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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT/
INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT PAPER

ON A

PROPOSED ADDITIONAL GRANT

IN THE AMOUNT OF US$2.7 MILLION
FROM THE KOREA-WORLD BANK GROUP PARTNERSHIP FACILITY

TO

MONGOLIA

FOR A

Additional Financing for Ulaanbaatar Sustainable Urban Transport Project

June 24, 2022

Transport Global Practice
East Asia And Pacific Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective May 31, 2022)

Currency Unit	=	
MNT3,094.54	=	US$1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Manuela V. Ferro
Country Director:	Martin Raiser
Regional Director:	Ranjit J. Lamech
Practice Manager:	Benedict L.J. Eijbergen
Task Team Leader(s):	Noroarisoa Rabefaniraka, Yang Chen

ABBREVIATIONS AND ACRONYMS

CPF	Country Partnership Framework
DA	Designated Account
DFIL	Disbursement and Financial Information Letter
E&S	Environmental and Social
EIRR	Economic Internal Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRS	Environmental and Social Review Summary
FM	Financial Management
GoM	Government of Mongolia
GRS	Grievance Redress Service
ITS	Intelligent Transport Systems
KWPF	Korea World Bank Partnership Facility
MUB	Municipality of Ulaanbaatar
PAD	Project Appraisal Document
PMO	Project Management Office
POM	Project Operations Manual
PDO	Project Development Objective
PPSD	Project Procurement Strategy for Development
PTSA	Public Transport Service Agency
RDA	Road Development Agency
SEP	Stakeholder Engagement Plan
TA	Technical Assistance
TAMP	Transport Asset Management Plan
TCC	Traffic Control Center
TIIP	Transport Infrastructure Investment Plan
TPMEA	Traffic Planning, Management, and Engineering Agency
USUT	Ulaanbaatar Sustainable Urban Transport

Mongolia

Ulaanbaatar Sustainable Urban Transport Project Additional Financing

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BASIC INFORMATION – PARENT (Ulaanbaatar Sustainable Urban Transport Project - P174007)

Country	Product Line	Team Leader(s)		
Mongolia	IBRD/IDA	Noroarisoa Rabefaniraka		
Project ID	Financing Instrument	Resp CC	Req CC	Practice Area (Lead)
P174007	Investment Project Financing	IEAT1 (9381)	EACCF (344)	Transport

Implementing Agency: Municipality of Ulaanbaatar

Is this a regionally tagged project?
No

Bank/IFC Collaboration

No

Approval Date	Closing Date	Expected Guarantee Expiration Date	Environmental and Social Risk Classification
23-Jun-2021	31-Dec-2026		Substantial

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach [MPA]	[✓] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a Non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)

Development Objective(s)

The Project Development Objectives are to develop a comprehensive framework for sustainable urban mobility in Ulaanbaatar, and to reduce congestion, improve road safety, and address climate resilience on selected transport corridors.

Ratings (from Parent ISR)

	Implementation	Latest ISR
	18-Oct-2021	31-Mar-2022
Progress towards achievement of PDO	S	S
Overall Implementation Progress (IP)	S	S
Overall ESS Performance	S	S
Overall Risk	S	S
Financial Management	S	S
Project Management	S	S
Procurement	S	S
Monitoring and Evaluation	S	S

BASIC INFORMATION – ADDITIONAL FINANCING (Ulaanbaatar Sustainable Urban Transport Project Additional Financing - P179043)

Project ID	Project Name	Additional Financing Type	Urgent Need or Capacity Constraints
P179043	Ulaanbaatar Sustainable Urban Transport Project Additional Financing	Scale Up	No
Financing instrument	Product line	Approval Date	
Investment Project Financing	Recipient Executed Activities	14-Jun-2022	
Projected Date of Full Disbursement	Bank/IFC Collaboration		
17-Apr-2027	No		

Is this a regionally tagged project?	
No	

Financing & Implementation Modalities

[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a Non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)
[ ] Contingent Emergency Response Component (CERC)	

Disbursement Summary (from Parent ISR)

Source of Funds	Net Commitments	Total Disbursed	Remaining Balance	Disbursed
IBRD	100.00	1.00	99.00	1 %
IDA				%
Grants				%

PROJECT FINANCING DATA – ADDITIONAL FINANCING (Ulaanbaatar Sustainable Urban Transport Project Additional Financing - P179043)

FINANCING DATA (US$, Millions)

SUMMARY (Total Financing)

	Current Financing	Proposed Additional Financing	Total Proposed Financing
Total Project Cost	100.00	2.70	102.70
Total Financing	100.00	2.70	102.70
Financing Gap	0.00	0.00	0.00

DETAILS - Additional Financing

Non-World Bank Group Financing

Trust Funds	2.70
Korea WB Partnership Facility	2.70

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any other Policy waiver(s)?

[ ] Yes [✓] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

INSTITUTIONAL DATA

Practice Area (Lead)

Transport

Contributing Practice Areas

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Noroarisoa Rabefaniraka	Team Leader (ADM Responsible)	Transport	IEAT1
Yang Chen	Team Leader	Urban transport	IEAT1
Jianjun Guo	Procurement Specialist (ADM Responsible)	Procurement	EEAR1
Erdene Ayush	Financial Management Specialist (ADM Responsible)	Financial Management	EEAG1
Ross James Butler	Social Specialist (ADM Responsible)	Social Safeguards	SEAS1
Xiaodan Huang	Environmental Specialist (ADM Responsible)	Environmental Engineer	SEAE1
Amarbayasgalan Dorj	Team Member	Social safeguards	IEAT1
Anita Shrestha	Team Member	Transport	IEAT1
Aristeidis Panou	Team Member	Legal	LEGAS
Battuya Dash	Team Member	Transport	IEAT1
Clemens Franz Ludwig Portenlaenger	Team Member	Engineer	IEAT1
Elikia Merleen Vanessa Abraham	Team Member	Private Sector	IPGPF
Erdene Ochir Badarch	Social Specialist	Social safeguard	SEAS1
Gantuya Paniga	Team Member	Operations	EACMF
Giang Thanh Huong Le	Team Member	Program Assistant	IEAT1
Gladys Frame	Team Member	Transport Engineer	IEAT1
Jianwei Wang	Team Member	Transport Engineer	IEAT1
Khaliun Bat Orig	Team Member	Transport	IEAT1
Minghe Zheng	Team Member	Finance Officer	WFACS
Orgil Batsukh	Team Member	Environmental issues	SEAE1

Otgonjargal Norovjav	Procurement Team	Procurement	EEAR1
Thu Ha Le	Counsel	Legal	LEGAS
Yan Zhang	Procurement Team	Assistant	EACCF

Extended Team

Name	Title	Organization	Location

I. BACKGROUND AND RATIONALE FOR ADDITIONAL FINANCING

A. Introduction

1. **This Project Paper seeks the approval of the Bank's Regional Vice President for East Asia and the Pacific to provide an Additional Financing (AF) in an amount of US$2,700,000** to the Ulaanbaatar Sustainable Urban Transport Project (USUTP, P174007), the parent project. The proposed AF is funded by the Korea World Bank Group Partnership Facility (KWPF) Single-Donor Trust Funds as a Recipient Executed Trust Fund (RETF). A supporting Bank Executed Trust Fund (BETF) in the amount of US$300,000 is also provided by KWPF. The Project Development Objective (PDO) of the AF remains the same as the PDO of the parent project, "to develop a comprehensive framework for sustainable urban mobility in Ulaanbaatar, and to reduce congestion, improve road safety, and address climate resilience on selected transport corridors". The AF will be used to finance activities originally included in the design of the parent project. The funds released from the original financing will be reallocated to scale up the parent project activities.

