

**OFFICE INTERIOR FOR ENERGY DEPARTMENT  
GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**TENDER DOCUMENT**

**CONDITION OF CONTRACT  
&  
BILL OF QUANTITIES  
(MARCH' 2014)**



**ENERGY DEPARTMENT  
GOVERNMENT OF SINDH**

7<sup>TH</sup> FLOOR, LAKSON SQUARE BUILDING NO. 3, NEAR KARACHI PRESS CLUB, KARACHI.

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**OFFICE INTERIOR**  
Energy Department

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**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**INSTRUCTIONS TO BIDDERS**

## INSTRUCTIONS TO BIDDERS

### A. GENERAL

#### IB.1 Scope of Bid

- 1.1 Procuring agency as defined in the bidding data hereinafter called "the procuring agency" wishes to receive bids for the construction and completion of works as described in these bidding documents, and summarized in the bidding data hereinafter referred to as the "Works".
- 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

Procuring agency has received/ applied for additional grant to Finance Department Government of Sindh in Pak Rupees towards the cost of the Interior Works specified in the bidding data, and it is intended that part of the proceeds of this fund 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 interested bidders who are eligible under provisions of Sindh Public Procurement Rules as mentioned below and the criteria given in the Notice Inviting Tender (NIT)/ Bidding Document.
  - (a) Bidders may be excluded if;
    - (ii) A firm is blacklisted/ debarred by the procuring agency.
  - (b) Government-owned enterprises or institutions may participate only if they can establish that they are;
    - (i) legally and financially autonomous, and
    - (ii) Operate under commercial law.
  - (c) Bidders are:-
    - (i) Pre-qualified with procuring agency for particular Interior Works.
    - (ii) Registered with relevant tax authorities (income/sales tax, wherever applicable).

**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 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 procuring agency will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

**IB.6 Site Visit**

6.1 The bidders are advised to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing the bid and entering into a contract for construction of the works. All cost in this respect shall be at the bidder's own expense.

6.2 The bidders and any of their personnel or agents will be granted permission by the procuring agency to enter upon his premises and lands for the purpose of such inspection, but only upon the express condition that the bidders, their personnel and agents, will release and indemnify the procuring agency, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

**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 addendum. (If Issued)

- a. Instructions to Bidders.
- b. Bidding Data.
- c. General Conditions of Contract, Part-I (GCC).
- d. Special Conditions of Contract, Part-II (SCC)
- e. Specifications.
- f. Form of Bid and Appendices to Bid.
- g. Bill of Quantities
- h. Form of Bid Security.
- i. Form of Contract Agreement.
- j. Forms of Performance Security, Mobilization Advance Guarantee, Integrity Pact and Indenture bond for secured advance.
- k. Drawings (Existing).

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 bidders own risk. Pursuant to, bids which are not substantially responsive to the requirements of the BD will be rejected.

**IB.8 Clarification of Bidding Documents**

Any interested bidder requiring any clarification(s) in respect of the bidding documents may notify the procuring agency in writing at the procuring agency's address indicated in the Invitation for Bids/NIT. Procuring agency will respond to any request for clarification provided they are received at least five calendar days prior to the date of opening of bid.

Provided that any clarification in response to query by any bidder; shall be communicated to all parties who have obtained bidding documents.

**IB.9 Addendum/Modification of Bidding Documents:**

At any time prior to the deadline for submission of bids, the procuring agency may, for any reason, whether at his own initiative or in response to a clarification requested by a interested bidder, modify the bidding documents by issuing addendum.



**C. PREPARATION OF BIDS**

**IB.11 Bid Prices**

- 11.1 Unless stated otherwise in the bidding documents, the contract shall be for the whole of the works as described in IB 1.1 hereof, based on the unit rates or prices submitted by the bidder or percentage quoted above or below on the rates of Composite Schedule of Rates (CSR), as the case may be.
- 11.2 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 procuring agency when executed and shall be deemed to be covered by rates and prices for other items in the Bill of Quantities. In case of Composite Schedule of Rates, if the bidder fails to mention the percentage above or below, it shall be deemed to be at par with the rates of Composite Schedule of Rates.
- 11.3 The bid price submitted by the contractor shall include all rates and prices including the taxes. All duties, taxes and other levies payable by the contractor under the contract, or for any other cause during the currency of the execution of the work or otherwise specified in the contract as on the date seven days prior to the deadline for submission of bids.

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

- 11.4 The rates and prices quoted by the bidders are subject to adjustment during the performance of the contract in accordance with the provisions. 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. Adjustment in prices quoted by bidders shall be allowed as per Sub-Para 4(ii) of Section C of Instructions to bidders and bidding data.

**IB.12 Currencies of Bid and Payment**

- 12.1 The unit rates and the prices shall be quoted by the bidder entirely in Pak rupees. A bidder expecting to incur expenditures in other currencies for inputs to the works supplied from outside the procuring agency's country will be entirely in Pak rupees.

**IB.13 Bid Validity**

- 13.1 Bids shall remain valid for the period stipulated in the bidding data from the date of opening of bid specified.
- 13.2 In exceptional circumstances, prior to expiry of the original, the procuring agency may request the bidders to extend the period of validity for a specified additional period, which shall not be for more than one third of the original period of bid validity. The request and the responses thereto, shall be made in writing. A bidder may refuse the request without the forfeiture of the bid security. In case, a bidder agreed to the request, shall not be required or permitted to modify the bid, but will

be required to extend the validity of the bid security for the period of the extension, and in compliance in all respects.

**IB.14 Bid Security**

- 14.1 Each bidder shall furnish, as part of the bid, a bid security in the amount stipulated in the bidding data in Pak Rupees only.
- 14.2 The bid security shall be at the option of the bidder, in the form of Pay order or a bank guarantee issued by a Scheduled Bank in Pakistan of the procuring agency, which should commensurate with the bid validity period. The bank guarantee for bid security shall be acceptable.
- 14.3 Any bid not accompanied by an acceptable bid security shall be rejected by the procuring agency as non-responsive.
- 14.4 Bid security shall be released to the unsuccessful bidders once the contract has been signed with the successful bidder or the validity period has expired.
- 14.5 The bid security of the successful bidder shall be returned when the bidder has furnished the required Performance Security and signed the Contract Agreement.
- 14.6 The bid security may be forfeited:
  - (a) If the bidder withdraws his bid except as provided
  - (b) If the bidder does not accept the correction of his bid price pursuant to here of; 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.15 Pre-Bid Meeting**

- 15.1 Procuring agency may, on his own motion or at the request of any bidder, hold a pre-bid meeting to clarify issues and to answer any questions on matters related to the bidding documents. The date, time and venue of pre-bid meeting, if convened, shall be communicated to all bidders. All bidders or their authorized representatives shall be invited to attend such a pre-bid meeting at their own expense.
- 15.2 The bidders are requested to submit questions, if any, in writing so as to reach the Procuring agency not later than seven (7) days before the proposed pre-bid meeting.
- 15.3 Any modification of the bidding documents listed in here of, which may become necessary as a result of the pre-bid meeting shall be made by the procuring agency

exclusively through the issue of an Addendum pursuant.

15.4 Absence at the pre-bid meeting will not be a cause for disqualification of a bidder.

**IB.16 Format and Signing of Bid**

16.1 Bidders are particularly directed that the amount entered on the Form of Bid shall be for performing the contract strictly in accordance with the bidding documents.

16.2 All appendices to bid are to be properly completed and signed.

16.3 Alteration is not to be made neither 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.

16.4 Each bidder shall prepare by filling out the forms without alterations and shall provide an original copy along with photocopies as per the requirement of the procuring agency specified in the bidding data. The original as well as copies of the document shall be clearly marked as "ORIGINAL" and „COPY", as the case may be. If there is any discrepancy between original and copy (ies) then the original shall prevail.

16.5 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(s) duly authorized to sign on behalf of the bidder pursuant, hereof. All pages of the bid shall be initialed and stamped by the person(s) signing the bid.

16.6 The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the procuring agency, or as are necessary to correct errors made by the bidder. Such corrections shall be initialed by the person(s) signing the bid.

16.7 Bidders shall indicate in the space provided in the Form of Bid their full and proper Postal 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.

16.8 Bidders should retain a copy of the bidding documents as their file copy.

**D. SUBMISSION OF BIDS**

**IB.17 Sealing and Marking of Bids**

17.1 Each bidder shall submit his bid as under:

- (a) ORIGINAL of the bid shall be sealed and as such.
- (b) The envelope containing the ORIGINAL shall be put in one sealed envelope and addressed as given, hereof.

17.2 The inner and outer envelopes shall:

- (c) Be addressed to the procuring agency at the address provided in the bidding data;
- (d) Bear the name and identification number of the contract as defined in the bidding data; and
- (e) Provide a warning not to open before the time and date for bid opening, as specified in the bidding data.

17.3 In addition to the identification required in hereof, the inner envelope shall indicate the name and postal address of the bidder to enable the bid to be returned unopened.

17.4 If the outer envelope is not sealed and marked as above, the procuring agency will assume no responsibility for the misplacement or premature opening of the Bid.

**IB.18 Modification, Substitution and Withdrawal of Bids**

18.1 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 procuring agency prior to the deadline for submission of bids.

18.2 No bid may be modified by a bidder after the deadline for submission of bids except in accordance.

**E. BID OPENING AND EVALUATION.**

**IB.19 Bid Opening**

- 19.1 Procuring agency will open the bids, including withdrawals, substitution and modifications made pursuant in the presence of bidders" representatives who choose to attend, at the time, date and location stipulated in the bidding data. The bidders or their representatives who are in attendance shall sign an attendance sheet.
- 19.2 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 shall not be opened.
- 19.3 Procuring agency shall read aloud the name of the bidder, total bid price and price of any Alternate Proposal(s), if any, discounts, bid modifications, substitution and withdrawals, the presence or absence of bid security, and such other details as the procuring agency may consider appropriate, and total amount of each bid, and of any alternative bids if they have been requested or permitted, shall be read aloud and recorded when opened.
- 19.4 Procuring Agency shall prepare minutes of the bid opening, including the information disclosed to those present in accordance.

**IB.20 Process to be Confidential.**

- 20.1 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 before the announcement of bid evaluation report in accordance with the requirements of **Rule 45**, which states that Procuring agencies shall announce the results of bid evaluation in the form of a report giving reasons for acceptance or rejection of bids. The report shall be hoisted on website of authority and that of procuring agency if it website exists and intimated to all bidders at least seven (7) days prior to the award of contract The announcement to all bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated. Any effort by a bidder to influence the procuring agency's processing of bids or award decisions may result in the rejection of such bidder's bid. Whereas, any bidder feeling aggrieved, may lodge a written complaint as per Rule 31; however mere fact of lodging a complaint shall not warrant suspension of the procurement process.

## IB.21 Examination of Bids and Determination of Responsiveness

- 21.1 Prior to the detailed evaluation of bids, the procuring agency will determine whether the bidder fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC (where applicable), turnover statement, experience statement, and any other condition mentioned in the NIT and bidding document. If the bidder does not fulfill any of these conditions, it shall not be evaluated further.
- 21.2 Once found to be fulfilling the eligibility criteria, as mentioned in the bids of eligible bidders will be evaluated for technical responsiveness as per specification and criteria given in the bidding documents. Technical and financial evaluations will be carried out in accordance with two stage or two stage-two envelopes bidding procedures,
- 21.3 A bid will be considered technically responsive if it (i) has been properly signed; (ii) is accompanied by the required bid security; and (iii) 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 procuring agency"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.
- 21.4 If a bid has major deviations to the commercial requirements and technical specifications will be considered technically non responsive. As a general rule, major deviations are those that if accepted, would not fulfill the purposes for which the bid is requested, or would prevent a fair comparison or affect the ranking of the bids that are compliant with the bidding documents.

### **(A). Major (material) Deviations include:-**

- (i) has been not properly signed;
- (ii) is not accompanied by the bid security of required amount and manner;
- (iii) stipulating price adjustment when fixed price bids were called for;
- (iv) failing to respond to specifications;
- (v) failing to comply with Mile-stones/Critical dates provided in Bidding Documents;
- (vi) sub-contracting contrary to the Conditions of Contract specified in Bidding Documents;
- (vii) refusing to bear important responsibilities and liabilities allocated in the Bidding Documents, such as performance guarantees and insurance coverage;
- (viii) taking exception to critical provisions such as applicable law, taxes and duties and dispute resolution procedures;
- (ix) a material deviation or reservation is one :
  - (a) which affect in any substantial way the scope, quality or performance of the works;
  - (b) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

**(B) Minor Deviations**

Bids that offer deviations acceptable to the Procuring Agency and which can be assigned a monetary value may be considered substantially responsive at least as to the issue of fairness. This value would however be added as an adjustment for evaluation purposes only during the detailed evaluation process.

- 21.5 If a bid is not substantially responsive, it will be rejected by the procuring agency, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

**IB.22 Correction of Errors before Financial Evaluation**

- 22.1 Bids determined to be substantially responsive will be checked by the procuring agency for any arithmetic errors. Errors will be corrected by the procuring agency 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 procuring agency 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.

- 22.2 The amount stated in the Form of Bid will be adjusted by the procuring agency in accordance with the above procedure for the correction of errors and with the concurrence of the bidders. The amount thus corrected 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.

**IB.23 Financial Evaluation and Comparison of Bids**

- 23.1 The procuring agency will evaluate and compare only the Bids determined to be substantially responsive

- 23.2 In evaluating the Bids, the procuring agency will determine for each bid the evaluated bid price by adjusting the bid price as follows:

(a) making any correction for errors pursuant.

(b) excluding provisional sums (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.

- 23.3 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.

23.4 If the bid of the successful bidder is seriously unbalanced in relation to the procuring agency's estimate of the cost of work to be performed under the contract, the procuring agency 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 procuring agency may require that the amount of the Performance Security set forth to be increased at the expense of the successful bidder to a level sufficient to protect the procuring agency against financial loss in the event of default of the successful bidder under the contract.

23.5 Bidders may be excluded if involved in "**Corrupt and Fraudulent Practices**" means either one or any combination of the practices given below

- (i) "**Coercive Practice**" means any impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;
- (ii) "**Collusive Practice**" means any arrangement between two or more parties to the procurement process or contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;
- (iii) "**Corrupt Practice**" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;
- (iv) "**Fraudulent Practice**" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (v) "**Obstructive Practice**" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit rights provided for under the Rules.

#### 23.6 Evaluation Report

After the completion of evaluation process, the procuring agency shall announce the results of bid evaluation in the form of report giving reasons for acceptance and rejection of bid. The report shall be intimated to all bidders at least seven (7) days prior to the award of contract.



**F. AWARD OF CONTRACT**

**IB.24 Award**

- 24.1 Subject to provision of the rule: The procuring agency shall 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, but not necessarily the lowest submitted price, within the original or extended period of bid validity. Provided that such bidder has been determined to be eligible in accordance and qualify pursuant.
- 24.2 Procuring agency, at any stage of the bid evaluation, having credible reasons for or having *prima facie* evidence of any deficiency(ies) in contractor's capacities, may require the contractor to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not for the said project.

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

**IB.25 Procuring Agency's Right to reject all Bids or Annul/Cancellation the Bidding Process**

Notwithstanding and provision of the rule: (1) A procuring agency reserves may cancel the bidding process at any time prior to the acceptance of a bid or proposal; (2) The procuring agency shall incur no liability towards bidders solely by virtue of its invoking sub -rule (1); (3) Intimation of the cancellation of bidding process shall be given promptly to all bidders and bid security shall be returned along with such intimation; (4) The procuring agency shall, upon request by any of the bidders, communicate to such bidder, grounds for cancellation of the bidding process, but is not required to justify such grounds.

**IB.26 Performance Security**

- 26.1 The successful bidder shall furnish to the procuring agency a Performance Security in the form of pay order or demand draft or bank guarantee, and the amount stipulated in the bidding data and the Conditions of Contract within a period of 28 days after the receipt of Letter of Acceptance.
- 26.2 Failure of the successful bidder to comply with the requirements of shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. Validity of performance security shall extend at least ninety days beyond the date of completion of contract, or as mentioned in the bidding data to cover defects liability period or maintenance period subject to final acceptance by the procuring agency.

**IB.27 Signing of Contract Agreement**

- 27.1 Within 15 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the procuring agency will send the successful bidder the Contract Agreement in the form provided in the bidding documents, incorporating all agreements between the parties.
- 27.2 The formal Agreement between the procuring agency and the successful bidder shall be executed within 15 days of the receipt of the Contract Agreement by the successful bidder from the procuring agency.
- 27.3 A procurement contract shall come into force when the procuring agency requires signs contract, the date on which the signatures of both the procuring agency and the successful bidder are affixed to the written contract. Such affixing of signatures shall take place within the time prescribed in the bidding documents.

Provided that the procuring agency may reduce the maximum time limit for signing of contract, as and when required, and shall be mentioned in the bidding document.

**IB.28 Stamp Duty**

The formal Agreement between the Procuring Agency and the successful bidder shall be duly stamped as per Stamp Act 1899, applicable in Government of Sindh.

**IB.29 General Performance of the Bidders**

Procuring agency may in case of consistent poor performance of the contractor and his failure to remedy the underperforming contract may take such action as may be deemed appropriate under the circumstances of the case including the rescinding the contract and/or black listing of such contractor and debarring him from participation in future bidding process.

**IB.30 Integrity Pact**

The bidder shall sign and stamp the Integrity Pact provided to the bidding documents for Provincial Government procurement contracts exceeding Rupees ten million. Failure to provide such Integrity Pact shall make the bidder non-responsive.

**IB.31 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.

**IB.32 Arbitration**

Any dispute that is not resolved shall be finally settled, unless otherwise specified in the Contract, under the Arbitration Act 1940 updated from time to time and would be held anywhere in the Province of Sindh at the discretion of procuring agency.



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**BIDDING DATA**

### Contact/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.

- 1.1 Name and address of the procuring agency:

*Energy Department Government of Sindh.  
7<sup>th</sup> Floor, Lakson Square Building No.3, Near Karachi Press Club, Karachi*

- 1.2 Name of the Project and Summary of the works:

*Office Interior Energy Department, Government of Sindh Located at 3<sup>rd</sup> Floor, State life Building, No 3, Dr. Ziauddin Ahmed Road, Karachi on Turnkey Basis.  
Design and Execution of all works complete in all manner.*

- 1.3 Name of the Borrower/Source of Financing/Funding Agency/Funding Source:

*Energy Department. Additional grant provided/ to be provided by Finance Department Government of Sindh Located.*

- 1.4 Amount and Type of Financing/Scheme Cost and Allocated Funds:

*Additional grant provided/ to be provided by Finance Department Government of Sindh Located.*

- 1.5 Time limit for clarification:

*5 (Five) working days prior to last date of submission.*

- 1.6 Bid language:

*The same language in which the bidding documents are written that is English*

- 1.7 (a) Prequalification Information to be updated (where applicable):

*Not applicable.*

(b) Financial and Technical Proposal (in case of two envelope method) or Company Profile in single stage single envelope:

*The bidder has to submit a technical proposal and financial proposal in sufficient detail to demonstrate the adequacy of the bid in meeting requirements for timely completion of the works. Two stage two envelope method is adopted for this bidding.*

1.8 Period of Bid Validity:

*45 days Calendar days after the submission of bid.*

1.9 Amount of Bid Security:

*5% of estimated cost.*

1.10 Venue, time, and date of the pre-Bid meeting:

*Energy Department Government of Sindh.  
7<sup>th</sup> Floor, Lakson Square Building No.3, Near Karachi Press Club, Karachi.*

1.11 Number of copies of the bid to be completed and returned:

*Original only.*

1.12 a. Procuring Agency's address for the purpose of bid submission:

*Energy Department Government of Sindh.  
7<sup>th</sup> Floor, Lakson Square Building No.3, Near Karachi Press Club, Karachi.*

1.13 a. Deadline for submission of bids:

*The time 4.00 pm and date April 11, 2014.*

(b) Venue, time, and date of bid opening:

*Energy Department Government of Sindh.  
7<sup>th</sup> Floor, Lakson Square Building No.3, Near Karachi Press Club, Karachi.*

*The time 5.00 pm and date April 11, 2014.*

1.14 Standard form and amount of Performance Security acceptable to the procuring agency:

*Performance Security 10% in form of bank guarantees/ pay order.*

1.15 Stamp duty:

*As per Stamp Act 1899, applicable in Government of Sindh.*



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**FORM OF BID  
AND  
APPENDICES TO BID**

## FORM OF BID

Bid Reference No. E.D.SO (Admn) Tender No. 01/2014

To:

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

1. Having examined the bidding documents with Turnkey Basie including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications, Existing Drawings and Bill of Quantities and Addendum Nos. \_\_\_\_\_ for the Design of execution of the above-named work, we/I, the undersigned, offer to Design of execute and complete the work  
and remedy any defects therein in conformity with the Conditions of Contract, Specifications, Drawings, Bill of Quantities and Addendum for the sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) or such other sum as may be ascertained in accordance with the said conditions.
2. We/I 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/I submit herewith a **bid security 5% (Estimated cost of project)** in the amount of Pak Rupees \_\_\_\_\_ (Rs. \_\_\_\_\_) drawn in your favour or made payable to procuring agency and valid for a period, after **Mobilization advance period** from the Construction of process **2 months** Period.
4. We/I 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/I agree to abide by this bid for the period of \_\_\_\_\_ days from the date fixed for opening 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.  
  
We understand that you are not bound to accept the lowest or any bid you may receive.
8. We undertake, if our/my bid is accepted, to execute the Performance Security of Conditions of Contract for the due performance of the Contract.
- 9.. We confirm, if our bid is accepted, that all partners of the joint venture shall be liable jointly and severally for the execution of the Contract and the composition or the constitution Of the joint venture shall not be altered without the prior consent of the procuring agency.

**OFFICE INTERIOR**

Energy Department

(Please delete this in case of Bid form a single bidder)

**Bidding Data**

In the capacity of \_\_\_\_\_duly authorized to sign Bids for and on behalf of

Dated this \_\_\_\_\_day of \_\_\_\_\_20\_\_\_\_\_

Signature: \_\_\_\_\_

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

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

Witness:

Signature: \_\_\_\_\_

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

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

Occupation: \_\_\_\_\_



Appendix-A to Bid

**SPECIAL  
STIPULATIONS  
Clause  
Conditions of Contract**

1	Type of work to be endorsed on the package of the Tender	Office Interior for Energy Department, Government of Sindh. 3 <sup>rd</sup> Floor, State life Building No. 3, Dr. Ziauddin Ahmed Road, Karachi on turnkey basis.
2	Date of Issuance of Bid	March 28, 2014
3.	Place of Issuance of Bid	Energy Department, Government of Sindh. 7th Floor, Lakson Square Building No. 3, near Karachi Press Club, Karachi.
4	Place of submission and opening of Bid	Energy Department, Government of Sindh. 7th Floor, Lakson Square Building No. 3, near Karachi Press Club, Karachi.
5	Last Date and Time of submission of Bid	April 11, 2014 at 4.00 pm
6	Date and Time of opening of Bid	April 11, 2014 at 5.00 pm
7	Amount and validity Security bid money	<b>5% (Five Percent)</b> of tender cost against Pay Order or approved insurance company in Karachi and shall remain valid upto 90 days from the date of opening of Tender
8	Date of commencement of work.	Within <b>15 (Fifteen)</b> calendar days from date of issuance of Letter.
19	Advance Income tax deduction.	In accordance with prevailing government rules
10	Period of Interim payment	Two Bill in one month
11	Time of completion of Structural Works.	(Not Applicable)
12	Time of completion of Overall Works	<b>5 (Five)</b> calendar months from the date of issuance of Letter.
13	Defect Liability or Maintenance period.	<b>6 (Six)</b> calendar months from the date of issuance of Substantial Completion Certificate by the Engineer/ Monitoring Committee.
14	Amount of Performance Security (bank guarantee)	<b>10% (ten percent)</b> of total Contract Price against Bank Guarantee from a schedule Bank in Karachi.
15	Validity of Performance Bond Security (bank guarantee).	Construction Period
167	Amount of Mobilization Advance	<b>10% (Ten Percent)</b> of Contract Price against Insurance Guarantee through approved Bank/ Insurance company based in Karachi.
17	Validity of Mobilization Advance Bond/Guarantee	Construction Period
18	Recovery of Mobilization Advance	<b>20% (Twenty percent)</b> of gross amount of work done from each Running Bill.
19	Retention money to be deducted from Contractor's Running Bills.	<b>5% (Five percent)</b> of gross amount of work done from each Running Bill.

**OFFICE INTERIOR**

Energy Department

**Bidding Data**

20	Release of Retention Money	<b>50% (fifty percent)</b> of total retention money shall be released after issuance of Substantial Completion Certificate and the balance 50% after successful completion of Maintenance Period, duly certified by the Consultant/Engineer, or against Insurance guarantee if payable at the time of completion.
21	Period of honouring Interim Payment Certificate by the Engineer.	Within <b>10 (Ten)</b> working days, after receipt from the Contractor
22	Time within which payment to be made to the Contractor by the Employer	Within <b>14 (Fourteen)</b> calendar days, after issuance of Payment Certificate.
23	Period of checking of Final Bill.	Within <b>30 (thirty)</b> calendar days after the date of Substantial Completion of the works, subject to submission of the Bill by the Contractor.
24	Venue of arbitration.	Karachi.
25	Validity of Bid	45 (forty five) calendar days from the date of opening of Tender
26	Approved Insurance Company	
27	Secured Advance against material delivered on site	
28	Approved Insurance Company	
29	Secured Advance against material Delivered on site.	



