



Report and Recommendation of the President to the Board of Directors

Project Number: 45023
July 2013

Proposed Loan
People's Republic of China: Hubei–Yichang
Sustainable Urban Transport Project

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 10 July 2013)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.163145
\$1.00	=	CNY6.1295

ABBREVIATIONS

ADB	–	Asian Development Bank
BRT	–	bus rapid transit
EIA	–	environmental impact assessment
EMP	–	environmental management plan
GAP	–	gender action plan
LIBOR	–	London interbank offered rate
NMT	–	nonmotorized transport
PAM	–	project administration manual
PMO	–	project management office
PRC	–	People's Republic of China
YMG	–	Yichang municipal government
YMUCID	–	Yichang Municipal Urban Construction Investment and Development

GLOSSARY

CO ₂	–	carbon dioxide
mu	–	Chinese unit of measurement equivalent to 666.67 square meters
m ²	–	square meters
tCO _{2e}	–	tons of CO ₂ equivalent

NOTE

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

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PROJECT AT A GLANCE

1. Project Name: Hubei–Yichang Sustainable Urban Transport Project		2. Project Number: 45023-002	
3. Country: China, People's Republic of		4. Department/Division: East Asia Department/Transport and Communications Division	
5. Sector Classification:			
		Sectors	Primary
		Transport, and information and communication technology	√
		Subsectors	
		Urban transport	
6. Thematic Classification:			
		Themes	Primary
		Economic growth	√
		Subthemes	
		Promoting economic efficiency and enabling business environment	
		Urban environmental improvement	
6a. Climate Change Impact No Climate Change Indicator available.		6b. Gender Mainstreaming	
		Gender equity theme (GEN)	
		Effective gender mainstreaming (EGM)	√
		Some gender benefits (SGB)	
		No gender elements (NGE)	
7. Targeting Classification:		8. Location Impact:	
	Targeted Intervention		
General Intervention	Geographic dimensions of inclusive growth	Millennium development goals	Income poverty at household level
√			
		Regional	Low
		Urban	High
9. Project Risk Categorization: Complex			
10. Safeguards Categorization:			
		Environment	A
		Involuntary resettlement	A
		Indigenous peoples	C
11. ADB Financing:			
	Sovereign/Nonsovereign	Modality	Source
	Sovereign	Project loan	Ordinary capital resources
	Total		150.0
12. Cofinancing:			
Cofinancing is not required			
13. Counterpart Financing:			
Source		Amount (\$ Million)	
Yichang Municipal Government		154.5	
China Development Bank		210.6	
Total		365.1	
14. Aid Effectiveness:			
Parallel project implementation unit		No	
Program-based approach		No	

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the People's Republic of China (PRC) for the Hubei–Yichang Sustainable Urban Transport Project.¹

2. The project will (i) establish a bus rapid transit (BRT) corridor in Yichang city, Hubei province, (ii) support nonmotorized transport (NMT) along the BRT corridor, (iii) construct an urban bypass road, and (iv) strengthen institutional capacity. This will contribute to inclusive growth and environmentally sustainable development by improving the efficiency and sustainability of urban transport and promoting more efficient freight logistics.

II. THE PROJECT

A. Rationale

3. The urban population of the PRC amounted to 690.79 million in 2011, or 51.3% of the total population. Since 1978, the PRC's urban population had increased by more than 500 million (and another 300 million people are expected to move to cities by 2020). Such a huge rural–urban migration was unprecedented. Millions of rural peasants became urban residents, which enabled a major shift in the economy from agriculture to manufacturing and service employment, contributing to rapid economic growth and rising per capita incomes. As a result of this massive migration, there is a need to expand second-tier cities to relieve pressure on first-tier urban centers and provide efficient access to economic activities. Large investments are needed in urban infrastructure and service provision. A critical task is to develop sustainable urban transport systems that will give all urban residents access to centers of employment and services, and do so in a way that is convenient, affordable, efficient, safe, and clean.

4. The central region of the PRC, where Hubei province is located, has become a major center for energy production, agricultural processing, and high-technology manufacturing.² Large hydropower facilities at Three Gorges Dam and Gezhou Dam provide low-cost energy. The region has also developed as a transportation and logistics hub. Yichang benefits from recent investments in railway infrastructure, including a new high-speed rail service, and road network expansion. New and expanded terminal facilities for waterborne traffic on the Yangtze River further enhance regional connectivity and development. However, due to limitations in ship-lock capacity at Three Gorges Dam and Gezhou Dam, additional road investments are needed to support road-based transfer of goods between the upstream and downstream sides of the dam (pass-dam transshipment).³

5. Yichang is a prefecture-level city, the second-largest city in Hubei province after Wuhan, the provincial capital. Yichang has a total population of 4.1 million, of which 1.4 million is urban. The urbanization rate of about 32% at the end of 2011 was well below the national average of 51.3%. Yichang's urban population is forecast to increase to 2.8 million by 2030 due to continuing migration. Major investments are needed in urban infrastructure, transport, and related services to accommodate the growing population and support sustainable urbanization and inclusive growth.

