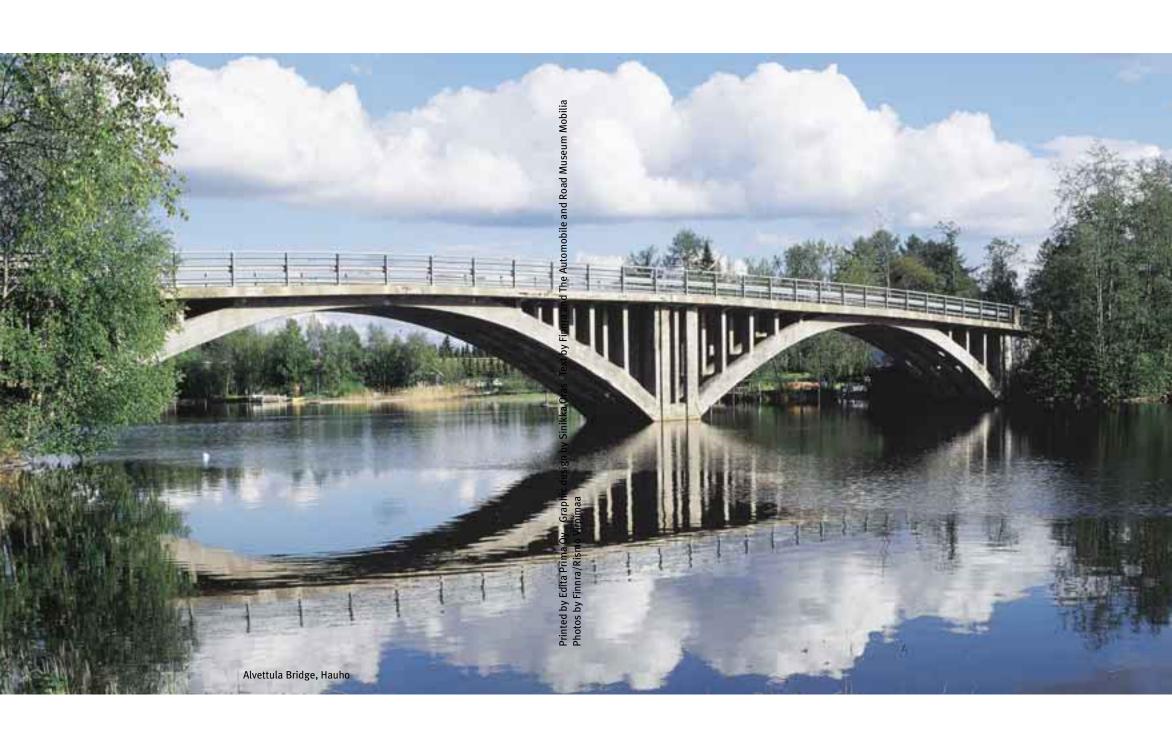


Historic Roads and Bridges in Finland





New bridge - old design, Pälkäne

Historic roads and bridges in Finland

Roads and bridges are an integral part of Finland's historical and cultural heritage. This heritage is preserved for posterity through official measures protecting parts of the various stages of our network of roads and communications.

The Finnish Road Administration's selection of museum roads and bridges is based on considerations of national historic and cultural importance, the technological history of roads and bridges, significance for the history of roads and communications, local importance, the original state of roads and bridges and conditions for their future survival in their present state.

Jakob Teitti's roads and highways

The oldest uniform list of Finland's public roads and routes of communication was compiled in 1555-56 by Jakob Teitti, secretary to King Gustavus Vasa of Sweden. Finland belonged to the Swedish realm from the 12th century until 1809, when it became part of the Russian Empire. Finland became an independent republic in 1917.

Jakob Teitti's list of roads mentions the "Great Coastal Highway" leading from Turku to Viipuri along the northern coast of the Gulf of Finland, the "Upper Viipuri Road" from Hämeenlinna to Viipuri, the "Häme Oxen Road" from Hämeenlinna to Turku, the road from Viipuri to Savonlinna, the "Great Savo Highway" from Hämeenlinna to Savonlinna, the road from Turku to Ulvila, the road from Ulvila to Korsholm, and the "Kyröskangas Road" leading from the province of Häme to Korsholm.

