



FRIENDLY HIGHWAYS

NATIONAL HIGHWAY AUTHORITY

Procurement & Contract Administration Section

28 Mauve Area, G-9/I, Islamabad ☎ 051-9032727, 📠 051-9260419

No. 6(461)/DIR-III(P&CA)/NHA/18/382

۲۸^{۱۱} September, 2018

Director General

Public Procurement Regulatory Authority
1st Floor FBC Building near State Bank,
Sector G-5/2, Islamabad

Subject: **ANNOUNCEMENT OF EVALUATION REPORT (PPRA Rule-35):
Consultancy Services for Design Review and Construction
Supervision for Dualization and Improvement of Indus
Highway N-55: Package-I Sarai Gambila to Karak (61 Km)**

Reference: PPRA Rule-35

Kindly find attached the duly filled and signed Evaluation Report along with Bid Evaluation Criteria (Annex-I) pertaining to the procurement of subject services in view of above referred PPRA Rule-35 for uploading on PPRA website at the earliest, please.

(Muhammad Azam)
Director(P&CA)

Encl: Evaluation Report along with **Annex-I**

Copy for kind information to:

- Member (Engineering-Coord), NHA;
- Member (Planning), NHA;
- General Manager (P&CA), NHA;
- S.O. (Tech.) to Chairman, NHA.

EVALUATION REPORT

(AsPerRule35ofPPRules,2004)

1.	Name of Procuring Agency:	National Highway Authority
2.	Method of Procurement:	Single Stage Two Envelope Procedure
3.	Title of Procurement:	Design Review and Construction Supervision for Dualization and Improvement of Indus Highway N-55: Package-I Sarai Gambila to Karak (61 Km)
4.	Tender Inquiry No.:	6(461)
5.	PPRA Ref. No. (TSE):	TS340072E
6.	Date & Time of Bid Closing:	23 rd January, 2018 at 1130 hours local time
7.	Date & Time of Bid Opening:	23 rd January, 2018 at 1200 hours local time
8.	No of Bids Received:	Six (06) Proposals were received
9.	Criteria for Bid Evaluation:	Criteria of Bid Evaluation is attached at Annex-I
10.	Details of Bid(s) Evaluation:	As below

Name of Bidder	Marks			Evaluated Cost* (PKR)	Rule/Regulation/SBD**/ Policy/ Basis for Rejection / Acceptance as per Rule 35ofPPRules,2004.
	Technical (if applicable)	Financial (if applicable)	Total (out of 1000)		
1) M/s National Engineering Services Pakistan (Pvt.) Ltd. (NESPAK) in JV with M/s Turpkak International (Pvt.) Ltd.	595	181	776	132,734,350	Top scoring JV in combined evaluation (PPRA Rule 36(b) (ix))
2) M/s Associated Consulting Engineers – ACE(Pvt.) Ltd. in JV with M/s Prime Engineering & Testing Consultants (Pvt.) Ltd. and M/s PAVRON	614	157	771	152,918,284	2 nd
3) M/s Indus Associated Consultants (Pvt.) Ltd. in JV M/s Umar Munshi Associates and M/s New Vision Engineering Consultants.	567	200	767	119,867,465	3 rd

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EVALUATION REPORT

(As Per Rule 35 of PPR Rules, 2004)

Name of Bidder	Marks			Evaluated Cost* (PKR)	Rule/Regulation/SBD**/ Policy/ Basis for Rejection / Acceptance as per Rule 35 of PPR Rules, 2004.
	Technical (if applicable)	Financial (if applicable)	Total (out of 1000)		
4) M/s PEAS Consulting (Pvt.) Ltd. in JV with M/s Partners in Development and M/s Spectra Engineering Solutions	556	-	-	-	PPRA Rule 36(b) (v)
5) M/s Asif Ali & Associates (Pvt.) Ltd. in JV M/s A.A. Associates, M/s Associated Consultancy Centre (Pvt.) Ltd. and M/s HA Consultancy	517	-	-	-	-do-
6) M/s Consulting Associates Peshawar in JV with M/s Republic Engineering Corporation (Pvt.) Ltd. and M/s Loya Associates	435	-	-	-	-do-

*EC is the Evaluated Cost used for evaluation purpose and includes only the cost of competitive component (i.e. Remuneration and Direct Non- Salary Cost) and is exclusive of Provisional Sum, Contingency and Indirect Taxes.

Top Ranked Bidder: M/s National Engineering Services Pakistan (Pvt.) Ltd. (NESPAK) in JV with M/s Turpak International (Pvt.) Ltd.

11. **Any other additional/supporting information, the procuring agency may like to share:**
The Procurement was carried out in line with PPRA Rules & Regulations. The bidding was done on QCBS method with 80:20 Technical to Financial Proposals ratio.

Signature:..... 

Official Stamp:.....
General Manager (P&A).
National Highway Authority
Islamabad

**Standard Bidding Documents (SBD).

National Highway Authority



Annex-I

Criteria

FOR

Bid Evaluation

**Consultancy Services for Design Review and
Construction Supervision for Dualization and
Improvement of Indus Highway N-55: Package-I
Sarai Gambila to Karak (61 Km)**

September, 2018



NATIONAL HIGHWAY AUTHORITY

Procurement & Contract Administration Section
28-Mauve Area, G-9/1, Islamabad Tel: 9032727, Fax: 9260419

Ref: 6(461)/DIR-III (P&CA)/NHA/18/27

19th January, 2018

All prospective Consultants

Subject: Minutes of Pre-Proposal Meeting for:
Consultancy Services for Design Review and Construction Supervision
for Dualization & Improvement of Sarai Gambila to Karak Section of
Indus Highway N-55 (61 km)

Reference: Request for Proposal Notice for the Subject Services appeared in daily newspapers on 5th January, 2018.

The Minutes of Pre-Proposal Meeting for the Subject Services being integral part of the Request for Proposal are enclosed herewith for necessary action, please.


(Muhammad Azam)
Director (P&CA)

Enclosure:

- Minutes of Pre-Proposal Meeting (01 Page).

Copy for kind information to:

- Member (Engg. Coord.), NHA, Islamabad;
- Member (Planning), NHA, Islamabad;
- General Manager (Design), NHA, Islamabad;
- General Manager (Planning), NHA, Islamabad;
- General Manager (P&CA), NHA, Islamabad;

MINUTES OF PRE-PROPOSAL
MEETING HELD ON 9th January, 2018

Consultancy Services for Design Review and Construction supervision for Dualization & Improvement of Sarai Gambila to Karak Section of Indus Highway N-55 (61 km)

A Pre-Proposal Meeting was held in NHA Auditorium at 1100 hours on 9th January, 2018 to discuss the Request for Proposal (RFP) for the Subject Services. Following NHA officers and representatives of prospective consultants attended the meeting:

- National Highway Authority
 - Mr. Parkash Lohano ... General Manager (Planning)
 - Mr. Muhammad Azam ... Director (P&CA) - III
 - Mr. Dawood Khan ... Deputy Director (P&CA) - II
 - Mr. Rafiq Alam ... Assistant Director (Design)
- Consultants
 - Mr. Abdul Hameed ... M/s Republic Engineering Cooperation.
 - Mr. Qazi Ahsan ... M/s NESPAK (Pvt.) Ltd.
 - Mr. Niaz Ahmad ... M/s ABM Engineers
 - Mr. Adeel Bar ... M/s SGA Pakistan.
 - Mr. M. Sarwar ... M/s ACE (Pvt.) Ltd

2. The queries submitted during the above mentioned pre-proposal meeting and their clarifications/ replies are summarized below for information of all prospective bidders:

Sr. No.	Queries	Reply
1.	We have gone through clause 5.2.1 (1-b) on page 127-128 that it has been specified there that the billing consultancy firm must have experience of construction supervision of at least 1 bridge over a major river with minimum length of 500 m. This has given rise to 2 following question in our mind: That the project is about the Dualization of Indus Highway (N-55) from Karak to Kohat and we believe that the alignment does not cross any major river and this condition appear to be superfluous. It this is correct. We request you to delete this condition.	Not Agreed, proceed as per RFP.
2.	We are going to compete as Joint Venture with Techno in this Bid. We would appreciate if it is clarified that either of the companies of Joint Venture has supervised such a bridge, then it will meet the requirement of the RFP for the Joint Venture (JV)	Formation of Joint Venture for submission of bid is at discretion of consultants, however it is worth to mention that proposal will be evaluated jointly as single entity.

... 000 0 000 ...



Tender No. 6(461)

National Highway Authority



REQUEST FOR PROPOSAL

FOR

**CONSULTANCY SERVICES
FOR**

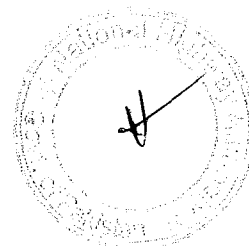
**DESIGN REVIEW AND CONSTRUCTION
SUPERVISION FOR DUALIZATION &
IMPROVEMENT OF SARAI GAMBILA TO KARAK
SECTION OF INDUS HIGHWAY N-55
(61 KM)**

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JANUARY, 2018

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GOVERNMENT OF PAKISTAN
NATIONAL HIGHWAY AUTHORITY
28-Mauve Area, G-9/1, Post Box No. 1205,
ISLAMABAD

Dated the _____
Ref No. _____

LETTER OF INVITATION

To,
All consultants

Gentlemen!

We extend warm welcome to you and invite you to participate in this project. We hope that you will live up to your reputation and provide us accurate information so that the evaluation is carried out "just and transparent". Please understand that the contents of this RFP, where applicable, shall be deemed part of the contract agreement. An example to this affect can be the contents of your work plan and methodology which you shall be submitting in your Technical Proposal. Since that is the basis of the selection, therefore, it shall become part of the contract agreement subject to approval/revisions of the same by NHA during the negotiations. Similarly, all other services and the content contributing to services shall be deemed part of the contract agreement unless it is specifically mentioned for any particular item up-front in your Technical Proposal which obviously will make your Proposal a conditional proposal whereby, authorizing NHA to may or may not consider to evaluate your Proposal. Please understand that if no such mention appears up-front (i.e. on front page of Technical Proposal) then it shall be deemed that the consultant is in 100% agreement to the above. You are also advised to kindly read the RFP thoroughly as it can drastically affect the price structure for various services which may not be appearing directly in the terms of reference. In the end, we appreciate your participation and hope that you will feed a good proposal to merit consideration by NHA.

Your attention is particularly drawn towards paragraph 1.10, 3.1.1, subparagraph 3.1.2 (d), paragraphs 3.1.3, 3.1.5, 5.2.1 and 6.5 of Instructions to Consultants (Annex A) as well as subparagraphs 1.7 (v), 1.7 (vii), 1.7 (viii), 1.8 (a) and 1.8 (b) in Data Sheet (Annex B) and Note under the Table for check list of Required Forms (in Technical Proposal) to avoid the risks of Disqualification/ Rejection/ loosing marks/ Penalty.

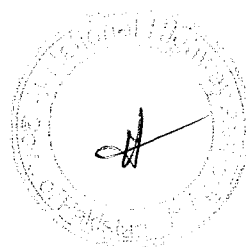
However, the Client at its own discretion reserves the right to EITHER seek clarification on non-compliance of the Instructions and rectify or not the shortcomings only in Technical Proposals (under similar treatment to each consultant), OR not, prior to opening of Financial Proposals (which shall be kept unopened till complete evaluation of Technical Proposals). No alteration in Financial Proposals shall be made except during the negotiations subject to Procurement of Consultancy Services Regulations 2010 as notified by Public Procurement Regulatory Authority.



General Manager (P&CA)
Telephone: +92-51-9032727,
Fax: +92-51-9260419
E-mail: gmpca.nha@gmail.com,
Website: www.nha.gov.pk

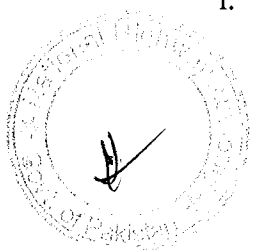
ATTACHMENTS

1. Instructions to Consultants (Annex A)
2. Data Sheet (Annex B)
3. Technical Proposal Forms
4. Financial Proposal Forms
5. Appendix A (Terms of Reference)
6. Appendix B (Person-Months and Activity Schedule)
7. Appendix C (Client's Requirements from the Consultants)
8. Appendix D (Personnel, Equipment, Facilities, and other services to be provided by the Client).
9. Appendix E (Copy of Model Agreement)



INSTRUCTIONS TO CONSULTANTS**1. GENERAL**

- 1.1 Desiring consultants are invited to submit a technical and a financial proposal for consulting services required for the assignment named in the attached Data Sheet (Annex B). The proposals could form the basis for future negotiations and ultimately a Contract between the selected Consultant and the Client named in the Data Sheet.
- 1.2 A brief description of the assignment and its objectives are given in the Data Sheet which are elaborated in Appendix A (Terms of Reference) to this RFP.
- 1.3 The assignment shall be implemented in accordance with the phasing indicated in the Data Sheet. (When the assignment includes several phases, continuation of services for the next phase shall be subject to satisfactory performance of the previous phase, as determined by the Client).
- 1.4 The Client (NHA) has been entrusted the duty to implement the Project as Executing Agency by GOP and funds for the project have been approved and provided in the budget for utilization towards the cost of the assignment, and the Client intends to apply part of the funds to eligible payments under the Contract for which this LOI is issued.
- 1.5 To obtain first-hand information on the assignment and on the local conditions, you are encouraged to pay a visit to the Client before submitting a proposal and attend a pre-proposal conference if specified in the Data Sheet. Your representative shall meet the official named in the Data Sheet. Please ensure that the official is advised of the visit in advance to allow adequate time for him to make appropriate arrangements. You must fully inform yourself of local conditions and take them into account in preparing your proposal.
- 1.6 The Client shall provide the inputs specified in the Data Sheet, assist the Consultants in obtaining licenses and permits needed to carry out the services, and make available relevant project data and reports.
- 1.7 It is notified that:
- i. The cost of preparing the proposal and of negotiating the Contract, including visit to the Client, are not reimbursable as a direct cost of the Assignment, and
 - ii. The Client is not bound to accept any or all of the proposals submitted.
- 1.8 An invitation to submit proposals has been sent to the firms as listed/stated in the Data Sheet.
- 1.9 In order to avoid conflicts of interest:
- i. A firm that has been engaged by the Client to provide goods, works, or non-consulting services for a project, or any of its Affiliates, shall be disqualified from providing consulting services resulting from or directly related to those goods, works, or non-consulting services. Conversely, a firm hired to provide consulting services for the preparation or implementation of a project, or any of its Affiliates,



shall be disqualified from subsequently providing goods or works or non-consulting services resulting from or directly related to the consulting services for such preparation or implementation.; and

- ii. A Consultant (including its Experts and Sub-consultants) or any of its Affiliates shall not be hired for any assignment that, by its nature, may be in conflict with another assignment of the Consultant for the same or for another Client.
- 1.10 A firm may submit its proposal for the Assignment either as an independent Consultant or as a Member of a JV Consultants but participation of a firm occurring in more than one proposal for the Assignment is not allowed. In case a firm participates in more than one proposal, all such proposals shall be **disqualified and rejected**. However this condition does not apply for individual Specialist Sub-consultant(s).

2. DOCUMENTS

- 2.1 To prepare a proposal, please use the attached Forms/Documents listed in the Data Sheet.
- 2.2 Consultants requiring a clarification of the Documents must notify the Client, in writing, not later than Fourteen (14) days before the proposal submission date. Any request for clarification in writing, or by cable, telex or tele-fax shall be sent to the Client's address indicated in the Data Sheet. The Client shall respond by cable, telex or telefax to such requests and copies of the response shall be sent to all invited consultants.
- 2.3 At any time before the submission of proposals, the Client may, for any reason, whether at its own initiative or in response to a clarification requested by an invited consulting firm, modify the Documents by amendment. The amendment shall be sent in writing or by cable, telex or telefax to all invited consulting firms and will be binding on them. The Client may at its discretion extend the deadlines for the submission of proposals.

3. PREPARATION OF PROPOSAL

Desiring consultants will submit a Technical and a Financial Proposal. The proposals shall be written in English language.

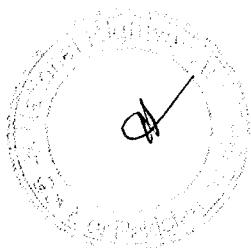
3.1 Technical Proposal

- 3.1.1 The Technical Proposal should be submitted using the format specified and shall include duly signed and stamped forms appended with the RFP. This is a mandatory requirement for evaluation of proposals and needs to be filled up carefully.

