

# The New Interpretation of '**Light, Air and Space**' in Airey Blocks in Slotermeer

Yuan CHEN

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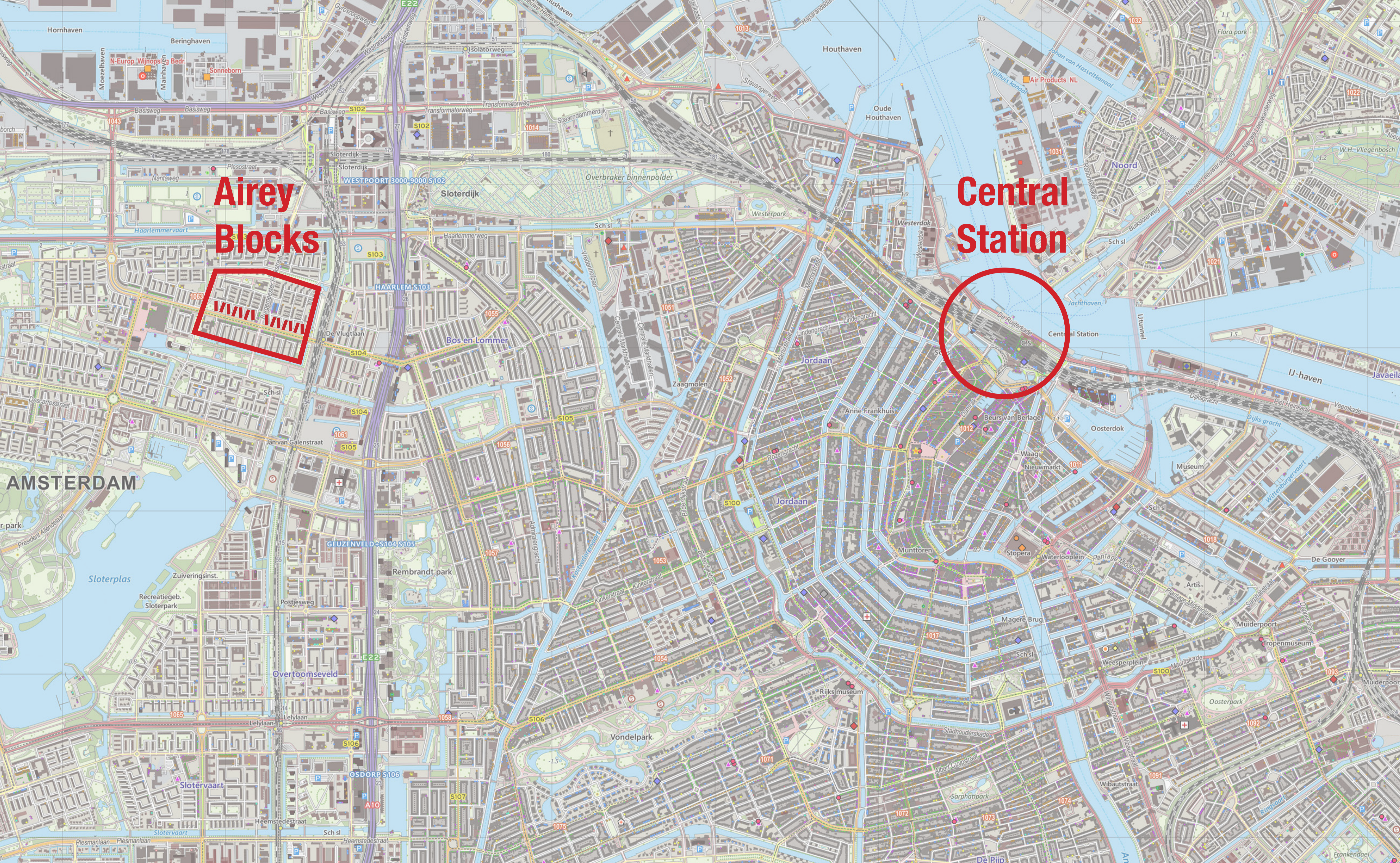
## **REFLECTION**

