Project Administration Manual

Project Number:
Loan Number:
January 2014

Socialist Republic of Viet Nam:

Sustainable Urban Transport for Ho Chi Minh City Mass Rapid Transit Line 2 Project

Contents

Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with government of Viet Nam (Government) and Asian Development Bank (ADB) policies and procedures. The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ho Chi Minh City People's Committee (HCMC PC) and Urban Transport Management Department No. 1 (UTMD1) are wholly responsible for the implementation of ADB financed projects, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by HCMC PC and UTMD1 of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At Loan Negotiations the borrower and ADB shall agree to the PAM and ensure consistency with the Loan agreement. Such agreement shall be reflected in the minutes of the Loan Negotiations. In the event of any discrepancy or contradiction between the PAM and the Loan Agreement, the provisions of the Loan Agreement shall prevail.

After ADB Board approval of the project's report and recommendations to the President (RRP) changes in implementation arrangements are subject to agreement and approval pursuant to relevant Government and ADB administrative procedures (including the ADB Project Administration Instructions) and upon such approval they will be subsequently incorporated in the PAM.

The PAM includes references and arrangements for the ADB Clean Technology Fund financed portion of the Sustainable Urban Transport for Ho Chi Minh City Mass Rapid Transit Line 2 Project. These references are included for information purposes only and administrative and management arrangements are subject to final agreement between the Government and ADB Clean Technology Fund.

Abbreviations

ADB	=	Asian Development Bank
AFS	=	Audited financial statements
AP	-	Affected Persons
CIF	=	Climate Investment Fund
CQS	=	consultant qualification selection
CTF	=	ADB Clean Technology Fund
DMF	=	design and monitoring framework
DSC	=	design and supervision consultant
EMP	=	environmental management plan
ESMS	=	environmental and social management system
FDIC	=	International Federation of Consulting Engineers
GDP	=	gross domestic product
HCMC PC	=	Ho Chi Minh City People's Committee
ICB	=	international competitive bidding
IEE	=	Initial environmental examination
LAR	=	land acquisition and resettlement
LIBOR	=	London interbank offered rate
MAUR	=	Management Authority for Urban Railways
MOF	=	Ministry of Finance
MPI	=	Ministry of Planning and Investment
NCB	=	national competitive bidding
NGOs	=	nongovernment organizations
PAI	=	project administration instructions
PAM	=	project administration manual
PMU	=	project management unit
QCBS	=	quality- and cost based selection
RRP	=	report and recommendation of the President to the Board
SBD	=	standard bidding documents
SBV	=	State Bank of Vietnam
SGIA	=	second generation imprest accounts
SOE	=	statement of expenditure
SPS	=	Safeguard Policy Statement
SPRSS	=	summary poverty reduction and social strategy
TOR	=	terms of reference
UTMD1	=	Urban Transport Management Department No. 2

NOTES

1 The fiscal year (FY) of the Government and its agencies ends on 31 December.

2 In this report, "$" refers to US dollars.

I. PROJECT DESCRIPTION

1. **Rationale.** The Government of Viet Nam is planning and implementing major public transport infrastructure investments intended to induce a substantive modal shift from private to public transport modes.[1] Failure to invest in public transport infrastructure to support a modal shift away from private transport in Viet Nam's large cities will constrain economic growth and accelerate degradation of the urban environment. The government is supporting climate change mitigation efforts by adopting a low carbon transport growth path, which is more energy efficient and lowers green house gas (GHG) emissions. The Viet Nam 2012-2015 Country Partnership Strategy of the Asian Development Bank (ADB) supports the government's program to improve urban transport infrastructure and promote public transport.

2. HCMC is the largest city in Viet Nam, with a population of the greater urban area over 9 million that is expected to grow to 13.8 million by 2025. Private vehicles dominate urban transportation, with motorcycles being the most prevalent mode at about an 85% share. High private vehicle usage has resulted in severe congestion; many major routes have travel speeds below 10 kilometers per hour during peak periods and road safety is poor. As a result of rising income levels, HCMC is experiencing a new phase of urban transport motorization marked by a shift from motorcycles to cars. With the number of vehicles in HCMC growing by around 10% per annum, congestion is worsening; the situation is compounded as more motorbike owners convert to cars.

3. The rapid growth of private vehicles is partly attributable to the inadequacy of HCMC's existing public transport system, which consists of a poorly integrated bus network that cannot compete with private modes of transport.[2] The recovery of bus operating costs is constrained by the inefficient institutional arrangements for establishing, allocating, and operating bus routes and providing reliable services. Traffic planning and management is also weak and, as a result, ineffective in controlling traffic and encouraging the use of public transport. Footpath areas are commonly blocked by motorcycle parking and other private uses which impedes pedestrian access. Importantly, there are no policy and regulatory measures to reduce private modes of transport, and the absence of an efficient public transport system does not encourage people to switch from private vehicles.

4. Plans to develop a city-wide mass transit system is the centerpiece of the HUTMP, and three MRT lines[3] and two bus rapid transit lines are currently under development. Phase 1 of MRT Line 2 is financed by ADB[4] and is expected to be operational in 2019. In order to make the MRT network more financially and economically viable, there is a need for complimentary measures to ensure the public transport system is integrated as well as attractive, accessible and affordable to users. HUTMP's strong focus on a modern public transport system will also reduce GHG emissions and other environmental pollution, and improve the urban environment for city residents and increase public safety through reduction in traffic accidents.

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[1] Viet Nam Socio-Economic Development Plan for 2011–2015.

[2] A proposed World Bank project, expected to be approved in 2014, will implement two bus rapid transit systems, upgrade a large portion of the existing bus fleet and improve bus operations and management.

[3] MRT Line 1 from Suoi Tien to Ben Thanh, cofinanced by Japanese government, MRT Line 2 from Ben Thanh to Tam Luong, cofinanced by ADB, European Investment Bank and Kreditanstalt für Wiederaufbau and MRT Line 5 from Bay Hien to Sai Gon Bridge, cofinanced by Spanish government.

[4] ADB 2010*. Loan 2731-VIE: Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program - tranche 1,* Manila. ADB 2012*. Loan 2956-VIE: Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program – tranche 2,* Manila.

5. **Project Components.** The Project will directly support the integration of MRT Line 2 into the HCMC's overall public transport network by providing infrastructure and facilities at stations that will improve access to the MRT and strengthen the MRT's connectivity with other modes of public transport. Station accessibility will be improved through pedestrian-friendly walkways and "park and ride" facilities, whereas dedicated bus feeder links will strengthen connectivity. The supporting infrastructure and other facilities will be designed to incorporate gender sensitive features that will complement similar measures under the MRT Line 2. Infrastructure improvements will be complemented by policy and regulatory reforms in the areas of traffic management, parking and congestion pricing. These reforms will also define clear institutional responsibilities for effective enforcement.

6. The overall Project structure consists of: (i) construction of accessibility measures and public transport facilities along 10.3 km of MRT2 from Ben Thanh to Tham Luong, primarily around the 10 stations; (ii) procure and install systems and equipment to support public transport measure improvements, including the MRT2 station enforcement system equipment, and bus information system at the bus control centre, and (iii) consulting services for design and construction supervision of the contracts, support UTMD1 for project management and implementation, development of multi-modal transport and traffic management modeling platforms and for urban transport sector development to address street management system, establishment of a parking policy to support public transport and assist in the development of a framework for pricing all public and private transport in HCMC.

7. The consulting services for sector development and implementation support will provide critical strengthening of UTMD1, which is necessary to ensure that the Project components can be timely and successfully implemented. The implementation of CTF funded integrated sustainable transport projects will complement MRT Line 2 works and the measures will enhance the attractiveness and competitiveness of the system in order to achieve forecast ridership levels.

8. **Impact.** The expected impact of the Project will be an integrated and sustainable public transport system in six districts of HCMC.[5] This will support the HUTMP in achieving the city-wide public transport modal share targets.

9. **Outcome.** The outcome will be improved access to MRT Line 2 stations and connectivity with other modes of public transport.

10. **Outputs:** There are three outputs under the Project: (i) MRT Line 2 stations accessibility improvements; (ii) public transport information systems; and (iii) public transport policy development program.

(i) **MRT Line 2 Station Accessibility Improvements:** MRT Line 2 station accessibility improvements, including public transport facilities, will be constructed along the first stage of MRT Line 2 from Ben Thanh to Tham Luong, primarily within 100m around the nine underground and one elevated stations along the 10.3 km line. Civil works will include pedestrian subways and footbridges, bus stops and feeder links, dedicated taxi stands, park and ride facilities, parking for two-wheeled vehicles and waiting areas for other public

[5] Districts 1, 2, 10, 12, Tan Binh and Tan Phu.

transport service providers. All infrastructure and other facilities will be designed to incorporate gender sensitive features, universal access guidelines and safe passageways for pedestrians. The Project will also establish a station access management system to facilitate the efficient flow of people and traffic around MRT Line 2 stations. Enforcement measures will be implemented to ensure clear pedestrian access, smooth flow of traffic, and proper parking management of private vehicles. To support Project implementation, consulting services will be provided for detailed design and construction supervision of the civil works and goods and services contracts, as well as for overall project management.

(ii) **Public Transport Information Systems:** To support public transport improvements and to increase ridership, the Project will include the development of a public transport information system along MRT Line 2, which will be linked to the main bus control centre in HCMC. This system will provide continuously updated schedule information to increase the convenience and reliability of using public transport, and will complement the city-wide bus network improvements under the proposed Green Transport Project.[6] The Project will install equipment for the public transport information system at MRT Line 2 stations; the HCMC PC and bus operators will finance and install the necessary equipment in buses and at bus stops.

(iii) **Public Transport Policy Development Program:** To support HUTMP objectives and improve the financial sustainability of public transport, the Project will provide consulting services to develop specific policies and regulations: (i) a station access management system and enforcement measures to ensure clear pedestrian access and proper use of public space by venders around the stations; (ii) a station parking policy to provide for the efficient flow of vehicles to and from the MRT Line 2 stations; and (iii) a policy framework for pricing public and private transport in HCMC to promote a modal shift from private vehicles to public transport. The Project will include capacity development and training to HCMC transport agencies to implement and enforce the new policies and regulations. Additionally, equipment and consulting services will be provided to establish comprehensive multi-modal transport and traffic management modeling systems that will be utilized to develop the detailed pilot schemes to improve public transport integration for the Project.

[6] Funded by World Bank, with the loan expected to be approved in 2014.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

11. The Project is already at an advanced stage of development, the government feasibility study expected to be approved in August 2013. Detailed design of the works will commence once the loan becomes effective, as it cannot be commenced until the contract for the underground stations has been awarded and the contractor submit their detailed design to Management Authority for Urban Railways (MAUR). The first contract is expected to be awarded in early 2015 and all works completed by 2017.

12. The draft readiness criteria, at fact finding requires: (i) feasibility study appraised and approved by EA, (ii) PDO approved by Prime Minister, (iii) Project Administration Manual[7] agreed, (iv) counterpart fund agreed, (v) Project Management Unit staffing and Terms of Reference (TOR) agreed, (vi) draft IEE and RP completed and agreed, and (vii) Consultant inputs, TOR and RFP data completed. The draft feasibility study is currently under appraisal and expected to be approved in August. The PDO is expected to be approved by end of July. The PAM draft contents, PMU staffing and consulting inputs have been discussed and agreed with UTMD1, with further discussion on specific details to be undertaken in order that the PAM will be finalized prior to loan negotiations. The draft IEE and RP will be approved by end of July.

13. Prior to loan negotiations, the following government readiness criteria need to be complied; (i) Project Administration Manual confirmed; (ii) Counterpart Funds for First Year of Implementation confirmed; (iii) Project unit establishment with key staff appointed; (iv) Project Implementation Plan agreed; (v) IEE and RP action plans confirmed; (vi) Procurement Plan confirmed; and (vii) auditing arrangements and TOR confirmed. At end of fact finding mission the draft PAM, implementation plan, procurement plan and auditing arrangements were agreed and the draft IEE and RP provided. Arrangements for establishing PMU and counterpart funding will be completed in August 2013. UTMD1 should confirm with SBV the requirements are met prior to loan negotiations. A list of all readiness criteria, their current status and target dates is detailed in Table 2.1. In the period up to loan approval, HCMC PC and UTMD1 will provide preparation activities to support readiness criteria completion.

[7] Includes procurement plan, project implementation plan, and auditing arrangements.

Table 2.1 – Program Readiness Criteria

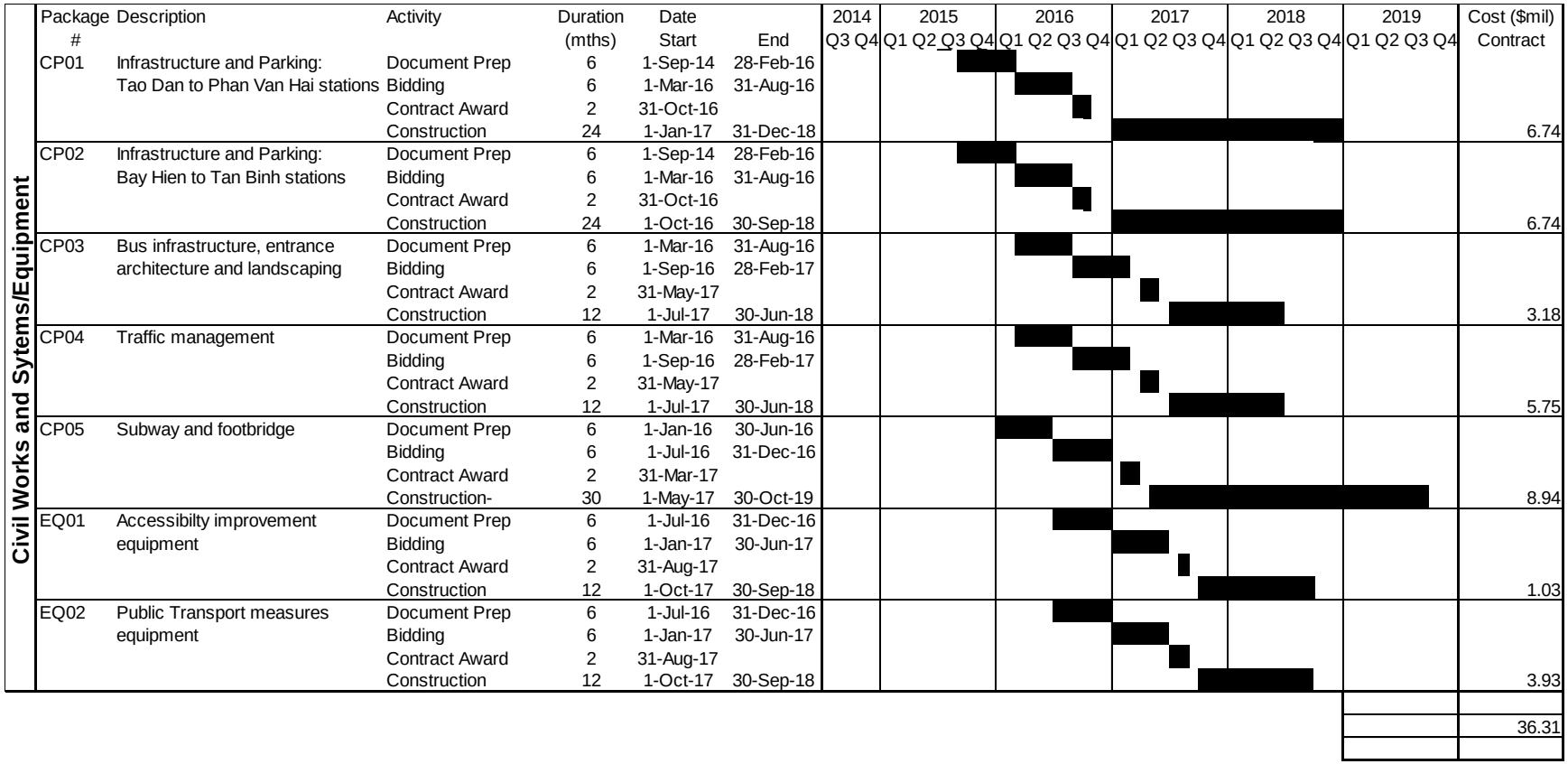
	Indicative Activities	2013 Months						2014	Who
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Responsible
1	FS Approved		X						HCMC PC
2	Project Administration Memorandum approved		X						UTMD1/ADB
3	Counterpart funds for first year confirmed			X					HCMC PC
4	Establishment of the PMU with key staff in place		X						UTMD1
5	Project Implementation Plan agreed		X						UTMD1/ADB
6	IEE, RP Action Plans agreed	X							UTMD1/HCMC PC/HRB
7	Procurement Plan confirmed			X					UTMD1/ADB
8	Auditing arrangements		X						UTMD1/ADB
9	ADB Board approval								ADB (2016)
10	Government legal opinion provided								SBV (2014)
11	Loan signing (April 2014)								SBV/ADB
12	Loan effectiveness (July 2014)								ADB

ADB = Asian Development Bank, FS = feasibility study, HCMC PC = Ho Chi Minh City People's Committee, IEE = Initial Environmental Examination, PMU = project management unit, RP = Resettlement Plan, SBV = State Bank of Vietnam, UTMD1 = Urban Transport Management Department 1
Source: Asian Development Bank

B. Overall Project Implementation Plan

14. The project physical components, works and systems/equipment, are largely tied to the implementation schedule of the ongoing construction of the MRT Line 2 project, which is expected to be completed in 2020. Therefore the implementation of the first contract is scheduled to commence in late 2016 and all contracts are expected to be completed by 31 December 2019. The loan closing will be on 30 June 2020. The overall Project implementation is shown in Figure 2.1.

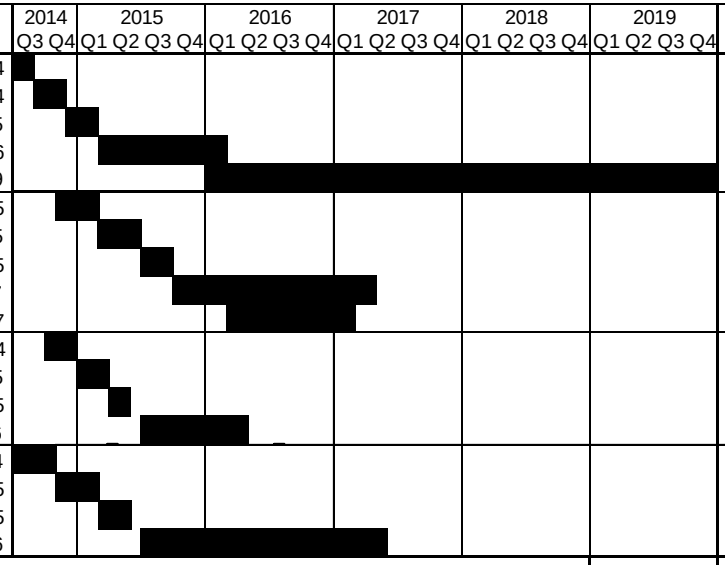
Figure 2.1 - Project Implementation Plan (works, systems and equipment)



	Package #	Description	Activity	Duration (mths)	Date Start	Date End	Cost ($mil) Contract
Civil Works and Sytems/Equipment	CP01	Infrastructure and Parking: Tao Dan to Phan Van Hai stations	Document Prep	6	1-Sep-14	28-Feb-16	
			Bidding	6	1-Mar-16	31-Aug-16	
			Contract Award	2	31-Oct-16		
			Construction	24	1-Jan-17	31-Dec-18	6.74
	CP02	Infrastructure and Parking: Bay Hien to Tan Binh stations	Document Prep	6	1-Sep-14	28-Feb-16	
			Bidding	6	1-Mar-16	31-Aug-16	
			Contract Award	2	31-Oct-16		
			Construction	24	1-Oct-16	30-Sep-18	6.74
	CP03	Bus infrastructure, entrance architecture and landscaping	Document Prep	6	1-Mar-16	31-Aug-16	
			Bidding	6	1-Sep-16	28-Feb-17	
			Contract Award	2	31-May-17		
			Construction	12	1-Jul-17	30-Jun-18	3.18
	CP04	Traffic management	Document Prep	6	1-Mar-16	31-Aug-16	
			Bidding	6	1-Sep-16	28-Feb-17	
			Contract Award	2	31-May-17		
			Construction	12	1-Jul-17	30-Jun-18	5.75
	CP05	Subway and footbridge	Document Prep	6	1-Jan-16	30-Jun-16	
			Bidding	6	1-Jul-16	31-Dec-16	
			Contract Award	2	31-Mar-17		
			Construction-	30	1-May-17	30-Oct-19	8.94
	EQ01	Accessibilty improvement equipment	Document Prep	6	1-Jul-16	31-Dec-16	
			Bidding	6	1-Jan-17	30-Jun-17	
			Contract Award	2	31-Aug-17		
			Construction	12	1-Oct-17	30-Sep-18	1.03
	EQ02	Public Transport measures equipment	Document Prep	6	1-Jul-16	31-Dec-16	
			Bidding	6	1-Jan-17	30-Jun-17	
			Contract Award	2	31-Aug-17		
			Construction	12	1-Oct-17	30-Sep-18	3.93
							36.31

Figure 2.2 - Project Implementation Plan (consulting services)

	Package #	Description	Activity	Duration (mths)	Date Start	End	Cost ($mil) Contract
Consulting Services	CS01	Design and Supervision	shortlist	2	1-Jul-14	31-Aug-14	
			RFP	3	1-Sep-14	30-Nov-14	
			negotiate/award	2	1-Dec-14	31-Jan-15	
			Design	12	1-Mar-15	28-Feb-16	0.95
			Supervision	48	1-Jan-16	30-Jun-19	1.9
	CS02	Multi-modal demand and traffic modelling platform	shortlist	4	1-Nov-14	28-Feb-15	
			RFP	4	1-Mar-15	30-Jun-15	
			negotiate/award	3	1-Jul-15	30-Sep-15	
			Multi-modal demand	18	1-Oct-15	30-Apr-17	3.36
			Traffic	12	1-Mar-16	28-Feb-17	1.12
	CS03	Bus information and street management systems	shortlist	3	1-Oct-14	31-Dec-14	
			RFP	3	1-Jan-15	31-Mar-15	
			negotiate/award	2	1-Apr-15	31-May-15	
			Services	10	1-Jul-15	30-Apr-16	0.16
	CS04	Urban transport sector development program	shortlist	4	1-Jul-14	31-Oct-14	
			RFP	4	1-Nov-14	28-Feb-15	
			negotiate/award	3	1-Mar-15	31-May-15	
			Services	24	1-Jul-15	30-Jun-16	2.89
							10.38



C. Assessment of Physical Progress during Implementation

15. Each project implementation activity carries certain weight and should be accounted for while computing the physical progress. In this respect, Table 2.2 shows guidelines for computing physical progress of the Project. This will be used both by UTMD1 and ADB for the assessment of physical progress at any time during the project implementation.

