Country: REPUBLIC OF ARMENIA

Project Name: YEREVAN ENERGY EFFECIENCY II PROJECT
Funding source: European Investment Bank (EIB) and Neighbourhood Investment Platform, a financing instrument of the European Union
EIB Loan No.: 90.016

CONSULTING SERVICES – FIRMS SELECTION

REQUEST FOR EXPRESSIONS OF INTEREST

Assignment Title: "Technical Supervision over seismic upgrades, energy efficiency improvements and reconstruction of Kindergartens Nos. 17, 39, 46, 64, 72, 93 & 133".

Reference No.: **YEEP-II/QCBS/CS-25/001**

This Request for Expressions of Interest (REOI) follows the General Procurement Notice for this project which was published on **May 5, 2023.**

1. The **Republic of Armenia** has received a financing from ***European Investment Bank (EIB) and Neighbourhood Investment Platform*** *(a financing instrument of the European Union)* toward the cost of the **"Yerevan Energy Effeciency II Project" (YEEP-II)**, and intends to use part of the funds there of for payments under the following consulting services: **"Technical Supervision over seismic upgrades, energy efficiency improvements and reconstruction of Kindergartens Nos. 17, 39, 46, 64, 72, 93 & 133".**

This contract will be jointly financed by the European Investment Bank (EIB) and Government of the Republic of Armenia. Bidding will be conducted through international competitive bidding procedures as specified in the EIB's "Guide to Procurement" *[**"Guide to Procurement for projects financed by the EIB", March 2024**[1]]* and it is open to all Bidders from all countries, eligible to tender for works, goods and services contracts, except Bidders included in EIB's list of debarred firms. In addition, please refer to paragraph 1.5 setting forth the Bank's policy on conflict of interest.

The consulting services (the "Services") comprise technical supervision and quality control over reconstruction of **seven (7) kindergartens in Yerevan**.

Seismic upgrades, energy efficiency improvements and reconstruction of Kindergartens Nos. 17, 39, 46, 64, 72, 93 & 133 will be implemented through **one (1) construction package**:

- **"Seismic upgrades, energy efficiency improvements and reconstruction of Kindergartens Nos. 17, 39, 46, 72, 93, 133 & 64"** Ref#YEEP-II/ICB/CW-25/001; international competitive bidding (an open procedures); language of tender: English.

  The Package will be implemented through the following **seven (7) lots**:

- **Lot 1, Kindergarten No. 17 (Kentron administrative district in Yerevan)**:

The existing kindergarten building was constructed in 1961. The building was designed for 8 groups with a capacity of 240 children. According to the conclusion of the technical condition assessment, the building is subject to reconstruction. The land area of the kindergarten is 0.40413 ha. **The duration of the whole of Works is seventeen (17) months.**

[1] The «Guide to Procurement» is available online on EIB's website: https://www.eib.org/en/publications/20240132-guide-to-procurement-for-projects-financed-by-the-eib

- **Lot 2, Kindergarten No. 39 (Ajapnyak administrative district in Yerevan)**:

The existing kindergarten building was constructed in 1972. The building was designed for 10 groups with a capacity of 300 children. According to the conclusion of the technical condition assessment, the building is subject to reconstruction. The land area of the kindergarten is 0.490924 ha. **The duration of the whole of Works is twenty (20) months.**

- **Lot 3, Kindergarten No. 46 (Ajapnyak administrative district in Yerevan)**:

The existing kindergarten building was constructed in 1972. The building was designed for 10 groups with a capacity of 300 children. According to the conclusion of the technical condition assessment, the building is subject to reconstruction. The land area of the kindergarten is 0.810999 ha. **The duration of the whole of Works is twenty (20) months.**

- **Lot 4, Kindergarten No. 72 (Erebuni administrative district in Yerevan)**:

The existing kindergarten building was constructed in 1981. The building was designed for 7 groups with a capacity of 238 children. According to the conclusion of the technical condition assessment, the building is subject to reconstruction. The land area of the kindergarten is 0.12438 ha. **The duration of the whole of Works is seventeen (17) months.**

- **Lot 5, Kindergarten No. 93 (Malatia-Sebastia administrative district in Yerevan)**:

The existing kindergarten building was constructed in 1982. The building was designed for 12 groups with a capacity of 360 children. According to the conclusion of the technical condition assessment, the building is subject to reconstruction. The land area of the kindergarten is 1,22785 ha. **The duration of the whole of Works is twenty-four (24) months.**

- **Lot 6, Kindergarten No. 133 (Shengavit administrative district in Yerevan)**:

The existing kindergarten building was constructed in 1963. The building was designed for 8 groups with a capacity of 240 children. According to the conclusion of the technical condition assessment, the building is subject to reconstruction. The land area of the kindergarten is 0.3419 ha. **The duration of the whole of Works is twenty-four (24) months.**

- **Lot 7, Kindergarten No. 64 (Erebuni administrative district in Yerevan)**:

The existing kindergarten building was constructed in 1972. The building was designed for 12 groups with a capacity of 360 children. According to the conclusion of the technical condition assessment, the building is subject to reconstruction. The land area of the kindergarten is 0.500893 ha. **The duration of the whole of Works is twenty (20) months.**

It is expected that Services will start in **December of 2025.** The maximum duration of the assignment is **twenty-four (24) months** from the commencement date. The Form of Contract to be used for the assignment is Time-Based Contract.

(*)More details on the Services are provided in the Terms of Reference attached to this Invitation/REOI.

2. The **Yerevan Municipality (the "Client")** through "**Investing Projects Implementation Unit Building up of Yerevan" Community Non-Commercial Organization of Yerevan Municipality ("IPIU Building up of Yerevan" CNCO, the Procuring/Executing Agency of the "Client")** hereby invites eligible Applicants (the **"**Consultants") to show their interest in delivering the Services described above. This Request for Expressions of Interest is open to all Consulting firms from all countries, eligible to tender for services contracts, except Consultants included in EIB's list of debarred firms. In addition, please refer to paragraph 1.5 setting forth the Bank's policy on conflict of interest.

Interested Applicants should provide information demonstrating that they have the required qualifications and relevant experience to perform the services (brochures, descriptions of similar assignments, experience in similar conditions, availability of technical resources to do the work, general qualifications and number of the key staff (at the EOI stage the CVs are not required), etc.).

The following shortlisting criteria/maximum points will be taken into account for the evaluation of the applications:

#	Criteria	Points
(i)	**Firm's general experience** *(core business and years in business)*	**20**
(ii)	**Firm's experience in the field of the assignment** *(experience in technical supervision over reconstruction/contruction of residential/public/educational/industrial buildings over the past 10 years and the number of similar assignments performed)*	**50**
(iii)	**General qualifications and number of the key staff** *(at this stage the CVs are not required)*	**20**
(iv)	**Technical and managerial capacities of the firm** *(managerial and organizational structure, office/field and laboratory equipment, etc.)*	**10**

Note: The Client has the right to request from the Consultant/Applicant documents confirming the authenticity of the qualifications and experience provided by Consultant, such as copies of implemented contracts, certificates, extracts etc.

3. The Consultants may associate with other firms in the form of a **Joint Venture (JV)** or a **Sub-consultancy** to enhance their qualifications *(please clearly state the status of association, e.g. JV or Sub-consultancy)*. **Maximum number of members in the JV shall be: 3 (three).** In case of contract award, each member will be jointly and severally liable to the Client for all the Consultant's obligations under this Contract.

If an Applicant (including any JV member) submits or participates in more than one application (expression of interest), those applications shall be all rejected. However, the same Subconsultant may participate in several applications.

If the Applicant is a JV, the expression of interest shall include:
- a power of attorney for the representative of the lead member to represent all JV members
- a copy of an existing JV agreement, or
- a «Letter of Intent» to execute a JV Agreement.

In the absence of the document(s), the other members will be considered as **Subconsultants.**

Experiences and qualifications of Subconsultants are not taken into account in the evaluation of the Applications (Expressions of interest).

Among the submitted applications, the Client will establish the shortlist **a maximum of six (6) Applicants**, to whom the Request for Proposals (RFP) to carry out the Services shall be sent.

The Applicant/Consultant will be selected in accordance with the **Quality and Cost-Based Selection (QCBS)** method.

