

Chronology of a Project of the Century Milestones in the Construction History up to 2015

1947

Carl Eduard Gruner, engineer and urban planner from Basel, sketches the visionary idea of a Gotthard Base Tunnel as an element of a rapid transit system.

1960s

In 1963, the Swiss Federal Government establishes a committee for a "Railway Tunnel through the Alps". It evaluates various base-tunnel solutions and in 1970 recommends construction of a Gotthard base tunnel from Erstfeld to Biasca.

1970s

A new committee is set up to review the proposed variants again. However, political disagreement between the proponents of the Gotthard, Simplon and Splügen routes, as well as an economic recession, block the tunnel project.

In 1971, the Swiss Federal Council assigns to Swiss Federal Railways (SBB) the task of elaborating the construction project for the Gotthard base route Erstfeld-Biasca to allow rapid implementation of construction work. The construction project is presented in 1975.

1980s

In 1983, the Swiss Federal Council concludes in a report that a new rail link through the Alps is "not urgent". In 1986, new evaluation studies investigate variants for a continuous flat route from the northern edge of the Alps to the southern border of Switzerland. After formal consultation with the cantons, in 1989 the Federal Council decides on implementation of a so-called "network variant", which proposes a combination of a Gotthard base tunnel, a Lötschberg base tunnel, and a Hirzel tunnel to provide a link to eastern Switzerland.

1992

May 2

In the Through Traffic Agreement with the European Union, Switzerland commits to providing the agreed traffic capacities.

September 27

The Swiss electorate accepts with a 64% majority the federal government's resolution to construct the Swiss Rail Link through the Alps (AlpTransit Decision). This forms the basis for planning and constructing the NRLA Gotthard and Lötschberg axes.

1993

September 1

Swiss Federal Railways (SBB) takes over the AlpTransit project organisation from the Federal Office of Transport (FoT) and thereby also the responsibility for the AlpTransit Gotthard project. This comprises the Gotthard base route from Arth-Goldau to Lugano and the integration of eastern Switzerland. SBB undertakes to present preliminary projects within the specified cost budget.

October 4

Groundbreaking ceremony for the Piora exploratory bore system: the position, extent and geological-hydrogeological characteristics of the Piora syncline will be investigated. The purpose of the exploratory bores is to determine the geotechnically most favourable route for the Gotthard Base Tunnel.

1994

February 20

The Alps Initiative is accepted in a referendum. Protection of the Alps is included in the Swiss constitution.

1995

April 12

The Federal Council accepts SBB's proposals for the Gotthard Base Tunnel route between Erstfeld and Bodio and the overground section between Bodio and Giustizia. The future tunnel system for the Gotthard Base Tunnel is decided: two single-track railway tunnels will be constructed which are connected by around 180 cross passages so that each tunnel can provide a rescue space for the other tunnel. There will also be two multifunction stations, at Sedrun and Faido, whose purpose includes allowing trains to change tunnels or to make an emergency stop in case of an incident. The tunnel system will have a total length of 153.4 kilometres.

June 27

The Federal Office of Transport and Energy (today's Federal Department of the Environment, Transport, Energy and Communication, DETEC), sets up the interdepartmental task force "Funding Public Transport" (FöV). In its report "Constructing and Funding the Public Transport Infrastructure," the self-financing of the NRLA is called into question.

October 3

The planning authorisation procedure for the individual sections of the Gotthard Base Tunnel between Amsteg and Bodio and the overground section between Bodio and Giustizia is initiated. Work begins on the construction project.

1996

March 31

The exploratory bores from the tunnel face of the Piora exploration tunnel strike sugary water-saturated dolomite of the Piora syncline.

April 15

Construction work starts on the intermediate heading at Sedrun: this marks the start of preparatory and exploratory work for the Gotthard Base Tunnel. The AlpTransit Visitor Centre at Sedrun is also opened: an information room is installed to provide information to the public.

April 24

The Federal Council decides how to proceed with regard to constructing and financing the public transport infrastructure. It decides to implement the NRLA project in phases. Of the total project that was approved in the referendum of 1992, on the Gotthard route only the base tunnels under the Zimmerberg, Gotthard and Ceneri will be built, and for some of its length the Lötschberg Base Tunnel will be single-track only. Most of the approach routes that have been planned up to this date, including the Hirzel Tunnel, are shelved.

June 26

The Federal Council presents its report "Construction and Financing of the Public Transport Infrastructure" (FinöV) to the Swiss parliament. In addition to the NRLA, the investment program of 30 billion Swiss francs includes three other major public transport projects: Rail 2000, noise-abatement measures, and integration of Switzerland into the high-speed networks of its neighbour countries.

