



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

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Project Number: 49042-005

Loan and Grant Numbers: Loan 3451-TAJ, Grant 0509-TAJ, and Grant 0510-TAJ  
March 2018

## Proposed Grant for Additional Financing Republic of Tajikistan: Central Asia Regional Economic Cooperation Corridors 2, 5, and 6 (Dushanbe–Kurgonteppa) Road Project

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Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 28 February 2018)

|               |   |              |
|---------------|---|--------------|
| Currency unit | – | somoni (TJS) |
| TJS1.00       | = | \$0.1134     |
| \$1.00        | = | TJS8.8194    |

## ABBREVIATIONS

|       |   |  |
|-------|---|--|
| ADB   | – | Asian Development Bank                                 |
| CAREC | – | Central Asia Regional Economic Cooperation             |
| EMP   | – | environmental management plan                          |
| JICA  | – | Japan International Cooperation Agency                 |
| km    | – | kilometer  |
| LARP  | – | land acquisition and resettlement plan                 |
| MOT   | – | Ministry of Transport                                  |
| PIURR | – | project implementation unit for roads rehabilitation   |
| PMSCS | – | project management and contract supervision consultant |

## NOTE

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

|                         |   |
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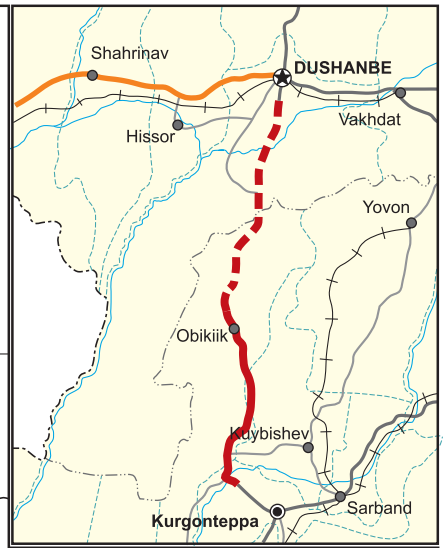
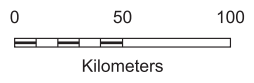
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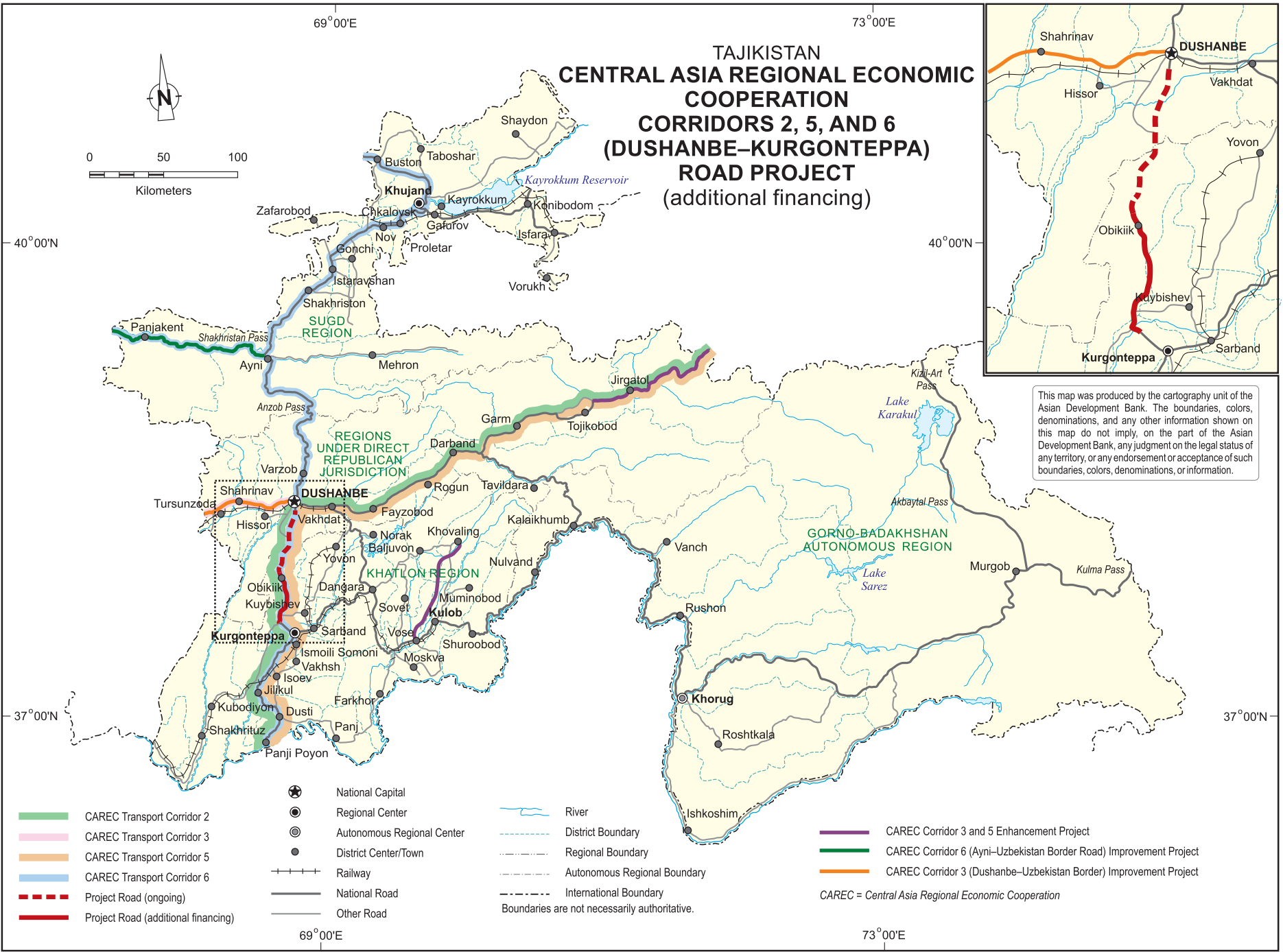
## PROJECT AT A GLANCE

