

Terms of Reference

Supervision of the

Design & Build Contract

**for the Rehabilitation of road G33: R12 – Mîndic – Zgurița – Mărculești – R13
and G35: R14 – Țepilova – Vanțina – Căinari Vechi – G33 (Corridor 5)**

1. INTRODUCTION

1. The S.A. „Administrația Națională a Drumurilor” is the government entity responsible for the road transport network construction, repair and maintenance.
2. The World Bank (the “Bank” or “WB”) has provided financing towards a Loan/Credit to the S.A. „Administrația Națională a Drumurilor” (“the Employer” or (“the Client”) for the Moldova Rural Connectivity Project (“the Project”).
3. The Project objective is: (i) to improve climate-resilient road connectivity in selected rural communities; (ii) to enhance road transit through selected border crossings with Romania; and (iii) in case of an Eligible Crisis or Emergency, to respond promptly and effectively to it. The Project will finance the rehabilitation and upgrading of approximately 95 km of three priority local roads with climate resilient design to improve reliable, all-weather connectivity to markets, schools, health, and other social and economic centres. The works include road safety measures in the proximity of schools and settlement areas.
4. The works contract will be procured under the World Bank procurement regulations and follow the Bank’s standard procurement document.
5. For the execution of design and works under Corridor 5, the Conditions of Contract are the “General Conditions” which form part of the “FIDIC Conditions of Contract for Plant & Design-Build (2nd Edition, 2017; Reprinted 2022 with amendments)” published by the Federation Internationale Des Ingenieurs – Conseils (FIDIC), called “FIDIC” in this document from hereon, and the “Particular Conditions” comprise of the World Bank’s Conditions of Particular Application (COPA) and the amendments and additions to such General Conditions (hereinafter called “Works Contract”).
6. The Works Contract therefore, calls for the appointment of “the Engineer” or “the Consultant” to supervise the civil works and manage the works contract as the “Employer’s Representative”. The Client seeks to engage an engineering consulting firm (“the Consultant”) to undertake the assignment for which this Terms of Reference is issued.

2. OBJECTIVE OF THE ASSIGNMENT

The overall objective of the assignment is to supervise the implementation of civil and related works and administer the Works Contract (detailed below). In doing so the Consultant will assume the role of the

“Engineer” as defined in the FIDIC as amended in the Works Contract. In addition, the Consultant will assist the Client with all aspects concerning contracts administrations, payments, and compliance with the environmental and social (E&S).

7. The Works Contract is:

Rehabilitation of road **G33: R12 – Mîndic – Zgurița – Mărculești – R13 and G35: R14 – Țepilova – Vanțina – Căinari Vechi – G33 (Corridor 5).**

The Works are based on a Conceptual Design and comprise substantial works described in Appendix A.

As the Engineer under the Works Contract, the Consultant shall act impartially, discharging delegated duties strictly in accordance with the Conditions of Contract and within the scope of authority granted by the Employer. All actions, decisions, and determinations shall be based on contract provisions, sound engineering judgment, and fair process.

The Consultant is responsible for reviewing the Contractor’s design submissions, including drawings, design reports, technical specifications, calculations, and method statements. The Consultant shall confirm that these documents meet the Employer’s Requirements and are technically coordinated, constructible, and compliant with applicable codes and standards.

During construction, the Consultant shall verify that the Works are executed in conformity with the approved Contractor’s Documents as defined in GCC (Sub-Clause 5.2) and Particular Conditions of Contract. The Consultant shall ensure compliance with the Employer’s Requirements and all applicable national regulations and technical standards referenced in the Contract.

The Consultant shall provide contract administration support to the Employer, including oversight of the Contractor’s programme, quality management systems, and contractual obligations. The Consultant shall evaluate claims, prepare determinations, and support the Employer in addressing disputes, including the administration of the dispute board process. The Consultant shall also review and certify interim and final payment applications, assess variations, and advise the Employer on matters such as contract suspension or termination, as appropriate.

Environmental and social performance is an integral part of the Consultant’s responsibilities. The Consultant shall monitor the Contractor’s compliance with environmental, social, health and safety requirements of the contract including with the Environmental and Social Management Plan (ESMP), the approved Traffic Management Plan, and relevant site-specific safety procedures. The Consultant shall ensure adherence to applicable national environmental laws and recognised international good practices. The Consultant’s responsibilities include:

- ensuring that the Contractor’s documents indicate clearly acceptable methods, equipment, materials and controls to perform the works in accordance with the environmental and social requirements of the contract, and thereafter ensure the contractor implements the documents as expected;
- supporting gender equality and social inclusion by monitoring the Contractor’s compliance with labour and community provisions of the contract. This includes verification of equal pay practices, implementation of measures to prevent gender-based violence and sexual harassment, and local employment including the promotion of female participation in construction activities. All efforts

should be consistent with applicable laws, policies and regulations, as well as the environmental and social obligations set out in the contract;

- ensuring strict compliance with national labour laws and international conventions prohibiting child labour, including applicable ILO conventions, as detailed in the contract documentation;
- monitoring health and safety performance across all areas where permanent or temporary works are undertaken, to ensure the Contractor adopts safe systems of work, training programs, and PPE of the correct standard to prevent injury to workers or the public;
- reminding the Contractor of their environmental and social obligations and advising the Contractor on methods, approaches, equipment or systems that are necessary to complete the works without causing harm to people or the environment.

Finally, the Consultant shall carry out any additional duties assigned to the Engineer under the Conditions of Contract, provided they fall within the Consultant's scope of services and delegated authority.

3. SCOPE OF SERVICES

The Consultant shall deliver comprehensive consultancy services to support the effective and compliant implementation of the Works. The Consultant shall provide design review, construction supervision, and contract administration services in accordance with the FIDIC. These services shall span the full project lifecycle and are divided into two main phases:

- (i) Pre-Construction Review Phase, and
- (ii) Construction including Defect Notification Period

In both phases, the Consultant shall perform the role of Engineer as defined in the Contract, exercising authority strictly within the limits delegated by the Employer and guided by sound engineering principles, procedural fairness, and contractual integrity.

3.1. General Duties of the Consultant Acting as Engineer

The Consultant, acting as the Engineer, shall provide professional services to administer the Contract on behalf of the Employer within the authority delegated in the Particular Conditions. The Consultant is expected to exercise impartial judgment in its contractual functions, including making determinations where required.

This role includes supervision of the Works to ensure compliance with the Contract, the approved Contractor's Documents, and all applicable regulations and standards. The Consultant is also responsible for maintaining structured and auditable records of site activities and for providing routine and special reports to the Employer.

The Consultant shall keep updated all records including reports, cash flow forecast for the Project, works diaries, correspondence, instructions given to Contractor, test records, measurement and quantity calculations, payment records and all other relevant documents.

The detailed breakdown of the general duties of the Consultant acting as the Engineer for both the Pre-Construction Phase and the Construction Phase are presented in TOR Section 4.1.

3.2. Pre-Construction Phase Services

This period spans from the effective date of the Supervision Contract to the design stage and well into the initial critical resource mobilization period and overlaps with the Construction phase described in the following section. During the pre-construction stage, the Consultant shall focus on validating the Contractor's approach and readiness, ensuring that the design meets the Employer's Requirements as described in the final signed Works Contract and complies with applicable laws, regulations, and site-specific constraints. Key duties include:

- a) Reviewing the Employer's Requirements and ensuring their proper integration into the Contractor's Documents.
- b) Assessing all design submissions including drawings, technical specifications, and calculations, for completeness, compliance, and alignment with project objectives.
- c) Reviewing and commenting on the Contractor's Works Programme, method statements, procurement strategy, and construction sequencing to ensure alignment with contractual timeframes and ensure the proposed phasing aligns with traffic needs and provide appropriate and timely inputs to the Programme where required to ensure that construction works are implemented using effective and realistic plans and schedules;
- d) Coordinating and tracking the design review process, including Issued-for-Construction (IFC) drawings, considering adequate time for responses and revisions avoiding unnecessary delays and keeping the overall schedule on track.
- e) Identifying inconsistencies, design risks, or potential conflicts within or between documents, and recommending corrective actions, before the Contractor submits design for the Statutory Verification and Expertise.

The Consultant will assist in establishing a shared understanding between the Employer and Contractor on reporting formats, communication protocols, and the management of interfaces between ongoing road traffic and the construction activities.

The Consultant shall issue a comprehensive Design Review Report, summarizing review outcomes, unresolved issues, and proposed resolutions.

A detailed breakdown of the specific duties and procedural obligations under the Pre-Construction Phase is presented in TOR Section 4.2.

3.3. Construction Phase Services

During the construction phase, the Consultant shall provide full-time supervision and contract administration services to ensure that the Works are executed in accordance with the Contract, the approved Contractor's Documents, and relevant statutory and environmental obligations. Key responsibilities shall include:

- f) Verifying that the Works are executed in accordance with the approved Contractor's Documents and statutory requirements.
- g) Monitoring progress against the agreed Programme, identifying delays or deviations early, and advising the Employer on corrective actions.
- h) Cause the Contractor to revise the program whenever the previous program is inconsistent with the actual works on site or with the Contractor's obligations;
- i) Overseeing the implementation of quality control systems and verifying results from tests and inspections.

- j) Managing communication with the Contractor and Employer, including issuing formal instructions, responding to requests for information, and convening regular coordination meetings.
- k) Certifying interim and final payments, processing claims, and advising on variations and other contractual issues in accordance with the Employer's instructions and the delegated authority.
- l) Supporting the Employer in addressing potential disputes or differences, including preparing documentation and evidence as needed for DAAB referrals.
- m) Ensuring that the construction phasing plan is respected so that ongoing traffic is not interrupted, and the road remains compliant and accessible during works execution.

The detailed breakdown of the specific duties and procedural obligations for the Construction Phase is presented in TOR Section 4.3.

4. CONTRACT ADMINISTRATION AND CONSTRUCTION SUPERVISION

4.1. General Duties of the Consultant (The Engineer)

4.1.1. Contract Framework and Role of the Engineer

The Works shall be executed under the FIDIC Conditions of Contract.

The Consultant shall act as the Engineer, with duties and authority defined in the Contract General Conditions (GCC) including any limitations requiring prior Employer consent as stated in the Particular Conditions (PCC) and/or as listed in the "Actions Requiring Employer's Approval or Consultation" schedule in section 5.4 of this TOR.

4.1.2. Engineer's Responsibilities for Site Supervision and Contract Administration

The Engineer shall supervise the day-to-day execution of the Works and administer the Contract in accordance with the duties and authority defined provisions under GCC for the Engineer's Duties and Authority (Sub-Clause 3.2), Agreement or Determination (Sub-Clause 3.7), and relevant provisions of Clauses 4, 5, 8, and 20, the Consultant's general responsibilities shall include:

- a) Verifying that the Works comply fully with the Contract Documents, (Sub-Clause 5.2) (Contractor's Documents), Specifications, and Drawings.
- b) Monitoring progress against the Programme as submitted under Sub-Clause 8.3 (Programme), and reporting deviations in time or budget.
- c) Verifying Contractor compliance with:
 - (i) Approved Quality Management System
 - (ii) Method Statements
 - (iii) Materials and workmanship specifications
 - (iv) Contractor's Quality Assurance/Quality Control Plans
- d) Overseeing implementation of the Contractor's environmental and social obligations including with respect to:
 - (i) Health and Safety Obligations, Sub-Clause 4.8
 - (ii) Protection of the Environment, Sub-Clause 4.18
 - (iii) Staff and Labour, Sub-Clauses 6.1 to 6.27
 - (iv) Contractor's General Obligations, Sub-Clause 4.1

- e) Assisting the Employer in maintaining stakeholder engagement and grievance redressal as outlined in the Employer's Requirements and applicable national laws.
- f) Overseeing the Contractor's community consultation which should be undertaken prior to commencing any roadworks.
- g) Providing written advice and regular updates to the Employer regarding performance, delays, non-compliance, or other issues requiring resolution.

