

TERMS OF REFERENCE FOR CONSULTANTS

A. Background

1. The population of Phnom Penh, which is Cambodia's capital, increased from 1.00 million in 1998 to 1.69 million in 2013;¹ this trend is expected to continue, with the population forecast to increase to 2.41 million in 2020 and 2.87 million in 2035. It is expected that the number of all person trips, including to home, to work, to school, business and private by walking, motorbike, passenger car, and para-transit, will increase from 4.30 million trips in 2012 to 6.97 million trips in 2035. Urban areas have been expanding along major roads towards the west, north, and south, and beyond existing urban areas to the west.²

2. Traffic conditions in Phnom Penh are worsening. The country's economic growth has spurred a rapid increase in the number of vehicles, with a 350% increase in the number of registered vehicles from 2001 to 2012, while the average travel speed in the city center decreased from 22.9 to 14.6 kilometers per hour over the same period (footnote 2).

3. In line with the 2001 Transport Master Plan (TMP), which had a target year of 2015,³ the Government of Cambodia invested in road construction and improvement, intersection improvement, traffic signal installation, and traffic safety improvements. These investments have improved traffic conditions to some degree, but a 2015 review found that a public transport system and traffic management measures are required to effectively alleviate the worsening traffic conditions.⁴

4. In 2014, with support of the Japan International Cooperation Agency (JICA), the government reformulated the 2001 TMP and developed the Comprehensive Urban Transport Plan (CUTP) to improve people's mobility, maintain people- and environment-friendly urban conditions, and revitalize economic activities in Phnom Penh City by promoting a shift from a private-oriented urban transport system to a well-balanced system of public and private transport with a combination of public transport enhancement, traffic management improvement, and road network improvement. The CUTP is an updated TMP with a 2035 target date that is built on a traffic-demand forecast model; it includes an overall investment implementation plan, with an expected total investment cost of \$4.6 billion. It also includes medium-term (2017–2020) and long-term (2021–2035) action plans that define targets, actions, periods, and responsible agencies.

5. The action plans include three components: (i) public transport, involving completion of a basic bus network and implementation of rail transit, with 8 proposed actions; (ii) traffic management, comprising upgrading of signalized intersections and traffic demand management, (such as park and bus ride, parking measures, and improvement of the pedestrian walking environment and commodity transport), with 8 proposed actions; and (iii) roads, involving development of radial, ring, and inner city trunk road systems, and improvement of bottleneck intersections, with 13 proposed actions. Phnom Penh needs to implement the public transport and traffic management components, because the road network improvement alone is insufficient to improve traffic conditions.

¹ Government of Cambodia. 2013. *Cambodia Inter-Censal Population Survey 2013 Final Report*. Phnom Penh.

² Government of Cambodia. 2014. *Comprehensive Urban Transport Plan in Phnom Penh Capital City (Final Draft), Executive Summary*. Phnom Penh.

³ JICA. 2001. *The Urban Transport Master Plan in the Phnom Penh Metropolitan Area*. Phnom Penh.

⁴ Government of Cambodia. 2015. *Overview of the Transport Infrastructure Sector in the Kingdom of Cambodia (5th Edition)*. Phnom Penh.

6. The government and Phnom Penh Capital City (PPCC) have been implementing the medium-term action plan for the public transport and traffic management components with the support of development partners in an effort to meet travel demand resulting from Phnom Penh's growth, and to address worsening traffic conditions. PPCC introduced 3 bus routes serviced by 57 buses in 2014, and expanded up to 8 routes served by additional buses provided by the People's Republic of China and JICA in 2017. Also, JICA has upgraded 100 signalized intersections and is preparing a pilot bus priority lane. In addition, JICA and France plan to introduce an urban rail for the East–West transport corridor and a tramway as a part of the long-term action plan.

7. The public transport and traffic management components are emerging topics, and the government and PPCC officials require new standards and regulations to consistently plan, design, and implement actions (especially for mode interchanges) in the CUTP medium- and long-term action plans, in support of the development of a sustainable integrated urban public transport system. The development of standards and regulations will allow the officials to coordinate and manage the action plans to (i) improve accessibility from the travel starting point to the urban public transport system; and (ii) improve connectivity or integration among different modes (e.g., private vehicle, paratransit, walking and public transport), and within a mode (e.g., bus to bus). Meeting these needs is essential to ensure the urban public transport system plays a greater role in transit in Phnom Penh. The knowledge and support technical assistance (TA) for Supporting Sustainable Integrated Urban Public Transport Development will respond to their needs by introducing the proposed solutions below.

B. Objective

8. The TA will improve Phnom Penh city's urban public transport system management to achieve a sustainable integrated urban public transport system and promote the use of the system through: (i) developing policy guides and a planning toolkit for relevant public transport authorities; (ii) formulating candidate integrated urban public transport improvement programs; and (iii) providing capacity development training to the public transport authorities to improve their system management capacity, and public awareness-raising workshops to promote use of the system.

9. The consulting services will assist the Ministry of Public Works and Transport (MPWT) and the PPCC in realizing the objective.

