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R12-17  
7 March 2017

## Proposed Loan and Administration of Loan Batumi Bypass Road Project (Georgia)

1. The Report and Recommendation of the President (RRP: GEO 50064-001) on the proposed loan and administration of a loan to Georgia for the Batumi Bypass Road Project is circulated herewith.
2. This Report and Recommendation should be read with *Country Operations Business Plan: Georgia, 2017–2019*, which was circulated to the Board on 28 October 2016 (DOC.IN.433-16).
3. In the absence of any request for discussion and in the absence of a sufficient number of abstentions or oppositions (which should be communicated to The Secretary by the close of business on 28 March 2017), the recommendation in paragraph 40 of the paper will be deemed to have been approved, to be so recorded in the minutes of a subsequent Board meeting. Any notified abstentions or oppositions will also be recorded in the minutes.

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# Report and Recommendation of the President to the Board of Directors

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Project Number: 50064-001  
March 2017

## Proposed Loan and Administration of Loan Georgia: Batumi Bypass Road Project

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Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 24 February 2017)

Currency unit      –      lari (GEL)

GEL1.00	=	\$0.381679	or	€0.362228
\$1.00	=	GEL2.62000	or	€0.949037
€1.00	=	GEL2.760696	or	\$1.053699

## ABBREVIATIONS

ADB	–	Asian Development Bank
AIIB	–	Asian Infrastructure Investment Bank
EIA	–	environmental impact assessment
EMP	–	environmental management plan
ETCIC	–	Eurasian Transport Corridor Investment Center
EWB	–	East–West Highway
km	–	kilometer
LAR	–	land acquisition and resettlement
LARP	–	land acquisition and resettlement plan
m	–	meter
MFF	–	multitranchise financing facility
MRDI	–	Ministry of Regional Development and Infrastructure
PBM	–	performance-based maintenance

## NOTE

In this report, "\$" refers to United States dollars.

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## CONTENTS

### Page

#### PROJECT AT A GLANCE

#### MAP

I.	THE PROPOSAL	1
II.	THE PROJECT	1
	A. Rationale	1
	B. Impact and Outcome	4
	C. Outputs	4
	D. Summary Cost Estimates and Financing Plan	4
	E. Implementation Arrangements	5
III.	DUE DILIGENCE	7
	A. Technical	7
	B. Economic and Financial	7
	C. Governance	8
	D. Poverty, Social, and Gender	8
	E. Safeguards	9
	F. Summary of Risk Assessment and Risk Management Plan	9
IV.	ASSURANCES AND CONDITIONS	10
V.	RECOMMENDATION	10

#### APPENDIXES

1.	Design and Monitoring Framework	11
2.	List of Linked Documents	12

## PROJECT AT A GLANCE

1. Basic Data		Project Number: 50064-001	
Project Name	Batumi Bypass Road Project	Department /Division	CWRD/CWTC
Country	Georgia	Executing Agency	Ministry of Regional Development and Infrastructure of Georgia
Borrower	Georgia		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Transport	Road transport (non-urban)		114.00
		Total	114.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Adaptation (\$ million)	14.00
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	Climate Change impact on the Project	Medium
Regional integration (RCI)	Pillar 2: Trade and investment		
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Institutional development	No gender elements (NGE) ✓	
Knowledge solutions (KNS)	Knowledge sharing activities		
Partnerships (PAR)	Pilot-testing innovation and learning		
	Implementation		
	Private Sector		
Private sector development (PSD)	Public sector goods and services essential for private sector development		
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Regional	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG9		
6. Risk Categorization:	Complex		
7. Safeguard Categorization	Environment: A Involuntary Resettlement: A Indigenous Peoples: C		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		114.00	
Sovereign Project loan (Regular Loan): Ordinary capital resources		114.00	
Cofinancing		114.00	
Loan - Asian Infrastructure Investment Bank		114.00	
Counterpart		87.20	
Loan - Government		87.20	
Total		315.20	
9. Effective Development Cooperation			
Use of country procurement systems		No	
Use of country public financial management systems		Yes	



## GEORGIA BATUMI BYPASS ROAD PROJECT

-  National Capital
  -  Autonomous Republic Capital
  -  City/Town
  -  Poti–Sarpi Highway (E70)
  -  Kobuleti Bypass Road
  -  Batumi Bypass Road
  -  East–West Highway
  -  Other Road
  -  River
  -  Autonomous Republic Boundary
  -  International Boundary
- Boundaries are not necessarily authoritative.



This map was produced by the cartography unit of the Asian Development Bank. The boundaries, colors, denominations, and any other information shown on this map do not imply, on the part of the Asian Development Bank, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries, colors, denominations, or information.

