ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

Works with arrangement and equipping of the interior of the railway station Beograd Centar

Belgrade,
December 2024.

Ministry of Construction, Transport and Infrastructure
THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP
AFD
AGENCE FRANÇAISE DE DÉVELOPPEMENT

Abbreviations

Abbreviation	Meaning
AFD	French Development Agency
CFU	Central Fiduciary Unit
E&S	Environmental and Social
EA	Environmental Assessment
EHSG	World Bank Group Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
EPRP	Emergency Preparedness and Response Plan
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESSs	Environmental and Social Standards
ESSQ	Environmental and Social Screening Questionnaire
GBV	Gender based violence
GRM	Grievance Redress Mechanism
SRI	Serbian Railways Infrastructure
LMP	Labor Management Procedure
m asl,	Meters above sea level
MCTI	Ministry of Construction, Transport, and Infrastructure
MoEP	Ministry of Environment Protection
MoI	Ministry of Interior
MP	Monitoring Plan
MPA	Multiphase Program Approach
MS	Measurement station
O&M	Operation and Maintenance
OP	Operational Procedure
PGR	General Regulations Plans
PE	Population Equivalent
PITs	Project Implementation Teams within the SRI, SC, SV and DfR
PIU	Project Implementation Unit within the MCTI
PUC	Public Utility Company
PSEP	Project Level Stakeholder Engagement Plan
PCT	Public City Transport
PTW	Permit to Work
RS	Republic of Serbia
RD	Rail Directorate
SEA	Sexual Exploitation and Abuse
SIA	Social Impact Assessment
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SRSM	Serbia Railway Sector Modernization
TOR	Terms of Reference
WB	World Bank

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1 INTRODUCTION

1.1 OBJECTIVES OF THE ESMP

The main objective of Environmental and Social Management Plan (ESMP) is to ensure that the Project activity is compliant to national, as well as to World Bank (WB) Environmental and Social Framework (ESF) in all phases of the Project's lifecycle. Accordingly, ESMP addresses requirements of WB Environmental Health and Safety Guidelines (EHSG) and Good International Industrial Practices (GIIP). For that purpose, ESMP defines measures to minimize and mitigate adverse effects and risks on the biophysical and socio-economic environment during construction works with arrangement and equipping of the interior of the main station Beograd Centar (Prokop). Application and content of ESMP are guided by the Project Environmental and Social Commitment Plan (ESCP) and ESMF, WB ESSs, WB EHSG and GIIP. This document will help assess potential environmental and social impacts associated with the proposed Project, identify potential environmental and social improvement opportunities, and recommend measures for the prevention, minimization, and mitigation of adverse environmental and social impacts. ESMP and Monitoring Plan (MP) encompassing all stages of the Project, with a purpose to supervise E&S compliance and streamline implementation of measures (and corrective actions) are an integral part of the ESMP.

In line with the ESMF, Project Level Stakeholder Engagement Plan (SEP) was conducted, in June 2024.

1.2 SRSM PROGRAM BACKGROUND

In 2016, Serbia opened negotiations with the EU under Chapters 14, Transport Policy and 21, Trans-European Networks of the Acquis Communautaire. Under Chapter 14, the objectives of EU transport policy are establishing efficient transportation systems offering a high level of sustainable mobility throughout the Union, ensuring high standards for safety, security, and passenger rights, and improving working conditions. Under Chapter 21, the EU seeks to create a modern infrastructure to ensure connectivity for passengers and freight.

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

Phase 1 of the Program amounts EUR 102,000,000.00 jointly financed in equal shares by International Bank for Reconstruction and Development (IBRD, the Bank) and the Agence Française de Développement (AFD). Phase 1 will be focusing on the rehabilitation and renewal of the existing railway infrastructure, and technical assistance to key institutions in the sector. The objectives of Phase 1 are to enhance the efficiency and safety of existing railway assets and improve governance institutional capacity of the railway sector.

Conducting works with arrangement and equipping of the interior of the "Beograd Centar" railway station (Project) is part of Subcomponent 1.1 named Reliable and safe railway.

1.3 GENERAL INFORMATION ABOUT THE PROJECT

The purpose of the Project is to unify and complete all the works done on the "Beograd Centar" railway station. These works took place with interruptions in the period from 1996 to 2022 and were not financed by WB. All structural elements (foundations, columns, beams) were dimensioned and built for the station building. **The hard construction work on the entire**

station building has been constructed (reinforced concrete construction has the use permit since 2005). After this use permit, use permits were obtained for the completed parts of the facility in accordance with the dynamics of the work execution. The last one for the station building below an elevation of 105.50 with 88 parking spaces; exits (conveyors) from platforms 1 and 6 was obtained on 25.02.2025. and is not the subject to the SRSM project. The station has been operational (with 8 tracks, 6 platforms, reinforced concrete construction for whole station building, with fully equipped part below an elevation 105.50, roads for access to the station and all other elements necessary for the functioning of the railway station).

With activities planned under this project, which are the subject of the SRSM project, the station building, and tracks will become a complete technological object, and in line with the technical documentation.

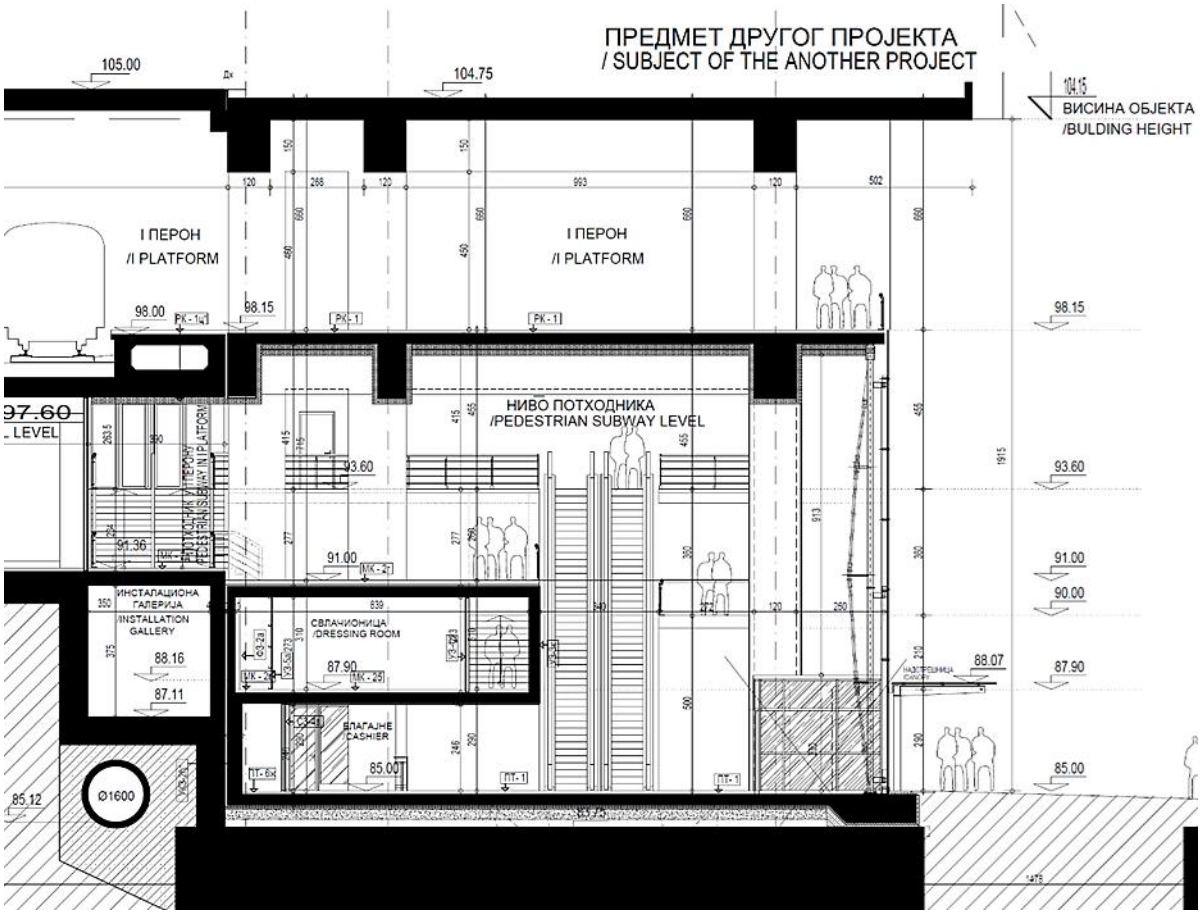
Most activities are light construction works (not interfering with vital components of the buildings structure). The Project comprises light construction works (not interfering with vital/constructive components of the building structure) and craft works in the building, such as installation of partition (not bearing) walls, finishing of floors and walls, installation of hydrotechnical, mechanical, telecommunication installations, installation of conveyors and escalators, two railway tracks added to the existing platform and existing substructure, superstructure, installation of a façade consisting of aluminum profiles filled with glass or sintered stone. However, some works include removals of retention walls, possible interference with constructive elements to accommodate additional drainage, provide electrical installations and utilities, etc. There are three basic group of works:

- ***Preparation for the execution of works***, which can be clearing the terrain as a preparation for smaller scale reinforced concrete works (for example introducing drainage channels), preparing the substrate for the construction of smaller scale foundations (for example, foundations for chillers), channels, laying cable installations, landscaping. This group of works includes the demolition/removal of parts of constructed structures, such as smaller parts of previously constructed retaining walls, foundation walls, widening of openings for installation of elevators, escalators, widening of openings in existing reinforced concrete walls; punching openings in brick walls, for installation of water and sewerage installations, cables and the like); disassembly and relocation of covers, contact networks, telecommunications installation, electrical installations, grounding, channel cleaning.
    - ***Execution of works*** such as: installation of internal aluminum structure and package glass (doors, canopies, partitions, stair railings, counters), installation of steel structures for canopies, platforms, substation floors, supporting structure for steel stairs with railings; steel frame for installing the escalator, substructure for laying the glass facade; reinforcement of elevator openings; installation of partition walls inside the station building, covering of floors, ceilings and walls; installation of sanitary facilities, waterproofing and thermal insulation within the station building but also on the facilities of the "Beograd Centar" railway station; installation of drainage pipes; reinforced concrete works on the construction of ramps, foundations: for chillers, contact network poles, planters; plate upgrade at the height of 93.60. Specific works are execution of works on the superstructure of tracks I and II, which includes installation of elastomers, geotextiles, installation of sleepers, rails, switches, equipping platforms, and tracks by placing markings including markings for the visually impaired; and parapet; rehabilitation of columns on previously constructed parts of the building, as well as planting trees and grass on the station complex. After installing the installation and equipment that is the subject of this project, quality control of the installed

equipment and its testing. For the plumbing installation, system disinfection and testing of the water sample for suitability for drinking are mandatory.

- ***Procurement and installation of materials, equipment and systems:*** material for the covering of floors, ceilings, walls, complete equipping of sanitary junctions, water and sewage pipes with accompanying material, coalescent separator, pumps, hydrants, water meters, cast iron covers and climbing frames, fences, interior carpentry including smoke doors, furniture for official premises, substations, uninterruptible power supply devices, switches and other related equipment, cables and cable lines, pole LED lights, steel catenary poles, cantilever poles with short portals, catenary with power connections and hangers, distribution cabinets, racks, clock system, technical protection system, sound system, telephones, system for recording working hours, radio network for the work of the security service, upgrade of existing software for integration of the security system, burglar alarm, video surveillance, alarm and fire extinguishing equipment; distribution for underfloor heating, air conditioners and ventilation chambers, heat pumps, boilers, heating and cooling units, fan-coil, air curtains, equipment and installation of elevators, moving paths, parallel and individual escalators, equipment for informing and guiding the movement of passengers, benches, audio visual information system, monitors, platform access control system.

  The technical documentation is prepared by licensed engineers (which implies time-proven engineering experience in the relevant fields of design) which, if necessary, is coordinated with the technical control (an independent entity with appropriate licenses, obtained on the basis of personal engineering licenses) in accordance with the Laws and Bylaws. The confirmation of the Technical Control on the acceptance of the project for the construction permit is binding for obtaining the construction permit, and for the notification of the start of works. This means that it is divided by areas: Architecture, Engineering constructions, Hydrotechnics, Project of electric power installations, Project of telecommunications and signal security devices, Mechanical installation. All the above mentioned will be a subject of the technical approval for the use permit. A separate fire safety study has been developed as a part of the construction permit, and before the start of the works will be the subject of control and approval of competent authority (Ministry of Interior, Administration for emergency situations in Belgrade).



Cross-section of railway station building below 105,50masl

1.4 POLICY FRAMEWORK

1.4.1 Overview of national environmental and social legislation

The legal and institutional framework for environmental and social matters, based on the Constitution of the Republic of Serbia, ensures the right to a healthy environment and the duty of all, as in accordance with the Law, to safeguard and improve the environment. Health and the environment are reinforced by numerous governmental strategies, international agreements, and the Millennium Development Goals.

The Republic of Serbia has made a significant effort to reach environmental requirements in line with the EU acquis. A set of environmental legal frameworks was adopted transferring requirements of relevant EU directives to national legislation. Still, a series of laws and by-laws need to be adopted to harmonize the horizontal legislation with EU directives.

Social standards as set by the International Bank for Reconstruction and Development (IBRD) are in many aspects in accordance with the Serbian legal framework. However, some IBRD social standards are exceeding or supplementing Serbian laws and regulations, especially in terms of stakeholder engagement and grievance mechanism, and to some extent resettlement. Environmental legislation in the Republic of Serbia consists of many laws and regulations. Currently, the majority of these are harmonized with EU legislation.

Environment:

- Law on Environmental Protection ("Official Gazette of RS" No 135/2004, 36/2009, 36/2009 – other law, 72/2009 – other law, 43/2011 – CC ruling, 14/2016, 76/2018, 95/2018 – other law and 95/2018 – other law, 94/2024 – other law).
- The Law on EIA ("Official Gazette of RS" No. 94/2024)
- Law on chemicals ("Official Gazette of the RS. 36/2009, 88/2010, 92/2011, 93/2012 and 25/2015),
- The Law on Climate Change ("Official Gazette of RS", No. 26/2021)
- The Law on the use of renewable energy sources ("Official Gazette of RS", No. 40/2021)

Other pieces of legislation regulating the EIA process are the following:

- Law on Strategic Environmental Impact Assessment ("Official Gazette of the RS", No. 135/04 and 88/10).
- Regulation on the determination of the List of projects for which impact assessment is mandatory, and the List of projects for which the environmental impact assessment may be required ("Official Gazette of the RS", No. 114/08).
- 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 EIA Study ("Official Gazette of the RS", No.69/05).
- Rulebook on the contents of the EIA Study ("Official Gazette of the RS", No. 69/05).
- Law on confirmation of convention on information disclosure, public involvement in the process of decision making and legal protection in the environmental area ("Official Gazette of the RS", No. 69/05).
- Rulebook on the content, appearance, and manner of keeping the public book on implemented procedures and adopted decisions on environmental impact assessment ("Official Gazette of the RS", No. 69/05).
- Rulebook on the procedure of public inspection, presentation, and public consultation about the EIA Study ("Official Gazette of the RS", No. 69/05).
- Rulebook on the work of the Technical Committee for the EIA Study ("Official Gazette of the RS", No. 69/05

Water Protection, wastewaters, and water quality

- The Law on Water ("Official Gazette of the RS" No. 30/10, 93/12, 101/2016, 95/2018 and 95/2018 – other law)

Additional regulations that apply include:

- Regulation on Emission Limit Values for Pollutants in Waters and the Deadlines for Their Reaching ("Official Gazette of the RS", No. 67/2011, 48/2012 and 1/2016).
- Regulation on Emission Limit Values for Pollutants in Surface and Ground Waters and Sediments and the Deadlines for Their Reaching ("Official Gazette of the RS", No. 50/2012).
- Regulation on Categorization of Watercourses ("Official Gazette of the RS", No. 5/68).

- Regulation on Establishing the Water Management Program in 2021 (“Official Gazette of the RS”, No. 11/2021, 48/2021 and 112/2021).
- Rulebook on Permissible Quantities of Hazardous and Harmful Substances in Soil and Irrigation Water and Methods for Their Verification (“Official Gazette of the RS”, No. 23/94).
- Rulebook on the Manner and Conditions for Measuring the Quantities and Examining the Quality of Wastewater, and the Contents of Reports on Performed Measurements (“Official Gazette of the RS”, No. 33/2016).

Soil Protection

- Law on Soil Protection ("Official Gazette of the RS", No. 112/2015).
- Law on Forests ("Official Gazette of the RS", No. 30/2010, 93/2012, 89/2015 and 95/2018-other law),
- Law on Agricultural Land ("Official Gazette of the RS", No. 62/2006, 65/2008-other law, 41/2009, 112/2015, 80/2017 and 95/2018- other law),
- Law on Spatial Planning and Construction ("Official Gazette of the RS", No. 72/2009, 81/2009 (Corrigendum), 64/2010, 24/2011, 121/2012, 42/2013, 50/2013, 98/2013, 132/2014 145/2014, 83/2018, 31/2019, 37/2019 – other law, 9/2020 and 52/2021).

Additional regulations are:

- Regulation on limit values of polluting, harmful and dangerous substances in soil (“Official Gazette of the RS”, No. 30/2018 and 64/2019).
- Rulebook on the List of Activities That May be the Cause of Soil Pollution and Degradation, Procedure, Data Content, Deadlines and Other Requirements for Soil Monitoring (“Official Gazette of the RS”, No. 102/2020).
- Regulation on systematic monitoring of the condition and quality of soil (“Official Gazette of the RS”, No. 88/2020).
- Regulation on the conditions that a legal entity must meet to perform land monitoring activities, as well as the documentation that is submitted with the request for obtaining authorization for land monitoring (“Official Gazette of the RS”, No. 58/2019

Air Protection

- Law on Air Protection ("Official Gazette of the RS", No. 36/2009, 10/2013, 26/2021)

Occupational and Community Health and Safety:

- The Law on Occupational Safety and Health organized (“Official Gazette of the RS” No. 101/2005, 91/2015 and 113/2017 -other law)

Occupational health and safety system is also supported by:

- The Labor Law ("Official Gazette of the RS", no. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014, 13/2017 - US decision, 113/2017 and 95/2018 - authentic interpretation),
- The Law on Health Care (“Official Gazette of the RS”, number 25/2019),
- Law on Health Insurance („Official Gazette of the RS”, no.25/2019 and 92/2023),

- Law on Pension and Disability Insurance ("Official Gazette of the RS", no. 34/2003, 64/2004 - decision of USRS, 84/2004 - other laws, 85/2005, 101/2005 - other laws, 63/2006 - decision of the USRS, 5/ 2009, 107/2009, 101/2010, 93/2012, 62/2013, 108/2013, 75/2014, 142/2014, 73/2018, 46/2019 - US decision, 86/2019, 62/2021, 125 /2022, 138/2022 and 76/2023),
- Law on General Product Safety („Official Gazette of the RS", no. 41/2009 and 77/2019) and many other laws, technical regulations, and standards for realization of safe and healthy working conditions. Additional laws:
- Law on Fire Protection ("Official Gazette of the RS", № 111/09, 20/2015, 87/2018 and 87/2018- other law).
- Law on Explosive Substances, Flammable Liquids and Gases ("Official Gazette of SRS", № 44/77, 45/85, 18/89 and "Official Gazette of the RS", № 53/93, 67/93, 48/94, 101/2005- other law and 54/2015- other law).
- Rulebook on Labor Protection for Construction Works ("Official Gazette of the RS", № 53/97 and 14/09 – other law).
- Rulebook on Scope of Elaborate of Construction Site Arrangement ("Official Gazette of the RS", № 31/92, 121/2012 and 102/2015).
- Law on Public Roads ("Official Gazette of the RS", № 41/2018 and 95/2018 – other law).
- The Public Health Service Law ("Official Gazette of the RS", № 25/2019).