|   |   |  |                       |
|---|---|--|-----------------------|
| <b>1. Basic Data</b>                            |   | <b>Project Number:</b> 49042-005       |                       |
| <b>Project Name</b>                             | Central Asia Regional Economic Cooperation Corridors 2, 5, and 6 (Dushanbe-Kurgonteppa) Road Project - Additional Financing | <b>Department /Division</b>            | CWRD/CWTC             |
| <b>Country Borrower</b>                         | Tajikistan<br>Tajikistan  | <b>Executing Agency</b>                | Ministry of Transport |
| <b>2. Sector</b>                                | <b>Subsector(s)</b>   | <b>ADB Financing (\$ million)</b>      |                       |
| ✓ Transport                                     | Road transport (non-urban)  |  | 90.00                 |
|   |   | <b>Total</b>                           | <b>90.00</b>          |
| <b>3. Strategic Agenda</b>                      | <b>Subcomponents</b>  | <b>Climate Change Information</b>      |                       |
| Inclusive economic growth (IEG)                 | Pillar 1: Economic opportunities, including jobs, created and expanded  | Adaptation (\$ million)                | 0.90                  |
| Environmentally sustainable growth (ESG)        | Disaster risk management  | Climate Change impact on the Project   | Medium                |
| Regional integration (RCI)                      | Global and regional transboundary environmental concerns<br>Pillar 1: Cross-border infrastructure                           |  |                       |
| <b>4. Drivers of Change</b>                     | <b>Components</b>   | <b>Gender Equity and Mainstreaming</b> |                       |
| Governance and capacity development (GCD)       | Institutional development   | Some gender elements (SGE)             | ✓                     |
| Knowledge solutions (KNS)                       | Application and use of new knowledge solutions in key operational areas   |  |                       |
| Partnerships (PAR)                              | Bilateral institutions (not client government)<br>Official cofinancing  |  |                       |
| <b>5. Poverty and SDG Targeting</b>             |   | <b>Location Impact</b>                 |                       |
| Geographic Targeting                            | No  | Regional                               | High                  |
| Household Targeting                             | No  |  |                       |
| SDG Targeting                                   | Yes   |  |                       |
| SDG Goals                                       | SDG3, SDG9  |  |                       |
| <b>6. Risk Categorization:</b>                  | Complex   |  |                       |
| <b>7. Safeguard Categorization</b>              | <b>Environment: B Involuntary Resettlement: A Indigenous Peoples: C</b>   |  |                       |
| <b>8. Financing</b>                             |   |  |                       |
| <b>Modality and Sources</b>                     |   | <b>Amount (\$ million)</b>             |                       |
| <b>ADB</b>                                      |   | <b>90.00</b>                           |                       |
| Sovereign Project grant: Asian Development Fund |   | 90.00                                  |                       |
| <b>Cofinancing</b>                              |   | <b>0.00</b>                            |                       |
| None  |   | 0.00                                   |                       |
| <b>Counterpart</b>                              |   | <b>17.50</b>                           |                       |
| Government                                      |   | 17.50                                  |                       |
| <b>Total</b>                                    |   | <b>107.50</b>                          |                       |

# TAJIKISTAN CENTRAL ASIA REGIONAL ECONOMIC COOPERATION CORRIDORS 2, 5, AND 6 (DUSHANBE-KURGONTEPPA) ROAD PROJECT (additional financing)



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- |  |                                     |  |                            |  |                              |  |  |
|--|-------------------------------------|--|----------------------------|--|------------------------------|--|--|
|  | CAREC Transport Corridor 2          |  | National Capital           |  | River                        |  | CAREC Corridor 3 and 5 Enhancement Project                         |
|  | CAREC Transport Corridor 3          |  | Regional Center            |  | District Boundary            |  | CAREC Corridor 6 (Ayni-Uzbekistan Border Road) Improvement Project |
|  | CAREC Transport Corridor 5          |  | Autonomous Regional Center |  | Regional Boundary            |  | CAREC Corridor 3 (Dushanbe-Uzbekistan Border) Improvement Project  |
|  | CAREC Transport Corridor 6          |  | District Center/Town       |  | Autonomous Regional Boundary |  |  |
|  | Project Road (ongoing)              |  | Railway                    |  | International Boundary       |  |  |
|  | Project Road (additional financing) |  | National Road              |  |                              |  |  |
|  |                                     |  | Other Road                 |  |                              |  |  |
- Boundaries are not necessarily authoritative.

CAREC = Central Asia Regional Economic Cooperation

## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed grant to the Republic of Tajikistan for the additional financing of the Central Asia Regional Economic Cooperation (CAREC) Corridors 2, 5, and 6 (Dushanbe–Kurgonteppa) Road Project.<sup>1</sup>

2. The proposed additional financing will support an increase in the scope of the current project by constructing a 40-kilometer (km) road section connecting Chashmasoron to Kurgonteppa in Khatlon Province,<sup>2</sup> improving safety on priority sections of the national highway network, and continuing to strengthen the institutional capacity of the Ministry of Transport (MOT).<sup>3</sup> The overall project will improve the connectivity between the capital Dushanbe and Kurgonteppa, which are two major cities and economic hubs in Tajikistan, and enhance the safety of the national highway network.

## II. THE PROJECT

### A. Rationale

3. Tajikistan depends heavily on its road transport corridors to support investment, job creation, trade, and ultimately economic growth and poverty reduction. Almost 70% of the population lives in rural areas, in a largely mountainous territory where only 10% of the land is suitable for cultivation. The road transport sector suffers from low quality, long travel times, and poor reliability. Four CAREC regional corridors (2, 3, 5, and 6) cross parts of Tajikistan, offering the opportunity for Tajikistan to enhance its connectivity and trade competitiveness.

4. The government has requested Asian Development Bank (ADB) assistance to progressively upgrade the 82 km Dushanbe–Kurgonteppa road, for which ADB has programmed two projects: one in 2016 (current project) and one in 2018 (proposed additional financing).<sup>4</sup> The road is a strategic north–south link, and one of the most heavily traveled roads in the country, as well as the confluence of CAREC corridors 2, 5, and 6. The project road passes through terrain that varies from flat to mountainous. A further 90 km beyond Kurgonteppa, connects Dushanbe to Afghanistan. The government has also requested ADB assistance through the project to improve several short sections of the national highway network that have substantial road safety-related deficiencies.