4.1.3. Progress Reports to the Employer

The Engineer shall submit progress reports to the Employer as per Section 6, Reports and Deliverables, of this TOR. Monthly Progress Reports shall comply with the provisions in Section 6, including:

- a) Comparison of actual versus planned progress, based on the Programme under Sub-Clause 8.3.
- b) A summary of site activities, milestones achieved, and updated construction status.
- c) Financial progress showing certified disbursements versus physical progress.
- d) ESHS (Environmental, Social, Health, and Safety) compliance performance, referencing:
 - (i) Contractor's ESHS performance under Sub-Clause 4.1 (Contractor's General Obligations), 4.8 (Health and Safety Obligations), 4.18 (Protection of the Environment), and Staff and Labour (Clause 6)
 - (ii) Any non-conformities with MSIP/C-ESMP or other approved ESHS plans
 - (iii) Incidents or accidents that have occurred and their status
- e) Log of Engineer's Instructions, issued under Sub-Clause 3.5 (Engineer's Instructions).
- f) Identification and status of potential:
 - (i) Claims or events under Clause 20 (Employer's and Contractor's Claims), specifically Sub-Clause 20.2.1 (Notice of Claim)
 - (ii) Delays or disruptions
 - (iii) Risk of cost/time overruns.

4.1.4. Support to Employer during Missions and Reviews

The Engineer shall support the Employer during review missions by the World Bank until the close of the relevant financing agreements and thereafter provide similar documentation directly to the Employer, by:

- a) Preparing required documents, records, and progress reports
- b) Attending meetings and site visits
- c) Responding to queries and providing clarifications
- d) Addressing any observations or non-conformities raised during review.

4.1.5. Delegation of Authority

The Engineer may delegate duties to an Engineer's Representative or assistants as permitted under Sub-Clause 3.4 (Delegation by the Engineer), provided such delegation:

- a) Is notified to the Contractor
- b) Clearly states the delegated authority and scope.

The delegated staff shall operate under the overall direction and control of the Engineer and in compliance with the provisions of the Contract.

4.1.6. Employer Approvals and Engineer's Authority Limitations

Where authority is not fully delegated, the Consultant shall request the Employer's prior written approval before executing actions classified under the "Actions Requiring Approval or Consultation" schedule, Section 5.4 of this TOR. This includes, but is not limited to:

- a) Key determinations under Sub-Clause 3.7 (Agreement or Determination)
- b) Selected instructions under Sub-Clause 3.2 (Engineer's Duties and Authority).

4.1.7. Quality Management System

The Engineer shall establish and maintain a Quality Management System (QMS) consistent with current ISO 9001 standards. The Consultant shall:

- a) Submit a draft Quality Plan within 30 days of the Commencement Date of Services
- b) Finalize the Quality Plan in coordination with the Employer
- c) Implement and adhere to the approved Quality Plan throughout the duration of the Services
- d) Ensure the Contractor complies with its own Quality Plan under Sub-Clause 4.9 (Quality Management and Compliance Verification Systems).

4.1.8. Document Control

The Consultant shall establish and maintain a project-specific document and data management system designed to ensure the secure handling, traceability, and auditability of all communications and submissions throughout the duration of the assignment. This system shall be consistent with:

- a) Sub-Clause 1.3 (Notices and Other Communications), which governs the issuance and receipt of formal notices, reports, and project correspondence.
- b) Sub-Clause 4.1 (Contractor's General Obligations), specifically as it pertains to supporting the Engineer's role in receiving, reviewing, and archiving Contractor submissions.

The document control system shall:

- a) Be fully operational at both the Consultant's site office and head office to ensure seamless project-wide access and coordination.
- b) Guarantee secure version control, with complete traceability of revisions and submission dates, and provide a transparent audit trail.
- c) Remain accessible to the Employer for the entire duration of the Contract and for a minimum of five (5) years following the issuance of the Performance Certificate, in accordance with Sub-Clause 11.9, unless alternative provisions are defined in the Particular Conditions or relevant funding agreements.

4.1.9. Meetings and Minutes

The Engineer shall chair, document, and circulate minutes for all progress meetings, technical coordination meetings, and site meetings throughout the duration of the Contract, in line with the Engineer's responsibilities under Sub-Clause 3.2 (Engineer's Duties and Authority).

4.1.10. Claims and Variations

Undertake the evaluation of Extension of Time (EOT) claims, variations, and other entitlements submitted by the Contractor in accordance with the provisions of:

- a) Variations and Adjustments (Clause 13).
- b) Employer's and Contractor's Claims (Clause 20), with particular reference to Sub-Clauses 20.2.1 through 20.2.6.

Provide comprehensive advice to the Employer regarding the time, cost, and contractual implications of such claims. This includes assessing the validity, quantum, and impact of each claim and variation, and supporting the Employer in negotiations or determinations as appropriate to ensure compliance with the Contract and the safeguarding of the Employer's interests.

4.1.11. Dispute Support

Provide assistance to the Employer in the management and resolution of disputes arising under the Contract, in accordance with Clause 21 (Disputes and Arbitration). This includes supporting the Employer throughout the proceedings involving the Dispute Avoidance/Adjudication Board (DAAB), by preparing technical input, reviewing claims and counterclaims, and furnishing documentation and expert advice as necessary to facilitate fair and efficient resolution.

4.1.12. Incident Investigation

Collect and collate data about any incident or accident that may occur during the Works, and promptly investigate the immediate, underlying and root causes of the incident. The investigation should be on the basis of 'no blame' and seek to establish where project systems, processes or working methods could be improved to prevent recurrence.

4.2. Pre-Construction Phase

4.2.1. Kick-off Meeting

The Engineer shall organize and chair a Kick-off Meeting only after Works contract signature between the Contractor and the Employer. The Kick-off Meeting shall include the Contractor, and other relevant stakeholders, and Engineer. The objective of the meeting is to align expectations, clarify roles and responsibilities, confirm the contractual framework, and establish communication protocols. This meeting shall be conducted in accordance with the Engineer's duties and authority as stipulated under Sub-Clause 3.2 (Engineer's Duties and Authority).

4.2.2. Review of Contract Documentation

Conduct a comprehensive review of all Contract Documents, including Specifications, Drawings, Schedules or Pricing Documents.

In line with Sub-Clause 1.5 (Priority of Documents), identify inconsistencies or gaps, report findings to the Employer, and recommend clarification or corrective actions.

Study/review of Quality Assurance/Quality Control programs, ESIA/ESMP, RAP and contract documents, and other relevant documents prepared by the Contractor and advise the Client of any deficiencies or necessary improvements that are identified or deemed necessary for the successful implementation of the project.

4.2.3. Design and Document Review Procedures

The Engineer shall develop and implement structured procedures, schedules, and quality assurance protocols for the review of design-related documentation. These shall include, but are not limited to:

- a) Reviewing the Employer's Requirements for consistency with the Contract, in accordance with:
 - (i) General Design Obligations, Sub-Clause 5.1
 - (ii) Priority of Documents, Sub-Clause 1.5
 - (iii) Care and Supply of Documents, Sub-Clause 1.8
- b) Reviewing the Contractor's Documents per:
 - (i) Contractor's Documents, Sub-Clause 5.2
 - (ii) Subcontractors, Sub-Clause 4.4
- c) Assessing the Programme, method statements, procurement plans, and construction sequence per Sub-Clause 8.3 (Programme).

4.2.3. Securities and Insurances

Prior to commencement of the Works, the Engineer shall verify that the Contractor has submitted all required securities and insurance documentation in full compliance with the Contract. These include, but are not limited to:

- a) Performance Security, in accordance with Sub-Clause 4.2
- b) Advance Payment Guarantee, pursuant to Sub-Clause 14.2.1
- c) Insurance policies in compliance with Clause 19, including the specific coverage requirements set out in Sub-Clause 19.2 (Insurance to be provided by the Contractor).

All submitted documents shall be reviewed for adequacy, validity, and conformity with contractual and legal standards, and appropriate records shall be maintained. However, the scope of Consultant's review does not include determination of Performance Security and Advance Payment Guarantee formal compliance with the ICC Uniform Rules on Demand Guarantees and conformity of the issuer(s) thereof to the credit rating requirements.

4.2.4. Notice to Commence

The Engineer shall confirm that the Notice to Commence has been duly issued in accordance with the requirements of Sub-Clause 8.1 (Commencement of Works). The issuance shall be verified against the fulfilment of all preconditions specified in the Contract, including the provision of securities, insurances, and approved Programme submissions. The Engineer shall notify the Employer in writing once the conditions precedent to commencement have been satisfied.

4.2.5. Equipment Mobilization

The Consultant shall check and establish that the Contractor mobilizes all plants, equipment and machinery that have been committed under the Works Contract and ensure that all such items of plants, equipment and machinery are calibrated, as required and remain on the construction site until their release has been authorized.

The Consultant shall inspect all Contractor mobilized plant and equipment, ensuring conformity with the technical specifications and suitability for the site environment. Records of compliance and calibration shall be maintained and reviewed prior to acceptance.

4.2.6. Programme Management

The Contractor shall submit a detailed time programme to the Engineer within 28 days after receiving the notice of Commencement of Works (FIDIC Sub-Clause 8.1). The Engineer shall review and provide written comments on the Contractor's Initial Programme submitted under Sub-Clause 8.3 (Programme). The review shall assess technical soundness, feasibility, compliance with contractual milestones, and alignment with the traffic management requirements of the site.

Where necessary, the Engineer shall return the Programme with comments or requests for revision, ensuring coordination between the Employer and the Contractor. Approval or conditional acceptance of the Programme shall be formally communicated in writing, forming the baseline for subsequent progress monitoring.

4.2.7. Construction Plan and Traffic Management Plan Review

A critical deliverable under this phase is the review and validation of the Contractor's Construction and Traffic Management Plan, which must address the continued traffic on the road. The Consultant shall:

- a) Liaise with the respective Regional Authority to ensure that the assessment and compensation of crops and buildings including temporary structures and fences, if any, within the right of way is done before the Contractor is given possession of site;
- b) Review and approve all road safety measures, including road detours/deviations, safety controls and signs, training, and monitoring; and should undertake inspections on adequacy of road safety measures and make recommendations for changes or improvements as needed.
- c) Review the roadworks Traffic Management Plans (TMPs) prepared by the Contractor and provide relevant comments (if any) to ensure safety of workers as well as all road-users through the work zone. The Consultant must approve the TMPs and share copies with the Client for its review and record. The Consultant shall also ensure that the Contractor follows the TMPs in order to establish safety of all road-users during the roadworks.
- d) Verify that temporary works, and access routes are planned to maintain safety, efficiency, and environmental control.

4.2.8. Review of Detailed Design

The Contractor's Programme submitted as per Sub-Clause 8.3 of the CoC and referenced in 4.2.7 above, shall include the timing when the design documents and drawings will be submitted to the Engineer.

Design Work Plan: The Consultant shall review/recommend for approval, within 14 days of receipt, the Contractor's work plan for the design activities, with scheduled dates for each development stage of the detailed design. The design process itself can be done and reviewed in stages.

Detailed design: The contractor may carry out the road design separately for individual sub-sections of the road. The Consultant shall review the detailed design prepared by the Contractor for each sub-section, according to the approved work plan, before the Contractor submits the detailed design for the statutory verification and expertise, as described below.

The purpose of this review is to ensure that the documents and data to be provided by the Contractor are correct, complete, updated, and conform to the internationally acceptable standards, the World Bank and national legislation. The Consultant shall review the Contractor's detailed design and requirements for consistency with:

- a) The signed Contract and other relevant technical standards and specifications
- b) Site-specific environmental, hydrological, and geotechnical conditions
- c) Applicable laws and regulations, in accordance with Sub-Clause 1.13 (Compliance with Laws).

