Request for Expressions of Interest (REOI)

(Consulting Services – Selection of Firms)

Country: *Islamic Republic of Pakistan*

Project: *Reconstruction of National Highway N-5 Under Pakistan's Resilient Recovery, Rehabilitation and Reconstruction Framework Project - Phase 1A: Widening & Improvement of Three Priority Sections of N-5 (141 Km):*

- *Section-2 Ranipur - Sukkur Road (70 Km)*
- *Section-7 Rawalpindi - Hassanabdal Road (40 Km)*
- *Section-8 Nowshera-Peshawar (31 Km)*

Project No.: *P000913*

Contract/Assignment Title: *Design Review & Construction Supervision for Reconstruction of National Highway N-5 Under Pakistan's Resilient Recovery, Rehabilitation and Reconstruction Framework Project - Phase 1A*

REOI Reference No: *CS01*

Client: *National Highway Authority (of Ministry of Communications) – Government of Pakistan*

1. Islamic Republic of Pakistan has applied for financing from the Asian Infrastructure Investment Bank (AIIB or Bank) for the Project and intends to apply part of the proceeds for the consulting services for which this REOI is issued.

2. The consulting services ("the Services") include the Design Review and Construction Supervision Services for the Project. The Consultant shall complete the Scope of Services within forty-two (42) months of contract signing. The Consultant will work with the NHA as per agreement to carry out the tasks outlined in the TOR.

3. The draft Terms of Reference (TOR) for the assignment are attached to this REOI.

4. The National Highway Authority (NHA) now invites eligible consulting firms ("Consultants") to indicate their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. The shortlisting criteria are mentioned in the Expression of Interest (EOI) Template. The EOI Template and the draft TOR can be downloaded from NHA website www.nha.gov.pk. Key Experts will not be evaluated at the shortlisting stage.

5. The attention of interested Consultants is drawn to Section 2 of the Bank's Procurement Instructions for Recipients (PIR), via AIIB website: https://www.aiib.org/en/policies-strategies/_download/operational-directive/AIIB-Directive-on-Procurement-Instructions-for-Recipients-July-26-2024.pdf, setting forth the Bank's policy on conflict of interest.

6. Consultants may associate with other firms to enhance their qualifications, but should indicate clearly whether the association is in the form of a joint venture and/or a

sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

7. A Consulting firm will be selected in accordance with the ***Quality and Cost Based Selection (QCBS)*** method set out in the PIR.

8. Further information can be obtained at the address below during office hours *0830 to 1630 hours.*

9. EOI must be delivered in a written form to the address below (in person, or by mail, or by fax, or by e-mail) by **29th August 2025**.

National Highway Authority
Ministry of Communication
Government of Pakistan
General Manager (P&CA)
Address: Procurement and Contract Administration Section, 2nd Floor, NHA -HQ, 28-Mauve area, G-9/1 Islamabad
Tel:+92519032727
Fax:+925160419
Email: gmpca.nha@gmail.com, gmpca@nha.gov.pk
Website: www.nha.gov.pk

CONSULANCY SERVICES FOR DESIGN REVIEW & CONSTRUCTION SUPERVISION OF RECONSTRUCTION OF NATIONAL HIGHWAY N-5 UNDER PAKISTAN'S RESILIENT RECOVERY, REHABILITATION AND RECONSTRUCTION FRAMEWORK PROJECT - PHASE 1A

Expression of Interest (EOI) Template for Consulting Firms

Project Name	Consultancy Services for Design Review & Construction Supervision of Reconstruction of National Highway N-5 Under Pakistan's Resilient Recovery, Rehabilitation and Reconstruction Framework Project - Phase 1A: Widening & Improvement of Three Priority Sections of N-5 (141 Km): □ Section-2 Ranipur - Sukkur Road (70 Km) □ Section-7 Rawalpindi - Hassanabdal Road (40 Km) □ Section-8 Nowshera-Peshawar (31 Km)
Project Country	Islamic Republic of Pakistan

I. Consulting Firm Information

Date:	Country of Incorporation:[1]
Consultant Name:	Acronym:
EOI Submission Authorized by:	Position
Contact Information: address, email, phone No. etc.	

Associations (Joint Venture or Sub-consultancy)

Sr. No	Consultant	Acronym	Country of Incorporation[1]	Joint Venture (JV) or Sub-consultant	EOI Submission Authorized by	Position

Present the rationale for and benefits of working in association (JV or Sub-consultant) with others rather than undertaking the assignment independently (as appropriate). Describe the proposed management and coordination approach of the association and the role of each firm.

[1] The lead consultant must submit a copy of the Certificate of Incorporation of itself and of each JV member and sub-consultant as EOI Attachments.

II. Evaluation Criteria

The EOI will be evaluated in accordance with the criteria elaborated against each head, as given below:

1. Company profile (Score 15):

The EOI shall demonstrate the company profile with the following particularities but not limited to:

- Number of years of establishment of the company/firm (lead and JV); (03)
- Number of personnel (key experts); (03)
- Track record: Detail about firm's corporate capacity and profile. The consultant should never have been backlisted by any client or have left any project incomplete for reasons which is not attributable to the Client(s). (Affidavit (company's letter head for International firms and affidavit on stamp paper for Pakistani firms) to this effect must be submitted); (04)
- Overall management: consultants shall demonstrate strong technical and managerial staff for employment of the subject services. (05)

2. Technical competence (Score 50):

Consultant shall provide details about ten (10) relevant projects completed in the last ten (10) years by highlighting the technical qualifications of the entity/consortium in undertaking similar assignments.

In addition to the standard scope of design review and construction supervision services, the evaluation of technical competence will also emphasize the consultant's experience and qualifications in the following areas: (1) supporting resettlement, relocation, or land acquisition; (2) enhancing road safety for travelers and ensuring occupational health and safety (OHS) for project workers during construction; (3) supporting effective management of traffic disruptions throughout the construction period; and (4) leveraging digital tools to strengthen project management. More details of these requirements are included in the draft Terms of Reference (TOR) provided along with the REOI.

3. Geographical Experience (Score 20):

Consultant shall provide a list of projects completed in the last ten (10) years in South Asia.

4. Management Competence (Score 15) (Each question carries a maximum of 3 points):

Please answer each question in one paragraph of 3-5 sentences:

a) Describe standard policies, procedures, and practices that your entity has to assure quality interaction with clients and outputs. Please state if your company is ISO certified.

b) How will your firm/consortium handle complaints concerning the performance of experts or quality of the reports submitted for this assignment? What internal controls are in place to address and resolve complaints?

c) How will you ensure the quality of your firm's/consortium's performance over the life of this assignment?

d) Describe standard policies, procedures and practices that your firm has put in place to avoid changes/replacements of personnel and to ensure the continuity of professional services once contracted.

e) Describe what social protection practices you have in place to safeguard the well-being of your proposed experts? Specifically describe arrangements you have in place for medical, accident, and life insurance coverage during the assignment.

III. Other Information (maximum of 500 words)

IV. Project brief

The Project includes the following three (3) sections:
- Section-2 Ranipur – Rohri Road (70 Km)
- Section-7 Rawalpindi – Hassanabdal Road (40 Km)
- Section-8 Nowshera – Peshawar Road (31 Km).

The tentative project duration is of 42 months.

Project References format

Please select the most relevant projects to demonstrate the firm's technical qualifications and geographical experience, respectively (maximum 10 projects).

SN	Project	Period	Client	Country	Firm
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Project Summary

SN 1

Project Title	
Country / Region	
Start Date	
Completion Date	
Continuous / Intermittent	
Client	
Funding Source	
Description	(Indicate your role, input in person-months, total consultancy cost, Share of the Firm etc.)

SN 2	
Project Title	
Country / Region	
Start Date	
Completion Date	
Continuous / Intermittent	
Client	
Funding Source	
Description	(Indicate your role, input in person-months, total consultancy cost, Share of the Firm etc.)

(Please insert more tables as necessary)

V. EOI Attachments

Sr. No.	Description
1	Certificate of Incorporation of the lead member
2	Certificate of Incorporation of the JV member (for each member)
3	Certificate of Incorporation of the Sub-Consultant (for each sub-consultant)
4	Letter of Association

(Please insert more rows as necessary)

I confirm that:

☐ Documentation regarding our corporate structure including beneficial ownership has been attached.

☐ Documentation regarding our Board of Directors has been attached.

☐ A written agreement to associate for the purpose of this Expression of Interest has been signed between the consortium partners and has been attached.

(Once your team is shortlisted and invited for submission of the Proposal, it is not permissible to transfer the invitation to any other firm, such as Consultant's parent companies, subsidiaries and affiliates. The Client will reject a Proposal if the Consultant drops a JV member without the Client's prior consent, which is given only in exceptional circumstances, such as debarment of the JV partner or occurrence of Force Majeure.)

Authorized Signature {*in full and initials*}: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

July 2025

DTERMS OF REFERENCE (DRAFT)

Consultancy Services
for

Design Review &
Construction Supervision

of the
Reconstruction of National Highway N-5 under Pakistan's Resilient Recovery, Rehabilitation and Reconstruction Framework Project

PHASE 1A (141 Km)

- **SECTION-2 RANIPUR - ROHRI ROAD (70 Km)**
- **SECTION-7 RAWALPINDI - HASSANABDAL ROAD (40 Km)**
- **SECTION-8 NOWSHERA-PESHAWAR (31 Km)**

June 2025

Table of Contents

TOR Template shall include, in order and material, as follows:

CHAPTER NO. 1
INTRODUCTION

1.1 BACKGROUND:

- The National Highway N-5 is Pakistan's longest highway running from the strategic port city of Karachi to the border crossing with Afghanistan at Torkham. It runs north from Karachi, located in the Sindh province to Hyderabad, Moro and Khairpur before crossing into Punjab province where it passes through Multan, Sahiwal, Lahore, Sheikhupura District, Gujranwala, Gujrat, Jhelum and Rawalpindi. At Rawalpindi, it turns eastwards and passes through Attock Khurd before crossing the Indus River into Khyber Pakhtunkhwa to continue through Nowshera and Peshawar before entering the Khyber Pass and reaching the border town of Torkham. Multiple major cities contribute to feeding regular and freight traffic on this vital highway.

- In recent years, the priority sections of the N-5 between various cities have shown increasing congestion, and traffic capacity- and management-related challenges. NHA identified the need to provide additional lanes on each side of N-5 in the priority sections as a critical and urgent measure to enhance the highway performance in a holistic manner. In addition to enhancing the capacity of N-5's priority sections, the Project aims to substantially improve their road safety and climate resilience performance. The Project is expected to contribute to the economic development of the regions and local communities along its route.

- The Reconstruction of National Highway N-5 under Pakistan's Resilient Recovery, Rehabilitation and Reconstruction Framework Project – Phase 1A (the "**Project**") will facilitate freight and passenger traffic movement along its priority sections. It will have, however, significant impacts on land use, which have been subject of an Environmental and Social Impact Assessment (ESIA), prepared in accordance with the Asian Infrastructure Investment Bank (AIIB)'s Environmental and Social Framework (ESF), including the Environmental and Social Policy (ESP), Environmental and Social Standards (ESS), and Environmental and Social Exclusion List (ESEL). The Project's implementation must comply with the provisions of the Project's ESIA, including the Environmental and Social Management Plan (ESMP), Resettlement Action Plans (RAPs), Environmental and Social Management Planning Framework (ESMPF), Resettlement Planning Framework (RPF), Labor Management Plan (LMP), Stakeholder Engagement Plan (SEP), Gender Action Planning Framework (GAPF), and Environmental and Social Action Plan (ESAP). The Consultant shall be responsible for ensuring that all works, including review and supervision,

comply with the applicable national laws and regulations related to environmental protection, social safeguards, labor, and resettlement, in addition to AIIB ESF requirements.

1.2 NEED ASSESSMENT:

- The priority sections of N-5 are heavily trafficked and congested which leads to hold-ups and encumbrances for the commuters. In priority sections, the situation is further aggravated by the deteriorating conditions of existing pavements which are in poor condition on both south- and northbound roads, and need improvement, apart from a few stretches where road is fair.

- The Project will facilitate the movement of various types of traffic, including trade, construction materials, agricultural goods, industrial products, and commercial freight, along the N-5 route from Karachi to Torkham.
  - Widening and improvement of existing roads is expected to increase the traffic carrying capacity of the road and reduce traffic congestion in major urban areas.
  - Widening and improvement of existing cross drainage structures is required for the safe passage of water accumulating from adjoining catchment areas.
  - Geometric improvement of sharp horizontal and vertical curves is required.
  - Provision of pedestrian facilities for safe pedestrian movements particularly in populated urban areas, in line with International Best Practices and Guidelines, is necessary.
  - Implementation of the project is expected to uplift the economy of the area and generate employment opportunities for local people and enhance business activities.
  - Construction of service roads on both sides is required to improve mobility of through traffic by reducing direct access points of local traffic on the main carriageway.

1.3 PROJECT DEFINITION:

- The Project includes the following three (3) sections:
  - **Section-2** Ranipur – Rohri Road (70 Km)
  - **Section-7** Rawalpindi – Hassanabdal Road (40 Km)
  - **Section-8** Nowshera – Peshawar Road (31 Km)
- For this purpose, NHA intends hiring a consultancy firm (the "Consultant") for the purpose of carrying out the Project's Design Review and Construction Supervision.

