OFFICE OF THE
EXECUTIVE ENGINEER, PROVINCIAL HIGHWAY DIVISION
JAMSHORO

☎022-3874465 NO: TC/G-55/ 972/2026 Dated: - 25 /05 /2026

NOTICE INVITING TENDERS (EPADS SYSTEM)

01. This office invites E-Bid through "E-Pak Acqultion and Disposal System (EPADS)" on website http://portalsindh.eprocure.gov.pk/ for the following works are invited from the interested persons / contractors / companies / firms agencies registered with PPRA, EPAD and Pakistan Engineering Council (PEC) in relevant catagoery, who has valid renewal limit of catagory of follwoing works.

S#	Name of Work	Estimate Cost Rs: (M)	Earnest Money 5% Rs: (M)	Tender Fee	Time of Completion	PEC Category
01	**CONSTRUCTION OF PRE-STRESSED BRIDGE I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0/3 (0.60 KM) DISTRICT JAMSHORO**	166.967 (M)	8.348 (M)	5000/-	24 Months	C4 & Above

02. HOW TO APPLY:-

a) Bidding documents containing detailed terms and condition can be views and download from http://portalsindh.eprocure.gov.pk/

b) Bids shall be submitted electronically through the "EPADS" only. manual submission will not be entertained.

c) Intrested bidders must ensure their registration on "EPADS" at http://portalsindh.eprocure.gov.pk/

e) The original instrument of Tender Fee / bid security in the shape of call deposit / pay order & E-Stamp Paper shall be delivered to the procurement Agency on or before the deadline for submission of E-Bids.

03. PROGRAMME RECEIPT AND OPENING OF TENDERS:-

S. No.	Particulars	1st Attempt	2nd Attempt (In case of un-responded tenders)
1.	Bidding document can be downloaded after hoisted on SPPRA "EPADS" website @ 10:00 A.M physical bids will not be issued / accepted	18/06/2026	03/07/2026
2.	Tender will be received at 10:30 A.M and open on the same day at 11:00 A.M.	18/06/2026	03/07/2026

04. MANDATORY CONDITIONS:-

I. Each page Numbering of the Technical proposal must be attested by the owner of firm / company along with its stamp.

II. Bid validaty period is 90 days.

III. Conditional tenders will be rejected.

05. ELIGIBILITY CRIETERIA:-

01. Firm/Contractors must be registered with Pakistan Engineering Council (PEC Valid upto June-2026) in relevant category with specialization Code in CE-01, CE-02,CE09, CE10, Supported by PEC valid registration certificate.

02. Experience in Similar Nature of works (S) Executed during last Five (5) years:

    (i) At least one similar nature of work having minimum cost 80% of the estimate cost of the work;

    (ii) At least two (02) similar nature works each having minimum cost 50% of the estimate cost.

03. At least 01 work **INHAND** having same specification and nature having equal or more cost **OR** quantum (in terms of Quantities) duly supported with certified copies of Detailed working estimate and SPPRA ID's showing Bid Evaluation Report.

04. Bio data of Engineering / Technical staff (Civil) work and Electric Work with the firm along with Attested CVs, which showing employment with firm.

05. Average annual financial turnover not less than equivalent cost of the Scheme/Project last five (05) years (Turn over will be evaluated from Annual FBR Returns and Audit Reports).

06. Registration with Income Tax Department (NTN Certificate) with Active status with FBR.

07. SIndh Revenue Board (SRB Certificate should be attached) supported by copies of Income Tax return receipts of the last Five (5) years. Must be active Tax Payer Status.

08. Litigation history in which the decision has been given against or in favor of the firm (s). List and give brief details of arbitration / litigation / court cases if any in case of no such cases enclose an affidavit duly attested that the firm has not been involved in any litigation arbitration with any Government Departments.

09. Bank Account Statement in the name of the Bidders Firm for the last Five (5) years must be submitted with the Technical Proposal.

10. Annual audit reports of last Five (5) years from (ICAP) registered with audit firm. Audit report issued other than (ICAP) registered audit firms will not be accepted.

11. List of Machinery and equipment available with documentary evidence of its ownership/rented.

12. Documentary evidence showing the contractor / firm owns or rented an Asphalt Plant along with its related Machinery such as Tandem, PTR and Paver machine (Applicable on Asphalt Concrete works).

13. Evaluation Criteria, sub-criteria, for the evaluation of Full Technical Proposals is based on Yes / No OR Pass/Fail if a bidder fails to obtain yes or pass in any criteria or sub-criteria then he or his firm shall not be qualified

14. Bid Security shall be in shape of Call Deposit Receipt (CDR) only from any scheduled Bank of Pakistan

15. Fresh undertaking / Affidavit on E-Stamp Paper duly attested Rs: 500/- that the bidder and its firm have never been black listed by any Government, Semi-Government, autonomous or state owned organization and their cases regarding blacklisting or not under trial by any Court of Law.

16. Joint venture will not be allowed.

17. The representative should have authority on Judicial E-Stamp Paper from owner. Authority other than Judicial E-Stamp paper will not be accepted and such tender will Not be entertained.

Evaluation criteria sub- criteria, for the evaluation of full Technical Proposals is based on Yes / No OR **pass / fail;** if a bidder fails to obtain Yes or Pass in any criteria or sub-criteria then he / she / it shall not be qualified.

The competent authority resaves the right to reject any or all application as per SPPRA Rules-2010 (amended upto date).

in case, Government announces any Public Holiday on schedule dates, the tender will be opened on the next working day, as per usual schedule in accordance with Rule-41(B) of SPPRA 2010 (amended upto date).

OFFICE ADDRES:

Executive Engineer, Provincial Highway Division Jamshoro, situated at opposite Irrigation Workshop near NADRA Office Main Road Kotri**.** Telephone No.: **022-3874465.**

EXECUTIVE ENGINNER
PROVINCIAL HIGHWAY DIVISION
JAMSHORO

Copy F.W.Cs to:-

1. The Chief Engineer (Highways), Hyderabad, for favour of his kind information.
2. The Director Information (Advertisement) Public Relation Department Block-96 Sindh Secretariat Karachi for information alongwith copies of the Advertisement for its publication in Mass circulating Newspapers in insertion only.
3. The Director (A&F) Sindh Public Procurement Regulatory Authority, Barrack No.08, Sindh Secretariat No.04-A, Court Road Karachi, alongwith required Tender Documents with CD write for favour of his kind information and up-loading on SPPRA website.
4. The Superintending Engineer, Provincial Highways Circle, Hyderabad, for favour of his kind information.
5. The Members of Procurement Committee.
6. The Complaint Redressal Committee Members
7. Assistant Engineers under Provincial Highway Division, Jamshoro.
8. Notice Board / Drawing Branch for information.

EXECUTIVE ENGINNER
PROVINCIAL HIGHWAY DIVISION
JAMSHORO

WORKS & SERVICES DEPARTMENT

GOVERNMENT OF SINDH

BIDDING DOCUMENT

FOR

CONSTRUCTION OF PRESTRESSED BRIDGE I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0-0/3 (0.60 KM) DISTRICT JAMSHORO

"Construction of Prestressed Bridge I/C Approaches for Village Kachy Wara Radhan Taluka Sehwan Mile 0/0-0/3 (0.60 KM) District Jamshoro"

SINGLE STAGE - TWO ENVELOPE BIDDING PROCEDURE

ELECTRONIC BIDDING PROCEDURE (EPADS)

JUNE 2026

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INVITATION FOR BID

INVITATION FOR BIDS

Date: ________________

Loan / Credit No. (if any): NIT Ref. TC/G-55/972/2026

Bid Reference No. (if any): NIT Ref. TC/G-55/972/2026

1. The **Executive Engineer, Provincial Highway Division Jamshoro** ("the Employer") has received the funds from Annual Development Programme (PSDP) ADP Scheme No. TC/G-55/972/2026, titled "**Construction of Prestressed Bridge I/C Approaches for Village Kachy Wara Radhan Taluka Sehwan Mile 0/0-0/3 (0.60 KM) District Jamshoro"** towards the cost of **Construction of Prestressed Bridge I/C Approaches for Village Kachy Wara Radhan Taluka Sehwan Mile 0/0-0/3 (0.60 KM) District Jamshoro.** It is intended that a part of the proceeds of this funding will be applied to eligible payments under the Contract for the works, which involves construction of one bridge including approaches.

2. The Employer invites sealed bids on **Electronic Single Stage Bidding Procedure through EPADS (E-Pak Acquisition and Disposal System)**, in accordance with Sindh Public Procurement Rules 2010. Bids shall be open and evaluated, in accordance with Bidding Documents.

3. Bidders may obtain further information and acquire the Bidding Documents from the office of the Employer, at **Office of The Executive Engineer, Provincial Highways Division, Jamshoro, near NADRA Office Kotri**.

4. A complete set of Bidding Documents may be obtained by an interested Bidder upon submission of a written application to the above office and payment of a non-refundable Tender fee of **PKR 5,000 (Pak Rupees Five Thousand)**. The documents can also be downloaded from the official SPPRA website; however, in such a case, the Bidder shall be required to pay the non-refundable Tender Fee through a **Pay Order** issued by any Scheduled Bank of Pakistan in favor of the Executive Engineer, Provincial Highways Division, Jamshoro.

5. Bids must be accompanied by a Bid Security in the amount of **PKR 8,348,000** (**Pak Rupees Eight Million Three Hundred Forty-Eight Thousand**) in the form of **Call Deposit** only from any Scheduled Bank of Pakistan in favor of the **Executive Engineer, Provincial Highway Division, Jamshoro** on account of (Name of Firm), and must be delivered to **Office of The Executive Engineer, Provincial Highways Division, Jamshoro, near NADRA Office Kotri** at or before **1030** hours, on **18th June 2026**. Bids will be opened at **1100** hours on the same day, in the presence of Bidder's representatives who choose to attend at the same address.

INSTRUCTIONS TO BIDDERS (IB)

INSTRUCTIONS TO BIDDERS
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INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1. Scope of Bid

1.1 The Employer as defined in the **Bidding Data** hereinafter called "the Employer" 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 the **Bidding Data**.

IB.2. Source of Funds

2.1 "The Employer" allocated budget from its own resources for the work / project.

IB.3. Eligible Bidders

3.1 This Invitation for Bids is open to all Bidders meeting the following requirements at the time of submission of Bids and thereafter:

(a) Duly prequalified for this bidding process;

(b) Duly licensed by the Pakistan Engineering Council (PEC) in the category relevant to the value of the Works in the relevant field of specialization.

However, a Foreign Constructor can submit provisional licence with its Bid but the Foreign Constructor will be required to submit standard licence after award of Contract and before start of work.

Foreign Constructor shall not be eligible to participate in bidding individually. Foreign Constructor shall enter into joint venture with Pakistani Constructor registered with the Pakistan Engineering Council in equivalent/compatible category and submit the joint venture agreement to the Employer before participating in bidding in accordance with PEC Construction and Operation of Engineering Works Bye-laws, 1987;

(a) Pakistani Constructor must be on Active Taxpayer List of the Federal Board of Revenue and provincial revenue authority/ board where applicable; and

(b) All partners constituting the Bidder including proposed subcontractors do not appear in the list of debarred/ blacklisted firms and individuals on the websites of PEC and Federal & Provincial Procurement Regulatory Authorities and have not been declared debarred/ blacklisted by foreign country, international organizations or other foreign institutions.

IB.4. Eligible Materials, Equipment and Services

4.1 All materials, equipment and services to be supplied under this Contract shall have their origin in eligible countries described under paragraph 4.4 hereunder.

4.2 For purpose of this Clause, "origin" means the place where the Goods are mined, grown or produced or from where the ancillary services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

4.3 The origin of Goods and Services is distinct from the nationality of the Bidder.

4.4 Eligible countries to participate in this bidding process are those which have been notified by Ministry of Interior, Government of Pakistan as Business Friendly Countries (BVL); information can be accessed through following link:
http://www.dgip.gov.pk/Files/Visa%20Categories.aspx#L

IB.5. One Bid per Bidder

5.1 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.17) will be disqualified.

IB.6. Site Visit

6.1 The Bidders are advised to visit and examine the Site of Works and its surroundings and obtain for themselves on their own responsibility 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 Employer 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 Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

B. BIDDING DOCUMENTS

IB.7. Contents of Bidding Documents

7.1 The Bidding Documents, in addition to Invitation for Bids, are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9:

1. Instructions to Bidders;
2. Bidding Data;
3. Evaluation Criteria and Qualification Updating Forms;
4. General Conditions (GC);
5. Particular Conditions (PC):
   Part A - Contract Data;

Part B - Special Provisions;

6. Specifications (SP):
   Part A - Specific Provisions;
   Part B - Technical Provisions;
7. Letter of Bid;
8. Schedules to Bid;
9. Standard Forms:
   (i) Form of Bid Security;
   (ii) Letter of Acceptance;
   (iii) Form of Contract Agreement;
   (iv) Form of Performance Security;
   (v) DAAB Agreement;
   (vi) Form of Mobilization Advance Guarantee;
10. Drawings.

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

IB.8. Clarification of Bidding Documents, Pre-Bid Meeting

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

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

8.3 The Employer may, on his own or at the request of any prospective Bidder(s), 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, are as stipulated in the **Bidding Data**. All prospective Bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.

8.4 The Bidders are requested to submit questions, if any, in writing so as to reach the Employer not later than seven (7) days before the proposed pre-bid meeting.

8.5 Minutes of the pre-bid meeting, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bidding Documents. 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 Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.

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

IB.9. Amendment of Bidding Documents

9.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by issuing addendum.

9.2 Any addendum thus issued shall be part of the Bidding Documents listed in Sub-Clause IB.7.1 hereof and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective Bidders shall acknowledge receipt of each addendum in writing to the Employer.

9.3 Such addendum shall be issued not later than number of days prior to the deadline for submission of bids, specified in the **Bidding Data**. To afford prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend the deadline for submission of bids in accordance with Clause IB.20.

C. PREPARATION OF BIDS

IB.10. Cost of Bidding

10.1 The Bidders shall bear all costs associated with the preparation and submission of their respective bids and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

IB.11. Language of Bid

11.1 The Bid and all correspondence and documents related to the Bid exchanged by a Bidder and the Employer shall be in the Bid language stipulated in the Bidding Data and Particular Conditions of Contract. Supporting documents and printed literature furnished by the Bidders may be in any other language provided the same are accompanied by duly certified 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.12. Documents Comprising the Bid

12.1 Each Bidder shall:

(a) submit duly filled in, signed and stamped Letter of Bid and completed Schedules to Bid as required, including priced Bill of Quantities, in accordance with Clause IB.18 hereof;

(b) submit Bid Security in accordance with Clause IB.16 hereof;

(c) submit alternative proposal, if permissible in accordance with Clause IB.17;

(d) submit a written power of attorney authorizing the signatory of the Bid to act for and on behalf of the Bidder. The name and position held by each person signing the authorization must be typed or printed below the signature;

(e) Documentary evidence established that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.

(f) submit the Qualification Forms duly filled in, signed and stamped along with requisite attachments, to establish that the Bidder meet the Eligibility and Qualification Criteria as provided in the Section "Evaluation Criteria and Qualification Forms";

(g) furnish a technical proposal taking into account the various Schedules to Bid, specially the following:

(h) Schedule-C to Bid, Proposed Construction Schedule; Schedule-D to Bid, Method of Performing the Work; Schedule-E to Bid, List of Major Equipment;

(i) Schedule-F to Bid, Organization Chart for Supervisory Staff; and other pertinent information, such as mobilization programme, etc.

12.2 Bids submitted by a joint venture of two (2) or more firms specified in **Bidding Data**, shall comply with the following requirements:

(a) the bid, and in case of a successful bid, the Form of Contract Agreement shall be signed by all members so as to be legally binding on all partners;

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

(c) the partner-in-charge shall always be duly authorized to deal with the Employer regarding all matters related with and/or incidental to the execution of Works as per the terms and Conditions of Contract and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the joint venture;

(d) all partners of the joint venture shall at all times and under all circumstances be liable jointly and severally for the execution of the Contract in accordance with the Contract terms and a statement to this effect shall be included in the authorization mentioned under Sub- Para(b) above as well as in the Letter of Bid and in the Form of Contract Agreement (in case of a successful bid); and

(e) a copy of the agreement entered into by the joint venture partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the Contract and can give valid receipts on behalf of the joint venture, the proportionate participation and corresponding duties & responsibilities 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 Employer.

12.3 Bidders shall also submit proposals of work methods and schedule, in sufficient detail to demonstrate the adequacy of the Bidders' proposals to meet the technical specifications and the completion time referred to in Sub-Clause IB.1.2 hereof.

IB.13. Bid Prices

13.1 The price and discount if any quoted by the Bidders in the Letter of Bid and in the Bill of Quantity shall conform to the requirement specified below:

13.2 The Bidder shall quote any discounts and the methodology for their application.

13.3 If bids are being invited for individual lots (contracts) or for any combination of lots, the Bidders can offer discounts for the individual lots (contracts) as well as for award of more than one Contract and shall specify in their bid.

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

13.5 The Bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a Bidder will not be paid for by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.

13.6 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 days prior to the deadline for submission of bids shall be included in the rates and prices and the total Bid Price submitted by a Bidder.

Additional/reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be reimbursed/ deducted as per Sub Clause 13.6 [Adjustment for Changes in Laws] of the Conditions of Contract.

13.7 The rates and prices quoted by the Bidders are subject to adjustment during the performance of the Contract in accordance with the provisions of Sub-Clause 13.7 [Adjustments for Changes in Cost] of the General Conditions of Contract. The Bidders shall furnish the prescribed information for the price adjustment formulae in Schedule-A to Bid, and shall submit with their bids such other requisite supporting information if required under the said Schedule.

IB.14. Currencies of Bid and Payment	14.1	The unit rates and the prices shall be quoted by the Bidder entirely PKR. A Bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country (referred to as the "Foreign Currency Requirements") shall indicate in Table III of Schedule-A to Bid the proportion of the Bid Price (excluding Provisional Sums) needed by him for the payment of such Foreign Currency Requirements; in such case the unit rates and the prices shall be quoted by the Bidder in Equivalent PKR.
	14.2	The rates of exchange to be used by the Bidder for currency conversion shall be the TT Selling Rates published or authorized by the State Bank of Pakistan prevailing on the date twenty eight (28) days prior to the deadline for submission of bids. Such rates shall be notified by the Employer not later than fourteen (14) 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.15. Bid Validity	15.1	Bids shall remain valid for the period stipulated in the Bidding Data after the date of Bid Opening specified in Clause IB.23.
	15.2	In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the Bidders extend the period of validity for a specified additional period which normally may not be more than the original bid validity period. The request and the responses thereto shall be made in writing. A Bidder may refuse the request without forfeiting his Bid Security. A Bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause IB.16 in all respects.
IB.16. Bid Security	16.1	Each Bidder shall furnish, as part of his bid, a Bid Security in original form in the amount stipulated in the **Bidding Data** in PKR or an equivalent amount in a freely convertible currency.
	16.2	The Bid Security shall be, at the option of the Bidder, in the form of Call Deposit Receipt (CDR)/ Pay Order or a Security issued in the prescribed form included in the Bidding Documents, by (a) a Scheduled Bank in Pakistan or (b) a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan or (c) an Insurance Company listed in the **Bidding Data** and rated by PACRA/VIS of rating as provided in Table below in favour of the Employer valid for a period 14 days beyond the Bid Validity date. The Bid Security of Joint Venture shall be in the name of Joint Venture or Lead/either Firm of the JV or in ratio of shares of the individual JV partners, submitting the bid.

Bid Price (In Eq. million PKR)	Minimum Rating of Insurance Companies

Up to 1000	A (+)
1001 to no limit	AA
[Note: Insurance Company includes Joint Ventures of Insurance Companies also]	

16.3 Any Bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.

16.4 The Bid Securities of the Bidders except the lowest three will be returned by the Employer within twenty-eight (28) days from the opening of Bids, provided a Bidder requests for the return of its Bid Security, or upon the expiry of original validity of Bid Security or as extended, whichever is earlier.

16.5 The Bid Security of the lowest three Bidders including the successful Bidder will be returned when the successful Bidder has furnished the required Performance Security.

16.6 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.28.2 hereof; or

(c) in the case of successful Bidder, fails to furnish the required Performance Security.

16.7 In case of annulment, all Bids submitted and specially, Bid securities, shall be returned to the Bidders within 14 days of annulment.

IB.17. Alternative Proposals by Bidder

17.1 Unless otherwise specified in the **Bidding Data**, alternative proposal(s) shall not be considered.

17.2 Should any Bidder consider that he can offer any advantages to the Employer by a modification to the designs, specifications or other conditions, he may, in addition to his Bid to be submitted in strict compliance with the Bidding Documents, submit any alternative proposal(s) containing (a) relevant design calculations; (b) technical specifications; (c) proposed construction methodology; and (d) any other relevant details/conditions, provided always that the total sum entered on the Letter of Bid shall be that which represents complete compliance with the Bidding Documents.

17.3 Alternative proposal(s), if any, of the Bidder having submitted most advantageous Bid only may be considered by the Employer as the basis for the award of Contract to such Bidder.

IB.18. Format and Signing of Bid

18.1 Bidders are particularly directed that the amount entered on the Letter of Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.

18.2 All Schedules to Bid are to be properly completed and signed.

18.3 No alteration is to be made in the Letter of Bid nor in the Schedules 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 in the forms completely and without alterations one (1) original and number of copies, specified in the **Bidding Data**, of the documents comprising the Bid as described in Clause IB.12 and clearly mark them "ORIGINAL" and 'COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.

The Bidder shall also provide complete searchable PDF versions as well as Word, Excel, etc., versions of the Bid if so required in the **Bidding Data**.

18.5 The original of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder pursuant to Sub-Clause IB.12.1(d) hereof. All pages of the Bid shall be initialled and stamped by the person or persons signing the bid.

18.6 The Bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the Employer, or as are necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Bid.

18.7 Bidders shall indicate in the space provided in the Letter of Bid their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.

18.8 Bidders should retain a copy of the Bidding Documents and the Bid as their file copy.

18.9 All documents executed outside Pakistan required to be submitted with the Bid must be certified by Pakistani Embassy in the respective country (ies).

D. SUBMISSION OF BIDS

IB.19. Sealing and Marking of Bids

19.1 Each Bidder shall submit his Bid as under:

(a) ORIGINAL and each copy of the Bid shall be separately sealed and put in separate envelopes and marked as such.

(b) The envelopes containing the ORIGINAL and copies will be put in one sealed envelope and addressed / identified as given in Sub Clause IB.19.2 hereof.

19.2 The inner and outer envelopes shall:

(a) be addressed to the Employer at the address provided in the **Bidding Data**;

(b) bear the specific identification of this bidding process as specified 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 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 Employer 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 Employer at the address specified no later than the time and date stipulated in the **Bidding Data**.

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

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

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

20.2 The Employer may, at his discretion, extend the deadline for submission of Bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the Bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

IB.21. Late Bids

21.1

(a) Any Bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.20 shall be declared late, rejected and returned unopened to such Bidder.

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

IB.22. Modification, Substitution and Withdrawal of Bids

22.1 Any Bidder may modify, substitute or withdraw his Bid after Bid submission provided that the modification, substitution or written notice of withdrawal is received by the Employer prior to the deadline for submission of bids.

22.2 The modification, substitution, or notice for withdrawal of any Bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked “MODIFICATION”, “SUBSTITUTION” or “WITHDRAWAL” as appropriate.

22.3 No Bid may be modified by a Bidder after the deadline for submission of Bids except in accordance with Sub Clauses IB.22.1 and 28.2.

22.4 Withdrawal of a Bid during the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified in the Letter of Bid may result in forfeiture of the Bid security in pursuance to Clause IB.16.

E. BID OPENING AND EVALUATION

IB.23. Bid Opening

23.1 The Employer will open the Bids including withdrawals, substitution and modifications made pursuant to Clause IB.22, in the presence of Bidders’ representatives who choose to attend, at the time, date and location stipulated in the **Bidding Data**. The Bidders’ representatives who are present shall sign a register evidencing their attendance.

23.2 Envelopes marked “MODIFICATION”, “SUBSTITUTION” or “WITHDRAWAL” shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause IB.22 shall not be opened. Only bids that are opened and read out at Bid opening shall be considered further.

23.3 The Bidder’s name, total Bid Price and price of any alternative proposal(s), any discounts, Bid modifications, substitution and withdrawals, the presence or absence of Bid security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening of Bids. Only discounts and alternative proposals read out at Bid opening shall be considered for evaluation. The Letter of Bid and the Summary Bill of Quantities are to be initialled by representative(s) of the Employer attending Bid opening. The Employer shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with Sub-Clause IB 21.1).

23.4 The Employer 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	24.1	Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of Contract shall not be disclosed to Bidders or any other person not officially concerned with such process before the announcement of the result of Bid evaluation in the form of final evaluation report giving justification for acceptance or rejection of Bids which shall be done at least fifteen (15) days prior to award of Contract. The announcement to all Bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the Bids evaluated. Any effort by a Bidder to influence the Employer's processing of Bids or Contract award decisions may result in the rejection of such Bidder's Bid. Whereas any Bidder feeling aggrieved may lodge a written complaint not later than five (5) days after the announcement of the final evaluation report.
IB.25. Clarification of Bids	25.1	To assist in the examination, evaluation and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates and lump sum prices. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The request for clarification and the response shall be in writing. No change in the price or substance of the Bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause IB.28.
	25.2	The Employer may, at his discretion, ask any Bidder for confirmation/submission of missing information to clarify its Bid. However, the Employer does not have an obligation to request any additional information or clarification with respect to missing or deficient information in a Bid. The Employer may reject any Bid as non-responsive if found materially incomplete, obscure, irregular or omitting any material information required to be submitted in accordance with the Bidding Documents.
	25.3	If a Bidder does not provide clarifications of its Bid by the date and time set reasonably (not less than seven (7) days) in the Employer's request for clarification, the Employer may proceed with the evaluation based on the information submitted in the Bid without waiting for the Bidder's response.
IB.26. Examination of Bids and Determination of Responsiveness	26.1	Prior to the comparison of Bids, the Employer will determine whether each Bid is substantially responsive to the requirements of the Bidding Documents.
	26.2	The Employer's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in Sub-Clause IB.12.

26.3 A substantially responsive Bid is one which meets the requirements of the Bidding Documents, without material deviation, reservation or omission. A material deviation, reservation or omission is one that,

(a) if accepted, would:

(i) affect in any substantial way the scope, quality or performance of the Works; or

(ii) limit in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the Bidder's obligations under the proposed Contract; or

(b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

26.4 During the evaluation of Bids, the following definitions apply:

(a) "Deviation" is a departure from the requirements specified in the Bidding Documents;

(b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and

(c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.

26.5 The Employer shall examine the technical aspects of the Bid submitted in accordance with Sub-Clause IB.12.1(f), in particular, to confirm that all requirements stated in Specifications have been met without any material deviation, reservation or omission.

26.6 If a Bid is not substantially responsive to the requirements of the Bidding Documents, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation, reservation or omission.

IB.27. Nonmaterial Nonconformities

27.1 Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid.

27.2 Provided that a Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

27.3 Provided that a Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component, by adding the average price of the item or component quoted by other lowest two evaluated substantially responsive Bidders. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Employer shall use a suitable CSR, adjusted to the date 28 days earlier to the Bid submission date or its best assessment.

IB.28. Correction of Arithmetic Errors

28.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

(a) where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

(b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.

(c) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.

28.2 The amount stated in the Letter of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected Bid Price, his Bid will be rejected, and the Bid security shall be forfeited in accordance with Sub Clause IB.16.6(b) hereof.

IB.29. Evaluation and Comparison of Bids

29.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause IB.26. The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.

29.2 In evaluating and comparing the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:

(a) making any correction for arithmetic errors pursuant to Clause IB.28;

(b) price adjustment due to discounts offered in accordance with Sub-Clause IB.23.3;

(c) excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including competitively priced daywork;

(d) making an appropriate price adjustment for any quantifiable nonmaterial nonconformities in accordance with Sub-Clause IB.27.3; and

(e) the additional evaluation factors are specified in Section Evaluation Criteria and Qualification Forms.

29.3 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 Bids' comparison.

IB.30. Abnormally Low Bids

30.1 If the Bid Price of the successful Bidder is more than 15% below the lower of the Employer's estimate of the cost of work to be performed under the Contract or average of other lowest two evaluated substantially responsive Bids, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require an additional Performance Security by 10% of the difference of the Bid Price as determined hereinabove upto issuance of Taking Over Certificate at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract. The Bids having Bid Price lower than 25% shall be liable to be rejected.

IB.31. Unbalanced or Front Loaded Bids

31.1 If the Bid of the successful Bidder is seriously unbalanced (Front Loaded) in relation to the average of other evaluated substantially responsive Bids, the Employer during execution of contract may pay against measured quantities of significantly higher quoted line item(s) rate(s) with respect to same line item(s) rate(s) determined from the average of other lowest two evaluated substantially responsive Bids as instructed by the Engineer. The balance line item(s) rate(s) may be paid against the same measured quantities at the time of issuance of Taking Over Certificate or as instructed by the Engineer.

F. AWARD OF CONTRACT

IB.32. Award Criteria

32.1 Subject to Clauses IB.33 and IB.39, the Employer will award the Contract to the Bidder whose Bid has been determined as most advantageous Bid (substantially responsive to requirements of the Bidding Documents with the lowest evaluated Bid Price).

IB.33. Employer's Right to Annul the Bidding Process

33.1 Notwithstanding Clause IB.32, the Employer reserves the right to annul the bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidders or any obligation.

33.2 The Employer shall upon request communicate to any Bidder who submitted a Bid, the grounds for its rejection of all Bids but is not required to justify those grounds. Rejection of all Bids shall be notified to all Bidders promptly.

IB.34. Notification of Award

34.1 Prior to expiration of the period of Bid validity prescribed by the Employer, the Employer will notify the successful Bidder in writing ("Letter of Acceptance") that his Bid has been accepted. This letter shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Accepted Contract Amount").

The Letter of Acceptance will also state the remedies with respect to Sub-Clauses IB.30 & IB.31 if applicable.

34.2 No negotiation with the Bidder having submitted most advantageous Bid or any other Bidder shall be permitted, however, Employer may have clarification meetings before issuing Letter of Acceptance to get clarified any item in the Bid evaluation report.

34.3 The Letter of Acceptance/ notification of award and its acknowledgement/acceptance by the Bidder will constitute the formation of the Contract, binding the Employer and the Bidder till signing of the formal Contract Agreement.

34.4 Upon furnishing by the successful Bidder of a Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful and return their Bid securities in accordance with Sub-Clause IB.16.5.

IB.35. Performance Security

35.1 The successful Bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Conditions of Contract and additional Performance Security if applicable under IB.30 as stated in the Letter of Acceptance, within a period of 28 days after the receipt of Letter of Acceptance.

35.2 Failure of the successful Bidder to comply with the requirements of Sub Clause IB.35.1 or Clauses IB.36 or IB.37 shall constitute sufficient grounds for the annulment of the award, forfeiture of the Bid security and to award the Contract to the Bidder having submitted next advantageous Bid.

IB.36. Signing of Contract Agreement

36.1 Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will notify the successful Bidder to depute its representative with appropriate Power of Attorney to sign the Contract Agreement in the form provided in the Bidding Documents, incorporating all agreements between the parties.

36.2 The formal Agreement between the Employer and the successful Bidder shall be executed within 14 days of the receipt of the above stated notification by the successful Bidder from the Employer.

IB.37. Integrity Pact	37.1	The Bidder shall sign and stamp the Integrity Pact provided at Schedule-J to Bid in the Bidding Documents for all Federal Government procurement contracts exceeding PKR ten million. Failure to provide such Integrity Pact shall make the Bidder non-responsive.
IB.38. Instructions not Part of Contract	38.1	Bids shall be prepared and submitted in accordance with the Instructions to Bidders which are provided to assist the Bidders in preparing Bids but do not constitute part of the Contract.
IB.39. Corrupt and Fraudulent Practices	39.1	The Employer will reject a Bid if it determines that the Bidder recommended for award, or any of its personnel, or its agents, or its sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract under this bidding.
	39.2	The Employer will blacklist and hence forthwith debar a Constructor or individual, at any time, in accordance with the prevailing Sindh Public Procurement Rules 2010.

BIDDING DATA (BD)

BIDDING DATA

IB Clause Reference	Bidding Data
1.1	**Name and address of the Employer:** **Executive Engineer, Provincial Highway Division Jamshoro** Office of The Executive Engineer, Provincial Highways Division, Jamshoro, near NADRA Office Kotri
1.1	**Name of the Project & Summary of the Works:** **"Construction of Prestressed Bridge I/C Approaches for Village Kachy Wara Radhan Taluka Sehwan Mile 0/0-0/3 (0.60 KM) District Jamshoro"** The project involves construction of one bridge including its approaches.
1.2	**Time for Completion for the Works:** 24 months
2.1	**Name of the Borrower/Source of Funding:** Provincial Highway Division Jamshoro under NIT Ref. TC/G-55/972/2026.
7.1	**Contents of Bidding Documents:** Delete the text of Sub-Clause 7.1 and substitute with the following: The Bidding Documents are those stated below, and should be read in conjunction with any Addenda issued in accordance with Clause IB.9. **Technical Bid:** **7.1.1 Volume - I** • Instruction to Bidders • Bidding Data Sheet • Letter of Technical Bid & Schedules to Bid (excluding Schedule-B) • Forms of Bid Security, Performance Security, Contract Agreement, Mobilization Advance Bank Guarantee • General Conditions of Contract (GC) • Particular Conditions of Contract (PC) Part A – Contract Data Part B – Special Provisions **7.1.2 Volume – II** • Specifications (SP) Part A – Technical Provisions **7.1.3 Volume – III**

IB Clause Reference	Bidding Data
	• Drawings **<u>Price Bid:</u>** **7.1.4 Volume – IV** • Letter of Price Bid • Preamble to Bill of Quantities • Schedule–B to Bid (Bill of Quantities) • Schedule-I to Bid
8.1	**Time limit for clarification:** <u>07</u> days
8.3	**Venue, time, and date of the pre-Bid meeting:** Pre bid meeting **will not** take place.
9.3	**Number of days:** <u>Seven (07)</u>
11.1	**Bid language:** <u>English</u>
12	**Documents Accompanying the Bid:**
12.1	Delete the text of Sub-Clause 12.1 and substitute with the following:
12.1 (a)	The Bid shall comprise **two envelopes** submitted simultaneously, one called the **Technical Bid** and the other the **Price Bid**. Both envelopes to be enclosed together in an outer single envelope called the Bid. Each bidder shall furnish all the documents as under: The Bidder shall submit with its **Technical Bid** the following documents: **Volume – I** (i) Letter of Technical Bid (ii) Written power of attorney authorizing the signatory of the Bid (iii) Original Bidding Documents (Volume – I) (duly signed and stamped) (iv) Dully filled in Schedules to Bid (except Schedule-B & I to Bid) (v) Qualification documents establishing bidders' eligibility as per Schedule-K. (vi) **Bid Security** in accordance with clause IB.16. **Volume – II** (i) Specifications (SP) Part B – Technical Provisions **Volume – III** (i) Bid Drawings Submission of the Bid in a wrong format may lead to the Proposal being deemed non-responsive to the requirements.
12.1 (b)	The Bidder shall submit with its **Price Bid** the following documents: **Volume – IV** (i) Letter of Price Bid (ii) Preamble to Bill of Quantities (iii) Schedule–B to Bid (Bill of Quantities)

IB Clause Reference	Bidding Data
	(iv) Schedule-I to Bid (Integrity Pact) Submission of the Bid in a wrong format may lead to the Proposal being deemed non-responsive to the requirements.
12.2	Maximum number of JV Partners shall be: **None**
14.1	Second Paragraph of Sub–Clause 14.1 is deleted in its entirety.
14.2	The Sub-Clause 14.2 is deleted in its entirety.
15.1	**Period of Bid Validity:** Period of bid Validity is 90 days after the date of bid opening.
16.1	**Amount of Bid Security:** Bid Security shall be **Pak Rupees 8,348,000/-**
16.2	Delete the text of Sub–Clause 16.2 and substitute with the following: The Bid Security shall be in the form of **Call Deposit** issued by a Scheduled Bank in Pakistan in favour of the Employer valid for a period of 28 days beyond the Bid validity date.
17.1	Alternative Proposal(s) by the Bidder shall not be considered.
18.4	**Number of copies of the Bid to be completed and submitted:** The Bidder shall prepare and submit the **one original** and **one copy** of **Technical Bid** & **one original** of **Price Bid** comprising the Bid as described in Clause 7 and 12 of these Instructions to Bidders, and clearly marked **"ORIGINAL"** and **"COPY"**. The Bids must conform in all respects to the Bidding Documents. The Bidder shall stamp and sign each page of Bidding Documents for the purpose of identification and acknowledgement of acceptance thereof. Searchable pdf versions as well as word, excel etc. versions of the Bid are required: **No**
18.5	Delete the text of Sub–Clause 18.5 and substitute with the following: The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder pursuant to IB 12.1 hereof. All pages of the Bid shall be initialed and stamped by the person or persons signing the Bid. One (1) copy of Power of Attorney must be attached to the Bid submitted to the Employer if this Bid is signed / executed by a person other than the President, Partner or Owner of the Bidder's Company.
19.1	Delete the text of Sub–Clause 19.1 and substitute with the following: Each Bidder shall submit his Bid for **Electronic Single Stage Bidding through EPADS (E-Pak Acquisition and Disposal System)** and as under:

IB Clause Reference	Bidding Data
	(a) **Bids shall be submitted electronically** through the EPADS portal at http://portalsindh.eprocure.gov.pk/ only. Manual/physical submission will not be entertained. (b) Interested Bidders must ensure their registration on EPADS at http://portalsindh.eprocure.gov.pk/ prior to submission. Bidding Documents may be viewed and downloaded after being hoisted on the SPPRA "EPADS" website. Physical bids will not be issued or accepted. (c) The **Technical Bid** shall comprise of documents listed in IB-12.1(a) and the **Price Bid** shall comprise of documents listed in IB-12.1(b) which shall be placed in separate envelopes in accordance with IB-12.1. Both the envelopes of **Technical Bid** and **Price Bid** shall be placed in single sealed envelope. Submission of the Technical Proposal in a wrong format may lead to the Proposal being deemed non-responsive to the RFP requirements.
19.2(a)	**Employer's address for the purpose of Bid submission:** **Executive Engineer, Provincial Highway Division Jamshoro** Office of The Executive Engineer, Provincial Highways Division, Jamshoro, near NADRA Office Kotri
19.2(b)	**Name and Number of the Contract:** NIT Ref. TC/G-55/972/2026
20.1(a)	**Deadline for submission of Bids:** **Time:** 1030 Hours **Date:** 18th June 2026 **Address:** **Executive Engineer, Provincial Highway Division Jamshoro** Office of The Executive Engineer, Provincial Highways Division, Jamshoro, near NADRA Office Kotri If the opening is declared a holiday for any reason, then the proposals will be opened on the next working day at the same time.
23.1	**Venue, time, and date of Bid opening:** **Time:** 1100 Hours **Date:** 18th June 2026 **Executive Engineer, Provincial Highway Division Jamshoro** Office of The Executive Engineer, Provincial Highways Division, Jamshoro, near NADRA Office Kotri If the opening is declared a holiday for any reason, then the proposals will be opened on the next working day at the same time.

IB Clause Reference	Bidding Data
	The Employer will open the Technical Bids in public at the address, date and time as stated in Notice Inviting Bids and mentioned above in the presence of Bidders' designated representatives and anyone who choose to attend. The Price Bids will remain unopened and will be held in custody of the Employer until the specified time of their opening.
23.3	Delete the text of Sub–Clause 23.3 and substitute with the following: The envelopes holding the Technical Bids shall be opened one at a time, and the following information will be read out and recorded: (a) the name of the Bidder; (b) whether there is a modification or substitution; (c) Any other details as the Employer may consider appropriate. No Bid shall be rejected at the opening of Technical Bids except for late bids, in accordance with IB 21.1, or bids submitted without **Bid Security & Tender Document Fees**. Only Technical Bids read out and recorded at bid opening shall be considered for evaluation.
	Add the following Sub-Clauses:
23.5	**Preliminary Examination of Technical Bids:** (a) The Employer shall first examine qualification and experience Data as per **Schedule-K** submitted by the Bidder. The technical proposal examination of those bidders only shall be taken in hand who meet the minimum\ requirement as mentioned in **Schedule-K**. Only substantially responsive qualification shall be considered for further evaluation. (b) The Employer shall examine the Technical Bid to confirm that all the documents have been provided, and to determine the completeness of each document submitted.
23.6	At the end of the evaluation of the Technical Bids, the Employer will invite only those bidders who have submitted substantially responsive Technical Bids and who have been determined as being Technically qualified to attend the opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Employer. Bidders shall be given reasonable notice for the opening of Price Bids. The Employer will the return the Price Bids unopened to the Bidders who have been rejected on the grounds of their Technical Bids being substantially non-responsive to the requirements of the Bidding Document.
23.7	All envelopes containing Price Bids shall be opened one at a time and the following read out and recorded: (a) The name of the Bidder; (b) Whether there is a modification or substitution; (c) The Bid Prices, including any discounts and alternative offers; (d) Any other details as the Employer may consider appropriate.

IB Clause Reference	Bidding Data
	Only Price Bids and discounts, read out and recorded during the opening of Price Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Price Bids.
26.5	**Examination of Bids and Determination of Responsiveness:** Delete the text 'IB.12.1(f)' and substitute with "IB.12.1(a)".
29.2	**Evaluation and Comparison of Bids:** Delete the Sub-clause IB-29.2 (e) in its entirety.

LETTER OF BID AND SCHEDULES TO BID

LETTER OF TECHNICAL BID

Bid Reference No. ________________________

[Name of Contract/ Works]

To: __________________________

____

We, the undersigned, declare that,

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract, Specifications, Schedules to Bid including Bill of Quantities, Drawings and Addenda issued in accordance with Instructions to Bidders (IB) 9.
2. We meet the eligibility requirements in accordance with IB.3.
3. We offer to execute and complete in conformity with the Bidding Documents the following Works: “”.

   Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of ninety (90) days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
4. We, including any Subcontractors for any part of the Contract, are not debarred/ blacklisted by the Employer, any Government/Semi Government/Public Department in Pakistan or foreign country, international organizations or other foreign institutions.
5. We understand that all the Schedules attached hereto form part of this Bid.
6. We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process, other than alternative offers submitted in accordance with IB17 (as applicable).
7. We undertake, if our Bid is accepted, to commence the Works and to complete the whole of the Works comprised in the Contract within the time stated in Contract Data.
8. We agree to abide by this Bid for the period of _______ days, inclusive of 14 days beyond Bid validity period (as mentioned at Sr. No. 6 above) and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
9. 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.
10. We understand that you are not bound to accept the lowest or any Bid you may receive.
11. We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB.12.1(A) of the Bidding Data Sheet.

12. We undertake that all the information and documents submitted with the Bid are genuine, and in case of incorrect information of fake documents we shall be liable for punitive action under the Applicable Law.

Dated this_____day of_________20_____

Signature: _________________________

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

____

(Name of Bidder in Block Capitals)
(Seal)

Address:____

____

____

Witness:

Signature:_________________________________

Name: _________________________________

Address. _________________________________

____

Occupation: ______________________________

LETTER OF PRICE BID

Bid Reference No. ________________________
[Name of Contract/ Works]

To: __________________________

____

Gentleman,

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract, Specifications, Schedules to Bid including Bill of Quantities, Drawings and Addenda issued in accordance with Instructions to Bidders (IB) 9, for the execution of the above-named Works, we, the undersigned, offer to execute and complete such Works and remedy any defects therein in conformity with the said Bidding Documents and Addenda for the sum of Equivalent PKR _______________ (Eq. Pak Rupees ___________________ ____) or such other sum as may be ascertained in accordance with the said conditions.

2. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a Bid Security in the amount of PKR________________________(Pak. Rupees. ____) drawn in your favour or made payable to you and valid for a period of _______________days beginning from the date Bids are opened.

3. We agree to abide by this Bid for the period of _________ days, inclusive of 14 days beyond Bid validity period (as mentioned at Sr. No. 6 above) and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

4. 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.

5. We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other Bidder for the Works.

6. We understand that you are not bound to accept the lowest or any Bid you may receive.

7. We undertake that all the information and documents submitted with the Bid are genuine, and in case of incorrect information of fake documents we shall be liable for punitive action under the Applicable Law.

Dated this___________ day of ______________20___________

Signature: ________________________

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

____

(Name of Bidder in Block Capitals)
(Seal)

Address: ____

____

____

Witness:

Signature: ____________________________________

Name: _______________________________________

Address. ______________________________________

____

Occupation: __________________________________

SCHEDULE OF ADJUSTMENT DATA

Schedule of Cost Indexation

[The formulae for price adjustment shall be of the following general type:]

Pn= a + b Ln / Lo + c En/ Eo + d Mn/Mo + ...

where:

"Pn" is the adjustment multiplier to be applied to the estimated Contract value in the relevant currency of the work carried out in period "n", this period being a month;

"a" is a fixed coefficient, stated in the relevant table of adjustment data, representing the non-adjustable portion in contractual payments;

"b", "c", "d", ... are coefficients representing the estimated proportion of each cost element related to the execution of the Works as stated in the relevant table of adjustment data; such tabulated cost elements may be indicative of resources such as labour, equipment and materials;

"Ln", "En", "Mn", are the current cost indices or reference prices for period "n", expressed

in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the date 49 days prior to the last day of the period (to which the particular Payment Certificate relates); and

"Lo", "Eo", "Mo", are the base cost indices or reference prices, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the Base Date.

The weightings (coefficients) for each of the factors of cost stated in the following table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variation(s).

SCHEDULE OF ADJUSTMENT DATA

Table I. Local Currency (LC) For Bill Nos. _____________

Cost Element	Description	Weightages	Applicable Price
(i)	**(ii)**	**(iii)**	**(iv)**
a	Fixed Portion	0.30	
b	Labour *(Labourer (un-skilled) per day, shall be taken as representative of all types of Labour (skilled/unskilled) deployed at site)*	0.28	Government of Pakistan (GP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
c	Reinforcing Steel *(½" Ø round M.S. Bars per tonne shall be taken as representative of all types and diameters of Steel Reinforcement)*	0.30	- do -
d	Cement *(SRC cement per bag shall be taken as representative of all types of cement used at the site)*	0.11	- do -
e	High Speed Diesel (HSD) *(HSD shall be taken as representative of all kind of fuels used in connection with the Contract)*	0.01	As announced by Pakistan State Oil (PSO) and prevalent on seven (7) days prior to bid opening date.
	Total	1.00	

Notes:

1) Prices for "(b)" to "(d)" shall be taken from the Government of Pakistan, Federal Bureau of Statistics. Monthly Statistical Bulletin. The base prices shall be those prevalent 28 days prior to the latest day for submission of Bids. Current date price of any element shall be those prevalent 28 days prior to the start of execution month to which a particular monthly statement is related.

   Prices for "(e)" shall be taken from the Pakistan State Oil (PSO). The base prices shall be those applying 07 days prior to the latest day for submission of Bids. Current prices shall be those applying 07 days prior to the start of the execution month to which a particular monthly statement is related.

2) If the Statistical Bulletin of the aforesaid month is not available at the time of Bid opening, then the Basic Prices of Specified Materials will be submitted by the Contractor at the time of their availability and shall be recommended by the Engineer and will be fixed as Basic Prices for Specified Materials for Price Adjustment.

3) The prices for the cost elements of (b) to (d) shall be used for the Karachi City.

4) Any fluctuation in the prices of materials other than those given above shall not be subject to adjustment of the Contract Price and shall be deemed to be included in the rates and prices quoted by the Bidders.

5) The prices of materials provided in this Appendix are for the purpose of price adjustment only. The Contractor shall base his rates entered in the Bill of Quantities on current market prices.

SCHEDULE OF ADJUSTMENT DATA

Table II. Foreign Currency (FC) For Bill Nos. _____________

NOT USED

SCHEDULE OF ADJUSTMENT DATA

Table III. Foreign Currency Requirements

NOT USED

SCHEDULE OF ADJUSTMENT DATA

Table IV. Summary of Payment Currencies

NOT USED

BILL OF QUANTITIES

ATTACHED IN A LATER SECTION OF THIS DOCUMENT.

CONSTRUCTION SCHEDULE

Pursuant to Sub-Clause 8.3 of the General Conditions, the whole of the Works, and each Section (if any), shall be completed within the Time for Completion for the Works or Section (as the case may be) stated as hereunder and mentioned in Contract Data:

Description	Time for Completion (days)
Whole Works	

The Bidder shall provide, the Construction Schedule in the bar chart (CPM) 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 Sections of the Works may meet Employer's completion targets in days noted above and counted from the Commencement Date (Attach sheets as required for the specified form of Construction Schedule).

METHOD OF PERFORMING THE WORK

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

1) **Organization Chart:**

   Shall indicate head office and field office personnel involved in management and supervision, engineering, equipment maintenance and purchasing.

2) **Mobilization:**

   the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for storage, communications, security and other services to be used.

3) **Method of executing the Works:**

   The procedures for installation of equipment and machinery and transportation of equipment and materials to the site and providing all services required for completion of works in accordance with the Contract.

4) Quality control / Quality assurance measures to be adopted including procedures to be followed for carrying out all tests required under specifications.

5) The Bidder while preparing his methodology for performing and executing the works shall also consider the following:

   a) The timely completion of the Project as per the time provided in Contract.

   b) The Contractor while filling out the list of major equipment required at site, shall ensure that the equipment requirement is in consonance with the construction requirement.

   c) The Contractor is not restricted to carry out the work in single shift. The Contractor should note that if he plans to execute the work in more than single shift than all costs related to the additional superintendence to be provided by the Engineer will be borne by the Contractor. Procedure for such additional costs will be worked out and finalized between the Contractor and Engineer with the consent of the Employer.

   d) The portions of the Site shall be made available to the Contractor in coordination with other Contractors working at site. The Contractor shall prepare the work programme accordingly.

LIST OF MAJOR EQUIPMENT

The Bidder will provide on Sheet E-2 of this Schedule a list of all major equipment and related items, under separate heading for items owned, to be purchased or to be arranged on lease by him to carry out the Works. The information shall include make, type, capacity, and anticipated period of utilization for all equipment.

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Sheet E-3.

S. No.	Description of Equipment	Total No. of Equipment to be brought/installed/erected at site during execution of Works
1.	Rotary Piling Rig (Minimum Capable for executing loads up to 30 m depth & 1000 mm dia &) with all accessories	01 Nos.
2.	Excavator	01 Nos.
3.	Dumper	01 Nos.
4.	Mobile Crane (30–50 Ton)	01 Nos.
5.	Dynamic Pile Load Testing Apparatus	01 Nos.
6.	Pre-stressing Equipment with all accessories	01 Nos.
7.	Transit Mixers & Concrete Pumps	02 Nos. Each
8.	De-watering Pumps	02 Nos.
9.	Mechanical Vibrator	04 Nos.
10.	Portable Mechanical Compactor	02 Nos.
11.	Generator Set (Min. 150KVA)	01 Nos.
12.	Survey Instruments	02 Nos.

Note:

The bidder while preparing his methodology for performing and executing the works and listing out Major Equipment (required to complete the Works in the specified Time Schedule) in this Appendix shall consider the above-mentioned minimum requirement of Construction Equipment to be brought/installed/erected at site.

LIST OF MAJOR EQUIPMENT

Owned, Purchased or Leased

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

LIST OF MAJOR EQUIPMENT

Equipment Details

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment ☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured	
The following information shall not be applicable for equipment owned by the Bidder		
Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

[This Table shall be used for each item of Equipment separately]

ORGANIZATION CHART FOR THE SUPERVISORY STAFF AND LABOUR

MINIMUM MANDATORY STAFF REQUIREMENT:

The Contractor shall arrange the following staff at site immediately upon commencement of works:

Designation	Nos.	Minimum Qualification & Min. Relevant Working Experience
Project Manager (Minimum B.E Civil Engineer registered with Pakistan Engineering Council)	01	• M.E. Civil Engineer having at least 15 years relevant experience or B.E. Civil Engineer having at least 20 years relevant experience • Minimum Ten (10) years' experience as Project Manager is mandatory.
Site Engineer (Bridges/Structures) (B.E Civil Engineer registered with Pakistan Engineering)	01	• B.E. Civil Engineer having at least 15 years bridge structures experience.
Site Engineer (Pilling Works) (B.E Civil Engineer registered with Pakistan Engineering)	01	• B.E. Civil Engineer having at least 08 years Pilling structures experience.
Safety Engineer (B.E Civil Engineer registered with Pakistan Engineering)	01	• B.E. Civil Engineer having at least 10 years relevant HSE experience.
Site Supervisor (Civil) B-Tech / DAE Civil	01	• B-Tech / DAE Civil and at least 15 years relevant experience.
Quantity Surveyor B-Tech / DAE Civil	01	• B-Tech / DAE Civil and at least 15 years relevant experience.
Material Engineer B.Sc. Geology	01	• B.Sc. Geology and at least 15 years relevant experience.
Surveyor Survey Certificate	01	• Survey certificate and at least 15 years relevant experience.

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Schedule-G 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.

Part of Works (Give Details)	Subcontractor (With Complete Address)
1	2

CONSTRUCTION CAMP AND HOUSING FACILITIES

The Bidder in accordance with Clause 6 of the Conditions of Contract shall provide description of his construction camp's facilities and staff housing requirements.

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) Electrical 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, 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) Other Items Proposed (Security services, etc.)]

Note:

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.

INTEGRITY PACT

DECLARATION OF FEES, COMMISSION AND BROKERAGE, ETC. PAYABLE BY THE BIDDERS/CONTRACTORS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH PAK. RS. 10.00 MILLION OR MORE

Contract No. ____________________ Dated _______________
Contract Value: __________________
Contract Title: ___________________

……………………………… [Name of Bidder/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 GoS through any corrupt business practice.

Without limiting the generality of the foregoing, [Name of Bidder/ 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 Procuring Agency (PA), except that which has been expressly declared pursuant hereto.

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

[Name of Bidder/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 Bidder/Contractor] agrees to indemnify PA for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to PA in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Bidder/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.

Name of Employer: ……………………
Signature: ……………………
[Seal]

Name of Bidder/Contractor: ………………………
Signature: …………………………….
[Seal]

QUALIFICATION CRITERIA

Qualification of Bidders shall be evaluated on the basis of the criteria listed herein. The evaluation criteria sub-criteria for the full Technical Proposals is based on **Yes / No OR Pass / Fail**; if a Bidder fails to obtain Yes or Pass in any criteria or sub-criteria then he/she/it shall not be qualified. The scoring system below provides guidance on evaluation; a minimum of **70%** overall and **50%** in each category is required, in addition to fulfillment of all mandatory requirements.

The Contractor must fill out all the appendices/ annexure of this Document, with correct information, along with relevant acceptable supporting documents of proofs.
The Employer reserves the right to waive minor deviations, if they do not materially affect the capability of the Bidder to perform the Contract.

A. Mandatory Requirements:

i. Valid registration with PEC in category C-4 or above having CE-01, CE-02, CE-09 and CE-10 as codes of specialization (PEC registration valid up to June 2026).
ii. Fresh Undertaking / Affidavit on E-Stamp Paper duly attested (Rs. 500/-) that the bidder and its firm have never been blacklisted by any Government, Semi-Government, Autonomous or State Owned Organization, and their cases regarding blacklisting are not under trial by any Court of Law. Affidavit must be prepared within the current month of submission.
iii. Information on any litigation or arbitration resulting from contracts completed or under execution by the Bidder. In case, the firm has never been involved in litigation, an affidavit to such effect should be provided.
iv. An Affidavit on a stamp paper to the effect that all documents/particulars/information given with this Bidding Document are true.
v. Registration with Income Tax Department – Valid NTN Certificate with Active Status on FBR; supported by copies of Income Tax return receipts for the last five (5) years.
vi. Registration with Sindh Revenue Board – Valid SRB Certificate with Active Taxpayer Status; supported by copies of Income Tax return receipts for the last five (5) years.
vii. Must be on Active Taxpayer Status with FBR at the time of submission of Bid.
viii. Bank Account Statement in the name of the Bidder's Firm for the last five (5) years must be submitted with the Technical Proposal.
ix. Annual Audit Reports for the last five (5) years from ICAP-registered audit firms. Audit reports issued by non-ICAP registered firms will not be accepted.
x. List of Machinery and Equipment available with the firm, supported by documentary evidence of ownership or rental agreement.
xi. Bid Security shall be in the shape of Call Deposit Receipt (CDR) only from any Scheduled Bank of Pakistan. No other form of bid security will be accepted.
xii. Joint Venture (JV) will NOT be allowed.
xiii. The Authorized Representative must have authority on Judicial E-Stamp Paper from the owner of the firm. Authority letter on other than Judicial E-Stamp Paper will not be accepted and such tender will not be entertained.

Note: Contractor must meet the above mandatory requirements for further evaluation.

B. Detailed Requirements:

The detailed qualification evaluation shall be carried out based on the criteria mentioned below for the different categories, with the minimum passing marks prescribed hereunder:

S. No.	Category	Weightage / Marks Assigned	Passing Marks
1.	Experience Record	30	15
2.	Personnel Capabilities	25	13
3.	Equipment Capabilities	20	10
4.	Financial Soundness	10	5
5.	Work Methodology & Project Schedule	15	4 in Work Methodology 4 in Project Schedule
	Total	**100**	**50**

J-2

Schedule-J to Bid

1. Experience:

S. No.	Sub-Category	Marks Assigned	Marks Allocation
a)	Firms Existence (Registration with PEC)	06	• 01 mark for every 4 years' experience until 2025. • No marks will be awarded if the firm's experience is less than 15 years.
b)	Experience as constructor in execution of similar nature of Bridge/Road infrastructure Work Projects completed during last three (3) years.	12	• 04 marks will be awarded for each completed project having project cost ≥ Rs. 133.57M (80% of estimated cost). • No marks will be awarded for project having project cost < Rs. 83.48M (50% of estimated cost).
c)	Experience as constructor for Similar Works (Pre-stressed Bridge) Projects completed during last three (3) years. Contractor must have completed at least 02 (Two) projects. Contractor must have competed at least 02 (Two) projects.	12	• 04 marks will be awarded for completed project having project cost ≥ Rs. 133.57M (80% of estimated cost). • 04 marks will be awarded for each of two (02) completed projects having project cost ≥ Rs. 83.48M (50% of estimated cost) each, up to maximum of 8 marks. • No marks will be awarded for project having project cost < Rs. 83.48M (50% of estimated cost). In case of JV the share of the bidder must be minimum 50%.
	Total Marks Allocated	**30**	

Note:

i. The applicants must provide Taking Over/Completion Certificate of completed projects. No marks will be given to the projects for which above letter/certificate is not provided.

ii. Applicant shall provide complete information of the projects including scope of Constructor and cost of works etc.

iii. Joint Venture (JV) is NOT allowed for this project. Each bidder must submit independently.

iv. At least one (01) work IN-HAND having same specification and nature with equal or more cost/quantum (in terms of quantities), supported with certified copies of Detailed Working Estimate and SPPRA IDs showing Bid Evaluation Report.

2. Personnel Capabilities:

Designation	Marks Assigned	Explanation for Marks
Project Manager (Minimum B.E Civil Engineer registered with Pakistan Engineering Council)	7	• 7 marks will be awarded for M.E. Civil Engineer having 15 years relevant experience or B.E. Civil Engineer having 20 years relevant experience. • Ten (10) years' experience as Project Manager is mandatory.
Site Engineer (Bridges/Structures) (B.E Civil Engineer registered with Pakistan Engineering)	4	• 4 marks will be awarded for B.E. Civil Engineer having 15 years bridge structures experience.
Site Engineer (Pilling Works) (B.E Civil Engineer registered with Pakistan Engineering)	4	• 4 marks will be awarded for B.E. Civil Engineer having 08 years Pilling structures experience.
Safety Engineer (B.E Civil Engineer registered with Pakistan Engineering)	2	• 2 marks will be awarded for Safety Inspector having B.E. Civil Engineer and 10 years relevant HSE experience.
Site Supervisor (Civil) B-Tech / DAE Civil	2	• 2 marks will be awarded for Site Inspector having B-Tech / DAE Civil and 15 years relevant experience.
Quantity Surveyor B-Tech / DAE Civil	2	• 2 marks will be awarded for Quantity Surveyor having B-Tech / DAE Civil and 15 years relevant experience.
Material Engineer B.Sc. Geology	2	• 2 marks will be awarded for Quantity Surveyor having B.Sc. Geology and 15 years relevant experience.
Surveyor Survey Certificate	2	• 2 marks will be awarded for Surveyor having Survey certificate and 15 years relevant experience.
Total Marks Allocated	**25**	

Note:

i. The applicant must provide verifiable proof of employment (i.e. appointment letters, salary slips of last 3 months) of the staff and attach detailed CVs & valid PEC Registration Certificates

/ Diploma / Certificates of the Engineer, B.Sc. & DAEs staff etc. The authentication of personnel with employer firm will be carried out online from PEC website.

ii. Proportionate marks will be awarded if above mentioned qualification and experience are not met.

3. Equipment Capabilities:

S. No.	Equipment	Quantity	Marks Assigned
1.	Rotary Piling Rig (Minimum Capable for executing loads up to 30 m depth & 1000 mm dia &) with all accessories	01 Nos.	4
2.	Excavator	01 Nos.	1
3.	Dumper	01 Nos.	1
4.	Mobile Crane (30–50 Ton)	01 Nos.	2
5.	Dynamic Pile Load Testing Apparatus	01 Nos.	2
6.	Pre-stressing Equipment with all accessories	01 Nos.	3
7.	Transit Mixers & Concrete Pumps	02 Nos. Each	2
8.	De-watering Pumps	02 Nos.	1
9.	Mechanical Vibrator	04 Nos.	1
10.	Portable Mechanical Compactor	02 Nos.	1
11.	Generator Set (Min. 150KVA)	01 Nos.	1
12.	Survey Instruments	02 Nos.	1
	Total Marks Allocated		**20**

Note:

i. Proportionate marks will be awarded if minimum number of corresponding equipment is less than minimum required.

ii. Applicant must provide an undertaking to the effect that the aforementioned equipment is available with the firm and will be made available, as and when required, for the Project.

4. Financial Capabilities

The Bidder shall submit copies of annual audited financial statements for the last five (5) years from ICAP-registered audit firms, along with income tax returns (FBR) for the last five (5) years. Audit reports from non-ICAP registered firms will not be accepted.

The average annual financial turnover shall not be less than the equivalent cost of the Scheme/Project (Rs. 166.967 Million) evaluated from Annual FBR Returns and Audit Reports for the last five (5) years.

Average Annual Turn Over (Last Three Years)		Marks Assigned
i.	Rs. 166.967 million to Rs. 250 million (equal to or above Scheme cost)	7
ii.	Above Rs. 250 million	10

Total Marks Allocated	10

5. Work Methodology & Project Schedule

The Bidder shall submit the Work Methodology as per Schedule-D and the Project Schedule as per Schedule-C, detailing all major activities.

S. No.	Sub-Category	Marks Assigned	Explanation for Marks
a)	Work Methodology	8	• As per Schedule-D. • Include detailed explanation of all major activities. • Each major activity should be elaborated upon to provide a comprehensive understanding of how it will be carried out. • Provide Comprehensive understanding of how they plan to execute the project.
b)	Project Schedule	7	• As per Schedule-C. • Include Timeline and sequence of all major activities. • Project Schedule must align with the Work Methodology.
	Total Marks Allocated	**15**	

STANDARD FORMS

FORM OF PERFORMANCE SECURITY

Guarantee No. ____________________
Executed on ______________________
Expiry date _______________________

[Letter by the Guarantor to the Employer]

Name of Guarantor with address: ____

____

Name of Principal (Contractor) with address: ____

____

Penal Sum of Security (*express in words and figures*) _____________________________________

____

Letter of Acceptance No. ____ Dated _______________

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

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has accepted the Employer's above said Letter of Acceptance for ____

____ (Name of Contract) for the ___________________

____ (Name of Project).

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of 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 Clause11, Defects After Taking Over, 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 defense under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

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

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

Guarantor
(Schedule Bank)

WITNESS:

1. ____________________________

____
Corporate Secretary (Seal)

2. ____________________________

____
Name, Title & Address

Signature_____________________

Name _______________________

Title _________________________
Corporate Guarantor (Seal)

LOA-1

Letter of Acceptance

[Letterhead paper of the Employer]

NAME OF CONTRACT: ________________________________

CONTRACT NUMBER: ________________________________

TO: ________________________________

Date: ________________________________

Your Reference: ________________________________

Our Reference: ________________________________

We thank you for your Bid dated for the execution and completion of the Works comprising the above-named Contract and remedying of defects therein, all in conformity with the terms and conditions contained in the Contract.

We have pleasure in accepting your Bid for the Accepted Contract Amount of:

____

[currency and amount in figures]

____

[currency and amount in words]

In consideration of you properly and truly performing the Contract, we agree to pay you the Accepted Contract Amount or such other sums to which you may become entitled under the terms of the Contract, at such times and as prescribed by the Contract.

We acknowledge that this Letter of Acceptance creates a binding Contract between us, and we undertake to fulfil all our obligations and duties in accordance with the terms of this Contract.

Signature: _______________________________________

Signed by: _______________________________________

For and on behalf of: ______________________________

Date: ______________________

FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the __________ day of ______________ (month) 2025 between _______________________________________ __________________________ (hereinafter called the "Employer") of the one part and ____ (hereinafter called the "Contractor") of the other part.

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

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.

2. The following documents, in the order of priority, 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:

   a) This Contract Agreement;
   b) The Letter of Acceptance;
   c) The Letter of Bid;
   d) The Particular Conditions Part A - Contract Data;
   e) The Particular Conditions Part B - Special Provisions;
   f) The General Conditions;
   g) The Specifications Part A - Specific Provisions;
   h) The Specifications Part B - Technical Provisions;
   i) The Drawings;
   j) The Completed Schedules to Bid including Schedule of Prices;
   k) the JV Undertaking (if the Contractor is a JV); and
   l) [Employer to insert any other documents forming part of the Contract]

   The addenda/corrigenda, if any, (Excluding part relating to Instructions to Bidders along with Bidding Data) shall be deemed to have been incorporated at the appropriate places in the "Documents forming the Contract".

3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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

________________________________	________________________________
Signature of Contactor	Signature of Employer
________________________________	________________________________
(Seal)	(Seal)

Signed, Sealed and Delivered in the presence of:

________________________________	________________________________
Witness	Witness
________________________________	________________________________
(Name, Title and Address)	(Name, Title and Address)

DAAB Agreement

[All italicised text and any text within square brackets (except sub-clause headings) in this form of agreement is for use in preparing the form and should be deleted from the final product].

Name and details of the Contract ____

____

This Agreement made the ___________ day of ______________ [month], _____________ [year], between

Name and contact details of the Employer ___________________________________ (name)

_________________________________ (address)

_______________________________ (telephone)

_______________ (email / other contact details);

Name and contact details of the Contractor ___________________________________ (name)

_________________________________ (address)

_______________________________ (telephone)

_______________ (email / other contact details);

Name and contact details of the DAAB Member ___________________________________ (name)

_________________________________ (address)

_______________________________ (telephone)

_______________ (email / other contact details);

("**DAAB Agreement**")

Whereas:

A. the Employer and the Contractor have entered (or intend to enter) into the Contract;
B. under the Contract, the "**DAAB**" or "**Dispute Avoidance/Adjudication Board**" means the sole member or three members (as stated in the Contract Data of the Contract) so named in the Contract, or appointed under Sub-Clause 21.1 [*Constitution of the DAAB*] or Sub-Clause 21.2 [*Failure to Appoint DAAB Members*] of the Conditions of Contract;
C. the Employer and the Contractor desire jointly to appoint the above-named DAAB Member to act on the DAAB as:
   a. the sole member of the DAAB, and where this is the case, all references to the "Other Members" do not apply; or
   b. one of three members / chairman [*delete the one which is not applicable*] of the DAAB and, where this is the case, the other two persons are:

______________________________ (name)	_______________________________ (name)
______________________________ (address)	_____________________________ (address)
______________________________ (telephone)	___________________________ (telephone)
_______________ (email/ other contact details)	____________ (email/ other contact details)

the "**Other Members**"; and

D. the DAAB Member accepts this appointment.

The Employer, Contractor and DAAB Member jointly agree as follows:

1. The conditions of this DAAB Agreement comprise:

   (a) Clause 21 [*Disputes and Arbitration*] of the Conditions of Contract, and any other provisions of the Contract that are applicable to the DAAB's Activities; and

   (b) the "General Conditions of Dispute Avoidance/Adjudication Agreement", which is appended to the General Conditions of the "Conditions of Contract for Construction" Second Edition 2017 published by FIDIC ("GCs"), as amended and/or added to by the following provisions.

2. [Details of amendments to the GCs, if any. For example:

   In the procedural rules annexed to the GCs, Rule _ is deleted and replaced by: "… "]

3. The DAAB Member shall be paid in accordance with Clause 9 of the GCs. The currency of payment shall be ________________________.

   In respect of Sub-Clauses 9.1 and 9.2 of the GCs, the amounts of the DAAB Member's monthly fee and daily fee shall be:

   monthly fee _________________________ per month, and

   daily fee of __________________________per day

   (or as otherwise set under Sub-Clause 9.3 of the GCs).

4. In consideration of the above fees, and other payments to be made to the DAAB Member in accordance with the GCs, the DAAB Member undertakes to act as DAAB Member in accordance with the terms of this DAAB Agreement.

5. The Employer and the Contractor shall be jointly and severally liable for the DAAB Member's fees and other payments to be made to the DAAB Member in accordance with the GCs.

6. This DAAB Agreement shall be governed by the law of ________________________ (if not stated, the law that governs the Contract under Sub-Clause 1.4 of the Conditions of Contract).

SIGNED by: _____________	SIGNED by: _____________	SIGNED by DAAB Member: _____________
Print name:_____________	Print name: ____________	
Title: __________________	Title: __________________	Title: __________________
for and on behalf of the Employer	for and on behalf of the Contractor	

in the presence of in the presence of in the presence of

Witness: _______________	Witness: _______________	Witness: _______________
Name: ________________	Name: ________________	Name: _________________
Address: _______________	Address: _______________	Address: _______________
_______________________	_______________________	________________________
Date: _________________	Date: _________________	Date: __________________

MG-1

FORM OF MOBILIZATION ADVANCE GUARANTEE/ BOND

Guarantee No. ____ Date___________________

WHEREAS ____ (hereinafter called the 'Employer')

has entered into a Contract for ____

(Particulars of Contract)

with ____ (hereinafter called the "Contractor').

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

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

AND WHEREAS, ____

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

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

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

This Guarantee shall remain in force until the advance is fully adjusted against payments from the Interim Payment Certificates of the Contractor or until _____________________________whichever is earlier. (*Date*)

The Guarantor's liability under this Guarantee shall not in any case exceed the sum of PKR ____________________________ (Pak Rupees ____

_____________________).

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
(Scheduled Bank)

WITNESS:

1. ___________________________________

____

Corporate Secretary (Seal)

2. ___________________________________

____

Name, Title & Address

Signature ________________________

Name ___________________________

Title ____________________________

Corporate Guarantor (Seal)

CONDITIONS OF CONTRACT

CONDITIONS OF CONTRACT

The Conditions of Contract comprise two parts:

(a) General Conditions

(b) Particular Conditions

General Conditions

These Conditions are the "General Conditions" which form part of the "FIDIC Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer Second Edition (2017 Red book, Reprinted 2022 with amendments)" published by:

International Federation of Consulting Engineers
(Fédération Internationale des Ingénieurs – Conseils) – (FIDIC)
World Trade Center II - Geneva Airport
P. O. Box 311
CH-1215 Geneva 15
Switzerland
Email: fidic@fidic.org, fidic.pub@fidic.org
Website: https://fidic.org/bookshop

The successful Bidder after award of Works shall have to provide two (02) copies of above said "General Conditions" for incorporation in the Contract.

Particular Conditions

The Particular Conditions (PC) complement the General Conditions (GC) to specify dates, contractual requirements, and special circumstances related to the Works. The PC consists of two parts, Part A - Contract Data and Part B - Special Provisions. The provisions to be found in the Special Provisions (Particular Conditions - Part B) take precedence over the equivalent provisions found under the same Sub-Clause number(s) in the General Conditions, and the provisions of the Contract Data (Particular Conditions - Part A) take precedence over the Special Provisions (Particular Conditions - Part B).

Part A - Contract Data

Sub - Clause	Data to be Given	Data
1.1.27	Defects Notification Period (DNP):	12 months
1.1.31	Employer's name and address:	**Executive Engineer, Provincial Highway Division Jamshoro** Office of The Executive Engineer, Provincial Highways Division, Jamshoro, near NADRA Office Kotri
1.1.35	Engineer's name and address:	To be nominated later
1.1.73	Sections:	None
1.1.84	Time for Completion:	24 months for whole of the Works
1.3(a) (ii)	agreed methods of electronic transmission:	Not Used
1.3(d)	address of Employer for communications:	Office of The Executive Engineer, Provincial Highways Division, Jamshoro, near NADRA Office Kotri
	address of Engineer for communications:	To be nominated later
	address of Contractor for communications:	________________________________ [insert Contractor's address at the time of signing of the Contract]
1.4	Contract shall be governed by the law of:	Islamic Republic of Pakistan
	ruling language:	English
	language for communications:	English
1.8	number of additional paper copies of Contractor's Documents:	Eight (08)
2.1	after receiving the Letter of Acceptance, the Contractor shall be given right of access to all or part of the Site within:	Within 14 days of Signing of Contract Agreement.
2.4	Employer's financial arrangements	The Employer has has allocated budget from Provincial Highway Division, Jamshoro under NIT Ref. TC/G-55/972/2026.

Sub - Clause	Data to be Given	Data
3.2 (e)(ii)	Engineer's Duties and Authority	Variation resulting in an increase of the Accepted Contract Amount in excess of one percent (1%) subject to accumulative Variations not exceeding five percent (5%) of the Accepted Contract Amount
4.2	Performance Security (as percentage of the Accepted Contract Amount in Currencies) percent: currency:	Ten percent (10%) Pakistani Rupees (PKR)
4.2.1	List of Banks	Any Scheduled Bank in Pakistan
4.7.2	period for notification of errors in the items of reference	Twenty Eight (28) days
4.19	period of payment for temporary utilities	Not Applicable
4.20	number of additional paper copies of progress reports	Six (06)
5.1(a)	maximum allowable accumulated value of work subcontracted (as a percentage of the Accepted Contract Amount)	Not Allowed unless approved by The Engineer.
5.1(b)	parts of the Works for which subcontracting is not permitted	Whole of the Works
6.5	Normal working hours on the Site	Eight (08) hours
8.3	number of additional paper copies of programmes	Six (06)
8.8 & 14.15(b)	Delay Damages payable for each day of delay	0.1% of the Accepted Contract Amount for delay in completion of whole of the Works.
8.8	maximum amount of Delay Damages	Ten percent (10%) of the Accepted Contract Amount
8.14	Applicability of Incentives for Early Completion	No
12.3	Percentage profit	Ten percent (10%)
13.4.(b)(ii)	percentage rate to be applied to Provisional Sums for overhead charges and profit	Twenty Five percent (25%)
14.2	total Advance Payment	Ten percent (10%) of the Accepted Contract Amount excluding Provisional Sums payable in the currencies and proportions in which the Accepted Contract Amount is payable.
14.2.1	List of Banks	Any Scheduled Bank in Pakistan.
14.2.3	percentage deductions for the repayment of the Advance Payment	Deduction shall be made at the amortization rate of 12.5 % of the value of the Works executed of each IPC as provided in paragraph (i) of Sub-Clause GCC 14.3,

Sub - Clause	Data to be Given	Data
		starting from 2nd IPC provided that the advance payment shall be completely repaid prior to the time when 90% of the Accepted Contract Amount less Provisional Sums has been certified for payment. It may be more than 12.5% in the last installment to ensure full repayment.
14.3	period of payment	one month
14.3(b)	number of additional paper copies of Statements	Six (06)
14.3 (iii)	percentage of retention	Ten percent (10%)
14.3 (iii)	limit of Retention Money (as a percentage of the Contract Price)	Five percent (5%)
14.5(b)(i)	Plant and Materials for payment when shipped	Not Applicable
14.5(c)(i)	Plant and Materials for payment when delivered to the Site	Not Applicable
14.6.2	minimum amount of Interim Payment Certificate (IPC)	Eighty Million (Rs. 80 Million)
14.7(a)	period of payment of Advance Payment to the Contractor	14 days
14.7b(i)	period for the Employer to make interim payments to the Contractor under Sub-Clause 14.6 [Interim Payment]	<u>28 days</u>
14.7b(ii)	period for the Employer to make interim payments to the Contractor under Sub-Clause 14.13 (Final Payment)	28 days
14.7(c)	period for the Employer to make final payment to the Contractor	<u>56 days</u>
14.8	financing charges for delayed payment	KIBOR+3% per annum for local currency.
14.11.1(b)	number of additional paper copies of draft Final Statements	Six (06)
14.15	currencies of payment of Contract Price	Pakistani Rupees (PKR)
14.15(a)(i)	Proportions or amounts of Local and Foreign currencies	Local Currency: 100%
14.15(c)	currencies and proportions for payment of Delay Damages	Local Currency: 100%
14.15(f)	rates of exchange	Not Applicable
17.2(d)	forces of nature, the risks of which are allocated to the Contractor	Nil
19.1	permitted deductible limits: i) insurance required for the Works	i) Ten percent (10%) of loss amount on each & every loss

Sub - Clause	Data to be Given	Data
	ii) insurance required for Goods iii) insurance required for liability for breach of professional duty iv) insurance required against liability for fitness for purpose (if any is required) v) insurance required for injury to persons and damage to property vi) insurance required for injury to employees vii) other insurances required by Laws and by local practice	ii) Nil iii) Nil iv) Nil v) Rupees one hundred thousand (Rs. 100,000) per occurrence with number of occurrences unlimited vi) Rupees one hundred thousand (Rs. 100,000) per occurrence with number of occurrences unlimited vii) Nil
19.1	Periods for submission of insurance: a) evidence of insurance b) relevant policies	Not later than the Commencement Date Within twenty eight (28) day from the Commencement Date
19.2.1(b)	additional amount to be insured (as a percentage of the replacement value)	15% of the replacement value (Accepted Contract Amount)
19.2.2	extent of insurance required for Goods amount of insurance required for Goods	from Ex-Works (i.e., works, factory, warehouse, etc.) to delivery at the Site Full replacement value
19.2.3(a)	amount of insurance required for liability for breach of professional duty	Not Applicable
19.2.3(b)	insurance required against liability for fitness for purpose	Not Applicable
19.2.3	period of insurance required for liability for breach of professional duty	Until the date of issuance of Performance Certificate
19.2.4	amount of insurance required for injury to persons and damage to property	Injury to person and Fatal case: in accordance with Workmen Compensation Act Damage to Property: Rs. 10,000,000 without limit to the number of incidents
19.2.6	other insurances required by Laws and by local practice	All insurances as applicable, to the extent of execution of the project, under Federal and Provincial laws of Islamic Republic of Pakistan
21.1	time for appointment of the DAAB	Appointment of the DAAB shall be made when Dispute arises between the Parties.
21.1	the DAAB shall comprise	Sole Member

Sub - Clause	Data to be Given	Data
21.1	List of proposed members of DAAB - proposed by Employer - proposed by Contractor	[to be inserted at the time of signing of the Contract] 1. ____________________ 2. ____________________ 3. ____________________ 1. ____________________ 2. ____________________ 3. ____________________
21.2	Appointing entity (official) for DAAB members	Chairman Pakistan Engineering Council (PEC) from the list of PEC approved arbitrators published at its website
21.6	Rules of Arbitration	PEC Rules of Conciliation and Arbitration or Pakistan Arbitration Act of 1940, if the former is inactive. The place of Arbitration shall be in the Employer's country: Karachi

Particular Conditions

Part B - Special Provisions

1.1 Definitions

1.1.76 "Specification"

Following is added at the end:

"and consists of two parts i.e.,

i) "Part A - Specific Provisions"; and

ii) "Part B - Technical Provisions"."

1.1 Interpretation

"and" is deleted from the end of sub-paragraph (i) and added at the end of sub-paragraph (j).

Sub-paragraph (k) is added:

"(k) The word "tender" is synonymous with "bid" the word tenderer with "bidder", the words "tender documents" with "bidding documents" and "Schedule of Prices" with "Bill of Quantities", as applicable."

1.5 Priority of Documents

The documents listed at (a) through (k) of this Sub-Clause are deleted and substituted with the following:

(a) the Contract Agreement;
(b) the Letter of Acceptance;
(c) the Letter of Bid;
(d) the Particular Conditions Part A - Contract Data;
(e) the Particular Conditions Part B - Special Provisions;
(f) the General Conditions;
(g) the Specification Part A - Specific Provisions;
(h) the Specification Part B - Technical Provisions;
(i) the completed Schedules to Bid including Bill of Quantities;
(j) the Drawings;
(k) the JV Undertaking (if the Contractor is a JV); and
(l) (l) any other documents forming part of the Contract.

The addenda/corrigenda, if any, shall be deemed to have been incorporated at the appropriate places in the documents forming the Contract.

1.6 Contract Agreement

In the last line of the 1st paragraph the text "shall be borne by the Employer" is substituted by "shall be reimbursed by the Employer to the Contractor".

3.1 The Engineer

In sub-paragraph (a) the text "as defined in the Pakistan Engineering Council Act, 1975 (Act No. V of 1976)" are added after the words "professional engineer".

3.2 Engineer's Duties and Authority

The Engineer shall obtain the consent in writing of the Employer before taking action under the following Sub-Clauses of these Conditions:

(a) Consenting to the subcontracting of any part of the Works under Sub-Clause 5.1 [Subcontractors]
(b) Any action under Sub-Clauses 8.9 [Employer's Suspension] and 8.12 [Prolonged Suspension]

(c) Issuance of “Taking Over Certificate” under Sub-Clause 10.1 [Taking Over the Works and Sections].
(d) Issuing the “Performance Certificate” under Sub-Clause 11.9 [Performance Certificate].
(e) Sub-Clause 13.1 [Right to Vary]: instructing a Variation, except;
(i) in an emergency situation as determined by the Engineer, or
(ii) if such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the Contract Data.
(f) Sub-Clause 13.3 [Variation Procedure]: approving a proposal for Variation submitted by the Contractor in accordance with Sub-Clause 13.3.2 [Variation by Request for Proposal] or 13.2 [Value Engineering].
(g) Certifying release of second half of the Retention Money under Sub-Clause 14.9 [Release of Retention Money].
(h) Issuing Final Payment Certificate under Sub-Clause 14.13 [Issue of FPC].
(i) Extra payment as a result of Contractor’s claims under Clause 20 [Employer’s and Contractor’s Claim].

Any such requirement shall not be applied to any action by the Engineer under Sub-Clause 3.7 [Agreement or Determination], as stated in Sub-Clause 3.2 [Engineer’s Duties and Authority] of the General Conditions.

Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Employer.

Following is added after the words “the Employer’s consent is required” in 4th paragraph:

“stating that the Employer’s consent has been obtained for that specified authority”

4.2 Performance Security

4.2.1 Contractor’s Obligations

The entity issuing the Performance Security and its form shall be as under:

The Performance Security shall be, at the option of the Contractor, issued in the prescribed form included in the Bidding Documents, by (a) a Scheduled Bank in Pakistan or (b) a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan.

In case of Joint Venture, the Performance Security shall be in the name of the Joint Venture or in the name of Lead/either firm of the JV or in ratio of shares of the individual JV partners.

Following paragraph is added at the end of this Sub-Clause:

"The amount of Performance Security shall be reduced to 50% following issue of the Taking-Over Certificate for the whole of the Works under Clause 10 of Conditions of Contract."

4.3 Contractor's Representative

In second paragraph the text "professional engineer as defined in the Pakistan Engineering Council Act, 1975 (Act No. V of 1976) (having temporary licence in case of foreign engineer under Section 12 of the Pakistan Engineering Council Act, 1975 (Act No. V of 1976)" are added after the words "qualified, experienced".

In the 3rd paragraph the words "28 days" are substituted by "14 days". In 2nd line of 4th paragraph the text "or appoint a replacement" is substituted by "except appointment of a suitable temporary replacement is deployed at the Site"

4.4 Contractor's Documents

4.4.2 As-Built Records

First paragraph is deleted and the text in the last paragraph is substituted with the following:

"The Contractor shall furnish to the Engineer 6 copies, one reproducible and one electronic copy (provided the Engineer has made available to the Contractor editable form of the Drawings) of all Drawings amended to conform to the Works as built. In case the Engineer does not make available to the Contractor editable form of the Drawings, the Contractor shall furnish to the Engineer as-built data for incorporation in the Drawings. Upon receipt of PDF versions of the as-built drawings prepared by the Engineer, the Contractor shall furnish to the Engineer 6 copies and one reproducible of these Drawings.

The price of such Drawings shall be deemed to be included in the Contract Price."

Following Sub-Clause is added:

4.4.4 Shop Drawings

The Contractor shall submit to the Engineer for review 3 copies of all shop and erection drawings applicable to this Contract as per provision of relevant Sub-Clause of the Contract.

Review and approval by the Engineer shall not exceed 21 days and be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory and the Engineer's review or approval shall not relieve the Contractor of any of his responsibilities under the Contract.

4.8	Health and Safety Obligations	The following text is added at the end of this Sub-Clause: In the event of work being carried out outside the normal working hours and in the event of work being carried out at night, the Contractor shall at his own cost, provide and maintain such good and sufficient light as will enable the work to proceed satisfactorily and without danger. The approaches to the Site and the Works where the night work is being carried out shall be sufficiently lighted. All arrangement adopted for such lighting shall be to the satisfaction of the Engineer.
4.20	Progress Reports	At the end of sub-paragraph (g) the word "and" is deleted and at the end of sub-paragraph (h) the full stop (.) is replaced with ";", and the following new sub-paragraphs are added as: (i) planned programme for the execution of the Works for next 56 days to enable the Engineer to determine its programme of inspection and testing; (j) monthly summary of daily job record indicating weather conditions, deployment of Contractor's Equipment, labour employment, local material procurement and material import, if any; and (k) salient contractual and project information.
5.1	Subcontractors	Add the following text at the end of paragraph (ii): "under Schedule to Bid" The following is added at the end of the last paragraph of Sub-Clause 5.1: "All subcontracts relating to the Works shall include provisions which entitle the Employer to require the subcontract to be assigned to the Employer under sub-paragraph (a) of Sub- Clause 15.2.3 [*After Termination*]. The Contractor shall give reasonable opportunity to contractors from Islamic Republic of Pakistan for subcontracts for the Works, and endeavour to employ such contractors as Subcontractors."
5.2	Nominated Subcontractors	<u>5.2.2 Objection to Nomination</u> In sub-paragraph (c), "and" is deleted from the end of (i); "." at the end of (ii) is replaced with: ", and". The following is then added as (iii): "(iii) be paid only if and when the Contractor has received from the Employer payments for sums due under the Subcontract referred to under Sub-Clause 5.2.3 [*Payment to nominated Subcontractors*]."
6.1	Engagement of Staff and Labour	The following paragraph is added at the end of the Sub-Clause: "The Contractor shall, to the extent practicable and reasonable, employ staff (not less than 50%) and labour (not less than 85%) with appropriate qualifications and experience from sources within the Islamic Republic of Pakistan."