Construction and Spatial Planning:

- The Law on planning and construction ("Official Gazette of the RS", No. 72/2009, 81/2009 - correction, 64/2010 - decision of the CC, 24/2011, 121/2012, 42/2013 - decision of the CC, 50/2013 - decision of the CC, 98/2013 - decision of the CC, 132/2014, 145/2014, 83/2018, 31/2019, 37/2019 - other act and 9/2020, 52/2021 and 62/2023).

Labor management and Gender Equality:

- The Labor Law (LL) ("Official Gazette of the RS" No. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014, 13/2017- CC ruling,113/2017 and 95/2018 – authentic interpretation)
- Law on gender equality (official Gazette of the RS no 52/2021)

Waste Management:

- The Law on Waste Management ("Official Gazette of the RS" No. 36/2009, 88/2010, 14/2016, 95/2018 and 36/2023)
- Waste management Plan of SRI (Jun 2023)

Additional regulations in waste management are as listed:

- Regulation on Disposal of Waste Materials in Waste Disposal Sites ("Official Gazette of the RS", No. 92/2010).
- Rulebook on Practice for Categories, Testing and Classification of Waste ("Official Gazette of the RSbia" No. 56/2010, 93/2019 and 39/2021).

- Rulebook on Waste Tires Management (Official Gazette of the RS, No. 104/09 and 81/2010).
- Rulebook on Waste Batteries and Accumulators Management (Official Gazette of the RS, No. 86/2010).
- Rulebook on the Method of Storage, Packaging and Labelling of Hazardous Waste (Official Gazette of the RS, No. 92/2010 and 77/2021).
- Rulebook on Waste Oils Management (Official Gazette of the RS, No. 71/2010).
- Rulebook on List of Electrical and Electronic Equipment, Measures of Prohibition and Restrictions on the Use of Electrical and Electronic Equipment Containing Hazardous Substances and Management of Electrical and Electronic Equipment (Official Gazette of the RS, No. 99/2010).
- Rulebook on the Form of the Document on the Movement of Hazardous Waste, the Form of Prior Notice, the Manner of its Delivery and Instructions for Their Completion ("Official Gazette of the RS, No. 17/2017).
- Rulebook on the Form of the Document on Waste Movement and Instructions for its Completion ("Official Gazette of the RS, No. 114/2013).
- Rulebook on the Form of Daily Records and Annual Report on Waste with Instructions for its Completion ("Official Gazette of the RS, No. 7/2020 and 79/2021).
- Rulebook on Conditions and Manner of Collection, Transport, Storage and Treatment of Waste Used as Secondary Raw Material or for Energy Production ("Official Gazette of the RS, No. 98/2010).
- Law on Packaging and Packaging Waste Management ("Official Gazette of the RS", No. 36/2009 and 95/2018- other law).

Cultural heritage:

- The Law on Cultural property ("Official Gazette of the RS" No. 71/94, 52/11 – other law, 92/11 – other law).

Stakeholder Engagement:

- The Law on Free Access to Information of Public Importance (Official Gazette or the RS 120/04, 54/07, 104/09 and 36/10).
- Law on Planning and Construction (Official Gazette of the RS, No. 72/2009, 132/2014, and later amendments) This law requires public hearings and stakeholder consultations as part of spatial and urban planning processes. It also includes provisions for notifying affected persons and the broader public about projects that may affect them.
- Law on Public Administration (Official Gazette of the RS, No. 79/2005, 101/2007, and amendments) This law emphasizes transparency and citizen participation in administrative processes.

Labor

- Labor Law (Official Gazette of the RS No. 24/2005 and subsequent amendments): This law governs employment relationships, ensuring fair labor practices, occupational health and safety, and the prevention of child and forced labor

- Law on Occupational Safety and Health
- (Official Gazette of the RS, No. 101/2005, 91/2015, and 113/2017) Covers safety standards in workplaces, including for contractors and project workers, and indirectly contributes to broader community safety by minimizing workplace accidents that could affect nearby communities.

Community Safety

- Law on Planning and Construction
- (Official Gazette of the RS, No. 72/2009, 132/2014, 145/2014, and others) Regulates construction site safety, urban planning, and the siting of infrastructure to ensure risks to the public are minimized during project implementation (e.g., transport corridors, railway modernization).
- Law on Protection and Rescue in Emergency Situations
- (Official Gazette of the RS, No. 111/2009 and 92/2011) Provides a legal basis for risk prevention, preparedness, and response mechanisms in case of industrial accidents or natural disasters—relevant to large infrastructure projects.
- Bottom of Form

Other:

- Law on road traffic safety ("Official Gazette of the RS", No. 41/2009, 53/2010, 101/2011, 32/2013 - decision US, 55/2014, 96/2015 - law, 9/2016 - decision US, 24/2018, 41/2018, 41/2018 – other law, 87/2018, 23/2019, 128/2020 – other law and 76/2023).
- Law on Amendments to the Law on Road Traffic Safety ("Official Gazette of the RS", No. 76/2023).
- Law on Safety in railway traffic ("Official Gazette of the RS", No. 41/2018).
- Railway Rulebook for Traffic No 227.
- Manual for the application of safety measures against electric current on the contact network of the single-phase system 25kV 50Hz of Yugoslav railways No 227a.

1.4.2 ESF objectives and requirements

WB ESS, supported by WB Group Environmental, Health and safety Guidelines (ESHG), https://www.ifc.org/en/insights-reports/2000/general-environmental-health-and-safety-guidelines and GIIP (applicable WB good practice notes, applicable EU directives and other regulation requirements e.g. BREFs, REACH directive) also mandatory under ESF, are applied in parallel to the national policies where, as a rule, the stricter one prevails.

1.4.2.1 *Overview of the World Bank Environment, Health, and Safety Guidelines (EHSG)*

Recommendations for the management of EHS impacts during the Project implementation are provided in the General WB EHS Guidelines. Available at: https://documents1.worldbank.org/curated/en/157871484635724258/pdf/112110-WP-Final-General-EHS-Guidelines.pdf.

WB EHSG applicable to the Project:
Environmental:
1.1 Air Emissions and Ambient Air Quality.
1.2 Energy Conservation.
1.3 Wastewater and Ambient Water Quality.
1.4 Waste Management.
1.5 Noise.
Occupational health and safety:
2.1 General Facility Design and Operation.
2.2 Communication and Training.
2.3 Physical Hazards.
2.4 Chemical Hazards.
2.7 Personal Protective Equipment (PPE).
2.9 Monitoring.
Community Health and Safety:
3.1 Water Quality and Availability.
3.2 Structural Safety of Project Infrastructure.
3.3 Life and Fire Safety (L&FS).
3.4 Traffic Safety.
3.5 Emergency Preparedness and Response.
Construction and Decommissioning
4.1 Environment
4.2 Occupational Health and Safety
4.3 Community Health and Safety

1.4.2.2 *Overview of the World Bank Environmental and Social Standards (ESS)*

The World Bank developed an Environmental and Social Framework (ESF) setting out the World Bank's commitment to sustainable development through application of Bank Policy (defined in the ESF) and a set of Environmental and Social Standards (ESS) that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity.

There are 10 ESSs. Each of the ESSs sets out several objectives. The objectives describe the outcomes that each of the ESSs is intended to achieve.

The following ESSs are relevant for this Project:

- ESS1 Assessment and Management of Environmental and Social Risks and Impacts.

  It sets out the Borrower's responsibilities for assessing, managing, and monitoring environmental and social risks and impacts associated with each stage of Project to achieve environmental and social outcomes consistent with the ESSs.

- ESS2 Labor and Working Conditions.

  Objectives of this standard are: to promote safety and health at work; the fair treatment, non-discrimination and equal opportunity of project workers; to protect health and safety of workers, to protect workers, including vulnerable workers such as women, persons with disabilities, children (working age) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate; to prevent the use of all forms of forced labor and child labor; to support the principles of freedom of association and collective

bargaining of project workers in a manner consistent with national law; to provide project workers with accessible means to raise workplace concerns.

- ESS3 Resource Efficiency and Pollution Prevention and Management.

  Objectives of this standard are to promote the sustainable use of resources, including energy, water and raw materials; to avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities; to avoid or minimize project-related emissions of short and long-lived climate pollutants; to avoid or minimize generation of hazardous and non-hazardous waste; to minimize and manage the risks and impacts associated with pesticide use.

- ESS4 Community Health and Safety.

  Objectives of this standard are: to anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and nonroutine circumstances; to promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams, to avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials, to have in place effective measures to address emergency events; to minimize and manage the risks and impacts associated with pesticide use; to ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.

- ESS10 Stakeholder Engagement and Information Disclosure.

  Objectives of this standard are to establish a systematic approach to stakeholder engagement that will help Borrowers to identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties; to assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be considered in project design and environmental and social performance, etc.

  The ESS set that apply to the Borrower and projects present set of obligatory guidelines and instructions with the main objective to foster efficient and effective identification and mitigation of potentially adverse environmental and social impacts that may occur in the development projects, with proper stakeholder engagement and sustainable management.

  The Ministry of Construction, Transport and Infrastructure prepared an Environmental and Social Management Framework (ESMF) for the phase I of SRSM project. The ESMF is the environmental and social instrument guiding the identification and management of potential risks and impacts and hence, to ensure that the proposed Project is implemented in accordance with the World Bank operational guidelines, including WB Environmental, Health and Safety Guidelines (EHSG), and similar guidelines of national competent organizations, World Bank Environmental and Social Standards (ESS), national legislation related to environmental and social protection, as well as a mandatory practical tool to be used during design, implementation, and monitoring of the Project activities.

2 PROJECT DESCRIPTION

2.1 Background information

Activities related to ES presented in this project is part of the activities presented in the integral EIA named Beograd-Centar railway station extension project with access roads number: 353-02-01745/2016-16 dated 15.12.2016. and approved by the Ministry of Environmental Protection.

In the part of the national EIA that refers the purpose of the building, it is stated that the Project includes contents technical and business premises for railway needs at elevations: 85, 90, 93.60 and 98.15, which is the subject of this assessment. Considering that in the previous period works on the substructure on tracks 1 and 2 were completed, the subject of this project is the installation of the superstructure.

Validity of the national EIA has been confirmed on several occasions: 2017 due to changes of the cadaster parcel number; Decision that the preparation of the EIA is not required due to the construction of the parking lot in 2022 year; and at last, in 2023 the Ministry of Environmental Protection opinion that it is not necessary to update the EIA for changes in the architectural solution of the station building. As a part of project preparation, the sub-project includes rehabilitation of recorded superficial damages. The designer with a construction license, has inspected the elements where local subsidence of part of the protective concrete layer was observed. The calculations showed that the adopted reinforcement is significantly larger than necessary. Also, a detailed check of the joints of the old and new fittings was carried out. The climate change and natural disaster resilience was not assessed as the part of the EIA; therefore, it was included in this ESMP. A social impact assessment (SIA), as an addendum to EIA is finished.

The wall and tall vegetation on the edge of the wall provide natural shade regardless of these natural advantages of the terrain, due to the large area of 5ha on which it will be building a building requires additional protection against the negative effects of direct and indirect solar radiation. Direct and indirect solar radiation on the object also prevents by applying appropriate types of materials.

For this final stage, in Table below are listed the latest documents and permits, which are the subject of Project.

Table 1: List of latest documents and permits

Documents	Competent authority	Status	Year	Additional information/Comments
Location conditions	Ministry of Construction, Transport, and Infrastructure	completed	2023	Zavod za zaštitu spomenika kulture grada Beograda (cultural heritage - Belgrade) Republički zavod za zaštitu spomenika kulture (cultural heritage - Serbia), Zavod za zaštitu prirode Srbije (Environment protection, Serbia) Telekom (Telecommunications) CETIN (Telecommunications) SBB (Telecommunications)

				JKP „Beogradski vodovod i kanalizacija“ – (water and sewage, Belgrade) JKP „Beogradske elektrane“ (heating, Belgrade) JKP „Javno osvetljenje (Public lighting, Belgrade) JKP „Zelenilo – Beograd (City greenery) JKP „Gradska čistoća (Waste management, Belgrade) Sekretarijat za javni prevoz JKP „ Beogradski metro i voz“ (Public transportation) Sekretarijat za saobraćaj (Public transportation) JP „Srbija gas“ Beogas d.o.o. (gas, heating, Serbia) „Elektromreža Srbije “a.d. (electricity) Ministarstvo odbrane (defence ministry) JP “Putevi Beograda (traffic) JVP „Srbijavode“ Republičke direkcije za vode (water, Serbia) MUP, Sektor za vanredne situacije (emergency situations, fire protection) Elektrodistribucija Srbije“ d.o.o. (electricity)
Fire safety study	MUP, Sektor za vanredne situacije	completed	2023	Ministry of Internal Affairs,Emergency Situations Sector
Expert control of Feasibility Study and preliminary design	State revision Commission	completed	2023	
Construction permit Design	Saobraćajni institute CIP	completed	2024	
Technical control of project for construction permit	Project Biro Utiber” doo VS INFRA DESIGN D.O.O.	completed	2024	
Construction permit	Ministry of Construction, Transport, and Infrastructure	Ongoing		The preparation of the tender for the selection of the contractor for this project, is underway. The investor is obliged to obtain a Building Permit.
EIA-RELATED ACTIVITIES				
EIA Study Beograd Centar	Saobraćajni institute CIP, approved by	completed	2016	

railway station extension project with access roads	Ministry of Environmental Protection.			
Decision	Ministry of Environmental Protection.	completed	2022	that the preparation of the EIA is not required due to the construction of the parking lot
Opinion	Ministry of Environmental Protection.	completed	2023	that it is not necessary to update the EIA due to changes in the architectural solution of the station building

2.2 Location and building plot

The location of the "Beograd Centar" railway station has the status of urban construction land and it is defined for a traffic area in several spatial documentation: The plan of the general regulation of the construction area of the units local governments - City of Belgrade (units I-XIX) ("Official Gazette of the City of Belgrade", No.20/16, 97/16, 69/17, 97/17 and 27/22), Plan of general regulation of rail systems in Belgrade with elements of detailed elaboration for the I phase of the first metro line Belgrade ("Official Gazette of the City of Belgrade", No.102/21), Detailed urban plan of the passenger railway hub in Belgrade ("Official Gazette of the City of Belgrade", No. 13/72, 22/76, 8/77) and the Urban Project for the construction Belgrade Center railway station facilities, parking lot and accompanying business - commercial facilities within the complex of the train station Belgrade Centar, KO Savski Venac (certificate from the Ministry of Construction, Traffic and Infrastructure, No. 350-01-02005/2020-11, from 02.03.2021.).

The "Beograd Centar" railway station is in the Belgrade municipality of Savski Venac, right next to the Boulevard Franche d'Eperea, Knez Aleksandar Karađorđević Boulevard and Vojvode Putnik Boulevard at the foot Topčidersko brdo. Nearby the station there are significant facilities that attract many users: the Clinical Center, the football stadiums of Partizan and Crvena Zvezda, Complex "Rudo", and Memorial Museum 25 May. In the observed area there is an abandoned brewery of the Belgrade Beer Industry “BIP” (in bankruptcy), “Hyde Park”, the Maleško brdo settlement, with about fifty houses. Opposite this settlement, on the other side of the railway station, there is a residential complex of 4 solitaires called settlement Stjepan Filipovic.

Cadaster parcels: 2462/1, 2463/1, 2757/1, 2855/1, 2855/107, 2855/110, 2855/111, 2855/117, 3284/23, 3284/25, 3284/29, 3285/4, 3286/3, 3286/4, 3291/1, 10692/2, 10692/3, 10692/6, all on cadaster Municipality Savski Venac.

Location of the "Beograd Centar" railway station

2.3 Technical description of planned reconstruction

In the previous phase, part of the station building above an elevation of 105,5, was already built under the strategic partnership agreement. This part of the building functions as an independent entity and has use permit since February 2025. Activities on the construction of the building below an elevation of 105,5, furnishing of the interior as well as the completion of works on tracks I and II, are financed by a loan from the World Bank and the French Development Agency (this sub project). This Phase involves the construction of a 10,000-square-meter station complex below the slab for passenger services and staff accommodations, with the understanding that all structural civil works were completed during previous Phase.

The station below an elevation 105,5 has six characteristic height levels named in relation to the absolute elevation:

- Level 85: Access from the highway.
- Level 90: Offices and Staff Premises.
- Level 93: Underpasses.
- Level 98: Platforms.
- Level 100: Concourse (ticket sales, passenger restrooms) - not part of the project.
- Level 102: Technical rooms.

2.3.1 Water supply

The subject of the Project is new installations of water supply, sanitary and fire-fighting water (external internal and internal hydrant network) and fecal sewage are foreseen below an elevation of 105,5 of the station building**.**

The station building below an elevation 105,5 will be supplied with sanitary and fire-fighting water through a common connection, and in accordance with the existing conditions on the ground, project requirements and conditions of Belgrade Water and Sewage PUC. The connection is planned to the reconstructed water supply network Ø 200 in Prokupačka street,

which belongs to the 1st altitude zone. Considering that the supply of the station building at elevation 105,5 is planned from the street water supply network from the upper side of the street, a completely independent provision of the facility at and below elevation 105,5 was achieved.

The required amount of water for extinguishing fires is provided from the reconstructed city network with the installation of a pressure booster.

The network of external and internal wall hydrants is designed as a ring.

Hot water supply is provided by central preparation through appropriate water heaters located in the machine rooms an elevation of 85. The building is equipped with fire alarms. The designed stable fire-fighting installation with NovecTM1230 as extinguishing agent is of automatic action, with automatic-electric activation in accordance with the previous fire-studies.

For the removal of fecal water and sanitary wastewater, a fecal sewage system is planned, which is discharged into the existing sewage network released into the fecal city collector.

2.3.2 Sewerage system (surface runoff)

Connection of garages, parking lots, internal roads and other buildings and surfaces that release water with the content of oil, grease, gasoline, etc., be carried out through a precipitator and separator (separator) of grease and oil. For objects that have drainage around the object, connect the drainage water to the internal storm sewer after passing through the clarifier. There will be a cooling pit for wastewater from the thermal substation. The quality of wastewater discharged into the city's sewage system must comply with the Decree on limit values of emission of polluting substances into water and deadlines for reaching them, III Municipal wastewater.

2.3.3 Electrical installations

Power installations of this project include connection of buildings to the power grid according to the conditions of Belgrade electricity distribution PE; construction of a substation with a dry transformer; backup power source for all necessary consumers; installation of external lighting and equipment of the lower station square (diesel generator); installation of protection against electric shock and part of the lightning rod installation that was not carried out in the previous stages.

The installed equipment must be made of materials that prevent the spread of flames and the development of smoke and toxic gases.

For cooling the facility, electricity is provided for the central preparation of cold water with chillers, while the heating will be provided by connecting to the city remote hot water system.

The preparation of sanitary hot water is via an electricity powered central boiler, with a backup electrical supply in case of need.

A new transformer station with two dry transformers, 1250kVA each, is planned within the technical block of the building at an elevation of 85,0.

For powering priority consumers there is backup power source as a diesel electric generator with a power of 825 kVA. For powering equipment that requires uninterrupted power supply (computer workstations, server room, automation cabinets), devices that have autonomy in power supply are installed. Autonomy is provided by batteries, for a duration of about 10 minutes, until the operation of the diesel unit is established.

For powering safety systems that must function in the fire conditions, special cables are provided that maintain integrity and functionality in fire conditions for at least 90 minutes and must have a declaration manufacturer on compliance.

LED lamps are planned for lighting the rooms in the building, as for the evacuation lighting, which must have own power source with power autonomy for 3 hours.

