

Invitation for Bids

Date:	30 March 2016 /published date by European Investment Bank (EIB)/
Loan No. and Title:	EIB loan - N FIN81.437
Invitation Number:	The number of the Invitation for Bids is : 01
Contract No. and Title:	M6- ICB/CW-01: Rehabilitation and Improvement of the M6 Vanadzor–Alaverdi–Georgian Border Interstate Road from km 0+000 to km 38+450
Deadline for Submission of Bids:	20 May 2016 at 15:00 hours (local time)

1. The **Republic of Armenia** has applied for financing a loan from the European Investment Bank (EIB). Part of this loan will be used for payments under the contract named above. Bidding is open to bidders from eligible source countries of the EIB.

2. Transport Projects Implementation Unit State Institution of the Ministry of Transport and Communication (**“the Employer”**) invites sealed bids from eligible bidders for the construction and the completion of the project: **Rehabilitation and Improvement of the M6 Vanadzor–Alaverdi–Georgian Border Interstate Road.**

Rehabilitation and Improvement of the M6 Vanadzor–Alaverdi–Georgian Border Interstate Road from km 0+000 to km 38+450 (**“the Works”**) which consist of **3 Lots**:

Lot 1: Rehabilitation and Improvement of the M-6 Vanadzor-Alaverdi-Georgian Border Interstate Road from KM 0+000 to KM 17+625

Lot 2: Rehabilitation and Improvement of the M-6 Vanadzor-Alaverdi-Georgian Border Interstate Road from KM 17+625 to KM 30+125

Lot 3: Rehabilitation and Improvement of the M-6 Vanadzor-Alaverdi-Georgian Border Interstate Road from KM 30+125 to KM 38+450

International Competitive Bidding will be conducted and is open to all Bidders.

3. Description

3.1 Purpose, Location

The project concerns the rehabilitation and improvement of M6 road in north eastern Armenia between Vanadzor and the entrance to custom area of Bagratashen, as more particularly described below.

3.2 Project Description

The road has many difficulties due to the morphology the land crossed - a narrow valley of the Pambak and Debed Rivers where is located also the railway to Georgia - and the geological ground conditions, mostly subject to landslides and rockfalls.

The road has a narrow cross-section, in some sections of 5÷6 m. Sub-vertical slopes generally flank it. In addition, the horizontal alignment is very tortuous, with many curves of radius below the minimum required by the minimum design standard for an Interstate Highway (Class III.b).

Between km 18 and 19, there is a section with a very sharp hairpin bends, hazardous for the transit of heavy vehicles, especially in the presence of snow and ice.

The slopes are often under the minimum standard of 8%, being problematic for heavy vehicles in winter. Besides, sharp vertical curves are often found, greatly reducing the sight distance.

The project foresees the rehabilitation of the road along the existing alignment, without significant impact on the environment.

This purpose has been reached through the components as follows:

- Improve the horizontal and vertical alignment to the minimum standards for an Interstate road wherever possible;
- Design speed 50 km/h, load carrying capacity 110 kN/axle;
- Widening the carriageway. The asphalt strip to 6.60 m minimum and the hard shoulders to 2.10 m (1.20 m in narrow sections);
- Strengthening the pavement;
- Improvement of three tunnels to the standards and lighting;
- Reconstruction of 6 bridges and Improvement of the 6 remaining;
- Construction of retaining walls and gabions;
- Rock-fall and landslide protections (shotcrete, soil nails, iron nets, retaining walls, etc.);
- River erosion protection (gabions, etc.);
- Improvement of safety devices (road signs, markings, kilometer posts, safety barriers, plastic delineators with cat-eyes on both shoulders edges for a better night driving));
- Installation of guardrails everywhere required by the standards and where it is necessary to ensure full security for the road user

Finally, special attention has been focused on road safety and traffic management.

Road Safety

The existing road has many gaps in this matter and the designer's task was to examine all the critical aspects and find the best solutions available with the modern technology.

Generally means that the road safety is ensured by the installation of guardrails on all sections where required by the norms and a careful accommodation road sign, traffic markings and traffic devices for pedestrian protection.