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to Georgia for the Batumi Bypass Road Project. The report also describes the proposed administration of a loan to be provided by the Asian Infrastructure Investment Bank (AIIB) for the Batumi Bypass Road Project and, if the Board approves the proposed loan, I, acting under the authority delegated to me by the Board, approve the administration of the loan.<sup>1</sup>

2. The proposed project will (i) construct a new two-lane bypass road of 14.3 kilometers (km) skirting Batumi; and (ii) contract out routine and periodic maintenance work for about 200 km of international and connecting secondary roads, through a performance-based maintenance (PBM) contract.

## II. THE PROJECT

### A. Rationale

3. **Country's strategic location.** The Caucasus region forms a land bridge between the Black Sea and the Caspian Sea, and is the shortest transit link from Central Asia to Europe and Turkey. The region once served caravans along the historic Silk Road, and today is a major conduit for transport of crude oil from Central Asia and the Caucasus to Europe. The East–West Highway (EWH) between Azerbaijan and Georgia is already a major route for oil exports from Azerbaijan and Central Asian countries, which are exported through the Black Sea ports of Poti and Batumi.

4. **Road network and government sector strategy.** Since the mid-2000s, Georgia has radically transformed its transport system infrastructure and service delivery through the construction of roads, railways, port terminals, and airports. The road network in Georgia totals about 22,000 km, with 6,835 km of international and secondary roads managed by the Roads Department of Georgia under the Ministry of Regional Development and Infrastructure of Georgia (MRDI), and about 15,000 km of local roads managed by district administrations. Two international roads, E60 and E70 of the European network, form Georgia's EWH portion of the Europe–Asia corridor that transits the Caucasus. It runs north from Sarpi at the border with Turkey, serving the Black Sea ports of Batumi and Poti; then east to Tbilisi; and then southeast to the border with Azerbaijan, a total distance of 412 km. It constitutes a portion of the Central Asia Regional Economic Cooperation program road corridors (Georgia joined the program in 2016). The EWH carries over 60% of the country's foreign trade, and is a central element in the government's strategy of developing Georgia as a regional transport and logistics hub.

5. **Regional transport and logistics hub.** The government aims to leverage Georgia's transit and trade potential to boost private sector competitiveness and inclusive economic growth. The government's national development strategy emphasizes environmental sustainability and the integration of Georgia within regional and international transport systems.<sup>2</sup> The broad strategic goals are to improve the transport system to link all parts of the country, and connect Georgia's ports and airports to neighboring countries and beyond; the aim is to make Georgia a regional and logistical hub and business platform, upgrade multimodal infrastructure, and ultimately transform Georgia into the preferred gateway between Asia and Europe.

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<sup>1</sup> The design and monitoring framework is in Appendix 1.

<sup>2</sup> Government of Georgia, Ministry of Regional Development and Infrastructure. *Georgia 2020: Socioeconomic Development Strategy of Georgia*. Tbilisi. <http://static.mrdi.gov.ge/551e4a570cf24147438b1727.pdf>.



6. **Development coordination.** Since 2004, development partners—the World Bank, European Investment Bank, Japan International Cooperation Agency, and the Asian Development Bank (ADB)—have jointly extended their assistance to support rehabilitation and upgrading of the EWH, which is essential to regional connectivity. As of 2015, development partner assistance and government efforts had upgraded 155 km of the EWH, with some 113 km under rehabilitation. Development partners have committed to financing 94 km of the remaining 144 km. The government aims to complete rehabilitation and upgrading of the EWH by 2020.

7. **ADB assistance.** In 2009, ADB approved a \$500 million multitranchise financing facility (MFF) for the Road Corridor Investment Program to assist the government in upgrading two key sections of E70 of the EWH.<sup>3</sup> The tranche 1 project (\$118.8 million, approved in 2009) was to construct a new 28 km two-lane bypass road skirting Kobuleti. The tranche 2 project (\$150 million, approved in 2010) was to construct a new 14 km two-lane bypass road skirting Batumi. An updated cost estimate prepared in 2011, following completion of the detailed design, far exceeded the original cost estimate based on the preliminary design.<sup>4</sup> Significant cost overruns were anticipated for both the tranche 1 and 2 projects. In November 2011, the government requested additional financing of \$140 million through a tranche 3 project to make up for the shortage of financing for the tranche 1 project. However, the government decided to cancel construction of the Batumi bypass road because of an excessive cost increase and a less-than-robust economic justification; it subsequently canceled the tranche 2 project in November 2011.