4. Interested Applicants may obtain further information at the address below during office hours: from **10.00 to 17.00 (Yerevan time), Monday to Friday**, excluding public holidays (contact person: **Mrs.Meri Hayrapetyan – "IPIU Building up of Yerevan" CNCO, Public Buildings Program Lead; email: meri.hayrapetyan@yerevan.am).**

5. Expressions of interest must be delivered in a written form **in English OR in Armenian (one (1) validated hard copy+ one (1) digital copy (CD or flashdisk))** in person (or by courier services) **or by e-**

mail in the Adobe PDF format to the address below not later than **August 19, 2025** and should be clearly marked: **«Expressions of Interest for "Technical Supervision over seismic upgrades, energy efficiency improvements and reconstruction of Kindergartens Nos. 17, 39, 46, 64, 72, 93 & 133", Ref#YEEP-II/QCBS/CS-25/001».**

6. The Applicant shall bear all costs associated with the preparation and submission of its Application (EOI), and the Client shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

7. The address referred to above is:
"Investing Projects Implementation Unit Building up of Yerevan" Community Non-Commercial Organization ("IPIU Building up of Yerevan" CNCO)
Attn.: Mr. Martin Charyan- Procurement Specialist
Tel: (+374 11) 51-50-07 (reception)
Street address: 1/3 Buzand Street
Floor/Room number: 6th floor; room#618
City: Yerevan
ZIP Code: 0010
Country: Republic of Armenia
E-mail: martin.charyan@yerevan.am; copy to: meri.hayrapetyan@yerevan.am; narek.melkumyan@yerevan.am

The Application/Expression of Interest should comprise the following:

- Application Letter («**Letter of Interest**») addressed to the **"IPIU Building up of Yerevan" CNCO** Interim Director[2];
- Authorization Letter for the person signing the Expression of Interest;
- Information about overall experience of the firm;
- Information about the assignment related contracts performed during the past **ten (10) years** (to be provided in a form «**Form EXP: Specific Experience**»)[2];
- Information about general qualifications and number of the Key Staff *(at the EOI stage CVs are not required)* and the firm's regional experience;
- A copy of the JV Agreement entered into by all members, or a letter of intent to execute a JV Agreement, signed by all members together with a copy of the Agreement proposal *(in the absence of this document, the other members will be considered as Subconsultants)*.

[2] **These documents are attached to this REOI (see next pages below)**

Note: ***all italicized text in [..] is for use in preparing this form and shall be deleted from the final product.***

Letter of Interest

Date_____ ***[insert the EOI submission date]***

To: **"Investing Projects Implementation Unit Building up of Yerevan" Community Non-Commercial Organization (Procuring/Executing Agency of the "Client")**
Attn: **Mrs. Aneta BABAYAN, Interim Director**
Address: **1/3 Buzand Street, Yerevan 0010, Armenia**

Dear Sir/Madam:

In response to the Request for Expressions of Interest (REOI) published on _____ ***[insert date of publication]*** for the assignment relevant to **«…….», Ref#.....** [***insert name and number of Bidding/Contract***]**.**

I, as an authorized representative of _____ [***insert name of your organization\company and any other firm joining as joint venture]*** would like to express the interest of my organization \ company ***[or joint venture]*** to undertake the above-mentioned assignment as mentioned in the REOI and the attached **Terms of Reference (TOR)**.

I am enclosing the information and documents requested, in the format requested, for your information and records.

I declare that the information provided is complete and correct in details and understand that the contracting authority has the right to request, for the purpose of verifying and confirming the statements, any available supporting documents.

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

We remain,

Yours sincerely,

Authorized Signature **[*in full and initials*]:** _____

Name and Title of Signatory: _____

Note: ***to be signed by the authorized representative of the organization \ company or the lead organization \ company (in case of Joint venture)***

Note: ***all italicized text in [..] is for use in preparing this form and shall be deleted from the final product.***

Form EXP: Specific Experience

[The following table shall be filled in for contracts performed by the Applicant and each member of a Joint Venture. A separate table shall be filled for each contract]

Applicant's Name: _____ ***[insert full name]***
Date: _____ ***[insert day, month, year]***
Joint Venture Member Name:_____ ***[insert full name]***
REOI No. and title: _____ ***[insert REOI number and title]***
Page___ ***[insert page number]*** of ___ ***[insert total number]*** pages

<table>
<tr><td>Similar Contract No.

[insert number] of [insert number of similar contracts required]</td><td colspan="4">Information</td></tr>
<tr><td>Contract Identification</td><td colspan="4">[insert contract name and number, if applicable]</td></tr>
<tr><td>Award date</td><td colspan="4">[insert day, month, year e.g., June 15, 2018]</td></tr>
<tr><td>Completion date</td><td colspan="4">[insert day, month, year, e.g., October 20, 2021]</td></tr>
<tr><td>Original contractual completion period</td><td colspan="4"></td></tr>
<tr><td>If there was any delay in completion, provide the period of delay due to consultants default Cause of delay</td><td>Force Majeure</td><td>Contractually justified extension of time</td><td>Consultants default</td><td>Others</td></tr>
<tr><td>Period corresponding to cause of delay (months)</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Role in Contract

[check the appropriate box]</td><td>Prime Consultant ☐</td><td>Member in JV

☐</td><td>Management Consultant

☐</td><td>Sub-consultant ☐</td></tr>
<tr><td>Total Contract Amount</td><td colspan="2">[insert total contract amount in EURO or US$ or local currency (AMD)]</td><td colspan="2">[insert exchange rate and total contract amount in EURO/US$ equivalent, if contract signed in local currency (AMD)]</td></tr>
<tr><td rowspan="2">If member in a JV or sub-consultant, specify share in value in total Contract amount and roles and responsibilities</td><td>[insert a percentage amount]</td><td>[insert total contract amount in EURO or US$ or local currency (AMD)]</td><td colspan="2">[insert exchange rate and total contract amount in EURO/US$ equivalent, if contract signed in local currency (AMD)]</td></tr>
<tr><td colspan="4">[insert roles and responsibilities]</td></tr>
<tr><td>Description of the similarity in accordance with Technical Qualifications</td><td colspan="4"></td></tr>
<tr><td>Complexity</td><td colspan="4">[insert description of complexity]</td></tr>
</table>

Methods/Technology	***[insert specific aspects of the methods/technology involved in the contract]***
Other Characteristics	***[insert other characteristics as described in Section VII, Scope of Purchaser's Requirements]***
Client's Name:	***[insert full name]***
Address : Telephone number : E-mail:	***[indicate street / number / town or city / country]*** ***[insert telephone numbers, including country and city area codes]*** ***[insert e-mail address, if available]***

Note: The contracts specified in the Form must be completed successfully. The Client has the right to request from the Consultant/Applicant documents confirming the authenticity of the experience provided by Consultant, such as copies of implemented contracts, certificates, extracts etc.

TERMS OF REFERENCE (ToR)

for Consultancy Services - Firms Selection

"Technical Supervision over seismic upgrades, energy efficiency improvements and reconstruction of Kindergartens Nos. 17, 39, 46, 64, 72, 93 & 133"

1. GENERAL BACKGROUND

Yerevan, the capital of Armenia and home to over a third of the national population, has made strategic and institutional commitments toward sustainable energy development, energy efficiency (EE), and climate resilience. As the country's largest urban center and economic hub, Yerevan plays a critical role in Armenia's broader energy and environmental policy landscape.

1.1 Strategic framework and policy commitments

Yerevan has adopted several strategic plans that frame its energy and climate priorities:

- **Yerevan Green City Action Plan (GCAP)** (2020): Developed with support from the European Bank for Reconstruction and Development (EBRD), the GCAP identifies priority sectors—including energy, buildings, waste, and transport—with targeted measures to improve environmental performance and reduce emissions. The plan emphasizes retrofitting public buildings, advancing renewable energy use, improving public transport, and implementing energy-saving regulations.
- **Yerevan City Sustainable Energy Action Plan (SEAP)** (2010): In alignment with the EU's Covenant of Mayors initiative, this plan outlined a roadmap to achieve a 20% reduction in greenhouse gas (GHG) emissions. It identified EE improvements in buildings, street lighting, and municipal services as key strategies, with implementation support from local and international partners.
- **Sustainable Energy and Climate Action Plan (SEDCAP)** (updated 2025): Following Yerevan's renewed commitment under the **Covenant of Mayors for Climate and Energy**, the city set a more ambitious goal of **30% GHG reduction by 2030**, along with **climate adaptation** measures. The SEDCAP reflects an integrated approach that addresses both mitigation and resilience, incorporating updated baseline emission inventories and sectoral analyses.

These documents were developed through participatory processes involving stakeholders, expert reviews, and public consultations, ensuring alignment with both local realities and international climate and energy frameworks.

Yerevan has benefited from substantial technical and financial support from the European Investment Bank (EIB), UNDP, European Bank for Reconstruction and Development (EBRD), EU Neighbourhood Investment Platform, and the Eastern Europe Energy Efficiency and Environment Partnership (E5P).

1.2 Key Energy Efficiency Projects

Energy efficiency in public buildings remains one of the highest-impact areas of intervention in Yerevan:

- Yerevan Energy Efficiency Project (2017–ongoing): Focused on rehabilitating kindergartens through building envelope insulation, heating system upgrades, and energy-efficient lighting.
- Yerevan Energy Efficiency II Project (2024–ongoing): Supported by a €25 million loan from the EIB, a €10.1 million grant from the EU Neighbourhood Investment Platform, and €2 million co-financing from the Yerevan Municipality, this project scales up earlier efforts to cover additional public buildings, including kindergartens and polyclinics. It is expected to significantly reduce energy consumption and GHG emissions, while improving indoor comfort and health standards.