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**BILL OF QUANTITIES**

## GRAND SUMMARY OF COST

1	Civil/ interior /Plumbing Works	Rs.	_____
2	Furniture Works	Rs.	_____
3	Electrical Works	Rs.	_____
	<b>Total</b>	Rs.	<input type="text"/>



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**BILL OF QUANTITIES  
CIVIL & INTERIOR WORKS**

### SUMMARY OF COST

Division A - Dismantling/Removing	Rs.	_____
Division B - Floor Finishes	Rs.	_____
Division C - Suspended Ceilings	Rs.	_____
Division D - Wall Partition, Finishes & Cladding	Rs.	_____
Division E - Door & Window	Rs.	_____
Division F- Miscellaneous Works	Rs.	_____
Division G- Toilet Works	Rs.	_____
<b>Grand Total</b>	<b>Rs.</b>	<input type="text"/>

(Rupees \_\_\_\_\_  
\_\_\_\_\_ )

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
<b>A Dismantling / Removing</b>					
1	Dismantling / removing of existing construction including tools & equipments, all necessary precautionary measures, stacking useable at designated, AC / Electrical / Plumbing or any other item which is required to be demolished / removed place for Owner's properly, carting away surplus, stuff, etc. from site complete in all respect. <b>Note : Contractor should visit the site and take all necessary information before quoting the price. All debry is shift by contractor reasonability out site area.</b>				
a	Bath with fixture, fitting and Vanity, contractor must be check the site and listout bathroom accessories than given by the Client. Complete	13.00	each		
b	Wazoo Khana ( R.C.C Floor ,fixture, fitting etc completed	1.00	Job		
c	Block Masonry complete	4,657.00	Sft		
d	R.C.C Lintels	92.00	Rft		
e	Chipping Plaster	Rate Only	Sft		
f	Chipping Plaster (lift outer area)	240.00	Sft		
g	Raised RCC Floor	284.00	Sft		
h	Floor with Skirting Tile with basic	17,647.00	Sft		
i	Floor with Skirting Tile with basic (lift outer area)	866.00	Sft		
j	Ceilling frame	17,334.00	Sft		
k	Ceiling frame (Lift outer area)	866.00	Sft		
l	Doors (Single)	20.00	Nos		
m	Doors (Double)	4.00	Nos		
n	Window	150.00	Nos		
o	Wooden Partition	284.00	Sft		
<b>2 RCC Concrete</b>					
a	Providing and casting 6" thick RCC wall and other works 1:2:4 (mix design) area using graded screened bajri 3/8" and down gauge as fine aggregate and crushed stone 3/4" and down gauge as coarse aggregate with machine mixing including the cost of form work and its removal, curing etc. <b>having min. works cube crushing strength of 3,000 psi after 28 days curing</b> including the cost of reinforcement bars #4 @ 6" c/c both ways (double reinforcement) complete as per drawing. R.C.C. Lintels 1:2:4 (fc 3000 psi) 4" x 6"	90.00	Rft		
<b>Total of "A"</b>					

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
<b>B</b>	<b><u>FLOOR FINISHES</u></b>				
1	<b><u>CC Flooring</u></b>				
a	Provide and lay 1:3:6 cement concrete floor smooth finished of minimum 2" thick including curing, hacking / chipping of existing surface for bonding where necessary, etc. complete in all respects.	4700.00	Sft		
b	Provide and lay (in Kitchen or any other required Area) 4" thick C.C. 1:3:6 platform base for cabinet, including finishing with CM (1:4) plaster of required thickness, curing, cleaning, hacking / chipping of existing surface for bonding where necessary, etc. complete in all respects.	250.00	Sft		
2	<b><u>Porcelain Tile flooring</u></b>				
	Provide and lay imported porcelain tile of approved quality for flooring and in ramps/ slopes, if required, with 1:4 cement sand mortar base of required thickness to achieve a minimum overall finished floor thickness of 2", setting the tiles with neat cement mortar, grouting the joints 1/4" wide with matching grout of approved supplier, including curing, cleaning, finishing & hacking/chipping of existing surface for bonding where necessary, etc. complete in all respect.				
	(Basic price of tile shall be Rs. 1800.00 per sq.m.)				
a	Porcelain polished tiles Size: 24"x 24"	5956.00	Sft		
b	Porcelain Dark color tiles Size: 24"x 24"	100.00	Sft		
c	Porcelain Dark color Boder tiles	690.00	Rft		
d	Porcelain Textured polished tiles Size: 42" x 3"	400.00	Sft		
e	Porcelain polished tiles Size: 12"x 24"	65.00	Sft		
f	Lift lobby (Outer area) Size: 24"x 24"	866.00	Sft		



Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
2.1	<b><u>Ceramic Tile Floor and Walls.</u></b> Provide and lay Ceramic Tile Walls and Floor of approved sample in Minter Toilet, Staff , kitchen & Minister Kitchen Area with 1:4 cement sand mortar base of required thickness, setting the tiles with neat cement mortar, grouting the joints 6mm wide horizontal with Hi-Bond Tile Grout of approved colour of Dadabhoy or approved equivalent as per manufacturer's specifications & instructions including curing, cleaning, hacking / chipping of existing surface for bonding where necessary, etc., complete in all respect. Size : 12" x 12" (Basic price of tile shall be Rs. 1600.00 per sq.m.)				
	<b>Floor Area</b>				
a	Porcelain tile for Executive Wash Room(Basic price of tile shall be Rs. 1800.00 per sq.m.)	145.00	Sft		
b	Kitchenette	100.00	Sft		
c	Officers Wash Room	80.00	Sft		
d	Staff Wash Rooms (Gents & Ladies)	654.00	Sft		
e	Drivers Wash Room	83.00	Sft		
	<b>Wall Tile</b>				
a	Porcelain tile for Executive Wash Room(Basic price of tile shall be Rs. 1800.00 per sq.m.)		Sft		
b	Kitchenette	168.00	Sft		
c	Officers Wash Room	244.00	Sft		
d	Staff Wash Rooms (Gents & Ladies)	2245.00	Sft		
e	Drivers Wash Room	320.00	Sft		
f	Canteen Kitchen	115.00	Sft		
3	<b><u>Carpet Tile Flooring</u></b> Provide and install floor of machine made nylon carpet tile of approved make with color and design, complete in all respects. (Basic price of carpet tile shall be Rs. 250.00 per sq.ft.)	5780.00	Sft		
4	<b><u>Wooden Flooring</u></b> Provide & install in line and level wooden floor (heavy commercial) of approved make i/c rubber underlay, wood edge detail as per drawing, etc complete in all respects. (Basic price of tile shall be Rs. 250.00 per sqft.)	4700.00	Sft		

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
5	<b><u>Floor Strip</u></b> Provide and install in position S.S floor strip between hard flooring and carpet consisting of 3/4" wide, 1/8" thick SS. strip screwed with S.S. screws @ 12" c/c including rounded edges, etc. complete in all respect.	105.00	Rft		
6	<b><u>Marble Threshold.</u></b> Provide and fix 3/4" thick chemically pre-polished Boticina marble with approved edges of approved sample including 1:4 cement sand mortar base of required thickness, curing, cleaning, hacking of existing surface for bonding where necessary, etc. complete in all respect.	85.00	Rft		
7	<b><u>Raised Floor in Toilet.</u></b>				
i	Provide and construct Raised Floor 6" to 8" deep in Toilet consisting of following items. (For payment, sub-floor area will be measured)	1023.00	Sft		
ii	1:4 floor in slope, minimum 2" thick and cementitious waterproofing treatment by brush application of ICS / Penetron International Ltd or approved equivalent including treatment at the junctions of horizontal & vertical surface, etc., as per manufacturer's specifications and instructions.				
iii	1/2" thick 1:4 plaster on walls and cementitious waterproofing treatment by brush application of ICS / Penetron International Ltd or approved equivalent including treatment at the junctions of horizontal & vertical surface, etc., as per manufacturer's specifications and instructions.				
iv	Foam concrete (Concrete Technology as per manufacturer's specifications and instructions.)				
v	3" thick 1:3:6 sub-floor.				
vi	4" thick solid block masonry.				

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
8	<b><u>SKIRTING</u></b>				
8.1	<b><u>PVC Skirting:</u></b>				
	Provide and install in position where required, 65mm high approved quality heavy duty PVC skirting (Kaysons, Sarina or approved equivalent) with approved adhesive, etc, complete in all respect.	2515.00	Rft		
8.2	<b><u>Porcelain Skirting</u></b>				
a	Providing and fixing skirting of porcelain tiles of approved color and shade with cement mortar 1:2 over 3/4" thick mortar 1:4 filling joints with matching grout of approved supplier i/c curing and finishing etc complete in all respects.	1770.00	Rft		
b	Lift lobby (Out area)	130.00	Rft		
c	Wooden porcelain skirting	205.00	Rft		
d	porcelain skirting 12" x 24"	42.00	Rft		
8.3	<b><u>Wooden Skirting</u></b>				
	Providing and fixing wooden skirting 1/2" thick of heavy commercial / Pak Carpet /other equivalent with nails / screws / glue / cutting, fitting and finishing, complete in all respects .	1335.00	Rft		
	<b>Total of "B"</b>				

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
C	<b><u>SUSPENDED CEILINGS</u></b>				
1	<b><u>Gypsum ceiling</u></b>				
	<p>Providing &amp; fixing reflected ceiling consisting of rough wood blocking well with solignum treated internal framing as per given sizes, in gypsum board 1/2" thick, including bulk head / valance and open light box etc, fixed with rigid adjustable hanging suspension system of GS (to make rust proof is entire responsibility of contractor) including applying Matt Enamel paint roller applied (ICI or approved equivalent). Also making provision for dropped and punched including required height and light fixture Pelmet as shown in drawing. Complete as per detail / drawing and as directed by the Consultants. (make Thermec, Protector or equivalent ) complete in all respect. <b>(For calculation net stated horizontal surface will be measured).</b></p>	17995.00	Sft		
2	<b><u>Wooden MDF Ceiling</u></b>				
a	<p>Provide and install in position 1/2" thick MDF commercial with 1/8" thick Oak Ply (imported approved type) with with solignum treated partial wood frame works as per drawing of approved sizes, or CKM adjustable suspension system other equivalent, with bulk head required height and light fixture Pelmet (where required) as per drawing including all hardware and accessories, with approved 1/8" thick grooves, cutting out openings for all lights fixtures, linear grills and diffusers including wooden light pelmet, approved polish finish etc. complete in all respects. <b>(For calculation net stated horizontal surface will be measured).</b></p>	665.00	Sft		
b	Same as items # 2 but approved paint finish	431.00	Sft		

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
3	<b><u>Gypsum Tile Ceiling</u></b>				
	Providing and fixing suspended ceiling using size: 24"x 24"x 1/2" thick (from Iqbal sons, Thermec or Protector) tapered edge gypsum board sheets as per sample approved including suspension systems with groves, attachment devices, hangers, edge mouldings, trim clips and trimming any extra hangers as required, including making provision for light fixtures, A/C diffusers, smoke detectors etc. as per detail / drawing. Standard Specification . (make Elephant or Thermec equivalent).	244.00	Sft		
	Lift Lobby (Outer area)	1000.00	Sft		
4	<b><u>Oak Ply Rafters</u></b>				
	Providing, making and fixing Rafter 4" thick having 1/2" thick MDF all side with 3" x 1 1/2" wooden frame with solignum 1/8" thick Oak wood ply rafters with approved polish finish fixed with nuts and bolts on walls and adjacent gypsum ceiling including applying lacquer polish finish, using approved quality hardware, glue, nails etc. complete as per drawing. (For calculation net stated horizontal surface will be measured).	32.00	Rft		
	Rafters Size: 4" x 8"				
5	<b><u>Solid Wooden Gola (Ceiling)</u></b>				
	Provide & Making in position 2" wide x 1/2" thick as approved thickness solid Oak wood gola on Gypsum Ciling as shown on drawing & detail including wastage, hardware, glue, nails etc, complete in all respect.	284.00	Rft		
6	<b><u>Dampa Ceiling</u></b>				
	Dampa ceiling tiles with clamping rail system in various finish with imported approved hangers for suspension etc. Complete detail / drawing and as directed by the Consultant. (make Thermec, Protector or equivalen) complete in all respect.	516.00	Sft		
	<b>Total of "C"</b>				

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
<b>D</b>	<b><u>WALL PARTITION, FINISHES &amp; CLADDING</u></b>				
1	<b><u>Block Masonry</u></b> Provide and lay machine made solid block masonry of approved quality, setting the block in 1:4 cement sand mortar, raking out joints including curing, scaffolding, anchoring / tying with 1/4" dia bar at the junction of RCC columns / walls, hackling of existing surface for bonding where necessary, etc. complete in all respect. 4" thick	3,950.00	Sft		
2	<b><u>Cement Plaster</u></b> Provide and apply 1:4 cement sand plaster i/c 8" wide galvanized metal lathe of 18 SWG at the junctions of concrete and block masonry, conduit chases, etc. fixed with masonry nails and G.I. sheet strip, rounded edges and grooves where required, smooth finished in line, level, plumb, curing, scaffolding, hackling / chipping of existing surface for bonding where necessary, etc. complete in all respect.				
a	1/2" thick	9,130.00	Sft		
b	1/2" thick (Lift Lobby outer area)	240.00	Sft		
3	<b><u>Stud Partition</u></b>				
3.1	<b><u>Full Height Partition</u></b>				
a	Providing, making & fixing wooden partitions 4" thick having 3/4" thick MDF both side with 2" x 2 1/2" rough wooden frame fix upto existing slab ht in between well treated with solignum (U.K) paint, complete with 1/2" thick grooves 1/2" thick wherever shown on elevation/drawing applying matt enamel paint both side of (ICI approved equivalent) also providing approved quality hardware, including 1/2" groove wastage, nails, glues, lifting, etc. complete in all respect <b>(Including door Lintels area and measurement only ceiling ht area) (Excluding the cost of Skirting),</b>	8990.00	Sft		
b	Same as item Full ht Partition 6" thick	140.00	Sft		
c	Same as item Full ht Partition 7" thick	142.00	Sft		
c	Same as item # 3.1 but 8mm plan glass Make UAE with Solid 4" x 1" thick Oak wood with forsting film Strips frame approved size polish finish.	100.00	Sft		

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
3.2	Same as item Full ht but 3 1/2" thick x 5' -0" ht low ht having 3/4" thick MDF both side with 2" x 2" rough wooden frame including 3" x 4" thick partal wood with 3/16" thick oak ply cladding solid with solignum (U.K) including 4" x 1" thick oak wood top & bottom and side(if required) including 1" x 1" and 1" x 1/4" thick solid oak wood both side and required area gola approved polish finish including 5mm thick U.A.E glass fix with approved sealant, in 1/8" thick groove with approved Forsting Flim approved polish finish as shown in drawing including with 1 1/2" x 1 1/2" x 1/8" thick M.S. section box for column support with 8" x 8" x 1/4" thick M.S. base plate, fixed on structural slab with 4 Nos. expansion bolts of approved sizes including two coats of anti corrosive paint (ICI or Berger), if Site required.	5,490.00	Sft		
4	<p><b><u>Plain Glass Partition</u></b></p> <p>Providing and installation 12mm thick polished glass with fabricating and fixing stander ionodized aluminum using standard section as approved top &amp; bottom the architect with approved quality bottom rails, brush finish SS-304, with sand blasting film surface as per approved design. Complete with patch fitting, top &amp; bottom locks (from ISEO, Geza or equivalent as approved). Contractor is required to provide joints between the panels with minimum 5mm thick clear silicon from Dow corning or other approved, complete in all respects.</p>	835.00	Sft		
5	<p><b><u>WALL CLADDING</u></b></p>				
5.1	<p><b><u>MDF Cladding On Column</u></b></p> <p>Providing &amp; fixing cladding over existing column with MDF board back support with 3" x 1 1/2" Portal wooden frame with solignum treated, making groove 1/2" thick as per design, upto any height applying Matt enamel paint both side of (ICI approved or equivalent) as shown on drawing, complete in all respect with approved hardware, glue, nails etc. as per detail / drawing.</p>	1135.00	Sft		
5.2	<p><b><u>Wooden Panelling</u></b></p>				
a	<p>Providing, making &amp; fixing of Wooden Panelling required size 2'-6" ht 1/2" thick MDF board with 1/8" thick Sheesham teak wood ply with molding as per drawing including 3" x 1 1/2" Portal wooden frame with solignum treated, applied approved polish finish with required grooves as shown in drawing, complete in all respect with approved hardware, glue, nails etc. as per detail / drawing.</p>	5795.00	Sft		





Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
E	<b><u>DOORS, WINDOWS</u></b>				
1	<b><u>Laminated Door</u></b> Providing, making and fixing door comprising of solid Oak wood frame 4" x 2" thick, with approved polish finish, fixed with required Nos. of hold fast minimum 3" wide x 1/4" thick (not less than 3" in length) properly fixed with frames, having 1 1/4" thick commercial ply solid core door shutter with Oak wood lipping 1 1/2" x 1/2" thick on shutter edges and Oak ply veneering both side, including making approved 1/8" thick groove including approved beading with 6mm thick plain glass with solignum treated (U.K) shown on drawing, also fixing approved hardwares, hinges, tower bolts, locks, door closer, door stopper etc. including applying clear lacquer polish finish complete as per details / drawing (lock and handle Rs. 6000- each closer upto Rs. 2500- each) <b>For payment, area from Main Frame will be measured.</b>				
a	Door Type D1 - 2'-6" x 6'-6" (single) as per drawing	9.00	Nos		
b	Door Type D1a -3'-0" x 7'-0" (single leaf) as per drawing	1.00	Nos		
c	Door Type D2 -3'-0" x 7'-0" (Single) as per drawing	11.00	Nos		
d	Door Type D2a -3'-0" x 7'-0" (Single) as per drawing	8.00	Nos		
e	Door Type D2b -3'-0" x 7'-0" (Single) as per drawing	2.00	Nos		
f	Door Type D3a-4'-0" x 7'-0" (Duble) as per drawing	3.00	Nos		
g	Door Type D4- 5'-0" x 7'-0" (Duble) as per drawing	5.00	Nos		

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
2	<p><b><u>Glass Door</u></b>                      Providing, making and fixing glass doors using 12mm thick U.A.E make clear glass, having 1 1/2" x 4" silver powder coated aluminium top and bottom rail, including approved best quality S.S 3/4" dia. rod &amp; hardwares, floor hinges, custom made S.S Clipe, S.S.handle, door lock etc. as approved by the Architect, complete as per details / drawing                      Door Type GD1 - 3'-0" x 7'-0" (Single) with Forsting Flim as per drawing</p>	20.00	Nos		
3	<p><b><u>Double Glazing with Anti Shutter Flim</u></b>                      External Double Glazing consist of double clear glass approved sample (<b>Tempered 8mm thick + Anti-shatter film of 3M of 200 Microns on glazing + 8mm thick</b>), including silicon sealent, rubber gasket including all hardwares, wastage, lifting, scaffolding, etc, complete in all respect as per client instruction.</p>	180.00	Sft		
4	<p><b><u>Aluminium Windows.</u></b>                      Provide and install natural anodized (minimum 20mm microns) Aluminium windows sub frame with Shutter minimum approved by Architect or 4" x 1 1/2" wide code No_____ of approved sample, including all approved hardwares, wastage, lifting, gasket seal, weatherproof sealant, fixing arrangement, scaffolding etc. complete in all respect, as per client instruction.  <b>For payment, area from Main Frame will be measured.</b></p>	180.00	Sft		
5	<p><b><u>Metal Door</u></b>                      Providing, fabricating and fixing M.S heavy duty door Frame and door made of 1/2" thick MS plate on both side with 18" long and 3" thick carbon shaft hinge. the total thickness of the door is 6", filled with copper sheet and fire clay for fire resistance and drill resistance, door is securely held by sliding carbon steel 2" dia shaft bolt at four side (5 each for front and rear and 2 each for upper and lowe sides) Door fire rating capable to resist 60 min. against 900oC fire. The sliding bolts are controlled by two 8 lever brass locks having dual combination and one key lock of S.S in duplicate including all hardwares with Panic bar. Anti rust red oxide paint, finally in spray painted in approved colour complete in all respect  <b>Emergenay Exit Door Type ED1 -3'-6" x 7'-0" as per drawing</b></p>	3.00	Nos		
<b>Total of "E"</b>					-

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
F	<b><u>MISCELLANEOUS WORK.</u></b>				
1	<b><u>Stainless Steel Planters</u></b> Providing, making and supplying Stainless Steel planter 16" dia and 20" high complete in all respect		Rate Only	Nos	
2	<b><u>Kitchen / Wooden Cabinet</u></b>				
a	Providing, making and fixing Kitchen Cabinets using 3/4" thick best quality white laminated board inside and laminated board with approved tuff formica outside with 3/8" deodar Oak wood lipping, including drawers and shutters complete with best quality approved hardwares, hinges, handles, imported chanel, locks etc. as per detail / drawing and complete in all respect				
i)	Wall hanging cabinet 14" deep with Light Pelmet	57.00		Sft	
ii)	Wooden base cabinet 22" deep.	173.00		Sft	
b	<b><u>Kitchenette</u></b>				
i)	Wall hanging cabinet 14" deep with Light Pelmet	18.00		Sft	
ii)	Wooden base cabinet 22" deep.	37.00		Sft	
3	<b><u>Marble Counter tops in Kitchen and Toilet</u></b> Provide and construct 3/4" thick chemically pre-polished boticina marble on slab with rounded edge of approved sample with 1:4 cement sand mortar base, edge polishing, grouting, sealing the edges, etc. (Basic price of pre-polished Marble shall be Rs. 450.00 per SFT.) For payment, top area will be measured.	235.00		Sft	
4	<b><u>Granite Counter tops in kitchenette</u></b> Provide and construct same item 3 granite with moulding approved finish including Moulding counters consisting of following items. (Basic price of pre-polished Marble shall be Rs. 650.00 per SFT.) For payment, top area will be measured.	35.00		Sft	
5	<b><u>Corian counter top in Executive wash Room</u></b> Provide and lay Corian top of approved quality and color with approved adhesive, including rounded edges, fix in wooden vanity etc. with wastage, complete as approved (Basic Rate Rs1200.00 per sqm.)	80.00		Sft	
6	<b><u>Window Blinds.</u></b>				
a	Provide and install in position Roll-up window blinds of approved colour, and specifications, of Imported chain operated Roller blind with approved sample including wastage, lifting, etc, complete as respect and as approved	365.00		Sft	

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
b	Executive area	165.00	Sft		
c	Black out Blind intall in meeting room as approved complete in all respect	136.00	Sft		
7	<b><u>Wooden Border Coping (Executive Area)</u></b> Provide and install in position Wash Room 1/2" x 2"ht thick wooden Oak Wood Border on toilet wall as shown in drawing with polish finish including all hardwares, wastage, cutting, lifting, etc. complete in all respect.	100.00	Rft		
8	<b><u>MDF Hanging Beams (only Glass Partition)</u></b> Providing, making & fixing wooden Hanging beams 4" for support to fix Glazing and glass door thick having 1/2" thick Lasani board both side with 3" x 1 1/2" wooden frame in between well treated with solignum paint, complete with groves 3/16" thick wherever shown on elevation/drawing applying matt enamel paint both side of (ICI approved equivalent) also providing approved quality hardware, including 3/16 " grove nails, glue etc. complete in all respect	560.00	Sft		
9	<b><u>Mirror in Toilet.</u></b> Provide and install 6mm thick mirror (Belgium make) with solid oak wooden frame of approved sample and polish finish as per instructions by architec including wastage, lifting, etc. as per drawing complete in all respect.	140.00	Sft		
10	<b><u>Water Proofing.</u></b> Provide and apply cermentitious waterproofing tretment by brush application of ICS/Penetrton International Ltd. or appeoved equivalent including teratment at the junctions of horizontal & vertical surface & where construction joint is provided etc. Complete in all respect as per manufactuer, specification and instructions.	2120.00	Sft		
11	<b><u>Anti- Shutter Film</u></b> Providing and pasting anti shutter film on internal glazing of approved make, with specified microns, as approved complete in all respect Internal Glazing - 100 microns External Glazing - 200 microns	503.00 455.00	Sft Sft		
12	<b><u>RCC Vanity in Toilet and Kitchen.</u></b> i Provide and construct counters consisting of following items. (For payment, Slabe area will be measured) ii 1:2:4 R.C.C. Slab & Pardi including providing required openings embedding into walls for support, etc. as per drawing (including cost of steel reinforcement).	250.00	Sft		

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
iii	Block Masonry				
iv	1:4 Plaster on Slab and Pardi (Bottom & Inside).				
v	Matt Enamel paint on Slab and Pardi (Bottom & Inside).				
13	<b><u>Loose Pebbles with landscaping</u></b> Providing and laying Pebbles and landscaping in position as per instruction as approved.	350.00	Sft		
14	<b><u>Solid oak wood Bench</u></b> Providing, making and fixing Solid Oak wood bench, size 1' - 6" x 2" thick in different area with hardware, nail glue, wastage, polish finish, complete in all respects				
a	Executive Wash Room 1- Lenth : 5'-0"	1.00	No		
b	Officer Wash Room 2 -Lenth : 2'-6"	1.00	No		
c	Ladies Wash Room Lenth : 3' -6"	1.00	No		
15	<b><u>Termite Proofing</u></b> Providing and spraying pesticide solution of approved manufacturer inside building line in 3 - stages i.e. in trenches, on floor base & all wood work etc., using "FMC or equivalent of Jaffer Brothers water mixed solution @ 5 Litre/Sqm., as approved (for billing purpose plinth area will be calculated)	18128.00	Sft		
16	<b><u>Marble Partition.</u></b> Provide and fix 3'-6" x 1'-6" 'x 3/4 thick chemically pre-polished boticina or equivalent marble partition with taper edges of approved sample at urinal stalls embedding into walls for support including edge polishing, grouting, etc. as per drawing complete in all respect.	1.00	job		
17	<b><u>Cleaning and Re-Fixing Existing Aluminum Windows</u></b> Provide and install existing natural anodized aluminum window after re-pairing and cleaning with approved chemical and all hardwares, wastage, etc, complete as per.	325.00	Sft		
18	<b><u>Wool Insulation in Partition</u></b> Providing & fixing wooden partitions 4" ,6",7" thick Partition frame into the frame use wool insulation of 120 Kg/m3 of given thickness size, complete as approved.				
i	4" Thick	8990.00	Sft		
ii	6" Thick	140.00	Sft		
iii	7" Thick	142.00	Sft		
iv	8" Thick	Rate only	Sft		

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
19	<b><u>Art works</u></b> Providing & fixing, Art work or Picture with frame & hang on wall with proper care & treatment, completed in all respects	1.00	Job		
20	<b><u>Pre-Cast Sills</u></b> Provide and fix size: 1'-3" x 3'-6" x 2" thick 3000 psi cube strength fair-faced pre-cast sills of varying widths / lengths with 1:4 cement sand mortar base of including 90 degree angle edges, grouting, curing etc. complete in all respect.	10.00	Nos		
21	<b><u>Wooden Nich</u></b> Provide and install in position Oak Wood nich with top and bottom with 1/2" thick MDF board with 1/8" thick oak ply required side including 1 1/2" x 1 1/2" wooden frame in with solignum (U.K) approved polish finish, as shown in drawing including all hardwares, wastage, glue, lifting, etc. complete in all respect.				
a	Size: 4'-6" x 1'-8" x as per ceiling ht	1.00	No		
b	Size: 3'-3" x 1'-8" x as per ceiling ht	1.00	No		
c	Size: 2'-8" x 1'-6" x as per ceiling ht	1.00	No		
d	Size: 1'-6" x 1'-6" x as per ceiling ht	2.00	Nos		
e	Size: 1'-4" x 1'-4" x as per ceiling ht	1.00	No		
f	Size: 1'-6" x 8" x 2'-6" ht	2.00	Nos		

Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
22	<b><u>Ramp for Server Room</u></b>				
	Provide and install in server room in position M.S. Metal Frame with ramp, consisting of 1¼" x 1¼" x 3/16" thick M.S. 'T' section frame with M.S. base plate 14 SWG including approved section, with M.S. including metal support of 3/4" dia M.S. bar & 3" dia M.S. plate (make by Protector) as shown on drawing including two coats of anti corrosive paint (ICI or Berger), including all hardwares, wastage, lifting, etc., complete in all respect.	1.00	Job		
23	<b><u>Raised Floor</u></b>				
	Provide and install in raised floor in server room in position approved M.S. Metal section 8" ht x 6" dia jack fixing in existing Slab with M.S. bold to support for four tile eages within (center point). <b>(Make by Protector)</b> as shown on drawing including two coats of anti corrosive paint (ICI or Berger), including all hardwares, wastage, lifting, earthen etc., complete in all respect.	65.00	Sft		
24	<b><u>Wooden Light Pelmet.</u></b>				
	Provide and install in position Wooden 12" wide Light x 12" ht Pelmet, consisting of 1/2" thick MDF board with 1/8" Oak ply thick Oak wood approved polish finish fixed in Partition and required area including cutting light fixture area as shown drawing including all hardwares, wastage, etc. complete in all respect.	395.00	Rft		