Technical parameters

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

  Standards / Specifications

  The following standards and specifications shall be adopted for the construction of this Project:

  - NHA Specifications,
  - International Best Practices and Guidelines for the Safe System Approach Design,[1]
  - AIIB Environmental and Social Framework (ESF), as reflected in the Project's Environmental and Social Impact Assessment (ESIA) including the Environmental and Social Management Plan (ESMP), Resettlement Action Plan (RAP), Gender Action Planning Framework (GAPF), Environment and Social Management Planning Framework (ESMPF), Resettlement Planning Framework (RPF), Labor Management Plan (LMP), Stakeholder Engagement Plan (SEP), and Environmental and Social Action Plan (ESAP) and Good International Industry Practice (e.g., WBG EHS Guidelines, OSHA etc.).
  - AIIB Climate Action Plan, including developing and adopting climate mitigation measures to reduce the Project's lifecycle carbon footprint, and developing and adopting climate adaptation and resilience measures to enhance the Project's resilience to climate change and disasters.

  Design Standards & Criteria for Highway & Structures

  The design criteria adopted are in accordance with the recommendations of the National Highway Authority (NHA) and the International Best Practices and Guidelines and the following design standards and policies have been adopted:

  - American Association of State Highway and Transportation Officials (AASHTO): A Policy on Geometric Design of Highways and Streets (Latest) for Geometric Design;
  - Highway Capacity Manual, by the United States Transportation Research Board for the analysis of roadway capacity;

[1] International Best Practices and Guidelines include, but not limited to:

- Guide to Integrating Safety into Road Design, Transport Global Practice, 2022
- Guide for Safe Speeds, Managing Traffic Speeds to Save Lives and Improve Livability, International Bank for Reconstruction and Development / The World Bank, 2024.
- Road Safety Manual, World Road Association (PIARC), 2003,
- iRAP specifications, manuals and guides, including Road Surey and crash risk mapping,
- Practical Guide for Road Safety Auditors and Inspectors, PIARC, 2022,
- Road Crash Trauma, Climate Change, Pollution, and the Total Cost of Speed, Global
- Road Safety Facility – World Bank, 2020.

- AASHTO: Guide for Design of Pavement Structures (1993) for the design of pavements; and
- Pakistan Highway Code of Practice for Bridges & ASTM for the analysis and design of structures
- *Guide to Integrating Safety into Road Design, Transport Global Practice, 2022.*
    - Guide for Safe Speeds, Managing Traffic Speeds to Save Lives and
    - Improve Livability, International Bank for Reconstruction and
    - Development / The World Bank, 2024.
    - Road Safety Manual, World Road Association (PIARC), 2003,
    - iRAP specifications, manuals and guides, including Road Survey and crash risk mapping,
    - Practical Guide for Road Safety Auditors and Inspectors, PIARC, 2022,
    - Road Crash Trauma, Climate Change, Pollution, and the Total Cost of Speed, Global Road Safety Facility – World Bank, 2020.

Geometric Details

- **Ranipur – Rohri Section:**

- The existing carriageway is 2+2 lanes dual carriageway with a 2 to 3m outer shoulder and 1m inner shoulder along with a 7 to 8m wide median. Unprotected U-turns, Pedestrian bridges are located throughout the entire length.
- The average width of the existing carriageway ranges from 8-9m on each side. The north side of the carriage is two lanes rigid pavement in partial sections and one lane of rigid plus one lane flexible pavement in partial sections. The south side of the carriageway is flexible throughout the length. The existing condition of the carriageway is good in Rigid pavement sections and deteriorated in flexible pavement sections.
- NHA Intends to provide additional lanes which will eliminate traffic problem, allow smooth traffic flow, reduce accidents, save time and reduce operating cost.

- **Rawalpindi Hassanabdal Section:**

- This section has become a point of congestion with slower speeds, longer trip times, and increased vehicular queuing due to very dense urbanization in this section along N-5 especially at the locations of 26 No. stop, Tarnol, Sangjani, Taxila, Wah Cantt. As demand has approached capacity, NHA Intends to provide additional lanes which will eliminate traffic problems, allow smooth traffic flow, reduce accidents, time saving and improved operating cost.
- The existing carriageway is 2+2 lanes and 3+3 lanes dual carriageway with 2 to 3m outer shoulder and 1m inner shoulder with 2 to 28m wide median. Unprotected U-turns, Pedestrian bridges and underpasses are located throughout the entire length.

- **Nowshera – Peshawar section of N-5**

- This section has become a point of congestion with slower speeds, longer trip times, and increased vehicular queuing due to very dense urbanization in this area along N-5, especially at the locations of Pabbi, Tarru Jabba and Amangarh. The traffic of Nowshera-Chitral road (N-45) also uses Nowshera Chamkani Section of N-5. After the launch of the CPEC project, Rashakai town of Nowshera is now an Economic Zone of KPK which has also drawn traffic. As demand has approached capacity, NHA Intends to provide additional lanes which will eliminate traffic problems, allow smooth traffic flow, reduce accidents, save time and reduce operating costs.
- The existing carriageway is a 2+2 lane dual carriageway with 2 to 3m outer shoulder and 1m inner shoulder with a 2 to 6m area median. Unprotected U-turns are located at an interval of approx. 1km.

Geometric Criteria:

The geometric design will be carried out as per "A Policy on Geometric Design of Highways and Streets 2018" by AASHTO based on the following main parameters.

- **Design Speed**

As per TOR Design Speed (Plain /Rolling/ Mountainous is 100/80/60 Kilometers per Hour (KPH).

- **Design Vehicle**

As per TOR and International standard the design vehicle used for this Project is a 6-Axle Articulated Trailer.

- **Curve Radius**

Minimum radius at relevant design speed 100/80/60 Kph and maximum super-elevation of 4% is 492/280/135m respectively.

- **Super elevation**

Maximum super elevation on the project is 4%.

- **Vertical Alignment**

a) Gradient

The desirable maximum grade is 4% in this Project.

b) K value for Vertical Curves

For this project the "K" value, based on stopping sight distance is "52/26/11" for Crest vertical curve & "45/30/18" for Sag vertical curve.

- **Width of Roadway**

Width of Roadway consists of traveled way width and shoulder width. These elements on the Project Road are as follows;

- **Lane Width**

Lane width on the Project is 3.65 m and 3 Lanes on either side of traveled way for the Project are provided.

- **Shoulder Width**

  Paved Shoulder on the inner edge (both sides) of traveled way is 1m and 2.5m wide outer TST shoulder and 1.8m paved in urban sections.

- **Cross Slope**

  On divided highways, unidirectional cross slope across the entire width of the traveled way, which is almost always downward to the outer edge, is generally provided. In this Project, the cross slope of 2% has been provided of each traveled way, the cross slope of 4% has been provided in TST shoulders.

- **Noise Barrier**

  Noise Barrier where required (Urban sections, sensitive receptors), based on the findings and recommendations of noise modelling, will be given as per standards.

Pavement Details

- A design period of 10 years has been adopted, as per the practice in vogue to calculate the traffic load and eventually carry out pavement design. However, the ESALs have been calculated for 20 years from the base year to work out the thickness requirement of unbound layers, to provide a foundation that can sustain 20 years of structural life. For asphalt layers, stage construction is opted. The Asphalt requirement for 10 years' design life is ascertained and shall be placed so that the pavement can perform satisfactorily for 10 years' subject to adopt quality control measures during the execution of the project.
- The minimum pavement thicknesses thus worked out, exploiting the AASHTO approach for pavement design of the subject roads mentioned below subject to enforcement of Axle Load restrictions:

  - **Ranipur – Rohri Section:**

  Proposed pavement for Widening portion

  - Asphalt Concrete Wearing Course 50 mm
  - Asphalt Concrete Base Course 190 mm
  - Aggregate Base Course 300 mm
  - Granular Subbase 250 mm

  Proposed Pavement for Rehabilitation of existing Road

  - Asphalt Concrete Wearing Course 50 mm
  - Asphalt Concrete Base Course 190 mm
  - Aggregate Base Course 150 mm

  Proposed Pavement for Service Road

  - Asphalt Concrete Wearing Course 50 mm
  - Aggregate Base Course 250 mm
  - Granular Subbase 150 mm

- **Rawalpindi - Hassanabdal**

Proposed pavement for Widening portion

- Asphalt Concrete Wearing Course 50 mm
- Asphalt Concrete Base Course 180 mm
- Aggregate Base Course 300 mm
- Granular Subbase 250 mm

Proposed Pavement for Rehabilitation of existing Road

- Asphalt Concrete Wearing Course 50 mm
- Asphalt Concrete Base Course 180 mm
- Aggregate Base Course 150 mm

Proposed Pavement for Service Road

- Asphalt Concrete Wearing Course 50 mm
- Asphalt Concrete Base Course 80 mm
- Aggregate Base Course 250 mm
- Granular Subbase 150 mm

- **Nowshera- Peshawar**

Proposed pavement for Widening portion

- Asphalt Concrete Wearing Course 50 mm
- Asphalt Concrete Base Course 180 mm
- Aggregate Base Course 300 mm
- Granular Subbase 250 mm

Proposed Pavement for Rehabilitation of existing Road

- Asphalt Concrete Wearing Course 50 mm
- Asphalt Concrete Base Course 180 mm
- Aggregate Base Course 150 mm

Proposed Pavement for Service Road

- Asphalt Concrete Wearing Course 50 mm
- Aggregate Base Course 250 mm
- Granular Subbase 150 mm

1.4 PROJECT OBJECTIVES:

- The project is expected to provide significant tangible and intangible benefits which include:
- To ensure that the N-5 provides safe, sustainable and disaster resilient road corridor
- To provide dedicated lane for heavy traffic to minimize the road deterioration
- To provide service lane in urban areas to manage the local traffic and reduce their direct accessibility on main carriageway.
- To provide protected U-Turns for smooth flow and to minimize the accidents

- To enhance road safety through Star Rating improvements up to 3 Star or better.
- To ensure the design fully takes into consideration the needs of and priorities of vulnerable and disadvantage groups such as women, those with disabilities, the elderly, children, and others as determined in the social analysis to ensure they access and use safely without barriers.

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CHAPTER NO.2
DESCRIPTION OF THE PROJECT

2.1 LOCATION OF PROJECT

➢ Ranipur-Rohri

- This Section is located in the districts of Khairpur and Sukkur of Sindh Province. Ranipur is a town in the Khairpur district of Sindh. Sukkur is a city in the province of Sindh along the western bank of the Indus River.
- The start point (Lat 27.256527, Long 68.484411) of the Project has been taken at 1 km away from Gadegi town on N-5 and terminates at N-5 where the Sukkur bypass ends (Lat 27.683664, Long 68.937544). This covers a total length of 70 km. The existing facility is four-lanes highway (2) lanes in each direction.

➢ Rawalpindi-Hassanabdal

- This Section is located in the districts of Rawalpindi and Attock of Punjab Province. Rawalpindi is situated along the historic Grand Trunk Road that connects Peshawar to Islamabad and Lahore. The road is roughly paralleled by the M-1 Motorway between Peshawar and Rawalpindi. Hassanabdal is located 40 km northwest of the country's capital city, Islamabad.
- The start point (Lat 33.634168, Long 72.933062) of the Project has been taken at IJP Flyover near Quad-e-Azam Hospital on N-5 and terminated at the N-5 Intersection with N-35 after Hassanabdal (Lat 33.819594, Long 72.607532). This covers a total length of 40 kms. The existing facility is a six and four lanes highway (2 and 3 lanes in each direction).

➢ Nowshera Peshawar

- This Section is located in the Province of Khyber Pakhtunkhwa (KPK). The start point (Lat 34.019343, Long 71.652726) of the Project is Chamkani, which is located alongside N-5 and after traversing through small towns like Taru Jabba, Pabbi and Amangarh it ends at Nowshera which is also located on N-45 (Lat 34.005907, Long 72.086899).


Project Length = 70 Km
Sukkur
Ranipur
NORTH
Google Earth


Project Length = 40Km
Hassanabdal
Rawalpindi
NORTH
Google Earth


Project Length = 31 Km
Peshawar
Nowshera
NORTH
Google Earth

2.2 PROJECT WORKS

- The scope of work of the assignment has been defined in the TOR. The main scope of work includes, but is not limited to the following:
  - Design Review.
  - Construction supervision of the subject project.
  - Quality control/Quality assurance.
  - Facilitate the NHA in implementing and monitoring the Resettlement and Relocation (R&R) of informal settlers and entities operating within the right-of-way of the three sections of N-5 as per the RAPs.
  - Supervise the implementation of Contractor's Traffic management / diversion plan.
  - Supervise Occupational and community health, and safety management plans of the Contractor to protect health and safety of the Employer, the Contractor , workers, the Engineer and the members of the communities in close proximity of worksites during construction including traffic safety, and sexual exploitation abuse/sexual harassment (SEA/SH).
  - Environmental management during pre-construction, construction and decommissioning as per the Contractor's Environmental and Social Management Plan (C-ESMP)
  - Social risk management during construction as per the ESMPF, SEP, LMP and Gender Action Plan Framework (GAPF).
  - Assist NHA in the audit of the project. The consultant will be equally responsible for any ambiguity. The assistance of the Consultant will remain intact up to the settlement of audit paras.
  - Update the RAPs, including the Detailed Measurement Survey, in the event of any design changes during project implementation
  - Preparation of revised PC-I up to approval and coordination with original Design consultant (if required) (cost will be built in its bid).
  - Preparation of PC-IV (up to approval) (cost will be built-in its bid).
  - The Consultant is required to provide certified soft or pdf copies of all the documents prepared, utilized, or referenced during the Contract period, along with the hard copies. These duly certified soft/scanned copies of all the documents prepared/used/referred etc. shall be stored on appropriate storage media, such as external hard disk in a secure and structured manner. The scanned copies must have proper filenames/titles etc. in appropriate folders for quick retrieval. The soft/scanned documents provided by the Consultant must have third party certification and traceability. The Consultant shall be ensuring for confidentiality of all Project's records.
- The consultant will be responsible for the quality of work and timely execution (details are given in other chapters of TOR). All expenditure for preparation of Revised PC-I and PC-IV up to approval from concerned forum will be built-in the consultants bid.

