

Priority Transport Projects in Republic of



10th Eastern Partnership transport panel
Brussels, 11 May 2016



Brief Presentation of North-South Road Corridor Investment Project

Estimated length of North-South Road Corridor: about **470 km**

Design speed: **100 km/h**

Passing time: **4,5-5 hours**

The length of existing road: about **560 km**

Speed: **30-90 km/h**

Passing time: **9,5-10 hours**

Total investment of about **\$2,0-3,0 billion USD** is envisaged for Project implementation.

Existing and agreed:

- ADB financing: **\$500 million**
- EIB financing: **\$66 million + \$132 million**
- NIF Grant: **\$13.5 million + \$13.5 million**
- EADB financing: **\$150 million + \$350 million**
- Total: **\$ 1225 million**

Remaining: **\$0,7-1,7 billion USD**

Implementation period: **2010 – 2020**





Brief Presentation of North-South Road Corridor Investment Project

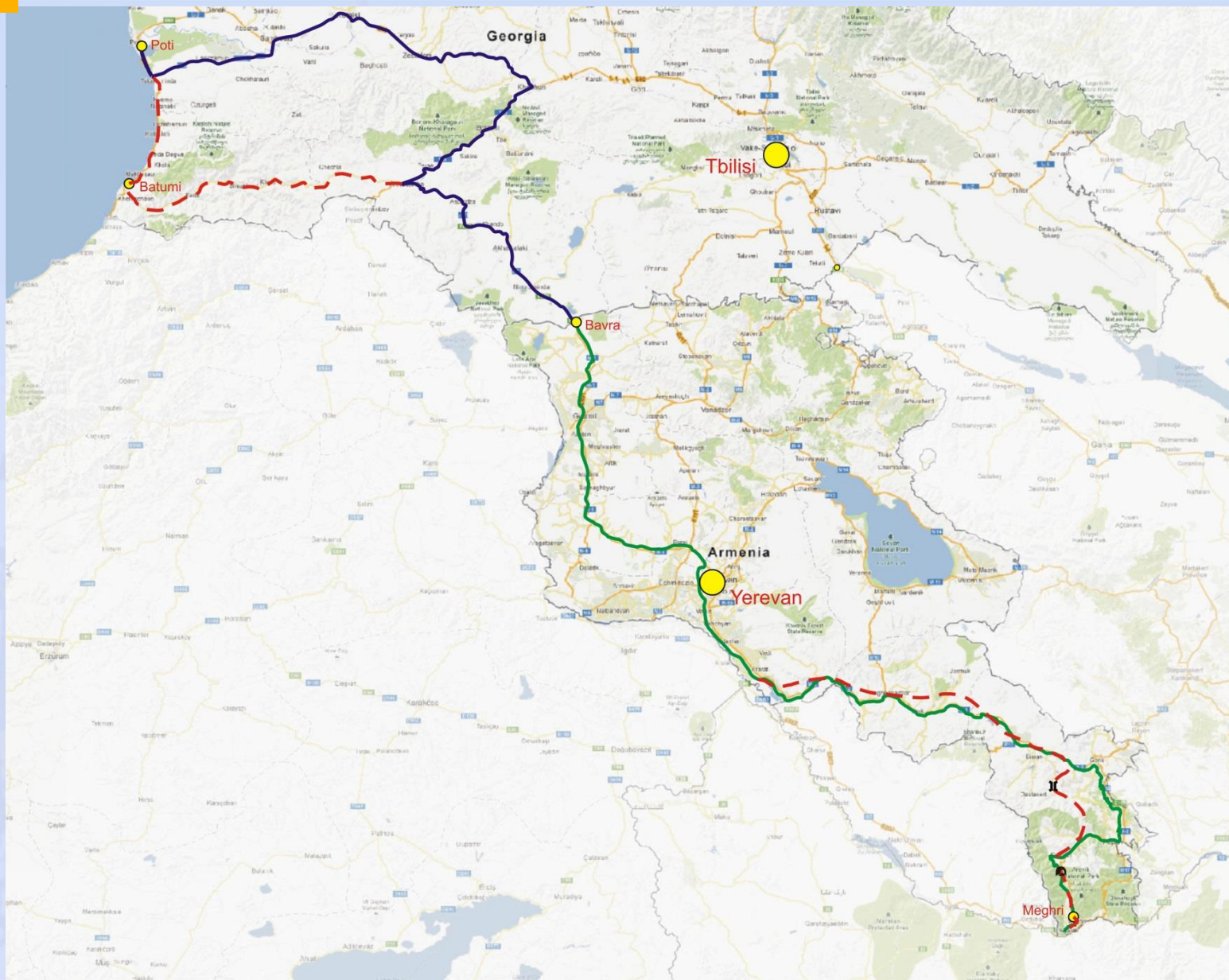
N	Road Section	Existing (km)	Constructed (km)	Reduction (km)	Notes
A	Tranche V- Bavra (Georgian border)-End of Gyumri (EIB+ADB+PPP), from which:	58	65	-7	
1	Bavra (Georgian border) - Gyumri entrance	41.0	41.0	0.0	EIB preliminary agreement for 150million USD financing
2	Gyumri bypass	17.0	24.0	-7.0	EIB preliminary agreement for 150 million USD financing, PPP is possible
B	Tranche III- Gyumri exit-Talin (EIB+ADB), from which:	46.5	46.2	0.3	
1	Gyumri exit-Lanjik (EIB)	29.0	27.5	1.5	Sinohydro, China, Completion- 2019
2	Lanjik-Talin (ADB)	17.5	18.7	-1.2	Sinohydro, China, Completion- 2018
C	Tranche II- (ADB), from which:	42.7	41.9	0.8	
1	Talin-Ashtarak	42.7	41.9	0.8	Corsan Corviam , Spain ,completion- 2018
D	Tranche I- Ashtarak-Artashat (ADB), from which	31.0	31.0	0.0	
1	Ashtarak-Yerevan entrance	11.4	11.4	0.0	Corsan Corviam , Spain , completed
2	Yerevan exit- Artashat	19.6	19.6	0.0	Corsan Corviam , Spain , completed
E	Yerevan bypass (ADB+Yerevan Municipality)	23.8	22.9	0.9	The project is implemented by Yerevan Municipality, completion - 2020
F	Tranche IV- Artashat-Agarak (Iranian border), (ADB+EIB+EDB+PPP), from which:	358.0	263.0	95.0	