Electrical installations and lighting of parts of the first and second platforms are planned according to the previously performed works. Power supply is provided through distribution cabinets located in the technical rooms at an elevation 98,0. Lighting is divided into general, auxiliary, anti-panic, and evacuation. General and auxiliary lighting is provided for the same luminous bodies (lamps) powered from different sources. General the lighting is powered from the distribution network, and the auxiliary is regularly powered from the network and in the event of a power failure, it is automatically switched to a backup source power supply - diesel electric generator.

Anti-panic lighting has been achieved with lamps marked R3 with their own power source of 3h autonomy. Installation of potential equalization, connection of all metal is foreseen mass, structure, telecommunication, and other equipment to grounding. Provisions are made for powering thermomechanical consumers in machine rooms special distribution cabinets.

All ventilation systems are switched off with a signal from the fire control panel, air conditioning in the building in case of fire and all fire-resistant dampers on ventilation ducts must be closed.

To fulfill all requirements and functions of supervision, management, measurement, and regulation a supervisory control system consisting of the following functional units is foreseen:

- Primary equipment in the field - sensors, transmitters, and executive bodies in the plant, necessary to provide information about the current state of the facility.
- Automation cabinets in the plant with microprocessor controllers (substations) - controllers in charge of performing local functions management and communication with the operator workstation.
- Elements for local management and regulation.
- Operator workstation - control center with application software.
- for central supervision and management (SCADA - Supervisory Control and Data acquisition).
- Cables and cable accessories for interconnection and communication of all elements of the supervisory and management system.

The design of the central system for supervision and management (CSNU) includes supervisory-management and measurement-regulation functions for the following technical technological systems and units in the facility:

- distribution cabinets.
- air conditioning.
- ventilation.
- heating.
- cooling.
- preparation of sanitary hot water.
- transformers.
- diesel generator.

- UPS's.
- lighting of public areas of the facility.
- external lighting.
- escalators.
- smoke removal.
- conveyors.
- elevators.

Protection against electric shock

For protection against electric shock by indirect contact, TN-S is provided power supply system with automatic power cut-off in case of failure. For protection against electric shock by direct contact the following protection principles are foreseen protective isolation by use insulated conductors and cables and by installing electrical equipment indoors installation housings.

2.3.4 HVAC installations (heating, cooling, and ventilation)

Facility will be connected to the remote heating system of Belgrade Power Stations PUC via two primary heating substations located at an elevation of 85,0 (which uses gas and fuel oil as fuel), and the cooling energy is the air water heat pump chillers. It is possible that the installed installation can be connected to water-water heat pumps when the conditions are met.

Air-cooled heat pump chillers installed at elevations of 85,0 and 90,0 are intended for the preparation of cold water. Two cooling aggregates with a capacity of 235 and 250 kW have been adopted.

Ventilation and air conditioning

In the primary and secondary substations, 11 air conditioning chambers, ventilation, and air conditioning were installed. The ventilation chambers operate with 100% fresh air, and the air conditioning chambers with circulating air. When calculating the amount of fresh air, the recommended amount of air per person was considered (for rooms where people are constantly staying 25m3/h, and for staircases, corridors 14m3/h) and the emission of harmful substances originating from the building itself. The amount of fresh air for each of the ventilation systems is determined according to SRPS EN 15251:2010.

For ventilation, heating, and cooling of official premises (cash registers, offices, etc.), shops and workshops, installation of duct and cassette fan coils that work with fresh air is planned. In this way, it is possible to individually adjust the temperature in the rooms, in accordance with the stay in them.

Floor heating

For ventilation, heating, and cooling of official premises (cash registers, offices, etc.), shops and workshops, installation of duct and cassette fan coils that work with fresh air is planned. In this way, it is possible to individually adjust the temperature in the rooms, in accordance with the stay in them.

In the vestibule at an elevation of 85,0 as well as in the sanitary rooms, where possible, underfloor heating is provided to cover transmission losses.

Cooling of the server room

In accordance with the heat load of the fully equipped server room of 65 kW, an indirect cooling system with a mixture of water 70% and glycol 30% was chosen as the cooling medium, which is called intelligent free cooling due to its efficient energy saving system. In the Hall, 4 in-line

units are installed that maintain air temperatures at the designed level (to instructions/recommendations of the producer).

Cooling of TT premises

In the premises for the accommodation of telecommunication equipment and energy, "single" split systems or VRF are provided, i.e. two redundant systems in each room, one working and one spare. The condensation network of the system is voided from the internal and external units with a drop of 1% of the sewerage or street vertical.

Air curtains

At the main entrance door of the vestibule at heighten elevation of 85,0, as well as at the entrances from the underpass to the building at an elevation of 93,60, hot water air curtains are placed to prevent the penetration of outside air into the building. They are switched on by a switch at the door of the distribution cabinet.

Ventilation in the case of fire

Ventilation in the case of fire from the vestibule room at an elevation of 85,0 is provided by a natural smoke extraction system. Other fire protection measures are provided by KGH systems.

1. In the places where the ventilation ducts pass through the fire walls, electric fire dampers are provided.

2. On the parts of the ventilation ducts that pass through the fire protection sectors, insulating material with a fire resistance of 120 min is provided.

3. Air conditioning and ventilation equipment are located in different rooms.

4. It is planned to switch off comfort ventilation systems in case of fire.

Ventilation of diesel units and substations

During the operation of the unit, heat and hazardous exhaust fumes is released, which must be removed from the room. Ventilation provides combustion air supply and general ventilation with exchange of air sufficient to prevent saturation with exhaust fumes. Cooling is done by the flow of air around it. The unit has built-in shock absorbers to prevent the transmission of vibrations to the foundations of the building. Exhaust gases are taken out through two steel pipes, to the outside environment, 2,5m above ground level in a way to allow venting and prevent concentration of gasses. Rooms with diesel generators are equipped with CO and CO2 concentration sensors and alarms.

Start-up of the unit, engine and generator protection and fault signaling are automatic.

Substation

Due to the large heat dissipation from transformers in the substation, forced ventilation/cooling of these rooms is provided. The warm air from the upper zone of the room is drawn by a duct fan to the outer protective grid above the entrance door. Compensation with fresh air is done through the grille in the door.

Emergency ventilation

The ventilation of the room that is extinguished with gas during the fire is provided by a mobile axial fan system.

Automatic regulation and control

The basic functions of automatic regulation and control include:

1. Circulation pumps.
2. Fire dampers.
3. Air filters.
4. Fans.
5. Air conditioner heaters.
6. Refrigerators, air conditioners.
7. Plate heat recuperators.
8. Mixing section in air conditioning chambers.
9. Fan coil devices.
10. Air curtains.
11. Chillers for cooling the server room.

2.3.5 Parking lots at the location

Calculations of the number of parking spaces were made for the variant without metro system.

The total number of parking spaces, in accordance with the design parameters, for employees, passengers and companions is 232, but only 34 parking spaces will be provided under scope of this Project.

Apart from railway passengers and companions, the center will stay at the "Beograd Centar" railway station complex and employees in that zone, as well as users of content for business and commercial purposes (in the final stage of the realization of the station, 300 workers are expected in the 1st shift, i.e. a total of 500 during the day). In the first phase, all of them will come and go with PCT system vehicles (bus, trolleybus), by taxi, passenger cars and on foot, and in the future also by depo. Analyzing the number of inhabitants in certain spatial zones of the city and planned connection with various types of road traffic, the distribution was assessed of the arrival and departure of the users of the "Beograd Centar" railway station complex. Loading of the lower and upper cell square yes is 55% against 45% in favor of the former.

Special parking garages are planned for commercial buildings and shopping centers (the UP planned a parking garage with 4 floors, one of which is reserved for railway users).

A „Park and ride“ system is planned, which includes the construction of a parking space for accommodation and storage of individual means of transport (cars, bicycles, motorcycles) with which passengers would arrive at the station, park their vehicle, and continue their journey by train. The calculation resulted in the number of 45 parking spaces, the subject of SRSM project are 34 open parking spaces on the lower station square. Some of them will be for people with disabilities. The planned garage is not a part of the SRSM project. Accessibility of people with disabilities and reduced mobility

Measures and design solutions to ensure accessibility of persons with reduced mobility in the premises intended for their movement, residence and work are determined according to the Rule book on the technical standards of planning, design, and construction of facilities, which ensure uninterrupted movement and access to people with disabilities, children, and the elderly persons (Official gazette of the RS, 22/2015).

At the ends of platforms 1, 2 and 3 on the Senjak side, or 4, 5 and 6 on the Dedinje side, provided are fixed inclined ramps for people with reduced mobility and the transport of loaded goods mechanized means and vehicles for maintaining cleanliness. As mentioned in the previous part, all technical and design elements are in accordance with the TSI and articles 6

and 7 of the rule book on the technical standards of planning, design, and construction of facilities.

There will be passenger-freight electric elevators PL5 and PL6, each in its own concrete carriage window dimensions 2400x2900 mm (intended for the transport of goods, passengers and users' commercial content, employees, disabled people in wheelchairs, parents with children as well as the elderly) with a nominal capacity of 1600 kg for people with disabilities.

The hydraulic platform lift HPL7 is used exclusively for the transportation of disabled persons from level VI-platform elevation +98.20 to the level of the sanitary block elevation +100.48 for transport disabled people in wheelchairs, parents with children, as well as old people, i.e. of all persons who can't use moving paths there are passenger electric elevators PL8, PL9, PL10 and PL11 each in its own steel carriage.

Arrangement of access areas adapts to all passengers, and for persons with reduced mobility (persons with disabilities, mothers with children, the elderly persons, and all other people) who have difficulty moving, will be marked separately.

Also, for the blind and visually impaired, tactile surfaces will be provided. These tactile surfaces are installed in three groups (tactile surfaces (longitudinal) intended for directing movement, tactile surfaces (dotted) intended for changing the direction of movement and tactile surfaces (longitudinal) intended for notifying the beginning/end of the part for indicating movement).

Special type of ceramic sink and tiles for people with special needs will be built in.

2.3.6 Fire safety

The facility is equipped with an automatic fire alarm system.

Internal partition walls in the building which separate technical rooms - fire sectors, meets fire resistance of at least 120 minutes. The mezzanine construction at the border of the fire sectors is resistant to fire at least 90 minutes. The internal doors of the rooms that make up the fire sector are intended to be metal PP door, certified for fire resistance from 60 to 120 minutes depending on the purpose and size of the room. Cable penetrations are protected with fire-resistant sealant for a fire resistance of 120 minutes. Before penetration through fire-resistant walls the cables must be protected with resistant coatings.

Hand-held fire extinguishers are provided for initial fire extinguishing. An internal hydrant network is provided in the facility, and a network is provided around the facility external hydrant network.

Protective measures for protection against lightning strikes are installation of lightning protection, equalization of potential of metal masses (parts) on the building, correctly dimensioned and installed grounding device and application of overvoltage protection.

In places where ventilation ducts pass through fire walls (border fire sectors) electric fire dampers are provided.

The air conditioning chambers are in a separate machine room. It is planned to switch off comfort ventilation systems in case of fire.

The fire protection study is a mandatory part of the technical documentation for the building permit. The Ministry of interior (MoI) has confirmed that all the measures provided in the fire protection study have been addressed in the construction project. The MoI confirmation of the fire protection study will be a part of the use permit.

2.3.7 Energy efficiency

The application of modern natural and industrial materials and technologies is foreseen (granite ceramics, glass, stainless metal, printed metals and embossed glass, blinds, industrially produced systems for floors and walls, systems installation, lighting, ventilation, heating, electronic control, fire protection, breakdowns, burglaries, information technologies, visual communications, means of assistance in the movement of persons with special needs, etc.).

The thermal comfort of the building is ensured by the design of the building in accordance with the measured energy efficiency of buildings.

The building has a projected internal temperature of 20ºC, in accordance with the purpose of the premises. The elements of the envelope are designed so that the quality and thickness of the thermal insulation of all the designed assemblies, meet the conditions on the permitted values of heat transfer coefficients Umax. During the design, care was taken to avoid thermal bridges.

The designed facade joinery is made of high-quality aluminum profiles, with high thermal performance. Facade openings in the building are dimensioned so that meet the amount of natural lighting set by current regulations and standards for this type of facility. Light comfort was achieved by introducing natural lights wherever possible and adequate artificial lighting.

All rooms in the facility have natural or mechanical ventilation, which achieves the number of air changes for good sealing and a very sheltered position of the object (n=0.5 h-1).

By choosing appropriate materials and insulating assemblies as well as partition walls, sound comfort is provided (air sound and impact sound).

Based on design, annual required energy and calculations, energy class of the station building is class „C“.

3 ENVIRONMENTAL CONDITIONS OF PROJECT AREA

3.1 Land use

The location of the "Beograd Centar" railway station has the status of urban construction land, and it is defined for a traffic area in several spatial documentation. The total area of the plots that are the subject of the project is 180.951,00 m², while land area under the building is 29.854,50 m². There will be no occupation of new areas.

Table 2: Recapitulation of premises in all facilities of the "Beograd Centar" railway station below 105,5

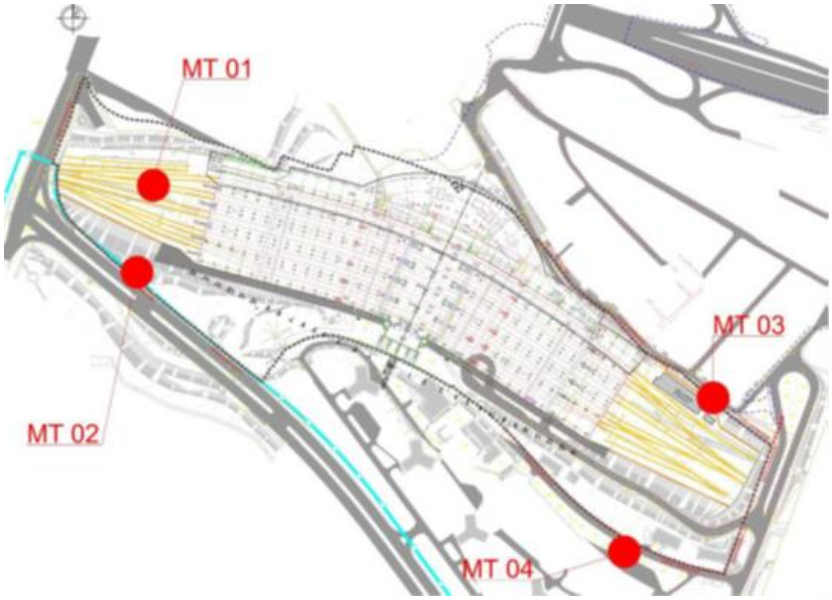
Level	85,00	90,00	93,60	98,15	102,05	Station building below elevation 105,5	Station building below elevation with platform and underpass
Total net area Π (m²)	2.657,24	2.068,51	1.831,43	1.152,01	1.438,02	9.720,47	16.987,39
Total gross area Π (m²)	3.195,77	2.484,59	2.249,46	1.341,50	1.613,20	11.567,65	20.255,47

3.2 Air Quality

In the area of the "Beograd Centar" railway station there is a relatively dense network of roads, so that, negative impacts on the air originating from road traffic can be expected. An internal combustion engine emits many gases, of which they are the most important (due to their proven negative impact on human population): CO, NOx, SO2, hydrocarbons, lead, as well as solid particles in the form of soot. Spatially, the closest measuring point for air quality monitoring in the City of Belgrade is measuring point 15. „Mostar“ (loop to Vojvode Mišića boulevard). It's a type of intersection with 70%-80% passenger traffic, and the rest is heavy and bus traffic. The mean annual value for carbon monoxide and nitrogen dioxide at the measuring point were higher than the allowed average annual value. For the lead and sulfur dioxide measuring levels were less than allowed annual values.

3.3 Noise

The population living in the vicinity of the "Beograd Centar" railway station is exposed to the resulting noise because of the development of railway traffic, as well as the development of road traffic that takes place on the surrounding streets. During the measurement of the noise level, in addition to the regular development of railway and road traffic, works were also carried out on the construction of the railway station. At measuring points 1-3 the equivalent noise levels are above the levels determined by law. These values are significantly higher when trains pass through. At measuring point 4 which was on the local road in the settlement Stjepan Filipović were within acceptable limits.



Noise measuring points locations

3.4 Flora and Fauna

Because of the construction area, the vegetation cover is minimally represented so they are on small fragments of lush vegetation located around the perimeter of the object present in the location areas. Vegetation grows uncontrollably and is mostly not maintained. There are tall and short, bushy representatives of thermophilic deciduous trees forests, numerous grassy and numerous ruderal species. Weed species are also present on unkempt and neglected areas.

In the wider location, the valuable green complexes of Hyde Park and the areas under the greenery of Maleško brdo.

The fauna of the subject area consists of synanthropic species, primarily small mammals, and birds.

According to the Decision of the Institute for Nature Protection of Serbia there are no protected natural assets of ecological importance in the subject area areas (parts of the Ecological Network of Serbia) recorded natural assets or assets that are in the protection procedure.

3.5 Water and flood areas

There are no surface watercourses in the subject area. Subject location-complex the train station Beograd Centar is located outside the sanitary protection zone of Belgrade springs in the first and second altitude zones of the water supply of the city of Belgrade. The Mokroluški stream is regulated and fed into the Sava River.

3.6 Seismic characteristics

During the preparation of the technical documentation (for all engineering objects) calculation of seismic effects according to Eurocode 8 was applied, which is given in more detailed in Geotechnical study.

The assessment of seismic hazard is carried out using the Seismological Map of Yugoslavia, scale 1:1000000, issued in 1987. The Regulation on Amendments and Supplements to the Regulation on Technical Norms for the Construction of High-rise Buildings in Seismic Areas (Official Gazette of the SFRY No. 52/90) introduced this map, which has 6 oleates, which refer to the time interval of 50, 100, 200, 500, 1000 and 10000 years. The probability of an event of

the intensity present on these oleates is 63%. Text taken from the Geotechnical Elaboration of the PD.

In the frame shown engineering geological map, for the mentioned engineering geological complexes is defined seismicity:

The terrain of Holocene age (Q2) is classified in zone 7c, which means that at detailed seismological research for the needs of construction in this area should be expected many locations with an intensity of 8°.

Terrain of Tertiary age sediments, it is classified in zone 7a, which means that for the purposes of construction in this area, it is not expected locations with an intensity of 8° Mercalli scale.

3.7 Climate

3.7.1 Climate change

Within the EIA, the impact on climate change is given in point 6.2.7. Microclimate. Applied measures in the environmental protection system ensure that the Project, in progress execution of works as well as in the operational phase of the facilities of the "Beograd Centar" railway stationwill not have a temporary or permanent impact on the climate and microclimate conditions. The building is oriented, approximately, with longer facades in the north-south direction. That means it is one of the longer facades is constantly facing the north, and the opposite is facing the south. According to the configuration terrain, the southern facade is constantly obscured by the park complex Hyde Park, which is cut off by a vertical retaining wall 10m high, towards the railway façade. Therefore, the wall and tall vegetation on the edge of the wall provides natural shade. The most significant influence for the location of the "Beograd Centar" railway station is certainly Hajd park, which with its proximity offers a temperature that is several degrees lower than in a city where there is only "asphalt and concrete".

Although there are no precise and detailed regulations and procedures, for the dimensioning of hydrotechnical capacities (first of all, we mean storm sewers) for an economically acceptable flood risk, data on heavy rains of short duration in City area, are respected. The occurrence of Landslides, exceeding drainage system capacity, flooding of underground structures as a result of heavy rains on "Beograd Centar" railway station, caused by climate change, are unlikely. This risk is minimal due to the presence of forest vegetation in the surroundings (Hyde Park, Maleško brdo), the channels built in the cuts of the retaining walls, drainage channels near traffic roads, as well as the capacity design that respects the total needs of the station complex. The first geotechnical investigation works for the construction of the "Beograd Centar" railway station were carried out in 1976, on the basis of which the design began. The implementation of the project was temporarily suspended, so that in the course of 1997, 1999, 2000, as part of the continuation of the activity, several supplementary geotechnical investigation works were carried out. Finally, due to changes in the scope of the project, the last geotechnical investigations were carried out in 2016, primarily in light of the fact that the plateau of the railway station was partly excavated (partly towards the entrance to the Senjački tunnel) and partly on an embankment (towards the entrance in the Dedinje tunnel), but also with a large height difference of about 30 m between the highway and Kralja Aleksandra Boulevard. Shallow landslides were registered in the research area, so retaining walls of different dimensions were constructed. In accordance with the legal regulations, every change in the scope of the project was preceded by geotechnical investigations.