- The Consultant will response to the Client without any extra expenditure in settlement of Audit Para's, preparation of Revised PC-I & PC-IV even after conducting construction activities up to the finalization and approval of all subject documents.

2.3 TIME OF START

- The services shall commence immediately after signing the contract.

2.4 TIME OF COMPLETION

- The period of implementation for the project is 42 months for each section.

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CHAPTER NO. 3
DESIGN REVIEW

3.1 OBJECTIVES

The Consultant is required to undertake a design review of the detailed design and tender drawings prepared by the Design Consultant, suggest the necessary improvements and update the design if required, taking into consideration road safety aspects and universal access. The Consultant may be required to carry out fresh survey at site, at no cost to the Client.

3.2 THE CONSULTANT

A well-reputed consulting firm, (National or International), will provide the Services. (For National Firms, registration with Pakistan Engineering Council is mandatory). The consulting firm shall have completed at least one similar experience in design review and construction supervision for roads in the recent 10 years. The consulting firm may form a Joint Venture as per the instructions of the RFP. To avoid giving rise to conflict of interest the Design Consultant i-e M/s NESPAK is not eligible to bid for this Contract.

3.3 SCOPE OF WORK FOR DESIGN REVIEW & CONSTRUCTION SUPERVISION CONSULTANT

The term "Consultant" as used herein shall be referred as the "Design Review and Construction Supervision Consultant". The services of the Consultant shall include, but not necessarily be limited to the following:

3.3.1 Kick off meeting

- The Kickoff meeting will be held between NHA Project office, the Consultant and the AIIB representative(s), wherein NHA will be apprised about detailed approach, methodology, mobilized resources, and timelines for carrying out design review services. Any other aspects may also come under discussion. NHA may decide the Design Consultant to participate in the Kickoff meeting.

3.3.2 Data Collection

- The Consultant will actively coordinate with the Design Consultant through NHA Project office and collect all design reports & drawings in order to initiate design review in a timely manner.

3.3.3 Inception Report

- The Consultant will carry out a preliminary/general review of design, and will determine the appropriate design criteria, codes and standards etc. for design review to ensure that Design review criteria is in complete harmony with the following:

- Original design criteria.

- The Best International Practices and Guidelines;
- They need to adapt the designs to meet the requirements of the AIIB's ESF and ESP, as reflected in the Project's ESIA / ESMP, ESMPF, RPF, SEP, RAPs, LMP, ESAP, and GAPF, and to work closely with the International Environmental Consultant (Individual) and the International Social Development Consultant (Individual) funded by AIIB's Project Preparation Special Fund (PPSF) on environmental and social improvements;
- They need to adapt the designs to meet the requirement of the AIIB Climate Action Plan, including developing and adopting climate mitigation measures to reduce the Project's lifecycle carbon footprint, and developing and adopting climate adaptation and resilience measures to enhance the Project's resilience to climate change and disasters, and to review and integrate climate mitigation and adaption measures proposed by the Climate Mitigation and Adaptation Assessment Consultant (Climate Consultant) funded by AIIB's PPSF grant;
- They need to review and integrate the safety improvements proposed by the Comprehensive Road Safety Improvement Consultant (Safety Consultant) funded by AIIB's PPSF grant;
- They need to review and integrate the improvements proposed by the Air Quality and Noise Monitoring, Modeling, and Improvement Consultant (Air Quality and Noise Consultant) funded by AIIB's PPSF grant;
- They need to work closely with the Digital Project Management System Consultant (DPMS Consultant) funded by AIIB's PPSF grant to improve project management using digital solutions.
- A draft Inception report will be prepared and submitted to NHA Project Office and shared with the AIIB Project Team. It must contain description and preliminary review findings of all the reports & drawings and the proposed Design Review Criteria, codes and standards etc., including reference to the International Best Practices and Guidelines, reference to the design adaptation needs to align with the AIIB ESF and ESP, as reflected in the Project's ESIA / ESMP, SEP, LMP, RPF, GAPF and RAPs, and reference to the design adaption needs to align with AIIB's PPSF grant funded Safety Consultant, Climate Consultant, Air Quality and Noise Consultant, and Digital Consultant.

3.3.4 Design Review

- The Consultant will review the project design against the design criteria, the International Best Practices and Guidelines for a Safe System Approach Design and the requirements of the AIIB Environmental and Social Framework (ESF), as reflected in the Project's ESIA, ESMP, ESMPF, RPF, RAPs, GAPF, LMP, SEP, and ESAP, identify shortcomings and recommend improvements.

  The International Best Practices and Guidelines for a Safe System Approach Design include, but are not limited to:

- Guide to Integrating Safety into Road Design, Transport Global Practice, 2022
- Guide for Safe Speeds, Managing Traffic Speeds to Save Lives and Improve Livability, International Bank for Reconstruction and Development / The World Bank, 2024.
- Road Safety Manual, World Road Association (PIARC), 2003,
- iRAP specifications, manuals and guides, including Road Survey and crash risk mapping,
- Practical Guide for Road Safety Auditors and Inspectors, PIARC, 2022,
- Road Crash Trauma, Climate Change, Pollution, and the Total Cost of Speed, Global Road Safety Facility – World Bank, 2020.

- The available tender drawings /design may suffice for the purpose of tendering. Before the supplementary / construction drawings are formally issued to the Contractor, the Consultants shall be on fast track without fail establish the traverse & level controls along the Alignment; Joint cross sections with the Contractor shall be observed and shall form the basis of Construction Drawings and validation of the Project estimate. The location, size and quantity of structures shall be checked and validated. If during joint survey in fields, any deficiency in topography is observed, it shall be depicted, mitigation measures suggested and incorporated in the design at no cost to Client in this consultancy agreement.
- The design prepared by the Design Consultant is as per TOR provided to the Design Consultant. The Consultant shall review the conformance of the said design with the TOR provided to the Design Consultant, and review the said design against the International Best Practices and Guidelines, and the design adaptation needs to align with the AIIB Environmental and Social Framework, and Environmental and Social Policy, as reflected in the Project ESIA, ESAP, SEP, RPF, ESMPF, and RAP and other Environmental and Social Instruments.
- The Consultant shall work closely with the Climate Consultant support by the AIIB's PPSF grant to integrate the climate mitigation and adaptation measures into the Project design and construction.
- The Consultant shall work closely with the Safety Consultant supported by AIIB's PPSF grant to integrate safety improvement measures into the Project design and construction.
- The Consultant shall work closely with the Air Quality and Noise Consultant supported by AIIB's PPSF grant to integrate air quality and noise improvement measures into the Project design and construction.
- The Consultant shall work closely with the DPMS Consultant supported by the AIIB's PPSF grant to integrate digital solutions into project management to increase efficiency, effectiveness, and transparency.
- The traffic count, projections and computation of ESAL's with appropriate damaging factors shall be re-validated. Pavement design computations shall be confirmed. Consultants are advised to keep the original Contract

intact as much as possible (excepting necessary mitigation) to avoid re-rating and variation orders, unless the project quality/ safety is compromised.

- The Consultant shall carry out independent computations of bridges, culverts and other structures, taking into consideration improving climate resilience and safety, among others. Any economy achieved shall be added to the Consultant's grading.
- Review the design of all structures / bridges with calculations. Review and if necessary, assess the cross-drainage requirements and propose/design new structures (bridges, culverts, etc. as appropriate) or improvements to structures.
- Review the locations and position of retaining/protection walls. Review & examine the provisions of side drains and their disposal at suitable locations.
- Review if any, evaluate the conditions of retaining walls and propose repairs / improvements.
- Construction Drawings shall be developed and issued to the Contractor by Consultant.
- Review of hydrology report shall be done based on rainfall and flood record including surface runoff and drainage area characteristics. The discharge against individual drainage structure shall be checked. Stability of road embankment against erosion shall be checked.
- Road surface runoff, collection of water and disposal shall be adequately addressed.
- Soil characteristics along the alignment shall be checked for any likely stability issues. The Consultant shall finally validate the Bid BOQ against the design review estimates. Every effort shall be made to secure the project cost within budget.
- Review the suitability of locally available construction materials, and if necessary, locate new quarries and borrow pits (consider the Environmental and Social guidance and criteria while locating quarry and borrow sites), work together with ES specialists and ensure screening and approval, and assess the quality and quantity of materials and hauling distance.
- Review materials already found along the road alignment taken at suitable intervals. Study sample to verify the calculation of construction quantities to an accuracy of 25%.
- Check in detail the Bill of Quantities (BOQs) and update.
- Evaluate the provision and adequacy of traffic signs, guard rails and other road furniture along with identification of bottlenecks along the road especially on railway crossings.
- Review the Highway Safety Audit Report in detail.

- Study the black spots along the selected road sections and ensure that improvements suggested are adequate. Propose additional remedial measures (if required).
- Check to ensure that sharp curve, steep slopes, wildlife crossing, weaving sinology and all other geometric design features proposed by Design Consultant are properly designed and placed. Update and or propose measures (if required).
- Based on the findings and recommendations of ESIA / ESMP, RAP and other E&S documents, the Consultant will ensure that adequate E&S measures are incorporated in the design, including considerations to climate resilience, the alternatives, and measures to avoid and minimize impacts. These will include incorporation of ES measures into technical design, construction drawings and technical specification, validation that project design avoids or minimizes impacts on sensitive receptors, and communities, inputs to improve pedestrian safety, drainages, noise, culvert sizing (considering extreme floods), etc.
- Informed by the ESIA / ESMP, RAP and other E&S documents, ensure that the Bidding Documents include specific EHS provisions and requirements to minimize disruptions that damage the environment, occupational and community health and safety of project staff and local settlements during construction.
- Review ESIA and Environment and Social Management Plan, RAP and other E&S documents to address implementation monitoring of parameters listed in the ESIA /ESMP, RAP, and other ES instruments and reports during construction operation phase.
- Review Contractor's Environment and Social Management Plan (C-ESMP) and Occupational and Community Health and Safety Management Plan and accord approval.
- Ensure Contractor employs qualified EHS staff as per the requirements stipulated in the ESMP.
- Ensure all method statements contain a dedicated EHS section containing risk assessments and controls associated with each construction task.
- Supervise the implementation of C-ESMP and OCHSMP by the Contractor.
- Coordinate with PPSF Grant supported E&S consultants for training and capacity building during the entire duration of the Project.
- Ensure functional Grievance Redress Mechanism, that addresses also specific requirements for complaints related to gender-based violence/sexual harassment/sexual exploitation and abuse as per the SEP and GAPF during construction and operation phase.
- Ensure that traffic management / diversion plans are as per actual site conditions and keeping in view traffic safety considerations & work zone requirements.

- The consultant will review the Design Consultant's climate related designs in detail, and work with PPSF Grant supported Climate consultant to improve the climate resilience designs. The consultant will Collect and report data for the indicators in the Project's Results Monitoring Framework (RMF) which is attached with the TOR.

3.4 DESIGN REVIEW REPORT AND ISSUANCE OF CONSTRUCTION DRAWINGS:

3.4.1 Design Review Report

The consultant shall review the detailed design, prepare design review report and proceed with the following:

- In case, Consultant fully agrees with the detailed design prepared by the Designer, he shall share equal responsibility of the detailed design with the Designer.
- In case some modifications/amendments are suggested by the Consultant during the review process and the Designer is agreed to the suggested modifications/changes. Both should hold equal responsibility for the detailed design.
- In case the changes/modifications proposed by consultant are not agreed by the Designer, then the Review Consultant shall take full responsibility of the detailed design.

3.4.2 Construction Drawings

- On the basis of Final Design Review Report, the Consultant will prepare and submit Construction Drawings to NHA Project office for subsequent issuance as per relevant conditions of contract. Subsequent additions and amendments in Construction Drawings, if any, will also be made without additional cost by Consultant and issue them to the Contractor as per relevant conditions of the contract.

3.5 PREPARATION OF REVISED PC-I:

- Based on the design data provided, the Consultant shall prepare revised PC-1 for the project, if required, including economic analysis and Environmental Impact Assessment (EIA) on Performa of PC-1 prescribed by Planning Commission.
- ***The Consultant shall be fully responsible for soundness and safety of the overall design of the project.***

3.6 REVIEW OF E&S DOCUMENT AND E&S INTEGRATION

- The consultants will review and update the ESIA, GAPF, ESMPF, RAP, RPF, LRP, SEP, GRM and all E&S safeguards documents prepared by the design consultants. Suggest any corrective action if required. Ensuring compliance with AIIB and National environmental and social safeguards requirements. Monitoring and evaluating the implementation of

Environmental and Social Management Plans (ESMPs) and Resettlement Action Plans (RAPs).