¹ The design and monitoring framework is in Appendix 1.

² In 2011, the secondary industry contributed 60.6% to Yichang's gross domestic product, the tertiary industry contributed 28.2%, and the primary industry contributed 11.2%.

³ Pass-dam transshipment is the shipping of goods or containers by road or rail to an inland waterway port upstream or downstream of a dam to bypass the ship lock or ship-lifting facilities at the dam.

6. **Urban transport.** Yichang has a linear urban form running east–west along the Yangtze River valley. Most of the city is located on the north bank of the river, with three primary urban arterial roads running in parallel to each other. Interregional traffic movements flow through the urban area. About 75% of all person-trips are made with private means of transport and are mainly concentrated in the central business district. While there is a bus priority system in the form of curb-side bus lanes, this has been less effective due to encroachment by illegal parking and hawker activities, among others. There is also lack of enforcement of traffic regulations. In view of the rapid growth of car ownership⁴ and limited land available for expansion of the urban area, the city will experience congestion, increasing road accidents, and vehicle emissions-related air quality problems unless a more sustainable approach to transport is established.

7. International best practice indicates that one of the key elements in a sustainable transport system is to improve public transport and make it an attractive option for travelers. In the PRC, bus-based public transport and NMT have received less attention than road building. The mode shares of public transport and NMT are well below potential levels, and there is growing dependency on private vehicles. The present public transport system of Yichang will not be able to cope with future travel demand, and the city's NMT facilities are unable to provide a safe environment for pedestrians and bicycle users. An affordable, efficient public transport system coupled with safe, attractive NMT should be introduced. In most medium-sized cities and many large cities, BRT represents the best, most cost-effective, and most flexible option for public transport.⁵ Yichang's linear form is very well suited for BRT, which can begin by establishing a core BRT corridor connecting the new railway station and provincial bus terminal, and then be extended in phases. As part of ongoing efforts to improve urban planning in Yichang, there is an opportunity to introduce safe, seamless NMT routes for cyclists and pedestrians. Investments in BRT and NMT could well boost the share of public transport and reverse the decline of NMT. There is potential for Yichang to become a model for BRT and NMT development in medium-sized cities in the PRC.

8. **Pass-dam transshipment freight.** Three Gorges Dam is a major part of the Yichang economy, and growth in associated freight transport has become a challenge for the transport system in Yichang. The bi-directional freight volume of the Three Gorges ship lock reached 90 million tons in 2010 and is projected to reach 185 million tons in 2020 and 248 million tons in 2030. Due to limitations in ship-lock capacity, the portion of traffic requiring pass-dam transshipment could increase from 12.4 million tons in 2010 to 85 million tons in 2020, and 148 million tons in 2030. A bypass road is therefore needed to handle this traffic growth without causing congestion and traffic safety problems in the city center area. In addition, it is necessary to reinforce the logistics hub function of Yichang by improving access to the logistics parks and developing manufacturing facilities. More efficient access to logistics facilities and increased pass-dam transshipment capacity will contribute to stronger use of inland waterways, which is the most economical and environmentally friendly mode of freight transport.

9. **Strategic fit.** The project is in line with the Asian Development Bank (ADB) country partnership strategy, 2011–2015 for the PRC. It will (i) support inclusive growth and balanced development by promoting sustainable urbanization and (ii) contribute to resource efficiency and environmental sustainability by promoting efficient and sustainable urban transport.⁶ The focus

⁴ From 2007 to 2008, the vehicle fleet increased by 14.7%, compared with a gross domestic product per capita increase of 14.6%.

⁵ The first line, Guangzhou BRT, was put into operation on 10 February 2010. It handles nearly 1 million passenger trips daily with a peak passenger flow of 29,900 passengers per hour per direction (second only to the TransMilenio BRT system in Bogota, Colombia).

⁶ ADB. 2012. *Country Partnership Strategy: People's Republic of China, 2011–2015*. Manila.

on public transport and multimodal integration directly supports ADB's Sustainable Transport Initiative. The project aligns with the development plan of the Three Gorges Modern Logistics Center,⁷ a key priority of the National Development and Reform Commission under the 12th five-year plan.