Among the biggest dangers on the road in the project, there are numerous areas of rockfall, and some areas of landslide, which caused several causalities in the past.

The solutions are represented primarily by the removal of boulders unsafe, then the containment measures by drafting protective nets, fixing with rock nails and coating with shotcrete.

For areas in landslide, the planned measures include drainage upstream and placing retaining structures – walls, gabions - to contain the foot of the landslide.

In stretches along the rivers banks gabions protection has to be placing.

As for the measures "traditional" - guardrails, road markings, signs and traffic calming, design was done for their accurate positioning in all sections or points where necessary to ensure the maximum level of security.

In addition to such measures, it have been provided a simple, but highly effective device, constituted by the installation on both sides of the carriageway of plastic delineators, fitted with cat-eyes, which provide a significant improvement in night driving, since they will provide a visible route light that surround the road edges.

Traffic management during construction

Due to the characteristic of the existing road, is no possible to make a temporary widening during construction, such as to allow the upgrading works simultaneously across the full carriageway.

It is therefore necessary to provide the construction of a half-carriageway at a time, forcing traffic to take place on a single lane with the system of the alternate one-way.

To minimize the negative impact on the traffic, it will need to contain the length of the sections under construction to no more than 500 m. In case of multiple interventions on the same lot, they should be spaced at least 2 km.

To ensure a sufficient level of security both to vehicles in transit and to the men at work, appropriate signage will be installed, located at a distance sufficient to allow the stop of passing vehicles - about 200 m - and managing the alternate traffic with traffic lights, which will operate even in the periods of suspension of work, for example during the night.

All these measures have to be taken and managed by the Contractor, after the approval of the relevant proposal by the competent local Authorities and Police.

The project is subdivided in two packages, each one composed by three lots, as follows:

A- Package 1

- Lot 1: Total length 17.625 km From KM 0+000 to KM 17+625
- Lot 2: Total length 12.5 km From KM 17+625 to KM 30+125
- Lot 3: Total length 8,325 km From KM 30+125 to KM 38+450

B- Package 2

- Lot 1: Total length 9,65km From KM 38+450-KM 48+100
- Lot 2: Total length 14,2km From KM 48+100 – KM 62+300
- Lot 3: Total length 27,891km From KM 62+300 – KM 90+191

The works duration is 18 months for each lot, with a subsequent 365 days defect liability period.

3.3 Package 1

The total length of this Packages of 38.450 km.

Crossing the urban section of Vanadzor (km 0 – 6.5), no modifications to the road alignment are envisaged. It is envisaged to resurface the existing carriageway, improvement of traffic and pedestrian safety, revision of gutter system, crossings design.

In the first stretch, km 0+1.9, a concrete (New Jersey) barrier will be placed in the middle of the carriageway, so to improve the road user's safety.

From Vanadzor to Tumanyan Village (km 6.5 – 50.650) it is envisaged to provide a new pavement and widening of the carriageway for a safe operation of the infrastructure. Moreover, an improvement of horizontal and vertical alignment will be done "wherever possible" while remaining inside the existing road right of way (very small radii will be upgraded). For the 3 existing tunnels upgrading of the cross section to the standard, lining, waterproofing, pavement reconstruction as well as lighting and safety devices will be provided.

Replacement of 2 damaged bridges with new ones will be carried out in this section and repairing of the others.

In the sections close to the rivers bank, it has been provided their protection from flooding and erosion, while the road structures located in the riverbed (piers, abutments and walls) will be protected with gabions against the force of the water runoff and from the scouring.

Structures

The major structures includes in this Package are as follows:

- 3 Tunnels
- 9 Bridges (including 3 railway overpasses) and 6 Culverts
- Minor structures (walls, gabions, rockfall protections and pipe culverts)

The main dimensions and location of the tunnels are shown here below:

1. km 24+866÷24+972 - width 9.45 m – clearance 5.00 m
2. km 30+579÷30+860 – width 8.10 m – clearance 3.15 m
3. km 31+287÷31+468 - width 9.35 m – clearance 5.00 m

The tunnels 1 and 3 are in fair condition. They are lined and their overall dimensions are about to comply with Armenians standards. However also they are lacking of basic safety items, like lighting and suitable pavement. The second one is unleaded and with insufficient clearance.