- The Consultant shall prepare an Environmental and Social Design Integration Matrix summarizing how each recommendation of the ESIA/ESMP, RAP, RPF, ESMPF, GAPF, SEP, and LMP has been incorporated into the engineering design, BoQs, and bidding documents, including relevant drawings and contract clauses. Support in the preparation of bidding documents including employer's EHS requirements, EHS specifications, and EHS BoQ.

3.7 MODE OF PAYMENT

- For the purpose of payment, the Consultant is required to quote Lump Sum (LS) cost for design review services. The cost must be inclusive of all taxes, Remuneration/Salary Costs, Direct Non- Salary Costs etc. All the payments will be made only after the deliverables in the table below are accepted by the client. The mode of payment is as under:

Sr. No.	Deliverable /Service	%age of Design Review Cost
i.	Advance Payment upon receipt of the bank guarantee	10%
ii.	Final Inception Report	10%
iii.	Draft Design Review Report	20%
iv.	Final Design Review Report	20%
v.	Construction Drawings	40%
	Total	**100%**

Notes Regarding Payment:

- Three (03) hard copies along with a soft copy of the final version of each deliverable will be submitted.
- All deliverables must be signed & stamped, and all pages /sheets be properly numbered
- Any service reflected in the above TOR but not mentioned in the mode of payment or vice versa will be duly carried out without failure. Moreover, if any service is mentioned in TOR but not reflected in mode of payment then its cost will be deemed to be built in the services mentioned in the mode of payment
- Depending upon quality of deliverable and responsiveness to TOR, partial payment up to 50% may be initially approved against the deliverable. Remaining/Final payment against any deliverable is of acceptable quality and completely responsive to TOR ;(b) comments (if any) have been appropriately addressed by the Consultant; and (c) hard copies of final deliverable are submitted in requisite quantity along with soft copies. The soft copies must be complete in all respects and be properly indexed by the consultant

- If final deliverable/report is not completely responsive to TOR and/or has quality issues, then partial or full payment against the report/deliverable will be deducted besides adverse performance rating of Consultant. This deduction will not absolve the Consultant of any penalty on account of delayed submissions.

3.8 TIME FOR COMPLETION OF SERVICES

The time for completion of services will be Three (03) months.

3.9 STAFFING FOR DESIGN REVIEW

Sr. No	Experts/Staff	No. of Persons	Man-Days For Design Review Phase
Key Staff			
1.	Team Leader/Highway Design Engineer **(International experience, road safety experience)**	1	90
2.	Structure Engineer	1	60
3.	Drainage Engineer/Hydrologist **(International experience)**	1	45
Non-Key Staff			
4.	Quantity Surveyor	1	60
5.	Chief Surveyor	1	45
6.	Highway Safety Expert	1	30
7.	Traffic/Pavement Analyst	1	45
8.	Geotechnical/Soil & Material Engineer	1	30
9.	Environmental and Social Expert	1	45
10.	Draughtsman/CAD Operator	1	90
	Total Man Days		**540**

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CHAPTER NO.4
CONSTRUCTION SUPERVISION

4.1 DETAILED SCOPE OF WORK COVERING CONSTRUCTION SUPERVISION

4.1.1 Supervision Manual

Within three (3) months after signing the Contract, or otherwise agreed with the NHA, but not later than two weeks prior to the commencement of construction works, the Consultant shall produce a Supervision Manual which includes but not limited to the following:

- Construction quality and quality assurance.
- Organization of site daily supervision (including team composition).
- Standard formats (correspondence, notifications, diaries, acts) to be used.
- Standard tests and forms.

4.1.2 Activities during the construction

The Consultant shall carry out the Construction Supervision in accordance with the FIDIC Conditions of Contract for Construction, MDB Harmonized Edition, June 2010, appointed by the Employer (NHA) to act as Engineer for purpose of this Contract.

The Consultant will ensure the mobilization of site-specific supervision teams for the supervision for the Project works as per the Contract.

4.1.3 Responsibilities

The responsibility of supervision shall rest with the Engineer as per FIDIC condition of contractor who shall issue instructions in writing to the site-specific supervision teams for the supervision of works as per the Contract. The Consultant will have all the powers defined in the FIDIC Conditions of Contract, being the Engineer / Engineer's Representative, to ensure that the Works are constructed in accordance with the Works contracts provisions. The Consultant shall carry out a revision in the plans and specifications and prepare all change orders instantly thereto and shall further assist the Employer in negotiations necessary for the execution of the changes. Such revisions shall be encouraged which result in improved project performance, in accordance with the plans and conforming to the specifications. The Consultant shall carry out the Construction Supervision but not limited to the following tasks:

- Make sure execution of works professionally as per design, standards, specification and technical construction drawings.
- To intimate NHA in each matter and must obtain formal approval from NHA to proceed in the matter.
- Assure quality of the work during execution by using suitable and tested construction material as per contract provision.
- To ensure the good quality of construction survey work, levels and grade achieved during and after construction.

- Make sure the continuous supervision/inspection of the soils, materials construction operations and the works with regard to workmanship and compliance with the specifications.
- Certify the payment bills of Contractor according to the approved procedure and also maintain the payment record maintaining consolidated project accounts and assist NHA for settlement of Audit Para's.
- Work closely with NHA, Construction Contractor(s), and the PPSF Grant-supported Safety Consultant to improve the safety and efficiency of the Traffic Management Plans (TMPs) during construction. Make sure the existing traffic management and safety plan all times in a safe and secure manner. The TMPs should also minimize the disruptions to travelers and communities.
- Work closely with NHA, Construction Contractor(s), the PPSF Grant supported Safety Consultant, and other relevant entities to develop Traffic Evacuation Plans (TEPs) for potential natural disasters such as floods and earthquakes.
- Monitor and appraise the progress of the work for timely completion of work. Review and accept or reject Contractor's proposed work schedules.
- The supervisory Consultants shall prepare the revised PC-I of the project and will be responsible to incorporate all changes up to final approval from the relevant forum.
- This Consultant shall work closely with the following **PPSF-supported consultants** to improve the Project's climate resilience, safety, ES, and digital project management:
  - Work with **Climate Mitigation and Adaptation Assessment Consultant (Climate Consultant)** supported by the PPSF Grant to integrate climate mitigation and adaptation measures into the Project design and construction.
  - Work with **Comprehensive Road Safety Improvement (Safety Consultant)** supported by the PPSF Grant to integrate safety improvement measures into the Project design and construction.
  - Integrate environmental and social (ES) risk management measures identified in the ES assessments done by **(Environment Consultant and Social Consultant),** including ESIA, ESMP, RAP, RPF, GAPF, LMP, SEP, and ESAP, into Project design and construction.
  - Work with **Air Quality and Noise Monitoring, Modeling and Improvement Consultant** supported by the PPSF Grant to improve air quality and noise levels along the project. Verify the noise forecasts to the sensitive receptors and work with the contractor on the effective noise control measures in consultation with NHA.

- Work closely with the **Digital Project Management System Consultant (DPMS Consultant)** in developing, deploying, and utilizing the DPMS for digital project management and control.

4.2 GOVERNING RESPONSIBILITIES AND DUTIES OF THE CONSULTANT

4.2.1 Application of Standards, Specifications and Engineering Decisions

The Consultant will be fully responsible for the execution of the works in accordance with the standards and specifications and technical construction drawings. The Consultant shall supervise the Works' Contracts, make engineering decisions, be responsible for quality assurance, provide general guidance and furnish a timely response to the Contractors in all matters relating to the Works.

4.2.2 Intimation and Approval by NHA

- The Consultant shall advise NHA on all matters relating to the efficient and successful execution of the Works Contracts and shall act at all times so as to protect the interests of the Project and shall take all reasonable steps to keep all expenses to a minimum, consistent with sound economic and engineering practices. The Consultant will intimate and will get approval of any decision from NHA regarding the change in Design to initiate Variation Order, Extension of time etc.
- Advise NHA on the need for effective liaison with local authorities, police, landowners, utility owners, the public and other organizations affected by the Works in order to minimize or avoid unnecessary delays or disputes.
- Shall assist in the settlement of the Audit Paras and enquiries (if any) pertaining to the Project without any time restriction and remuneration to be made separately on this account. The cost to be incurred may be built in the rates.
- Jointly inspect with NHA the completed Works and assist in formal taking over review and approve "as built" drawings and plans, provide report(s) testifying to the satisfactory completion of the contract.
- After completion of work the consultant will prepare a punch list of all deficiencies (if exist) and will hand over to NHA with proper remedial measures. Provide any other specialist services requested by NHA under conditions to be mutually agreed.

4.2.3 Project Management

The Consultant shall assist NHA in all matters related to proper execution of project as per contract and NHA Standard and specification but not being limited to the following:

- Assist NHA for the establishment of the basic overall project construction schedule, budget and cash disbursement schedule.

- Assist NHA for establishing and implementing project management systems and procedures to monitor and control the cost and time schedule to enable timely corrective measures.
- To coordinate, supervise, and support the decision-making actions by NHA concerning engineering and design matters during the construction stage in order to ensure that quality control and engineering standards are consistently maintained throughout the project within cost and time constraints.
- Assist NHA in setting up an effective reporting system of project progress and status to the management of NHA.
- Prepare realistic construction schedules, showing the anticipated progress of Works and expenditures of the contract package.
- Review and approval of proposal on variation orders and implementation schedule prepared by the Contractor. Issue monthly consolidated progress reports on a format to be agreed with NHA including payment estimates and comments on the Contractors' work program and advise NHA of any problem or potential problems which might arise and cause delay in implementation and recommend corrective action(s) to be taken.
- Issue the Progress Reports as defined and required in the Legal Agreement of the project, and the Project Restructuring Report if needed. Monitor and control progress of Works and initiate corrective measures, if required.
- Work closely with the **DPMS Consultant** in developing, deploying, and utilizing the DPMS for digital project management and control.

4.2.3.1 E&S Scope of Supervision Consultant:

- Assist NHA to implement the measures required under the ESIA/ESMP, ESAP, SEP, LMP, GAPF, RPF and RAP, in accordance with the AIIB Environmental and Social Policy / Environmental and Social Framework (ESF). If required by the national regulations, this will also include the preparation of additional Environmental and Social documentation and conducting public hearings/consultations in accordance with the national regulation. More specifically, the ES Scope of Construction Supervision includes (but not limited to):
  - (i) Review the Contractor's Environmental and Social Management Plan (C-ESMP) and sub-plans (e.g., waste management, health and safety, community engagement etc. as needed/ defined in the ESIA/ESMP, SEP, GAPF, LMP, and RAP);
  - (ii) guide, follow up and assist, as needed, in obtaining necessary environmental permits and clearances;
  - (iii) review the baseline data/information in the ESIA / ESMP and RAP and conduct/ collect, if necessary, baseline environmental

and social monitoring, data/ information prior to construction at a site;

(iv) Support NHA in the implementation of RAPs in line with national requirements and AIIB's ESS2

(v) Ensure that site-specific environmental and social safeguards are in place before construction begins at a site, especially no civil work should commence before completion of full payment of compensation for affected persons; approval of C-ESMP etc.

(vi) Monitor contractor's ES performance regularly and ensure compliance with ES requirements,

(vii) Supervise the implementation of the C-ESMP by the contractor;

(viii) monitor compliance with occupational health and safety (OHS) requirements and keep health & safety log;

(ix) Support NHA to ensure that NHA/contractors implement E&S actions and recommendations by Independent E&S Monitor.

(x) Support NHA in the implementation of GAP

(xi) conduct environmental quality monitoring (air, water, noise, soil) at sites where such impacts are likely, and verify contractor compliance;

(xii) ensure waste management and pollution control measures are implemented;

(xiii) monitor impacts on sensitive receptors and mitigation measures;

(xiv) monitor and ensure proper management of worker accommodation and safety

(xv) Ensure functional GRMs for affected people to raise their concerns and/or lodge a complaint related to risks and impacts of the Project.

(xvi) ensure compliance with labor standards and workers grievance redress mechanisms, grievance handling;

(xvii) raise awareness and disseminate information about community/local/site level GRM, including amongst women/vulnerable groups, support/ facilitate functioning of the GRM and keep record of the grievances;

(xviii) verify implementation of RAP, including compensation payments and resettlement assistance and relocation support and keep records;

(xix) Update the RAPs, including the DMS, where necessary following any Project design changes

(xx) Facilitate stakeholder engagement in line with the SEP and the RAPs; (prepare and submit ES monitoring report on monthly basis); pay close attention to stakeholder engagement with affected people and other community religious leaders and other public institutions

(xxi) Keep register/record of the incidents / accidents, keep health & safety log, and report in the monthly E&S monitoring report. Report (fatal and high potential incidents) immediately, within 24 hours to AIIB through PIU/PMU using a flash report and full-investigation report after 7 days of the incident;

(xxii) organize periodic environmental and social training / workshops for the project staff (consultant and contractor);

(xxiii) provide support, as needed, to independent ES monitoring

(xxiv) Ensure site restoration and proper closure of construction sites/ conduct post-construction ES inspection/ audit Prepare and maintain a Daily EHS Supervision Log using a work observation checklists and forms; issue verbal, written, and Non-Conformance Reports (NCRs) for observed violations; follow up and track closure of corrective actions; and include all relevant findings in the Monthly EHS Progress Report (summarizing Contractor's ES Compliance status, Accidents/ Incidents, Non-compliance and corrective actions, progress on ES mitigations etc.).

(xxv) Prepare semi-annual ES Monitoring Report and final E&S compliance report (document lesson learned and good practices).