The last ones (which are available to us are from 2016) and are included in the Geotechnical design and construction conditions for: roads, expansion of the facilities of the Belgrade Center

railway station, retaining walls and reservoirs. In the previous period, during the execution of the works, some shallow landslides were recorded and recovered. As a part of the project the existing retaining walls will be additionally recovered and improved. To stabilize the supporting walls, additional protective gutters will be made to receive additional water from the slope, and for additional drainage.

3.7.2 Air temperature

Average monthly temperatures range from 0.0°C in January to 22.1°C in July. During the summer months, there are days with temperatures above 35°C (summer heat), as well as tropical nights (with temperatures above 20°C) from June to August. The data indicate favorable climatic conditions throughout the year, there are few days with severe frost in winter, and summers are moderately warm.

Recorded values of absolute maximum temperatures in all months of the year are above 20°C, while in the period from May to October their values are above 34°C. In July and August, the average number of days with a daily temperature above 30°C is 11.

The highest number of frosty days is in January, an average of 20.4.

3.7.3 Solar radiation - insolation

The annual sum of sunshine is an average of 2084.4 hours, with the highest average values in July being 295.6 hours, and the lowest in December being 63.8 hours.

3.7.4 Air humidity

Average monthly values of relative humidity for MS "Belgrade" range from 63% (April and July) to 82% (December). Average hourly values of relative humidity above 80% occur in December and January at almost all hours, and in the other months during the night and in the early morning hours.

3.7.5 Cloudiness, appearance of fog and smog

The average value of cloudy days decreases from winter to summer months and increases again, so the highest average number of cloudy days occurs in December 16.4 days (maximum 28 days), and the lowest in July 3.5 days. During the summer, the days with the least cloud cover coincide with the days in which drought, summer heat and tropical days occur. The highest number of clear days is 11.4 in August, and the lowest is 2.2 days in December.

The highest mean monthly number of days with fog is in the period from November to January with a maximum in December of 8.8 days. The maximum number of days with fog was recorded in November and is 26 days.

3.7.6 Precipitation

The largest number of days with precipitation are in April, June and December, a total of 139, of which 38 with snow.

The highest number of days with snow cover is 15.5 days in January, while the maximum height is 80 cm in February.

3.7.7 Wind

The southeast wind (“Košava”) blows throughout the year (with a maximum in September and during winter, and a minimum in June and July), while the northwest wind blows most often

in the summer months. The southeast wind reaches its highest speed in the winter months, and the northwest wind in March and April.

4 SOCIO-ECONOMIC BASELINE OF PROJECT AREA

4.1 Population

The total population of Savski Venac municipality is estimated to be 36.699, out of which 16.954 men and 19.745 women (2022. census) out of the total population of the City of Belgrade, estimated to be 1.681.405 (2022. census). Official population data for the neighborhood nearest to the project site, Maleško brdo, is not available. During preparation of EIA for Prokop Station, site visit showed that the settlement comprises approx. 50 houses with no more than 250 residents. The average size household in Savski Venac comprises 2,1 members, less than the average urban household in the City of Belgrade (2,34).

The working age population (15 to 64), according to 2022. census in Savski Venac municipality, was estimated at 23.117. With over 23,13 percent of its population being over the age of 65, proportion of elderly people in Savski Venac is among the highest in the world. The City of Belgrade, and Savski Venac as a municipality, are no exception and the average age in both is close to 43, similar to the Republic level average. The aging index in Savski Venac, according to the Statistical Office of the Republic of Serbia (SORS) for 2022, is 160,7 which is higher than the aging index at the level of the City of Belgrade (132,9). Within the municipality, According to SORS in 2022, life expectancy is 68.4 years for men and 76.3 years for women.

Contrary to the rest of Serbia, struggling with significant outmigration of young people, the City of Belgrade's population is growing, as it offers the best living conditions and economic opportunities in the country. According to SORS, the projected population of the City of Belgrade for the year 2041 is close to 2 million inhabitants, while for the municipality Savski Venac, the projected population is 36.498, close to what it is today, as the municipality has no significant capacity for expanding its residential areas.

About 76% of the population of the municipality of Savski Venac declared themselves as Serbs in the 2022 census. 3% of the population did not declare any national affiliation. Less than 1.27% of the population of Savski Venac declared themselves as Yugoslavs, while nearly 0.75% are Russians, and Roma are about 0.38%. Other smaller groups are Macedonians and Montenegrins.

4.2 Socio-economic context

According to the Decree on Establishing a Uniform List of Regional Development and Local Self Government Units for 2014 of the Republic of Serbia, Savski Venac is characterized as a highly developed municipality (belonging to category one of four, with one being the highest), whose level of development is above the republic average.

The number of registered companies in 2022 is 4.632, of which 522 are newly founded. The number of registered entrepreneurs is 2.815, of which 423 newly registered. The numbers of active companies and entrepreneurs, as well as their employees has been steadily increasing since 2013.

According to the 2022. census, a total of 17.225 persons residing in Savski Venac municipality were employed, of whom 50,5% were women.

The number of unemployed persons in 2022, registered with the National Employment Agency, is 905 which is roughly 3,9% of the working age population. Of the registered unemployed persons, 538 are women. Details on the educational level of unemployed persons is provided in Table.

Table 3: Registered unemployment, according to educational level, in Savski Venac municipality

2021	Unskilled	Semi-skilled and low skilled	Skilled	Secondary education	Highly skilled	Post-secondary two-year education	Higher education	Total
Savski Venac	71	19	65	278	9	52	336	830

The average net salary in Savski Venac in 2023 was 140.472 RSD (approx. 1200 EUR), which is above the City of Belgrade average of 109.431 RSD (approx. 935 EUR) and significantly above the republic average of 86.007 RSD (735 EUR)1.

4.3 Education

According to the Statistical Office of the Republic of Serbia (SORS), in Savski Venac municipality (Table 4), the majority of residents have completed secondary education (over 90%) and more than 50% have completed college or university. The number of women who have completed higher education (college or university degree) is more than double the number of men who have the same educational status.

Table 4: Education status of Savski Venac municipality residents according to the 2011 census

Population group	No school, incomplete or unknown primary education	Primary education	Secondary education	College / University degree
Men	3%	6%	35%	56%
Women	2%	6%	34%	58%

4.4 Healthcare and Emergency Services

All major Serbian hospitals and medical centers, public and private ones, are in various parts of Belgrade City, as the capital of Serbia, including the large Emergency Department withing the Clinical Centre of Serbia, located some 500m from the Project site.

4.5 Vulnerable groups

The term “vulnerable group” in Serbia is used in different laws to denote various categories and degrees of social and economic vulnerability. Most often vulnerable groups include the following categories: low-income households and individuals, young people, children without parental care, single parents, families with many children, single headed households, persons over the age of 65, persons with disabilities, war veterans and/or members of their family, civilians who are disabled as a result of wars, refugees and internally displaced persons, members of the Roma population and other vulnerable groups. Such groups are often entitled to various forms of financial support, provision of social services and in-kind assistance, such as food, schooling supplies and energy aid.

The share of beneficiaries of social welfare in the total population of Savski Venac municipality is 4,8%, which is less than the share of beneficiaries at the level of the City of Belgrade (6,9%). This includes persons or households who benefit from various forms of financial assistance, but also beneficiaries of residential institutions (for children without parental care, for people with disabilities or elderly people), foster or family care, various day care centers, etc.

[1]The average middle exchange rate of the National Bank of Serbia: 1 EUR = 117 RSD.

In terms of data on cases of domestic violence towards women, in 2021, a total of 94 cases were registered on the territory of Savski Venac municipality, accounting for around 1,6% of cases registered in the City of Belgrade as a whole. The number of registered cases of domestic violence towards children in Savski Venac municipality, in 2021 was 103, which is close to 2,25% of cases registered in the City of Belgrade.

4.6 Civil Society Organizations

According to the latest publicly available information, in 2023, a total of 1.346 civil society organizations, active in various fields, were registered in Savski Venac. In 2023, 55 organizations were newly registered and 19 were removed from the registry. Most of the organizations are active in the promotion of environmental protection, humanitarian work, cultural activities, sports, etc.

4.7 Buildings and infrastructure in the vicinity

One- and two-story houses are dominant in Maleško brdo. They are often surrounded by small courtyards and walls/fences around them. In some of the courtyards, there are additional buildings, such as garages or storage areas, and in some cases small businesses such as mechanics shops. In recent years, as the demand for housing in Belgrade is increasing, small apartment buildings (three, four stores) are also being built in these settlements.

Households living in these neighborhoods all have access to the public water supply and sewage system, as well as electricity. Solid waste disposal is organized in all local communities, and all have street lighting.

In Savski Venac municipality in 2022, there were a total of 113.019 km of modern roads. There are a couple of streets passing near the project site, with Prokupačka being the closest to the site. Prokupačka street is separating the back entrance of the station building from the closest houses in Maleško brdo. Zorana Žunkovića street goes along the main entrance of the station building and connects to the Kneza Aleksandra Karadjordjevića boulevard.

Traffic around the station building is not very heavy. The street with heaviest traffic near the site is Kneza Miloša, and the highway Belgrade – Niš. Prokupačka, the closest street to the construction site has little to no traffic, since the back entrance to the station is not open yet, and Maleško brdo is not densely populated.

To access to the site is over Prokupačka street.

The highest forecasted number of passengers for the entire station is around 6200, in the peak morning hour. For the station building below an elevation 105,5 there can be at most 750 passengers and visitors, and 200 employees of the station.

5 STAKEHOLDER CONSULTATIONS AND INFORMATION DISCLOSURE

Serbian legislation guarantees to its citizens the right to information, i.e. that everyone shall have the right to be informed accurately, fully, and timely about issues of public importance. These provisions are included in the Constitution of the Republic of Serbia, as well as in the Law on Free Access to Information of Public Importance (Službeni glasnik RS br…).

The Law on Planning and Construction of the Republic of Serbia regulates the development and adoption of spatial and urban plans in Serbia, which are all subject to a public disclosure and consultation process. This is described in more detail in the Regulation on the Content, the Method, and the Procedure for Developing Planning Documents.

During the adoption of all mentioned planning documents, it was mandatory to follow the procedures defined by the Rulebook on the content, method, and procedure of creating spatial and urban planning documents.

Competent authority for planning documents regarding the "Beograd Centar" railway station is City of Belgrade administration, Secretariat for Urban Planning and Construction. For each planning documents in the building of the City of Belgrade Administration public insights were held from 20 to 30 days (depending on the level of planning document), with all necessary information. During the public consultations, the draft plan was displayed on the website of the City of Belgrade.

Also, the public was informed about the public review of the Draft General Regulation Plan/General Regulation Plan/Urbanistic project, through the print media.

Serbian laws and bylaws in the field of environmental protection, including the main Environmental Protection Law, require the public to be informed about and involved in all matters concerning the environment. Public disclosure and consultation procedures are organized in connection to the development of project environmental impact assessments (EIAs) as per the Rules for Disclosure of Information, Presentations and Public Consultations Regarding EIA.

Competent authority for adopting EIA was Ministry of Environmental Protection. Public insight was carried out in accordance with procedures defined by the Law on environmental impact assessment. It was held from 29.09.2016, until 24.10.2016. but there was no objection on EIA. The invitation was published in daily newspaper, as well as on the website of the Ministry. The public hearing was held in the premises of the city municipality of Savski Venac.

Stakeholder engagement, one of the basic principles of the ESMS, is one of the most important tools for the implementation of the ESMP.

The SE for this project is defined is defined through SEP. Implementation of this instrument throughout project is obligatory as per WB ESS10. This instrument serves for the following:

Understanding the conditions in the project area and addressing stakeholder concerns.

- Identifying stakeholders affected by or interested in the project.
- Planning engagement activities throughout the preparation, construction, and operation phases.
- Determining the frequency, content, and level of stakeholder involvement in consultations.
- Establishing a Grievance Mechanism for open communication at all project stages.

- Incorporating stakeholder feedback into the SEP, ESMP, and project decision-making processes to ensure the effectiveness of mitigation measures.

The main groups of stakeholders are:

- National and local government (MoCTI, MoF, City of Belgrade, Savski Venac municipality)
- Railway companies (SRI, SV, BG voz)
- Local population, residents,
- Commuters
- Employees of the "Beograd Centar" railway station, and businesses operating at the station
- Contractors
- Financial institutions
- NGOs

The stakeholders are identified in detail in the SEP.

The main required steps in the disclosure and consultation process for the above-mentioned plans and projects are:

- Informing the public through the media about details of disclosure of the draft plan/document (i.e. where the electronic version and hard copy are available for review, the dates and time when the hard copy can be reviewed, the dates when the developer of the draft is available to answer questions) and inviting citizens/organizations to submit comments and/or attend a public meeting/session during the disclosure period. Citizens can request that their comments are responded to in writing.
- Organizing a public meeting/session to ask further questions and present/elaborate the submitted comments (usually in the municipal building or other appropriate local venue) during the disclosure period.
- Processing comments received from all stakeholders and revising the draft plan/document to reflect them, as well as preparing a report to justify why certain comments were not adopted; in case of significant changes of the plan / document, the revised draft may once again be publicly disclosed for another round of comments.
- Submission of the revised draft plan/document and report to relevant authorities which judge whether the comments have been meaningfully considered and addressed.
- Adopting the final plan / document by the relevant authorities and disclosing it.
- For all spatial and urban planning documents there is also a requirement to organize an early public disclosure process, before the development of the draft plan, to obtain initial comments and suggestions which should be considered in the development of the draft.

The above-mentioned steps in the disclosure process are related to the planning documents, and done before the preparation of the technical documentation, and before the works start. During work, the public can give the feedback to the project in multiple locations through the grievance mechanism: at the construction site, in the station, and through the ministry website where the mechanism can be accessed. After the project is finished, and in operational phase, the station becomes the property of SRI, and the company along with the MCTI are in charge of the public feedback.

World Bank Grievance Redress System

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, because of WB noncompliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-andservices/ grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

6 POTENTIAL ENVIRONMENTAL AND SOCIAL RISK, IMPACTS AND MITIGATION MEASURES

Although there are no direct potential environmental and social adverse impacts during design phase, if design documentation is not prepared in accordance with the environmental protection standards and respond to issues raised by stakeholders, implementation of the Project may cause degradation of certain components of the environmental and environment human health and safety (e.g. life and fire-safety), adversely impact the workers, users, and the surrounding community. Further, given that (i) the station building was built in several phases and over past few decades (1970s-2020s), (ii) works may interfere with constructive elements (potentially impacting bearing capacity), the designer with a construction license, has inspected the elements where local subsidence of part of the protective concrete layer was observed. The calculations showed that the adopted reinforcement is significantly larger than necessary. Also, a detailed check of the joints of the old and new fittings was carried out.

ESMP must be in line with WB Environmental and Social Standards, WB EHSG, GIIP, national legislative requirements.

Activities during the construction phase within this Project carry moderate risks typical for all construction works:

- dust and noise emissions.
- traffic disruption.
- generation of construction waste.
- unsafe working conditions.
- poor occupational health and safety practices.
- poor information dissemination and not sharing information on potential impacts (noise, dust, and traffic,) during the construction works.
- Community health and safety risks (including SEA/SH risks, structural stability and other)
- OHS risks

Measures and/or procedures for construction phase are meant to be implemented by the Contractor (including sub-contractors, good supplier, service provider or others engaged or employed by the Contractor) during the construction phases of the proposed Project. They include all required mitigation measures related to ambient and indoor air quality, fire safety measures, excessive noise mitigation measures, as well as general measures related to site organization and OHS, community safety, traffic management measures, labor and working conditions and occupational health and safety measures, as well as the risks related to generation of construction and other waste.

- The construction company will avoid noisy construction work during nighttime.
- waste management measures: design spaces to facilitate future waste flows to reduce the negative impact of waste on the environment and human health.
- The railway staff has signed the ethical code of conduct, and the implementation is monitored. The same will be done by the Contractor’s staff.

- The construction site must be secured and clearly marked, in accordance with the Law on planning and building.
- The station is covered by security cameras with a security guard on duty.
- **Workers** have had SH/SEA training and **will have no contact with the local community and passengers, since the part of the station under construction is and will not be in function during works. Works will also be fenced off**.
- The code of conduct with provision on SEA/SH has been signed as a part of the contract,
- GRM is available at the site.

The potential risks and impacts are (i) predictable, (ii) medium scope and severity; (iii) site-specific, and (iv) low probability of serious adverse effects to human health and/or the environment. The duration of construction phase is expected to be fourteen (14) months. Despite the above, the Project's risks and impacts can be easily mitigated in a predictable manner.

Due to the project characteristics and location, most of the potential risks and impacts are expected during construction phase (moderate), and only impacts manageable through regular maintenance during the operational phase.

Potential environmental and social risks during operational phase are mainly related to:

- waste management.
- increased noise and vibration (will most certainly take place based on the noise monitoring conducted so far).
- deteriorated ambient air quality due to greater number of vehicles.
- accidents on site (within the train station).
- Community health and safety risks (including SEA/SH risks, risks from fire, and indoor air quality/pollution)

Following the requirements which arise from the ESMF (which adheres to the WB's ESF, WB EHSG, WHO, national regulation and GIIP), this ESMP has been prepared to analyze potential environmental and social risks and impacts of this Project, as well as to provide appropriate measures to mitigate the potential impact to the extent possible and to establish an appropriate monitoring program.

From the impacts identification and the evaluation of their significance (described in the following subsections), it results that key mitigation measures that were addressed are:

- monitoring the noise level during the regular operation of the project, in order to apply measures that will reduce this negative impact on the environment and human health.
- waste management measures: design spaces to facilitate future waste flows to reduce the negative impact of waste on the environment and human health
- reduction of impact to climate change through design that minimizes use of fossil fuels, maximizes green spaces.
- greening and re-greening in the way that includes aesthetic as well as biodiversity considerations (native species will be used in regreening).

- Security cameras and security guards at the station
- The railway staff have signed the ethical code of conducted the implementation is monitored.
- The workers have signed the ethical code of conduct, including SEA/SH, and the implementation is monitored.

Distribution of responsibilities and supervision arrangements:

Contractor is obliged to implement mitigation measures prescribed in this ESMP, and Supervising Engineer is obliged to supervise their implementation and submit E&S compliance monthly report to E&S Specialists at PIU. The compliance report includes observations and implementation results of mitigation and monitoring plan. The cost of mitigation measures is included in the Project cost (Contractor cost). The risks related to the primary supplier are not anticipated.

During construction, Contractor is obliged to implement set of legally required and other measures including, but not limited to taking care that all legally required permits and licenses are kept on site as well as safety procedures; construction site is organized in a safety way; generated waste is managed properly; emission in the air are minimal (watering the surface, machinery and equipment are switched off when not in use, etc.); workers are provided and wear appropriate personal protective equipment; etc. Also, Contractor will have to ensure that potential impacts on communities including users of the operating part of the building and nearby community are prevented or minimized. Contractor is also obliged to minimize the labor risk by following the Labor Management Procedures and prescribed Occupational Health and Safety measures, as presented in this ESMP and all applicable national laws and by-laws. Measures and/or procedures during operational phase are meant to be considered and adopted as appropriate by the SRI.

