

## Standard Summary Project Fiche – IPA centralised programmes

### **Project number 15: Supervision of road construction works on the Corridor X**

#### **1. Basic information**

- 1.1 CRIS Number: 2009/021-765**
- 1.2 Title:** Supervision of road construction works on the Corridor X (Grdelica – Vladicin Han and Pirot – Ciflc sections)
- 1.3 ELARG Statistical code:** 02.21
- 1.4 Location:** Republic of Serbia

#### **Implementing arrangements:**

- 1.5 Contracting Authority:** EU Delegation to the Republic of Serbia
- 1.6 Implementing Agency:** EU Delegation to the Republic of Serbia
- 1.7 Beneficiary** (including details of project manager):

The project beneficiary will be the Koridor 10 Company and the Ministry of Infrastructure (MoI).

Contact details per beneficiary:

Koridor 10 Company founded by the Government of Republic of Serbia (address: 19a Vrljковiceva street, 11000 Belgrade, Republic of Serbia, tel : +381 11 33 44 174) Project manager : Mr. Nenad Ivanisevic, member of Management Board.

Ministry of Infrastructure- Mrs. Zorica Djeric – Stojcic; (contact details: :+381 11 361 93 98; email:djeric@mi.gov.rs; address: 22-24 Nemanjina street, Belgrade)

Project Steering Committee (SC) will be responsible for the overall quality of project implementation and provide strategic direction. The SC will ensure that the project outputs and goals are met in a timely fashion, approve work plans and reports, offer guidance and advise on project activities. The SC will consist of representatives from the ECD, the Ministry of Infrastructure and the Koridor 10 Limited Liability Company (LLC), which is owned by the Government of Republic of Serbia responsible for the efficient implementation of the projects related to the road part of Corridor X.

#### **Financing:**

- 1.8 Overall cost (VAT excluded): 10.000.000 EUR**
- 1.9 EU contribution: 10.000.000 EUR**
- 1.10 Final date for contracting:** 2 years after the signature of the FA
- 1.11 Final date for execution of contracts:** 4 years after the signature of the FA

**1.12 Final date for disbursements:** 5 years after the signature of the FA

## **2. Overall Objective and Project Purpose**

### **2.1 Overall Objective:**

To contribute to the enhancement of traffic flows on Euro Corridor X and to improve environmental and safety conditions along the Serbian road transport network in line with EU standards.

### **2.2 Project purpose:**

To assure the efficient and effective supervision of motorway construction works on selected Corridor X sections in line with FIDIC rules.

### **2.3 Link with AP/NPAA / EP/ SAA**

The **European Partnership** document emphasizes the importance of the implementation of the Memorandum of Understanding (MoU) on the Development of the South East Europe Core Regional Transport Network.

The **Stabilisation and Association Agreement** (under the Title VIII, section Cooperation policies , Transport ,article 108 see extract in Annex IV) stipulates: **Cooperation may notably aim at restructuring** and modernising the Serbian transport modes, improving the free movement of passengers and goods, enhancing the access to the transport market and facilities, including ports and airports. Furthermore cooperation may support the development of multi-modal infrastructures in connection with the main Trans-European networks, notably to reinforce regional links in South East Europe in line with the Memorandum of Understanding on the development of the Core Regional Transport Network. The objective of the cooperation should be to achieve operating standards comparable to those in the Community as well as to develop a transport system in Serbia compatible and aligned with the Community system and improving protection of the environment in transport

The **National program for the Integration of the Republic of Serbia into the EU (Page 416) under the section 3.14.1.1.3.2. Institutions - Middle-term priorities (2010-2011)** - Page 418 - completion of the construction of the Corridor 10 is one of the main priorities of the Ministry of Infrastructure

The **Serbia Progress Report 2008**, in section 4.2.4, emphasises that Serbia has made some progress in the area of transport. But, further development of transport network is necessary for economic development of Republic of Serbia and entire region.

### **2.4 Link with MIPD**

In the MIPD 2009-2011, Section 2.3.1.3, Ability to assume obligations of membership and sub-section 2.3.1.3 Objectives and choices (Page 27) covers transport:

**Transport:** Support transport authorities to meet requirements of the EU relevant 'acquis'; Implement commitments taken under the Memorandum of Understanding on Development of the South East Europe Core Regional Transport Network and the Addendum for a South East

European Railway Transport Area, and support regional infrastructure investments (SEETO Multi-annual Plan 2008-2012), multi-modal transport network and transshipment facilities; facilitation of IFI investment through project preparation/implementation in the Core Regional transport Network

## **2.5 Link with National Development Plan (where applicable)**

N/A

## **2.6 Link with national/ sectoral investment plans (where applicable)**

The **Needs Assessment Document 2008-2010**, Transport section, (Page 251), stipulates following: „Starting from European Transport Policy and Strategy of Transport Development in the Republic of Serbia from 2008-2015 (hereinafter the Strategy), priority of the Government is to, with financial support from the EU, continue construction of road and railway infrastructure in the Republic of Serbia, as well as to establish necessary conditions for unhindered sales in internal navigation routes, and especially on Danube and Sava.“

The **National strategy for development of the rail, road, water, air and intermodal transport in the Republic of Serbia 2008-2015**. This strategy emphasises that the main priority for the transport network of Republic of Serbia is further development of the Corridor X which is a part of TEN-T.

