REPORT NO.: RES32830

RESTRUCTURING PAPER

ON A

PROPOSED PROJECT RESTRUCTURING

OF

CHINA: TIANJIN URBAN TRANSPORT IMPROVEMENT PROJECT

APPROVED ON DECEMBER 21, 2015

TO THE

PEOPLE'S REPUBLIC OF CHINA

TRANSPORT GLOBAL PRACTICE

EAST ASIA AND PACIFIC REGION

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ABBREVIATIONS AND ACRONYMS

ALC	Amenities and Landscape Commission
BF	Beneficiary Feedback
CE	Citizen Engagement
ChinaRAP	China Road Assessment Program
CPS	Country Partnership Strategy
EA	Environmental Assessment
EMP	Environmental Management Plan
EIRR	Economic Internal Rate of Return
FM	Financial Management
FSR	Feasibility Study Report
GEF	Global Environment Facility
GHG	Greenhouse Gas
IBRD	International Bank for Reconstruction and Development
MoF	Ministry of Finance
M&E	Monitoring and Evaluation
NMT	Non-motorized Transport
PAD	Project Appraisal Document
PDO	Project Development Objective
PMO	Project Management Office
RF	Results Framework
TA	Technical Assistance
TCC	Tianjin Construction Commission
TMG	Tianjin Municipal Government
TransFORM	China Transport Transformation and Innovation Knowledge Platform
TTMB	Tianjin Traffic Management Bureau
TOD	Transit Oriented Development
TOR	Terms of Reference

BASIC DATA

Product Information

Project ID	Financing Instrument
P148129	Investment Project Financing
Original EA Category	**Current EA Category**
Partial Assessment (B)	Partial Assessment (B)
Approval Date	**Current Closing Date**
21-Dec-2015	31-Mar-2021

Organizations

Borrower	Responsible Agency
People's Republic of China	Tianjin PMO

Project Development Objective (PDO)

Original PDO

The PDO is to leverage the Tianjin metro system and to promote walking and biking in the urban core (in Heping and Nankai) in order to make transport greener and safer in Tianjin and draw lessons for other large cities.

Summary Status of Financing

Ln/Cr/Tf	Approval	Signing	Effectiveness	Closing	Net Commitment	Disbursed	Undisbursed
IBRD-85650	21-Dec-2015	26-Feb-2016	26-May-2016	31-Mar-2021	100.00	19.85	80.15

Policy Waiver(s)

Does this restructuring trigger the need for any policy waiver(s)?

No

I. PROJECT STATUS AND RATIONALE FOR RESTRUCTURING

A. PROJECT STATUS

1. **Background.** The US$100 million loan for the Tianjin Urban Transport Improvement Project was approved by the Board on December 21, 2015. The loan became effective on May 26, 2016 and has a closing date of March 31, 2021. The Project Development Objective (PDO) is *to leverage the Tianjin metro system and to promote walking and biking in the urban core (in Heping and Nankai) in order to make transport greener and safer in Tianjin and draw lessons for other large cities*. This project comprises five components: (i) Green Transport Improvement in Heping and Nankai Districts; (ii) Metro Access Improvement; (iii) Public Bike Sharing System Pilot; (iv) Bus Terminal Development; and (v) Technical Assistance (TA). The total project cost was estimated at US$224.27 million and the total International Bank for Reconstruction and Development (IBRD) financing is US$100 million.

2. **Implementation Status and Achievement to Date.** Project implementation, although slow, is progressing well toward achieving the PDO. Progress towards achieving the PDO is currently rated Satisfactory and the Implementation Progress is rated Moderately Satisfactory. The city of Tianjin has made remarkable progress in implementing the green transport development recommendations and interventions from TAs. Two TAs have been completed, providing solid ground to adjust the allocation of funds towards green transport, and supporting the global replicability of green transport development, in line with the PDO. With solid policy and institutional foundations established, the civil works are catching up pace after experiencing delays in the initial implementation stage caused by complex approval procedures for the innovative design (described in paragraph 3B). By the end of June 2019, the loan had disbursed US$19.85 million (20 percent of the IBRD loan). Although the disbursement is lower than the original schedule, the physical implementation is expected to pick up to achieve the PDO as issues relating to the institutional coordination have been addressed and an approval mechanism has been established. The PDO remains relevant to current conditions and the priorities reflected in government strategies, as well as the World Bank Group's China Country Partnership Strategy (CPS) for 2013-2016 (Report No. 67566-CN) dated October 11, 2012. The project specifically focuses on two strategic themes of the CPS, namely supporting green growth and promoting more inclusive development, as well as on the sector objective of promoting low carbon urban transport.

A. **Progress of TAs.** The TA activities have progressed very well and on schedule. Tianjin Municipality proactively has started implementing the green transport recommendations of the TAs. For example, Tianjin Municipality has extensively adopted recommendations under TA-1 (Sustainable Green Transport Development - Strategic Study for the Tianjin Central Area), including: (i) implementation of 150 km of new dedicated bus priority lanes; (ii) issuance of a Quality Measurement Method for dockless bike sharing services; (iii) implementation of a study on Bus Operation Cost Mechanism and Supporting Policies; and (iv) issuance of an Implementation Plan for the Integration of the Urban Rail Network and the Bus Transit Network. Tianjin Transportation Commission launched 'Green Transport Month' campaign in September 2018 where the green mobility promotion videos developed under the project were played at metro stations/bus stops, and on trains/buses, and were well received by the public. The campaign reached 500,000 people a day through videos in the metro, and another 300,000 through posters. Recommendations from TA-2 (Car Parking Mechanism of the Core Area in Central City of Tianjin) were selectively adopted by the Tianjin Municipality in the following decisions: (i) Implementation Plan for Tianjin Parking Facility's Construction and Management (released on September 28, 2017 by Tianjin Municipal Government); and (ii)Technical Guideline on Bicycle Parking Areas in Tianjin.

B. **Progress of Civil Works.** Civil works are picking up speed, following a period of initial delays. The delays were mainly caused by: (i) complex approval procedures requiring multiple layers of review and clearance due to innovative and integrated design, which, by nature, is different from what is usually pursued in Tianjin. This project is the first demonstration project in Tianjin aiming to improve Non-Motorized Transport (NMT) and metro access, therefore no

ready approval procedures were available. The leadership in Tianjin took time to digest and adopt the new concept and ideas, which led to a long review, administrative and approval process; and (ii) extensive coordination and consultation needed as project involves interventions from multiple government agencies. Green transport improvement on five main streets and five branch streets in Heping and Nankai Districts and twenty metro station access improvement in Nankai District are under implementation and will be completed by the end of September 2019. Binjiang Dao in Heping District was selected as one of the 11 national level pilot pedestrian streets by Ministry of Commerce of China. When the first dedicated bike lane in Tianjin on Chifeng Dao was put into operation in May 2019, it was covered by media news and was welcomed by local people. Heping and Nankai Districts and Tianjin Municipality have shown continuous commitment and strong support during the project implementation.