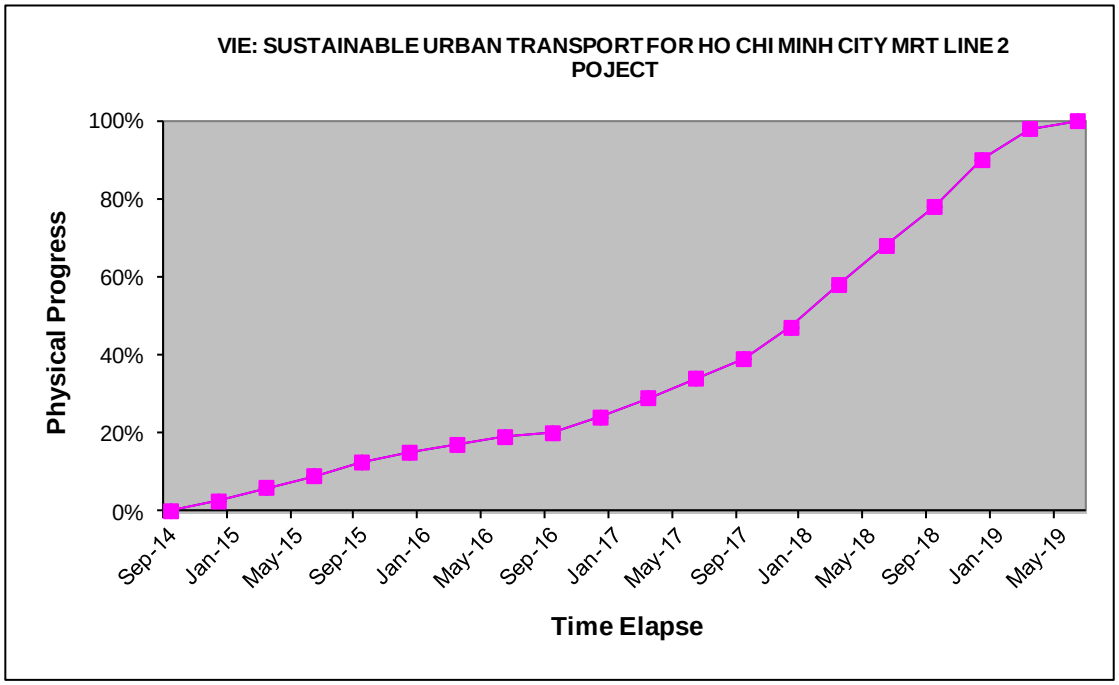
Table 2.2 – Project Implementation Progress

Activities	2014	2015	2016	2017	2018	2019	(a) Assigned weight	(b) Actual Progress	(a) x (b) Weighted progress
Consultant recruitment							5%	0%	0%
Detailed design and documents							5%	0%	0%
Tendering of contracts							5%	0%	0%
Physical civil works							60%	0%	0%
Provision of Systems and equipment							15%	0%	0%
Urban transport development and studies							10%	0%	0%
							100%		
									0%

D. Physical Progress S-Curve

16. Figure 2.2 shows graphs of anticipated overall physical progress over the life of Project. This graph will help identify the status of project either achieving the anticipated targets or underperforming with delays. This data will also be used for the project performance rating (PPR) and as an early warning system, which are explained in Section IX.

Figure 2.3 – Project Physical Progress S-Curve



III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations – Roles and Responsibilities

17. The executing agency will be the HCMC People's Committee and the implementing agency will be the Urban Transport Management Department No. 1 (UTMD1), under Department of Transport. UTMD1 will be responsible directly to HCMC PC for implementation of the Project. UTMD1 was established in 2002, has strong leadership, a sound organizational structure and the capability to further develop its institutional capacity to implement and manage an expanding public transport system. UTMD1 will establish a project management unit (PMU) for the Project under the Director, which is responsible for the day to day management and coordination of implementation. The PMU head will ensure compliance with ADB procurement, disbursement and consulting guidelines and ADB safeguard policies. The PMU staff will be assisted by experienced engineers, accountants, and other staff as required. HCMC PC also established the External Financed Project Division, responsible for all externally financed projects, and this division will have overall Project oversight authority and coordinate directly with other city agencies.

18. UTMD1 was established in 2002, has strong leadership, a sound organizational structure and the capability to further develop its institutional capacity as the public transport system expands. However, together with PMU, are staffed with specialists with limited previous experience in development of integrated public transport systems, so implementation capacity to manage complex interactions between project components that involves coordination of multiple disciplines and project interfaces, will need support from international consultants in order to be more effective. In terms of HCMC PC, in the past different projects report to different agencies, which make it difficult to implement as part of an overall system and deal with common issues. The new External Financed Project Division will address these institutional coordination problems. HCMC PC proposes to establish a Public Transport Authority (PTA) with responsibility for planning, developing and regulating all public transport modes, but a timeline has not been determined.

19. To strengthen the capabilities of UTMD1 and HCMC PC public transport agencies, capacity development will be provided through consulting services, training and urban transport sector development studies. The capacity development will be provided through: (i) project implementation support – consultant services to support UTMD1 and PMU for the implementation of the Project, (ii) capacity building of UTMD1 – training in urban transport issues as part of proposed technical assistance from International Enterprise Singapore on select policy and regulatory aspects, and (iii) urban transport studies – to examine enforcement, parking policy and urban transport pricing issues, including means to promote public transport, discourage private transport modes and ensure long term sustainability through pricing and institutional measures.

20. Non-engineering functions such as environment, resettlement, financial management and procurement will be strengthened through both participation at ADB sponsored training courses held each year and capacity training courses conducted by consultants engaged to undertake the sector studies. New skills will need to be developed in the areas of (i) Project Management; (ii) public transport integration; and (iii) other key non – engineering areas. A greater integration of functions within UTMD1 will be needed, by putting necessary procurement, technical, etc. staff within PMU.

Project implementation organizations	Management Roles and Responsibilities
• Government	➢ Sign the Loan Agreement ➢ Monitor of the investment program implementation and provide respective coordination and facilitation ➢ Endorse to ADB the authorized staff with approved signatures for withdrawal application processing ➢ Process and submit to ADB any request, when required, for reallocating the loan proceeds ➢ Compliance with loan covenants
• HCMC PC/External Funded Project Division	➢ Overall responsibility for execution of the project ➢ Review the Project implementation progress ➢ Timely provision of agreed counterpart funds for project activities ➢ Allocate and release counterpart funds ➢ Provide policy guidance to UTMD1 ➢ Monitor and coordinate different agency activities ➢ Review and endorse any proposed changes in project scope ➢ Compliance with loan covenants ➢ Provide oversight on transport policies and regulations. ➢ Approval of major change in scope of project components
• UTMD1	➢ Establishment of project management unit (PMU) ➢ Involving beneficiaries and civil society representatives in all stages of project design and implementation ➢ Public disclosure of project outputs ➢ Quality assurance of works and services of consultants and counterpart staff ➢ Establishing strong financial management system, establishment and maintaining records for imprest account, submitting timely withdrawal applications to ADB, arranging timely financial audits as per agreed timeframe and taking recommended actions ➢ Approval of award of contracts for civil works and consultant services within approved procurement plan ➢ Complying with all loan covenants (urban transport sector reforms, social and environmental safeguards, financial, economic, and others) ➢ Ensuring projects' sustainability during post implementation stage and reporting to ADB on the assessed development impacts
• Project Management Unit	➢ Recruiting consultants ➢ Finalizing survey, detailed design, bidding documents and contract awards ➢ Monitoring and evaluation of project activities and outputs, including periodic review, preparation of review reports identifying issues and action plans

	➢ Preparing regular periodic progress reports, and project completion reports and their timely submission to ADB.
• Asian Development Bank	➢ Assist UTMD1 and its PMU in providing timely guidance at each stage of the program for implementation in accordance with the agreed implementation arrangements ➢ Review all the documents that require ADB approval ➢ Approve the procurement activities ➢ Conduct periodic loan review missions, a mid-term review, a completion mission for each project under the program, and an overall program completion mission ➢ Ensure compliance of all loan covenants (transport sector reforms, social and environmental safeguards, financial, economic, and others) ➢ Timely process withdrawal applications and release eligible funds ➢ Ensure the compliance of financial audit recommendations ➢ Regularly update the project performance review reports with assistance of UTMD1 ➢ Regularly post on ADB website the updated project information documents for public disclosure, and also the safeguards documents as per disclosure provision of the ADB safeguard policy statement

B. Key Persons Involved in Implementation

Implementing Agency

UTMD1	Le Quyet Thang Director No. 3, 3 thang 2, District 10 Ho Chi Minh City Tel: +84 839291470 Fax: +84 839291490 Email: lqt.khu1@yahoo.com.vn
Project Management Unit	(to be determined) No. 3, 3 thang 2, District 10 Ho Chi Minh City Tel: +84 839291501 Fax: +84 839291490 Email: leantmu@gmail.com

ADB

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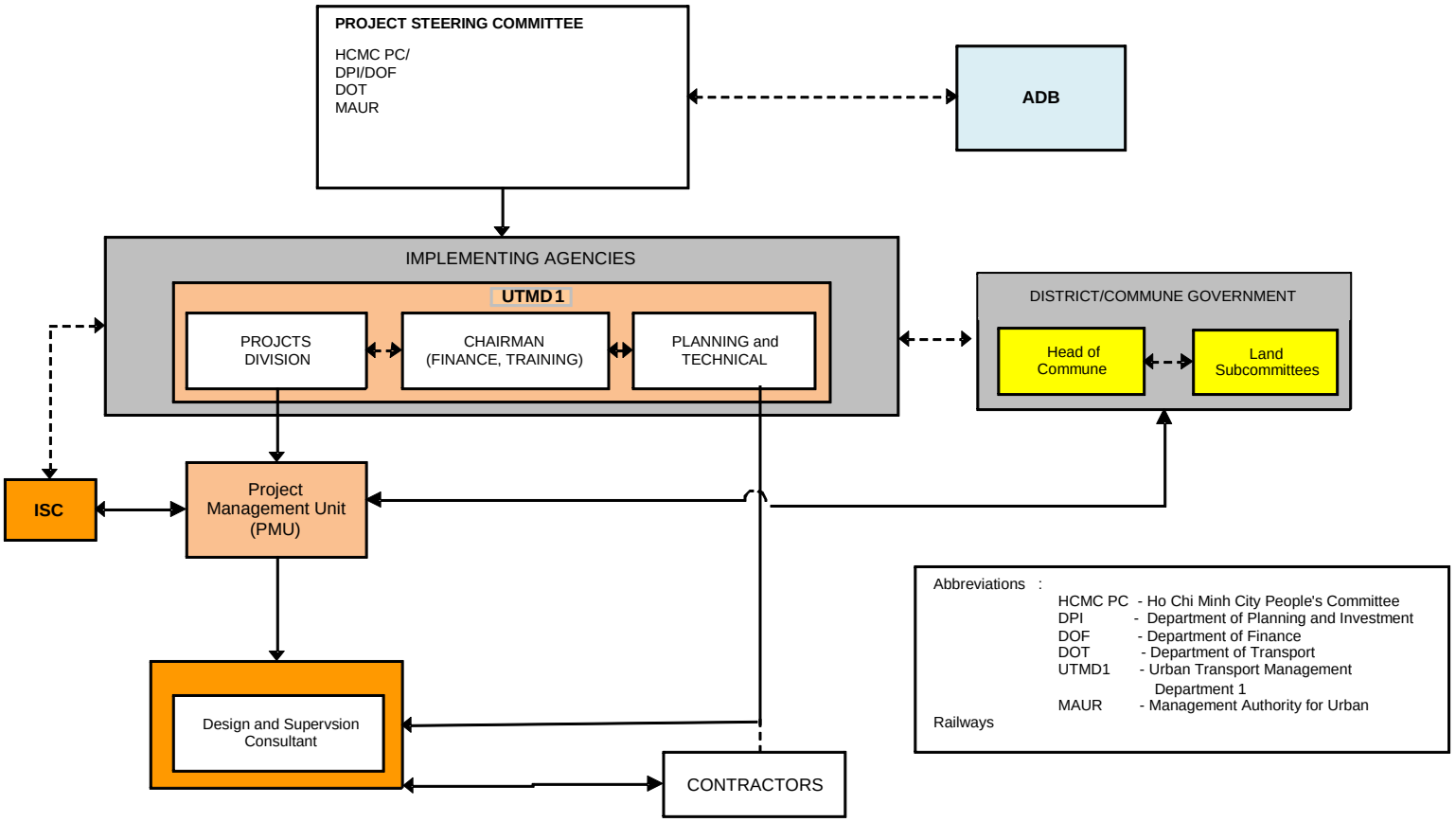
C. Project Organization Structure

21. The organizational structure of HCMC PC agencies for planning, development and regulation of the public transport system is being strengthened with clear assignment of responsibilities to ensure effectivity of the urban transport objectives. Presently the Project Management Units for different projects report to different agencies. This is under consideration for improvement, but in the meantime HCMC PC will implement strategic policies for the transport system to ensure (i) the integration of MRT Line 2 with other lines and modes is well developed, (ii) standards and Operations and Maintenance (O&M) are developed by UTMD1 for project components, (iii) measures are undertaken for integrated fares, restricting private vehicle parking and enforcement of traffic regulations, and (iv) the overall levels of capital and recurrent funding requirements for the implementation and operation of the whole public transport system are being reviewed.

22. The HCMC PC proposes to establish a Public Transport Authority (PTA) with responsibility for planning, developing and regulating all public transport modes in HCMC, including the MRT system. The timeframe for establishment and resourcing of the PTA is yet to be determined (expected under the proposed World Bank funded “Green Transport Project” in 2014), whereas critical strategic issues need to be studied in the near term in order to have a well-integrated public system in place at the opening of the first MRT line in 2018.

Figure 3.1 Organization Chart



IV. COSTS AND FINANCING

A. Cost Estimates by Expenditure Category

23. The tentative total project investment cost is estimated at $65.0 million, including taxes and duties, physical and price contingencies, and interest and other charges during implementation. The project investment costs broken down by expenditure category are detailed in Table 4.1 and the detailed cost estimates by expenditure category are detailed in Table 4.2.

Table 4.1 – Project Investment Plan
($ million)

Item		Total [a]
A.	**Base Cost** [b]	
	1. MRT Line 2 station accessibility improvements	
	- civil works	34.50
	- systems and equipment	1.89
	- consulting services	2.85
	- land acquisition and resettlement	1.13
	- incremental administration	1.39
	2. Public transport information systems	
	- systems and equipment	2.92
	- consulting services	0.16
	3. Public Transport Policy Development Program	
	- systems and equipment	0.40
	- consulting services	7.37
	Sub-total (A)	**52.61**
B.	**Contingencies** [c]	**11.30**
C.	**Financial Charge During Implementation** [d]	**1.10**
	Total (A+B+C)	**65.00**

[a] Includes local taxes and duties of $3.38 million, to be financed from Government resources.
[b] March 2013 prices.
[c] Physical contingencies computed at 10% of civil works, systems & equipment, 10% of resettlement. Price contingencies are computed at 1.9% in 2013, 2.2% in 2014, 1.9% in 2015, and 1.8% from 2016 onward on foreign exchange costs, and 7.4% in 2013, 5.7% in 2014, 5.3% in 2015, and 5% from 2016 onwards on local currency costs. Price contingencies are applied to all Base Cost items.
[d] Includes interest and commitment charges accrued from both ADB and CTF loans. ADF loan will have 25 year loan period including grace period of 5 years, an interest charge of 2.0% per annum during the grace period and thereafter. CTF loan will have 40 year loan period including grace period of 10 years, an interest charge of 0.25% per annum and management fee of 0.18% on the undisbursed balance of the CTF loan

ADB = Asian Development Bank, ADF = ADB Special Fund, CTF = ADB Clean Technology Fund.

Source: Asian Development Bank estimates.

Table 4.2 – Detailed Cost Estimates by Expenditure Category

Item		Total
A.	**Investment Cost**	
1.	Civil works	31.40
2.	Systems and equipment	4.95
3.	Environmental and Social Mitigation	1.13
4.	Consultants	
	a. design, supervision and implementation support	3.76
	b. systems development	4.77
	c. policy development	1.85
	Sub-total (A)	**47.86**
B.	**Recurrent Costs**	
	Incremental Administration	**1.39**
C.	**Taxes and duties**	
1.	Civil works	3.13
2.	Systems and equipment	0.25
	Sub-total (c)	**3.38**
D.	**Contingencies**	
1.	Physical	3.79
2.	Price	8.07
	Sub-total (D)	**11.30**
E.	**Financial Charge During Implementation**	**1.10**
	Total (A+B+C+D+E)	**65.00**

B. Allocation and withdrawal of Loan Proceeds

24. Tables 4.3 and 4.4 show allocation and withdrawal of funds under all the categories of the Project for the ADB and CTF loans, respectively in their loan currencies. For the ADB loan, the SDR to USD exchange rate on the date of conversion of 7 November 2013 is 1.531281, and the actual SDR to USD exchange rate will change based on date of payment.

Table 4.3 – Allocation and Withdrawal of ADB Loan Proceeds

CATEGORY			ADB FINANCING
Number	**Item**	**Total Amount Allocated for ADB Financing SDR Category**	**Percentage and Basis for Withdrawal from the Loan Account**
1	Works	4,924,000	24% of total expenditure claimed*
2	Interest charge	346,000	100% total amount due
3	Unallocated	1,260,000	
	Total	6,530,000	

* exclusive of taxes and duties imposed within the territory of the Borrower

Table 4.4 – Allocation and Withdrawal of CTF Loan Proceeds

CATEGORY			CTF FINANCING
Number	**Item**	**Total Amount Allocated for ADB Financing ($) Category**	**Basis for Withdrawal from the Loan Account**
1	Works	23,820,000	76% of total expenditure claimed*
2	Systems and Equipment	4,960,000	100% of total expenditure claimed*
3	Consulting Services	10,380,000	100% of total expenditure claimed*
4	Interest charge	570,000	100% total amount due
5	Unallocated	9,220,000	
	Total	**48,950,000**	

* exclusive of taxes and duties imposed within the territory of the Borrower

C. Detailed Cost Estimates by Financier

25. The financing plan includes ADB Special Funds financing of $10 million equivalent for civil works, and CTF cofinancing for $48.95 million for civil works, systems and equipment, and consulting services. The balance of $6.05 million would be financed by the Government, which includes all taxes and duties, incremental administration and land acquisition and resettlement costs. Detailed cost breakdown by financier is provided in Table 4.5.

Table 4.5 – Detailed Cost Estimates by Financier

($ million)

	ADB		CTF		Government of Viet Nam			Total
	Amount (cost)	%	Amount (cost)	%	Amount (cost)	Amount (taxes and duties)	%	
Base Cost								
1 MRT Line 2 station accessibility improvements								
- civil works	7.54	21.86%	23.82	69.06%	0.0	3.13	9.08%	34.50
- systems and equipment	0.0	0.0%	1.78	94.18%	0.0	0.11	5.82%	1.89
- consulting services	0.0	0.0%	3.76	100.0%	0.0	0.0	0.0%	3.76
- land acquisition and resettlement	0.0	0.0%	0.0	0.0%	1.13	0.0	100.0%	1.13
2 Public transport information system								
- systems and equipment	0.0	0.0%	2.78	95.21%	0.0	0.14	4.79%	2.92
- consulting services	0.0	0.0%	4.77	100%	0.0	0.0	0.0%	4.77
3 Public Transport Policy Development Program								
- systems and equipment	0.0	0.0%	0.40	100.0%	0.0	0.0	0.0%	0.40
- consulting services	0.0	0.0%	1.85	100.0%	0.0	0.0	0.0%	1.85
Subtotal (A)	**7.54**	14.72%	**39.16**	76.47%	**1.13**	**3.38**	8.81%	**51.21**
Incremental Administration	**0.0**	0.0%	**0.0**	0.0%	**1.39**	**0.0**	100%	**1.39**
Contingencies[a]	**1.93**	17.08%	**9.22**	81.59%	**0.15**	**0.0**	1.33%	**11.30**
Financing Charges During Implementation[b]	**0.53**	48.18%	**0.57**	51.82%	**0.0**	**0.0**	0.0%	**1.10**
Total Project Cost	**10.0**		**48.95**		**2.67**	**3.38**		**65.0**
% Total Project Cost		**15.38%**		**75.31%**			**9.31%**	**100%**

[a] Physical contingencies computed at 10% of civil works, systems & equipment, 10% of resettlement. Price contingencies are computed at 1.9% in 2013, 2.2% in 2014, 1.9% in 2015, and 1.8% from 2016 onward on foreign exchange costs, and 7.4% in 2013, 5.7% in 2014, 5.3% in 2015, and 5% from 2016 onwards on local currency costs. Price contingencies are applied to all Base Cost items.

[b] Includes interest during construction and commitment charges

Source: Asian Development Bank

Table 4.6 – Detailed Cost Estimates by Component

($ million)

Item	Component 1 Amount	Component 1 %	Component 2 Amount	Component 2 %	Component 3 Amount	Component 3 %	Total
A. Investment Cost							
1. Civil works	31.40	100%	0.0	0%	0.0	0%	31.40
2. Systems and equipment	1.08	21.82%	2.77	55.96%	1.1	22.22%	4.95
3. Environmental and Social Mitigation	1.13	100%	0.0	0%	0.0	0%	1.13
4. Consultants							
a. design, supervision and implementation support	3.76	100%	0.0	0%	0.0	0%	3.76
b. systems development	0.0	0%	4.64	97.27%	0.13	2.73%	4.77
c. policy development	0.0	0%	0.0	0%	1.85	100%	1.85
Subtotal (A)	**37.37**	78.08%	**7.41**	15.48%	**3.08**	6.44%	**47.86**
B. Incremental Administration	**1.39**	100%	**0.0**	0.0%	**0.0**	0.0%	**1.39**
C. Taxes and duties	**3.19**	94.94%	**0.13**	3.87%	**0.04**	1.19%	**3.36**
D. Contingencies	**9.57**	84.77%	**1.37**	12.13%	**0.35**	3.10%	**11.30**
E. Financing Charges During Implementation	**0.89**	80.91%	**0.0**	0%	**0.21**	19.09%	**1.10**
Total Project Cost	**52.41**		**8.91**		**3.68**		**65.0**
% Total Project Cost		**80.63%**		**13.71%**		**5.66%**	**100%**

[a] Physical contingencies computed at 10% of civil works, systems & equipment, 10% of resettlement. Price contingencies are computed at 1.9% in 2013, 2.2% in 2014, 1.9% in 2015, and 1.8% from 2016 onward on foreign exchange costs, and 7.4% in 2013, 5.7% in 2014, 5.3% in 2015, and 5% from 2016 onwards on local currency costs. Price contingencies are applied to all Base Cost items.

