

Feld 1 School Building, Richterswil

2021



Due to the growing number of students, the municipality of Richterswil has decided to expand the space available at the Feld 1 school building. This will create an additional 1,542 square meters of space for classrooms, group rooms, and a music room.

The Project

The Feld 1 school building opened in 1971 and has now reached its capacity limit. The school was therefore expanded with two additional stories. To keep the weight of the addition as low as possible, a timber construction was planned from the outset. With TS3 technology, loads can be transferred directly to the underlying load-bearing columns and walls.

Thanks to TS3 technology, joists are no longer necessary. The rooms are designed flexibly, allowing their use to be adapted to changing needs. The timber construction gives the rooms a sense of comfort, safety, and brightness.

Construction Method

A 34-cm-thick cross-laminated timber (CLT) panel was installed on the existing school building roof to serve as a load-distribution deck. This allows for flexible room layout in the addition, independent of the underlying existing structural framework. The two-story addition now stands on top of this deck. TS3 technology is used for the load-distribution panel, the floor slab, and the roof of the addition. The homogeneously bonded large-format panels have a thickness ranging from 280 to 340 millimeters, depending on the floor, and are up to 13.5 meters long.

The Challenge

All construction work took place while the school remained in operation. Thanks to the prefabrication of the timber structure, the shell of the addition was erected in two weeks during the summer break.



Construction phase Richterswil school building

Construction data

- Number of floors: 2
- Gross floor area: 1,757 m²
- Cross-laminated timber: 549 m³
- TS3 technology: 540 m³

Architecture

Batimo AG, Zofingen

Client

Municipality of Richterswil

Timber engineer

Timbatec Timber Engineering Switzerland AG, Zurich

Timber construction

Saxer Holzbau GmbH, Zurich

Civil engineer

Forster & Linsi AG, Pfäffikon

GU/TU

Allreal Generalunternehmung AG, Glattpark

Photography

Duco Ventilation & Sun Control, Veurne

CLT Manufacturer

Schilliger Holz AG, Küssnacht