C. Scope of Services, Tasks and Expected Deliverables

10. With a focus on the two important components, the TA will develop policy guides, a planning toolkit, and candidate integrated urban public transport improvement programs, and improve transport authority officials' capacity and public awareness.

11. **Output 1: Sustainable integrated urban public transport policy guides and planning toolkit developed.** The TA will develop policy guides to regulate planning, design, and implementation of an integrated urban public transport system by articulating suitable measures and standards. With a focus on public transport and traffic management, the TA will review existing plans, standards, regulations, and planning practices; the operation and management of urban transport systems and public space; and the institutional settings of the authorities who plan, operate, and manage these. The TA will then assess infrastructure and people's needs, constraints, and behavior, through surveys of literature, traffic (through counts) and physical

infrastructure along the existing and planned urban public transport network in Phnom Penh.⁵ Base on the prior activities, the TA will identify and propose suitable urban public transport measures and standards. The policy guides will cover integration of public transport, including waterways, pedestrian walkways, transit malls, and park and ride facilities; the use of public space, and control of public and private space around bus stops and urban rail stations; and operational tools and schemes (e.g., information and communication technology, and outsourcing to the private sector).⁶ Policies to promote the use of the public transport system will be (i) responsive to the needs of different segments of the population, especially women, the elderly, and people with disabilities; and (ii) grounded in theory, experience, and research. The policy guides will be used to prepare new transport regulations.

12. The TA will also develop a planning toolkit, with planning processes and tips built on good urban public transport system development practices, ensuring that the needs of different segments of the population will be identified and addressed during the planning process. It will be a comprehensive resource that will allow officials to develop a sustainable, integrated urban public transport system by identifying options (e.g., pedestrian subways, footbridges, and park and ride facilities) through assessments that consider technical, economic, financial, gender, environmental, and social aspects.

13. Table 1 shows the areas to be covered by output 1 and activities to be conducted by other development partners.

Table 1: Areas for Output 1 and Activities to be Conducted by Others

Actions in CUDP Action Plan^a	Areas for Output 1	Others' Activities
Public Transport		
Bus System	Bus system policy, technical specification, operation plan etc. to be developed by JICA will be summarized and explained in the policy guides and toolkit.	<ul style="list-style-type: none"> JICA will produce bus system policy, technical specification, operation plan etc. related to bus system development and operation. JICA plans to conduct a pilot study of bus rapid transit or bus priority lane within a few years and provide policy and technical specification.
Urban Railway	Urban railway policy, technical specification, operation plan etc. to be developed by JICA will be summarized and explained in the policy guides and toolkit.	JICA plans to produce policy, technical specification, operation plan, business plan etc. related to urban railway system under a feasibility study in 2017-2018.
Tramway ^b	Feasibility study, policy, and technical specification to be conducted by France will be summarized and explained in the policy guides and toolkit.	France plans to conduct a feasibility study and develop policy and technical specification once France confirms

⁵ The Ministry of Public Works and Transport (MPWT) plans to apply the guidelines to other urban cities (i.e., Kandal, Siem Reap, and Baat Dambang) in the near future. A rapid assessment will be made as to whether the policy guides can be applied in the three cities, with consideration given to traffic and physical infrastructure similarities and differences.

⁶ JICA will develop a transport policy and technical specification related to an urban railway, a bus system, traffic management, parking management, paratransit management, and a fare policy. France plans to conduct a feasibility study and produce a policy and technical specification for a tramway. These products will be summarized and explained in the policy guidelines and toolkit.

Actions in CUTP Action Plan ^a	Areas for Output 1	Others' Activities
		improved capacity of MPWT and PPCC.
Waterway ^b	Route selection, operation and financing scheme, institutional development to be covered.	Phnom Penh Autonomous Port planned to conduct a feasibility study but could not.
Integration ^b	Policy and toolkit to be developed for areas connecting to urban public transport system (bus, urban railway, tramway, waterway). JICA supported master plan comprising concepts should be used. A fare policy to be developed by JICA will be summarized and explained in the policy guides and toolkit.	JICA will conduct a fare policy to integrate urban public transport system.
Traffic Management		
City center traffic signal upgrading	Signal policy and technical specification to be developed by JICA will be summarized and explained in the policy guides and toolkit.	JICA will produce policy and technical specification.
Development of commutable pedestrian environment	Policy and toolkit to be developed for areas connecting to urban public transport system. JICA's outputs should be used for this area. Policy and technical specification related to traffic management, parking and para-transit management to be developed by JICA will be summarized and explained in the policy guides and toolkit.	JICA plans to cover policy and technical specification related to traffic management, parking management, and para-transit management.
Parking measures	Policy and technical specification related to parking measures to be developed by JICA will be summarized and explained in the policy guides and toolkit.	Ditto
One way system	Policy, technical specification, plan developed by JICA will be summarized and explained in the policy guides and toolkit.	JICA conducted pilot one way system implementation. MPWT and PPCC have knowledge and skills to develop one way system.
Transit mall	Policy and toolkit to be developed for areas connecting to urban public transport system.	None
Park and Bus/Rail Ride	Policy and toolkit to be developed for areas connecting to urban public transport system. JICA's outputs shall be used for this area if available. Policy and specification related to traffic management, parking management, and para-transit management under bus improvement project to be developed by JICA will be summarized and explained in the policy guides and toolkit.	JICA plans to cover policy and technical specification related to traffic management, parking management, and para-transit management under bus improvement project.