Yerevan stands out in the region for its structured, multi-tiered approach to energy efficiency and climate action. The city's integration of long-term planning (SEDCAP, GCAP), institutional commitments, and access to international financing mechanisms positions it as a model for sustainable urban energy transformation in Eastern Europe and the Caucasus. Continued focus on implementation, public-private cooperation, and monitoring will be essential for achieving its 2030 climate and energy goals.

1.3 Consultant Selection for Technical Supervision

Yerevan Energy Efficiency II Project

Within the framework of the **Yerevan Energy Efficiency II Project**, it is planned to implement energy efficiency renovation (or improvements) and seismic upgrades **of 32 kindergartens and 6 polyclinics in Yerevan**, aligning their technical condition with the following standards and requirements:

- RA Norms 20.04.2020 – "Earthquake-Resistant Building. Design Norms"
- RA Norms 24.02.2022 – "Ensuring Energy Efficiency of Buildings. Energy Efficiency Assessment Indicators"
- RA Government Decision No. 1504-N, dated December 25, 2014 – "On the Application of Measures Aimed at Increasing Energy Saving and Energy Efficiency in Objects Built (Reconstructed, Renovated) with State Funding"
- Other applicable energy efficiency standards

To ensure technical supervision of the works for the above-mentioned buildings, it is planned to select a specialized consulting organization (hereinafter referred to as the "Consultant"). Financial resources will be allocated to ensure proper technical supervision of the buildings being reconstructed/renovated. A Time-Based Contract will be signed with the Consultant.

The selection of the specialized Consultant will be conducted through a competitive process in accordance with the rules and procedures of the EIB («Guide to Procurement for projects financed by the EIB», March 2024). The **"Guide to Procurement"** is available online on EIB's website: https://www.eib.org/en/publications/20240132-guide-to-procurement-for-projects-financed-by-the-eib

The Yerevan Municipality (hereinafter referred to as the "Client"), through the "Investing Projects Implementation Unit Building up of Yerevan" Community Non-Commercial Organization (hereinafter referred to as PIU), will publish a Request for Expressions of Interest (REOI) to select a Consultant to perform this assignment. **The tender will follow the Quality and Cost-Based Selection (QCBS) procedure**.

2. OBJECTIVES OF THE ASSIGNMENT

This ToR provides consulting services within the framework of the contract signed between the Client and the Consultant. The purpose of this work is to provide technical supervision services during the reconstruction of nursery-kindergartens in the administrative districts of Yerevan, Republic of Armenia: No. 17 in Kentron district, No. 39 and 46 in Ajapnyak district, No. 64 and 72 in Erebuni district, No. 93 in Malatia-Sebastia and No. 133 in Shengavit district.

3. SCOPE OF SERVICES

3.1 Description

The Consultant will review the Construction Permit, Design Details, Environmental and Social Management Checklist, the ESMP and Monitoring Plan (MP) included therein, the Grievance Redress Mechanism, and will monitor the compliance of the Contractor's specific solutions and actions with the design documents. The kindergarten's project, seismic assessment, energy audit report, design documents and other necessary documents will be provided additionally.

The addresses of the kindergartens, along with the necessary information, are provided below.

#	Kindergarten	Location	Established Date	Anticipated groups groups/children	Land Area (ha)
1.	**17**	Tigran Metsi Ave., 36a Building (Kentron administrative district), Yerevan, Armenia;	1961	8/240	0.40413
2.	**39**	Margaryan Street, 18/4 Building (Ajapnyak administrative district), Yerevan, Armenia;	1972	10/300	0.490924
3.	**46**	Bashinjaghyan Street 1st Lane, 9 Building (Ajapnyak administrative district), Yerevan, Armenia	1972	10/300	0.810999
4.	**64**	Avanesovi Street Lane, 12 Building (Erebuni administrative district), Yerevan, Armenia	1972	12/360	0.500893
5.	**72**	Khaghagh Doni Street, 21 Building (Erebuni administrative	1981	7/238	0.12438

		district), Yerevan, Armenia			
6.	**93**	Raffu Street, 69 Building (Malatia-Sebatia administrative district), Yerevan, Armenia	1982	12/360	1.22785
7.	**133**	Maisi Inni Street, 16 Building (Shengavit administrative district), Yerevan, Armenia	1963	8/240	0.3419

3.2 Scope of work, clarifications and construction contract administration

In writing this TOR, an attempt has been made to outline the Consultant's tasks in the performance of the Services in as much detail as possible. However, the Consultant should bear in mind that the list of tasks and activities can in no way be considered a definitive and comprehensive description of the Consultant's responsibilities. Rather, it is the Consultant's responsibility to critically assess the scope of the services specified and to expand, reduce or modify them in consultation with the Client where it deems necessary based on its professional judgment and knowledge. The Consultant is expected to carry out all work that is necessary to achieve the objectives of the project.

The Consultant shall, where necessary, assist the Client/Engineer in clarifying the construction contracts, including the terms of the Contract and the administration of the Contract. The Consultant shall closely monitor any situation that may give rise to claims by the Contractor and shall recommend specific measures to the Client/Engineer to prevent or minimize such claims. The Consultant's qualified staff shall assist To review and evaluate the Contractor's requirements and provide recommendations to the Client/Engineer.

As practice shows, disputes arising between the Client and the Contractor during construction regarding the interpretation of specifications, contractual regulations, contract content, omissions, extension of time, additional work, conditional work, additional claims, compensation and other issues are more common than the exception. The Consultant will suggest measures to be taken by the Client/Engineer in such cases and will assist in all types of negotiations aimed at resolving these disputes.

The Contractor shall discuss any issues arising during construction with the Consultant's field supervisors, Site Supervisors and the Employer/Engineer. The Consultant shall keep brief minutes of these discussions. Information regarding the issues shall be compiled in the form of a letter submitted by the Contractor. Responses to the letters shall be in writing and documented with photographs.

Issues related to the project will be discussed with the consultant performing author supervision in order to find appropriate solutions.

In the event of construction issues, the Consultant's Site Manager will work to resolve them, involving the Engineer as necessary. If the resolution involves a change in the scope of the

construction work, a Change Order will be prepared by the agreed Engineer and the Contractor will be asked to submit a quotation for the cost of the work. All additional work must be preceded by an approved Change Order, which must be signed jointly by the Employer/Engineer and the Consultant. All work within the Change Order must be carried out in accordance with the provisions of the construction contract.

The Consultant is required to participate in meetings, which will also include the Client and the Contractor, as well as other invited parties, the main purpose of which is to:

- The Consultant shall assess the compliance of the design documents with the requirements of the Contract. In justified cases, the assessment of compliance will be agreed with the Client;
- Discussion and resolution of current issues.

The Consultant will participate in working visits, meetings organized outside the Client's office with the participation of the Client, the Contractor and other interested parties, which are intended to clarify and make working decisions, and which may be accompanied by site visits to the locations specified in the design documents or to the office of one of the parties. The Consultant is obliged to draw up minutes of these meetings and monitor the implementation of the decisions taken.

Such working visits will be organized at the initiative of the Consultant, the Client or the design consultant. Meetings should be held once a week, but more often if necessary (in parallel, there will be meetings on issues related to design documents and construction works). Each meeting will be chaired by the Project Manager.

3.3 Drawings

The responsibilities of the consultant team leader include working with drawings, including:

- Prepare additional information on drawings (if such a need arises during construction),
- Examine the additional drawings (work organization drawings) prepared by the Contractor to be submitted to the Client.
- Approve the execution drawings submitted by the Contractor.

3.4 Location

An important objective of quality control is to ensure that the work is performed in accordance with the Contract drawings and Technical specifications.

Prior to the commencement of construction works, the Consultant will work with the Contractor and mark all key points (at locations as provided in the design) for checking the horizontal level, as well as all reference marks.

The Consultant and the Contractor shall carry out an initial ground level profile survey which will be used for volume calculations. The Consultant and the Contractor shall agree on the number of markers and the placement points to ensure that the work is carried out in the correct directions and markers. The Consultant shall supervise the installation of structures and all other work required by the design. The benchmarks, slopes and alignment shall be checked on site to ensure that they meet the design requirements and are accurate.

Before accepting the completed work at a particular site, the accuracy of the completed lines and levels will be checked. To do this, the following must be checked:

- leveling, longitudinal and transverse sections,

- procedure for locating buildings (descriptions for installing temporary benchmarks and leveling are presented in the Technical Specifications).