C. **Implementation Status by Component.** The status of implementation of each component is summarized below. A description of the critical change proposed and the reasons for the change are described below as well:

i. **Component 1: Green Transport Improvement in Heping and Nankai Districts**. This component supports the redevelopment of the streetscape in certain parts of Heping and Nankai Districts to create a connected, vibrant and sustainable urban space (spanning over 7.2 square kilometers). The main interventions include: the creation of an integrated pedestrian and bike network with infrastructure investments along approximately 42 streets for a total length of approximately 50 km, street pavement updates, drainage improvements, street facilities, and landscape improvements.

Status. Two main streets and four branch streets in Heping District have been completed; one main street, a branch street in Heping District, and two main streets in Nankai District will be completed by September 2019. Nine Streets in Heping District and two streets in Nankai District are under preparation and will be tendered by September 2019.

Proposed Changes. It is proposed to add NMT improvements in 46 streets of Hebei District, for a total length of 35 km.

Reasons for the Changes. The completed TA on city-wide Green Transport Strategy was presented to the leadership of Tianjin and all related agencies. Pilots in Heping and Nankai Districts are expected to have a demonstration effect on other districts in Tianjin. Hebei District government has expressed its interest, needs and commitment for green transport improvement to create a more vibrant urban space focused on people, walking and biking. To further strengthen the PDO (to promote walking and biking in the urban core area) by enhancing the project's impact and to leverage the institutional learning achieved so far, the green transport improvement pilots in Heping and Nankai Districts are proposed to be replicated in Hebei District. The streets for the pilot areas in Hebei District were selected based on a traffic analysis that identified streets with the highest NMT potential. The intervention seeks to systematically reduce road safety hazards and access bottlenecks for NMT, while enhancing mobility for disadvantaged groups. Besides street pavement upgrades and drainage improvement, the works will focus on improving street facilities, including bollards separating NMT from vehicles, pedestrian crossing facilities, street furniture, signage, greening, bus stop sheds, street lights, junction improvements, and pedestrian safety islands. This component is proposed to be renamed as Component 1: Green Transport Improvement in Heping, *Hebei* and Nankai Districts.

ii. **Component 2: Metro Access Improvement.** This component supports civil works for selected intersection improvements and interconnection facilities (bike parking, bus connection/terminal, taxi connection, landscaping, and park and ride) at 111 metro stations along the existing Tianjin Metro Lines 1, 2, 3, 5, and 9, as well as Line 6 (under construction).

Status. Access improvement of 20 metro stations in Nankai District will be completed and access improvement of 11 metro stations in Hebei District will be tendered by September 2019.

Proposed Changes. The scope of work under this component is proposed to be reduced by excluding activities implemented under metro construction (described below) and it will result in savings of around US$32 million. The number of stations and their locations will remain the same. The reduction in the scope of work will not impact the achievement of the PDO.

Reasons for the Changes. At the time of project preparation and appraisal in 2015, Tianjin Metro Lines 5 and 6 were under construction (Metro Line 5 has been in operation since 2018, while Metro Line 6 is still under construction). While the metro construction is ongoing in parallel, some of the improvements at 57 metro stations along Metro Lines 5 & 6 originally foreseen under the project have been (or will be) executed by other agencies. For example, roads access to the newly constructed metro stations has been provided by the Metro Company and Tianjin Construction Commission (TCC), utility tunnels under these access roads have been installed by TCC, and landscaping works around the new metro stations have been completed by Tianjin Amenities and Landscape Commission (ALC). Traffic lights, markings and signs in the catchment area of the new metro stations have been implemented by Tianjin Traffic Management Bureau (TTMB). These improvements are in line with the project's design concept and will result in savings of around US$32 million under this component. Besides the improvements already carried out by other agencies, this component will focus on the integration of different modes in the metro station catchment areas to ease transfers with metro; this includes moving bus stops closer to the metro stations and creating direct pedestrian routes, building bike parking lots, creating taxi drop-off and pick-up areas, optimizing adjacent junctions to improve safety for pedestrians and bikes, and improving public space. These interventions also target solving the least satisfactory factors listed by metro passengers in a recent satisfaction survey, e.g., limited safe space for bike parking, poor transfers and connections between buses and metro stations, and lack of parking facilities.

iii. **Component 3: Public Bike Sharing (PBS) System Pilot.** This component was designed to finance the establishment of a pilot public bike sharing (PBS) system in the core urban area of Tianjin, as well as in areas along metro lines, to support last mile accessibility.

Status. This component is proposed to be cancelled as part of the project restructuring.

Proposed Changes. The cancelation of this component will not impact the achievement of the PDO and will result in savings of around US$10 million.

Reasons for the Changes. There was no public bike sharing system in Tianjin at the time of project preparation and appraisal in 2015. However, since 2017, seven private dockless bike sharing companies (such as Mobike and Ofo) have supplied 800,000 dockless shared bikes to Tianjin. The activities planned under this component therefore have been carried out through private financing of dockless bike sharing systems to support last mile accessibility in a sustainable way.[1] Tianjin has coordinated with Mobike to analyze biking data to locate the bottlenecks, to develop solutions to address such bottlenecks, and to measure the impact of the measures taken. This applies to the major bike corridors as well as access to metro stations by bike.

iv. **Component 4: Bus Terminal Development.** This component comprises the development of five bus terminals, including the pavement of terminals, as well as bus stops, bus parking, car parking, bike parking and service buildings. It also supports equipment within the bus terminals for bus operation.

Status. The implementation of this component is behind schedule due to the time required to obtain land certificates to use public land for bus terminals. Two bus terminals will be completed by the end of 2019.

Proposed Changes. Three bus terminals are proposed to be dropped. The cancellation of these bus terminals will result in savings of around US$4 million. This component is proposed to be renamed as Component *3*: Bus Terminal Development, due to the cancellation of the former Component 3 (PBS Pilot).

Reasons for the Changes. Three bus terminals are proposed to be dropped due to the following reasons: (i) impact of the new master plan with an uncertain approval date; and (ii) land use conflict. The cancellation of the three bus terminals will not impact the achievement of the PDO, as the city has been developing substantial additional bus facilities in parallel.

v. **Component 5: Technical Assistance (TA).** This component supports five technical studies on: (i) sustainable green urban transport development; (ii) parking management improvement schemes; (iii) the effectiveness of implementation of the public bike sharing system; (iv) multi-channel financing mechanisms for urban transport; and (v) surveys and support for the analysis of and reporting on project impact.

Status. The TAs have progressed well and are on schedule. Two TAs have been completed and have: (i) provided the basis to adjust the allocation of funds to greener transport; and (ii) supported the global replicability of green transport development. Tianjin Municipality has proactively started implementing the green transport recommendations identified in the TAs.

Proposed Changes. Three TAs will be dropped (the effectiveness of public bike sharing, multi-channel financing mechanism for urban transport, and surveys and support for the analysis of and reporting on the project impact) and two new TAs will be added (performance evaluation and analysis of economic activity in the NMT zone supported by the project, and preparation of Project Implementation and Completion Report). A Phase II to the TA1 on Green Transport and a Phase II to the TA2 on parking management focusing on enforcement with capacity building in Hebei District are proposed. Overall, it is proposed to increase the allocation for this component by

[1] According to a survey report on public bike sharing system carried out under the Bank-financed Changzhi Sustainable Urban Transport Project

US$510,000. This component is proposed to be renamed as Component *4*: Technical Assistance (TA), due to the cancellation of the former Component 3 (PBS Pilot).