10. This is ADB's third project to support BRT in the PRC, after the Lanzhou Sustainable Urban Transport Project⁸ and Jiangxi Fuzhou Urban Integrated Infrastructure Improvement Project.⁹ It incorporates lessons learned in developing and implementing those projects. A key lesson is that when developing BRT and NMT, careful attention to design is essential to optimize system configuration and capacity to best serve user needs. An integrated approach is needed for BRT design and NMT development, including careful coordination between BRT design, traffic management, and urban planning. Due to the specialized nature of BRT system planning, design, and operations, it is useful to include a program of institutional strengthening and capacity building for the municipal bus company, project management office (PMO), and the traffic police.

11. The BRT corridor in Yichang will serve all the major districts and major public transport facilities, including the new high-speed railway station and provincial bus terminals. The project represents a new concept for small and medium-sized cities that links urban development to the expansion of public transport. This project will be a model for sustainable transport development that can be replicated in the PRC and across Asia.

B. Impact and Outcome

12. The impact of the project will be an efficient, inclusive, and sustainable transport system in Yichang. The outcome will be the provision of efficient passenger and freight transport.

C. Outputs

13. **Output 1: Bus rapid transit system.** A 23.9 kilometer (km) BRT system will be implemented in the median of the main arterial road in Yichang. Services will operate from the provincial bus terminal in Yiling district, extend along the Yixing Avenue–Yemingzhu Road–Dongshan Avenue–Jucheng Road, and end at Yichang East railway station. The route will connect the main residential and business districts with the city's new logistics and industrial park and the high-speed railway station. The BRT will include dedicated, center-running bus lanes, fully enclosed BRT stations, a bus management system and bus information system, a fare collection system, and parking management along the BRT corridor.

14. **Output 2: Nonmotorized transport measures.** Pedestrian and bicycle facilities (bicycle lane and bicycle parking) will be implemented along the BRT corridor and at key intersections. This will help improve accessibility and safety for bus passengers and other NMT users.

⁷ In May 2010, the Comprehensive Transportation Study Office of the National Development and Reform Commission completed the *Development Plan for the Three Gorges Modern Logistics Center*. The plan includes nine comprehensive logistics park areas and an urban distribution center in Yichang (including Huayan Comprehensive Logistics Park Area, Taipingxi Logistics Park Area, Maoping Logistics Park Area, Yunchi Logistics Park Area, Honghuatao Logistics Park Area, and Three Gorges Airport Logistics Park Area). The logistics parks are selected to support the development of Three Gorges Logistics Center and expand logistics operational capacity by creating an efficient multimodal logistics network through ports, railway, roads, and the airport.

⁸ The project includes 12.4 kilometers (km) of BRT corridor development. The initial phase of BRT operations commenced in December 2012.

⁹ The Jiangxi-Fuzhou Urban Integrated Infrastructure Improvement Project includes 12.2 km of BRT development and an urban transport hub at new high-speed railway station.

15. **Output 3: Road network improvement.** This will build a 23.4 km extension of Dongshan 4th Road to accommodate through-traffic and freight traffic, including pass-dam transshipment. The road comprises (i) improvement of 12.3 km of Fazhan Avenue–Bailinhe Road Section (phase 1) to a road width of 44–70 meters (m); and (ii) improvement of the 11.1 km Bailinhe Road to Xianfeng Road (phase 2) to class 1 highway, with a road width of 24.5 m. The output includes 11 bridges and two tunnels.

16. **Output 4: Capacity building and quality assurance.** This will (i) support project management and implementation to ensure that project outputs are delivered on time and within budget in accordance with ADB policies and procedures, develop and maintain the project performance monitoring system, and assist with procurement and disbursement; (ii) support detailed design review and safeguard implementation, monitoring, and reporting; and (iii) build capacity in traffic management, road safety, and BRT operation and management.

D. Investment and Financing Plans

17. The estimated cost of the project is \$515.1 million (Table 1).

Table 1: Summary of Project Cost

Item	Amount		Share of Total (%)
	(CNY million)	(\$ million)	
A. Base Cost^a			
1. Bus rapid transit and nonmotorized transport	1,596.73	260.5	50.6
2. Road network improvement	1,053.66	171.9	33.4
3. Capacity building and quality assurance	12.26	2.0	0.4
Subtotal (A)	2,662.65	434.4	84.3
B. Contingencies^b	419.87	68.5	13.3
C. Financing Charges During Implementation^c	74.78	12.2	2.4
Total (A+B+C)	3,157.31	515.1	100.0

^a Includes taxes and duties of \$16.07 million, which will be partly financed by the Asian Development Bank (ADB) loan. The amount of taxes and duties follows the principles set out in para. 9 of the Operations Manual H3/OP.