5. **Current project.** The current project that is improving 33 km of the road from Dushanbe to Chashmasoron was approved on 31 October 2016, with a combined loan, grant, and administration of a grant of \$67.2 million equivalent. The ADB loan and grants were signed on 15 November 2017 and declared effective on 26 May 2017, with a closing date of 30 September 2021. In addition, the Organization of the Petroleum Exporting Countries Fund for International Development (OFID) provided a \$12 million loan for the current project, which is not administered by ADB. The OFID loan is effective and also has a closing date of 30 September 2021.

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<sup>1</sup> Asian Development Bank (ADB). 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loan, Grant, and Administration of Grant to the Republic of Tajikistan for the Central Asia Regional Economic Cooperation Corridors 2, 5, and 6 (Dushanbe–Kurgonteppa) Road Project*. Manila.

<sup>2</sup> Kurgonteppa was renamed Bokhtar in January 2018.

<sup>3</sup> ADB provided project preparatory technical assistance for the CAREC Corridors 2, 5, and 6 Road (Dushanbe–Kurgonteppa) Project (TA 8945-TAJ).

<sup>4</sup> ADB. 2017. *Country Operations Business Plan: Tajikistan, 2018–2020*. Manila.

6. The current project is rated *on track* to deliver its expected outputs and meet its intended outcome, with cumulative contract awards amounting to \$42.3 million (61% of total loan and grants financing) and cumulative disbursements amounting to \$6.3 million (9%) against an elapsed time of 26% as of 13 February 2018. Disbursements will increase by the end of 2018, as high-value pavement works will have commenced by that time.<sup>5</sup>

7. The project management and contract supervision consultant (PMSCS) contract was awarded on 28 June 2017 and the civil works contract was awarded on 28 September 2017. The PMSCS was mobilized in August 2017 and the civil works contractor was mobilized in October 2017. The works commenced in November 2017 and are expected to be completed by October 2020. The resettlement plan has been fully implemented and the environmental management plan (EMP) is being implemented without major issues. A grievance redress mechanism was established and there are currently no unresolved grievances or complaints. (output 1). Capacity building activities on financial management, road safety, and road asset management are progressing as planned (output 2). The current project, through the PMSCS's support, has contributed to substantially improving the readiness of the additional financing, which will help synchronize the award of the PMSCS and main civil works contracts with the effectiveness of ADB-provided financing (output 3). The risks identified during project preparation are being adequately managed with the PMSCS's assistance.

8. **Proposed additional financing.** Additional financing is sought to scale up the project by improving a contiguous 40 km road section (Chashmasoron–Kurgonteppa) to the current project's 33 km road section. It is expected that the Japan International Cooperation Agency (JICA) will help finance, through collaborative parallel financing, the remaining 9 km section in Kurgonteppa to complete the project road improvement. The additional financing will also support the MOT's program to improve the road safety situation on selected priority sections of the national highway network, which may include existing tunnels, intersections, black spots, and failed lengths of pavement.

9. The proposed additional financing will continue strengthening the MOT's capacity on financial management, road safety, and road asset management. The MOT will revisit and update its current standard technical specifications, which follow the highway construction standards (1998), to improve quality of bidding documents for typical road rehabilitation projects. The MOT will also inventory and geo-reference the main bridges on the national highway network to build up the bridge module of the road asset management system, which is being developed with the World Bank's assistance.<sup>6</sup>

10. **Suitability of additional financing.** The proposed additional financing meets the eligibility criteria for additional financing, as the overall project is (i) technically feasible, economically viable, and financially sound based on the due diligence carried out; (ii) accorded high priority by the government as reflected by its inclusion in the National Development Strategy;<sup>7</sup> (iii) consistent with the transport development objectives of the current project, as it will enhance the outcome and outputs of the current project; and (iv) consistent with the country partnership strategy, 2016–2020 for Tajikistan, which aims to improve physical connectivity and enhance regional integration.<sup>8</sup> Given the strong links with the original project in terms of design and

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<sup>5</sup> Summary of Project Performance (accessible from the list of linked documents in Appendix 2).

<sup>6</sup> World Bank. 2015. *Project Appraisal Document for the Second Phase of the Central Asia Roads Links Program*. Washington, DC.

<sup>7</sup> Government of Tajikistan. 2017. *National Development Strategy of the Republic of Tajikistan for the Period up to 2030*. Dushanbe.

<sup>8</sup> ADB. 2016. *Country Partnership Strategy: Tajikistan, 2016–2020*. Manila.

implementation arrangements, the additional financing will offer substantial efficiency gains in project processing and help meet the project outcome in a timely manner.

11. **Value added by ADB assistance.** The current project enabled the introduction of clean energy technology, in the form of solar-based LED road lighting and enhanced road safety facilities, such as traffic calming and speed reduction elements, and much improved edge of road drainage and protection features. These are essential and comply with current international practice. They would not have been incorporated without ADB assistance. The proposed additional financing will scale up these design elements to the entire project road (73 km). The use of high-level technologies to inventory the main highway bridges, which may include drone-based inspections and cloud database systems, will also be explored.

## B. Impact and Outcome

12. The overall aggregate impact of the project will remain unchanged as a result of the additional financing. The overall project will be aligned with the following impacts: (i) the strategic pillar on promotion of economic growth of the Tajikistan National Development Strategy (footnote 7), and (ii) CAREC's strategic goal of establishing competitive corridors across the CAREC region.<sup>9</sup> The overall aggregate outcome will be improved efficiency and safer movement of goods and people on selected sections of the Dushanbe–Kurgonteppa road, and improved safety on the national highway network.<sup>10</sup>

## C. Outputs

13. The proposed additional financing will enable expansion of existing outputs and include a new output to address safety deficiencies on the national highway network. The overall aggregate outputs will be (i) improved road conditions, facilities, and safety along, and in the vicinity of, the project road (expanded); (ii) strengthened institutional capacity of the MOT regarding financial management, road safety, and road asset management (expanded); (iii) completed procurement readiness for the Chashmasoron–Kurgonteppa road section (unchanged); and (iv) improved safety on selected priority sections of the national highway network (added).