Reasons for the Changes. Given the city's interest and commitment, a second phase with more specific policy suggestions and pilot implementation is proposed for both TA-1 and TA-2. Two new TAs on performance evaluation and analysis of economic activity in the NMT zone and the preparation of Project Implementation and Completion Report are proposed to be added to replace the TA on project impact evaluation. The TA on the effectiveness of public bike sharing is no longer relevant, as Component 3 (PBS Pilot) is proposed to be cancelled. The multi-channel financing mechanism for the urban transport study is now being funded through the Global Environment Facility (GEF) Sustainable Integrated Approach Pilot Project, and is therefore proposed to be cancelled from this project.

3. **Environmental and Social Safeguards.** The project is in compliance with Bank safeguard policies. The Environmental Management Plan (EMP) and the resettlement framework are being implemented well, as confirmed by the external monitor. There has been no land acquisition related to the project.

4. **Procurement.** Project procurement has been in compliance with the Bank Procurement Guidelines and Consultant Guidelines. There have been no significant issues relating to either procurement or contract management.

5. **Financial Management (FM).** The project is in compliance with Bank FM policies. There are neither outstanding audits nor are there any audit qualifications.

6. **Compliance with Covenants.** The project is in compliance with legal covenants.

B. RATIONALE FOR RESTRUCTURING

7. **Loan Savings.** The project is expected to have significant loan savings due to (i) the changes proposed to project components and (ii) financing of some activities by counterpart funding. The total loan savings are estimated at approximately US$46 million (46 percent of the loan amount), comprising savings of: US$32 million from Component 2, as a result of improvements at newly constructed metro stations being implemented by other agencies, such as access roads (described in paragraph 3C(ii)); US$10 million from the cancelation of Public Bike Sharing System Pilot in Component 3 (described in paragraph 3C(iii)); and US$4 million due to the dropping of three bus terminals in Component 4 (described in paragraph 3C(iv)).

8. **Incorporating a New District to the PDO.** Green transport improvements in Hebei District, which was not part of the original project, are proposed to utilize the above loan savings under Component 1. The proposed restructuring will replicate the approach taken by Heping and Nankai Districts in Hebei District. The proposed activities in Hebei District will extend the overall coverage of pro-NMT intervention to 11.7 square kilometers in the central part of Tianjin, compared to the original 7.2 square kilometers. This would enhance project impact and the achievement of the PDO, as further explained below.

a. **Replicate Innovations.** Hebei District is proposed to be included in the green transport improvement pilots due to its strategic location and significance of potential impact. Hebei District is the only district bordering Heping and Nankai Districts in the center areas along Hai River. Improving NMT in this district will improve the overall pedestrian and bike network in Tianjin urban core areas. The integrated NMT network will also connect the space between the east and west side of the Hai Riverfronts. The district also has two major train stations (Tianjin Train Station and North Train Station), which serve both local residents and travelers from the rest of China. Improving NMT in this district will improve access to Tianjin urban core areas both at the city level (by reaching the east side of the Hai River) and at the national level (by connecting to the Tianjin Train station hubs therefore leveraging the metro and train connectivity).

In addition, the existing pedestrian and biking networks in Hebei District are fragmented and in poor condition, making NMT trips hazardous and unattractive. A survey in Hebei District found that the problems included insufficient width for pedestrians and bikes, lack of separation, and vehicles using the space reserved for walking and biking. In the Hebei pilot area, more than 70 percent of bike lanes and 60 percent of existing sidewalks were occupied by illegal parking. Hebei District has a large under-served population relying on walking and biking. The population density is high, and walking (27 percent) and biking (35 percent) remain the primary transport mode for lower income groups in the Hebei pilot areas. By improving the NMT modes people use most frequently to access jobs and services, it will in particular benefit the low-income groups. Additional 45,000 walking and biking trips and 10,000 metro ridership per day are expected to be generated by the project interventions in Hebei District pilot areas in 2022.

The proposed activities in Hebei District will rebalance the street layout to create a continuous network for walking and biking linked to public transport, drawing on a Complete Street approach adapted to the Tianjin context. The interest and commitment shown by Hebei District Government will greatly help the implementation of these activities.

b. **Contribute Further to Global Public Goods.** Building on the green transport strategy that has been completed (the project encourages people to shift from car travel to public transport, cycling, and walking), the proposed restructuring will further help the government to adopt and implement the approach to promote low-emission travel modes in Tianjin urban core areas. At the network level, the proposed restructuring will further improve bus, bike and pedestrian access to metro stations to increase public transport ridership and encourage NMT, which will contribute to a low carbon transport solution. At the neighborhood level, the proposed restructuring reprioritizes cycling and walking in Hebei District, as part of an effort to increase urban vibrancy and encourage low carbon mobility. This will contribute to a further reduction of GHG emissions from the urban transport sector. An additional 1,000 tons of CO_2 emission reduction per year is expected due to the project interventions in Hebei District in 2022.

c. **Contribute Further to Road Safety.** The proposed activities in Hebei District will systematically reduce road safety hazards, drawing on the results of the China Road Assessment Program (ChinaRAP) assessment, while improving mobility for the vulnerable groups. The safety improvement measures (e.g. safety facilities such as bollards separating NMT from vehicles, pedestrian crossing facilities, street furniture, signage, greening, bus stops, junction improvements, and pedestrian islands) in the proposed activities in Hebei District are expected to reduce 298 accidents (30 percent) involving non-motorized vehicles or pedestrians in the project streets in Hebei District in 2022 from the baseline year.

d. **Contribute Further to Knowledge Sharing.** Replication of green transportation improvement activities in the Hebei District will contribute further to knowledge generation and sharing. The experience and lessons accumulated from project activities as a result of restructuring, especially with the implementation of innovative and participatory design in low-income communities of Hebei District, will be valuable for other Chinese cities (e.g., Urumqi) and for cities in other developing countries (e.g., India). At least 10 dissemination events to promote green transport strategies developed in the project will be carried out before project closing, which includes, but not limited to, international/domestic workshops; dissemination of green transport knowledge, practice and lessons through different channels such as news, print media, and China Transport Transformation and Innovation Knowledge Platform (TransFORM); piloting green transport program and events, such as “Green Transport Month”, “No Car Day”, and “Bike to Work Day”; etc. For example, six thematic articles on the Tianjin green transport strategy, supported by TA under the project, were published on the “Urban Transport of China” (a core journal for professionals in China) as a special issue in November 2018.

e. **Contribute Further to Citizen Engagement**. The project has emphasized public consultation and citizen engagement throughout project design and implementation. These efforts are crucial to achieve the shift to green modes and community revitalization. The proposed activities in Hebei District will further explore citizen engagement utilizing

various channels such as feedback and suggestion collection box, email, hotline, and innovative online public participation platforms/apps. It is expected at least 10,000 participatory interactions by citizens will be made on quality of street space in Heping, Hebei and Nankai Districts per year. The percentage of satisfied non-motorized vehicle users and pedestrians regarding the walking and biking environment this project improves is expected to be increased from 28 percent to 70 percent.

f. **Contribute Further to Institutional Coordination**. The experience and lessons learned in Heping and Nankai Districts will be transferred to Hebei District to further promote inter-agency coordination. The coordination efforts and recommendations on policies and institutions piloted in Hebei District (e.g., to solve on-street parking issues within a city-wide parking policy) will contribute further to the establishment of a coordination mechanism between city agencies for promoting green transport modes.

