

The image shows the interior of a large railway tunnel. Two parallel tracks run towards the horizon, illuminated by bright blue lights mounted on the walls. The tunnel's circular shape and the perspective of the tracks create a strong sense of depth. An orange banner at the top contains the title text.

GOTTHARD BASE TUNNEL BODIO/FAIDO

Combination of Contract Sections Bodio/Faido, Switzerland

The Gotthard Base Tunnel is a railway tunnel for high-speed rail traffic. With a length of 57 km, it is the longest railway tunnel in the world.

The contract section combination of Bodio/Faido represents two out of five construction lots. This combination consists of the construction section of Bodio, which is 16.6 km long and has a maximum overburden of 1'500 m and the construction section of Faido, which is 14.6 km long beneath an overburden of up to 2'300 m. The tunnel section Faido also contains a multifunction station with a length of 1.7 km.

Construction of the New Gotthard Base Tunnel

Location

Bodio and Faido, Switzerland

Project Stages

Design: since 1990

Realisation: 1999 – 2016

Project Description

Bypass gallery:	Length:	1.17 km
	Cross-section:	51.00 m ²
2 single-track tubes:	Length:	each 31.2 km
	Cross-section:	each approx. 75.00 m ²
Multifunction station:	Gallery length:	1.7 km
	Cross-section:	12 – 330 m ²
Soft-ground section:	at South portal:	800 m
Cut-and-cover section:	at south portal:	380 m

Excavation Method

In rock: TBM excavation; driven section in soft ground: pipe arch; multifunction station and cross-passages: drill-and-blast technology.

Geology

Penninic Gneiss zone, Gotthard massif, Piora syncline and 800 m-long soft ground section close to the South portal.

Max. overburden: 2'300 m

Project Details

Extensive TBM drive beneath high overburden.
Two-shell lining with umbrella waterproofing

Client and Contact Person

AlpTransit Gotthard AG (ATG)

Dr. Renzo Simoni (director)



Amberg Engineering Ltd.
Trockenloostrasse 21
CH-8105 Regensdorf
Switzerland

information@amberg.ch, www.amberg.ch



Project

Combination of contraction sections
Bodio/Faido: 31.2 km
Overall length: 57 km
Construction of two new single-track railway tunnels. Construction cost (price base 1991)
Gotthard Base Tunnel South:

CHF 3'995 million

Combination of contraction sections
Bodio/Faido: CHF 2'430 million

Our Services

- Construction supervision in engineering joint-venture

In collaboration with Pöyry Infra AG and Lombardi SA Ingegneri Consulenti