

PUBLIC TENDER

ARCHITECTURAL DESIGN COMPETITION FOR THE RABA-LAI BRIDGE IN PÄRNU

REFERENCE NO. 217156

TENDER DOCUMENTS (TERMS OF REFERENCE)

Type of procedure: open design competition

Contracting Entity: Pärnu City Government

Address: Suur-Sepa 16, 80098 Pärnu linn, Pärnu linn

Pärnu 2019

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Source materials for the design competition and additional information:

1. Geodetic base map of the design area
2. Base map of the banks of Pärnu River
3. Materials of applicable detailed plan
4. Materials of detailed plans of the surrounding area
5. Geotechnical survey report
6. Photos of the design area (Source of orthophotos and aerial photographs: Land Board 2019)
7. Terrain model (base map: Land Board 2019)

Source materials for the design competition are available at:

http://server.parnu.ee/riigihanked/voistlused/raba_lai_sild/

1 Objective and background of design competition

1.1 Objective

The objective of the architectural design competition consists in designing a new bridge and its surroundings, based on the order of Pärnu City. The objective is to obtain the best architectural and structural solution of the bridge as well as traffic scheme of the bridge corridor, landscaping of its surrounding area and urban design solution.

Total area to be designed is 53.8 ha.

The bridge and its surroundings shall have high quality and representative architectural design, state-of-the-art level of engineering and suitable for given location in terms of urban design. The bridge and its surroundings shall enhance the spatial quality of the area, be functional and convenient for end users, and built and maintained at reasonable cost.

Source materials of the design competition include:

1. Detailed plan of Raba-Lai bridge. Job no.: 1784DP1. AB Arters Terrae OÜ. Partially approved on September 26, 2019, decision no. 70.
2. Contract entered into by and between Pärnu City Government and Estonian Association of Architects for carrying out the design competition, 06.06.2019 no. 8-4/717-70
3. Instructions for Estonian Architectural Design Competitions 2013 by the Estonian Association of Architects.

Main organiser of the design competition is Pärnu City Government.

Terms of reference were drafted by architect Kalle Komissarov.

Terms of reference have been approved by Pärnu City Government and Estonian Association of Architects.

1.2 Background

Development Plan 2035 of Pärnu city voices concern about the technical condition of bridges. There are five bridges across Pärnu River and its tributaries, two of them for light traffic. Large traffic load of Siimu bridge (built in 1937, renovated in 1957/1958), Central bridge (built in 1938, re-built in 1956) and Papiniidu bridge (built in 1976) has created a need for building a new bridge across Pärnu River; light traffic section of Central bridge also needs improving. Completed reconstruction design of Central bridge provides for extending the bridge plate (one additional lane, extended footpaths).

The development plan provides for improving attractiveness and functionality of urban space through spatial development of historical city centre and strengthening of the heart of the city in every way. It is necessary to improve connections with city centre (Raba bridge, connection to Rail Baltic station and airport) and make them more pedestrian-friendly. City centre needs better connection to riverside areas.

Extract from the explanatory note of the DP:

It is necessary to improve the connections between the city centre and other parts of the city, because the position of Pärnu city centre as an active city hub has deteriorated over time. This is mainly due to new commercial centres built outside the city centre, relocation of public agencies to other parts of the city, increased traffic load and also increased competition in the city centre among large shopping centres in the area of Ringi and Aida Streets. As a result of that, lots of people no longer need to visit the city centre. Moreover, emergence of shopping centres and other commercial facilities on the outskirts of the city further the need to provide various services in the centre, and increases people's dependence on motorised transport (cars, public transport). This does not represent a sustainable development. Compact, active and attractive city centre, sustainable traffic solutions connecting different parts of the city and supportive

infrastructure represent key features of a well-functioning and efficient city. One way to improve access to the centre is the Central bridge that connects rather heavily populated Rääma and Ülejõe city districts. Old Town and its surroundings must remain an important destination for the inhabitants of the city. City centre must ensure good access, while minimising car traffic that has no purpose there.

Variants for bridge corridor

The location of the bridge corridor has been subject to long public discussion. When choosing the location, the aim was to have a bridge with minimum length that crosses Pärnu River as perpendicularly as possible. Another important aspect was to keep the environmental impact and cost of construction as low as possible.

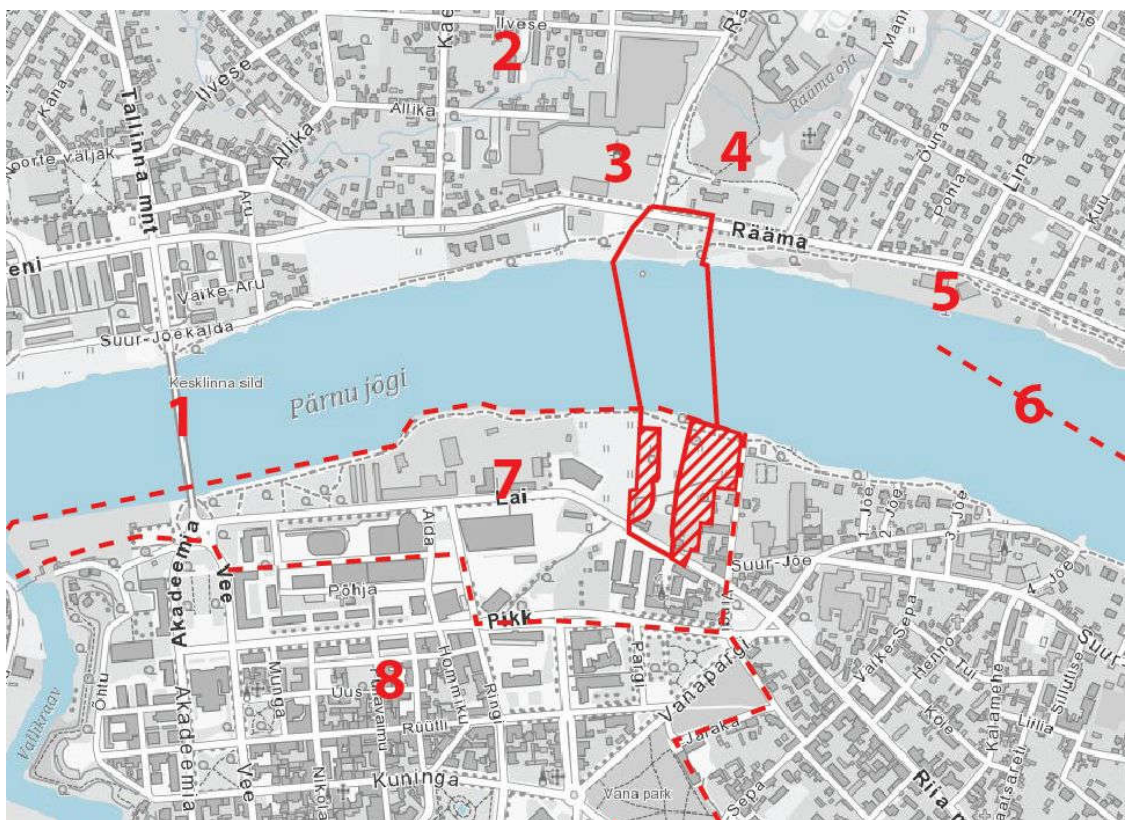
Aligning the bridge with Pargi Street allows spatial extension of the city centre to Pargi Street. Considering that this variant does not shift entire traffic load from the bridge to the extension of Aia Street, it allows more pedestrian-friendly connections across and along Aia Street in the future.

