

# Renovation of the Wasserfluh Tunnel second stage



**As part of the renovation of the Wasserfluh Tunnel (2<sup>nd</sup> stage), the existing single-track railway tunnel (length 3,556 m) had to be repaired and equipped with a ballastless track. EBP was responsible for the comparison of various options for the construction of the track and for the speed optimization as well as for producing the preliminary project from the best option.**

The railway tunnel, which was first in operation in 1911, has a horseshoe-shaped profile without an inverted arch and runs through rock with embedded marl layers.

Following the construction work that was carried out in 2012, the approximately 3,600-meter-long Wasserfluh Tunnel is being renovated in a 2<sup>nd</sup> stage covering the remaining 2,300 or so meters.

Since the intention of the Südostbahn (SOB) is to reduce the travel time on the St. Gallen – Wattwil route, different track geometry optimizations and the associated costs and impact were also investigated within the scope of the project. In a first phase, EBP carried out a comparison of different options for the construction of the track (incl. the position of the transition area between ballast track and slab track) and the increase in travel speed. Then we developed the pre-liminary project from the best option, incl. the construction schedule and cost estimate.

The renovation work included the construction of a ballastless track (IVES system) along the full length of the tunnel. In

## Client

Schweizerische Südostbahn AG (Swiss South Eastern Railway)

## Facts

Period 2016 - 2017

Project Country Switzerland

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addition, as part of the 2nd phase, the drainage system and pressurized water pipe were renewed.

The construction work will be carried out during the summer holidays in such a way as to mini-mize the period of total closure. In order to meet the time constraints of SOB, EBP has re-searched and optimized a detailed construction timetable. Certain operations will now be shunted into the preliminary phase (increased night closures).