1	Artashat-Kajaran, from which:	304.0	221.0	83.0	
a	Artashat-Ararat (Ararat bridge)	24.0	24.0	0.0	It is recommended to apply for ADB financing
b	Ararat (Ararat bridge)-Tigranashen (Kiarki) tunnel entry	16.0	13.0	3.0	PPP is possible, no funding yet.
c	Tigranashen (Kiarki) 3 tunnels (each tunnel about 2,5km) with approaching roads	20.0	12.0	8.0	PPP is possible, no funding yet.
d	Tigranashen (Kiarki) tunnels exit -Yeghegnadzor	37.0	33.0	4.0	PPP is possible, no funding yet.
e	Yeghegnadzor -Entry of Saravan tunnel	52.0	50.0	2.0	PPP is possible, no funding yet.
f	Saravan tunnel with its approaching roads	14.0	8.0	6.0	PPP is possible, no funding yet.
g	Exit of Saravan tunnel-Sisian	21.0	21.0	0.0	PPP is possible, no funding yet.
h	Sisian -Bargushat Tunnels Entry	40.0	25.0	15.0	It is recommended to submit a preliminary application for EDB's financing
i	Bargushat tunnels with the approcahing roads	40.0	15.0	25.0	It is recommended to submit a preliminary application for EDB's financing, simultaneously study the PPP possibility
j	Exit of Bargushat tunnels-Kajaran entrance	40.0	20.0	20.0	It is recommended to submit a preliminary application for EDB's financing
2	Kajaran-Agarak (Iranian border), from which:	54.0	42.0	12.0	
a	Kajaran entrance- entry of Kajaran tunnel	4.5	4.0	0.5	Saving or additional funding of EDB loan of 150 million USD dollars, on condition of financing a separate Lot in the bid, end of construction - 2019
b	Kajaran tunnel with the approcahing roads	18.0	6.0	12.0	It is recommended to submit a preliminary application for ADB's financing, simultaneously study the PPP possibility
c	Exit of Kajaran tunnel-Vardanidzor	11.5	11.5	0.0	EDB 150 million USD loan framework, the bid is announced, end of construction- 2019
d	Vardanidzor-Meghri	15.0	15.5	-0.5	EDB 150 million USD loan framework, the bid is announced, end of construction- 2019
e	Meghri-Agarak (Iranian border)	5.0	5.0	0.0	EDB 150 million USD loan framework, the bid is announced, end of construction- 2018
Total North-South		560.0	470.0	90.0	