The aim of these mitigation measures is to prevent and reduce the potential negative impacts during use of the Project on the environmental components to an acceptable level. Other measures include, but are not limited to, waste management measures, occupational health and safety and community protection measures, noise reduction measures and measures for storage and use of hazardous substances. In the following sub-chapters, the impacts of the Project during construction and operational phases are described according to individual environment components and social issues; the measures in design and construction phase and finally measures for the operational phase proposed to mitigate these impacts. While key risks and measures are presented in the remaining of this chapter, detailed measures are presented in the ESMP table in the Chapter 9.

6.1 Ambient air quality

POTENTIAL IMPACT
CONSTRUCTION PHASE

Dust emissions and gaseous emissions can adversely affect air quality and cause environmental nuisance to the Project and surrounding areas.

Fugitive dust and PM will be generated during the construction of the proposed Project. This will lead to a localized reduction of air quality, which is considered to potentially affect workers on-site employees of the "Beograd Centar" railway station and neighboring residents. The following are the main impacts expected to result from the generation of dust:

- nuisance and disturbance.

- impacts on the health of onsite workers and employees.
- increased traffic.
- visual and health disturbances to neighboring communities.

Most of the dust generated is likely to be deposited within the Project area. However, there may also be additional dust deposited offsite during material and equipment transport in case of off-road vehicle movement. Considering that most of the rough construction work has been completed, it is estimated that this type of impact will be minimal.

OPERATIONAL PHASE

No significant increase in exhaust gases and impacts on the quality of the surrounding air are expected. The Project does not include facilities with emissions of pollutants into the air. Auxiliary energy sources (diesel generators) will be used in the case of power cuts. The source of hot air energy is from Belgrade remote heating system (which uses gas and fuel oil as fuel), so there will be no individual heating sources on site.

MITIGATION MEASURES

DESIGN PHASE

Diesel generator is in a separate fire sector. The floor of the aggregate area will be made of non-flammable material and impermeable to water and fuel. The aggregate area will have ventilation openings towards the outdoors space. The ventilation opening will be positioned so it would not permit concentration of gases in any weather conditions and away from frequently used spaces. The exhaust emissions will be managed so the risk form concentration of gases (CO, CO2) is minimized by including in the design sensors, alarms, adequate ventilation, and air exchange, etc.

CONSTRUCTION PHASE

Maximum compliance with the provisions of the technical documentation.

OPERATIONAL PHASE

Auxiliary diesel generators, ventilation systems, sensors and alarms will regularly be maintained.

6.2 Soil

POTENTIAL IMPACT

DESIGN PHASE

In accordance with planning documents this location was planned for traffic and traffic areas - the primary function of railway traffic and the main passenger, there will be no new loss of the soil on the surface for the construction of the building. The risk from the soil erosion (demonstrated from the earlier stages of construction and by geomechanical testing) will be included in the design of the retention walls.

CONSTRUCTION PHASE

Construction activities may affect soil characteristics. Impacts on soil and land-use may be mainly the result of general site clearance and grading, transportation of materials on the construction site.

Also, there will be no deeper excavations of the soil and the creation of excess material from the excavation since the civil works on constructive part of the building is finished.

OPERATIONAL PHASE

No impact on soil is expected during operational phase, providing safety and good housekeeping (including waste management) procedures are adhered to.

MITIGATION MEASURES

DESIGN PHASE

Geotechnical investigations were carried out and reflected in the construction designs of the earlier phases of the construction. No new impacts on soil are expected since all mitigation measures were foreseen and implemented in the earlier stages of the project.

CONSTRUCTION PHASE

Measures to mitigate the risk of soil pollution due to spills or spill leakage:

Proper management of hazardous and non-hazardous liquid waste, proper use of oils and fuels on construction site, prevention of spillage coming from tanks, containers construction equipment and vehicles, adequate response measures in case of an accident etc.

OPERATIONAL PHASE

There will be no refueling or waste dumping at the site. All equipment and devices of term technical and electrical installations that may contain pollutants (e.g. transformer oil in transformation station, diesel generator), are planned indoors or on the building itself, and in the „dry“ type technology transformers. During the regular infrastructure maintenance there may be negligible soil pollution when using means such as anti-corrosion agents (maintenance of metal parts), use of maintenance lubricants, etc.

6.3 Water Quality

POTENTIAL IMPACT

CONSTRUCTION PHASE

Impacts on groundwater and surface water quality during the construction phase may be the result of incidental spills at onsite maintenance locations, which could result in introducing organic matter, hydrocarbons (oils), coliforms or heavy metals to the groundwater aquifer. Since there are no open surface streams in the research area, we do not expect these impacts.

Project is located outside the groundwater protection zones and sanitary protection zones, no decrease in the quality of drinking water for local communities is expected. Negative impacts on surface water and ground water are expected only in the case of incidental spills. The risk can be categorized as low to negligible (if all mitigation measures are in place).

After installing the water supply and sewage systems, it is mandatory to check the tightness, as well as flush the pipelines, and later check the quality of the water in the pipes. During these works, short-term disruptions in the water supply are possible (reduced pressure or short-term interruption in the supply).

Water quality control

Perform a test of water supply networks for water retention; rinsing and disinfection installed and tested plumbing networks in the facility. After disinfection, test water samples from the newly installed water supply network at the hygiene institute for suitability for drinking. Upon completion of works on installations, installation of devices and equipment and completed testing of the water supply network, measure the pressure on the hydrants by an authorized company.

Temporary interruption of water supply may happen during the connection of the facility to the city network. The public and local stakeholders will be informed before the interruption.

OPERATIONAL PHASE

Potential pollutants during the use of the Project can be present in wastewater (sanitary-fecal, technological and storm water), oils from the substation transformer and diesel generator fuel. Using the planned wastewater collection and drainage system, under regular conditions of Project use, pollution due to their discharge is not expected. Given all the above, during the use of the project, no negative impact on the condition of water bodies of the Project is expected.

There is a risk in the case of inadequate waste management.

MITIGATION MEASURES

DESIGN PHASE

When designing the water supply system and the drainage system, it is necessary to respect the obtained special conditions of the competent authorities (Belgrade Water and Sewage PUC). Potable water supply comes from the municipal water supply system.

Connection of garages, service stations, parking lots and other facilities that discharge water with oil content, fats, gasoline, etc., should be carried out through the precipitator and separator (separator) of fats and oils.

The temperature of the water discharged into the sewage network must not exceed 40ºC. For wastewater from thermal substations to design a cooling pit.

The connection of drainage water from the building should be done through the precipitator. Wastewaters from the building will be discharged to the municipal wastewater collection system.

CONSTRUCTION PHASE

Strictly obey project solutions. Measures to mitigate the risk of pollution of surface water and groundwater due to spill leakage: proper management of liquid waste, proper use of oils and fuels on construction site, prevention of spillage coming from tanks, containers construction equipment and vehicles, adequate response measures in case of an accident, forbid discharge of contaminated waters into the ground, etc.

The local community will be informed in a timely manner about temporary changes in the water supply

OPERATIONAL PHASE

It is necessary to ensure that the composition of sanitary, industrial and precipitation wastewater before discharge into the public drainage system of the Belgrade is in accordance with the limit values of wastewater emissions, thus the water will be regularly tested. There will be no fueling or waste dumping at the site. All equipment and devices of thermotechnical and electrical installations that may contain pollutants (e.g. transformer oil in transformation station, diesel generator), are planned indoors or on the building itself, or on impermeable substrates, which prevents their possible reaching the soil and underground.

Quality of potable water will be regularly tested in accordance with the legislation.

6.4 Vulnerability of Project to the floods

POTENTIAL IMPACT

Since the Project is located outside the flooding areas the Project is not vulnerable to the floods. However, it can be prone to localized flooding in case of heavy rains. This will be addressed though connection of all surface runoff collection systems to the municipal rainwater collection systems.

MITIGATION MEASURES

Localized flooding will be prevented thought adequately designed and sized collection of surface runoff, and regular maintenance.

6.5 Biodiversity, Nature Protection Areas

POTENTIAL IMPACT

DESIGN and CONSTRUCTION PHASE

Project is planned in an area under strong anthropogenic influence (main railway station with the existing settlements and intensive road traffic).

Before designing, and after visiting the site, the presence of existing tall vegetation was determined. This information was a prerequisite for the development of the greening project.

During the construction of the Project in the form of habitat loss, possible damage to dwellings and/or the suffering of individuals of smaller species of animals using the area, and changes in habitat conditions, is unlikely. During the construction work, it is possible to enter and/or spread invasive plant species due to human movement and mechanization. Provided for as much as possible conservation of all specimens of quality vegetation and additional refinement of the area with new one's plantings according to the purpose of the space.

The site is in the vicinity of Hajd park with area of almost 7ha, with rows of linden and sycamore trees, as well as larger areas of wild trees. Its maintenance is in the jurisdiction of Belgrade Greenery PUC. Project has no influence on it.

The planned Project is located outside nature protected areas and Natura 2000 sites.

OPERATIONAL PHASE

Since the Project envisages preservation as much as possible of all specimens of quality vegetation and additional refinement of the area with new ones according to the purpose of the space, with regular maintenance of all green areas, there will be no significant impacts.

MITIGATION MEASURES

DESIGN PHASE

No impact. The designer has marked the trees that need to be preserved during the works

CONSTRUCTION PHASE

Measures to mitigate the risk of endangering flora and fauna are avoiding cutting down trees and other natural vegetation where possible, using exclusively autochthonous plant species for the landscape management. Removal of trees is possible only with approval of the local competent authorities (City of Belgrade). All removed trees will be replaced (relocated), again in agreement with the local competent authorities.

Before recommencing works, check the area for the wildlife. If any found, competent authorities shall be notified.

OPERATIONAL PHASE

Regular maintenance of all green areas.

6.6 Noise exposure

POTENTIAL IMPACT

CONSTRUCTION PHASE

Noise is an unavoidable environmental and social impact during construction works. It occurs during the operation of machines and equipment at the site (mainly in the processes like transport, loading/unloading machinery, installation of the facade on the station building etc.), loud verbal communication between workers on the construction site. This impact will be limited to the location of the site and the narrower area around the site and will cease after completion of foreseen works (14 months).

Permissible noise level for the construction site is determined by the provisions of the Law on protection against noise. This noise is temporary and will cease upon the completion of the works, hence, if the technological regulations are observed, there should be no major negative impact on the populated settlements nearby.

OPERATIONAL PHASE

After the works have been completed, due to the construction of new rails and superstructure, the noise emission caused by the rolling of wheels on the rails will be generally reduced in comparison to the existing condition. However, due to increased speed and number of trains, the noise level will increase in the nearby settlements.

Noise sources can also be represented by HVAC systems (heating, ventilation, and cooling). The building plans to use other equipment and devices that may represent sources of noise (e.g. diesel generator), but since they are intended indoors, they do not cause noise emission into the environment.

During the pre-Project measurement of the noise levels, noise levels were higher than the allowed legal limits at 3 out of 4 measuring locations.

MITIGATION MEASURES

DESIGN PHASE

Designed and applied solution of the construction of the superstructure at the "Beograd Centar" railway station will give the greatest effects in terms of noise and vibration reduction.

CONSTRUCTION PHASE

Mechanisms available to monitor potential impacts and introduce mitigation measures in a timely manner will be used. It is necessary to choose and apply adequate noise protection measures: adjustment of operating time; use of temporary movable noise barriers; use of alternative working machines with lower noise emission levels. In the case of complaints, the noise levels will be monitored and further mitigation measures taken.

OPERATIONAL PHASE

The Serbia Railways Infrastructure (SRI) will carry out noise monitoring upon completion of works. In case that monitoring indicates that generated noise levels exceed the maximum permitted noise levels, it is necessary to choose and apply adequate noise protection measures (design of noise barriers around major noise sources). In the moment the new tracks come in use, the noise monitoring will be carried out, and if necessary SRI will implement additional noise management measures (e.g. installation of noise screens).

6.7 Vibration

POTENTIAL IMPACT

DESIGN PHASE

Since the "Beograd Centar" railway station is in urban area, with settlements in surrounding area, innovative technical solutions for vibration reduction were applied during the design process of tracks, including elastomer mats in critical points of track substructure construction.

CONSTRUCTION PHASE

Since the project does not foresee activities that could affect the stability of the surrounding area, there is no risk of endangering the stability of the surrounding buildings. Vibration from operation of the equipment/vehicles can affect workers at the site (especially workers in operating machines and equipment). It is expected that potential impact from vibration during construction will be local. This impact is considered low.

OPERATIONAL PHASE

In accordance with the Project solutions that will be implemented, no impacts are expected, due to that the impact is considered low.

MITIGATION MEASURES

CONSTRUCTION PHASE

The basic measure is the strict application of design solutions and the appropriate quality of the installed materials.

OPERATIONAL PHASE

In the case of complaints from local residents and employees at the "Beograd Centar" railway station, a vibration level check will be carried out by an authorized laboratory, at the expense of the SRI.

6.8 Traffic

POTENTIAL IMPACT

CONSTRUCTION PHASE

It is assumed that delivery of construction materials and equipment to the construction site will be by railway and existing roads. The transportation of material and equipment to the construction sites will cause a temporary increase in traffic along the roads, also outside the project area. Access to the plot is provided through existing surrounding roads. All activities of Project construction will be carried out in a way they do not endanger the safety and normal flow of traffic on the surrounding roads, and the received conditions of the Traffic Secretariat of the City of Belgrade.

OPERATIONAL PHASE

The realization of the Project will improve the transport infrastructure at the local level, with increased frequency of city traffic.

MITIGATION MEASURES

DESIGN PHASE

The design (Traffic signalization Design) in accordance with the provisions of the Rulebook on Traffic Signals, (Official Gazette of the Republic of SerbiaNo. 51/2020) and occupational safety measures when performing work outdoors and during traffic.

CONSTRUCTION PHASE

Mitigation measures include adequate organization of temporary traffic arrangements to improve signals, visibility and overall safety of roads, timely information dissemination through media and placing of the signs and warnings at the scene of construction works, ensuring safe passage for pedestrians and passengers at all times, clearly separating delivery routes from those used by passengers, and similar.

OPERATIONAL PHASE

No mitigation measures are foreseen in the operational phase.

6.9 Labor and Working Conditions and Occupational Health and Safety

POTENTIAL IMPACT

CONSTRUCTION PHASE

The Labor Management Procedures (LMP) are prepared as part of ESMF.

Contracted and subcontracted workers will have access to a grievance mechanism, located at the construction site, with an option to file complaints anonymously. At this stage the exact number of workers is unknown, and it will be known when implementation of Project begins. Although contractors and workers employed in construction activities are likely to be locally based, there is a potential of labor influx, and contractor may engage foreign workers (local from outside the area or foreigners) subject to meeting LMP, ESS2, and national requirements for work permit or a work registration certificate.

Regarding the potential labor risks, they are in detail described in Labor Management Procedures within the ESMF, and here are conclusions:

- no instances of child or forced labor are likely to happen under the project as legislation on employment and labor are fully harmonized with the International Labor Organization (ILO) conventions and the European Union Directives inclusive of convention on forced labor and convention on elimination of child labor and protection of children and young persons. Therefore, people under the age of 14 will not be employed under the Project.
- Project activities do not involve activities that have a high potential for harming people or the environment.
- Potential risks in the construction phase involve general occupational health and safety hazards such as:
    - working at height.
    - electrocutions and electrical works.
    - traffic accidents.
    - lifting of heavy structures, falling.
    - exposure to construction airborne agents (dust, etc.).
    - vibration of heavy construction equipment.
    - use of rotating, cutting, and moving equipment, using heavy machinery.
    - noise exposure.
    - SEA/SH risks.
- lack of workers' awareness on occupational health and safety requirements such as the use of personal protective equipment (PPE) and safe workplace practices.
- working with heavy and dangerous machinery.
- working around pits, ditches, stacked materials, traffic, loading and unloading, etc.
- Site personnel may experience heat stress (heat rush, cramps, heat exhaustion, heat stroke, etc.) due to a combination of elevated ambient temperatures and the concurrent use of PPE. This will largely depend on the type of work and the time of year.
- Potential risks regarding labor influx related to:

- language barriers.
- different attitudes of foreign workers toward safety and risk perception, absence, or low skills for certain types of works that can lead to accidents (H&S risks).
- exploitation and unfair treatment – contractual arrangements (unfair wages, excessive working hours, working in unsafe conditions, inadequate accommodation).
- integration in community: risks and impact on community related to foreign workers due to difficulty of their integration into community (e.g., the feelings of anxiety and fear for unsafe environment among the local residents when there are foreign workers living in the same building or in vicinity).
- potential cases of discrimination of foreign workers at the working place and within the community.

OPERATIONAL PHASE

Accidents such as fire in the station building, traffic accidents (derailing or turning over the train), electric shock, tripping and falling, etc. may occur.

MITIGATION MEASURES

DESIGN PHASE

Measures to reduce exposure to hazardous substances/waste are included in waste management measures. Regarding fire protection measures, all public buildings should be designed, constructed, and used in full compliance with national building regulations, the requirements of the competent Institution (MoI, Emergency Situations Sector, Fire Protection Directorate) and national (EU-harmonized) regulations, in accordance with WB Systems and equipment for life and fire safety. Contractor's team as well as Supervision, and Operation ones will include OHS specialist(s) at all phases of the Project.

CONSTRUCTION PHASE

Mitigation measures for occupational health and safety risks (detailed measures are provided in the mitigation measures ESMP table in the Table 9):

- measures related to workers safety.
- measures to address discrimination against women/vulnerable groups in the hiring process of workers.
- measures to address risk associated with labor influx.
- measures to prevent Sexual Exploitation and Abuse (SEA)/ Sexual Harassment (SH).
- Measures related to accessibility

6.10 Community Health and Safety

POTENTIAL IMPACT

DESIGN PHASE

In accordance with Rulebook on the technical conditions of the infrastructure subsystem, it is stated that platforms are designed and built to enable safe entry/exit of passengers.

In the case of new, upgraded, or renovated railways, the height of the platform can be 0.55 m and 0.76 m.

In accordance with this data, when purchasing new rolling stock, reconstructing existing ones and building new tracks, a platform height of 55 cm has been adopted, in order to avoid a gap between the train and the platform. In order to reduce the risk of accidents, only rolling stock designed to this standard is acceptable (in accordance with the TSI of the European Union Commission Technical Specifications for Interoperability (2002/735/EC), in order to avoid

gaps between the rolling stock and the platform and increase safety for passengers. It is necessary to provide an adequate technical solution, acceptable to the World Bank, in the case of using rolling stock designed to other standards before the use phase commences.

The fire safety report is a mandatory part of the technical documentation. The station building is classified in the category of K3 buildings in terms of fire hazard (public business and residential buildings that can accommodate more than 500 people). The MoI, Emergency Situations Sector, is responsible for approving this report. Before the start of work, the PIU will (and) review the report to ensure that it has been prepared in accordance with the requirements of the ESF, EHSG, WB, GIIP; check and confirm with the WB that the fire safety report has been received and that the fire safety has been assessed as acceptable in the technical inspection. All deficiencies will be eliminated before the start of work.

With the realization of the Project, a number of positive impacts on the community are expected, through the development of more efficient railway and city transport.

Also, the impacts in the field of eventual improvement of living conditions and increase in the value of spatial and settlement potentials are expected.

CONSTRUCTION PHASE

Regarding community health and safety, several factors from the previous subheadings were identified that could affect community health and safety. Based on the analysis of each of these factors in the previous separate chapters, it is concluded that the construction work will have small and negligible impact on the health and safety of the community.

Civil works may cause disruptions to nearby communities and employees in "Beograd Centar" railway station, such as: increased levels of dust, emissions to air, noise and vibrations or temporary disruptions to traffic, risk of road accidents for pedestrians, disruptions in utility services due to accidents or planned interventions (water, gas, electricity) and poor occupational health and safety practices. However, no delays for the passengers in the timetable related to the project are expected.