	<b>Total of "F"</b>		
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Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
<b>G Toilet Works.</b>					
1	Supply and installation of Plumbing fixtures UPVC and PVC fittings (of Dadex or Marley of approved quality) as shown on drawings, including Rise floor, bitumen coating etc. upto the drain as per side. Plumbing work with PVC (drainage & water supply) Piping internal and external. Complete in all respects.	1.00	job		
<b><u>Executive &amp; Officers Wash Room</u></b>					
a	Providing & fixing imported china matt finish stainless steel bowl sink with waste set, p-trap, goose neck mixer, angle valves, nuts, tubes and wall flanges, as approved	1.00	Nos		
b	Providing & fixing counter basin in Executive & Officers wash rooms make by (Roca) with waste set, P-trap mixer tap and Basin Mixture (Grohe), angle valves, nuts tubes and wall flanges, as approved	2.00	Nos		
c	Providing & fixing western style water closet in Executive & Officers wash rooms, make by (Roca), of approved shade and all required fittings of (Grohe) make including matching low level cistern, deluxe heavy duty seat and cover, angle valve, nut type and flanges, as approved	2.00	Nos		
d	Providing & fixing Duple Bibcock with accessories approved by Architect from S. Abdullah or JB Saeed.	2.00	Nos		
e	Providing & fixing Bibcock with accessories approved by Architect from S. Abdullah or JB Saeed.	2.00	Nos		
f	Providing & fixing Spray type (Grohe) Muslim shower including angle valve, hose, wall holder and hand spray having trigger control.	2.00	Nos		
g	Providing & fixing Towel Rail (stainless Steel, from S. Abdullah or JB Saeed)	2.00	Nos		
h	Providing & fixing Toilet Paper holder (stainless Steel, from S. Abdullah or JB Saeed)	2.00	Nos		
i	Providing & fixing Hand Dryer aproved by Architect.	2.00	Nos		
j	Providing & fixing Soap Dish (stainless Steel, from S. Abdullah or JB Saeed)	2.00	Nos		
k	Providing & fixing Coat Hook (make by JB Seed)	2.00	Nos		
l	Providing & fixing Stainless Steel Floor Drain Jali from S. Abdullah or JB Saeed)	5.00	Nos		



Sr. No.	Particulars	Qty.	Unit	Rate	Amount (Rs.)
<b><u>Staff Gents and ladies Wash Rooms</u></b>					
a	Providing & fixing imported china matt finish duple stainless steel bowl sink with waste set, p-trap, goose neck mixer, angle valves, nuts, tubes and wall flanges, as approved	1.00	No		
b	Providing & fixing Urinal with all accessories make by (Porta).	2.00	Nos		
c	Providing & fixing counter basin in Staff (Gents, Ladies & Drivers) wash rooms make by (Porta) with waste set, P-trap mixer tap and Basin Mixture (Sonex make or equivalent), angle valves, nuts tubes and wall flanges, as approved.	9.00	Nos		
d	Providing & fixing western style water closet in Staff (Gents, Ladies & Drivers) wash rooms, make by (Porta), of approved shade and all required fittings of (Sonex make or equivalent) including matching low level cistern, deluxe heavy duty seat and cover, angle valve, nut type and flanges, as approved.	4.00	Nos		
e	Providing & fixing Indian W/C with all accessories make by (Porta). Complete in all respects.	5.00	Nos		
f	Providing & fixing Duple Bibcock with accessories approved by Architect from Sonex or equivalent.	4.00	Nos		
g	Providing & fixing Bibcock with accessories approved by Architect from Sonex or equivalent.	5.00	Nos		
h	Providing & fixing spray type (Sonex) Muslim shower including angle valve, hose, wall holder and hand spray having trigger control.	4.00	Nos		
i	Providing & fixing Towel Rail (stainless Steel, from Sonex or equivalent).	5.00	Nos		
j	Toilet Paper holder (stainless Steel, from Sonex and equivalent)	4.00	Nos		
k	Providing & fixing Hand Dryer aproved by Architect.	2.00	Nos		
l	Providing & fixing Soap Dish (stainless Steel, from Sonex or equivalent)	6.00	Nos		
m	Coat Hook (make by Imported)	9.00	Nos		
n	Providing & fixing Stainless Steel Floor Drain Jali from Sonex or equivalent)	15.00	Nos		
		<b>Total of "G"</b>			
<b>Total Civil, Interior &amp; Plumbing Works Rs.</b>					

Rupees: \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Contractor's Sign, Seal & Date.



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**BILL OF QUANTITIES  
FURNITURE WORKS**

### SUMMARY OF COST

Division H - Table	Rs.	_____
Division I - C Miscellaneous Works	Rs.	_____
Division J - I Sofa & Chair	Rs.	_____
<b>Grand Total</b>	Rs.	<input type="text"/>

(Rupees \_\_\_\_\_  
\_\_\_\_\_ )

S #	Description	Qty	Unit Rate	Amount
<b>FURNITURE WORKS</b>				
<b>H</b>	<b>Table</b>			
1	Providing, making and fixing Loose and Fix Furniture, as per detail, drawing and standard specification as approved.			
	Providing and making tables as per following specifications except noted other wise			
a.	material specified in drawings of each item			
b.	Polyurethane polish finish to all wood surfaces except noted otherwise			
c.	Best quality Hardware to be used as per Architect's approval			
d.	Samples of all the items will be approved before the final product.			
	<b>Note:</b> All table with side Rack with out Conference and Meeting Room			
1	T1- Table (as per drawing)	2.00	Nos	
2	T2- Table (as per drawing)	8.00	Nos	
3	T3- Table (as per drawing)	8.00	Nos	
4	T4- Table (as per drawing)	17.00	No	
5	SD1- Table (as per drawing)	2.00	Nos	
6	CT1- Table 3' dia (as per drawing)	2.00	No	
7	CT1- Round Table 4' dia (as per drawing)	1.00	Nos	
8	CT2- Center Table (as per drawing)	1.00	No	
9	ST1- Round Table 1'-4" dia (as per drawing)	2.00	Nos	
10	ST2- Side Table (as per drawing)	19.00	Nos	
11	MT1- Table (as per drawing)	1.00	No	
12	MT2- Table (as per drawing)	1.00	No	
13	DT1- Table (as per drawing)	2.00	Nos	
14	DT2- Table (as per drawing)	6.00	Nos	
2	<b>R1 Reception Counter (R1)</b>			
	Providing and making reception counter of required materials and size as per photograhhas/ drawing, complete in all respesst.			
i	RC1	1.00	No	
ii	RC2	1.00	No	
<b>Total of 'H'</b>				

S #	Description	Qty	Unit Rate	Amount
I	<b>MISCELLANEOUS WORK</b>			
1	<b><u>Working Counters Table (CT)</u></b> Providing and making 1 1/2" thick Portal wood frame with 3/4" approved laminated board finish with approved colour in counter top with oak wood lipping, including key board tray as per detail drawing of required sizes, applying lacquer polish to all wooden members, including approved nails, glue, etc. complete in all respect.			
i	WC1	720.00	/Sft.	
ii	WC2	810.00	/Sft.	
iii	WC2	28.00	/Sft.	
iv	WS1	75.00	/Sft.	
2	<b><u>Cabinets</u></b> Providing and making of cabinets of following sizes using Oak veneer board with solid oak wood lipping for all exposed/ visible surfaces, commercial ply on back side, finally applying combination of different shade polish to all wooden surface, complete in all respect as per drawings.			
a	<b>Low ht cabinets Oak ply 18" deep as per drawing</b>			
i	CB1	45.00	/Sft.	
ii	CB2	175.00	/Sft.	
iii	CB3	200.00	/Sft.	
iv	CB4	390.00	/Sft.	
v	CB5	30.00	/Sft.	
vi	CB6	65.00	/Sft.	
b	<b>Upper hanging cabinet 14" deep with approved light Pelmet as per drawing</b>			
i	WHC2	700.00	/Sft.	
c	<b>Full ht cabinet 18" deep</b>	465.00	/Sft.	
d	Executive Vanity (as per drawing)	35.00	/Sft.	
e	Ladies Vanity (as per drawing)	20.00	/Sft.	
f	Gents Room Vanity (as per drawing)	70.00	/Sft.	
3	<b><u>Oak Ply Shelf (U.H.P)</u></b> Providing making and fixing Decorative mdf with tuff formica finish Shelf 12" x 3/4" thick on Cubicals, including hardware, nail , glue, wastage complete polish finish as per instruction			
		Rate Only	/Rft.	

S #	Description	Qty	Unit Rate	Amount
4	<b><u>Sheesham Ply Shelf</u></b>			
a	Providing, making and fixing book Shelf with approved size and 1 1/2" thick polished finish with 1 1/2" x 1/2" solid wooden lipping including front 1 1/2" groove, Shelf 16" deep fixed on 3- sides (fixing detail not visible), as per drawing, including all hardware, nail, glue, wastage complete in all respects as per instruction .	380.00	/Sft.	
b	same as item # 4 Executive area but 12" deep	150.00	/Sft.	
5	<b><u>Console</u></b>			
a	Providing making and supply of Console in solid Oak wood polish finish complete as per drawing as approved.			
i	CN1 size ( 8' - 0" x 1' - 6" x 2' - 6" high)	1.00	Nos	
ii	CN1a size ( 8' - 0" x 1' - 6" x 2' - 6" high)	2.00	No	
iii	CN2 size ( 7' - 0" x 1' - 6" x 2' - 6" high)	1.00	No	
iv	CN3 size ( 4' - 0" x 1' - 6" x 2' - 6" high)	2.00	Nos	
v	CN3a size ( 4' - 0" x 1' - 6" x 2' - 6" high)	1.00	No	
vi	CN4 size ( 3' - 0" x 1' - 6" x 2' - 6" high )	2.00	Nos	
6	<b><u>Tack Surface</u></b>			
a	Providing and fixing tack surface comprising of 1/2" thick soft board fixed directly on partition wall, with approved quality fabric cladding with imported adhesive , complete in all respect. Dir, officer and Staff	1,718.00	/Sft.	
7	<b><u>Mobile Drawer</u></b>			
	Providing and making mobile drawer units using MDF board with Oak ply i/c all n/c fittings, as shown in drawing complete in all respects.			
	<b>Full ht cabinet 18" deep</b>			
i	DU1 (as per drawing)	38.00	Nos	
ii	DU2-(as per drawing)	80.00	Nos	

S #	Description	Qty	Unit Rate	Amount
8	<b><u>Re- pairing Existing Wooden Furniture</u></b> Repairing,scrapping,repolishing & Refixing including cleaning Existing Furniture and change Hardware with approved cloth finish all hardwares, astage, etc, complete as as per instruction.	1.00	Job	
9	<b><u>Shifting Existing Furniture for Existing Place to New Place.</u></b> Existing approved furniture will be used in new place Contractor must be visited existing site and list out furniture than shifting a new place( site) .Complete as per instruction by the Client.	1.00	Job	

	<b>Total of 'I'</b>			
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S #	Description	Qty	Unit Rate	Amount
J	<b>Sofa &amp; Chair</b>			
a	Providing and making sofa & chairs of "CHAIRISTER" make as per following specifications,			
i	using best quality Oak wood, well seasoned,			
ii	using best quality (Imported) fabric @Rs. 700/-meter			
iii	using MASTER Moulty Foam or approved equivalent			
iv	Lacquer polish finish to all wood surfaces except noted otherwise			
v	Best quality Hardware to be used			
vi	Using imported base and side arms			
b	Samples of all the items will be approved before the final product.			
i	C1	2.00	Nos	
ii	C2	8.00	Nos	
iii	C3	8.00	Nos	
iv	C4	21.00	Nos	
v	C5	39.00	Nos	
vi	C6	77.00	Nos	
vii	Reception Chair	3.00	Nos	
viii	MC1	20.00	Nos	
ix	MC2	8.00	Nos	
x	DC1	32.00	Nos	
xi	CV1	4.00	Nos	
xii	CV2	16.00	Nos	
xiii	CV3	16.00	Nos	
xiv	CV4	38.00	Nos	



S #	Description	Qty	Unit Rate	Amount
c	Providing, making and fixing ,as per detail, drawing and standard specification as approved			
i	DS1	5.00	Nos	
ii	SC1	16.00	Nos	
iii	S2	7.00	No	
iv	S3	1.00	Nos	
v	S1	10.00	Nos	
VI	ES1	10.00	Nos	
VII	ES2	4.00	Nos	
VIII	ES3	4.00	Nos	
	<b>Total of 'J'</b>			
	<b>Net Total</b>			

Rupees: \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Contractor's Sign, Seal & Date.



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**BILL OF QUANTITIES  
ELECTRICAL WORKS**

## SUMMARY OF COST

1	Lighting, Fan & Small Power Point Wiring	Rs.	<input type="text"/>
2	PVC Pipes / Pull Boxes	Rs.	<input type="text"/>
3	Lighting Fixtures & Fans	Rs.	<input type="text"/>
4	Switchgear & Earthing	Rs.	<input type="text"/>
5	Power Cables	Rs.	<input type="text"/>
6	Closed Circuit TV System	Rs.	<input type="text"/>
7	Telephone & Data System	Rs.	<input type="text"/>
8	Fire Alarm System	Rs.	<input type="text"/>
9	Air conditioning system	Rs.	<input type="text"/>
10	Miscellaneous Items	Rs.	<input type="text"/>
	Total	Rs.	<input type="text"/>

Rupees : \_\_\_\_\_  
\_\_\_\_\_ )

Contractor : \_\_\_\_\_

Licence No. : \_\_\_\_\_

S.No	Description	Unit	Qty.	Rate	Amount
1.0	<b><u>Lighting, Fan &amp; Small Power Point Wiring</u></b>				
	Supply & installation of following items: -				
1.1	Wiring for light points, fan points, circuits using PVC insulated 450/750 grade copper wires in 25mm dia. PVC conduit, with accessories, concealed or surface installed, including connections.				
	a) Circuit wiring from D.B. to switch and between switch to switch with 3 x 1C - 2.5 sq.mm wires in 25mm dia. PVC conduit.	Nos.	70		
	b) Light point controlled by one switch with 3 x 1C-2.5mm <sup>2</sup> PVC wires.	Nos.	345		
	c) Light point from point to point with 3 x 1C - 2.5mm <sup>2</sup> PVC cables.	Nos.	559		
1.2	Wiring of power circuit, using following PVC insulated 450/750V grade copper cables in 25 mm PVC conduit / trunking Complete with connections.				
	a) 2 x 1C - 2.5sqmm + 1 x 1C - 2.5mm <sup>2</sup> for 5A, switch sockets.	Nos.	65		
	b) 3 x 1C - 2.5mm <sup>2</sup> for point to point.	Nos.	195		
	c) 3C-4 sqmm for 13A, switch sockets.	Nos.	55		
	d) 3C-4 sqmm for 13A, point to point.	Nos.	145		
1.3	Wiring for A/C. split unit from DB to respective circuit breaker & from circuit breaker to condensing unit with 3 x 1C - 6mm <sup>2</sup> PVC insulated copper wires in 25mm dia. conduit with all accessories.	Nos	28		
	a) Same as item 1.3 but with 3 x 1 C - 4 sq.mm	Nos	25		
1.4	M.S. back boxes of the following sizes, fabricated with 16SWG powder coated, with brass earth terminal for switches, sockets, telephone & Data points concealed / surface type boxes Clipsal make or equivalent .				
	a) Back Box for single outlet.	Nos.	615		
1.5	10A Switches (Clipsal E-3000 Series)				
	a) One gang.	Nos.	15		
	b) Two gang	Nos.	45		
	c) Three gang	Nos.	28		
	d) Four gang	Nos.	24		
	e) Five gang	Nos.	12		

S.No	Description	Unit	Qty.	Rate	Amount
1.6	Switch socket outlets (Clipsal E-3000 Series or Equivalent as directed by Architect / Consultant).				
	a) 5A-3pin switch socket outlet.	Nos.	260		
	b) 15A-3pin switch socket outlet.	Nos.	12		
	c) 13 A, flat pin switch socket outlet. (Duplex)	Nos	190		
<b>TOTAL Rs.</b>					

**2.0 PVC Pipes / Pull Boxes**

2.1	Following size of PVC conduit with accessories embed in wall / floor / ceiling or surface installed.				
	a) 1" dia.	Mtr.	1100		
	b) 1-1/4" dia.	Mtr.	800		
	c) 1-1/2" dia.	Mtr.	500		
2.2)	Supply & installation of galvanized sheet steel floor / wall pull box with brass earth terminal with barriers for cable crossing including all fixing accessories as per drawings & specifications of following sizes.				
	a) 100 x 100 x 50mm	Nos.	15		
<b>TOTAL Rs.</b>					

**3.0 Lighting Fixtures & Fans**

3.1 Supply, installation and connection of the following lighting fixtures complete with lamps, starters, holders, capacitors, Electronic ballast etc. including all mounting accessories, as per lighting fixture schedule.

**Note:** Florescent / PLC lamps shall be colour 83 / 84or equivalent.

a)	Celling Mounted DownLight with 2x 18 W lamps and tinted glass with hanging arangement from ceiling as per drawing.	Nos.	395		
b)	Halogen Spot light with 1x50W halogen lamp and electronic blast.	Nos.	12		
c)	TBS-420 with 4 x 18 W lamp.	Nos.	2		
d)	TMS-140 with 1x36w flourecent lamp with electronic blast	Nos.	290		
e)	TMS-120 with 1x18w flourecent lamp with electronic blast	Nos.	45		
f)	ceiling mounted Spot light with 11W LED lamp.	Nos.	125		
g)	Chandilier maximum 300 W	Nos.	21		
h)	Exhaust fan 6"/8" dia.	Nos.	10		
<b>TOTAL RS.</b>					

S.No	Description	Unit	Qty.	Rate	Amount
<b>4.0</b>	<b><u>Switchgear &amp; Earthing</u></b>				
4.1	Supply, installation & connection of the following DBs with all mounting accessories as per specifications & drawings, complete in all respect. (To be wall mounted, surface or flush as required)				
a)	ATS / AMF 600A	No.	1		
b)	MDB	No.	1		
c)	DB-L	No.	1		
d)	DB-P	No.	1		
e)	DB-A/C	No.	1		
f)	DB-UPS-1	No.	1		
g)	DB-UPS-2	No.	1		
h)	DB- UPS Data Centre.	No.	1		
4.2	Supply & installation of the following load break switches MCCB operation in weather proof steel enclosures as per specifications & drawings.				
a)	32A DP	Nos.	28		
b)	25 A DP	No	25		
c)	600A TP MCCB in sheet steel box.	No	1		
4.3	Supply & installation of earthing pits complete with earth copper clead rod 25 mm dia 10 feet long by force driven etc Complete with cable clamps pvc pipe and all accessories Each earth is to be provided with a concrete hand hole 100 x 100 x 100(mm) deep with heavy duty C.I. cover including test clamp complete in all respect.				
		Nos.	4		
4.4	Supply & installation of the following PVC insulated earthing conductors in 25mm dia. PVC pipe schedule 'D' from earth pit to respective equipment as per drawing and specifications. (length subject to as per site conditions)				
a)	1 x IC - 70mm <sup>2</sup> PVC cables.	Mtr	180		
				<b>TOTAL Rs.</b>	

S.No	Description	Unit	Qty.	Rate	Amount
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**5.0 Power Cables**

5.1 Supply, installation & connection of the following PVC insulated copper power cables clipped to surface with cleats raceway or on already installed cable tray / trunking / PVC pipe as per drawings & specifications.

insulated copper power cables clipped to surface with cleats raceway or on already installed cable tray / trunking / PVC pipe as per drawing & specifications.

a) 3.5 core 300 sq.mm + ECC 1 x 70 sq.mm	Mtr.	150
b) 3.5 core 185 sq.mm + ECC 1 x 70 sq.mm	Mtr.	10
c) 3.5 core 50 sq.mm + ECC 1 x 25 sq.mm	Mtr.	10
d) 4 core 35 sq.mm + ECC 1 x 16 sq.mm	Mtr.	10
e) 4 core 16 sq.mm + ECC 1 x 16 sq.mm	Mtr.	110
f) 4 core 10 sq.mm + ECC 1 x 10 sq.mm	Mtr.	75

<b>TOTAL Rs.</b>			
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**6.0 Closed Circuit TV System**

6.1 Supply & Installation of colour CCD standard resolution Camera scene illumination operating on 230VAC ceiling / wall mounted with all accessories, as per drawings & specifications.

Nos. 20

6.2 Supply & Installation of colour video Monitor / LCD 20".

Nos. 2

6.3 Testing and Commissioning of CCTV System by authorized local representative of the manufacturer.

Job. 1

6.4 CCTV 4-core shielded cable in 1" dia. PVC conduit

Mtr. 660

6.5 Electric cabling.(3 x 2.5 mm<sup>2</sup> Cu - PVC) to be pulled in 1" dia PVC conduit / channel. (length subject to check at site)

Job. 1

<b>TOTAL Rs.</b>			
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S.No	Description	Unit	Qty.	Rate	Amount
7.0	<b><u>Voice &amp; Data Communication System</u></b>  Supply, Installation, testing and commissioning of following items for <b>voice and data communication system</b> 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. <b>Different colors of voice and data cables shall be used.</b>				
7.1	<b>Simplex Face plate with 1 Gang Flexiport CAT-6 RJ-45 I/O</b> for Voice, white/off white finish, complete with shuttered click-ins, labels and all accessories including back box.	Nos.	190		
7.2	<b>Duplex Face plate with 2 Gang Flexiport CAT-6 RJ-45 I/O</b> for Voice point white/off white finish, complete with shuttered click-ins, labels and all accessories including back box.	Nos.	20		
7.3	<b>Simplex Face plate with 1 Gang Flexiport CAT-6 RJ-45 I/O</b> for Data, white/off white finish, complete with shuttered click-ins, labels and all accessories including back box.	Nos.	190		
7.4	<b>Duplex Face plate with 2 Gang Flexiport CAT-6 RJ-45 I/O</b> for Data point white/off white finish, complete with shuttered click-ins, labels and all accessories including back box.	Nos.	20		
7.5	<b>CAT-6 UTP cables</b> , for <b>Data communication</b> system from Com Rack to each workstation in already installed 25mm dia PVC conduit , channel or trench as per drawings including termination and tagging at both ends. Complete in all respects.	Mtr.	15500		
7.6	<b>CAT-6 UTP cables</b> , for <b>Voice communication</b> system from Com Rack to each workstation in already installed 25mm dia PVC conduit, channel or trench as per drawings including termination and tagging at both ends. Complete in all respects.	Mtr.	15500		
7.7	Following <b>CAT-6, Patch Panels</b> equipped with RJ-45 I/Os for Data communication system with rear cable organizer including all labeling and all mounting accessories. Complete in all respects.				
a)	24-port CAT-6 patch panel for data	Nos.	9		
7.8	Following <b>CAT-6, Patch Panels</b> equipped with RJ-45 I/Os for Voice communication system with rear cable organizer including all labeling and all mounting accessories. Complete in all respects.				
a)	24-port CAT-6 patch panel for Voice	Nos.	9		
7.9	<b>Front Cable Organizer</b> for Voice & Data patch panels / wiring blocks with complete labeling and dressing for incoming cable management.	Nos.	18		



S.No	Description	Unit	Qty.	Rate	Amount
7.10	Following CAT-6 , factory certified <b>patch cords</b> of specified color having RJ-45 connectors at both ends for <b>voice communication</b> .				
a)	3 meter long.	Nos.	200		
b)	1 meter long.	Nos.	200		
7.11	Following CAT-6 , factory certified <b>patch cords</b> of specified color having RJ-45 connectors at both ends for <b>Data communication</b> .				
a)	3 meter long.	Nos.	200		
b)	1 meter long.	Nos.	200		
7.12	<b>Supply, installation, testing and commissioning of Main Distribution frame (MDF) for telephone network</b> having 1x10 Pair Connecting Block, CRONE make including testing and termination at both ends. Installed inside Communication Rack in Server Room.	No.	1		
7.13	<b>Supply, installation, testing and commissioning</b> of following Twisted Pair shielded telephone cable, 0.6 Sq.mm dia, in 50mm dia PVC conduit including all kind of terminations. Complete in all respect as shown in schematic drawing.				
a)	<b>30 Pair cable</b> from Main Building MDF to MDF Office.	Mtr.	140		
7.14	<b>PABX</b> 10 lines IN 200 lines OUT Digital Hybrid IP PABX System	No.	1		
7.15	<b>Supply, Installation, testing and commissioning of Data Switch (10G)</b> for Cat-6 Cable.	No.	1		
7.16	<b>Supply and installation of 42U Floor Mounted Communication Rack.</b> suitable for installation of servers, switches and related equipment etc. Complete with vertical cable managers. Rack shall be equipped with power distribution units (PDUs) with at least 5 imported power sockets etc. Complete in all respects.	Nos.	4		
7.17	<b>Testing and commissioning</b> of all above items termination and connectivity at both ends, including submission of detailed test report from the Principals.	Job	1		
7.18	Supply & installation of following <b>UPS/stabilizer</b> with all installation accessories MG Make.				
a)	UPS 40 KVA	Nos.	2		
b)	UPS 25 KVA	No.	1		
c)	voltage stabilizer 40 KVA	Nos.	2		
d)	voltage stabilizer 25 KVA	No.	1		
				<b>TOTAL Rs.</b>	

S.No	Description	Unit	Qty.	Rate	Amount
<b>8.0</b>	<b><u>Fire Alarm System / FM - 200 System.</u></b>				
8.1	Supply, installation and connection of conventional type Fire Alarm control panel flush mounted complete with all accessories, back up battery, indication lamps, internal buzzer, etc. Number of zones to be as indicated on the drawing. (8-Zone Panel).	No.	1		
8.2	Supply, installation and connection of photo-electric type smoke detectors as per drawing.	Nos.	50		
8.3	Same as item 8.2 but heat detector.	Nos.	3		
8.4	Supply, installation and connection of conventional manual break glass stations with LED indication as per drawing.	Nos.	4		
8.5	Supply, installation and connection of fire alarm sounders as per specifications & drawing.	Nos.	5		
8.6	Wiring of smoke, heat detectors, manual break glass & Fire alarm sounders with 2C x 1.5sq.mm PVC insulated copper wires in PVC conduit for surface installation complete with all accessories, etc. up to fire alarm control panel including termination.	Job.	1		
8.7	Power supply to Fire Alarm Control Panel from DB UPS-1, wired with 3C x 2.5mm <sup>2</sup> PVC insulated cable in PVC conduit as.	Job.	1		
8.8	Testing and commissioning of Fire Alarm System by authorized local representative of the manufacturer.	Job.	1		
8.9	Supply, installation of fire alarm & fire suppression system complete in all respect including testing & commissioning of the system as per drawing & to the entire satisfaction of engineer incharge. The system shall include the following.				
	a) FM 200 Agent.	KG	45		
	b) 70 liters cylinder with discharge valves outlet adaptors pressure indication, selenoid actuator & all necessary accessories.	No.	1		
	c) Discharge nozzle.	Nos	3		
	d) Abort switch.	Nos	1		
	e) Optical smoke detector.	Nos	6		
	f) Fire alarm bell.	Nos	1		
	g) Fire alarm pull station.	No	1		
	h) Piping for suppression system.	Job.	1		
	i) Wiring & conduit for the fire suppression system.	Job.	1		
				<b>TOTAL Rs.</b>	

S.No	Description	Unit	Qty.	Rate	Amount
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**9.0 Air-Conditioning System**

Supply, Installation, Testing & Commissioning of following Air Conditioning Unit Complete in all respect ready to operate complete in all respect. The work should be completed with control wiring with conduiting as required between indoor and outdoor unit (Genral/Mitsubishi).

a)	1.0 ton wall mounted split type.	Nos.	20		
b)	1.5 ton wall mounted split type .	Nos.	4		
c)	2.0 ton wall mounted split type .	Nos.	9		
d)	2.5 ton wall mounted split type.	Nos.	3		
e)	3.0 ceiling mounted Cassette type.	Nos.	16		
9.1	Supply, Installation and Commissioning of Refrigerant piping (Liquid + Gas-1/2 + 1/4 + 5/8+3/8) make Muller USA with expanded rubber foam Insulation (Make Aeroflex) Gas Charging if required. Control wiring in PVC conduit between internal and external units. complete in all respects.	Mtr.	2000		
9.2	Supply & Installation of uPVC Schedule 40 AGM Pipe with accessories, including cutting of wall with insulation for drain etc.,				
a)	¾" dia	Mtr.	1500		
b)	1" dia.	Mtr	1000		
9.3	Supply & Installation of floor mounted/wall mounted angel iron bracket for outdoor units as per drawing. Complete in all respects.	Nos.	52		

<b>TOTAL Rs.</b>	
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**10.0 Miscellaneous Items**

10.1	Submitt shop drawings	Job.	1		
10.2	Submitt As-Built drawings	Job.	1		

<b>TOTAL Rs.</b>	
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<b>TOTAL ELECTRICAL WORKS Rs.</b>	
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Rupees: \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Contractor's Sign, Seal & Date

01. LIST OF APPROVED MANUFACTURERS / SUPPLIERS

IMPORTANT

Bidders Choiced  
Names from  
Approved Ones

- |     |  |   |  |
|-----|--|---|--|
| 1.  | L.V. Switch Gear   | : | Libra<br>Premeir engineer<br>Babar Brother<br>Hussain & Company<br>Sunbeam           |
| 2.  | L.V. Cables and Wires<br>Fire Alarm Cables and<br>Sound Cables | : | Pakistan Cables Limited<br>Pioneer Cables Limited<br>AGE Cables Limited              |
| 3.  | PVC Conduit and Accessories                                    | : | Galco (Galaxy)<br>Dadex<br>Civic   |
| 4.  | Wiring Accessories<br>(Switch, sockets etc.)                   | : | Clipsal, UK<br>MK, UK  |
| 5.  | Back Boxes, Pull Boxes<br>Junction Boxes etc.                  | : | Hussain & Company  |
| 6.  | Lighting Fixtures  | : | UNILUX<br>Britlite Engineering Company<br>OR As approved by<br>Consultant.           |
| 7.  | Circuit Breakers<br>ELCBs etc.                                 | : | Terasaki, Japan<br>Merlin Gerin, France  |
| 8.  | Fire Alarm System  | : | Notifier, USA<br>Honey Well, USA<br>Gent,s   |
| 9.  | Ballasts, Capacitors,<br>Starters, Lamps                       | : | Philips, Holland, Australia<br>Schwabe, Germany<br>Osram, Germany<br>Helver, Germany |
| 10. | Sound System   | : | Philips, Holland<br>AEX, Australia<br>TOA, Japan<br>Interim, Korea                   |

**IMPORTANT**

Bidders Choiced  
Names from  
Approved One

- |     |                          |   |   |
|-----|--------------------------|---|---|
| 11. | CCTV System              | : | Philips, Holland<br>Proline, UK<br>PELCO, USA<br>Bosch, Singapore |
| 12. | Telephone Wires / Cables | : | Pony, Japan<br>Clipsal,<br>Pakistan Cable                         |
| 13. | Data System              | : | 3M Cat vi Cables<br>Clipsal Make                                  |

**Notes:**

1. Any other material not mentioned above, shall be of best quality and as per suggestion and approval.
2. The Client shall have right to suggest Contractor to submit sample from any one of the approved manufacturers of any item, if Consultant consider it necessary. The Contractor shall be required to comply.
3. Samples / Catalogues of all materials and Construction drawing of equipment to be manufactured are to be submitted for approval before purchase or fabrication / installation.

