

**REQUEST FOR EXPRESSIONS OF INTEREST
CONSULTING SERVICES – FIRMS SELECTION**

Republic of Serbia

The Serbia Railway Sector Modernization Project (SRSM)

Project ID No. P170868

Assignment Title:

Supervision services on reconstruction of railway level crossings and replacement of light signals

Reference No. SER-SRSM-QCBS-CS-22-28-2

The Republic of Serbia has received a Loan from the International Bank for Reconstruction and Development (IBRD) in the amount of EURO 51 million and from the Agence Francaise de Développement (AFD) in the amount of EURO 51 million, toward the cost of the Serbia Railway Sector Modernization Project, Phase 1 of the Multiphase Programmatic Approach (MPA) and intends to apply part of the proceeds to payments for consulting services for the Supervision services on reconstruction of railway level crossings (RLC) and replacement of light signals.

The consulting services (“the Services”) include:

- Technical design review of the Preliminary Designs which will be prepared by the Contractor to be selected, and which should be all in accordance with the with applicable domestic legislation.
- Supervision services of supply and installation of RLC, auditing and giving recommendation on Performing Design (s), and Works Contract administration.
- Supervision services of Replacement of light signals on RLC and Works Contract administration

Railway level crossings are divided into two groups of tenders, namely:

- Group 1: Replacement of light signals on railway level crossings, consisting of 214 RLCs,
- Group 2: Reconstruction of railway level crossings, consisting of 11 RLCs.

The Consultant shall be contracted for the provision of services for:

1. Supervision of works on Replacement of light signals of Group 1. RLC are scattered throughout the territory of the Republic of Serbia. The Scope of work for the Consultant is to provide the stated services for supervision of signalling and safety works, installation of horizontal and vertical traffic signalization, with minor supporting civil works and all other eventual works necessary for successful completion of services), all in accordance with designs prepared by the Contractor. Technical design review of the Preliminary Design (type design) is not part of the scope for Group 1.
2. Technical design review and supervision of works on reconstruction of Group 2. RLC are scattered throughout the territory of the Republic of Serbia. The Scope of work for the Consultant is to provide the stated services for technical design review and supervision of works on supply and installation of RLC signalling and safety equipment and reconstruction of railway and road superstructure, drainage, pedestrian walkways and other related to modernisation of level crossing solutions (i.e. rubber panels, labyrinth gates, lighting, video surveillance etc.), all in accordance with designs prepared by the Contractor and reviewed by the Consultant. Works are divided into three major groups of works:
 - Traffic works refer to the development of the traffic flow operation during the execution of works on the RLC and temporary regulation of the road traffic during the execution of works, installation of temporary and/or permanent vertical and horizontal road signs and railway signals, and all other traffic related equipment;
 - Civil works refer to changes in structural RLC elements (widening of the roadway, extension of pedestrian paths in the crossing zone, correction of the road level), changes in the type of roadway structure in the RLC (i.e. rubber panels and other road works) with prior arrangement of the substructure and superstructure of rail track in RLC

area, including eventual drainage works, installation of labyrinth gates, eventual concrete and foundation works and all other related civil engineering works;

- Electrical works include the installation of an automatic RLC safety device(s) that contain a block house, indoor and outdoor equipment, boom barriers, half-boom barriers, road crossing signals, on-off elements, lighting and the appropriate cable network for connection; provision of constant power supply of the RLC, and lighting of the RLC.

Contract duration is up to 26 months starting from the commencement date.

The detailed Terms of Reference for the above referenced consulting services is posted on the website of the Ministry of Construction, Transport and Infrastructure (MoCTI):

<https://www.mgsi.gov.rs/cir/dokumenti/serbia-railway-sector-modernization-project-srsm-railway-level-crossings-supervision>

The Central Fiduciary Unit (CFU) of the Ministry of Finance now invites eligible consulting firms (“Consultants”) to indicate their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services.

The Consultants will be selected in accordance with QCBS (Quality and Cost-Based Selection) method set out in the World Bank’s Procurement Regulations for IPF Borrowers (July 2016, revised November 2017, August 2018 and November 2020).

Consultants may associate with other firms to enhance their qualifications, but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

To be **shortlisted**, the Firm or joint venture submitting the EoI must meet the following requirements:

As a precondition for being considered for shortlisting, a firm or joint venture submitting the EoI must be a legal entity.

In accordance with Serbian regulations for this scope of work, as a precondition for contract signing, the Consultant has to hold the following Republic of Serbia Company licenses as minimum (Decisions on fulfilment of requirements):

- For technical design review: P141G2, P131S1, P141S1, P141E4 and
- for works supervision: P141G2 or I141G2, P141E4 or I141E3.

The access to such licenses is under the responsibility and risk of the awarded Consultant. The conditions for obtaining the required licenses are defined in the “Rulebook on the method, procedure and content of data for determining the fulfilment of the requirements for issuing licenses for the production of technical documentation and licenses for the construction of facilities for which a building permit is issued by the ministry, or an autonomous province (Official Gazette of RoS No.41/22)”, which can be found on the following web link:

<https://www.mgsi.gov.rs/lat/dokumenti/pravilnik-o-nacinu-postupku-i-sadrzini-podataka-za-utvrdivanje-ispunjenosti-uslova-za>

As proof, the firm or JV shall submit the Decision on fulfilment of requirements for stated licences issued by the Ministry in charge. Alternatively, proof of intent to obtain the company licenses shall be accepted. The acceptable proof must be a declaration issued and signed by the company or joint venture stating that the Consultant is aware of the licensing requirements, and that the named company licenses shall be obtained and available at the time of contract signing.

Company or JV that doesn’t submit the company licenses or stated proof of intent for obtaining the named licenses shall not be shortlisted in the EOI stage.

The consulting firms/JV that will submit EoI shall possess the following experience and qualifications:

i) Experience in Railway Level Crossing designs

- Minimum three (3) fully completed contracts in designs of construction/reconstruction of level crossings on railway infrastructure. The reference designs must include the electrotechnical design for installing automatic safety equipment (boom barrier, signalisation, axle counters, interlocking, etc.) and a civil engineering design to install rubber panel systems (three references each). The reference designs must have been completed in the last seven (7) years.

The acceptable levels of designs are Preliminary and Design for a building permit, while concept/general/preliminary solutions (or equivalent) design references shall not be considered as relevant experience. The design references shall be accepted if in the scope of a larger project (i.e. reconstruction of a railway section) as long as it includes all stated projects.

ii) Experience in railway infrastructure works supervision:

- Minimum one (1) supervision of works contract on public/main railway infrastructure, including civil engineering works and signalling/interlocking electrotechnical works, where each works contract investment value is a minimum of ten million euros. The reference supervision contracts must have been completed in the last seven (7) years.

As proof of experience, the bidder shall prepare reference forms, naming **ten (10) references maximum** for each stated requirement, clearly stating the following:

- Reference #
- Start date and completion date (mm/yy)
- Brief description of the design (10 sentences each maximum)
- Country of assignment with client name and address, and client reference contact
- Contract value
- Role on project

Submitted expressions of interest should be no larger than 30 pages of text, including reference forms.

Shortlisting of firms will be based on the following of points:

1. Experience in railway-level crossing designs 40 points
2. Experience in railway infrastructure works supervision 60 points

Key Experts' CV are not required and will not be evaluated at the shortlisting stage.

The attention of interested Consultants is drawn to paragraphs 3.14, 3.16 and 3.17 of the World Bank's Procurement Regulations for IPF Borrowers – Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services (July 2016, revised November 2017, August 2018 and November 2020) ("the Regulations") setting forth the World Bank's policy on conflict of interest.

Further information can be obtained at the address below during office hours 09:00 to 15:00 hours.