8. **Necessity of bypass road.** In 2015, aspiring to upgrade the entire EWH to international standards, the government decided to reassess the Batumi bypass road, and requested that ADB revive the Batumi bypass road project. Congestion in Batumi city has become intolerable, and is aggravated by transit traffic that passes through heavily built up tourist and residential areas, and mixes with dense urban traffic. In addition to congestion, the heavy transit traffic also poses serious social, environmental, and safety problems for the local population and tourists in resort areas. The economic justification for the Batumi bypass road is now much more robust, as a result of (i) growing transit traffic from Turkey, (ii) the high cost of urban congestion, (iii) serious social and safety costs to the local population, and (iv) a globally stabilized price for construction materials. The financial viability is not so strong as to attract private sector for financing and operation of the road.

9. **Preservation of road assets and sustainability of road networks.** Since 2004, the government has increased public expenditures for road construction and rehabilitation by about 13% per year to meet its aspiration to complete the EWH. However, the government's budget allocations for road maintenance have increased by just 6% per year, with routine annual maintenance expenditures for international and secondary roads of about \$2,500–\$3,000 per km. Development partners have conducted a joint policy dialogue to improve road maintenance and enhance road network sustainability, with a focus on (i) increasing the fiscal budget allocation for road maintenance; (ii) reconstructing and rehabilitating international and secondary roads in poor condition and thereby reducing the demand for road maintenance funding; and (iii) increasing the efficiency of road maintenance spending.

<sup>3</sup> ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranchise Financing Facility to Georgia for the Road Corridor Investment Program*. Manila.

<sup>4</sup> The updated cost estimate increased substantially due to (i) alignment changes made to avoid significant resettlement impacts, which resulted in additional tunnels and bridges; and (ii) increased global commodity prices, which led to considerable increases in the cost of construction materials.

10. **Unbalanced road network improvement.** While international roads have been rapidly improved, secondary and local roads have been relatively neglected. In consequence, while the proportion of international roads that are in good condition reached 77% in 2013, many secondary and local roads remained in poor (38%) or very poor condition (54%), rendering them unmaintainable. For this category of roads, engaging in routine and periodic maintenance makes little economic sense; these roads first need to be reconstructed or rehabilitated to a maintainable level. The World Bank concentrated on improving the EWH during 2006–2009; since 2012 it has allocated significant resources to rehabilitation of unmaintainable secondary roads. ADB has supported this effort, with a secondary road rehabilitation project to be processed in 2017.<sup>5</sup> These initiatives will reduce overall requirements for road maintenance funding and contribute to more efficient use of maintenance funds.<sup>6</sup>

11. **Performance-based maintenance.** Development partners have guided the government to use the resources allocated for road maintenance as efficiently as possible. One of the recommended approaches, the PBM contract, was pilot-tested by the World Bank's project in 2012<sup>7</sup> and was well accepted by the Roads Department as a solution for long-term savings from regular and adequate routine maintenance up to the expected levels of service.<sup>8</sup> Encouraged by the success of pilot tests and positive feedback from local contractors, the Roads Department intends to expand the PBM approach and make the local construction industry familiar with the concept. The proposed project will assist the Roads Department to increase the use of PBM for road maintenance.

12. **Road safety.** The National Traffic Safety Strategy and Action Plan 2009–2013 adopted by the government in 2009 has mainstreamed road safety audits of new designs and regular road safety inspections of existing road assets, and improved the Roads Department's implementation practices and enforcement of traffic laws. The Roads Department road safety unit, in conjunction with the patrol police, has carried out road safety audits and inspections of planned road rehabilitation and construction activities; in combination with a road safety campaign by nongovernmental organizations, and stricter enforcement of some traffic rules (e.g., front seatbelt use) by the patrol police, this has helped reduce the road accident fatality rate.<sup>9</sup> The government adopted the 2nd Road Safety Strategy in 2016 and prepares a yearly action plan, financed by the World Bank, which defines road safety as a permanent national priority and establish and implement a modern and efficient model for improving road safety in Georgia. ADB assistance is helping Georgia harmonize road technical regulations with European Union standards and promote road safety, in line with development partners' efforts.

13. **Lessons.** The implementation of the Kobuleti bypass road showed that a slow, complex land acquisition and resettlement process poses a fundamental challenge to timely project completion. In 2009, expropriation of lands for public purposes and involuntary resettlement were unknown concepts in Georgia, particularly in the Adjara region, because of incomplete

<sup>5</sup> The Secondary Road Improvement Project (\$80 million).

<sup>6</sup> The Roads Department developed a five-year rolling program for 2016–2020 for improvement and preservation of secondary road assets. The key objective is to reduce the existing maintenance backlog and increase the share of secondary roads in good and fair condition.

<sup>7</sup> World Bank. 2012. *Project Appraisal Document for a Proposed Credit and a Proposed Loan to Georgia for the Second Secondary and Local Roads Project*. Washington D.C.