**ADDENDUM NO.**

**ISSUED ON** \_\_\_\_\_

**CLIENT:** \_\_\_\_\_

**PROJECT:** \_\_\_\_\_

**SUBJECT:** \_\_\_\_\_

Participant attending the Meeting

NAME	DESIGNATION	COMPANY NAME
_____	_____	M/s. _____
_____	_____	M/s. _____
_____	_____	M/s. _____
_____	_____	M/s. _____
_____	_____	M/s. _____

THE FOLLOWING SHALL BE CONSIDERED TO BE AN ADDENDUM TO THE TENDER DOCUMENTS OF THE SUBJECT PROJECT, AND SHALL FORM A PART OF THE CONTRACT DOCUMENTS.

THIS ADDENDUM IS BEING ISSUED IN THE LIGHT OF PRE-BID MEETING HELD ON \_\_\_\_\_, AT \_\_\_\_\_ OFFICE. PLEASE INCORPORATE/AMEND/CORRECT THE FOLLOWING IN THE TENDER AT APPROPRIATE PLACES, TO BE READ AND UNDERSTOOD ACCORDINGLY.

**SECTION OF TENDER BOOK:**

- Item # \_\_\_\_: \_\_\_\_\_.
- Item # \_\_\_\_: \_\_\_\_\_.
- Item # \_\_\_\_: \_\_\_\_\_.
- Item # \_\_\_\_: \_\_\_\_\_.

**END OF ADDENDUM**

Sincerely,  
\_\_\_\_\_  
\_\_\_\_\_

C.C.to:      Mr. \_\_\_\_\_      ...      M/s. \_\_\_\_\_  
                 Mr. \_\_\_\_\_      ...      M/s. \_\_\_\_\_  
                 All Bidders

### PROPOSED CONSTRUCTION SCHEDULE

Pursuant to 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 procuring agency'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>
1) Whole works	_____ days
2) Part-A	_____ days
3) Part-B	_____ days
4) _____	_____ days
5) _____	_____ days

## Appendix-D to Bid

### 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.



**Appendix-E to Bid**

**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.]

Appendix-E to Bid  
Sheet 2

LIST OF MAJOR EQUIPMENT (SAMPLE)

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						

**Appendix-F to Bid**

**LIST OF SUBCONTRACTORS**

I/We intend to subcontract the following parts of the work to subcontractors. In my/our opinion, the subcontractors named hereunder are reliable and competent to perform that part of the work for which each is listed.

Enclosed are documentation outlining experience of subcontractors, the curriculum vitae and experience of their key personnel who will be assigned to the contract, equipment to be supplied by them, size, location and type of contracts carried out in the past.

<b>Part of Works (Give Details)</b>	<b>Subcontractor (With Complete Address)</b>
1	2

Appendix-G to Bid

Estimated Progress Payments

1	2

**OFFICE INTERIOR**  
Energy Department

**Bidding Data**

**Appendix-H to Bid**

**ORGANIZATION CHART  
FOR THE  
SUPERVISORY STAFF AND LABOUR**  
(To be filled in by the bidder)

Appendix-I to Bid

(INTEGRITY PACT)  
DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC; PAYABLE BY  
CONTRACTORS.  
(FOR CONTRACTS WORTH RS. 10.00 MILLION OR MORE)

Contract No. \_\_\_\_\_ Dated \_\_\_\_\_  
Contract Value: \_\_\_\_\_  
Contract Title: \_\_\_\_\_

..... [name of Contractor] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Sindh or any administrative subdivision or agency thereof or 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 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 responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to 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 regard, [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 the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from PA.

.....  
Procuring Agency

.....  
Contractor



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**FORMS**

**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 'Procuring Agency') in the sum stated above for the payment of which sum well and truly to be made, we find 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 Procuring Agency; and

WHEREAS, the Procuring Agency 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 Procuring Agency, conditioned as under:

that the bid security shall remain in force for the period of construction as stated in the Instructions to bidders or as it may be extended by the Procuring Agency, notice of which extension(s) to the Surety is hereby waived. The bid security of unsuccessful bidders will be returned by the Procuring Agency after expiry of its validity or upon signing of the Contract Agreement.

NOW THEREFORE, if the successful bidder shall, within the period specified on the prescribed form presented to him for signature, enter into a formal Contract with the said Procuring Agency in accordance with his bid the successful bidder will within Fifteen (15) days of his being requested may be required to submit a Performance Security with good and sufficient surety from the successful bidder on the Bid form.

Prescribed by the said Procuring Agency for the faithful performance and proper fulfillment 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 other wise to remain in full force and effect.

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



PROVIDED ALSO THAT the Committee 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 the said requirements and the Surety shall pay without objection the said sum upon demand from the Procuring Agency 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 Committee.

SURETY (Bank)

WITNESS:

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

\_\_\_\_\_

Corporate Secretary (Seal)

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

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

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

Corporate Guarantor (Seal)

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

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

[Letter by the Guarantor to the Procuring Agency]

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 Procuring Agency) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said Procuring Agency, we find 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 Procuring Agency'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 there of that may be granted by the Procuring Agency, 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 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 Procuring Agency without delay upon the Procuring Agency's first written demand without cavil or arguments and without requiring the Procuring Agency to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Procuring Agency'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 "s designated Bank & Account Number.

PROVIDED ALSO THAT the Procuring agency 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 Procuring Agency 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.

Witness:

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

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

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

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

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

Signature \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

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

## FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the \_\_\_\_\_ day of \_\_\_\_\_ (month) 20\_\_\_\_\_ between

\_\_\_\_\_ (hereafter called the "Procuring Agency") of the one part  
and \_\_\_\_\_  
\_\_\_\_\_ (hereafter called the "Contractor") of the other part.

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

NOW this Agreement witnesseth-- as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda, 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) Instructions of Bidders
  - (d) The completed Form of Bid;
  - (e) Special Stipulations (Appendix-A to Bid);
  - (f) The Special Conditions of Contract – Part II;
  - (g) The General Conditions – Part I;
  - (h) The Bill of Quantities (Appendix-B to Bid);
  - (i) The completed Appendices to Bid (C,D,E,F,G.H);
  - (j) Bid Security(Bank)
  - (k) Performance Security(Bank)
  - (l) Mobilization Advance Guarantee
  - (m) Addendum (any other))
3. In consideration of the payments to be made by the Procuring Agency to the Contractor as hereinafter mentioned, the Contractor here by covenants with the Procuring Agency to execute and complete the works and remedy defects therein in conformity and in all respects with the provisions of the contract.
4. Procuring Agency 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 Contractor

\_\_\_\_\_

(Seal)

Signature of Procuring Agency

\_\_\_\_\_

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

\_\_\_\_\_

(Name, Title an Address)

Witness:

\_\_\_\_\_

(Name, Title and Address)

## MOBILIZATION ADVANCE GUARANTEE

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

WHEREAS \_\_\_\_\_ (hereinafter called the 'Procuring Agency') has entered into a Contract for \_\_\_\_\_

(Particulars of Contract) with \_\_\_\_\_ (hereinafter called the "Contractor").

AND WHEREAS, the Procuring Agency 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 Procuring Agency 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)

(hereinafter called the "Guarantor") at the request of the Contractor and in consideration of the **Procuring Agency** agreeing to make the above advance to the Contractor, has agreed to furnish the said Guarantee.

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

Notice in writing of any default, of which the **Committee** shall be the sole and final judge, on the part of the Contractor, shall be given by the Procuring Agency 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)



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**GENERAL CONDITION OF CONTRACT**



## Notes on the Conditions of Contract

The Conditions of Contract comprise two parts:

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

Over the years, a number of "model" General Conditions of Contract have evolved. The one used in these Standard Interior Bidding Documents.

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

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

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

## Part – 1 GENERAL CONDITIONS OF CONTRACT

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1.1.1.2	Contract Agreement	1.1.2.2	Employer
1.1.1.3	Letter of Acceptance	1.1.2.3	Contractor
1.1.1.4	Letter of Tender	1.1.2.4	Engineer
1.1.1.5	Specification	1.1.2.5	Contractor's Representative
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1.1.3.8	Defects Notification Period	1.1.4.8	Payment Certificate
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		1.1.4.10	Retention Money
		1.1.4.11	Statement

1.1.3.1	Base Data	1.1.4.1	Accepted Contract Amount
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# General Conditions

## General Provisions

### 1.1 Definitions

In the Conditions of Contract (“these Conditions”), which include Particular Conditions, Parts A and B, and these General Conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

#### 1.1.1

The Contract 1.1.1.1 “Contract” means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specification, the existing Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the **Letter of Acceptance**.

1.1.1.2 “Contract Agreement” means the contract agreement referred to [Contract Agreement].

1.1.1.3 “Letter of Acceptance” means the letter of formal acceptance, signed by the Employer, of the Letter of Tender, including any annexed comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression “Letter of Acceptance” means the Contract Agreement and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.

1.1.1.4 “Letter of Tender” means the document entitled letter of tender or letter of bid, which was completed by the Contractor and includes the signed offer to the Employer for the Works.

1.1.1.5 “Specification” means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

1.1.1.6 “Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract.

1.1.1.7 “Schedules” means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Tender, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.

1.1.1.8 "Tender" means the Letter of Tender and all other documents which the Contractor submitted with the Letter of Tender, as included in the Contract.

1.1.1.9 "Bill of Quantities", "Daywork Schedule" and "Schedule of Payment Currencies" mean the documents so named (if any) which are comprised in the Schedules.

1.1.1.10 "Contract Data" means the pages completed by the Employer entitled contract data which constitute Part A of the Particular Conditions.

1.1.2

Parties and Persons

1.1.2.1 "Party" means the Employer or the Contractor, as the context requires.

1.1.2.2 "Employer" means the person named as employer in the Contract Data and the legal successors in title to this person.

1.1.2.3 "Contractor" means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s).

1.1.2.4 "Engineer" means the person appointed by the Employer to act as the Engineer for the purposes of the Contract and named in the Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor [ Replacement of the Engineer ].

1.1.2.5 "Contractor's Representative" means the person named by the Contractor in the Contract or appointed from time to time by the Contractor under [ Contractor's Representative ], who acts on behalf of the Contractor.

1.1.2.6 "Employer's Personnel" means the Engineer, the assistants referred to in Sub-Clause 3.2 [ Delegation by the Engineer ] and all other staff, labour and other employees of the Engineer and of the Employer; and any other personnel notified to the Contractor, by the Employer or the Engineer, as Employer's Personnel.

1.1.2.7 "Contractor's Personnel" means the Contractor's Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

1.1.2.8 "Subcontractor" means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.

1.1.2.9 "Bank" means the financing institution (if any) named in the Contract Data.

1.1.3  
Dates, Tests, Periods  
and Completion

1.1.3.1 "Base Date" means the date 28 days prior to the latest date for submission and completion of the Tender.

1.1.3.2 "Commencement Date" means the date notified [ Commencement of Works ].

1.1.3.3 "Time for Completion" means the time for completing the Works or a Section (as the case may be) [ Time for Completion ], as stated in the Contract Data (with any extension under Sub-Clause 8.4 [ Extension of Time for Completion ]), calculated from the Commencement Date.

1.1.3.4 "Tests on Completion" means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried out [ Tests on Completion ] before the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.5 "Taking-Over Certificate" means a certificate issued [Employer's Taking Over].

1.1.3.6 "Tests after Completion" means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.7 "Defects Notification Period" means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [ Completion of Outstanding Work and Remedying Defects ], which extends over twelve months except if otherwise stated in the Contract Data (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period ]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [ Taking Over of the Works and Sections ].

1.1.3.8 "Performance Certificate" means the certificate issued under Sub-Clause 11.9 [ Performance Certificate ].

1.1.3.9 "day" means a 5<sup>th</sup> calendar and "Months".

1.1.4  
Money and Payments

1.1.4.1 "Accepted Contract Amount" means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.



1.1.4.2 "Contract Price" means the price defined in Sub-Clause 14.1 [ The Contract Price ], and includes adjustments in accordance with the Contract.

1.1.4.3 "Cost" means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

1.1.4.4 "Final Payment Certificate" means the payment certificate issued of Final Payment Certificate].

Final Statement" means the statement defined in [ Application for Final Payment Certificate ].

1.1.4.6 "Interim Payment Certificate" means a payment certificate issued under Clause 14 [ Contract Price and Payment ], other than the Final Payment Certificate.

1.1.4.7 "Local Currency" means the currency of the Country.

1.1.4.8 "Payment Certificate" means a payment certificate issued under Clause 14 [ Contract Price and Payment].

1.1.4.9 "Provisional Sum" means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [ Provisional Sums ].

1.1.4.10 "Retention Money" means the accumulated retention moneys which the Employer retains [ Application for Interim Payment Certificates ] and pays [ Payment of Retention Money ].

1.1.4.11 "Statement" means a statement submitted by the Contractor as part of an application, Contract Price and Payment ], for a payment certificate.

1.1.5  
Works and Goods

1.1.5.1 "Contractor's Equipment" means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor's Equipment excludes Temporary Works, Employer's Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

1.1.5.2 "Goods" means Contractor's Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

1.1.5.3 "Materials" means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

1.1.5.4 "Permanent Works" means the permanent works to be executed by the Contractor under the Contract.

1.1.5.5 "Plant" means the apparatus, machinery and vehicles intended to form or forming part of the Permanent Works, including vehicles purchased for the Employer and relating to the construction or operation of the Works.

1.1.5.6 "Section" means a part of the Works specified in the Contract Data as a Section (if any).

1.1.5.7 "Temporary Works" means all temporary works of every kind (other than Contractor's Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

1.1.5.8 "Works" mean the Permanent Works and the Temporary Works, or either of them as appropriate.

Other Definitions

1.1.6.1 "Contractor's Documents" means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

1.1.6.2 "Country" means the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.

1.1.6.3 "Employer's Equipment" means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.

1.1.6.4 "Force Majeure" is defined [Force Majeure ].

1.1.6.5 "Laws" means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.

1.1.6.6 "Performance Security" means the security (or securities, if any) [ Performance Security ].

1.1.6.7 "Site" means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials are to be delivered, and any other places as may be specified in

the Contract as forming part of the Site.

1.1.6.8 "Unforeseeable" means not reasonably foreseeable by an experienced contractor by the Base Date.

1.1.6.9 "Variation" means any change to the Works, which is instructed or approved as a variation [ Variations and Adjustments ].

## 1.2

### Interpretation

In the Contract, except where the context requires otherwise:

- (a) words indicating one gender include all genders;
- (b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) provisions including the word "agree", "agreed" or "agreement" require the agreement to be record in writing;
- (d) "written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and
- (e) the word "tender" is synonymous with "bid", and "tenderer" with "bidder" and the words "tender documents" with "bidding documents".

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

In these Conditions, provisions including the expression "Cost plus profit" require this profit to be one-twentieth (6%) of this Cost unless otherwise indicated in the Contract Data.

## 1.3

### Communications

Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- (a) in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Contract Data; and
- (b) delivered, sent or transmitted to the address for the recipient's communications as stated in the Contract Data. However:
  - (i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
  - (ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was

issued.

Approvals, certificates, consents and determinations shall not be unreasonably withheld or delayed. When a certificate is issued to a Party, the certifier shall send a copy to the other Party. When a notice is issued to a Party, by the other Party or the

Engineer, a copy shall be sent to the Engineer or the other Party, as the case may be.

1.4  
Law and Language

The Contract shall be governed by the law of the country or other jurisdiction stated in the Contract Data.

The ruling language of the Contract shall be that stated in the Contract Data.

The language for communications shall be that stated in the Contract Data. If no language is stated there, the language for communications shall be the ruling language of the Contract.

1.5  
Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- (a) the Contract Agreement,
- (b) the Letter of Acceptance,
- (c) the Tender,
- (d) the Particular Conditions - Part A,
- (e) the Particular Conditions - Part B,
- (f) these General Conditions,
- (g) the Specification,
- (h) the Drawings, and
- (i) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

**1. EXTENT OF CONTRACT.**

The Contract comprises the completion and maintenance of the works and except in so as the Contract otherwise provides the provision of all labour, materials, Construction Plant, Temporary Works and everything whether of temporary or permanent nature required in and for such completion and maintenance so far as the necessity for providing the same is specified in or reasonably to be inferred from the Contract.

**2. DOCUMENTS MUTUALLY EXPLANATORY.**

The several documents forming the Contract are to be taken as mutually explanatory of one and in case of ambiguities or discrepancies the same shall be explained by the Committee whose explanation in this respect shall be final.

**3. SUFFICIENCY OF TENDER.**

The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his Tender for the Works and of the rates and prices stated in the priced Bill of quantities which rates and prices shall except in so far as otherwise provided in the Contract cover all his obligations under the Contract.

**4. INSPECTION OF SITE.**

The Contractor shall inspect and examine the Site and its surroundings and shall satisfy himself before submitting his Tender as to nature of the ground, the hydrological and climatic conditions, the form and nature of the Site, the quantities and nature of the works and material necessary for the completion of the Works and the means of access to the Site, accommodation he may require and in general shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his Tender.

The Contractor by tendering shall be deemed to have satisfied himself as to all the conditions and circumstances affecting the Contract Price, as to the possibility of executing the Works as shown and described, as to the general circumstances at the site of the Works and as to the general labour position at the site, and to have fixed his prices according to his own view for these as no additional allowance, as otherwise expressly provided, will afterwards be made beyond the Contract Price. The Contractor shall be responsible for any misunderstanding or incorrect information however obtained except information given in writing by the Owner/Engineer, In regard to the foregoing shall neither bind the Owner, nor absolve the tenderer of his liability / obligations or requirement to make his own enquiries and investigations.

**5. SETTING OUT.**

The Contractor shall be responsible for the true and proper setting out of the Works in relation to the original points, lines and levels of reference given by the Engineer in writing and for the correctness of the position, levels, dimensions and alignment of all parts of the works and for the provision of all necessary instruments, appliances and labour in connection therewith. If at any time during the progress of the Works any error shall appear or arise in the position, levels, dimensions or alignment of any part of the Works, the Contractor on being required to do so by the Engineer shall at his own expense rectify such error. In case incorrect data is supplied in writing by the Engineer, the expense of rectifying the same shall be borne by the Owner. The checking of any setting out or of any line or level by the Engineer shall not in any way relieve the Contractor of his responsibility for the correctness thereof. The Contractor shall protect and preserve all benchmarks, sight rails, pegs, slope-stakes and other things used in setting out the works.

**6. SUBLETTING.**

**6.1** The Contractor shall not sublet the whole of the works. Except where otherwise provided for in the Contract, the Contractor shall not sublet any part of the Works without the prior written consent of the Owner/ Engineer and such consent if given shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any sub-contractor, his agents employees or workmen.

**6.2** If the Contractor proposes to appoint sub-contractors for portions of the work, he should submit a list of sub-contractors with full particulars of the firms to whom he proposes to sublet such work. No work will be allowed to be carried out by the Sub-Contractors unless the sub-contractors have been pre-qualified by the Owner / Engineer.

**7. DRAWINGS AND DOCUMENTS.**

**7.1** Two sets of the approved Drawings, Conditions of Contract, Specifications and Bill of Quantities shall be furnished to the Contractor free of cost. The Contractor shall be supplied with additional copies of drawings at cost on demand. At the completion of the Contract, the Contractor shall return to the Owner all drawings provided under the contract.

**7.2 One copy of Drawings & Documents to be kept on Site:** One copy of the drawings & documents furnished to the Contractor shall be kept by the Contractor on the site and the same shall at all times be available for inspection and the use by the Architect and the Engineer and by any other person authorized by the Owner.

**8. FURTHER DRAWINGS AND INSTRUCTIONS.**

**8.1** The committee shall have full power and authority to supply to the Contractor from time to time during the progress of the Works such further drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and maintenance of the works and the Contractor shall carry out and be bound by the same.

**8.2 Contractor to provide everything necessary :** The Contractor shall provide everything necessary for the proper execution of the works according to the intent and meaning of the drawing, schedule of quantities and specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from and if the Contractor finds any discrepancy in the drawings, schedule of quantities and specifications he shall immediately in writing.

**9. DESCRIPTION OF WORK ITEMS.**

The description of items in the Bill of Quantities shall be deemed to be short description and for convenience only and shall be read with and include detail description in the relevant parts of the specifications.

**10. CONTRACT AGREEMENT.**

The Contractor shall, after the award of work, enter into and execute a Formal Agreement (to be prepared at the costs of the Contractor) in the form annexed with such modification as may be necessary.

**11. PERFORMANCE BOND.**

The successful Contractor shall provide the Owner with a Performance Bond equivalent to the percentage of the Contract Cost as mentioned in Salient Features. The Performance Bond will be a guarantee issued by an approved Insurance Company to be jointly and severally bound with the Contractor to the Owner and shall be valid till satisfactory completion of construction Period. A specimen form of the Performance Bond is attached herewith. The cost of the Bond to be entered into shall be at the expenses in all respects, including Surety's margin, stamp duty, etc., of the Contractor.

**12. WORKS TO BE TO THE SATISFACTION OF THE COMMITTEE.**

**12.1** The Contractor shall execute, complete and maintain the Works in strict accordance with the Contract to the satisfaction of the client and the whole of the materials, plant, labour and other things to be provided by the Contractor pursuant to the Contract shall be to the satisfaction of the client. The Contractor shall comply with and adhere strictly to the instructions and directions on any matter given by the client from time to time.

**12.2** The materials may be tested and the cost of such testing shall be borne by the Contractor. No payment shall be made to the Contractor on this account.

**13. ACTION AND COMPENSATION PAYABLE IN CASE OF WORKS BELOW SPECIFICATIONS.**

If it shall appear to the engineer, that any work has been executed with substandard, imperfect or unskilled workmanship or with materials of inferior description or that any materials or articles provided by the Contractor for the execution of the work are substandard, or of a quality inferior to that Contracted for or otherwise not in accordance with the Contract, the Contractor shall on demand in writing from the engineer specifying the work, materials or articles complained of notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify, or remove and reconstruct the work so specified in whole or part, as the case may require, or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own cost, and in the event of his failing to do so within a period to be specified by the engineer, the Owner may rectify or remove, and re-execute the work which may include additional work necessary to strengthen or set right the substandard work carried out by the Contractor or remove and replace, with others, the materials or articles complained of, as the case may be, at the risk and expenses of the Contractor in all respect.

**14. MASTER CONSTRUCTION SCHEDULE.**

**14.1** Within a week, after the acceptance of his tender, the Contractor shall have a meeting with the engineer and ascertain the available data to enable the Contractor to prepare a Master Construction Schedule in writing and submit the Preliminary Submission (Civil & Plumbing Works) to the engineer within 21 calendar days of the Letter of Award, showing the order of procedure. Subsequent Submission (Civil, Plumbing & Electrical Works) has to be submitted within 21 calendar days of the Letter of Award of respective trade duly revising and taking off from last Submission. Final

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Submission (inclusive of all trades) will require approval from Owner, engineer to implement Master Construction Schedule in true letter & spirit.

**14.2** The Master Construction Schedule should be modified at every quarter of the project with the mutual consent of the engineer and the Contractor and subject to the approval of the Owner.

**16. EXTENSION OF TIME FOR COMPLETION.**

Should the amount of extra or additional work of any kind or other special circumstances of any kind whatsoever which may occur be such as fairly to entitle the Contractor to an extension of time, he may be granted the time extension provided the Contractor has within 30 calendar days after such work has been commenced or such circumstances have arisen delivered to the engineer full and detailed particulars of any claim for extension of time which he may consider himself entitled in order that such claim may be investigated at the time.