[b] Includes interest during construction and commitment charges

Source: Asian Development Bank

Table 4.7 – Estimated Expenditure Categories by Year for the Project
($ million)

	Item	Total cost	2015	2016	2017	2018	2019
A.	**Base Cost**[a]						
	1 Civil works	34.50	0.0	5.17	12.07	13.80	3.45
	2 Systems and Equipment	5.21	0.0	0.78	1.82	2.08	0.52
	3 Land acquisition and resettlement	1.13	1.13	0.0	0.0	0.0	0.0
	4 Consulting services	10.38	0.48	5.00	3.78	0.75	0.38
	5 Incremental administration	1.39	0.14	0.42	0.55	0.21	0.07
	Subtotal (A)	**52.6**	**1.74**	**11.37**	**18.23**	**16.84**	**4.42**
B	**Contingencies**	**11.30**	**0.0**	**2.01**	**4.44**	**4.75**	**0.10**
C	**Financing Charges during Implementation**	**1.10**	**0.02**	**0.14**	**0.23**	**0.36**	**0.36**
	Total Project Cost (A+B+C)	**65.0**	**1.72**	**13.55**	**22..90**	**21.95**	**4.88**
	% Total Project Cost	**100%**	**2.65%**	**20.85%**	**35.23%**	**33.77%**	**7.51%**

D. Contract and Disbursement S-curve

26. Figure 4.1 shows the estimated disbursement progress over the implementation period for Project. This will assist to assess the disbursement performance at any time during the project implementation. In case of delays and poor disbursements, this will help as an early warning system for taking timely remedial measures.

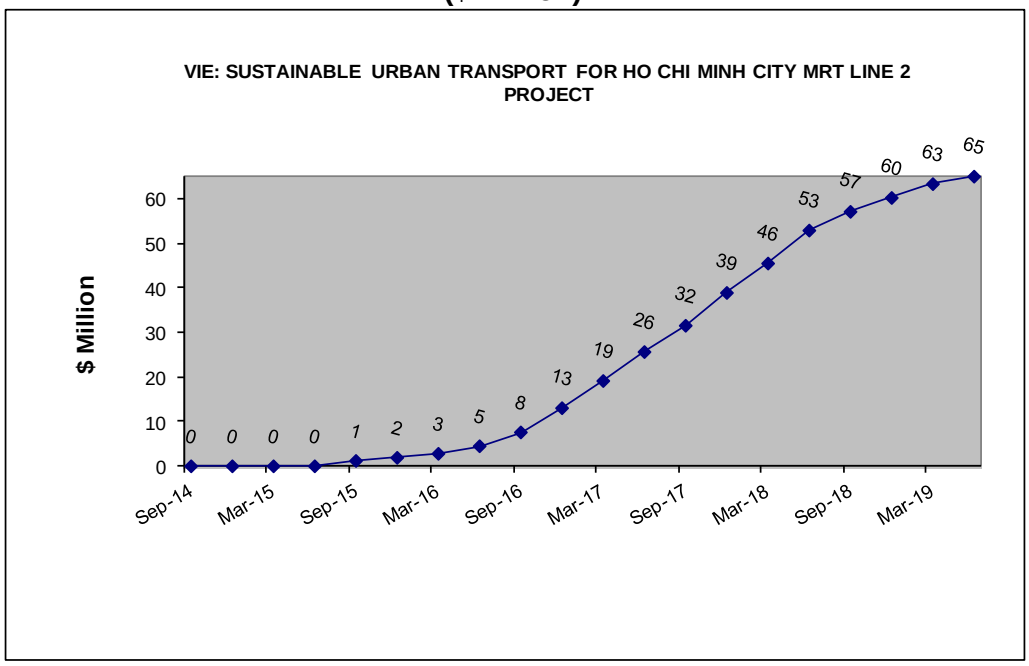
Table 4.8 Contract Awards
($ million)

Year	Q1	Q2	Q3	Q4	Total
2015			3.05	0.16	3.21
2016	4.48			13.48	17.96
2017		8.94	8.93	4.96	22.83
2018					
2019					

Table 4.9 Disbursement
($ million)

Year	Q1	Q2	Q3	Q4	Total
2015			0.48	0.61	1.09
2016	1.33	1.09	1.37	1.32	5.10
2017	3.01	3.60	5.29	6.17	18.07
2018	6.17	6.17	3.94	2.70	18.98
2019	2.70	1.01	1.01	1.01	3.46

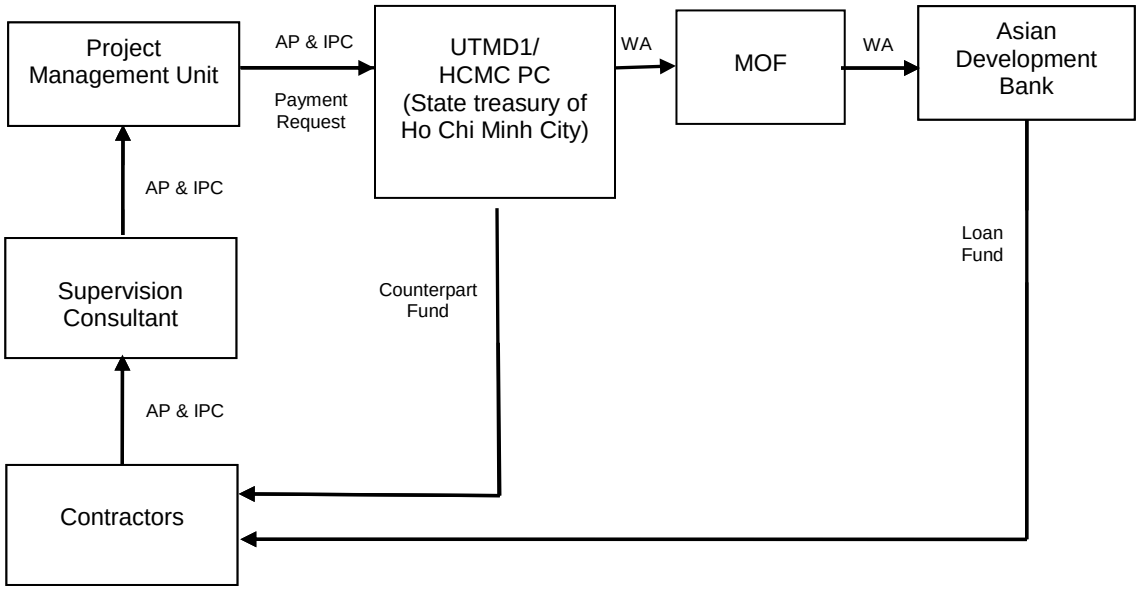
Figure 4.1 – Project Disbursement S-Curve
($ million)



G. Fund Flow Diagrams

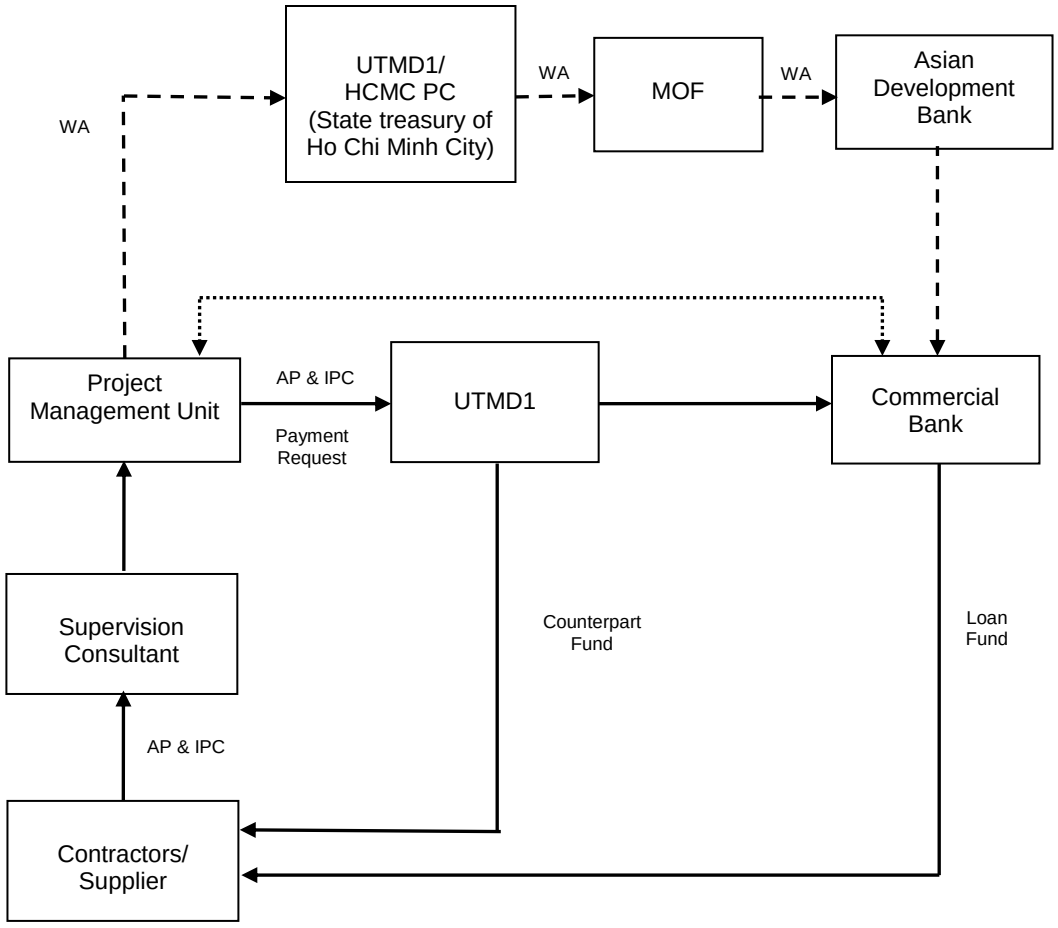
27. The Fund flow diagrams are included below in Figures 4.2 and 4.3 which show how the funds will flow from ADB and the Government to implement the Project.

Figure 4.2 - Direct Payment for Civil Works



AP : Advance payments
HCMC PC : Ho Chi Minh City People's Committee
UTMD1 : Urban Transport Management Department 1
IPC : interim payment certificates
MOF : Ministry of Finance
WA : Withdrawal application

Figure 4.3 - Imprest Account



Payment to consultants/contractors

Replenishment

Coordination/monitoring

AP : Advance payments
HCMC PC : Ho Chi Minh City People's Committee
UTMD1 : Urban Transport Management Department 1
IPC : interim payment certificates
WA : withdrawal application

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

28. A financial management assessment of UTMD1 was undertaken during project preparation and the main findings are indicated in Table 5.1 below.[8] The HCMC PC, the executing agency for the project, has had some experience in managing foreign funded projects, including ADB projects, and the financial management arrangements are expected to follow a similar system used on other ADB funded projects.

29. The Implementing Authority for the Project is to be the UTMD1 that was established in 2002, under the Department of Transport. UTMD1 is a relatively new agency with procedures being tested as they are put in place and little institutional experience in project management. As a state agency, UTMD1 is obliged to follow the regulations and procedures set out in the various statutes and guidelines referred to above, and several of these are specific to ODA projects. This gives some assurance that procedures will meet the necessary accounting and reporting standards.

30. Some matters related to procurement and financial arrangements for the Project are yet to be confirmed by the HCMC PC and specific arrangements for implementation have not yet been agreed. These need to be resolved, and UTMD1 will need to improve its capacity to manage funds involved in the Project to the standards required by ADB.

31. The need to recruit more staff should be first considered prior to participating in training provided by ADB to ensure that the UTMD1 has the appropriate staff to be involved in and gain the most from the training. Staffing needs should be reviewed again following this training and prior to project commencement to ensure that UTMD1 has the necessary staff to manage Project finances. UTMD1 should submit its staffing plans and seek ADB's approval at each of these review stages. Based on an assessment of training needs, the following training programs have been identified:

(i) understanding the basis on which the cost of the Project was estimated, contract packages determined, financier contributions identified and disbursement schedules established;
(ii) ADB's policies and procedures on financial management;
(iii) ADB's policies and procedures on procurement and contract management;
(iv) ADB reviews during project implementation; and
(v) measures to ameliorate foreign exchange risks during implementation of the Project.

Table 5.1 – Summary of the Financial Management Assessment

Particulars	Conclusions
A. Funds Flow Arrangements	The arrangements for the flow of funds will use both direct payment and imprest account method, which are detailed in Figure 4.2 and 4.3. Under the Government guidelines on financial management of official development assistance (ODA) programs, (Circular 108/2007/TT-BTC of Ministry of Finance (MOF), the mode of transfer will be determined in the project investment decision.

[8] Financial management assessment was undertaken in accordance with ADB Financial Management Guidelines and Financial Due Diligence Methodology Note.

B. Staffing	UTMD1 is headed by a Director, and there are 4 Vice Directors who have responsibilities for specific areas of activities. As of July 2013 UTMD1 has 150 staff. UTMD1 has 9 divisions, including one Project Management Unit (PMU), which will be established prior to loan negotiation for this Project. Most UTMD1 staff has no previous experience in implementation of externally-financed projects. The exceptions are the staff, who have had some exposure to preparation work on the TAs and ODA funded rail transport projects. UTMD1 has indicated that it is actively recruiting new staff with previous ODA project experience. A detailed capacity assessment will be carried out and the Project includes management support and training to UTMD1/HCMC PC staff to assist with the successful implementation of the Project.
C. Accounting Policies and Procedures	At present UTMD1 uses the accounting system prescribed by MOF Decision No. 214/2000/QD-BTC. Vietnam Accounting Standards (VAS) and its accounting software have been developed, installed and used. Detailed information on staff responsibilities in the Finance and Accounting Division was provided, and staff accountability is in accordance with general Government of Vietnam policies and procedures, but procedures will need to be enhanced for Project needs.
D. Internal and external audits	HCMC PC is responsible for internal audit and inspection function, which plays the role of checking, supervision of policies, including financial issues and reporting. Inspections are conducted based on the Government guidelines and focused on reviews of plans, expenditures, contracts and compliance. Financial statements of UTMD1 are to be audited annually by independent external auditors, which are hired through bidding process, in accordance with the International Standards on Auditing, which complies with the requirements of ADB
E. Reporting and monitoring	UTMD1 will follow the reporting mechanisms for the implementation of ODA programs and projects as set out in Decree 38/2013/ND-CP by the Government. This Decree also provides for the use of the Aligned Monitoring Tool which allows users and lending agencies access to monitor the project.
F. Information Systems	The UTMD1 accounting, financial and management reporting system has been computerized but will need enhancement to meet the specific needs of the Project, including Improved data safeguarding and confidentiality need to be implemented.

32. UTMD1 is following the accounting system for project owners as set out in MOF Decision No. 214/2000/QD-BTC. Accounting vouchers, bank account, chart of accounts and financial statements are coded and classified by the project components, categories of expenditure, and sources of funds. If properly applied the system satisfies the following FMA criteria:

i. Controls are in place concerning the preparation and approval of transactions
ii. The chart of accounts is adequate to properly account for and report on project activities and disbursement categories
iii. The General Ledger and subsidiary ledgers are reconciled and in balance
iv. All accounting and supporting documents are retained on a permanent basis in a defined system that allows authorized users easy access.

33. The Financial Management Action Plan (FMAP) for UTMD1 includes strengthened internal controls through regular technical and financial audits of project activities, strengthened payment validation procedures to reduce risks of fraud, segregation of some financial functions from the rest of project management to maintain checks and balances, documentation of Project and financial management procedures in this manual to guide project staff, and steps to train Project staff in financial management procedures.

Table 5.2 – Financial Management Action Plan

Action Expected	Output	Due Date
A. Project Organization and Staffing 1. Project Management Unit (PMU) established and staffed. Further review the organization to ensure adequate segregation of duties between project financial verification functions and project management.	UTMD1 policy which sets out the project's organizational structure and FM staff appointments are acceptable to the Bank.	PMU to be established prior to ADB loan negotiations.
2. Recruitment of financial management specialist consultant to help prepare the Interim Financial Reports.	Acceptable terms of reference and qualification of financial management consultant.	
B. Project Administration Manual (PAM) A Manual to document procedures to be followed by implementing unit covering all aspects of procurement and financial management. This should include inter alia, all financial management and disbursement procedures for this project. Also included should be annual budgets and work programs for at least the first year, stronger payment validation procedures, segregation of duties among payment authorization and "commitment maker" functions at central level, financial reporting formats, supervision, internal audit arrangements community oversight arrangements and anti-corruption plan.	Draft Project Administration Manual acceptable to ADB. Final Project Administration Manual acceptable to the ADB.	30 Aug 2013 1 Oct 2013
C. Training for UTMD1 staff who will require the necessary skills to carry out respective project management duties as described in the Project	Consultant support to UTMD1 and on the job training as identified by capacity assessment of UTMD1	2014
D. Internal Audit Risk-based Internal Audits to be systematically undertaken for all project	Incremental operating cost of internal audits included in the	2014

activities at regular intervals, jointly by private/public sector audit firms and the UTMD1, based on terms of reference acceptable to the ADB. Copies of these audit reports to be provided to the Bank.	Project cost estimates. Terms of reference on responsibility for internal audits of project activities to be issued.	
E. Auditing Arrangement of the project annual audit in accordance with a specific TOR and by independent auditors acceptable to the ADB.	Terms of reference and letter to auditor (including TOR) confirming the audit arrangements.	July 2014

34. **Risk Analysis:** During the implementation phase, the PMU/UTMD1 will encounter some risks, which can be segregated into two main categories: (i) country level and (ii) organization/project level. Together with project specific risks and activities to mitigate them are summarized in Table 5.3 below. Financial management risks shall need to be considered and updated throughout the life of the Project. Risk mitigation measures will also need to be updated as appropriate.

Table 5.3 – Risk Assessment and Mitigation Measures

Risk	Risk Assessment	Risk Mitigation Measures
Inherent Risk		
1. Country specific **- Budgeting**	M	• Annual budgets and work programs will be required. • Budgeting control procedures of Government of Viet Nam and HCMC PC to be followed
2. Entity specific **- PMU Capacity**	M	Current UTMD1 and consultants will assist PMU to be established in implementing ADB financed project. Extensive training on ADB procedures shall be carried out under ADB's annual VIE training program.
3. Project specific **- procurement: collusion**	L	A Project Administration Manual (PAM) to include a clear description of financial management procedures for guidance of Project staff.
- Internal control and Accounting	M	Strengthened internal controls to include regular internal technical and financial audits, stronger payment validation procedures and specific requirements for accounting evidence. Payment verification function to be segregated from project management.
Overall Inherent Risk	M	
Control Risk		
1. Implementing Agency	M	Organizational capacity augmentation with the induction of experienced PMU staff will support the existing organizational structure
2. Funds Flow *UTMD1 currently operate an account in Ho Chi Minh City Treasury Department, and all expenditures are controlled by the Treasury Department.*	S	UTMD1 to set up dedicated imprest account to channel loan disbursements. Under the loan, foreign and local equipment will be paid directly to the contractors. This could be through commitment or direct payment procedures. Other payments could be through reimbursement or imprest procedures.
Overall Control Risk	Moderate	

* H = High, S = Substantial, M = Moderate, L = Low or Negligible

B. Disbursement

35. The ADB and CTF Loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time),[9] and detailed arrangements agreed upon between the Government and ADB.

[9] Available at: http://www.adb.org/documents/loan-disbursement-handbook.

36. Loan proceeds will generally be disbursed directly to contractors, suppliers, and consultants, based on an approved contract using direct payment procedures, where ADB pays a designated beneficiary directly. A signed withdrawal application (Appendix 7A of Loan Disbursement Handbook) must be submitted to ADB together with a summary sheet (Appendix 7B of Loan Disbursement Handbook) and the required supporting documents. A separate withdrawal application is required for each different currency.

37. Pursuant to ADB's Safeguard Policy Statement (2009) (SPS),[10] ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the SPS. All financial institutions will ensure that their investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list (Appendix 5 of Loan Disbursement Handbook) to subprojects financed by ADB.

38. Payments should be certified by the Engineer in the form of monthly interim payment certificate for the civil works contracts. The monthly certificates will then be split into the relevant funding portions for each contract (ADB and the Government) by the sub project manager. The sub-project manager will provide payment request form (SPP) and if this is in order and supported by approved order, Government will issue a Payment Order (SPM). The Government (or UTMD1/HCMC PC) will submit a separate Withdrawal Application for each request for each currency.

39. Payment for CTF funded individual consultants (national) may be made from the Imprest Account. An imprest account for CTF loan will be established for the Project at a commercial bank selected by State Bank of Vietnam and acceptable to ADB, administered by UTMD1. The currency of the imprest account is US dollar. The imprest account may be used exclusively for CTF's share of eligible expenditure once training is completed and sufficient capacity exists. The UTMD1, who established the imprest account in its name, is accountable and responsible for its proper use of advances to the imprest account.

40. The ceiling of the imprest account is 10% of the CTF loan. UTMD1 may request for initial and additional advances to the imprest account based on an Estimate of Expenditure Sheet,[11] setting out the estimated expenditures to be financed through the account for the forthcoming six (6) months. Supporting documents should be submitted to the ADB or retained by UTMD1 in accordance with ADB's Loan Disbursement Handbook when liquidation or replenishing the imprest account.

41. The statement of expenditure (SOE) procedure may be used to reimburse/liquidate eligible expenditures per individual payment not exceeding $100,000 equivalent, once training is completed and sufficient capacity exists. Supporting document and records for the expenditures claimed under the SOE should be maintained and readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sample basis, and for independent audit. Reimbursement and liquidation of individual payments in excess of the SOE ceiling should be supported by full documentation when submitting the withdrawal application to ADB. UTMD1 will be responsible for (i) preparing disbursement projections and (ii) requesting budgetary allocations for counterpart funds.

