

## Ex-ante Evaluation

### **1. Name of the Project**

Country: The Socialist Republic of Vietnam

Project: Red River Bridge Construction Project (IV)

(Loan Agreement: March 31, 2006; Loan Amount: 13,711 million yen; Borrower: The Government of the Socialist Republic of Vietnam)

### **2. Necessity and Relevance of JBIC's Assistance**

In reflection of Vietnam's economic growth in recent years, the volume of freight and passengers transported by Vietnam's transportation sector continues to increase sharply on the main roads that connect the urban centers of Hanoi and Ho Chi Minh City and the regional cities of Hai Phong and Can Tho, and the increase is forecast to continue. Above all, the road sector plays a central role in transportation, accounting for 67.6% of freight transport (heavy freight) in 2004. Vietnam's "10-Year Socio-Economic Development Strategy (2000-2010)" stress connecting development to poverty reduction as well as maintaining growth in highly developing areas. This project is planned the highway development in the "Plan for Vietnam Road Transport Sector Development to 2010 and its Direction until 2020" (Vietnam's Ministry of Transport).

The roads in the city of Hanoi have basically remained in the same condition since they were built during the French colonial period (before 1954). A bottleneck to economic growth is created by problems such as lack of a road network, insufficient road width, and poor pavement, etc. Meanwhile, due the recent economic growth, in 2001 the number of motorbikes in Hanoi reached 1,313,000 (an increase of 20% YOY) and the number of registered vehicles reached 520,000 (an increase of 7.1% YOY), and the increase continues at a high rate. In addition, there are only two bridges, the Thang Long Bridge and the Chuong Duong Bridge that span the Red River, which splits Hanoi in two. Furthermore, there are seven main roads that radiate out from the center of Hanoi, but there is no ring road. Therefore, traffic – including vehicles that would prefer to bypass the city – is concentrated in the city center. This, in combination with mixed traffic including bicycles, is aggravating traffic conditions in the city. To relieve the above-mentioned bottleneck in Hanoi, it is urgently necessary to construct new bridges across the Red River and ring road to connect National Highway No. 1 and National Highway No. 5.

In JBIC's current Medium-Term Strategy for Overseas Economic Cooperation Operations, "infrastructure development for sustainable growth" is positioned as a priority area.

Therefore, JBIC's assistance is highly necessary and relevant.

### **3. Project Objectives**

The objective of this project is to accommodate the growing traffic demand by constructing the bypass, Hanoi Third Ring Road (including Red River Bridge, new Duong Bridge, and Phap Van Viaduct), which is urgently required in Hanoi's road transportation network, and thereby contribute to the economic development of the area.

### **4. Project Description**

(1) Target Area

Northern area of the city of Hanoi

(2) Project Outline

Civil works necessary for the implementation of the project will be conducted as follows for the segment of Hanoi Third Ring Road that joins National Highway No. 1 and National Highway No. 5 in Hanoi.

- (a) Construction of bridges (Red River Bridge, new Duong Bridge, and Phap Van Viaduct)
- (b) Construction of approach roads (Gia Lam segment of Hanoi Third Ring Road, Thanh Tri segment)
- (c) Installation of infrastructure in the resettlement site

(3) Total Project Cost/Loan Amount

58,931 million yen (Yen Loan Amount: 40,989 million yen)

Note: Previous yen loans include Phase I (10,000 million yen; loan agreement: March 2000), Phase II (14,863 million yen; loan agreement: March 2002), and Phase III (2,415 million yen; loan agreement: March 2004).

(4) Schedule

January 2001-May 2011 (125 months)

(5) Implementation Structure

- (a) Borrower: The Government of the Socialist Republic of Vietnam
- (b) Executing Agency: Ministry of Transport
- (c) Operation and Maintenance System: Vietnam Road Administration

(6) Environmental and Social Consideration

(a) Environmental Effects/Land Acquisition and Resettlement

(i) Category: A

(ii) Reason for Categorization

This project involves new construction of large-scale roads and bridges, and so it is classified as Category A under “JBIC Environmental Guidelines for ODA Loans” (established October 1999). (Furthermore, in “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations” (established April 2002) it is also classified as Category A because it is in the large-scale road sector and has characteristics likely to exert impact.)

