

Wooden bridge Sihlmatt, Hirzel

2018



The Sihlmatt wooden bridge has connected the cantons of Zug and Zurich since its construction in 1849-1850. Timbatec Holzbauingenieure AG has determined by means of a condition survey that the bridge urgently needs to be rehabilitated and subsequently supervised the repair project.

The project

The wooden bridge over the Sihl was built in the years 1849 - 1850. It was a central connection of the main traffic axes between Lake Zug and Lake Zurich. In 1960 it was moved upstream to make room for a new, larger bridge at the old location. Now the wooden bridge is mainly used by hikers and the directly surrounding farms. Timbatec Holzbauingenieure AG was commissioned by the Civil Engineering Office of the Canton of Zurich to carry out a condition survey of the wooden bridge. It was found that some components of the supporting structure were almost completely decayed due to insect infestation. A renovation of the bridge was therefore absolutely necessary.

The construction

The repair project was carried out in close cooperation with the Civil Engineering Office of the Canton of Zurich and the preservation of historical monuments. A team consisting of the carpentry firm Schneider GmbH and the hydraulic engineers Willi Stäubli Ing. AG was formed to repair the damaged components. In order for the bridge to meet all safety requirements again for the coming years, the damaged parts were replaced. In addition, the structural wood protection was improved.

The challenge

Due to the construction method, it was a great challenge to replace the components without dismantling the bridge into its individual parts. By means of temporary driven piles in the watercourse, the individual components could be carefully replaced without dismantling the bridge. The rehabilitation was successfully completed thanks to the good cooperation of all parties involved.



Strut renovation of the bridge



Temporary driven piles for stabilization



Bottom view of the bridge



Existing and refurbished structure

Construction Data

- Wooden bridge 31 meters
- Clear width 5.4 meters
- Clear height 4.7 meters Repair costs 150'000.francs

Services of Timbatec

- Condition analysis
- Planning of the renovation
- Call for tenders
- cost estimation
- Statics/construction
- Construction site inspections
- construction management

Master builder

Willy Stäubli Ing. AG
8810 Horgen

Timber construction engineer

Timbatec Holzbauingenieure Schweiz AG, Zürich
8006 Zürich

Timber constructor

Zimmerei Schneider GmbH
8824 Schönenberg

Building owner

Baudirektion Kanton Zürich
8090 Zürich