Until the 16th century, Finnish roads were only paths for riders on horse-back connecting the country's castles, which were the centres of crown administration. The building and maintenance of roads was the duty of landowners.

The most important duties were to provide crossings over bogs and bodies of water, for example with causeways or piled stone settings. Wooden bridges were built across rivers and smaller lakes, or travellers were ferried across with rafts.

1. Fagervik Road, Great Coastal Highway, Inkoo

The Fagervik road is part of the medieval Great Coastal Highway that connected Turku and Viipuri. The route was cleared into a road in the 13th century. The highway followed the coast of the Gulf of Finland from parish to parish, linking the country's main areas of settlement and administration.

7. Vanhalinnantie Road, Häme Oxen Road, Lieto

Vanhalinnantie Road follows the course of the medieval Häme Oxen Road. It is one of Finland's oldest routes of communication, and the longest section in its original state survives at Lieto. Known as the Oxen or Turku Road this road is of cultural and historic significance. The original name comes from the raising and transport of oxen.

9. The Old Halikko Bridge, Halikko

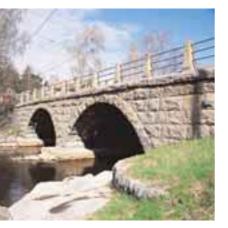
The Old Halikko Bridge is part of the important route formed by the Great Coastal Highway. There have been bridges at the site since medieval times. The present wooden bridge was built in 1866. It is a typical strut-frame bridge of timber and masonry resting on wooden posts. At present the bridge serves light traffic.

13. The Porras-Renko Road, Häme Oxen Road, Loppi and Renko

The Porras-Renko road between the municipalities of Loppi and Renko is one of the two sections of the Häme Oxen Road that have been given museum status.

19. The Tallimäki-Virojoki Road, Vehkalahti and Virolahti

The Tallimäki-Virojoki Road between Vehkalahti and Virolahti is Finland's longest (32.5 km) section of road that has been given museum status. It is part of the Great Coastal Highway, and there are several historic bridge and inn sites along this road.



22. Salmi Bridge, Vehkalahti and Hamina

Made of stone, this bridge across the River Salmenvirta is on the Husula local road in Hamina. The site of Salmi Bridge was part of the Great Coastal Highway since the 18th century. The present doublespan stone-vault bridge was built in 1902 to replace a wooden bridge that had been destroyed by fire.



25. The Kuortti-Miekansalmi Bridge, Pertunmaa

The road between Kuortti and Koirakivi was probably in use since the late 15th century. It was one of the main routes linking the provinces of Savo and Häme in the 16th century. Known as the Great Savo Highway, this route was made trafficable in the 18th century.

26. Porrassalmi Road, Mikkeli

Porrassalmi Road was part of the Mikkeli-Lappeenranta highway that branched from the Great Savo Highway. Used only in winter in the 16th century, it was cleared for summer use in the 17th century. A memorial to the Battle of Porrassalmi fought in 1789 between the troops of Sweden-Finland and Russia stands on Porrassalmi Ridge.



36. The Kyrönkangas summer road, Kauhajoki

This privately owned road in the village of Nummijärvi at Kauhajoki is part of a medieval road route. It is also known as the "Swine Road" and the "Upper Vaasa Highway". The summer road was converted into a highway in the 17th century.

55. Huovintie Road, Köyliö

Starting at the mouth of the River Kokemäenjoki, the road known as Huovintie (Trooper Road) is part of a medieval route. The road passes from Torttila in the municipality of Harjavalta eastward of Lake Köyliönjärvi to Oripää and Koski.

Crown Roads and Highways 1500-1809

The construction of roads in Finland gained pace in the 16th century with the growth of government administration. Roads were needed by the mail, government official and the army in particular, and the construction of roads concentrated on the west coast and along the eastern border of Finland.