<sup>8</sup> PBM contracting for the management and maintenance of road networks is designed to increase the efficiency and effectiveness of road maintenance operations. The World Bank's Technical Report for Implementation of Performance Based Contracting (2013) reports that substantial cost savings (up to 50%) can be realized by introducing performance-based road maintenance contracts instead of traditional method-based contracts. The World Bank also found that pilot PBM contracts have started to build local industry capacity in implementation and management of contracts, with greater transfer of risks to contractors.

<sup>9</sup> The fatality rate dropped from 16 people per 100,000 in 2006 to 11 people per 100,000 in 2013.

post-Soviet Union land reforms. Many land plots remained unregistered; cadastral data were incomplete and erroneous; and government agencies (and the courts) had limited experience and capacity in handling land expropriation. Grievance and dispute cases were rampant as a result. Experience since 2009 indicates land acquisition and resettlement for the project can be expedited by (i) making contact with important stakeholders early, and briefing them on possible scenarios; (ii) tackling difficult, challenging, and unprecedented cases early in the project period; (iii) seeking high-level support through appropriate protocols as needed; and (iv) allowing sufficient time for land acquisition, resettlement, and related consultative processes.

14. **Value added by ADB assistance.** ADB has financed the Kobuleti bypass road, contiguous to the Batumi bypass road, located in similar hilly terrains, and designed with similar engineering features. ADB has also accumulated knowledge and experiences about legal and institutional mechanisms for land expropriation and relocation of affected people in the project area and acquired know-how to expedite due processes. Land acquisition and resettlement plans (LARPs) under the project were prepared, building on such local knowledge and experiences, in such a way as to avoid unresolvable grievances and disputes that may block project implementation. ADB's assistance will be instrumental to completing the project within a normal road construction period without being stalemated in the middle of construction.

## **B. Impact and Outcome**

15. The project is aligned with the following impact: improvement of regional connectivity in Georgia so that it can play the role of regional transport and logistics hub (footnote 2). The project will have the following outcome: efficiency of road transport along the EWH in Georgia improved.

## **C. Outputs**

16. **Output 1: New bypass road skirting Batumi constructed.** A new two-lane bypass road of 14.3 km skirting Batumi will start from the Senaki–Poti–Sarpi road; passes through mountainous terrain and densely populated villages and ends at the juncture of the existing Batumi–Akhaltsikhe road (E691), on an entirely new alignment.

17. **Output 2: Routine and periodic maintenance carried out using performance-based maintenance contracts.** PBM contracts, which will be implemented about 200 km of international and connecting secondary roads, have both output- and performance-based components and consist of (i) initial repairs, (ii) routine maintenance comprising lump-sum monthly payments per km related to meeting defined operation and maintenance service levels, (iii) periodic maintenance (resurfacing), and (iv) emergency maintenance works.

## **D. Summary Cost Estimates and Financing Plan**

18. The project is estimated to cost \$315.2 million (Table 1). The government has requested a regular loan of €108,190,000 (\$114.0 million)<sup>10</sup> from ADB's ordinary capital resources to help finance the project. The loan will have a 24-year term, including a grace period of 13 years; an annual interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year (the interest and other charges during construction to be capitalized in the loan); and such other terms and conditions set forth in the draft loan agreement. Based on the straight-line method, the average maturity of the loan is 18.75 years, and the maturity premium payable to ADB is 0.20% per year. ADB will

<sup>10</sup> €0.949037 = \$1.00 as of 24 February 2017.

finance expenditures related to the construction of the Batumi bypass road, performance-based maintenance of international and connecting secondary roads, and project management and institutional support.

**Table 1: Summary Cost Estimates (\$ million)**

Items	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Batumi Bypass Road	260.9
2. Performance-Based Road Maintenance	15.4
<b>Subtotal (A)</b>	<b>276.3</b>
<b>B. Contingencies<sup>c</sup></b>	<b>22.1</b>
<b>C. Financing Charges During Implementation<sup>d</sup></b>	<b>16.8</b>
<b>Total (A+B+C)</b>	<b>315.2</b>

<sup>a</sup> Includes taxes and duties of \$44.9 million to be financed from government resources through tax exemption.

<sup>b</sup> In September 2016 prices.

<sup>c</sup> Physical contingencies computed at 10% for civil works. Price contingencies computed at 1.4%–1.5% on foreign exchange costs and 3.0%–5.0% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>d</sup> Includes interest and commitment charges in the case of an Asian Development Bank loan; and interest, commitment charges, and front-end fee in the case of an Asian Infrastructure Investment Bank loan.

Source: Asian Development Bank estimates.