2 Area to be designed and its close vicinity

2.1 Area to be designed

Pärnu is a harbour and resort city in Southwest coast of Estonia at Pärnu Bay, downstream Pärnu, Sauga and Reiu rivers. With its approximately 40,000 inhabitants, Pärnu is the fourth biggest city in Estonia. The city covers 33.15 km² area, 20% of it consists in parks and green areas. There are three protected areas within the borders of Pärnu city.

Area to be designed is located at the border of Pärnu city centre and Rääma city district, between Raba Street on the right bank and Lai Street on the left bank of Pärnu River.



Scheme 1: Situation scheme. Based on Land Board map.

Area to be designed (continuous line) and stage II of detailed plan (hatched); 1- Central bridge; 2- Rääma city district; 3- AS Wendre production area; 4- Rääma park; 5- Rääma rowing facilities; 6- direction of rowing channel; 7- protected zone of heritage

conservation area; 8- heritage conservation area of Pärnu Old Town.

Area to be designed includes the following properties: Lai Street 24 (62510:131:4350), Lai Street 26 (62510:131:9611), riverside path on the right bank L4 (62507:018:0002), Raba Street T2 (62507:018:0001), Rääma Street 23 (62507:018:3540).

Ground benchmarks in the area to be designed are 2 to 6 m on the right riverbank and 1 m on the waterline 1 m; 1 to 3 m on the left riverbank. Area to be designed is situated in the area at risk of flooding. According to the data of flood-related risk management plan for West Estonian basin, issued by the Ministry of the Environment, Pärnu city is subject to the following water levels during flooding:

- 10-year probability abs h 2.09;
- 50-year probability abs h 2.62;
- 100-year probability abs h 2.88;
- 1000-year probability abs h 3.71;

In comparison, during the storm in January 2005, water level in the city rose to 2.95m.

Pärnu River is Natura 2000 special conservation area, and pursuant to section 70 of the Nature Conservation Act its objective of protection is to types of habitats specified in Annex I or of the species specified in Annex II to Council Directive 92/43/EEC.

In the green areas along the riverbanks grows forest stand consisting of various species. Both watersides of Pärnu River are hemmed with ca 10 m wide belt of dense aquatic vegetation (reeds and *Geum Rivale*), indicating slower flow near riverbank. Width of the river at the location of designed bridge corridor is 245...255 m and it is relatively shallow.

The area in question is partially located in the protected zone of Pärnu Old Town and resort heritage conservation area (monument reg no. 27007).

Area to be designed has been partially built on. The area between Lai Street and the river consists mostly wasteland or features industrial buildings from Soviet times. Plan also included multi-storey buildings (on the plot at Lai Street 22), but they have not been built yet. East of the area to be designed, small houses have been preserved on small plots near Vingi, Suur-Jõe, Lai and Pikk Street, built before WW II. On the right bank of Pärnu River, a production complex is located northwest and park and kindergarten northeast of the area to be designed.

Area to be designed contains a wooden house at Lai Street 26, built in the first half of the 20th century. According to the traffic scheme version in the detailed plan, it is to be demolished to make way to roundabout, but that building could still be preserved if possible, because it is one of the oldest buildings preserved.

On the plot at Rääma Street 23 on the right riverbank there is a low-value two-storey building made of silicate bricks, which is to be demolished. The water extraction point or “barrel” made of silicate bricks in Pärnu River, aligned with the extension of Raba Street shall also be eliminated.



Scheme 2. Map of Jaanson's trail with the location of new bridge (black).

There is a riverside light traffic road and health trail or “Jaanson’s trail” cutting into the area to be designed on both riverbanks, designated by original oar-shaped luminaires. The 8 km long trail was opened in 2014 and it has been improved since then. Left bank solution was provided by architectural bureau Luhse and Tuhäl.



Photo 7. Health trail on the left riverbank. Source: Google maps.