The proposals should be bound in the hard book binding form to deny the possibility of removal or addition of page(s). All the pages of proposals must be signed and stamped in original by authorized representative of the firm/JV. All the pages must be numbered starting from first page to last. Any proposal found not adhering to these requirements may be **rejected** at the time opening.

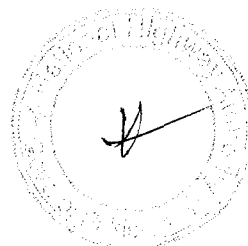
3.1.2 In the Technical Proposal, the general approach and methodology shall be proposed for carrying out the services covered in the Term of Reference, including such detailed information as deemed relevant together with consultant's appreciation of the Project from provided details and

- a. A detailed overall work programme to be provided with timing of the assignment of each Key Personnel or other staff member assigned to the Project.
- b. An estimate of the total number of person-months and Project duration required.



- c. Clear description of the responsibilities of each Key Personnel within the overall work programme.
 - d. The Curriculum Vitae of all Key Personnel and an Affidavit on stamp paper duly attested by Oath Commissioner to the effect that the proposed personnel shall be available for the assignment in the project duration and their present place of duty may also be mentioned. Failure to provide the Affidavit may result in to no further evaluation of the proposal. The consultants are advised to suggest such names that shall be available for the Assignment.
 - e. The Technical Proposal shall include duly filled in forms provided in this RFP: the name, background, and professional experience of each Key Personnel to be assigned to the Project, with particular reference to his experience of work of a nature similar to that of the proposed assignment.
 - f. Current commitments and past performance are the basic criteria in evaluation of Technical Proposal. Consultants are required to provide the details of present commitments/ongoing jobs as referred in the Form TECH-9 of Technical Proposal. Further, the basis for considering the past performance is the report from Design Section and Construction Wing of NHA.
- 3.1.3 While preparing the Technical Proposal, consultants are expected to examine all terms and instructions included in the RFP. Failure to provide all requested information shall be at consultant's risk and may result adversely in the scoring of the proposal. The proposal should be prepared as per RFP and any suggestion or review of staff etc. should be clearly spelt out in Form TECH-4. This will be discussed at the time of negotiation meeting as and when called.

Penalty against non-compliance with the maximum page requirement based in the '**CHECKLIST OF REQUIRED FORMS**' provided in the Section of Technical Proposal Forms will be one (01) score point per excess page to be deducted from the total technical score. The consultants are instructed to submit the CVs of Key Personnel by truly following the format attached at Form TECH-5. The CV's submitted on format in deviation to that specified are susceptible of scoring low.



3.1.4 During preparation of the Technical Proposal, consultants must give particular attention to the following:

- i. Consultant may utilize the services of expatriate experts but only to the extent for which the requisite expertise is not available with any Pakistani firm. In case of JV, the proposal should state clearly partners will be "Jointly and Severally" responsible for performance under the Contract and One (Representative) partner will be solely responsible for all dealings with the Client on behalf of the JV. Its Power of Attorney on this account is to be enclosed. The Representative partner shall retain the responsibility for the performance of obligations and satisfactory completion of the consultancy services. PEC registers a foreign consulting firm for issuing license to provide consultancy services in Pakistan, which is based on formation of JV with the condition that the foreign consulting firm shall provide only that share of consultancy services by the JV for which expertise is not available with Pakistani consulting firms. A copy of JV agreement to be provided at the time of finalizing the contract documents with specific responsibilities and assignments to be looked after by each partner.
- ii. Subcontracting part of the assignment to the other consultants is discouraged and only individual Specialist Sub-Consultants (having unique expertise which is not available with others) may be included.
- iii. The Key Personnel proposed shall preferably be permanent employees of the firm unless otherwise indicated in the Data Sheet.
- iv. The estimated number of Key Personnel person-months required for the Assignment is stated in the Data Sheet. The proposal should be based on a number of Key Personnel person-months substantially in accordance with the above number. However consultants may propose changes in the light of their experience through particular comments on the TOR.
- v. Proposed personnel should have experience preferably under conditions similar to those prevailing in the area of the Assignment. The minimum required experience of proposed Key Personnel shall be as listed in the Data Sheet.
- vi. No alternative to Key Personnel may be proposed, and only one curriculum vitae (CV) may be submitted for each position.
- vii. If the Data Sheet specifies training as a major component of the Assignment, a detailed description of the proposed methodology, staffing, budget and monitoring is to be provided.

3.1.5 The Technical Proposal shall not include any financial information. The Consultant's comments, if any, on the data, services and facilities to be provided by the Client and indicated in the TOR shall be included in the Technical Proposal. A Technical Proposal containing any financial information will be treated as non-responsive resulting in to rejection of the proposal.

3.2 Financial Proposal

3.2.1 The Financial Proposal should be submitted using the format specified and enclosed with this RFP. This is a mandatory requirement for evaluation of proposals and needs to be

filled up carefully. The total cost is to be mentioned in the Form FIN-7 and accordingly in Form FIN-1 too.

3.2.2 The Financial Proposal should list the costs associated with the Assignment. These normally cover remuneration for staff in the field and at headquarters, per diem, housing, transportation for mobilization and demobilization, services and equipment (vehicles, office, equipment, furniture, and supplies), printing of documents, surveys, and investigations. These costs should be broken into foreign (if applicable) and local costs. The Financial Proposal should be prepared using the formats attached as Forms FIN- 1 to FIN- 7.

3.2.3 The Financial Proposal shall also take into account the professional liability as provided under the relevant PEC Bye-Laws and cost of insurances specified in the Data Sheet.

3.2.4 Costs may be expressed in currency (s) listed in the Data Sheet.

4. SUBMISSION OF PROPOSALS

4.1 Consultants shall submit one original Technical Proposal and one original Financial Proposal and the number of copies of each indicated in the Data Sheet. Each proposal shall be in a separate envelope indicating original or copy, as appropriate. All Technical Proposals shall be placed in an envelope clearly marked "Technical Proposal" and the Financial Proposals in the one marked "Financial Proposal". These two envelopes, in turn, shall be sealed in an outer envelope bearing the address and information indicated in the Data Sheet. The envelope shall be clearly marked, "DO NOT OPEN, EXCEPT IN PRESENCE OF THE EVALUATION COMMITTEE."

4.2 In the event of any discrepancy between the copies of the proposal, the original shall govern. The original and each copy of the Technical and Financial Proposals shall be prepared in indelible ink and shall be signed by the authorized representative of the consultant. The representative's authorization shall be confirmed by a written power of attorney accompanying the proposals. All pages of the Technical and Financial Proposals shall be signed by the person or persons signing the proposal.

4.3 The proposal shall contain no interlineations or overwriting except as necessary to correct errors made by the consultants themselves. Any such corrections shall be initialed by the person or persons signing the proposal.

4.4 The completed Technical and Financial Proposals shall be delivered on or before the time and date stated in the Data Sheet. The location for the submission of proposals is indicated in the Data Sheet.

4.5 The proposals shall be valid for the number of days stated in the Data Sheet from the date of its submission. During this period, consultants shall keep available the Key Personnel proposed for the Assignment. The Client shall make its best effort to complete negotiations at the location stated in the Data Sheet within this period.

5. PROPOSAL EVALUATION

5.1 Evaluation Procedure and Criteria

5.1.1 A quality cum cost based procedure shall be adopted in ranking of the proposals. The technical evaluation shall be carried out first, followed by the financial evaluation. Firms shall be ranked using a combined technical/financial score.



5.1.2 The evaluation committee will correct any computational errors in Financial Proposals. When correcting computational errors, in case of discrepancy (i) between a partial (sub-total) amount and the total amount, or (ii) between the amounts derived by multiplying unit price with quantity and the total price or (iii) between words and figures, the formers will prevail. However, items described in the Technical Proposals but not priced, in the Financial Proposals shall be assumed to be included in the prices of other activities or items and no corrections are made to the Financial Proposal. In case an activity or item is quantified in the Financial Proposal differently from the Technical Proposal, the evaluation committee shall correct the quantification indicated in the Financial Proposal so as to make it consistent with that indicated in the Technical Proposal for further correction by applying the unit price included in the Financial Proposal to the consistent/corrected quantity. However, the proposals that quote higher than the required input of person-months as per this RFP will not be adjusted. Whereas the proposals quoting lesser than the required input of person-months as per this RFP shall be adjusted as follows. If unit price for the subject person-month is available, the same shall be applied; and if the unit price for the subject person-months is not available, highest unit price for an activity or item of the same category [international or national (Key Personnel or other Personnel)] as provided in the Financial Proposals shall be applied. The Reimbursable direct cost shall not be adjusted and the same shall be capped for the Assignment.

5.2 Technical Proposal

5.2.1 The evaluation committee appointed by the Client shall carry out its evaluation for the project(s) as listed in Para 1.1, applying the evaluation criteria and point system specified in the Data Sheet. Each responsive proposal shall be attributed a technical score (St). Firms scoring less than seventy (70) percent points shall be rejected and their financial proposals returned un-opened.

5.3 Financial Proposal

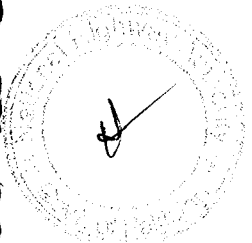
5.3.1 The Financial Proposals of the three top-ranking qualifying consulting firms on the basis of evaluation of Technical Proposals shall be opened in the presence of the representatives of these firms, who shall be invited for the occasion and who care to attend. The Client shall inform the date, time and address for opening of Financial Proposals as indicated in the Data Sheet. The total price and major components of each proposal shall be publicly announced to the attending representatives of the firms.

5.3.2 The evaluation committee shall determine whether the Financial Proposals are complete and without computational errors; all errors/discrepancies and deviations from respective Technical Proposals as well as RFP shall be dealt with for subsequent scoring in accordance with procedure and criteria given in Para 5.1.2 herein above. The lowest Financial Proposal (Fm) among all shall be given a financial score (Sf) of 1000 points. The financial scores of the proposals shall be computed as follows:

$$S_f = (1000 \times F_m) / F$$

(F = amount of specific Financial Proposal)

5.3.3 Proposals, in the quality cum cost based selection shall finally be ranked according to their combined technical (St) and financial (Sf) scores using the weights (T = the weight given to the Technical Proposal, P = the weight given to the Financial Proposal; and T+P=1) indicated in the Data Sheet:



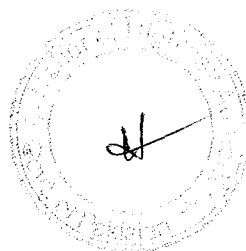
$$S = S_t \times T \% + S_f \times P \%$$

6. NEGOTIATION

- 6.1 Prior to the expiration of proposal validity, the Client shall notify the successful consultant that submitted the highest ranking proposal in writing, by registered letter, cable telex or facsimile and invite it to negotiate the Contract. The proposed Chief Resident Engineer/ Resident Engineer shall also be invited to attend the negotiations.
- 6.2 Negotiations normally take from two to five days. The aim is to reach agreement on all points and initial a draft contract by the conclusion of negotiations.
- 6.3 Negotiations shall commence with a discussion of consultant's Technical Proposal including proposed methodology, work plan, staffing and any suggestions which may have been made to improve the TOR. Agreement shall then be reached on the final TOR, the staffing, and the bar charts, which shall indicate activities, staff, periods in the field and in the home office, staff months, logistics and reporting.
- 6.4 Changes agreed upon shall then be reflected in the Financial Proposal, using proposed unit prices (no negotiation of the person-month rates).
- 6.5 Having selected Consultant on the basis of, among other things, an evaluation of proposed Key Personnel, the Client expects to negotiate a contract on the basis of the staff named in the proposal. Prior to contract negotiations, the Client shall require assurances that the personnel will be actually available. The Client shall not consider substitutions of Key Personnel except in cases of un-expected delays in the starting date or incapacity of Key Personnel for reasons of health. Failure to assure the availability of Key Personnel or substitution (equal or better) as exception only may result in rejection of Consultant's proposal.
- 6.6 The negotiations shall be concluded with a review of the draft form of the contract. The Client and the Consultant shall finalize the contract to conclude negotiations. If negotiations fail, the Client shall invite the consultant that received the second highest score in ranking to Contract negotiations. The procedure will continue with the third in case the negotiation process is not successful with the second ranked consultant (and so on).

7. AWARD OF CONTRACT

- 7.1 The Contract shall be awarded after successful negotiations with the selected Consultant and approved by the competent authority. Upon successful completion of negotiations/ initialing of the draft contract, the Client shall promptly inform the other consultants that their proposals have not been selected.
- 7.2 The selected Consultant is expected to commence the Assignment on the date and at the location specified in the Data Sheet.



DATA SHEET

LOI Clause #

1.1 The name of the Assignment is:

Consultancy Services for Design Review and Construction Supervision for Dualization & Improvement of Sarai Gambila to Karak Section of Indus Highway N-55 (61 Km)

The name of the Client is:

National Highway Authority (NHA)

1.2 The description and the objectives of the assignment are:

As per TOR

1.3 Phasing of the Assignment (if any):

- Nil -

1.5 Pre-Proposal Conferences:

Yes No

Pre-proposal conference will be held on:

9th January, 2018 at 1100 Hours
in NHA Auditorium, National Highway Authority, 28 Mauve Area, G-9/1,
Islamabad.

Name of the official is:

Imtiaz Ahmed Khokhar
 (General Manager P&CA)
 E-mail: gmpca.nha@gmail.com

1.6 The Client shall provide the following inputs:

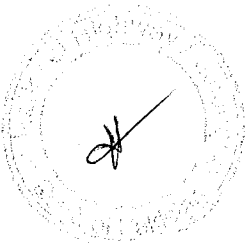
As per TOR and Appendix D

1.7 Following sub-clauses are added:

- iii. The supervision of the project shall commence upon undertaking of the construction works by the contractor and shall be notified through issuance of commencement notice to the selected consultant by NHA. Any inordinate delay or cancellation of the construction work for any reason including non-availability of funds shall not entitle the consultants to any financial or legal claims. However when the project shall commence the supervisory consultants shall maintain the right subject to availability of proposed Key Personnel (professional staff) based on which the consultant was selected or if the delay is beyond six months then equally competent Key Personnel with equal or higher qualification and experience shall be pre-requisite for consideration of issuance of commencement notice by NHA. In case the work is delayed or abandoned for any reason whatsoever, the consultant shall not have any legal recourse.



- iv. The consultant shall be responsible to have the whole construction work completed through the contractor in a professional manner so that all items of construction work are completed from one end to the other including paying attention to site clearance of debris or any other leftover material. The trees/shrubs prone to landscape and earth work slopes grassed in ROW. All signs of construction work dispensed with. To achieve this objective consultant may include the price for such incidental or ancillary service which will lead to the final completion of the assignment in the price quoted by the consultant who shall remain liable for making final measurements of the Works and to issue Final Payment Certificate of the Contractor. No separate costs are payable as extra costs for this service. All such costs shall be included in these rates submitted by the consultant in its financial proposal. The consultant has to basically ensure that contractor has completed entire construction work as per Works Contract with particular reference to site clearance before taking over the project on completion.
- v. The consultants may better not to propose names of Key Personnel already proposed in other proposals which are being evaluated by NHA or contract(s) awarded recently. This will affect adversely marking of these Personnel in evaluation of the technical proposal. Their secured points are liable to be reduced by 50% if their names appear in more than one previous proposal in which they are ranked No.1. Further the existing load of work with a firm shall be considered as one of the factors for the consideration in the award of the contract. No CV of any alternate Personnel shall be accepted during evaluation.
- vi. Form TECH-4 is meant for comments on provisions contained in RFP and TOR and unless the observations are noted in this particular Form, anything written elsewhere on this account including financial implications, if any, shall be considered of no consequence in the evaluation process and award of the contract.
- vii. Consultants may form a Joint Venture (JV) to qualify for the Assignment in which case the contract will be signed between the Client and all members of the JV on the prescribed Form included in Appendix E (copy of Model Agreement) subject to the ranking and successful negotiations. A JV may include at the most four members. To promote the consultancy industry in the country, 50 marks (out of 1000 for Evaluation) are allocated for Transfer of Knowledge in the form of JV with a new / less experienced firm by sharing at least 20% of Assignment with them.
- viii. The term associates, if used in the proposal or otherwise shall not be considered as an alternative of JV member. Any personnel proposed for the Assignment but belonging to the so called associates shall not be marked in evaluation of technical proposal like in case of Sub-consultants (except individual Specialist Sub-consultants having unique expertise which is rarely available OR an expatriate Personnel) who are not supposed to contribute in qualification of their main consultants.
- ix. Consultant's Head Office Support will be mandatory during Supervision; the firm shall be bound to provide design input required on the Site or advice on contractual matters; the cost for the same must be built in the financial proposal. Responsibility for the team in field will be backed by the Consultant's Head Office; the Head Office will assume full responsibility for the team in field. Any key position that remains vacant for more than one month that was required to be filled for that period, a compensation equivalent to the charge rate of that individual will be imposed. For clarification, the invoice will not include the charge rate of the missing individual and additionally, the charge rate of one month for that individual will be deducted from the invoice. This will be replicated for all missing key personnel. For the 2nd month, the compensation payment will be doubled. For the 3rd month, an additional warning will be issued. If the issue persists in the fourth month, the firm can be penalized by invoking conditions of contract and even to the extent of consideration for blacklisting.