**17. ENGINEER REPRESENTATIVE.**

The Engineer shall be responsible to the committee and his duties are to watch and supervise the Works and to test and examine any materials to be used or workmanship employed in connection with the Works. He shall have no authority to relieve the Contractor of any of his duties or obligations under the Contract, nor, except as expressly provided hereunder or elsewhere in the Contract, to order any work involving delay or any extra payment by the Employer, nor to make any Variation of or in the Works.

**18. CONTRACTOR'S SUPERINTENDENCE.**

**18.1** The Contractor shall give or provide all necessary superintendence during the execution of the Works and as long thereafter as the Owner / engineer may consider necessary for the proper fulfillment of the Contractor's obligations under the Contract. The Contractor shall appoint competent and authorized Site Agent approved by the Owner / engineer (which approval may at any time be withdrawn) who shall have full authority to act for and bind the Contractor and who shall be constantly at the Site and shall give his whole time to the superintendence of the Works. Such authorized Site Agent of the Contractor shall receive on behalf of the Contractor and comply with the directions of the Engineer, and shall supervise the work of the workmen or others responsible to the Contractor. He shall also work in harmony with the other contractors at the site.

**18.2** The Contractor shall appoint the Site Agent within 15 calendar days of the Acceptance of the Tender and notify the Owner / Engineer of the same.

**18.3** The Site Agent shall be a qualified professional with an experience of at least ten years in the respective trade.

**18.4** The Site Agent shall not be transferred from his operation without the consent of the Owner / Engineer.

**18.5** The Site Agent shall carefully examine the drawings and the specifications and inform the Engineer with any inconsistency or discrepancy which may appear.



**19. CONTRACTOR'S EMPLOYEES.**

**19.1** The Contractor shall provide and employ on the site for the purpose of or in connection with execution and maintenance of the Works:

- i) Only such technical assistants as are skilled and experienced in their respective callings and such sub-agents, foremen and leading hands as are competent to give proper supervision to the work, they are required to supervise; and
- ii) Such skilled and Semi-skilled labour as is necessary for the proper and timely execution and maintenance of the works.

The Contractor shall be responsible for all acts and omissions of his technical assistants, foremen, leading hands, labour and other employees, agents and personnel engaged by him and for remunerating them, who shall always be considered as the employees / representatives / agents of the Contractor and shall have no privity of contract with the Owner or the Engineer.

**20. REMOVAL OF CONTRACTOR'S EMPLOYEES.**

The Owner / Engineer shall have the power to object in writing and require the Contractor to remove forthwith from the works any person employed by the Contractor in or about the execution or maintenance of the Works who in their opinion misconduct himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by them to be undesirable and such person shall not be again employed upon the works without the written permission of the Owner / Engineer. Any person so removed from the Works shall be replaced without delay by a competent substitute approved by the Owner / Engineer. If in the opinion of the Owner / Engineer the work is likely to suffer due to the removal of the Contractor's employee, he may ask the Contractor to stop further progress on particular items of work or the whole works until the Employee is replaced by a competent substitute approved by the Owner / Engineer. Any delays caused by work stoppage due to the above will be the Contractor's responsibility and he will not be entitled to any additional time or any other form of compensation on this account. The Contractor shall not be entitled to demand any reasons for requiring the removal of any of his employees.

**21. CARE OF WORKS.**

**21.1** From the commencement to the completion of the works the Contractor shall take full responsibility of all temporary works, materials, constructional plant and other things brought on the site by the Contractor for the purpose of the Contract and in case any damage, loss or injury shall happen to the Works or to any part thereof or to any Temporary Works or any such materials or Constructional Plant or other things from any cause whatsoever (save and except the Excepted Risks as defined in sub-clause 21.2 of this clause) shall at his own cost repair and make good the same so that at completion, the Works shall be in good order and condition and in conformity in every respect with the requirements of the Contract and the Engineer's instructions. In the event of any such damage, loss or injury happening from any of the Excepted Risks the Contractor shall if and to the extent required by the Engineer make good the same as aforesaid at the cost of the Owner.

**21.2 Excepted Risks :**

The Excepted Risks are war hostilities (whether war be declared or not), invasion, act of foreign enemies, rebellion, revolution, insurrection, civil war, or riots (other than among the Contractor's own employees), commotion or disorder or use or occupation by the Owner of any portion of the Works in respect of which a Certificate of Completion has been issued or a cause solely due to the committee of the Works or any such operation of the forces of nature beyond the control of the Contractor (all of which are herein collectively referred to "The Excepted Risks").

**22. INSURANCE OF WORKS, ETC.**

Without limiting his obligations and responsibilities the Contractor shall insure in the joint names of the Owner & the Contractor against all loss or damage from whatever cause arising (other than the Excepted Risks) for which he is responsible under the terms of the contract & in such manner that the Owner & Contractor are covered during the period of construction of the Works and are also covered during the period of maintenance for any loss or damage arising from a cause occurring during the period of construction and the maintenance period and for any loss or damage occasioned by the Contractor in the course of any operation carried out by him for the purpose or complying with his obligations under the contract. The insurance shall conform to the following requirements.

- a) The Works and Temporary Works being executed from time to time including the materials for incorporation in the works supplied by the Owner to the full value thereof plus 15% to cover any additional expenses of whatever nature.
- b) The materials, constructional plant and other things brought on to the site by the Contractor for the purpose of the Contract to the full value of such materials, constructional plant and other things.
- c) Insurance to cover any liability arising under the Workmen's Compensation Acts, Employer's Liability Acts, or any other laws or regulations relating to payment to be made to or for the benefit of employees of Contractor.
- d) Insurance to cover all damages to the Contractor's site agent, technicians, foremen, employees, agents, representatives, etc. if they are not covered under Workmen's Compensation Act.
- e) Insurance to cover all damages to the Owner's officials, adviser & persons working on other trades on the site of work.
- f) **Third Party Insurance.**
  - i) The Contractor shall, subject to sub-clause (a) and (b) of clause indemnify the Owner in respect of all damage or injury occurring before the works shall have been taken over to any person or to any property (other than property forming part of the Works) & against all actions, suit, claims, demands, costs, charges and expenses arising in connection therewith which shall be occasioned by the negligence of the Contractor or any Sub-contractor, or by defective design (other than a design made, furnished or specified by the Owner and for which the Contractor has disclaimed responsibility in writing within a reasonable time after the receipt of the Owner's instructions), materials or workmanship but not otherwise.

- ii) If while the Contractor is on the site for the purpose of making good a defect there shall occur any losses of or damage or injury to the Works or to any other property or to any person, the Contractor's liability in respect thereof shall be the same as if the said losses damage or injury had occurred before any part of the works had been taken over.

**23. DAMAGE TO PERSONS AND PROPERTY.**

The contractor shall (except if any so for as the Specifications provide otherwise) indemnify and keep indemnified the Owner against all losses and claims for injuries or damages to any person or any property whatsoever which may arise out of or in consequence of the construction and maintenance of the works and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto.

**24. COMPENSATION PAYABLE UNDER THE WORKMEN COMPENSATION ACT.**

The Contractor shall indemnify the Owner with an Insurance policy as prescribed above in respect of all claims, damage, compensation or expenses payable in consequence of any accident or injury sustained by any workman or other persons, whether in the employment of the Contractor or not, while in or upon the said works or the site of the same and the Owner shall not be bound to defend any claim brought under the Workman's Compensation Act unless the Contractor first deposits with the Owner a sum sufficient to cover any liability which the Owner might incur by reason of defending any such claim.

**25. ACCIDENT OR INJURY TO WORKMEN AND FIRE INSURANCE.**

a) The owner shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workman or other person in the employment of the contractor or any Sub-Contractor and the Contractor shall indemnify and keep indemnified the Owner against all such damages & compensation & against all claims, demands, proceedings, costs, charges & expenses whatsoever in respect thereof or in relation thereto.

b) **Fire Insurance:** The contractor shall at the time of signing the Contract insure the works & keep insured until the virtual completion of the Contract against loss or damage by fire.

**26. REMEDY ON CONTRACTOR'S FAILURE TO INSURE.**

If the Contractor shall fail to effect and keep in force the insurance referred to in Clauses hereof, or any other insurance which he may be required to effect under the terms of the Contract, then & in any such case the Owner may effect & keep in force any such insurance & pay such premium or premiums as may be necessary for the purpose and from time to time deduct the amount so paid by the Owner as aforesaid from any monies due or which may become due to the contractor, or recover the same as a debt due from the Contractor.

- 27. DISCREPANCY BETWEEN UNIT RATE AND TOTAL PRICE.**  
In case of discrepancy between the unit rate and total price of any particular item, unit rate shall be taken as correct and discrepancy found in the column of total price shall be corrected accordingly, unless in the opinion of Architect/Engineer, the total price of any particular item seems to be logical as compared to the unit rate in which the total price as quoted shall govern and the unit rate shall be corrected accordingly. The decision of the Architect/Engineer shall be final and binding on both the Owner and the Contractor.
- 28. FOSSILS, ETC.**  
All fossils, coins, article or value or antiquity and other remains or things of geological or archaeological interest discovered on the site of the works shall be deemed to be the absolute property of the Owner, and Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or things and shall immediately upon  
Discovery thereof and before removal acquaint the Engineer of such discovery and carry out at the expense of the Owner, the Engineer's orders as to the disposal of the same.
- 29. WORK TO BE MEASURED.**  
The Engineer shall except as otherwise stated, ascertain and determine by measurement the value of works done in accordance with the Contract. He shall when he requires any part or parts of the works to be measured give notice to the Contractor's authorized agent or representative who shall forthwith attend or send a qualified agent to assist the Engineer or the Representative of the Engineer in making such measurement and shall furnish all particulars required by either of them. Should the Contractor not attend or neglect or omit to send such agent then the measurement made by the Engineer or approved by him shall be taken to be the correct measurement of the works.
- 30. METHOD OF MEASUREMENT.**  
The works shall be measured in accordance to any general or local custom except where otherwise specially described or prescribed in the Contract.  
Except or otherwise specifically provided for, all items in the Bill of Quantities are measured net, as fixed in place in accordance with the drawings, and any allowance made for waste & overlaps shall be included in the price rate for that item.
- 31. CLEANING AND CLEARANCE OF SITE DURING EXECUTION.**  
During the execution of works the Contractor, at his own cost, shall be responsible for clearing and clearance of all debris, rubbish, surplus material, etc. to the satisfaction of Engineer.
- 32. CLEARANCE OF SITE ON COMPLETION.**  
On the completion of the works the Contractor, at his own cost, shall clear away and remove from the site all Constructional Plant, surplus materials, rubbish and Temporary Works of every kind and leave the whole of the site and works clean and in a workman like condition to the satisfaction of the Engineer. The rubbish should be disposed off in the manner as directed by the Engineer.
- 33. CERTIFICATE OF SUBSTANTIAL COMPLETION OF WORKS.**  
As soon as in the opinion of the Engineer the works shall have been completed and shall have satisfactorily passed any test that may be prescribed by the Contract he shall on the written request of the Contractor and in coordination with the client issue a Certificate of Substantial Completion in respect of the work and the Period of Maintenance of the Works

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shall commence from the date of such certificate. Provided that the Engineer may upon the written application of the Contractor and in coordination with the client give such certificate with respect to any substantial part of the works which has been both completed to the satisfaction of engineer and occupied or used by the Owner, and when any such certificate is given in respect of a part of the works such part shall be considered as completed and the period of Maintenance of such part shall commence from the date of such certificate. Provided also that a certificate of completion given in accordance with the foregoing provisions of any part of the works occupied and used as aforesaid shall not be deemed to certify completion of any ground or surfaces requiring reinstatement unless such certificate shall expressly so state.

### 34. MAINTENANCE AND DEFINITION OF MAINTENANCE PERIOD.

In these conditions the expression "Period of Maintenance" shall be **6 (Six) calendar** months from the date of completion of the Works certified by the Engineer in accordance with **Clause 34** hereof or, in the event of more than one certificate having been issued by the Engineer under the said Clause, from the respective dates so certified and in relation to the Period of Maintenance the expression "The Works" shall be construed accordingly.

### 35. EXECUTION OF WORK OF REPAIR ETC.

During the inspection made at site at the time of Substantial Completion of Project, the Contractor will be provided a punch list of items requiring rectification / replacement. During the Maintenance Period, defects, shrinkage or other faults, if observed by the Owner / Engineer, will also be notified to the Contractor.

The Contractor shall execute all such work of repair, reconstruction, and making good of defects (fair wear and tear excepted as determined by the Engineer) during the period of Maintenance. If there are certain items of repairs that require urgent attention / rectification / replacement, the Contractor shall proceed with the required necessary action as soon as possible.

In the event the Contractor fails to perform as required above, the Owner shall be entitled to carry out such Works and deduct the actual costs incurred from any monies due to the Contractor.

### 36. SITES FOR PLANT.

The Contractor, at his own cost, shall select and arrange for the use of Sites for all central mixing plants, aggregate and cement stores, general dumps, workshops, pre-casting yards, water storage etc., and shall provide adequate flooring and foundations for these where necessary. Before any land is used for any such sites, the Owner's / Engineer's consent shall be obtained in writing and on completion of the Works or before then if instructed by the Owner / Engineer, the sites shall be reinstated and any damage made good at Contractor's cost.

### 37. QUALITY.

The quality of materials and workmanship is laid down in the documents and the Contractor will be deemed to have allowed in his rates for the cost of providing this quality even when it may in some cases be higher than he has been in the custom of providing in the normal course of his business.

**38. SAMPLES.**

In addition to the special provisions made hereafter as to sampling and testing of materials by particular methods, samples of all materials and workmanship proposed to be employed in the execution of the Works shall be submitted by the Contractor to the Engineer for approval prior to execution of the work at site. The samples when approved will be kept by the Engineer who will reject all materials or workmanship not corresponding in quality and character with the approved samples.

**39. PROGRESS REPORT.**

At the end of each month or as determined by the Engineer, the Contractor is required to submit the report in such form and substance as may be prescribed by the Engineer explaining the progress of construction activities during the period, expected activities to start the following periods, procurement status, Manpower employed, tools and plant on site, and areas of problems.

**40. CONTRACTOR'S SUBMITTAL.**

In addition to the Contractor's program / schedule he is required to submit for the Engineer's approval during the construction of works.

- a. As-build Drawings for all important works, as required by the Engineer such as Electrical and air-condition Works, and other items as per site required etc., for which the Contractor will describe construction details. It is the Contractor's responsibility to check all design drawings and forward to the Engineer any discrepancy or disagreement (if any) between the other disciplines and suggest to the Engineer in his shop drawings their solution.

**41. WORK ON SUNDAYS, PUBLIC HOLIDAYS, DURING NIGHT & IN MORE THAN ONE SHIFT.**

- b. No work shall be done on Sundays or Public Holidays or during night without the sanction in writing of the Engineer.
- c. No work shall be carried out in more than one shift per day without the prior permission in writing from the Engineer.
- d. Whenever such permission is accorded the Contractor shall not be entitled to any extra payment whatsoever.
- e. The Contractor shall be responsible for obtaining official permission, if necessary, from any relevant authorities, and in particular, the labour department, if permitted, to work on Sundays, public holidays and during the night or for more than one shift. Additionally, the Contractor shall ensure that in carrying on the works at night or beyond normal hours, no nuisance or inconvenience is caused to the occupants of the building / houses in vicinity of the site.

**42. SETTLEMENT OF DISPUTES.**

**42.1** In the event of any dispute between the Owner and the Contractor, the matter shall be referred to the committee/ superintending engineer in writing for his decision. The Engineer shall, after making such inquiries as he may deem fit, give his decision, which shall be final & binding on both the Owner and Contractor till such time as the Contract is completed. The Owner and/or Contractor shall forthwith give effect to the decision of the until completion of the Contract whether arbitration is intended or not.

**42.2** If the Contractor are dissatisfied with the decision of the committee/ superintending engineer and desire arbitration they shall give notice of such intention within a period of 15 calendar days. The said notice shall contain the cause of action, material facts of the case, and the relief sought. It should be clearly understood that it is agreed that the decision shall be final and binding till the completion of the Contract, and arbitration proceedings will commence after completion of work and after handing over of the completed work to the Owner for use as they deem fit.

**42.3** Arbitration shall be conducted as per the arbitration laws prevalent in the country, and the venue of arbitration shall be Karachi.

**42.4** No decision given by the Engineer in accordance with the foregoing provisions shall disqualify him from being called as a witness and giving evidence before the arbitration on any matter whatsoever relevant to the dispute or difference referred to the arbitration.

**43. DELAYS AND LIQUIDATED DAMAGES.**

**43.1** Shall the progress of work at any time in the opinion of the Engineer be found too slow to ensure the completion of the works by the scheduled date or by any extended date the Engineer may so notify the Contractor in writing and the Contractor shall thereupon take such steps as the Engineer may think necessary to accelerate the progress of work, without any extra cost.

**43.2** In case the Contractor fails to complete the works and clear the site within the time prescribed in the Contract or extended time, then the Contractor shall pay to the Owner as Liquidated Damages an amount as mentioned in the Salient Features of this Contract.

**43.3** The Owner may without prejudice to any other method of recovery, deduct the amount of such damages from any monies due or which may become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligations to complete the works or from any other of his obligations and liabilities under the Contract.

**43.4** The liquidated damages provided for in this section shall be payable in all events without set-off, counter claim or defence by the Contractor, & the Contractor hereby agrees that the damages are predetermined costs which the Owner is likely to incur, due to the Contractor's delay & that the amount thereof is reasonable.

**43.5** Liquidated damages are only to compensate the Owner the delays on part of the Contractor and will not relieve the Contractor for any liabilities or claims accruing to the Owner on account of any default or breach of any other terms and conditions of the contract.

**44. ADDITIONS / DELETIONS.**

The Owner shall have the right to add and/or delete any parts of the work. Such addition or deletion shall not invalidate this Contract. Contractor shall be paid for the actual work executed by him, at the agreed rates or in case of the contract rates being not applicable at rates determined as per Article 51.

If it is found that final value of works including all Extra items / Variations (other than those arising by reason of any clause relating to variation in price of material, labour, POL including due to change in basic cost of items) is lesser or greater by 20% (or more) of the Contract Price (at the time of award of work), the final value of works shall be amended (increased in case the value is decreased and vice versa) considering Contractor's site and general overhead costs, etc. In such cases Contractor's profit shall not be taken into consideration. In case the value of works is decreased due to clause 9 of "Instructions to Tenderers", no increase in final value of work will be made.

**45. VARIATION IN WORK.**

The works / specifications shown in the drawings and bill of Quantities may be varied, increased and decreased by the Owner. Such variations shall not invalidate the Contract. The Contractor shall be paid for the actual work executed as per contract at the contract rates as accepted by the Owner / Engineer forming part of this Contract or where not applicable at the rates determined as per Article 51. Change in quantities of any item not on account of a variation order but due to error or discrepancy between the drawings and bill of quantities shall not be considered as variation. The contractor shall be paid as per the actual work executed at the contract rates forming part of this contract.

**46. ASCERTAINMENT OF PRICES FOR VARIATIONS.**

No variation shall vitiate or invalidate the Contract. All variations authorized in writing by the Engineer shall be separately recorded. Records of all such variations shall be submitted forthwith to the Engineer for verification & approval. The valuation of such variations unless previously or otherwise agreed shall be made in accordance with the following.

**46.1** A complete rate analysis of all such items of work giving details of actual materials, labour, cartage, and equipments consumed, shall be submitted by the Contractor to the Engineer. Such cost after due checking by the Engineer, shall be increased by 25% on items manufactured / executed by the contractor directly and 15% on items manufactured / executed by third parties (for which the contractor is responsible for coordination) to cover the Contractor's overheads, profits and withholding tax.

**46.2** Where extra work cannot be properly measured and valued, the Contractor shall be allowed day work prices at the current rates established in the area for similar work. Provided that in any case vouchers specifying the time daily spent upon the work (and if required by the Engineer the workmen's names) and the materials employed shall be delivered for verification to the Engineer not later than the end of the week following that in which the work has been executed.



**47 TERMINATION BY OWNER.**

**47.1 Termination due to default of Contractor:** If the Contractor shall commit breach or fail to perform as per Conditions of Contract relating to quality, adherence to design & specifications, progress, time of performance of the work or any part thereof or if without reasonable cause suspend the execution or performance of the works or substantial or material part thereof before completion or if he fails to proceed with the works with reasonable diligence, speed and progress or if he refuses or neglects to comply with notice in writing from the Engineer requiring him to remove defective work or improper materials and/or requiring him to take appropriate measures to the satisfaction of the Engineer to expedite the progress of work or if he otherwise commits breach of any other terms and conditions of the contract, and if the Contractor shall continue such above breach or failure for 14 calendar days after a notice by Registered Post specifying the same has been given to him by the Owner, the Owner may, without prejudice to his other rights or remedies, by further written notice by Registered Post terminate the employment of the Contractor under the Contract.

**47.2 Rights of Parties in case of Termination:** In the event of the employment of the Contractor being terminated & so long as has not been reinstated & continued, the following shall be the respective rights and duties of the Owner and the Contractor, viz :-

- a) The Owner may employ his own force or pay another person or agency to carry out and complete the works at the risk and cost of the Contractor and he or they may enter upon the site and use all temporary buildings, plant, machinery, appliances, goods and materials thereon, and may purchase any materials and/or arrange any plant, machinery, appliances, etc. necessary for carrying out and completion of the work
- b) The Contractor shall during the execution or after the completion of the work under this sub-clause remove from the site as and when required, within such reasonable time as the Owner in consultation with the Engineer may in writing specify, any temporary building, plant, machinery, appliances, goods or materials belonging to or hired by him. In default the Owner may (without being responsible for any loss or damage) remove & sell any such property of the Contractor holding the proceeds less all costs incurred to the credit of the Contractor.
- c) Until after completion of the works, the Owner shall not be bound by any provision of the Contract to make any further payment to the Contractor but upon such completion as aforesaid and after the verification within reasonable time of the accounts thereof by the Engineer who shall certify the amount of expenses properly incurred by the Owner and the loss or damage suffered by the Owner and if such amount added to the monies paid to the Contractor before such determination exceeds the total amount which would have been payable on due completion in accordance with the Contract, the difference will be a debt payable to the Owner by the Contractor and if the said amount added to the said monies be less than the said total amount the difference shall be a debt payable by the Owner to the Contractor.

**47.3 Owner's Privilege:** Without any such reasons as mentioned hereinbefore the Owner may terminate this Contract at any time by giving 30 calendar days notice in writing by Registered Post to the Contractor. Upon receipt of such notice the Contractor unless the notice directs otherwise, shall discontinue all supplies, works and services. Payment to the Contractor will be made in respect of the work which the Contractor has actually performed less payments previously made, and payments of actual cost of such approved materials which have been procured for use in the work but remain un-used on the site of work and actual cost of such manufactured items which are required in the work and have been ordered by the Contractor for manufacture under the sub-contract agreement, such payment to be made when such items are received at site of work and are duly checked and approved by the Engineer. The valuation of work by the Project Manager shall be final and binding on the Contractor. The Contractor shall not be entitled for any other benefit or profit which he might have obtained by completing the work if not terminated. Contractor shall however remain liable for maintenance and defects and guarantees in respect of the part of work completed by him upto that date and paid for by the Owner.

**48. TERMINATION BY CONTRACTOR.**

If the Owner within 1 calendar months after the presentation of payment certificates as per Mode of Payment and thereafter for 30 calendar days after written notice from the Contractor does not without cause or reason pay to the Contractor the amount due on the certificate (after recovery of any previous and advance payments made to the Contractor), the Contractor may, thereupon by 30 calendar days notices by Registered Post to the Owner terminate the employment under the Contract.

The Contractor shall be paid by the Owner :-

- a) The value of the works completed at the date of such termination, as evaluated by the Engineer, subject to the Engineer certifying all such works to have been completed as per Contract.
- b) The value of work begun and executed but not completed at the date of such termination the value being ascertained by the Engineer in accordance with the provisions of these conditions subject to the Owner/ Engineer certifying all such works to have been completed as per Contract.

The cost of materials or goods as evaluated by the Engineer and which have been properly ordered for the works for which the Contractor shall have paid or of which the Contractor is legally bound to accept delivery subject to the Engineer certifying all such materials and goods are according to the Contract. On such payment by the Owner any such materials or goods so paid for shall become the property



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**SPECIAL CONDITION OF CONTRACT**

## PART II-SPECIAL CONDITIONS OF CONTRACT

### 1. UNIT SYSTEM.

For all purposes the unitary system of Foot, lbs., Sec. (FPS System) shall be followed.

### 2. CONCURRENT WORKS.

Works concerned with installing of services or other works carried out by the Owner or other Contractors may continue on or near the Site of the Works. The Contractor must conduct his operation in coordination with the Owner or the other Contractor.

### 3. BASIC COST OF ITEMS.

In the event that the basic cost (which is inclusive of all taxes such as GST, Income Tax, etc. but exclusive of cartage) of an item has been given in the Bill of Quantities and the actual cost of sample approved is higher or lower than the cost stipulated, the net difference of price (based on finished quantity) shall be added to or deleted from the Contractor's rate at actuals + 6%.

Same procedure will be followed in the case if the source of supply is given or type of material is given (e.g. waterproofing membrane, etc.) or specific consumption of any material is given (e.g. concrete ratio, etc.), and they are changed.

### 4. BILL OF QUANTITIES.

Effort has been made to ensure that the quantities stated in the Bill of Quantities are accurate. However the Contractor should assume that they are estimated only and their accuracy or inaccuracy shall in no way affect the validity of the tender or any contract based thereon.

### 5. RATIONALIZATION OF RATE / PRICE.

The Owner / Engineer while scrutinizing the bids shall have right to object to any rate / price found to be unreasonable or abnormal and the Contractor shall be required to rationalize the unit rates, which are either on higher side or lower side, to the satisfaction of Engineer in such a way that agreed overall contract price remains unchanged.

### 6. CO-ORDINATION WITH OTHER CONTRACTORS.

The Contractor shall in accordance with the requirements of the Owner / Engineer extend co-operation for carrying out their work to any other Contractor employed by the Owner and their workmen and to the workmen of the Owner and of any other duly constituted authority who may be employed in the execution on or near the Site of any work not included in the Contract or of any contract which the Owner may enter into in connection with or ancillary to the Works. When the works of two or more Contracts are being executed at one time in such a manner that work on one Contract interferes with that of another, the Owner / Engineer shall decide which Contractor shall withhold work and which should be in progress at the same time and in whatever manner. In all matters

relating to cooperation with other Contractors, the decision of the Owner / Engineer shall be final.

**7. MOCK-UPS.**

Contractor, at his own cost, shall submit mock-ups of desired items as instructed by Owner / Architect / Engineer.

**8. DELIVERY OF MATERIAL.**

Delivery of any material at site shall be made after approval of the delivery schedule so as to ensure that materials liable to be adversely affected due to prolonged storage are not delivered prior to required time of installation.

**9. WATCHING AND LIGHTING.**

The Contractor, at his own cost, shall provide and maintain all lights, guards, fencing, watching, security, safety measures, etc. for the security and protection of the works, property, persons, etc. or for safety and convenience of the public or others. The lighting must be adequate enough for true supervision and inspection of works. The Contractor, at his own cost, shall also provide proper lighting for entire construction areas including other trades and also external security lighting as per requirement of Engineer.