The North-South Road Corridor Investment Project is aimed at reconstruction of the 2nd-3^d category carriageway with a speed limit of 30-90 km/hour that runs 560 km from the Armenian border with Georgia at Bavra to the border with Iran at Agarak and upgrading it to 470 km-long 1st category high-speed carriageway with a speed limit of 100-110 km/hour enabling to cross the mentioned section during decreased 4.5-5 hours instead of current 9.5-10 hours and increasing the comfortability and safety that of by ensuring the fulfilment of the Project goal in regard to making the North-South Road a transit carriageway for passenger and cargo transportation from the East to the West within scope of TRACECA and Silk Road Projects.

The preliminary estimated cost of construction works of the North-South Road Corridor Investment Program is about USD 2-3 billion (excluding VAT and the cost of land acquisition and resettlement), of which USD 150 million will be allocated for consulting services in respect to design works and technical supervision.

South-Iran border–Agarak–Bavra–Georgian border–Batumi–Poti–North





Tranche 1 , Yerevan-Artashat and Yerevan-Ashtarak



Total length: **31 km**

Construction completion: **30 June 2016**

Construction cost : **\$70,4 million**

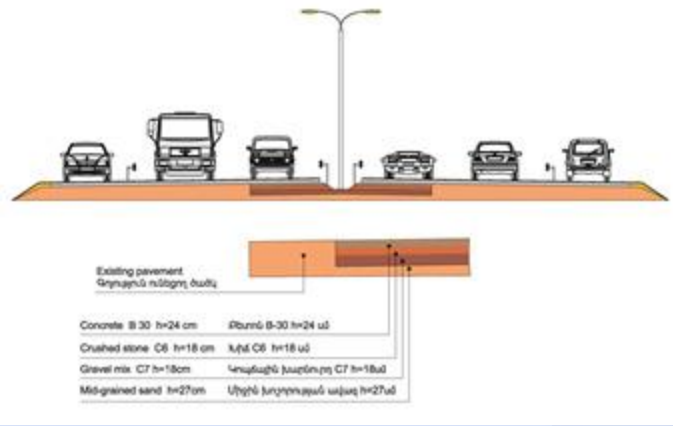
Contractor: «**ISOLUX CORSAN /Spain/**

Engineer/PMC: “**Safege-Eptisa” JV /Belgium/**

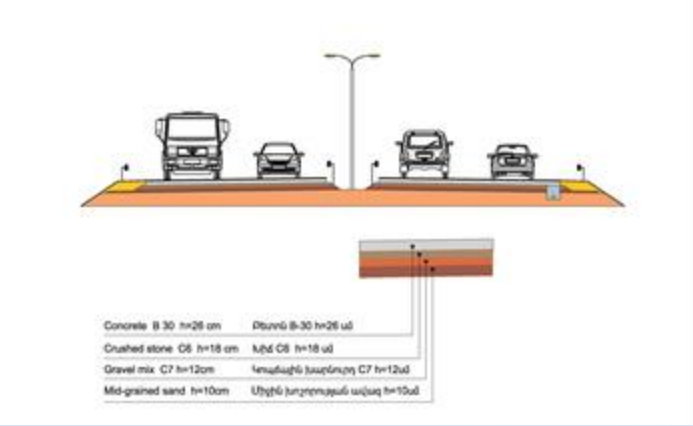
Opened for traffic: **29 December 2015**

Tranche 1

Հյուսիս-հարավ ճանապարհային ծրագիր Հ2 /Երևան-Արարատ/
North-South Road Program S2 /Yerevan-Ararat/



Հյուսիս-հարավ ճանապարհային ծրագիր Հ3 /Երևան-Աշտարակ/
North-South Road Program S3 /Yerevan-Ashtarak/