Country context.

2. Mongolia is a landlocked, lower-middle-income country with growth potential owing, in part, to its rich mineral resource endowment. The country's economy experienced rapid yet volatile – extremely susceptible to external shocks - growth over the last 15 years, creating a wave of economic prosperity across the country with large investments in its infrastructure and increased support in social services. The poverty rate[1] dropped between 2010 and 2018 from 38 to 28 percent but remains high. Currently, around 42 percent of the poor in Mongolia live in Ulaanbaatar.[2] During the COVID-19 pandemic, the country's economy contracted over 4 percent in 2020. In response, the government had unveiled several rounds of stimulus measures, including the "100 trillion" program[3], but economic growth remained modest in 2021, reaching 1.4 percent only. Over the medium-term, however, economic growth is expected to accelerate to above 6 percent in 2023-24, as the underground phase of the world-renowned Oyu Tolgoi gold and copper mine becomes operational during year

[1] As calculated using the national poverty line.
http://www.rilsp.gov.mn/upload/2018/argazui//Yduurliin_Undsen_Uzuuleltuudiig_Tootsoh_Argachlal.pdf.
[2] National Statistics Office, 2020
[3] The New Recovery Policy envisages 94 projects worth MNT 100 trillion (US$33 billion equivalent) to strengthen six pillars.

2023. However, a new wave of economic shocks[4] caused by the war in Ukraine threaten the country's economic recovery.

3. To reduce its high dependency to mineral resources and achieve sustainable economic growth, the Government of Mongolia (GoM) has set an agenda to diversify its economy. Nevertheless, infrastructure inadequacy (including transport) inhibited the competitiveness of selected sectors such as agriculture, trade, and tourism. Moreover, Ulaanbaatar being the most populous city in Mongolia, faces urban transport challenges that also significantly affect the country's economic productivity. Hence, the recent Mongolia InfraSAP study[5] suggested five strategic infrastructure interventions to promote the diversification of the economy, which include urban mobility infrastructure improvements.

4. Rapid rural-urban migration over the past two decades has challenged municipal service delivery in the capital city of Ulaanbaatar—Mongolia's economic, financial, and political center. Now, 48 percent of the country's total population live in Ulaanbaatar[6]. The rapid and unorganized expansion of the city and the weak fiscal capacity of the municipality have resulted in a number of urban management challenges, including insufficient expansion of municipal infrastructure and services to the growing ger areas of the city, inadequate provision of public services, and poor municipal asset management. This has resulted in increased inequality of access to services and infrastructure, where the poor have been particularly at a disadvantage.

Sectoral context.

5. Increased economic activities and a sustained rate of migration from rural areas have led to significant increases in demand for urban transit in the city. Development of transport infrastructure and services in Ulaanbaatar have not been able to keep up with this increase in transport demand[7]. The slowly expanding road network in the city, financed by both the state budget and other international financiers, is in poor condition and is quickly deteriorating due to insufficient maintenance, repair, and resilient management practices. The bus public transport service is unreliable, uncomfortable, and lacks coverage in the city's peripheral, lower-income areas. Traffic is heavily congested and traffic management is archaic and inefficient. Moreover, the city's unregulated vehicle parking contributes to both increased congestion and poor road safety, especially the vulnerable road users including pedestrians and bicyclists.

6. At the governance level, the urban transport sector lacks a strategic vision and a comprehensive development approach. Investment decisions are fragmented, and the Municipality of Ulaanbaatar (MUB) lacks a systematic prioritization process for urban transport investments. This is particularly important, given that the sector faces an enormous funding and financing gap. For example, it has been estimated that approximately US$300 million investment is required to bring up 90 percent of MUB's road network to "good" condition with repair and maintenance from its current state. Yet, the budget allocation for repair and maintenance of roads amounted to less than US$1 million in 2019 and the total capital investment from the municipal budget

[4] Disruptions in import and export due to disruptions in international payments (Mongolian banks use Russian banks for payment transfers); Limitation on oil and other household imports; Disruptions in imports logistics from European countries that transit through Russia; etc.

[5] World Bank, *Mongolia InfraSAP: Infrastructure for Connectivity and Economic Diversification,* November 2020.

[6] National Statistics Office, 2021

[7] Ulaanbaatar already has a relatively high motorization rate (392 registered motor vehicles per 1,000 people as of 2019) compared to its peer cities with similar income levels.

amounted to US$35 million in road development. Meanwhile, the public transport sector subsidies amounted US$20 million (or 27 percent of the total municipal variable budget), as of 2019.

7. Amongst others, alleviating traffic congestion has been one of the top priorities of both the central and municipal governments in the recent years. The government has responded to increasing congestion with infrastructure expansion investments and plans (unrealized) for mass transit systems such as light rail, bus rapid transit, and cable cars. However, soft measures to enhance the efficiency of the existing road network, through better traffic management with the use of intelligent transport systems (ITS) and through better road space management with effective parking regulation have not yet been implemented. The proposed AF will finance activities targeting capacity building and investment implementation of these two areas: ITS and Parking management.

B. Parent Project Design and Scope

8. The Ulaanbaatar Sustainable Urban Transport (USUT) Program had been conceptualized based on the results of the extensive Technical Assistance (TA) programs implemented by the World Bank and the MUB since 2015. These TAs included sector diagnostics, sector strategies with specific recommendations for improving capital investment planning, transport infrastructure asset management, public transport financial sustainability, bus management system, mass transit deployment, road safety, and climate resilience. The USUTP Program, envisioned as a multi-year investment program that would be implemented over a long period beyond individual projects, will help the MUB coordinate all future urban transport initiatives and investments, moving from its previous piecemeal approach to addressing the root causes of the urban transport issues discussed above in a comprehensive manner.

9. The parent Ulaanbaatar Sustainable Urban Transport Project (USUTP)(P174007), in the amount of US$100 million, was approved by the Board of Executive Directors on June 23, 2021 and became effective on February 18, 2022. The Project was designed to build the foundation for the above-mentioned USUT Program, by establishing its framework and demonstrating its implementation. During project preparation, the project components, the pool of candidate activities, and the initial selection methodology to identify and prioritize the activities have been developed. During project implementation, responsible agencies of the MUB[8], with the support of the Bank team, will continue to develop the framework with strategic study and technical assistance activities, and to select and implement priority activities on a rolling basis, until all the loan amount is fully utilized. Using the framework approach has two major advantages: flexibility in activity selection and implementation sequencing depending on the Government's changing priorities, fiscal space, and implementation capacity; and focuses on the capacity of the MUB and its relevant agencies in planning, designing, implementing, and managing urban transport activities, which would be gradually institutionalized to enhance client ownership, sustainability, and long-term impacts.