Expressions of interest in English language must be delivered in a written form to the email below, by **September 27, 2024, 12:00 hours, noon, local time.**

Contact:	E-mail:	Address:
To:	dejan.jeremic@mfin.gov.rs Mr. Dejan Jeremić Procurement Specialist	Ministry of Finance Central Fiduciary Unit Balkanska 53 11000 Belgrade, Serbia Tel/Fax: (+381 11) 765 2565
Cc:	ljljana.dzuver@mfin.gov.rs larisa.puzovic@mgsi.gov.rs	

TERMS OF REFERENCE

Supervision services

on reconstruction of railway level crossings and replacement of light signals

September, 2024

Abbreviation	Meaning
AFD	Agence Francaise de Développement
CFU	Central Fiduciary Unit
E&S	Environmental and Social
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plans
EU	European Union
GoS	Government of Serbia
FIDIC	International Federation of Consulting Engineers
IBRD	International Bank for Reconstruction and Development
IFI	International Financial Institution
IZS	Serbian Railways Infrastructure
KE	Key Expert
LC	Level Crossing
MPA	Multiphase Programmatic Approach
MoCTI	Ministry of Construction, Transport, and Infrastructure
MoM	Minutes of Meetings
OHS	Occupational Health and Safety
O&M	Operations and Maintenance
NKE	Non-Key Expert
PIU	Project Implementation Unit
PIT	Project Implementation Teams
Project	Serbia Railway Sector Modernization (SRSM) Project
QA	Quality Assurance
RAMS	Reliability, availability, maintainability and safety
RD	Railways Directorate
RLC	Rail Level Crossing
RoS	Republic of Serbia
SC	Serbia Cargo
SV	Serbia Voz
ToR	Terms of Reference
WB	World Bank

1. Background information

1.1 Beneficiary country: Republic of Serbia

Client: Ministry of Construction, Transport, and Infrastructure of Republic of Serbia (MoCTI), for Infrastructure Serbian Railways (IZS).

1.2 Project Information

The World Bank launched the Multiphase Programmatic Approach (MPA) to support the Government of Serbia in the continuation of institutional, physical, and operational modernization of the railway sector in an integrated manner by providing financial support to Serbia Railway Sector Modernization Project as part of the MPA to be implemented in three overlapping phases over the ten-year period.

For the purpose of financing the Serbia Railway Sector Modernization Project, Phase 1 of the MPA (the Project), the International Bank for Reconstruction and Development (IBRD), as part of the World Bank Group, and the Agence Francaise de Développement (AFD), jointly, granted to the Republic of Serbia EUR 102 million loan to support enhancing the efficiency and safety of existing railway assets and improving governance and institutional capacity of the railway sector. The Project includes the following Components:

- Component 1: Infrastructure Investments and Asset Management. This component focuses on improving the quality and safety of railway infrastructure and enhancing rail asset management practices. **This assignment is part of the Sub-Component 1.1 Reliable and Safe Railway Infrastructure.**
- Component 2: Institutional Strengthening and Project Management. This component focuses on strengthening rail policies and institutions to deepen and sustain recent reforms.
- Component 3: Railway Modernization Enablers. This component will finance measures to protect the vulnerable and poor and strengthen sectoral enablers for sustainable business growth and job creation.

The Project is managed by the MCTI through the Project Implementation Unit (PIU) supplemented by the Project Implementation Teams (PITs) in Railway Directorate (RD) and in railway companies, respectively IZS, SV, and SC. PITs act as subordinate implementing agencies and provide technical support for specific Project subcomponents or activities of the MPA that pertain to their area of expertise. The Central Fiduciary Unit (CFU) in the Ministry of Finance provides procurement and financial services for the project. Primary responsibility for Project execution lies on PIU which will ensure that the Project development objectives are met.

1.3 General Railways Sector Information

The position of Serbia in the European railway network is such that it forms part of the shortest traffic line between West and South-East Europe and as such is often referred to as a gateway of Europe. The length of the railway lines in the Republic of Serbia is 3.348,1 km, of which 3.059,4 km are single-track and 288,7 km of double-track railway lines, of which 1.273,7 km are electrified.

The Core Network extends for 1,414 km and it encompasses Corridor X (with branches Xb and Xc -770 km), Route 4 (421 km), Route 10 (84.5 km) and Route 11 (138 km). Except for one section on Corridor Xc (Nis - Dimitrograd), Corridor X is electrified with 108 km of double-

track sections and 219 km of single-track sections. As for Route 4, connecting RoS with Montenegro and Romania, approximately 157 km is in very good and good condition, major part of route 4 (212km) is in medium condition, single track, electrified except for the section Pančevo - Vršac with diesel traction. The largest part of Route 10 traversing RoS is in good condition, and Route 11 section from Požega to Kraljevo is in very good condition.

Infrastructure modernization is essential to address various cross-cutting performance issues like safety, resilience, inclusion, and digitalization. Decades of low and non-strategic investments, outdated management structures and practices, and neglect of maintenance have led to serious deterioration of the network infrastructure, obsolescence of the rolling stock, and low service quality.

According to the EU legal classification (a reference to Directive (EU) 2016/798 on railway safety of 11 May 2016), the protection of LCs are divided into “Active” and “Passive” (where “Passive” are those where roads cross the railway without any form of a warning system or protection activated when it is unsafe for the user to use the crossing, whereas “Active” are those where the crossing users are protected from or warned of the approaching train by the devices activated when it is unsafe for the user to traverse the crossing). In EU MS, 45% of LCs are “Passive”, i.e. 55% “Active”, while the related averages in the Western Balkans are much worse, i.e. in favour of the less safe “Passive” LCs. (24% of “Active” and 76% of “Passive”)¹.

The total number of accidents and the number of accidents on LCs in the entire Western Balkans region are presented in the table 1 below.

Table 1: Total numbers of accidents and the number of accidents on LCs in the Western Balkans

Western Balkan - total	2014	2015	2016	2017	2018	2019	2020	2021	Total
Total number of railway accidents	722	831	633	824	786	752	488	671	5707
Accidents on LCRs	98	91	114	114	117	77	59	80	750
Percentage of accidents on LCs	13.6	11.0	18.0	13.8	14.9	7.8	11.5	13.4	12.9

Across the Serbian railway network, there are 2,121 RLCs in total, out of which:

- 75% level crossings, secured with traffic signs on the road and the zone of necessary visibility;
- 1% level crossings, secured with light traffic signs and traffic signs on the road;
- 13% level crossings, secured with automatic half-barriers with light traffic signs and traffic signs on the road;
- 11% level crossings, secured with barriers and traffic signs on the road;
- 0% level crossing, secured with direct traffic regulation at a level crossing and special measures;
- 0.05% level crossing, secured with a protective fence and traffic signs or passing places and traffic signs at the crossings for pedestrians and cyclists.

¹ Source: Permanent Secretariat of the Transport Community, *Level Crossings Safety Improvement Project Report 2022*.

Level crossings are becoming a national problem having in mind that the number of motor vehicles is increasing every year. Respectively, because of increased traffic capacity (especially road traffic), the intersection of road traffic lines with railway lines, i.e. level crossings, represents dangerous places with frequent irregular events.

Analysis of these accidents primarily identifies human factors as the primary cause, while other conditions such as the current state of pavement, driving vehicles or equipment are often disregarded. In the Annual Safety Report for 2020 published by the Directorate for Railways, it is concluded that level crossing accidents are still a major problem for railway traffic safety. On the public railway network, after the downward trend started in 2019, the relative number of indicators increased again in 2020 by 13.94%. Despite the lower volume of traffic, in 2021 there were 10 more accidents at road crossings (53) than in 2019 (43), as shown in Figure 1.