Tranche 2, **Ashtarak-Talin**



Section length : **41,9 km**

Construction completion: **2018**

Construction cost: **\$ 179,6 million**

Contractor: **«ISOLUX CORSAN /Spain**

Engineer/PMC: **“Safege-Eptisa” JV /Belgium/**

Հյուսիս-հարավ ճանապարհային ծրագիր Հ1 /Աշտարակ-Թալին/
North-South Road Program S1 /Ashtarak-Talin/



Concrete B 30 h=25 cm	Քոնկրետ B-30 h=25 սմ
Crushed stone C6 h=18 cm	խճված C6 h=18 սմ
Natural granular sub-base h=15cm	Ավազա-կուպճային ենթահիմք h=15սմ
Granular capping layer h=18cm	Կուպճային բնական շերտ h=18սմ

Tranche 3, Talin – Gyumri

Section length: **46,2 km**

Talin-Gyumri section is split between **ADB and EIB**

- **ADB – Talin-Lanjik 18,7 km**
- **EIB – Lanjik-Gyumri 27,5 km**
- **Tender was announced in June 2015.**
- **Contracts awarded**
- **Contractor: Sinohydro Corporation LTD, China**
- **Engineer/Supervision: SPEA-IRD Consortium, Italy**
- **Contract Talin-Lanjik: ~ \$ 60 million**
- **Contract Lanjik-Gyumri: ~ \$ 80 million**
- **Construction completion: end of 2018**





Tranche 4, Artashat-Agarak



Estimate length of Artashat-Agarak /border point/ section is: **354 km**

Road will reduced by about **85 km**

Feasibility Study is ready. Preliminary Design for all section and Detail Design for Sisian-Qajaran section is ongoing. Designer: **SPEA-IRD Consortium (Italy)**

Tender for Construction of Section Agarak-Qajaran will be announced in April 2016 and Contract Signing planned in July-August 2016. Completion of Construction: 2019. Financed by EADB loan: **\$ 150 million**

More financing opportunity for Tranche 4:

- EADB loan: **\$ 350 million**
- ADB loan: **\$ 170 million**

Possible PPP and new Cofinancing by other IFT's.



Tranche 5, Gyumri- Bavra

Tranche 5



Estimated length of Gyumri bypass- Bavra/border point/ is **60 km**

Gyumri-Bavra section will be implemented under EIB loan proceeds

Estimated cost: about **\$150million**

Estimated construction period: **24-36 months**

Feasibility Study, Preliminary Design and Detail Design are financed by NIF Grant, Contract Signed and the Designer is: **Lotti (Italy)**



Investment and PPP opportunities

- The Feasibility study on Artashat-Qajaran road section (220 km) is ready. The preliminary design for 220 km long section will be presented by the end of 2017, followed by detailed design for Sisian-Qajaran (60km) road section to be presented by the end of 2016.

80% of the mentioned section may be separated and considered as a project implemented under concession (Investment and PPP). The current carriageway will be preserved as a free alternative to toll-road. The section envisages 0.5-8 km long tunnels with two lane single carriageway and the total length of tunnels: for about 25km. The length of current road of the mentioned section is 305 km, which as a result will be reduced by 85 km. To note, merely the length of Sisian-Qajaran section will be reduced by half and will become 60 km long road.

The estimated preliminary cost of construction works for the total Artashat-Qajaran road section is USD 2 billion (including the cost for consulting services, and excluding VAT and the cost for land acquisition and resettlement), of which the preliminary estimated cost of construction works in Sisian-Qajaran road section is USD 600 million (including the cost for consulting services, and excluding VAT and the cost for land acquisition and resettlement).

- The Feasibility study on Qajaran-Agarak road section (42 km), including the Tunnel (5 km), is available. Merely the Tunnel will reduce the length of the road by 12 km with a free alternative current road to be preserved. The Tunnel is envisaged to be equipped with two lane single carriageway with the cost that of totaling USD 140 million (including the cost for consulting services, and excluding VAT and the cost for land acquisition and resettlement). The mentioned Tunnel may be separated and considered as a project implemented under concession (Investment and PPP). The road part with length of 37km will be constructed by Eurasian Development Bank's loan till end of 2019.

- The Feasibility study and Detailed Design is being procured for Gyumri bypass road section, which will be ready by the end of 2016 and 2017 accordingly. The mentioned section may be separated and considered as a project implemented under concession (Investment and PPP). The current carriageway will be preserved as a free alternative to toll-road. The estimated preliminary cost of construction works is USD 80 million (including the cost for consulting services, and excluding VAT and the cost for land acquisition and resettlement).



