

**DOW UNIVERSITY OF HEALTH SCIENCES,
KARACHI**



**TENDER
DOCUMENT**

TITLE OF THE JOB

**CONSTRUCTION OF G+1 (4 BLOCKS) OF ISOLATION FACILITY
FOR COMBATING COVID-19 AT OJHA CAMPUS, DUHS, KARACHI
REF NO: DUHS/W&S/2020/064**

**NIT # DUHS/P&D/2020/082
DATED: MAY 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



TENDER NOTICE

No. DUHS/W&S/2020/082

Dated: May 18, 2020

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	2.5% EARNEST MONEY	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/ 2020/064	Quoted Rate	2.5% Bid Amount	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	2.5% of the Total Bid Value.
Purchasing Date & Time	28-05-2020 to 16-06-2020 (11 a.m to 02 p.m)
Bids Delivery & Opening Date & Time	17-06-2020 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
Bab-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.
- 7.2 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.
- 9.2 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.

IB.11 Documents Accompanying the Bid

- 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.

11.2 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.

11.3 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

- 121 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.
- 122 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.
- 123 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

- 124 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.
- 14.2 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

- 15.1 Each bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in the Bidding Data in Pak Rupees (2.5% 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.
- 15.4 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

- 16.1 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

- 181 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.
- 182 All appendices to Bid are to be properly completed and signed and stamped.
- 183 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.
- 184 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.
- 185 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.
- 186 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.
- 187 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.

19.3 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.
- 20.2 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.
- 22.2 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.
- 22.4 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.
- 23.4 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.
- 27.2 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.
- 28.5 A bid with highly inflated or unworkable rates of any BOQ items may be considered non-conforming 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.

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").
- 31.2 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

- 33.1 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.
- 33.2 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, interilic, 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 **2.5%** 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 500 Million
- 8.1 Time limit for clarification:
3 working days prior to last date of submission
- 10.1 Bid language:
English
- 11.1 (a) Prequalification Information to be updated (where applicable):
Not applicable
- 11.1 (b) Furnish Company Profile for Single Stage One Envelope:
Following are minimum Mandatory requirement
- i. 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 – EE01- EE02 – EE04 – EE06 – EE07 – EE08 – 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 Reference No. _____

(Name of Contract/Works)

To:

Gentleman, _____

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract. Specifications, Drawings and Bill of Quantities and Addenda Nos. ____ for the execution of the above-named Works, we, the undersigned, offer to execute and complete such Works and remedy any defects therein in conformity with the Conditions of Contract. Specifications, Drawings, Bill of 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.
3. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a 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 Works comprised in the Contract within the time stated in Appendix-A to Bid.
5. We agree to abide by this Bid for the period of _____ days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
7. We 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 this _____ day of _____ 20 _____

Signature: _____

in the capacity of _____ duly authorized to sign Bids for and on behalf of

Bidder in Block Capitals) (Seal) (Name of

Address: _____

Witness:

Signature: _____

Name: _____

Address. _____

Occupation _____

SPECIAL STIPULATIONS
CLAUSE CONDITIONS OF CONTRACT

1.	Engineer's Authority to issue Variation in emergency	2.1	The variation amount shall not exceed overall 2.5% 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	04 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)

Cost Element	Description	Weightages	Applicable index
1	2	3	4
(i)	Fixed Portion	0.60	
(ii)	Local Labor	0.12	Government of Pakistan (GP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
(iii)	Cement – in bags	0.06	“ “ “
(iv)	Reinforcing Steel	0.20	“ “ “
(v)	High Speed Diesel (HSD)	0.02	“ “ “
			“ “ “
			“ “ “
	Total	1.000	

Notes:

- 1) 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.
- 3) 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>	<u>Time for Completion</u>
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	

**ORGANIZATION CHART FOR
THE
SUPERVISORY STAFF**

(INTEGRITY PACT)
DECLARATION OF FEES, COMMISSION 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.

(PROCURING AGENCY)

(CONTRACTOR)

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 Pakistan)

Name of Principal (Bidder) with Address _____

Penal Sum of Security Rupees. _____ (Rs. _____)

Bid Reference No. _____

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

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

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

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

NOW THEREFORE, if the successful Bidder shall, within the period specified 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 _____
Expiry date _____

[Letter by the Guarantor to the Employer]

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

Name of Principal (Contractor) with address: _____

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

Letter of Acceptance No. _____ Dated _____

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

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

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

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

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

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

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

<p>Witness:</p> <p>1. _____</p> <p>_____</p> <p>Corporate Secretary (Seal)</p> <p>2. _____</p> <p>_____</p> <p>Name, Title & Address</p>	<p>_____</p> <p>Guarantor (Bank)</p> <p>Signature _____</p> <p>Name _____</p> <p>Title _____</p> <p>_____</p> <p>Corporate Guarantor (Seal)</p>
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FORM OF CONTRACT AGREEMENT

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

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

NOW this Agreement witnessed as follows:

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

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

Signature of the Contactor

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. _____ Date _____

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

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

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

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

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

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

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

 (Date)

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

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

GUARANTOR

- 1. Signature _____
- 2. Name _____
- 3. Title _____

WITNESS

- 1. _____

Corporate Secretary (Seal)

- 2. _____
(Name Title & Address)
- _____ Corporate Guarantor(Seal)

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	INFRASTRUCTURE	
	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

CIVIL WORKS INCLUDING WAITING AREA

STRUCTURE

SECTION – A: FROM FOUNDATION TO PLINTH LEVEL (SUB – STRUCTURE) (UPTO – 75 LEVEL)

S. NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>EXCAVATION AND BACKFILLING</u>				
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).	900	Cum		
2.0	<u>CONCRETE OF SUB – STRUCTURE</u> —				
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-in-charge.				
	A. Lean Concrete 1:4:8	87	Cum		
	B. 1:3:6 Cast in situ (under plinth beams)	16	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)	240	Cum		
	B. Foundation beams (f' c = 4 ksi)	9	Cum		
	C. Plinth beams (f' c = 3 ksi)	15	Cum		

	D. Columns upto Plinth level ($f' c = 4$ ksi)	28	Cum		
	E. Lift shear walls upto plinth level ($f' c = 4$ ksi)	18	Cum		
3.0	<u>STEEL REINFORCEMENTS.</u>				
3.1	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).	56000	Kg		
SECTION – B: PLINTH LEVEL TO 1ST FLOOR SLAB (- 75 LEVEL TO + 3825 LEVEL)					
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>CONCRETE OF SUPER – STRUCTURE</u>				
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)	35	Cum		
	B) Lift/ Shear walls ($f' c = 4$ ksi)	27	Cum		
	C) Beams ($f' c = 3$ ksi)	40	Cum		
	D) Slabs ($f' c = 3$ ksi)	105	Cum		
	E) Staircase steps, landing etc ($f' c = 3$ ksi)	15	Cum		
2.0	<u>STEEL REINFORCEMENTS.</u>				
2.1	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).	45000	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
1.0	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)	35	Cum		
	B) Lift / Shear walls (f' c = 4 ksi)	27	Cum		
	C) Beams (f' c = 3 ksi)	40	Cum		
	D) Slabs (f' c = 3 ksi)	105	Cum		
	E) Staircase steps, landing etc (f' c = 3 ksi)	15	Cum		
2.0	STEEL REINFORCEMENTS.				
2.1	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).	45000	Kg		
	TOTAL COST OF SEC - C Rs.				
					=====

SECTION – D: ROOF TO UPPER ROOF LEVEL + O/H TANK (+ 7725 TO + 11625 & + 9475 & +10950 LEVEL)					
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	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./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)	18	Cum		
	B) Lift / Shear walls (f' c = 4 ksi)	27	Cum		
	C) Beams / Upstand (f' c = 3 ksi)	32	Cum		
	D) Slabs / Projection (f' c = 3 ksi)	27	Cum		
1.2	Same as item # 1.1 above but water proof concrete prepared by mixing of water proofing concrete admixture “ BETOCRETE C– 16” . (crystalline water proofing admixture) from M/S AQUAFIN PAKISTAN (Tel # 021-35361131-32). Admixture shall be mixed @ 2% by weight of cement along with mixing of super plasticizer G-1000 used @ 1% by weight of cement. Dosing of water proofing admixture shall be done under supervision of AQUAFIN PAKISTAN representative. Complete with including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel. Complete in all respect at any height and any level, complete as per specifications, drawings and all to the approval of Engineer – in – charge.				
	A) O/H Water tank				
	i) Bottom slab & chamfers (f'c = 3 Ksi)	8	Cum		
	ii) Walls & chamfers (f'c = 3 Ksi)	7	Cum		
	iii) Top slab (f'c = 3 Ksi)	8	Cum		
2.0	MISCELLANEOUS WORKS				
2.1	Providing and applying water proofing treatment of O/H , water tank with “AQUAFIN – IC” (Crystalline water proofing slurry) from M/S AQUAFIN PAKISTAN. or approved equivalent, Mixing and application of water proofing material shall be carried out by material supplied company applicators. Complete in all respect as per drawing, specifications and directed by Engineer – in – charge.				
	a. At bottom slab applying @ 1 Kg/Sqm	40	Sqm		
	b. On walls, applying @ 1.5 Kg / sqm	40	Sqm		
2.2	Providing and applying 20mm thick 1:6 cement sand plaster to all internal and external surfaces of O/H water tank (i.e walls & ceilings). Complete in all respect.	120	Sqm		
2.3	Providing, laying and finishing of 75mm thick c.c 1:2:4 concrete floor with sand and crushed stones on bottom slab of water tank. Complete with gurmala finish smooth surfaces. Complete in all respect.	40	Sqm		

2.4	Providing and fixing of S/S Manhole cover of 600 x 600 sizes at O/H water tank. . Complete in all respect.	2	Nos		
3.0	<u>STEEL REINFORCEMENTS.</u>				
3.1	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 margining, 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).	22000	Kg		
	TOTAL COST OF SEC - D Rs.				
					=====

WAITING AREA BUILDING

S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>EXCAVATION AND BACKFILLING</u>				
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).	119	Cum		
2.0	<u>CONCRETE OF SUB – STRUCTURE</u>				
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-in-charge.				
	A. Lean Concrete 1:4:8	24	Cum		
	B. 1:3:6 Cast in situ (under plinth beams)	16	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 Cube strength of 3000 psi 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	13	Cum		
	B. Plinth beams	13	Cum		
	C. Columns upto Plinth level	17	Cum		
3.0	<u>CONCRETE OF SUPER – STRUCTURE</u>				
3.1	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 Cube strength of 3000 psi 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	26	Cum		
	B) Beams	30	Cum		
	C) Slabs	14	Cum		
4.0	<u>STEEL REINFORCEMENTS.</u>				
4.1	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 margin, 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).	13100	Kg		
5.0	<u>M.S STRUCTURAL WORKS</u>				
5.1	Providing, fabricating, erection and fixing in position, M.S structural works of trusses & purlins. Complete with fabricated as per sections shown in drawing such as angles, H.S.S. Sections M.S plates, nut & bolts etc. Complete with cutting, welding, (all around the section), grinded the welded joints, applying three coats of ICI enamel paint over a coat of rust proof paint. Complete with wastage & welding etc. (no extra weight of welding will be given). Complete in all respect as per drawing, specification and directed by Engineer – in – Charge.	10400	Kg		

		TOTAL COST Rs.			

Item No.	Description	Unit	Quantity	Rate	Amount
1	External Improvement				
	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				
a)	150mm thick solid wall	m ²	110		
b)	100mm thick solid wall	m ²	185		
2	Applying 20 mm thick cement 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	295		
3	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	460		
4	Providing and laying RCC slab including cost of cement, reti, steel complete in all respect as per drawing.	m ²	13		
5	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	210		
6	Providing and lay G.I. rolling shutter complete in all respect as per drawing.	m ²	10		
7	Provide and lay glazed tile for bathroom fixing with dry bond including grouting; complete in all respect as per drawings	m ²	238		
8	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-04 - 1200 x 2750	Nos	8		
	D-08 - 750 x 2750	Nos	6		
9	Provide and laying khaprail roof tile as complete in all respect as per drawings	m ²	210		

10	Provide and lay envicrete including khaka as per site survey in all respect as per drawing, external and external	m ²	2015		
11	Providing and making marble and masonry Bench complete in all respect as per drawing.				
a)	1800 m	Nos	20		
b)	3200 m	Nos	20		
12	Providing and laying pre polish marble counter complete in all respect as per drawing.	m ²	15		
13	Provide and lay curve stone in all respect as per drawing	m	50		
14	Provide and making wash terrazzo planter in all respect as per drawing	Nos	5		
15	Provide and fabricate sliding M.S. gate including anti rust proof paint in all respect as per drawing	Nos	2		
16	Provide and install 12mm tempered glass partition as required complete in all respects with all necessary hardware. Refer as per drawing	m ²	16		
17	Providing and lay G.I. rolling shutter complete in all respect as per drawing.	m ²	10		
	Sub Total				

Item No.	Description	Unit	Quantity	Rate	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				
	300mm thick solid wall	m ²	266		
	150mm thick solid wall	m ²	1550		
	100mm thick solid wall	m ²	154		
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 lowers 1:2:4 counter including form work and steel finish and fixing arrangement complete in all respect as per drawing				
	Elevation 3.26 mm high	Nos	92		
	Staircase 3.3 mm high	Nos	332		
	Staircase 3.50 mm high	Nos	63		
5	Provide and fix glass block in 200 x 200 mm as approved including fix in adhesive and all respect fixing arrangement complete in all respect as as per drawing No.....	m ²	28		
6	Provide and casting RCC 1:2:4 including steel complete in all respect as per Drawing	m ³	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 as per drawing No.....	m	95		
8	Provide and fabricating M.S. hand railing for staircase with fixing arrangement with anti rust paint including fixing 60mm red miranti wood gola finish with paint and polish n all respect as as per drawing No.....	m	120		

9	Provide and lay imported design engineered wooden floor and skirting of approved pattern complete with polish on CC 1:2:4 laid line leveling, curing etc. complete in all respects per drawing.	m2	54		
	Skirting	m	72		
10	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	810		
c)	Provide and laying 1:2:4 50mm thick complete on all respect as per drawing	m ²	810		
d)	Provide and laying National insulation tile 35 x 132 x 268mm thick complete on all respect as per drawing	m ²	810		
11	Ground Floor finishes				
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		
12	Expansion Joint Cover Assemblies				
	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		
13	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		
14	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		
15	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		
16	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		
	W-03 - 750 x 1591 - Size	Nos	2		
	V-02 - 450 x 450 - Size	Nos	14		
17	Portland Cement Plastering				
	Provide and apply 12 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 and specifications. Ground to 4th floor	m ²	3840		
18	12 mm thick ceiling plaster in 1:4 cement sand mortar as per drawing and specifications.	m ²	1870		
19	12mm thick Cement plaster to waist of stair case and pardi on both side of steps in 1:4 cement sand mortar as per drawing and specifications.	m ²	115		
20	Applying 20 mm thick external cement 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	1275		
21	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	1275		
22	ALUMINIUM 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	150		
23	Plastic Tiling 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	196		
24	Provide and lay glazed tile for bathroom fixing with dry bond including grouting; complete in all respect as per drawings				
	Wall	m ²	385		
25	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	1107		
b)	up to 2100	m ²	272		
26	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)	600 x 600	m ²	1700		
b)	300 x 300	m ²	198		
	Skirting	m	154		
27	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		
28	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	1113		
29	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 ²	150		

30	Interior Painting				
	Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings	m ²	4985		
31	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	195		
32	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	66 Nos		
a)	On Landing	m ²	33		
b)	Skirting	m ²	316		
33	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	66 Nos		
b)	On Landing	m ²	33		
34	Provide and lay marble border complete in all respect as per drawings	m	270		
35	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	69		
36	Provide and lay marble on landing complete in all respect as per drawings	m	33		
Sub Total					
TOTAL CIVIL WORKS					

ELECTRICAL WORK – YELLOW BLOCK

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 PUBLIC ADDRESS SYSTEM			
11	SECTION - K CCTV SYSTEM			
12	SECTION - L QUEUE MANAGEMENT SYSTEM			
13	SECTION - M 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.

S.#	DESCRIPTION	QTY	UNIT	SUPPLY		INSTALLATION		AMOUNT (Rs.)
				RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	
	SECTION - A WIRING & WIRING ACCESSORIES							
	<p>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.</p> <p>Note:</p> <p>1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.</p> <p>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.</p> <p>3) Megger Test of each circuit to be done by contractor.</p> <p>4) Wiring for Occupancy Sensor shall be included in light wiring.</p>							
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.	51	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.	281	No.					
a	Same as above item but wiring from light point to point.	220	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.	17	No.					
a	Same as above item but wiring from light point to point.	72	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.	7	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.	26	No.					
a	Same as above item but wiring from light point to point.	11	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.	2	No.					
a	Same as above item but wiring from light point to point.	51	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.	26	No.					
b	Same as above item, but wiring from outlet to outlet.	266	No.					
8	Wiring of 13A/15A Switch Socket units (UPS 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.	20	No.					
b	Same as above item, but wiring from outlet to outlet.	51	No.					
9	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 Cu/PVC	4	No.					
b	Same as above item but wiring from 20A Switch to 13A International Outlet	4	No.					
10	Wiring of 16A DP Isolator for 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	22	No.					
11	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	22	No.					
12	Wiring of 20A DP Isolator for Indoor VRF Units /Hot Water Gyser 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	30	No.					
13	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	30	No.					
14	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	11	No.					
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 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	11	No.					
16	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.							
a	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	9	No.					
17	Wiring of 32A, 5-pin Industrial Socket unit (20 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	4	No.					
18	Wiring of 32A, 5-pin Industrial Socket unit (15 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	2	No.					
19	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.							
a	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	7	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 colour 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.							
a	25mm dia PVC Conduit	1,000	Rm.					
b	32mm dia PVC Conduit	200	Rm.					
c	38mm dia PVC Conduit	200	Rm.					
d	100mm dia UPVC Conduit (Class-D)	150	Rm.					
e	150mm dia UPVC Conduit (Class-D)	150	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.							
a	200mm x 200mm x 75mm	22	No.					
b	300mm x 300mm x 75mm	22	No.					

3	<p>Supply & installation of following sizes of 14 SWG G.I Cable Tray with 16 SWG cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p>Note:</p> <ul style="list-style-type: none"> - 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. 							
a	300mm x 100mm (2-Partition)	125	Rm.					
b	300mm x 100mm (2-Partition) (On Roof Top)	85	Rm.					
c	300mm x 100mm	50	Rm.					
d	150mm x 100mm	30	Rm.					
e	450mm x 100mm	30	Rm.					
4	<p>Supply & installation of following sizes of 14 SWG G.I Cable Ladder with 16 SWG cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p>Note:</p> <ul style="list-style-type: none"> - 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. 							
a	450mm x 100mm (Vertical) (GF to Roof)	35	Rm.					
b	300mm x 100mm (Vertical) (GF to Roof)	35	Rm.					
c	300mm x 100mm (Vertical) (Roof)	15	Rm.					
5	<p>Supply & Installation of Imported Linear Outlet Boxes without face plates made of Aluminum, mounted on wall or punched in furniture as per design drawings. The linear outlet boxes are to be provided with appropriate sizes of knockouts.</p>							
a	450mm x 100mm	37	No.					
6	<p>Supply & installation of Imported Floor Outlet Boxes without face plates made of 16 SWG G.I Sheet, recessed in ground as per design drawings.</p>	4	No.					
	<p>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.</p>							

	Total Amount (Rs.) Sec - B(CARRIED FORWARD TO SUMMARY)						
	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 Pienno for Switches & Vivace for Sockets Outlets or Equivalent)						
1	10A, 220V One Gang Switch Unit	42	No.				
2	10A, 220V Two Gang Switch Unit	68	No.				
3	10A, 220V Three Gang Switch Unit	20	No.				
4	20A, 220V One Gang Neon Indication Light Switch for Hot Water Gyser	10	No.				
5	One Gang Fan Dimmer	1	No.				
6	Two Gang Fan Dimmer	4	No.				
7	Three Gang Dimmer	20	No.				
8	13A, International Switch Socket unit	323	No.				
9	15A, Round 3 pin Switch Socket unit	7	No.				
10	13A, 3-Pin Flat Duplex Switch Socket unit	42	No.				
11	13A, 3-Pin Flat Simplex Switch Socket unit	26	No.				
12	20A Switched Socket for Hand Dryer	4	No.				
13	16A DP Isolator (Split Unit)	22	No.				
14	20A 4P Isolator (Indoor VRF)	22	No.				
15	20A DP (Indoor VRF)	22	No.				
16	80A 4P Isolator (Outdoor VRF)	11	No.				
17	63A 4P Isolator (Outdoor VRF)	11	No.				
18	32A 4P Isolator (Fresh Air Units)	9	No.				
19	32A 4P Isolator (Medical Equipment)	7	No.				
20	60A TP Isolator (Lifts)	2	No.				
21	32A 5-Pin (Three Phase) Industrial Socket with Plug (for UPS)	11	No.				
22	32A 5-Pin (Three Phase) Industrial Socket with Plug (for Communication Racks)	15	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	Recessed Mounted Down Light with 15W LED Lamp Color 4000K Diffused Glass	55	No.					
2	Surface Mounted Down Light with 18W LED Lamp Color 4000K Diffused Glass	296	No.					
3	Surface Mounted Down Light with 12W LED Lamp Color 4000K Diffused Glass	13	No.					
4	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	7	No.					
5	Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	8	No.					
6	Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	167	No.					
7	Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	35	No.					
8	Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	58	No.					
9	Bulk Head Light	25	No.					
10	Ceiling Fan 56"	69	No.					
11	50W Insect Killer Light	20	No.					
12	Exhaust Fan 24"	10	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-LP 4C-95 Sqmm Cu/XLPE/PVC + ECC 1C-50 Sqmm Cu/PVC	10	Rm.					
2	From MDB- BLUE to SMDB-IT 3C-16 Sqmm Cu/PVC/PVC	10	Rm.					
3	From MDB-BLUE to USMDB-LP 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	20	Rm.					
4	From MDB-BLUE to SMDB-HVAC 4C-185 Sqmm Cu/XLPE/PVC + ECC 1C-95 Sqmm Cu/PVC	20	Rm.					
5	From MDB-BLUE to 2 No. 60A TP Isolator (Lift) 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	40	Rm.					
6	From SMDB-LP to LPDB-R4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
7	From SMDB-LP to LPDB-GF1 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	15	Rm.					
8	From SMDB-LP to LPDB-GF2 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	60	Rm.					

9	From SMDB-LP to LPDB-FF1 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	20	Rm.					
10	From SMDB-LP to LPDB-FF2 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	60	Rm.					
11	From SMDB-IT to DATA RACK-GF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.					
12	From SMDB-IT to DATA RACK-GF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.					
13	From SMDB-IT to DATA RACK-FF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
14	From SMDB-IT to DATA RACK-FF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
15	From USMDB-LP to UDB-GF-1 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	15	Rm.					
16	From USMDB-LP to UDB-GF-2 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	60	Rm.					
17	From USMDB-LP to UDB-FF-1 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
18	From USMDB-LP to UDB-FF-2 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	60	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							

	<p>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.</p> <p>Note: (Refer Single Line Diagram)</p> <p>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 plated 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.</p> <p>Minimum One Year Warranty Required from date of successful commissioning on site.</p>							
1	MDB BLUE	1	No.					
2	SMDB-LP	1	No.					
3	USMDB-LP	1	No.					
4	USMDB-IT	1	No.					
5	SMDB-HVAC	1	No.					
6	LPDB-R	1	No.					
7	LPDB-GF-1	1	No.					
8	LPDB-GF-2	1	No.					
9	LPDB-FF-1	1	No.					
10	LPDB-FF-2	1	No.					
11	UDB-GF-1	1	No.					
12	UDB-GF-2	1	No.					
13	UDB-FF-1	1	No.					
14	UDB-FF-2	1	No.					
15	80A Weather Proof TP Boxes	5	No.					
16	100A Weather Proof TP Boxes	5	No.					
17	C.O.S USMDB-IT	1	No.					
	<p>Note:</p> <p>1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.</p>							
	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.	12	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.	10	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.	2	No.					
4	Earthing Mesh (900mm x 900 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.	2	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	225	Rm.					
b	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	275	Rm.					
6	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.							
a	95 Sq.mm Bare Copper Conductor	150	Rm.					
B	LIGHTNING PROTECTION SYSTEM							
7	Supply, installation, testing and commissioning of Early Streamer Emission (ESE) with remote testing option and having following specifications: Make : As per approved manufacturer's list Type : Generation 3 or Equivalent Reaction time : 45 - 50 micro seconds Maximum Discharge Rating : 180 to 200 kA	1	No.					

	Material : Stainless Steel or as per manufacturer's specifications Length : 400mm or as per manufacturer's specifications Level of Protection: Level 1 Protection Radius : 45 m Risk Assement / Coverage Calculation Via Software. Mounting height (from Roof top to tip of ESE) : 5m or as specified Note: The work is included with all mounting, fixing and support accessories and material required for the completion of above mention task.							
8	5 Meter high 125mm dia MS Pole to be used as mast for installation of ESE lightning arrester. Complete with all supports, angles, brackets, wire guides nuts & bolts etc.	1	No.					
9	Surge / Stroke Counter for indicating the number of strokes arrested by the ESE.	2	No.					
10	Supply, installation, testing and commissioning of Stranded bare copper conductors of following sizes in appropriate size of UPVC Conduit (Class-D) laid in floor / Surface on wall from Earth Station to Earth Connecting Points / Lightning Arrester shown in drawings. Complete in all respects including termination at ECP.							
a	95 Sq.mm Bare Copper Conductor	300	Rm.					
7	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.	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 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	Simplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	51	No.					
2	Duplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data & 1 No. CAT-6 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.	42	No.					
3	TV Outlet with face plate	9	No.					

4	1x8 way Splitter including 18 SWG M.S Sheet powder coated Box for RG-6 Connectivity.	2	No.					
5	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.) (Selected Cable Must be UL Listed LSZH)	7	Coil					
6	Supply and Wiring of CAT-6a UTP Cables for Data communication system from Com Rack to each workstation 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 Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	15	Coil					
7	Supply and Wiring of CAT-6a UTP Cables for WIFI Outlets from Com Rack to each outlet in already installed conduit via cable tray as per drawings including termination and tagging at both ends . Complete in all respects. Different colors of cables shall be used for Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	2	Coil					
8	Supply and Wiring of Co-axial cable RG-6 for CATV system in already installed PVC Conduit from each T.V point to Splitter as per drawings including terminations. Complete in all respect.	110	Rm.					
9	Imported Communication Rack 42U (Floor Mounted), (600mm x 600mm) 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDU s) with at least 5 imported power sockets etc. Complete in all respects.	6	No.					
10	Imported Communication Rack 27U (Wall Mounted) , 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDU s) with at least 5 imported power sockets etc. Complete in all respects.	1	No.					
11	Following CAT-6, Patch Panel equipped with RJ-45 I/Os for Voice Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6 Patch Panel for Voice	2	No.					
12	Following CAT-6a, Patch Panel equipped with RJ-45 I/Os for Data Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6A Patch Panel for Data	12	No.					
13	Front Cable Organizer for Voice patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	2	No.					
14	Front Cable Organizer for Data patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	6	No.					
15	Following CAT-6 , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Voice Communication .							
a	1 meter long (Patch panel to Tag block).	42	No.					

16	Following CAT-6a , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Data Communication .							
a	3 meter long.	42	No.					
b	1 meter long. (Patch panel to switch).	75	No.					
17	Supply, installation, testing and commissioning of following items for Data Communications Network Equipment (Active) including all material, labor, tools, accessories etc. Complete in all respects.							
a	24 Ports Access Switch with 1G RJ45 CAT6 POE+ Downlink Ports , 2 x 1G SFP Uplink Ports,52 Gbps Switching Capacity,40 Mpps Forwarding Performance,802.1Q VLANs,4K VLANs Supported,802.1p CoS as L2 Qos,DSCP as L3 QoS,Flow Control,Storm Control & Supression,MAC Spoofing Detection & Prevention,DHCP Snooping,802.1X Supported,STP - 802.1d,RSTP - 802.1w,MSTP - 802.1s,SNMP V1/V2C/V3,Telnet, SSH, WebUI,Single AC Power Supply,Side Air Flow,369.6W available POE power,Standard 19" Rack Mountable complete in all respect.	10	No.					
b	10 Ports Distribution Switch with 10 x 10G SFP+ Downlink Ports , 2 x 10G SFP+ Uplink Ports 240 Mbps Switching Capacity,178.56 Mpps Forwarding Performance,16k MAC Address Entries,802.1Q VLANs,4K VLANs Supported,802.1p CoS as L2 Qos, DSCP as L3 QoS,Flow Control, Storm Control & Supression,802.1X Supported, STP - 802.1d ,RSTP - 802.1w,MSTP - 802.1s,SNMP V1/V2C/V3,Telnet, SSH, WebUI, Single AC Power Supply,Side Air Flow, Standard 19" Rack Mountable	2	No.					
c	Wireless Access Points , with 2 x 1G RJ45 CAT6 POE Uplink Ports,HT20,40/VHT20,40,80,MCS0-9 BPSK,QPSK,16QAM,64QAM ,4 SSID,2 x 2 MIMO,WPA-PSK, WPA-Enterprise,802.1X Supported,802.1p CoS as L2 Qos, DSCP as L3 QoS, Flow Control, Storm Control & Supression, MAC Spoofing Detection & Prevention, DHCP Snooping,802.1Q Vlans, Wall/Ceiling Mounting kit	16	No.					
d	AP Aggregation switch with 8 Portx 1G RJ45 CAT6 POE+ Downlink Ports ,2 x 10G SFP+ Uplink Ports,56 Gbps Switching Capacity,41.644 Mpps Forwarding Performance,16k MAC Address Entries,802.1Q VLANs,4K VLANs Supported,802.1p CoS as L2 Qos,DSCP as L3 QoS,Flow Control,Storm Control & Supression,802.1X Supported,STP - 802.1d,RSTP - 802.1w,MSTP - 802.1s,SNMP V1/V2C/V3,Telnet, SSH, WebUI,Single Power Supply,Side Air Flow,Standard 19" Rack Mountable	4	No.					
18	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 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. (Selected Cable Must be UL Listed LSZH)	250	Rm.					

19	Supply & Wiring of 24 Core, 9/125um Single Mode 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. (Selected Cable Must be UL Listed LSZH)	1	Rm.					
20	Programming, testing and commissioning of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job					
21	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 - H (CARRIED FORWARD TO SUMMARY)							
	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM							
	Supply, installation, testing & commissioning of Addressable Fire Alarm System comprising of following equipments 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.	75	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.	11	No.					
4	Addressable Type Indoor Loop Powered electronic sounder and minimum sound out put 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.	19	No.					
5	Supply and wiring for FACP Power from DB 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.	900	Rm.					

7	Networking of all the Fire alarm control panels of all the OPD Buildings along with integration with the existing control room including IO modules, wiring, conduiting, complete in all respect.	1	Job					
8	Programming, testing and commissioning of the complete system as per client's requirements permissible for the FACP with training sessions of maintenance personnel's.	1	Job					
9	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.	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 PUBLIC ADDRESS SYSTEM							
	Supply, Installation, testing & commissioning of following items for Public Address System as described below including all accessories. Complete with mounting brackets, wiring, adapters etc.							
1	EN-54 Standard IP Base Emergency Evacuation System Manager comprising with required number of Audio Input modules, Equalization modules, 4 Matrix zone system, Voice announcement cards, remote microphone input modules, and 4 audio input, 10000 log event , Surveillance-fault modules with 128 control inputs dry contacts for output of Access Control panel, lift, emergency, CCTV systems and for input from Fire alarm system. system supports up to 64 emergency or 256 general remote microphones and 512 speaker zones.	1	No.					
2	40W Power Amplifier operating at 220V, AC suitable for rack mounting incorporates two audio line level inputs: a Music input and a priority call input. A built-in relay switches the amplifier from the music input of priority call input.	2	No.					
3	6W Recessed / Surface Ceiling Speakers intended for high quality speech and music reproduction with sealed enclosure (fire dome) protective against moisture and dust. The speaker shall have output power adjustments for full, half and quarter power outputs, including back boxes if required.	24	No.					
4	Background Playback Source having module for 2 AM/FM Tuners, USB, DVD/CD, Bluetooth, playing and recording units.	1	No.					
5	4-Zone Call Station Keypad & Microphone with remote and interface unit including all accessories. Complete in all respect.	1	No.					

6	Micro Phone Outlet including all accessories.	2	No.					
7	Volume Controller as per requirement. Complete in all respect.	1	No.					
8	Supply and wiring for Public Address System using 2C, 2.5 Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	450	Rm.					
9	Wiring for Microphone outlet using Cat-6 FTP Cable in 25mm dia PVC conduit. as shown in drawings. Complete in all respects. (Selected Cable Must be UL Listed LSZH)	1	Coil					
10	Programming, testing and commissioning of the complete system as per client's requirements permissible for the training sessions of maintenance personnel's.	1	Job					
11	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.	1	Job					
	Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)							
	SECTION - K CCTV SYSTEM							
1	Supply and Wiring of CAT-6a UTP Cables for Cameras from each camera to NVR in already installed conduit via cable tray as per drawings including termination and tagging at both ends . Complete in all respects. (Selected Cable Must be UL Listed LSZH)	4	Coil					
2	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Fiber Optic Cable (from Main Switch to Data Racks) 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. (Selected Cable Must be UL Listed LSZH)	220	Rm.					
3	Programming, testing and commissioning of the complete system as per client's requirements permissible for the training sessions of maintenance personnel's.	1	Job					
4	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.	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 as per site conditions before commencement of work.							
	Total Amount (Rs.) Sec - K (CARRIED FORWARD TO SUMMARY)							

	SECTION - L QUEUE MANAGEMENT SYSTEM							
	Supply, installation, testing and commissioning of following items for Quematic Management System as described below including all accessories. Complete with mounting brackets, wiring, adapters etc.							
1	Supply and Wiring of CAT-6 UTP Cables for Queue Management System from Com Rack to each station in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends . Complete in all respects. (Selected Cable Must be UL Listed LSZH)	3	Coil					
	Note: 1) The Bidder shall provide the complete Technical Literature for the system offered. 2) Contractor is advised to confirm the cable running lengths as per site conditions before commencement of work.							
	Total Amount (Rs.) Sec - L (CARRIED FORWARD TO SUMMARY)							
	SECTION - M 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 - M (CARRIED FORWARD TO SUMMARY)							

YELLOW BLOCK

Cost Summary Of Plumbing and Firefighting Works

S.No	Activity	Amount Rs.
A	TOILET FITTING AND ACCESSORIES	
B	COLD WATER SUPPLY SYSTEM	
C	SOIL, WASTE AND VENT PIPE SYSTEM	
D	EXTERNAL WATER SUPPLY SYSTEM	
E	SEWER SYSTEM	
F	FIRE FIGHTING SYSTEM	
	Total Cost Of Plumbing & Firefighting Works	

LIST OF APPROVED MANUFACTURERS

S.No.	ITEM	MAKE
PLUMBING WORKS		
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-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 WORKS		
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

Note.

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

Above mentioned approved manufacturers list is to be maintained

PLUMBING & FIRE FIGHTING WORKS

S.No.	Description	Qty	Unit	Rate	Amount
A	TOILET FITTING AND ACCESSORIES				
1	Providing and fixing European Type Water Closet with coupled flushing cistern, including all accessories and fittings, C.P flexible pipe, thimble,waste and traps, including seat and cover, tee stop cock with check nut, all joints to service and drains, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout, and coated with epoxy, complete in all respect.				
	a) For General toilets	16	Nos.		
	b) For Handicapped toilet	2	Nos.		
2	Providing and fixing Counter Top Wash Basin with all accessories such as, basin mixer, tee stop cock with check nuts, CP flexible pipe, waste pipe, waste coupling, bracket set, etc. Complete including bottle trap, silicon sealant, all joint to service and drain, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout, and coated with epoxy. complete in all respect.	28	Nos.		
3	Providing and fixing Wash Basin with Half Pedestal with all accessories such as, basin mixer, tee stop cock with check nuts, CP flexible pipe, waste pipe, waste coupling, bracket set, etc. Complete including bottle trap, silicon sealant, all joint to service and drain, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout complete in all respect.				
	a) For General toilets	22	Nos.		
	b) For Handicapped 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 Dispensor	52	Nos.		
	III Double bibcock with muslim shower	18	Nos.		
	IV Cloth hook	18	Nos.		
	V Bibcock (Janitor Area)	2	Nos.		
				Sub Total- A	

B	COLD WATER SUPPLY SYSTEM							
1	Polypropylene Cold Water Piping for the Toilets							
	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			
2	Polyethylene (P.E) Piping for O.H Tank Water Supply, Overflow / Drain system							
	Providing and fixing, jointing, polyethylene pipe as per ISO 4427/ DIN 8074 / 8075 (PN 16), including specials fittings such as, sockets, tees, elbow, bends, reducers, plugs, tapping saddle and union etc.. Supported on walls and buried in floor as per specification complete in all respect as per drawing including sleeve in wall, testing @ 232 psi. (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	90	mm	Ø	3	RM		
II	110	mm	Ø	472	RM			
3	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 specification and as shown on drawings and as approved by the engineer.							
	I	1/2"	Ø		36	Nos.		
	II	3/4"	Ø		8	Nos.		
	III	1"	Ø		4	Nos.		
	IV	3"	Ø		1	No.		
	V	4"	Ø		3	Nos.		
							Sub Total-B	

C	SOIL, WASTE AND VENT PIPE SYSTEM							
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	Providing and fixing in position uPVC pipes solvent joint type pipe for rain water drainage, 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 and as shown in drawings.							
	I	82	mm	Ø	6	RM		
	II	110	mm	Ø	45	RM		
3	Providing, fixing make Floor Drain / Floor Gully of approved design with S/S grating including requisite number of holes in wall plinth or floor for pipe connection and making good the same as necessary to the structure and filling sleeve opening with non-shrink grout complete including gasket and clamp.							
	I	82	mm	Ø	28	Nos.		
4	Providing and fixing uPVC Clean Out with cover making requisite number of holes in walls, plinth or floor for pipe connection and making good the same as necessary to the structure and filling sleeve opening with non-shrink grout complete including rubber gasket and clamp.							
	I	82	mm	Ø	14	Nos.		
	II	110	mm	Ø	6	Nos.		
5	Providing and fixing uPVC Clean Out Plug with cover for pipe roding, making good the same as necessary to the structure with rubber gasket, complete in all respect.							
	I	82	mm	Ø	20	Nos.		
	II	110	mm	Ø	6	Nos.		

6	Providing and fixing uPVC Cowl for vent pipe of the following \emptyset including all accessories complete in all respect.						
	I	82	mm	\emptyset	4	Nos.	
	II	110	mm	\emptyset	3	Nos.	
7	Providing and fixing Rain Drain of approved design with uPVC grating 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 gasket and clamp complete in all respect.						
	I	110 mm \emptyset (Scupper Drain)		5	Nos.		
						Sub Total-C	
D	EXTERNAL WATER SUPPLY SYSTEM						
1	Providing and installing testing and commissioning the Centrifugal Pump for over head water tank filling of 160Gpm of 60'ft Head as per manufacturer recommendation including all accessories such as flanged pipes, gate valves, non-return valves, foot valves, pressure gauges on suction and delivery side of the pump motor control panel with dry run protection including indication light, electrical float valve with complete wiring, complete in all respect.			1	No.		
2	Providing, installing, testing and commissioning Booster Pump for top 2 floors water supply of approved make including (100 litres) tank, gate valves, check valves, foot valves, gauges, control 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 in all respect. (Note : 01set = 02Nos pumps)			1	Set.		
3	Providing, fixing Automatic Level Controller with Display Panel for overhead water tank, including all accessories and wiring, complete in all respect and as per engineer's satisfaction.			1	No.		
4	Providing and fixing C.I Manhole Cover for underground and over head water tank. (weight : 52kg)						
	I	600x600 mm		4	Nos.		
5	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 \emptyset		2	Nos.		
						Sub Total-D	

E	SEWER 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	115	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.				5	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)							
	I	For depth 0-3'ft (600mm x 600mm)			13	Nos.		
4	Shop Drawings as per specifications.				1	Job		
5	As Built Drawings as per specifications.				1	Job		
							Sub Total-E	
F	FIRE FIGHTING SYSTEM							
1	Providing, installing, testing & commissioning fire pump comprising of 01 No. Electric pump capacity of 750GPM and head of 8 Bar, horizontal end suction type centrifugal main pump flexibly coupled to electric motor, 01 No. Diesel pump Horizontal end suction type centrifugal, flexibly coupled to Diesel engine, 01 No. Jockey Pump capacity of 18GPM and head of 8.5Bar, vertical multistage type centrifugal electric pump closed coupled to electric motor, 01 No. factory assembled control panel and standard accessories such as pressure gauge, pressure switches, air release valve suction and discharge header with non-return valve, gate valves of suitable sizes, complete in all respect with intermediate piping and electrical wiring mounted on common base frames as per Engineer's instructions.				1	Set.		
2	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for fire fighting 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		

3	Providing, fixing, jointing, Polyethylene Pipe (as out ring burried out side the building to feed building's internal risers and fire hydrant) as per ISO 4427/ DIN 8074 / 8075 (PN 16), including specials fittings such as, sockets, tees, elbow, bends, reducers, plugs, tapping saddle and union etc. including excavation, backfilling and compaction, as per specification complete in all respect as per drawing, including testing @ 232 psi.				
	I	6"Ø	232	RM	
4	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 specification and as shown on drawings and as approved by the engineer.				
	I	3/4"Ø	2	Nos.	
	II	4"Ø	1	No.	
5	Providing, installing and fixing Wet Type Fire Hydrant with 2.5 plane outlet gray cast iron body, copper alloy outlet. 4" dia flanged outlet, complete in all respect.		2	Nos.	
6	Providing and fixing of Full Way Gate Valve With (600mm X 600mm) Valve Chamber 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 specification and as shown on drawings and as approved by the engineer.				
	I	4"Ø	2	Nos.	
7	Providing and fixing double compartment Fire 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.		6	Nos.	
8	Providing and fixing Dry Chemical Powder , fire extinguisher 6Kg capacity, powder coated in red colour, complete with pressure gauge and wall bracket.		10	Nos.	
9	Providing and fixing CO₂ Type Fire Extinguisher 2Kg capacity, powder coated in red colour, complete with wall bracket and all other accessories.		10	Nos.	

10	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.		
11	Providing and fixing of full way Non-return Valve of cast iron with threaded ends 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.				
	1	4"Ø	1	No.	
12	Providing, Installing and commission of Alarm Check Valve 6"dia with motor gong all accessories and material as specified, complete in all respect as per specifications.	1	No.		
13	Providing and installing Automatic Air Vent with all accessories and material as specified complete in all respect as shown on drawings / specificatoins.	2	Nos.		
DRAWINGS					
14	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.				
15	Shop Drawings as per specifications.	1	Job		
16	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

CIVIL WORKS INCLUDING WAITING AREA

STRUCTURE

SECTION – A: FROM FOUNDATION TO PLINTH LEVEL (SUB – STRUCTURE) (UPTO – 75 LEVEL)

S. NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>EXCAVATION AND BACKFILLING</u>				
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).	900	Cum		
2.0	<u>CONCRETE OF SUB – STRUCTURE</u> —				
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-in-charge.				
	A. Lean Concrete 1:4:8	87	Cum		
	B. 1:3:6 Cast in situ (under plinth beams)	16	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)	240	Cum		
	B. Foundation beams ($f'c = 4$ ksi)	9	Cum		
	C. Plinth beams ($f'c = 3$ ksi)	15	Cum		

	D. Columns upto Plinth level ($f' c = 4$ ksi)	28	Cum		
	E. Lift shear walls upto plinth level ($f' c = 4$ ksi)	18	Cum		
3.0	STEEL REINFORCEMENTS.				
3.1	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).	56000	Kg		

SECTION – B: PLINTH LEVEL TO 1ST FLOOR SLAB (- 75 LEVEL TO + 3825 LEVEL)

S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	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./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)	35	Cum		
	B) Lift/ Shear walls ($f' c = 4$ ksi)	27	Cum		
	C) Beams ($f' c = 3$ ksi)	40	Cum		
	D) Slabs ($f' c = 3$ ksi)	105	Cum		
	E) Staircase steps, landing etc ($f' c = 3$ ksi)	15	Cum		
2.0	STEEL REINFORCEMENTS.				
2.1	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).	45000	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
1.0	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)	35	Cum		
	B) Lift / Shear walls (f' c = 4 ksi)	27	Cum		
	C) Beams (f' c = 3 ksi)	40	Cum		
	D) Slabs (f' c = 3 ksi)	105	Cum		
	E) Staircase steps, landing etc (f' c = 3 ksi)	15	Cum		
2.0	STEEL REINFORCEMENTS.				
2.1	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).	45000	Kg		
	TOTAL COST OF SEC - C Rs.				
					=====

SECTION – D: ROOF TO UPPER ROOF LEVEL + O/H TANK (+ 7725 TO + 11625 & + 9475 & +10950 LEVEL)					
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	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./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)	18	Cum		
	B) Lift / Shear walls (f' c = 4 ksi)	27	Cum		
	C) Beams / Upstand (f' c = 3 ksi)	32	Cum		
	D) Slabs / Projection (f' c = 3 ksi)	27	Cum		
1.2	Same as item # 1.1 above but water proof concrete prepared by mixing of water proofing concrete admixture “ BETOCRETE C– 16” . (crystalline water proofing admixture) from M/S AQUAFIN PAKISTAN (Tel # 021-35361131-32). Admixture shall be mixed @ 2% by weight of cement along with mixing of super plasticizer G-1000 used @ 1% by weight of cement. Dosing of water proofing admixture shall be done under supervision of AQUAFIN PAKISTAN representative. Complete with including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel. Complete in all respect at any height and any level, complete as per specifications, drawings and all to the approval of Engineer – in – charge.				
	B) O/H Water tank				
	iv) Bottom slab & chamfers (f'c = 3 Ksi)	8	Cum		
	v) Walls & chamfers (f'c = 3 Ksi)	7	Cum		
	vi) Top slab (f'c = 3 Ksi)	8	Cum		
2.0	MISCELLANEOUS WORKS				
2.1	Providing and applying water proofing treatment of O/H , water tank with “AQUAFIN – IC” (Crystalline water proofing slurry) from M/S AQUAFIN PAKISTAN. or approved equivalent, Mixing and application of water proofing material shall be carried out by material supplied company applicators. Complete in all respect as per drawing, specifications and directed by Engineer – in – charge.				
	c. At bottom slab applying @ 1 Kg/Sqm	40	Sqm		
	d. On walls, applying @ 1.5 Kg / sqm	40	Sqm		
2.2	Providing and applying 20mm thick 1:6 cement sand plaster to all internal and external surfaces of O/H water tank (i.e walls & ceilings). Complete in all respect.	120	Sqm		
2.3	Providing, laying and finishing of 75mm thick c.c 1:2:4 concrete floor with sand and crushed stones on bottom slab of water tank. Complete with gurmala finish smooth surfaces. Complete in all respect.	40	Sqm		

2.4	Providing and fixing of S/S Manhole cover of 600 x 600 sizes at O/H water tank. . Complete in all respect.	2	Nos		
3.0	<u>STEEL REINFORCEMENTS.</u>				
3.1	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 margining, 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).	22000	Kg		
	TOTAL COST OF SEC - D Rs.				
					=====

WAITING AREA BUILDING

S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>EXCAVATION AND BACKFILLING</u>				
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).	119	Cum		
2.0	<u>CONCRETE OF SUB – STRUCTURE</u>				
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-in-charge.				
	A. Lean Concrete 1:4:8	24	Cum		
	B. 1:3:6 Cast in situ (under plinth beams)	16	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 Cube strength of 3000 psi 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	13	Cum		
	B. Plinth beams	13	Cum		
	C. Columns upto Plinth level	17	Cum		
3.0	<u>CONCRETE OF SUPER – STRUCTURE</u>				
3.1	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 Cube strength of 3000 psi 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	26	Cum		
	B) Beams	30	Cum		
	C) Slabs	14	Cum		
4.0	<u>STEEL REINFORCEMENTS.</u>				
4.1	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 margining, 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).	13100	Kg		
5.0	<u>M.S STRUCTURAL WORKS</u>				
5.1	Providing, fabricating, erection and fixing in position, M.S structural works of trusses & purlins. Complete with fabricated as per sections shown in drawing such as angles, H.S.S. Sections M.S plates, nut & bolts etc. Complete with cutting, welding, (all around the section), grinded the welded joints, applying three coats of ICI enamel paint over a coat of rust proof paint. Complete with wastage & welding etc. (no extra weight of welding will be given). Complete in all respect as per drawing, specification and directed by Engineer – in – Charge.	10400	Kg		

		TOTAL COST Rs.			

Item No.	Description	Unit	Quantity	Rate	Amount
1	External Improvement				
	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				
a)	150mm thick solid wall	m ²	110		
b)	100mm thick solid wall	m ²	185		
2	Applying 20 mm thick cement 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	295		
3	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	460		
4	Providing and laying RCC slab including cost of cement, reti, steel complete in all respect as per drawing.	m ²	13		
5	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	210		
6	Providing and lay G.I. rolling shutter complete in all respect as per drawing.	m ²	10		
7	Provide and lay glazed tile for bathroom fixing with dry bond including grouting; complete in all respect as per drawings	m ²	238		
8	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-04 - 1200 x 2750	Nos	8		
	D-08 - 750 x 2750	Nos	6		
9	Provide and laying khaprail roof tile as complete in all respect as per drawings	m ²	210		

10	Provide and lay envicrete including khaka as per site survey in all respect as per drawing, external and external	m ²	2015		
11	Providing and making marble and masonry Bench complete in all respect as per drawing.				
a)	1800 m	Nos	20		
b)	3200 m	Nos	20		
12	Providing and laying pre polish marble counter complete in all respect as per drawing.	m ²	15		
13	Provide and lay curve stone in all respect as per drawing	m	50		
14	Provide and making wash terrazzo planter in all respect as per drawing	Nos	5		
15	Provide and fabricate sliding M.S. gate including anti rust proof paint in all respect as per drawing	Nos	2		
16	Provide and install 12mm tempered glass partition as required complete in all respects with all necessary hardware. Refer as per drawing	m ²	16		
17	Providing and lay G.I. rolling shutter complete in all respect as per drawing.	m ²	10		
	Sub Total				

Item No.	Description	Unit	Quantity	Rate	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				
	300mm thick solid wall	m ²	266		
	150mm thick solid wall	m ²	1550		
	100mm thick solid wall	m ²	154		
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 lowers 1:2:4 counter including form work and steel finish and fixing arrangement complete in all respect as per drawing				
	Elevation 3.26 mm high	Nos	92		
	Staircase 3.3 mm high	Nos	332		
	Staircase 3.50 mm high	Nos	63		
5	Provide and fix glass block in 200 x 200 mm as approved including fix in adhesive and all respect fixing arrangement complete in all respect as as per drawing No.....	m ²	28		
6	Provide and casting RCC 1:2:4 including steel complete in all respect as per Drawing	m ³	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 as per drawing No.....	m	95		
8	Provide and fabricating M.S. hand railing for staircase with fixing arrangement with anti rust paint including fixing 60mm red miranti wood gola finish with paint and polish n all respect as as per drawing No.....	m	120		

9	Provide and lay imported design engineered wooden floor and skirting of approved pattern complete with polish on CC 1:2:4 laid line leveling, curing etc. complete in all respects per drawing.	m ²	54		
	Skirting	m	72		
10	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	810		
c)	Provide and laying 1:2:4 50mm thick complete on all respect as per drawing	m ²	810		
d)	Provide and laying National insulation tile 35 x 132 x 268mm thick complete on all respect as per drawing	m ²	810		
11	Ground Floor finishes				
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		
12	Expansion Joint Cover Assemblies				
	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		
13	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		
14	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		
15	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		
16	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		
	W-03 - 750 x 1591 - Size	Nos	2		
	V-02 - 450 x 450 - Size	Nos	14		
17	Portland Cement Plastering				
	Provide and apply 12 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 and specifications. Ground to 4th floor	m ²	3840		
18	12 mm thick ceiling plaster in 1:4 cement sand mortar as per drawing and specifications.	m ²	1870		
19	12mm thick Cement plaster to waist of stair case and pardi on both side of steps in 1:4 cement sand mortar as per drawing and specifications.	m ²	115		
20	Applying 20 mm thick external cement 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	1275		
21	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	1275		
22	ALUMINIUM 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	150		
23	Plastic Tiling 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	196		
24	Provide and lay glazed tile for bathroom fixing with dry bond including grouting; complete in all respect as per drawings				
	Wall	m ²	385		
25	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	1107		
b)	up to 2100	m ²	272		
26	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)	600 x 600	m ²	1700		
b)	300 x 300	m ²	198		
	Skirting	m	154		
27	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		
28	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	1113		
29	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 ²	150		

30	Interior Painting				
	Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings	m ²	4985		
31	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	195		
32	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	66 Nos		
a)	On Landing	m ²	33		
b)	Skirting	m ²	316		
33	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	66 Nos		
b)	On Landing	m ²	33		
34	Provide and lay marble border complete in all respect as per drawings	m	270		
35	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	69		
36	Provide and lay marble on landing complete in all respect as per drawings	m	33		
Sub Total					
TOTAL CIVIL WORKS					

ELECTRICAL WORK – BLUE BLOCK

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 PUBLIC ADDRESS SYSTEM			
11	SECTION - K CCTV SYSTEM			
12	SECTION - L QUEUE MANAGEMENT SYSTEM			
13	SECTION - M 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.

S.#	DESCRIPTION	QTY	UNIT	SUPPLY		INSTALLATION		AMOUNT (Rs.)
				RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	
	SECTION - A WIRING & WIRING ACCESSORIES							
	<p>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.</p> <p>Note:</p> <p>1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.</p> <p>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.</p> <p>3) Megger Test of each circuit to be done by contractor.</p> <p>4) Wiring for Occupancy Sensor shall be included in light wiring.</p>							
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.	51	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.	281	No.					
a	Same as above item but wiring from light point to point.	220	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.	17	No.					
a	Same as above item but wiring from light point to point.	72	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.	7	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.	26	No.					
a	Same as above item but wiring from light point to point.	11	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.	2	No.					
a	Same as above item but wiring from light point to point.	51	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.	26	No.				
b	Same as above item, but wiring from outlet to outlet.	266	No.				
8	Wiring of 13A/15A Switch Socket units (UPS 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.	20	No.				
b	Same as above item, but wiring from outlet to outlet.	51	No.				
9	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 Cu/PVC	4	No.				
b	Same as above item but wiring from 20A Switch to 13A International Outlet	4	No.				
10	Wiring of 16A DP Isolator for 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	22	No.				
11	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	22	No.				
12	Wiring of 20A DP Isolator for Indoor VRF Units /Hot Water Gyser 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	30	No.				
13	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	30	No.				
14	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	11	No.				
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 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	11	No.				
16	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.							
a	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	9	No.					
17	Wiring of 32A, 5-pin Industrial Socket unit (20 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	4	No.					
18	Wiring of 32A, 5-pin Industrial Socket unit (15 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	2	No.					
19	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.							
a	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	7	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 colour 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.							
a	25mm dia PVC Conduit	1,000	Rm.					
b	32mm dia PVC Conduit	200	Rm.					
c	38mm dia PVC Conduit	200	Rm.					
d	100mm dia UPVC Conduit (Class-D)	150	Rm.					
e	150mm dia UPVC Conduit (Class-D)	150	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.							
a	200mm x 200mm x 75mm	22	No.					
b	300mm x 300mm x 75mm	22	No.					

3	<p>Supply & installation of following sizes of 14 SWG G.I Cable Tray with 16 SWG cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p>Note:</p> <ul style="list-style-type: none"> - 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. 							
a	300mm x 100mm (2-Partition)	125	Rm.					
b	300mm x 100mm (2-Partition) (On Roof Top)	85	Rm.					
c	300mm x 100mm	50	Rm.					
d	150mm x 100mm	30	Rm.					
e	450mm x 100mm	30	Rm.					
4	<p>Supply & installation of following sizes of 14 SWG G.I Cable Ladder with 16 SWG cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p>Note:</p> <ul style="list-style-type: none"> - 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. 							
a	450mm x 100mm (Vertical) (GF to Roof)	35	Rm.					
b	300mm x 100mm (Vertical) (GF to Roof)	35	Rm.					
c	300mm x 100mm (Vertical) (Roof)	15	Rm.					
5	<p>Supply & Installation of Imported Linear Outlet Boxes without face plates made of Aluminum, mounted on wall or punched in furniture as per design drawings. The linear outlet boxes are to be provided with appropriate sizes of knockouts.</p>							
a	450mm x 100mm	37	No.					
6	<p>Supply & installation of Imported Floor Outlet Boxes without face plates made of 16 SWG G.I Sheet, recessed in ground as per design drawings.</p>	4	No.					
	<p>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.</p>							

	Total Amount (Rs.) Sec - B(CARRIED FORWARD TO SUMMARY)							
	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 Pienno for Switches & Vivace for Sockets Outlets or Equivalent)							
1	10A, 220V One Gang Switch Unit	42	No.					
2	10A, 220V Two Gang Switch Unit	68	No.					
3	10A, 220V Three Gang Switch Unit	20	No.					
4	20A, 220V One Gang Neon Indication Light Switch for Hot Water Gyser	10	No.					
5	One Gang Fan Dimmer	1	No.					
6	Two Gang Fan Dimmer	4	No.					
7	Three Gang Dimmer	20	No.					
8	13A, International Switch Socket unit	323	No.					
9	15A, Round 3 pin Switch Socket unit	7	No.					
10	13A, 3-Pin Flat Duplex Switch Socket unit	42	No.					
11	13A, 3-Pin Flat Simplex Switch Socket unit	26	No.					
12	20A Switched Socket for Hand Dryer	4	No.					
13	16A DP Isolator (Split Unit)	22	No.					
14	20A 4P Isolator (Indoor VRF)	22	No.					
15	20A DP (Indoor VRF)	22	No.					
16	80A 4P Isolator (Outdoor VRF)	11	No.					
17	63A 4P Isolator (Outdoor VRF)	11	No.					
18	32A 4P Isolator (Fresh Air Units)	9	No.					
19	32A 4P Isolator (Medical Equipment)	7	No.					
20	60A TP Isolator (Lifts)	2	No.					
21	32A 5-Pin (Three Phase) Industrial Socket with Plug (for UPS)	11	No.					
22	32A 5-Pin (Three Phase) Industrial Socket with Plug (for Communication Racks)	15	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	Recessed Mounted Down Light with 15W LED Lamp Color 4000K Diffused Glass	55	No.					
2	Surface Mounted Down Light with 18W LED Lamp Color 4000K Diffused Glass	296	No.					
3	Surface Mounted Down Light with 12W LED Lamp Color 4000K Diffused Glass	13	No.					
4	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	7	No.					
5	Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	8	No.					
6	Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	167	No.					
7	Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	35	No.					
8	Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	58	No.					
9	Bulk Head Light	25	No.					
10	Ceiling Fan 56"	69	No.					
11	50W Insect Killer Light	20	No.					
12	Exhaust Fan 24"	10	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-LP 4C-95 Sqmm Cu/XLPE/PVC + ECC 1C-50 Sqmm Cu/PVC	10	Rm.					
2	From MDB- BLUE to SMDB-IT 3C-16 Sqmm Cu/PVC/PVC	10	Rm.					
3	From MDB-BLUE to USMDB-LP 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	20	Rm.					
4	From MDB-BLUE to SMDB-HVAC 4C-185 Sqmm Cu/XLPE/PVC + ECC 1C-95 Sqmm Cu/PVC	20	Rm.					
5	From MDB-BLUE to 2 No. 60A TP Isolator (Lift) 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	40	Rm.					
6	From SMDB-LP to LPDB-R4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
7	From SMDB-LP to LPDB-GF1 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	15	Rm.					
8	From SMDB-LP to LPDB-GF2 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	60	Rm.					

9	From SMDB-LP to LPDB-FF1 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	20	Rm.					
10	From SMDB-LP to LPDB-FF2 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	60	Rm.					
11	From SMDB-IT to DATA RACK-GF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.					
12	From SMDB-IT to DATA RACK-GF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.					
13	From SMDB-IT to DATA RACK-FF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
14	From SMDB-IT to DATA RACK-FF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
15	From USMDB-LP to UDB-GF-1 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	15	Rm.					
16	From USMDB-LP to UDB-GF-2 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	60	Rm.					
17	From USMDB-LP to UDB-FF-1 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
18	From USMDB-LP to UDB-FF-2 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	60	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							

	<p>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.</p> <p>Note: (Refer Single Line Diagram)</p> <p>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 plated 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.</p> <p>Minimum One Year Warranty Required from date of successful commissioning on site.</p>							
1	MDB BLUE	1	No.					
2	SMDB-LP	1	No.					
3	USMDB-LP	1	No.					
4	USMDB-IT	1	No.					
5	SMDB-HVAC	1	No.					
6	LPDB-R	1	No.					
7	LPDB-GF-1	1	No.					
8	LPDB-GF-2	1	No.					
9	LPDB-FF-1	1	No.					
10	LPDB-FF-2	1	No.					
11	UDB-GF-1	1	No.					
12	UDB-GF-2	1	No.					
13	UDB-FF-1	1	No.					
14	UDB-FF-2	1	No.					
15	80A Weather Proof TP Boxes	5	No.					
16	100A Weather Proof TP Boxes	5	No.					
17	C.O.S USMDB-IT	1	No.					
	<p>Note:</p> <p>1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.</p>							
	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.	12	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.	10	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.	2	No.					
4	Earthing Mesh (900mm x 900 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.	2	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	225	Rm.					
b	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	275	Rm.					
6	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.							
a	95 Sq.mm Bare Copper Conductor	150	Rm.					
7	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.	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 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	Simplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	51	No.					
2	Duplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data & 1 No. CAT-6 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.	42	No.					
3	TV Outlet with face plate	9	No.					
4	1x8 way Splitter including 18 SWG M.S Sheet powder coated Box for RG-6 Connectivity.	2	No.					
5	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.) (Selected Cable Must be UL Listed LSZH)	7	Coil					
6	Supply and Wiring of CAT-6a UTP Cables for Data communication system from Com Rack to each workstation 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 Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	15	Coil					
7	Supply and Wiring of CAT-6a UTP Cables for WIFI Outlets from Com Rack to each outlet in already installed conduit via cable tray as per drawings including termination and tagging at both ends . Complete in all respects. Different colors of cables shall be used for Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	2	Coil					
8	Supply and Wiring of Co-axial cable RG-6 for CATV system in already installed PVC Conduit from each T.V point to Splitter as per drawings including terminations. Complete in all respect.	110	Rm.					

9	Imported Communication Rack 42U (Floor Mounted), (600mm x 600mm) 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets etc. Complete in all respects.	6	No.					
10	Imported Communication Rack 27U (Wall Mounted) , 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets etc. Complete in all respects.	1	No.					
11	Following CAT-6, Patch Panel equipped with RJ-45 I/Os for Voice Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6 Patch Panel for Voice	2	No.					
12	Following CAT-6a, Patch Panel equipped with RJ-45 I/Os for Data Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6A Patch Panel for Data	12	No.					
13	Front Cable Organizer for Voice patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	2	No.					
14	Front Cable Organizer for Data patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	6	No.					
15	Following CAT-6 , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Voice Communication .							
a	1 meter long (Patch panel to Tag block).	42	No.					
16	Following CAT-6a , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Data Communication .							
a	3 meter long.	42	No.					
b	1 meter long. (Patch panel to switch).	75	No.					
17	Supply, installation, testing and commissioning of following items for Data Communications Network Equipment (Active) including all material, labor, tools, accessories etc. Complete in all respects.							
a	24 Ports Access Switch with 1G RJ45 CAT6 POE+ Downlink Ports , 2 x 1G SFP Uplink Ports,52 Gbps Switching Capacity,40 Mpps Forwarding Performance,802.1Q VLANs,4K VLANs Supported,802.1p CoS as L2 QoS,DSCP as L3 QoS,Flow Control,Storm Control & Supression,MAC Spoofing Detection & Prevention,DHCP Snooping,802.1X Supported,STP - 802.1d,RSTP - 802.1w,MSTP - 802.1s,SNMP V1/V2C/V3,Telnet, SSH, WebUI,Single AC Power Supply,Side Air Flow,369.6W available POE power,Standard 19" Rack Mountable complete in all respect.	10	No.					

b	10 Ports Distribution Switch with 10 x 10G SFP+ Downlink Ports , 2 x 10G SFP+ Uplink Ports 240 Mbps Switching Capacity, 178.56 Mpps Forwarding Performance, 16k MAC Address Entries, 802.1Q VLANs, 4K VLANs Supported, 802.1p CoS as L2 QoS, DSCP as L3 QoS, Flow Control, Storm Control & Suppression, 802.1X Supported, STP - 802.1d, RSTP - 802.1w, MSTP - 802.1s, SNMP V1/V2C/V3, Telnet, SSH, WebUI, Single AC Power Supply, Side Air Flow, Standard 19" Rack Mountable	2	No.					
c	Wireless Access Points , with 2 x 1G RJ45 CAT6 POE Uplink Ports, HT20, 40/VHT20, 40, 80, MCS0-9 BPSK, QPSK, 16QAM, 64QAM, 4 SSID, 2 x 2 MIMO, WPA-PSK, WPA-Enterprise, 802.1X Supported, 802.1p CoS as L2 QoS, DSCP as L3 QoS, Flow Control, Storm Control & Suppression, MAC Spoofing Detection & Prevention, DHCP Snooping, 802.1Q Vlans, Wall/Ceiling Mounting kit	16	No.					
d	AP Aggregation switch with 8 Portx 1G RJ45 CAT6 POE+ Downlink Ports , 2 x 10G SFP+ Uplink Ports, 56 Gbps Switching Capacity, 41.644 Mpps Forwarding Performance, 16k MAC Address Entries, 802.1Q VLANs, 4K VLANs Supported, 802.1p CoS as L2 QoS, DSCP as L3 QoS, Flow Control, Storm Control & Suppression, 802.1X Supported, STP - 802.1d, RSTP - 802.1w, MSTP - 802.1s, SNMP V1/V2C/V3, Telnet, SSH, WebUI, Single Power Supply, Side Air Flow, Standard 19" Rack Mountable	4	No.					
18	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 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. (Selected Cable Must be UL Listed LSZH)	250	Rm.					
19	Supply & Wiring of 24 Core, 9/125um Single Mode 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. (Selected Cable Must be UL Listed LSZH)	1	Rm.					
20	Programming, testing and commissioning of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job					
21	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 - 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.	75	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.	11	No.					
4	Addressable Type Indoor Loop Powered electronic sounder and minimum sound out put 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.	19	No.					
5	Supply and wiring for FACP Power from DB 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.	900	Rm.					
7	Networking of all the Fire alarm control panels of all the OPD Buildings along with integration with the existing control room including IO modules, wiring, conduiting, complete in all respect.	1	Job					
8	Programming, testing and commissioning of the complete system as per client's requirements permissible for the FACP with training sessions of maintenance personnel's.	1	Job					
9	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.	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 PUBLIC ADDRESS SYSTEM							
	Supply, Installation, testing & commissioning of following items for Public Address System as described below including all accessories. Complete with mounting brackets, wiring, adapters etc.							
1	EN-54 Standard IP Base Emergency Evacuation System Manager comprising with required number of Audio Input modules, Equalization modules, 4 Matrix zone system, Voice announcement cards, remote microphone input modules, and 4 audio input, 10000 log event , Surveillance-fault modules with 128 control inputs dry contacts for output of Access Control panel, lift, emergency, CCTV systems and for input from Fire alarm system. system supports up to 64 emergency or 256 general remote microphones and 512 speaker zones.	1	No.					
2	40W Power Amplifier operating at 220V, AC suitable for rack mounting incorporates two audio line level inputs: a Music input and a priority call input. A built-in relay switches the amplifier from the music input of priority call input.	2	No.					
3	6W Recessed / Surface Ceiling Speakers intended for high quality speech and music reproduction with sealed enclosure (fire dome) protective against moisture and dust. The speaker shall have output power adjustments for full, half and quarter power outputs, including back boxes if required.	24	No.					
4	Background Playback Source having module for 2 AM/FM Tuners, USB, DVD/CD, Bluetooth, playing and recording units.	1	No.					
5	4-Zone Call Station Keypad & Microphone with remote and interface unit including all accessories. Complete in all respect.	1	No.					
6	Micro Phone Outlet including all accessories.	2	No.					
7	Volume Controller as per requirement. Complete in all respect.	1	No.					
8	Supply and wiring for Public Address System using 2C, 2.5 Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	450	Rm.					
9	Wiring for Microphone outlet using Cat-6 FTP Cable in 25mm dia PVC conduit. as shown in drawings. Complete in all respects. (Selected Cable Must be UL Listed LSZH)	1	Coil					
10	Programming, testing and commissioning of the complete system as per client's requirements permissible for the training sessions of maintenance personnel's.	1	Job					

11	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.	1	Job					
	Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)							
	SECTION - K CCTV SYSTEM							
1	Supply and Wiring of CAT-6a UTP Cables for Cameras from each camera to NVR in already installed conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Selected Cable Must be UL Listed LSZH)	4	Coil					
2	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Fiber Optic Cable (from Main Switch to Data Racks) 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. (Selected Cable Must be UL Listed LSZH)	220	Rm.					
3	Programming, testing and commissioning of the complete system as per client's requirements permissible for the training sessions of maintenance personnel's.	1	Job					
4	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.	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 as per site conditions before commencement of work.							
	Total Amount (Rs.) Sec - K (CARRIED FORWARD TO SUMMARY)							
	SECTION - L QUEUE MANAGEMENT SYSTEM							
	Supply, installation, testing and commissioning of following items for Quematic Management System as described below including all accessories. Complete with mounting brackets, wiring, adapters etc.							
9	Supply and Wiring of CAT-6 UTP Cables for Queue Management System from Com Rack to each station in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends. Complete in all respects. (Selected Cable Must be UL Listed LSZH)	3	Coil					

	Note: 1) The Bidder shall provide the complete Technical Literature for the system offered. 2) Contractor is advised to confirm the cable running lengths as per site conditions before commencement of work.							
	Total Amount (Rs.) Sec - L (CARRIED FORWARD TO SUMMARY)							
	SECTION - M 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 - M (CARRIED FORWARD TO SUMMARY)							

BLUE BLOCK

Cost Summary Of Plumbing and Firefighting Works

S.No	Activity	Amount Rs.
A	TOILET FITTING AND ACCESSORIES	
B	COLD WATER SUPPLY SYSTEM	
C	SOIL, WASTE AND VENT PIPE SYSTEM	
D	EXTERNAL WATER SUPPLY SYSTEM	
E	SEWER SYSTEM	
F	FIRE FIGHTING SYSTEM	
	Total Cost Of Plumbing & Firefighting Works	

LIST OF APPROVED MANUFACTURERS

S.No.	ITEM	MAKE
PLUMBING WORKS		
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-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 WORKS		
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

Note.

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

Above mentioned approved manufacturers list is to be maintained

PLUMBING & FIRE FIGHTING WORKS

S.No.	Description	Qty	Unit	Rate	Amount
A	TOILET FITTING AND ACCESSORIES				
1	Providing and fixing European Type Water Closet with coupled flushing cistern, including all accessories and fittings, C.P flexible pipe, thimble,waste and traps, including seat and cover, tee stop cock with check nut, all joints to service and drains, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout, and coated with epoxy, complete in all respect.				
	a) For General toilets	16	Nos.		
	b) For Handicapped toilet	2	Nos.		
2	Providing and fixing Counter Top Wash Basin with all accessories such as, basin mixer, tee stop cock with check nuts, CP flexible pipe, waste pipe, waste coupling, bracket set, etc. Complete including bottle trap, silicon sealant, all joint to service and drain, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout, and coated with epoxy. complete in all respect.	28	Nos.		
3	Providing and fixing Wash Basin with Half Pedestal with all accessories such as, basin mixer, tee stop cock with check nuts, CP flexible pipe, waste pipe, waste coupling, bracket set, etc. Complete including bottle trap, silicon sealant, all joint to service and drain, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout complete in all respect.				
	a) For General toilets	22	Nos.		
	b) For Handicapped 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 Dispensor	52	Nos.		
	III Double bibcock with muslim shower	18	Nos.		
	IV Cloth hook	18	Nos.		
	V Bibcock (Janitor Area)	2	Nos.		
				Sub Total- A	

B	COLD WATER SUPPLY SYSTEM							
1	Polypropylene Cold Water Piping for the Toilets							
	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			
2	Polyethylene (P.E) Piping for O.H Tank Water Supply, Overflow / Drain system							
	Providing and fixing, jointing, polyethylene pipe as per ISO 4427/ DIN 8074 / 8075 (PN 16), including specials fittings such as, sockets, tees, elbow, bends, reducers, plugs, tapping saddle and union etc.. Supported on walls and buried in floor as per specification complete in all respect as per drawing including sleeve in wall, testing @ 232 psi. (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	90	mm	Ø	3	RM		
II	110	mm	Ø	472	RM			
3	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 specification and as shown on drawings and as approved by the engineer.							
	I	1/2"	Ø		36	Nos.		
	II	3/4"	Ø		8	Nos.		
	III	1"	Ø		4	Nos.		
	IV	3"	Ø		1	No.		
	V	4"	Ø		3	Nos.		
							Sub Total-B	

C	SOIL, WASTE AND VENT PIPE SYSTEM							
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	Providing and fixing in position uPVC pipes solvent joint type pipe for rain water drainage, 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 and as shown in drawings.							
	I	82	mm	Ø	6	RM		
	II	110	mm	Ø	45	RM		
3	Providing, fixing make Floor Drain / Floor Gully of approved design with S/S grating including requisite number of holes in wall plinth or floor for pipe connection and making good the same as necessary to the structure and filling sleeve opening with non-shrink grout complete including gasket and clamp.							
	I	82	mm	Ø	28	Nos.		
4	Providing and fixing uPVC Clean Out with cover making requisite number of holes in walls, plinth or floor for pipe connection and making good the same as necessary to the structure and filling sleeve opening with non-shrink grout complete including rubber gasket and clamp.							
	I	82	mm	Ø	14	Nos.		
	II	110	mm	Ø	6	Nos.		
5	Providing and fixing uPVC Clean Out Plug with cover for pipe roding, making good the same as necessary to the structure with rubber gasket, complete in all respect.							
	I	82	mm	Ø	20	Nos.		
	II	110	mm	Ø	6	Nos.		