10. The USUTP has four components: Component 1) Integrated Corridors (US$81 million), which includes subcomponents of i. Corridor specific investments for rehabilitation, reconfiguration, and upgrading, ii. Intelligent transport systems, iii. Smart parking management system; Component 2) Sustainable Public

[8] These agencies are the Public Transport Service Agency (PTSA), Road Development Agency (RDA), Traffic Control Center (TCC), Traffic Planning, Management, and Engineering Agency (TPMEA).

Transport System (US$10 million) with subcomponents of i. Corridor specific bus lane and bus stop improvements and ii. City-wide bus management systems improvement and deployment of on-demand transit services; Component 3) Effective institutions for transport planning and management (US$9 million); and Component 4) Contingent Emergency Response Component (US$0) [9].

C. Parent Project Performance to Date.

11. Progress towards achieving PDO is Satisfactory. The PMO has been working with the Project Implementing Agencies (IAs) to measure the baseline values of PDO indicators, which was not possible during the preparation of the Project due to the COVID-19 pandemic. The monitoring and evaluation (M&E) specialist has been closely coordinating with other PMO experts (especially the engineers and procurement specialist) to ensure that the Project M&E processes are fully integrated in their planning processes.

12. The project's Implementation Progress is Satisfactory. The project was declared effective on February 18, 2022, after meeting all effectiveness conditions: the project's Subsidiary Agreement between the Borrower and the Project Implementing Entity (PIE, or MUB) was signed, the Project Steering Committee is established, the Project Management Office is operational (with all staff now on-board, except one road engineer who resigned and whose replacement is being recruited now), and the Project Operations Manual has been adopted. After the project's kick-off meeting, the MUB submitted an Annual Work Plan and Budget (AWPB) containing relevant Project activities and expenditures proposed to be included in the Project for the first year of project implementation (including a specification of the sources of financing and the Borrower's proposed counterpart share in the cost of the AWPB), together with the relevant Procurement Plan. All documents were found to be satisfactory and approved by the World Bank team. The PMO team is now preparing to launch the procurement process for the design and construction supervision of the planned works and preparing for the other studies, aiming for the actual construction works to commence during the next construction period (May-September 2023). As per the framework approach for USUTP project implementation, the World Bank supervision team has carried out a training and workshop for the PMO staff and other relevant MUB officials to introduce the foundation of the multi-criteria analysis to prioritize and select priority corridors during the duration of the project implementation, based on MUB's development objectives and available and evolving data.

13. The project's social and environmental safeguards performance remains Satisfactory. With the activities scheduled and implementation arrangements which continue to apply, the assessment of environmental and social (E&S) risks for the proposed AF also remains the same as that of the parent project, that is Substantial. Though the project is still at the early stage of implementation, the client has taken actions to implement the E&S mitigation measures as specified in the Environmental and Safeguards Management Framework (ESMF), Stakeholder Engagement Plan (SEP) and Environmental and Social Commitment Plan (ESCP), particularly the implementation of capacity building plan with the establishment of a competent PMO and ongoing recruitment of dedicate E&S staff for the PMO.

14. **Rationale for the AF.** MUB's transport sector management and planning are deficient in terms of capacity and resources. The MUB needs better institutional capacity to efficiently allocate its limited financial resources to the growing infrastructure investment needs. The lack of funding permeates through every aspect

[9] This zero-dollar component is designed to provide swift response in the event of an eligible crisis or emergency, by enabling Ulaanbaatar to request the World Bank to reallocate project funds to support emergency response and reconstruction where needed.

of the urban transport sector, including infrastructure and public transport, and the effects of the financial constraints are further worsened by lack of policy coordination and inefficient planning. Without a coherent vision or comprehensive strategy for urban transport, the MUB has been implementing piecemeal urban transport initiatives and programs over the past decade. Investment decisions have been poorly coordinated and resources spread among unsolicited projects with financial assistance from bilateral and international partners.

15. Considering the weak technical and implementation capacity of the client, the Bank team submitted a grant request to the KWPF to help the MUB with the design, preparation, and implementation of the Intelligent Transport System (ITS) and parking activities during project preparation. KWPF approved the grant request six months after its original submission, on June 4, 2021, after the IBRD project had already been submitted to the Board for approval. As per Bank Procedure "Additional Financing for Investment Project Financing applying the Environmental and Social Policy" RVP approval is required to process the proposed AF - as the parent project has been under implementation for less than 12 months. On April 9, 2022, EAP RVP approval was received to process such a package for approval.

16. The development of UB's ITS comes in response to the city's strategic priority to develop itself as a Smart City through use of technology in the traffic management, road safety, and public transport sectors. Yet, as of early 2022, traffic management policy and deployment of technology have only evolved in a piecemeal manner without definitive and integrated plans. This has resulted in incompatible and obsolete equipment and technology. MUB has to benefit from upgraded technology and data.

17. **Link to higher level objectives**. The parent USUTP was planned within the new World Bank Group's Country Partnership Framework (CPF) for Mongolia (FY21 – 25). Improving the livability of urban centers is an important objective under the CPF's Focus Area 3 of improving quality of life. As envisioned in the CPF, the parent USUT Project will improve transport mobility for all road users in the capital city. The improvement of urban mobility will not only improve the lives of its residents, particularly the vulnerable population, but also enhance the competitiveness of the city and the overall growth of the country. Investments in ITS, through the proposed AF, will contribute to this overall objective by enabling efficient planning, operations, and management of urban transport in Ulaanbaatar.

18. Development of ITS within the context of Smart Cities contributes to both national level and municipal level development documents. At the national level, the long-term Development Vision-2050 includes ITS related plans, such as: i) establish an integrated information system and introduce smart public transportation, within the short term 2021 -2030; and ii) strengthen smart technologies in hard and soft infrastructure, within the medium term 2031 – 2040; and iii) introduce new generation technologies of smart system based on artificial intelligence in the city development, within the long term 2041 – 2050 periods, respectively. At the municipal level, one of the seven visions of the UB Master Plan 2030 is to become a Smart City. Moreover, the development of the ITS and implementation of appropriate parking policy and systems will contribute to the city's goal of alleviating the severe congestion problem.

II. DESCRIPTION OF ADDITIONAL FINANCING

19. **The only changes that will affect the parent project with the proposed AF are related to its Components and Costs**. The proposed AF will provide funding for activities that have already been included in the design of the parent project USUTP. The proposed AF will be used to finance eligible expenses under the Grant and related to the ITS design (Subcomponent 1.2) and the Smart Parking Management System (SPMS) (Subcomponent 1.3), as well as any related support to Institutions for Transport Planning and Management (Subcomponents 3.1. and 3.2).