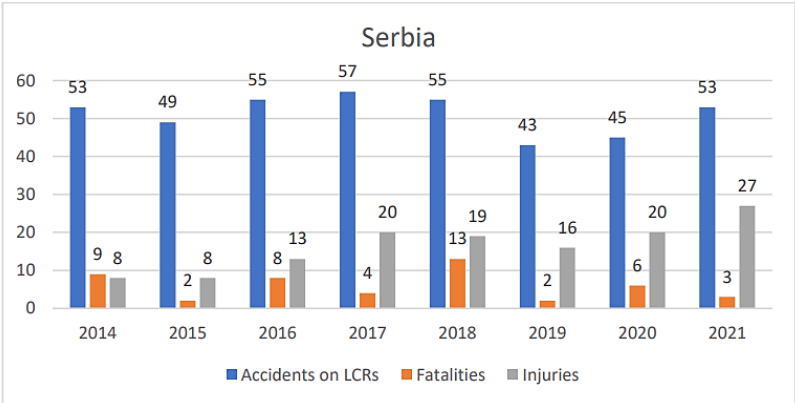


Figure 1. Number of fatalities and injuries in accidents happened on RLCs in Serbia

Figure 2 shows the relative values (number of accidents per train-kilometers) of the common safety indicator - accidents at RLCs for the period 2016 - 2020.

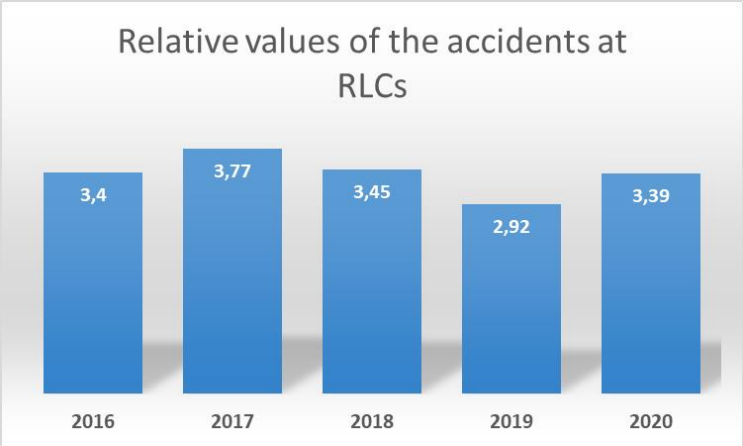


Figure 2. Relative values of the common safety indicator - accidents at RLCs for the period 2016 - 2020.

One of the priorities of the GoS is the improvement of the RLCs safety level, so as part of the reconstruction and modernization projects of the rail lines, the reconstruction of RLCs and the raising of the safety level is also envisaged, and in addition, tailor-made projects have been launched which include specific works on RLCs with the application of relevant measures for increasing the safety and interlocking system and devices on it. The improvement of existing rail infrastructure, respectively RLCs will have mitigation co-benefits by making this mode more efficient, reliable, and attractive. This helps to shift freight and passenger transport from

road to rail. Therefore, reconstruction of level crossing in sense of scope and quantity of predicted works is a very specific process, having in mind that disturbing both railway and road traffic must be minimized and at the same time performances of level crossing (construction and interlocking) must be optimized.

2. Objectives

2.1 Objectives of the Services

Objectives of the services include:

- Technical design review of the Preliminary Designs which will be prepared by the Contractor to be selected, and which should be all in accordance with the with applicable domestic legislation.
- Supervision services of supply and installation of Railway Level Crossings, auditing and giving recommendation on Performing Design (s), and Works Contract administration.
- Supervision services of Replacement of light signals on railway level crossings and Works Contract administration.

Within the scope of this contract, 11 level crossings have been identified as potentially weak spots on railway infrastructure in RoS, and may present a potential risk both to road as well as railway traffic. Reconstructions and upgrades of existing railway infrastructure, respectively the selected RLCs, will have a direct positive effect on modal shift by making the rail mode of transport more efficient, reliable and attractive, and therefore helping the freight and passenger traffic transition from road to rail traffic.

Additionally, 214 RLCs have been selected for replacement of light signals – installation of new semaphores.

The Consultant will be assigned to perform technical design review of Preliminary Design(s) prepared by Contractor to be selected for supply and installation of safety and interlocking system and necessary civil work on each RLCs over and review, give recommendation on Performing Designs and supervision of activities on supply, installation and commissioning of RLCs in line with relevant national regulations and engineering practices.

Work execution Contracts are structured in two groups, which is explained in detail in paragraph 2.2 RLC information and contracting.

2.2 RLC information and contracting

Railway level crossings are divided into two groups of tenders, namely:

- Group 1: *Replacement of light signals on railway level crossings*, consisting of **214** RLCs,
- Group 2: *Reconstruction of railway level crossings*, consisting of **11** RLCs.

Execution works on the Group 1 of RLCs shall be done on Lot Basis:

- Lot1: RLC No. 1-98
- Lot2: RLC No. 99-214

The Consultant shall be contracted for the provision of services described in this ToR for:

- Supervision of works on Replacement of light signals of Group 1 of Railway Level Crossings. Full list of 214 RLCs is presented in appendix 1.
- Technical design review and supervision of works on reconstruction of Group 2 of Railway Level Crossings (table 2.)

Table 2. List of group 2 of RLCs in scope of tender

No.	Railway	Chainage	Location
1	107 Beograd Centar - Pančevo Glavna - Vršac - državna granica - (Stamora Moravita)	83+813	PP Stražara 419
2	109 Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	74+202	PP Vitanovac blok 2
3	109 Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	85+316	PP Ložionica
4	110 Subotica-Bogojevo-Državna granica-(Erdut)	115+163	PP Tavankut
5	202 Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	46+442	Kovačica Blok 2
6	202 Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	153+239	PP Stražara 56
7	213 Stalać-Kraljevo-Požega	11+034	PP Goodyear
8	213 Stalać-Kraljevo-Požega	66+631	APP Ratina
9	216 Smederevo-Rasputnica Jezava-Radinac-Mala Krsna	9+455	PP Vranovo
10	219 (Niš)-Crveni Krst-Zaječar-Prahovo Pristanište	68+023	PAPP Knjaževac
11	219 (Niš)-Crveni Krst-Zaječar-Prahovo Pristanište	167+159	PP Kobišnica

The design and execution works on each group of RLCs and each Lot of Group 1 will be contracted independently of each other and will not necessarily take place at the same time.

Subject to the satisfactory performance by the Consultant, the Contract may be modified on mutually agreed terms and conditions, to include additional RLCs into the scope of the technical design review and supervision services.

The list of RLCs is descriptive, and throughout project implementation The Client may add, change or remove RLC locations from the scope of works.

2.3 Scope of the work for Group 1 of RLCs

The Scope of work for the Consultant is to provide the stated services for supervision of signalling and safety works, installation of horizontal and vertical traffic signalization, with minor supporting civil works and all other eventual works necessary for successful completion of services), all in accordance with designs prepared by the Contractor.

Technical design review of the Preliminary Design (type design) is not part of the scope for Group 1 of RLCs. Detailed scope of works is included in chapter 2.5 Scope of services.

2.4 Scope of the work for Group 2 of RLCs

The Scope of work for the Consultant is to provide the stated services for technical design review and supervision of works on supply and installation of RLC signalling and safety equipment and reconstruction of railway and road superstructure, drainage, pedestrian walkways and other related to modernisation of level crossing solutions (i.e. rubber panels, labyrinth gates, lighting, etc.), all in accordance with designs prepared by the Contractor and reviewed by the Consultant.

Site supervision of works on the RLCs will cover supervision of all related works on deployment of the automatic safety and interlocking devices, semaphores, boom barriers, installation of appropriate traffic signs and road equipment on all existing level crossings, deployment of rubber panels and road works, lighting installation works as well as works on pedestrian walkways in the area of the RLC. Works are divided into three major groups of works:

1. Traffic works refer to the development of the traffic flow operation during the execution of works on the RLC and temporary regulation of the road traffic during the execution of works, installation of temporary and/or permanent vertical and horizontal road signs and railway signals, semaphores and all other traffic related equipment;
2. Civil works refer to changes in structural RLC elements (widening of the roadway, extension of pedestrian paths in the crossing zone, correction of the road level), changes in the type of roadway structure in the RLC (i.e. rubber panels and other road works) with prior arrangement of the substructure and superstructure of rail track in RLC area, including eventual drainage works, installation of labyrinth gates, eventual concrete and foundation works and all other related civil engineering works;
3. Electrical works include the installation of an automatic RLC safety device(s) that contain a block house, indoor and outdoor equipment, boom barriers, half-boom barriers, road crossing signals, on-off elements, lighting and the appropriate cable network for connection; provision of constant power supply of the RLC and lighting of the RLCs.