6	Providing and fixing uPVC Cowl for vent pipe of the following \emptyset including all accessories complete in all respect.						
	I	82	mm	\emptyset	4	Nos.	
	II	110	mm	\emptyset	3	Nos.	
7	Providing and fixing Rain Drain of approved design with uPVC grating 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 gasket and clamp complete in all respect.						
	I	110 mm \emptyset (Scupper Drain)		5	Nos.		
						Sub Total-C	
D	EXTERNAL WATER SUPPLY SYSTEM						
1	Providing and installing testing and commissioning the Centrifugal Pump for over head water tank filling of 160Gpm of 60'ft Head as per manufacturer recommendation including all accessories such as flanged pipes, gate valves, non-return valves, foot valves, pressure gauges on suction and delivery side of the pump motor control panel with dry run protection including indication light, electrical float valve with complete wiring, complete in all respect.			1	No.		
2	Providing, installing, testing and commissioning Booster Pump for top 2 floors water supply of approved make including (100 litres) tank, gate valves, check valves, foot valves, gauges, control 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 in all respect. (Note : 01set = 02Nos pumps)			1	Set.		
3	Providing, fixing Automatic Level Controller with Display Panel for overhead water tank, including all accessories and wiring, complete in all respect and as per engineer's satisfaction.			1	No.		
4	Providing and fixing C.I Manhole Cover for underground and over head water tank. (weight : 52kg)						
	I	600x600 mm		4	Nos.		
5	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 \emptyset		2	Nos.		
						Sub Total-D	

E	SEWER 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	115	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.				5	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)							
	I	For depth 0-3'ft (600mm x 600mm)			13	Nos.		
4	Shop Drawings as per specifications.				1	Job		
5	As Built Drawings as per specifications.				1	Job		
							Sub Total- E	
F	FIRE FIGHTING SYSTEM							
1	Providing, installing, testing & commissioning fire pump comprising of 01 No. Electric pump capacity of 750GPM and head of 8 Bar, horizontal end suction type centrifugal main pump flexibly coupled to electric motor, 01 No. Diesel pump Horizontal end suction type centrifugal, flexibly coupled to Diesel engine, 01 No. Jockey Pump capacity of 18GPM and head of 8.5Bar, vertical multistage type centrifugal electric pump closed coupled to electric motor, 01 No. factory assembled control panel and standard accessories such as pressure gauge, pressure switches, air release valve suction and discharge header with non-return valve, gate valves of suitable sizes, complete in all respect with intermediate piping and electrical wiring mounted on common base frames as per Engineer's instructions.				1	Set.		
2	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for fire fighting 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		

3	Providing, fixing, jointing, Polyethylene Pipe (as out ring burried out side the building to feed building's internal risers and fire hydrant) as per ISO 4427/ DIN 8074 / 8075 (PN 16), including specials fittings such as, sockets, tees, elbow, bends, reducers, plugs, tapping saddle and union etc. including excavation, backfilling and compaction, as per specification complete in all respect as per drawing, including testing @ 232 psi.				
	I	6"Ø	232	RM	
4	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 specification and as shown on drawings and as approved by the engineer.				
	I	3/4"Ø	2	Nos.	
	II	4"Ø	1	No.	
5	Providing, installing and fixing Wet Type Fire Hydrant with 2.5 plane outlet gray cast iron body, copper alloy outlet. 4" dia flanged outlet, complete in all respect.				
			2	Nos.	
6	Providing and fixing of Full Way Gate Valve With (600mm X 600mm) Valve Chamber 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 specification and as shown on drawings and as approved by the engineer.				
	I	4"Ø	2	Nos.	
7	Providing and fixing double compartment Fire 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.				
			6	Nos.	
8	Providing and fixing Dry Chemical Powder , fire extinguisher 6Kg capacity, powder coated in red colour, complete with pressure gauge and wall bracket.				
			10	Nos.	
9	Providing and fixing CO₂ Type Fire Extinguisher 2Kg capacity, powder coated in red colour, complete with wall bracket and all other accessories.				
			10	Nos.	

10	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.		
11	Providing and fixing of full way Non-return Valve of cast iron with threaded ends 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.				
	1	4"Ø	1	No.	
12	Providing, Installing and commission of Alarm Check Valve 6"dia with motor gong all accessories and material as specified, complete in all respect as per specifications.	1	No.		
13	Providing and installing Automatic Air Vent with all accessories and material as specified complete in all respect as shown on drawings / specifications.	2	Nos.		
DRAWINGS					
14	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.				
15	Shop Drawings as per specifications.	1	Job		
16	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”.**

GREEN BLOCK

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

CONTRACTOR

CIVIL WORKS INCLUDING WAITING AREA

STRUCTURE

SECTION – A: FROM FOUNDATION TO PLINTH LEVEL (SUB – STRUCTURE) (UPTO – 75 LEVEL)

S. NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>EXCAVATION AND BACKFILLING</u>				
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).	900	Cum		
2.0	<u>CONCRETE OF SUB – STRUCTURE</u> —				
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-in-charge.				
	A. Lean Concrete 1:4:8	87	Cum		
	B. 1:3:6 Cast in situ (under plinth beams)	16	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)	240	Cum		
	B. Foundation beams ($f'c = 4$ ksi)	9	Cum		
	C. Plinth beams ($f'c = 3$ ksi)	15	Cum		

	D. Columns upto Plinth level ($f' c = 4$ ksi)	28	Cum		
	E. Lift shear walls upto plinth level ($f' c = 4$ ksi)	18	Cum		
3.0	<u>STEEL REINFORCEMENTS.</u>				
3.1	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).	56000	Kg		
SECTION – B: PLINTH LEVEL TO 1ST FLOOR SLAB (- 75 LEVEL TO + 3825 LEVEL)					
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>CONCRETE OF SUPER – STRUCTURE</u>				
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)	35	Cum		
	B) Lift/ Shear walls ($f' c = 4$ ksi)	27	Cum		
	C) Beams ($f' c = 3$ ksi)	40	Cum		
	D) Slabs ($f' c = 3$ ksi)	105	Cum		
	E) Staircase steps, landing etc ($f' c = 3$ ksi)	15	Cum		
2.0	<u>STEEL REINFORCEMENTS.</u>				
2.1	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).	45000	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
1.0	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)	35	Cum		
	B) Lift / Shear walls (f' c = 4 ksi)	27	Cum		
	C) Beams (f' c = 3 ksi)	40	Cum		
	D) Slabs (f' c = 3 ksi)	105	Cum		
	E) Staircase steps, landing etc (f' c = 3 ksi)	15	Cum		
2.0	STEEL REINFORCEMENTS.				
2.1	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 margining, 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).	45000	Kg		
	TOTAL COST OF SEC - C Rs.				
					=====

SECTION – D: ROOF TO UPPER ROOF LEVEL + O/H TANK (+ 7725 TO + 11625 & + 9475 & +10950 LEVEL)					
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	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./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)	18	Cum		
	B) Lift / Shear walls (f' c = 4 ksi)	27	Cum		
	C) Beams / Upstand (f' c = 3 ksi)	32	Cum		
	D) Slabs / Projection (f' c = 3 ksi)	27	Cum		
1.2	Same as item # 1.1 above but water proof concrete prepared by mixing of water proofing concrete admixture “ BETOCRETE C– 16” . (crystalline water proofing admixture) from M/S AQUAFIN PAKISTAN (Tel # 021-35361131-32). Admixture shall be mixed @ 2% by weight of cement along with mixing of super plasticizer G-1000 used @ 1% by weight of cement. Dosing of water proofing admixture shall be done under supervision of AQUAFIN PAKISTAN representative. Complete with including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel. Complete in all respect at any height and any level, complete as per specifications, drawings and all to the approval of Engineer – in – charge.				
	C) O/H Water tank				
	vii) Bottom slab & chamfers (f'c = 3 Ksi)	8	Cum		
	viii) Walls & chamfers (f'c = 3 Ksi)	7	Cum		
	ix) Top slab (f'c = 3 Ksi)	8	Cum		
2.0	MISCELLANEOUS WORKS				
2.1	Providing and applying water proofing treatment of O/H , water tank with “AQUAFIN – IC” (Crystalline water proofing slurry) from M/S AQUAFIN PAKISTAN. or approved equivalent, Mixing and application of water proofing material shall be carried out by material supplied company applicators. Complete in all respect as per drawing, specifications and directed by Engineer – in – charge.				
	e. At bottom slab applying @ 1 Kg/Sqm	40	Sqm		
	f. On walls, applying @ 1.5 Kg / sqm	40	Sqm		
2.2	Providing and applying 20mm thick 1:6 cement sand plaster to all internal and external surfaces of O/H water tank (i.e walls & ceilings). Complete in all respect.	120	Sqm		
2.3	Providing, laying and finishing of 75mm thick c.c 1:2:4 concrete floor with sand and crushed stones on bottom slab of water tank. Complete with gurmala finish smooth surfaces. Complete in all respect.	40	Sqm		

2.4	Providing and fixing of S/S Manhole cover of 600 x 600 sizes at O/H water tank. . Complete in all respect.	2	Nos		
3.0	<u>STEEL REINFORCEMENTS.</u>				
3.1	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 margining, 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).	22000	Kg		
	TOTAL COST OF SEC - D Rs.				
					=====

WAITING AREA BUILDING

S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>EXCAVATION AND BACKFILLING</u>				
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).	119	Cum		
2.0	<u>CONCRETE OF SUB – STRUCTURE</u>				
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-in-charge.				
	A. Lean Concrete 1:4:8	24	Cum		
	B. 1:3:6 Cast in situ (under plinth beams)	16	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 Cube strength of 3000 psi 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	13	Cum		
	B. Plinth beams	13	Cum		
	C. Columns upto Plinth level	17	Cum		
3.0	<u>CONCRETE OF SUPER – STRUCTURE</u>				
3.1	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 Cube strength of 3000 psi 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	26	Cum		
	B) Beams	30	Cum		
	C) Slabs	14	Cum		
4.0	<u>STEEL REINFORCEMENTS.</u>				
4.1	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 margin, 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).	13100	Kg		
5.0	<u>M.S STRUCTURAL WORKS</u>				
5.1	Providing, fabricating, erection and fixing in position, M.S structural works of trusses & purlins. Complete with fabricated as per sections shown in drawing such as angles, H.S.S. Sections M.S plates, nut & bolts etc. Complete with cutting, welding, (all around the section), grinded the welded joints, applying three coats of ICI enamel paint over a coat of rust proof paint. Complete with wastage & welding etc. (no extra weight of welding will be given). Complete in all respect as per drawing, specification and directed by Engineer – in – Charge.	10400	Kg		

		TOTAL COST Rs.			

Item No.	Description	Unit	Quantity	Rate	Amount
1	External Improvement				
	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				
a)	150mm thick solid wall	m ²	110		
b)	100mm thick solid wall	m ²	185		
2	Applying 20 mm thick cement 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	295		
3	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	460		
4	Providing and laying RCC slab including cost of cement, reti, steel complete in all respect as per drawing.	m ²	13		
5	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	210		
6	Providing and lay G.I. rolling shutter complete in all respect as per drawing.	m ²	10		
7	Provide and lay glazed tile for bathroom fixing with dry bond including grouting; complete in all respect as per drawings	m ²	238		
8	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-04 - 1200 x 2750	Nos	8		
	D-08 - 750 x 2750	Nos	6		
9	Provide and laying khaprail roof tile as complete in all respect as per drawings	m ²	210		

10	Provide and lay envicrete including khaka as per site survey in all respect as per drawing, external and external	m ²	2015		
11	Providing and making marble and masonry Bench complete in all respect as per drawing.				
a)	1800 m	Nos	20		
b)	3200 m	Nos	20		
12	Providing and laying pre polish marble counter complete in all respect as per drawing.	m ²	15		
13	Provide and lay curve stone in all respect as per drawing	m	50		
14	Provide and making wash terrazzo planter in all respect as per drawing	Nos	5		
15	Provide and fabricate sliding M.S. gate including anti rust proof paint in all respect as per drawing	Nos	2		
16	Provide and install 12mm tempered glass partition as required complete in all respects with all necessary hardware. Refer as per drawing	m ²	16		
17	Providing and lay G.I. rolling shutter complete in all respect as per drawing.	m ²	10		
	Sub Total				

Item No.	Description	Unit	Quantity	Rate	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				
	300mm thick solid wall	m ²	266		
	150mm thick solid wall	m ²	1550		
	100mm thick solid wall	m ²	154		
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 lowers 1:2:4 counter including form work and steel finish and fixing arrangement complete in all respect as per drawing				
	Elevation 3.26 mm high	Nos	92		
	Staircase 3.3 mm high	Nos	332		
	Staircase 3.50 mm high	Nos	63		
5	Provide and fix glass block in 200 x 200 mm as approved including fix in adhesive and all respect fixing arrangement complete in all respect as as per drawing No.....	m ²	28		
6	Provide and casting RCC 1:2:4 including steel complete in all respect as per Drawing	m ³	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 as per drawing No.....	m	95		
8	Provide and fabricating M.S. hand railing for staircase with fixing arrangement with anti rust paint including fixing 60mm red miranti wood gola finish with paint and polish n all respect as as per drawing No.....	m	120		

9	Provide and lay imported design engineered wooden floor and skirting of approved pattern complete with polish on CC 1:2:4 laid line leveling, curing etc. complete in all respects per drawing.	m ²	54		
	Skirting	m	72		
10	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	810		
c)	Provide and laying 1:2:4 50mm thick complete on all respect as per drawing	m ²	810		
d)	Provide and laying National insulation tile 35 x 132 x 268mm thick complete on all respect as per drawing	m ²	810		
11	Ground Floor finishes				
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		
12	Expansion Joint Cover Assemblies				
	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		
13	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		
14	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		
15	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		
16	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		
	W-03 - 750 x 1591 - Size	Nos	2		
	V-02 - 450 x 450 - Size	Nos	14		
17	Portland Cement Plastering				
	Provide and apply 12 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 and specifications. Ground to 4th floor	m ²	3840		
18	12 mm thick ceiling plaster in 1:4 cement sand mortar as per drawing and specifications.	m ²	1870		
19	12mm thick Cement plaster to waist of stair case and pardi on both side of steps in 1:4 cement sand mortar as per drawing and specifications.	m ²	115		
20	Applying 20 mm thick external cement 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	1275		
21	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	1275		
22	ALUMINIUM 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	150		
23	Plastic Tiling 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	196		
24	Provide and lay glazed tile for bathroom fixing with dry bond including grouting; complete in all respect as per drawings				
	Wall	m ²	385		
25	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	1107		
b)	up to 2100	m ²	272		
26	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)	600 x 600	m ²	1700		
b)	300 x 300	m ²	198		
	Skirting	m	154		
27	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		
28	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	1113		
29	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 ²	150		

30	Interior Painting				
	Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings	m ²	4985		
31	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	195		
32	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	66 Nos		
a)	On Landing	m ²	33		
b)	Skirting	m ²	316		
33	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	66 Nos		
b)	On Landing	m ²	33		
34	Provide and lay marble border complete in all respect as per drawings	m	270		
35	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	69		
36	Provide and lay marble on landing complete in all respect as per drawings	m	33		
Sub Total					
TOTAL CIVIL WORKS					

ELECTRICAL WORK – GREEN BLOCK

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 PUBLIC ADDRESS SYSTEM			
11	SECTION - K CCTV SYSTEM			
12	SECTION - L QUEUE MANAGEMENT SYSTEM			
14	SECTION - M 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.

S.#	DESCRIPTION	QTY	UNIT	SUPPLY		INSTALLATION		AMOUNT (Rs.)
				RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	
	SECTION - A WIRING & WIRING ACCESSORIES							
	<p>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.</p> <p>Note:</p> <p>1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.</p> <p>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.</p> <p>3) Megger Test of each circuit to be done by contractor.</p> <p>4) Wiring for Occupancy Sensor shall be included in light wiring.</p>							
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.	51	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.	281	No.					
a	Same as above item but wiring from light point to point.	220	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.	17	No.					
a	Same as above item but wiring from light point to point.	72	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.	7	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.	26	No.					
a	Same as above item but wiring from light point to point.	11	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.	2	No.					
a	Same as above item but wiring from light point to point.	51	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.	26	No.					
b	Same as above item, but wiring from outlet to outlet.	266	No.					
8	Wiring of 13A/15A Switch Socket units (UPS 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.	20	No.					
b	Same as above item, but wiring from outlet to outlet.	51	No.					
9	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 Cu/PVC	4	No.					
b	Same as above item but wiring from 20A Switch to 13A International Outlet	4	No.					
10	Wiring of 16A DP Isolator for 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	22	No.					
11	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	22	No.					
12	Wiring of 20A DP Isolator for Indoor VRF Units /Hot Water Gyser 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	30	No.					
13	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	30	No.					
14	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	11	No.					
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 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	11	No.					
16	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.							
a	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	9	No.					
17	Wiring of 32A, 5-pin Industrial Socket unit (20 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	4	No.					
18	Wiring of 32A, 5-pin Industrial Socket unit (15 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	2	No.					
19	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.							
a	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	7	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 colour 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.							
a	25mm dia PVC Conduit	1,000	Rm.					
b	32mm dia PVC Conduit	200	Rm.					
c	38mm dia PVC Conduit	200	Rm.					
d	100mm dia UPVC Conduit (Class-D)	150	Rm.					
e	150mm dia UPVC Conduit (Class-D)	150	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.							
a	200mm x 200mm x 75mm	22	No.					
b	300mm x 300mm x 75mm	22	No.					

3	<p>Supply & installation of following sizes of 14 SWG G.I Cable Tray with 16 SWG cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p>Note:</p> <ul style="list-style-type: none"> - 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. 							
a	300mm x 100mm (2-Partition)	125	Rm.					
b	300mm x 100mm (2-Partition) (On Roof Top)	85	Rm.					
c	300mm x 100mm	50	Rm.					
d	150mm x 100mm	30	Rm.					
e	450mm x 100mm	30	Rm.					
4	<p>Supply & installation of following sizes of 14 SWG G.I Cable Ladder with 16 SWG cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p>Note:</p> <ul style="list-style-type: none"> - 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. 							
a	450mm x 100mm (Vertical) (GF to Roof)	35	Rm.					
b	300mm x 100mm (Vertical) (GF to Roof)	35	Rm.					
c	300mm x 100mm (Vertical) (Roof)	15	Rm.					
5	<p>Supply & Installation of Imported Linear Outlet Boxes without face plates made of Aluminum, mounted on wall or punched in furniture as per design drawings. The linear outlet boxes are to be provided with appropriate sizes of knockouts.</p>							
a	450mm x 100mm	37	No.					
6	<p>Supply & installation of Imported Floor Outlet Boxes without face plates made of 16 SWG G.I Sheet, recessed in ground as per design drawings.</p>	4	No.					
	<p>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.</p>							

	Total Amount (Rs.) Sec - B(CARRIED FORWARD TO SUMMARY)							
	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 Pienno for Switches & Vivace for Sockets Outlets or Equivalent)							
1	10A, 220V One Gang Switch Unit	42	No.					
2	10A, 220V Two Gang Switch Unit	68	No.					
3	10A, 220V Three Gang Switch Unit	20	No.					
4	20A, 220V One Gang Neon Indication Light Switch for Hot Water Gyser	10	No.					
5	One Gang Fan Dimmer	1	No.					
6	Two Gang Fan Dimmer	4	No.					
7	Three Gang Dimmer	20	No.					
8	13A, International Switch Socket unit	323	No.					
9	15A, Round 3 pin Switch Socket unit	7	No.					
10	13A, 3-Pin Flat Duplex Switch Socket unit	42	No.					
11	13A, 3-Pin Flat Simplex Switch Socket unit	26	No.					
12	20A Switched Socket for Hand Dryer	4	No.					
13	16A DP Isolator (Split Unit)	22	No.					
14	20A 4P Isolator (Indoor VRF)	22	No.					
15	20A DP (Indoor VRF)	22	No.					
16	80A 4P Isolator (Outdoor VRF)	11	No.					
17	63A 4P Isolator (Outdoor VRF)	11	No.					
18	32A 4P Isolator (Fresh Air Units)	9	No.					
19	32A 4P Isolator (Medical Equipment)	7	No.					
20	60A TP Isolator (Lifts)	2	No.					
21	32A 5-Pin (Three Phase) Industrial Socket with Plug (for UPS)	11	No.					
22	32A 5-Pin (Three Phase) Industrial Socket with Plug (for Communication Racks)	15	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	Recessed Mounted Down Light with 15W LED Lamp Color 4000K Diffused Glass	55	No.					
2	Surface Mounted Down Light with 18W LED Lamp Color 4000K Diffused Glass	296	No.					
3	Surface Mounted Down Light with 12W LED Lamp Color 4000K Diffused Glass	13	No.					
4	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	7	No.					
5	Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	8	No.					
6	Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	167	No.					
7	Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	35	No.					
8	Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	58	No.					
9	Bulk Head Light	25	No.					
10	Ceiling Fan 56"	69	No.					
11	50W Insect Killer Light	20	No.					
12	Exhaust Fan 24"	10	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-LP 4C-95 Sqmm Cu/XLPE/PVC + ECC 1C-50 Sqmm Cu/PVC	10	Rm.					
2	From MDB- BLUE to SMDB-IT 3C-16 Sqmm Cu/PVC/PVC	10	Rm.					
3	From MDB-BLUE to USMDB-LP 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	20	Rm.					
4	From MDB-BLUE to SMDB-HVAC 4C-185 Sqmm Cu/XLPE/PVC + ECC 1C-95 Sqmm Cu/PVC	20	Rm.					
5	From MDB-BLUE to 2 No. 60A TP Isolator (Lift) 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	40	Rm.					
6	From SMDB-LP to LPDB-R4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
7	From SMDB-LP to LPDB-GF1 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	15	Rm.					
8	From SMDB-LP to LPDB-GF2 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	60	Rm.					
9	From SMDB-LP to LPDB-FF1 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	20	Rm.					

10	From SMDB-LP to LPDB-FF2 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	60	Rm.					
11	From SMDB-IT to DATA RACK-GF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.					
12	From SMDB-IT to DATA RACK-GF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.					
13	From SMDB-IT to DATA RACK-FF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
14	From SMDB-IT to DATA RACK-FF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
15	From USMDB-LP to UDB-GF-1 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	15	Rm.					
16	From USMDB-LP to UDB-GF-2 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	60	Rm.					
17	From USMDB-LP to UDB-FF-1 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
18	From USMDB-LP to UDB-FF-2 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	60	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							

	<p>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.</p> <p>Note: (Refer Single Line Diagram)</p> <p>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 plated 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.</p> <p>Minimum One Year Warranty Required from date of successful commissioning on site.</p>							
1	MDB BLUE	1	No.					
2	SMDB-LP	1	No.					
3	USMDB-LP	1	No.					
4	USMDB-IT	1	No.					
5	SMDB-HVAC	1	No.					
6	LPDB-R	1	No.					
7	LPDB-GF-1	1	No.					
8	LPDB-GF-2	1	No.					
9	LPDB-FF-1	1	No.					
10	LPDB-FF-2	1	No.					
11	UDB-GF-1	1	No.					
12	UDB-GF-2	1	No.					
13	UDB-FF-1	1	No.					
14	UDB-FF-2	1	No.					
15	80A Weather Proof TP Boxes	5	No.					
16	100A Weather Proof TP Boxes	5	No.					
17	C.O.S USMDB-IT	1	No.					
	<p>Note:</p> <p>1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.</p>							
	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.	12	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.	10	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.	2	No.					
4	Earthing Mesh (900mm x 900 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.	2	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	225	Rm.					
b	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	275	Rm.					
6	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.							
a	95 Sq.mm Bare Copper Conductor	150	Rm.					
7	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.	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 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	Simplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	51	No.					
2	Duplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data & 1 No. CAT-6 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.	42	No.					
3	TV Outlet with face plate	9	No.					
4	1x8 way Splitter including 18 SWG M.S Sheet powder coated Box for RG-6 Connectivity.	2	No.					
5	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.) (Selected Cable Must be UL Listed LSZH)	7	Coil					
6	Supply and Wiring of CAT-6a UTP Cables for Data communication system from Com Rack to each workstation 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 Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	15	Coil					
7	Supply and Wiring of CAT-6a UTP Cables for WIFI Outlets from Com Rack to each outlet in already installed conduit via cable tray as per drawings including termination and tagging at both ends . Complete in all respects. Different colors of cables shall be used for Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	2	Coil					
8	Supply and Wiring of Co-axial cable RG-6 for CATV system in already installed PVC Conduit from each T.V point to Splitter as per drawings including terminations. Complete in all respect.	110	Rm.					

9	Imported Communication Rack 42U (Floor Mounted), (600mm x 600mm) 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets etc. Complete in all respects.	6	No.					
10	Imported Communication Rack 27U (Wall Mounted) , 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets etc. Complete in all respects.	1	No.					
11	Following CAT-6, Patch Panel equipped with RJ-45 I/Os for Voice Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6 Patch Panel for Voice	2	No.					
12	Following CAT-6a, Patch Panel equipped with RJ-45 I/Os for Data Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6A Patch Panel for Data	12	No.					
13	Front Cable Organizer for Voice patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	2	No.					
14	Front Cable Organizer for Data patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	6	No.					
15	Following CAT-6 , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Voice Communication .							
a	1 meter long (Patch panel to Tag block).	42	No.					
16	Following CAT-6a , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Data Communication .							
a	3 meter long.	42	No.					
b	1 meter long. (Patch panel to switch).	75	No.					
17	Supply, installation, testing and commissioning of following items for Data Communications Network Equipment (Active) including all material, labor, tools, accessories etc. Complete in all respects.							
a	24 Ports Access Switch with 1G RJ45 CAT6 POE+ Downlink Ports , 2 x 1G SFP Uplink Ports,52 Gbps Switching Capacity,40 Mpps Forwarding Performance,802.1Q VLANs,4K VLANs Supported,802.1p CoS as L2 QoS,DSCP as L3 QoS,Flow Control,Storm Control & Supression,MAC Spoofing Detection & Prevention,DHCP Snooping,802.1X Supported,STP - 802.1d,RSTP - 802.1w,MSTP - 802.1s,SNMP V1/V2C/V3,Telnet, SSH, WebUI,Single AC Power Supply,Side Air Flow,369.6W available POE power,Standard 19" Rack Mountable complete in all respect.	10	No.					

b	10 Ports Distribution Switch with 10 x 10G SFP+ Downlink Ports , 2 x 10G SFP+ Uplink Ports 240 Mbps Switching Capacity, 178.56 Mpps Forwarding Performance, 16k MAC Address Entries, 802.1Q VLANs, 4K VLANs Supported, 802.1p CoS as L2 QoS, DSCP as L3 QoS, Flow Control, Storm Control & Suppression, 802.1X Supported, STP - 802.1d, RSTP - 802.1w, MSTP - 802.1s, SNMP V1/V2C/V3, Telnet, SSH, WebUI, Single AC Power Supply, Side Air Flow, Standard 19" Rack Mountable	2	No.					
c	Wireless Access Points , with 2 x 1G RJ45 CAT6 POE Uplink Ports, HT20, 40/VHT20, 40, 80, MCS0-9 BPSK, QPSK, 16QAM, 64QAM, 4 SSID, 2 x 2 MIMO, WPA-PSK, WPA-Enterprise, 802.1X Supported, 802.1p CoS as L2 QoS, DSCP as L3 QoS, Flow Control, Storm Control & Suppression, MAC Spoofing Detection & Prevention, DHCP Snooping, 802.1Q Vlans, Wall/Ceiling Mounting kit	16	No.					
d	AP Aggregation switch with 8 Portx 1G RJ45 CAT6 POE+ Downlink Ports , 2 x 10G SFP+ Uplink Ports, 56 Gbps Switching Capacity, 41.644 Mpps Forwarding Performance, 16k MAC Address Entries, 802.1Q VLANs, 4K VLANs Supported, 802.1p CoS as L2 QoS, DSCP as L3 QoS, Flow Control, Storm Control & Suppression, 802.1X Supported, STP - 802.1d, RSTP - 802.1w, MSTP - 802.1s, SNMP V1/V2C/V3, Telnet, SSH, WebUI, Single Power Supply, Side Air Flow, Standard 19" Rack Mountable	4	No.					
18	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 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. (Selected Cable Must be UL Listed LSZH)	250	Rm.					
19	Supply & Wiring of 24 Core, 9/125um Single Mode 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. (Selected Cable Must be UL Listed LSZH)	1	Rm.					
20	Programming, testing and commissioning of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job					
21	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 - 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.	75	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.	11	No.					
4	Addressable Type Indoor Loop Powered electronic sounder and minimum sound out put 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.	19	No.					
5	Supply and wiring for FACP Power from DB 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.	900	Rm.					
7	Networking 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					
8	Programming, testing and commissioning of the complete system as per client's requirements permissible for the FACP with training sessions of maintenance personnel's.	1	Job					
9	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.	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 PUBLIC ADDRESS SYSTEM							
	Supply, Installation, testing & commissioning of following items for Public Address System as described below including all accessories. Complete with mounting brackets, wiring, adapters etc.							
1	EN-54 Standard IP Base Emergency Evacuation System Manager comprising with required number of Audio Input modules, Equalization modules, 4 Matrix zone system, Voice announcement cards, remote microphone input modules, and 4 audio input, 10000 log event , Surveillance-fault modules with 128 control inputs dry contacts for output of Access Control panel, lift, emergency, CCTV systems and for input from Fire alarm system. system supports up to 64 emergency or 256 general remote microphones and 512 speaker zones.	1	No.					
2	40W Power Amplifier operating at 220V, AC suitable for rack mounting incorporates two audio line level inputs: a Music input and a priority call input. A built-in relay switches the amplifier from the music input of priority call input.	2	No.					
3	6W Recessed / Surface Ceiling Speakers intended for high quality speech and music reproduction with sealed enclosure (fire dome) protective against moisture and dust. The speaker shall have output power adjustments for full, half and quarter power outputs, including back boxes if required.	24	No.					
4	Background Playback Source having module for 2 AM/FM Tuners, USB, DVD/CD, Bluetooth, playing and recording units.	1	No.					
5	4-Zone Call Station Keypad & Microphone with remote and interface unit including all accessories. Complete in all respect.	1	No.					
6	Micro Phone Outlet including all accessories.	2	No.					
7	Volume Controller as per requirement. Complete in all respect.	1	No.					
8	Supply and wiring for Public Address System using 2C, 2.5 Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	450	Rm.					
9	Wiring for Microphone outlet using Cat-6 FTP Cable in 25mm dia PVC conduit. as shown in drawings. Complete in all respects. (Selected Cable Must be UL Listed LSZH)	1	Coil					
10	Programming, testing and commissioning of the complete system as per client's requirements permissible for the training sessions of maintenance personnel's.	1	Job					

11	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.	1	Job					
	Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)							
	SECTION - K CCTV SYSTEM							
1	Supply and Wiring of CAT-6a UTP Cables for Cameras from each camera to NVR in already installed conduit via cable tray as per drawings including termination and tagging at both ends . Complete in all respects. (Selected Cable Must be UL Listed LSZH)	4	Coil					
2	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Fiber Optic Cable (from Main Switch to Data Racks) 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. (Selected Cable Must be UL Listed LSZH)	220	Rm.					
3	Programming, testing and commissioning of the complete system as per client's requirements permissible for the training sessions of maintenance personnel's.	1	Job					
4	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.	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 as per site conditions before commencement of work.							
	Total Amount (Rs.) Sec - K (CARRIED FORWARD TO SUMMARY)							
	SECTION - L QUEUE MANAGEMENT SYSTEM							
	Supply, installation, testing and commissioning of following items for Quematic Management System as described below including all accessories. Complete with mounting brackets, wiring, adapters etc.							
1	Supply and Wiring of CAT-6 UTP Cables for Queue Management System from Com Rack to each station in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends . Complete in all respects. (Selected Cable Must be UL Listed LSZH)	3	Coil					

	Note: 1) The Bidder shall provide the complete Technical Literature for the system offered. 2) Contractor is advised to confirm the cable running lengths as per site conditions before commencement of work.							
	Total Amount (Rs.) Sec - L (CARRIED FORWARD TO SUMMARY)							
	SECTION - M 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 - M (CARRIED FORWARD TO SUMMARY)							

GREEN BLOCK

Cost Summary Of Plumbing and Firefighting Works

S.No	Activity	Amount Rs.
A	TOILET FITTING AND ACCESSORIES	
B	COLD WATER SUPPLY SYSTEM	
C	SOIL, WASTE AND VENT PIPE SYSTEM	
D	EXTERNAL WATER SUPPLY SYSTEM	
E	SEWER SYSTEM	
F	FIRE FIGHTING SYSTEM	
	Total Cost Of Plumbing & Firefighting Works	

LIST OF APPROVED MANUFACTURERS

S.No.	ITEM	MAKE
PLUMBING WORKS		
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-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 WORKS		
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

Note.

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

Above mentioned approved manufacturers list is to be maintained

PLUMBING & FIRE FIGHTING WORKS

S.No.	Description	Qty	Unit	Rate	Amount
A	TOILET FITTING AND ACCESSORIES				
1	Providing and fixing European Type Water Closet with coupled flushing cistern, including all accessories and fittings, C.P flexible pipe, thimble, waste and traps, including seat and cover, tee stop cock with check nut, all joints to service and drains, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout, and coated with epoxy, complete in all respect.				
	a) For General toilets	16	Nos.		
	b) For Handicapped toilet	2	Nos.		
2	Providing and fixing Counter Top Wash Basin with all accessories such as, basin mixer, tee stop cock with check nuts, CP flexible pipe, waste pipe, waste coupling, bracket set, etc. Complete including bottle trap, silicon sealant, all joint to service and drain, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout, and coated with epoxy. complete in all respect.	28	Nos.		
3	Providing and fixing Wash Basin with Half Pedestal with all accessories such as, basin mixer, tee stop cock with check nuts, CP flexible pipe, waste pipe, waste coupling, bracket set, etc. Complete including bottle trap, silicon sealant, all joint to service and drain, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout complete in all respect.				
	a) For General toilets	22	Nos.		
	b) For Handicapped 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 Dispensor	52	Nos.		
	III Double bibcock with muslim shower	18	Nos.		
	IV Cloth hook	18	Nos.		
	V Bibcock (Janitor Area)	2	Nos.		
				Sub Total- A	

B	COLD WATER SUPPLY SYSTEM							
1	Polypropylene Cold Water Piping for the Toilets							
	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			
2	Polyethylene (P.E) Piping for O.H Tank Water Supply, Overflow / Drain system							
	Providing and fixing, jointing, polyethylene pipe as per ISO 4427/ DIN 8074 / 8075 (PN 16), including specials fittings such as, sockets, tees, elbow, bends, reducers, plugs, tapping saddle and union etc.. Supported on walls and buried in floor as per specification complete in all respect as per drawing including sleeve in wall, testing @ 232 psi. (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	90	mm	Ø	3	RM		
II	110	mm	Ø	472	RM			
3	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 specification and as shown on drawings and as approved by the engineer.							
	I	1/2"		Ø	36	Nos.		
	II	3/4"		Ø	8	Nos.		
	III	1"		Ø	4	Nos.		
	IV	3"		Ø	1	NO.		
	V	4"		Ø	3	Nos.		
							Sub Total-B	

C	SOIL, WASTE AND VENT PIPE SYSTEM							
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	Providing and fixing in position uPVC pipes solvent joint type pipe for rain water drainage, 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 and as shown in drawings.							
	I	82	mm	Ø	6	RM		
	II	110	mm	Ø	45	RM		
3	Providing, fixing make Floor Drain / Floor Gully of approved design with S/S grating including requisite number of holes in wall plinth or floor for pipe connection and making good the same as necessary to the structure and filling sleeve opening with non-shrink grout complete including gasket and clamp.							
	I	82	mm	Ø	28	Nos.		
4	Providing and fixing uPVC Clean Out with cover making requisite number of holes in walls, plinth or floor for pipe connection and making good the same as necessary to the structure and filling sleeve opening with non-shrink grout complete including rubber gasket and clamp.							
	I	82	mm	Ø	14	Nos.		
	II	110	mm	Ø	6	Nos.		
5	Providing and fixing uPVC Clean Out Plug with cover for pipe roding, making good the same as necessary to the structure with rubber gasket, complete in all respect.							
	I	82	mm	Ø	20	Nos.		
	II	110	mm	Ø	6	Nos.		

6	Providing and fixing uPVC Cowl for vent pipe of the following \emptyset including all accessories complete in all respect.						
	I	82	mm	\emptyset	4	Nos.	
	II	110	mm	\emptyset	3	Nos.	
7	Providing and fixing Rain Drain of approved design with uPVC grating 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 gasket and clamp complete in all respect.						
	I	110 mm \emptyset (Scupper Drain)		5	Nos.		
						Sub Total-C	
D	EXTERNAL WATER SUPPLY SYSTEM						
1	Providing and installing testing and commissioning the Centrifugal Pump for over head water tank filling of 160Gpm of 60'ft Head as per manufacturer recommendation including all accessories such as flanged pipes, gate valves, non-return valves, foot valves, pressure gauges on suction and delivery side of the pump motor control panel with dry run protection including indication light, electrical float valve with complete wiring, complete in all respect.			1	No.		
2	Providing, installing, testing and commissioning Booster Pump for top 2 floors water supply of approved make including (100 litres) tank, gate valves, check valves, foot valves, gauges, control 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 in all respect. (Note : 01set = 02Nos pumps)			1	Set.		
3	Providing, fixing Automatic Level Controller with Display Panel for overhead water tank, including all accessories and wiring, complete in all respect and as per engineer's satisfaction.			1	No.		
4	Providing and fixing C.I Manhole Cover for underground and over head water tank. (weight : 52kg)						
	I	600x600 mm		4	Nos.		
5	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 \emptyset		2	Nos.		
						Sub Total-D	

E	SEWER 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	115	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.				5	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)							
	I	For depth 0-3'ft (600mm x 600mm)			13	Nos.		
4	Shop Drawings as per specifications.				1	Job		
5	As Built Drawings as per specifications.				1	Job		
							Sub Total- E	
F	FIRE FIGHTING SYSTEM							
1	Providing, installing, testing & commissioning fire pump comprising of 01 No. Electric pump capacity of 750GPM and head of 8 Bar, horizontal end suction type centrifugal main pump flexibly coupled to electric motor, 01 No. Diesel pump Horizontal end suction type centrifugal, flexibly coupled to Diesel engine, 01 No. Jockey Pump capacity of 18GPM and head of 8.5Bar, vertical multistage type centrifugal electric pump closed coupled to electric motor, 01 No. factory assembled control panel and standard accessories such as pressure gauge, pressure switches, air release valve suction and discharge header with non-return valve, gate valves of suitable sizes, complete in all respect with intermediate piping and electrical wiring mounted on common base frames as per Engineer's instructions.							
					1	Set.		

2	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for fire fighting 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		
3	Providing, fixing, jointing, Polyethylene Pipe (as out ring buried out side the building to feed building's internal risers and fire hydrant) as per ISO 4427/ DIN 8074 / 8075 (PN 16), including specials fittings such as, sockets, tees, elbow, bends, reducers, plugs, tapping saddle and union etc. including excavation, backfilling and compaction, as per specification complete in all respect as per drawing, including testing @ 232 psi.					
	I	6"Ø	232	RM		
4	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 specification and as shown on drawings and as approved by the engineer.					
	I	3/4"Ø	2	Nos.		
	II	4"Ø	1	No.		
5	Providing, installing and fixing Wet Type Fire Hydrant with 2.5 plane outlet gray cast iron body, copper alloy outlet. 4" dia flanged outlet, complete in all respect.		2	Nos.		
6	Providing and fixing of Full Way Gate Valve With (600mm X 600mm) Valve Chamber 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 specification and as shown on drawings and as approved by the engineer.					
	I	4"Ø	2	Nos.		

7	Providing and fixing double compartment Fire 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.	6	Nos.		
8	Providing and fixing Dry Chemical Powder , fire extinguisher 6Kg capacity, powder coated in red colour, complete with pressure gauge and wall bracket.	10	Nos.		
9	Providing and fixing CO₂ Type Fire Extinguisher 2Kg capacity, powder coated in red colour, complete with wall bracket and all other accessories.	10	Nos.		
10	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.		
11	Providing and fixing of full way Non-return Valve of cast iron with threaded ends 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.				
	1	4"Ø	1	No.	
12	Providing, Installing and commission of Alarm Check Valve 6"dia with motor gong all accessories and material as specified, complete in all respect as per specifications.	1	No.		
13	Providing and installing Automatic Air Vent with all accessories and material as specified complete in all respect as shown on drawings / specifications.	2	Nos.		
DRAWINGS					
14	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.				
15	Shop Drawings as per specifications.	1	Job		
16	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”.**

ORANGE BLOCK

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

CONTRACTOR

CIVIL WORKS INCLUDING WAITING AREA

STRUCTURE

SECTION – A: FROM FOUNDATION TO PLINTH LEVEL (SUB – STRUCTURE) (UPTO – 75 LEVEL)

S. NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>EXCAVATION AND BACKFILLING</u>				
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).	900	Cum		
2.0	<u>CONCRETE OF SUB – STRUCTURE</u> —				
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-in-charge.				
	A. Lean Concrete 1:4:8	87	Cum		
	B. 1:3:6 Cast in situ (under plinth beams)	16	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)	240	Cum		
	B. Foundation beams (f' c = 4 ksi)	9	Cum		
	C. Plinth beams (f' c = 3 ksi)	15	Cum		

	D. Columns upto Plinth level ($f' c = 4$ ksi)	28	Cum		
	E. Lift shear walls upto plinth level ($f' c = 4$ ksi)	18	Cum		
3.0	<u>STEEL REINFORCEMENTS.</u>				
3.1	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).	56000	Kg		
SECTION – B: PLINTH LEVEL TO 1ST FLOOR SLAB (- 75 LEVEL TO + 3825 LEVEL)					
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>CONCRETE OF SUPER – STRUCTURE</u>				
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)	35	Cum		
	B) Lift/ Shear walls ($f' c = 4$ ksi)	27	Cum		
	C) Beams ($f' c = 3$ ksi)	40	Cum		
	D) Slabs ($f' c = 3$ ksi)	105	Cum		
	E) Staircase steps, landing etc ($f' c = 3$ ksi)	15	Cum		
2.0	<u>STEEL REINFORCEMENTS.</u>				
2.1	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).	45000	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
1.0	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)	35	Cum		
	B) Lift / Shear walls (f' c = 4 ksi)	27	Cum		
	C) Beams (f' c = 3 ksi)	40	Cum		
	D) Slabs (f' c = 3 ksi)	105	Cum		
	E) Staircase steps, landing etc (f' c = 3 ksi)	15	Cum		
2.0	STEEL REINFORCEMENTS.				
2.1	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).	45000	Kg		
	TOTAL COST OF SEC - C Rs.				
					=====

SECTION – D: ROOF TO UPPER ROOF LEVEL + O/H TANK (+ 7725 TO + 11625 & + 9475 & +10950 LEVEL)					
S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	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./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)	18	Cum		
	B) Lift / Shear walls (f' c = 4 ksi)	27	Cum		
	C) Beams / Upstand (f' c = 3 ksi)	32	Cum		
	D) Slabs / Projection (f' c = 3 ksi)	27	Cum		
1.2	Same as item # 1.1 above but water proof concrete prepared by mixing of water proofing concrete admixture “ BETOCRETE C– 16” . (crystalline water proofing admixture) from M/S AQUAFIN PAKISTAN (Tel # 021-35361131-32). Admixture shall be mixed @ 2% by weight of cement along with mixing of super plasticizer G-1000 used @ 1% by weight of cement. Dosing of water proofing admixture shall be done under supervision of AQUAFIN PAKISTAN representative. Complete with including water tight shuttering fixing and removing etc., but excluding the cost of reinforcing steel. Complete in all respect at any height and any level, complete as per specifications, drawings and all to the approval of Engineer – in – charge.				
	D) O/H Water tank				
	x) Bottom slab & chamfers (f'c = 3 Ksi)	8	Cum		
	xi) Walls & chamfers (f'c = 3 Ksi)	7	Cum		
	xii) Top slab (f'c = 3 Ksi)	8	Cum		
2.0	MISCELLANEOUS WORKS				
2.1	Providing and applying water proofing treatment of O/H , water tank with “AQUAFIN – IC” (Crystalline water proofing slurry) from M/S AQUAFIN PAKISTAN. or approved equivalent, Mixing and application of water proofing material shall be carried out by material supplied company applicators. Complete in all respect as per drawing, specifications and directed by Engineer – in – charge.				
	g. At bottom slab applying @ 1 Kg/Sqm	40	Sqm		
	h. On walls, applying @ 1.5 Kg / sqm	40	Sqm		
2.2	Providing and applying 20mm thick 1:6 cement sand plaster to all internal and external surfaces of O/H water tank (i.e walls & ceilings). Complete in all respect.	120	Sqm		
2.3	Providing, laying and finishing of 75mm thick c.c 1:2:4 concrete floor with sand and crushed stones on bottom slab of water tank. Complete with gurmala finish smooth surfaces. Complete in all respect.	40	Sqm		

2.4	Providing and fixing of S/S Manhole cover of 600 x 600 sizes at O/H water tank. . Complete in all respect.	2	Nos		
3.0	STEEL REINFORCEMENTS.				
3.1	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 margining, 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).	22000	Kg		
	TOTAL COST OF SEC - D Rs.				
					=====

WAITING AREA BUILDING

S.No	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1.0	<u>EXCAVATION AND BACKFILLING</u>				
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).	119	Cum		
2.0	<u>CONCRETE OF SUB – STRUCTURE</u>				
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-in-charge.				
	A. Lean Concrete 1:4:8	24	Cum		
	B. 1:3:6 Cast in situ (under plinth beams)	16	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 Cube strength of 3000 psi 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	13	Cum		
	B. Plinth beams	13	Cum		
	C. Columns upto Plinth level	17	Cum		
3.0	<u>CONCRETE OF SUPER – STRUCTURE</u>				
3.1	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 Cube strength of 3000 psi 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	26	Cum		
	B) Beams	30	Cum		
	C) Slabs	14	Cum		
4.0	<u>STEEL REINFORCEMENTS.</u>				
4.1	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 margin, 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).	13100	Kg		
5.0	<u>M.S STRUCTURAL WORKS</u>				
5.1	Providing, fabricating, erection and fixing in position, M.S structural works of trusses & purlins. Complete with fabricated as per sections shown in drawing such as angles, H.S.S. Sections M.S plates, nut & bolts etc. Complete with cutting, welding, (all around the section), grinded the welded joints, applying three coats of ICI enamel paint over a coat of rust proof paint. Complete with wastage & welding etc. (no extra weight of welding will be given). Complete in all respect as per drawing, specification and directed by Engineer – in – Charge.	10400	Kg		

		TOTAL COST Rs.			

Item No.	Description	Unit	Quantity	Rate	Amount
1	External Improvement				
	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				
a)	150mm thick solid wall	m ²	110		
b)	100mm thick solid wall	m ²	185		
2	Applying 20 mm thick cement 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	295		
3	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	460		
4	Providing and laying RCC slab including cost of cement, reti, steel complete in all respect as per drawing.	m ²	13		
5	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	210		
6	Providing and lay G.I. rolling shutter complete in all respect as per drawing.	m ²	10		
7	Provide and lay glazed tile for bathroom fixing with dry bond including grouting; complete in all respect as per drawings	m ²	238		
8	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-04 - 1200 x 2750	Nos	8		
	D-08 - 750 x 2750	Nos	6		
9	Provide and laying khaprail roof tile as complete in all respect as per drawings	m ²	210		

10	Provide and lay envicrete including khaka as per site survey in all respect as per drawing, external and external	m ²	2015		
11	Providing and making marble and masonry Bench complete in all respect as per drawing.				
a)	1800 m	Nos	20		
b)	3200 m	Nos	20		
12	Providing and laying pre polish marble counter complete in all respect as per drawing.	m ²	15		
13	Provide and lay curve stone in all respect as per drawing	m	50		
14	Provide and making wash terrazzo planter in all respect as per drawing	Nos	5		
15	Provide and fabricate sliding M.S. gate including anti rust proof paint in all respect as per drawing	Nos	2		
16	Provide and install 12mm tempered glass partition as required complete in all respects with all necessary hardware. Refer as per drawing	m ²	16		
17	Providing and lay G.I. rolling shutter complete in all respect as per drawing.	m ²	10		
	Sub Total				

Item No.	Description	Unit	Quantity	Rate	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				
	300mm thick solid wall	m ²	266		
	150mm thick solid wall	m ²	1550		
	100mm thick solid wall	m ²	154		
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 lowers 1:2:4 counter including form work and steel finish and fixing arrangement complete in all respect as per drawing				
	Elevation 3.26 mm high	Nos	92		
	Staircase 3.3 mm high	Nos	332		
	Staircase 3.50 mm high	Nos	63		
5	Provide and fix glass block in 200 x 200 mm as approved including fix in adhesive and all respect fixing arrangement complete in all respect as as per drawing No.....	m ²	28		
6	Provide and casting RCC 1:2:4 including steel complete in all respect as per Drawing	m ³	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 as per drawing No.....	m	95		
8	Provide and fabricating M.S. hand railing for staircase with fixing arrangement with anti rust paint including fixing 60mm red miranti wood gola finish with paint and polish n all respect as as per drawing No.....	m	120		

9	Provide and lay imported design engineered wooden floor and skirting of approved pattern complete with polish on CC 1:2:4 laid line leveling, curing etc. complete in all respects per drawing.	m2	54		
	Skirting	m	72		
10	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	810		
c)	Provide and laying 1:2:4 50mm thick complete on all respect as per drawing	m ²	810		
d)	Provide and laying National insulation tile 35 x 132 x 268mm thick complete on all respect as per drawing	m ²	810		
11	Ground Floor finishes				
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		
12	Expansion Joint Cover Assemblies				
	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		
13	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		
14	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		
15	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		
16	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		
	W-03 - 750 x 1591 - Size	Nos	2		
	V-02 - 450 x 450 - Size	Nos	14		
17	Portland Cement Plastering				
	Provide and apply 12 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 and specifications. Ground to 4th floor	m ²	3840		
18	12 mm thick ceiling plaster in 1:4 cement sand mortar as per drawing and specifications.	m ²	1870		
19	12mm thick Cement plaster to waist of stair case and pardi on both side of steps in 1:4 cement sand mortar as per drawing and specifications.	m ²	115		
20	Applying 20 mm thick external cement 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	1275		
21	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	1275		
22	ALUMINIUM 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	150		
23	Plastic Tiling 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	196		
24	Provide and lay glazed tile for bathroom fixing with dry bond including grouting; complete in all respect as per drawings				
	Wall	m ²	385		
25	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	1107		
b)	up to 2100	m ²	272		
26	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)	600 x 600	m ²	1700		
b)	300 x 300	m ²	198		
	Skirting	m	154		
27	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		
28	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	1113		
29	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 ²	150		

30	Interior Painting				
	Plastic Emulsion paint wall and ceiling for interior surface including all base work complete as per drawings	m ²	4985		
31	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	195		
32	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	66 Nos		
a)	On Landing	m ²	33		
b)	Skirting	m ²	316		
33	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	66 Nos		
b)	On Landing	m ²	33		
34	Provide and lay marble border complete in all respect as per drawings	m	270		
35	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	69		
36	Provide and lay marble on landing complete in all respect as per drawings	m	33		
Sub Total					
TOTAL CIVIL WORKS					

ELECTRICAL WORK – ORANGE BLOCK

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 PUBLIC ADDRESS SYSTEM			
11	SECTION - K CCTV SYSTEM			
12	SECTION - L QUEUE MANAGEMENT SYSTEM			
13	SECTION - M 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.

S.#	DESCRIPTION	QTY	UNIT	SUPPLY		INSTALLATION		AMOUNT (Rs.)
				RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	
	SECTION - A WIRING & WIRING ACCESSORIES							
	<p>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.</p> <p>Note:</p> <p>1) The cost of wiring items shall includes Imported Polycarbonate Connectors and flexible G.I conduit with PVC Coating on each light point.</p> <p>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.</p> <p>3) Megger Test of each circuit to be done by contractor.</p> <p>4) Wiring for Occupancy Sensor shall be included in light wiring.</p>							
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.	51	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.	281	No.					
a	Same as above item but wiring from light point to point.	220	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.	17	No.					
a	Same as above item but wiring from light point to point.	72	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.	7	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.	26	No.					
a	Same as above item but wiring from light point to point.	11	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.	2	No.					
a	Same as above item but wiring from light point to point.	51	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.	26	No.				
b	Same as above item, but wiring from outlet to outlet.	266	No.				
8	Wiring of 13A/15A Switch Socket units (UPS 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.	20	No.				
b	Same as above item, but wiring from outlet to outlet.	51	No.				
9	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 Cu/PVC	4	No.				
b	Same as above item but wiring from 20A Switch to 13A International Outlet	4	No.				
10	Wiring of 16A DP Isolator for 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	22	No.				
11	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	22	No.				
12	Wiring of 20A DP Isolator for Indoor VRF Units /Hot Water Gyser 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	30	No.				
13	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	30	No.				
14	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	11	No.				
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 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	11	No.				
16	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.							
a	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	9	No.					
17	Wiring of 32A, 5-pin Industrial Socket unit (20 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	4	No.					
18	Wiring of 32A, 5-pin Industrial Socket unit (15 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	2	No.					
19	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.							
a	4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	7	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 colour 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.							
a	25mm dia PVC Conduit	1,000	Rm.					
b	32mm dia PVC Conduit	200	Rm.					
c	38mm dia PVC Conduit	200	Rm.					
d	100mm dia UPVC Conduit (Class-D)	150	Rm.					
e	150mm dia UPVC Conduit (Class-D)	150	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.							
a	200mm x 200mm x 75mm	22	No.					
b	300mm x 300mm x 75mm	22	No.					

3	<p>Supply & installation of following sizes of 14 SWG G.I Cable Tray with 16 SWG cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p>Note:</p> <ul style="list-style-type: none"> - 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. 							
a	300mm x 100mm (2-Partition)	125	Rm.					
b	300mm x 100mm (2-Partition) (On Roof Top)	85	Rm.					
c	300mm x 100mm	50	Rm.					
d	150mm x 100mm	30	Rm.					
e	450mm x 100mm	30	Rm.					
4	<p>Supply & installation of following sizes of 14 SWG G.I Cable Ladder with 16 SWG cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer including all installation accessories such as rawal bolts e.t.c. Complete in all respects.</p> <p>Note:</p> <ul style="list-style-type: none"> - 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. 							
a	450mm x 100mm (Vertical) (GF to Roof)	35	Rm.					
b	300mm x 100mm (Vertical) (GF to Roof)	35	Rm.					
c	300mm x 100mm (Vertical) (Roof)	15	Rm.					
5	<p>Supply & Installation of Imported Linear Outlet Boxes without face plates made of Aluminum, mounted on wall or punched in furniture as per design drawings. The linear outlet boxes are to be provided with appropriate sizes of knockouts.</p>							
a	450mm x 100mm	37	No.					
6	<p>Supply & installation of Imported Floor Outlet Boxes without face plates made of 16 SWG G.I Sheet, recessed in ground as per design drawings.</p>	4	No.					
	<p>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.</p>							

	Total Amount (Rs.) Sec - B(CARRIED FORWARD TO SUMMARY)							
	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 Pienno for Switches & Vivace for Sockets Outlets or Equivalent)							
1	10A, 220V One Gang Switch Unit	42	No.					
2	10A, 220V Two Gang Switch Unit	68	No.					
3	10A, 220V Three Gang Switch Unit	20	No.					
4	20A, 220V One Gang Neon Indication Light Switch for Hot Water Gyser	10	No.					
5	One Gang Fan Dimmer	1	No.					
6	Two Gang Fan Dimmer	4	No.					
7	Three Gang Dimmer	20	No.					
8	13A, International Switch Socket unit	323	No.					
9	15A, Round 3 pin Switch Socket unit	7	No.					
10	13A, 3-Pin Flat Duplex Switch Socket unit	42	No.					
11	13A, 3-Pin Flat Simplex Switch Socket unit	26	No.					
12	20A Switched Socket for Hand Dryer	4	No.					
13	16A DP Isolator (Split Unit)	22	No.					
14	20A 4P Isolator (Indoor VRF)	22	No.					
15	20A DP (Indoor VRF)	22	No.					
16	80A 4P Isolator (Outdoor VRF)	11	No.					
17	63A 4P Isolator (Outdoor VRF)	11	No.					
18	32A 4P Isolator (Fresh Air Units)	9	No.					
19	32A 4P Isolator (Medical Equipment)	7	No.					
20	60A TP Isolator (Lifts)	2	No.					
21	32A 5-Pin (Three Phase) Industrial Socket with Plug (for UPS)	11	No.					
22	32A 5-Pin (Three Phase) Industrial Socket with Plug (for Communication Racks)	15	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	Recessed Mounted Down Light with 15W LED Lamp Color 4000K Diffused Glass	55	No.					
2	Surface Mounted Down Light with 18W LED Lamp Color 4000K Diffused Glass	296	No.					
3	Surface Mounted Down Light with 12W LED Lamp Color 4000K Diffused Glass	13	No.					
4	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	7	No.					
5	Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	8	No.					
6	Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	167	No.					
7	Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	35	No.					
8	Ceiling Recessed 45W LED Panel 600 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	58	No.					
9	Bulk Head Light	25	No.					
10	Ceiling Fan 56"	69	No.					
11	50W Insect Killer Light	20	No.					
12	Exhaust Fan 24"	10	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-LP 4C-95 Sqmm Cu/XLPE/PVC + ECC 1C-50 Sqmm Cu/PVC	10	Rm.					
2	From MDB- BLUE to SMDB-IT 3C-16 Sqmm Cu/PVC/PVC	10	Rm.					
3	From MDB-BLUE to USMDB-LP 4C-25 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	20	Rm.					
4	From MDB-BLUE to SMDB-HVAC 4C-185 Sqmm Cu/XLPE/PVC + ECC 1C-95 Sqmm Cu/PVC	20	Rm.					
5	From MDB-BLUE to 2 No. 60A TP Isolator (Lift) 4C-16 Sqmm Cu/PVC/PVC + ECC 1C-16 Sqmm Cu/PVC	40	Rm.					
6	From SMDB-LP to LPDB-R4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
7	From SMDB-LP to LPDB-GF1 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	15	Rm.					
8	From SMDB-LP to LPDB-GF2 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	60	Rm.					

9	From SMDB-LP to LPDB-FF1 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	20	Rm.					
10	From SMDB-LP to LPDB-FF2 4C-10 Sqmm Cu/PVC/PVC + ECC 1C-10 Sqmm Cu/PVC	60	Rm.					
11	From SMDB-IT to DATA RACK-GF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.					
12	From SMDB-IT to DATA RACK-GF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	10	Rm.					
13	From SMDB-IT to DATA RACK-FF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
14	From SMDB-IT to DATA RACK-FF 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
15	From USMDB-LP to UDB-GF-1 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	15	Rm.					
16	From USMDB-LP to UDB-GF-2 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	60	Rm.					
17	From USMDB-LP to UDB-FF-1 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	20	Rm.					
18	From USMDB-LP to UDB-FF-2 4C-6 Sqmm Cu/PVC/PVC + ECC 1C-6 Sqmm Cu/PVC	60	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							

	<p>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.</p> <p>Note: (Refer Single Line Diagram)</p> <p>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 plated 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.</p> <p>Minimum One Year Warranty Required from date of successful commissioning on site.</p>							
1	MDB BLUE	1	No.					
2	SMDB-LP	1	No.					
3	USMDB-LP	1	No.					
4	USMDB-IT	1	No.					
5	SMDB-HVAC	1	No.					
6	LPDB-R	1	No.					
7	LPDB-GF-1	1	No.					
8	LPDB-GF-2	1	No.					
9	LPDB-FF-1	1	No.					
10	LPDB-FF-2	1	No.					
11	UDB-GF-1	1	No.					
12	UDB-GF-2	1	No.					
13	UDB-FF-1	1	No.					
14	UDB-FF-2	1	No.					
15	80A Weather Proof TP Boxes	5	No.					
16	100A Weather Proof TP Boxes	5	No.					
17	C.O.S USMDB-IT	1	No.					
	<p>Note:</p> <p>1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.</p>							
	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.	12	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.	10	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.	2	No.				
4	Earthing Mesh (900mm x 900 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.	2	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	225	Rm.				
b	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	275	Rm.				
6	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.						
a	95 Sq.mm Bare Copper Conductor	150	Rm.				
B	LIGHTNING PROTECTION SYSTEM						
7	Supply, installation, testing and commissioning of Early Streamer Emission (ESE) with remote testing option and having following specifications: Make : As per approved manufacturer's list Type : Generation 3 or Equivalent Reaction time : 45 - 50 micro seconds Maximum Discharge Rating : 180 to 200 kA	1	No.				

	Material : Stainless Steel or as per manufacturer's specifications Length : 400mm or as per manufacturer's specifications Level of Protection: Level 1 Protection Radius : 45 m Risk Assessment / Coverage Calculation Via Software. Mounting height (from Roof top to tip of ESE) : 5m or as specified Note: The work is included with all mounting, fixing and support accessories and material required for the completion of above mention task.							
8	5 Meter high 125mm dia MS Pole to be used as mast for installation of ESE lightning arrester. Complete with all supports, angles, brackets, wire guides nuts & bolts etc.	1	No.					
9	Surge / Stroke Counter for indicating the number of strokes arrested by the ESE.	2	No.					
10	Supply, installation, testing and commissioning of Stranded bare copper conductors of following sizes in appropriate size of UPVC Conduit (Class-D) laid in floor / Surface on wall from Earth Station to Earth Connecting Points / Lightning Arrester shown in drawings. Complete in all respects including termination at ECP.							
a	95 Sq.mm Bare Copper Conductor	300	Rm.					
7	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.	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 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	Simplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	51	No.					
2	Duplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data & 1 No. CAT-6 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.	42	No.					

3	TV Outlet with face plate	9	No.					
4	1x8 way Splitter including 18 SWG M.S Sheet powder coated Box for RG-6 Connectivity.	2	No.					
5	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.) (Selected Cable Must be UL Listed LSZH)	7	Coil					
6	Supply and Wiring of CAT-6a UTP Cables for Data communication system from Com Rack to each workstation 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 Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	15	Coil					
7	Supply and Wiring of CAT-6a UTP Cables for WIFI Outlets from Com Rack to each outlet in already installed conduit via cable tray as per drawings including termination and tagging at both ends . Complete in all respects. Different colors of cables shall be used for Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	2	Coil					
8	Supply and Wiring of Co-axial cable RG-6 for CATV system in already installed PVC Conduit from each T.V point to Splitter as per drawings including terminations. Complete in all respect.	110	Rm.					
9	Imported Communication Rack 42U (Floor Mounted), (600mm x 600mm) 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDU s) with at least 5 imported power sockets etc. Complete in all respects.	6	No.					
10	Imported Communication Rack 27U (Wall Mounted) , 19 inches suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDU s) with at least 5 imported power sockets etc. Complete in all respects.	1	No.					
11	Following CAT-6, Patch Panel equipped with RJ-45 I/Os for Voice Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6 Patch Panel for Voice	2	No.					
12	Following CAT-6a, Patch Panel equipped with RJ-45 I/Os for Data Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6A Patch Panel for Data	12	No.					
13	Front Cable Organizer for Voice patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	2	No.					
14	Front Cable Organizer for Data patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	6	No.					
15	Following CAT-6 , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Voice Communication .							

a	1 meter long (Patch panel to Tag block).	42	No.					
16	Following CAT-6a , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Data Communication .							
a	3 meter long.	42	No.					
b	1 meter long. (Patch panel to switch).	75	No.					
17	Supply, installation, testing and commissioning of following items for Data Communications Network Equipment (Active) including all material, labor, tools, accessories etc. Complete in all respects.							
a	24 Ports Access Switch with 1G RJ45 CAT6 POE+ Downlink Ports , 2 x 1G SFP Uplink Ports,52 Gbps Switching Capacity,40 Mpps Forwarding Performance,802.1Q VLANs,4K VLANs Supported,802.1p CoS as L2 Qos,DSCP as L3 QoS,Flow Control,Storm Control & Supression,MAC Spoofing Detection & Prevention,DHCP Snooping,802.1X Supported,STP - 802.1d,RSTP - 802.1w,MSTP - 802.1s,SNMP V1/V2C/V3,Telnet, SSH, WebUI,Single AC Power Supply,Side Air Flow,369.6W available POE power,Standard 19" Rack Mountable complete in all respect.	10	No.					
b	10 Ports Distribution Switch with10 x 10G SFP+ Downlink Ports , 2 x 10G SFP+ Uplink Ports 240 Mbps Switching Capacity,178.56 Mpps Forwarding Performance,16k MAC Address Entries,802.1Q VLANs,4K VLANs Supported,802.1p CoS as L2 Qos,DSCP as L3 QoS,Flow Control,Storm Control & Supression,802.1X Supported,STP - 802.1d ,RSTP - 802.1w,MSTP - 802.1s,SNMP V1/V2C/V3,Telnet, SSH, WebUI,Single AC Power Supply,Side Air Flow,Standard 19" Rack Mountable	2	No.					
c	Wireless Access Points , with 2 x 1G RJ45 CAT6 POE Uplink Ports,HT20,40/VHT20,40,80,MCS0-9 BPSK,QPSK,16QAM,64QAM ,4 SSID,2 x 2 MIMO,WPA-PSK, WPA-Enterprise,802.1X Supported,802.1p CoS as L2 Qos,DSCP as L3 QoS,Flow Control,Storm Control & Supression,MAC Spoofing Detection & Prevention,DHCP Snooping,802.1Q Vlans,Wall/Ceiling Mounting kit	16	No.					
d	AP Aggregation switch with 8 Portx 1G RJ45 CAT6 POE+ Downlink Ports ,2 x 10G SFP+ Uplink Ports,56 Gbps Switching Capacity,41.644 Mpps Forwarding Performance,16k MAC Address Entries,802.1Q VLANs,4K VLANs Supported,802.1p CoS as L2 Qos,DSCP as L3 QoS,Flow Control,Storm Control & Supression,802.1X Supported,STP - 802.1d,RSTP - 802.1w,MSTP - 802.1s,SNMP V1/V2C/V3,Telnet, SSH, WebUI,Single Power Supply,Side Air Flow,Standard 19" Rack Mountable	4	No.					
18	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 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.	250	Rm.					

	(Selected Cable Must be UL Listed LSZH)							
19	Supply & Wiring of 24 Core, 9/125um Single Mode 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. (Selected Cable Must be UL Listed LSZH)	1	Rm.					
20	Programming, testing and commissioning of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job					
21	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 - H (CARRIED FORWARD TO SUMMARY)							
	SECTION - I ADDRESSABLE FIRE ALARM SYSTEM							
	Supply, installation, testing & commissioning of Addressable Fire Alarm System comprising of following equipments 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.	75	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.	11	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.	19	No.					
5	Supply and wiring for FACP Power from DB 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.	900	Rm.					
7	Networking of all the Fire alarm control panels of all the OPD Buildings along with integration with the existing control room including IO modules, wiring, conduiting, complete in all respect.	1	Job					
8	Programming, testing and commissioning of the complete system as per client's requirements permissible for the FACP with training sessions of maintenance personnel's.	1	Job					
9	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.	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 PUBLIC ADDRESS SYSTEM							
	Supply, Installation, testing & commissioning of following items for Public Address System as described below including all accessories. Complete with mounting brackets, wiring, adapters etc.							
1	EN-54 Standard IP Base Emergency Evacuation System Manager comprising with required number of Audio Input modules, Equalization modules, 4 Matrix zone system, Voice announcement cards, remote microphone input modules, and 4 audio input, 10000 log event , Surveillance-fault modules with 128 control inputs dry contacts for output of Access Control panel, lift, emergency, CCTV systems and for input from Fire alarm system. system supports up to 64 emergency or 256 general remote microphones and 512 speaker zones.	1	No.					
2	40W Power Amplifier operating at 220V, AC suitable for rack mounting incorporates two audio line level inputs: a Music input and a priority call input. A built-in relay switches the amplifier from the music input of priority call input.	2	No.					
3	6W Recessed / Surface Ceiling Speakers intended for high quality speech and music reproduction with sealed enclosure (fire dome) protective against moisture and dust. The speaker shall have output power adjustments for full, half and quarter power outputs, including back boxes if required.	24	No.					

4	Background Playback Source having module for 2 AM/FM Tuners, USB, DVD/CD, Bluetooth, playing and recording units.	1	No.					
5	4-Zone Call Station Keypad & Microphone with remote and interface unit including all accessories. Complete in all respect.	1	No.					
6	Micro Phone Outlet including all accessories.	2	No.					
7	Volume Controller as per requirement. Complete in all respect.	1	No.					
8	Supply and wiring for Public Address System using 2C, 2.5 Speaker Cable as per zoning layout shown in drawings in 25mm dia PVC conduit. Complete in all respects.	450	Rm.					
9	Wiring for Microphone outlet using Cat-6 FTP Cable in 25mm dia PVC conduit. as shown in drawings. Complete in all respects. (Selected Cable Must be UL Listed LSZH)	1	Coil					
10	Programming, testing and commissioning of the complete system as per client's requirements permissible for the training sessions of maintenance personnel's.	1	Job					
11	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.	1	Job					
	Total Amount (Rs.) Sec - J (CARRIED FORWARD TO SUMMARY)							
	SECTION - K CCTV SYSTEM							
1	Supply and Wiring of CAT-6a UTP Cables for Cameras from each camera to NVR in already installed conduit via cable tray as per drawings including termination and tagging at both ends. Complete in all respects. (Selected Cable Must be UL Listed LSZH)	4	Coil					
2	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Fiber Optic Cable (from Main Switch to Data Racks) 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. (Selected Cable Must be UL Listed LSZH)	220	Rm.					
3	Programming, testing and commissioning of the complete system as per client's requirements permissible for the training sessions of maintenance personnel's.	1	Job					
4	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.	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 as per site conditions before commencement of work.							
	Total Amount (Rs.) Sec - K (CARRIED FORWARD TO SUMMARY)							
	SECTION - L QUEUE MANAGEMENT SYSTEM							
	Supply, installation, testing and commissioning of following items for Quematic Management System as described below including all accessories. Complete with mounting brackets, wiring, adapters etc.							
1	Supply and Wiring of CAT-6 UTP Cables for Queue Management System from Com Rack to each station in 25mm dia PVC Conduit as per drawings including termination and tagging at both ends . Complete in all respects. (Selected Cable Must be UL Listed LSZH)	3	Coil					
	Note: 1) The Bidder shall provide the complete Technical Literature for the system offered. 2) Contractor is advised to confirm the cable running lengths as per site conditions before commencement of work.							
	Total Amount (Rs.) Sec - L (CARRIED FORWARD TO SUMMARY)							
	SECTION - M 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 - M (CARRIED FORWARD TO SUMMARY)							

ORANGE BLOCK

Cost Summary Of Plumbing and Firefighting Works

S.No	Activity	Amount Rs.
A	TOILET FITTING AND ACCESSORIES	
B	COLD WATER SUPPLY SYSTEM	
C	SOIL, WASTE AND VENT PIPE SYSTEM	
D	EXTERNAL WATER SUPPLY SYSTEM	
E	SEWER SYSTEM	
F	FIRE FIGHTING SYSTEM	
	Total Cost Of Plumbing & Firefighting Works	

LIST OF APPROVED MANUFACTURERS

S.No.	ITEM	MAKE
PLUMBING WORKS		
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-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 WORKS		
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

Note.

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

Above mentioned approved manufacturers list is to be maintained

PLUMBING & FIRE FIGHTING WORKS

S.No.	Description	Qty	Unit	Rate	Amount
A	TOILET FITTING AND ACCESSORIES				
1	Providing and fixing European Type Water Closet with coupled flushing cistern, including all accessories and fittings, C.P flexible pipe, thimble,waste and traps, including seat and cover, tee stop cock with check nut, all joints to service and drains, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout, and coated with epoxy, complete in all respect.				
	a) For General toilets	16	Nos.		
	b) For Handicapped toilet	2	Nos.		
2	Providing and fixing Counter Top Wash Basin with all accessories such as, basin mixer, tee stop cock with check nuts, CP flexible pipe, waste pipe, waste coupling, bracket set, etc. Complete including bottle trap, silicon sealant, all joint to service and drain, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout, and coated with epoxy. complete in all respect.	28	Nos.		
3	Providing and fixing Wash Basin with Half Pedestal with all accessories such as, basin mixer, tee stop cock with check nuts, CP flexible pipe, waste pipe, waste coupling, bracket set, etc. Complete including bottle trap, silicon sealant, all joint to service and drain, plugging and screwing as necessary to the structure, filling sleeve opening with non-shrink grout complete in all respect.				
	a) For General toilets	22	Nos.		
	b) For Handicapped 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 Dispensor	52	Nos.		
	III Double bibcock with muslim shower	18	Nos.		
	IV Cloth hook	18	Nos.		
	V Bibcock (Janitor Area)	2	Nos.		
				Sub Total- A	

B	COLD WATER SUPPLY SYSTEM							
1	Polypropylene Cold Water Piping for the Toilets							
	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			
2	Polyethylene (P.E) Piping for O.H Tank Water Supply, Overflow / Drain system							
	Providing and fixing, jointing, polyethylene pipe as per ISO 4427/ DIN 8074 / 8075 (PN 16), including specials fittings such as, sockets, tees, elbow, bends, reducers, plugs, tapping saddle and union etc.. Supported on walls and buried in floor as per specification complete in all respect as per drawing including sleeve in wall, testing @ 232 psi. (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	90	mm	Ø	3	RM		
II	110	mm	Ø	472	RM			
3	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 specification and as shown on drawings and as approved by the engineer.							
	I	1/2"	Ø		36	Nos.		
	II	3/4"	Ø		8	Nos.		
	III	1"	Ø		4	Nos.		
	IV	3"	Ø		1	NO.		
	V	4"	Ø		3	Nos.		
							Sub Total-B	

C	SOIL, WASTE AND VENT PIPE SYSTEM							
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	Providing and fixing in position uPVC pipes solvent joint type pipe for rain water drainage, 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 and as shown in drawings.							
	I	82	mm	Ø	6	RM		
	II	110	mm	Ø	45	RM		
3	Providing, fixing make Floor Drain / Floor Gully of approved design with S/S grating including requisite number of holes in wall plinth or floor for pipe connection and making good the same as necessary to the structure and filling sleeve opening with non-shrink grout complete including gasket and clamp.							
	I	82	mm	Ø	28	Nos.		
4	Providing and fixing uPVC Clean Out with cover making requisite number of holes in walls, plinth or floor for pipe connection and making good the same as necessary to the structure and filling sleeve opening with non-shrink grout complete including rubber gasket and clamp.							
	I	82	mm	Ø	14	Nos.		
	II	110	mm	Ø	6	Nos.		
5	Providing and fixing uPVC Clean Out Plug with cover for pipe roding, making good the same as necessary to the structure with rubber gasket, complete in all respect.							
	I	82	mm	Ø	20	Nos.		
	II	110	mm	Ø	6	Nos.		