9. **Extension and Efficiency.** To allow completion of all activities under the project, and more effectively support the implementation of the green transport strategy using the new prioritization tool for NMT improvement being developed under the TAs, it is proposed to extend the closing date of the loan by 15 months. With this extension, the additional investment has an economic internal rate of return (EIRR) of more than 16 percent, and a net present value of CNY267 million with a discount rate of 12 percent, thus confirming that there is no compromise in efficiency.

10. **Risk Assessment.** At the time of project preparation and appraisal in 2015, the overall risk to achieving the PDO was rated substantial in view of the risks relating to the technical design of the project and institutional capacity for implementation and sustainability. The design concepts pursued under the project are a departure from traditional car-focused urban design and require close cooperation across agencies and engagement with stakeholders, including the public and municipal agencies, throughout the process to ensure support for the overall approach. Tianjin Municipal Government (TMG) has shown strong support and commitment to address the complexity in coordination and approval procedure due to innovative design, after delays during the initial stage of project implementation. As a risk mitigation measure, the TMG has established a bi-weekly reporting mechanism between the project management office (PMO) and the Deputy Secretary-General, as well as regular coordination meetings headed by the Vice Mayor responsible for urban construction, comprised of leaders and directors of relevant government line agencies. Tianjin Construction Commission has taken the leadership and responsibility to accelerate coordination between different agencies. All related agencies and district-level governments have taken actions to facilitate the administrative and approval process in support of the PMO. The city also has made remarkable progress in implementing the green transport development recommendations from TAs (see earlier discussion on project progress). The experience and lessons from implementing activities in Heping and Nankai Districts will be transferred through the city government leadership, the PMO, and the Bank team to Hebei District, including the integrated design concept, the leadership's understanding of the project, the approval procedures, and the institutional coordination mechanism. In view of this, the risks in technical design of project or program is downgraded to Moderate.

The risks in implementation capacity have been mitigated through the experienced PMO (founded in the 1990s for the first World Bank financed Project in Tianjin), the engagement of several experienced institutes and an experienced project management consultant to provide technical support in project implementation (including Hebei District). Training has been provided to government officials, contractors and supervision engineers on contract management and site management, as well as on procurement, safeguards and fiduciary requirements. The Bank team will continue the capacity building efforts, in addition to the semi-annual missions, and the Bank will provide additional technical support to the PMO as needed. In view of this, the risks in institutional capacity for implementation and sustainability is downgraded to Moderate.

As a result, the overall risk to achieving the PDO is downgraded from Substantial to Moderate.

II. DESCRIPTION OF PROPOSED CHANGES

11. **Proposed Changes to the Loan Agreement.** The proposed first restructuring of the project will require amendments to the legal agreements are as follows:

a. Add "Hebei" to the PDO as an additional beneficiary district. The proposed restructured PDO will read: "The Project Development Objective (PDO) is to leverage the Tianjin metro system and to promote walking and biking in the urban core (in Heping, Hebei and Nankai) in order to make transport greener and safer in Tianjin and draw lessons for other large cities."

b. Reduce the scope of activities: (i) Component 2: Metro Access Improvement will be reduced by excluding activities implemented under metro construction, however the number of stations (111) and their locations will remain the same; and (ii) three bus terminals under Component 4: Bus Terminal Development would be dropped.

c. Component 3: Public Bike Sharing System Pilot will be deleted. TAs under Component 5 on the effectiveness of public bike sharing and multi-channel financing mechanism for urban transport will be dropped.

d. Loan savings will be reallocated and the project components will be revised to: (i) add NMT improvements in Hebei District to Component 1: Green Transportation Improvement, together with Heping and Nankai District (about 46 streets for a total length of 35 km); (ii) add the following TAs to Component 5: (a) a Phase II to the TA on Green Transport; (b) a Phase II on parking management focused on enforcement with capacity building in Hebei District; (c) performance evaluation and analysis of economic activity in the NMT zone supported by the project; and (d) preparation of the Project Implementation Completion Report.

e. Extend the loan closing date from March 31, 2021 to June 30, 2022 to enable the implementation of the revised scope of activities.

f. Amend the dates for achieving indicator targets in line with the proposed revised closing date, and revise the results indicators and associated target values to reflect the revised scope of activities and the proposed activities in Hebei District.

12. **Project Cost and Financing Plan.** Table 1 shows the original project cost as presented in the Project Appraisal Document (PAD), along with the revised project costs as a result of the proposed restructuring. The financing plan will remain unchanged. Tianjin Municipality has shown strong commitment to the project, and has embedded the project components in its official plans. Tianjin has the financial capacity to provide counterpart funding of US$123.99 million from the municipal budget and maintain service quality.

Table 1: Project Cost and Financing Plan

APPRAISAL				RESTRUCTURING			
Project Components	**Project Cost (US$ million)**	**IBRD Financing (US$ million)**	**% IBRD Financing**	**Project Components**	**Project Cost (US$ million)**	**IBRD Financing (US$ million)**	**% IBRD Financing**
Component 1: Green Transportation Improvement in Heping and Nankai Districts	89.48	33.39	37%	Component 1: Green Transportation Improvement in Heping, *Hebei* and Nankai Districts	177	78.71	44%
Component 2: Metro Access Improvement	89.05	44.90	50%	Component 2: Metro Access Improvement	37	12.96	35%
Component 3: Public Bike Sharing System Pilot	23.14	9.77	42%	Cancel the original component 3	-	-	-

Component 4: Bus Terminal Development	15.99	5.58	35%	Component *3*: Bus Terminal Development	3.13	1.47	47%
Component 5: Technical Assistance	2.90	2.64	91%	Component *4*: Technical Assistance	3.15	3.15	100%
Total Costs	**220.56**	**96.28**	44%	**Total Costs**	**220.28**	**96.29**	44%
Interest	3.14	3.14	100%	Interest	3.14	3.14	100%
Commitment Fee	0.32	0.32	100%	Commitment Fee	0.32	0.32	100%
Front-End Fees	0.25	0.25	100%	Front-End Fees	0.25	0.25	100%
Total Financing Required	**224.27**	**100.00**	-	**Total Financing Required**	**223.99**	**100.00**	-

13. **Environmental and Social Safeguards.** The project originally triggered OP4.01 on Environmental Assessment, OP4.11 on Physical Cultural Resources, and OP4.12 on Involuntary Resettlement. Implementation of the resettlement framework and the EMP has been satisfactory, with no land acquisition to date. The proposed restructuring will neither trigger any new safeguard policy nor a change in the environmental assessment category. The EMP/Environmental Assessment (EA) for additional activities in Hebei District were disclosed locally in Chinese on July 16, 2018 and in English on the Bank's InfoShop on November 08, 2018.

14. **Technical Appraisal.** The feasibility studies and subsequent preliminary designs for the proposed new activities in Hebei District are technically sound. The designs drew from the experience of implementing the designs under the project to date. The Term of References (TORs) for the proposed new technical assistance activities are acceptable to the Bank.

