RECONSTRUCTION OF THE SALZBURG MAIN RAILWAY STATION

Client: Austrian Railways Construction AG
Development Period: 2006 to 2014

THE PROJECT

The main railway station of Salzburg is situated on the Danube axis (Budapest - Vienna - Salzburg - München - Paris) and at the start of the Tauern axis (Salzburg - Villach - Triest) and therefore marks an important junction point in the European railway network. Concurrently, it represents the central node of the regional public traffic.
The previous station with eight dead-end platforms, three through platforms and a dissatisfactory access situation for passengers no longer met modern day requirements. Therefore, the station has been thoroughly remodelled.
For this purpose, all of the rails and platforms, the Nelböck viaduct and two more crossing objects have been rebuilt. The project also included a spacious central passage with an opening to the Schallmoos district. Lastly, a historic hall over the platforms is heritage-protected and had to be preserved.

OUR FUNCTION

For this project, BGG Consult was responsible for all geotechnical and hydrogeological activities. By using the results of previous subsoil exploration campaigns (conducted in 1990 and 1993), a further investigation was conducted in 2007 for the new project. Based on these findings, a geotechnical and hydrogeological expert's report was compiled, which was needed for the construction permit application.
In 2008, expert's reports for the different contract sections of the project were prepared.
During construction, a geotechnical and hydrogeological supervision was provided.

Deep-seated foundation:
The underground in the station area, which is on the foundation level, consists of "Seeton", a fine grained lacustrine sediment with a low bearing capacity and a high settlement sensitivity. This soil reaches to great depths. In cooperation with the designers, a combined foundation of grouted driven steel piles and shallow grounding was chosen where heavy loads occurred. This foundation method constitutes a proper and economic option to bored cast-in-place concrete piles.

Dewatering and ground water communication:
BGG Consult provided hydrogeology consulting for the planning of the numerous dewatering measures that were needed for the construction of the bridges. Furthermore, the planning had to ensure that remaining sheet pile walls and jet grouting bodies would not influence the natural ground water flow significantly.

Section of the passage with the pedestrian underpass (photo composition by kadawittfeldarchitektur)