6	Providing and fixing uPVC Cowl for vent pipe of the following \emptyset including all accessories complete in all respect.						
	I	82	mm	\emptyset	4	Nos.	
	II	110	mm	\emptyset	3	Nos.	
7	Providing and fixing Rain Drain of approved design with uPVC grating 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 gasket and clamp complete in all respect.						
	I	110 mm \emptyset (Scupper Drain)		5	Nos.		
						Sub Total-C	
D	EXTERNAL WATER SUPPLY SYSTEM						
1	Providing and installing testing and commissioning the Centrifugal Pump for overhead water tank filling of 160Gpm of 60'ft Head as per manufacturer recommendation including all accessories such as flanged pipes, gate valves, non-return valves, foot valves, pressure gauges on suction and delivery side of the pump motor control panel with dry run protection including indication light, electrical float valve with complete wiring, complete in all respect.			1	No.		
2	Providing, installing, testing and commissioning Booster Pump for top 2 floors water supply of approved make including (100 litres) tank, gate valves, check valves, foot valves, gauges, control 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 in all respect. (Note : 01set = 02Nos pumps)			1	Set.		
3	Providing, fixing Automatic Level Controller with Display Panel for overhead water tank, including all accessories and wiring, complete in all respect and as per engineer's satisfaction.			1	No.		
4	Providing and fixing C.I Manhole Cover for underground and overhead water tank. (weight : 52kg)						
	I	600x600 mm		4	Nos.		
5	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 \emptyset		2	Nos.		
						Sub Total-D	

E	SEWER 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	115	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.				5	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)							
	I	For depth 0-3'ft (600mm x 600mm)			13	Nos.		
4	Shop Drawings as per specifications.				1	Job		
5	As Built Drawings as per specifications.				1	Job		
							Sub Total-E	
F	FIRE FIGHTING SYSTEM							
1	Providing, installing, testing & commissioning fire pump comprising of 01 No. Electric pump capacity of 750GPM and head of 8 Bar, horizontal end suction type centrifugal main pump flexibly coupled to electric motor, 01 No. Diesel pump Horizontal end suction type centrifugal, flexibly coupled to Diesel engine, 01 No. Jockey Pump capacity of 18GPM and head of 8.5Bar, vertical multistage type centrifugal electric pump closed coupled to electric motor, 01 No. factory assembled control panel and standard accessories such as pressure gauge, pressure switches, air release valve suction and discharge header with non-return valve, gate valves of suitable sizes, complete in all respect with intermediate piping and electrical wiring mounted on common base frames as per Engineer's instructions.				1	Set.		
2	Providing, laying, jointing and testing Black Steel Seamless Piping schedule 40 for fire fighting 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		

3	Providing, fixing, jointing, Polyethylene Pipe (as out ring burried out side the building to feed building's internal risers and fire hydrant) as per ISO 4427/ DIN 8074 / 8075 (PN 16), including specials fittings such as, sockets, tees, elbow, bends, reducers, plugs, tapping saddle and union etc. including excavation, backfilling and compaction, as per specification complete in all respect as per drawing, including testing @ 232 psi.				
	I	6"Ø	232	RM	
4	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 specification and as shown on drawings and as approved by the engineer.				
	I	3/4"Ø	2	Nos.	
	II	4"Ø	1	No.	
5	Providing, installing and fixing Wet Type Fire Hydrant with 2.5 plane outlet gray cast iron body, copper alloy outlet. 4" dia flanged outlet, complete in all respect.		2	Nos.	
6	Providing and fixing of Full Way Gate Valve With (600mm X 600mm) Valve Chamber 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 specification and as shown on drawings and as approved by the engineer.				
	I	4"Ø	2	Nos.	
7	Providing and fixing double compartment Fire 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.		6	Nos.	
8	Providing and fixing Dry Chemical Powder , fire extinguisher 6Kg capacity, powder coated in red colour, complete with pressure gauge and wall bracket.		10	Nos.	
9	Providing and fixing CO₂ Type Fire Extinguisher 2Kg capacity, powder coated in red colour, complete with wall bracket and all other accessories.		10	Nos.	

10	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.		
11	Providing and fixing of full way Non-return Valve of cast iron with threaded ends 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.				
	1	4"Ø	1	No.	
12	Providing, Installing and commission of Alarm Check Valve 6"dia with motor gong all accessories and material as specified, complete in all respect as per specifications.	1	No.		
13	Providing and installing Automatic Air Vent with all accessories and material as specified complete in all respect as shown on drawings / specifications.	2	Nos.		
DRAWINGS					
14	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.				
15	Shop Drawings as per specifications.	1	Job		
16	As-Built Drawings as per specifications.	1	Job		
				Sub Total-F	
				Total	

INFRASTRUCTURE WORKS

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 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.

S.#	DESCRIPTION	QTY	UNIT	SUPPLY		INSTALLATION		AMOUNT (Rs.)
				RATE (Rs.)	AMOUNT (Rs.)	RATE (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. 3) Megger Test of each circuit to be done by contractor. 4) Wiring for Occupancy Sensor shall be included in light wiring.							
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.	4	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.	10	No.					
a	Same as above item but wiring from light point to point.	6	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.	2	No.					
a	Same as above item but wiring from light point to point.	10	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.	2	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.	3	No.					
a	Same as above item but wiring from light point to point.	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 point to point .	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 outlet to outlet .	6	No.					
8	Wiring of 13A/15A Switch Socket units (UPS 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 outlet to outlet .	6	No.					
9	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 Cu/PVC	1	No.					
b	Same as above item but wiring from 20A Switch to 13A International Outlet	1	No.					
10	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	3	No.					
12	Wiring of 32A, 3-pin Industrial Socket unit (5 kVA UPS) from Socket to UPS & UPS to Socket with following size of wires in 32mm dia size PVC conduit as shown on drawings.							
a	3C-6 Sqmm Cu/PVC/PVC	2	No.					

	<p>Note:</p> <p>1) Contractor is advised to confirm the cable running lengths and termination as per site conditions before commencement of work.</p> <p>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)</p> <p>3) All the cables shall be colour coded according to phases / types of services.</p> <p>4) Wires color of UPS circuits should be different from RAW Power</p> <p>5) Wiring for outgoing circuits of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.</p>							
	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.							
a	25mm dia PVC Conduit	50	Rm.					
b	32mm dia PVC Conduit	10	Rm.					
c	38mm dia PVC Conduit	10	Rm.					
d	100mm dia UPVC Conduit (Class-D)	100	Rm.					
e	150mm dia UPVC Conduit (Class-D)	100	Rm.					
f	200mm dia UPVC Conduit (Class-D)	2,000	Rm.					
2	Making of RCC Man hole 3' x 3' (LW) 4' (For Power) Depth make with 150 mm RCC Wall, heavy duty 450mm Square RCC cover including Ground Excavation of Hand Holes as per drawing & details. Complete in all respects.	20	No.					
3	Making of RCC Man hole 3' x 3' (LW) 4' (For IT) Depth make with 150 mm RCC Wall, heavy duty 450mm Square RCC cover including Ground Excavation of Hand Holes as per drawing & details. Complete in all respects.	20	No.					
4	Making of Main LV Room of dimensions 20'x10'x12' with RCC plinth,column,Slab, Block Masonary Walls with plaster finish and weather proof enamel paint on both interior & exterior faces and M.S Louvered Doors of 8' width and 8' height, including water proofing on roof slab, cable trench of 3' width & 4' depth, complete in all respects as per the satisfaction of the client / consultant.	1	Job.					

5	Making of Server Room of dimensions 10'x10'x12' with RCC plinth, column, Slab, Block Masonry Walls with plaster finish and weather proof enamel paint on both interior & exterior faces and M.S Louvered Doors of 8' width and 8' height, including water proofing on roof slab, cable trench of 3' width & 4' depth, complete in all respects as per the satisfaction of the client / consultant.	1	Job.					
6	Excavation in ordinary soil up to 1200mm depth x 600mm wide including back filing after laying of cables & UPVC pipes as mentioned on drawings and then compressing it. The work also includes the site preparation and marking of Warning tape. Complete in all respects.	500	Rm.					
	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 UMMARY)							
	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 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	10	No.					
9	13A, 3-Pin Flat Duplex Switch Socket unit	1	No.					
10	13A, 3-Pin Flat Simplex Switch Socket unit	1	No.					
11	20A Switched Socket for Hand Dryer	1	No.					
12	16A DP Isolator (Split Unit)	3	No.					
13	32A 3-Pin (Single Phase) Industrial Socket with Plug (for UPS)	4	No.					
14	32A 5-Pin (Three Phase) Industrial Socket with Plug (for Communication Racks)	1	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	Emergency Exit Light Fixture with Built-In Battery Pack Unit (Maintained)	1	No.					
2	Emergency Exit Light Fixture with Built-In Battery Pack Unit And Direction Sign (Maintained)	3	No.					
3	Ceiling Recessed 45W LED Panel 600 x 600mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	1	No.					
4	Bulk Head Emergency Light with 10W LED With Built-In Battery Back-Up (Non Maintained)	1	No.					
5	Ceiling Recessed 45W LED Panel 1200 x 300mm Fixture of Diffused Glass Color Temp 4000K CRI 90%	12	No.					
6	Bulk Head Light	4	No.					
7	Exhaust Fan of 3' dia	4	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	Incoming Main Power Cable from Power House to LV Panel Main 18 No. 1C-300 Sqmm Cu/PVC/PVC + 2 No. ECC 1C-95 Sqmm Cu/PVC	250	Rm.					
2	From LV Panel Main to MDB-YELLOW 7 No. 1C-300 Sqmm Cu/PVC/PVC + 2 No. ECC 1C-95 Sqmm Cu/PVC	200	Rm.					
3	From LV Panel Main to MDB-BLUE 7 No. 1C-300 Sqmm Cu/PVC/PVC + 1 No. ECC 1C-95 Sqmm Cu/PVC	150	Rm.					
4	From LV Panel Main to MDB-GREEN 7 No. 1C-300 Sqmm Cu/PVC/PVC + 1 No. ECC 1C-95 Sqmm Cu/PVC	150	Rm.					

5	From LV Panel Main to MDB-ORANGE 7 No. 1C-300 Sqmm Cu/PVC/PVC + 1 No. ECC 1C-95 Sqmm Cu/PVC	200	Rm.					
6	From LV Panel Main to MCC-FIRE PUMP 4C-70 Sqmm Cu/XLPE/PVC + ECC 1C-50 Sqmm Cu/PVC	75	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 - 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.							

	<p>9) Braided Door earth required. 10) Lockable handle required for main door. 11) As-built drawing pocket. 12) Cable hanging arrangement.</p> <p>Minimum One Year Warranty Required from date of successful commissioning on site.</p>							
1	MAIN LV PANEL	1	No.					
2	DB-SS	1	No.					
	<p>Note: 1) Supply & Installation of MCCs required for Fire Fighting, HVAC & Plumbing Services shall be in the scope of Mechanical Works.</p>							
	<p>Total Amount (Rs.) Sec - F (CARRIED FORWARD TO SUMMARY)</p>					-		
	<p>SECTION - G EARTHING / GROUNDING SYSTEM</p>							
	<p>Supply, installation, testing and commissioning 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.</p>							
1	<p>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.</p>	6	No.					
2	<p>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.</p>	3	No.					
3	<p>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.</p>	2	No.					
4	<p>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</p>	2	No.					

	connected using 70 sqmm bare copper conductors with the earthing rods.							
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	100	Rm.					
b	1C, 70 Sq.mm PVC (Green) in 50mm dia PVC Conduit	100	Rm.					
6	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.							
a	95 Sq.mm Bare Copper Conductor	100	Rm.					
	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 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	Simplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data, white / off white finish, complete with shuttered click-ins, labels and all accessories including 16 SWG sheet steel back box. Complete in all respects.	1	No.					
2	Duplex Face plate with 1 No. CAT-6a RJ-45 I/O for Data & 1 No. CAT-6 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.	1	No.					

3	Supply and Wiring of CAT-6 UTP Cables for Voice communication system from Com Rack to each workstation 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.) (Selected Cable Must be UL Listed LSZH)	1	Coil					
4	Supply and Wiring of CAT-6a UTP Cables for Data communication system from Com Rack to each workstation 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 Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	1	Coil					
5	Supply and Wiring of CAT-6a UTP Cables for Data communication system from Com Rack to each workstation in already installed conduit via cable tray as per drawings including termination and tagging at both ends . Complete in all respects. Different colors of cables shall be used for Data (Coil =305 Rm.) (Selected Cable Must be UL Listed LSZH)	1	Coil					
6	Communication Rack 42U (Floor Mounted), (800 x 1000) suitable for installation of standard patch panels and etc. Complete with floor base, vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets & proper ventilation system including fan etc. Complete in all respects.	2	No.					
7	Following CAT-6, Patch Panel equipped with RJ-45 I/Os for Voice Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6 Patch Panel for Voice	1	No.					
8	Following CAT-6a, Patch Panel equipped with RJ-45 I/Os for Data Communication System including all labeling and all mounting accessories. Complete in all respects.							
a	24-Port CAT-6A Patch Panel for Data	1	No.					
9	Front Cable Organizer for Voice patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	1	No.					
10	Front Cable Organizer for Data patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	1	No.					
11	Following CAT-6 , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Voice Communication .							

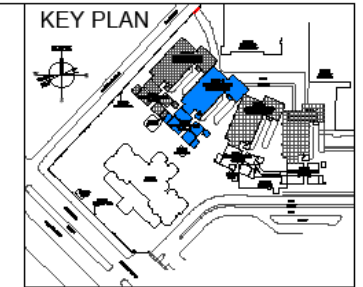
a	1 meter long (Patch panel to Tag block).	10	No.					
12	Following CAT-6a , factory certified Patch Cords of specified color having RJ-45 connectors at both ends for Data Communication .							
a	3 meter long.	10	No.					
b	1 meter long. (Patch panel to switch).	10	No.					
13	Following Main / Sub-Main Telephone Junction Boxes (MTJB/SMTJB) made with 16 SWG sheet steel housing, powder coated paint of approved color, consisting of specified Distributor Blocks / Tag Blocks for incoming and outgoing PTCL lines from ONU . Item includes all interconnecting jumper wiring and termination.							
a	MDF-PABX (400 Pair wiring tag blocks)	1	No.					
14	Tag block for telephone network having 1x25 Pair Connecting Block, KRONE make including testing and termination at both ends, installed inside Communication Rack. Complete in all respects.	1	No.					
15	100 Pair, CAT-5 shielded , 0.6 mm dia, twisted pair telephone cable to be installed in 38mm dia PVC conduit / channel from Control room to Communication rack as per drawings including connection, labeling and tagging. Complete in all respects.	600	Rm.					
16	Supply & Wiring of 6 Core, 50/125um Multi Mode OM3 Outdoor 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. (Selected Cable Must be UL Listed LSZH)	800	Rm.					
17	Supply & Wiring of 12 Core, 50/125um Multi Mode OM3 Outdoor 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. (Selected Cable Must be UL Listed LSZH)	300	Rm.					
18	Supply & Wiring of 24 Core, 9/125um Single Mode 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. (Selected Cable Must be UL Listed LSZH)	1,200	Rm.					

19	ODF 24 port MM 50/125LC 24 port MM ODF complete in all accessories with pigtail splicing etc. Complete in all respect.	1	No.					
20	ODF 24 port SM 9/125SC 24 port SM ODF complete in all accessories with pigtail splicing etc. Complete in all respect.	1	No.					
21	Fiber optic patch chord MM 50/125U OM3 Aqua 6 meter long with	1	No.					
22	Fiber optic patch chord MM 50/125U OM3 Aqua 3 meter long with LC/LC	1	No.					
23	Fiber optic patch chord SM 9/125U OS2 Aqua 6 meter long with	1	No.					
24	Fiber optic patch chord SM 9/125U OS2 Aqua 3 meter long with LC/LC	1	No.					
25	Programming, testing and commissioning of complete system including on site demonstration and training of client's representative upto the entire satisfaction of consultant/client	1	Job					
26	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 - H (CARRIED FORWARD TO SUMMARY)							
	SECTION - I 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 - I (CARRIED FORWARD TO SUMMARY)							

LIST OF WORKING DRAWINGS

S.#	DRAWING.#	DESCRIPTION
		TITLE SHEET
01	A-0.00	LIST OF WORKING DRAWINGS
02	A-0.01	SCHEDULE OF FINISHES
03	A-0.02	SCHEDULE OF FINISHES
BUILDING PLANS		
04	A-0.03	BUILDINGS BLOCK SITE PLAN
05	A-0.03a	GRID LAYOUT PLAN OF ALL FOUR BUILDINGS
06	A-0.04	TOPOGRAPHICAL SURVEY
07	A-0.05	GROUND FLOOR PLAN (WAITING AREA)
08	A-0.06	ROOF PLAN (WAITING AREA)
09	A-0.07	ELEVATIONS (WAITING AREA)
10	A-0.08	SECTIONS (WAITING AREA)
11	A-1.00	GROUND FLOOR PLAN
12	A-2.00	FIRST FLOOR PLAN
13	A-3.00	ROOF PLAN
14	A-4.00	ROOF TOP PLAN
BUILDING ELEVATIONS		
17	A-5.00	ELEVATIONS -1 & 2
18	A-5.01	ELEVATIONS -3 & 4
BUILDING SECTIONS		
19	A-6.00	SECTION -S1 & S2
20	A-6.01	SECTION -S3 & S5
21	A-6.02	SECTION -S5 & S6
WALL SECTIONS		
22	A-07.00	WALL SECTION,S
23	A-07.01	WALL SECTION,S
24	A-07.02	WALL SECTION,S
25	A-07.03	WALL SECTION,S
STAIR DETAILS		
26	A-08.00	STAIR CASE PLAN (ST-01)
27	A-08.01	STAIR SECTION 1-1 & 2-2
28	A-08.02	STAIR SECTION 3-3 & 4-4
29	A-08.03	STAIR (ST-01) DETAILS
30	A-09.00	STAIR CASE PLAN (ST-02)
31	A-09.01	STAIR SECTION 5-5 & 6-6
32	A-09.02	STAIR SECTION 7-7 & 8-8
33	A-09.03	STAIR (ST-02) DETAILS
LIFT LOBBY		
34	A-10.00	TYPICAL PLANS: LIFT LOBBY & SECTION
35	A-10.01	TYPICAL PLANS: LIFT LOBBY & SECTION

TOILET DETAILS		
26	A-11.00	TYPICAL TOILET PLANS/ELEVATION & SECTION'S (T-01)
37	A-11.01	TYPICAL TOILET PLANS/ELEVATION & SECTION'S (T-01)
38	A-11.02	TYPICAL TOILET PLANS/ELEVATION & SECTION'S (T-01)
39	A-12.00	TYPICAL TOILET PLANS/ELEVATION & SECTION'S (T-02)
40	A-13.00	TYPICAL TOILET PLANS/ELEVATION & SECTION'S (T-03)
SCHEDULE OF DOORS & WINDOWS		
41	A-14.00	DOORS & WINDOWS NUMBERS GROUND FL & FIRST FLOOR PLAN
42	A-14.01	DOORS & WINDOWS NUMBERS SECOND FL & THIRD FLOOR PLAN
43	A-14.02	DOORS & WINDOWS NUMBERS FORTUH FL & ROOF PLAN
44	A-14.03	DOOR'S & WINDOWS ELEVATION'S
45	A-14.04	DOOR'S & WINDOWS ELEVATION'S
46	A-14.05	DOOR'S & WINDOWS DETAILS
47	A-14.06	DOOR'S & WINDOWS DETAILS
MISCELLANEOUS DETAILS		
48	A-15.00	RCC & MASONRY JOINT DETAILS
FLOORING LAYOUT PLANS		
49	FL-16.00	FLOORING PLAN (GROUND FLOOR)
50	FL-16.01	FLOORING PLAN (FIRST FLOOR)
CEILING LAYOUT PLANS		
51	FC-17.00	REFLECTING CEILING PLAN (GROUND FLOOR)
52	FC-17.01	REFLECTING CEILING PLAN (FIRST FLOOR)
EXTERNAL DEVELOPMENT DETAILS		
		BOUNDARY BLOWNUP PLAN'S SEC. & ELEVATION'S
		BOUNDARY BLOWNUP PLAN'S SEC. & ELEVATION'S
		DETAILS OF MAIN GATE / ELEVATION & SECTION
FURNITURE LAYOUT PLANS		
		FURNITURE LAYOUT PLAN BASEMENT & GROUND FLOOR
		FURNITURE LAYOUT PLAN FIRST & SECOND FLOOR PLAN
LANDSCAPING CITY PAVER ENVICRETE		
		LANDSCAPE PLAN



NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND REPORT CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
R-01	May 2020	REVISED TENDER DRAWING GROUND +1 FLOOR
R-02	May 2020	TENDER DRAWING ISSUED FOR STRECH. WORK
R-03	July 2019	ISSUED TO TENDER
R-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

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

TITLE
**TENDER DRAWING
 BLUE BUILDING**
LIST OF DRAWINGS

PROJ. ARCH.	SHEET No.
CHECKED AK	A-0.00
DRAWN BY JAWAID	
JOB No.	SCALE N.T.S.
-	DATE July 2019
	FILE:



**DOW UNIVERSITY
OF HEALTH SCIENCES
KARACHI.**

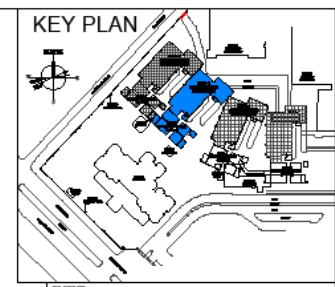
**TENDER DRAWING
ARCHITECTURAL**

(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



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

NOTE:-
01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
02. CONTRACTOR TO BE PROVIDED LAY OUT OF ALL FOUR BUILDINGS AND EXPLORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

REV	DATE	DESCRIPTION
R-01	May 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2019	TENDER DRAWING ISSUED FOR STREC. WORK
R-03	July 2019	ISSUED TO TENDER
R-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

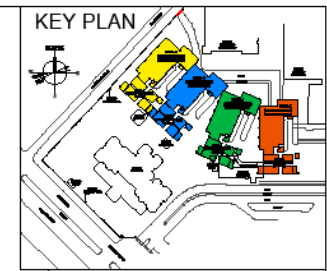
ARCHITECT	
PROJECT	PROPOSED OPD BUILDING AT OJHA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI
TITLE	TENDER DRAWING BLUE BUILDING SCHEDULE OF FINISHES
PROJ. ARCH.	
CHECKED	AK
DRAWN BY	JAWAID
JOB No.	DATE
	July 2019

ROOM NO.	ROOM NAME	FLOORS	SKIRTING	WAINSCOTS	DADO	HT.	WALLS	CEILING	MGT.	SUSP.HT	REMARKS
GROUND FLOOR (00)											
01.00	LIFT LOBBY	1b				1a 2					
02.00	LOBBY	1b									
03.00	STAIR-01	1b									
04.00	STAIR-02	1b									
05.00	COM.ROOM	1b									
06.00	ELECTRIC ROOM	1b									
07.00	TEMP.OFFICE	15		SE				1		12	3000 mm
08.00	LIFT									11	
09.00	TOILETS	1a				7				11 12	3000 mm
10.00	ADMIN RECEPTION	1b						1		11 12	3000 mm
11.00	WC	1a				7		1		11 12	3000 mm
12.00	JANITOR	1a				7		1		11 12	3000 mm
13.00	DIRTY UTILITY	1a						1		11 12	3000 mm
14.00	DIRTY STORE	1a						1		11 12	3000 mm
15.00	SERVICES/CORRIDOR	1b						1		11 12	3000 mm
16.00	CLINIC	1b						1		11 12	3000 mm
17.00	RECEPTION	1b						1		11 12	3000 mm
18.00	WAITING	1b								11 12	
19.00	HOLDING	1b								11 12	
20.00	EQUIPMENT STORE	1b								11 12	
21.00	TREATMENT	1b					5	1		11 12	3000 mm

FIRST FLOOR (01)											
01.01	LIFT LOBBY	1b				1a 2					
02.01	LOBBY	1b									
03.01	STAIR-01	1b									
04.01	STAIR-02	1b									
05.01	COM.ROOM	1b									
06.01	ELECTRIC ROOM	1b									
07.01	TEMP.OFFICE										
08.01	LIFT									11	
09.01	TOILETS	1a				7		1		11 12	3000 mm
10.01	ADMIN RECEPTION	1b						1		11 12	3000 mm
11.01	WC	1a				7		1		11 12	3000 mm
12.01	JANITOR	1a				7		1		11 12	3000 mm
13.01	DIRTY UTILITY	1a						1		11 12	3000 mm
14.01	DIRTY STORE	1a						1		11 12	3000 mm
15.01	SERVICES/CORRIDOR	1b						1		11 12	3000 mm
16.01	CLINIC	1b						1		11 12	3000 mm
17.01	RECEPTION	1b						1		11 12	3000 mm
18.01	WAITING	1b								11 12	
19.01	HOLDING	1b								11 12	
20.01	EQUIPMENT STORE	1b								11 12	
21.01	TREATMENT	1b					5	1		11 12	3000 mm

ROOF											
01.02	LIFT LOBBY / MACHINE ROOM	1b				1a 2					
03.02	STAIR-01	1b									
04.02	STAIR-02	1b									
06.02	UPS / BETRAY ROOM/ELECTRIC RM	1b									
07.01	TEMP.OFFICE	15		SE				1		12	3000 mm

SCALE: **A-0.01**



CLIENT

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

NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE RESPONSIBLE LAY OUT OF ALL FOUR BUILDINGS AND REPORT CONSTRUCTION TO BE CHECKED BY ARCHITECT.

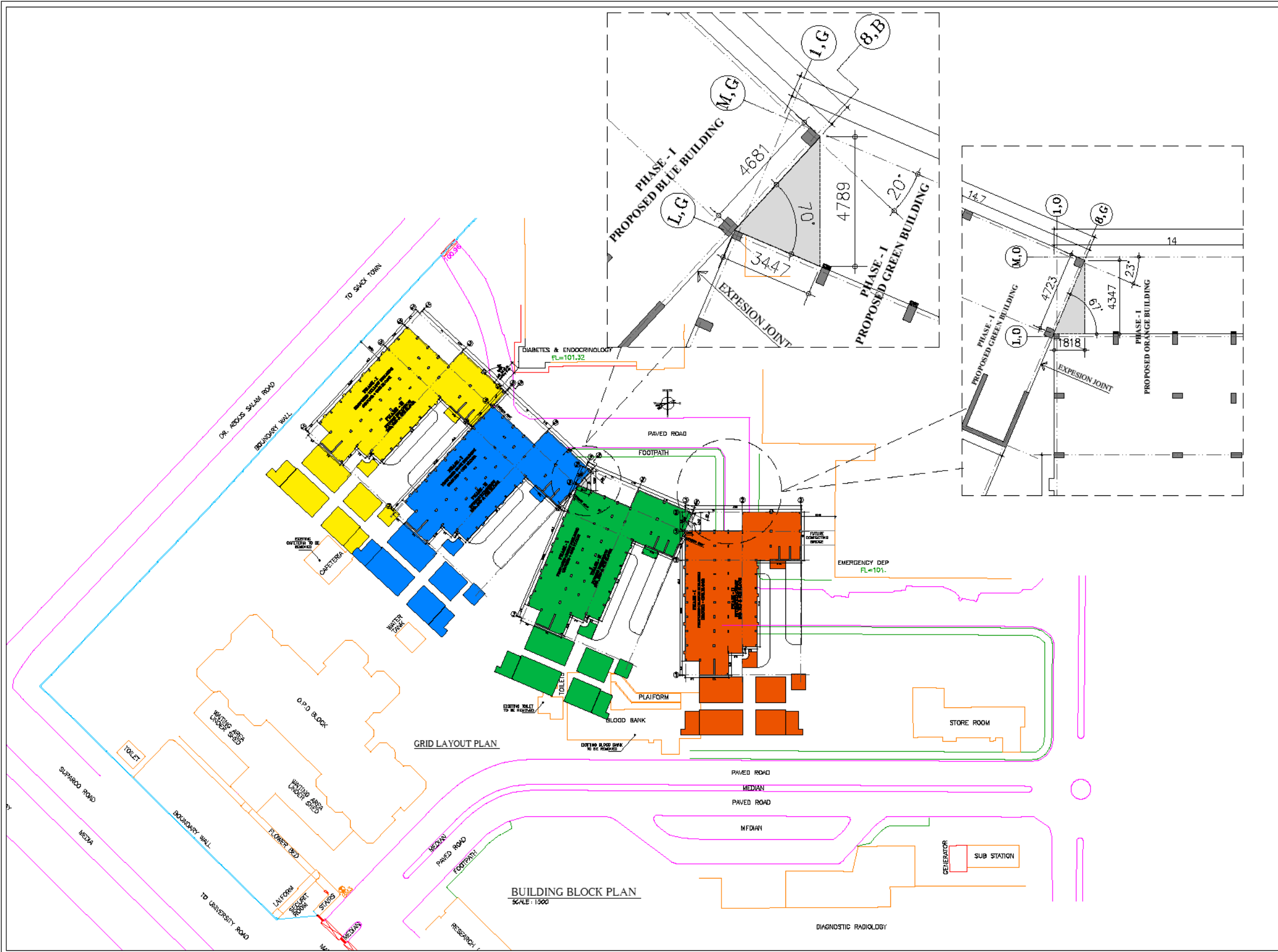
MARK	DATE	DESCRIPTION
B-03	May 2020	REVISED TENDER DRAWING GROUND +1 FLOOR
B-02	May 2020	TENDER DRAWING ISSUED FOR STRUC. WORK
B-01	July 2019	ISSUED TO TENDER
B-00	15-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

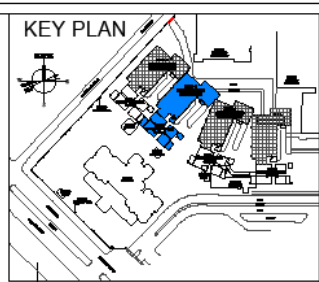
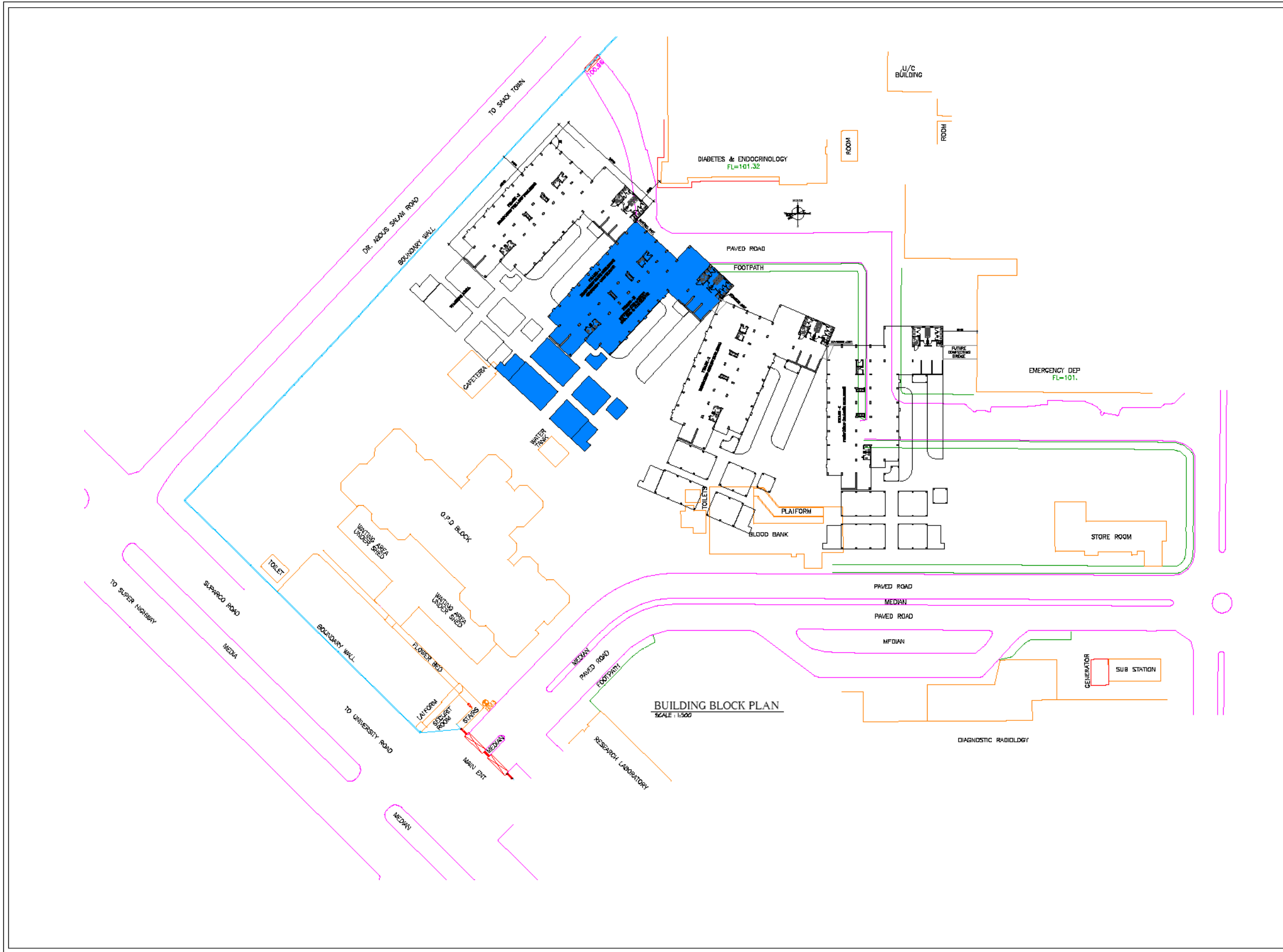
ARCHITECT

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

TITLE
GRID LAYOUT PLAN OF ALL FOUR BUILDINGS

PROJ. ARCH:		SHEET No.	A-0.03a
CHECKED	AK		
DRAWN BY	JAWAID	SCALE	1 = 500
JOB No.		DATE	MAY 2020
		FILE	





CLIENT



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

- NOTE:
01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDING AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
E-03	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
E-02	May 2020	TENDER DRAWING ISSUED FOR STRUC. WORK
E-01	July 2019	ISSUED TO TENDER
E-00	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

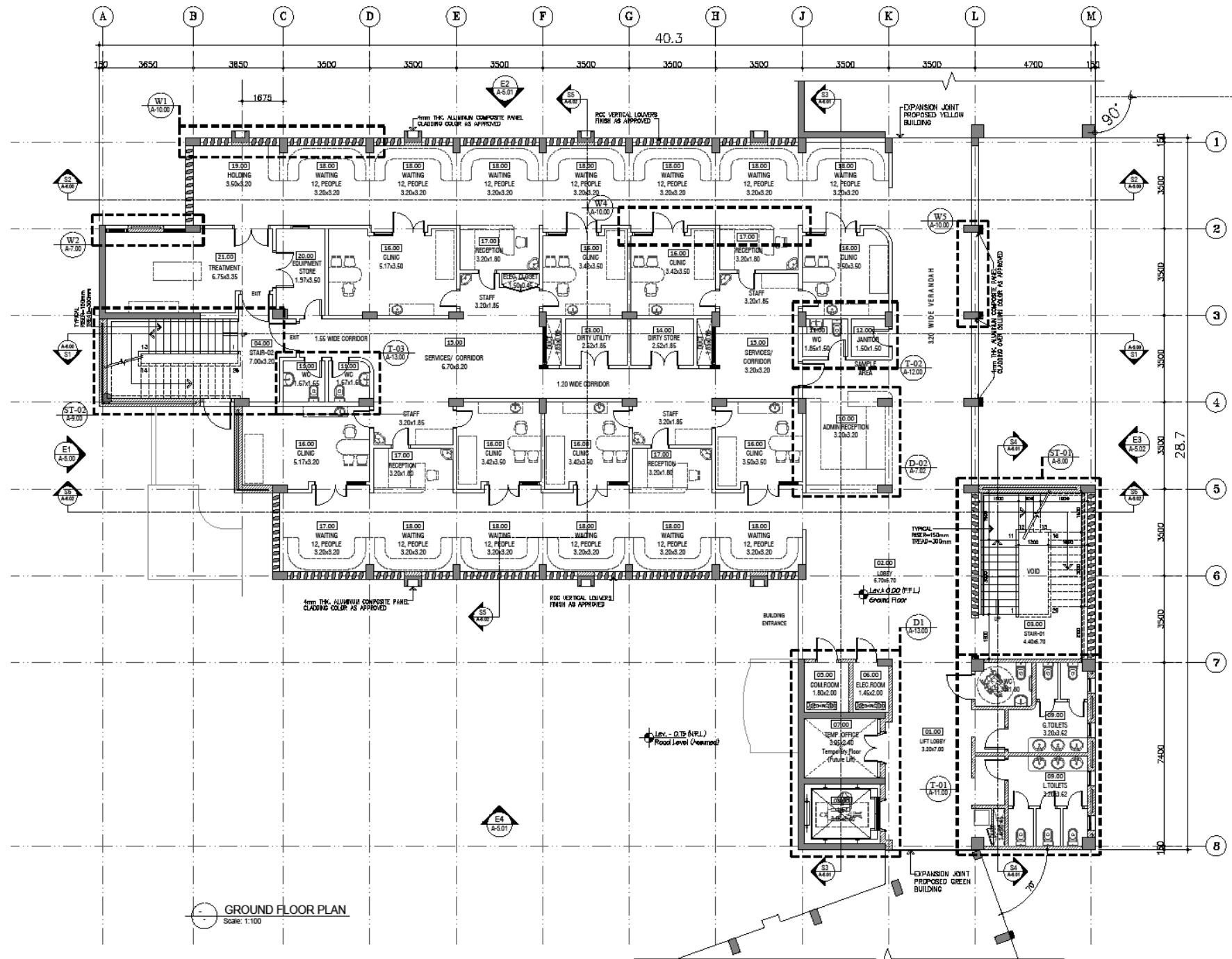
PROJECT

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

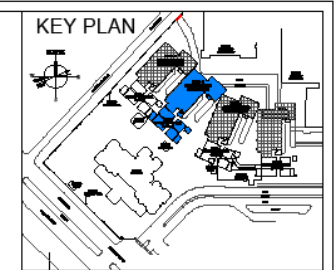
TITLE

TENDER DRAWING
 BLUE BUILDING
 BUILDINGS BLOCK
 SITE PLAN

PRICE ARCH.	SHEET No.
CHECKED AK	A-0.03b
DRAWN BY JAWAID	SCALE 1 = 500
JOB No.	DATE May 2020
	FILE



GROUND FLOOR PLAN
Scale: 1:100



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

NOTE:
01. ALL THE EXISTING STRUCTURE IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL TEST BUILDING AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

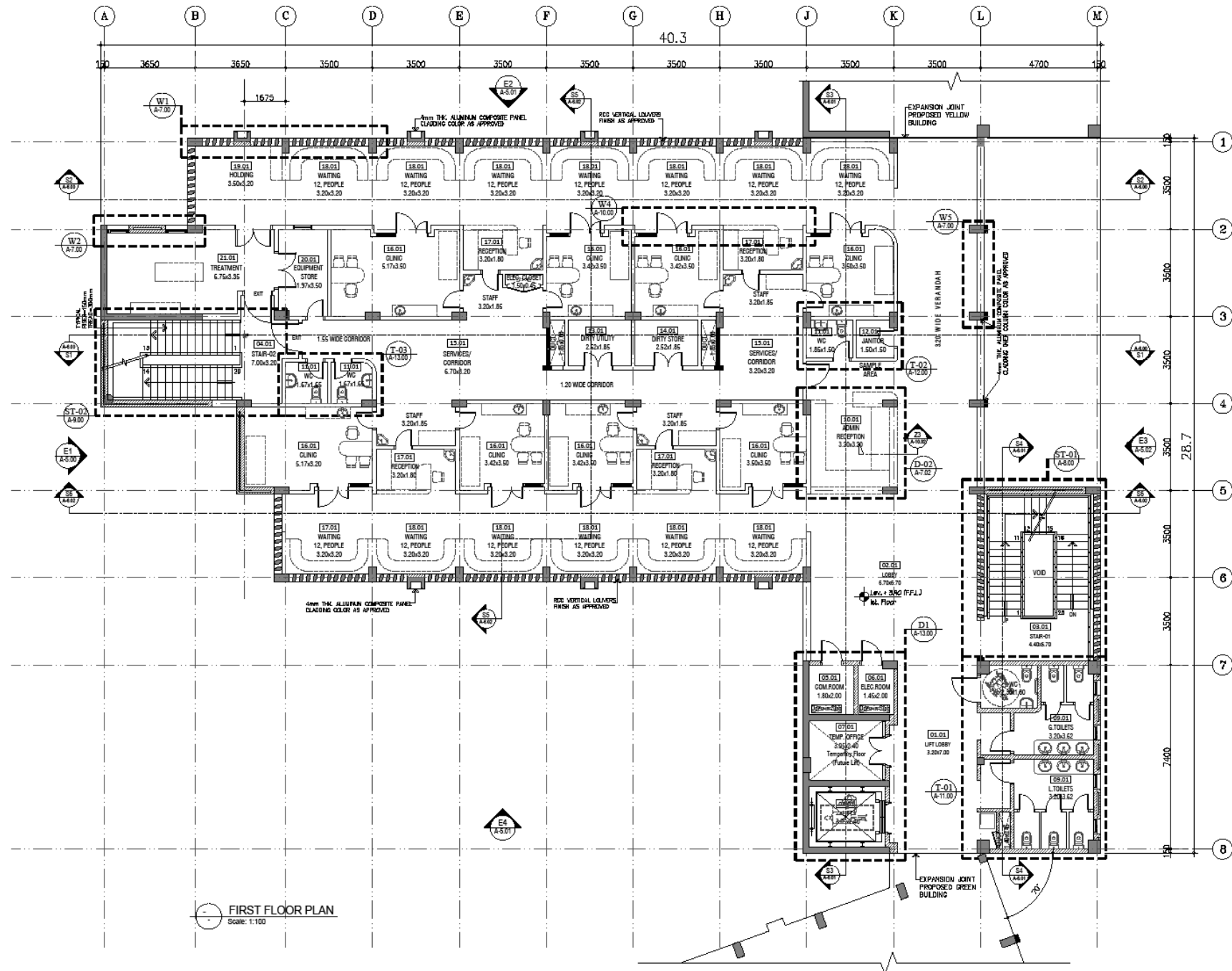
MARK	DATE	DESCRIPTION
01-01	13-04-2019	ISSUED TO CLIENT, BASIC WORKING DWG.
01-02	13-04-2019	ISSUED TO TENDER
01-03	13-04-2019	ISSUED TO TENDER FOR STIC. WORK
01-04	13-04-2019	DEFINITE DRAWING GROUND +1 FLOOR

ARCHITECT

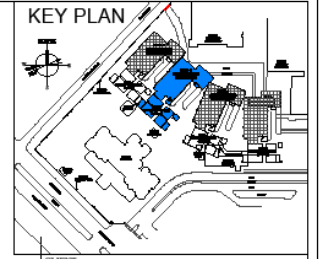
PROJECT
PROPOSED OPD BUILDING
AT OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HIJRI
KDA SCHEME - 33 KARACHI

TITLE
TENDER DRAWING
BLUE BUILDING
GROUND FLOOR PLAN

PROJ ARCH	SHEET No.
CHECKED AK	A-1.00
DRAWN BY JAWAID	SCALE 1:100
JOB No.	DATE May 2020
	FILE



FIRST FLOOR PLAN
Scale: 1:100



CLIENT

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

NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL YOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

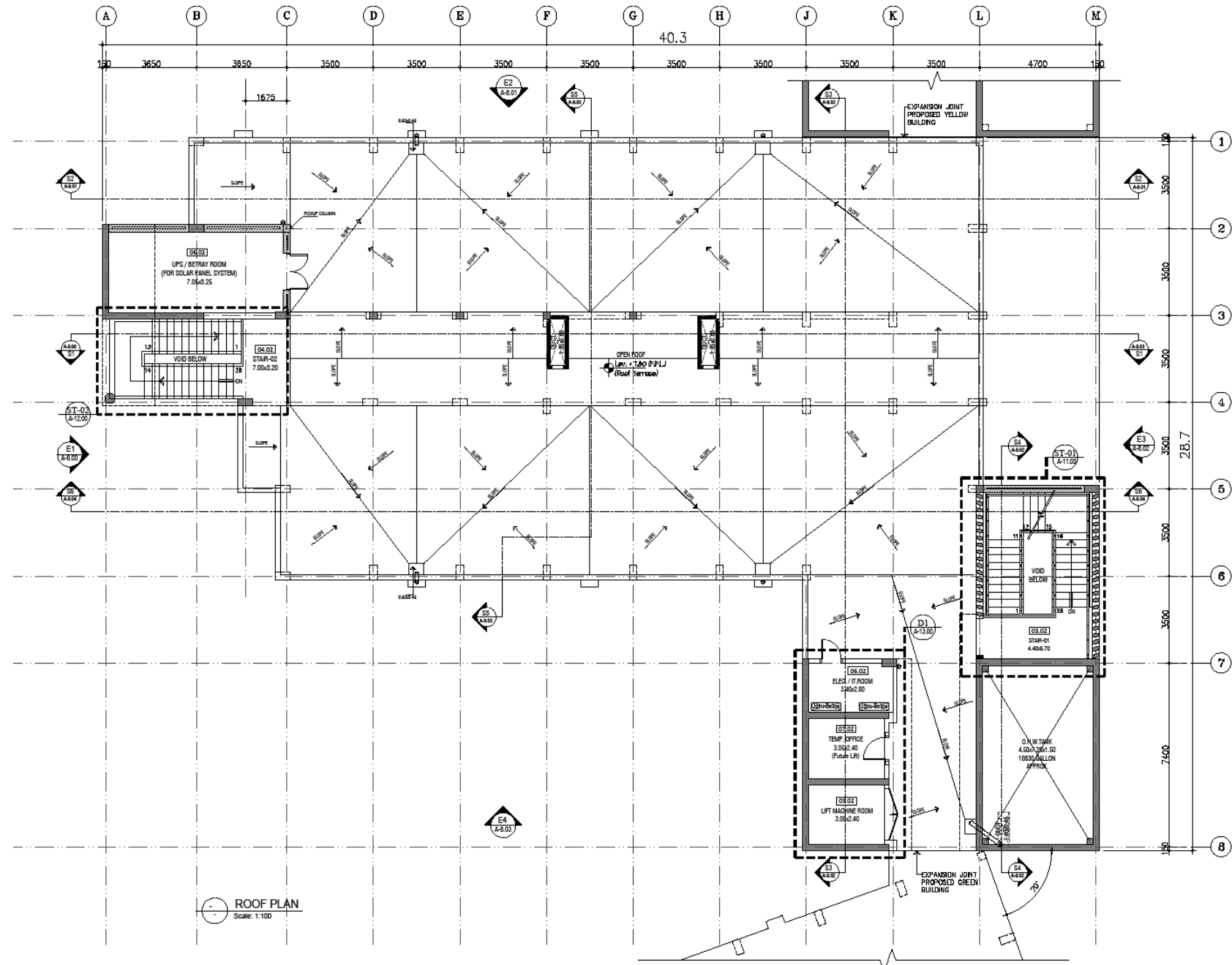
MARK	DATE	DESCRIPTION
B-01	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
B-02	May 2020	TENDER DRAWING ISSUED FOR STREC. WORK
B-03	Jun-2020	ISSUED TO TENDER.
B-04	12-06-2020	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

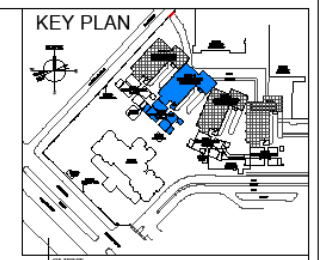
PROJECT
 PROPOSED OPD BUILDING
 AT OJHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIARI
 KDA SCHEME - 33 KARACHI

TITLE
TENDER DRAWING
BLUE BUILDING
FIRST FLOOR PLAN

PROJ. ARCH.	SHEET No.
CHECKED AK	A-2.00
DRAWN BY JAWAID	SCALE 1:100
JOB No.	DATE May 2020
	FILE



ROOF PLAN
Scale: 1:100



CLIENT

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

NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELINQUISHED WITH THE CO-ORDINATION OF OHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE REQUIRED TO LAY OUT OF ALL FOUND BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

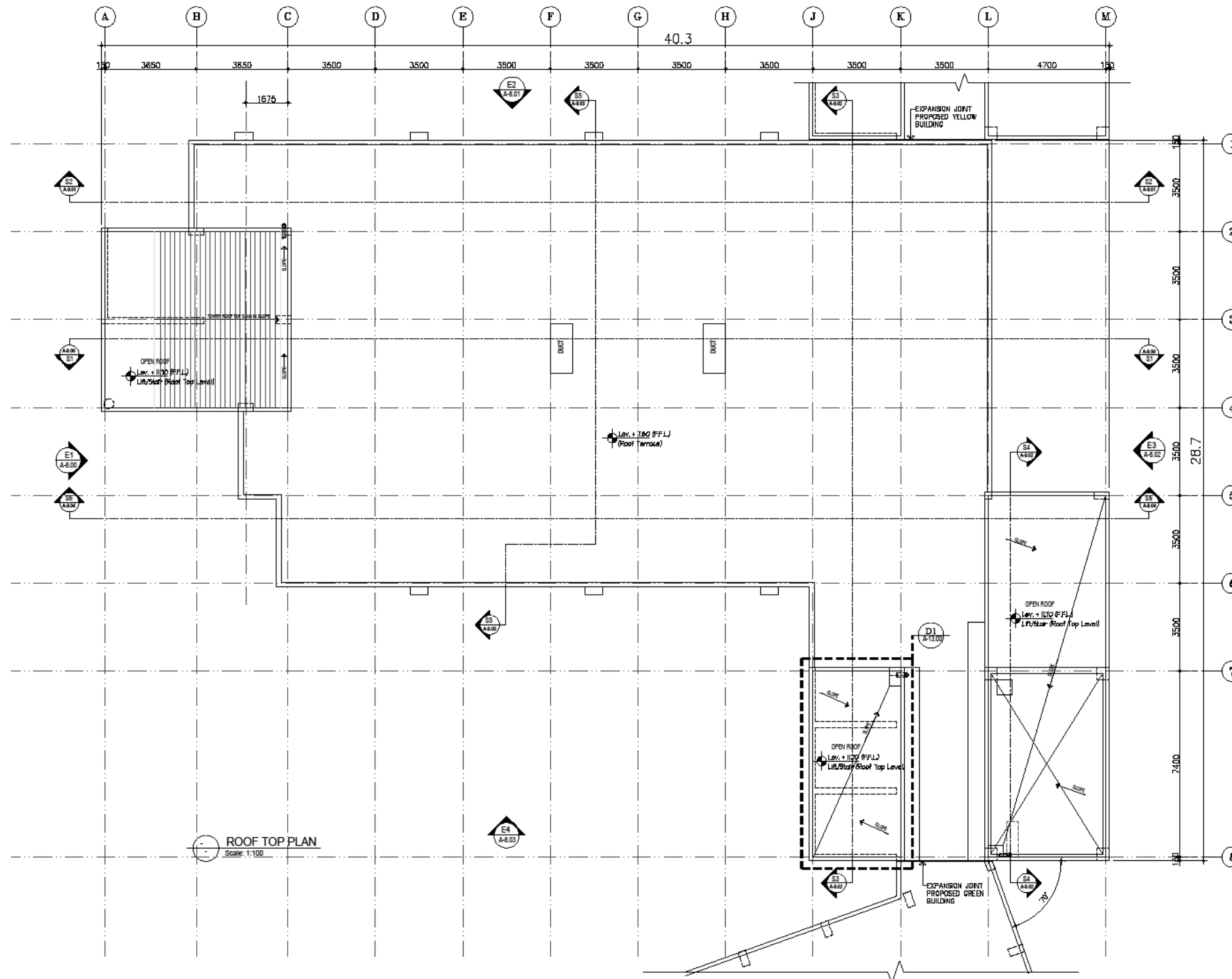
MARK	DATE	DESCRIPTION
B-40	May 2020	REVISED TENDER DRAWING GROUND +1 FLOOR
B-41	May 2020	TENDER DRAWING ISSUED FOR BIDDING WORK
B-42	July 2019	ISSUED TO TENDER
B-43	11-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

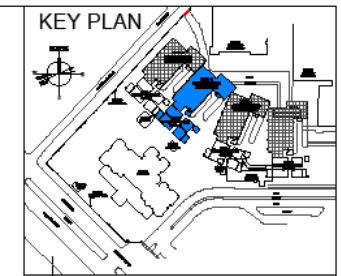
PROJECT
 PROPOSED OPD BUILDING
 AT OHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIJRI
 KDA SCHEME - 33 KARACHI

TITLE
 TENDER DRAWING
 BLUE BUILDING
 ROOF PLAN

PROJ. ARCH.	SHEET No.
CHECKED AK	A-3.00
DRAWN BY JAWAID	SCALE 1:100
JOB No.	DATE May 2020



ROOF TOP PLAN
Scale: 1:100



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

- NOTE:-
01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PROVIDED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

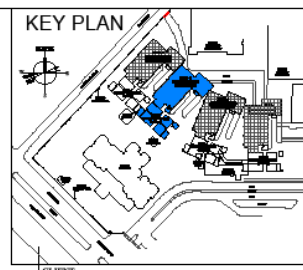
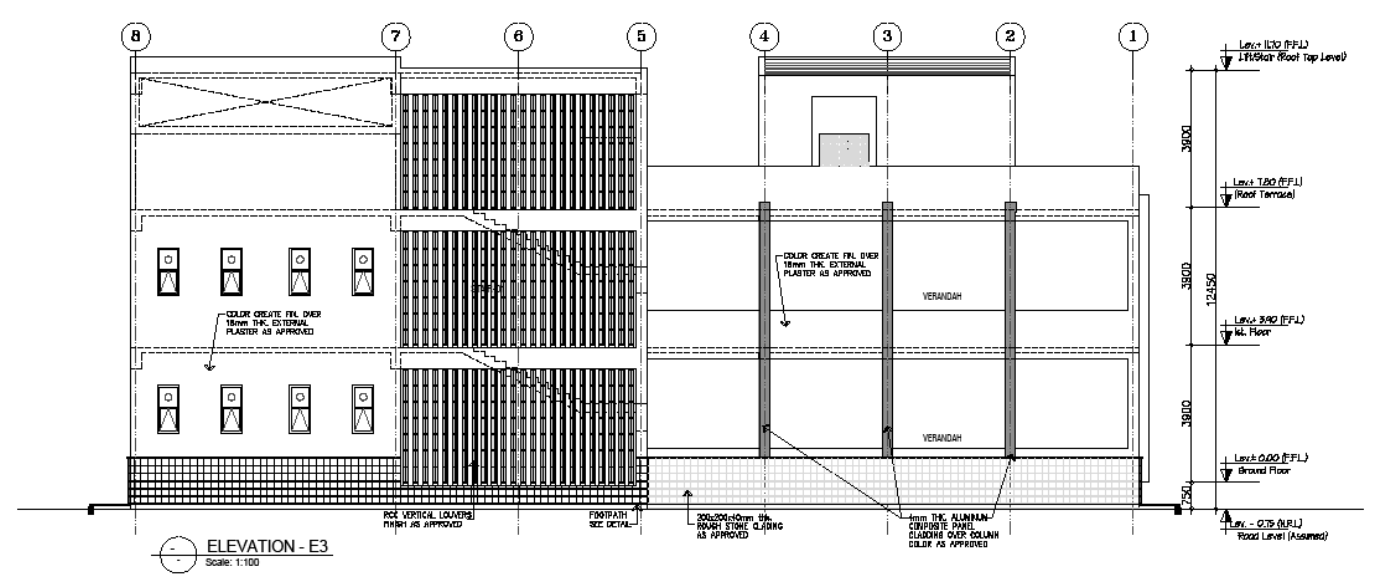
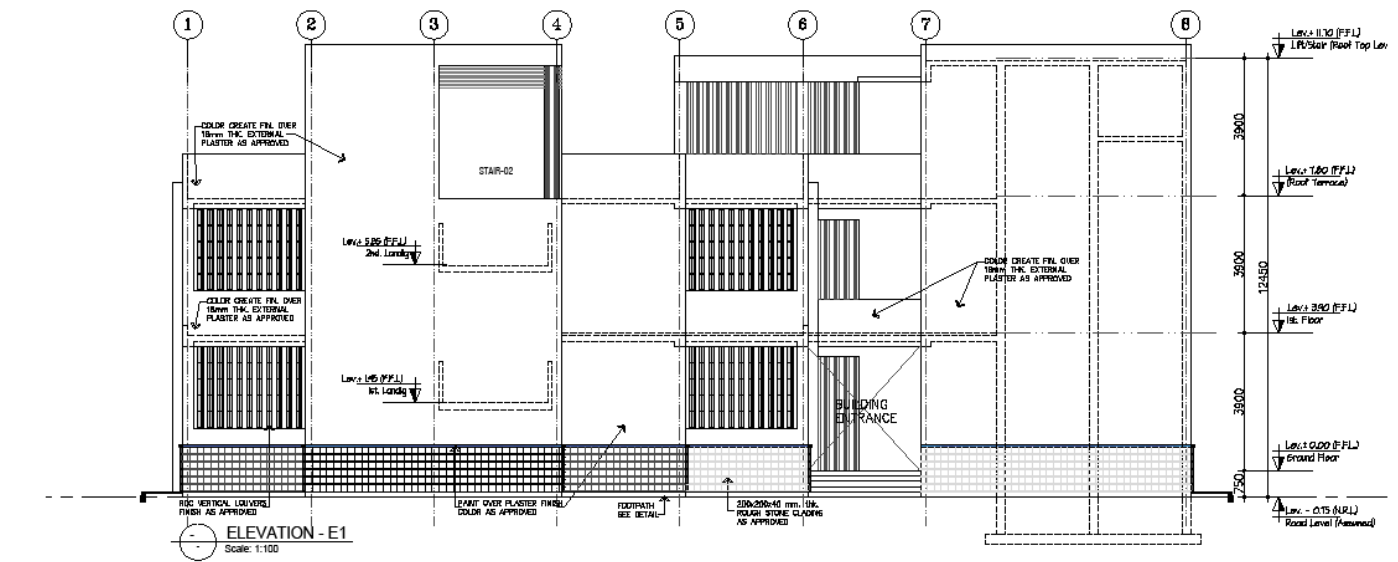
MARK	DATE	DESCRIPTION
R-40	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-42	May 2020	TENDER DRAWING ISSUED FOR STRUC. WORK
R-41	July 2019	ISSUED TO TENDER
R-40	12-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT


PROJECT
PROPOSED OPD BUILDING
AT OHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HIURI
KDA SCHEME - 33 KARACHI

TITLE
TENDER DRAWING
BLUE BUILDING
ROOF TOP PLAN

PROJ. ARCH.	ISSUED No.
CHECKED AK	A-4.00
DRAWN BY JAWAID	
JOB No. DATE May 2020	



CLIENT



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

NOTE:

- ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
- CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

REVISION	DATE	DESCRIPTION
R-01	May 2020	REVISED TENDER DRAWING GROUND +1 FLOOR
R-02	May 2020	TENDER DRAWING ISSUED FOR STUC. WORK
R-03	July 2019	ISSUED TO TENDER
R-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

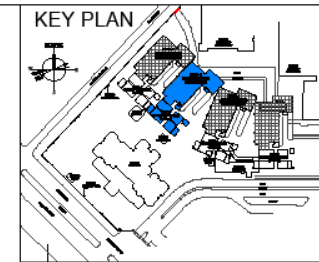
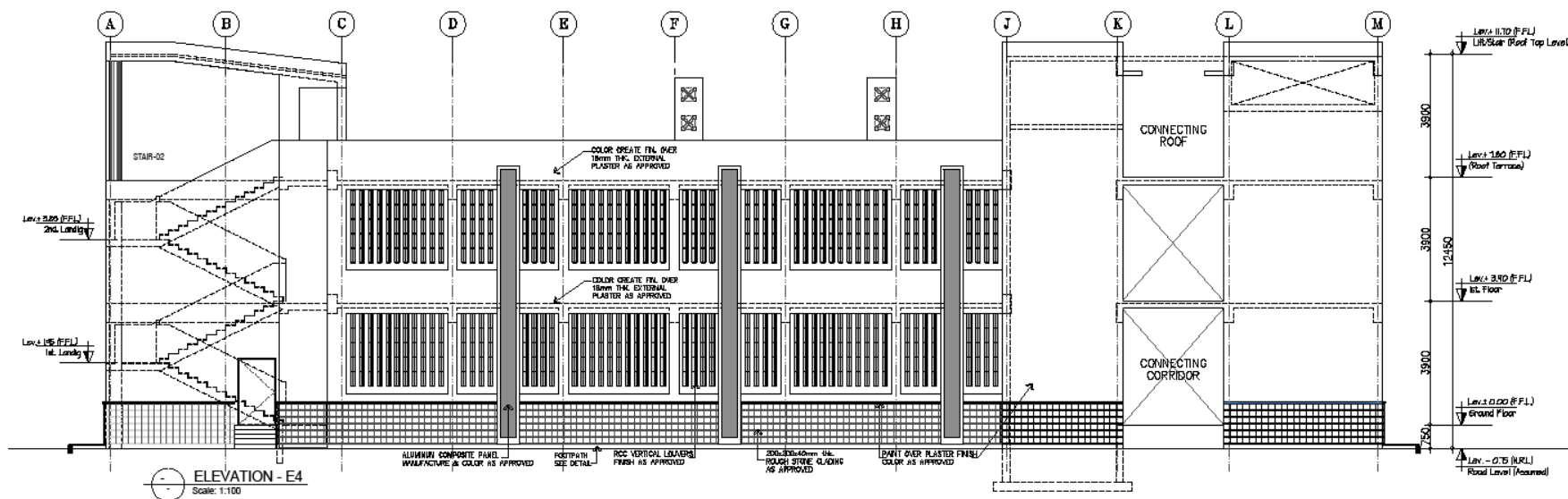
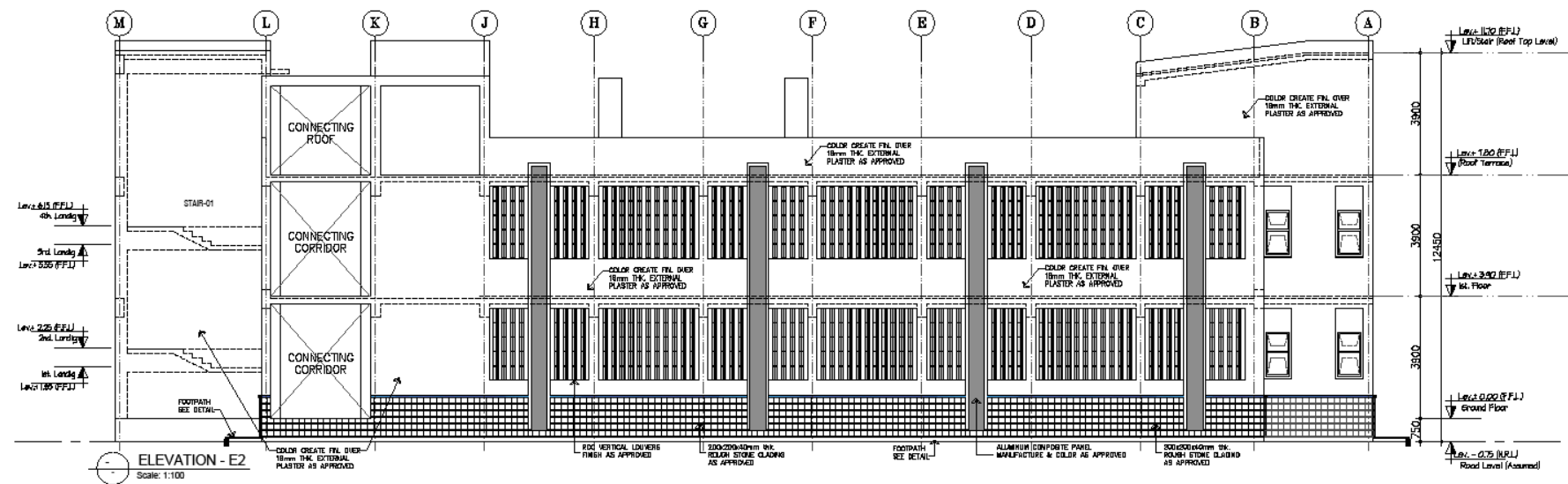
PROJECT

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

TITLE

TENDER DRAWING
BLUE BUILDING
ELEVATION 'E1' AND 'E3'

PROJ. ARCH.	SHRIT No.
CHECKED AK	A-5.00
DRAWN BY JAWAID	SCALE 1:100
JOB No.	DATE May 2020
	FILE:



CLIENT



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

NOTE:-

- ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
- CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND RESPONSIBILITY TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
R-01	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2020	TENDER DRAWING ISSUED FOR STREC. WORK
R-03	July 2019	ISSUED TO TENDER
R-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

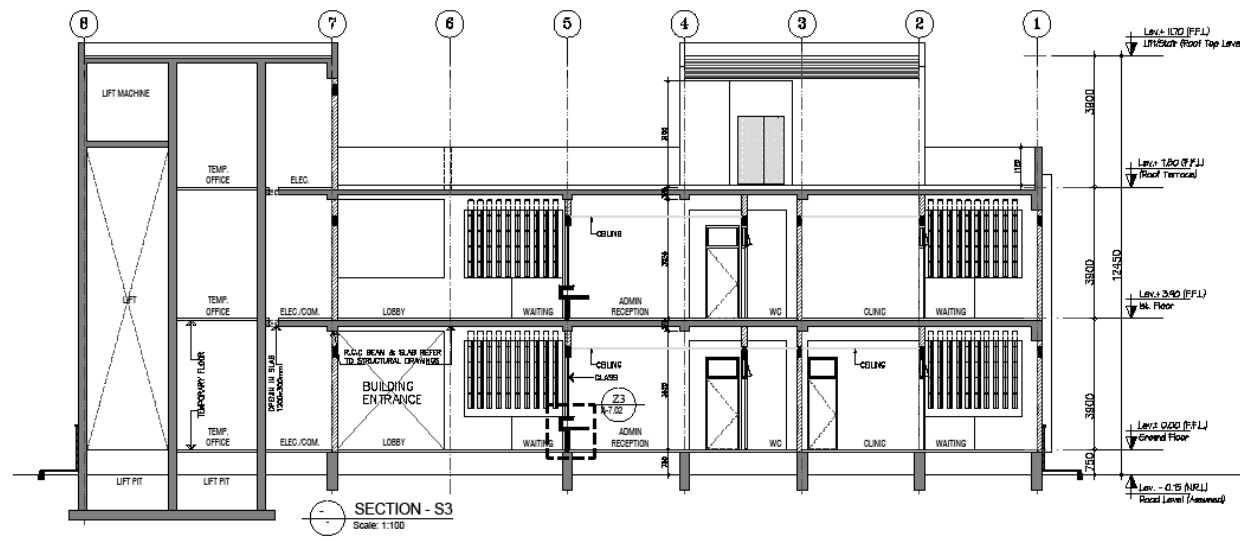
PROJECT

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

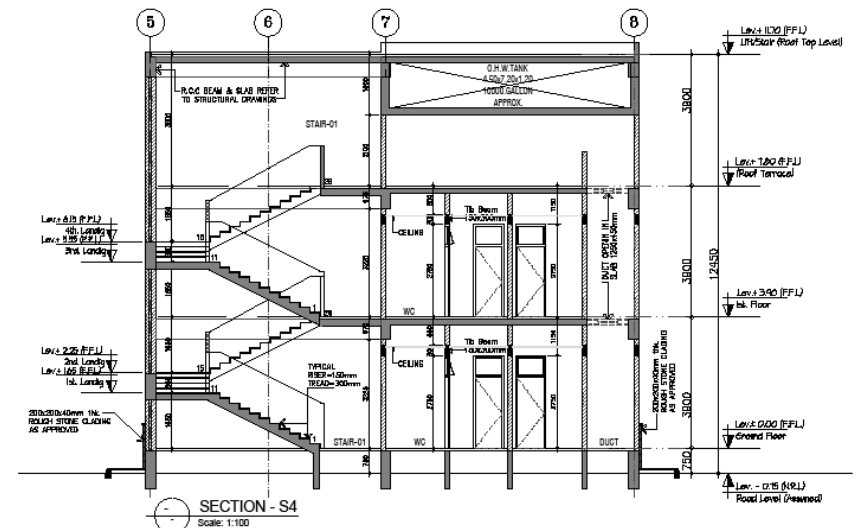
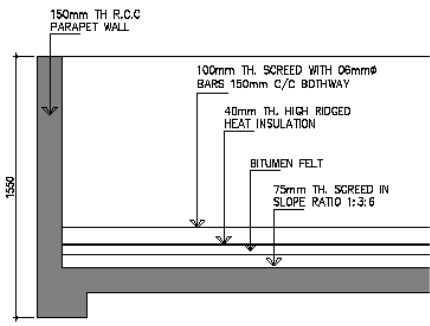
TITLE

TENDER DRAWING
BLUE BUILDING
**ELEVATION
'E2' AND 'E4'**

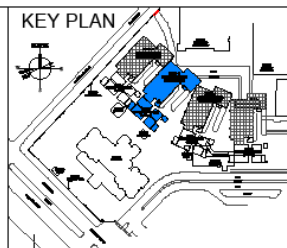
PROJ. ARCH.	SHEET No.
CHECKED	A-5.01
DRAWN BY	SCALE
JAWAID	1:100
JOB No.	DATE
	May 2020
	FILE



SECTION - S3
Scale: 1:100



SECTION - S4
Scale: 1:100



CLIENT

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

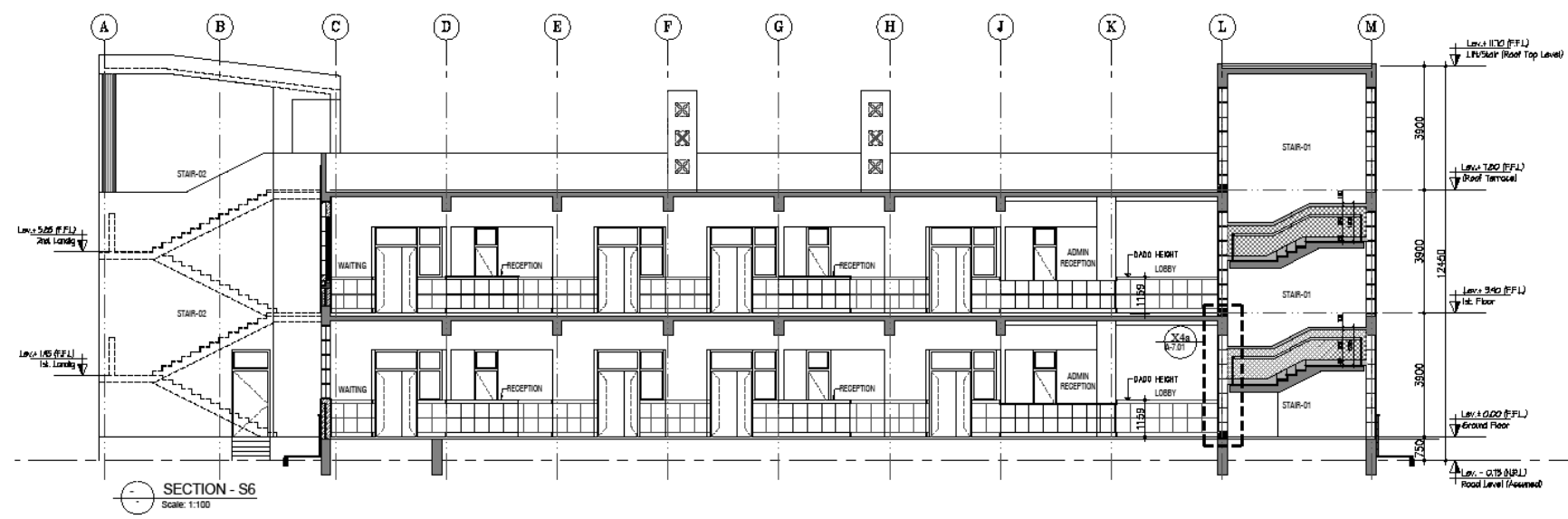
NOTE:-
 01. ALL THE SCOPING SERVICES IN THIS AREA OF PROPOSED BUILDINGS TO BE RELIANTLY WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL TEST BUILDING AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-43	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
B-42	May 2020	TENDER DRAWING ISSUED FOR STREC. WORK
B-41	May 2020	ISSUED TO TENDER
B-40	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

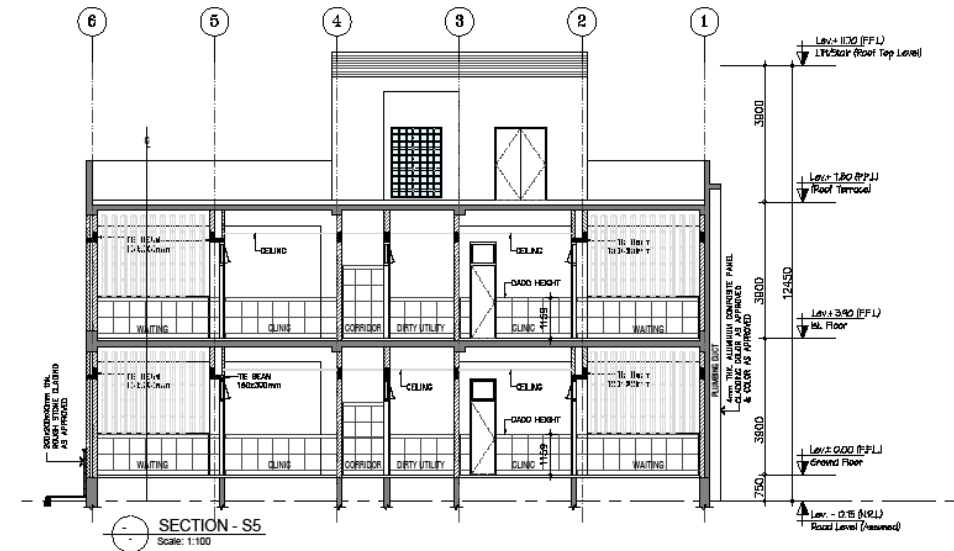
ARCHITECT
 PROJECT
 PROPOSED OPD BUILDING
 AT OJHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HURI
 KDA SCHEME - 33 KARACHI

TITLE
 TENDER DRAWING
 BLUE BUILDING
 SECTION
 'S2' AND 'S4'

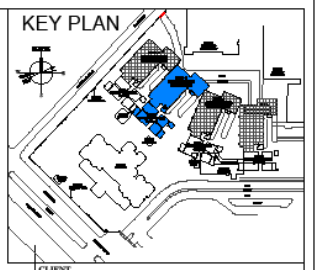
PROJECT ARCHT.	SHEET No.
CHECKED AK	A-6.01
DRAWN BY JAWAID	SCALE 1:100
JOB No.	DATE May 2020



SECTION - S6
Scale: 1:100



SECTION - S5
Scale: 1:100



CLIENT

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

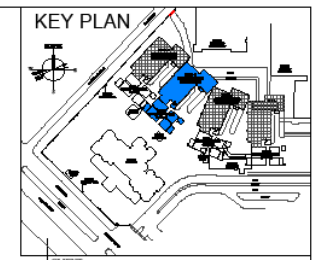
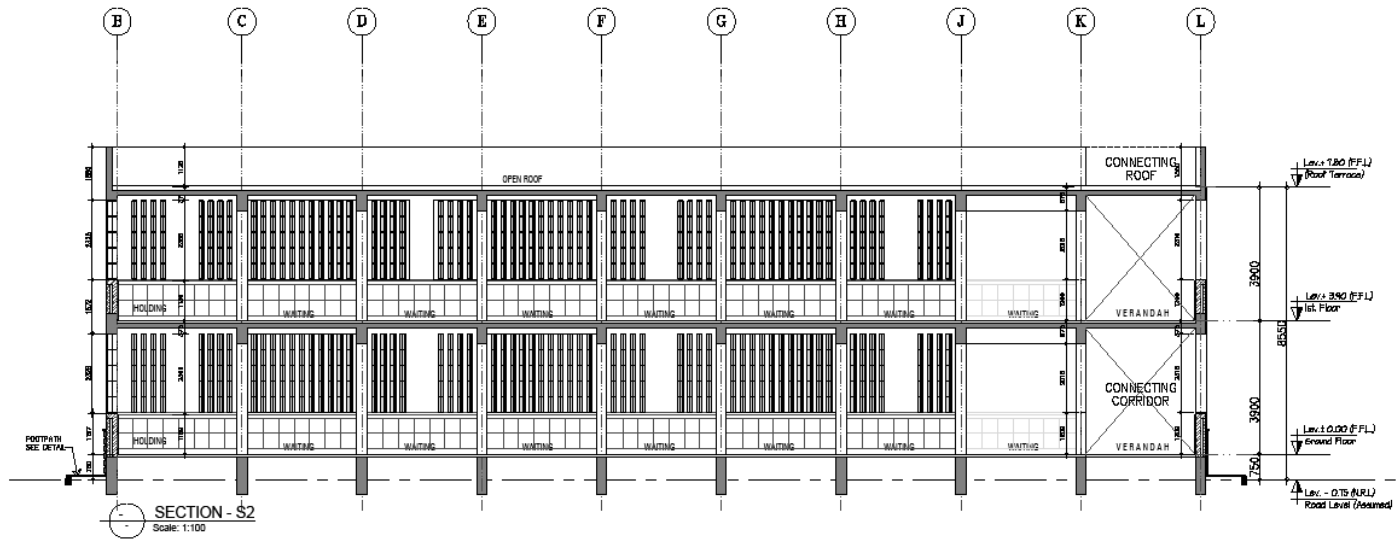
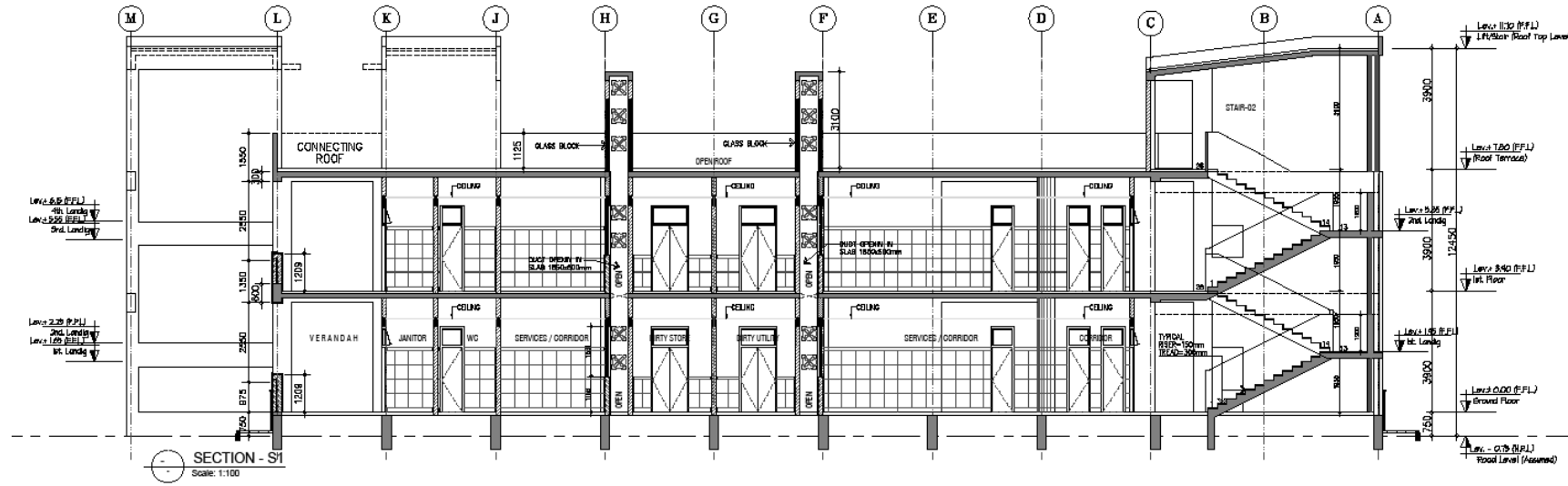
NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF QHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUND BUILDINGS AND BRINGS CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-40	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
B-42	May 2020	TENDER DRAWING ISSUED FOR STRUC. WORK
B-44	July 2019	ISSUED TO TENDER
B-46	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DRWG.

