

PROJECT PREPARATORY TECHNICAL ASSISTANCE

A. Justification

1. The Government of Georgia is endeavoring to make Georgia a regional and logistics hub and more attractive for businesses. The East West Highway (EWH), stretching 410 km from Sarpi on the Black Sea, at the border with Turkey, through the center of the country to the capital Tbilisi and on to the border with Azerbaijan, is the main inter-regional and international route between western and eastern Georgia, as well as its neighboring countries. Representing about 2 percent of Georgia's road network and one fourth of its international roads, the EWH serves 8,000 to 10,000 vehicles per day and carries over 60 percent of the country's international trade. In anticipation of admission of Georgia to the Central Asia Regional Economic Cooperation (CAREC) program in 2016, the EWH will be an integral part of one of the six key CAREC corridors providing the shortest transit link to connect Central Asia with Europe and East Asia.

2. In light of the traffic growth on EWH, the high percentage of truck traffic, and the difficult terrain and resulting geometric profiles, capacity expansion of the current 2-lane mountainous section between Chumateleti and Argveta is crucial to realizing full potential of the EWH with improvements to the highway either completed or underway on each side of this section. Therefore, the Government has requested the Asian Development Bank (ADB) and several other development partners to finance the remaining bottleneck sections (Chumateleti–Argveta) on the EWH. A feasibility study financed under a World Bank project for the Chumateleti–Argveta section (comprising four sections F1 through F4) of the EWH was completed in 2015. The World Bank will finance Section F1 of about 11km from Chumateleti to Khevi and detailed design for the section will start in Q4 2016. Detailed design of the approximate 42 km section, F2, F3, and F4 between Khevi and Argveta, financed under an ongoing ADB loan (Loan 2843-GEO), will commence in early 2017. The terms of reference for the detailed design consultant covers the preparation of detailed design for the new construction of Khevi–Ubisa–Shorapani–Argveta section, the bidding documents, and the environment impact analysis and land acquisition and resettlement plan in accordance with ADB's Safeguard Policy Statement (2009) requirements.

3. The proposed bottleneck section (Khevi–Ubisa) improvement for ADB financing requires the construction of around 12 tunnels, 43 bridges, and several very deep cuttings and high embankments within a distance of around 15 km, through terrain with difficult geological and geotechnical conditions. While the detailed design consultant will have been selected on the basis of its experience with designing roadwork in such conditions, the scope for design errors is large, and the outcome of such errors would be potentially very serious. Accordingly, and is often the case on large and complex infrastructure projects, an independent proof check consultant is to be engaged to review the detailed design consultant's major outputs for, for example, tunnels, bridges, and deep cuttings, to provide the government with advice on the soundness of the designs, and with suggestions for improving them. In addition, critical sections of Georgia's international and secondary road network are being rapidly improved, with development partner assistance and also through the Government's own resources. These improvements, while essential, are not being matched by an improvement in the country's ability to operate and maintain the network in a sustainable manner over the medium to long term. This requires both a sound understanding of the sector, and knowledge of what the Government and other development partners are doing and proposing to do.

4. To help formulate the project design mutually agreed and suitable for ADB financing, the project preparatory technical assistance (PPTA) will support the Road Department (RD) under the Ministry of Regional Development and Infrastructure with (i) providing an independent technical review, covering technical and contractual aspects, of the detailed design for the highway improvement works; and (ii) providing a comprehensive assessment of the country's road sector from institutional, operational, financial, and technical perspectives and recommending ensuing institution and capacity development activities for enhancing Georgia's existing road asset management system and road safety.

B. Major Outputs and Activities

5. The major outputs and activities are summarized in Table A3.1.

Table A3.1: Summary of Major Outputs and Activities

Major Activities	Expected Completion Date	Major Outputs	Expected Completion Date
Sector diagnostic study and recommendations on key policy/sector reform directions, and identification of aspects for institutional strengthening	Month 1–8	A comprehensive road transport sector assessment from institutional, operational, financial, and technical perspectives, including a detailed summary of all ongoing and proposed development partner activities in the sector and their coherent coordination	31 August 2017
Technical audit on engineering and procurement; and analysis of economic and financial aspects	Month 4–15	A series of review reports with recommendations prepared after the detailed design consultants submit their technical, contract documentation, and other outputs	Progressively depending on the detailed design schedule, until 31 March 2018.

Source: Asian Development Bank estimate

C. Cost Estimate and Proposed Financing Arrangement

6. The TA is estimated to cost \$1,050,000 equivalent, of which \$1,000,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-V). The government will provide counterpart staff, office accommodation, communication facilities for consultants, and other in-kind contributions. The detailed cost estimate is presented in Table A3.2.

Table A3.2: Cost Estimates and Financing Plan

Item	Total Cost (\$'000)
Asian Development Bank	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (25 person-months)	750.0
ii. National consultants (10 person-months)	50.0
b. International and local travel	110.0
c. Reports and communications	10.0
d. Workshops and seminars	10.0
2. Miscellaneous administration and support costs	15.0
3. Contingencies	55.0
Total	1,000.0

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-V)

Source: Asian Development Bank estimate

D. Consulting Services

7. The services will be provided by individual consultants who will be engaged by ADB in accordance with the Guidelines on the Use of Consultants (2013, as amended from time to time). The required positions and person-months are indicated in Table A3.3. The individual reports will be integrated by the project processing team to ensure quality and relevance of inputs and recommendations.