2.2 Overview of plans

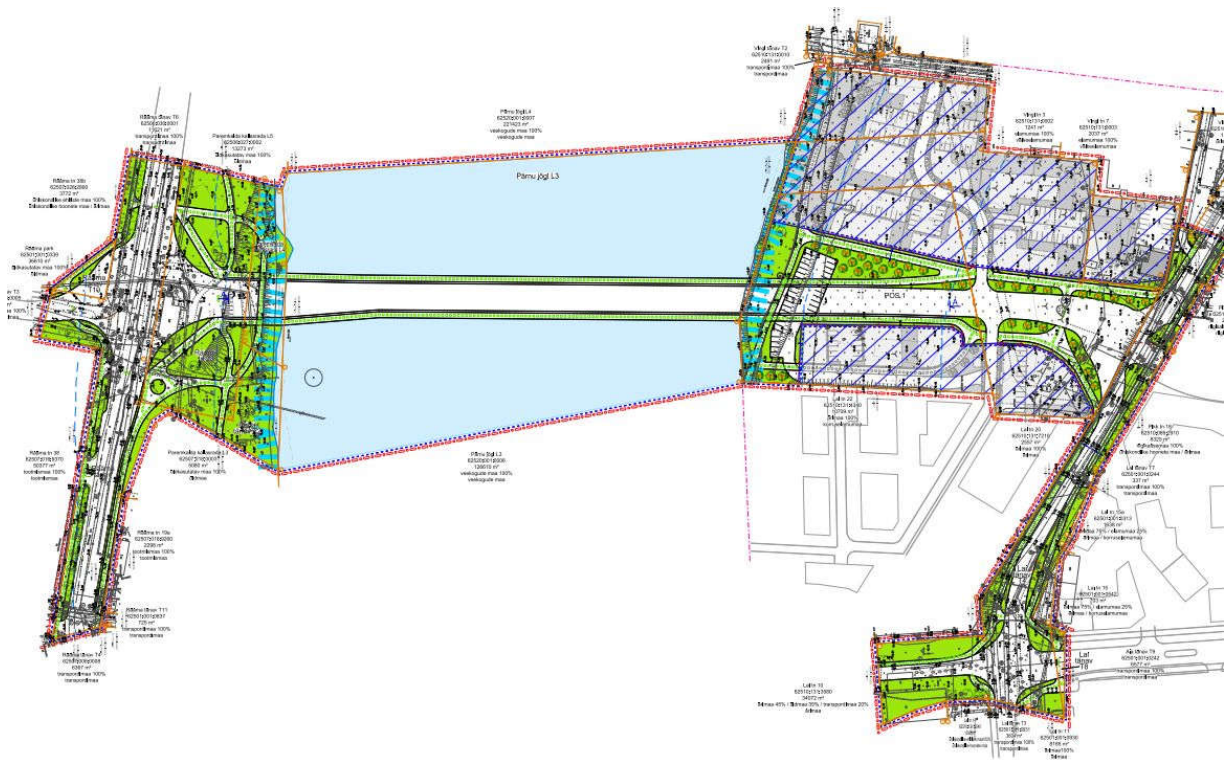
Abstract from detailed plan of Raba-Lai bridge (source material, folder 3)

Job no: 1784DP1. AB Artars Terrae OÜ

Source document of the plan is the decision no. 49 of Pärnu City Council dated June 15, 2017 “Initiation of the preparation of detailed plan of Raba-Lai bridge”. In the course of preparing the plan, the area in question has been reduced and traffic scheme on exclude properties will be solved in the course of design work. In view of the size of the planned area and scope of activities, detailed plan will be established in stages.

Stage I of the plan involves determining the location of the bridge and bridge corridor, general traffic scheme regarding the bridge and conditions for establishing connecting plots necessary for planning the bridge and bridge-related streets and intersections. Following the implementation of Stage I of the plan, an international design competition shall be carried out in cooperation with the Estonian Association of Architects, with the purpose to get the best architectural solution for the bridge and adjacent areas in accordance with general architectural and urban design principles.

Stage II of the plan provides solution for the structure of plots adjacent to the bridge and its approach roads, building rights of plots, vegetation, traffic and parking solutions, servitude areas, etc. Prior to adopting Stage II of the plan, the relevant design competition will be carried out in cooperation with the Estonian Association of Architects.



Scheme 3: Abstract from the main drawing of detailed plan.

Planned solution allows building a new bridge from the line of Raba Street up to Lai Street and the line of extension of Pargi Street. The area left over from the service land for the bridge will have mixed buildings, location and building rights of which will be determined in Stage II of the plan after completing architectural or planning competition (drawings of the plan indicate potential solutions).

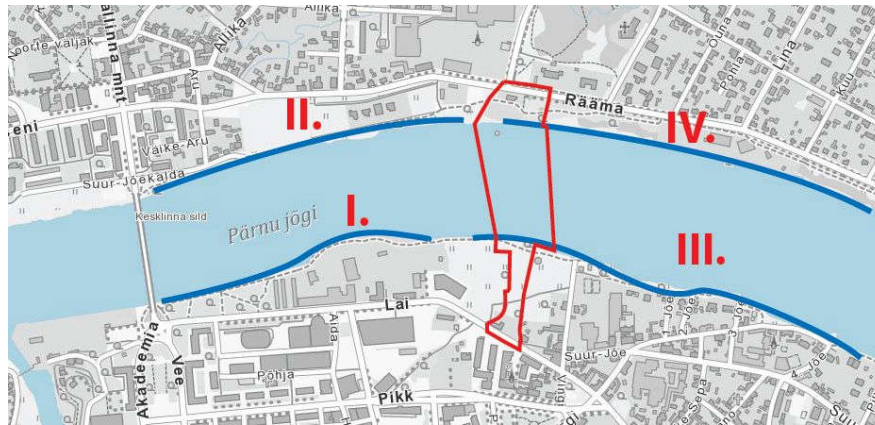
In the course of the plan, special conditions of heritage conservation were compiled with regard to the DP of Raba-Lai bridge.

AB Artes Terrae, Job no.: 1767ET. Special conditions have been added to the source materials of the competition (Annex 4).

Abstract from detailed plan of the banks and water area of Pärnu River (source material, folder 4)

AS K&H, Job no.: 03DP109

Planned area covers water area and riverbanks of Pärnu River in Pärnu city between Central bridge and Papiniidu bridge. The principles and requirements used for describing the area of new bridge in the plan have been added to clause 5.3 of the terms of reference "Requirements for bridge surroundings".



Scheme 4: Functional zones of riverbanks

The plan divided riverbank into different zones, which serve as a basis for determining main architectural criteria and principles for vegetation and public services and amenities.

Zones 1 and 2 – designed as modern urban space, accessible for people all year round, during day and night. As for water area, both zones shall be used for arranging recreational craft traffic and, where possible, for long-term moorage of ships for museology or business purpose. A design competition will be held to find the best design solution.