^b Physical contingencies are computed at 8.0%. Price contingencies are computed by year and expenditure type based on cumulative domestic and foreign price inflation assumptions and amount to 7.8% of the base cost.

^c Includes interest charges during implementation and commitment charges. Interest on the loan during implementation has been computed at the 5-year US dollar fixed swap rate plus a spread of 0.4% and a maturity premium of 0.2%. Commitment charges for the ADB loan are computed at 0.15% per year on the projected undisbursed loan amount.

Source: Asian Development Bank.

18. The government requested a loan of \$150.0 million from ADB's ordinary capital resources to finance 29.1% of the project cost. The loan will have a 25-year term, including a grace period of 5 years; an interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a commitment charge of 0.15% per year; and such terms and conditions as may be set forth in the draft loan and project agreements.¹⁰ ADB's loan will cover civil works, equipment, capacity building and quality assurance, and taxes and duties on the expenditures financed by ADB.¹¹ The Yichang municipal government (YMG) will provide \$365.1 million, including 154.5 million from the municipal budget and 210.6 million borrowed

¹⁰ Interest includes a maturity premium of 0.20%. This is based on the above loan terms and the government's choice of repayment option and dates.

¹¹ Regarding taxes and duties: (i) the amount to be financed by the ADB loan, which represents 3.192% of the project cost, does not represent an excessive share of the project; (ii) these apply only with respect to ADB-financed expenditures; and (iii) the financing of the taxes and duties is relevant to the success of the project.

from a domestic bank, to finance civil works, resettlement, detailed design, supervision, and contingencies.

19. The borrower will be the PRC. The government will make the loan proceeds available to the Hubei provincial government, which will relend them to the YMG. The YMG will transfer the loan proceeds and government counterpart funds to Yichang Municipal Urban Construction Investment and Development (YMUCID). The YMG will assume the risk of foreign exchange and interest rate variation for the ADB loan. The government has provided ADB with (i) the reasons for its decision to borrow under ADB's LIBOR-based lending facility based on these terms and conditions, and (ii) assurance that these choices were its own independent decision and not based on any communication or advice from ADB. The financing plan is in Table 2.

Table 2: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank	150.0	29.1
Yichang municipal government	154.5	30.0
Domestic bank (China Development Bank)	210.6	40.9
Total	515.1	100.0

\$1.00 = CNY6.1295.

Source: Asian Development Bank estimates.

E. Implementation Arrangements

20. The executing agency is the YMG, the implementing agency is YMUCID. Advance contracting and retroactive financing have been requested. The implementation arrangements are summarized in Table 3 and described in detail in the project administration manual (PAM).¹²

Table 3: Implementation Arrangements

Aspects	Arrangements		
Implementation period	August 2013–June 2018		
Estimated completion date	30 June 2018 (Loan closing date: 31 December 2018)		
(i) Oversight body	Yichang municipal project leading group Vice-Mayor, YMG (chair) Heads of all municipal agencies concerned (members)		
(ii) Executing agency	YMG		
(iii) Implementing agency	YMUCID		
Procurement	International competitive bidding	Nine contracts	\$311.08 million
Consulting services	QCBS	136 person-months	\$1.80 million
	CQS	28 person-months	\$0.2 million
Retroactive financing and/or advance contracting	The YMG has requested advance contracting and retroactive financing for road contracts and consulting services incurred no earlier than 12 months before signing of the loan agreement. The amount to be retroactively financed will not exceed 20% of the loan amount.		
Disbursement	The loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.		

ADB = Asian Development Bank, CQS = consultant's qualification selection, QCBS = quality- and cost-based selection, YMG = Yichang municipal government.

Source: Asian Development Bank.

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

III. DUE DILIGENCE

A. Technical

21. Technical due diligence confirmed that the project is economically viable and technically feasible, with technology choices based on efficient and proven designs. The capacity of the YMG is considered adequate to implement the project's advanced technical and sustainable transport aspects, based on its performance in past and ongoing urban transport development projects.¹³

B. Economic and Financial

22. The economic analysis compared the "with-project" case of introducing BRT service and road improvement against the "without-project" case of existing public transport services and road facilities. The estimated costs include investment in civil works and equipment, land acquisition and resettlement, and operation and maintenance. BRT will enable faster bus operating speeds and shorten passenger transport times. The project road improvement will increase road capacity, leading to faster vehicle speeds, shortened transport time, and fewer road accidents. The estimated benefits include savings in vehicle operating cost and travel time, traffic and pedestrian safety benefits, and a reduction in carbon dioxide (CO₂) emissions. The project is economically viable, with an estimated economic internal rate of return of 17.8% and net present value of CNY1,334.63 million at a 12.0% discount rate. Sensitivity analysis of potential cost overruns and benefit reductions demonstrates that project economic viability is robust. Other benefits that could not be quantified include health benefits thanks to better air quality, and better quality of life thanks to more convenient transportation.