Actions in CUTP Action Plan ^a	Areas for Output 1	Others' Activities
Others		
Use of public space and control of public space ^b	Policy and toolkit for urban public transport in relation to land use to be developed.	France supported land use development.
Transportation operation tools and scheme ^b	Policy and toolkit for operation of integrated urban public transport system to be developed. An optimized operation scheme (e.g., institutional setting and financing mechanism) shall be proposed.	<ul style="list-style-type: none"> JICA and France plan to produce an operation manual and a business plan for each public transport system (i.e., bus, urban railway, tramway) France assessed the creation of a Transport and Mobility Organization Authority (or Public Transport Authority).
Non-motorized transport ^b	Policy and toolkit for non-motorized transport to be developed.	None
Environmental and climate change considerations ^b	Policy and toolkit for environment and climate change to be developed.	None
Social and gender considerations ^b	Policy and toolkit for social and gender considerations in urban public transport to be developed.	None
Financial and economic considerations ^b	Policy and toolkit for financial and economic considerations to be developed.	None
Planning approach	Policy and toolkit for planning approach (e.g., consultation, surveys, transport models, budgeting etc.) to be developed.	JICA demonstrated planning approach at a strategic level under CUTP.
Travel characteristics	Travel characteristics in Phnom Penh to be discussed in policy guides and toolkit.	JICA identified travel characteristics in Phnom Penh under CUTP.

CUTP = Comprehensive Urban Transport Plan; JICA = Japan International Cooperation Agency; MPWT = Ministry of Public Works and Transport; PPCC = Phnom Penh Capital City.

^a Actions respond to Table 9.5-1 Selection of Priority Programs of CUTP (footnote 2).

^b These plans are not included in the CUTP but are recognized as necessary plans to supplement the CUTP's action plan.

Note: Topics under Others shall be added through discussion with MPWT and PPCC.

Source: Asian Development Bank.

14. Output 2: Candidate integrated urban public transport improvement programs formulated. Based on output 1, the TA will work with government and PPCC officials to formulate candidate integrated urban public transport improvement programs, including scope and investment costs, for at least three planned or ongoing actions in the CUTP medium-term and long-term action plans, and examine their feasibility through a preliminary feasibility study. The candidate programs will aim to improve safety, affordability, accessibility, and connectivity in the vicinity of bus stops and interchanges, urban rail stations, and major transit hubs of the action plans (which were developed and implemented with little coordination), and seek to maximize the efficacy of the urban public transport network.⁷

15. Output 3: Urban public transport management capacity and awareness improved. The TA will improve the capacity of officials to develop candidate integrated urban public transport

⁷ If the government requests ADB to implement the candidate integrated urban public transport improvement programs, ADB will process a transaction TA (programmed for 2019 in the ADB country operations business plan for Cambodia, 2018–2020) to prepare a sustainable integrated urban public transport improvement project in 2021.

improvement programs and manage an urban public transport system by providing training sessions using the deliverables in outputs 1 and 2. A study tour will be undertaken to review and discuss good practices—regarding traffic demand management, transit-oriented development, and urban public transport system planning and development, in terms of sustainability and social inclusion—with authorities and developers in the study tour destination country. The findings of the study tour will be incorporated in the deliverables of the two outputs. In addition, the TA will promote the use of the urban public transport system by raising public awareness on system safety, security, and efficiency, and will reach out to both women and men by formulating a communication tool based on the two outputs.

16. These outputs will result in the following outcome: urban public transport system management improved. The TA will be aligned with the following impacts: people- and environment-friendly urban conditions maintained, and the urban activities in Phnom Penh City vitalized.

17. The executing agency of the TA will be the Ministry of Public Works and Transport (MPWT), while the implementing agency will be the PPCC. The MPWT and PPCC will coordinate to successfully deliver the three outputs. The MPWT will be responsible for leading the development of the policy guides and toolkit under output 1. The PPCC will be the main beneficiary of the TA under outputs 2 and 3. The Transport and Communications Division of Asian Development Bank (ADB's) Southeast Asia Department will be responsible for TA administration, consultant recruitment, and consultant contract management.

D. Team Composition and Qualification Requirements

18. To support implementation of the TA activities, consulting services, training and other direct support will be provided to the PPCC, MPWT and relevant government agencies. The TA shall provide approximately 37.0 person-months of international consultants including (i) Urban Transport Planner / Team Leader, (ii) Public Transport / Institutional Specialist, (iii) Urban Transport Engineer, (iv) Resettlement Specialist, (v) Social Development and Gender Specialist, (vi) Environment Specialist, (vii) Economist, (viii) Financial Specialist, (ix) Public-Private Partnership Specialist, (x) Legal Specialist, and (xi) Public Communications Specialist. It will also provide approximately 70.0 person-months of national consultants including (i) Urban Planner / Deputy Team Leader, (ii) Public Transport Expert, (iii) Urban Transport Engineering Expert, (iv) Resettlement Expert, (v) Social Development and Gender Expert, (vi) Environment Expert, (vii) Legal Advisor, (viii) Communications Expert, (ix) Architect, Design Engineers, and (x) CAD / Technical Experts. The role of the national consultants is to directly support the international consultant successfully complete their tasks.

