WELCOME TO THE TUNNEL!

The Tampere Rantatunneli tunnel will be under construction until 2017. After its completion, the tunnel will promote the development of Tampere’s central areas, while also improving the functionality and safety of traffic.

Between 2013 and 2017, just over four kilometres of Highway 12 (Vt 12 Tampereen Rantaväylä) will be rerouted. Together, we have taken on a huge challenge, building a 2.3-kilometre road tunnel – the longest in Finland – along with the related interchanges and route arrangements.

We are currently in the implementation phase, and have build up a good head of steam. Work has started according to plan. This is due to the efficient preparations made during the planning phase.

As it is completed in 2017, the Rantatunneli tunnel will free up a large swath of central Tampere’s northern areas for the use of residents, while also providing easier access to the shoreline of Lake Näsijärvi. Rock material generated during the tunnel excavation will be used to fill in the water body for the park being created in the new Ranta-Tampella district.

The project will be carried out using the alliance model, whereby the traditional customer-service provider model has been eliminated, with the parties planning and implementing the project through cooperation. The alliance members are the City of Tampere, the Finnish Transport Agency, Lemminkäinen Infra Oy, A-Insinöörit Suunnittelu Oy, and Insinööritoimisto Saanio & Riekkola Oy.

Through innovations borne out of cooperation, we will be able to reduce any disruptions caused by the worksite, while cutting costs and speeding up processes.

We hope that this page will answer any questions raised by the project. We would also be delighted to hear about any ideas that might lead our temporary arrangements to be of better service to residents. If you have an idea, please send it to us! Our contact information can be found at the bottom of this page.

Kind regards
Esko Mulari
Alliance project manager
Rantatunnelin Allianssi
**THIS IS HOW THE WORK IS BEING DONE**

Most construction work on the tunnel is being carried out hidden from sight underground. By clicking on the bars on the timeline, you can see what each phase involves. Up-to-date information on the traffic arrangements caused by the work can be found on the Finnish Transport Agency’s website.

![Timeline Image]

### 4/2014 – 12/2015 | Pipe and equipment relocation
Pipe and equipment relocation refers to the relocation of cables, pipes, pumping stations and other items of municipal infrastructure located in the project area to other locations, so as to prevent them from hampering construction.

### 1/2014 – 10/2015 | Tunnel excavation
The tunnels are being excavated using the normal drilling and blasting method: blastholes a few metres deep are drilled into the rock, and explosives and blasting caps are placed in the blastholes. The detonation of each hole is timed separately in order to ensure that the rock chips off according to plan and in correctly sized pieces.

### 11/2014 – 8/2016 | Tunnel reinforcement and construction and systems installation
Reinforcement and compactment will be performed by means of injection, bolting and concrete spraying. In addition, the rock space will be panelled. An air conditioning system, lighting, traffic telematics equipment, and monitoring and safety systems will be installed in the tunnel.

### 4/2014 – 11/2016 | Route construction
Construction of the Santalahti and Naistenlahti interchanges will start once pipe and equipment relocation has been carried out. These interchanges will be constructed at slightly different times. This will help us to take optimal account of the environment, efficient progress of work and the functionality of traffic.

The building of the concrete structures of the interchanges will occur more or less simultaneously with route construction. The northern end of the Naistenlahti interchange will be separately constructed between April and October in 2017.

### 7/2016 – 10/2017 | Commissioning: systems testing and traffic launch
Commissioning of the tunnel systems will begin in July 2016. The tunnel will be opened for traffic in the spring of 2017. The traffic arrangements in their entirety will be ready and in use by 30 November 2017, once the roundabout north of Naistenlahti and the related solutions have been completed.

### 3/2018 – 7/2018 | Finishing
The project area will be finished and cleaned during the spring and summer. The sides of the road will be dotted with pavement, lawn, meadows, shrubbery, and coniferous and deciduous trees.
A TUNNEL IN THE MIDDLE OF THE CITY

The Rantatunneli tunnel's aboveground work sites are located in Santalahti, Näsinkallio and Naistenlahti. You can view additional information on the construction sites by clicking on the icons on the map.

The tunnel comprises dedicated vehicle tunnels for both directions. The distance between these tunnels is between 11 and 12 metres. There are interconnecting tunnels between these tunnels at around 150-metre intervals. In addition, the tunnel includes one interconnecting tunnel large enough to accommodate vehicles for rescue and maintenance purposes.