By the end of Swedish rule in 1809, Finland had a network of roads of 11,000 kilo-metres covering Southern Finland and mainly trafficable with horse-drawn carria-ges. But the hilly and uneven roads were still troublesome for travellers.

Lakes were crossed with boats or rafts, and wooden bridges spanned rivers and bays. As masonry skills and vaulting techniques developed, stone bridges began to be built on the most actively used roads towards the end of the 18th century.

The oldest precursor of the Finnish Road Administration, the Royal Directorate of Rapids Clearing, was founded in 1799.

2. Lake Tuusulanjärvi Road, Tuusula

The road along the shore of Lake Tuusulanjärvi was built in the 17th century in connection with crown road projects. In the early 1900s, many renowned artists lived on Lake Tuusulanjärvi Road and in its vicinity, including the painters Pekka Halonen and Eero Järnefelt, the composer Jean Sibelius, and the writer Eino Leino. The author Aleksis Kivi died in a small house on Lake Tuusulanjärvi Road.



32. Vornantie Road, Eno

The Vornantie Road is in Lieksa and Eno in Eastern Finland. It was built during the so-called Lesser Wrath, the Russian occupation of Finland in 1741-43. The road was the site of military battles in 1808 during the Swedish-Russian War of Finland of 1808-09.



3. Bridge at Espoonkartano Manor, Espoo

The stone-built bridges of Espoonkartano Manor are on the Great Coastal Highway. The single-span stone-vaulted Sågbro bridge, listed as a museum bridge, was built in 1778-1816. Qvarnbro Bridge located next to it was built in 1777-78 and is probably Finland's oldest stone bridge.



10. Lapijoki Bridge, Eurajoki

The Lapijoki bridge is situated in the village of Taipale in Eurajoki. This three-span stone-vaulted bridge was built by a local tenant farmer in 1883. It is an example of local craftsmanship.

14. The Kuru-Ruovesi Road, Ruovesi

The road leading from Kuru Church to Ruovesi Church is part of the Peräkunta Road linking Parkano and Mänttä. The oldest available information on settlement along the route dates from the 16th century. The road was built in the 17th century, and it became a public road maintained with government funds in 1920.

20. Niskapietiläntie Road, Ruokolahti and Rautjärvi

Niskapieltiläntie Road is in the municipalities of Ruokolahti and Rautjärvi. In the 17th century it served not only local users but also the border region of the realm and military traffic. It was a postal road linking the provinces of Savo and Southern Karelia in the 19th century, and it was part of national highway no. 6 until 1957.

31. Nikkilänmäentie Road, Leppävirta

The route and course of the privately owned Nikkilänmäentie Road date from the 17th century. The road achieved its presently surviving state in the public roadworks of the reign of King Gustavus III in the 1770s. It was part of national highway no. 5 until the 1950s.

37. Minnestodsintie Road, Oravainen

Minnestodsintie Road at Oravainen originally belonged to Finland's 17th-century network of roads and highways. Also known as the Coastal Highway of Ostrobothnia, it was built in 1618-20 and began to be used by the postal service in the 1640s. Situated on the road is a memorial of battles fought in 1808 in the War of Finland.



40. Tuovila Bridge, Mustasaari

Tuovila Bridge, built in 1781 across the River Laihianjoki, is on the road between Helsingby and Tuovila. The three-span stone-vault stone bridge is Finland's secondoldest bridge. It was designed by Superintendent Carl F. Adelcrantz, of the Board of Public Buildings. The contract for the bridge was auctioned publicly and went to David Olander assisted by Tomas Rijf.

51. Simonkylä Road, Simo

The museum road section of the Oulu-Tornio highway is in Simo. There was summer road at the site in the 17th century. The road was not improved into trafficable condition until King Adolphus Frederick's 1752 visit to Finland, when it was part of the royal route.

56. The Koivisto local road, Äänekoski

The Koivisto museum road is part of the highway between Kuopio and Vaasa. It was laid out by surveyors in 1777, and was built to serve wheeled traffic at the end of the century. Until the mid-19th century Koivisto was a junction of the main roads of Central Finland.



