

**SINDH MASS TRANSIT CELL**  
**GOVERNMENT OF SINDH**  
**TENDER DOCUMENTS**



**SINGLE STAGE – ONE ENVELOPE SYSTEM**

**BASED ON SPPRA RULE 2010**

**UP-GRADATION/ INSTALLATION OF TRAFFIC  
SIGNALS IN KARACHI, LARKANA, SUKKHUR,  
MIRPURKHAS**

No.  
ISSUE TO

DATED: \_\_\_\_\_

P.O. NO: \_\_\_\_\_

DATED: \_\_\_\_\_

Signature of Issuing Authority

# INVITATION FOR BIDS

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## NOTICE INVITING TNDERS

Date: \_\_\_\_\_  
Federal/Provincial/Local Government Funds/ Loans / Grant No: \_\_\_\_\_  
Bid Reference No: \_\_\_\_\_

1. The “SINDH MASS TRANSIT CELL – TRANSPORT & MASS TRANSIT DEPARTMENT” (the “**Procuring Agency**”) has received / applied for loan/grant/funds from the GOVERNMENT OF SINDH towards the cost of ADP SCHEME 2246 and it is intended that part of the proceeds of the loan/grant/funds will be applied to eligible payments under the contract for the “UPGRADATION OF TRAFFIC SIGNALS IN KARACHI, LARKANA, SUKKHUR, MIRPURKHAS”. Bidding is opened to all interested/pre-qualified bidders.
2. Procuring agency invites sealed bids from interested / pre-qualified firms or persons licensed by the Pakistan Engineering Council (PEC) in the category EE06, EE07 & CE10 or above for the works and in discipline GENERAL CIVIL ENGINEERING WORKS, HIGH VOLTAGE INSTALLTION & SPECIALIZED LIGHTNING SYSTEM and registered with relevant tax authorities.
3. Bidders may obtain information by acquiring the bidding documents (BD) from the Office of the procuring agency, from 25th August 2017 to 08<sup>th</sup> September 2017 from “F 34/1, Block 7, Near Teen Talwar Clifton, Karachi”.
4. A complete set of BD may be purchased by an interested bidder on submission of a written application to the above office and upon payment of a non-refundable fee of Rs.4000/=, which can be paid Via pay order in favour of Sindh Mass Transit Cell, Transport and Mass Transit department Government of Sindh.
5. All bids must be accompanied by a bid security in the amount of 2% of the Bid Price and must be delivered to “F 34/1, Block 7, Near Teen Talwar Clifton, Karachi” at or before 15:00 hours, on 11<sup>th</sup> September 2017. Bids will be opened at 16:00 hours on the same day, in the presence of bidder’s representatives who choose to attend at the same address.
6. Procuring agency reserves right to annul the bidding process and reject all bids or proposals, as per SPP Rules 2010.



# **INSTRUCTIONS TO BIDDERS**

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## INSTRUCTIONS TO BIDDERS

(Note: These Instructions to Bidders along with bidding data will not be part of the Contract and will cease to have effect once the contract is signed.)

### 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

- 2.1 Procuring agency has received/allocated/] applied for loan/grant/ Federal/ Provincial/Local Government funds from the source(s) indicated in the bidding data in various currencies towards the cost of the project /scheme specified in the bidding data, and it is intended that part of the proceeds of this loan/grant/funds 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 / prequalified 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.

Firms and individuals, national or international, may be allowed to bid for any project where international competitive bidding is feasible. Any conditions for participation shall be limited to those that are essential to ensure the bidder's capability to fulfill the contract in question.

- (a) Bidders may be excluded if;
  - (i) as a matter of law or official regulations, commercial relations are prohibited with the bidder's country by the federal Government in case of ICB, or
  - (ii) a firm is blacklisted/ debarred by the procuring agency and the matter has been reported to the Authority, subject to Rule 30 of Sindh Public Procurement Rules 2010.



- (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.

Provided that where government-owned universities or research centers in the country are of a unique and exceptional nature, and their participation is critical to project implementation, they may be allowed to participate; and

Bidders shall include all those contractors who are registered or incorporated in Pakistan, irrespective of the nationality of their owners and professional staff, or

- (c) Bidders are:-
  - (i) pre-qualified with procuring agency for particular project/scheme;
  - (ii) registered with Pakistan Engineering Council in particular category and discipline,
  - (iii) 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 (other than alternatives pursuant to Clause IB.16) will be disqualified.

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

- 5.1 The bidders shall bear all costs associated with the preparation and submission of their respective bids, and the 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 (SSP RULE 21)**

7.1 The bidding documents, in addition to invitation for bids, are those stated below and should be read in conjunction with any addenda issued in accordance with Clause IB.9.

- 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 (Appendix-D to Bid).
- 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.

7.2 The bidders are expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the bidder's own risk. Pursuant to Clause IB.26, bids which are not substantially responsive to the requirements of the BD will be rejected.

### **IB.8 Clarification of Bidding Documents (SSP RULE 23(1)):**

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:**

9.1 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.

9.2 Any addendum thus issued shall be part of the bidding documents pursuant to sub-clause IB 7.1 hereof and shall be communicated in writing to all bidders. Interested bidders shall acknowledge receipt of each addendum in writing to the procuring agency.

9.3 To afford bidders reasonable time in which to take an addendum into account in





Preparing their bids, the procuring agency may extend the deadline for submission of bids in accordance with IB.20

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

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

- 10.1 The bid and all correspondence and documents related to the bid exchanged by a bidder and the procuring agency shall be in the language stipulated in the bidding data and Special Conditions of the Contract. Supporting documents and printed literature furnished by the bidders may be in any other language provided the same are accompanied by an accurate translation of the relevant parts in the bid language, in which case, for purposes of evaluation of the bid, the translation in bid language shall prevail.

#### **IB.11 Documents Accompanying the Bid**

- 11.1 Each bidder shall:

- (a) submit a written authorization on the letterhead of the bidding firm, authorizing the signatory of the bid to act for and on behalf of the bidder;
- (b) update the information indicated and listed in the bidding data and previously submitted with the application for prequalification, and continue to meet the minimum criteria set out in the prequalification documents, which as a minimum, would include the following :
  - (i) Evidence of access to financial resources along with average annual construction turnover;
  - (ii) Financial predictions for the current year and the following two years, including the effect of known commitments;
  - (iii) Work commitments since prequalification;
  - (iv) Current litigation information; and
  - (v) Availability of critical equipment.

And

- (c) furnish a technical proposal taking into account the various Appendices to Bid specially the following:

Appendix-E to Bid	Proposed Construction Schedule
Appendix-F to Bid	Method of Performing the Work
Appendix-G to Bid	List of Major Equipment
Appendix-K to Bid	Organization Chart for Supervisory Staff

and other pertinent information such as mobilization programme etc;

- 11.2 Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements:

- (a) one of the joint venture partners shall be nominated as being in charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the joint venture partners;



- (b) the bid, and in case of a successful bid, the Form of Contract Agreement shall be signed by the authorized partner so as to be legally binding on all partners;
  - (c) the partner-in-charge shall always be duly authorized to deal with the procuring agency regarding all matters related with and/or incidental to the execution of works as per the terms and Conditions of Contract and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the joint venture;
  - (d) all partners of the joint venture shall at all times and under all circumstances be liable jointly and severally for the execution of the contract in accordance with the contract terms and a statement to this effect shall be included in the authorization mentioned under Sub-Para (a) above as well as in the Form of Bid and in the Form of Contract Agreement (in case of a successful bid);
  - (e) a copy of the agreement entered into by the joint venture partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the contract and can give valid receipts on behalf of the joint venture, the proportionate participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. No amendments / modifications whatsoever in the joint venture agreement shall be agreed to between the joint venture partners without prior written consent of the procuring agency;
  - (f) Submission of an alternative Letter of Intent to execute a Joint Venture Agreement shall be mandatory.
- 11.3 Bidders shall also submit proposals of work methods and schedule, in sufficient detail to demonstrate the adequacy of the bidders' proposals to meet the technical specifications and the completion time referred to sub- clause IB 1.2 hereof.

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

- 12.1 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.
- 12.2 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.
- 12.3 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 as per Sub-Clause 13.7 of the General Conditions of Contract Part-I.

- 12.4 The rates and prices quoted by the bidders are subject to adjustment during the performance of the contract in accordance with the provisions of Clause 13.7 of GCC. 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.13 Currencies of Bid and Payment**

- 13.1 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 (referred to as the "Foreign Currency Requirements") shall indicate the same in Appendix-B to Bid. The proportion of the bid price (excluding Provisional Sums) needed by him for the payment of such Foreign Currency Requirements either (i) entirely in the currency of the bidder's home country or, (ii) at the bidder's option, entirely in Pak rupees provided always that a bidder expecting to incur expenditures in a currency or currencies other than those stated in (i) and (ii) above for a portion of the foreign currency requirements, and wishing to be paid accordingly, shall indicate the respective portions in the bid.
- 13.2 The rates of exchange to be used by the bidder for currency conversion shall be the selling rates published and authorized by the State Bank of Pakistan prevailing on the date, 07 (seven) days prior to the deadline for submission of bids. For the purpose of payments, the exchange rates used in bid preparation shall apply for the duration of the contract.

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

- 14.1 Bids shall remain valid for the period stipulated in the bidding data from the date of opening of bid specified in clause IB.23.
- 14.2 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 with Clause IB.15 in all respects.

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



- 15.1 Each bidder shall furnish, as part of the bid, a bid security in the amount stipulated in the bidding data in Pak Rupees or an equivalent amount in a freely convertible currency.
- 15.2 The bid security shall be at the option of the bidder, in the form of deposit at call, Pay order or a bank guarantee issued by a Scheduled Bank in Pakistan or from a foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan in favour of the procuring agency, which should commensurate with the bid validity period. The bank guarantee for bid security shall be acceptable in the manner as provided at Annexure BS-1
- 15.3 Any bid not accompanied by an acceptable bid security shall be rejected by the procuring agency as non-responsive.
- 15.4 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.
- 15.5 The bid security of the successful bidder shall be returned when the bidder has furnished the required Performance Security and signed the Contract Agreement.
- 15.6 The bid security may be forfeited:
- (a) if the bidder withdraws his bid except as provided in sub- clause IB 22.1;
  - (b) if the bidder does not accept the correction of his bid price pursuant to sub-clause IB 27.2 hereof; or
  - (c) In the case of successful bidder, if he fails within the specified time limit to:
    - (i) furnish the required Performance Security; or
    - (ii) sign the Contract Agreement.

#### **IB.16 Alternate Proposals/Bids**

- 16.1 Each bidder shall submit only one bid either by himself, or as a member of a joint venture, until and unless they have been requested or permitted for alternative bid, then he has to purchase separate bidding documents and alternate bid shall be treated as separate bid.
- 16.2 Alternate proposals are allowed only for procurement of works where technical complexity is involved and more than one designs or technical solutions are being offered. Two stage two envelope bidding procedure will be appropriate when alternate proposal is required.
- 16.3 Alternate bid(s) shall contain (a) relevant design calculations; (b) technical specifications; (c) proposed construction methodology; and (d) any other relevant details / conditions, provided that the total sum entered on the Form of Bid shall be that which represents complete compliance with the bidding documents.

#### **IB.17 Pre-Bid Meeting**





- 17.1 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.
- 17.2 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.
- 17.3 Minutes of the pre-bid meeting, including the text of the questions raised and the replies given, will be transmitted without delay to all bidders. Any modification of the bidding documents listed in sub- clause IB 7.1 hereof, 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 to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a bidder.

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

- 18.1 Bidders are particularly directed that the amount entered on the Form of Bid shall be for performing the contract strictly in accordance with the bidding documents.
- 18.2 All appendices to bid are to be properly completed and signed.
- 18.3 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.
- 18.4 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.
- 18.5 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 to sub- clause IB 11.1(a) hereof. All pages of the bid shall be initialed and stamped by the person(s) signing the bid.
- 18.6 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.
- 18.7 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.
- 18.8 Bidders should retain a copy of the bidding documents as their file copy.

#### **D. SUBMISSION OF BIDS**



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

19.1 Each bidder shall submit his bid as under:

- (a) ORIGINAL and COPIES of the bid shall be separately sealed and put in separate envelopes and marked as such.
- (b) The envelopes containing the ORIGINAL and COPIES shall be put in one sealed envelope and addressed as given in sub – clause IB 19.2 hereof.

19.2 The inner and outer envelopes shall:

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

19.3 In addition to the identification required in sub- clause IB 19.2 hereof, the inner envelope shall indicate the name and postal address of the bidder to enable the bid to be returned unopened in case it is declared “late” pursuant to Clause IB.21

19.4 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.20 Deadline for Submission of Bids**

20.1 (a) Bids must be received by the procuring agency at the address specified not later than the time and date stipulated in the bidding data,

- (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of bids. No claims shall be entertained for refund of such expenses,

- (c) Where delivery of a bid is by mail and the bidder wishes to receive an acknowledgment of receipt of such bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed bid package,

- (d) Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by messenger.

20.2 The Procuring Agency may, at its discretion, extend the deadline for submission of bids by issuing an amendment in accordance with IB 09. In such case, all rights and





obligations of the procuring agency and the bidders shall remain the same as mentioned in the original deadline.

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

- (a) any bid received by the procuring agency after the deadline for submission of bids prescribed in to clause IB 20 shall be returned unopened to such bidder.
- (b) delays in the mail, person in transit, or delivery of a bid to the wrong office shall not be accepted as an excuse for failure to deliver a bid at the proper place and time. It shall be the bidder's responsibility to submit the bid in time.

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

- 22.1 Any bidder may modify, substitute or withdraw his bid after bid submission provided that the modification, substitution or written notice of withdrawal is received by the procuring agency prior to the deadline for submission of bids.
- 22.2 The modification, substitution, or notice for withdrawal of any bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 22.3 No bid may be modified by a bidder after the deadline for submission of bids except in accordance with to sub - clauses IB 22.1 and IB 27.2.
- 22.4 Withdrawal of a bid during the interval between the deadlines for submission of bids and the expiration of the period of bid validity specified in the Form of Bid may result in forfeiture of the bid security in pursuance to clause IB 15.

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

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

- 23.1 Procuring agency will open the bids, including withdrawals, substitution and modifications made pursuant to Clause IB.22, in the presence of bidders' representatives who choose to attend, at the time, date and location stipulated in the bidding data. The bidders or their representatives who are in attendance shall sign an attendance sheet.
- 23.2 Envelopes marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to clause IB.22 shall not be opened.
- 23.3 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.



- 23.4 Procuring Agency shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with the sub-clause IB.23.3.

**IB.24 Process to be Confidential. (SPP Rule 53)**

- 24.1 Information relating to the examination, clarification, evaluation and comparison of bid and recommendations for the award of a contract shall not be disclosed to bidders or any other person not officially concerned with such process 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.25 Clarification of Bid (SPP Rule 43)**

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

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

- 26.1 Prior to the detailed evaluation of bids, the 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.
- 26.2 Once found to be fulfilling the eligibility criteria, as mentioned in sub- clause 26.1, 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 may be carried out in accordance with single stage-single one envelope, single stage-two envelopes, two stage or two stage-two envelopes bidding procedures, depending on the selection procedure adopted by the procuring agency.
- 26.3 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.

- 26.4 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.

- 26.5 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.27 Correction of Errors before Financial Evaluation**

- 27.1 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.

27.2 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 in accordance with sub- clause IB 15.6(b) hereof.

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

28.1 The procuring agency will evaluate and compare only the Bids determined to be substantially responsive in accordance with clause IB 26.

28.2 In evaluating the Bids, the 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 to clause IB 27;
- (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.

28.3 The estimated effect of the price adjustment provisions of the conditions of contract, applied over the period of execution of the contract, shall not be taken into account in bid evaluation.

28.4 If the bid of the successful bidder is seriously unbalanced in relation to the 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 in clause IB.32 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.