Main Questions and Answers

- In which form and volume will be the state participation in the concession (Investment and PPP)?

Under concession (Investment and PPP) projects, the state will co-finance VAT (20%) and the cost of land acquisition and resettlement. The State already financed, financing and is going to finance for about 1-1.5 bln. USD from total cost of Project, which is already 50% of preliminary estimates.

- What type of concession (Investment and PPP) it will be (Build-Operate-Transfer, Build-Transfer-Operate, Build-Own-Operate, Build-Own-Operate-Transfer, Buy-Build-Operate)?

The following sequence is envisaged based on preference:

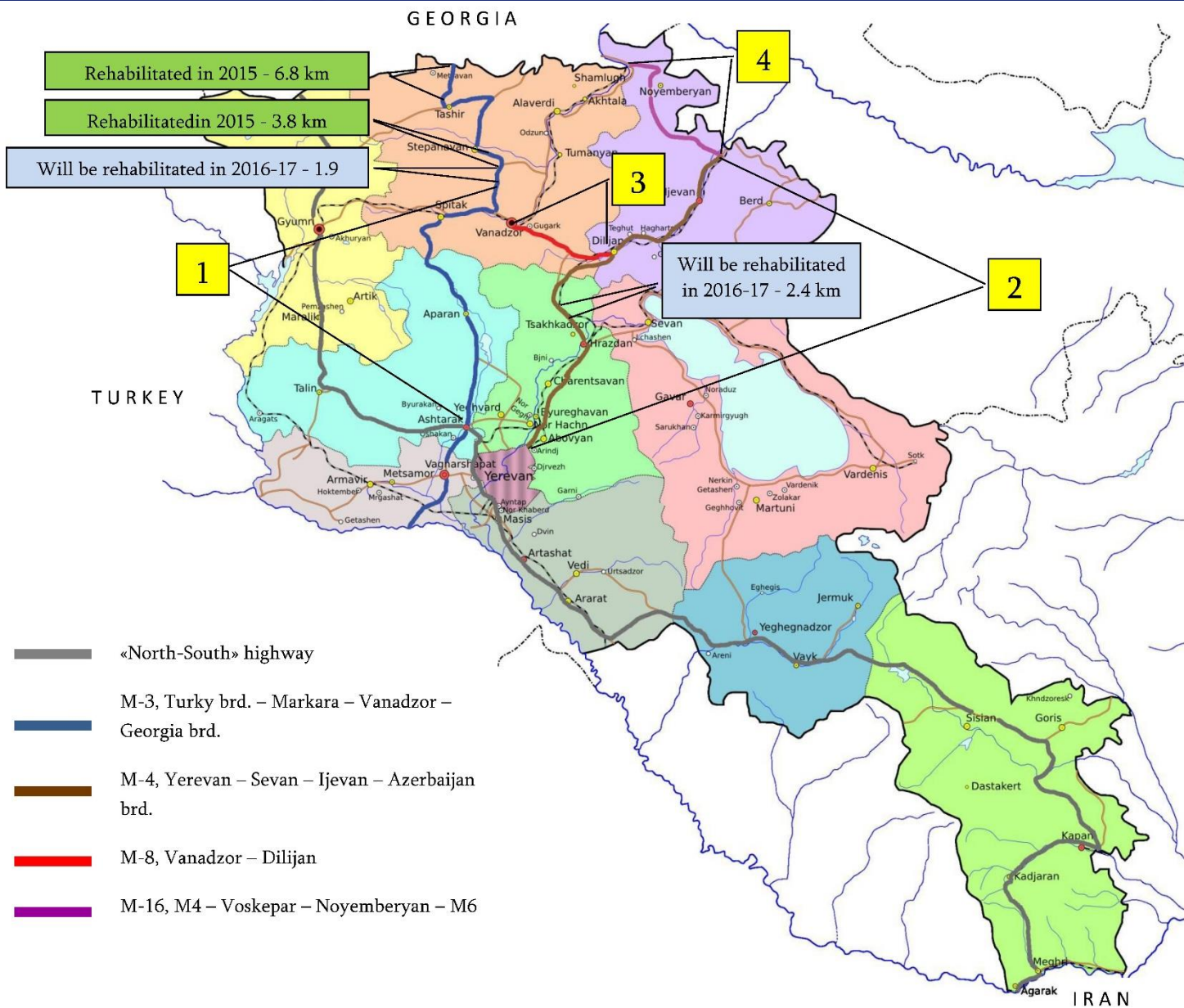
- Build-Own-Operate-Transfer
- Build-Operate-Transfer,
- Build-Transfer-Operate
- Build-Own-Operate
- Buy-Build-Operate