20. In parallel, the disbursement schedule is updated to take into consideration the disbursements stemming from the AF and the corresponding amount that becomes available to finance any eligible activity under the parent project**.** The disbursement schedule reflects the AF which will be disbursed between FY23 and FY25.

21. Under the ITS subcomponent, the proposed AF will finance the upgrading of the centralized transport systems, including, among others, area traffic control system and equipment; and upgrading on-street intelligent transport systems, including, among others, traffic signals, traffic enforcement and monitoring cameras. Under the SPMS subcomponent, it will finance the development and operationalization of a smart parking management system, through the following: (a) installation of hardware and development of software for the system; and (b) adoption of a zonal parking system with differentiated pricing. It will also finance any ITS and SMPS-related strategic studies and capacity building and implementation support.

22. More specifically, in terms of outputs, the proposed AF will: (1) support the preparation of a feasibility study and a deployment plan for the ITS, as part of parent USUTP Subcomponent 1.2; (2) finance the design and implementation (feasibility study, design, and procurement) of a pilot Smart Parking Management System (SPMS) in select areas of the city as part of Subcomponent 1.3; and (3) provide technical support to the Municipality of Ulaanbaatar (MUB) – the project implementing entity - on the development of a city-wide parking management plan and capacity building as parts of Subcomponent 3.1 Strategic Studies and Subcomponent 3.2 Capacity Building and Implementation Support.

23. Therefore, the proposed AF would help improve the quality of design of the proposed activities, the city's financial and environmental sustainability, its economic competitiveness, and quality of life for its residents and would also yield climate mitigation co-benefits[10] through improved traffic flow efficiency and reduced travel time.

24. Those activities are already financed under the parent project, but since the grant was approved while the parent project was already submitted to the Board approval, the corresponding amount will be available and serve to scale up the financing of any eligible potential additional activities to enhance development impact, including possible additional budget for ITS-related activities. The allocated budget to enhance the ITS-related activities may be limited, especially since the MUB did not purchase similar equipment over the past decade. Otherwise, these additionally available IBRD resources originally allocated to the AF activities may be used to scale-up Component 1.1 *Corridor-specific infrastructure* investments, for instance, for the rehabilitation, repair, and maintenance of approximately 40 km roads in UB. The framework approach, based on multi-criteria prioritization tool for priority corridor selection, used in the design of the parent USUTP, will allow the MUB to

[10] The GHG accounting analysis for the USUTP indicated that the project activities can reduce 326,825 tons of CO2 equivalent (tCO2e) of GHG emissions over the economic lifetime of the project or a 19,225 tCO2e annually.

identify any additional corridor that can be financed by USUTP without affecting neither the project's current funds allocation, nor its results framework.

25. The proposed revised project costs are presented in the table below:

Table 1: Proposed Revised Project Costs (US$ million)

Parent Project Component	Total Parent Project Cost	Proposed AF Cost	New Proposed Total Cost
Component 1: Integrated Corridors	81.0	1.6	82.6
Component 2: Sustainable Public Transport System	10.0	0.0	10.0
Component 3: Effective Institutions for Transport Planning and Management	9.0	1.1	10.1
Component 4: Contingent Emergency Response Component	0.0	-	00.0
Total	**100.0**	**2.7**	**102.7**

26. No changes to the PDO. The parent project PDO remains the same.

27. **No changes in the Results framework** because the activities to be financed by the AF was included in the original scope of the parent project; therefore, the Results Framework includes the necessary indicators to measure the outputs and outcomes from the AF activities. As for monitoring of additional works to be financed by the funds that become available under the Parent Project, its results framework had been developed in a way that it fits the framework approach in project preparation and implementation. The potential change in the length of corridor rehabilitation which may be funded from the funds that become available from the original financing as the AF is financing the previously scheduled ITS and SMPS-related expenses does not impose change in the results framework, as the latter has been designed as the percentage change from the baseline.

28. **No changes in Environmental and Social Risk Rating.** The proposed AF is only to provide the parent project (particularly the TA activities under the sub-components of 1.2, 1.3, 3.1 and 3.2) with additional financial supports but without introducing any new activity or institutional change for project implementation; therefore, the environmental and social risk rating will remain Substantial, same as the parent project considering the AF will support, and the E&S risk rating is unchanged.

29. **Implementation arrangements:** There will be no change to implementation arrangements under the AF. The MUB, which is currently implementing the Parent Project, will implement the AF-financed activities. The project has a Project Operations Manual (POM) which will be updated by the PMO after the approval of this proposed AF.

30. The closing date for the AF is December 31, 2024.

III. KEY RISKS

31. **The overall risk to achieving the PDO continues to be assessed as Substantial**. Based on the latest Implementation Status and Results Report (ISR), the risks to achieving the development objective are Substantial overall. The Political and Governance, Institutional Capacity for Implementation and Sustainability, Fiduciary, Environmental and Social risks are all Substantial and the remaining risks are Moderate (see the Systematic Operations Risk-Rating Tool (SORT) table under Section VII. Detailed Changes below).

32. **Political and governance risk is assessed as Substantial**. High turnover rate of relevant government officials and decision makers have created uncertainties and policy inconsistencies in the past. In the absence of a firm strategic vision of the urban transport sector in Ulaanbaatar, various urban transport interventions have been proposed in the past championed by different cohort of leaders and officials. These have caused inconsistencies and inactions in the past.

33. To mitigate the high turnover and policy instability risks, the project has been designed to use a framework approach. The project concept focuses on the pressing issues of Ulaanbaatar that the leadership aims to tackle and design a comprehensive program targeting the root causes of the dysfunctional urban transport system. The program and components are deliberately flexible to respond to different government priorities if it were to happen in the case of an MUB leadership change. In addition, through more than five years of collaboration in analytical work, the World Bank team has built a strong partnership with the project implementation entities in the MUB and relevant agencies at the working level. This partnership can, to some extent, safeguard the technical soundness of project activity selection and design from undue political influence.

34. **Institutional capacity risk is assessed as Substantial.** The parent USUTP is the Bank's first transport sector lending to Mongolia over the past 20 years. The capacity to implement a transport project needs to be built and closely monitored to ensure the success of the project. In general, the number of transport professionals is limited in Mongolia and their technical capacities are weak. The implementation of parking policy will require a good coordination among all relevant agencies within MUB. However, there is a risk of lack of institutional coordination between the agencies (PTSA, RDA, TCC, and TPMEA).

35. To mitigate these risks of capacity of partner agencies and the PMO, close supervision in the selection of project team members and continued capacity building during the implementation of the project can help improve weak institutional capacity. Intensive implementation support by the World Bank team including additional international expertise on the ground will help mitigate some of the risks. The multitude of IAs and hence the risk of potential fragmentation and overlap of roles and responsibilities in implementation arrangements are mitigated through a flexible implementation sequencing of the project components and their activities within a comprehensive program based on government priorities. Also, having the PMO under the guidance of the Mayor of UB to act as the central focal point of various agencies and establishing a Project Steering Committee that comprises of representatives from relevant agencies will help mitigate the risk of poor coordination and collaboration among relevant MUB agencies. A series of targeted capacity-building activities, including study tours and trainings can help address limitations of the technical capacity of IAs.