28.5 Bidders may be excluded if involved in **"Corrupt and Fraudulent Practices"** means either one or any combination of the practices given below SPP Rule2(q);

- (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.

## 28.6 Evaluation Report (SPP Rule 45)

After the completion of evaluation process, as described in clauses IB 27 and IB 28, the procuring agency shall announce the results of bid evaluation in the form of report (available on the website of the authority) giving reasons for acceptance and rejection of bid. The report shall be hoisted on website of the authority and that of procuring agencies if its website exists and intimated to all bidders at least seven (7) days prior to the award of contract.

## F. AWARD OF CONTRACT

### IB.29 Award (SPP Rule 49)

29.1 Subject to clauses IB 30 and IB 34 and 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 with the provisions of clause IB 03 and qualify pursuant to sub-clause IB 29.2.

29.2 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.30 Procuring Agency's Right to reject all Bids or Annul/Cancellation the Bidding Process (SPP Rule 25)**

Notwithstanding clause IB 29 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.31. Notification/Publication of the Award of Contract (SPP Rule 25).**

- 31.1 Prior to expiry of the period of bid validity, including extension, prescribed by the procuring agency, the procuring agency shall notify the successful bidder in writing ("Letter of Acceptance") that his bid has been accepted. This letter shall mention the sum which the procuring agency will pay to the contractor in consideration of the execution and completion of the works by the contractor as prescribed by the contract (hereinafter and in the conditions of contract called the "Contract Price").
- 31.2 No negotiation with the bidder having evaluated as lowest responsive or any other bidder shall be permitted, however, procuring agency may hold meetings to clarify any item in the bid evaluation report.
- 31.3 The notification of award and its acceptance by the bidder will constitute the formation of the contract, binding the procuring agency and the bidder till signing of the formal Contract Agreement.
- 31.4 Upon furnishing by the successful bidder of a Performance Security and signing of the contract, the procuring agency will promptly notify the name of the successful bidder to all bidders and return their bid securities accordingly.
- 31.5 Within seven days of the award of contract, procuring agency shall publish on the website of the Authority and on its own website, if such a website exists, the results of the bidding process, identify the bid through procurement identifying numbers, and the following information:
- (1) Evaluation Report;
  - (2) Form of Contract and letter of Award;
  - (3) Bill of Quantities or Schedule of Requirement.

**31.6 Debriefing (SPP Rule 51).**

- (a) A bidder may ask the procuring agency for reasons for non acceptance of his bid and may request for a debriefing meeting and procuring agency shall give him the reasons for such non acceptance, either in writing or by holding a debriefing meeting with such a bidder.



- (b) The requesting bidder shall bear all the costs of attending such a debriefing.

#### **IB.32 Performance Security (SPP Rule 39)**

- 32.1 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.
- 32.2 Failure of the successful bidder to comply with the requirements of Sub-clause IB.32.1 or clauses IB 33 or IB 35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.
- 32.3 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.33 Signing of Contract Agreement (SPP Rule 39)**

- 33.1 Within 14 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.
- 33.2 The formal Agreement between the procuring agency and the successful bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful bidder from the procuring agency.
- 33.3 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 documents.

#### **33.4 Stamp Duty.**

The formal Agreement between the Procuring Agency and the successful bidder shall be duly stamped at rate of ----% of bid price (updated from time to time) stated in Letter of Acceptance.

#### **IB.34 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.35 Integrity Pact (SPP Rule 89)**



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

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

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

**IB.37 Arbitration (SPP Rule 34)**

Any dispute that is not amicably 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.



## **BIDDING DATA**





## NOTES ON BIDDING DATA

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

The procuring agency should provide in the bidding data information and requirements specific to the circumstances of the procuring agency, the processing of the bid, the applicable rules regarding bid price and currency, and the bid evaluation criteria that will apply to the bids. In preparing this section, the following aspects should be checked:

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



## 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.

### Instructions to Bidders

#### Clause Reference

1.1 Name and address of the **Procuring Agency (PA)**: SINDH MASS TRANSIT CELL – TRANSPORT & MASS TRANSIT DEPARTMENT [F34-1, BLOCK 7, NEAR TEEN TALWAR CLIFTON, KARACHI, TEL: 021-35865392]

1.2 Name of the Project and Summary of the works:

“UPGRADATION / INSTALLATION OF TRAFFIC SIGNALS IN KARACHI, LARKANA, SUKKHUR, MIRPURKHAS”.

2.1 Source of Financing

Annual Development Plan Scheme

3.1 Eligible Bidders:

Following are the mandatory requirements to be fulfilled and evidence duly submitted in a separate sealed envelope in order to proceed with the bidding process. The bids will be declared Non-Responsive if any of the following requirements are not met / evidences not submitted.

- Valid PEC in C-4 category along with special category for signalization work EE-06, EE-07 & CE-10 or above
- Electrical License of the firm issued from Government of Sindh.
- Valid NTN Certificate.
- Valid Professional TAX Certificate.
- Minimum last eight years experience in SCOOT based system controllers, Authorization Certificate.
- Registration with Sindh Board of Revenue.

8.1 Time limit for clarification:

Bidders may write to the PA for the clarifications required by 28th August 17.

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

The mandatory requirements as mentioned in 3.1 needs to be submitted in a separate sealed envelope along with the complete bidding documents. Failure to submit any of such requirements shall result in a Non Responsive Bid and will be returned to the bidder.

14.1 Period of Bid Validity:

The Bid Validity period will be 90 days from the date of opening of Bids.

15.1 Amount of Bid Security: 2% of the Bid Price

18.4 Number of copies of the bid to be completed and returned: 1 Original and 2 Copies

19.2 (a) Procuring Agency's address for the purpose of bid submission:

F 34/1, BLOCK 7, NEAR TEEN TALWAR, CLIFTON, KARACHI

20.1 (a) Deadline for submission of bids: 11<sup>th</sup> September 2017, 15:00 hours

(b) Venue, time, and date of bid opening: F 34/1, BLOCK 7, NEAR TEEN TALWAR, CLIFTON, KARACHI, 16:00 hours, 11<sup>th</sup> September 2017.

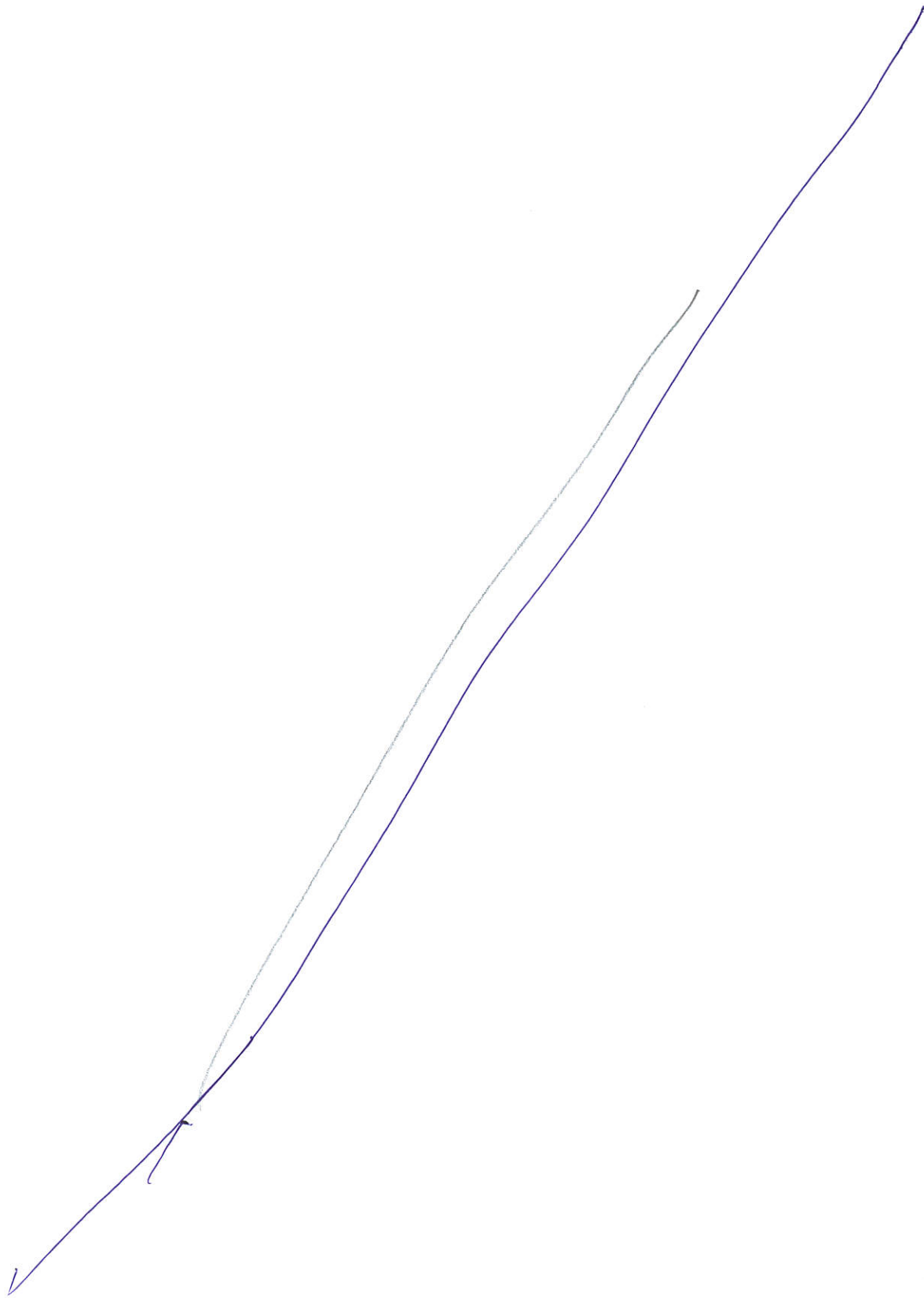
32.1 Standard form and amount of Performance Security acceptable to the procuring agency: Performance Security will be 5% of the Contract Price in the form of Bank Guarantee.

33.4 Stamp duty

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







*[Handwritten signature]*

**FORM OF BID  
AND  
APPENDICES TO BID**

A handwritten signature in blue ink, located in the bottom right corner of the page. The signature is stylized and appears to be a name, possibly "J. Smith" or similar, written in a cursive or semi-cursive style.

## FORM OF BID

Bid Reference No. \_\_\_\_\_  
(Name of Contract/Work)

To:

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

1. Having examined the bidding documents including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications, Drawings and Bill of Quantities and Addenda Nos. \_\_\_\_\_ for the execution of the above-named work, we/I, the undersigned, offer to execute and complete the work and remedy any defects therein in conformity with the Conditions of Contract, Specifications, Drawings, Bill of Quantities and Addenda for the sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) or such other sum as may be ascertained in accordance with the said conditions.
2. We/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 in the amount of Rupees \_\_\_\_\_ (Rs. \_\_\_\_\_) drawn in your favour or made payable to procuring agency and valid for a period of \_\_\_\_\_ days beginning from the date, bid is opened.
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.

9. We undertake, if our/my bid is accepted, to execute the Performance Security referred to in Clause 10 of Conditions of Contract for the due performance of the Contract.

10. 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.  
(Please delete this in case of Bid form a single bidder)

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: \_\_\_\_\_



**SPECIAL STIPULATIONS**  
**Conditions of Contract**

1.	Amount of Performance Security	10.1	5% of contract price shall be paid by the contractor.
3.	Minimum amount of Third Party Insurance	23.2	3 % of contract price per occurrence
4.	Time for Commencement	41.1	Within 14 days from the date receipt of engineer's Notice to Commence
5.	Time for Completion (works)	43.1	270 calendar days (09 months) from the date of receipt of engineer notice to commence
6.	Amount of Liquidated Damages	47.1	0.10 % of contract price for each day of delay in completion of the works subject to a maximum of 10 % of contract price, stated in the Letter of Acceptance
7.	Defects Liability Period	49.1	365 calendar days (01 year) from the effective date of taking over certificate
8.	Percentage of Retention Money	60.2	5 % of the amount in Interim Payment Certificate
10	Minimum amount Interim/Running Payment	60.2	3 % of Contract Price
11	Mobilization Advance.	60.11	10 % of Contract Price stated in the Letter of Acceptance



**FOREIGN CURRENCY REQUIREMENTS**

1. The bidder may indicate herein below his requirements of foreign currency (if any), with reference to various inputs to the works.
2. Foreign Currency Requirement as percentage of the bid price excluding Provisional Sums \_\_\_\_\_%.
3. Table of Exchange Rates

Unit of Currency	Equivalent in Pak. Rupees
Australian Dollar	-----
Euro	-----
Japanese Yen	-----
U.K. Pound	-----
U.S. Dollars	-----
-----	-----
-----	-----





## BILL OF QUANTITIES

### A. Preamble

1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices entered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix as per the Contract ( in case of item not mentioned in Bill of Quantities).
3. The rates and prices entered in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the contract include all costs of contractor's plant, labour, supervision, materials, execution, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the contract. Furthermore all duties, taxes and other levies payable by the contractor under the contract, or for any other cause, as on the date 14 days prior to deadline for submission of Bids in case of ICB/NCB respectively, shall be included in the rates and prices and the total bid price submitted by the bidder.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities and shall not be paid separately.
5. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the works.
6. General directions and description of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the bidding documents shall be made before entering prices against each item in the priced Bill of Quantities.
7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with sub-clause 13.5 of Part I, General Conditions of Contract.



### Summary of Bill of Quantity

Tenderers shall price the Bills of Quantities in Pak Rupees only.

S. No.	Description	Amount
01	BOQ for upgradation of 19 signals (Karachi) including Tidal Flow System at I.I. Chundrigar Road.	
02	BOQ for New Traffic Signals to be installed at Karachi, Sukkar, Larkana and Mirpur Khas	
03	BOQ for Civil works for Installation of New Signals at Karachi, Larkana, Sukkar and Mirpur Khas.	