6.7 Health and Safety of Personnel

The existing text is substituted with the following:

"In order to provide for the safety, health and welfare of persons, and for prevention of damage of any kind, all operations for the purposes of or in connection with the Contract shall be carried out in compliance with the Safety Requirements of the Government of Pakistan with such modifications thereto as the Engineer may authorize or direct and the Contractor shall take or cause to be taken such further measures and comply with such further requirements as the Engineer may determine to be reasonably necessary for such purpose. The Contractor shall also provide all other medical services and appoint a health and safety officer at Site if stated in the Specifications. In case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer immediately by the quickest available means."

6.8 Contractor's Superintendence

Insert at the end of sub-paragraph (a) of this Sub-Clause:

"or, if not, the Contractor shall make competent interpreters available during all working hours, in a number sufficient for those persons to properly perform their superintendence duties"

The following text is added at the end of this Sub-Clause:

"The Contractor's authorized representative and his other engineers working at site shall possess valid registration with the Pakistan Engineering Council.

The Contractor's authorized representative at Site shall be authorized to exercise adequate administrative and financial powers on behalf of the Contractor so as to achieve completion of the Works as per the Contract."

6.12 Key Personnel

The following is inserted at the end of the last paragraph:

"If any of the Key Personnel are not fluent in this language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer."

The following Sub-Clauses 6.13 to 6.26 are added at the end of Sub-Clause 6.12:

6.13 Foreign Personnel

The Contractor may bring in to the Country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Employer will, if requested by the Contractor, use all reasonable endeavours in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.

The Contractor shall be responsible for the return of these personnel to the place where they were recruited or to their domicile. In the event of the death in the Country of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

6.14	Supply of Foodstuffs	The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.
6.15	Supply of Water	The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.
6.16	Measures against Insect and Pest Nuisance	The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.
6.17	Alcoholic Liquor or Drugs	The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereto by Contractor's Personnel.
6.19	Festivals and Religious Customs	The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.
6.20	Funeral Arrangements	The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of its local employees who may die while engaged upon the Works.
6.21	Forced Labour	The Contractor, including its Subcontractors, shall not employ or engage forced labour which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labour, such as indentured labour, bonded labour or similar labour-contracting arrangements.
6.22	Child Labour	The Contractor, including its Subcontractors, shall not employ or engage child labour in accordance with relevant law(s) in force in Islamic Republic of Pakistan.
6.23	Employment Records of Workers	The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [*Contractor's Records*].
6.24	Workers' Organizations	The Contractor shall comply with the relevant labour laws of Pakistan which recognize workers' rights to form and to join workers' organizations/Trade Union of their choosing and to bargain collectively without interference.
6.25	Non-Discrimination and Equal Opportunity	The Contractor shall not make decisions relating to the employment or treatment of Contractor's Personnel on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment of Contractor's Personnel on the principle of equal opportunity and

fair treatment, and shall not discriminate with respect to any aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices.

Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination. The Contractor shall provide protection and assistance as necessary to ensure non-discrimination and equal opportunity, including for specific groups such as women, persons with disabilities, migrant workers and children (of working age in accordance with Sub-Clause 6.22).

6.26 Epidemics

In the event of any out-break of illness of epidemic nature, the

Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities for the purpose of overcoming the same.

7.7 Ownership of Plant and Materials

The following is added before the first paragraph: "Except as otherwise provided in the Contract,"

The following is added at the end of the Sub-Clause:

"No Plant and/or Materials that is the property of the Employer shall be removed from the Site. If it becomes necessary to:

(i) remove any item of such Plant from the Site for the purposes of repair, the Contractor shall give a Notice, with reasons, to the Engineer requesting consent to remove the defective or damaged item off the Site. This Notice shall clearly identify the item of defective or damaged Plant, and shall give details of: the defect or damage to be repaired; the place to which defective or damaged item of Plant is to be taken for repair; the transportation to be used (and insurance cover for such transportation); the proposed inspections and testing off the Site; and the planned duration required before the repaired item of Plant shall be returned to the Site. The Contractor shall also provide any further details that the Employer may reasonably require; or

(ii) replace any item(s) of such Plant and/or Materials, the Contractor shall give a Notice, with reasons, to the Engineer clearly identifying the item(s) of Plant and/or Materials to be replaced, and giving details of the due date of delivery to the Site of the replacement item(s).

Where any item of Plant and/or Materials has become the property of the Employer under this Sub-Clause before it has been delivered to the Site, the Contractor shall ensure that such an item is not moved except for its delivery to the Site.

The Contractor shall indemnify and hold the Employer harmless against and from the consequences of any defect in title or encumbrance or charge (except any reasonable restriction arising from the intellectual property rights of the manufacturer or producer) on any item of Plant and/or Materials that has become the property of the Employer under this Sub-Clause."

The following Sub-Clause 7.9 is added after Sub Clause 7.8:

7.9 Use of Pakistani Materials and Services

The Contractor shall, so far as may be consistent with the Contract, make the maximum use of materials, supplies, plant and equipment indigenous to or produced or fabricated in Pakistan and services available in Pakistan provided such materials, supplies, plant, equipment and services shall be of required standard.

8.1 Commencement of Works

The following is added before the first paragraph:

"After signing of the Contract Agreement by both Parties," and thereafter the word "The" is replaced with the word "the".

8.5 Extension of Time for Completion

The following is added after paragraph (c):

"for last five years".

The following Sub-Clause 8.14 is added after Sub-Clause 8.13:

8.14 Incentives For Early Completion

If Contract Data does not state applicability of incentives for early completion, this Sub-Clause shall not apply.

The Contractor shall be entitled subject to Sub-Clause 20.2 [Claims for Payment and/or EOT] to bonus payment if the Works and/or each Section is completed earlier than the Time for Completion for the Works or Section (as the case may be). The amount of bonus for early completion of the Works and/or each Section shall be upto a limit and at a rate to 50% of the relevant limit and rate of delay damages prescribed in Contract Data and shall be paid for every day which shall elapse between the relevant Date of Completion of the Works or Section and the relevant Time for Completion.

For the purposes of calculating any bonus payment, the applicable Time for Completion stated in the Contract Data is fixed and no adjustments of this time by reason of granting an EOT will be allowed.

The following Sub-Clause 11.12 is added after Sub-Clause 11.11:

11.12 Supervisory Assistance During DNP

If provided under the Schedule of Prices, the Contractor shall provide supervisory assistance to the Employer during the DNP for the Works. Such supervisory assistance shall be as described in the Specification for the purpose of supporting the Employer's operation and maintenance of the Plant for the period specified in the Schedule of Prices after the Date of Completion.

12.2 Method of Measurement

The following paragraph is added at the end of the Sub-Clause:

		"Summary of measured quantity for payment shall be delineated item-wise under four heads namely; "Schedule of Prices Quantity", "Quantity Executed To-date", "Quantity Certified Previously" and "Net Quantity Executed under this Certificate".
12.3	Valuation of the Works	The following text is added at the end of fifth paragraph of the Sub-Clause: "Sum of overhead charges and profit for sub-paragraph (a) shall be Twenty Five percent (25%)".
13.4	Provisional Sums	The following paragraph is inserted as the penultimate paragraph: "The Provisional Sum shall be used to cover the Employer's share of the DAAB members' fees and expenses, in accordance with Clause 21. No prior instruction of the Engineer shall be required with respect to the work of the DAAB. The Contractor shall submit the DAAB members' invoices and the satisfactory evidence of having paid 100% of such invoices as part of the substantiation of those Statements submitted under Sub-Clause 14.3.
13.6	Adjustments for Changes in Laws	The following paragraphs are added at the end of the Sub- Clause: "Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the Table of Adjustment Data in accordance with the provisions of Sub-Clause 13.7 [*Adjustments for Changes in Cost*]."
14.2	Advance Payment	<u>14.2.1 Advance Payment Guarantee</u> The entity issuing the Advance Payment Guarantee and its form shall be as under: The Advance Payment Guarantee shall be in the form of Guarantee issued by (a) a Scheduled Bank in Pakistan or (b) a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan.
14.6	Issue of IPC	<u>14.6.1 The IPC</u> In the first line of the 1st paragraph the words "28 days" are substituted by "14 days".
14.7	Payment	Delete '.' At the end of last paragraph and add the words "or through crossed cheque in favour of the Contractor.
14.8	Delayed Payment	In the first paragraph, third line, the words "compounded monthly" are deleted. The text of 2nd paragraph is deleted and substituted with the following: "The Employer shall pay to the Contractor compensation at the rate stated in the Contract Data."

15.2	Termination for Contractor’s Default	<u>15.2.1 Notice</u> Following text is added at the end of sub-paragraph (h) of this Sub-Clause: “For the purposes of this Contract, corrupt and fraudulent practices have been defined in Sindh Public Procurement Rules 2010.” <u>15.2.3 After Termination</u> The word “and” at the end of sub-paragraph (ii) of paragraph (b) is deleted the following paragraph is added after sub-paragraph (iii): “(iv) all Employer-Supplied Materials and/or Employer's Equipment made available to the Contractor in accordance with Sub-Clause 2.6 [Employer-Supplied Materials and Employer's Equipment], and”
15.4	Payment after Termination	The following text is added at the end of this Sub-Clause: “The Employer shall be entitled to sell any of the Contractor’s Equipment, Temporary Works and unused materials and apply the proceeds of sale towards payment of any debt due from the Contractor to the Employer under this Clause including any outstanding payments to the Subcontractors.
16.2	Termination by Contractor	<u>16.2.1 Notice</u> The sub-paragraph (j) is deleted in its entirety. At the end of sub-paragraph (i) “; or” is replaced with “.” and at the end of sub-paragraph (h) “;” is replaced with “; or”. In sub-paragraph (f) “84 days” are replaced with “180 days” and text “for reasons not attributable to the Contractor” is added at the end.
16.3	Contractor’s Obligations After Termination	Sub-paragraph (c) is deleted and replaced with: "(c) deliver to the Engineer all Employer-Supplied Materials and/or Employer's Equipment made available to the Contractor in accordance with Sub-Clause 2.6 [*Employer-Supplied Materials and Employer's Equipment*]; and (d) remove all other Goods from the Site, except as necessary for safety, and leave the Site."
17.1	Responsibility for Care of the Works	After the two instances of “Goods” in the last paragraph, the words “Employer-Supplied Materials and/or Employer's Equipment” are added.

The following Sub-Clause 17.7 is added after Sub-Clause 17.6:

17.7	Use of Employer’s Accommodation/ Facilities	The Contractor shall take full responsibility for the care of the items of the Employer’s facilities and/or accommodation, if any, as detailed in the Specification, from the date of use and/or occupation by the Contractor until the date on which such use and/or occupation is re-vested in the Employer.

If any loss or damage happens to any of the above items during a time while the Contractor is responsible for its care, arising from any cause other than a cause for which the Employer is responsible or liable, the Contractor shall promptly rectify the loss or damage at the Contractor's risk and cost.

18.1 Exceptional Events	The words "or disorder" are replaced with "disorder or sabotage" in sub-paragraph (c) of the Clause.
18.4 Consequences of an Exceptional Event	The following is added at the end of sub-paragraph (b) after deleting the ".": ", including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Exceptional Events, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 19.2 [*Insurance to be provided by the Contractor*]."
18.5 Optional Termination	In sub-paragraph (c), the words "and necessarily" are added after the words "was reasonably".
19.1 General Requirements	Following text is added at the end of first paragraph: "The Contractor shall immediately after the date of the Letter of Acceptance submit the draft of insurance policies for the Employer's consent." Following text is added at the end of third paragraph: "The Contractor shall, within the respective periods stated in the Contract Data submit to the Engineer and the Employer a) evidence that the insurances described in this Clause have been effected, and b) copies of policies of the insurances described in Sub-Clauses 19.2.1, 19.2.4 and 19.2.5."
19.2 Insurance to be provided by the Contractor	<u>19.2.5 Injury to employees</u> The words "sickness, disease" are deleted in the third line of first paragraph. The following Sub-Clause is added after Sub-Clause 19.2.6: <u>19.2.7 Insurance Company</u> "The Contractor shall be obliged to place all insurances described in this Clause with insurers listed in the Contract Data with minimum rating of AA+ by PACRA/VIS.
21.6 Arbitration	The word "international" is deleted in the sixth line of first paragraph. The text of sub-paragraph (a) is substituted with the following: "the Dispute shall be finally settled under the Rules of Arbitration, specified in the Contract Data;"

The following Clauses are added after Clause 21

22 Custom Duty	The Contractor shall be liable to pay custom duty arising out of the Contract. The rates and prices as stated in the contract shall be deemed to cover all such duties.

23 **Taxes**

The Contractor, Subcontractors and their employees shall be liable to pay income tax, withholding tax, super tax and other taxes on income arising out of the Contract. The rates and prices as stated in the contract shall be deemed to cover all such taxes.

24 **Integrity Part**

If it is found and established at any stage that the Contractor or any of his Subcontractors, agents or servants have violated or involved in violation of the Integrity Pact signed by the Contractor then the Employer shall be entitled to:

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

The termination under sub-paragraph (b) of this Sub-Clause shall proceed in the manner prescribed under Sub-Clause 15.1 to 15.4 and the payment under Sub-Clause 15.4 shall be made after having deducted the amounts due to the Employer under sub-paragraph (a) and (c) of this Sub-Clause.

SPECIFICATIONS

PART A - TECHNICAL PROVISIONS

DRAWINGS

BILL OF QUANTITIES (BOQs)

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

S. No	DESCRIPTION	Total Amount	Total Amount after % Above or Below
		PKR	PKR
	GENERAL SUMMARY		
1	GENERAL WORK	6,401,909	
2	SUBSTRUCTURE WORK	89,942,550	
3	SUPERSTRUCTURE WORK	44,301,479	
4	RAMP WORKS	17,889,837	
	BRIDGE AMOUNT	**158,535,774**	
5	NSR		
	SRB @ 5%		
	TOTAL AMOUNT		

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
		CIVIL WORK :							
		(AB1 To AB2 DISTANCE 3-SPAN of 17.100 METER)							
1		**GENERAL WORK**							
1.1	**CSR-2024 CH-1 VOL-III, Part-IV,** Item No.1	**EARTH WORK** (Excavation & Embankment) Clearing and grubbing the site by cutting, uprooting and removing all rubbish and shrubs including disposal to (outside limits) designated places.	Sq.m	593.40	31.00	18,395.40			
1.2	**CSR-2024 CH-2 VOL-III, Part-I,** Item No.19.C	Dismantling cement concrete plain 1: 2: 4: Existing Structure	Cu.m	365.23	4,695.99	1,715,116.00			
		CSR Rate coverted From Cft To Cu.m							
1.3	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.39.2	**MISCELLANEOUS : (DIVERSION)** Making and maintaining diversion during construction including supplying necessary barriers, notice boards with lighting arrangements and providing temporay crossing over the water courses where ever necessary so as to be a good motorable condition.	P.K.m	0.50	232,853.57	116,426.79			
1.4	Item No. 43.48	Confirmatory Boring (Nx) Size Two Nos Bore Holes Depth 35m	Mtr	25.00	11,315.03	282,875.75			
1.5	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.43.46	Pile Load Test Upto 550 Tonne * design Load 100 Ton * Index Pile For twice the design load	Nos	2.00	2,134,547.35	4,269,094.70			
		To General Summary				**6,401,909**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
		CIVIL WORK :							
		(AB1 To AB2 DISTANCE 3-SPAN of 17.100 METER)							
2		**SUBSTRUCTURE WORK**							
2.1	**CSR-2024 CH-1 VOL-III, Part-I,** Item No.18 (b).	Excavtion in foundation of Building Bridges and other structures including dagbelling dressing, refilling around structrure with excavated earth Watering and ramming lead upto 5 ft. , lead upto one chain (30 metre) and lift upto 5 ft. (1.5 metre). In Ordinary Soil	Cu.m	302.64	419.12	126,842			
		* Rate converted to match s.i as given conversion rate of CSR 2024 Page 04.							
2.2	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.43.16.1	**Lean Concrete** including Formwork Below Pier Pile Cap, etc, as per dwg & Specification with all respect.	Cu.m	20.18	13,892.95	280,359.73			
2.3	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.43.1	Concrete Class A1 (Under Ground) Pile Foundation	Cu.m	866.01	24,021.96	20,803,257.58			
		To Bill Summary				**21,210,459**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
2.4	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.43	Reinforcement As Per AASHTO M-31 Grade 60 including cutting,bending,binding and fixing in position for required components of Pre-Stressed Bridges.The rate also include the cost of binding wire and its labour fixing							
2.5	43.25	Pile Foundation (Reinforcement)	Ton	91.75	372,699.59	34,195,187			
2.6	Item No.43.8	Concrete Class A3 (On Ground) (280 Kg/sq.cm.) For Pier Pilecap as specified and formwork, exposed faces fair face	Cu.m	190.00	29,946.55	5,689,845			
2.7	43.25	Pier Pilecap (Reinforcement)	Ton	23.484	372,699.59	8,752,477			
2.8	Item No. 43.41	Cast In Place Piles Upto 1.00 M Dia In Gravel Strata (Boring Only)	Mtr	1,225	16,403.74	20,094,582			
		To Bill Summary				**68,732,091**			
		Bill Summary							
		Civil -Rev.0 -Page 1 of 2				**21,210,459**			
		Civil -Rev.0 -Page 2 of 2				**68,732,091**			
		To General Summary				**89,942,550**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
		CIVIL WORK :							
		(AB1 To AB2 DISTANCE 3-SPAN of 17.100 METER)							
3		**SUPERSTRUCTURE WORK**							
3.1	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.43.8	Pier Shaft 1000mm diameter	Cu.m	81.69	29,946.55	2,446,334			
3.2	43.25	Pier Shaft (Reinforcement)	Ton	10.10	372,699.59	3,764,266			
3.3	Item No.43.8	Pier Transom	Cu.m	41.25	29,946.55	1,235,295			
3.4	43.25	Pier Transom (Reinforcement)	Ton	5.098	372,699.59	1,900,023			
3.5	Item No.43.8	Diaphragm, end & intermediate	Cu.m	17.82	29,946.55	533,648			
3.6	43.25	Diaphragm (Reinforcement)	Ton	2.20	372,699.59	819,939			
3.7	Item No.43.8	Abutment	Cu.m	10.177	29,946.55	304,766			
3.80	43.25	Abutment (Reinforcement)	Ton	1.258	372,699.59	468,856			
3.90	Item No.43.8	Wing walls	Cu.m	16.43	29,946.55	492,022			
3.10	43.25	Wing walls (Reinforcement)	Ton	2.031	372,699.59	756,953			
3.11	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No. 43.38.1	**Elastomeric Bearing Pads (According To Size And Thickness) Imported.,** Size 400x300x39mm comprised of three 12mm rubber plates sandwiched in four 3mm plates enclosed in three rubbers., as per design & specification complete with all respect.	Cu.Cm	110,000	10.41	1,145,100			
3.12	Item No. 43.21.1	Precast Concrete Class "D2" (425 Kg/sq.cm) For Precast Prestessed concrete girder, as specified and formwork, exposed faces fair face PC Girder	Cu.m	122.43	36,438.41	4,461,151			
	43.25	PC Girder (Reinforcement)	Ton	17.29	372,699.59	6,443,976			
		To Bill Summary				**24,772,329**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
3.13	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No. 43.27.1	Pre-Stressing Wires Strands 3/8"- 1/2" Dia Complete In All Respects i/c Girder stressing grouting & End Pockets complete job as per design & specification complete with all respect. Tandon : Prestressed concrete wire (PC wire). All strands in tendon shall be stressed to max. load of 147 KN each and locked without any allowance what to ever. Prestressing tendoms comprise 0.5 inch Ø wires strands in numbers stated in the respective dwgs. Accssories : a). Prestressed concrete wire (PC wire). o.5 inch Ø b). Barrel and wedges c). Casting anchorage d). Fixing (dead) end anchorage e). Spherical plate f). Tensioning end anchorage g). Hex nut h). Spherical Nut	Ton	4.540	460,389.77	2,090,170			
3.14	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No. 43.28.1	**Launching Of Girder** Installation of Pre-Cast Post Tension R.C.C Girder Including Transportation for fabrication yard & installation of the transom, wt. of Girder 30 Ton x 12 No of Girder = 360 Ton	Ton	360.00	2,492.53	897,311			
3.15	Item No.43.8	Deck slab 230mm THK.	Cu.m	86.13	29,946.55	2,579,296			
3.16	43.25	Deck slab (Reinforcement)	Ton	10.646	372,699.59	3,967,760			
3.17	Item No.43.8	Expansion Joint RCC Beam	Cu.m	2.69	29,946.55	80,556			
3.18	43.25	E . Joint Beam (Reinforcement)	Ton	0.296	372,699.59	110,319			
3.19	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No. 16	Providing and laying fairfaced reinforced cement concrete new jersey barrier having 3000 PSI compressive cylindrical strength Concrete (Ready mixed concrete) (area 2.0 Sft) as per drawing including the cost of excavation, formwork, lean concrete 1450 PSI compressive cylindrical strength etc. complete in all respect. (excluding the cost	R.m	102.600	13,779.48	1,413,775			
3.20	a	New Jersey Barrier (Reinforcement)	Ton	3.057	372,699.59	1,139,343			
		To Bill Summary				**12,278,529**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
3.21	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.43.33	**Steel Expansion Joints With Cast Aluminum Alloy Triangular Teeth For 110mm Movement (Imported).,** Design joints in accordance with specifications and drawings. EXPANSION JOINT (EJ) : As Freyssinet CIPEC (WOSd 50) or approved equivalent with tension bolts. a). Extruded aluminium alloy section. b). Neoprene gland (elastomeric profile) c). Washer. d). Structural anchor bolt M12x200mm HSS galvanized bolt. e). PVC protection sheath. f). Achoring piece. g). Concrete Cast after setting in place the joint. h). Epoxy Fill- such as Fosrock NITOSEAL 290 OR Approved Equivalent.	MTR	29.20	172,787.27	5,045,388			
		Approach Slab							
3.22	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.43.16.1	**Lean Concrete** including Formwork Below Approch Slab, Abutment pilecap etc, as per dwg & Specification with all respect.	Cu.m	6.18	13,892.95	85,858			
	Item No. 43.2	Concrete Class A1 (On Ground) (210 Kg/sq.cm) For Barrier, Approch Slab and all other reinforced concrete members except noted below, as specified and formwork, exposed faces							
3.23	43.2.1	Approch slab 250mm THK.	Cu.m	18.92	26,096.27	493,741			
3.24	43.25	Approch slab (Reinforcement)	Ton	1.695	372,699.59	631,726			
3.25	**CSR-2024 CH-7 VOL-III, Part-IV,** Item No.7.31	**APPLYING BITUMINOUS COAT.(PRIME COAT)** Applying priming coat or tack coat with approved binder at the required rate including cleaning the road surface thoroughly, heating to the required temperature and spraying the binder with pressure as directed etc, complte. (Deck Slab & Approch Slab Area)	Sq.m	469.09	37.67	17,671			
		To Bill Summary				**6,274,384**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
3.26	**CSR-2024 CH-5 VOL-III, Part-IV,** Item No.5.24 (B)	**2" (50 mm) Thick Asphalt Concrete Wearing Course Plant Mix** Laying to Proper line and grade plant mixed Asphalt concrete paver finished (Hydraulic / Electronic control) Prepared to specified fomula according to job mix formula approved by Engineer incharge including rolling and finishing to Properline, grade level and camber etc: (Machinery with POLs cost of material carriage). (Deck Slab & Approch Slab Area)	Sq.m	433	2,138.44	925,945			
3.27	Item No.39.13	**Tharmo Plastic Paint** Pavement marking in Reflective Tharmo Plastic Paint for Lines of 6" Width. (Deck Slab & Approch Slab Area)	R.m	178.02	282.51	50,292			
		To Bill Summary				**976,237**			
		Bill Summary							
		Civil -Rev.0 -Page 1 of 4				**24,772,329**			
		Civil -Rev.0 -Page 2 of 4				**12,278,529**			
		Civil -Rev.0 -Page 3 of 4				**6,274,384**			
		Civil -Rev.0 -Page 4 of 4				**976,237**			
		To General Summary				**44,301,479**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
		CIVIL WORK :							
		(AB1 To AB2 DISTANCE 3-SPAN of 17.100 METER)							
4		**RAMPS**							
4.1	**CSR-2024 CH-1 VOL-III, Part-IV,** Item No. 6(II)	**Embankment (For Ramp)** Earth work for road embankment by buldozer including ploughing. mixing, clod breaking dressing and compacting with optimum moisture content. Lead upto 100 ft: and lift upto 5 ft: in all							
		(II) If earth work is done by other then departmental agency.							
	(a).	* For 95-100% modified AASHO density.	Cu.m	6,431.48	583.67	3,753,861.932			
	(c)	* For 85% modified AASHO density.	Cu.m	53.98	326.24	17,610.435			
4.2	**CSR-2024 CH-2 VOL-III, Part-IV,** Item No.11 (A)	**SUB BASE (For Ramp)** Preparing sub- base course by supplying and spread-ing stone metal 1-1/2"-2" guage of approved quality from approved quarry in required thickness to proper camber and grade including hand packing filling voids with 20 cft: of pit / canal sand having plasticity index not more than 6% of suitable quality, watering and compacting to achieve 98-100% density as per modified AASHO specifiecations (Rate includes all cost of materials T&P and carriage upto 3 chains).	Cu.m	41.61	5,169.67	215,109.969			
4.3	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.39 (7)	**DIAGONAL GROOVES (For Ramp)** Making diagonal grooves of 1-1/2"*1-1/2" at 2FT: centre to centre in road surface.	RM	2,039.6	85.18	173,733.128			
		To Bill Summary				**4,160,315.464**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
4.4	**CSR-2024 CH-2 VOL-III, Part-IV,** Item No.12	**BRICK WORK** Laying brick on end edging including supplying 9" * 4 - 1/2"* 3" first class bricks, excavation for laying edging with small side parallel to the road (Rate includes lead upto 3- chains).	RM	949.91	283.97	269,745.943			
4.5	**CSR-2024 CH-3 VOL-III, Part-IV,** Item No.13	**BASE COURSE (For Ramp)** Preparing base course i/c supplying and spreading stone metal of approved qualitiy properly graded to maximum size of 1-1/2" in required thickness to Proper camber and grade including supplying and spreading 15 Cft: screenings and non plastic quarry fines, filling depressions with stone metal after initial rolling including watering and compaction the same so as to achieve 100% density as per modified AASHO directed .(Rate includes all cost of materials T&P and carriage upto 3 chins). specifications. (Rate includes providing and using templates, camber plates, screens, forms as	Cu.m	345.46	5,539.49	1,913,672.215			
4.6	**CSR-2024 CH-4 VOL-III, Part-IV,** Item No.16 (b)	**SURFACE TREATMENT** Providing surface dressing Ist coat on new or existing surface with 30 lbs bitumen and 4.0 Cft: of bajri of required size including cleaning the road surface rolling etc, complete. (Rate includes all cost of materials T & P and carriage upto 3 chains). (b) Using Crushed Bajri.	Sq.m	2,533.37	445.88	1,129,578.570			
4.7	**CSR-2024 CH-4 VOL-III, Part-IV,** Item No.24 (A)	**11/2inch(37.50mm)thick Asphalt Concrete wearing coarse plant mix** Laying mechanically to proper line and grade plant mixed Asphalt Concrete specified formula according to job mixed formula approved by the Engineer incharge rolling and finishing to design Proper grade line level and comber etc (Machinery with POLs Cost of material carriage).	Sq.m	2,674.24	1,813.81	4,850,563.254			
		To Bill Summary				**8,163,559.982**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR	Percentage(%) Above or Below	Rate After (%) Above or Below	Amount After Percentage(%) Above or Below
4.8	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.13	**Tharmo Plastic Paint** Pavement marking in Reflective Tharmo Plastic Paint for Lines of 6" Width. (Ramps)	R.m	1,084.03	282.51	306,249.880			
4.9	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.18(C)	**TRAFFIC SIGNS** Providing & Fixing Rectangular shape 3'x2' comprizing 2 Nos: 3" Dia G.I pipe Post i/c Painting, writing as directed each.	Each	2.00	52,117.78	104,235.560			
4.10	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No. 16	Providing and laying fairfaced reinforced cement concrete new jersey barrier having 3000 PSI compressive cylindrical strength Concrete (Ready mixed concrete) (area 2.0 Sft) as per drawing including the cost of excavation, formwork, lean concrete 1450 PSI compressive cylindrical strength etc. complete in all respect. (excluding the cost	R.m	99.400	13,779.48	1,369,680			
4.11	a	New Jersey Barrier (Reinforcement)	Ton	2.475	372,699.59	922,329			
4.12	**CSR-2024 CH-12 VOL-III, Part-IV,** Item No.18(A)	**CAUTION BOARD** Providing & Fixing traffic sign 3' dia G.I.Pipe post and sign of equilaterial triangular shape each side 3' long i/c Painting, Marking as directed each.	Each	4.00	55,873.81	223,495.240			
4.13	**CSR-2024 CH-06 VOL-III, Part-I,** Item No.24	**STONE PITCHING** Stone Pitching hand packed with surface leveled off to the Correct Section with hammer dressed Stone and voids filled in 1:8 Cement mortar in floors of bridges and along hands and in aprons etc. including three chains lead.	Cu.m	375.54	7,029.80	2,639,971			
		To Bill Summary				**5,565,961.077**			
		Bill Summary							
		Civil -Rev.0 -Page 1 of 3				**4,160,315.464**			
		Civil -Rev.0 -Page 2 of 3				**8,163,559.982**			
		Civil -Rev.0 -Page 3 of 3				**5,565,961.077**			
		To General Summary				**17,889,836.523**			

BILLS OF QUANTITIES

PRE-STRESSED BRIDGE 50 METER I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0.06 DISTRICT JAMSHORO

PRESTRESSED CONCRETE BRIDGES (HIGHWAYS)

S. No	Item Reference	DESCRIPTION	Unit	Quantity	Unit Price PKR	Amount PKR
		CIVIL WORK : **(AB1 To AB2 DISTANCE 3-SPAN of 17.100 METER)**				
6						
6.1	**NSR**	Dismantling of pile head with light chiesel & hammer so as not to un nessecery distrub sound concrete including the cost of tool and plant as per drawing & specifications or as directed by The Engineer.	Each	48.00		
6.2	**NSR**	**Pile integrity test 100% Pile .** Pile Integrity Test (PIT) is normally performed by striking the pile head with a light hand-held hammer and recording the response of the pile using a motion transducer (i.e. accelerometer) coupled to the pile head. The hammer strike (blows) generate compressive stress wave that will travel through the pile., i/c making of pile head.	Each	48		
		To General Summary				-

OFFICE OF THE EXECUTIVE ENGINEER, PROVINCIAL HIGHWAY DIVISION JAMSHORO

PROCUREMENT PLAN DEVELOPMENT SCHEME IN PROVINCIAL HIGHWAYS DIVISION JAMSHORO 2025-26

Sr. No.	Description Of Procurement	Quantity (Where Applicable	Estimated Unit Cost Applicable	Estimated Total Cost	Funds Allocated	Source Of Funds (ADP/Non ADP)	Proposed Procurement Method	TIMING OF PROCUREMENTS				REMARKS
								1st Quarter	2 nd Quarter	2 nd Quarter	2 nd Quarter	
01	Special M&R of Dual Carriageway road from (M-9) Motorway to Link road Gulshane-Shahbaz via Mehran Housing Society @ Mile 0/0-1/0 (1.60 KMs)	---	---	99.651 (M)	99.651 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
02	Special M&R of Road inside Cadet College Petaro at Mile 0/0- 0/5+330 (1.10 KM) Taluka Kotri,	---	---	29.663 (M)	29.663 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
03	Special M&R of Dual Carriageway road Shaheed Mohtarma Benazir Bhutto Gate to (M-9) Super Highway 1/C Masonry Structure Mile 0/0-2/0 (3.22 KMs) Taluka Kotri,	---	---	261.473 (M)	261.473 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
04	Special M&R of Internal Roads at University of Sindh Jamshoro I/C Masonry Structure @Mile 0/0-2/3	---	---	212.189 (M)	212.189 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
05	Rehabilitation / Construction of Asphalt Road / Chuher Luck Cutting from Super Highway to Thano Ahmed Khan (Construction of 10 ft Span 03 Nos Box Culverts Bridge Towards Thana Bula Khan Road in between @ Mile 2/0-2/4	---	---	30.193 (M)	30.193 (M)	A.D.P Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	

OFFICE OF THE EXECUTIVE ENGINEER, PROVINCIAL HIGHWAY DIVISION JAMSHORO

PROCUREMENT PLAN DEVELOPMENT SCHEME IN PROVINCIAL HIGHWAYS DIVISION JAMSHORO 2025-26

Sr. No.	Description Of Procurement	Quantity (Where Applicable	Estimated Unit Cost Applicable	Estimated Total Cost	Funds Allocated	Source Of Funds (ADP/Non ADP)	Proposed Procurement Method	TIMING OF PROCUREMENTS				REMARKS
								1st Quarter	2 nd Quarter	2 nd Quarter	2 nd Quarter	
06	M&R of Road From Government High School Bubak to Bubak Sabeel Mile 0/0-2/3 (3.80 KMs) (18" Wide)	---	---	129.733 (M)	129.733 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
07	M&R of Road from Indus Highway to Peer Chhatan Dhingano Balal I/C Masonry Structure Mile 0/0-0/6 (1.20 KMs) (12' Wide)	---	---	27.618 (M)	27.618 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
08	M&R of Road from Bukaira Road to Bhan Lundi Shakh Road via Village Abdullah Panhwar @& Village Karyani (I/C Masonry Structure Mile 0/0- 1/4 (2.40 KMS) 12' Wide	---	---	46.148 (M)	46.148 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
09	M&R of Road from Village Sijawal Talpur to Bhootra Village via Sadardin Rind Atar Rind Along Danster Wah Mile 0/0-1/6 (2.80 KMS) (12' Wide)	---	---	63.559 (M)	63.559 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
10	M&R of Road from Indus Highway Bubak Sabeel to Railway Station Phattak Mile 0/0-1/3 (2.20 KMS) 18' Wide	---	---	76.037 (M)	76.037 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	

OFFICE OF THE EXECUTIVE ENGINEER, PROVINCIAL HIGHWAY DIVISION JAMSHORO

PROCUREMENT PLAN DEVELOPMENT SCHEME IN PROVINCIAL HIGHWAYS DIVISION JAMSHORO 2025-26

Sr. No.	Description Of Procurement	Quantity (Where Applicable	Estimated Unit Cost Applicable	Estimated Total Cost	Funds Allocated	Source Of Funds (ADP/Non ADP)	Proposed Procurement Method	TIMING OF PROCUREMENTS				REMARKS
								1st Quarter	2 nd Quarter	2 nd Quarter	2 nd Quarter	
11	M&R of Road from Shalmani Village to Village Hakim Khoso to Garwari & Village Dhabi I/C Masonry Structure Mile 0/0-3/1 (5.0 KMS) 12' Wide)	---	---	120.788 (M)	120.788 (M)	M&R Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	
12	CONSTRUCTION OF PRE-STRESSED BRIDGE I/C APPROCHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0/3 (0.60 KM) DISTRICT JAMSHORO	---	---	166.967 (M)	83.4835 (M)	ADP Programme 2025-26	Single Stage Two Envelope Procedure	---	---	---	----	

EXECUTIVE ENGINNER
PROVINCIAL HIGHWAY DIVISION
JAMSHORO

TENDER DRAWINGS

CONSTRUCTION OF PRE-STRESSED BRIDGE 50 METER

I/C APPROACHS FOR VILLAGE KACHY WARA RADHAN

TALUKA SEHWAN MILE 0/0-03-0.06

DISTRICT JAMSHORO

CLIENT:

THE EXECUTIVE ENGINEER
PROVINCIAL HIGHWAYS DIVISION
JAMSHORO

CONSULTANT:

logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD

Tue, 02 Jun 2026 - 4:52pm
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GENERAL NOTES

1 RELEVANT CODES AND SPECIFICATIONS:

THE BASIC CRITERIA, CONCEPTS, ALL TESTS AND SPECIFICATIONS WHICH ARE USED DURING THE DESIGNED PROCEDURE ARE BASED ON THE CONCERNED AND RELEVANT AASHTO, ACI, ASTM, BRITISH, AND HIGHWAY CODE OF PAKISTAN (1967. ALL MATERIALS AND TESTS SHALL CONFIRM THE ABOVE-MENTIONED CODES AS ADVISED BY THE CONSULTANT/EXECUTIVE ENGINEER AND SHALL REQUIRE THEIR APPROVAL.

2 SUPERVISION OF WORK:

COMPLETE SUPERVISION IS THE RESPONSIBILITY OF EXECUTIVE ENGINEER OR BY HIS REPRESENTATIVE AND/ OR THE CONSULTANTS APPOINTED FOR THIS PURPOSE.

3 REINFORCED CONCRETE:

(a) STRENGTH REQUIREMENT:

THE MIX OF CONCRETE IS TO BE DESIGNED BEFORE THE EXECUTION OF ACTUAL WORK/CONSTRUCTION. THE VALUES OF 20 DAYS WORKS CYCLED. CRUSHING STRENGTH FOR A SPECIFIC CONCRETE ARE MENTIONED BELOW. THE VALUES FOR THE STRENGTH OF TEST CYCLED. MADE AT THE TRIAL MIX STAGE SHALL HAVE VALUES 8% MORE THEN THOSE REQUIRED. AGGREGATE CEMENT RATIO, WATER CEMENT RATIO, AGGREGATE GRADING. SAND TYPE ONCE FIXED DURING TRIAL MIX SHALL NOT BE CHANGED DURING ACTUAL EXECUTION OF WORK. MINIMUM 6 TEST CYLD. SHALL BE PREPARED DURING A DAY WORK OF EACH COMPONENT OF THE BRIDGE, OUT OF WHICH 4 CYLD. ARE TESTED AFTER 28 DAYS, 2 CYLD. SHALL BE TESTED AFTER 7 DAYS OF CURING. COMPLETE RECORD OF REPORTS SHALL BE MAINTAINED AND COPY OF WHICH SHALL BE SUBMITTED TO THE CONSULTANT AND EXECUTIVE OFFICER. MAXIMUM COMPACTION OF CONCRETE SHALL BE OBTAINED BY USING ELECTROMECHANICAL VIBRATORS. SLUMP TEST SHALL ALSO BE PERFORMED AT REGULAR INTERVALS AND REPORTS SHALL BE INCLUDED LIKEWISE. 28 DAYS CYLD. STRENGTH SHALL BE FOLLOWS:

DESCRIPTION OF COMPONENTS REQUIRED STRENGTH

1. RAILING POST, KURBS, PLANKS, AND MISC. .... 3000 psi
2. DECK SLAB AND DIAPHRAGM .... 3000 psi
3. PRE-STRESSED GIRDERS .... 5000 psi
4. PILE CAPS .... 3000 psi
5. PILE .... 4000 psi

CONCRETING OF PILES TO BE DONE USING TREMIE METHOD USING BENTONITE SLURRY WHERE REQUIRED MAINTAINING REQUIRED DIA OF BORE HOLE THROUGH OUT. QUALITY OF CONCRETE USED FOR GIVEN LENGTH/SIZE OF BORE HOLE SHOULD BE REPORTED AND ALL RESULTS TO BE TABULATED AND SHOWN CLEARLY TO DENOTE ANY OCCURRENCE OF NECKING IN THE BORE HOLE.

(a) METHOD AND DURATION OF CURING:

ALL THE EXPOSED SURFACES OF CONCRETE SHALL BE COVERED WITH HESSIAN CLOTHES/EQUIVALENT AND SHALL BE KEPT CONTINUOUSLY WET FOR ENTIRE DURING PERIOD. IF CONCRETE IS TO BE DONE IN HOT WHETHER THAT IS IN TEMPERATURE EXCEEDING 33C THE PROCESS SHALL BE COMPLETED TILL NOON AND ALL THE FRESH CONCRETE AND FORM WORK SHALL BE COVERED WITH HESSIAN/EQUIVALENT WITHIN AN HOUR OF CONCRETE LAYING TO AVOID FLASH SETTING, CONCRETE SURFACES LEFT OUT DRY FOR 03 HOURS WITHIN FIRST FOUR DAYS OF CONCRETE SHALL BE REJECTED FURTHER. NO NIGHT CONCRETING IS PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

(b) FORM WORK TYPE AND DETAILS:

THE DESIGN ERECTION AND FABRICATION OF FORM WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND DOES NOT FORM THE PART OF DRAWING. CONCRETE OBTAINED SHALL BE FAIR FACED AND EDGES SHALL BE PROPERLY CHAMFERED ACI-347/EQUIVALENT STANDARDS SHALL BE USED IN FORM WORK DESIGN. STRIKING OF FORM WORK BOTTOM IS STRICTLY PROHIBITED WITH IN 15 DAYS AFTER POURING OF CONCRETE. SIDE OF DIAPHRAGM SHALL BE REMOVED AFTER 24 HOURS OF CONCRETING WORK WITHOUT DISTURBING THE GREEN CONCRETE. IT IS THE FULL RESPONSIBILITY OF THE CONTRACTORS TO CHECK AND CONFIRM THE FORM WORK STABILITY. CONSULTANT/EXECUTIVE ENGINEERS IS NOT RESPONSIBLE FOR OCCURRENCE OF ACCIDENT/MISHAP OR INJURY TO LABOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION PROCESS. PROJECT EXECUTION, SAFETY TO LIFE AND PROPERTY OF THE PARTIES/PERSONS ENGAGED IN THE PROJECT.

4 MATERIAL REQUIREMENTS:

(a) CEMENT:

ORDINARY PORTLAND CEMENT UNLESS OTHERWISE NOTED, MANUFACTURE IN PAKISTAN SHALL BE USED IN ALL RCC WORKS CONFIRMING TO THE SPECIFIED STANDARDS AS MENTIONED BELOW

ASTM C-150-78a TYPE 1

PS-232

RS-12

IF OTHER THAN ORDINARY PORTLAND CEMENT IS REQUIRED FOR ANY COMPONENTS OF THE BRIDGE, IT SHALL BE CLEARLY MARKED ON THE INDIVIDUAL DRAWING SHOWING DETAIL OF THAT COMPONENT SUCH AS PILE, PILE CAP ETC. THE CEMENT WHICH THE EXECUTIVE ENGINEER CONSIDER STALE OR UNSUITABLE BECAUSE OF LUMPS, ABSORPTION OF MOISTURE OR IMPROPER STACKING SHALL BE CONSIDERED REJECTED AND REMOVED FROM SITE.