1997

January 30

The first exploratory bore has traversed the Piora Syncline at the level of the exploratory tunnel and encounters rock of the Gotthard massif to the north. At this point, the Piora syncline is 250 metres wide and consists of water-saturated sugary dolomite under high hydrological pressure.

February 1

With the groundbreaking ceremony for the exploratory tunnel at Sigrino, exploration of the geology under the Ceneri begins.

October 20

Following the resignation of the long-serving SBB head of the AlpTransit project, Peter Zuber, his responsibilities are temporarily taken over by his deputy, Peter Zbinden.

1998

March 20

The Swiss parliament approves the report "Construction and Financing of the Public Transport Infrastructure" (FinöV) with its modified construction programme and its financing concept. The total investment amount for all major projects is 30 billion Swiss francs. The NRLA project comprises the base tunnels under the Gotthard, Lötschberg, Ceneri and Zimmerberg, and a link from eastern Switzerland joining the Gotthard route near the Lake of Zurich. The projects will be financed to 55% from the heavy road-vehicle tax, 19% from a 0.1 percentage point increase in value added tax, 10% from customs duties on fuels, and the rest from loans.

May 8

The exploratory work on the Piora syncline is complete. The results are a cause for optimism. At the level of the base tunnel, the rocks of the Piora syncline are solid, dense and dry, and can be excavated with a tunnel boring machine or by drilling and blasting.

May 12

AlpTransit Gotthard Ltd is established. It is created from the AlpTransit department of Swiss Federal Railways (SBB), which was formerly responsible for planning the Gotthard route of the NRLA. The company is a wholly owned subsidiary of SBB, with share capital of 5 million Swiss francs. Peter Zbinden is appointed CEO.

September 27

In a national referendum, the distance-related heavy road-vehicle tax (LSVA) is accepted. This opens up the possibility of improving the position of the railways in the transport market.

November 29

With a majority of 63.5%, Swiss voters accept the government proposals for the construction and financing of the public transport infrastructure.

1999

February 4

At Sedrun the first blast for sinking the 800-metres-deep main shaft takes place. The shaft will provide access to the tunnel-level construction site.

March 30

DETEC officially authorises the Gotthard Base Tunnel. The tendering process for the construction work on the Amsteg, Sedrun, Faido and Bodio sections can begin. The planning approval process for the northernmost Erstfeld section of the tunnel is still pending with DETEC.

November 4

On the construction site at Amsteg, first blasts are performed for driving the 1.8-kilometres-long access adit. These represent the official start of construction of the Gotthard Base Tunnel north of the Alps.

2000

March 1

At Sedrun, the shaft sinkers complete the 800-metres-deep main shaft down to the level of the future Gotthard Base Tunnel.

July 10

With a first blast at Bodio, construction work at the Ticino end also begins. As a first step, a 1.2-kilometres-long bypass tunnel is constructed.

2001

June 13

The first two major construction lots are awarded. A single consortium is awarded the contracts for construction of the 15-kilometres-long Bodio-Faido section as well as the 14-kilometres-long Faido-Sedrun section using tunnel boring machines. The contracts also include construction of the multifunction station at Faido.

August 30

At Bodio, excavation of the first kilometre of the 57-kilometres-long Gotthard Base Tunnel is completed.

2002

January 23

The first annual film about construction of the world's longest railway tunnel is shown to the public.

March 6

At Faido, following completion of the access adit down to the starting point, construction work on the multifunction station begins.

November 7

On the construction site at Bodio, the first tunnel boring machine starts driving through the 15 kilometres of rock to Faido.

2003

March 26

The Pollegio Visitor Centre at the south portal of the Gotthard Base Tunnel is opened. It contains an exhibition about the project and serves as the starting point for guided tours of the construction site.

May 27

On the north side of the Alps, the first tunnel boring machine starts driving from Amsteg. To reach Amsteg, the main drive of the machine, which weighs 177 tonnes, is loaded onto a barge at Lucerne and shipped over Lake Lucerne to Flüelen.

June 26

At Sedrun, the boring machine, with a weight of 250 tonnes, intersects the second 800-metres-deep vertical shaft. This is at a distance of 32 metres from the main shaft and equipped with a lift system for the vertical transportation of heavy loads.

August 19

At Amsteg, the second tunnel boring machine also starts driving through the 11.4 kilometres of rock to Sedrun.