Total Bid Amount

---

Name of Firm

Signature and stamp of bidder



**BOQ FOR NEW TRAFFIC SIGNALS INSTALLED AT**  
**KARACHI,LARKANA,SUKKUR AND MIRPURKHAS**

ITEM NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	PROVIDING FIXING & COMMISSIONING OF MCE 0141 MICROPROCESSOR BASED TRM 200 SERIES OR EQUIVALENT TRAFFIC SIGNAL CONTROLLER WITH 16 PHASE SWITCHES FITTED CUSTOMIZED INCLUDING CONTROLLER CASE, CONTROLLER PLINTH.	17	NOS		
2	INSTALLATION OF T-400 OR ST-800 CONTROLLER 16 OR 8 PHASE INCLUDING COMMISSIONING & TESTING WITH RE-BLOWING OF EPROM.	11	NOS		
3	PROVIDING & FIXING OF SIEMENS TURKISH/ SWARCO 3 OR EQUIVALENT WAY TRAFFIC LIGHT ASPECT ASSEMBLY (RED + AMBER + GREEN) 200 MM DIAMETER AND HOOD COMPLETE HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING LED IN ACCORDANCE WITH SPECIFICATION GIVEN.	245	NOS		
4	PROVIDING & FIXING OF SIEMENS TURKISH/ SWARCO 3 OR EQUIVALENT WAY TRAFFIC LIGHT ASPECT ASSEMBLY (RED + AMBER + GREEN) 300 MM DIAMETER AND HOOD COMPLETE. HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING LED IN ACCORDANCE WITH SPECIFICATION GIVEN. PROVIDING FIXING	95	NOS		
5	PROVIDING & FIXING OF SIEMENS TURKISH/ SWARCO OR EQUIVALENT IMPORTED 2 WAY TRAFFIC LIGHT ASPECT ASSEMBLY (RED + GREEN) 200 MM DIAMETER AND HOOD COMPLETE. HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING LED IN ACCORDANCE WITH SPECIFICATION GIVEN. PROVIDING FIXING	148	NOS		
6	PROVIDING & FIXING OF SIEMENS TURKISH/ SWARCO OR EQUIVALENT IMPORTED 1 WAY TRAFFIC LIGHT ASPECT ASSEMBLY (RED + GREEN) 200 MM DIAMETER AND HOOD COMPLETE. HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING DUAL COLOUR (RED & GREEN) IN ACCORDANCE WITH SPECIFICATION GIVEN. PROVIDING FIXING	64	NOS		
7	INSTALLATION OF STANDARD POLE 12 FT ASSEMBLY WITH ALL NECESSARY FITTING POLE CAP ETC. COMPLETE INCLUDING PAINTING TWO COATS WITH SYNTHETIC ENAMEL PAINT AS PER DRAWING.	72	NOS		
8	INSTALLATION OF MAST ARM POLE ASSEMBLY WITH ALL NECESSARY FITTING , POLE CAP ETC. COMPLETE INCLUDING PAINTING TWO COATS WITH SYNTHETIC ENAMEL PAINT AS PER DRAWING.PROVIDING FIXING	35	NOS		
9	PROVIDING & FIXING OF STANDARD POLE 12 FT ASSEMBLY WITH ALL NECESSARY FITTING POLE CAP ETC. COMPLETE INCLUDING PAINTING TWO COATS WITH SYNTHETIC ENAMEL PAINT AS PER DRAWING.	98	NOS		
10	PROVIDING & FIXING CANTILEVER POLE ASSEMBLY WITH ALL NECESSARY FIYYING,POLE CAP ETC,COMPLETE INCLUDING PAINTING TWO COATS WITH SYNTHETIC ENAMEL PAINT AS PER DRAWING.	60	NOS		
11	PROVIDING ELECTRICAL CABLE (12 CORE 1.5 MM SQ. SOLID "CU" CONDUCTOR, PVC INSULATED, PVC BEDDED / PVC SHEATHED) INCLUDING LYING IN DUCT STRIP BACK TERMINATE AND LABEL ALL CORES INCLUDING TESTING COMMISSIONING CHARGES.	5600	METER		



12	PROVIDING & FIXING OF INCOMING KESC POWER SUPPLY METALLIC SWITCHBOARD OF SUITABLE SIZE AND STURDY DESIGN WATER/ WEATHER PROOF HAVING LOCK & KEY ARRANGEMENTT AND EQUIPMENT WITH FOLLOWING 1) CIRCUIT BREAKER SINGLE PHASE. 2) VOLTMETER, SINGLE PHASE (IMPORTED) APPROVED MAKE AND SIZE. 3) INDICATION LAMP.	28	NOS		
13	PREPARATION OF INTERSECTION SPECIFICATION (IS) OF THE INDIVIDUAL INTERSECTION SITES BY CARRYING OUT TRAFFIC SURVEY (FOR PEAK HOURS) PLANING, SUPERVISION AND COLLECTION OF DATA, ANALYSIS AND RESULT FOR CUSTOMIZED THE TRAFFIC CONTROLLERS CLS PLANS AS WELL AS PHASE / STAGE TIMING FOR EACH JUNCTION SHALL BE PREPARED AND PROVIDED TO THE ENGINEER FOR APPROVAL IN DUPLICATE BOUNDED FORM INCLUDING TIMIMNG OF CONTROLLER UP DATING OF TIME PLANS.	03	NOS		
14	SUPPLY AND LAYING ONE NUMBER POLY VINYL CHLORIDE PIPE (PVC) "D" CLASS UNDER FOOTWAY FROM DRAWPIT TO SIGNAL POLE IN ACCORDANCE WITH SPECIFICATION AND DRAWING INCLUDING COST OF SPECIAL, CUTTING FITTING, LAYING ON PIPE IN TRENCH, SAND CUSHIONING, BACK FILLING, PROVIDING AND LAYING DRAW WIRE IN DUCT AND PROPER ARRANGEMENT OF LIGHT AND SAFETY DEVICES ETC. DISPOSAL OF SURPLUS EXCAVATED MATERIAL WITH 5 MILES LEAD AND COMPLETE WITH ALL RESPECT AS DIRECTED BY THE ENGINEER.	700	METER		
15	CONSTRUCTION OF STANDARD POLE FOUNDATION AS PER DRAWING	170	NOS		
16	CONSTRUCTION OF MAST ARM POLE FOUNDATION AS PER DRAWING	95	NOS		
17	SUPPLY AND LAYING ONE NUMBER BEST QUALITY 4" DIA G.I.PIPE IN DUCT UNDER ROAD CARRIAGEWAY FOOTWAY AS PER DRAWING / DESIGN INCLUDING BREAKING THROUGH SURFACE EXCAVATION UPTO MINIMUM DEPTH 1"-8" UNDER ROAD WAY AND 2"-8" FOOTWAY OR AS REQUIRED, PROVIDING SAND, STONE BALLAST FOR BACKFILLING COMPACTION, REINSTATEMENT OF ROAD OR FOOTWAY SURFACE AS PER SPECIFICATION AND APPROVAL OF THE ENGINEER INCLUDING CUTTING MAKING THREAD OF PIPE SPECIAL AS REQUIRED, LAYING OF PIPE PAINTING TWO COAT OF BITUMINOUS PAINT ON G.I.PIPE PROVIDING AND PLACING OF DRAW WIRE IN DUCT AND PROPER ARRANGEMENT OF LIGHT, TRAFFIC BARRIERS SAFETY DEVICES FOR PROTECTION OF TRAFFICAND DISPOSAL OF SURPLUS EXCAVATED MATERIAL WITHIN THREE MILES LEAD AND COMPLETE WITH ALL RESPECT AS DIRECTED BY THE ENGINEER.	2416	METER		
18	PROVIDING CHAMBER 3'-0. 3'-0 2'-8" (MINIMUM DEPTH) AS PER APPROVED DESIGN FOR CABLE. DUCT DRAW CHAMBER AS SHOWN ON DRAWING AND PROVIDING RCC 1:2:4 COVER IN ¼" 3" * 3" MS ANGLE OF 30" OF SIZE AND ¼ THICK 3.25" * 3.25" MS ANGLE FRAME FIXED IN 1:2:4 CC WALL AND MAKING PROPER HOLES FOR DUCTING OF ALL SIZES IN WALLS INCLUDING EXCAVATED, BACKFILLING CC 1:2:4 BASE, WALL, SLAB CHAIN, CHAIN FIXING IN WALL AND SLAB, COMPLETE WITH ALL RESPECT AS DRAWING AND AS DIRECTED BY THE ENGINEER.	192	NOS		
19	PROVIDING & LAYING POWER CABLE 3 CORE 6MM	640	METER		
20	PROVIDING & FIXING OF SILICON CD50 3 DIGIT DUAL COLOUR COUNTDOWN TIMER	101	NOS		
21	LANE DEVICE AND MODEM	11	NOS		
22	NET DEVICE WITH 12 MONTHS MONTHLY RENT	11	NOS		

23	FISH EYE CAMERA	11	NOS		
24	RG 45 CABLE FOR CAMERA	550	METER		
	<b>TOTAL RS</b>				



## **BOQ FOR UP-GRADATION OF 19 SIGNALS IN KARACHI**

ITEM NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
1	MONITORING ROOM PC-I3,4.NOS,SERVER CORE I7,01 .NO LED SCREEN 48 INCH 05 NOS. FURNITURE AND FIXTURES with GIE Map	01	JOB		
2	PROVIDING FIXING & COMMISSIONING OF MCE 0141 MICROPROCESSOR BASED SIEMENS ST-950 SERIES OR EQUIVALENT TRAFFIC SIGNAL CONTROLLER WITH 16 PHASE SWITCHES FITTED CUSTOMIZED INCLUDING SCOOT INTERFACE ENABLE ,CONTROLLER CASE ,CONTROLLER PLINTH.	19	NOS		
3	PROVIDING & FIXING OF SIEMENS TURKISH/ SWARCO OR EQUIVALENT 3 WAY TRAFFIC LIGHT ASPECT ASSEMBLY (RED + AMBER + GREEN) 200 MM DIAMETER AND HOOD COMPLETE HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING LED IN ACCORDANCE WITH SPECIFICATION GIVEN.	09	NOS		
4	PROVIDING & FIXING OF SIEMENS/TURKISH/ SWARCO OR EQUIVALENT 3 WAY TRAFFIC LIGHT ASPECT ASSEMBLY (RED + AMBER + GREEN) 300 MM DIAMETER AND HOOD COMPLETE. HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING LED IN ACCORDANCE WITH SPECIFICATION GIVEN.	03	NOS		
5	PROVIDING & FIXING OF SIEMENS TURKISH/ SWARCO OR EQUIVALENT IMPORTED 2 WAY TRAFFIC LIGHT ASPECT ASSEMBLY (RED + GREEN) 200 MM DIAMETER AND HOOD COMPLETE. HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING LED IN ACCORDANCE WITH SPECIFICATION GIVEN.	08	NOS		
6	PROVIDING & FIXING OF SIEMENS TURKISH/ SWARCO OR EQUIVALENT IMPORTED 1 WAY TRAFFIC LIGHT ASPECT ASSEMBLY (RED) 200 MM DIAMETER AND HOOD COMPLETE. HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING LED IN ACCORDANCE WITH SPECIFICATION GIVEN.	02	NOS		
7	PROVIDING ELECTRICAL CABLE (12 CORE 1.5 MM SQ. SOLID "CU" CONDUCTOR, PVC INSULATED, PVC BEDDED / PVC SHEATHED) INCLUDING LYING IN DUCT STRIP BACK TERMINATE AND LABEL ALL CORES INCLUDING TESTING COMMISSIONING CHARGES.	1610	METER		
8	PROVIDING & FIXING OF INCOMING KESC POWER SUPPLY METALLIC SWITCH BOARD OF SUITABLE SIZE AND STURDY DESIGN WATER / WEATHER PROOF HAVING LOCK & KEY ARRANGEMENT AND EQUIPMENT WITH FOLLOWING. 1) CIRCUIT BREAKER SINGLE PHASE. 2) VOLTMETER, SINGLE PHASE (IMPORTED) APPROVED MAKE AND SIZE. 3) INDICATION LAMP.	01	NO		





9	SUPPLY AND LAYING ONE NUMBER BEST QUALITY 4" DIA G.I.PIPE IN DUCT UNDER ROAD CARRIAGEWAY FOOTWAY AS PER DRAWING / DESIGN INCLUDING BREAKING THROUGH SURFACE EXCAVATION UPTO MINIMUM DEPTH 1"-8" UNDER ROAD WAY AND 2"-8" FOOTWAY OR AS REQUIRED, PROVIDING SAND, STONE BALLAST FOR BACKFILLING COMPACTION, REINSTATEMENT OF ROAD OR FOOTWAY SURFACE AS PER SPECIFICATION AND APPROVAL OF THE ENGINEER INCLUDING CUTTING MAKING THREAD OF PIPE SPECIAL AS REQUIRED, LAYING OF PIPE PAINTING TWO COAT OF BITUMINOUS PAINT ON G.I.PIPE PROVIDING AND PLACING OF DRAW WIRE IN DUCT AND PROPER ARRANGEMENT OF LIGHT, TRAFFIC BARRIERS SAFETY DEVICES FOR PROTECTION OF TRAFFICAND DISPOSAL OF SURPLUS EXCAVATED MATERIAL WITHIN THREE MILES LEAD AND COMPLETE WITH ALL RESPECT AS DIRECTED BY THE ENGINEER.	510	METER		
10	SUPPLY AND LAYING ONE NUMBER POLY VINYL CHLORIDE PIPE (PVC) "D" CLASS UNDER FOOTWAY FROM DRAWPIT TO SIGNAL POLE IN ACCORDANCE WITH SPECIFICATION AND DRAWING INCLUDING COST OF SPECIAL, CUTTING FITTING, LAYING ON PIPE IN TRENCH, SAND CUSHIONING, BACK FILLING, PROVIDING AND LAYING DRAW WIRE IN DUCT AND PROPER ARRANGEMENT OF LIGHT AND SAFETY DEVICES ETC. DISPOSAL OF SURPLUS EXCAVATED MATERIAL WITH 5 MILES LEAD AND COMPLETE WITH ALL RESPECT AS DIRECTED BY THE ENGINEER.	465	METER		
11	INSTALLATION OF STANDARD POLE 12 FT ASSEMBLY WITH ALL NECESSARY FITTING POLE CAP ETC. COMPLETE INCLUDING PAINTING TWO COATS WITH SYNTHETIC ENAMEL PAINT AS PER DRAWING.	06	NOS		
12	INSTALLATION OF MAST ARM POLE ASSEMBLY WITH ALL NECESSARY FITTING , POLE CAP ETC. COMPLETE INCLUDING PAINTING TWO COATS WITH SYNTHETIC ENAMEL PAINT AS PER DRAWING.PROVIDING FIXING	03	NOS		
13	CONSTRUCTION OF STANDARD POLE FOUNDATION AS PER DRAWING	06	NOS		
14	CONSTRUCTION OF MAST ARM POLE FOUNDATION AS PER DRAWING	03	NOS		
15	PROVIDING CHAMBER 3'-0. 3'-0 2'-8" (MINIMUM DEPTH) AS PER APPROVED DESIGN FOR CABLE. DUCT DRAW CHAMBER AS SHOWN ON DRAWING AND PROVIDING RCC 1:2:4 COVER IN ¼" 3" * 3" MS ANGLE OF 30" OF SIZE AND ¼ THICK 3.25" * 3.25" MS ANGLE FRAME FIXED IN 1:2:4 CC WALL AND MAKING PROPER HOLES FOR DUCTING OF ALL SIZES IN WALLS INCLUDING EXCAVATED, BACKFILLING CC 1:2:4 BASE, WALL, SLAB CHAIN, CHAIN FIXING IN WALL AND SLAB, COMPLETE WITH ALL RESPECT AS DRAWING AND AS DIRECTED BY THE ENGINEER.	30	NOS		
16	PROVIDING & LAYING POWER CABLE 3 CORE 6MM	380	METER		
17	DUAL COLOUR (RED+GREEN) COUNT DOWN TIMER 300	75	NOS		

	MM SIZE WITH TIMER CONTROLLER CABLE ETC.COMplete				
18	LANE DEVICE AND MODEM	19	NOS		
19	NET DEVICE WITH 12 MONTHS MONTHLY RENT	19	NOS		
20	FISH EYE CAMERA	19	NOS		
21	RG 45 CABLE FOR CAMERA	950	METER		
22	PROVIDING & FIXING OF CONTROLLERS FOR TIDAL FLOW SYSTEM WITH GPS CLOCK TO BE SYNCHRONIZED IN TIME TO OPERATE THE LANE CONTROL LIGHTS.	05	NOS		
23	PROVIDING & FIXING OF SIEMENS TURKISH/ SWARCO OR EQUIVALENT 1 WAY TRAFFIC LIGHT ASPECT ASSEMBLY WITH TWO WAY ARROW CROSS LED MODULE (RED + GREEN) 200 MM DIAMETER AND HOOD COMPLETE. HOUSING & COVER MADE UV-STABILIZED POLYCARBONATE, COVER WITH SNAP ACTION CATCH INCLUDING LED IN ACCORDANCE WITH SPECIFICATION GIVEN.	110	NOS		
24	PROVIDING & FIXING OF LED TRAFFIC LIGHT MODULE WITH DUAL LANCE CENTRAL LIGHT SOURCE SYSTEM WITH NO LED DOTS VISIBLE , VERY UNIFORM SIGNAL GLOW-CENTRAL LIGHT SOURCE	492	NOS		
	<b>TOTAL</b>				