(b) AGGREGATE:

AGGREGATE WHICH SHALL BE USED IN CONCRETE SHALL NOT CONTAIN ANY IMPURITIES LIKE CLAY, LOAMS, OIL, ORGANIC MATTER OR ANY SUCH IMPURITIES AFFECTING CONCRETE STRENGTH AND QUALITY FINE AND COURSE AGGREGATES SHALL MEET REQUIREMENT OF ASTM C-33-79 OR US 662 SPECIFICATIONS.

i. FINE AGGREGATES

SAND FROM APPROVED QUARRIES/SOURCES SHALL BE USED. IF SIEVE ANALYSIS IS NOT PERFORMED FOR A SAND SPECIMEN EXECUTIVE ENGINEER SHALL CONFIRM AND APPROVE THE SAME BASED ON PREVIOUS PERFORMANCE OF SAND FOR SIMILAR WORKS.

ii. COARSE AGGREGATES

CRUSHED STONES SHALL BE USED AS COARSE AGGREGATE WITH SPECIFIED SIEVE ANALYSIS, ABRASION TESTS AND SOUNDNESS. MAXIMUM SIZE OF THE COURSE AGGREGATE WHICH SHALL BE USED IN PRECAST GIRDER CONCRETE IS 1/2". MAXIMUM SIZE OF ¾" SHALL BE USED IN OTHER MEMBERS. THE FINE PERCENTAGE SHALL BE LIMITED TO 5% PASSING ASTM SIEVE NO: 200. ALLOWABLE SOUNDNESS AND ABRASION VALUES SHALL BE 18% AND 50%. APPROVED QUALITY AND GRADES OF CRUSH SHALL BE USED IN THE PILE CONCRETE. CRUSH SHOWING ANY SIGNS OF LENSES, HAIR CRACKS OR UNSOUND APPEARANCE SHALL BE REJECTED. IF MICA AND LIMESTONE ARE PRESENT IN THE CRUSH.

c) WATER:

CLEAR PORTABLE WATER SHALL BBE USED FOR CONCRETE PURPOSE AND SHALL BE FREE OF ORGANIC AND OTHER IMPURITIES, CHLORIDES AND SULPHATES CONTENT TEST SHALL BE PERFORMED ON THE WATER AND RESULTS SHALL BE APPROVED BY THE CONSULTANT.

d) REINFORCEMENTS:

i. HIGH YIELD STRENGTH BARS:

THE MARK "#" ON ANY REINFORCEMENT BAR DETAIL SHALL SHOW HIGH YIELD STRENGTH DEFORMED. TWISTED, OR RIBBED BARS MADE FROM PRIME BILLETS HOT ROLLED OR COLD WORKED. HIGH YIELD STRENGTH BARS MEET THE FOLLOWING REQUIREMENTS:

MINIMUM YIELD STRENGTH = 60,000 psi CONFIRMING TO

ASTM A-615 GRADE 60
HOT ROLLED OR COLD DRAWN

BS 4449 GRADE
460/425 HOT ROLLED

BS 4461 GRADE
460/425 HOT ROLLED

ii. BAR BENDING DIMENSION:

ASTM A-615 OR BS-4466 SHALL BE USED TO CONFIRM THE REINFORCEMENT BENDING DIMENSION. REINFORCEMENT SHALL BE PROPERLY PLACED WITH THE HELP OF CHAIRS AND CONCRETE SPACERS AT SUITABLE INTERVALS.

iii. REINFORCEMENT QUALITY:

IN SCRAP, RAILS, SHIPS PLATES, AXLES OR ANY OTHER ALLOY IS USED IN PRODUCTION OF STEEL TO BE USED AS REINFORCEMENT, THE STEEL SHALL BE REJECTED. CERTIFIED FOR BILLET STEEL FROM THE MILL INCLUDING REPORTS AND RESULTS FOR TENSILE STRENGTH, PURCHASE, SHIPMENTS, ELONGATION, AND BENDING TESTS SHALL BE SUBMITTED TO THE EXECUTIVE ENGINEER/ CONSULTANTS.

5 CONSTRUCTION JOINTS AND LAP SPLICES:

ACI 318 REQUIREMENTS SHALL BE MET FOR LAPS AND SPICES UNLESS SHOWN AND DRAWING. STIRRUPS OR CLOSED RINGS STILL NOT BE SPLICED WITHOUT CONSULTANTS APPROVAL. LAPS IN MAIN BARS SHALL BE STAGGERED. THE GREATER VALUES OF LAPS SPLICES OF 50 TIMES DIA OF BAR OR 3 FEET. FOR MAIN REINFORCEMENT SHALL BE USED. LAP SPLICE OF MAXIMUM OF 36 TIME DIA OR 2 FT SHALL BE TAKEN FOR THE TRANSVERSE OR DISTRIBUTION BARS. NUMBER OF CONSTRUCTION JOINTS SHALL BE REDUCED AS MUCH AS POSSIBLE EXCEPT FOR DISCONTINUITY. DUE TO WHETHER OR END OF DAYS WORK CONTINUOUS REINFORCEMENT SHOWING ON DRAWING SHELL PROTRUDE PROPERLY TO THE REQUIRED LENGTH. ALL CONSTRUCTION JOINTS SHALL BE PROPERLY TRIMMED AND KEYED AS REQUIRED. THE CONSULTANT SHALL APPROVE THE CONSTRUCTION JOINTS LOCATIONS PRIOR TO THE WORK.

6 PRE-STRESSING REINFORCEMENT:

(a) SYSTEM:

THE DETAILS OF MULTI-WIRES OR MULTI-STRANDS SYSTEMS ARE SHOWN ON THE DRAWINGS AND THEIR QUALITY SHALL BE APPROVED BY THE CONSULTANT.

(b) STEEL:

PRE-STRESSING STEEL SHALL FULL FILL REQUIREMENTS OF BS 2691 SPECIFICATIONS AND SHALL BE LOW RELAXATION, STRESS RELIEVED CARBON STEEL.

MINIMUM ULTIMATE TENSILE STRENGTH (U.C.S) FOR MULTI-WIRES SYSTEM 100 TONS PER SQUARE INCH.

MINIMUM ULTIMATE TENSILE STRENGTH (U.C.S) FOR STRAND SYSTEM 120 TONS PER SQUARE INCH.

YOUNG'S MODULUS OF ELASTICITY. .... 29000 psi.

0.2% PROOF STRESS MINIMUM SPECIFIED YIELD STRESS) 85% OF U.T.S STRESS RELAXATION AT 70% OF U.T.S HELD FOR 1000 HRS SHALL NOT EXCEED 5%.

ULTIMATE ELONGATION OF 10" GAUGE SHALL NOT BE LESS THAN 4% WIRE SHALL WITHSTAND REVERSE BEND TEST AS REQUIRED BY 2691 AND THE CONFIRMING CERTIFICATE FOR THE ABOVE MENTIONED TEST SHALL BE OBTAINED FROM THE MANUFACTURER BY THE CONTRACTOR AND SUBMITTED TO CONSULTANT/ EXECUTIVE ENGINEER.

7. POST TENSIONING:

ALL DETAILS REGARDING ELONGATION, JACKING FORCES, PROCEDURE OF JACKING, ANCHORAGE SLIPPAGE AND LOCKING ARE SHOWING ON RESPECTIVE DRAWINGS OF THE POST TENSION MEMBERS/ GIRDERS. ANY DEVIATION OR CHANGE IN VALUES OF THE ABOVE MENTIONED SHALL BE NOTIFIED TO THE EXECUTIVE ENGINEER/CONSULTANT BEFORE FURTHER STRESSING. STRAND OR WIRES SHALL BE FREE FROM RUST, CRACKS, CUTTING OR ANY SIGN OF UNSOUNDNESS. APPROVED QUALITY OF BEARING PADS SHALL BE PROVIDED AS DETAIL IN THE DRAWINGS.

8 COVER OF CONCRETE TO REINFORCEMENT:

RAILING, POSTS, PLANKS........ 3/4"
P.S.C GIRDERS .... MAIN BARS = 2", STIRRUPS TIES = 1-12"
TRANSOMS AND DIAPHRAGM ....MAIN BARS 1-1/2", STIRRUPS = 1"
DECK SLAB........TOP BARS = 1-1/2", BOTTOM BARS = 1"
ABUTMENTS........MAIN BARS = 2", STIRRUPS = 1-1/2"
PILES AND PILE CAPS ....MAIN BARS = 3"

9 INDEMNITY:

CONTRACTOR SHALL ABIDE BY ALL LABOR LAWS AND OTHER APPLICABLE LAWS REGARDING HIGHWAY DEPARTMENT. CONTRACTOR AT HIS OWN COST AND RISK SHALL KEEP CONSULTANT AND EXECUTIVE ENGINEER INDEMNIFIED FROM ALL RISK OF LIFE AND PROPERTY DUE TO DAMAGES INCURRED BY THE CONCERNED PARTIES DURING CONSTRUCTION OF PROJECT.

10 PROFILE, LOADING AND DESIGN CODES:

a) PROFILE OF THE BRIDGE:

THE BRIDGE IS A TWO-LANE BRIDGE WITH KURBS AS PER HIGHWAY DIVISIONS REQUIREMENTS. PAKISTAN HIGHWAY CODE OF 1967 IS CONSIDERED IN GEOMETRIC DESIGN AND DETAILS OF THE AUGMENTED BY AASHTO SPECIFICATIONS.

b) LIVE LOADS:

FOLLOWING DESIGN LOADS ARE CONSIDERED WITH APPROPRIATE COMBINATIONS SO AS TO PRODUCE THE MAXIMUM STRESS (INCLUDING IMPACT EFFECTS). PUNCHING IN SLAB IS CHECKED FOR 21 KIPS ON A WHEEL PRINT OF 24" X 12".

(i) CLASS - A A:

(MILITARY TRUCKS WEIGHING 70 TONS) PLACED IN THE SPAN SO AS TO PRODUCE SEVERE CONDITIONS OF STRESSES.

(ii) SEISMIC AND WIND LOAD:

U.B.C EARTH QUAKE ZONE #2 IS CONSIDERED FOR DESIGN, LOAD PRODUCED BY WIND ARE CHECKED AND APPLIED WHERE REQUIRED.

(iii) LONGITUDINAL, TRACTION, THERMAL AND LATERAL FORCES:

SUITABLE CODE REFERENCES AND SPECIFICATIONS ARE REFERRED TO DEAL WITH THE ABOVE-MENTIONED FORCES.

(iv) EARTH AND STREAM FLOW PRESSURES:

STREAM FLOW PRESSURES ON THE PIERS IN ADDITION OF AFFLUX AND AFFECT OF FLOW VELOCITY ARE CONSIDERED. AFFECT OF SURCHARGE AND EARTH PRESSURES ARE ALSO TAKEN INTO ACCOUNT OF ABUTMENT WHEREVER NECESSARY.

c) DESIGN CODES, PROCEDURE, ANALYSIS AND SPECIFICATIONS:

ANALYSIS USED IN THE BRIDGE IS BASED ON THE ELASTIC RESPONSE OF INTERCONNECTED GRID SYSTEM USING MICROCOMPUTERS AND OBTAIN RESULTS BY NUMERICAL ANALYSIS OF OPTIMUM STIFFNESS MATRIX SOLUTION. BASIC CODES/SPECIFICATIONS WHICH ARE REFERRED DURING DESIGN ARE WEST PAKISTAN HIGHWAY CODE (1967) AUGMENTED BY AASHTO/ACI AMENDED WHEREVER REQUIRED FOR STRENGTH DESIGN, WORKING STRESS AND SERVICEABILITY CRITERIA.

AASHTO (1990)

ACI (318-95)

ACI (343)

UBC (1986)

IF BRITISH CODE IS USED FOR A SPECIFIC MEMBER, A NOTE IS PRESENT TO MENTION THE DETAILS OR SHOULD BE REFERRED TO THE CONSULTANT FOR WORKMANSHIP AT FIELD.

11 HYDRAULIC DESIGN AND DATA:

ALL THE HYDRAULIC DATA NEEDED FOR THE DESIGN OF THE BRIDGE SHALL HAS BEEN FURNISHED IN THE HYDRAULIC REPORT PREPARED BY THE CONSULTANT.

12 SOIL INVESTIGATION AND FOUNDATION WORKS:

IN THE REPORT CONDUCTED BY THE CONSULTANT.

13 LOAD TESTING OF PILE

PILE LOAD TESTING SHALL BE CARRIED ON SPECIFIED PILE UNDER THE METHOD OF TESTING ASTM.D-1143T. LOAD SHALL BE AS FOLLOWS:

a) INDEX PILE---------- TWICE THE DESIGN LOAD i.e UPTO 200 TONS.
b) WORKING PILE-------- UPTO DESIGN LOAD i.e 100 TONS.

TENDER DRAWING
NOT FOR CONSTRUCTION

CLIENT:	CONSULTANT:	PROJECT / TITLE	REV.	DESCRIPTION	DATE	CHECKED:	PROJECT CODE:	SCALE (A1)
THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSHORO	logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PROJECT: PRE-STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0-03-0.06 DISTRICT JAMSHORO				IRFAN ULLAH KHAN	2601	1:300
		TITLE: GENERAL NOTES				DESIGNED: IRFAN ULLAH KHAN	DRG. NO. RAD-GN-01	
						DRAWN: ASd	DATE: MAY, 2026	REV.

Wed, 20 May 2026 - 5:37pm
Pervez 2424-A-SARI-GN-01.dwg

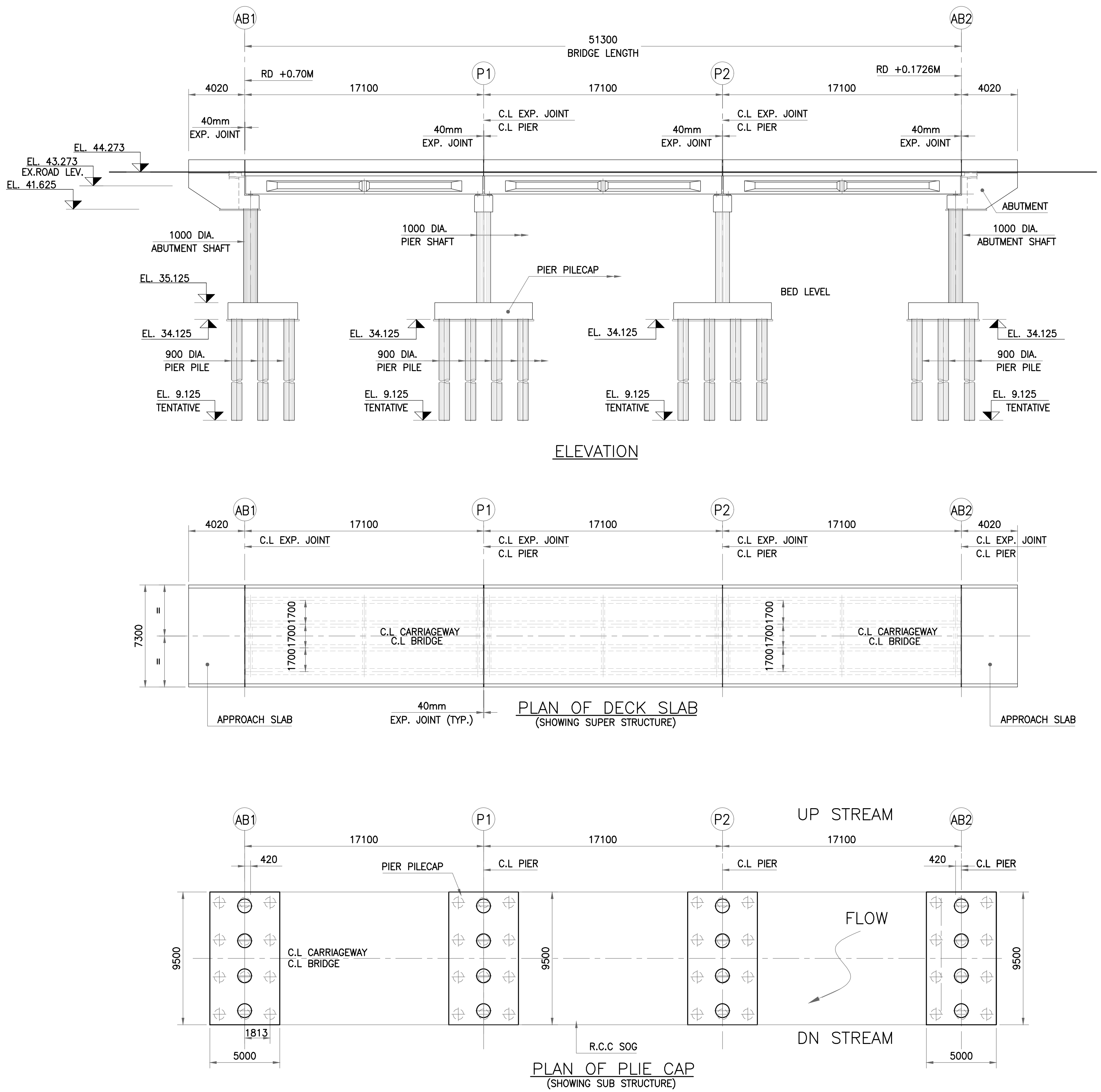
LIST OF DRAWINGS

GENERAL ARRANGEMENT & REINFORCEMENT DRAWINGS

TENDER DRAWING
NOT FOR CONSTRUCTION

CLIENT:	CONSULTANT:	PROJECT	REV.	DESCRIPTION	DATE	CHECKED:	PROJECT CODE:	SCALE (A1)
THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSHORO	logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PRE-STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0-03-0.06 DISTRICT JAMSHORO				IRFAN ULLAH KHAN	2601	1:30
		TITLE				DESIGNED: IRFAN ULLAH KHAN	DRG. NO. RAD-LD-01	
		LIST OF DRAWINGS				DRAWN: ASd	DATE: MAY, 2026	REV.

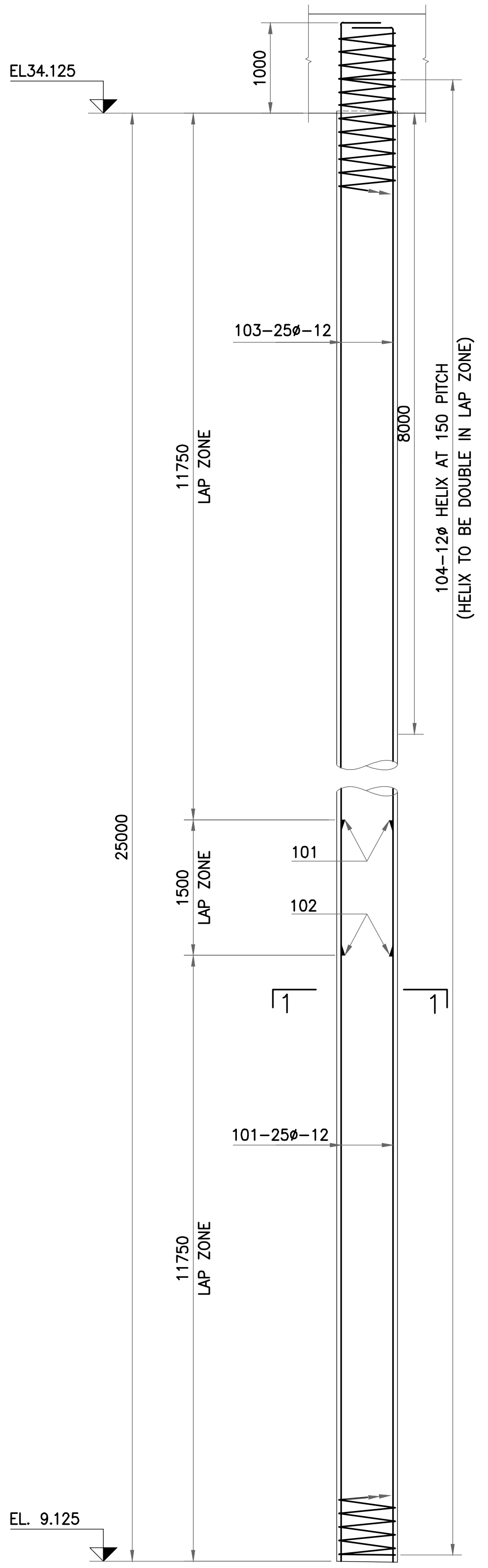
Wed, 20 May 2026 - 5:35pm
Pervez 2424-A-SARI-LD-01.dwg



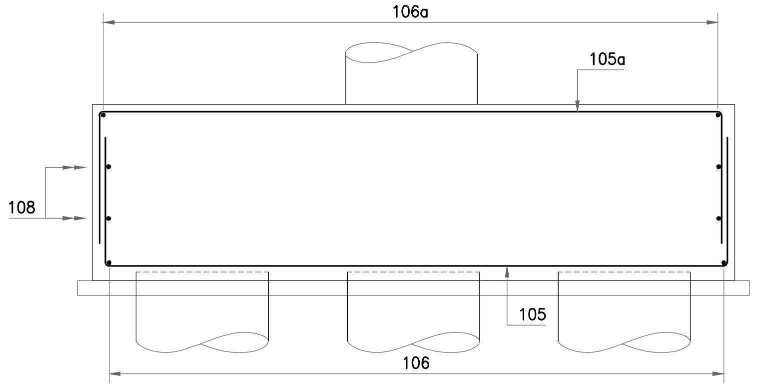
TENDER DRAWING
NOT FOR CONSTRUCTION

CLIENT: THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSHORO	CONSULTANT: logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PROJECT: PRE-STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0-03-0.06 DISTRICT JAMSHORO	REV.	DESCRIPTION	DATE	CHECKED: IRFAN ULLAH KHAN	PROJECT CODE: 2601 / SCALE (A1) 1:160
		TITLE: GENERAL ARRANGEMENT (SHEET 1 OF 2)				DESIGNED: IRFAN ULLAH KHAN	DRG. NO. RAD-101
						DRAWN: ASd	DATE: MAY, 2026 / REV.

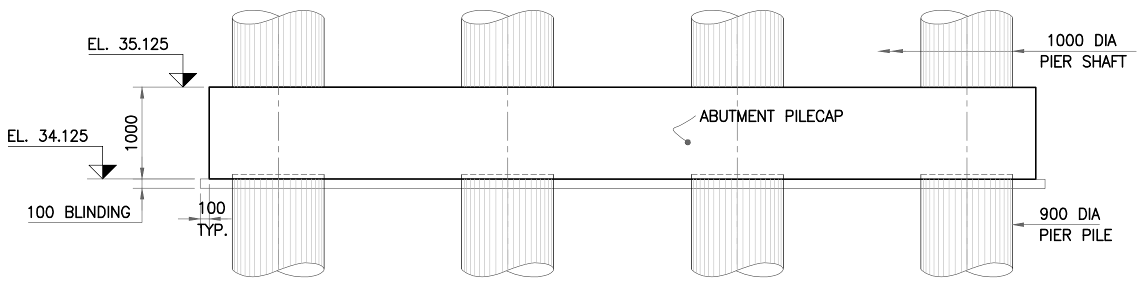
Wed, 20 May 2026 - 5:39pm
Pervez 2424-A-SARI-101A.dwg



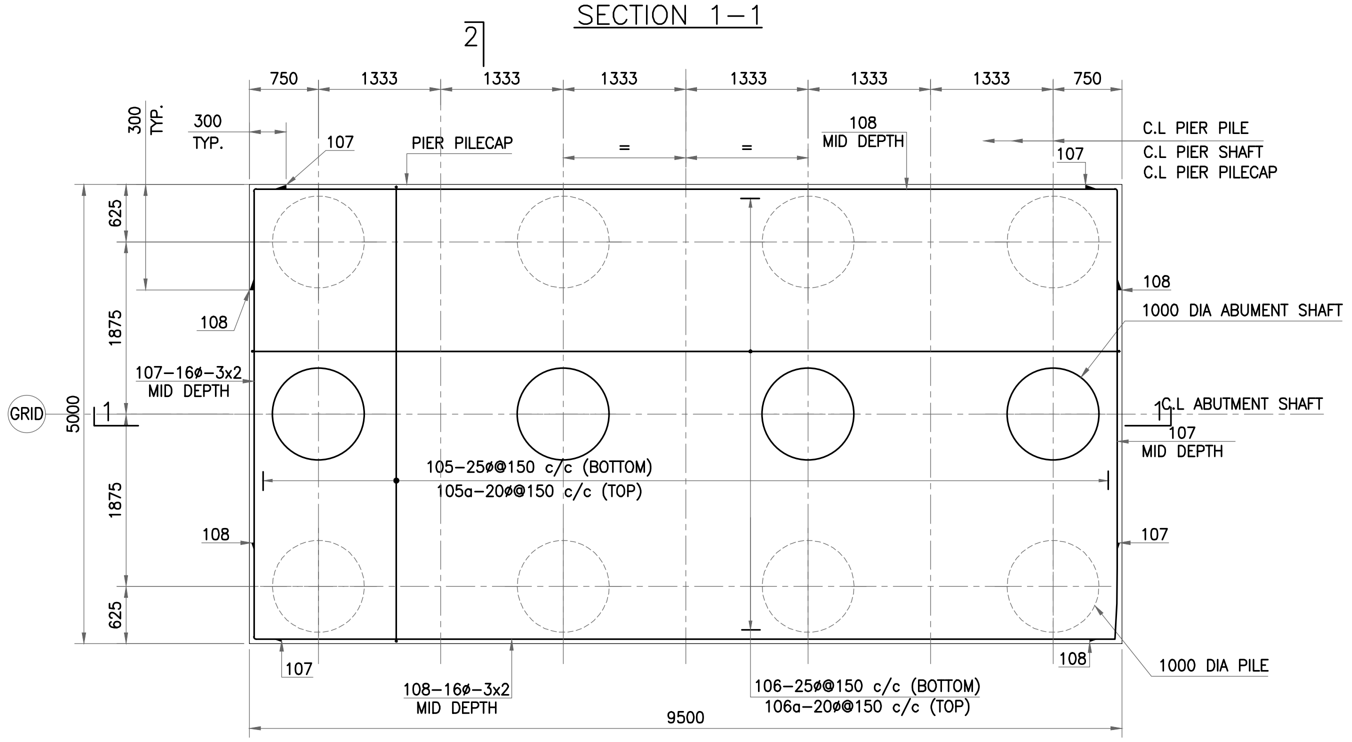
ABUTMENT PILE
SCALE 1:50



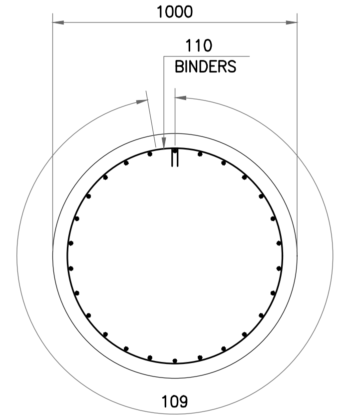
SECTION 2-2



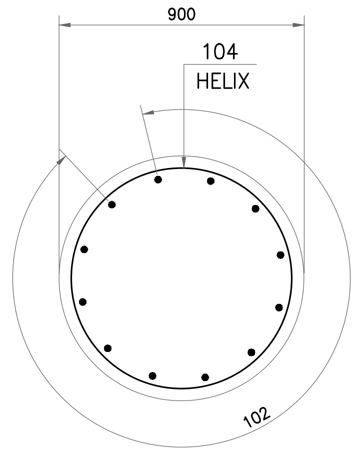
SECTION 1-1



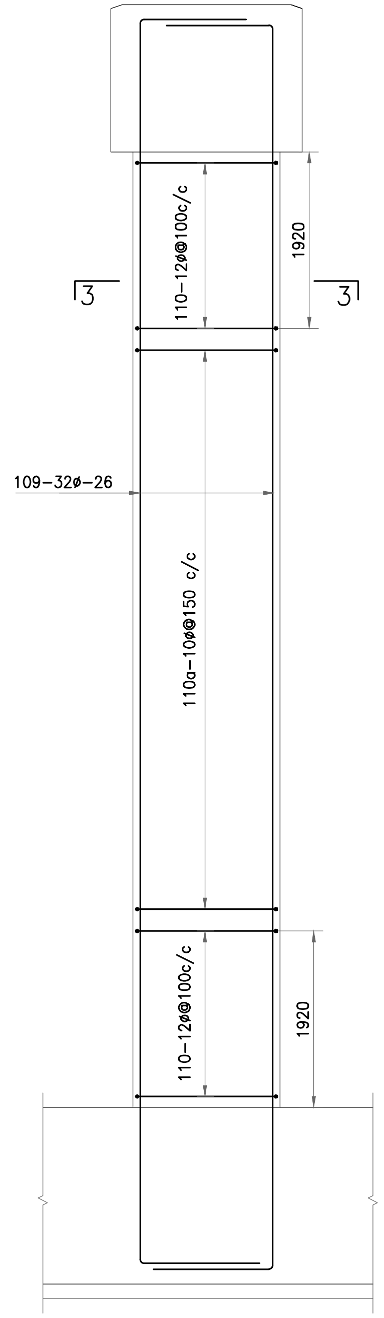
ABUTMENT PILECAP PLAN



SECTION 3-3



SECTION 1-1



ELELVATION OF PIER SHAFT

TENDER DRAWING
NOT FOR CONSTRUCTION

NOTES

1- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. RAD-101 TO RAD-103.

2- FOR GENERAL NOTES REFER DRG. NO. RAD-GN-01.

CLIENT:

THE EXECUTIVE ENGINEER
PROVINCIAL HIGHWAYS DIVISION
JAMSHORO

CONSULTANT:

logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD

PROJECT
PRE-STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0-03-0.06 DISTRICT JAMSHORO

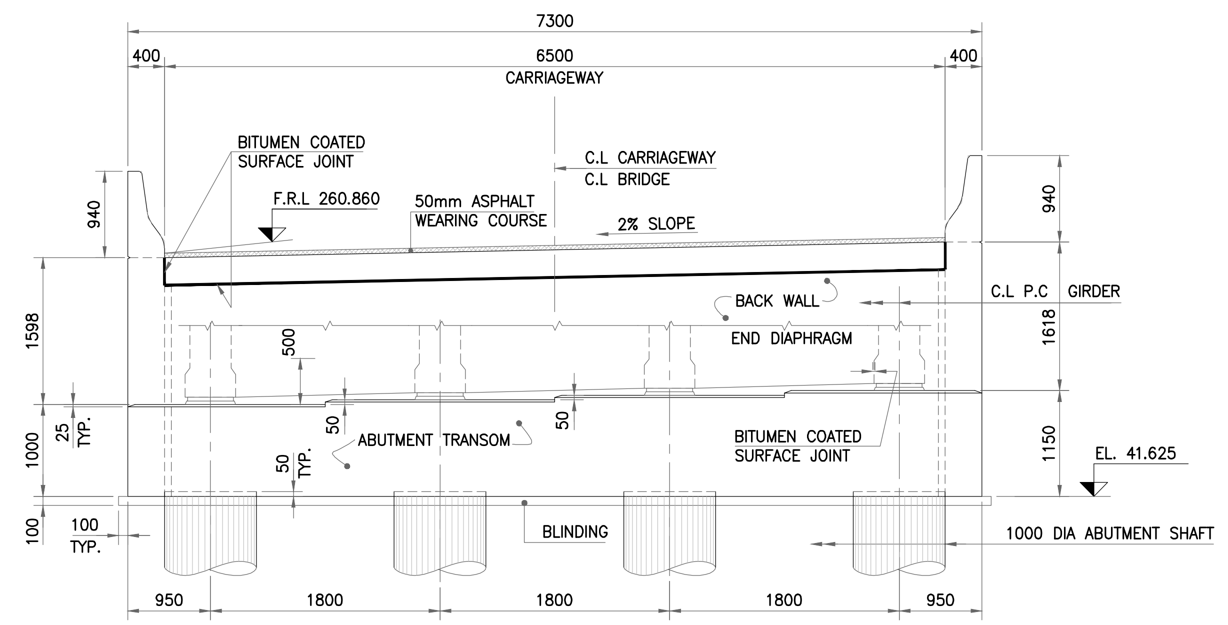
TITLE
ABUTMENT PILE & ABUTMENT PILECAP ARRANGEMENT AND REINFORCEMENT DETAILS

REV.	DESCRIPTION	DATE

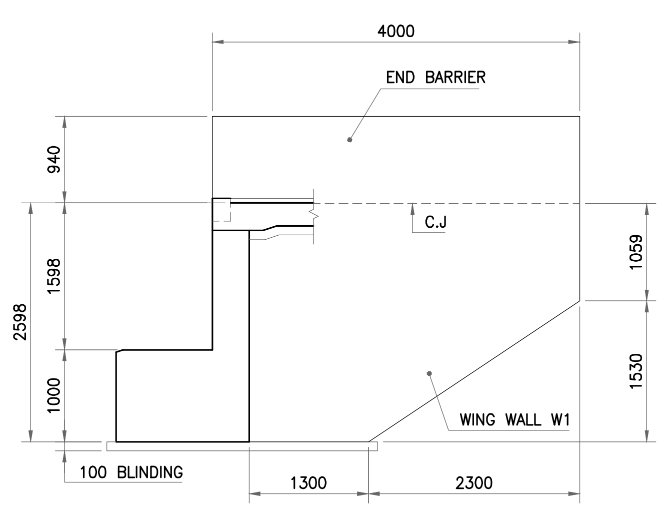
CHECKED: IRFAN ULLAH KHAN
DESIGNED: IRFAN ULLAH KHAN
DRAWN: ASd

PROJECT CODE: 2601
SCALE (A1): 1:40
DRG. NO. RAD-103
DATE: MAY, 2026
REV.

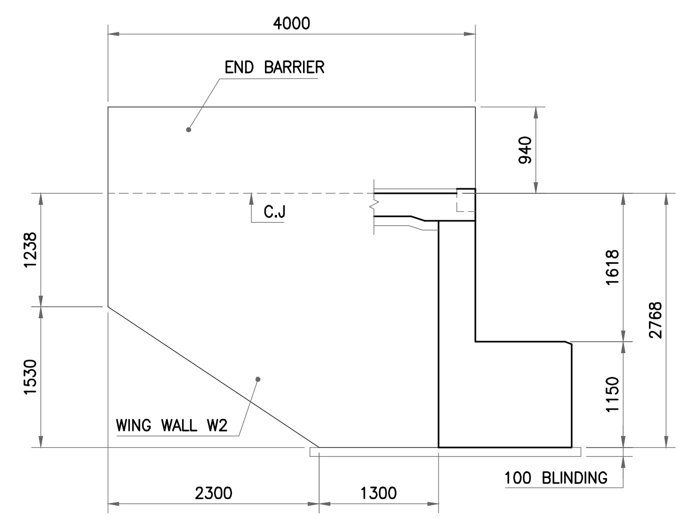
Wed, 20 May 2026 - 5:40pm
Pervez 2424-A-SARI-103.dwg



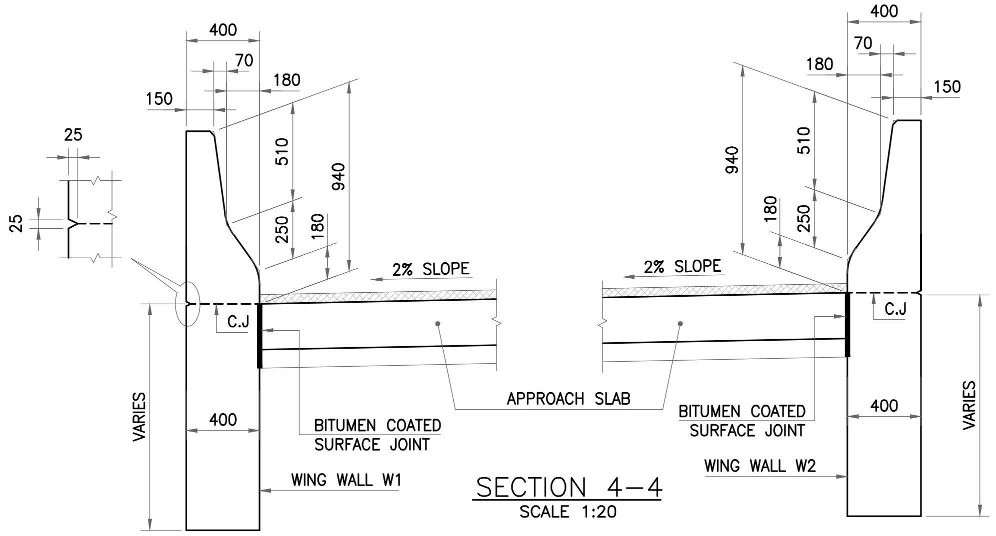
SECTION 1–1
(BACK WALL)



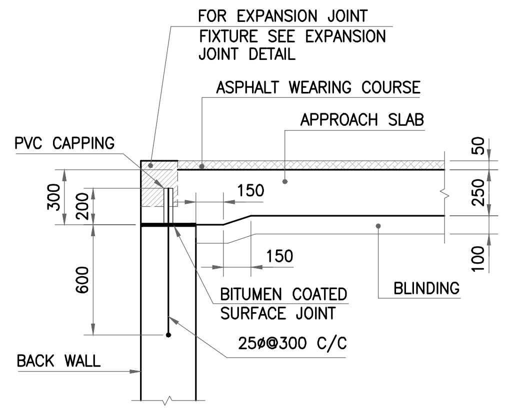
SECTION 2–2
(WING WALL W1)



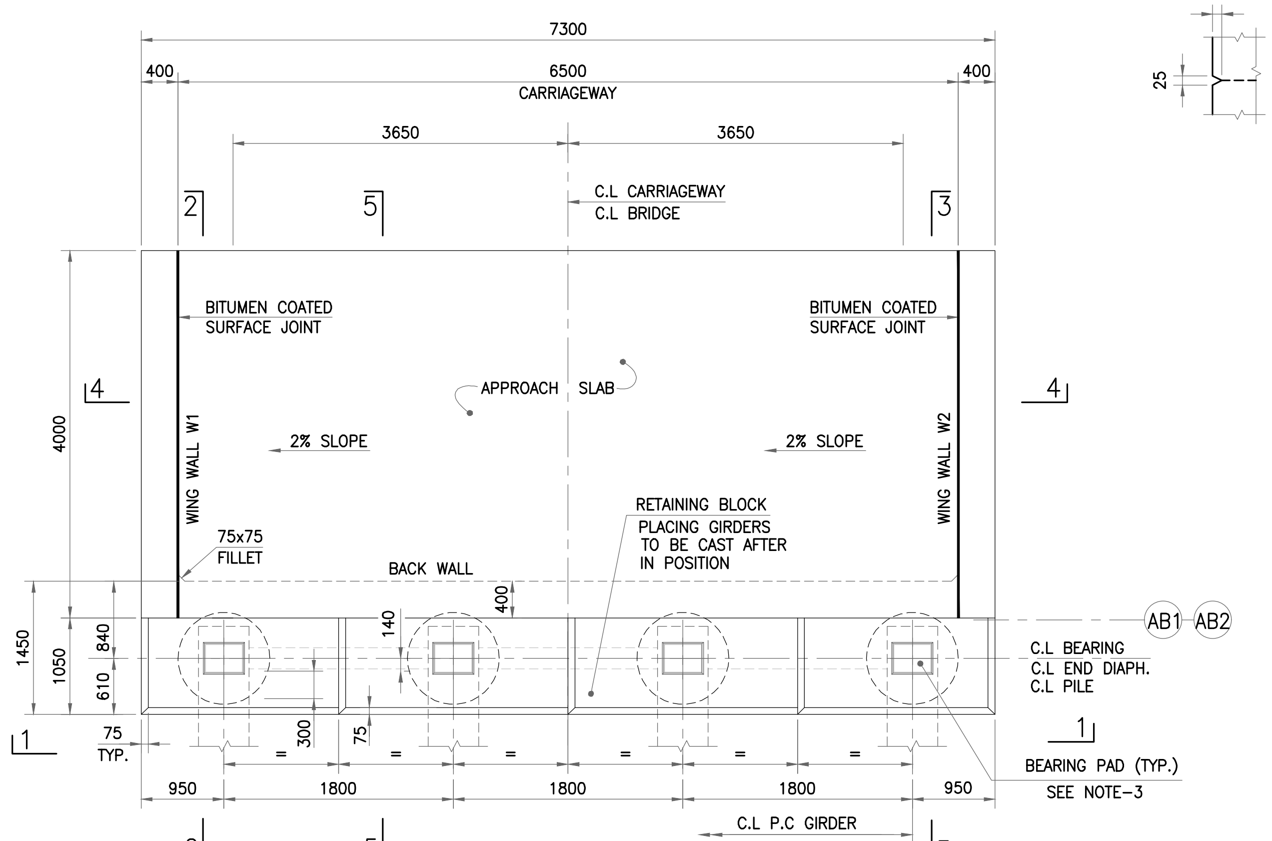
SECTION 3–3
(WING WALL W2)



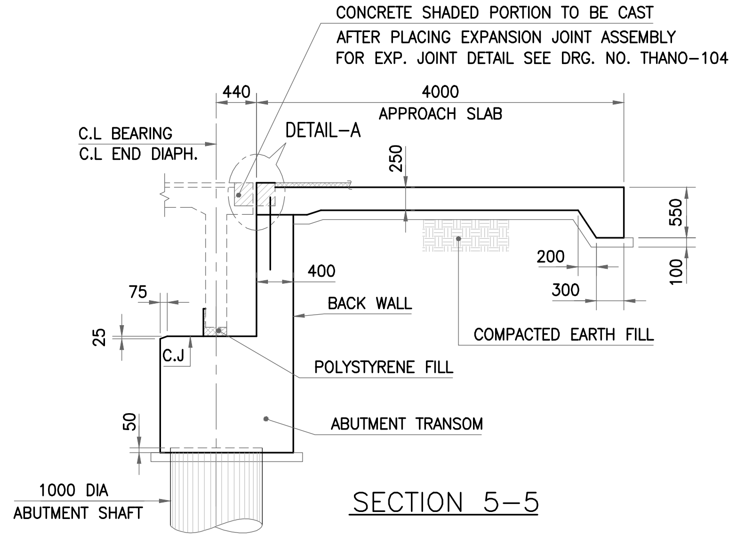
SECTION 4–4
SCALE 1:20



DEATIL–A
SCALE 1:20



ABUTMENT PLAN



SECTION 5–5

TENDER DRAWING
NOT FOR CONSTRUCTION

NOTES

1– THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. SARI–101.

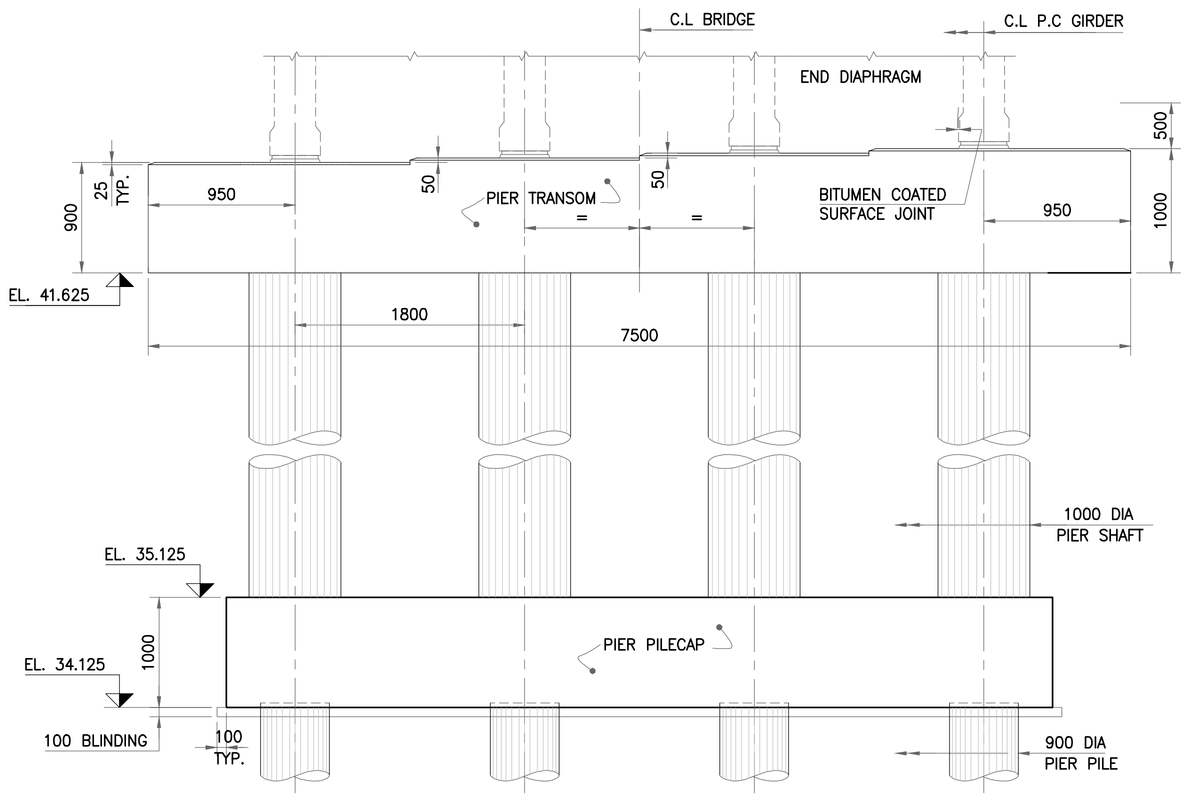
2– FOR EXPANSION JOINT DETAIL REFER DRG. NO. SARI–104.