The Emperor's Stone Bridges 1809-1920

Russian rule marked a change in traffic and communications, with an increasingly eastward orientation towards Viipuri and St. Petersburg. As life became more peaceful and the economy developed, the travellers on the roads also changed, from soldiers to merchants or farmers on their way to market.

Road building was concentrated in areas with few routes. In Northern Finland, for example, the roads system trebled in size.

The construction of bridges improved conditions for road use. The majority of the bridges were still made of wood, but masonry bridges were already built on the busiest roads in the late 19th century. From the 1880s to the early years of national independence after 1917, their number grew from 1,200 to 4,000. This was the result of improved construction methods and above all of the participation of the state in the costs of the works.

The former Rapids Clearing Directorate became the Board of Road and Water Transport in 1840, and in 1887 the Board of Road and Water Works.

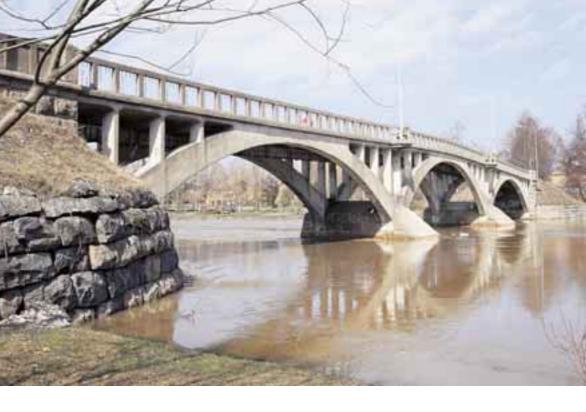
6. Tönnö Bridge, Orimattila

Tönnö Bridge at Orimattila was built in 1911. Designed by Jalmar Castrén, Professor of Bridge Building and made by the Tampere Sementtivalimo concrete casting works, it is Finland's oldest reinforcedconcrete bridge.

8. Muntti Bridge, Taivassalo

Muntti Bridge is situated on a formerly used section of the Turku-Taivassalo road. This small single-span stone-vault bridge was built in 1850 to link the village of Koivisto with the island of Taivassalo.





11. Tulkkila Bridge, Kokemäki

Tulkkila Bridge is on the Tulkkila local road in the town of Kokemäki. It was built by the Constructor firm of Helsinki to replace an old wooden bridge that was destroyed in the Finnish Civil War of 1918.



12. Lankoski Bridge, Merikarvia

In 1887 a double-span stone-vault bridge was built at the Lankoski Rapids to cross the River Merikarvianjoki. The bridge is on section of the highway linking the provinces of Satakunta and Ostrobothnia.

15. Mierola Bridge, Hattula

This three-span reinforced-concrete bridge in Hattula was opened to traffic in 1919. It replaced a wooden bridge destroyed in the Finnish Civil War of 1918.



16. Alvettula Bridge, Hauho

Alvettula Bridge is a double-span concrete arch bridge made of hollow brick cast on site. It was presumably designed by the civil engineer Wäinö Wuolio.

17. Aunessilta Bridge, Tampere

Aunessilta Bridge was made of local Teisko granite in 1899. This single-span bridge has a span of 46.5 metres and was designed by Senior Architect Georg Schreck and built under the supervision of building foreman Frans Malmlund.



27. Enonkoski Bridge, Enonkoski

Enonkoski Bridge was built in 1903-04 by Sylvester Redsven, a local resident. It is a single-span stone-vault bridge made of slate.

29. Koria Bridge, Kouvola and Elimäki

In 1870 a steel bridge was built for the railway line to St. Petersburg. The Koria Bridge was made of so-called English wrought iron. In this method the iron ingots are joined and rolled into sheets. The bridge was converted to road use in the 1920s.

30. The Toholahti-Hankavesi Road, Rautalampi

The section of road between Saahkari and Myhinpää at Rautalampi is also known as Ihalaisenkyläntie road. In the 19th century, several official proposals were made for a road for travel on horseback to be built in the area, but the road was not built until 1910. This is a typical gravelled road of the province of Savo of the early 20th century.