**BOQ FOR NEW TRAFFIC INTERSECTION CIVIL WORK****AT KARACHI, LARKANA, SUKKHUR AND MIRPURKHAS**

S.NO	DESCRIPTION	QTY	RATE	UNIT	AMOUNT
1	DISMANTLING OF EXISTING ASPHALT CONCRETE ROAD I/E BASE,SUB BASE A DISPOSAL OF DISMANTLED MATERIAL TO DESIGNATED PLACE	48900	773.86	%CFT	37841754
2	EXCAVATION FOR FOUNDATION OF BUILDING, BRIDGES AND OTHER STRUCTURES INCLUDING DEGBELLING DRESSING, REFILLING AROUND STRUCTURE WITH EXCAVATED EARTH WATERING AND RAMMING LEAD UPTO 5 FT.	8400	3176.25	%0 CFT	26681
3	CEMENT CONCRETE PLAIN I/C PLACING, COMPACTING, FINISHING AND CURING ETC.	16632	12595	%CFT	2094800
4	P/F PRE CAST KERB STONE 3750 PSI INDUSTRIAL MADE SIZE 6 INCH THICK* 12 INCHES LONG * 12 INCHES HIGH INCLUDING THE COST OF CARTAGE, EXCAVATION,FORM WORK FOR HAUNCHING 1450 PSI LEAN CONCRETE,2250 PSI CONCRETE FOR HAUNCHING 1:4 CEMENT SAND MORTAR.	47200	297.01	RFT	14018872
5	P/F CEMENT PAVING BLOCKS FLOORING HAVING SIZE OF 197 * 197 * 60 (MM) OF CITY / QUDDRA / COBBLE SHAPE HAVING STRENGTH B/W 5000 PSI TO 6500 PSI INCLUDING FILLING THE JOINTS WITH HILL SAND AND LAYING IN SPECIFIED MANNER / PATERN AND DESIGN ETC. COMPLETE.	118000	199.77	SFT	23572860
6	CARTAGE OF ALL MATERIAL LEAD UPTO 10 MILES	48900	1200.20	%CFT	586898
<b>TOTAL</b>					<b>40678529</b>





# **APPENDIX “B”**

## **LIST OF INTERSECTIONS AND GOOGLE EARTH LOCATIONS INCLUDING TIDAL FLOW SYSTEM**



S.NO	NAME OF INTERSECTION
	<b>INSTALLATION OF SIGNALS (NEW INTERSECTIONS)</b>
1	SAMAMA SHOPPING CENTRE/ UNIVERSITY ROAD
2	JOUHAR MOUR / RASHID MINHAS ROAD
3	R.D.CHOWK / ESTATE AVENUE
4	HABIB CHOWRANGI/TEXTILE AVENUE SITE
5	MIRAN NAKA/MIRZA ADAM KHAN ROAD
6	ICI CHOWK/G.ALLANA ROAD (OLD MARIPUR ROAD)
7	MODEL COLONY GRAVEYARD/JINNAH AVENUE
8	MANZIL PATROL PUMP CROSSING/NATIONAL HAGHWAY
9	PMTF CROSSING/NATIONAL HIGHWAY
10	PORT QASIM CROSSING/NATIONAL HIGHWAY
11	TOWNSHIP CROSSING/NATIONAL HIGHWAY
	<b>UP-GRADATION OF SIGNALS</b>
12	KHAYABAN-E-JAMI/KHAYABAN-E-SADDI (BOAT BASIN)
13	KHAYABAN-E-IQBAL / CHARTERED ACCOUNTANTS AVENUE (THREE SWORDS)
14	CH.KHALIQ-UZ-ZAMAN ROAD / CHARTERED ACCOUNTANTS AVENUE (RACE COURSE)
15	CH. KHALIQ UZZAM / LILLY BRIDGE ROAD
16	CHAND BIBI BRIDGE / CSD / KALA PUL
17	HOSHANG ROAD / ZIAUDDIN AHMED ROAD
18	HOSHANG ROAD/ ABDULLAH HAROON ROAD
19	DR. ZIAUDDIN AHMED ROAD / M.T.KHAN ROAD / CLUB ROAD (PIDC )
20	SHAHEED MILAT ROAD / KHALID BIN WALID ROAD (MEDICARE)
21	SHAHEED MILAT ROAD / TARIQ ROAD (M.CHOWRANGI)
22	SHAHEED-E-MILLAT ROAD / SIRAJ -UD-DAULA ROAD
23	SHAHEED-E-MILLAT ROAD / TIPU SULTAN ROAD
24	JOHAR CHOWRANGI / HAFEEZ JALHANDRI ROAD
25	NATIONAL STADIUM / PIR SIBGHATULLAH ROAD
26	DISCO BAKERY GULSHAN / SHABBIR USMANI ROAD
27	RUB HOSPITAL GULSHAN / SHABBIR USMANI ROAD
28	YASEEN ABAD / SHABBIR USMANI ROAD
29	GHANI CHOWRANGI / STATE AVENUE
30	SHARFABAD / ALAMGIR ROAD
	<b>INSTALLATION OF SIGNALS (NEW INTERSECTIONS LARKANA)</b>
1	CHANDKA CHOWK
2	CITY MEDICAL CENTRE CHOWK
3	TALUKA POLICE STATION CHOWK
4	NEW DARO CHOWK
5	BANK SQUARE CHOWK
	<b>INSTALLATION OF SIGNALS (NEW INTERSECTIONS MIRPURKHAS)</b>
1	KHIPRO CHOWK
2	SHIMLA CHOWK
3	MARKET CHOWK
4	POST OFFICE CHOWK

5	KALAY KHAN CHOWK
6	UBL CHOWK
	<b>INSTALLATION OF SIGNALS (NEW INTERSECTIONS SUKKUR)</b>
1	POLICE HEAD QUARTER CHOWK
2	CLOCK TOWER CHOWK
3	MUHAMMADI CHOWK
4	DOLPHIN CHOWK
5	GARAM GODI CHOWK
6	SHIKKARPUR CHOWK





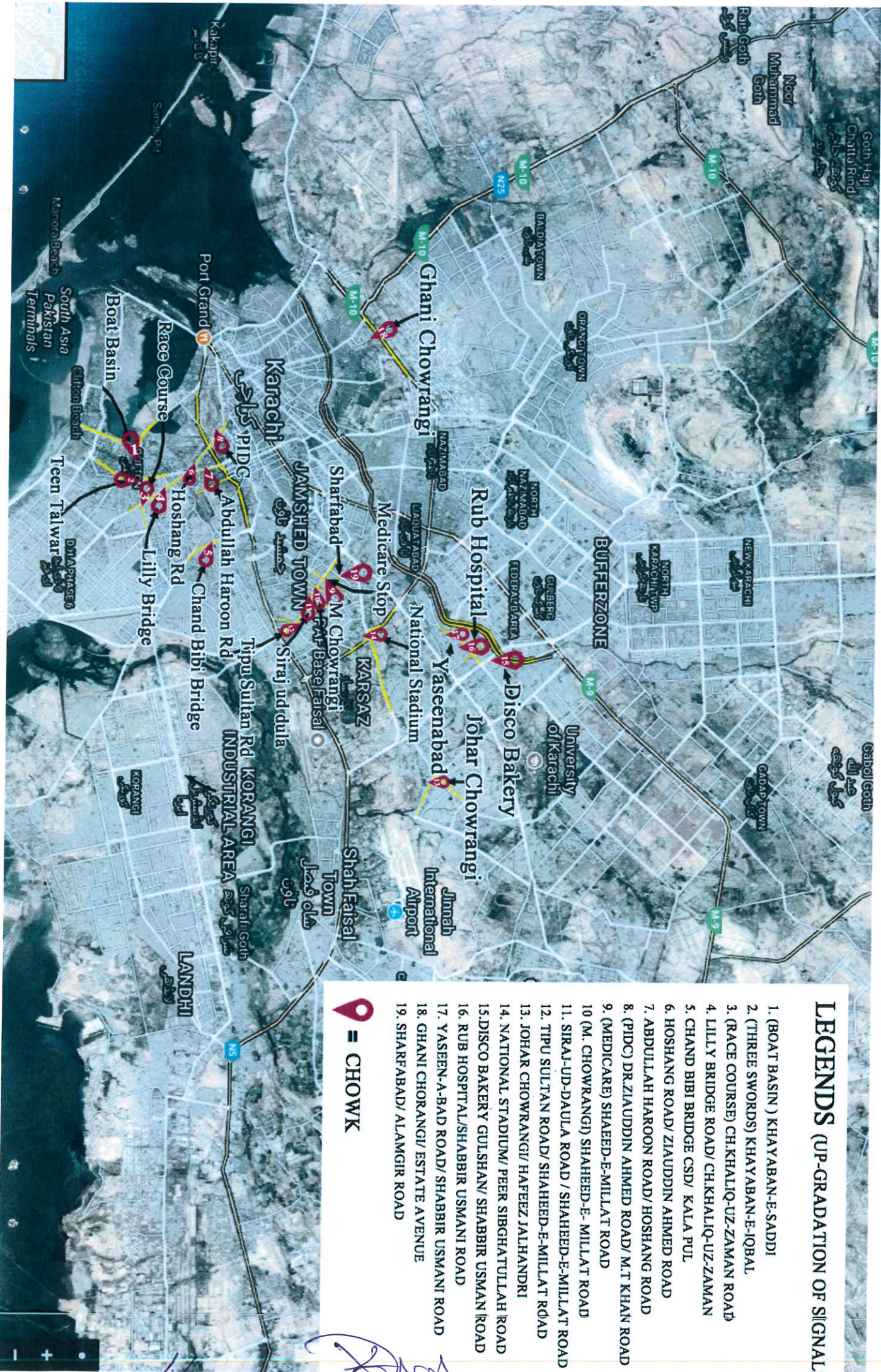
# KARACHI TRAFFIC SIGNAL LOCATIONS



= CHOWK

## LEGENDS (UP-GRADATION OF SIGNALS)

1. (BOAT BASIN ) KHAYABAN-E-SADDI
2. (THREE SWORDS) KHAYABAN-E-IQBAL
3. (RACE COURSE) CH.KHALIQ-UZ-ZAMAN ROAD
4. LILLY BRIDGE ROAD/ CH.KHALIQ-UZ-ZAMAN
5. CHAND BIBI BRIDGE CSD/ KALA PUL
6. HOSHANG ROAD/ ZIAUDDIN AHMED ROAD
7. ABDULLAH HAROON ROAD/ HOSHANG ROAD
8. (PIDC) DR.ZIAUDDIN AHMED ROAD/ M.T KHAN ROAD
9. (MEDICARE) SHAHEED-E-MILLAT ROAD
10. (M. CHOWRANGI) SHAHEED-E- MILLAT ROAD
11. SIRAJ-UD-DAULA ROAD / SHAHEED-E-MILLAT ROAD
12. TIPU SULTAN ROAD/ SHAHEED-E-MILLAT ROAD
13. JOHAR CHOWRANGI/ HAFEEZ JALHANDRI
14. NATIONAL STADIUM/ PEER SIBGHATULLAH ROAD
- 15.DISCO BAKERY GULSHAN/ SHABIR USMAN ROAD
16. RUB HOSPITAL/SHABIR USMANI ROAD
17. YASEEN-A-BAD ROAD/ SHABIR USMANI ROAD
18. GHANI CHORANGI/ ESTATE AVENUE
19. SHARFABAD/ ALAMGIR ROAD





# KARACHI TRAFFIC SIGNAL LOCATIONS

## LEGENDS(NEW SIGNALS)

1. SAMAMA SHOPPING CENTRE / UNIVERSITY RVD CHOWK
2. JOUHAR MOUR / RASHID MINHAS ROAD
3. R.D CHOWK / ETATE AVENUE
4. HABIB CHORANGI / TEXTILE AVENUE SITE
5. MIRAN NAKA/ MIRZA ADAM KHAN ROAD
6. ICI CHOWK / G.ALLANA ROAD
7. MODEL COLONY / JINNAH AVENUE
8. MANZIL PETROL PUMP / NATIONAL HIGHWAY
9. PMTF CROSSING / NATIONAL HIGHWAY
10. PORT QASIM CROSSING / NATIONAL HIGHWAY
11. TOWN SHIP CROSSING / NATIONAL HIGHWAY

 = CHOWK



44(a)