The Consultant shall in particular also review the following:

- a) Data gathering, taking into consideration existing data from the Conceptual Design (CD);
- b) Interpretation of the data collected. Selection of design parameters and obtaining approval from the Employer;
- c) Incorporation of the design parameters into the design process;
- d) Survey data on site to verify the correctness of the survey data and where necessary correct the survey data and the detailed design accordingly, carry out a thorough study/review of the terrain and traffic at the major centres and pavement layers;
- e) Drainage structures and their resilience to climate change effects, subsoil drains, erosion checks for drains;
- f) Geometrical design including walkways, bus bays and truck lay bay areas along the route and intersections type and design warranted based on, among other factors, the traffic volumes and turning movements at the intersections as per the international good practice,
- g) Check compliance of the pavement design with the requirements in terms of pavement life described in the Specifications;
- h) Service roads at the major centres for safeguard segregation of traffic and pedestrians;
- i) Signs and road markings, kerbs, speed humps / rumble strips / raised pedestrian crossings, guardrails in terms of a crash performance based on the design vehicle and length of needs,
- j) Illumination in roads, walkways and service road as per typical cross-section provided;
- k) The Consultant is also required to cause the Contractor to incorporate in the design recommendation of the Road Safety Audit provided by Client,
- l) Safeguards Compliance in line with WB ESF requirements, including but not limited to Environmental and Social Management Framework, Labour Management Procedures, Stakeholder Engagement Plan, Environmental and Social Commitment Plan, Environmental and Social Impact Assessment including an Environmental and Social Management Plan, Resettlement Action Plan (RAP);
- m) Review the available data and climate change projections for the project area with regards to the hydrological and geological conditions to ensure adequacy of proposed drainage systems;
- n) Review the assessments done by the contractor on effects of climate change including effects of increased/decreased rainfall, unusual storms leading to flooding, higher temperature due to climate change and assess the vulnerability of road alignment, pavement and cross drainage structures during their design life and propose appropriate resilience adaptation works. The Consultant is required to give consideration to environmental aspects and the climate change aspects in finalizing the design review;
- o) Review of the vertical profile in consideration of climate change impacts particularly from the drainage aspects in terms of minimum longitudinal slope, minimum cross-slope, height of

embankment, etc.;

- p) Verify the hydraulic capacity of existing bridges and drainage structures along the project road, and determine the requirements for the longitudinal drainage system;
- q) Review pertinent data and historic and future rainfall information to determine various risk scenarios based on pertinent aspects such as overall risk of failure for drainage structures. Flood Return periods for the design of culverts and bridges will be taken in accordance with the design standards with particular attention to sections prone to flooding or damage during rainy seasons;
- r) Review the catchment area, adopted runoff coefficients based on topography, permeability of soil and vegetation cover;
- s) Review the design and analyses methods used in the design of pavement, earthworks, drainage structures, topographic surveys and geotechnical surveys / testing of the existing pavement structures, giving preference to the use of available local construction materials. At all times a balance must be maintained between capital and maintenance costs;
- t) Check adequacy of the designed solutions (e.g. geometric design; drainage; earthworks; pavement; road safety furniture; traffic signs and pavement marking; structure repair; environmental protection measures);
- u) Review the analysis performed to compute design discharge, design of various hydraulic parameters, as appropriately adjusted for climate change i.e. water way, scour depth, free board for bridges, size of roadside drains to guide the runoff to nearby culverts/bridges, etc. given in the detailed design report and compare with the data collected from site investigation and propose appropriate intervention measures.

Participants in such reviews shall include representatives of the institutions concerned with the design and development stage(s) being reviewed. Records of the results of the reviews and any necessary actions shall be maintained by the Consultant.

4.2.9. Timely Review of IFC Drawings

The Consultant shall review all Issued-for-Construction (IFC) drawings submitted by the Contractor under Sub-Clause 5.2 (Contractor's Documents), before their submission by the Contractor for the statutory verification and expertise, and provide formal written responses (approval, rejection, or revision requests) within 7 calendar days of receipt, or as otherwise specified in the PCCs.

4.2.10. Integration and Compliance of Technical Documents

Ensure that all technical specifications and Employer's Requirements are fully integrated into the Contractor's Document, reflected in the construction drawings, and verified during execution to ensure ongoing compliance with Sub-Clause 5.2 (Contractor's Documents), and Sub-Clause 4.6 (Co-operation).

4.2.11. Report on Design Review

Prepare and submit design review reports to the Employer in accordance with Sub-Clause 4.20 (Progress Reports) and the requirements of Section 6 including:

- a) Status of Contractor submissions and review outcomes
- b) Identified design inconsistencies, risks, or unresolved issues
- c) Recommendations for technical resolution, clarification, or mitigation.

4.2.12. Design Stage Road Safety Audit

A Road Safety Audit shall be conducted at the Detailed Design Stage, to assess if the detailed design by Contractor's Designer has sufficiently incorporated design features on road safety based on the project site-specific characteristics and identify road safety shortcomings in the developed design. If not, to provide specific recommendations for revisions and improvement.

An experienced road safety engineering expert of the Consultant is required to review the road safety measures prepared by the Contractor's Designer and make practical recommendations for each safety concern found in the existing design that can guide review to finalise the road safety according to the international best practice and adopt the road safety measures required in the Moldova road design standards.

The Consultant will:

- a) Study design drawings and reports. Undertake the review of the detailed design in accordance with international audit processes.
- b) Compare safety related design elements with international good practice.
- c) Conduct site visit and inspect the entire road alignment.
- d) Review and inspect the existing road (day and night) to determine roadway and roadside features, design elements and local conditions (night visibility, adjacent land uses, glare etc.) that may increase the likelihood and/or severity of a crash when the road is upgraded.
- e) Identify shortcomings that may need to be mitigated to prevent road accidents.
- f) Observe how road users are interacting with each other and with the road during the sight inspections, particularly for locations near schools, markets and other places with high pedestrian traffic, and determine if the needs of all road users are being adequately and safely met.
- g) Prepare the Road Safety Audit Report for the Detailed Designs prepared by the Contractor's Designer with specific improvement recommendations, if any. The Audit Report shall be prepared in a form that is easily communicable to the designer and based on the consultation with designer.
- h) Ensure that the report contains practical recommendations for treating identified safety concerns.
- i) Meeting with the Contractor's design team.
- j) Reception of the Contractor's design team and the client's response and decision for each comment with argumentation for recommendations that cannot be followed as suggested.

4.2.13. Statutory Design Verification and Expertise

According to the Urbanism and Construction Code, the design shall be submitted for mandatory statutory verification and expertise. This obligation to submit the design for verification and expertise, as well as costs for it rests with the Contractor.

Submission of the design for the statutory verification and expertise shall follow after the design review under this Terms of reference.

4.3. Construction Phase

During the Construction Phase, the Consultant shall provide continuous supervision and contract administration services to ensure that the Works are executed in strict compliance with the FIDIC, the Contractor's approved documents, the Specifications, the Drawings, and all applicable legal, regulatory and contractual requirements.

In its capacity as the Engineer under the Contract, the Consultant shall carry out the duties defined under Sub-Clauses 3.2 (Engineer's Duties and Authority), 3.5 (Engineer's Instructions), 3.7 (Agreement or Determination), and other applicable provisions, acting impartially and within the authority delegated by the Employer.

The Consultant's responsibilities during this phase include, but are not limited to, the following activities:

4.3.1. Contract Administration

Undertake comprehensive contract administration duties to ensure the effective execution and management of the Contract in accordance with the FIDIC. Responsibilities include, but are not limited to, the following:

- a) Issuing clarifications, instructions, and directions to the Contractor in accordance with Sub-Clause 3.5 (Engineer's Instructions). All instructions shall be documented, logged, and tracked through a formal correspondence and instruction register.
- b) Evaluating and certifying interim and final payment applications in compliance with Sub-Clause 14.6 (Issue of Interim Payment Certificate) and Sub-Clause 14.13 (Issue of Final Payment Certificate), ensuring that the assessment is based on achieving performance standards and verified as per the Employer's Requirements. For the purpose of confirmation of the Contractor's applications for zero rate VAT and exemptions from custom duties, fees, taxes and excises for goods and services purchased and/or imported from the proceed of credits and grants, under the *Law no. 176/2024 and Government Decision no. 114/2025, as per which the Client is granted exemption for the Consultant from payment of VAT with the right to deduct, as well as from excise duties and the environmental pollution tax and VAT without the right to deduct, excise duties, customs duties, customs procedure taxes and the tax on the goods which, in the process of use, cause environment pollution for the supply of goods or/and services performed in the Client's country*, and subsequent modifications, the Engineer shall confirm to the Employer that the goods to be purchased and/ or the services to be provided under the contracts signed between the Contractor and various suppliers, are intended for the implementation of the Works Contract.
- c) Assessing and advising on Variations in accordance with Clause 13 (Variations and Adjustments), and evaluating Contractor's and Employer's claims under Clause 20 (Employer's and Contractor's Claims), with particular reference to Sub-Clauses 20.2.1 through 20.2.6.
- d) Assisting the Employer in the resolution of disputes through the Dispute Avoidance/Adjudication Board (DAAB), in accordance with the procedures outlined in Clause 21 (Disputes and Arbitration), including preparation of relevant documentation, technical analysis, and presentation of factual records.

The Engineer shall maintain full and auditable records of all contractual communications, determinations, certifications, and evaluations throughout the duration of the Contract.

4.3.2. Supervision of Works

Provide continuous and diligent supervision of all construction activities to ensure that the Works are executed in full compliance with the Contract. Specific responsibilities shall include, but are not limited to, the following:

- a) Monitoring and supervising all on-site construction operations to verify that the execution of the Works is in strict conformity with the Contractor's Documents, as submitted and approved in accordance with Sub-Clause 5.2 (Contractor's Documents). This includes drawings, specifications, MSIPs/C-ESMP, method statements, and other relevant technical submissions.
- b) Ensuring that all materials, workmanship, construction practices, and equipment employed by the Contractor comply with the standards and specifications stipulated under Clause 7 (Plant, Materials and Workmanship).
- c) Reviewing all test results, inspection records, construction logs, and the Contractor's quality control documentation. Where non-compliance or deviations are identified, the Engineer shall instruct the Contractor to take corrective actions in accordance with Sub-Clause 7.4 (Testing by the Contractor), Sub-Clause 7.5 (Defects and Rejection), and Sub-Clause 4.9 (Quality Management and Compliance Verification Systems). As appropriate, approve the conduct and results of such tests whether on or off site.

The Engineer shall maintain appropriate site records, issue site instructions where required, and ensure that quality assurance mechanisms are enforced throughout the execution of the Works.

4.3.3. Equipment Mobilization

Inspect and verify all Contractor-mobilized plant and equipment for full compliance with the technical specifications, contractual requirements, and suitability for the site conditions. This includes ensuring that equipment is correctly calibrated, properly maintained, and safe to operate within the environmental and logistical constraints of the site. Detailed records of compliance, calibration certificates, and inspection outcomes shall be maintained, reviewed, and formally documented prior to acceptance and use on site.

4.3.4. Subcontractors

Provide support to the Employer in the assessment and evaluation of all subcontractors proposed by the Contractor, in accordance with the provisions of Sub-Clause 4.4 (Subcontractors). This shall include reviewing the qualifications, experience, and capacity of each proposed subcontractor to ensure compliance with the Contract requirements, and advising the Employer on the suitability and potential risks associated with such appointments.

4.3.5. Setting out

Assist the Contractor in verifying setting-out data and identifying and locating all beacons and benchmarks, control points, and reference markers confirm their compatibility with the designs, cause Contractor to re-establish the missing ones where needed, in accordance with Sub-Clause 4.7 (Setting Out) and the works requirements and agreed specifications. The Consultant shall ensure the accuracy and integrity of setting-out works and validate that they reflect the latest IFC drawings.