ARCHITECT
 PROJECT
 PROPOSED OPD BUILDING
 AT QHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIRI
 KDA SCHEME - 33 KARACHI

TITLE
TENDER DRAWING
BLUE BUILDING
SECTION
'S5' AND 'S6'

PROJ. ARCH.	SHEET No.
CHECKED AK	A-6.02
DRAWN BY JAWAID	
JOB No.	SCALE 1:100
DATE May 2020	FILE



CLIENT



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

NOTE:-

1. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OSHA PROJECT MANAGEMENT TEAM.
2. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-01	May 2020	REVISED TENDER DRAWING GROUND +1 FLOOR
B-02	May 2020	TENDER DRAWING ISSUED FOR STEC WORK
B-03	July 2019	ISSUED TO TENDER
B-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

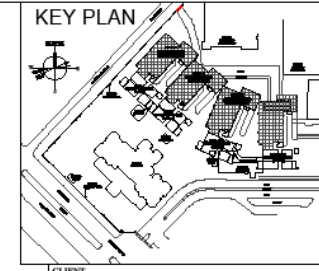
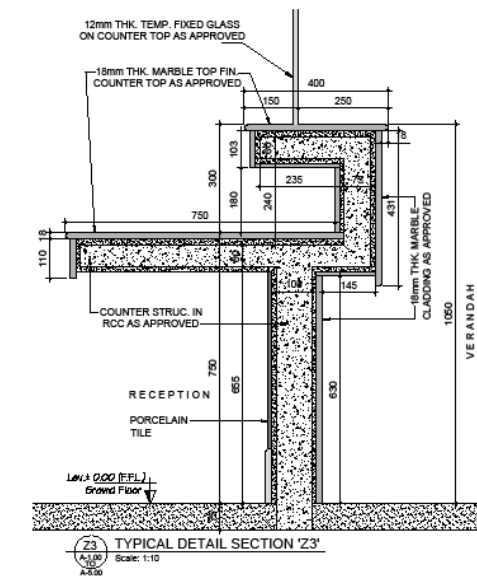
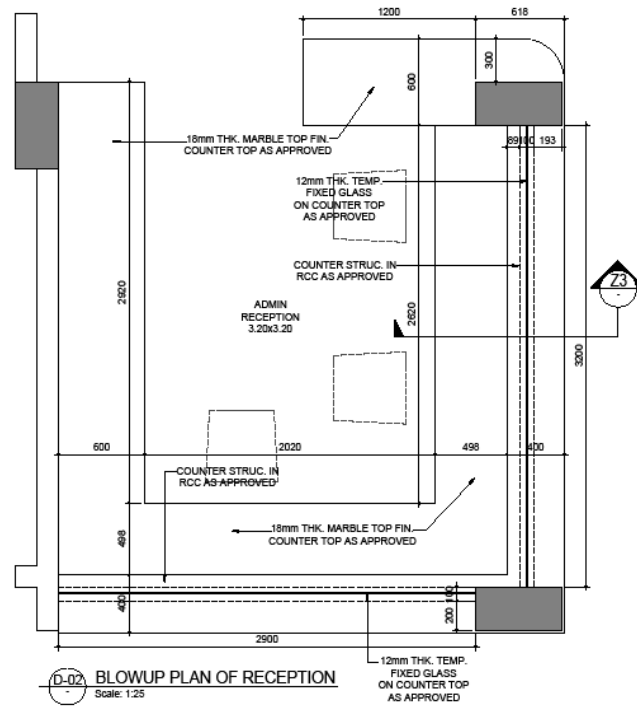
PROJECT

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

TITLE

TENDER DRAWING
BLUE BUILDING
SECTIONS
'S1' AND 'S2'

PROJ. ARCH.	SHEET No.
CHECKED AK	A-6.00
DRAWN BY JAWAID	
JOB No.	SCALE 1:100
DATE May 2020	TITLE



CLIENT

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

NOTE:
 * OPENING IN RCC SLAB, BEAM & PARAPET WALL TO BE CONSTRUCTED IN ACCORDANCE WITH THE COORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL TECH BUILDING AND RESERVE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

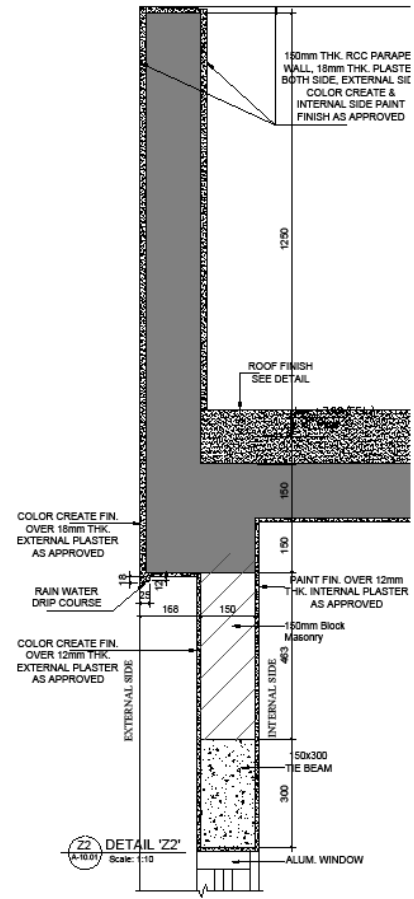
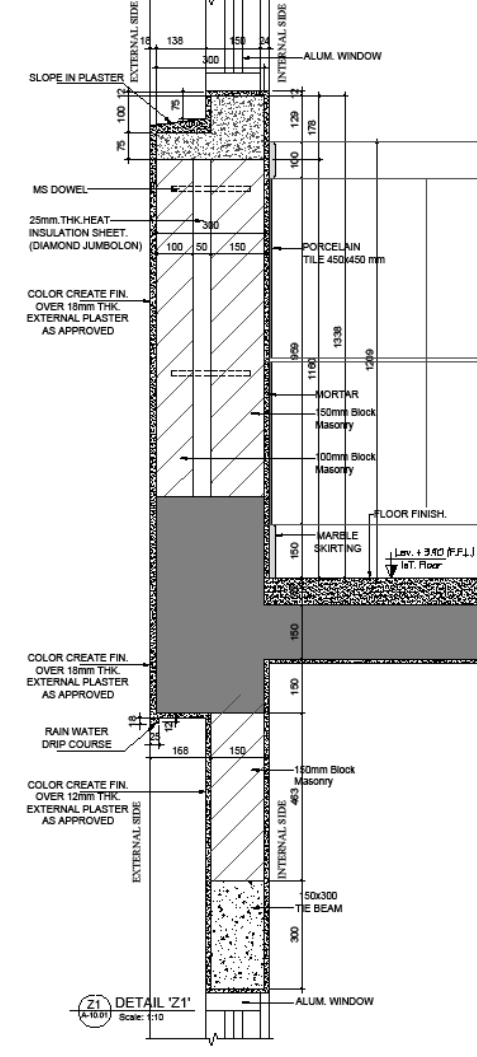
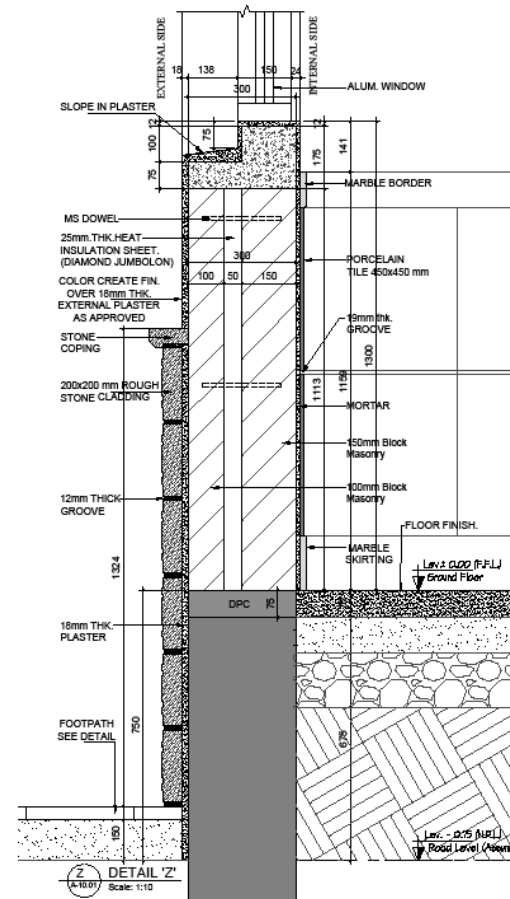
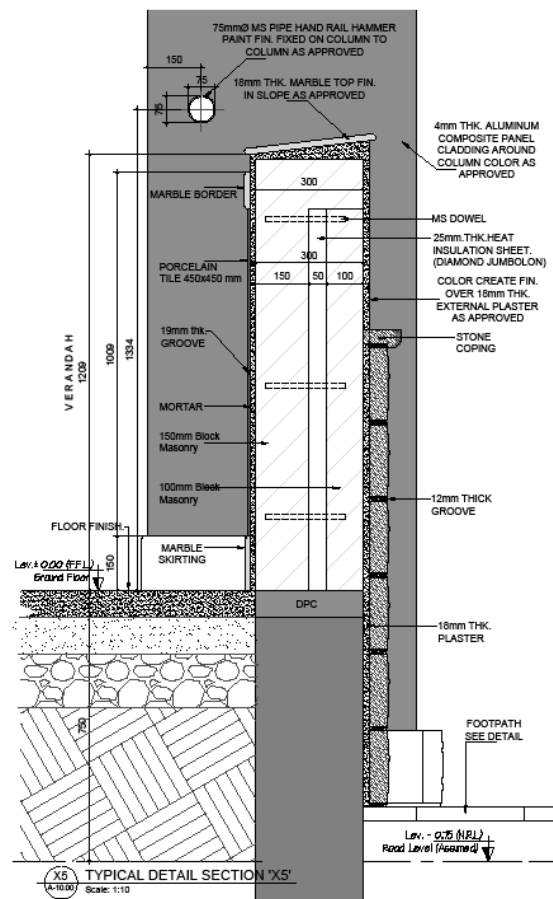
REV.	DATE	DESCRIPTION
S-00	Mar 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
S-01	Mar 2019	TENDER DRAWING ISSUED FOR SPEC. WORK
S-02	Apr 2019	ISSUED TO TENDER
S-03	12-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

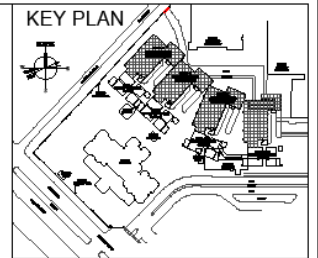
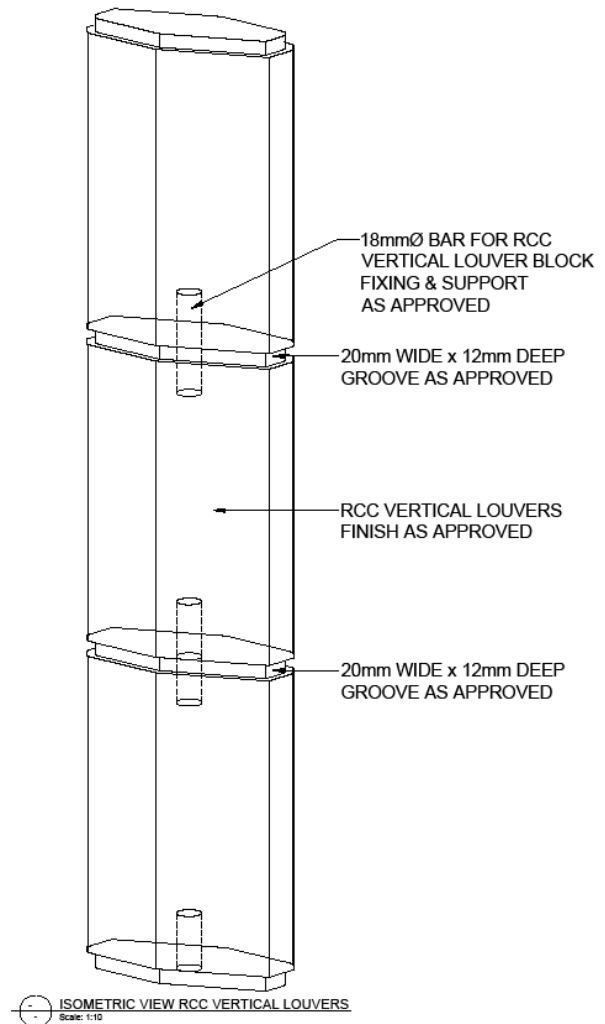
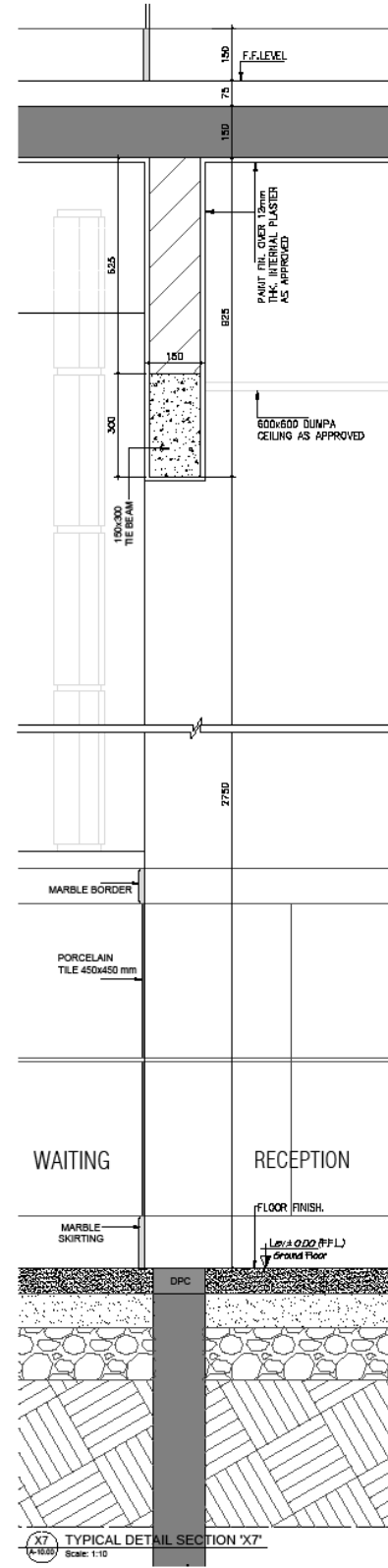
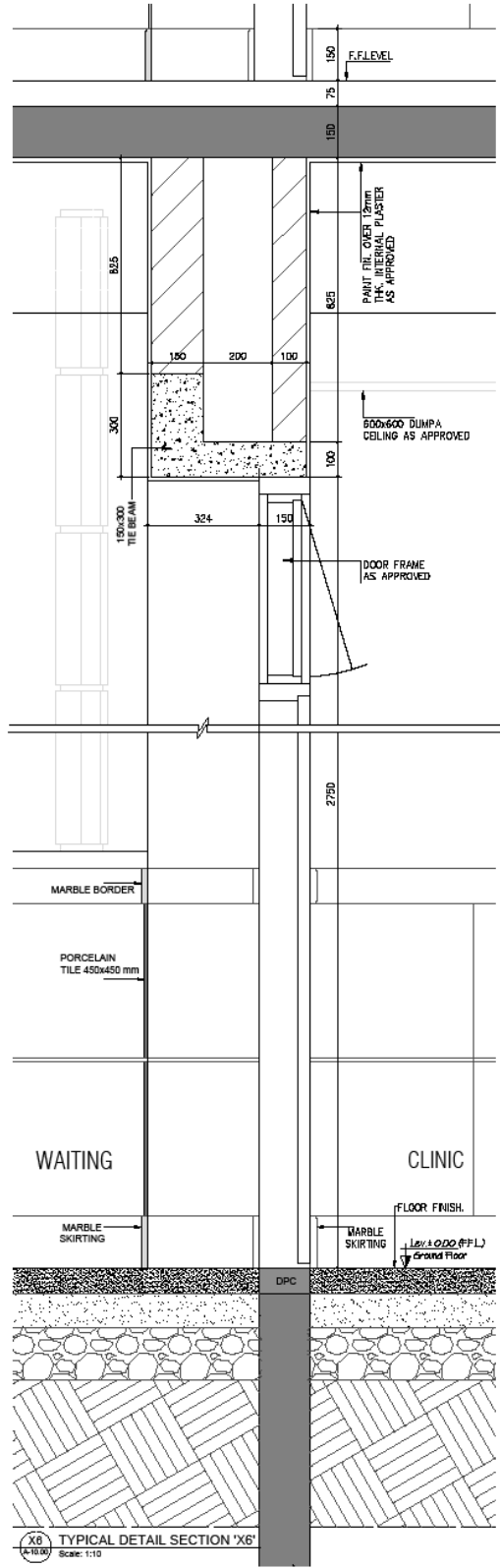
* OPENING IN RCC SLAB, BEAM & PARAPET WALL FOR 'MEP' TO BE COORDINATED CONTRACTOR & PROJECT MANAGEMENT AS ON SITE

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

TITLE
TENDER DRAWING
WALL SECTIONS & DETAIL

PROJ. ARCH.	DATE	SCALE	AS SHOWN
CHECKED	AE	A-07.02	
DRAWN BY	JAWAD	DATE	July 2019
JOB No.		FILE	





CLIENT

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

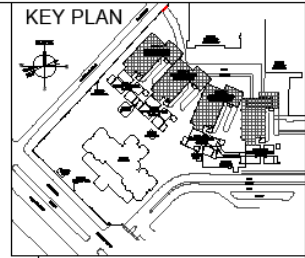
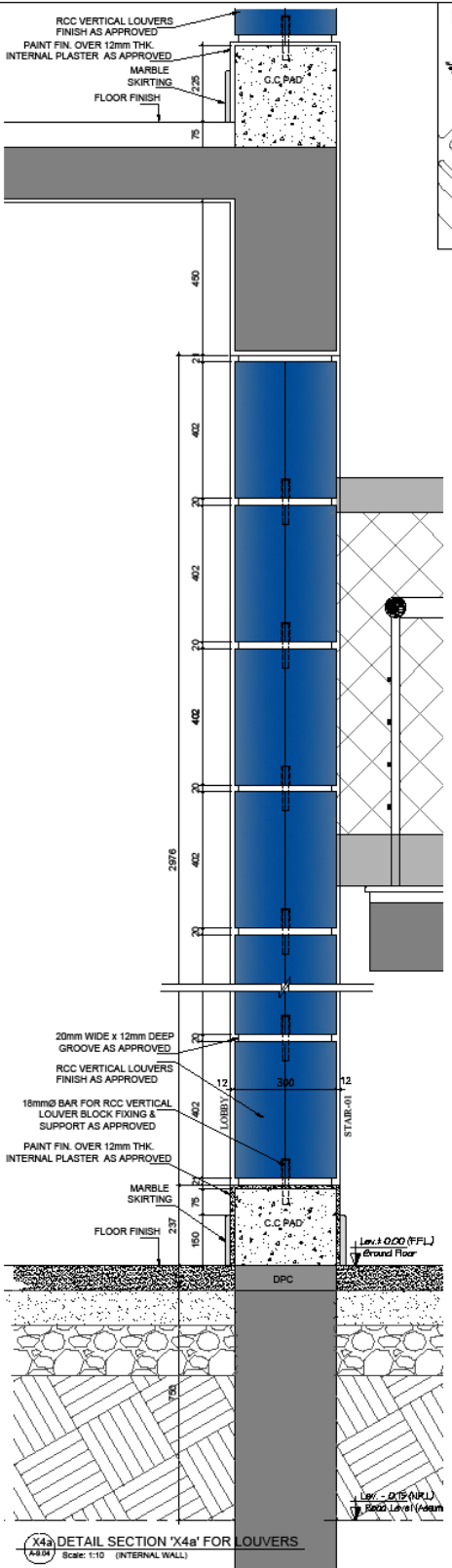
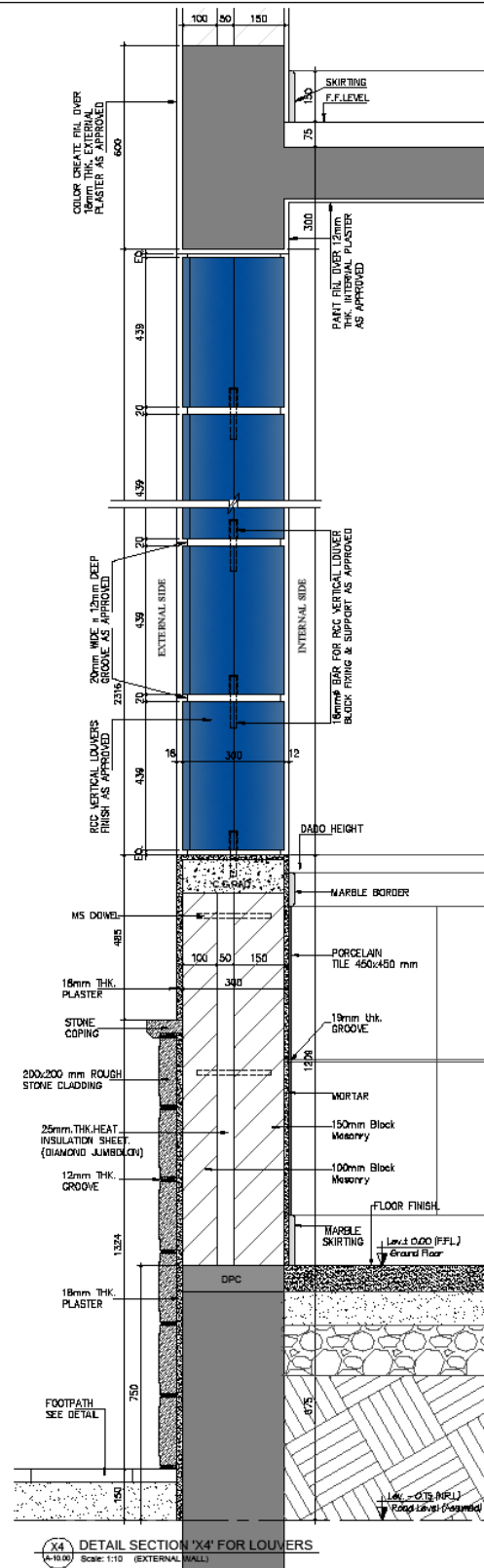
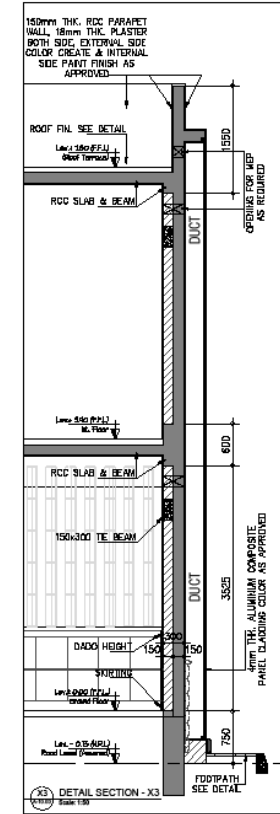
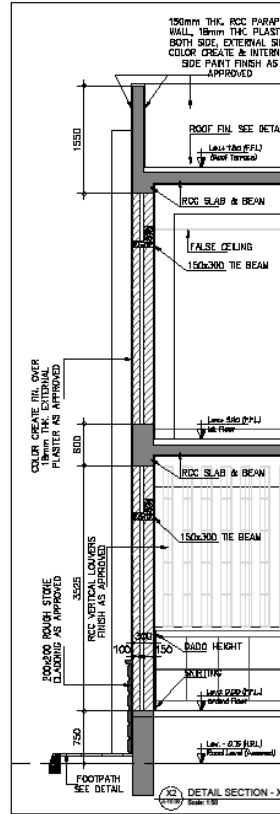
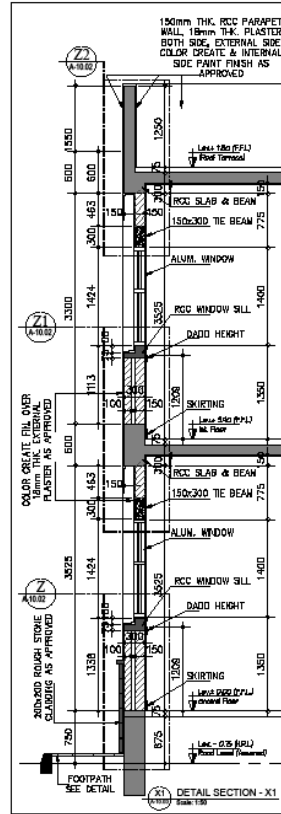
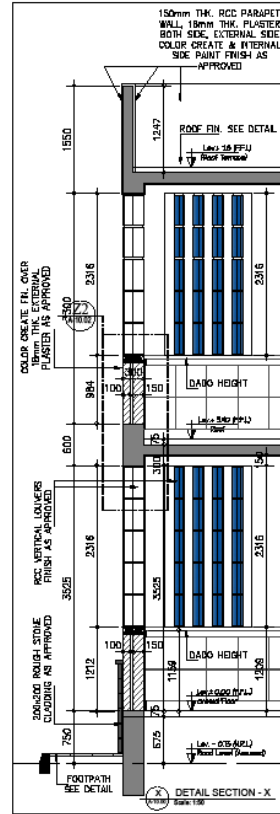
NOTE:
 * OPENING IN RCC SLAB, BEAM & PARAPET WALL AND WINDOW OPENING TO BE APPROVED BY ARCHITECT & STRUCTURAL ENGINEER AS PERMANENT WITH THE CO-ORDINATION OF KDA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND REPORT CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-01	May 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
B-02	May 2019	TENDER DRAWING ISSUED FOR TEND. WORK
B-03	July 2019	ISSUED TO TENDER
B-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

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

TITLE
TENDER DRAWING
WALL SECTIONS & DETAIL

PRICE ARCHT	SHEET No.
CHECKED AK	A-07.03
DRAWN BY JAWAID	SCALE AS SHOWN
JOB No.	DATE July 2019
	FILE:



CLIENT



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

NOTE:
 01. OPENING IN RCC SLAB, BEAM & PARAPET SHALL BE MADE IN ACCORDANCE TO THE APPROVED DRAWING OF STRUCTURAL ENGINEER TO BE PROVIDED WITH THE COORDINATION OF THIS PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FLOOR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

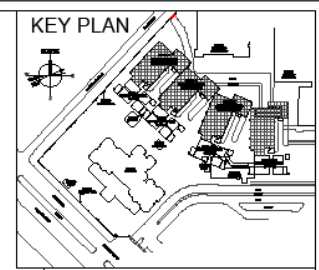
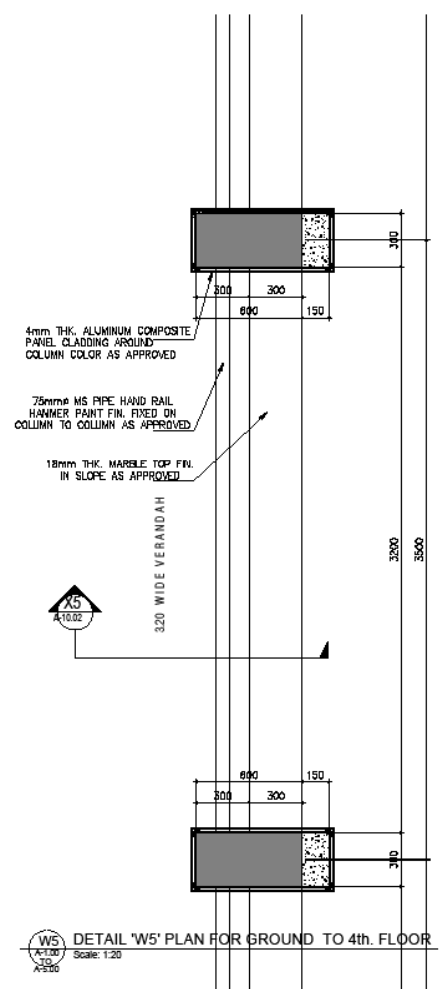
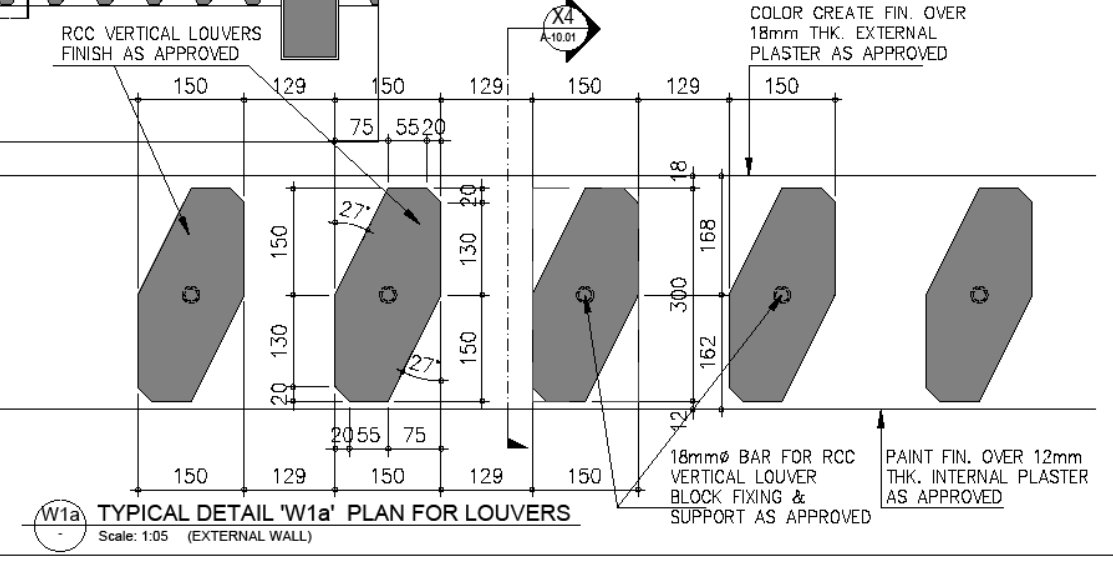
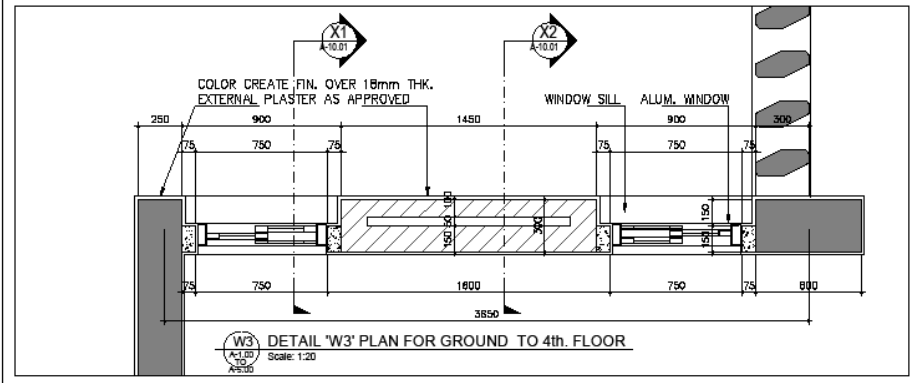
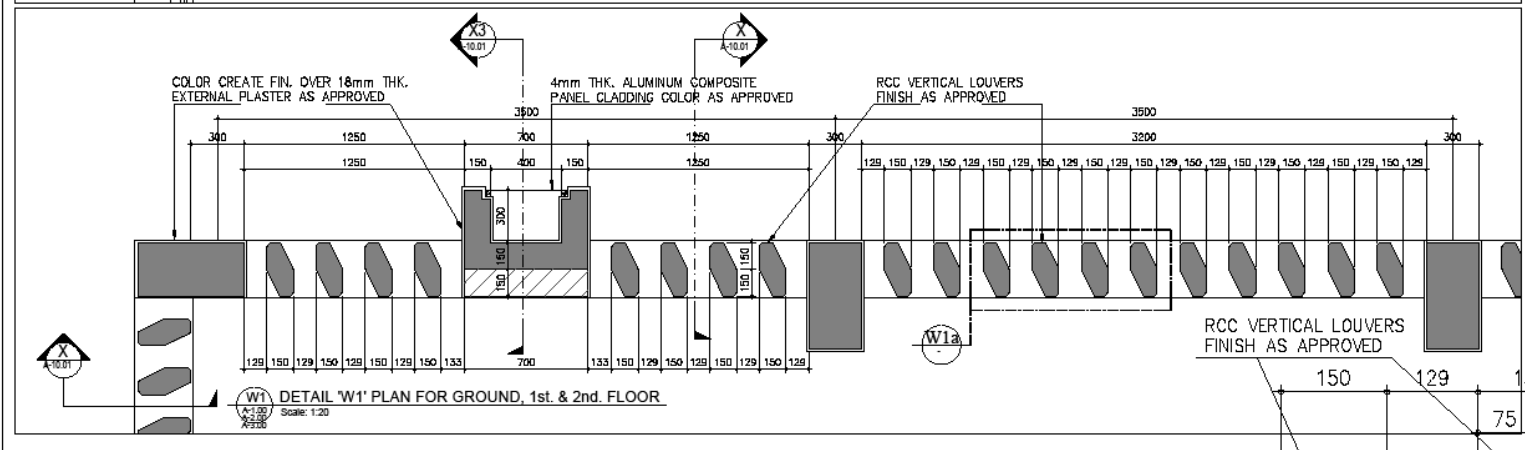
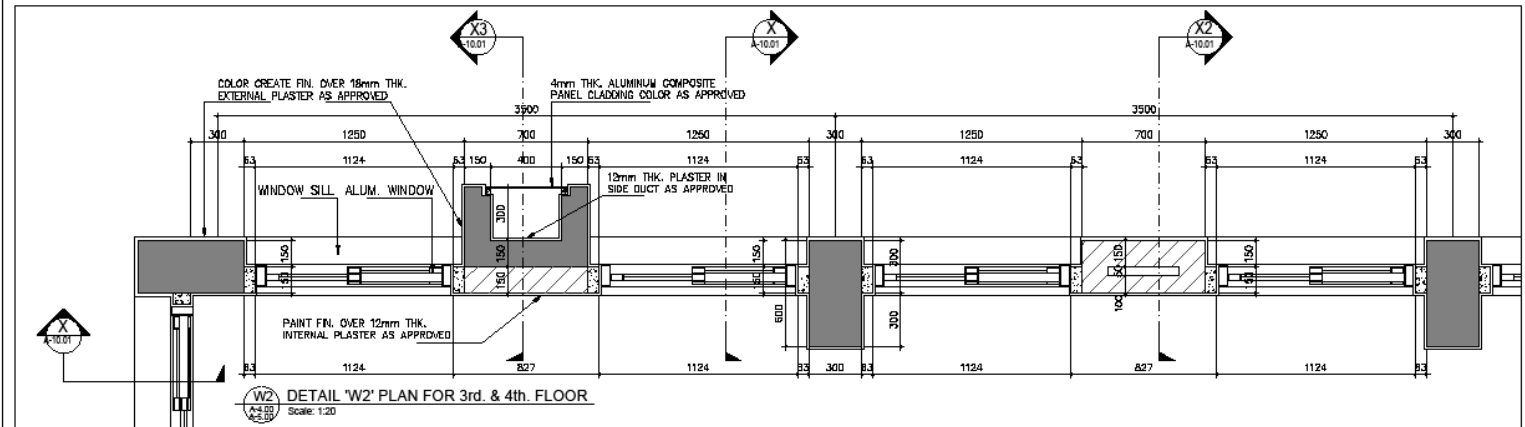
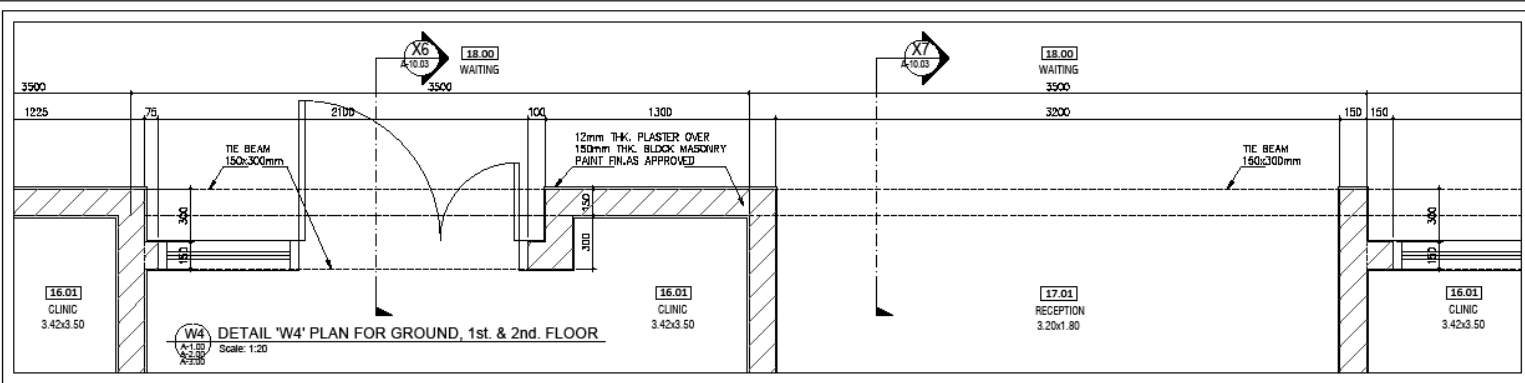
MARK	DATE	DESCRIPTION
B-01	May-2019	REVISED TENDER DRAWING GROUND +1 FLOOR
B-02	May-2019	TENDER DRAWING ISSUED FOR STREC. WORK
B-03	July-2019	ISSUED TO TENDER
B-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

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

TITLE
TENDER DRAWING
WALL SECTIONS & DETAIL

PROJ ARCH	SHEET No.
CHECKED AE	A-07.01
DRAWN BY SAWAID	SCALE AS SHOWN
JOB No.	DATE July 2019
	FILE



CLIENT

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

NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

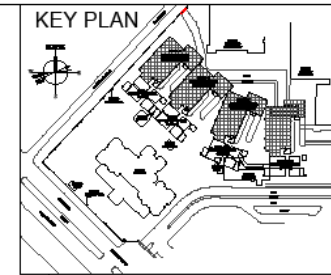
MARK	DATE	DESCRIPTION
B-03	May 2020	REVISED TENDER DRAWING GROUND +1 FLOOR
B-02	May 2020	TENDER DRAWING ISSUED FOR STREIC. WORK
B-01	July 2019	ISSUED TO TENDER
B-00	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

* OPENING IN RCC SLAB, BEAM & PARAPET WALL FOR 'MEP' TO BE COORDINATED CONTRACTOR & PROJECT MANAGEMENT AS ON SITE

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

TITLE
TENDER DRAWING
WALL SECTIONS & DETAIL

PROJ. ARCH.	SHEET No.
CHECKED AK	A-07.00
DRAWN BY JAWAID	SCALE AS SHOWN
JOB No.	DATE July 2019
	FILE

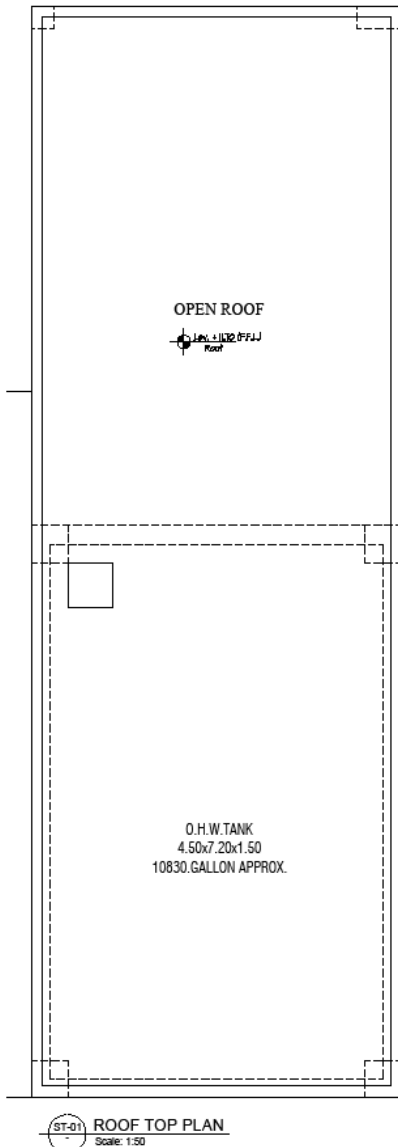
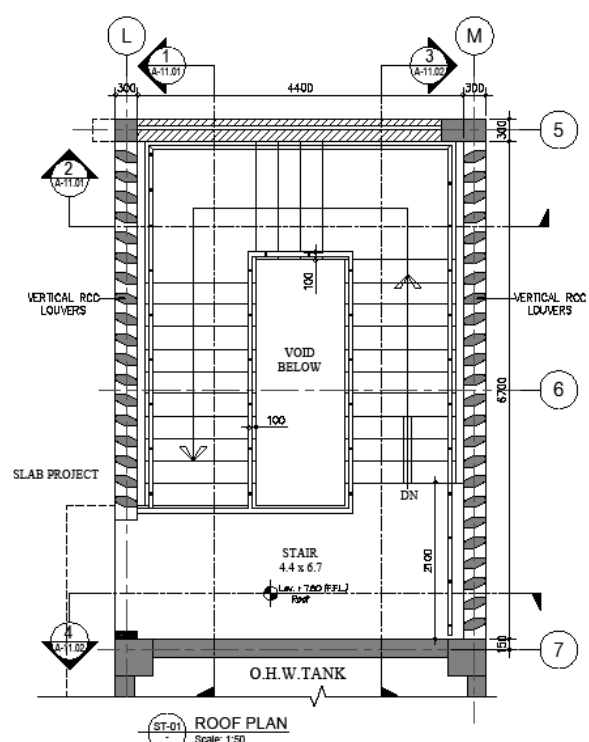
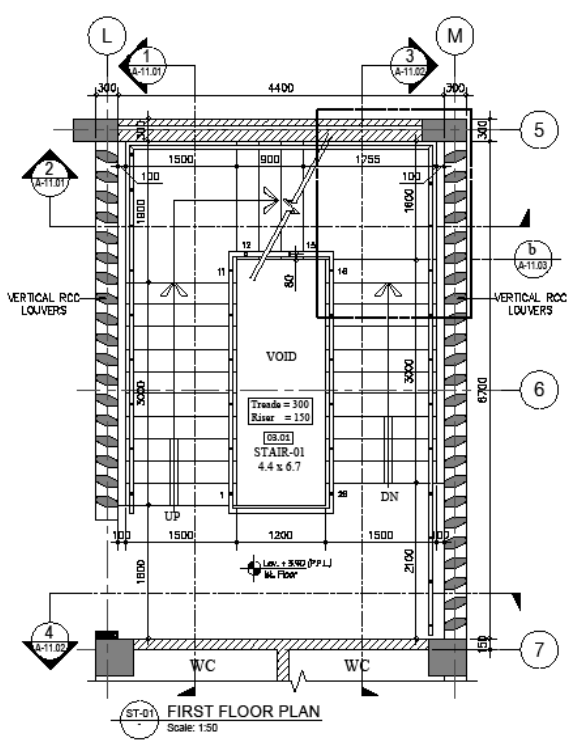
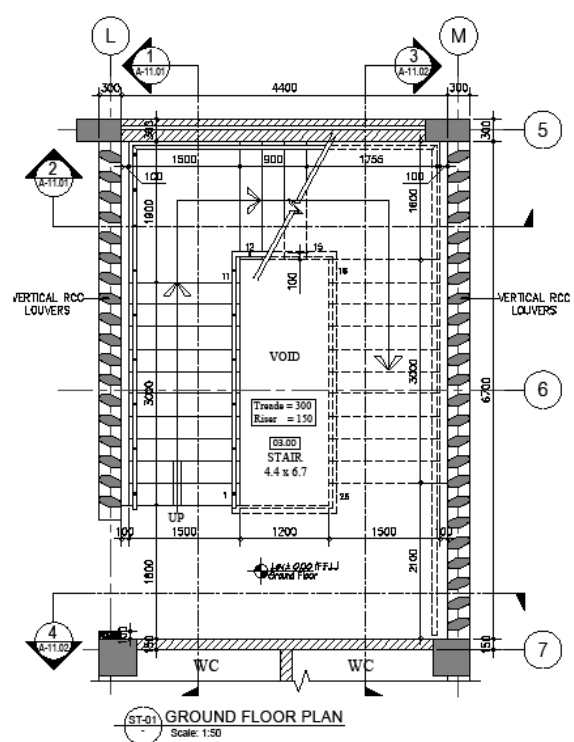


CLIENT

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

NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND REPORT CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-01	May 2020	REVISED TENDER DRAWING GROUND +1 FLOOR
B-02	May 2020	TENDER DRAWING ISSUED FOR STRUC. WORK
B-03	July 2019	ISSUED TO TENDER
B-00	13-06-2019	ISSUED TO CLIENT BASIC WORKING DWG.

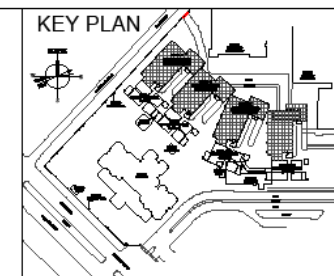


ARCHITECT

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

TITLE
TENDER DRAWING
STAIR PLANS (ST-01)

PROJ. ARCHT.	SHEET No.
CHECKED AK	A-08.00
DRAWN BY Wasim Akbar	SCALE 1:50
JOB No.	DATE July 2019
	FILE



CLIENT

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

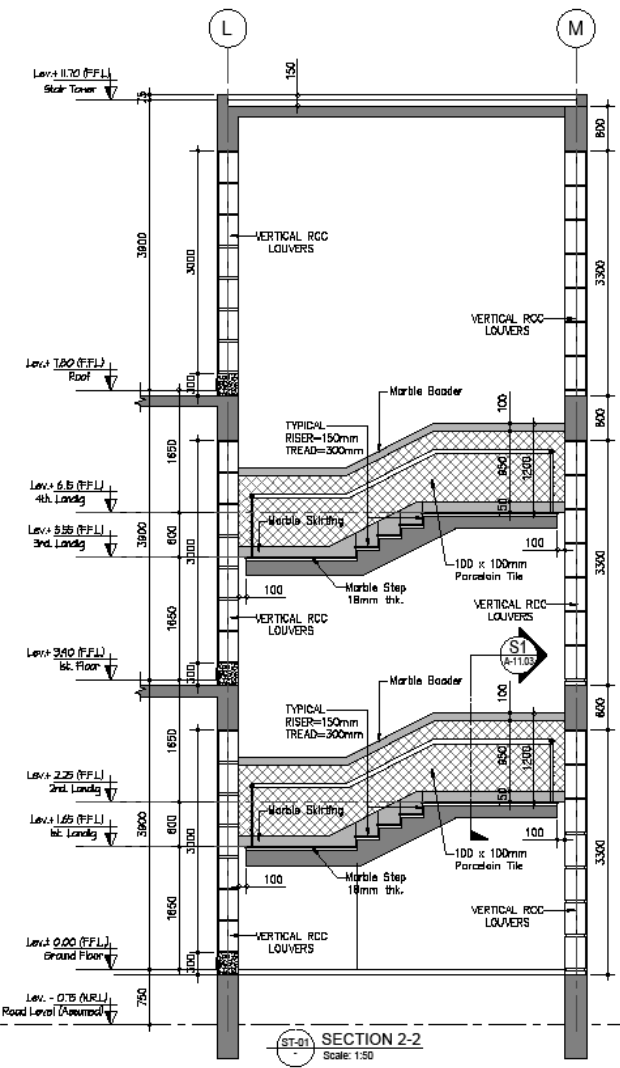
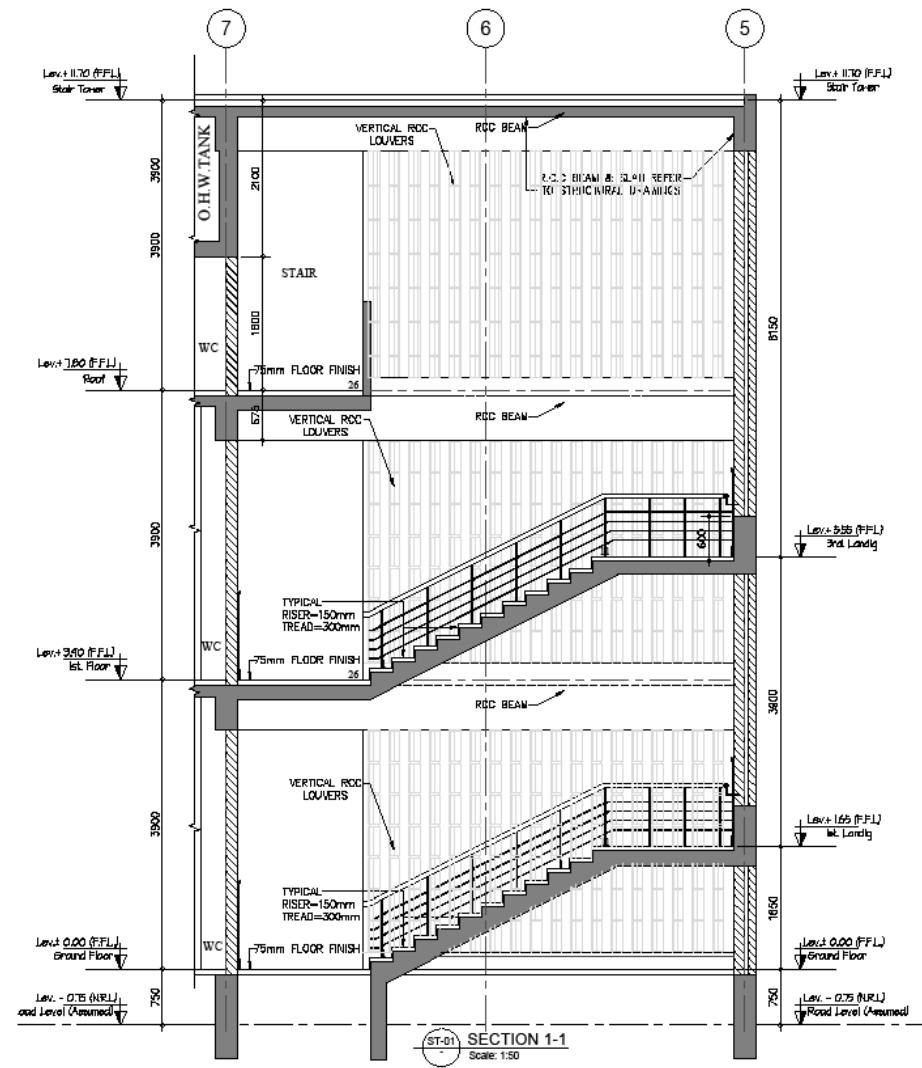
NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

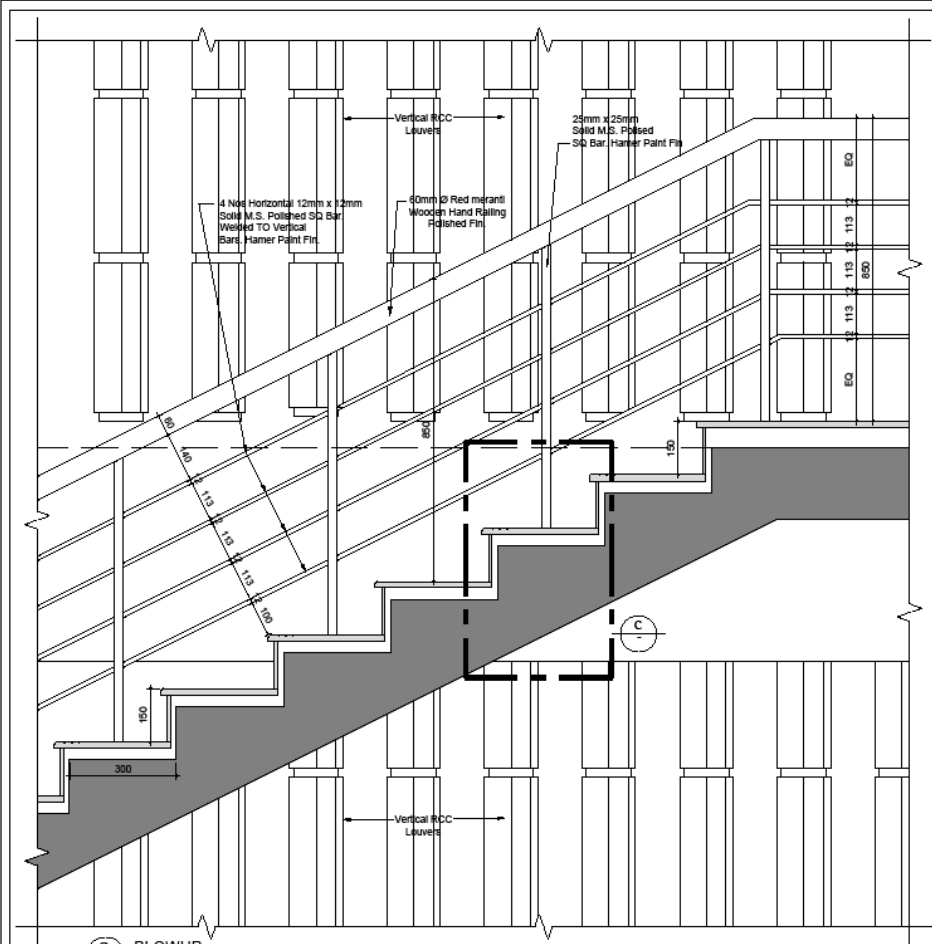
MARK	DATE	DESCRIPTION
R-40	May 2019	REVISED TENDER DRAWING GROUND +1 FLOOR
R-42	May 2019	TENDER DRAWING ISSUED FOR STRUC. WORK
R-43	July-2019	ISSUED TO TENDER
R-46	12-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

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

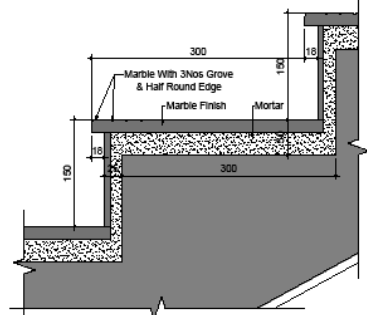
TITLE
TENDER DRAWING
STAIR SECTION 1-1 & 2-2
 (ST-01)

PROJ. ARCH.	SHEET No.
CHECKED AK	A-08.01
DRAWN BY Wasim Akram	SCALE 1=40
JOB No.	DATE July 2019
	FILE

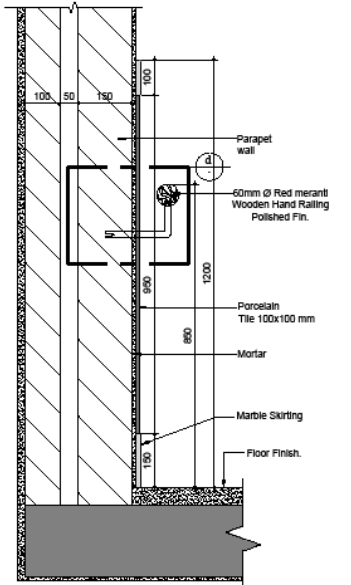




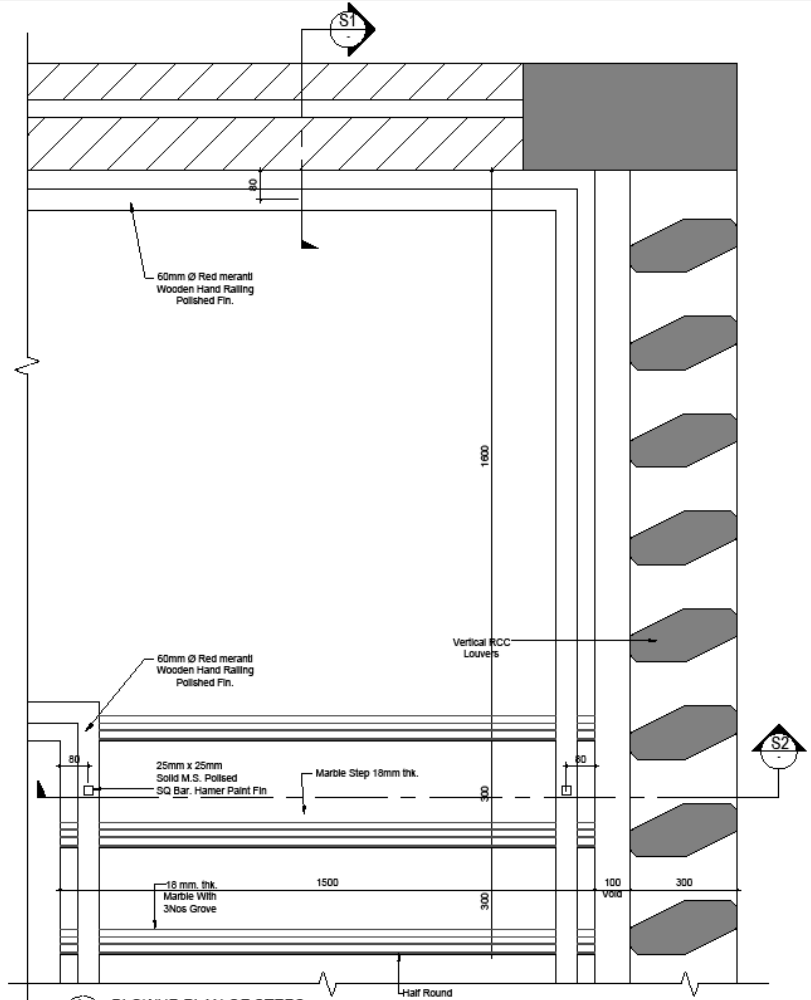
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Scale: 1:10



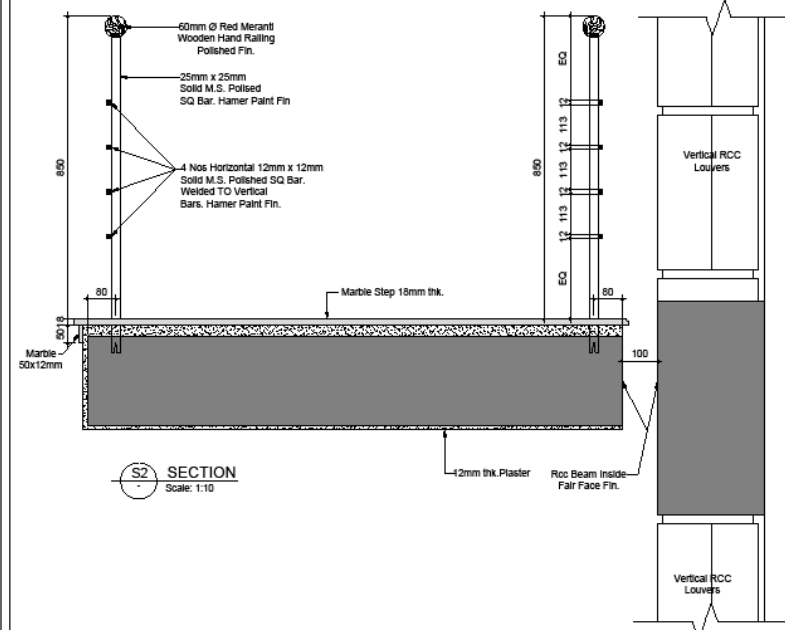
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Scale: 1:2



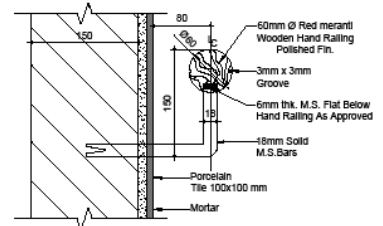
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Scale: 1:10



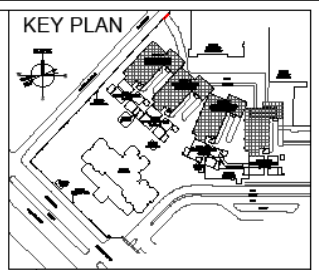
d BLOWUP PLAN OF STEPS
Scale: 1:10



S2 SECTION
Scale: 1:10



d BLOWUP
Scale: 1:5



CLIENT

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

NOTE:
01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL UTIL BUILDINGS AND SERVICES CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
0-01	May 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
0-02	May 2019	TENDER DRAWING ISSUED FOR STREC. WORK
0-03	July 2019	ISSUED TO TENDER
0-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

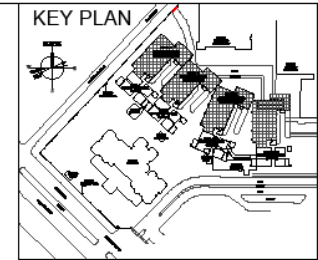
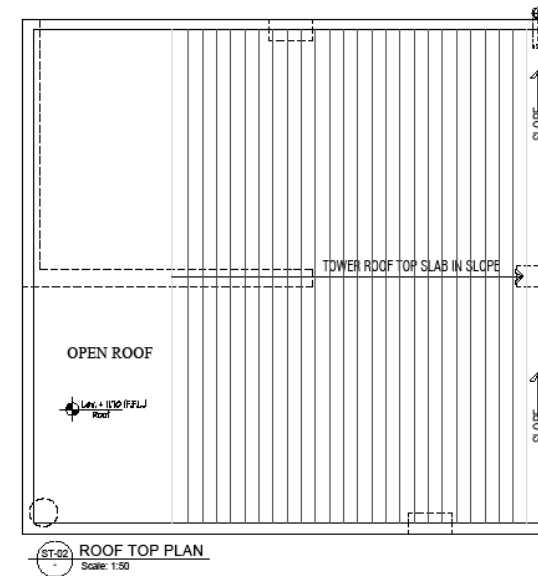
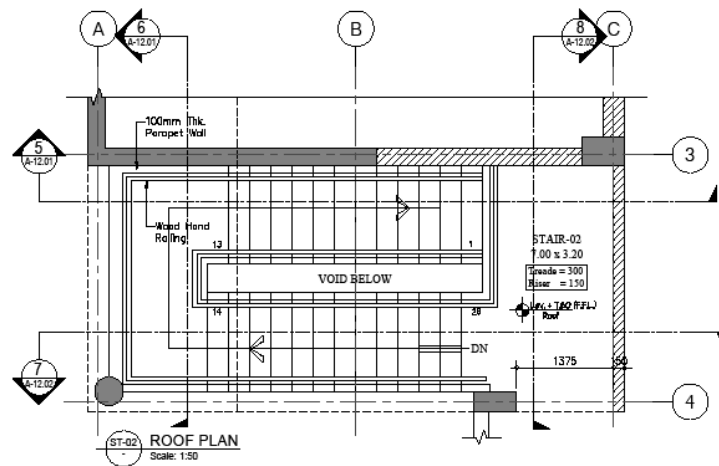
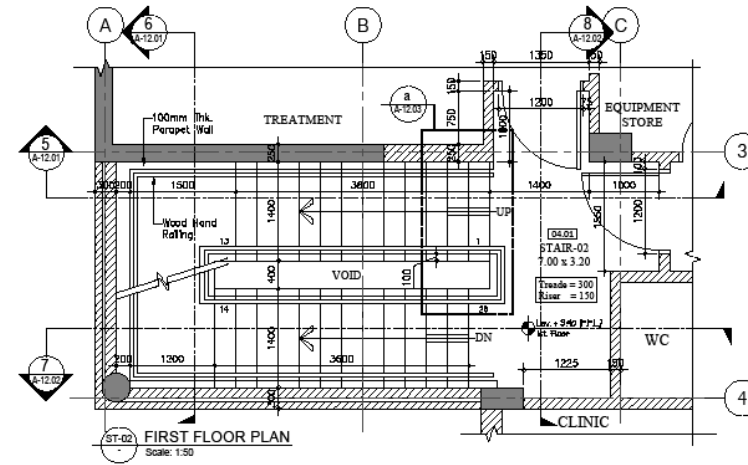
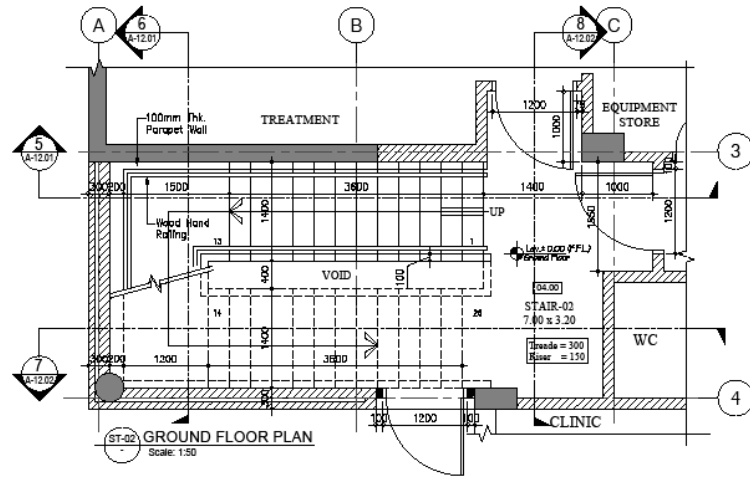
PROJECT
PROPOSED OPD BUILDING
AT OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HIJRI
KDA SCHEME - 33 KARACHI

TITLE
TENDER DRAWING

STAIR (ST-01)
DETAILS

PROJ. ARCH.	DESIGNER	CHECKED	SCALE	DATE	FILE
-	-	AK	AS SHOWN	July 2019	-

BRIFT No.
A-08.03



CLIENT

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

NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OSHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND RESPON CONSTRUCTION TO BE CHECKED BY ARCHITECT.

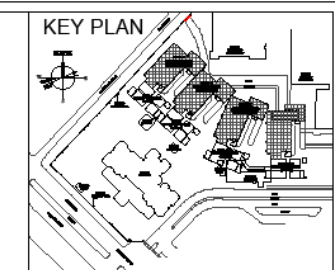
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R-01	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2020	TENDER DRAWING ISSUED FOR STREUC. WORK
R-03	July 2019	ISSUED TO TENDER
R-04	12.06.2019	ISSUED TO CLIENT, BASIC WORKING DWG.


ARCHITECT

PROJECT
 PROPOSED OPD BUILDING
 AT OSHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIRI
 KDA SCHEME - 33 KARACHI

TITLE
 TENDER DRAWING
 STAIR PLANS (ST-02)

PROJ. ARCH.	SHEET No.
CHECKED BY AK	A-09.00
DRAWN BY Wasim Akram	SCALE 1:50
JOB No.	DATE July 2019
	FILE



CLIENT

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

NOTE:
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND REPORTS CONSTRUCTION TO BE CHECKED BY ARCHITECT.

