1. Key development issues and rationale for Bank involvement

BACKGROUND

The road network in Serbia represents a major asset for the country. Serbia is crossed by the following segments of the important Trans European networks (TEN): (i) Corridor X with its branches Xb (Belgrade-Budapest) Xc (Nis-Sofia), and Xd (Nis-Presevo), which represent the most important transit routes in the Republic of Serbia, connecting Austria/Hungary, Slovenia/Croatia, and Bulgaria/Macedonia/Greece/Turkey. On this Corridor in the Republic of Serbia, there are 792 km of roads. The entire road network extends for some 38,600 km in Central Serbia, including 15,500 km of primary and secondary roads (and approximately 634 km of motorways and semi-motorways), together with just over 23,000 kilometers of tertiary, or local, roads. A recent survey of a sample of the main road network revealed that whilst thirty percent (30%) of the network was found to be in good condition, primarily main and regional roads, fifty three percent (53%) of the network was in poor or very poor condition. The comparative figures for Croatia and Bosnia and Herzegovina, respectively, are 32 percent and 22 percent, poor or very poor, and 43 percent and 22 percent poor or very poor respectively.¹

¹ Although, Bosnia and Herzegovina commenced a 5 year program in 2008 to clear the maintenance backlog.
Traffic flows on the Serbian road network are growing steadily, with increasing congestion in and around the main urban areas. Average Annual Daily Traffic (AADT) has been growing steadily on the national road network at just under eight percent (8%) annually each year since 2000. This level of demand growth is consistent with that observed on the ‘core road network’ across South East Europe. The average increase in real GDP over the same period has been five and one half (5.5) percent, implying an average income elasticity of demand of 1.4. Hence, a conservative estimate of real GDP growth of five (5) percent per year results in a prediction of continued growth in AADT of seven (7) percent per year in future. The total fleet has been increasing by an average annual rate of just over four (4) percent since 1999, although actual growth is likely to be much higher in and around the main urban areas where incomes have been growing faster. The average motorization rate is now estimated at about 235 vehicles per 1,000 inhabitants, with an average age of 15 years.

In addition, a survey of user perception of the quality of the infrastructure reveals that Serbia scores poorly compared to regional comparators. The recent Global Competitiveness Report, published annually by the World Economic Forum, presents rankings from user surveys of the quality of infrastructure in 131 major and emerging economies. The rankings indicate that infrastructure generally and road infrastructure, in particular, are seen as placing Serbia at a competitive disadvantage in doing business, compared to selected regional comparators. Serbia is ranked 107th for the overall quality of infrastructure, and 99th for the quality of the road infrastructure, with only Albania and Bosnia and Herzegovina performing worse in both categories in the region. By contrast, Croatia was ranked 53rd and 36th respectively, with the quality of its road infrastructure seen as a relative competitive advantage.

Despite a recent minor drop in the total number of fatalities, road safety remains a major concern in Serbia. The latest available data for 2007 shows a total of 16,585 road accidents on Serbia roads with 962 fatalities. Whilst the fatality rate has improved to nearly five (5) casualties per 10,000 vehicles, an improvement from the twelve (12) casualties per 10,000 vehicles in 1998, it remains about five (5) times higher than that of the best performing European Union countries, and one of the worst in the region. In the years 2000-2005, there have been almost 5000 fatalities and nearly 80,000 injuries resulting from road traffic crashes on the road network in Serbia. Apart from the human losses, the social cost of these accidents has been estimated to approximate to Euro 980 million per year, based on the 2005 figures.

The new Government in the Republic of Serbia wishes to develop and complete the core road infrastructure on Corridor X within the next 4 years. The Government requested the assistance of the World Bank to lead the preparation and contribute to the financing the construction of the two southern sections of Corridor X in one program: (i) The construction of a motorway on the corridor between Leskovac and Presevo near the Macedonian border (Corridor

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2 Based on an assessment of automatic count data collected at 57 points on the primary and secondary network.
5 In contrast to an average of about 506 vehicles per 1000 inhabitants in the OECD countries and in most of the European Union countries - OECD Factbook 2008.
6 Assuming the value of a fatality is 70% GDP per capita, and an injury is valued at 17 times GDP per capita Dahdah and Mcmahon, (2008) The True Cost of Road Crashes – Valuing Life and the Cost of a Serious Injury, iRAP.
Xd) at a provisional cost estimate of €600 million (USD800 million); and (ii) the construction of a motorway on 98 km of the section of corridor between Niš and the border with Bulgaria at Dimitrovgrad (Corridor branch-Xc) at an estimated provisional cost of €600 million (USD800 million). The authorities have undertaken a comparative assessment and plan to reduce toll levels on the corridor to ensure that it is competitive, and have signed a Memorandum of Understanding with Bulgaria to co-ordinate their border controls and reduce waiting times. They intend to follow this example with other neighboring countries.

