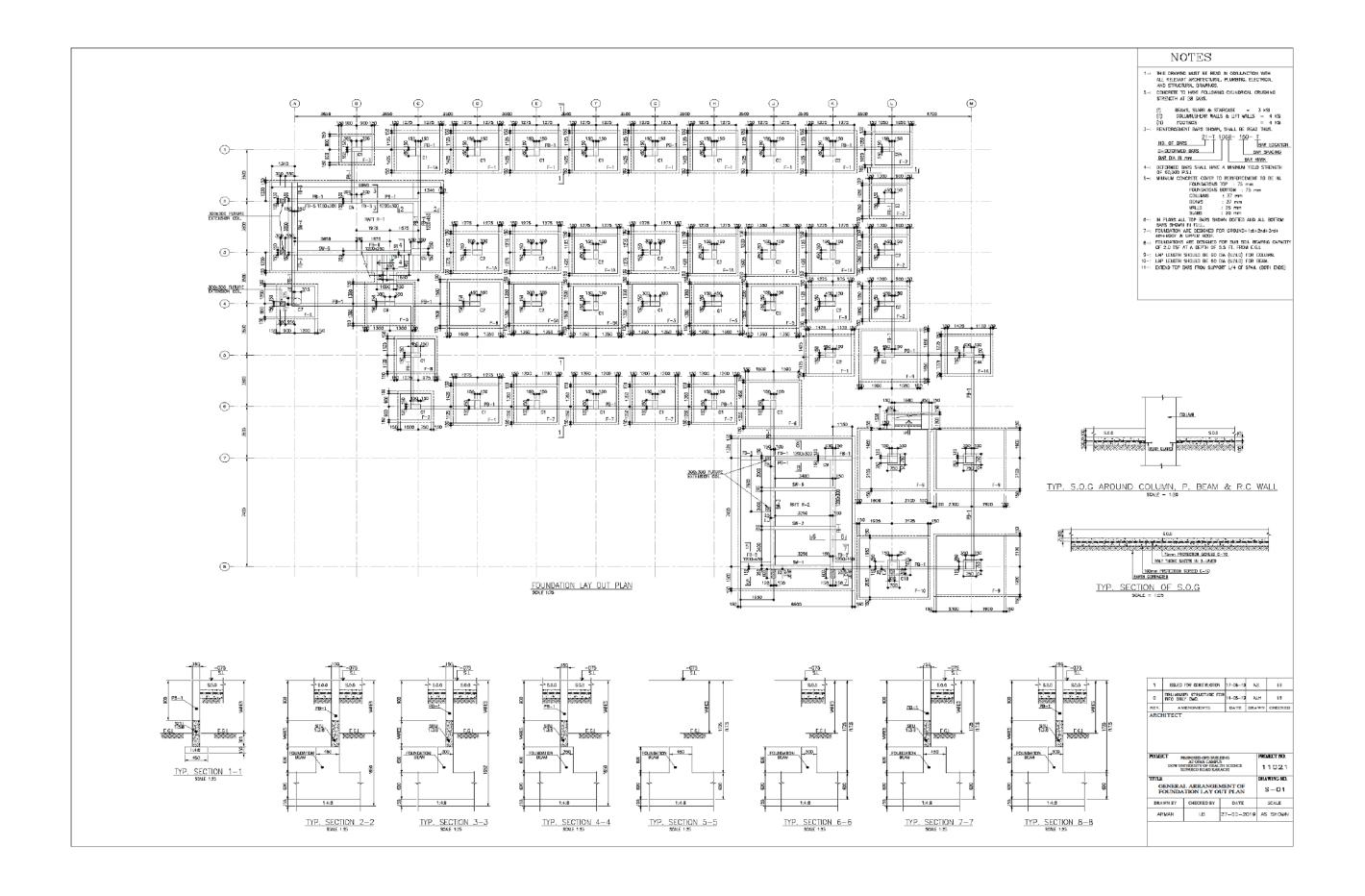
PROPOSED OPD BUILDING
OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HURI