Zone 3 – Along the riverbank runs light traffic road that allows people to travel from city centre to riverside residential plots and berthing area for recreational craft. Two ramps are planned for this zone. The zone is primarily intended for active leisure (promenade). It is necessary to value the so-called suburban vibe or milieu of riverside streets – design work has to take into account the area of cultural and environmental value located between Vingi Street and IV River Street.

Zone 4 – riverbank area from future Raba bridge on the right bank of the river to Niidu forest. Planned area includes a modern park, consisting of playground, sculpture park, theme park and other attractive elements that will bring people to the right bank of the river. Different areas of the park must extend along the riverside and constitute a whole. Park architecture will utilise combination of stone, glass, metal and wood. Vegetation shall use decorative and colourful tree and shrub species so as to look pleasant to the eye all year round.

3 Surveys

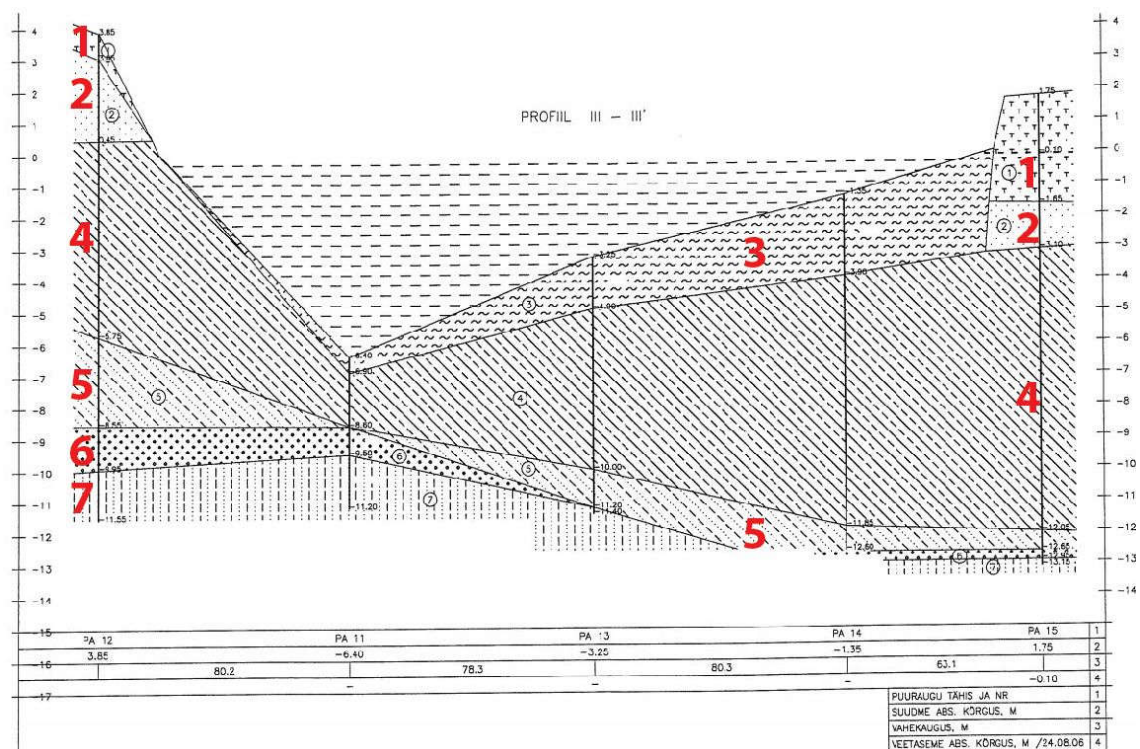
Ex ante evaluation of strategic environmental assessment

Ex ante evaluation of strategic environmental assessment of potential location of Raba-Lai bridge. Environment agency Viridis OÜ, Job no. 61/18.

Resulting from the design solution of the new bridge and, primarily, the number of bridge pillars to be erected in Pärnu River, the construction of the bridge has significant environmental impact and in order to determine the extent, significance of such impact and area affected by it is necessary to initiate EIA (environmental impact assessment) of the application for the permit for the special use of water. It is considered reasonable to combine the processes of SEA (strategic environmental assessment) and EIA.

Geology (source material, folder 5)

Report of geotechnical survey in 2006 – Sag pipes of Pärnu River. Job no. 1767-06. OÜ REI Geotehnika



Scheme 5. Surveyed geological profile in the line of III Vingi Street.

Source: Report of geotechnical survey, Annex 5

1- made ground; 2-silty sand; 3-muddy silty sand with abundant organic substance; 4-fluid clay; 5-fluid sandy loam and silty loam; 6-gravelly fine and medium sand; 7-moraine (sandy silt moraine with hard consistency and coarse-grain material content 20-40% - moraine is very sandy at times).

The boreholes of this survey did not reach limestone of Lower Silurian bedrock (i.e. 17.3m deep in the river and 20.0m deep on riverbanks). Soil cover consists of moraine, fluvioglacial sand, fluid glaciolacustrine clay with a top layer of marine and fluvial sands on top. Top surface on riverbanks consists in made ground.

At the time of performing the survey, soil water level was similar to river water level.

Geotechnical conditions. Fluid clay soil is predominant up to 12m from water surface. In the line of Vingi Street (profile III-III), moraine top layer reaches absolute height of -9.5m and the layer of dense sand above moraine reaches absolute height of -8.6m.

4 Terms of reference of design competition

4.1 General requirements



Scheme 6. Area to be designed (continuous line) and built up areas of Stage II (white line) on an aerial photograph. Based on Land Board photo.

- The bridge to be designed along with its surroundings must have high architectural quality and representativeness, high level of engineering, and fit in given location in terms of urban planning. The bridge and its surroundings must improve the spatial quality of the area, be functional and convenient for end users, and also built and maintained at reasonable cost.
- The bridge represents a crucial object in terms of the city, and thus it has to be representative and worthy of its status. Meanwhile, the design solution must be functional and constructed in the manner that ensures maximum reliability.
- Area to be designed must be given an integral concept and spatial solution: architectural and structural solution for the bridge, landscaping of its surroundings, analysis of connections with urban planning.
- Civil engineer shall be involved in the development of the design solution.
- Design solutions shall be prepared in consideration of the terms of reference of the competition and valid detailed plan.
- Design solution shall consider applicable regulations and instructions (including requirements for the disabled and principles of inclusive design).
- External finish shall use high-quality and durable materials.

