

## Project Overview & Logistics

### Project Details

**Typology:** Roof replacement and new extension construction

**Location:** France, French Savoy

**Execution:** Maisdabösch and Batiache (Lorenzo Torre)

**Role:** Executive design, timber framing, and finishes

**Materials:** Local Douglas fir timber, wood fiber insulation, sheet metal work

### General Context & Project Philosophy

The project involved the retrofit and refurbishment of a chalet located in the French Alps. The goal was to modernize the building by enhancing the pre-existing timber structure while integrating high-performance energy and living solutions.

Material selection focused on traditional alpine timber and natural, breathable water-repellent treatments, protecting the wood from harsh mountain weather while highlighting its natural grain.

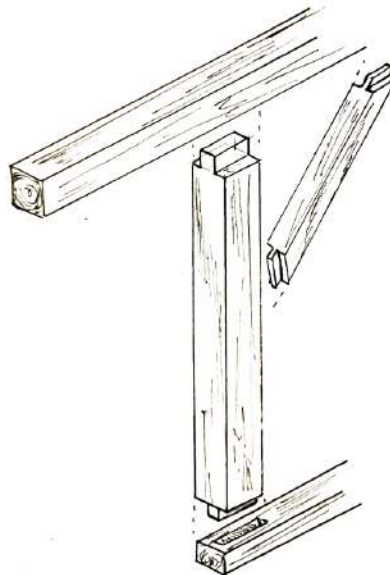
### Construction Solution

Works focused on revising exposed structural elements and installing new roof decking. On-site crafting enabled direct interlocking assembly, millimetrically adapting every component to the chalet's existing geometry. This approach ensures maximum structural stability, weather-tightness, and a precise, integrated aesthetic.



Photo 1 | Extension completion

### Joint Engineering & Details



Drawing 1 | Axonometric view of timber structure



Photo 2 | strut detail

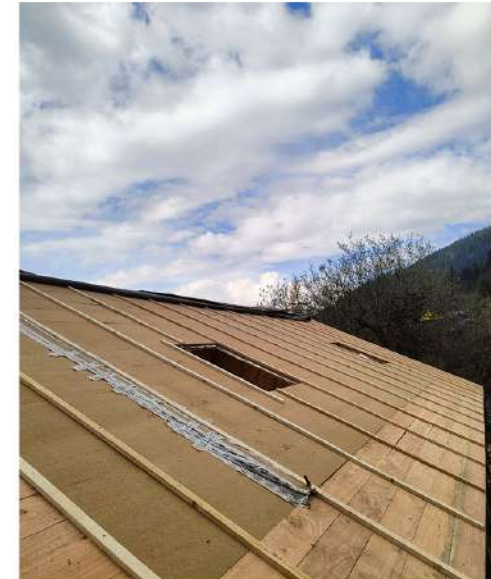
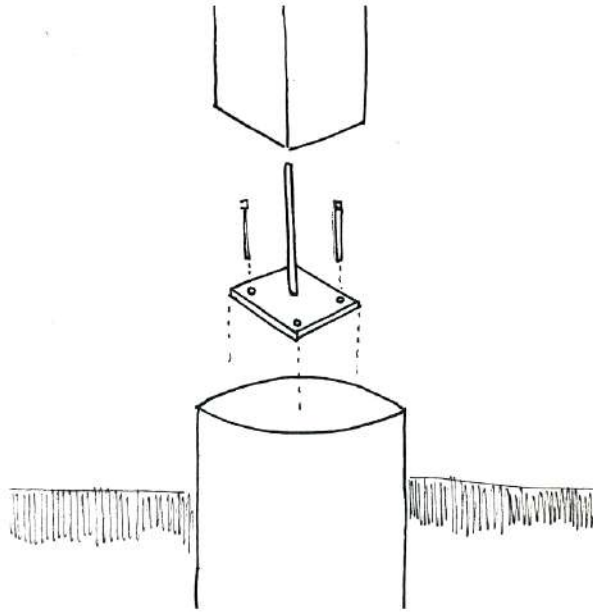
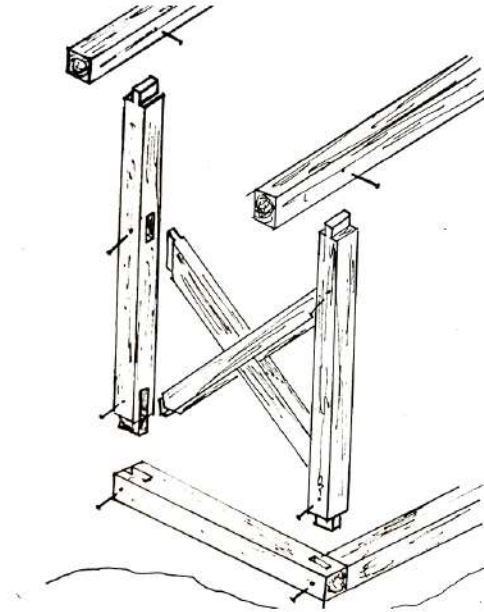


Photo 3 | Roof envelope detail

## Joint Engineering & Construction Phases



Drawing 2 | Axonometric detail of column base connection



Drawing 3 | Axonometric view of porch structure

### Joint Engineering

#### On-Site Interlocking Assembly

To match the existing geometry of the chalet, the joints were crafted using direct on-site interlocking, ensuring structural stability and visual continuity without visible metal connectors.

#### Construction Details & Durability

- **Millimetric adaptation:** Each timber element is hand-notched on site to ensure optimal contact surfaces between the framing and the existing structure.
- **Joint protection:** Deep-penetrating natural plant oils protect the timber components, providing weatherproofing while maintaining breathability in harsh alpine conditions.

## The 4 Construction Phases



### 1- Survey & Layout

Analysis of the chalet's existing geometry and verification of levels to custom-fit the new timber components.



### 2- On-Site Crafting

Hand-shaping and preparation of traditional joinery on site, calibrating cuts directly onto the structure.



### 3- Installation & Timber Framing

On-site interlocking assembly of the exposed primary framing, ensuring tight joint fitment at elevation.



### 4- Roof Boarding & Finishing

Installation and securing of the roof decking boards, completing the upper building envelope and final protective oil treatment.