1.8 The invited firms are:

Any firm meeting the following requirements:

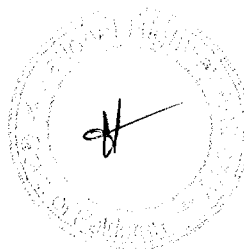
- (a) Valid Registration Certificate of Pakistan Engineering Council with relevant Project Profile Codes. Foreign consulting firms shall make JV in accordance with Bye-Law 6(2) and Bye-Law 9 of the Pakistan Engineering Council (Conduct and Practice of Consulting Engineers) Bye-Laws 1986. Failure to provide valid Registration Certificate (license) of the firm (each member in case of JV) by the PEC will entitle the Client to reject the proposal.
- (b) Affidavit in original bearing the subject with project name on stamp paper duly attested by the Oath Commissioner to the effect that the firm has neither been blacklisted nor any contract rescinded in the past for non-fulfillment of contractual obligations (By all partner firms in case of JV). Non submission of the affidavit may be treated as disqualification resulting in to no further evaluation of the proposal.
- (c) Facilities available with the consultant to perform their functions effectively (proper office premises, software, hardware, record keeping etc.)
- (d) Client's satisfaction certificates (Performance Reports) for the last three relevant assignments from the respective Clients. Moreover any adverse report regarding performance of consultant on NHA projects received from NHA's any relevant quarter may become basis for its disqualification from the Assignment above named in clause 1.1.
- (e) Person-months of staff and Project Duration as per TOR.

2.1 The Documents are:

- (i) Letter of Invitation,
- (ii) Instructions to Consultants,
- (iii) Data Sheet,
- (iv) Technical Proposal Forms,
- (v) Financial Proposal Forms,
- (vi) Appendix-A Terms of Reference (including Background information),
- (vii) Appendix-B: Person-Months and Activity Schedule,
- (viii) Appendix-C: Client's Requirements from the Consultants,
- (ix) Appendix-D: Personnel, Equipment, Facilities and Other Services to be provided by the Client, and
- (x) Appendix-E Copy of Model Agreement (Draft Form of Contract & Appendices etc.)

2.2 The address for seeking clarification is:

General Manager (P&CA)
National Highway Authority
28 Mauve Area, G-9/1, Islamabad.
Phone: +92-51-9032727
Fax: +92-51-93260419
E-mail: gmpca.nha@gmail.com



3.1.4

- iii. Proposed Key Personnel shall preferably be permanent employees who are employed with the consultants at least six months prior to submission of Proposal.

Yes _____ No _____

- iv. The minimum number of person-months of Key Personnel is:

Total Expatriates: _____ **Person-Months (Not used)**

Total Local Experts: **221.50 Person-Months**

- v. The minimum required qualification and experience of proposed Key Personnel is given in Appendix – A “Terms of Reference”

- vii. Training is a major component of this Assignment:

Yes _____ No _____

3.2.3 Professional liability, insurances (description or reference to appropriate documentation):

- i. The consultants shall be responsible for Professional Indemnity Bond of the required amount at their own cost. This bond shall be in the joint name of Consultant and the Client.
- ii. The consultants are required to insure their Employees and Professionals for Hospitalization/ Medical, Travel and Accident Cover for the duration of the Contract.
- iii. Other details provided in Para 3.5 of Special Conditions of Contract in Model Agreement (Appendix E).

3.2.4 Consultants shall quote the rates of remuneration for local personnel in Pak. Rupees, whereas only the rates of remuneration for expatriate personnel shall be quoted in US dollar currency. The payment however, to the Consultant for both the local as well as the expatriate personnel will be made in Pak Rupees by converting US\$ into Pak. Rupees by applying USD TT/ OD Selling Rate of National Bank of Pakistan on the prevailing date (i.e. the Date of Payment) as per TT/OD Selling Rate from website: <http://www.forex.com.pk/> for Inter Bank Rates.

For comparison of the Financial Proposals of consultants the US dollar's component of Financial Proposals will be converted to Pak Rupees as per following exchange rates:

The official source of the Selling (exchange) Rate is: National Bank of Pakistan as per TT/OD Selling Rate from the website: <http://www.forex.com.pk/> for Inter Bank Rates.

The date of the exchange rate is: The date of submission of proposals.

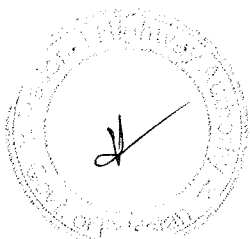
4.1 The number of copies of the Proposal required is:

TECHNICAL PROPOSAL:

ONE ORIGINAL AND THREE COPIES WITH CD (SOFT FORM OF COMPLETE TECHNICAL PROPOSAL IN PDF FORM) IN SEALED ENVELOPE

FINANCIAL PROPOSAL:

ONE ORIGINAL WITH CD (SOFT FORM OF COMPLETE FINANCIAL PROPOSAL IN PDF AS WELL AS MS WORD/ EXCEL FORMS) IN SEALED ENVELOPE



The address for writing on the proposal is:

General Manager (P&CA)
National Highway Authority
28, Mauve Area G-9/1 Islamabad
Telephone: +92-51-9032727
Facsimile: +92-51-9260419
Email: gmpca.nha@gmail.com

4.4 The date and time of proposal submission is:

1130 hours on 23rd January, 2018

The location for submission of proposal is:

**National Highway Authority Auditorium
2nd Floor, 27 Mauve Area, G-9/1, Islamabad**

4.5 Validity period of the proposal is:

180 days

The bid shall remain valid upto:

22nd July, 2018

Location for Negotiation is:

**National Highway Authority Auditorium
2nd Floor, 27 Mauve Area, G-9/1, Islamabad**

5.2.1 The evaluation of Technical Proposal shall be based on following criteria:

Description/ Items	Points
1. Experience of the Firm	100
1-a. General Experience in road Transport Sector	<u>(25)</u>
1-b. Specific Experience related to particular Assignment (Construction Supervision of atleast one Bridge over a major river with total length of 500 M minimum)	<u>(75)</u>
2. Approach & Methodology	250
2-a Appreciation of the Project	<u>(70)</u>
(i). Evidence of Site Visit with Photographs	<u>(30)</u>
(ii). Clarity of appreciation	<u>(20)</u>
(iii). Comprehensiveness of appreciation	<u>(20)</u>
2-b Problem Statement/ Understanding of Objectives	<u>(50)</u>
(i). Identification of Problems/ Objectives	<u>(30)</u>
(ii). Components of Proposed Services	<u>(20)</u>
2-c Methodology	<u>(80)</u>



(i).	<i>Proposed Solutions for this Project</i>	(30)
(ii).	<i>Quality of Methodology</i>	(20)
(iii).	<i>Conciseness, clarity and completeness of proposal</i>	(30)
2-d	Suggested changes for improvement in TOR	(10)
2-e	Work Program	(20)
2-f	Staffing Schedule	(20)
3.	Key Personnel	450
4.	Performance Certification from clients	100
5.	Present Commitments (current engagement and available strength – justification)	50
6.	Transfer of Knowledge * (Methodology/ Plans)	50
	Total Points:	1000
	Minimum qualifying technical score	70%

* Transfer of knowledge would be in the form of joint venture with new/ less experienced firm(s) by sharing at least 20% of Assignment with them for promoting the consultancy industry in the country.

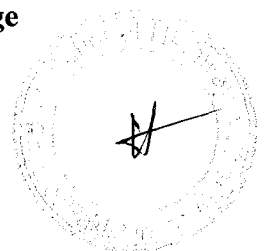
The percentage distribution of weightage earmarked for evaluation sub-criteria for suitability of Key Personnel are:

a. Design Review Team:

Description/ Items	Percentage
i. Academic and General Qualifications	30%
ii. Professional experience related to the Project	60%
iii. Status with the firm (Permanent & duration with Firm)	10%

b. Supervision Phase Team:

Description/ Items	Percentage
i. Academic and General Qualifications	30%
ii. Professional experience related to the Project	65%
iii. Status with the firm (Permanent & duration with Firm)	5%



Form of Summary Evaluation and Personnel Evaluation Sheets for Technical Proposal (QCBS) is attached at the end of Data Sheet.

5.3.1 The words “three top-ranking qualifying consulting firms” is deleted in its entirety and replaced with the words “qualifying consultants”.

The date, time and address of the Financial Proposal opening are:

After evaluation and approval of Technical Proposals (to be informed later).

5.3.3 The weights given to the Technical and Financial Proposals are:

Technical:	80%
Financial:	20%

6.3 Add following at the end of this Para:

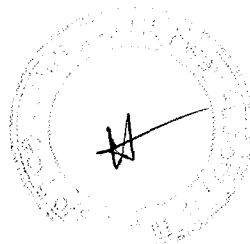
The final person-months of each personnel are subject to adjustment at the stage of contract negotiation in line with demonstrated approach & methodology and need basis.

6.5 Add following at the end of this Para:

The Consultant is bound to replace all the Key Personnel proposed who scored less than 60% marks in the Personnel Evaluation, if the Client so requests. If the Consultant refuses to replace such Key Personnel, the Client reserves the right to reject its proposal and invite the Consultant that received the second highest score in ranking to Contract negotiations.

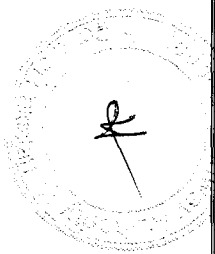
7.2 The Assignment is expected to commence in:

April, 2018



SUMMARY EVALUATION SHEET FOR TECHNICAL PROPOSAL (QCBS)

EVALUATION CRITERIA		Max. Weight*	Firm 1		Firm 2	
			Rating	Score	Rating	Score
I. Experience of the Firm		100				
	General Experience in road Transport Sector	25				
	Specific Experience related to particular Assignment	75				
II. Approach and Methodology		250				
III. Key Personnel		450				
	Design Review Team	105				
	a) Highway Design Engineer/ Team Leader	30				
	b) Sr. Structure Engineer	15				
	c) Geotechnical Engineer	15				
	d) Geometric Design Engineer	15				
	e) Road Safety Engineer	15				
	f) Drainage Engineer	15				
	Construction Supervision Team	345				
	g) Resident Engineer/ Team Leader	50				
	h) Assistant Resident Engineer (Structures)-I & II	2x35				
	i) Assistant Resident Engineer (Bridges)-I & II	2x35				
	j) Assistant Resident Engineer (Highways)-I, II & III	3x35				
	k) Material Engineer	35				
	l) Contract Engineer	15				
IV. Performance Certification from clients		100				
V. Present Commitments (current engagement and available strength – justification)		50				
VI. Transfer of Knowledge (Methodology/ Plans)		50				
	The Joint Venture (JV) shall be evaluated in the same manner as a single entity, since they function as one unit.					
TOTAL		1000				



Excellent - 100% Very Good – 90 to 99% Above Average – 80 to 89% Average – 70 to 79% Below Average – 1 to 69% Non-complying – 0%

Score: Maximum Weight X rating / 100.

Minimum qualifying score is 70% or 700 marks.

PERSONNEL EVALUATION SHEET

POSITION / AREA OF EXPERTISE	Name	Academic and General Qualification *		Project related Experience Weight 60% for design review but 65% for supervision		Status with the Firm** 10% for design review but 5% for supervision		OVERALL RATING (Sum of Weighted Ratings)
		Percentage Rating	Weighted Rating (A)	Percentage Rating	Weighted Rating (B)	Percentage Rating	Weighted Rating (C)	(A+B+C)
(Show all experts to be evaluated)								
Design Review Team								
a) Highway Design Engineer/ Team Leader								
b) Sr. Structure Engineer								
c) Geotechnical Engineer								
d) Geometric Design Engineer								
e) Road Safety Engineer								
f) Drainage Engineer								
Construction Supervision Team								
g) Resident Engineer/ Team Leader								
h) Assistant Resident Engineer (Structures)-I & II								
i) Assistant Resident Engineer (Bridges)-I & II								
j) Assistant Resident Engineer (Highways)-I, II & III								
k) Material Engineer								
l) Contract Engineer								

Rating: - Excellent - 100% Very good – 90-99% Above Average – 80-89% Average – 60-79% Below Average – 1-59%
 Non-complying - 0%

* For **Highway Design Engineer/Team Leader, Sr. Structure Engineer, Geometric Design Engineer, Drainage Engineer, Resident Engineer/ Team Leader, ARE (Structures), ARE (Bridges), ARE (Highways), Material Engineer, Contract Engineer, Road Safety Engineer:** M.Sc. with additional relevant trainings from recognized organizations – 100%; M.Sc. – 90%; B.Sc. with additional courses/ trainings in relevant field – 80%; B.Sc. – 70%.

For **Geotechnical Engineer:** M.Sc. with additional relevant trainings from recognized organizations – 100%; M.Sc. – 90%; B.Sc. with additional courses/ trainings in relevant field – 60%; B.Sc. – 50%.

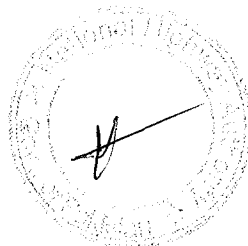
Score = Maximum Weight X rating /100

** These marks for status with the firm shall apply for evaluation of proposed Key Personnel as per following proportion:

Regular employee - 100%
 First time for this assignment - 0%



TECHNICAL PROPOSAL FORMS



Technical Proposal – Forms

{Notes to Consultant shown in brackets throughout this Section provide guidance to the Consultant to prepare the Technical Proposal; they should not appear on the Proposals to be submitted.}

Checklist of Required Forms (subparagraph 3.1.3 of ITC)

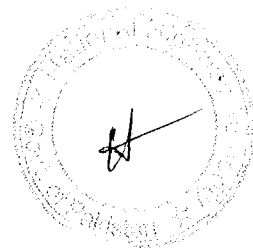
Required, (√)	FORM	DESCRIPTION	Page Limit
√	TECH-1	Technical Proposal Submission Form	
√	TECH-1 Attachment	Proof of legal status and eligibility	
“√” If applicable	TECH-1 Attachment	If the Proposal is submitted by a joint venture, attach a letter of intent or a copy of an existing agreement.	
“√” If applicable	TECH-1 Attachment Power of Attorney	No pre-set format/form. In the case of a Joint Venture, several are required: a power of attorney for the authorized representative of each JV member and a Special power of attorney for the representative of the lead member to represent all JV members.	
√	TECH-2	Consultant’s Organization and Experience.	As given below
√	TECH-2A	A. Consultant’s Organization	3
√	TECH-2B	B. Consultant’s Experience/ Client’s Reference	20
√	TECH-3	Approach Paper on Methodology proposed for Performing the Assignment	50
√	TECH-4	Comments/ Suggestions of Consultant	[See footnote] ¹
√	TECH-4A	A. On the Terms of Reference	n/a
√	TECH-4B	B. On the Counterpart Staff and Facilities	2
√	TECH-5	Format of Curriculum Vitae (CV) for proposed Key Personnel	8 pages each CV
√	TECH-6	Composition of the Team Personnel and the Tasks to be Assigned to each Team Member	n/a
√	TECH-7	Work Plan / Activity Schedule	n/a
√	TECH-8	Work Plan and Time Schedule for Key Personnel	n/a
√	TECH-9	Current Commitments of the Firm	n/a

Note: Failure to provide required attachments with Form TECH-1 will entitle the Client to reject the proposal.