3.5 Construction schedule control

Within Ten (10) calendar days after the Employer's order to commence work (Notice of Commencement of Work), the Contractor, in consultation with the Consultant, shall submit to the Employer a Schedule of Works, a Detailed Work Plan in the form of a graphical table, and actual on-site verified construction drawings and amendments, if they differ from the tender design drawings. Such Schedule of Works and Work Plan shall reflect all stages of construction implementation with separate sub-stages and shall indicate critical moments that may hinder the implementation of construction.

The Consultant Team Leader, in conjunction with the Contractor's Construction Manager and the Client/Engineer, will review the proposed Work Schedule and Work Plan for the facility, as well as the proposed payment schedules and equipment procurement and installation periods. If necessary, the Work Schedule and Work Plan will be supplemented by the Contractor's Construction Manager after review. The final Work Schedule and Work Plan will be submitted to the Consultant Team Leader and then to the Client/Engineer for approval.

The Contractor is required to update the schedules every month and include them in the monthly reports.

Fifteen (15) calendar days or more behind schedule, the Consultant Team Leader shall request the Contractor to submit a revised schedule within **two (2) calendar days**, indicating how they plan to complete the work on time. The request for revised schedules shall be in writing.

Any request for an extension of the project period must be accompanied by a detailed revised schedule, indicating the reason for the proposal, how the time is planned to be used, and what equipment and personnel will be involved in the work.

The Consultant Team Leader shall ensure that the Contractor submits an updated Schedule to the Employer's Engineer at the intervals specified in the construction contract. The Consultant Team Leader shall monitor the work and request updated schedules from the Contractor if he considers that the work is falling behind schedule.

3.6 Work quality control and field inspections

The purpose of quality control is to ensure that all work performed complies with the working drawings (project, drawings and dimensional sheets) and the requirements of the Technical Specifications.

If design changes occur during construction, the Consultant shall promptly notify the Client's design and construction engineers and environmental and social specialists, as appropriate. With the coordination and support of the latter, the Design Consultant shall make appropriate changes to the ESMP, MP, RAP and the full Environmental and Social Management Checklist. All work shall be suspended and resumed only after receiving the Bank's approval.

Quality control of construction phases is a long process that requires careful inspection and recording of all construction work data, including:

- choice of building materials,
- Selection of appropriate equipment
- composition of concrete mix,

- Preparation of reinforced concrete structures according to the approved concrete brand/class,
- implementation of construction works using appropriate technology,
- implementation of thermal insulation and energy-efficient windows, as well as decommissioning of outdated heating, ventilation and air conditioning systems and installation of new ones that meet the requirements,
- correct use and operation of installations and equipment,
- sample selection and material testing**.**

All tests and sampling, including testing of materials, completed works and finished parts of buildings, shall be carried out in appropriate laboratories (Appendix 4). If the reliability of any data is questionable, for example, there is a discrepancy between the test results, this shall be immediately reported to the Engineer. The latter shall make recommendations to avoid such situations. If necessary, additional inspections and tests shall be required.

Effective quality control requires the Consultant to maintain a construction log (in electronic format on a platform accessible to the Client), inspection reports and records to accurately reflect the progress of construction and the performance of the works.

The following information must be recorded daily:

- important events that took place at the construction site,
- weather conditions,
- hydrological conditions of the construction site,
- duration of adverse weather conditions,
- the number/quantity of workers, equipment and materials on the construction site,
- equipment downtime,
- training and application of safety techniques,
- measurement data, initial land marks, etc.,
- corrections to drawings,
- construction sequence,
- the results of all tests and research,
- property damage, personal injury,
- other events, such as visits by officials.

If the Consultant is convinced that the quality of the work performed by the Contractor is not satisfactory, he must, through the Client, request in writing from the Contractor to improve the quality of the work, and in some cases, to terminate the work. Termination of work is a very serious decision, it must be well justified, and this measure should be taken with great caution. Notice of cessation of work shall be given to the Contractor in writing after consultation with the Client/Engineer. Any notice of cessation of work shall be preceded by discussions with the Client/Engineer.

The Consultant will also conduct awareness monitoring of the Contractor to determine their knowledge of Armenian safety regulatory documents in the construction sector and ensure that copies of relevant laws are available at the site.

The consultant is responsible for inspecting the work being carried out at construction sites. The aim of the inspection is to identify defects in a timely manner and ensure the quality and safety of the construction.

The representative responsible for the operation and maintenance of the kindergarten has the right to carry out independent or joint control of the quality of construction. In case of detection of deviations from the design decisions, he must inform the Consultant through the Client, who

is obliged to take them into account and, if the observations are justified, make appropriate decisions. For this reason, testing of the completed sections should be carried out with the participation of a third party (the consultant who prepared the project, the Consultant's team, the Client's representative).

The consultant's technical team must be sufficiently equipped to carry out the following inspections:

- Inspection of structural steel structures and welds,
- inspection of construction works, all materials and equipment to be used,
- checking the formwork and reinforcement connection diagrams, formwork temperatures,
- checking the cleanliness of the surfaces of the formwork panels, the correctness of their installation direction and inclination,
- checking the availability and working conditions of the Contractor's equipment before using the concrete mix, for example, checking the availability of vibrating platforms, beacons, trowels, shovels and concrete mixer trucks,
- checking the installation of insert parts,
- During the placement of concrete produced by the concrete plant, sand and gravel aggregates are mixed at least once a day.
- Checking the temperature accuracy of the concrete composition: sand, gravel, water, and cement proportions.
- Inspection of Contractort's work implementation is in accordance with approved technical designs. If the results are poor, the inspector in poor quality of work, the inspectors shall inform the Contractor and the Client. If the Contractor does not change his methods, the Consultant's Site Manager, through the Client, shall be obliged to stop the work.
- Inspection reports should clearly explain the actions taken and the reasons for them.
- Checking and approving hidden work reports submitted by the contractor.
- Measurements, confirmation, and registration of completed work.
- During the period of correction of defects that have arisen during the defect elimination period, if necessary, technical control shall be carried out upon written notification of the Client.

The Client/Engineer will support all measures taken by the Consultant aimed at improving the quality of the work.

3.7 Environmental and social impact monitoring activities

Environmental and Social Management Plans (ESMPs) have been prepared for the construction works for the rehabilitation of the canals of the internal economic networks, including monitoring plans. The ESMP forms part of the contract for the implementation of the construction works, and the construction contractor will be responsible for fully following the ESMP and the fulfilment of Bank environmental and social requirements in according with the EIB "Environmental and Social Standards" (The EIB **"Environmental and Social Standards"** is available online on EIB's website: https://www.eib.org/en/publications/eib-environmental-and-social-standards). The tasks of the Technical Supervision Consultant include the supervision of the implementation of the ESMP by the construction contractor. For this purpose, the Consultant shall carry out environmental monitoring of the works in accordance with the ToR and complete the "Monthly Field Environmental Checklist" attached to this ToR (see Appendix 1). If a change in the pipeline route is required during construction, the Consultant shall ensure that construction works are suspended in those sections until the Employer has clarified the land ownership and entered into the necessary land use agreements.

The Consultant shall immediately inform the Employer of any possible change in the pipeline route.

3.8 Safety on the construction site

Construction Site Safety: One of the important functions of technical supervision is ensuring safety at the construction site. Supervisors monitor compliance with labor protection rules and instructions, conduct inspections, and train workers in basic safety principles. They also ensure that the construction site has the necessary protective equipment and that fire safety requirements are met.

3.9 Amendments to the construction contract

During construction, it may be necessary to make changes to the original designs and specifications or to make additional designs as a result of special circumstances that prevent the use of existing designs.

If Contractors are required to perform work not included in the original contract, or to revise a portion of the work, they will be given field instructions. The inclusion of additional work or design changes must be accompanied by the submission of a Change Order. However, as previously noted, the Consultant team and the Client/Engineer will work to revise the design of these portions based on the results of the Consultant's initial design/construction specialist review.

Instructions to the Contractor must be in writing.

3.10 Changes to the design and amended orders in the construction works contract

If necessary, the Author Control Officer will make design changes, as amended. order and submit it to the Engineer for review and approval. The Consultant's job is to ensure that the work performed complies with the final/working designs.

All changes shall be valued at the unit prices specified in the construction works, if applicable, in the opinion of the Engineer. If these are not acceptable, the Engineer and the Contractor shall agree on appropriate acceptable unit prices and values after consultation between the Engineer and the Employer and the Contractor. In the event of disagreement, the Engineer shall record the unit prices which he considers to be applicable and shall notify the Employer and the Contractor thereof.

3.11 Consultant Responsibilities

The Consultant is required to:

- Create/provide access to an online project management platform that allows detailed visibility of monitoring and control activities, data, records, protocols, reports, and other documentation related to the ongoing works.
- Oblige the Contractor to ensure the maintenance and insurance of the construction site and property in accordance with the procedure agreed with the Client.
- Require the Contractor to ensure the maintenance and cleanliness of the access roads and areas adjacent to the site buildings.
- Provide its opinion and approval on the construction methods, site organization, including the execution of temporary works, which the Contractor will propose in accordance with the Work Contract.