[10] Available at: http://www.adb.org/Documents/Policies/Safeguards/Safeguard-Policy-Statement-June2009.pdf.
[11] Available in Appendix 10B of the Loan Disbursement Handbook

42. Before the submission of the first withdrawal application, SBV should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the borrower, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is US$100,000 equivalent, unless otherwise approved by ADB. Individual payment below this amount should generally be paid from the imprest account, or by the UTMD1 and subsequently claimed to ADB through reimbursement. ADB reserves the right not to accept WAs below the minimum amount.

C. Financial Accounting and Auditing

43. UTMD1 will maintain separate project books and records by funding source for all expenditures incurred on the Project. Project financial statements will follow international accounting principles and practices.

44. The HCMC PC will cause the detailed Project financial statements to be audited in accordance with International Standards on Auditing and in accordance with the Government's audit regulations by an independent auditor acceptable to ADB. The audited financial statements will be submitted in the English language to ADB within 6 months of the end of the fiscal year by the executing agency.

45. The annual audit report will include an audit management letter and audit opinions which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether loan and grant proceeds were used only for the purposes of the project or not; (iii) the level of compliance for each financial covenant contained in the legal agreements for the project; (iv) compliance with the imprest fund procedure; and (v) compliance with use of the statement of expenditure procedure certifying (a) to the eligibility of those expenditures claimed under SOE procedures, and (b)proper use of the SOE and imprest procedures in accordance with ADB's Loan Disbursement Handbook and the project documents.

46. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

47. The Government and HCMC PC have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited financial statements.[12] ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the recipient), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are

[12] ADB Policy on delayed submission of audited project financial statements:
- When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (i) the audit documents are overdue; and (ii) if they are not received within the next six months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- When audited project financial statements have not been received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement and issuance of new commitment letters. ADB will (i) inform the executing agency of ADB's actions; and (ii) advise that the loan may be suspended if the audit documents are not received within the next six months.
- When audited project financial statements have not been received within 12 months after the due date, ADB may suspend the loan.

substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

48. Public disclosure of the project financial statements, including the audit report on the project financial statements, will be guided by ADB's Public Communications Policy (2011)[13]. After review, ADB will disclose the project financial statements for the project and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website. The Audit Management Letter will not be disclosed.

49. The annual audit report will include a separate audit opinion on the use of the imprest account and the SOE procedures. The Government and HCMC PC have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited accounts. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures. For revenue generating projects only, ADB requires audited financial statements (AFS) for each executing and/or implementation agency associated with the project.

[13] Available from http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications

VI. PROCUREMENT AND CONSULTING SERVICES

50. All works and consulting services to be partially or fully financed out of the proceeds of the ADB and CTF Loan shall be subject to and governed by ADB's Procurement Guidelines[14] (March 2013, as amended from time to time), and Guidelines on The Use of Consultants by Asian Development Bank and Its Borrowers[15] (March 2013, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval.

51. Advance action is expected for the Project for the procurement of goods and works, and recruitment of consulting services.

A. Procurement of Goods, Works and Consulting Services

52. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines.

53. International competitive bidding procedures will be used for civil works contracts estimated to cost $5 million or more, and supply contracts valued over $1 million. Civil works will be procured through ICB without prequalification, using single stage one envelope procedure. ADB's prior review procedures will be followed. The HCMC PC agreed to include the relevant sections of ADB's Anticorruption Policy (1998) in all bidding and contractual documents.

54. For national competitive bidding (NCB), before the start of any procurement ADB and the Government will review the public procurement laws of the municipal and central government to ensure consistency with ADB's Procurement Guidelines.

55. An 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting service contract packages and national competitive bidding guidelines is in Section C.

56. All consultants will be recruited according to Guidelines on The Use of Consultants by Asian Development Bank and Its Borrowers.[16] The terms of reference for all consulting services and individual consultants are detailed in Section C annexes.

57. An estimated 1298 person-months (179 international and 1019 national) of consultant services is required to undertake (i) detailed design and supervision, (ii) support project management and implementation, (iii) develop a multi-modal transport and traffic management modeling platform, (iv) support public transport information system development and implementation, and (v) support public transport sector development program to address enforcement of traffic regulations, establishment of a parking policy and development of a framework for pricing all public and private transport in HCMC. Consulting firms will be engaged using the quality- and cost-based selection (QCBS) method with a standard quality:cost ratio of 80:20.

[14] Available at: http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf.
[15] Available at: http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Consultants.pdf.
[16] Checklists for actions required to contract consultants by method available in e-Handbook on Project Implementation at: http://www.adb.org/documents/handbooks/project-implementation/ .

B. Procurement Plan

58. The procurement plan for the Project is detailed below in Table 6.1, and will be updated during the course of implementation. The Loan involves 4 ICB packages and 1 NCB package for civil works, 2 ICB packages for systems and equipment, and 4 packages for consulting services, as well as a several smaller contracts for utility diversion.[17] For the NCB procurement, before the start of any procurement ADB and UTMD1 will review the Government's public procurement laws to ensure consistency with ADB's Procurement Guidelines. Any necessary modifications or clarifications to the Government's procedures will be reflected in the procurement plan.

59. The procurement plan covers the first 18 months of procurement activity, which has been finalized at the loan negotiations. Within one year after the date of loan effectiveness, the UTMD1 shall submit a revised procurement plan to ADB for approval that captures all ongoing procurement and that planned for the following 18 months. The plan shall be updated annually (or as required after every loan review mission or after award of each major ICB contract), on the same basis for the duration of the project.

Table 6.1 Procurement Plan

Project Information

Country	Vietnam
Name of Borrower	Government of Vietnam
Project Name	Sustainable Urban Transport for Ho Chi Minh City MRT Line 2 Project
Loan Reference	TBD
Date of Effectiveness	TBD
Project Cost Amount ($ million)	65.0
Of which ADB loan Amount ($ million)	10.0
Executing Agency	Ho Chi Minh City People's Committee
Approval Date of Original Procurement Plan	(TBD)
Approval of Most Recent Procurement Plan	(NA)
Publication for Local Advertisement	(TBD)
Period Covered by this Plan[a]	2014-2019

NA = Not applicable, TBD = to be determined

[a] The plan will be updated annually, on rolling 18-month basis, on the anniversary of the date of loan effectiveness

Procurement Thresholds, Goods and Related Services, Works and Supply/Install

Method	Threshold
International Competitive Bidding (ICB) for Works	> $5,000,000
National Competitive Bidding (NCB) for Works	Below $5,000,000
International Competitive Bidding (ICB) for Goods	Above $1,000,000
National Competitive Bidding (NCB) for	Above $100,000 and below $1,000,000

[17] Packages are expected to be well below $50,000 and to be implemented through separate small contracts related to utility provider's requirements.

Goods	
Shopping	Below $100,000

Procurement Thresholds, Consultants Services

Methods	**Threshold**
Quality- and Cost- Based Selection (QCBS)	> $1,000,000 by Full Technical Proposal ≤ $1,000,000 by Simplified Technical Proposal ≤ $600,000 by Biodata Technical Proposal
Individual consultants	In accordance with ADB's Guidelines on the Use of Consultants with procedures acceptable to ADB.

Table 6.1 Procurement Plan (cont.)

List of Contract Packages in Excess of $100,000
Goods, Works and Consulting Services

Ref (Package #)	Contract Description	Estimated Costs ($ million)[a]	Procurement Method	Date of Advertisement	Prior Review Y/N	Funding Source
CP01	Infrastructure and parking 1	6.74	ICB 1s1e	Q1/2016	Y	ADB/CTF 24%/76%
CP02	Infrastructure and parking 2	6.74	ICB 1s1e	Q1/2016	Y	ADB/CTF 24%/76%
CP03.	Bus infrastructure, entrance and landscaping	3.18	NCB 1s1e	Q3/2016	Y	ADB/CTF 24%/76%
CP04.	Traffic Management	5.75	ICB 1s1e	Q3/2016	Y	ADB/CTF 24%/76%
CP05.	Subway and footbridge	8.94	ICB 1s1e	Q3/2016	Y	ADB/CTF 24%/76%
EQ01.	Accessibility improvement	1.03	ICB 1s1e	Q1/2017	Y	CTF
EQ02.	Public transport measures	3.93	ICB 1s1s	Q1/2017	Y	CTF
CS01	Design and supervision	2.85	QCBS 80:20 FTP	Q3/2014	Y	CTF
CS02	Multi-modal demand and traffic platform	4.48	QCBS 80:20 FTP	Q4/2014	Y	CTF
CS03	Bus information system and street management	0.16	Individual consultants BP	Q4/2014	N	CTF
CS04	Urban transport sector development	2.89	QCBS 80:20 FTP	Q3/2014	Y	CTF

1s1e = one stage one envelope bidding, 1s2e = one stage two envelope bidding, ADB = Asian Development Bank, BP = biodata proposal, CTF = ADB Clean Technology Fund, FTP = full technical proposal, ICB = international competitive bidding, NCB = national competitive bidding, N = No, QCBS = quality- and cost-based selection, Y = Yes.

[a] Cost estimates do not include physical and price contingencies

Sources: ADB estimates

60. When a need arises during project implementation to change procurement arrangements (threshold, review requirements, method of procurement, contract packaging), UTMD1, in consultation with the ADB Project Officer, will prepare a letter justifying the change submitted together with an updated procurement plan, and present it for ADB approval. In the case of a variation, which would in aggregate increase the original amount of the contract by more than 15 percent of the original price, the EA shall seek ADB's no objection to the proposed extension, modification, or change order providing detailed justification validated by the Engineer. If ADB determines that the proposal is inconsistent with the provisions of the financing agreement and/or procurement plan, it shall promptly inform the EA and state the

reasons for its determination. A copy of all amendments to the contract shall be furnished to ADB for its record.

61. For the purpose of oversight and monitoring, ADB will be responsible for posting the initial procurement plan and subsequent updates on ADB website.

C. Consulting Services

62. All consulting services will be financed by the CTF loan. Consulting services will be provided for (i) design and supervision, (ii) Multi-modal demand and traffic platform, (iii) Bus information and street management system, and (iv) Urban transport sector development.

63. The outline terms of reference for all consulting services are detailed in Annex 1 to 4 for Section VI, and are summarized as follows:

- **Detailed design, construction supervision and implementation support: –** A total of 103 person-months of international consultant inputs and 200 person-months of domestic consultants will be required. Consultant services are expected to take place over 52 months and commenced in March 2015. The consultant team will (i) assist UTMD1 with preparation and approval of the detailed design for civil works, systems, equipment and studies, (iii) procurement of all contracts and consulting services packages; (iv) construction supervision services, and (v) project management support to UTMD1. The outline scope of services is described in Annex 1.

- **Multi-modal demand and traffic platform development: –** A total of 63 person months of international consultant inputs and 167 person-months of domestic consultants will be required. Consultant services are expected to take place over 18 months. The consultant team will assist UTMD in development of a multi-modal demand platform and traffic management platform. The outline scope of services is described in Annex 2.

- **Public transport information and station access management system:** - A total of 5 person months of international consultant inputs and 26 person-months of domestic consultants will be required. Consultant services are expected to take place over 10 months. The consultant team will assist UTMD1 to; (i) develop and implement the public transport information system and management system for buses and (ii) prepare the station access management system. The outline scope of services is described in Annex 3.

- **Public transport policy development program:** A total of 40 person months of international consultant inputs and 108 person-months of domestic consultants will be required. Consultant services are expected to take place over 24 months. The consultant team will assist UTMD1 with (i) the development of improved enforcement systems around MRT stations, (ii) preparation of a parking demand management program, and (iii) development of urban transport pricing framework for HCMC. The outline scope of services is described in Annex 4.

64. To strengthen the capabilities of UTMD1 and PMU, it is considered that additional capacity building is an essential requirement, which has been incorporated into the respective consulting services packages, as well as participation in ADB financed training programs conducted in Vietnam.

Annex 1: Detailed design, construction supervision and implementation support Outline Terms of Reference

A. Introduction

Background: Ho Chi Minh City (HCMC) is the largest city in Vietnam, with a population of the greater urban area over 9 million that is expected to grow to 13.8 million by 2025. Private vehicles dominate transportation in HCMC, but existing road infrastructure is reaching saturation point and congestion becoming severe during peak hours, especially as motorbike riders convert to cars with improving household incomes. A well-integrated high capacity public urban transport system is essential to meet the demands of a growing urban metropolis. Without investment in major public transport infrastructure to support a significant modal shift to public transport, economic growth will be severely constrained and the urban environment will deteriorate due to high transport costs and severe congestion.

The Prime Minister of Vietnam approved in January 2007 the HCMC Urban Transport Master plan (UTM) that proposes to develop a network of nine urban mass rapid transit (MRT) lines, improvements and expansion of the bus system and traffic management system improvements, all of which will support a modal shift from private to public transport. Together with improvements to the road system and supporting policy and regulatory measures, the UTM objective is for public transport to achieve 45% of transport demand by 2020.

The Government of Socialist Republic of Viet Nam has received a Loan from the Asian Development Bank (ADB) towards the cost of "Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program" (MRTL2). MRT Line 2 will facilitate public transport connectivity and access in six central districts of HCMC (Districts 1,3, 10, Tân Bình, Tân Phú and District 12), as well as being an integral part of the public urban transport system to support the UTM. The UTM will establish a comprehensive network of public transport services in the central area of HCMC.

In order to ensure integration of public transport occurs in six districts along Metro Line 2, ADB has funded a project preparatory technical assistance (PPTA) for the Sustainable Urban Transport for HCMC MRT Line 2 to support the development of sustainable low carbon urban transport measures and programs in HCMC. This will be addressed through the implementation linking key inter-connected urban transport measures under three (03) main components of packages recommended from the PPTA, including; (i) Component 1 - Station accessibility enhancement, (ii) Component 2 - Public transport integration measures, and (iii) Component 3 – Policy and regulation development support. Component 2 and 3 are to be implemented through other consulting service contracts under the proposed ADB and ADB Clean Technology Fund loans

Component 1 – MRT Line 2 station accessibility enhancement. The implementation of this component mainly involved hard measures (civil works) including physical items such as overpass, underpass, sidewalk, landscape, lighting, bus shelters, public services for passengers accessing to MRT 2 stations and interchange with other MRT lines. Other equipment such as CCTV camera and lighting to improve pedestrian access to the MRT Line 2 stations.

The Consultant will work directly with the urban transport management division 1 (UTMD1) and their project management unit (PMU) to implement these services, including the preparation of detailed engineering designs, cost estimates and bid documents for the project. The Consultant

will carry out detailed engineering and supervision of the scope of work confirmed by UTMD1 and financiers for all project components, as described in more detail below.

Approaches to the Development of Station Integration Proposals

Clearly, further initiatives will be needed to facilitate the desired increase in public transport usage. These will generally be "soft" in nature, with a focus on operations and management of the transport system, management of the demand by people for transport services, together with low cost investments in civil works and equipment to complement the extensive investments already proposed. In this Study they are described as (a) integrated, (b) sustainable, (c) innovative and (d) transformative initiatives to distinguish them from the measures that have already been proposed.

More specifically, three categories of proposed measures have been identified. These are: (a) station accessibility improvements, (b) public transport integration measures, and (c) policy and institutional developments.

Different proposed measures to improve station accessibility have been developed for consideration for two physical areas around Metro Line 2 stations (a) within the immediate surrounds of station, namely 500 meter catchment as well as (b) limit of the corridor's ride catchment (up to say 5 kilometers). These measures have been devised on purpose to meet the following broader objectives:

To facilitate the integration of other modes with metro by making it possible to use other modes (especially energy efficient modes) to access the metro stations and by making this access easier, quicker and more comfortable.

To facilitate the integration of surrounding urban development with the metro and to facilitate the potential for usage of walking and cycling to access the metro stations by proposing changes in land uses and densities within the station catchment area.

In developing the concept layout Solutions, there are five technical areas that have been examined:

(a) Parking

(b) Public transport facilities

(c) Station related facilities

(d) Footpaths and pedestrian crossings

(e) Street and traffic management

Concept Layout Solutions

For each station, concept layouts have been developed that include how the proposed urban transport measures can be incorporated. The approach taken in the development of these Solutions is set out below.

Solution 1 essentially requires the provision of the basic station integration facilities, within the station realm and comprises:

- Immediate station integration schemes: various parking facilities and pick-up/ drop-off facilities
- Footpath enhancement scheme: typically involving repaving of footpaths accessing station
- Traffic management scheme: such as car diversion to encourage PT and motorcycle access to station

A small bus interchange is proposed adjacent to Le Thi Rieng Station in front of the park to accommodate 7 new local/feeder bus routes. This is included in Solution 1 as it is essential to the operation of the proposed new routes.

Based on Solution 1, Solution 2 aims to achieve a fuller provision for integration than Solution 1 where conditions allow. This typically involves:

- Identifying key existing buildings and committed TODs outside the given ROW, then building MRT subways/ connections to serve those developments and beyond
- Identifying key existing buildings and committed TODs outside the given ROW, then improving footway connections to serve those developments
- Identifying surrounding readily available sites to develop car and motorcycle parking for promoting and facilitating park and ride activities

It should however be noted that, for a concerned station, if there are no existing buildings and committed TODs identified to be suitable for building MRT subways/ connections, or improving footway connections, and there are no readily available sites to develop park and ride facilities – then it is possible that, for that station, no Solution 2s can be identified.

Where Solution 2 exists, Solution 1 plus Solution 2 represent a comprehensive solution to achieving good station integration.

Solutions	Item	Remark
Solution 1	Station box accessibility	These items refer to facilities to aid parking and chop-off
	R500 m accessibility	This refers to footway and alleyway improvements
Solution 2	New subway link	This refers to new underground subway link between MRT2 station and existing/ committed developments
	New bus terminal	This refers to new terminal to mainly serve MRT2 feeder bus routes
	New Parking	This refers to site consumption for provision of significant parking lots for MRT2 stations

Objective of services

Detail Design Phase

General Project Preparation: Create a project manual, a work break down structure identifying all packages of the project including: glossary, determine relevant regulations

and standard, co-financier's requirements, set up communication and documentation system. Output: Project manual

Project Definition: Compilation all design criteria and requirement to define the project including: equipment requirements, network integration requirements, determined connection to feeder system, existing geotechnical, utilities, traffic, land acquisition requirement. Output: Survey reports for geotechnical, reference point network, traffic and utilities, passenger flows optimisation to be complied in the baseline design report.

Detail Design: Comprising detail design for civil work / equipment system including construction specifications

Tender Document: Compiling tender documents and tendering all packages: Civil works and equipment system. Output: General and special term of contract

Supervision Phase

Review of Construction Design for Civil and Equipment system: Based on the detail design and specifications developed in 'Detail Design phase", the contractors will prepare within 6 – 9 months the construction design. Output: Final approved design for construction.

Supervision of construction Works and installation: This work package is closely related to monitoring the Quality Assurance of the contractor, monitoring interface, configuration management, monitoring the time schedule and follow up compliance with statutory regulations and technical standard.

Implementing Contract Management including administering claims: Contract and claim management for all packages and disciplines.

Commissioning of the system: This includes supervision of system integration, testing, trial runs, review of project documentation and the final report after provisional acceptance

Implementation Support

Project Management
Gender support
Auditing

Overall scope in Detail Design and Supervision phase

Detail Design Phase

Physical

This covers (i) topographic, infrastructure and land ownership survey, and (ii) geotechnical and hydrological investigations, including borehole study

Topographic, infrastructure and land ownership survey

Topographic: The surveys will be made in different levels of detail depending on the section of the line which they cover, and on the existing map and field data availability. More detail will for example be collected at the locations of the proposed stations, at the elevated sections of the line, for the depot area, and at the transition section from underground to overhead line. The relevant information will be made available in the appropriate format and level of detail both for the CAD design teams and the project GIS (geographic information system) proposed for use particularly at the key station areas.

Utility survey: Utilities cover infrastructure such as telephone, power supply, foul water and potable water networks. Knowledge of the location and type of existing (and proposed) utilities has to be collected as part of this phase. Collecting this material will involve both desktop studies and field surveys. The information collected from the utility survey will be added as map layers to the project GIS. The GIS will be established in such a way as to facilitate interchangeability with the project CAD tools

Infrastructure survey: Here definition to cover physical objects such as roads and buildings. The consultants will involve in building surveys, that the impact (red line) including land take of the Line 2 project has largely been fixed, and that the Design and Build contractor will be required to carry out precautionary building surveys where appropriate. During this phase will therefore carry out (as with the utility survey) a combined desktop and field survey to identify:

- proposed new road works and their timetable
- general condition and pavement structure of the existing roads

Geotechnical and hydrological investigations, including borehole study

Geotechnical investigation: Main tasks are (i) to ensure sufficient geotechnical data is available to achieve confidence in the fundamental design, (ii) specify, procure and oversee any necessary geotechnical investigation, and (iii) produce geotechnical report

Hydrological Investigation: Main Tasks are (i) collect data on meteorology, hydrology and rainfall for Ho Chi Minh City, from relevant meteorology stations in the area, (ii) collect data on water levels on hourly basis during the last 10 years from relevant gauging stations in the area (Vung Tau, Nha Ba, Phu An, Bien Hoa, Ben Luc and Go Dau), (iii) collect data on run off of all rivers and channels on the areas, and (iv) collect data on current status and planning of drainage and sewerage systems along Cach Mang and Thang Tam Street

Geographic and Topographic Reference System: Main tasks are (i) define the topographic reference system, and (ii) installation of Survey Stations and benchmarks

Updating of passenger demand and flows and review master plan

A detailed understanding of passenger flows at the proposed stations is essential for defining a proper operations concept.

The locations of the stations as given in the feasibility study are assumed to be fixed. Furthermore it is assumed that forecasts of the approximate traffic flows exist or that a transport model (numbers of passengers entering and leaving the stations from/to local traffic generators, numbers of interchanging passengers, etc.) can be made available.

An optimisation of the station entrances and exits and links with important facilities in the localities will help to attract users to the metro whilst enhancing an effective integration of the Metro-Line 2 system into the urban realm.

The Consultant will research the surroundings of each station in order to improve the pedestrian links to major facilities (office buildings, malls, P+R-facilities, housing areas, objects of special interest, etc.) and other means of transport.

The Consultant will analyse the neighbourhood (up to about 500m walking distance) of all the stations on Metro Line 2 by identifying major facilities and other means of transport using specific geographic information tools.

