Detailed Technical Design Review and Design Expertise Services for Rail Baltica in Estonia

Meeting with Suppliers

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Eriks Dilevs

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Technical Specification

- Technical Requirements for Design Review and Design Expertise
  - Both services shall be carried out according to applicable acts of Republic of Estonia:
    - “Nõuded ehitusprojekti ekspertiisile” Majandus- ja taristuminsti 08.06.2015 määrus nr 62;
    - “Nõuded ehitusprojektile” RTI I, 18.07.2015;
    - “Ehitusasustik” RT I, 19.03.2019,98;
    - “Tee ehitusprojektile esitatavad nõuded” RT I, 03.07.2015,29;
    - Other applicable legislation acts and documents.

- General information and scope of work:
  - According to preliminary design 213 km of Railway in Estonia includes 52 railway bridges/viaducts, 24 eco ducts, 42 road crossings, 284 culverts and other structures which shall be taken into account respectively for every Design Priority Section. This amount of construction objects and Design Priority Sections is used only in the form of Detailed Financial proposal and shall not be treated as limiting and/or restricting the scope of services. Tenderer shall take into account that actual number of total construction objects and structures may change during design process of Rail Baltica.
  - Design Review and Design Expertise service shall be carried out for the following design stages:
    - Master Design – Design Review and Design Expertise;
    - Detailed Technical Design – Design Review.

- Design Review:
  - ESP shall carry out the Design Review services for each deliverable in Master Design and Detailed Technical Design which are provided to ESP by Client;
  - Design Review services minimum scope of work for each deliverable shall be provided according to Checklists and Chapter 5 of Technical Specification;
  - Design review reports shall be done in English;
  - Client has a right to decide whether Design Review remarks provided by ESP shall be implemented or not;
  - ESP shall use Design Review as an input basis for Design Expertise report;
  - BIM deliverables are not part of scope of work for Design Review Services.

- Design Expertise:
  - The Expert shall carry out Design Expertise services for every designed construction object that is required by Estonian legislation.
Schedule and Duration of Works

Time period

- Period for the provision of the Design Review Services and Design Expertise Services is envisaged to last twenty-seven (27) months starting from the Signing Date, however, the Services shall be furnished till the end of the design works for each design section, but no longer than sixty (60) months from the Signing Date.

<table>
<thead>
<tr>
<th>Design Section</th>
<th>Design priority section</th>
<th>Length (Preliminary design)</th>
<th>Indicative date of deliverable submission from Consultant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Master Design</td>
</tr>
<tr>
<td>DTD1 (Rapla – Pärnu)</td>
<td>I</td>
<td>9.6</td>
<td>03.2020</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>13.9</td>
<td>06.2020</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>17.2</td>
<td>08.2020</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>14.0</td>
<td>03.2021</td>
</tr>
<tr>
<td></td>
<td>V</td>
<td>15.7</td>
<td>08.2020</td>
</tr>
<tr>
<td>DTD2 (Tallinn - Rapla)</td>
<td>I</td>
<td>15.8</td>
<td>04.2020</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>19.3</td>
<td>06.2020</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>12.0</td>
<td>03.2021</td>
</tr>
<tr>
<td>DTD3 (Pärnu – EE/LV border)</td>
<td>I</td>
<td>36.7</td>
<td>03.2021</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>31.5</td>
<td>05.2021</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>25.5</td>
<td>08.2021</td>
</tr>
</tbody>
</table>

Meetings

<table>
<thead>
<tr>
<th>Title</th>
<th>Responsible party organizing the meeting</th>
<th>Scheduling</th>
<th>Participating parties (from both parties of the Contract)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick-off meeting</td>
<td>Client</td>
<td>7 days after signing of the Contract</td>
<td>ESP and Client</td>
</tr>
<tr>
<td>Inception meeting</td>
<td>Client</td>
<td>19 days after signing of the Contract</td>
<td>ESP and Client and other experts appointed by contract parties</td>
</tr>
<tr>
<td>Co-ordination meetings</td>
<td>Client</td>
<td>5 days after completion of Design Review and Design Expertise services for particular deliverable</td>
<td>ESP Key-Experts, additional Expert (if needed), Client and Consultant</td>
</tr>
</tbody>
</table>

Rail Baltica
Sequence and description of work procedure.