- Require to consistently perform laboratory tests in accordance with Appendix 4.
- Instruct the Contractor to conduct additional inspections of any materials or work if their quality is in doubt.
- Supervise the repair and/or restoration of community and private property that was accidentally damaged during construction.
- Upon the Client's request, express its opinion on the preliminary amendments made to the Employment Agreement within **fourteen (14) calendar days.**

The Client will not provide the Consultant with machinery, office space, furniture, computer equipment, etc. The Consultant is expected to establish a field office.

Cost control (control/monitoring of actual costs incurred and their comparison with budget estimates) applies to all stages of the construction project implementation. To this end, the Consultant is required to prepare a procedure for accountability, monitoring, cost and cost control related to construction, in particular:

- Maintain cost accountability for actual and planned costs,
- Prepare the cost report in the form requested by the Client, as well as distribute these documents as instructed by the Client,
- Regularly organize meetings to discuss the pace and volume of construction work, differences between actual and planned costs, prepare and establish a procedure for controlling cost changes,
- To monitor the accuracy of the list of completed works and the interim payment certificate submitted by the Contractor, on the basis of which invoices are issued, in terms of their provision and justification of the items and amounts specified in the invoice, in accordance with the rules set out in the contract concluded with the Contractor. The Consultant is accountable to the Client/Engineer and is fully responsible for the volumes included in the List of Volumes of the Certificate,
- to check the process of estimating the scope of work carried out by the Contractor,
- Prepare a final report of completed work.

The Consultant shall be responsible for the overall management of the project, in particular, to periodically analyze the status of the construction project implementation, to identify any problems, hazards or threats that threaten the successful completion of the construction project (within the planned deadlines and budget). In the event of such a problem, the Consultant, within the scope of its authority, shall immediately take action to eliminate the problem or shall prepare specific proposals for the Client on the implementation of specific actions. The Consultant shall present and describe the above-mentioned problems in its monthly report.

In the event that construction work is not proceeding according to schedule (or there is a risk of such), the Consultant shall immediately inform the Client about the measures being taken to correct the situation, as well as take these measures in agreement with the Client. The Consultant shall also:

- To the extent possible, identify the risk of a possible claim arising from the Contractor or any third party and immediately inform the Client thereof, presenting methods and proposals for resolving or preventing such claims.
- In the event that a lawsuit has been initiated between the Client and the Contractor in connection with the implementation of construction works, support the Client by providing comprehensive information, clarifications, and a clear position on the subject of the dispute.

- Keep a copy of the Works Contract in the office (a copy of the Construction Contract will be provided by the Client immediately at the beginning of the assignment), as well as records and writings related to the Works Contract, in particular as evidence - copies of any dispute, claim submitted by the Contractor, in the event of a disaster, accident or other circumstances, including copies of documents prepared by the Contractor in paper and electronic form.
- Organize weekly meetings at the construction site regarding technical, project progress, future planning, and other issues with the participation of the Client and the Contractor, and prepare minutes of these meetings and include them in monthly reports.
- Ensure compliance with safety equipment standards and rules during the performance of work. Conduct daily instructions by making entries in the safety equipment maintenance instruction log.
- The consultant should engage environmental and social specialists for monitoring the ESMP.

4. THE CONSULTANT TEAM

4.3 Team composition

Technical supervision shall be carried out by a team with relevant work experience and shall be staffed with qualified specialists. The consultant team shall consist of at least the following Key Personnel:

- Consultant team leader,
- Precinct Heads (at least 4 people), hereinafter referred to as the Consultant Precinct Head,
- Quality Control and Materials Testing Engineer (hereinafter referred to as Quality Control Engineer) (at least 1 person),
- Environmental expert (at least 1 person),
- Social issues expert (at least 1 person),
- Health and safety expert (at least 1 person),
- Technical supervisors (at least 7 people).
- Geologist (at least 1 person)
- Technical supervisors of engineering networks (at least 4 people)

The consultant team leader must be a specialized engineer, have solid technical and management skills and at least 5 years of contract management experience, the ability to identify problems that arise during construction and resolve them in a timely manner.

The Consultant's Site Manager(s) is to provide communication between the Client and the Contractor and to present solutions to problems directly from the Contractor. He/she should be a graduate with a degree in civil engineering and have at least 5 years of experience in the construction industry.

A quality control and materials testing engineer must have a higher education degree with a qualification as a construction engineer or a construction technologist and have at least 5 years of experience in the field of construction and laboratory testing.

The Environmental Expert must have a higher education degree, at least 3 years of professional work experience in the fields of environmental protection, water resources management or environmental and social impact assessment. The Environmental Expert will be responsible for ensuring that the construction works being carried out comply with the requirements of the project's Environmental and Social Management Checklist, as well as the

Environmental and Social Management and Environmental Monitoring Plans.

The Social Issues Expert must have a higher education degree and at least 3 years of professional work experience in the field of social impact assessment. The Social Issues Expert will be responsible for ensuring that the construction works being carried out comply with the social requirements set out in the project's Environmental and Social Management Checklist, as well as the Environmental and Social Management and Environmental Monitoring Plans.

The Health and Safety Expert must have a higher education degree, at least 3 years of professional work experience in the field of work and health and safety at work. The Health and Safety Expert is responsible for monitoring the compliance of the construction works with the requirements set out in the project's Environmental and Social Management and Environmental Monitoring Plans.

Technical supervisors must have higher education degree, be qualified as engineers-construction engineers, and have at least 5 years of experience in field construction work,

Geologists must have a higher education, a qualification as an engineer-geologist, and at least 5 years of relevant work experience.

Technical supervisors of engineering networks must be higher educated engineers with the appropriate qualifications as construction engineers, and have at least 5 years of experience in field construction of engineering networks.

At least one of the specialists included in the staff of the Consulting Organization (local and/or international) must have a 1st class certificate of the relevant subtype (Resolution of the Government of the Republic of Armenia No. 2106-N of November 30, 2023).

If necessary, the Consultant must be ready to supplement its staff with additional specialists, agreeing on the candidacy with the Client (for example, in the case of the RAP development task, a resettlement specialist will be needed).

The consulting organization (local and/or international) must have a valid Class 1 construction quality control technical license and an attached insert (Resolution of the Government of the Republic of Armenia of November 30, 2023 N 2106-N) according to the following types:

- residential, public and industrial structures,
- power supply (internal and external networks of power supply, electric lighting, power supply systems, photovoltaic and wind power plants),
- heat and gas supply and ventilation (ventilation, heating and air conditioning systems, heat supply and gas supply systems),
- water supply and drainage (internal and external networks of water supply and drainage, hydro-amalgamation),
- communication systems (telecommunications and signaling systems, transmitters, receivers, antennas, amplifiers),
- engineering and geological exploration.

Moreover, the validity period of the license cannot be less than the sum of the warranty service periods for the completion of the construction works and the elimination of defects discovered after their completion.

Depending on the workload, the total and working hours during the construction season for the entire project implementation period, the Consultant must specify in its proposal the technical and quality control approaches and methodology, as well as ensure the minimum required

number of the Consultant's individual specialists mentioned above to prevent the absence of responsible personnel at the construction site.

The Consultant Team Leader shall ensure the constant presence of his/her main representative on site during the execution of the construction works. This may be the Site Manager or, if this is not possible due to the management of multiple sites, supervision may be exercised by the Senior Field Supervisor.

The entire technical supervision team works in close cooperation with the Engineer responsible for coordinating the Client's construction work.

4.4 Compliance with environmental, social and safety requirements

The Consultant Team shall ensure that the Contractor is aware of the RA Construction Safety Regulations and that copies of these regulations are maintained at the construction site in an accessible location. The Consultant Team shall also be responsible for ensuring that the Construction Contractor complies with the provisions of the ESMP and the Bank environmental and social requirements (EIB "Environmental and Social Standards") as well as the RAP that are to be applied during construction. The Consultant shall have environmental and social experts to ensure that the environmental and social requirements of the works are met. The personnel responsible for the implementation of environmental and social requirements shall, as necessary, provide training to the Contractor's staff to promote their compliance with the applicable areas of the Environmental and Social Management Checklist, ESMP, Monitoring Plan and RAP.

The Technical Supervision Consultant is obliged to immediately inform the Client of any work-related incident that has affected the health of the Contractor's employees or members of the project-affected community (injury and death), as well as any incident (car accident, accidental release of toxic substances, fire, etc.) that has negatively affected natural assets and property.