4.3.6. Coordination

The Consultant shall be responsible for ensuring effective and continuous coordination between all relevant parties to facilitate the seamless integration of construction activities with road traffic. Key responsibilities shall include:

4.3.6.1. Convening structured and recurring coordination meetings with the Employer to provide progress updates, discuss interface issues, identify potential risks, and ensure alignment on project objectives and timelines.

4.3.6.2. Actively liaising with relevant governmental authorities to address and resolve any implementation-related challenges. This shall be conducted in a timely and collaborative manner, ensuring compliance with applicable regulations and minimizing delays.

4.3.7. Utility Relocation

Coordinate with relevant utility service providers and public authorities to facilitate the timely relocation, diversion, or protection of existing utilities and services that may be affected by the Works. Specific responsibilities shall include:

4.3.7.1. Engaging with utility operators at an early stage to identify all affected services within the right of way and to develop coordinated relocation plans (where necessary) that align with the construction schedule.

4.3.7.2. Monitoring that all utility services are fully operational and reinstated to the satisfaction of the relevant authorities prior to the issuance of the Taking-Over Certificate, in accordance with Sub-Clause 10.1 (Taking Over of the Works and Sections).

4.3.7.3. Monitoring the progress of relocation activities and addressing any conflicts, delays, or access issues that may arise, to prevent disruptions to both the construction program and public services.

4.3.8. Programme and Progress Monitoring

Monitor and manage the Contractor's compliance with the approved construction Programme, in accordance with Sub-Clause 8.3 (Programme). This shall include:

4.3.8.1. Continuously tracking the Contractor's progress against the baseline Programme and revised Programme as needed, and promptly notifying the Employer of any emerging deviations, slippages, or risks that may impact the timely completion of the Works.

4.3.8.2. Identifying any delays, particularly those affecting the critical path, and advising both the Contractor and the Employer on appropriate and timely corrective measures to mitigate such delays.

4.3.8.3. Monitoring that the Contractor submits programme updates and revisions in a timely manner, as required under Sub-Clause 8.3 (Programme), and verifying the adequacy and accuracy of such submissions.

4.3.9. Quality Assurance and Inspection

Review and monitor the Contractor's Quality Assurance (QA) and Quality Control (QC) systems, ensuring full compliance with the requirements set forth under Sub-Clause 4.9.

Key responsibilities include:

4.3.9.1. Verifying that the Contractor develops, submits for approval, and implements a robust Inspection and Test Plan (ITP) in line with the requirements of Sub-Clause 4.9 (Quality Management and Compliance Verification Systems).

4.3.9.2. Conducting systematic and regular site inspections and audits to verify adherence to the approved ITP and the broader Quality Management System (QMS), ensuring that all construction activities are performed to the required standards of quality.

4.3.9.3. Promptly issuing Non-Conformance Reports (NCRs) upon identification of any deviations, deficiencies, or non-compliance issues, and recommending appropriate corrective and preventive actions to the Contractor to rectify such matters in a timely manner.

4.3.10. Material Approvals

The Consultant shall be responsible for the timely review and consent of all material submittals to ensure full compliance with the contractual requirements. Specific duties include:

4.3.10.1. Reviewing and approving all material submittals, including specifications, certifications, and samples, in accordance with Clause 7 (Plant, Materials and Workmanship) of the Conditions of Contract.

4.3.10.2. Verifying that proposed suppliers and manufacturers meet the quality and performance standards stipulated in the contract documents.

4.3.10.3. Ensuring that only approved materials and suppliers are used in the execution of the Works and that any substitutions are subject to prior review and formal approval.

4.3.11. Test Results, Defect Management, and Test Records

The Consultant shall be responsible for overseeing the integrity and reliability of all testing activities, as well as the effective management of non-compliance and defect-related matters. Specific duties include:

4.3.11.1. Monitoring the Contractor's ongoing compliance with the approved ITP and the Quality Management System (QMS), and initiating appropriate follow-up actions as necessary.

4.3.11.2. Reviewing and verifying all material and soil test results to ensure compliance with the specified technical requirements and standards, including third-party validation where required.

4.3.11.3. Issuing clear instructions to the Contractor in relation to any non-compliant test results, in accordance with the procedures outlined in Sub-Clause 7.5 (Defects and Rejection).

4.3.11.4. Ensuring that comprehensive and well-organized records of all testing activities are maintained, providing full traceability and verifiability throughout the duration of the Works.

4.3.12. Measurement and Payments

The Consultant should carry out the duties of the Engineer in relation to payment of the Contractor's Works

in accordance with the Contract.

The Consultant shall ensure that the certification of payments is based on verified achievement of performance standards and payment milestones set out in the Contract. Key responsibilities include:

- 4.3.12.1. Receive from the Contractor, on a monthly basis, Statements (Interim Payment Applications) pursuant to the Contract.
- 4.3.12.2. Upon receipt of the Contractor's Statements, copy to the Client each such Statement and give due consideration to any comments of the Client.
- 4.3.12.3. Verifying the quantities of work executed on-site, ensuring accuracy, traceability, and compliance with contractual specifications. This shall include the preparation and maintenance of detailed and auditable measurement records to support the issuance of Interim and Final Payment Certificates pursuant to Sub-Clause 14.1 (The Contract Price).
- 4.3.12.4. Check the Contractor's Statements and resolve with the Contractor, where possible, any mistakes and queries which may arise in conjunction therewith; advise the Client of any adjustments considered necessary.
- 4.3.12.5. Ascertain the amount to be certified in respect of the Contractor's Statements pursuant to the Works Contract. Within the times stipulated in the Works Contract, issue an Interim Payment Certificate (IPC) addressed to the Contractor and the Client specifying the aggregate amount payable by the Client to the Contractor.
- 4.3.12.6. Monitoring construction progress using approved tools and methodologies, aiming at appropriate alignment of physical progress with the certified payment as per the Programme.
- 4.3.12.7. Collate and prepare quarterly budgets showing sums anticipated to fall due from the Client to the Contractor, dates and amounts of invoices and certificates under the Contract and milestones values expected to be achieved in the quarter and deliver the same to the Client forthwith.
- 4.3.12.8. When the implementation of the civil Works contract reaches a value of 80% of the Accepted Contract Amount, the Consultant shall prepare and submit a detailed progress report with updated cost of the civil Works contract, implementation schedules and substantiate any request related to additional funding, as such, needed to full completion of the project.
- 4.3.12.9. In accordance with the Works Contract, no later than fifty-six (56) days after the date of issue of the Performance Certificate, receive from the Contractor the draft Final Statement pursuant to the Contract and, within the time stipulated in the Contract, work with the Contractor to agree the Final Statement and prepare the Final Payment Certificate.
- 4.3.12.10. Based on the records of payments, prepare project financial statements and final project accounts.

4.3.13. Taking Over and Final Close-Out

Once the roadworks for the entire road corridor is on the verge of completion or completed, the consultant, in close collaboration with the Client, shall undertake a pre-opening stage Road Safety Audit (RSA), including preparation of road safety audit report, to identify any road features or deficiencies which may lead to hazardous situation. A RSA report shall be prepared by the consultant and shared with the Client within 5 working days of the completion of the RSA. The consultant shall organize a meeting with the Client and the Contractor to discuss the findings and recommendations of the RSA. The consultant shall also be responsible to ensure compliance of RSA recommendations by the Contractor, and ensure its compliance prior to issuance of taking over certificate.

As part of the Engineer's duties under Sub-Clauses 10.1 (Taking Over of the Works and Sections) and 11.9 (Performance Certificate), the Engineer shall:

4.3.13.1. Review the Contractor's application for a Taking-Over Certificate in accordance with Sub-Clause 10.1. Conduct a detailed inspection of the Works (or a Section or part, if applicable), and determine whether they are substantially complete and in accordance with the Contract, including that any required tests under Sub-Clause 9.1 (Contractor's Obligations) and 9.2 (Delayed Tests) have been passed.

4.3.13.2. If the Works are found to be compliant, issue the Taking-Over Certificate (or recommend it, if required by the Particular Conditions), and record the commencement of the Defects Notification Period per Sub-Clause 11.1 (Completion of Outstanding Work and Remedying Defects). At the end of the DNP, after confirming that all notified defects have been corrected, issue or recommend issuance of the Performance Certificate, under Sub-Clause 11.9.

4.3.13.3. Verify the Contractor's submission and adequacy of all handover deliverables, including but not limited to As-Built Drawings finalized and signed by the Contractor and Engineer.

4.3.13.4. Prepare and submit a Completion Report to the Employer, which shall include:

- a) Key completion milestones (completion, testing, TOC, etc.).
- b) Summary of Engineer's supervision and QA/QC activities.
- c) Any outstanding obligations by the Contractor.
- d) Engineer's final recommendations to the Employer for post-Taking-Over monitoring or follow-up.
- e) Incorporate summary including on Contractor's performance on cost, and lesson learnt. The content and format of the report to be finalized with the Employer.

4.3.13.5. Record and monitor any outstanding or seasonal works, training obligations, or utility connections. Track their completion during the DNP in coordination with the Employer.

4.3.13.6. Management of Variations, Claims, and Disputes Prior to Taking Over:

- a) At the stage of Taking Over of the Works, the Engineer shall ensure that all Variations under Clause 13 (Variations and Adjustments) and all Claims submitted by the Contractor under Clause 20 (Employer's and Contractor's Claims), which have implications for time and/or payment, are either
 - (i) fully settled through agreement or determined in accordance with Sub-Clause 3.7 (Engineer's Determinations), or
 - (ii) clearly identified and recorded as pending matters that do not prevent the issuance of the Taking-Over Certificate under Sub-Clause 10.1 (Taking Over of the Works).

- b) In cases where any such Variations or Claims are subject to ongoing dispute resolution proceedings before the Dispute Avoidance/Adjudication Board (DAAB) or arbitration under Clause 21 (Disputes and Arbitration), the Engineer shall ensure that these disputes are adequately documented, quantified, and noted in the Taking-Over documentation as unresolved but non-blocking, thereby allowing such proceedings to continue post-Taking Over without prejudice to either Party's rights under the Contract.

4.3.13.7. Submit a Contract Close-Out Package in hard and digital format, comprising:

- a) Completion Report
- b) Performance Certificate copy
- c) Final Payment Certificate
- d) As-built record set
- e) Summary of resolved claims and determinations (under Sub-Clause 3.7) and summary of outstanding disputes and their status;
- f) Ensure Engineer's ESHS compliance statement confirming Contractor's compliance with ESHS requirements during the DNP.

4.3.14. Defects Notification Period (DNP)

In accordance with Clause 11 (Defects After Taking Over), the Engineer shall act on behalf of the Employer to monitor and ensure that the Contractor fulfils all post-Taking Over obligations throughout the Defects Notification Period (DNP).

- 4.3.14.1. Monitor the Contractor's performance in remedying any defects or incomplete works identified in the Taking-Over Certificate or subsequently notified under Sub-Clause 11.1 (Completion of Outstanding Work and Remedying Defects). Ensure all corrections are completed within the DNP in accordance with the Contract.
- 4.3.14.2. Maintain and update a comprehensive Defects Register, which shall be updated regularly and shared with the Employer, tracking:
 - a) Each defect's description and location
 - b) Notification date and target deadline for rectification
 - c) Current status of remedial action
 - d) Confirmation of satisfactory completion or notes on further follow-up.
- 4.3.14.3. Supervise and verify the execution of all remedial works. Confirm whether rectifications are in full compliance with the Contract and completed at the Contractor's cost where applicable, per Sub-Clause 11.2 (Cost of Remedying Defects). Provide formal certification of satisfactory completion to the Employer.
- 4.3.14.4. If the Contractor fails to remedy any defect within a reasonable time, recommend appropriate measures in line with Sub-Clause 11.4 (Failure to Remedy Defects), including the Employer's right to arrange rectification at the Contractor's cost and to recover associated expenses.
- 4.3.14.5. Review and advise on any Claims under Clause 20 (Employer's and Contractor's Claims) or Variations Clause 13 (Variations and Adjustments) arising during the DNP, particularly those

related to:

- a) Latent defects
- b) Defect-related cost implications
- c) Adjustments to the Final Contract Price.