KDA SCHEME - 33 KARACHI

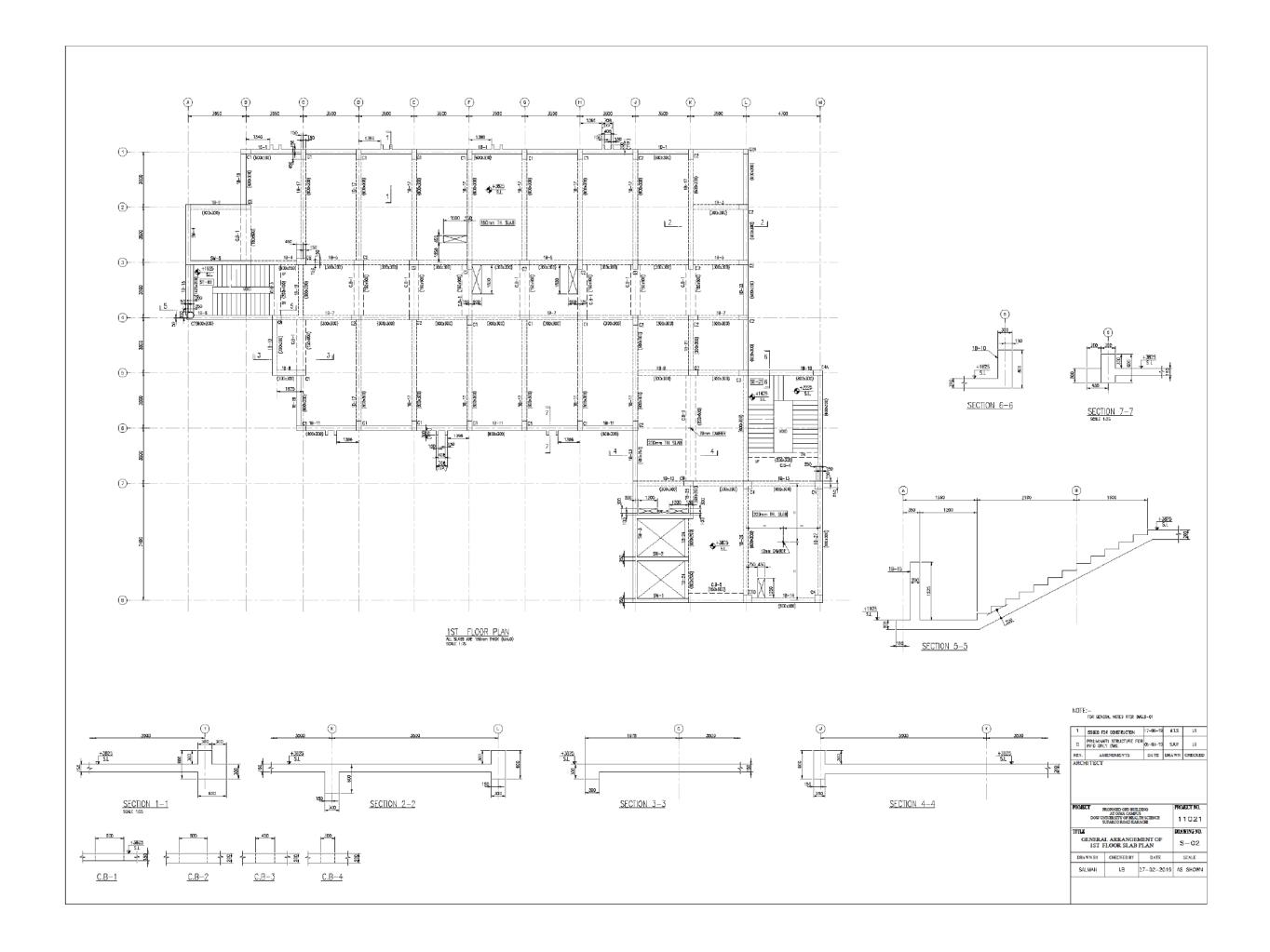
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