3– FOR BEARING PAD SEAT DETAIL REFER DRG. NO. SARI–104.

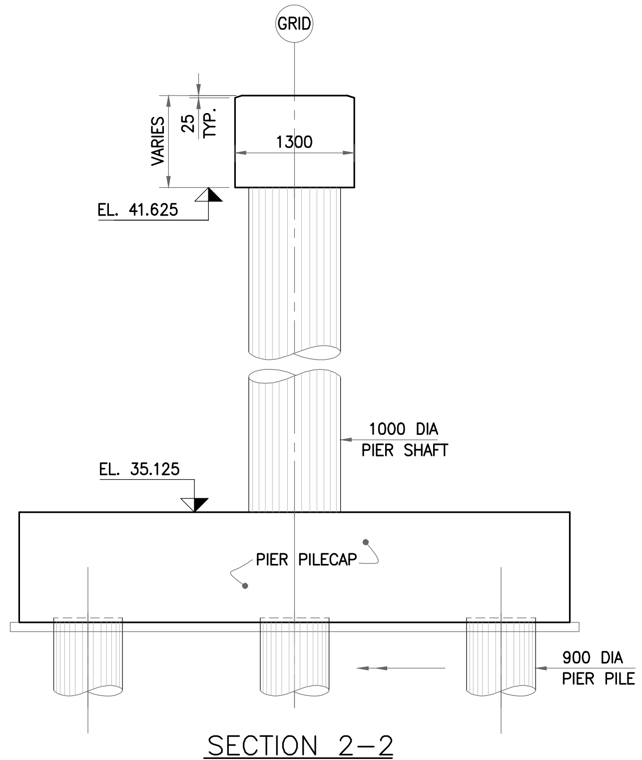
4– FOR GENERAL NOTES REFER DRG. NO. SARI–GN–01.

CLIENT:	CONSULTANT:	PROJECT	REV.	DESCRIPTION	DATE	CHECKED:	PROJECT CODE:	SCALE (A1)
THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSHORO	logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PRE–STRESSED BRIDGE 50 METER I/C APPROACHS FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0–03–0.06 DISTRICT JAMSHORO				IRFAN ULLAH KHAN	2601	1:40
		TITLE				DESIGNED:	DRG. NO.	
		GENERAL ARRANGEMENT ABUTMENT DETAILS				IRFAN ULLAH KHAN	RAD–104	
						DRAWN:	DATE:	REV.
						ASd	MAY, 2026	

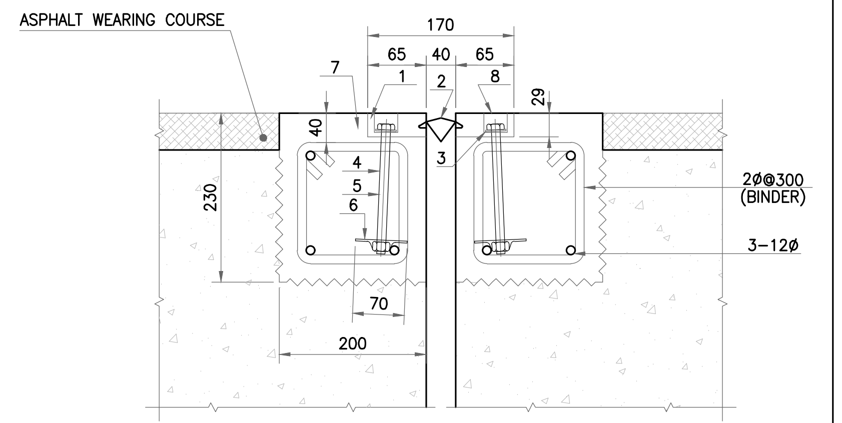
Wed, 20 May 2026 - 5:42pm
Pervez 2424-A-SARI-104.dwg

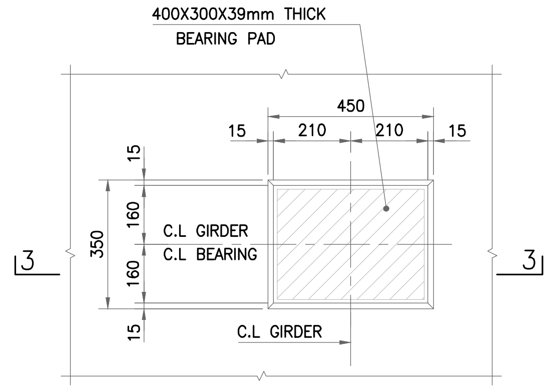


SECTION 1–1

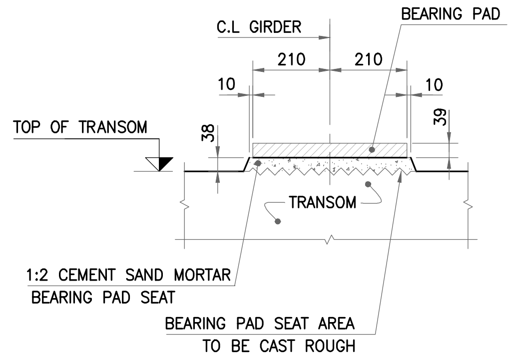


SECTION 2–2

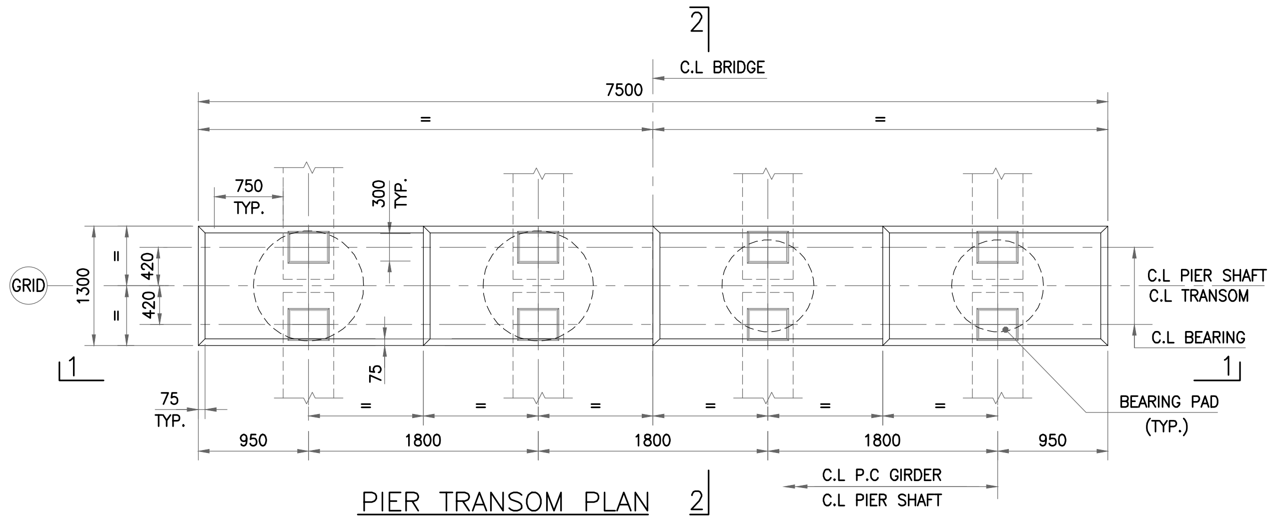




BEARING PAD SEAT
SCALE 1:10



SECTION 3–3
SCALE 1:10



PIER TRANSOM PLAN 2

TENDER DRAWING
NOT FOR CONSTRUCTION

EXPANSION JOINT DETAIL

FREYSSINET CIPEC (WOSd 40) OR APPROVED EQUIVALENT WITH TENSION BOLTS.
SCALE 1:5

1– EXTRUDED ALUMINUM ALLOY SECTION.
2– NEOPRENE GLAND (ELASTOMERIC PROFILE)
3– WASHER.
4– STRUCTURAL ANCHOR BOLT M12X200mm HSS GALVANIZED BOLT.
5– PVC PROTECTION SHEATH.
6– ANCHORING PIECE.
7– CONCRETE CAST AFTER SETTING IN PLACE THE JOINT.
8– EPOXY FILL–FOSROC NITOSEAL 290 OR APPROVED EQUIVALENT.

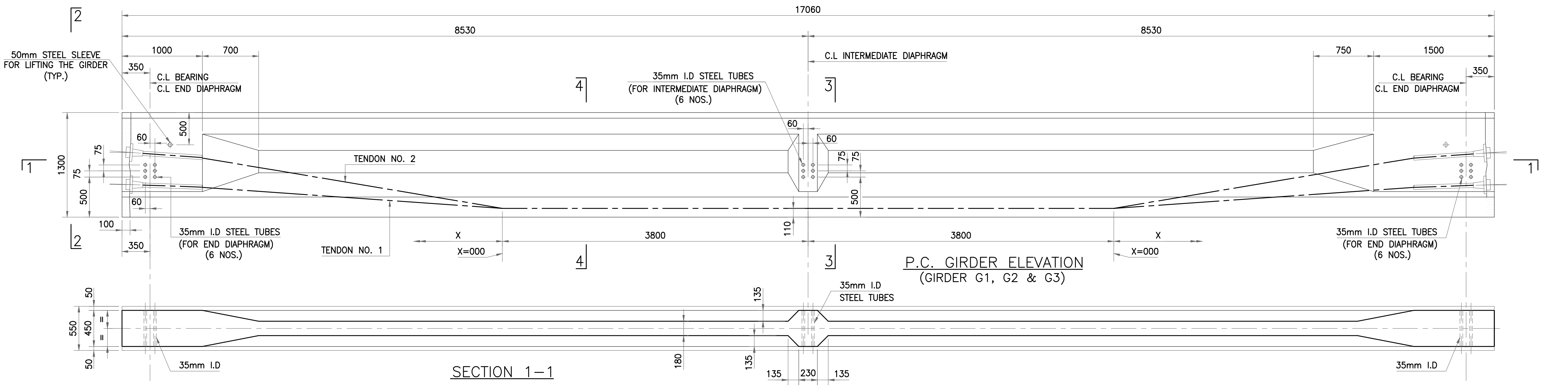
NOTES

1– THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. RAD–101.

2– FOR GENERAL NOTES REFER DRG. NO. RAD–GN–01.

CLIENT: THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSHORO	CONSULTANT: logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PROJECT: PRE–STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0–03–0.06 DISTRICT JAMSHORO	REV. / DESCRIPTION / DATE	CHECKED: IRFAN ULLAH KHAN	PROJECT CODE: 2601 / SCALE (A1) 1:40
		TITLE: GENERAL ARRANGEMENT PIER TRANSOM DETAILS		DESIGNED: IRFAN ULLAH KHAN	DRG. NO. RAD–105
				DRAWN: ASd	DATE: MAY, 2026 / REV.

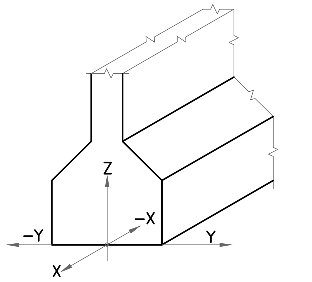
Wed, 20 May 2026 – 5:45pm
Pervez 2424–A–SARI–105.dwg



P.C. GIRDER ELEVATION
(GIRDER G1, G2 & G3)

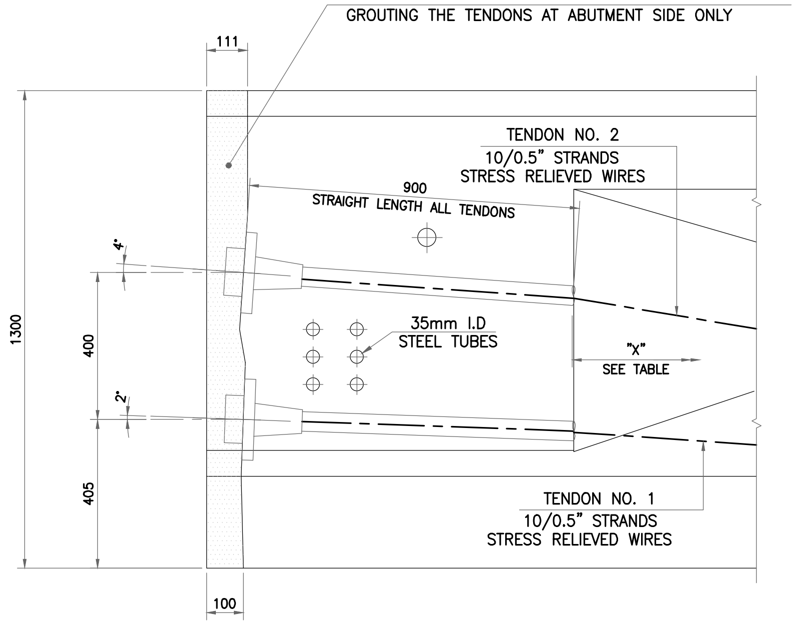
SECTION 1–1

TENDER DRAWING
NOT FOR CONSTRUCTION

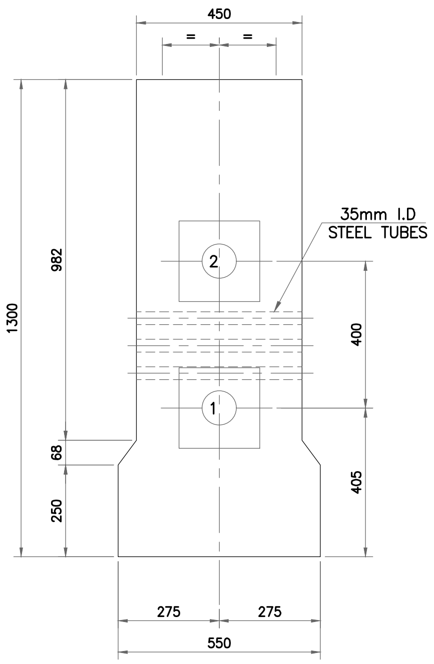


REFERENCE CO–ORDINATES
(GIRDER AXIS AT MIDSPAN ARE 0,0,0,)

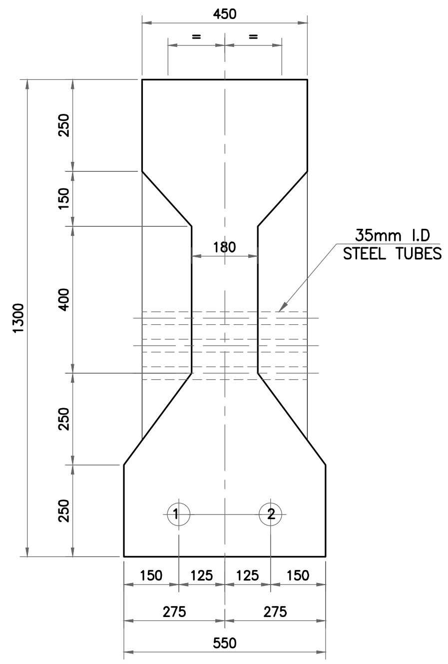
TENDON DATA		
CODINATES "X"	1	2
	Z	Z
0000	110	110
463	113	117
926	122	138
1389	131	173
1852	157	221
2315	184	284
2778	216	360
3241	255	451
3704	299	555
4167	349	663
4630	405	805
ORDER OF STRESSING	A	B
ELONGATION	121 mm	120 mm
JACKING FORCE (KN)	145 TON	145 TON



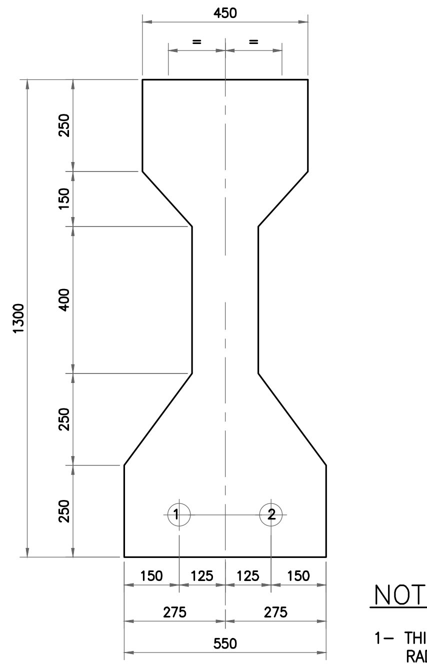
END BLOCK
SCALE 1:10



SECTION 2–2
SCALE 1:10



SECTION 3–3
SCALE 1:10



SECTION 4–4
SCALE 1:10

NOTES

1– THIS DRAWING MUST BE READ IN CONJUNCTION WITH DRG. NO. RAD–101 TO RAD–107.

2– FOR GENERAL NOTES REFER DRG. NO. RAD–GN–01.

CLIENT:
THE EXECUTIVE ENGINEER
PROVINCIAL HIGHWAYS DIVISION
JAMSHORO

CONSULTANT:
logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD

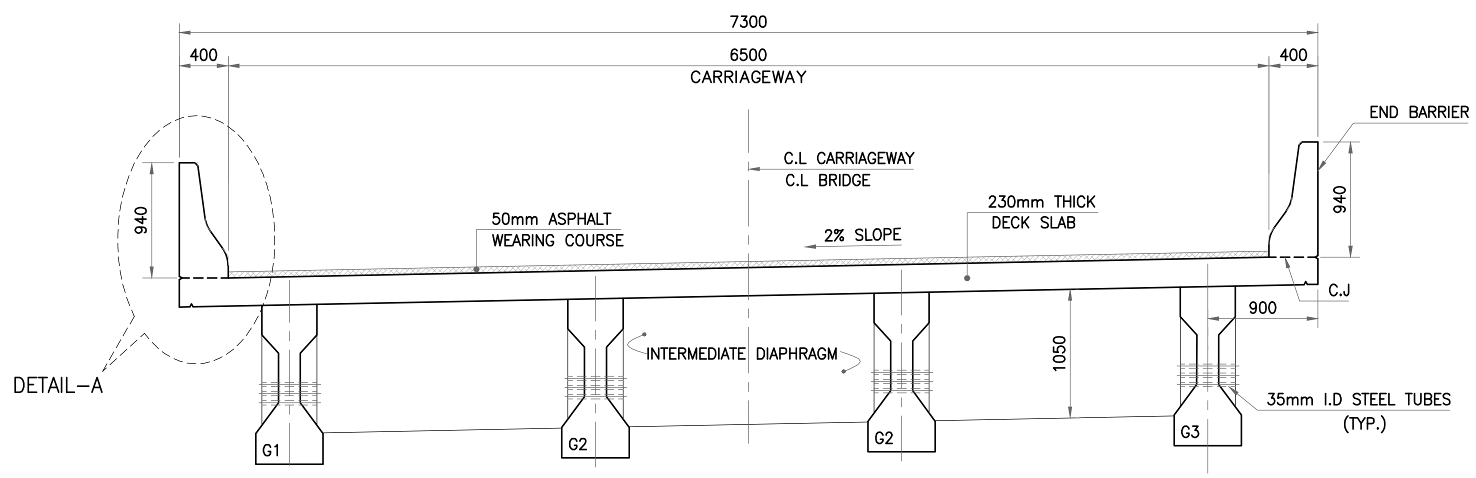
PROJECT
PRE–STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0–03–0.06 DISTRICT JAMSHORO

TITLE
GENERAL ARRANGEMENT P.C GIRDER DETAILS

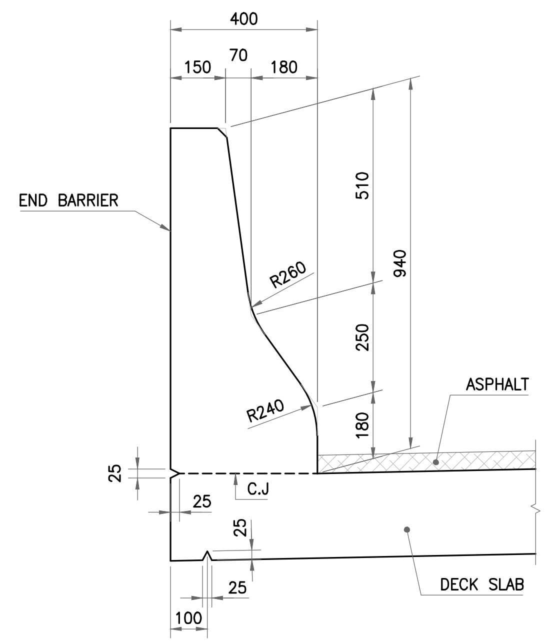
REV.	DESCRIPTION	DATE

CHECKED: IRFAN ULLAH KHAN
DESIGNED: IRFAN ULLAH KHAN
DRAWN: ASd

PROJECT CODE: 2601
SCALE (A1) 1:25
DRG. NO. RAD–106
DATE: MAY, 2026
REV.

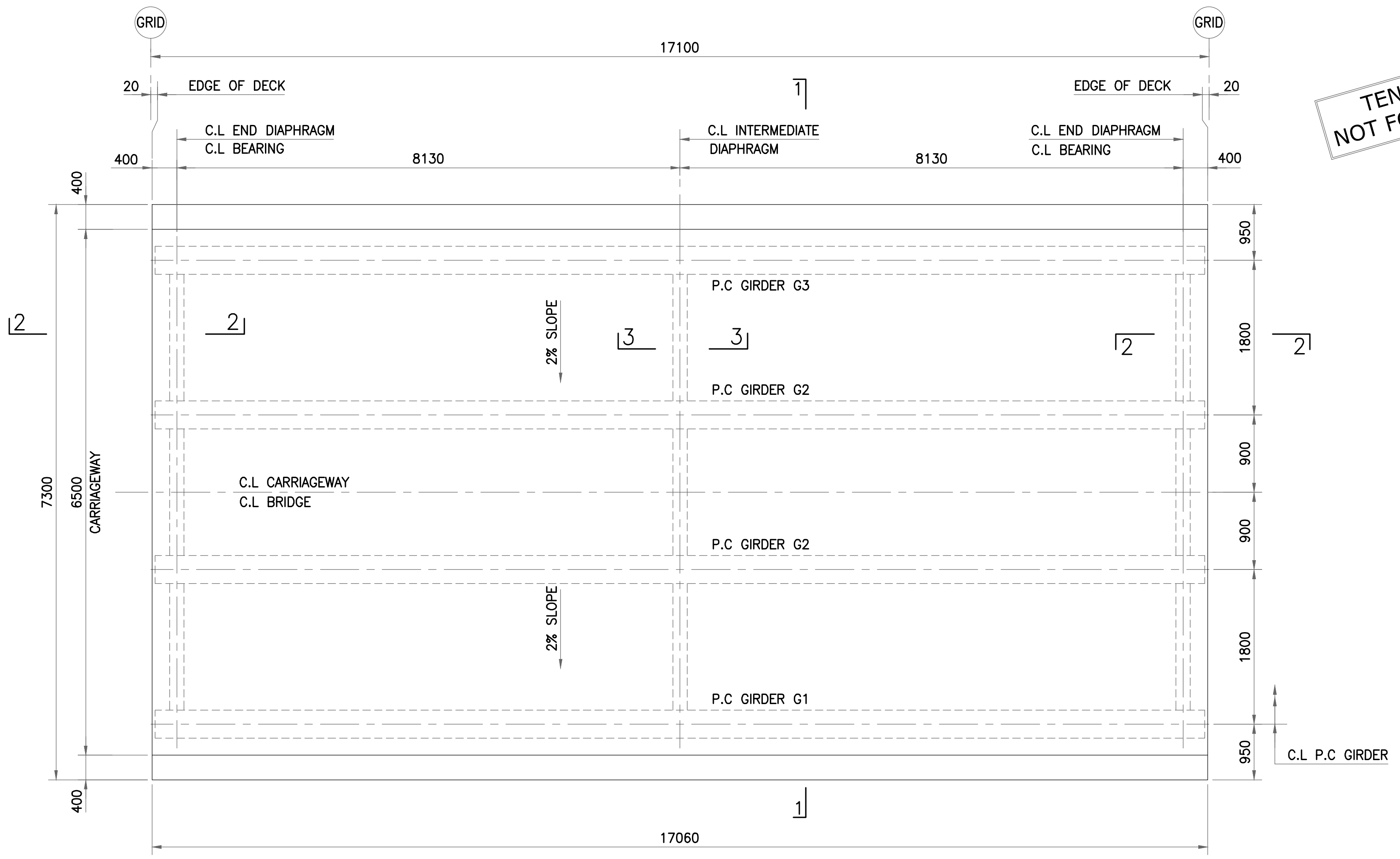


SECTION 1-1
SCALE 1:30

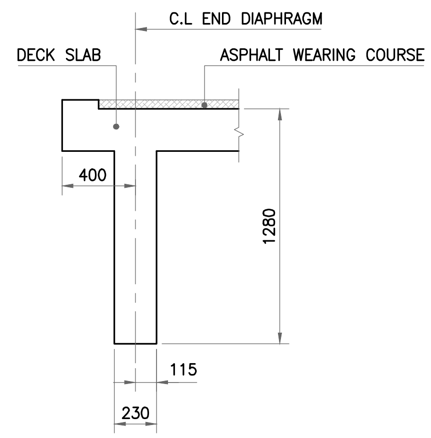


DETAIL-A
SCALE 1:20

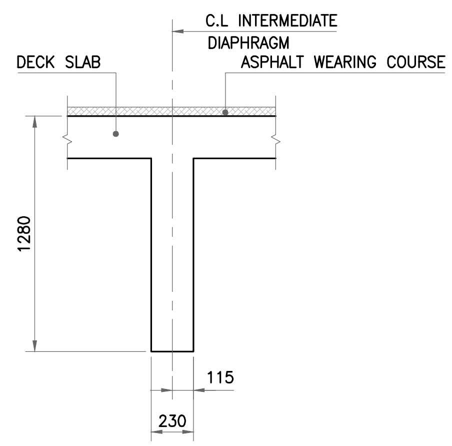
TENDER DRAWING
NOT FOR CONSTRUCTION



DECK SLAB PAN



SECTION 2-2
SCALE 1:20



SECTION 3-3
SCALE 1:20

NOTES

1- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NOS. RAD-101 & RAD-106.

2- FOR GENERAL NOTES REFER DRG. NO. RAD-GN-01.

CLIENT:

THE EXECUTIVE ENGINEER
PROVINCIAL HIGHWAYS DIVISION
JAMSHORO

CONSULTANT:

logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD

PROJECT

PRE-STRESSED BRIDGE 50 METER I/C APPROACHES
FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN
MILE 0/0-03-0.06 DISTRICT JAMSHORO

TITLE

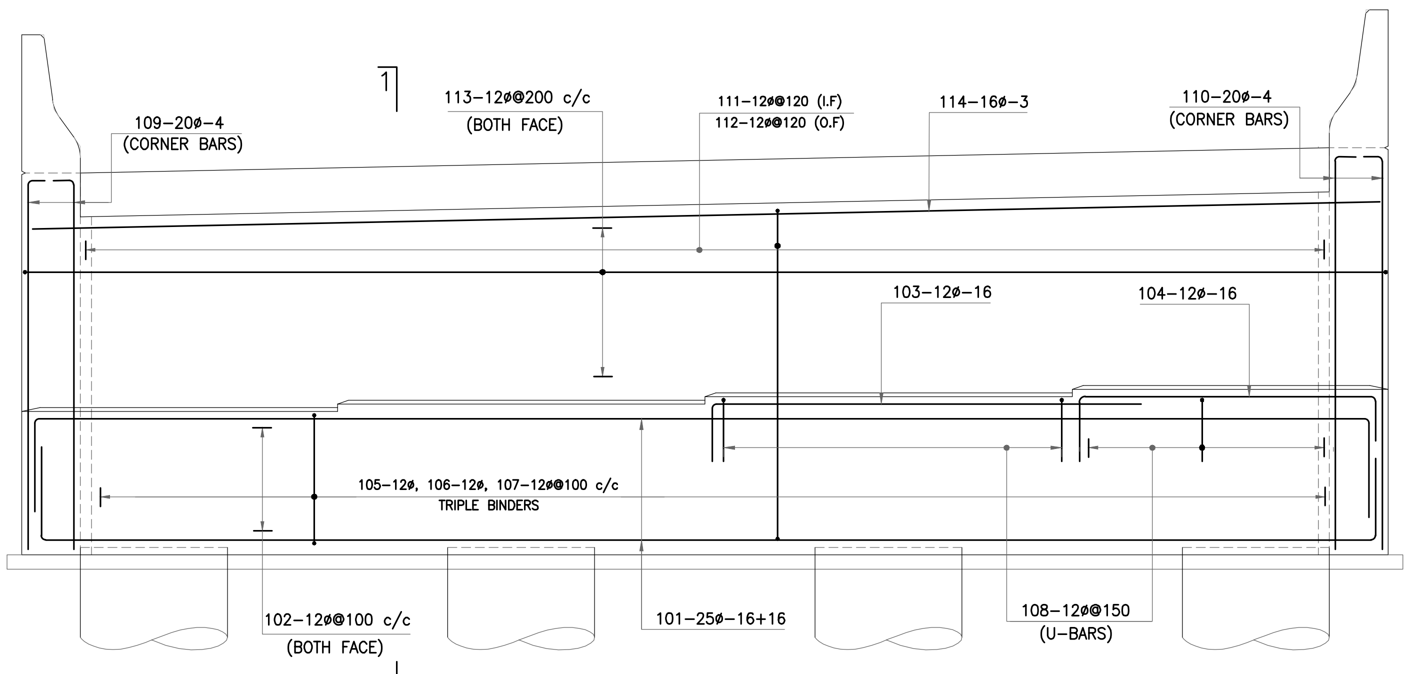
GENERAL ARRANGEMENT DECK SLAB DETAILS

REV.	DESCRIPTION	DATE

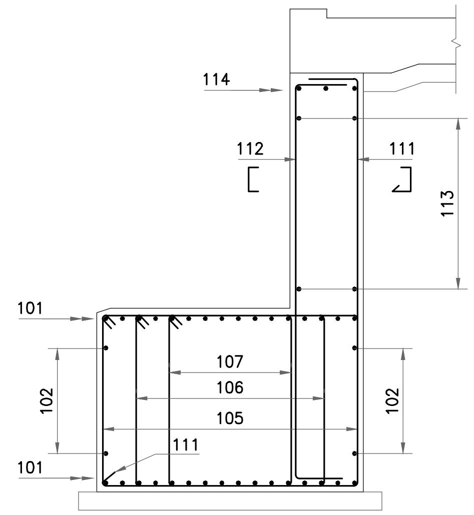
CHECKED: IRFAN ULLAH KHAN
DESIGNED: IRFAN ULLAH KHAN
DRAWN: ASd

PROJECT CODE: 2601
SCALE (A1) 1:50
DRG. NO. RAD-107
DATE: MAY, 2026
REV.

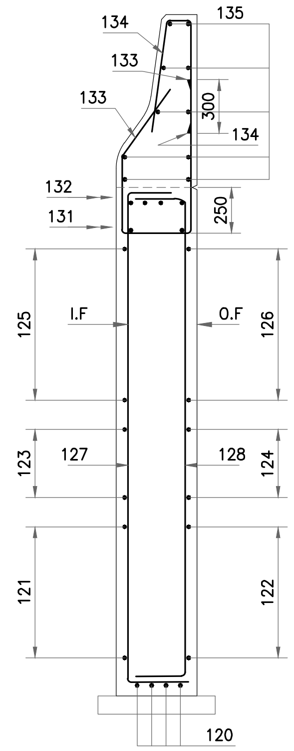
Wed, 20 May 2026 - 5:46pm
Pervez 2424-A-SARI-107.dwg



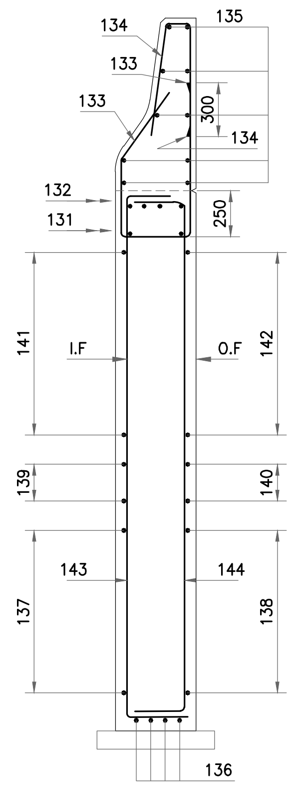
ELEVATION OF BACK WALL
(RETAINING BLOCK REINFORCEMENT NOT SHOWN FOR CLARITY)



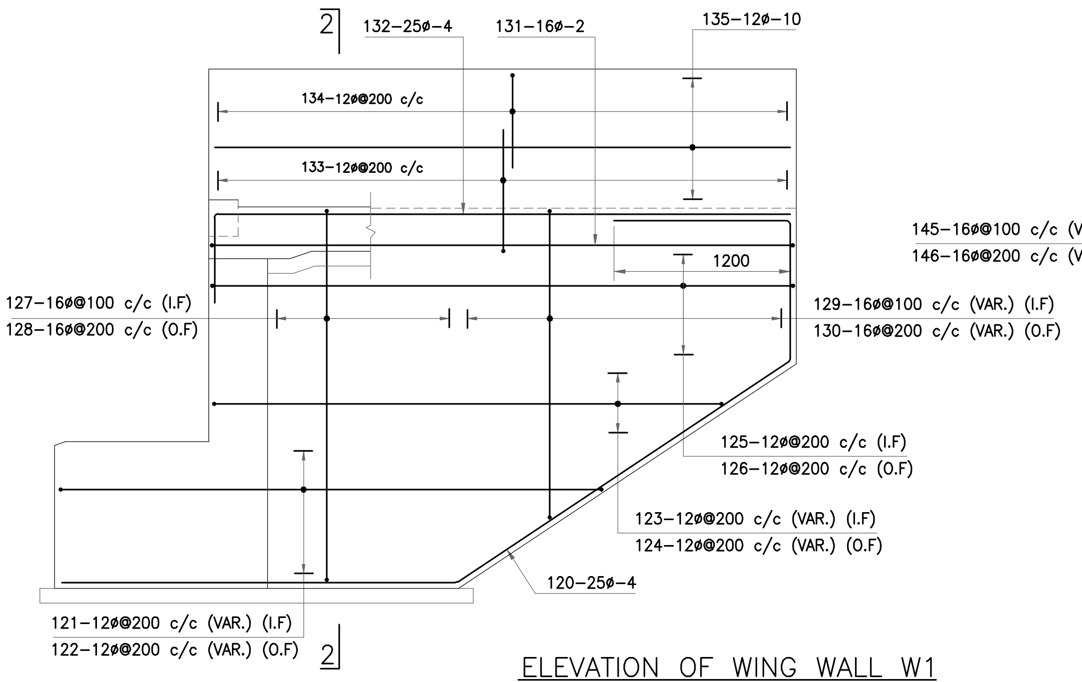
SECTION 1–1
SACLE 1:20



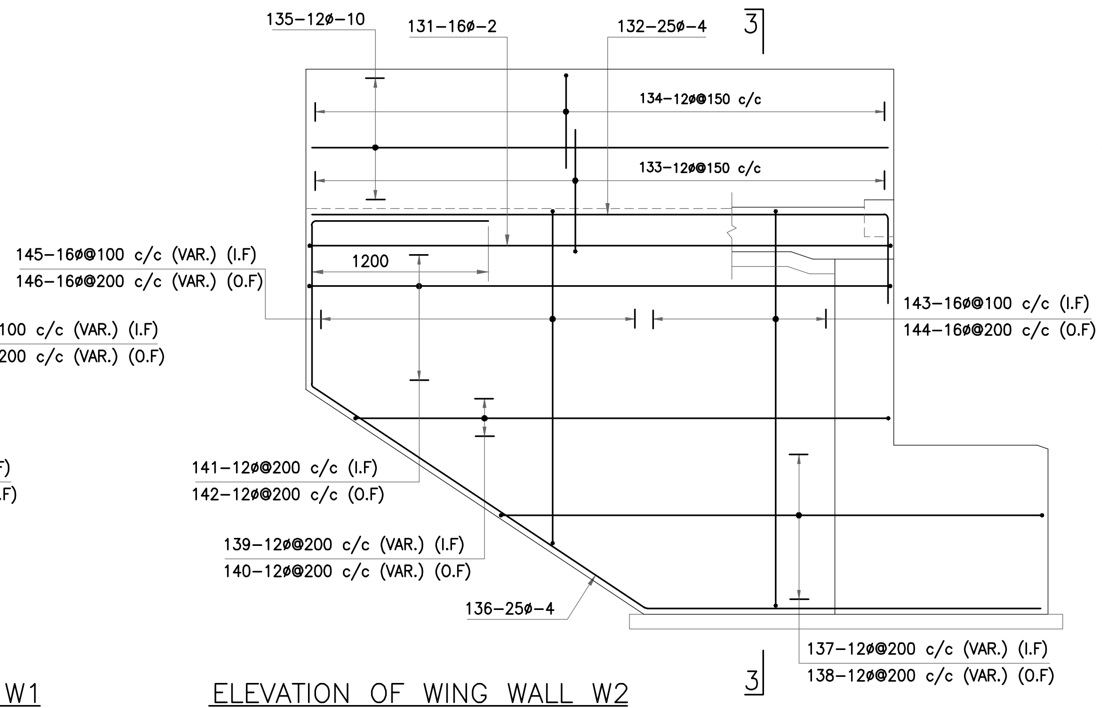
SECTION 2–2
SACLE 1:20



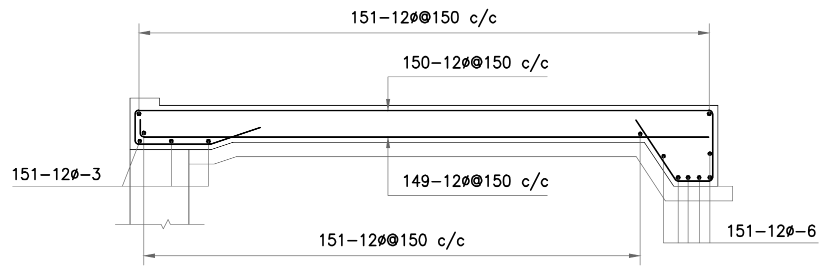
SECTION 3–3
SACLE 1:20



ELEVATION OF WING WALL W1



ELEVATION OF WING WALL W2



APPROACH SLAB SECTION

TENDER DRAWING
NOT FOR CONSTRUCTION

NOTES

1– THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NOS. RAD–101 TO RAD–104.

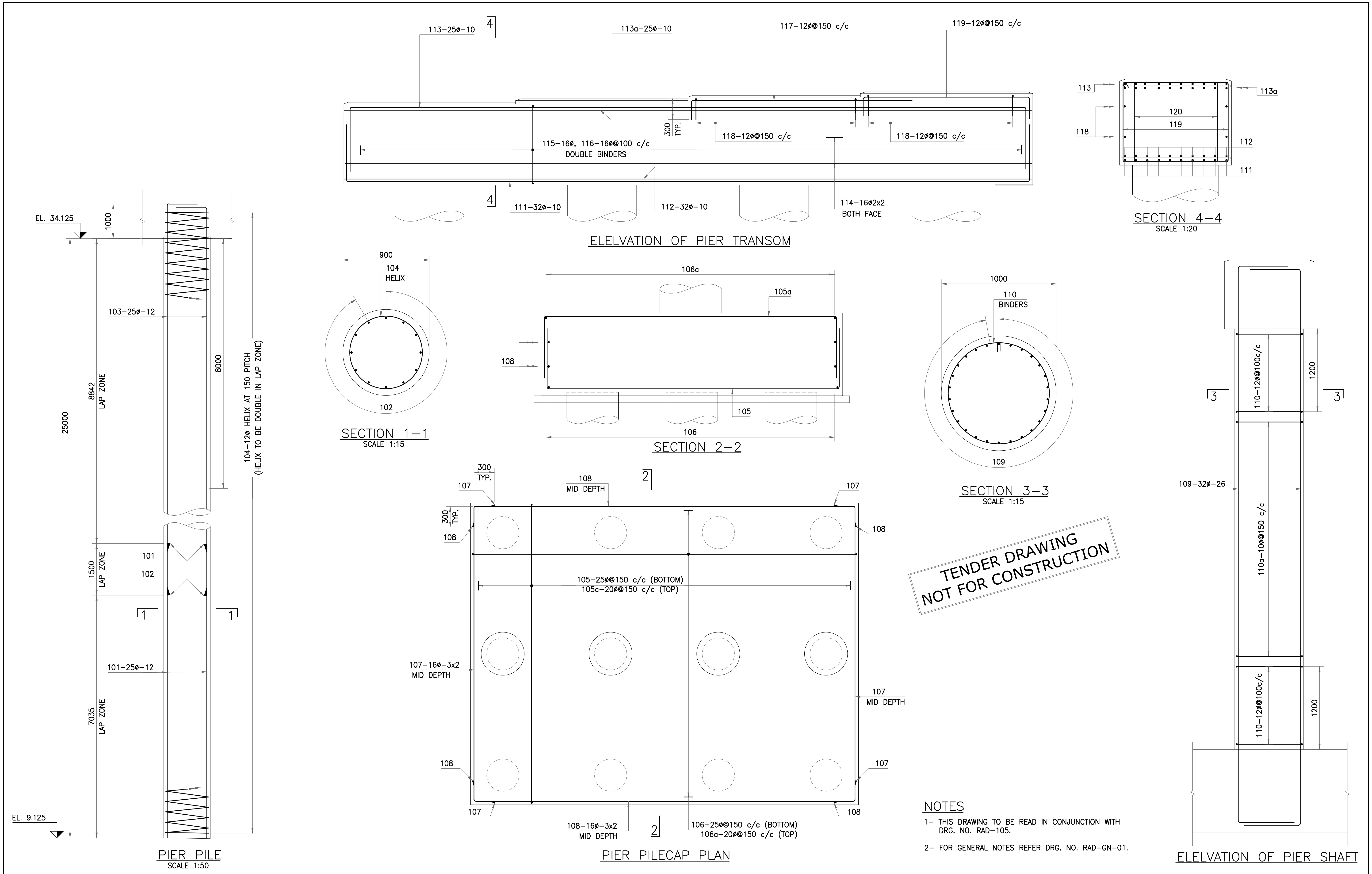
2– FOR GENERAL NOTES REFER DRG. NO. RAD–GN–01.

CLIENT: THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSHORO	CONSULTANT: logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PROJECT: PRE–STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0–03–0.06 DISTRICT JAMSHORO TITLE: ABUTMENT REINFORCEMENT DETAILS

REV.	DESCRIPTION	DATE

CHECKED: IRFAN ULLAH KHAN	PROJECT CODE: 2601	SCALE (A1) 1:25
DESIGNED: IRFAN ULLAH KHAN	DRG. NO. RAD–108	
DRAWN: ASd	DATE: MAY, 2026	REV.

Wed, 20 May 2026 – 5:47pm
Parvez 2424–A–SARI–108.dwg



NOTES

1- THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. RAD-105.

2- FOR GENERAL NOTES REFER DRG. NO. RAD-GN-01.

CLIENT: THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSORO	CONSULTANT: logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PROJECT: PRE-STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0-03-0.06 DISTRICT JAMSHORO
		TITLE: PIER TRANSOM REINFORCEMENT DETAILS

REV.	DESCRIPTION	DATE

CHECKED: IRFAN ULLAH KHAN	PROJECT CODE: 2601	SCALE (A1) 1:25
DESIGNED: IRFAN ULLAH KHAN	DRG. NO. RAD-109	
DRAWN: ASd	DATE: MAY, 2026	REV.