September 10

It becomes apparent that the assumptions underlying the financing concept that was decided in 1998 are too optimistic. As an immediate measure, the Federal Council proposes a further redimensioning of the NRLA: the projects for the Zimmerberg and Hirzel tunnels are shelved.

December 9

In Cologne, the Research Association for Underground Transportation Facilities (STUVA) awards its annual prize to the Swiss NRLA project. The project is praised for the innovative impetus it gives to the European transport network and tunnel construction worldwide.

2004

July 19

Work begins on the north portal of the Gotthard Base Tunnel at Erstfeld. Construction work is therefore now in progress on all five sections of the tunnel.

December 16

The two tunnel boring machines, Gabi I and Gabi II, have cut through half the distance between Amsteg and Sedrun. A total of more than 40% of the entire 153.4-kilometres-long tunnel system of the Gotthard Base Tunnel has been excavated.

2005

June 22

The Federal Council releases the authorised credit for construction of the Ceneri Base Tunnel.

July 20

Underground visits to the tunnel construction site at Faido are offered.

August 30

Half of the tunnel system of the Gotthard Base Tunnel has been excavated. To date, half of the work has been performed with tunnel boring machines and half by drilling and blasting.

September 21

In the Sedrun section, AlpTransit Gotthard Ltd uses a new technique of rock support for the first time. To counteract the enormous rock pressure in the Tavetsch Intermediate Massif, deformable steel rings are inserted. Thanks to this new technique, the constructionally difficult Tavetsch Intermediate Massif North can be successfully traversed.

2006

June 2

With the foundation-stone laying ceremony at Camorino, south of Bellinzona, construction work for the Ceneri Base Tunnel officially begins. Together with the Gotthard Base Tunnel, the 15.4-kilometres-long Ceneri Base Tunnel between Camorino and Vezia, near Lugano, will create the future flat rail route through the Alps.

September 6

First breakthrough by a tunnel boring machine in the Gotthard Base Tunnel: just under four years after starting out from Bodio, the tunnel boring machine reaches the multifunction station at Faido. The breakthrough takes place with a minimal horizontal deviation of 5 cm and a vertical deviation of slightly under 2 cm.

2007

March 29

Change in the top management of AlpTransit Gotthard Ltd: CEO Peter Zbinden retires after 15 years of commitment to the NRLA project. His successor as CEO is civil engineer Dr. Renzo Simoni, a graduate of the Swiss Federal Institute of Technology (ETH), Zurich.

September 11

At Sigirino, first blasts for the access adit mark the start of excavation work for the Ceneri Base Tunnel.

October 17

Breakthrough between Sedrun and Amsteg: breakthrough in the west tunnel of the Gotthard Base Tunnel takes place nine months earlier than planned.

December 4

On Saint Barbara's Day, the patron saint of miners, tunnel driving begins in the Gotthard Base Tunnel at Erstfeld. Driving will be done with the two overhauled tunnel boring machines that have already cut the Amsteg section.

2008

March 14

The Gotthard Base Tunnel information and visitor centre by the north portal at Erstfeld is opened. Similar to the visitor centres at Sedrun and Pollegio, it informs the interested public about the NRLA project.

April 29

The work contract for the railway infrastructure systems is signed in Lucerne. It covers the implementation planning and installation of the railway infrastructure systems in the Gotthard Base Tunnel as well as on the approach routes of the existing railway network. The contract for 1.69 billion Swiss francs is the largest construction lot awarded by AlpTransit Gotthard Ltd.

September 16

For implementation of the NRLA, the Swiss parliament authorises a total credit of 19.1 billion Swiss francs (price level 1998, excluding inflation, value added tax and construction interest costs). Of this amount, 13.157 billion Swiss francs are for the Gotthard and Ceneri base tunnels of the Gotthard route. The financing gap that has existed since 2004 is thereby closed.

October 15

In the east tunnel of the Gotthard Base Tunnel, the geologically challenging zone of the Piora syncline is completely cut through and thereby mastered for the first time.

2009

February 3

The Piora syncline is also successfully mastered in the west tunnel of the Gotthard Base Tunnel.

May 18

First work for installation of the railway infrastructure systems of the Gotthard Base Tunnel starts at Biasca.

June 11

The main lot for the Ceneri tunnel is awarded. It covers driving the two 15.4-kilometres-long single-track tunnels of the Ceneri Base Tunnel from the intermediate heading at Sigirino.

June 16

Breakthrough is achieved between Erstfeld and Amsteg. With horizontal and vertical deviations of less than 1 centimetre, the second-to-last breakthrough in the Gotthard Base Tunnel is achieved with very high accuracy.