Noise pollution produced by vehicular movement, excavation and other construction machinery, concrete mixing, and other construction activities can have negative impact on the narrower area around the site due to the long duration of construction works and due to the vicinity of certain receptors (e.g. Clinical center dormitory, faculties, the old military facility which is used for exhibitions on the northeast side).

One of the key potential risks associated with the construction works is the increased risk of road accidents due to increased traffic of construction vehicles.

Furthermore, the project area is prone to earthquakes which poses the risk of accidents, for workers and community, if earthquake occurs (e.g., demolition of a crane or other machinery).

The risk of exposure of the community to hazardous materials and other hazards is limited. Management of hazardous materials, including hazardous waste, is related to construction activities and is short-term (finite duration of the construction activities). There is a risk to the health and safety of community if the works are not separated or passengers use parts of the building that is potentially unsafe, and for which use permit was not issued.

One can expect foreign workers. During construction, due to potential labor influx, there is a risk of a potential sexual exploitation and abuse and sexual harassment within the community and/or creation of concern among local residents. Although the risk exists, it is considered small.

OPERATIONAL PHASE

Regarding the health of the local community, no significant impacts on the quality of the surrounding air are expected. The premises that suffered works under this project shall be used only after the use permit for them is issued.

Also, no impacts on the soil are expected, with the implemented soil stability testing and measures. No impact is expected on water quality nor on biological diversity, protected nature areas and Natura 2000 areas.

Regarding the safety of the local community and passengers, no significant impacts are expected, providing all necessary ESF, WB EHSG and GIIP measures were implemented in the design and construction phases, including those for ensuring fire safety, static stability of the building, resistance to earthquakes, and railway traffic safety.

The increase in traffic could threaten the safety of the local community due to the increase in the number of cars and city transport.

MITGATION MEASURES

DESIGN PHASE

No additional measures were foreseen except the one mentioned in previous chapters.

CONSTRUCTION PHASE

Waste management shall be organized in line with this ESMP (also compliant to WB EHSG, GIIP) and the national legislation and WB policies.

The risk of exposure of the community to hazards is limited as works under the Project (including transport and supply of materials and machinery) shall be clearly separated from the area used by the passengers and station employees. The works will be carried out in the parts of the building that is not used by passengers or staff and in addition, where there could be communication, the works will be fenced off. At the same time, passengers and station employees will use only areas of the building for which use permits have been issued. If have not been previously checked for structural safety, the areas for workers will be checked before works commence (by a licensed construction engineer).

During construction, due to potential labor influx application of adequate labor management procedures must be envisaged presents to prevent any potential sexual exploitation and abuse and sexual harassment within the community and/or creation of concern among local residents. Contractor will be required to prepare and enforce a Code of Conduct for Workers. Also, Grievance Redress Mechanism (GRM) project mechanism is available. The construction company will have training on SEA/SH prevention. Also, the security cameras at the station will be in function, and the station security guard on duty. The contractor will sign the code of conduct. In case foreign workers are engaged, the construction company will treat them according to the ESS2, LMP and national legislation.

As such, negative impacts relating to the presence of non-local and migrant workers within the community are unlikely to occur.

Mitigation measures for other risk related to community health and safety are analyzed in sub-chapters above (increased levels of noise, dust, or temporary disruptions to traffic, risk of road accidents for pedestrians, disruptions in utility services due to accidents or planned interventions (water, gas, electricity) and poor occupational health and safety practices).

OPERATIONAL PHASE

In the case of complaints from local population regarding increased noise levels and conducted measurements, appropriate measures will be applied to reduce this impact.

6.11 Waste Management

POTENTIAL IMPACT

CONSTRUCTION PHASE

Mainly waste types from the following waste groups are expected to occur:

- construction and demolition wastes.
- oil wastes and wastes of liquid fuels.
- waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.
- municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions (paper, plastics, glass, food waste etc.).

OPERATIONAL PHASE

- waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.
- waste not specified elsewhere (waste from electrical and electronic equipment).
- municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions (paper, plastics, glass, food waste, discarded electrical and electronic equipment etc.).

MITGATION MEASURES

DESIGN PHASE

Waste audits will be prepared with planned quantities and types as well as planned final destinations. A separate area was designed for separate collection of waste in accordance with the conditions of the city cleanliness company. Main fractions will be separately collected, especially recyclables. Hazardous waste will not be mixed with other wastes and various types of hazardous waste will be separately collected, transported, and processed/landfilled.

CONSTRUCTION PHASE

Waste Management Plan that defines waste management procedures at the construction site for each category of waste generated during construction, method, and place of storage of individual categories of waste will be prepared by the Contractor. It will rely on the national legislation, ESMP and EU construction and demolition waste management protocols.

Each type of generated waste on the location must be temporarily stored in separate waste containers which have to be labelled with waste type name and waste code. All waste, including construction waste, soil, must be disposed exclusively at the licensed construction waste landfills and processing plants. Whenever feasible the contractor shall reuse and recycle appropriate and viable materials. Burning or illegal dumping of waste is strictly prohibited. Records (waste manifests, landfill/processing receipts, etc.) will be kept and checked.

OPERATIONAL PHASE

On the site there will be separate collection of waste at the place of origin, keep records, store waste in appropriate containers and temporarily store waste in a specially separated area until processing or until handing over to an authorized person.

7 INSTITUTIONAL ARRANGEMENT

To ensure the effective implementation of this ESMP, there is need for clear roles, responsibility, and reporting procedure by various institutions. As part of the environmental and social risk management, MoCTI must ensure that this ESMP is part of the bidding and contract documentation for the conducting works with arrangement and equipping of the interior of the "Beograd Centar" railway station.

The MoCTI, through the Project Implementation Unit (PIU) and SRI will have the responsibility to ensure that the ESMP and the monitoring plan are implemented. They must ensure that all stakeholders (the Contractor, sub-contractors, goods supplier, service provider or others engaged or employed by the Contractor), are familiar with the contents of the ESMP and their roles, that they understand and adopt ESMP, that resources are available and key staff for implementing the activities are adequately trained.

Responsibilities of the Selected Contractor **A critical strategy and overall plan that the Contractor shall develop, and implement is the Community Health and Safety Plan.** In this plan, the selected Contractor shall identify, manage, and mitigate risks to the public arising from construction and operational activities under the railway modernization project. The plan shall address potential such as increased traffic and movement of heavy machinery, noise, dust, vibration, restricted access to construction sites, risks at pedestrian crossings, SEA/SH and risk related to public misperception. It will include measures such as public safety signage, traffic management plans, timely information disclosure and stakeholder engagement, emergency preparedness and response protocols, and coordination with local authorities and first responders, in line with ESS4 and applicable Serbian regulations.

Some of the specific plans expected to be developed under this subproject include, but are not limited to

Waste Management Plan

- defines waste management procedures at the construction site for each category of waste generated during construction, method, and place of storage of individual categories of waste.

Plan or set of measures to be included in ESMP for Stakeholder Engagement and Establishment of Site-Specific Grievance Redress Mechanism (GRM): The plan will define information disclosure and stakeholder engagement activities but will also outline protocols for receiving and resolving community complaints, managing incidents and accidents, and ensuring accessibility and confidentiality. The GRM will include specific referral pathways for GBV and SEA/SH cases, in line with World Bank requirements. **Safety at Work Plan**

- measures to reduce health hazards and to ensure safety at work during the execution of works according to WB EHSG and GIIP.
- includes Occupational Health and Safety (OHS) measures during the execution of construction works, accommodation conditions, food and transportation of workers, sanitary facilities and wardrobe, organization of first aid, personal protective equipment, workplaces with special working conditions and medical examination of workers, training of workers in occupational safety, safety measures in the work of subcontractors.

Emergency Preparedness and Response Plan

- actions that must be taken to ensure staff safety in an emergency (spills, accidents, fire, explosion, earthquake, injuries), including a list of all emergency equipment at the construction site (such as fire extinguishing systems, spill control equipment, communications, first aid), and alarm systems (internal and external), and decontamination equipment, contacts of responsible persons, competent authorities, other emergency numbers, communication procedures and evacuation plan. Emergency preparedness and response plan must be prepared by SRI for the building before use phase and communicated to staff.

Fire Safety Plan

- includes a list of major workplace fire hazards, their proper handling and storage procedures, potential ignition sources and control procedures, and a description of fire protection, trainings documentation, equipment, and systems, as well as maintenance and plans for safety drills.

Contractor's monitoring and reporting obligations

- These contractor's plans collectively comprise the Contractor's Environmental and Social Management Plan (C-ESMP). C-ESMP will be developed and continuously updated (minimum every 6 months) to enable implementation of mitigation measures.
- In addition to regular activities of professional supervision of works, the activities of Site Supervising Engineers also include:
  - Daily supervision of works with checking the performance of works according to technical documentation, all specifications, and applicable standards. The control includes monitoring the Contractor's activities on and off the construction site, as well as work environmental impacts which 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 and social 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 implementation of environmental and social protection measures in accordance with the requirements defined by the Construction Permit Design and the Design for Execution.
- Regular submission of monthly reports on monitoring carried out to the E&S Specialists.

  The following monitoring reports will be produced:
  - monthly reports according to the requirements defined in the contract for works.
  - the Site Supervising Engineer will prepare monthly reports on the implementation of the ESMP for the PIU Environmental and Social Specialists. The monthly report will include information on monitoring and the implementation of the ESMP on the location of Project that have been collected by the Site Supervising Engineer in accordance with the prescribed Metric for Progress Reports (which includes reporting

of implementation of all mitigation measures during construction proposed by this ESMP).

- Quarterly on ESMP and CHMP compliance until differently agreed. Project progress reports will be prepared by the E&S Specialists at PIU, by combining monthly reports and the results of review meetings. The progress report reports in detail on progress in the preparation and the quality and success of ESMP implementation and highlights the environmental and social issues resulting from the activities supported by the Project, the status of mitigation measures and the necessary follow-up steps. The status of mitigation measures and the follow-up steps will be submitted to the World Bank (Environmental & Social Specialists) for review. In case non-compliances are noted in the implementation of the ESMP and the World Bank policies and procedures, ESMP measures and/or national legislation, corrective measures will be prescribed and implemented. If the non-compliances are significant, they will notify the World Bank Environmental & Social Specialists without a delay. In the event of major non-compliances or failure to implement corrective measures, financial measures against the contractor are also possible, including withholding payments (until acceptable E&S report), which in the worst case include the termination of the contract.
- Notification Reports on incidents and accidents during construction: E&S Specialists at PIU will prepare and implement an incident reporting procedure, indicating details of the incident, institutional responsibilities, immediate measures to address the reported incident and information requirements to be provided by the Supervising Engineer. Supervising Engineer will have to fulfil the Notification Report and promptly notify the PIU E&S Specialists within the 12 hours of any incident or accident related to the construction works activities which have, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers including health and safety serious injuries and road accidents. E&S Specialist will then notify the WB within 48 hours after learning of the incident or accident.

Table 5: Capacity building plan for implementation of the ESMP

Activity	Target Group/Participants	Responsibility	Timeline
In line with ESCP training on monitoring and reporting under ESF, waste management, GRM, OHS, ESMP.	Contractor workers and Beneficiary	MCTI/PIU	Once Project is awarded and prior to implementation of the Project
SEA/SH prevention training	Contractor	MCTI/PIU	Before construction
Specific training on directing the complaints from the community to Project GRM	Contractor's employees	MCTI/PIU Social Specialist	Prior to commencement of the construction works
Training on Contractor's GRM	Contractors and sub-contractors' workers	Contractor	Prior to commencement of the construction works

Training on the Code of Conduct (part of which is SEA/SH sensitization)	Contractors and sub-contractors' workers	Contractor	Prior to commencement of the construction works and when needed
Reporting on public feedback and grievances	PIU	Contractor, Engineer	During construction

8 GRIEVANCE REDRESS MECHANISM

The main objective of the Grievance Redress Mechanism is to allow the Project's stakeholders to submit complaints, feedback, queries, suggestions, or even compliments, related to the overall management and implementation of the Project. The GRM should address issues and complaints reported by the stakeholders in an efficient, timely, and cost-effective manner. It should ensure transparent and credible processes for fair, effective, and lasting outcomes. It should build trust and cooperation as an integral component of broader community inclusion that facilitates corrective actions

8.1 Project GRM

Respecting already available legal procedures for the submission of grievances, the PIU is implementing additional measures to ensure that all questions, complaints, and suggestions in relation to the Project are managed in accordance with international best practice. The grievance mechanism for the SRSM project has been established and has been in function since early 2023. This grievance mechanism will be applied to all the subcomponents and activities within the SRSM project, including this subcomponent.

Questions, comments, or grievances may be submitted by any individual or organization, using the following contact details in the PIU:

PIU of the Ministry of Construction, Transport, and Infrastructure

Serbia Railway Sector Modernization Project

Attn: Central Grievance Manager: Ivan Radovanović, Social and Citizen Engagement Expert

Uzun Mirkova 3

11000 Belgrade, Serbia

zalbe.srsm@mgsi.gov.rs

All grievances are being recorded by the PIU in the grievance log and responded to within 30 working days. They are responded to in writing if contact details of the person who submitted the grievance are provided. Persons who submit a grievance have the right to request that their name be kept confidential. Grievances may also be submitted anonymously; however, this could limit PIU's options for investigating the issue and responding to it.

8.2 Contractors GRM

8.2.1 Labor GRM

The Contractor will be required to prepare and enforce a Code of Conduct for workers and report on regularly basis all related incidents that might occur during the construction works.

Contractor will develop Plan for establishing Contractor Grievance Redress Mechanism (C-GRM) as one of ES-MSIP where the protocol for receiving and resolving complaints and administering incidents and accidents and training program for contractor and all subcontract workers will be defined.

Finally, Contractor ESMP (C-ESMP) will be developed containing a detailed description of C-GRM. After establishment of C-GRM, Contractor will also provide training for all sub-workers on Contractor's GRM.

A list of all complaints received, and corrective actions taken will be included in monthly reports for the PIU Environmental and Social Specialists.

8.2.2 Community GRM

The Contractor and (all sub-contractors) will direct complaints received from the local community to the PIU. GRM training will be held by the PIU Social Specialist for the Contractor's employees to educate them on directing the complaints to Project GRM.

Both Project and Contractors GRM will ensure special referral pathways for grievances on GBV and SEA/SH.

A Local grievance desk will be set up at the "Beograd Centar" railway station and announced on the contractor’s bulletin board at the construction site entrance. More information about the Project grievance mechanism is available on the Ministry'Ministry of Construction, Transport, and Infrastructure website

Using a grievance mechanism does not prevent individuals and organizations to seek judicial or administrative remedies in accordance with the laws and regulations of the Republic of Serbia.

9 ENVIRONMENTAL AND SOCIAL MITIGATION PLAN

The main objective of the mitigation measures is to reduce the significance of the potential impacts to an acceptable level for all aspects of the Project in relation to the receiving environment.

Mitigation measures are defined for design, construction, and operational phase of the Project.

9.1 Environmental and social mitigation plan - Construction phase

Table 6: Environmental and social mitigation plan - Construction phase

Environmental and Social aspect	Proposed mitigation measure (Design and Construction Phase)	Cost	Responsibility	
			Implementation	Supervision
General conditions				
Pre-construction				
Permits and certificates; Design	All required permits have been acquired prior to works and kept on site (e.g., building permit, application of works, fire protection study aligned with the WB EHSG).	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU
	Contractor and subcontractors have valid operating licenses.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU
	Use permit is obtained for reinforced concrete construction below elevation 105,5 as well as for the comprehensive part of the station building above elevation 105,5. The building shall be equipped with fire alarms, smoke management systems, extinguishers, and other equipment in line with the national legislation and WB ESHG (compliant to internationally recognized standards).	Included in project cost	Designer/SRI	Supervising Engineer, MoCTI/PIU
	Materials quality certificates, vehicles attest, certificates for working at heights, health, and safety certificates for workers (e.g. to operate heavy machinery and vehicles) have been put in place before works commence.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU
	Static calculations in the design have been prepared and/or verified by a licensed civil engineer, expert in static of buildings. If new elements are added they will be designed and constructed in accordance with the Eurocode 8 or corresponding national legislation if using Eurocode 8 is not technically feasible.	Included in project cost	PIU/SRI	MoCTI

	Works are planned in the way to ensure static stability of the building and adequate seismic resistance in all phases of the project implementation and use.			
	The project was designed in the way that envisages risks and includes all the necessary measures to eliminate dangers that can occur (tearing of traction chains and handles; improper handling; short circuit currents; overload; accidental contact with live parts; accidental loss of voltage; too high contact voltage on the lightning protection installation) during the use of mechanical installations when using moving walkways in terms of occupational safety. It is a manufacturer of mechanized work tools (escalators, elevators, etc.) obliged to submit instructions for safe work and to confirm on the tool that they are on the same applied prescribed measures and norms of safety at work, i.e. delivery, with tools for work, a certificate on the applied safety regulations at work.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU
Site organization	Regular updating of the Emergency Preparedness and Response Plan	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU OHS
Air quality, OHS, CHS	Rooms with diesel generators will be equipped with appropriate ventilation, exhaust designed to prevent concentration of gases indoors and outdoors, CO and CO2 sensors and alarms, and other necessary equipment to ensure safety of staff and public using the premises.	Included in project cost	Contractor	
Construction				
Site organization	Program of Works are available at the construction site. Appropriate installation of sign posting of the project sites inform workers of key rules and regulations to follow. Assign person who oversees establishment and management of GRM (communication with and receiving requests/complaints, local population, and construction workers). Limit construction activities to day hours. When necessary, carefully schedule night work, with no noisy activities and with approval of the City of Belgrade competent authority approval.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU OHS, SRI
	All occupational health and safety measures are ensured:			
	Contractor has developed Environmental and Social Management Plan (C-ESMP) to enable implementation of mitigation measures for environmental and social risks. C- ESMP comprises of ES- Management Strategies and Implementation	Included in project cost	Contractor	Supervising Engineer,