34. Viheri Bridge, Joutsa

Viheri Bridge was built upon the decision of the local municipal board in 1887. It is a wooden double-span strut-frame bridge resting on masonry abutments and pillars.

38. Närpes Nybro Bridge, Närpiö

The Närpes Nybro Bridge was built in 1842. It is a three-span stone vault bridge designed in 1839 by C.F. Favor, a member of the Rapids Clearings Directorate.

39. Harrström Bridge, Korsnäs

Harrström Bridge, formerly known as Åback bro, is a three-span stone girder bridge on a local road. It was built by Karl Åberg and Karl Höbacka in 1898.

41. Perttilä Bridge, Isokyrö

Perttilä Bridge is Finland's oldest steel suspension that is still open to traffic. It was built according a Norwegian design in 1909-1910. The bridge is decked with timber and it is 86 metres long.

42. Pattijoki Bridge, Pattijoki

Pattijoki Bridge was built in 1896-97. It is a single-span stone-vaulted bridge.

44. Savisilta Bridge, Ylivieska

Savisilta Bridge is Finland's second-oldest concrete bridge. This five-span bridge was designed by the civil engineer Jalmar Castrén and was built in 1912. It was called "Clay Bridge", because concrete was still almost unknown in Finland at the time. The local inhabitants thought a bridge made of "clay" would not withstand use.

45. Etelänkylän Isosilta Bridge, Pyhäjoki

Built in 1857, this bridge is presumably Finland's oldest wooden bridge still in use. It is of strut-frame construction and 77.5 metres long. Until the early 1960s this bridge was still part of national highway no. 8.







46. The Saviselkä-Piippola Road, Kärsämäki and Piippola First proposed for construction in 1775, the road between Saviselkä and Piippola dates from the early 19th century. From the 1930s until 1953 it was part of national highway no. 7.

47. Paltaniementie Road, Kajaani

Paltaniementie Road was built in 1820. The road is classed as nationally significant with regard to its scenic and historic values.

State roads 1920-38

In the early years of national independence after 1917, the reorganization of roads administration and maintenance became more important than the building of new roads. The old system in which the upkeep of roads was linked to land ownership and was regarded as an economic burden similar to taxes was not satisfactory to anyone. A new Roads Act was ratified in 1918, whereby the state took over the maintenance of all public roads from the beginning of 1921.

There was a great deal of discussion and debate on improving the quality of the road system in the 1920s and 1930s. Specialist committees proposed a network of highways linking the country's main towns and cities. In 1938, twenty-one highways and 32 so-called grade A main roads were officially designated.

As a result of the new legislation concerning roads, the National Board of Public Roads and waterways was established in 1925.



21. Savukoski Bridge, Pyhtää and Ruotsinpyhtää Savukoski Bridge was built by the Danish contracting firm of Christiani & Nielsen in 1928. It is single-hinge concrete arch bridge that was unique in the whole world upon completion. The construction work required the use of a cableway.

23. Mullinkoski Bridge, Vehkalahti and Hamina

The pre-stressed reinforced concrete girder bridge at Mullin-koski was built in 1949. It was the first of its kind in Finland and the Nordic countries. This technique was not applied in bridge construction in the United States until 1951.

24. Keskikoski Bridge, Anjalankoski

Keskikoski Bridge was built in 1954. This steel tied arch bridge with a reinforced concrete deck is the largest of its kind in Finland.

28. Virransalmi Bridge, Mäntyharju

Virransalmi Bridge was built in 1937 at an old ferry site. It is a steel truss bridge.

33. Haarajoki Bridge, Tuupovara

This reinforced-concrete cantilever bridge is one of the oldest surviving bridges in the region of Northern Karelia. It was designed at the Board of Public Roads and Waterways according to standard plans and was built in 1926.

