

Expansion of the Loogarten Foundation Care Center, Esslingen

2025



The Loogarten Care Center in Esslingen was expanded by two stories using innovative TS3 technology in a short period of time, without interrupting operations, using locally sourced wood, thereby doubling its capacity.

The project

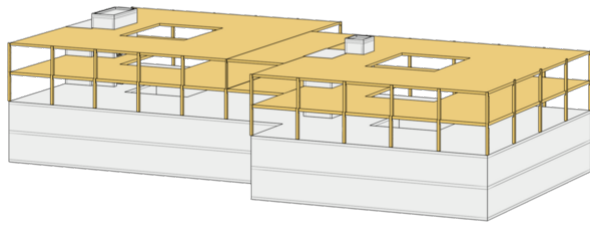
For this two-story addition, Timbatec was responsible for the fire protection, structural engineering, and building physics aspects of the project. The requirements for the construction project were diverse and demanding: The use of TS3 technology, fire protection solutions with encapsulated cross-laminated timber (CLT) floors and walls, as well as fulfilling the client's request to source the approximately 2,000 m³ of wood required from the forests of the surrounding municipalities of Küsnacht, Erlenbach, Herrliberg, and Egg. This required a three-part tender for the forestry operation (timber procurement), the timber industry (sawing and further processing), and the timber builder—a collaboration that combined technology, logistics, and regionality.

The construction method

TS3 technology was used for the addition, in which cross-laminated timber panels are bonded lengthwise and end-to-end with cast resin. This creates solid, biaxially load-bearing floor slabs that transfer loads precisely and efficiently to the load-bearing walls and columns of the existing solid-construction floors—this construction method is characterized by its high load-bearing capacity and enables slender timber structures.

The challenge

The use of locally sourced wood required separate bids from the forestry department, the wood processing industry, and the timber contractor (generally involving slightly more planning effort). On-site, enclosed timber components in the areas where ceiling joints meet had to be modified to meet fire safety requirements.



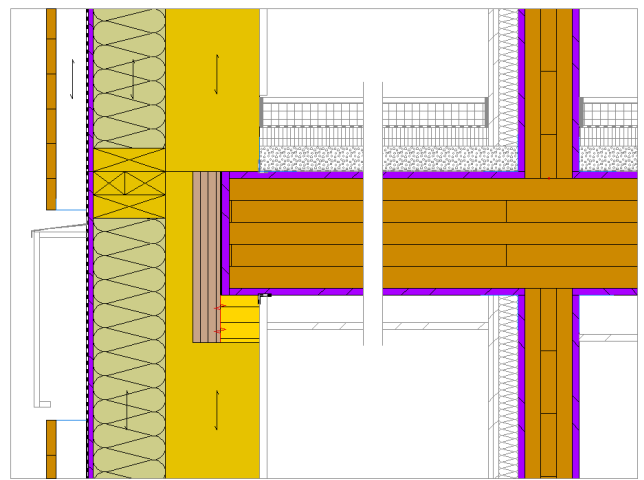
Visualization of a two-story addition to the existing floor plan. Columns, slabs, finished



CLT panel prepared along its long side being erected prior to TS3 joint grouting.



The TS3 joint sealant is applied on-site during installation.



Floor slab details (left: exterior wall with facade connection) and (right: interior wall inside the building).

Construction Data

- 2 new additional floors
- Gross floor area: 1500 m²
- Cross laminated timber: 860 m³ (including interior walls)
- TS3-ceilings 2500 m²
- TS3-Technology: 1000 lm joint
- Glued laminated timber (glulam) 70 m³
- Exterior wall elements 1100 m²

Construction costs

- Timber construction CHF 2.3 million

Services of Timbatec

- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- SIA Phase 52 Execution
- SIA Phase 53 Commissioning

Architect

asa AG
8640 Rapperswil

Client

ARGE Loogarten
8610 Uster

Timber construction

Kübler Holzbau AG
8618 Oetwil am See

Others

Schilliger Holz AG
6403 Küssnacht am Rigi

Construction management

Reichle Architekten AG
8610 Uster