	Plans: Waste Management Plan, Plan for stakeholder engagement and establishing Grievance Redress Mechanism (GRM), Safety at Work Plan, Emergency Preparedness and Response Plan (EPRP), Fire Safety Plan. C-ESMP reflects all ESMP prescribed measures.			MoCTI/PIU OHS, SRI
	Emergency Preparedness and Response Plan is prepared for works (as part of C-ESMP) and it covers actions that must be taken to ensure staff safety from emergencies. It shall include, but it is not limited to a list of all emergency equipment at the construction site (such as fire extinguishing systems, spill control equipment, communications), and alarm systems (internal and external), and decontamination equipment (where this equipment is required), contacts of responsible persons, competent authorities, other emergency numbers, communication procedures and evacuation plan. EPRP must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities. Staff will be trained/instructed in all emergencies, waste management, first aid and firefighting and other relevant procedures. Procedures are available at the site.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU OHS, SRI
	Temporary material storage on the construction site is clearly marked.	Included in project cost	Contractor	Supervising Engineer, MoCTI/ PIU, SRI
	There is no temporary storage of construction materials and waste within any type of private property.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU, SRI
	The surrounding area near the project is kept clean and good housekeeping practices is applied at the site. Works are carried out in a safe way.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU, SRI
	Stockpiles do not exceed 2m in height to prevent dissipation and risk of fall. Materials to be lifted by forks, cranes are not placed under or in the vicinity of overhead transmission lines. Working areas are fenced off. Corridors for delivery of materials are clearly separated from the areas used by passengers.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU, SRI
	Producer of asphalt, gravel, concrete possesses all necessary concessions, working and OHS permits, comply with all emission regulations, quality certifications and labor and working conditions requirements. During earthworks (and where applicable) utility providers are consulted to	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU OHS, SRI

	avoid damages to other infrastructure. In areas where other infrastructure (utilities) is present, only manual work will be applied.			
	All transportation vehicles and machinery are equipped with appropriate emission control equipment, regularly maintained, and attested.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU
Cultural Heritage				
Cultural Heritage Preservation	In the case of chance findings, the works will be stopped immediately, the chance find protected, and the competent authority for cultural heritage protection informed. Their instructions will be followed. Works will recommence only with the written approval of the competent authority for cultural heritage protection.	Included in project cost	Contractor	Supervising Engineer,
Occupational Health and Safety				
Worker's safety	Safety at Work Plan (as part of the C-ESMP) is prepared and includes: occupational health and safety (OHS) measures during the execution of all construction works, accommodation conditions, food and transportation of workers, sanitary facilities and wardrobe, organization of first aid, personal protective equipment, workplaces with special working conditions and medical examination of workers, training for workers and visitors of construction site in occupational safety, safety measures in the work of subcontractors. measures for identified risks from weather extremes such as strong winds, excessive heat, storms, etc. In the case of excessive heat, shelters, enough water and isotonic drinks must be provided, in the case of winds, shelter and screens, harnesses, and other minimizing the risks. Construction company had a training on SEA/SH prevention: GRM has been put in place and is implemented Security cameras are functioning The contractor has signed a code of conduct	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU OHS expert
	Staff is properly trained (and certified if applies) for the positions and work performed, workers hold valid workers certificates for e.g., certificates for electrical safety (for licensed electrician), working at heights, operating dangerous machinery, etc.	Included in project cost	Contractor	Supervising Engineer, SRI, MoCTI/PIU
	Engaged workers use protective equipment, workers' personal protective equipment and safety procedures comply with legislation and international good practice (ESH and safety glasses, safety boots, harnesses when needed e.g. working at heights, personal hearing protection equipment when needed, and	Included in project cost	Contractor	Supervising Engineer, SRI, MoCTI/PIU

	other work specific protective equipment, appropriate masks or respirators when dealing with the asbestos, etc.). Contractor ensures that sufficient quantities and quality of equipment is available. The Contractor ensures the scaffolds are professionally installed, to be safe.			
	Appropriate informative and warning signposting of the sites informs workers (and authorized visitors) of key rules and regulations to follow.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU
	All dangerous spots in the working sites such as pits, trenches, high voltage, etc. is clearly marked and fenced.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU , SRI
	The transportation routes outside the construction areas (local, county and state roads) are kept clean.	Included in project cost	Contractor	Supervising Engineer, MoCTI/PIU
	Machines are handled only by experienced and appropriately trained personnel, certified in line with the national regulation (where applicable), thus reducing the risk of accidents.	Included in project cost	Contractor	Supervising Engineer,
	Fire Safety Plan (as part of C-ESMP) is prepared and includes a list of major workplace fire hazards, their proper handling and storage procedures, potential ignition sources and control procedures, and a description of fire protection, trainings documentation, equipment, and systems.	Included in project cost	Contractor	Supervising Engineer, SRI, MoCTI/ PIU
	Devices, equipment, and fire extinguishers are attested and functional, so in case of need they can be used rapidly and efficiently.	Included in project cost	Contractor	Supervising Engineer,
	Constant presence of attested firefighting devices is ensured on sites in case of fire or other damage. Their position is communicated to workers and marked. The level of fire-fighting equipment is assessed and evaluated through a typical risk assessment.	Included in project cost	Contractor	Supervising Engineer,
	First aid kits are available on the site and personnel is trained to use it.	Included in project cost	Contractor	Supervising Engineer,
	Procedures for cases of emergency (including spills, accidents, etc.) as part of the Emergency Preparedness and Response Plan are available at the construction site and conveyed to all workers.	Included in project cost	Contractor	Supervising Engineer,
	Adequate sanitary facilities (toilets and washing areas) are provided at the construction site with adequate supplies of hot and cold running water and soap.	Included in project cost	Contractor	Supervising Engineer,
	Work is aligned with weather conditions which can factor in safe organization of works and OHS measures.	Included in project cost	Contractor	Supervising Engineer,

	Wages and contract conditions offered to all staff are in keeping with Serbian labor laws or higher set standards which is competitive in all categories of workers including foreign workers.	Included in project cost	Contractor	Supervising Engineer, PIU through GRM
Community Health and Safety				
Discrimination against women/vulnerable groups including foreign workers in the hiring process of workers and during Project implementation	The workers are explicitly informed of their rights and on GRM.	Included in project cost	Contractor	Supervising Engineer, PIU through GRM
	Access to safe GRM for workers (Contractor GRM) is ensured and other grievance mechanisms (unions, arbitration).	Included in project cost	Contractor	Supervising Engineer, PIU
	Information regarding Worker Code of Conduct and information on GRM availability and access, is provided in local language and language accessible to foreign workers.	Included in project cost	Contractor	Supervising Engineer, PIU
Foreign workers / labor influx	Workers are hired through national employment service to avoid hiring "at the gate" and therefore to discourage spontaneous influx of job seekers. The contractors employing the foreign workers directly guarantee that foreign workers are provided with working conditions and accommodation that comply with both national laws and ESS2 (fair recruitment): employment contracts are comprehensible, equitable, and transparent, and are given in a language that the worker can understand. The foreign workers are informed about their rights and responsibilities, as well as the resources they can access if they encounter exploitation or discrimination. All contractors and their sub- contractors respect and implement the World Bank Group Code of Ethics.	Included in project cost	Building contractor	Supervising Engineer, PIU
Sexual Exploitation and Abuse (SEA)/ Sexual Harassment (SH	Contractor's Personnel do not engage in Sexual Harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel. Construction company had a training on SEA/SH prevention GRM has been put in place and is implemented Security cameras are functioning The contractor has signed a code of conduct	Included in project cost	Contractor	Supervising Engineer, PIU
	Workers do not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power, or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially, or politically from the sexual exploitation of another.	Included in project cost	Contractor	Supervising Engineer, PIU

	Workers do not engage in Sexual Abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions. Construction company had a training on SEA/SH prevention GRM has been put in place and is implemented Security cameras are functioning The contractor has signed a code of conduct	Included in project cost	Contractor	Supervising Engineer, PIU
	Workers do not engage in any form of sexual activity with individuals under the age of 18. Construction company had a training on SEA/SH prevention GRM has been put in place and is implemented Security cameras are functioning The contractor has signed a code of conduct	Included in project cost	Contractor	Supervising Engineer, PIU
	All relevant competent authorities are notified of commencement of works (police, state inspectorate, firefighters, etc.).	Included in project cost	Contractor	Supervising Engineer, PIU
	Grievance Redress Mechanism is available to for receiving and resolving complaints. Complaints received are dealt with in accordance with the article 134. of Labor Act (OG 93/14, 127/17, 98/19, 151/22, 46/23, 64/23), WB ESF and Project GRM.	Included in project cost	Contractor	Supervising Engineer, PIU
	SEA/SH sensitization (education for contract workers) has been performed as part of the Code of Conduct training. All workers have signed a code of conduct on SEA/SH.	Included in project cost	Contractor	Supervising Engineer, PIU
	Local community is timely informed in case of power shortages	Included in project cost	Contractor	Supervising Engineer, PIU
	The construction site is properly fenced and marked. Works are fully separated from the flow of passengers, staff and public.	Included in project cost	Contractor	Supervising Engineer, PIU
	Safe passages are provided for the pedestrians.	Included in project cost	Contractor	Supervising Engineer, PIU
Increased road traffic	The start of construction is communicated in a timely manner, through local media, in local frequently visited places (local stores, and inside the station building)	Included in project cost	Contractor	Supervising Engineer, PIU
	The construction site is secured, in accordance with the Law on planning and construction	Included in project cost	Contractor	Supervising Engineer, PIU
	Traffic management plan is provided and implemented	Included in project cost	Contractor	Supervising Engineer, PIU

	Traffic management is conducted in accordance with the provisions of traffic legislation and ESF (e.g., appropriate lighting, traffic safety signs, barriers and flag persons that are seen easily or are easy to follow, road speed shall be clearly posted).	Included in project cost		
	Traffic is organized in a safe manner. Access road speed does not exceed 30 km/h. Major transport activities are avoided during rush hours.	Included in project cost	Contractor	Supervising Engineer, PIU
	Safe passages and crossings for pedestrians and workers where construction traffic interferes are ensured.	Included in project cost	Contractor	Contractor
	All materials prone to dusting and susceptible to weather conditions are protected from atmospheric impacts either by windshields, covers, watered or other appropriate means.	Included in project cost	Contractor	Supervising Engineer, PIU
	Roads are regularly swept and cleaned at critical points. Spilled materials are immediately removed from the road and cleaned. Access roads are well maintained.	Included in project cost	Contractor	Supervising Engineer, PIU
	Spilled materials are immediately removed from tracks and cleaned. Tracks are well maintained.	Included in project cost	Contractor	Supervising Engineer, PIU
	Access of the construction and material delivery vehicles is strictly controlled, especially during the wet weather.	Included in project cost	Contractor	Supervising Engineer, PIU
	Entry for unemployed person within the construction site is prohibited (within the warning tapes and fences when/where deem needed).	Included in project cost	Contractor	Supervising Engineer, PIU
	The surrounding area near the construction site is kept clean. No temporary storage of construction materials and waste do not occur within any type of private property.	Included in project cost	Contractor	Supervising Engineer, PIU
	Waste management is in line with the national legislation, this ESMP, WB EHSG and GIIP, stricter ones prevailing.	Included in project cost	Contractor	Supervising Engineer, PIU
	Scaffolds and other protection installations are installed in line with the regulation, and best industry best practices (GIIP). It considers past climate change extremes such as strong winds.	Included in project cost	Contractor	Supervising Engineer, PIU
	Measures to minimize dusts, noise, water, and ground pollution are applied.	Included in project cost	Contractor	Supervising Engineer, PIU
Stakeholder engagement				
Engagement of Local Community	Public is informed on the works through appropriate notification in the media and/or at publicly accessible communication channels (including the site of the works) according to Project SEP.	Included in project cost	Contractor, SRI, and PIU in coordination	PIU

Social conflicts arising from presence of construction personnel and construction works	Code of Conduct for Workers is prepared, disseminated, signed, and enforced. Training courses on the Code of Conduct are organized for all workers.	Included in project cost	Contractor	PIU, Supervising Engineer
	Stakeholders' engagement is conducted prior, during and after construction works, all in accordance with Project SEP developed by the PIU Team: National and local government, railway companies (SRI and SV), contractors and financial institutions are engaged through the official correspondence throughout the project implementation. The commuters are communicated with during construction, through local media, announcement boards at the station and GRM Local residents and businesses, and NGOs are communicated with through the project website, GRM, through local media, announcement boards at the station, before and during construction	Included in project cost	PIU	MCTI/PIU
	A Contractor Grievance Redress Mechanisms are prepared and implemented. Plan for establishing Grievance Redress Mechanism (GRM) as part of the C- ESMP are prepared by the Contractor and include action for planning the establishment of protocols for receiving and resolving complaints and managing incidents and accidents, internal (within the Contractor's company) and external (direct complaints to the PIU team).	Included in project cost	Contractor	PIU, Supervising Engineer
	Person who oversees communication with and receiving requests/complaints is assigned (communication with and receiving requests/complaints from construction workers). Complaints from construction site are redirected to Project GRM (PIU team).	Included in project cost	Contractor	Supervising Engineer, PIU
Air quality				
Reduced air quality in the nearby construction area and access road due to emission of dust and particulates	Sprinkle water at the construction materials and non-asphalted roads where appropriate and when needed (e.g., during dry and/or windy periods). Use water where and when appropriate to reduce dust at land clearing, grubbing, scraping, excavation, land levelling, grading, cut and fill and demolition activities which may cause dusting and particles emissions.	Included in project cost	Contractor	Supervising Engineer, MCTI/PIU
	Cover load (surfaces) with plastic coverings during material storage and transportation to avoid dust spreading. Cover bulk materials were not in use.	Included in project cost	Contractor	Supervising Engineer, MCTI/PIU

	Adequate locations for storage, mixing and loading of construction materials are established.	Included in project cost	Contractor	Supervising Engineer, PIU
	Construction site and access roads are regularly cleaned from debris.	Included in project cost	Contractor	Supervising Engineer, PIU
	Limit vehicles speed (30 km/h) in the construction area and on the access roads near the residential houses.	Included in project cost	Contractor	Supervising Engineer, MCTI/PIU
	Avoid unnecessary journeys.	Included in project cost	Contractor	Supervising Engineer, PIU
	Construction site and access roads are regularly cleaned from debris.	Included in project cost	Contractor	Supervising Engineer, PIU
	Use modern attested construction machinery to minimize emissions, provided with mufflers and maintained in good and efficient operation condition.	Included in project cost	Contractor	Supervising Engineer, PIU
Reduced air quality in the nearby area due to gaseous emissions	Use low Sulphur content fuel, when possible, for machinery and equipment to reduce SO_2 emissions from engines whenever possible. Fuel is purchased only from licensed distributors.	Included in project cost	Contractor	Supervising Engineer, PIU
	Machinery and equipment are switched off when not in use (idle mode).	Included in project cost	Contractor	Supervising Engineer, PIU
	Regularly maintain, service and tune the engines and service construction equipment. All vehicles and machinery are attested.	Included in project cost	Contractor	Supervising Engineer, PIU
	To minimize dust (mainly PM_{10}) from construction material collection, material retention time at the site is reduced to a minimum, in order to minimize exposure to wind.	Included in project cost	Contractor	Supervising Engineer, PIU
	Diesel generator for auxiliary power supply room:			
	(a) is designed to ensure good ventilation and prevent the accumulation of harmful gases; • is equipped with ventilation outlets positioned and designed in such a way that they do not endanger the lives, health, or quality of life of other users of the building and the wider community. • The room is provided with an adequate fire alarm system and firefighting equipment. Is equipped with CO and CO2 saturation sensors and alarms.	Included in project cost	Contractor	Supervising Engineer, PIU
	Burning of waste at the site (or elsewhere) is strictly forbidden.	Included in project cost	Building contractor	Supervising Engineer, PIU

Noise				
	The Project-affected parties are adequately informed about the Project and contractors' GRM. The Project-affected parties are kept informed about construction schedules, progress, and safety precautions. It is necessary to choose and apply adequate noise protection measures during construction phase: adjustment of operating time;	Included in project cost	Contractor	Supervising Engineer, PIU
	All equipment is maintained in good operating condition and be attested.	Included in project cost	Contractor	Supervising Engineer, PIU
	During operations the engine covers of generators, air compressors and other powered mechanical equipment are closed, and equipment placed as far as possible from the residential houses.	Included in project cost	Contractor	Supervising Engineer, PIU
	When necessary, night work is scheduled carefully.	Included in project cost	Contractor	Supervising Engineer, PIU
Water and groundwater quality / Soil quality				
Risk of pollution of surface water, groundwater, and soil due to spill leakage	Hazardous liquid waste is collected separately (by type), managed by authorized companies, and treated/disposed only at licensed sites. Collection containers should have secondary containment system (e.g., double walled or bunded containers) with sufficient volume to contain a spill from the largest fuel tank (minimum 110 %) and is protected from impact of weather conditions.	Included in project cost	Contractor	Supervising Engineer, PIU
	Containers with hazardous substances is kept closed, except when adding or removing materials/waste. They are not handled, opened, or stored in a manner that may cause them to leak. Waste is handed by licensed collectors and treated in licensed processing plants.	Included in project cost	Contractor	Supervising Engineer, PIU
	Non-hazardous liquid waste is not discharged into nature without a prior treatment.	Included in project cost	Contractor	Supervising Engineer, PIU
	It is necessary to designate a special and limited area for refueling construction vehicles to avoid spillage. Fuel and oil handling are performed on impermeable surfaces with retention in safe and responsible manner (as the area is classified as a sensitive catchment area). Avoid storing fuel and other hazardous liquids and materials on construction site. If installation of fuel storage tanks is needed, they should be secondary tanks with sufficient volume to contain a spill from fuel tanks in the structure (minimum 110%) and are protected from impact of weather conditions.	Included in project cost	Contractor	Supervising Engineer, PIU

	Handling and management of all materials is in accordance with instructions given in Waste management plan of SRI, as well in accordance with the Law on Waste Management	Included in project cost	Contractor	Supervising Engineer, PIU
	Material storage areas is organized and covered.	Included in project cost	Contractor	Supervising Engineer, PIU
	Hazardous spillage coming from tanks, containers (mandatory secondary containment system, e.g., double walled or bunded containers), construction equipment and vehicles (regular maintenance and check-ups of oil and gas tanks) is prevented.	Included in project cost	Contractor	Supervising Engineer, PIU
	It is necessary to comply with measures and standards for construction machinery.	Included in project cost	Contractor	Supervising Engineer, PIU
	Demolition is carried out in the way that it does not jeopardize or disturb stability of surrounding buildings.	Included in project cost	Contractor	Supervising Engineer, PIU
	Substations are manufactured, maintained, and managed in line with requirements of Stockholm Convention (Serbia is a Party to).			
	In case of an accident, hazardous liquid is removed from the soil using adsorption materials such as sand, sawdust, or mineral adsorbents. Such waste material is collected in tanks, stored in the space provided for hazardous waste storage and handed over to authorized companies for hazardous waste. This waste is managed and treated/disposed as hazardous waste.	Included in project cost	Contractor	Supervising Engineer, PIU
	Wash down areas of concrete and other equipment are isolated from watercourse by selecting areas for washing that are not free draining directly or indirectly into watercourse as well as those that are placed on impermeable surfaces and equipped with/connected to municipal water collection system.	Included in project cost	Contractor	Supervising Engineer, PIU
	It is forbidden to extract groundwater on unregulated way, or discharge cement slurries, or any other contaminated waters into the ground or adjacent streams or rivers.	Included in project cost	Contractor	Supervising Engineer, PIU
Biodiversity (flora and fauna)				
Risk of endangering flora and fauna by removing vegetation and	Restrict the movement of heavy machinery to the access road corridor. Construction site takes up only the necessary space.	Included in project cost	Contractor	Supervising Engineer, PIU
	Cutting down trees and other natural vegetation is avoided, where possible. In the case of removing vegetation, the areas from which the vegetation will be removed is clearly marked to prevent unnecessary loss of vegetation in the project area. Replanting will be carried out using native species.	Included in project cost	Contractor	Supervising Engineer, PIU

polluting water and soil	In order to reduce the risk of entering and/or spreading invasive plant species due to human movement and mechanization it is necessary to regularly remove newly grown ruderal and weed vegetation in the working belt and the scope of the Project.	Included in project cost	Contractor	Supervising Engineer, PIU
Material management				
	Equipment is cleaned in areas where there will be no impact to the environment or danger of surface run-off (e.g., areas where water is collected to retention basins and transported to proper water treatment, and waste is separated and appropriately disposed).	Included in project cost	Contractor	Supervising Engineer, PIU
	All materials are approved by the Supervising Engineer.	Included in project cost	Contractor	Supervising Engineer, PIU
	Materials temporarily stored on site shall be protected and separated. HDPE pipes are not in touch or stored next to oil, coatings, solvents, etc.	Included in project cost	Contractor	Supervising Engineer, PIU
Traffic management				
Increased road traffic	Traffic management is conducted in accordance with provisions of traffic legislation and ESF (e.g., appropriate lighting, traffic safety signs, barriers and flag persons that are seen easily or are easy to follow, road speed shall be clearly posted).	Included in project cost	Contractor	Supervising Engineer, PIU
	Safe passages and crossings for pedestrians where traffic interferes are ensured.	Included in project cost	Contractor	Supervising Engineer, PIU
	Roads are regularly swept and cleaned at critical points.	Included in project cost	Contractor	Supervising Engineer, PIU
Protection measures from electric shock and other accidents (including traffic)	Attend specific training provided by Serbian Railways Infrastructure	Included in project cost	Contractor	Supervising Engineer, PIU
	Be supervised by authorized supervisor	Included in project cost	Contractor	Supervising Engineer, PIU
	Provide a detailed schedule with names of all working personnel, of where and when work is done	Included in project cost	Contractor	Supervising Engineer, PIU
	To place or stock next to the track, and especially near visible railway signals and markings, colored lights or any other things that are colored, shaped, or light, or otherwise make it difficult to detect railway signals or may affect off.	Included in project cost	Contractor	Supervising Engineer, PIU
	Do not change of position of switches or other devices that provide train traffic, act, or use a braking device, unless this could prevent the risk to train safety, safety of passengers and other persons	Included in project cost	Contractor	Supervising Engineer, PIU