4.2.3.2 Gender

- National Highway Authority intends to improve and widen the existing road Karachi-Lahore-Peshawar-Torkhum (N-5) which is the major economic lifeline for Pakistan. This improvement and widening of road is being carried out with financial assistance of the Asian Infrastructure Investment Bank (AIIB). AIIB has its own Gender, SEAH and GBV standards and protocols which would be implemented along with other relevant national and provincial laws.
- Gender mainstreaming is a critical aspect of project planning and implementation, particularly for infrastructure projects that may involve resettlement, land acquisition, displacement, or impacts on livelihoods. AIIB seeks to hire a Gender Specialist to ensure that social risk management including resettlement, relocation and livelihood support activities are planned and executed in compliance with AIIB's policies, national regulations, international best practices, and the requirements of affected communities.
- **Responsibilities**

a) Support NHA in the implementation of the Gender Action Plan Framework and integrated section-specific Gender Action Plans in the RAPs

b) Contribute and input based on gender aspects, particularly related to policy requirements, thematic areas such as OHS, LWC, stakeholder engagement, GRM, etc. and emerging ESG frameworks.

c) Participate in the identification, appraisal, design and implementation of social risks and impacts. Appraise the gender and other social risks and impacts associated with projects.
d) Screening Projects for potential gender risks and impacts, including gender-based violence (GBV), Sexual Exploitation, Abuse and Harassment (SEAH) impacts and risks, and proposing the ES category for the Project.
e) For gender-based violence (GBV), Sexual Exploitation, Abuse and Harassment (SEAH) the expert is required to coordinate with local government's women and child protection agency and report the same to NHA's relevant forums.
f) Conducting due diligence assessment on the social aspects of the Project, including assessing and identifying potential gender-differentiated impacts of the project with special attention to disproportionate gender impacts and the vulnerability of various types of potentially affected people.
g) Conduct gender analysis to assess gender dynamics and identify specific needs, opportunities, and challenges in the context of the project.
h) Develop and implement a comprehensive gender strategy, ensuring gender equality is integrated into all aspects of the project's activities.
i) Collaborate with relevant stakeholders to ensure the project aligns with national and international gender equality standards and best practices.
j) Conducting gender and social due diligence reviews, advisory work, and compliance studies, including field-based reviews as needed.
k) Assisting to address any non-compliance with its obligations by providing support to develop, recommend, and monitor courses of action/corrective measures required of the client to bring the Project back to compliance with the Bank's requirements.
l) Work as part of multi-disciplinary teams, including Project Teams, Clients and key stakeholders on managing environmental and social risks and impacts.

➢ **Capacity Building and Training**

- Design and deliver training and capacity-building programs on gender mainstreaming for project staff, local partners, and stakeholders, including to members of the GRM on handling GBV/SEA/SH complaints appropriately.
- Facilitate workshops, seminars, and community engagement activities aimed at increasing awareness and understanding of gender issues with a particular focus on GBV/SEA/SH issues, ensuring inclusion of women with additional sources of vulnerability.

➢ **Monitoring and Evaluation**

- Develop gender-sensitive indicators to monitor progress on gender-related outcomes and impacts.

- Ensure the project's gender-related objectives are included in the monitoring and evaluation (M&E) framework.
- Regularly assess the implementation of gender-responsive activities and recommend corrective actions when necessary.

➢ **Stakeholder Engagement and Advocacy**

- Foster partnerships and engage with key stakeholders, including government agencies, community organizations, and women's groups, to promote gender equality in the region.
- Advocate for policies and practices that promote women's rights and gender equality at local, national, and regional levels.

➢ **Reporting and Documentation**

- Provide regular progress reports on gender-related activities to the Project Director and EALS wing, ensuring the integration of gender segregated data.
- Provide inputs for social monitoring reports on the implementation of GAP and grievance management related to SEAH and GBV during project implementation
- Document lessons learned, best practices, and challenges related to gender mainstreaming for future reference.

4.2.3.3 Resettlement And Relocation

➢ National Highway Authority intends to improve and widen the existing road Karachi-Lahore-Peshawar-Torkhum (N-5) which is the life line for Pakistan economy. This improvement and widening of road is being carried out with financial assistance of Asian Infrastructure Investment Bank (AIIB). The Asian Infrastructure Investment Bank (AIIB) has its own Environmental and Social Policy (ESP) and Environmental and Social Standards (ESSs) which would be implemented along with the other national and provincial laws.

➢ Resettlement and Relocation is a critical aspect of project planning and implementation, particularly for infrastructure projects that may involve land acquisition, displacement, or impacts on livelihoods. AIIB seeks to hire a Resettlement & Relocation Specialist to ensure that resettlement activities are planned and executed in compliance with AIIB's policies, international best practices, and the requirements of affected communities.

➢ **Objectives of the Assignment**

The Resettlement and Relocation Specialist will provide technical expertise and guidance to ensure that resettlement activities associated with AIIB-funded projects are designed and implemented in a manner that avoids, minimizes, and mitigates adverse social impacts, particularly on vulnerable and disadvantaged groups. The specialist will also ensure compliance with AIIB's ESS 2: Involuntary Resettlement and other relevant safeguards policies.

- **Scope of Work**

The Resettlement and Relocation Specialist will be responsible for the following tasks:

A. Support in Project Implementation and Monitoring

- To provide support to the implementation of resettlement activities to ensure compliance with approved plans and AIIB's requirements.
- Conduct regular field visits to assess progress, identify challenges, and recommend corrective actions.
- Review monitoring reports submitted by clients and provide feedback.
- Support RIUs/PMU to implement livelihood restoration program
- Ensure that grievance redress mechanisms are functioning effectively and that affected communities have access to them.
- Ensure that complaints and feedback are fully acknowledged and addressed in a timely manner
- Support RIUs/PMU to implement actions and recommendations as required by Independent Monitors and AIIB
- Ensure that RAPs, through the DMS, reflect all design changes during Project implementation
- Engage with E&S Independent Monitor to ensure that his/her actions and recommendations are implemented in a timely manner

B. Capacity Building and Knowledge Sharing

- Provide training and capacity-building support to clients, project teams, and other stakeholders on resettlement planning and implementation.
- Develop and share best practices, tools, and guidelines to improve resettlement outcomes.
- Contribute to AIIB's knowledge products and reports on resettlement-related topics.

C. Reporting and Documentation

- Prepare detailed reports on resettlement activities, including findings, recommendations, and lessons learned.
- Maintain accurate records of resettlement-related data and documentation.
- Support the preparation of AIIB's internal and external reports on social safeguards and resettlement.

D. Reporting and Supervision

- The Resettlement and Relocation Specialist will report to EALS wing and work closely with project teams, clients, and other stakeholders.

4.2.4 Construction Supervision

The Supervisory Consultants shall be fully responsible that the Works are executed in accordance with the plans, grade as per specifications of NHA as per contract. The Supervisory Consultants shall carry out the Construction Supervision ensuring the following items:

- Stake the centerline, ROW limits and relocation of roadway structure and appurtenance;
- Setting of Grade-stakes;
- Relocation of Grade-stakes;
- Soil Tests;
- Concrete Tests;
- Reinforced Bar Tests;
- Structural Steel Tests;
- Other Tests as deemed necessary;
- Inspect and evaluate Contractors' facilities material testing laboratory items to ensure compliance with the specifications and terms and conditions of the Contract Agreement. 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), Monitor the concrete Batching and laying as per approved mix design & specifications, maintaining asphalt invoices record, transportation, Asphalt Mixing and laying as per Job Mix Formula and specifications, carry out the testing of steel and High Tensile wire / cable for Stressing as per Specifications and also monitor the Stressing activity as per approved procedure and Specifications and also ensure the desired performance, and accord approval thereof;
- Assure quality of the works during construction, continuously inspect the soils and materials, construction operations and the Works with regard to workmanship and compliance with the specifications; and carry out independent testing in the field and/or in the "Engineer / Project Manager" laboratory, and approve or disapprove and certify the Works that conform with the specifications and maintain permanent records of results of all the tests made;
- Give notice to the 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 NHA other recourse available under the Contract;
- 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;
- Inspect quarries and borrow pits and crushing plants and order tests of materials and ensure adherence to specifications and approve the sources of materials.

4.2.4.1 Traffic Management Plans during construction

- Traffic disruptions during construction are a potential high risk to cause widespread disruptions to travelers and communities. Therefore, the Consultant shall work closely with NHA, Construction Contractor(s), and the PPSF Grant-supported Safety Consultant to improve the safety and efficiency of the Traffic Management Plans (TMPs) during construction. To make sure the existing traffic management and safety plans have been implemented all times in a safe and secure manner.

4.2.4.2 Traffic Evacuation Plans

- The Consultant should work closely with NHA, Construction Contractor(s), the PPSF Grant-supported Safety Consultant, and other relevant entities to develop Traffic Evacuation Plans (TEPs) for potential natural disasters such as floods and earthquakes. (This will be part of the Project's climate resilience aspect in Design Review Report).

4.2.5 Quantity Measurement and Quality Control

- Provide advance advice to NHA concerning the Schedule of handing over of sites, and possible delays due to lack of possession with a view to assure that the Contractors are given Possession of Site in accordance with the agreed work programs;
- Review and approval of proposal on variation orders and implementation schedule prepared by the Contractor.
- The Consultant Will respond to Independent Monitoring Consultant who will be independently monitoring the ES aspect of the project during construction, collecting data and produce periodic reports. The Independent Monitoring Consultant will also identify non-compliances and issue corrections notices which will be dealt/resolved by the Supervision Consultant.

4.2.6 Approval of Construction Methodology and Equipment of Contractor

- Review, evaluate and approve the planned construction methodology by the Contractor and ensuring that the Contractor has incorporated the most effective and expeditious methodology of carrying out the Works; and ensure in setting up a computerized project control system for reporting physical and financial progress by the Contractor as well as the forecasts, if included in the bids and/or if demanded later on by the NHA. Subsequently, closely monitor the construction progress on regular basis to determine whether it is proceeding in accordance with the approved work program.
- Advising on the selection of Contractor's equipment. 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.

4.2.7 Payment Certificates and Claims of Contractor

- Verify the interim and final payment certificates submitted by the Contractor on the basis of measured work items as the case may be having regard to any contractual provision for advance payment and variation of price, certify the completion of the activities / Works or parts thereof and verify indices for Price Adjustment in costs as applicable after ascertaining ex-factory prices before recommending any amount on this account in interim payment certificates (IPCS).
- Assist NHA in contractual matters with the Contractor (performance bonds, insurances, claims, advance payment guarantees etc.). Assist with interpretation of the Contract Documents, explain and or reconcile any ambiguities and or discrepancies in the Contract Documents, and apply various provisions of the contract documents; and provide NHA all relevant documentation needed for settling disputes (if any) with the Contractors, and make recommendations to NHA for resolving the Contractors' claims, contract time extensions, variation orders, subletting, quantification of claims, rate and price fixing etc.
- Review and approval of the Withdrawal Applications to be submitted to AIIB.

4.2.8 Maintain Project Record

- Establish a comprehensive system of maintaining site records including site correspondence, survey data, inspection records, test data, site diaries, records of meetings, financial records, progress records etc.
- Recommend any modification of complementary items to be necessary to Contractor.
- Supervising information program on STDs and HIV/AIDs which the Works Contractors are required to carry out at construction campsites.
- Consultant shall prepare movie by Drone Camera for record of all the activity on the project from the date of start to the end and hand over five copies of the same at the time of completion to the Client.

4.2.9 Reporting Requirements

- The Consultants shall prepare and submit each of the under-mentioned reports to NHA. The format of these reports shall be mutually agreed with NHA.

•	Inception Report	1 soft + 5 hard copies
•	Contract Administration Report and Construction program	1 soft + 5 hard copies
•	Annual Management Information Report at the end of each Financial Year	1 soft + 5 hard copies
•	Technical Reports	1 soft + 5 hard copies
•	Progress Reports including E&S Supervision Report (monthly)	1 soft + 5 hard copies

•	Project Completion Report (PC-IV)	1 soft + 5 hard copies
•	Project Documentary	1 soft + 5 hard copies
•	Updated construction program as required.	1 soft + 5 hard copies
•	Roughness Survey reports at substantial completion and expiry of defect liability period	1 soft + 5 hard copies
•	Revised PC-1	1 soft + 5 hard copies
•	Project Documentary Report (Drone movie in CD)	1 soft copy

- **Inception Report**

  The Consultants will submit an Inception Report to NHA after conducting site visits and meetings with NHA officials which indicate the possible design changes observed during design review exclusive supervision methodology, possible sites / Reaches ready to hand over to contractor and any other important detail related to project.

- **Project Completion Report**

  The Consultants will prepare a comprehensive final Completion Report within thirty (90) days after completion of the project (as described in the contract). The Final Completion Report for the project shall summarize the method of construction, as built record of executed work and certification of the satisfactory correction of defects, the construction supervision performed, and recommendations for future projects of similar nature to be undertaken by NHA. This will also include a brief on the performance of the Contractor with particular emphasis on planning and job management at site. His weak and strong points need to be emphasized with clarity.

- **Project Documentary Report (Drone movie in CD)**

  The Consultant has to make a 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 include;

i. Laying and compaction of various pavement layers;
ii. Operation of Asphalt and concrete Plants;
iii. Quarry sites and laboratory activities;
iv. Road after completion showing road furniture;
v. Various important stages in construction of structures;
vi. Any other major activity involved requiring specific mention.