¹ The total number of pages for combined forms TECH-3 and TECH-4 should not exceed 50. A page is defined as one printed side of A4 or letter-size paper with font size of 10 or more.

CHECKLIST OF OTHER DOCUMENTS

1. Valid Registration Certificate(s) of PEC [subparagraph 1.8(a) of Data Sheet].
2. Affidavit in accordance with subparagraph 1.8(b) of Data Sheet.
3. Page numbered, signed, stamped, and duly bound proposal (paragraph 3.1.1 of ITC).
4. Affidavit in accordance with subparagraph 3.1.2(d) of ITC.
5. Technical proposal not to include any financial information (paragraph 3.1.5 of ITC).
6. Letter of Intent/ JV Agreement (Form TECH - 1).
7. Integrity Pact [subparagraph (h) of Form TECH - 1].



TECHNICAL PROPOSAL SUBMISSION FORM

{Location, Date}

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to provide the consulting services for [**Insert the Project Name**] in accordance with your Request for Proposals dated [Insert Date]. We are hereby submitting our Proposal, which includes this Technical Proposal and a Financial Proposal sealed in a separate envelope.

[{If the Consultant is a joint venture, insert the following:

We are submitting our Proposal in a joint venture comprising: {Insert a list with full name and the legal address of each member, and indicate the lead member}. We have attached a copy {insert: "of our letter of intent to form a joint venture" or, if a JV is already formed, "of the JV agreement"} signed by every participating member, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture.}]

[AND

{If the Consultant's Proposal includes individual Specialist Sub-consultant, insert the following:

Our Proposal includes: {Insert full name and country of the individual Specialist Sub-consultant}}]

We hereby declare that:

- (a) All the information and statements made in this Proposal are true and we accept that any misinterpretation or misrepresentation contained in this Proposal may lead to our disqualification and/or may be sanctioned by the Client in compliance of Rule 19 of the Public Procurement Rules, 2004.
- (b) Our Proposal shall be valid and remain binding upon us for the period of time specified in the Data Sheet, Clause 4.5.
- (c) We have no conflict of interest in accordance with ITC Clause 1.9.
- (d) We meet the eligibility requirements as stated in Data Sheet Clause 1.8.
- (e) Neither we, nor our JV member or any of the proposed individual Specialist Sub-consultant prepared the TOR for this consulting assignment.



- (f) Within the time limit stated in the Data Sheet, Clause 4.5, we undertake to negotiate a contract on the basis of the proposed Key Personnel. We accept that the substitution of Key Personnel for reasons other than those stated in ITC, Clause 6.5 may lead to the termination of Contract negotiations.
- (g) Our Proposal is binding upon us and subject to any modifications resulting from the Contract negotiations.
- (h) In compliance (and, if the award is made to us, in execution) of Contract, we undertake to obey the Integrity Pact (attached herewith duly signed by authorized representative and stamped).
- (i) Our Head Office Support will be mandatory during Supervision; our firm shall be bound to provide design input required on the Site or advice on contractual matters; the cost for the same has been built in our financial proposal. Responsibility for the team in field will be backed by our Head Office; our Head Office will assume full responsibility for the team in field.
- (j) Our firm/ each member of our JV is not participating in any other proposal for this Assignment.

We undertake, if our Proposal is accepted and the Contract is signed, to initiate the Services related to the Assignment not later than the date mentioned in Data Sheet 4.5 (*or the date extended with the written consent of Consultant in case of delay in procurement process*).

We understand that the Client is not bound to accept any or all Proposal(s) that the Client receives.

We remain,

Yours sincerely,

Authorized Signature {In full and initials}: _____

Name and Title of Signatory: _____

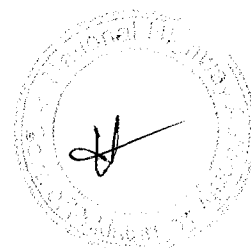
Name of Consultant (firm's name or JV's name): _____

In the capacity of: _____

Address: _____

Contact information (phone and e-mail): _____

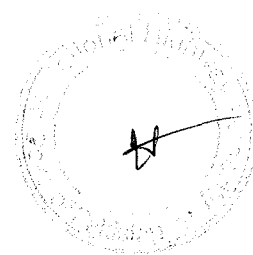
{For a joint venture, either all members shall sign or only the lead member, in which case the power of attorney to sign on behalf of all members shall be attached}



CONSULTANT'S ORGANIZATION

- [1. Provide here a brief description of the background and organization of your Firm, and – in case of a joint venture – of each member for this Assignment.

2. Include organizational chart, a list of Board of Directors, and beneficial ownership².]



² Beneficial ownership shows all owners and major shareholders of the company, including any person or entity who enjoys the benefit of ownership including, but not limited to power of control and influence of the business transactions, receiving dividends or profit share. This includes direct or indirect ownership of the company (e.g. ownership by close relatives)

CONSULTANT'S EXPERIENCE/ CLIENT'S REFERENCE

Relevant Services Carried Out in the Last Ten Years (by each member in case of JV) and by Specialist Sub-consultant, if any, Which Best Illustrate Qualifications

- [1. Using the format below, provide information on each successfully completed reference assignment for which your firm, either independently or as one of the member of Joint Venture (JV), was largely contracted by indicating the share of the firm itself in the JV.
2. Assignments completed by the Consultant's individual Experts working privately or through other consulting firms or that of the Consultant's Specialist Sub-consultant, cannot be claimed as the relevant experience of the Consultant, but can be claimed by the Experts or the Specialist Sub-consultants themselves in their CVs. The Consultant should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested by the Client.]

Assignment Name:		Country of Assignment:
Location within Country:		Key Personnel Provided by Your Firm:
Name of Client:		No of other personnel provided by your Firm:
Address:		Total No of Person-Months of staff of your Firm:
Start Date (Month/Year):	Completion Date (Month/Year):	Approx. Value of Services (in Equivalent / Rs.) provided by staff of your Firm
Name(s) of Member Firm(s), in case of JV:		No. of Person-Months of Key Personnel Provided by member Firm(s), in case of JV
Name of Senior Staff (Project Manager / Coordinator, Team Leader) involved and functions performed:		
Narrative Description of Project		
Description of Actual Services Provided by Staff of your Firm		

Consultants' Name: _____



**APPROACH PAPER ON METHODOLOGY PROPOSED FOR PERFORMING THE
ASSIGNMENT**

[In this part of the Technical Proposal, explain understanding of the objectives of the Assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of the detail of such output. You should explain your methodology to complete the project within time and budget.

The approach must be indigenous project specific approach of Consultant and not a generic one or copy of the TOR.

Based on the specific approach, describe Work Plan which is consistent with inputs provided in Forms TECH – 7 and TECH – 8.

In case of JV, the role of each member must be clearly highlighted. Likewise role of Specialist Sub-consultant, if any, along with necessity must be highlighted.]



COMMENTS / SUGGESTIONS OF CONSULTANT

[Provide here comments and suggestions on the Terms of Reference that could improve the quality/ effectiveness of the Assignment; and on requirements for counterpart staff and facilities, which are provided by the Client, including: administrative support, office space, local transportation, equipment, data, etc., separately under Forms TECH-4A and TECH-4B respectively.]

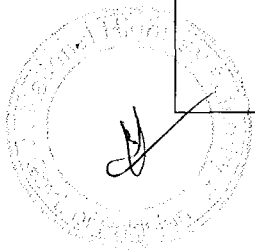
A. On the Terms of Reference (TOR)

- 1.
- 2.
- 3.
- Etc.

B. On the Counterpart Staff and Facilities (data & services to be provided by the Client as indicated in the TOR):

- 1.
- 2.
- 3.
- Etc.

Note:	1. The Consultant may propose a team of experts to best achieve the scope of service and activities and to deliver outputs <u>as required in TOR</u> . Proposed changes in position/individual inputs should be indicated and reasoned in the Technical Proposal but incorporated only in the Financial Proposals (showing excess/saving, in datum Price as worked out with the person months indicated in the RFP, which must be clearly bifurcated and marked red at each place for acceptance or otherwise by the Client at its prerogative during negotiations). (i) The Proposal may assign person-month inputs differently from TOR. However, Key Personnel input totals in the Proposal should not be less than the minimum totals of person-months inputs mentioned in Data Sheet Sub-
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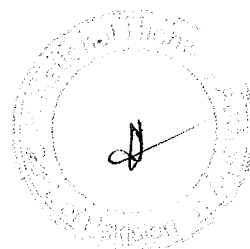


Clause-3.1.4 respectively.

- (ii) The Proposal may include additional expert position/s. However, additional expert will be considered Non Key Personnel for the purpose of proposal evaluation.
- (iii) If the Proposal drops or replaces a Key Personnel position with a different one, the original position will receive zero score in the technical evaluation and the new position added in the Proposal will be considered Non Key and will not be evaluated.
- (iv) DO NOT INCLUDE EXCESS/SAVING INFORMATION IN TECHNICAL PRPOSAL. If Technical Proposal includes financial information, the Proposal will be rejected under Clause-3.1.5 of ITC.

2. When the Consultant suggests a change in scope of service, activities or output, the Consultant must describe the details in Form TECH-4A and the change should not be incorporated in the Proposal. Enumerate each suggestion in Form TECH-4A with incremental cost as a separate attachment to Financial Proposal indicating breakdown into individual remuneration and expenses for each suggestion. Forms FIN-1 to 7 should be prepared without incorporating the changes.

- (i) If Financial Proposal provides no separate attachment about incremental cost to a suggestion, the suggestion will be considered at no additional cost to the Client and no negotiations for an incremental cost shall be done;
- (ii) DO NOT INCLUDE INCREMENTAL COST INFORMATION IN TECHNICAL PRPOSAL. If Technical Proposal includes financial information, the Proposal will be rejected under Clause-3.1.5 of ITC.



FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED KEY PERSONNEL AND SPECIALIST SUB-CONSULTANT (IF ANY)

- 1. Proposed Position: _____
- 2. Name of Firm proposing the Key Personnel: _____
- 3. Name of Person: _____
- 4. Profession: _____
- 5. Date of Birth: _____
- 6. Years with Firm: _____
- 7. Nationality & CNIC Number: _____
- 8. Membership in Professional Societies: _____
(Membership of PEC is Mandatory)
- 9. Detailed Tasks to be Assigned on the Project: _____

10. Key Qualifications:

{Give an outline of the person's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by the person on relevant previous assignments and give dates and locations. Use up to one page}.

11. Education

{Summarize college/university and other specialized education of the person, giving names of institutions, dates attended and degrees obtained}.

12. Employment Record

{Starting with present position, list in reverse order every employment held. List all positions held by the person since graduation, giving dates, names of employing organizations, title of positions held, and location of assignments. For experience in last ten years, also give types of activities performed and client references, where appropriate}.

13. Languages

{Indicate proficiency in speaking, reading, and writing of each language: excellent, good, fair, or poor}.



14. Certification

I, the undersigned, certify to the best of my knowledge and belief that:

- (i) This CV correctly describes my qualifications and experience;
- (ii) I am not a current employee of the Executing or the Implementing Agency;
- (iii) In the absence of medical incapacity, I will undertake this Assignment for the duration and in terms of the inputs specified for me in Form TECH-5 provided team mobilization takes place within the validity of this Proposal;
- (iv) I was not part of the team who wrote the Terms of Reference for this consulting services Assignment;
- (v) I am not currently debarred by any department/ organization/ (semi-autonomous/ autonomous) bodies or such like institutions in Pakistan; and
- (vi) I have been informed by the Firm that it is including my CV in the Proposal for the {name of project and contract}. I confirm that I will be available to carry out the Assignment for which my CV has been submitted in accordance with the implementation arrangements and schedule set out in the Proposal.

[If CV is signed by the Firm's authorized Representative:

I, as the authorized representative of the Firm submitting this Proposal for the {name of project and contract}, certify that I have obtained the consent of the named Key Personnel to submit his/her CV, and that s/he will be available to carry out the Assignment in accordance with the implementation arrangements and schedule set out in the Proposal, and confirm his/her compliance with paras (i) to (v) above.]

I understand that any willful misstatement described herein may lead to disqualification or dismissal, if engaged.

Signature of Key Personnel or authorized
Representative of the Firm(s)

Date: _____
Day/Month/Year

Full name of authorized Representative: _____

{Note: copy or scanned signatures are not allowed}



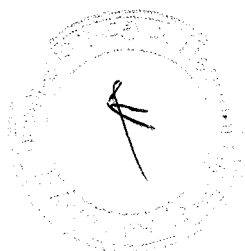
**COMPOSITION OF THE TEAM PERSONNEL AND THE TASKS TO
BE ASSIGNED TO EACH TEAM MEMBER**

1. **Key Personnel (and Specialist Sub-consultant, if any)**

Name	Position	Task Assignment	Present location	Name of assignment involved and clients names at present

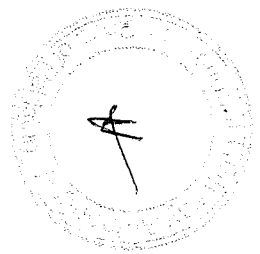
2. **Other Personnel**

Name	Position	Task Assignment



WORK PLAN/ ACTIVITY SCHEDULE

Items of Work/Activities	Monthly Program from date of commencing Assignment (in the form of a Bar Chart)														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15



WORK PLAN AND TIME SCHEDULE FOR KEY PERSONNEL (AND SPECIALIST SUB-CONSULTANT, IF ANY)

Name	Position	Months (in the form of a Bar Chart)															Number of Months
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

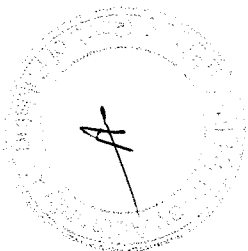
Continuous: _____
 Intermittent: _____

Activities Duration _____

Yours faithfully,

Signature _____
 (Authorized Representative)

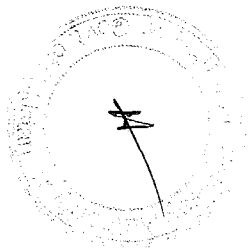
Full Name _____
 Designation _____
 Address _____



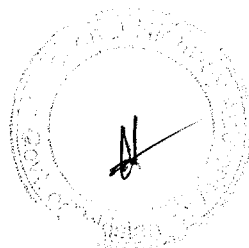
**CURRENT COMMITMENTS OF THE FIRM
[OF EACH MEMBER IN CASE OF JV AND THE SPECIALIST SUB-CONSULTANT, IF ANY]**

List must be comprehensive including project from clients other than NHA as well

Name of project	Single or JV	Task assignment	Start date of the project	Expected date of completion



FINANCIAL PROPOSAL FORMS



FINANCIAL PROPOSAL SUBMISSION FORM

{Location, Date}

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to provide the consulting services for [Insert the Project Name] in accordance with your Request for Proposal dated [Insert Date] and our Technical Proposal.

Our attached Financial Proposal is for the amount of {Insert amount in words and figures}, including all Federal, Provincial and Local taxes applicable as per law of the land. {Please note that all amounts shall be the same as in Financial Proposal Form FIN-7}.

As indicated and reasoned in Form TECH-4 of our Technical Proposal, in accordance with Note 2 under Form TECH-4 of the RFP, a separate attachment for incremental cost(s) is included/ not included in our Financial Proposal [if attached, strike out "not included" and vice versa]

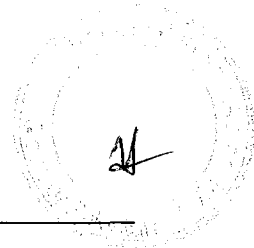
Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e. before the date indicated in Clause 4.5 of the Data Sheet (or the date extended with the written consent of consultant in case of delay in procurement process).