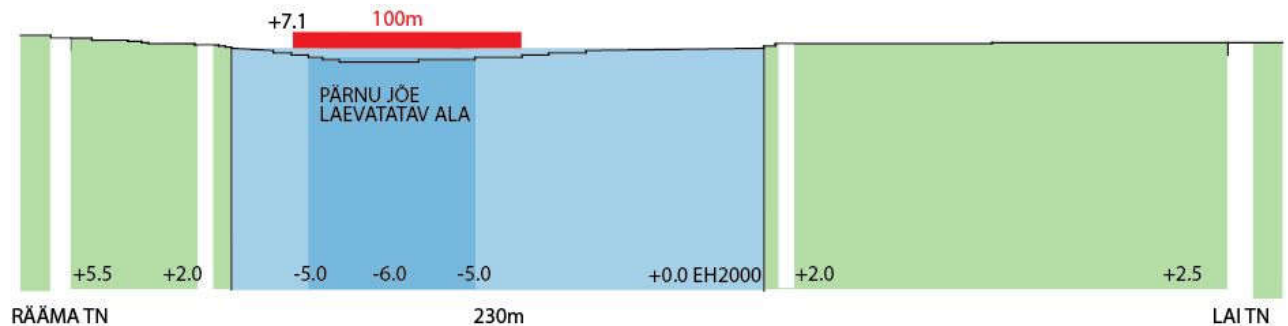
4.2 Requirements for bridge design

Bridge structure must be attractive and structurally feasible. The bridge and its surroundings shall constitute an architectural whole. The type of bridge structure is left open in the design competition.

Preferred solution involves load-bearing point or points in the river. Due to geological situation, it is better to have as few bridge pillars as possible.

Span height required for shipping must be at least 7.1 m in EH2000 system, based on navigable span of Papiniidu bridge.

Deeper right-hand part of the river shall be left free for shipping (river depth -5.0 and -6.0m). Span must be above the deepest part of the river. Minimum span width is 50 m.



Scheme 7. Section and view of profile of the area to be designed at bridge location. 100m red box indicates the scale.

Bridge dimensions must ensure proper traffic throughput and satisfy pedestrian needs.

According to the plan, maximum width of bridge corridor is 21 m in order to fit maximum three 3.25 metres wide lanes in the roadway. Pedestrian and cyclist areas are planned for both sides of the bridge. Pedestrians and cyclists must be separated. A wider, separated footpath and cycle path will be designed on the downstream side of the bridge (view towards the Old Town).

Gradient of the cycle path and footpath on the bridge must not exceed 5%.

Attention must be paid to the convenience of the bridge. Certainly, the design shall take into account wind effect on the pedestrians and ensure traffic safety. It is important to ensure the safety of bridge users – prescribe barriers in accordance with min. applicable norms.

Area to be designed is subject to airfield protected zone with height limitation up to 45m.

Ice run must be considered when designing river pillars.

Utility networks. Bridge must have space for high and low voltage cable and heating and telecommunication duct.

Bridge must allow using mechanical means for snow removal.

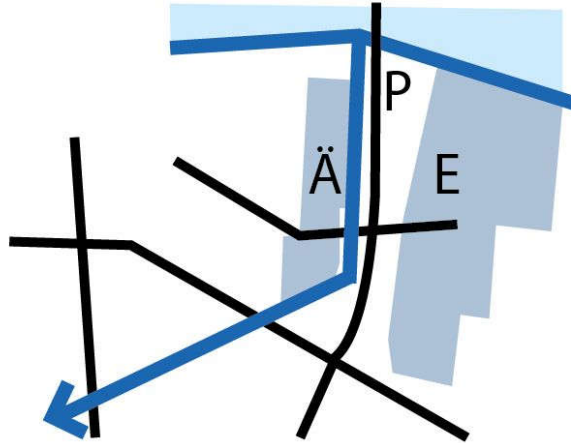
Design must describe the discharge of rainwater from the bridge. All rainwater sewerage pipes are designed to have oil traps before they enter in the river.

Solution must be provided for lighting of the bridge and roads. Roadway lighting must comply with applicable norms; decorative lighting solution must also be added.

4.3 Requirements for the surroundings of the bridge

Public space

Area to be designed must be designed as a high-quality area that is part of urban space. Riverbanks must serve as green corridors and ensure mobility of light traffic (pedestrians, cyclists) along the riverbanks. Design must ensure easy mobility option for light traffic and pedestrians towards the City centre and Riia Street.



Scheme 8. Scheme of passages. Consideration shall be given to the direction of passage connecting riverside and city centre and running partially along old railway route (blue arrow). Passage direction should support the planned built area with commercial function left of the exit road.

Shore path for public use shall be ensured on the riverbanks. The width of shore path in the navigable part of Pärnu River is 10 m. Shore path must allow passage to full extent – there is no need for a path, but it has to be passable.

Average width of footpaths is 4 m. At places where light traffic road crosses the bridge, light traffic road must have grade separated crossing with roadway on both riverbanks. The section of light traffic road under the bridge must be sufficiently wide, illuminated and aesthetic, and have safe effect. Footpath design must allow using wheeled objects (bicycles, baby prams).

It is possible to establish parallel paths on different levels along the riverbank to make the landscape more interesting and exhibit the fortifications during low water level when viewed from the river. Viewing platforms and rest areas can be established next to the planned footpath (by example of Jaanson's trail).

No barriers are prescribed for the area to be designed.

Design solution must prescribe the need for and locations of minor elements suitable for the area - benches, luminaires, trash bins, pavilions, shelters, stairs, etc.

Riverbank fortifications

Area to be designed must provide solution for fortification of riverbanks.

The extent of massive riverbank fortifications must be kept to minimum.

Choice of material and structure is important when designing passive fortifications for protecting the slopes from erosion (mainly shore pavement), as they may vary at different heights.

