

# Apartment Building on Albulastrasse, Zürich

2019



The seven-story new building on Albulastrasse in Zurich, featuring 30 new apartments, was completed in late December 2019. Since space constraints prevent fire department access in some areas, Timbatec designed a wooden emergency stairwell.

## The project

In Switzerland, buildings with a total height of over 30 meters are considered high-rise buildings. By law, such buildings must be constructed with safety stairwells. This means that all vertical escape routes must be specially protected against the ingress of smoke and fire. If access for the fire department is impossible in the event of a fire, as is the case with the apartment building on Albulastrasse, even buildings under 30 meters in height must be designed with a safety stairwell. The same applies to hospitals. Until now, such stairwells and escape routes were typically constructed of concrete. Not so on Albulastrasse in Zurich: Here, the stairwell was constructed using cross-laminated timber and enclosed with 18-millimeter-thick gypsum fiber boards—encapsulated, as experts call it.

## Construction Method

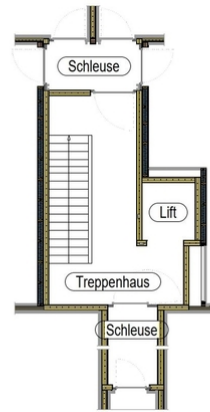
The basement through the first floor are constructed using solid construction methods. The upper floors of the building, which house the apartments, are constructed using timber framing. Conventional timber elements were used for the exterior walls. The ceilings consist of box-girder elements; in some cases, solid wood ceilings were used for fire safety reasons.

## The Challenge

Since no longitudinal facade of the building is accessible to the fire department, a safety stairwell with airlocks had to be constructed. This stairwell and the airlocks were built using encapsulated CLT panels. The remaining ceilings were constructed as box girders and the walls using a frame construction method.



Exterior view



Detail of the stairwell



Stairwell during construction

### Construction Data

- Three-ply/Kerto panels 200 m<sup>3</sup>
- Structural/glulam wood 220 m<sup>3</sup>
- CLT panels 175 m<sup>3</sup>

### Construction costs

- BKP 1–9: 12.7 million Swiss francs
- BKP 2: 10.5 million Swiss francs
- BKP 214: 1.5 million Swiss francs

### Services of Timbatec

- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of bids
- SIA Phase 51 Implementation project
- SIA Phase 52 Execution
- Specialist fire protection planning

### Client

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