19. ADB will recruit a consultant firm based on the quality- and cost-based selection method using a 90:10 quality-cost ratio with full technical proposal in accordance with ADB Procurement Policy (2017, as amended from time to time) and the associated project administration Instructions and TA staff instructions. An output-based, lump sum contract with a provision for fixed out-of-pocket expenditures shall be considered for cost-effective, efficient TA implementation.

20. **Urban Transport Planner / Team Leader** (international, 9.0 person-months) will be responsible for the overall implementation of all services. Specific tasks include:

- (i) Assess public transport planning and relevant aspects of the urban transport masterplan for Phnom Penh,⁸
- (ii) Identify vicinity of bus stops/interchanges, urban rail stations, and other major transit hubs to be surveyed,
- (iii) Procure goods,
- (iv) Plan and conduct traffic count and infrastructure condition surveys at the vicinity of bus stops/interchanges, urban rail stations, and other major transit hubs in Phnom Penh. The traffic count survey shall include (a) pedestrian counts to collect sex- and age-disaggregated data, (b) vehicle classification counts, and (c) public transport and para-transit user counts disaggregated by sex and age. The infrastructure condition surveys will include an assessment on relevant social and gender aspects,
- (v) Conduct a rapid diagnostic study of traffic and infrastructure condition in other growing cities (i.e., Kondal, Siem Reap, and Baat Dambang) to assess whether the policy guides and planning toolkit can be applied to the cities and how,
- (vi) Assess public transport policies and regulations, and ongoing activities conducted by development partners to determine necessary reforms to encourage public transport usage and discourage private vehicles and provide the Legal Specialist and Legal Advisor with his/her findings,
- (vii) Review existing public parking regulations, traffic management, parking management, and para-transit management policies,
- (viii) Recommend measures and standards to be applied to the policy guides and planning toolkit, based on international practices while considering country contexts,
- (ix) Develop detailed concept notes and drawings to improve accessibility and connectivity for vicinity of bus stops/interchanges, urban rail stations, and other major transit hubs,
- (x) Review transit-oriented development (TOD) and land use and building control in other countries,
- (xi) Review integration of public transport and traffic management in other countries,
- (xii) Assess applicability of TOD, integrated public transport and traffic management in Phnom Penh,
- (xiii) Review commercial development opportunities in station and bus stop/interchange areas,
- (xiv) Assess potential waterway routes and identify necessary measures to improve connectivity and accessibility to other transport modes,
- (xv) Develop and finalize policy guides and a planning toolkit given inputs from his/her team members,
- (xvi) Identify cost estimates, implementation arrangements, recommended financial resources and timing of implementation, risks and mitigation measures for candidate improvement programs,
- (xvii) Develop a prioritization mechanism for selection of measures,
- (xviii) Prepare and coordinate other expert inputs for reports, workshops and training,
- (xix) Develop candidate integrated urban public transport improvement programs with the MPWT and PPCC,
- (xx) Provide training to MPWT and PPCC officials
- (xxi) Teach the Deputy Team Leader how to deliver training, and
- (xxii) Consult with a taskforce, comprising the MPWT and PPCC, to develop and finalize deliverables.

⁸ JICA. 2014. *The Project for Comprehensive Urban Transport Plan in Phnom Penh Capital City, Final Report Executive Summary prepared for Ministry of Public Works and Transport*. Phnom Penh.

21. **Urban Transport Expert / Deputy Team Leader** (national, 21.0 person-months) will assist the Urban Transport Planner and other international specialists and more specifically to ensure adequate government participation and feedback in the development of solutions, including any necessary direct liaison. In addition, specific tasks will include:

- (i) Plan and facilitate traffic count and infrastructure condition surveys in Phnom Penh and a diagnostic study in other cities,
- (ii) Assist the Team Leader in reviewing TOD and land use and building control in other countries,
- (iii) Review integration of public transport and traffic management in other countries,
- (iv) Assist the Team Leader in assessing applicability of TOD, integrated public transport and traffic management in Phnom Penh,
- (v) Assist the Team Leader in identifying cost estimates and resources required for potential integrated urban public transport improvement programs,
- (vi) Provide his/her inputs to develop and finalize sustainable integrated urban public transport policy guides and a planning toolkit,
- (vii) Assist the Legal Specialist and Legal Advisor in identifying necessary regulations,
- (viii) Facilitate meeting and discussion among the PPCC, MPWT and the consultant team,
- (ix) Provide supports to a taskforce to discuss policy guides, toolkit and integrated urban public transport improvement programs,
- (x) Assist procurement of goods,
- (xi) Assist development of policy guides, planning toolkit, candidate improvement programs,
- (xii) Provide his/her inputs to prepare capacity development and public awareness raising,
- (xiii) Assist the Communication Expert in proving public awareness-raising workshops, and
- (xiv) Lead the provision of training to MPWT and PPCC officials.