(iii) Environmental Permit

The EIA report for the project was approved in July 1998 by Vietnam’s Ministry of Science, Technology, and Environment (MOSTE) (currently the Ministry of Natural Resources and Environment (MONRE)). For the new Duong Bridge, an EIA report was prepared in July 2003, although it is not required in the country’s legal system.

(iv) Anti-Pollution Measures

Measures will be taken to alleviate air pollution and noise along the road by establishing buffer zones, planting trees, and installing soundproof walls. Moreover, during construction, in addition to giving sufficient attention to the supervision of the consultants, environmental monitoring will be carried out with regard to disposal of waste material, prevention of water contamination, and prevention of soil erosion, etc.

(v) Natural Environment

The project site is on agricultural land including rice paddies, and there are no virgin forests or protected areas in the vicinity. Therefore, no significant impact is foreseen.

(vi) Social Environment

The project is expected to require the resettlement of 1,230 households, and of these, 271 households have already been resettled away from the planned construction site. The land acquisition and resettlement procedures for the remaining households are being undertaken in accordance with the resident resettlement plan prepared by the executing agency and the land acquisition ordinance revised in December 2004. The residents are being resettled on sites (10 sites in total) prepared by the project.

(vii) Other/ Monitoring

The executing agency is planned to implement monitoring of the air quality and noise during construction and during usage as well as monitoring of the resident relocation, etc.

(b) Promotion of Poverty Reduction

None

(c) Promotion of Social Development (e.g. Perspective on Gender)

Because this is a large-scale infrastructure project in a country where there is concern over spreading HIV/AIDS infection, it is planned to include measures against HIV/AIDS for the workers in the bidding documents as well as to have the contractors implement HIV/AIDS countermeasures in cooperation with the Hanoi People's Committee Health Department and to implement HIV/AIDS countermeasures through consignment to NGOs, etc. Moreover, out of consideration for the living and social environment of the resettled residents, installation of infrastructure at the resettlement sites will be included in the works.

(7) Other Important Issues

None

**5. Outcome Targets**

(1) Evaluation Indicators (Operation and Effect Indicator)

Indicator	Target (2010, 1 year after completion**)		
	Red River Bridge	Phap Van Viaduct	New Duong Bridge
Annual average daily traffic on the bridge (PCU*/day)	73,130	55,848	20,254
Time saving (1 billion dong/year)	81.49	54.36	31.14

\*PCU (passenger car unit): So that the traffic volume can be expressed only in terms of passenger cars, adjustments are made for vehicles of differing sizes such as large trucks and motorbikes by multiplying their numbers by specified ratios.

\*\*With the expectation that the manifestation of effect will be integrated with the earlier Red River Bridge Construction Project (III), the target year is set as the same year.

(2) Internal Rate of Return

Economic Internal Rate of Return (EIRR): 16.7%

(a) Cost: Project cost (excluding tax), and operation and maintenance cost

(b) Benefit: Time saving, Vehicle operation cost saving

(c) Project Life: 30 years

**6. External Risk Factors**

(1) Stagnation or deterioration of the economy in Vietnam or the project site area.

(2) Delay or alteration in the implementation of local development plans, such as industrial parks or urban development plans, etc.

(3) Delay in completion due to natural disaster. (The progress of civil engineering works is easily affected by rainfall, etc.)

**7. Lessons Learned from Findings of Similar Projects Undertaken in the Past**

In previous ODA loan project involving road and bridge construction, it has been learned that, in projects where land acquisition is required, it is necessary to conduct monitoring so that appropriate social consideration is given. Based on this lesson learned, in the implementation of this project, the executing agency will submit a quarterly monitoring report so that the progress of the land acquisition may be sufficiently understood.

**8. Plans for Future Evaluation**

(1) Indicators for Future Evaluation

(a) Annual average daily traffic on the bridge (PCU\*/day)

(b) Time saving (1 billion dongs/year)

(c) Economic Internal Rate of Return (EIRR) (%)

(2) Timing of Next Evaluation

After project completion