We confirm that we have no condition to state that may have financial implications over and above the amount quoted above.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,



Authorized Signature {In full and initials}: _____

Name and Title of Signatory: _____

In the capacity of: _____

Address: _____

E-mail: _____

{For a joint venture, either all members shall sign or only the lead member, in which case the power of attorney to sign on behalf of all members shall be attached.}

BREAKDOWN OF RATES FOR CONSULTANCY CONTRACT

Project: _____ Firm: _____

Name	Position	Basic Salary per Cal. Month	Social Charges (%age of 1)	Overhead (%age of 1+2)	Sub-Total (1+2+3)	Fee (%age of 4)	Rate per Month for project Office	Field Allow. (%age of 1)	Rate per Month for Field Work
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Notes:

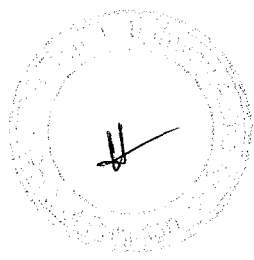
- Item No. 1 Basic salary shall include actual gross salary before deduction of income tax. Payroll sheet for each proposed personnel should be submitted at the time of negotiations.
- Item No. 2 Social charges shall include Client's contribution to social security, paid vacation, average sick leave and other standard benefits paid by the firm to the employee. Breakdown of proposed percentage charges should be submitted and supported {see Form FIN-3}.
- Item No. 3 Overhead shall include general administration cost, rent, clerical staff and business getting expenses, corporate tax including sales tax on services and insurances, etc. Breakdown of proposed percentage charges for overhead should be submitted and supported {see Form FIN-4}.
- Item No. 5 Fee shall include firm's profit and share of salary of partners and directors {if not billed individually for the project} or indicated in overhead costs of the firm.
- Item No. 7 Normally payable only in case of field work under hard and arduous conditions.
 - Note 1 The minimum percentage of item (1) should be preferably 50% of (8).
 - Note 2 The Consultant is to provide appointment letter and affidavit/undertaking duly signed by each of the individual Personnel showing salary rates as above. Further during execution each invoice will also be provided showing that the Personnel have been paid their salaries as per basic rates mentioned therein; failing to which, NHA will take punitive action against the Consultant and shall deduct the deficient amount from its monthly invoice. Moreover it will be considered as a negative mark on the Consultant's performance that will be considered for future projects.
 - Note 3 The Consultant shall provide its audited financial statements of latest three fiscal years, during negotiations, w.r.t. second paragraph under SC 6.2 (b) of the Model Agreement (APPENDIX-E).



Full Name: _____
 Signature: _____
 Title: _____

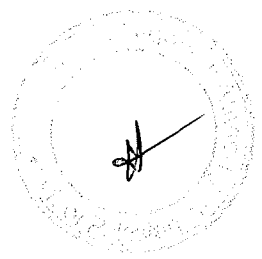
BREAKDOWN OF SOCIAL CHARGES

Sr. No.	Detailed Description	As a %age of Basic Salary



BREAKDOWN OF OVERHEAD COSTS

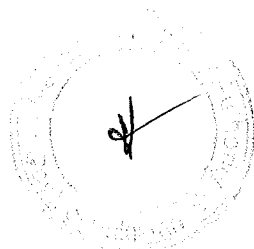
Sr. No.	Detailed Description	As a %age of Basic Salary and Social Charges



**A - ESTIMATED LOCAL CURRENCY SALARY/ REMUNERATION COSTS
EQUIVALENT IN US DOLLARS**

[Refer also to Notes under Form TECH-4]

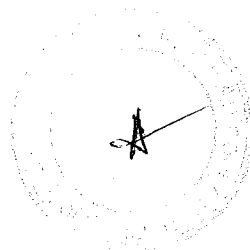
Sr. No.	Name	Position	Person- Months	Monthly Billing Rate (US \$)	Total Estimated Amount (US \$)
A. All Foreign Expatriates including Foreign Specialist Sub-consultant (if any)					
		Sub-Total:			



B-I ESTIMATED LOCAL CURRENCY SALARY COSTS/REMUNERATION

[Refer also to Notes under Form TECH-4]

Sr. No.	Name	Position	Person-Months	Monthly Billing Rate (Rs.)	Total Estimated Amount (Rs.)
B-I. All Local Key Personnel and Specialist Sub-consultant (if any)					
		Sub-Total:			



B-II ESTIMATED LOCAL CURRENCY SALARY COSTS/ REMUNERATION

[Refer also to Notes under Form TECH-4]

Sr. No.	Position	Person-Months	Monthly Billing Rate (Rs.)	Total Estimated Amount (Rs.)
B-II. Non-Key and other Personnel (Local)				
	Sub Total:			



DIRECT/ NON-SALARY COSTS FOR DESIGN REVIEW AND SUPERVISION SERVICES

[Refer also to Notes under Form TECH-4]

Sr. No.	Nomenclature	Unit	Qty.	Unit Price (Pak. Rs.)	Total Amount (Pak. Rs.)	Remarks
1.	Communication Expenses allocable to the Assignment	P.M	24			Fixed Rate
2.	Printing of Reports and Drawings for the Assignment	P.M	24			-do-
3.	Travel expenses of required Key Personnel between Head Office and Site (as per actual)	P.S	-	-	500,000/-	Reimbursement of actual expenditures upto a maximum limit subject to approval of Project Director for travel(s).
4.	Cost of preparing Construction/ Supplementary Drawings	L.S	As per TOR	-		-
5.	Others not covered above to comply with TOR / RFP requirements*					
Sub-Total for Direct Cost						

* Any additional item/ cost quoted against this line item must be supported by solid/ tenable justification(s) detailed in Technical Proposal Submission Form A-4 "Comments on TOR" without indicating financial value therein. The negotiation committee of the Client may negotiate this cost on the basis of justification provided in the form A-4 with the prospective successful bidder in the light of Clause ITC 6.6 of RFP. Moreover, if no justification is given or Client does not agree to the justifications, the Client in both the cases shall not include this cost in the total cost offered by the Consultants for this assignment, particularly in case any amount against this line item is deemed to have been covered in other pay items.

SUMMARY OF COST OF CONSULTANT FOR DESIGN REVIEW AND SUPERVISION SERVICES

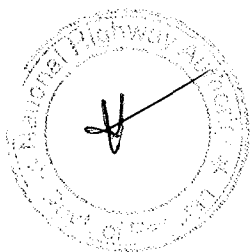
[Refer also to Notes under Form TECH-4]

Sr. No.	Description	Amount (Pak. Rs.)	Amount (US \$)
1.	Salary Cost		- Not Applicable -
2.	Direct Cost		- Not Applicable -
3.	Sub Total:		- Not Applicable -
4.	Sales Tax @ 16% on item 3 above which shall be kept as Provisional Sum in the Contract Agreement		- Not Applicable -
5.	Contingencies	-	- Not Applicable -
	Grand Total:		- Not Applicable -

- Note: 1- The dues and salaries of staff are payable by the Consultant in time and not later than 10th of the following month positively. In case of failure to do so Client shall intervene and pay these dues and salaries of the concerned Personnel and recover from the invoice of the Consultant at actual charges paid plus 1% of the amount. This will also be accounted for adversely in making assessment of the Consultant in the next evaluation process for selection of consultants with report of such defaults.
- 2- The grand total is inclusive of all the applicable Federal, Provincial and Local taxes. All these taxes (except the Sales Tax) are required to be built in the quoted rates and not be mentioned separately.
- 3- Any Omission or arithmetical error made by the Consultants in entering the amount against item 4 above shall also be rectified during evaluation of the Financial Proposal.
- 4- Consultant's Head Office Support will be mandatory during Supervision; the firm shall be bound to provide design input required on the Site or advice on contractual matters; the cost for the same is built in the financial proposal. Responsibility for the team in field will be backed by the Consultant's Head Office; the Head Office will assume full responsibility for the team in field.
- 5- Any key position that remains vacant for more than one month that was required to be filled for that period, a compensation equivalent to the charge rate of that individual will be imposed. For clarification, the invoice will not include the charge rate of the missing individual and additionally, the charge




rate of one month for that individual will be deducted from the invoice. This will be replicated for all missing key personnel. For the 2nd month, the compensation payment will be doubled. For the 3rd month, an additional warning will be issued. If the issue persists in the fourth month, the firm can be penalized by invoking conditions of contract and even to the extent of consideration for blacklisting.



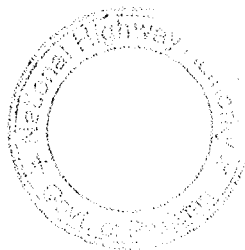
APPENDIX - A

TERMS OF REFERENCE
(Including Description of Services)



Major Contents

- Background
- Project Objectives
- Scope of Services and Expected Deliverables
- Team Composition and Qualification Requirement of Key Personnel and Specialist Sub-consultant.



A. BACKGROUND

1. The Indus Highway (N-55) is a main road which lies along the western bank of the Indus River and runs nearly the entire length of Pakistan from north to south. It complements N-5 in north-south bound traffic travelling medium to long distance.
2. In recent years, the Indus Highway has been unable to cope with the increasing traffic volume and larger size of vehicles sufficiently due to the lack of road capacity and deterioration of the road surface. As a result, traffic has become excessively concentrated on N-5, causing frequent traffic jams. The project road is part of program to relieve the traffic on Indus Highway.
3. In order to address above said problems, National Highway Authority developed program for up-gradation/ improvement of Indus Highway (N-55) for being the major trade route for country on western bank of Indus River. In this connection, N-55 (Indus highway) is already under up-gradation phase and has already been upgraded to four lane highway on various sections. It is proposed to improve/ upgrade the Indus Highway (N-55) from Sarai Gambila to Kohat since the N-55 section from DI Khan to Gandhi Chowk has already been dualized.

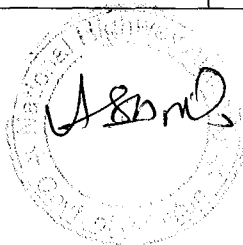
4. PROJECT

The scope of the project is dualization and improvement of existing Indus Highway (N-55) from Sarai Gambila to Kohat (at N-80, Rawalpindi – Jand – Kohat road). The project road starts from Sarai Gambila, passes through Topai, Ambiri Kala, Lawagarh, Krapa, Lachi, Mandoori and connects Rawalpindi – Jand – Kohat road (N-80). The project has gained significance due to inauguration of China Pakistan Economic Corridor (CPEC) projects. The CPEC (western alignment) traversing between Islamabad and DI. Khan connects N-55 near Yarak, D.I.Khan and N-55 section, Yarak – Kohat & Peshawar will also connect with CPEC (western corridor).

5. ALIGNMENT

The project alignment is divided into two sections; first starts from Sarai Gambila and ends at Karak and second starts from Karak and ends at Kohat. The whole alignment is asphalt bound (Flexible Pavement) with rigid lane in reaches having high gradient. The retaining structures have been provided at numerous places to retain the high fill and protection of embankment in water prone areas. The project alignment mostly passes through flat/rolling terrain with some significant reach in hilly/ mountainous terrain.

Section	Description	Length (km)
I	Sarai Gambila to Karak	61 km



6. **TECHNICAL PARAMETERS**

Details of the technical inputs/parameters, scope and specifications of the project are given below:

STANDARD / SPECIFICATIONS

Geometrics:

4-Lane highway shall conform to the following specifications:

Design Speed	Flat Terrain	:	100 km/hr
	Mild Rolling Terrain	:	80 km/hr
	Rugged Mountainous Terrain	:	60 km/hr
Road Width	No. of Travel Lanes	:	02 Lane (Additional)
	Lane Width	:	3.65 m each
	Travel Lane Width	:	7.3 meters
	Inner Shoulder	:	1 meter
Cross Slope:	Outer Shoulder	:	3 meters
	Pavement	:	2.0%
	Shoulder	:	4.0%

Design Life of Pavement : 10 Years

Design Life of Structures :

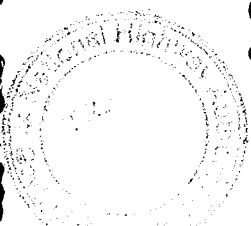
Design Return Period: :

Culverts : 25 Years

Bridges / Flyovers : 50 Years

7. The Consultancy Services would be required for a period of **39 months** including 12 months defects notification period and 3 months for finalizing bills of Contractor. Total input of **221.5 person-months** Key Personnel and **1210 person-months** Non-Key Personnel would be required for the assignment.

8. The Consultants will perform the duties of the Engineer specified in the FIDIC conditions of contract and will be required to nominate a Resident Engineer and 7 Assistant Resident Engineers for the contract(s) that will be a full-time resident in the areas or located in the proximity of project areas. In addition to the primary role, the Consultants will assist the Employer in the efficient administration and implementation of the sub-projects, support and strengthen it in its tasks, monitor progress, financial management, social and environmental safeguards and gender mainstreaming in the project. The Consultants will report to the General Manager (GM) appointed by NHA. The Consultants will work under the overall guidance, coordination and directions of the GM.



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B. OBJECTIVE

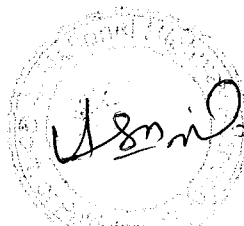
9. The overall objectives of these Terms of Reference are to:

- (i) Ensure that the detailed engineering design is reviewed, and updated if required, in accordance with the specified parameters / standards and best international practices prior to implementation of Works contracts;
- (ii) Ensure that high quality construction is achieved in time within budget and that all work is carried out in full compliance with the approved engineering designs, technical specifications, agreed work schedule, and within the terms and conditions of all other contract documents and sound engineering practices;
- (iii) Demonstrate the efficacy of contract administration and supervision by independent external agencies;
- (iv) Monitor and evaluate the implementation of environmental management plan, resettlement plan and other social safeguard measures to be taken by the Contractor and Employer; and
- (v) Promote technology transfer and the introduction of modern Contract Administration practices within NHA.

C. SCOPE OF CONSULTANCY SERVICES

10. **General Duties and Responsibilities of the Consultants.**

- (i) The Consultants will carry out a critical review of the detailed engineering design prior to the commencement of Works to identify anomalies or omissions that constitute inconsistency in the design and completeness of Works. This design review should be completed in two (2) months' time and the design review report will be submitted within thirty (30) days. The design report should clearly indicate if any section of the road requires adjustment in the horizontal and vertical alignment, changes to the structures. On completion of the review, the Consultants will prepare a report, setting out all findings and recommendations for correcting any defects or omissions identified. Notwithstanding these, the Consultants will immediately inform the Employer of any defect or omission that may have a substantial impact on the Project at the time the defect or omission is uncovered.
- (ii) Civil Works will be carried out based on the FIDIC Conditions of Contract for Construction. The Consultants will administer the Work's contracts, make engineering decisions, be responsible for quality assurance, provide general guidance and furnish timely responses to the Contractors in all matters relating to the Works, and ensure that all clauses of the contract agreement between the Works Contractors and PIU are adhered to and respected.



- (iii) The Consultants will advise PIU on all matters relating to the efficient and successful execution of the Works contracts, and will act at all times to protect the interests of the project and will take all reasonable steps to keep the construction costs to a minimum, consistent with sound economic and engineering practices; and will prepare a "Contract Administration and Construction Supervision Manual" outlining routines and standard operating procedures to be applied in contract administration and construction supervision, based on sound internationally recognized practice.

11. Design Review:

The Consultants will review and validate on ground, the detailed engineering design including the design reports, design calculations, and design drawings. Thereafter the Design Review Consultants will bear the professional liability for the accuracy of the design, which will be covered under this Contract. The design review shall include but not be limited to the following tasks;

- (i) Review & ensure that the design meets all the standards and parameters specified in these ToR for supervision Consultants, NHA specifications and best international practices. The design criteria used are:

Description	Codes
Geometric Design	A policy on Geometric Design of Highways and Streets 2011 AASHTO
Pavement Design	AASHTO guide for Design of Pavement Structures 1993
Highway Safety Design	Manual of Uniform Traffic Control Devices, Highway Safety Wing, Ministry of Communication, Government of Pakistan.
Design Standards for Bridges and Cross Drainage Structures:	
-AASHTO LRFD (Latest Edition- 2012)	
-Pakistan Highway Code of Practice for Bridges 1967	
-UBC/IBC 2007: For Seismic zoning	

- (ii) Review and ensure that the geometric alignment particularly the horizontal curve and vertical profile of National Highway as well as service roads, meets the minimum specified criteria.
- (iii) Review and ensure that a cost effective embankment height, has been adopted throughout the alignment, based on the required capacity of soil, depth of water table and drainage pattern of the surrounding area.
- (iv) Review and ensure that the pavement is most efficient and cost effective; design has been carried out on the basis of traffic studies conducted by the Design Consultants, characteristics of the proposed pavement materials, the calculated loading (ESALs) and prescribed design life.
- (v) Review and ensure that the design parameters, calculation, location and layout of hydraulic and other traffic engineering structures to include bridges, flyovers, underpasses and culverts, on the basis of hydrology report,



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geotechnical investigations, soil analysis, drainage pattern, and site conditions, ensuring that safe and cost effective designs are adopted.