22. **Public Transport / Institutional Specialist** (international, 5.0 person-months) will conduct the following tasks:

- (i) Provide his/her inputs to develop a plan for traffic count and infrastructure condition surveys in terms of public transport aspects and take part in the surveys,
- (ii) Assess existing transport operation and maintenance scheme and capacity for buses, para-transit, and taxi, and identify planned and ongoing developments for improvements,
- (iii) Assess measures to be implemented for integration of bus services at main bus stops/interchanges, urban rail stations, and other major transit hubs in terms of operation and maintenance,
- (iv) Assess organizational arrangements and capacity of public transport authorities,
- (v) Identify needs for candidate integrated urban public transport improvement programs in terms of hardware and software,
- (vi) Recommend necessary institutional setting and capacity development as the urban public transport system will be developed and expanded in future,
- (vii) Assess the feasibility of private sector's involvement in operation and maintenance and recommend feasible options,
- (viii) Provide his/her inputs to develop the TA outputs, and
- (ix) Provide his/her inputs to prepare and provide capacity development and public awareness raising.

23. **Public Transport Expert** (national, 8.0 person-months) will assist the Urban Transport / Institutional Specialist and ensure obtaining necessary information and adequate government participation and feedback in the development of solutions, including any necessary direct liaison.

24. **Urban Transport Engineer** (international, 5.0 person-months) will conduct the following tasks:

- (i) Provide his/her inputs to develop a plan for traffic count and infrastructure condition surveys in terms of transport engineering aspects and take part in the surveys,
- (ii) Assess layouts and locations of bus interchanges and urban railway stations based on available resources,
- (iii) Assess traffic management around bus stops/interchanges, urban railway stations, and major transit hubs,
- (iv) Assess needs for other complimentary measures around bus stops/interchanges, bus rapid transit stations, urban railway stations, and major transit hubs,
- (v) Develop preliminary engineering design of access features at bus interchanges, urban railway stations, and major transit hubs,
- (vi) Develop catchment plans within a minimum of 500m for each bus stop/interchange, urban railway station, and major transit hub,
- (vii) Identify potential greenhouse gas (GHG) emission reduction of integration of public transport and traffic management options,
- (viii) Prepare solutions to improve accessibility and connectivity along pedestrian corridors,⁹
- (ix) Examine integration of public transport and traffic management options for the catchment areas at each bus interchange and urban railway station,
- (x) Contribute to the development of candidate integrated urban public transport improvement programs through formulating detailed integration of public transport and traffic management measures,
- (xi) Provide his/her inputs to develop the TA outputs, and
- (xii) Provide his/her inputs to prepare and provide capacity development and public awareness raising.

25. **Urban Transport Engineering Expert** (national, 8.0 person-months) will assist the Urban Transport Engineer and ensure adequate government participation and feedback in the development of solutions, including any necessary direct liaison.

26. **Resettlement Specialist** (international, 2.0 person-months) will conduct the following tasks:

- (i) Provide his/her inputs to develop a plan for traffic count and infrastructure condition surveys in terms of resettlement aspects and take part in the surveys,
- (ii) Provide his/her inputs to develop the sustainable integrated urban public transport policy guides and planning toolkit along with necessary planning procedure, including assessments of resettlement and stakeholder consultation, and review and assessment of resettlement impacts of interventions and mitigation measures,
- (iii) Review, assess, and evaluate candidate integrated urban public transport improvement programs to be developed together with the government and the PPCC according to ADB's Safeguard Policy Statement (2009) and domestic requirements,
- (iv) Identify capacity development requirements for the government and the PPCC staff, and
- (v) Provide his/her inputs to prepare and provide capacity development and public awareness raising.

⁹ JICA's study (footnote 1) identified that more than 30% of bus users lived more than 401 meters away from a nearest bus stop.

27. **Resettlement Expert** (national, 2.0 person-months) will assist the Resettlement Specialist, and ensure adequate government participation and feedback in the development of solutions, including any necessary direct liaison.

28. **Social Development and Gender Specialist** (international, 2.0 person-months) will conduct the following tasks:

- (i) Provide his/her substantive inputs when developing the plan for traffic count and infrastructure condition surveys to ensure collection of data disaggregated by sex and age and assessment of relevant social and gender aspects, and take part in the surveys,
- (ii) Review literature and identify people's different needs, constraints and behavior in relation to urban public transport in general and more particularly in the city,
- (iii) Provide his/her substantive inputs in the development of the sustainable integrated urban public transport (a) policy guides and (b) planning toolkit along with necessary planning procedure, including assessments of social development and gender issues, stakeholder consultation, and review and assessment of social development and gender impacts of interventions and risk mitigation measures. The specialist will provide inputs to ensure the policy guides and planning toolkit include clear guidance and a set of practical tools on how to adequately consider social inclusion and gender aspects and address the needs of different segments of the population, especially women, elderly and people with disabilities, in urban public transport,
- (iv) Review, assess, and evaluate candidate integrated urban public transport improvement programs to be developed together with the government and the PPCC according to ADB's Safeguard Policy Statement (2009) and domestic requirements. The specialist will provide substantive inputs to ensure the candidates have paid adequate attention to improve safety, affordability and accessibility, and address the needs of different segments of the population, especially women, elderly and people with disabilities,
- (v) Identify capacity development requirements for the government and the PPCC staff,
- (vi) Provide his/her substantive inputs to prepare and provide capacity development in mainstreaming gender and other social considerations in urban public transport and for the public awareness raising to ensure it is tailored to different groups of people and reach out to both women and men, and
- (vii) Work closely with the team leader and other consultants, especially the public communications specialist.

29. **Social Development and Gender Expert** (national, 2.0 person-months) will assist the Social Development and Gender Specialist, and ensure adequate government participation and feedback, including from relevant gender stakeholders, in the development of solutions, including any necessary direct liaison.

30. **Environment Specialist** (international, 3.0 person-months) will conduct the following tasks:

- (i) Provide his/her substantive inputs when developing the plan for traffic count and infrastructure condition surveys in terms of environmental aspects and take part in the surveys,
- (ii) Review literature and identify environmental issues in relation to urban public transport in general and more particularly in the city,
- (iii) Provide his/her substantive inputs in the development of the sustainable integrated urban public transport (a) policy guides and (b) planning toolkit along with necessary planning procedure, including environmental assessment, stakeholder consultation,

- and review and assessment of environment impacts of interventions and mitigation measures,
- (iv) Review, assess, and evaluate candidate integrated urban public transport improvement programs to be developed together with the government and the PPCC according to ADB's Safeguard Policy Statement (2009) and domestic requirements,
 - (v) Identify capacity development requirements for the government and the PPCC staff,
 - (vi) Provide his/her substantive inputs to prepare and provide capacity development and public awareness raising, and
 - (vii) Work closely with the team leader and other consultants, especially the public communications specialist.
31. **Environment Expert** (national, 3.0 person-months) will assist the Environment Specialist, and ensure adequate government participation and feedback in the development of solutions, including any necessary direct liaison.
32. **Economist** (international, 1.5 person-months) will conduct the following tasks:
- (i) Provide his/her inputs to develop the sustainable integrated urban public transport planning toolkit in terms of the economic evaluation of integration of public transport and traffic management measures,
 - (ii) Contribute to development of a prioritization mechanism for selection of measures,
 - (iii) Assess integration of public transport and traffic management measures in terms of economic viability,
 - (iv) Identify measures or mechanisms to capture indirect economic benefits and impacts for inclusion in the analysis,
 - (v) Review, assess, and evaluate candidate integrated urban public transport improvement programs to be developed together with the government and the PPCC,
 - (vi) Identify an optimal implementation strategy of the integrated urban public transport improvement programs in terms of economic viability,
 - (vii) Identify capacity development requirements for the government and the PPCC staff, and
 - (viii) Provide his/her inputs to prepare and provide capacity development and public awareness raising.
33. **Financial Specialist** (international, 1.5 person-months) will conduct the following tasks:
- (i) Provide his/her inputs to develop the sustainable integrated urban public transport planning toolkit in terms of the financial evaluation of integration of public transport and traffic management measures,
 - (ii) Contribute to development of a prioritization mechanism for selection of measures,
 - (iii) Assess integration of public transport and traffic management measures in terms of financial viability,
 - (iv) Identify measures or mechanisms to capture indirect financial benefits and impacts for inclusion in the analysis,
 - (v) Review, assess, and evaluate candidate integrated urban public transport improvement programs to be developed together with the government and the PPCC,
 - (vi) Identify an optimal implementation strategy of the integrated urban public transport improvement programs in terms of financial viability,
 - (vii) Identify capacity development requirements for the government and the PPCC staff, and
 - (viii) Provide his/her inputs to prepare and provide capacity development and public awareness raising.

34. **Public-Private Partnership Specialist** (international, 1.0 person-month) will conduct the following tasks:

- (i) Review the existing and future public transport operation mechanism,
- (ii) Assess an applicability of public-private partnership (PPP) scheme for public transport and modal interchange infrastructure,
- (iii) Demonstrate the PPP applicability assessment in a document,
- (ix) Provide Economist / Financial Specialist with his/her inputs to identify an optimal implementation strategy of the integrated urban public transport improvement programs in terms of economic and financial viability under PPP scheme,
- (iv) Provide his/her inputs to develop the TA outputs, and
- (v) Provide his/her inputs to prepare and provide capacity development and public awareness raising.

35. **Legal Specialist** (international, 5.0 person-months) will conduct the following tasks:

- (i) Review existing urban transport policy and regulations related to integrated urban public transport improvement programs,
- (ii) Identify necessary transport regulations, with inputs from the Team Leader and Legal Advisor,
- (iii) Draft of new transport regulations, and
- (iv) Provide instructions on the new transport regulations so that the government can adopt the proposed regulations through necessary procedure.