	The special attention is paid on stockpiling in zones close to high voltage systems and contact lines	Included in project cost	Contractor	Supervising Engineer, PIU
	Works are performed by experienced workers equipped by appropriate helping devices especially adapted for these purposes.	Included in project cost	Contractor	Supervising Engineer, PIU
	Any connection or closeness of contact wire, side wire, or parts for its fixing or leaning (isolators, parts of cantilever etc.) is forbidden. This also means for all electricity devices and installations on track renewal cars. In such zones, working with water is forbidden. This is allowed only under high safety measures and ensured voltage cut-off. Switched off, but not ground connected wires are dangerous too. Signposts marking no-access zones are positioned in visible places and in sufficient number.	Included in project cost	Contractor	Supervising Engineer, PIU
	Next to the pillars of contact line, it is forbidden to set up or place any kind of material. Approach to the pillars is clean	Included in project cost	Contractor	Supervising Engineer, PIU
	Any connection of phone and telegraphic installations placed parallel with the wires of contact line will be avoided as are also dangerous due to possibility of induction of high voltage electricity in them.	Included in project cost	Contractor	Supervising Engineer, PIU
	Throwing of metal parts in zone of contact wire is forbidden. There are some records with fatal consequences, as for example, fast withdrawing of steel measuring ribbon.	Included in project cost	Contractor	Supervising Engineer, PIU
	Climbing on the machines or other working sections is forbidden without previously performed check and confirmation that the voltage is switched off	Included in project cost	Contractor	Supervising Engineer, PIU
	On certain positions and according to appropriate regulation books, the safety of working space should be ensured by pole grounding. Poles are placed and removed only by authorized person	Included in project cost	Contractor	Supervising Engineer, PIU
	Their removal, or at least temporarily movement due to creating a passage of rail cars is forbidden without authorization of authorized person	Included in project cost	Contractor	Supervising Engineer, PIU
	The plan of switching off and the way of sharing information between services of Employer and Contractor has to be agreed before in detail, in written procedures. In certain cases, some phases can be performed under switched on voltage	Included in project cost	Contractor	Supervising Engineer, PIU
	Although these works are allowed, each of them has to be individually approved from the side of supervisory board, or another authorized person from employer	Included in project cost	Contractor	Supervising Engineer, PIU
	In case of overhaul works, it can come to temporary breaks of different rails and inter-gage bridge, grounding or cower. In order to prevent accidents on these	Included in project cost	Contractor	Supervising Engineer, PIU

	terrains after finished work, contractor is obliged to return all cut junctions in the stage they were at the beginning, or new stage but the correct one			
	Specific procedure for putting the railway into traffic to be respected. Responsible Contractor has signed the statement by which he states that works are finished and that all safety measures are performed in case of switched off voltage. Responsible person of Investor only then can remove grounding rod and start the procedure of switching on the voltage. Works are organized in safe manner in all phases.	Included in project cost	Contractor	Supervising Engineer, PIU
Waste generation and management				
Waste generation	Waste Management Plan that defines waste management procedures at the construction site for each category of waste generated during construction, method, and place of storage of individual categories of waste is prepared by the Contractor (as part of the Management Strategies and Implementation Plans (MSIPs) and is aligned with EU construction and demolition waste protocols.	Included in project cost	Contractor	Supervising Engineer, PIU
	Each type of generated waste on the location is temporary stored in separate waste container which are labelled with waste type name and waste code and located at the solid surface foreseen for that purpose on the construction site.	Included in project cost	Contractor	Supervising Engineer, PIU
	Mineral (soil) waste is disposed exclusively at the designated locations, approved by competent authorities, or be reused. Records of this are kept.	Included in project cost	Contractor	Supervising Engineer, PIU
	Records on waste streams and amounts are kept for each type of waste generated at the location.	Included in project cost	Contractor	Supervising Engineer, PIU
	Keeping records of waste generated is the obligation of the contractor. Records are shared with SRI. Upon request with PIU	Included in project cost	Contractor	Supervising Engineer, PIU
	All waste is handed over with appropriate documentation to the companies licensed for the waste management (companies that have adequate waste management permit). Waste is disposed/processed only at licensed landfills / processing plants.	Included in project cost	Contractor	Supervising Engineer, PIU
	For all waste, information on handing over waste to the final destination is obtained.	Included in project cost	Contractor	Supervising Engineer, PIU
	Whenever feasible the contractor shall reuse and recycle appropriate and viable materials (except asbestos).	Included in project cost	Contractor	Supervising Engineer, PIU
	Mineral (natural) construction and demolition wastes are separated from general refuse, organic, liquid, and chemical wastes by on-site sorting and temporarily stored in appropriate containers. Depending on its origin and content, mineral waste is reapplied to its original location or reused.	Included in project cost	Contractor	Supervising Engineer, PIU

	Transportation of hazardous substances and waste conduct in line with Act on the Transport of Dangerous Goods and other relevant national legislation and World Bank EHSG and GIIP.	Included in project cost	Contractor	Supervising Engineer, PIU
	Burning or illegal dumping of waste is strictly prohibited.	Included in project cost	Contractor	Supervising Engineer, PIU
Accidents and emergencies				
Accident/ incident	Emergency Preparedness and Response Plan (as part of the C-ESMP) are prepared and include actions that are taken to ensure staff safety in an emergency (spills, accidents, fire, explosion, earthquake…), including a list of all emergency equipment at the construction site (such as fire extinguishing systems, spill control equipment, communications), and alarm systems (internal and external), and decontamination equipment, contacts of responsible persons, competent authorities, other emergency numbers, evacuation plan.	Included in project cost	Contractor	Supervising Engineer, PIU
	In the case of significant accident/incident (fatality, serious injury, larger spilling, fire, and similar) Supervising Engineer notifies the PIU (E&S specialists) without delay and fulfil the Notification report, and the PIU will notify the WB within 48 hours. Activities are carried out in accordance with the Project's Incident/Accident Procedure.	Included in project cost	Contractor	Supervising Engineer, PIU

9.2 Environmental and social mitigation plan - Operational phase

Table 7: Environmental and social mitigation plan for operational phase

Environmental and Social aspect	Proposed mitigation measure (Operational Phase)	Cost	Responsibility	
			Implementation	Supervision
Occupational Health and Safety and Community Safety				
Worker's health, safety, and labor and working conditions	All furniture and equipment purchased will meet requirements of relevant national and EU safety standards and legislation, such as (but not limited to): General Product Safety Directive (GPSD) , EN 581-1 – Outdoor furniture, EN 12520 – Furniture. Strength, durability, and safety, etc.	Project cost	SRI	MoCTI

	The area supported under the Project shall not be put to use until the Use Permit is issued.	Project cost	SRI	MoCTI
	Moving in and use of tracks is preceded by obtaining the use permit. The tracks constructed/reconstructed under this Project will not be used by trains which were built according to other standards (e.g. JUS) hence, present a risk for passengers (e.g. where there is a platform-train entrance gap, etc.). This can be allowed only if a technical solution to remove the risk is provided, satisfactory to the World Bank.	Operating costs and maintenance	SRI	MoCTI
	Fire and safety, and Emergency Preparedness and Response Plan for the building are prepared prior to operational phase. The fire alarm and fire systems are regularly maintained and certified.	Operating costs and maintenance	SRI	MoCTI
	Hazardous materials are managed (that is, used, stored, and handled) in accordance with WBG EHSGs requirements from Section 1.5 “Hazardous Materials”. Their use includes a hazard assessment of the potential for uncontrolled reactions such as fire and explosions and actions to manage these materials safely and the safety specifications for these materials and equipment. Short circuits causing sparks) under frequent startup and shutdown phases.	Operating costs and maintenance	SRI	Ministry of Internal Affairs, Emergency Situations Sector
	Safety and maintenance plan for all equipment is prepared before use and regularly implemented. The following user instructions are posted near the access to the moving walkways: -Transportation of disabled persons in wheelchairs is not permitted. - Hold the little children tight - Dogs should be carried - Stand facing the direction of travel, keep your feet away from the edges - Hold on tight to the handrail - Baby carriages are not allowed.	Operating costs and maintenance	SRI	Competent authority inspection
	Space is reserved for access of fire protection vehicles to the building at any time.	Operating costs and maintenance	SRI	SRI Ministry of Internal Affairs, Emergency Situations Sector
	Ensuring working conditions and management of worker relationships (terms and conditions of employment, Non-discrimination and equal opportunity, prohibition of child labor, etc.) according to Labor Act		SRI	
Waste management				

Waste generation, collection, and storage	A sufficient number of containers is installed for the separate collection of the main waste fractions. Waste is collected separately, kept, and temporarily stored in the safe manner and handed over for processing and disposal to licensed companies, all in line with the EU regulation and best practices described in this ESMP.	Operating costs and maintenance	SRI	MoCTI
	It is ensured that the local municipal company regularly collects waste for recovery or disposal in authorized facilities.	Operating costs and maintenance	SRI	MoCTI
	Dismantle dangerous equipment in the safe manner. Handling of waste, transport and final disposal or processing is carried out by licensed companies.	Operating costs and maintenance	SRI	MoCTI
Air and water quality				
Indoor air quality	Regularly monitor indoor air quality (for relevant parameters e.g. radon, and other relevant)	Operating costs and maintenance	SRI	Ministry of Environmental Protection
Water Quality	Regularly check potable water quality. Regularly check water discharge quality.	Operating costs and maintenance	SRI	Ministry of Environmental Protection
Noise				
Increased noise emission	It is ensured that the noise does not exceed the permitted levels during regular day and night work. The Serbia Railways Infrastructure (SRI) will carry out noise monitoring upon completion of works and commencement of activities. In case that generated noise levels exceed the maximum permitted noise levels; it is necessary to choose and apply adequate noise protection measures (design of noise barriers around major noise sources).	Operating costs and maintenance	SRI/Environmental inspector according to the inspection plan or by invitation to intervention	Ministry of Environmental Protection
Hazardous substances				
	All equipment is regularly maintained in line with the yearly maintenance plan, legislation and GIIP, including but not limited to: CO sensors, fire safety equipment and alarms, etc.	Operating costs and maintenance	SRI	competent authorities s of the Institute for the Protection of Cultural Monuments

10 ENVIRONMENTAL AND SOCIAL REPORTING AND MONITORING PLAN

Contractor will be responsible for the establishment and continuous implementation of mitigation measures proposed by this ESMP and for monthly reporting to PIU Environmental and Social Specialists on the implementation of the ESMP (according to proscribed Metrics for Reporting). Metrics for Reporting will be a part of the contract for works.

Supervising Engineer will be monitoring the implementation of ESMP and also monthly reporting to PIU Environmental and Social Specialists on any non – compliances

PIU Environmental and Social Specialists are responsible for the environmental and social measures defined by ESMP, as well as monitoring and supervision of implementation of mitigation measures for environmental protection and OH&S according to the Monitoring plan and reporting to the WB on the results.

Table 8. Environmental and social monitoring plan – Civil Works

	What (is the parameter to be monitored?)	**Where (is the parameter to be monitored?)**	**How (is the parameter to be monitored?)**	**When (Define the frequency / or continuous?)**	**Why (Is the parameter being monitored?)**	**Cost (if not included in project budget)**	**Who (Is responsible for monitoring?)**	
							Implementation/ reporting	**Monitoring**
CONSTRUCTION PHASE (monitoring according to Metrics for Reporting)								
GENERAL CONDITIONS								
1.	Obtaining permits and certificates	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	At the start of construction works	To ensure workers safety and minimize the risks of accidents	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI Environmental and Social Specialists

2.	Site organization	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Monthly	To ensure workers and community safety and minimize the risks of accidents	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Environmental and Social Specialists
OCCUPATIONAL HEALTH AND SAFETY AND COMMUNITY SAFETY								
3.	Worker's safety	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Daily	To ensure workers safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	PIU's Environmental and Social Specialists
4.	Discrimination against women/vulnerable groups in the hiring process of workers and during Project implementation	On construction site	By inspecting the site and keeping written records, GRM records, Supervising Engineer report	Monthly	To prevent discrimination and gender biases at work and ensure workers and community safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	PIU's Environmental and Social Specialists
5.	Worker's health due to improper asbestos handling	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Monthly	To ensure proper handling with asbestos and workers safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	PIU's Environmental and Social Specialists

6.	Labor influx	On construction site	By inspecting the site and employment records, keeping written records, Supervising Engineer report	Monthly	To ensure workers and community safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	PIU's Environment al and Social Specialists
7.	Sexual Exploitation and Abuse (SEA)/ Sexual Harassment (SH)	On construction site	By inspecting the site and keeping written GRM records, Supervising Engineer report	Monthly	To ensure workers and community safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	PIU's Environment al and Social Specialists
8.	Community safety,	On construction site	By inspecting the site, GRM records, and keeping written records, Supervising Engineer report	Monthly	To ensure community safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Environment al and Social Specialists

9.	Labor conditions and child labor	On construction site	By inspecting the site, GRM records, and keeping written records, Supervising Engineer report	Monthly	To ensure community safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Environment al and Social Specialists
10.	Risk of pollution of surface water, groundwater, and soil due to spill leakage	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Daily	To minimize the risks of air, soil, groundwater, and surface water pollution	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Environment al and Social Specialists
11.	Risk for safety of workers and community	On construction site and office	By (i) inspecting documentation – positive opinion on static of building must be obtained before works; (ii) observing the building and possible damage.	Once before works commence (i) Daily (ii)	To minimize the risks for human health and safety	Included in project budget	SRI	PIU's Environment al and Social Specialists
12.	Risk for safety of workers and community	Office	Is the use permit obtained for the used part of the building	Once before works commence	To minimize the risks for human health and safety	Included in project budget	SRI	PIU's Environment al and Social Specialists

BIODIVERSITY (FLORA AND FAUNA)								
13.	Risk of endangering flora and fauna by removing vegetation and polluting water and soil	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Daily	To minimize the risks on biodiversity by introducing alien invasive species	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Environment al and Social Specialists
MATERIAL MANAGEMENT								
14.	Risk of environmental pollution through inadequate handling of dangerous substances	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Daily	To ensure workers and community safety and minimize the risks of accidents	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Environment al and Social Specialists
TRAFFIC DISTURBANCE								
15.	Increased road traffic	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Monthly	To ensure traffic safety, to ensure workers and community safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Environment al and Social Specialists
16.	Risk of pollution of surface water, groundwater, and soil due to spills	On the construction site	Site inspection and maintaining written records; Engineer Supervisor's Report	Daily	To minimize risks of air, soil, groundwater, and surface water pollution	Included in the project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Environment al and Social Specialists

17.	Risk to worker and community safety	Construction site and offices	1.Document review – before construction begins, a positive opinion on the structural stability of the building must be obtained 2.Visual inspection of the building and any possible damage	Once before the start of works Daily	To reduce risks to human health and safety	Included in the project budget	SRI	PIU's Environmental and Social Specialists
18.	Risk to worker and community safety	Offices	Checking if an occupancy permit has been obtained for the part of the building in use	Once before the start of works	To reduce risks to human health and safety	Included in the project budget	SRI	PIU's Environmental and Social Specialists
WASTE MANAGEMENT								
19.	Waste generation and management	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Randomly, at least once a week	To ensure proper waste management	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	PIU's Environmental and Social Specialists
ACCIDENT AND EMERGENCIES								

20.	Accident/incident	On construction site	By inspecting the site and keeping written records, Supervising Engineer report	Daily	To ensure workers and community safety	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI, Department for emergency situation PIU's Environment al and Social Specialists
STAKEHOLDER ENGAGEMENT								
21.	Social conflicts arising from presence of construction personnel and construction works	On construction site	By interviewing the Contractor and Supervising Engineer and keeping written records, GRM records, conducting activities defined by Project SEP	During construction	To keep records of all complaints	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	SRI and PIU's Social Specialist
22.	Contractor's GRM	On construction site	The Contractor will be required to prepare and enforce a Code of Conduct for workers and report on regularly basis all related incidents that occur during the construction works.	During construction	To raise workplace concerns	Included in project budget	Contractor and sub-contractors/ Supervising Engineer	epartment for Conservation , SRI and PIU's Environment al and Social Specialists

23.	Project GRM	N/A	Through e-mail, telephone, post, and Contractor monthly report	During construction on daily basis	To keep records of all complaints.	Included in project budget	PIU's Environmental and Social Specialists	/
OPERATIONAL PHASE								
24.	Was moving into the building was carried out after the use permit had been issued?	Office in the facility	By inspecting the site	Once before the station starts to operate	To ensure employee's and student's safety	SRI	Building inspector according to the inspection plan or upon request for intervention	PIU's MoCTI
25.	OHS management in place	Office in the facility	Safety center in the facility	Before and during regular operation of the facility on an annual basis	To ensure employee's and student's safety	SRI	SRI, department of safety and health at work	inspection
26.	Are fire protection equipment and system in place and regularly maintained and certified?	Office in the facility	By inspecting the site	Before and during operational phase	To ensure employee's and patient's safety	SRI	SRI, department of safety and health at work	inspection

27.	Is there sufficient number of waste containers?	On project site	By inspecting the site and keeping written records	Before and during operational phase	To ensure proper waste management	SRI	Environmental/ Sanitary inspector according to the inspection plan or by invitation to intervention.	MoCTI
28.	Is oil and grease separator regularly maintained, and content is handed over to authorized company?	On project site	By inspecting the site and keeping written records	During operational phase	To ensure proper waste management	SRI	Environmental/ Sanitary inspector according to the inspection plan or by invitation to intervention.	MoCTI
29.	Noise levels during day and night work do not exceed the permissible levels	On project site	on-site measurement	During operational phase	To minimize the noise emission	SRI	Environmental inspector according to the inspection plan or by invitation to intervention.	MoCTI

11 ANNEXES

ANNEX 1. Information flow and responsibilities for providing information

FLOW OF INFORMATION AND RESPONSIBILITY	
Development of Design for Execution	DESIGNERS ←→ PIU ←→ STAKEHOLDERS
Development of ESMP document	PIU ←→ ES WB INSTITUTIONS, MEDIA, AND GENERAL PUBLIC
Information on potential impacts from construction works (traffic, dust, and noise)	PIU/SRI/ → DIRECTLY AFFECTED STAKEHOLDERS, MEDIA, AND GENERAL PUBLIC
Information on Ethics Code, WB's ESS, GRM	PIU / SRI → DIRECTLY AFFECTED STAKEHOLDERS, MEDIA, AND GENERAL PUBLIC PIU → Construction Company → Construction workers
Received complaints, comments, and suggestions on GRM	STAKEHOLDERS → GRMs (CONSTRUCTION COMPANY / BENEFICIARY / PIU) → PIU Ethics Committee PIU (responses) → STAKEHOLDERS / CONSTRUCTION COMPANY / BENEFICIARY
Information on occurred incidents	CONSTRUCTION COMPANY / SUPERVISING ENGINEER → PIU ←→ / WORLD BANK
	PIU (feedback / requests) □ CONSTRUCTION COMPANY / SUPERVISING ENGINEER

ANNEX 2. Documentation issued from the Ministry of Environmental protection related to Environmental Impact Assessment

ANNEX 3. Minutes of public consultations