It should be noted also that since there is no alternative option for traffic adjacent to the tunnels, they work heavy-loaded.

In addition to the works provided on the entire road (alignment, widening of carriageway, improvement of safety devices, as stated in Project Description, in Package 1 are also provided the following works:

- 2 bridges to be replaced/rebuilt;
- Improvement and/or reconstruction of all minor structures;
- 28 rockfall zones to be consolidated;
- New pavement and widening of the carriageway over a length of approximately 38.5 km built to expressway standards on new alignment for a safe operation of the infrastructure;
- Relocation of utilities interfering with the works;
- About 670,000 cu.m. of earthworks;
- About 330,000 sq.m.of pavement.

3. Only eligible bidders with the following key qualifications should participate in this bidding:

Having a minimum average annual construction turnover for each lot as follows:

Lot1: AMD 2 009 000 000 (or US\$ 4 100 000 equivalent)

Lot 2: AMD 2 009 000 000 (or US\$ 4 100 000 equivalent)

Lot 3: AMD 2 254 000 000 (or US\$ 4 600 000 equivalent)

for Bidders calculated as total certified payments received for contracts in progress and/or completed within the last 5 (five) years, divided by 5 (five)years

Participation as contractor, prime contractor, joint venture member¹, management contractor or sub- contractor between 1st January 2011 and application submission deadline, less than or equal to five contracts, with total minimum value:

Lot 1: AMD 4 830 694 400 (or US\$ 9 858 560 equivalent)

Lot 2: AMD 4 831 635 200 (or US\$ 9 860 480 equivalent)

Lot 3: AMD 5 390 000 000 (or US\$ 11 000 000 equivalent)

The Bidder must demonstrate access to, or availability of, liquid assets, lines of credit, or other financial resources, (other than any contractual advance payments) to meet the Bidder's financial resources requirement indicated in Form FIN-4 of Section 3 of the bid documents.

4. To obtain further information and inspect the bidding documents, bidders should contact:

Office of Transport Projects Implementation Unit State Institution of the Ministry of Transport and Communication

Street Address: Transport Projects Implementation Unit State Institution of the Ministry of Transport and Communication, 28,Nalbandyan Street

City: Yerevan

ZIP Code: 0010

Country: Republic of Armenia

Tel: (374 10) 580 523

Fax: (374 60) 540 525

Electronic mail address: esargsyan@transportpiu.am,
hordukhanyan@transportpiu.am,satasatryan@transport.am

5. A complete set of Bidding documents (including drawings, specifications and bill of quantities) in English language may be purchased from the office of Transport Projects Implementation Unit State Institution of the Ministry of Transport and Communication(the Beneficiary) starting from March 30, 2016. The bidding documents will be issued during normal working hours from 9:00 a.m. to 5:00 p.m. upon submission of a written application to the address below and upon payment of a nonrefundable fee of Two Hundred USD (\$200) or One Hundred Thousand Armenian Drams (AMD100,000) and upon presentation of the receipt of the respective payment. The method of payment will be banking transfer to the Beneficiary's following bank account.

Central Bank of Armenia.

For Armenian dram: Acc. # 900000908096

For US dollars: Acc. # 900000908104

6. Deliver your bid:

- to the address above
- on or before the deadline: May 20, 2016 at 15:00 hours (local time)
- Together with a Bid Security as described in the bidding documents.

Bids will be opened immediately after the deadline in the presence of bidders' representatives who choose to attend. For the purpose of determining the equivalent amount of the required Bid Security in a AMD or its equivalent in freely convertible currency, the exchange rates published by the Central Bank of Armenia as of Bid Security issuance date.

7. A Pre-bid meeting and site visit will be organized. The dead line for submission is on **May 20, 2016** at 15:00 pm.

¹ For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder's share, by value, shall be considered to meet this requirement.