Wed, 20 May 2026 - 5:48pm
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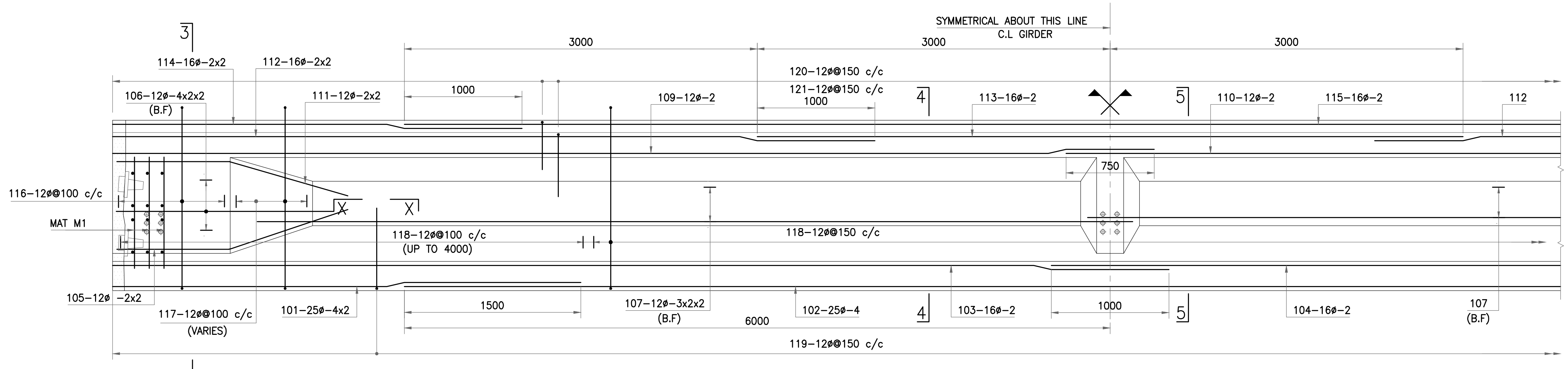
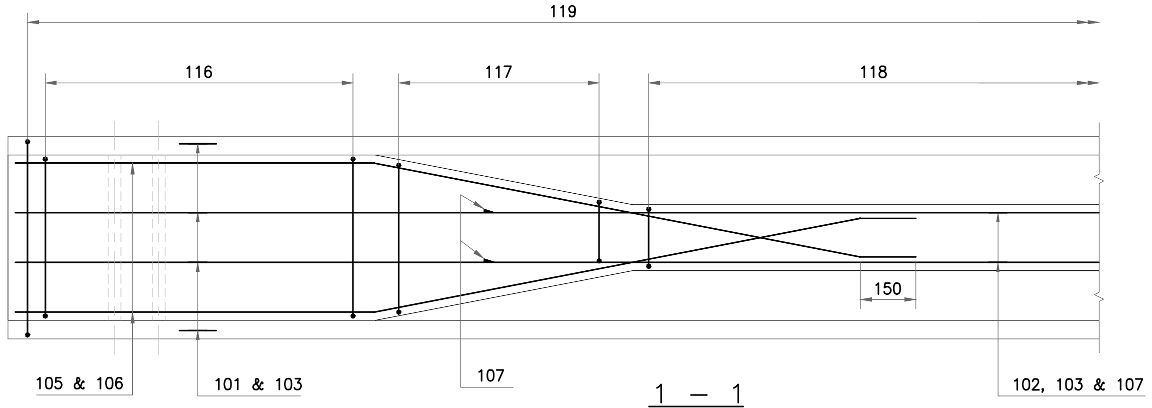
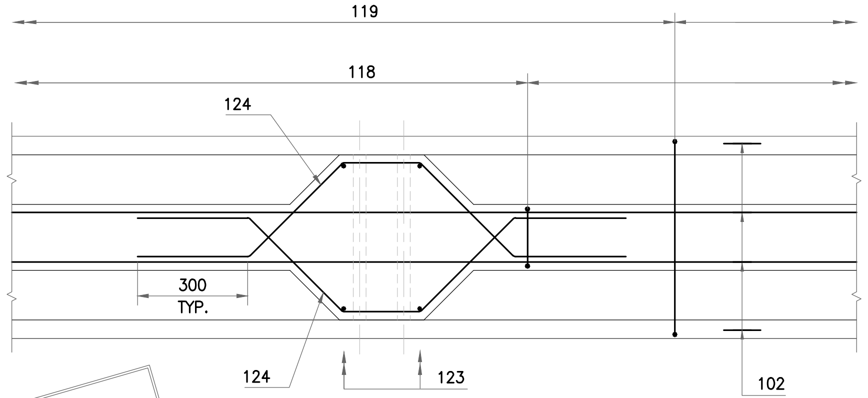


HALF ELEVATION OF P.C GIRDER

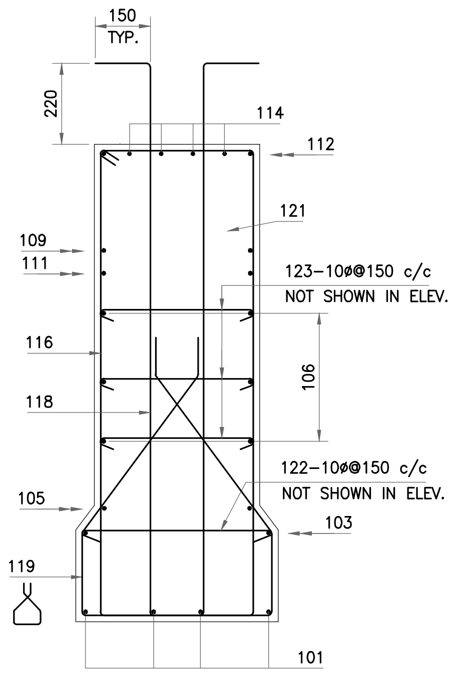


1 – 1
SCALE 1:10



2 – 2
SCALE 1:10

TENDER DRAWING
NOT FOR CONSTRUCTION



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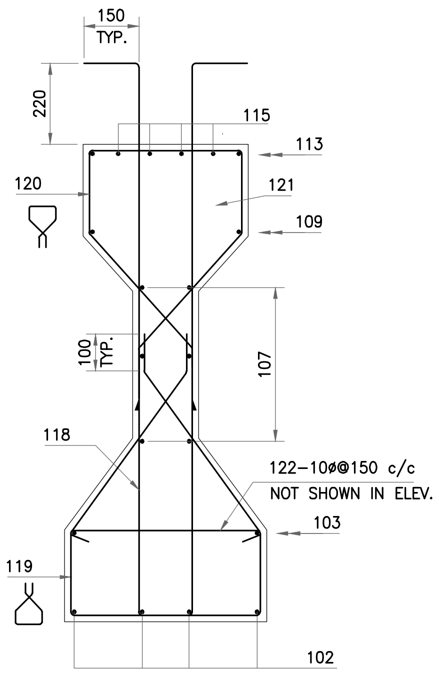

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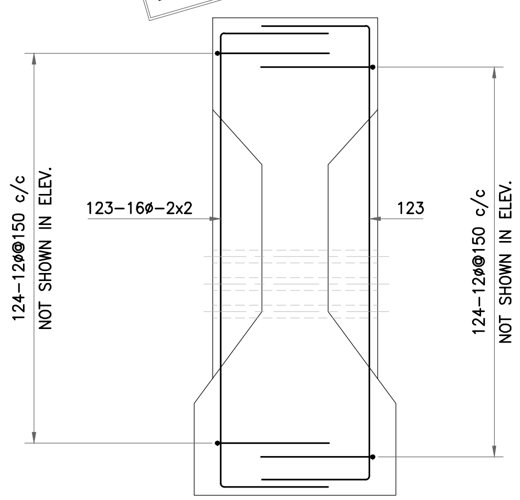
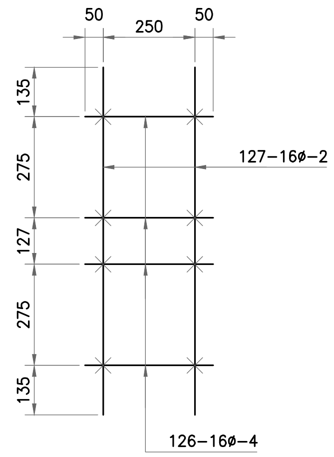


5 – 5
SCALE 1:10



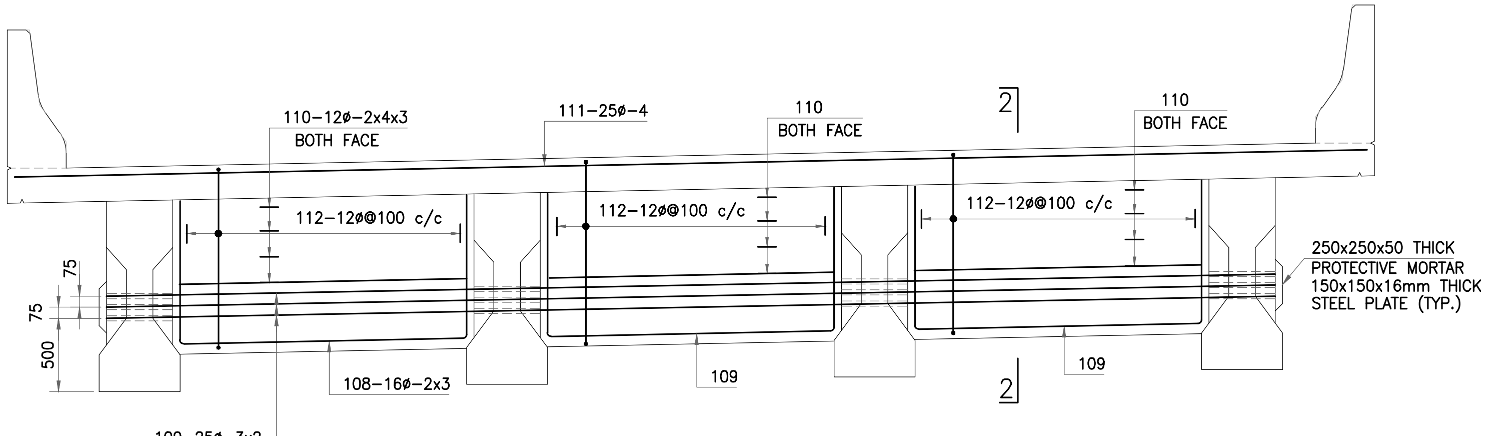
MAT M1
(SPACING MAY BE VARIES LOCALLY TO PASS CABLE)
(3x2=6NOS.)

NOTES

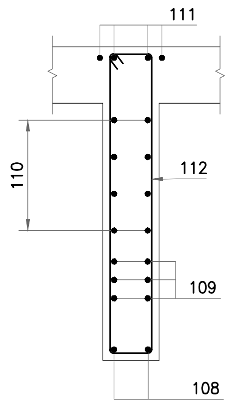
1– THIS DRAWING MUST BE READ IN CONJUNCTION WITH DRG. NO. RAD–106.

2– FOR GENERAL NOTES REFER DRG. NO. RAD–GN–01.

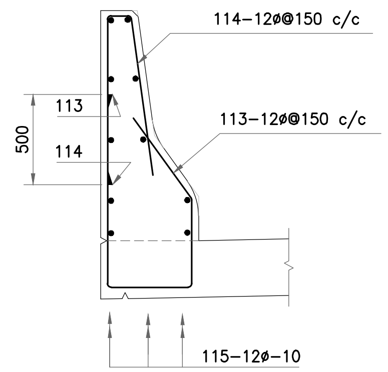
CLIENT:	CONSULTANT:	PROJECT	REV.	DESCRIPTION	DATE	CHECKED:	PROJECT CODE:	SCALE (A1)
THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSHORO	logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PRE–STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0–03–0.06 DISTRICT JAMSHORO				IRFAN ULLAH KHAN	2601	1:20
		TITLE				DESIGNED: IRFAN ULLAH KHAN	DRG. NO. RAD–110	
		P.C GIRDER REINFORCEMENT DETAILS				DRAWN: ASd	DATE: MARCH, 2026	REV.



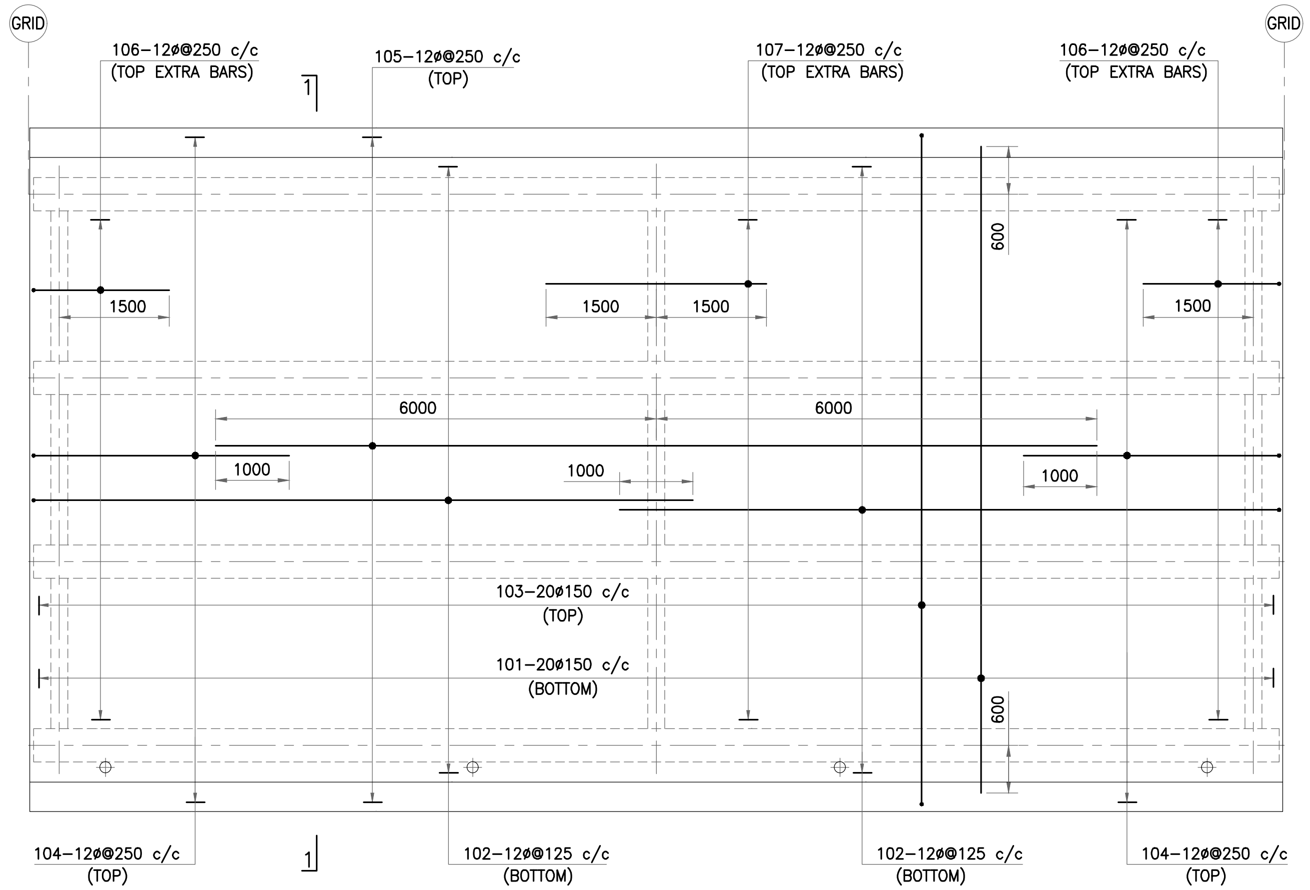
ELEVATION OF END & INTERMEDIATE DIAPHRAGM



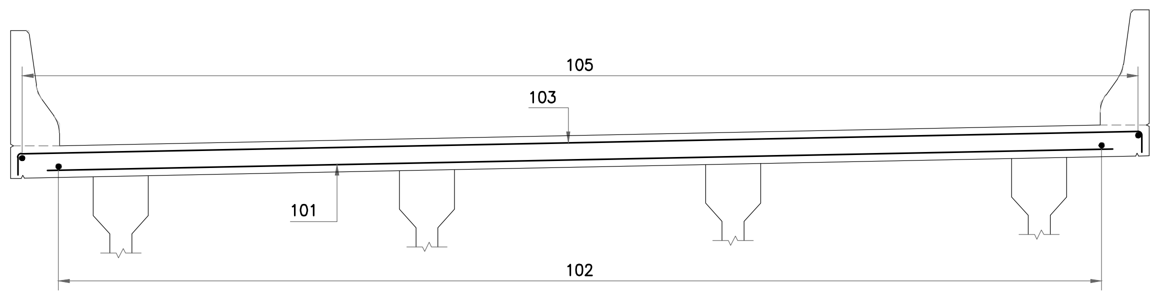
SECTION 2-2
SCALE 1:15



END BARRIER REINFORCEMENT DETAILS
SCALE 1:15



DECK SLAB REINFORCEMENT PAN



SECTION 1-1
SCALE 1:30

TENDER DRAWING
NOT FOR CONSTRUCTION

NOTES

1- THIS DRAWING MUST BE READ IN CONJUNCTION WITH DRG. NO. RAD-107.

2- FOR GENERAL NOTES REFER DRG. NO. RAD-GN-01.

CLIENT: THE EXECUTIVE ENGINEER PROVINCIAL HIGHWAYS DIVISION JAMSHORO	CONSULTANT: logix CONSULTANTS ADVISORS PROJECT MANAGEMENT (PVT) LTD	PROJECT: PRE-STRESSED BRIDGE 50 METER I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0-03-0.06 DISTRICT JAMSHORO	REV. / DESCRIPTION / DATE	CHECKED: IRFAN ULLAH KHAN	PROJECT CODE: 2601	SCALE (A1) 1:50
		TITLE: DECK SLAB & DIAPHRAGM REINFORCEMENT DETAILS		DESIGNED: IRFAN ULLAH KHAN	DRG. NO. RAD-111	
				DRAWN: ASd	DATE: MAY, 2026	REV.

Wed, 20 May 2026 - 5:50pm
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EARTHWORKS

SCOPE

The work under this section of the specifications consists of furnishing all plant, labour, equipment, appliances and materials and in performing all operations in connection with excavation, backfilling/filling for all type foundations, trenches and embankments including stock piling of suitable excavated material, disposal of unsuitable and surplus excavated material in accordance with this section of specifications, the applicable drawings and subject to terms and conditions of the Contract.

GENERAL

The Contractor shall acquaint himself with the nature of the ground, existing structures and subsurface materials (soil / rock) which will be encountered during excavation or earthworks. The Employer does not guarantee or warrant in any way that the materials to be found in the excavation will be similar in nature to that of any samples which may have been exhibited or indicated in the Report, Drawings or any other Contract Documents or to material obtained from boring or trial holes. The Contractor shall be deemed to have made local and independent inquiries as to, and shall take whole risk of the nature of the subsurface materials (soil / rock) to be excavated or penetrated and the Contractor shall not be entitled to receive an extra or additional payment nor to be relieved from any of his obligations by reasons of the nature of such ground and subsurface material.

The Contractor shall submit a detailed list of plant and equipment which he shall undertake to bring to the site and to carry out the work. The list shall satisfy the Engineer as to type, size and quantity. The Contractor shall place on the site of the work all of the equipment listed and all subsequent equipment required for approval of the detailed program of work and such equipment which may be directed by the Engineer.

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirement of work and produce a satisfactory quality of work. In no case shall the Contractor remove from the site, the plant and equipment without the written approval of the Engineer. The Contractor shall supply all plant and equipment necessary for the construction of each phase of the work and it must be on site, inspected and approved by the Engineer. If after use of the equipment the Engineer determines that the work carried out does not meet the Contract requirement, the equipment shall be changed and the deficient work shall be removed and corrected as direct by the Engineer.

All suitable materials from stripping of topsoil and excavation shall be used unless otherwise declared unsuitable by the Engineer. The suitable material shall comply with the requirements as specified in the respective sections for various items.

The Contractor shall jointly survey the area marked for service lines, buildings or other structures or any area designated by the Engineer and prepare the survey drawings showing natural ground profile and cross-section and submit to the Engineer for approval prior to start of any earthwork operation.

All suitable material from excavations shall be transported to and placed in fill areas or stockpiled at locations designated by the Engineer. Materials from excavation and stripping shall be stockpiled separately.

Existing utilities which are to remain in service or to be relocated and to remain in service until relocation are to be determined by the Contractor. They shall be safeguarded and protected from damage.

If any existing service lines, utilities and utility structures which are to remain in service are uncovered or encountered during the operations, shall be safe guarded, protected from damage and supported as directed by the Engineer.

All excavations, cut and fills shall be constructed to the lines, levels and gradients specified with any necessary allowance for consolidation, settlement and drainage so that at the end of the Period of Maintenance the ground shall be at the required lines, levels and gradients. During the course of the Contract and during the Period of Maintenance any damage or defects in cuts and fills, in structures and other works, caused by slips, falls of wash-ins or any other ground movement due to the Contractor's negligence shall be made good by the contractor at his own cost.
Barricade open excavations occurring as part of this work and post with warning lights. Operate warning lights as recommended by the authorities having jurisdiction. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
Prior to commencing work at site, verify agreement of existing conditions with indicated conditions. Notify the Engineer in writing of discrepancies found. Start of work without notification constitutes acceptance of conditions, with no extra cost.

FOUNDATIONS / TRENCHES

Excavations

- Excavation shall include the removal of all material of every name and nature. Excavations shall be carried out in accordance with excavation plans and sections shown on the Drawings.
- The major portion of excavations shall be carried out by mechanical excavators and excavated materials disposed off to stockpile or spoil as per Drawings or as directed by the Engineer. The excavation, which cannot be done by mechanical means, shall be done by manual tools. Unless otherwise specified by the Engineer, leveling, trimming and finishing to the required levels and dimensions shall be done manually. The material suitable for fill and backfill if approved by the Engineer shall be stockpiled at approved stockpile sites.
- The Contractor shall preserve the completed excavation from damage due to slips and earth movements, ingress of water from any source whatsoever and deterioration by exposure to the sun and the effects of the weather.
- All excavation of every description, in whatever material encountered shall be performed to the elevations and dimensions shown on the Drawings in such a manner as to avoid interruption to work in other parts of the site. The Contractor shall be responsible for injury to the other works caused during excavation period.
- All excavations in foundations shall be taken to 150mm above the final excavation elevations shown on the drawings and the last 150mm shall be trimmed carefully to a smooth and level.
- surface. Immediately after trimming to the final elevation, a layer of blinding concrete shall be placed to the thickness shown on the drawings. All excavations for foundations which have been trimmed and disturbed shall be compacted and covered by lean concrete by the end of the day. It is specifically brought to the notice of the Contractor that any excavation taken down to the trimmed elevation which is left over-night or for any length of time thereafter, uncovered by the blinding concrete, shall be required to be trimmed to such lower elevation as directed by the Engineer and any extra work or any consequent increase in the quantities caused thereby shall not be paid to the Contractor.
- If excavation for sub-structures are carried below the required level, as shown on the Drawings or as directed by the Engineer, the surplus depth shall be filled in with concrete of same grade as of blinding concrete at the sole cost of the Contractor.

- All excavation shall be performed in the dry. The placing of blinding concrete, placing of reinforcement and casting of the permanent works in the excavation shall be carried out in the dry and the Contractor shall have sufficient dewatering equipment for this purpose. The Contractor shall design, provide and maintain effective dewatering system during excavation and construction of foundations up to plinth level so as to keep the foundation area dry. Adequate precautions shall be taken to prevent any erosion due to undercutting from underneath the previously constructed adjoining foundations.
- Shoring, where required during excavation, shall be installed to protect workmen and the bank, adjacent paving, structures and utilities. The term shoring shall also be deemed to cover whatever methods the Contractor elects to adopt, with prior approval of Engineer, for upholding the sides of excavation and also for planking and strutting to excavation against the side of roadways and adjoining properties in existing hardcore of any other material. The Contractor will be held responsible for upholding the sides of all excavations and no claim for additional excavation, concrete or other material will be considered in this respect.
- Existing utility lines that are shown on the drawings or the locations of which are made known to the Contractor prior to excavation and that are to be retained, as well as utility lines constructed during excavation and backfilling, and if damaged, shall be repaired by the Contractor at his own expense. Any existing utility lines which are not known to the Contractor in sufficient time to avoid damage, if inadvertently damaged during excavation, shall be repaired by the Contractor and adjustment in payment will be made as approved by the Engineer. When utility lines which are to be removed, are encountered within the area of operations the Contractor shall notify the Engineer in ample time for the necessary measures to be taken to prevent interruption of the service.
- Excavated material suitable for use as fill and backfill shall be stockpiled at approved stockpile sites as directed by the Engineer. This stockpiled material shall be transported back to places requiring fill or backfill.
- Excavated material unsuitable for use as fill and backfill shall be disposed off by the Contractor at locations approved by the Engineer up to all leads and lifts.
- Where applicable the excavation work shall include the excavation in above water table and excavation below water table. The Contractor shall submit the proposal for dewatering from the areas of excavation for the approval of the Engineer and shall provide all plant, equipment, pumps, sheeting, well points as required to keep the water table 1.0 meter below the deepest foundation as shown on the drawings till the completion of foundation works

Fill and Backfill

- After completion of foundations, walls, trenches and other construction below the elevation of the final grades and prior to start of back filling, forms shall be removed and the excavation shall be cleaned of trash and debris.
- The backfilling shall include filling under the floors, around the foundation and in trenches.
- The backfilling shall include loading, unloading, transporting, placing, stacking, spreading of earth, watering, rolling, ramming and compacting, etc., complete as specified herein.
- Filling under floor/trenches shall be done with approved selected material obtained from required excavation or outside sources. It shall be predominantly granular material and free from slurry mud, organic or other unsuitable matter and capable of compaction by ordinary means.
- The Contractor shall provide the approved quality of backfill and fill material required to complete the fill and backfill from the places designated by the Engineer.

- Filling in foundations/trenches shall be placed in 200mm layers and compacted at optimum moisture content by mechanical means or other means as approved by the Engineer.
- Material for backfilling shall be as approved by the Engineer and shall be placed in layers not exceeding 200mm measured as compacted material and saturated with sufficient water and compacted to produce in-situ density not less than 95% of the maximum dry density at optimum moisture content, achieved.
- All fill areas shall be left neat, smooth and well compacted, the top surface consisting of the normal site surface soil, unless otherwise directed.
- Depending on the capacity of the compacting equipment the Engineer may instruct increased thickness of successive layers to be placed.
- Fill shall not be placed against foundation walls prior to approval by the Engineer. Fill shall be brought up evenly on each side of the walls as far as practicable. Heavy equipment spreading and compacting the fill shall not be operated closer to the wall than a distance equal to the height of the fill above the top of footing.
- In case the Contractor has to arrange the fill material from outside source the quality of the fill material will be subject to the approval of the Engineer. The Engineer shall require the Contractor to carry out various tests of the fill material. All such tests shall be made at an approved laboratory at the cost of the Contractor.
- Backfilling of foundations / trenches shall be carried out only after the structural works within the excavations have been inspected, tested and approved by the Engineer.
- Layers up to an elevation of 300 mm above the top of the bedding shall not be more than 150mm in loose thickness and the remainder of the layers above that elevation shall not be more than 150mm of compacted thickness.
- If it is found necessary to alter the moisture content of the fill material in any way, then, very strict control shall be exercised over the wetting and/or the drying process and frequent moisture content tests shall be carried out.
- The stabilization of compacted fill/backfill surfaces shall be smooth and even and shall not vary more than 10mm in 3 meters from true profile and shall not be more than 12.5mm from true elevation.

CONCRETE

COMPRESSIVE STRENGTH

The Contractor shall provide and test three sets of specimens taken under the supervision of the Engineer from each 125 cubic meters or not less than once a day from each grade of concrete placed. Samples shall be secured in accordance with ASTM C 172. Test specimens shall be made and cured in accordance with ASTM C-31. Specimens shall be tested in accordance with ASTMC39 or ACI-214. Test specimens shall be evaluated for each grade of concrete specified in conformance with ACI318, chapter "Concrete Quality". The standard age of concrete for tests shall be 3, 7 and 28 calendar days.

SLUMP AND ENTRAINED AIR

Slump test and entrained air tests shall be performed in the field under the supervision of the Engineer. Slump test shall conform to ASTM C 143 and entrained air content shall be determined in accordance with ASTM C 231 or C 173 as applicable.

CONCRETE REMOVED FOR THE STRUCTURE

When the results of the strength test of the specimen indicate deficiency in specified requirements or where there is other evidence that the quality of concrete is below specified requirements, core boring tests shall be made in conformance with ASTM C-42. If a deficiency is discovered, the Contractor may be allowed to make load test, at his expense, and results shall be evaluated in conformance with ACI 318, Chapter 20.

CONCRETE COMPRESSIVE STRENGTH:

ASTM C39. Three sets of specimens for each 75 cu.m of each grade of concrete placed or at least three sets for each grade per work shift.

Flexural Strength: Three sets of specimens for each 100 cu.m of concrete placed or at least three sets per work shift. The concrete shall be sampled in accordance with ASTM C172. Flexural strength specimens shall be made in accordance with ASTM C 31 and tested in accordance with ASTM C 78.

Concrete Sulphate (S03), Chloride Content and pH value: One test per month for each grade of concrete. Broken laboratory specimens from strength tests shall be used for hardened concrete Sulphate, Chloride content and pH Value tests.

NOMINAL CONCRETE MIXES

The cement, fine aggregate and the coarse aggregate shall be weighed separately. The proportions of cement to fine aggregate and coarse aggregate shall be adjusted as per ACI 211 and ACI 318 so as to provide the concrete of the required crushing strength when tested as set
out in Table.

The Contractor shall regulate and arrange mixing of the ingredients for the designed mix of the concrete by weight-batching.

WATER/CEMENT RATIO

The quantity of water used shall be just sufficient to produce a dense concrete of the specified strength. For all exterior exposed work and foundations, the water/cement ratio shall not exceed 0.45, allowance shall be made for any water in the fine and coarse aggregates.

WORKABILITY

Admixtures may be used where necessary to achieve required workability, with the Engineer's approval. For concrete pavements, the mix determined shall be workable concrete having a slump between 13mm and 50mm, as determined by ASTMC143. For other structures the concrete shall be proportioned and produced to have a slump of 75mm or less if consolidation is to be by vibration, and 125mm or less if consolidation is to be by methods other than vibration.

Class of Concrete	Strength (MPa)	Max. Aggregate Size (mm)	Mini. Cement Content (Kg/cu.m)
A1	21	20	335
A2	28	20	375
A3	28	38	400
D1	35	20	450
B	26	20	350
C	17	20	230
D	8	20	110

The Contractor shall adopt all necessary measures as per ACI201.2, like proper grading of aggregates, control of water cement ratio and cement content, proper compaction and curing, to achieve dense and durable concrete.

BATCHING

All cement, including cement supplied in bulk, shall be batched by weight. A bag of cement may be taken as 50 kg.

Aggregates shall be batched by weight; due allowance being made for water content. Aggregates may be batched by volume only with the prior permission of the Engineer. The apparatus for weight batching may be as integral part of the mixer or a separate unit of a type approved by the Engineer. It shall be accurate within 2% and shall be checked for accuracy at least once a week.

MIXING

The concrete shall be mixed in an approved batch mixer. It shall be fitted with the manufacturer's plate stating the rates, capacity and the recommended number of revolutions per minute and shall be operated in accordance therewith. It shall be equipped with a suitable charging mechanism and an accurate water measuring device.

Mixing shall continue for the period recommended by the mixer manufacturer or until there is apparently, a uniform distribution of the materials and the mass is uniform in color, whichever period is longer. However, minimum mixing time shall not be less than 45 sec. If it is desired to use a mixing period of less than 45 sec, the Engineer's approval shall be obtained in writing.

Controls shall be provided to ensure that the batch cannot be discharged until the required mixing time has elapsed. At least three quarters of the required mixing time shall take place after the last of the mixing water has been added.

The interior of the mixer shall be free of accumulations that will interfere with mixing action. Mixing blades shall be replaced when they have lost 10 percent of their original height.

DESIGN MIX CONCRETE REPORT

The contractor is required to submit a detailed report of the design mix for the concrete used in the project. This report should include information on the proportions of materials used, such as cement, aggregates, water, and any admixtures, along with the expected properties of the concrete, including strength, workability, and durability. The design mix must be in accordance with the project specifications and relevant standards. The report should be submitted prior to the commencement of concrete pouring to ensure that the mix meets the required performance criteria and to allow for review and approval.

REINFORCEMENT

SCOPE

The work under this section of specifications consists of furnishing, cutting, fabricating, bending and placing steel reinforcement and Welded wire fabric in any floor and at any height in concrete structures or elsewhere as shown on the drawings or as directed by the Engineer. The scope of this section of specification is covered with detailed specifications as laid down herein.

APPLICABLE STANDARDS

Latest editions of the following Pakistan, British, ASTM Standards are and AASHTO Standards relevant to these specifications wherever applicable.

PAKISTAN STANDARDS

PS 231 Mild Steel Bars.
PS 241 Tensile Testing of Steel.
PS 244 Bend test for Steel
PS 580 Rolled deformed Steel bars (intermediate grade) for concrete reinforcement.
PS 605 Rolled deformed steel bars (hard grade) for concrete reinforcement.
PS 606 Rolled deformed Steel bars (structural grade) for concrete reinforcement.
PS 607 General technical delivery requirement for steel.

BRITISH STANDARDS

BS 4449 Carbon steel bars for reinforcement of concrete
BS 4466 Bending dimensions and scheduling of bars for the reinforcement of concrete.

ASTM STANDARD

A 82 Cold- Drawn steel wire for concrete reinforcement.
A 305 Minimum requirement for the deformations of deformed steel bars for concrete reinforcement.
A 615 Deformed billet steel bars for concrete reinforcement, Grade 60.

AASHTO STANDARDS:

M31 Deformed and Plain Billet steel bars for concrete reinforcement Grade 60.
M32 Plain Steel wire for concrete reinforcement.
In addition to the above, the latest editions of other Pakistan Standards, British Standards, American Concrete Institute Standards, American Society for Testing and Materials Standards and other standards as may be specified by the Engineer for Special Materials and construction are also relevant.

MATERIAL AND SIZE OF BARS

- Reinforcement for concrete shall conform to the respective Pakistan, British, ASTM, or other Standards as specified in the Drawings and in the Contract Documents or as may be specified by the Engineer.
- Unless otherwise specified, all steel bars for reinforcement of concrete shall conform to ASTM A615, Grade 60 deformed hot rolled billet steel bars with minimum yield strength of 413 MPa (60,000 Psi).
- Reinforcement shall be obtained only from manufacturers approved by the Engineer. Each consignment of reinforcement steel shall be accompanied by the manufacturer's certificate or shall refer to a previous certificate, if the consignment is from the same batch, showing that the reinforcement steel complies with the specified requirement. If

such a certificate is not made available or if the Engineer considers that the manufacturer's tests are inadequate, samples shall be taken for acceptance test from different consignments as the Engineer may direct and shall be tested at the contractor's cost. Should the result of such tests show that the sample does not meet with the specifications, the whole consignment shall be rejected and removed from the site at the Contractor's cost.

- Reinforcement shall be free from all loose or flaky rust and mill scale, or coating, including ice, and any other substance that would reduce or destroy the bond. Reduced section steel reinforcement shall not be used.

WEIGHT OF BAR

Nominal Bar Diameter (mm)*	Bar No.	Weight (kg/m³)
6.35	-	2.675
9.525	#10	6.0229
12.7	#13	10.700
15.875	#16	16.707
19.05	#19	24.059
22.225	#22	32.74
25.4	#25	42.769
28.5750	#29	54.46
31.750	#32	68.92
34.9250	#36	85.106

1 kg = 0.001 tonne

PILING WORK

GENERAL

The work under this section of specification shall consists of furnishing all plant, labor, equipment, appliances and material and performing all operations necessary for the execution of the works as contained in this section in accordance with the specification and as per drawings add/or as directed by the Engineer, including the following for a complete job.

- Drilling of boreholes/offshore below existing ground level/sea bed level of the diameter and lengths as shown on the drawings or as directed by the Engineer.
- Supply and installation of permanent steel liner.
- Supply, fabrication and placement of reinforcing steel bar cage for piles as shown on the drawings and in accordance with the specifications.
- Supply and placement of concrete by termite for construction of piles.
- Pile lengths shown on the drawings are tentative. and may be revised during the
- Execution of piling work.

SUBMITTALS

Refer to Section 100 "General"

Submit details and drawings for the following activities:

- Drilling of boreholes on offshore.
- Installation of permanent steel liner
- Methodology & procedure of placing reinforcement and concrete for constructing the piles.

SUPERVISORY STAFF

The Contactor shall have at site at all times, only qualified, experienced, orderly and thoroughly competent persons who shall conduct and supervise all work related to construction of piles. Since the construction of piles requires special knowledge and utmost care, the contractor shall have at least one qualified and experienced Engineer specialized in this field work who shall be present full-time during execution.

LOCATION OF PILES

The location of piles shall be established by the Contractor as shown on the drawing or as directed by the Engineer from the reference points provided by the Engineer. Establishing the pile locations accurately in the field shall be the sole responsibility of the Contractor.

The Contractor shall carry out leveling survey and provide ground elevation and tip & top elevation of each pile. The elevations shall be given with respect to a reference bench mark provide by the Engineer.

NUMBER, DIAMTER AND LENGTH OF PILES

The piles shall be constructed line to line, level and profiles as shown on the drawings or as directed by the Engineer.

The piles shall have specified diameter and length as shown on the drawings or as directed by the Engineer.

The Engineer may direct the positions the number, diameter and length of piles to be changed at his discretion and according to design requirements during the progress of work.

MOBILIZATION AND DEMOBILIZATION

Mobilization shall consist of the delivery at the site of all plant, equipment and materials supplies in satisfactory working order. Adequate plant and equipment shall be employed at site. Mobilization shall also include the shifting of necessary plant, equipment including drilling and necessary materials/ supplies from one pile location to other within the site and sel1ing up of such equipment in satisfactory manner at each location.

For offshore drilling in the sea, pontoons, barges, fixed platform will be employed. The plant and equipment shall be stable under sea conditions and boring for piles shall be accomplished without excessive movement of tilting.

Demobilization shall consist of the removal from site of all plant, equipment and materials after completion of the work and leaving the site clear clean and tidy.

DRILLING OF BOREHOLES IN SOIL/ROCK

BORING

The Contractor shall use percussion or any other method as approved by the Engineer for drilling of boreholes. The Contractor shall mobilize at site adequate drilling equipment for smooth, continuous and timely execution of work. All material, tools, plants and equipment shall be provided by the Contractor to the satisfaction of the Engineer, cost of which shall be deemed to have been included in the rates for the boring of the RCC cast in-situ piles.

PERMANENT STEEL CASING INCLUDING DRIVIN

The Contractor shall provide and drive permanent mild steel casing of internal dia and minimum wall thickness as specified in the drawings and specifications. It will however be the responsibility of the Contractor to drive the casing without distortion, buckling etc. the casing shall be driven to the required level as shown in the drawings or as directed by the Engineer.

Steel for permanent casing shall conform to the requirement of ASTM 36 Standard with a minimum yield stress of. 250N/mm^2 (36000 psi). All welding shall be in conformance with A WS specifications using electrodes E 60 XX OR equal.
Only welders tested and certified as per AWS D 1.1 or equivalent standard for the type of welding to be executed shall be employed for this work. Relevant certificates are to be handed over to the Engineer.
Prior to commencement tor fabrication of liner, the Contractor shall submit to the Engineer for his approval a Procedure Qualification Rep011 providing at least the following information:

- Material (type quality of steel)
- Type of weld seam
- Joint design
- Plate preparation
- Welding procedure (details of filter material and flux, welding sequence no. of passes, penetration of each pass etc.)
- Procedure for non-destructive testing (if any required).

All welds shall be made to ensure 100% penetration. The welding seam quality factor shall be u= 1.0. Full penetration pre-qualified welds, as per AWS Specifications shall be used.
Defective welds shall be repaired in accordance with A WS Dl.l or Replaced and re-tested by the same method and acceptance standard used to examine the original weld. Whenever, defective welds arc found, cause of the defectsshall be determined and corrective action shall be instituted immediately.

All testing repair replacement of welds shall be at the Contractor's expense.

All welds shall be free of slag, inclusion and porosity, 100% visual inspection shall be carried out l or all welds. In addition to visual inspection, welds shall be tested by dye-penetration, (l0%) ultrasonic radiographic, (5%) methods as and where so directed. The Contractor shall submit schedule details and results of test to the Engineer.
The steel lining section shall preferably be ready welded together to complete length at the manufacturer's plant with ends cut straight. If the casing is to be transported in parts to the site proper marking of the ends at the joint to be welded at site is to be provided for to ensure accurate fitting. Any butt welds to be executed at the working yard shall have the same standard for quality and acceptance as that for the welds executed at manufacturer's plant.
All the liner shall be stored and stocked carefully in such as manner as not to inflict any damage. The liner shall not be stocked more than 3 tiers high.

The liner shall be transported to be set-up and pitched with accuracy. The position of driving the liner shall be determined by the Contractor with the help of high precision surveying instruments by using permanent and verified base points/bench marks.

The contractor shall make himself thoroughly familiar with the site conditions and job requirements and propose the most suitable liner driving method for approval. The approval however, will not relieve the Contractor from his total responsibility for the job.

During the driving of liner, the alignment shall be monitored and controlled by appropriate measures throughout the progress. The liner shall be driven accurately both laterally and longitudinally and true to the vertical as indicated on the drawings The drilling in the hole shall not be permitted in advance of liner tip. It may also be noted that back hammering of liner will not be allowed.

STABILIZING THE HOLES

The Contractor shall ensure at all times that the hole does not collapse during and after boring. The permanent steel liner can be omitted where it can be shown to the satisfaction of the Engineer that lowering of reinforcement cage and concreting operation will not entrap soil from the sides of the hole by caving. The contractor may use bentonite or cement slurry or any other drilling method with written approval from the Engineer. It may also be noted that no extra payment shall be made for using bentonite or cement slurry adopting alternative drilling method for advancing the boreholes in satisfactory manner.

CLEAN-OUT AT THE BOTTOM OF PILES

After bore has reached its final penetration as stipulated on the drawings and as may be additionally ordered by the Engineer on the basis of data obtained in the field it 'hall be thoroughly cleaned of all loose materials and made ready to receive the reinforcement cage and concrete to the satisfaction of the Engineer.

COLLECTION AND PRESERVATION OF SAMPLES FROM BOREHOLES

The Contractor shall keep a complete borehole log with visual classification of each borehole supported by an adequate number of samples preserved. Sealed and labeled in plastic jars. In this context an adequate number of samples shall mean not less than one sample for every 3 meter or boreholes and in addition not less than one sample at every significant change in soil strata.

No payment shall be made for obtaining and preserving the soil/rock samples from boreholes.

TOLERANCES

Tolerance in plan position vertically and lateral deviation and deviation in the level of the pile shall be as follows:

- Plan position at pile top 75mm
- Pile head level 25mm
- Vertically 1:50

DISPOSAL OF DRILLING MATERIAL

The sub-surface material obtained from drilling shall be disposed of to the areas designated by the Engineer a suitable manner or outside the project limits,as directed by the Client.

REINFORCEMENT IN PILES

Steel reinforcement shall be provided in piles in accordance with the relevant specification section. Circular concrete spacers shall be provided.at appropriate spacing to ensure the required cover of the concrete.

CONCRETE IN PILES

Concrete of specified Class as mentioned on the drawing/specification shall be provided and filled in boreholes by tremie in one go. The concrete for piles shall be in accordance with relevant technical specification and as shown on the drawings.The slump of concrete shall be 125 to 150mm. Admixture shall be used in manufacturing concrete to obtain required slump to improve workability and avoid segregation.