R-01	May 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2019	TENDER DRAWING ISSUED FOR STREC. WORK
R-03	July 2019	ISSUED TO TENDER
R-04	12-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

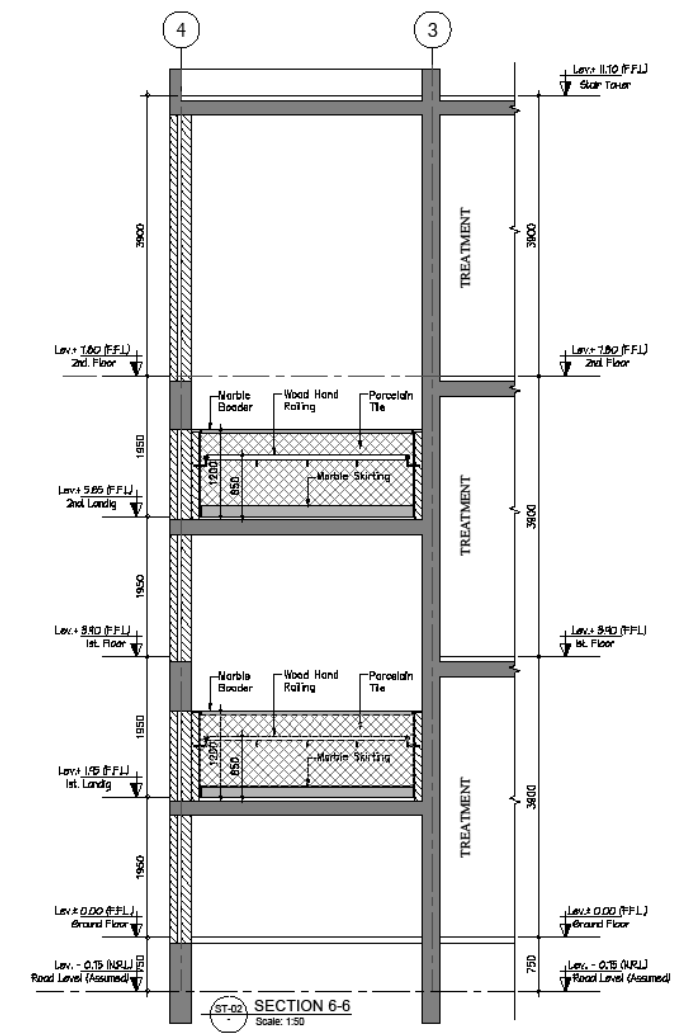
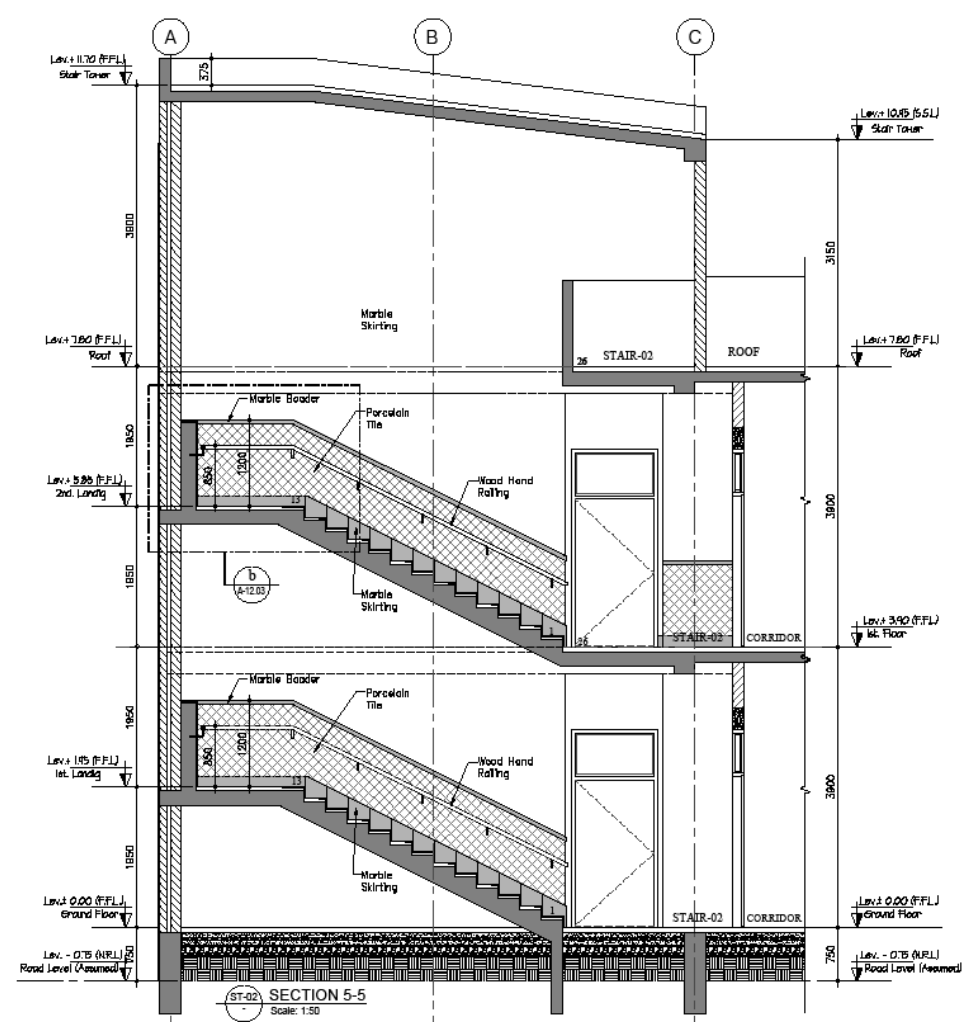
MARK DATE DESCRIPTION

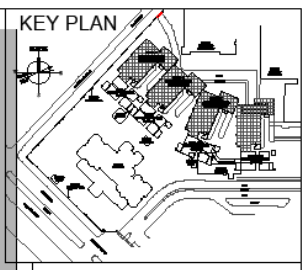
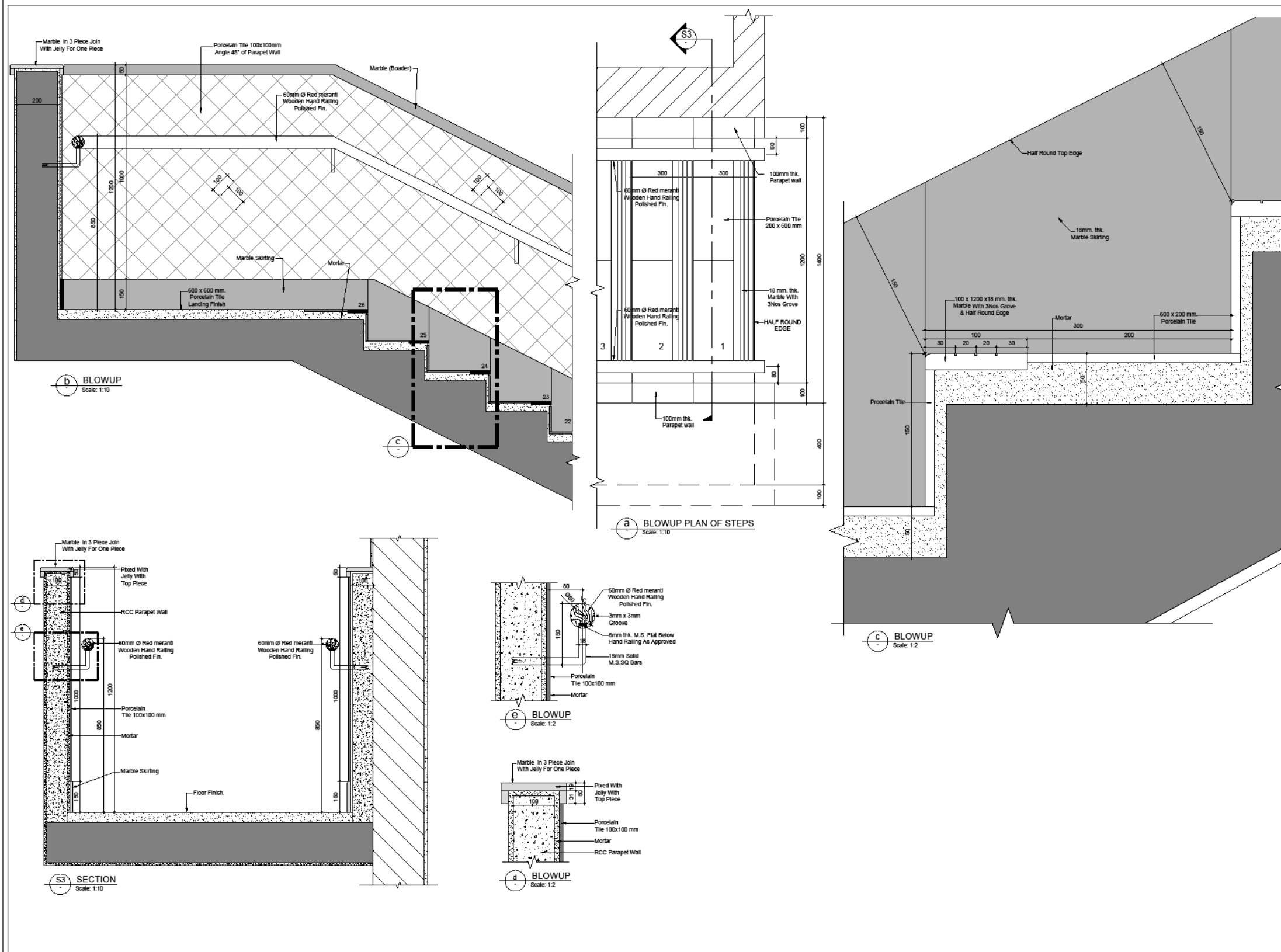
ARCHITECT

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

TITLE
TENDER DRAWING
 STAIR SECTION 5-5 & 6-6
 (ST-02)

PROJ. ARCH.	SHEET No.
CHECKED AK	A-09.01
DRAWN BY Wasim Akbar	SCALE 1:50
JOB No.	DATE July 2019





CLIENT



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

NOTE:-

01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FEED BUILDINGS AND SERVICES CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-01	May 2019	REVISED TENDER DRAWING GROUND +1 FLOOR
B-02	May 2019	TENDER DRAWING ISSUED FOR STREC. WORK
B-03	July 2019	ISSUED TO TENDER
B-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

PROJECT

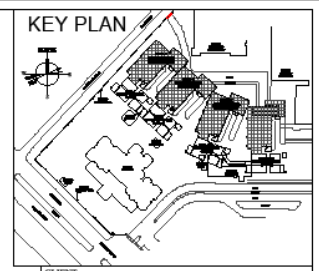
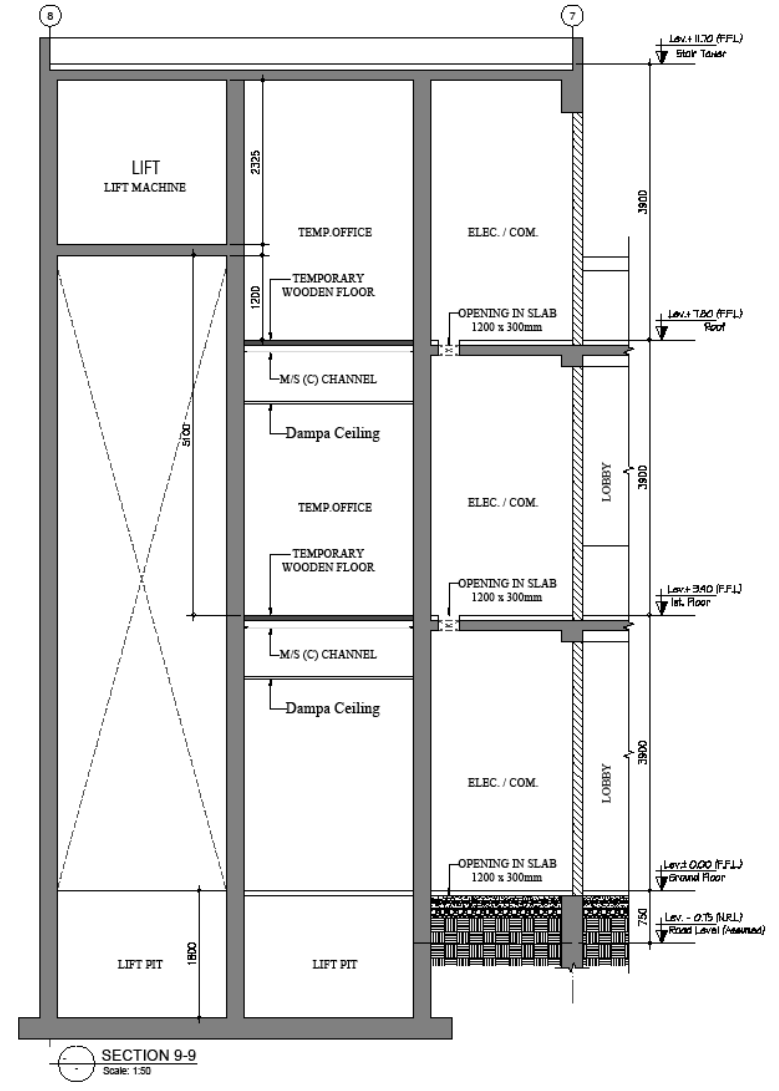
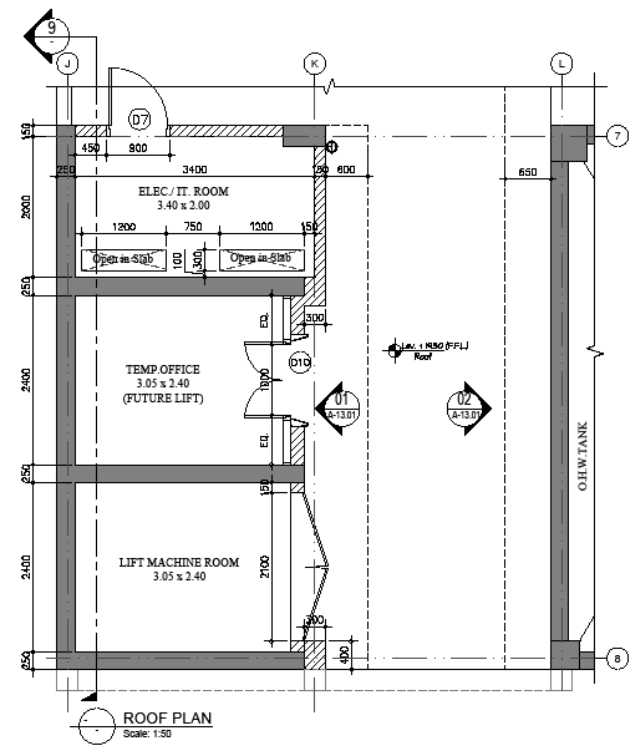
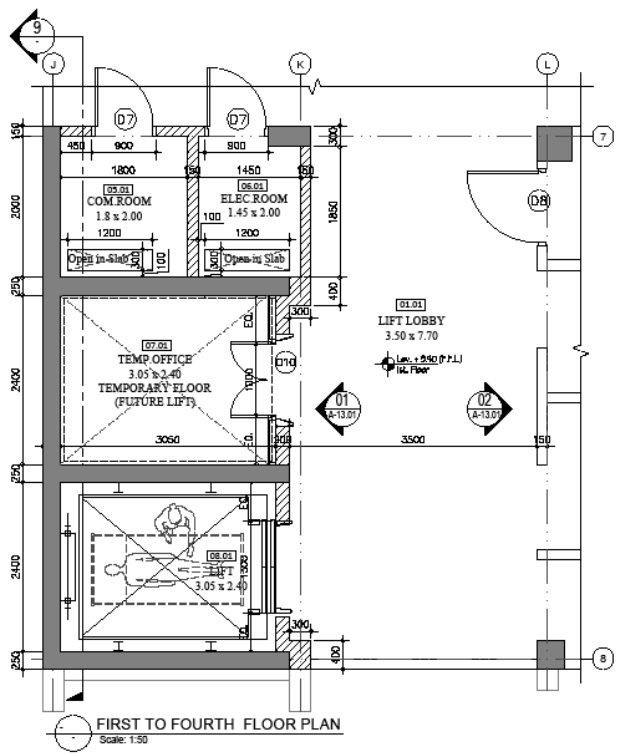
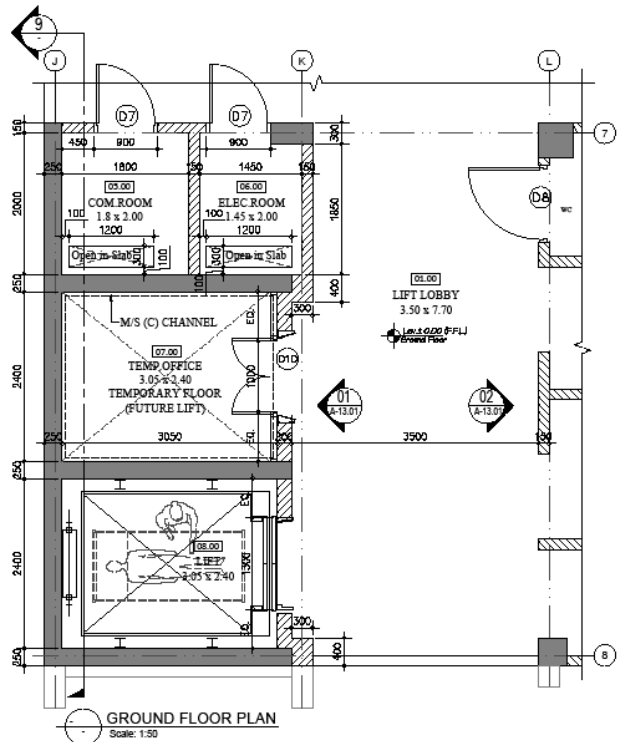
PROPOSED OPD BUILDING
AT OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HJRI
KDA SCHEME - 33 KARACHI

TITLE

TENDER DRAWING

STAIR (ST-02)
DETAILS

PROJ ARCH.	SHEET NO.
CHECKED AK	A-09.03
DRAWN BY Waseem Akram	SCALE AS SHOWN
JOB No.	DATE July 2019
	FILE



CLIENT

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

NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

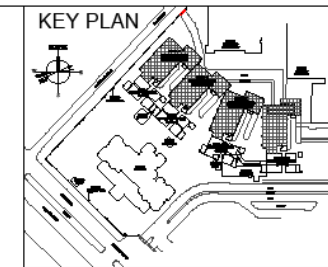
MARK	DATE	DESCRIPTION
R-01	May-2010	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May-2010	TENDER DRAWING ISSUED FOR STREC. WORK
R-03	July-2010	ISSUED TO TENDER
R-04	12-06-2010	ISSUED TO CLIENT. BASIC WORKING DWG.

ARCHITECT

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

TITLE
TENDER DRAWING
 TYPICAL PLANS:
 LIFT LOBBY & SECTION

PROJ. ARCH.	AK	BRIEF No.	A-10.00
CHECKED	AK	SCALE	
DRAWN BY	JAWAID	SCALE	
JOB No.	DATE	FILE	



CLIENT

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

NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

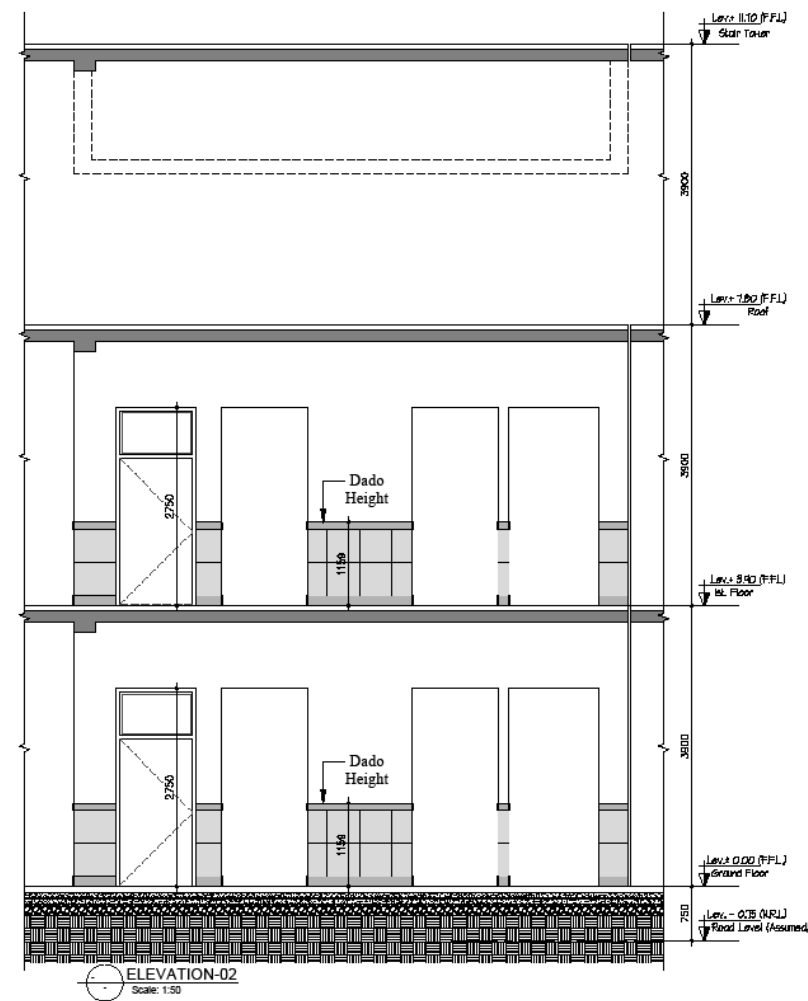
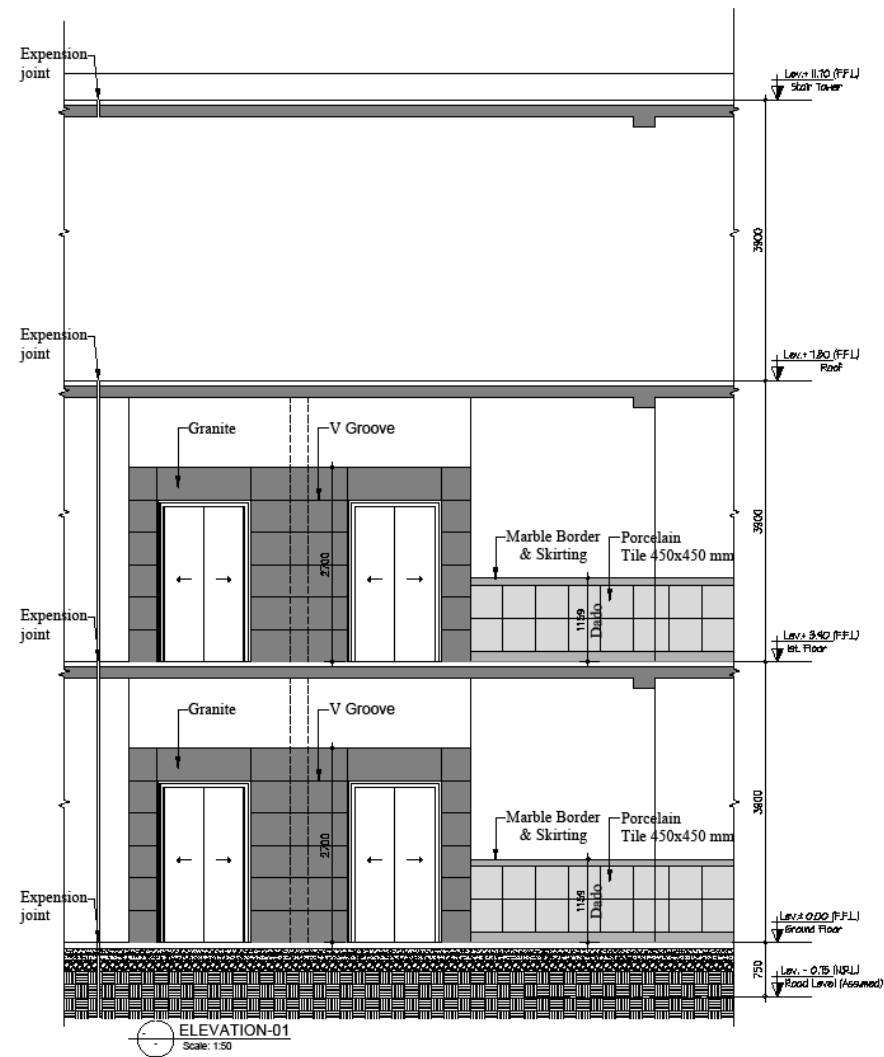
MARK	DATE	DESCRIPTION
R-01	May 2018	REVISED TENDER DRAWING GROUND +1 FLOOR
R-02	May 2018	TENDER DRAWING ISSUED FOR STREC. WORK
R-03	July 2019	ISSUED TO TENDER
R-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

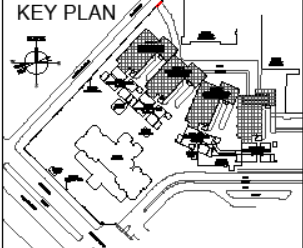
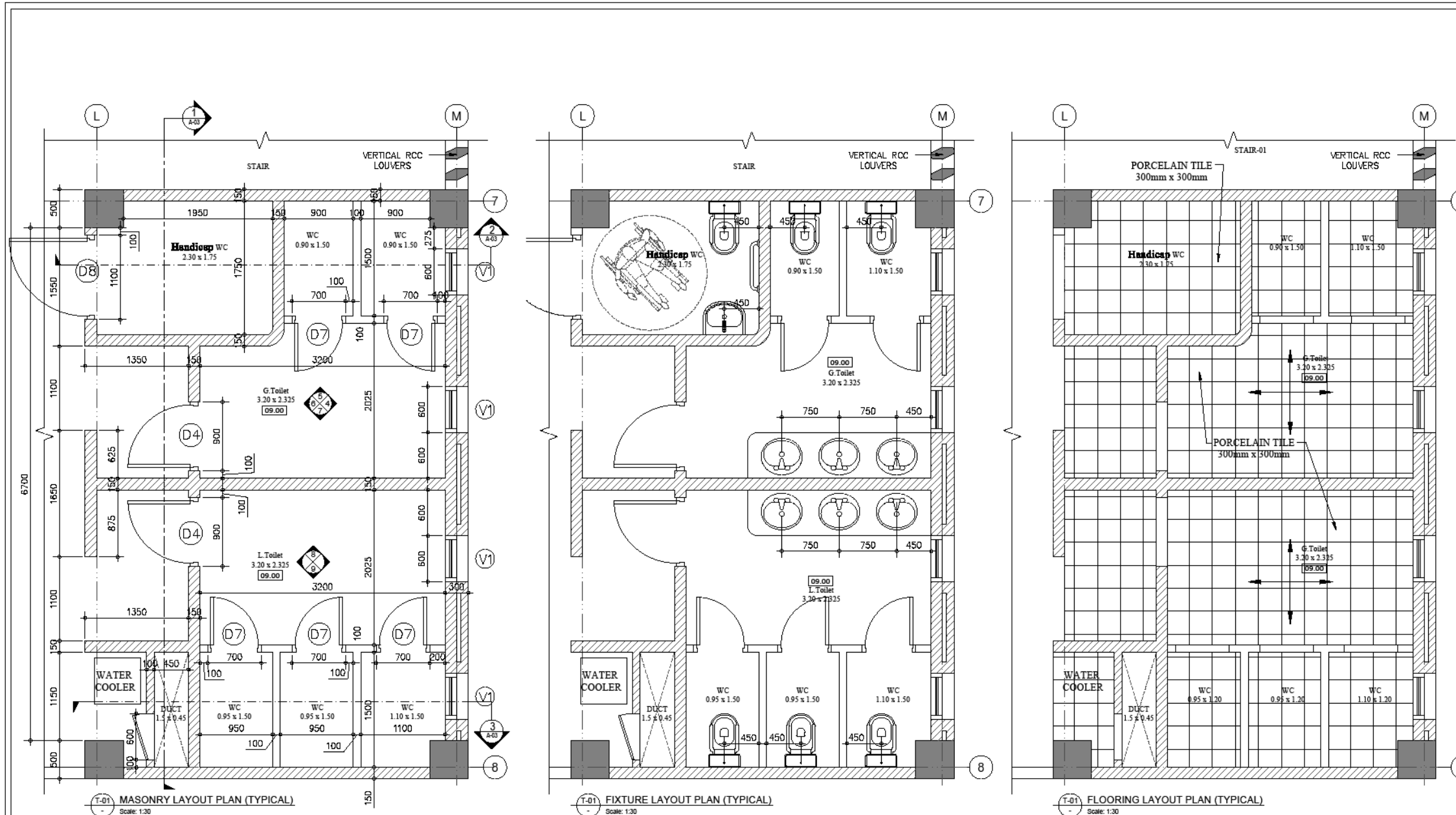
ARCHITECT

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

TITLE
 TENDER DRAWING
 ELEVATION 01 & 02

PROJ. ARCH.	SHEET No.
CHECKED AK	A-10.01
DRAWN BY JAWAID	
JOB No.	DATE July 2019
SCALE 1:100	FILE





CLIENT



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

NOTE:-

01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-OPERATION OF OHA PROJECT MANAGEMENT TEAM.
02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FEED BUILDINGS AND SERVICES CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
R-03	May 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2019	TENDER DRAWING ISSUED FOR BIDDING WORK
R-01	14-05-2019	ISSUED TO TENDER
R-00	12-05-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

PROJ. ARCHT.	DATE	FILE
AK	May 2019	A-11.00

ARCHITECT

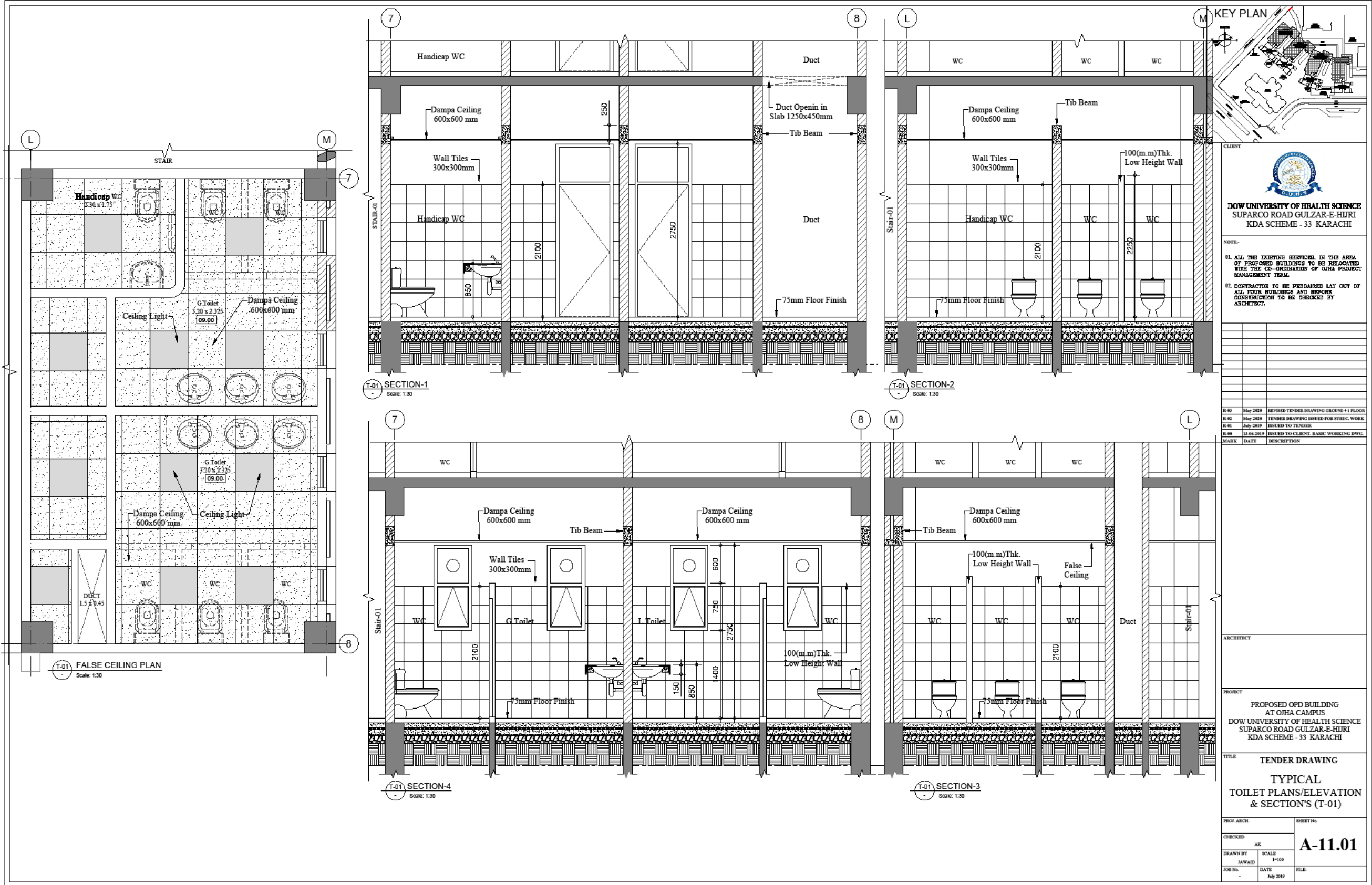
PROJECT

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


TITLE

TENDER DRAWING
TYPICAL
TOILET PLANS/ELEVATION
& SECTION'S (T-01)

PROJ. ARCHT.	DATE	FILE
AK	May 2019	A-11.00



CLIENT



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

NOTE:-

01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND REPORT CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
R-03	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2020	TENDER DRAWING ISSUED FOR SERVIC. WORK
R-01	14th 2019	ISSUED TO TENDER
R-00	12-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

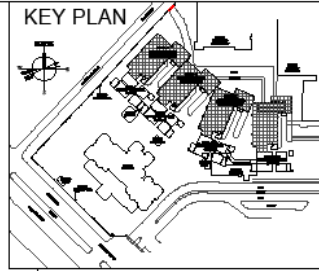
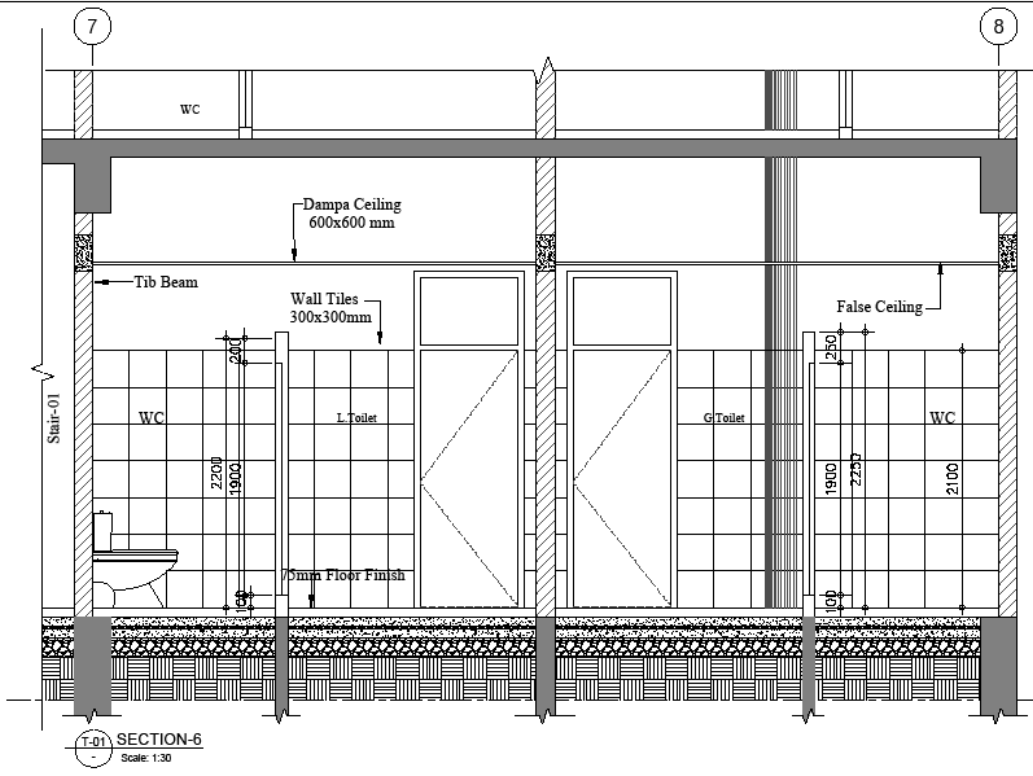
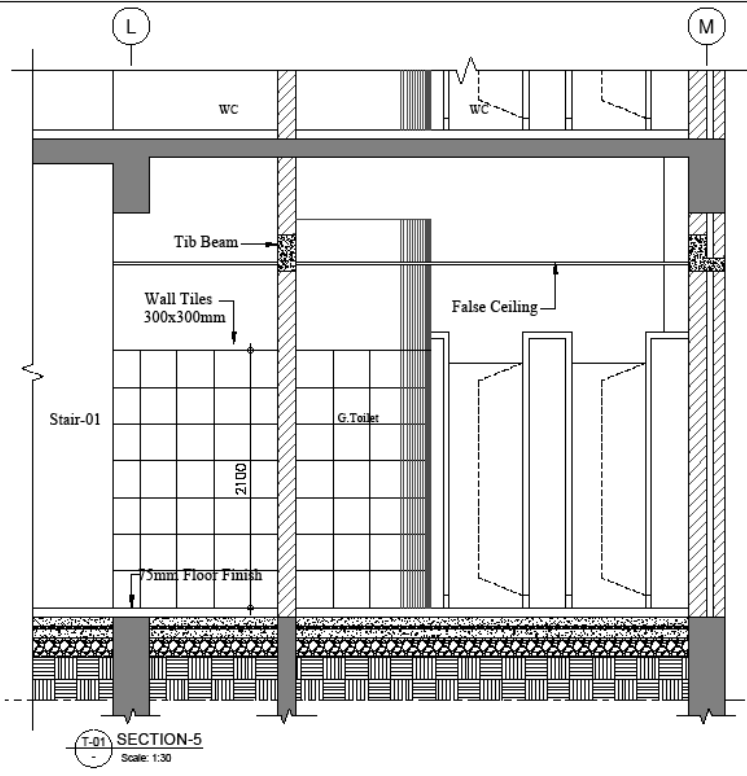
PROJECT

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

TITLE

TENDER DRAWING
 TYPICAL
 TOILET PLANS/ELEVATION
 & SECTION'S (T-01)

PROJ. ARCH:	SHEET No.
CHECKED	A-11.01
DRAWN BY	SCALE
JAWAID	1:100
JOB No.	DATE
	July 2019
FILE	

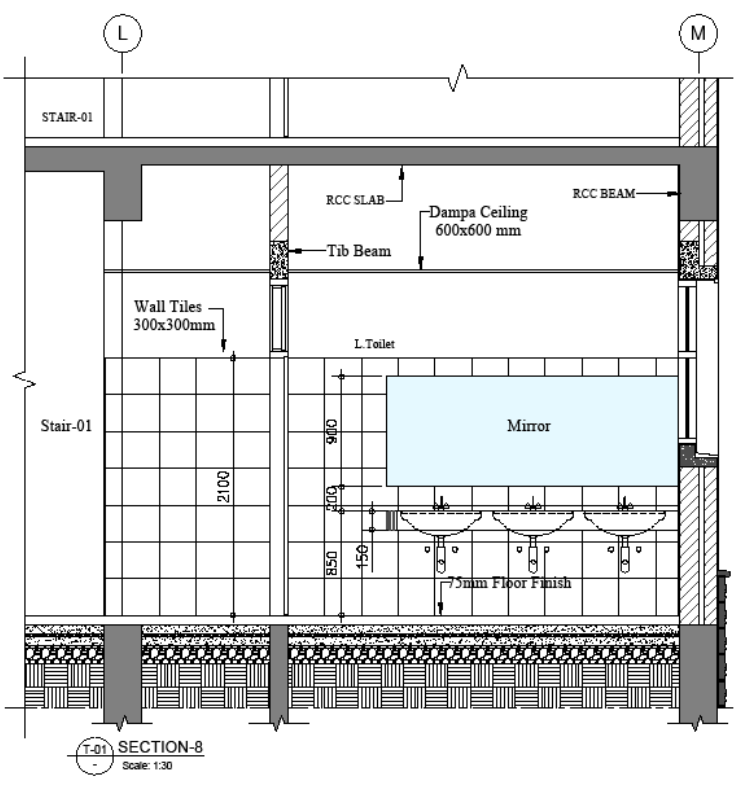
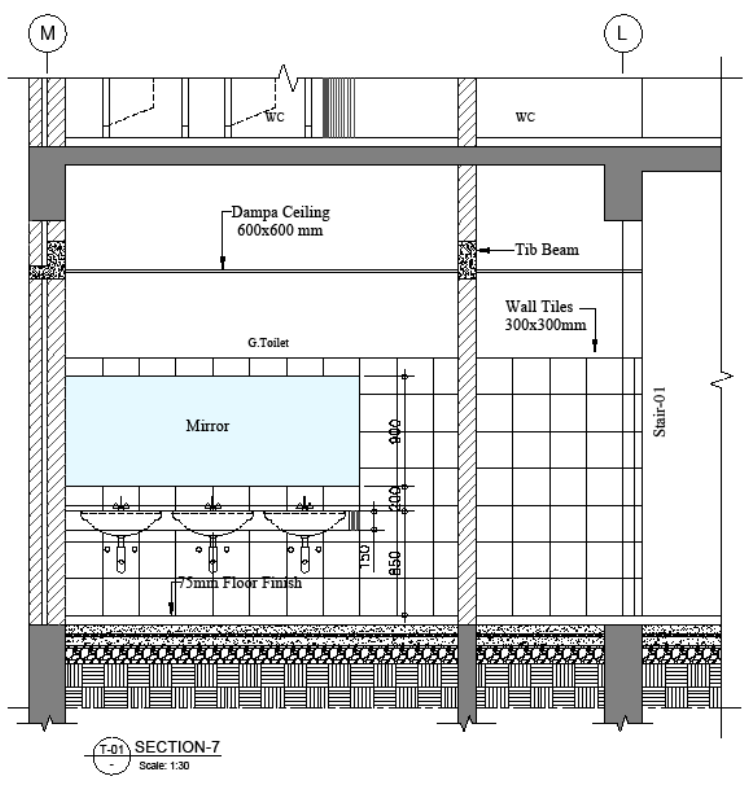
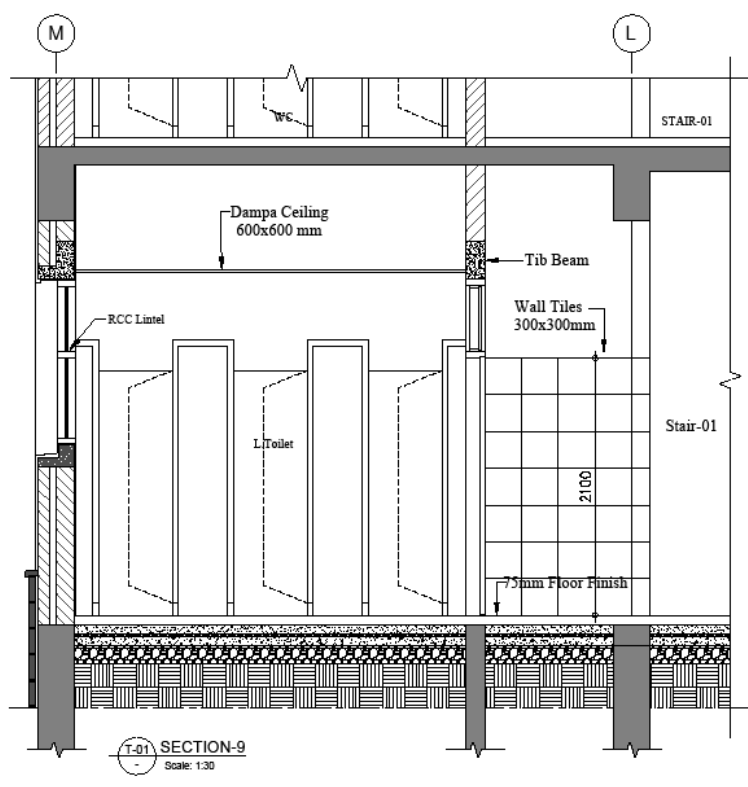


CLIENT

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

NOTE:
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 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

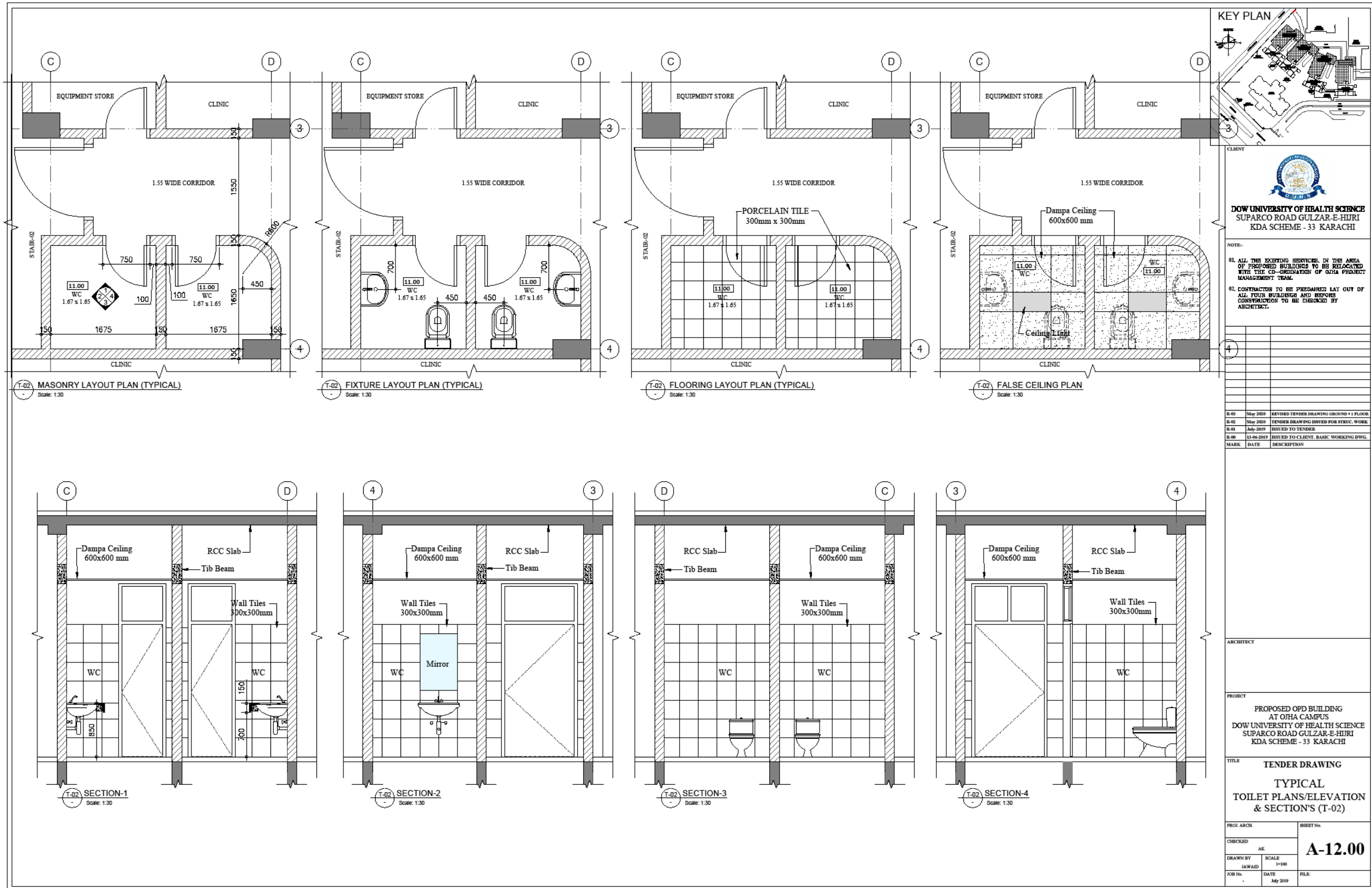
REVISION	DATE	DESCRIPTION
R-03	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2020	TENDER DRAWING ISSUED FOR STREC. WORK
R-01	July 2019	ISSUED TO TENDER
R-00	12-05-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

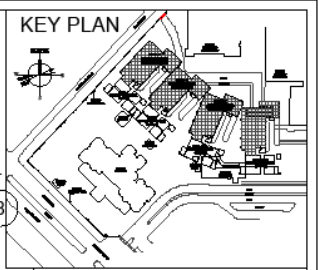
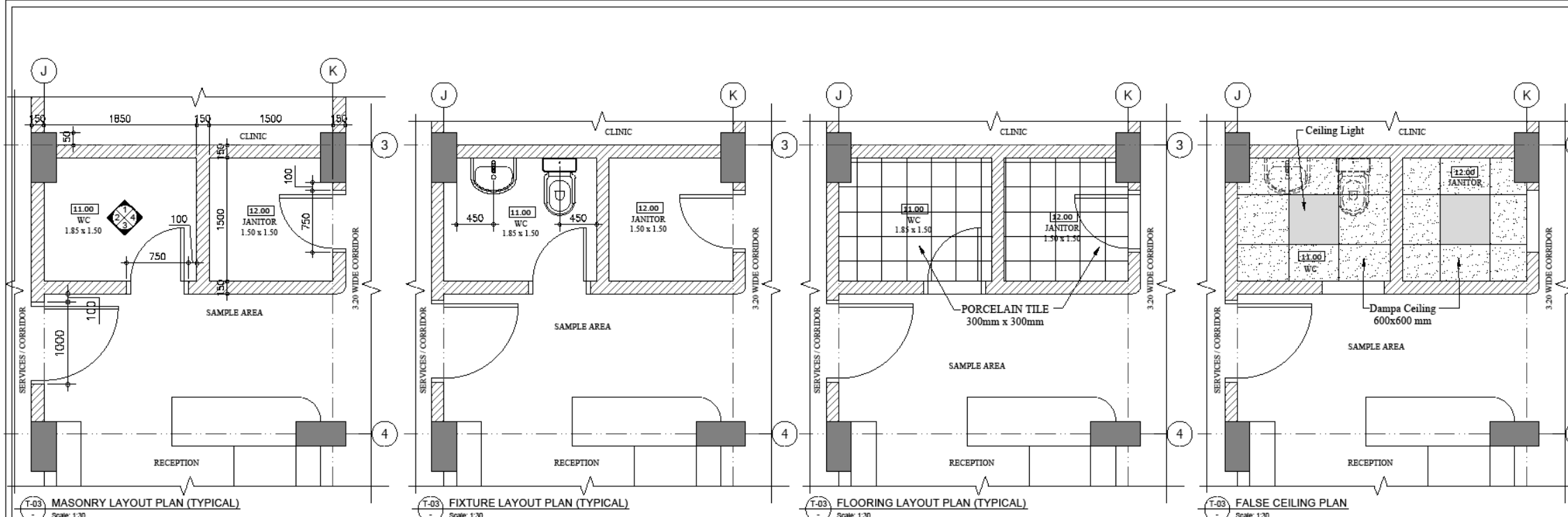


ARCHITECT
 PROJECT
 PROPOSED OPD BUILDING
 AT OJHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIRI
 KDA SCHEME - 33 KARACHI

TITLE
TENDER DRAWING
TYPICAL TOILET PLANS/ELEVATION & SECTION'S (T-01)

PROJ. ARCHT.	SHEET No.
CHECKED AK	A-11.02
DRAWN BY JAWAID	SCALE 1:100
JOB No.	DATE July 2019



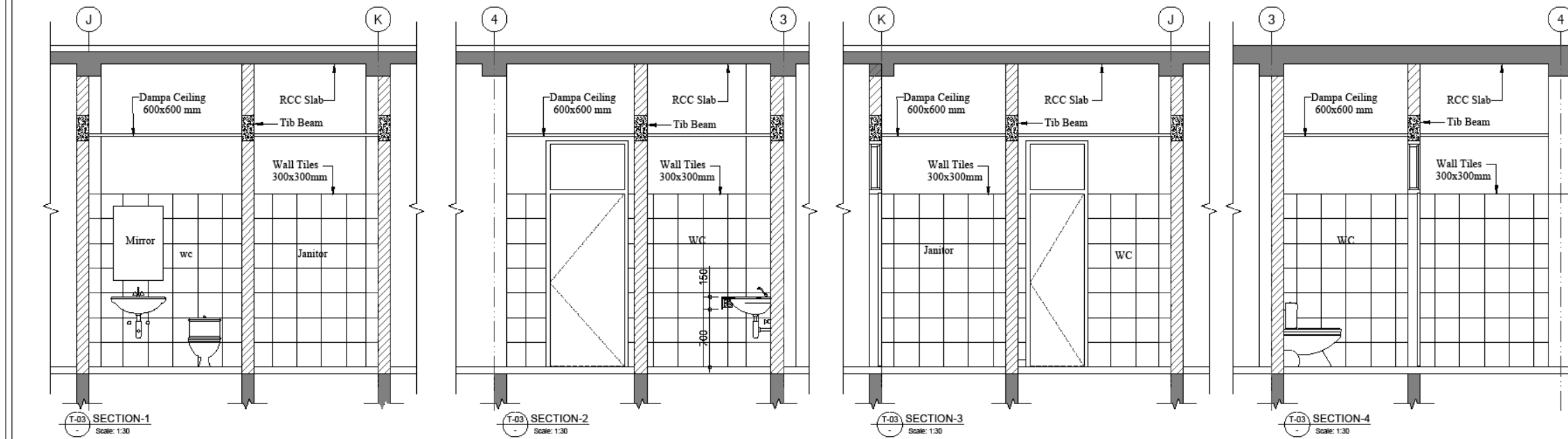


CLIENT

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

NOTE:
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OIHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDING AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
R-03	May 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2019	TENDER DRAWING ISSUED FOR STREC. WORK
R-01	July 2019	ISSUED TO TENDER
R-00	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.



ARCHITECT
 PROJECT
 PROPOSED OPD BUILDING
 AT OIHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIRI
 KDA SCHEME - 33 KARACHI

TITLE
TENDER DRAWING
TYPICAL
TOILET PLANS/ELEVATION
& SECTION'S (T-03)

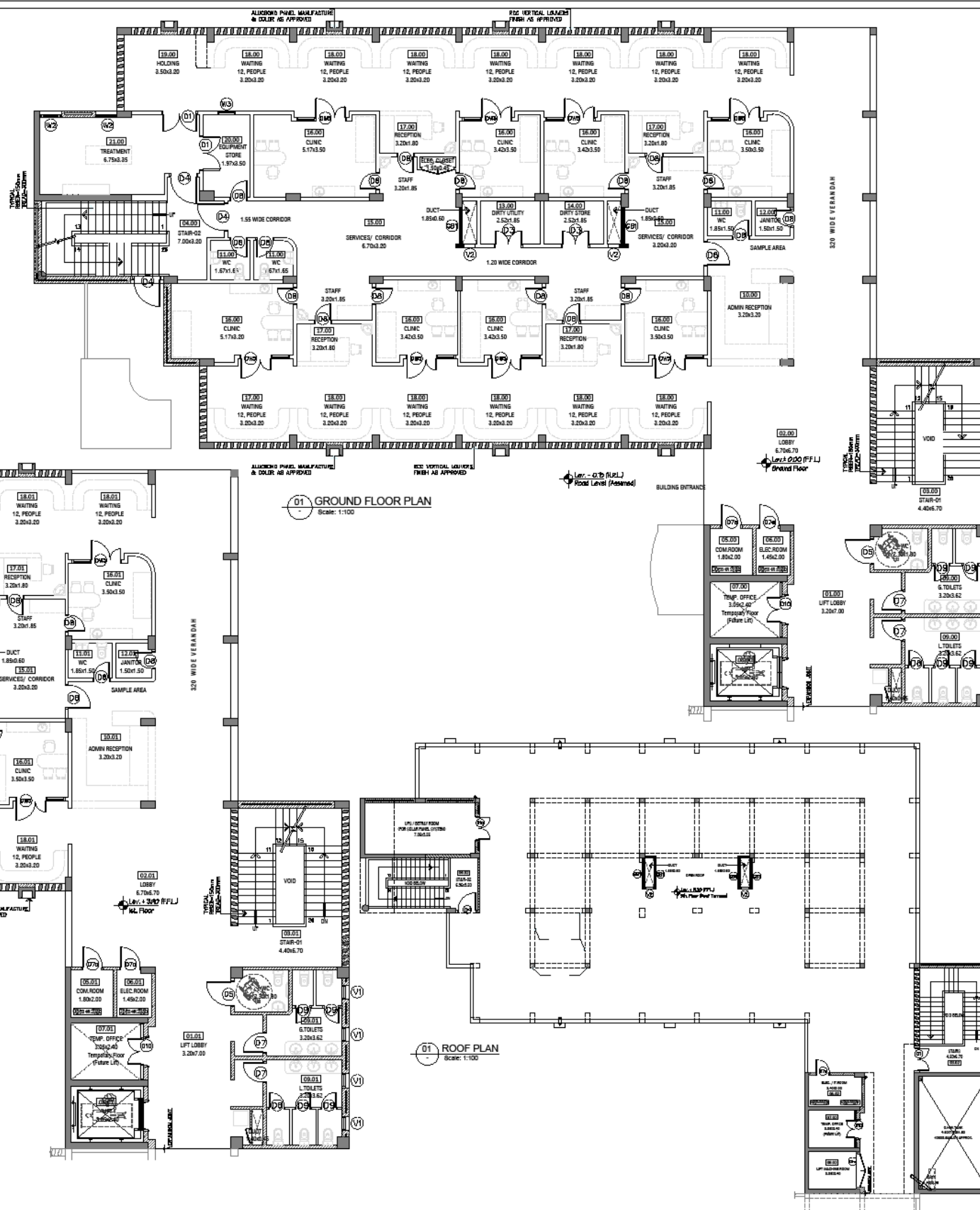
PROJ. ARCHT.	SHEET No.
CHECKED	AK
DRAWN BY	SCALE
JAWAID	1:100
JOB No.	DATE
-	July 2019
FILE	

A-13.00

SCHEDULE OF M.S. DOOR'S FRAME											
TYPE	FINISH	FRAME SIZE		FLOORS						REMARKS	
		A	B	GROUND FLOOR	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	FOURTH FLOOR	ROOF		TOTAL
D-01	1500 x 2750	80	100	-	2	2				4	OPEN-ABLE PANEL DOOR (Equipment Holding/ Faculty Office/ Seminar Rm)
D-02	1350 x 2750	//	//	-	8	8				16	OPEN-ABLE PANEL DOOR (Office)
D-03	1200 x 2750	//	//	-	2	2				4	OPEN-ABLE PANEL DOOR (Staff-2/ Treatment/ Faculty Office)
D-04	1500 x 2750	//	//	-	3	2				5	OPEN-ABLE PANEL DOOR (Staff-2/ Treatment/ Faculty Office)
D-05	1100 x 2750	//	//	-	1	1				2	OPEN-ABLE PANEL DOOR (H.M.C)
D-06	1000 x 2750	//	//	-	1	1				2	OPEN-ABLE PANEL DOOR (Admin/ Reception)
D-07	800 x 2750	//	//	-	2	2				4	OPEN-ABLE PANEL DOOR (Clinic/ ST/ Lab/ L. Lab)
D-08	700 x 2700	//	//	-	17	17				34	OPEN-ABLE PANEL DOOR (Clinic/ MC/ Locker)
D-09	700 x 2000	//	//	-	3	3				6	OPEN-ABLE PANEL DOOR (2 Stair/ L. Lab)
D-10	1150 x 2150	80	100	-	1	1				2	OPEN-ABLE PANEL DOOR (Temp. Office (Duct))

SCHEDULE OF ALUMINUM ANODIZED WINDOWS											
TYPE	FINISH	FRAME SIZE		FLOORS						REMARKS	
		A	B	GROUND FLOOR	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	FOURTH FLOOR	ROOF		TOTAL
W-02	750 x 1400	40	100	2	2					4	OPEN-ABLE WINDOW (Treatment/ Faculty Office/ Classroom)
V-01	800 x 900	//	//	1200	4	4				8	OPENABLE VENTILATOR (Atrium) (Glass/ Frame)
WB-01	1430 x 1261	//	//	70	2	2				4	GLASS BLOCK (Duct)

SCHEDULE OF ALUMINUM POWDER COATED DOORS & VENTILATORS											
TYPE	FINISH	ALUM. FRAME		FLOORS						REMARKS	
		A	B	GROUND FLOOR	FIRST FLOOR	SECOND FLOOR	THIRD FLOOR	FOURTH FLOOR	ROOF		TOTAL
PV-01	870 x 350	80	100	-	4	4				8	OPEN-ABLE VENTILATORS TOP FLANGE TO BE FIXED AT TOP OF MS DOOR FRAME
PV-02	800 x 560	//	//	-	10	10				20	//
PV-03	530 x 560	//	//	-	10	9				19	//
PV-04	470 x 500	//	//	-	3	2				5	//
PV-05	840 x 350	//	//	075	1	1				2	//
PV-06	780 x 350	//	//	375	4	4				8	//
PV-07	840 x 350	//	//	075	17	17				34	//
FW-08	800 x 161	//	//	8	8					16	OPEN-ABLE WINDOW (Power/ Control) (Duct)
FW-09	700 x 500	//	//	8	8					16	OPEN-ABLE WINDOW (Power/ Control) TO BE FIXED AT TOP FLANGE (Duct)
DB-05	2100 x 2750	//	//	-	8	8				16	OPEN-ABLE PANEL DOOR (Office)
D-14	1300 x 2750	55	100	-	2	2				4	OPEN-ABLE WINDOW ALUMINUM LUSOR (Staff/ Faculty Office/ L. Lab/ Seminar Rm)
D-74	800 x 2750	//	//	-	2	2				4	OPEN-ABLE WINDOW ALUMINUM LUSOR (Staff/ Faculty Office)
W-00	100 x 1061	//	//	800	1	1				2	GLASS WINDOW (Atrium) (Equipment Store)
V-02	450 x 450	//	//	870	4	4				8	FIXED GLASS WITH EXTERIOR FIN (Duct)



KEY PLAN

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

NOTE:
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FEEDS, RIGIDITIES AND RESERVE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

REVISION	DATE	DESCRIPTION
R-03	May 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
R-02	May 2019	TENDER DRAWING ISSUED FOR STRENGTH WORK
R-01	July 2019	ISSUED TO TENDER
R-00	15-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

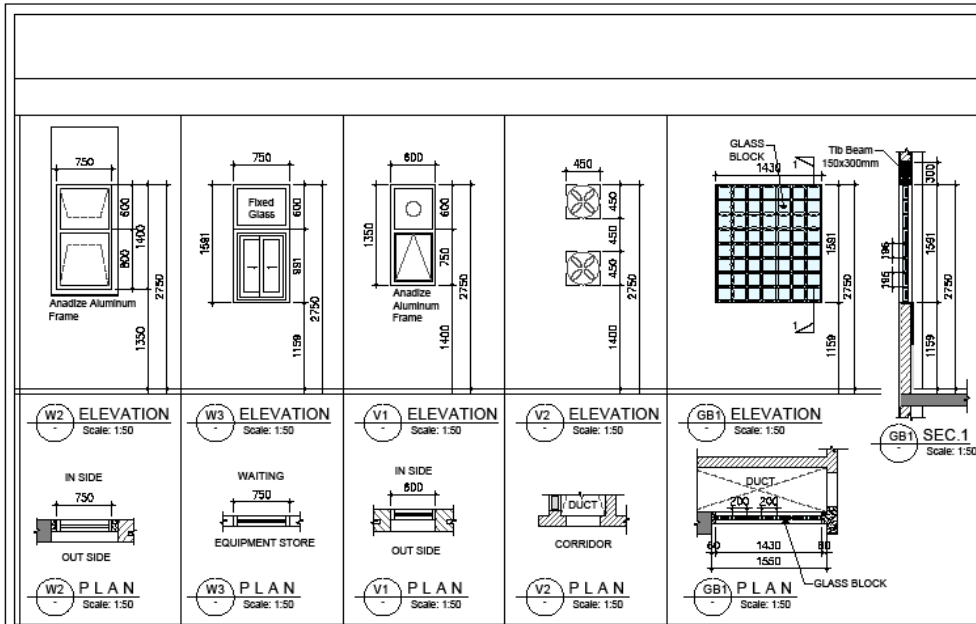
PROJECT
 PROPOSED OPD BUILDING
 AT OJHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIRI
 KDA SCHEME - 33 KARACHI

TITLE
DOOR & WINDOW NUMBERS
(G / 1ST & ROOF FL. PLAN)

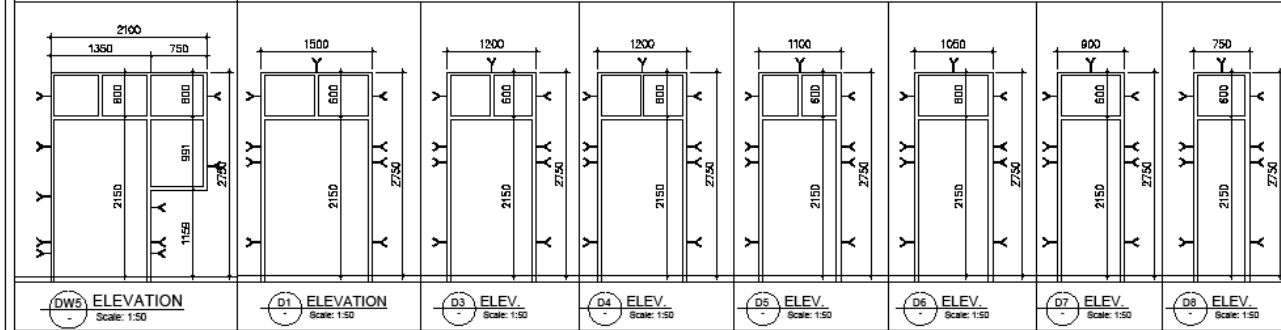
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CHECKED BY: **A-14.00**

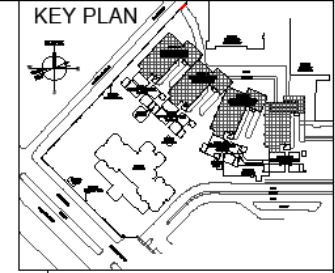
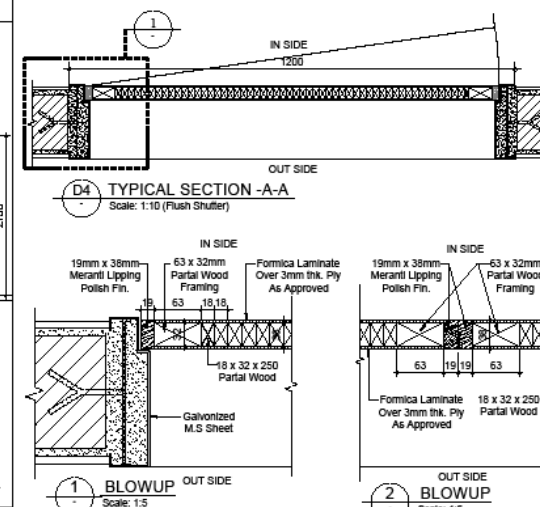
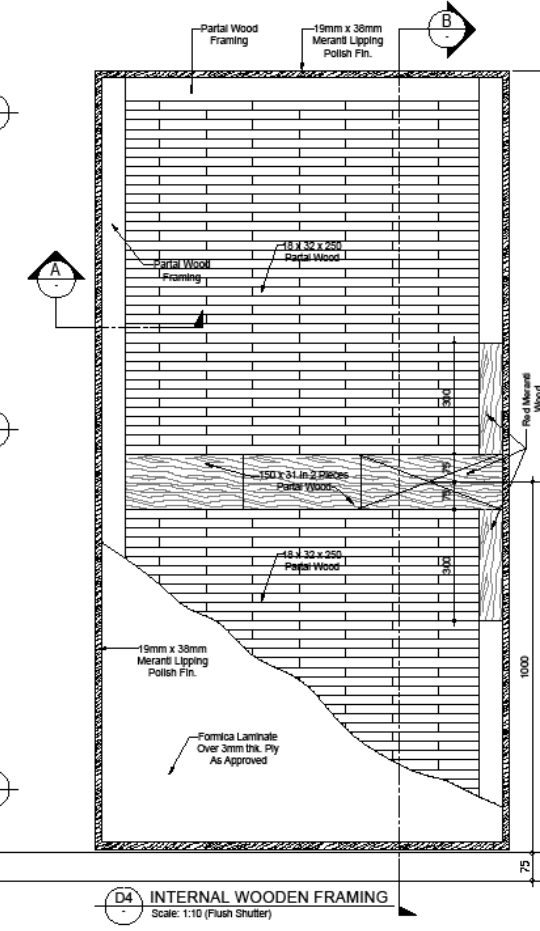
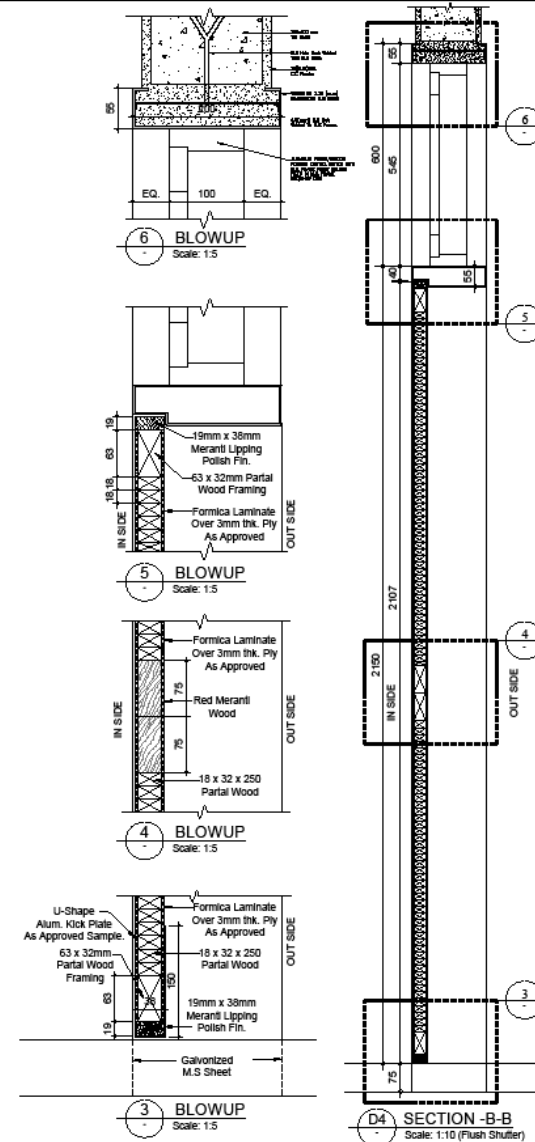
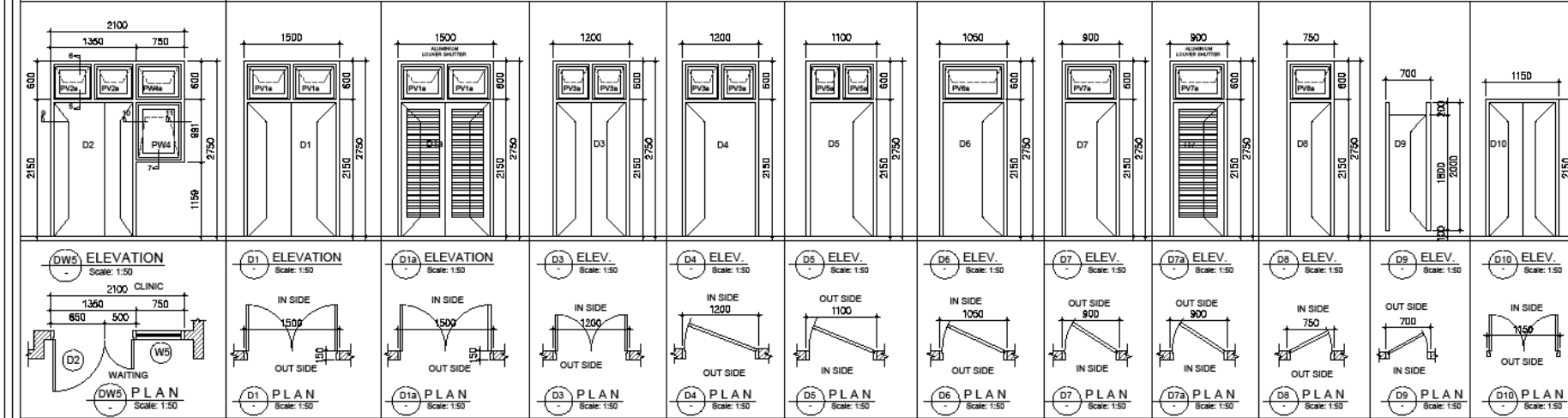
DRAWN BY: SAJWAD SCALE: 1:100
 JOB No. DATE: July 2019 FILE:




ELEVATION OF ONLY M.S. FRAME IN BOX SECTION FOR MANUFACTURER



ELEVATION OF M.S. FRAMES WITH ALUMINIUM WINDOWS & FIXED GLASS



CLIENT

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

NOTE:-

- ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELIANT WITH THE CO-ORDINATION OF O&A PROJECT MANAGEMENT TEAM.
- CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-01	May 2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
B-02	May 2019	TENDER DRAWING ISSUED FOR REC. WORK
B-03	July 2019	ISSUED TO TENDER
B-04	11-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

PROJECT
 PROPOSED OPD BUILDING
 AT OIHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HJRI
 KDA SCHEME - 33 KARACHI

TITLE
 TENDER DRAWING
 DOOR & WINDOW NUMBERS
 DOOR & WINDOW
 ELEVATIONS

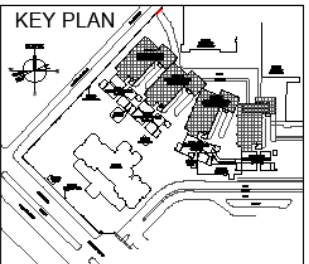
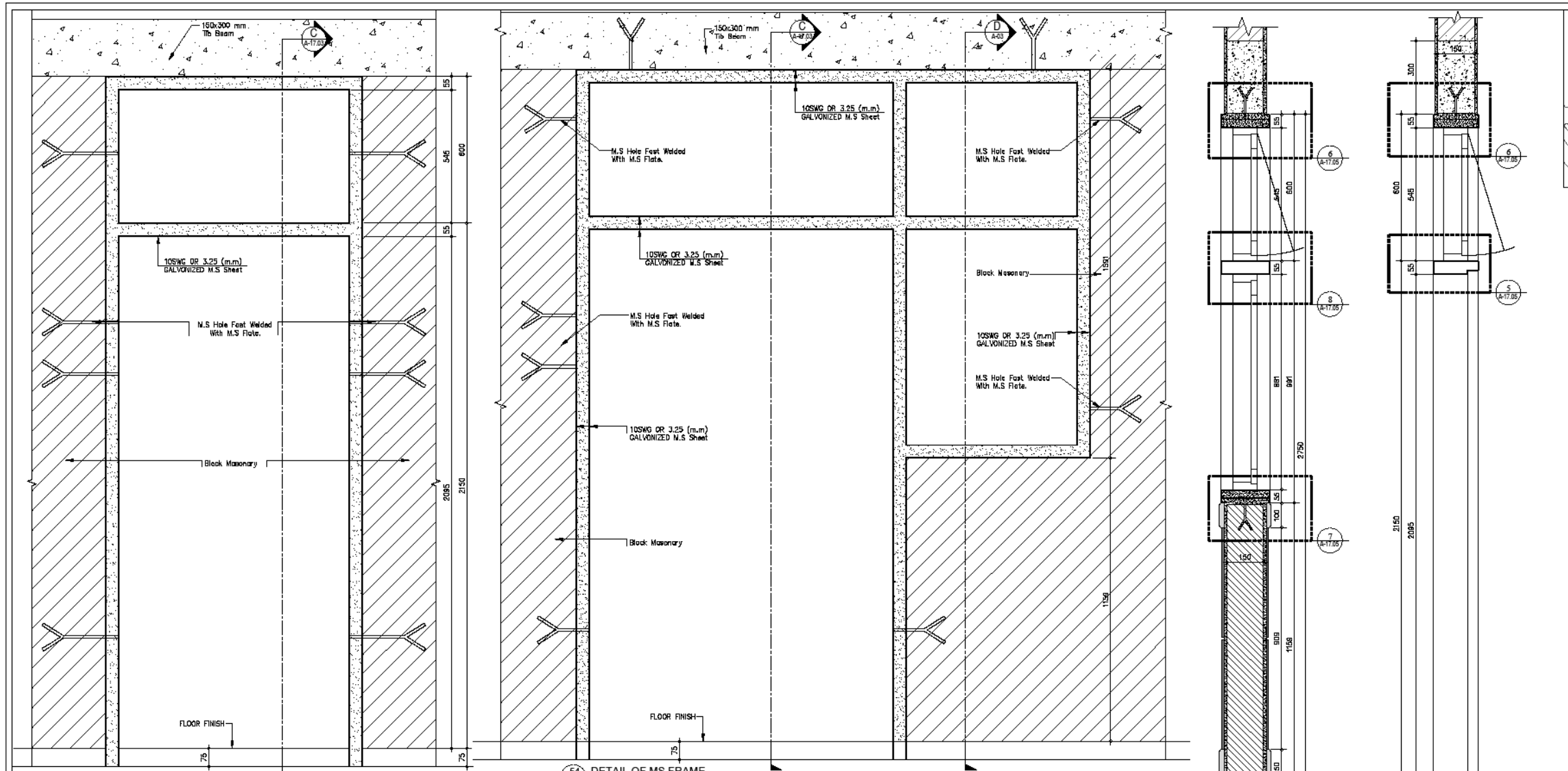
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CHECKED	AK	SCALE	1:10

A-14.01

DRAWN BY	SCALE	1:10
JAWAID		

SUB No.	DATE	FILE
	July 2019	



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

NOTE:
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OCHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL FOUR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-00	May-2020	REVISED TENDER DRAWING GROUND +1 FLOOR
B-01	May-2020	TENDER DRAWING ISSUED FOR STRUC. WORK
B-02	July-2019	ISSUED TO TENDER
B-00	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

PROJECT
 PROPOSED OPD BUILDING
 AT OCHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIJI
 KDA SCHEME - 33 KARACHI

TITLE
TENDER DRAWING
DOOR AND WINDOW DETAILS

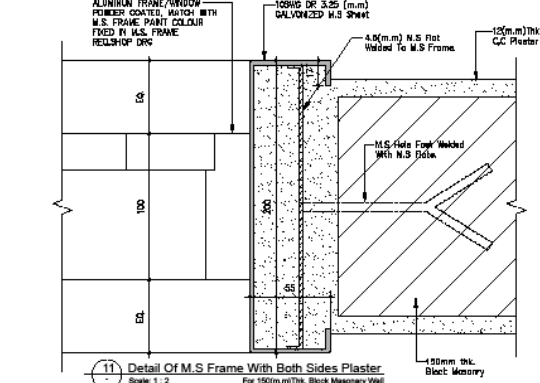
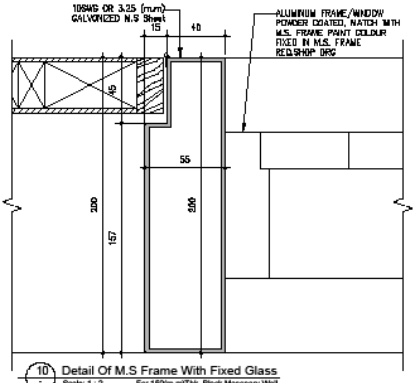
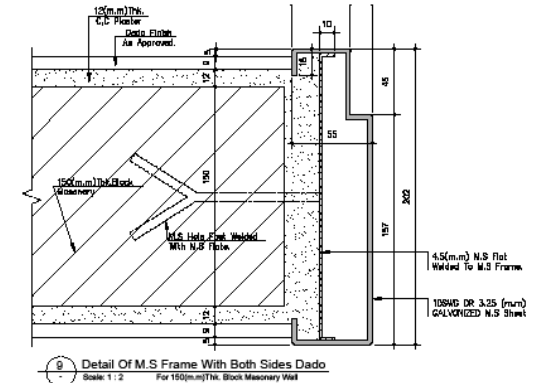
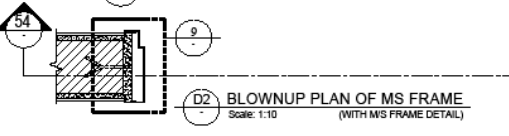
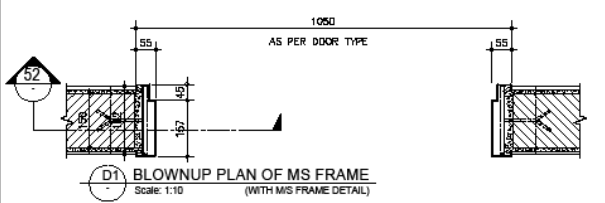
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FOR No. / DATE July 2019	FILE