The mentioned options are subject to discussion, and preference will be given merely to the interested organizations upon submission of properly developed and well-justified price offer.

- What are the other intended terms of the concession (Investment and PPP) ?
A relevant legislative regulation may set up the State's commitment towards the return of funds/compensation of difference in regard to the planned activities by the end of operating.

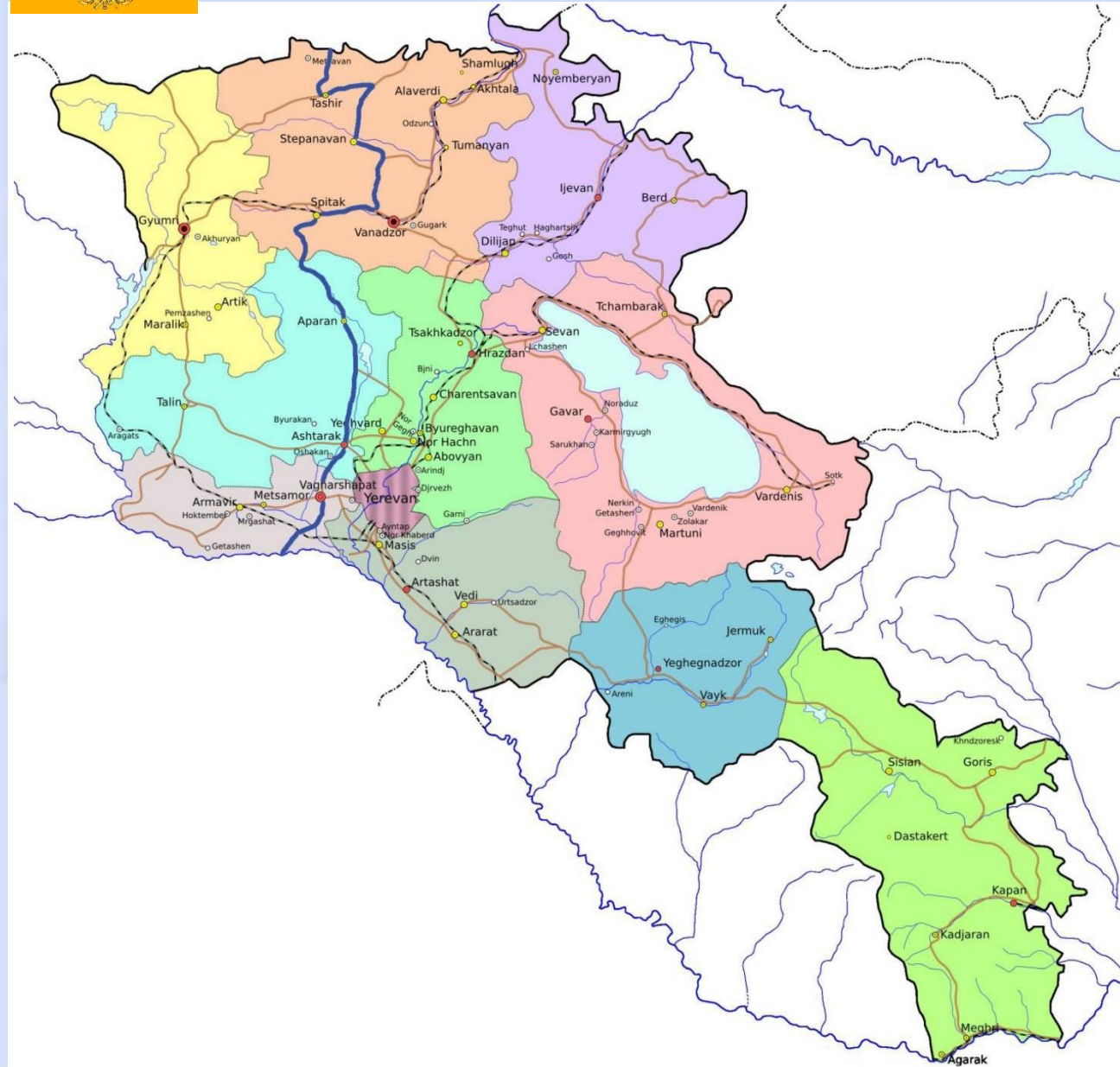


Other Priority Transport Projects in Republic of Armenia





M3 Turkish border – Margara-Vanadzor – Georgian Border



The highway starts at the "North-South" highway - from bypass area of Ashtarak, passes through Aparan, Spitzak, Stepanavan, Tashir and ends before reaching the checkpoint of Gogavan. The highway consists of 2 areas, 95.2 km (Ashtarak-Pushkin