Construction issues

This covers
a) Traffic management study: Task - Establish framework and procedures for traffic management

b) Traffic diversion concept: Task - Classify surrounding roads with on-site checks, Collect available information from involved parties along Line 2, Prepare traffic diversion models according to possible construction programme (station areas, utilities), Develop traffic diversion procedure

c) Disposal of excavated material: Task - Identify the location, dimension and volume of spoil created and the location and capacity of the disposal site for excavated materials; obtain the approval of relevant authorities, Propose optimal plan for handling of excavated materials, Propose procedures and regulations to minimize environmental impacts arising during the collection, transportation and disposal of excavated materials.

Design Guidelines

As in any engineering project, the Sustainable Urban Transport for HCMC MRT Line 2 has to be based on established technical principles. These are usually referred to by means of various phrases, such as “standards, norms, guidelines, regulations, parameters” and so on. For the line 2 project they will form a substantial number of the elements which will form the project’s “design guidelines”.

Station Layout and Requirements

Tasks are (i) review traffic demand and flows for each station, (ii) agree priorities, program and spatial arrangement to accommodate the requirements, (iii) produce concept design interactively with relevant stakeholders and responsible agencies, and (iv) assess the impact of the design on adjacent structures and facilities and develop a scheme for integrating the development into the surrounding subterranean and surface level urban fabric.

Civil Engineering

This covers (i) underground tunnels and elevated foot bridge: Task - Review of the basic design with recommendations for improvement, establish design criteria and structure specifications, (ii) surface side work and (iii) drainage System along Cach Mang Thang Tam Road

Utility diversion

This covers (i) review of the utility survey documents mentioned in the feasibility study reports: in case of any omissions notified, a supplementary survey will be suggested, and (ii) prepare the plan and cost estimate for diversion of utilities

Safety and Security

Tasks include

- Coordinate and advise involved parties (Contractors, Client, Authorities, Emergency response organizations – e.g. Fire Department, Police, Medical emergency response organizations) on Safety and Security topics during the design and planning phase.
- Decide with the Customer and Authorities upon a safety level to comply with
- Realize a safety report taking the whole system into account
- Realize a fire protection and fire life safety concept taking the whole system into account
- Propose amendments or changes to the system if deficiencies are identified
- Monitor compliance to the set safety level
- Training of Key Personnel
- Emergency response planning

Environment, Involuntary Resettlement, Gender and Social Development Aspects

During the preparation of tender documents will ensure that environmental issues are included in the design criteria e.g. for depot and stations operations, depot construction, timing and phasing. The consultant will add specific outputs and recommendations of the Gender Action Plan (GAP), Resettlement Plan and Initial Environmental Examination (IEE)/Environmental Management Plan (EMP) into the Detail Design and bidding documents for the contractors

Tender Documentation

Procurement regulations of client and financing agencies: The Sustainable Urban Transport for HCMC MRT Line 2 is to be funded by a number of different financing agencies including the ADB and CTF. Each of the Services funded by a particular Agency will be procured in line with the regulations and guidelines of that particular agency. The guidelines of the funding agencies are to ensure that:

- The projects are implemented in an efficient way.
- There is transparency in the procurement process and it is undertaken with the highest standards of ethics.
- There are equal opportunities for bidders regardless of their country of origin.
- The funds are disbursed to eligible countries.
- There is local development of contracting and manufacturing in the borrowers' country.

During the tender document preparation phase, full reference will be made to the Funding Agency Procurement Regulations and to the Vietnamese requirements such as the Decree on Tendering (ref: 58-2008-ND-CP). The tender documents will be made available to the Client and the relevant funding agency during preparation for auditing and comment.

Develop and agree tendering process with client and stakeholders: It is critical that the tendering process is agreed between the Implementation Consultant and the Client and Financiers at an early stage so that the number and scope of packages may be determined and the documentation can be prepared to match.

Define any prequalification requirements: Invitations to prequalify for the works contracts are to be prepared in accordance with the respective financier's guidelines and typically include the general contact details of the Client, along with a general description of the project and details of the funding agency. The consultant shall assist in the drafting of the invitation to prequalify along with the guidelines for the submission of the prequalification documents. The use of Standard Prequalification Documents for the Procurement of the Works is a typical requirement of the funding agencies and these normally include:

- Application Data Sheet
- Qualification Criteria
- Application Forms
- A list of eligible countries
- Scope of the contract

Once interested parties have submitted notification of their interest, the IC and the Client shall review the capabilities of the applicants and ensure that they have sufficient resources to carry out the Works. The evaluation is a strictly confidential process. Experience on similar projects, financial health and absence of litigation are major considerations when considering whether or not a contractor should be shortlisted. The shortlist will typically consist of a minimum of three names but all companies meeting the requirements should be given an opportunity to bid

Assemble prequalification document: The tender documents will be in accordance with the relevant funding agency guidelines and will be sufficient for the tendering parties to produce a robust bid but are likely to include:

- Construction (technical) Specifications
- Invitation to bid
- Instructions to bidders
- All bidding forms
- General Conditions of Contract

<u>Construction Supervision Phase</u>

Review of Construction Design: Checking the construction design documentation submitted by the Contractor in order to verify its completeness, consistency and compliance with the detail Design. This task will also ensure compliance with the performance and technical characteristics stipulated in the performance specifications and assured to the Employer by the Contractor in the works contract documents.

Supervision of construction, deliveries, assemblies, fabrication, and installations: The Consultant will perform the duties and authority of the contractor as specified in or necessarily implied from the consulting contract as well as administer the works contract, dealing with situations in accordance with the works contract and taking due regard of all relevant circumstances. The Engineer will perform duties or act

- Proactively, where the initiative lies with the Engineer in administering the works contract
- Reactively, in response to the Contractor's or the Employer's requests
- Passively, in observing the requirements of the works contract

During the Construction stage the Engineer will review the Contractor's proposals for compliance with the Employer's Requirements and carry out any such proof checks as are necessary to meet the obligations of the Employer.

The Engineer will supervise construction, delivery, assembly and installation, inspect the works against the approved designs, specifications and budget, report to the Employer, and propose and monitor corrective action, if and when necessary.

Supervision will include monitoring of the Contractor's construction and implementation schedule(s), their forward planning provisions and capabilities, and detecting potential deficiencies and risks.

Reporting to the Employer will distinguish criticality of issues with regard to their impact on the implementation schedule, budget and/or compliance with the regulatory environment. Systematic site inspections will be carried out to ensure that the contracted design, quality and performance are delivered. Checking will inter alia include compliance with the detailed designs as provided by the Contactor and approved by the Employer, compliance with applicable regulations and standards, delivery of agreed construction techniques and compliance with environmental protection, traffic management and logistics rules.

Supervision will include witnessing of tests of materials envisaged / used for construction and equipment earmarked / used for installation, as well as witnessing tests of finalised works. Supervision will include the Contractor's provisions for the rectification of non-compliant works and deliveries.

Test witnessing will be particularly important for any construction work or equipment that is to be covered or hidden from view, and we will therefore request test witnessing prior to subsequent construction / installation.

Site supervision will also comprise inspection of the appropriate use of materials and equipment in the construction process.

Monitoring of interfaces, configuration management, and the updates of project time and schedule: The Consultant will monitor the management of project interfaces. This task will be carried out upon request of the Contractor. After a review of the submitted request and a resolution of potential conflicts, the Consultant will propose approval or modifications to the Employer.

Monitoring of commissioning, system integration and final acceptance: The Consultant will participate in commissioning, system integration, and final acceptance, reviewing the Contractor's test procedures, verifying the conformity of the works (construction and deliveries)

and their performance with the Design Baseline, recording and interpreting the results for acceptability and conclusively submitting a report on the results to the Employer.

Implementing and administrating the claims management: In the event of receiving a notice of claim from the Contractor the Engineer will, immediately thereafter, notify and provide a copy of the notice to the Employer. Promptly after the consultant's inspection, the Engineer will provide the Employer with an assessment of the Contractor's contemporary records, which will be supported with the Engineer's preliminary conclusions with regard to the potential outcome of the claim. The Engineer will also consult with the Employer regarding any instruction which has been (or is to be) issued to the Contractor with regard to any further contemporary records.

Review of the Project Documentation: After the provisional acceptance of works, the Engineer will review the project documentation (as-built drawings and documents, Technical Instructions, and User Manuals) to be submitted by the Contractor, proposing their acceptance or rejection to the Employer.

Support after provisional acceptance of works: Following overall activities have to be undertaken during the Defects Notification Period after provisional acceptance:

- Completion of outstanding works
- Removal of defective work
- Remedying of defects
- Additional testing
- Fulfillment of any obligation which remains unperformed at that time
- Clearance of the site

Project Management Services

Project Management

Gender

Accessibility

- MRT stations are easily accessible and spacious for women carrying children and packages, as well as for pregnant women;
- Steps and elevators are designed for women traveling with children, pushing baby prams, and for elderly people and for the disabled;
- There are proper parking areas for motorbikes and bicycles around the MRT stations, with women-only designated areas and also "xe om" waiting areas.

Health and safety

- Proper lighting and landscaping around and in the park areas, bus terminals and bus stops to ensure that there are no dark spaces;
- Video surveillance system around MRT station exit areas to ensure safety for women;
- Provide clinics with basic first aid at the bus terminal and lay-bys and MRT interchange stations;
- Provide information materials on HIV/AIDS and STI in each of the toilets
- Provide dispensers in the female and male toilet where users can purchase prophylactics against STI and HIV/AIDS

Convenience

- Accessible separate toilets for women and men in bus lay-by and terminals, with women's toilets including additional toilet facilities appropriate for young children and changing stations. Number of female toilet to be double that of male;
- All linked public transport modes has to be integrated with each other in timetable and ticketing systems;

Wherever possible there should be space designed for market/shopping areas selling everyday food and household items around the MRT stations to facilitate the daily household purchases by women on the way home from work and to save time for women.

Affordability

Pricing of metro tickets need to be affordable to all groups of people, integrated with other city public transportation systems, and with monthly passes available for commuters. Gender analysis of affordability will inform ticket pricing

Auditing

Required Team Expertise

A summary of the required expertise and expected duration of expert engagement is summarized in Table A2.2 below.

Table A1.1: Expertise

Position	**Person months**	
	Design	**Supervision**
International		
Urban Transport Specialist/Team Leader	11	
Project manager/Team Leader		24
Transport Engineer	3	3
Traffic Engineer	3	3
Urban Transport Development Specialist	3	3
Urban Transport expert		3
Infrastructure specialist	3	
Bus operations specialist	2	3
Cost estimator	3	
Social development specialist	2	
Environmental specialist	2	2
Contract administration specialist		10
Sub-total	**31**	**49**
National		
Deputy team leader	12	38
Transport engineer (2 No)	24	8
Traffic engineer (2 No.)	24	8
Bus operations expert	8	8
Infrastructure expert	10	8
Cost estimator	6	
Senior topographical Surveyor	8	

Geotechnical engineer	6	
Urban safety engineer	6	5
Data collection manager	6	
Technical support/CAD (4 No)	48	10
Civil supervision engineer (2 No)		48
Bus supervision engineer		18
Quantity engineer (2 No)		48
Quality assurance engineer (2 No)		36
Inspectors (6 No)		144
Office manager/staff (3 No)	36	114
Local translator	12	38
Sub-total	**206**	**531**
TOTAL	**237**	**580**

Annex 2: Multi-modal transport and traffic modeling platform development Outline Terms of Reference

A. Introduction

Background: Ho Chi Minh City (HCMC) is the largest city in Vietnam, with a population of the greater urban area over 9 million that is expected to grow to 13.8 million by 2025. Private vehicles dominate transportation in HCMC, but existing road infrastructure is reaching saturation point and congestion becoming severe during peak hours, especially as motorbike riders convert to cars with improving household incomes. A well-integrated high capacity public urban transport system is essential to meet the demands of a growing urban metropolis. Without investment in major public transport infrastructure to support a significant modal shift to public transport, economic growth will be severely constrained and the urban environment will deteriorate due to high transport costs and severe congestion.

The Prime Minister of Vietnam approved in January 2007 the HCMC Urban Transport Master plan (UTM) that proposes to develop a network of nine urban mass rapid transit (MRT) lines, improvements and expansion of the bus system and traffic management system improvements, all of which will support a modal shift from private to public transport. Together with improvements to the road system and supporting policy and regulatory measures, the UTM objective is for public transport to achieve 45% of transport demand by 2020.

The Government of Socialist Republic of Viet Nam has received a Loan from the Asian Development Bank (ADB) towards the cost of "Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program" (MRTL2). . MRT Line 2 will facilitate public transport connectivity and access in six central districts of HCMC (Districts 1,3, 10, Tân Bình, Tân Phú and District 12), as well as being an integral part of the public urban transport system to support the UTM. The UTM will establish a comprehensive network of public transport services in the central area of HCMC.

In order to ensure integration of public transport occurs in six districts along Metro Line 2, ADB has funded a project preparatory technical assistance (PPTA) for the Sustainable Urban Transport for HCMC MRT Line 2 to support the development of sustainable low carbon urban transport measures and programs in HCMC. This will be addressed through the implementation linking key inter-connected urban transport measures under three (03) main components of packages recommended from the PPTA, including; (i) Component 1 - Station accessibility enhancement, (ii) Component 2 - Public transport integration measures, and (iii) Component 3 – Policy and regulation development support. Component 1 and 3 are to be implemented through civil works, systems and equipment and other consulting service contracts under the proposed ADB and ADB Clean Technology Fund loans.

Component 3 - Public transport integration measures and services were identified that were considered as important measures for the sustainable urban transport for Ho Chi Minh City MRT Line 2, which is required to provide integrated public transport measures to complement the other two components to achieve the overall sustainability objective. The four packages selected are:

i) Development of a multimodal transport modeling platform
ii) Development of a traffic management modeling platform
iii) Support to the development of Bus Information System (BIS) and Bus Management System (BMS) Center
iv) Development of a Street and Footpath Management System

This consulting services package will cover the first two separate but linked packages, being the (i) multi-modal transport modeling platform, and (ii) traffic management modeling platform. The Consultant will work directly with the urban transport management division 1 (UTMD1) and their project management unit (PMU) to implement these services, as described in more detail below.

B. Development of a multi modal transport modeling platform

Background / Rationale

Existing Transport Model

The existing transport model used to produce the ridership forecasts for MRT Line 2 to date is an updated version of the model developed for the HCMC Transport Study during the period of 1996-1999. The current version of the model uses the CUBE Voyager software package and is based on a variety of demographic, socio-economic and travel data collected between 1996 and 2007.

The travel characteristics data comprising trip rates and travel patterns are founded on a Home Interview Survey (HIS) carried out in 1996.

Population, employment and vehicle ownership data was taken from the 2002 HOUTRANS database and extrapolated to 2007 control totals.

Value of time was estimated from a 2007 revealed preference survey. Other base year inputs including economic growth, bus ridership, traffic volumes, and road and bus networks also related to the situation in 2007.

The model is structured on a conventional four stage multi-modal modeling process consisting of:

+ Trip generation to / from each area

+ Trip distribution between areas

+ Mode split

+ Traffic volume forecast on the network

The model was calibrated and validated to 2007 traffic and public transport data. Forecasting assumptions and inputs were based on Master Plan targets, planning, economic and other projections available in 2007.

Model Limitations

The three main limitations of the present transport model are summarized as follows:

- The model is out of date. While other data may be updated, as successive studies have done in the past, the basic trip rate and travel pattern database is from a HIS conducted 17 years ago, when travel characteristics in HCMC were very different to those of today.
- The model is insufficiently detailed to meet the requirements of the present level of metro and bus system planning and design. This is especially the case for the main mode split model, which splits demand into public and private trips before assignment so is unable to reflect park-and-ride trips that use a combination of

public and private modes. As a consequence, the mode of access to/from stations has to be estimated outside the model.

- The model zoning, whilst adequate for broadly estimating MRT patronage, is too coarse for bus network planning purposes, and other modes such as walking to the station or park-and-ride mode (Park and Ride).

Model Enhancement

To overcome the above limitations it would be necessary to conduct a new HIS and to revise the model structure to reflect park-and-ride mode choice and to produce station mode of access.

The HIS should cover the whole of HCMC, rather than just the MRT Line 2 corridor, due to the interdependency of Line 2 with other metros, Bus rapid transit (BRT) lines and bus feeder services from across the city. In addition to its immediate use for analysis of the MRT Line 2 Corridor, the enhanced model could be used by other planning and infrastructure projects such as other MRT or BRT lines, bus network planning and highway improvements or updating of the Mass Transit Master plan (approved in 2007 based on work conducted several earlier years).

The mode split model would need to incorporate an additional stage in which the private trips could be split between all private and park-and-ride modes, i.e. the choice between using a motorcycle for the whole trip or riding motorcycle to the nearest metro station and then completing the journey by metro. The metro leg of the park-and-ride trip would be added to the metro trips in the public transport assignment model and the motorcycle (or car) leg of the park-and-ride trip would be added to the reported access/egress walk and feeder bus trips at each station.

The model would also need to be capable of analyzing impacts of alternative fare structures and vehicle parking capacity and charging structures.

Objective

The primary aim of these services is to develop a strategic transport model complied with proposed enhancement to support the tasks of planning, development and management of urban transport in a multi-modal context, with the priority on evaluating proposed policies and measures for MRT Line 2.

Overall Scope

Design and implementation of necessary home interview survey (HIS), traffic counts, network data collection including all public transport modes (bus, BRT, MRT, heavy rail, tramway, monorail) and develop an enhanced travel demand model for multi modal transport network in HCMC.

The following main tasks are required to implement the proposed current package:

(i) Large-scale home interview survey (HIS) on travel demands to determine travel characteristics data including trip rates and travel patterns, plus both revealed preference (RP) and stated preference (SP).

A sample size of 82,000 households may be considered for large scale HIS. The calculation is based on the sampling rate and population of HCMC in the inner, outer areas and the fringe area plus the nearby area of the previous HOUTRANS study in 1997. In HOUTRANS, 28,004 households were selected for the HIS, representing 1.89% of total population. In the proposed HIS for the current package HCMC has a higher population and the assumed sampling rate is 3.6%. It should be noted that the 82,000 households is for planning purposes only. The selection of sampled households is subjected to how detailed the RP and SP surveys are and allocated budget, which is estimated to be $1.2million.

Table A2.1: Comparison between the previous HIS in HOUTRANS Study and Scope of HIS for the Task 2.1.1

A. Scope of previous Home Interview Survey in HCMC by HOUTRANS

	Population (1000 people)	Number of Households	Sampling rate (%)	Number of sampled households
Inner area	3,386	660,000	2.53	16,740
Outer area	1,337	287,000	2.30	6,597
Sub total	4,723	947,000	2.46	23,337
Fringe area	311	70,000	0.87	611
Nearby area	2,090	457,000	0.89	4,056
Sub total	2,401	527,000	0.88	4,667
Total	9,525	1,474,000	1.89	28,004

B. Scope of Home Interview Survey in HCMC proposed for Package 2.1 - Task 2.1.1

	Population (1000 people)	Number of Households	Sampling rate (%)	Number of sampled households
Inner and outer areas	9000	1,800,000	4.0	72,000
Fringe and nearby areas	2000	500,000	2.0	10,000
Total	11000	2,300,000	3.6	82,000

(ii) Traffic counts on major transport corridors and bus lines, and boarding/alighting surveys on major bus lines

(iii) Processing and analysis of the collected travel survey data

(iv) Purchase equipment, software and travel demand model development

(v) Training to DOT, UTMD1 and other departments on the use of travel demand model

Inputs

Two specific tasks required staffing and specific expertise to carry out the services, being (i) data entry, process and analysis, and (ii) equipment purchase and model development. For data entry, process and analysis, provision has been made for a total of 10 person months by 1 international expert in travel survey data management and analysis supported by 2 local

experts. 1 office staff and 1 translator spread over two months. For equipment purchase and model development, provision has been made for a total of 128 person months by five (05) international experts (1 international transport planner/team leader, 1 transport modeler, transport survey designer, traffic engineer, 1 urban transport engineer) supported by nine (09) local experts. 1 office staff and 1 translator spread over eighteen (18) months. A summary of the required expertise and expected duration of expert engagement is summarized in Table A2.2 below.

Table A2.2: Expertise

Position	Person months
International	
Transport Planner/Team Leader	12
Travel survey data management expert	2
Transport modeller	12
Transport survey planner	2
Traffic engineer	3
Urban transport engineer/specialist	3
Sub-total	**34**
National	
Transport planner/Deputy team leader	18
Transport survey coordinator	6
Transport survey team leaders (2 no.)	4
Transport modeller (2 No.)	30
Traffic engineer	10
IT specialist	6
Bus operations specialist	6
Data Analyst (2 No)	20
Office staff	20
Local translator	16
Sub-total	**104**
TOTAL	**148**

The development of a multi-modal transport modeling platform will require the selection, procurement and installation of relevant equipment and software. The initial assessment for these items is listed in Table A2.3 below.

Table A2.3: Equipment and systems

Item	Number
Computer equipment	
Laptops	6
Printers	2
Back-up/storage	2
Licensed “Cube” software	
Base, Land, Cargo, Dynaism, Analyst, Avenue	1
Voyager	6
Maintenance contract	2 years
Installation, management and training	

Output / Deliverables

Main deliverable is the operational travel demand model with full enhancement to support sustainable urban transport development for HCMC in general and MRT Line 2 in particular.

Progress report and technical report are required to report the progress and results from the five (05) main tasks incorporating major comments from DOT and all related stakeholders in HCMC, including all international public transport financiers.

Associated agencies and working arrangements

Related agencies for package include DOT, MAUR, MOCPT and other related stakeholders in HCMC. Working and training arrangements among these related agencies need to be proposed and finalized as one of the output/deliverables.

Timing

The development of multimodal transport model should be provided and finalized in advance of the opening date of MRT Line 2 (2018). Assume that the implementation of this package start at beginning of January 2015 and ends by July 2016, with a duration of 18 months.

C. Development of a traffic modeling platform

Background / Rationale

There will be a need to optimize traffic management arrangements in MRT Line 2 corridor during metro construction (temporary traffic management arrangements), and after the completion of the construction and reinstatement of the road system. The quality of traffic management schemes would benefit greatly if DOT could develop local traffic simulation models to evaluate possible options of road traffic arrangements before and after Line 2 opening. Therefore, appropriate software and input parameters will be needed.