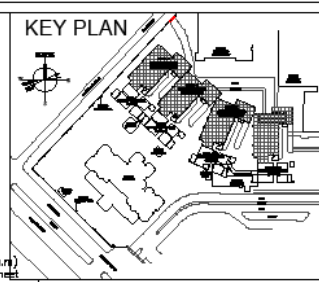
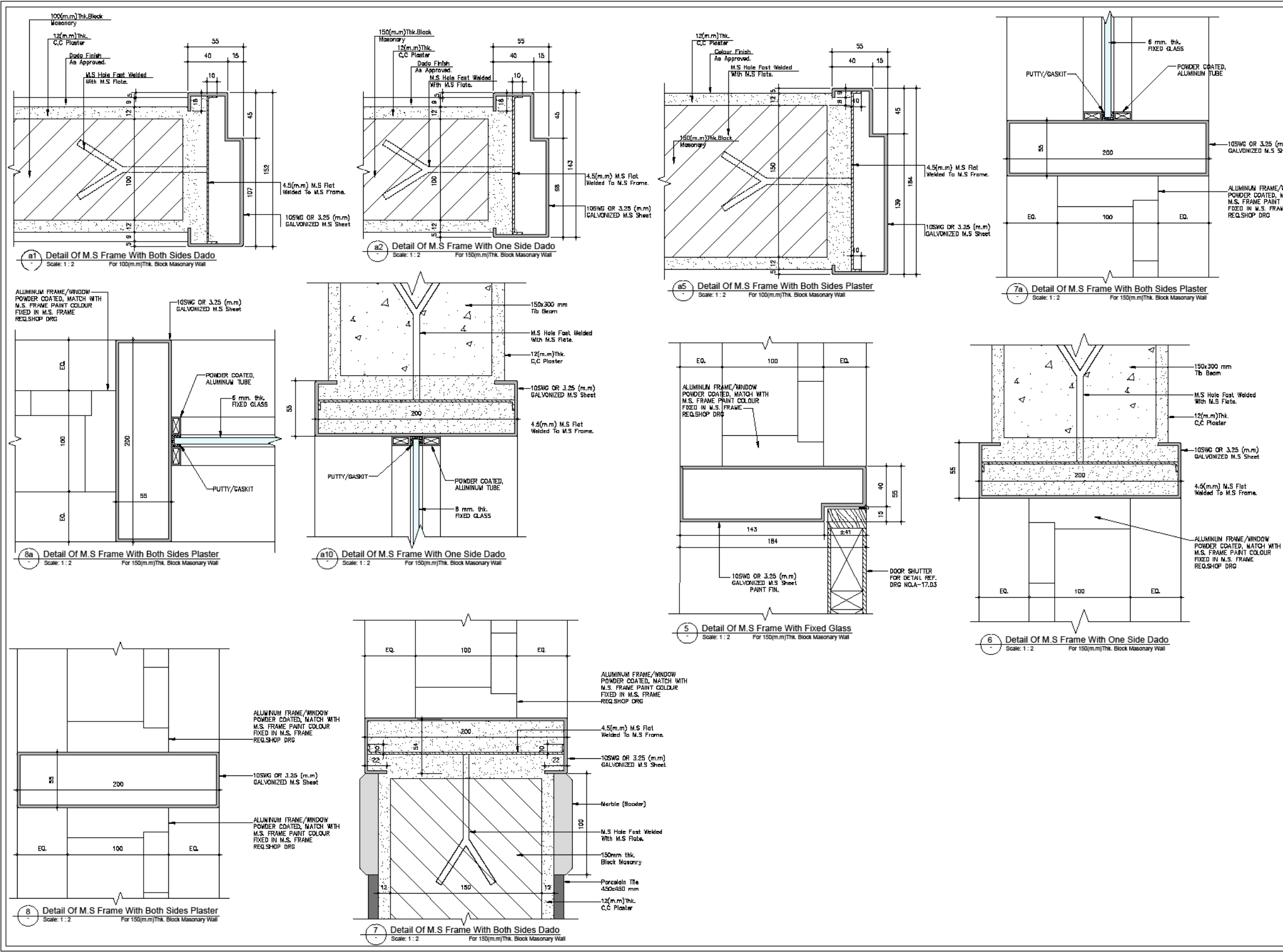
52 DETAIL OF MS FRAME
 Scale: 1:10

54 DETAIL OF MS FRAME
 Scale: 1:10

TYPICAL SECTION D-D
 Scale: 1:10

TYPICAL SECTION C-C
 Scale: 1:10





CLIENT

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

NOTE:

- ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
- CONTRACTOR TO BE PREPARED LAY OUT OF ALL FLOOR BUILDINGS AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
B-03	May-2019	REVISED TENDER DRAWING GROUND + 1 FLOOR
B-04	May-2019	TENDER DRAWING ISSUED FOR SERVIC. WORK
B-05	July-2019	ISSUED TO TENDER
B-06	13-08-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

PROJECT

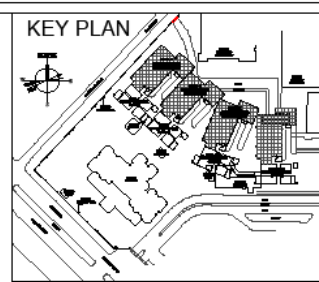
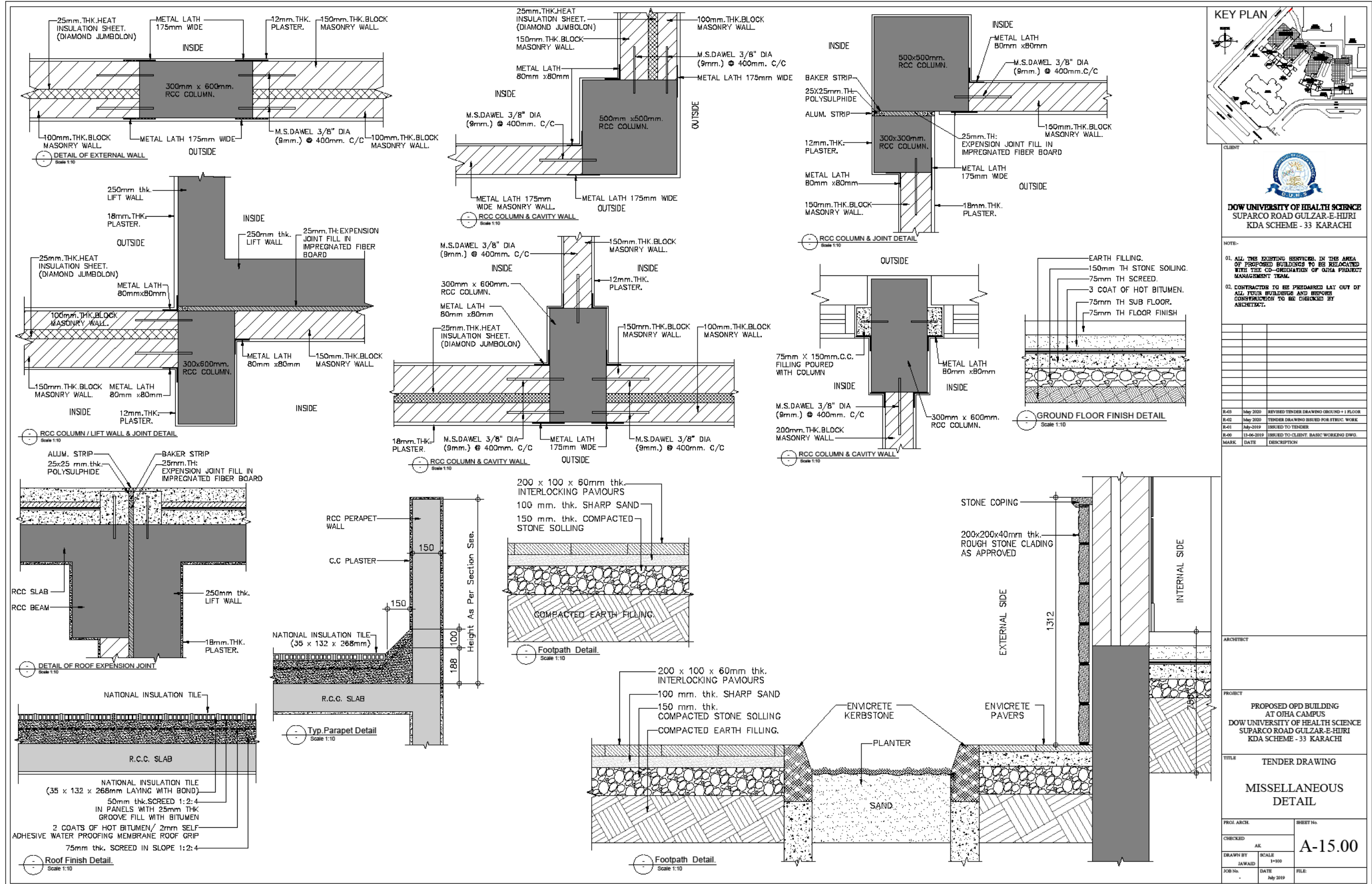
PROPOSED OPD BUILDING
AT OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HIJRI
KDA SCHEME - 33 KARACHI

TITLE

TENDER DRAWING

DOOR AND WINDOW DETAILS

PROJECT ARCHT.	SHEET No.
CHECKED BY AK	A-14.03
DRAWN BY JAWAID	SCALE 1:50
JOB No.	DATE July 2019
	FILE



CLIENT

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

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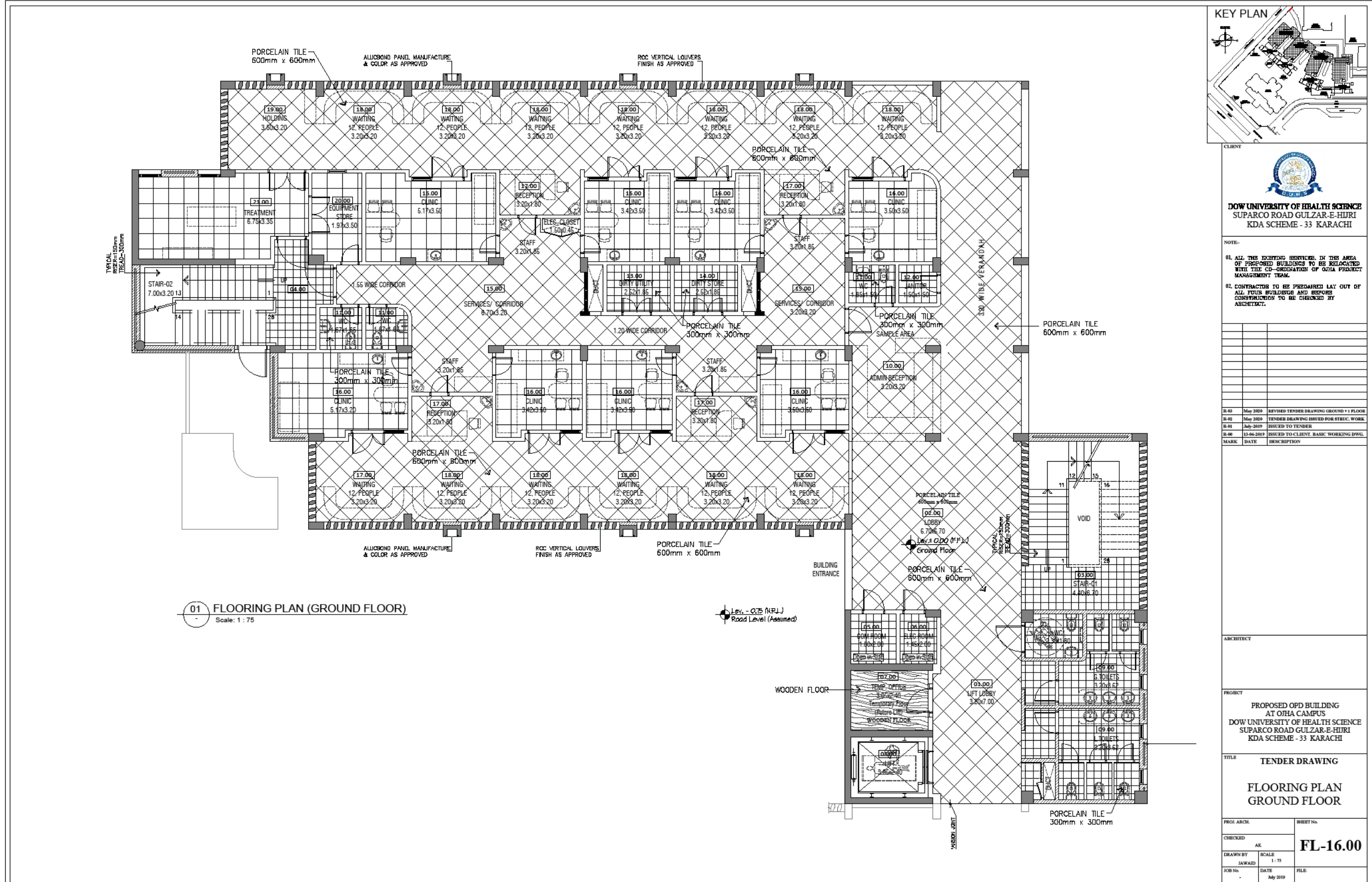
MARK	DATE	DESCRIPTION
R-01	May 2020	REVISED TENDER DRAWING GROUND + 1 FLOOR
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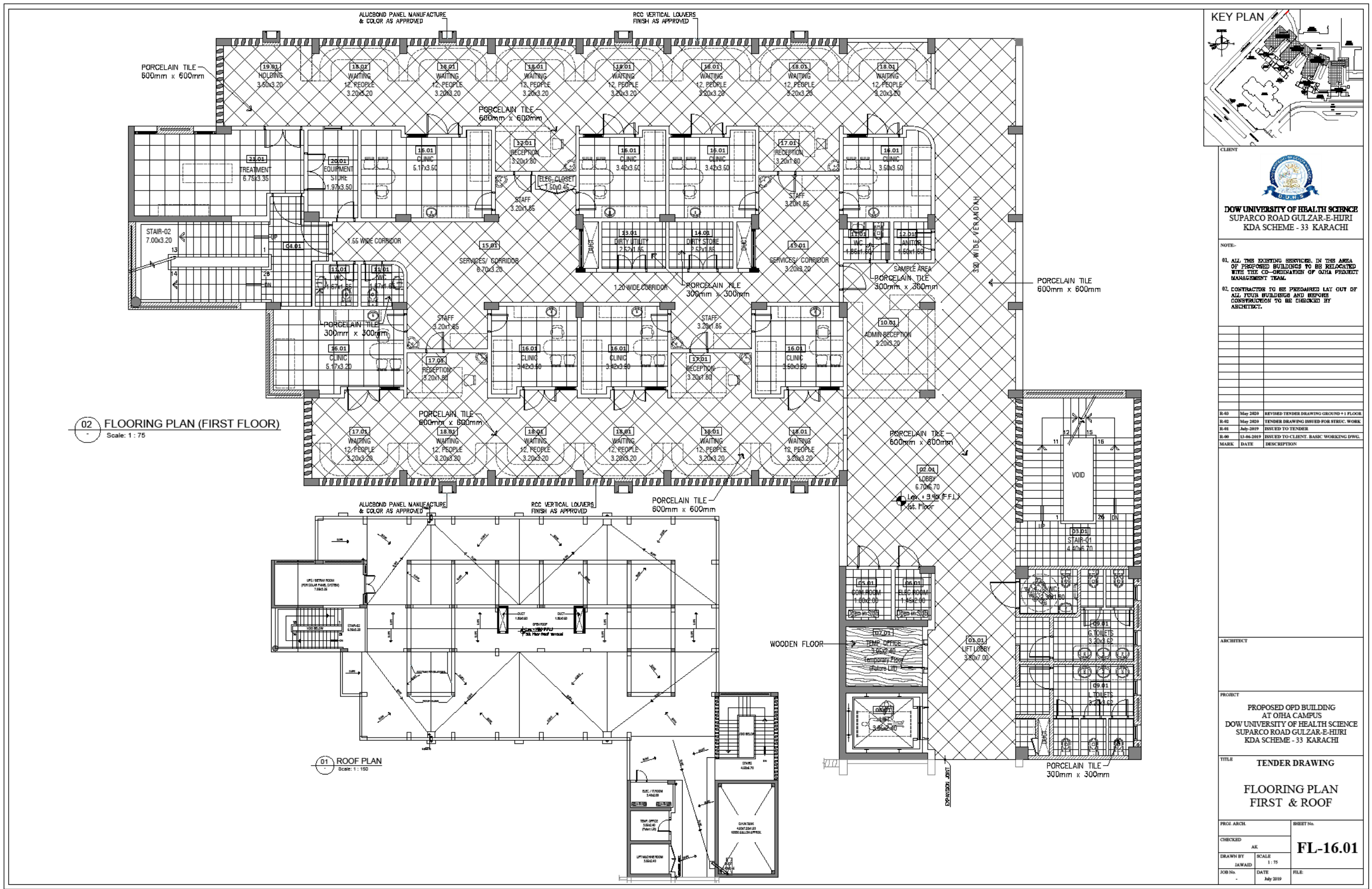
ARCHITECT

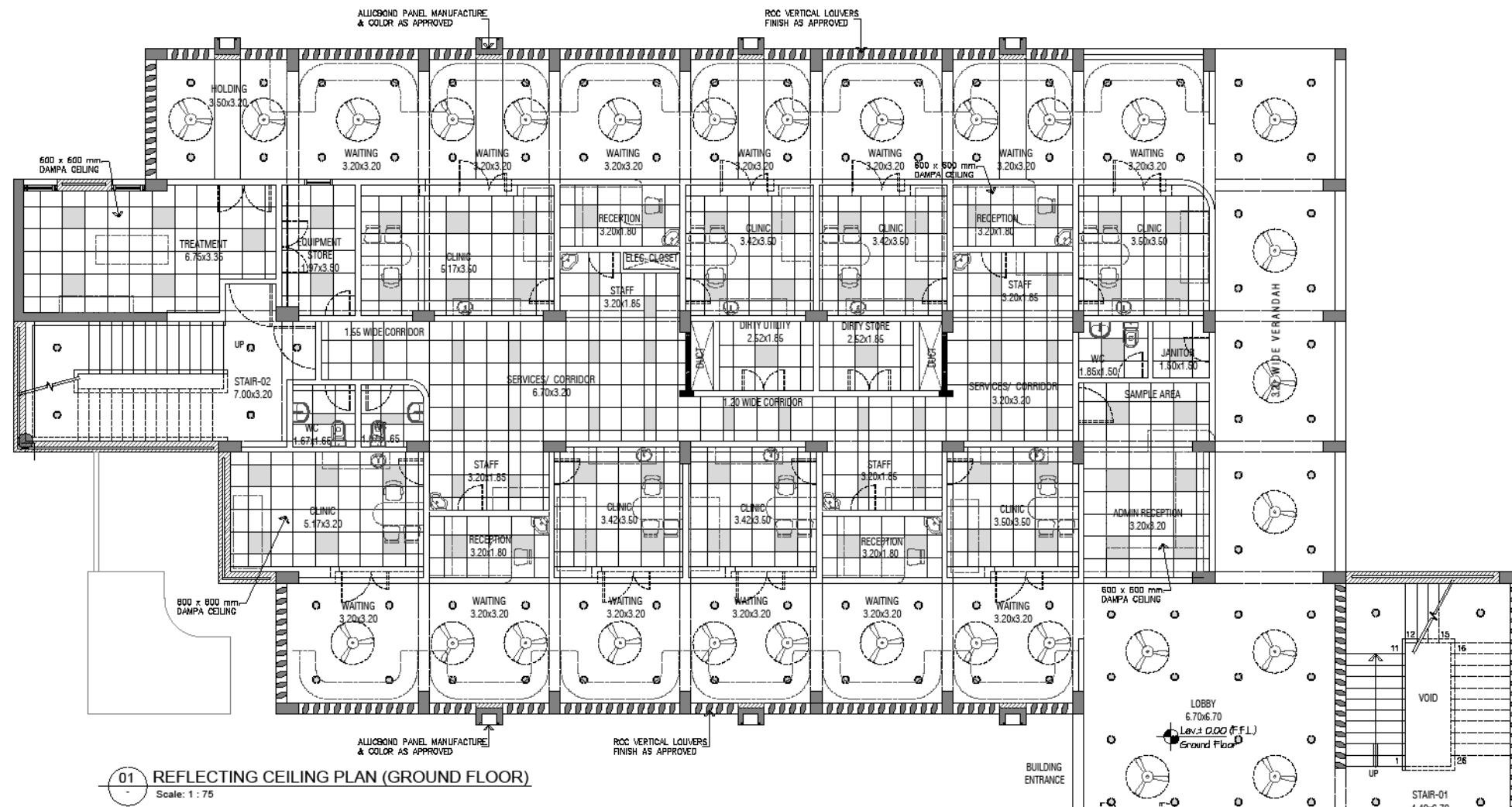
PROJECT
 PROPOSED OPD BUILDING
 AT OJHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIJRI
 KDA SCHEME - 33 KARACHI

TITLE
 TENDER DRAWING
 MISCELLANEOUS
 DETAIL

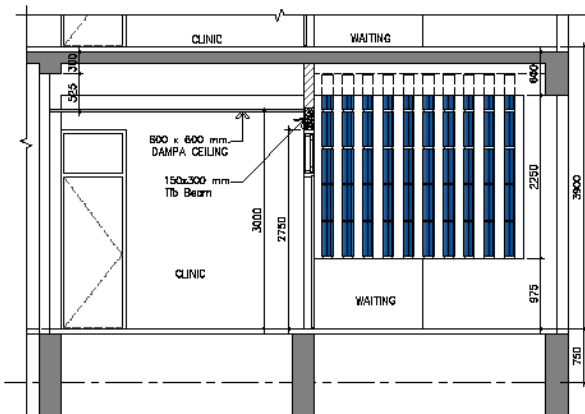
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JOB No.	DATE July 2019
FILE	



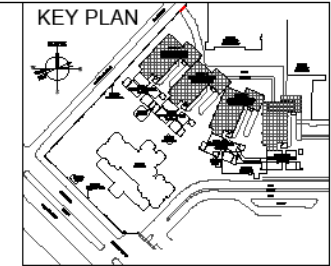




01 REFLECTING CEILING PLAN (GROUND FLOOR)
Scale: 1:75



01 REFLECTING CEILING (TYPICAL SECTION)
Scale: 1:50



CLIENT

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

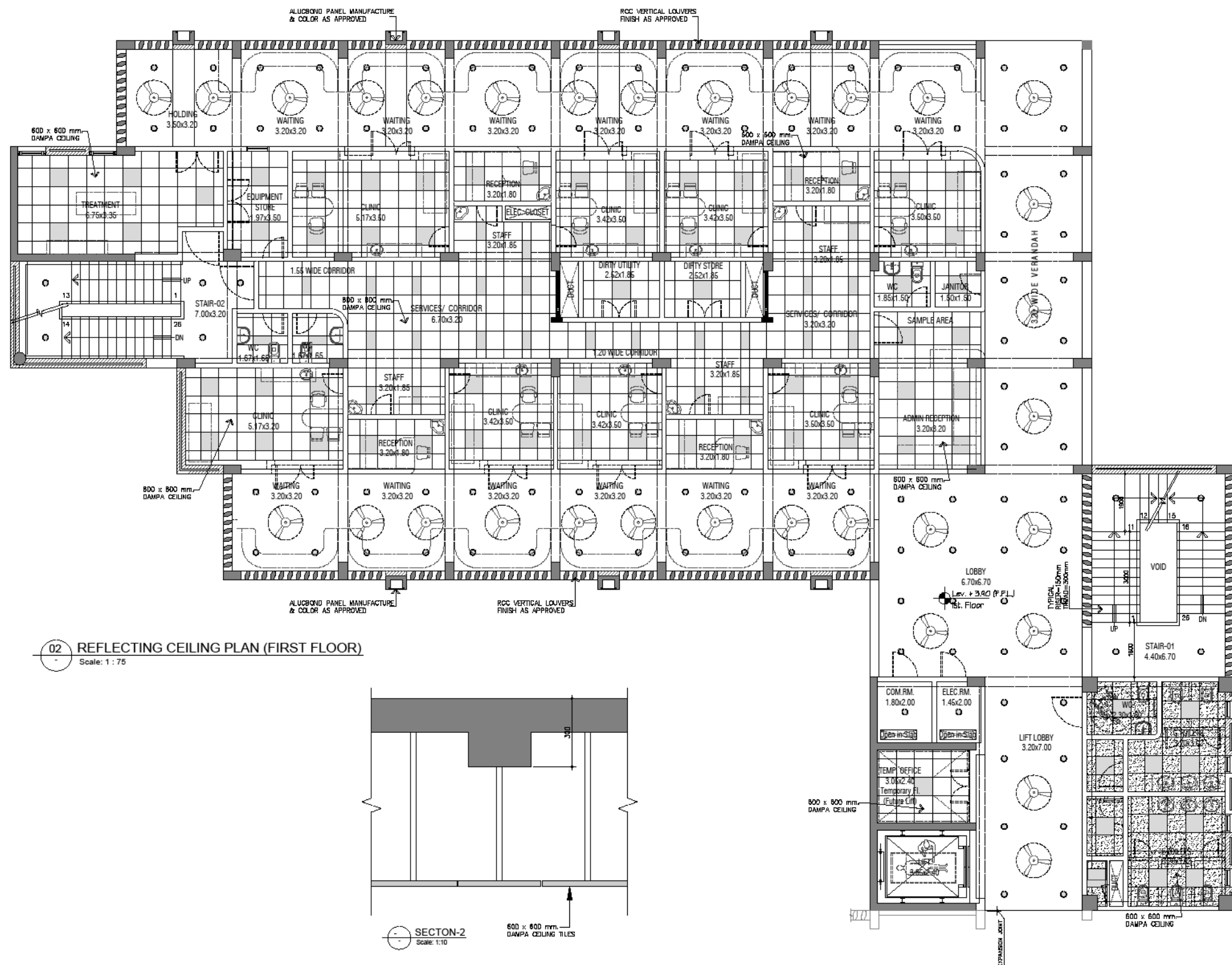
NOTE:-
 01. ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDING TO BE RELOCATED WITH THE CO-ORDINATION OF OCHA PROJECT MANAGEMENT TEAM.
 02. CONTRACTOR TO BE PREPARED LAY OUT OF ALL THE BUILDING AND BEFORE CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
R-01	May 2019	REVISED TENDER DRAWING GROUND +1 FLOOR
R-02	May 2019	TENDER DRAWING ISSUED FOR STREC WORK
R-03	July 2019	ISSUED TO TENDER
R-04	13-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

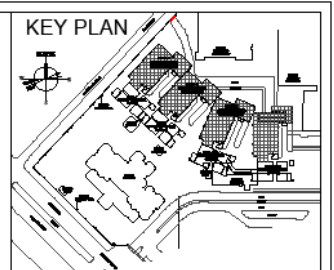
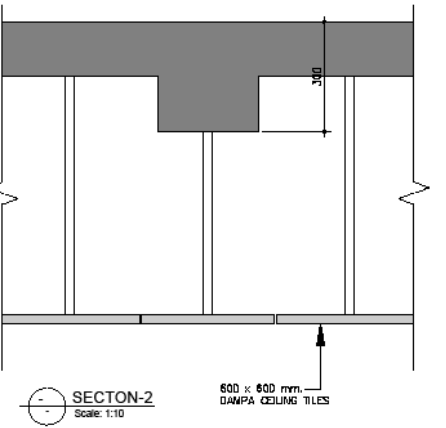
ARCHITECT
 PROJECT
 PROPOSED OPD BUILDING
 AT OCHA CAMPUS
 DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIRI
 KDA SCHEME - 33 KARACHI

TITLE
REFLECTING CEILING PLAN (GROUND FLOOR)


PROJ ARCH	SHEET No.
CHECKED AK	FC-17.00
DRAWN BY JAWAID	SCALE 1:75
JOB No.	DATE May 2019
	FILE



02 REFLECTING CEILING PLAN (FIRST FLOOR)
Scale: 1 : 75



CLIENT



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

NOTE:

- ALL THE EXISTING SERVICES IN THE AREA OF PROPOSED BUILDINGS TO BE RELOCATED WITH THE CO-ORDINATION OF OJHA PROJECT MANAGEMENT TEAM.
- CONTRACTOR TO BE PREPARED LAY OUT OF ALL YOUR BUILDINGS AND REPORT CONSTRUCTION TO BE CHECKED BY ARCHITECT.

MARK	DATE	DESCRIPTION
R-40	May 2019	REVISED TENDER DRAWING GROUND +1 FLOOR
R-42	May 2019	TENDER DRAWING ISSUED FOR STRUC. WORK
R-43	May 2019	ISSUED TO TENDER
R-44	12-06-2019	ISSUED TO CLIENT, BASIC WORKING DWG.

ARCHITECT

PROJECT

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

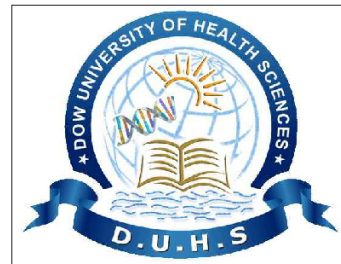
TITLE

TENDER DRAWING
REFLECTING CEILING
PLAN (FIRST FLOOR)

PRICE ARCHT.	SCALE	DATE	FILE
AK	1 : 75	July 2019	

PROJECT No.

FC-17.01

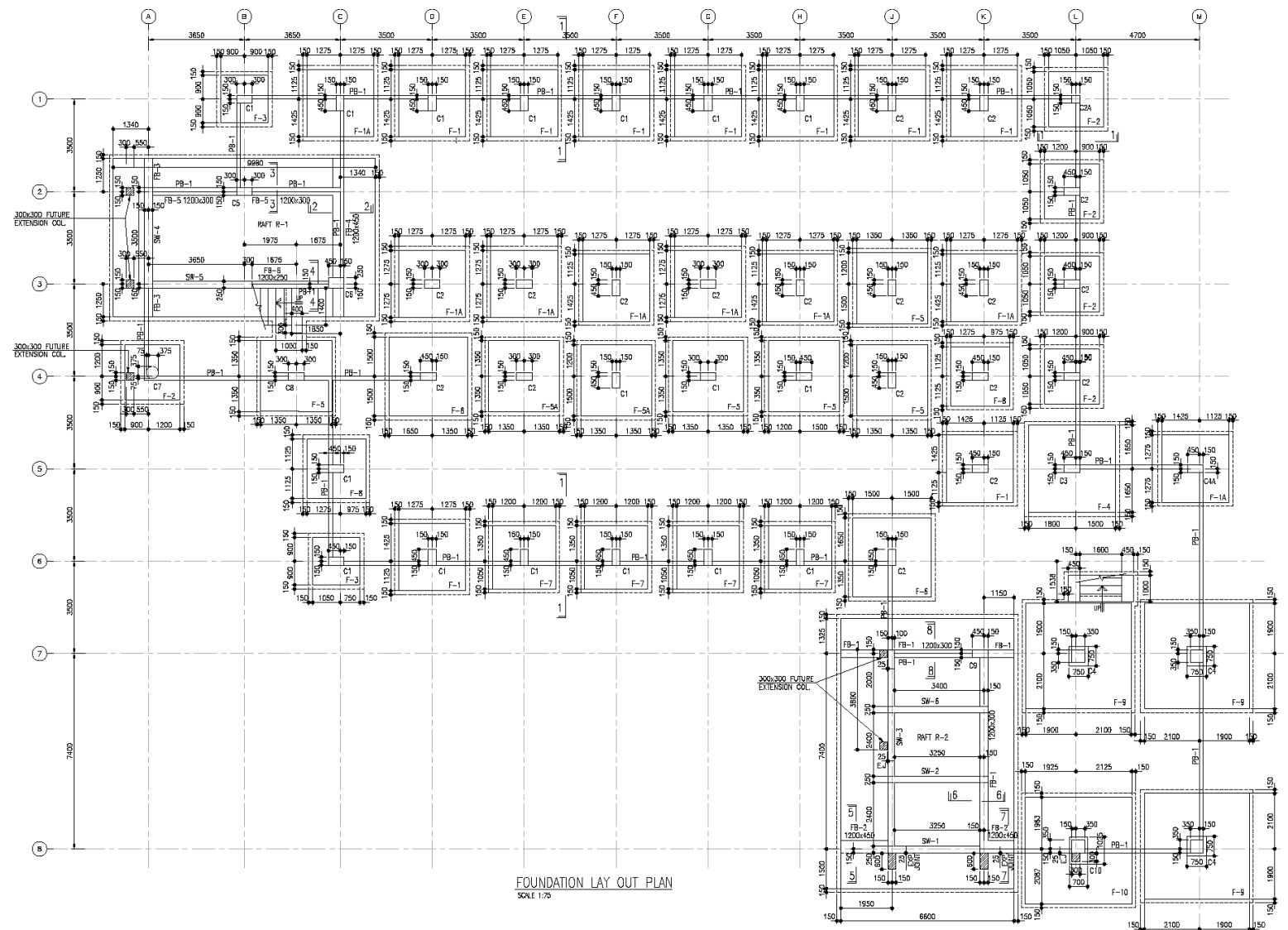


DOW UNIVERSITY
OF HEALTH SCIENCES
KARACHI.

**TENDER DRAWING
STRUCTURAL**

(GROUND + ONE FLOOR)
DATE :- MAY 2020

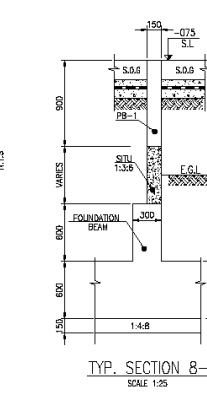
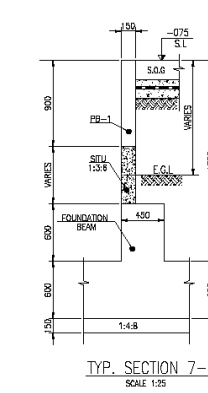
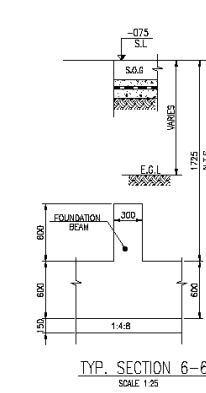
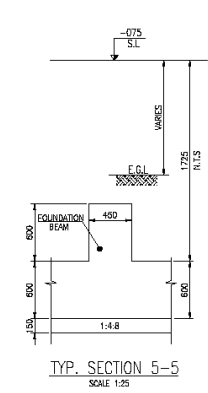
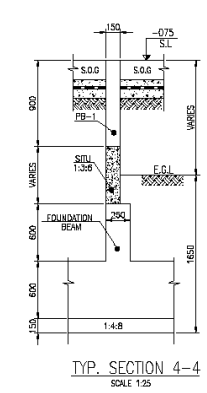
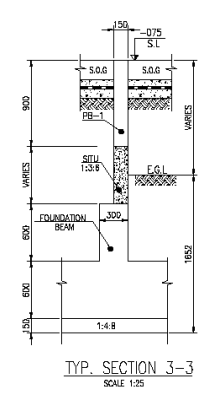
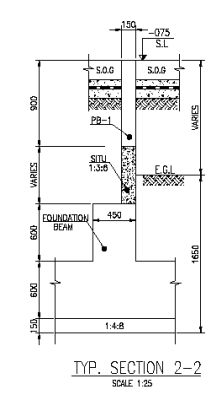
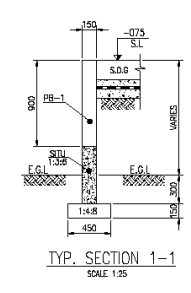
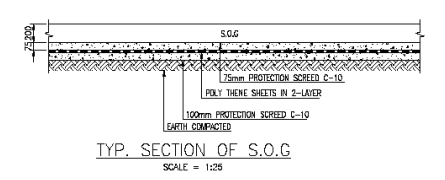
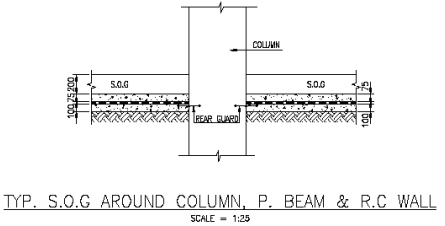
PROPOSED OPD BUILDING AT OJHA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD GULZAR-E-HIJRI KDA SCHEME - 33 KARACHI



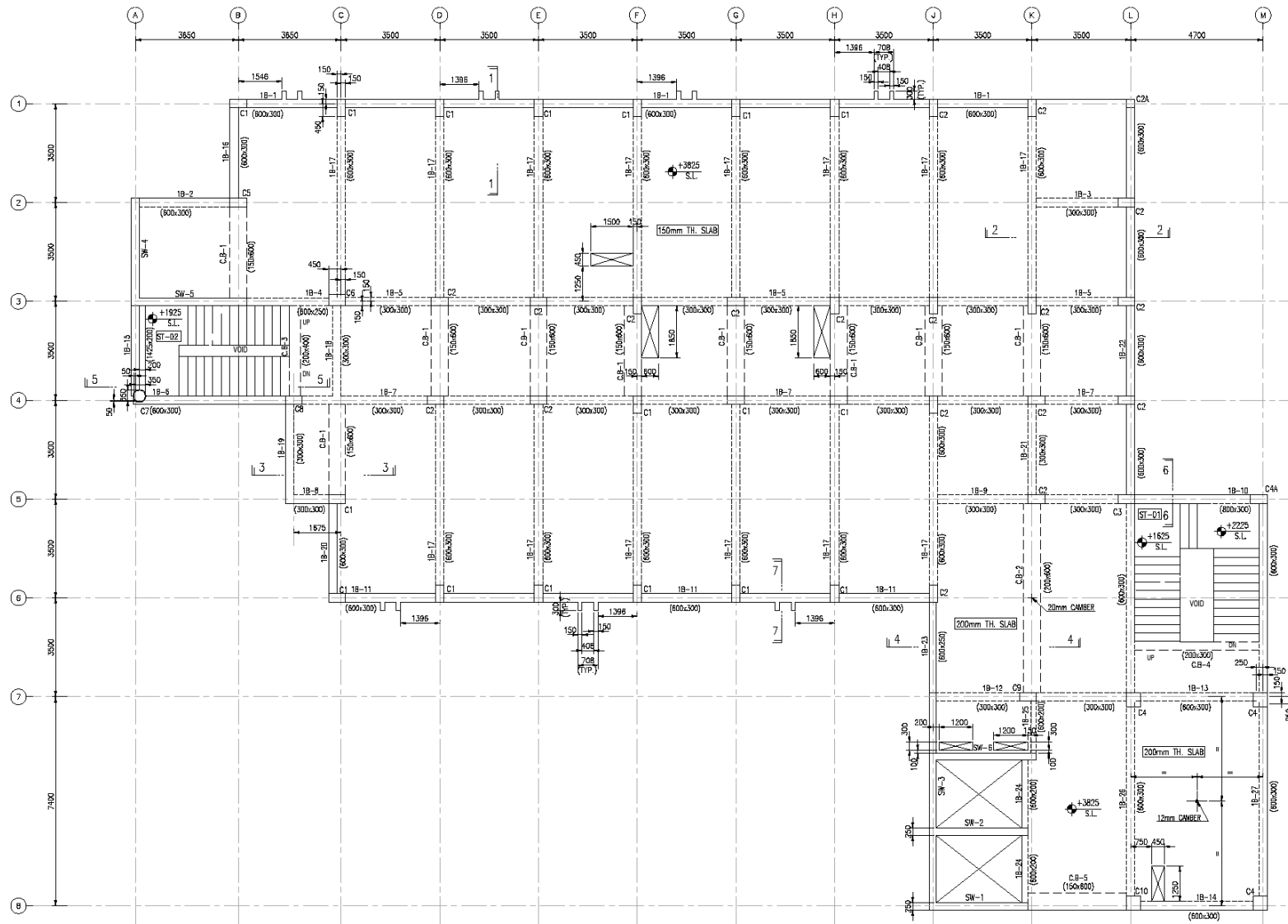
FOUNDATION LAY OUT PLAN
SCALE 1:75

- ### NOTES
- 1- THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, PLUMBING, ELECTRICAL AND STRUCTURAL DRAWINGS.
 - 2- CONCRETE TO HAVE FOLLOWING CYLINDRICAL CRUSHING STRENGTH AT 28 DAYS.
 - (i) BEAMS, SLABS & STAIRCASE = 3 KSI
 - (ii) COLUMNS, SHEAR WALLS & LIFT WALLS = 4 KSI
 - (iii) FOOTINGS = 4 KSI
 - 3- REINFORCEMENT BARS SHOWN, SHALL BE READ THUS.

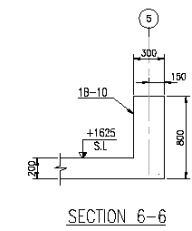
NO. OF BARS	21-T	100B	150-T
D=DEFORMED BARS			
BAR DIA. IN mm			
BAR LOCATION			
BAR SPACING			
BAR MARK			
 - 4- DEFORMED BARS SHALL HAVE A MINIMUM YIELD STRENGTH OF 80,000 P.S.I.
 - 5- MINIMUM CONCRETE COVER TO REINFORCEMENT TO BE IN.
 - FOUNDATIONS TOP : 75 mm
 - FOUNDATIONS BOTTOM : 75 mm
 - COLUMNS : 37 mm
 - BEAMS : 37 mm
 - WALLS : 25 mm
 - SLABS : 20 mm
 - 6- IN PLANS ALL TOP BARS SHOWN DOTTED AND ALL BOTTOM BARS SHOWN IN FULL.
 - 7- FOUNDATION ARE DESIGNED FOR GROUND+1st+2nd+3rd+4th+ROOF & UPPER ROOF.
 - 8- FOUNDATIONS ARE DESIGNED FOR SUB SOIL BEARING CAPACITY OF 2.0 TSF AT A DEPTH OF 5.5 FT. FROM E.G.L.
 - 9- LAP LENGTH SHOULD BE 60 DIA (U/LD) FOR COLUMN.
 - 10- LAP LENGTH SHOULD BE 60 DIA (U/LD) FOR BEAM.
 - 11- EXTEND TOP BARS FROM SUPPORT L/4 OF SPAN. (BOTH ENDS)



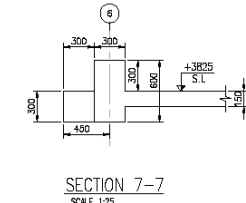
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REV	AMENDMENTS	DATE	DRAWN	CHECKED
ARCHITECT				
PROJECT		PROPOSED OPD BUILDING AT OMA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD KARACHI	PROJECT NO. 11021	
TITLE		GENERAL ARRANGEMENT OF FOUNDATION LAY OUT PLAN	DRAWING NO. S-01	
DRAWN BY	CHECKED BY	DATE	SCALE	
ARMAH	LB	27-02-2019	AS SHOWN	



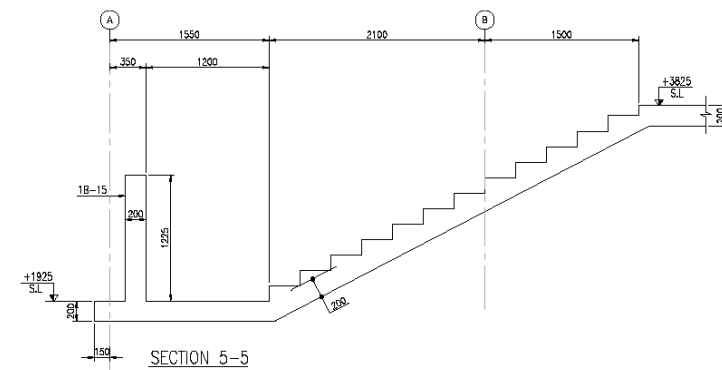
1ST FLOOR PLAN
ALL SLABS ARE 150mm THICK (U.K.)
SCALE: 1:75



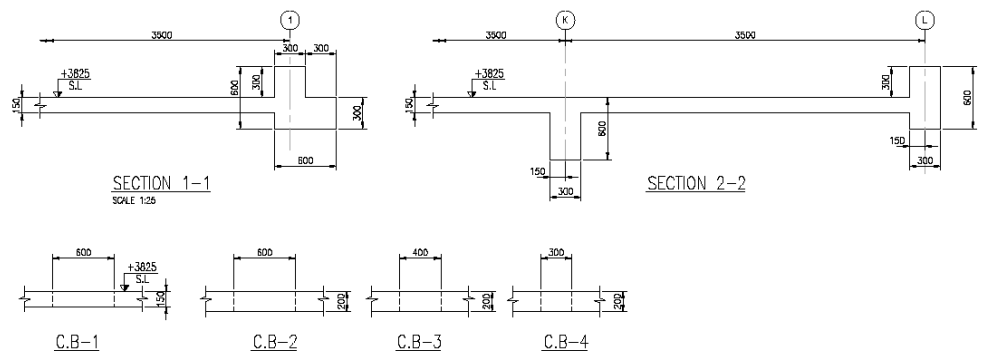
SECTION 6-6



SECTION 7-7
SCALE: 1:25



SECTION 5-5

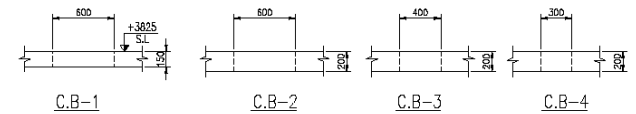


SECTION 1-1
SCALE: 1:25

SECTION 2-2

SECTION 3-3

SECTION 4-4



C.B-1

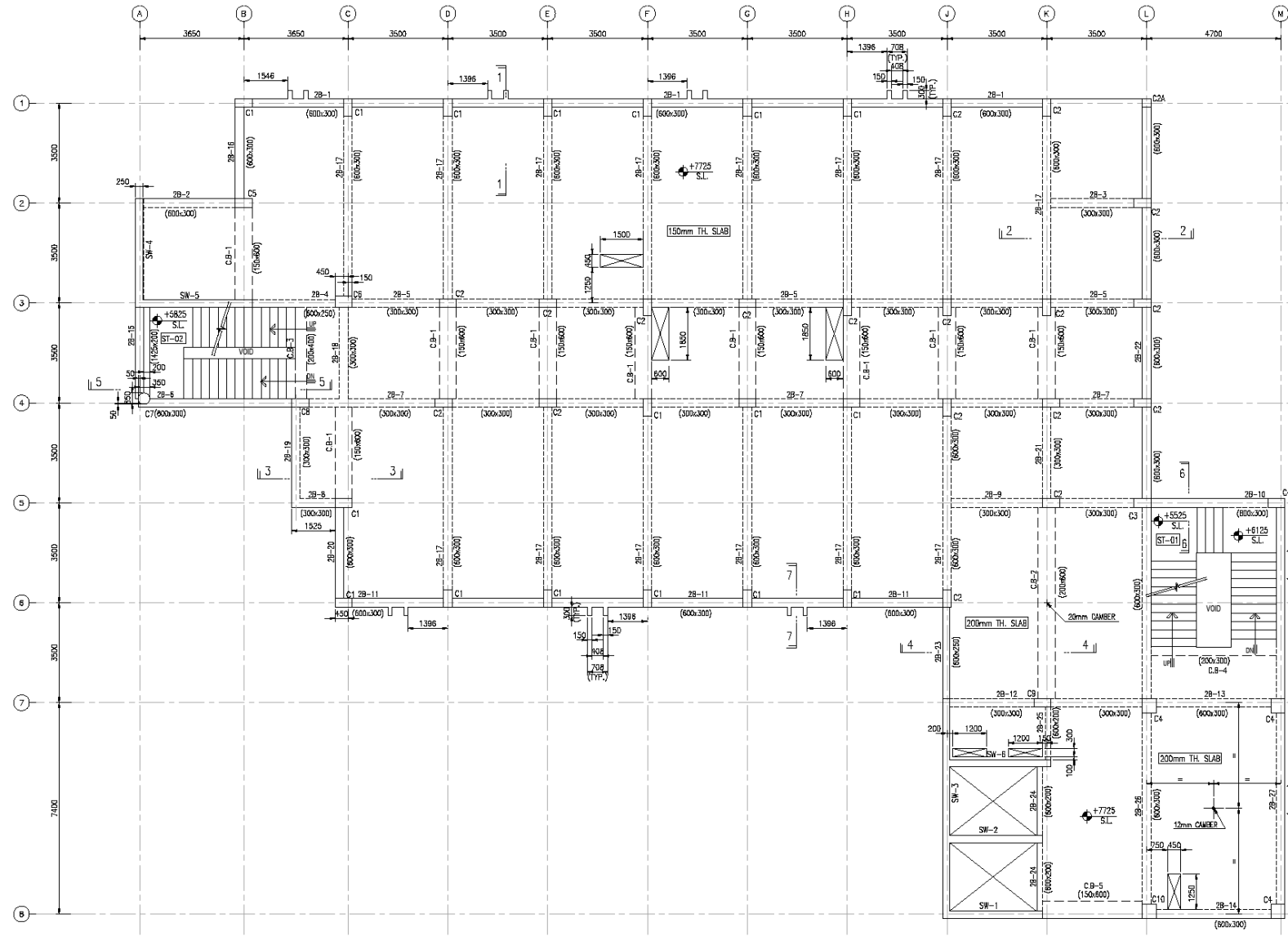
C.B-2

C.B-3

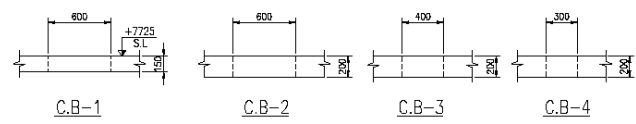
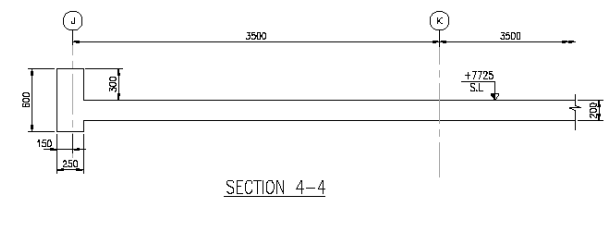
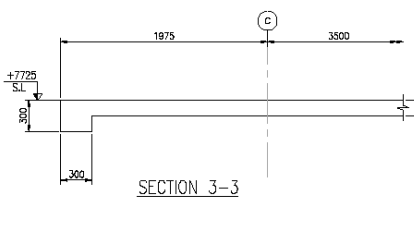
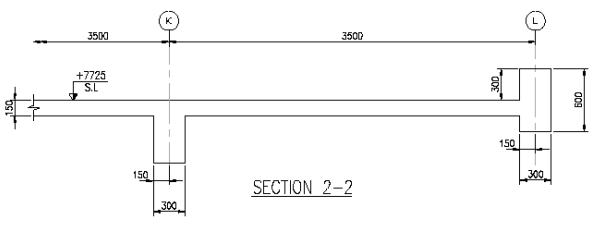
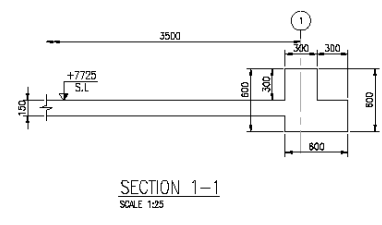
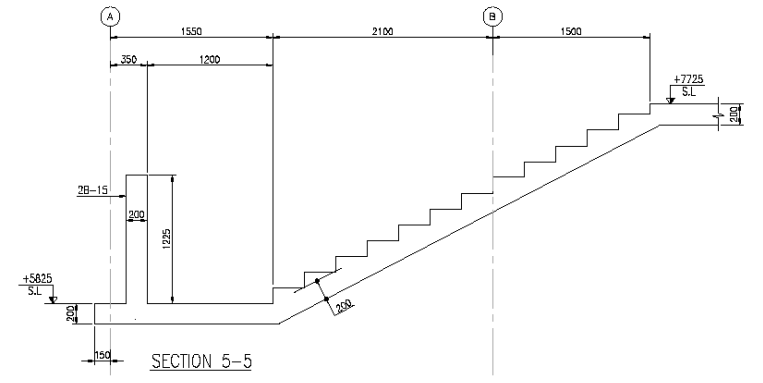
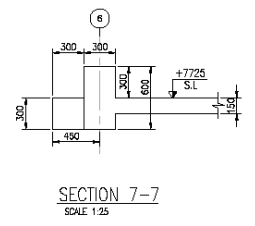
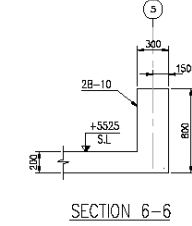
C.B-4

NOTE:-
FOR GENERAL NOTES REFER DWG.S-01

1	ISSUED FOR CONSTRUCTION	17-06-19	M.T.S	I.B
0	PRELIMINARY STRUCTURE FOR INFO ONLY DWG.	05-03-19	SAR	I.B
REV	AMENDMENTS	DATE	DRAWN	CHECKED
ARCHITECT				
PROJECT				PROJECT NO.
PROPOSED OPD BUILDING AT OIRA CAMPUS, DOW UNIVERSITY OF HEALTH SCIENCE, SUPARCO ROAD KARACHI				11021
TITLE				DRAWING NO.
GENERAL ARRANGEMENT OF 1ST FLOOR SLAB PLAN				S-02
DRAWN BY	CHECKED BY	DATE	SCALE	
SALMAN	I.B	27-02-2019	AS SHOWN	

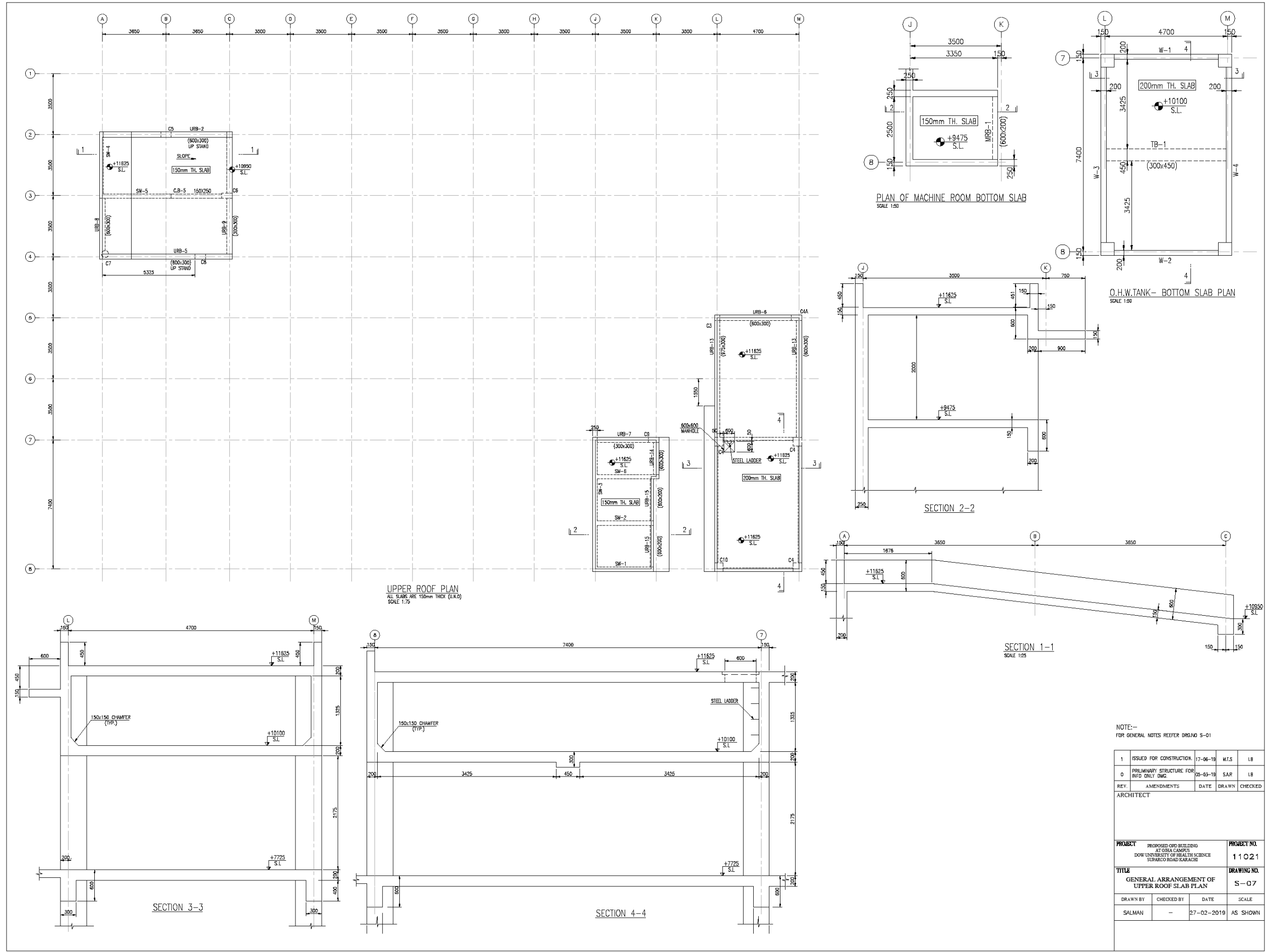


ROOF PLAN
ALL SLABS ARE 150mm THICK (UNO)
SCALE 1:75



NOTE:— FOR GENERAL NOTES REFER DWGS-01

1	ISSUED FOR CONSTRUCTION	17-06-19	M.T.S	LB
0	PRELIMINARY STRUCTURE FOR INFO ONLY DWG.	05-03-19	ALH	LB
REV.	AMENDMENTS	DATE	DRAWN	CHECKED
ARCHITECT				
PROJECT			PROJECT NO.	
PROPOSED OPD BUILDING AT ORA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD KARACHI			11021	
TITLE			DRAWING NO.	
GENERAL ARRANGEMENT OF ROOF SLAB PLAN			S-03	
DRAWN BY	CHECKED BY	DATE	SCALE	
ARWAN	LB	27-02-2019	AS SHOWN	



UPPER ROOF PLAN
ALL SLABS ARE 150mm THICK (I.L.O.)
SCALE 1:75

PLAN OF MACHINE ROOM BOTTOM SLAB
SCALE 1:50

O.H.W. TANK - BOTTOM SLAB PLAN
SCALE 1:50

SECTION 2-2

SECTION 1-1
SCALE 1:25

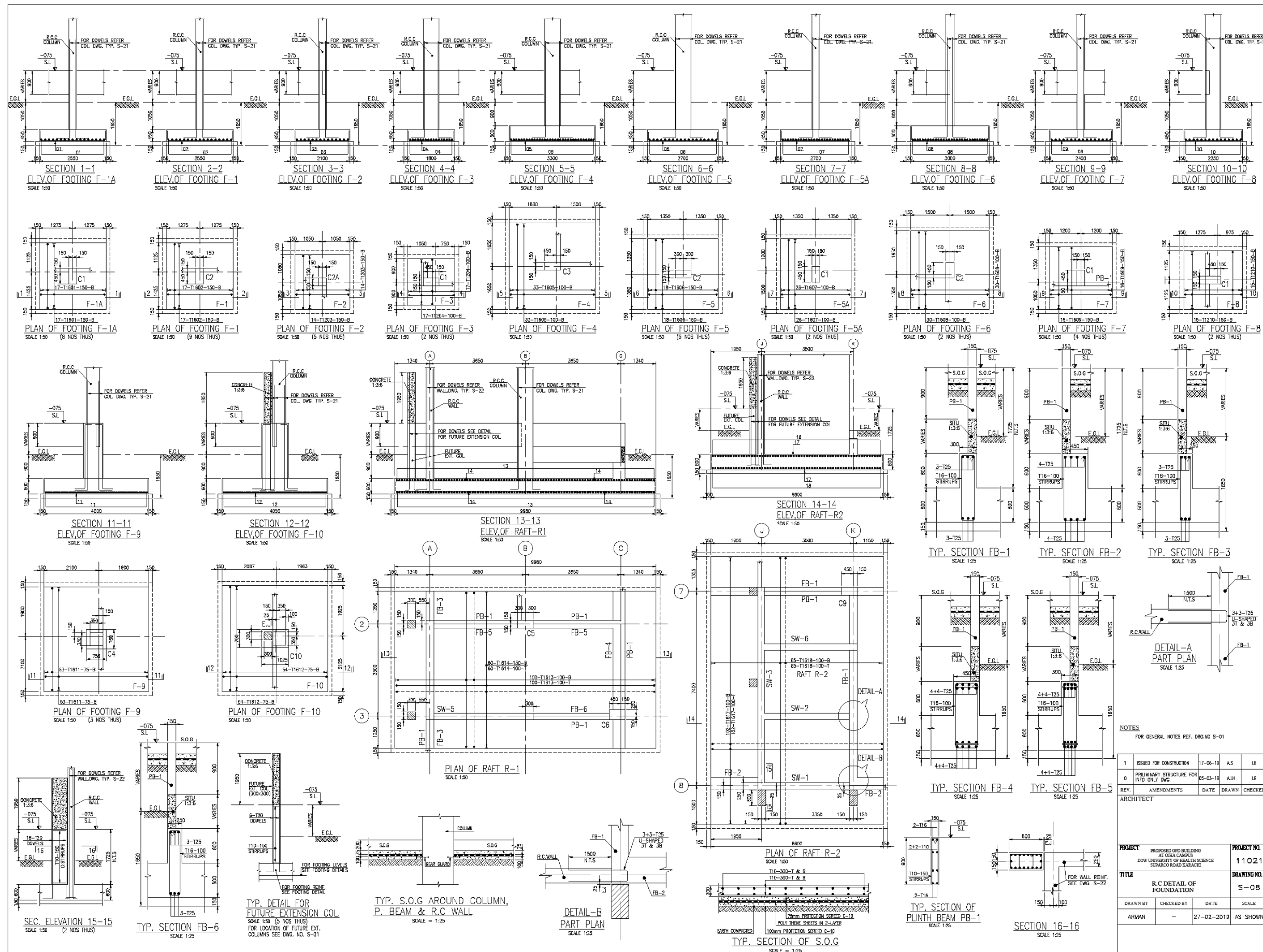
SECTION 3-3

SECTION 4-4

NOTE:-
FOR GENERAL NOTES REFER DRGNO S-01

REV.	AMENDMENTS	DATE	DRAWN	CHECKED
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0	PRELIMINARY STRUCTURE FOR INFO ONLY DWG.	05-03-19	SAR	I.B

PROJECT	PROPOSED OPD BUILDING AT ORSA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCES SUPARCO ROAD KARACHI	PROJECT NO.	11021
TITLE	GENERAL ARRANGEMENT OF UPPER ROOF SLAB PLAN	DRAWING NO.	S-07
DRAWN BY	SALMAN	CHECKED BY	-
DATE	27-02-2019	SCALE	AS SHOWN



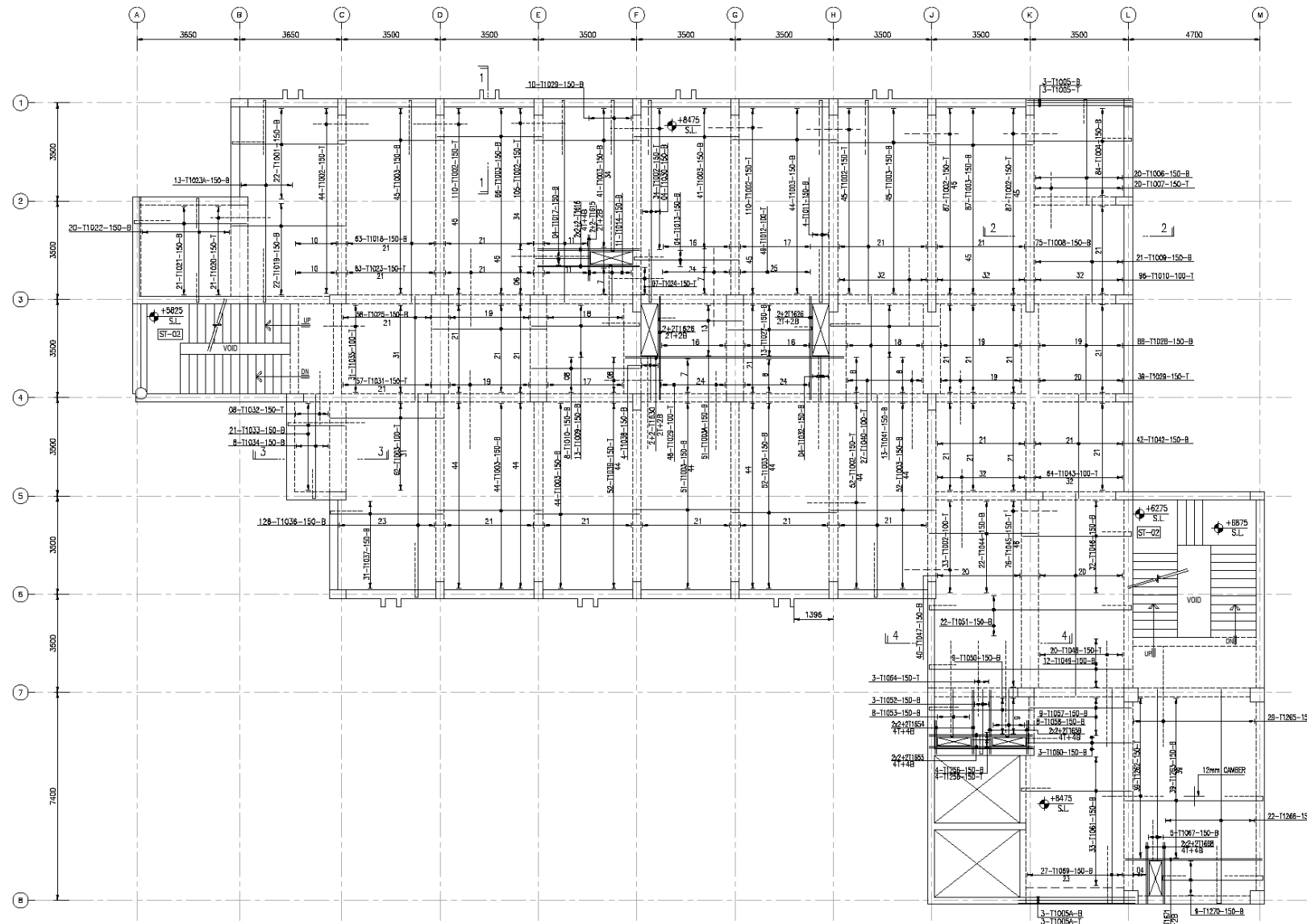
NOTES
FOR GENERAL NOTES REF. DRG NO S-01

1	ISSUED FOR CONSTRUCTION	17-06-19	A.S	LB
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REV.	AMENDMENTS	DATE	DRAWN	CHECKED

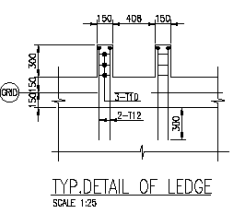
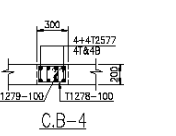
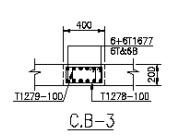
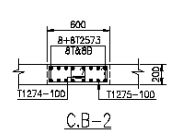
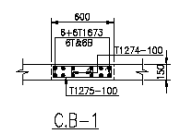
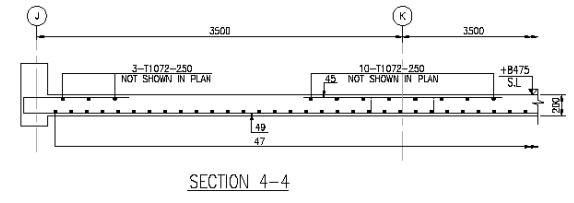
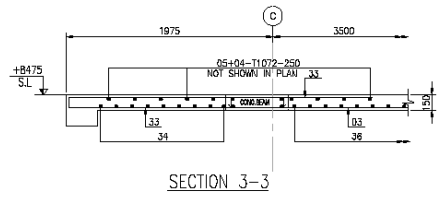
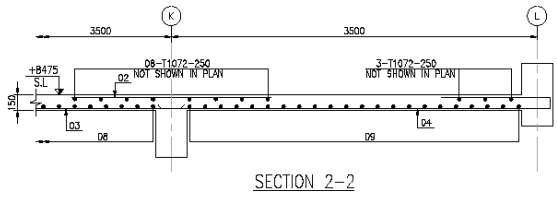
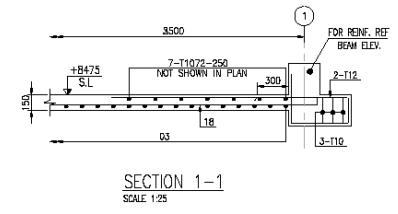
ARCHITECT

PROJECT	PROPOSED OPD BUILDING AT QIBA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPERBLOCK KARACHI	PROJECT NO.	11021
TITLE	R.C DETAIL OF FOUNDATION	DRAWING NO.	S-08

DRAWN BY	CHECKED BY	DATE	SCALE
ARMAN	-	27-02-2019	AS SHOWN

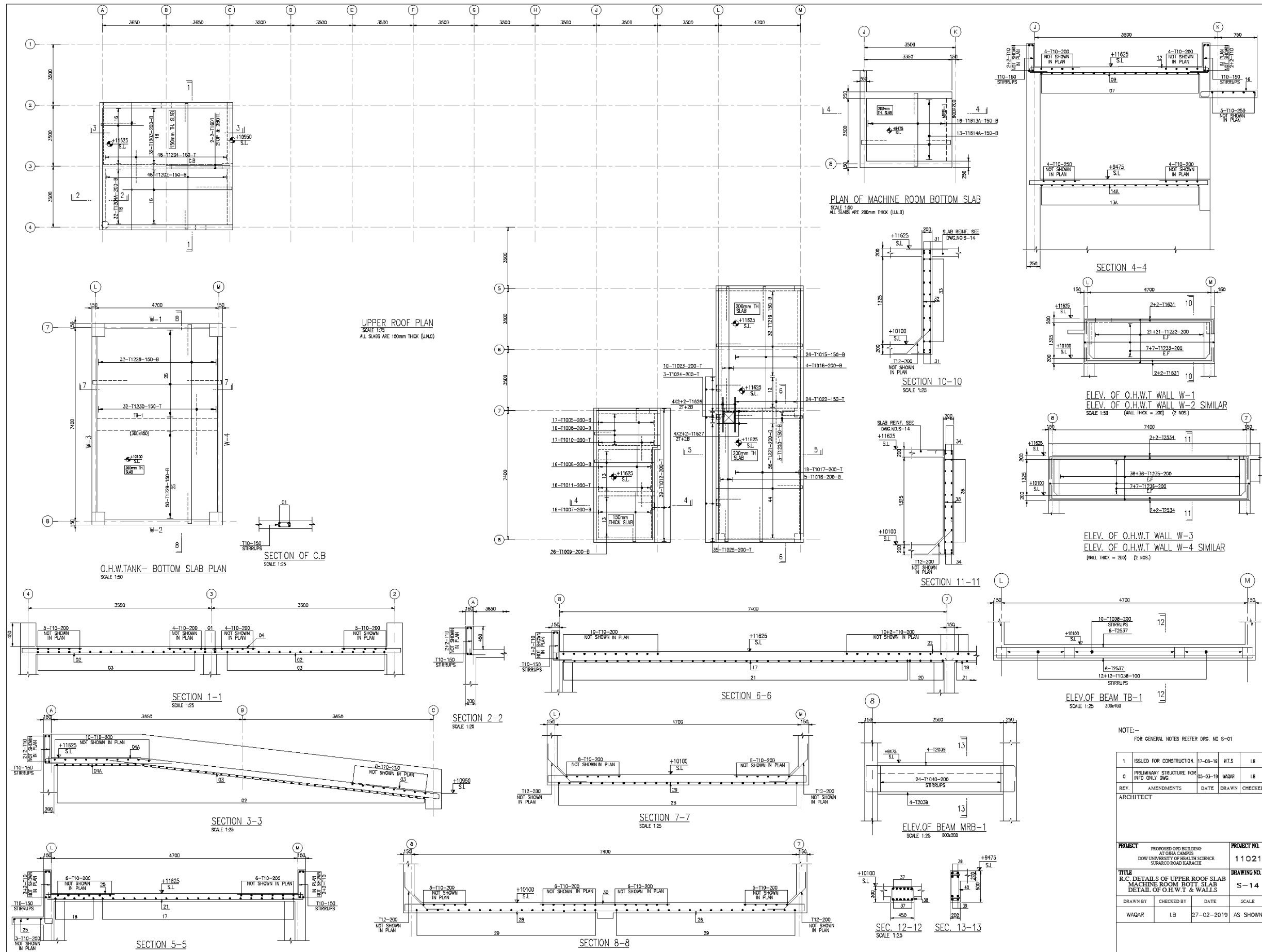


ROOF PLAN
 ALL SLABS ARE 150mm THICK (U.N.O)
 SCALE 1:75



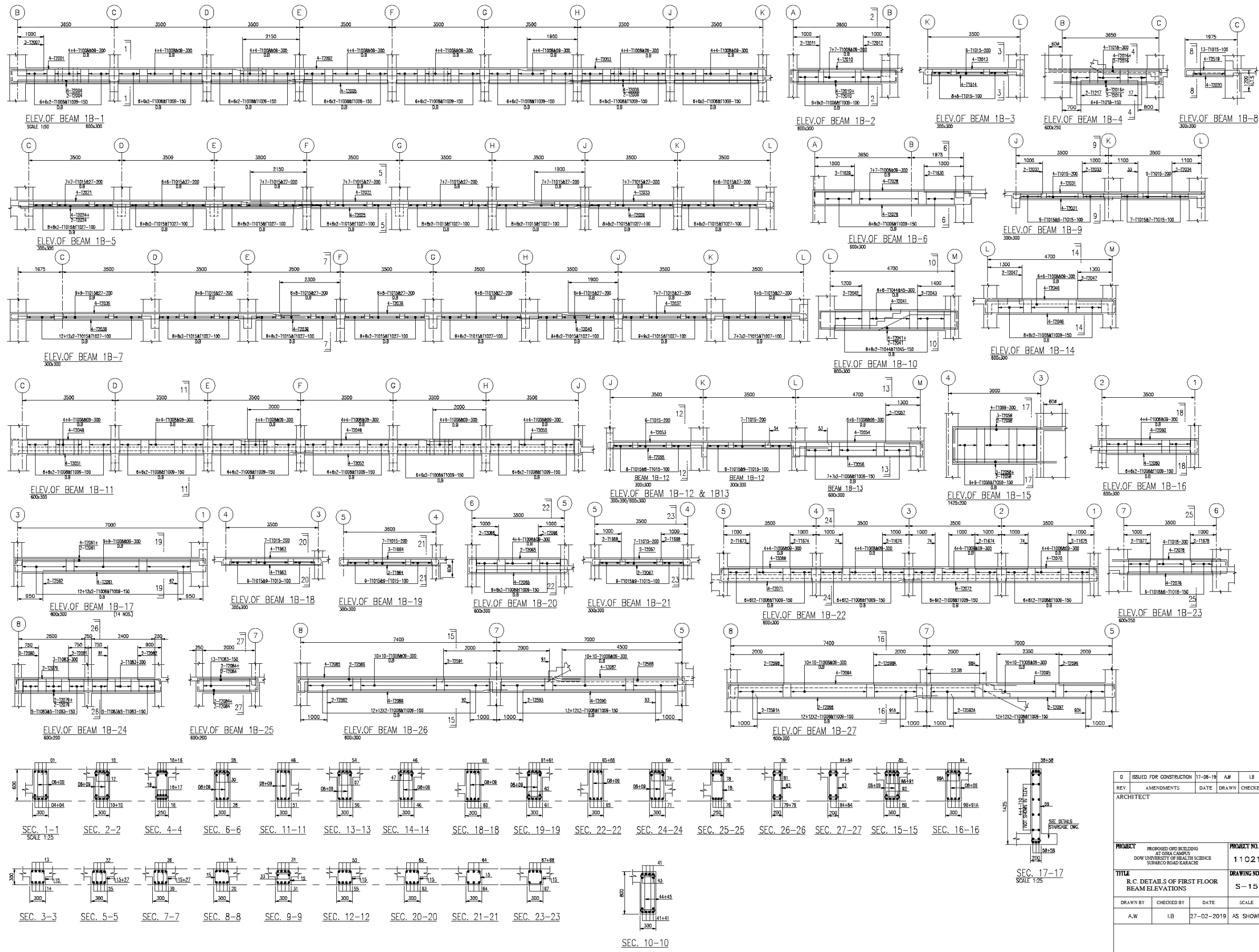
NOTE:-
 FOR GENERAL NOTES REFER DRG NO S-01