**10. EXTRA ITEM OR ADDITIONAL PAYMENT BEYOND BOQ RATE.**

In the event of execution of any work as per drawing or the instruction from the Owner / Engineer constitutes an "extra item" as per terms of the contract or involves additional payment beyond the BOQ rate including due to increase in basic cost of items, the same should be indicated and approval obtained prior to implementation of the work.

If it is not pointed out that the work constitutes an extra item or involves additional payment prior to implementation of work, it will be construed that no extra item or additional payment is involved.

**11. CONTRACTOR'S MEETINGS.**

The Contractor shall attend and shall cause his Sub-Contractors to attend meetings when called by the Owner / Engineer to discuss progress of work and other related matters to the works and the Contract.

**12. COMPLIANCE WITH STATUTES AND REGULATIONS.**

The Contractor shall conform and comply in all respects with the provision of all laws, rules, regulations, bye-laws or orders of any Government or other authority whether Federal, Provincial, Municipal or Local from time to time in force which may be applicable to the Works and shall give all notices and pay all fees including Social Securities required thereby and shall indemnify and keep the Owner indemnified against all liabilities and penalties arising there under. Provided always that the Contractor shall not be responsible for obtaining any planning permission which may be necessary in relation to the works.

**13. EXISTING WORKS, DRAINAGE AND SERVICES.**

The Contractor, at his own cost, shall take all necessary precautions to avoid damage to any existing drains and services which may be encountered in carrying out the works and most adequately protect, support and maintain such drains and services as required.

**14. AS BUILT DRAWINGS.**

The Contractor, at his own cost, shall submit as-built drawings of Electrical and Air-condition finishing works after completion of works. Tracking set has to be maintained at site and needed to be periodically updated and reviewed by Engineer.



**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**SPECIFICATIONS**

## GENERAL INSTRUCTION

1. All wood specified to be properly seasoned and of 'A' quality.
2. M.D.F. board to be of Lasani (Super) or approved equivalent.
3. Soft board to be of imported make.
4. Steel reinforcement and cement (Grey & White) to be used as approved.
5. Formica to be of Balochistan Laminates or approved equivalent.
6. All polish on wood work to be imported stain as approved in Matt / Satin Finish with required no of coats of Joutun or approved equivalent polyurethane as per manufacturer's specification and instruction.
7. All wooden framework to be solignum treated (English make) prices to be included in respective items of BOQ.
8. All materials specified like wood, MDF board, gypsum sheet, M.S. 8, Stainless Steel, etc. mentioned in nomenclature / drawings to be used in maximum possible sizes to avoid too many joints, etc.
9. All aluminum sections to be of Pakistan Cable or approved equivalent.
10. Aluminum composite panels to be of Aluco Bond or approved equivalent.
11. All Glass to be imported of Saudia origin or approved equivalent.
12. All paints, Primer, etc. to be of ICI or Berger.
13. All M.S. work to be treated with minimum 2 coats of Anti Corrosive paint.
14. Gypsum Board sheet to be of Elephant Brand Thailand origin.
15. All material to be approved before installation.
16. Fabric to be of Fabric Project with basic rate of Rs. 350/- SM



**1.  
SCOPE OF WORK.**

1.1 The work covered by this section of the specifications, consists of furnishing all plant, labour, equipment, appliances, materials and performing all operations in connection with the supply and installation of ordinary cement concrete solid and hollow block masonry including wall ties, anchors complete in strict accordance with this section of the specifications & the applicable drawings and subject to the terms and conditions of the contract.

**2.  
APPLICABLE  
STANDARDS**

2.1 The work shall be completed with the requirements of Pakistan, British and ASTM standards.

**3.  
MATERIALS**

3.1 **For Blocks:** Cement, aggregate and water for concrete blocks shall conform to the requirements as specified in the section of Concrete.

3.2 **For Mortar.**

3.2.1 **Sand:** Sand for mortar shall be graded in accordance with the following table and the various sizes of particles shall be uniformly distributed. Sand should be obtained from approved source.

Sieve Size	Percentage passing by Weight	
	Minimum	Maximum
Mm		
4.75	100	-
2.36	95	-
1.18	70	100
0.60	40	75
0.30	10	35
0.15	2	15
0.075	0	0

Sand upto 0.063mm shall not be more than 8% by weight of the total.

3.2.2 **Cement:** Cement shall be ordinary portland cement, unless otherwise specified, conforming to the requirements as specified in the section of Concrete.

3.2.3 **Water :** Water shall be clean and free from any harmful impurity conforming to the requirement as specified in the section of Concrete.

3.3 **Mortars and Grout:** Materials for mortar shall be mixed by volume or by weight for at least 3 minutes with the minimum amount of water to produce a correctly mixed with workable consistency in mechanical batch mixer. For small jobs, hand mixing shall be permitted, the ingredients being mixed with sufficient water to produce a correctly mixed workable mortar. Mortar shall be as strong, but no stronger than the materials it bonds together. Mortars shall be mixed in batches which can be used within a period before the setting process commences. Once a mix begins dry off it shall be discarded and no ingredients shall be added to it once the setting process has begun.

**4.  
CONCRETE  
BLOCK MAKING**

- 4.1 The solid and hollow blocks shall be machine moulded. The block making machine shall be of the standard approved by the Engineer. They shall be operated according to the Instructions laid down by the manufacturers.
- 4.2 The blocks shall be continuously water cured by sprinkling for a minimum of 10 days and covered between sprinkling operations with polyethylene sheeting. After the 10 days of water curing period, the blocks shall be air dried. Under no circumstances will blocks be used in the work until they are completely dry. During period no surfaces of the block will be allowed to dry.
- 4.3 Cured concrete blocks shall be stored off the ground, stacked on level platforms which allow air circulation under stacked units. Units shall be covered and protected against wetting.
- 4.4 Care shall be exercised in the handling of all concrete blocks. No damaged blocks shall be used in the work.
- 4.5 The hollow blocks shall be manufactured strictly to sizes as shown on the drawing. These block units shall be provided by the Contractor for use where required. In building, units shall have uniformly fine, smooth surfaces of uniform colour. These shall be free of any honeycombing cracks or other imperfections or deformation, all edges true and straight and at right angles with each other and without any chipped or otherwise broken edges.
- 4.6 Reinforced cement concrete hollow block masonry shall be provided where shown on the drawings or specified in the Bill of Quantities. Hollow blocks manufactured by moulding machine shall have well formed cavities, sharp and well defined edges comers, smooth surface without any imperfections, deformation.
- 4.7 The blocks cast on different dates shall be stacked separately and must be labeled showing the date on which they are cast.

**5.  
PROPERTIES OF  
BLOCKS**

- 5.1 All blocks shall be of the sizes and shape required to complete the work shown in the drawings or instructed by the Engineer.
- 5.2 The cement, sand and coarse aggregate shall be volume batched and their proportion may be adjusted as to provide the concrete of the required strength when lusted and shall be mixed in a concrete mixer in accordance with the section of Concrete.
- 5.3 The compressive strength shall be minimum 800 psi for blocks with 28 days after casting.
- 5.4 The Contractor shall provide test certificates proving the minimum crushing strength of the blocks prior to the commencement of the construction. Further test certificates shall be provided as required by the Engineer to ensure that all batches of blocks have the minimum crushing strength specified.
- 5.5 The test shall be carried out by a laboratory, approved by the Engineer. Evidence shall be produced that the block manufacturer has an efficient method of quality control. The Engineer will require to periodically test samples of blocks, and the Contractor shall make necessary arrangements.

5.6 The Specifications of hollow blocks unit shall be in conformity with the British Standards, according to the requirements, The constituent materials e.g. cement, aggregate, water, process of manufacture including mixing, dimensions including tolerances, density, width of cavities in hollow blocks, bedding, joints, surface texture, curing, compressive/transverse strength, drying shrinkage, moisture movement, shall be strictly controlled/ determined and tested in accordance with the British Standards.

**6.  
ABSORPTION  
RATE**

The Contractor shall at his own cost, satisfy the Engineer that the adsorption rate of the block when determined in accordance with BS 3921 does not exceed specified value or that the Contractor is able to adjust it so that it does not exceed that value on site.

**7.  
SOLUBLE SALT  
CONTENT**

For exposed block work, the contents, by weight percent of soluble sulphate, calcium, magnesium potassium and sodium radicals, shall not exceed respectively 0.30, 0.10, 0.03 and 0.03, percent when ascertained in accordance with BS 3921 at the cost of the Contractor.

**8.  
REINFORCING  
AND ANCHORS**

Unless otherwise stated reinforcing and anchors shall conform to under mentioned sizes.

8.1 Joint reinforcing shall be 18 SWG mild steel wire mesh design, galvanized after fabrication. Steel wire woven into 12mm x 75mm wide.

8.2 All block masonry abutting with R.C.C. Columns / Walls is to be anchored using 675mm long, 3/8" dia liquid galvanized Mild Steel bar at every 3<sup>rd</sup> course, drilling 75mm deep into R.C.C. structure and grouting with sand cement mortar (if bar is placed in already constructed columns/ walls after drilling).

8.3 6mm dia galvanized tie bars shall be provided at the rate of 600mm c/c horizontal and vertical, of the size and shape as shown in the drawings In cavity block masonry.

8.4 Dovetail anchors and slots (if used as an alternate anchorage) shall be not less than 18 gauge galvanized steel.

**9.  
INSULATION**

Insulation to be inserted into the cavities or applied to faces of brick work or block work shall be correctly executed in accordance with the manufacturer's instructions. Where foam insulation is to be inserted into cavities, holes and openings shall be sealed prior to injection to prevent seepage of the foam. Loose fill insulation shall be poured into cavities from the top of each wall section completed, where required, and shall be allowed to form its natural density, and shall not be tamped.

**10.  
ERECTION**

10.1 Blocks shall be laid true to line, level and laid in accurately spaced courses in stretching bond with vertical joints of each course located at centre of units in alternate courses below. Vertical joints shall be buttered in the entire height of blocks. Each course shall be property bonded at comers and intersections of walls. Courses of block shall be kept plumb throughout and comers, reveals shall be true and in plumb. Standard width of mortar joints for both horizontal & vertical joints shall be 10mm (maximum). Mortar joints in walls shall have full mortar coverage on vertical and horizontal faces between the blocks. Mortar joints on wall including

struck joints shall be thoroughly compacted & pressed tight against the edges of the blocks with proper tools. Blocks terminating against soffits of beam or slab construction shall be wedged tight with wedges and the joints shall be packed solidly with mortar between the top of the block and the bottom of slab or beam. Control expansion joints shall be kept free from mortar or other debris. Unless otherwise shown on the drawings or directed by the Engineer, the spaces around door frames and other materials or built in items shall be solidly filled with mortar. Spaces around the door and window holdfasts shall be filled in with 1:2:4 concrete. Work required to be built in with masonry including door frame anchors, wall plugs, dovetail anchors and accessories shall be built in as the erection progresses.

- 10.2 The block work shall be carried up in uniform manner and no portion shall be carried out more than one metre above the adjoining one at any time. All masonry shall be kept strictly true and square and the whole property bonded together and leveled around each floor.
- 10.3 Sleeves, chases, holes sinking and mortice for other trades shall be correctly located and formed to the sizes as required by the relevant trades. Chiseling of completed walls or the formation of holes shall only be carried out with the approval of the Engineer.
- 10.4 All bolts, anchors, ties, pipe sleeves, flushing metal attachments, lintels, and the like required to be built into the work shall be correctly inserted and executed as the work proceeds. Walls or partitions abutting concrete columns or walls shall be securely anchored and tied with metal anchor ties at not more than 2nd course vertical centres. Wall ties cast in with concrete shall be bent down after the removal of formwork and securely jointed into the mortar beds of walling.
- 10.5 Walls of blocks indicated, as being non-load bearing shall be constructed on the in situ concrete floor slab unit after the floor formwork is struck and the concrete has obtained sufficient strength to support their weight. Tothing into load-bearing walls shall not be permitted.

## 11. SCAFFOLDING

Contractor shall provide safe scaffolding of adequate strength for use of workmen at all levels and heights at his own expense. Scaffolding which is unsafe in the opinion of the Engineer shall not be used until it has been strengthened and made safe for use of workmen. Cost of scaffolding etc., shall be included by the Contractor in the unit rate for masonry items. Damage to masonry from scaffolding or from any other subject, shall be repaired by the Contractor at his own cost.

## 12. JOINTING

Jointing is the forming of joints as work proceeds. Joints shall be as follows:

- 12.1 Exterior exposed joints shall be tightly formed to a weather joint with the point of the trowel.
- 12.2 Interior exposed joints shall be tightly formed to a concave joint.
- 12.3 Joints which are subsequently covered with plaster or other finish materials shall be struck flush.

## 13. TOLERANCE

All block work shall be erected plumb & true to line and level with the maximum variation in any storey height or any length of wall being one mm in one meter. The maximum tolerance in the length, height or width of any single masonry unit shall be +3mm.

**14.  
DAMP PROOF  
COURSE**

Damp proof courses shall be laid on an even mortar bed, free from projections, which may puncture the materials. Where the damp-proof course is to be stepped, only flexible membranes shall be used. Damp-proof course unless otherwise specified shall consist of 1:4 Cement Concrete 50mm thick, mixed with approved quality water proofing compound as per manufacturers specifications and shall be laid at required level as per drawings & instructions of the Engineer. The D.P.C. shall be tamped, consolidated, leveled & edges & comers made to the requirements of drawings & shall include finishing & curing.

**15.  
SOLID BLOCK WORK  
AROUND OPENING OF  
HOLLOW MASONRY.**

Around all openings in hollow block masonry, the Contractor shall provide solid block work of same thickness as that of hollow block masonry wall and of width as indicated on the drawings. Solid block shall be laid around openings in a manner that these are bonded integrally with hollow block masonry.

**16.  
EXPANSION  
JOINT**

Where shown on the drawings, expansion joint shall be provided. The joint shall be filled with approved sealant and finished true to line and level.

**17.  
CURING AND  
REPAIRS**

- i. All block masonry shall be watered cured and shall be kept wet for at least seven days, by an approved method which will keep all surfaces to be cured continuously wet. Water used for curing shall meet the requirements of these specifications for water used in the manufacturer of blocks.
- ii. If, after the completion of any block masonry work, the block is not in alignment or level, or does not, conform to the lines and grades shown on the drawings or shows a defective surface, it shall be removed and replaced by the Contractor at his expense unless the Engineer grants permission, in writing, to patch or replace the defective area.

**18.  
MEASUREMENT  
AND PAYMENT.**

18.1 **General:** Except otherwise specified herein or elsewhere in the Contract document, no measurement and payment will be made for the under mentioned specified works related to the relevant items of the Bill of Quantities. The cost thereof shall be deemed to have been included in the quoted unit rate of the respective items of the Bill of Quantities.

18.1.1 Chiseling of masonry, wherever required.

18.1.2 Providing and fixing all joint reinforcing bars and dovetail anchors.

18.1.3 Providing and filling 1:4:8 concrete or as specified in the cavity of hollow block masonry, if required in Bill of Quantities.

18.2 **Solid Block Masonry:**

18.2.1 **Measurement:** In case of different thickness of slab in different areas or rooms or for any other reasons, whatsoever, if chiseling of masonry is required, the Contractor shall do so at his own cost. Where for any reason whatsoever, the height of the wall is short of ceiling height, the actual height shall be made good

with 1:2:4 nominal mix concrete. This concrete shall neither be measured nor be paid under item of concrete but will be paid for under the item of wall masonry.

Similarly where the lintel heights are such that the contractor has to chisel the masonry or provide cast-in-place concrete to make up the height of the course, no payment will be made for chiseling, but where such cast-in-place concrete is provided, payment not the same will be made at the unit rate of masonry.

Measurement for acceptably completed works of solid block masonry will be made on the basis of unit of measurement as specified in B.O.Q. provided and installed in position as shown on the drawings or as directed by the Engineer. All openings left in the masonry wall will be deducted.

18.2.2 **Payment:** Payment will be made for acceptable measured quantity of solid block masonry work on the basis of unit rate in the Bill of Quantities and shall constitute full compensation for all the works related to the item.

### 18.3 **Hollow Block Masonry**

18.3.1 **Measurement:** Measurement for acceptably completed works of hollow block masonry wall will be made on the basis of unit of measurement as specified in B.O.Q. provided and installed in position as shown on the Drawings or as directed by the Engineer. All openings left in the masonry will be deducted. Solid block masonry around openings shall not be measured separately. It shall be included in the measurement of hollow block masonry for payment.

18.3.2 **Payment:** Payment will be made for acceptable measured quantity of hollow block masonry works on the basis of unit rate in the Bill of Quantities and shall constitute full compensation for all the works related to the item.

**1.  
SCOPE OF  
WORK**

The work covered by this section of the Specifications consists of furnishing all plant, labour, equipment, materials and performing all operations in connection with cement plaster work, complete in strict accordance with this section of the specifications and the applicable drawings and subject to the terms and conditions of the Contract. The scope of this section of specifications is covered with detailed specifications as laid down herein.

**2.  
APPLICABLE  
STANDARDS**

The work shall be completed with the requirements of Pakistan, British and ASTM standards.

**3.  
GENERAL**

- 3.1 Except as may be otherwise shown on surfaces specified, all plaster work, both internal and external, shall be Ordinary Portland cement plaster of the required thickness mentioned in B.O.Q. Internal plaster for the buildings for all the internal surfaces; columns, walls ceilings, partitions, etc. shall be cement plaster finished smooth unless otherwise specified. Whereas the areas like lavatory blocks, bathrooms, stores, or such other places where there is possibility of any dampness occurring, the plaster shall be cement plaster finished smooth with cement niru or as specified in the BOQ. Except as otherwise specified, all plaster work shall be carried out in Conformity with acceptable code of practice for internal and external rendering and finishes.
- 3.2 Plastering shall not commence until all electric conduits, drainage and sanitary pipes, inlets to tanks, brackets, clamps, sills, doors' and windows' frames and all sorts of inserts and embedded items are fixed in position. It shall be the responsibility of the Contractor to make sure that all such works are carried out by other Contractors before starting of plaster work. Chiseling and repairing of cement plaster shall not be permitted without the approval of the Engineer.

**4.  
MATERIALS**

- 4.1 Cement: Cement for plaster shall be Portland Cement either ordinary, rapid hardening or sulphate resisting cement and shall conform to requirement as described in the specifications of concrete.
- 4.2 Sand: Sand for plaster shall comply with the requirements of BS-812, BS-119 and ASTM C-144. It shall comprise natural sand, crushed stone sand or crushed gravel sand. It shall be hard durable, clean and free from adherent coatings such as clay and from any appreciable amount of clay pellet form. It shall not contain harmful materials to adversely affect the hardening, the strength, the durability or the appearance of the plaster or any materials in contact with it. The quantity of clay, silt and dust shall not exceed 5% by weight for sand or crushed gravel or 10% by weight for crushed stone sand.

The grading of sand for internal plaster work and external rendering shall be within the following limits

<u>Percentage by weight passing Sieve Sizes</u>			
Sieve Size	Gypsum Plaster Under Coats. Not Used	Gypsum Coats Finishing Plaster Not Used	Internal Cement Plaster work & External Rendering
MM	%	%	%
5.00	100	100	100
2.36	90-100	100	90-100
1.18	80-90	95-100	70-100
0.6	30-85	30-85	40-80
0.3	5.40	5.50	5.40
0.15	0.10	0.10	0.10

The grading specified above shall be suitable for smooth finishing coats, scraped finishes and for pebble dash or dry dash for textured surfaces, produced by the treatment of the freshly applied final coat with a tool, the coarser particles shall be removed by screening through a 2mm sieve.

- 4.3 Water: Water for plaster shall conform to requirements as described in the specifications of concrete.
- 4.4 Additives: Additives for controlling the setting and working characteristics of plaster, or for imparting anti-corrosion, fungicidal or water proofing properties, shall be added to the plaster strictly in accordance with the particular manufacturer's specifications and instructions. Good quality hair or manila fibre in reasonably well distributed proportion may be added to the plaster to assist application and reduce droppings. No additives shall be used except as specified in the Contract Documents.

## 5. PROPORTIONING AND MIXING

- 5.1 Measurement of materials by volume shall be by containers of known capacity to maintain consistent proportions. No lumpy or caked material shall be used. Mixing equipment boxes and tools shall be clean. Materials shall be proportioned as specified on the drawings, in the Bill of Quantities or as directed by the Engineer. Mixing shall be continuous until complete and all ingredients are evenly distributed.
- 5.2 Only limited water shall be added for proper workability and such quantity of the mortar shall be prepared as that which will be consumed in thirty minutes after preparation. Preparation of mortar in bulk quantity for use during the entire day or for any other time more than that stipulated above is expressly prohibited. Re-tampering shall not be permitted and all mortar which has begun to stiffen shall be discarded.
- 5.3 Plaster ingredients shall be thoroughly mixed, either by hand on a clean cement concrete platform or by a mechanical mixer, as directed by the Engineer.

## 6. PREPARATION OF SURFACE TO BE PLASTERED

- 6.1 Concrete surface to be plastered shall be cleaned to remove all grease, oil and other surface impurities, which will otherwise adversely affect the adhesion of plaster to the surface concerned. The surface of all concrete ceilings, beams and columns shall be lightly hacked by approved means to give the required key for plastering.
- 6.2 All masonry surface to be plastered shall be cleaned to remove all matter which will otherwise adversely affect the adhesion of plaster to the surface concerned. The surface shall be washed with clean water and kept damp for 24 hours before further treatment. The surface thus prepared shall be treated uniformly with cement and



sand slurry. The slurry to be used shall be one part cement to one part sand by volume with water added to make a stiff creamy mix. This slurry shall be applied with a stiff brush on surface, which has previously been well wetted. The surface so treated shall be left to cure for three days.

7.  
**APPLICATION  
OF PLASTER**

7.1 The plaster shall be minimum 12-20mm thick, as mentioned in BOQ and shall not be less than 12mm thick at any internal surface or 20mm at any external surface. The plaster of a thickness less than the specified thickness shall be rejected. If the plaster is to be more than 25mm thick, it shall be done in two coats. The surface of first coat shall be made rough before the second coat is applied. The plaster shall not have wavy surface and shall be perfectly in plumb. The edges and corners shall represent a straight line. The plaster shall be kept wet continuously for at least ten (10) days. The curing/wetting of the plastered surface shall start immediately after the surface is set i.e. 4-5 hours from the time of finishing. No extra payment shall be allowed for jambs, junctions, corners, edges, round surfaces or for more than one layer of plaster required due to any unevenness in the work done by the Contractor. The plaster work is to cover all conduits, pipes etc. fixed in the walls and ceiling. Wherever specified, metal lath shall be nailed firmly before plastering is commenced. The plaster surface shall be tested frequently with 3 meter straight edge and plumb bob.

7.2 Plaster containing cracks, blisters, pits, discolouration or any defects shall not be acceptable. Any such plaster or loose plaster shall be removed and replaced with plaster in conformity with these specifications and as additionally directed by the Engineer. Contractor shall cut and patch all defective work at his own cost. All damaged plaster shall be patched as directed by the Engineer. Patching plaster shall match appearance of and shall be finished level with adjoining plaster. If the Engineer does not accept patch work, he may ask to replace the entire wall, ceiling, area. etc.

7.3 **Cement Plaster Finished with Cement Niru:** The first coat (Scratch coat) of cement plaster is to be applied as specified and immediately while the plaster is still fresh a floating coat of neat cement shall be applied on it and the surface shall be finished smooth by steel trowel. The plaster with wavy surface or trowel marks shall be rejected.

7.4 **Rough Cast Stucco Plaster :**

The rough cast finished cement plaster shall be composed as follows:

**First Coat:** One part of Portland Cement and three parts of sand or as provided in Schedule of Quantities.

**Second Coat:** Two parts of Portland Cement and two parts of shingle or crushed stone or pea size gravel and three parts of sand or as provided in Schedule of Quantities.

The materials shall be mixed in a dry state either by hand or in mechanical mixer. When the materials are thoroughly and uniformly mixed, then sufficient water shall be added to give workable consistency. The thickness of the first or strengthening coat shall not exceed 15mm or be less than 10mm. When this coat has commenced to dry and harden, it should be combed when evenly distributed, wavy horizontal combing about 15mm apart, and not more than 3mm deep. The thickness of the final coat shall be controlled by texture required by the Engineer-in-Charge shall not be less than 6mm or more than 10mm.

7.5 **Washed Terrazzo Finish:** The washed terrazzo finish on interior or exterior surfaces shall be composed as follow

**First Coat:** The composition and application of this shall be similar to the first coat of Stucco plaster above.

**Second Coat:** One part of white or grey Portland Cement as provided in Schedule of Quantities and two parts of marble chips. The materials of the second coat shall be hand mixed in a dry state before sufficient quantity of water is mixed to give a workable consistency. When this coat has commenced to set, (approximately 30-45 minutes after application) it should be washed and slowly scraped with a brush to expose the aggregate. The thickness of the second coat shall be between 10-12mm as required by the Engineer-in-Charge.

- 7.6 **Water-Tight Cement Plaster for Damp-Proof Course:** This type of plaster, where specified, shall be carried out very carefully. The cement sand proportions shall not be less than 1:3 or as specified. The water tight reagent such as "Pudlo" or approved additive shall be mixed dry with the cement sand mixture in the quantity specified in the schedule of description of works. The sand for this item shall be specially selected. The cement, sand and powder are thoroughly mixed and water is added to the extent, it is required to make the paste to apply as plaster. Water should be added to that much mixture of cement, sand and powder, as would be used within the initial set, as per instructions of the manufacturers. The surface plastered shall be thoroughly protected from dry winds and the sun and kept wet for at least 10 days.
- 7.7 **Drip Courses and Moldings:** Drip course is to be provided in all projections, whatever the nature of cantilevers projections in sills or architraves, etc., may be. Where drip course is to be provided in cast-in-situ concrete it may be cast by placing an inch dia. bar at the position where the drip course is required. Every care shall be taken to see that the drip course is exactly horizontal and parallel to the face of the wall. Drip courses made out in plaster shall be made of richer mix than the plaster and shall be uniform in width and depth and preferably horizontal. Mouldings at ceiling or around openings shall be made as shown in the drawings.

8.  
**METAL LATH AT  
JUNCTION OF CONCRETE  
& MASONRY, CONDUIT  
CHASES, ETC**

Metal lathing, at the junction of concrete & masonry, conduit chases, etc., shall be fabricated from sheet steel, and shall be of uniform quality and free from flaws, broken strands, cracks and corrosive pitting, shall be rectangular and true to shape.

Before plastering, wherever masonry meets with reinforced concrete members a 200mm wide continuous strip of expanded metal lath shall be nailed to the masonry and the reinforced concrete member covering the joint completely to prevent cracking of the joint.

9.  
**BEADS & PROFILES**

Angle beads, corner beads, stop beads, architraves beads, depth gauge beads, edging profiles, plaster dividing profiles, interior angle profiles, plaster borders and the like shall all be manufactured from sheet steel and galvanized after fabrication, all beads and profiles shall be perforated at edges to ensure good adhesion of the plaster work. Thickness and dimensions shall suit particular locations and plaster work thickness.

Nails for fixing metal lathing shall be galvanized and have either clout heads or small flat heads to suit particular locations. All angle beads, stop beads, architrave beads, depth gauge beads, and the like are to be fixed in accordance with the manufacturer's instructions.