All the activities to be executed by the Consultant for the Group 2 of RLCs are divided into two tasks as follows:

Task 1: Technical Design Review

Technical design review of the Preliminary Design(s) shall be conducted in all respects in accordance with the Law on Planning and Construction Official Gazette of RS No. 72/221A9, 81/221A9 - corrigendum, 64/2010 - decision US, 24/2011, 121/2012, 42/2013 - decision US 50/2013 - decision US, 98/2013-US, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019 other

law, 9/2020, 52/2021 and 62/2023) and in accordance with Rulebook on Content, Method and Manner of Development and Performing Review of the Technical Documentation According to Class and Intended Use of the Structure ("Official Gazette of RS" No. 96/2023).

The Consultant shall apply legal and other regulations, technical norms, and standards that regulate the subject services during the technical design review of the Preliminary Design, as well as perform the service in accordance with the quality norms.

Task 2: Supervision and Works Contract Administration

The Consultant shall provide full supervisory services during construction and installation works by the Contractor who will be engaged in accordance with the WB Conditions of Contract Plant design, supply and installation.

For this purpose, the Consultant shall set up an adequate organization, including monitoring systems, to meet requirements for efficient construction supervision and administration. In the performance of duties, the Consultant shall ensure that the works contract brings the construction and installation works to completion within the approved time, quality and budget in accordance with the Clients requirements for the project and design implementation. The Consultant shall provide services to Client with respect to the scope of this Contract and shall establish, with the consent of the Client the implementation program for the facilities and be generally responsible for the coordination and administration of all works contract's issues.

The Consultant shall be required to establish and follow detailed supervision procedures based on sound international practice to monitor the completion of the works contract within the agreed program, budget, quality standards, and environmental provisions stipulated in the works contract.

Wherever appropriate and not in conflict with the works contract, the Consultant shall exercise every reasonable care to protect the interests of the Client.

The Consultant will comply with his activities with the provisions of both the Law on Planning and Construction (Official Gazette of RS No. 72/221A9, 81/221A9 - corrigendum, 64/2010 - decision US, 24/2011, 121/2012, 42/2013 - decision US 50/2013 - decision US, 98/2013-US, 132/2014, 145 / 2014, 83/2018, 31/2019, 37/2019 other law, 9/2020, 52/2021 and 62/2023) and the Rulebook on the content and method of conducting the site supervision ("Official Gazette of RS", No. 22/2015 and 24/2017) as well as with provisions of the World Bank Environmental and Social Standards provisions. Taking that into account, the Consultant should have a license indicating the eligibility to act as a Supervisor in RoS for civil and electro works.

Detailed scope of works is included in chapter 2.5 Scope of services.

2.5 Scope of the services

Generally, the scope of services shall include, but should not be limited to, the following:

- Supervision of all activities of the Contractor in all aspects of the fulfilment of its obligations, responsibilities, and actions taken in relation to the performance of contractual obligations and timely completion of the contract;
- Issuing of Commencement Order for works;
- Daily supervision of works with checking the performance of works according to technical documentation, specifications, and applicable standards. The control includes monitoring the Contractor's activities on and off the construction site and work

environmental & social impacts that may happen during the contractor's activities. Also, the obligations include supervision of the applicability of contractor's equipment for the performance of works, the safety of works, property, personnel and third parties;

- Supervision and control of the Contractor regarding the implementation of environmental protection measures, occupational, health and safety measures for Contractors' personnel as well as for third parties, as well as ensuring compliance with recommendations and requirements of traffic safety during the contract implementation;
- Supervision and control of the application of WB environmental and social standards during the execution of works;
- Supervision and control of implementation of environmental protection measures in accordance with the requirements defined by the Preliminary Design and the Performing design;
- Preparation of all documents, especially technical and financial documents, relevant for the execution of this contract or decision-making, for the needs of the PIU/MoCTI and IZS;
- Preparation and provision of necessary evidence, analysis and testimonies that represent the interests of PIU/MoCTI and IZS in all disputes that may arise during the term of the Works Contract;
- Pre-approval of the interim payment application and sending it for final approval;
- Verification of compliance of equipment and devices received;
- Review of technical and attest documentation for devices and equipment;
- Attend and supervise the preliminary taking over and final taking over committee;

The Consultant shall obtain the specific approval of the Client in the performance of his duties before taking the following actions:

- 1) Agreeing or determining any matter, which will change the Contract Price of the Works contract;
- 2) Final recommendation of Performing Design;
- 3) Giving consent to a Sub-contractor for which a different sub-contractor is named in the Works contract;
- 4) Agreeing or determining a time extension for the Works Contract;
- 5) Instructing an Administrative Order which is expected to change the Contract Price for Works Contract or in any change in the scope, character or quality of the works. No Administrative Order shall be given by the Consultant without the consent of the Client regardless of whether it will change the price or not (including the change of materials and design);
- 6) Issuing an Administrative Order for the use of the provisional sums/ contingencies/ day works;
- 7) Issuing a Suspension Order.

Within this scope of the Contract, the Consultant shall be responsible for:

Pre-construction activities

These activities will initiate with the Works Contract award and ceases with the commencement of the implementation. Most of the pre-construction activities (reviews, time and activity planning etc.) will be performed in the main office (premises of the Consultant).

Monitoring of Performing designs preparation

The Contractor may subdivide the Performing design of the structure into appropriate design packages in accordance with the type and schedule of works. Every design package or whole Performing design will be submitted in advance to the Consultant for acceptance. The design packages must relate to the significant and clearly identifiable parts of the Preliminary Designs and address the design requirements described herein. The design packages shall facilitate the review and understanding of the Preliminary Designs as a whole and shall be produced and submitted in an orderly, sequential and progressive manner. During the Supervision of preparation of Performing designs, the Consultant shall carry out the following but not limited to:

- Monitoring the preparation and control of compliance of the Performing design with the approval of Works, the Preliminary Designs, and with all relevant laws, standards, regulations, and other documents that define the content and scope of the project;
- Control that all parts of the designs are mutually harmonised and whether designs solutions can be implemented on the site;
- Control whether the project specifies technical measures for environmental protection and prevention of harmful effects on land and facilities in the environment during the implementation of the projected works and later during the exploitation phase;
- Control of the characteristics of the materials proposed within the projects from the aspect of justification and adequacy;
- Control definitions of the technical conditions for the executions of works for each item, specific descriptions of the quality control methods of applied materials and work performed, which clearly and precisely must present the tests to be performed and the criteria to be met;
- Recommendation on Performing designs in writing and informing the Client.

Other Pre-construction activities

Within this, the Consultant shall:

- Prepare a detailed time and activity schedule (supervision plan), for easy monthly (minimum) updating throughout the duration of the contract and with reference to reporting requirements;
- Confirm the responsibilities and duties of the supervisory staff with the MoCTI, IZS, and the Contractor;
- Ensure/check that all activities/formalities and in particular all Supervisor's responsibilities are fulfilled before the works are carried out or started up for works contract signed or taken-over, such as insurance of works, detailed Implementation Program, Notice of Commencement Order, approval of contractors representative and other staff, approval of sub-contractors, suppliers (of works contract), supply of documents of contractors, data for setting-out, safety on site, machinery and equipment used in the construction works, approval of means and format of the communication and reporting;
- Review, validation and approval of E&S instruments and their implementation;
- Participation on kick-off meeting with the IZS, PIU, and the Contractor and keep the minutes of the meeting;
- Review timing and commencement of the works;

Construction supervision activities

The Consultant shall provide full supervision services during the construction works on behalf of the Client.

This activity will commence at the Commencement Date of the Work contract and will continue until the temporary acceptance and issuing of the taking-over certificate.