15. **Economic Analysis**. Economic analysis of the proposed new activities in Hebei District was carried out in accordance with the World Bank guidelines of *Economic Analysis of Investment Operations* and *Economic Analysis Guidance Note*.[2] The proposed activities would bring substantial economic benefits to Hebei, including: (i) savings in passenger travel time; (ii) reduction in vehicle operation cost; (iii) reduction in emissions and improvements in the environment; and (iv) reduction in vehicle accidents. The new activities have an expected EIRR of 16.38 percent, which is higher than the World Bank recommended economic opportunity cost of capital (12 percent). Sensitivity analysis carried out indicated that the EIRRs for the tested cases were higher than 12 percent.

16. **Results Framework (RF)**. The RF is proposed to be revised as shown in the Results section below. The principal changes include the revision of target values for the relevant indicators to reflect the impacts of the addition of Hebei District, the cancellation of the PBS system, and the extension of the loan closing date. PDO indicator 4 is proposed to be revised as the number of reported accidents involving non-motorized vehicles or pedestrians, instead of all reported accidents, to better reflect the project impact on safety of non-motorized vehicles and pedestrians. It is proposed to add a new sub-indicator 5.1 at the PDO level to measure the level of engagement by female citizens using the number of sites established for citizen engagement. A new PDO indictor 6 is proposed to be added to better measure the effort to promote green transport strategies and to disseminate knowledge and lessons for other large cities using the number of dissemination events. The description and calculation methodology for indicators are also proposed to be revised in line with current Monitoring and Evaluation (M&E) quality standards. Annex 1 shows the proposed RF along with detailed indicator descriptions.

[2] The World Bank. January 1998. *Handbook on Economic Analysis of Investment Operations*. Operational Core Services Network, Learning and Leadership Center. The World Bank. April 9, 2013. *Guidance Note of Economic Analysis for Investment Project Financing*. OPSPQ

17. **Implementation Plan and Disbursement Estimates.** The project implementation schedule is proposed to be updated to reflect the changes to project activities and the proposed revised loan closing date. The disbursement estimates are proposed to be revised to reflect the updated implementation schedule (see Annex 2). There are no changes to the implementation arrangements of the project, and all activities will be managed through the city-level PMO.

III. SUMMARY OF CHANGES

	Changed	Not Changed
Project's Development Objectives	✓	
Results Framework	✓	
Components and Cost	✓	
Loan Closing Date(s)	✓	
Reallocation between Disbursement Categories	✓	
Disbursements Arrangements	✓	
Disbursement Estimates	✓	
Overall Risk Rating	✓	
Implementation Schedule	✓	
Economic and Financial Analysis	✓	
Implementing Agency		✓
DDO Status		✓
Cancellations Proposed		✓
Safeguard Policies Triggered		✓
EA category		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Other Change(s)		✓
Technical Analysis		✓
Social Analysis		✓

Environmental Analysis		✓

IV. DETAILED CHANGE(S)

PROJECT DEVELOPMENT OBJECTIVE

Current PDO

The PDO is to leverage the Tianjin metro system and to promote walking and biking in the urban core (in Heping and Nankai) in order to make transport greener and safer in Tianjin and draw lessons for other large cities.

Proposed New PDO

The PDO is to leverage the Tianjin metro system and to promote walking and biking in the urban core (in Heping, Hebei and Nankai) in order to make transport greener and safer in Tianjin and draw lessons for other large cities.

COMPONENTS

Current Component Name	Current Cost (US$M)	Action	Proposed Component Name	Proposed Cost (US$M)
Green Transport Improvement in Heping and Nankai Districts	89.48	Revised	Green Transport Improvement in Heping and Nankai Districts	177.00
Metro Access Improvement	89.05	Revised	Metro Access Improvement	37.00
Public Bike Sharing System (PBS) Pilot	23.14	Revised	Public Bike Sharing System (PBS) Pilot	0.00
Bus Terminal Development	15.99	Revised	Bus Terminal Development	3.13
Technical Assistance	2.90	Revised	Technical Assistance	3.15
TOTAL	**220.56**			**220.28**

LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Revised Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IBRD-85650	Effective	31-Mar-2021		30-Jun-2022	30-Oct-2022

REALLOCATION BETWEEN DISBURSEMENT CATEGORIES

	Current Allocation	Actuals + Committed	Proposed Allocation	Financing % (Type Total)	
				Current	Proposed
IBRD-85650-001 | Currency: USD					
iLap Category Sequence No: 1		Current Expenditure Category: GDs/WKs/nonCSs			
	93,646,000.00	6,719,421.48	93,136,000.00	60.00	60.00
iLap Category Sequence No: 2		Current Expenditure Category: Training and Workshops and CSs			
	2,640,000.00	1,735,748.07	3,150,000.00	100.00	100.00
iLap Category Sequence No: 3		Current Expenditure Category: CHARGES and Interests			
	3,464,000.00	1,593,720.21	3,464,000.00		
Total	**99,750,000.00**	**10,048,889.76**	**99,750,000.00**		

DISBURSEMENT ESTIMATES

Change in Disbursement Estimates
Yes

Year	Current	Proposed
2016	0.00	0.00
2017	5,000,000.00	1,468,000.00
2018	20,000,000.00	6,988,000.00
2019	25,000,000.00	25,768,000.00
2020	30,000,000.00	32,974,000.00
2021	20,000,000.00	25,299,000.00
2022	0.00	7,503,000.00
2023	0.00	0.00

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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

Results framework

COUNTRY: China
China: Tianjin Urban Transport Improvement Project

Project Development Objectives(s)

The PDO is to leverage the Tianjin metro system and to promote walking and biking in the urban core (in Heping and Nankai) in order to make transport greener and safer in Tianjin and draw lessons for other large cities.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
To leverage the Tianjin metro system *(Action: This Objective is New)*							
1. Metro ridership generated from metro access improvement in the central city area (daily trips) (Number)		0.00	14,667.00	20,000.00	30,000.00	85,000.00	95,000.00
Action: This indicator has been Revised	***Rationale:*** ***The target values for this indicator are updated to reflect the new activities and the extension of the closing date. The methodology is further clarified.***						
To promote walking and biking in the urban core area in Tianjin *(Action: This Objective is New)*							
2. Walking and biking trips generated by the project in Heping, Hebei and Nankai pilot areas (daily trips) (Number)		0.00	11,052.00	35,000.00	75,000.00	105,000.00	120,000.00
Action: This indicator has been Revised	***Rationale:*** ***The target values for this indicator are updated to reflect the new activities, extension of the closing date and cancellation of the Public Bike Sharing System Pilot component. Due to the cancellation of the PBS system, the target values for Heping and Nankai districts are reduced. The methodology is***						