Many “default” parameters used in some available software packages are based on international “norms”, because of the very high motor cycle volumes and motorbike user behavior in HCMC, there is a need for some local research surveys to establish gap acceptance and other parameters that actually apply in HCMC traffic conditions, which can be input to the traffic simulation models. The surrounding distance of the various users is a parameter to be quantified for following different traffic conditions in Ho Chi Minh City:

+ Interchanges / intersections
  i. Signalized intersections
  ii. Unsignalized intersections

+ Road (mid block)
  iii. Separated lane for motorbikes (with median)
  iv. Two lanes for motorbikes: one separated lane, one shared lane for cars
  v. Vehicles are allowed to mixed traffic flow for the direction

+ Bridge
  vi. Separated lane for motorbikes
  vii. No separated lane for motorbikes

For sustainability, it is recommended that the traffic model software and structure should have the capability to differentiate buses from other vehicles and seek to optimize person flows rather than vehicle flows.

Objectives

To support the tasks of managing traffic in HCMC, this package aims at developing a traffic modeling platform project with sufficient calibration data applicable to the traffic and behavior of different vehicle types in HCMC. The operational traffic model will be used to test 3 different traffic management plans for MRT Line 2 corridor (Cach Mang Thang Tam Street) before, during construction and after the opening of MRT Line 2.

Overall Scope

Design and implementation for the selection of suitable equipment, software, and survey locations, the traffic surveys, traffic model development and testing for MRT Line 2 corridor.

Main Tasks

The following tasks are required to implement the package:

- Develop an implementation plan including the selection of suitable equipment, software, and representative survey locations at junctions, mid-block, or on river bridges
- Carry out behavioral surveys of different vehicle types at selected locations in HCMC to establish appropriate design parameters for input to the selected traffic simulation model software
- Purchase equipment, software and traffic model development and testing three (03) different traffic management plans for MRT Line 2 corridor (Cach Mang Thang Tam Street) before, during construction and after the opening of MRT Line 2
- Survey data processing to determine the calibration parameters to be used for the traffic model
- Training to local technical staff

Inputs (Required Expertise)

Two tasks required staffing and specific expertise, including (i) to develop an implementation plan including the selection of suitable equipment, software, and representative traffic volume survey locations at junctions, mid-block, or on bridges and (ii) purchase equipment and traffic model development. For task (i), provision is made for a total of 4 person months by 1 international expert in Intelligent Transport Systems (ITS) or BMS/BIS Center, with support by 2 local experts, 1 office staff and 1 translator. For task (ii) provision is made for a total of 78 person months by 4 international experts supported by 8 local experts, 1 office staff and 1 translator spread over 6 month. A summary of the required expertise and expected duration of experts engagement is summarized in Table A2.4 below.

Table A2.4: Expertise

Position	Person months
International	
Transport Planner/Team Leader	6
ITS/BIS system expert	1
Traffic modeller	4
Traffic behaviour specialist	4
Traffic engineer	4
Sub-total	**19**
National	
Transport planner/Deputy team leader	6
ITS expert	1
BIS expert	1
Traffic modeller (2 No.)	12
Traffic survey coordinator	6
Traffic engineer	6
IT specialist	6
Data Analyst (2 No)	12
Office staff	7
Local translator	7
Sub-total	**64**
TOTAL	**83**

The development of a traffic modeling platform will require the selection, procurement and installation of relevant equipment and software. The initial assessment for these items is listed in Table A2.5 below.

Table A2.5: Equipment and systems

Item	Number
Computer equipment	
Laptops	5
Printers	2
Back-up/storage	2
Licensed “Vissim” software	
Size F package	1
With dynamic traffic	4
Maintenance contract	2 years
Installation, management and training	

Output / Deliverables

Progress report and technical report are required to report the progress and results from the five (05) main tasks incorporating major comments from DOT and related stakeholders in HCMC. Main deliverable is an operational traffic model and the assessment of three (03) different traffic management plans of MRT Line 2 corridor by using the traffic model.

Associated agencies and working arrangements

Main agency for implementing this package is DOT. However, the coordination with other related agencies including PMU1, MAUR and MOCPT is required.

Timing

The package to develop a traffic modeling platform is proposed to support traffic management in HCMC. The traffic model is also important in the assessment and selecting suitable transport management plans for MRT Line 2 corridor (Cach Mang Thang Tam Street) before, during construction and after the opening of MRT Line 2. Therefore this package should be implemented in advance of the construction date of MRT Line 2 (2015). The implementation of this package start at beginning of July 2015 and ends by July 2015, with duration of 12 months.

Annex 3: Public transport information and station access management system Outline Terms of Reference

A. Introduction

Background: Ho Chi Minh City (HCMC) is the largest city in Vietnam, with a population of the greater urban area over 9 million that is expected to grow to 13.8 million by 2025. Private vehicles dominate transportation in HCMC, but existing road infrastructure is reaching saturation point and congestion becoming severe during peak hours, especially as motorbike riders convert to cars with improving household incomes. A well-integrated high capacity public urban transport system is essential to meet the demands of a growing urban metropolis. Without investment in major public transport infrastructure to support a significant modal shift to public transport, economic growth will be severely constrained and the urban environment will deteriorate due to high transport costs and severe congestion.

The Prime Minister of Vietnam approved in January 2007 the HCMC Urban Transport Master plan (UTM) that proposes to develop a network of nine urban mass rapid transit (MRT) lines, improvements and expansion of the bus system and traffic management system improvements, all of which will support a modal shift from private to public transport. Together with improvements to the road system and supporting policy and regulatory measures, the UTM objective is for public transport to achieve 45% of transport demand by 2020.

The Government of Socialist Republic of Viet Nam has received a Loan from the Asian Development Bank (ADB) towards the cost of "Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program" (MRTL2). MRT Line 2 will facilitate public transport connectivity and access in six central districts of HCMC (Districts 1,3, 10, Tân Bình, Tân Phú and District 12), as well as being an integral part of the public urban transport system to support the UTM. The UTM will establish a comprehensive network of public transport services in the central area of HCMC.

In order to ensure integration of public transport occurs in six districts along Metro Line 2, ADB has funded a project preparatory technical assistance (PPTA) for the Sustainable Urban Transport for HCMC MRT Line 2 to support the development of sustainable low carbon urban transport measures and programs in HCMC. This will be addressed through the implementation linking key inter-connected urban transport measures under three (03) main components of packages recommended from the PPTA, including; (i) Component 1 - Station accessibility enhancement, (ii) Component 2 - Public transport integration measures, and (iii) Component 3 – Policy and regulation development support. Component 1 and 3 are to be implemented through civil works, systems and equipment and other consulting service contracts under the proposed ADB and ADB Clean Technology Fund loans

Component 2 - Public transport integration measures and services were identified that were considered as important measures for the sustainable urban transport for Ho Chi Minh City MRT Line 2, which is required to provide integrated public transport measures to complement the other two components to achieve the overall sustainability objective. The four packages selected are:

i) Development of a multimodal transport modeling platform
ii) Development of a traffic management modeling platform
iii) Support to the development of Bus Information System (BIS) and Bus Management System (BMS) Center
iv) Development of a Station Access Management System

This consulting services package will cover the third and fourth separate but linked packages, being the (I) development of bus information system, and (ii) station access management system. The Consultant will work directly with the urban transport management division 1 (UTMD1) and their project management unit (PMU) to implement these services, as described in more detail below

B. Support to the development of BIS/BMS Center

Background / Rationale

The need for a much improved bus system to complement the planned MRT and BRT networks requires better "real time" management of the bus operations and comprehensive multi-modal service information available to passengers. Modern Intelligent Transport System (ITS) developments in the public transport field provide opportunity for much improved outcomes. In general, a basic BIS/BMS is consisted of equipment and software to be installed i) at BIS/BMS Center ii) on buses and iii) at bus stops or bus terminals. The types of equipment involved will probably include:

+ Two way voice communications between drivers and the Centre (for use in the case of incidents and/or interventions rather than routinely)
+ GPS equipment on buses frequently communicating its location with the Control Centre that can in turn:
  - i) Facilitate interventions to reduce headway variance on individual services and in turn reduce average passenger waiting times
  - ii) Provide passengers with "real time" indications of likely arrival time of the next bus on particular services
  - iii) Provide an early warning of buses held up by traffic congestion, breakdown or accidents, and facilitate rapid corrective actions
  - iv) Facilitate monitoring of service provision in relation to agreed schedules and provide a platform for penalty and/or reward for operators compliance with such schedules
+ Real time electronic displays of next bus arrivals by route at bus stops and/or within stations: Provide passengers with "real time" indications of likely arrival times of the next bus on particular services, and enable them to choose an alternative mode (e.g. taxi) if the waiting time is long and they are in a hurry, or to use the time to undertake some minor local shopping or other activity.

The impact of such control centers varies, but a conservative assumption is that overall bus passenger journey time benefit by 2% as a result. An issue to be addressed in developing the detailed design of the Centre is the method for it to communicate effectively with MRT Line 2 and other Railway Operations Centers, the proposed Station Area Street Management System Control Centre (see below) and/or any centralized traffic control center.

Objectives

The support of the development of the BIS/ BMS center is the objective of this package. The main aim is to improve the quality and safety aspects of bus services and service information provided to passengers and utilize Intelligent Transport System (ITS) to support the automation of operation and management of bus services in HCMC,

Overall Scope

The overall scope covers from implementation plan to select, install and test equipment and software for BIS/BMS center and provide training to local staff.

Main Tasks

The following tasks are required to implement the package:

+ Develop an implementation plan including the selection of suitable equipment and software to be provided at bus stops and MRT stations
+ Select and install equipment and software for the BIS/BMS Center only. The equipment required on the buses and at bus stops are not included in this package. MOCPT and DOT will need to ensure the equipment on 340 buses of relevant bus routes to support the integration with MRT Line 2 and at approximate 210 bus stops, government budget are required so that a full operation BIS/BMS can be evaluated.
+ Testing and evaluating the system
+ Training to local operations management and technical staff

Inputs (Required Expertise and Equipment)

Three specific tasks required different staffing and specific expertise, including (i) Develop an implementation plan including the selection of suitable equipment and software. to be provided at BIS/BMS Centre, (ii) testing and evaluating the BIS/BMS system and (iii) training to local technical staff. For task (i), provision has been made for a total of 4 person months by 1 international expert on ITS or BMS/BIS Center supported by 2 local experts. 1 office staff and 1 translator spread over 1 month. For task (ii) provision has been made for a total of 8 person months by 1 international expert on IT for testing BMS/BIS system/ team leader supported by 5 local experts, 1 office staff and 1 translator spread over 1 month. For ask (iii), provision has been made for a total of 4 person months by 1 international expert in ITS or BMS/BIS Center supported by 2 local experts. 1 office staff and 1 translator spread over 1 month. A summary of the required expertise and expected duration of experts engagement is summarized in Table A3.1 below.

Table A3.1: Expertise

Position	Person months
International	
ITS/BIS Expert/Team Leader	2
IT system expert	1
Sub-total	**3**
National	
ITS experts (2 No)	4
IT specialists (5 No)	5
Office staff	3
Local translator	3
Sub-total	**15**
TOTAL	**18**

The establishment of the BIS will require the selection, procurement and installation of relevant equipment, which will include (i) servers at bus control center, and (ii) licensed software at BMS/BIS Center. The initial assessment for these items is listed in Table A3.2 below. Equipment on buses and at bus stops shall be timely provided by the government or bus operators.

Table A3.2: Equipment and systems

Item	Number
Servers at bus control centre (main, database, backup, storage)	9
LED Displays	21
PCs	10
Network equipment, power backup	1
Firewall	2
Licensed software	
Windows, SQL, Web, Antivirus, VM	8
BIS systems	4
Installation, management and training	

Output / Deliverables

Progress and technical reports are required to report the results from the four (04) main tasks listed above and the main deliverable is the fully tested equipment and software for the BIS/BMS Center.

Associated agencies and working arrangements

MOCPT is the main agency for the implementation of this package under the supervision of PMU1 and DOT.

Timing

The proposed package to support the development of BIS/BMS is an important component of public transport integration measures to improve the attractiveness of bus services before the opening of MRT Line 2. This package should be implemented in advance of the opening date of MRT Line 2. Assume that the implementation of this package starts at beginning of January 2016 and ends by Feb 2017, with duration of 12 months.

C. Development of a Street and Footpath Management System

Background / Rationale

The aim of the street and footpath management system is to preserve the footway capacity created for safe and convenient pedestrian access to MRT Line 2 stations.

A surveillance and reporting system for monitoring the levels of restrictions and controls on the use of footways and other pedestrian facilities in the vicinities of metro stations, including illegal car and motorcycle parking, motorcycle riding and encroachment by vendors and cafes.

Ideally the system would be operated by a separate metro enforcement unit to deploy its own team of metro enforcement officers.

Alternatively it could be operated by the metro authority which would then use the data gathered to advise and direct the traffic police to areas with the most problems.

At each metro station, CCTV cameras mounted on poles and aimed along each of the key pedestrian access streets and routes

Control room and monitoring equipment located within the Metro Line 2 control center building

This package represents the “hard” component of better enforcement in the vicinity of stations, to be operated in conjunction with the “soft” package “Better Enforcement Program” (Package 3.1 under Component III Policy and regulation Development).

Objectives

To ensure the footpath access to MRT Line 2 stations is safe and convenient, this package is to develop a surveillance and reporting system for monitoring the levels adherence to the proposed restrictions and controls on the use of footpaths and other pedestrian facilities in the vicinities of metro stations, including illegal car and motorcycle parking, encroachment by shops and street vendors, and use as a short cut or queue bypass by motorcycle riders.

Overall Scope

The overall scope covers from implementation plan to select, install and test equipment and software and provide training to local staff in the operation of the street and footpath management system.

Main Tasks

The following tasks are required to implement the package:

- Develop an implementation plan including the selection of suitable technology (equipment and software) and suitable locations for installing the surveillance equipment.
- Select and install equipment and software
- Testing and evaluating the system
- Training to local technical staff

Output / Deliverables

Progress and technical reports are required to report the results from the four main tasks listed above and the main deliverable is the fully tested equipment and software for the street and footpath management system and the training program to local staff on the use of the system.

Inputs (Required Expertise and Staffing)

Inputs (Required Expertise and Equipment)

Three specific tasks required different staffing and specific expertise, including (i) Develop technology and locations, (ii) testing and evaluating the BIS/BMS system and (iii) training to local technical staff. For task (i), provision has been made for a total of 4 person months by 1

international expert on ITS or BMS/BIS Center supported by 2 local experts. 1 office staff and 1 translator spread over 1 month. For task (ii) provision has been made for a total of 8 person months by 1 international expert on IT for testing BMS/BIS system/ team leader supported by 5 local experts, 1 office staff and 1 translator spread over 1 month. For ask (iii), provision has been made for a total of 4 person months by 1 international expert in ITS or BMS/BIS Center supported by 2 local experts. 1 office staff and 1 translator spread over 1 month. A summary of the required expertise and expected duration of experts engagement is summarized in Table A3.1 below.

Table A3.1: Expertise

Position	Person months
International	
Urban transport Expert/Team Leader	2
IT system expert	1
Sub-total	**3**
National	
ITS experts (2 No)	4
IT specialists (5 No)	5
Office staff	3
Local translator	3
Sub-total	**15**
TOTAL	**18**

The establishment of the BIS will require the selection, procurement and installation of relevant equipment, which will include (i) equipment at 10 MRT Line 2 stations, and (ii) licensed software at monitoring center. The initial assessment for these items is listed in Table A3.2 below.

Table A3.2: Equipment and systems

Item	Number
Server at monitoring centre	2
Station set ups	
LED Displays	10
PCs and power	10
Individual surveillance units	110
Maintenance for first year	
Licensed software	
Servers/monitoring	2
Stations	10
Installation, management and training	

Associated agencies and working arrangements

Related agencies for package include DOT, MAUR, MOCPT and other related agencies at the city level and from central government. Working arrangements among these related agencies need to be proposed and finalized as one of the output/deliverables.

Timing

The proposed fares and ticketing solutions for HCMC at the city level and for MRT Line 2 at the corridor level from this study should be reviewed and finalized in advance of the opening date of MRT Line 2 (2018). Assume that the implementation of this package start at beginning of January 2015 and ends by July 2015 (6 months).

Annex 4: Urban transport sector development
Outline Terms of Reference

A. Introduction

Background: Ho Chi Minh City (HCMC) is the largest city in Vietnam, with a population of the greater urban area over 9 million that is expected to grow to 13.8 million by 2025. Private vehicles dominate transportation in HCMC, but existing road infrastructure is reaching saturation point and congestion becoming severe during peak hours, especially as motorbike riders convert to cars with improving household incomes. A well-integrated high capacity public urban transport system is essential to meet the demands of a growing urban metropolis. Without investment in major public transport infrastructure to support a significant modal shift to public transport, economic growth will be severely constrained and the urban environment will deteriorate due to high transport costs and severe congestion.

The Prime Minister of Vietnam approved in January 2007 the HCMC Urban Transport Master plan (UTM) that proposes to develop a network of nine urban mass rapid transit (MRT) lines, improvements and expansion of the bus system and traffic management system improvements, all of which will support a modal shift from private to public transport. Together with improvements to the road system and supporting policy and regulatory measures, the UTM objective is for public transport to achieve 45% of transport demand by 2020.

The Government of Socialist Republic of Viet Nam has received a Loan from the Asian Development Bank (ADB) towards the cost of "Ho Chi Minh City Urban Mass Rapid Transit Line 2 Investment Program" (MRTL2). MRT Line 2 will facilitate public transport connectivity and access in six central districts of HCMC (Districts 1,3, 10, Tân Bình, Tân Phú and District 12), as well as being an integral part of the public urban transport system to support the UTM. The UTM will establish a comprehensive network of public transport services in the central area of HCMC.

In order to ensure integration of public transport occurs in six districts along Metro Line 2, ADB has funded a project preparatory technical assistance (PPTA) for the Sustainable Urban Transport for HCMC MRT Line 2 to support the development of sustainable low carbon urban transport measures and programs in HCMC. This will be addressed through the implementation linking key inter-connected urban transport measures under three (03) main components of packages recommended from the PPTA, including; (i) Component 1 - Station accessibility enhancement, (ii) Component 2 - Public transport integration measures, and (iii) Component 3 – Policy and regulation development support. Component 1 and 2 are to be implemented through civil works, systems and equipment and other consulting service contracts under the proposed ADB and ADB Clean Technology Fund loans

Component 3 – Policy and regulatory development support: The proposals for improvements to station accessibility and public transport integration are extensive, and may not be entirely compatible with existing policies and regulations, or within existing institutional arrangements. Three priority policy areas were identified and are to be addressed through this component, which are:

i) Better Enforcement Program
ii) Parking and Demand Management
iii) Urban Transport Pricing

The Consultant will work directly with the urban transport management division 1 (UTMD1) and their project management unit (PMU) to implement these services, as described in more detail below.

B. Better Enforcement Program

Background / Rationale

The need for regulations to define roles and responsibilities

The streets, public spaces and land around stations are currently owned by or under the control of different HCMPC and District agencies. However, it appears that no agreements have yet been reached on the responsibilities for ownership, management and maintenance of the areas immediately surrounding metro stations. To ensure good integration, it is proposed that one single agency be charged with the responsibility for monitoring the areas around the stations, outside the limits of the station itself.

Such empowered agency for overseeing and managing the immediate areas surrounding metro stations could be set up in the form of a MRT Station Management Board, which could operate under the Public Transport Authority (PTA) to be possibly set up for HCMC. Such agency could also be charged with a broader responsibility to identify TOD opportunities and promote TOD progress in general.

The need for regulations to define roles and responsibilities of traffic police or inspectors

Experience worldwide shows that the perceived ease, comfort and safety in accessing a station will influence their use of the metro (or otherwise). Thus, it is important to ensure that all modes of transport can access a metro station conveniently. Of all transport modes, walk is of paramount importance as all modes will finally end up with walking to/ from the metro station.

However, the footpaths and pedestrian crossings of the streets adjacent to many of the proposed stations are currently occupied by parking and other commercial activities, and are often not in good maintenance.

Station accessibility enhancements (with the physical scheme components as described in Component 1) and a program of better enforcement are two complementary packages proposed for improving pedestrian access to/ from MRT2 stations

Objectives

This project provides the regulatory framework for the management of station facilities and adjacent developments. Specific project components include:

+ Regulation to define roles and responsibilities e.g. safety in station/ outside entrances
    - Roles & responsibilities of MRT Station Management Board
    - Roles & responsibilities of Transit Police/Inspector

+ Integrating Street Management System to the Metro Operation and Management System. The Street Management System is being recommended under Component 2 of the same ADB/CTF funding project.

The project could also act as the catalyst for better enforcement of city-wide parking regulations as one of the most effective ways of limiting the use of private vehicles to

support the overall package of sustainable transport measures.

Overall Scope

Design and implementation of revised policies and regulations, procedures, enforcement personnel and technology to provide enforcement support for the physical measures for improving station accessibility in Component 1 of the Project

Main Tasks

Unlike the physical schemes, the policy and regulatory schemes will need to face and overcome a number of challenges and issues as highlighted below, which in turn calls for a strong need to define the roles and responsibilities to be involved in the street management activities for MRT2. Main tasks for this package will be based on the following challenges:

- *Institutional* – Should the police be charged with the duty to manage/ regulate the illegal parking on the footpaths accessing a metro station? Or should traffic inspectors working under Public Transport Agency (PTA) or Department of Transport (DOT) have similar enforcement authority to issue penalty notice? The role, authority and responsibilities of the street management enforcers need to be clearly defined in the new regulation - including the incentive system and the performance review relating to the enforcers.

- *Supporting Policy* – Should the current parking decisions from DOT or at district level be amended to better support the smooth operations of MRT Line 2?

- *Public Acceptance Survey* – It is important to receive opinions from general public in HCMC, local residents and shop owners who live/work and do business along MRT Line 2 corridor (mainly Cach Mang Thang Tam Road) regarding the proposed street management regulations to gauge the level of public acceptance.

- *Funding and Resources* – How can the task of enforcement be managed effectively and efficiently? CCTV and Surveillance equipment used in Street Management System as described in the preceding proposals can surely help monitor footpath activities and conditions. However, the staffing and associated funding to maintain a good enforcement effort remain to be determined and secured. Should the Youth group member (Thanh Nien Xung Phong) be mobilized to support police or transit inspectors in the day-to-day routine? What are potential mechanisms for funding to recruit / train staff to support the street management initiatives?

- *Information Responsiveness* – How much staff resource should MRT Management Centre allocate to monitor and respond to the information transmitted from CCTV and Surveillance during the operating hours of MRT Line 2 as collected from the Street Management System?