## LEGENDS

● = 11 NO. TIDAL FLOW  
GANTRIES AT I.I CHUNDRIGAR ROAD

Karachi

گراچی

SARAFI BAZAAR

GARIKHATA

SADDAR TOWN

I.I CHUNDRIGAR ROAD

M.A. Jinnah Rd

I.I Chun drigar Rd

City Station Karachi  
Circular Railway

KPT Container Terminal

Mai Kolachi Bypass

Chinna Creek

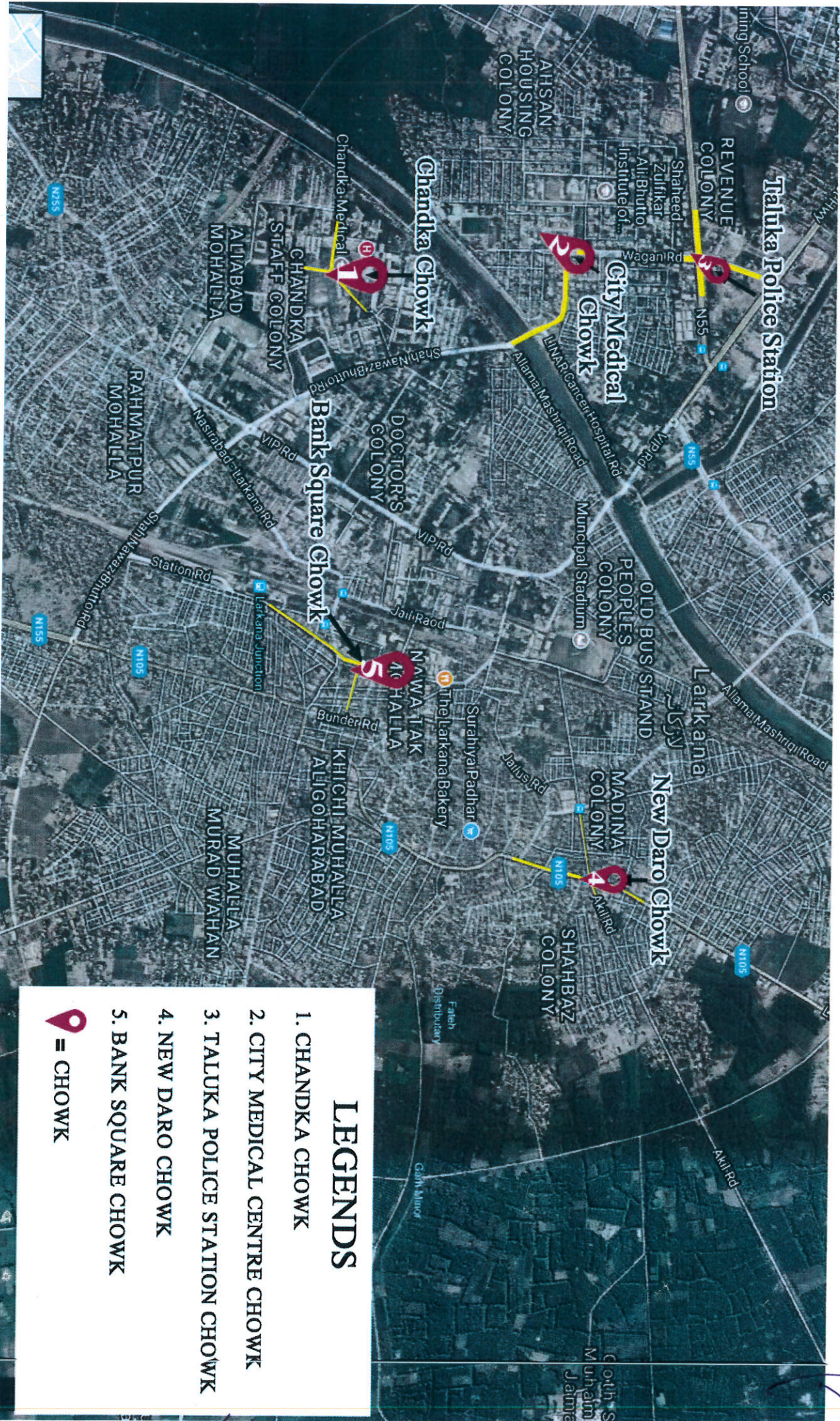


45

SD 501

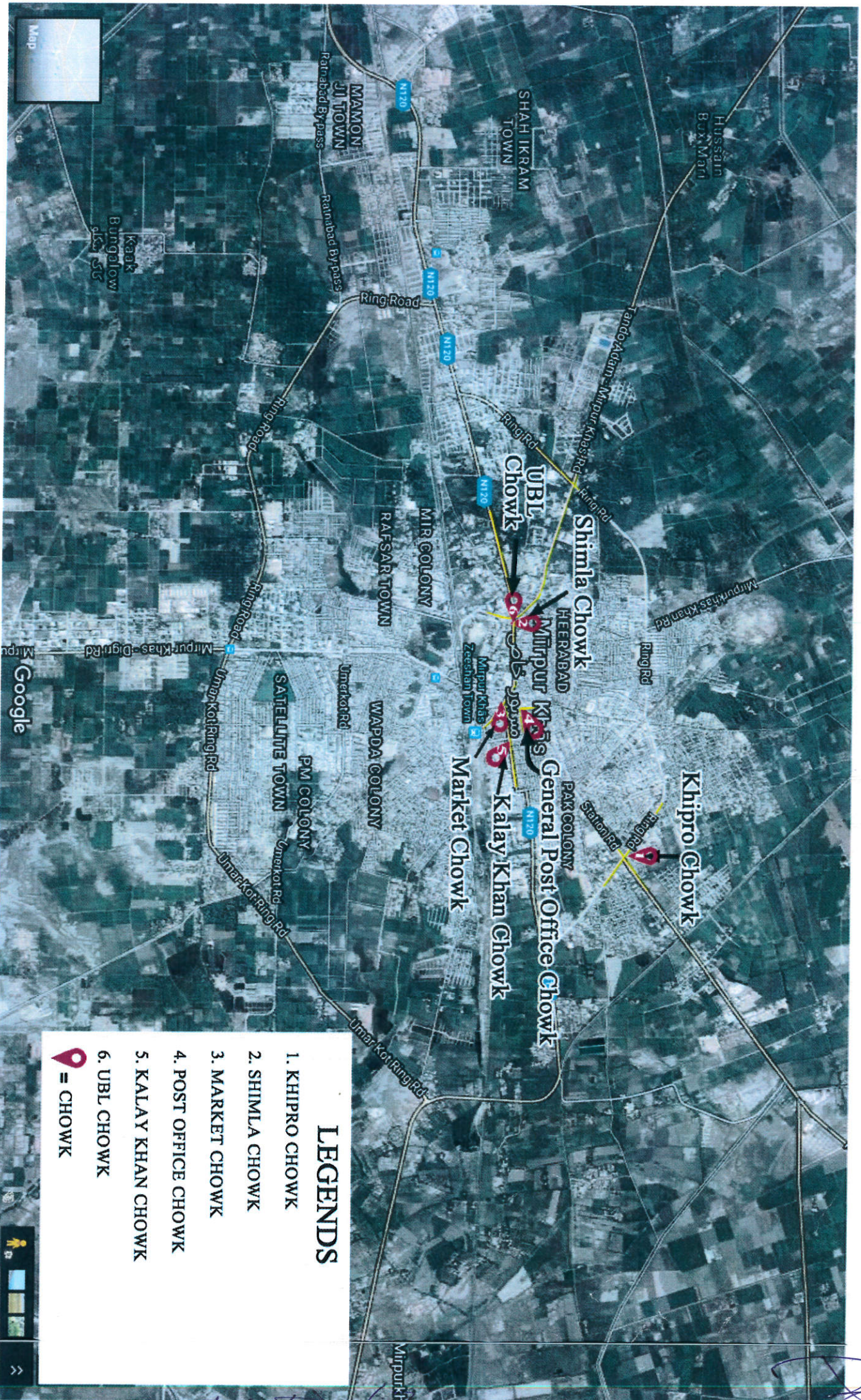


# LARKANA TRAFFIC SIGNAL LOCATIONS





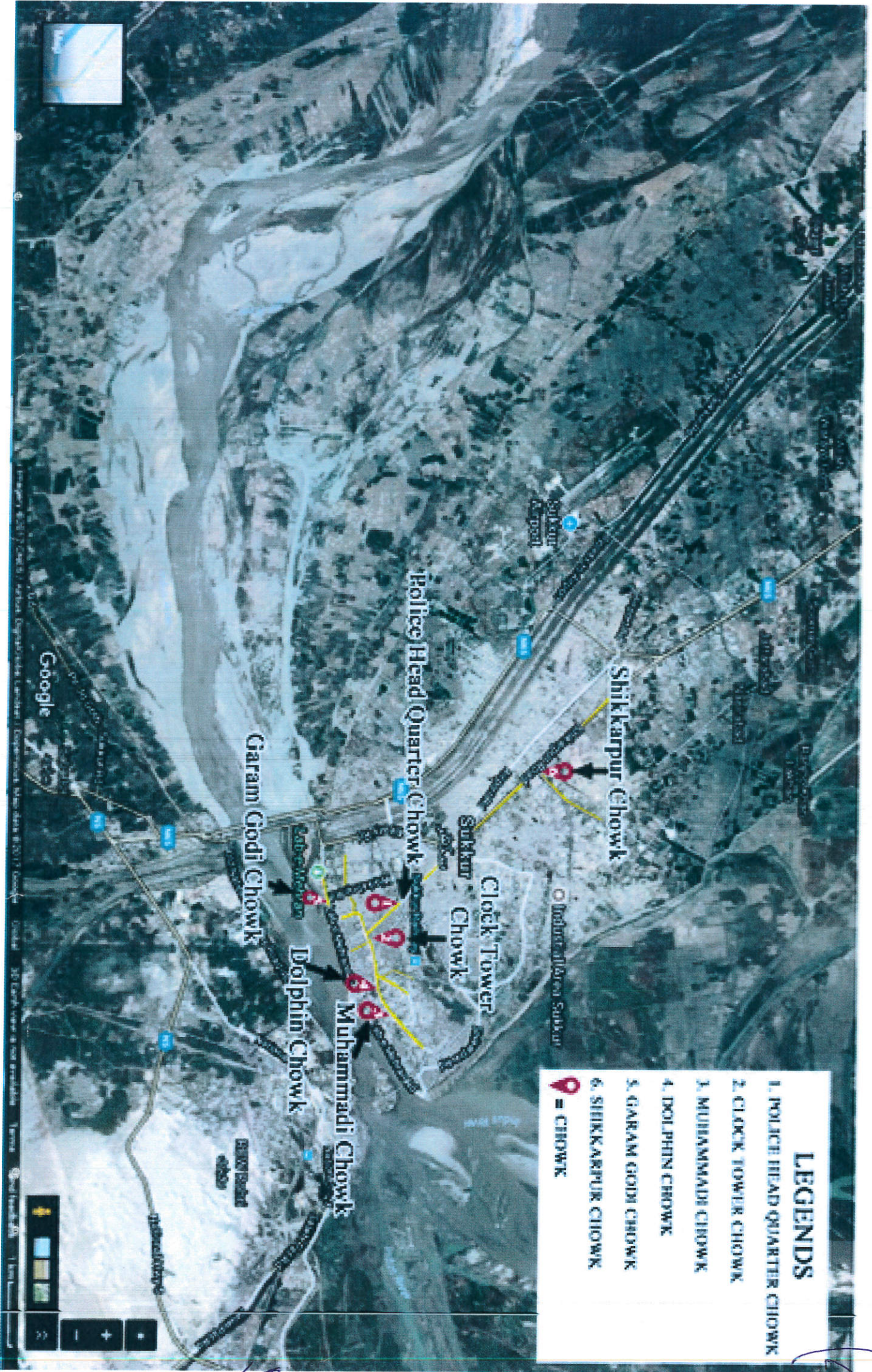
# MIRPURKHAS TRAFFIC SIGNAL LOCATIONS





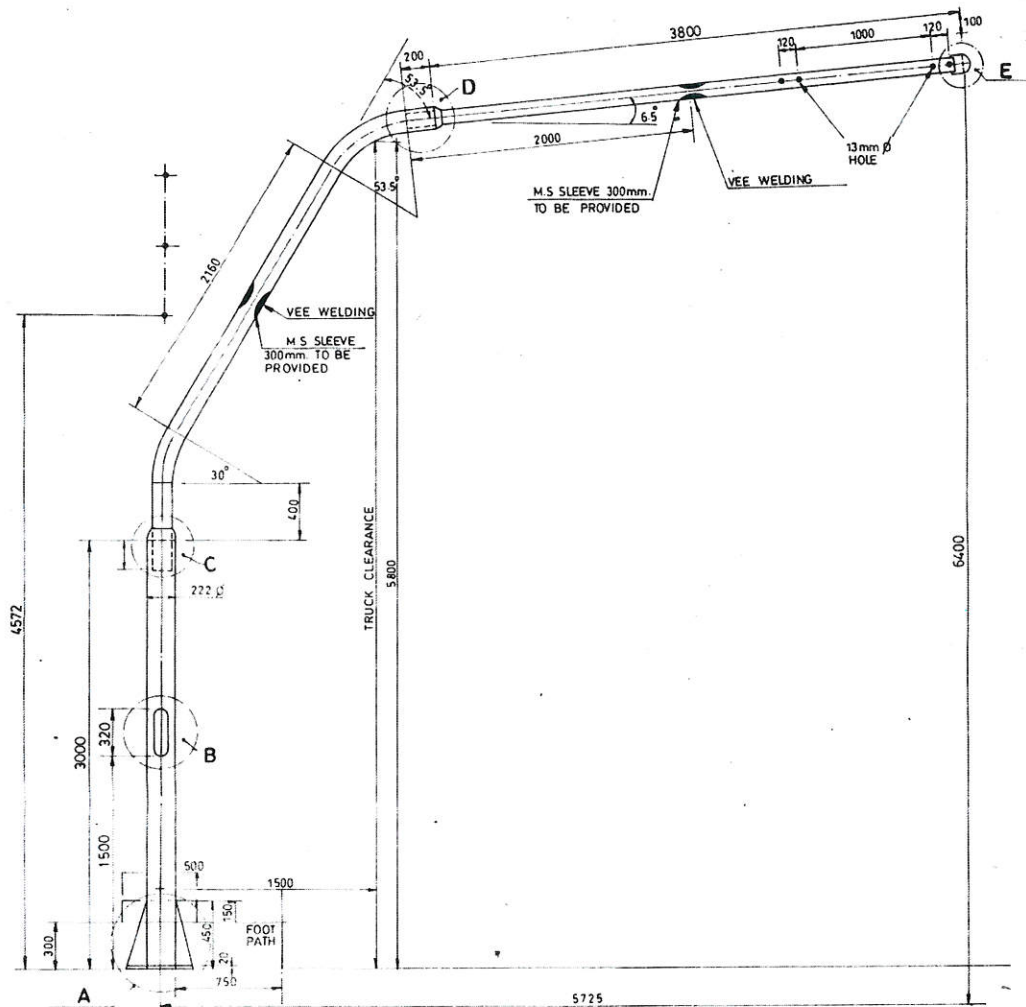
# SUKKUR TRAFFIC SIGNAL LOCATIONS

- LEGENDS**
- 1. POLICE HEAD QUARTER CHOWK
  - 2. CLOCK TOWER CHOWK
  - 3. MUHAMMADI CHOWK
  - 4. DOLPHIN CHOWK
  - 5. GARAM GODI CHOWK
  - 6. SHEKKARPUR CHOWK
- = CHOWK





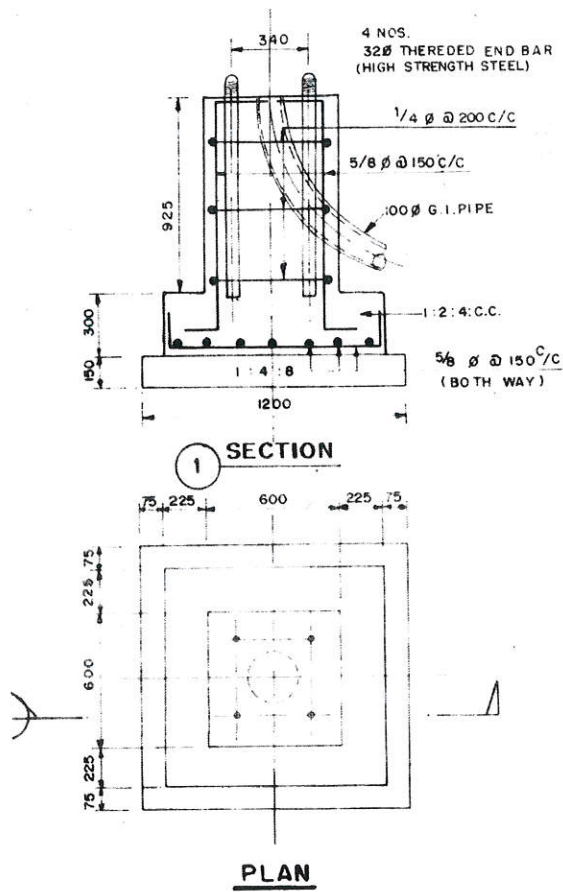
# DRAWINGS



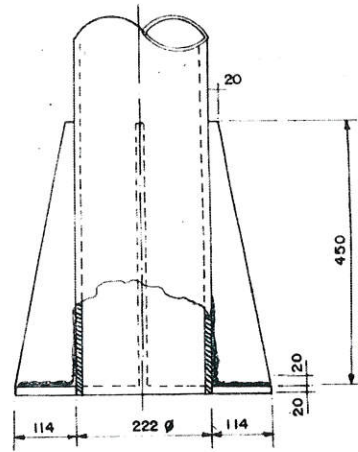
DETAILS OF MAST ARM POLE

49

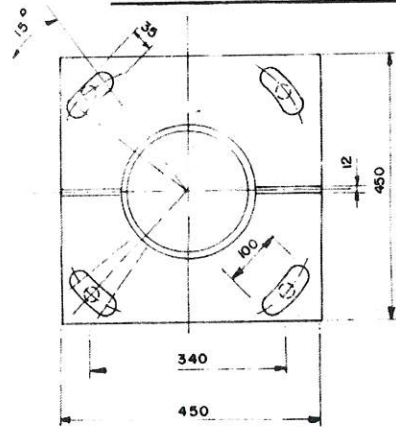
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**DETAILS OF FOUNDATION**  
(FOR MAST ARM POLE)

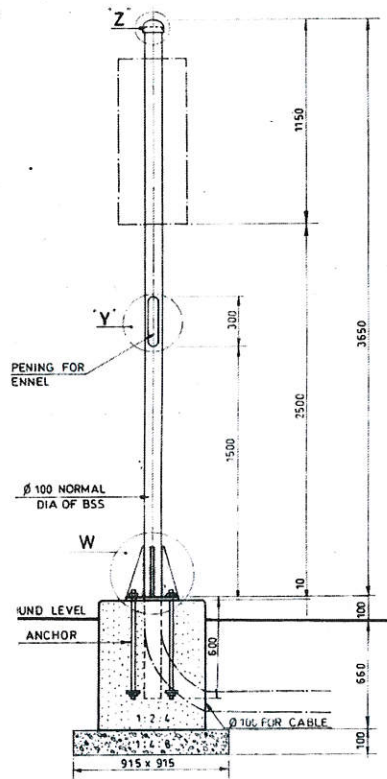


**DETAIL OF STIFNERS**

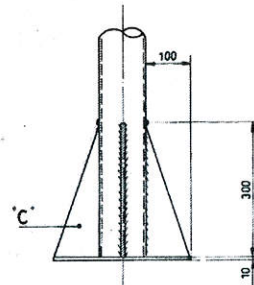


**DETAIL OF BASE PLATE**  
(FOR MAST ARM POLE)

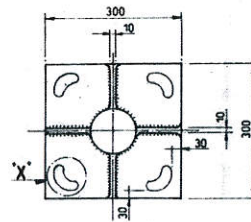
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**SIGNAL POLE**