4.3.14.6. Monitor the Contractor's ongoing Environmental, Social, Health, and Safety (ESHS) compliance, including:

- a) Ongoing operation of the grievance redress mechanism
- b) Settlement of any pending environmental or community-related commitments
- c) Continued occupational health and safety compliance under Sub-Clause 4.8 (Health and Safety Obligations), environmental compliance under Sub-Clause 4.18 (Protection of the Environment) and working conditions compliance under Section 6 (Staff and Labour) if the Contractor retains a presence on site during the DNP
- d) Local employment requirements
- e) World Bank applicable requirements.

4.3.14.7. Conduct a Final Joint Inspection with the Employer prior to the expiry of the DNP. Confirm the following:

- a) All identified and subsequently notified defects have been properly rectified
- b) No further Contractor obligations remain under Clause 11 (Defects after Taking Over)
- c) The Contractor has fulfilled all duties and is eligible for final discharge.

4.3.14.8. Following successful completion of the above, recommend the issuance of the Performance Certificate under Sub-Clause 11.9 (Performance Certificate), which formally closes the Works and discharges the Contractor from further obligations.

4.3.14.9. Prepare and submit a comprehensive Final Report, which shall include:

- a) Summary of the Engineer's activities during the DNP
- b) Status and resolution of each defect and outstanding work
- c) Confirmation of contract administrative and financial close-out
- d) Any final observations or Employer advisories related to long-term asset operation or postdefect monitoring.

4.3.14.10. Deliver a complete documentation handover package to the Employer in both digital and hardcopy formats, including:

- a) Finalized Defects Register
- b) All Engineer instructions and correspondence during the DNP
- c) Final Report
- d) Copies of all notices and certifications issued under Clause 11 (Defects After Taking Over).

4.3.15. Environmental, Social, Health and Safety (ESHS) Compliance Monitoring

In accordance with the Contractor's obligations under Sub-Clauses 4.1 (Contractor's General Obligations), 4.8 (Health and Safety Obligations), 4.18 (Environmental Protection), 6 (Staff and Labour), and 1.13

(Compliance with Laws), the Engineer shall supervise and monitor compliance with all Environmental, Social, Health and Safety (ESHS) obligations throughout the Contract duration.

4.3.15.1. The Consultant will monitor that all applicable environmental and social requirements of the Bank are being adhered to by the works Contractor. This includes providing oversight of and support, as needed, to Contractor in implementation of the Environmental and Social Management Plan (C-ESMP), environmental and social monitoring plan and preparation of required environmental and social reports to the Bank using the approved WB's reporting format, and in accordance the Project's Environmental and Social Instruments and with the World Bank's Environmental and Social Framework, available at <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>.

4.3.15.2. The Consultant will ensure that the Contractor delivers its E&S obligations under its contract. This includes, but is not limited to the following:

- (a) review the Contractor's Environment and Social Management Plan (C-ESMP), including all updates and revisions at frequencies specified in the Contractor's contract (normally not less than once every 6 months);
- (b) review all other applicable contractor's documents related to E&S aspects including the health and safety manual, security management plan and SEA prevention and response action plan;
- (c) review and consider the E&S risks and impacts of any design change proposals and advise if there are implications for compliance with ESIA, C-5 ESMP, consent/permits and other relevant project requirements;
- (d) undertake, as required, audits, supervisions and/or inspections of any sites where the Contractor is undertaking activities under its contract, to verify the Contractor's compliance with E&S requirements (including relevant requirements on SEA/SH);
- (e) undertake audits and inspections of Contractor's accident logs, community liaison records, monitoring findings and other E&S related documentation, as necessary, to confirm the Contractor's compliance with E&S requirements (including relevant requirements on SEA/SH);
- (f) immediately notify the Client of any failure by the Contractor to comply with its SEA and SH obligations;
- (g) immediately notify the Client of any allegation, incident or accident, which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, Client's Personnel, Contractor's Personnel or Experts. In case of SEA and/or SH, while maintaining confidentiality as appropriate, the type of allegation (sexual exploitation, sexual abuse or sexual harassment), only gender and age of the person who experienced the alleged incident should be included in the information. The Consultant shall provide full details of such incidents or accidents to the Client within the timeframe agreed with the Client.
- (h) immediately inform and share with the Client notifications on ESH&S incidents or accidents provided to the Consultant by the Contractor, and as required of the Contractor as part of the Progress Reporting. Subsequently, review the adequacy of the Contractor's report on the incident and or accident and proposed measures to address it and prevent its recurrence.
- (i) share with the Client in a timely manner the Contractor's ES metrics, as required of the Contractor as part of the Progress Reports;
- (j) determine remedial action/s and their timeframe for implementation in the event of a noncompliance with the Contractor's E&S obligations;
- (k) ensure appropriate representation at relevant meetings including site meetings, and progress meetings to discuss and agree appropriate actions to ensure compliance with E&S obligations;
- (l) ensure that the Contractor's actual reporting (content and timeliness) is in accordance with the Contractor's contractual obligations;

- (m) review and critique, in a timely manner, the Contractor's E&S documentation (including regular reports and incident reports) regarding the accuracy and efficacy of the documentation;
- (n) undertake liaison, from time to time and as necessary, with project stakeholders to identify and discuss any actual or potential E&S issues;
- (o) establish and maintain a grievance redress mechanism including types of grievances to be recorded and how to protect confidentiality e.g. of those reporting allegations of SEA and/or SH;
- (p) Equal Opportunity. Integrating gender into improvement plans for Client, consultant will enhance policies, procedures, and documentation by addressing barriers to achieving a level-playing field for women and men. Consultant is expected to ensure that supervision services include measurable activities related to strengthening/safeguarding equality of opportunity, and that these are implemented and monitored using appropriate resources and indicators.

4.3.15.3. The Consultant will have the following obligations for Health and Safety:

- (a) Require the Contractor to prepare and implement a Construction Health and Safety Plan and where necessary, require the Contractor to provide and maintain at their own cost all lights, guards, fencing, warning signs and watching, for the protection of the Works or for the safety and convenience of the public or others.
- (b) supervise the Contractor in all matters concerning safety and care of works.
- (c) supervision of the implementation of the road safety recommendations under both road users and Contractor's workers' perspectives under the Works Contracts.
- (d) The Consultant shall monitor and ensure that during the implementation of the project, all employees, including the Consultant and the Contractor's personnel engaged in the activities related to the implementation of the project, must fully respect prescribed measures for occupational protection, all in accordance with the recommendations of the World Health Organisation, relevant departments of the Company and authorities of the Republic of Moldova.

4.3.15.4. The Consultant will have the following obligations for Archaeological Remains:

- (a) Receive notice from the Contractor in the event of the discovery of any fossils, coins, articles of value or antiquity or other similar remains, dangerous dumpsites, hazardous contamination or munitions within the Site and advise the Client in relation to the steps to be taken in consequence thereof and the time and cost implications of such steps.
- (b) Decide any extension of time and any additional payment to which the Contractor is entitled in accordance with the terms of the Contract as a result of discovery of any archaeological remains or dangerous dumpsites.

5. Engineer's Delegated Authority and Approvals

5.1. Engineer's Authority Under the Contract

5.1.1. The Consultant, acting as the Engineer under the Contract, shall carry out the duties and exercise the authority delegated by the Employer strictly in accordance with Sub-Clause 3.1 (Engineer's Duties and Authority) of the Conditions of Contract and as further defined in the Particular Conditions.

5.1.2. The Engineer shall act on behalf of the Employer only to the extent expressly delegated. In making any determination under Sub-Clause 3.7 (Agreement or Determination), including in relation to claims submitted under Clause 20 (Employer's and Contractor's Claims), the

Engineer shall act neutrally and impartially, notwithstanding any prior consultation with or direction from the Employer, in accordance with the principles set out in Sub-Clause 3.7 (Agreement or Determination).

5.1.3. The Engineer shall not exceed the scope of the delegated authority and must seek the Employer's prior written approval for the specific matters outlined in this TOR, or as stipulated in the Particular Conditions.

5.2. Taking-Over Certificates

The Engineer shall consult with the Employer prior to issuing any Taking-Over Certificate under Sub-Clause 10.1 (Taking Over of the Works and Sections) to confirm readiness and acceptance of partial or full handover. This consultation does not relieve the Engineer of the duty to make an independent and impartial assessment of whether the Contractor has fulfilled the requirements of Sub-Clause 10.1, including:

- a) Satisfactory completion of all relevant Tests on Completion (Sub-Clause 9)
- b) Submission of required documentation as detailed in the Employer's Requirements.

5.3. Records

All instructions, approvals, determinations, notices, consultations, certificates, and correspondence issued by the Engineer shall:

- a) Be documented in writing
- b) Reference the applicable Contract clause
- c) Be maintained in the official project records for audit, contractual compliance, and future reference.

5.4. Actions Requiring Employer's Approval or Consultation

No.	Action	Clause Reference in the Works Contract	Remarks
1	Determination of claims involving time and/or cost	3.7, 20.2.5	Engineer shall inform the Employer of all claims and consult as appropriate.
2	Approval of Performance Security and Advance Payment Guarantee form and issuer(s)	4.2, 14.2	Engineer must obtain Employer's prior approval for the form of the Performance Security and Advance Payment Guarantee and the issuing bank(s) of the Performance Security and Advance Payment Guarantee, proposed by Contractor.

3	Issuing Variations with cost/time implications, including Value Engineering	13.1, 13.2, 3.7	Engineer must obtain Employer's prior approval for any Variation expected to increase the Contract Price or Time for Completion and on Value Engineering proposals.
4	Granting Extensions of Time (EOT)	8.5, 3.7, 20.2.5	Engineer must consult with the Employer before determining EOTs.
5	Approval of Subcontractors (where restricted in the Contract)	4.4	Employer's approval shall be obtained where prior consent is contractually required.
6	Replacement of Contractor's key personnel named in the Contract and record of Contractor's personnel & labor	6.9 (modified in Particular Conditions) including relevant sub-clauses Section 6 on Staff & labor	Prior consent of the Employer is required before replacement of key personnel.
7	Approval of Contractor-designed elements	4.1, 5.1	Where applicable, Engineer must obtain Employer approval for design acceptance.
8	Termination of the Contract	15.2 (by Employer), 16.2 (by Contractor)	Termination decisions are reserved for the Employer.
9	Referring disputes to the Dispute Avoidance/Adjudication Board (DAAB) or entering settlement agreements	21.4–21.6	Only the Employer may initiate or consent to formal dispute processes or settlements. The Engineer may assist but decisions are reserved for the Employer.
10	Acceleration of the Works	8.6	Acceleration requires Employer's explicit written approval, including agreement on cost/time implications.
11	Issuance of Taking-Over Certificate	10.1	Engineer to consult Employer before issuing any TOC.
12	Any other matter specified in the Particular Conditions requiring Employer's prior approval	3.1	Refer to Particular Conditions for additional delegated or reserved powers specified therein.

6. Reporting Requirements and Time Schedule for Deliverables

6.1. Report Submissions

All reports and deliverables specified below in section 6.2, shall be submitted to the Employer's designated representative. The Consultant shall:

- Ensure all submissions are in conformity with the agreed content, format as will be agreed, and schedule defined in the TOR and the Contract
- Accommodate reasonable written requests from the Employer for clarifications, updates, or additional documentation
- The reports shall be submitted to the Employer and relevant stakeholders to facilitate informed decision-making and ensure effective project oversight
- Provide both editable electronic and hard copies unless otherwise stated in the Particular Conditions or Employer's Requirements.

For practical reasons it is proposed to allow a delay of ten working days in submission of the reports in Romanian due to the translation efforts.

If the Consultant does not comply with his reporting obligations as listed in the Terms of Reference, an amount may be withheld from his periodic invoice in accordance with Sub-Clause 26.1 of the Special Conditions of the Contract.