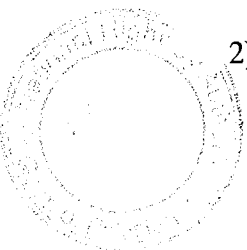
- (vi) Review and ensure that the design of road side drainage and cross drainage structures has been carried out as per the site requirement and flow patterns/calculations of runoff.
- (vii) Review and ensure that the design, lay out and requirement of retaining walls, breast walls, other retaining structures, and slope stability/ slide control measures are as per the geotechnical requirement and site conditions.
- (viii) Review and ensure that the requirement for U turns, underpasses, overhead bridges, Entry/ Exits, Service lanes, and all other highway related works have been included in the design.
- (ix) Review existing soil reports provided by the Employer and suggest any additional testing, if required.
- (x) Carry out the Highway Safety Audit as per international standards after a detailed site visit. Consultants will ensure that all safety measures are taken without any compromise in the design and recommend improvement/missing safety measures, if any before execution of the road; Verify a highway safety audit to ensure that all traffic signs, pavement marking, and pavement studs have been provided in the design as per the requirement. Check proposed work zone safety requirements are in accordance with best international practices.
- (xi) Based on the finding of Environment Impact Assessment (EIA), review the environment study report. Ensure that adequate measures are incorporated in the design to mitigate the adverse impact including those likely to be encountered during construction and recommend any improvement.
- (xii) Based on design review, i). prepare social due diligence reports confirming project road sections with and without LAR impacts, including clearly marking LAR and non-LAR sections in the field and reflected in a linear plan and timelines for updating of LARPs and ii). update the LARPs based on horizontal and vertical alignment adjustments proposed/incorporated (if any) in design. Assist PIU in a) establishing a LAR database, b) planning and implementation of public consultations during design review and c) operationalizing Grievance Redress Mechanism (GRM) with complaints recording, tracking, monitoring and community outreach systems.

12. **Contract Administration & Construction Supervision:**

The scope of construction supervision and contract administration services of the Consultants shall include but will not be limited to the following tasks:

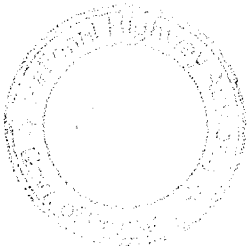
- 1) prepare the Pre-Construction meeting agenda, and conduct the Pre-construction meeting, record and distribute the minutes;
- 2) appoint various members of the Engineer's construction supervision team as

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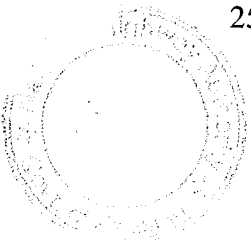
the Engineer's Assistants (Resident Engineer/ Assistant Resident Engineers, Material Engineers, Inspectors, etc.) and notify the Contractor and the Employer, and approve the Contractor's Representative;

- 3) verify whether the Performance Security complies with the form provided in the Contract, whether it is in the correct amount and currencies, and notify the Employer accordingly;
- 4) advise the Employer whether to accept the Performance Security;
- 5) if the Contractor does not submit the Performance Security on time, notify and advise the Employer of the appropriate contractual remedies;
- 6) request the Contractor to increase the amount of the Performance Security if the Contract Price increases and monitor the validity of the Performance Security until the issue of the Performance Certificate;
- 7) verify whether the bank guarantee for advance payment is in the form specified under the Contract and in the amount and currencies stated in the Particular Conditions of the Contract;
- 8) verify whether the bank guarantee for advance payment conforms to the contract requirements and that the guarantee is valid until the entire advance payment is recovered from the Contractor's certificates;
- 9) interpret the specific provisions of the contract related to the Employer's obligation to give possession of the Site, and the Contractor's Work Program, assess the contractual consequences of any specific land acquisition issue and advise the Employer on the appropriate mitigation measures;
- 10) obtain the Parties' confirmation that all conditions in relevant clause of the Conditions of Contract pertaining to possession of Site are fulfilled;
- 11) issue instruction to the Contractor to commence the Works;
- 12) verify whether the form and substance of the evidence of the Contractor's insurances is satisfactory, whether insurance premiums have been paid and the required insurances are effective on the dates required by the Contract;
- 13) verify that the terms of the Contractor's insurance policies fully comply with the requirements of the contract;
- 14) monitor whether the Contractor maintains adequate insurance in the course of performance of the contract, particularly if the Contractor provides insurances for a fixed period which is shorter than the period required under the contract;
- 15) advise the Employer on the appropriate action and contractual remedies in case that the Contractor does not perform its insurance obligations in accordance with contract;
- 16) without relieving the Contractors of their obligations under the contract, review and approve the traffic management and safety plan, and ensure compliance such that the Works are carried out at all times in a safe and secure manner and damage or injury to persons or property is avoided;



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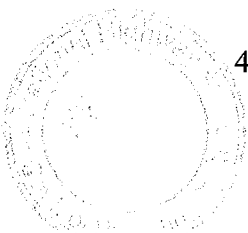
- 17) obtain the bench marks and other information from the NHA Design Section as required for commencement of construction activities;
- 18) ensure that the Contractors have all necessary data for setting out and check the Contractors' setting out including staking the right-of-way limits, centerline, and grade and confirm permanent monuments in the construction area;
- 19) ensure that all land and all rights-of-way required for the Project and all Project facilities are made available to the Works Contractor in accordance with the schedule agreed under the related Works contract and all land acquisition and resettlement activities are implemented in compliance with (a) all applicable laws and regulations in Pakistan relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; and (c) all measures and requirements set forth in the LARP, and any corrective or preventative actions plan set forth in a Safeguards Monitoring Report;
- 20) carry out the following duties related to environmental management with particular reference to the technical requirements of sound environmental standards on the basis of the Environmental Assessment and Review Framework (EARF), the Initial Environmental Examinations (IEEs), and the Environmental Management Plans during construction: (i) review and endorse site specific Environmental Management Plans (EMPs) for the projects sections, prepared by the Contractors; (ii) ensure that all the environmental mitigation measures required to be implemented are incorporated into the contract documents; (iii) ensure that the Contractors comply with the measures and requirements relevant to the Contractors set forth in each IEE and EMP, and any corrective or preventative actions set out in Environment Monitoring Reports; (iv) conduct environmental monitoring and ensure that the day-to-day construction activities are carried out in an environmentally sound and sustainable manner; (v) prepare and submit semi-annual environmental monitoring reports on the implementation of the 'Environmental management Plan (EMP) to PIU within 14 days after a completion of the monitoring period;
- 21) with respect to the prevention of HIV/AIDs and Human Trafficking, monitor that the Contractors comply and carry out required actions as provided in the respective contract documents, such as awareness and education of laborers and workers;
- 22) ensure that the Contractors do not involve child labor for the execution of the Works contracts in accordance with the provisions of the contract agreement;
- 23) without relieving the Contractors of their obligations under the contract, check and approve the Contractors' Working Drawings, Method Statements and Temporary Works proposals;
- 24) review the Contractor's Work Program and notify the Contractor if the program does not comply with the contract;
- 25) monitor the progress against the Work Program and the cash flow estimate and request revisions, if required;



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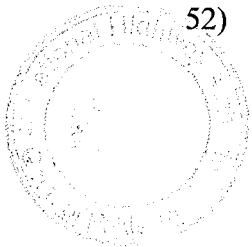
- 26) report in the Consultants' Monthly Report the work progress against the Contractor's Work Program and the cash flow estimate;
- 27) verify whether the progress charts in the Contractor's Monthly Progress Report reflect the actual progress and correspond to the latest revision of the Work Program and the cash flow estimate, and instruct the Contractor to correct the report, if required;
- 28) if required, determine the Contractor's entitlements to time extensions on the basis of the Contractor's Work Program;
- 29) determine the Employer's entitlement to Delay Damages on the basis of the Work Program and advise the Employer of the relevant contractual remedies if the Contractor's progress is behind schedule;
- 30) verify the Contractor's Monthly Progress Reports and notify the Contractor of any incorrect or inconsistent information;
- 31) conduct regular weekly site meetings and monthly progress review meetings, record and distribute the minutes;
- 32) perform quantity take-offs from drawings to verify BoQ quantities;
- 33) issue regular notices to the Contractors of intended field measurements, measure the Works, compute the quantities for payment, and determine the amounts due to the Contractor within the period specified in the contract;
- 34) carry out any subsequent design changes, and expeditiously issue supplementary drawings, site instructions, variation orders and day work orders to avoid delay to the works and to ensure that the works are executed in accordance with contract;
- 35) establish and maintain throughout the Works contracts a structured system of measurement records, supporting documents and calculations for the payment of all BOQ items, that is transparent for auditing purposes;
- 36) provide all necessary assistance to the Employer and external auditors for conducting regular quarterly audits of the measurement records, supporting documents and calculations for the payment of all BOQ items;
- 37) verify the sources of indices or prices for price adjustment, determine a provisional value of an index/reference price until it is published, but, if the index is not published in certain period(s), apply the last available published value; _____
- 38) establish with the Contractor a standard format for the Contractor's Statement and the Interim Payment Certificates;
- 39) issue the interim certificates to PIU for payment to the Contractors in accordance with the Conditions of Contract, having regard to any contractual provisions for advance payment, variation of price, and exchange rate fluctuation etc. Certify the completion of the Activities/Works or parts thereof and process final payments to the Contractors;
- 40) prepare and maintain the Estimates of Cost of Works to Completion

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continuously, update the Estimates after each Variation instruction or a Variation Order issue and after each IPC, and present the latest Estimate in the Consultants' Monthly Progress Reports;

- 41) initiate and process variations promptly, when it is necessary for the construction of the Works;
- 42) request the Contractor's technical and cost proposal, as required, consult both parties in all matters in connection to variation work;
- 43) value variations, obtain the Employer's approval of any variation, issue variations under the contract, keep record of all variations issued under the contract and report the summary of the variations in the Consultants' Monthly Progress Reports;
- 44) discharge fully the Engineer's obligations with respect to approval of materials and workmanship, approval and auditing of the Contractor's Quality Assurance System and the QA Personnel and the compliance testing by the Engineer;
- 45) inspect quarries and borrow pits, and crushing plants, and order tests of materials and ensure adherence to specifications, and approve the sources of materials;
- 46) without relieving the Contractors of their obligations under the contract, monitor the Contractors' laboratory testing, evaluate the Portland cement concrete and bituminous mixture designs prepared by the Contractors, and recommend improvements (if any) to ensure the desired performance, and accord approval thereof;
- 47) carry out independent testing in the field and/or in the laboratory of the "Engineer/Project Manager", and approve or disapprove and certify the works that conform with the specifications and maintain permanent records of results of all the tests made;
- 48) give notice to Contractors of any defects and deficiencies, and issue instructions for the removal and substitution of the improper works, where provided under the contract. If required, order suspension of the Work(s) and/or recommend to PIU other recourse available under the contract;
- 49) when the Works are completed in accordance with the contract, issue a Taking Over Certificate to the Contractor(s);
- 50) undertake an inspection of the Works at the completion of the respective road sections, and certify the Contractor(s)' final accounts;
- 51) obtain the Employer's specific approval before taking any action for determination of extension of time, additional costs and the Contractor's claims for additional time or costs, for all events for which the Employer's express approval is required under the Conditions of Contract;
- 52) assess objectively the Contractor's claims and give professional and objective advise to the Employer, consult both parties before determining an extension



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of time;

- 53) determine Contractor's claims on the basis of the Contractor's Work Program, the impact of the delay(s) event on the Critical Path and the particulars submitted by the Contractor, and not to act as the Contractor's advisor in this matter;
- 54) prepare standard Daily Diary forms and ensure that all supervision staff maintain daily diaries of Contractor's and its own activities;
- 55) assess minimum construction equipment, plant and machinery requirements, by type and specification, and monitor, keep and regularly update a list of the Contractors' equipment, plant and machinery in order to keep a check on the Contractors' mobilization. Inspect and evaluate the Contractor's establishments including in particular the laboratory facilities to ensure compliance with the terms and conditions of the contract;
- 56) maintain an Events Log starting at beginning of contract;
- 57) assist the parties establish Dispute Board, if required under the Conditions of Contract, provide all necessary information to DB members and attempt to facilitate amicable settlement of the dispute between the Employer and the Contractor;
- 58) establish and maintain an effective documents management system in the Engineer's office, which provides for separate filing of incoming and outgoing correspondence and documents, as well as the filing by subject matter;
- 59) carry out detailed inspections of the Works during the Defects Notification Period and prepare detailed inspection and recommendation reports for the Employer after each inspection;
- 60) ensure that the Contractor(s) provide a safe workplace for their workforce, supervisory personnel and for members of the public requiring access through the Sites in full conformity with Health and Safety regulations;
- 61) ensure that the Contractor(s) comply fully with contractual obligations relating to care of the environment (both specified and legislated) and provide all reports and obtain all permits and permissions required in relation to spoil areas, borrow areas quarries and the like;
- 62) keep and maintain daily records of labor, equipment and weather conditions on the Site along with records of activity, progress and other events happening on the Site and having relevance to the Works;
- 63) ensure the receipt of and maintain as permanent records of all warranties required under terms and conditions of the contract for materials including their source and equipment accepted and incorporated in the project;
- 64) advise PIU on need for effective liaison with local authorities, police, landowners, utility owners, complainants, the public and other organizations affected by the Works in order to minimize or avoid unnecessary delays or disputes;



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- 65) maintain consolidated project accounts and assist NHA for settlement of Audit Para's and objections raised, prepare replies related to project, and provide the entire relevant documents/papers/letters etc. to support the replies-until 1 year after completion of Works. The cost to be incurred may be built in the rates;
- 66) develop training programs for NHA staff and develop on the job training on innovative construction methods, project management and value engineering;
- 67) prepare revised PC-1 for the project including economic analysis and Environmental Impact Assessment (EIA) on Performa of PC-1 prescribed by Planning Commission;
- 68) provide any other specialist services requested by PIU under conditions to be mutually agreed;
- 69) ensure that the construction methods as proposed by the Contractor for carrying out the Works are satisfactory, inspection of Contractor's construction equipment; and safety of the Works, property, personnel, and general public; the schedule of mitigation measures for adverse environmental impacts; and
- 70) For any laps in quality, quantity, or financial irregularity related to the performance of the Services, the Consultants will indemnify the Client.

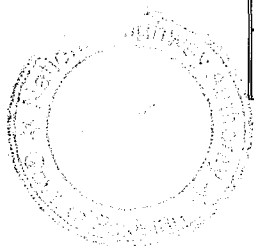
D. Staffing

13. **221.5** Persons-Months of Key Personnel and **1210** Person-Months of Non-Key Personnel for design review and construction supervision Consultants are required to review the designs and assist in construction supervision/ contract administration, financial management, safeguard compliance and implementation of the above mentioned project. The Consultancy Services would be required for a period of 39 months including 12 months defects notification period, and three (3) months for finalizing bills of Contractors. There will be one "site supervision team", for the contract package. The site supervisory staff are expected to mobilize on the date of actual commencement of Works by the Contractor. Construction Supervision Team Leader of the Consultants is expected to be full time during construction and be mobilized to the Project Site at least thirty (30) days in advance of the commencement of the Works in order to assist PIU with activities leading up to mobilization of the Contractor. Procurement of Consulting Services will be based on quality and cost-based selection (QCBS) method following PEC Guidelines on the Use of Consultants and as per Procurement of Consulting Service Regulations 2010 as notified by PPRA. The tentative team composition is as below:

14. **Key and Non-Key Personnel**

Sr. No	Experts	No.	Months	Total	Monthly Rate (Rs.)	Total (Rs.)
I. Design Review Stage						
A. Key Personnel						
1.	Highway Design Engineer/ Team Leader	1	1.50			

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Sr. No	Experts	No.	Months	Total	Monthly Rate (Rs.)	Total (Rs.)
2.	Sr. Structure Engineer	1	0.75			
3.	Geotechnical Engineer	1	0.50			
4.	Geometric Design Engineer	1	0.50			
5.	Road Safety Engineer	1	0.50			
6.	Drainage Engineer	1	0.75			
Sub-Total:		6	4.50			
II. Construction Supervision Stage						
B. Key Personnel						
1.	Resident Engineer / Team Leader	1	1+24+3			
2.	Assistant Resident Engineers (Structures)-I & II	2	22			
3.	Assistant Resident Engineers (Bridges)-I & II	2	22			
4.	Assistant Resident Engineers (Highways)-I, II & III	3	24			
5.	Material Engineer	1	24			
6.	Contract Engineer	1	5			
Sub-Total:		10	217			
C. Non-Key Personnel						
1.	Quantity Surveyor	1	24+3			
2.	Assistant Quantity Surveyors-I, II & III	3	20			
3.	Chief Surveyor	1	12			
4.	Site Inspectors (Highways)	6	24			
5.	Site Inspectors (Structures)	2	24			
6.	Site Inspectors (Bridges)	2	20			
7.	Material Inspectors	6	24			
8.	Surveyors	3	24			
9.	Lab Technicians	12	24			
10.	Project Monitoring & Evaluation System Officer	1	27			
11.	Jr. Engineers for Planning Wing HQ.	2	27			
12.	Cad Operator	1	24			
13.	Accountant	1	24+3			
14.	Computer Operator	1	24+3			
15.	Computer Operators	2	24			
16.	Office Assistants	3	24			
	Office Boys	4	24			
Sub-Total:		51	1210			
Grand Total A + B + C:		67	1431.5			

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Total Person-Months of Key Personnel for Design Review	--	4.50
Total Person-Months of Key Personnel for Construction Supervision	--	217
Total Key Personnel (Person Months)	--	221.5
Total Non-Key Personnel (Person Months)	--	1210
Total Personnel (Person Months)	--	1431.5

15. Special Extension for Selected Personnel

Following staff of the Consultants shall be allowed to continue performing Services for a period of three (03) months after completion of Works to finalize the accounts and other outstanding issues of Contract. This period of three (03) person-months for each of the Personnel shall be spread over the calendar months required to finalize the said activities.