Both tunnels feature one-way traffic with a speed limit of 60 km/h. Walking, bicycling and slow vehicles are not allowed in the tunnel.

A — Santalahti work site
In Santalahti, a separate open pit has been excavated for a work tunnel. Most excavation of the western part of the tunnel will be performed via this tunnel. This has enabled an earlier start to tunnel excavation, while also allowing the construction of the Santalahti interchange's concrete structures without disrupting other work.

B — Näsinkallio work site
A work tunnel is being built from Näsinkallio to the traffic tunnel. Excavation of the work tunnel, which began in Nääshalli, commenced in January 2014 and reached the traffic tunnel in April 2014. An extra ramp and space will be excavated into the rock near Näsinkallio. If required, an underground connection from Rantatunneli to other parts may be constructed in this space later.

C — Naistenlahti work site
Tunnel excavation began at the Naistenlahti end in February 2014. A work tunnel will be excavated first. The actual traffic tunnel will be bored to the north of this tunnel during the autumn and winter of 2014/2015. The Naistenlahti interchange will be completed in its entirety in November 2017.
THE TUNNEL IN NUMBERS

This extensive tunnel project involves reams of statistics. We are, after all, building Finland’s longest road tunnel in Tampere. For instance, did you know that the central Tampere area will grow by 4.5 hectares?

1,000 man-years

The tunnel project constitutes around 1,000 man-years of work. In addition, the construction of the Ranta-Tampella residential district will add thousands of man-years to the total.

180.3 EUR million (target cost)

The alliance model has allowed the target cost to be determined with particular accuracy, since both the customer and provider participated in drawing up the budget.

300 employees

An average of 300 employees will vary according to the work phase. The highest number of employees will be reached in 2015. In 2015, the alliance will have around 400 employees.

The implementation phase takes 46 months

The implementation phase began in October 2013, and the tunnel will be opened to traffic in May 2017. The finishing work will continue for around a year after the commissioning of the tunnel.
The most significant innovation consisted of beginning the excavation of the Näsinkallio work tunnel through the eastern maintenance connection for Nääshalli. This eliminated the need to reroute traffic on the Rantaväylä route via a detour during the excavation, speeding up the schedule by around four months.

Channelling through traffic from Highway 12 into the tunnel will reduce the load on the aboveground traffic network, since it will only have to withstand local traffic.

The project will generate a total of 750,000 cubic metres of blast stones, 650,000 of which will come from the tunnel. “Theoretical solid cubic metres” refer to chunks of rock with one-metre sides; when blast stones have been cracked off, their cubic capacity is even greater.

Construction of a new residential district in Ranta-Tampella will begin as traffic on the Highway 12 (Vt 12 Tampereen Rantaväylä) route is reduced. Construction will start once Highway 12 traffic has been rerouted into the tunnel.

Based on the alliance model, the customer and provider form a joint project organisation. The members of the Rantatunneli Allianssi alliance are the Finnish Transport Agency, the City of Tampere, Lemminkäinen Infra Oy, Saanio & Riekkola Oy, and A-Insinöörit Suunnittelu Oy.

The central Tampere area will grow by 4.5 hectares after parts of water bodies in Ranta-Tampella and Santalahd have been filled in. Parks and other such sites will be built on these earth-fill areas.

Highway 12 (Vt 12 Tampereen Rantaväylä) is the busiest section of trunk road located outside the Helsinki Metropolitan Area; its average daily traffic has increased by 11 per cent during the last 10 years.

39 innovations during the development phase have improved project implementation

4.3 kilometres of Highway 12 will be rerouted

650,000 theoretical solid cubic metres of blast stones from the tunnel

1 new residential district

4.6 kilometres of tunnel

A total of 4.5 hectares of water body filled in

Between 32,800–44,500 vehicles use Highway 12 each day on average
THE RANTATUNNELI TUNNEL SETS THE STAGE FOR A NEW KIND OF TAMPERE

The tunnel project is not only transforming central Tampere, creating new residential and recreational areas, but is also improving the flow of traffic on the Pirkanmaa trunk road network. We asked a resident, a city planner, a professional driver and a representative of North Tampere’s business community to share their expectations for the tunnel.