Detailed plan of the banks of Pärnu River prescribes the following options for fortifying riverbank:

- Recommended height of vertical fortification on the left bank – abs h 2.1 m (range 1.2-2.3m).
- Height of vertical fortification on the right bank from Central Bridge to Raba Bridge – abs h 2.1 m. Natural riverside is to be preserved upstream from the bridge.

Elsewhere, natural looking non-massive fortifications may be erected of fieldstones. Specific height of bank fortification in accordance with the design solution. Footpath passage (water may flood the footpath in case water level rises) must be clearly noticeable at the beginning of relevant quarter.

Vertical fortification shall have stairs that allow access to water during different water level.

Green areas

Area to be designed must have consistent vegetation.

It shall allow open views towards and from the river. However, that does not mean that the riverbanks must be cut clear.

Valuable trees shall be preserved in the streets and riverside green areas. Additional new vegetation shall be provided to the extent of entire area to be designed, in consideration of protective zone for utility networks and growth of existing trees. Parking area shall be articulated by means of trees.

Preferred vegetation includes undemanding and durable species and solutions. Vegetation shall have different layers.

Street lighting

Shore path must have outdoor lighting, taking into consideration the luminaires on Jaanson's trail.

Different types of luminaires should be used in different quarters.

Natural areas must not have too intense luminous flux.

Lighting design may emphasise interesting individual objects (tree, chimney, riverbank fortification) with directional light, so that they are visible from the river or from the other shore.

Parking area

Design must include a parking area for 35 cars under the bridge on the left riverbank with minimum 2.4 m clearance between parking area floor and bridge structure. Design of pillars under the bridge must create a safe and pleasant environment. Parking area would function as a park-and-ride facility.

Traffic and connections

The traffic and parking scheme of the area to be designed must be simple, logical and safe.

Transport solution must draw on valid detailed plan and terms of reference.

According to DP traffic solution, the roadway intersections at the ends of the bridge are shown with one lane or partially two-lane roundabouts, but other intersection types may be considered.

Exit lane on the left bank shall take into account crossing streets in Stage II built up areas. The intersection on Lai Street shall have an option to connect to the intersection on Pargi Steet. Design must include cycle paths and/or footpaths by all streets.

Environmental sustainability

The choice of construction and finishing materials, engineering and maintenance of the bridge and its surroundings must be as sustainable and environment-friendly as possible.

5 Format

5.1 Scope of the design solution

Drawings

- Plan of the bridge on a scale of 1:500;
- Side view of the bridge on a scale of 1:500;
- Plans of bridge ends (indicate traffic concept and parking solution, landscaping concept, including vegetation, minor elements, lighting, pavement solutions, etc.) on a scale of 1:200;
- Longitudinal sections of bridge ends on a scale of 1:200;
- Cross-sections of the bridge (at least 2) on a scale of 1:100;
- Drawings of elements like barriers, posts and the like, where necessary.
- Schemes that outline the functioning of the bridge and interconnections with urban design on a freely chosen scale;
- 3D visuals (up to 4 visuals from directions that best represent the design concept, including night view and long-distance view)

Letter of explanation

- Overall concept of design solution
- Description of urban design and planning solution, incl. traffic scheme, landscaping, public space;
- Description of architectural solution, incl. functional operation of the bridge, lighting solution.
- Description of structural solution and main technical indicators – basic dimensions (overall length, span lengths, gauges), materials used, general work principle, description of the cross-section of the bridge.

5.2 Form of design solution

Form of the design solution must comply with the following criteria:

- Graphic materials shall be submitted on plotting sheets with rigid base, with dimensions 700x1000mm or in size A1;
- Text materials shall be submitted in size A4, bound;
- All parts of the design solution shall be submitted printed on paper and electronically as printable jpg and/or pdf files on data carrier and/or via the register of public procurements in accordance with tender documents;
- Design solution shall maintain its anonymity – graphic materials and the letter of explanation shall be supplemented with a keyword.

6 Sources of reference

- Detailed plan of Raba-Lai bridge. Job no.: 1784DP1. AB Artars Terrae OÜ. Partially approved on September 26, 2019, decision no. 70
- Detailed plan of the banks and water area of Pärnu River, AS K&H, Job no.: 03DP109; including geodetic base plans: OÜ Pärnu Maamõõduteenistus 06.2002 (job no. TM-166/02) and Geodesics Division of the Planning Department of Pärnu City Government 06.2009 (job no. GT-147/09);
- Report of geotechnical survey – sag pipes of Pärnu River. Job no. 1767-06. OÜ REI Geotehnika
- Pärnu Development Plan 2035
- Map server of the Land Board, Google maps, Fotis, Ajapaik
- Flood-related risk management plan for West Estonian basin, issued by the Ministry of the Environment management. Ministry of the Environment, 2016.
- <https://gis.vta.ee/nutimeri/>
- <https://parnu-lv.maps.arcgis.com/>
- <https://et.wikipedia.org/wiki/Pärnu>

- Instructions for Estonian Architectural Design Competitions by the Estonian Association of Architects

Article about the history of bridges in Pärnu, published in *Pärnu Postimees*.

“Major bridges in Pärnu in 1803–2007”

Tõnu Kann, Pärnu Postimees 17.03.2007

“When Peter Reinhold Harder, a merchant from Pärnu who was not only a successful businessman but also member of the city government and police burgomaster, together with other merchants from Pärnu financed the building a float bridge across Pärnu River in 1803, they hardly believed that it would continue to serve the residents and visitors of the city for well over a century. But that is what happened, although it might have been built for vanity rather than for actual need, driven by expected visit of Czar Aleksander I, who indeed visited Pärnu in a few years.



Photo 1. Leather Bridge in Pärnu. Source: Ajapaik.ee

The bridge, popularly known as Leather Bridge, connected the Water gate with Jänesselja road, which was a dead end back then, leading to Jänesselja Manor and not onwards to the capital city. The road to the capital started at the Tallinn gate, continued to the river, where rafts took you to Old-Pärnu and from there to sandy road towards Tallinn. Current Haapsalu road was then referred to as “main road”, but it was officially named Kuressaare road in the 1930s. After completion of the float bridge, people started to use the bridge to go to Tallinn: they turned left at the end of the bridge, to the drifting sands of fishermen village, where they reached Tallinn road across the estuary of Sauga River.