S. No.	Description of Personnel	Nos.	Months	Man-months
1.	Resident Engineer/ Team Leader	01	01+03	04
2.	Quantity Surveyor	01	03	03
3.	Accountant	01	03	03
4.	Computer Operator	01	03	03

16. Qualification and Experience of Key personal

1. Title: Highway Design Engineer / Team Leader (Design)

Experience:

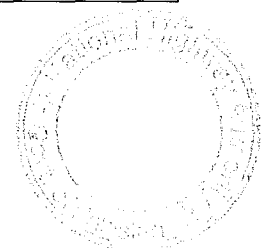
Minimum 15 years' preferably 18 years of relevant experience in design of national highway projects of which 5 years minimum and 7 years desirable as Highway Design Engineer in roads and bridge design projects. Must have worked as Team Leader during last seven (07) years on at least two (02) similar projects.

Qualification:

Minimum bachelor's degree in civil engineering preferably Masters in Civil Engineering / Highway Engineering / Transportation Engineering or equivalent.

Responsibilities:

He/she will lead the design review team as coordinator to complete the task in professional manner. The Geometric Design Engineer will verify the detailed design and provide comments. Verify and recommend/provide design plans for road geometry and furniture and road safety appliances. Generally, role of a geometric road design engineer is to decide the

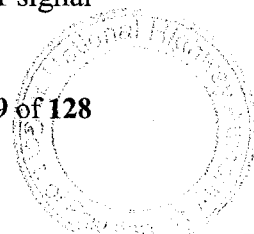


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placement of the road with respect to surrounding physical environs and give a shape to its configuration with due care for mobility, access management, traffic control and best possible road safety mechanism embedded in design process. More specifically Geometric Design Engineer/Team Leader (Design) is required but not limited to the following:

- Agree upon the category of road to be developed to make sure relevant design standards are applied and relevant guidelines are followed during the design process. It could be any category ranging from motorway to rural access roads or mountainous roads in rural settings and urban freeways, primary roads, secondary roads, laterals and access roads in case of an urban situation;
- To decide and fix the route alignment as per project requirements;
- Firm up connectivity requirements and linkages;
- Liaise with survey entity to get the topographic details of the route alignment with appropriate details;
- Assess travel demand for the project road alignment;
- Work out road's right of way requirement and spacing for various road components including formation widths, carriageways, lanes, shoulders, medians/horizontal barriers, road side facilities like spacing for NMT, drainage channels, green verges, laybys and other road side facilities etc. Decide upon relevant design standards for cross falls, camber and super elevations;
- Design both horizontal and vertical profile alignments as per given speed and other geometric design criteria to bring upon most direct, cost effective and safe route alignment;
- Locate and firm up position of road crossings and crossings for water channels and cross drainage. Lead the relevant engineering specialists for structure design and positioning of utilities and other crossings;
- Provide design plans for various road segments including links (sections between road crossings) and road crossings. In case of motorways/ expressways only grade separated crossings and interchanges are involved whereas in case of lower order roads multiple choices are available requiring option analysis for selection of relevant form of road crossings;
- Both horizontal design plans and vertical alignments are required to run simultaneously;
- Lead the pavement design engineer during production of design plans;
- Design engineers are encouraged to apply any relevant software available for generation of design plans;
- Provide design plans for road furniture and road safety appliances including traffic control devices, signage and road marking;
- In case of signalized crossings provide separate design plans for installation of signal configuration and relevant plans for signal and other relevant ITS operations;

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- Generate typical and standardized design details of various elements as appropriate;
 - Produce the design folder in hard and soft formats;
 - Be responsible for and respond to third party road safety audit recommendations; and
 - Keep liaison with the Client for design review matters.
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2. Title: Sr. Structure Engineer

Experience:

Minimum fifteen (15) years, preferably twenty (20) years of relevant professional experience of which 8 years minimum and 11 years desirable, as Structure Engineer on major road projects. He/she shall demonstrate a working knowledge in: (i) the design and construction of bridges and other structures for road projects; (ii) various structural designs and documentations including the design of all required earthworks, retaining walls, drainage and any other required structures; and (iii) supervising the work of field teams in monitoring progress, assessing quality, and certifying construction in accordance with contract conditions.

Qualification:

Minimum bachelor's degree in Civil engineering preferably Masters in Structural Engineering or equivalent.

Responsibilities:

Sr. Structure Engineer will perform duties under the guidance of the Team Leader for both design review phase as well as construction supervision phase. He/she will review the design of all structures and assist the Team during construction supervision of the project's bridges and structures and assist in ensuring that the project is implemented in accordance with the required specifications and approved drawings. He / She will set up supervision systems, and train the Consultants' supporting staff in their use. He/she will be responsible for construction supervision and of structural components of the road and ensuring that the subject project is implemented in accordance with the required specification and approved drawings.

He will be responsible for construction supervision and review and approval of Contractor's bills. He will assist the Resident Engineer (RE) in the performance of his tasks. He will be responsible for designing especially on cost effective, multi-hazard resistant design, design the structural elements of roads component and bridges, including detailed structural drawings and specifications. The main responsibilities of the position will include but not limited to the following:

- Inspect the site and collect the condition data for the design review and necessary changes if any;
- Assist in preparation of technical details such as specifications and estimates;

- Provide details about existing structures, damages and assessment;
- Assist and recommend approval of Contractor's work program, method statements, material sources, etc.;
- Assist in preparing and issuing reports as defined subsequently;
- Review and recommend approval and/or issuing working drawings, approval of the setting out of the Works, and instruction to the Contractor;
- Assist in Taking measurements and keep measurement records;
- Assist in Maintaining records, correspondence, and diaries;
- Assist in Certifying work volume and recommending interim certificates for progress payments;
- Assist in maintaining consolidated project accounts, and preparing of financial statements;
- Provide feedback on the certification of completion of part or all of the Works;
- Assist in inspecting the Works at appropriate intervals during the defects liability period and issuing the defects liability certificate;
- Assist in Processing the Contractor's possible claims;
- Providing the Employer with complete records and reports, and recommend the Contractors' as -built drawings for the Works; and
- Assist in the compilation of a Project completion report data, providing details of Project implementation, problems encountered, and solutions adopted, and detailing and explaining any variation in Project costs and implementation schedules from the original estimate

3. Title: Geotechnical Engineer

Experience:

Minimum eighteen (18) years relevant professional experience of which 10 years minimum and 15 years desirable, as Geotechnical Engineer in design/ design review of roads/structures of National Highway projects with proven credentials in Bridge Designing or related to foundation investigation and design of major structures and embankments.

Qualification:

Minimum bachelor's degree in Civil / Geological Engineering with Master's degree in Geotechnical Engineering or Foundation Engineering or equivalent.



Responsibilities:

Geotechnical Engineer will review the design and any modification and change in design, construction method, and alternate technology of construction and provide oversight during the consultancy design review service. He/she will be responsible for carrying out geotechnical investigations and subsurface explorations for road and structures, stipulate material testing procedures and specifications, identify sources of materials, quarry sites and borrow areas. He/she is also responsible for all design related assignments related to Soil / Geotechnical engineering of the project.

4. Title: Geometric Design Engineer**Experience:**

Minimum 15 years' professional experience in Geometric Design of National Highways/ Expressways/ Motorways. Strong background in access management and traffic control systems will be preferred.

Qualification:

Minimum bachelor's degree in civil engineering preferably Masters in Civil Engineering / Highway Engineering / Transportation Engineering or equivalent.

Responsibilities:

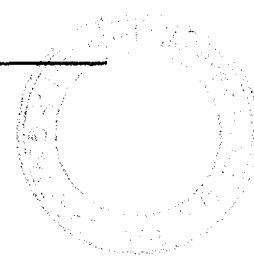
He/she will lead the design review team as coordinator to complete the task in professional manner. The Geometric Design Engineer will verify the detailed design and provide comments. Verify and recommend/provide design plans for road geometry and furniture and road safety appliances. Generally, role of a geometric road design engineer is to decide the placement of the road with respect to surrounding physical environs and give a shape to its configuration with due care for mobility, access management, traffic control and best possible road safety mechanism embedded in design process.

5. Title: Road Safety Engineer**Experience:**

Minimum 12 years relevant professional experience of which 6 years minimum, and 9 years desirable, as Road Safety Engineer with proven credential as safety auditor on major Highway projects.

Qualification:

Minimum bachelor's degree in Civil Engineering and preferably Master's in Transportation / Traffic Engineering with additional certification of Safety Auditor.



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Responsibilities:

The Road Safety Engineer will Audit the design of road during Design Review from safety aspect to improve the design if required. The Road Safety Engineer will be part of the supervision services team too and will be providing all necessary assistance to the construction supervision team with respect to all safety, health and environmental issues. He/she will review and approve the safety plans of the Contractor and he will monitor the safety of the Works and the safety of the traffic diversions and ensure compliance with the regulations. Road Safety Engineer will identify hazardous location(s) and conditions, conduct a highway safety study, collect and analyses preliminary data, identify and collect field data, select and conduct appropriate detailed studies, evaluate study results, determine safety and operational deficiencies, identify potential safety and operational improvement and to select appropriate improvements. The Road safety Auditor will set up the road safety supervision systems, train the national staff and ensure that the system is in place. He/she shall ensure minimum disruption/damage to the environment by approval of Contractors' work statement/ methodology, including monitoring the impact of construction works on the environment and local settlements and providing information to NHA on the monthly progress reports.

6. Title: Drainage Engineer**Experience:**

Minimum 15 years of relevant professional experience of which 10 years minimum, and 13 years desirable as Drainage Engineer on roads and bridges design projects of National Highways/ Expressways/ Motorways.

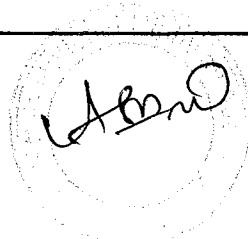
Qualification:

Minimum bachelor's degree in Civil engineering with Masters in Hydrology/ Hydraulics Engineering or equivalent.

Responsibilities:

Responsibilities of the Drainage Engineer will include, but is not limited to the following:

- He/she will perform his duties under the guidance of the Team Leader.
- Work in the survey and design team and will be responsible for collecting and assessing the hydrological data, finalizing the design discharges for the required drainages, cross drainages, sub surface drainages.
- Provide assistance to the design team in designing the appropriate and cost effective design of drainage structures.
- He/she shall collect relevant field data and estimate the design discharges for various drainages structure for the design purpose.



7. Title: Resident Engineer / Team Leader (Construction Supervision)

Experience:

Minimum 15 years' preferably 18 years' relevant professional experience of which 8 years minimum and 10 years desirable experience as Resident Engineer on construction projects of National Highways/ Expressways/ Motorways. The candidate should have worked as Team Leader on three (03) similar projects.

Qualification:

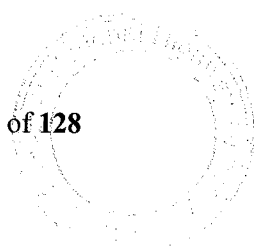
Minimum bachelor's degree in Civil engineering preferably Masters in Civil Engineering / Highway Engineering / Transportation Engineering / Construction Management or equivalent.

Responsibilities:

Overall responsibility for the organization, conduct and delivery of consultancy services and reporting to NHA. The RE / Team Leader will head the Consultants' team and will work directly to manage the project and will maintain liaison with NHA.

Responsibilities of the RE / Team Leader will include, but is not limited to the following:

- Ensure the Project implementation;
- Assume full responsibility for the consulting team and performance of services under the Consultancy Contract;
- Ensure that the consulting team undertakes comprehensive review of the designs and specifications which were prepared by the design consultant;
- Ensure that the consulting team undertakes comprehensive construction supervision and contract administration of the Works;
- Oversee the Consultants activities ensuring compliance to details provided in the construction drawings and strict adherence to construction specifications;
- Oversee and supervise construction of Works in accordance with details provided in the construction drawings ensuring strict adherence to construction specifications;
- Ensure preparation of detailed and quantitative progress reports to support the Contractor's requests for progress payments;
- Keep the Employer informed of technical issues and progress of all Works both by informal and formal meetings and correspondence and assist in any project issue which the Employer may require;
- Ensure implementation of environment and social safeguards requirements;
- Assist the Employer in preparing responses to audit objections and queries of the financiers or other Government Authorities;
- Coordinate with all concerned Employer's organizations on project issues;



- At the end of the construction activities, guide and ensure that the team prepares a comprehensive Construction Completion Report inclusive of “as-built drawings” as appropriate;
- The Resident Engineer will be responsible for quality, cost, scope, time, safety, and environmental control of the subprojects;
- Review and assist in the approval of Contractor’s work program, method statements, material sources, preparing and issuing reports as defined subsequently, approving and/or issuing working drawings, approving the setting out of the Works, and instructing the Contractor;
- Certifying work volume and recommending interim certificates for progress payments, maintaining consolidated project accounts, and preparation of financial statements, ensuring minimum disruption/damage to the environment by approval of Contractors’ work statement/ methodology;
- Monitoring the impact of construction Works on the environment and local settlements and providing information to the Consultants and NHA on the monthly progress reports;
- Preparing and issuing reports as defined subsequently;
- Approving and/or issuing working drawings, approving the setting out of the Works, and instructing the Contractor;
- Taking measurements and keep measurement records;
- Maintaining records, correspondence, and diaries;
- Certifying work volume and recommending interim certificates for progress payments;
- Maintaining consolidated project accounts, and preparing of financial statements;
- Certifying completion of part or all of the Works;
- Inspecting the Works at appropriate intervals during the defects notification period and issuing the defects notification certificate;
- Processing the Contractor’s possible claims;
- Ensuring minimum disruption/damage to the environment by approval of Contractors’ work statement/ methodology, including monitoring the impact of construction Works on the environment and local settlements and providing information to NHA on the monthly progress reports;
- Providing the Employer with complete records and reports, and approving the Contractors’ as - built drawings for the Works; and
- Compile a Project completion report providing details of Project implementation, problems encountered, and solutions adopted, and detailing and explaining any variation in Project costs and implementation schedules from the original estimates.

8. Title: Assistant Resident Engineer (Structures)

Experience:

Minimum 10 years' preferably 15 years' relevant professional experience of supervision of construction projects of National Highways/ Expressways/ Motorways of which 7 years minimum, and 10 years desirable, as Assistant Resident Engineer (Structures).

Qualification:

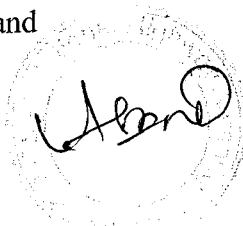
Minimum bachelor's degree in Civil engineering preferably Masters in Structural Engineering or equivalent.