5. REPORTING REQUIREMENTS

5.1 Reports to be submitted by the consultant

The Consultant shall prepare and submit to the Client for approval the following reports:

#	Report name	Number of examples (Armenian/English)	Presentation day
1.	Monthly reports (including electronic versions in Microsoft Excel and/or Word format)	1/1	No later than the 5th business day of the following month
2 .	Monthly environmental reports (including a brief textual review of the construction activities for the given month, an analysis of environmental issues, a description of the implemented or necessary mitigation measures, as well as a completed monthly environmental monitoring checklist (see Appendix 1, 2, 3 standard forms attached to the AP) (including electronic versions in Microsoft Excel and/or Word format)	1/1	No later than the 10th business day of the following month
3.	Quarterly report (including electronic versions in Microsoft Excel and/or Word format)	1/1	The 10th business day of the end of each quarter
4	Final Completion Report (including electronic versions in Microsoft Excel and/or Word format)	1/1	Within the 7th working day after the

			issuance of the "Substantial" completion certificate of construction works

Monthly reports must contain the following information:

- summary of the process of technical supervision of construction of the contract execution,
- a summary of the execution of the construction contract at each facility,
- contractor schedules,
- monthly progress reports for each site,
- further work and expected costs,
- construction work delays and their causes,
- requirements presented by the Client to the Contractor,
- technical issues: summary and evaluation of tests,
- photos of the work in progress,
- the status of implementation of environmental requirements of the works, including textual observation, analysis, implementation of mitigation measures, as well as a completed monthly environmental monitoring checklist (see attached sample form),
- security issues,
- contractor's building materials and equipment at the construction site,
- copies of important correspondence related to the program,
- expense reports,
- other relevant questions.

Monthly interim reports should also include a graphical representation of actual and planned work, expected construction progress, and projected costs.

The Consultant shall submit a final report within **five (5) working days** after the completion of its services . It shall include the following:

- construction work chronology for all sites and types of work,
- verification of the implementation of the requirements presented to the Contractor and the methods for their resolution,
- the financial balance of the final completion certificate,
- additional work carried out and their justifications for recommendations
- all changes made to the designs during construction and their justifications,
- construction-related approvals and copies of correspondence,
- photos taken during the implementation of hidden work, with dates.

6. DURATION OF TECHNICAL CONTROL WORKS

The consultancy services are expected to commence in **December 2025**. The total duration of the services will be up to a maximum of **twenty-four (24) calendar months** , calculated from the date of commencement of work by the Contractor(s) (**the list of contracts and detailed descriptions of the packages are provided in Annex-A to this TOR below**).

The Defects Liability Period (DLP) under each construction and works contract will be **365 (three hundred and sixty-five) calendar days** after the issuance of the "Works Acceptance Certificate".

During the Defects Liability Period, the Consultant must:

- Secure necessary experts (team leader, relevant specialist, (depending on the nature of the work) availability construction in the public square(s),

- In the event of identified deficiencies, the contractor shall pay a penalty to the client for failure to fulfill or improper fulfillment of its obligations, in the amount of actual expenses incurred by either the contractor or the client for the elimination of the identified deficiency,
- In all cases, ensure the mandatory presence of relevant experts at the construction site, at the Client's first request and according to the agreed schedule,
- Provide a written conclusion To the client found about eliminating defects.

The Consultant has to prepare his Financial Proposal for Time-Based contract based on that period and conditions.

APPENDICES

Appendix - A

LIST OF CONTRACTS AND DETAILED DESCRIPTIONS OF PACKAGE

#	Package/Contract(s) name and Ref Nos.	The total completion time for all work starting from start date	Acquaintance
Package #1	"Seismic retrofitting, energy efficiency improvement and reconstruction work of kindergartens No. 17, 39, 46, 72, 93, 133 and 64 (consisting of 7 lots)" (YEEP-II/ICB/CW-25/001)		
Lot 1	"Seismic retrofitting, energy efficiency improvement and reconstruction works of Nursery-Kindergarten No. 17" (YEEP-II/ICB/CW-25/001-1) (Address: 36a, Tigran Mets Street, Kentron Administrative District, Yerevan, Republic of Armenia)	17 (seventeen) calendar months	The tender will be conducted in accordance with the International Competitive Bidding (ICB), an open procedures. The language of the contracts is English. Contract type: unit price-based contract. The period for eliminating defects is 365 (three hundred and sixty-five) calendar days after the issuance of the «Work Acceptance Certificate».
Lot 2	"Seismic retrofit, energy efficiency improvement and reconstruction works of nursery-kindergarten No. 39" (YEEP-II/ICB/CW-25/001-2) (Address: Margaryan st. 18/4, Ajapnayk administrative district, Yerevan)	20 (twenty) calendar months	
Lot 3	"Seismic retrofitting, energy efficiency improvement and reconstruction works of the nursery-kindergarten No. 46" (YEEP-II/ICB/CW-25/ 001-3) (Address: Bashinjaghyan 1st lane. 9, Ajapnayk administrative district, Yerevan)	20 (twenty) calendar months	
Lot 4	"Seismic retrofit, energy efficiency improvement and reconstruction works of Nursery-Kindergarten No. 72" (YEEP-II/ICB/CW-25/001-4) (Address: Khaghagh Doni str., 21, Erebuni administrative district, Yerevan)	17 (seventeen) calendar months	
Lot 5	"Seismic retrofit, energy efficiency improvement and reconstruction works of nursery-kindergarten No. 93" (YEEP-II/ICB/CW-25/001-5) (Address: Raffi 69, Malatia-Sebastia administrative district, Yerevan)	24 (twenty-four) calendar months	

Lot 6	"Seismic retrofit, energy efficiency improvement and reconstruction works of nursery-kindergarten No. 133 « (YEEP-II/ICB/CW-25/001-6) (Address: May 9-16 st., Shengavit administrative district, Yerevan)	24 (twenty-four) calendar months	
Lot 7	"Seismic retrofit, energy efficiency improvement and reconstruction works of nursery-kindergarten No. 64" (YEEP-II/ICB/CW-25/001-7) (Address: 12 Avanesov cul-de-sac, Erebuni administrative district, Yerevan)	20 (twenty) calendar months	

Brief description of the types of construction work being carried out:

- Basic works
- Strengthening the foundations
- Strengthening walls and columns
- Floor reinforcement
- Interior and exterior finishing works
- Roof reconstruction/construction
- Construction of engineering networks, etc.
- Conducting laboratory tests in accordance with Appendix 4 of this ToR.
- Energy saving and energy efficiency measures
- Heating and hot water supply system
- Electricity and lighting system
- Door and window structures

Appendix 1. MONTHLY FIELD ENVIRONMENTAL MONITORING CHECKLIST

Location of the construction site					
Contractor name					
Supervisor name					
Visit date					
Construction work status					
Verification subject documents and functions	Status				Notes
The contractor has construction materials extraction permission	Yes	Partially	No	C/N	
The contractor has concrete / asphalt factory operation permission					
The contractor has waste installation number permission					
The contractor has agreement services waiter's with: construction from the square household garbage removal regarding					
Construction the square fenced and warning the signs installed are					
The works are not disordering pedestrian and car movement, or provided temporarily alternative the approach					
Work the hours maintained are					
Construction machines and equipment standard technical is in a state of surplus smoke and noise, fuel and lubricants the leak is missing					
Construction materials and waste moving to cover having truck by car					
Construction the square watered - dust causing works in case					
Construction the camp fence, waste temporary accumulation locations and machinery/equipment service the squares defined are					

Construction to the camp water is supplied and drainage is ensured					
Construction the camp furnished first medical aid and firefighting by means					
The workers carry are outerwear, which corresponds to the implementation technological processes (gloves, helmets, respirators, goggles, etc.)					
Machines and mechanisms location and charging waterproofing is carried out platform on, special with an area where can accumulate operation and emergency accidents as a result emerging the leak					
Machines and mechanisms washing is carried out naturally aquatic from objects far, excluding leakage direct penetration natural waters					
Construction waste being installed are exclusively special defined in places					
Natural building materials extraction is done in the license brought conditions strictly maintaining					
Land works as a result caused excess materials and soil upper the layer must be kept separately and later be used backfill/site improvement number					
Random of finds detection in case works must be stopped and must be contacted to be confirmed cultural inheritance maintenance number responsible state bodies back					
Publication physical works from the end then the square/camp must be cleaned any from the remains and will be matched surrounding to the landscape					