The Consultant's services will include but not be limited to:

- Overall day-to-day supervision, including, but not limited to, management and planning, cost and quality control, reporting and monitoring physical and financial progress of the works contract(s) and related activities;
- Organization of the bi-weekly meetings, and ad hoc site meetings, whenever necessary, with the contractor(s) and other related parties (IZS, PIU/MoCTI, Municipalities, etc.), if any, to monitor the progress of works to ensure sound and timely completion of the works in the desired quality;
- Carry out quantity surveys to verify the progress of the works;
- Checking and approving the quality of executed works, quality of built-in materials and installed equipment, all test runs of completed works along with the tests proving the achievement of guaranteed parameters set out in the works contract(s), and all related activities taken by the contractor(s), checking quality certificates, approvals, statement of compliance, certificates, guarantees etc.;
- Follow-up on cash flows and monthly progress time schedules;
- Control the contractor's hand-over of completed works, review and approve the as-built documentation and Operation and Maintenance Manuals prepared by the contractor(s) post-construction activities;
- Review and approve the testing plans, performance test, and commissioning plans in accordance with the conditions of the works contract(s);
- Carry out the take-over inspections;
- Control the trial operating periods, performance tests and the handing-over of the works to the Client;
- Engage the supervision side in settlement of disputes;
- Prepare and submit monthly Progress Reports which includes progress reporting, photos, physical and financial progress schedules, and minutes of meetings related to the reporting period;
- Supervise the implementation of environmental, OHS and community safety-related activities as outlined in the ESMF of the Project and further defined in the ESMP, required by the WB Environmental and Social Standards and the relevant national regulation;
- Prepare post-contract documentation, checking the contractor's invoice(es) and that amounts claimed have actually been incurred in accordance with the requirements of the works contract(s), issuing the certificates of payment, take-over certificates, payment certificates, performance certificates etc.

Within this phase, the Consultant's services include a check of designers' methodology proposal of works execution together with the time schedule, which has to be harmonised to the Contractors' obligations regarding the contracted time schedule and cost of works. The Consultant will be responsible for controlling if all required elements are executed in accordance with the approved design.

Equipment control and testing services

The Consultant's services will include but not be limited to:

- Monitoring and ensuring timely purchase and delivery of the equipment at the specific installation site,
- Acceptance of equipment delivered from the plant to the specific installation site,
- Quality control of installations and performed works on installations,
- Check-up of documents availability,
- Check-up of completeness of equipment in accordance with packing lists,
- Check-up of completeness of spare parts and accessories in accordance with documents,
- Check-up of components, assembly parts and materials,
- Check-up of delivered equipment integrity,
- Compliance of foundations equipment mounting,
- Visual inspection of assembly and check-up of equipment as a whole assembly,
- Applicable testing of the equipment,
- Set out basic principles for the safe and reliable operation of equipment as a reference for the Contractor(s) to prepare his O&M manual,
- Check-up the integration and compatibility of newly installed equipment into the existing system(s),
- Supervise the implementation of environmental, OHS and community safety-related activities as outlined in the ESMF of the Project, further defined in ESMP of the sub-project, required by the WB Safeguards Policies and the relevant national regulation;
- Supervision of training to be provided by the Contractors.
- Check up and approval of testing and certification documentation

Completion, commissioning and handover activities

The Consultant's Services during commissioning and handover of the performed works will include but not be limited to:

- Carry out and/or supervise the technical inspections, tests, and verifications before Works Contract milestones and Client acceptance;
- Carry out the taking-over inspections;
- Control, approve and compile the As-Built documents prepared by the Contractor;
- Providing assistance in the work of the Commission for the handover of works; preparation of documentation and participation in the work of the Commission for final settlement;
- Supervision of works on the elimination of deficiencies according to the remarks of the Commission for technical inspection of works.

3. Location and timing

3.1 Location

Group 1 of RLCs

Multiple (214) locations on the Serbian railway network, at crossing points with roads of different categories. Full list of RLCs is presented in table 1 of appendix 1.

Group 2 of RLCs

Multiple (11) locations on the Serbian railway network, at crossing points with roads of different categories. Full list of RLCs is presented in table 2 of section 2.2 RLC information and contracting.

3.2 Commencement date and period of implementation

The intended commencement date for services for RLC reconstruction is November 2024 but the actual commencement date will be defined with the signature of the Contract. The contract's implementation period is possible to be up to 26 months from the commencement date. Services will be defined based on the works. The Consultant will carry out the services in line with a detailed time schedule to be submitted as part of his proposal, which could be changed during the negotiations to reflect the comments and/or requirements by the parties.

4. Consultant requirements

4.1 Personnel

The Consultant shall establish his Team in accordance with the needs and requirements of this ToR. The Team shall consist of a core team made of key experts with the qualifications and skills defined in **Error! Reference source not found.**, below and non-key experts, as needed.

The Consultant is obliged to ensure adequate staff in terms of expertise and time allocation, as well as needed equipment in order to complete the activities required under the scope of work and to achieve the objectives of this Contract in terms of time, costs, and quality. The Consultant is expected to be flexible in terms of travelling.

Considering that the reconstruction works at the RLCs will be executed in 2 groups, with a maximum of 3 contracts in total, as described in the scope of works, the Consultant is required to allocate personnel in a way that allows uninterrupted fulfillment of their supervision duties for both groups of RLCs, even if the works overlap or are conducted in parallel.

All experts shall be independent and free from any conflicts of interest in the responsibilities. The experts should have appropriate design licenses issued by the MoCTI or a declaration stating that they shall apply for and receive the license in no more than 1 month after the announcement of the award.

The Consultant shall secure that the construction sites are adequately staffed with the relevant experts during the construction/installation phase.

It is expected and planned that for the services for RLC reconstruction, the Consultant's obligation is to have an adequate number of KE and NKE staff, as stated in sections 4.2 and 4.3 below, provided for the timely and competent provision of services.

The same conditions will apply if the Consultant's contract is extended to include services for any additional requirements or changes (RLCs) to the scope of the technical design review and supervision services are mutually agreed upon and incorporated into the contract terms.

Note that staff of the public administration of the beneficiary country (Republic of Serbia) cannot be proposed as experts.

The Project language is English. The communication (written and oral) will be bilingual (Serbian and English). A sufficient number of the Consultant’s team should be fluent in Serbian, especially the staff assigned to be on site.

The Consultant shall provide adequate administrative staff (secretary, translators, drivers accountant) needed to support the expert team.

4.2 Key experts

Key experts for Group 1 of RLCs

The team should include key experts with the qualifications and experience listed below, as well as non-key experts, if necessary. As a minimum, the Consultant shall provide the following experts:

Table 4. Key experts for the assignment

Title	Qualifications/Experience	Skills
Team Leader	<u>Education:</u> Have as a minimum MSc Degree in civil or electrotechnical engineering or another relevant field; <u>Relevant professional experience:</u> At least 7 years of relevant experience in project management/supervision in the railway sector; Experience as a team leader/project manager in the successful implementation of at least 2 contracts for supervision of railway infrastructure works in investment value min. 10 million EUR each.	Excellent command of the English language. Computer literacy. Knowledge of Serbian language will be an advantage
Supervision and works contract administration		
Electrotechnical Engineer for the rail signalling/interlocking and telecommunication systems supervision	<u>Education:</u> Have as a minimum M. Sc. Degree in Electrotechnical Engineering <u>Relevant professional experience:</u> At least 7 years of general professional experience, of which at least 5 in the rail sector design and/or supervision of safety or interlocking systems. Participation as a key expert or supervisor in at least one (1) successfully completed supervision contract for installing automatic railway level crossing devices (can be in the scope of a larger project). <u>Valid license 353 or 352 or 453 (or new licence number equivalent)</u>	Excellent command of the English language. Computer literacy. Knowledge of the Serbian language will be an advantage
Civil Engineer or Traffic Engineer	<u>Education:</u> Have as a minimum MSc. Degree in Civil/Traffic Engineering <u>Relevant professional experience:</u> At least 7 years of general professional experience, of which at least 5 in the rail sector design and/or supervision of safety or interlocking systems.	Excellent command of the English language. Computer literacy. Knowledge of the Serbian language will be an advantage