## D. Investment and Financing Plans

14. The overall project is estimated to cost \$203.9 million (Table 1).

**Table 1: Project Investment Plan**  
(\$ million)

| Item                                   | Current Amount <sup>a</sup> | Additional Financing <sup>b</sup> | Total        |
|--|-----------------------------|-----------------------------------|--------------|
| <b>A. Base Cost<sup>c</sup></b>        |                             |                                   |              |
| 1. Civil works                         | 73.3                        | 85.7 <sup>e</sup>                 | 158.9        |
| 2. Equipment                           | 1.9                         | 0.0                               | 1.9          |
| 3. Land acquisition and resettlement   | 0.8                         | 1.2                               | 2.0          |
| 4. Consulting services                 | 4.7                         | 6.6                               | 11.4         |
| 5. Incremental administrative expenses | 0.5                         | 0.5                               | 1.0          |
| <b>Subtotal (A)</b>                    | <b>81.2</b>                 | <b>94.0</b>                       | <b>175.2</b> |
| <b>B. Contingencies<sup>d</sup></b>    | <b>12.5</b>                 | <b>13.5<sup>e</sup></b>           | <b>26.0</b>  |

<sup>9</sup> ADB. 2014. *CAREC Transport and Trade Facilitation Strategy, 2020*. Manila.

<sup>10</sup> The design and monitoring framework is in Appendix 1.



| Item  | Current Amount <sup>a</sup> | Additional Financing <sup>b</sup> | Total        |
|---|-----------------------------|-----------------------------------|--------------|
| <b>C. Financing Charges During Implementation</b> | <b>2.7</b>                  | <b>0.0</b>                        | <b>2.7</b>   |
| <b>Total (A+B+C)</b>                              | <b>96.4</b>                 | <b>107.5</b>                      | <b>203.9</b> |

<sup>a</sup> Refers to the original amount approved on 31 October 2016. Includes taxes and duties of \$14.3 million financed from government resources.

<sup>b</sup> Includes taxes and duties of \$15.4 million to be financed from government resources.

<sup>c</sup> In mid-2017 prices for the additional financing portion.

<sup>d</sup> Physical contingencies computed at 10% for goods and civil works, and 5% for consulting services. Price contingencies were estimated using the Asian Development Bank cost escalation factors; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>e</sup> Loan savings of approximately \$10 million under the current project—the result of effective competition among international bidders for the civil works contract, which resulted in a lower-than-estimated contract award—will be utilized to cover civil works and contingencies in relation to the proposed additional financing. Upon approval of the additional financing, the financing agreement for the current project will be amended to permit such use.

Source: Asian Development Bank estimates.

15. The government has requested a grant not exceeding \$90 million from ADB's Special Funds resources (Asian Development Fund) to help finance the project. The government has also requested grant financing from JICA, which will be parallel and collaborative, and will not be administered by ADB.

16. The government will provide counterpart funding of \$17.5 million equivalent to cover taxes and duties, land acquisition and resettlement costs, incremental administrative expenses, and other miscellaneous costs. ADB will not finance taxes and duties. The financing plan is in Table 2.

**Table 2: Financing Plan**

| Source   | Current <sup>a</sup>   |                       | Additional Financing   |                       | Total                  |                       |
|--|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|
|  | Amount<br>(\$ million) | Share of<br>Total (%) | Amount<br>(\$ million) | Share of<br>Total (%) | Amount<br>(\$ million) | Share of<br>Total (%) |
| Asian Development Bank   | 65.2                   | 67.6                  | 90.0                   | 83.7                  | 155.2                  | 76.1                  |
| Special Funds resources (loan)   | 49.4 <sup>b</sup>      | 51.2                  | 0.0                    | 0.0                   | 49.4                   | 24.2                  |
| Special Funds resources (grant)  | 15.8                   | 16.4                  | 90.0                   | 83.7                  | 105.8                  | 51.9                  |
| OPEC Fund for International<br>Development (loan)  | 12.0                   | 12.5                  | 0.0                    | 0.0                   | 12.0                   | 5.9                   |
| Clean Energy Fund <sup>c</sup> (grant) under<br>the Clean Energy Financing<br>Partnership Facility | 2.0                    | 2.1                   | 0.0                    | 0.0                   | 2.0                    | 1.0                   |
| Government   | 17.2                   | 17.8                  | 17.5                   | 16.3                  | 34.7                   | 17.0                  |
| <b>Total</b>   | <b>96.4</b>            | <b>100.0</b>          | <b>107.5</b>           | <b>100.0</b>          | <b>203.9</b>           | <b>100.0</b>          |

OPEC = Organization of the Petroleum Exporting Countries.

<sup>a</sup> Refers to the original amount approved on 31 October 2016.

<sup>b</sup> Of this amount, approximately \$10 million (reflecting the amount of loan savings as a result of effective competition among international bidders for the civil works contract, which resulted in a lower-than-estimated contract award) will be utilized to cover civil works and contingencies in relation to the proposed additional financing. Upon approval of the additional financing, the financing agreement for the current project will be amended to permit such use.

<sup>c</sup> Financing partners: the governments of Australia, Norway, Spain, Sweden, and the United Kingdom. Administered by the Asian Development Bank.

Source: Asian Development Bank estimates.

## E. Implementation Arrangements

17. The existing implementation arrangements remain unchanged. The MOT will be the executing agency and its project implementation unit for roads rehabilitation (PIURR) will be the implementing agency. The PIURR will be assisted during project implementation by relevant MOT departments and the PMCS to be recruited in accordance with ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).

18. The civil works contracts will be supervised by the PMCSC, which will render the following services:

- (i) **Contract supervision.** The PMCSC will function as the engineer in administering the civil works contracts in accordance with the conditions of the contract, and will advise the employer on all matters concerning implementation of the contracts, including quality control, work progress, and dispute resolution.
- (ii) **Project management.** The PMCSC will provide support to the employer for environment and resettlement monitoring, road safety audits, financial management, and design and procurement for the selected safety improvements works on the national highway network.

