

Freight passing track, Pfäffikon

Building surveying & monitoring



📍 Pfäffikon, Switzerland
 👤 SBB AG
 🕒 2023-2025

Services

- ◆ Automated track monitoring:
 - on approximately 1.2 km of track using 500 track prisms and seven total stations
 - with 160 track prisms and three total stations on 390 m of track (subsidence area)
 - at 7 track crossings
- ◆ Automatic monitoring of retaining walls & slope stabilization
- ◆ Manual monitoring measurements:
 - Precise tachymetric and leveling recording of position and height changes along Churerstrasse.
- ◆ Detailed recordings & stakeouts:
 - Precise recording of heights, track axes, shafts
 - Stakeouts for switches, foundations, insulating joints, and catenary systems
- ◆ Redefinition of track safety points
- ◆ Automated monitoring of a drainage channel to check drainage
- ◆ All recorded data is documented in TEDAMOS Web.

Technologies

- ◆ Total stations
- ◆ Inclination sensors
- ◆ Ultrasonic Sensors
- ◆ Leveling

Between September 2023 and October 2025, a new freight passing track will be built in Pfäffikon (SZ). This is a challenging project with complex technical requirements in terms of planning, construction, and documentation. Two structural elements of the track system require particular attention:

Support structures along the cantonal road

Due to significant differences in height, an angle retaining wall up to 8 m high will be erected on a 650 m long section. In the western part of the construction site, gabion walls and an embankment will provide the necessary ground leveling.

Track lowering under Hurdenerstrasse

To alleviate space constraints, the southern main track will be lowered over a length of 250 m.