	<p>Participation as a key expert or supervisor in at least one (1) successfully completed supervision contract for construction or reconstruction of a RLC (can be in the scope of a larger project).</p> <p><u>Valid license 315 or 412 or 415 or 370 or 468 or 470 (or new licence number equivalent)</u></p>	
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Key experts for Group 2 of RLCs

The team should include key experts with the qualifications and experience listed below, as well as non-key experts, if necessary. As a minimum, the Consultant shall provide the following experts:

Table 4. Key experts for the assignment

Title	Qualifications/Experience	Skills
Team Leader	<p><u>Education:</u> Have as a minimum MSc Degree in civil or electrotechnical engineering or another relevant field;</p> <p><u>Relevant professional experience:</u> At least 7 years of relevant experience in project management/supervision in the railway sector; Experience as a team leader/project manager in the successful implementation of at least 2 contracts for supervision of railway infrastructure works in investment value min. 20 million EUR each.</p>	<p>Excellent command of the English language. Computer literacy. Knowledge of Serbian language will be an advantage</p>
Technical Design Review		
Electrotechnical Engineer	<p><u>Education:</u> Have as a minimum MSc. Degree in Electrotechnical Engineering</p> <p><u>Relevant professional experience:</u> At least 5 years of relevant experience in preparation of technical documentation in the railway sector. Participation in at least 2 projects for railway electrotechnical infrastructure design for safety and/or interlocking equipment, each including at least 1 automatic railway level crossing devices</p> <p><u>Valid license 353 or 352 (or new licence number equivalent)</u></p>	<p>Excellent command of the English language. Computer literacy. Knowledge of the Serbian language will be an advantage</p>
Civil Engineer	<p><u>Education:</u> Have as a minimum MSc. Degree in Civil Engineering</p> <p><u>Relevant professional experience:</u> At least 5 years of relevant experience in preparation of technical documentation in the railway sector. Participation in at least 2 projects for railway infrastructure each including at least 1 level crossing</p>	<p>Excellent command of the English language. Computer literacy. Knowledge of the Serbian language will be an advantage</p>

	<u>Valid license 315 (or new licence number equivalent)</u>	
Railway traffic engineer	<u>Education:</u> Have as a minimum MSc Degree in traffic and transport engineering; <u>Relevant Professional Experience:</u> At least 5 years of relevant experience in preparation of technical documentation in the railway sector. Participation in at least 2 projects for railway infrastructure (re)construction/rehabilitation as a traffic expert. <u>Valid license: 368 (or new licence number equivalent)</u>	Communication skills, fluency in English. Knowledge of Serbian language will be an advantage
Road traffic engineer	<u>Education:</u> Have as a minimum MSc Degree in traffic and transport engineering; <u>Relevant Professional Experience:</u> At least 5 years of relevant experience in preparation of technical documentation in the public roads sector. Participation in at least 2 projects for public road (re)construction/rehabilitation as a traffic expert. <u>Valid license: 370 (or new licence number equivalent)</u>	Communication skills, fluency in English. Knowledge of Serbian language will be an advantage
Supervision and works contract administration		
Electrotechnical Engineer for the rail signalling/interlocking and telecommunication systems supervision	<u>Education:</u> Have as a minimum M. Sc. Degree in Electrotechnical Engineering <u>Relevant professional experience:</u> At least 7 years of general professional experience, of which at least 5 in the rail sector design and/or supervision of safety or interlocking systems. Participation as a key expert or supervisor in at least one (1) successfully completed supervision contract for installing automatic railway level crossing devices (can be in the scope of a larger project). <u>Valid license 353 or 352 or 453 (or new licence number equivalent)</u>	Excellent command of the English language. Computer literacy. Knowledge of the Serbian language will be an advantage
Civil Engineer for civil works supervision	<u>Education:</u> Have as a minimum MSc. Degree in Civil Engineering <u>Relevant professional experience:</u> At least 7 years of general professional experience, of which at least 5 in the rail sector design and/or supervision of safety or interlocking systems. Participation as a key expert or supervisor in at least one (1) successfully completed supervision contract for construction or reconstruction of a RLC (can be in the scope of a larger project).	Excellent command of the English language. Computer literacy. Knowledge of the Serbian language will be an advantage

	<u>Valid license 315 or 412 or 415 (or new licence number equivalent)</u>	
Environmental & Social expert	<u>Education:</u> Have as a minimum University. Degree or equivalent <u>Relevant professional experience:</u> At least 7 years of general professional experience, of which at least 5 in environmental or social field. Participation as a key expert or supervisor in at least one (1) successfully completed contract for project financed by IFI.	Excellent command of the English language. Computer literacy. Knowledge of the Serbian language will be an advantage

If the key experts proposed for **Technical Design Review** meet the qualifications and relevant professional experience also for **Supervision and works contract administration**, the Consultant may propose them for performing activities within both parts.

The proposed key experts cannot be the same for Group 1 and Group 2 of RLCs.

4.3 Non-key experts

The Consultant is expected to select and hire other experts, including but not limited to civil engineers, rail signalling engineers, transport engineers, electrical engineers, architectural engineers, RAMS, environmental, social and OHS specialists or any other engineers relevant to the assignment. They must indicate clearly which profile they have so it is clear which fee rate in the budget breakdown will apply. All experts must be independent and free from conflicts of interest in their responsibilities.

The pool of non-key experts is expected to support/complement all the activities of the key experts. Possession of a relevant Serbian license for design/construction will be required, as applicable.

The Consultant is expected to include other positions they consider necessary for the assignment in their proposals. CVs for non-key experts should be submitted in the proposal, however, they would not be subject to evaluation.

The proposed non-key experts may be the same for Group 1 and Group 2 of RLCs.

5. Office accommodation

The operational base and main office of the Consultant will be established on his premises. The Consultant may establish site offices for his staff if he deems it necessary for the supervision of the works.

The Consultant shall ensure that experts are adequately supported and equipped. In particular, it shall ensure sufficient administrative, secretarial, and interpreting provisions to enable experts to concentrate on their primary responsibilities.

No equipment is to be purchased on behalf of neither Client (MoCTI), PIU or Beneficiaries (IZS) as part of this service contract or transferred to the Client or beneficiaries at the end of this Contract.

6. Outputs requirements

6.1 Group 1 of RLCs output requirements

The Consultant shall prepare, at minimum, the below-listed reports during the period of execution of the Contract.

All deliverables (draft and final versions) shall be prepared in both, English and Serbian language.

The deliverables should be delivered in accordance with the following timetable:

Deliverables	Description	Due date	Format
Supervision and works contract administration			
Monthly Reports	Description of the level of implementation of the contractor's dynamic plan, possible problems and proposals for their solution, review of adopted works by variations and explained proposal for change/variation, plan for engagement of supervision for the next period, data on inspections, data on incidents during works, E&S compliance and monitoring data and others important events. Monthly reports must cover all aspect described in Section 3 of this ToR and also contain an overview of all receivables submitted by the Contractor since the beginning of the implementation of the construction contract. This report should be made in a convenient form that allows consideration of requests, previous activities, and key deadlines for resolving requests. The monthly report should also contain photo documentation (up to 20 pages).	Not later than 1 week after the end of the month	Digital in Serbian and English language
Works Contract Completion Report	On completion of the works contract, upon the issue of the Taking-Over Certificate, within 15 days the Consultant shall submit a Completion Report for each defined group of RLCs to the Client. The main report must contain: <ul style="list-style-type: none"> – Copies of the Taking-Over Certificate(s) – Verified "as-built" documentation showing all revisions of the design of the works. – A complete analysis of the complete cost of the works. – An overview of the actual progress of the works detailing reasons for delays and/or extensions of time – Commissioning report for the various mechanical and electrical components of the works – Details of all permits required for the operation of the works – An overview of site safety procedures, any problems in this regard, and recommendations for improvement. – An overview of the Consultant's working practices and resources. 	No later than 15 days after issue of Taking-Over Certificate of works contract.	Digital in Serbian and English language and 1 hard copy in Serbian language

