

## TECHNICAL SPECIFICATION

# DESIGN AND DESIGN SUPERVISION SERVICES FOR THE PANEVĖŽYS – LITHUANIAN/LATVIAN BORDER SECTION (114,71 – 168,6 KM) OF THE “RAIL BALTICA” RAILWAY LINE

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## ACRONYMS AND ABBREVIATIONS

All acronyms, abbreviations, designations, definitions, and terms defined in the applicable laws, legislation, regulations, directives, Technical Specifications for Interoperability, standards, rules, this Agreement and Rail Baltica Design Guidelines, other guidelines and documents of Client are used in this Technical Specification without modifications if not defined otherwise further. In this document where the context admits, the following words shall have the meaning assigned to them hereafter:

Table 1: Acronyms and Abbreviations

Abbreviation (LT)	Abbreviation (EN)	Description (EN)	Description (LT)
-	AACE	International Association for the Advancement of Cost Engineering	Tarptautinė išlaidų inžinerijos pažangos asociacija
-	AsBo	Assessment Body	Vertinimo įstaiga
-	BEP	BIM Execution Plan	BIM vykdymo planas
-	BIM	Building Information Management	Statinio informacinis modeliavimas
DKŽ	BoQ	Bill of Quantities	Darbų kiekių žiniaraštis
-	CAD	Computer-aided design	Kompiuterizuotas projektavimas
-	CAPEX	Capital Expenditure	Kapitalo išlaidos
-	CCS	Control, Command and Signalling	Kontrolė, valdymas ir signalizavimas
-	CDE	Common Data Environment	Bendroji duomenų aplinka
-	CIAR	Critical Items Action Report	Kritinių punktų veiksmų ataskaita
-	CPM	Critical Path Method	Kritinio kelio metodas
-	CSM-RA	Regulation (EU) No 402/2013 on Common safety method for risk evaluation and assessment,	Bendrasis saugos būdas, susijęs su pavojaus lygio nustatymu ir pavojaus vertinimu
-	DCMA	Defence Contract Management Agency	Gynybos sutarčių valdymo agentūra
-	DeBo	Designated Body	Paskirtoji įstaiga
-	DG	Design Guidelines	Projektavimo gairės

PVP	DSS	Design Supervision Services	Projekto vykdymo priežiūros paslaugos
PAV	EIA	Environmental Impact Assessment	Poveikio aplinkai vertinimas
-	EIR	Employer's (Client's) Information Requirements	Užsakovo informacijos reikalavimai
-	ENE	Energy Subsystem	Energijos posistemis
ES	EU	European Union	Europos Sąjunga
-	GIR	Ground Investigation Report	Grunto tyrimo ataskaita
-	GNSS	Global Navigation Satellite System	Pasaulinė palydovinės navigacijos sistema
-	ICF	Interface Control Form	Sąsajų kontrolės forma
-	IPMA	International Project Management Association	Tarptautinė projektų valdymo asociacija
Liet.	Lith.	Lithuanian language	Lietuvių kalba
LT	LT	Lithuania	Lietuva
-	MIDP	Master Information Delivery Plan	Pagrindinis informacijos teikimo planas
-	MoM	Minutes of Meeting	Susirinkimo protokolas
TPD	MDTD	Master Detailed Technical Design	Techninis darbo projektas
NVO	NGO	Non-Governmental Organization	Nevyriausybė organizacija
-	NoBo	Notified Body	Notifikuotoji įstaiga
-	NSA	National Safety Authority	Nacionalinė saugos institucija
-	OPEX	Operating Expenses	Veiklos sąnaudos
-	PCR	Project Change Request	Projekto pakeitimo prašymas
-	PEP	Project Execution Plan	Projekto vykdymo planas
-	PMBOK	Project Management Body of Knowledge	Projektų valdymo žinių rinkinys



-	PRM	Persons with Reduced Mobility	Riboto judumo asmenys
-	PWDM	ProjectWise Deliverables Management (Bentley Systems)	„ProjectWise Deliverables Management“ portalas („Bentley Systems“)
-	RAMS	Reliability, Availability, Maintainability and Safety	Patikimumas, parengtis, priežiūras, sauga
-	RBR	RB Rail AS	„RB Rail“ AS
-	RFI	Request for Information	Informacijos prašymas
-	RIS	Rail Baltica Railway Infrastructure Schematic Layout	Geležinkelių infrastruktūros schema
SP	SP	Special Plan	Specialusis planas
STR	-	Construction Technical Regulation (Lith. „Statybos techninis reglamentas“)	Statybos techninis reglamentas
-	TIDP	Task Information Delivery Plan	Užduoties informacijos pateikimo planas
TPS	-	Spatial Planning and Construction Gateway (Lith. „Teritorijų Planavimo ir statybos vartai“) <a href="#">Home   Teritorijų planavimo ir statybos vartai</a>	Teritorijų planavimo ir statybos vartai <a href="#">Pradžia   Teritorijų planavimo ir statybos vartai</a>
TS	TS	Technical Specification	Techninė specifikacija
-	TSC	Technical Specifications for Construction	Statybos techninės specifikacijos
TSS	TSI	Technical Specifications for Interoperability	Techninės sąveikos specifikacijos
TDG	TWG	Technical Working Group	Techninė darbo grupė
VMT	-	Lithuanian State Forest Service (Lith. „Valstybinė miškų tarnyba“)	Lietuvos valstybinė miškų tarnyba
VMU	-	Lithuanian State Forest Enterprise (Lith. „Valstybinė miškų urėdija“)	Lietuvos valstybinė miškų urėdija

VTPSI	-	State Territorial Planning and Construction Inspectorate under the Ministry of Environment (Lith. <i>„Valstybinė teritorijų planavimo ir statybos inspekcija“</i> )	Valstybinė teritorijų planavimo ir statybos inspekcija prie Aplinkos ministerijos
-	WBS	Works Breakdown Structure	Darbų suskirstymo struktūra

## DEFINITIONS

The following terms are used throughout this document:

Table 2: Terms and Definitions

Term	Definition
Affected Parties	Project external stakeholders – State institutions, local government bodies, public and/or private enterprises, non-profit and non-governmental organizations, legal or private entities (persons) representing the owners and/or managers of the assets (networks and/or objects of power supply, gas, oil, water, drainage etc.) that are linked to the designed layout of Rail Baltica railway line and shall be considered during the provision of Services.
Assessment Body	The independent organization or entity which undertakes investigation to provide a judgement, based on evidence, of the suitability of a system to fulfil its safety requirements.
Beneficiary	Ministry of Transport and Communications of the Republic of Lithuania.
Bill of Quantities	An itemized list of materials, parts, and labour together with their unit cost and description what is basis for cost calculation, required to construct, install, maintain, and/or repair the infrastructure. Classification system is described in the BIM Requirements.
BIM Execution Plan	A formal document that defines how the project will be executed, monitored, and controlled with regards to BIM. Developed by the Supplier at project initiation to provide important information/data management plans and assignment of roles and responsibilities for model creation and data integration throughout the project.
BIM Requirements	Corresponds to BIM requirements set in Design Guidelines: BIM Employer Information Requirements (EIR), BIM Manual and templates for BIM documents / deliverables.
Builder	Corresponds to Legal Entity responsible for the construction of the Project (Lith. „Statytojas“), according to the Law of the Republic of Lithuania on Construction.
Building design in a minimum composition (BDMC)	Corresponds to definition of Latvian „Būvprojekts minimālā sastāvā” (MBP), according to Cabinet of Ministers regulations No.500 “General Construction regulations”.
Building permit	Construction permit (Lith. „Statybą leidžiantis dokumentas”, Latvian “Būvatļauja”) issued by state authorities based on national construction legislation.
CCS Contractor	Rail System Control-Command and Signalling Subsystem Contractor responsible for design and construction of the CCS subsystem for entire Rail Baltica Global Project, incl. Defect Notification Period and is contracted by RB Rail AS.
CCS Engineer	RB Rail AS employed Control-Command and Signalling subsystem engineer responsible for supervision of design and deployment of CCS systems that include the European Rail Traffic Management System (ERTMS) Level 2, interlocking, traffic management, information, and

	communication technologies (ICT), ancillary, station, and non-traction power supply subsystems.
Classification system	Classification system is described in the BIM Requirements. A systematic arrangement of Design and construction work aspects including assets, facility elements, functional and constructive systems, products, components, etc.
Client	AB “LTG Infra”
Common Data Environment	A central repository where construction project (Design) information is stored. The contents of the Common Data Environment are not limited to assets created in a „BIM environment” and it therefore includes data, documentation, graphical model and non-graphical assets.
Compliance Report	A compliance report is a self-declaration submitted by the Supplier with each deliverable demonstrating that the Supplier adheres to Design Guidelines, standards, rules, laws and regulations.
Conceptual Design	Preliminary (schematic) design level for objects, that shall be an integral part of the Rail Baltica project but are not requested to be designed by the Supplier to MDTD level. Conceptual design solutions shall be shown in MDTD documentation to ensure future developments.
Construction Object	Individual structure or part of the overall design solutions for which the design forms part of the scope of the Services. The ‘Construction Object’ is defined as separate object for which an individual Design package (including all required documentation and necessary approvals to obtain a Building permit) is prepared allowing to have a separate construction (including construction tendering) and taking-over process in accordance with national construction legislation.
Supplier	Service provider awarded with an Agreement to provide the Services specified in this Technical Specification. Supplier shall perform all rights and responsibilities of Supplier (Lith. „Statinio projektuotojas”) and Investigator (Lith. „Tyrėjas”) in accordance with national legislation and shall be certified/licensed to provide the Services.
Days	Corresponds to working days
Design	Corresponds to definition of Design project (Lith. „Statinio projektas”) and (Lith. „Statinio projektavimas”) according to the Law of the Republic of Lithuania on Construction.
Design Expertise	Corresponds to definition of Lith. „Statinio projekto ekspertizė”, according to the Law of the Republic of Lithuania on Construction.  Corresponds to definition of Latvian „Būvprojekta ekspertīze”, according to Cabinet of Ministers regulations No.500 “General Construction regulations”.  Client procures an independent expertise to evaluate the Design in accordance with national legislation. Supplier shall amend the Design according to expert comments to be able to receive positive expert conclusion within agreement terms.
Design Guidelines	Set of technical requirements for Rail Baltica infrastructure to be applied at design, construction, and operation phases of Rail Baltica Railway, which forms an integral part of

	this Technical Specification. The Design guidelines may be changed by the Client therefore the Agreement always refers to the most current version of the Design guidelines. See Annex 1.
Design Priority Section	Part of Design Section identified as separate Rail Baltica railway line section for planning of the Services, construction, and management purposes.
Design Proposals	Design stage corresponds to Project Proposal (Lith. „Projektiniai pasiūlymai“) stage as described in Building Technical Regulation, STR 1.04.04:2017 „Statinio projektavimas, projekto ekspertizė“. Design proposals are pre-requisite for application for building permit.
Design Section	Section of overall Rail Baltica railway line falling under the scope of the Services.
Design Supervision Services	Corresponds to Project Implementation Supervision (Lith. „Statinio projekto vykdymo priežiūra“) as described by STR 1.06.01:2016 „Statybos darbai. Statinio statybos priežiūra“. Corresponds to definition of Latvian “Autoruzraudzība” according to Cabinet of Minister regulations No.500 “General Construction Regulations”.
Designated Body	In accordance with the Interoperability Directive (EU) 2016/797, a Designated Body (DeBo) shall perform conformity assessment for compliance with National Rules, Certifying National conformity (everything beyond TSIs).
Employer’s Information Requirements	Building information modelling (BIM) Employer’s information requirements (EIR) defines the information that The Supplier shall be required to provide in BIM models during development of the Project and fit for the operation of the completed built asset.
ENE Contractor	Rail System Energy Subsystem Contractor responsible for design and construction of the ENE subsystem for entire Rail Baltica Global Project, incl. Defect Notification Period and is contracted by RB Rail AS.
ENE Engineer	Rail System Energy Subsystem Engineer – provides engineering services for the complete ENE Global project lifecycle starting from preparatory phase for the procurement, supervision during design and construction, till the end of Defects Notification Period and is contracted by RB Rail AS.
Environmental Impact Assessment	Assessment of the significant effects of a project or development proposal on the environment. Corresponds to Lith. “Poveikio aplinkai vertinimas” and Latvian “Ietekmes uz vidi novērtējums”. An integral procedure carried out during the preparation of Spatial planning documents.
Global Project	All the activities undertaken by the Rail Baltica railway implementing parties to build, render operational and commercialize the Rail Baltica railway and related railway infrastructure in accordance with the agreed route, technical parameters and time schedule.
Inception Report	A Report, produced by the Supplier after signing of an Agreement, that describes in detail all the work activities that are planned during the provision of Services.
Interface Control Form	A document that includes interface requirements to implement in both sub-systems referred in the document

	Interface Control Forms are owned by RB Rail AS and are to be considered and updated (if related to the outcomes of the design process) by the Supplier through the Service provision.
Interface Management Plan	A document which describes the process of managing Project interfaces.
Local Facility	Means geographically limited parts of railway infrastructure with extended structural or functional elements (terminals, service facilities, etc.) which are related or needed to ensure a safe and smooth operation of the railway. Local Facilities are, inter alia, the following: a passenger terminal, including passenger stations; a freight terminal including railway station; a rolling stock maintenance facility; an infrastructure maintenance facility; other possible facilities.
Master Detailed Technical Design	<p>Master Detailed Technical Design corresponds to Lith. „Techninis darbo projektas“ and must contain the information required by Construction Technical Regulations STR 1.04.04:2017 „Statinio projektavimas, projekto ekspertizė“, which establish composition and requirements for Master Detailed Technical Design.</p> <p>In terms of Construction Law of the Republic of Latvia, Master Detailed Technical Design corresponds to Building design (“Būvprojekts” in Latvian) together with all additional requirements specified in Technical Specification for the Master Detailed Technical Design. A final stage (received note within Building permit on design condition fulfilment) of the design process in accordance with Construction Law of the Republic of Latvia.</p>
National Safety Authority	The institution independent in its organization, legal structure and decision-making from any railway undertaking, infrastructure manager, applicant or contracting entity and from any entity awarding public service contracts. National Safety Authority is entrusted with authorization for placing in service the trackside control-command and signalling, energy and infrastructure subsystems constituting the Union rail system.
National studies / RB Rail AS studies	Detailed engineering, technical and feasibility studies on implementation of Rail Baltica project.
Notified Body	Conformity assessment body is classified as a ‘Notified Body’ (NoBo) following notification by a Member State. Notified bodies responsible for examining the procedures for assessment of conformity and suitability for use of interoperability constituents, together with the procedure for the assessment of subsystems, should, in the absence of any European specification, coordinate their decisions as closely as possible. European wide authority for assessment. Certifies EU conformity in accordance with TSI.
Operational Plan	Comprehensive set of documents defining all long-term operational principles of the Rail Baltica railway line on the wider corridor of Warsaw - Helsinki and describing the future structure of train traffic and operational processes on Rail Baltica railway line, outlining railway capacity, establishing operational requirements regarding the infrastructure, rolling stock, and outlining the related effort for maintenance of the infrastructure and rolling stock. Operational Plan also defines the infrastructure parameters for Rail Baltica railway line covering speed limitations, track layouts of the stations, main line and facilities, type of turnouts, main infrastructure objects. Timetable and travel time defined in the Operational Plan are the essential targets to be complied with.

	The Operational Plan may be changed by the Client; therefore, the Agreement always refers to the most current version of the Operational Plan and RIS.
PRM TSI	“Commission Regulation (EU) No 1300/2014 of 18 November 2014 on the technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility”
Project	Design and design supervision services for the Panevėžys – Lithuanian/Latvian border section (114,71 – 168,6 km) of the “Rail Baltica” railway line.
Project Execution Plan	A governing document that defines how a Project is to be executed, monitored, and controlled.
Rail Baltica railway	A new high-speed double track electrified standard gauge (1435 mm) railway line on the route from Tallinn through Pärnu - Riga - Panevėžys - Kaunas to Lithuanian - Polish border, with the connection of Kaunas - Vilnius.
Railway infrastructure	Correspond to the Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (recast), as well as it includes freight and passenger terminals and infrastructure and rolling stock maintenance facilities and the ground underneath them and the airspace above them to the extent that the national legislation permits the ownership of the ground and the airspace.
Railway station	Part of a railway containing necessary sidings and necessary equipment, which allows to perform train traffic organization (change of direction, overtaking, crossing) and commercial (passenger exchange, freight operations, etc.) operations. The border of a railway station is a station border (an entry signal or a border sign).
Reliability, Availability, Maintainability and Safety	As per RAMS requirements and RAMS methods, the obligatoriness Directives, Regulations and Standards following the Directives (EU) 2016/797 and Regulation (EU) 2013/402, the standard EN50126-1, Rail Baltica RAMS Design Guidelines and procedures.
Services	Corresponds to all Design and Design Supervision Services under the Agreement.
Shadow Operator	The Shadow Operator provides its Operation and Maintenance (O&M) experience and expertise in the railway industry to support the Rail Baltica project in representing the future O&M companies during the design and construction phases. It will contribute/define the O&M requirements for design and construction, participate and cross-review the project to ensure that abovementioned requirements are considered, support elaboration of tender documents and initiate a regulatory framework for the future operators and maintainers to operate the required services with the required performances. Shadow Operator is contracted by RB Rail AS.
Spatial planning and construction gateway	Corresponds to Lith. „Teritorijų planavimo ir statybos vartai“- Information system for Spatial planning and construction, <a href="http://www.planuojustatau.lt">www.planuojustatau.lt</a> .
Special Plan	Spatial plan corresponds to definition of Lith. „Inžinerinės infrastruktūros vystymo planas“, according to the Law of the Republic of Lithuania on Spatial Planning (Lith. „Lietuvos

	Respublikos Teritorijų planavimo įstatymas“, prepared in accordance with Lithuanian national legislation and approved at the State level.
Technical Conditions	Corresponds to Technical tasks (Lith. „Techninė užduotis“), Special requirements (Lith. „Specialieji reikalavimai“), Design Conditions for connecting to engineering networks or communications (Lith. „Prisijungimo prie inžinerinių tinklų ar susisiekimo komunikacijų sąlygos“) and other mandatory documents as required by Republic of Lithuania Law on Construction (Lith. „Lietuvos Respublikos statybos įstatymas“) issued by Affected parties involved in Design process.
Technical Specification	This document with all its Annexes and references, which is an integral part of the Agreement.
RB Technical Specification	Technical specifications for materials and subsystems developed by RB Rail AS for Rail Baltica project. RB technical specifications are listed in Annex 7.38 of this document.
Technical Specifications for Interoperability	A specification adopted in accordance with Directive EU 2016/797 by which each subsystem or part of a subsystem is covered in order to meet the essential requirements and ensure the interoperability of the Union rail system as defined by Directive EU 2016/797.
Technical Working Group	A group of technical experts from Client and involved parties nominated by Client specifically to deal with administrative and technical matters during Agreement implementation. The objective of the TWG is to provide a platform for the exchange of information and opinions among the key stakeholders, to ensure an efficient feedback mechanism, to promote cooperation during the implementation of the Agreement. The Technical Working Group has no responsibilities regarding project management and control as well as contract management.
Work Breakdown Structure	A hierarchical framework for organizing and ordering activities that make up the entire scope of Services. It covers all project scope and breaks down into unique manageable parts that correspond to key deliverables, phases of work, and milestones. They are product (deliverable-based) structures that provide a common frame of reference for managing and reporting project elements (e.g., estimating, scheduling, etc.) to stakeholders.
Work Package	The work and services defined at the lowest level of the work breakdown structure.
Works Contractor	Corresponds to future construction works contractor responsible for implementation of Construction activities.



# 1. General

## 1.1 Introduction

The Baltic countries Estonia, Latvia and Lithuania have historically been linked to the east-west railway transport axis using the 1520 mm gauge railway system. Because of the existing historical and technical constraints, the existing rail system is incompatible with mainland European standards, thus there is a consensus that Estonia, Latvia, and Lithuania need to be fully integrated into the wider European rail transport system. Currently there is no efficient 1435 mm railway connection along the Warsaw - Kaunas - Riga - Tallinn axis, i.e., there are missing links or significant bottlenecks. Thus, there are no direct passenger or freight services along the railway axis as the existing infrastructure does not allow for competitive services compared to alternative modes of transport. Thus, most of the North-South freight is being transported by road transport and the overall accessibility in the region is low.

The ambitions of the Rail Baltica Global project (Global Project) are:

- to become a powerful catalyst for sustainable economic growth in the Baltic States,
- to set a new standard of passenger and freight mobility,
- to ensure a new economic corridor will emerge,
- sustainable employment and educational opportunities,
- an environmentally sustainable infrastructure,
- new opportunities for multimodal freight logistics development,
- new intermodal transport solutions for passengers,
- safety and performance improvements,
- a new value platform for digitalization and innovation,
- completion of Baltic integration in the European Union transport ecosystem.