The **National Strategy for Sustainable Development** (Page 109, paragraph 2 and 4) emphasises that reconstruction, maintenance and development of transport infrastructure is one of the main priorities of Republic of Serbia.

## **3. Description of project**

This project is about standard supervision of motorway construction works along the southern branches of Corridor X in Serbia. There are a number of technical issues that necessitate splitting the project into three contracts; the justification for this decision is provided during the description of the technical issues surrounding this project in section 3.1 below.

### **3.1 Background and justification:**

In international comparisons, Serbia has a relatively low ranking in the quality of infrastructure; she scores poorly compared to regional comparators. The Global Competitiveness Report 2008-2009<sup>1</sup> rank Serbia at 83rd out of 134 countries for the overall quality of infrastructure, with only FYR Macedonia (89th), Bosnia and Herzegovina (107th) and Albania (108th) performing worst for South East European countries. This indicates that Serbia's infrastructure places her at a competitive disadvantage in doing business, compared to selected regional comparators.

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<sup>1</sup> The Global Competitiveness Report is published annually by the World Economic Forum, presents rankings from user surveys of the quality of infrastructure in 134 countries.  
See <http://www.weforum.org/documents/GCR0809/index.html>

The integration of the Serbian transport network with the core regional transport network is recognized as a key policy objective Government of Serbia for the economic and social development of the country. Serbia is crossed by the following segments of the important Pan-European networks: (i) Corridor X with its branches Xb (Belgrade-Budapest) Xc, (Niš-Sofia), and Xd (Niš-FYRM), and forms part of the SEETO regional 'core network', which together represent the most significant road and railway routes in the Republic of Serbia. On Corridor X in the Republic of Serbia, there are 792 km of roads and 760 km of railway lines; and (b) Corridor VII (the Danube River) which connects Central Europe through the Republic of Serbia with the Black Sea, and a part of the South East multimodal axis, flows through the Republic of Serbia along a length of almost 600 km.

The Government of Republic of Serbia regards the development of Corridor X as its key priority and wishes to develop and complete the core road infrastructure on Corridor X within the next 4 years. The objective is to facilitate sustainable economic development and ensure that the country capitalizes on its geographical position to continue its development as a key transit country on the Trans-European Network. The National Infrastructure Council prepared the plan for infrastructure construction in the 2008-2012 period which calls for some EUR 1.58 billion for the completion of the missing links on the road Corridor X in Serbia.

*The following represents a summary of the key missing links on Corridor X within the road network in Serbia, as outlined in the broad Strategy:*

- a) The construction of the second 2-lane carriageway on 118 km of motorway between Horgoš - Novi Sad (Corridor branch-Xb);
- b) 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);
- c) The construction of a motorway on the corridor between Leskovac and the Macedonian border (Corridor Xd); and
- d) The completion of Sections 1-6 of Belgrade Bypass, which would form an important section of Corridor X.

**The Financial plan for the construction the Corridor X estimates that** the total cost of the Corridor X projects is EUR 1.3 billion, of which the World Bank will be contributing US\$ 388 million. In addition, a number of other donors have confirmed their commitment to provide formal co-financing: The European Bank for Reconstruction and Development (EBRD) will lend EUR 150 million, and the European Investment Bank (EIB) will lend EUR 650 million. In parallel, Greece will grant EUR 100 million under its Hellenic Plan for the Economic Reconstruction of the Balkans (HiPERB) which will be allocated to one section of the E-75 between Levosoje and Donji Neradovac. This latter section will be constructed in parallel to the IFI co-financed project.

It is understood that the World Bank will supervise both the financial and technical aspects of the outstanding construction along Corridor X in Serbia, irrespective of the donor. This IFI funded project will consist of four components; the two relevant ones for this project are described below:

**Component 1 - The M-1 road to FYR Macedonia (E-75) – Corridor Xd.** Grabovnica – FYRM is motorway sections E-75 and belongs to the Trans European Motorway network and

is part of transport Corridor X. This motorway makes the connection between Central Europe, through Belgrade and Nis, with Skopje and onwards to Athens.

This component involves the construction of a 74.03 km motorway between Grabovnica and Levosoje (Corridor Xd). This motorway section will extend the existing motorway coming from Belgrade to Levosoje and fill the gap up-to the Levosoje – FYR Macedonia border section where work has already started. The E-75 motorway presently ends at Leskovac (Grabovnica), about 52 km from the Niš motorway node. The missing motorway section from Grabovnica to the FYROM border is 96 km long, but 22 kilometers from the FYROM border are already under construction and are not part of the present project, so the missing motorway section under the project is 74.03 km long. The starting point of this component corresponds to the end point of the motorway at Grabovnica. The end point in Levosoje corresponds to the starting point of the motorway section from Levosoje to FYR Macedonia border whose works have already started and which is domestically financed. Although the final section, 15.8 km between Donji Neredovac and Levosoje, will be financed in parallel to the IFI funded project by HiPERB and the Serbian Government.