36. **Fiduciary risk is assessed as Substantial.** This risk rating may be reassessed once the Bank obtains sufficient assurance that the proposed mitigation measures listed in paragraph below have been successfully implemented. The implementing agencies of the MUB are new to the World Bank's procurement procedures and other fiduciary requirements, as this is their first time working together on a World Bank-financed project.

These agencies' lack of experience in implementing World Bank-financed projects and procurement may cause delays in implementing the project and provide less assurance on fiduciary management.

37. The following mitigation measures have been proposed: (a) a PMO be established under the MUB with qualified staff, meeting all agreed requirements, including FM and procurement staff and with proper segregation of duties, (b) the participating IAs assign qualified staff including technical and contract management to be responsible for implementation of their respective components and contracts and to work with close coordination with the PMO; (c) the WB team provides training and guidance as needed and continues to maintain close coordination with project stakeholders; and (d) PMO prepares the Procurement Management Manual as part of the POM. Many of these mitigation measures have already been put in place since the effectiveness of the parent project. It remains to be seen, however, whether these measures have been sufficiently set up to ensure that the project implementation, including the undertaking of procurement activities, can be carried out smoothly without any delays or bottlenecks from the fiduciary perspective. The Bank fiduciary team will review the effectiveness of the mitigation measures and reassess the fiduciary risk during the next Bank supervision mission.

38. **E&S risk is rated as Substantial.** The proposed AF is to provide the parent project with additional financial support without introducing any new activity or institutional change for project implementation. Therefore, the environmental and social risk rating will remain Substantial, same as the parent project. This is largely because of the limited capacity of the borrower and because subproject activities remain undetermined, particularly in relation to Type II corridor upgrading works. Potential risks are largely site-specific and limited to construction impacts associated with the rehabilitation and improvements of existing roadways and other associated small-scaled construction activities. The social risks are also assessed as Substantial, as there is the potential for land acquisition, disruption of businesses and livelihoods, as well as challenges related to inclusion/exclusion of different beneficiary categories. Although no land acquisition will be required (or permitted) for Type I physical investments, land acquisition and impacts on livelihoods can be expected to be relevant to Type II physical investments which are larger in scale. Risk assessment, policies triggered, and mitigation measures are discussed in detail in the Environmental and Social Review Summary (ESRS), which has been updated for the purposes of this AF.

39. **Other risk.** Uncertainties around COVID-19 may continue to disrupt public and private sector operations and cause delays in project implementation. The closure of borders to international travel may also continue to affect project implementation. The Bank will continue to monitor development on the ground, and adjust operational model, including through strengthened physical presence of Bank staff in Mongolia.

IV. APPRAISAL SUMMARY

A. Economic and Financial (if applicable) Analysis.

40. Since the proposed AF will finance activities already included in the Parent Project design, the economic justification for the AF is based on the original economic rationale of the Parent Project. The economic and financial analysis performed for the Parent Project remains unchanged in quantifiable aspects. The key economic benefits of the original project derive from improved and new corridors, new bus priority lanes, bus stops, upgraded pedestrian and bicycle facilities, and enhanced traffic management. The economic benefits

include reduction in (a) Vehicle Operating Costs (VOCs), (b) vehicle travel time and bus passenger travel time savings, (c) reduction of the frequency and severity of road crashes, and (d) reduction in GHG emissions. The analysis of the original project showed that the project is economically viable with an economic internal rate of return (EIRR) of 26 percent, and Net Present Value of US$224 million at a 6 percent discount rate.

B. Technical

41. The technical appraisal for the activities proposed to be financed by the AF has been conducted as part of the technical appraisal done for the Parent Project. Upgrade of the ITS and the implementation of a Smart Parking Management System both contribute to the improved efficiency, safety, and environmental externalities of Ulaanbaatar's urban transport systems.

42. **Intelligent Transport Systems (ITS).** UB city needs a comprehensive overhaul of its current traffic control systems and equipment towards intelligent transport systems. ITS are a cornerstone of an efficient, safe, and sustainable urban transport systems, and therefore are an essential complement to the road network and traffic management measures. ITS and its yielded Big Data can provide the foundations for "smart" transport planning, management and monitoring with the focus on data analytics and evidence-based decision-making for UB. As Big Data measures aim to link different databases across sectors and agencies, a wholesome development of ITS creates the opportunity for birth of innovative solutions, enhancing the sustainability and the impact of urban transport interventions. The proposed AF will implement: 1) the Feasibility Study Report (FSR), for deployment of ITS in UB. The FSR will include key considerations of i) needs assessment and prioritization of investments, ii) detailed analysis of benefits of ITS and plans for leveraging those, iii) market assessment of ITS vendors, iv) investigation of potential public -private partnership (PPP), and v) technological and institutional prerequisites for deploying ITS. The results from the FSR will enable MUB to better design and implement the ITS component, to be financed from the Parent USUTP. Findings from the AF funded activity will be complemented by Deployment Plan for ITS and capacity building activities through Bank-Executed Trust Fund (BETF) activity; and 2) Procurement of ITS equipment, co-financed by the Parent Project

43. Smart Parking Management Systems (SPMS). Parking policies and regulations – including the allocation of space and pricing of parking – are among the most powerful tools to disincentivize mode choices with high negative externalities - such as congestion[11]. Appropriate and effective parking policy and tools can act as an effective traffic management tool, and contribute overall to more sustainable, efficient, inclusive, and safe transport systems. UB's traffic congestion, inefficiency of urban street network and the growing road crashes are partly caused by the city's parking problem. On the streets, cars park for free and often take over sidewalks, entrances, and exits, creating an extraordinarily unsafe environment for pedestrians and the traffic flow. Parking enforcement system is lacking, where there is no "leave on the windshield parking ticket" system and police are not able to constantly patrol and fine drivers who are parked in no park zones. Private towing companies, contracted by the Municipality but loosely regulated, are the key parking "enforcers" patrol and tow cars at their discretion, also raising safety and security concerns. Off-the street parking "compounds" throughout UB charge various fees which is freely determined by the landowners based on the market. These compounds charge lower fee per hour for commuter parkers who leave their cars for the whole day at a discounted rate compared to short visitors - creating a cross-subsidy between visitors to commuters. Therefore, development of a comprehensive parking policy and the operationalization of a technology solution to

[11] World Bank Group, "Decarbonizing cities by improving public transport and managing land use and traffic", 2021

implement differentiated parking zones and hierarchical parking fees (where commuters are not subsidized by short visitors) will help push private car owners to internalize some of its externalities, promote modal shift to more sustainable transport options, and free up road spaces as well as sidewalk spaces for safer and more inclusive travel in UB, while creating a source of revenue that the city can invest in improving its urban transport systems. The proposed AF will implement: 1) policy, implementation, and enforcement guideline for parking management, 2) feasibility study report for SPMS, 3) design and implementation of the SPMS central system, and 4) procurement of the tools and equipment for operationalization of the SPMS.

