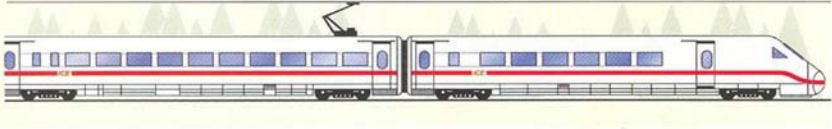

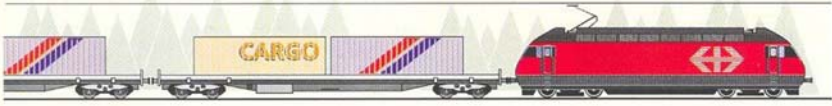



Alp Transit, Gotthard Base Tunnel, Switzerland High Speed Railway

	<p>Future passenger trains Eurocity (TGV, ICE, tilt trains) Maximum speed: 200-250 km/h Seating capacity: 700-800 Maximum length: 400 m</p>
	<p>Other passenger trains Maximum speed: up to 200 km/h Seating capacity: 900-1000 Maximum length: 400 m</p>
	<p>Unaccompanied intermodal traffic Maximum speed: 120 km/h Maximum hauled tonnage: 2000-4000 tons Maximum length: 750-1500 m</p>
	<p>Rolling road Maximum speed: 120 km/h Maximum hauled tonnage: 2000-4000 tons Maximum length: 750-1500 m</p>

Client

Alp Transit Gotthard; a subsidiary of Swiss Railways.

Project

Alp Transit Gotthard Base Tunnel.

Services

- Project management
- Concept and feasibility studies
- Geotechnical investigations
- Geomechanical / structural analysis
- Cost estimates, construction methods and scheduling
- Public approval phase
- Environmental impact assessment
- Environmental management
- Ventilation and cooling design
- Civil and E&M detailed design
- Tender document preparation
- Construction supervision
- Operation / maintenance concept

Services period

1994 - 2015

Background

Switzerland has a transit agreement with the European Union and has a commitment to implement the new Alp Transit railway infrastructure.

Alp Transit is the mark of quality for the new railway through the Base Tunnel of the Gotthard Mountains; consisting of twin single track high speed railway tunnels running the 57 km between Erstfeld and Bodio.

Alp Transit line will provide the link to the European high speed railway network and travel times will be cut drastically.

Also with an operational railway in the Gotthard Base Tunnel it will be possible to divert the increasing flow of goods traffic through Switzerland from road to the new rail system.

Eurocity trains like the latest TGV trains from France; ICE trains from Germany or new tilting trains, will travel at up to 250 km / hr through the Gotthard Base Tunnel.

With the high speed rail connection, airlines will have serious competition. For instance the railway journey will be faster between Zurich and Milan, if transfer times between the airports and city centers are consider.

The other passenger trains will travel through the Gotthard Base Tunnel at up to 200 km / hr; and goods trains will travel at 100 to 120 km / hr.

Electrowatt, in joint venture alone; or in association with other firms is playing a major role on this mega underground rail project.

Competence. Service. Solutions.