Rail Baltica is already designed to become a part of the EU TEN-T North Sea – Baltic Core Network Corridor, which links Europe’s largest ports of Rotterdam, Hamburg, and Antwerp – through the Netherlands, Belgium, Germany and Poland – with the three Baltic States, further connecting to Finland via the Gulf of Finland short sea shipping connections with a future fixed link possibility between Tallinn and Helsinki. Further northbound extension of this corridor shall pave the way for future connectivity also with the emerging Arctic corridor, especially considering the lucrative prospects of the alternative Northern Circle maritime route development between Europe and Asia. Furthermore, the North Sea – Baltic Corridor crosses with the Baltic-Adriatic Corridor in Warsaw, paving the way for new supply chain development between the Baltic and Adriatic seas, connecting the Baltics with the hitherto inadequately accessible Southern European markets. In a similar fashion, Rail Baltica shall strengthen the synergies between North-South and West-East freight flows, creating new transshipment and logistics

development opportunities along the Europe and Asia overland trade routes. The new Rail Baltica infrastructure would, therefore, not only put the Baltics firmly on the European rail logistics map, but also create massive opportunities for value creation along this infrastructure with such secondary economic benefits as commercial property development, revitalization of dilapidated urban areas, private spin-off investment, new business formation, technology transfer and innovation, tourism development and other catalytic effects. Rail Baltica aims to promote these effects from the early stages of the Global Project, learning from the key global success stories and benchmarks in this regard.

The contracting authority RB Rail AS was established by the Republics of Estonia, Latvia, and Lithuania, via state-owned holding companies, to coordinate the development and construction of the fast-conventional standard gauge railway line on the North Sea – Baltic TEN-T Core Network Corridor (Rail Baltica II) linking three Baltic states with Poland and the rest of the EU.

The shareholders structure of RBR is presented in Figure 1.

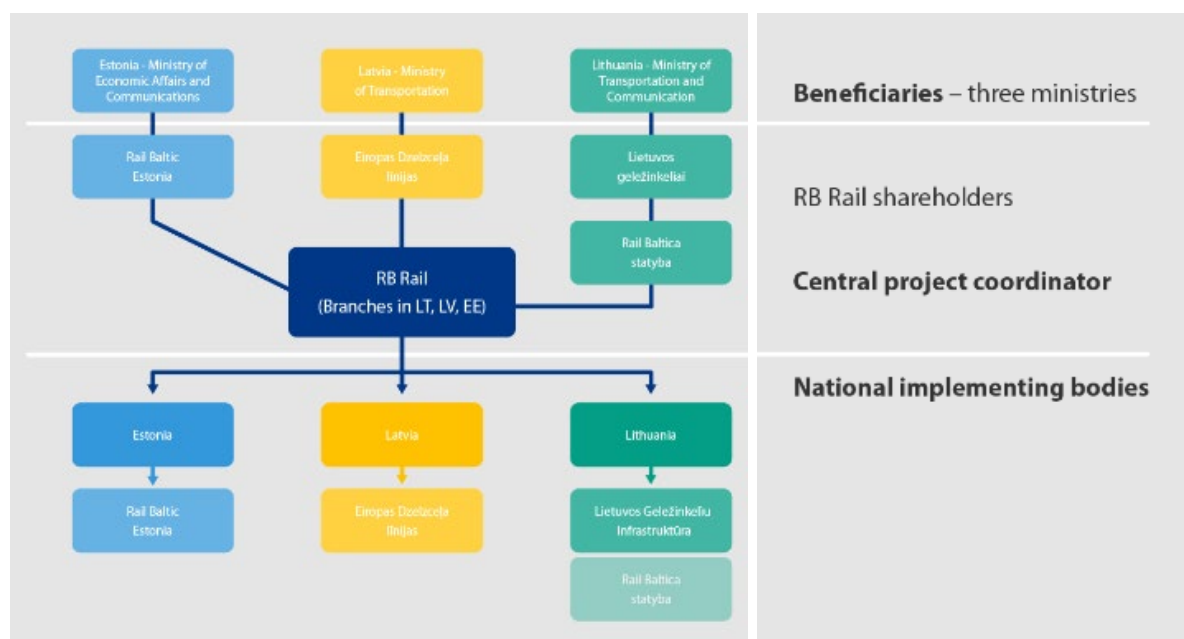


Figure 1: The shareholders' structure

RBR together with governments of Estonia, Latvia, and Lithuania (represented by the ministries in charge of transport policy) have applied for the CEF co-financing in 2020 and 2021 (two applications in total). Both applications were successful and INEA grants are available to support the Global Project expenses.

Rail Baltica is a joint project of three EU Member States – Estonia, Latvia, and Lithuania – and concerns the building of a fast conventional double track 1435 mm gauge electrified railway line on the route from Tallinn through Pärnu (EE), Riga (LV), Riga International Airport (LV), Panevėžys (LT), Kaunas (LT) to the Lithuania/Poland state border (including connection Kaunas - Vilnius). In the longer term, the railway

line could potentially be extended to include a fixed link between Helsinki and Tallinn, as well as integrate the railway link to Warsaw and beyond.

The expected core outcome of the Rail Baltica project is a European gauge (1435mm) double-track railway line of almost 900 km in length meant for both passenger and freight transport and the required additional infrastructure (to ensure full operability of the railway). It will be interoperable with the TEN-T Network in the rest of Europe and competitive in terms of quality with other modes of transport in the region.

Further information is available in <http://www.railbaltica.org/>

## 1.2 Legal references

The Supplier shall comply with all EU Directives, all national construction and other legislation, EU standards, Lithuanian legislation/standards/rules, and other legal acts applicable to the provision of the Services. Supplier must ensure adherence to any updates or amendments to these laws and regulations, maintaining compliance throughout the duration of the project. Main applicable legal acts (non-exhaustive list) are provided below<sup>1</sup>:

- Construction Law of the Republic of Lithuania (Lith. „*Lietuvos Respublikos Statybos įstatymas*“)  
<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.26250/asr>
- Construction Law of the Republic of Latvia  
<https://likumi.lv/ta/id/258572-buvniecibas-likums>  
Construction Technical Regulations (Lith. „*Statybos techniniai reglamentai*“)  
<https://vtpsi.lrv.lt/lt/teisine-informacija/teises-aktai-2/statybos-techniniai-reglamentai>
- Lithuanian register of legal acts  
<https://www.e-tar.lt/portal/en/index>
- Latvian register of legal acts  
<https://likumi.lv>
- Melioration Law of the Republic of Lithuania (Lietuvos Respublikos Melioracijos įstatymas )  
<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.5651/asr>
- On the recognition of the „Rail Baltica” project as a project of special national interest

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<sup>1</sup> The Client is not responsible for the availability and content of the information available online (except for [www.railbaltica.org](http://www.railbaltica.org) website)

<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.408298>

- Intergovernmental Agreement on the development of the Rail Baltic / Rail Baltica railway connection  
[Intergovernmental Agreement 2017.pdf](#)

## 1.3 National state institutions

The Services include Design and Design supervision services for the construction of the railway track embankment, superstructure as well as related civil structures, roads and utilities on the new standard gauge (1435 mm) double-track electrified railway Rail Baltica line section between Panevėžys and Lithuanian – Latvian state border.

As well Design and Design supervision services for the construction of railway track embankment, superstructures and all related civil structures, roads and utilities of the Joniškėlis railway station (excluding Station Building and Station building area).

The Design shall be prepared in accordance with the Rail Baltica Design Guidelines (see Annex 7.01), Rail Baltica Operational Plan (see Annex 7.02), Special Plan for Kaunas – Lithuanian/Latvian border (see Annex 7.03), Environmental Impact assessment for Kaunas – Lithuanian/Latvian border (see Annex 7.04, the validity of the decision was extended until 2027-02-01), Special plan for Engineering infrastructure development for the engineering systems and regional stations of the communications engineering infrastructure of the "Rail Baltica" project on the Kaunas-Lithuanian and Latvian (see Annex 7.05), Screening for the Environmental Impact Assessment of the engineering systems and transport communications engineering infrastructure of regional stations of the railway line Kaunas-Lithuanian/Latvian border of the Rail Baltica Project (see Annex 7.06), TSIs requirements, for a design speed of up to 249 km/h for passenger trains and up to 120 km/h for freight trains, as well as demonstrate the compliance with the CSM-RA.

In describing the procurement object, any reference in the technical specification or other procurement documents (e.g. MD, MDTD) to a particular model or source of supply, a particular process specific to the goods or services supplied by a particular supplier, or to a trademark, patent, types, specific origin or manufacture, certificates, standards, must be read with the words "or equivalent". The goods, services and/or works must not constitute a threat to national security.

## 1.4 National state institutions

Lithuania's regulatory institutions (non-exhaustive list) as a guidance for the Supplier to consider throughout the Agreement implementation provided below:

- State Territorial Planning and Construction Inspectorate under the Ministry of Environment (Lith. „Valstybinė teritorijų planavimo ir statybos inspekcija prie Aplinkos ministerijos“)  
[vtpsi.lrv.lt](http://vtpsi.lrv.lt)

- Lithuanian Transport Safety Administration (Lith. „Lietuvos transporto saugos administracija“) [tsa.lrv.lt](http://tsa.lrv.lt)
- Construction Sector Development Agency (Lith. „Statybos sektoriaus vystymo agentūra“) [ssva.lt](http://ssva.lt)
- Environmental Protection Agency (Lith. „Aplinkos apsaugos agentūra“) [aaa.lrv.lt](http://aaa.lrv.lt)
- State Service for Protected Areas under this Ministry of Environment (Lith. „Valstybinė saugomų teritorijų tarnyba prie Aplinkos ministerijos“) [vstt.lrv.lt](http://vstt.lrv.lt)
- Lithuanians State Forest Enterprise (Lith. „Valstybinė miškų urėdija“) [vmu.lt/](http://vmu.lt/)
- National Center for Public Health under the Ministry of Health (Lith. „Nacionalinis visuomenės sveikatos centras prie Sveikatos apsaugos ministerijos“) [nvsc.lrv.lt](http://nvsc.lrv.lt)
- State border guard services (Lith. „Valstybinė sienos apsaugos tarnyba“) [vsat.lrv.lt](http://vsat.lrv.lt)
- Lithuanian Geological Survey (Lith. „Lietuvos geologijos tarnyba prie Aplinkos ministerijos“) [lgt.lrv.lt](http://lgt.lrv.lt)
- Department of Cultural Heritage under the Ministry of Culture (Lith. „Kultūros paveldo departamentas prie Kultūros ministerijos“) [kpd.lrv.lt](http://kpd.lrv.lt)

Latvia's regulatory institutions (non-exhaustive list) as a guidance for the Supplier to consider throughout the Agreement implementation provided below:

- The State Railway Technical Inspectorate (Valsts dzelzceļa tehniskā inspekcija) <https://www.vdzti.gov.lv/lv>
- The State Construction Control Bureau of Latvia (Būvniecības valsts kontroles birojs) <https://www.bvkb.gov.lv/lv>
- State Border Guard <https://www.rs.gov.lv/en>
- State Environmental Service <https://www.vvd.gov.lv/lv>

- Bauska municipality

<https://www.bauskasnovads.lv/lv>

## 1.5 Affected Parties

The Supplier shall be responsible for stakeholder management and coordination activities with Affected parties within and/or in association with the Scope of the Services (see Stakeholder Management in Section 6.3.16.5). The indicative (non-exhaustive) list of Affected parties is as follows:

- a) Transport infrastructure operators/owners: railways, roads, airports;
- b) Power transmission operators (high voltage) and power distribution (low and medium voltage);
- c) Oil/gas transmission operators;
- d) State/municipal institutions;
- e) Landowners and land managers;
- f) State Forest Service;
- g) Telecom (communication cable lines, mobile operators);
- h) Fire/rescue services and military authorities;
- i) Private enterprises, residents, developers, entrepreneurs;
- j) Associations / NGOs;
- k) Railway authorities;
- l) State/municipal service companies (water supply, heat supply etc.);
- m) Environmental monitoring institutions;
- n) Culture heritage monitoring institutions;
- o) Melioration and land drainage authorities and owners / managers;
- p) any other institutions involved in the Design process.

## 2. Scope of the Services

### 2.1 Main Tasks

- 2.1.1 The Supplier shall perform all necessary tasks required for providing the Services and obtaining Client’s approval for the deliverables of the Services in compliance with the Design Guidelines (Annex 7.01), RB Technical specifications (Annex 7.38), Operational Plan (Annex 7.02), Rail Baltica railway Infrastructure Schematic (RIS) Layout (Annex 7.09), Special Plans (Annexes 7.03, 7.05), EIA (Annexes 7.04, 7.07), Screening for the EIA (Annex 7.06), Lithuanian National legislation, Latvian National Legislations, TSI requirements, CSM-RA.
- 2.1.2 The Supplier shall review and analyze already prepared conceptual design solutions for Panevėžys – Lithuanian/Latvian border provided in Annex 7.08. Which includes Consolidated Design reports (Master Design Interim Reports), Geological investigation reports, Hydrological reports, Design proposals and align these with all mandatory requirements and regulations, EIA reports and Kaunas – Lithuanian/Latvia border Special Plan provided in references and annexes of this document.
- 2.1.3 The Supplier shall review and analyse design solutions provided for Joniškėlis railway station in "Rail Baltica" railway line Kaunas - Lithuanian Latvian border engineering systems and regional stations communications engineering infrastructure development special plan (Annex 7.05), Screening for the EIA (Annex 7.06), and align these with all mandatory requirements and regulations set in references and annexes of this document.
- 2.1.4 The Supplier shall prepare, submit all necessary applications for Affected Party requirements and Technical Conditions, and fulfil the Services in accordance with additionally obtained requirements and Technical Conditions.
- 2.1.5 The Supplier shall prepare the Inception Report as described in section 3.2.
- 2.1.6 The Supplier shall review all the input data provided in Annex 7.08 for the "Rail Baltica" Main Line, and perform necessary assessments of existing conditions required to start the design and evaluate future impact during construction and operational phase of the existing neighbouring, adjacent and interfaced objects/structures (roads, railways, bridges, buildings, etc.)
- 2.1.7 The Supplier shall acquire necessary input data for Joniškėlis railway station, perform necessary assessments of existing conditions required to start the design and evaluate future impact during construction and operational phase of the existing neighbouring, adjacent and interfaced objects/structures (roads, railways, bridges, buildings, etc.).
- 2.1.8 The Supplier shall review all Site Investigations, including, geodetic, geology, hydrology, areas contaminated with explosives and hazardous materials (where applicable), environmental, and

other studies related to the Main Line and carry out the investigations again or undertake additional ones (if required) in Annex 7.08.

- 2.1.9 The Supplier shall undertake all necessary Site Investigations, including topographic, geodetic, geology, hydrogeology, hydrology, contaminated areas (where applicable), environmental, etc. for Joniškėlis railway station, that are needed for the project and for obtaining a building permit.
- 2.1.10 The Supplier shall prepare required documentation for compensation for repairing or reinstating third party property (crops, harvest, yield, plants, trees) that occurred during the Investigation stage.
- 2.1.11 The Supplier shall undertake necessary procedures and prepare for timely access to forest areas (if needed).
- 2.1.12 The Supplier shall assess/investigate existing structures and utilities intersections (including but not limited to high / low voltage electricity lines, general gas pipelines, water supply and sewer, telecommunication lines, oil pipes) and factual technical condition. The Supplier shall deliver assessment/investigation reports.
- 2.1.13 The Supplier shall analyse existing data on archeologic, cultural heritage objects, and implement necessary investigations.
- 2.1.14 The Supplier shall analyse existing data and assessments of existing (current) environmental conditions and the expected impact on the environment, environmentally sensitive areas, and implement necessary investigations.
- 2.1.15 The Supplier shall obtain all permits, qualification certificates, licenses required to deliver and complete the Services. This also includes, but not limited to, cultural heritage protection.
- 2.1.16 The Supplier shall apply for all Technical Conditions from issuing institutions and Affected parties and implement the received requirements. Including but not limited to high / low voltage electricity lines, general gas pipelines, water supply and sewer, telecommunication lines.
- 2.1.17 The Supplier shall comply with the BIM Requirements and shall design in a BIM environment throughout all stages and full duration of the Services.
- 2.1.18 The Supplier shall prepare and deliver Design Proposals as detailed in Section 3.4.
- 2.1.19 The Supplier shall prepare and deliver the Master Detailed Technical Design in accordance with Rail Baltica Design Guidelines (Annex 7.01), Operational Plan (Annex 7.02), SP (Annex 7.03, 7.05), EIA (Annex 7.04, 7.07), Screening for the EIA (Annex 7.06), national legislation, TSIs requirements, CSM-RA, Technical, Special and Connection Conditions, this TS, and any additional Client Requirements.



- 2.1.20 The Supplier shall prepare Design parts for cultural heritage objects (Lith. „*Tvarkybos projektas*“) if necessary, as defined in national legislation (refer to Lith. „*Lietuvos Respublikos nekilnojamojo kultūros paveldo apsaugos įstatymas*“).
- 2.1.21 The Supplier shall prepare residential or industrial buildings demolition project documentation (Lith. „*Statinio griovimo projektas*“), in case railway line design requires demolition to be performed by Construction Works contractor.
- 2.1.22 The Supplier shall cooperate with all parties involved in the approval process and obtain all necessary approvals (from Client, National Safety Authority, AsBo / NoBo /DeBo, Affected Parties, etc.) which are required during the design process and for providing the Services.
- 2.1.23 The Supplier shall present Master Detailed Technical Design for Design Expertise, as required by the Law of the Republic of Lithuania on Construction. The Supplier shall provide answers and implement required changes to Master Detailed Technical Design according to the remarks received to get approval from Design Expertise service provider.
- 2.1.24 For a bridge over Mūša (Mūsa in Latvian) on the border of Lithuania/Latvia, the Supplier shall present BDMC as required by legislation of the Republic of Latvia and Master Detailed Technical Design as required by the Law of the Republic of Latvia and Lithuania. A separate project must be prepared for the bridge over the Mūša River, and a separate building permits (Lith. SLD, Latv. „*Būvatlauja*“) must be obtained. The project for the bridge over the Mūša River must be prepared in Lithuanian, English, and Latvian languages. The Supplier must prepare a single document that meets the legal and technical requirements and EIA conditions of both countries. The Supplier shall provide answers and implement required changes to Master Detailed Technical Design according to the remarks received to get approval from Design Expertise service provider.
- 2.1.25 The Supplier shall define the number of Building Permits and apply for them by ensuring the provision of necessary Design data in accordance with national legislation.
- 2.1.26 The Supplier shall successfully obtain the Building Permit (including permits for cultural heritage objects if necessary) in accordance with national legislation by implementing the requirements received from all national institutions involved in the Building Permit acquisition process. This might require multiple attempts/applications which the Supplier shall provide at no extra cost.
- 2.1.27 The supplier carries out an environmental impact assessment (if required by law) and/or screening for the environmental impact assessment (if required by law). The supplier prepares the necessary documents (design solutions, environmental measures, construction restrictions and other requirements should comply as much as possible with previous reports of environmental impact assess, see Annex 7.04, 7.06, 7.07), carries out publicity, submits and coordinates with the authorities, obtains the decision (conclusion).

- 2.1.28 The Supplier shall carry out all public and stakeholder management activities, consultations and presentations of design solutions.
- 2.1.29 The Supplier shall prepare both BoQ and cost expenditure (construction cost estimation) calculations as required by National Legislation and following the requirements set in Annex 7.14 of this Technical Specification.
- 2.1.30 During the design development process, particularly at the stages of technology selection, fuels selection, materials selection, site selection, land use and land-use change planning, low carbon options and solutions for greenhouse gas savings shall be considered and integrated by the Supplier.
- 2.1.31 The Supplier shall provide Design Supervision Services during the construction in accordance with the national legislation and design compliance requirements set in Section 5.
- 2.1.32 The Supplier must develop plans and strategies for monitoring railway and dependent building systems in accordance with the applicable building laws and design guidelines (e.g. geotechnical monitoring, etc.). The Supplier must develop plans and strategies for various monitoring systems, including the monitoring of embankment settlement and frost heave, bridges, viaducts, tunnels and animal crossings. Particular attention must be paid to the emerging karst zone, where specific and interconnected monitoring systems (such as fibre optic technology, InSAR, fixed ERT, etc.) must be installed to ensure comprehensive monitoring of karst processes.
- 2.1.33 The Supplier shall be responsible for assisting the Client in Procurement activities for Construction Works for all construction objects throughout the entire procurement process (-es), by preparing required documentation and participating in question and answers procedures. Received questions from tender shall be answered in 3 working days or otherwise agreed with the Client.
- 2.1.34 The Supplier shall ensure best Project management practices (such as PMBOK, IPMA, PRINCE, or similar) are implemented throughout the provision of Services.

## 2.2 Main Objects

- 2.2.1 The Supplier shall design the following main Objects under the scope of the Services and any other parts necessary for the Objects below:
  - (a) Earthworks (including non-usable material storage places), embankment, filling, cutting, subgrade, frost protection layer, blanket layer (sub-ballast), drainage, stabilization and protection of slopes and other earthworks according to DG. Automated geotechnical monitoring as well.