- **General Description for Design Review scope of Work:**
  - With the respect to each deliverable, the Client shall inform the ESP at least 10 days before the design deliverables will be issued to the ESP for the Design Review and Design Expertise services execution. If available, Client will provide a draft of deliverable to ESP before services execution. Client is not obligated to provide draft of deliverable. Draft of deliverable has not to be assessed. Draft of deliverable is only for informative purpose for upcoming Design Review and Design Expertise services.

- **General Description for Legal Design Expertise:**
  - Design expertise shall be carried out according to national legislation;
  - Design expertise shall check all design parts according to national legislation.

- **Design Review and Design Expertise first examination for each deliverable unless otherwise agreed with the Client shall be carried out in 30 days.** ESP is obliged to submit Design Review and Design Expertise reports to the client after the work completion but not later than 30 days after receiving the deliverable package.

- **During the Design Review and Design Expertise services ESP has 5 days to carry out administrative review.** The aim of the administrative review is to check whether provided deliverable is complete. In case of missing documents/data in deliverable package for Design Review and Design Expertise the ESP shall as soon as possible inform the Client and Consultant. In case of incomplete deliverable it is up to the Client to decide if ESP Service provided shall carry out Design Review Services.

- **After Client receives a report from ESP, Client and Consultant has 10 days to evaluate non-conformities.**

- **Design Review iterations shall not exceed 2 times.**
  - Every following Design Review and Design Expertise repeated examination for each deliverable shall be carried out in 7 days. The Expert is obliged to submit Design Review and Design Expertise reports to the Client after the work completion but not later than 7 day after receiving the deliverable package.
  - On completion of the Design Review and Design Expertise for a particular Service Module, the ESP shall submit to Client following deliverables:
    - Report of Design Review by providing separate word or excel documents with all remarks (if any generated) according to each item in checklists of Annex 2.
Workflow procedure for Design review and Design Expertise

Consultant.

Deliverable

Administrative review + Design Review and Desing Expertise According to BIM EIR and TIDP 30 days (5+25)

(If during Administrative review deliverable is not compliant)

Expertise service provider

Client & Consultant

Report & Checklist

10 days to evaluate with coordination meeting

Building permit

Consultant.

Deliverable

Repeated examination 7 days

To fix

Expertise service provider

Client (Makes decision)

Report & Checklist

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Design Review and Design Expertise and NoBo

NoBo:

- Following requirements stated in NoBo TSI regulations shall not be a part of this Design Review and Design Expertise scope of work:
  - Commission Regulation (EU) No 1299/2014;
  - Commission Regulation (EU) No 1303/2014;
  - Commission Regulation (EU) No 1301/2014;

- ESP shall coordinate works with respective NoBo services provider. Reports developed by ESP shall be available to NoBo services provider. Client shall be included in the coordination process with NoBo. Client will provide ESP with all the necessary contact details of NoBo services provider.
## Experts

### Key Experts:

<table>
<thead>
<tr>
<th>No</th>
<th>Specialist Designation</th>
<th>Professional competence (qualification)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project Manager of Design Expertise</td>
<td>Not applicable</td>
</tr>
<tr>
<td>2</td>
<td>Structural Design Expert for Transport Structures</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>3</td>
<td>Railway Track Design Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>4</td>
<td>Geotechnical Engineer or Engineering Geologist</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
</tbody>
</table>