19. The government also requested a loan of \$114.0 million from AIIB. It is expected that the AIIB loan will have a 20-year term, including a grace period of 5 years; an annual interest rate determined in accordance with AIIB's sovereign-backed loan pricing; a commitment charge of 0.25% per year; a one-time front-end fee of 0.25% charged on the loan principal,<sup>11</sup> and such other terms and conditions to be set forth in the loan agreement between the government and AIIB. It is expected that ADB will administer the AIIB loan. AIIB will finance expenditures related to the construction of the Batumi bypass road (both civil works and consulting services). The government will contribute \$87.2 million to finance expenditures related to land acquisition and resettlement, and also taxes and duties. The summary financing plan is in Table 2.

**Table 2: Summary Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (regular loan)	114.0	36.2
Asian Infrastructure Investment Bank (loan) <sup>a</sup>	114.0	36.2
Government	87.2	27.6
<b>Total</b>	<b>315.2</b>	<b>100.0</b>

<sup>a</sup> Joint and contractual cofinancing to be fully administered by Asian Development Bank.

Source: Asian Development Bank estimates.

20. Climate adaptation is estimated to cost \$35.0 million and ADB will finance 40.2%, and AIIB will finance 59.8%, of such cost.

## **E. Implementation Arrangements**

21. MRDI will be the executing agency and the Roads Department, assisted by the Eurasian Transport Corridor Investment Center of MRDI (ETCIC), will be the implementing agency. The International Procurement and Donor Reporting Division of the Roads Department will handle all the project implementation activities under the supervision and guidance of the chair or vice-chair of the Roads Department. The International Procurement and Donor Reporting Division comprises technical staff from the Roads Department and, as necessary, external

<sup>11</sup> All of these terms are subject to the negotiation and conclusion of the loan agreement between the government and AIIB.

experts (national and international). Financial management activities will be outsourced to ETCIC.

22. Procurement of civil works and related services financed under the project, including the ADB-administered loan, will be done in accordance with ADB's Procurement Guidelines (2015, as amended from time to time). Consulting services will be required for supervising construction and designing PBM contracts. Consultants will be recruited in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). As the AIIB will cofinance the project and ADB will administer the cofinancing, universal procurement will apply, including for both civil works and consulting services.<sup>12</sup>

23. Advance contracting and retroactive financing will be pursued in line with ADB's Procurement Guidelines to facilitate project implementation. The government has been advised that advance contracting and retroactive financing do not commit ADB to finance the project. The project is categorized as procurement- and design-ready. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual (PAM).<sup>13</sup>

**Table 3: Implementation Arrangements**

Aspects		Arrangements		
Implementation period	July 2017–June 2023			
Estimated completion date	30 June 2023			
Estimated loan closing date	31 December 2023			
Management				
(i) Oversight body	MOF, Deputy Minister (chair)			
(ii) Executing agency	MRDI			
(iii) Implementing agency	Roads Department			
Procurement	International competitive bidding		1 contract for the construction of Batumi bypass road	\$190.3 million
	International competitive bidding		Multiple contracts to be determined based on PBM design	\$10.0 million
Consulting services	PBM design and procurement packaging	QCBS (90:10)	International: 24 person-months National: 12 person-months	\$1.0 million
	Supervision for PBM	QCBS (90:10)	To be determined based on PBM design	\$2.0 million
	Construction supervision for Batumi bypass road	QCBS (90:10)	International: 186 person-months National: 477 person-months	\$7.0 million
	Procurement specialist	ICS	To be determined (need-based)	\$0.2 million
	Project audit service	LCS	Lump-sum contract	\$0.05 million
Retroactive financing and/or advance contracting	Retroactive financing will be allowed for civil works and consulting services expenditures incurred up to 12 months prior to the date of signing of the ADB loan and the AIIB loan, subject to a maximum of 20% of the loan amounts.			
Disbursement	The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2015, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.			

ADB = Asian Development Bank, AIIB = Asian Infrastructure Investment Bank, ICS = individual consultant selection, LCS = least-cost selection, MOF = Ministry of Finance of Georgia, MRDI = Ministry of Regional Development and Infrastructure, PBM = performance-based maintenance, QCBS = quality- and cost-based selection.

Source: ADB estimates.

<sup>12</sup> ADB. 2015. *Enhancing Operational Efficiency of the Asian Development Bank*. Manila.