This component is located along the Morava river valley. The valley is very narrow between Grabovnica and Vladicin Han (Grdelica gorges), a length of about 35 km, and all infrastructure has to share the same valley along this section: the railway, the national road and the new motorway. In addition the valley is curved and is partly occupied by villages or towns (Predejane). Between Vladicin Han and Levosoje the valley becomes wider and the motorway does not need any tunnels. Wherever it is possible, the motorway reuses the existing road for one carriageway with another carriageway built alongside it. However, some new alignments are needed to avoid urban areas (Vranje, Bujanovac) or making the alignment straighter (at one location between Vladicin Han and Vranje). In locations where the existing M1 highway is reused as one carriageway of the future motorway, a parallel regional road is restored for accommodating the local traffic. There are five interchanges serving respectively Grdelica, Predejane, Vladicin Han, Vranje and Bujanovac.

A full profile motorway, with four 3.75m traffic lanes and a design speed of 120 km/h, is planned for the sections between Grabovnica (Leskovac) – Grdelica and between Vladicin Han and Levosoje. Four 3.5m traffic lanes and a design speed of 100 km/h is planned for the more difficult gorge section between Grdelica and Vladicin Han. The proposed motorway will include five tunnels: 1804 m, 1112 m, 325 m, 200 m, 150 m long. The two long tunnels will be equipped with electrical and mechanical works in accordance with European standards for tunnel safety conditions. Monitoring centres will be implemented. About half of the missing section is a new alignment, the other half is a widening of the existing road (these road works will be done during normal traffic conditions).

The component includes the relevant electrical and mechanical (M&E) facilities, annex areas, toll plazas and buildings, five interchanges, and some interconnecting roads to improve integration with the local road network. The motorway alignment was selected to minimize the negative environmental and social impacts of the project, while the interchanges were located based on the network needs and access requirements of local road users. Land acquisition and road design costs will be financed by the Borrower's own funds. The estimated total cost<sup>2</sup> is EUR 580 million.

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<sup>2</sup> This includes works and supervision, net of all taxes and duties, and all contingencies.

***Component 2 - The M 1-12 Road to Bulgaria (E-80) – Niš – Dimitrovgrad - Corridor Xc.***

This component is the construction of 83.45 km of motorway on a section of the corridor south of Niš, near the town of Prosek, to the border with Bulgaria at Dimitrovgrad. The proposed new motorway will be built on a new alignment all the way, with the exception of a 5 km long section between Pirot and Dimitrovgrad where the existing road is used as one carriageway of the motorway. This component will include 12 tunnels: 1000 m, 916 m, 550 m, 347 m long, the others below 251 m. Between Prosek and Crvena Reka, the topography is mountainous and the existing road uses the very narrow and curved Nisava river valley. The existing road is very close to the railway and includes 13 short tunnels. There is no room for building a new motorway. The designers found an alignment very different from the one of the existing road crossing the mountains with providential small valleys. However the vertical alignment has to climb the mountains and includes a long tunnel, 916 meters long. The alignment coincides with one of the existing roads and the Nisava river after 23 kilometers.

From Crvena Reka to Ciflik, the existing road follows the Southern bank of the river while the motorway is designed on the Northern bank in a rather easy section, about 12 km long. From Ciflik to Pirot East, the proposed alignment leaves the Nisava river and the existing road and a brand new alignment implemented in a very difficult topography is proposed. The alignment first climbs the mountains with a succession of viaducts and tunnels (8 tunnels, 71 to 347 meters long each), and then progressively goes down and catches again the Nisava river in the East of Pirot. Geological conditions of this section are rather difficult. All this section, about 27 km long, bypasses Pirot rather far from the city. Between Pirot East and Dimitrovgrad, the motorway is flat and straight as well as the existing road without any particular difficulty along 11 kilometers.

Dimitrovgrad is bypassed by a new alignment proposed in the North of the city. There are two tunnels, respectively 550 and 1000 meters long, in very bad geological conditions. There are five interchanges for serving respectively Bela Palanka, the South of Pirot, the East of Pirot, the West of Dimitrovgrad, and the East of Dimitrovgrad. The motorway will be tolled and be part of the closed system encompassing the whole Serbian motorway network. The main toll station between Niš and Prosek will be removed and a main toll station will be built near Dimitrovgrad. Long tunnels will be equipped with electrical and mechanical works in accordance with European standards for tunnel safety conditions. Monitoring centres will be implemented.

The motorway will be built with four lanes, with a design speed of 120 km/hour. The component includes all the relevant electrical and mechanical (E&M) facilities, annex areas, toll plazas and buildings, five interchanges, and some interconnecting roads to improve integration with the local road network. The motorway alignment was selected to minimize the negative environmental and social impacts of the project, while the interchanges were located based on the network needs and access requirements of local road users. Land acquisition and road design costs have been financed by the Borrower's own funds. The list of civil works contracts was agreed with the client and accepted by the Bank. The estimated total cost<sup>3</sup> is EUR 682 million.

For the efficient implementation of these works on Corridor X supervision of works in accordance with FIDIC rules is necessary. Therefore, the Ministry of Infrastructure has proposed this project as their priority for financing from IPA 2010 programme. If this project

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<sup>3</sup> This includes works and supervision, net of all taxes and duties, and all contingencies.

will be supported Republic of Serbia will complete financial aspects of the construction of these two road sections on the Corridor Xc and Xd.

### **3.2 Assessment of project impact, catalytic effect, sustainability and cross border impact (where applicable)**

The construction of the two sections of the Corridor X motorway, which will be supervised by this project, represent two of the main missing links on the highway network of the region; this network is a major link between Western Europe, Greece and the Middle East.