The Authorities also recognize the importance of road safety, as not only a matter of growing national social concern but also an economic concern. The authorities requested the assistance of the Global Road Safety Facility for support to undertake a road safety management capacity review, which recommended a follow-on implementation plan. The Government, through the Ministry of Infrastructure, has also requested the support of the World Bank to support plans for: (i) road safety capacity building in the establishment of a Lead Agency; (ii) creation of a road safety performance framework; (iii) developing and launching a national road safety strategy; and (iv) preparation and piloting of multi-sectoral road safety pilots.

Over the past years, the Bank has assisted the Government of the Republic of Serbia in the road sector through a number of interventions: (i) Transport Rehabilitation Project; (ii) Trade and Transport Facilitation Project; (iii); (iv) A Road Safety Management Capacity Review, funded by the Global Road Safety Facility (FY07); (iv) A Policy Note on Improving the Management and Financing of the Road Sector (FY07); and (v) A PPIAF funded study to examine the options for E-Tolling on the Highway Network (Ongoing for FY08 delivery). The main lessons learned from these activities and other relevant projects can be summarized as follows:

- Increasing transport efficiency and improving traffic safety along road corridors requires a focus on adequate road maintenance, implementation of traffic safety measures (e.g. safety engineering and audits), enforcement of road safety regulations, removal of non-physical barriers (e.g. unlawful road side stops) and reducing transit time at border crossings;
- Improving the overall condition of the national road network is important. This can be achieved through the introduction of modern road management systems and design standards, improved management and procurement of civil works contracts. The Bank financed Transport Rehabilitation Project has been instrumental in reforming road management, road maintenance practices, and introducing Output and Performance Based Contracting on a Pilot Basis - strengthening capabilities to implement, inter alia, measures to plan and budget road maintenance expenditures, improve road safety, to undertake an extensive program of road maintenance and rehabilitation, involving the private sector, using the latest developments and technologies, and to mitigate the adverse effects on the environment; and

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8 Letter of July 14, 2008 by Minister of Infrastructure to the World Bank.
• Greater efforts are required to reduce road traffic accidents. Addressing this problem will require increased resources, greater co-ordination between stakeholders to improve road conditions, driver behavior and enforcement, and increased awareness of safety at each stage of the project cycle. The revitalization of the Council for Road Safety, supported by a new Lead Agency and a small secretariat, will be essential for an appropriate and coordinated response to the road safety problem.

Rationale for Bank involvement

There are three main reasons supporting the involvement of the World Bank in the project:

(i)  **The completion of Trans-European Corridor X in Serbia in a fiscally sustainable manner.** The completion of the upgrading of the road infrastructure on these two section represents the last ‘missing links’ in the completion of Corridor X in Serbia. However, the 98 km of the section of corridor between Niš and the border with Bulgaria at Dimitrovgrad (Corridor branch-Xc) and the section between between Leskovac and the Macedonian border (Corridor Xd) are provisionally estimated to be 1.2 billion. In addition to the usual due technical, economic and safeguard diligence, the Bank is uniquely placed to assist the authorities in devising an implementation plan for the entire program in a fiscally sustainable manner;  

(ii) **The Bank acting as the Lead IFI.** The Government asked the World Bank to act as lead IFI amongst all the donors for these two sections to both ensure consistency and quality, and reduce transaction costs on counterparts. The WB is leading the review of the assessment of technical and economic viability, the social and environmental assessment, the selection of the preferred option, and the proposed design ensuring consistency with EU norms and international best practice, for the entire program. In addition, the other IFIs have agreed to use the World Bank safeguards, procurement, financial management and reporting for their respective contributions to the overall program; and

(iii) **The Bank can provide support for institutional capacity building.** There are potential needs for institutional support and capacity building in the areas of road safety, reform of the management bodies in the sector, and trade facilitation. Building on its considerable experience worldwide and earlier in the region in the sector the World Bank has all the required expertise, and is the client’s trusted choice, to provide such support within or in parallel to the Bank financed project.

