

# Semmering railway

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## Semmering Railway\*

[UNESCO World Heritage Site](#)

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**State Party**  Austria

**Type** Cultural

**Criteria** ii, iv

**Reference** 785

**Region\*\*** [Europe](#)

### Semmeringbahn



Semmering railway with  
surrounding mountain scenery

Operation	
Owner	<a href="#">Austrian Federal Railways</a>
Operator(s)	Austrian Federal Railways
Technical	
Line length	41 km (25.5 mi)
Track gauge	1,435 mm (4 ft 8 ½ in)
Minimum radius of curvature	190 m (623 ft)
Electrification	15 kV, 16⅔ Hz Overhead line
Maximum incline	2.5 %

The **Semmering railway**, [Austria](#), which starts at [Gloggnitz](#) and leads over the [Semmering](#) to [Mürzzuschlag](#) was the first mountain [railway](#) in Europe built with a [standard gauge](#) track. It is commonly referred to as the world's first true mountain railway, given the very difficult terrain and the considerable altitude difference that was mastered during its construction. It is still fully functional as a part of the former [Austrian Southern Railway](#) which is now part of the [Austrian Federal Railways](#).



The Semmering railway was constructed between 1848 and 1854 by some 20.000 workers under the project's designer and director [Carl von Ghega](#). The construction features 14 [tunnels](#) (among them the 1,431 m vertex tunnel), 16 [viaducts](#) (several two-story) and over 100 curved stone bridges as well as 11 small iron bridges. The stations and the buildings for the supervisors were often built directly from the waste material produced in the course of tunnel construction.

Across an overall track length of 41 km the Semmering railway overcomes an altitude difference of 460 m; on 60% of its length the gradient is 20-25‰ (2-2.5%,

equivalent to a 1-meter difference in altitude on a 40 m route distance), and 16% exhibit a curvature radius of only 190 m. This was an entirely new technical dimension of railway construction, and new instruments and methods of surveying had to be developed to handle the resulting challenges. Also, new technologies were employed for the [Engerth locomotives](#) because the types in general use at this time could not handle the extreme gradients and turning radii.

Even while being built the Semmering railway was perceived as an effort of "landscape gardening", i.e. it attempted a harmonious combination of technology and nature. The unique travel experience which the Semmering railway offered contributed significantly to the original opening of the Semmering region for tourism. Numerous hotels and mansions are witnesses of this epoch. This enormous upswing to the turn of the century and the revaluation of the region as a winter sports area in the first third of the 20th Century were interrupted first by World War I and then by the changed recreational needs of the population. Therefore this unique culture landscape could be preserved with little change. A trip on the Semmering railway, which is in full use 150 years after its building, still impresses the traveller as a special experience by its varied landscape, the typical style of its mansions and the characteristic sequence of viaducts and tunnel constructions.

**In 1998 the Semmering railway was added to the list of the UNESCO [World Heritage sites](#).**

**The Management-Plan was finished in June 2010 – *a short overview below:***

### **Partners for the Management of the World Heritage**

There are already several active institutions, organisations and bodies on Provincial, regional and community levels working in the area of the World Heritage site, and they are well integrated in the World Heritage management. Therefore it is not about setting up new structures, but to use existing ones, to network and develop them.

Apart from preserving the technical monuments of the Semmering Railway according to the ideas of monument protection and awareness-raising in favour of the World Heritage, implementing the Management Plan is designed to contribute to the positive development of the entire region. Therefore the areas of action of the Management Plan and the subject areas also include tasks of regional development, such as settlement, mobility, cultural landscape, inter-community cooperation.

The regional management of Lower Austria – Industrial District Office and the regional management of Upper Styria, Ost GmbH, are also value, coordinating partners of the association "Freunde der Semmeringbahn", also and primarily as regards the professional networking of the organisations and institutions. Regional political development work in the context of the small-scale region of the *World-Heritage Region Semmering Rax* is also of great importance. All communities located in the World Heritage area in the Province of Lower Austria are represented in it.

## **Formation of a workgroup connecting the Provinces**

The construction of the Semmering Base Tunnel will bring vital impulses to the entire debate about the development of the regional economy in this borderline region between Lower Austria and Styria.

### **Objectives**

The aim is to create added value for the region through reinforced cooperation and to use the chance of repositioning the region with accompanying measures. The expected value-created potentials for businesses and communities should be put into specific projects. At the same time, sensitive exploitation of the Semmering World Heritage and its future development should be guaranteed. Therefore the World Heritage Semmering Railway is defined as separate field of action of a workgroup connecting the Provinces.

On the basis of various precursory work, the following fields of action for the workgroups can be deducted:

- Development of potentials for tourism
- World Cultural Heritage – implementation of the Management Plan, development of projects
- Boosting the economy and the industrial corridors
- Location and housing quality
- Inter-community cooperation

### **Organisation of work**

Formation of a steering committee involving the different Provinces for supra-regional coordination among the most important organisations, Provincial and other funding bodies. The following Province-connecting workgroups have been established:

- Value-creation due to the construction of the tunnel – networking of entrepreneurs/business people in the region
- World Cultural Heritage and Tourism with regard to further focuses on regional development: Settlement, mobility, cultural landscape, energy, attractive housing locations, inter-community cooperation and protection of monuments

The regional management for Lower Austria – Industrial District Office and the regional management for Upper Styria, Ost GmbH are responsible for coordination and management of this cross-regional development process.

### Short characteristics of the region:

Municipality	Province	Inhabitants permanent residence		Inhabitants secondary residence 2001	Area km2
		2001	2010		
Breitenstein	Lower Austria	371	348	364	20
Gloggnitz	Lower Austria	6159	5989	838	19
Mürzzuschlag	Styria	9569	9016	460	19,26
Payerbach	Lower Austria	2357	2203	960	17
Reichenau an der Rax	Lower Austria	2914	2736	1625	89
Schottwien	Lower Austria	714	714	238	12
Semmering	Lower Austria	610	600	944	8
Spital am Semmering	Styria	1887	1655	367	72,72

reference: [www.statistik.at](http://www.statistik.at)

decreasing  
population

high number  
of "leisure  
homes" in  
some  
municipalities

### Geographical situation

Regional integration:

In the Provinces of Lower Austria and Styria, between the towns of Gloggnitz and Mürzzuschlag