This project's direct impact is ensuring that the Southern branches of Corridor X are constructed to European standards so that traffic flows in both East-West and North-South directions are improved; this is important because Corridor X is a part of the TEN-T network; not just across Serbia but also the whole of the Balkan peninsular. As a result of this project, benefit will accrue not just Serbian users but also to the whole of the Balkan peninsular; this cross-border impact will not be restricted to improvements in transport infrastructure but also to the economic development of Southern Serbia and the region as a whole.

The impact will also be catalytic because transit times through Serbia will be decreased and current accident „black spots“ in the area will be eliminated. In terms of sustainability, the World Bank is supervising the construction of the other sections of the Corridor X motorway; Putevi Srbije “the roads of Serbia” enterprise is responsible for the future maintenance and any further development of Corridor X.

### **3.3 Results and measurable indicators:**

1. Supervision of motorway construction works on the E-75 motorway-Corridor Xd ( Grdelica – Vladicin Han section) in accordance with national and professional standards carried out successfully.
2. Supervision of motorway construction works on the E-80 motorway-Corridor Xc (Ciflik – Pirot section) in accordance with national and professional standards carried out successfully.

### **3.4 Activities:**

#### **Activity related to E-75 Motorway**

1. To monitor the progress of the works on the M-1 road to FYR Macedonia (E-75) – Corridor Xd (Grdelica – Vladicin Han section) by conducting on site inspection as considered necessary to check the satisfactory performance of the Contractor and execution of the project in accordance with the contract documents and sound project management practices.

#### **Activities related to the E-80 Motorway**

2. To monitor the progress of the works on the M 1-12 Road to Bulgaria (E-80) – Niš – Dimitrovgrad - Corridor Xc (Ciflik – Pirot section) by conducting on site inspection as considered necessary to check the satisfactory performance of the Contractor and execution of the project in accordance with the contract documents and sound project management practices.

3. To conduct inspections periodically after completion of the works and to assist the Koridor 10 Limited Liability Company, in administrative matters related to the completion of the Contract.

The supervision of the Corridor X motorway construction works will be performed by a civil engineering consulting firm; they will be the “Engineer” in accordance with FIDIC contracts.

The arrangements for contract management will follow FIDIC procedures with Koridor 10 LLC being the client (Employer) and the supervising civil engineering firm being the Engineer (Employer’s Representative). As such, decisions on variation orders and time extensions will only be with the express consent of the Employer, who as well as controlling costs, wishes to reduce the possibility for collusion practices between the Engineer and the Contractor.

### **3.5 Conditionality and sequencing:**

The government is begin to appreciate the potential socio-economic multiplier benefits of transport infrastructure and government policy is moving towards placing the transport sector with an overall integrated socio-economic framework. This will require strong inter-ministerial relations particularly between the Ministry of Infrastructure, the Ministry of Finance and cooperation with other key institutions such Koridor X Limited Liability Company.

Procedures for land acquisition along the various sections must be completed prior to this project commencing.

This project will be implemented through three service contracts: one for the E80 motorway and two for the E75 motorway.

The supervision of the construction works within this project is independent; each contract may run separately, but it would be beneficial if they ran in parallel.

(a) Supervision of works on the Pirot – Ciflc section (E 80 motorway) will be delivered through one service contract for 2.5 M€

(b) Supervision of works on the Grdelica – Vladicin Han (E 75 motorway) will be conducted through two service contracts. This is because work along this section is quite technically difficult for works and therefore supervision of works is also demanding. Therefore, the supervision is to split between two contracts. The first, for the more technically demanding part of section will be 4 M€(that part of Corridor X contain tunnels); and the second for the Grdelica – Vladicin Han section will be 3.5 M€

### **3.6 Linked activities**

A project financed from IPA 2007 programming package-**Supervision of Belgrade City Road By-Pass, Section B – Dobanovci to Bubanj Potok** 37.3 km motorway. The aim of this project was the efficient supervision of works on the Belgrade City Road Bypass on the following sections:

Section “B” Dobanovci – Bubanj Potok 37.3 km

Sector 1. Dobanovci – Surcin 7.8 km

Sector 2. Surcin - Sava river 4.9 km

Sector 3. Sava river bridge – Ostruznica 4.1 km

Sector 4. Ostruznica – Orlovaca 7.7 km

Sector 5. Orlovaca – Beli Potok 5.4 km

Sector 6. Beli Potok – Bubanj Potok

**Loan Agreement for Supplementary Financing of the Transport Reconstruction Project.**

The Agreement is to do with borrowing 36.8 M€(US \$ 50 mil) from the World Bank. The sum will be put at the disposal of the Serbia Highways Public Enterprise, which will have to pay debt, interest and other costs. The Transport Reconstruction Project will be implemented on the basis of the Development Loan Agreement between Serbia and Montenegro and International Development Association, which was signed on the 9<sup>th</sup> of June 2004 in Belgrade. With this Loan reconstruction of 113 km of the primary and secondary road network (i.e. at least seven additional routes in the major highway network; it also covers the renewal and expansion of the contract for regular and winter maintenance of roads in two pilot regions (Macva and Kolubara covering about 660 km of major roads and 517 km of regional ones), measures for improvement of traffic safety; technical assistance in the implementation of the project and construction of facilities.