23. The project has both revenue-earning and nonrevenue outputs. The road network improvements are not revenue-earning. The BRT output will generate revenue through the collection of bus fares from passengers. The ticket revenue of the BRT will exceed the operating and maintenance cost of the BRT component. The estimated financial internal rate of return for the BRT component is 4.8% before corporate income tax and 2.7% after tax.¹⁴ As the financial internal rate of return after tax is higher than the weighted average cost of capital of 2.56%, the BRT component is financially viable. The executing agency will periodically review and update fares to ensure that these are sufficient to meet the cost of service provision and are affordable for poor and vulnerable groups.

C. Governance

24. All procurement to be financed under the ADB loan will be carried out in accordance with ADB Procurement Guidelines (2010, as amended from time to time). The relevant sections of ADB's Anticorruption Policy (1998, as amended to date) will be included in all procurement documents and contracts. ADB's Anticorruption Policy was explained to and discussed with the government, the executing and implementing agencies, and the PMO. Specific policy requirements and supplementary measures are described in the PAM (footnote 12). An assessment of financial management capacity indicates that the implementing and executing agencies carefully follow PRC policies and procedures for accounting and financial management. The implementing agency has strong accounting and financial management

¹³ Project Technical Description (accessible from the list of linked documents in Appendix 2).

¹⁴ The business tax for transport entities is 3.36% of sales, and the corporate income tax for all businesses is 25.00% of profit.

capacity, as well as experience in managing multiple large construction projects such as Yichang Logistics Center and Xioting Wastewater Treatment Plant.

D. Poverty and Social

25. Conducted in accordance with ADB guidelines, a poverty and social impact analysis aimed at assessing transport and economic development needs of the people in the project-affected area. Urban traffic decongestion, safe and convenient public transport facilities, and road connectivity for neighboring rural areas are main transport requirements of the local people. The causes of poverty include lack of economic and employment opportunities, illness, and disability. The project will benefit 1.3 million people, both urban and rural. Within the project area, there are 32,673 urban poor and 39,100 rural poor. The project will endeavor to meet the transport and economic development needs of people by mitigating traffic congestion, improving traffic efficiency and safety, reducing travel time, improving public transit facilities, and enhancing access to nonfarm employment and markets. People from low-income groups will get priority for job opportunities created during construction and operation of the project.

26. The project will facilitate the development of a sustainable transport system to meet the transport needs of Yichang city as it continues to expand rapidly. A large number of urban residents, including women and poor, are dependent on public transport. The proposed project will provide them with a convenient and efficient mode of transportation to meet their everyday requirements. The inclusive aspect of the project is strengthened by the NMT output, which will provide pedestrians and cyclists with a dedicated, safe right-of-way within the city's main traffic corridor. The extended Dongshan 4th Road will also serve the transport and economic development needs of rural neighborhoods of the city.

27. **Gender.** The project is designed with distinct gender-sensitive features to boost women's inclusion and participation. All four project outputs include features that go toward meeting gender-specific transport and economic development needs of the project beneficiary population. The poverty and social assessment (PSA) indicated that 51% of women use public transport as the main mode of transportation, and 31% rely on walking. Women have particular transport needs arising from their various social roles and patterns of mobility. They also have personal safety concerns when using public transport. These gender-related concerns have been dealt with in the project design to ensure that women benefit from an urban transport system that is safe and convenient. A gender action plan (GAP) has been prepared to (i) ensure women's equitable participation in public consultation, (ii) implement the gender-responsive features of the project, (iii) promote employment opportunities for women, and (iv) build institutional capacity for gender mainstreaming.¹⁵ Implementation of the GAP will be financed from the project budget and will be monitored through collection of sex-disaggregated data.

E. Safeguards

28. **Environment.** The project is classified as environment category A. An environmental impact assessment (EIA) report and environmental management plan (EMP) that comply with ADB Safeguard Policy (2009) and PRC regulatory requirements have been prepared for the project and were disclosed on the ADB website on 14 December 2012. The EIA concludes that anticipated environmental impacts and risks are modest and can be limited to an acceptable level through the implementation of the EMP and compliance with loan covenants. Capacity development and institutional strengthening are proposed to minimize environmental risks. The

¹⁵ Gender Action Plan (accessible from the list of linked documents in Appendix 2).

EMP assesses potential impacts of the project components, sets out mitigation and monitoring measures, institutional arrangements, training requirements, and budgets for implementation of the EMP. The budget for implementation of the EMP is \$2,978,250. This includes \$2,881,500 for mitigation measures, \$80,000 for environmental monitoring, \$9,600 for training and capacity development, and \$7,150 for public consultation.