Appendix 2: ENVIRONMENTAL AND SOCIAL IMPACT MITIGATION PLAN

ACTION	PARAMETER	MITIGATION MEASURES CHECKLIST
General	Notification	(a) Population informed is works about press and / or publicly accessible in places (including construction site) according to notifications through (b) Hand are to be brought required legal all permits, agreements, licenses and wording: program of actions number (c) The Contractor officially agreement is that all works will be done safe and disciplined in a way to reduce the effects nearby residents and surrounding environment on
	Worker safety	(a) Personal protective equipment for workers should comply with international best practices (helmets, masks and protective glasses where necessary, overalls and protective footwear, etc.) (b) First aid kits and fire extinguishers are available on the construction site. (c) Appropriate signs are posted on the construction site informing workers of emergency services (ambulance, fire department) contact information.
Impact on biodiversity	Flora	- Minimize impacts on vegetation by planning and implementing large-scale earthworks outside the active vegetation period (if construction works are carried out in natural landscapes or adjacent areas), - Strictly monitor vegetation clearance along canals being renovated to prevent impacts outside the designated area
	Animal world	- Limit habitat disturbance by confining construction activities to a narrow corridor along the pipeline route. Do not allow movement of vehicles/machines and careless placement of construction materials/waste in excessively large areas adjacent to the project site, - It is necessary to develop a schedule of land works that will prevent land works during the wintering and reproduction of animals.
Pollution control	Air quality	(a) Construction machinery and equipment shall be regularly and properly operated and maintained. (b) Excavated/excavated soil piles shall be compacted. (c) Dust sources should be watered down to minimize nuisance to nearby residents. (d) Materials and waste must be transported in a covered truck. (e) Vehicle speeds should be controlled to reduce road dust generation.
	Noise	(a) Noise generation during construction near residential areas shall be limited to working hours. (b) Enclosed/covered generators, air compressors and other powerful mechanical equipment should be used during work and the equipment should be located as far away from residential areas as possible.
	Waste	(a) Permanent landfills for waste disposal should be determined and agreed with local authorities. disposal sites should be provided to avoid excessive accumulation of waste on and around the construction site. (c) Where possible, recycling and reuse of construction waste (except asbestos) should be implemented. (d) Agreements should be reached with certified companies for the supply of construction machinery and for the removal and recycling of used tires and filters from mechanisms.

ACTION	PARAMETER	MITIGATION MEASURES CHECKLIST
		(e) Open burning of construction waste shall not be permitted on the construction site.
Erosion management		(a) Shore protection should be provided by strengthening the banks, building embankments in important areas, or strengthening with vegetation. (b) The topsoil shall be removed and stored for use in future site rehabilitation. (c) Surplus materials should be used for the restoration of damaged areas.
Random findings		(a) Land works time found random findings to discover in case activity need is be terminated, in writing notification need is be sent to the Ministry of Education, Science, Culture and Sports of the Republic of Armenia, the work need is to resume the above from the body official permission from receiving later.
Protection of water bodies	Turbidity	(a) Sludge traps and/or gabions should be installed along rivers to filter sediments carried by the land. (b) Erosion control measures should be applied in the manner described above.
	Pollution	(a) Maintenance of machinery and equipment in the immediate vicinity of water bodies shall be prohibited. (b) Maintenance and refueling of machinery and equipment shall be limited to specially designated areas with impermeable floors and sufficient capacity to contain spills in the event of fuel spills. (c) Agreements should be reached with certified companies for the processing/deactivation of used oils and sand/gravel soaked in petroleum products.
Danger of unexploded mines	Danger to human health and safety	Before excavation work begins, the Contractor must ensure that the site has been inspected and cleared of unexploded ordnance by the appropriate authorities.
Social risk management	Public Relations Management	(a) Appoint a local focal point who will be responsible for communicating with the local population and receiving their requests and complaints, (b) Introduce the EIA and maintain an EIA log in all affected communities and construction sites, (c) Consult with local populations to identify potential conflicts between foreign labor and local populations in order to manage them, (d) Increase community awareness about sexually transmitted diseases, due to the presence of external labor in the community, including locals in awareness-raising activities, (e) Project activities should be scheduled after the irrigation season to avoid/minimize service disruptions as much as possible; Inform local residents of construction and other work schedules, service disruptions, traffic diversions and temporary bus routes, blasting and demolition, as appropriate; (f) Limit construction activities to night hours. If necessary, carefully plan night work, informing the affected community in advance. (g) The construction site must be properly marked and fenced, (h) No construction materials or waste shall be temporarily stored on cultivated land or any type of private property. (i) Temporary storage areas for construction materials and waste must be allocated in a way that does not impede free traffic and pedestrian movement.

ACTION	PARAMETER	MITIGATION MEASURES CHECKLIST
		(j) Accidental damages caused by the Contractor shall be repaired.
	Work management	(a) If possible, do not locate construction sites near communities, (b) Locate and operate construction sites after consultation with neighboring communities, (c) Involve local unskilled and semi-skilled labor in construction work as much as possible, and where possible, improve the labor skills of local people to promote their participation in the work, (d) Provide toilet and washing facilities on construction sites with adequate facilities such as hot and cold running water, soap, and hand dryers. Any construction site that also houses the workforce should have a temporary septic tank to prevent contamination of nearby water bodies. (e) Raise awareness among workers on building relationships with local populations, develop a code of conduct in line with international practices, and strictly enforce it, including termination of employment and financial sanctions.

Appendix 3: ENVIRONMENTAL AND SOCIAL MONITORING PLAN

Action	What?	Where?	How?	When?	Why?	The cost	Who?
	Parameter to be monitored)	**This parameter is monitored)**	**This parameter is monitored**	**Set frequency or continuity**	**The parameter will be monitored**	**If not included in the project budget**	**Is responsible for monitoring**
CONSTRUCTION PHASE							
Notification	(a) The population is informed about the works through appropriate notices in the press and/or in public places (including the construction site). (b) Hand are to be brought required legal all permits, agreements, licenses and the formulations: program of actions number	In the precinct, in affected communities	Interviews with local governments and community members Monitoring contractor records	Before construction begins	Ensure that required information regarding construction is available to affected communities	Included in the program in the budget	PIU (through the supervising consultant)
Worker safety	Construction workers wear overalls and personal protective equipment. (helmets, masks and protective glasses, if necessary, outerwear and protective shoes, etc.), with the operation of construction equipment and the use of personal protective	At the precinct	Action control	During the entire construction period	To reduce potential accidents and injuries among workers	Included in the program in the budget	PIU (through the supervising consultant)

	equipment, First aid kits and fire extinguishers are available on the construction site. Appropriate signs are installed at the construction site, informing workers of emergency services (ambulance, fire department) contact information.						
Biodiversity	Flora Impacts on vegetation are minimized by planning and implementing large-scale earthworks outside the active vegetation period (if construction works are carried out in natural landscapes or adjacent areas), - Vegetation clearance along the canals being renovated is strictly controlled to prevent impacts outside the designated area. Animal world - Habitat disturbance is limited by restricting construction activities	At the precinct	Visual inspection	Monthly, throughout the construction period	In order to reduce the impact on biodiversity, To limit the risk of soil erosion	Included in the program in the budget	PIU (supervisor) consultant via) Environmental Protection and Subsoil Inspection Body

	to a narrow corridor along the pipeline route. Movement of vehicles/machines and careless placement of construction materials/waste in excessively large areas adjacent to the project site is not permitted, - A soil work schedule has been developed, which allows preventing soil work during animal hibernation and reproduction.						
Random finds	Land works time random found to discover in case activity who is it, in writing A notification has been sent to the Republic of Armenia. Education, science, culture and sports ministry, work will resume Armenia Education, science, culture and sports from the ministry official permission from receiving after.	At the station	Site investigation of accidental finds, Study of field documents	continuous	To protect cultural heritage from damage during construction works	Included in the program in the budget	PIU (through the supervising consultant)

Poshi	No excessive dust at the construction site	In the area and on the approach roads	Visual inspection	Regularly	In the case of construction work, the main air pollutant is dust, the impact of which, although temporary, can negatively affect both the health of workers in District A. and place residents of to reduce the risk of dust exposure	Included in the program in the budget	PIU (supervisor) consultant via) Environmental Protection and Subsoil Inspection Body
Noise	Monitoring working hours, Technical condition of equipment and machinery, Noise level in case of complaints	At the precinct	Visual inspection, Instrumental measurement of noise level in case of complaint	Monthly	Workers and residents security for the purpose	Included in the program in the budget	PIU (supervisor) consultant via)
Construction and household garbage collection	Building square to establish is community land on which number in advance the contractor hand is to bring community the agreement, build and household garbage spilled are not construction. public square,	In the room	Action control	Periodically during construction and after completion	To avoid soil and water pollution, In order to prevent deterioration of the aesthetic appearance of the area, Population in order to limit	Included in the program in the budget	PIU (supervisor) consultant via) Environmental Protection and Subsoil Inspection Body

	construction waste installed is construction. public special separated in the area, household garbage collected is construction from garbage separately: special containers in, building publication there are none garbage combustion visible signs, contractor by hand is brought waste final installation the agreement, waste installed are their number officially agreed in places				anxiety, Construction site with building materials and scattered fragments because of for the sake of avoiding accidents		
Transportation of building materials and waste Construction equipment movement	Technical condition of vehicles, Protection of truck cargo with special cover, Adherence to established times and routes for transportation	At the construction site	Inspection of roads adjacent to the construction site in the direction of movement	Monthly (by WDPIU) Daily (by technical control consultant) Conditional, by the Environmental Protection and Subsoil Inspection Authority, depending on their inspection	To limit soil and air pollution from emissions, To limit noise and vibration nuisance to local communities, To reduce traffic disruption	Included in the project budget and must be taken into account by the contractor	PIU (through the supervising consultant) Traffic police