### Additional Experts:

<table>
<thead>
<tr>
<th>No</th>
<th>Specialist Designation</th>
<th>Professional competence (qualification)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Road Design Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>2</td>
<td>Structural Design Expert for roadviaducts</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>3</td>
<td>Railway Track Design Expert for 1520mm railway</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>4</td>
<td>Water, Stormwater and Drainage and sewerage Design Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>5</td>
<td>Land reclamation systems design Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>6</td>
<td>Hydraulic structures design Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>7</td>
<td>High voltage (11 and more kV) power supply design Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>8</td>
<td>Network and Telecommunications Design Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>9</td>
<td>High pressure Gas supply network design Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>10</td>
<td>Cultural Heritage Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>11</td>
<td>Environmental Expert</td>
<td>Qualified in relevant area (or equivalent certification/license) to provide Design Expertise Services in accordance with European Qualification Framework</td>
</tr>
<tr>
<td>12</td>
<td>Construction works preparation and organization expert</td>
<td>Qualified in relevant area with previous experience for construction works preparation and organization for highspeed railway.</td>
</tr>
</tbody>
</table>
Qualification certificate issuance

- Estonian Qualifications Framework is based on the European Qualifications Framework.
- The conformity of foreign qualifications with the requirements shall be assessed in accordance with the Foreign Professional Recognition Act.
- Conformity of foreign qualifications is assessed by following local authorities.
  - Estonian Road Administration
    - Road
    - Bridges
  - Technical Regulatory Authority
    - Railway structures
    - Geotechnical engineer
    - Utilities
    - Constructions
    - Environment
    - Hydrotechnical structures
    - Others
- Documents to deliver:
  - Digitally signed application form with corresponding template;
  - Copy of identity document (passport or ID card);
  - Evidence of formal qualifications (diploma, certificate, attestation of competence or other evidence of formal qualifications or an education or professional qualification or diploma issued by a competent authority or person) and translations thereof;
  - Copies of documents for professional development training and work experience (if required);
  - A payment order or other confirmation of payment of the costs of processing the summons.

➢ For more information visit https://www.riigiteataja.ee/en/eli/504022016010/consolidate

Rail Baltica
Mitigation of risks and different consequences

- Common approach for all three Baltic state Detailed Technical Design shall be established to ensure that the best possible quality is achieved.

- General Design Expertise according to local legislation without additional Design Review and Design Expertise services with detailed task description.

  - Construction procurement and construction implementation phase:
    - Extension of time for Construction procurement due to incomplete design;
    - Increase of CAPEX for Construction;
    - Problems with project financing;
    - Extension of time during Construction phase.

- Design Expertise with additional Design Review with specific scope of work defined in Terms of Reference for the Design Expertise procurement.

  - Risks during design phase, construction procurement and construction implementation phase:
    - Design mistakes and errors shall be limited to minimum;
    - Design is completed in full compliance with contract agreements;
    - Contractor is not capable to prolong the procurement deadline relying on design errors and claim for variations during construction works relying on descripencies in design;
    - Savings on CAPEX and OPEX.

Rail Baltica
Access to data and file sharing during work execution

File sharing using RB Rail Common Data Environment

OPTION: “CONSULTANT” USES ITS OWN PROJECTWISE LICENSES
This use case is for Consultant companies which are Bentley ProjectWise license holders. In this case, the Client will set up a Connected Project within the platform and the Consultant has to do the same on its side of the ProjectWise platform. These two Connected Projects will then be linked and used for Deliverables Management between the Connected Projects. In this case the Consultant:

- Access the dedicated, project relevant information on the Clients data source;
- Exchange (send/receive) information with the Client using the Common Data Environment Deliverables Management platform ensuring traceability of all deliverables and communications;
- View the delivered dedicated project information in Client’s data source;
- See the audit trail of all Deliverables and information exchange history;
- Fully control and administrate the number of users who has access to this its side of the Connected Project on Consultant’s Side of CDE;
- Fully control the access right levels for the users who has the access rights to the Connected Project on Consultant’s side of the CDE;
- Can add as many users as it considers necessary to have access to the Connected Project;
- Does cover the license cost for using the platform for all users from Consultant’s side.
Questions?
Paldies!
Thank you!
Aitäh!
Ačiū!
Kiitos!
Danke!
Merci!
Dziękuję!