19. The proposed small civil works will be high-priority and urgent network improvement works that have safety and asset management benefits. The works selected will have no resettlement impacts and minimal environmental impacts, and shall be completed no later than the physical completion of the project road.

20. JICA and ADB agreed that each of their respective policies and procedures will be followed in (i) the procurement of works and goods, and the use of consulting services to be financed by their respective loans and grants; (ii) the disbursement arrangements and establishment of accounts used for payments from their respective loans and grants; (iii) the reporting mechanisms and auditing of project accounts relating to their respective loans and grants; and (iv) the measures against fraud, corruption, money laundering, and the financing of terrorism.

21. JICA and ADB agreed to adopt a single social and environmental assessment and planning process, as well as unified safeguard documentation, consultation, and disclosure requirements to satisfy both ADB's Safeguard Policy Statement (2009) and JICA's safeguards requirements as stipulated in the JICA Guidelines for Environmental and Social Considerations.<sup>11</sup> During project implementation, ADB will be responsible for supervising and monitoring the environmental and social aspects of the ADB-financed section, while JICA will be responsible for reviewing and monitoring the environmental and social aspects of the JICA-financed section.

22. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual.<sup>12</sup>

**Table 3: Implementation Arrangements**

| Aspects                  | Arrangements   |   |                |
|--------------------------|--|---|----------------|
| Implementation period    | September 2018–September 2022                        |   |                |
| Closing date             | 31 March 2023  |   |                |
| Management               |  |   |                |
| (i) Executing agency     | Ministry of Transport                                |   |                |
| (ii) Implementation unit | Project implementation unit for roads rehabilitation |   |                |
| Procurement              | Open competitive bidding                             | 1 contract<br>(civil works for Chashmasoron–Kurgontepa section)     | \$72.6 million |
|                          |  | 1 contract<br>(civil works for priority safety improvements)        | \$4.0 million  |
|                          |  | Up to 3 contracts<br>(civil works for priority safety improvements) | \$6.0 million  |

<sup>11</sup> JICA. 2010. *Guidelines for Environmental and Social Considerations*. Tokyo.

<sup>12</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).

| Aspects             | Arrangements  |   |             |
|---------------------|---|---|-------------|
| Consulting services | Quality- and cost-based selection   | 680 person-months (project management and contract supervision)               | \$4,200,000 |
|                     |   | 70 person-months (highway bridges inventory and load testing)                 | \$800,000   |
|                     |   | 18 person-months (standard technical specifications for highway construction) | \$350,000   |
|                     |   | 5 person-months (project auditing—block audit)                                | \$50,000    |
|                     | Individual consultant selection   | 8 person-months (independent monitor—2 positions)                             | \$200,000   |
| Advance contracting | Advance contracting for civil works and consulting services for project management and contract supervision and independent monitoring.   |   |             |
| Disbursement        | The loan and grant proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed upon between the government and ADB. |   |             |

ADB = Asian Development Bank.

Source: ADB.

### III. DUE DILIGENCE

#### A. Technical

23. The design of the Chashmasoron–Kurgonteppa road section (additional financing) essentially follows the standards and specifications used for the Dushanbe–Chashmasoron road section (current project). Present traffic volumes range from approximately 7,000 to 9,000 vehicles per day. As with the current project, the civil works under the proposed additional financing will consist of (i) expanding the road width from two to four lanes to address projected capacity constraints, (ii) improving the road surface condition through construction of new pavements, and (iii) providing well-designed safety facilities to address existing road safety deficiencies.

24. The completed road will have two carriageways, each with two traffic lanes typically 3.5 meters wide, separated by a median typically 2.0 meters wide in rural areas and narrower where the road passes through villages and difficult mountain terrain. The project road alignment will follow the existing road alignment because of terrain considerations and to minimize land acquisition, with some adjustments to horizontal and vertical alignments to meet the required standards. The design speed will typically be 100 km per hour, which is appropriate for a road of this class in the terrain through which it passes.

25. The completed road will have a flexible pavement with asphaltic concrete surfacing. The pavement structure has been designed using appropriate design methods based on the traffic projected to use the road over a 20-year period (2021–2040) following project completion, assuming one asphaltic concrete overlay during this period to provide the additional strength required for traffic loading for the latter part of the road's service life. The road design takes into account the severe weather conditions that the road will experience, which range from high temperatures in summer to below freezing temperatures and heavy snowfall in winter. Adverse weather events beyond projected parameters may however be a risk that could delay construction.

26. Relevant disaster risks and climate change adaptation measures have also been factored into the design, which are estimated to cost \$900,000. The road design meets internationally accepted standards and practices in terms of road safety, which have been introduced and piloted through the current project. The design will be subjected to detailed road safety audits before construction commences, during construction, and prior to final acceptance of the completed road. The road safety audits will be conducted in close coordination with the traffic police. The road design also reflects consultations with communities living adjacent to the road, which have resulted in the inclusion in the project road's design of several underpasses for people, livestock, and agriculture, as well as pedestrian crossings with appropriate warning devices. The smaller safety-related works will be designed in accordance with the same standards as the project road design.

27. This technical due diligence has confirmed that the project road's technical design, alignment, cross-section, drainage structures, pavements, and road safety provisions are appropriate for a road of this standard in this location, and for the volume of traffic that is projected to use it.

## **B. Economic and Financial**

28. **Economic viability.** The economic evaluation of the project was undertaken using the highway development and management model, and following ADB guidelines.<sup>13</sup> For the economic analysis, the with-project scenario assumed the improvement of the 39.6 km road section from Chashmasoron to Kurgonteppa. Without the project, the road is expected to deteriorate to an average international roughness index value of 9 within about 7 years, rendering it in very poor condition. Future traffic was estimated based on classified traffic counts conducted in 2016 and 2017, and available gross domestic product growth forecasts. The project is economically viable with an estimated economic internal rate of return of 15.4%, with a net present value of \$20.1 million at a 12% discount rate. The principal quantifiable benefits are reduced vehicle operating costs, reduced travel time, and reduced maintenance costs. Sensitivity tests confirmed that the economic viability of the project is robust against project cost increases of up to 34% and decreases in vehicle operating costs savings of up to 27%.