C. Financial Management

44. The financial management and disbursement arrangements already established for the parent project will be sufficient to take on and implement the Additional Financing provided by the KWTF to the Ulaanbaatar Sustainable Urban Transport Project. The FM assessment, based on the Bank Directive: Financial Management Manual for World Bank Investment Project Financing Operations issued on February 10, 2017 concluded that the project will meet the World Bank's minimum financial management requirements. The residual FM risk for the project is assessed as Substantial mainly due to the involvement of multiple municipal agencies with lack of familiarity with and experience of working on World Bank financed projects. These agencies will be responsible for implementing relevant project activities including some fiduciary related aspects. As the AF will fully utilize and rely on the parent project's FM arrangements, the findings and conclusions of the FM assessment performed for the parent project will be fully applicable for the purpose of processing this AF. The original FM assessment has detailed out the FM weaknesses and risks and related mitigation measures to be taken under the parent project that will equally apply for the AF.

45. The FM arrangements including the planning/budgeting, accounting, financial reporting, internal controls and auditing will be the same as those of the parent project. The only addition to the funds flow and disbursement arrangements will be opening of separate Designated Account and Sub-account at the Treasury Single Account for handling of the AF funds to be financed by the KWTF. This way, the PMO will be able to better and transparently manage and account for the AF funds. In terms of disbursement, the AF proceeds will be disbursed against eligible expenditures (inclusive of taxes) according to the following table, noting the exclusion under the KWTF grant of 1) works; 2) non-consulting services; 3) salaries of civil servants; and 4) purchase of motor vehicles.

Category	Amount of Additional Financing (US$)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, consulting services, training and operating costs under Parts 1.2, 1.3, 3.1 and 3.2 of the Project	2,700,000	100%
TOTAL AMOUNT	2,700,000	

46. From the government side, disbursement of the AF funds shall be regulated by the Government Order # 176 which approved the "Regulation on obtaining, utilizing, managing, recording and reporting foreign grant aid" on March 28, 2016. The regulation stipulates that the central government body responsible for management and coordination of foreign loans and grants shall ensure that allocation of approved grant funds

through relevant legal agreements and treaties get reflected in the project implementing entity's budget based on that entity's proposal.

D. Procurement

47. Same as in the parent project, procurement in this AF will be carried out in accordance with World Bank Procurement Regulations for IPF Borrowers dated, November 2020. Alternative procurement arrangements will not be used in the AF.

48. As the AF is not introducing new activities but rather providing additional financing to the parent project, procurement arrangements in the AF will be based on the same Project Procurement Strategy for Development (PPSD) as developed in the parent project. Goods procurement anticipated in the AF may include supply and installation of SPMS. Procurement may follow RFP or RFB approaching international or national market. Consulting services anticipated in the AF will include preparation of feasibility study and deployment plan for the ITS, feasibility study and design of the SPMS, and development of a city-wide parking management plan. Selection method for these consulting services will be Quality- and Cost-Based Selection (QCBS), Quality-Based Selection (QBS), or Selection based on Consultants' Qualifications (CQS) approaching international or national market.

49. **Procurement risk assessment and mitigation measures.** The AF will not introduce any change to the institutional arrangement under the parent project. Procurement and contract implementation will be assumed by the same agency MUB as in the parent project. In view of the procurement profile of the AF, relevant risks identified for AF include: (i) the MUB's lack of experience in implementing World Bank-financed projects may cause a delay in preparing and implementing the project; (ii) under the COVID-19 pandemic there will be risks on borders closure or other control measures, which may affect the international suppliers' and consultants' participation. The AF procurement risk is rated as substantial.

50. **Mitigation actions** of the identified risks include: (i) the Bank team to deliver training to the MUB staff; (ii) clear mechanism for complaints handing to be specified in the project operation manual; (iii) establishing of PIU with qualified staff; (iv) PIU to conduct market engagement before the start of procurement, open advertisement combined with soliciting interest directly from the qualified consultants in the market.

51. **Procurement oversight and monitoring arrangements.** Same as in the parent project, the responsibility for the procurement oversight and monitoring in the AF rests with the MUB. In addition, the procurement will also be subject to annual government audit.

52. **Procurement documentation references.** Since the AF is not introducing new activities to the parent project, the procurement plan for the AF has been incorporated in that under the parent project. It will be made available on the Bank's external website. The procurement plan has set forth the thresholds for procurement methods and prior/post reviews requirements. The Procurement Plan will be updated annually, or as required to reflect implementation needs and improvements in institutional capacity.

E. Legal Operational Policies

53. As per the table below, none of the OP 7.50 and OP 7.60 is triggered.

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

F. Environmental and Social

54. The Parent Project's environmental and social risks are classified as Substantial at Appraisal following the Bank's Environmental and Social Framework (ESF) policy. However, this is based largely on the undetermined subproject activities, particularly in relation to Type II corridor upgrading works and limited capacity of the Borrower on applying ESF. The Parent Project became effective on February 18, 2022, but is still in the early stage of implementation without any physical works started. At this stage, the project's environmental and social risk has not fully materialized. The E&S risk rating at this stage is assessed as Substantial which is the same as at appraisal stage. The Municipality of Ulaanbaatar has established the Project Steering Committee and an operational Project Management Office (PMO) with the recruitment of dedicated environmental and social specialists following the requirements of agreed Environmental and Social Commitment Plan (ESCP) and Environmental and Social Management Framework (ESMF) – which have been prepared for the Parent Project and remain applicable for activities financed by the proposed AF. The environmental and social performance of the project is deemed Satisfactory. The ESCP and Stakeholder Engagement Plan (SEP) were updated and re-disclosed on the Bank's website on May 22, 2022.

55. The proposed AF is to provide the parent project with additional financial support without introducing any new activity or institutional change for project implementation. The AF will support activities already included in the Parent project to upgrade some equipment and to improve the quality of design of some proposed activities and thus to ameliorate the city's financial, environmental and social sustainability with the enhancement of climate mitigation co-benefits. These are consistent with the PDOs of the Parent Project and expected to have environmental and social implications on the implementation of corresponding physical investments and TAs under the Parent Project. Therefore, the environmental and social risk rating will remain Substantial, same as the parent project.

V. WORLD BANK GRIEVANCE REDRESS

56. ***Grievance Redress.*** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the

Bank's Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit https://accountability.worldbank.org.