The importance of Tallinn gate in the city life was greatly reduced while the importance of Water gate, which was formerly used for fishing and drawing water, increased a lot. Water gate was demolished on the second half of the 19th century along with the city wall built in the 17th century. That was also the end of Karja (Riia) gate. Leather Bridge was fully functional until grand opening of the Great Bridge in Pärnu on November 6, 1938. That was the prettiest bridge ever built across Pärnu River.

Long story and short life of the Great Bridge

The long story of short-lived Great Bridge started in 1903, during the celebrations of the 100th anniversary of the Leather Bridge. That was a peculiar jubilee, because the bridge sunk and was under water on May 23. For two weeks, the connection between two city districts was maintained by means of barges and boats, until the bridge emerged above the again. Considering that the Leather Bridge had become regionally important road extension over the century, the sinking of the bridge caused major trouble, so that on June 10, 1903, the Governor of Livonia

wrote to the Mayor of Pärnu a letter, ordering the latter to take steps for building a new bridge. The City Government addressed seaborne trade and ports administration for funding. However, the city was asked to show the design of the new bridge at first. Bridge design was ordered from Munich, it was completed in 1906 and cost 4,500 roubles. That was all.

It was not until in 1913 – a crucial year in czarist Russia in view of the 300th anniversary of the Romanov dynasty and big promises made by the government – that Pärnu was granted half a million roubles of state money for erecting a new bridge. However, construction was made impossible due to the outbreak of World War I in 1914 and Leather Bridge continued to service people. In the independent Estonia, the construction of a new bridge in Pärnu was opened for discussion again only in 1925, when the city government submitted to the Ministry of Roads a design of the bridge made in 1906, but it was returned to the city government with recommendation to build the bridge by using reinforced concrete and not iron structures due to iron shortage at that time.

Construction of Pärnu bridge was revived only after 1933, when Konstantin Päts from Pärnu county became the Head of State. Competition was organised to find the builder in March 1935, and the winner was a Danish bridge construction company. Design was based on largest loads prescribed for German technical requirements, the length of the bridge from bank to bank was 210 m and total length 255 m. The bridge had an opening mechanism. It took a minute, or 100 seconds in case of strong wind, to open it by using engine power. Bridge was also equipped with manual opening mechanism that allowed opening it within fifteen minutes. The bridge was named Great Bridge of Pärnu (Pärnu Suursild) and its total construction budget reached 1,421,000 kroons.

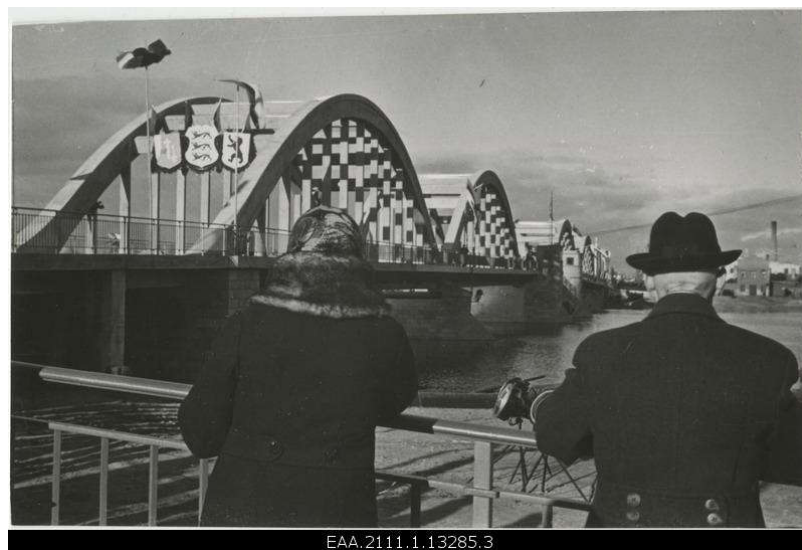


Photo 2. Opening ceremony of Great Bridge in Pärnu. Source: Fotis.ee

Grand opening of Great Bridge took place on November 6, 1938 in the presence of Konstantin Päts. It was the prettiest bridge ever built across Pärnu River. The first ship to pass through the span was cargo steamboat Kassari, sunk by a Russian submarine 11 months later on December 10, 1939.

Great Bridge was blasted in the morning of September 23, 1944, immediately before Russian tanks arrived to Ülejõe area. A day before, horses of the escapees had been shot down at the berth of Great Bridge, their carcasses still laying there in the morning of September 23 according to eyewitnesses. Who were those coldblooded men in German uniform, who set fire to Pärnu, obstructed extinguishing of houses burning after the bombing attack by Russian airplanes, killed the horses and blasted the bridge at the last minute? The only thing that eyewitnesses agree on, is that they were neither German nor Estonian soldiers.

Siimu Bridge had already been blasted either at night or in early morning before destruction of Great Bridge.

In the autumn of 1944, a wooden bridge was built over Pärnu River, which was used until December 31, 1956. On that day was held the opening ceremony of the contemporary Central Bridge, which was also named Grand Bridge. The first car to cross the new bridge, was a taxi driven by Abram Ratut. That bridge was also supposed to be extensible, but the Soviet builders did something wrong and the opening mechanism did not work.



Photo 3. Võidu Bridge (“Victory Bridge”) opened in 1956. Source: Fotis.ee

Some of the contemporaries remember that it was not the opening, but closing mechanism that failed to work, because the bridge was opened during test, but failed to close. In order to get the bridge back in working order, a Russian tank was sent to the bridge so that it forced the bridge section down by its weight and the section was then welded together forever. Contemporary Central bridge was built since January 1954, i.e. for three years. Old pillars were used, but according to the media, they were so badly demolished that needed labour intense restoration. Disassembly of the temporary wooden bridge built in December 1944 was completed in March 1957.