29. **Financial sustainability.** The project is nonrevenue generating. The design of the project road pavement and structures has been carefully developed with a view to ensuring the road's long-term sustainability. The project will support the development of a tailored road asset management system in close coordination with other development partners (e.g., the European Bank for Reconstruction and Development, JICA, and the World Bank), all of which have operations that involve some forms of operation and maintenance. The government is committed to maintaining the project road and facilities at the required standard as reflected in the grant agreement.<sup>14</sup> The financial analysis concluded that the MOT has sufficient financial capacity, within the government's budgetary procedures, to meet recurrent expenditures to operate and maintain the project road in a sustainable manner.

## **C. Governance**

30. **Financial management.** The proposed additional financing does not entail any changes in the existing financial management arrangements. Financial management functions under the proposed additional financing will remain the responsibility of the PIURR, as under the current

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<sup>13</sup> Economic and Financial Analysis (accessible from the list of linked documents in Appendix 2); ADB. 2017. *Guidelines for the Economic Analysis of Projects*. Manila.

<sup>14</sup> Grant Agreement (accessible from the list of linked documents in Appendix 2).

project. The original financial management assessment concluded that the financial management risk of the implementing agency is substantial, which remains relevant for the overall project. The PMCSC team for the current project includes an international financial management specialist and a national financial management specialist who will both assist the PIURR in implementing key actions and measures to address the deficiencies identified in the financial management assessment. The MOT and PIURR will maintain adequate and separate project records and accounts, which will be audited annually by an independent auditor.

31. **Procurement.** The procurement classification for the current project (category B) remains relevant for the overall project since procurement arrangements will not be changed. The MOT and PIURR have an adequate understanding of ADB's procurement and financial management policies and procedures as a result of the sizeable portfolio of ADB-supported transport operations in Tajikistan. The PMCSC team for the current project includes an international procurement specialist who will assist the PIURR with procurement of contracts for the proposed additional financing, including for small road safety works.

32. ADB's Integrity Principles and Guidelines and ADB's Anticorruption Policy (1998, as amended to date) were explained to and discussed with the government, the MOT, and the PIURR.<sup>15</sup> The specific policy requirements and supplementary measures are described in the project administration manual (footnote 12).

#### **D. Poverty and Social**

33. The project will directly benefit residents in Dushanbe, Kurgonteppa, and 19 villages located along the project road by improving access to jobs, markets, and public services while reducing the likelihood and severity of road collisions. The project will also enhance the reliability and efficiency of power solutions along the project road by introducing solar-based street lighting and power backup systems for communities living adjacent to the project road. Socioeconomic surveys were carried out for project preparation and a summary poverty reduction and social strategy was prepared.<sup>16</sup>

34. The gender categorization for the current project (some gender elements) remains relevant for the overall project since the additional financing is essentially scaling up the project following the same project design elements. The current project design already addresses the gender issues identified during the project preparation, which include increasing safety features, enhancing connectivity of villages (pedestrian crossings and livestock underpasses), constructing bus stops, improving rest areas and road bazaars, and promoting confidence in the new road configuration through road safety awareness training and workshops. The current project also contributes to reducing women's household drudgery with improved access to electricity through the installation of power backup solutions. The MOT and PIURR are taking all necessary actions to encourage women living in the project area to participate in planning and implementing project activities in line with ADB's Policy on Gender and Development (1998).

#### **E. Safeguards**

35. **Involuntary resettlement.** The project is classified as category A for involuntary resettlement impacts. The census carried out during project preparation identified approximately 246 affected households—including private agriculture plots, owners and users of land and buildings, business owners, renters, and employees—with 1,956 household members affected. Of the 246 affected households, 92 households with 766 members will experience severe impacts

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<sup>15</sup> ADB. 2015. *Integrity Principles and Guidelines*. Manila.

<sup>16</sup> Summary Poverty Reduction and Social Strategy (accessible from the list of linked documents in Appendix 2).

on their livelihood and 66 households with 632 members were found to belong to vulnerable groups. A total of 18 residential buildings and 39 main business buildings will be permanently impacted. The small road safety-related works will not have impacts on resettlement.

36. A land acquisition and resettlement plan (LARP) has been prepared to mitigate and address all the associated losses in accordance with the ADB's Safeguard Policy Statement and relevant national legislation.<sup>17</sup> The LARP was disclosed on the ADB website in January 2018. Consultations with the project stakeholders and displaced persons were undertaken during LARP preparation and will continue throughout implementation. If modification of the LARP is required, or additional land requirement or involuntary resettlement impacts are identified, the LARP will be updated in accordance with applicable laws, and ADB approval will be obtained prior to any further implementation. All displaced people will receive compensation in accordance with the LARP provisions. The land required for the project will be made free of encumbrances in sections prior to commencement of construction. A grievance redress mechanism is in place in accordance with the LARP to assist affected persons in resolving grievances and complaints. The MOT will submit semiannual safeguards monitoring reports to ADB for review and disclosure.

37. **Environment.** The project is classified as category B for environmental impacts. The environmental assessment established that the project will have site-specific environmental impacts related to air and water pollution, noise and vibration, soil erosion, loss of roadside trees, relocation of utilities, and traffic disruption during the construction stage. Additionally, it was found that the project could result in split communities, disruption of farming patterns, and loss of access to roadside businesses during road operation.

38. An initial environmental examination and an EMP have been prepared for the project and were disclosed on the ADB website in January 2017, in accordance with the ADB Safeguard Policy Statement.<sup>18</sup> Public consultations were conducted during initial environmental examination preparation involving people from roadside villages, nongovernment organizations, and other project stakeholders. Adequate mitigation measures are included in, and will be implemented through, the EMP. The project design incorporates measures for preserving community cohesion such as improved road crossings, access to public facilities, and access of agricultural machinery to fields and livestock to pastures. The cost for implementing the EMP will be financed by the project through the civil works contract (mitigation measures) and the PMCSC's contract (environmental monitoring).