**10.  
CLEANING AND  
PROTECTION.**

- 10.1 Rubbish and debris shall be removed as necessary to make way for work of other trades and as directed by the Engineer. As each room or space is completed, all rubbish, debris, scaffolding and tools should be removed to leave the room clean.
- 10.2 Prior to plastering all aluminum windows and finished metals should be covered by sheet of plastic or tarpaulin to protect them from damage.
- 10.3 Protect finished plaster from injury by any source. Contractor shall also protect walls, floors and work of other trades from plaster materials.

**11.  
TOLERANCES**

Surfaces of plaster work shall be finished with a true plane to correct line and level with all angle and comers to a right angle unless otherwise specified and with walls and reveals plumb and square.

Maximum permitted tolerances shall not exceed 3mm in 2m variation from plumb or level in any exposed line or surface and 1.5mm variation between planes of abutting edges or ends

**12.  
MEASUREMENT  
& PAYMENT**

**12.1 General**

- 12.1.1 Except otherwise specified herein or else where in the Contract Document, no measurement and payment will be made for the under mentioned specified works related to the relevant items of the Bill of Quantities. The cost thereof shall be deemed to have been included in the quoted unit rate of the respective items of the Bill of Quantities
- 12.1.2 Joints, junctions, jambs, comers, drip course, edges and roundings.
- 12.1.3 More than one layer due to any unevenness in the work done by the Contractor.
- 12.1.4 Cutting and patching of all defective works.
- 12.1.5 Surface preparation, cleaning, providing expanded metal lath and protections as specified.
- 12.1.6 Water proofing agent for water-proof plaster.
- 12.1.7 Angles beads, comers, beads, stop beads, architraves beads, depth gauge, edging profiles, plaster dividing profiles, interior angle profiles and plaster borders used in plaster works as shown on drawings if these are required in the respective items of Bill of Quantities.

**12.2 Plain Plaster**

- 12.2.1 **Measurement:** Deductions shall not be made for ends of joints, beam posts, etc., and openings not exceeding 0.5 square meter each and no addition shall be made for reveals, jambs, soffits, sills, etc. of these openings nor for finishing the plaster around ends of joints, beams posts etc. In case of opening of area exceeding 0.5 square meter each, deduction shall be made for the openings and addition shall be made for reveals jambs, soffits, sills, etc. of these openings. Measurement for acceptably completed works of plaster will be made on the basis of number of square meter of the surface area plastered as shown on the Drawings or as directed by the Engineer.

- 12.2.2 **Payment:** Payment will be made for acceptable measured quantity of plaster on the basis of unit rate per square meter quoted in the Bill of quantities and shall constitute full compensation for all the works related to the item.
- 12.3 **Water Proof Plaster.**
- 123.1 **Measurement:** Measurement for acceptably completed works of water proof plaster will be made on the basis of number of square meter of the surface area plastered as shown on the drawings or as directed by the Engineer.
- 12.3.2 **Payment:** Payment will be made for acceptable measured quantity of water-proof plaster on the basis of unit rate per square meter quoted in the Bill of Quantifies and shall constitute full compensation for all the works related to the item.

**1.  
SCOPE OF WORK**

The works covered under this section of specifications consists of furnishing all labour, materials and equipment and performing all operations in connection with laying flooring including bases, dados and skirtings in strict accordance with drawings and as specified herein and subject to terms and conditions of the contract documents.

**2.  
EARTH FILL  
UNDER FLOORS**

The filling inside the plinth upto the required level of the base shall be carried out in layers of not more than 200mm thickness. Each layer shall be thoroughly watered and compacted to minimum 95% of dry density before the next layer is laid. The earth on site from excavation shall be used only if it is suitable, non-expansive and approved by the Engineer.

**3.  
SAND FILL**

A uniform layer of sand shall be laid to the required thickness over the surface of compacted earth. The sand layer shall be compacted in the manner required by the Engineer prior to execution of subsequent item.

**4.  
STONE SOLING**

The quality of stone material shall be as per requirements for best quality work, and shall be approved by the Engineer. The stones shall be laid on edge as approved by the Engineer. When the stones have been rammed in place and the surface is satisfactory, the spaces or voids between and around shall be grouted with cement mortar 1:b unless otherwise specified. The cement grout shall be poured and broomed into the spaces between the stones. This operation shall be continued until the grout remains flush with the top of the stones. The grout shall be of such consistency that it will flow readily into the spaces between the stones but it must not be so wet that solid matter separates from the water. No further work shall proceed on this stone soling until the cement grout has set sufficiently.

**5.  
BRICK PAVING**

The Contractor shall lay brick pavement at locations indicated on drawings or where directed by the Architect/Engineer.

5.1 Materials shall conform to all the requirements specified in Section "Brick Masonry".

5.2 The Contractor shall prepare compacted sub-grade upto 95% of dry density, finished accurately to lines, grades and dimensions shown on drawings or as directed, diagonal herring bone or other pattern as directed by the Engineer. The Contractor shall first make small samples on site and the Architect/Engineer shall select any suitable pattern. The joints shall be 6mm to 9mm thick unless otherwise specified and shall be filled in with approved mortar for full depth as specified. Curing should be made in on approved manner as already explained in section "Brick Masonry".

**6.  
CEMENT  
CONCRETE.**

The base course of cement concrete shall be 1:3:6 concrete unless otherwise specified. The surface of the bed shall be roughened for the grip of the top layer.

**7.  
FLOOR FINISHES.**

All floor finishes shall be laid on property cleaned and prepared sub-floors to the thickness as indicated on the drawings and finished to the satisfaction of Engineer. The Contractor shall make sample panels of floors for inspection and approved by the Architect/Engineer before actual flooring works are taken in hand.

**8.  
CEMENT CONCRETE  
FLOORS.**

- 8.1 The concrete ingredients shall be mixed in a batch mixer for not less than 1 ½ minutes after all ingredients except the full amount of water, are in the mixer. The concrete shall be uniform in composition and consistency from batch to batch except when changes in composition or consistency are required. Water shall be added prior to, during and following the mixer charging operations. Excessive or over mixing or increasing concrete consistency will not be permitted. The concrete ingredients shall be mixed by volumetric measurement in purpose made boxes approved by the Engineer.
- 8.2 The screed may be laid when the concrete is still plastic, thus forming a monolithic slab, or on set and hardened concrete. In the first case, any foreign material, laitance or water on the surface of the base should be removed shortly before the screed is laid. In the second case the surface of the base concrete should be brushed with a stiff broom, just before it hardens, to remove all laitance and loose aggregate and at the same time, to roughen the surface to improve the bond. The hardened base should be thoroughly cleaned, wetted, preferably overnight surplus water removed and a grout of cement and water brushed into the surface keeping just ahead of the application of the screed.
- 8.3 The adhesion between the screed/ topping and base shall be tested by tapping the surface with a rod or a hammer. A hollow sound indicates poor adhesion. Loss of adhesion does not necessarily mean that the screed or concrete topping is unsatisfactory. However, when it is accompanied by visible or measurable lifting at the edges of bays or at cracks, the screed or concrete topping may deflect and break under the loads imposed in use and shall be considered unsatisfactory. Where the screed or concrete topping is considered to be unsatisfactory it shall be necessary to redo the whole of the affected bay or bays.
- 8.4 The tolerance in level over a 2m length shall not-exceed +3mm.

**9.  
TERRAZZO FLOORING  
(IN SITU).**

The Contractor shall submit samples of terrazzo flooring required in the various locations and the samples, which Engineer may select for use in the buildings shall be available for examination and comparison by both the Contractor and the Engineer. The finished floors shall conform in all respects to the characteristics of the samples approved. The size of chips shall be of 3mm to 10mm size and the colour will be as selected by the Architect/Engineer.

The Contractor, after tentative colour patterns are approved, shall provide sample panels of cast in place terrazzo wear coat and base, he proposes to use for subsequent approval of the Engineer before proceeding with his work. The thickness of the wear coat shall be uniform and at no point shall it be less than 15mm. Wherever a cove base is required with skirting or dado, the radius shall be uniform and shall be made together with the skirting/ dado. Under no circumstances, with a joint at the base to introduce the curvature will be allowed. Finished surfaces of both floors and walls when completed, ground and polished, shall in all cases show uniformly distributed exposed granules or chips, free of undesirable blotches of matrix without marble granules or chips. Uneven distribution in either floor or wall surface will be required to be resurfaced and /or refinished to the satisfaction of the Engineer. All floors shall be adequately cured for a minimum of 14 days after laying by means of sand bunds in panels or as required by the Engineer. During the course of construction of the floors and upto the time of completion of the Project, the Contractor shall protect the flooring from stains and mechanical damage by his workers or by workers of other Contractors/Sub Contractors. For the latter conditions, he may take assistance

from the Engineer if required. However, in the event of damage or staining, the Contractor shall redo certain floor panels or the entire floor within a space as required by the Engineer.

**10.  
TERRAZZO TILE  
FLOORING & STEPS**

- 10.1 All tiles shall be of size 300x300mm or 200x200mm size as shown on drawings or as mentioned in the Schedule of Quantities and shall be perfectly leveled square and true to every surface. Tiles shall be minimum 25mm for 300mm size and minimum 20mm thick for 200mm size with a marble mosaic topping firmly bonded to a base of cement concrete, manufactured by the dry process and machine pressed hydraulically with a pressure of not less than 150 kg. Per square centimeter. The thickness of topping shall not be less than 13mm for 300x300mm tiles and 13mm for 200x200mm tiles.

The marble mosaic topping shall be of colours as selected by the Architect/Engineer, including sizes of chips, their colour proportion and distribution. All tiles shall be of uniform colour and liable to rejection due to difference in any of the above specified conditions.

The tile shall be vibrated to an extent that it releases air to the surface and consolidates the aggregate at the wearing surface. Proportion of cement to aggregate shall not be leaner than 1:2 by weight in topping layer. All tiles shall be cured after manufacture for not less than three weeks, prior to delivery at site, or setting up in floors.

If the Contractor is allowed to use ordinary tiles for stair risers he will have to cut the standard tiles for which no payment for the wastage or cutting will be made. The tiles before being used shall be thoroughly soaked in water for 10 to 20 minutes and stood on their edges to dry for about the same length of time. Any tiles, which have hair cracks shall be rejected. Should the cracks be noticed after the tiles are fixed in position, such tiles shall be replaced at contractor's cost and risk.

- 10.2 The terrazzo tiles will be laid to the required levels and grades over a setting bed of cement mortar comprising of 1 part of cement and 4 parts of sand by volume or as specified. The overall thickness of mortar and tile shall be minimum 50mm. The curing period of the setting bed should be as directed by the Engineer. As large an area of setting bed shall be spread at one time as can be covered with tiles before the mortar has set. Surplus mortar shall be removed. Floor and wall surfaces to receive the tiles shall be thoroughly cleaned of all dirt, dust, oil and other objectionable matters. Tiles shall be laid out from the centre line of each space in on outward direction and the pattern shall be made symmetrical with a minimum number of cut tiles. Joints between the tiles shall be of uniform width. Tiles shall be cut with a suitable cutting tool and rough edges shall be rubbed smooth. Tiles shall be laid to the straight edges. The Contractor is required to submit his shop drawing before actual laying of the tiles to show in detail how and where tiles pieces are planned to be laid. The Drawing shall be approved by the Architect/Engineer. After seven days the terrazzo tile surface shall be machine ground to a true even surface using various grades of abrasive stones as required and directed by the Engineer. After the first grinding, the floor shall be grouted with the same colour composition as used for its manufacture. The grout shall be of the consistency of thick cream and shall be brushed over the floor to fill in the joints and after 72 hours the grouting coat shall be removed by grinding till a smooth and even surface is obtained. Areas and portion of the floor inaccessible for the grinding machine shall be ground and rubbed by hand. The final gloss shall be given by polishing the surface to the satisfaction of the Engineer. The tile floor shall be kept wet for at least 72 hours and no one should be allowed to walk on the tiles during that period.

**11.  
CERAMIC TILE  
FLOORING & DADO.**

- 11.1 The tiles shall be of approved manufacturer. These will be either white or coloured as specified in the Schedule of Quantities or as approved by the Architect/Engineer. The tiles shall be free from cracks or crazing, free from twisting and uniform in colour

and size. Approval of the manufacturer does not relieve the Contractor to carry-out his own checking to ensure that only the best quality tiles are used and all defective tiles are rejected and removed from site immediately.

- 11.2 Ceramic tiles shall be soaked in clean water 24 hours before laying. They shall be laid on cement concrete base of specified grade and the joints filled with neat white or grey cement or as specified including vertical and horizontal covers. The curing period of the setting bed shall be as directed by the Engineer. As large an area of setting bed shall be spread at one time as can be covered with tiles before the base has set. Surplus base material shall be removed. The thickness of setting bed shall not be less than 45mm for floor and 12mm for walls. Floor and wall surfaces to receive the tiles shall be thoroughly cleaned of all dirt, dust, oil and other objectionable matters. Tiles shall be laid out from the centre line of each space in an outward direction and the pattern should be made symmetrical with a minimum number of cut tiles. Joints between the tiles shall be of uniform width. Tiles shall be cut with a suitable cutting tool and rough edges shall be rubbed smooth. Tiles shall be laid to the straight edges. The vertical comers of the tiles shall be mitred and finished true by rubbing with carborandum stone or by another approved means. The contractor will not be entitled to claim anything extra for cutting the tiles to the required sizes and finishing the edges as approved by the Engineer. The tile floor should be kept wet for at least 72 hours and man traffic should no be allowed on the tiles during this period.

**12.  
VINYL TILE  
FLOORING**

Vinyl tiles shall be of specified sizes and factory finished. Colour patterns shall be selected by the Architect/ Engineer from the standard range from an approved manufacturer.

The tile shall have an uniform wearing surface and be colour-fast to day light. The material shall be resistant to mild acids, alkalis, oils, and grease.

Adhesives for tile fixing shall be the adhesive recommended by the manufacturer supplying the tiles. After the base is cured, it will be allowed to dry completely and cleaned thoroughly to make it dust, moisture, oil and grease free. Any irregularity on the base shall be filled in and leveled before laying the tiles. An area not exceeding about 2.5 sq.m. shall be coated with approved adhesive material. 10 to 15 minutes shall be spent for airing the adhesive. Tiles shall be laid starting from one side of the room and shall be so pressed that complete adhesion takes place. Prior to commencement of work, the Contractor shall submit to the Architect/Engineer samples of Vinyl tiles of all available colour and patterns along with the sample of adhesives for approval of the Architect/ Engineer. Manufacturer published instructions and recommendation shall also be submitted.

**13.  
VITRIFIED CLAY  
TILE FLOORING.**

Tiles shall be of the best quality and of colour and size as approved by the Architect/Engineer. The overall thickness of cement sand mortar and tile shall be minimum 50mm. The mortar shall be laid to make up the total thickness of floor finish specified. The surface shall be laid to levels and grade required.

Tiles shall be laid using adequate number of spacer to ensure uniform spaces between adjacent units of the required thickness as indicated on the drawings or Schedule of Quantities. After the tiles are laid, the joints shall be grouted with 1:4 cement sand grout with or as specified in Schedule of Quantities. The grout shall be tooled in the required shape, and the Contractor shall ensure that all the joints are finished in a uniform manner



as per approval of the Sample. Care shall be take to see that full tiles are used as far as possible. Where not possible, the edge tiles shall be neatly cut with an electric saw and the edges rubbed smooth. The edges cut shall be under the wall tile. In case of patterned tiles, the tiles shall be laid in such as way that the patterns end symmetrically on two sides.

Tiles shall be cured for 7 days with water and then thoroughly cleaned and dried. Notwithstanding anything written above the manufacturer's printed instructions regarding laying shall be strictly followed. On completion of the flooring, the entire surface shall be acid washed to remove the film of cement from the surface of the tiles, and the cost of this item shall be deemed to have been included in the quoted unit rate of the Bill of Quantities.

**14.  
MEASUREMENT  
AND PAYMENT**

14.1 Except otherwise specified herein or else wherein the Contract Documents, no measurement and payment will be made for the under mentioned specified works related to the relevant items or the Bill of Quantifies. The cost thereof shall be deemed to have been included in the quoted unit rate of the respective items of the Bill of Quantities.

Grinding, washing, polishing, acid washing and finishing of tiles.

Pigments used for making of tiles or grouting material.

Grouting.

Adhesive for fixing vinyl tile flooring.

Base mortar.

Cement mortar for setting tiles.

14.2 Measurement of acceptably completed works of finished floor, dado, skirting, stair finish, etc. will be made on the basis of net finished area laid in position as shown on the drawings or as directed by the Engineer. Exposed edges of tiles, marble, etc. will not be included in the measurements.

Payment will be made for acceptable measured quantity of finished floor, dado, skirting, stair finish, etc. on the basis of unit rate quoted in the Bill of Quantities and shall constitute full compensation for all the works related to the items.

**1.**

**SCOPE OF WORK**

The work covered by this section of the Specification, consists of furnishing all materials, plant, labour, equipment, appliances and performing all operations in connection with surface preparation, mixing, painting concrete works, gates, frames, structural steel works, steel pipes, valves, steel and wooden doors, windows, louvers, wall ceilings and all such surfaces as shown on the drawings/or as directed by the Engineer, the scope of this section of specification is covered with detailed specifications as laid down herein.

**2.**

**GENERAL**

2.1 Where the work or term 'paint' and 'polish' is used or referred to throughout the specifications, it shall be interpreted to mean and include the surface finish treatment consisting of any, all or some of the following items:

Sealers, primers, fillers, body and final coat, emulsion varnish, shellac, wall paper paste, stain or enamels as more specifically defined hereinafter as to kind and quality and function for various surfaces and finishes.

2.2 All paint, polish and necessary materials incorporated in or forming a part thereof shall be subject to the approval and selection for colour, tint or finish by the Architect/ Engineer.

2.3 In connection with the Architect's / Engineer's determination of colour or tint of any particular surface, the depth of any colour or tint selected or required shall in no instance be a subject for an additional payment to the Contractor.

2.4 Where a 'two colour' or tint combination may be selected or approved for the treatment of any particular surface in any space or room, no additional payment shall be made thereof to the Contractor in any instance.

2.5 Painting of wood work and for plaster surfaces shall be minimum 3 coats work except otherwise specified. Painting of metal surfaces required to be painted, shall be minimum 3 coats work, in addition to the shop protection coats.

2.6 All paints shall be as manufactured locally and approved by the Engineer and shall be brought on to the site in sealed containers and used without any admixture or adulteration except where recommended in the Manufacturer's printed instructions.

2.7 Surfaces of stainless steel, aluminum, bronze, and machines surfaces adjacent to metal work being cleaned or painted shall be protected by effective masking or other suitable means, during the cleaning and painting operations.

**3.**

**PREPARATION  
&  
WORKMANSHIP**

3.1 Prior to start of any work the Contractor shall, as a part of his contract, carefully inspect all surfaces to be painted or finished and notify the Engineer in writing of any defective workmanship, materials, or any other conditions, which in his opinion, will affect the satisfactory execution and /or performance of his work. No work in this section shall be initiated until all such surfaces or conditions have been corrected. The absence of any such notification will be construed as an acceptance by the Contractor of all such surfaces and later claims of defects in these surfaces that may result in finished surfaces being unsatisfactory to the Engineer will not in any way relieve the Contractor from the responsibility and/or accountability under his guarantee. No work should to be done under the conditions that are unsuitable for the production of good results. nor at any time when the plastering is in progress or is drying, or not dry. Neither paint nor any other finish treatment is to be applied over

- wet or damp surfaces unless specifically required, nor shall succeeding coats be applied until the preceding coat is thoroughly dry.
- 3.2 Before proceeding with any painting or finishing thorough cleaning and removing of all dust from surfaces, which would affect either the satisfactory execution or permanency of the work is necessary.
- 3.3 All painting materials are to be applied, evenly spread and thoroughly brushed out only by skilled workers. All workmanship shall be executed in accordance with the best acceptable practices applying to the class of work and grade type and kinds of materials specified.
- 3.4 Plastered surfaces shall be primed before speckling. After application of primer coat, Contractor shall check all surfaces and do all necessary speckling of cracks, indentations and other imperfections in any approved manner.
- 3.5 Wood work that is to have a finish treatment, whether executed as field work or shop finished, shall be smooth and free from raised grain or other surface imperfections that affect its appearance and shall be lightly sanded or steel woolled during finishing operations. After filler has been applied, if required all nail holes or other similar blemishes shall be carefully stopped with linseed oil putty.
- 3.6 Shop coats provided by others, where required or necessary, shall have all bare spots touched-up by the Contractor, using same materials as used for shop coat, or other equivalent material, if approved by the Engineer.

**4.  
MATERIALS.**

- 4.1 All materials shall be stored and mixed only in spaces assigned for this purpose by the Engineer and all necessary precautions shall be taken to prevent fires by complying with all applicable local fire prevention and safety ordinances. The contractor shall provide galvanized iron pans of suitable size in which all mixing paints shall be placed and no mixing shall be permitted outside of these pans.
- 4.2 The basic materials entering into the compounding and/or manufacture of all paints, polishes and other treatments referenced herein shall be of the best grade and quality of their respective kinds for the intended purposes. These shall be the products or formula of recognized and reputable manufacturers of known reliability and integrity subject to the approval of the Engineer and shall conform to the applicable requirements of the British Standard Specifications or approved local standards regarding kind, quality and finish. Reference herein to specific paint materials is for the sole purposes of establishing a basis of "Minimum Standards" of quality and shall not be construed to be a limit of perfection or quality for any of the materials, ingredients to be furnished or utilized in this work. The Engineer reserves the right to select and / or accept only the best grades of standard products, which in his opinion, will provide a finish of recognized performance and characteristics suitable for their respective surfaces, irrespective of minimum standards reference herein.
- 4.3 All materials shall be delivered to premises in their original sealed containers or package bearing the manufacturer's name, label and brand, and be mixed and applied in accordance with manufacturer's directions and /or instructions. The mixing of all paint or other covering finish treatments shall be done in premises as and when, if required, under the supervision and direction of the Engineer.

5.  
**PAINTING TO  
METAL WORK.**

- 5.1 All metal work shall have, in addition to shop primer coats, minimum three (3) coats of enamel paint or as incorporated in the Bill of Quantities, in the manner as specified herein.
- 5.2 All exposed ornamental and miscellaneous iron and steel shall receive over the shop primer coat, minimum three (3) coats of enamel paints as specified herein or as incorporated in the Bill of Quantities.
- 5.3 Galvanized iron not previously shop coated shall receive minimum 4 coats, the first coat to be of an approved galvanized iron primer and minimum three finish coats of enamel paint or as incorporated in the Bill of Quantities.
- 5.4 Where shop coats and/or priming coats are found to be scratched or abraded they shall be touched up with appropriate paint

6.  
**OIL BOUND  
DISTEMPERING**

- 6.1 Distempers shall be of approved quality and make as directed by the Engineer.
- 6.2 Before work of distempering is commenced, the surface should be cleaned. The surface then must be sized with a priming coat of petrifying liquid of approved manufacture. Distemper shall be applied quickly and boldly with broad stiff brushes of approved make. The brush is to be dipped and stroked cross-wise into the walls and then immediately stroked up and down. This shall be considered to be one coat of distempering. The distemper shall be mixed in the manner specified by the manufacturer and each coat shall be inspected and passed by the Engineer before the next coat is applied.
- 6.3 The Contractor shall carry out as many coats as specified in the Schedule of Quantities in accordance with the above specifications. The number of coats specified are enough for producing the uniform smooth finish and if the finish produced by the Contractor is not upto the satisfaction of the Engineer, the Contractor will be required to apply more coats, as may be required to produce the specified finish without any additional charges.

7.  
**SURFACE  
PREPARATION  
AND FILLING.**

All plaster and masonry surfaces that are to be finished with vinyl emulsion, plastic emulsion or enamel paint shall be prepared as under prior to application of paint finish.

- 7.1 **NEW SURFACES:** Rub down the surfaces with a sand paper or carborandum stone to remove any loose material. Check that the surface is thoroughly dry before painting.
- 7.2 **OLD SURFACES:** For previously painted surfaces especially white - washed surfaces, scrape down to the bare surface and ensure that the surface is free from any contaminant like grease, oil, etc. and any loose material or dust is completely removed before painting.
- 7.3 **SEALING:** Apply 1 coat of Alkali Resisting Masonry Sealer and allow to dry overnight. Alkali Resisting Masonry Sealer may be thinned with 10-15% good quality mineral turpentine or white spirit if required due to surface absorption.

- 7.4 **FILLING:** Putty for filling the walls should be made by mixing 4 parts of good quality chalk and one part of Zinc Oxide Powder with Alkali resisting masonry sealer till a smooth knifing paste is formed. Putty should be applied after sealing the walls with Alkali Resisting Masonry Sealer, and after the filling work is completed and prior to application of the finish paint, the filled surfaces should be dry and properly finished. No filling should be carried out on external surfaces. Each coat of paint shall be allowed to become dry before any subsequent coat is applied. The finished surface shall be free from runs and sags, defective coverage and clogging of lines or angles. Edges of paint adjoining other materials or other colours shall be full and clean - cut without overlapping.

The Contractor shall carry out as many coats as are specified in accordance with the above specifications. The number of coats specified should be enough for producing uniform smooth finish and if the finish produced by the Contractor is not up to the requirement, he will be required to apply as many more coats as may be required to produce the required uniform finish, and no payment for the extra coats applied to produce the desired uniformity will be made.

**8.  
CEMENT BASED  
PAINTS.**

- 8.1 Cement based paint shall be obtained from approved manufacturers. It shall be obtained in sealed tins, which shall be opened in the presence of the Engineer. Only that much quantity of paint should be mixed which can be used in one hour.

Where required, different colours of cement based paints may have to be mixed together to provide the desired shade. The quantities of the various colours required to give the desired shade will be intimated by the Engineer. These shall be mixed in the manner specified by the manufacturer or as approved by the Engineer after which it must be sieved through 200 mesh sieve.

- 8.2 The surface should be free from dust, dirt, etc., loose material and dirt must be removed by brushing or if necessary by washing and grease, oil paint, varnishes, oil bound distempers, lime wash etc., shall be completely removed before application of the paint finish.

- 8.3 Paint Material must be mixed in two stages. First by adding a little quantity of water to form a paste and then further quantity of water to get a mix of liquid consistency. In the first stage one measure of water to two similar measures of paint must be thoroughly stirred and allowed to stand for 10 minutes. A further measure of water should then be added and thoroughly mixed. This mix must be applied within one hour of the mixing. The lid of the container must be tightly shut immediately after the material has been taken out from it. The surface over which the paint is to be applied shall be thoroughly saturated with water immediately before applying the first coat. The paint shall be applied with brushes of approved make and manufacture. The first coat of paint shall be well scrubbed into the surface by means of brushes and allowed to set for a period of 24 hours. After this, the second coat shall be brushed-in. After two coats have been applied, the surface should present a uniform smooth surface.

**9.  
LACUER  
POLISHING**

- 9.1 Clear polyurethane lacquer used on the work shall be of ICI /Berger or an approved make.
- 9.2 The surface to be lacquer polished should be sand papered and a staining compound should be applied if required.

When the stain coat dries up the surface should be rubbed down with sand paper. Approved polyurethane lacquer of a proprietary brand shall then be applied.

The surface shall then be wiped with a dry cloth and the process repeated several times in succession until the surface assumes the desired degree of gloss as approved by the Engineer.