35. Heinäjoki Bridge, Pihtipudas

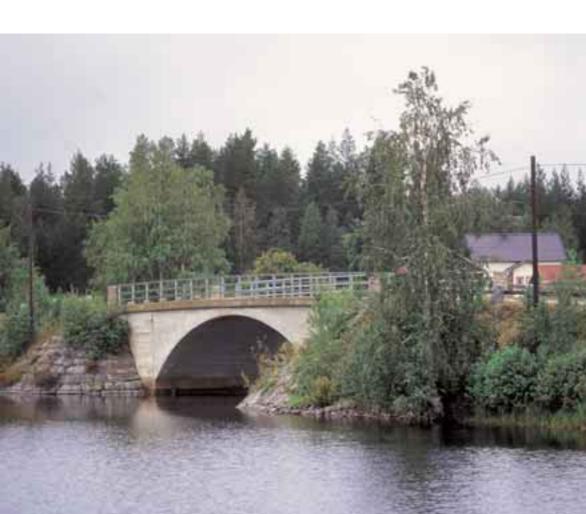
Heinäjoki Bridge was commissioned by the Board of Public Roads and Waterways from the Granit firm. Work on this two-span stone-vault bridge began in 1919 and was completed in 1924.

43. Ponkila Bridge, Muhos

This steel suspension bridge was designed by the civil engineer L. Iloniemi in 1928 and it was built in 1931.

48. Tervasalmi Bridge, Kuhmo

The first plans for Tervasalmi Bridge were prepared in 1906, but the bridge was not built by the Board of Public Roads and Waterways until 1935. It is a three-hinged reinforced-concrete single-span vaulted bridge.





49. Möykkysenjoki Bridge, Ristijärvi This single-span stone-vaulted bridge crossing the River Möykkysenjoki was designed and built by the Board of Public Roads and Waterways. It was completed in 1926.

52. Saarenpudas Bridge, Rural Commune of Rovaniemi Saarenpudas Bridge was built in 1925 at the site of an old bridge. It is the oldest surviving reinforced-concrete vaulted bridge in Lapland.



57. Männikkö Bridge, Sonkajärvi

Männikkö Bridge was designed by the civil engineer Harald Backman upon commission from the Board of Public Roads and Waterways. It was built in 1925-26 by the Suomen Rakennus-osakeyhtiö construction firm. The three-span cautilever bridge is made of reinforced concrete.

58. Mattila Bridge, Alahärmä

Mattila Bridge was built in 1921 by the Constructor company. It is a three-span reinforced-concrete girder bridge in which the railings function as load-carrying structures. It is presumably Finland's only bridge of this type that is still in public use by traffic.

Military roads

The outbreak of war in 1939 interrupted the building of public roads, and only roadworks necessary for the war effort were continued. The focus of road construction shifted from the renewal of highways and main roads to formerly roadless areas in Lapland and Eastern Finland. The most actively used and strategically most important route was the Arctic Ocean Highway from Rovaniemi to the port of Liinahamari at Petsamo.

Finland's road system fell into disrepair as a result of the war years (1939-44) and it was not restored into serviceable condition until 1947.

4. Vårnäs Bridge, Kirkkonummi

Vårnäs Bridge was built in the late 1940s when part of the municipality of Kirkkonummi was leased to the Soviet Union as a military base. It was constructed on wooden piles.

50. Raatteentie Road, Suomussalmi

The Kokkojoki-Raate road was built as a relief works scheme in 1915-19 and it was in active use until 1928. The most successful Finnish defensive actions of the Winter War (1939-40) were fought along Raatteentie Road and in its immediate vicinity.



53. Ahdaskuru Bridge, Enontekiö

Ahdaskuru Bridge is located on the highway between Muonio and Kilpisjärvi close to the border between Finland and Norway. This masonry-built vaulted bridge was completed in 1943.



Magneettimäki Hill in Inari is a three-kilometre section of the famous Arctic Ocean Highway. In 1940 and 1941 Liinahamari at Petsamo on the Arctic Ocean was the only ocean port in year-round use in all Northern Europe.