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
	further clarified. Due to different implementation sequence, this indicator is further broken-down into two sub-indicators to demonstrate impacts on Heping and Nankai, and Hebei, respectively.						
2.1 Walking and biking trips generated by the project in Heping and Nankai pilot areas (daily trips) (Number)		0.00	11,052.00	30,000.00	55,000.00	65,000.00	75,000.00
Action: This indicator is New	***Rationale:*** ***This indicator is further broken-down into two sub-indicators to demonstrate impacts on Heping and Nankai, and Hebei, respectively, to reflect the new activities (Green Transport Improvement in Hebei district). Due to the cancellation of the PBS system, the target values for Heping and Nankai districts are reduced.***						
2.2 Walking and biking trips generated by the project in Hebei pilot areas (daily trips) (Number)		0.00	0.00	5,000.00	20,000.00	40,000.00	45,000.00
Action: This indicator is New	***Rationale:*** ***This indicator is further broken-down into two sub-indicators to demonstrate impacts on Heping and Nankai, and Hebei, respectively, to reflect the new activities (Green Transport Improvement in Hebei district).***						
To make transport greener in Tianjin *(Action: This Objective is New)*							
3. GHG emission reduction due to the project (tCO2e/year) (Number)		0.00	513.00	3,500.00	6,800.00	7,000.00	7,500.00
Action: This indicator has been Revised	***Rationale:*** ***The target values for this indicator are updated to reflect the new activities and the extension of the closing date. The methodology is further clarified***						

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
To make transport safer in Tianjin *(Action: This Objective has been Revised)*							
4. Number of reported accidents involving non-motorized vehicles or pedestrians in Heping, Hebei and Nankai pilot areas (accidents/year) (Number)		1,201.00	1,191.00	1,141.00	1,081.00	961.00	841.00
Action: This indicator has been Revised	***Rationale:*** ***To better reflect the project impact on safety for non-motorized vehicles and pedestrians, this indicator is revised as the number of reported accidents involving non-motorized vehicles or pedestrians instead of all reported accidents. The target values for this indicator are updated to reflect the new activities and the extension of the closing date. The description and methodology of the indicator are further clarified. Due to different implementation sequence, this indicator is further broken-down into two sub-indicators to demonstrate impacts on Heping and Nankai, and Hebei, respectively.***						
4.1 Number of reported accidents involving non-motorized vehicles or pedestrians in Heping and Nankai pilot areas (accidents/year) (Number)		206.00	204.00	196.00	185.00	165.00	144.00
Action: This indicator is New	***Rationale:*** ***Due to different implementation sequence, this indicator is further broken-down into two sub-indicators to demonstrate impacts on Heping and Nankai, and Hebei, respectively.***						
4.2 Number of reported accidents involving non-motorized vehicles or pedestrians in Hebei pilot		995.00	987.00	945.00	886.00	796.00	697.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
areas (accidents/year) (Number)							
Action: This indicator is New	***Rationale:*** ***Due to different implementation sequence, this indicator is further broken-down into two sub-indicators to demonstrate impacts on Heping and Nankai, and Hebei, respectively.***						
To draw lessons for other large cities *(Action: This Objective is New)*							
5. Number of sites with citizen engagement system established (Number)		0.00	10.00	20.00	23.00	26.00	26.00
Action: This indicator is New	***Rationale:*** ***The target values for this indicator are updated to reflect the new activities and the extension of the closing date. The methodology is further clarified***						
5.1 Number of gender-informed (female) citizen engagement system established (Number)		0.00	9.00	18.00	21.00	23.00	23.00
Action: This indicator is New	***Rationale:*** ***To further measure the impact on female users, a sub-indicator to demonstrate gender-informed (female) impacts is added.***						
6. Number of dissemination events promoting green transport strategies for large cities (Number)		0.00	2.00	4.00	6.00	8.00	10.00
Action: This indicator is New	***Rationale:***						

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
	This indicator is added to measure the activities to promote green transport strategies and to showcase the good practice in Tianjin for other large cities in promoting green transport strategies.						

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Green Transport Improvement in Heping, Hebei and Nankai Districts *(Action: This Component has been Revised)*							
1. Whether changes have been made to project activities as a result of consultation (Yes/No)		No	Yes	Yes	Yes	Yes	Yes
Action: This indicator has been Revised	***Rationale:*** ***The description and methodology to calculate this indicator is further clarified.***						
2. NMT Space Ratio in Heping, Hebei and Nankai pilot areas (Percentage)		25.00	28.00	38.00	44.00	46.00	46.00
Action: This indicator has been Revised	***Rationale:*** ***The description and methodology to calculate this indicator is further clarified.***						
3. Kilometers of urban streets rehabilitated and open to traffic in Heping, Hebei and Nankai pilot areas (Kilometers)		0.00	4.40	25.00	50.00	70.00	75.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Action: This indicator has been Revised	***Rationale:*** ***The target values for this indicator are updated to reflect the new activities and the extension of the closing date. The end target value is updated to reflect the potential impact of metro line construction.***						
4. Percentage of km with at least 3-star rating for pedestrians for project streets in Heping, Hebei and Nankai pilot areas (Percentage)		31.00	31.00	50.00	70.00	85.00	90.00
Action: This indicator has been Revised	***Rationale:*** ***The description and calculation methodology of the indicator is further clarified, the target values are updated accordingly.***						
Metro Access Improvement							
5. Number of metro station with access improved (Number)		0.00	5.00	30.00	40.00	95.00	111.00
Action: This indicator has been Revised	***Rationale:*** ***The target values for this indicator are updated to reflect the extension of the closing date.***						
Public Bike Sharing System (PBS) Pilot ***(Action: This Component has been Marked for Deletion)***							
PBS stations in operation (Number) (Text)		0.00	0.00	0.00	50.00	446.00	446.00
Action: This indicator has been Marked for Deletion							
Bus Terminal Development							

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
6. Number of bus terminals completed under the project (Number)		0.00	0.00	0.00	1.00	2.00	2.00
Action: This indicator has been Revised	***Rationale:*** ***The target values for this indicator are reduced to reflect the revised activities (3 bus terminals are proposed to be dropped) and the extension of the closing date.***						
Technical Assistance							
7. Number of TA studies completed and endorsed by Tianjin government (Number)		0.00	2.00	4.00	4.00	5.00	6.00
Action: This indicator has been Revised	***Rationale:*** ***This target value for this indicator is increased to reflect the added new TAs***						

Annex 1 Results Framework after Restructuring

Project Development Objectives

The PDO is to leverage the Tianjin metro system and to promote walking and biking in the urban core (in Heping, Hebei and Nankai) in order to make transport greener and safer in Tianjin and draw lessons for other large cities.

These results are at	Project Level

Project Development Objective Indicators

Indicator Name	Baseline (2015)	Cumulative Target Values (since restructuring)				
		YR 2018	YR 2019	YR 2020	YR 2021	End Target (2022)
1. Metro ridership generated from metro access improvement in the central city area (daily trips)	0	14,667	20,000	30,000	85,000	95,000
2. Walking and biking trips generated by the project in Heping, Hebei and Nankai pilot areas (daily trips)	0	11,052	35,000	75,000	105,000	120,000
2.1 Walking and biking trips generated by the project in Heping and Nankai pilot areas (daily trips) (Sub-indicator: Breakdown)	0	11,052	30,000	55,000	65,000	75,000
2.2 Walking and biking trips generated by the project in Hebei pilot areas (daily trips) (Sub-indicator: Breakdown)	0	0	5,000	20,000	40,000	45,000
3. GHG emission reduction due to the project (tCO2e/year)	0	513	3,500	6,800	7,000	7,500
4. Number of reported accidents involving non-motorized vehicles or pedestrians in Heping, Hebei and Nankai pilot areas (accidents/year)	1,201	1,191	1,141	1,081	961	841
4.1 Number of reported accidents involving non-motorized vehicles or pedestrians in Heping and Nankai pilot areas (accidents/year) (Sub-indicator: Breakdown)	206	204	196	185	165	144
4.2 Number of reported accidents involving non-motorized vehicles or pedestrians in Hebei pilot areas (accidents/year) (Sub-indicator: Breakdown)	995	987	945	886	796	697