# INTRODUCTION

## RE-HOUSING AIREY

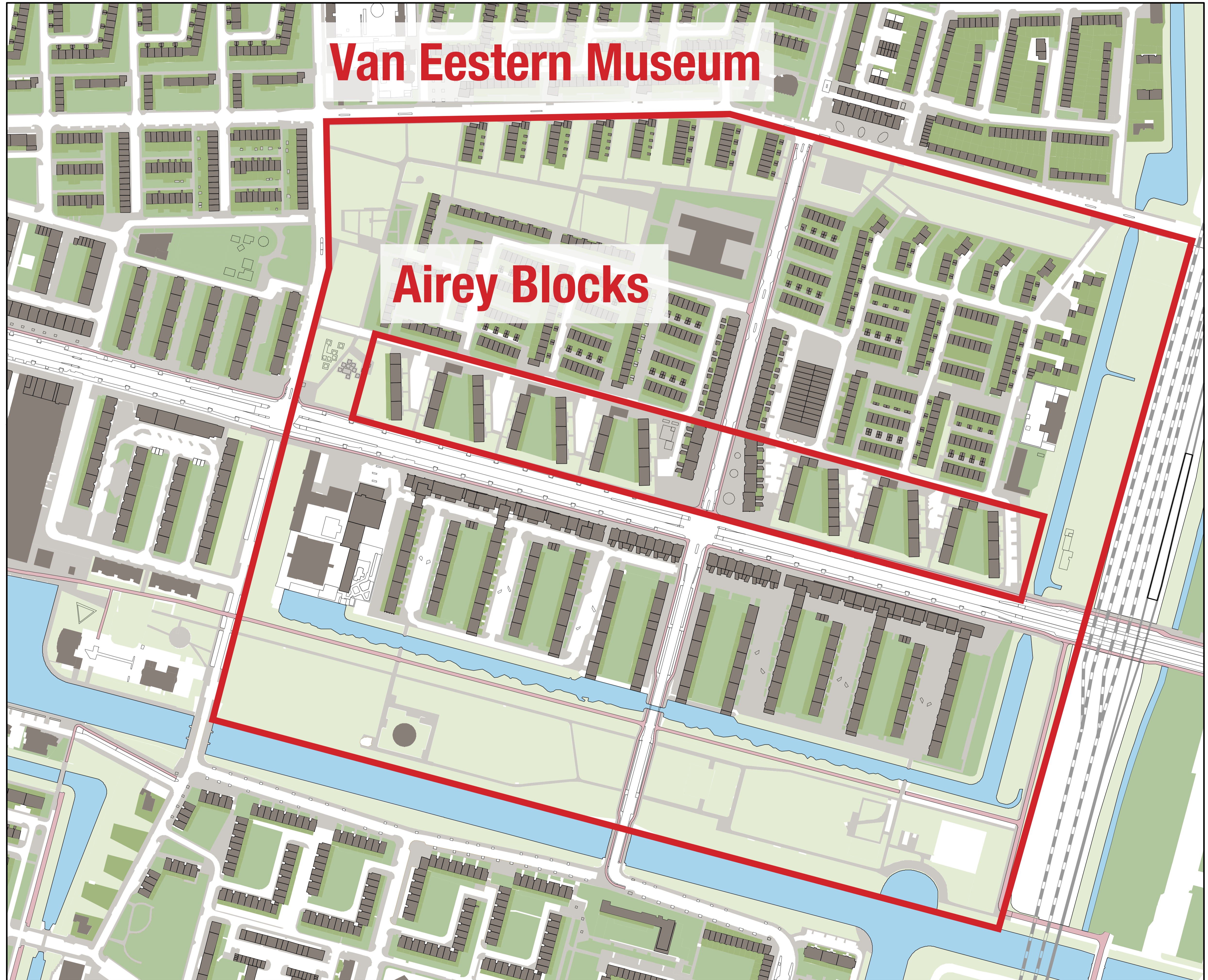


# Location



**Van Eastern Museum**

**Airey Blocks**



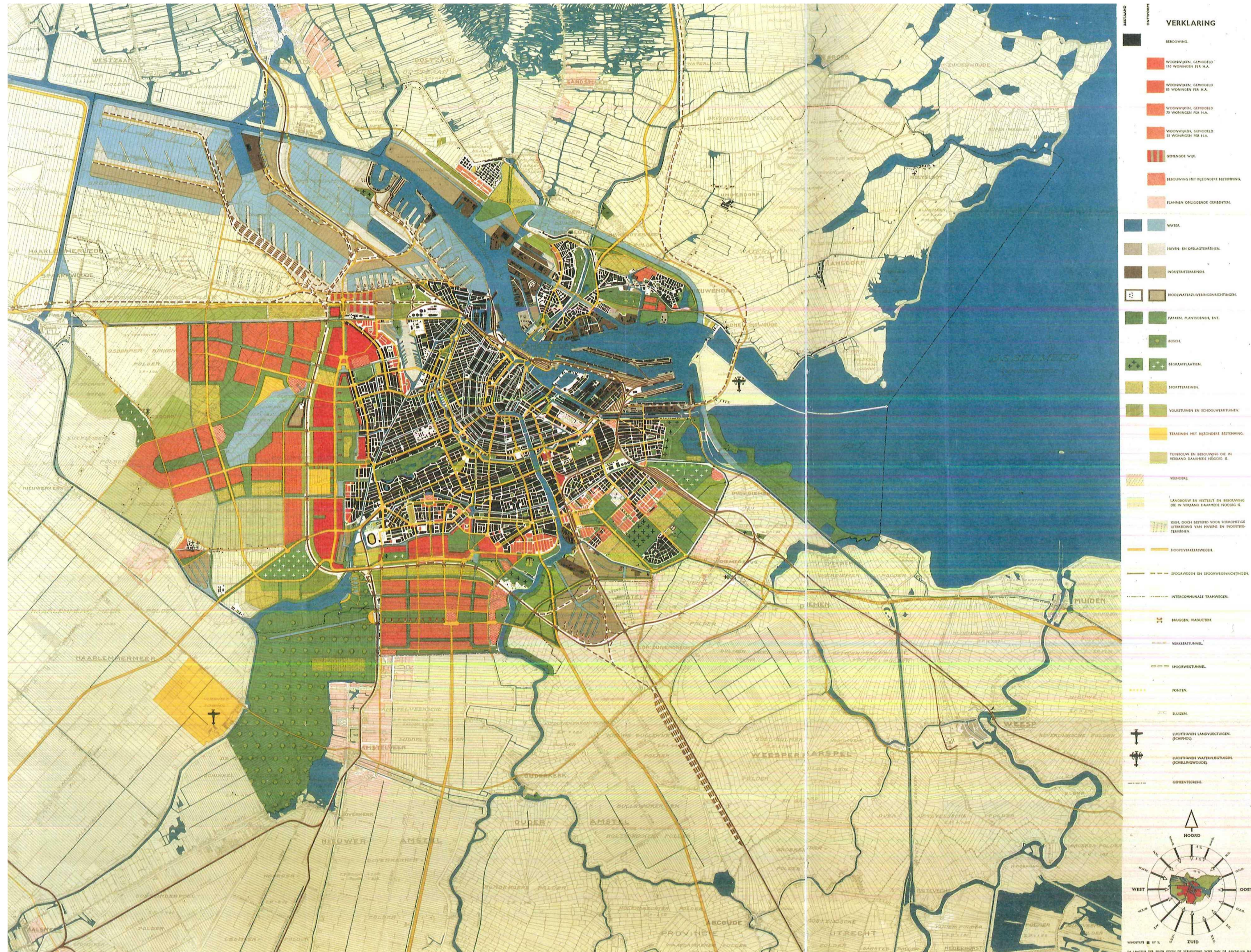