**Guaranty Agreement for the Belgrade Bypass Road Loan-**The Agreement was signed on October 19<sup>th</sup> 2007. The purpose of the 60 M€loan from the European Investment Bank is to help Putevi Srbije in the construction of Section A of the Belgrade Bypass Road, which includes a 10km stretch of motorway with 2x2 lanes, from Batajnica to Dobanovci, which is a part of Corridor 10. Design, supervision, traffic safety inspection and construction of toll booths are also included. The total value of the project has been estimated at 136.5 M€

**Guarantee Agreement between the Republic of Serbia and European Bank for Reconstruction and Development for Belgrade Motorway and Bypass Road.** The Agreement was signed on 15<sup>th</sup> of November 2007, under this agreement EBRD is prepared to extend a 80 M€loan for the Belgrade Motorway and Bypass Road project.

### **3.7 Lessons learned**

Economic development in Europe is linked closely to good infrastructure; the timely provision of modern infrastructure is a clear lesson from infrastructure programmes across Europe. Serbia is heeding this lesson after years of lack of investment and internal conflict. In particular, the availability of efficient transport infrastructure along the Pan European Transport Corridor X is of particular importance for economic growth in SEE. The geographical position of the Republic of Serbia provides a transport competitive advantage to the country's economy. In general, growth of transport will continue causing congestion of trucks and trailers on roads resulting in high rates of accidents, high levels of pollution and noise, reduce mobility of goods and people, decrease utilization of infrastructure. Corridor X has potential to become the backbone of sustainable transport system connecting the Middle East countries to the European markets.

**4. Indicative Budget (amounts in EUR)**

Corridor X			TOTAL EXP.RE	SOURCES OF FUNDING								
				IPA COMMUNITY CONTRIBUTION			NATIONAL CONTRIBUTION					PRIVATE CONTRIBUTION
ACTIVITIES	IB (1)	INV (1)	EUR (a) = (b) + (c) + (d)	EUR (b)	% (2)	Total EUR (c) = (x) + (y) + (z)	% (2)	Central EUR (x)	Regional / Local EUR (y)	IFIs EUR (z)	EUR (d)	% (2)
contract 1	X	–	4.000.000	4.000.000	100%							–
contract 2	X	–	3.500.000	3.500.000	100%							–
contract 3	X	–	2.500.000	2.500.000	100%							–
TOTAL IB			10.000.000	10.000.000	100%							
TOTAL INV												
<b>TOTAL PROJECT</b>			10.000.000	10.000.000	<b>100%</b>							

Amounts net of VAT

(1) In the Activity row use "X" to identify whether IB or INV

(2) Expressed in % of the **Total** Expenditure (column (a))

## 5. Indicative Implementation Schedule (periods broken down per quarter)

Contracts	Start of Tendering	Signature of contract	Project Completion
Contract 1.	N+1Q	N+4Q	N+17Q
Contract 2.	N+1Q	N+4Q	N+17Q
Contract 3.	N+1Q	N+4Q	N+17Q

All projects will be ready for tendering in the 1<sup>ST</sup> Quarter following the signature of the FA

## 6. Cross cutting issues (where applicable)

### 6.1 Equal Opportunity

The service provider for this project will ensure that their human resource policies and procedures take account of gender differences. Criteria should be introduced to ensure that gender equality measures are pursued.

### 6.2 Environment

In the implementation of the works and subsequently in the operation of the infrastructure and facilities, due consideration will be given to the environmental factors, all in compliance with Serbian legislation and with environmental standards comparable All the work lots will have a specific EIA where environmentally sensitive issues will be addressed in detail to EU standards. The EIA recommendations carried out before project launch will be respected throughout the operation.

### 6.3 Minorities

Transport is one of the priority areas which do not primarily impact minority issues. At the same time, they might have long-term repercussions on minorities. Thus, project needs to consider whether minorities are also beneficiaries of some of the measures, or whether, due to geographical disbursement (or other regions), only majority communities benefit from these measures.

**ANNEX I: Logical framework matrix in standard format**

LOGFRAME PLANNING MATRIX FOR Project Fiche		Programme name and number	
<p align="center"><b>Supervision of road construction works on the Corridor X</b> (Grdelica – Vladicin Han and Pirot – Ciflc sections)</p>		Contracting period expires: 2 years after signing of the FA	Disbursement period expires: expires: 5 years after signing of the FA
		Total budget :10 mil euro	IPA budget:10mil euro
<b>Overall objective</b>	<b>Objectively verifiable indicators</b>	<b>Sources of Verification</b>	
To contribute to enhancement of traffic flows on Euro Corridor X and to improve environmental and safety conditions the Serbian road transport network in line with EU standards.	Reduction in transit time on Corridor X  Number of accidents reduced	Sample survey  Annual reports	
<b>Project purpose</b>	<b>Objectively verifiable indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
To assure efficient and effective supervision of motorway construction works of on the selected Corridor X sections in line with FIDIC rules.	Construction done timely in line with technical specification	Final Acceptance Certificate for the Roads	Competent experts available  Successful tendering of works  Sufficient implementation capacities in administration

<b>Results</b>	<b>Objectively verifiable indicators</b>	<b>Sources of Verification</b>	<b>Assumptions</b>
<p>1. Supervision of motorway construction works on the E-75 motorway-Corridor Xd (Grdelica – Vladicin Han section) in accordance with national and professional standards carried out successfully.</p> <p>2. Supervision of motorway construction works on the E-80 motorway-Corridor Xc (Ciflik – Pirov section) in accordance with national and professional standards carried out successfully.</p> <p>3. Technical assistance in permits provision resulting by Take-over Certificate and Final Acceptance Certificate for the Roads provided.</p>	<p>Time schedule adhered to work carried out according to technical specifications</p>	<p>Monitoring reports</p> <p>Inspection reports</p>	