5. Number of sites with citizen engagement system established (number)	0	10	20	23	26	26
5.1 Number of gender-informed (female) citizen engagement system established (number) (Sub-indicator: Breakdown)	0	9	18	21	23	23
6. Number of dissemination events promoting green transport strategies for large cities (New Indicator)	0	2	4	6	8	10

Intermediate Results Indicators

Indicator Name	Baseline (2015)	Cumulative Target Values				
		YR 2018	YR 2019	YR 2020	YR 2021	End Target (2022)
1. Whether changes have been made to project activities as a result of consultation (Yes/No)	No	Yes	Yes	Yes	Yes	Yes
2. NMT Space Ratio in Heping, Hebei and Nankai pilot areas (percentage)	25%	28%	38%	44%	46%	46%
3. Kilometers of urban streets rehabilitated and open to traffic in Heping, Hebei and Nankai pilot areas	0	4.4	25	50	70	75
4. Percentage of km with at least 3-star ChinaRAP rating for pedestrians for project streets in Heping, Hebei and Nankai pilot areas (percentage)	31%	31%	50%	70%	85%	90%
5. Number of metro station with access improved	0	5	30	40	95	111
6. Number of bus terminals completed	0	0	0	1	2	2
7. Number of TA studies completed and endorsed by Tianjin government	0	2	4	4	5	6

Indicator Description

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
1. Metro ridership generated from metro access improvement in the central city area (daily trips)	The indicator measures the additional metro ridership generated by the metro access improvement among 111 metro stations in the central city area. *This indicator measures the extent of the project "leveraging the Tianjin metro system" in the PDO.*	Once a year	This indicator calculates the change in metro ridership due to the metro access improvement in 111 project stations, therefore it only measures stations with access improvement already completed. For each completed project station i, the metro company provides the average daily metro ridership for the current year M_i. The indicator is the sum of M_i multiplied by the percentage of ridership generated or shifted to metro because of metro access improvement interventions *R*. This percentage is determined every year through a survey at sample metro stations. At least two sample stations will be selected with a total sample size of at least 400 respondents. Tianjin Planning Institute and Tianjin Metro Company will carry out the survey in October each year in a consecutive 7-day period during morning and afternoon peak hours. The relevant question would be: "What mode would you take for this trip if there is no access improvement?" with options of "car", "metro", "bus", "walk", "bike", and "I would not make this trip". The percentage of generated metro ridership $R = 1 -$ percentage of people who would take metro without the project intervention.	PMO with Tianjin Planning Institute and Tianjin Metro Company
2. Walking and biking trips generated by the project in Heping, Hebei and Nankai pilot areas (daily trips)	The indicator measures additional volume of non-motorized trips generated by the project interventions in Heping, Hebei and Nankai pilot areas. *This indicator measures the green aspect of the PDO.* Due to different implementation sequence, this	Once a year	This indicator is calculated as the difference between the pre-project daily volume of biking and walking trips and the daily volume of walking and biking trips in the streets improved by the project in Heping, Hebei and Nankai pilot areas. Every year, the PMO with support from the M&E consultants and Tianjin Planning Institute will collect the volume of walking and biking trips on selected sample streets (at least one typical project street per improvement type that is completed within the monitoring year, cumulatively more than 1/3 of total project street. A list of selected sample streets is recorded in WBDocs.) before project and after project completion	PMO with support from consultant and Tianjin Planning Institute

	indicator is further broken-down into two sub-indicators to demonstrate impacts on Heping and Nankai, and Hebei, respectively.		on a regular weekday and a regular weekend using a combination of camera data, shared bike data, on-site smart tracking device, and manual counting. The average daily volume generated for all project streets will be extrapolated and calculated using street length, and annual workday and holiday ratio as weights.	
2.1 Walking and biking trips generated by the project in Heping and Nankai pilot areas (daily trips) (Sub-indicator: Breakdown)	This breakdown sub-indicator measures additional volume of non-motorized trips generated by the project interventions in Heping and Nankai pilot areas.	Once a year	This sub-indicator is calculated as the difference between the pre-project daily volume of biking and walking trips and the daily volume of walking and biking trips in the streets improved by the project in Heping and Nankai pilot areas. The daily volume of walking and biking trips is collected and calculated annually on completed project streets by PMO, consultants, and Tianjin Planning Institute.	PMO with support from consultant and Tianjin Planning Institute
2.2 Walking and biking trips generated by the project in Hebei pilot areas (daily trips) (Sub-indicator: Breakdown)	This breakdown sub-indicator measures additional volume of non-motorized trips generated by the project interventions in Hebei pilot areas.	Once a year	This sub-indicator is calculated as the difference between the pre-project daily volume of biking and walking trips and the daily volume of walking and biking trips in the streets improved by the project in Hebei pilot areas. The daily volume of walking and biking trips is collected and calculated annually on completed project streets by PMO, consultants, and Tianjin Planning Institute.	PMO with support from consultant and Tianjin Planning Institute
3. GHG emission reduction due to the project (tCO_2e/year)	This indicator measures the GHG emission reduction benefits due to the project interventions. *This indicator measures the green aspect of the PDO.*	Once a year	The main GHG emission reduction benefits come from modal shift from cars to green modes including metro, bus, walking and biking. The modal shift to metro and to walking and biking trips is estimated from previous two indicators. Emission factors and other assumptions to calculate the GHG emission reduction per year will be done using the economic analysis spreadsheet during appraisal which PMO has and filed in WBDocs.	PMO with support from consultant
4. Number of reported accidents involving non-motorized vehicles or pedestrians in Heping, Hebei and Nankai pilot areas (accidents/year)	This indicator measures the number of reported accidents involving non-motorized vehicles or pedestrians in the streets with project intervention. *This indicator measures the*	Once a year	This indicator is calculated as the three-year rolling average (the previous three years before the monitoring year) of the number of reported accidents the traffic police received, including crashes between motor vehicles and non-motorized vehicles, or between motor vehicles and pedestrians on the project streets in Heping, Hebei, and Nankai pilot areas. The baseline is 1,201 accidents per year for all project streets in Heping, Hebei, and Nankai pilot areas.	PMO with Traffic Police