- (b) Railway superstructure, i.e., railway tracks covering application of turnouts, rail expansion joints, buffer stops, ballast, rails, guard rails, concrete sleepers with fastenings and under-sleeper pads, in accordance with relevant technical specifications etc.
- (c) Joniškėlis railway station (excluding the railway station building and the station building area (Annex 7.10)) and including the railway tracks, platforms, structures for evacuation from platforms (the number and location of the structures shall be selected in accordance with the requirements of the Rail Baltica Design Guidelines (Annex 7.01), NFPA 130 Fixed Guideway Transit and Passenger Rail Systems Standards, legislation and other relevant documents), pedestrian tunnel for passenger access to the platforms, and the engineering networks necessary for the operation of the station.
- (d) All required lighting solutions and equipment, including their supporting structures.
- (e) Culverts, groundwater, drainage and storm water management systems.
- (f) Reconstruction of existing affected land melioration system.
- (g) Bridges, tunnels (pedestrian, animal), road overpasses (viaducts), railway overpasses (viaducts), wildlife overpasses (eco-ducts), retaining walls.
- (h) Access and maintenance roads along the railway line and for infrastructure objects.
- (i) Access roads to a private plots.
- (j) Cableways (cable ducts, multi-ducts, cable channels, manholes and under track crossings) for CCS and ENE subsystems (incl. cable channels to the turnout point machines, switch heating systems, axle counters and signals), cableways in entire track area of stations and passenger platforms, cableway connections to the neighbouring design sections (incl. Local Facilities) and cableway connections to the land plot reservation areas for CCS and ENE equipment location.
- (k) Fences with access gates, escape gates and escape ramps for animals, separation walls, and other relevant structures.
- (l) Noise barriers and other technical solutions for reduction of noise and vibration.
- (m) Necessary solutions for safety measures related to the railway protection zone.
- (n) Landscape design (including planting and replanting of vegetation, greeneries and species-rich or biodiverse greening solutions in suitable areas etc.).
- (o) Design for demolition and removal of buildings and other structures (including utilities)
- (p) Design for reconstruction and/or relocation, and/or protection of all existing utilities (e.g., gas, oil, product pipelines, electricity main lines, communications, water supply).

- (q) Reconstruction of the existing transportation infrastructure, including intersections, state and local roads, narrow gauge railway and other related infrastructure, as necessary for the implementation of the Project.
- (r) Temporary buildings, structures, access roads and bypasses required for the implementation of the design solutions.

2.2.2 The Supplier shall design the following objects at the Conceptual Design level:

- (a) Traction power supply facility areas.
- (b) CCS land plot reservation areas (radiocommunication towers, facilities (including technical rooms or buildings) for CCS equipment, and other objects).
- (c) Railway overhead catenary system, including locations of catenary supporting structures (fixing elements shall be integrated into structures).
- (d) Technical buildings necessary for the railway operations and maintenance.
- (e) Adjacent design projects, according to 3.1.15.

2.2.3 The list of main objects defined in the 2.2.1 is indicative and is based on existing studies. It is Supplier's responsibility to deliver the Services in its full scope thus also defining the exact number of construction objects during the Design implementation needed for the realization of the Project.

## 2.3 Design Priority Sections

2.3.1 The Design Section subject to the Services has been broken down into the three Design Priority Sections. Joniškėlis railway station is part of the LT-DS2-DPS2B, however, it is distinguished separately. The design sequence must be planned and agreed upon with the Clients during the preparation of the Inception Report.

2.3.2 The Design Priority Sections are presented in Table 3 below.

Table 3: Design Priority Sections (DPS)

DPS number	Title
LT-DS2-DPS2B	Berčiūnai – Joniškėlis
LT-DS2-DPS2B	Joniškėlis Railway station
LT-DS2-DPS3	Joniškėlis – Vaškai
LT-DS2-DPS4	Vaškai – LT/LV state border

- 2.3.3 The Client reserves the right to change the number of Design Priority Sections and/or their priority order during Supplier's provision of the Services, if such change is required due to adjusted financing and / or construction sequencing.

## 2.4 Construction Objects

- 2.4.1 The Supplier shall use the Construction Object list in Table 4 to evaluate his need for the necessary resources and planning. The Supplier shall deliver complete design packages in accordance with national construction legislation for every Construction Object.
- 2.4.2 The Supplier shall arrange and split objects into the Construction Objects taking cognizance of the following:
- (a) Lithuanian construction legislation.
  - (b) Financial resources allocation for the implementation of design (construction) activities.
  - (c) Supplier's experience and best practices of high-speed railway design.
  - (d) Coordination and management of the Services.
  - (e) Ownership of the designed and built structures or other infrastructure solutions.
  - (f) Technical Conditions received from Affected Parties.
  - (g) Environmental Impact Assessment and EIA screening.
  - (h) Alignment with a planned construction phasing strategy (Annex 7.09).
- 2.4.3 The Supplier shall note that due to the above-mentioned reasons, the final number and list of Construction Objects might change during the Services.
- 2.4.4 The Supplier shall evaluate if CO scope should be delivered with a single package or multiple packages within given. And propose these evaluations for a Client to approve.
- 2.4.5 The Supplier is responsible to ensure the design solutions align between separate COs throughout the DPS and adjacent DPSs. In case the Supplier chooses to deliver certain COs earlier than other, the Supplier takes full responsibility to make corrections at his own cost, if any discrepancies are discovered in the submissions delivered and approved previously.
- 2.4.6 The Supplier shall prepare an implementation Programme of design of Construction Object within Design Priority Section and submit it for approval. This implementation Programme shall be updated monthly and included in monthly progress report. The Client may change the priorities for design of Construction Objects.
- 2.4.7 The following table shows the indicative list of Construction Objects based on Special Plan solutions which the Supplier shall consider in the development of the Design and consult with the Client regarding any necessary changes identified:

**Table 4:** List of planned Construction Objects:

<b>Priority Section No 2B</b>
<b>Berčiūnai-Joniškėlis</b> (0+000 to 20+700), 114+800 - 135+500
<b>Preliminary number of Construction objects in Design Priority Section</b>
Railway Mainline Track - 20,7 km Railway bridge/viaduct structure (from 60 m length) - 2 units Railway bridge/viaduct structure (from 60 to 220 m length) - 1 unit Road overpass structures (from 60 m length) - 2 units Road overpass structures (longer than 60 m) - 2 units Wildlife overpass / green bridge structures - 2 units Culvert over 2 m width - 4 units Maintenance / service / access roads - 40 km Noise Barriers (acoustic walls) up to 5m height - 0,25 km State & Local Roads - 4 km Melioration systems - 400 ha Electricity networks - 3 km Communications (telecommunications) networks – 1 set Pumping station – 1 unit
<b>Priority Section No 2B</b>
<b>Joniškėlis Railway Station</b>
<b>Preliminary number of Construction objects in Design Priority Section</b>

Railway Tracks - 10 km  
Platforms (2 units) - 820 m  
Pedestrian tunnel for access to platforms - 1 unit  
Water management solutions for the station area – 9 ha  
Water supply networks – 200 m  
Wastewater disposal networks – 600 m  
Electricity networks (0,4 kV) - 4000 m  
Electricity networks (10 kV) - 7000 m  
Communications (telecommunications) networks – 1 set  
Heating networks – 1 set  
Lighting system – 1 set  
Video surveillance system – 1 set

### Priority Section No 3

**Joniškėlis-Vaškai** (0+000 to 18+539), 135+500 - 154+000

### Preliminary number of Construction objects in Design Priority Section

Railway Mainline Track – 18,6 km  
Railway bridge/viaduct structure (up to 60 m length) - 3 units  
Railway bridge/viaduct structure (longer than 220 m) - 1 unit  
Road overpass structures (up to 60 m length) - 2 units  
Road overpass structures (longer than 60 m) - 2 units  
Wildlife overpass / green bridge structures - 3 units  
Culvert over 2 m width - 2 units  
Maintenance / service / access roads - 31 km  
Retaining structures from 1m to 5m height - 0,10 km  
Noise Barriers (acoustic walls) up to 5m height - 0,70 km  
State & Local Roads - 4,5 km

Melioration systems - 380 ha

Electricity networks - 3 km

Communications (telecommunications) networks – 1 set

#### Priority Section No 4

**Vaškai-LT-LV State Border** (0+000 to 14+530), 154+000 - 168+513

#### Preliminary number of Construction objects in Design Priority Section

Railway Mainline Track – 14,51 km

Railway bridge/viaduct structure (up to 60 m length) - 2 units

Railway bridge/viaduct structure (from 60 to 220 m) - 1 unit

Road overpass structures (up to 60 m length) - 1 unit

Wildlife overpass / green bridge structures - 3 units

Culvert over 2 m width - 8 units

Maintenance / service / access roads - 29 km

Noise Barriers (acoustic walls) up to 5m height - 0,50 km

State & Local Roads - 1,5 km

Melioration systems - 300 ha

Electricity networks - 2,5 km

Gas networks – 0,5 km

Orlen oil network protection - 1 set

Communications (telecommunications) networks – 1 set

Pumping station – 1 unit



## 3. Design Process and Deliverables

### 3.1 General Requirements

- 3.1.1 The Supplier shall comply with all Rail Baltica Design Guidelines, RB Technical specifications, CSM-RA, TSI, SP, EIA, studies, reports, and other related documents (latest version) as listed in Section 7 until completion of the Design and Design Supervision Services.
- 3.1.2 The Supplier shall design the best technically feasible solutions within the limitations of the approved Special Plans, the approved design solutions given in Annex 7.08, Catalogue 03\_CD and the requirements set out in this Technical Specification.
- 3.1.3 The Supplier shall also review the supplementary data provided in Annex 7.08, evaluate the information provided and consider re-use of the information where applicable for the implementation of Design Services.
- 3.1.4 In case the design technical solutions developed by the Supplier cannot fulfil the requirements set out in 3.1.1 and 3.1.2 and the approved Special Plan boundaries must be exceeded, the Supplier shall inform the Client immediately and submit the proposal for Rail Baltica Design Guidelines derogations by completing a form and following the Technical Change Control Procedure set out in the Design Guidelines. The Client will evaluate the request for derogation.
- 3.1.5 If a derogation is not granted the Supplier shall either (i) provide a land acquisition plan consisting of layouts, drawings, cadastral information, explanatory note, cadastral unit markings, boundaries, and surface data of additional land plots, or (ii) an easement (servitude) drawing with landowners' written consent, which needs to be obtained for all Design elements.
- 3.1.6 If there is a need to apply derogations to the Design Guidelines, the Supplier must submit a request for derogations to the Rail Baltica design guidelines to the Client.
- 3.1.7 The Supplier shall not be responsible for the Special Plan amendment / correction and for the land acquisition process procedures. In case these procedures interfere with the provision of Services, the Supplier shall propose a roadmap for proceeding with the project and align it with the Client case by case.
- 3.1.8 The Supplier shall obtain “written consents” (Lith. „rašytiniai sutikimai”), “permissions” (Lith. „leidimai”), approvals (Lith. „pritarimai”) other mandatory documents from the owners of bordering land plots, Affected Parties, etc. in accordance with national legislation.
- 3.1.9 Considering the requirements of the provisions of the Law on Special Land Use Conditions of the Republic of Lithuania to register protection zones related to the installation or relocation of engineering networks, upon the need to establish and register easements, the Supplier (as

needed) will have to prepare the documentation of the related objects for the registration of these easements, organize the signing of notarial contracts according to the authorization (Client will pay compensations), organize the registration of land use conditions in the Real Estate Register, and transfer all coordinated documentation to the Client.

- 3.1.10 The Supplier shall apply for Affected Party Technical Conditions. If Affected Party Technical Conditions expire during the design process or they expire within one year after the receipt of the Building Permit but prior to Construction, the Supplier shall renew the Technical Conditions at its own cost.
- 3.1.11 The Supplier shall (i) inform the Client when the applications for Technical Conditions were made, (ii) inform the Client when the Technical Conditions were received, (iii) ensure that the Technical Conditions are in line with Client's requirements and (iv) ensure that the Technical Conditions are valid and have not expired and (v) provide copies of the Technical Conditions to the Client.
- 3.1.12 The Supplier shall be responsible for the implementation of the requirements of Affected Party Technical Conditions in the design solutions during the provision of the Services.
- 3.1.13 The Supplier shall implement, update and transfer the database of Technical Conditions and developed Interface Control Forms (ICFs) to the Client together with correspondence and any other documents related to Affected Party Technical Conditions.
- 3.1.14 The Supplier shall align the railway track design solutions with adjacent design sections or projects by designing at least 1 kilometre of railway track alignment extending outside of the Project boundaries (if needed).
- 3.1.15 The Supplier shall renew the list of adjacent projects which may interface with this project before starting the Design Services. The Supplier shall align the design solutions (by following Interface Management Process) at the interfaces with adjacent design projects and their technical solutions, preliminary non-exhaustive list is as follows:
  - (a) Rail Baltica New 1435mm railway line from Berčiūnai to Joniškėlis (DPS2A).
  - (b) Rail Baltica New 1435mm railway line Misa – LT/LV border (LV DS4 DPS5) (Annex 7.43).
  - (c) ENE subsystem.
  - (d) CCS subsystem.
- 3.1.16 The Supplier shall prepare demolition project documentation (Lith. “Statinių griovimo projektas”) for all objects, residential or industrial buildings, and structures required to be demolished and removed. The Supplier shall determine the most suitable CO under which this documentation to be provided (if required).

- 3.1.17 The Supplier shall prepare the design documentation for the phasing of the construction by specifying the construction phases in the technical documentation and by providing bills of quantities for each construction phase. The envisaged phasing of the construction works is set out in Annex 7.09, and the phasing shall be agreed with the Client.
- 3.1.18 The Supplier shall prepare design (including necessary site investigations) for exploitation of mineral material deposits specified in the Special Plan and obtain all necessary approvals and permissions from state institutions for the exploitation of these deposits during the construction phase.
- 3.1.19 Supplier investigates potentially contaminated areas and prepares a method for clearing explosives and hazardous materials (applicable during construction).
- 3.1.20 The Supplier shall comply with the EIA, EIA screening, and any other environmental requirements throughout the provision of the Services. All Services deliverables must include approvals, permissions from respective responsible environment authorities.
- 3.1.21 If the proposed design solutions do not partially comply with the EIA or the EIA screening decisions and measures, the Supplier shall carry out all additional monitoring, assessments, consultations, studies and necessary activities to meet the environmental requirements. The Supplier shall prepare the necessary applications and/or reports and obtain all necessary approvals from the relevant responsible environmental authorities to avoid new EIA or EIA screening procedures.
- 3.1.22 The Supplier shall design environmental protection measures and perform necessary modelling of noise and vibration, following the requirements set in Rail Baltica Design Guidelines and national legislation.
- 3.1.23 The Supplier shall develop all design solutions in BIM, following the BIM Requirements throughout the executions of Services. The Supplier shall ensure that all design deliverables are generated from the BIM model and are submitted only after Clash Detection procedures are performed and all clashes are eliminated for all construction objects within each design DPS.
- 3.1.24 The Supplier shall ensure that the designed railway chainage km-direction is set as described in Design Guidelines and aligned with Rail Baltica Global chainage nomenclature. For any existing railway reconstruction, the chainage has to be aligned as per the Affected Party requirements.
- 3.1.25 The Supplier shall ensure the coordination of provision of the Services with Client, Affected Parties and any other state, private entities, persons involved in the design process.
- 3.1.26 The Supplier shall cooperate with the AsBo, the NoBo, the DeBo and Design Expertise, Independent Design Reviewer to implement their comments and obtain their acceptance for the Design, for details see Section 5.3.

- 3.1.27 The Supplier shall prepare construction Cost Estimation as required according to national legislation (based on Comparative economic indicators for the estimated prices of building construction, e.g., „Sistela” or similar).
- 3.1.28 The Supplier shall update the Construction Cost estimates in the period of up to two years after receipt of the Building Permit, when price indexes change or the Supplier receives renewed Technical Conditions from the Affected Parties.
- 3.1.29 During provision of the Services the Supplier shall prepare all deliverables required to obtain all necessary Building Permits for all the Construction Objects for 2 (two) phases (stages) – Phase I and Phase II.
- 3.1.30 The Supplier shall prepare all necessary deliverables within the deadlines specified in the Agreement and Section 6.3 “Project Planning and Programme”.
- 3.1.31 The Supplier shall submit these main deliverables (non-exhaustive list) during the provision of the Services:
- (a) Inception report;
  - (b) Investigation’s data and reports;
  - (c) Topographic and Geodetic survey Reports;
  - (d) Design proposals (incl. necessary reports);
  - (e) Building permits;
  - (f) Master Detailed Technical Design;
  - (g) Positive expertise and Positive AsBo/NoBo assessment results (no open items, all comments closed);
  - (h) Verification report;
  - (i) Configuration report;
  - (j) Change and defect management report;
  - (k) Quality Assurance Report;
  - (l) Safety Assurance Report;
  - (m) Approval of design evidence;
  - (n) Design supervision and reports;
  - (o) Other deliverables and submittals as per System Engineering processes.
- 3.1.32 Approved master-detailed technical Design shall be submitted 1 copy in \*.pdf, \*.jpg format signed with electronic signatures, 1 copy in editable formats (\*.docx, \*.xlsx, \*.dwg, etc.). All

layers/surfaces of the Designed railway, roads and streets embankment and superstructure shall also be submitted in .xml format. Railway horizontal with cant axis and vertical profile shall be provided also in .xml format.

- 3.1.33 The Supplier shall be responsible for the correction and resubmission of Design deliverables at his own cost during any stage of provision of the Services if the Design deliverables were rejected due to design mistakes and/or noncompliance with TS, Rail Baltica Design Guidelines, System Engineering processes, Technical Conditions and other mandatory national construction legislation requirements.
- 3.1.34 Upon request, but not more than twice per each Design documentation, the Supplier shall provide a copy of Design documentation for Construction Works procurement without personal data as follows:
- (a) Designers: names, numbers of qualification certificates do not need to be concealed. Phone numbers, email addresses – must be concealed.
  - (b) Surveyors: all personal data must be concealed.
  - (c) Owners of the adjacent plots: all personal data must be concealed.
  - (d) In private bodies approval letters: all personal data must be concealed.
  - (e) In institutional approval letters or tables: all personal data must be concealed.
  - (f) Correspondence with private bodies: all personal data must be concealed.
- 3.1.35 The Supplier shall participate in Construction Works tender Questions and Answers process and shall provide answers and comments regarding the designed technical solutions (including the translation to Lithuanian) within 5 (five) days upon receipt of the questions, unless agreed otherwise. This process continue until the tender winner are chosen.
- 3.1.36 The Supplier shall ensure that textual and graphical documents comply with Lithuanian Standard LST 1516 “Design of construction works – General requirements”. The Supplier shall provide a list of textual and graphical documents (drawings, sketches, plans, schemes, diagrams, TSCs, etc.) and propose an exact layout of these documents for Services to define the scope of graphical documents and minimum level of detailing. Alternative scales may be offered. The Supplier shall correct/improve/supplement the list and/or minimum level of detailing and obtain Client’s approval.
- 3.1.37 The Supplier shall perform interdisciplinary review for all deliverables and shall provide the Client with the evidence (electronically signed) of interdisciplinary review completion.
- 3.1.38 The Supplier shall provide Design documentation containing information on Supplier’s interdisciplinary review and approval (electronically signed). Each Construction Object and its Design part (e.g., Structural, Electrotechnical, Site plan, etc.) shall be reviewed and verified

against each other and signed by Heads of Design Parts (Discipline Leads) and Project Manager / Head of Design. The Supplier shall include the information required by Lithuanian Standard LST 1516 “Design of construction works – General requirements” into each deliverable submitted by the Supplier.

- 3.1.39 The Supplier shall not include entire copy of the RB technical specifications listed in Annex 7.38 into his design documentation, instead clear reference shall be indicated to specific requirement.
- 3.1.40 The Supplier shall submit all deliverables (reports, models, drawings, documentation, and metadata) using CDE platform (integrated with JAMA requirements management and traceability software), as described in BIM Requirements. All files shall be delivered in: (i) native-editable file format (e.g., MS Word, MS Excel, Autodesk Civil3D, Bentley System, NWC, Primavera P6, etc.) and shall include all styles and external references to allow the Client to fully re-create the drawings when needed, and (ii) non-editable/open file formats (PDF, NWD, XML, IFC).
- 3.1.41 The Supplier shall align composition of combined or single PDF files of deliverables and adjust them if needed during the project based on the Client’s requirements.
- 3.1.42 In addition, the Supplier shall submit all deliverables to Affected Parties, Design Expertise, AsBo / NoBo / DeBo, etc. based on their individual request, which may require to provide deliverables in hard-copy format, CDs, USB sticks, combined PDFs with size limitations. The Supplier shall engage with the Client and Affected Parties to ensure all necessary native-editable and non-editable files are provided upon submission.