Activities	Means & Costs	Assumptions
<p><b>Activity related to E-75 Motorway</b></p> <p>1. To monitor the progress of the works on the M-1 road to FYR Macedonia (E-75) – Corridor Xd (Grdelica – Vladicin Han section) by conducting on site inspection as considered necessary to check the satisfactory performance of the Contractor and execution of the project in accordance with the contract documents and sound project management practices.</p> <p><b>Activity related to the E-80 Motorway</b></p> <p>2. To monitor the progress of the works on the The M 1-12 Road to Bulgaria (E-80) – Niš – Dimitrovgrad - Corridor Xc. (Ciflik – Pirot section) by conducting on site inspection as considered necessary to check the satisfactory performance of the Contractor and execution of the project in accordance with the contract documents and sound project management practices.</p> <p>3. To conduct inspections periodically after completion of the works and to assist the Koridior 10 Limited Liability Company, in administrative matters related to the completion of the Contract.</p>	<p><b>Total budget: 10,000,000 EUR</b></p> <p>1.Service contract for supervision of works on the Corridor Xc – 4.0 mil euro</p> <p>2.Service contract for supervision of works on the Corridor Xd – 3.5 mil euro</p> <p>3.Service contract for supervision of works on the Corridor Xd-2.5 mil euro</p>	

Pre-conditions: Procedures for land acquisition of the various sections completed

**ANNEX II: amounts (in million €) Contracted and disbursed by quarter for the project**

<b>Contracted</b>	<b>N+4Q</b>	<b>N+6Q</b>	<b>N+8Q</b>	<b>N+10Q</b>	<b>N+12Q</b>	<b>N+14Q</b>	<b>N+16Q</b>	<b>N+17Q</b>	<b>TOTAL</b>
Contract 1	4.00								<b>4.00</b>
Contract 2	3.50								<b>3.50</b>
Contract 3	2.50								<b>2.50</b>
<b>Cumulated</b>	<b>10.00</b>								
<b>Disbursed</b>									
Contract 1	0.80	0.47	0.47	0.46	0.47	0.46	0.47	0.40	<b>4.00</b>
Contract 2	0.70	0.41	0.41	0.41	0.41	0.41	0.40	0.35	<b>3.50</b>
Contract 3	0.50	0.30	0.29	0.29	0.29	0.29	0.29	0.25	<b>2.50</b>
<b>Cumulated</b>	<b>2.00</b>	<b>3.18</b>	<b>4.35</b>	<b>5.51</b>	<b>6.68</b>	<b>7.84</b>	<b>9.00</b>	<b>10.00</b>	<b>10.00</b>

### **ANNEX III Description of Institutional Framework**

The transport sector is administered by the Ministry of Infrastructure<sup>4</sup> (MoI) itself and through Directorates that deal with the relevant sector as road, railways, including intermodality, inland waterway transport and air. MoI performs public administration duties in these spheres, which includes:

- obligation and ownership rights relations;
- monitoring;
- safety and technical-technological system structure;
- status of foreign carriers in transport of goods and passengers on the territory of the Republic of Serbia;
- navigable waterways where international and multinational navigation regime is valid;
- development strategy of transport system;
- development plans and other plans in relation to structure, system organization, and relations in transport of passengers and goods;
- approval of construction and usage of transport infrastructure and equipment, and capacities which are in the function of utilization of traffic infrastructure;
- financial and technical control organization.

MoI also performs the public administration activities referring to: spatial and urban planning; setting out conditions for the construction of the facilities; sets out the housing relations and residential business; construction; construction land; geodesy engineering surveying; and other activities stipulated by law.

MoI consists of the following organizational units:

1. Sector for Road Transport
2. Sector for Roads and Road Safety
3. Sector for Railways and Intermodal Transport
4. Sector for Air Traffic
5. Inland Waterway Transport and Navigation Safety Sector

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<sup>4</sup> Following the [general](#) elections in January 2007 the new Government was installed on 15 May 2007; the Ministry of Capital Investments was restructured: the Sector for Telecommunication was rearranged into a new Ministry, and the residual was renamed as Ministry of Infrastructure.

## 6. EU Integration Sector

MoI is responsible for the public administration affairs in the area of railway, road, water and air traffic; specifically these pertain to:

- the organisation and establishment of the traffic system; realisation of the traffic infrastructure construction projects;
- inner and international transport and intermodal transport; organisation and safety of the technical and technological traffic system;
- obligations and proprietary legal relations; inspection control; strategy for traffic development, development plans and plans related to the organisation of the traffic system and organisation of transport;
- issuance of the certificate to use traffic facility or infrastructure;
- certification of approval to use vehicles, equipment and vehicle parts; organisation of financial and technical control;
- international affairs in the area of traffic;
- incentive measures for research and development in the area of traffic, as well as other affairs specified by the law.