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CHAPTER NO.5
STAFFING FOR DESIGN REVIEW AND CONSTRUCTION SUPERVISION

5.1 STAFFING BY CONSULTANTS

- Staff details given at 5.1.2 of TOR.
- The staff as given in section 5.1.2 of TOR has been provided for the said assignment. However, design review and key personnel for construction supervision staff will be considered for evaluation purpose. The staff of consultant will perform duty as per contract.
- The qualifications and experience required of Key Personnel are detailed at the end of TOR.
- The construction period of the project is 24 months (each section). Mobilization of staff schedule is given as under:

i.	Advance mobilization of Design Review personnel's	=	3 months.
ii.	Construction Supervision period	=	24 months.
iii.	Book/account closing and handing over taking over period	=	3 months.
iv.	Defect Liability period (each section)	=	12 months.
	Total Duration of Assignment	**=**	**42months.**

- The mobilization and de-mobilization of Key Personnel shall be with prior written consent of the Client.
- The facilities of consultants regarding office and residential accommodation at site, site transport, project laboratory with requisite equipment & furniture etc. will be provided as admissible under Works Contract's Bill No.7.

5.1.1 The mobilization of staff will be as per following: -

- Mobilization of staff on the project will be done with the approval of project authorities keeping in view the commencement of contractor.
- Advance Mobilization of key personnel and Design Review taken as under: -

  However, The Consultant is required to carefully ascertain all the direct and indirect expenses that may be incurred to ensure comprehensive review of design to complete satisfaction of NHA and project requirements as Lump/Sum mode of payment for design review, refer to (Chapter 3). Therefore, consultant will mobilize its design review team as per project requirement.

- For the purpose of evaluation, the consultant will provide CV's of following personnel for Design Review;

Sr. No.	Description of Key Personnel	Nos.
Design Review Key Staff		
1.	Team Leader/Senior Highway Engineer **(International experience)**	01
2.	Senior Structure Engineer	01
3.	Drainage Engineer/Hydrologist **(International experience)**	01
	Sub-Total:	**03**

5.1.2 Staff Requirements

- The Services shall be provided by the Key and Non-Key Personnel, which shall include but not be limited to the following:

- Chief Resident Engineer shall be appointed as Team Lead for all the 3 Teams proposed for construction Supervision. Team composition of CRE is as below:

Sr. No.	Description of Personnel	No. of Persons	Months	Person-Months
A.	**Key Staff**			
1	Chief Resident Engineer / Team Leader **(International experience)**	1	30	30
2	Contract Specialist (on intermittent basis) **(International experience)**	1	24	24
3	Senior Road Safety Engineer	1	24	24
4	Resettlement and Relocation Specialist **(International experience)**	2	24	48
5	Gender Expert (on intermittent basis) **(International experience)**	2	12	24
6	Social and Communication Specialist	1	24	24
7	Environment, Health and Safety Specialist (International experience)	1	42	42
8	Environment and Climate change Specialist (PIU)	1	42	42
9	OHS Specialist (PIU)	1	42	42
10	Sr. Quantity Surveyor	1	30	30
	Sub-Total:	**12**	**-**	**330**
B.	**Non-Key Staff**			
11	Computer Operator	1	30	30
12	CAD Operator	1	30	30
13	Office Assistant	1	30	30
14	Office Boy	1	30	30
Sub-Total:		**4**	**-**	**120**

- **The following 3 Teams have been provided for Construction Supervision of 3 respective Road Sections of Phase-IA:**

Ranipur – Rohri section:

Sr. No.	Description of Personnel	No. of Persons	Months	Person-Months
A.	**For Supervision (Key Personnel)**			
1	Resident Engineer	1	27	27
2	ARE (Highways) Engineer	2	24	48
3	ARE (Structure / Bridge) Engineer	1	24	24
4	Material Engineer	1	24	24
5	Road Safety Engineer	1	24	24
6	Environmental Specialist	1	24	24
7	OHS Specialists	2	24	48
8	Social Specialists (including LAR, LMP and SEA/SH)	1	24	24
9	Communication Specialist	1	24	24
10	Slope Stabilization Expert (on intermittent basis)	1	6	6
11	Quantity Surveyor	1	27	27
Sub Total		**14**		**300**
B.	**Non-Key Personnel**			
1	Site Inspector (Material)	3	24	72
2	Site Inspectors (Highways)	4	24	96
3	Site Inspectors (Structures)	3	24	72
4	EHS Supervisors	6	24	144
5	Social Surveyors	2	24	48
6	Surveyors	4	1*27 3*24	99
7	CAD Operator	4	24	96
8	Computer Operator*	4	1*27 3*24	99
9	Accountant	2	24	48
10	Office Assistant*	4	1*27 3*24	99
11	Helpers	4	24	96
12	Office Boys	4	24	96
13	Trainee Engineer **	2	24	48
14	Junior Engineer** for NHA, HQ only	2	24	48
Sub-Total:		**48**	**-**	**1161**

Rawalpindi – Hassanabdal Section:

Sr. No.	Description of Personnel	No. of Persons	Months	Person-Months
A.	**For Supervision (Key Personnel)**			
1	Resident Engineer	1	27	27
2	ARE (Highways) Engineer	2	24	48
3	ARE (Structure / Bridge) Engineer	1	24	24
4	Material Engineer	1	24	24
5	Road Safety Engineer	1	24	24
6	Environmental Specialist	1	24	24
7	OHS Specialists	2	24	48
8	Social Specialists (including LAR, LMP and SEA/SH)	1	24	24
9	Communication Specialist	1	24	24
10	Slope Stabilization Expert (on intermittent basis)	1	6	6
11	Quantity Surveyor	1	27	27
	Sub Total	**14**		**300**
B.	**Non-Key Personnel**			
1	Site Inspector (Material)	3	24	72
2	Site Inspectors (Highways)	4	24	96
3	Site Inspectors (Structures)	3	24	72
4	EHS Supervisors	6	24	144
5	Social Surveyors	2	24	48
6	Surveyors	4	1*27 3*24	99
7	CAD Operator	4	24	96
8	Computer Operator*	4	1*27 3*24	99
9	Accountant	2	24	48
10	Office Assistant*	4	1*27 3*24	99
11	Helpers	4	24	96
12	Office Boys	4	24	96
13	Trainee Engineer **	2	24	48
14	Junior Engineer** for NHA, HQ only	2	24	48
	Sub-Total:	**48**	**-**	**1161**

Nowshera – Peshawar section:

Sr. No.	Description of Personnel	No. of Persons	Months	Person-Months
A.	**For Supervision (Key Personnel)**			
1	Resident Engineer	1	27	27
2	ARE (Highways) Engineer	2	24	48
3	ARE (Structure / Bridge) Engineer	1	24	24
4	Material Engineer	1	24	24
5	Road Safety Engineer	1	24	24
6	Environmental Specialist	1	24	24
7	OHS Specialists	2	24	48
8	Social Specialists (including LAR, LMP and SEA/SH)	1	24	24
9	Communication Specialist	1	24	24
10	Slope Stabilization Expert (on intermittent basis)	1	6	6
11	Quantity Surveyor	1	27	27
	Sub Total	**14**		**300**
B.	**Non-Key Personnel**			
1	Site Inspector (Material)	3	24	72
2	Site Inspectors (Highways)	2	24	48
3	Site Inspectors (Structures)	2	24	48
4	EHS Supervisors	3	24	72
5	Social Surveyors	1	24	48
6	Surveyors	4	1*27 3*24	99
7	CAD Operator	3	24	72
8	Computer Operator*	4	1*27 3*24	99
9	Accountant	2	24	48
10	Office Assistant*	3	1*27 2*24	75
12	Helpers	4	24	96
13	Office Boys	4	24	96
14	Trainee Engineer **	2	24	48
15	Junior Engineer** for NHA, HQ only	2	24	48
	Sub-Total:	**39**	**-**	**969**
	Grand Total	**193**		**4641**

* Staffing months given for Construction Supervision & Handing, Overtaking period.

** Appointment of Trainee Engineer with approval of Member (Planning).
The carry home salary of Junior Engineer should not be less than Rs. 150,000/-and for Trainee Engineer should not be less than Rs. 100,000/- after deducting all types of applicable taxes and Consultants Overheads approval will be granted by the Member (Planning).

5.2 SERVICES AND FACILITIES TO BE PROVIDED BY THE CLIENT

For Supervision phase of the project, Accommodation, Offices, utilities, material testing laboratories and field transportation for consultant staff will be provided under the Works Contracts.

5.3 INDEMNITY OF CLIENT

The Consultants (National/International) will indemnify the Client against any inaccuracies / deficiencies in the Services of the team of Consultant. The Consultants will be required to obtain and maintain professional indemnity insurance at its own cost as per the latest Pakistan Engineering Council regulations/AIIB Procurement Policy dated January 2016 (Revised November 22, 2022 and June 26, 2024), as reflected in the consultancy agreement, from the date of the appointment of the Consultants till the end of project duration also keeping in view Public Procurement Regulations.

5.4 REVISION OF PC-1 & Preparation of PC-IV

It shall be the responsibility of the construction supervision Consultant to prepare the revised PC-1 of the respective project, before completion of the project, by incorporating all changes in the scope of work and prepare completion report (PC-IV) at completion of the project.

5.5 TRAFFIC DIVERSION PLAN AND SAFETY MEASURE'S

The Construction Supervision Consultant will make ensure to implement the finalized proper traffic management / diversion plan and to provide proper guidelines to contractor to maintain smooth traffic flow and to make ensure proper safety measures to save human life and to avoid any traffic accident during construction.

5.6 QUALIFICATION AND EXPERIENCE REQUIREMENT OF PERSONNEL

The engineering services shall be provided by the Key Personnel, who will be assisted by Non-Key Personnel. The Qualification and Experience requirements of these Personnel shall include but not be limited to the following:

S.No	Title, Experience, Qualification & Responsibilities	
	Design Review Key Staff	
1.	**Team Leader/Highway Engineer (International Experience)**	
	General Experience:	20 Years
	Qualification:	B.Sc. (Civil Engineering). Preferably M.Sc./PHD (Highway/Transportation Engineering)

	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	Proven fifteen (15) years' international design Review experience as Highway Design Engineer on major road Projects.
	Responsibilities:	He/She will be responsible for design review involving geometric design, designs for road features and road safety/traffic control features, drainage designs, rehabilitation and repair plan, traffic plans and amenities including detailed drawings and specifications. He/she will propose if required, during construction any modification and change in design, construction method and alternate technology of construction.
2.	**Senior Structure Engineer**	
	General Experience:	15 years
	Qualification:	B.Sc. (Civil Engineering). Preferably M.Sc./PHD (Structure Engineering)
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	Proven (8) years' design Review experience as Structure Engineer on National Highways and Motorways Projects.
	Responsibilities:	He/She will be responsible for design review of structures/Bridges. He shall demonstrate a working knowledge in the design and construction of bridges, the design of all required earthworks, retaining walls, drainage and any other required structures for road projects.
3.	**Drainage Engineer/Hydrologist (International Experience)**	
	General Experience:	15 years
	Qualification:	B.Sc. (Civil Engineering). Preferably M.Sc./PHD (Hydraulic/Hydrology/water resource Engineering)
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	Proven (8) years' international design Review experience as Structure Engineer on major road Projects.

	Responsibilities:	He/She will be responsible for carrying out the Hydrological study of the area and submits the Hydraulic Report. He shall also perform Hydrologic Analysis. Hydrology and Hydraulic design of the structures are his responsibility. Draining Engineer shall also make sure to take measures for the proper disposal of the water. Preparation of Detailed Design Drawing, Technical Specification B.O.Q for Hydraulic Structure work element based on the Design Drawings, Specifications and site investigations are his responsibility.

	Supervision Staff (key personnel)	
1.	**Chief Resident Engineer (International Experience)**	
	General Experience:	20 years
	Qualification:	B.Sc. (Civil Engineering) Preferably M.Sc. (Highways Engineering/Transportation Engineering).
	Marking:	M.Sc. with additional relevant trainings– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%.
	Specific Experience:	Fifteen (15) years' international experience as Resident Engineer on construction supervision of major road Projects. The Engineer is encouraged to attach at least two (02) references of high-quality workmanship duly verified by the respective client(s).
	Responsibilities	The CRE / Team Leader will head the Consultants' team and will work directly to manage the project and will maintain liaison with NHA. Responsibilities of the CRE / Team Leader will include, but are not limited to the following: - • Assist the NHA in 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 civil works. • Oversee the consultant's activities ensuring compliance with 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 the environment and other related 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.
2.	**Contract Specialist (International Experience)**	
	General Experience:	12 Years
	Qualification:	B.Sc. (Civil Engineering) Master's degree with a major in Civil Engineering or Law
	Marking:	M.Sc. with additional relevant trainings– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%.
	Specific Experience:	08 years' international experience as Contract Specialist on major road projects based on FIDIC form / conditions of contract, Experience and knowledge of AIIB's procurement procedures is essential. 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.
	Responsibilities	• Assist in organizing meetings for negotiating and resolving technical and contract completion issues; • Assist Employer and TL in effect with the timely distribution of reports and pertinent commercial information to and from Contractors in accordance with agreed schedule. • Assist in scheduling turnover meetings with Site Personnel, where required. • Assist in checking timesheets for contract conformance (rates, backup and extensions).