## 3.2 Inception Report

- 3.2.1 The Supplier shall prepare, submit, and present to the Client an Inception Report which must contain the following information:
  - (a) Executive Summary;
  - (b) Legal framework – tender documents considered, Suppliers staff certification, TSIs compliance matrix;
  - (c) Service provision methodology, including Conformity Assessment compliance (AsBo/ NoBo, Design Expertise certification and approval processes);
  - (d) Project Execution Plan, as described in section 6.2;
  - (e) Detailed description of resource allocation and management structure for full scope of Services (incl. the team of key and non-key experts, administrators, managers, translators, sub-contractors, assisting staff, etc.);

- (f) Documentation Management System – narrative indicating the document management plan for any incoming/outgoing communications, deliverables, software;
- (g) BIM Execution Plan, including TIDP, MIDP according to BIM Requirements;
- (h) System Engineering Management Plan as described in section 5.2;
- (i) Project Planning and Programme Management – for detailed requirement description see section 6.3;
- (j) Health and safety plan as per Annex 7.15;
- (k) Template for a BoQ for construction works;
- (l) Geodesy survey programme.
- (m) Quality Management Plan;
- (n) Interoperability Plan;
- (o) Safety Plan

### 3.3 Investigations

- 3.3.1 The Supplier shall carry out all the necessary site investigations/surveys for Joniškėlis railway station – geodetic and topography, geological, geotechnical, hydrogeological, hydrological, cultural heritage, environmental and any other investigations necessary to obtain authorities/institution approvals in accordance with the applicable national legislation, regulations, standards and other requirements covered in this TS, Design Guidelines (Annex 7.01) and Hydrometeorological Investigation (Annex 7.12).
- 3.3.2 The Supplier shall review provided investigation reports in Annex 7.08, folder 01 SI for a main line from Panevėžys to Lithuanian/Latvian state borders and decide (if not stated otherwise in this TS) if additional investigations are required in line with the national legislations. If it is required, it shall be coordinated and approved by the Client.
- 3.3.3 The Supplier shall carry out additional geological (geotechnical) investigation in Main line:
  - (a) Boreholes must be of 30-50m. depth, minimum quantity of 25pcs. Core recovery must be not less than 80%. If Core recovery is less than 80%, the maximum length of a single drill run must be <0,5m. If core recovery of >80% is not reached even when applying a run length of <0,5m., alternative methods or instruments must be used.
  - (b) Geophysical surveys shall be performed using the Electrical Resistivity Tomography (ERT) method to depth of not less than 40m. The minimum total ERT survey length must be – 13,92km

- (c) The additional surveys are intended to validate the previously performed surveys (Annex No. 7.08) and to further investigate potential karst areas in order to mitigate the risk of sinkhole formation. The survey locations and the technology employed shall be coordinated with the Client. The specified quantities may be adjusted if the Designer substantiates the necessity for such changes to the Client. The additional surveys shall be registered as control surveys in accordance with STR 1.04.02:2011.
- 3.3.4 Upon completion of additional engineering geological (geotechnical) surveys the Supplier, if needed, must update the previously prepared GIR (Annex No. 7.08, folder 01 SI).
- 3.3.5 The Supplier shall prepare investigation plans within 4 weeks from the effective date of the contract.
- 3.3.6 The Supplier shall obtain all the necessary and applicable permissions (from the Client, state authorities and others) to carry out the respective site investigations and prepare a report for each investigation after completion of such investigation.
- 3.3.7 Geotechnical Investigations for the areas which were not investigated following Rail Baltica - Additional requirements for investigations (Annexe No. 8 and 10) shall consist of the following stages:
- (a) 1<sup>st</sup> stage Initial Phase – required as pre-requisite to start the Design Proposals stage, unless otherwise agreed with the Client. The Supplier shall submit a Factual Report, which shall include a factual account of all field and laboratory investigations as described in EN 1997-2 clause 6.2. The results of these investigations shall be presented and reported according to the requirements defined in the EN and/or ISO standards applied in the investigations.
- (b) 1<sup>st</sup> stage Remaining Phase – required as pre-requisite to start the Master Detailed Technical Design stage, unless otherwise agreed with the Client. The Supplier shall submit a GIR, which, in addition to the information provided in the Factual Report, consists of a geotechnical evaluation of the information listing the assumptions made for the interpretation of the test results. The results of a geotechnical investigation shall be compiled in the GIR according to provisions of Section 6 of EN1997-2.
- (c) 2<sup>nd</sup> stage investigations – any additional investigations and monitoring which were proposed and justified at GIR stage shall be carried out. The Supplier shall produce a detailed programme for further investigations and align it with the Client.
- 3.3.8 The Supplier shall submit the verified Geological Design Report (GDR) together with Master Detailed Technical Design submission.
- 3.3.9 The Supplier shall provide a geotechnical risk register as part of the GDR where the risks associated with design, ground conditions for construction and in the operational phase are



assessed. Based on the identified risks the Supplier shall propose suitable and mitigation measures and a suitable monitoring plan as per EN1997-1 sub-section 12.7.

- 3.3.10 The Supplier shall set up the geodetic control points in the locations approved by the Client. The Supplier shall obtain all necessary permissions from private or public landowners to install said control points. In case there is a need to relocate any type of existing geodetic marker the Supplier shall perform such service as part of the Design Services agreement. This applies to newly installed geodetic markers, which are situated under an embankment when design is complete and prior to the start of construction.
- 3.3.11 The Supplier shall prepare topographical surveys in accordance with national legislation and DG. The topographical survey report shall contain all benchmark locations and all control points used for performing the survey, either for conventional methods or aerial mapping and LiDAR. When preparing topographical survey reports near the state border, Supplier must also conduct them within a 2-kilometre section of the neighbouring state
- 3.3.12 The Supplier shall prepare a terrain model to be used as basis for the design using data from topographical survey.
- 3.3.13 The Supplier shall regularly update the topographical survey as required by national legislation or as required by the affected parties throughout the duration of the Services.
- 3.3.14 The Supplier shall submit a Geodesy network report and levelling report for Client’s approval, containing at minimum:
- (a) Raw GNSS receiver data in Rinex format
  - (b) Loop closures and adjustment reports from the GNSS baselines postprocessing
  - (c) Error ellipsis plan view
  - (d) Baselines plan view
  - (e) Table with Easting, Northing, Latitude, Longitude, coordinates
  - (f) Raw data from the digital levels
  - (g) Planview of the levelling traverses and names of control points
  - (h) Double - run line misclosures from CP to CP
  - (i) Levelling line misclosures to Constraint State or connecting project’s benchmarks
  - (j) Levelling line in a spreadsheet format (e.g., MS Excel)
  - (k) Levelling lines adjustment reports
  - (l) Table with Control Points and elevations;

- (m) Concluding chapter with the concept of network measuring and connection to the neighbouring projects, findings and solutions propose or provided, as well as an annex with one page per control point containing as a minimum: an image of the control point and its surroundings, type and name of control point, sketch of location, all sets of coordinates and the date of measurement;
  - (n) Calibration certificates for the equipment used.
- 3.3.15 In case tree logging works are required for performing the Services, for example for investigations, the Supplier shall be responsible for:
- (a) preparing all mandatory documents, performing all mandatory procedures, (including obtaining all required approvals and permissions) where logging or other cutting of existing trees, protected trees and shrubs is needed to perform the Services.
  - (b) obtaining consents from owners (where required) or persons in disposition of land plots where logging needs to take place and applying on their behalf for the logging permit to the territorial subdivision of the Lithuanian State Forest Service under the Ministry of Environment of the Republic of Lithuania (Lith. „Valstybinė miškų tarnyba prie Lietuvos Respublikos aplinkos ministerijos”), municipality, or any other institution that may require a permit for tree logging works to be obtained.
  - (c) bearing all costs associated with performing tree logging activities, including but not limited to marking of the trees to be cut, cutting, storage and transportation of cut timber, repairing or reinstating the forest track affected by these activities (where required) or any other tree logging activity that might be required by the applicable legislation and the issued permits.
- 3.3.16 Tree logging activities shall be minimized to the smallest possible area necessary for the performance of the Services. During the Design proposal stage, the Supplier shall assess and propose, where applicable, measures for replanting the logged areas with tree species corresponding to or ecologically equivalent to those removed. Such replanting proposals shall be coordinated with the Client and relevant environmental authorities.
- 3.3.17 Supplier shall have right to access land for investigations. Preparation and provision of all documentation, informing/requesting the landowners to allow accessing land for investigations will be Supplier’s responsibility. In case the Supplier’s activities require repair or reinstatement to third party property (crops, harvest, yield, plants, trees), the Supplier shall prepare the required documentation for compensation for repair or reinstatement of the property in accordance with Article 4, paragraph 2, clause 2 of the Law of the Republic of Lithuania on the Land Acquisition for Public Needs in the Implementation of Projects of Particular State Importance. The documentation shall be prepared on behalf of Client and Client shall pay the compensations.

- 3.3.18 Where reconstruction and/or major repair of an existing structure, building or utility is required, the Supplier shall perform a technical condition assessment of it in accordance with the Technical Construction Regulations STR 1.04.04:2017 and STR 1.03.01:2016, deliver technical condition assessment reports.
- 3.3.19 The Supplier shall obtain hydrometeorological information from the Lithuanian Hydrometeorological Service under the Ministry of Environment.
- 3.3.20 In case the design requires reconstruction of cultural heritage objects and interaction with cultural heritage objects or design solutions intervene with cultural heritage protection zones, the Supplier shall prepare a project part for cultural heritage objects (Lith. „Tvarkybos projektas”) and prepare all necessary archaeological investigation as required by legislation.

### 3.4 Design Proposals

- 3.4.1 The Design Proposal stage corresponds to the Project Proposal stage (Lith. „Projektiniai pasiūlymai”) as described in Technical Construction Regulation STR. 1.04.04:2017 („Statinio projektavimas, projekto ekspertizė”).
- 3.4.2 Design proposals are a basis for obtaining the building permit as described in STR 1.05.01:2017 („Statybą leidžiančio dokumento išdavimas”) Supplier shall prepare Design Proposals for all Construction Objects (Which requires a Building permits) and the deliverables of project parts according to and as designated by the Technical Construction Regulation STR. 1.04.04:2017 and other relevant Technical Construction Regulations, national standards, etc.
- 3.4.3 The Supplier shall review and analyse the Design Proposals for the Main Line set out in Annex 7.08. It shall make the necessary changes in accordance with the applicable laws to obtain the necessary building permits.
- 3.4.4 The supplier prepares design proposals for the infrastructure of the Joniškės railway station in order to obtain the necessary building permits. The Supplier shall adjust the Design Proposals referred to in point 3.4.3 if amendments need to be made in relation to the design of the Joniškėlis railway station.
- 3.4.5 The Supplier shall prepare the mandatory documents "Task for preparation of design proposals" (Lith. „Projektinių pasiūlymų rengimo užduotis”) and present them to the Client for review and approval. In preparing these documents, the Supplier shall agree with the Client on the phasing of the project and include it in the design documentation for obtaining the SLD.
- 3.4.6 Supplier shall carry out all necessary tasks and procedures to obtain approvals from the affected municipalities for his Design proposals. This step shall also include obtaining approvals from utilities (under and overground) managers and/or operators where applicable.

- 3.4.7 Where design solutions require to reconstruct cultural heritage objects or/and require interaction with cultural heritage objects, the Supplier shall provide Design proposals to the National Cultural Heritage Department for assessment and shall obtain their Technical Conditions for the Design.
- 3.4.8 The Supplier shall apply best engineering practice to optimize the design solutions and achieve best value for money throughout the railway lifecycle by ensuring safety, railway system capacity, operational efficiency, interoperability, reliability, maintainability, flexibility, social, economic, environmental as well as any other relevant objectives. The Supplier shall investigate and propose best technical solutions without compromising SP (including EIA, EIA screening), Design Guidelines and RB Technical specifications requirements.
- 3.4.9 The Supplier shall ensure that each hydrological design solution is based on sufficient hydrological and hydraulic calculations. Design options shall consider hydrological constraints that are present in the Design Section.
- 3.4.10 The Supplier shall ensure that Design Proposals composition corresponds to requirements set in STR 1.04.04:2017 („*Statinio projektavimas, projekto ekspertizė*”) and contains at least the following:
- (a) Design Proposal report (introduction, general requirements, constraints, geological and geotechnical conditions, hydrological and hydrogeological conditions, overview of alternatives, multicriteria analysis, criteria description, conclusion and recommendation for chosen alternative, etc.)
  - (b) Object Drawings (plans, longitudinal profiles, typical cross-sections, basic solutions for the drainage system of the railway crossing, layout views, etc.);
  - (c) Preliminary BoQ for Construction Works.
- 3.4.11 The Supplier shall prepare a 3D model for the chosen Design Proposal composition option according to DG BIM Requirements. The Supplier shall refer to the “Value Engineering” stage for LOD.
- 3.4.12 The design proposal reports shall be prepared in consultation with the Client and, where appropriate, the Relevant Parties and approved by the Client. The approved Design Proposals shall be used as a basis for the further development and preparation of the design.
- 3.4.13 The Supplier shall prepare visualisations of each section of the Priority Design after agreeing with the Client the scope and content of the Design Proposals. The Supplier shall comply with the following minimum requirements and guidelines in the preparation of the visualisation dataset:
- (a) Overview of the planned route and landscape situation, including orthophotos;

- (b) Creation of an overview video of the entire project section, showing the administrative boundaries of the municipality, city and town, including a 360-degree overview view with the most interesting and significant point-type construction objects;
- (c) Detailed and realistic representation of the 100 m wide corridor along the rail axis;
- (d) Simplified view of the surrounding area, including forests, buildings, water bodies (e.g. rivers or lakes), high-voltage lines and other important landmarks, 500 m to 1 km in both directions from the track;
- (e) Designed and existing bridges, overpasses (viaducts), tunnels, wildlife underpasses and overhead passages (green bridges), roads, etc.;
- (f) Noise barriers, fences, electricity cables, overhead line pole support structures, lighting equipment;
- (g) Designed underground utilities are shown using a cross-section at several locations in the design section;
- (h) Movement of model passenger and freight (if applicable) trains;
- (i) Relocation of existing trains and road vehicles, if applicable, in cases where the designed route corridor crosses or is close to existing train or road infrastructure (up to 3 km from the route axis);
- (j) Any graphics, text or figures used in the video must be consistent with the visual identity of the project and agreed with the Client;
- (k) Technical requirements of the video - resolution: 1920x1080px; file format: \*MP4 or \*.MOV (encoded using the H.264 codec to ensure the best quality-to-file-size ratio); Minimum 25 fps.

## 3.5 Acquisition of Building Permits

- 3.5.1 The Supplier shall submit the Design proposals for interim reviews to the Client and Affected Parties prior to applying for the Building Permit.
- 3.5.2 The Supplier shall carry out all necessary activities at its own cost to obtain necessary Building Permits for all Construction Objects according to the national construction legislation. The Supplier shall ensure that the Project can be implemented in phases as set out in Annex 7.09 and agree the phasing with the Client.
- 3.5.3 The Supplier shall be responsible for the applications to receive the Building Permits and provision of necessary information. The Supplier is obliged to consider all the comments and remarks issued by the relevant authorities during the building permit review process.

Implementation of changes to the design solutions according to the comments and remarks must be agreed prior to with the Client.

### 3.6 Master Detailed Technical Design

- 3.6.1 The Supplier shall prepare Master Detailed Technical Design (Lith. „*Techninis darbo projektas*“) for all Construction Objects as designated in Construction Technical Regulations STR 1.04.04:2017 including the design for the cultural heritage objects.
- 3.6.2 Master Detailed Technical Design shall consist of all necessary parts worked out to the level, that Client can start Construction works, organize their procurement.
- 3.6.3 The Supplier shall prepare mandatory document(-s) e.g. technical task (-s) (Lith. „*Techninė užduotis*“) for every construction object and present them for Client’s revision and approval.
- 3.6.4 In case of reconstruction or major repair of the existing structures/buildings, with reference to Construction Technical Regulation STR 1.04.04:2017, General Part (Lith. „*Bendroji dalis*“) of Master Detailed Technical Design shall contain a copy of performed technical conditions assessment report (Lith. „*Esamų statinių tyrimų ataskaita*“) as an annex. Requirements for existing structures conditions assessment are defined by Construction Technical Regulation STR 1.03.01:2016.
- 3.6.5 The Supplier shall provide any additional graphic materials/documents or other information if it is necessary to do according to requirements of approving authorities, AsBo/ NoBo, Design Expertise, etc.
- 3.6.6 The Supplier shall consider the loads of all elements, regardless of their level of detail in Master - detailed technical design as well as relevant construction phases, methods, and equipment, when executing structural calculations and verifications. All bridges, overpasses, wildlife underpasses and overpasses (eco-ducts), tunnels, culverts, segregated grade crossings, pedestrian crossings between platforms, railway substructure and superstructure shall be designed with the consideration and calculations of all the impacts and all the loads. The design solutions shall include the locations for lighting poles, noise barriers, retaining walls, landscaping and catenary supporting structures, signals, and other objects.
- 3.6.7 For Structural Part development the Supplier shall use load cases as per EN 1991-2 clause 6.5.3. part (9) requirements and LST EN 1991-2:2004/NA:2012 requirements, the traction and braking loads shall be considered as per EN 1991-2 clause 6.5.3 part (2) requirements in full scope (100 % + 100 %) on both tracks.
- 3.6.8 The Supplier shall design eco-ducts according to Eurocodes, EIA, EIA screening, National legislation, and DG. If requirements are missing, then the minimum requirements are the following:

- (a) If planned traffic is missing, then minimum calculated vehicle load should be 600 kN (for emergency situation) and axle load 150 kN.
  - (b) If local traffic will pass wildlife overpasses (eco-duct) then calculated vehicle load should be 1200 kN, and axle load 150 kN.
  - (c) Wildlife overpasses (Eco-duct) calculated lifetime should be 100 years.
- 3.6.9 The Supplier shall design the solutions, that impose lowest possible negative impact on the capacity as well as operation of the existing railway infrastructure during and after the construction. The Supplier shall develop and align construction sequence and phasing to ensure continuous operations of any existing infrastructure. The design solutions (as well as construction technology solutions) influencing the capacity of any public infrastructure shall be aligned with the corresponding Affected parties and Client.
- 3.6.10 The Supplier shall undertake Electro-Magnetic Compatibility analysis for overhead high voltage crossings with railway and/or parallel to railway (joint corridor).
- 3.6.11 The Supplier shall design technical solutions for the section of Rail Baltica infrastructure, drawings, and cross-sections for the railway line, relevant stations and civil structures, including but not limited to:
- (a) Schematic railway track layout for the railway line including main track and side-tracks, station areas, passing loops, crossovers, speed, distance between tracks, turnout type and location, superstructure components type (rail type, sleeper type, ballast/ slab track), etc.
  - (b) Railway line layout (horizontal alignment) (scale 1:1000) with related passenger platforms, ditches (including ditch covering and access stairs to the embankment for maintenance purpose), roads, utilities, fencing (including gates), other structures/buildings placement and planned railway tracks.
  - (c) Railway line longitudinal profiles (vertical alignment) (vertical scale 1:200, horizontal scale 1:5000) combined with railway line layout (scale 1:5000) on orthophoto, including structures, switches, crossings, platforms with level data, utilities, culverts, ditches and geological, hydrogeological data and calculated groundwater and highest water level data.
  - (d) Cross-sections (scale 1:100) every 50 m on the railway mainline and at unique locations including superstructure, substructure, platforms with level data (altitudes), land plot boundaries, drainage structures, slope protection measures, ditches, typical cableway connections to land plot reservation areas for CCS and ENE equipment, typical undertrack crossings with ducts, noise barriers, fences etc., and geological, hydrogeological data and calculated groundwater and highest water level data.
  - (e) Diagram of design speed permitted according to alignment parameters.

- (f) Railway civil structure part: bridges with catenary fixing elements, grounding and signalling and catenary cable channel, crossings, showing overview plan, cross-section and elevation, indicating the length of spans, used materials and dimensions of bearing structures.
  - (g) Layouts of the forestation plans and landscaping design (including new greeneries and species-rich or biodiverse greening solutions in suitable areas implementation).
  - (h) Any additional drawings and documents according to national legislation.
- 3.6.12 The Supplier shall submit track alignment data (track number, DPS chainage start and end, global chainage start and end, alignment element type, length of element, coordinates of start and end of element, radius, cant, slope, design speed, gauge type) in spreadsheet format as per template provided by the Client.
- 3.6.13 The Supplier shall ensure that all existing utilities and their connections are shown in the design with information of the owner of each specific utility. Protective measures shall be designed if required by Affected party.
- 3.6.14 The Supplier shall carry out accredited laboratory tests for the quality check of mineral materials (in accordance with the requirements in Design Guidelines) from local quarries to be used in substructures.
- 3.6.15 The Supplier shall design all elements defined in clause 2.2.2 up to the Conceptual Design level during the Basic Design Phase in accordance with the Design Guidelines, the requirements of the ICF, and the Specifications of the CCS/ENE Engineer (or the CCS/ENE contractors when contracted) or the Relevant Parties.
- 3.6.16 All elements designed in 2.2.1 must remain in design drawings and 3D models throughout the project cycle for future reference.
- 3.6.17 The Supplier shall be provided with CCS/ENE Engineer requirements by the Client. During Master-Detailed Technical Design stage, the Supplier shall coordinate the development of solutions directly with the CCS/ENE Engineer (or CCS/ENE Contractors after these are contracted).
- 3.6.18 The Supplier shall ensure that all materials listed in Annex 7.11 (Consolidated Materials Supply List) have their supply and installation quantities separated in BoQs and Cost Estimation Part for Master Detailed Technical Design Documentation.
- 3.6.19 The Supplier shall follow requirement for materials specifications listed as references within Annex 7.11, these requirements supplement Design Guidelines and provide more detail for all the materials listed in Annex 7.11.