tunnel), 36.0 km (v.Gargar – before reaching the checkpoint of Gogavan) which, corresponds to M3 Turkish border – Margara-Vanadzor – Georgian border road km 40+000 up to km 135+900, km 140+900 up to km 176+900 sections in the road network of the Republic of Armenia.

The total length of sections proposed for rehabilitation is 131.2 km, the average intensity – 6950 vehicle/day, coefficient of roughness, IRI = 6.20 mm / m.

The cover is in very poor condition, there are many holes and slope collapses of ground road, drainage is not ensured in some parts, a large number of security elements are missing.

It was last rehabilitated in 1996-1998.

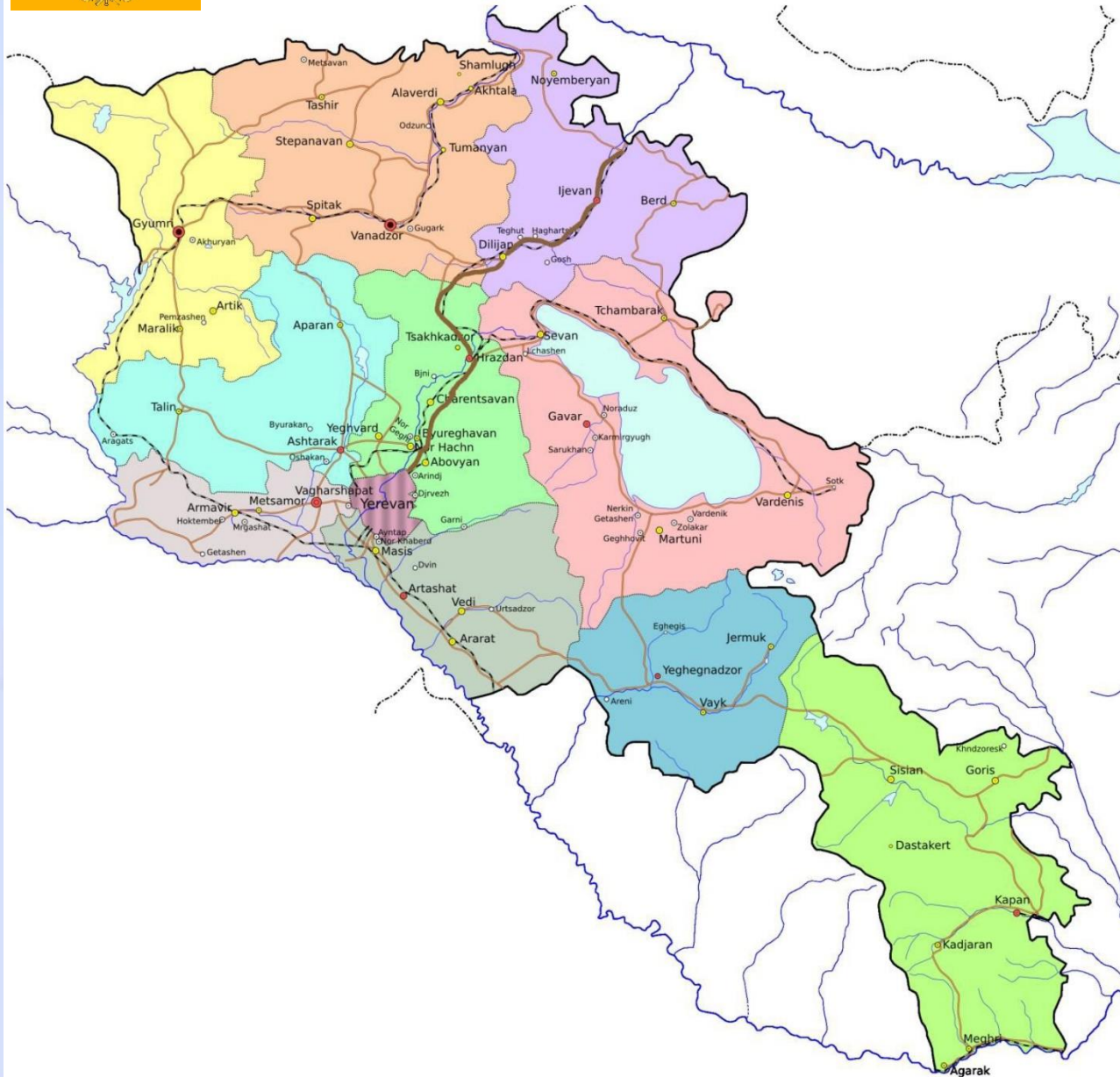
Two sections of the highway with a total length of 10.6 km were rehabilitated in 2015 and in 2016-2017 Pushkin tunnel is planned to be rehabilitated.