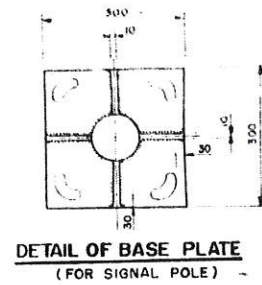
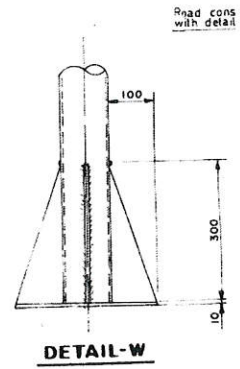
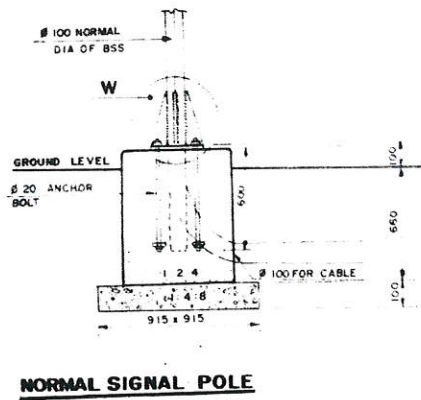
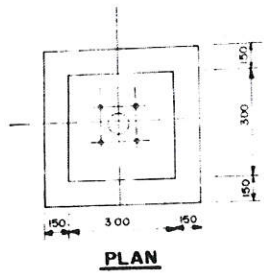


**DETAIL-W**

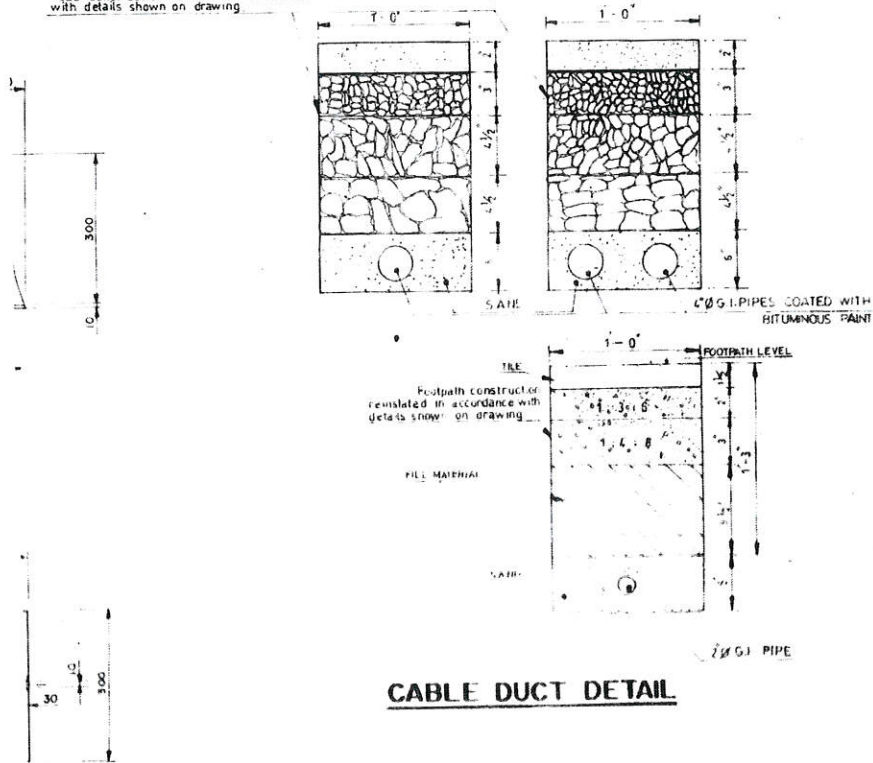


**DETAIL OF BASE PLATE  
(FOR SIGNAL POLE)**





Road construction reinstated in accordance  
with details shown on drawing



### CABLE DUCT DETAIL

PLATE  
(LE)

Cover 3x2'6x2'6 (76x760x760)  
R.C.C. Cast in 1/4" x 3/4" (6.35x76x76) welded  
M.S. frame with 2 no. lifting  
eyes recessed in surface.

3/8"  $\phi$  (9.5 $\phi$ ) bars @ 4" (100mm) centres  
both direction

Footpath Level

1/4" x 3/4" (6.35x76x990) Welded  
M.S. frame

Min. 4" (100mm) slot with P.V.C. Pipe  
Duct entries as Required at each  
location (Min 1' - 3' Footpath/Island Lev.)

M.S. Chain of enough Length to clear  
the opening (Min. 3' - 0" - 510mm) Length  
and should be welded with  
M.S. Frame

1/2" (13) th. Cement Plaster (1:4 Cement Mortar)

1:2:4 C.C.

2' - 2" MIN.  
(508mm)

1' - 0" MIN.  
(300mm)

Duct opening

10' - 4" (250mm)

2 NO 2"  $\phi$  (51mm) Drain hole

1:2 C.C. (5 R. Cement)

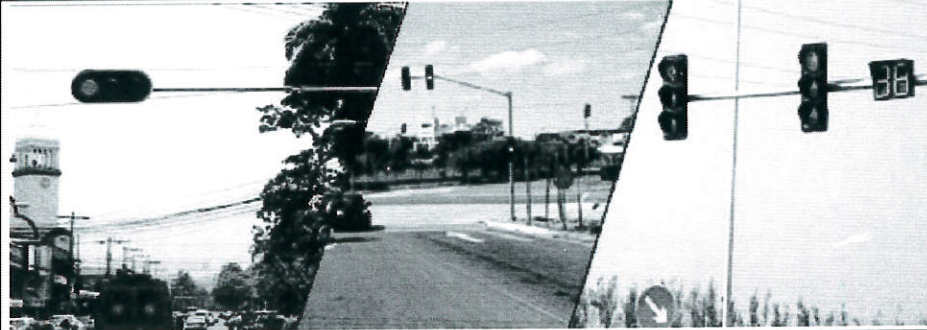
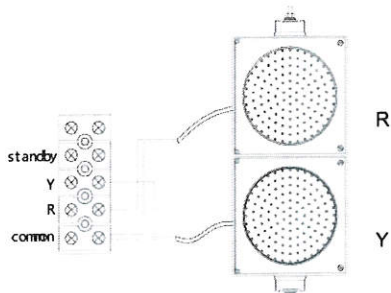

### CABLE DUCT DRAW CHAMBER

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# Specifications

## 300/200MM FULL BALL LED TRAFFIC LIGHTS

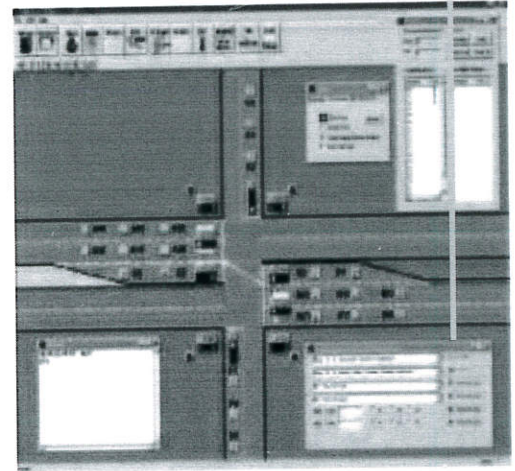
Model. SIEMENS TURKISH

	
<b>Connection Sketch</b>  <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Black : Common Red : Red light Yellow : Yellow light</p> </div>	<b>Product Photo</b> 
<b>Product Features</b> <ul style="list-style-type: none"> <li>▪ Novelty design with beautiful appearance</li> <li>▪ Low power consumption</li> <li>▪ High efficiency and brightness</li> <li>▪ Large viewing angle</li> <li>▪ Long lifespan-50,000-80,000 hours</li> <li>▪ Multi-layer sealed and waterproof</li> <li>▪ Exclusive optical lensing and good color uniformity</li> <li>▪ Long viewing distance</li> <li>▪ Keep up with CE, GB14887-2007, ITE EN12368 and relevant international standards</li> </ul>	





The ST950 is the latest high performance traffic controller from Siemens. It is designed for maximum flexibility in a wide range of applications including intersection and pedestrian traffic control. The ST950 family provides intersection, Pelican, Puffin and Toucan strategies to UK Department of Transport Specification TR2210 and meets the essential requirements of European Specifications prEN12675 and prEN50278.



## ST950 traffic controller

### Modular construction

Two main construction options are available:

- **Standard outercase** - A single-sided case provides a controller logic rack and frame which swings out for ease of access. Up to 32 phases can be accommodated together with detectors and ancillary equipment including Outstation Transmission Units (OTU), Outstation Monitoring Units (OMU) and other approved items.

The outercase provides all necessary street cable terminations using CET connectors, with ample room for additional terminations and cable separation if required. Manual panel access is provided through a separately locked access door contained within the main outercase door.

- **Free-standing logic rack** - A free-standing 19 inch 6U controller rack contains all essential controller electronics within a self-contained unit. An extensive range of mounting kits is available for fitting the equipment into a variety of existing cabinets, providing a particularly cost effective route to controller modernisation.

Phase cables are supplied which can be connected to existing terminals in the host cabinet further easing the upgrade process.

A basic controller comprises a processor board offering 16 buffered inputs and a single 8-phase lamp driver board.

Expansion to a maximum of 32 phases is accomplished by the addition of up to three further lamp driver boards. Expansion I/O boards, integral OTU, and SDE/SA processor boards may be added as necessary.

The controller design follows a modular concept which means that the equipment can be supplied to match individual user specification.

### Simplified installation

Installation is simplified by the modular nature of the equipment. The controller rack and cabinet, complete with street cable and mains supply termination may be installed without the logic rack, which can be added at a later date.

An extensive inbuilt self-test facility which validates both the controller hardware and the street connections provides an invaluable aid to controller commissioning.

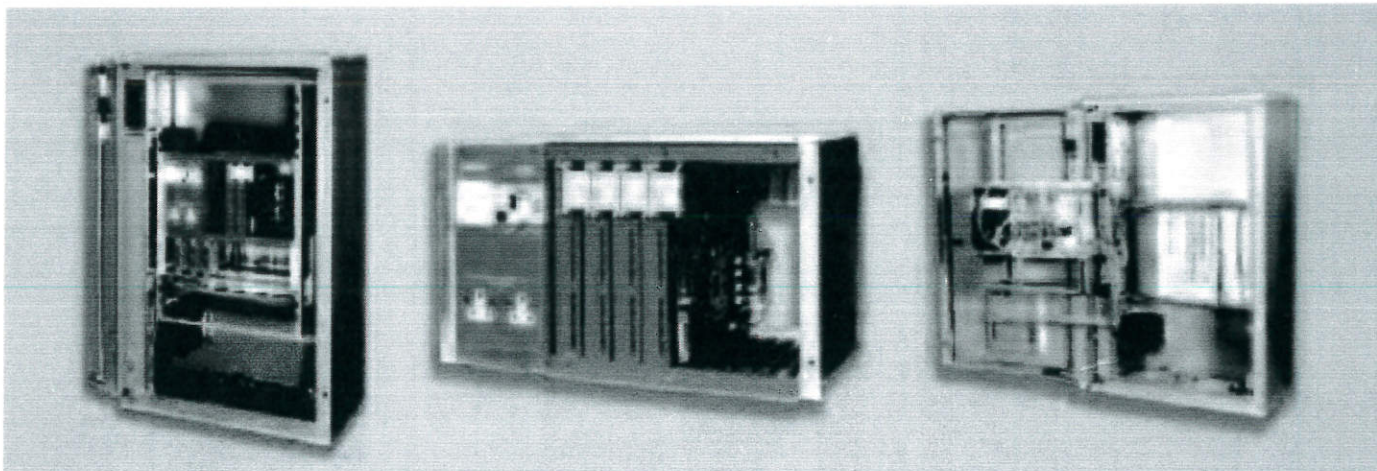
### User configurable

Enhanced navigation aids and selectable levels of configuration complexity, insulate the user from controller facilities that are not being used, simplifying the configuration process.

The configuration generated by the system contains the data required to allow the controller to operate and also the IC4 source data, ensuring that it can never be lost. The data can be retrieved via the handset port in typically less than one minute and subsequently edited to create a new configuration.

Existing data for T200 and T400 controllers produced using the earlier IC3 system can be imported as the basis of new ST800 configurations, significantly easing controller upgrades. Similarly Linsig™ generated data files can be imported.

The optional emulator is a feature rich tool which links seamlessly with IC4 to provide an advanced environment for de-bugging and proving ST800 configurations. It ensures a highly accurate representation of the controller operation on a PC, using the same software source files as the controller firmware.



The IC4 Configurator provides a Windows™-based easy to use tool for generating configuration data sets for the controller. Data is entered via a series of 'forms' and is validated for correctness as part of a sophisticated error checking process.

Once configured most controller timings and many other parameters may be altered using a simple hand-held terminal. Using Siemens IC4 configurator, the changes made in this way can be easily identified and automatically incorporated into the controller configuration.

For non-UK applications the handheld terminal may be used to change more widespread parameters including number of stages and number and types of phases. This allows a single configuration PROM to be created and then quickly customised on-street.

#### Enhanced safety features

Two independent microprocessors and comprehensive hardware self-check features ensure an unprecedented level of controller safety. This is further improved by full equivalence monitoring on all aspect drives (red, amber, green) ensuring that mis-display of any signal colour is prevented.

For UK applications, conflicts or other major failures result in the signals being extinguished in a fail-safe manner. For non-UK use the controller also features a built-in hardware fail flash. This offers selectable 'off' or flash red/yellow for each phase, with programmable mark/space and flash rate.

#### Reliable facility rich software

The controller software offers many features and facilities including:

- ☐ 32 phases, 32 Stages
- ☐ 8 streams
- ☐ 8 maximum green sets
- ☐ 8 hurry calls which are in priority order
- ☐ 8 uni-directional detector loop units

- ☐ Stage ripple change facility for improved intersection capacity
- ☐ Fully configurable lamp sequences for worldwide application
- ☐ Fully integral lamp monitoring with enhanced red lamp monitoring to significantly ease configuration, commissioning and use
- ☐ Improved part-time and start-up modes, such that a stream may be sent in and out of part-time mode without affecting any others.
- ☐ Capability to provide different phase extension times on an input basis
- ☐ Enhanced CLF with plans now having up to 32 groups and the timings specified in seconds as part of the total cycle time
- ☐ Improved event timetable which supports actions based on 32 independent events and simplified programming
- ☐ Enhanced time system with full date details
- ☐ Date stamped rolling log providing detailed history of events and faults, coupled with improved presentation to aid recognition of entries
- ☐ Improved UTC mode with independent G1/G2 reply bits on a stream basis
- ☐ Enhanced handset facility running at 1200, 9600 or 19200 baud that can produce a 14 character single line display up to an 80 character by 24 line full screen status display, which displays the result of up to 10 handset commands simultaneously.



