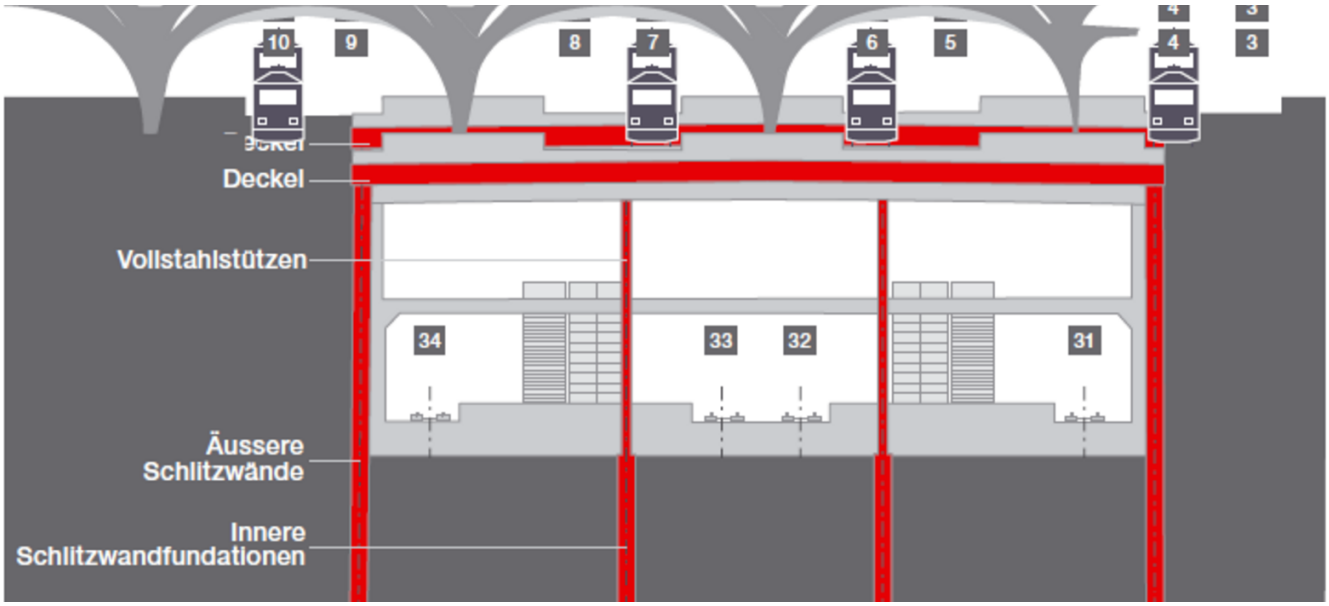
Reference

Zurich cross-city link, lot 2, Löwenstrasse train station









SHORT DESCRIPTION

The new underground transit station at Löwenstrasse is the heart of the Zurich cross-city link. It was built 16 metres below the existing tracks during normal railway operations. This represented an enormous challenge for everyone involved.

THE PROJECT

In order to ensure that operations could continue while work was carried out on the underground train station, the cut-and-cover method was used. The excavation pit was braced almost exclusively using diaphragm walls. With working heights of less than 7 metres in some places, and the logistical constraints imposed by the busy main train station, this project was especially challenging.

In addition to the existing station, the Sihl River also passes beneath the transit station. During the construction work, some sections of the river were drained. In order to make sure that the groundwater could flow freely after the new station was put into operation, three culverts were installed running through the structure.

The construction of the underground station also involved extensive jetting and injection work in order to underpin the old station building and to create a sealing block in the access zone of the tunnel boring machine in the shaft for the

southern section.

SERVICES IN DETAIL

- Diaphragm walls: 16,200 m^2 with various wall thicknesses
- Micropiles: 13,150 m
- Temporary anchors: 3,500 m
- Large filtering wells: 30 pcs, approx. 830 m
- Small filtering wells: 240 pcs, approx. 1,210 m
- Underpinning: 2,000 m^2 concrete infill
- Sealing wall: 1,500 m^2 injections
- Sealing columns: 500 m^2 jetting

CHALLENGES

Extremely limited space. Construction work during ongoing railway operations. Shift operation alongside railway traffic.

FACTS

Location	Bahnhofplatz Zürich , Zurich , Switzerland
Status	completed
Construction volume (value of our services)	33.8 M CHF
Start of construction	May 2008
Completion	October 2011
Building owner	SBB Infrastruktur
Contracting entity	SBB Infrastruktur
Project designer	igzalo c/o Basler Hofmann
Construction management	igzalo c/o Basler Hofmann
Construction management	igzalo c/o Basler Hofmann

SERVICES

Special Foundations

Infrastructure