<sup>13</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

### III. DUE DILIGENCE

#### A. Technical

24. The project road is a single carriageway two-lane international road with a total road width of 14 meters (m), including the lanes (7 m), paved shoulder (5 m), and unpaved shoulder (2 m). The right of way extends to 64 m (32 m on each side of the centerline), including a buffer zone allowance of 50 m (25 m on each side, measured from the edge of carriageway to the adjoining property boundary as required by government regulation). The road design was carried out in accordance with the Standard on Geometric and Structural Requirements for Highways in Georgia, with reference to relevant clauses of the American Association of State Highway and Transportation Officials standards for the design speed of 100 km per hour, which is applicable for the project road's rugged terrain. The rugged and mountainous terrain requires construction of five tunnels and 14 bridges, including two major river and two long valley crossings. The total length of the five tunnels is 3.8 km, and their design is consistent with the minimum requirements of the European Parliament and the Council of the European Union.<sup>14</sup>

25. The project will select contiguous international road links and connecting secondary roads of about 200 km in fair to good condition for areawide PBM contracts. The Roads Department will define routine maintenance service levels and condition-responsive standards for the application of resurfacing alternatives (including slurry seals, surface treatments, micro-surfacing, functional asphalt concrete overlays, and other appropriate treatments) based on (i) current maintenance standards and practices; (ii) information collected from condition surveys of each road; (iii) analysis of traffic and vehicle overloading data; (iv) analyses of typical road uses and road user needs for each road, including consultations and informal discussions with road users and roadside communities; and (v) affordability, based on analysis of past and expected maintenance expenditures.

#### B. Economic and Financial

26. **Economic.** An economic analysis for the Batumi bypass road was conducted in accordance with ADB guidelines.<sup>15</sup> The analysis was based on a comparison of the with- and without-project scenarios, and covered a period of 25 years, with opening of the facility by 2022. Traffic forecast projections included (i) normal traffic in the without-project case, (ii) diverted traffic from the existing road to the bypass section, and (iii) generated traffic. The project's major benefit will be a reduction in travel time of more than 60% for almost all vehicle types. Savings in vehicle operating cost per km (8.5% for cars, 17.3% for light goods vehicles, and 23.8% for heavy goods vehicles) and a nearly 50% reduction in traffic accidents are also expected. The highway design and maintenance model 4 was used in projecting benefits.<sup>16</sup>

27. The economic analysis showed the project to be economically viable, with an estimated economic internal rate of return of 16.1% and an estimated net present value of \$62.3 million using a 12% discount rate. Sensitivity analysis confirmed the economic viability of the project. A 20% decrease in benefits would lead to an economic internal rate of return of 12.9%, which still exceeds the threshold of 12%.

<sup>14</sup> EUR-Lex Access to European Law. Directive 2004/54/EC of the European Parliament and of the Council of 29 April 2004 on minimum safety requirements for tunnels in the Trans-European Road Network. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32004L0054>.

<sup>15</sup> ADB. 1997. *Guidelines for the Economic Analysis of Projects*. Manila.

<sup>16</sup> World Road Association. 2004. *Highway Development and Management Tool (HDM-4)*. Available: <https://www.piarc.org/en/knowledge-base/road-assets-management/HDM-4-Software/>.

28. **Financial.** The project road will be maintained under the government's normal routine maintenance program. The yearly allocation for routine maintenance for international and secondary roads of \$2,500–\$3,000 per km per year will be adequate to maintain project road function without undue damage. The financial management assessment was conducted as part of project preparation. The capacity of the ETCIC was assessed for funds-flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing arrangements. ETCIC has six professional staff members recruited from the market and professionally trained in financial management and accounting, and five supporting specialists. ETCIC's technical capacity is assessed to be satisfactory, ETCIC meets ADB requirements for financial management, and the financial management risk is moderate.

### **C. Governance**

29. Since 2003, wide-ranging reforms have been implemented to strengthen public financial management and reduce corruption; these have been complemented by measures to improve public service efficiency, including a 50% reduction in the number of civil service employees, and higher salaries for retained staff. Georgia's national procurement system is regulated by the 1999 Law on State Procurement (and subsequent amendments). Georgia's public procurement framework is strong, based on the country corruption profile prepared by ADB. Public procurement for domestically funded projects is required to use an e-procurement system, which is closely monitored by the State Procurement Agency.

30. Georgia's anticorruption regulatory framework is outlined in the 2009 Law of Georgia on the Conflict of Interests and Corruption in Public Service. The Investigative Division of the Prosecution Service is the key anticorruption body. The Anti-Corruption Interagency Council under the Ministry of Justice of Georgia is tasked with coordinating anticorruption efforts. The council comprises high-level officials along with nongovernment organizations and private sector representatives. Georgia adopted its inaugural National Anti-Corruption Strategy and Action Plan in 2005.

31. ADB's Integrity Principles and Guidelines (2015)<sup>17</sup> and ADB's Anticorruption Policy (1998, as amended to date) were explained to and discussed with the government, MRDI, and the Roads Department. The specific policy requirements and supplementary measures are described in the PAM (footnote 13).