## ANNEX IV Reference to laws, regulations and strategic documents:

### Strategic documents – International

- The **European Partnership** document emphasizes the importance of the implementation of the MoU on the Development of the South East Europe Core Regional Transport Network. The realization of short-term priority from the European Partnership - to adopt and implement national transport strategy - is under way and the Serbian Master Plan for IWT has been completed, inclusive of the Feasibility Studies for the Serbian IWT Network and for the Serbian IWT ports.
- **Stabilisation and Association Agreement** (under the Title VIII, section Cooperation policies , Transport ,article 108 see extract in Annex IV) stipulates:

Cooperation may notably aim at restructuring and modernising the Serbian transport modes, improving the free movement of passengers and goods, enhancing the access to the transport market and facilities, including ports and airports. Furthermore cooperation may support the development of multi-modal infrastructures in connection with the main Trans-European networks, notably to reinforce regional links in South East Europe in line with the Memorandum of Understanding on the development of the Core Regional Transport Network. The objective of the cooperation should be to achieve operating standards comparable to those in the Community as well as to develop a transport system in Serbia compatible and aligned with the Community system and improving protection of the environment in transport

### Strategic documents – national:

**Needs Assessment Document 2008-2010**, Transport section, (Page 251), stipulates following: „*Starting from European Transport Policy and Strategy of Transport Development in the Republic of Serbia from 2008-2015 (hereinafter the Strategy), priority of the Government is to, with financial support from the EU, continue construction of road and railway infrastructure in the Republic of Serbia, as well as to establish necessary conditions for unhindered sales in internal navigation routes, and especially on Danube and Sava.*“

**The National strategy for development of the rail, road, water, air and intermodal transport in the Republic of Serbia 2008-2015.** Strategy emphasises that the main priority for the transport network of Republic of Serbia is further development of the Corridor X which is a part of TEN-T.

**National Strategy for Sustainable Development** (Page 109, paragraph 2 and 4) emphasises that reconstruction, maintenance and development of transport infrastructure is one of the main priorities of Republic of Serbia.

The Ministry for Environment and Spatial Planning is the key institution in Serbia responsible for formulation and implementation of environmental policy matters. The Ministry is responsible for the protection against noise and vibration, hazardous and toxic material, air pollution, ionic and non-ionic radiation, nature protection and international co-operation. The other aspects of natural resources management related to issues of construction and operation of highways in the Republic of Serbia, are dealt with several other institutions, among which are the Ministry of Economy and Regional Development; the Ministry of Infrastructure; the Ministry of Agriculture, Forestry and Water management; the Ministry of Culture; the Public

Enterprise “Roads of Serbia”; the Institute for Nature Protection of Serbia; the Institute for Protection of Cultural Monuments of the Republic of Serbia.

The environmental legislation that provide framework for the implementation of the Project and has served as a basis for the EIAs include:

- Law on planning and construction (“Official Gazette of RS” No. 47/2003, 34/2006) which details the requirements for different phases in the planning cycle, i.e. pre-justification (pre-feasibility) and justification (feasibility) studies and the application for the main (general) project permit, as well as the requirement for public consultation during the preparation of master plans. According to the Law, the Pre-feasibility and feasibility studies must both include separate environmental assessments.
- Law on environmental protection (“Official Gazette of RS” No. 66/91, 83/92, 67/93, 48/94, 53/95, 135/04). The law states that ‘the use of natural resources, construction of structures or any other activity may be carried out under the condition that they cause no permanent change and significant change of landscape, no pollution, no other forms of environmental degradation’.
- *Law on Environmental Impact Assessment* (“Official Gazette of RS” No. 135/2004) and *Law on Strategic Environmental Impact Assessment* (“Official Gazette of RS” No. 135/2004). Those laws have been fully harmonized with EU legislation in the area of environmental protection in 2004. The harmonization included adjusting the EIA regulation (lists of projects and procedures) to the EIA Directive 97/11/EEC, introducing Strategic Environmental Assessment (SEA) procedures following the Directive 2001/42/EEC and securing public access to environmental information following the EU Directive 2003/4/EC.
- *Regulations on permitted noise level in the environment* (“Official Gazette of RS” No. 54/92), which detail the noise and air quality standards.

Regulations established on the basis of the Law on Environmental Impact Assessment include the following:

- **Decree** on establishing the List of Projects for which the Impact Assessment is mandatory and the List of projects for which the Environment Impact Assessment can be requested (“Official Gazette of RS” No. 84/05)
- **Rulebook on the contents of requests for the necessity of Impact Assessment** and on the contents of requests for specification of scope and contents of the Environmental Impact Assessment Study (“Official Gazette of RS” No. 69/05)
- **Rulebook** on the contents of the Environmental Impact Assessment Study (“Official Gazette of RS” No. 69/05)
- **Rulebook on the procedure of public inspection, presentation and public consultation** about the Environmental Impact Assessment Study (“Official Gazette of RS” No. 69/05)
- **Rulebook on the work of the Technical Committee for the Environmental Impact Assessment Study** (“Official Gazette of RS” No. 69/05).