December 18

In both tunnels between Amsteg and Sedrun, and in the west tunnel between Bodio and Faido, the concrete shell construction is complete. More than 40 kilometres, or over one third, of the Gotthard Base Tunnel are ready for installation of the railway infrastructure systems.

2010

March 10

An official first blast at Sigirino marks the start of the main driving work for the Ceneri Base Tunnel. The two tunnels, each running both north and south, will be excavated from the installations cavern at Sigirino.

April 12

At the future south portal of the Ceneri Base Tunnel in Vezia, blast-driving to the north begins.

June 25

At the south portal of the Gotthard Base Tunnel, installation of the railway infrastructure systems begins in the west tunnel between Bodio and Faido. By 2012, the 16-kilometres-long section will be completely equipped with railway infrastructure systems, which include the railway track, catenary, electric power supply, telecommunications and safety systems.

October 15

World record under the Gotthard: the first final breakthrough takes place between Sedrun and Faido. The entire 57 kilometres length of the Gotthard Base Tunnel has been completely cut in the east tunnel.

2011

March 10

At Sigrino, work begins for the Dosso di Taverne wild-animal corridor. The work continues until autumn 2012.

March 23

The miners excavate the last metres of rock between Faido and Sedrun. Around five months after the final breakthrough in the east tube, cutting of both single-track tubes over a length of 57 kilometres is therefore complete.

September 2

Installation of the railway systems by the north portal of the Gotthard Base Tunnel begins. In the next four years, a large part of the railway infrastructure systems, such as railway tracks and catenaries, as well as the electric power supply, telecommunication and safety systems, will be installed from Erstfeld.

December 5

For a period of one year, all railway traffic on the Gotthard route between Altdorf and Erstfeld will travel over a single track. The single-track phase is necessary to allow work on underpasses and bridges to the west of the approach section.

December 21

The final blast in the north drive of the Ceneri Base Tunnel at Vigana takes place. The first 670 metres of the 15.4-kilometres-long tunnel were excavated by blasting from Vigana.

2012

June 9

On the former spoil deposit of the Gotthard Base Tunnel at Sedrun, in collaboration with the municipality of Tujetsch (Sedrun), the Claus Surrein artificial lake is inaugurated.

September 1

At the Nodo di Camorino, the old railway bridge over the A2 motorway, near the Bellinzona South exit, is demolished. The demolition work starts at the beginning of September and continues until the end of 2012.

September 5

On their visit to the world's longest railway tunnel, the members of the Swiss Federal Council travel with the first passenger train to run over the definitive tracks from Erstfeld to Sedrun. In her on-site address, President of the Swiss Federal Council Eveline Widmer-Schlumpf underscores the great importance of the NRLA for the European railway network.

September 27

The date marks the twentieth anniversary of the referendum on the New Railway Link through the Alps (NRLA). To celebrate this jubilee, retired Federal Councillor Adolf Ogi with former colleagues visits the NRLA construction sites of the Gotthard Base Tunnel at Erstfeld and Amsteg.

September 28

Fehler! Verweisquelle konnte nicht gefunden werden.

In the Canton of Uri, the Wysshus underpass is opened to traffic.

November 15

AlpTransit Gotthard Ltd baptises the redesigned locomotive. Until the opening of the Gotthard Base Tunnel in 2016, the locomotive will heighten public awareness of the first flat route through the Alps.

December 3

Swiss Federal Railways again have two tracks available between Altdorf and Erstfeld. For a period of one year, the entire north-south traffic south of Altdorf railway station had to travel over a single track. With two tracks, Swiss Federal Railways have greater timetable stability.

2013

March 10

At Camorino, the 100-metres-long, 14-metres-wide bridge over the A2 motorway, weighing 4,000 tonnes, is successfully moved 14 metres sideways. In May 2013, construction of the second bridge begins. From 2019, railway traffic will travel over the four tracks of the new bridges.

June 13

At Camorino, the underpass for the cantonal road is officially opened by Ticino Cantonal Councillor Michele Barra and Renzo Simoni, CEO of AlpTransit Gotthard Ltd. Work on the 405-metres-long underpass for the cantonal road began in September 2009. It cost around 30 million Swiss francs.

August 12

The Board of Directors awards the railway systems lots "Track & Logistics" and "Railway Systems & Overall Coordination". Appeals against both awards will subsequently be lodged with the Swiss Federal Administrative Court.