**10.  
SAMPLES.**

Prior to the start of the application of any paint and /or finish treatment otherwise, the contractor shall apply samples of the required finish treatments to specific representative wall and ceiling surfaces or other areas or surfaces where indicated by the Engineer. The sizes of the sample paint and finishes shall be as determined by the Engineer.

**11.  
PROTECTION**

The Contractor shall protect all the work against damage or injury by his employees or by the materials, tools used in connection with the work of this contract. Any and all work damages as a result of the execution of this shall be repaired at Contractor's expense or if in the opinion of the Engineer it cannot be properly repaired, it shall be replaced with new work by the Contractor without additional compensation. At all times, the general and liberal use of drop cloths shall be a primary requirement for protection purposes.

**12.  
TOUCHING UP**

At the completion of all work specified herein, all painted work shall be touched up and restored where damaged or defected and the entire work left free from blemishes, to the complete satisfaction of the Engineer.

**13.  
CLEANING**

The Contractor shall clean all paint, spots, dubs, oil and stain from all floors, wood work, glass hardware, metal work, electrical fittings and all similar items, and leave the work in perfect condition, upon completion in every respect to the satisfaction of the Engineer.

**14.  
SCHEDULE OF  
MEASUREMENT OF  
PAINT AREA**

Irrespective of prime coats and number of paint coats applied to exposed painting surfaces, area of column, walls, projections, ceilings and other surfaces (except gates, doors, windows and ventilators) shall be measured as per actual paint surface area for single time only and paid in accordance with quoted rate of Bill of Quantities.

1.

**SCOPE OF WORK**

The work covered under this section of the Specifications consists of furnishing all labour, equipment, scaffoldings and providing glass, gaskets, sealants, compounds and accessories required for performing all operations in connections with the installation and setting of glass, glazing and glass blocks and butt jointed glazed partitions complete in every respect in accordance with the Drawings or as directed by the Engineer. The scope of this section of specifications is covered with detailed specifications as laid down herein.

2.

**GENERAL**

- 2.1 The glazier must examine the framing and glazing channel surfaces, backing, removable stop design, and the conditions under which the glazing is to be performed. Do not proceed with the glazing until unsatisfactory conditions have been corrected in a manner acceptable to the Glazier.
- 2.2 **Weather Conditions:** Do not proceed with installation of liquid sealants under adverse weather conditions, or when temperatures are below or above manufacturer's recommended limitations for installation.
- 2.3 The Contractor shall submit two samples of each type of glass required. These samples shall be of 300mm x 300mm size or as directed. He will also submit lengths of installed (mock-up) glazing materials together with samples of glazing sealants and glazing gaskets.
- 2.4 Contractor shall also submit printed materials manufacturer's installation instructions for specified glazing gaskets, compounds, sealants and accessories including description of required equipment, procedures and precautions to be observed.

3.

**DELIVERY, STORAGE  
AND HANDLING**

- 3.1 Contractor shall deliver materials in manufacturer's original, unopened containers clearly labeled with manufacturer's name and address, material, brand, type class and rating as applicable.
- 3.2 Contractor shall store the materials in original unopened containers, with labels intact, protected from ground contact and from other elements.
- 3.3 Contractor shall handle the materials in a manner to prevent breakage of glass and damage to surfaces, and shall exercise exceptional care to prevent edge damage to glass.

4.

**MATERIALS**

- 4.1 **Plain and Tinted Glass:** Glass shall be free from all blemishes, bubbles, distortions and other flaws of any kind and shall be properly cut to fit the rebates so as to have a uniform clearance round the panels between the edges of glass and the rebates. All glass shall be of best quality manufacture as approved by the Architect/Engineer. Glass shall be of plate or float type, in thickness and size as shown on the drawings or Bill of Quantities. All glass shall be of such quality that surface deterioration will not develop under normal conditions of use. Glass shall have parallel surfaces and without physical impurities.
- 4.2 **Glazing Sealants and Materials.**
  1. **General:** Provide colour of exposed sealant/compound indicated or if not otherwise indicated, as selected by Architect from manufacturer's standard colours. Comply with manufacturer's recommendations for selection or hardness, depending upon the locations of each application, conditions at

- the time of installation, and performance requirements as indicated. Select materials, and variations or modifications, carefully for compatibility with surfaces contacted in the installation.
2. **One or two part polysulfide glazing sealant:** Elastomeric polysulfide sealant specially compounded and tested to shown minimum of 20 years resistance to deterioration in normal glazing applications.
  3. **One part Silicone Rubber Glazing Sealant:** Elastomeric silicone sealant, non-sag. Provide acid type recommended by manufacturer where only non-porous are contacted; provide non-acid type recommended by manufacturer where one or more porous bond surfaces are contacted.
  4. **Molded Neoprene Glazing Gaskets:** Molded or extruded neoprene gaskets or the profile and hardness required.
  5. **Polyvinyl Chloride Glazing Gaskets:** Extruded, flexible PVC gaskets of the profile and hardness required.
  6. **Foam Glazing Tape:** Closed-cell, flexible, self-adhesive, non-extruding, polyvinyl chloride foam tape, recommended by manufacturer; comply with ASTM D 1667.
  7. **Setting Blocks:** Neoprene, 70-90 durometer hardness, with proven compatibility with sealants used.
  8. **Spacer:** Neoprene 40-50 durometer hardness, with proven compatibility with sealants used.
  9. **Compressible Filler Rod:** Closed cell or water-proof jacketed rod stock of synthetic rubber or plaster foam, proven to be compatible with sealants used, flexible and resilient, with compression strength for 25% deflection.
  10. **Cleaners, Primers and Sealers:** Type recommended by sealant or gasket manufacturer.
- 5.1 Glazing work shall comply with the recommendations of the glass and glazing materials manufacturers.
  - 5.2 Examine each piece of glass and discard and replace glass with edge damage or face imperfection.
  - 5.3 Clean glazing channels and other framing members indicated to receive glass. Remove coatings, which are not firmly bonded to the substrate, remove lacquer from metal surfaces wherever elastomeric sealants are to be used. Apply primer and sealer to joint surfaces wherever recommended by the sealer manufacturers.
  - 5.4 Trim and clean excess glazing materials from surrounding surfaces immediately after installation and eliminate stains and discolourations.
  - 5.5 Cure glazing sealants and compounds in compliance with manufacturer's instructions, to obtain high early bond strength internal cohesive strength and surface durability.
  - 5.6 No glazing shall be considered complete until and unless paint and other stains have been removed from the surface of the glass.

5.  
INSTALLATION  
OF GLAZING.



- 5.7 While glass operation is in progress, great care shall be taken to avoid breakage or damage to the glass and adjoining glazing. The Contractor shall make good, at his own cost, all glass broken by his workmen while cleaning or carrying out other operations. On the completion of the glazing work, all glass that has been set by the Contractor shall, if it becomes loose, within the maintenance period, be re-fixed at Contractor's expenses.
- 5.8 The glass panes shall be property cut to fit the rebates so as to have a uniform clearance of 2mm round the panes between the edges of glass and the frame. In the event that any pane is cut short so that the clearance exceeds the required dimension and renders the gaskets loose, the panes shall be replaced by the Contractor.
- 5.9 Glass in butt-jointed installation shall be plain or tinted and of sizes and thickness as indicated in the drawings or the Bill of Quantities. The specifications of glass shall be as mentioned above for plain or tinted glass. The glass shall be installed with a uniform spacing between the leaves equal to the thickness of glass but not greater than 10mm. after the glass is placed on location and approved by the Engineer, the space in between shall be completely filled by a clear or opaque sealant manufactured by Dow Coming or as approved. All edges shall be marked adequately prior to sealant application.
- 5.10 Glazing vinyl beads and gaskets shall be of suitable size and shape to fit tightly between the glass and the window/door section. The installation shall be carried out in a manner that the joints are confined to comers of glass panes, and no joint in beads and gaskets are visible on any side of the glass pane after completion of installation.

**6.  
PROTECTION  
& CLEANING  
OF GLAZING**

Remove all smears, labels and excess glazing sealant, leave clean inside and outside and free from scratches. The Contractor shall be responsible for the protection of installed glass. Before final acceptance, damaged or broken glass shall be removed and replaced with new glass at no additional expense to the Owner. All glazed surfaces shall be washed clean both inside and outside prior to final acceptance.

**7.  
MEASUREMENT  
AND PAYMENT**

- 7.1 **General:**  
No payment shall be made for the works involved within the scope of this section of specifications unless otherwise specifically stated in the Bill of Quantities.  
  
The cost thereof shall be deemed to be included in the quoted unit rate of the relevant items of the Bill of Quantities.
- 7.2 **Measurement:**  
Measurement of acceptably completed works will be made on the basis of net actual area in square metre/ square feet of glazing material provided and installed in position as shown on the drawing or as directed by the Engineer.
- 7.3 **Payment:**  
Payment will be made for acceptable measured quantity of glazing material on the basis unit rate quoted in the Bill of Quantities. The unit rate shall include the cost of glazing, wastage, sealants and compound for fixing the glass, all hardware fittings as per manufacturer's recommendations or as shown on the drawings. Payment shall constitute full compensation for all the works related to the item.

**1.  
SCOPE  
OF WORK.**

The work covered by this section of specifications consists of providing all labour equipment and materials including performance of all operations in connection with fixing and installation of all wood work and mill work construction, assembly and surface finish treatment and building in of all cabinet type items, complete in every respect and all related items support, etc., of wood or metal and incidentals, associated wood work appurtenances, the application of all Finish Hardware in connection with finished wood work, strictly in accordance with the requirements and drawings, as specified herein or as required by the Engineer and subject to the terms and conditions of the contract.

**2.  
GENERAL  
REQUIREMENTS**

- 2.1 All materials specified herein shall be the products of one mill as far as possible. Only first class cabinet type workmanship will be admissible in execution of this work, performed by artisans skilled in this trade, so as to provide cabinet work of the highest grade, quality, finishing, fixing and installation as per drawings.
- 2.2 Care shall be exercised to avoid strong contrasts in colour and graining of finished wood for all wood surfaces.
- 2.3 All cuttings, framing and fitting shall be done as required for accommodation of work of other trades. Use of wood chips, or other shrinkage material for leveling or plumbing will not be permitted in any form. Mortise and tennon joints shall be set in an approved type of glue with wedges and/or pinned. No wood work in the building shall be allowed until such time plastering is entirely dry. As far as practicable, all wood work shall be assembled in shop, painted and finished throughout before fixing /installation in the building.
- 2.4 In addition to machine sanding, all interior, trim, paneling and wood work shall be smoothed by hand, using ZERO No. sandpaper to give all wood work the required smooth surface for exposed finished treatment and free from machine and tool marks, abrasions, raised grains and other undesirable defects. All wood work shall be fitted to plaster or other finished work in a careful manner so as not to injure these surfaces in any way. Where plaster or other work is damaged or disturbed, it shall be made good and/or restored to its original conditions at the expense of the Contractor.
- 2.5 The whole of the timber shall be of good quality, properly seasoned, "free from large, loose or dead, knots, or tight knots, the diameter of which exceeds one quarter of the width of the exposed face, or one inch whichever is less, or injurious open shakes" and shall not contain sap wood and having a moisture content of not more than 15 percent, nor less than 12 percent of the dry weight at the time of fixing.
- 2.6 All work shall be accurately set out and properly framed together with close fitting mortise and tennon joints accurately cut and carefully fitted and wedged solid in the best and most substantial manner. The joinery work shall be started after the commencement of the construction of the building but not wedged up until required, for fixing in position within the building. No joinery shall be wedged or built into position until it has been accepted and approved by the Engineer.
- 2.7 Door frames built into the structure before the surrounding carcass is built shall be set plumb & true and shall be adequately braced and protected against damage during subsequent building operations.
- 2.8 All timber shall be of first class soft wood (deodar) except those specified in the Bill of Quantities and as shown on the drawings.

2.9 Plywood used for doors, paneling and other similar works shall be shown on the drawings or directed by the Engineer. The grade shall be first quality and the face and back shall be free from end joints, dead knots, overlaps, patches and other similar defects. The surfaces shall be free, smooth for painting or polishing. The veneer shall be of the required thickness and quality including base veneer and shall be impregnated with on approved adhesive and machine compressed. Such machine pressed veneered wood shall be fixed on all sides of the inner core wood (soft wood of approved quality) after it has been treated with water resistant hot setting glue.

**3.  
DOOR AND  
WINDOW FRAMES**

3.1 The door and windows frames shall be of the first class soft wood or hard wood as specified in the Bill of Quantities and description of works. These shall be fabricated to the exact sizes and dimensions as provided in the drawings. Where the door frames are not to have any sills, the vertical length shall be embedded in the floor. The Contractor shall also fully protect door and window frames from damage or injury during construction and shall replace the damaged or injured frames at his own cost. The frames must have primary coat painted on or before fixing. All framing members shall be properly mortised, tenoned and all joints properly wedged and glued and pinned. The door and window frames shall be secured in place by means of galvanized steel anchors bent up against the back of the jambs and screwed in place and built into the masonry as it is being constructed. There shall be one such anchor near the top and bottom of each jambs not over 90 cms intervals between the top and bottom anchors. Frames shall be secured to the anchors by means of two counter-sunk screws per anchor.

3.2 Wherever the drawings and Bill of Quantities require door and/or frame of metal, these shall be constructed of prime quality galvanized steel of 16 swg unless otherwise specified. The width and shape shall be as indicated on drawings. The frames shall be recessed at the point of location of hinges and shall have integral reinforcement to allow the butt hinges, pivot hinges, door closers and other finish hardware to be screwed on. The door frames shall also have a provision to allow recessed installation of door lock strike plate with a back up boxing to keep concrete away from the lock strike plate. The number and type of anchors shall be as per wooden frames. These anchors must not be welded onto the inner side of the exposed surface of the frames as indicated in the drawings. Under no circumstances must the Contractor manufacture the metal frames prior to approval of a sample by the Architect/Engineer. The protection of the metal frames from the plastered surface if shown on the drawings must be uniform throughout the project.

**4.  
FLUSH WOOD  
DOOR SHUTTERS.**

4.1 The door leaf has to be flushed type on both sides manufactured as approved. It shall be of well-seasoned solid core block board. Flush door shall be screwed to the frames by means of butt hinges. Hinges where provided shall be countersunk in the order for veneered leaves shall intimate the Engineer and also a sample of the leaf of the proposed manufacturer. Completed doors shall be sound, rigid and free from defects and warp. All edges shall be aligned and smooth. Joints shall be close fittings, hardwood doveled or mortised frames and of a strength to maintain the structural properties of the members connected. All adjoining faces and edges shall be flush and smooth. Edges shall be rectangular and solid. If a lipping is required on the edges of the flush door shutter, this shall be of the required size and shall be recessed and glued and nailed into the edge frame of the shutter.

**5.  
GLAZED DOORS  
AND WINDOWS.**

- 5.1 All doors and windows leaves shall be cut out and framed together as soon as possible after the commencement of the works and stacked in the shade for seasoning. These are not to be wedged and glued for four months where possible and where the contract time permits. If it is not possible, these should be wedged and glued just prior to being hung. Any or all portions, in which defects appear shall be replaced by the contractor before final gluing up the same. All tennons at the final assembly of the doors (top and bottom) shall be glued and wedged. Immediately after gluing, the frames shall be tightly clamped and so left till the glue has set. Unless otherwise specified, leaves are to be hung on hinges of the size and numbers required. The hinges shall be countersunk into the frames as well as in the leaf, the recesses being cut of the exact size and depth of the hinges. No subsequent packing shall be allowed.

**6.  
WOODEN  
HAND RAIL**

The wooden hand-rail shall be in accordance with the dimensions and shape shown in the drawings. It shall be fixed to the balustrades with counter screws at maximum 250mm centres or with bolts in an approved manner and the top neatly covered in with an appropriate wood stopper.

The wood shall be carefully selected and shall be free from all knots in addition to conforming to the specifications for wood work section.

**7.  
WOODEN  
CABINETS.**

All cabinets including fittings and fixtures shall be as approved and shall be of best quality.

- 7.1 The Contractor shall submit a finished sample of each type of cabinet including all fittings and fixtures and the same shall be got approved from the Engineer before fabrication. Samples of materials to be used in cabinets together with specifications and literature shall be supplied to the Engineer for his approval. The colour shade shall be as approved.
- 7.2 All cabinets shall be installed in position by the skilled workmen. The Contractor shall inspect delivered cabinets and related parts for indication of location, size required by field measurements, finishing hardware and similar preliminary works. Verify locations for installation, required floor and wall finishes, painting and all other related work. Unsatisfactory conditions shall be repaired. Concealed fasteners, all joints surfaces shall be smooth and even. Doors and other moving parts shall exactly fit in the frame. Refit, as necessary to ensure proper and easy operations. Refit, if necessary, all cabinet hardware, test for proper operation, remove for painting and other finishing and properly replace in position with all fittings and accessories. All work shall be thoroughly protected from damage at all times by suitable methods approved by the Engineer. Adjacent work shall similarly be protected from damage. Any damage or disfigurement shall be immediately made good at Contractor's expense.

**8.  
WOOD SKIRTING/  
DADO & PANELLING**

Wood skirting/dado and paneling shall be provided where shown on the drawings and the schedule of finishes. These shall be installed in position conforming to detailed drawings and as per direction of the Engineer. Shop drawings and sample shall be submitted to the Engineer for approval. In the event of

non-conformance to specifications and drawings, the work shall be rejected by the Engineer and the Contractor shall remove and replace the rejected work by new work as per specification.

Surfaces shall be prepared in the manner as directed by the Engineer for clear polish finish or as specified.

Hardware shall be of best quality and make, strong and fine finished according to the weight/dimension, material as per specified hardware schedule. The Contractor shall obtain prior approval from the Engineer for quality, shape, pattern and brand of all hardware materials by providing samples and catalogue etc. and shall provide and fix only the approved hardware materials.

Hardware shall be carefully and securely fitted. Upon handing over the work, hardware shall be demonstrated to operate freely. Keys shall be placed into respective locks and upon acceptance of the work keys shall be tagged and delivered to the Engineer.

**9.  
HARDWARE**

**10.  
MEASUREMENT  
AND PAYMENT**

- 10.1 Except otherwise specified herein or else where in the Contract Documents, no measurement and payment will be made for the under mentioned specified works related to the relevant items of the Bill of Quantities. The cost thereof shall be deemed to have been included in the quoted unit rate of the respective items of the Bill of Quantities.

All finished hardware/ fittings in carpentry and joinery works.

Glass and glazing including other materials and accessories required for installation and finishing.

Prime coat, painting and polish in carpentry and joinery -works.

Adhesives.

Fittings and fixtures for moveable panels.

- 10.2 Measurement of acceptably completed works of all units will be made on the basis of net actual area in square metre / square feet or length in metre /feet fabricated and installed in position as shown on the drawings or as directed by the Engineer.
- 10.3 Payment will be made for acceptable measured quantity of all units on the basis of unit rate quoted in the bill of quantities and shall constitute full compensation for all the works related to the item.

**GENERAL**

Work of this Section includes the supply and installation of Metal Tile, Mineral Fiber & Gypsum Board ceiling (plain or moisture proof) and accessories to areas indicated on the Drawings and Bill of Quantities. For any specified ceiling system, the complete system will be as per manufacturers specification.

**QUALIFICATIONS  
OF INSTALLERS**

- a) For installation of ceilings, use only thoroughly trained and experienced installers who are completely familiar with the requirements of this Work.
- b) In case of acceptance or rejection of installed materials, no allowance will be made for lack of skill on the part of workmen.

**SAMPLES**

Within 10 days after award of Contract, and before any material for this works is delivered to the Job Site, submit to the Engineer, in accordance with the provisions of these Specifications, Samples mock-ups of the proposed ceiling finish and accessories, etc.

**DELIVERY  
AND STORAGE**

- a) Deliver materials of this Section to the Job Site in their original unopened containers with labels intact and legible at time of use.
- b) Store materials under cover to prevent damage and contamination. Store only the specified materials at the Job Site.

**PROTECTION**

Protect materials of this Section before and during installation and protect installed work and materials of other trades.

**REPLACEMENTS**

In the event of damage, immediately make repairs and replacements to approval of Engineer, at no additional cost to Employer.

**1.  
ALUMINUM  
STRIP CEILING**

The ceiling system will consist of visible, primary grid of parallel channel sections with lay-in rectangular panels between grid members similar to DAMPA VANGEEL type LG-100 as per manufacturer's recommendations subject to the approval of the Architect / Project Manager.

The ceiling panel will be 0.7mm aluminum 300mm wide x 1800mm long perforated with 1.00mm dia holes at 2mm centers in diagonal patterns and 30mm plain border on both longitudinal sides. The longitudinal sides will be beveled making V-formed joints between units. All perforated panels will have factory applied black non-woven acoustic inlay bonded to the surface of the panels.

The ceiling panels and visible grids will be finished using polyester-based materials in RAL color 9010 or any other approved shade.

The panels shall be laid flush into 100mm wide visible linear grids comprising of parallel sections made of elector galvanized steel, fabricated in made to measure lengths providing a precision, close fitting butt joint between lengths. The suspension system shall include necessary couplings, brackets, connectors and edge trims etc. The grids will be installed with adjustable type rigid hangers.

**INSTALLER  
QUALIFICATIONS**

Workmen shall be skilled, well trained and experienced in their respective crafts and familiar with specified requirement and methods. In acceptance or rejection of installed materials, no allowance will be made for lack of skill on the part of workmen.

**TOLERANCES**

Suspension system components, hangers, fastening devices, supporting light fixtures, metal pan tiles and others shall be so installed that maximum deflection is not more than 1 /360th of the span. Allowable tolerance of finished ceiling system shall be level to within 37.50mm in 3600mm.

**2.  
GYPSUM BOARD,  
AS PER ASTM &  
BS STANDARDS**

Ceiling with concealed Metal Furring Channels; Suspended Ceiling Comprising of imported Rigid Gypsum plaster board size 2400mm x1200mm x 12mm thick or as specified in the drawings, firmly bonded on both sides with special linear/square/tapered edge suspended on galvanized steel furring channels, adjustable hangers and white painted edge trim excluding painting (paint shall be applied as per architect's recommendation) applied in strict compliance to the manufacturer's specifications, complete in all respect and conforming to the drawing and specifications or as directed by the Engineer.

Gypsum board plain or moisture proof of "Elephant Brand" shall be used, or approved equivalent. Contractor to submit sample of the same of 450x450mm with the hanging system, before execution of work.

**3.  
MINERAL FIBRE**

"Excel-Tone of Daiken Acoustical Ceiling System" or Thi-Tone of Celotex Acoustical Ceiling System with Imported, Exposed tee, or approved equal. Special quality of high sag resistively, reveal & beveled edge, warranty of 10 years from the manufacturer, with factory applied vinyl latex paint.

ITEM	THICKNESS mm		SPECIFICATION COMPLIANCE
	12	15	
Noise Reduction Coefficient	Min. 0.5		ISO 354
Flexural Strength K f	Min. 12	Min. 15	KSF 2263
Density (Kg/ml)	Max. 400		JIS A 6307
Thermal Conductivity Kcal/mh°C	Max. 0.055		KSF 2264
Surface Burning Characteristics	Flame Spread: Max. 25 Smoke Development: Max. 50		ASTM E-84



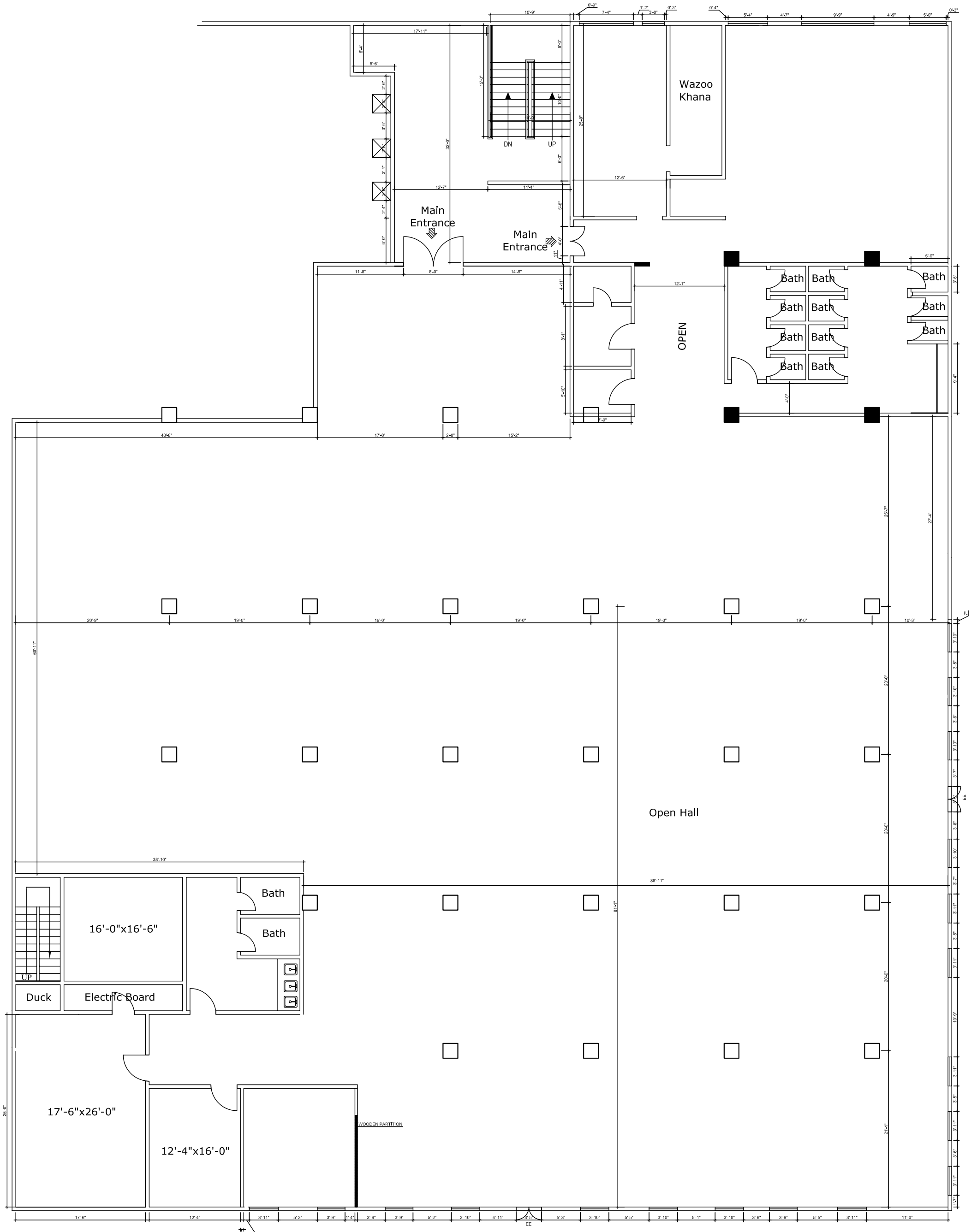
**OFFICE INTERIOR  
ENERGY DEPARTMENT GOVERNMENT OF SINDH**

3<sup>rd</sup> FLOOR, STATE LIFE BUILDING NO. 3, DR. ZIAUDDIN AHMED ROAD, KARACHI

**STAFF STRENGTH DISTRIBUTION  
&  
EXISTING DRAWING**







EXISTING LAYOUT PLAN (THIRD FLOOR)  
 OFFICE INTERIOR FOR ENERGY DEPARTMENT  
 GOVERNMENT OF SIND