- 3.6.20 The Supplier shall propose the Client best suitable locations for material storage sites during Master Detailed Technical Design stage. The Supplier shall align the suitability of proposed locations with the Client prior submission of Master Detailed Technical Design deliverables.
- 3.6.21 The Supplier shall prepare the BoQ following national legislation and the requirements set in Annex 7.14 of this Technical Specification. The Client shall provide BoQ master table, the Supplier shall use the table and codification in it to produce BoQ and TSCs for construction works/materials.
- 3.6.22 The Supplier shall prepare TSCs as a part of Master Detailed Technical Design documentation according to national legislation, and following the requirements set in Annex 7.14 of this Technical Specification. The Supplier shall follow the principles set in the provided reference and align with the Client if deviations from it is needed.
- 3.6.23 The Supplier shall prepare a Construction Organisation Part (Lith. “Pasirengimo statybai ir statybos darbų organizavimo dalis”) as required by STR 1.04.04:2017 for each CO.
- 3.6.24 The Supplier shall prepare the necessary documentation (drawings / plans and formal confirmations from landowners) needed for easement registration and provide this documentation to the Client. The Client shall organize further procedures to set and register easements.
- 3.6.25 The Supplier shall produce maintenance manuals for all the Construction objects as a part of Master Detailed Technical Design, following examples provided by the Client in Annex 7.22, and shall include, but not be limited to:
- (a) the requirements for maintaining the designed infrastructure objects to ensure their effective and safe operation,
  - (b) set of values for immediate action limits, intervention limits and alert limits,
  - (c) measures to be taken to mitigate the risk not to meet prescribed limits and prevent occurrence of defects (e.g., speed/operation restriction, reaction time for repair),
  - (d) maintenance manual should incorporate monitoring system.
- 3.6.26 The Supplier shall develop Rail Baltica Railway maintenance manual which describes the maintenance activities which are considered necessary to carry out the maintenance works of the line referring to civil works and track works. The Supplier shall use the “Manual Railway Infrastructure Maintenance (Civil Works, Track)” (RBDL-SOD-ZZ-ZZ-OAM-R-00002) provided by the Client in Annex 7.22. The key focus areas included but not limited are as follows:
- (a) the system safety and its availability regarding to civil works and track works;
  - (b) to minimize operating costs;

- (c) configuring the system to facilitate its operation;
  - (b) and providing all procedures necessary for safe, reliable, and efficient operations.
- 3.6.27 The Supplier shall provide dedicated maintenance manuals for specific point objects. The Supplier shall note, that provided “Manual Railway Infrastructure Maintenance (Civil Works, Track)” is a draft document and shall be used when developing the maintenance manual, either by improving current document or working on sections not covered (as indicated in Annex 7.22, Appendix I).
- 3.6.28 The Supplier shall prepare the visualizations for every Design priority section of final MDTD solutions. The Supplier shall follow the requirements for visualization set in section 3.4.13.
- 3.6.29 The Supplier shall develop monitoring plans and strategies and align them with the Client. The plans and strategies shall include, but not be limited to the following:
- (a) General monitoring strategy
  - (b) Monitoring plans for structures and sensitive areas (Installation of the sensors, control points, cabling, control system, etc.; Monitoring programme; TSCs)
  - (c) If needed, Electronic communications (Telecommunications) section shall be prepared as part of the project as described in Building Technical Regulation, STR. 1.04.04:2017 „Statinio projektavimas, projekto ekspertizė“.
  - (d) If needed, additional elements shall be designed to protect monitoring sensors.
- 3.6.30 The Supplier shall prepare an environmental monitoring programme for the construction and operation of the railway line in accordance with the EIA, EIA screening and applicable legislation. The Supplier shall obtain all necessary approvals and permits if necessary.

## 3.7 Design Supervision Services

- 3.7.1 Design Supervision services correspond to Design Implementation Supervision (Lith. „Projekto vykdymo priežiūra“) as described in STR. 1.06.01:2016 „Statybos darbai. Statinio statybos priežiūra“.
- 3.7.2 The Supplier shall appoint certified Design supervision manager (Lith. „Statinio projekto vykdymo priežiūros vadovas“) and certified Design supervision managers for specific discipline (Lith. „Statinio projekto dalies vykdymo priežiūros vadovas“) to ensure thorough Design (Author) supervision. Certified Design supervision manager shall represent and coordinate Design supervision team and shall carry out the Design Supervision Services for all sections / construction objects in accordance with national construction legislation. The Design Supervision Services shall also include supervision of cultural heritage objects’ design

(reconstruction/restoration) implementation in accordance with national legislation if necessary.

- 3.7.3 The certified DSS manager appointed by the Supplier is responsible for visiting the construction site in accordance with the Programme of the Design Supervision Services (the minimum number of DSS visits to the construction site is 1 per week), to ensure that construction works are implemented according to the Design. Each discrepancy detected during site visit must be noted in Construction Works Logbook (Lith. „Statybos darbų žurnalas”) in English, Lithuanian, Latvian (for Latvian part only) and in monthly reports.
- 3.7.4 The Supplier shall attend construction work consultations and construction site meetings at the time agreed upon with the Client representatives (but no later than 24 hours after request). The Supplier shall ensure that meetings are attended by specialists requested by the Client or the Works Contractor according to implemented construction activities. There shall be weekly Construction site visits / meetings organized.
- 3.7.5 The Supplier shall inform the Client immediately if the construction works deviate from the Design. The Supplier shall exercise their best efforts to ensure that the deviations are resolved without a delay.
- 3.7.6 The Supplier shall check building structures, technological and other equipment, construction products and materials compliance with the Master Detailed Technical Design. The Supplier shall inform the Client of any non-compliance/non-conformance found and, if necessary, provide additional instructions, and/or stop construction works.
- 3.7.7 The Supplier shall carry out all Master Detailed Technical Design modifications / corrections / additional detailing required during the construction works phase and if mistakes, flaws, nonconformities in Master Detailed Technical Design are detected. When such cases arise, the Supplier shall immediately inform the Client in writing and shall carry out changes / corrections to the Design at its own expenses and without Agreement extension.
- 3.7.8 The Supplier shall acquire necessary approval of the Client and/or any Affected party, AsBo / NoBo, Design Expertise, building authorities, project supervisor (if applicable) for all changes done to Master Detailed Technical Design. The Supplier shall propose and agree the modification procedure with the Client to ensure Construction works can proceed in a fastest possible way.
- 3.7.9 The Supplier shall provide the Design supervision monthly reports to the Client. The Supplier shall coordinate with the Client all the decisions during the Design Supervision Services provision prior to communicating them to any other party. The Supplier shall agree with the Client the approval process for variation orders received during the construction process and design supervision services.

- 3.7.10 The Supplier shall submit a written report on the content, volume, delivery time and Services provided to the Client once per month. Report should include Design supervision information such as: Service scope, Supplier's staff, service schedule, key achievements in period, routine inspections information, variations, relevant issues, related correspondence overview, etc.
- 3.7.11 The Supplier shall provide hourly rates for Design supervision services so the Client can order the additional services if required.
- 3.7.12 The Supplier has to provide evidence that during the Provision of DSS System Engineering management plans were implemented and that the built Railway infrastructure conforms to RAMS requirements.
- 3.7.13 The Supplier is obliged to transfer the documents obtained or provided during provision of the Services to the Client within 20 (twenty) days after the necessity to work with the documents has expired.
- 3.7.14 Participate in the inspection and acceptance of load-bearing structures, hidden structural elements and works, with reference to Clause 36.16 of Construction Technical Regulation STR 1.06.01:2016. Participate in testing of constructed engineering networks (utilities), installed engineering systems and equipment, with reference to Clause 36.17 of Construction Technical Regulation STR 1.06.01:2016.

## 4. Client’s Review and Approval Process

### 4.1 Means of Verifications

- 4.1.1 The Supplier shall receive approvals from the Affected parties for all Services including all Project parts for all Construction objects.
- 4.1.2 The Supplier shall ensure Approvals are received before the milestone dates of every single stage of Services.
- 4.1.3 The Supplier shall consider that multiple submissions may be required in case provided documents are of low quality or missing required information. The Supplier shall ensure that final submissions are delivered on milestone dates.
- 4.1.4 The Supplier shall submit a Compliance Report for all the deliverables submitted for Client’s review and approval. The Compliance Report can be filled in as part of comment response sheet or in another format if agreed with Client.
- 4.1.5 The Supplier shall use comment response sheets, open items lists, clause-by-clause matrixes to close any outstanding comments, all the subsequent submissions shall clearly identify all changes that were made to the documents during update process. The Supplier shall indicate references to drawing, document, page and changes made, any removal or addition made in the updated version.
- 4.1.6 The Client may conditionally accept the documents and deliverables with comments to resolved by the Supplier within the next stage deliverable submission. The Supplier shall resolve all previously conditionally accepted non-compliances before the final submission of Master-Detailed Technical Design can be accepted.
- 4.1.7 Table below summarizes the means of verifications of final deliverables:

**Table 5:** Means of Verification

Design Service	Means of Verification
Inception report	The Client receives final version of Inception report and approves it. Delivery & acceptance certificate signed by Client
Investigations: Geodetic, topography	Submission of Geodetic, Topographic Investigations Report approved by Client. Delivery & acceptance certificate signed by Client

Investigations: Geological, geotechnical	Submissions of Factual report and GIR approved by the Client. Delivery & acceptance certificate signed by Client.
Investigations: Other	Hydrogeology, hydrometeorology, cultural heritage, all any other. Final report of Investigations is approved by the Client. Delivery & acceptance certificate signed by Client.
Design Proposals	Design Proposals approved by Client & Municipality (on TPS). Delivery & acceptance certificate signed by Client.
Building Permit issued	Building permits and Final version of MD submission to the Client. Delivery & acceptance certificate signed by Client.
Master Detailed Technical Design	MDTD approved by Affected parties, conformity assessment (AsBo and NoBo) bodies (all comments resolved, no open items), Design expertise and the Client. Delivery & acceptance certificate signed by Client.
Design Supervision	Completed Services Percentage Reports in line with Construction Works completion percentages shall be submitted to the Client. Upon confirmation of the percentage the Client will sign partial Delivery & acceptance certificate.

## 4.2 RACI Matrix

4.2.1 The responsibility matrix (RACI) below provides overview of involved parties and its responsibilities:

**Table 6:** RACI Matrix

Activity	Supplier	RB Rail AS	AB „LTG Infra”	ENE Engineer/ Contractor	CCS Engineer/ Contractor	Shadow Operator	AsBo, NoBo	Design Expertise	TPS
Inception Report	R	I	A						
Investigations	R	I	A	I	I				
Design Proposals	R	C	A/C	I	I	I			A
Building Permit	R	I	A/C	I	I				A

Master Detailed Technical Design	R	C	A/C	C	C	I	C	A	
Design Supervision	R	I	A/C	I	I	I	C	A	C

R: Responsible for producing process outputs

A: Approves process outputs

C: Contributes to production of process outputs

I: Informed of content of process outputs

## 4.3 Inception Report

- 4.3.1 The Supplier shall submit Inception Report for Client to review. After receiving the provided deliverable Client will carry out the review in a period of up to 10 (ten) days.
- 4.3.2 If submission is incomplete, the Supplier shall correct any inconsistencies or provide missing information within 10 (ten) days. The Supplier shall be responsible at its own cost for the correction and resubmission of Inception Report.
- 4.3.3 The Client will approve inception report after final document version is aligned.

## 4.4 Investigations

- 4.4.1 The Supplier shall present permissions to execute Investigations as required by National legislation and approvals from the Affected parties for all Site Investigation services.
- 4.4.2 The Supplier shall submit Topographical surveys, aligned according to National legislation. The Client shall approve the report.
- 4.4.3 The Supplier shall provide the Client with the Geodetic Network Report and the levelling report. The Client shall approve the reports.
- 4.4.4 For Initial Geology investigation phase, the Supplier shall submit a Factual Report for Client Review. The Client shall review the information in 10 (ten) days.
- 4.4.5 For Remaining Geology investigation phase, the Supplier shall submit a Ground Investigation Report GIR for Client Review. The Client shall review the information in 20 (twenty) days.
- 4.4.6 If submission is incomplete, the Supplier shall correct any inconsistencies or provide missing information within 10 (ten) days.
- 4.4.7 The Supplier shall submit the Geological Design Report GDR together with Master Detailed Technical Design submission.

- 4.4.8 The Supplier shall submit Hydrometeorological Investigation Report together with Master Detailed Technical Design submission.

## 4.5 Design Proposals

- 4.5.1 The Supplier shall submit Design Proposals for Client to review:
- (a) **Administrative review.** After receiving of the provided deliverable, the Client will carry out administrative review in a period of up to 10 (ten) days. The aim of the administrative review is to check whether the deliverable provided is sufficient to proceed with technical review. If submission is incomplete, Client shall request resubmission of the deliverable in full scope.
  - (b) **Technical review.** After Administrative review is passed, the Client together will prepare the technical review report in a period of up to 35 (thirty-five) days.
- 4.5.2 In case technical review report rejects the deliverable, the Supplier shall submit new Design Proposals Revision in 20 (twenty) days with all the comments and discrepancies resolved.
- 4.5.3 Once the final version of the Design Proposals has been approved through both Administrative and Technical reviews by the Client, the Supplier shall organize and execute all necessary steps to obtain the building permit.
- 4.5.4 The Design Proposals stage shall be considered completed once the building permit are received.

## 4.6 Master Detailed Technical Design

- 4.6.1 The Supplier shall submit deliverables of the MDTD to the Client for review. In order to meet deadlines, set in the Programme and close out all comments, the Supplier shall plan intermediate submissions following the proposed initial Programme (or propose alternative Programme in Inception report):
- (a) Submission 6 months prior to deadline – Interim design report.
  - (b) Submission 3 months prior to deadline – for alignment of open comments.
  - (c) Final submission on deadline.
- 4.6.2 The Supplier shall provide Interim design report 6 (six) months prior to final MDTD deliverable, consisting of the following information and deliverables:
- (a) Updated PEP: including any changes that may have occurred since the Design Proposals stage.



- (b) Site Investigations and Assessments: The report should include a summary of completed 1st stage remaining phase site investigations. This should include key information on soil conditions, site topography, and other site-specific factors that may affect the project design and updated status of 2nd stage investigations that are remaining for MDTD completion.
  - (c) Affected Party conditions received: a list of Affected Party conditions for design and actual copies of the conditions. The list shall include information on dates, when the conditions were requested, were received, and their expiration date.
  - (d) System Engineering Management plans aligned with the Client.
  - (e) Design solutions: the Supplier shall provide final design alternative, developed on a basis of approved Design Proposals stage, including detailed engineering analyses and calculations to support the design decisions made since Design Proposals stage. This should include structural, geotechnical, and hydraulic analyses, as well as environmental impact assessments.
  - (f) Updated Design Drawings: The report should include updated design drawings made since Design Proposals stage, including site plans, horizontal and vertical alignments, cross-sections, structural drawings and details
  - (g) Federated BIM model: The Supplier shall provide a federated BIM model as part of Interim design report submission. The Federated BIM model shall include all CO's designed at LOD level agreed in BEP. Clash detection shall be performed in federated BIM model.
  - (h) Project Cost Estimates: The report should provide updated cost estimates for the project, based on design solutions. This should include detailed cost breakdowns for all major elements of the project.
- 4.6.3 The Supplier shall submit Master Detailed Technical Design deliverables for Client to review:
- (a) Administrative review. After receiving of the provided deliverable, the Client will carry out administrative review in a period of up to 10 (ten) days. The aim of the administrative review is to check whether the deliverable provided is complete. If submission is incomplete, Client shall request resubmission of the deliverable in full scope.
  - (b) Technical review. After Administrative review is passed, the Client will prepare the technical review report in a period of up to 35 (thirty-five) days.
- 4.6.4 In case technical review report rejects the deliverable, the Supplier shall submit new MDTD Revision in 20 (twenty) days with all the comments and discrepancies resolved.
- 4.6.5 The Client shall organize Design Expertise and AsBo / NoBo assessments for submitted Master Detailed Technical Design deliverable. The Client is responsible for supply of 2 iterations of

Design Expertise reviews and 2 iterations of AsBo / NoBo assessments. If two iterations are not sufficient to obtain positive conclusion, the Supplier shall cover the costs for any additional Design Expertise review services or AsBo / NoBo assessment services supplied until the Supplier receives a positive Conclusion.

- 4.6.6 The Supplier shall organize Design Review Coordination Meetings, as set in Section 6.8.1.
- 4.6.7 When all Approvals from Affected parties, Expertise, AsBo / NoBo and the Client are received, the Supplier shall get the Builders approval (Lith. „Statytojo Tvirtinimas”).

## **4.7 Design Supervision Services**

- 4.7.1 The Supplier shall submit monthly reports and draft Services Delivery & acceptance certificate with the percentage of Services completed aligned with actual Construction works completion percentages.
- 4.7.2 The Client shall evaluate the presented percentages and shall sign the Services Delivery & acceptance certificate or reject if percentages do not align.

## 5. Design Compliance Requirements

### 5.1 Building Information Modelling (BIM)

- 5.1.1 Client’s BIM requirements with all additional documents (templates etc.) are outlined in Design Guidelines. The Supplier shall follow these documents throughout all Design process.
- 5.1.2 BIM requirements shall apply to full scope of Services, including all technical disciplines that are included in the Supplier’s design scope (including stakeholders’ utilities affected).
- 5.1.3 The Supplier shall follow BIM Requirements and use the Templates set in Design guidelines to prepare BIM documents and related deliverables. See Annex 7.01 for more details.
- 5.1.4 During the Design Proposal stage, the Supplier shall follow BIM Requirements designated for Value Engineering in all BIM related documents and guidelines.
- 5.1.5 The Supplier shall use Master Bills of Quantities table when creating metadata for quantity take off for all models generated, see Section 3.6.18 for more details.
- 5.1.6 The CDE and the whole document management system shall be hosted by the Client. The Client shall provide a limited number of licenses for the access to CDE.
- 5.1.7 As part of Inception Report (see section 3.2.1), the Supplier shall prepare and provide for Client’s approval a full BEP with TIDP, MIDP according to the BIM Requirements. As a minimum, but not limited to, BEP shall also contain following information:
  - (a) Organizational Roles and Staffing;
  - (b) Modelling and clash test tolerances;
  - (c) Coordinate system and models’ alignment rules and procedures;
  - (d) Model partitioning principles and interfaces;
  - (e) Rules on nomenclature of file names;
  - (f) Collaboration Plan and Quality Control;
  - (g) All Quantity Take-offs and Extractions;
  - (h) Updated Objects Attribute Matrix;
  - (i) CDE usage for the design deliverable submission;
  - (j) Level of Detail (LOD) - Level of Geometry (LOG) and Level of Information (LOI) – for Conceptual Design, Master Detailed Technical Design stage;

- (k) 3D model details – for Conceptual Design, Master Design stages and Detail Technical Design Stage;
  - (l) Assemblies of the structure models.
- 5.1.8 Pre-contract BIM Implementation Plan (pre-contract BEP). During the proposal submission stage, a pre-contract BIM Implementation Plan (pre-contract BEP) is developed and included as part of the Supplier's proposal. This plan outlines how the Supplier, if awarded the contract, intends to implement the Client's BIM requirements. The pre-contract BEP serves as the foundation for the BIM Implementation Plan (BEP), which is more detailed and developed after the contract is signed. Pre-contract BEPs should be completed according to the template provided by the Client (Annex No. 7.42) and in accordance with the information provided in the BIM Guidelines. It should include information on the main project stages and document updates in the CDE, roles and responsibilities, BIM use cases, software versions, and exchange formats.
- 5.1.9 All changes, clarifications or amendments shall be represented and updated in BEP during the execution of the Services. Any deviations or changes in the BEP, if those are recommended or necessary, shall be permitted only after Client's approval.
- 5.1.10 The Supplier shall follow all CAD standards set in Design Guidelines and BIM Requirements. These CAD Standards define minimum standards and requirements for the drawings:
- (a) Drawing and Model referencing procedures;
  - (b) Exchange and revision procedures;
  - (c) Line-types;
  - (d) Text and Dimensioning;
  - (e) Annotations;
  - (f) Layers/Levels;
  - (g) Drawing Templates.
- 5.1.11 The Supplier shall provide native-editable and \*.IFC 3D models according to DG BIM EIR listed requirements.
- 5.1.12 The Supplier shall include all 3D reference models of technical disciplines which are directly interfering and are needed for spatial coordination of the models but are beyond the Supplier's design scope in Master Detailed Technical Design design deliverables. Such reference models may be provided in LOD (LoG and LoI as per EIR definitions) which is lower than specified by the Rail Baltica Design Guidelines.