39. **Indigenous peoples.** There are no indigenous peoples, as defined in the ADB Safeguard Policy Statement, in the project area, and thus the project is classified as category C for indigenous peoples' impacts.

## **F. Risks and Mitigating Measures**

40. Major 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 project risks are considered manageable through the prescribed mitigating measures. Integrated benefits and impacts are expected to outweigh the costs.

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<sup>17</sup> Resettlement Plan (accessible from the list of linked documents in Appendix 2).

<sup>18</sup> Initial Environmental Examination (accessible from the list of linked documents in Appendix 2).

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

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

| <b>Risks</b>   | <b>Mitigating Measures</b>  |
|--|---|
| Inadequate financial monitoring and reporting systems                        | The PMCSC team for the current project includes an international financial management specialist and a national financial management specialist who will both support the PIURR in reviewing and strengthening its financial reporting and monitoring system by providing adequate tools and on-the-job training during project implementation.                       |
| Insufficient allocation of funds to maintain the project road and facilities | The government and ADB have agreed on a covenant to ensure that the project road and facilities will receive timely and adequate maintenance. A road asset management system is being developed with World Bank assistance to assist the MOT in prioritizing its maintenance and financing programs. <sup>a</sup>   |
| Inadequate attention given to road safety on the project road                | The government and ADB have agreed on a covenant to ensure that recommendations identified in project road safety audits are effectively implemented by the works contractor and monitored by the PIURR with PMCSC assistance. Guidelines on safe arterial roads will be developed to foster progressive design practices and enable replication at the sector level. |

ADB = Asian Development Bank, MOT = Ministry of Transport, PIURR = project implementation unit for roads rehabilitation, PMCSC = project management and contract supervision consultant.

<sup>a</sup> World Bank. 2015. *Project Appraisal Document for the Second Phase of the Central Asia Roads Links Program*. Washington, DC.

Source: ADB.

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

41. The government and the MOT 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 project administration manual and loan documents.

42. The government and the MOT have agreed with ADB on certain covenants for the project, which are set forth in the grant agreement.

43. Disbursement of the ADB grant proceeds will be conditional upon (i) exemption of the project from taxes and duties (for any item of expenditure), and (ii) the government's allocation of adequate funds for implementation of the resettlement plan (for works).

#### **V. RECOMMENDATION**

44. I am satisfied that the proposed financing would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the grant not exceeding \$90,000,000 to the Republic of Tajikistan from ADB's Special Funds resources (Asian Development Fund) for the additional financing of the Central Asia Regional Economic Cooperation Corridors 2, 5, and 6 (Dushanbe–Kurgonteppa) Road Project, on terms and conditions that are substantially in accordance with those set forth in the draft grant agreement presented to the Board.

Takehiko Nakao  
President

6 March 2018

## REVISED DESIGN AND MONITORING FRAMEWORK

| <b>Impact the Project is Aligned with</b>   |   |   |  |
|---|---|---|--|
| <p><b>Current project</b></p> <p>(i) Economic growth promoted (Tajikistan National Development Strategy) <sup>a</sup></p> <p>(ii) Competitive corridors across the CAREC region established (CAREC Program) <sup>b</sup></p> <p><b>Overall project</b></p> <p>Unchanged</p>   |   |   |  |
| <b>Results Chain</b>  | <b>Performance Indicators with Targets and Baselines</b>  | <b>Data Sources and Reporting</b>   | <b>Risks</b>   |
| <p><b>Outcome</b></p> <p><b>Current project</b></p> <p>Improved efficiency and safer movement of goods and people on selected sections of the Dushanbe–Kurgonteppa road</p> <p><b>Overall project</b></p> <p>Efficiency and safer movement of goods and people on selected sections of the Dushanbe–Kurgonteppa road, and safety on the national highway network improved</p> | <p><b>Current project</b></p> <p>By 2022:</p> <p>a. Average daily vehicle-km reached 401,000 in the first full year of operation of the current project road (2015 baseline: 306,000)</p> <p>b. Crash rate per 100,000 vehicle-km of travel on the current project road reduced to 7.3 or less (2015 baseline: 7.3) <sup>c</sup></p> <p><b>Overall project</b></p> <p>By 2023:</p> <p>a. Average daily vehicle-km reached 926,000 in the first full year of operation of the overall project road (2017 baseline: 700,000)</p> <p>b. Crash rate per 100,000 vehicle-km of travel on the Dushanbe-Chashmasoron road section reduced to 7.3 or less (2015 baseline: 7.3) <sup>c</sup></p> <p>c. Crash rate per 100,000 vehicle-km of travel on the Chashmasoron-Kurgonteppa road section reduced to 12.9 or less (2016 baseline: 17.2) <sup>c</sup></p> | <p>a. Annual project progress reports from MOT and PMCSC</p> <p>b. Annual traffic accident reports from the Traffic Police Department</p>   | <p>Insufficient allocation of funds to maintain the project road and facilities</p> <p>Inadequate attention given to road safety on the project road</p> |
| <p><b>Outputs</b></p> <p><b>Current project</b></p> <p>Output 1: Road conditions, facilities, and safety along, and in the vicinity of, the project road improved</p>   | <p><b>Current project</b></p> <p>By 2021:</p> <p>1a. About 33 km of road designed to a 100 km/h standard with an average international roughness index of less than 2 m/km (2016 baseline: 6 m/km)</p> <p>1b. Adequate road safety features installed and functional on the project road (2016 baseline: preconstruction road safety audit) <sup>d</sup></p> <p>1c. At least 600 households in the vicinity of the project road connected to solar power backup solutions (2016 baseline: 0) <sup>c</sup></p>   | <p>1a. Project progress reports and PCR from MOT and PMCSC</p> <p>1b. Road safety audit reports and PCR from MOT and PMCSC</p> <p>1c. Project progress reports and PCR from MOT and PMCSC</p> | <p>Adverse weather conditions in project area delay construction</p>   |



