

## Ex-ante Evaluation

### 1. Name of the Project

Country: The Socialist Republic of Viet Nam

Project: Nhat Tan Bridge (Viet Nam-Japan Friendship Bridge) Construction Project (II)

L/A signed on: January 24, 2011

L/A Amount: ¥24,828 million yen

Borrower: The Government of the Socialist Republic of Viet Nam

### 2. Background and Necessity of the Project

#### (1) Current state and Issues of the Transportation and Road Sector in Viet Nam

Viet Nam's core transportation system includes roads, railways, inland transportation by water, overseas and coastwise shipping, and air transportation. Backed by recent economic growth, the country's cargo and passenger transportation is rapidly and drastically growing. The roads play a central role in the country's transportation system, accounting for nearly 70% of the cargo and 90% of the passenger transportation as of 2008.

Though road development has been particularly prioritized in transport sector, budget constraints have prevented the road sector from becoming fully developed to meet the increased traffic volume caused by the country's recent rapid economic growth.

As the nation's capital, Hanoi continues to enjoy burgeoning economic development, recording 10.1% increase in GDP from the previous year in the first half of 2010. With this rapid economic development in recent years, the number of motorcycles registered in the city as of 2007 had grown to 1.1 million and automobiles to 130,000, 130 percent growth over 2001. These factors and the mixed traffic have brought the traffic congestion in Hanoi city. There are only few bridges across the Red River, which divides Hanoi city into two. Due to lack of bridges to cross the river, freight vehicles which should avoid the center of the city have no choice but to pass straight through the center of the city. This has been increasing the urban congestion.

Given these conditions, building a new bridge across the Red River and improving the ring road bypassing the center of Hanoi city are urgent issues. Inefficient access to the central urban areas on the south side of the Red River and newly developed areas on the north side are causing transportation bottlenecks.

#### (2) Development Policy for the Transport/Road Sector in Viet Nam and the Priority of the Project

The Viet Nam government has prioritized the repair and new construction of roads under its Five-Year Socio-Economic Development Plan 2006-2010. The Development

Strategy of Transportation and Traffic Sector 2030 stresses the importance of improving major roads in large cities, Hanoi and Ho Chi Minh city in particular. Taking place in Northern Hanoi, this project has high priority under the Hanoi Transportation Development Master Plan up to 2020.

(3) Japan's and JICA's country assistance program and achievements in the transport/road sector

The Country Assistance Program for Viet Nam, which was formulated in July 2009 by the Government of Japan, indicates that "Japan's support will also be extended to both physical and knowledge-based infrastructure related to the development of public transportation (e.g. urban ring roads, inner-city and surrounding bypass roads, and other networks and inner-city mass transit systems) and communications networks". Since this project aims to streamline logistics and mitigate traffic congestion in Hanoi, it is considered relevant to the Program. Further, JICA has defined its goal to improve arterial transport networks as a part of four assistance priority areas as per Rolling Plan, "Urban development, network development for transportation and communications". Loans for the first phase were approved by JICA in 2005 (Loan Agreement signed in March 31, 2006, amounted 13,698,000,000 yen). In connection with this project, the "Noi Bai International Airport to Nhat Tan Bridge Connecting Road Construction Project" was approved in 2009, aiming to link the existing central urban area on the south side of the Red River with the newly developed area on the north side.

(4) Assistance by Other Aid Organizations

- i. World Bank: wide-ranging assistance is underway for national roads, local roads, inland transportation by water, and urban transportation
- ii. Asian Development Bank (ADB): provides assistance such as the Greater Mekong Subregion Regional Cooperation Program, including the Kunming-Hai Phong Transport Corridor and Noi Bai-Lao Cai Highway Project.

(5) Necessity of the Project

This project is highly relevant with Japan and JICA's priority areas. Therefore, this project has high necessity and relevancy.

### **3. Project Description**

(1) Project Objectives

The objective of the Project is to meet increasing traffic demands across the Red River by constructing Nhat Tan bridge and approach roads, and thereby contributing economic development in Hanoi city.

(2) Project Site/Target Region

Hanoi city, the Socialist Republic of Viet Nam

### (3) Project Outline

Constructing a new bridge across the Red River flowing through Hanoi (a bridge connects Phu Thuong precinct and Vinh Ngoc precinct), and a bypass road to be a part of Ring Road No. 2.