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REV.	AMENDMENTS	DATE	DRAWN	CHECKED
ARCHITECT				
PROJECT	PROPOSED OPD BUILDING AT ORSA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUKHNO ROAD KARACHI			PROJECT NO. 11021
TITLE	R.C.C DETAIL OF ROOF SLAB PLAN			DRAWING NO. S-10
DRAWN BY	CHECKED BY	DATE	SCALE	
USAMA	L.B	27-02-2019	AS SHOWN	

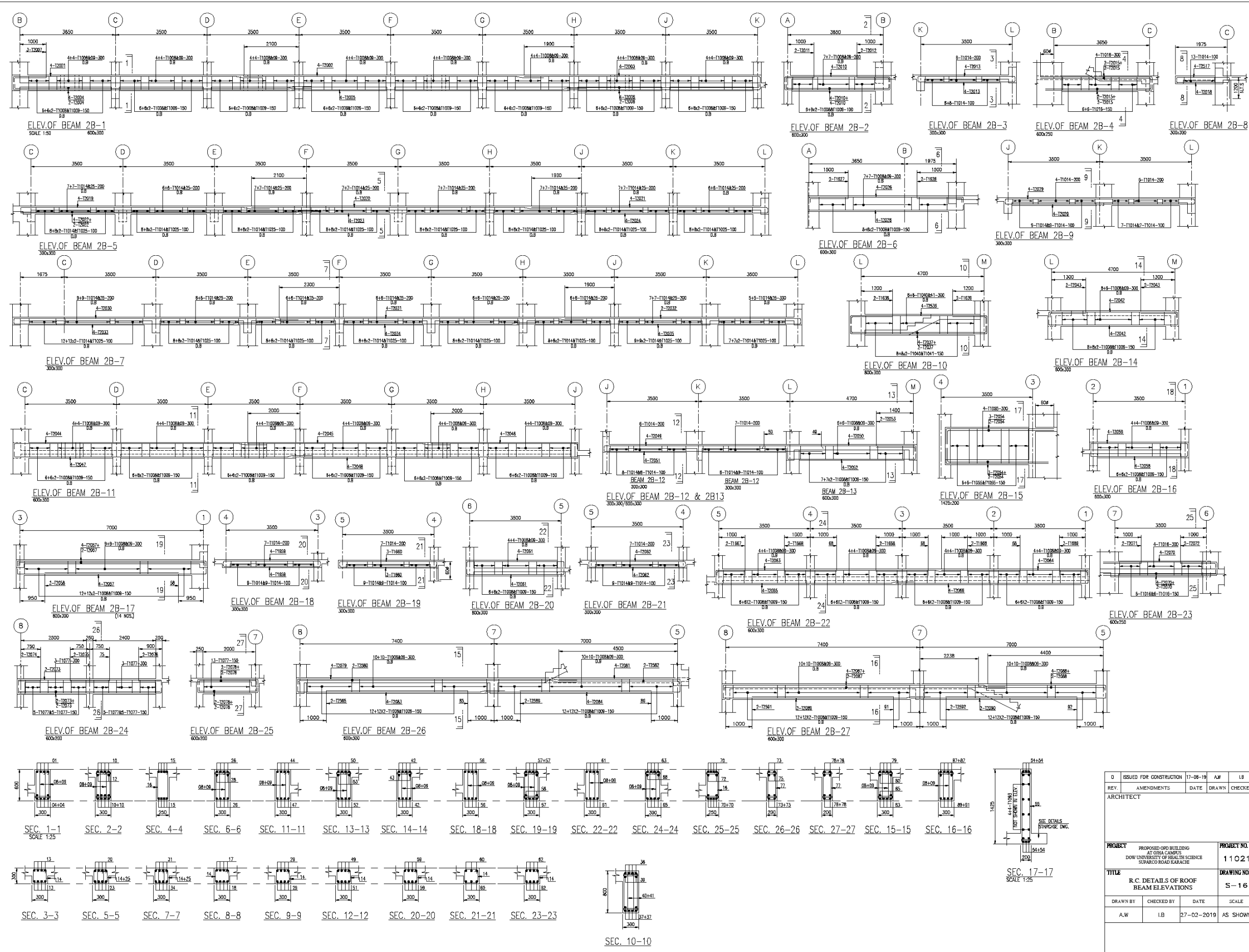


NOTE:-
FOR GENERAL NOTES REFER Dwg. NO S-01

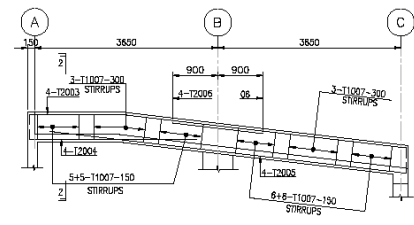
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REV.	AMENDMENTS	DATE	DRAWN	CHECKED
ARCHITECT				
PROJECT		PROPOSED OPD BUILDING AT ORSA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SUPARCO ROAD KARACHI		PROJECT NO. 11021
TITLE		R.C. DETAIL OF UPPER ROOF SLAB MACHINE ROOM BOTTL. SLAB DETAIL OF O.H.W.T & WALLS		DRAWING NO. S-14
DRAWN BY	CHECKED BY	DATE	SCALE	
WAQAR	1.B	27-02-2019	AS SHOWN	



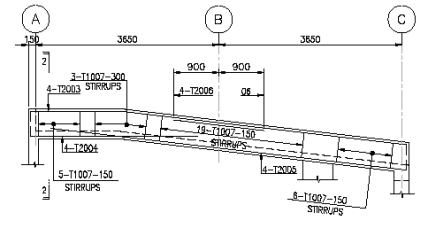
REV.	ISSUED FOR CONSTRUCTION	AMENDMENTS	DATE	DATE	A/W	LB	LB
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1	AMENDMENTS						
ARCHITECT							
PROJECT						PROJECT NO.	
PROPOSED OPD BUILDING AT ORSA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SEPARCO ROAD KARACHI						11021	
TITLE						DRAWING NO.	
R.C. DETAILS OF FIRST FLOOR BEAM ELEVATIONS						S-15	
DRAWN BY		CHECKED BY		DATE		SCALE	
A.W		LB		27-02-2019		AS SHOWN	



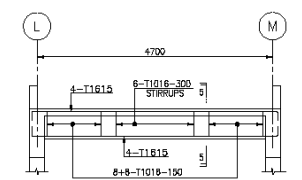
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REV.	AMENDMENTS	DATE	DRAWN	CHECKED
ARCHITECT				
PROJECT	PROPOSED OPD BUILDING AT ORSA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCES SUPARCO ROAD KARACHI	PROJECT NO.	11021	
TITLE	R.C. DETAILS OF ROOF BEAM ELEVATIONS	DRAWING NO.	S-16	
DRAWN BY	CHECKED BY	DATE	SCALE	
A.W	LB	27-02-2019	AS SHOWN	



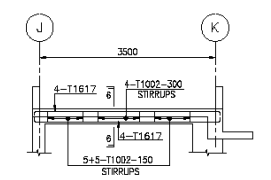
ELEV. OF BEAM URB-2
600/300
SCALE 1:25



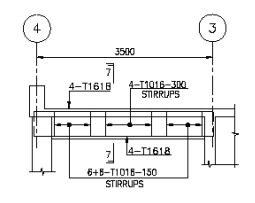
ELEV. OF BEAM URB-5
600/300



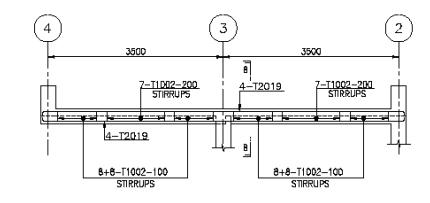
ELEV. OF BEAM URB-6
600/300



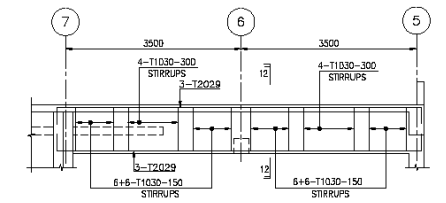
ELEV. OF BEAM URB-7
300/300



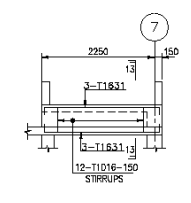
ELEV. OF BEAM URB-8
600/300



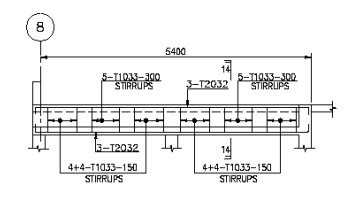
ELEV. OF BEAM URB-9
300/300



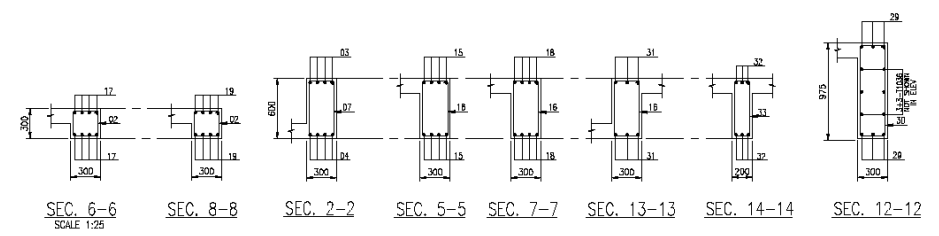
ELEV. OF BEAM URB-13
975/300
(2 NOS)



ELEV. OF BEAM URB-14
600/300



ELEV. OF BEAM URB-15
600/300



SEC. 6-6 SCALE 1:25
SEC. 8-8
SEC. 2-2
SEC. 5-5
SEC. 7-7
SEC. 13-13
SEC. 14-14
SEC. 12-12

0	ISSUED FOR CONSTRUCTION	17-06-19	ALH	LB
REV.	AMENDMENTS	DATE	DRAWN	CHECKED
ARCHITECT				
PROJECT			PROJECT NO.	
PROPOSED OPD BUILDING AT ORA CAMPUS DOW UNIVERSITY OF HEALTH SCIENCE SQUARCO ROAD KARACHI			11021	
TITLE			DRAWING NO.	
R.C. DETAILS OF UPPER ROOF BEAM ELEVATIONS			S-20	
DRAWN BY	CHECKED BY	DATE	SCALE	
AH-WED	LB	28-3-2019	AS SHOWN	



**DOW UNIVERSITY
OF HEALTH SCIENCES
KARACHI.**

**TENDER DRAWING
ELECTRICAL**

DATE :- MAY 2020

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

DRAWINGS REGISTER

PROJECT NAME : OJHA CAMPUS
SHEET NO. : 01

18-05-2020 TENDER DRAWING

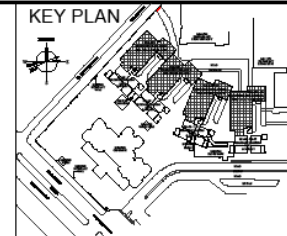
S/NO.	DWG. NO.	TITLE	SIZE	REVISION
GENERAL DRAWINGS				
1	EL-00-00	MAIN TITLE	900x600	●
2	EL-00-01	DRAWINGS REGISTER	900x600	●
3	EL-00-02	ELECTRICAL LEGEND GENERAL NOTES & KEY TO WORDS	900x600	●
4	EL-00-03	INSTALLATION DETAILS	900x600	●
5	EL-00-04	RISER DIAGRAM FOR POWER DISTRIBUTION SYSTEM	900x600	●
6	EL-00-05	RISER DIAGRAM FOR FIRE ALARM & PUBLIC ADDRESS SYSTEM	900x600	●
7	EL-00-06	RISER DIAGRAM FOR CCTV SYSTEM	900x600	●
8 TO 12	EL-00-07A TO EL-00-07D	SINGLE LINE DIAGRAM	900x600	●
GROUND FLOOR				
13	EL-01-00	GROUND FLOOR REFLECTED CEILING PLAN	900x600	●
14	EL-01-01	GROUND FLOOR WIRING & LIGHTING LAYOUT	900x600	●
15	EL-01-02	GROUND FLOOR FIRE ALARM & WIFI SYSTEM LAYOUT	900x600	●
16	EL-01-03	GROUND FLOOR PUBLIC ADDRESS & CCTV SYSTEM LAYOUT	900x600	●
17	EL-01-04	GROUND FLOOR POWER, DATA & VOICE COMMUNICATION SYSTEM LAYOUT	900x600	●
18	EL-01-05	GROUND FLOOR CABLE CONTAINMENT LAYOUT	900x600	●
FIRST FLOOR				
19	EL-02-00	FIRST FLOOR REFLECTED CEILING PLAN	900x600	●
20	EL-02-01	FIRST FLOOR WIRING & LIGHTING LAYOUT	900x600	●
21	EL-02-02	FIRST FLOOR FIRE ALARM & WIFI SYSTEM LAYOUT	900x600	●
22	EL-02-03	FIRST FLOOR PUBLIC ADDRESS & CCTV SYSTEM LAYOUT	900x600	●
23	EL-02-04	FIRST FLOOR POWER, DATA & VOICE COMMUNICATION SYSTEM LAYOUT	900x600	●
24	EL-02-05	FIRST FLOOR CABLE CONTAINMENT LAYOUT	900x600	●
25				
SECOND FLOOR				
26	EL-03-00	SECOND FLOOR REFLECTED CEILING PLAN	900x600	●
27	EL-03-01	SECOND FLOOR WIRING & LIGHTING LAYOUT	900x600	●
28	EL-03-02	SECOND FLOOR FIRE ALARM & WIFI SYSTEM LAYOUT	900x600	●
29	EL-03-03	SECOND FLOOR PUBLIC ADDRESS & CCTV SYSTEM LAYOUT	900x600	●
30	EL-03-04	SECOND FLOOR POWER, DATA & VOICE COMMUNICATION SYSTEM LAYOUT	900x600	●
31	EL-03-05	SECOND FLOOR CABLE CONTAINMENT LAYOUT	900x600	●
DISTRIBUTION				
REVISION				
P-PRELIMINARY	X-INFORMATION	T-TENDER	C-CONSTRUCTION	R,C-REVIEW & COMMENTS
H-HARDCOPY	B-BLUE PRINT			
D-DISC	E-EMAIL			
REMARKS: * * *	=ISSUED DRAWINGS			

DRAWINGS REGISTER

PROJECT NAME : OJHA CAMPUS
SHEET NO. : 01

18-05-2020 TENDER DRAWING

S/NO.	DWG. NO.	TITLE	SIZE	REVISION
THIRD FLOOR				
32	EL-04-00	THIRD FLOOR REFLECTED CEILING PLAN	900x600	●
33	EL-04-01	THIRD FLOOR WIRING & LIGHTING LAYOUT	900x600	●
34	EL-04-02	THIRD FLOOR FIRE ALARM & WIFI SYSTEM LAYOUT	900x600	●
35	EL-04-03	THIRD FLOOR PUBLIC ADDRESS & CCTV SYSTEM LAYOUT	900x600	●
36	EL-04-04	THIRD FLOOR POWER, DATA & VOICE COMMUNICATION SYSTEM LAYOUT	900x600	●
37	EL-04-05	THIRD FLOOR CABLE CONTAINMENT LAYOUT	900x600	●
FOURTH FLOOR				
38	EL-05-00	FOURTH FLOOR REFLECTED CEILING PLAN	900x600	●
39	EL-05-01	FOURTH FLOOR WIRING & LIGHTING LAYOUT	900x600	●
40	EL-05-02	FOURTH FLOOR FIRE ALARM & WIFI SYSTEM LAYOUT	900x600	●
41	EL-05-03	FOURTH FLOOR PUBLIC ADDRESS & CCTV SYSTEM LAYOUT	900x600	●
42	EL-05-04	FOURTH FLOOR POWER, DATA & VOICE COMMUNICATION SYSTEM LAYOUT	900x600	●
43	EL-05-05	FOURTH FLOOR CABLE CONTAINMENT LAYOUT	900x600	●
ROOF LEVEL				
44	EL-06-00	ROOF LEVEL REFLECTED CEILING PLAN	900x600	●
45	EL-06-01	ROOF LEVEL WIRING & LIGHTING LAYOUT	900x600	●
46	EL-06-02	ROOF LEVEL FIRE ALARM & CCTV SYSTEM LAYOUT	900x600	●
47	EL-06-03	ROOF LEVEL POWER & CABLE CONTAINMENT LAYOUT	900x600	●
DISTRIBUTION				
REVISION				
P-PRELIMINARY	X-INFORMATION	T-TENDER	C-CONSTRUCTION	R,C-REVIEW & COMMENTS
H-HARDCOPY	B-BLUE PRINT			
D-DISC	E-EMAIL			
REMARKS: * * *	=ISSUED DRAWINGS			



NOTE:-

02	ISSUED FOR REVIEW & COMMENTS	0-07-2019
01	ISSUED FOR REVIEW & COMMENTS	18-04-2019
REV.	DESCRIPTION	DATE
DATE	DESCRIPTION	DATE



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

CONSULTANT

DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:

DRAWING REGISTER

DRAWN BY:	AUSAF HAEEM	DRAWING NO.:	EL-00-01
CHECKED BY:	M. W. K.		
DESIGN BY:	H. Z.		
SCALE:	N. T. S.	REV. NO.:	

ELECTRICAL LEGEND

SYMBOLS	DESCRIPTION	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 RECESSED 45W LED PANEL 1200x300mm FIXTURE OF DIFFUSED GLASS COLOR 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	AT 0'-0" A.F.F.L
	CEILING FAN (36"φ , 48"φ , 58"φ)	AT CEILING SLAB
	BULK HEAD EMERGENCY LIGHT WITH 10W LED WITH BUILT-IN BATTERY BACK-UP (NON MAINTAINED)	AT CEILING SLAB
	EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT (MAINTAINED)	AT CEILING SLAB
	EMERGENCY EXIT LIGHT FIXTURE WITH BUILT-IN BATTERY PACK UNIT AND DIRECTION SIGN (MAINTAINED)	AT CEILING SLAB
	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
	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
	6W CEILING SPEAKER (F.C)	AT FALSE CEILING
	6W CEILING SPEAKER	AT CEILING SLAB
	10W WALL MOUNTED SPEAKER	AT 7'-0" A.F.F.L
	WiFi CEILING MOUNTED	AT FALSE CEILING
	WiFi WALL MOUNTED	AT WALL MOUNTED
	DOME TYPE CCTV CAMERA	AT CEILING SLAB
	WALL BRACKET CCTV CAMERA	AT 7'-6" A.F.F.L
Q. MATIC SYSTEM		
	PUSH BUTTON	
	SCREEN	
	TICKET DISPENSER	
POWER, DATA & VOICE COMMUNICATION SYSTEM		
	13A INTERNATIONAL SWITCH SOCKET / AT COUNTER HEIGHT	AT 0'-9" / 3'-6" A.F.F.L
	13A FLAT PIN SIMPLEX SWITCH SOCKET	AT 0'-9" A.F.F.L
	15A 3-PIN SWITCH SOCKET	AT 0'-9" A.F.F.L
	20A DP SWITCH SOCKET FOR HAND DRYER	AT 4'-0" A.F.F.L
	INDUSTRIAL SOCKET	AT 1'-6" A.F.F.L
	13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX	AT 0'-9" A.F.F.L
	13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX	AT 3'-6" A.F.F.L
	13A FLAT PIN SIMPLEX SWITCH SOCKET DUPLEX	AT 7'-0" A.F.F.L
	1NO. 13A INTERNATIONAL ON RAW POWER, 1NO. 13A FLAT PIN DUPLEX ON UPS POWER & 2NO. RJ-45 DUPLEX FOR VOICE & DATA	AT 0'-9" A.F.F.L
	RJ-45 SIMPLEX DATA OUTLET / AT COUNTER HEIGHT	AT 0'-9" / 3'-6" A.F.F.L
	TELEVISION OUTLET	AT 4'-0" A.F.F.L
	DISTRIBUTION BOARD	
	MAIN DISTRIBUTION BOARD	
	COMMUNICATION RACK	
	UPS POWER BUSWAY	
	CABLE TRAY FOR POWER & DATA CABLE (EACH TWO PARTITION)	

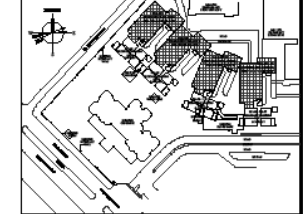
GENERAL NOTES

- 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 DRAWINGS.
- CIRCUIT WIRING SHALL BE DONE IN ACCORDANCE WITH THE WIRING SCHEDULE UNLESS OTHERWISE INDICATED.
- WIRING SHALL BE DONE AFTER THE COMPLETION OF CONDUCTING WORK IN ALL RESPECTS INCLUDING THE INSTALLATION OF BACK BOXES, OUTLET BOXES ETC.
- WIRING SHALL BE CONTINUOUS LAPPING 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 VIEW OF ITS PHYSICAL DIMENSIONS.
- BEFORE DETERMINING THE CUT LENGTH OF CABLE THE ACTUAL MEASUREMENTS BE TAKEN AT SITE AND PROVISIONS OF SLACK (3%) AT TERMINATION OF SWITCH BOARD (50" APPROX.) AND SPARE LOOP SHALL BE TAKEN INTO ACCOUNT.
- MOUNTING HEIGHT OF MISCELLANEOUS OUTLETS FROM FINISHED FLOOR LEVEL ARE SHOWN ON GIVEN SCHEDULE (REFER DRAWINGS).
- CONDUIT UNDER FLOOR SHALL HAVE A MINIMUM DEPTH OF 50mm MEASURED FROM FINISH FLOOR LEVEL TO TOP OF CONDUIT.
- MINIMUM SIZE OF CONDUIT SHALL BE 25mmφ, UNLESS OTHERWISE INDICATED.
- BACK BOXES FOR SWITCHES, SOCKETS AND TELEPHONE ETC. SHALL BE MADE WITH 16SWG SHEET STEEL.
- WIRE AS ECC SHALL BE GREEN IN COLOR OR GREEN / YELLOW IN COLOR.
- CONDUIT AND CABLES TO BE LAID UNDER FLOOR SHALL BE IN COORDINATION WITH OTHERS SERVICES.
- IN CASE OF ANY DEVIATION FROM DESIGN DRAWINGS AT ANY INSTANT THE CONTRACTOR MUST TAKE APPROVAL FROM CONSULTANT BEFORE COMMENCEMENT OF WORK AT SITE.
- FOR TELEPHONE WIRING, CAT-6 CABLE SHALL BE USED WITH GREY COLOR.
- FOR NETWORKING CAT-6 CABLE SHALL BE USED WITH BLUE COLOR OR ANY COLOR DISTINCT FROM TELEPHONE CAT-6 CABLE.
- FOR CCTV CAT-6 CABLE SHALL BE USED.

WIRING SCHEDULE

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 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 COMMON FOR ALL LIGHTS FIXTURE ON ONE CIRCUIT	1 x 2.5 Sq.mm + ECC 1 x 2.5 Sq.mm
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 OUTLET (UPS)	2 x 4 Sq.mm + ECC 1 x 4 Sq.mm FOR POWER

KEY PLAN



NOTE:-

NO.	ISSUED FOR REVIEW & COMMENTS	DATE
01	ISSUED FOR REVIEW & COMMENTS	04-07-2019
02	ISSUED FOR REVIEW & COMMENTS	04-04-2019

REV.	DATE	DESCRIPTION	DATE

CLIENT



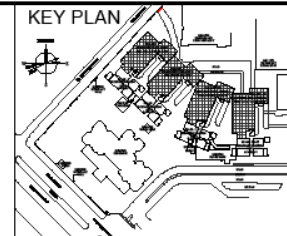
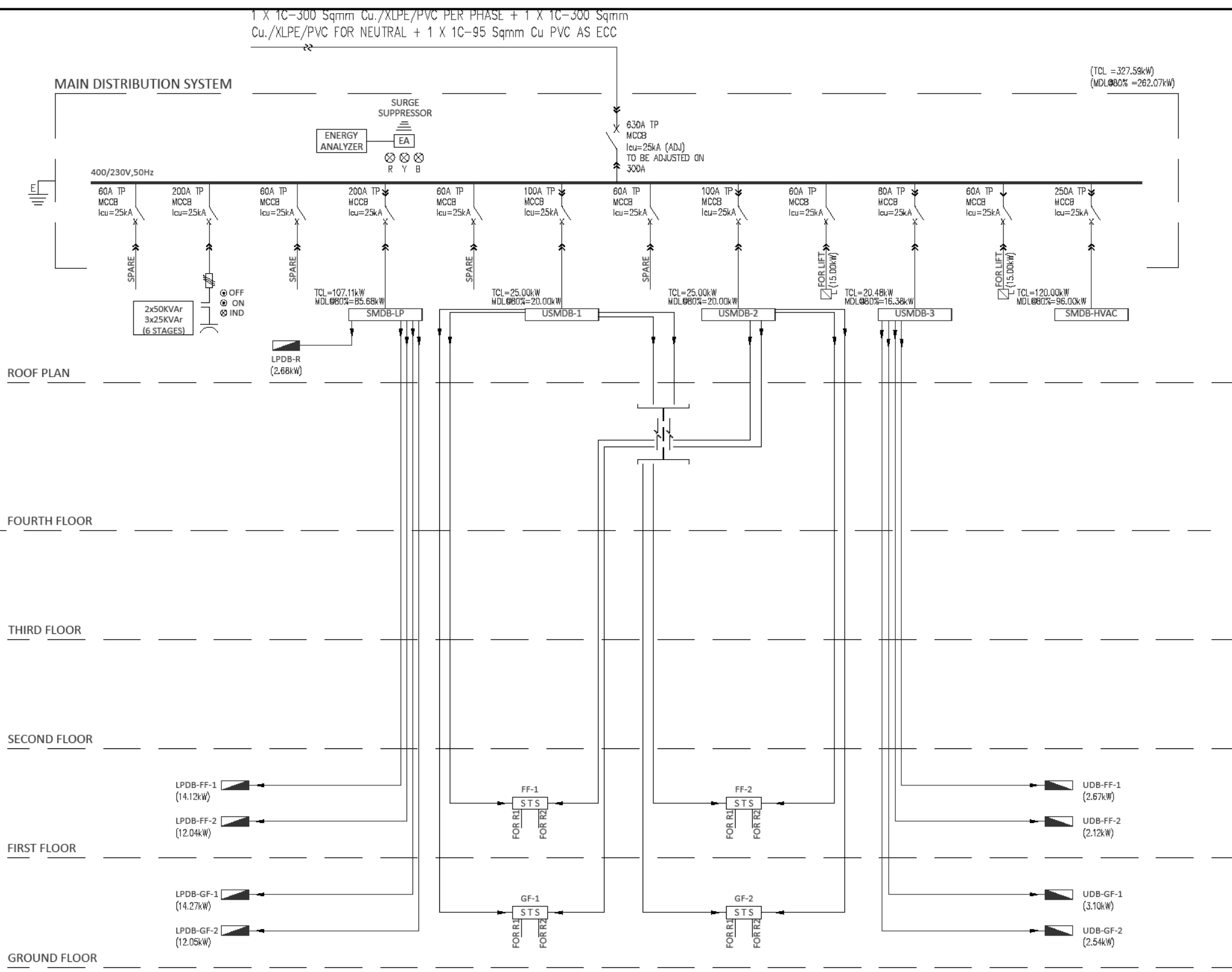
PROPOSED OPD
BUILDING OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD KARACHI

CONSULTANT

DRAWING STATUS:
REVIEW & COMMENTS

DRAWING TITLE:
ELECTRICAL LEGENDS

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



NOTE:

REV.	DATE	DESCRIPTION	DATE
02		ISSUED FOR REVIEW & COMMENTS	20-07-2019
01		ISSUED FOR REVIEW & COMMENTS	09-04-2019

CLIENT

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

CONSULTANT

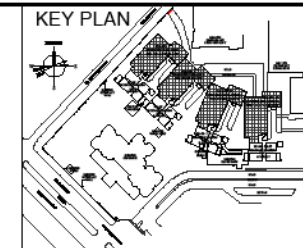
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REVIEW & COMMENTS

DRAWING TITLE:

RISER DIAGRAM FOR POWER DISTRIBUTION SYSTEM

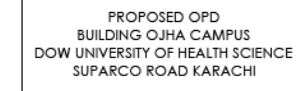
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CHECKED BY:	M. W. K		
DESIGN BY:	H. Z		
SCALE:	N. T. S	REV. NO:	



NOTE:

02	ISSUED FOR REVIEW & COMMENTS	10-07-2019
01	ISSUED FOR REVIEW & COMMENTS	09-04-2019
REV.	DESCRIPTION	DATE

MARK	DATE	DESCRIPTION



CONSULTANT

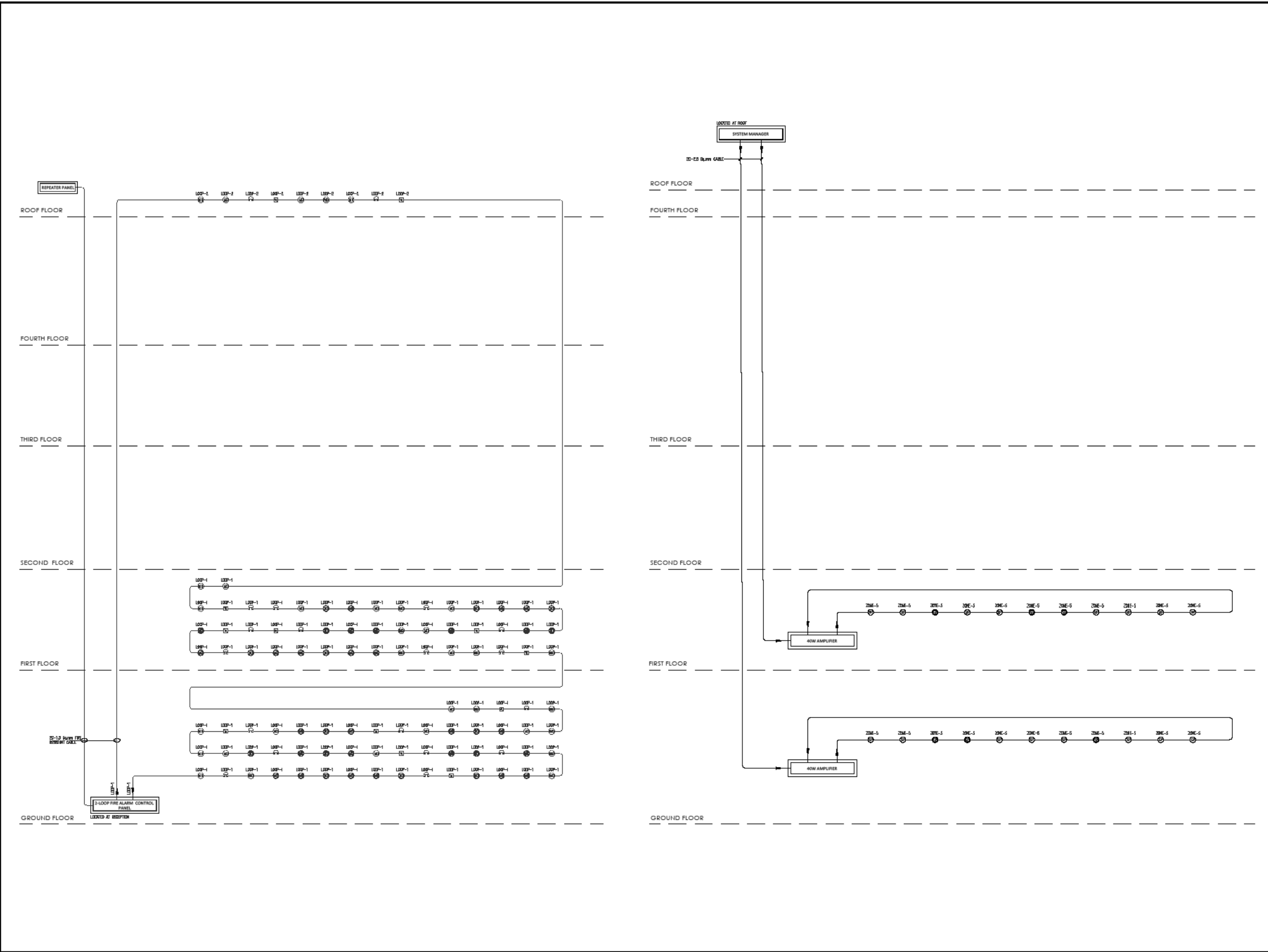
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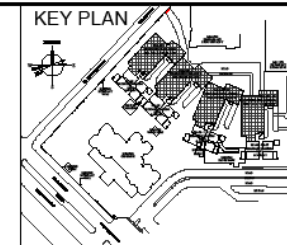
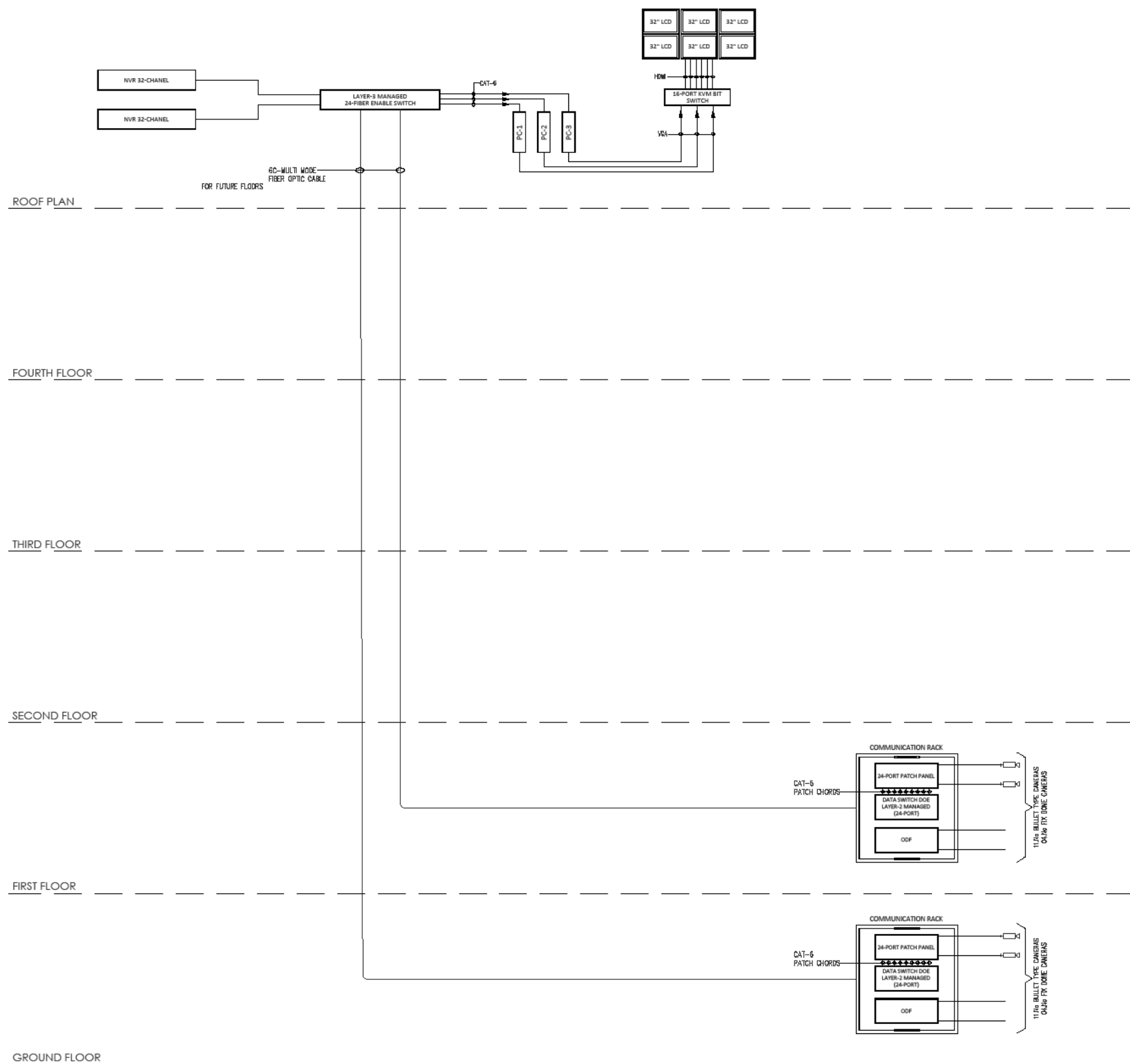
REVIEW & COMMENTS

DRAWING TITLE:

RISER DIAGRAM FOR FIRE ALARM & PUBLIC ADDRESS SYSTEM

DRAWN BY:	AUSAF HAEEM	DRAWING NO:	EL-00-05
CHECKED BY:	M. W. K.		
DESIGN BY:	H. Z.		
SCALE:	1 : 75	REV. NO:	





NOTE:

02	ISSUED FOR REVIEW & COMMENTS	0-07-2019
01	ISSUED FOR REVIEW & COMMENTS	09-04-2019
REV.	DESCRIPTION	DATE
DATE	DESCRIPTION	DATE

CLIENT:



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

CONSULTANT:

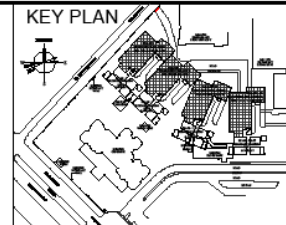
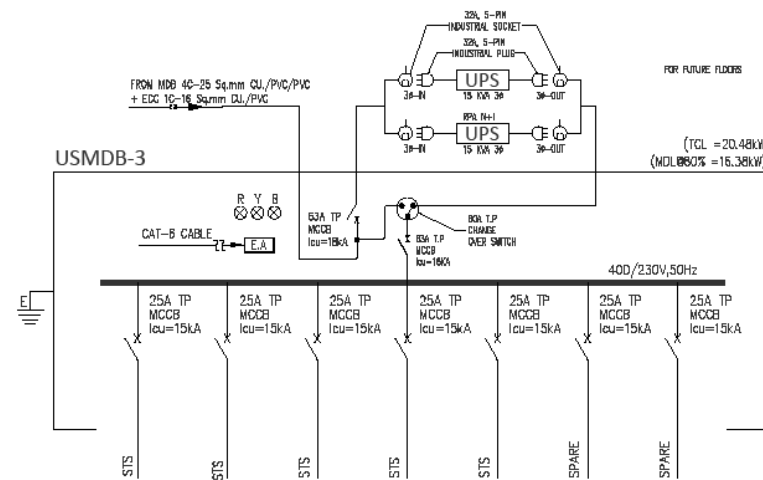
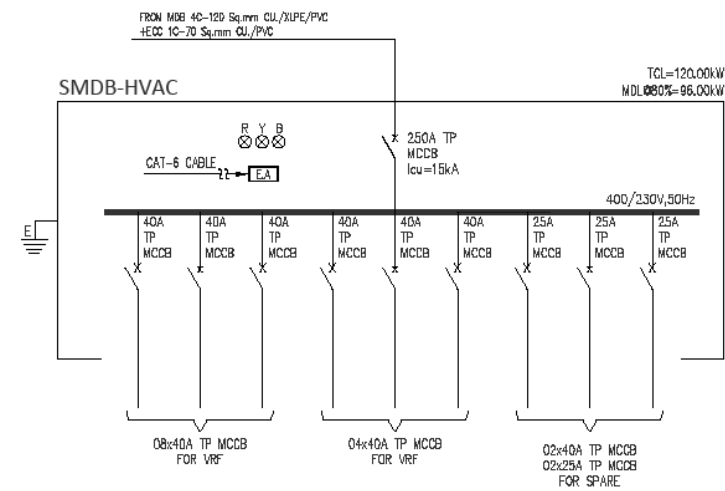
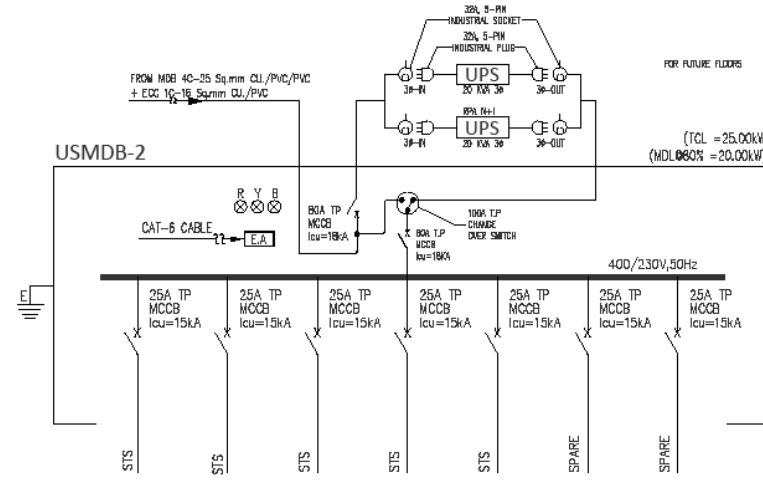
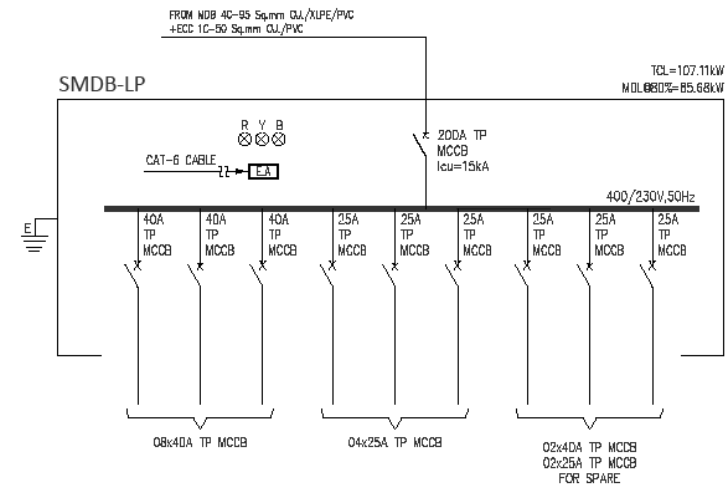
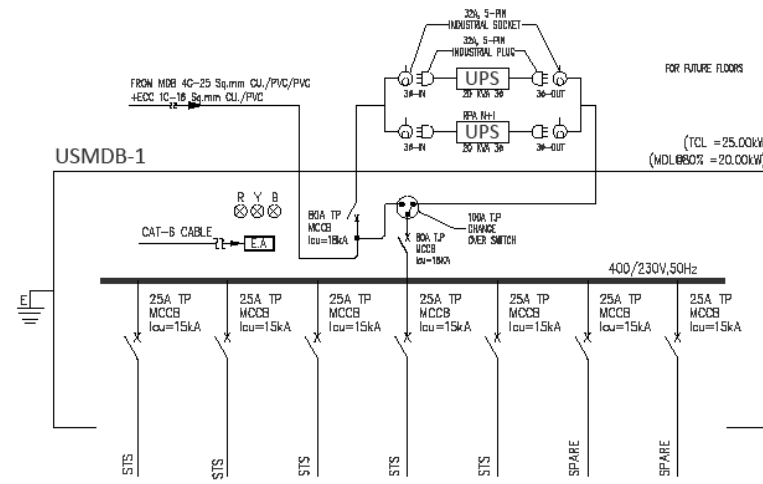
DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:

RISER DIAGRAM
FOR CCTV SYSTEM

DRAWN BY:	AUSAF HAEEM	DRAWING NO:	EL-00-06
CHECKED BY:	M. W. K.		
DESIGN BY:	H. Z.		
SCALE:	N.T.S.	REV. NO:	



NOTE:

REV.	DESCRIPTION	DATE
02	ISSUED FOR REVIEW & COMMENTS	0-07-2019
01	ISSUED FOR REVIEW & COMMENTS	09-04-2019



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

CONSULTANT:

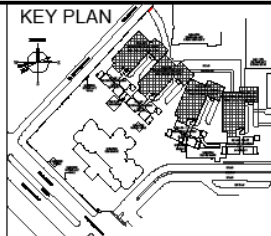
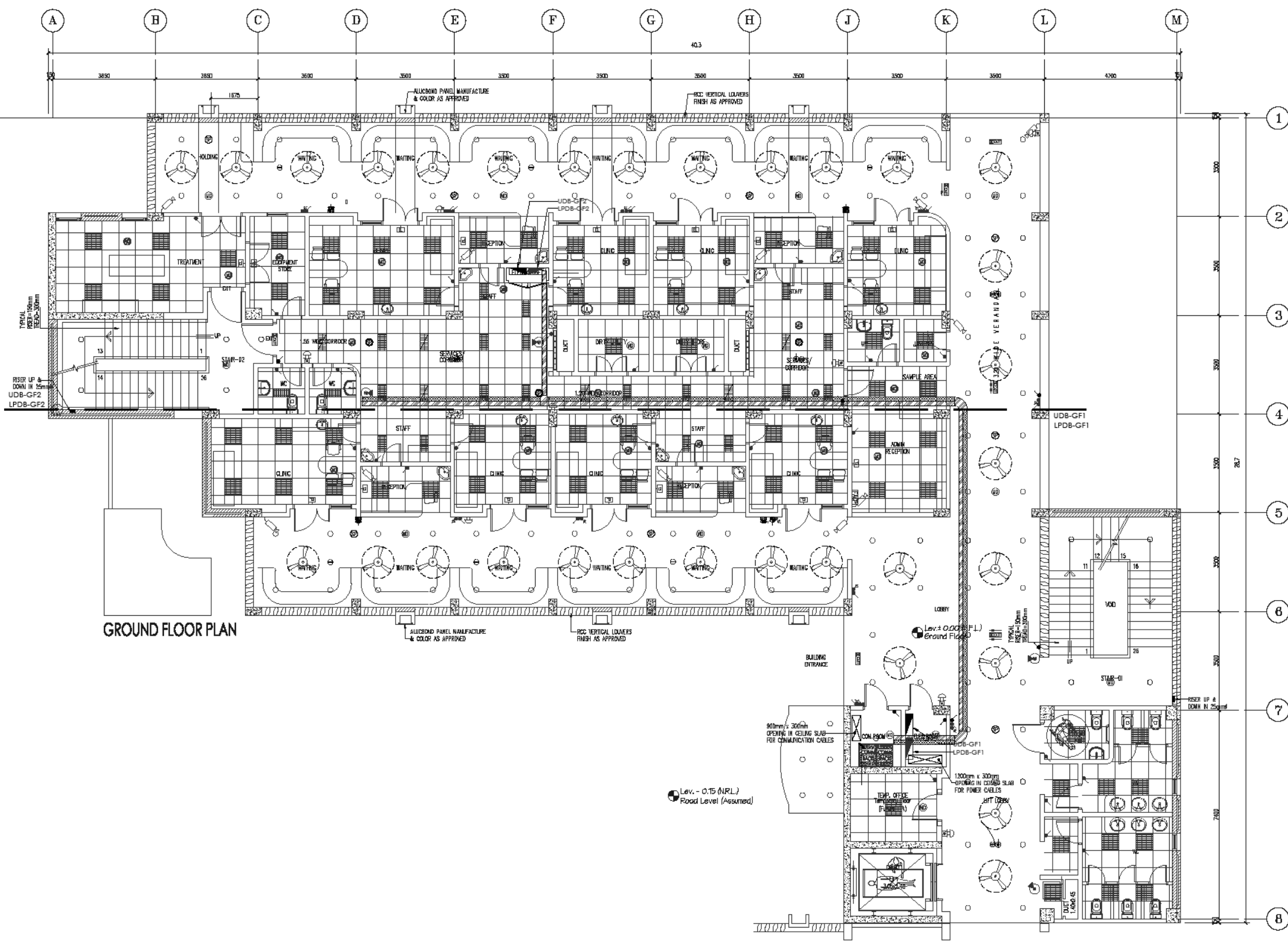
DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:


SINGLE LINE DIAGRAM
(SHEET-04)

DRAWN BY:	DRAWING NO.:
AUSAF HAEEM	EL-00-07D
CHECKED BY:	DESIGN BY:
M. W. K.	H. Z.
SCALE:	REV. NO.:
N. T. 5	



NOTE:-

02	ISSUED FOR REVIEW & COMMENTS	0-07-2019
01	ISSUED FOR REVIEW & COMMENTS	29-04-2019
REV.	DESCRIPTION	DATE
DATE	DESCRIPTION	DATE
DATE	DESCRIPTION	DATE



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

CONSULTANT:

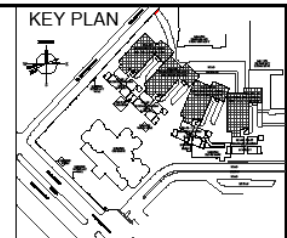
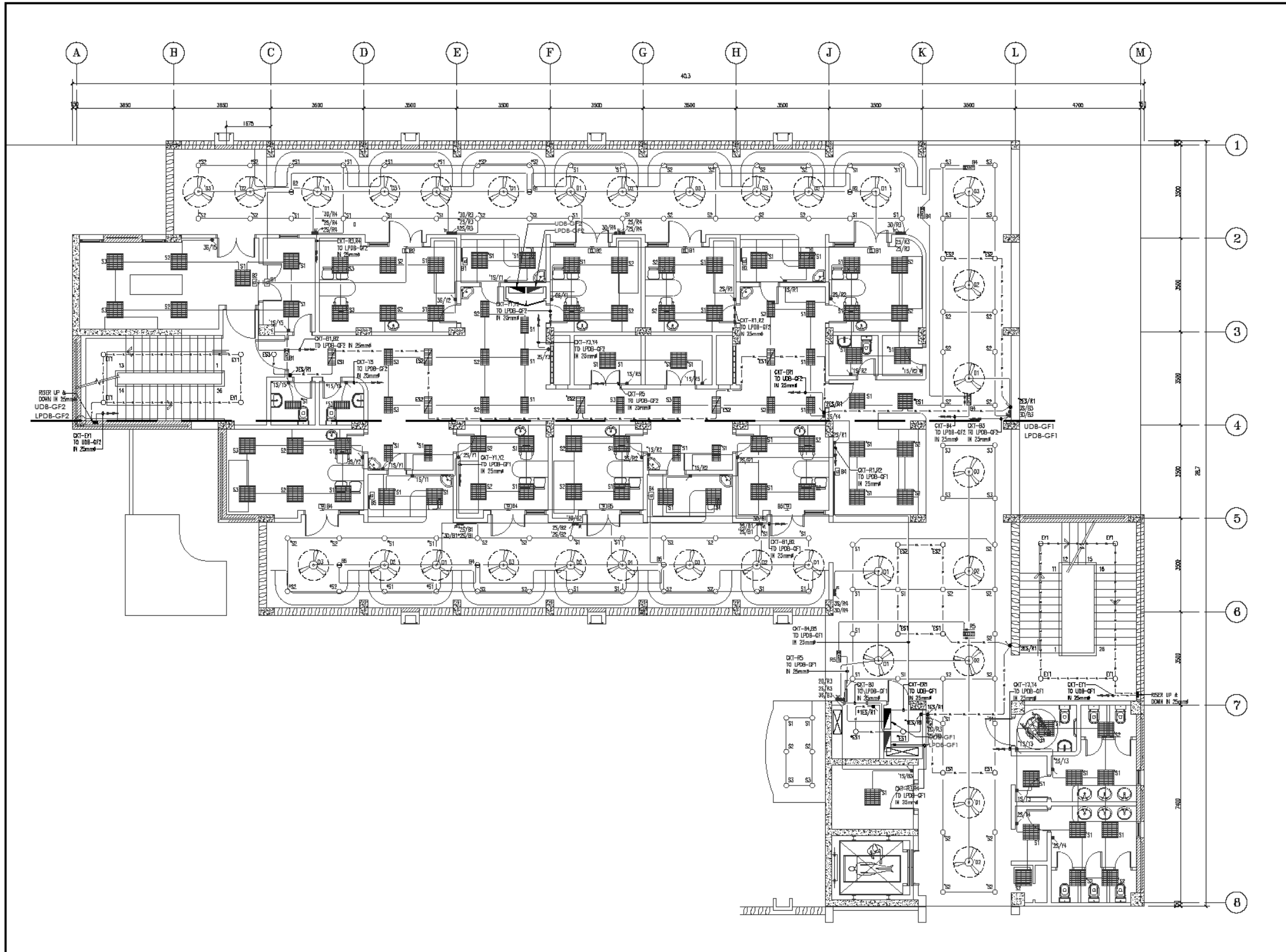
DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:

GROUND FLOOR
REFLECTED CEILING PLAN

DRAWN BY:	AUSAF NAEEM	DRAWING NO.:	
CHECKED BY:	M. W. K.		EL-01-00
DESIGN BY:	H. Z.		
SCALE:	1 : 75	REV. NO.:	



NOTE:

REV.	DATE	DESCRIPTION	DATE
02		ISSUED FOR REVIEW & COMMENTS	07-07-2019
01		ISSUED FOR REVIEW & COMMENTS	04-04-2019

CLIENT:

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

CONSULTANT:

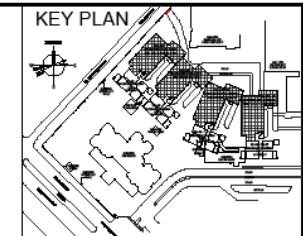
DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:

GROUND FLOOR
WIRING & LIGHTING LAYOUT

DRAWN BY: AUSAF HAEEM	DRAWING NO: EL-01-01
CHECKED BY: M. W. K	
DESIGN BY: H. Z	
SCALE: 1:75	REV. NO:

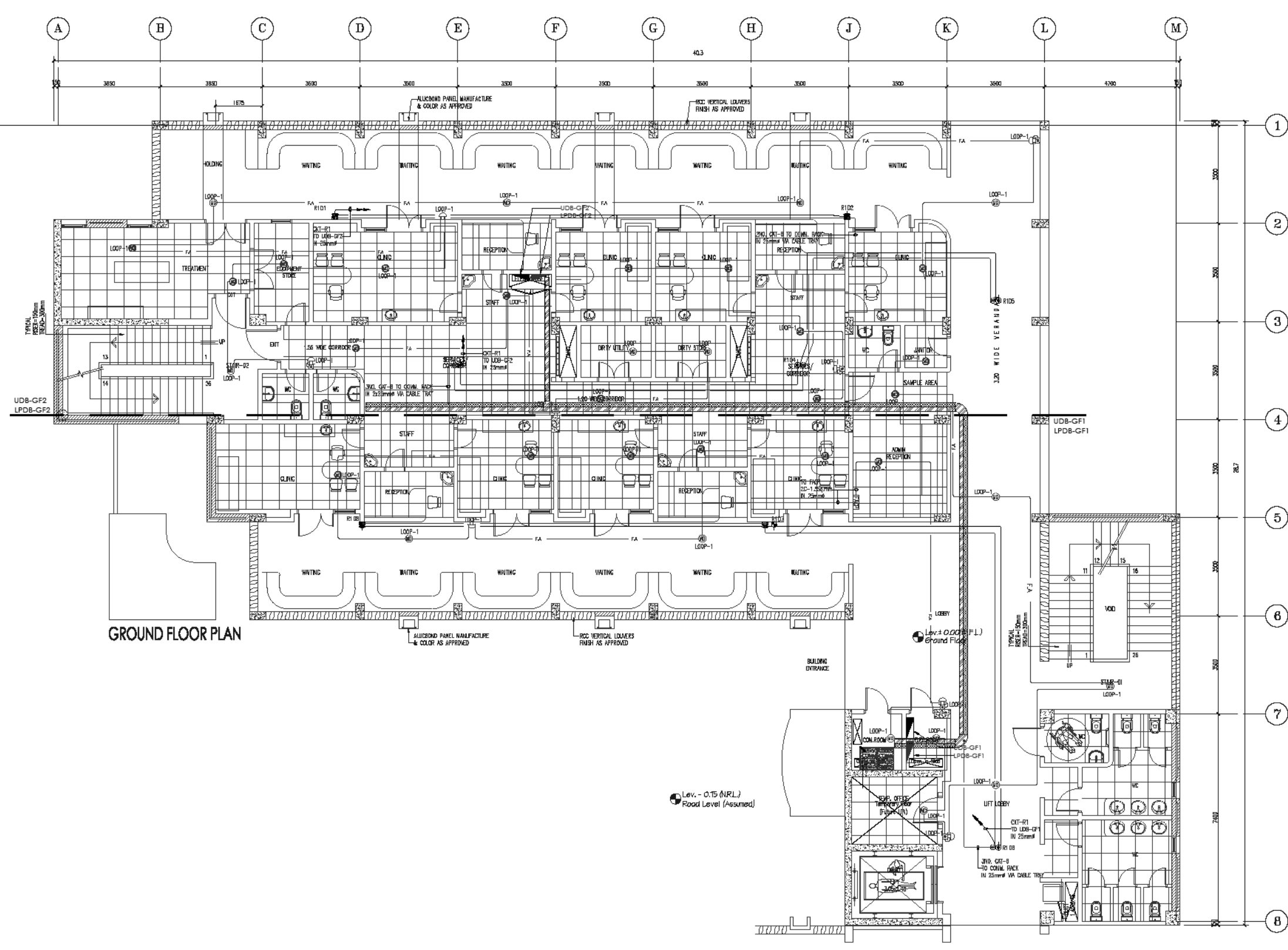


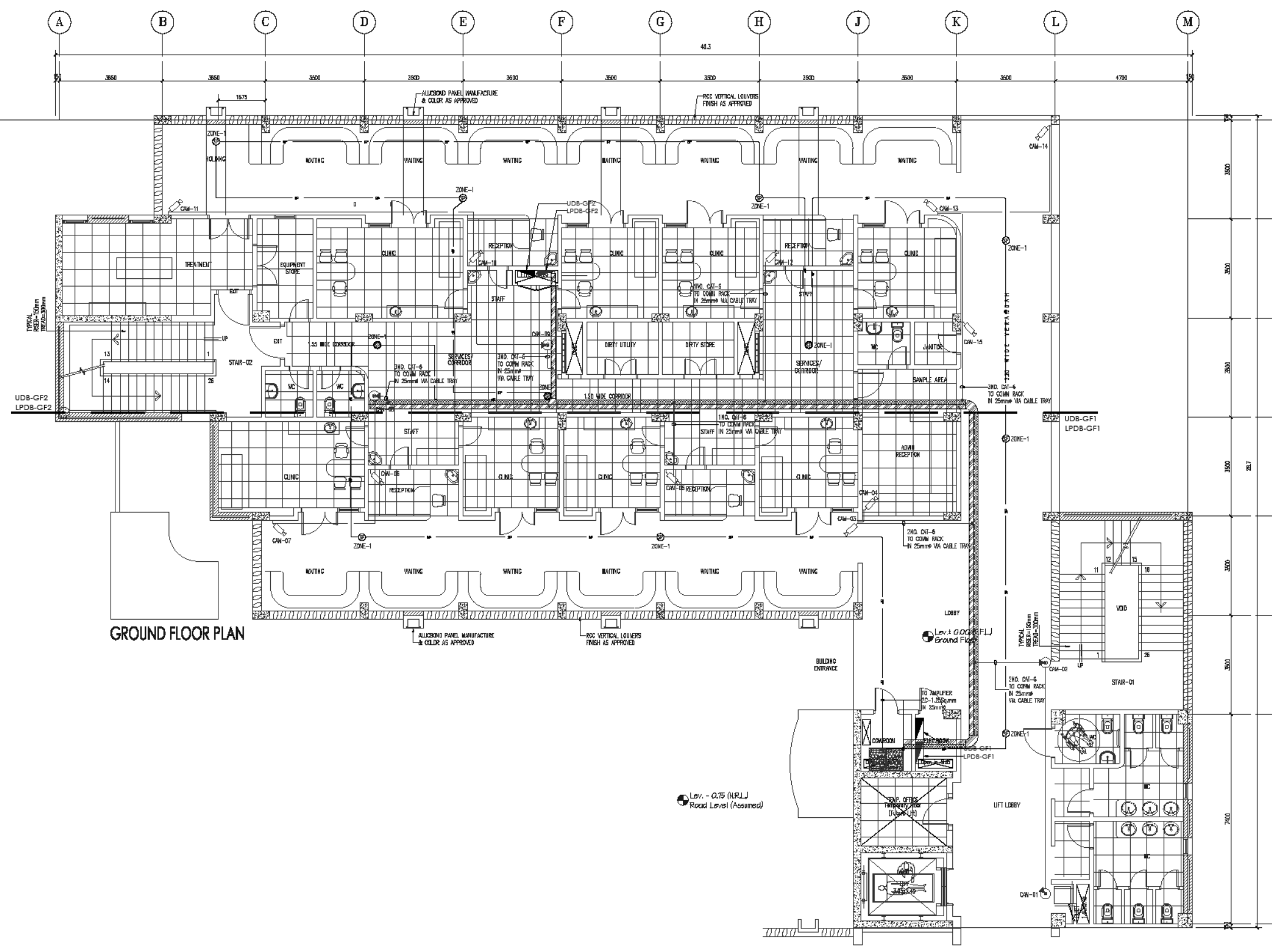
NOTE:

NO.	DESCRIPTION	DATE
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01	ISSUED FOR REVIEW & COMMENTS	09-04-2019
REV.	DESCRIPTION	DATE
DATE	DESCRIPTION	DATE
CLIENT		

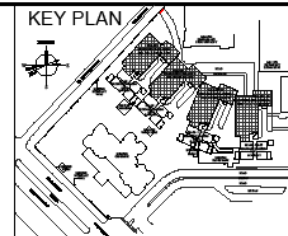


CONSULTANT	
DRAWING STATUS:	REVIEW & COMMENTS
DRAWING TITLE:	GROUND FLOOR FIRE ALARM & WIFI SYSTEM LAYOUT
DRAWN BY:	AUSAF HAEEM
CHECKED BY:	M. W. K.
DESIGN BY:	H. Z.
SCALE:	1 : 75
DRAWING NO.:	EL-01-02
REV. NO.:	





GROUND FLOOR PLAN



NOTES:

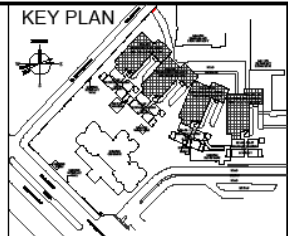
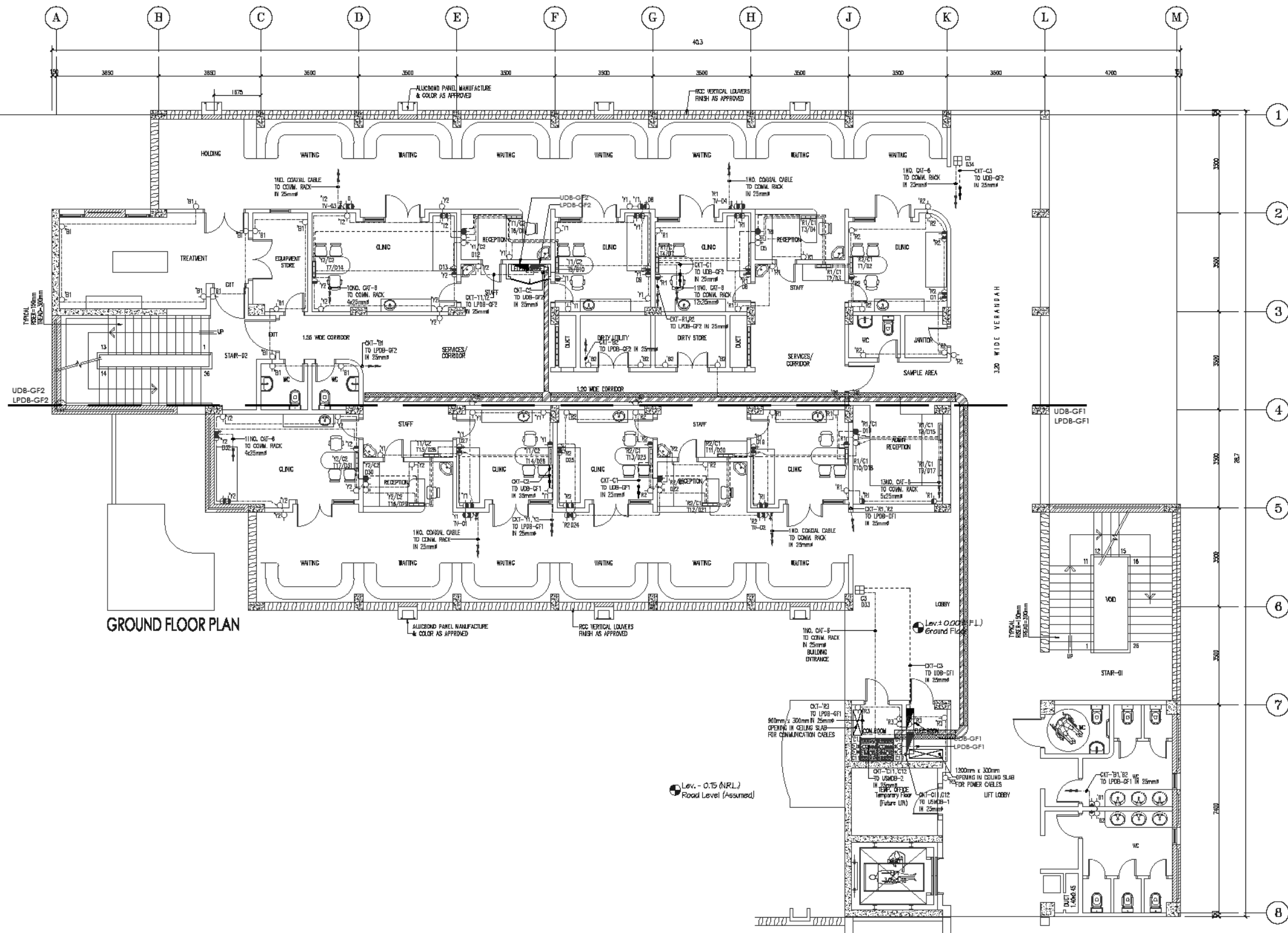
02	ISSUED FOR REVIEW & COMMENTS	10-07-2017
01	ISSUED FOR REVIEW & COMMENTS	09-04-2017
REV.	DESCRIPTION	DATE



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

CONSULTANT	
DRAWING STATUS	
REVIEW & COMMENTS	
DRAWING TITLE	
GROUND FLOOR PUBLIC ADDRESS & CCTV SYSTEM LAYOUT	
DRAWN BY:	AUSAF NAEEM
CHECKED BY:	M. W. K.
DESIGN BY:	H. Z.
SCALE:	1 : 75
DRAWING NO.:	EL-01-03
REV. NO.:	

Lev. - 0.75 (MRL)
Road Level (Assumed)



NOTE:

NO.	DESCRIPTION	DATE
01	ISSUED FOR REVIEW & COMMENTS	04-07-2019
02	ISSUED FOR REVIEW & COMMENTS	04-04-2019

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

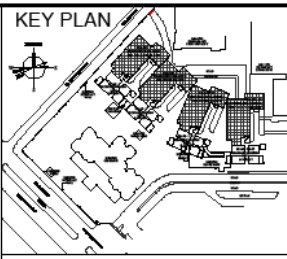
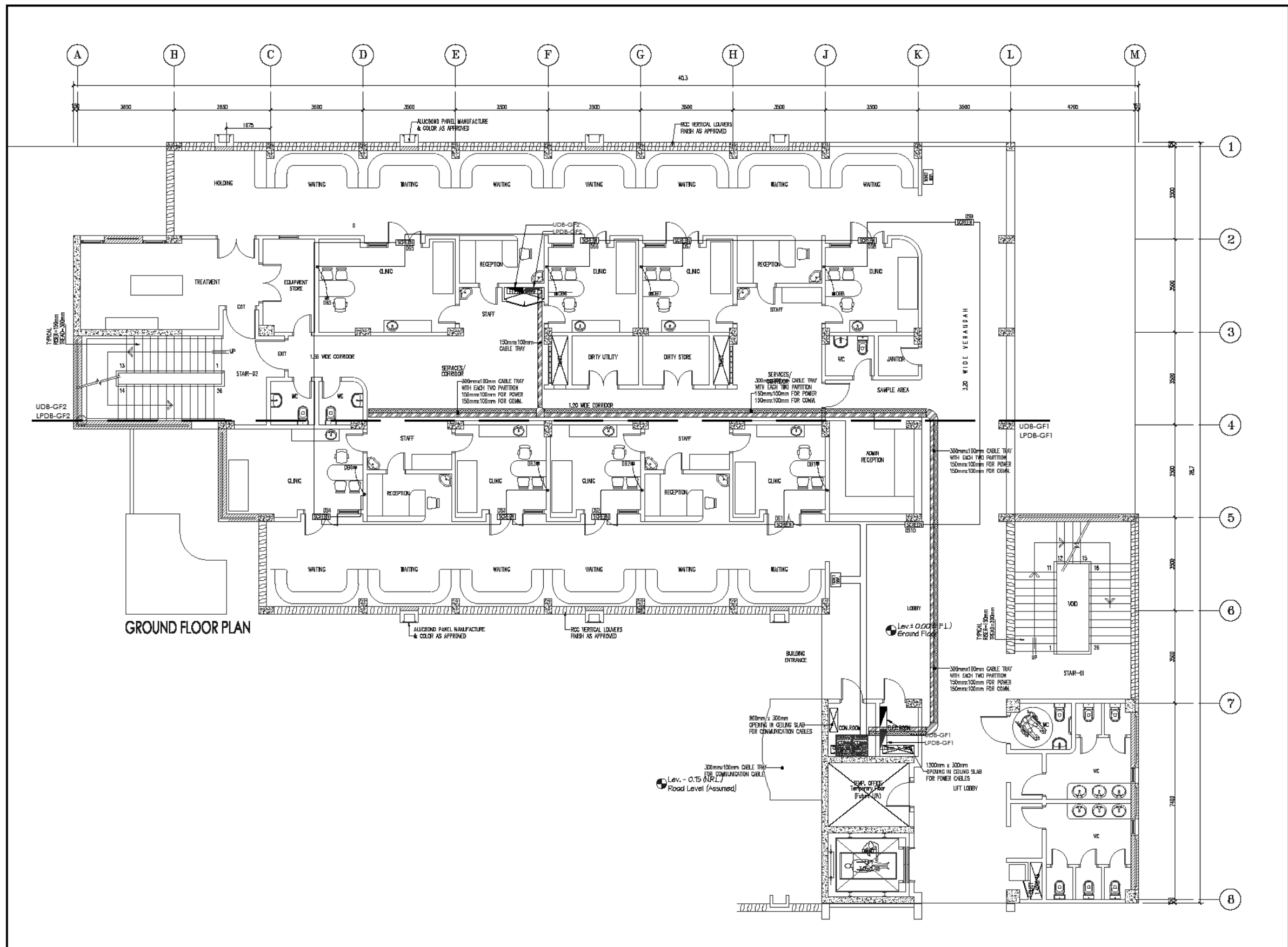
CONSULTANT:

DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:
**FIRST FLOOR
POWER, DATA & VOICE
COMMUNICATION SYSTEM
LAYOUT**

DRAWN BY: AUSAF NAEEM	DRAWING NO: EL-01-04
CHECKED BY: M. W. K.	
DESIGN BY: H. Z.	
SCALE: 1 : 75	REV. NO:



NOTE:

NO.	ISSUED FOR REVIEW & COMMENTS	DATE
02	ISSUED FOR REVIEW & COMMENTS	04-07-2019
01	ISSUED FOR REVIEW & COMMENTS	09-04-2019

REV.	DESCRIPTION	DATE

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

CONSULTANT

DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:

**GROUND FLOOR
CABLE CONTAINMENT &
Q-MANAGEMENT SYSTEM
LAYOUT**

DRAWN BY: AUSAF HAEEM

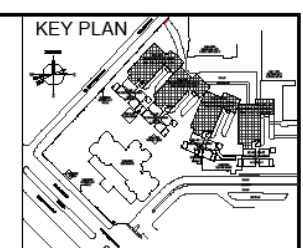
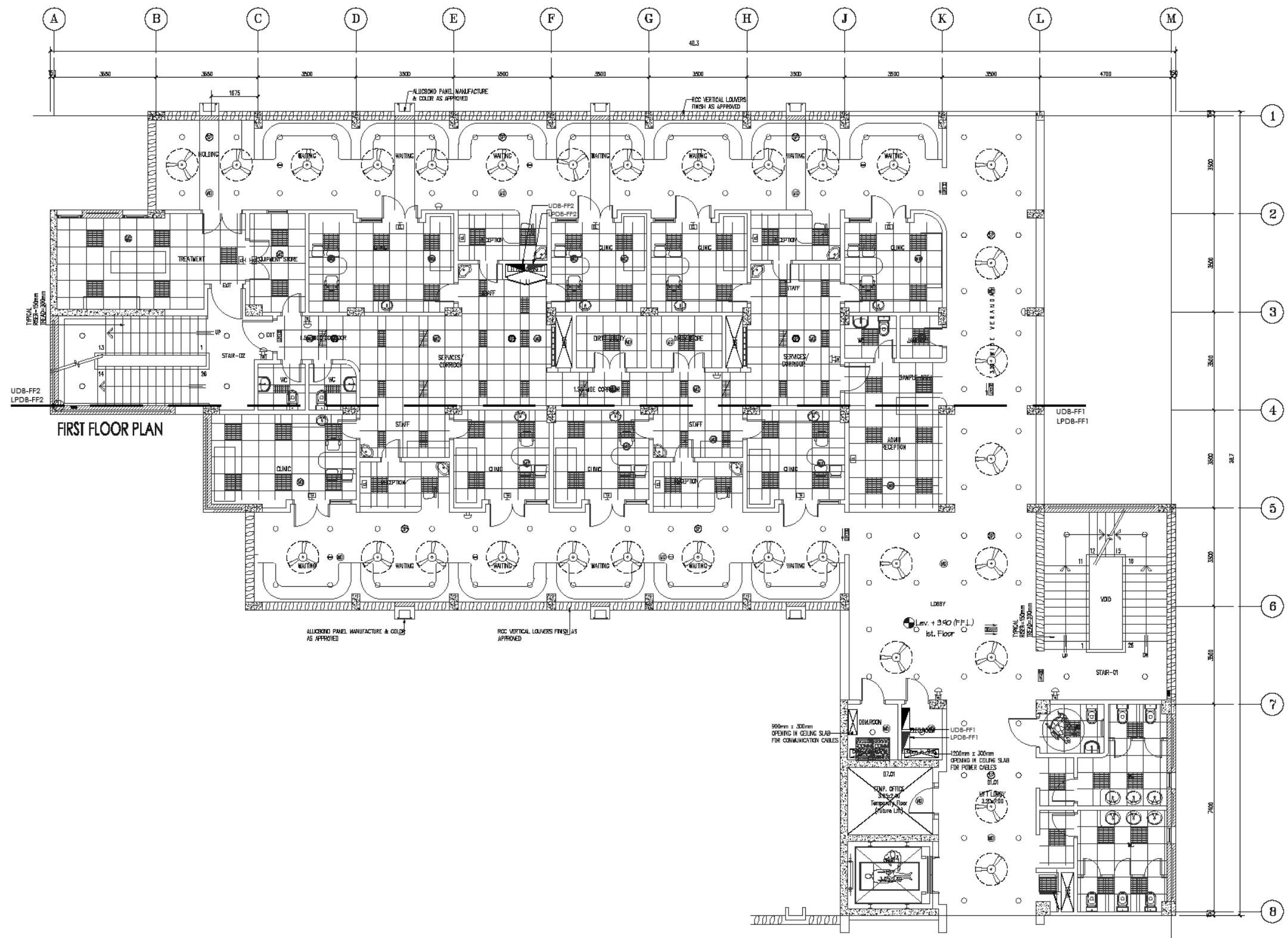
CHECKED BY: M. W. K

DESIGN BY: H. Z

SCALE: 1 : 75

DRAWING NO: EL-01-05

REV. NO:



NOTE:

02	ISSUED FOR REVIEW & COMMENTS	0-07-2019
01	ISSUED FOR REVIEW & COMMENTS	04-04-2019
REV.	DESCRIPTION	DATE
MARK	DATE	DESCRIPTION

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

CONSULTANT

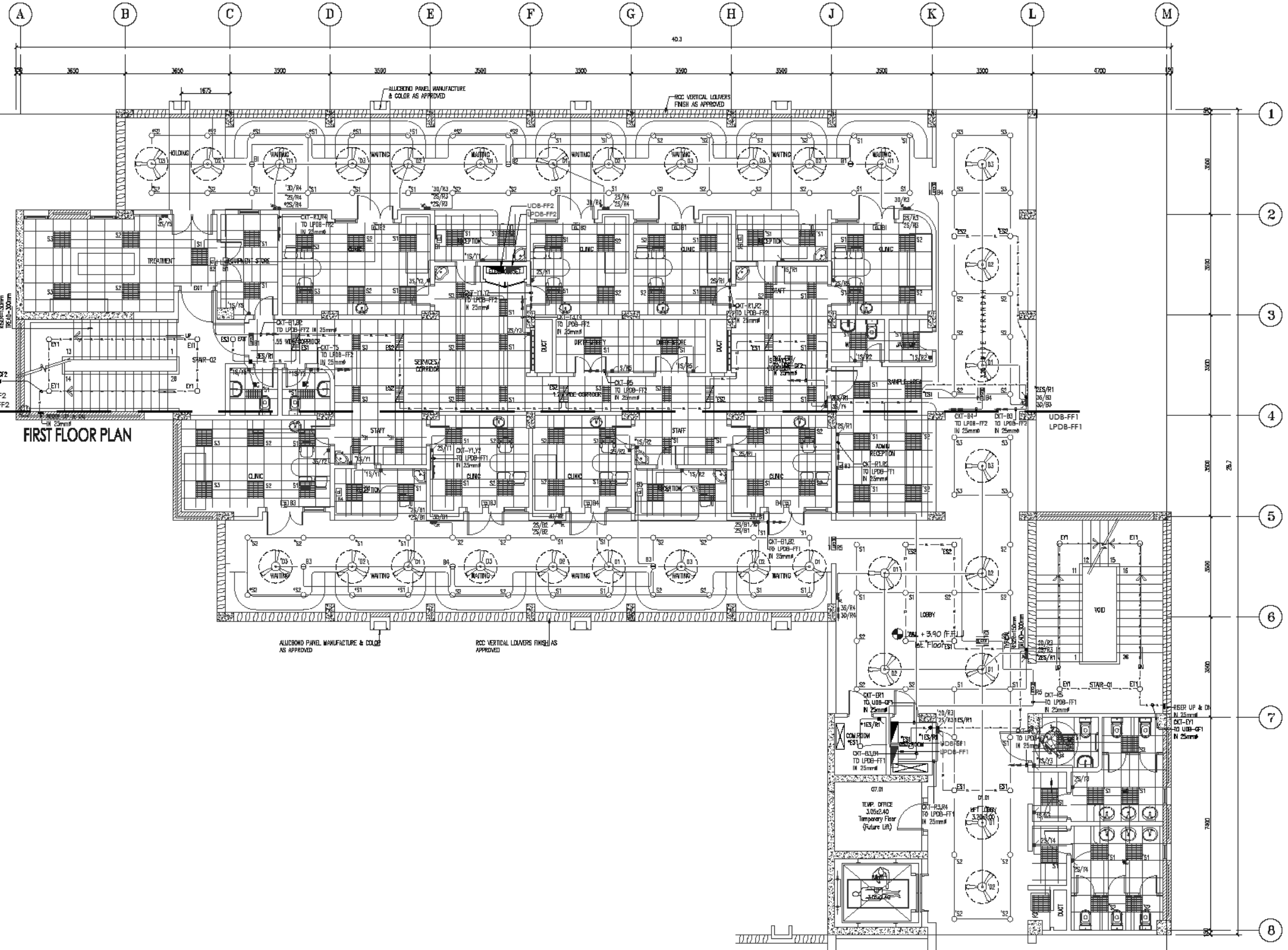
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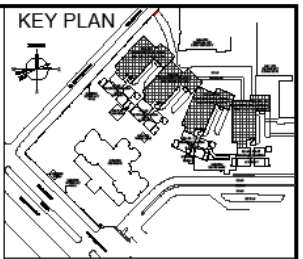
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FIRST FLOOR
REFLECTED CEILING PLAN

DRAWN BY:	AUSAF HAEEM	DRAWING NO.:	EL-02-00
CHECKED BY:	M. W. K.	DESIGN BY:	H. Z.
SCALE:	1 : 75	REV. NO.:	



FIRST FLOOR PLAN



NOTE:

REV.	DESCRIPTION	DATE
02	ISSUED FOR REVIEW & COMMENTS	10-07-2019
01	ISSUED FOR REVIEW & COMMENTS	09-04-2019

MARK	DATE	DESCRIPTION

CLIENT



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

CONSULTANT

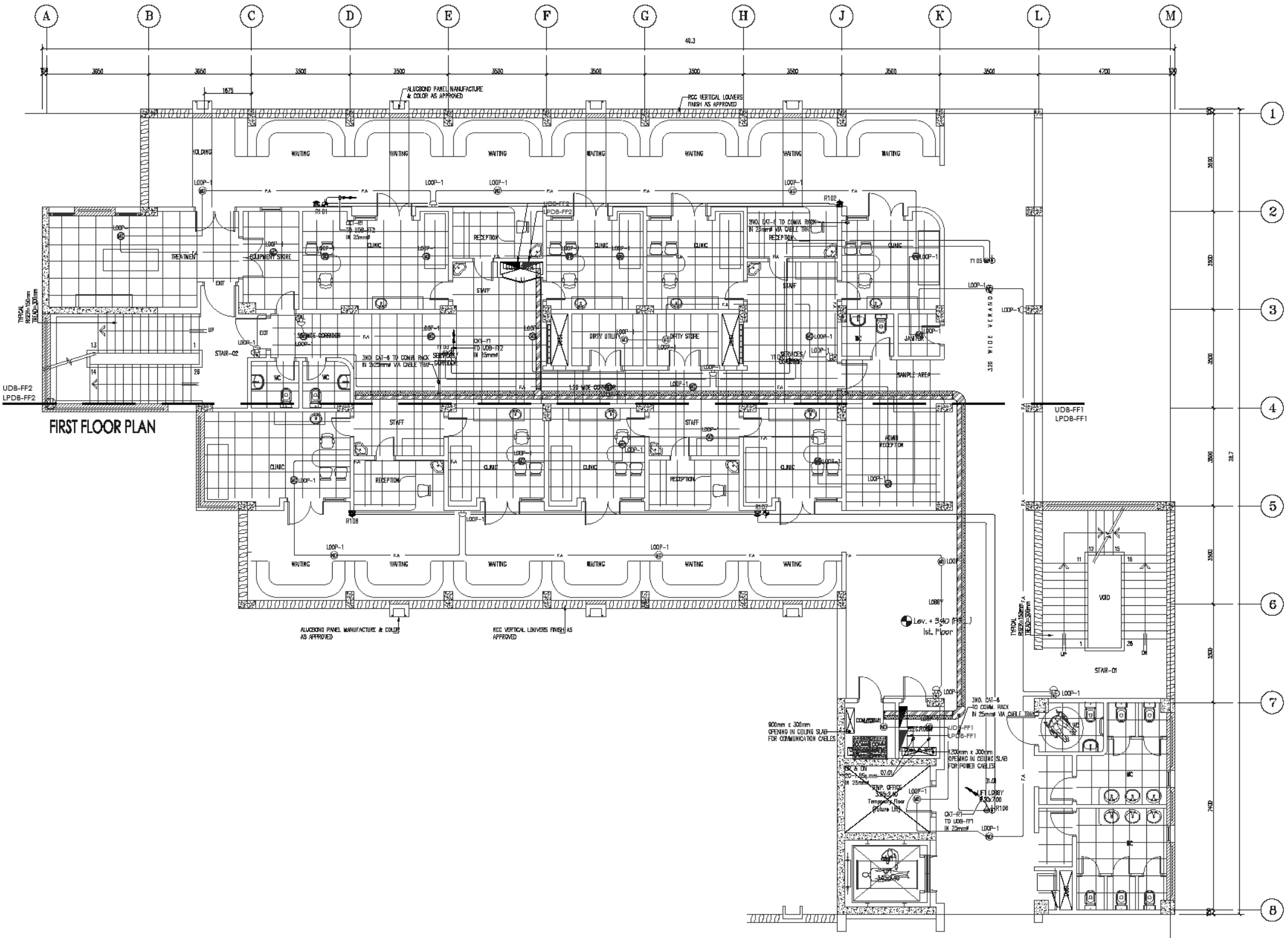
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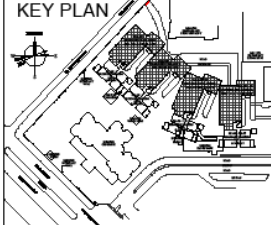
DRAWING TITLE:

**FIRST FLOOR
WIRING & LIGHTING LAYOUT**

DRAWN BY:	AUSAF NAEEM	DRAWING NO.:	EL-02-01
CHECKED BY:	M. W. K.	REV. NO.:	
DESIGN BY:	H. Z.		
SCALE:	1 : 75		



FIRST FLOOR PLAN



NOTE:

NO.	DESCRIPTION	DATE
02	ISSUED FOR REVIEW & COMMENTS	10-07-2019
01	ISSUED FOR REVIEW & COMMENTS	09-04-2019
REV.	DESCRIPTION	DATE
MARK	DATE	DESCRIPTION

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PROPOSED OPD
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SUPARCO ROAD KARACHI

CONSULTANT:

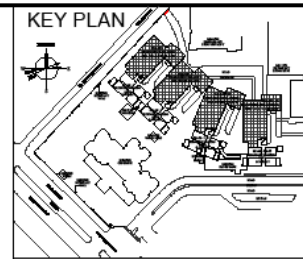
DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:

FIRST FLOOR FIRE ALARM
& WIFI SYSTEM LAYOUT

DRAWN BY:	AUSAF HAEEM	DRAWING NO.:	EL-02-02
CHECKED BY:	M. W. K.		
DESIGN BY:	H. Z.		
SCALE:	1 : 75	REV. NO.:	



NOTE:

REV.	DATE	DESCRIPTION	DATE
02		ISSUED FOR REVIEW & COMMENTS	10-07-2019
01		ISSUED FOR REVIEW & COMMENTS	09-04-2019

MARK	DATE	DESCRIPTION	DATE

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

CONSULTANT

DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:

FIRST FLOOR PUBLIC ADDRESS
& CCTV SYSTEM LAYOUT

DRAWN BY: AUSAF NAEEM

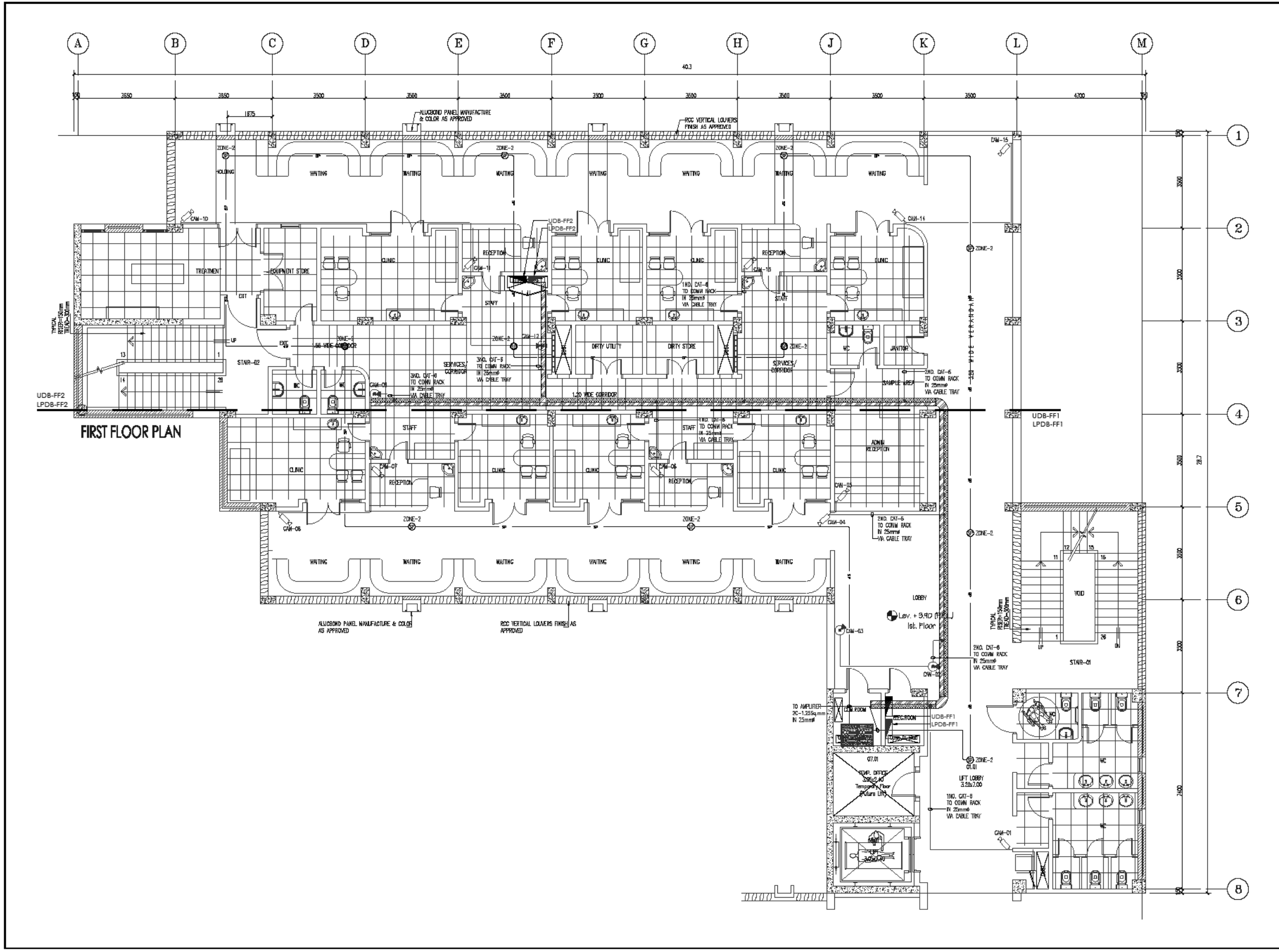
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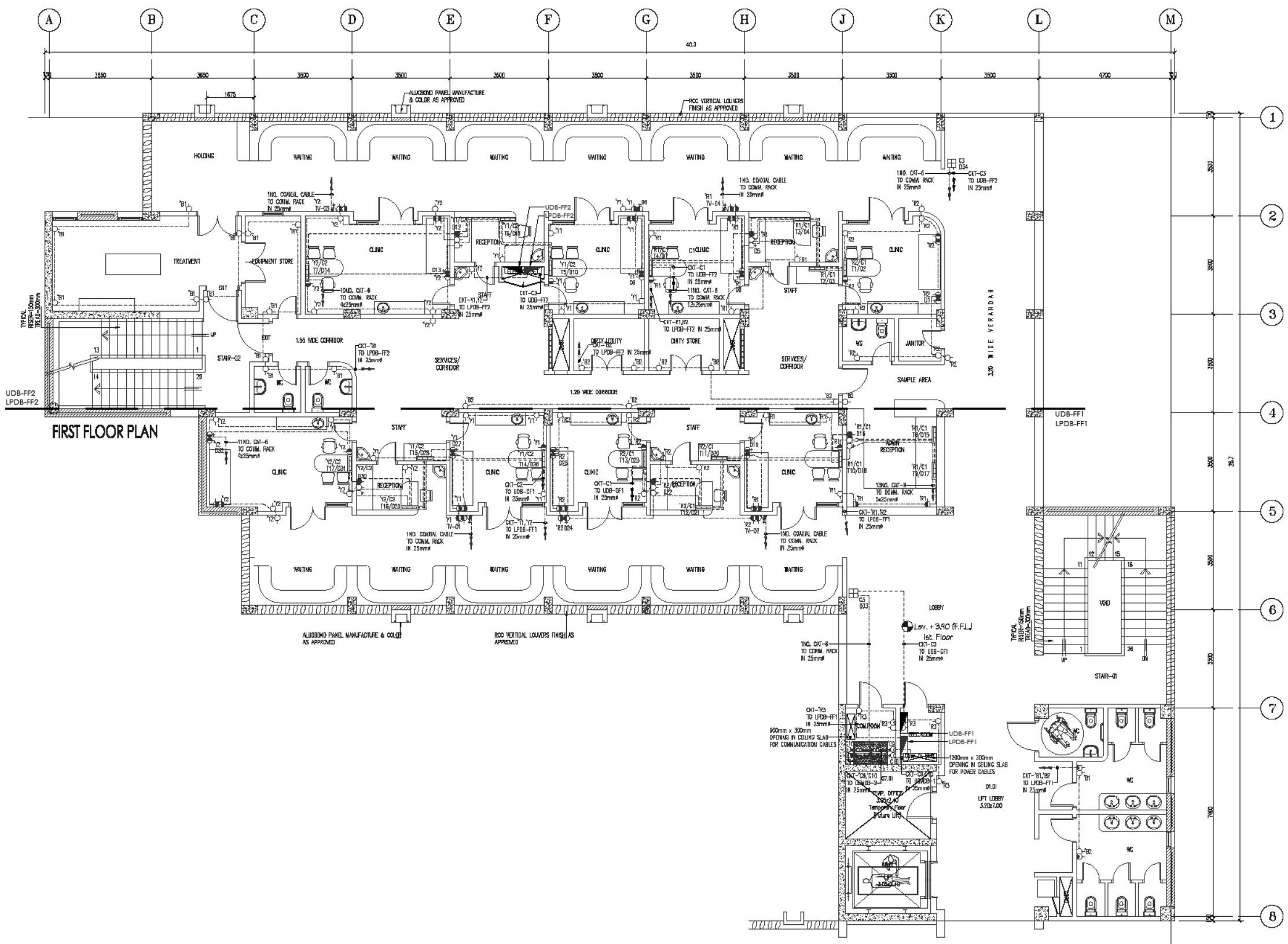
DESIGN BY: H. Z

SCALE: 1 : 75

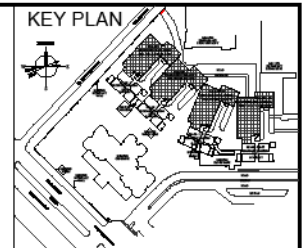
DRAWING NO: EL-02-03

REV. NO:





FIRST FLOOR PLAN



NOTE:

REV.	DESCRIPTION	DATE
02	ISSUED FOR REVIEW & COMMENTS	10-07-2019
01	ISSUED FOR REVIEW & COMMENTS	09-04-2019

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

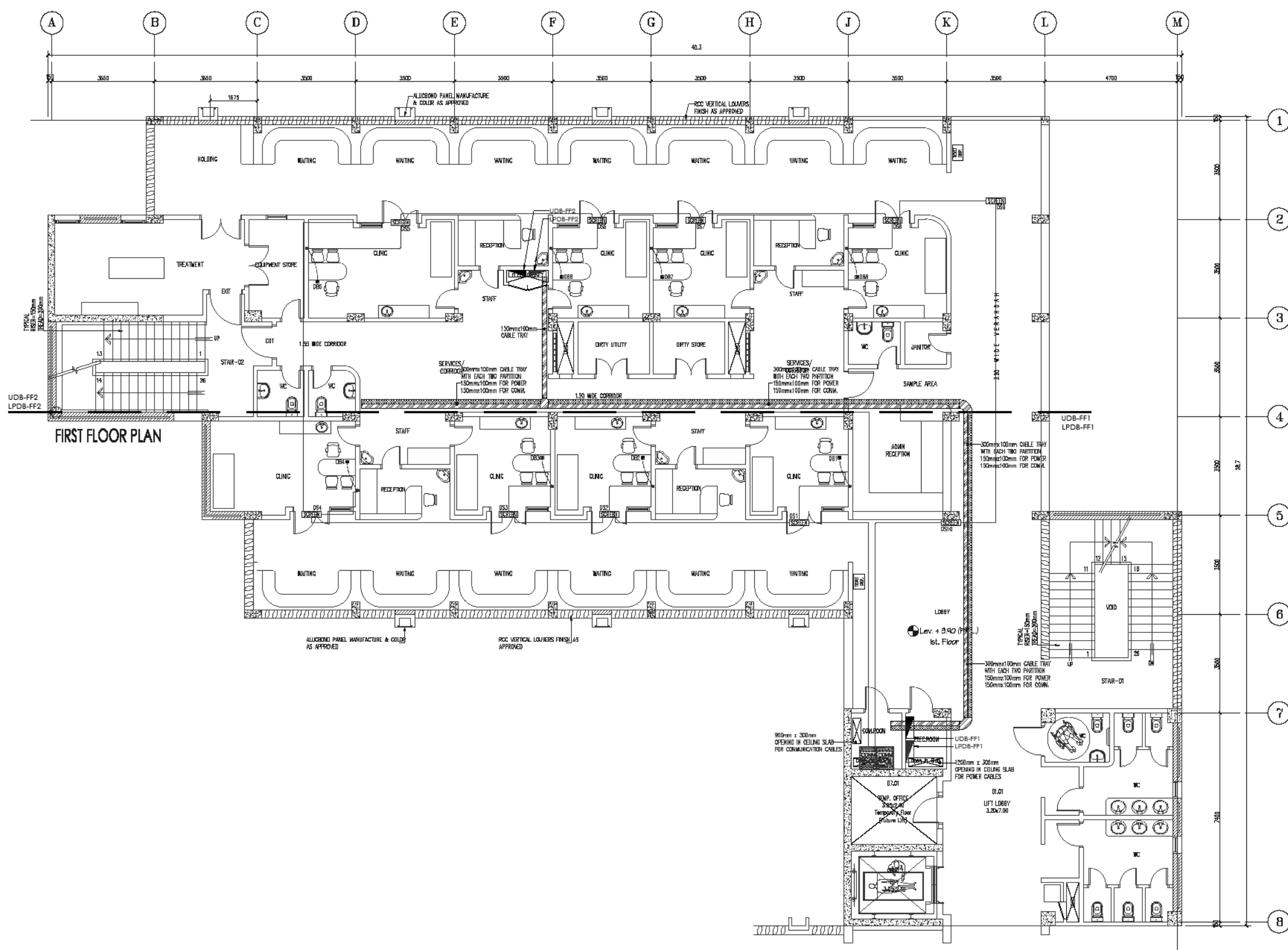
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DRAWING STATUS

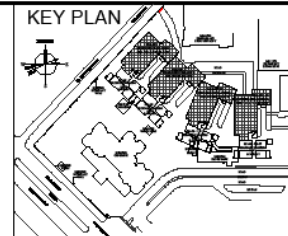
REVIEW & COMMENTS

DRAWING TITLE:
FIRST FLOOR POWER DATA & VOICE COMMUNICATION SYSTEM LAYOUT

DRAWN BY: AUSAF HAEEM	DRAWING NO.:
CHECKED BY: M. W. K.	EL-02-04
DESIGN BY: H. Z.	REV. NO.:
SCALE: 1 : 75	



FIRST FLOOR PLAN



NOTE:

REV.	DATE	DESCRIPTION	DATE
02		ISSUED FOR REVIEW & COMMENTS	0-07-2017
01		ISSUED FOR REVIEW & COMMENTS	0-04-2017



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

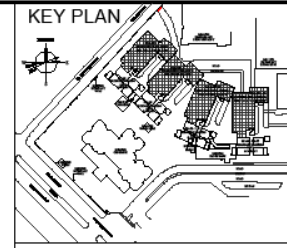
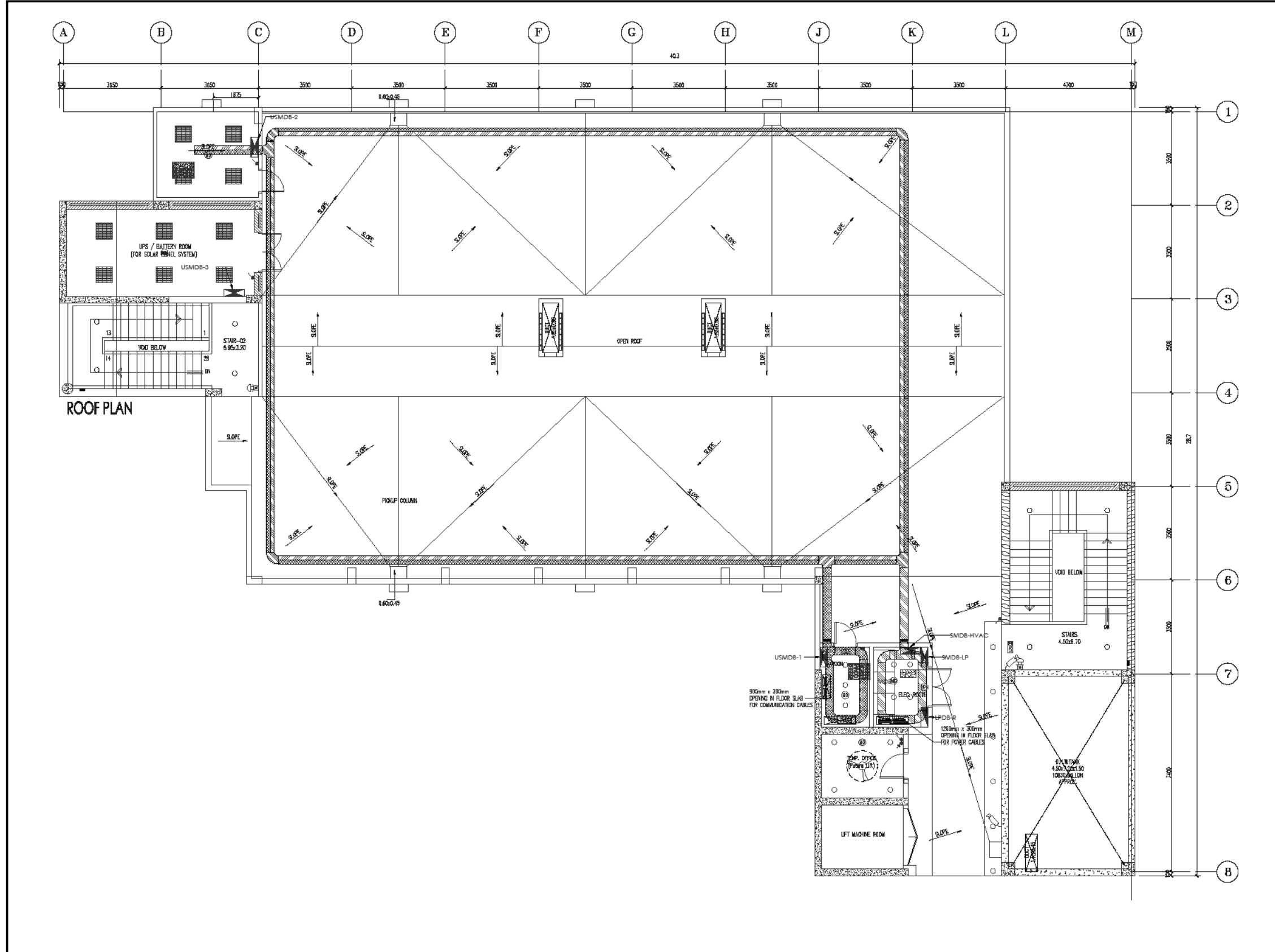
CONSULTANT

DRAWING STATUS

REVIEW & COMMENTS

DRAWING TITLE:
FIRST FLOOR CABLE
CONTAINMENT &
Q-MANAGEMENT SYSTEM
LAYOUT

DRAWN BY: AUSAF NAEEM	DRAWING NO.:
CHECKED BY: M. W. K	EL-02-05
DESIGN BY: H. Z	
SCALE: 1 : 75	REV. NO.:



NOTE:

REV.	DATE	DESCRIPTION	DATE
02	ISSUED FOR REVIEW & COMMENTS	10-07-2017	
01	ISSUED FOR REVIEW & COMMENTS	09-04-2017	

TAKE	DATE	DESCRIPTION	DATE

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

CONSULTANT

DRAWING STATUS:

REVIEW & COMMENTS

DRAWING TITLE:
ROOF LEVEL REFLECTED CEILING PLAN

DRAWN BY: AUSAF NAEEM	DRAWING NO: EL-06-00
CHECKED BY: M. W. K	
DESIGN BY: H. Z	
SCALE: 1 : 75	REV. NO:



**DOW UNIVERSITY
OF HEALTH SCIENCES
KARACHI.**

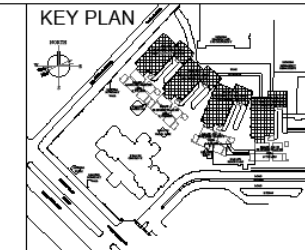
**TENDER DRAWING
PLUMBING**

DATE :- MAY 2020

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

LIST OF DRAWINGS		
S. NO.	DWG. NO.	DRAWING TITLE
GENERAL INFORMATION		
01	GR-00	JOB TITLE & COVER SHEET
02	GR-01	LIST OF DRAWINGS
03	GR-02	LEGEND & SYMBOLS
04	GR-03	GENERAL NOTES & SCHEDULES
05	GR-04	MISCELLANEOUS DETAILS FOR PLUMBING & FIRE FIGHTING WORKS
DRAINAGE LAYOUT		
06	DR-01	GROUND FLOOR PLAN (OUT SIDE) DRAINAGE LAYOUT
07	DR-02	GROUND FLOOR PLAN DRAINAGE LAYOUT
08	DR-03	1st FLOOR PLAN DRAINAGE LAYOUT
09	DR-04	ROOF PLAN DRAINAGE LAYOUT
10	DR-05	TOP ROOF PLAN DRAINAGE LAYOUT


LIST OF DRAWINGS		
S. NO.	DWG. NO.	DRAWING TITLE
WATER SUPPLY LAYOUT		
11	WS-01	GROUND FLOOR PLAN (OUT SIDE) WATER SUPPLY LAYOUT
12	WS-02	GROUND FLOOR PLAN WATER SUPPLY LAYOUT
13	WS-03	1st FLOOR PLAN WATER SUPPLY LAYOUT
14	WS-04	ROOF PLAN WATER SUPPLY LAYOUT
BUILDINGS BLOCK SITE PLAN		
15	SP-01	BUILDINGS BLOCK SITE PLAN DRAINAGE LAYOUT
16	SP-02	BUILDINGS BLOCK SITE PLAN WATER SUPPLY LAYOUT
17	SP-03	WATER SUPPLY & FIRE FIGHTING PUMP ROOM DETAIL
DRAINAGE & WATER SUPPLY ENLARGED DETAILS		
18	PD-01	GROUND & 1ST. FLOOR ENLARGED DETAILS LAYOUT



NOTE:

NO.	DATE	ISSUE FOR TENDER
MARK	DATE	DESCRIPTION
ISSUE:		

CLIENT



DOW UNIVERSITY OF HEALTH SCIENCES
SUPARCO ROAD GULZAR-E-HIRI
KDA SCHEME - 33 KARACHI

CONSULTANT

PROJECT

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

TITLE

LIST OF DRAWINGS

PRICE ENQD.	YUNUS BIKHRI	ISSUE No.
CHECKED	Mubee	GR-01
DRAWN BY	SCALE	1=100
MUNEEB	DATE	FEB 2019
JOB No.	DATE	FILE
MC-014	FEB 2019	

1. INTENT OF THE DRAWINGS:

- THE DRAWINGS ARE DIAGRAMMATIC IN NATURE, AND SHOW THE GENERAL LOCATION OF PIPING, AND EQUIPMENT.
- THE DRAWINGS DO NOT SHOW ALL NECESSARY OFFSETS, TRANSITIONS, AND ADJUSTMENTS NECESSITATED BY COORDINATION WITH OTHER TRADES.
- THE COST OF ALL OFFSETS, TRANSITIONS, AND ADJUSTMENTS NECESSITATED BY COORDINATION WITH OTHER TRADES SHALL BE INCLUDED IN THE CONTRACTOR'S BID.

2. COORDINATION WITH OTHER TRADES:

- EXAMINE AND REVIEW THE CONTRACT DOCUMENTS OF ALL DIVISIONS OF THE SPECIFICATIONS IN ORDER TO COORDINATE THE INSTALLATION OF WORK.
- USE DIMENSIONED ARCHITECTURAL AND STRUCTURAL CONTRACT DRAWINGS TO VERIFY THE SPACE NECESSARY FOR LOCATING PIPING, DUCTWORK, AND EQUIPMENT. USE FIELD MEASUREMENTS TO VERIFY DIMENSIONS WHERE AREAS ARE CONGESTED, AND EXACT LOCATION IS CRITICAL TO ASSURE PROPER INSTALLATION.
- COORDINATION SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, VERIFYING THE LOCATION AND SIZE OF OPENINGS IN FLOORS, WALLS, PARTITIONS, CEILINGS, AND ROOFS WITH THE INSTALLING TRADES; ALLOCATION OF SPACE WITH OTHER TRADES INSTALLING WORK IN CHASES, SHAFTS, CEILING INTERSTITIAL SPACES, AND EQUIPMENT SPACES; AND THE PHASING OF INSTALLATION WORK WITH THAT OF OTHER TRADES.

3. WORKMANSHIP:

- INSTALL ALL WORK IN A WORKMAN LIKE MANNER THAT PROVIDES A PROFESSIONAL, COMPLETED INSTALLATION.

4. EQUIPMENT:

- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, THE SPECIFICATIONS, AND APPROVED SHOP DRAWINGS.
- PROVIDE SERVICE AND OPERATING CLEARANCES AROUND ALL SIDES OF EACH PIECE OF EQUIPMENT IN ACCORDANCE WITH CODE AND THE MANUFACTURER'S PRINTED REQUIREMENTS AND RECOMMENDATIONS.
- PROVIDE 4" (100mm) HIGH CONCRETE HOUSE KEEPING PADS EXTENDING 6" (150mm) BEYOND ALL FLOOR MOUNTED EQUIPMENT ON ALL SIDES.

5. LARGE EQUIPMENT:

- SOME LARGE EQUIPMENT MAY REQUIRE DISASSEMBLY IN ORDER TO INSTALL IN SIDE THE BUILDING. SECURE THE SERVICES OF THE MANUFACTURER WHERE NECESSARY TO MAINTAIN WARRANTIES IN EFFECT.

6. PIPING:

- FABRICATE AND INSTALL ALL PIPING IN ACCORDANCE WITH THE SPECIFICATIONS; THE PIPING PLANS AND DETAILS; AND THE PIPE INSULATION SCHEDULE.
- PIPING SCHEMATICS AND DIAGRAMS SHOW ONLY THE BASIC FLOW PATTERN AND EQUIPMENT ARRANGEMENT, AND DO NOT SHOW ALL TERMINAL EQUIPMENT CONNECTED TO THE SYSTEM. REFER TO THE PLANS AND SECTIONS FOR DETAILED SYSTEM LAYOUT.
- PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS IN THE PIPING SYSTEM. PROVIDE 3/4" (20mm) HOSE BIB TYPE DRAIN VALVES AT ALL LOW POINTS IN THE PIPING SYSTEM TO ASSURE COMPLETE DRAIN ABILITY OF THE SYSTEM. TERMINATE DRAIN VALVES AND AIR VENTS IN ACCESSIBLE LOCATIONS.
- ALL PIPE SIZES FOR WATER SUPPLY (PPR) ARE OUTER DIA.
- CONTRACTOR MUST BE PROVIDE SHOP DRAWING BEFORE STARTING OF WORK.
- ALL DRAINAGE PIPES RUN IN BELOW FLOOR SLAB(BFS) AND WATER SUPPLY PIPES RUN IN SCREED

7. SLEEVES:

- DIMENSIONED AND COORDINATED SHOP DRAWINGS INDICATING THE LOCATION AND SIZE OF ALL SLEEVES AND CAST IN PLACE ITEMS NECESSARY FOR ALL WORK REQUIRED SHALL BE FURNISHED TO THE PRE-CAST CONCRETE FABRICATOR BEFORE THE FABRICATION OF THE PRE-CAST CONCRETE WORK.
- ALL PIPES PASSING THROUGH WALLS SHALL HAVE SLEEVE ONE SIZE LARGER THAN PIPE DIA.
- ALL SLEEVES AND OPENING TO BE FILLED WITH NON SHRINK GROUT.

8. PIPE MATERIAL:

- SOIL, WASTE & VENT (SWV) PIPE INSIDE THE BUILDING (uPVC) PUSH ON JOINT.
- ALL WATER SUPPLY PIPE OUTSIDE THE BUILDING WILL BE (P.E).
- ALL SANITARY SEWER PIPE OUTSIDE THE BUILDING ARE PVC.

SCHEDULE OF PIPE SUPPORTS (SWV) FOR uPVC PIPES (INSIDE THE BUILDING)

PIPE SIZE	HORIZONTAL DIST.	VERTICAL DIST.
32Ø TO 40Ø	10 TIME DIA OF PIPE	15 TIME DIA OF PIPE
50Ø	10 TIME DIA OF PIPE	15 TIME DIA OF PIPE
75Ø & 100Ø	10 TIME DIA OF PIPE	15 TIME DIA OF PIPE
150Ø TO 200Ø	10 TIME DIA OF PIPE	15 TIME DIA OF PIPE

- SUPPORT IN ALL CHANGES IN DIRECTION & UNDER FLOOR GULLY.
- ALL PPR PIPE SUPPORTS RECOMMENDED AS PER MANUFACTURE.

MANHOLE DEPTH	DETAILS
<1 METER	600mm x 600mm
<1.75 METER	900mm x 600mm or Ø 1000 mm
<2.5 METER	1200mm x 750mm or Ø 1200 mm
>2.5 METER	1400mm x 900mm or Ø 1400 mm

FIXTURE CONNECTIONS SCHEDULE

FIXTURES	COLD WATER	HOT WATER	DRAIN PIPE
WC (ENGLISH)	20	-	100
WC (ASIAN)	20	-	100
LAVATORY	20	20	50
SHOWER	20	20	50
KITCHEN SINK	20	20	50

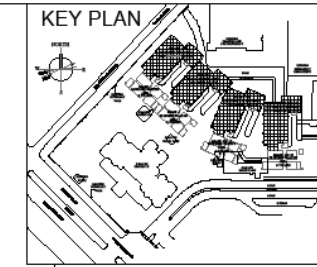
<u>SCHEDULE OF MANHOLE</u>			
TYPE	SIZE OF LARGEST PIPE (Millimeters)	CIRCULAR DIAMETER (Millimeters)	CIRCULAR COVER DIAMETER (Millimeters)
<1.5m DEEP TO SOFFIT	200	1200	600
	300	1200	600
>1.5m DEEP TO SOFFIT	200	1200	600
	300	1200	600
>3.0m DEEP TO SOFFIT OF PIPE	STEPS	1050	600
	LADDER	1200	600

RECOMMENDED uPVC PIPE SLOPES

PIPE SIZES	SLOPE RATIO
40Ø TO 50Ø	1:20, 1:30
75Ø & 150Ø	1:120
200Ø TO 250Ø	1:250
300Ø	1:450

PIPE SCHEDULE

<u>POLYETHYLENE (P.E.) PN-10</u>		
DIAMETER MILLIMETER (mm) OUTER DIA (O.D)	DIAMETER MILLIMETER (mm) INTERNAL DIA (I.D)	WALL THICKNESS
25	21.4	1.8
32	28.2	1.9
40	35.2	2.4
50	44.0	3.0
63	55.4	3.8
90	76.2	5.4
110	96.8	6.6
180	158.6	10.7
225	198.2	13.4
<u>POLYPROPYLENE (PPR) PN-20</u>		
25	16.6	4.2
32	21.2	5.4
40	26.6	6.7
50	33.2	8.4
63	42.0	10.5
75	50.0	12.5
90	60.0	15
110	73.2	18.4
<u>U-PVC (SWV)</u>		
40	34	3
50	44	3
75	49	3
110	103.6	3.2
160	153.6	3.2
<u>UPVC CLASS-E PRESSURE PIPE</u>		
60	51	4.5
75	64	5.5
89	76	6.5
114	97.4	8.3
168	143	12.5



NOTE:

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KDA SCHEME - 33 KARACHI

CONSULTANT

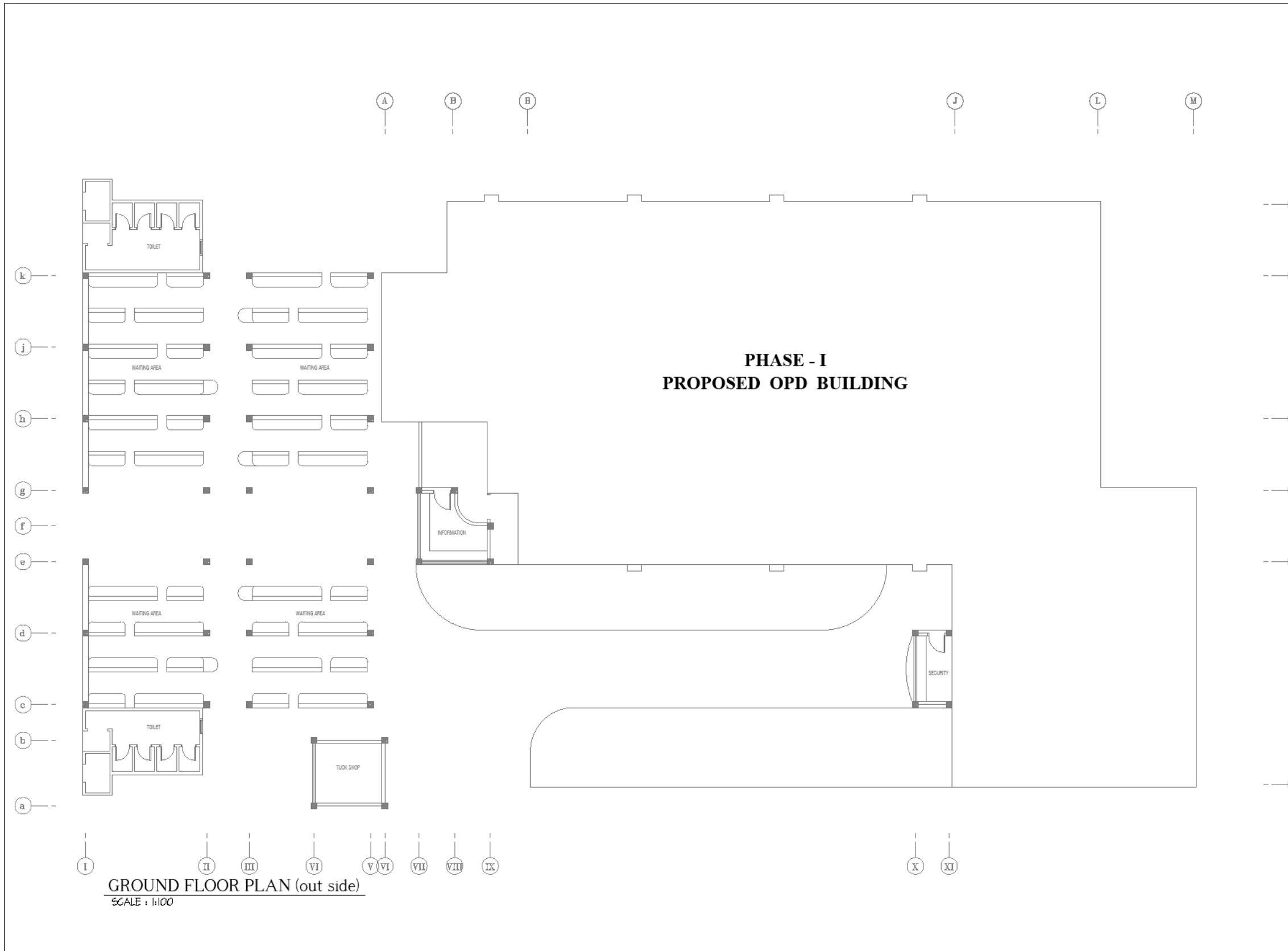
PROJECT

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

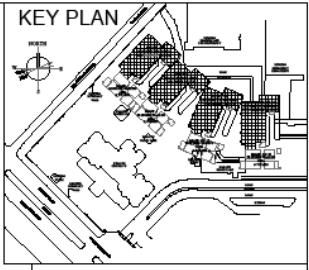
TITLE

GENERAL NOTES & SCHEDULES

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MEMBER	1:100		
JOB No.	MC-1914	DATE	FEB 2019
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GROUND FLOOR PLAN (out side)
SCALE : 1:100



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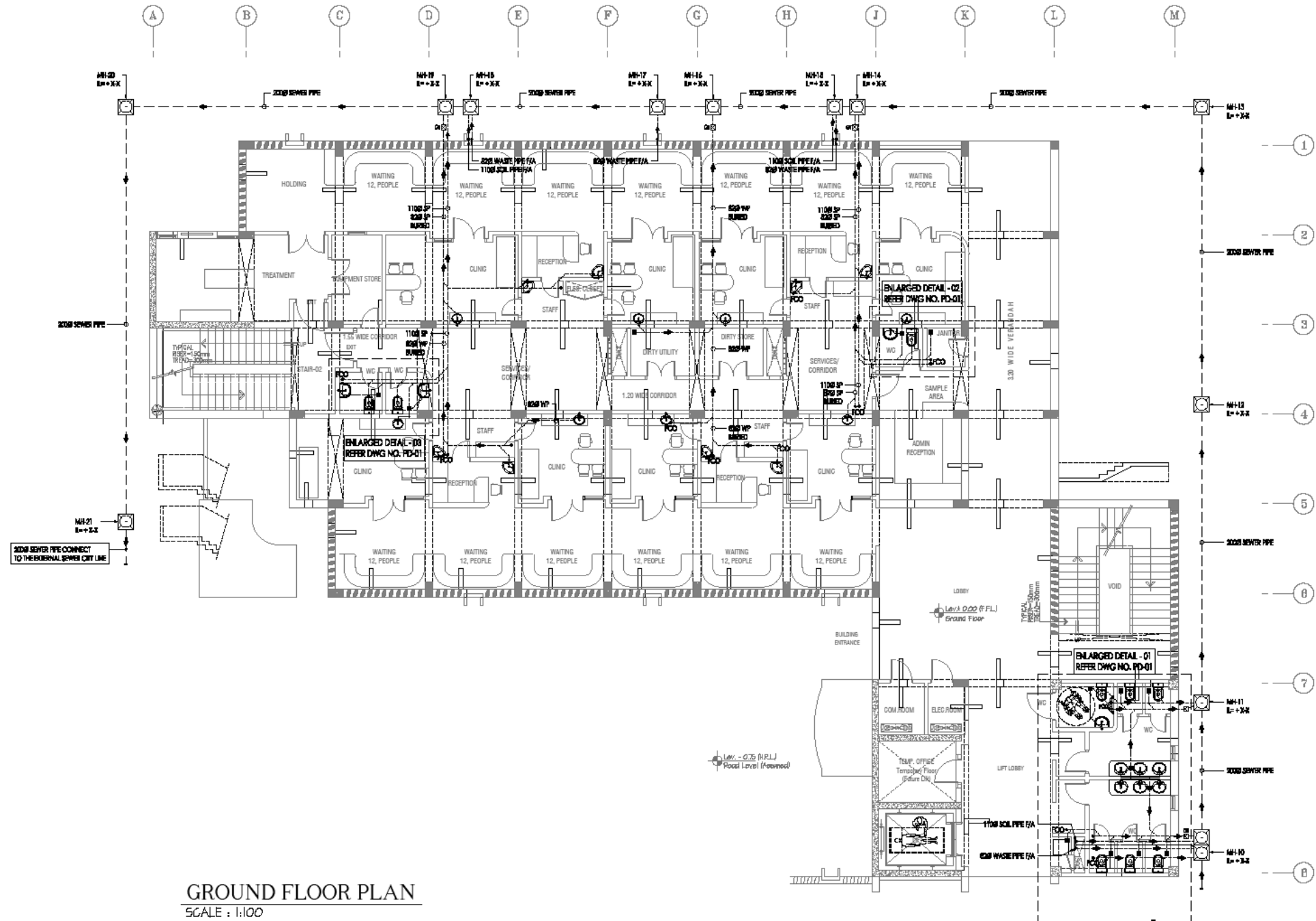
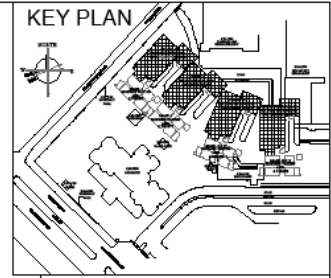
DOW UNIVERSITY OF HEALTH SCIENCES
SUPARCO ROAD GULZAR-E-HJRI
KDA SCHEME - 33 KARACHI

CONSULTANT

PROJECT
PROPOSED OPD BUILDING
 OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCES
 SUPARCO ROAD GULZAR-E-HJRI
 KDA SCHEME - 33 KARACHI

TITLE
DRAINAGE LAYOUT
GROUND FLOOR PLAN
OUTSIDE WAITING AREA

PROJ. ENGR.	YUNUS BUREKH	SHEET No.	DR-01
CHECKED	Mubir		
DRAWN BY	SCALE		
MEMBER	1:100		
JOB No.	MC-1014	DATE	FILE:
		FEB 2019	




GROUND FLOOR PLAN
SCALE : 1:100

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KDA SCHEME - 33 KARACHI

CONSULTANT

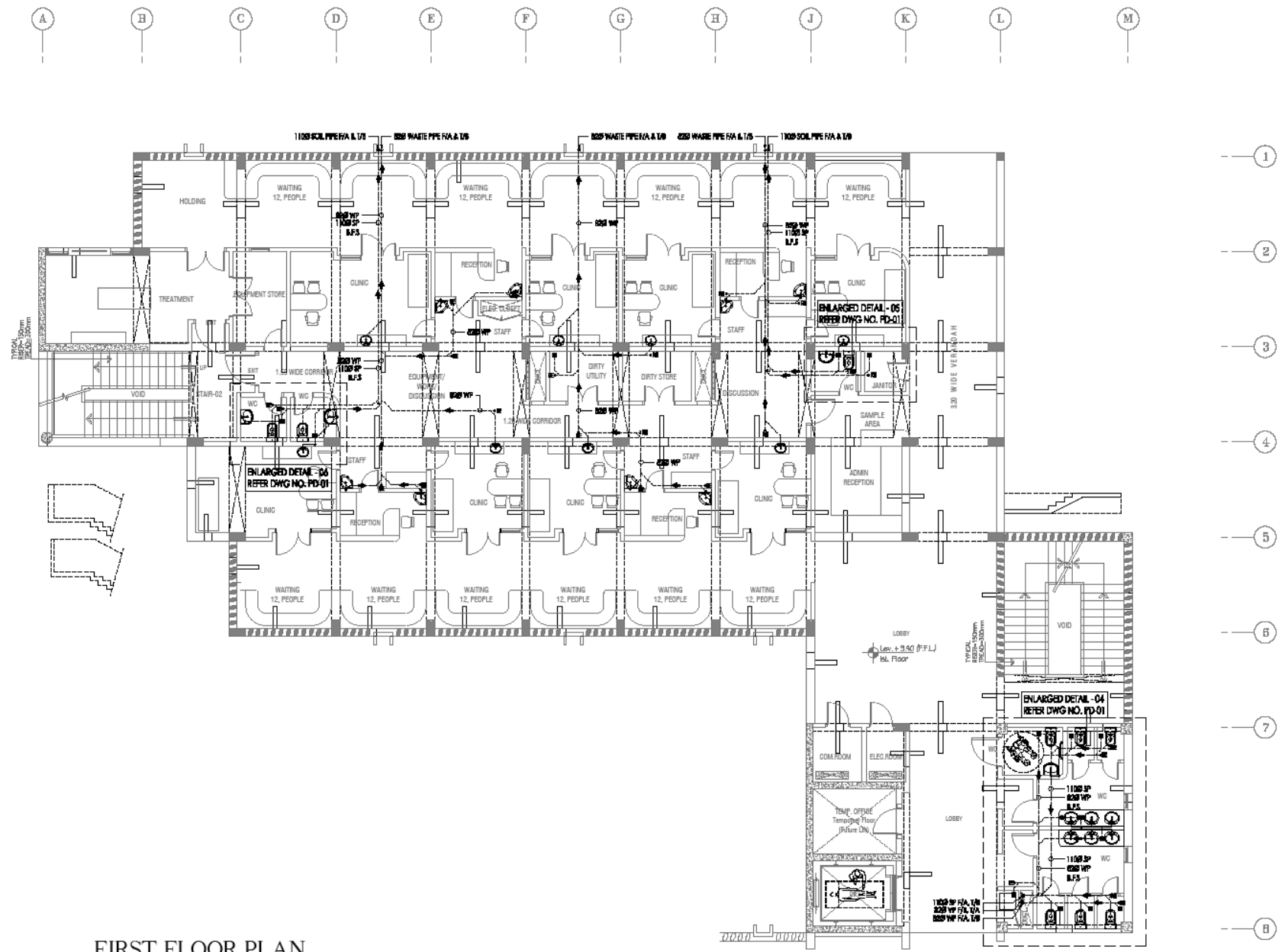
PROJECT

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

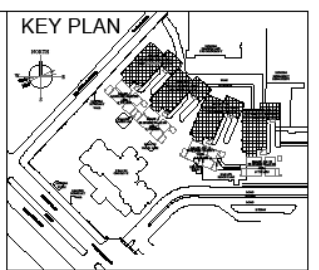
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DRAINAGE LAYOUT
GROUND FLOOR PLAN

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CHECKED	Mukhtar		
DRAWN BY	MUNEER	SCALE	1:100
JOB No.	MC-1914	DATE	FEB 2019
		FILE	



FIRST FLOOR PLAN
SCALE : 1:100



NOTE:

NO	DATE	ISSUE FOR TENDER
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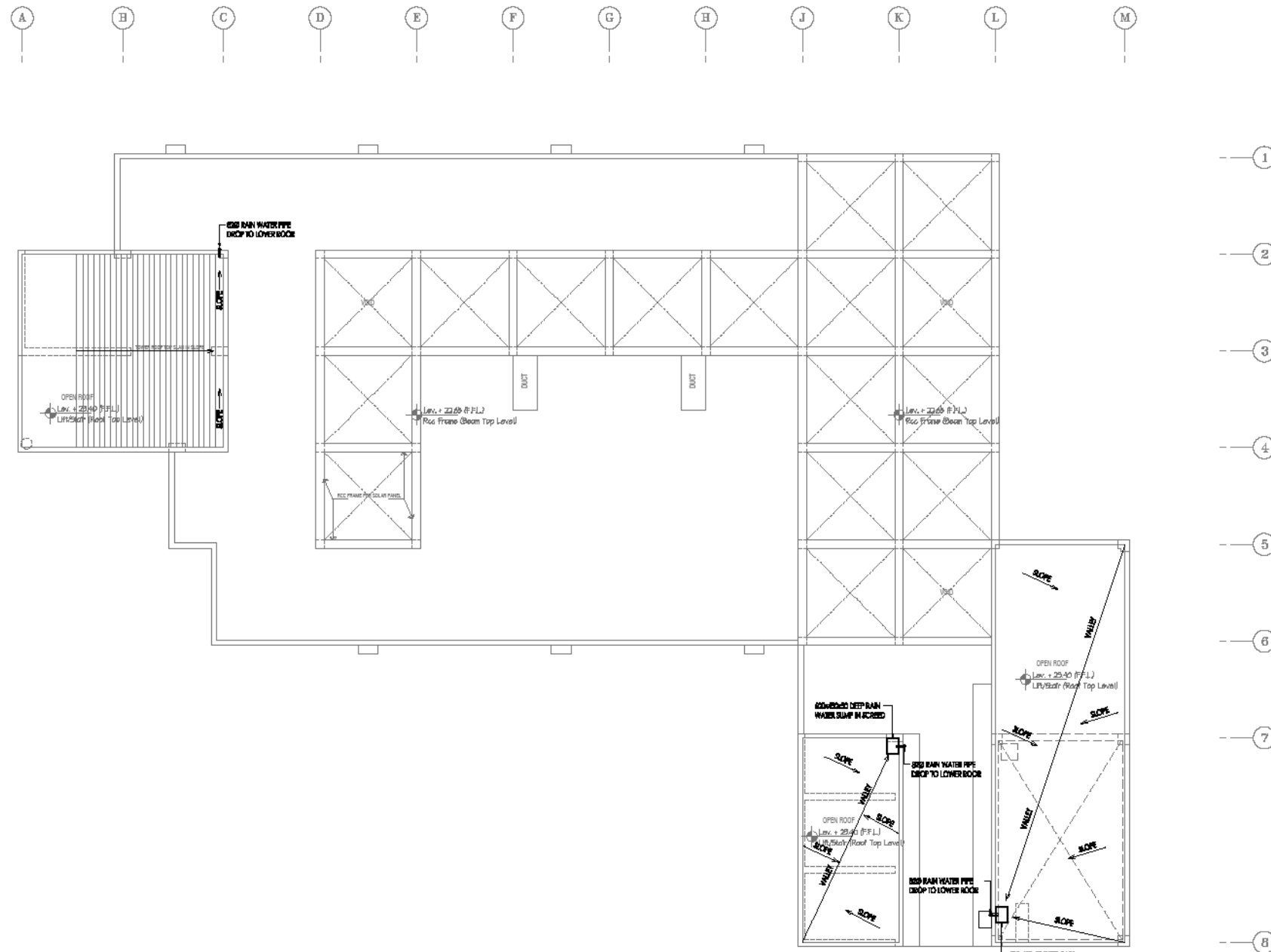
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PROPOSED OPD BUILDING
OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HJRI
KDA SCHEME - 33 KARACHI

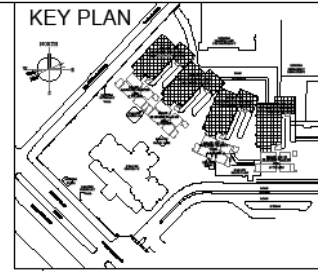
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**DRAINAGE LAYOUT
FIRST FLOOR PLAN**

PROJ. ENGR.	YUNUS SHEIKH	SHEET No.	DR-03
CHECKED	Muhammad		
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ROOF TOP PLAN
SCALE : 1:100



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KDA SCHEME - 33 KARACHI

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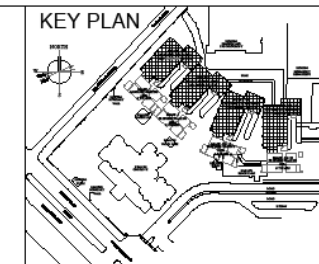
PROJECT

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

TITLE

**DRAINAGE LAYOUT
ROOF TOP PLAN**

PROJ. ENGG. YUNUS SHEIKH	SHEET No.
CHECKED Mubaw	DR-05
DRAWN BY MUNEER	SCALE 1:100
JOB No. MC-1914	DATE FEB 2019



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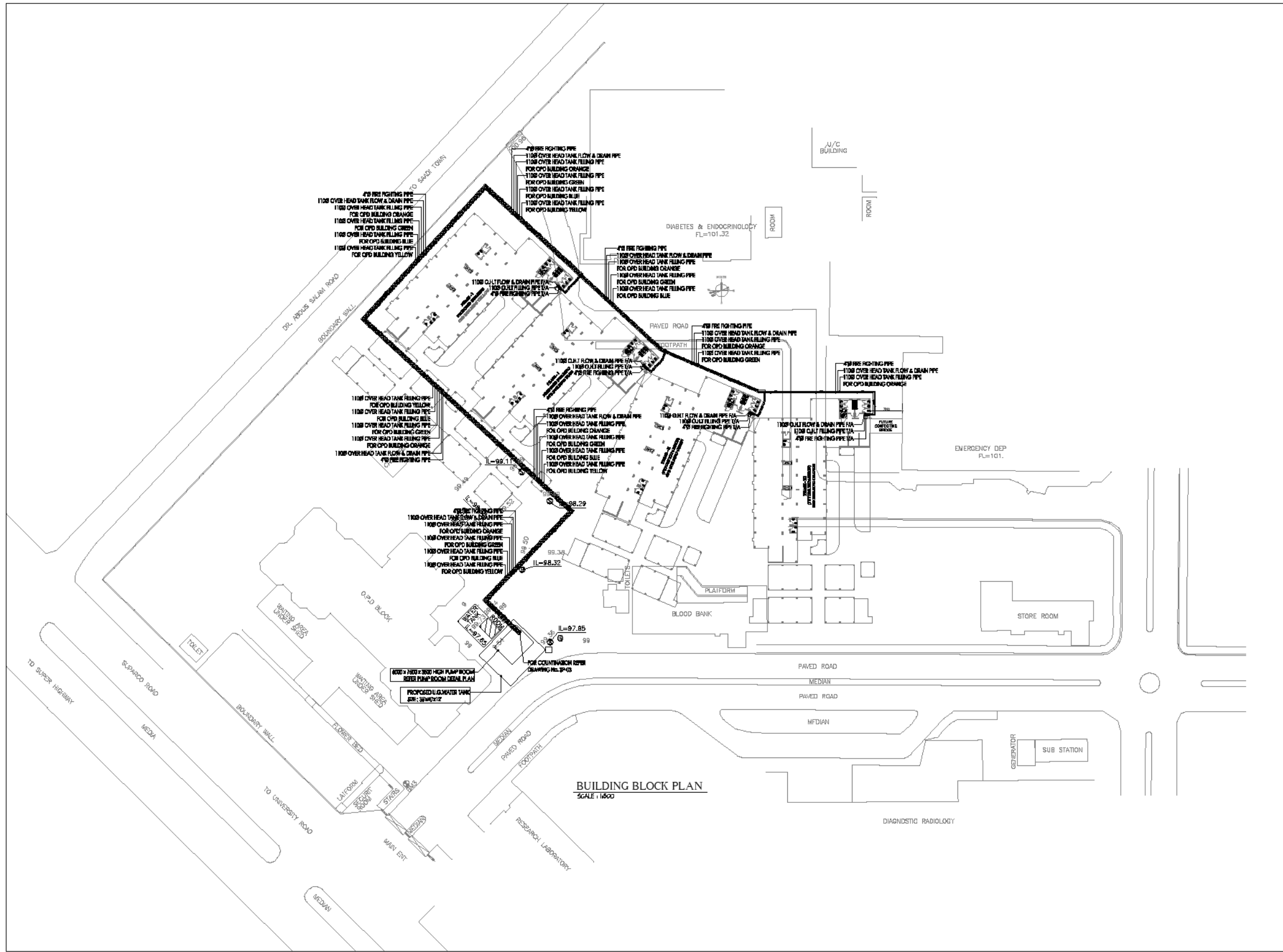
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SUPARCO ROAD GULZAR-E-HIARI
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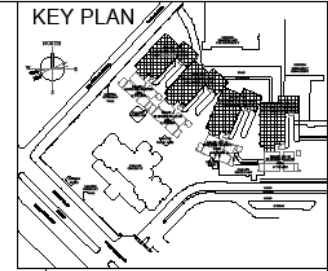
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PROJECT
PROPOSED OPD BUILDING
 OJHA CAMPUS
DOW UNIVERSITY OF HEALTH SCIENCE
 SUPARCO ROAD GULZAR-E-HIARI
 KDA SCHEME - 33 KARACHI

TITLE
**WATER SUPPLY &
 FIRE FIGHTING
 SITE PLAN LAYOUT**

PROJ. ENGR.	YUNUS BIRIKH	SHEET No.	SP-02
CHECKED	Moham		
DRAWN BY	MAS	SCALE	1:500
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KDA SCHEME - 33 KARACHI

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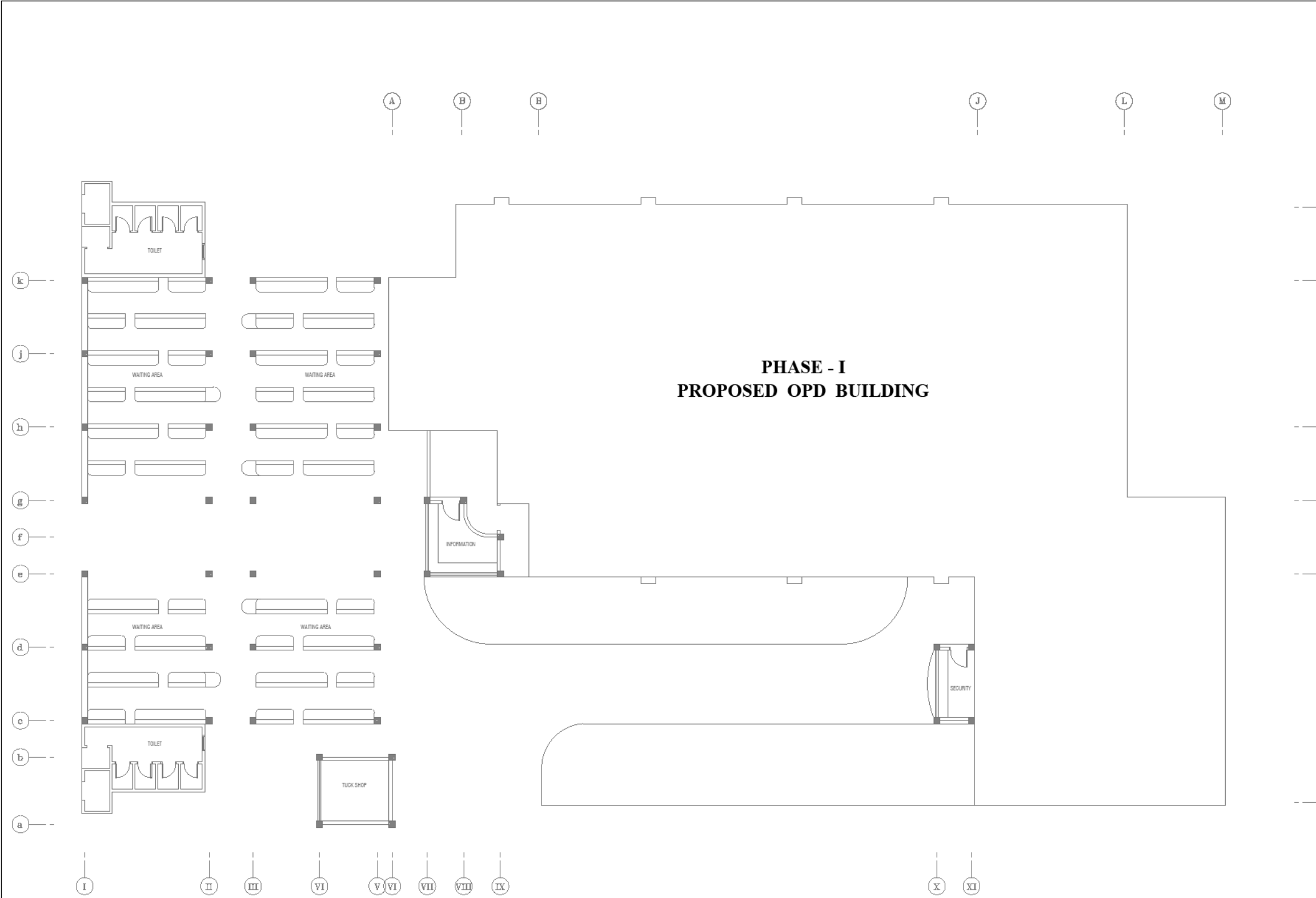
PROPOSED OPD BUILDING
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DOW UNIVERSITY OF HEALTH SCIENCE
SUPARCO ROAD GULZAR-E-HIARI
KDA SCHEME - 33 KARACHI

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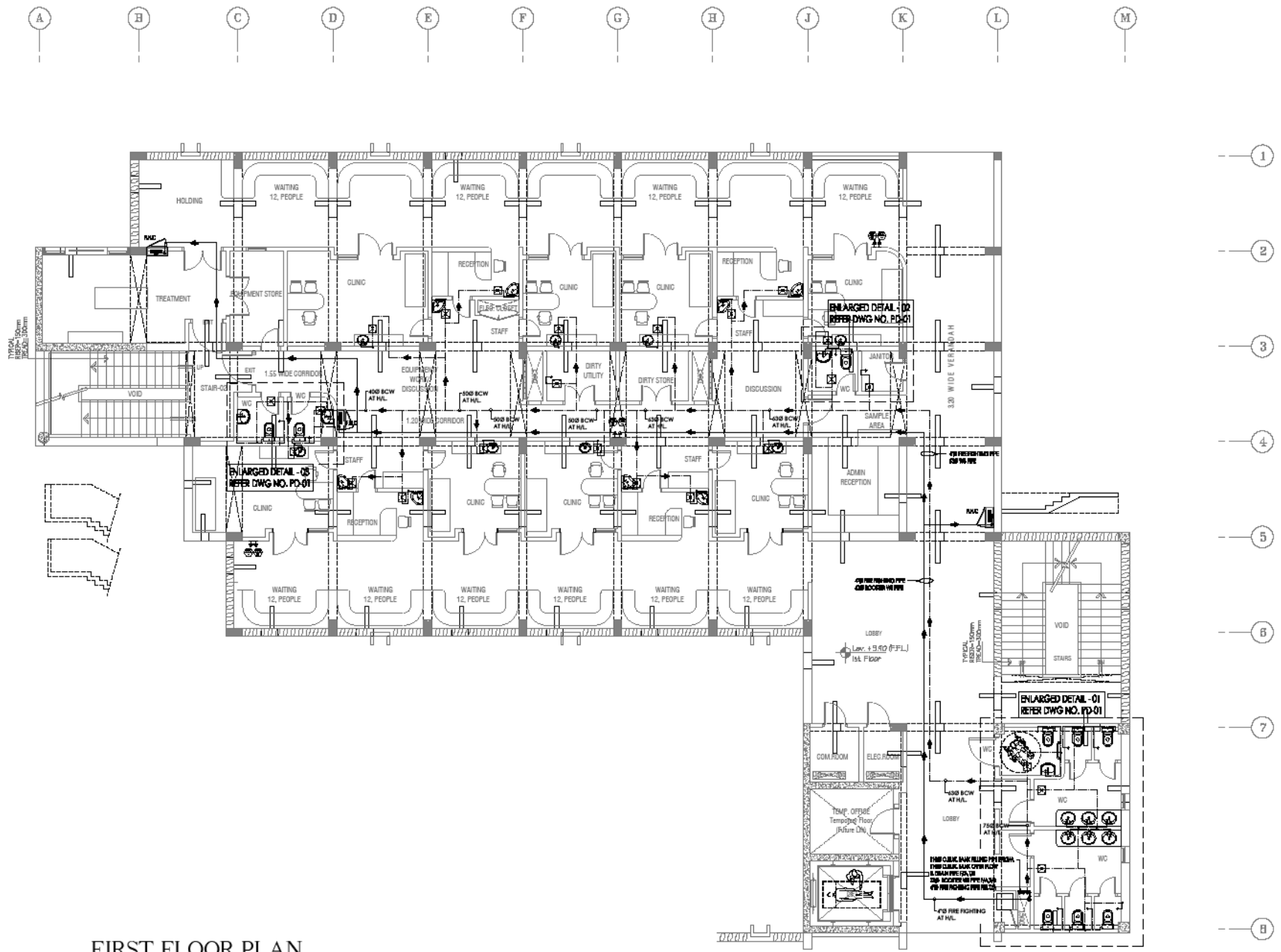
**WATER SUPPLY LAYOUT
GROUND FLOOR PLAN
OUTSIDE**

PROJ. ENGR.	SYDUS SHEKH	SHEET No.	WS-01
CHECKED	Muhammad		
DRAWN BY	SCALE	1:100	
JOB No.	DATE	FILE	
MC-514	FEB 2019		

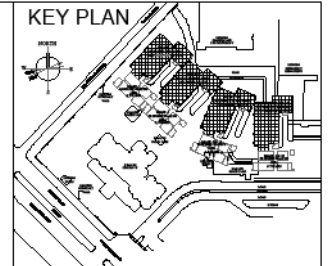
**PHASE - I
PROPOSED OPD BUILDING**



GROUND FLOOR PLAN (out side)
SCALE : 1:100




FIRST FLOOR PLAN
SCALE : 1:100



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KDA SCHEME - 33 KARACHI

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PROJECT

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

TITLE

**WATER SUPPLY LAYOUT
FIRST FLOOR PLAN**

PROJ. ENGR.	YUNUS SHEKH	SHEET No.	WS-03
CHECKED			
DRAWN BY	MUNEER	SCALE	
JOB No.	MC-014	DATE	FEB 2019
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