Output / Deliverables

(i) Revisions to regulations and clear definition of the roles and responsibilities of different agencies

(ii) Design and implementation of the operational procedures for the Street Management System package which is proposed under Component 1 of the same ADB/CTF funding project.

(iii) Design and delivery of Training Programs for the staff of the agencies. The content, and number of training programs and the number of staff to be trained will be determined during the course of the assignment.

Inputs with the required expertise and staffing

Provision has been made for a total of 55 person months by 2 international experts (1 team leader and 1 institutional specialist supported by 2 local experts. 1 office staff and 1 translator spread over the life of the project (12 months).

Table B.1.1: Required staffing for Component 3 Package 3.1

Staffing	Number of staff	Engaged time (months)
International Expert -Team Leader	1	7
International Expert - Institutional	1	6
Local experts	2	12
Office staff	1	12
Local translator	1	6

Associated agencies and working arrangements

Related agencies for package include DOT, MAUR, HCMC Traffic Police, HCMC District Authorities (Districts 1, 3, 10, Tan Binh, Tan Phu and 12), Youth group member (Thanh Nien Xung Phong). Working and training arrangements among these related agencies need to be proposed and finalized as one of the output/deliverables.

Timing

Review of policies and working and training arrangements should be provided and finalized in advance of the opening date of MRT Line 2 (2018). Assume that the implementation of this package start at beginning of September 2016 and ends by August 2017 (12 months). On the job training should be provided in the first week after opening, and during the first year of operation. The current TOR and the estimated cost do not include the “on the job” training since the opening of MRT Line 2.

C. Parking and Demand Management

Background / Rationale

Main outcome from this package is a parking strategy and policy solutions for HCMC at the city level and at the MRT Line 2 corridor level. The study approach will review both sides of parking requirements – demand and supply.

As long as current policies and trends persist, the demand for parking will continue to outstrip supply. Even with pro-parking policies such as increased and enforced provision in new buildings and government provision of off street parking lots, it will become increasingly difficult to meet the unconstrained demand for parking due to the city’s high development density, scarcity of available land demand, burgeoning economic growth

and rapid rise in motorcycle and car ownership.

The current demands for parking need to be clearly understood, covering location, duration, purpose and charges, including the breakdown between free parking (either illegal or employer/building provided), and government approved rates and private rates. This information could be most efficiently and economically obtained if included in the Home Interview Survey which forms part of the Development of a Transport Modeling Platform proposed in the above part.

The supply of parking spaces needs to be considered in conjunction with the strategies to reduce the demand for parking. Managing the demand goes hand in hand with complementary policies to provide more and better choice of alternatives to private vehicle travel such the planned MRT system and improved bus system. However, the main challenge in managing the demand for parking will affect far wider and stronger levels of enforcement than those of today, as discussed above under the Better Enforcement Program.

Until now, Ho Chi Minh City does not have a clear plan for parking supply in the downtown area (especially for Districts 1, 3, 5, 10) and the surrounding districts. In the central area, too many high-rise buildings have been developed without sufficient parking within or outside parking lots. In Districts 1 and 3, more than 80% of the buildings either do not have enough parking or do not provide parking at all. The lack of minimum parking in the CBD leads to occupancy of roadways and sidewalks for parking, and directly impacts on the capacity of lanes, traffic safety, pedestrians on sidewalk and urban landscape. Many sidewalks are already narrow, ranging from less than 1.5 meters down to 0.6 meters, but even these are often fully occupied by parked motorcycles. A similar situation exists on roadways, many sections of which are too narrow to accommodate on-street car parking.

It is clear that the lack of parking supply has caused serious effects on unnecessary traffic circulation leading to traffic congestion, illegal parking on the street and footpaths. Two types of strategies can be potentially developed to cope with the lack of parking supply.

i) *Supply management strategies* – These strategies are short and medium term solutions to address the lack of parking supply issue. One potential strategy is to consider the development of private off-street parking. It could save up HCMC PC in land acquisition and resettlement cost. Private developers should be encouraged to invest in the construction of off-street parking. Market based pricing of parking using intelligent meters can be reviewed and introduced.

ii) *Demand management strategies* - The second type of strategies is more for the longer term as it is looking at demand side of the parking. It aims to reduce the demand for parking via strategies to encourage the shift from private transport to use public transport and crackdown on illegal parking.

Objectives

Main outcome from this package is a parking strategy and policy solutions for HCMC at the city level and for MRT Line 2 at the corridor level.

Overall Scope

The study approach will need to review both sides of parking requirements – demand and supply.

In terms of coverage, strategies will need to be identified, evaluated and proposed at two levels – city wide level and metro corridor level. City wide level will focus on policy and measures to restrain private vehicle parking. At the MRT Line 2 corridor level measures, parking facilities are supplied mainly to attract motorcycle riders to use Metro in a Park and Ride mode. This is important to support people who live in the surrounding areas of Metro stations to access Metro station for modes other than walk and bus, particularly Tan Binh station (Tham Luong).

- the amount of parking spaces to be allowed in areas that will be well served for public transport,
- the hourly charges to be levied,
- use of footpaths and roadways for parking, whether parking will be restricted so as to encourage use of public transport

The issue on who makes the regulations and who will be responsible for enforcing them is included in Package 3.1 “Better Enforcement Program” described above

Main Tasks

The implementation of this package requires a systematic development of policies on parking for the public interest, with the project components including:

i) Study parking strategy and policy solutions for the city covering both public and private off-street parking provision, regulation and control

ii) Surveys to improve understanding of parking behavior and costs

iii) Study demand management solutions

iv) Introduce market based pricing of parking (intelligent meters)

Output / Deliverables

Progress report and technical report are required to report the progress and results from the four (04) main tasks incorporating major comments from DOT and related stakeholders in HCMC.

Inputs (Required Expertise and Staffing)

Provision has been made for a total of 43 person months by 3 international experts (1 team leader, 1 parking specialist and 1 travel demand management specialist supported by 3 local experts, 1 office staff and 1 translator spread over the life of the project (6 months).

Table B.2.1: Required staffing for Component 3 Package 3.2

Staffing	Number of staff	Engaged time (months)
International Expert -Team Leader	1	6
International Expert - Parking	1	3.5
International Expert – Travel Demand Management	1	3.5
Local experts	3	6
Office staff	1	6
Local translator	1	6

Associated agencies and working arrangements

Related agencies for package include DOT, MAUR, HCMC District Authorities (Districts 1, 3, 10, Tan Binh, Tan Phu and 12). Working arrangements among these related agencies need to be proposed and finalized as one of the output/deliverables.

Timing

The proposed parking strategy and policy solutions for HCMC at the city level and for MRT Line 2 at the corridor level **from this study** should be reviewed and finalized in advance of the opening date of MRT Line 2 (2018). Assume that the implementation of this package start at beginning of January 2015 and ends by July 2015 (6 months).

D. Urban Transport Pricing

Background / Rationale

Rail mass transit systems are very expensive and provide the high capacity /relatively high speed “backbone” of modern urban public transport systems. Once a rail line in operation, it can carry additional passengers at much lower marginal cost than any bus system. For financial, economic and environmental reasons, bus services should therefore serve a supporting role within urban rail corridors, and not compete directly with rail systems.

The initial lines of any planed rail mass transit system often suffer from low patronage relative to ultimate capacity and poor financial performance. Reasons for this include the lack of a comprehensive rail network, and time delay in land use development and redevelopment capturing the improved accessibility provided by the rail services, and increasing rail station demands. These factors can only be improved over relatively long timescales.

When there is more than one metro line, and each line has its own separate non-integrated fare structure, then the metro patronage on both lines will be less than otherwise, and bus patronage and private vehicle travel will be higher. It is considered essential for financial, economic, and environmental and equity reasons that urban rail fares should be integrated such that passengers do not suffer financially when they

transfer for one line to another. Even if the various metro lines have separate owners and operators it is important that the relevant authority has legislation and procedures in place that can ensure a common through fares system between metro and bus lines without any fare penalty for interchange.

Another common reason for low patronage and poor financial performance of new urban rail lines is poor integration with bus services. This is particularly the case when rail fares are set much higher than existing bus fares.

For many of the longer bus journeys in the corridor made prior to metro operation, the use of a shorter "feeder" bus service to a metro station and use of Metro can provide a shorter travel time than the original bus journey. However if there is no fares integration, the feeder bus fare plus metro fare is likely to be much higher than the pre-existing bus fare, which results in many potential Metro riders continuing to use bus. This results in under use of the rail line and its associated feeder bus services, higher bus resource requirements, and, as in the case of HCMC where public transport bus service operations are financially supported, higher subsidy requirements.

Therefore it is considered of the highest priority that an integrated fares and ticketing system that encourages transfer from bus (and possibly also from Taxi, Xe Om and private modes) to rail should be in place prior to opening of Line 2 (and also Line 1). From a broader and more strategic perspective, the costs of private transport and that of public transport can also be releveraged and rebalanced, with a view to promoting public transport and minimizing government subsidies to public transport operations. The developed multi modal transport model can be used to test different private/public transport pricing options to help optimize this overall balance in the HCMC transport market at large.

Amendment: By broadening the original scope of studying Fares and Ticketing to Urban Transport Pricing, the package will study the costs of using the different modes (private and public transport) and the extent of government finance allocated to each of them.

Objectives

The objectives of this project will be to define fare structure and ticketing system covering all public transport modes (allowing for possible variation in fees/charges for private transport), in order to ensure the integration and sustainable development of public transport; to minimize subsidies, and define the adjustment mechanisms for MRT, bus, taxi, and (subject to their regulation) Xe om fares.

Amendment: This study will identify the relative difference in costs of private and public transport modes without increasing the financial burden on the city. The outcome of the study will provide important transport pricing policies and sustainable financing strategies for HCMC. It will align with the efforts at the National level in encouraging the use of public transport and limiting private vehicle usage.

Overall Scope

Define fare structure and ticketing system covering all public transport modes to ensure the integration and sustainable development of public transport; to minimize subsidies, and define the adjustment mechanisms for MRT, bus, taxi, and (subject to their

regulation) Xe om fares.

Amendment: To identify the relative difference in costs of private and public transport modes and formulate transport pricing policies and sustainable financing strategies for HCMC.

Main Tasks

Specific project tasks include:

1) Study and recommend on future integrated fares Solutions for all modes, for example:

i. Distance, zonal, uniform - different fares for different quality of modes

ii. Set out the common definitions for passenger types.

iii. Examine implications for the technical requirements of the ticketing system

2) Confirm effectively finance of each option for all vehicles, example: public transport mode

Other benefits of alternative technologies (such as the level of detail of general management information, information that facilitates compliance with performance-based service operations contacts, and planning information on passenger journey origins and destinations) should also be considered in deciding the functional specification of the ticketing system.

3) Consider the extension of the bus and rail ticketing system to taxi and for payments for private vehicle parking at/near stations, including provision of fare or parking fee discounts for people interchanging with Metro.
4) Propose the implementation of recommended fares policy and associated ticketing systems prior to MRT Lines 1 and 2 opening.
5) Ensure that gender and vulnerable group issues are duly considered for any fare or pricing policy framework development

A revised project tasks include the following:

(i) Public Transport Fares Policy and Financial Support – This task should include the four (04) original tasks specified above.
(ii) Adjustments to Local and National Fees and Charges for Ownership and Usage of Private Vehicles
(iii) Overall levels and share of HCMCPC budget for public and private transport, and
(iv) A sustainable urban transport financial policy for HCMC.

Output / Deliverables

Four (04) reports are required to report the results from the four (04) main tasks listed above.

Inputs (Required Expertise and Staffing)

Provision has been made for a total of 50 person months by 3 international experts (1 team leader, 1 fares/urban transport pricing specialist and 1 ticketing specialist

supported by 1 local expert, 1 office staff and 1 translator spread over the life of the project (12 months).

Table B.2.1: Required staffing for Component 3 Package 3.3

Staffing	Number of staff	Engaged time (months)
International Expert -Team Leader	1	6.5
International Expert – Fares/Pricing	1	4
International Expert – Ticketing	1	3.5
Local expert	1	12
Office staff	1	12
Local translator	1	12

Associated agencies and working arrangements

Related agencies for package include DOT, MAUR, MOCPT and other related agencies (DOF, DPI) at the city level and from central government (MOF, MPI). Working arrangements among these related agencies need to be proposed and finalized as one of the output/deliverables.

Timing

The proposed urban transport pricing including fares and ticketing solutions for HCMC at the city level and for MRT Line 2 at the corridor level from this study should be reviewed and finalized in advance of the opening date of MRT Line 2 (2018). Assume that the implementation of this package start at beginning of January 2015 and ends by July 2015 (6 months).

VII. SAFEGUARDS

65. The primary objective of safeguards is to avoid adverse impacts of projects on the environment and people. If impacts become unavoidable to realize the intended positive project impacts, adverse impacts shall be minimized, mitigated or affected people compensated. Approved and acceptable planning procedures shall be used and will be part of project covenants. Such procedures and documents shall be acceptable and approved by approving authorities in Viet Nam and by ADB. They will be disclosed in accordance with the agreed procedures by ADB and the borrower

A. Involuntary Resettlement

66. The Borrower shall ensure that any involuntary resettlement is carried out in accordance with the agreed Resettlement Plan (RP), ADB's Safeguard Policy Statement (2009), and the Borrower's laws and regulations on involuntary resettlement. In case of discrepancies between the Government's laws, regulations, and procedures, and ADB's Safeguard Policy Statement (2009), the ADB SPS will prevail.

67. The draft RP agreed between HCMC PC and ADB will be updated following completion of detailed designs and will be submitted to ADB for review and concurrence. The RP will be updated through the conduct of consultations, census and detailed measurement survey (DMS) to determine the actual impacts on land and assets of displaced persons. A qualified appraiser will be engaged to carry out replacement cost survey for land and non-land assets during RP updating. The RP will be submitted to ADB for review and concurrence. Land acquisition, relocation of affected households, and clearance of land will not commence until the RP has been agreed between ADB and the Government.

68. HCMC PC, through UTMD1, is responsible for disclosing and disseminating the RP as required in the relevant laws of the Government and ADB Safeguard Policy Statement (2009). Copies of the resettlement external monitoring reports on RP implementation will be made available to project offices and affected communes.

69. HCMC PC, through UTMD1, will ensure that within 1 month following the commencement of RP updating, an external monitoring agency (EMA), acceptable to ADB, is engaged to monitor and evaluate updating and implementation of the RP. The budget provided to the EMA will include funds sufficient, in the opinion of ADB, for the EMA to adequately perform its functions.

70. HCMC PC, through UTMD1, will only issue a site possession notice to the civil works contract to commence construction activities for a specific section once the head of the district resettlement committee has officially confirmed in writing that (i) payment has been fully disbursed to the displaced persons and rehabilitation measures are in place for that specific section as per RP agreed between the Government and ADB; (ii) already compensated DPs for that specific section have been cleared from the area in a timely manner; and (iii) that the specific section of the project is free from any encumbrances.

71. HCMC PC shall timely provide counterpart funds for land acquisition, resettlement and monitoring activities specified in the agreed RP, and will meet any unforeseen obligations in excess of the RP budget estimate in order to satisfy resettlement objectives.

B. Environment

72. The Borrower shall ensure that:

(i) the Project is implemented in accordance with the Borrower's laws and regulations on environment, as well as ADB's Safeguard Policy 2009 (ADB's SPS), and that there is no significant damage to the natural environment as a result of the design, construction, operation and maintenance of the Project facilities;

(ii) if there is any discrepancy between the Borrower's laws and regulations, and ADB's SPS, then ADB's policy shall apply;

(iii) the Works contracts under the Project include specific measures to mitigate negative environmental impacts caused by the construction activities in accordance with the requirements of the EMP prepared for the Project, and the EMP shall be included in the bidding and contract documents requiring contractors to comply with all applicable provisions and as a basis for the contractors to prepare site specific EMPs;

(iv) adequate budget and staff resources are allocated for the EMP implementation;

(v) the contractors engaged under the Works contracts are in strict compliance with all environmental impact mitigation and monitoring requirements set out in the EMP and contract documents;

(vi) environmental approvals required by the Government are obtained in a timely manner and copies of such approvals shall be submitted to ADB upon issuance;

(vii) construction works carried out by contractors are adequately supervised and monitored to ensure compliance with the monitoring and mitigation measures set forth in the EMP;

(viii) new or supplementary environmental assessment report shall be prepared in compliance with the EARF and ADB's SPS if there are any additional components or changes in the Project such as specific location and design, among others, that will result to adverse environmental impacts and are not within the scope of the environmental assessment report approved by ADB; such documents shall be submitted to ADB for clearance prior to implementation of additional components or major changes and corresponding approval from the Borrower's (approving authority) shall be obtained in a timely manner;

(ix) if any unanticipated environmental impacts become apparent during project implementation, prepare a corrective action plan and submit this to ADB for clearance and ensure implementation of the corrective action plan;

(x) establish an environmental grievance redress mechanism, acceptable to ADB, to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the Project's environmental performance;

(xi) the existence of this grievance redress mechanism is made public through public awareness campaigns; review and address environmental grievances of stakeholders in relation to the Project, any of the service providers, or any person responsible for carrying out any aspect of the Project; and proactively and constructively respond to such grievances; and

(xii) semi-annual reports on implementation of the EMP are submitted to ADB on a timely manner.

C. Execution of Civil Works Contracts

73. HCMC PC, through UTMD1, will ensure that, subsequent to award of civil works contract, no section or part of the section for any project will be handed over to the contractor until the applicable provisions of the IEE and RPs, particularly the timely delivery of compensation to affected families, have been complied with.

74. Any changes to the location, alignment of works, or environmental impacts arising from the detailed designs of any project will be subject to prior approval by ADB and the relevant government agency of Viet Nam.

VIII. GENDER AND SOCIAL DIMENSIONS

A. Poverty Reduction

75. The Project is a general intervention, with indirect poverty reduction impacts. Major beneficiaries will be the communes and districts along the project corridor and all public and private transport users. It is expected that local economies will improve, with lowered transport costs business opportunities, reduce congestion, better quality of life

76. The Project is expected to contribute in reducing bottlenecks in transport infrastructure, ease congestion and improve air quality in Ho Chi Minh City, although during construction traffic congestion and disruptions are expected to be exacerbated. The beneficiaries include students in universities and colleges along the MRT2 3 alignment, workers and traders traveling between the western part of Ho Chi Minh City and the central business district and service/commercial establishments near the MRT Stations. Women, children and older people, who are more inclined to use public transport, are expected to benefit the most from the improved transportation

77. Project district wards will benefit through temporary construction jobs, and routine maintenance will employ unskilled and semiskilled workers. Women will be encouraged to work and will be treated equitably. UTMD1 will ensure that employment opportunities are announced to local communities and will also ensure that contractors conform to appropriate labor laws and standards. UTMD1 will monitor the use of local labor and appropriate labor laws and standards within the first 3 months of the commencement of each construction contract and take appropriate action to improve the employment and compliance if needed.

B. Safety, Health and Gender Concerns

78. The potential adverse social impacts from the Project are increased risks of exposure to HIV/AIDS and human trafficking of women and children during construction and operation due to the influx of construction workers and increased commuter traffic. There will also be increased safety risks for the communities along the road due to higher concentration of pedestrian movements near stations. These risks will be addressed through the HIV/AIDS and human trafficking awareness and prevention program. All civil works contracts under the Project incorporate provisions and budgets to the effect that contractors carry out the HIV/AIDS and Human Trafficking Prevention Program in the construction campsites with such Program being held in coordination with the Government's programs and other initiatives.

79. Gender is an important variable which needs to be taken into consideration to ensure that the effectiveness and sustainability of HCMC MRT development is maximized. Women and men have different transportation needs and behavior, and they also have different access and affordability to use transportation means. Women to a greater extent than men use public transportation, bicycles and motorbikes for transport. Generally they also take major part of bringing children to school and other activities, as well as purchase and carry home family food and consumer items. As more and more urban and suburban women are living and working in different areas, commuting to work, to children’s school and to markets/shops in overcrowded roads and streets takes an increasing part of their time. At the same time traffic is a major cause of stress due safety risks, and exhaust fume is causing health concerns. MRT will therefore provide a good transport alternative for women. However, gender aspects need to be integrated into all Project design, planning and implementation in order to ensure that the metro system

will be accessible, safe, secure, comfortable and affordable to women as well as to all different kinds of passengers.

80. Gender differences have to be understood and responded to in order to ensure the access and use of the transport system by different groups of passengers. A Gender Action Plan (GAP) has been prepared in accordance with ADB's Gender and Development Policy (1998) to ensure the sustainability of design, planning and implementation of the Project for both men and women, and an operation of a competitive and efficient public transport system that meets the needs of different users. Gender considerations will accordingly be mainstreamed into all Project phases and activities.

C. Gender Action Plan

81. Gender Action Plan has been prepared in order to ensure that gender aspects and issues will be considered in all Project-related issues and activities throughout the Project time period from preparatory stage to the start of the metro traffic operation. The GAP will be implemented through the project outputs and project management as follows:

a. **Output 1: Establishment of MRT Line 2 station accessibility improvements**.