VI SUMMARY TABLE OF CHANGES

	Changed	Not Changed
Components and Cost	✓	
Implementing Agency		✓
Project's Development Objectives		✓
Results Framework		✓
Loan Closing Date(s)		✓
Cancellations Proposed		✓
Reallocation between Disbursement Categories		✓
Disbursements Arrangements		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Implementation Schedule		✓
Other Change(s)		✓

VII DETAILED CHANGE(S)

COMPONENTS

Current Component Name	Current Cost (US$, millions)	Action	Proposed Component Name	Proposed Cost (US$, millions)
Integrated Corridors	81.00	Revised	Integrated Corridors	83.70
Sustainable Public Transport System	10.00	No Change	Sustainable Public Transport System	10.00
Effective Institutions for Transport Planning and Management	9.00	No Change	Effective Institutions for Transport Planning and Management	9.00
Contingent Emergency Response	0.00	No Change	Contingent Emergency Response	0.00

TOTAL	**100.00**			**102.70**

Expected Disbursements (in US$)

Fiscal Year	Annual	Cumulative
2021	0.00	0.00
2022	5,360,000.00	5,360,000.00
2023	8,260,000.00	13,620,000.00
2024	15,020,000.00	28,640,000.00
2025	18,770,000.00	47,410,000.00
2026	27,250,000.00	74,660,000.00
2027	28,040,000.00	102,700,000.00
2028	0.00	102,700,000.00

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Latest ISR Rating	Current Rating
Political and Governance	Substantial	Substantial
Macroeconomic	Moderate	Moderate
Sector Strategies and Policies	Moderate	Moderate
Technical Design of Project or Program	Moderate	Moderate
Institutional Capacity for Implementation and Sustainability	Substantial	Substantial
Fiduciary	Substantial	Substantial
Environment and Social	Substantial	Substantial
Stakeholders	Moderate	Moderate
Other		
Overall	Substantial	Substantial

LEGAL COVENANTS – Ulaanbaatar Sustainable Urban Transport Project Additional Financing (P179043)

Sections and Description
No information available

Conditions

VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Mongolia

Ulaanbaatar Sustainable Urban Transport Project Additional Financing

Project Development Objective(s)

The Project Development Objectives are to develop a comprehensive framework for sustainable urban mobility in Ulaanbaatar, and to reduce congestion, improve road safety, and address climate resilience on selected transport corridors.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	PBC	Baseline	End Target
Develop a comprehensive framework for sustainable urban mobility in Ulaanbaatar			
1. Establishment of a comprehensive framework for sustainable urban mobility in Ulaanbaatar (Number)		0.00	6.00
Reduce congestion on selected transport corridors			
2.a. Travel time by buses during peak hours on selected transport corridors (Percentage)		100.00	85.00
2.b. Travel time by cars during peak hours on selected transport corridors (Percentage)		100.00	85.00
Improve road safety on selected transport corridors			
3. Fatalities and serious injuries from road traffic crashes on selected transport corridors (Percentage)		100.00	85.00

Indicator Name	PBC	Baseline	End Target
Address climate resilience on selected transport corridors			
4. Application of climate resilience practice in design and implementation of selected transport corridors (Yes/No)		No	Yes
Corporate commitments: citizen engagement and gender			
5. Pedestrians satisfied with the walking environment along selected transport corridors (Percentage)		0.00	20.00
6. Women who walk on selected transport corridors because of safety improvement of the project (Percentage)		0.00	15.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Component 1: Integrated Corridors			
Length of priority road sections reconfigured and repaired with improved NMT/PT facilities (Kilometers) (Kilometers)		0.00	15.00
Length of priority road sections upgraded and constructed with improved NMT/PT facilities (Kilometers) (Kilometers)		0.00	25.00
Area Traffic Control and equipment in the Traffic Control Center upgraded (Y/N) (Yes/No)		No	Yes
Percentage of on-street ITS equipment upgraded (Percentage)		0.00	100.00
Smart parking management system developed and operationalized (Yes/No) (Yes/No)		No	Yes

Indicator Name	PBC	Baseline	End Target
Component 2: Sustainable Public Transport System			
Integrated bus management solutions launched (Yes/No) (Yes/No)		No	Yes
On-demand transit service launched (Yes/No) (Yes/No)		No	Yes
Component 3: Effective Institutions for Transport Planning and Management			
Number of strategies, plans, guidelines, and analyses developed (Number) (Number)		0.00	7.00
Data for Road Incident Visualization Evaluation and Reporting (DRIVER) platform operationalized (Y/N) (Yes/No)		No	Yes
Staff trained (Number)		0.00	1,000.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
1. Establishment of a comprehensive framework for sustainable urban mobility in Ulaanbaatar		Annual	Ulaanbaatar City Government	The PMO will validate whether specific strategy, plan, or guideline has been developed and adopted in the following four thematic areas: (a) vision & strategy, (b) transport	PMO

				infrastructure asset management and planning; (c) road safety, and (d) public transport reform. Each strategy/plan/guideline is assigned certain points. Specifically: (a) sustainable urban mobility strategy: 2 points; parking management plan: 1 point; (b) Transport Infrastructure Investment Plan (TIIP) +Transport Asset Management Plan (TAMP): 3 points; TAMP only: 1 point; (c) DRIVER: 1 point; speed management plan: 1 point; (d) private sector participation in public transport sector: 1 point; integrated public transport and Mobility as a Service (MaaS): 1 point. The associated points are obtained if the strategy/plan/guideline is developed (covering	

				key content as specified in Annex 2 Detailed Project Description of the PAD and the POM), and adopted with an implementation plan (including impleme ntation arrangement, indicative budget, and timeline) by the Mayor of the City through official Mayoral Decrees. The value of this indicator is the sum of the points obtained.	
2.a. Travel time by buses during peak hours on selected transport corridors		Annual	Measurement by the PMO/RDA	The travel time by bus is measured along each project corridor in both directions. The travel time for the subject corridor (travel time by bus on corridor i) is calculated taking the average of the 8-12 runs in each direction in the AM peak (8.30 am – 10:00 am) and 8 - 12 runs in each direction in the PM peak (5:00 pm – 8:00 pm) taken in five	PMO/RDA

				days (Monday-Friday) of a normal working week (5 workdays), when schools and universities are in session, and when buses are in operation, serving riders as usual. The baseline travel time for the subject corridor is measured and calculated before project implementation, and the travel time by bus on corridor i is normalized a s the percentage of the baseline. For each run, the measurement will be taken as soon as the bus enters the intersection where the corridor starts (defined by front wheels crossing the stop line) and will end as soon as the bus leaves the intersection where the corridor ends (defined by front wheels crossing the stop line of the next	

				corridor). The measurement will include the entire duration of the time the bus spends on the road, including stops, delays, and running time. Designated people tasked to measure time will ride buses running on the entirety of the subject corridor. Running time, delay time, and stopped time should all be measured and marked. Average travel time in each direction will be added to get the total travel time for both directions. If the subject corridor has a portion that is not passable by bus before the project, the baseline measurement s hould take the nearest alternative route given the same starting and ending points. To get the average of travel times by bus of all	

				corridors, the number of bus routes operating on the corridor will be used as weights. The indicator is calculated as: ∑ (travel time by bus on corridor i x # of bus routes on corridor i) / ∑ (# of bus routes on corridor i)	
2.b. Travel time by cars during peak hours on selected transport corridors		Annual	Measurement by the PMO/RDA	The travel time by car is measured along each project corridor in both directions. The travel time for the subject corridor (travel time by car on corridor i) is calculated taking the average of the 8-12 runs in each direction in the AM peak (8.30 am – 10:00 am) and 8 - 12 runs in each direction in the PM peak (5:00 pm – 8:00 pm) taken in five days (Monday-Friday) of a normal working week (5 workdays), when schools and universities are in session. The	PMO/RDA