Table A3.3: Summary of Consulting Services Requirement

Positions*	Indicative Person months
Transport Sector Specialist (International)	3
Tunneling Specialist (International)	5
Bridge and Structure Specialist (International)	4
Road Safety specialist (International)	3
Transport Economist (International)	2
Financial Management specialist (International)	2
Climate adaptation civil engineer (International)	3
Highway Engineer cum construction coordinator (national)	10
Resource Persons	3

* Lump sum payments / output-based contracts may be considered as appropriate for some positions under the TA.

Source: Asian Development Bank estimates.

8. The outline terms of reference for the TA consultants are described in paras 9 to 13.

9. **Tunneling Specialist/Bridge and Structure Specialist/Climate adaptation civil engineer/ Highway Engineer cum construction coordinator.** The detailed design consultant will submit their outputs (reports, site survey and investigation results, technical designs, specifications, work methods, procurement documentation, etc.) to the RD, and the RD will provide these to the relevant individual proof check specialist for review and suggestions for change or improvement, if required. Proof check specialists will need to arrange meetings and seminars to discuss findings and recommendations. Qualification: Qualified and competent professional engineers with a relevant degree and preferably of 15 or more year’s professional experience, as applicable, on the technical and contractual civil and other works for tunnels, bridge design, and road construction in difficult geotechnical conditions. Working experience or knowledge of ADB’s operations will be desirable; must have proven analytical skills and working experience in ADB developing member countries; Georgia experience would be preferred.

10. **Transport Sector Specialist /Road Safety Specialist.** Undertake, but not be limited to, the following tasks: (i) review all available documents and reports, with the Government and with development partners as appropriate; (ii) meet with the Ministry of Finance, the Ministry of Regional Development and Infrastructure, relevant government agencies and development partners active in the sector to develop an understanding of ongoing and proposed development partner activities, especially on road network operation and maintenance and road safety; (iii) hold seminars or workshops with the government and development partners to present and discuss initial findings, and to obtain feedback and additional information; (iv) prepare a draft report that provides a comprehensive assessment of the sector for the Government’s and ADB’s review; and (v) provide a final report reflecting the outcome of the review. Qualification: Qualified and competent professional engineer with a relevant degree and preferably of 10 or more year’s professional experience. Working experience or knowledge of ADB’s operations will be desirable; must have proven analytical skills and working experience in ADB developing member countries; Georgia experience would be preferred.

11. **Transport Economist.** Considering both the project road and the overall EWH corridor of which the project road is a part, undertake, but not be limited to, (i) review the available feasibility study and meet with the government, executing agency, and other stakeholders to gather in-depth information to update the traffic forecast; (ii) review macroeconomic and sector contexts, conduct demand analysis, identify project rationale and alternatives; (iii) identify and compare project costs and benefits, assess project sustainability, conduct sensitivity and risk analysis, and identify indicators for project performance monitoring system; and (iv) coordinate with other experts in order to produce a cohesive joint report for processing the project for ADB financing.⁷ Qualification: Bachelor's degree in economics or equivalent with broad-based work experience (at least 10 years of relevant professional experience) recognized as an expert in transport economics; proven analytical skills and working experience in ADB developing member countries; Georgia experience would be preferred.

12. **Financial Management Specialist.** Undertake, but not be limited to, (i) review the project financing plan; (ii) evaluate the project financial viability; (iii) prepare an updated sector financial management assessment; (iv) identify key risks and actions to ensure project sustainability and propose related assurances or covenants; and (v) review ongoing and planned institutional development and propose measures necessary for institutional strengthening, particularly in financial management. Qualification: Bachelor's degree and a broad-based work experience (at least 10 years of relevant professional experience) recognized as an expert in transport financial analysis; proven analytical skills and working experience in ADB developing member countries, with a recognized accountancy qualification such as a Chartered Accountant, Certified Public Accountant or Chartered Certified Accountant; Georgia experience would be preferred.

13. **Resource Persons.** Resource persons including on road tolling, construction and traffic management, and FIDIC contract administration may be engaged on a need basis to provide specialized expertise to RD. Qualification: Qualified and competent professional engineer with a relevant degree and preferably of 20 or more year's professional experience.

E. Implementation Arrangements

14. The Executing Agency for the TA will be the RD of the MRDI, whose existing resources will provide management and day to day support. The consulting services will be implemented over a period of 18 months, with estimated TA commencement starting on 1 February 2017 and ending on 31 August 2018. TA funds will be disbursed in accordance with ADB's Technical Assistance Disbursement Handbook (2010, as amended from time to time). The PPTA will be financially closed by 30 November 2018. On a regular basis, the consultants will report directly to ADB's project officer, and work closely with RD and its consultants for ongoing loans, and provide all necessary assistance in the preparation of project documents.

15. The individual consultants will each be responsible for submitting reports as required, on the basis of reports and documents submitted to them by the RD, for technical and procurement related reviews, or for task specific reports such as economic analysis, financial management assessment, climate adaptation and financing assessment, and others.

⁷ Detailed terms of reference will be explicit on the main areas of economic analysis that will be required (including 'Distribution Analysis', with reference to ADB's "Key Areas of Economic Analysis of Investment Projects – An Overview").