29. The BRT corridor will be constructed in an urban center that already experiences high noise, and pollutants and CO₂ emissions from traffic. Modelling indicates that the introduction of BRT will reduce daytime noise and CO₂ emission levels as a result of smoother traffic flow. Dongshan 4th Road is in a semi-urban setting and construction will result in permanent loss of 101.52 hectares of plantation, patchy woodland, and artificial ponds of limited biodiversity value. Dongshan 4th Road will divert heavy traffic from the city and contribute to a reduction in noise, pollutants, and CO₂ emissions in the urban center. During construction, activities that generate dust and noise have the potential to disturb residents and businesses along both the BRT corridor and Dongshan 4th Road, and these will be subject to controls as specified in the EMP. Tunneling and bridge works present environmental, occupational, and community safety risks, and will be subject to specific controls. The project will provide double-glazing for all households along the BRT corridor and Dongshan 4th Road that are predicted to experience noise levels in excess of the PRC noise standards for the assessed operational years (2018 to 2030). Two households will be resettled as a result of operational noise impacts of Dongshan 4th Road. Public consultation was carried out to discuss the project design and EIA process and will continue throughout project implementation. Environmental complaints or disputes will be handled through a grievance redress mechanism established for the project.

30. **Resettlement.** The project is category A for involuntary resettlement.¹⁶ The resettlement impacts of the project include land acquisition in rural areas and demolition of rural and urban houses and urban commercial structures (shops). Nine villages and one urban neighborhood in Yichang city will be affected. The total permanent land acquisition is 1,797.5 *mu*. Demolition will involve 56,106.60 square meters (m²) of residential structures. Together, land acquisition and demolition will affect 1,453 persons in 370 households. The project will also involve demolition of 325 m² of shops along the BRT corridor that will affect 25 persons in nine shops. The project will temporarily occupy 528.59 *mu* of land.

31. A draft resettlement plan has been prepared in accordance with ADB's Safeguard Policy Statement (2009) and adequately assesses the involuntary resettlement impacts of the project. The draft resettlement plan has been disclosed to the affected persons and on the ADB website. The plan will be finalized in line with the detailed engineering design and detailed measurement survey, disclosed to the affected people, and submitted to ADB for approval before awarding civil works contracts. The total cost of land acquisition and resettlement is CNY463.4 million (14.5% of total project cost). The YMG has assured ADB that adequate counterpart funding will be made available. A resettlement implementation schedule has been prepared. The YMG has relevant experience; nonetheless, some capacity development support for safeguards implementation is included in the project. A resettlement specialist will be engaged to assist in implementing the resettlement plan. The PMO's land acquisition and resettlement unit will coordinate internal supervision and reporting of plan implementation. The YMG will engage an external institute for semiannual monitoring and reporting. An acceptable grievance resolution mechanism will be established before starting the civil works, to deal with project-related grievances. Public consultations were undertaken during project preparation and will continue throughout the project cycle in accordance with the public consultation schedule.

¹⁶ Resettlement Plan (accessible from the list of linked documents in Appendix 2).

32. **Indigenous peoples.** There are no ethnic minority communities that will be adversely affected by the project, which is category C for indigenous peoples.

F. Risks and Mitigating Measures

33. The project is formulated to minimize potential risk. The YMG and YMUCID have successfully carried out many large infrastructure projects and have substantial experience in project implementation and management but no experience with ADB-financed projects. To counteract the lack of experience with ADB procedures, training on ADB safeguards and project procurement and monitoring procedures was provided during project preparatory technical assistance.¹⁷ An estimated 153 person-months of consulting services will be provided to strengthen project management and support project implementation. Major risks and mitigating measures are summarized in Table 4 and described in detail in the risk assessment and risk management plan.¹⁸

