Renovation/addition of storeys to MFH Heizenholz, Zürich

2007

In the case of the two Heizenholz apartment buildings in Zurich, built in 1963, the traces of time were clearly visible after more than 40 years of operation. The thermal standards of the facades and windows were no longer up to standard. In view of rising energy prices, the building owner decided to completely renovate the facade. In order to upgrade the buildings and create new living space, it was also decided to add an additional storey. This resulted in two modern, contemporary attic apartments.

The project

The construction method In order to realize an extension, it first had to be clarified whether the concrete ceiling above the upper floor was capable of bearing the new load. Since this was not the case, a solution had to be found to transfer the resulting loads (dead weight of the elements, snow loads and live load for living spaces). Sleeper timbers were moved onto the existing slab. Over the sleepers, board stack elements were laid, which were planked with an OSB board.

The construction method

The resulting cavity of approx. 140mm was fully insulated. Due to the unprotected slope length, the loading by wind forces required special attention. Thus, the planking of the board stack elements serves to absorb the resulting shear forces due to wind loads. In addition, a truss was integrated into an interior wall to transfer the tensile and compressive loads caused by wind directly to the concrete slab. The timber structure above was built using timber frame construction.

Initial situation

Abutment increase

Services of Timbatec

- SIA Phase 21 Structural Review
- Cost estimation
- SIA Phase 32 Construction project
- Structural analysis and design
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- Site supervision and site inspections
- Works planning 3D and 2D

Architect

Stahel Ehrsam Architekten
8049 Zurich

Holzbau

Bühlmann AG Holzbau
8953 Dietikon