## Technical specification

### Modes of operation

Manual  
Vehicle Actuated  
Vehicle Actuated - Ripple  
Pedestrian Fixed Vehicle Period  
Urban Traffic Control  
Bus/Light Rail Transit  
Part Time  
Fixed Time  
Cableless Linking  
Pedestrian Vehicle Actuated  
Puffin/Toucan  
Hurry Call  
Emergency Priority

### Phases and stages

No. of hardware phases	1-32
No. of software phases	0-32
Phase sequences	Programmable
No. of independent streams	8
No. of stages	32
No. of max. green periods	8
No. of phase delays	120
No. of call timers	8
No. of cancel timers	8
No. of all red extension units	7
No. of hurycalls	8
No. of emergency/priority units	8

### High speed vehicle detection

Speed discriminations	Double/triple
Speed assessment	
No. of assessors	16

### Cableless linking facilities

No. of plans 16  
No. of groups per plan 32  
No. of time switch settings 64  
No. of plan influence tables 16  
No. of group influences 10  
Timing sources 50/60Hz mains  
Internal crystal  
GPS clock  
64 days  
32 holiday periods  
Holiday clock

### Other facilities

Standby mode: Signals off  
or software flash  
Failure mode: Signals off  
or hardware flash

Hardware flash - selectable flash red or yellow per phase. Mark/space and flash rate selectable for whole controller.  
Signal dimming 120V, 140V, 160V  
High speed handset port 1200, 9600 and 19200 baud  
Port is auto bauding to match incoming data

### Electrical

Power supply 115V -20% +15%  
230V -20% +15%  
Supply frequency 50/60Hz  
Lamp switching type Solid state  
Phases per lamp switch card 8  
Max. load per output 4A  
Max. load per lamp switch card 20A  
Max. controller lamp load 20A  
(Heavy current option available for higher lamp loads)

### Environmental

Designed to meet: UK TR2210  
EU prEN1 2675  
EU prEN50278

Supply interruption:  
Continuous operation up to 50ms break  
Supply failure:  
Automatic restart without operator intervention  
Operating temperature range -25°C to +65°C

### Dimensions

Standard outercase Height 1160mm  
Width 725mm  
Depth 420mm  
Rack system Height 266mm  
Width 482mm  
Depth 280mm

(Rack system requires minimum 15mm clearance in front of fixing plane)

### Cuckoo kits

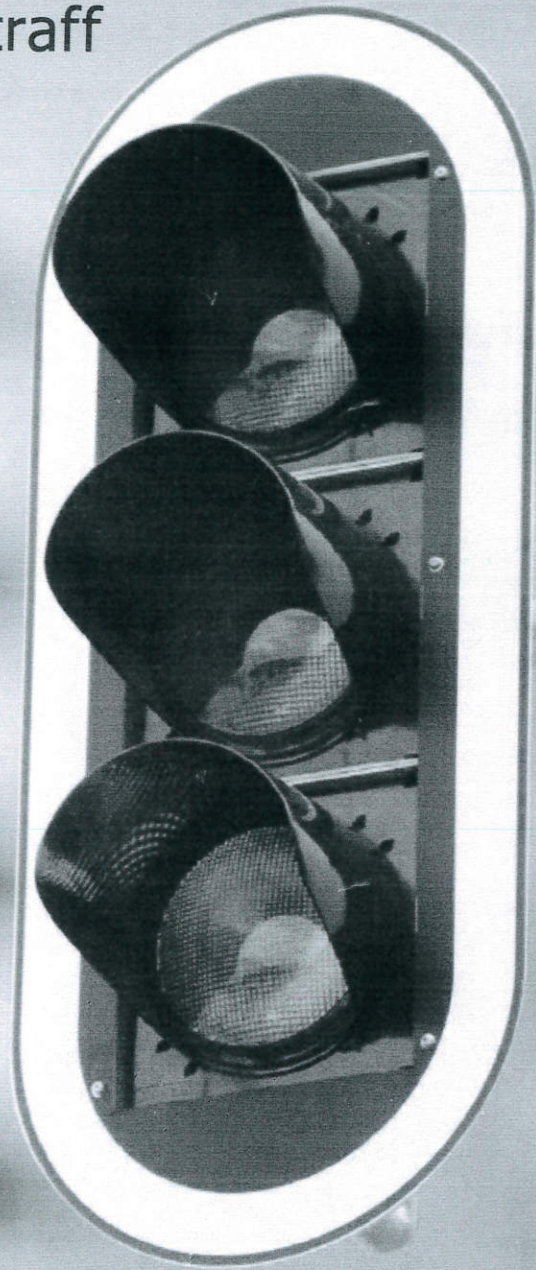
Siemens controllers:	GEC controllers:
Siemens T70	GEC 25
Siemens T90	GEC CX
Siemens T200	GEC3000
Siemens T400	
Siemens TCUG case	
Ferranti controllers:	
Ferranti MK1 (single and double case)	
Ferranti MK2	

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*[Signature]*



# Signal heads for road traff



SIEMENS

as Equivalent *Dr. J. J.*

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*Dr. J. J.*



# Siemens signal heads ... safe, reliable, environmentally compatible, energy-saving, attractively priced

## LED signal heads

These days, LEDs are the predominant form of illumination for signal heads, having largely superseded conventional signal lamps.

This technology consumes little power, yet today's LEDs achieve top traffic signal performance.

LED signal heads with their bright evenly illuminated lights are reliably seen by road users, even in unfavorable lighting conditions, and using LEDs practically eliminates the disorienting phantom reflections that occur when the sun is very low.

The electrical interface to the controller is provided by a connection enabling LED signal heads to be operated on Siemens controllers compliant with HD 638 / DIN VDE 0832 00.

LED lights have a considerably longer lifetime than conventional signal lamps and ensure a high level of reliability of the system. Failures caused by defective signal lamps are a thing of the past.

The higher efficiency of LEDs means that their electrical power consumption is vastly reduced, so running costs for power supply are correspondingly low. LED signal heads with their low energy consumption thus represent a valuable contribution to environmental protection: saving up to 90% of the energy consumed by signal lamps

## Conventional signal heads

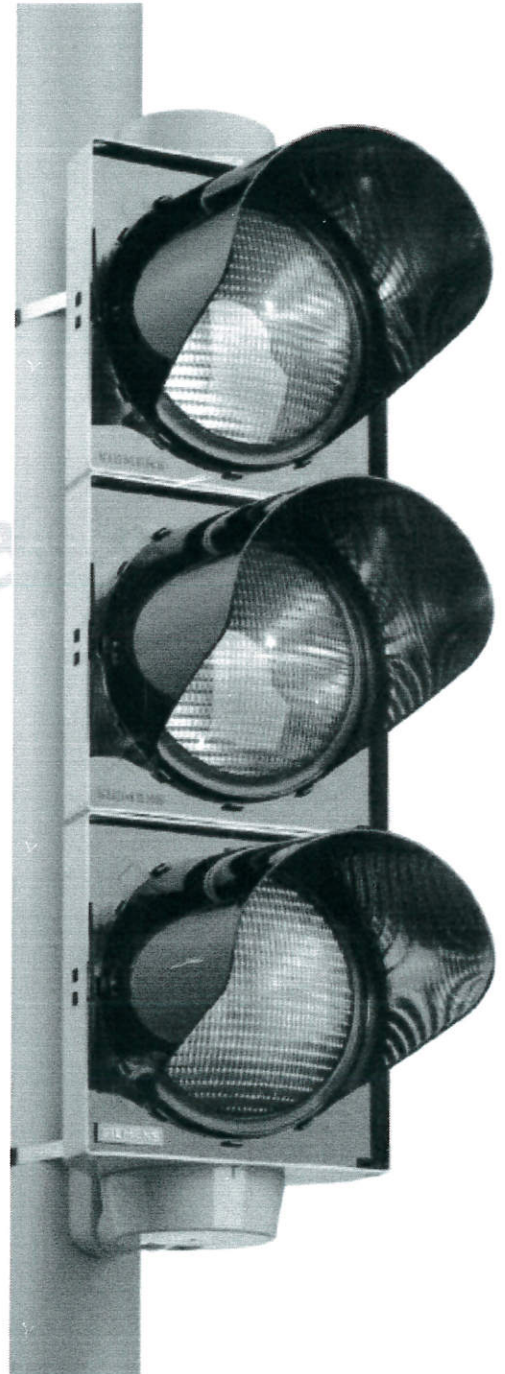
Signal heads with conventional signal lamps are used throughout the world and can be expanded with a wide selection of individual parts and accessories.

The product portfolio includes conventional high-voltage signal heads with 230 V signal lamps. Low-voltage technology (12 V) enables your energy consumption to be significantly reduced, right down to around 20 or 30 W.

## PLUS signal heads

The lamp circuits in signal heads with PLUS technology are switched decentrally in the signal heads themselves. This provides for marked reductions in the cabling outlay and in the work needed to take the units into operation. PLUS technology is available for 40 V LED and 12 V lamp designs.

- Millions of Siemens signal heads have proven their value in everyday use.
- They have demonstrated their capabilities in many different countries in the most adverse weather conditions.
- They blend very well into any urban situation and have been awarded with the seal of "Good Industrial Design".



## Siemens signal heads ... your choice

Signal heads are classified either as LED signal heads or conventional signal heads.

Siemens offers the following LED signal heads:

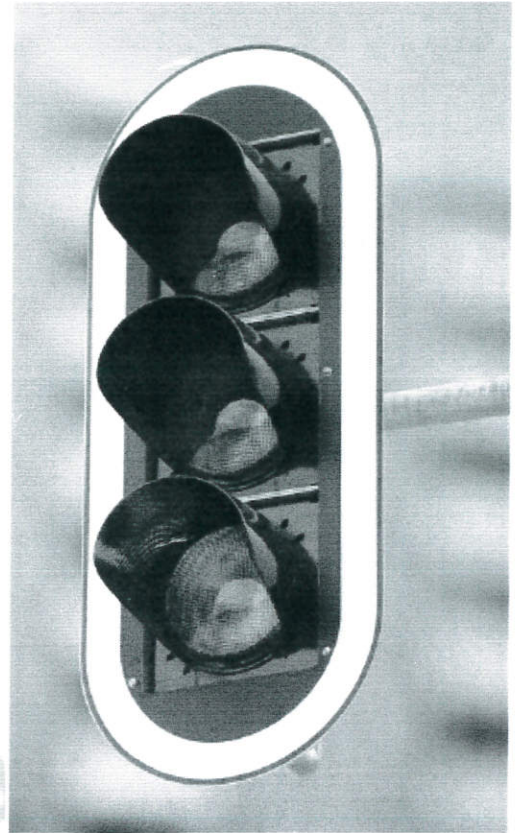
- Units with 230 V technology
- Units with 40 V technology

Siemens also offers the following conventional signal heads:

- Units with high voltage 230 V technology
- Units with low voltage 0 V technology

All LED signal heads from Siemens are equipped with a central light source comprising one or more high-performance LEDs. The light is refracted by a Fresnel and diffusing lens to obtain optimum emission characteristics. The signals can be easily seen from all angles and always show an homogeneous illumination.

The luminous intensity has been optimized to achieve a high level of recognition of both signals and symbols regardless of the environmental conditions. The luminous intensity is more



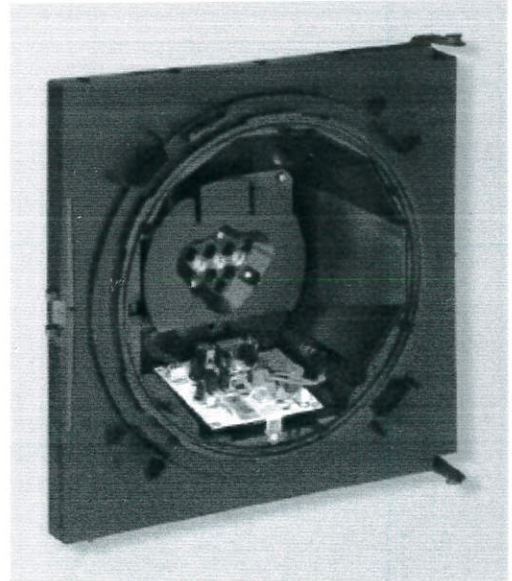
LED signal heads using 40 V technology and conventional signal heads with low voltage 0 V technology are also available as PLUS signal heads.

## LED signal heads

LED signal heads have considerable advantages over conventional signal heads and are used today in practically all new systems. Thanks to their modular design, existing systems can be refitted with LED signal head technology with a minimum of effort.

The benefits of Siemens LED signal heads at a glance:

- Brilliant optical properties
- Colorless lenses eliminate phantom color effects
- Phantom class 5 (for almost all colors and sizes)
- Energy savings of up to 90% as compared to conventional signal lamps
- High level of EMC immunity
- Optimized electrical interface for SIEMENS controllers
- Significantly longer life than conventional signal lamps
- Increased availability of your traffic signal systems





han adequate, even on bright days,  
while at night the symbols are not so  
rightly illuminated as to be difficult to  
recognize.

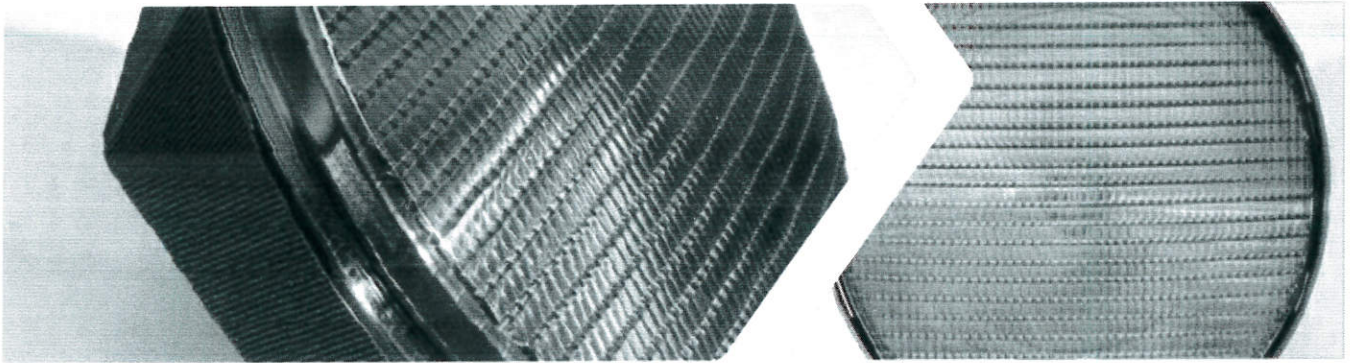
### safety technology

to ensure the safety of the traffic  
light system, each LED light source is  
equipped with an electronic monito-  
ring circuit that has been certified by  
the TÜV (the German safety standards  
authority). The current and voltage  
of the LEDs are continually monito-  
red. If the forced deactivation circuit  
registers values indicating that illu-  
mination performance conformant to  
standards can no longer be assured  
the current at the input is interrupted,  
thus enabling the controller to detect  
the fault in the LED unit.

*SILUX LED signal heads with background  
screen*

*SILUX LED insert, view of the i*





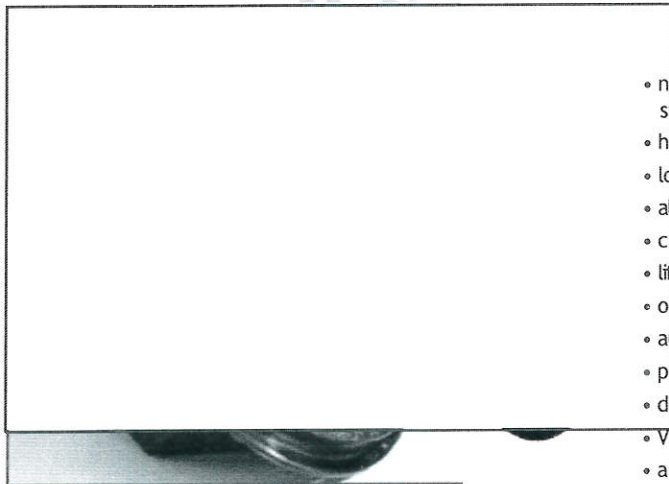
FUTURLED 3: the most successful generation of LED-based traffic signal modules

## FUTURLED3 TRAFFIC SIGNAL MODULES 230V AC

THE STANDARD FOR HIGHEST OPTICAL PERFORMANCE – EN12368

With more than 2,500,000 FUTURLED3 units sold, SWARCO FUTURIT impressively underscores its outstanding position and know-how in LED signalling technology. Over 10 years of experience in the development and manufacture of LED-based signals allow us to offer highly reliable, state-of-the-art products. The central light source combined with the dual lens system enables a brilliant and very uniform signal display.