- 5.1.13 In case LoG (Level of Geometric detail) definitions of the Design Guidelines are unclear the Supplier shall seek for clarification from the Client or in BIM Forum Level of Development requirements, version no older than 2020, available at website [bimforum.org](http://bimforum.org).
- 5.1.14 In cases when the Supplier notices rationally unjustified duplication in design information content required by Client's BIM requirements and Client's other requirements (e.g., requirements for printed documents when their function can be fulfilled by BIM content and/or processes) the Supplier shall inform the Client and get approval for a respective work optimization.
- 5.1.15 The Supplier shall ensure the sufficient performance capacity of hardware and software necessary to undertake 3D model analysis (clash check, etc.) and deliver the Services at the level set in DG BIM Requirements. The Client shall not accept software limitations as the reason for failure to fulfil the design requirements set in this TS and BIM requirements.
- 5.1.16 The graphic documentation of the Project must be generated based on the BIM model, applying BIM methodology best practices and in accordance with the requirements specified in the Design Guidelines (Annex 7.01). Project drawings depicting sections of the structure or its elements must include a reference to the model(s) from which these sections were derived. Specifically, the Section Identification Number (Section ID) must be provided alongside the section number or title, reflecting the reference to the model. The model used to generate the section must contain a 3D section plane (or planes) with a parameter indicating the Section ID. An alternative method for linking section drawings and model planes may be defined in the BEP (BIM Execution Plan).
- 5.1.17 The Client shall ensure the necessary training for the Supplier's personnel working with CDE and other workflows. The Supplier shall be responsible for the participation of the required personnel in these trainings.
- 5.1.18 The Supplier shall submit work-in-progress models 3 (three) days prior BIM Collaboration Meeting. The Supplier is responsible for presenting this model during the meeting. See 6.9.2 for BIM collaboration meetings details.
- 5.1.19 The Supplier must inform the Client on the design issues and propose solutions before submitting it to the Client's CDE.
- 5.1.20 All utilities (existing/renovated/reconstructed/relocated) within Special Plan boundaries shall be designed as 3D models with full geometry as mentioned in DG BIM EIR document.
- 5.1.21 In cases where utilities must connect to an existing utility network outside Special Plan boundaries, these utility connections shall also be designed in 3D with full geometry as mentioned in DG BIM EIR document. Extent of these connections to existing utility

infrastructure shall be modelled to the closest utility connection point (valve, electricity mast, connection box, manhole/well, etc.) and shall be included in BIM model.

- 5.1.22 For all utilities with unknown locations, the Supplier shall agree 3D modelling details with the Client in BEP separately.
- 5.1.23 The Supplier shall provide planting areas in 3D models according to the landscaping design data.

## 5.2 System Engineering Management

- 5.2.1 The Supplier shall carry out Design under a System Engineering approach following the RAMS life cycle (V-cycle) as indicated in the EN 50126 standard. The Supplier shall detail which evidence is to be provided at each stage as proof of compliance and fulfilment of each phase in the RAMS life cycle (V-cycle).
- 5.2.2 The Client submits the RBR Systems Engineering Management Plans Processes for informational purposes, so that the Supplier can become familiar with the systems engineering approach applied in all Rail Baltica projects.
- 5.2.3 The Supplier shall implement the system engineering requirements specified in document "RBDL-SEA-SPC-R-00001, 5.0\_ SE Requirements INFRA Design&Construction.xls" (Annex 7.16) which are applicable to phase „Design” (no matter whether the Phase applicable is Design alone, or Design and any other phase).

Clarification note: in the above-mentioned file, the Consultant shall be read as the Supplier and the Client as the Customer.

- 5.2.4 The Supplier must import the requirements from the created project into the RTM (Requirements Traceability Matrix), group these requirements, and define acceptance, verification, and validation criteria.

## 5.3 Conformity Assessment

- 5.3.1 In order to ensure that the authorization for placing the Rail Baltica railway system in service in the European Union is granted, the Supplier must demonstrate compliance with the applicable safety and interoperability requirements set out in the EU Directives (Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety, Directive (EU) 2016/797 of the European Parliament and of the Council of 11 May 2016 on the interoperability of the rail system within the European Union). Relevant technical specifications for interoperability, such as Commission Regulation (EU) No 1299/2014 of 18 November 2014 on the technical specifications for interoperability relating to the infrastructure subsystem of the rail system in the European Union and Commission Regulation (EU) No 1300/2014 of 18

November 2014 on the technical specifications for interoperability relating to accessibility of the Union's rail system for persons with disabilities and persons with reduced mobility, must be applied. Commission Implementing Regulation (EU) No 402/2013 of 30 April 2013 on the common safety method for risk evaluation and assessment and repealing Regulation (EC) No 352/2009 shall also apply.

- 5.3.2 The Supplier must demonstrate compliance by providing design documentation, test results, simulations, inspection results, certificates, declarations and other evidence of conformity. All documents submitted by the Supplier must be provided with traceability and completeness. The Supplier must provide any additional graphic material/documentation or other information as required by the Assessment Body (AsBo) or Notified Body (NoBo) and the EU Safety and Interoperability Directives. Documents submitted for assessment by AsBo and NoBo must be prepared and submitted in accordance with the requirements set out in documents mentioned in Annex 7.21.
- 5.3.3 The conformity assessment of subsystems must be carried out in accordance with Directive 2016/797/EU, ensuring interoperability between Rail Baltica and the European rail network (NoBo assessment). The NoBo assessment must begin with the provision of services and end with the official certification of each completed railway subsystem.
- 5.3.4 The Client must organize AsBo and NoBo assessment services. The Supplier cooperates with the AsBo and NoBo assessment service provider and the Client and provides all the necessary materials. Supplier communication with AsBo and NoBo should be organized through the Client (Annex 7.21).
- 5.3.5 The Client shall, within 12 (twelve) working days, carry out an administrative review of the material submitted by the Supplier. During the review, the quality of the submitted documents is assessed, as described in the Instruction RBGL-RBR-INS-Z-00004 (see Annex 7.21).
- 5.3.6 The Supplier must appoint a competent AsBo, NoBo expert for the implementation of the Project AsBo, NoBo requirements, who would be responsible for the fulfilment of the applicable requirements and constant control during the performance of the Contract.
- 5.3.7 The Supplier shall ensure that the scope and readiness of the design document package and the construction document package are such that full compliance with the applicable safety and interoperability requirements can be demonstrated.
- 5.3.8 All documentation related to the railway project must be transferred to the conformity assessor after the Client's administrative review has been carried out, and the submitted documents have been accepted.
- 5.3.9 Upon receiving the documentation, the conformity assessor assesses the quality and traceability of the information. The conformity assessor has the right to reject the submitted

documents in case of non-compliance with the requirements described in the instruction RBGL-RBR-INS-Z-00004 (see Annex 7.21), although the package has passed an administrative review and has been accepted to submit it further to the conformity assessor.

- 5.3.10 Before submitting the documentation for evaluation to AsBo or NoBo, the Client shall process the documents received from the Supplier within 2 (two) business days. After AsBo or NoBo has prepared the evaluation results, the Client shall process the received documents within 2 (two) business days before submitting them to the Supplier.
- 5.3.11 Within 20 (twenty) working days, the conformity assessor reviews the submitted documentation and provides feedback on the submitted evidence. Feedback is provided using the Open Items List (OIL) for AsBo and the Clause-by-clause Matrix (CbC) for NoBo as described in the instruction RBGL-RBR-INS-Z-00004 (see Annex 7.21).
- 5.3.12 During the entire AsBo/NoBo assessment, the Supplier must, within 10 (ten) working days from receiving remarks / comments from the assessor, change the design documentation or provide additional information in response to the comments of the AsBo and NoBo assessor. The Supplier must respond in detail (and provide evidence) to the Clause-by-clause matrix (CbC) in the case of NoBo and to the Open item list (OIL) in the case of AsBo, and the status of all items must be "Closed" / "Compliant". AsBo and NoBo assessment reports must be completely positive after each stage (Design and Construction) has been completed.
- 5.3.13 If project solutions are changed during the provision of services, the Supplier must ensure that the latest version of the project documentation is assessed for compliance with AsBo and NoBo, the procedure for managing changes must be established, approved and followed. For each design change, the Supplier shall carry, if applicable, out an impact assessment to determine its effect on, but not limited to, safety and interoperability arising from the planned modification. If any impact is identified, the relevant safety and/or interoperability evidence shall be updated accordingly, and the change shall undergo an independent conformity assessment by an AsBo or NoBo. The impact assessment shall be submitted to, and approved by, the Customer. The Supplier should submit the latest project documentation with explanations of updates and changes.
- 5.3.14 The Supplier must participate in the safety and quality audit performed by the assessment body. The results of the safety and quality audit are considered part of the project assessment. The Supplier must participate in technical meetings related to AsBo or NoBo conformity assessments, if necessary.
- 5.3.15 The Supplier shall ensure that DeBo assessments are carried out in the event that the National Safety Authority concludes that a permit is required for the placing in service of the renewed and/or upgraded fixed rail subsystems. The Supplier is responsible for DeBo evaluation services, the Client does not order these services.



- 5.3.16 The Supplier may submit documents free of charge at all stages of the assessment (design and construction) to 2 (two) review iterations for AsBo providing safety conformity assessment services and NoBo providing interoperability conformity assessment services. If the Supplier cannot obtain a positive conclusion with 2 iterations, the Supplier shall reimburse all additional costs of AsBo / NoBo assessment services (if the conclusions were not obtained due to the fault of the Supplier) until a final positive conclusion is obtained from AsBo, NoBo.
- 5.3.17 Before starting the assessment of the technical documentation AsBo and NoBo, the Supplier must prepare and submit the following documents to the Client, AsBo and NoBo for coordination:
- (a) The project safety plan;
  - (b) The interoperability plan (subsystem definition).
- 5.3.18 The Supplier shall have at his disposal a designated expert of AsBo, NoBo with sufficient knowledge and experience in the implementation of the technical specifications for railway interoperability (TSIs), Commission Implementing Regulation (EU) No 402/2013 on the overall safety method for risk analysis and assessment and/or the reliability, accessibility, maintenance and safety (RAMS) standard EN 50126 for the proper management of the conformity processes of the assessment body and the notified body. The expert must have experience in the railway industry related to the infrastructure subsystem (track, railway infrastructure, railway facilities) as part of the department of the contractors' organization / railway engineering services / Supplier / designer / infrastructure manager. The Supplier must provide a written and signed recommendation from the previous Employer(s) demonstrating the expert's required experience. If there is no such recommendation, the Supplier must submit a declaration signed by him proving experience with the contact information of the previous Employer. The language level of the expert(s) is at least level B2 in English.
- 5.3.19 In order to ensure an adequate level of safety and compliance with safety requirements, the Supplier shall follow the accompanying instructions provided. Information on the application of Regulation 402/2013 and the Assessment Body (AsBo) can be found in the guide RBDL-CTF-GDL-O-00002 (Annex 7.21). The information related to the provision of quality answers and the demonstration of information is provided in the instructions RBGL-RBR-INS-Z-00004 (Annex 7.21). It is expected that the application of the requirements set out in this instruction will reduce the number of administrative rejections and eliminate poor-quality submissions. Information on the requirements to be met during the duration of the Supplier's contract is set out in the specification RBGL-SEA-SPC-R-00001 (Annex 7.21). The safety activities, both managerial and technical, which must be carried out throughout the existence of the Rail Baltica global project, are set out in the system safety plan RBGL-SEA-PLN-R-00003 (Annex No. 7.21). We recommend that the Supplier use the hazard register RBGL-RBR-LST-Z-00006 to

perform the identification of new hazards and threats (Annex 7.21). Further information on the application of the technical specifications for interoperability (TSI) and the assessment of a Notified body (NoBo) can be found in the manual RBDL-CTF-GDL-O-00001 (Annex 7.21). Additional information on how the relevant documents are to be drawn up in order to ensure the proper maturity of the documentation on system definition and evidence of interoperability can be found in the guide D0007-SEA-GDL-R-00002 (Annex 7.21). Documents mentioned in Annex 7.21 should be applicable and used taking into account Supplier's scope of work.

## 5.4 RAMS Requirements

- 5.4.1 The Supplier shall apply the principles of Reliability, Availability, Maintainability and Safety (RAMS) and implement the Common Safety Method on Risk Assessment (CSM-RA) in accordance with Regulation (EU) 402/2013, the Global Project Rail Baltica Design Guidelines, RBR AS RAMS Targets, RB Technical Specifications, applicable safety and interoperability requirements, RB Rail AS procedures, and all relevant national regulations.
- 5.4.2 As the INFRA scope does not include CCS or ENE subsystems and covers only their interfaces with the civil works and fixed infrastructure assets, the standards EN-50126-1, EN 50126-2, EN50128 and EN50129 are not directly applicable. These standards shall, however, be taken into consideration by the Supplier, to ensure safe and compliant integration with the CCS and ENE subsystems where required. The Supplier's implementation of the RAMS principles within the INFRA scope will ensure that the civil works and infrastructure assets support and contribute to achieving the overall Global Project Rail Baltica RAMS targets, by delivering infrastructure that is safe, reliable, maintainable, and aligned with the wider system-level performance expectations.
- 5.4.3 The Supplier shall prepare and deliver RAMS related documentation to cover the INFRA scope, including:
  - (a) INFRA RAMS Plan – covering how RAMS principles are applied during design and monitored during design supervision.
  - (b) CSM-RA documentation – as per section 5.3.
  - (c) RAMS Requirements Allocation – demonstrating how the Rail Baltica RAMS objectives are addressed and satisfied within the INFRA design.
  - (d) Design Compliance Evidence – including Eurocodes and local technical regulations (e.g., STR) compliance, conformity with RBR design guidelines, design verification reports, calculations, drawings, and material specifications.
  - (e) Maintainability and Constructability Inputs – confirming safe and practical access for inspection and maintenance.

- (f) Interface Requirements Traceability – including RTMs showing how the design supports CCS/ENE integration into INFRA scope.
  - (g) Design Change Management Records – documenting modifications with potential RAMS impact.
- 5.4.4 These documents will demonstrate that the INFRA design supports the required safety, reliability, availability, and maintainability targets.
- 5.4.5 The Client will review the Supplier’s documentation. The parts related to hazard identification and risk management under Regulation 402/2013 will be assessed by AsBo in accordance with section 5.3.

## 5.5 Quality Assurance/ Quality Control

- 5.5.1 The supplier shall have an implemented quality management system in place and operational throughout the entire service provision period, in accordance with the ISO 9001 standard (or have an equivalent quality management system), which is certified by an independent third party. The Supplier shall establish processes for managing safety and quality in the project (for design and design supervision services). The Service Provider shall ensure application of those safety and quality processes, including documented application evidence demonstration.
- 5.5.2 The Supplier’s personnel involved in quality assurance and quality control shall have demonstrable experience or qualifications and have clearly defined responsibilities and organisational freedom to identify and assess quality problems.
- 5.5.3 All employees of the Supplier shall have job descriptions with defined duties and responsibilities, including those related to quality, safety and environmental protection.
- 5.5.4 Design and design supervision quality management shall include workflow and quality records. Documented processes include, but are not limited to:
- (a) Configuration management.
  - (b) Change management.
  - (c) Defect / non-conformity management.
  - (d) Acceptance / approval.
  - (e) Roles and responsibilities.
  - (f) Building Information Modelling (BIM).
  - (g) Reliability, Availability, Maintainability, and Safety (RAMS).
  - (h) System assurance.

- (i) Interoperability of the rail system in the European Union.
  - (j) Document management.
  - (k) Sub-contractors' selection and management.
  - (l) System Engineering management.
- 5.5.5 In a given case, a robust quality management system (QMS) must be in place throughout the life cycle of the Design, commensurate with the nature, duration and complexity of the works and Services.
- 5.5.6 The Supplier shall ensure that externally supplied processes, products and services are controlled within the scope of the Supplier's Quality Management System.
- 5.5.7 The Supplier shall apply the requirements of Annex 7.27 and evidence shall be provided to the Client.
- 5.5.8 Together with the Inception report the Supplier shall prepare and submit a Quality Management Plan (QMP) and Design Management Plan (DMP) (for design and design supervision services) in accordance with ISO 10005, ISO 9001, acceptable to the Client. Supplier's QMP and DMP shall also follow ISO 22163 and ISO 10006. The QMP and DMP shall be approved by the Client prior commencement of the Services.
- 5.5.9 Appropriate quality management resources must be allocated and used throughout the Design life cycle starting from the commencement of design and design supervision contract.
- 5.5.10 The Supplier shall appoint a Design Quality Manager who shall be responsible for the implementation of the applicable quality management requirements and for continuous monitoring during the performance of the contract. Before start of design the Supplier (Designer) shall officially notify Client about appointed Quality Manager and provide evidence of his/her competence (qualification and experience).
- 5.5.11 All quality management documents must be prepared and submitted in PDF format and in an editable source format.
- 5.5.12 If the Supplier chooses to outsource any process, work, or service, it shall control such processes, work, or service. This shall be identified in the Quality Management Plan.
- 5.5.13 The Client may, at its option, participate in any inspection or audit of the Supplier if it wishes to satisfy itself that the Supplier properly implements the quality management system which is applied for this specific project. The Client may, at its discretion, appoint a representative to carry out such inspections/audits, but this shall not relieve the Supplier of its responsibility to carry out its activities in accordance with the Contract or in compliance with the Quality Management System. The Supplier must fix all non-conformities identified during inspection

or audit, and report to the Client on performed actions and provide documented evidence within 40 calendar days from the identification of the non-conformity.

- 5.5.14 Together with the Inception Report, the Supplier shall submit its internal and second-party audit programme(s) to the Client for review and approval.
- 5.5.15 The Client may monitor the Supplier's quality management system by the following means:
- (a) Continuous maintenance;
  - (b) Being present at key moments;
  - (c) Consideration of discrepancies in reports;
  - (d) Special periodic audits;
  - (e) Document review;
  - (f) Other additional inspections by the Client or third parties.
- 5.5.16 A Kick-off meeting to discuss the management of the quality requirements shall be held between the Supplier, the Client prior to the commencement of the Services to ensure that all requirements are understood.
- 5.5.17 Supplier's progress reports (monthly, weekly) must contain quality related information (Non-Conformance Report, Audits, Inspections, Tests, Findings and corrective action status).
- 5.5.18 Supplier's Design deliverables shall be traced to individual requirements, providing a link with the source of each requirement compliance evidence.
- 5.5.19 The Supplier shall provide to the Client documented evidence of application of Quality Assurance and Design Management:
- a) Verification report,
  - b) Configuration report (including Version Control Document),
  - c) Change and defect management report,
  - d) Quality Assurance report,
  - e) Approval of design evidence,
  - f) Rail Baltica Design Guidelines compliance report.

## 5.6 Document Control

- 5.6.1 The Supplier shall ensure that all the documents delivered to the Client are prepared according to Document Control requirements set in Annex 7.23.

- 5.6.2 The Supplier shall ensure that all the documents delivered to the Client contain the following minimum, but not limited to, information:
- (a) LTG INFRA Logo, Document number, Title, Revision, Date of revision, Author – on cover sheet
  - (b) LTG INFRA Logo, Document number, Title, Revision - on headers of all document pages (including annexes)
  - (c) Table with referenced Documents (Number and Title) – on the last page of the document (before annexes).
- 5.6.3 The Supplier shall ensure that Document numbering and file naming standard set in Annex 7.23 is rigorously followed. The Supplier shall use the latest version of Client’s Code List. The Client shall update the Code List during the period of Services and shall inform the Supplier, when update has been released.
- 5.6.4 The Supplier shall provide all deliverables with Deliverables Issue Register (template is provided in Annex 7.41) containing information about all provided documents, their previous submissions, revision history, etc.
- 5.6.5 The Client shall check if the deliverables are in line with Document Control requirements during Administrative Review. If any non-compliance is found during the review, the documents shall be rejected.
- 5.6.6 All Rail Baltica Global Project (RBGP) documentation shall be managed using a centralized Electronic Document Management System (EDMS) selected by the Client that supports document review, approval, storage and distribution to ensure consistent management practices, secure document management and effective access to all Design stakeholders.
- 5.6.7 All RBGP documents, including those created by LTG Infra AB, RB Rail AS, the Supplier and other interested parties, shall be stored in the RBGP EDMS. This centralized repository facilitates uniformity, traceability and control of Design documents.
- 5.6.8 Access to documents in the RBGP EDMS must be managed according to Design levels, roles and responsibilities. Access permissions will be granted on a need-to-know basis to ensure confidentiality, security and compliance with RBGP policies.
- 5.6.9 The client shall provide access to client's chosen EDMS. Access will be granted to interested parties to ensure smooth document management.

## 6. Project Management and Control

### 6.1 General Project Management Requirements

- 6.1.1 The Supplier shall be responsible for all aspects of the management and execution for the full scope of the Services, included but not limited to planning, control, reporting, supervision, administration, management of sub-contractors and stakeholders, quality assurance, health & safety management, security, development of procedures, ensuring all necessary qualifications and certifications for experts are valid.
- 6.1.2 Independent from all management and control activities which may be taken by the Client, the Supplier is fully responsible for:
- (a) Managing and controlling all Project activities with the target to keep and optimize the Project plan in any phase of the Project
  - (b) Foreseeing risks and possible problems and taking measures in advance
  - (c) Analysing and solving all problems and Informing the Client.
- 6.1.3 The Supplier shall be responsible for the provision of the following Services implementation deliverables:
- (a) Programme (Detailed and Summary)
  - (b) Services progress report (monthly)
  - (c) Design Supervision Services progress report (monthly)
  - (d) Final report after completion of the Services
  - (e) Final report after completion of the Design Supervision Services
  - (f) Minutes of the meetings
  - (g) Official correspondence with all parties except for the Client
  - (h) All prepared presentations.