Table 4: Summary of Risks and Mitigating Measures

Risks	Mitigating Measures
1. Initial delay in implementation	Advance action on consultant recruitment for detailed design for the road, BRT, and NMT outputs. Timely environmental clearance for the project. Effective coordination between bureaus of the government, Hubei province, and the executing agency to ensure that the project loan becomes effective without delay.
2. Shortcomings in public financial management	Internal and external audit in accordance with national requirements and auditing standards acceptable to ADB. The executing and implementing agencies will include suitably qualified staff. An implementation consultant will support the two agencies and the PMO in financial management and reporting. External auditors accepted by ADB will annually verify implementation of the financial management system.
3. Lack of ADB project experience	Consulting services for financial capacity building will assist the executing agency, implementing agency, and tendering agency in (i) disbursement procedures, (ii) project accounting, (iii) strengthening of internal audit function, and (iv) budgeting as required by ADB. Staff training for financial management and disbursement will be provided. A tendering company will be engaged to support procurement of all packages financed by ADB. Staff involved will receive training on ADB procurement procedures during project preparation and implementation via the capacity building component.
4. Delays in land acquisition approvals, and house demolition and relocation, affect project implementation progress.	Compensation funds will be made available to affected persons early in project implementation. Resettlement plan implementation will be carefully monitored. There will be consultations with affected persons. Social safeguards management will be strengthened through institutional capacity building.
5. Weaknesses in project coordination between agencies delay project implementation.	Project management consulting service will provide support for coordination. Project implementation to be monitored closely through site inspections, and regular coordination meetings to be conducted with the PMO, executing agency, implementing agency, and other agencies. Quality assurance consultant will be engaged from detailed design stage
6. Lack of BRT management and operational experience	Government bureaus, the executing agency and implementing agency will receive capacity building on BRT systems, including operation and maintenance. Training courses will be provided to improve the implementing agency's knowledge of BRT, bus management systems, bus information systems, and ticketing system operation.

¹⁷ ADB. 2010. *Technical Assistance to the People's Republic of China for the Jiangxi Fuzhou Urban Integrated Infrastructure Improvement Project*. Manila.

¹⁸ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

Risks	Mitigating Measures
7. Failure to monitor environmental impacts and to implement the EMP	Measures include (i) providing training in environmental management under the project; (ii) appointing qualified project implementation consultants; (iii) following appropriate project implementation monitoring and mitigation arrangements; (iv) ADB conducting regular project reviews; and (v) project assurances covenanted in the loan and project agreement with ADB.

ADB = Asian Development Bank, BRT = bus rapid transit, EMP = environmental management plan, NMT = nonmotorized transport, PMO = project management office, YMG = Yichang municipal government.
 Sources: Asian Development Bank.

IV. ASSURANCES AND CONDITIONS

34. The government and the YMG have assured ADB that implementation of the project shall conform to all applicable ADB policies, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the PAM and loan documents.

35. The government and the YMG have agreed with ADB on certain covenants for the project, which are set forth in the loan agreement and project agreement.

V. RECOMMENDATION

36. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of \$150,000,000 to the People’s Republic of China for the Hubei–Yichang Sustainable Urban Transport Project, from ADB’s ordinary capital resources, with interest to be determined in accordance with ADB’s London interbank offered rate (LIBOR)-based lending facility; for a term of 25 years, including a grace period of 5 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft loan and project agreements presented to the Board.

Takehiko Nakao
 President

26 July 2013

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact Efficient, inclusive, and sustainable transport system in Yichang</p>	<p>By 2020: Bus passenger annual ridership increased by 30% (Baseline: 179.1 million in 2011)</p> <p>By 2020: Pass-dam transshipment freight increased by 25% from 2011</p> <p>Average concentration of CO₂ in air of Yichang will stay at current level in 2020 (around 5,300 tCO₂e in 2011)</p>	<p>Fare collection system data and statistics</p> <p>Yichang Statistical Yearbook</p> <p>Yichang Statistical Yearbook</p>	<p>Assumptions Yichang Urban Master Plan (2005–2020) implemented</p> <p>Strong government commitment to promote public transport system</p> <p>Bus service levels increase with population and economic growth</p> <p>Risk City economic growth slows more drastically than expected</p>
<p>Outcome Efficient passenger and freight transport</p>	<p>By 2018: Bus traffic speed increased to 25 km/h from 15 km/h in 2011 on BRT corridor</p> <p>By 2018: Passenger travel time reduced to 10 minutes on average, from 20 minutes in 2011</p> <p>By 2018: Freight travel time between inland ports and logistics centers reduced by 20% from 2011</p> <p>By 2018: Pass-dam transshipment freight travel time to logistics centers reduced to 1 hour, from 2 hours in 2011</p>	<p>Bus management system data</p> <p>Bus management system data</p> <p>Survey</p> <p>Survey</p>	<p>Assumptions BRT implementation is completed as planned and scheduled.</p> <p>Dongshan 4th Road construction is completed as planned and scheduled.</p> <p>Risks Delay in optimizing BRT operation due to lack of operational experience</p> <p>Delay in completing connecting roads</p>
<p>Outputs</p> <p>1. Bus rapid transit system</p> <p>2. Nonmotorized transport measures</p>	<p>By 2017: 23.9 km BRT system operating</p> <p>Priority seating for people with special needs (pregnant women, children, elderly, and disabled) in all BRT buses</p> <p>By 2017: Parking management measures for BRT corridor provided</p> <p>Employment targets for women: 20% unskilled construction jobs, 20% BRT drivers, 50% ticketing, fare collection, and administrative work</p> <p>By 2017: Pedestrian and bicycle facilities provided along BRT corridor</p> <p>By 2017: Bicycle sharing stations built along BRT corridor</p>	<p>Project progress reports</p> <p>Project progress reports</p> <p>Project progress reports</p> <p>Project progress reports Executing agency, consultant, and monitoring reports</p> <p>Project progress reports</p> <p>Project progress reports</p>	<p>Assumption Timely provision of counterpart funds</p>
<p>3. Road network improvement</p>	<p>By 2017: 23.4 km of new urban road constructed (i) improvement of 12.3 km of Fazhan Avenue–Bailinhe road section (phase 1) to a road width of 44–70 m; and</p>	<p>Project progress reports</p> <p>Executing agency, consultant, and monitoring reports</p>	