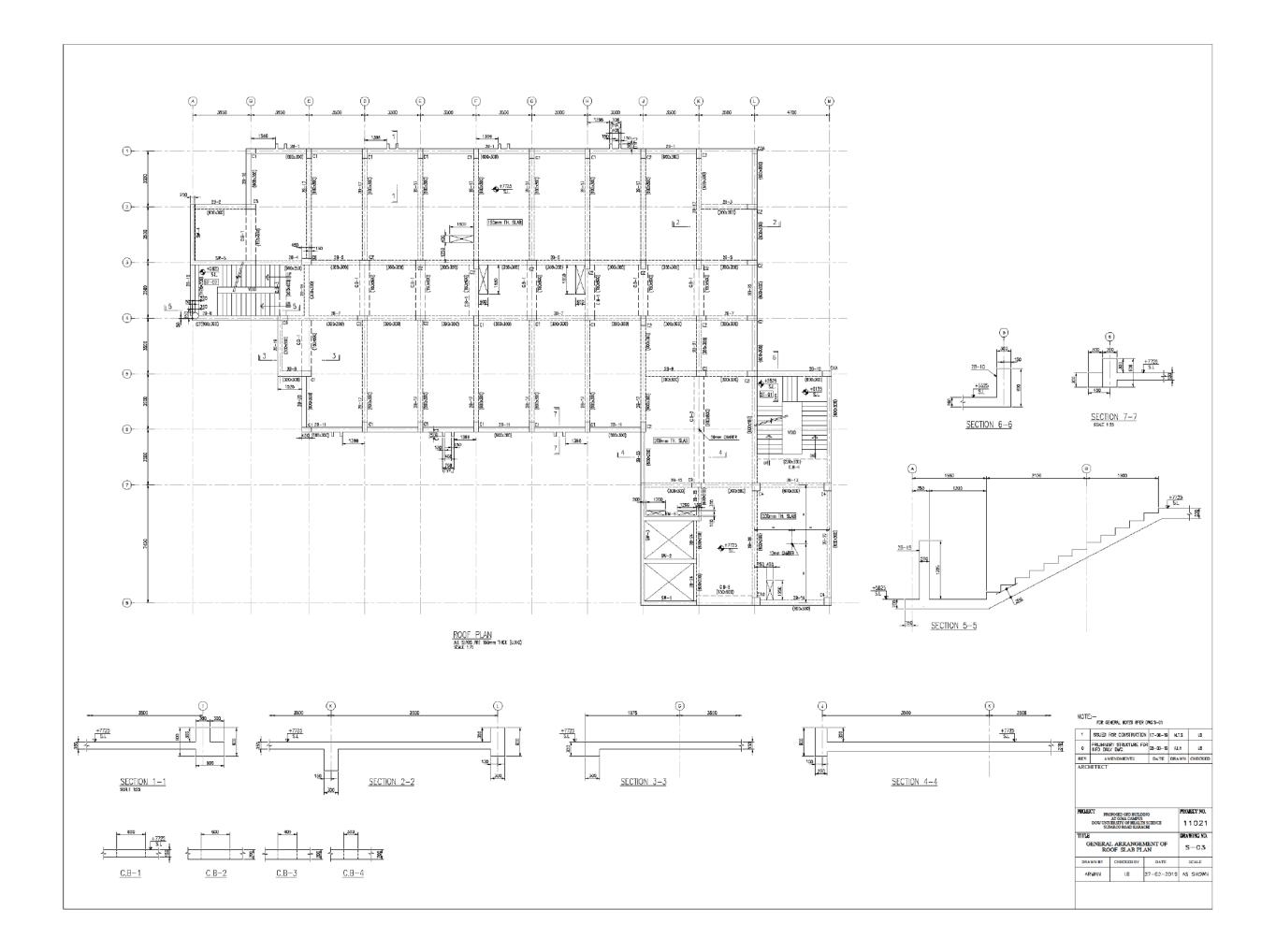
DRAINAGE &
WATER SUPPLY

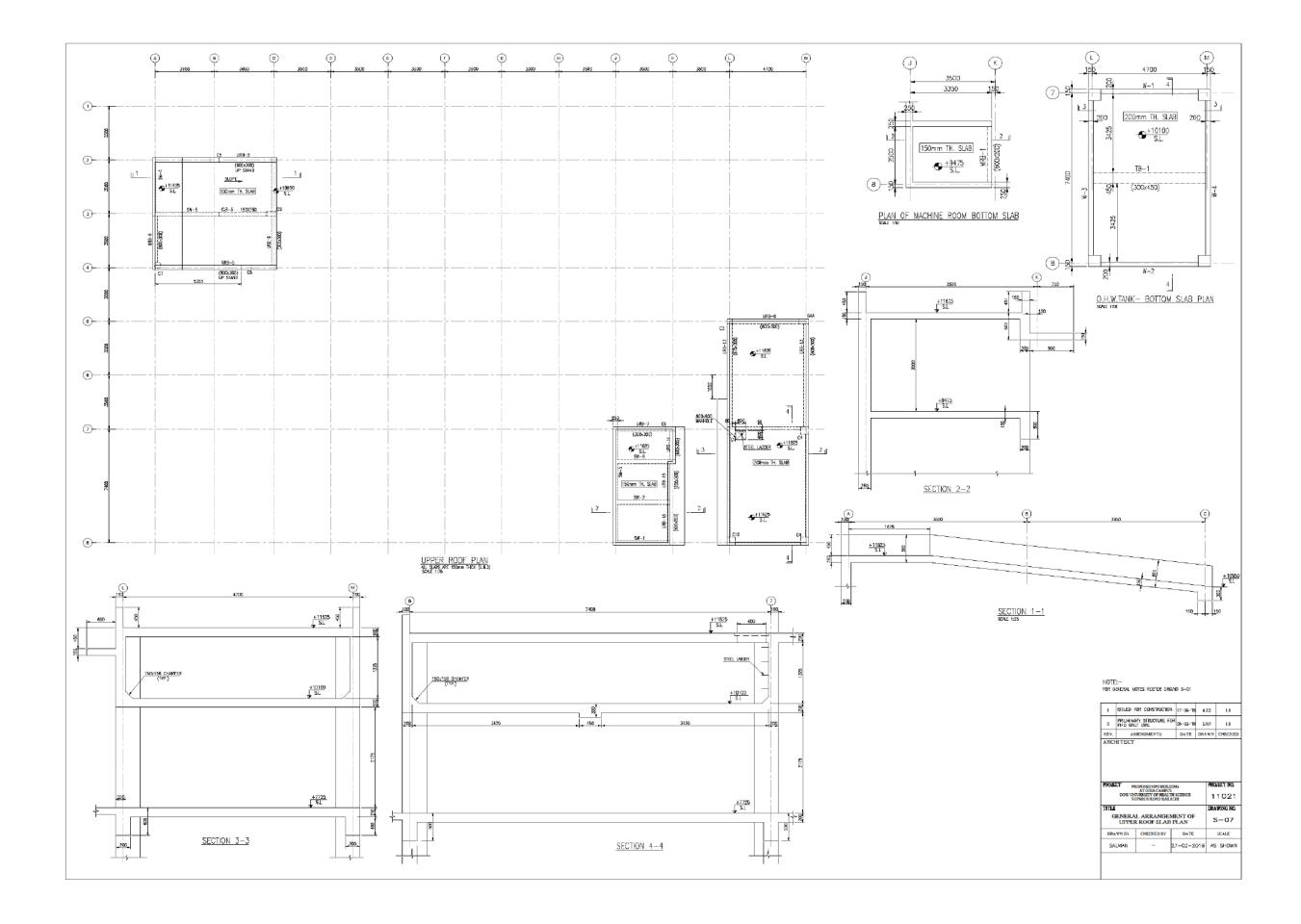