- Civil works to improve MRT Line 2 station accessibility will include gender specific design features, including:
- Women-only waiting spaces at the bus terminal, including space allocated for women with children, prams, large packages, and pregnant women
- Spaces allocated for women in the station parking lot
- Adequate lighting around stations, near exits/ entrances, bus stops and pedestrian subways and footbridges
- Separate toilets for women in bus lay-bys and terminal and ensure regular cleaning
- Space allocated for women's shops/vendors to operate in/ around the stations and bus terminal.
- Ensure pedestrian friendly traffic management and traffic calming measures, e.g., lights, traffic bumps, traffic police , etc.
- Ensure 20% of jobs generated by project civil works are filled by women
- Ensure 30% of jobs in project services operation and maintenance staff, such as in street management, attendants and security officers are filled by women
- All construction contracts for civil works include gender-specific core labor codes
- Ensure that all staff are provided briefing on the Prevention of Sexual Harassment, violence against women , STI/HIV and AIDS and trafficking and reporting channels.
- Provide information boards on STI/ HIV and AIDS and prevention of sexual harassment in bus terminals and lay-bys as well as entrances and exits to stations.
- Ensure that staff at the bus terminal trained on basic first aid to service passengers

b. **Output 2: Establishment of Public transport information systems.**

- Ensure that the public transport information system and scheduling is developed based on an analysis of transport patterns/ needs of women and men and provides MRT 2 trip schedules linked to other types of / multi modal public transport, to support accessibility and facilitate trip planning by different groups of men and women.
- Ensure real-time traffic information electronic displays to help women and men to plan their waiting time;

c. **Output 3: Public transport policy development program.**

- Ensure consulting services recruit a social development specialist consultant with gender expertise
- Ensure that all policy and regulations proposed are based on gender analysis and addresses gender dimensions of inter-modal public transport and needs of women and men transport users.
- Ensure that multi-modal public transport ticket pricing are integrated in timetable and ticketing systems and that these are affordable for poor men and women.
- Consider various modalities to support affordability and increase access, e.g., passes to enable travel in multiple segments without paying fares; change fares to reduce cost during off-peak hours; or provide flat rates rather than fares by distance to reduce the burden of cost for the poor living in peripheral areas. Gender analysis to inform ticket pricing and affordability

d. Project Management

- Appoint a full-time Gender Specialist in UTMD1 responsible for supervision and reporting against the GAP throughout the Project period.
- Gather baseline sex-disaggregated data and gender analytical information for preparatory surveys, feasibility studies and assessments.
- Facilitate equal participation and consultation of women affected by and involved in the Project during preparatory surveys, studies, assessments and other consultative mechanisms.
- Provide gender awareness and GAP implementation training for UTMD1 staff
- Include all EA female program implementation staff members as participants in capacity development activities
- Integrate gender-related substantive content into capacity development activities and communication strategies wherever appropriate
- Proactively encourage and promote women's employment in the urban transport services sector
- Gender indicators will be integrated into the project M&E system

82. Implementation Arrangements: The overall responsibility for the GAP implementation rests with the project Director, UTMD1. A full-time Gender Specialist will be appointed in UTMD1 to support the Project Director and will be responsible for supervision and reporting against the GAP throughout the Project period. The full time Gender Specialist in UTMD1 will

be supported by a Social Development Specialist Consultant with gender expertise, who can provide guidance on the implementation of the GAP. The above Gender Specialists will ensure the inclusion of responsibility for consideration of gender issues and gender analysis in Terms of Reference for all relevant consultants. They will both develop an " implementation GAP" aligning gender actions with key project activities, timeframes and milestones. Project will include the status of GAP implementation in their regular reporting to ADB..

83. Indicators have been developed for monitoring the implementation of major GAP strategies and activities. Gender disaggregated baseline data will be collected in the preparatory phase of the Project, and activities will be potentially adjusted and detailed based on the results. Gender disaggregated indicators will also be developed for an integrated monitoring of gender, social and resettlement-related issues as specified in the RP and GAP.

84. **Capacity Development Program.** Under the program to develop the capacity of UTMD1 for project implementation, gender activities will be included that address (i) gender mainstreaming into UTMD1 capacity development activities and targets for participation of female staff in all project-related capacity development activities, (ii) whenever relevant, gender aspects are considered in all TORs for consulting services and in studies and plans developed under the project, and (iii) separate targets for men and women in the HIV/AIDS and Human Trafficking Prevention Program developed for the Project.

GENDER ACTION PLAN
VIE: MFF
Sustainable Urban Transport for Ho Chi Minh City MRT Line 2 Project

Duration: 2014 –2019

Impact: *Enhance public transport system serving six districts of Ho Chi Minh City*
Outcome: I*mproved integration of MRT Line 2 stations with other modes of public and private transport*
Outcome indicator: 5-minute decrease in public transport travel time in project districts, including further decrease for women by 10%

Output and Gender-related Objective(s)	Activity / Strategy	Performance/Target Indicators	Time Frame
Preparatory Stage *To ensure due consideration of gender issues and analysis in program planning, design and implementation procedures*	• Appoint a full-time Gender Specialist in UTMD1 responsible for supervision and reporting against the GAP throughout the Project period. • Gather baseline sex-disaggregated data and gender analytical information for preparatory surveys, feasibility studies and assessments. • Facilitate equal participation and consultation of women affected by and involved in the Project during preparatory surveys, studies, assessments and other consultative mechanisms.	• Gender Specialist appointed in UTMD1 and reporting periodically on progress with GAP implementation. • Studies and reports include reference to gender-disaggregated data and gender analytical information. • Number of women's groups and representatives consulted during preparatory surveys, studies, assessments and other consultative mechanism	**November 2014**
Output 1: MRT Line 2 stations access improved *To ensure that gender analysis informs infrastructure and system design and construction to maximize women's equal access and benefits*	• Civil works designed and constructed in consultation with women and with gender-specific features, e.g. women's only waiting spaces, safe lighting, separate toilets, child-friendly access and facilities, shop spaces for female-owned/run small businesses • Establish targets for female employment generation and regulate adherence to gender-specific core labor codes • Include information on potential negative impacts through awareness and information campaigns to construction workers and general public e.g. gender dimensions of human trafficking, HIV/AIDS. • Ensure that affected FHHs are prioritized in through Resettlement Plan implementation • Include responsibility for consideration of gender issues and gender analysis in Terms of Reference for consultants	• Gender-specific physical design features evident in new facilities • 20% of jobs generated by project civil works are filled by women • All construction contracts for civil works include gender-specific core labor codes • Information and awareness campaigns on issues such as human trafficking and HIV/AIDS developed and delivered with gender-related content • 100% affected FHHs access equal compensation and livelihood restoration support	**2015 - 2019**

Output and Gender-related Objective(s)	Activity / Strategy	Performance/Target Indicators	Time Frame
To support transport sector staff to mainstream gender into MRT program delivery and operations *To promote the role of women in the transport sector and ensure the participation of women transport sector staff in capacity development activities*	• Make provision for the hiring of a social development specialist consultant with gender expertise who can provide guidance for implementation of the GAP • Provide gender awareness and GAP implementation training for UTMD1 staff • Include all EA female program implementation staff members as participants in capacity development activities • Integrate gender-related substantive content into capacity development activities and communication strategies wherever appropriate • Proactively encourage and promote women's employment in the urban transport services sector	• Gender awareness and GAP implementation training materials developed, and training delivered with sex-disaggregated attendance records • Number of female program staff participants per capacity development activity • Gender-related substantive content reflected in all training materials where appropriate	
Output 2: Public transport information system established *To ensure due consideration of gender issues and the incorporation of gender analysis in the selection and implementation of consulting services and consulting service deliverables*	• Include responsibility for consideration of gender issues and gender analysis in Terms of Reference for consultants for public transport information system	• Gender-specific physical design features evident in new facilities • 20% of jobs generated by project civil works are filled by women • All construction contracts for civil works include gender-specific core labor codes	**2015-2019**
Output 3: Public Transport policy and systems developed *To ensure due consideration of gender issues and the incorporation of gender analysis in the selection and implementation of consulting services and consulting service deliverables*	• Make provision for the hiring of a social development specialist consultant with gender expertise who can provide guidance for implementation of the GAP • Include responsibility for consideration of gender issues and gender analysis in Terms of Reference for consultants	• Services of a Social Development Specialist with gender expertise secured for the sector development program • Gender analysis reflected in various sector development consultancy reports and other deliverables from consulting services. Policy and regulation proposed includes and responds to gender dimensions of inter-modal public transport.	**2015-2019**

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

85. The Design and Monitoring Framework (DMF) for the Project is in Table 9.1 below.

Table 9.1 – Design and Monitoring Framework

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Enhanced public transport system serving six districts of HCMC	Public transport's share overall passenger traffic in the six districts increases from 7% in 2013 to 15% by 2023.	Government statistical publications by district Public transport operator statistics	**Assumption** Other planned MRT lines are implemented as scheduled. **Risk** The public resists planned constraints on private vehicle usage.
Outcome Improved integration of MRT Line 2 stations with other modes of public and private transport	MRT Line 2 and public transport services users decrease average travel time from 24 minutes in 2013 to 19 minutes by 2020, for males, females, and persons with disabilities	Public opinion survey by public transport authority Benefit monitoring and post evaluation reports	**Assumptions** Government resources are available to operate and maintain MRT Line 2. Higher acceptance levels by public of all public transit modes **Risk** Integrated public transit services are not planned, implemented and operated efficiently by city government
Outputs 1. MRT Line 2 station access improved	All MRT Line 2 accessibility measures for stations and local communities, including gender sensitive features, are completed by 2019. Station access management system implemented by 2019.	Progress Reports Project Review Mission Reports Project Completion Reports	**Assumptions** MRT Line 2 station works are completed on schedule. **Risks** Limited government experience in implementing urban transport improvements for an integrated transport system creates problems.
2. Public transport information system established	The public transport information system linked to MRT Line 2	Progress reports Project review	**Assumption** Bus operators and HCMC PC provide information

Design Summary	Performance Targets and Indicators	Data Sources and Reporting Mechanisms	Assumptions and Risks
	stations is operational by 2020	mission reports	system equipment on buses and at bus stops on time.
3. Public transport policy and systems developed	Station access management system developed by 2017 Parking strategy developed by 2017 and pilot for MRT Line 2 stations implemented by 2019 An urban transport pricing framework developed by 2017, guided by gender assessment, and required policies or regulations approved by 2019	Progress reports Project review mission reports Project completion reports Training assessment reports	**Assumption** Government demonstrates leadership to coordinate stakeholders. **Risks** Parking restrictions and enforcement are ineffective in supporting modal shift.

Activities with Milestones

1. MRT Line 2 station access improved

1.1 Complete all detailed design by June 2016

1.2 Award civil works and systems contracts by October 2017 and all works completed by October 2019

1.3 Complete any land acquisition and resettlement by December 2016

1.4 Design staged public transport services by August 2016, and make all services operational by December 2019

2. Public transport information system established

2.1 Develop public transport information system by July 2017, and make it operational by November 2018

3. Public transport policy and systems developed

3.1 Gain city government approval of station access management system by March 2017

3.2 Develop parking policy by June 2017, and pilot-test schemes by December 2018

3.3 Gain city government approval on proposed urban transport policy and regulatory measures by June 2017, with regulations enacted by December 2019

Inputs

ADB: $10 million ADF

Item	Amount	($ million)
Civil works:		7.54
Other		2.46

CTF: $48.95 million

Item	Amount	($ million)
Civil Works		23.82
Systems and equipment		4.96
Consulting services:		10.38
Other		9.79

Government: $6.05 million

Item	Amount	($ million)
Taxes and duties		3.38
Land acquisition:		1.13
Incremental administration:		1.39
Other		0.15

ADB = Asian Development Bank, ADB CTF = ADB Clean Technology Fund, ADF = Asian Development Funds, HCMC = Ho Chi Minh City, MRT = mass rapid transit, PC = people's committee.

Source: Asian Development Bank

B. Monitoring

86. **Project performance monitoring.** The UTMD1 will establish a project performance monitoring system. ADB through the project performance reporting (PPR) system will rigorously monitor the overall performance of each project under the Project. The UTMD1 will refine the monitoring system within 6 months from project commencement and collect and update baseline data for performance monitoring. The key indicators and targets, assumptions, and risks outlined at the impact, outcome, and output levels in the investment program's design and monitoring framework will be the primary data required for analysis. For this purpose, ADB inception mission will provide to UTMD1 a checklist of the above data, which will be updated in track changes and reported quarterly through the UTMD1's quarterly progress reports and after each ADB review mission. These quarterly reports will provide information to regularly update ADB's project performance reporting system.[18]

87. UTMD1 will involve the beneficiaries in the collection of data on impacts and outcomes. During each review mission, the updated project performance will be shared with the interested representatives of project beneficiaries.

88. **Compliance monitoring**: Compliance for all the Loan agreement undertakings and loan covenants — urban transport sector reforms, social and environmental safeguards, financial, economic, and others — will be jointly monitored by UTMD1 and ADB through monthly updates provided by UTMD1. In this respect, UTMD1 will submit to ADB a status report on the covenants summary with the explanation and time-bound actions on partly or non-complied covenants. As part of the joint venture efforts, ADB's resident mission will hold quarterly review meetings with the UTMD1 to ensure the full compliance of all the loan covenants.

89. In addition, HCMC PC and ADB shall undertake, at the end of the third year of Project implementation, a comprehensive midterm review. At the conclusion of the mid-term review, ADB and the Borrower may agree on changes in both Project scope and implementation arrangements, as deemed necessary

90. **Safeguards monitoring**:

a. Environment

91. HCMC PC and UTMD1, with assistance from the construction supervision consultant and other consultants, will (i) undertake regular monitoring, as scheduled in the EMP, of contractors' environmental performance in terms of implementation of mitigation measures indicated in the EMP; (ii) monitor and report on the environment impacts during construction, and recommend measures to improve the situation as required; (iii) undertake environmental effects monitoring on air quality, noise, water quality, etc. based on the EMP; and (iv) prepare semi-annual monitoring reports for submission to ADB.

92. In addition to the environmental monitoring described above, HCMC PC will also engage qualified and experienced external expert(s), acceptable to ADB, to review and verify the accuracy, breadth, depth, and relevance of information provided by HCMC PC to ADB with regard to EMP implementation and to determine if EMP provisions are being conducted in thorough and timely manner and in accordance with budget identified within the EMP. The

[18] ADB's project performance reporting system is available at: http://www.adb.org/Documents/Slideshows/PPMS/default.asp?p=evaltool

external expert shall undertake such monitoring on an annual basis and shall submit annual monitoring report to HCMC PC and ADB.

b. Resettlement

93. HCMC PC and UTMD1 will ensure that the RP will be updated following completion of detailed designs and will be submitted to ADB for review and concurrence. No land acquisition or site clearing will be done until and after the Final RP has been agreed between HCMC PC and ADB and those provisions in the Final RP have been implemented satisfactorily. In case of differences between the Borrower's laws and regulations and ADB's Safeguard Policy Statement (2009), ADB's Policy shall prevail.

94. The PMU will submit quarterly monitoring reports to UTMD1 and ADB starting from the commencement of RP finalization, which coincides with the conduct of the census, detailed measurement survey and implementation activities. An external monitoring agency (EMA) will also be engaged by UTMD1 to carry out its independent monitoring and assessment. The external monitoring agency will submit semiannual monitoring reports to UTMD1 and ADB. The budget provided to the EMA will include funds sufficient, in the opinion of ADB, for the EMA to adequately perform its functions. All monitoring reports will be uploaded on the ADB website.

95. HCMC PC will provide to the EMA, at no cost, all documents required to monitor the resettlement process, specifically including the RP, detailed measurement survey documents, and all associated documents which may be reasonably requested by the EMA.

96. HCMC PC, through UTMD1, will not issue a notice of possession of site for any works until the head of District Compensation and Site Clearance Committee has officially confirmed in writing that (i) payment has been fully disbursed to the affected persons and rehabilitation measures are in place as per updated RP agreed between HCMC PC and ADB; (ii) already-compensated affected persons have cleared the area in a timely manner; and (iii) the area is free from any encumbrances.

97. HCMC PC will timely provide counterpart funds for land acquisition, resettlement and monitoring activities specified in the agreed upon RP, and will meet any unforeseen obligations in excess of the RP budget estimate in order to satisfy resettlement objectives. HCMC PC will ensure that counterpart funds for compensation and entitlements under the agreed upon RP are fully provided directly to affected persons prior to their displacement from housing and prior to loss of land, livelihood, income or other assets.

98. **Gender and social dimensions monitoring**: The UTMD1 will submit quarterly reports to HCMC PC and ADB on specific activities indicated in the agreed social action plan.[19]

99. HCMC PC will ensure that all Works contracts under the Project incorporate provisions and budgets to the effect that contractors: (a) comply with the Viet Nam's applicable labor laws and related international treaty obligations and do not employ child labor; (b) provide safe working conditions, and water and separate sanitation facilities for male and female workers; (c) provide equal wages to male and female workers for work of equal value; (d) provide day care

[19] ADB's *Handbook on Social Analysis: A Working Document*, is available at: http://www.adb.org/Documents/Handbooks/social-analysis/default.asp, *Staff Guide to Consultation and Participation*: http://www.adb.org/participation/toolkit-staff-guide.asp, and, *CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations*: http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp

services for female construction workers; and (e) carry out the HIV, Illicit Drugs, and Human Trafficking Prevention Program in the construction campsites with such Program being held in coordination with the Government's programs and other initiatives.

C. Evaluation

100. Within 6 months of the loan effectiveness, UTMD1, assisted by the project supervision consultants, will establish baseline data for the performance indicators and targets for evaluating project performance in relation to the Project's impacts, outcomes, and outputs. Within 6 months of physical completion of the Project, UTMD1 will submit a project completion report to ADB.[20] The performance indicators and targets will be measured 6 months and 3 years after project completion, and compared with the baseline data. UTMD1 will submit a report summarizing key findings of the project performance monitoring and evaluation to ADB.

101. ADB will field an inception mission within 3 months after signing of the loan agreement. Review missions will be carried out on a semiannual basis jointly by representatives of ADB, Borrower, and UTMD1. The review missions will assess the status of the project implementation including procurement, civil works, financing, compliance to environmental and social safeguards, and the road sector sustainability. Site visits are required for all projects with environment or social impacts. A mid-term review mission will be carried out 2 years after each loan becomes effective. Each mid-term review will evaluate compliance with the terms, conditions, and undertakings set out in the environmental and social safeguards, and loan covenants set out in the loan agreements. The review will allow for any necessary midcourse corrections to ensure successful implementation and the achievement of the project objectives. Within 6 months of physical completion of the project, UTMD1 will submit a project completion report to ADB.[21]

D. Reporting

102. UTMD1 will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions; (c) updated procurement plan and (d) updated implementation plan for next 12 months; and (iii) a project completion report within 6 months of physical completion of the Project. To ensure the Project continues to be both viable and sustainable, project accounts and the executing agency AFSs, together with the associated auditor's report, should be adequately reviewed.

103. UTMD1 will establish a project performance monitoring system within 6 months from loan effectiveness and collect baseline data for performance monitoring. The key indicators and assumptions outlined at the impact and outcome levels in the investment program's design and monitoring framework will be the primary data required for analysis

[20] Project completion report format available at: http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar.

[21] Project completion report format is available at: http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar.

E. Stakeholder Communication Strategy

104. Table 9.1 details the overall required disclosures.

Table 9.1 – Stakeholder disclosure requirements

Project Documents	Means Of Communication	Responsible Party	Frequency	Audience(s)
Project Information Document (PID)	ADB's website	ADB	initial PID no later than 30 calendar days of approval of the concept paper; quarterly afterwards	General Public
Design and Monitoring Framework (DMF)	ADB's website	ADB	draft DMF after post fact-finding mission	Project-affected people
Initial Environmental Examination	ADB's website	ADB	draft post fact-finding mission	General Public, project-affected people in particular
Resettlement Planning Documents	ADB's website	ADB	draft post fact-finding mission	General Public, project-affected people in particular
Reports and Recommendations of the President	ADB's website	ADB	within 2 weeks of Board approval of the loan	General Public
Legal Agreements	ADB's website	ADB	no later than 14 days of Board approval of the project	General Public
Initial Poverty and Social Assessment	ADB's website	ADB	within 2 weeks of completion	General Public, project-affected people in particular
Documents Produced under Technical Assistance	ADB's website	ADB	within 2 weeks of completion	General Public
Project Administration Memorandum	ADB's website	ADB	After loan negotiations	General Public
Social and Environmental Monitoring Reports	ADB's website	ADB	Routinely disclosed, no specific requirements	General Public, project-affected people in particular
Major Change in Scope	ADB's website	ADB	within 2 weeks of approval of the change	General Public
Progress Report on Tranche Releases	ADB's website	ADB	within 2 weeks of Board or management	General Public

			approval	
Completion Reports	ADB's website	ADB	within 2 weeks of circulation to the Board for information	General Public
Evaluation Reports	ADB's website	ADB	Routinely disclosed, no specific requirements	General Public
Performance of the Project with clearly defined information requirements and indicators, policy on roads construction and reconstruction, 5-year investment plan, business opportunities, bidding process and guidelines, results of bidding process, and summary progress reports of the ongoing projects.	The borrower's Website	The borrower (Executing Agency)	per project progress, no longer than monthly	General Public

X. ANTICORRUPTION POLICY

105. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy (1998, as amended to date) relating to the Project.[22] All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all Project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the Project.[23]

106. To support these efforts, relevant provisions are included in the Loan agreement and the bidding documents for the Project.

107. The Government and HCMC PC will comply with, ADB's Anticorruption Policy (1998, as amended to date) and the Combating Money Laundering and the Financing of Terrorism Policy (2003). The Government (i) acknowledges ADB's right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive or coercive practices relating to the Project; (ii) agrees to cooperate fully with, and to cause HCMC PC to cooperate fully with, any such investigation and to extend all necessary assistance, including providing access to all relevant books and records, as may be necessary for the satisfactory completion of any such investigation; and (iii) agrees to refrain, and cause the HCMC PC to refrain, from engaging in money laundering activities or financing of terrorism and shall allow, and cause HCMC PC to allow, ADB to investigate any violation or potential violation of these undertakings.

108. HCMC PC will conduct periodic inspections on the contractors' activities related to fund withdrawals and settlements, and the Government and HCMC PC will ensure that all contracts financed by ADB in connection with the Project include provisions specifying the right of ADB to audit and examine the records and accounts of all contractors, suppliers, consultants and other service providers as they relate to the Project.

109. HCMC PC will publicly discloses on the website information how Loan proceeds are being used, presenting (i) procurement contract awards, including for each such contract (a) the list of participating bidders, (b) name of the winning bidder, (c) basic details on bidding procedures adopted, (d) amount of the contract awarded, (e) list of Goods and/or services purchased, (f) intended and actual utilization of Loan proceeds under each contract, and (ii) internal and external resettlement reports. The website will be updated within 2 weeks after: (i) each award of contract, (ii) each submission of the EMA's quarterly resettlement report, and (iii) each submission of UTMD1's internal quarterly resettlement reports.

[22] Available at: http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf.
[23] ADB's Integrity Office web site is available at: http://www.adb.org/integrity/unit.asp.

XI. ACCOUNTABILITY MECHANISM

110. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.[24]

[24] For further information see: http://www.adb.org/Accountability-Mechanism/default.asp.

XII. RECORD OF PAM CHANGES

111. This document was reviewed and agreed between Urban Transport Management Department 1 (UTMD1) and the Asian Development Bank (ADB) on November 8 2013. During the project implementation, if any discrepancies are found, they will be reviewed and discussed by both UTMD1 and ADB to ensure correctness, harmonization and compliance with the relevant regulations.