## **ANNEX V: Details Per EU Funded Contract**

**There will be three service contracts** awarded for the supervision of the construction of Southern routes of the Corridor X motorway in Serbia; the specific contracts will be for:

- Service contract for supervision of works on the E-75 motorway Corridor Xd to the value of 4.0 M€
- Service contract for supervision of works on the E-80 motorway Corridor Xd to the value of 3.5 M€
- Service contract for supervision of works on the E-80 motorway Corridor Xc to the value of 2.5 M€

The following is an indicative list of activities; it is not meant to be definitive or be a Terms of Reference, rather it reflects the scope of tasks needed during supervision. The tasks cover the relationship with the Contracting Authority, Contractor and Client, pre-construction responsibilities, administrative tasks and supervision responsibilities:

The Consultant shall seek the Contracting Authority's prior approval to:

- Authorising a sub-contractor different from sub-contractors named in the Works Contract;
- Approving any extension of the time for Completion;
- Approving any variation to the Scope of the Works, which is expected to increase or decrease the Contract Price, or in any substantial way alter the scope, character or quality of the Works.

### ***Pre-construction Activities***

- Check tender design drawings to identify any potential problems
- Check the insurance policies, securities, indemnities, guarantees etc. offered by the Contractor for compliance with the contract.
- Examine the Contractor's programmes to ensure that:
  - It is sufficiently detailed to facilitate meaningful progress monitoring
  - Adequate time allowances are included for the various activities, including mechanical & electrical equipment and lead times for manufacture
  - The sequences of construction are efficient
- Check the Contractor's site mobilisation and office for the Supervisor
- Review the Contractor's working methods, health and safety, quality assurance and control proposals for compliance with the contract terms and advise on any deficiencies that may require correction before the construction starts on each site.
- Review the Contractor's proposals for tests on completion, plant commissioning and trials.
- Check the origin of materials and equipment to ensure that they conform with specifications.

### ***Administrative Tasks***

- Prepare a Project Procedure Manual describing the administration procedures, guidelines and communication lines to be followed by the Contractor, Supervisor and Contracting Authority;
- Prepare the Supervisor's Quality Assurance Manual, including the Supervisor's control and inspection plans and procedures;
- Assist the Contracting Authority in the administration of contract bonds for advance payment, performance, retention etc;
- Keep the stakeholders informed about progress by holding regular site progress meetings and by the submission of minutes of the meetings;
- Advise the Contracting Authority, on any contractual issues or disputes that may arise.
- Check Operation and Maintenance manuals and as-built drawings;

### ***Works Supervision***

The Consultant shall supervise the works to ensure compliance with the specifications, contract documents, method statements, internationally recognised standards and Serbian standards and technical norms and regulations. The Consultant shall carry out the following tasks:

- Check correctness of the Contractor's setting out related to all survey reference markers provided by the relevant Authorities;
- Issue a Notice of Commencement to the Works Contractor following consultations with the Contracting Authority and supervise the commencement of works according to Serbian law;
- Inspect the Works and check to ensure compliance with the Specification and the Drawings;
- Continuously monitor the Contractor's work programme and progress, quality of work, site safety, equipment/material orders and deliveries, environmental issues etc. If necessary instigate corrective actions in accordance with the conditions of contract;
- Where necessary, approve traffic management at work sites for Contractor's equipment;
- Supervise installation of equipment according to manufacturers' recommendations;
- Measure and record location and quantities of works carried out by the Contractor;
- Maintain a daily works site logbook recording works site events and instructions given to the Contractor, and any other relevant information, which may at a later date be of assistance in resolving queries or dispute, which may arise during the execution of the Works. In particular, records shall be kept of the Contractor's activities including equipment and labour on site. Relevant information concerning weather conditions, equipment breakdown and other factors affecting work progress shall be recorded too;
- Supervise the Contractor in all matters concerning site health, safety and environment;
- Witness, and if required instruct testing, of all materials and equipment arriving at site to ensure compliance with the Specifications;

- Witness the measurement and testing of any work that is about to be covered or put out of view properly document all such works;
- Witness testing of all plant and equipment and to ensure compliance with the Specification;
- Order and witness additional tests of completed works and the removal of improper or substandard work;
- Organise, supervise and record Tests on Completion, provisional and temporary taking-over of works, witness start-up and performance testing of plant and equipment and commissioning of the works and report on the results of the tests;
- Continuous monitoring cash-flow in relation to the planned activities;
- Review and recommend approval of interim and final payments to the Contractor; including the final account;
- Issue any variation orders regarding the quantities of the works and the period for completion of the works after obtaining the approval of the Contracting Authority where the variation affects the contract price and/or the time for completion and/or leads to a substantial change in the scope or quality of the works. Determine and give recommendations to the Contracting Authority, concerning the cost of any variations to the contract price;
- Maintain and update financial records of payments and costs;
- Alert immediately the Contracting Authority if any change occurs in the disbursement plan;
- Calculate delay damages if necessary;
- Analyse any claim submitted by the Contractor in accordance with contract procedures. Following this analysis, advise the Contracting Authority showing clearly the possible scenarios;
- Assist in the speedy resolution of any dispute between the Contractor and the Contracting Authority; advise and assist both parties to reach a solution, taking full account of the need to keep activities moving on schedule;
- Chair monthly site progress meetings with the Contractor and other stakeholders to monitor and record key issues such as progress, quality of work, site safety, equipment/material orders and deliveries, environmental issues etc;
- Review and approve the Contractor's "As Built Drawings";
- Carry out an inspection of the works and supervise the necessary testing prior to the taking over of the works and, subject to the status and approval of the works;
- Issue the Taking-Over Certificate;
- Inform the Contracting Authority of any potential problems, which may arise in connection with the construction of the works and provide recommendations and possible solutions;
- The Consultant shall coordinate the preparation of certificates and other documents required under Serbian construction legislation;