36. **Legal Advisor** (national, 5.0 person-months) will conduct the following tasks:

- (i) Consult with the government agencies and collect existing urban transport policy and regulations related to integrated urban public transport improvement programs,
- (ii) Join the Team Leader's stocktaking on public transport policies and regulations, and ongoing activities conducted by development partners to identify necessary transport regulations,
- (iii) Advise the Legal Specialist about drafting regulations based on his/her experience, and
- (iv) Assist the Legal Specialist in drafting regulations and instructions.

37. **Public Communications Specialist** (international, 2.0 person-months) will be responsible for the development of awareness materials and a communications plan, conducting awareness workshops, and preparing a capacity development training program. The international specialist will be supported by the national expert to implement relevant tasks. They are expected to lead and co-lead the following tasks:

- (i) Review existing communications and knowledge dissemination processes under existing public transport projects,
- (ii) Develop a communications and knowledge management plan, tailored to different groups (e.g., women, senior citizens, people with disabilities, etc.),
- (iii) Develop awareness products on safety, security and efficiency of the use of public transport given inputs from other experts,
- (iv) Plan a dissemination plan of awareness materials through various opportunities and disseminate them upon the MPWT and PPCC's endorsement on the plan,
- (v) Organize and provide workshop and training to promote the use of public transport,
- (vi) Teach the Deputy Team Leader and the Communications Expert how to deliver workshop and training, and
- (vii) Get feedback from workshop and training participants in an earlier phase and feedback into the workshop and training program to improve those contents.

38. **Communications Expert** (national, 5.0 person-months) will assist the Public Communications Specialist, lead the provision of public awareness-raising workshops, and ensure adequate government and public participation and feedback in the development of solutions, including any necessary direct liaison.

39. **Architect, Design Engineer** (2 nationals, 4.0 person-months each) will support the urban transport specialists to complete their tasks and for the detailed concept and accessibility and connectivity improvement options at bus stops/interchanges, urban railway stations, and major transit hubs by providing architectural design supports.

40. **CAD / Technical Expert** (2 nationals, 4.0 person-months each) will support the urban transport specialists to complete their tasks and for the detailed concept and accessibility and connectivity improvement options at bus stops/interchanges, urban railway stations, and major transit hubs by providing drafting supports.

41. Table 2 shows a summary of consulting services requirement.

Table 2: Summary of Consulting Services Requirement

Positions	Person-Months Required	Qualification Requirements
International		
Urban Transport Planner /Team Leader	9.0	Preferably a master degrees in urban transport planning or other relevant areas and 15 years' experience in the urban transport sector, including developing countries (preferably Greater Mekong Sub-region (GMS) countries)
Public Transport / Institutional Specialist	5.0	A bachelor degree in relevant areas for public transport operations and 10 years' experience in public transport and/or institutional development, including developing countries (preferably GMS countries)
Urban Transport Engineer	5.0	Preferably a master degree related to urban transport and 10 years' experience in the urban transport sector, including developing countries (preferably GMS countries)
Resettlement Specialist	2.0	A bachelor degree in relevant areas and 10 years' experience in resettlement in the transport sector, including developing countries (preferably GMS countries)
Social Development and Gender Specialist	2.0	A bachelor degree in gender studies, social sciences or other relevant areas and 10 years' experience in gender and gender mainstreaming, preferably with practical experience in mainstreaming gender in the transport sector, including developing countries (preferably GMS countries)
Environment Specialist	3.0	A bachelor degree in environment engineering or other relevant areas and 10 years' experience in environmental impact assessment in the transport sector, including developing countries (preferably GMS countries)
Economist	1.5	Preferably a master degree in transport economics or other relevant areas and 10 years' experience in international development projects, including developing countries
Financial Specialist	1.5	A bachelor degree in finance or other relevant areas and Chartered Accountant or Certified Public Accountant and 10 years' experience in international development projects, including developing countries
Public-Private Partnership Specialist	1.0	Preferably a master degree in business administration or other related areas and 10 years' experience in international development projects in general, and 5 years' experience in the transport sector, including developing countries
Legal Specialist	5.0	Preferably a master degree in law, 10 years' experience in international development projects in general, and 5 years'

		experience in the transport sector, including developing countries
Public Communications Specialist	2.0	A bachelor degree in public relations or other relevant areas and minimum 7 years' experience in public relations and capacity building for international development projects
Sub total	37.0	
National		
Urban Transport Expert / Deputy Team Leader	21.0	A bachelor degree in urban transport planning or other relevant areas and 10 years' experience in urban planning or similar works. English fluency is necessary.
Public Transport Expert	8.0	A bachelor degree in transport related area and 7 years' experience in public transport or similar works. Working level of English is necessary.
Urban Transport Engineering Expert	8.0	A bachelor degree in transport related area and 7 years' experience in urban transport or similar works. Working level of English is necessary.
Resettlement Expert	2.0	A bachelor degree in relevant areas and 7 years' experience in similar assignments. Working level of English is necessary.
Social Development and Gender Expert	2.0	A bachelor degree in relevant areas and 7 years' experience in similar assignments (gender and gender mainstreaming into sectors, preferably infrastructure sectors). Working level of English is necessary.
Environment Expert	3.0	A bachelor degree in relevant areas and 7 years' experience in similar assignments. Working level of English is necessary.
Legal Advisor	5.0	A bachelor degree in law and 7 years' experience in similar assignments. Working level of English is necessary.
Communications Expert	5.0	A bachelor degree in public relations or other relevant areas and 5 years' experience in public relations and capacity building. Working level of English is necessary.
Architect, Design Engineers (2)	8.0	Non-key
CAD / Technical Experts (2)	8.0	Non-key
Sub total	70.0	
Total	107.0	

Source: Asian Development Bank.