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“I hope that the shoreline areas are handed over for public use, giving those of us living in central Tampere access to the shores of Lake Näsijärvi. Tampere could learn a lesson from New York City, which is converting the shores of Manhattan for public use, building facilities such as parks on the old piers.”
"In my opinion, the Rantatunneli project is not only important to Tampere but to the whole of the Pirkanmaa region, not to mention Finland’s entire highway network. This is due to the high amount of bypass traffic in Tampere. This tunnel will enable more efficient and safer bypass traffic. Tampere is also a growing area and a major node in Finland’s traffic network. For this reason, highways, railroads and air traffic are all important development targets.

In addition, the Rantatunneli tunnel will provide a basis for city planning, while also reducing traffic in central areas. After the tunnel’s completion, Tampere must continue to develop its underground road network, while building facilities such as underground parking garages. This project will pave the way for the future of Tampere and increase the area’s appeal."

"Tampere is a growing city to which 2,000 new residents move each year. The construction of the Rantatunneli tunnel will enable us to build a new residential district in central Tampere, while also developing the central areas, including traffic.

This project will enable us to remove this large obstacle from the best location in the city. Ranta-Tampella is a great location that will now be offered to people instead of traffic. This is also an environmental project, as the tunnel will improve the noise and air pollution situation in central Tampere.

This is indeed a large project and major financial investment: we are, after all, building the longest road tunnel in Finland. The project will have a great impact on our revenue via issues such as land use compensation and the employment effects of the new residential area to be built."

"As a project, the Rantatunneli tunnel is beneficial to Särkänniemi: it will create completely new types of opportunities for the development and expansion of Särkänniemi as well as other recreational and amusement activities in Tampere. This means new money flowing in from outside the region, and, possibly, new jobs.

Not only Särkänniemi but the entire Tampere business sector will benefit from the Rantatunneli project. The construction phase alone will create new jobs, let alone its other financial benefits. This is not just one road; the project is important from the perspective of the construction, development and future of Tampere."
AN ALLIANCE PROVIDES PROJECTS WITH AGILITY

The Tampere Rantatunneli tunnel will be constructed as an alliance, or cooperation, project. Through this operating model, based on partnership the project customer will participate in project implementation together with the designers and building contractors.

When using the traditional project model, the risks and benefits associated with the project in question are divided between the customer and provider. However, the division of risk is sometimes open to interpretation. Under the alliance model, the customer and provider are part of the same project organisation and share the project risks. This serves to ensure that everyone works toward common goals. The savings generated by the seamless progress of the project will benefit all parties.

In the case of the alliance model, unanimous decisions will be sought in response to all issues that arise for the various parties. For instance: with regard to project implementation, the roles of the parties will be jointly determined using the best possible expertise. The cooperation model will also ensure that the project can more efficiently cultivate and adopt ideas that deviate from the original plans.

Partnership-based projects have become particularly popular in Australia, from where they have been imported and adapted to Finnish conditions. The Tampere Rantatunneli tunnel is the second Finnish Transport Agency project to employ the new partnership model.

- The Rantatunnelin Allianssi alliance is responsible for designing and constructing the Rantatunneli tunnel.

- The members of the alliance are the Finnish Transport Agency, the City of Tampere, Lemminkäinen Infra Oy, Saanio & Riekkola Oy, and A-Insinöörit Suunnittelu Oy.

- The Tampere Rantatunneli tunnel is the second Finnish Transport Agency project in which the alliance model has been used.

"The alliance model is ideal for the implementation of larger, difficult projects since, based on this model, the partner selection process has multiple stages. The right kind of expertise and attitude are sought for the consortium by means of various types of workshop. After the project has begun, seamless cooperation is more important than titles. The alliance model is an excellent fit for the Tampere project, since this tunnel project is challenging to implement due its location near residential areas, the railroad track and the Rantaväylä road.

The benefits of the alliance model were seen in concrete terms immediately after the selection of the partners. Over EUR 20 million worth of savings related to work methods and the schedule, for instance, were generated during product development, conducted between 2012 and 2013. The traditional customer-provider model could not have yielded such benefits.

Every Finnish Transport Agency project is analysed and the optimal project model is determined for the case in hand. In the future, the alliance model will be a noteworthy option for our largest projects."

Pekka Petäjäniemi,
director of the Finnish Transport Agency's project implementation unit
The Rantatunneli project on the Finnish Transport Agency website.

You can follow the progress of the excavation through the Louhi online service.

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