### 6.2 Project Execution Plan

- 6.2.1 The Supplier shall prepare PEP (project management plan), the document that describes how the project will be executed, monitored, controlled, and closed in accordance with Project Management best practices, such as PMBOK (Project Management Body of Knowledge), IPMA (International Project Management Association) or other equivalent/similar requirements. The

Supplier shall develop PEP (project management plan - document specifying what is necessary to meet the objective(s) of the *project*) following ISO 22163.

6.2.2 PEP shall include the following sections, but not limited to:

- (a) Project goals and objectives;
- (b) Project stakeholders and their responsibilities;
- (c) Clearly defined scope of work;
- (d) Work Breakdown Structure (WBS);
- (e) Organization Chart (including Supplier team members and sub-Suppliers);
- (f) Responsibility Matrix;
- (g) Cost Breakdown Structure (CBS);
- (h) KPIs that are to be tracked and reported;
- (i) Requirements Management Plan;
- (j) Configuration Management Plan;
- (k) Quality Management Plan;
- (l) Resource Management Plan;
- (m) Change / variation management process;
- (n) Risk management plan, including list of possible risks and mitigation strategies;
- (o) Communications plan, including what is to be communicated, to whom and when;
- (p) Clearly defined milestones and the process for verifying when milestones are reached;
- (q) Other as per ISO 22163 (ref. project management plan).

6.2.3 The Supplier shall submit PEP (project management plan) as part of Inception Report and shall update it every 6 months during execution of the Services.

## 6.3 Project Planning and Programme

6.3.1 Tender Programme and a preliminary WBS shall be submitted as a part of tender documentation should fulfil Level 3 AACE requirements as described in Annex 7.13, including cost and resource loading. The Supplier's WBS will be based on the RBR WBS provided in Annex 7.13 and shall start at the lowest level of the RBR WBS (for each DPS and complete DS).

6.3.2 The Supplier shall provide a Detailed Programme (AACE Level 04) based on the developed WBS which will cover all Design Services scope and sufficient project milestones and other significant



deliverables against which progress can be reported. The Detailed Programme shall consist of a precedence network diagram using the Critical Path Methodology (CPM) to show each essential activity in sequence to meet the contractual milestones. It shall be detailed to a level where activities duration and resource can be estimated accurately, and progress could be confidently assessed. A basis of estimate for both attributes shall be provided for each activity. All Programme basis and assumptions must be documented and all interfaces and influences that could impact the work must be shown in the Programme.

- 6.3.3 The Supplier shall ensure that the following requirements as well as the requirements set in Annex 7.13 are respected during the provision of the Services. The Detailed Programme shall be resourced with labour (Working hours used as unit). No activity in the Programme shall exceed 60 (sixty) calendar days in duration. The Programme must not include any negative float and open-ended activities. The completion date must be modelled using a “Finish-On-or-Before” and no other activity apart the commencement and the completion dates shall be constrained. More than 95% of the relationships shall be “Finish-To-Start”. Activities should not be logic tied using negative lags (leads) and positive lags should be kept to a minimum (less than 5% of the relationships and not exceed fourteen (14) days. “Start-To-Finish” logic ties are not allowed. Float in the Programme is not to be used by the Supplier as a substitute for contingency. Failure to comply with these requirements will invalidate the Programme Submission.
- 6.3.4 The Detailed Programme shall be developed using the latest version of Oracle Primavera P6 as scheduling tool and within the RBR Oracle P6 Cloud environment as prescribed in Annex 7.13. The Primavera P6 settings shall be in accordance with the Client’s requirements, which enables easy and efficient control of the progress and changes in the Programme. The Client will provide 1 (one) Primavera P6 license to the Supplier.
- 6.3.5 An overall Progress Curve using the resource loading and comparing earned and forecast progress to planned progress in terms of percent complete against a monthly time scale. Supplier’s assessment of actual progress must be verifiable by the Client. This section will be in the monthly progress report and shall also include incremental and cumulative manpower histograms and curves comparing actual and forecast manpower levels to those planned (including subcontractors identified separately).
- 6.3.6 A Cumulative Schedule Variance shall be calculated: The following criteria are to be used to define the minimum required actions on the Supplier’s side to address schedules deviations:
- (a) Negative cumulative variance exceeding 5% must be addressed with a recovery plan or mitigation plan including a timeframe for the results to be achieved.
  - (b) Cumulative negative variance under 5% requires a list of preventive/corrective actions.

- (c) Positive variance will be accepted and cash flow forecast and impact will be adjusted accordingly.
- 6.3.7 The Summary Programme is used as the basis for developing and reporting to management and key stakeholders from initiation to completion. The Summary Programme will be developed in time-scaled format and should be limited to 1 page. The Summary Programme activities and progress status must be related to the status performed on the Detailed Programme.
- 6.3.8 Submissions made by the Supplier shall be in both non-editable file (.PDF) and native Primavera P6 (.XER) file formats for the Detailed Programme and native Microsoft EXCEL (.XLSX) for the report. The Supplier's Programme will form an integral part of the overall Client delivery Programme and Reporting structure.
- 6.3.9 In addition, the Supplier shall submit a complementary and detailed narrative description of its plan for performing the work including, but not limited to:
- (a) Summary Description of the scope;
  - (b) Format of activity descriptions including any abbreviations used;
  - (c) Staffing plan indicating total manpower required per reporting period, inclusive of subcontractors;
  - (d) Activity calendars used, particularly non-standard work patterns;
  - (e) Holidays, weather windows and other non-work periods;
  - (f) Assumptions and Constraints;
  - (g) Assumed production rates, equipment, and personnel requirements by craft to complete a resource loaded Programme;
  - (h) Description of the critical path;
  - (i) Description of the near critical paths (these activities being defined as a total float below fifteen (15) days));
  - (j) Listing of key interfaces with the Project Manager/ Client/ Affected Parties or others and the dates those interfaces are planned to occur;
  - (k) Listing of information required by the Supplier to meet Programme together with the date that the information is required;
  - (l) Details of any significant changes including revisions to the critical path since previous Approved or Submitted Detailed Programme;
  - (m) Impact of Progress;

- (n) Details of Changes to Key Dates, Milestones, and Associated float and time risk allowances;
- (o) List of Implemented / Predicted Changes or Variations;
- (p) Any delay mitigation measures incorporated;
- (q) All dates for the Contractual Milestones and Key Dates, Deadlines (including intermediate terms) and Commencement, Completion and Handover Milestones. Any other milestones and/or activities provided by the Client;
- (r) All dates when the Supplier plans to submit any particulars or deliverables of the design or temporary works design;
- (s) All dates when any information to be provided by the Client or third parties will be required by the Supplier;
- (t) Details of any consents, permits and licenses development, preparation, submission, and approvals allowing enough time for each stage of the process and allowances for resubmission;
- (u) Details of any 3<sup>rd</sup> Party interfaces and/or documents preparation, submission and approvals allowing enough time for each stage of the process and allowances for resubmission;
- (v) The Supplier shall describe details of any measures to be taken to minimize the effect of the Supplier's operations on the public including as a minimum (where applicable): intended working hours, safety risk assessments;
- (w) Clear details on Services completion processes and timeframes;
- (x) Clear identification of any Client obligation.

**6.3.10** Together with Inception report the Supplier shall provide the following:

- (a) Project Control Management Plan for the Client's approval. It should cover the processes indicating how he intends to carry out all aspect of Project Control requirements stated in this TS, including the Annexes 7.11 and 7.30.
- (b) Detailed Programme for approval. When approved, the Detailed Programme will constitute the Approved Detailed Baseline for the Agreement's execution. The Supplier shall cost load the Programme to the level of Construction Objects to allow for the accurate production of the cash flow and forecast.
- (c) Summary Programme for proforma and content approval.
- (d) Programme Narrative.

- (e) Design Progress Performance report for proforma and content approval with sets of Control Points (number and weight) designed for each different types of deliverables for approval.
- 6.3.11 The Supplier shall retain the Approved Detailed Baseline in all Detailed Programmes submitted during monthly reports, unless the Client permits the baseline to be amended. This will facilitate the assessment of progress, cost, and performance.
- 6.3.12 Together with each Monthly Progress report the Supplier shall provide a Programme Analysis Report:
- (a) Updated Detailed Programme for approval, showing the progress, remaining duration, actuals, physical percentage complete and forecast completion dates and submit it to the Client for acceptance.
  - (b) Updated Summary Programme with progress aligned with Updated Detailed Programme
  - (c) Updated Programme Change log where every modification done on the Detailed Programme (activities, logic before and after, Constraints, etc.) are recorded.
  - (d) Updated Programme Narrative
  - (e) Programme Variance Report for review by the Client at Monthly Progress Meeting which shows cumulative and period movement data. Any areas which show significant schedule or Cost variance shall be investigated, explained and mitigation measures identified if applicable.
- 6.3.13 The Supplier shall undertake ad-hoc or as requested Programme exercises as specified by the Client (which may include ‘what-if scenarios’). These exercises shall be undertaken by the Supplier within 10 (ten) days of the request.
- 6.3.14 The Supplier shall ensure that the updates and changes in the Programme follow these requirements:
- (a) The Programme shall remain a relevant document capable of accurate reporting on an ongoing basis and able to be relied upon when other associated parties are planning their works. If it becomes apparent that this is not as described, the Supplier shall revise and re-submit the Programme for approval by the Client.
  - (b) If it is evident that the rate of progress is insufficient to ensure timely completion as per the contractual milestones and time periods, the Supplier shall revise their Programme to demonstrate the intended plan to recover. A list of associated mitigating measures shall also be included.
  - (c) If the Supplier requests an extension of time to the dates specified in the Contract, justification shall be provided as the Client deems it necessary. The supporting information

used for justification shall include a cause-and-effect type Programme produced in P6 using recognized delay analysis method (EG time impact analysis) so the impact of the delay to the activities in question can be demonstrated.

- (d) If any logic changes are required to be made to the Programme, a Change Request shall be submitted by the Supplier requesting the change and the justification for the Change
  - (e) If any of the works necessary for the performance of the Contract is not included, this shall not relieve the Supplier of the obligation to complete all necessary work until the respective deadline of each phase or all Works, parts thereof, regardless of the Project Manager/ Client approval of the Programme or any sub - Programme.
- 6.3.15 All Programme submissions made by the Supplier shall be clearly titled (e.g. Baseline Programme, Monthly Programme, What-if Programme), numbered (e.g. Period 00, 01, 02, ...), revision coded (e.g. Rev. 1.0, 2.0...) and dated (YYYY-MM-DD).
- 6.3.16 The Supplier shall develop and maintain a Design Progress Performance Dashboard (DPPD) as part of the monthly reporting and project controls requirements. This dashboard shall provide a clear, visual, and data-driven representation of design progress against the approved baseline and forecast.

Dashboard Requirements:

- (a) Deliverables Listing;
- (b) Cost Loading and Planned Value;
- (c) Progress Measurement;
- (d) Forecast Updates;
- (e) Dashboard Format.

## 6.4 Resource management

- 6.4.1 The Supplier shall ensure the participation of key experts, including certified/licensed experts as described in procurement documents, required to complete the Services. See listed below:
- (a) Project manager;
  - (b) Design manager;
  - (c) 1435 mm gauge railway track designer / engineer;
  - (d) Structural/bridge designer / engineer;
  - (e) Building Information Modelling (BIM) Manager;
  - (f) Quality manager;

(g) AsBo/Nobo manager

(h) RAM safety manager

6.4.2 The Supplier shall ensure the participation of additional experts, including certified/licensed experts, required to complete the Services. See listed below (non – exhaustive list):

(a) Geodesy expert/engineer;

(b) Geotechnical expert/engineer;

(c) Hydrology expert/engineer;

(d) Road design expert/engineer;

(e) Spatial planning expert / Architect;

(f) Cultural heritage expert;

(g) Environment expert/engineer;

(h) Power networks designer/engineer;

(i) Natural gas and oil distribution network expert/engineer;

(j) Railway signalling expert/engineer;

(k) Railway catenary expert/engineer;

(l) Construction planning expert/engineer;

(m) Cost estimation expert;

(n) System Engineering Manager;

(o) Reliability, Availability, Maintainability, and Safety (RAMS) Engineer;

(p) Verification manager;

(q) Requirements manager;

(r) Configuration manager;

(s) Interface manager;

(t) Contract Manager;

(u) Project Planning expert;

(v) Stakeholder Manager / Public relations coordinator;

(w) Design Quality Control engineer;

(x) Geographical information systems (GIS) Expert;

(y) Technical translator (from/to Lithuanian-English language).

6.4.3 The Supplier shall ensure, that sufficient level of expert engagement is assured throughout the delivery of Services, detailing the allocation and workload of the experts in the Programme.

## 6.5 Stakeholder Management

6.5.1 The Supplier shall be fully responsible for stakeholders, including Affected parties', management process. The Supplier shall be responsible for necessary alignment and approvals to be obtained from the stakeholders as well as for provision of necessary analysis and data related to scope of works at the request of the stakeholders or the Client.

6.5.2 The Supplier shall prepare the Stakeholder Management Plan that includes methodology, processes and tools for stakeholder management to be implemented by the Supplier throughout the provision of Services. The Stakeholder Management Plan shall contain at least the following parts:

- (a) Stakeholders' identification and grouping;
- (b) Matrix of stakeholder's assessment according to their interests and influence;
- (c) Relevant engagement strategy for each stakeholders' group and consultation/communication methods to be applied;
- (d) Annual action plans;
- (e) Roles and responsibilities within the Supplier team, also including escalation mechanism to the Client.

6.5.3 The prepared Stakeholder Management Plan shall be consulted on and endorsed by the Client.

6.5.4 The Stakeholder Management Plan shall be reviewed regularly and, in any case, not least than once per quarter, and in case necessary – updated accordingly.

6.5.5 The Supplier shall ensure local representation being able to communicate with national stakeholders in local language (not less than B2 Lithuanian).

6.5.6 Any stakeholder engagement shall be documented and traceable. All generated documentation of meetings shall be in English language and in the Stakeholder's official national language, if required by the Stakeholder.

6.5.7 Stakeholder management activities, drawing particular attention to activities taken and planned by the Supplier in context of early risk mitigation, shall be included in the regular progress reports.

## 6.6 Risk Management

- 6.6.1 The Supplier shall plan all its activities necessary to carry out the full scope of the Services in due time and in the agreed quality by considering all relevant risks and minimizing their adverse influence on costs and time schedule. Without limitation, such risks include:
- (a) Restrictions by landowners to access the land plots for the site investigation;
  - (b) Weather conditions which may affect site investigation performance;
  - (c) Possible track realignment outside the borders of approved Rail Baltica route;
  - (d) Delays, inactivity, procrastination of the Affected parties regarding the provision of the Services;
  - (e) BIM strategy development and system implementation delays for any reason;
  - (f) Land acquisition process, Environmental impact assessment and related procedures;
  - (g) Delayed commencement of the Works and delayed Works during construction;
  - (h) Changes in the Design guidelines, the Client’s requirements and defaults of the Supplier’s subcontractors including unavailability of human and technical resources;
  - (i) Changes in applicable legislation;
  - (j) Legal actions by third parties.

## 6.7 Change Management

- 6.7.1 The Supplier shall inform the Client of request for changes immediately upon discovery of such need. The Supplier shall Change Request form (provided in the Contract) consisting of:
- (a) The reason for change;
  - (b) Who is requesting the change ;
  - (c) The consequences of the change, including maintenance, health and safety, time, quality, cost (and who will bear the cost);
  - (d) Proposals for mitigation of any consequences;
  - (e) The risks associated with the change;
  - (f) Alternatives to the proposed change;
  - (g) Time by which the change must be instructed.
- 6.7.2 The Client shall evaluate the proposal within 20 (twenty) days upon receipt of Change Request.



## 6.8 Reporting

- 6.8.1 The Supplier shall prepare monthly progress report on Services broken down by DPS which shall include the following information:
- (a) Contract Status and key achievements (including received building permits, other permits, approvals from Affected parties and authorities, etc.);
  - (b) Progress per Discipline;
  - (c) Progress per Construction Object;
  - (d) Interface Management Report;
  - (e) Requirements Status Report;
  - (f) Configuration Status Report;
  - (g) Risks management & Opportunities report;
  - (h) Contract and Commercial status;
  - (i) Critical Items Action Report, see section 6.8.2;
  - (j) Co-Ordination Report, see section 6.8.3;
  - (k) Open Items Report, see section 6.8.4;
  - (l) Claims and Variations Report, see section 6.8.5;
  - (m) Stakeholder Engagement activities including progress achieved on open/solved issues;
  - (n) Updated Detailed Programme;
  - (o) Updated Programme Change log;
  - (p) Updated Summary Programme;
  - (q) Programme Variance Report;
  - (r) Health and Safety.
- 6.8.2 The Supplier shall maintain a **Critical Items Action Report (CIAR)** which will be maintained in conjunction with the Early Warning system.
- (a) A critical item is defined as any item that has caused or is likely to cause an impact to a Milestone or Key Date or to overall contract Completion. It should be noted that not every delay result in an impact to a key date or milestone and therefore not every delay counts as a critical item.

- (b) The intent is that the CIAR becomes a working dynamic document, not a voluminous punch list for the contract. It should rarely contain more than 15-20 items. Significant critical items should have an accompanying entry in the Supplier’s Programme. The main task of the CIAR is the analysis of the Programme to determine which items are critical or potentially critical.
  - (c) The CIAR shall be reviewed at Monthly Progress Meetings to discuss corrective actions or alternatives to eliminate the programme impact of the critical items.
  - (d) The Supplier shall nominate a CIAR coordinator from within his team. The CIAR coordinator shall be responsible for development, maintenance and production of the CIAR.
  - (e) The Supplier shall define a template for CIAR in Inception Report.
  - (f) The Supplier shall continually identify and highlight activities in the programme that are at risk of being delayed. A list of any events causing delay or likely to cause delay is to be maintained including the proposed mitigating measures which may be performed by the Supplier for consideration by the Client.
- 6.8.3 The Supplier shall produce a monthly **Co-ordination Report** showing the Authorities and Affected Parties contacted, their feedback, actions taken, future needed actions and documents exchange between the parties. Detailed format of the report will be agreed within the Inception Report. The dates and the scope from the report must be reflected to Primavera P6 Schedule.
- 6.8.4 The Supplier shall produce a monthly **Open Items Report** showing all the items raised on meetings, Request for Information (RFI) and Change Requests (CR) submitted during the period and previous periods which have not received resolution to the date. The report shall show also all the decisions taken at working level meetings and open items from those meetings (Meeting Items). The report will be accompanied with RFI, CR, Meeting Items and Open Items tracker which displays all the history of items raised and decisions taken. Detailed format of the report and the tracker will be agreed within the Inception Report.
- 6.8.5 The Supplier shall produce a monthly **Claims and Variations report** showing all Claims and Variations issued since the start of the Services, actions taken, future needed actions and documents exchange between the parties.
- 6.8.6 The Supplier shall produce a weekly Design Progress Performance report as specified in Annex 7.27.

## 6.9 Meetings

- 6.9.1 The Supplier shall attend all meetings below in person in Vilnius, Lithuania, unless agreed otherwise with the Client.