All reports issued by the Consultant shall be reviewed and approved by the Client. A period of two weeks shall be allowed for the review and approval. In addition, the Consultant will:

- Document the work through Working Papers, Issues Papers and Memoranda in Romanian and/or English, as appropriate; and
- Prepare and maintain full and proper records of all meetings and discussions.

6.2. Reports and Deliverables

6.2.1. Inception Phase

- i. Inception Report/ Mobilization Report: within four weeks after the Consultant's contract effective date;
- ii. Work Programme Review Report: within 21 days of receipt of the Contractor's Work Programme;
- iii. Baseline Surveys Report: within four weeks after the contract effective date;

6.3.2. Design Review Phase

- iv. Design Review Report: within 30 calendar days of initial design submission;
- v. Design Risk Log: Updated within 14 calendar days of each design submission;
- vi. Compliance Verification Memo: Updated within 14 calendar days of final design submission;

6.3.3. Construction Supervision Phase

- vii. Weekly report: within 2 days of the end of each calendar week;
- viii. Monthly Progress Reports, including the Designer's Representatives' Monthly Reports as an Annex: within 10 days of the end of each calendar month;
- ix. Quarterly Progress Reports: within 15 days of the end of each quarter, covering all aspects of the project implementation and supported by charts, tables and graphics as needed to accurately report the situation on the ground. A template and outline of the report shall be attached as part of the inception report for discussion with the Client;
- x. Variations Reports (if required): no later than 14 days from the moment when the Engineer becomes aware that a Contract Variation order may be required;
- xi. Pre-opening (post-construction) Road Safety Audit (RSA) Report: prepare as soon as the civil works are over, and ensure compliance of the RSA prior to issuance of taking over certificate.
- xii. Works Completion Report: within 28 calendar days upon issuing the Taking-Over Certificate;
- xiii. Environment & Social Incident Response: submitted within 12 hours of any incident directly or indirectly related to the project happens in accordance with the World Bank's E&S requirement.
- xiv. Claims Reports: a) for preliminary assessment of the validity of the Contractor's potential Claim no later than 7 days from the date of receipt of the respective Notice of Claim; b) for a detailed analysis of the validity of the Claim no later than 21 days from the date of receipt of such Claim;
- xv. Nonconformities register: the electronic copy in the same date with monthly report, the hard copy at request;
- xvi. Defect Notification Period Reports: within two weeks of completion of each Defect Notification Inspection mission;
- xvii. Draft Final Report: Prior to last two months of the assignment;
- xviii. Final Report: immediately upon issuing the Final Payment Certificate;
- xix. Special Reports (if required): within two weeks from the Employer's request.

(i) Inception Report/ Mobilization Report

No later than four weeks after the Consultant's contract effective date as specified in SCC, a brief report should be submitted providing information on:

- Engineer's format for the various reports mentioned in this section,
- Interim Payment Certificates,
- refined staff mobilization schedule and work plan,
- time reporting systems,
- results of survey of construction sites identifying any issues that may need to be addressed,
- Project Management Information System,
- define the responsibilities of the key- and non-key experts,
- establish the communication procedures with the Employer, and
- required procedures and formats to carry out the civil works contract administration tasks.

(ii) Work Programme Review Report

Within 21 days of receipt of the Contractor's Work Programme, the Consultant shall submit a report to the Employer (Engineer's Work Programme Report), which shall indicate the Engineer's opinion and comments on the Programme or any update and/or revision thereof.

In the case where the Engineer has made comments, the report will indicate the reasons for the comments.

In the event that the Engineer considers the Contractor's Work Programme acceptable, the Engineer's report will include the following:

- a) copy of the Contractor's detailed time programme showing the order in which the Contractor intends to carry out the Works with the highlighted critical path/s, including general description of the methods which the Contractor intends to adopt, and of the major stages, in the execution and acceptance of the Works, Contractor's key equipment and personnel mobilization plan, and other information as may be deemed necessary and appropriate by the Engineer, including coordination arrangements with other Employer's contractors / personnel, if any;
- b) copy of the Contractor's detailed cash flow estimate, including a monthly breakdown of all prospective payments forecast to be made to the Contractor under the Contract;
- c) A supporting report which will include:
 - A list of critical path items and the related Contractors' estimates of delivery periods, accompanied by the Engineer's estimate of the latest delivery periods for each critical path item to warrant the completion in accordance with the Contract;
 - Engineer's opinion on the requirements in the Contractor's proposed Programme for the information the Contractor reasonably requires from the Employer, reasonableness

- of the envisaged order and timing when that information is required, and all Employer's activities and constraints (such as approvals/reviews, etc.) and risks arising thereof;
- For the manufacture of each main item of Plant and Materials, the name of the manufacturer, manufacture location and the expected dates of:
 - Commencement of manufacture;
 - Contractors' and/or the Engineer's inspections and tests; and
 - Shipment and arrival at the Site;
 - Materials and plant selected by the Engineer for inspections and tests, including an appropriate specification of the tests to be carried out and the associated arrangements;
 - Names and particulars, including gender, of the Contractors' representative and other superintendence personnel approved by the Engineer in accordance with the Contract;
 - Names of subcontractors consented by the Engineer in accordance with the Contract and, for each subcontractor, the cost and quantity of the subcontracted Works; this section will include a brief justification for the Engineer's consent;
 - The details of a Project Management Information System (PMIS), acceptable to the Employer, for efficient and timely management of correspondence and documents from the Contractor, Employer and other stakeholder(s), as applicable, to be compatible with Employer's Management Information System (MIS) requirements, also including an implementation schedule.
 - Copies of all notices, consents, approvals, certificates or determinations given or issued by the Engineer within the reported period;
 - Summary of the main actions with their estimated timing required of the Employer during the contract execution, summary of the issues under the contract guarantees and insurances with their key terms and matters for the client to pay specific attention to, such as expiry dates etc., and
 - Other information as may be required by the Client.

(iii) Baseline Surveys Report

No later than four weeks after the Works contract effective date as specified in SCC, the results of baseline surveys to measure the daily traffic, travel time and the IRI for each link (road section) shall be submitted. The Baseline Survey Report shall include baseline instrumental measurements and analysis of dust, noise, vibration and water quality for each road section rehabilitation works (if needed according to ESMP).

(iv) Design Review Report:

Review of Contractor's detailed designs. Report on conformity with Employer's Requirements and constructability.

(v) Design Risk Log

Identification and tracking of risks related to geotechnical instability, stormwater impacts, settlement, and regulatory compliance.

(vi) Design Stage Road Safety Audit Report

A review on final design stage road safety measures proposed in the design report (including specific locations, name of drawings, summary of issues, level of risk, and reformations) and present it for Client's review/discussion. The report shall include:

- List of drawings and materials submitted for audit and reviewed by the auditor.
- Time and conditions for the site visit.
- Each identified problem explained briefly and concisely (what element present a safety concern, to which road users, why, and under what circumstances).
- One or more recommendations for mitigating measures or changes to the project design for each identified problem. A table with all identified problems, recommendations, and the Client's response and decision for each recommendation, with justification for non-compliance if the recommendations cannot be followed.
- The Consultant will prepare and deliver a Power-Point presentation to identified stakeholders, summarizing the road safety audit findings, including recommendations, at a date to be determined in consultation with the Client.

(vii) Compliance Verification Memo

Assessment of compliance with applicable national regulations, environmental laws, and best engineering practice; confirmation of alignment with the Employer's Requirements.

(viii) Weekly reports

The Engineer will prepare and submit to the Client weekly report within 2 days of the end of each calendar week. The report will cover the cumulative and currently registered progress (including mobilization status) and supplied materials.

(ix) Contract's Monthly Progress Reports

The Engineer will prepare and submit to the Client monthly Progress Reports within 10 days of the end of each calendar month. The first Report will cover the period up to the end of the first calendar month following the Engineer's mobilization. Each monthly progress report will include:

- a) Brief summary information about any events or circumstances which, in the Engineer's opinion, may create sufficient grounds for any time, claim and/or cost overrun under a Contract and the Engineer's recommendation of the measures being (or to be) adopted to overcome such events or circumstances and the contractual basis thereof;

- b) Comparison in the form of a chart showing the Contractor's original cumulative cash-flow estimate, in monthly periods, of all payments to which the Contractor will be entitled under the Contract and the actual payments certified by the Engineer up to the end of the reporting period. In the event of the cumulative amount of the actual monthly payment certificates being lower than the Contractor's estimates, the Engineer will accompany the chart with a supporting report and provide:
 - Details of any events or circumstances that have caused the discrepancy;
 - Assessment of the significance of such events or circumstances, including the Engineer's opinion on whether these may jeopardise the completion in accordance with the Contract;
 - Report on the measures being (or to be) adopted to overcome delays in respect of each event or circumstances and the contractual basis thereof;
- c) A Table showing the dates and values of every IPCs received and the dates when and values actually paid.
- d) A similar Table showing the payment status of the Consultant's contract.
- e) Comparison of the actual percentage completion of delivery compared with the planned for each critical path item identified in the Engineer's Work Programme Report; where any delivery is behind the Programme, the Engineer will comment on the likely consequences and state the remedial action being (or to be) taken;
- f) Comparison of the actual percentage completion of delivery compared with the planned for each main item of Plant and Materials, if not included in the list of critical path items;
- g) Projection on Contract's total final price and the completion date;
- h) Information about the use of provisional sums and an appropriate justification thereof;
- i) Photographs showing the status of manufacture and of progress on the site;
- j) List of new quality assurance documents, reports on test results and certificates of materials;
- k) Safety statistics, as provided by the contractors, including details of any major incidents and activities (e.g., strikes, riots, demonstrations, media attention, etc.) relating to workers, public, and environment;
- l) List of all notices, consents, approvals, certificates or determinations given or issued by the Engineer within the reported period, including consents to the Contractor's Performance and the Advance Payment Securities; and
- m) Other information, as may be required by the Client.
- n) Submitted summarizing the work accomplished by the supervision team for the preceding month, including the progress of the civil works contract, status of physical and financial progress, the status of contractor's claims for cost or time extensions, if any, brief description of problems encountered including a record of any accidents on site and recommended solutions, information on any OHS incidents, along with follow-up action undertaken, grievances, violations of the code of conduct, civil works contracts Variations and Change Orders, employment generated through civil work and other relevant information for each

of the ongoing civil works contract requested by the Employer. In the consequent monthly reports, the consultant needs to provide a follow-up sections on previously reported problems and what follow up actions were undertaken by the Consultant/Employer/Contractor. The report should also contain the records of the Consultant's work for the preceding month (timesheets, copy of correspondence with the Employer and contractors, etc) and the reporting on (a) quality control and management, (b) compliance with the ESMP, any adverse environmental impacts that accrue during construction, the corrective measures taken to remedy that impacts and (c) social safeguards matters as separate chapters for Works contract. Each Monthly Progress Report should be submitted along with other supporting documents of the Consultant's statement for the specific month payment.

The reports have to be concise and contain only critical information related to progress, issues and key events for the month. The main body of the monthly report should not exceed 20 pages, except for photos which should only be submitted electronically and the above requested copies of the project documents. Only critical correspondence should be provided, as annexes.

(x) Quarterly Progress Reports

Within 15 days of the end of each quarter, covering all aspects of the project implementation and supported by charts, tables and graphics as needed to accurately report the situation on the ground, financial forecast updates projections for payment needs vs. approved budget.

A template and outline of the report shall be attached as part of the inception report for discussion with the Client.

(xi) Variations Reports

The Engineer shall prepare variation orders in sufficient detail, accuracy and clarity to ensure that the Employer can comply with the Bank's procedures for the approval of Contract variations etc.

The Consultant shall immediately advise the Employer (in writing) as soon as he become aware that a Contract Variation order may be required. He shall then prepare and submit within 14 days an analysis of the variation, or in cases where external rates / costs are involved (for example utility works) an estimate of when the analysis will be submitted.