2. Proposed objective(s)

The proposed Project Development Objective is to increase transport efficiency and improve traffic safety on the two sections of Corridor X, between Niš and Dimitrovgrad and Leskovac and Presevo respectively, and also strengthening the management of road safety in Serbia. The improvement of these two road corridors through the construction of two sections of motorway  

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9 The Bank is preparing a PER this FY, with a strong transport component to this end.
10 Five consecutive inland waterways improvement projects have been approved for China – and the Bank is re-engaging in the IWT sector in Bangladesh after a gap of some years.
will ultimately support local and regional socio-economic development, which is a key objective for the Government. The benefits of the proposed project are expected to include transport efficiency gains from a reduction of transport cost and travel times for people and goods along the corridor, increase in reliability of transport services, reduction of the share of domestic transport costs and non-factor services in the total value of commodities transported along the corridor, and traffic safety improvements, both in the corridor and more broadly across Serbia.

3. Preliminary description

The following provisional components have been identified for the program and the Bank financed project:

a) **Component 1 - The M-1 road to FYR Macedonia (E75) – Corridor Xd.** This component involves the construction or upgrading of the existing road to motorway for a length of 96.51km kilometers running between Leskovac and the border with the FYR of Macedonia (Corridor Xd). The proposed intervention involves the construction of a motorway on a new alignment for about half the length and a widening of the existing road for the remaining half. It crosses difficult terrain and will includes 5 tunnels: 1804 m, 1112 m, 325 m, 200 m, and 150 m. Estimated total cost: US$ 800 million (Euro 600 million) - WB estimated share – US$ 260 million;

b) **Component 2 - The M 1-12 Road to Bulgaria (E80) – Niš – Dimitrovgrad - Corridor Xc.** This component involves the construction of a motorway on a new alignment for a length of 83km kilometers from Prosek to the Bulgarian border. It will cross very difficult terrain and will include 12 tunnels: 1000 m, 916 m, 550 m, and 347 m, the others below 251 m, and there are long and steep downhill gradients. Estimated total cost: US$ 800 million (Euro 600 million) - WB estimated share US$ 120 million;

c) **Component 3 - Road Safety:** This component will support plans for: (i) road safety capacity building in the establishment of a Lead Agency for Road Safety; (ii) creation of a road safety performance framework; (iii) developing and launching a national road safety strategy; and (iv) preparation and piloting of multi-sectoral road safety pilots.\(^{11}\); and

d) **Component 4 - Institutional Capacity Building and Implementation Assistance:** This component will include consultant services for the supervision of the civil works on the two sections of motorway, and other necessary institutional capacity building and implementation assistance.

4. Safeguard policies that might apply

The project is likely to be assigned category A status for environmental assessment purposes within the World Bank. The proposed investments include activities related to

\(^{11}\) This follows an explicit request in a Letter signed by Minister of Infrastructure to the World Bank, dated July 14, 2008.
the construction of a new road and associated structures along a new alignment, on both of the sections.

The Bank team assessed that the project investments will trigger the following Bank safeguard policies: OP/BP 4.01 on Environmental Assessment (Category A project) as the project involves significant land take on a new alignment; OP/BP 4.04 on Natural Habitats (since there is the possibility of archeological chance finds, for which provisions of appropriate conservation and mitigation measures will be necessary during works); OP/BP 4.11 Physical Cultural Resources (since there is the possibility of chance finds, for which provisions of appropriate conservation and mitigation measures will be necessary during works); OP/BP 4.12 on Involuntary Resettlement (as land acquisition is needed for the works); and OP 17.50 on Bank Disclosure. The final EIA will assess and confirm the applicability of these policies and the Bank team will work with our counterparts to facilitate the completion of necessary documentation to satisfy the Safeguard requirements of the World Bank.

5. Tentative financing

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6. Contact point

Contact: Richard Martin Humphreys  
Title: Senior Transport Economist  
Tel: +1 (202) 458 2951  
Fax: +1 (202) 614 0900  
Email: rhumphreys@worldbank.org

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12 There is significant parallel financing to be confirmed from other a number of other donors.