		• Assist in review of Contractors' invoices and prepare Progress Payment Certificates with Cost Control. • Assist in reviewing Contractors' costs, forecasts and requests for extras. • 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.
3.	**Senior Road Safety Engineer**	
	Qualification:	B.Sc. (Civil Engineering - Transportation). Preferably M.Sc./PHD (Highway/Transportation Engineering)
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	Proven fifteen (15) years' international road safety design and operations experience for both rural and urban roads.
	Responsibilities:	During the design phase, he/she assesses alignment, intersections, and geometric features to identify potential hazards, recommending improvements such as proper signage, road markings, speed management measures, and pedestrian facilities. During construction, he/she supervises the implementation of safety measures, ensuring compliance with international standards (e.g., AASHTO, PIARC) and local regulations. He/she also conducts safety audits, inspects temporary traffic management plans, and verifies that features like guardrails, lighting, and drainage are correctly installed. The goal is to minimize accident risks and enhance the overall safety and efficiency of the highway. He/She will work closely with the Safety Consultant funded by AIIB's PPSF grant to improve road safety for the Project.
4.	**Gender Specialist (International)**	
	General Experience:	8 years
	Qualification:	MS Degree or higher in Gender Studies, Social Sciences, Development Studies, or a related field.
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.S. – 90%; B.S. with additional relevant trainings – 80%; B.S. – 70%.

		2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	• At least 8 years of professional international experience in gender mainstreaming in development projects, preferably within the Central Asia region. • Demonstrated expertise in designing and implementing gender strategies in large-scale, multi-stakeholder projects. • Experience with monitoring and evaluation frameworks, gender analysis, and the preparation of gender-sensitive reports. • Strong understanding of AIIB's policies and gender-related strategies.
	Responsibility:	As mentioned in Chapter 4(a)
5.	**Resettlement and Relocation Specialist (International Experience)**	
	General Experience:	• 8 years
	Qualification:	• MS Degree in social sciences, sociology, development studies, or a related field.
	Marking:	Ph.D - 100%, M.S. with additional relevant trainings/courses– 100%; M.S. – 90%; B.S. with additional relevant trainings – 80%; B.S. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	• Eight (8) years of relevant experience on Highway Projects • Demonstrated experience in preparing and reviewing Resettlement Action Plans (RAPs) and Livelihood Restoration Plans (LRPs). • Familiarity with international standards on resettlement, including IFC Performance Standards and IFI's Safeguard Policies. • Experience working with multilateral development banks (MDBs) or international organizations is highly desirable. • Strong analytical and problem-solving skills. • Excellent communication and stakeholder engagement skills. • Proficiency in English (written and spoken); knowledge of other languages spoken in AIIB member countries is an asset. • Ability to work independently and as part of a multidisciplinary team.
	Responsibility:	• As mentioned in Chapter 4(b)

6.	**Environment, Health and Safety Specialist (International)**	
	General Experience:	• 20 Years
	Qualification:	• B.Sc. (Engineering, Environmental Management, OHS) preferably M.Sc. / Ph.D. (Engineering, Environmental Management, OHS). Certificate course in OHS (e.g., NEBOSH, CRSP, CSP).
	Marking:	• Ph.D. - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%.
	Specific Experience:	• The assignment requires the services of an International OHS Specialist with at least 10 years of experience in occupational health and safety as well as community health and safety for large infrastructure projects globally. Prior experience of working in Pakistan would be considered a plus. In addition, the following criteria will apply: experience of working on a similar engagement; previous experience of working on large infrastructure projects, including large highway construction projects, as well as in the implementation of the Multilateral Development Bank's safeguards policies in South Asian region; complete understanding of the national legislative and regulatory as well as AIIB Policy and ESF requirements; proven report writing skills.
	Responsibilities	Support supervision consultant management to make sure that appropriate measures are taken to ensure adequate health and safety standards during construction in accordance with the best international standards and relevant national laws, and supervise the contractor's implementation of OCHSMP at all construction activities, which includes: - assess OHS risks and impacts including those related to contractors' health and safety and to community safety, and impacts on the health, safety and well-being of workers and project-affected communities; - assess safe and healthy working conditions, to identify the fair treatment, nondiscrimination and equal opportunity of project workers, to assess protection measure for project workers, including vulnerable categories of workers such as women, children, and migrant workers. - identify potential hazards to project workers, particularly those that may be life-threatening;

		- instruct preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; - instruct contractor of training of project workers and maintenance of training records; - manage documentation and reporting of occupational accidents, diseases and incidents; - instruct the contractors for preparing emergency prevention, preparedness and response arrangements; - anticipate and avoid adverse impacts on the health and safety of the affected communities during the project life cycle from both routine and non-routine circumstances; - ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the affected communities; - update and/or develop OHS policies, programs and practices, reviewing current site conditions; - ensure consultant safety team to follow the established OHS policies, programs and practices; - coordinate with contractors to ensure that they achieve adequate standards; - coordinate with the consultant management to respond to safety non-compliances and develop action plans to address safety risks and reduce safety matters and hazards; - attend daily internal meetings, and coordinate with all other consultant sections to improve OHS status; - review contractor's OHS programs and other relevant documents submitted by the contractors, and provide comments; - prepare and submit required reports and documents - establish safety training programs for various levels of project personnel; - report accident to Clients staff and ensure AIIB project lead have access to these reports; and • conduct transfer of knowledge to NHA's (Client's) staff.
7.	**Occupational, Health and Safety Specialist**	
	General Experience:	10 Years
	Qualification:	B.Sc. (Engineering, Environmental Management, OHS) preferably M.Sc. / Ph.D. (Engineering, Environmental Management, OHS). Certificate course in OHS (e.g., NEBOSH).

	Marking:	M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%.
	Specific Experience:	The assignment requires the services of an OHS Specialist with at least 5 years of experience in occupational health and safety as well as community health and safety for large infrastructure projects in Pakistan. In addition, the following criteria will apply: experience of working on a similar engagement; previous experience of working on large infrastructure projects, including large highway construction projects, as well as in the implementation of the Multilateral Development Bank's safeguards policies; complete understanding of the national legislative and regulatory as well as AIIB Policy and ESF requirements; proven report writing skills.
	Responsibilities	Responsible for the following: - conduct detailed hazard identification and risk assessments for construction activities (e.g., excavation, heavy equipment operation, working at heights, traffic control). - ensure compliance with applicable provincial OHS legislation and good international industry practices (e.g., OSHA) and project-specific safety requirements; - conduct regular site inspections, safety audits, and walkthroughs; - identify non-compliance and unsafe practices and initiate corrective actions. identify potential hazards to project workers, particularly those that may be life-threatening; - instruct preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; - investigate incidents and injuries, and near-misses along with contractor's OHS staff. Document findings and recommend corrective/preventive actions; - cooperate with contractor OHS staff in training project workers for continuous improvement; - manage documentation and reporting of occupational accidents, diseases and incidents; - instruct the contractors for preparing emergency prevention, preparedness and response arrangements; - anticipate and avoid adverse impacts on the health and safety of the affected communities during the project life cycle from both routine and non-routine circumstances;

		- ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the affected communities; - coordinate with traffic management teams to ensure the safety of workers and road users. Monitor effectiveness of signage, barriers, and detours. - assist in reviewing the contractor's OHS programs and other relevant documents submitted by the contractors, and provide comments; assist in preparing the monthly and quarterly progress reports and document conduct OHS training for CSC, contractor, and RIU personnel;
8.	**Resident Engineer**	
	General Experience:	15 years
	Qualification:	B.Sc. (Civil Engineering) preferably M.Sc./PHD (Highway / Transportation Engineering).
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	Ten (10) years of relevant experience including experience as a Resident Engineer on construction supervision of National Highway projects.
	Responsibility:	RE 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. RE will assist the Project Coordinator 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. • Preparation of technical details such as specifications and estimates. • Provide details about existing pavement, damages and assessment. • Assist the Project Coordinator and recommend approval of contractor's work program, method statements, material sources, etc.

		• Assist the Project Coordinator 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 keeping measurement records. • Maintaining records, correspondence, and diaries. • Certifying work volume and recommending interim certificates for progress payments. • To proceed & implement the project as per specifications, standards, Contracts & TOR's.
9.	**ARE (Highways) Engineer**	
	General Experience	12 Years
	Qualification	B.Sc. (Civil Engineering) preferably M.Sc./PHD (Highway / Transportation Engineering).
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience	(08) years' relevant experience of supervising construction of National Highways projects as ARE (Highways) on National Highways projects.
	Responsibility	His/her responsibilities shall include but not limited to the following tasks: He/she will assist the Resident Engineer (R.E) and will be responsible for quality of Road works. He will perform his/her duties as per consultant. To ensure quality execution and timely completion of project.
10.	**ARE Structure / Bridge Engineer**	
	General Experience	12 Years
	Qualification:	B.Sc. (Civil Engineering) preferably M.Sc./PHD (Structure Engineering).
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	(08) years' relevant experience of supervising construction of National Highways projects as ARE (Structure/ Bridge) on National Highways projects.

	Responsibility:	The AER Structure / Bridge Engineer will perform duties under the guidance of the Team Leader. He/she will assist the Team for the Design Review particularly the bridges and structures so that the project is implemented in accordance with the required specifications and approved drawings. She/he will set up supervision systems and train the consultant's national staff in their use.
11.	**Slope Stabilization Expert**	
	General Experience:	12 Years
	Qualification:	B.Sc. (Civil Engineering) / M.Sc. (Geology) preferably Masters/PhD in Geo-Tech Engineering /Civil Engineering.
	Marking:	Ph.D – 100%; M.Sc. Geotechnical Engineering/Civil Engineering with relevant trainings from recognized organizations – 100%; M.Sc. (Geo-Technical Engineering – 90%; B.Sc. Civil/M.Sc. Geology with relevant trainings from recognized organizations 80%; B.Sc. Civil/M.Sc. Geology 70%; 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses.
	Specific Experience:	Eight (08) years' relevant experience as Slope Stabilization Expert on construction supervision projects of National Highways involves asphalt concrete mix design in countries with hot climate and/or truck overloading problems including having experience to control testing at site, material testing and road pavement formation and other all related construction activities including concrete and highway embankment formation. He should have good command on internal and structure code closure e.g. AASHTO, ASTM and specification and standard of NHA along with field testing, concern Asphalts related all testing and mix design.
	Responsibilities:	He/she will assist and ensure that the design, layout 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.
12.	**Material Engineer**	
	General Experience:	12 Years
	Qualification:	B.Sc. (Civil Engineering) / M.Sc. (Geology) preferably Masters/PhD in Geo-Tech Engineering /Civil Engineering.

	Marking:	Ph.D – 100%; M.Sc. Geotechnical Engineering/Civil Engineering with relevant trainings from recognized organizations – 100%; M.Sc. (Geo-Technical Engineering – 90%; B.Sc. Civil/M.Sc. Geology with relevant trainings from recognized organizations 80%; B.Sc. Civil/M.Sc. Geology 70%; 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses.
	Specific Experience:	Eight (08) years relevant experience as Material Engineer on construction supervision projects of National Highways involves asphalt concrete mix design in countries with hot climate and/or truck overloading problems including having experience to control testing at site, material testing and road pavement formation and other all related construction activities including concrete and highway embankment formation. He should have good command on internal and structure code closure e.g. AASHTO, ASTM and specification and standard of NHA along with field testing, concern Asphalts related all testing and mix design.
	Responsibilities:	He/she will assist and will be responsible for the 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 are 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 earthwork and 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 detected borrow areas, quarries and the respective estimated quantities. • Be responsible for material Testing and specification and certification of material quality.