Responsibilities:

He/she will be responsible for construction supervision of structural components of the highway (and bridges if required) and ensuring that the subject project is implemented in accordance with the required specification and approved drawings.

He will be responsible for construction supervision and review and approval of Contractor's bills. He will assist the Resident Engineer (RE) in the performance of his tasks. He will be responsible for designing especially on cost effective, multi-hazard resistant design, design the structural elements of roads component (and bridges if required), including detailed structural drawings and specifications. The main responsibilities of the position will include but not limited to the following:

- Inspect the site and collect the condition data for the design review and necessary changes if any;
- Assist in preparation of technical details such as specifications and estimates;
- Provide details about existing structures, damages and assessment;
- Assist and recommend approval of Contractor's work program, method statements, material sources, etc.;
- Assist in preparing and issuing reports as defined subsequently;
- Review and recommend approval and/or issuing working drawings, approval of the setting out of the Works, and instruction to the Contractor;
- Assist in taking measurements and keep measurement records;
- Assist in maintaining records, correspondence, and diaries;
- Assist in certifying work volume and recommending interim certificates for progress payments;
- Provide feedback on the certification of completion of part or all of the Works;
- Providing the Employer with complete records and reports, and recommend the Contractors' as-built drawings for the Works; and



- Assist in the compilation of a Project completion report data, providing details of Project implementation, problems encountered, and solutions adopted, and detailing and explaining any variation in Project costs and implementation schedules from the original estimates.

9. Title: Assistant Resident Engineer (Bridges)

Experience:

Minimum 10 years' preferably 15 years' relevant professional experience of supervision of construction projects of National Highways/ Expressways/ Motorways of which 7 years minimum, and 10 years desirable, as Assistant Resident Engineer (Bridges).

Qualification:

Minimum bachelor's degree in Civil engineering preferably Masters in Bridge/ Structural Engineering or equivalent.

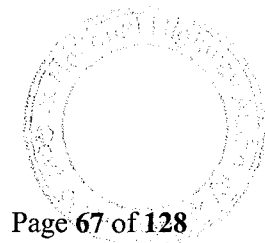
Responsibilities:

He/she will be responsible for construction supervision of bridges and structural components of the road and ensuring that the subject project is implemented in accordance with the required specification and approved drawings.

He will be responsible for construction supervision and review and approval of Contractor's bills. He will assist the Resident Engineer (RE) in the performance of his tasks. He will be responsible for designing especially on cost effective, multi-hazard resistant design, design the structural elements of roads component and bridges, including detailed structural drawings and specifications. The main responsibilities of the position will include but not limited to the following:

- Inspect the site and collect the condition data for the design review and necessary changes if any;
- Assist in preparation of technical details such as specifications and estimates;
- Provide details about existing structures, damages and assessment;
- Assist and recommend approval of Contractor's work program, method statements, material sources, etc.;
- Assist in preparing and issuing reports as defined subsequently;
- Review and recommend approval and/or issuing working drawings, approval of the setting out of the Works, and instruction to the Contractor;
- Assist in taking measurements and keep measurement records;
- Assist in maintaining records, correspondence, and diaries;

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- Assist in certifying work volume and recommending interim certificates for progress payments;
- Provide feedback on the certification of completion of part or all of the Works;
- Providing the Employer with complete records and reports, and recommend the Contractors' as-built drawings for the Works; and
- Assist in the compilation of a Project completion report data, providing details of Project implementation, problems encountered, and solutions adopted, and detailing and explaining any variation in Project costs and implementation schedules from the original estimate.

10. Title: Assistant Resident Engineer (Highways)

Experience:

Minimum 10 years' preferably 15 years' relevant professional experience of supervision of construction projects of National Highways/ Expressways/ Motorways of which 7 years minimum, and 10 years desirable, as Assistant Resident Engineer (Highways).

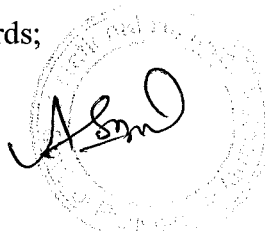
Qualification:

Minimum bachelor's degree in Civil engineering preferably Masters in Civil engineering/ Highways engineering/ Structural engineering/ Transportation engineering/ Construction Management or equivalent.

Responsibilities:

ARE will be responsible for construction supervision of the road and ensuring that the subject project is implemented in accordance with the required specification and approved drawings. He will be responsible for construction supervision and review and approval of Contractor's bills. ARE will assist the Resident Engineer (RE) in the performance of his tasks. The main responsibilities of the position will include but not limited to the following:

- Inspect the Site and collect the condition data for the design review and necessary changes if any;
- Assist the RE in preparation of technical details such as specifications and estimates;
- Provide details about existing pavement, damages and assessment, if required;
- Assist the RE and recommend approval of Contractor's work program, method statements, material sources, etc.;
- Assist the RE in preparing and issuing reports as defined subsequently;
- Review and recommend approval and/or issuing working drawings, approval of the setting out of the Works, and instruction to the Contractor;
- Taking measurements and keep measurement records;



- Maintaining records, correspondence, and diaries;
- Certifying work volume and recommending interim certificates for progress payments;
- Assist in maintaining consolidated project accounts, and preparing of financial statements;
- Provide feedback to the RE on the certification of completion of part or all of the Works;
- Processing the Contractor's possible claims;
- Ensuring minimum disruption/damage to the environment by approval of Contractors' work statement/ methodology, including monitoring the impact of construction works on the environment and local settlements and providing information to NHA on the monthly progress reports;
- Providing the Employer with complete records and reports, and recommend the Contractors' as - built drawings for the Works; and
- Assist in the compilation of a Project completion report data, providing details of Project implementation, problems encountered, and solutions adopted, and detailing and explaining any variation in Project costs and implementation schedules from the original estimates.

11. Title: Material Engineer

Experience:

Minimum 10 years' preferably 15 years' relevant experience as Material Engineer on construction supervision projects of National Highways/ Expressways/ Motorways of which minimum 5 years experience of asphalt concrete mix design in countries having similar climate condition and/or truck overloading problems like Pakistan.

Qualification:

Minimum Bachelor's degree in Civil engineering or Masters in Geology, preferably Masters in Soil Engineering/ Material Engineering/ Geotechnical Engineering or equivalent.

Responsibilities:

Soil/Material Engineer will perform duties under the guidance of the Team Leader. He/she will assist the Team during construction supervision of the Road, Bridges and structures and assist in ensuring that the subject project is implemented in accordance with the required specification and approved drawings. The Soil/Material Engineer will set up quality control systems, testing procedures, preparation of JMF, train the staff and ensure that the system is in place.



He/she will assist and will be responsible for quality of materials used in construction by performing field and laboratory tests and certifying their acceptance based on recommended specifications for the material, will also identify the sources of material and query sites.

Main responsibilities of the position will include but not limited to the following:

- Stipulate Material Testing Procedures and Specifications;
- Identify sources of materials, quarry sites and borrow areas;
- Confirm the suitability and availability of material in the borrow pits and quarries for pavement;
- If required, identify and evaluate additional sources of materials;
- Undertake field and laboratory testing of the materials to determine their suitability for various components of the Work;
- Prepare mass haul diagram for haulage purposes giving quarry charts indicating the location of selected borrow areas, quarries and the respective estimated quantities;
- Make suitable recommendations regarding making good the borrow and quarry areas after the exploitation of materials for construction of Works;
- Be responsible for Material Testing and specification and certification of material quality;
- Preparation and testing of concrete mixes of different design mix grades using suitable materials (binders, aggregates, sand filler etc.) as identified during Material Investigation to conform to specification applicable in Pakistan; and
- Preparation of JMF.

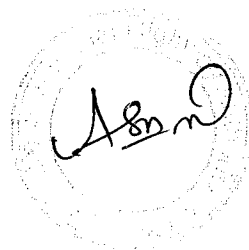
12. Title: Contract Engineer

Experience:

12 years' relevant professional experience of which 6 years minimum, and 9 years desirable, as Contract Specialist on major road projects based on FIDIC form / conditions of contract. Proven credentials in contract administration, evaluating Contractor's claims and dispute resolution, preferable experience/track record of an arbitrator, mediator, adjudicator and/or dispute resolution adviser.

Qualification:

Bachelor's degree with a major in Civil Engineering, Law, Contracts, Procurement, or Construction Management preferably M.Sc. in Civil Engineering, Law, Contracts, Procurement or equivalent




Responsibilities:

Responsible for assistance in contract administration of Works contracts, taking timely contractual actions related to cost, time and quality controls and closure of the contracts, and in case of dispute its referral to the adjudication and arbitration as the case may be.

He/she will be responsible for assisting the Team Leader in all the activities pertaining to contract management, early warning of key contractual actions, schedule and document contract management meetings and evaluating/ resolving Contractor's claims and contractual disputes.

Responsibilities of the Contract Engineer will include, but is not limited to the following:

- Assist Team Leader in coordinating contract management and planning activities for the work packages with Engineering, Project Controls and Construction;
- Assist to organize meetings for negotiating and resolving technical and contractual issues;
- Assist Team Leader in the timely distribution of reports and pertinent contractual information to and from Contractors in accordance with agreed schedule;
- Assist in schedule turnover meetings with Site Personnel, where required;
- Assist to check timesheets for contract conformance (rates, backup and extensions);
- Assist in review Contractors' invoices and prepare Progress Payment Certificates with Cost Control;
- Assist in review Contractors' costs, forecasts and requests for claims;
- Assist in review and issue for approval and post Substantial Performance documents;
- Participate in contract cost review meetings and regular Project progress and assist with preparation of monthly contracts and Project progress reports;
- Assist in procurement and contracts administration and assistance actions such as contracts, solicitations, modifications, delivery schedules, plans and coordination with relevant departments;
- Assist in preparation of procurement and contract documents;
- Assists in the review of procedural aspects of contract actions. Participates in contracts administration sufficient to ensure contract terms and conditions are met and that the Contractor delivers the required services in a timely manner to achieve the objectives of the project;
- Assists in the termination of contracts for the convenience of the Project by a Contractor. The incumbent is responsible for the preparation of all documentation necessary to support and defend termination decisions;
- Recommends actions when the Contractors are not in compliance with contract provisions;

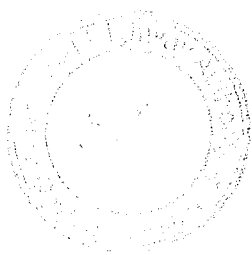


- Coordinate with Contractors to determine and recommend alternative courses of action, such as extension of delivery schedule;
- Conducts contract reviews to evaluate Contractor's performance, and monitors Contractors' activity to assure compliance;
- Monitors such matters as payments, claims, and contractual changes to insure requirements of the contract are met;
- Reviews completed contract file to ensure routine administrative matters are resolved or completed; and
- Support to Team Leader in drafting, for submittal to Employer, any requests for consent to extension of time / variation orders.

E. Reporting & Documents Requirements

17. Reporting Requirements: The Consultants will prepare and submit to PIU five copies of each of the under mentioned reports. The format of these reports shall be mutually agreed with the PIU:

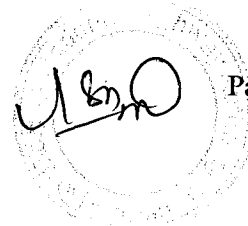
- (i) **Inception Report:** The Consultants will submit an Inception Report within one Month after mobilization. This will contain full detail of the Consultants' supervision, & contract administration methodology and staff plan with supporting CVs of professional staff and projected monthly billing.
- (ii) **Design Review Report:** The Consultants will submit a detailed Design Review Report, under the guidance of team leader within two months, indicating any deficiencies / improvements required in the detailed design prepared by the Design consultant. The design review will ensure that the construction drawings carry all details necessary for executing the job and shall not result in claims of non BOQ items / additional associated costs.
- (iii) **Monthly Contract Administration Reports:** The Consultants will prepare a narrative progress report, not later than the 10th of each month, summarizing:
 - a. Construction progress during the month and cumulative to date for each individual contract drawing specific attention to any major causes of delay (administrative, technical or financial) with details of remedial action taken or recommended to the Employer.
 - b. A comparison of actual and forecast expenditure both during the month and cumulative to date for each individual contract, and a record of the status of payment of the Contractors' monthly invoices, of all claims for cost or time extensions, and of actions required of PIU to permit unconstrained works implementation. The Consultants will also advise on the final estimated cost for each individual contract and draw attention to



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any major changes in the project budget including details of remedial action taken or recommended to the Employer.

- c. Brief on all correspondence exchanged with the Contractors particularly relating to contractual clauses, with financial and time implications.
 - d. Technical appreciation of any design or quality control problems for each individual contract including details of remedial action taken or recommended to the Employer.
 - e. Status of compliance with the Environmental & Resettlement Plans.
- (iv) **Annual Management Information Report at the end of each Financial Year:** The Consultants will prepare a comprehensive report summarizing all activities under the Services at the end of each Financial Year, and also at other times when considered warranted by either the Consultants or PIU because of delay of the construction Works or because of the occurrence of technical or contractual difficulties. Such reports shall summarize not only activities of the Project Engineer/ Manager but also the progress of the Contractors including all contract variations and change orders, the status of the Contractors claims, and brief descriptions of the technical and contractual problems being encountered and other relevant information for each of the ongoing contracts.
- (v) **Interim Contract Completion Reports:** The Consultants will prepare completion report for each contract within 30 days of issuance of Taking-over Certificate/Certification of Completion. This report shall summarize the implementation and financial history of the project. The defects list provided to the Contractor and all outstanding claims pending resolution.
- (vi) **Final Project Completion Report:** The Consultants will prepare a comprehensive final Completion Report within 90 days after Issuance of the Taking Over Certificate of the last Works contract. The Consultants will prepare a comprehensive final Completion Report for the project including each of the contracts and shall summarize the method of construction, as built record showing the location and details of all Works carried out, all defects and certification of the satisfactory correction of such defects for each of the construction contracts, the construction supervision performed, and recommendations for future projects of similar nature to be undertaken by NHA. A safeguards implementation completion (final) report will also be included as appendix to the final project completion report.
- (vii) **Project Documentary Report:** The Consultants has to make documentary of all major activities during constructions as well as that of completed project sections to be submitted towards the end of the project. These should also pertain;
- a) Laying and compaction of various pavement layers;
 - b) Operation of Asphalt and concrete Plants;



- c) Quarry sites and laboratory activities;
 - d) Road after completion showing road furniture;
 - e) Various important stages in construction of structures;
 - f) Any other major activity involved requiring specific mention.
- (viii) **Roughness Survey Report:** The roughness surveys will be carried out at substantial completion in coordination with NHA, before the end of the defect liability period. The Consultant is required to submit his findings along with data in this report.
- (ix) **Revised PC-1:** The Consultants shall prepare the revised PC-1 of the project, before completion of the project, if required by incorporating all changes in the scope of work and, prepare completion report (PC-IV), at the completion of the project.

18. **Documents & Manuals Required:** The Consultants will prepare following documents to be approved by the Employer for efficient contract administration & construction supervision.

- a. Contract Administration Manual
- b. Quality Control & Assurance Manual
- c. Laboratory Manual
- d. Environmental Monitoring Checklist
- e. Safeguard Monitoring Check list

F.

19. **Employer's Input and Counterpart Personnel**

- (i) Services, facilities and property to be made available to the Consultants by the Employer: Design Reports, Drawings and related data for the sub-projects will be shared with the Consultants.
- (ii) Professional and support counterpart personnel to be assigned by the Employer to the Consultants' team: The Employer shall establish a functional Project Management Unit for support and liaison with the Consultants.

G.

20. **Employer will provide the following inputs, project data and reports to facilitate preparation of the Proposals: N/A**



H.

21. Miscellaneous

(i) Employer's Staff:

The Employer has planned a Project Implementation Unit (PIU) to implement the Project. The PIU has been established under a General Manager, assisted by Project Director and land acquisition Staff and will be located in the field.

(ii) Facilities:

Facilities for the Consultants: The Construction Contractor shall provide, operate and maintain the following facilities for the exclusive use of the Consultants:

- a. Laboratory and Testing Equipment
- b. Site Office and Residential Accommodation (adequately furnished)
- c. Site Transport
- d. Survey Equipment

(iii) The Consultants are encouraged to familiarize with Construction Work before submitting their proposals. Draft sample documents regarding EMP, Resettlement, and Environment as per the instruction of the Client.