The Engineer must ensure that wherever possible existing or similar prices that exist within the Contract must be used.

The report shall outline the basis for the Engineer's valuation of the variation including but not limited to the following:

- whether the works were unforeseen and under whose risk (Client's or Contractor's) the consequences fall in accordance with the works contract;
- whether the works fall under Variation (i.e. relate to the Permanent works) or not and if not then what are the advantages of an amendment of the contract vs procuring the extra scope out;

- assessment of the time implication with potential prolongation costs and analysis of whether a variation is warranted vs a separate bidding;
- the quantity and the value of the varied Works that can be determined using existing prices set out in the contract;
- the quantity and the Engineer's estimate of the value of the varied Works, for new items of works which can be determined by using similar rates and prices set out in the contract as the basis for valuation;
- the quantity and the Engineer's estimate of the value of the varied Works that require the development of new rates using external quotations/ cost estimates from specialised sub-contractors (e.g. electrical, communications);
 - the Engineer shall provide a detailed breakdown of the rates and prices set out in the contract and identify the price components that the Engineer used or intends to use for the valuation of the varied works;
- the quantity and the Engineer's estimate of the value of the varied Works, which can only be determined using the rates and prices not set out in the Contract;
 - the Engineer shall provide to the Client an appropriate justification of using rates and prices not set out in the Contract with the evidence of at least three quotes from the market to confirm the reasonableness of the suggested rates.

In case a variation is approved by the Employer, the Engineer shall immediately issue the Variation Order to the Contractor. He shall adjust the Contract to reflect the changes made by the Variation Order.

(xii) Pre-opening (post-construction) stage Road Safety Audit report

As soon as the civil works are over, the engineer shall undertake pre-opening (or post-construction) stage road safety audit and prepare an audit report which includes location specific safety findings/ hazards (with photographs), risk level and recommendations for safety improvement (remedial measures). The RSA report shall be prepared immediately after the audit and compliance of the audit recommendations shall be ensured prior to issuance of taking over certificate.

(xiii) Works Completion Report

On completion of the Works Contract, upon issue of the Taking-Over Certificate, within 28 calendar days the Consultant shall submit a comprehensive Works Completion Report, which shall include but not limited to, copies of the Taking-Over Certificate(s); verified "as-built" drawings showing all revisions to the design of the Works; method of construction, the construction supervision performed, summary of temporary employment generated by the project/ contract, an analysis of the completion cost of the Works; an overview of the actual progress of the Works detailing reasons for delays and/or extensions of time; an overview of Site safety procedures, any problems in this regard and recommendations for improvement; an overview of the Contractor's working practices and resources; an assessment of the quality of Materials and workmanship, any problems in this regard and recommendations for improvement; details of technical difficulties encountered and how these were overcome; details of administrative difficulties encountered and

how these were overcome. In addition to the above, the Works Completion Report must also include information relating to “Before” and “After” traffic volume, vehicle speed, IRI, estimated vs actual cost, project baseline schedule vs actual schedule, challenges encountered and measures taken, lessons learned, highlight good practices, areas of improvement, environmentally friendly initiatives, advanced technologies (if used), road safety measures installed, accidents/incidents reported, etc. The template of the works completion report shall be finalized in close consultation with client.

(xiv) *Claims Reports*

The Engineer shall implement the procedures for Claim management as set out in the General Conditions of the Works Contract(s) in the assessment and determination of any Claim and in the management of interim claims and Notices of Claim.

The Engineer shall prepare and maintain a detailed register of all claims and potential claims.

A summary of the status of Claims, Notices of Claim and potential Claims shall be included, updated and reported by the Engineer in each Monthly Progress Report to the Client. The summary must clearly show the current status of each Claim and events that may have occurred in the reporting period, and actions planned by the Engineer.

In the event of the receipt of a Notice of Claim, or Claim from the Contractor the Engineer shall immediately notify, and provide a copy of the Contractor’s Notice of Claim to the Client, and record the Notice into the Claims Register.

The Engineer shall conduct a detailed analysis of all claims. The Engineer shall involve and coordinate work with project team members to obtain relevant background information and supporting documentation.

Each Claim must be assessed individually on its relevant merits.

The Engineer shall submit to the Employer a preliminary assessment of the validity of a Notice of Claim within 7 days of receipt of the Contractor’s Notice and provide an assessment (including a risk assessment) with regard to the potential impact and outcome of the claim.

The Engineer shall advise what steps can be implemented to mitigate the potential impact of the Claim if it is formally submitted.

The Engineer will propose to the Employer solutions that may prevent a Notice of Claim becoming a formal Claim.

The Engineer shall require the Contractor to copy to the Client all details sent to the Engineer with regard to the submission of a Contractor’s Claim.

The Engineer shall prepare all necessary letters and transmittals to be issued in respect of claims or potential claims.

(xv) *‘Non-conformities’ register*

The Engineer shall keep a 'Non-conformity' register and a 'Concession Request' register that shall be copied to the Employer monthly. Concession requests for materials or work that does not meet the Employer's Requirements (as recorded in the non-conformity register) shall be made part of the routine Quality Assurance inspection system (Request for Inspection System).

(xvi) *Defects Notification Period Reports*

The Consultant shall prepare for each inspection visit a report detailing:

- outstanding and remedial works completed by the Contractor during the period;
- the location, nature, extent and analysis of the causes of defects identified, if any;
- recommended method to correct identified defects together with cost estimates;
- in consultation with the Client and Contractor the liability for correcting the defects identified.

The report shall be submitted to the Client within two weeks of completion of each Engineer's mission.

(xvii) *Draft Final Report*

Two months prior to the assignment completion, the Consultant shall prepare a first draft final report which shall highlight all major points of interest that arose during the contract. The report will include, amongst others, the summary of the type, quality, quantities and sources of materials used on the project; contractor's plant and personnel; problems encountered and solutions employed; changes made by the Contractor in design and specifications and the reasons therefor; a breakdown of Contractor's performance in terms of respect of the Service Quality Criteria for maintenance services; a breakdown of the final cost of the contract item by item; a summary of contract changes and expenditure of provisional sums and contingency sums; a summary of all road and work execution related accidents happened during the contract execution and defects notification periods.

(xviii) *Final Report*

Upon completion of the contract, i.e. immediately upon issuing the Final Payment Certificate, the Final Report shall be submitted by the Consultant which will take into account all comments, if any, provided by the Client to the draft final report.

(xix) *Special Reports*

If required and at the request of the Client, within two weeks from any such request, the Consultant shall prepare a Special Report on any major issue raised by the contract implementation, including (but not limited to) modification of Drawings.

7. Duration of the Assignment

7.1. Duration and Commencement

The Consultant's services shall be carried out in one continuous phase, as per the implementation of the Works. Works is anticipated to commence on October 1, 2026 and conclude on October 31, 2029. During this period, the main activities expected to be carried out by the Contractor include site mobilization, design and construction.

The Consultant's services shall be performed over an estimated period of 52 months. The commencement of services shall begin at the Effective Date as stated in the signed Contract between the Employer and the Consultant. The Consultant's services shall cover all stages of the assignment including design review, construction supervision, commissioning, and support to the Engineer in the issuance of Taking-Over Certificates under Sub-Clause 10.1 of the Conditions of Contract.

7.2. Services During the Defects Notification Period

During the Defects Notification Period (DNP), as defined in Sub-Clause 11.1 (Completion of Outstanding Work and Remedying Defects), the Consultant's Team Leader shall conduct every three month a field visit of a minimum duration of one week . Duties shall include:

- Conducting inspections of any outstanding or remedial works.
- Supporting the Engineer in verifying that the remedial works conform to the Contract requirements.
- Preparing recommendations for issuance of the Performance Certificate.

7.3. Cost of Services

The Consultant's services during the Mobilization period, the execution of the Works, the Taking-Over phase, and throughout the Defects Notification Period shall be remunerated on a time-based basis, in accordance with the Consultant's Time-Based Contract Prices.

8. Key Experts Team Composition and STAFFING INPUT

8.1. The Consultant shall employ suitably qualified engineers and other professionals, who shall be competent to carry out their duties in accordance with responsibilities and/or authorities that are specified in these TOR or are necessarily implied from the Works Contract. The Consultant will demonstrate equal opportunities in the mobilization and management of human resources.

In preparing the Staff Mobilization Schedule, the Consultant shall take account of Contractor's work programme and construction activities.

The Consultant shall consider the prospective peaks of the construction activities and ensure the adequacy of staffing levels during such periods and shall be responsible for efficient staffing levels, including its reduction, when the real pace of the construction activities is much lower than work program envisages.

The indicative inputs and required qualifications for the Consultant's team are presented in the sections below.

Expertise required

It is expected that the Consultant's team shall comprise of the following experts:

		Estimated Minimum person-months per stage		
		Design	Construction	DNP
	Key Staff			
1	Team Leader / Engineer's Representative (TL/ER)	6	25	4
2	Road Design Engineer (RDE)	6	-	-
3	Quantity Surveyor (QS)	-	22	4
	Non-Key Staff			
1	Environmental and Social Expert	-	23	1
2	Site Supervisor ¹ / Road Inspector	-	24	4
3	Bridge Inspector	-	24	1
4	Land Surveyor	2	24	1
5	Laboratory Assistant /Material Engineer	-	19	1
6	Health and Safety inspector	-	10	-
	Short-term experts (as the need may arise)	5	5	
1	Pavement engineer			
2	Geotechnical engineer			
3	Hydraulic engineer/hydrologist			
4	Bridge designer			

8.2. The Consultant shall employ only such Key Staff whose CVs have been approved by the Client. In addition to the expert personnel, the Consultant shall determine the support staff to assist with on-site supervision of the works.

8.3. Consultants are encouraged to associate with local firms and include in the team local Technical Support Staff and/or Key Experts.

Engineer's Staffing input

8.4. The numbers and person-months for all staff shall be included in the technical proposal and the costs in respect of these personnel are to be included in the financial proposal.

8.5. **The Engineer/Project Director** - The Engineer/Project Director shall guide and support the site supervision staff for the duration of the project. He shall coordinate any specialist services that may be required from the Consultant.

8.6. The Engineer/ Project Director's position and any other head office support staff is not part of the

¹ The Road Inspector has the responsibility of the Site Supervisor in the Urban Planning and Construction Code.

Key Experts pool and Consultant's costs therefor will be covered by inclusion thereof in the overheads for the project.

- 8.7. The estimated minimum number of person-months required for the assignment is **211** person-months. This includes **67** person-months for Key Staff.
- 8.8. The Client's estimation of the necessary input for Non-Key Staff/Technical Support Staff is 134 person-months and **10** person-months for short-term experts. However, the exact estimation of the input of the non-key specialists remains at the Consultant's discretion.
- 8.9. In any case, the minimum total person-months established for each expert should correspond to the amount required in the ToR.

9. Key Expert Tasks and Qualification Requirements

Curriculum Vitae of the Key Staff proposed shall be signed by each Key Expert and submitted with the Consultant's Technical Proposal, in sufficient detail to clearly demonstrate that the credentials described below have been met. The Key Staff should possess University Degrees in Highway or Civil Engineering, or an equivalent technical qualification related to their respective proposed specialty in this project.

Provided that the basic minimum staff requirements are met, the Consultant is free to propose the supervision structure that is deemed by the Consultant to optimally meet the project requirements.

The Team Leader / Engineer's Representative shall be present during the working season and shall be available on site until the Works are complete and defects remedied.

In addition to the minimal required team of Key Staff mentioned above, the Consultant shall provide the necessary field teams of support staff.

9.1. Team Leader / Engineer's Representative (TL/ER) – Key Expert no.1

9.1.1. Credentials:

a) General Qualifications and Experience:

- University degree in civil engineering.
- The candidate should have at least fifteen (15) years of experience in design, construction and/or supervision of road works.

b) Specific experience and expertise related to the task:

The candidate is expected to have a minimum of ten (10) years of experience of supervision of road rehabilitation or/and construction works.