August 23

AlpTransit Gotthard Ltd welcomes the one-millionth visitor to the Erstfeld Information Centre. Since the start of construction work on the Gotthard, the world's longest tunnel has attracted tens of thousands of visitors to the NRLA construction sites as well as the Information Centres at Erstfeld, Sedrun and Pollegio.

August 30

The first journey through the full length of the Gotthard Base Tunnel from Bodio to Erstfeld takes place. The invited journalists cover the 57-kilometres distance by train, bus and on foot. One thousand days remain until the world's longest railway tunnel will be ready for operation.

December 16

Federal Councillor Doris Leuthard officially opens the pilot operation phase in the west tube of the Gotthard Base Tunnel. For the first time, a train travels over the approximately 13-kilometres-long pilot section from Bodio to Faido at a speed of 160 km/h.

2014

February 11

Fehler! Verweisquelle konnte nicht gefunden werden.

The members of the Executive Council of the Canton of Uri visit the Gotthard Base Tunnel. They inform themselves about the current and future work in the canton of Uri.

June 16

With more than 650 successful runs on 78 test days the pilot operation phase is complete. It took place from December 2013 to mid-June 2014 between the south portal at Bodio and the multifunction station at Faido. On this 13-kilometres-long section of tunnel, trains travelled at up to 220 km/h. The pilot operation phase yields important findings for test operation of the complete tunnel system and for opening of the Gotthard Base Tunnel in December 2016.

September 17

The Swiss Federal Supreme Court upholds two appeals against decisions of the Swiss Federal Administrative Court of March 2014 in connection with the awards of railway infrastructure systems work for the Ceneri Base Tunnel. The judgements of the Federal Administrative Court are annulled. The original decisions of AlpTransit Gotthard Ltd for the awards are confirmed.

September 18

The tunnel water at the north end of the Gotthard Base Tunnel will be used for breeding native fish and crustaceans (shellfish) and as a source of energy in the form of heat. ATG reaches agreement with «Basis57 nachhaltige Wassernutzung AG» for the purchase of around 2.5 hectares of land near the north portal.

September 20

The Construction Site Open Day at Sigrino again attracts many interested visitors. Around 6,500 people obtain on-site information about the state of work on the Ceneri Base Tunnel.

October 31

After 18 years and around 390,000 visitors, the Information Centre at Sedrun closes its doors. Since it was opened in 1996, the Information Centre has attracted visitors from Switzerland, Europe, and the rest of the world. Until the Gotthard Base Tunnel is opened, the Information Centres at Pollegio and Erstfeld remain open.

October 31

In the Gotthard Base Tunnel, at a distance of around 54 m from the south portal, the contractor casts the last, "golden" sleeper. The entire 57 km of the world's longest railway tunnel can now be continuously travelled by diesel locomotives. An important milestone for the project. The pure laying time was 39 months. 290 km of track have been laid.

November 20

Representatives of AlpTransit Gotthard Ltd, the canton of Ticino and the municipality of Osogna open the new Biasca-Osogna cantonal road at the Giustizia junction. The old Biasca-Osogna cantonal road had to be relocated to allow the cut-and-cover tunnel connecting the NRLA line to the existing SFR main line to be constructed. It now passes through the cut-and-cover tunnel.

December 11

At Nodo di Camorino, representatives of AlpTransit Gotthard Ltd, the project engineers and the construction companies inaugurate the Bellinzona-Lugano viaduct. In the future, trains traveling through the Ceneri Base Tunnel towards Lugano will pass over this 480-metres-long structure.

2015

March 17

After one final blast, the miners in the Ceneri Base Tunnel can shake hands. Thirteen months ahead of schedule, the first breakthrough to the south takes place in the west tube.

March 30

Only two weeks later, the miners excavate the last metres of rock in the east tube between Sigirino and Vezia. Both tubes of the Ceneri Base Tunnel towards the south are now completely cut.

May 21

Laura Sadis, former State Councillor of the Canton of Ticino, joins the Board of Directors of AlpTransit Gotthard Ltd (ATG). She is elected to this office by the Annual General Meeting of ATG.

June 1

In Lucerne, Transport Minister Doris Leuthard, Renzo Simoni and Andreas Meyer start the countdown to the opening celebrations of the Gotthard Base Tunnel. In exactly one year's time, on June 1, 2016, the official opening ceremony will take place.

October 1

Start of test operation in the Gotthard Base Tunnel.

2016

Scheduled opening of the Gotthard Base Tunnel for commercial operations.

2020

Scheduled opening of the Ceneri Base Tunnel for commercial operations.