13.	**Environmental Specialist**	
	General Experience:	12 Years
	Qualification:	B.Sc. (Environmental Engineering) preferably M.Sc. / PHD (Environmental Engineering).
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%.
	Specific Experience:	08 years' experience as an Environmental Specialist on major road projects supervising and monitoring environmental management plans. Evidence of previous relevant experience with MDB Environmental and Social Standards in the Transport Sector, including the preparation or review of ESIA/ ESMP, and ESAP, environmental supervision and monitoring of physical/civil infrastructure construction, and assistance to the beneficiary in the implementation of the Environmental and Social Management System in accordance to MDB policies or ISO certification.
	Responsibilities	Together with Social specialist / R&R Specialist, responsible for: (i) Review the contractor's Construction Environmental and Social Management Plan (CESMP) and sub-plans (e.g., waste management, health and safety, community engagement etc as needed/ defined in the ESIA/ESMP, ESMPF, RAP); (ii) guide, follow up and assist, as needed, in obtaining necessary environmental permits and clearances; (iii) review the baseline data/information in the ESIA / ESMP and RAP and conduct/ collect, if necessary, baseline environmental and social monitoring, data/ information prior to construction at a site; (iv) Ensure that site-specific environmental and social safeguards are in place before construction begins at a site; (v) Supervise the implementation of the C-ESMP by the contractor; (vi) monitor compliance with occupational health and safety (OHS) requirements; (vii) plan and organize/conduct environmental quality monitoring (air, water, noise, soil) at sites where such impacts are likely, and verify contractor compliance; (viii) ensure waste management and pollution control measures are implemented; (ix) monitor impacts on sensitive ES receptors and mitigation measures; (x) monitor and ensure proper management of worker accommodation; (xi) ensure compliance with labor standards and workers grievance redress mechanisms, grievance handling; (xii) raise awareness and disseminate information about

		community GRM, support/ facilitate functioning of the GRM and keep record of the grievances; (xiii) Facilitate stakeholder engagement in line with the SEP; (prepare and submit ES monitoring report on monthly basis); (xiv) keep register/record of the incidents / accidents, and health & safety log, and report in the monthly ES monitoring report. Report major (fatal or near fatal accidents) immediately, within 24 hours to AIIB through PIU/PMU; (xv) organize periodic environmental and social training / workshops for the project staff (consultant and contractor) (xvi) provide support, as needed, to independent ES monitoring; (xvii) Ensure site restoration and proper closure of construction sites/ conduct post-construction ES inspection/ audit; (xviii) provide final ES compliance report. Responsible for preparing Environmental monitoring check list, reviewing and endorsement of C-ESMP/Site Specific Environmental Management Plan (SSEMP), review of Bi-Environmental monitoring reports, prepare corrective action place in case of noncompliance. The Senior Environmental Specialist will set up environmental management and monitoring system (EMMS), train the national staff and ensure that the EMMS is in place. The Environmental Specialist shall be present at site full-time or as per construction activity intensity and shall oversee site-level E&S compliance, prepare monthly reports as member of the ES team, manage EHS documentation, and serve as the focal point for interface with the Independent Monitoring Consultant.
14.	**Social Specialist**	
	General Experience:	12 Years
	Qualification:	B.Sc. (Environmental Engineering) preferably M.Sc. / PHD (Environmental Engineering).
	Marking:	Ph.D - 100%, M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%.
	Specific Experience:	08 years' experience as Social/Stakeholder Engagement Specialist on major road projects supervising and monitoring social issues and community and civil society engagement Evidence of previous relevant experience with MDB Environmental and Social Standards in the Transport Sector, including the preparation or review of ESIA/ ESMP,

		and ESAP, social supervision and monitoring of physical/civil infrastructure construction, and assistance to the beneficiary in the implementation of ESIA/ESMP, ESAP, SEP in accordance to MDB policies
	Responsibilities	Together with Environmental specialist / R&R Specialist, responsible for: (i) Review the contractor's Construction Environmental and Social Management Plan (CESMP) and sub-plans (e.g., cultural heritage, LMP, community health and safety, community engagement etc. as needed/ defined in the ESIA/ESMP, ESMPF, RAP); (ii) guide, follow up and assist, as needed, in ensuring contractors' compliance with ESMP, LMP, CESMP, SEP; (iii) from social aspect, review the baseline data/information in the ESIA / ESMP and conduct/ collect, if necessary, baseline environmental and social monitoring, data/ information prior to construction at a site; (iv) Ensure that site-specific environmental and social safeguards are in place before construction begins at a site; (v) Supervise the implementation of the C-ESMP by the contractor from social aspects; (vi) monitor compliance with labor, occupational health and safety (OHS) requirements; (vii) plan and organize/conduct social monitoring (community safety, labor, stakeholder engagement, GRM including GRM for workers) at sites where such impacts are likely, and verify contractor compliance; (viii) monitor impacts on sensitive ES receptors and mitigation measures; (ix) monitor and ensure proper management of worker accommodation; (x) ensure compliance with labor standards and workers grievance redress mechanisms, grievance handling; (xi) raise awareness and disseminate information about community GRM, support/ facilitate functioning of the GRM and keep record of the grievances; (xii) verify implementation of RAP, including compensation payments and resettlement support and keep records; (xiii) Facilitate stakeholder engagement in line with the SEP; (prepare and submit ES monitoring report on monthly basis); (xiv) keep register/record of the incidents / accidents, and health & safety log, and report in the monthly ES monitoring report. Report major (fatal or near fatal accidents) immediately, within 24 hours to AIIB through PIU/PMU; (xv) organize periodic environmental and social training / workshops for the project staff (consultant and contractor) (xvi) provide support, as needed, to independent ES monitoring; (xvii) Ensure site restoration and proper closure of construction

		sites/ conduct post-construction ES inspection/ audit; (xviii) provide final ES compliance report. Responsible for preparing social monitoring check list, reviewing and endorsement of C-ESMP, review of bi-social monitoring reports, prepare corrective action place in case of noncompliance. The Social Specialist shall be present at site full-time or as per construction activity intensity and shall oversee site-level E&S compliance, prepare monthly reports as member of the ES team, manage EHS documentation, and serve as the focal point for interface with the Independent Monitoring Consultant.
15.	**Sr. Quantity Surveyor**	
	General Experience	B.Sc. 08 Years DAE 12 Years
	Qualification:	B.Sc. (Civil Engineering) or DAE (Civil).
	Marking:	B.Sc. with additional relevant trainings from recognized organizations – 100%; B.Sc. – 90%; DAE (Civil) – 70%.
	Specific Experience:	Eight (08) years' relevant experience as Sr. Quantity Surveyor on Civil Works projects on Highway construction projects. He/She shall have the experience of handling claims, variation orders, and other quantity related issues.
	Responsibility:	His/her responsibilities shall include but are not limited to the following tasks: He/she will assist Resident Engineer in verification of payment certificates. He/she will be responsible for verification of executed quantities. He/She shall have good command on his/her working.
16.	**Quantity Surveyor**	
	General Experience	DAE 10 Years
	Qualification:	DAE (Civil).
	Marking:	DAE (Civil) with relevant trainings from recognized organizations – 100%; DAE (Civil) – 80%.
	Specific Experience:	Eight (08) years' relevant experience as Quantity Surveyor on Civil Works projects on Highway construction projects. He/She shall have experience of handling claims variation orders and other quantity related issues.
	Responsibility:	His/her responsibilities shall include but are not limited to the following tasks:

		He/she will assist Resident Engineer in verification of payment certificates. He/she will be responsible for verification of executed quantities. He/She should have good command on his/her working.
	Non-Key Personnel	
1.	**Site Inspectors (Material)**	
	General Experience	02 Years B.Sc Civil/Geology or 05 Years DAE Civil.
	Qualification:	DAE (Civil) / B.Sc. (Civil Engineering).
	Specific Experience:	Involved in construction of Highway projects as Material Inspector.
	Responsibility:	His/her job description and duties will be defined by the Resident Engineer and approved by the Client. However, he/she shall have experience of field testing of Highway embankment and pavement structure and Asphalt testing.
2.	**Site Inspectors (Highways)**	
	Qualification:	B.Sc. (Civil Engineering).
	Specific Experience:	02 years
	Responsibility:	His/her job description and duties will be defined by the Resident Engineer and approved by the Client. However, he/she shall have experience of field testing of Highway embankment and pavement structure and Asphalt testing.
3.	**Site Inspectors (Structures)**	
	Qualification:	B.Sc. (Civil Engineering).
	Specific Experience:	02 years
	Responsibility:	His/her job description and duties will be defined by the Resident Engineer and approved by the Client. However, he/she shall have experience of field testing of Highway embankment, pavement structure, and Asphalt testing.
4.	**Road Safety Engineer**	
	Qualification:	B.Sc. (Civil Engineering - Transportation). Preferably M.Sc. (Highway/Transportation Engineering)
	Marking:	M.Sc. with additional relevant trainings/courses– 100%; M.Sc. – 90%; B.Sc. with additional relevant trainings – 80%; B.Sc. – 70%. 2.5% for each course/training from recognized institute upto max 10% for 4 training/courses
	Specific Experience:	Proven ten (10) years' road safety design and operations experience for both rural and urban roads.
	Responsibilities:	He/She will work closely with the Senior Road Safety Engineer of the CRE Team at the NHA HQ. During the

		design phase, he/she assesses alignment, intersections, and geometric features to identify potential hazards, recommending improvements such as proper signage, road markings, speed management measures, and pedestrian facilities. During construction, he/she supervises the implementation of safety measures, ensuring compliance with international standards (e.g., AASHTO, PIARC) and local regulations. He/she also conducts safety audits, inspects temporary traffic management plans, and verifies that features like guardrails, lighting, and drainage are correctly installed. The goal is to minimize accident risks and enhance the overall safety and efficiency of the highway. He/She will work closely with the Safety Consultant funded by AIIB's PPSF grant to improve road safety for the Project.
5.	**Surveyors**	
	General Experience	12 Years
	Qualification:	DAE – Civil from the Board of Technical Education's recognized institute preferably B.Sc. (Civil Engineering). .
	Specific Experience:	Eight (08) years' experience of surveying/leveling and related activities on National Highway Projects.
	Responsibility:	His/Her job description and duties will be defined by the Resident Engineer and approved by the Client. He/She is able to handle survey related activation independently e.g. ready of cross-section, maintain survey, level book, structure layout as per drawing, to check structure layout as per drawing.
6.	**CAD Operator**	
	General Experience	05 Years
	Qualification:	DAE – Civil from the Board of Technical Education's recognized institute. Certificate Auto-CAD Software Operator.
	Specific Experience:	Three (03) years' experience of drafting engineering drawings/ designs on Auto-CAD software.
	Responsibility	His/her responsibilities shall include but are not limited to the following tasks: His/her job description and duties will be defined by the Resident Engineer and approved by the Client.
7.	**Computer Operators**	
	General Experience	5 Years
	Qualification:	B.A and have computer relevant certificates.
	Specific Experience:	Three (03) years' experience of office management, typing at 30 words per minute typing speed.

	Responsibility:	His/her responsibilities shall include but are not limited to the following tasks: His/her job description and duties will be defined by the Resident Engineer and approved by the Client. Generally, he/she will assist the Consultants and Client's representative in all drafting, reports preparation and activities as per demand.
8.	**Accountant**	
	General Experience	05 Years
	Qualification:	B.Com from a recognized institute, preferably Master's Degree in Accounts.
	Specific Experience:	Five (05) years of relevant experience in the case of B.Com or three (03) years of relevant experience in the case of Master's Degree in Accounts.
	Responsibility:	His/her responsibilities shall include but are not limited to the following tasks: His/her job description and duties will be defined by the Resident Engineer and approved by the Client. Generally, he/she will be responsible for monitoring the project accounts.
9.	**Office Assistants**	
	General Experience	5 Years
	Qualification:	B.A./ B.Sc.
	Relevant	Three (03) years' experience in office management/ training in computer software (M.S. Office) and typing with 40 words per minute typing speed.
	Responsibility	His/her responsibilities shall include but are not limited to the following tasks: His/her job description and duties will be defined by the Resident Engineer and approved by the Client.
10.	**Junior Engineer**	
	Qualification:	B.Sc. (Civil Engineering from a recognized university in Pakistan.
	Experience:	2-3 years of relevant experience.
11.	**Trainee Engineer**	
	Qualification:	B.Sc. (Civil Engineering from a recognized university in Pakistan.

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Results Monitoring Framework (RMF) for the Phase 1A Project

Project Objective (PO):	**To contribute to the improvements of climate resilience, operational efficiency, and road safety in selected critical sections of the National Highway N-5 in Pakistan**							
Indicator Name	**Unit of measure**	**Base-line Data 2024**	**Cumulative Target Values**			**End Target 2029**	**Data source / Methodology**	**Responsibility**
			2026	**2027**	**2028**			
Project Objective Indicators:								
1. Share of population serviced by the Phase 1A sections having access to climate-resilient N-5	%						Annually	NHA
2. Efficiency – Travel time of each Phase 1A section								
2.1 Travel time of Ranipur-Rohri Road (per direction)	Minute						Annually	NHA
2.2 Travel time of Rawalpindi-Hassanabdal Road (per direction)	Minute						Annually	NHA
2.3 Travel time of Nowshera – Peshawar (per direction)	Minute						Annually	NHA
3. Efficiency – Annual Average Daily Traffic (AADT) of each Phase 1A section								
3.1 AADT of Ranipur-Rohri Road	Number of vehicles						Annually	NHA
3.2 AADT of Rawalpindi-Hassanabdal Road	Number of vehicles						Annually	NHA

Project Objective (PO):	**To contribute to the improvements of climate resilience, operational efficiency, and road safety in selected critical sections of the National Highway N-5 in Pakistan**							
Indicator Name	**Unit of measure**	**Base-line Data 2024**	**Cumulative Target Values**			**End Target 2029**	**Data source / Methodology**	**Responsibility**
			2026	**2027**	**2028**			
3.3 AADT of Nowshera – Peshawar	Number of vehicles						Annually	NHA
4. Share of N-5 length of the Phase 1A w/ iRAP 3+ star rating	%						Annually	NHA
5. Safety – Road fatalities of all Phase 1A sections in a calendar year	Number						Annually	NHA
6. Safety – Road injuries of all Phase 1A sections in a calendar year	Number						Annually	NHA
Intermediate Results Indicators:								
1. Roads constructed, rehabilitated, or maintained	Kilometer						Annually	NHA
2. Number of culverts widened	Number						Annually	NHA
3. Number of bus bays newly constructed or upgraded	Number						Annually	NHA
4. Number of pedestrian bridges and tunnels newly constructed or upgraded	Number						Annually	NHA

Project Objective (PO):	**To contribute to the improvements of climate resilience, operational efficiency, and road safety in selected critical sections of the National Highway N-5 in Pakistan**							
Indicator Name	**Unit of measure**	**Base-line Data 2024**	**Cumulative Target Values**			**End Target 2029**	**Data source / Methodology**	**Responsibility**
			2026	**2027**	**2028**			
5. Number of protected U-turns newly constructed	Number						Annually	NHA
6. Share of female employees in direct jobs created in Phase 1A	%						Annually	NHA
7. Total number of direct jobs created in the Phase 1A	Number						Annually	NHA
8. Percentage of grievances resolved within the timeframes stated in the GRM	%							