Short story of Siimu Bridge

At the location of current bridge, there was an old float bridge across Sauga River, built there after the completion of Leather bridge. In any case, a lithography originating from mid-1860s depicts view towards Pärnu from Ülejõe and it includes Sauga float bridge. However, considering the narrow estuary, the float bridge might have been built already much earlier.

A drawing of Sauga estuary originating from 1795 also shows some sort of float device with people and even horses on top.

Sauga float bridge, named after local Siimu tavern, looks shabby on almost century-old photos. The bridge has been and is still called Old Pärnu bridge. Construction of a new bridge on the estuary of Sauga River was included in the agenda along with the plan to build Great Bridge. In 1934, the construction of Siimu Bridge was included in the construction plan of Estonia bridges and works were commenced in October 1935.

In spring 1936, E. Jaanson from Old Pärnu wrote, “Perhaps Old Pärnu could have been proud of itself for once because of the new bridge, but it is our sad fate that New Pärnu gets a bigger and more expensive bridge again, and the residents of Old Pärnu and their bridge remain unnoticed.”



Photo 4. Old Siimu Bridge. Source: Fotis.ee

In fact, it turned out better, because there were two things that no one could take from Siimu Bridge – it was completed before Great Bridge, in January 1937, and it was the first arch bridge in Estonia. Just like Great Bridge, Siimu Bridge was also built by a Danish company. Although the bridge was already in use (with certain restrictions), it was officially opened on August 6, 1937. Bridge was opened by Oskar Kask, former Mayor of Pärnu who became Estonian Minister of Social Affairs. Total cost of Siimu Bridge was EEK 137,000.

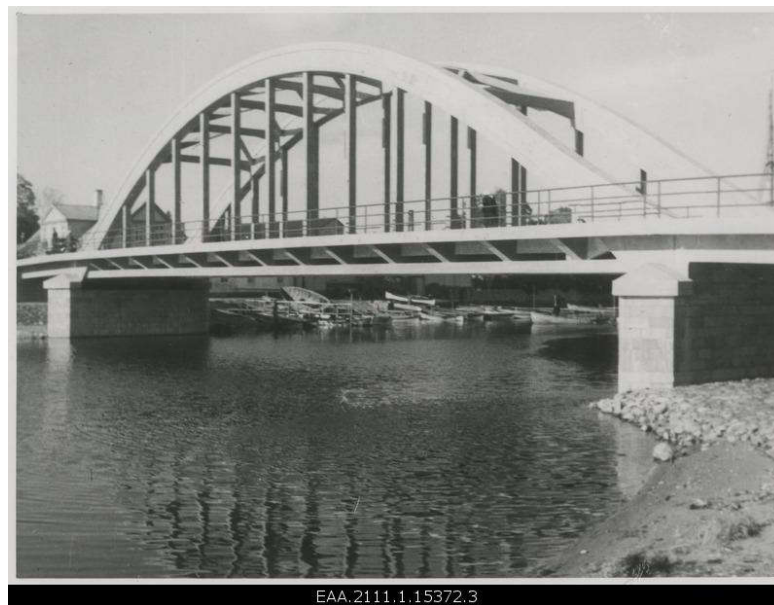


Photo 5. Siimu Bridge. Source: Fotis.ee

As previously mentioned, Siimu arch bridge shared the same fate as Great Bridge and was blasted in September 1944. Another float bridge was then built on Sauga River near Emajõe Street, which was used until completion of new Siimu Bridge in 1958. According to some, it is the prettiest bridge in Pärnu today.

Unfortunate story of Papiniidu Bridge

Construction works of Papiniidu Bridge commenced on January 23, 1973, when the builders set the first pile in the riverbank on the side of Papiniidu Street. Newspaper *Pärnu Kommunist* wrote, “Unique technique was employed at once. Piles were driven in by using fully rotational pile drivers. Introduction of new machinery created new employment relationships and multinational collective. The enthusiasm of the builders stood against moody riverbed. Human will and machine power overcame all obstacles.” Bridge was opened for use on December 30, 1976 without finishing the pavement.



Photo 6. Papiniidu Bridge. Source: EMM

Despite the efforts of “multinational collective” of the builders, Papiniidu Bridge lacks quality in terms of both structural durability and finish. Bridge was only ten years old, when the expert assessment of specialists from Tallinn Polytechnical Institute revealed substandard condition of several structural elements of the bridge. Bridge was not declared as in danger of collapse, but it certainly required major repairs.

Papiniidu Bridge required repairs already during its second decade, whereas Central bridge built in 1956 required major repairs no earlier than in 1995, forty years after it was built. Although Papiniidu Bridge has been state property for only a couple of years, it does not mean that the city abandoned it during the years after Estonia had regained its independence. The signs of deterioration of the bridge were visible already in the 1980s.

By now, Papiniidu Bridge has been subject to new expert assessment and it has been listed among ten bridges across Estonia that need immediate repairs, because salty water has reached the structures through joints and rusty pipes. Only recently, there was a discussion concerning the use of EU funds to repair Papiniidu Bridge and it was not considered impossible that the bridge will be demolished and brand new one built for Via Baltica. Until the demolition has not been decided, it is impossible to say what will eventually happen to it. Meanwhile, it is difficult to imagine a situation where Papiniidu Bridge no longer exists, unless the third, Raba Bridge has been completed.

The third large bridge over Pärnu River

The third bridge across Pärnu River was already included in the last Soviet comprehensive plan of Pärnu. Then it was intended as an extension of Tammsaare puistee. Riverside land was even kept available for that purpose. Somehow, we are now smarter than the Soviet urban planners and build the bridge starting from Raba Street in Ülejõe district.

No matter where the bridge will eventually be erected, it would benefit all. It is irrelevant whether it would be between Raba-Vingi or Raba-Aia Streets. It will be beneficial for city residents, tourists, economy, urban traffic. It will even be beneficial for those who managed to acquire plots that get in the way of the exit lane from the designed bridge, because the city will either purchase it or pay compensation. This is beneficial also to the politicians in power at the time of bridge construction. And, last but not least, it is beneficial for the person who will eventually cut the ribbon at the grand opening of the bridge one fine day. Most likely, it will be

Prime Minister or at least the Minister of Transport and Communications. Or maybe even the President.”