6.9.2 During provision of the Services, the following meetings shall be organized and held:

**Table 7:** Meetings

<b>Title</b>	<b>Responsible party organizing the meeting</b>	<b>Scheduling</b>	<b>Participating parties (from both parties of the Agreement)</b>
<b>Kick-off meeting</b>	Supplier	1 week after commencement date of the Agreement	Supplier and Client project management team
<b>Inception meeting</b>	Supplier	1 month after commencement date of the Agreement	Supplier and Client project management team and necessary experts
<b>Monthly Progress meetings</b>	Supplier	Monthly, following the Inception meeting	Supplier and Client project management team and necessary experts
<b>Monthly Schedule meetings</b>	Supplier	Monthly, same week as Monthly Progress Meeting	Supplier and Client project management team and necessary experts
<b>Risk Management meetings</b>	Supplier	Monthly, same week as Monthly Progress Meeting	Supplier and Client project management team and necessary experts
<b>Claims and Variations meetings</b>	Supplier	Monthly, same week as Monthly Progress Meeting	Supplier and Client project management team and necessary experts
<b>Technical Working Group (TWG) meetings</b>	Supplier	Ad-hoc	Supplier and Client project management team, and necessary experts
<b>BIM collaboration meetings</b>	Supplier	As approved in BEP	Supplier and Client project management team, and necessary experts
<b>Meetings with Affected parties</b>	Supplier	When needed or when Client appoints the time	Supplier and Client project management team, and necessary experts. Affected

		or Affected party appoints the time.	party authorized representatives
<b>Client and beneficiary management meetings</b>	Client	When needed (approximately on quarterly basis)	Supplier and Client project management team, and necessary experts
<b>Design Review Coordination Meetings</b>	Supplier	When needed. (Mostly, during Design Review and Conformity Assessment)	Supplier and Client project management team, and necessary experts
<b>Meetings with AsBo / NoBo</b>	Client	When needed. (Mostly, during Design Review and Conformity Assessment)	Supplier and Client project management team, and necessary experts
<b>Meetings with Design Expertise</b>	Supplier	When needed. (Mostly, during Design Review and Conformity Assessment)	Supplier and Client project management team, and necessary experts
<b>Interface Management Meetings</b>	Supplier	Weekly	Supplier and Client project management team, and necessary experts

6.9.3 The minimal content to be followed during the meetings is defined in the following table:

**Table 8:** Minimal content for the meetings

<b>Title</b>	<b>Main content and objectives of the meeting</b>	<b>Input data to be provided from Supplier's before the meeting</b>
<b>LT-DS2 - Kick-off meeting</b>	<ul style="list-style-type: none"> <li>• Presentation of Rail Baltica Global project and the general scope of the Services and Client Expectations presented by the Client.</li> <li>• Organizational structure of the Supplier</li> <li>• Presentation of Supplier's Team</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation Slides</li> </ul>

	<ul style="list-style-type: none"> <li>Split of responsibilities at Suppliers Team</li> <li>Preliminary Programme for execution of the Services activities</li> </ul>	
<b>LT-DS2 - Inception meeting</b>	<ul style="list-style-type: none"> <li>Presentation of Inception Report, including all items listed in Section 3.2</li> <li>Presentation of Draft versions of documents for Monthly Progress Meeting, Claims and Variations Meeting, Schedule Meeting.</li> </ul>	<ul style="list-style-type: none"> <li>Inception report</li> <li>Draft version of Progress Report</li> <li>Draft version of Claims and Variations Report</li> <li>Draft Version of Programme Analysis Report</li> </ul>
<b>LT-DS2 - Progress meeting No. XX</b>	<ul style="list-style-type: none"> <li>Monthly Progress Meeting Report, as listed in Section 6.8.1 (Programme Analysis Report and Claims and Variations Report to be discussed in separate meetings)</li> </ul>	<ul style="list-style-type: none"> <li>Monthly Progress Report</li> </ul>
<b>LT-DS2 - Monthly Schedule meeting No. XX</b>	<ul style="list-style-type: none"> <li>Programme Analysis Report</li> </ul>	<ul style="list-style-type: none"> <li>Programme Analysis Report</li> </ul>
<b>LT-DS2 – Risk Management Meeting No. XX</b>	<ul style="list-style-type: none"> <li>Risk Management Report</li> </ul>	<ul style="list-style-type: none"> <li>Early warnings</li> <li>Risk Management plan, mitigation measures</li> </ul>
<b>LT-DS2 - Claims and Variations meeting No. XX</b>	<ul style="list-style-type: none"> <li>Claims and Variations Report</li> </ul>	<ul style="list-style-type: none"> <li>Claims and Variations Report</li> </ul>
<b>LT-DS2 - TWG meeting No. XX</b>	<ul style="list-style-type: none"> <li>Presentation of technical issues and proposal of solutions</li> <li>Agreement on the way forward for every technical issue</li> </ul>	<ul style="list-style-type: none"> <li>List of technical issues to address during the meeting with the proposed solution options</li> </ul>
<b>LT-DS2 - BIM collaboration meeting No. XX</b>	<ul style="list-style-type: none"> <li>Review Federated Design Model</li> <li>Review Design Clashes and agree resolutions</li> <li>Discuss open BIM issues</li> <li>Review upcoming delivery plan</li> </ul>	<ul style="list-style-type: none"> <li>Federated model of upcoming deliveries</li> <li>Submit progress report</li> <li>Questions, comments, suggestions from the Supplier</li> <li>Updated BEP document</li> </ul>

<b>LT-DS2 - Affected party meeting No. XX</b>	<ul style="list-style-type: none"> <li>• Presentation of administrative and/or technical issues related to Affected party and proposal of solutions</li> <li>• Agreement on the way forward for every administrative and/or technical issue</li> </ul>	<ul style="list-style-type: none"> <li>• List of administrative and/or technical issues to address during the meeting with the proposed solution options, including drawings for solutions presented.</li> </ul>
<b>LT-DS2 – Client and beneficiary management meeting No. XX</b>	<ul style="list-style-type: none"> <li>• Presentation of progress</li> <li>• Administrative issues</li> <li>• Agreement on the way forward for every open issue</li> </ul>	<ul style="list-style-type: none"> <li>• Programme review</li> <li>• Status Presentation</li> <li>• Open Issues with the proposed solution options</li> </ul>
<b>LT-DS2 - Design Review Coordination Meeting No. XX</b>	<ul style="list-style-type: none"> <li>• Presentation of consolidated checklist</li> <li>• Review and resolution of open comments</li> </ul>	<ul style="list-style-type: none"> <li>• Consolidated checklist</li> </ul>
<b>LT-DS2 - Meeting with AsBo / NoBo No. XX</b>	<ul style="list-style-type: none"> <li>• Review of open comments from AsBo / NoBo.</li> <li>• Agreement on the way forward for every comment.</li> </ul>	<ul style="list-style-type: none"> <li>• List of comments to address during the meeting with the proposed solution options</li> </ul>
<b>LT-DS2 - Meeting with Design Expertise No. XX</b>	<ul style="list-style-type: none"> <li>• Review of open comments from Design Expertise</li> <li>• Agreement on the way forward for every comment</li> </ul>	<ul style="list-style-type: none"> <li>• List of comments to address during the meeting with the proposed solution options</li> </ul>
<b>LT-DS2 - Interface Management Meeting No. XX</b>	<ul style="list-style-type: none"> <li>• Presentation of progress regarding Interface Management process</li> <li>• Agree on the next steps</li> </ul>	<ul style="list-style-type: none"> <li>• Interface list</li> <li>• Interface Control Forms</li> </ul>

6.9.4 Supplier shall ensure the following:

- Request the Client if any additional items shall be added to agenda;
- Distribute the agenda of the meeting to the participants at least 5 (five) days in advance;
- Prepare the supporting documents according to agenda and upload the material to CDE at least 2 (two) days before the meeting;
- Organize a venue for the meetings;
- Chair the meetings;

- (f) Record the Minutes of the Meeting (MoM);
  - (g) Organize signing of the MoM;
  - (h) Distribute the signed MoM and upload the records to CDE, no later than 1 week.
- 6.9.5 The Supplier shall be responsible for the Live Translation services to and from Lithuanian language during the meetings where Affected Party or non-English speaking participants are involved.

## 6.10 Languages

- 6.10.1 The Supplier shall prepare bilingual design documentation, in English and Lithuanian language. The documentation should be prepared in such way that both languages could be read in parallel on the same document. Documentation related to Latvia shall be also prepared by Supplier in Latvian language.
- 6.10.2 The Client is not and shall not be responsible for the translation of national legislation into English language. The Supplier shall cover the costs for the translation of national legal acts and any other documents, if necessary for the Supplier for implementation of the Services.
- 6.10.3 The Supplier shall have technical and legal resources proficient in communication both in English and Lithuanian, Latvian (if needed) language.
- 6.10.4 List of the documents to be provided and translated:

**Table 9:** Documents to be provided

Document name	English	Lithuanian
Correspondence between Supplier and only Client	YES	YES
Correspondence and minutes of meetings between Supplier and Affected Parties	YES	YES
Inception, Progress, Technical Working group (TWG), BIM collaboration meetings (agenda, necessary data, minutes of meeting)	YES	YES
Meetings with Client, Beneficiary, AsBo / NoBo, design expertise (agenda, necessary data, minutes of meeting)	YES	YES
Inception report	YES	YES
Programme	YES	YES
Quality Management Plan	YES	YES

Verification Report	YES	YES
Configuration Report	YES	YES
Change and defect management report	YES	YES
Quality Assurance report	YES	YES
Approval of design evidence	YES	YES
Rail Baltica Design Guidelines Compliance Report	YES	YES
BIM Execution plan (BEP)	YES	YES
Method Statement for Geodetic and for Topography works	YES	YES
Geodetic and Topography measurement report	YES	YES
Design progress reports	YES	YES
Design supervision progress reports	YES	YES
Final report after completion of the Design Services	YES	YES
Final report after completion of the Design Supervision Services	YES	YES
Site investigation (per investigation)	-	-
Investigation Programmes	YES	YES
Permissions	YES	YES
Site investigation reports	YES	YES
Application for approval investigation programme, reports, receiving permits	YES	YES
Design Proposals reports for railway alignment	YES	YES
Design Proposals reports for structures	YES	YES
Payment documentation	YES	YES
Presentations	YES	YES
Applications for receiving Technical Conditions from Affected parties	YES	YES
Technical conditions from Affected parties	YES	YES



Applications for building permits	YES	YES
Building permits	YES	YES
Conceptual design	YES	YES
Master Detail technical design	YES	YES
Construction technology and work organisation part	YES	YES
Bill of quantities	YES	YES
Maintenance manual	YES	YES
Environmental reports	YES	YES
Land acquisition plan	YES	YES
Plans for deforestation of land plots and cutting of trees	YES	YES
Procurement Responses for Construction Works Tender	YES	YES

- 6.10.5 The Supplier shall submit all bilingual documents or deliverable submission in both languages when documents are submitted for review or approval. However, the Supplier may request the Client for permission to submit bilingual documents or deliverables in one language only for partial or interim reviews. Bilingual documents with only single language or partial translation will not be accepted by the Client, unless it is aligned with the Client prior such submission is made.

## 7. Annexes

7.1.1 The following documents complement and shall be read together with the TS. Please note that the most up to date version of the reference document shall be applied when contract is signed.

Table 10: Annexes

Annex Ref.	Name	File Codification Number	Notes
7.01	Design Guidelines	-	Access to the current version: <a href="https://www.railbaltica.org/about-rail-baltica/documentation/">https://www.railbaltica.org/about-rail-baltica/documentation/</a>
7.02	Operational Plan	-	Access to the current version: <a href="https://www.railbaltica.org/about-rail-baltica/documentation/">https://www.railbaltica.org/about-rail-baltica/documentation/</a>
7.03	Special plan for European standard railway line section Kaunas to Lithuanian/Latvian state border	TPDRIS Nr. T00079723	Access to the current version: <a href="#">Home   Teritorijų planavimo ir statybos vartai</a>
7.04	Environmental impact assessment report for the European standard railway line Kaunas-Lithuania-Latvia border	-	<b><i>The information is confidential. Access to this annex will be granted upon signing Annex No. XV of the Special part of the Procurement Conditions.</i></b>
7.05	Engineering infrastructure development plan for the engineering systems and regional stations of the communications engineering infrastructure of the "Rail Baltica" project on the Kaunas-Lithuanian and Latvian border	TPDRIS Nr. T00095021	Access to the current version: <a href="#">Home   Teritorijų planavimo ir statybos vartai</a>

7.06	Screening for the Environmental Impact Assessment of the engineering systems and transport communications engineering infrastructure of regional stations of the railway line Kaunas-Lithuanian/Latvian border of the Rail Baltica Project	-	<a href="https://drive.google.com/drive/folders/1K-OzVbShenyy3KKkaDEXfW5jx36FFphZ?usp=drive_link">https://drive.google.com/drive/folders/1K-OzVbShenyy3KKkaDEXfW5jx36FFphZ?usp=drive_link</a>
7.07	Environmental Impact Assessment Report for the Construction of the European Standard Gauge Public Railway Infrastructure Line Rail Baltica (LV)	-	Access to the current version: <a href="https://makonis.edzl.lv/d/da5579a9e4/">https://makonis.edzl.lv/d/da5579a9e4/</a>
7.08	Previously prepared documents	-	<b>The information is confidential. Access to this annex will be granted upon signing Annex No. XV of the Special part of the Procurement Conditions.</b>
7.09	RIS_V16_Main_Track_Part_9_LT-DS2_Excerpt	RBDN-SOD-ZZ-ZZ-DRW-R-00001	
7.10	Preliminary boundary of the Joniškėlis railway station building	-	
7.11	List of Consolidated Material Supply Elements	RB068-PMD-LST-R-00001 v4.0	
7.12	Hydrometeorological Investigation	RBGL-HYD-SPC_SI-R-00001 v2.0	
7.13	Planning & Scheduling procedure	RBGL-PCR-PRC-Z-00004 v1.0	

	Primavera P6 Cloud Operational Requirements	RBDL-PCR-QRG-Z-00001 v3.0	
	Work Breakdown Structure Standard	RBGL-RBR-STN-Z-000013 v1.0	
7.14	Requirements for Technical specifications for Construction	RBCN-RBR-SPC-R-00001A12 v2.0	
	Technical specifications for Construction	RBCN-RBR-SPC-R-00001 v4.0	
	Rail Baltica BoQ Master Table	RBCN-RBR-BOQ-R-00001 v2.0	
	Acceptance related QC&QA Requirements	RBCN-RBR-SPC-R-00002 2.0	
7.15	Design services and Design Supervision health and safety standard in Rail Baltica Global Project	RBGL-HSD-STN-Z-00002 v1.0	
7.16	System Engineering Management in RBGP	RBGL-SEA-PLN_SE-R-00001 v2.0	
	System Engineering Management Process for Implementation Phases: Design, Construction and Manufacturing	RBGL-SEA-PLN_DN-R-00001 v2.0	
	System Engineering Requirements Specification for INFRA Design and Construction tenders	RBDL-SEA-SPC-R-00001 v5	

	Systems Engineering templates (SE templates)	-	
7.17	Requirements Management Process	RBGL-SEA-PLN_RQ-R-00001 v2.0	
7.18	Configuration Management Process	RBGL-SEA-PLN_CM-R-00001 v2.0	
7.19	RBGP Verification and Validation Management	RBGL-SEA-PLN_VV-R-00001 v2.0	
7.20	Interface Management	RBGL-SEA-PLN_FC-R-00001 v2.0	
7.21	Introduction to CSM-RA application	RBDL-CTF-GDL-O-00002 v1.0	
	System assurance requirements on mainline track and civil works contractor	RBGL-SEA-SPC-R-00001 v1.0	
	RBGP System safety plan	RBGL-SEA-PLN-R-00003 v3.0	
	RBR Reference INF Mainline Hazard Record (REF-INF-ML-HR)	RBGL-RBR-LST-Z-0006 v2.0	
	Introduction to Notified Body (NoBo) application and assessment	RBDL-CTF-GDL-O-00001 v3.0	
	NoBo system definition and interoperability evidence	D0007-SEA-GDL-R-00002 v1.0	

	System Assurance Instruction for Contractor's Deliverables	RBGL-RBR-INS-Z-00004 v3.0	
7.22	Manual - Railway Infrastructure Maintenance (Civil Works, Track)	RBDL-SOD-ZZ-ZZ-OAM-R-00002 v2.0	
	FMEA and RCM matrix	RBDL-SOD-ZZ-ZZ-MTX-R-00001 v1.0	
	Maintenance checklist template	RBDL-SOD-ZZ-ZZ-TPL-R-00001 v1.0	
7.23	RBGP Document Numbering and File Naming standard	RBGL-RBR-STN-Z-00028 rev. 3.0	
	Document Numbering and Master Coding	RBGL-DMT-LST-Z-00001 rev. 77.0	
	Deliverables Quality Control	RBGL-RBR -PRC-Z-00005 rev. 1.0	
	Document management plan	RBGL-DMT-PLN-Z-00001 rev. 1.0	
7.24	Interface Management Register	RBDL-SEA-OS6300-Z-REG-Z-00001.xlsx	
	Interface Control Forms	-	
7.25	RBR Utility requirements	RBCN-ROA-SPC_RQ-R-00001 v4.0	

7.26	Technical study for the impact of high voltage line parallel to Rail Baltica line	RBDL-ADN-REP-V-00001 v1.0	
7.27	RBR AS Quality Management Requirements for Providers of Products and Services	RBDL-SEA-ZZ-ZZ-REQ_QA-R-00001 v2.0	
	Inspection & Test Plan template	L-SEA-TPL-R-00004	
	Client's quality requirements	-	
7.28	Quality assessment study on usage of local mineral materials in Lithuania for Rail	RB049-TEH-REP-V-00001 v1.0	
7.29	Study on Supply of Mineral Materials for Rail Baltica in Lithuania	RBDL-GEC-REP-V-00001 v1.0	
7.30	Design Progress Performance guidelines	RBDL-PCR-GDL-Z-00001v1.0	
7.31	Requirement Traceability Matrix (RTM) template	RBGL-RBR-TPL-Z-00042 v4.0	
7.32	Verification and Validation Evidence Catalogue template	RBGL-RBR-TPL-Z-00043 v3.0	

7.33	RBR Gauge Study Technical Note	RBDL-SOD-ZZ-ZZ-NTF-R-00001 v3.0	
7.34	Rail Baltica EMC Study	DGII-TL-6520 v1.0	
7.35	Report of the European standard Railway line Kaunas – border of Lithuania and Latvia describing the plan for the clearance of areas contaminated with explosives and for the neutralization of explosives	-	<i>For information</i>
7.36	RBR Railway Overall Track Stiffness Parameters	RBDL-SOD-ZZ-ZZ-NTF-R-00008 v2.0	
7.37	Version Control Document Template	RBGL-RBR-TPL-Z-00027 v2.0	
7.38	Turnout Integrated System and Rail Expansion Joint System	RBGL-SOD-SPC-R-00003 v1.3	<i>RB Technical Specifications</i>
	Railway ballast for construction of Rail Baltica railway line	RBCN-RWM-SPC-R-00003 v5.0	<i>RB Technical Specifications</i>
	Technical Specification Rails	RBGL-TRA-SPC-R-00001 v1.10	<i>RB Technical Specifications</i>
	Sleepers, Bearers, Fastening system and Under sleeper pad	RBGL-TRA-SPC-R-00002 v1.9	<i>RB Technical Specifications</i>
	Consolidated Supply of Multi-Ducts, Cable Ducts, Manholes and Cable	RBGL-SOD-SPC-R-00002 v5.0	<i>RB Technical Specifications</i>



	Channels for construction of Rail Baltica Railway Line		
	Technical specification for Derailer	RBGL-SOD-SPC-R-00005 v2.0	<i>RB Technical Specifications</i>
	Fence Components	RBCN-RWM-SPC-R-00004 v4.0	<i>RB Technical Specifications</i>
	Noise Barrier Elements	RBCN-RWM-SPC-R-00005 v4.0	<i>RB Technical Specifications</i>
7.39	RBGP System RAMS Concept	RBGL-SEA-PLN-R-00004 v 3.0	
7.40	Rail Baltica Product Breakdown Structure	RBDL-DMT-LST-Z-00001 v2.0	
7.41	Requirements Management Plan Template	RBGL-RBR-TPL-Z-00021 v2.0	<i>Template</i>
	RFI Template	RBGL-RBR-TPL-Z-00022 v2.0	<i>Template</i>
	Change Proposal Template	RBGL-RBR-TPL-Z-00023 v2.0	<i>Template</i>
	Change Request Template	RBGL-RBR-TPL-Z-00024 v2.0	<i>Template</i>
	Change Notice Template	RBGL-RBR-TPL-Z-00025 v2.0	<i>Template</i>
	Configuration Management Plan Template	RBGL-RBR-TPL-Z-00026 v1.0	<i>Template</i>
	Change Request Register Template	RBGL-RBR-TPL-Z-00028 v2.0	<i>Template</i>
	Delivery Report Template	RBGL-RBR-TPL-Z-00029 v1.0	<i>Template</i>

	Interface Management Plan Template	RBGL-RBR-TPL-Z-00031 v1.0	<i>Template</i>
	RBGP Verification Plan for Contractor Template	RBGL-RBR-TPL-Z-00035 v1.0	<i>Template</i>
	RBGP Validation Plan for Contractor and FDO Template	RBGL-RBR-TPL-Z-00036 v1.0	<i>Template</i>
	RBGP Verification / Validation Report Template	RBGL-RBR-TPL-Z-00037 v1.0	<i>Template</i>
	System Engineering Management Plan Template	RBGL-RBR-TPL-Z-00040 v1.0	<i>Template</i>
	Interface Control Form Template	RBGL-RBR-TPL-Z-00076 v4.0	<i>Template</i>
	Deliverables Record (Register) Template	RBGL-RBR-TPL-Z-00079 v2.0	<i>Template</i>
7.42	BIM Execution Plan template	RBDG-TPL-013_BEPTemplate	<i>Template</i>
7.43	Ātrgaitas dzelzceļa “Rail Baltica” DS4 posma “Misa - Latvijas/Lietuvas robeža” apakšposms DPS5 (43+000 =>45+134). Būvatļauja Nr.11 (in Latvian) (angl. High-speed railway “Rail Baltica” DS4 section “Misa - Latvian/Lithuanian border” subsection DPS5 (43+000 =>45+134). Building permit No. 11 (in Latvian))	-	

7.44	Previously prepared documents (Topography)	-	<p><b>The information is confidential. Access to this annex will be granted upon signing Annex No. XV of the Special part of the Procurement Conditions.</b></p> <p><i>Please note that Annexes 7.44 and 7.45 of the TS are provided for information only and the Supplier will be required to conduct a new topographical investigation as specified in page 3.3.11 of the TS.</i></p>
7.45	Previously prepared documents (Topography) (The .dwg files in Annex 7.44)		<p><b>The information is confidential. Access to this annex will be granted upon signing Annex No. XV of the Special part of the Procurement Conditions.</b></p> <p><i>Please note that Annexes 7.44 and 7.45 of the TS are provided for information only and the Supplier will be required to conduct a new topographical investigation as specified in page 3.3.11 of the TS.</i></p>
7.46	Previously prepared documents (The .dwg files in Annex 7.08)	-	<p><b>The information is confidential. Access to this annex will be granted upon signing Annex No. XV of the Special part of the Procurement Conditions.</b></p>