				schedule			
Construction equipment maintenance	- Washing of construction equipment and vehicles outside the construction site or at a maximum distance from natural streams, - Refueling or servicing construction equipment outside the construction site or in a designated area	At the construction site and construction site	Action control	Random control during working hours Monthly (by WDPIU) Daily (by technical control consultant) Conditional, by the Environmental Protection and Subsoil Inspection Authority, depending on their inspection schedule	To avoid water and soil contamination from equipment operation Timely fire isolation and reduction of potential damage	Included in the project budget and must be taken into account by the contractor	PIU (through the supervising consultant) Environmental Protection and Subsoil Inspection Body
Liquid waste production	Provision and maintenance of toilets on the construction site in accordance with sanitary standards	At the precinct	Visual inspection	Monthly (by WDPIU) Daily (by technical control consultant) Conditional, by the Environmental Protection and Subsoil Inspection Authority, depending on their inspection schedule	To reduce pollution of surface and groundwater	Included in the project budget and must be taken into account by the contractor	PIU (through the supervising consultant) Environmental Protection and Subsoil Inspection Body

Construction site remediation and landscape restoration	Dismantling of construction structures (if any) and compaction of access roads and harmonization of the site with the landscape, Final cleaning of the construction site and roads and restoration of the area's landscape	At the precinct	Visual inspection	Monthly (by WDPIU) Daily (by technical control consultant) Conditional, by the Environmental Protection and Subsoil Inspection Authority, depending on their inspection schedule	To reduce the loss of aesthetic value of the landscape due to restoration works	Included in the project budget and must be taken into account by the contractor	PIU (through the supervising consultant) Environmental Protection and Subsoil Inspection Body
Earthworks	Soil upper layer removal and temporary storage for the purpose of soil processing, Temporary storage of excavated soil at a designated location, Backfill with excavated soil, as needed, and transportation of additional soil to a location approved in writing	In the room	Visual inspection	during earthworks after completion of earthworks	Soil fertile layer maintenance for the purpose To limit vegetation loss due to soil compaction and reduce particulate pollution of surface waters	Included in the program in the budget	PIU (supervisor) consultant via) Environmental Protection and Subsoil Inspection Body
Public Relations Management	- Communication with local governments is maintained. The details of the BLM contact person are posted at the construction site	In the precinct, in affected communities	Visual inspection	monthly, throughout the construction period	To ensure the health and safety of the community, To ensure uninterrupted	Included in the program in the budget	PIU (through the supervising consultant)

	and in the community, in a visible place. The BLM log is completed on site and at the WTPUI - Project work is planned after the irrigation season - The local population is informed about the schedule of construction and other works, service interruptions, traffic direction changes and temporary bus routes, as appropriate, - Construction work is limited at night, - The construction site is properly marked and fenced, No construction materials or waste shall be temporarily stored on cultivated land or any type of private property. (i) Temporary storage areas for construction materials and waste are allocated in a way that does not impede free traffic and pedestrian movement.				irrigation water, To protect private property from damage and ensure freedom of movement		

	- Accidental damages caused by the contractor are repaired (damages such as felling of fruit trees and moving of buildings and structures are compensated) - Safe access for people to sidewalks, homes and buildings, as well as pastures, is ensured						
Work management	a) Construction sites are not located in close proximity to communities, if possible, (b) Construction sites are located and operated after consultation with neighboring communities, (c) Local unskilled and semi-skilled labor, including women, is involved in construction work as much as possible. (d) Construction sites are provided with toilets and washing facilities,	At the precinct	Visual inspection	monthly, throughout the construction period	To uphold international labor standards	Included in the program in the budget	PIU (through the supervising consultant)

	(e) A Code of Conduct in line with international practice has been developed and is strictly enforced.						
Project review	A design change was made, including a change in the location and volume of the infrastructure due to unforeseen obstacles during construction.	at the precinct	Document review	monthly throughout the construction period	To monitor the use of newly included lands in the project, their ownership status, and the existence of community land use agreements	Included in the program in the budget	PIU (through the supervising consultant)
OPERATION PHASE							
Irrigation water quality	From the canal taken water chemical analysis	Along the entire length of the river	Document review	Irrigation water number unusual color, smell, etc. characteristics to discover in case	The soil, gravel waters and crops possible dangerous from pollution to protect for the purpose	Current expenditure of water utilities	Waterworks Environmental Protection and Subsoil Inspection Body
Technical condition of restored canals	the canals clogged are not with silt and with garbage, water the story damaged not and there is no overflow / overflow visible is there is no illegal water use	Along the entire length of the river	Visual inspection	Seasonal cleaning of canals should be part of canal operations. The sludge and waste generated after cleaning should be transported to an	In order to ensure the uninterrupted operation of renewable water resources	Annual budget of water utilities	Waterworks

				appropriate disposal site.			
Garbage accumulated from canal cleaning	Temporary storage of waste in designated areas, Transportation of waste to officially designated locations in Shamanak	Along the entire length of the river Waste disposal site	Action control	Twice a year: in spring and autumn	To prevent pollution of soil, surface and groundwater To maintain the aesthetic appearance of the area	Annual budget of water utilities	Waterworks
Renewable canal service in the area's pesticides application	Water users' possession are pests against to fight and pesticides management good to the experience Water users' application are pests against complex to fight resources.	In the agricultural fields of the territories	Action control	Throughout the entire operating period	To prevent soil and water pollution by pesticides the presence of food products containing pesticide residues and not meeting the required standards	Annual budget of water utilities	Waterworks

Appendix 4. LABORATORY TESTING PLAN

Earthworks			
Description	**Unit of measurement**	**Quantity**	**Number of attempts**
Soil compaction and other tests	By layers	-	22
Reinforced concrete works			
Reinforced concrete structures below 0+00 mark			
Concrete works			
Description	Unit of measurement	Quantity	Sampling 10x10x10 molds from every 50m3 of concrete volume (number of samplers)
Preparation of concrete preparation layer under the beams	m3		1
Manufacturing of monolithic steel frame beams	m3		6
Production of monolithic reinforced concrete walls	m3		3
Reinforcement works			
Description	Unit of measurement	Quantity	Sampling from each 20t batch by diameter
Reinforcement Ø 6mm A240 C	t		1
Reinforcement Ø 8 mm A240 C	t		1
Reinforcement Ø 8 mm A 500C	t		1
Reinforcement Ø 10 mm A 500C	t		1
Reinforcement Ø 12 mm A 500C	t		1
Reinforcement Ø 14 mm A 500C	t		1
Reinforcement Ø 16 mm A 500C	t		1
Reinforcement Ø 18 mm A 500C	t		1
Reinforcement Ø 22 mm A 500C	t		1
Concrete works above 0+00 mark			
Description	Unit of measurement	Quantity	Sampling 10x10x10 molds from every 20m3 of concrete volume (number of samplers)
Production of monolithic columns for reinforced concrete frames	m3		3
Preparation of E/b primitives	m3		7
Preparation of single-piece belts	m3		1
E/b Preparation of diaphragms	m3		5

Preparation of single-piece steel covers	m3		10
Making electric bicycles	m3		1
Preparation of E/B stairs	m3		1
Reinforcement works			
Description	Unit of measurement	Quantity	Sampling from each 20t batch by diameter
Reinforcement Ø 6mm A240 C	t		1
Reinforcement Ø 8 mm A240 C	t		1
Reinforcement Ø 8 mm A 500C	t		1
Reinforcement Ø 10 mm A 500C	t		1
Reinforcement Ø 12 mm A 500C	t		1
Reinforcement Ø 14 mm A 500C	t		1
Reinforcement Ø 16 mm A 500C	t		1
Reinforcement Ø 18 mm A 500C	t		1
Reinforcement Ø 22 mm A 500C	t		1
Reinforcement Ø 2 5mm A 500C	t		1
Reinforcement Ø 2 8mm A 500C	t		1
Concrete strength testing			
Description	Unit of measurement	Quantity	
Determination of concrete strength by non-destructive elastic rebound method using Schmidt Hummer sclerometer	piece	20	
Visual inspection of welding stations	gm	200	
Welding electrode tests	piece	5	
Determination of concrete strength using a sample cylinder drilled from a reinforced concrete structure	piece	10	
Inspection of welding seams of metal structures using equipment	gm	50	
Exterior decoration			
Description	Unit of measurement	Quantity	
Determination of the thermal conductivity of materials	by layer	1	
Determination of organic matter content in thermal insulation materials	by layer	1	