Deliverables	Description	Due date	Format
	<ul style="list-style-type: none"> – An assessment of the quality of materials and workmanship any problems in this regard and recommendations for improvement. – Details of technical difficulties encountered and how these were overcome. – Details of administrative difficulties encountered and how these were overcome <p>An appraisal of the strengths and weaknesses in the contract documents and in the design of the works (including but not limited to the Special Conditions of the works contract, technical specifications, price schedules, design details, and drawings) with recommendations on how improvements could be made for future contracts.</p>		
Quality Assurance (QA) Dossiers	<p>In addition to the Completion Report, the Consultant shall submit a comprehensive QA Dossier containing all original requests for inspection, approval, test forms, and certificates relating to the construction of the works, materials and equipment incorporated into the works. Documentation in the QA Dossier must include but not necessarily be restricted to:</p> <ul style="list-style-type: none"> – All manufacturer's test certificates for materials, if any – Performance test certificates and warranty agreements where applicable for mechanical and electrical equipment. <p>Requests for inspection (if any), approvals and test results</p>	The QA Dossier will be compiled during the course of the works contract and it must be available for inspection by the MoCTI at any reasonable time.	Digital in Serbian and English language and 1 hard copy in Serbian language

6.2 Group 2 of RLCs output requirements

The Consultant shall prepare, at minimum, the below-listed reports during the period of execution of the Contract.

All deliverables (draft and final versions) shall be prepared in both, English and Serbian language.

The deliverables should be delivered in accordance with the following timetable:

Deliverables	Description	Due date	Format
Design Review			
Technical Design Review Report	<p>Findings, guidelines and recommendations for changes/supplements for reviewed Preliminary designs and conclusions of technical design review.</p> <p>Subject to the approval of the Client</p>	No later than 1 month from receiving the Preliminary Design from the Contractor	Digital in Serbian and English language and 1 hard copy in Serbian language

Deliverables	Description	Due date	Format
Supervision and works contract administration			
Monthly Reports	Description of the level of implementation of the contractor's dynamic plan, possible problems and proposals for their solution, review of adopted works by variations and explained proposal for change/variation, plan for engagement of supervision for the next period, data on inspections, data on incidents during works, E&S compliance and monitoring data and others important events. Monthly reports must cover all aspect described in Section 3 of this ToR and also contain an overview of all receivables submitted by the Contractor since the beginning of the implementation of the construction contract. This report should be made in a convenient form that allows consideration of requests, previous activities, and key deadlines for resolving requests. The monthly report should also contain photo documentation (up to 20 pages).	Not later than 1 week after the end of the month	Digital in Serbian and English language
Works Contract Completion Report	<p>On completion of the works contract, upon the issue of the Taking-Over Certificate, within 15 days the Consultant shall submit a Completion Report for each defined group of RLCs to the Client. The main report must contain:</p> <ul style="list-style-type: none"> – Copies of the Taking-Over Certificate(s) – Verified "as-built" documentation showing all revisions of the design of the works. – A complete analysis of the complete cost of the works. – An overview of the actual progress of the works detailing reasons for delays and/or extensions of time – Commissioning report for the various mechanical and electrical components of the works – Details of all permits required for the operation of the works – An overview of site safety procedures, any problems in this regard, and recommendations for improvement. – An overview of the Consultant's working practices and resources. – An assessment of the quality of materials and workmanship any problems in this regard and recommendations for improvement. – Details of technical difficulties encountered and how these were overcome. – Details of administrative difficulties encountered and how these were overcome <p>An appraisal of the strengths and weaknesses in the contract documents and in the design of the works (including but not limited to the Special Conditions of the works contract, technical specifications, price schedules, design details, and drawings) with</p>	No later than 15 days after issue of Taking-Over Certificate of works contract.	Digital in Serbian and English language and 1 hard copy in Serbian language

Deliverables	Description	Due date	Format
	recommendations on how improvements could be made for future contracts.		
Quality Assurance (QA) Dossiers	<p>In addition to the Completion Report, the Consultant shall submit a comprehensive QA Dossier containing all original requests for inspection, approval, test forms, and certificates relating to the construction of the works, materials and equipment incorporated into the works. Documentation in the QA Dossier must include but not necessarily be restricted to:</p> <ul style="list-style-type: none"> – All manufacturer's test certificates for materials, if any – Performance test certificates and warranty agreements where applicable for mechanical and electrical equipment. <p>Requests for inspection (if any), approvals and test results</p>	The QA Dossier will be compiled during the course of the works contract and it must be available for inspection by the MoCTI at any reasonable time.	Digital in Serbian and English language and 1 hard copy in Serbian language

7. Submission and approval of outputs

All reports and other outputs, if any must be written in English and Serbian language. The draft version of the reports (electronic copy) shall be submitted to PIU for distribution to the Client. The commenting period for the outputs is 2 weeks. In case of no reaction to the submitted outputs, such status will be interpreted as “no objection” and shall be deemed approved.

The Consultant shall prepare the Minutes of Meetings (MoM) for the meetings and monthly progress meetings. All Meetings must be ensured to lead to clear decisions, persons in charge, and deadlines. Minutes of Meetings will be distributed by the Consultant. MoM of the meetings must be commenced within 7 calendar days by participants. MoM for the monthly progress meetings will be always on the agenda of the next monthly meeting to be approved and followed up.

All deliverables will be sent as electronic copies to Client.

8. Terms of Payment

The Consultant should note that the Terms of payment for this assignment shall be defined in detail and finalized within the Contract upon negotiations, where the proposed payment framework would be based on timesheets within the monthly progress reports.

Appendix 1

Table 1. List of group 1 of RLCs in scope of tender

No.	Railway	Chainage
1	109 MP Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	2+983
2	109 MP Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	47+909
3	109 MP Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	48+142
4	111 MP Beograd Ranžirna "A"-Ostružnica-Batajnica	23+227
5	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	41+162
6	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	75+829
7	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	87+634
8	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	89+288
9	207 O-I Novi Sad - Odžaci - Bogojevo	65+180
10	207 O-I Novi Sad - Odžaci - Bogojevo	66+250
11	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	66+207
12	213 O-I Stalać-Kraljevo-Požega	15+062
13	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražogrnac)	178+165
14	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražogrnac)	244+249
15	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražogrnac)	245+382
16	219 O-I (Niš)-Crveni Krst-Zaječar-Prahovo Pristanište	7+500
17	219 O-I (Niš)-Crveni Krst-Zaječar-Prahovo Pristanište	173+422
18	223 O-II Doljevac-Kastrat-Merdare-Kosovo Polje	21+974
19	309 LP Pančevo Varoš-Pančevo Vojlovica	0+908
20	309 LP Pančevo Varoš-Pančevo Vojlovica	2+133
21	309 LP Pančevo Varoš-Pančevo Vojlovica	2+518
22	311 LP Markovac – Svilajnac – Despotovac – Resavica	10+630
23	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	57+685
24	109 MP Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	0+833
25	110 MP Subotica-Bogojevo-Državna granica-(Erdut)	102+890
26	110 MP Subotica-Bogojevo-Državna granica-(Erdut)	126+741
27	110 MP Subotica-Bogojevo-Državna granica-(Erdut)	127+235
28	201 O-I Subotica-Horgoš-Državna granica	5+235.76
29	201 O-I Subotica-Horgoš-Državna granica	7+072
30	201 O-I Subotica-Horgoš-Državna granica	7+322
31	201 O-I Subotica-Horgoš-Državna granica	8+544