The candidate is expected to have previous experience with asphalt pavement construction.

The candidate is expected to have previous experience in the role of Engineer's Representative in at least two projects of similar size and complexity as follows:

- i) working experience in minimum: 1 project of similar size and complexity carried out under the FIDIC 1999 Conditions of Contract for Plant & Design-Build (Yellow Book) **and** in 1

- project carried out under FIDIC 2017 Conditions of Contract for Plant & Design-Build (Yellow Book), with minimum of 2 years' involvement in each such projects; **or**
- ii) working experience in minimum 2 projects of similar size and complexity carried out under the FIDIC 2017 Conditions of Contract for Plant & Design-Build (Yellow Book), with minimum of 2 years' involvement in each such projects.

She/he should be experienced in contract administration under FIDIC Conditions of Contract.

Knowledge/experience of assessing climate change impacts and consequent required engineering adaptations are an added advantage. She/he must have served as a Resident Engineer or in an equivalent capacity on at least one (1) bituminous road construction project (**not necessarily under a design and build contract**) of similar magnitude and complexity in the last 10 years.

- c) Specific Experience in the European region and/or former Soviet Union countries:

The Candidate shall demonstrate previous work experience in the European Region and / or former Soviet Union countries.

- d) Knowledge of English language:

A sound working knowledge of the English language is required.

9.1.2. Job description:

The Team Leader / Engineer's Representative shall:

- carry out the duties of the Engineer's Representative, as described in the civil Works Contract documents;
- manage the Consultant's team;
- be responsible for proper conduct of the entire design review;
- elaborate the programme of activities of his team;
- take care of his team's logistics;
- check that the services are carried out in accordance with the Terms of Reference;
- verify and certify the interim and final statements of the Contractor under the civil works contract;
- identify any risks of Contractor's claims and report to the Employer on such risks as promptly as possible;
- identify risks for delays in the works and report to the Employer on such risks as promptly as possible;
- produce the periodic reports;
- produce the final reports;
- produce any other reports as required by the Employer;
- inspect the works during the Defects Notification Period and issue the related reports;
- advise the Client on any issue likely to affect the financial resources, e.g., variation orders, or the scope of work;
- delegate duties as appropriate to other Key Personnel and Technical Support staff;
- be the responsible person on behalf of the Engineer to assure Contractor's implementation of, and compliance with, the Health and Safety requirements of the contract. As such, delegate specific responsibilities to the appropriate Key Personnel to assure Contractor's compliance with

the Occupational Health and Safety (OH&S) Plan which is a part of the Construction Environmental and Social Management Plan (CESMP);

- when applicable, be the person to record and send notices on implementation of penalties against the Contractor in accordance with the Works Contract;
- any other duties that may be required for successful performance of the role of the Engineer for Works Contract and for timely and successful completion of Works.

9.2. Road Design Engineer - Key Expert no.2

9.2.1. Credentials:

a) General Qualifications and Experience:

- She/he must be a registered Civil Engineer with a degree in Civil Engineering or Highway Engineering.
- A postgraduate qualification in Highway Engineering and knowledge and experience of assessing climate change impacts and consequent required engineering adaptations are an added advantage.

b) Specific experience and expertise related to the task:

She/he must have a minimum of ten (10) years of specific experience related to roads design and construction. She/he must have served in a similar capacity on at least one (1) project for construction of bituminous roads (not necessarily under design and build) of similar magnitude and complexity in the last 10 years.

c) Specific Experience in the European region and/or former Soviet Union countries:

The Candidate shall demonstrate previous work experience in the European Region and / or former Soviet Union countries.

d) Knowledge of English language:

A sound working knowledge of the English language is required.

9.2.2. Job description:

- The Road Design Engineer shall be responsible for review of the Contractor's design on the geometrical and pavement aspects of the road and provide assistance to the ESIA/RAP team during undertaking of valuation of properties to be affected by the project.
- The Road Design Engineer's duties shall comprise supervision of road surveys, construction of pavement structures, and measurement of quantities and management of site operations.
- The Road Design Engineer shall be responsible for the review of the Contractor's design on roads design aspects to adequately and safely accommodate for all transport users including but not limited to pedestrians, cyclists, public transport users, freight, and motorists. The Road Design Engineer will ensure that the detailed design considers mobility, accessibility, and inclusive

(universal access, gender, etc.) requirements for all users, and adequate alignment with land-use requirements.

9.3. **Quantity Surveyor (QS)**

9.3.1. **Credentials:**

a) General Qualifications and Experience:

- University degree in Civil Engineering, Quantity Surveying, Construction Management or a related field.
- The Candidate should have at least ten (10) years of experience in road, design, construction and/or supervision.

b) Specific experience and expertise related to the task:

- The candidate is expected to have a minimum of eight (8) years in similar positions in the construction or /and supervision of road works.
- The candidate is expected to have previous experience working as a Quantity Surveyor in at least two (2) projects of similar size and complexity under FIDIC Conditions of Contract (Red Book or Yellow Book, any edition) is required, with minimum of 1 year involvement in each such projects.
- The candidate is expected to have previous experience in the preparation and analysis of Contract variations in accordance with FIDIC Conditions of Contract (Red Book or Yellow Book, any edition).

c) Specific Experience in the European region and/or former Soviet Union countries:

The Candidate shall demonstrate previous work experience in the European Region and / or former Soviet Union countries.

d) Knowledge of English language:

A sound working knowledge of the English language is required.

9.3.2. **Job Description:**

The Quantity Surveyor shall:

- Prepare and maintain the project cost control system, tracking against budget and approved variations.
- Review and validate contractor's payment applications and interim payment certificates.
- keep records of all contractor's payment applications approved for payment;
- prepare, in close co-ordination with the Team Leader/Engineer's Representative all documentation regarding the Monthly Statements and the Interim Payment Certificates, and Supporting Documentation;

- Support the Team Leader/Engineer's Representative in draw-up and up-date the necessary records and documents for preparation and justification of variation orders and claim assessments.
- supervise the execution of works and check the finished works before taking-over;
- promptly inform both Team Leader/Engineer's Representative and Deputy Team Leader/Resident Engineer of potential Variation Orders and unexpected increases in costs;
- provide daily co-ordination of supporting staff assigned under his direct control, ensuring constant supervision and quality control of the works in progress;
- Monitor financial implications of design changes, delays, or disputes.
- follow-up the works in order to advise the Team Leader/Engineer's Representative about any event which might create disruption of the Work.
- Maintain records of cost forecasts, measurements, and valuations.

9.4. **Non-Key Professionals**

The time, number and type of non-key (and short-term) specialists to be mobilised will be agreed between the Client and the Consultant as the need arises. For estimating purposes, a number of individual expert visits and a global number of person-months are to be shown in the proposal and the Consultant should also enter a person-month rate and round-trip air ticket costs.

Non-Key Experts' Required Qualifications. The CVs for Non-Key and Short-term Experts are not reviewed prior to the signature of the Contract and should not be included in technical proposals.

The Consultant shall mobilise these experts as required according to the profiles identified in the Organisation & Methodology and these Terms of Reference. They must indicate clearly which profile they have so it is clear which fee rate in the budget breakdown will apply. All experts must be independent and free from conflicts of interest in the responsibilities assigned to them.

Specific Credentials and Job Description for non-key Experts: Proposed candidates should be graduated engineers or other qualified professionals, having at least ten (10) years of experience in their area of expertise. They shall also have a university degree in their area of expertise.

Experience in countries with similar climatic and geographic conditions to those of Moldova will be considered an asset.

They should demonstrate that they have participated in at least two (2) projects where they have held similar functions.

Site Supervisors have been accredited and a list of qualified Site Supervisors is available on the website of the Ministry of Infrastructure and Rural Development (MIRD). The Consultant is free to contact anybody from this list. The proposed staff shall be accredited.

The expertise will be supplied at the request of the Engineer with the prior written approval of

the Employer providing the terms of reference for the assignment.

The Employer's agreement to a proposed expert shall be obtained prior to his coming/her coming in Moldova based on a curriculum vitae supplied by the Engineer.

They will be mobilized according to the needs, which may arise since the pre-construction stage during the construction works and until the end of the Defects Notification Period.

Environmental Expert (EE) and Social Expert (SE) shall meet the following minimum requirements:

Specific Credentials and Job Description for Environmental and Social Expert (ESE)

Credentials:

a) General Qualifications and Experience:

- The Candidate should be a qualified professional with University degree in Environmental Science, Social Science or equivalent (degree in Ecology, Biology, Chemistry, Natural Resources, Political Economy, Social Development).
- The Candidate is expected to have at least six (6) years of professional working experience.

b) Specific experience and expertise related to the task:

The Candidate is expected to have at least four (4) years of experience in conducting environmental assessment of IFI funded projects and monitoring the implementation of ESMPs for road infrastructure projects.

The Candidate is expected to demonstrate understanding of Moldovan legislation on social protection, access to information, public consultation, grievances, etc.;

c) Specific Experience in the European region and/or former Soviet Union countries:

The Candidate shall demonstrate previous work experience in the European Region and / or former Soviet Union countries.

d) Knowledge of English language:

A sound working knowledge of the English language is required.

Job Description:

The Environmental and Social Expert shall:

- Supervise the implementation of the mitigation and environmental protection measures provided in EMP by the Contractors engaged by the Project; Ensure that the contractors

are made aware of the mitigation measures as specified in the EMP and included in the contracts;

- Set-up monitoring system on environmental and social issues and measures,
- Monitoring and confirming that the contractors have all the required national and local permits to perform the road works according to their contracts before starting the construction works;
- Monitor the environmental permits status, including a periodic status update as a component of the reporting requirements;
- Serve as a main interlocutor between the project-affected parties and Project, on social and environmental impact issues; coordinate with key stakeholders in dealing and resolving social and environmental issues, and
- Organize and manage periodic sessions for public consultations on environmental issues related to the Project.

9.5. Short-term specialists/experts

For short-term experts a minimum of **10** person-months is estimated. Short-term experts may only be mobilised with prior written consent of Client and each short-term expert must provide mission reports prior to their demobilisation.

Short-term experts may be required in the following areas:

- highway engineer
- pavement engineer
- bridge engineer
- geology and geotechnical expertise;
- environmental and social expertise;
- specific equipment expertise;
- hydrology;
- hydraulics;
- contract specialist/claim expertise;
- legal adviser;
- financial experts;
- road safety auditor;
- road safety engineer;
- health and safety;
- etc.

Proposed candidates should be graduated engineers or other qualified professionals, having at least ten (10) years of experience in their area of expertise. They shall also have a university degree in their area of expertise.

Experience in countries with similar climatic and geographic conditions to those of Moldova will be considered an asset.

They should demonstrate that they have participated in at least two (2) projects where they have held similar functions.

The expertise will be supplied at the request of the Engineer with the prior written approval of the Employer providing the terms of reference for the assignment.

The Employer's agreement to a proposed expert shall be obtained prior to his coming/her coming in Moldova based on a curriculum vitae supplied by the Engineer.

They will be mobilized according to the needs, which may arise since the pre-construction stage during the construction works and until the end of the Defects Notification Period.

Short-term experts shall produce detailed reports at the end of their stay in Moldova, stating the results of their expertise on site.

10. Provisions by the Employer

10.1. The Project Implementation staff within the Employer will serve as the liaison between Employer, Consultants and contractors, and shall be responsible for the overall project management.

10.2. The Consultant shall be provided with the necessary logistical support, including office accommodation and equipment, which will be provided under the associated Works contracts. Responsibility for the provision and maintenance of these facilities lies with the Works Contractor.

APPENDIX A

Appendix A contains extracts from the Concept Design at the time of publication of the Request for Bids for the Supervision of the Design & Build Contract for the Rehabilitation of road G33: R12 – Mîndic – Zgurița – Mărculești – R13 and G35: R14 – Țepilova – Vanțina – Căinari Vechi – G33.