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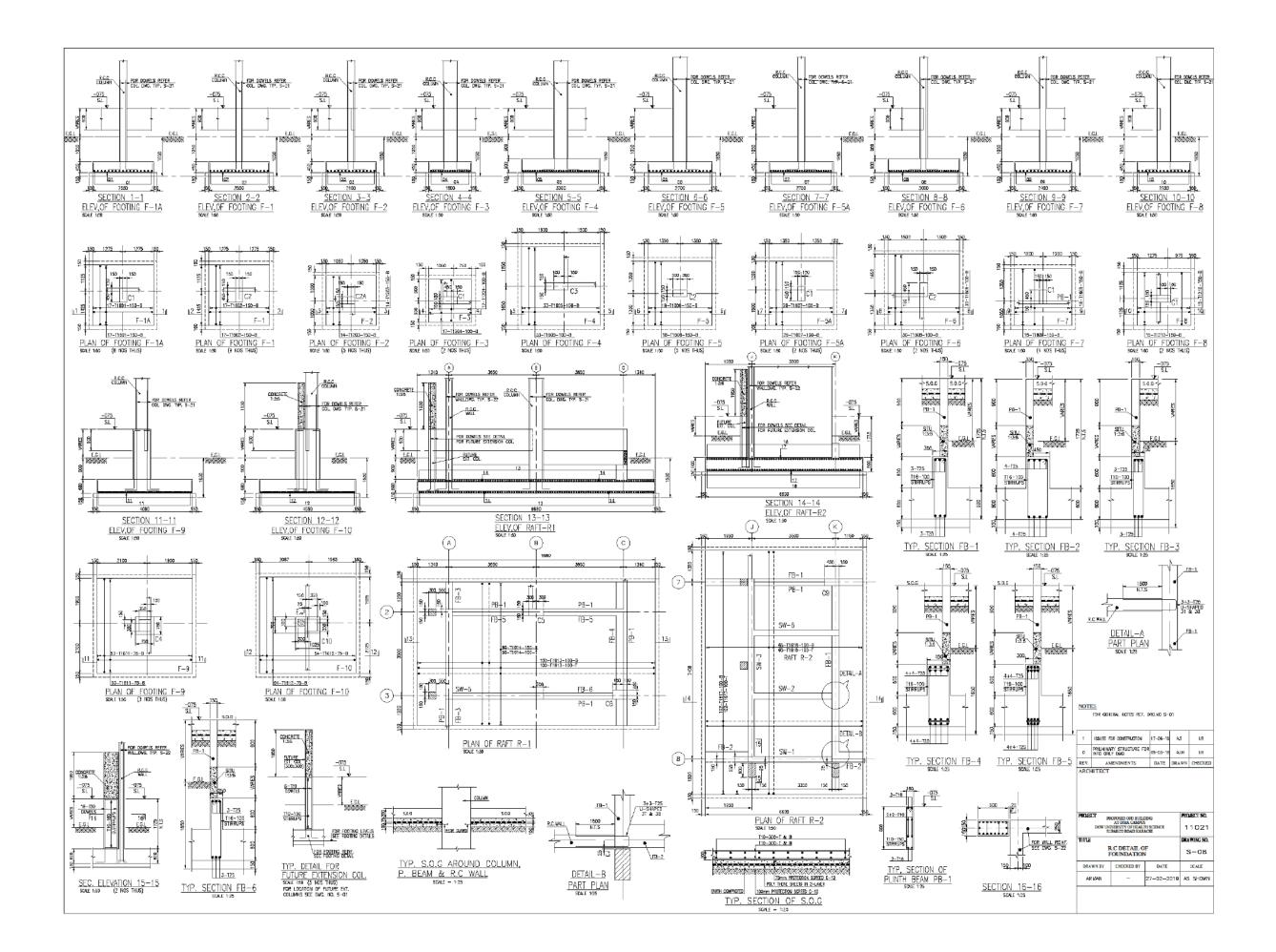