As soon as the pile is completed the projected length of the pile shall be immediately and

carefully protected from any possible damage or adversely affect to the hardening of concrete.

It may be noted that drilling of boreholes for adjacent piles within a clear radius of 3.5 meter of a concerted pile shall not commence until 48 hours have elapsed after completion of concreting.

During the course of construction, the contractor will always ensure that no part of the structure is loaded beyond its design capacity.

RECORD AND REPORTS

RECORDS

The Contractor shall keep records of all the works accomplished under this section of the specifications. All such records shall be reserved in good condition and order by the contractor until they are delivered and accepted by the Engineer. The Engineer shall have the right to examine such records at any time prior to their delivery to him.

The following information shall be included in the records for each pile;

- Pile number and elevation of top and bottom of pile
- Elevation of existing ground level at each pile location
- Type of drilling operations
- Date and time by depths when drilling operations were performed and piles constructed. Time consumed in concreting each pile.
- Type of soil/rock encountered in the hole including bore log.
- Total depth of each bore hole
- Theoretical volume of concrete required and the volume of concrete actual consumed in each pile.
- Quantity of constituents for each batch of mix water cement ratio and results of all quality control tests.

- Details of reinforcement.
- Remarks concerning any unusual occurrence during drilling and concreting.

The presence of Engineers Representative or the keeping of separate records by his representative shall not relieve the Contractor of the responsibility for the work specified in this clause.

REPORTS

Reports of construction of each pile shall be communicated to the Engineer as follows:

- Reports as the work proceeds
- The records as specified above in duplicate not later than 24 hours after the completion of each borehole -and concreting of piles.
- No. of copies of the final report of the works, as directed by the Engineer within one month of the completion of the last pile

The final report shall include:

- Layout showing the "As-built arrangement of piles".
- Observations and results of laboratory tests regarding quality control of concrete.
- Contractor's evaluation of test results.

CUTTING OF PILE HEADS

Pile head cutting should be carried out after the concrete has reached the required to ensure structural integrity. The cutting must be done to the precise level specified in the design documents, using appropriate tools such as hydraulic cutters to achieve a clean and accurate finish. Once the cutting is complete, bend the reinforcement into the pile cap as specified to ensure proper integration with the cap. The cut surface should be inspected for evenness and adherence to design requirements. Ensure all safety protocols are followed to protect workers during the operation.

DUMMY BLINDING CONCRETE

If due to unavoidable circumstances there is a delay in construction of piles caps then the exposed steel reinforcing bars of piles shall be covered with dunm1y Blinding concrete using appropriate formwork as approved by the Engineer.

LOAD TESTING OF TEST PILES

GENERAL

a) The Contractor shall submit his plans for performing load test on test piles for approval.

b) The contractor shall be responsible for arranging all equipment, labour and other supplies to the site for the complete job and for satisfactory execution of the test according to **ASTM D 1143T**, and directed by the Engineer. **(For more details, refer to Annexure A)**

c) Pile load test shall be conducted on Index Piles (twice the design load) and on working pile (equal to the design load)

d) The record of pile load test shall be maintained on an approved format. The Contractor shall prepare load-settlement time, settlement and load time curves. For each such load test two copies of the relevant field data and the graphs shall be supplied *to* the Engineer within 48 hours of the completion of that test.

e) The contractor must also perform a Pile Integrity Test (Sonic) on-site to assess the quality and consistency of the pile concrete. This non-destructive test involves using sonic equipment to evaluate the integrity of the pile, detecting any anomalies or defects within the concrete. The contractor is required to submit a detailed report of the test results, including interpretations and any identified issues, to ensure compliance with design specifications and structural safety standards. This report must be provided promptly for review and approval before proceeding with further construction activities.

The Contractor shall keep accurate record and report of load testing of piles in accordance with the subsection record & reports. In addition, the following information shall also be provided on the approved format tor the test pile:

I) Data and time of load testing of piles, load and settlement readings during the loading the unloading of the test pile.

II) Graph tor time-load settlement relationships for test.

The presence of Engineer or the keeping of separate records by his representative for the work specified in this clause. Payment will not be made for any work for which records have not been furnished by the Contractor.

PRESTRESSING

SCOPE

The work under this section consists of furnishing all plant, labour, equipment, appliances and materials and performing all operations in connection with supply and installation of prestressing materials i.e. prestressing cables, anchorages, couplers, sheathings, grouting etc., stressing the cables in concrete girders, in strict accordance with this section of specifications and the applicable drawings, and subject to the terms and conditions of the Contract for a complete job.

GENERAL

The Contractor shall employ qualified and competent personnel on the work, adequately experienced in prestressing works undertaken in equal size or larger projects. Samples of all materials shall be submitted at least six weeks before it is intended to commence deliveries. No deliveries in bulk shall commence until the approval is given in writing by the Engineer satisfying himself that the material is considered satisfactory and complies with the specifications. Materials failing to comply with the requirements of the specifications shall be removed from the site immediately.

MATERIALS

PRESTRESSING STEEL

Prestressing steel shall be high-tensile strand (15.24mm nominal Dia.) conforming to ASTM Specification A-416 and (AASHTO M-203) grade 1862.
After stranding and stress relieving, physical requirements of strands shall be as follows:
i. Minimum breaking strength of strand 260.7 KN
ii. Minimum load at 1.0 percent extension (normal relaxation) 221.5 KN
iii. Minimum elongation 3.5 percent in
iv. 600mm Gauge length
v. Tolerance on Diameter +0.65, -0.15mm
The steel shall be free from injurious defects and shall have a smooth surface. Material which shows injurious defects during or prior to its installation in the work shall be rejected. The wire shall be supplied in coils not less than 1800mm in diameter and strand shall be furnished on reels or in compact coils having a minimum core diameter of 600mm. The pre-stressing steel shall be well protected against mechanical injury during transportation. Each reel, or coil shall have a strong tag securely fastened to it showing the size, grade, specification number and the name or mark of the manufacturer.

ANCHORAGES

Anchorages shall have an efficiency of at least 96% of the actual ultimate tensile strength of the prestressing cables, tested in unbounded state without exceeding anticipated set. Concrete cones shall not be allowed. Locking surfaces of the anchorages shall be free from deformation, damage and rust.

SHEATH

The cables shall be sheathed in galvanized steel tubing which shall be hydra-rigid and adequately strong to withstand handling and placing of concrete without sagging between its supports. These shall be undamaged, grout tight, and free from kinks, punctures and deformations.

GROUT

Grout for bonded tendons shall be equivalent to class A or C as specified in Table 10.9.3-1, meeting all properties and testing requirements of Table 10.9.3-2 of the AASHTO LRFD Bridge Construction Specifications.

TESTING

PRESTRESSING STEEL

All wires, strands, to be shipped to the site shall be tagged with its production lot number for identification purposes. Anchorage assemblies to be shipped shall be likewise identified.

All samples shall be representative of the lot to be furnished.

All of the materials specified for testing shall be furnished free of cost and shall be delivered in time for tests to be made well in advance of anticipated time of use.

The Contractor shall furnish for test the following samples selected from each lot as ordered by the Engineer. The selection of samples shall be made at the manufacturer's plant by the Engineer or his representative.

For bars to be furnished with threaded ends and nuts, one and half (1.5) m shall be clear between threads at ends. The strand shall be accompanied by the test certificates and stress-strain graphs in respect of each size. Test samples shall be taken from each ten tons of coils or reels of the same production lot, which will be referred to as a parcel of coils or reels hereinafter.

The test certificates shall give the following information

1. Determination of the ultimate tensile strength on not less than five samples of each parcel using a gauge length of 250mm. The tests shall be plotted to give stress-strain graphs.
2. Determination of 1% as per ASTM A416 proof stress on not less than five samples for each parcel using a gauge length of 250mm. This test may be conducted while carrying out the ultimate tensile test.
3. Determination of reverse bend on not less than five samples for each parcel of wire coils.
4. Determination of ultimate elongation at rupture on not less than five samples from each parcel using a gauge length of 250mm for wire and 600mm for strand. This test must be independent and must not be combined with any other test prescribed herein.
5. In case of low-relaxation steel, determination of one thousand (1000) hours relaxation loss (creep of steel) at constant strain on one sample per parcel using a gauge length of 40 times the nominal strand diameter (dia.) or more with an initial stress of 70% (seventy percent) of the guaranteed minimum ultimate tensile strength, as stipulated in the section 6.5 of ASTM A416.

The tests stipulated herein may be carried out at the manufacturer's own laboratories and subject to retests as directed by the Engineer or the Engineer's Representative.

Test results and test certificates applying to the general production of the manufacturer or to the order as a whole shall not be considered valid substitutes for the specific tests for each parcel stipulated herein and the wire or strand not accompanied by the specific documents stipulated herein shall not be accepted.

Prestressing Steel, as determined from test specimens, shall conform to the following:

1. Ultimate Elongation

The ultimate elongation of the strand shall be at least 3.5% of its initial length in a gauge length of 600mm.

2. Tensile Tests

The test of ultimate tensile strength and proof stress shall be carried out in accordance with the recommendations and shall comply with the requirements of the relevant codes i.e. ASTM A421 for wire and ASTM A416 for strand. Such test shall not be done until 48 hours after the wires have been drawn.

CONSTRUCTION REQUIREMENTS

GENERAL

Unless otherwise directed by the Engineer, the Contractor shall certify that a technician skilled in the approved prestressing method will be available to the Contractor to aid and instruct in the use of prestressing equipment at the job site to acquire the desired results.
The details of the method of construction shall be submitted by the Contractor for approval of the Engineer before the work is started. When the method has been approved, no changes shall be made without the written consent of the Engineer.
The Contractor shall inform the Engineer of the dates, in advance, for casting of the concrete members and stressing of the tendons.
The Contractor shall send to the Engineer within seven (7) days after the transfer of stress, a certificate showing the force and strain in the tendons immediately after they were anchored.
Placement of sheathing, steel and anchorage hardware shall confirm to Article 10.4 of AASHTO LRFD Bridge Construction Specification.

LAYING OF SHEATHS

The sheath shall be laid to the lines indicated on the drawings and shall be securely fixed in position with mild steel strips and binding wires. It is important to achieve smooth curves as shown on the drawings and to avoid interference between the cables and/or between the cables and the reinforcement. Minor adjustment with prior approval of the Engineer is permissible for this purpose, provided that stipulated cover is maintained throughout. The tying of the cable shall be removed as it is inserted into the sheath.
The Contractor shall submit his proposal for fixing of sheathing to the Engineer for his approval. Unless self-joining sheath is used, all joints between sheathing and anchorages shall be made with approved couplers specially designed for this purpose. All sheaths shall be carefully inspected immediately prior to concreting in order to ensure that the alignment is correct, the joint secure, and the sheath is undamaged and unblocked.

PLACING STEEL

All steel units shall be accurately placed in the position shown on the Drawings or as directed by the Engineer and firmly held during the placing and setting of concrete.
Distance from the forms shall be maintained by stays, blocks, ties, or hangers approved by the Engineer. Blocks for holding units form contact with the forms shall be of plastic or stainless steel of approved shape and dimensions. Wooden blocks shall not be left in the concrete.
Suitable horizontal and vertical spacers shall be provided, if required, to hold the wires in place and in true position in the concrete.

PLACING CONCRETE

Concrete shall be controlled, mixed, and handled as specified in other section of these specifications, unless otherwise specified therein.
Concrete shall not be poured in the forms until the Engineer has inspected the placement of reinforcement, sheaths, anchorages, and prestressing steel and has given his approval thereof.

The concrete shall be vibrated internally or externally, or both, as directed by the Engineer. The vibrating shall be done with care in such a manner as to avoid displacement of reinforcement, sheaths, anchorages or wires and to avoid damaging sheaths.

PRE-STRESSING EQUIPMENT

Hydraulic jacks shall be equipped with accurate pressure gauges. The Contractor may select to substitute screw jacks or other approved types. In that case, proving rings or other approved devices shall be used in connection with the jacks. All devices, whether hydraulic jack gauges or otherwise, shall be calibrated so as to permit the stress in the prestressing steel to be computed at all times. The calibration certificate shall be submitted by the Contractor to the Engineer. A certified calibration curve shall accompany each device. Safety measures shall be taken by the Contractor to prevent accidents due to possible breaking of the prestressing steel or the slipping of grips during the prestressing process.

STRESSING CABLES

All precast members shall be adequately braced during and after the prestressing operations.

No precast member shall be stressed prior to acquiring 75 percent of the specified 28 days strength.

Before stressing any tendons, compressed air shall be blown through the ducts in concrete formed by the sheaths. A good flow of air from free end of the duct shall be established in order to ensure that the duct is clear and that there is no loss of air at intermediate points. The cables shall be stressed using jacks at both ends or as specified in drawings or instructed by the Engineer. The sequence in which the cables are stressed shall follow exactly the instructions shown in the drawings and as stipulated by the Engineer in writing. Stressing schedules are stipulated on the drawings for all cables, giving the required cable extensions and the cable forces. These schedules are based on estimated friction and other losses and on an assumed value of Young's Modulus. This value of the modulus shall be checked against that given in the manufacturer's test certificates for each individual lot and the extensions shall be adjusted accordingly before stressing is started, any adjustment being first agreed upon with the Engineer.

Should any departure from the instructions given in the stressing schedules be required owing to unexpected variations in friction losses or for any other reasons, then the Engineer shall be informed immediately. Stressing operation shall be at all times under the personal supervision of qualified personnel experienced in this class of work. Careful record of all stressing operations including pressure gauge readings, extensions, and the pull-in measured at each end shall be kept and these shall include a report on any difficulties or significant event encountered during stressing.

During the prestressing operations, all necessary precautions shall be taken to ensure the safety of workers from flying spindle, tendon or the jack in the event of a break occurring.

CUTTING CABLE END

After all stressing operations are completed the projecting wire or strand, unless otherwise stipulated shall be cut off approximately 40mm from the face of anchorage.

The cutting of strand shall be done either by mechanical means, for example with a high-speed cutting disc designed specifically for this purpose or by using very small and very hot oxy-acetylene flame for not more than 2 seconds for each wire or strand. If flame cutting is used, it is of the utmost importance to ensure that there is no appreciable heating of the wire stubs at the anchorage. A useful check of the proper adjustment of the flame-cutting equipment is to experiment on a scrap end of wire holding the wire in the naked hand 125mm from the place where it is being flame-cut. If the hand feels the applicable heat, either during or immediately after the cutting, the too much heat is being absorbed by the strand owing to the slow speed of cutting which is usually due to an excessively large and/or insufficiently hot cutting flame. The equipment should then be readjusted and the experiment repeated until fully satisfactory performance is achieved. Periodic rechecks are advisable.

GROUTING

The adequate grouting of cable ducts after stressing the cables shall be done under the supervision of qualified and competent personnel. All cables shall be grouted soon after stressing. Grout shall be injected at a pressure of 0.2 N/sq.mm. Grout shall be mixed in a high-speed motor driven mixer specially designed for this purpose and shall then be sieved into a pump unit where it shall be continuously mixed at a slow speed by means of a mechanical or hand operated agitator. The pump unit shall be of the diaphragm type, preferably motor driven, with a by-pass pipe to make possible the constant circulation of grout except when injection is actually taking place. All equipment shall be thoroughly washed with clean water at least once every three (3) hours during the grouting operations and at the end of use for each day.

Immediately before grouting, all cable ducts shall be blown through with compressed air followed by water and then a further flushing with compressed air in order to ensure that they are completely clean. If necessary, intermediate grout holes shall be used to assist in this operation. The volume of the duct space to be filled shall be estimated and checked against the volume of grout used, to ensure that these balances reasonably well. Grout shall be injected from the end points of any cable and intermediate grout holes, if any shall not be plugged until a steady flow of grout through them has been observed. The grouted member shall not be moved or disturbed after 30 minutes of grouting till up to 36 hours; it may be moved after 36 hours.

MAKING GOOD RECESSES

After completing all grouting operations, the Contractor shall neatly plug the various grout holes and shall make good the recesses at the anchorages with class 'C' concrete all in a neat and workman like manner.

The Contractor shall provide methodology of erection of shuttering for cast-in-place superstructure.

All cost of any damage of whatever kind caused due to negligence of the Contractor shall be borne by the Contractor and shall be made good at his expense.

Designation: D 1143 – 81 (Reapproved 1994)[e1]

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Standard Test Method for Piles Under Static Axial Compressive Load[1]

This standard is issued under the fixed designation D 1143; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (e) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

e[1] Note—Section 10 was added editorially in May 1994.

INTRODUCTION

This standard has been prepared to cover routine methods of testing to determine if a pile has adequate bearing capacity. The provisions permit the introduction of more detailed requirements and procedures when required to satisfy the objectives of the test program. While the procedures herein produce a relationship between applied load and pile settlement, the results may not represent long-term performance.

1. Scope

1.1 This test method covers procedures for testing vertical or batter piles individually or groups of vertical piles to determine response of the pile or pile group to a static compressive load applied axially to the pile or piles within the group. This test method is applicable to all deep foundation units that function in a manner similar to piles regardless of their method of installation. This test method is divided into the following sections:

1.2 The values stated in inch-pound units are to be regarded as the standard.

Note 1—Apparatus and procedures designated "optional" are to be required only when included in the project specifications or if not specified, may be used only with the approval of the engineer responsible for the foundation design. The word "shall" indicates a mandatory provision and "should" indicates a recommended or advisory provision. Imperative sentences indicate mandatory provisions. Notes, illustrations, and appendixes included herein are explanatory or advisory.

Note 2—This test method does not include the interpretation of test results or the application of test results to foundation design. See Appendix X1 for comments regarding some of the factors influencing the interpretation of test results. A qualified geotechnical engineer should interpret the test results for predicting pile performance and capacity. The term "failure" as used in this method indicates rapid progressive settlement of the pile or pile group under a constant load.

1.3 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents

2.1 *ASTM Standards:*

D 3689 Method of Testing Individual Piles Under Static Axial Tensile Load[2]

2.2 *American National Standards Institute Standard:*

B30.1 Safety Code for Jacks[3]

3. Apparatus for Applying Loads

3.1 *General*:

3.1.1 The apparatus for applying compressive loads to the test pile or pile group shall be as described in 3.3, 3.4, or 3.5 or as otherwise specified and shall be constructed so that the loads are applied to the central longitudinal axis of the pile or pile group to minimize eccentric loading. Paragraph 3.3 is suitable for applying axial loads to individual vertical or batter piles; 3.4 and 3.5 are suitable for applying vertical loads only.

Note 3—When a pile group is subject to vertical test loads, cap rotations and horizontal displacements could occur. The occurrence of such movements and the necessary reactions to resist such movements if they are prohibited should be considered when designing and constructing the loading apparatus for the group test.

Note 4—If it is not feasible to apply axial test loads to a batter pile, the results of a test on a similar nearby vertical pile generally may be used to

[1] This test method is under the jurisdiction of ASTM Committee D-18 on Soil and Rock and is the direct responsibility of Subcommittee D18.11 on Deep Foundations.

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[2] *Annual Book of ASTM Standards*, Vol 04.08.

[3] Available from American National Standards Institute, 1430 Broadway, New York, NY 10018.

evaluate the axial bearing capacity of the batter pile.

3.1.2 Where feasible, the immediate area of the test pile or pile group shall be excavated to the proposed pile cut-off elevation. The test pile(s) shall be cut off or built up to the proper grade as necessary to permit construction of the load-application apparatus, placement of the necessary testing, and instrumentation equipment, and observation of the instrumentation. Where necessary, the unsupported length of the test pile(s) shall be braced to prevent buckling without influencing the test results.

3.1.3 If the head of the pile has been damaged during driving, the damaged portion shall be removed prior to the test. For tests on piles groups, the piles shall be capped with a reinforced concrete cap designed and constructed in accordance with accepted engineering practice for the anticipated loads.

NOTE 5—Consideration should be given to providing a nominal clear space between the cap and the ground surface to eliminate any support offered by the soil under short-term loading. A properly constructed steel grillage may serve as an adequate pile cap for testing purposes.

3.1.4 In 3.3 and 3.4 and for a test on an individual pile in 3.5, a steel bearing plate(s) (test plate(s)) of sufficient thickness to prevent it from bending under the loads involved (but not less than 2 in. (50 mm)) shall be centered on the pile or pile cap and set perpendicular to the longitudinal axis of the pile or piles within the group, except that for tests on pile groups involving the use of two or more separate loading points, a test plate shall be used at each loading point and such plates shall be arranged symmetrically about the centroid of the group. For tests on individual piles, the size of the test plate shall be not less than the size of the pile butt nor less than the area covered by the base(s) of the hydraulic jack(s); for tests on pile groups, the size of the test plate(s) shall be not less than twice the area covered by the base(s) of the hydraulic jack(s).

3.1.5 For tests on precast or cast-in-place concrete piles or on pile groups, the test plate when used shall be set in high-strength quick-setting grout. For tests on individual steel H-piles, the test plate shall be welded to the pile. For tests on individual timber piles, the test plate may be set directly on the top of the pile which shall be sawed off to provide full bearing for the test plate or, alternatively, the test plate may be set in high-strength quick-setting grout.

3.1.6 In 3.3 and 3.4, the hydraulic jack(s) shall be centered on the test plate(s) with a steel bearing plate of adequate thickness between the top(s) of the jack ram(s) and the bottom(s) of the test beam(s). If a load cell(s) or equivalent device(s) is to be used, it shall be centered on the bearing plate above the ram(s) with another steel bearing plate of sufficient thickness between the load cell(s) or equivalent device(s) and the bottom(s) of the test beam(s). Bearing plates shall be of sufficient size to accommodate the jack ram(s) and the load cell(s) or equivalent device(s) and properly bear against the bottom(s) of the test beam(s).

3.1.7 In 3.5 for tests on pile groups a test plate may be used in accordance with the appropriate provisions of 3.1 or, alternatively, the test beam(s) may be set directly on the pile cap or the loading material applied directly on the cap. Test beam(s) set directly on the cap shall obtain full bearing using high-strength quick-setting grout, if necessary.

3.2 *Testing Equipment*:

3.2.1 Hydraulic jacks including their operation shall conform to ANSI B30.1.

3.2.2 Unless a calibrated load cell(s) is used, the complete jacking system including the hydraulic jack(s), hydraulic pump, and pressure gage shall be calibrated as a unit before each test or series of tests in a test program to an accuracy of not less than 5 % of the applied load. The hydraulic jack(s) shall be calibrated over its complete range of ram travel for increasing and decreasing applied loads. If two or more jacks are to be used to apply the test load, they shall be of the same ram diameter, connected to a common manifold and pressure gage, and operated by a single hydraulic pump.

NOTE 6—If it is not feasible to calibrate the complete jacking system as a unit, the pressure gage may be calibrated independently, in which case the jack piston(s) should be measured to verify the area(s).

3.2.3 When an accuracy greater than that obtainable with the jacking system is required, a properly constructed load cell(s) or equivalent device(s) shall be used in series with the hydraulic jack(s). Load cell(s) or equivalent device(s) shall be calibrated prior to the test to an accuracy of not less than 2 % of the applied load and shall be equipped with a spherical bearing(s).

3.2.4 If the hydraulic jack pump is to be left unattended at any time during the test, it shall be equipped with an automatic regulator to hold the load constant as pile settlement occurs.

3.2.5 Calibration reports shall be furnished for all testing equipment for which calibration is required, and shall show the temperature at which the calibration was done.

NOTE 7—Considerations should be given to employing a dual load-measuring system (gage and load cell) to provide as a check and as a back-up in case one system malfunctions. Hydraulic jack rams should have sufficient travel to provide for anticipated pile settlements, deflections of the test beam, and elongation of connections to anchoring devices with 3.3. The use of a single high-capacity jack is preferred to the use of multiple jack(s). If a multiple jacking system is used, each jack should be fitted with a pressure gage (in addition to the master gage) in order to detect malfunctions.

3.3 *Load Applied to Pile or Pile Group by Hydraulic Jack(s) Acting Against Anchored Reaction Frame* (See Fig. 1 and Fig. 2):

3.3.1 Install a sufficient number of anchor piles or suitable anchoring device(s) so as to provide adequate reactive capacity and a clear distance from the test pile or pile group at least five times the maximum diameter of the largest anchor or test pile(s) but not less than 7 ft (2 m). When testing individual batter piles, the anchor piles shall be battered in the same direction and angle as the test pile.

3.3.2 Center over the test pile or pile group a test beam(s) of sufficient size and strength to avoid excessive deflection under load with sufficient clearance between the bottom flange(s) of the test beam(s) and the top of the test pile or pile group to provide for the necessary bearing plates, hydraulic jack(s) (and load cell(s) if used). When applying axial loads to an individual batter pile, the test beam(s) should be oriented perpendicular to the direction of batter. For test loads of high magnitude requiring several anchors, a steel framework may be required

ANNEXURE A

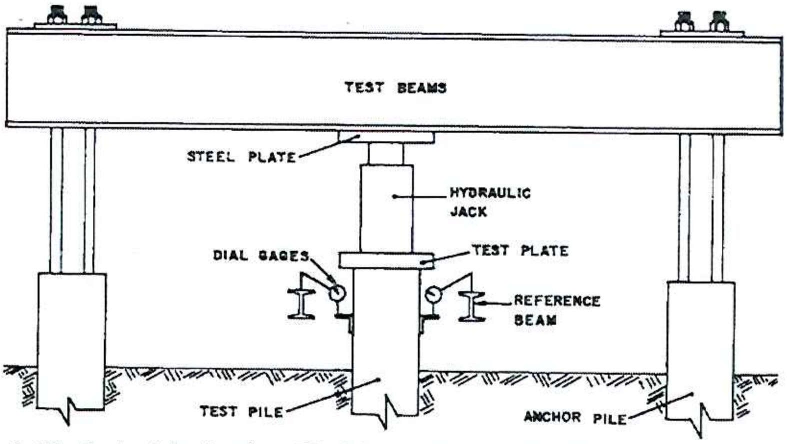
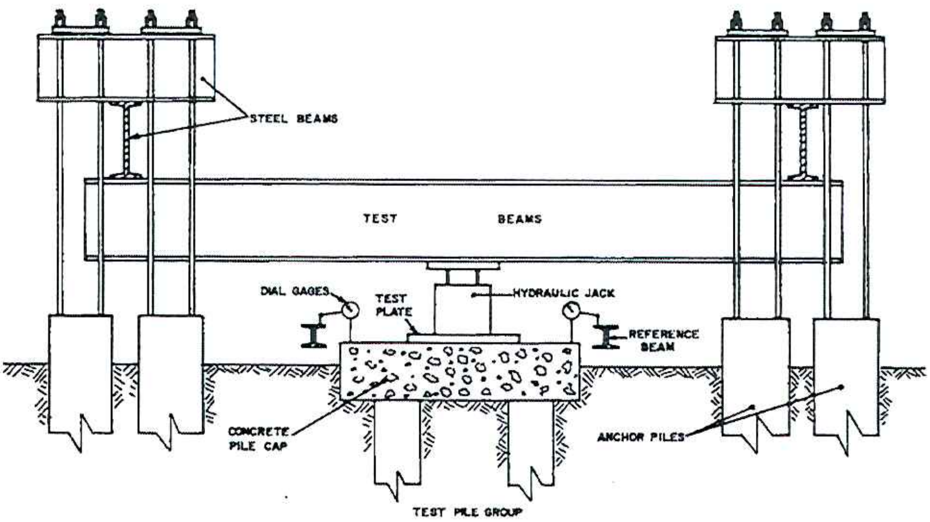


FIG. 1 Schematic Set-Up for Applying Loads to Pile Using Hydraulic Jack Acting Against Anchored Reaction Frame



Methods shown in Fig. 3 and Fig. 4 could be used.

FIG. 2 Typical Arrangement for Applying Load Test to Pile Group Using Method Illustrated in Fig. 1

to transfer the applied loads from the test beam(s) to the anchors.

3.3.3 Attach the test beam(s) (or reaction framework if used) to the anchoring devices with connections designed to adequately transfer the applied loads to the anchors so as to prevent slippage, rupture or excessive elongation of the connections under maximum required test load.

3.3.4 Apply the test load in accordance with the standard loading procedure 5.1 or as otherwise specified to the test pile or pile group with the hydraulic jack(s) reacting against the test beam(s).

3.4 *Load Applied to Pile or Pile Group by Hydraulic Jack(s) Acting Against a Weighted Box or Platform* (See Fig. 3):

3.4.1 Center over the test pile or pile group a test beam(s) of sufficient size and strength to avoid excessive deflection under load allowing sufficient clearance between the top of the test pile or pile cap and the bottom(s) of the beam(s) after deflection under load to accommodate the necessary bearing plates, hydraulic jack(s) (and load cell(s) if used). Support the ends of the test beam(s) on temporary cribbing or other devices.

3.4.2 Center a box or platform on the test beam(s) with the edges of the box or platform parallel to the test beam(s) supported by cribbing or piles placed as far from the test pile or pile group as practicable but in no case less than a clear distance of 5 ft (1.5 m). If cribbing is used, the bearing area of the cribbing at ground surface shall be sufficient to prevent adverse settlement of the weighted box or platform.

3.4.3 Load the box or platform with any suitable material such as soil, rock, concrete, steel, or water-filled tanks with a total weight (including that of the test beam(s) and the box or platform) at least 10 % greater than the anticipated maximum test load.

3.4.4 Apply the test loads to the pile or pile group in accordance with the standard procedure in 5.1 or as otherwise specified with the hydraulic jack(s) reacting against the test beam(s).

3.5 *Load Applied Directly to the Pile or Pile Group with*

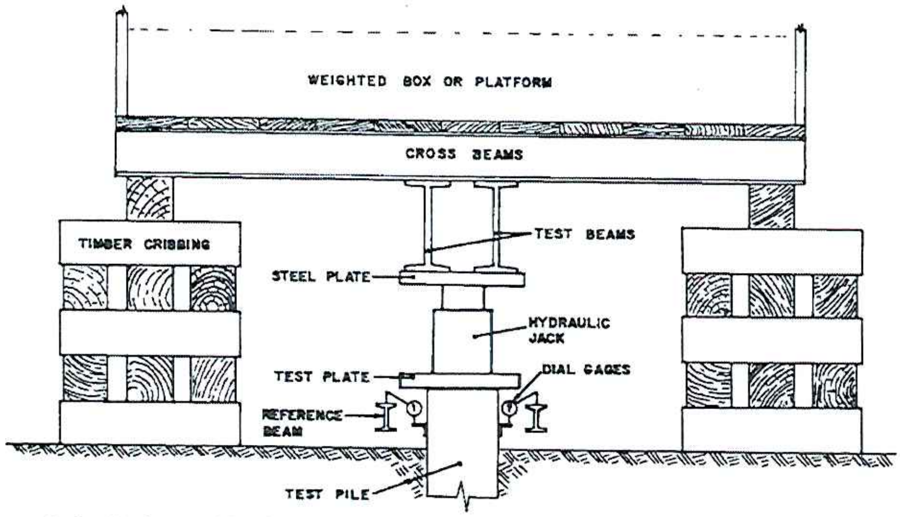


FIG. 3 Schematic Set-Up for Applying Loads to Pile Using Hydraulic Jack Acting Against Weighted Box or Platform

Known Weights (See Fig. 4, Fig. 5, and Fig. 6):

3.5.1 Center on the test plate or pile cap a test beam(s) of known weight and of sufficient size and strength to avoid excessive deflection under load with the ends supported on temporary cribbing if necessary to stabilize the beam(s). Alternatively the known test weights or loading material may be applied directly on the pile or pile cap.

3.5.2 Center and balance a platform of known weight on the test beam(s) or directly on the pile cap with overhanging edges of the platform parallel to the test beam(s) supported by cribbing or by piles capped with timber beams, so that a clear distance of not less than 5 ft. (1.5 m) is maintained between the supports and the test pile or pile group.

3.5.3 Place sufficient pairs of timber wedges between the top of the cribbing or timber cap beams and the bottom edges of the platform so that the platform can be stabilized during loading or unloading.

3.5.4 When ready to load the platform, remove any temporary supports at the ends of the test beam(s) and tighten the wedges along the bottom edges of the platform so that the platform is stable. Load the platform in accordance with the standard loading procedures in 5.1 or as otherwise specified using material such as steel or concrete so that the weight of incremental loads can be determined within 5 %.

NOTE 8—With the loading apparatus described in 3.5, provisions can be made for taking target rod level readings directly on the center of the pile butt or pile cap or center of the test plate to measure pile butt movements in 4.2.3. For tests on concrete piles, or on pile groups, a hole would be required in the center of the test plate through which would extend a steel pin embedded in the top of the pile or pile cap. For tests on steel H or timber piles, readings would be taken on the test plate. To accommodate the target rod, a double test beam must be used with sufficient space between the beams and a hole must be left through the platform. To permit sighting on the target rod it may be necessary to leave a space between the test weights in line with the line of sight.

3.6 *Other Types of Loading Apparatus* (Optional)—Any other type of loading apparatus satisfying the basic requirements of 3.3 or 3.4 may be used.

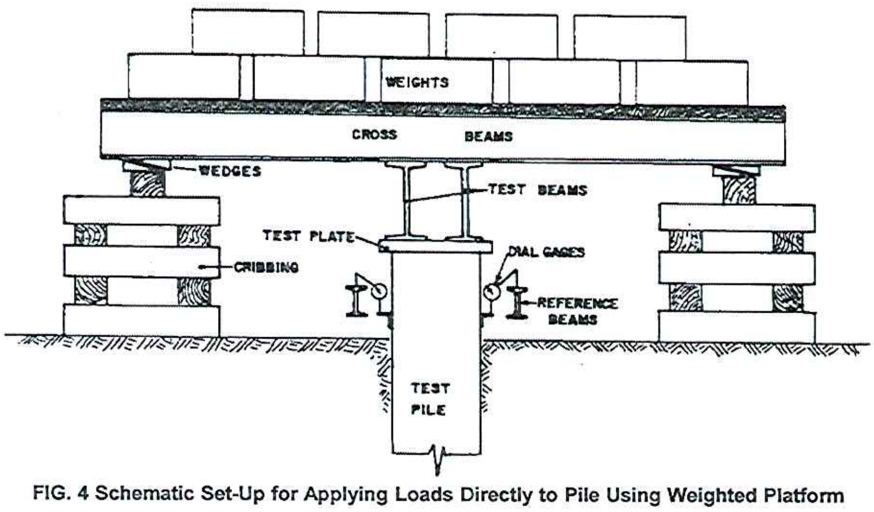


FIG. 4 Schematic Set-Up for Applying Loads Directly to Pile Using Weighted Platform

ANNEXURE A

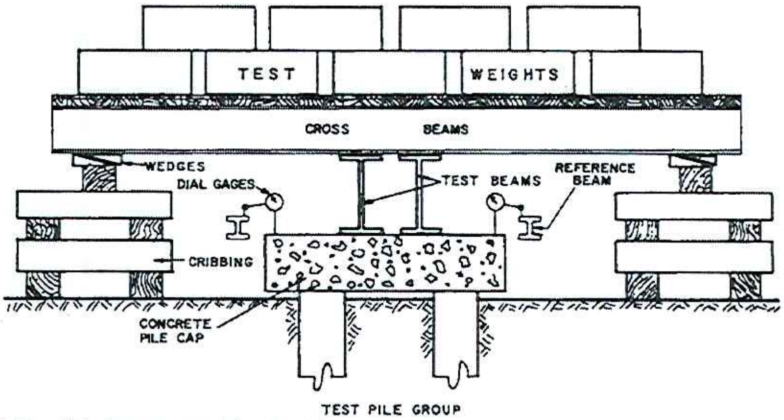


FIG. 5 Possible Arrangement for Applying Load Test to Pile Group Using Weighted Platform

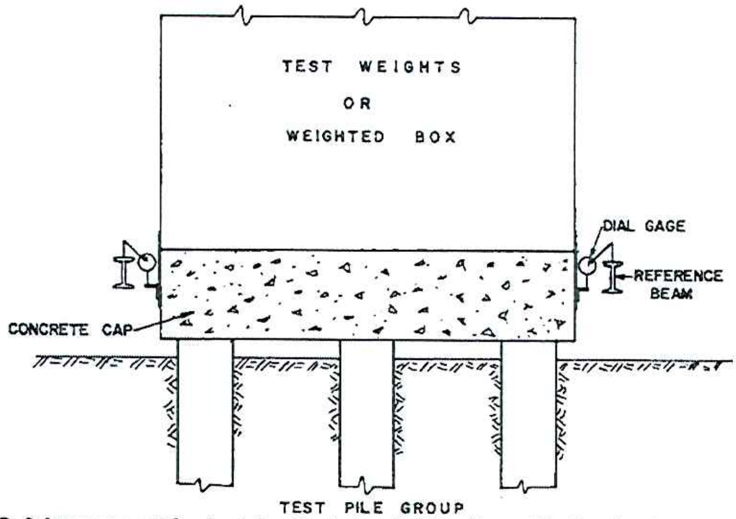


FIG. 6 Arrangement for Applying Tests Loads Directly on Pile Cap for Group Tests

4. Apparatus for Measuring Movement

4.1 *General*:

4.1.1 All reference beams and wires shall be independently supported with supports firmly embedded in the ground at a clear distance of not less than 8 ft (2.5 m) from the test pile or pile group and as far as practical from the anchor piles or cribbing. Reference beams shall be sufficiently stiff to support the instrumentation such that excessive variations in readings do not occur and should be cross connected to provide additional rigidity. If steel reference beams are used, one end of each beam shall be free to move horizontally as the beam length changes with temperature variations.

4.1.2 Dial gages shall have at least a 2-in. (50-mm) travel; longer gage stems or sufficient gage blocks shall be provided to allow for greater travel if anticipated. Except as required in 4.4.2, gages shall have a precision of at least 0.01 in. (0.25 mm). Smooth bearing surfaces (such as glass) perpendicular to the direction of gage-stem travel shall be provided for the gage stems. Scales used to measure pile movements shall read to 1/64th of an inch or to 0.01 in. (0.25 mm). Target rods shall read to 0.001 ft (0.3 mm).

4.1.3 All dial gages, scales and reference points shall be clearly marked with a reference number or letter to assist in recording data accurately. Provisions shall be made to protect the measuring system, reference system, and instrumentation from adverse temperature variations and from disturbance. All gages, scales, or reference points attached to the test pile or pile cap shall be mounted so as to prevent movement relative to the test pile or pile cap during the test.

4.2 *Pile Butt Axial Movements* (See Fig. 7)—The apparatus for measuring axial movement of the butt of the test pile or piles within the group shall consist of a primary and secondary system in accordance with the following methods.

NOTE 9—Two separate measuring systems are required in order to have a check on the observed data, to provide for accidental disturbance of the measuring system, and to permit continuity of data in case it becomes necessary to reset the gages or scales.

4.2.1 *Dial Gages*—Two parallel reference beams, one on each side of the test pile or pile cap, shall be oriented in a direction that permits placing their supports as far as practicable from anchor piles or cribbing. A minimum of two dial gages shall be mounted on the reference beams approximately

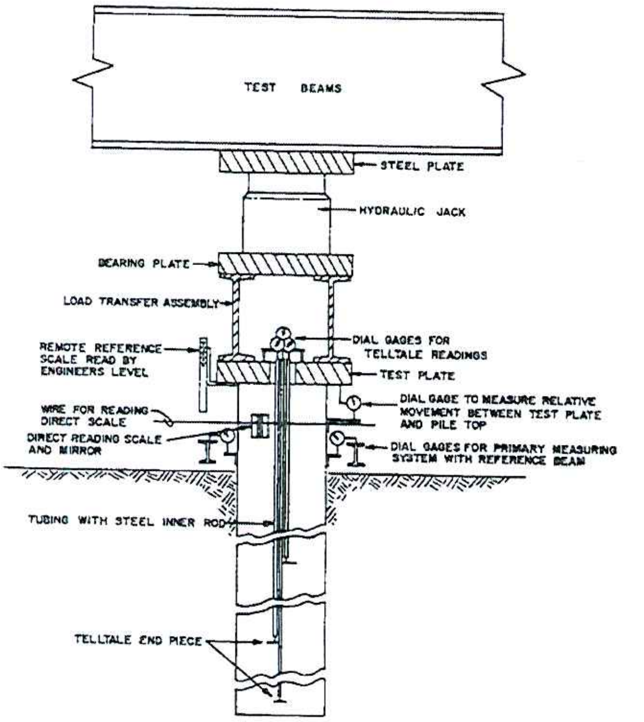


FIG. 7 Possible Arrangement of Instrumentation for Measuring Vertical Movements of Pile

equidistant from the center of and on opposite sides of the test pile or pile cap with stems parallel to the longitudinal axis of the pile(s) and bearing on lugs firmly attached to the sides of the pile or pile cap below the test plate. Alternatively, the two dial gages shall be mounted on opposite sides of the test pile or pile cap below the test plate with stems parallel to the longitudinal axis of the pile(s) and bearing on lugs firmly attached to the reference beams. However, gages may be mounted to bear on the top of the pile cap or on the test plate provided that two additional gages shall be mounted on opposite sides of the test plate to measure relative movements between the test plate and the pile or pile cap (see Fig. 7). For tests on individual batter piles, the dial gages shall be mounted along a line perpendicular to the direction of batter.

NOTE 10—The use of four dial gages mounted 90° apart is recommended to compensate for lateral movement or rotation of the pile butt due to accidental eccentric loading.

NOTE 11—For tests on batter piles, it is recommended that a dial gage be mounted in line with the direction of batter through the center of the test pile with the gage stem perpendicular to the longitudinal axis of the pile and bearing against a lubricated glass plate to measure lateral movements.

4.2.2 *Wire, Mirror, and Scale*—Two parallel wires, one on each side of the test pile or pile cap, shall be oriented in a direction that permits placing the wire supports as far as practicable from anchor piles or cribbing. Each wire shall pass across and be clear of the face of a scale that is mounted parallel to the axis of the test pile or piles within the group and that is attached to a mirror fixed to the test pile or pile cap so that consistent readings of axial movement can be made directly from the scale by lining up the wire and its image in the mirror. The wire shall be not more than 1 in. (25 mm) from the face of the scale. A suitable method shall be used to maintain tension in the wires throughout the test so that when plucked or tapped, the wire will return to its original position. Piano wire or equivalent type shall be used.

4.2.3 *Surveyor's Level or Laser Beam*—Readings using a surveyor's level or laser beam shall be taken on a target rod or a scale and shall be referenced to a permanent bench mark located outside of the immediate test area or, alternatively, the surveyor's level shall be mounted on an object of fixed elevation (for example a driven pile) outside of the immediate test area. Reference points or scales used in taking settlement readings shall be mounted on the sides of the test pile or pile cap and located on opposite sides except that reference points may be on top of the pile cap or readings may be taken on a single fixed point in the center of the test pile top, test plate or pile cap or on scales mounted on the test plate provided that relative movements between the test plate and the top of the pile are measured in accordance with 4.2.1 (see Fig. 7).

4.2.4 *Other Types of Measuring Apparatus* (Optional)—Any other type of measuring device such as electric or optical gages of proven reliability and that yield an accuracy of 0.01 in. (0.25 mm) may be used.

4.3 *Lateral Movements* (Optional) The lateral movements of the top of the test pile or pile group shall be measured to an accuracy of 0.1 in. (2.5 mm) using either of the following methods: (*a*) two dial gages mounted on the reference beam 90° apart with their stems perpendicular to the longitudinal axis of the test pile(s) and bearing against the sides of the test pile or pile cap, or (*b*) an engineer's transit reading from fixed positions scales mounted horizontally on the sides of the test pile or pile cap 90° apart with readings referenced to fixed foresights or backsights. For tests on batter piles, one of the gages or scales shall be oriented in the direction of the batter.

