Construction project LUX, Schindellegi

Automatic and manual monitoring measurements

Schindellegi, Switzerland
Baulink AG
2023 - 2026

Leistungen

- Planning & installation of a complex and extensive measuring system
- Automated measurements at intervals between permanent and 1 hour
- Automatic calculation & alarms when limit values for settlements, positional shifts, noise limits, etc. are exceeded
- Manual deformation measurements on the construction site, surrounding structures and terrain
- Construction site documentation via webcam and CraneCam

Technologien

- 1 total station
- 3 noise and 4 vibration sensors
- 3 pore water pressure sensors
- 3 chain inclinometers
- 9 humidity sensors
- 1 webcam
- 1 CraneCam system
- Web-based, password-protected customer portal with 24/7 access

Since summer 2023, the LUX new-build project with 6 apartment blocks and a total of 29 exclusive flats has been under construction in a fantastic panoramic location overlooking Lake Zurich. During the construction of the excavation pit on the slope, the client commissioned Terradata to provide an "all-round carefree package" in the area of "preservation of evidence and monitoring measurements".

The extensive measurements included crack detection on neighbouring buildings, vibration and noise measurements during the entire construction period, automatic inclinometer and pore water pressure measurements as well as manual and automatic 3D deformation measurements on surrounding buildings, roads and the end of the construction pit.

For the first time, a continuous condition survey of the moisture in the neighbouring basement rooms was carried out at 9 different locations (air and concrete moisture).

Authorised persons can not only analyse all the results of the manual and automatic measurements on the TEDAMOS web platform, but can also observe the construction progress live via webcam. We also fly over the project perimeter every month with our drones and create a high-resolution orthophoto and a 3D model from the image data.

Our TEDAMOS CraneCam system will soon be installed as soon as the first crane has been erected so that the specialist planners can create a target/actual comparison of the various trades (formwork, electrical and HVAC inserts, etc.) on the computer with centimetre accuracy. In addition to the orthophotos, which are updated daily, including overlays of trade plans, this high-quality as-built information and 3D models can also be used to derive cubatures, slopes of lean concrete, profiles and other parameters.