1) Construction of bridge and feeder road (Nhat Tan Bridge, Ring Road No. 2 between Phu Thuong precinct and Vinh Ngoc precinct)

2) Consulting services (e.g. detailed design, bidding assistance, supervision of work, training of maintenance managers, creating maintenance manuals, assistance on environment, society, and safety measures)

### (4) Total Project Cost

80,815,000,000 yen (Japanese ODA loan amount for this fiscal year: 24,828,000,000 yen)

### (5) Schedule

From March 2006 to November 2015 (117 months in total)

Completion of project: December 2013—when the facilities are placed in service

### (6) Implementation Structure

1) Borrower: The Government of the Socialist Republic of Viet Nam

2) Executing agency: Ministry of Transport (MOT)

3) Operation and maintenance: Vietnam Road Administration (VRA), MOT will be appointed. Formal decision will be made one year ahead of commencement of service.

### (7) Environmental and Social Consideration, Poverty Reduction, and Social Development

1) Environmental and social consideration:

i. Category: A

ii. Justification: This project falls into a category of “Sensitive Sectors” as per the JBIC Guidelines for Confirmation of Environmental and Social Considerations (issued April 2002). Therefore, it is classified as Category A.

iii. Environmental approval: The Environmental Impact Assessment (EIA) report for this project was approved by Viet Nam’s Ministry of Natural Resources and Environment (MONRE) in October 2005.

iv. Pollution control: for air quality, noise, and vibration after project start, measures to mitigate air pollution and noise at roadsides will be taken by spraying water, installing rear deck covers for carrying soil, and requiring the use of construction equipment that meets local standards.

v. Natural environment: Target areas of this project are not thought to be sensitive areas

- (e.g. national parks and their peripheral areas), making adverse impacts on the natural environment minimal.
- vi. Social environment: This project will require the acquisition of approximately 136 ha of land, the relocation of 369 families and 6 company offices. These activities will be carried out in line with the resettlement action plan, led by Hanoi People's Committee.
  - vii. Monitoring/other: Project Management Unit No. 85 under MOT will monitor air quality, noise, residential relocation and other factors during construction, while operation and maintenance institutions will take charge of monitoring the same items once the road is in service.
- 2) Partnership with other donors: None in particular
  - 3) Promotion of social development: Since this project takes place in a country where there is increasing fear of HIV infection, measures to prevent the spread of HIV will be implemented.
  - (8) Partnership with other donors: None in particular
  - (9) Other important issues: The bridge is designed to reduce flood risk in Hanoi by constructing less number of bridge footings to mitigate inhibition of water flow. This project can therefore be considered a way to help Viet Nam cope with climate change.

#### 4. Project's Effects

##### (1) Operation and Effect Indicators

Indicator	Baseline 【2010 Actual】	Target (2015) 【Two years after the completion of the project】
Annual average daily traffic volume (PCU*/day)	35,141	56,566
Shortening of transporting time ** (1 million dong/year)	-	463,663
Saving of vehicle operating cost (1 million Vietnam Dong/year)	-	957,303

\*Passenger Car Units

\*\*Converted into monetary amounts (calculated by multiplying time value with saved transporting time)

## (2) Internal Rate of Return

Based on the following premises, the economic internal rate of return (EIRR) of this project is 14.46%. Due to the fact that financial profitability was not maintained or secured independently for the bridge, financial rate of return (FIRR) is not calculated.

### 【EIRR】

Cost: Project cost (excluding tax) and operation and management expenses

Benefit: Shortening of time required and running costs

Project life: 30 years

## 5. External Risk Factors and Control

None in particular

## 6. Lessons Learned from Findings of Similar Projects Undertaken in the Past

It was learned from the Ex-Post Evaluation on “National Highway No. 1 Bridge Rehabilitation Project” that local governments need to improve their capacity to cope with land acquisition and resettlement. Under this project, JICA implemented the Survey for Facilitating Land Acquisition of the Nhat Tan (Japan-Viet Nam Friendship Bridge) Construction Project in August 2008. In addition, various efforts are underway such as the followings: (1) JICA, MOT, and the land acquisition executing agency are building stronger communication systems to address monitoring of the planned schedule; (2) the Project Management Unit No. 85 under MOT voluntarily dispatches personnel to a department in charge of executing the land acquisition.

## 7. Plans for Future Evaluation

### (1) Indicators for Future Evaluation

- 1) Annual average daily traffic volume (PCU/day)
- 2) Shortening of transporting time (1 million dong/year)
- 3) Saving of vehicle operating cost (1 million dong/year)
- 4) Financial internal rate of return (FIRR) (%)

### (2) Timing of the Next Evaluation: Two years after the completion of the project