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
	(ii) improvement of the 11.1 km Bailinhe–Xianfeng road (phase 2) to class 1 highway, with road width of 24.5 m. The output includes 11 bridges and two tunnels. Women obtain at least 20% unskilled construction and post-construction jobs.	Project progress reports Executing agency, consultant, and monitoring reports Project progress reports	
4. Capacity building and quality assurance	Staff from the executing agency and the implementing agency are trained on project management and implementation by 2016. Agencies in Yichang concerned with traffic management, road safety, and BRT operation and management are trained by 2016. BRT bus drivers and conductors are trained on safety needs of women by 2016. Key staff from the executing agency and implementing agency are trained on GAP implementation by 2017.	Project progress reports Project progress reports Project progress reports	
Activities with Milestones		Inputs	
1. Bus rapid transit system		ADB: \$150 million	
1.1 Construction of BRT route, station, terminal, and parking area by June 2015		Item	Amount (\$ million)
1.2 Implementation of BRT traffic engineering work by December 2015		Investment cost	150.0
1.3 Installation of BRT station ticketing system, operation system by December 2015		Contingencies	0.0
1.4 Construction of landscaping along BRT corridor by June 2016		Financial charges during implementation	0.0
1.5 Trial operation of BRT from June to December 2016		Total	150.0
1.6 Preparation of parking management plan along BRT corridor by June 2016		Yichang municipal government: \$154.5 million	
1.7 Implementation of parking management measures for by June 2017		Item	Amount (\$ million)
2. Nonmotorized transport measures		Investment cost	114.9
2.1 Construction of bicycle lane along BRT by June 2016		Contingencies	27.4
2.2 Construction of bicycle sharing station along BRT corridor by June 2016		Financial charges during implementation	12.2
2.3 Intersection traffic safety measures implemented by 2015 along BRT corridor		Total	154.5
3. Road network improvement		China Development Bank: \$210.6	
3.1 Construction for Dongshan 4th Road by June 2017		Item	Amount (\$ million)
3.2 Implementation of traffic engineering for Dongshan 4th Road by June 2017		Investment cost	169.5
3.3 Landscaping for Dongshan 4th Road by December 2017		Contingencies	41.1
4. Capacity building and quality assurance		Financial charges during implementation	0.0
4.1 Recruitment of international consulting firm by September 2013		Total	210.6
4.2 Training for staff of the executing and implementing agencies and PMO on project management, PPMS, procurement, disbursement, and safeguards requirements by December 2016			
4.3 Training of concerned agencies in Yichang on traffic management, road safety, and BRT operation and management by December 2016			
4.4 Training of BRT bus drivers and conductors on women's safety needs by June 2016			
4.5 Implementation of EMP, Resettlement Plan, GAP, and SDAP by June 2017			

BRT = bus rapid transit, EMP = environmental management plan, GAP = gender action plan, km = kilometer, km/h = kilometer per hour, m = meter, NMT = nonmotorized transport, PMO = project management office, PPMS = project performance management system, SDAP = social development action plan, tCO₂e = tons of CO₂ equivalent.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=45023-002-3>

1. Loan Agreement
2. Project Agreement
3. Sector Assessment (Summary): Transport, and Information and Communication Technology
4. Project Administration Manual
5. Contribution to the Output Aggregates of the ADB Results Framework
6. Development Coordination
7. Financial Analysis
8. Economic Analysis
9. Country Economic Indicators
10. Summary Poverty Reduction and Social Strategy
11. Gender Action Plan
12. Environmental Impact Assessment
13. Resettlement Plan
14. Risk Assessment and Risk Management Plan

Supplementary Documents

15. Project Technical Description
16. Summary Travel Demand Forecasts
17. Financial Management Assessment