				baseline travel time for the subject corridor is measured and calculated before project implementation, and the travel time by car on corridor i is normalized as the percentage of the baseline. If the subject corridor has a portion that is not passable before the project, the baseline measurement should take the nearest alternative route given the same starting and ending points. For each run, the measurement will be taken as soon as the car enters the intersection where the corridor starts (defined by front wheels crossing the stop line) and will end as soon as the car leaves the intersection where the corridor ends (defined by front wheels crossing the stop line of the next	

				corridor). The measurement will include the entire duration of the time the car spends on the road, including stops, delays, and running time. The floating car technique will be used to measure the travel time by car each run. This involves cars that are specifically dispatched to drive with the traffic stream for the purpose of data collection. A passenger in the test vehicle will manually record travel time at the checkpoint (intersections) using a timer and clipboard. Average travel time in each direction will be added to get the total travel time for both directions. To get the average of travel times by car of all corridors, traffic volume on the corridor (using Annual Average Daily	

				Traffic, i.e. AADT as reported by the TCC and RDA) will be used as weights. The value of this indicator is calculated as: ∑ (travel time by car on corridor i x AADT of corridor i) / ∑ (AADT of corridor i)	
3. Fatalities and serious injuries from road traffic crashes on selected transport corridors		Annual	Crash data of the Transport Police	Total numbers of persons killed and seriously injured (KSI) each year are collected from Transport Police on the project corridors (those that happened within the right of way of the project corridors), using domestic definition. For example, fatality is counted if the person dies within the duration of the crash registration and investigation (typically 2 months) due to injuries received in the road crash. KSI count. This indicator is calculated using a three-	Transport Police

				year rolling average. E.g. the KSI for the year 2021 is the average of KSIs on the project corridor for 2019, 2020, and 2021. The KSI on project corridors is reported as the percentage of the baseline KSI. Once the DRIVER platform is deployed by the Transport Police under the Component 3 of the Project, DRIVER will be used to measure this indicator, including analyzing data by user types and gender.	
4. Application of climate resilience practice in design and implementation of selected transport corridors		Annual	Validation by the PMO	The PMO will validate whether a climate resilience due diligence has been applied throughout the process of design and implementation of project corridors. Specifically, the PMO will validate whether an expert specialized in climate resilience in road engineering has	PMO

				reviewed corridor works' design and the construction drawings for the bidding documents, and ensuring the climate resilience measures such as proper grading, use of flood minimizing and permeable pavements and sidewalk materials, and improvement of drainage channels among others have been considered and utilized wherever appropriate; whether supervision consultants takes climate resilience into consideration during construction; and finally, whether climate resilience is considered during operation of the corridors, such as making arrangements and allocating resources to ensure proper maintenance of the drainage outlets and filters.	

5. Pedestrians satisfied with the walking environment along selected transport corridors		Before project implemenation and three months after the completion of the project corridors	Surveys conducted by the PMO	Satisfaction survey will be conducted at the beginning and at the end of the project. Sample size: 400–500. Surveys to be conducted on randomly selected pedestrians along major transport corridors in Ulaanbaatar during both work and non-work hours. The baseline survey and monitoring survey after project implementation should be conducted in the same month of year to control for the seasonality factor of walkability. Survey must ask the respondents' gender and income. Location of the corridors should be recorded or marked by GPS. Pedestrian satisfaction could be measured using a 5-point Likert scale (1: unsatisfied; 2: moderatel y unsatisfied; 3: neutral; 4: moderately satisfied; 5: satisfied) in	PMO

				the questionnaire, asking whether the pedestrian is satisfied with the overall walking environment nearby. Those who answer 4 or 5 will be counted as “satisfied.” The baseline percentage of “satisfied” respondents is calculated from the total sample before project implementation (i.e. bas eline percentage). Setting the indicator baseline val ue to zero, the value of this indicator is calculated as the percentage of “satisfied” respondents on the project corridors minus the baseline percentage. Survey instruments should be consistent for baseline and project years. Focus groups can	

				be used to obtain a better understanding of user satisfaction. SMS or web-based (app) surveys could be used as complementary measuring tools.	
6. Women who walk on selected transport corridors because of safety improvement of the project		Three months after the completion of the project corridors	Surveys conducted by the PMO	A mobility survey will be conducted at the end of the project. Sample size: 200–300. Surveys to be conducted on randomly selected pedestrians along project corridors i n Ulaanbaatar during both work and non-work hours. The survey must ask the respondents' gender and income. The location of the corridors should be recorded or marked by GPS. Results from women are consolidated and reported. Respondents will be asked in the questionnaire to report whether he/she u sed to take the same trip	PMO

				on the corridor before the corridor improvement project. And if not, the respondent will pick from the following multiple choices for the reasons that he/she makes the current trip: (a) streets and bus waiting areas are safer because of the corridor improvement project; (b) change of home/work/school location; (c) new attractions such as store/restaurant/café was opened; (d) others. The respondents who did not make the same trip before and picked (a) as the reason for making the current trip will be counted, and divided by the total number of respondents to get the value of this indicator. Focus groups can be used to obtain a	

				better understanding of the reasons for the change. SMS or web-based (app) surveys could be used as complementary measuring tools.	

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Length of priority road sections reconfigured and repaired with improved NMT/PT facilities (Kilometers)		Annual	Progress reports	This indicator will be measured from progress reports produced by the contractor.	PMO/RDA
Length of priority road sections upgraded and constructed with improved NMT/PT facilities (Kilometers)		Annual	Progress reports	This indicator will be measured from progress reports produced by the contractor.	PMO/RDA
Area Traffic Control and equipment in the Traffic Control Center upgraded (Y/N)		Annual	Progress reports	This will be reported by the PMO.	PMO/TCC
Percentage of on-street ITS equipment upgraded		Annual	Progress reports	This will be reported by the PMO	PMO/TCC
Smart parking management system developed and operationalized (Yes/No)		Annual	Progress reports	This will be reported by the PMO.	PMO

Integrated bus management solutions launched (Yes/No)		Annual	Progress reports	This will be reported by the PTSA.	PMO/PTSA
On-demand transit service launched (Yes/No)		Annual	Progress reports	This will be reported by the PTSA.	PMO/PTSA
Number of strategies, plans, guidelines, and analyses developed (Number)		Annual	Progress reports	The PMO will report the number of strategies developed.	PMO
Data for Road Incident Visualization Evaluation and Reporting (DRIVER) platform operationalized (Y/N)		Annual	Progress reports	The Transport Police will report whether the DRIVER platform has been operationalized.	PMO/Transport Police
Staff trained		Annual	Progress reports	Person-days of total trained officials, staff and officers will be reported by the PMO.	PMO