| Results Chain   | Performance Indicators with Targets and Baselines   | Data Sources and Reporting  | Risks |
|---|---|---|-------|
| <p><b>Overall project</b><br/>Unchanged</p>   | <p><b>Overall project</b><br/>By 2022:<br/>1a. About 73 km of road reconstructed with 100 km/h typical standard speed design and an average international roughness index of less than 2 m/km (2016 baseline: 5 m/km)</p> <p>1b. Unchanged</p> <p>1c. Unchanged</p>   |   |       |
| <p><b>Current project</b><br/>Output 2:<br/>Institutional capacity of the MOT regarding financial management, road safety, and road asset management strengthened</p> <p><b>Overall project</b><br/>Unchanged</p> | <p><b>Current project</b><br/>By 2020:<br/>2a. Guidelines on safe arterial roads design developed and disseminated (2016 baseline: not developed)</p> <p>2b. RAMS framework developed and disseminated (2016 baseline: not developed)</p> <p>2c. Financial management system and procedures developed and used by PIURR staff (2016 baseline: not developed)</p> <p><b>Overall project</b><br/>By 2022:<br/>2a. Unchanged<br/>2b. Unchanged<br/>2c. Unchanged<br/>2d. Main highway bridges inventoried to build up the RAMS bridge module (2017 baseline: not developed)<br/>2e. Standard technical specifications for highway construction updated and disseminated (2017 baseline: specifications date back 1998)</p> | <p>2a–2c. Project progress reports and PCR from MOT and PMSC</p>                          |       |
| <p><b>Current project</b><br/>Output 3:<br/>Procurement readiness for the Chashmasoron–Kurgonteppa road section completed</p> <p><b>Overall project</b><br/>Unchanged</p>   | <p><b>Current project</b><br/>By 2018:<br/>3a. Contracts for works, goods, and services awarded (2016 baseline: not applicable)</p> <p><b>Overall project</b><br/>Unchanged</p>   | <p>3a. Project progress reports and PCR from MOT and PMSC</p>                             |       |
| <p><b>Current project</b><br/>Output 4:<br/>Not applicable</p> <p><b>Overall project</b><br/>Safety on selected priority sections of the national highway network improved</p>                                    | <p>By 2022:<br/>4a. Safety improved on at least 3 priority sections or black spots across the national highway network (2017 baseline: preconstruction road safety audits)<sup>d</sup></p>  | <p>4a. Road safety audit reports, project progress reports, and PCR from MOT and PMSC</p> |       |

**Key Activities with Milestones (overall project)****1. Improved road conditions, facilities, and safety along, and in the vicinity of, the project road**

- 1.1 Award PMCSC contract for current project road section by Q2 2017 (changed, completed).  
 1.2 Award civil works contract for current project road section by Q3 2017 (changed, completed).  
 1.3 Complete preopening RSA for current project road section by Q1 2020 (changed).  
 1.4 Award contract for supply of goods for current project road section by Q4 2018 (changed).  
 1.5 Award PMCSC contract for additional financing road section by Q3 2018 (added).  
 1.6 Award civil works contract for additional financing road section by Q3 2018 (added).  
 1.7 Complete preopening RSA for additional financing road section by Q1 2021 (added).

**2. Strengthened institutional capacity of the MOT regarding financial management, road safety, and road asset management**

- 2.1 Develop and disseminate guidelines on safe arterial roads design by Q2 2020 (unchanged).  
 2.2 Develop and disseminate RAMS framework by Q2 2020 (unchanged).  
 2.3 Develop financial management system and procedures and train PIURR staff by Q4 2020 (unchanged).  
 2.4 Inventory main highway bridges by Q4 2021 (added).  
 2.5 Update and disseminate standard technical specifications for highway construction by Q4 2021 (added).

**3. Completed procurement readiness for the Chashmasoron–Kurgonteppa road section**

- 3.1 Develop bidding documents by Q2 2017 (completed).  
 3.2 Procure contracts by Q4 2018 (unchanged).

**4. Improved safety on selected priority sections of the national highway network (added)**

- 4.1 Award contracts for the targeted safety improvement works by Q4 2019 (added).

**Inputs (\$ million)**

|            | Source            |                    |   |   |            |
|------------|-------------------|--------------------|---|---|------------|
|            | ADB               |                    | OPEC Fund for International Development | Clean Energy Fund under the Clean Energy Financing Partnership Facility | Government |
|            | Loan <sup>e</sup> | Grant <sup>e</sup> | Loan                                    | Grant   |            |
| Current    | 49.4              | 15.8               | 12.0                                    | 2.0   | 17.2       |
| Additional | 0.0               | 90.0               | 0.0                                     | 0.0   | 17.5       |
| Overall    | 49.4              | 105.8              | 12.0                                    | 2.0   | 34.7       |

**Assumptions for Partner Financing**

**Current project:** Not applicable

**Overall project:** Unchanged

ADB = Asian Development Bank, CAREC = Central Asia Regional Economic Cooperation, h = hour, km = kilometer, m = meter, MOT= Ministry of Transport, OPEC = Organization of the Petroleum Exporting Countries, PCR = project completion report, PIURR = project implementation unit for roads rehabilitation, PMCSC = project management and contract supervision consultant, Q = quarter, RAMS = road asset management system, RSA = road safety audit.

<sup>a</sup> Government of Tajikistan. 2017. *National Development Strategy of the Republic of Tajikistan for the Period up to 2030*. Dushanbe.

<sup>b</sup> ADB. 2014. *Central Asia Regional Economic Cooperation Transport and Trade Facilitation Strategy, 2020*. Manila.

<sup>c</sup> Data to be sex-disaggregated.

<sup>d</sup> Includes provision of road signs, pedestrian crossings, road lighting, livestock underpasses, bus stops, and improvement of rest areas and road bazaars where appropriate.

<sup>e</sup> ADB's Special Funds resources.

Source: ADB.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=49042-005-3>

1. Grant Agreement
2. Sector Assessment (Summary): Transport (Road Transport [Nonurban])
3. Project Administration Manual
4. Summary of Project Performance
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Economic and Financial Analysis
8. Country Economic Indicators
9. Summary Poverty Reduction and Social Strategy
10. Initial Environmental Examination
11. Resettlement Plan
12. Risk Assessment and Risk Management Plan
13. Climate Change Assessment