42. The consultants will procure \$55,000 worth of goods (indicatively, 5 computers, 5 computer software, 1 printer/photocopying machine, 1 video camera, 5 portable traffic counters, and 10 hand held intersection traffic counters) in accordance with ADB Procurement Policy (2017, as amended from time to time) and the associated PAIs/TA Staff Instructions using the shopping method. The goods will be used by the consultants and turned over to the MPWT upon TA completion.

E. Reporting Requirements and Time Schedule for Deliverables

43. The consultants will be required to prepare and submit for approval reports, plans, products and training related to the three TA output as follows:

- **Reports:** An inception report to be submitted to MPWT, the PPCC and ADB within one month of commencement of services. Progress reports will be submitted on a quarterly basis. A mid-term report will be submitted in 12th month from the commencement. A draft final report that would include and summarize all activities under the services, including other deliverables, to be submitted in 22nd month for review and comment of all stakeholders. A final report will be submitted within 2 months of receipt of all comments.
- **Survey and reports:** Traffic count and infrastructure condition surveys shall be conducted in Phnom Penh city. In addition, rapid infrastructure diagnostic survey shall be conducted in

large cities, including Kondal, Siem Reap, and Baat Dambang. Findings will be submitted as a report in 4th month.

- **Policy guides:** The initial draft will be submitted for comments and discussion by 6th month and will be revised as the final version for submission by 8th month.
- **Planning toolkit:** The initial draft will be submitted for comments and discussion by 13th month and will be revised as the final version for submission by 14th month.
- **Capacity development and awareness program work plan:** The plan shall be submitted by 4th month, prior to the date of any dissemination of awareness materials and provision of training /workshop.
- **Integrated urban public transport improvement programs:** The draft programs shall be submitted by 9th month and will be finalized by 15th month.
- **Study tour:** The tour will be conducted and its report will be submitted by 6th month. The consultants shall select a country oriented in integrated public transport system based on the need of the MPWT and PPCC and develop a study tour plan. ADB will assist the consultants in contacting with organizations in the country to set up meetings.
- **Public awareness materials:** The materials will be produced by 20th month.
- **Public awareness workshops:** Ten workshops will be provided from September to January 2020 and a summary report will be submitted in January 2020. The requirements of the workshops are:
 - The targets are at least 600 students and 400 workers who are potential users of urban public transport system in Phnom Penh. The venue shall be of sufficient size to accommodate up to 100 people (excluding presenters and attendees), with audio visual facilities. A meeting room in a school and a factory would be considered appropriate.
 - An expected agenda which will be based on the capacity development and awareness program work plan agreed with the EA/IA.
- **Capacity development training:** Five training sessions for two groups will be provided from 3rd month to 24th month and a summary report will be submitted in 24th month. The requirements of the training are:
 - The venue shall be of sufficient size to accommodate up to 25 people (excluding presenters and attendees), with audio visual facilities, and ability to provide refreshments. A meeting room in a hotel or in the consultants' office or a government office would be considered appropriate.
 - The training attendees will be staff from concerned agencies. The list of agencies and persons to be invited is to be agreed between the consultants and the EA/IA.
 - An expected agenda which will be based on the capacity development and awareness program work plan agreed with the EA/IA.

44. The consultants shall submit ten copies of documents, including reports, policy guides, planning toolkit, capacity development and awareness program work plan, integrated urban public transport improvement programs, study tour report, workshop and training summary reports. The number of public awareness materials is expected to be at least 1,000 copies. A soft copy of all documents will be provided to EA, IA and ADB.

F. Client's Input and Counterpart Personnel

45. The MPWT and the PPCC will provide counterpart support in the form of counterpart staff, office, access to information and reports, and other in-kind contributions.

46. To effectively deliver and adopt the outputs, the MPWT and PPCC will appoint one focal point officer each, who will directly communicate with the consultants. To develop and finalize the deliverables, the MPWT and PPCC will form a taskforce with support of the consultants. The taskforce shall include relevant authorities, such as the Ministry of Economy and Finance, and invite key public transport industry, such as paratransit providers and bus operators. In addition, TA activities and deliverables shall be shared with relevant agencies and development partners at the Infrastructure Regional Integration Technical Working Group chaired by MPWT and JICA.

G. Implementation Schedule

47. Figure 1 depicts an indicative overall implementation schedule.

