

Apartment buildings in Unterhub, Zollikerberg

2022



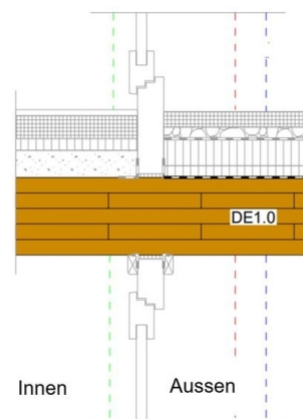
In the apartment buildings on the lower right bank of Lake Zurich, the benefits of TS3 technology and timber construction are both tangible and visible: This construction method allows for flexible room layouts and wooden ceilings that extend from the interior to the exterior without the need for complex cantilevered slab connections.

The Project

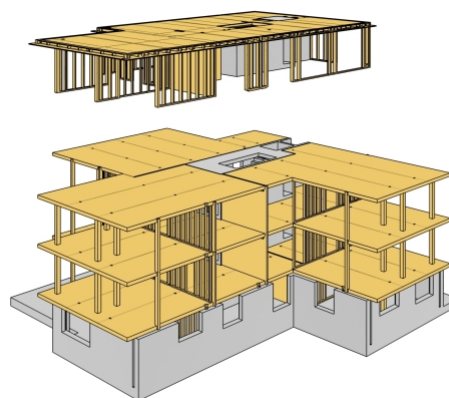
The above-ground structure is a wooden construction consisting of wooden columns and cross-laminated timber panels connected using TS3 technology. The floor slabs rest solely on the columns, which are mostly positioned in the exterior walls and the stairwell core. This allows for a highly flexible layout of the rooms. In the model shown in Figure 3, the columns, the few load-bearing walls, and the TS3 joints are visible. A total of 520 meters of TS3 joints were installed.

The Construction Method

The TS3 connection using joint grouting enables the construction of beam-free timber frame structures with slender, point-supported panels. By activating the secondary load-bearing direction, the same types of floors can be built using wood. Due to wood's low thermal conductivity, there is no need for complex cantilever slab connections. The CLT panel can simply extend from the interior to the exterior. The concrete stairwell provides structural rigidity to the building.



Detail continuous plate



Construction with joint division

Construction data

- Number of floors: 3
- Gross floor area: 1,720 m²
- TS3 technology: 520 m¹

Architecture

Merkli Degen Architects, LLC, Zurich

Client

Hirs Real Estate, Zollikon

Timber engineer

Timbatec Timber Engineering Switzerland AG, Zurich

Timber construction

Holzbau Oberholzer GmbH, Eschenbach

Building physics

Timbatec Timber Engineering Switzerland AG, Zurich

Photography

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CLT Manufacturer

Theurl Holz Steinfeld GmbH, Steinfeld