Roads for motorists 1948-70

In the autumn of 1948 a period of winters of major unemployment began in Finland. Road construction in the form of relief works was begun to improve the situation. At most, over 40,000 people were employed in relief works supervised by the Board of Public Roads and Waterways.

Road construction on a relief basis came to an end in the mid-1960's. This was the result of both the mechanization of road building and loans received from the World Bank in the years 1964-70. The loans permitted large-scale road-surfacing works and the building of motorways from Kulju to Tampere and the Tattariharju in Helsinki to Järvenpää, among other projects.

By the early 1970s Finland's all parts road system had been made suitable for vehicular traffic and developed to modern standards. The length of the public network of roads was 71,000 kilometres. The road system that had to be maintained had grown as a result of road building and also because of reforms to legislation in 1958 in this connection the Board of Public Roads and Waterways took over the care of local roads.

The Board of Public Roads and Waterways underwent reorganization in 1964 to become the National Board of Public Roads and Waterways.



5. Myllysilta Bridge, Nurmijärvi

Myllysilta Bridge was built in 1966. This bridge combines traditional Finnish timber construction technique with modern design.

18. Markkula Bridge, Kihniö

This typical wooden truss-framed bridge was built in 1959. It is founded directly on soil and it utilises stone-filled timber caissons. It is an example of a bridge type that is rare in Finland.

Finnish roads today

The main emphasis of developing Finland's roads network over the past few decades has been to improve trafficability. road works has focused on bypasses and improvements to road safety. Important projects have included bridges Jätkän kynttilä Bridge at Rovaniemi, Kärkinen Bridge at Korpilahti, Tähtiniemi Bridge in Heinola and Raippaluoto Bridge, which is the longest in Finland, and the motorways from Helsinki to Lahti and Tampere.

The National Board of Public Roads and Waterways was reorganized in 1990 and in 2001 it became the Finnish Road Administration, the government authority responsible for Finland's public roads.

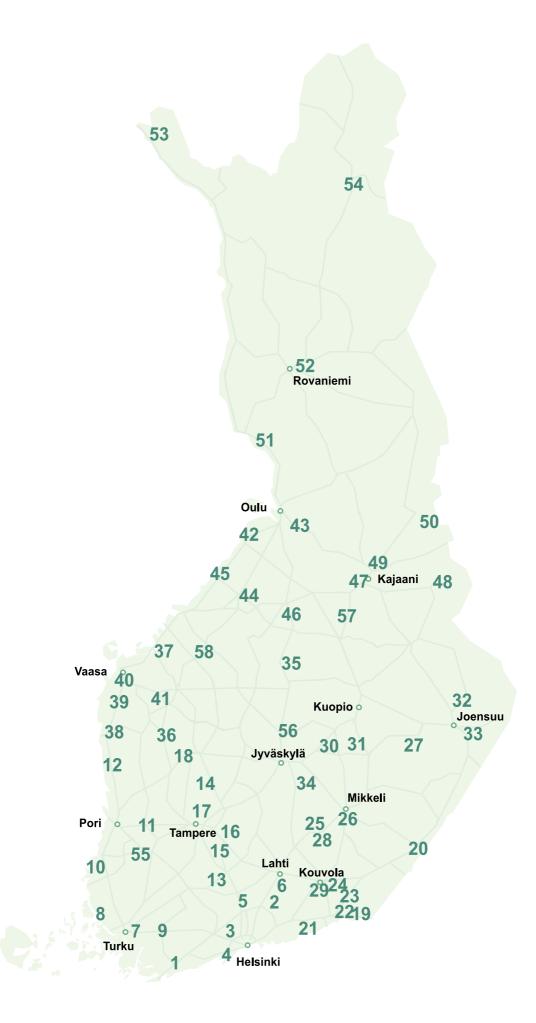
Finland's present network of public roads is some 78,000 kilometres long, of which 50,300 kilometres are surfaced roads. There are 592 kilometres of motorways. Sixty-eight percent of all goods traffic and 93 percent of passenger traffic in Finland use the road system. There are a total of 2,4 million automobiles in the country, of which there are 2,1 million passenger cars.











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