

# Addition of another storey to MFH Zwinglistrasse, Zurich

2019



The modest worker's dwelling from the late 19th century was rebuilt and raised. Timbatec accompanied the necessary strengthening of the load-bearing structure as specialist planner.

## The project

In this conversion, architect Beat Nievergelt rethought the house and gave the small-scale apartments a sense of spaciousness and a sense of the outside. This required a considerable intervention in the primary structure: the load-bearing corridor walls were partially removed with a view to the new spatial structure; their load-bearing function was taken over by columns and beams. The wooden beams of the ceiling were exposed and replaced where necessary, their interstices filled with lightweight concrete and straightened in level. A suspended plaster ceiling and rock wool help to comply with the limits for impact sound.

## The construction

The addition is a wooden element structure built on top of the exterior walls and provides space for a maisonette apartment. Its false ceiling is suspended from the roof beams with tie rods. The partially exposed wooden beams and braces remain visible and have been skillfully integrated into the apartments.

## The challenge

The rafter layer with a knee wall rests directly on the joist layer. Due to the asymmetrical construction method, flexurally rigid connections between the rafter layer and the knee wall were required. The floor slab with the very large span is cantilevered and also serves as a hatch. It was suspended from the center purlin with tie rods.



View building from outside

#### Construction Data

- Land area 119 m<sup>2</sup>
- Floor area total 629 m<sup>2</sup>

#### Construction costs

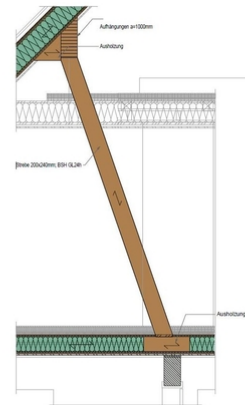
- BKP 1-9: CHF 1'909'000.-
- BKP 2: CHF 1'860'000.-

#### Services of Timbatec

- SIA Phase 11 Condition analysis
- SIA Phase 21 Structural analysis
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 52 Execution



Visible brace in the apartment



Detail Strebe

#### Architect

Beat Nievergelt GmbH 8032 Zurich

#### Timber engineer

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#### Civil engineer

Tragwerkstatt GmbH 8006 Zurich

#### Building physics

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#### Photography

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