### **D. Poverty, Social, and Gender**

32. The project is expected to help reduce poverty by improving the transport of goods and people and access to services, thereby stimulating economic activities. The project will benefit local residents and enterprises by creating jobs during construction and reducing transport costs and travel times. The project is classified as a general intervention, with no direct poverty reduction component. It will benefit poor people in the project area by improving transport conditions and enabling better access to social services. The civil works contract will require contractors to (i) comply with Georgia's applicable labor laws and related international treaty obligations, and not use child labor; (ii) provide safe working conditions and separate sanitation facilities for male and female workers; (iii) provide equal wages to male and female workers for work of equal value; (iv) provide employment opportunities for women; and (v) carry out HIV/AIDS, illicit drugs, and human trafficking prevention and awareness programs in workers' campsites.

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<sup>17</sup> ADB, Office of Anticorruption and Integrity. 2015. *Integrity Principles and Guidelines (2015)*. Manila.

## E. Safeguards

33. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.<sup>18</sup>

34. **Environment (category A).** It is a new alignment that will pass through hilly terrain involving extensive civil works, including tunnels and bridges, and resulting in a large-scale operation. In 2009, during the project preparatory technical assistance stage, the government prepared an environmental impact assessment (EIA) report for the entire Adjara bypass and ADB approved it, as required by the ADB Environment Policy 2002. The EIA report was updated in 2011 during the detailed design phase, and subsequently revised in 2016, to incorporate environmental impacts, new legislation, environmental management costs, new public consultations, climate change risks, and an assessment of cumulative impacts. The project is rated as being at *medium risk* from climate change impacts due to possible floods and landslides at the project location. Where roadways traverse steep slopes, the project design mitigates climate risk by incorporating multiple tunnels and high-pillared bridges, rather than cutting rock. The updated EIA was disclosed on the ADB website on 2 November 2016.

35. The anticipated environmental impacts will occur primarily during construction and result from the project's large scale. The road passes through hilly terrain, and in the vicinity of settlements and water courses; soil erosion, noise, dust, vibration, and air quality impacts are therefore likely to be significant. Air quality, noise, and vibration impacts are also expected during road operation. The environmental management plan will include measures to minimize anticipated impacts during construction and operation. Prior to construction, the contractors will develop a site-specific environmental management plan; this will be prepared employing a risk assessment approach to select impacts and site-appropriate mitigation measures.

36. **Involuntary resettlement (category A).** The total length of the Batumi bypass is 14.3 km. Civil works associated with road construction will entail significant land acquisition and resettlement (LAR), and some effect on livelihoods. No LAR impact was identified for the starting 0.6 km of the Batumi bypass road as it constitutes the existing Chakvi–Makhinjauri tunnel, for which no structural work is designed other than pavement rehabilitation. For the remaining 13.7 km, a total of 963 privately owned land plots will need to be acquired. There are 769 affected households, totaling 4,051 affected people. Of these, 562 households with 3,024 people are deemed severely affected; 369 households with 2,023 people will require physical relocation; and 276 households are deemed vulnerable. For LAR purposes, the 13.7 km portion of the bypass has been split into two sections (7 km and 6.7 km in length). LARPs have (i) been produced for both sections; (ii) approved by ADB, and disclosed on the ADB website; and (iii) are being implemented. The inclusion and entitlements defined in the LARPs are in accordance with ADB's Safeguard Policy Statement (2009).

37. **Indigenous peoples (category C).** No indigenous peoples are present in the project area, as defined by the Safeguard Policy Statement (2009).

## F. Summary of Risk Assessment and Risk Management Plan

38. Significant risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.<sup>19</sup> The risks are assessed as

<sup>18</sup> ADB. Safeguard Categories. <https://www.adb.org/site/safeguards/safeguard-categories>.

<sup>19</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).



manageable by adopting mitigating measures, and the integrated benefits and impacts are expected to outweigh the costs of mitigation.

**Table 4: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigating Measures</b>
The Roads Department's human, technical, and financial resources are inadequate to manage a rapidly growing portfolio and technically complex projects that require sophisticated highway engineering.	The Roads Department hired an international tunnel and a bridge engineer for the World Bank East–West Highway Corridor Improvement Project (approved in 2015); their expertise could be shared for other projects, as needed. The project includes funding for project management and institutional support, which will be used to obtain expertise needed for project implementation.
An inadequate road maintenance budget may jeopardize the sustainability of large road network investments, and preservation of road assets.	The development partners' joint policy dialogue seeks to increase the road maintenance fiscal budget. In addition, efforts are being made to use limited maintenance resources more productively and efficiently by (i) reducing the maintenance backlog, particularly for secondary roads; and (ii) introducing PBM contracts.
A small number of affected people may decline relocation and resort to lengthy disputes outside of the grievance redress mechanism, and thereby disrupt construction works.	During project preparation, extensive consultations were conducted with nongovernment organizations and local residents to explain the legal framework allowing involuntary land acquisition and expropriation for public purposes; this will continue during implementation. The Roads Department will closely coordinate with law enforcement agencies to avoid indefinite grievance cases that disrupt construction works.
The local construction industry may not be mature enough to absorb the PBM concept, properly assess the risks, and accurately price their services.	The consultancy for the PBM design and procurement packaging will (i) assess the contracting industry, including local and international contractors active in Georgia, to evaluate their technical, managerial, and financial capacity; (ii) identify potential bidders and their capacity; (iii) establish a basis for bidder qualification criteria; and (iv) identify weaknesses of likely bidders and ways to mitigate associated risks.