4.4 *Incremental Strain Measurements* (Optional):

4.4.1 The test pile(s) shall be instrumented as specified to determine distribution of load transfer from the pile to the soil. If strain rods or telltales (see Fig. 7, Fig. 8, Fig. 9, and Fig. 10) are used, they shall be installed in or on the test pile terminating at the pile tip and at other points along the pile as required and shall be sheathed or encased to insure free movement of the rods during the test. The influence of the sheathing on the elastic properties of the pile section shall be considered. If electric resistant strain gages are used, the gage type and installation shall be as specified and shall include temperature compensating gages.

NOTE 12—Where feasible, measurement programs involving strain gages should include calibration of the fully instrumented pile and a complete strain history starting before the pile is installed.

4.4.2 Pile butt axial movements shall be measured with dial gages (see 4.2.1). The movements of the top of each strain rod relative to the top of the test pile shall be measured with a dial gage reading to 0.001 in. (0.025 mm). Dial gages shall be referenced to points on the test pile below the test plate except that they may be referenced to the top of the test plate if the plate is welded to the pile or if relative movements between the top of the test pile and the test plate are measured in accordance

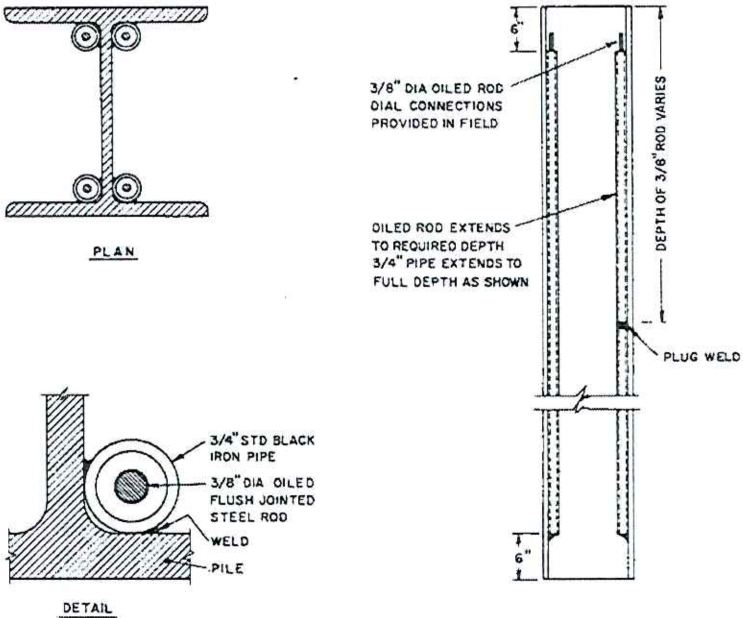


FIG. 8 Possible Installation of Telltales for Steel H-Piles

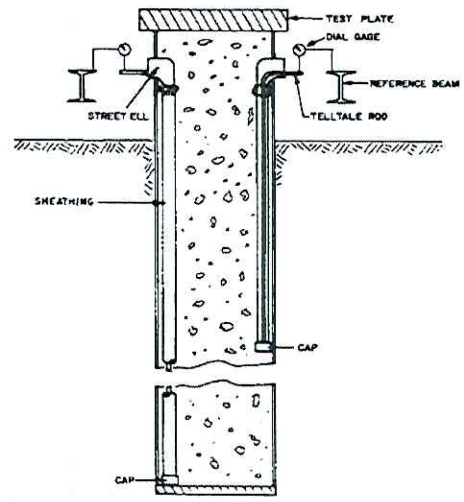


FIG. 9 Possible Installation of Telltales for Pipe Piles

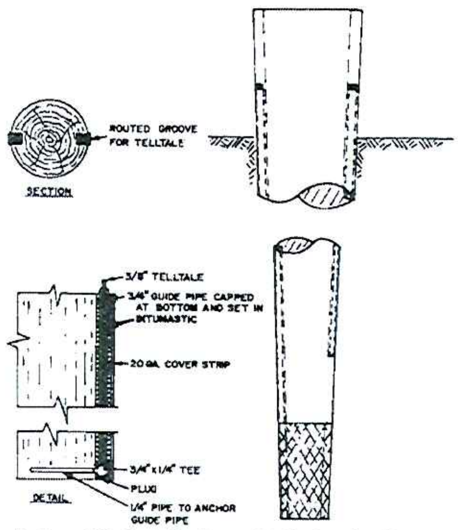


FIG. 10 Possible Installation of Telltales for Timber Piles

with 4.2.1 (see Fig. 7).

5. Loading Procedures

5.1 *Standard Loading Procedure*—Unless failure occurs first, load the pile to 200 % of the anticipated pile design load for tests on individual piles or to 150 % of the group design load for tests on pile groups, applying the load in increments of 25 % of the individual pile or group design load. Maintain each load increment until the rate of settlement is not greater than 0.01 in. (0.25 mm)/h but not longer than 2 h. Provided that the test pile or pile group has not failed, remove the total test load anytime after 12 h if the butt settlement over a one-hour period is not greater than 0.01 in. (0.25 mm); otherwise allow the total load to remain on the pile or pile group for 24 h. After the required holding time, remove the test load in decrements of 25 % of the total test load with 1 h between decrements. If pile failure occurs continue jacking the pile until the settlement equals 15 % of the pile diameter or diagonal dimension.

5.1.1 *Direct Loading Method*—When using the loading method described in 3.5, include in the first load increment the weight of the test beam(s) and the platform. Before adding or removing load increments, tighten the wedges along the platform edges to stabilize the platform. Place or remove load increments in a manner which avoids impact and maintains the load balanced at all times. After each load increment has been added, loosen (but do not remove) the wedges and keep them loose to permit the full load to act on the pile as settlement occurs.

NOTE 13—Testing a pile to failure provides valuable information to the design engineer and is recommended for pile tests performed prior to the foundation design or to evaluate comparative performances of different type piles. Such testing permits the selection of optimum pile type and design load.

NOTE 14—If the test pile(s) may exhibit or has exhibited negligible settlement at the design load or may approach or has approached incipient failure at the full test load, consideration may be given to increasing the standard loading increments at the start of the test or subsequent tests or to decreasing the standard loading increments during the latter stages of the test or subsequent tests.

5.2 *Cyclic Loading* (Optional)—For the first application of test load increments, apply such increments in accordance with 5.1. After the application of loads equal to 50, 100, and 150 % of the pile design load for tests on individual piles or 50 and 100 % of the group design load for tests on pile groups, maintain the total load in each case for 1 h and remove the applied load in decrements equal to the loading increments, allowing 20 min between decrements. After removing each total applied load, reapply the load to each preceding load level in increments equal to 50 % of the design load, allowing 20 min between increments. Apply additional loads in accordance with 5.1. After the total required test load has been applied, hold and remove the test load in accordance with 5.1.

5.3 *Loading in Excess of Standard Test Load* (Optional)—After the load has been applied and removed in accordance with 5.1, reload the test pile or pile group to the standard test load in increments of 50 % of the pile or pile group design load, allowing 20 min between load increments. Then increase the load in increments of 10 % of the design load for the pile or pile group until the maximum required load has been applied or until failure of the test pile or pile group occurs, allowing 20 min between load increments. If failure does not occur, hold the full load for 2 h and then remove the load in four equal decrements, allowing 20 min between decrements.

5.4 *Constant Time Interval Loading* (Optional)—Follow the procedures of 5.1 except apply load in increments of 20 % of the pile or group design load with 1 h between load increments and unload the piles with 1 h between load decrements.

5.5 *Constant Rate of Penetration Method for Individual Piles* (Optional):

5.5.1 The apparatus for applying loads shall have a capacity as specified and shall be in accordance with either 3.3 or 3.4. The hydraulic jack ram(s) shall have a travel greater than the anticipated total movement of the pile but not less than 25 % of the average pile diameter or diagonal dimension. A mechanical pump equipped with a bleed valve, variable speed device, or other means for providing a smooth variable delivery shall be used. If a video recording system is used to record the test data, a digital clock reading to seconds should be used and the clock as well as all gages shall be easily readable and located within the camera field.

5.5.2 Vary the applied load as necessary to maintain a pile penetration rate of 0.01 to 0.05 in. (0.25 to 1.25 mm)/min for cohesive soil or 0.03 to 0.10 in. (0.75 to 2.5 mm)/min for granular soils, or as otherwise specified. Continue loading the pile until no further increase in the load is necessary for continuous pile penetration at the specified rate unless the specified capacity of the loading apparatus is reached. If pile penetration continues, hold the load required to achieve the specified penetration rate until the total pile penetration is at least 15 % of the average pile diameter or diagonal dimension at which time release the load. If the pile stops penetrating under the maximum applied load, release the load.

5.5.3 The rate of penetration may be controlled by checking the time taken for successive small equal increments of penetration and by adjusting the rate of jacking accordingly. Alternatively, any mechanical or electrical device may be used to monitor and control the penetration rate so that it remains constant.

5.5.4 See 6.3 for measurement procedures.

5.6 *Quick Load Test Method for Individual Piles* (Optional):

5.6.1 The apparatus for applying the load shall have a capacity as specified and shall be in accordance with 3.3 or 3.4.

5.6.2 Apply the load in increments of 10 to 15 % of the proposed design load with a constant time interval between increments of 2½ min or as otherwise specified. Add load increments until continuous jacking is required to maintain the test load or until the specified capacity of the loading apparatus is reached, whichever occurs first, at which time stop the jacking. After a 5-min interval or as otherwise specified, remove the full load from the pile.

5.6.3 See 6.4 for measurement procedures.

NOTE 15—For 5.5 and 5.6 it is recommended that the full test load be removed in four approximately equal decrements with 5 min between decrements so the shape of the rebound curve may be determined.

5.7 *Constant Settlement Increment Loading Method for Individual Piles* (Optional):

5.7.1 The apparatus for applying the load shall have a capacity as specified and shall be in accordance with 3.3 or 3.4.

5.7.2 Apply test loads in increments required to produce pile butt settlement increments equal to approximately 1 % of the average pile diameter or diagonal dimension. Vary the applied load as necessary to maintain each settlement increment, and do not apply additional load until the rate of load variation to hold that settlement increment constant is less than 1 % of the total applied load per hour. Continue loading the pile in such increments until the total butt settlement equals about 10 % of the average pile diameter or diagonal dimensions or until the specified capacity of the loading apparatus is reached.

5.7.3 Remove the full test load in four equal decrements after maintaining the final settlement increment until the rate of load variation is less than 1 % of the total applied load per hour. After removing the first load decrement, do not remove additional decrements until the rate of pile rebound for the preceding load decrement is less than 0.3 % of the average pile diameter or diagonal dimension per hour.

5.7.4 See 6.5 for measurement procedures.

NOTE 16—For piles driven into cohesive soils, the elapsed time between driving and testing should be sufficient to allow dissipation of any excess pore water pressure resulting from pile driving and to permit the regain of the soil strength (known as soil freeze). The waiting period will depend on such things as the amount of excess pore water pressure built up, the degree of soil structure disturbance resulting from pile driving, and the soil properties. It could range from a minimum of 3 days to as long as 30 days or longer and the actual required waiting period may be determined by testing (for example redriving piles) or by prior experience.

NOTE 17—To avoid excessive creep of green concrete in cast-in-place concrete piles, the elapsed time between concrete placement and pile testing should be sufficient to permit the concrete to cure and harden properly, recognizing that the curing time for the concrete in the pile generally will be longer than that for the sampled concrete in standard test cylinders.

6. Procedures for Measuring Pile Movements

6.1 *General*—For axial movements, take readings on the test pile or pile cap; readings may be taken on the test plate, provided that the requirements of 4.2.1 are satisfied. For lateral movements, taken readings on the sides of the test pile or pile cap. Take required readings at each properly identified gage, scale, or reference point as nearly simultaneously as practicable. When using the loading method described in 3.5, take the no-load reading before the test beam(s) and platform are permitted to bear on the pile(s). Clearly indicate and explain any adjustments made to instrumentation or to data recorded in the field.

6.2 *Standard Measuring Procedures*—Take readings of time, load, and movement, and record them before and after the application of each load increment or the removal of each load decrement. During loading, provided that the test pile or pile group has not failed, take additional readings and record them at intervals not exceeding 10 min during the first ½ h nor 20 min thereafter for each load increment. After the total load has been applied, provided that the test pile or pile group has not failed, take readings and record at intervals not exceeding 20 min during the first 2 h, not exceeding 1 h for the next 10 h, and not exceeding 2 h for the next 12 h. If pile failure occurs, take readings immediately before removing the first load decrement. During unloading, take readings and record at intervals not exceeding 20 min. Take a final rebound reading 12 h after all load has been removed.

NOTE 18—If incremental strain measurements as in 4.4 are made using strain gages, gage readings should be taken and recorded before and after the pile is installed and immediately before the application of test loads so that a complete strain history is obtained and residual stresses can be accounted for.

6.3 *Readings for Constant Rate of Penetration Loading*—Take readings of time, load, and settlement, and record at least every 30 s or at sufficient intervals to determine the rate of penetration being achieved. If automatic monitoring and recording devices are used, operate them continuously during each test. When the test pile has achieved its specified rate of penetration, continue to take and record readings for the duration of the loading, and determine the maximum load applied. Immediately after unloading, take and record readings of time, load, and rebound. Take final readings and record 1 h after all load has been removed.

6.4 *Readings for Quick Load Test Method*—Take readings of time, load, and settlement, and record immediately before and after the application of each load increment and at intermediate time intervals as specified. When the maximum load has been applied, take readings and record when the jacking is stopped. Repeat after 2½ min and again at 5 min thereafter. If a longer holding period than in 5.7.2 is specified, take and record additional readings as specified. Take readings of time and rebound, and record after all load has been removed. Repeat after 2½ min and again at 5 min thereafter.

6.5 *Readings for Constant Settlement Increment Method*—Take readings of time, load, and settlement, and record immediately before and after each settlement increment with sufficient intermediate readings so as to determine the rate of load variation and the actual load required to maintain each settlement increment. During unloading, take readings of time, load, and rebound, and record immediately before and after the removal of each load decrement with sufficient intermediate readings so as to determine the rate of pile rebound. Take final readings and record 12 h after all load has been removed.

NOTE 19—Level readings should be taken on the reference beams and on the reaction system using a surveyor's level or transit and target rod or scale to determine if any excessive movement occurs. Such readings should be taken and recorded before any test load is applied, at the proposed design load, at the maximum test load, and after all load has been removed. Intermediate readings may be required if results during testing appear unusual.

NOTE 20—When testing piles in granular soils in dewatered excavations which will be submerged during service, the groundwater level should be maintained as near to the existing ground surface as possible and the depth to the groundwater level should be measured and recorded during the test. If the groundwater level during the test is more than 5 ft (1.5 m) below the ground surface, a correction to the pile bearing capacity as determined by the test should be made.

7. Safety Requirements

7.1 All operations in connection with pile load testing shall be carried out in such a manner so as to minimize, avoid, or eliminate the exposure of people to hazard. The following safety rules are in addition to general safety requirements applicable to construction operations:

7.1.1 All work areas, walkways, platforms, etc., shall be kept clear of scrap, debris, small tools, and accumulations of snow, ice, mud, grease, oil, or other slippery substances.

7.1.2 All timbers, blocking and cribbing materials shall be of quality material and be in good serviceable condition with flat surfaces and without rounded edges.

7.1.3 Hydraulic jacks shall be equipped with spherical bearing plates or shall be in complete and firm contact with the bearing surfaces and shall be aligned so as to avoid eccentric loading.

7.1.4 Loads shall not be hoisted, swung, or suspended over anyone and shall be controlled by tag lines.

7.1.5 The attachments of the test beam(s) or reaction frame to the anchor piles or other anchoring devices shall be designed and installed to transmit the required loads with an adequate factor of safety.

7.1.6 For tests on batter piles, all inclined jacks, bearing plates, test beam(s), or frame members shall be firmly fixed into place or adequately blocked to prevent slippage upon release of load.

7.1.7 All reaction loads shall be stable and balanced. When using loading method in 3.5, safety wedges shall be in place at all times to prevent the platform from tipping. During testing, movements of the reaction load or system should be monitored to detect impending unstable conditions.

7.1.8 All test beams, reaction frames, platforms, and boxes shall be adequately supported at all times.

7.1.9 Only authorized personnel shall be permitted within the immediate test area.

8. Report

8.1 The report of the load test shall include the following information when applicable:

8.1.1 *General*:

8.1.1.1 Project identification,

8.1.1.2 Project location,

8.1.1.3 Test site location,

8.1.1.4 Owner,

8.1.1.5 Structural engineer,

8.1.1.6 Geotechnical engineer,

8.1.1.7 Pile contractor,

8.1.1.8 Test boring contractor,

8.1.1.9 Designation and location of nearest test boring with reference to test pile or group,

8.1.1.10 Log of nearest test boring,

8.1.1.11 Horizontal control datum, and

8.1.1.12 Vertical control (elevation) datum.

8.1.2 *Pile Installation Equipment*:

8.1.2.1 Make, model, type and size of hammer,

8.1.2.2 Weight of hammer and ram,

8.1.2.3 Stroke or ram,

8.1.2.4 Rated energy of hammer,

8.1.2.5 Rated capacity of boiler or compressor,

8.1.2.6 Type and dimensions of capblock and pile cushion,

8.1.2.7 Weight and dimensions of drive cap and follower,

8.1.2.8 Size of predrilling or jetting equipment,

8.1.2.9 Weight of clamp, follower, adaptor, and oscillator for vibratory driver.

8.1.2.10 Type, size, length, and weight of mandrel,

8.1.2.11 Type, size, and length of auger,

8.1.2.12 Type and size of grout pump, and

8.1.2.13 Type, size, wall thickness, and length of drive casing.

8.1.3 *Test and Anchor Piles*:

8.1.3.1 Identification and location of test and anchor piles,

8.1.3.2 Design load of pile or pile group,

8.1.3.3 Type of pile(s)–test and anchor,

8.1.3.4 Test pile material including basic specifications,

8.1.3.5 Tip and butt dimensions of pile(s),

8.1.3.6 General quality of timber test piles including occurrence of knots, splits, checks and shakes, and straightness of piles,

8.1.3.7 Preservative treatment and conditioning process used for timber test piles including inspection certificates,

8.1.3.8 Wall thickness of pipe test pile,

8.1.3.9 Weight per foot of H test pile,

8.1.3.10 Description of test pile tip reinforcement or protection,

8.1.3.11 Description of banding–timber piles,

8.1.3.12 Description of special coatings used,

8.1.3.13 Test pile (mandrel) weight as driven,

8.1.3.14 Date precast test piles made,

8.1.3.15 Concrete cylinder strengths when test pile driven and when pile tested (approximate),

8.1.3.16 Description of internal reinforcement used in test pile (size, length, number longitudinal bars, arrangement, spiral, or tie steel),

8.1.3.17 Condition of precast piles including spalled areas, cracks, head surface, and straightness of piles.

8.1.3.18 Effective prestress,

8.1.3.19 Which piles vertical or batter,

8.1.3.20 Degree of batter,

8.1.3.21 Length of test pile during driving,

8.1.3.22 Embedded length–test and anchor piles,

8.1.3.23 Tested length of test pile, and

8.1.3.24 Final elevation of test pile butt(s) referenced to fixed datum.

8.1.4 *Pile Installation–Test and Anchor*:

8.1.4.1 Date driven (installed),

8.1.4.2 Date concreted (cast-in-place),

8.1.4.3 Volume of concrete or grout placed in pile,

8.1.4.4 Grout pressure used,

8.1.4.5 Description of pre-excavation or jetting (depth, size, pressure, duration),

8.1.4.6 Operating pressure for double-acting and differential type hammers,

8.1.4.7 Throttle setting–diesel hammer (at final driving),

8.1.4.8 Fuel type–diesel hammer,

8.1.4.9 Horsepower delivered and frequency of vibratory driver during final 10 ft (3 m) of pile penetration,

8.1.4.10 Description of special installation procedures used such as piles cased off,

8.1.4.11 Type and location of pile splices,

8.1.4.12 Driving logs (blows per foot),

8.1.4.13 Final penetration resistance (blows per inch),

8.1.4.14 Rate of pile penetration for last 10 ft (3 m) s/ft, vibratory driving,

8.1.4.15 When capblock replaced (indicate on log),

8.1.4.16 When pile cushion replaced (indicate on log),

8.1.4.17 Cause and duration of interruptions in pile installation, and

8.1.4.18 Notation of any unusual occurrences during installation.

8.1.5 *Pile Testing*:

8.1.5.1 Date tested,

8.1.5.2 Type test,

8.1.5.3 Number of piles in group test,

8.1.5.4 Brief description of load application apparatus, including jack capacity,

8.1.5.5 Description of instrumentation used to measure pile movement including location of gages or other reference points with respect to pile butt (see Note 21),

8.1.5.6 Description of special instrumentation such as strain rods or gages including location of such with reference to pile butt,

8.1.5.7 Special testing procedures used,

8.1.5.8 Tabulation of all time, load, and movement readings,

8.1.5.9 Identification and location sketch of all gages, scales, and reference points (see Note 21),

8.1.5.10 Description and explanation of adjustments made to instrumentation or field data, or both,

8.1.5.11 Notation of any unusual occurrences during testing,

8.1.5.12 Test jack and other required calibration reports,

8.1.5.13 Groundwater level (see Note 20), and

8.1.5.14 Temperature and weather conditions during tests.

NOTE 21—Suitable photographs can be very helpful in showing the instrumentation set-up, location of gages, scales, and reference points.

NOTE 22—In addition to the above required information to be reported, the results of any in-place and laboratory soil tests should be made available for the proper evaluation of test results.

9. Precision and Bias

9.1 *Precision*—Data are being evaluated to determine the precision of this test method. In addition, Subcommittee D18.11 is seeking pertiment data from users of this test method.

9.2 *Bias*—A statement on bias is not possible because there are no standard reference materials.

10. Keywords

10.1 field testing; load cell; loading procedure; piles; reference beam

APPENDIX

(Nonmandatory Information)

X1. SOME FACTORS INFLUENCING INTERPRETATION OF TEST RESULTS

X1.1 Potential residual loads in the pile which could influence the interpreted distribution of load at the pile tip and along the pile shaft.

X1.2 Possible interaction of friction loads from test pile with upward friction transferred to the soil from anchor piles obtaining part or all of their support in soil at levels above the tip level of the test pile.

X1.3 Changes in pore water pressure in the soil caused by pile driving, construction fill, and other construction operations which may influence the test results for frictional support in relatively impervious soils such as clay and silt.

X1.4 Differences between conditions at time of testing and after final construction such as changes in grade or groundwater level.

X1.5 Potential loss of soil supporting test pile from such things as excavation and scour.

X1.6 Possible differences in the performance of a pile in a group or of a pile group from that of a single isolated pile.

X1.7 Affect on long-term pile performance of factors such as creep, environmental effects on pile material, negative friction loads not previously accounted for, and strength losses.

X1.8 Type of structure to be supported, including sensitivity of structure to settlements and relation between live and dead loads.

X1.9 Special testing procedures which may be required for the application of certain acceptance criteria or methods of interpretation.

X1.10 Requirement that all conditions for nontested piles be basically identical to those for test pile including such things as subsurface conditions, pile type, length, size and stiffness, and pile installation methods and equipment so that application or extrapolation of the test results to such other piles is valid.

CLASSIFIED ADVERTISMENT

عدالت نوٹس

عام اطلاع

پاکستان سیکورٹی پرنٹنگ کارپوریشن (پرائیویٹ) لمیٹڈ

(Wholly owned subsidiary of State Bank of Pakistan)

پیشکشوں کی طلبی

Tender No.	Bid Due Submission	Bid Opening Date & Time	Earnest Money	Description of Job / Items	Qty
LPT 4143/26 MR	19-June-26 11:00 A.M.	19-June-26 11:30 A.M.	Rs. 211,000/- Fixed	Supply of Corrugated Boxes (As per BOQ/Specification attached with Bidding Documents)	As per BOQ

www.ppra.org.pk

www.pspc.gov.pk

www.eprocure.gov.pk

آفيس آف دي ايگزيڪيوٽو انجنيئر، پراونشل هاءِ وي ڊويزن، ڄامشورو

EPADS سسٽم ذريعي ٽينڊر گھرائڻ لاءِ نوٽيس

ايگزيڪيوٽو انجنيئر پراونشل هاءِ وي ڊويزن ڄامشورو

INF/KRY/2131/2026

Oil & Gas Development Company Limited

ogdc the energy

INVITATION TO E-BID
THROUGH SAP ARIBA DISCOVERY

E-Bids are invited through SAP ARIBA Discovery for the service/material given below under competitive bidding procedure as per Public Procurement Regulatory Authority (PPRA) rules:

TENDER NUMBER	DESCRIPTION	CLOSING DATE & TIME
OGDC-SCM-SERVICES-CB-LOG-322888686-2026	TRANSPORTATION OF MATERIAL ON CALL-OUT BASIS	17.06.2026 1030 Hrs
OGDC-SCM-LC-PT-PAINT-DAKHNI-322968226-2026	SUPPLY OF INDUSTRIAL PAINT	18.06.2026 1130 Hrs
OGDC-SCM-SERVICES-CB-LOGISTIC-322834066-2026	TRANSPORTATION OF MATERIAL BY CRANES AT LOGISTICS FIELD KOT SARANG	18.06.2026 1030 Hrs
OGDC-SCM-SERVICES-CB-PROD-322851766-2026	SERVICES FOR INTERNAL AND EXTERNAL COATING OF CRUDE OIL STORAGE TANKS	18.06.2026 1030 Hrs

CORRIGENDUM NOTICE

2. Reference our Tender Notice published in newspaper(s) on 25.05.2026, please read the description of the cases as follows:

TENDER NO.	FOR	READ
OGDC-SCM-LF-PT-PNP-UCH-321082916-2026	OGDC-SCM-FD-CB-ECMP-319403588-2026	OGDC-SCM-LF-PT-PNP-UCH-321082916-2026
OGDC-SCM-FD-CB-ECMP-319403588-2026	OGDC-SCM-LF-PT-PNP-UCH-321082916-2026	OGDC-SCM-FD-CB-ECMP-319403588-2026

3. All bids will be opened 30 minutes after the bids closing date and time.
4. Tender Notice and detailed instructions are available on PPRA website at www.ppra.org.pk
5. Tender documents are available online and bids are also required to be submitted online through portal at https://ogdcl.com/sap-ariba-tenders or discovery.ariba.com/profile/AN01362395627. For details see "Instruction for Bidders Section" of the tender documents.

General Manager
(Supply Chain Management)
Oil & Gas Development Company Limited
OGDC Headquarters, Plot 03, F-6/G-6, Jinnah Avenue,
Blue Area Islamabad-Pakistan.
Ph: +92 (51) 92002 3602 / 3780

ogdcl.com
No. 356/93

Man put to death in Kohat firing

[illegible]

K-P/BALOCHISTAN

Peshawar MTIs ready for Eid emergencies

Hospitals ensure round-the-clock care, staff alerts

SHAHIDA PARVEEN
PESHAWAR

Lady Reading Hospital (LRH) and the three major Medical Teaching Institutions (MTIs) in Peshawar have put comprehensive arrangements in place to ensure uninterrupted medical services during the Eid-ul-Azha holidays.

According to hospital administrations, all emergency services, including paediatrics, gynaecology, and other critical departments, will remain fully operational 24 hours a day throughout the festive period.

The three MTI hospitals have prepared special action plans that include the formation of monitoring committees, ensuring availability of sufficient beds, medical equipment, and essential medicines. Duty rosters have been finalised, with names of emergency staff prominently displayed for immediate recall in case of any untoward incident.

> Three MTI hospitals have prepared special action plans that include the formation of monitoring committees

Lady Reading Hospital

Hospital Director Muhammad Tariq Khan Barki presided over a special meeting and issued strict instructions to all administrative officers that no patient should face any inconvenience during the Eid holidays. He directed that medicines for admitted and emergency patients must be delivered promptly, and there should be no disruption in laboratory tests or ultrasound facilities.

The hospital has also issued special guidelines for the treatment of individuals who may sustain injuries from animal handling or during sacrificial rites.

Spokesman Muhammad Asim said that heads of all units at LRH have constituted dedicated teams to provide the best possible medical care during Eid. Nurses, paramedical staff, and all departments have been assigned duties.

Hayatabad Medical Complex

MTI Hayatabad Complex has also announced round-the-clock emergency services during Eid.

Hospital spokesman Waseem Khattak said the Emergency Department will function without any break. Senior officials, including Hospital Director Dr Gulzar Ahmad Khan, Medical Director Prof Dr Khalid Khan, and Director Nursing Rahatullah Khan, inspected all wards before Eid. They issued strict directives for ensuring air-conditioning and other facilities for patients, warning that no negligence would be tolerated.

The administration has ensured full staffing in the Emergency Department, availability of specialists for consultation, prompt treatment, and modern medical equipment. Heightened monitoring of cleanliness, facilities, and safety measures has also been ordered across all wards.

Khyber Teaching Hospital

Khyber Teaching Hospital has placed all its departments on alert to ensure uninterrupted treatment of incoming patients. Senior doctors have been directed to conduct special rounds during the holidays.

These proactive measures aim to provide timely and quality healthcare to citizens during the Eid-ul-Azha festivities, particularly in case of any emergency or sacrifice-related incidents.

Panel formed for Quetta blast assessment

OUR CORRESPONDENT
QUETTA

The Quetta district administration has constituted a special committee to evaluate the financial and structural damages caused by the powerful explosion near Chaman Phatak on Sunday, which claimed 14 lives and left many others injured.

According to an official notification, the committee has been directed to begin work immediately and carry out a comprehensive survey of the affected area. The panel will assess damage to residential homes, shops, vehicles, commercial establishments, and other properties impacted by the blast.

Deputy Commissioner Quetta, who also serves as Chairman of the District Compensation Committee, formed the panel to ensure a fair, transparent, and accurate evaluation of losses suffered by local residents and business owners.

Assistant Commissioner (City) Quetta has been appointed as the head of the committee. Its members include senior officials from the Counter Terrorism Department (CTD), Communication and Works Department, Metropolitan Corporation Quetta, and Agricultural Engineering Department.

Officials said the committee will visit the blast site, document all damaged structures and vehicles, and prepare a detailed report. The findings will be submitted to the district administration to determine appropriate compensation packages and relief measures for the affected families.

The explosion near Chaman Phatak caused widespread destruction in the densely populated area, shattering windows, damaging buildings, and destroying several parked vehicles.

CONNECTING BALOCHISTAN

145

years ago, in 1881, construction of railways line up to Sibi was completed. [illegible]

Grenade attack targets MPA's hujra

[illegible] Unidentified armed assailants launched a grenade attack on the hujra of Riaz Shaheen, a Member of the Provincial Assembly from Jamiat Ulema-e-Islam Fazl (JUI-F), in tribal district of Kurram on Monday. The attackers hurled a hand grenade at the MPA's hujra. The device exploded in the courtyard, causing no injuries or loss of life. All individuals present inside the hujra remained safe. The blast triggered panic and fear among local residents. Security forces reached the scene shortly after receiving information and cordoned off the area. Police have collected evidence and launched an investigation into the incident from multiple angles. Authorities confirmed that a manhunt for the attackers is underway. [illegible]

Balochistan police on high alert over threats

Banned outfit suspected of planning highway attacks on key routes

SARDAR HAMEED
QUETTA

The Central Police Office Balochistan has issued a formal threat alert following credible intelligence about possible terrorist activities in the province and neighbouring Khyber-Pakhtunkhwa.

According to an official letter, the proscribed organisation Fitna al-Khawarij is planning to plant Improvised Explosive Devices (IEDs) on major highways and sensitive locations in both provinces. The alert specifically highlights Quetta-Chaman Highway, Quetta-Pishin Road, Saranan, Malal Adda, and other important points as potential targets.

The communiqué also warns that terrorist elements may target personnel of law enforcement agencies.

In response, the Central Police Office has directed all concerned departments, district police chiefs, and security agencies to immediately enhance security measures, intensify surveillance and patrolling, and take all necessary preemptive actions to prevent any untoward incident.

The authorities have been instructed to submit a detailed report on the security arrangements put in place within five days to the Inspector General of Police, Balochistan.

The development comes amid heightened security concerns in the region.

TRIBUNE
TODAY'S PAPER | MAY 31, 2026 | EPAPER

OFFICE OF THE,EXECUTIVE ENGINEER
PROVINCIAL HIGHWAY DIVISION, JAMSHORO

022-3874465 NO: TC/G-55/ 972/2026 Dated: - 25 /05/2026

NOTICE INVITING TENDERS (EPADS SYSTEM)

01. This office invites E-Bid through "E-Pak Acquisition and Disposal System (EPADS)" on website http://portalsindh.eprocure.gov.pk/ for the following works are invited from the interested persons / contractors / companies / firms agencies registered with PPRA, EPAD and Pakistan Engineering Council (PEC) in relevant category, who has valid renewal limit of category of following works.

S#	Name of Work	Estimate Cost Rs: (M)	Earnest Money 5% Rs: (M)	Tender Fee	Time of Completion	PEC Category
01	CONSTRUCTION OF PRE-STRESSED BRIDGE I/C APPROACHES FOR VILLAGE KACHY WARA RADHAN TALUKA SEHWAN MILE 0/0 -0/3 (0.60 KM) DISTRICT JAMSHORO	166.967 (M)	8.348 (M)	5000/-	24 Months	C4 & Above

02. **HOW TO APPLY:-**

a) Bidding documents containing detailed terms and condition can be views and download from http://portalsindh.eprocure.gov.pk/
b) Bids shall be submitted electronically through the "EPADS" only, manual submission will not be entertained.
c) Interested bidders must ensure their registration on "EPADS" at http://portalsindh.eprocure.gov.pk/
d) The original instrument of Tender Fee / bid security in the shape of call deposit / pay order & E- Stamp Paper shall be delivered to the procurement Agency on or before the deadline for submission of E-Bids.

03. **PROGRAMME RECEIPT AND OPENING OF TENDERS:-**

S. No.	Particulars	1st Attempt	2nd Attempt (in case of un-responded tenders)
1.	Bidding document can be downloaded after hoisted on SPPRA "EPADS" website @ 10:00 A.M physical bids will not be issued / accepted	18/06/2026	03/07/2026
2.	Tender will be received at 10:30 A.M and open on the same day at 11:00 A.M.	18/06/2026	03/07/2026

04. **MANDATORY CONDITIONS:-**

i. Each page Numbering of the Technical proposal must be attested by the owner of firm / company along with its stamp.
ii. Bid validity period is 90 days.
iii. Conditional tenders will be rejected.

05. **ELIGIBILITY CRITERIA:-**

01. Firm/Contractors must be registered with Pakistan Engineering Council (PEC Valid upto June- 2026) in relevant category with specialization Code in CE-01, CE-02.CE09, CE10, Supported by PEC valid registration certificate.
02. Experience in Similar Nature of works (S) Executed during last Three (3) years:
   (i) At least one similar nature of work having minimum cost 80% of the estimate cost of the work;
   (ii) At least two (02) similar nature works each having minimum cost 50% of the estimate cost.
03 At least 01 work INHAND having same specification and nature having equal or more cost OR quantum (in terms of Quantities) duly supported with certified copies of Detailed working estimate and SPPRA ID's showing Bid Evaluation Report.
04. Bio data of Engineering / Technical staff (Civil) work and Electric Work with the firm along with Attested CVs, which showing employment with firm.
05. Average annual financial turnover not less than equivalent cost of the Scheme/Project last five (05) years (Turn over will be evaluated from Annual FBR Returns and Audit Reports).
06. Registration with Income Tax Department (NTN Certificate) with Active status with FBR.
07. Sindh Revenue Board (SRB Certificate should be attached) supported by copies of Income Tax return receipts of the last Five (5) years. Must be active Tax Payer Status.
08. Litigation history in which the decision has been given against or in favor of the firm (s). List and give brief details of arbitration / litigation / court cases if any in case of no such cases enclose an affidavit duly attested that the firm has not been involved in any litigation arbitration with any Government Departments.
09. Bank Account Statement in the name of the Bidders Firm for the last Five (5) years must be submitted with the Technical Proposal.
10. Annual audit reports of last Five (5) years from (ICAP) registered with audit firm. Audit report issued other than (ICAP) registered audit firms will not be accepted.
11. List of Machinery and equipment available with documentary evidence of its ownership/rented.
12. Documentary evidence showing the contractor / firm owns or rented an Asphalt Plant along with its related Machinery such as Tandem, PTR and Paver machine (Applicable on Asphalt Concrete works).
13. Evaluation Criteria, sub-criteria, for the evaluation of Full Technical Proposals is based on Yes / No OR Pass/Fail if a bidder fails to obtain yes or pass in any criteria or sub-criteria then he or his firm shall not be qualified
14. Bid Security shall be in shape of Call Deposit Receipt (CDR) only from any scheduled Bank of Pakistan
15. Fresh undertaking / Affidavit on E-Stamp Paper duly attested Rs: 500/- that the bidder and its firm have never been black listed by any Government, Semi-Government, autonomous or state owned organization and their cases regarding blacklisting or not under trial by any Court of Law.
16. Joint venture will not be allowed.
17. The representative should have authority on Judicial E-Stamp Paper from owner. Authority other than Judicial E-Stamp paper will not be accepted and such tender will Not be entertained.

Evaluation criteria sub- criteria, for the evaluation of full Technical Proposals is based on Yes / No OR pass / fail; if a bidder fails to obtain Yes or Pass in any criteria or sub-criteria then he / she / it shall not be qualified.

The competent authority reserves the right to reject any or all application as per SPPRA Rules-2010 (amended upto date).

In case, Government announces any Public Holiday on schedule dates, the tender will be opened on the next working day, as per usual schedule in accordance with Rule-41 (B) of SPPRA 2010 (amended upto date).

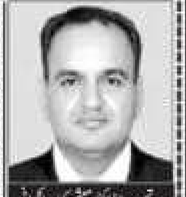
OFFICE ADDRESS:

Executive Engineer, Provincial Highway Division Jamshoro, situated at opposite Irrigation Workshop near NADRA Office Main Road Kotri. Telephone No.: 022-3874465.

Sd/-
EXECUTIVE ENGINEER
PROVINCIAL HIGHWAY DIVISION
JAMSHORO

INF/KRY/2131/2026

دیا بھر کے خوش قسمت حاجیوں کے نام۔۔۔!



تحریر: ڈاکٹر بخش علی داگوانی

روبرو: جناب عبدالرزاق (جج صاحب)

بینکنگ کورٹ نمبر II، بمقام کراچی

روبرو: جناب عبدالرزاق (جج صاحب)

بینکنگ کورٹ نمبر II، بمقام کراچی

Invitation to Bid

HIRING OF INTERNATIONALLY REPUTABLE TECHNICAL FIRMS FOR CONDUCTING A STUDY FOR THE DEVELOPMENT OF STRATEGIC PETROLEUM RESERVES IN PAKISTAN

Pakistan LNG Limited (PLL) is a public sector entity, incorporated in Pakistan and operates under the administrative control of the Ministry of Energy (Petroleum Division), Government of Pakistan (GOP). PLL is a wholly owned subsidiary of Government Holdings Private Limited (GHPL). PLL has been mandated by the Government of Pakistan to undertake a study for the development of Strategic Petroleum Reserves in Pakistan. PLL intends to invite bids from internationally renowned firms to undertake this study.

On behalf of the Ministry of Energy (Petroleum Division), Government of Pakistan, PLL invites bids from globally reputed consulting firms for carrying out the subject study based on international best practices and models.

Bidding documents, containing detailed terms and conditions, the scope of work, and other relevant information, are available for registered bidders on EPADS V2.0 at **https://epads.gov.pk** and may also be downloaded from PLL's website at **www.paklng.com**.

Electronic Proposals, prepared in accordance with the instructions provided in the bidding documents, must be submitted by using the EPADS system on or before **1400 hrs (PST)** on **1st July 2026**. Bids will be opened on the same day at **1430 hrs (PST)**. This advertisement is also available on PPRA website at **www.ppra.org.pk**.

Head of International Procurement
Pakistan LNG Limited
9th Floor, Petroleum House, Ataturk Avenue G-5/2, Islamabad, Pakistan.
Email: **procurement@paklng.com** | Tel: +92 51 921 6901

دفتر میونسپل کمیٹی دادو

No.MCD/Tax/323 مورخہ 25-05-2026

اطلاع نیلام

دکانوں کی نیلامی کا شیڈول

دوسری مرتبہ 17-06-2026 وقت صبح 11:00 بجے
تیسری مرتبہ 24-06-2026 وقت صبح 11:00 بجے

کرایہ پر دی جانے والی دکانوں کی تفصیلات

نمبر شمار	دکان نمبر	دکان کی جگہ / سائیڈ	کم سے کم کرایہ
01	دکان نمبر 1 اور 22	مغرب کی جانب	5000/- روپے فی دکان
02	دکان نمبر 11 اور 12	مشرق کی جانب	5000/- روپے فی دکان
03	دکان نمبر 02 تا 10	مغرب سے مشرق کی جانب	4500/- روپے فی دکان
04	دکان نمبر 13 تا 21	مشرق سے مغرب کی جانب	4500/- روپے فی دکان

نیلام کی شرائط و ضوابط

دستخط

چیف میونسپل آفیسر
میونسپل کمیٹی دادو

INF-KRY 2129/26
WORK FOR SINDH
JOB PORTAL BY INFORMATION DEPARTMENT

سیکریٹریٹ
صوبائی اسمبلی سندھ

تصحیح

بحوالہ ٹینڈر نوٹس اشتہار (INF/KRY No.2116/2026)

شائع شدہ مختلف اخبارات میں درج ذیل تبدیلیاں کی گئی ہیں۔

• دوسرے اور تیسرے پیراگراف میں تاریخ بھی 01-06-2026 کو 03-06-2026 کے طور پر پڑھا جائے۔

دیگر تمام شرائط و ضوابط حسب سابق برقرار رہیں گی۔

دستخط:
ڈی ڈی او

INF-KRY 2133/26
WORK FOR SINDH
JOB PORTAL BY INFORMATION DEPARTMENT

دفتر ایگزیکٹو انجینئر، پراونشل ہائی وے ڈویژن حب مشورہ

No.TC/G-55/972 of 2026 Dated:25/05/2026 فون: 022-3874465

ٹینڈر طلبی نوٹس (EPADS سسٹم)

دستخط۔۔۔ ایگزیکٹو انجینئر
پراونشل ہائی وے ڈویژن حب مشورہ

INF-KRY 2131/26
WORK FOR SINDH
JOB PORTAL BY INFORMATION DEPARTMENT

دفتر لینڈ ایکویزیشن کلیکٹر تعلقہ ٹھیاری

روانگی نمبر 358/2026 مورخہ: 18-05-2026

فائنل نوٹس

جیسا کہ موٹروے (M-6) کا تعمیراتی کام شروع ہونے والا ہے اس سلسلے میں درکار زمین 23-631 ایکڑز میں سے تقریباً 400 ایکڑز زمین کے مالکان کو معاوضہ کی ادائیگی کرنے کے بعد قبضہ NHA کے حوالے کر دیا ہے۔

اس حوالے سے تعلقہ ٹھیاری میں موٹروے (M-6) میں آنے والی اراضی کے تمام متعلقہ کھاتیداروں کو مطلع کیا جاتا ہے کہ جلد از جلد اپنا فوتی کھاتہ تبدیل، رہن ختم کرا کے درکار کاغذات لینڈ ایکویزیشن کلیکٹر کے دفتر میں جمع کرائیں تاکہ انہیں روڈ میں آنے والی اراضی کا معاوضہ دیا جا سکے اور ایک بڑی قومی شاہراہ (M-6) کا تعمیراتی کام مکمل کیا جائے۔

نوٹس ہذا کی اشاعت کے سات دنوں کے اندر مندرجہ بالا دفتر میں درکار دستاویزات مہیا نہ کرنے کی صورت میں آپ کا ایوارڈ واؤچر اور دیگر متعلقہ دستاویزات لینڈ ایکویزیشن ایکٹ 1894ء کے قانون کے مطابق معزز عدالت میں جمع کروا دیے جائیں گے۔

دستخط: **(عبدالستار شیخ)**
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