### FUTURLED3: 230V AC – EN12368



- no LED dots visible, very uniform signal glow - central light source
- highest anti-phantom performance (class 5)
- lowest power consumption and brilliant light output
- all products traceable by serial number
- custom-made masks allow any symbol display
- life cycle > 5 years
- optimum heat balance reduces degradation to a minimum
- automatic light compensation in case of diode failure
- proven technology
- dimming function available
- VDE-compliant FUTURLED3 modules available
- also available with clear lens

FUTURLED3: custom-made masks available

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modules compliant to local norms available  
(UK, South Africa)  
optical monitoring available  
compatible with standard-conforming signal head housings

WARCO FUTURIT is ISO 9001:2000 certified and the world's  
no. 1 manufacturer of high quality traffic signals.



# TECHNICAL DETAILS: FUTURLED3 230V AC – EN12368

FUTURLED3		230V AC	
Diameter	Ø 100 mm	Ø 210 mm	Ø 300 mm
Luminous intensity acc. to EN12368	Not applicable	red > 200 cd amber > 200 cd green > 200 cd	red > 400 cd amber > 400 cd green > 400 cd
Optical performance acc. to EN12368	Not applicable	B2/1, W	B3/1, N
Colour acc. to EN12368		red 613.5 - 631 nm, amber 585 - 597 nm, green 498.5-508 nm, white 5000 - 7000 K	
Uniformity of Luminance acc. to EN12368	Not applicable	better than 1 : 2.5	better than 1 : 2.5
LED type		High Flux	
Phantom light class	Not applicable	Class 5	
Power Factor		> 0,9	
Operating Voltage bright mode/dimmed mode	196 - 265 V / n.a.	196 - 265 V / 160 V - 180 V (light output is reduced to app. 50 % of normal level if the input voltage is decreased)	
Frequency		45 - 55 Hz	
Power consumption: typically bright mode / dimmed mode	red, amber, green, white 5 W / n.a.	red, amber, green, white 12 W / 4 W red, amber, green, white 8 W / n.a.	
EMC		acc. EN 50293	
Cable		2 x 0.75 mm <sup>2</sup> ; 1 m	
Ambient temperature range acc. to EN12368		Class A, B, C	
Protection Class		Safety Class II acc. to EN 60598	
Tightness		IP 65 acc. to EN 60598	
Impact resistance		Class IR3; acc. to EN 60598-1	
Material of lens / housing		UV-stabilized polycarbonate	
Weight	< 0.25 kg	< 1.0 kg	< 1.5 kg
Dimensions (incl. front lens)	Ø 108 x 72 mm	Ø 210 x 117 mm	Ø 300 x 149 mm

## Specifications

### Key features

- 1/1.8" Progressive Scan CMOS
- 6MP Resolution
- Unique De-warping Image
- Low bitrate , Excellent low light performance
- 3D DNR, dWDR, ICR, HLC
- IR Range 10m
- Smart IR

### Dimensi



CAMERA	
Image Sensor	1/1.8" Progressive Scan CMOS
Min. illumination	Color 0.01Lux(AGC ON); BW 0 Lux(IR On)
Day & Night	ICR (IR Filter Auto)
Shutter Speed	1/5-1/20000
Auto Iris	Auto
Wide Dynamic Range	dWDR
Digital Noise Reduction	2D/3D
Lens	1.6mm
FOV	360 degrees
IR LED	6pcs
IR Range	10m
IMAGE	
Video Compression	H.264 High/Main/Baseline Profile, MJPEG
Bit Rate (CBR/VBR)	500kb-12000kb
Audio Compression	G.711 ,RAW_PCM
Max. Resolution	3072*2048@15fps
Dual Stream	Stream1 3072*2048@15fps ,1920*1920/1440*1440/1920*1080@25fps/30fps Stream 2 1024*1024/ 720*720/ D1@15fps
Image Setting	Rotate Mode, Saturation, Brightness, Contrast, Sharpness
De-warping	Fisheye, Fisheye+3, Fisheye+5, Fisheye+7, Panorama, 4PTZ
Mount Type	Ceiling / Table / Wall
HLC	Yes
DIS	N/A
ROI	N/A
Defog	N/A
NETWORK	
Network Protocols:	HTTP, HTTPS, TCP/IP, IPv4, IPv6, UDP/IP, RTSP, DHCP, NTP, PPPoE, Unicast and Multicast supported
Alarm Trigger	Network disconnect, Disk alarm, I/O alarm
RTSP Video	Standard RFC2326, Support Quick Time / VLC Player.
Security	User security authentication, Reset, Hardware Watch Dog
Web Language	English, Chinese
System Compatibility	Onvif, CGI, SDK
INTERFACE	
Ethernet	1 Ethernet (10/100 Base-T) RJ-45 Connector
Audio I/O	1ch Audio In, 1ch Audio Out
Alarm I/O	1ch Alarm In, 1ch Alarm Out
RS485	N/A
BNC Output	N/A
Reset Button	Yes
Edge Storage	Micro SD/SDHC/SDXC slot ,Max 64GB
GENERAL	
Power Supply	AC24V / DC12V / POE IEEE 802.3af
Power Consumption	5W IR LED OFF; 8W IR LED ON
Operating Temperature	-20°C~+60°C
Operating Humidity	0% - 90% RH
Ingress Protection	IP66
Approvals	CE / FCC
Product Dimensions	φ160*46.8mm
Product Weight	700g



## Specifications

### Key features

- 1/1.8" Progressive Scan CMOS
- 6MP Resolution
- Unique De-warping Image
- Low bitrate , Excellent low light performance
- 3D DNR, dWDR, ICR, HLC
- IR Range 10m
- Smart IR

### Dimensi

Q tidal flow operation



Reddit



Giving drivers an extra lane  
during rush hour : oddlysatisfy...



**PROPOSED CONSTRUCTION SCHEDULE**

The bidder shall provide 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.

<u>Description</u>	<u>Time for Completion</u>
1) Whole works	_____ days
2) Part-A	_____ days
3) Part-B	_____ days
4) _____	_____ days
5) _____	_____ days

### CONSTRUCTION CAMP AND HOUSING FACILITIES

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

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

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

1. Site Preparation (clearing, land preparation, etc.).
2. Provision of Services.
  - a) Power (expected power load, etc.).
  - b) Water (required amount and system proposed).
  - c) Sanitation (sewage disposal system, etc.).
3. Construction of Facilities
  - a) Contractor's Office. Workshop and Work Areas (areas required and proposed layout, type of construction of buildings, etc.).
  - b) Warehouses and Storage Areas (area required, type of construction and layout).
  - c) Housing and Staff Facilities (Plans for housing for proposed staff, layout, type of construction, etc.).
4. Construction Equipment Assembly and Preparation (detailed plans for carrying out this activity).
5. Other Items Proposed (Security services, etc.).





## Appendix-I 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>
<b>1</b>	<b>2</b>



(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 (GoS) 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 or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from, from Procuring Agency (PA) except that which has been expressly declared pursuant hereto.

[name of Contractor] accepts full responsibility and strict liability that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Contractor] accepts full 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 times 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]





**FORMS**

**BID SECURITY  
PERFORMANCE SECURITY  
CONTRACT AGREEMENT  
MOBILIZATION ADVANCE GUARANTEE  
INDENTURE BOND FOR SECURED ADVANCE**



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

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

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

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

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

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

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

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

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

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

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

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

SURETY (Bank)

WITNESS:

Signature \_\_\_\_\_

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

Name \_\_\_\_\_

\_\_\_\_\_

Title \_\_\_\_\_

Corporate Secretary (Seal)

Corporate Guarantor (Seal)

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

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



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

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

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

Expiry date \_\_\_\_\_

[Letter by the Guarantor to the 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 bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

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

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the 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 Clause 49, Defects Liability, of Conditions of Contract are fulfilled.

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

We, \_\_\_\_\_ (the Guarantor), waiving all objections and defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the 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 Procuring Agency'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 witnessed-- as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda, if any, except those parts relating to Instructions to bidders shall be deemed to form and be read and construed as part of this Agreement, viz:
  - (a) The Contract Agreement;
  - (b) The Letter of Acceptance;
  - (c) The completed Form of Bid;
  - (d) Special Stipulations (Appendix-A to Bid);
  - (e) The Special Conditions of Contract – Part II;
  - (f) The General Conditions – Part I;
  - (g) The priced Bill of Quantities (Appendix-D to Bid);
  - (h) The completed Appendices to Bid (B, C, E to L);
  - (i) The Drawings;
  - (j) The Specifications.
  - (k) \_\_\_\_\_ (any other)
3. In consideration of the payments to be made by the procuring agency to the Contractor as hereinafter mentioned, the Contractor hereby 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 Contactor

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

Signature of Procuring Agency

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

Signed, Sealed and Delivered in the presence of:

Witness:

\_\_\_\_\_

(Name, Title and 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 fulfilment 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 procuring agency 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)



## **PART I - GENERAL CONDITIONS OF CONTRACT**

The General Condition of the Contract shall be based on the FIDIC condition of the contractor for works of civil construction, part -1 fourth edition (1987) , reprinted in 1988, with editorial amendments , reprinted in 1992 with further amendments.

These conditions of contract are published by the "FEDERATION OF INTERNATIONALE DES INGENIEURS-CONSEILS"(FIDIC) ,FIDIC Secretariat ,P.O Box 86,1000 Lausanne 12, Switzerland,email:fidic.pub@fidic-FIDIC.org/bookshop and can obtained from the same for the use of this Contract.



## **PART II - SPECIAL /PARTICULAR CONDITIONS OF CONTRACT**

### **1.1 Definitions**

- 1.1.(a).(i) “Employer” means the Procuring Agency i.e. Sindh Mass Transit Cell, Transport and Mass Transit Authority, Government of Sindh.
- 1.1.(a).(iv) “Engineer” means the officer in-charge of the project designated from the Employer / Procuring Agency.
- 1.1.(a).(v) “Engineer’s Representative” implies to the Employer’s team of officers working with and reporting to the Engineer.

### **41.1. Commencement of Works**

The contractor shall commence the works on site within 14 days from the date of receipt of Engineer’s written Notice to Commence.

### **43.1. Time For Completion of works.**

The Contractor shall be responsible to complete the entire works as per Specifications / BOQ of the contract within or before 270 Calendar days i.e. (09 months) from the receipt of Engineer’s Notice to commence

### **10.1 Performance Security**

The contractor shall provide a performance security equal to 5% of the contract price in the form of Bank Guarantee, as stated in the Letter of Acceptance. The cost of complying with this clause shall be borne by the Contractor.

### **10.4 Performance Security Binding on Variation and Changes**

The performance security shall be binding irrespective of changes in the quantities or variations in the Works or extension in Time of Completion of the Works which are granted or agreed upon under the provisions of the Contract.

### **47.1 Liquidated Damages For Delay**

The contractor shall pay to the Employer a sum of 0.1% of the contract price for each day of delay in completion of the works subject to a maximum of 10 % of contract price, stated in the Letter of Acceptance.



#### **49.1 Defects Liability Period**

The Defects Liability Period shall be 12 months from the date of Taking Over Certificate.

#### **49.5 Extension Of Defects liability Period.**

The provision of this sub clause shall apply to all replacement or renewals of plant and Equipment carried out by the contractor to remedy defects and damage as if the replacement and renewals had been taken over on the date they were completed. The defects liability period for the works shall be extended by a period equal to the period during which the works cannot used by reason of a defect or damage. If only a part of the works is affected the defects liability period shall be extended only for that part. In neither case shall the defects liability period extend beyond 2 years from the date of taking over.

#### **60.2 Percentage of Retention Money**

The percentage retention shall be equal to 5% of the amount of Interim Payment Certificate. The deducted retention money shall be paid to contractor after taking over certificate /successfully completion of works verified by the Engineer.  
The minimum amount of interim payment certificates shall be 3% of the contract price.

#### **60.11 Financial Assistance to the Contractor**

Financial assistance shall be made available to the Contractor by the Employer by providing an interest-free Mobilization Advance up to 10% of the Contract Price in two equal parts [ first part within 14 days after signing of the Contract Agreement or date of receipt of Engineer's notice to commence whichever is earlier & second part within 40days from the date of payment of first part *subject* to the satisfaction of the Engineer as to the state of mobilization of the Contractor] upon submission by the Contractor of a Mobilization Advance Guarantee / Bond for the full amount of the Advance in the specified form from a Scheduled Bank in Pakistan.

This Mobilization Advance shall be recovered in equal installments along with the interim payments.

#### **60.12 Withholding of Payment**

The Employer may withhold the whole or a part of any payment requested by the Contractor if it is necessary in the opinion of the Employer to protect himself against losses on account of the following reasons.

- i) Defective work not rectified.
- ii) Non-fulfilment of any due demand and guarantee.



- iii) Any third party claims, raised against the Employer, in the case of Contractor's or its sub-contractor's fault in connection with the Works.
- iv) Damages caused by the Contractor or his personnel or its sub-contractor, to the Employer or to a third party on the Site.
- v) Non-Fulfillment of the Contract by the Contractor.

### **63.1 Default of Contractor**

The following para is added at the end of the Sub-Clause: Provided further that in addition to the action taken by the Employer against the Contractor under this clause, the Employer may also refer the case of default of the Contractor to Pakistan Engineering Council for punitive action under the relevant laws.

### **23.2. Third Party Insurance including Employers property**

Third Party Insurance shall be equal to 3% of the contract price.

### **73.1 Payment of Income Tax**

The Contractor, Subcontractors and their employees shall be responsible for payment of all their income, super tax and other taxes on income arising out of the contract and the rates and prices stated in the Contract shall be deemed to cover all such taxes including Sindh Sales Tax on Services.

### **73.2 Cost inclusive of duties and taxes**

The rates and prices stated in the priced Bill of Quantities shall be deemed to include every element of duty or tax leviable on or in relation to the production, import, purchase, sale, delivery and transportation of materials and to the bringing thereof to the Site and no such duty or tax shall be separately reimbursable.

### **74.1 Integrity Pact**

If the Contractor or any of his Subcontractors, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Appendix L, then the Employer shall be entitled to:

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

The termination under sub-para (b) of this sub-clause shall proceed in the manner prescribed under sub-clause 63.1 to 63.4 and the payment under sub-clause 63.3 shall be made after having deducted the amounts due to the Employer under sub-para (a) and (c) of this sub-clause.

#### **76.1 Liability of contractor**

The contractor or his sub-contractor or assigns shall follow strictly, all relevant labour laws including the Workmen's Compensation Act and the Employer shall be fully indemnified for all claims, damages etc. arising out of any dispute between the Contractor, his Sub Contractors or assigns and the labor employed by them.

#### **77.1 Joint and Several Liability**

If the Contractor is a Joint Venture of two or more persons, all such persons shall be jointly and severally bound to the Employer for the fulfilment of the terms of the Contract and shall designate one of such persons to act as leader with authority to bind the joint venture. The composition or the constitution of the joint venture shall not be altered without the prior consent of the Employer.

#### **78.1 Details to be Confidential**

The Contractor shall treat the details of the Contract as private and confidential, save in so far as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the prior consent in writing of the Employer.

#### **79.1 Precaution for Pollution**

Precautionary measures and facilities shall be provided by the Contractor at his own cost in carrying out the Works including dumping and disposal of spoils in sea, river and other areas, in the manner approved by the Engineer to prevent environmental pollution.

#### **80.1 Coordination of Work at Site**

The Contractor shall take cognizance that during the execution of the project, other Contractors may be working concurrently on the site as well.

All works of his responsibility shall be coordinated by the Contractor so as to give the necessary facilities to other Contractors or their workmen or any other employees, who execute or supervise any work on the Site.

The Contractor shall ensure that necessary safety precautions will be observed and interferences shall be avoided especially for the works executed side-by-side by different Contractors. All necessary allowances for coordination of work at site shall be made in the prices and work programme of the Contractor.

Due consideration must be given to permit access to sections of the work as required by the other contractors for the execution of their works. With a view to coordinate the works, the Engineer or his representative may from time to time direct the order of the work to be carried out.