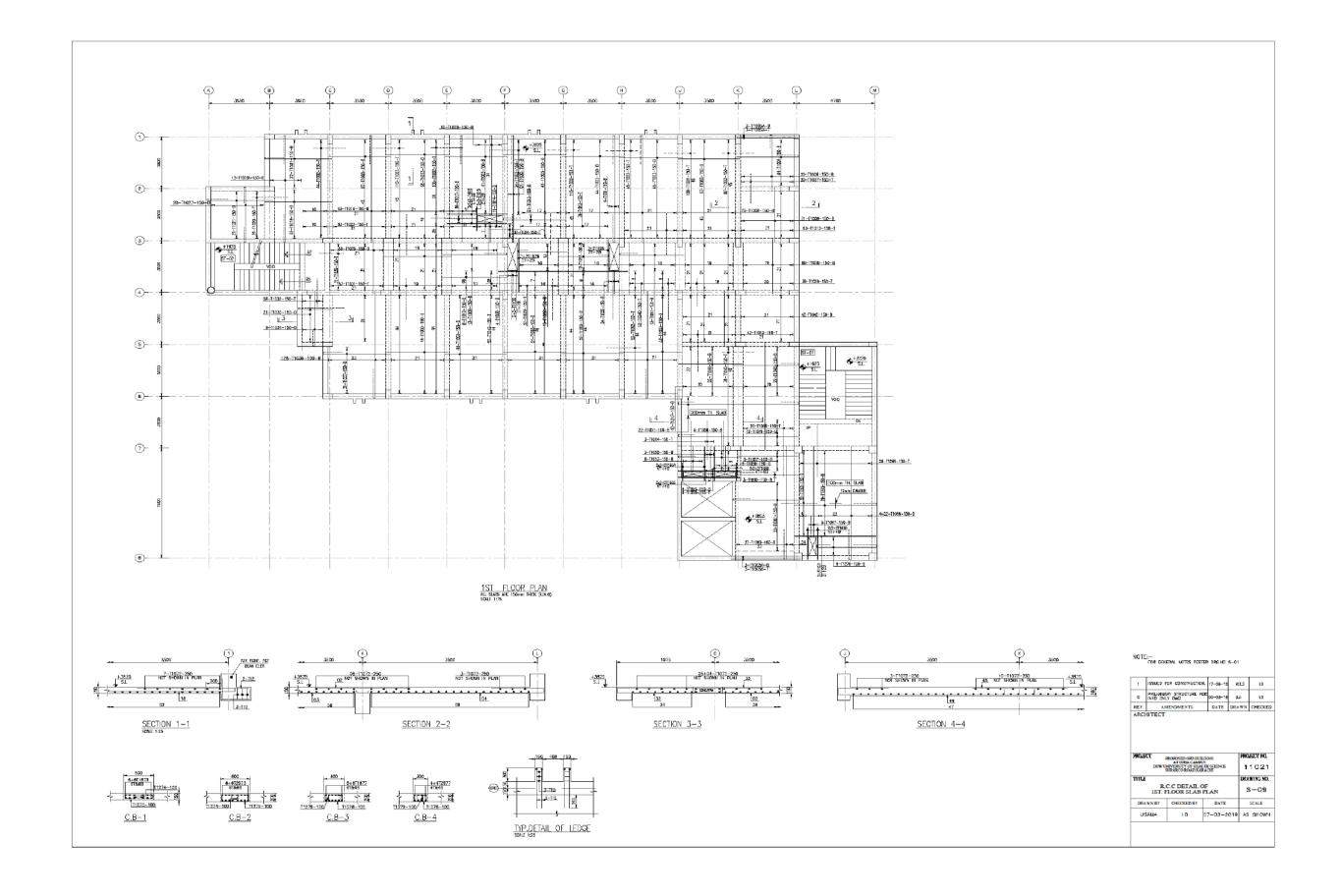


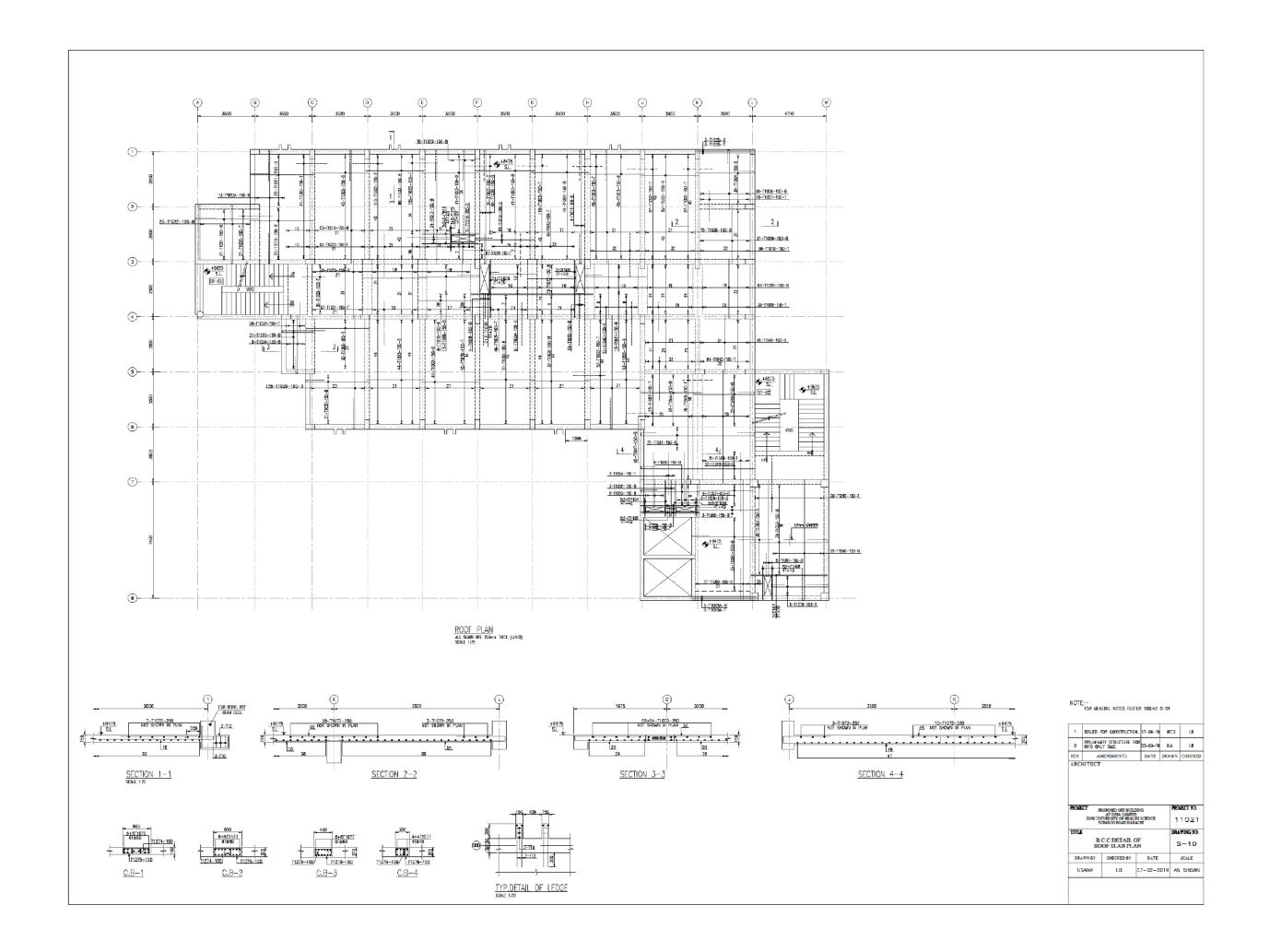


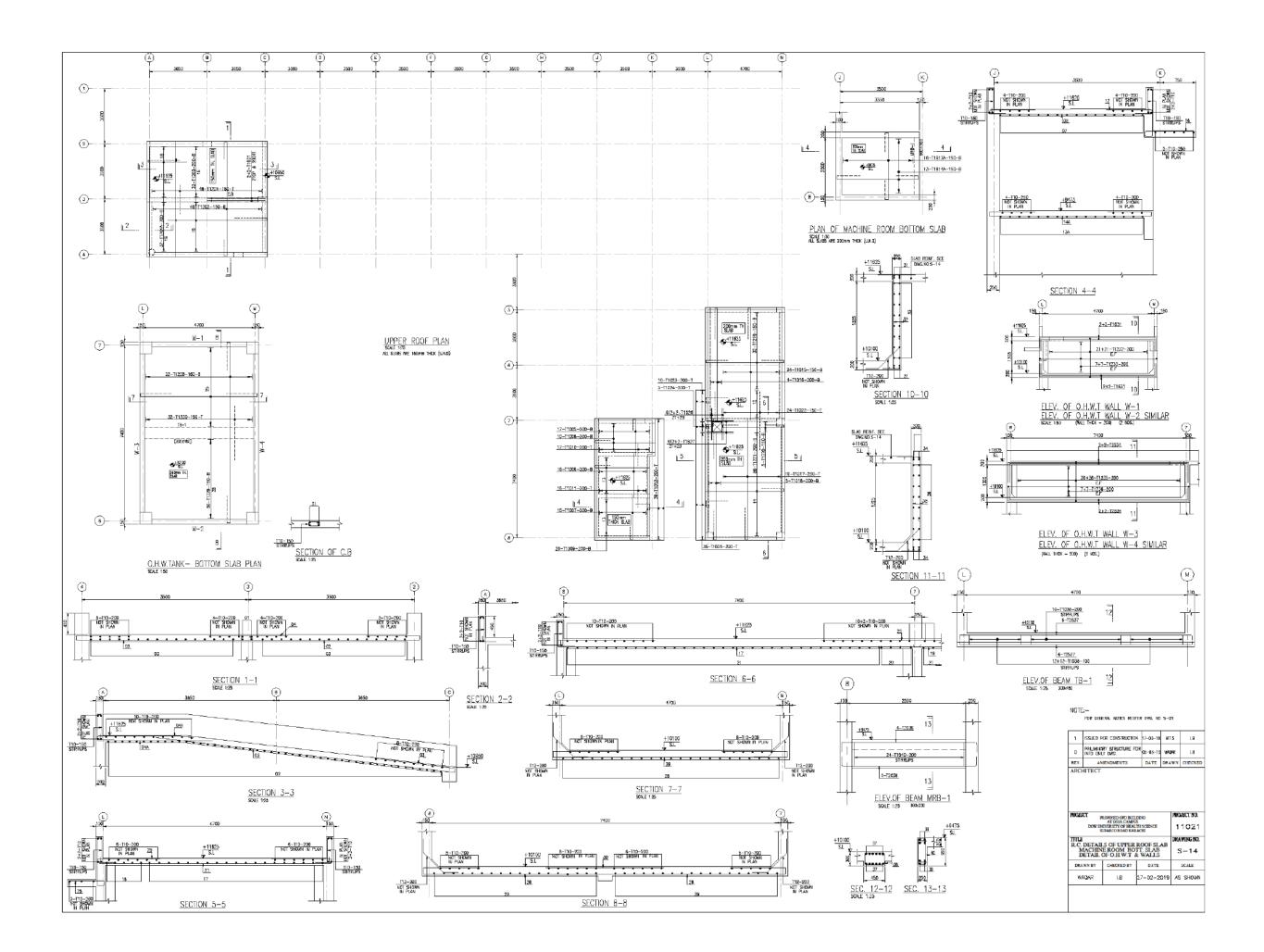