	safety aspect of the PDO focusing on non-motorized modes. Due to different implementation sequence, this indicator is further broken-down into two sub-indicators to demonstrate impacts on Heping and Nankai, and Hebei, respectively.			
4.1 Number of reported accidents involving non-motorized vehicles or pedestrians in Heping and Nankai pilot areas (accidents/year) (Sub-indicator: Breakdown)	This breakdown sub-indicator measures the number of reported accidents involving non-motorized vehicles or pedestrians in the streets with project intervention in Heping and Nankai Districts.	Once a year	This sub-indicator is calculated as the three-year rolling average (the previous three years before the monitoring year) of the number of reported accidents the traffic police received, including crashes between motor vehicles and non-motorized vehicles, or between motor vehicles and pedestrians on the project streets in Heping and Nankai pilot areas. The baseline is 206 accidents per year for all project streets in Heping and Nankai pilot areas.	PMO with Traffic Police
4.2 Number of reported accidents involving non-motorized vehicles or pedestrians in Hebei pilot areas (accidents/year) (Sub-indicator: Breakdown)	This breakdown sub-indicator measures the number of reported accidents involving non-motorized vehicles or pedestrians in the streets with project intervention in Hebei District.	Once a year	This sub-indicator is calculated as the three-year rolling average (the previous three years before the monitoring year) of the number of reported accidents the traffic police received, including crashes between motor vehicles and non-motorized vehicles, or between motor vehicles and pedestrians on the project streets in Hebei pilot areas. The baseline is 995 accidents per year for all project streets in Hebei pilot areas.	PMO with Traffic Police
5. Number of sites with citizen engagement system established	This indicator measures the number of sites established for citizen engagement to facilitate project design,	Once a year	This indicator is the cumulative number of pilot locations (including metro stations, street improvements in Heping, Hebei and Nankai) where the city has put in place a process of engaging with citizens (men and women) in the design, implementation, and evaluation	PMO with support from consultant

	implementation, and evaluation, with specific gender considerations. This indicator showcases the good practice for other large cities in public consultation and crowd-sourcing public resources for good design, implementation, and evaluation.		phases of the project. Activities of citizen engagement system include identifying expected impacts, estimating costs of an intervention, setting up monitoring and evaluation framework, analyzing ex-post results, information dissemination to citizens, other districts and other cities. The process and monitoring of this indicator are recorded in the report produced under the Technical Assistance.	
5.1 Number of gender-informed (female) citizen engagement system established (number) (Sub-indicator: Breakdown)	This sub-indicator measures the level of engagement by female citizens using the number of sites established for citizen engagement.	Once a year	This sub-indicator will be built from the process described above. The engagement is gender-informed and female participation is encouraged, gender factors are considered in the process. It will report female's engagement.	PMO with support from consultant
6. Number of dissemination events promoting green transport strategies for large cities	This indicator measures the effort to promote green transport strategies and to disseminate knowledge and lessons for other large cities. *This indicator measures the "draw lessons for other large cities" aspect in the PDO.*	Once a year	This indicator is the cumulative number of dissemination events to promote green transport strategies developed in the project, which includes, but not limited to, international/domestic workshops on green transport; dissemination of green transport knowledge, practice and lessons through different channels such as news, print media, and TransFORM; piloting green transport program and events, such as "Green Transport Month", "No Car Day", and "Bike to Work Day"; etc.	PMO with support from consultant

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data

				Collection
1. Whether changes have been made to project activities as a result of consultation (Yes/No)	This indicator measures whether consultation as one activity of citizen engagement has resulted in change in project design.	Once a year	Check TA report on citizen engagement to see if citizens are consulted and if those consultations have resulted in changes to project activities, e.g. the design and implementation of pilots, determine baseline conditions and establish targets.	PMO
2. NMT Space Ratio in Heping, Hebei and Nankai pilot areas (percentage)	This indicator measures the percentage of road space allocated to NMT reflecting the priority of NMT on project streets.	Once a year	This indicator is calculated as the percentage of area allocated for biking and walking of the total road space (i.e. for continuous street design, use the total redline width minus the motor lane width in the cross section as the percentage allocated for NMT) for all completed project streets in Heping, Hebei and Nankai pilot areas. For the project streets that are not completed, use the baseline value of 25 percent. This indicator is the average ratio of all project streets weighted by street length.	PMO
3. Kilometers of urban streets rehabilitated and open to traffic in Heping, Hebei and Nankai pilot areas	Kilometers of urban streets rehabilitated and open to traffic in Heping, Hebei and Nankai pilot areas	Once a year	Check the progress report and record the kilometers of streets that completed construction.	PMO
4. Percentage of km with at least 3-star ChinaRAP rating for pedestrians for project streets in Heping, Hebei and Nankai pilot areas (percentage)	Percent of km of project streets in Heping, Hebei and Nankai pilot areas rated by ChinaRAP as at least 3-star for pedestrians	Once a year	The indicator is calculated as the length of project street with a ChinaRAP 3-star or above for pedestrians divided by the total length of project streets in Heping, Hebei and Nankai pilot areas. The ChinaRAP team carries out assessment and gives star rating for all length of project streets for vehicle occupants, motorcyclists, bicyclists, and pedestrians. Assessment results carried out after project completion or at engineering drawing stage are used for the completed project streets. The baseline assessment was carried out by ChinaRAP team in 2015, with 31 percent of km of streets having 3-star or above rating for pedestrians. For streets that are not yet completed, the 31 percent baseline percentage is used. This indicator is the average percentage of all project streets weighted by street length.	PMO with ChinaRAP team

5. Number of metro station with access improved	Number of station areas where connections between metro, bike and public transport have been improved through project interventions, including providing bike parking, shorten transfer distance, and providing facilities for the disabled	Once a year	Check the progress report at the end of the year and count the number of metro stations with access improvement completed.	Urban Rail Company and PMO
6. Number of bus terminals completed	Number of bus terminals completed under the project	Once a year	Check the progress report at the end of the year and count the number of bus terminals completed.	Bus company and PMO
7. Number of TA studies completed and endorsed by Tianjin government	Number of technical assistance studies completed with endorsement from Tianjin government	Once a year	Check the progress report at the end of the year and count the number of TA studies completed with endorsement from relevant agencies of the Tianjin government.	PMO

Annex 2 Updated Implementation Plan

Contract (Contract Number)	Contract Period (months)	Implementation Plan (duration by year)				
		Yr 2018	Yr 2019	Yr 2020	Yr 2021	Yr 2022
Component 1: Non-motorized Transport						
Heping Phase I (A-1)	**14**	5	9			
Nankai Phase I (A-2)	**12**	3	9			
Heping Phase II (A-3)	**14**		1	8	5	
Nankai Phase II (A-4)	**14**		1	10	3	
Heping Phase III (A-5)	**12**			2	8	2
Nankai Phase III (A-6)	**12**				8	4
Hebei Phase I (A-7)	**12**		2	10		
Hebei Phase II (A-8)	**16**			4	10	2
Hebei Phase III (A-9)	**14**			1	10	3
Component 2: Metro Connection						
Nankai District (B-1)	**11**	2	9			
Hebei District (B-2)	**14**		2	8	4	
Heping, Hexi, Hongqiao, and Hedong District (B-3)	**12**			2	8	2
Dongli, Beichen, Jinnan, and Xiqing Districts (B-4)	**12**				9	3
Component 3: Bus Terminal Development						
Bus Terminal (D-1)	**6**		2	4		
Component 4: Technical Assistance						
Green Transport Development Strategy Phase II (E-1B)	**20**		3	12	5	
Parking Management Phase II (E-2B)	**18**		3	12	3	
Performance Evaluation and NMT Economic Analysis (E-5)	**33**		4	12	12	5
ICR Preparation (E-6)	**3**					3
Disbursement (US$ million)		**6.988**	**25.768**	**32.974**	**25.299**	**7.503**