32	201 O-I Subotica-Horgoš-Državna granica	9+688
33	201 O-I Subotica-Horgoš-Državna granica	11+696
34	201 O-I Subotica-Horgoš-Državna granica	14+971
35	201 O-I Subotica-Horgoš-Državna granica	17+098.8
36	201 O-I Subotica-Horgoš-Državna granica	22+792
37	201 O-I Subotica-Horgoš-Državna granica	24+321
38	201 O-I Subotica-Horgoš-Državna granica	25+277
39	201 O-I Subotica-Horgoš-Državna granica	26+509
40	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	1+067
41	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	31+536
42	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	53+735
43	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	95+807
44	202 O-I Pančevo Glavna-Zrenjanin-Kikinda-Državna granica-(Jimbolia)	159+115
45	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	1+168
46	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	1+776
47	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	2+635
48	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	21+465
49	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	31+875
50	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	32+383
51	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	56+521
52	213 O-I Stalać-Kraljevo-Požega	53+095
53	213 O-I Stalać-Kraljevo-Požega	102+148
54	213 O-I Stalać-Kraljevo-Požega	103+239
55	216 O-I Smederevo – Rasputnica Jezava – Radinac – Mala Krsna	0+134
56	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražognac)	85+812
57	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražognac)	87+056
58	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražognac)	88+060
59	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražognac)	89+070
60	301 LP Subotica-Subotica fabrika	1+227
61	311 LP Markovac – Svilajnac – Despotovac – Resavica	14+135
62	402 MA Kikinda - Metanolsko sirčetni kompleks (km 6+413)	1+189

63	107 MP Beograd Centar-Pančevo glavna stanica-Vršac-državna granica-(Stamora)	9+858
64	107 MP Beograd Centar-Pančevo glavna stanica-Vršac-državna granica-(Stamora)	12+177
65	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	19+311
66	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	21+942
67	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	25+327
68	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	27+708
69	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	28+543
70	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	29+948
71	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	31+195
72	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	38+513
73	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	42+655
74	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	46+820
75	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	63+941
76	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	65+290
77	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	68+403
78	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	69+506
79	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	70+831
80	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	71+789
81	109 MP Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	58+810
82	109 MP Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	59+247
83	109 MP Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	86+576
84	110 MP Subotica-Bogojevo-Državna granica-(Erdut)	70+316
85	110 MP Subotica-Bogojevo-Državna granica-(Erdut)	71+377
86	111 MP Beograd Ranžirna "A"-Ostružnica-Batajnica	15+245

87	113 MP Beograd Ranžirna "A"-Rasputnica "B"-Rasputnica "K/K1"-Resnik	3+020
88	128 MP Spojni kolosek stanice Niš (Crveni Krst)-odvojna skretnica 3-odvojna skretnica 4-(Ćele Kula)	0+269
89	128 MP Spojni kolosek stanice Niš (Crveni Krst)-odvojna skretnica 3-odvojna skretnica 4-(Ćele Kula)	0+382
90	216 O-I Smederevo – Rasputnica Jezava – Radinac – Mala Krsna	10+711
91	216 O-I Smederevo – Rasputnica Jezava – Radinac – Mala Krsna	12+003
92	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražogrnac)	71+275
93	219 O-I (Niš)-Crveni Krst-Zaječar-Prahovo Pristanište	10+261
94	223 O-II Doljevac-Kastrat-Merdare-Kosovo Polje	0+722
95	223 O-II Doljevac-Kastrat-Merdare-Kosovo Polje	1+272
96	223 O-II Doljevac-Kastrat-Merdare-Kosovo Polje	1+928
97	501 TP Šarganska osmica	268+842
98	501 TP Šarganska osmica	269+576
99	109 MP Lapovo-Kraljevo-Lešak-Kosovo Polje-Đeneral Janković-Državna granica-(Volkovo)	94+593
100	309 LP Pančevo Varoš-Pančevo Vojlovica	1+233
101	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	46+228
102	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	51+049
103	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	53+436
104	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	60+060
105	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	62+008
106	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	65+687
107	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	74+019
108	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	80+740
109	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	84+091
110	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	86+425
111	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	91+486
112	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	94+604
113	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	99+549
114	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	103+287
115	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	105+400
116	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	109+280
117	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	112+710
118	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	116+105
119	101 MP Beograd-Stara Pazova-Šid-državna granica-(Tovarnik)	117+037
120	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	14+604
121	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	25+396
122	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	45+144

123	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	47+212
124	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	48+348
125	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	49+919
126	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	51+813
127	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	55+032
128	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	62+912
129	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	67+080
130	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	85+099
131	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	91+928
132	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	94+060
133	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	97+711
134	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	120+909
135	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	128+121
136	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	131+233
137	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	151+447
138	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	158+969
139	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	164+596
140	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	166+671
141	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	168+193
142	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	173+684
143	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	177+050
144	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	198+026

145	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	199+090
146	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	199+924
147	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	202+411
148	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	205+395
149	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	206+423
150	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	213+746
151	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	215+364
152	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	217+519
153	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	218+782
154	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	220+749
155	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	223+308
156	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	228+082
157	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	229+604
158	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	231+540
159	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	232+535
160	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	233+571
161	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	235+148
162	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	239+338
163	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	241+397
164	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	242+722
165	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	243+101
166	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	247+070

167	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	273+221
168	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	286+071
169	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	287+137
170	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	287+994
171	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	288+608
172	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	312+001
173	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	321+347
174	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	329+977
175	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	333+585
176	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	335+404
177	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	335+818
178	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	344+230
179	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	348+691
180	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	361+872
181	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	365+272
182	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	366+788
183	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	374+310
184	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	382+789
185	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	391+712
186	103 MP (Beograd Centar)-Rakovica-Jajinci-Mala Krsna-Velika Plana	24+466
187	103 MP (Beograd Centar)-Rakovica-Jajinci-Mala Krsna-Velika Plana	25+575
188	103 MP (Beograd Centar)-Rakovica-Jajinci-Mala Krsna-Velika Plana	61+020

189	103 MP (Beograd Centar)-Rakovica-Jajinci-Mala Krsna-Velika Plana	66+630
190	103 MP (Beograd Centar)-Rakovica-Jajinci-Mala Krsna-Velika Plana	69+722
191	103 MP (Beograd Centar)-Rakovica-Jajinci-Mala Krsna-Velika Plana	89+918
192	103 MP (Beograd Centar)-Rakovica-Jajinci-Mala Krsna-Velika Plana	91+202
193	104 MP (Jagodina) Rasputnica Ćuprija- Ćuprija -Paraćin	1+990
194	107 MP Beograd Centar-Pančevo glavna stanica-Vršac-državna granica-(Stamora)	8+714
195	211 O-I Ruma-Šabac-Rasputnica Donja Borina-državna granica-(Zvornik Novi)	6+620
196	213 O-I Stalać-Kraljevo-Požega	43+017
197	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražognac)	244+249
198	218 O-I Mala Krsna-Bor-Rasputnica 2-(Vražognac)	245+382
199	223 O-II Doljevac-Kastrat-Merdare-Kosovo Polje	21+974
200	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	11+761
201	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	26+923
202	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	59+265
203	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	155+977
204	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	290+488
205	102 MP Beograd Centar-Rasputnica G-Rakovica-Mladenovac-Lapovo-Niš-Preševo-Državna granica (Tabanovce)	296+562
206	107 MP Beograd Centar-Pančevo glavna stanica-Vršac-državna granica-(Stamora)	15+563
207	107 MP Beograd Centar-Pančevo glavna stanica-Vršac-državna granica-(Stamora)	16+675
208	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	35+247
209	108 MP (Beograd Centar)-Resnik-Požega-Vrbnica-Državna granica-(Bijelo polje)	56+501
210	207 O-I Novi Sad - Odžaci - Bogojevo	52+303
211	207 O-I Novi Sad - Odžaci - Bogojevo	57+306
212	208 O-I (Novi Sad)-Sajlovo Rasputnica-Rimski Šančevi-Orlovat Stajalište	57+446
213	213 O-I Stalać-Kraljevo-Požega	91+776
214	213 O-I Stalać-Kraljevo-Požega	98+988