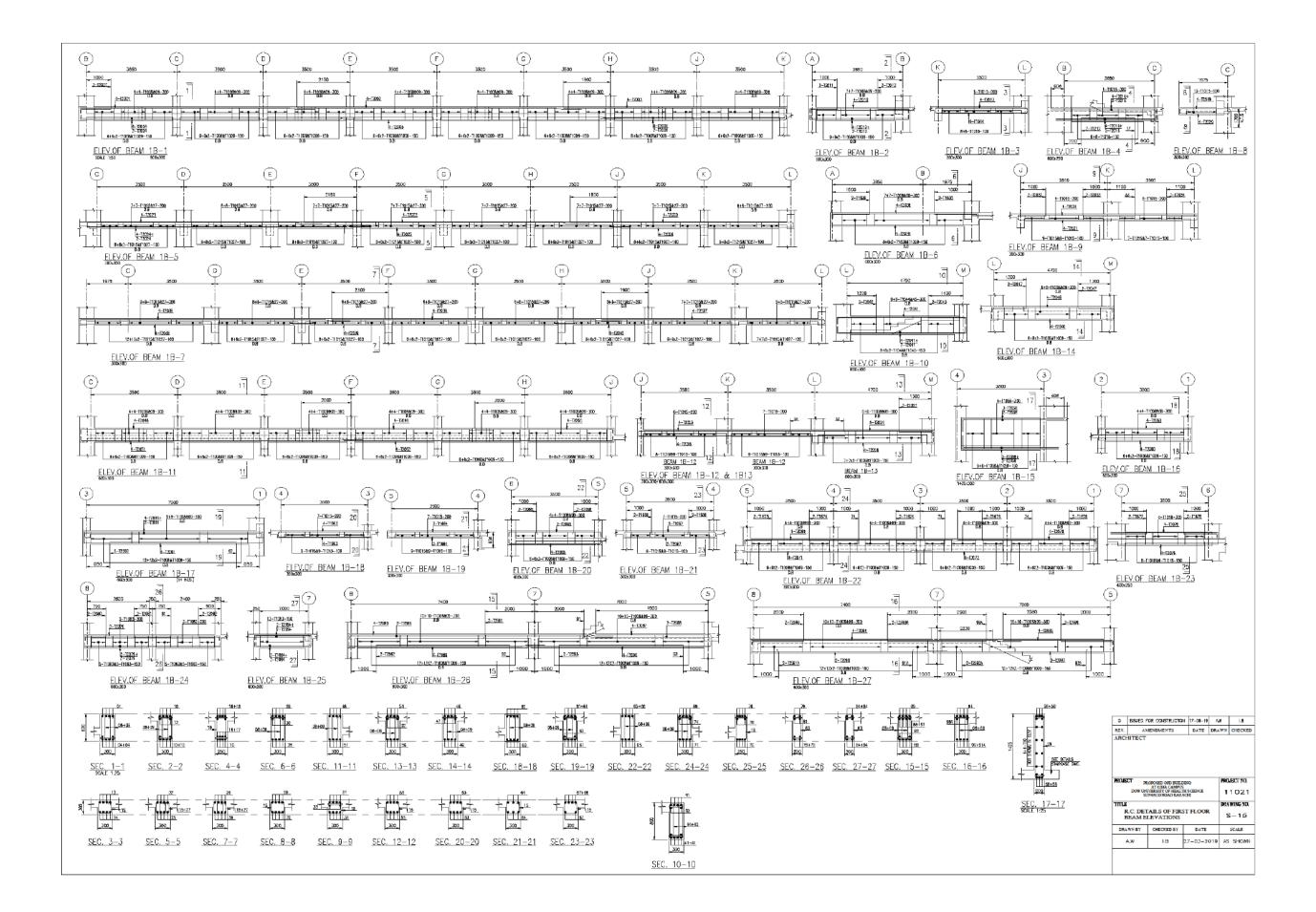


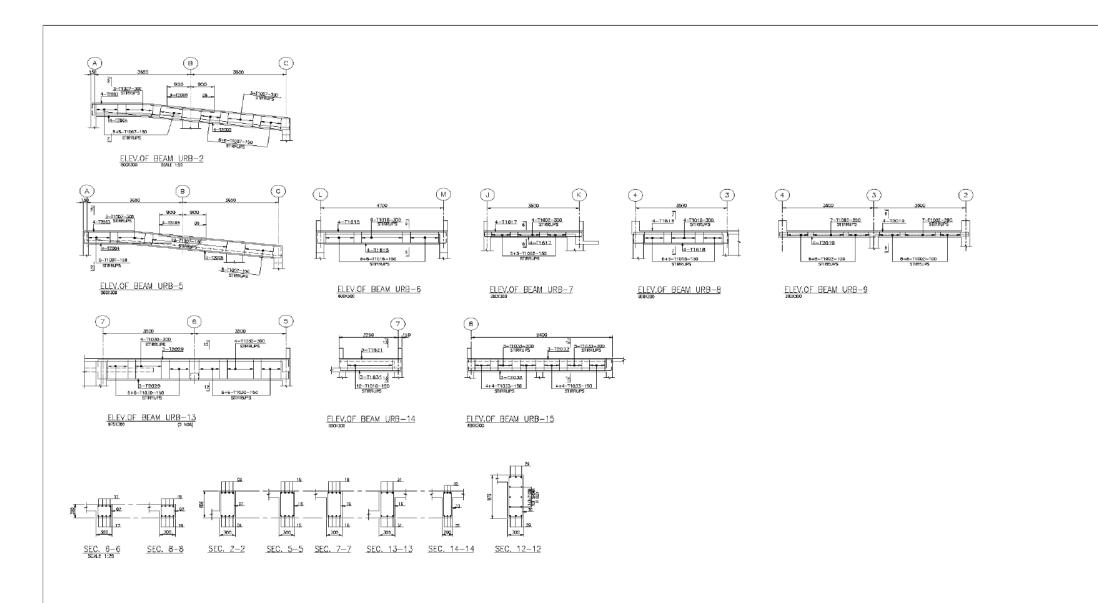












0	ISSUED FOR CONSTRUCTION	17-06-19	AJH	1.8
REV.	AMENDMENTS	DATE	DRAWN	CHECKE

DOWLD	ROPOSED OF DBUIL AT OTHA CAMPU IVERSITY OF HEAL UPARCO ROAD KAR	TH SCIENCE	11021
	.C. DETAILS (	DRAWING NO. S-20	
DRAWN BY	CHECKED BY	DATE	SCALE
AHMED	I.B	28-3-2019	AS SHOWN