ADB = Asian Development Bank, PBM = performance-based maintenance.

Source: Asian Development Bank estimates.

#### **IV. ASSURANCES AND CONDITIONS**

39. The government, MRDI, and the Roads Department have assured ADB that implementation of the project shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and loan documents. The government, MRDI, and the Roads Department have agreed with ADB on certain covenants for the project, which are set forth in the draft loan agreement. The loan agreement will not be effective until, among others, the AIIB loan agreement, and the cofinancing agreement between ADB and AIIB, have been executed and become effective in accordance with their respective terms.

#### **V. RECOMMENDATION**

40. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of €108,190,000 to Georgia for the Batumi Bypass Road Project, from ADB's ordinary capital resources, in regular terms, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; for a term of 24 years, including a grace period of 13 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan agreement presented to the Board.

Takehiko Nakao  
President

6 March 2017

## DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with Improving regional connectivity in Georgia so that it can play the role of regional transport and logistics hub (The Socioeconomic Development Strategy of Georgia [Georgia 2020]). <sup>a</sup>			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<b>Outcome</b> Efficiency for road transport along the EWH in Georgia improved	a. Travel time from Sarpi to Poti reduced to 1.5 hours by 2023 (2016 baseline: 3.0 hours)	a. Roads Department surveys	An inadequate road maintenance budget may jeopardize the sustainability of large investments in the road network, and the preservation of road assets.
<b>Outputs</b> 1. New bypass road skirting Batumi constructed  2. Routine and periodic maintenance carried out using PBM contracts	1a. 14.3 km of a new two-lane bypass road skirting Batumi constructed by 2021, with an international roughness index of 3.0 m/km or less (2016 baseline: 0 km)  2a. By 2023, about 200 km of international roads combined with connecting secondary roads maintained by private contractors on long-term PBM contracts of no less than 5 years, with an international roughness index of 3.0 m/km or less (2016 baseline: 0 km)	1a–2a. Supervision consultant's project progress report	A small number of affected people may decline relocation and resort to lengthy disputes outside of the grievance redress mechanism, and thereby disrupt construction works.  The local construction industry may not be mature enough to absorb the PBM concept, properly assess the risks, and accurately price their services.
<b>Key Activities with Milestones</b> <b>Output 1: New bypass road skirting Batumi constructed</b> 1.1 Complete payment for compensation and relocation of affected people with no dispute or complaint by June 2017. 1.2 Complete bid evaluation for civil works contract by July 2017. 1.3 Recruit supervision consultants by July 2017. 1.4 Award civil works contract by October 2017. 1.5 Complete payment for compensation and relocation of all affected people by December 2017. 1.6 Complete civil works by December 2021. <b>Output 2: Routine and periodic maintenance carried out using PBM contracts</b> 2.1 Recruit PBM design consultants by December 2017. 2.2 Complete engineering design and procurement packaging by June 2018. 2.3 Award PBM contracts by December 2018. 2.4 Recruit supervision consultants by December 2018. 2.5 Complete PBM contracts by June 2023.			
<b>Inputs</b> ADB: €108,190,000 (\$114.0 million equivalent [loan]) AIIB: \$114.0 million (loan) Government: \$87.2 million			
<b>Assumptions for Partner Financing</b> Not applicable.			

ADB = Asian Development Bank, AIIB = Asian Infrastructure Investment Bank, EWH = East–West Highway, m/km = meter/kilometer,, OCR = ordinary capital resources, PBM = performance-based maintenance.

<sup>a</sup> Government of Georgia, Ministry of Regional Development and Infrastructure. *Georgia 2020: Socioeconomic Development Strategy of Georgia*. Tbilisi. <http://static.mrdi.gov.ge/551e4a570cf24147438b1727.pdf>

Source: Asian Development Bank.

### **LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=50064-001-3>

1. Loan Agreement
2. Sector Assessment (Summary): Transport
3. Project Administration Manual
4. Contribution to the ADB Results Framework
5. Development Coordination
6. Economic and Financial Analysis
7. Country Economic Indicators
8. Summary Poverty Reduction and Social Strategy
9. Environmental Impact Assessment
10. Resettlement Plan
11. Risk Assessment and Risk Management Plan