A complex area-city Spitzak (needed a bypass road).

The initial cost of reconstruction of the highway is 105.0 million EUR.



M-4 Yerevan - Sevan-Ijevan-Azerbaijan Border



The proposed highway starts from Yerevan, passes through Dilijan and Ijevan and is adjacent to the highway leading to Bagratashen checkpoint, which corresponds to the M-4 Yerevan - Sevan-Ijevan-Azerbaijan border road, km 10 + 300 to km 143 + 200 section in the road network of the Republic of Armenia. The highway length is 132.9 km, average intensity, 12688 vehicle / day, coefficient of roughness, IRI = 5.50 mm / m. The initial section of the highway, 62.9 km long, has four lane with a cover in satisfactory condition, but due to high traffic intensity (more than 20,000 vehicle / day) is subject to rapid decay. In the rest of the 70 km long section the cover is in poor condition- there are many holes and slope collapses of ground road, drainage is not ensured in some sections, a large number of security elements are missing. It was last rehabilitated in 2001-2002. In 2016-2017 it is planned to reconstruct Dilijan tunnel, 2.4 kilometers long. The initial cost of rehabilitation of the highway is 106.3 million EUR.



M 8 Vanadzor- Dilijan road



The proposed highway is part of a transit destination West from East, connecting the above 1st and 2nd highways as well as Dilijan and Vanadzor. The alignment of the road network corresponds to M – 8 Vanadzor- Dilijan road, km 10 + 500 to km 42 + 000 section.

The highway length is 31.5 km the average intensity, 1574 vehicle / day, coefficient of roughness, IRI = 6.14 mm / m.

The cover is in very poor condition, there are many holes, residues, insufficient visibility curves, stone fragments, a large number of security elements are missing. Last time it was renovated in 2003.

The initial cost of rehabilitation of the highway is 25.2 million Euro.



The M6 Vanadzor–Alaverdi–Georgian Border Interstate Road

Purpose

The M6 Vanadzor–Alaverdi–Georgian Border Interstate Road concerns the rehabilitation and improvement of M6 road in north eastern Armenia between Vanadzor and the entrance to custom area of Bagratashen in total of 90 km length.

Program implementation

The M6 project is divided in 2 sections:
1st section: km 0 + 000 to km 38 + 450 road section will be financed by the European Investment Bank
2nd section: km 38 + 450 - km 90 + 191 road section will be funded by the Asian Development Bank.
The the estimated duration of construction is 36 months, (2017-2020).

Volume of investments

Preliminary estimates for the M6 project is about 102 million Euro loan portfolio. The project is financed by the European Investment Bank and the Asian Development Bank jointly. The EIB will provide an amount of 51 million euro loan, for which between the Republic of Armenia and the European Investment Bank January 26, 2016 in Yerevan and January 29, 2016 in Luxembourg was signed "Armenia M6 Interstate Road" financial contract.

Negotiations are being conducted on the loan agreement with the Asian Development Bank.