# Burgemeester de Vlughtlaan



AMSTERDAM-W., (Slotermeer) Burg de Vlughtlaan

# History

## The General Extension Plan (AUP)



# Cornelis van Eesteren



# Het Nieuwe Bouwen



**The General Extension Plan (AUP)**

**Green  
Network**

**Road  
Network**

**Typolo-  
gy**



**Airey**



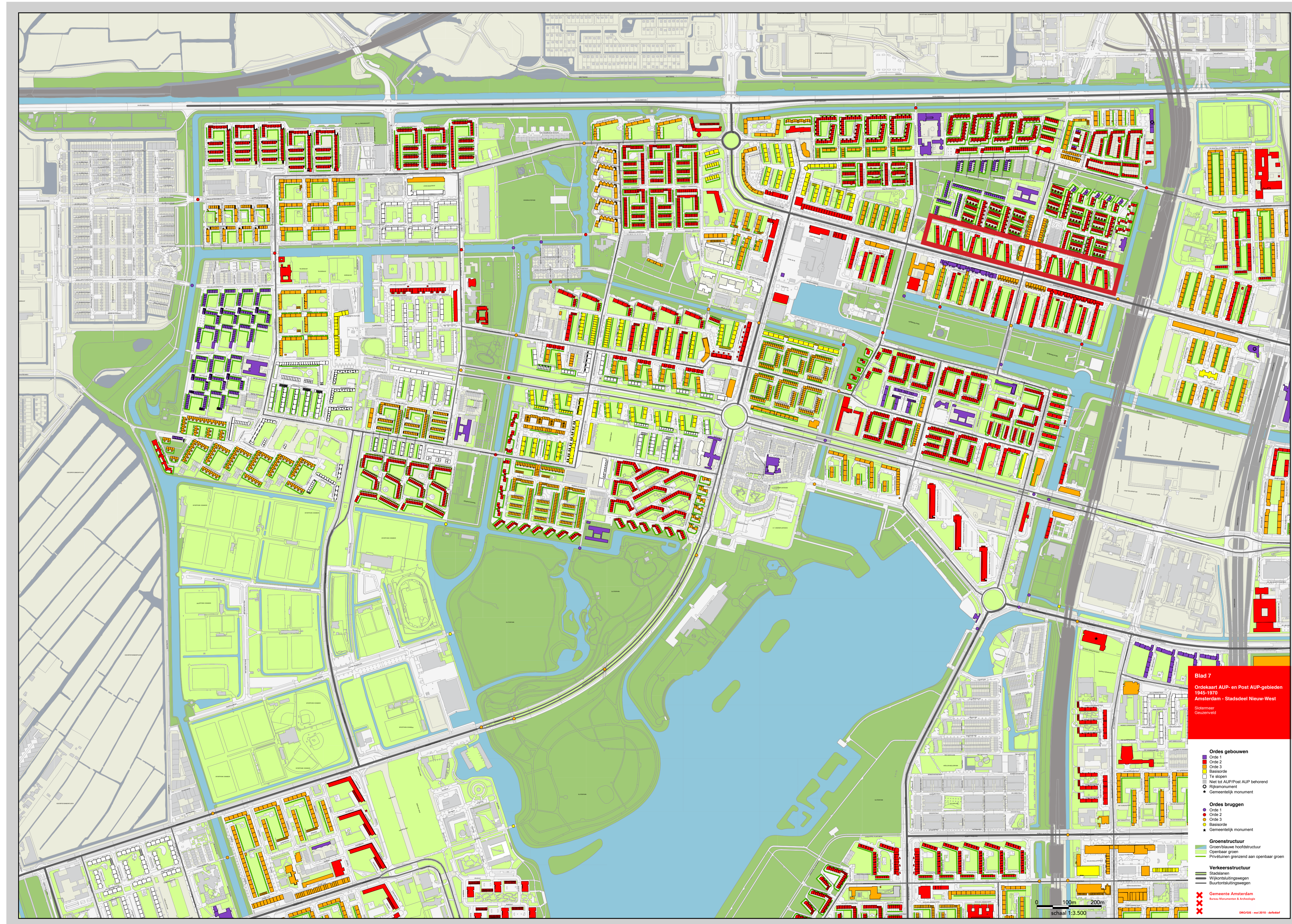
**Light**

**Air**

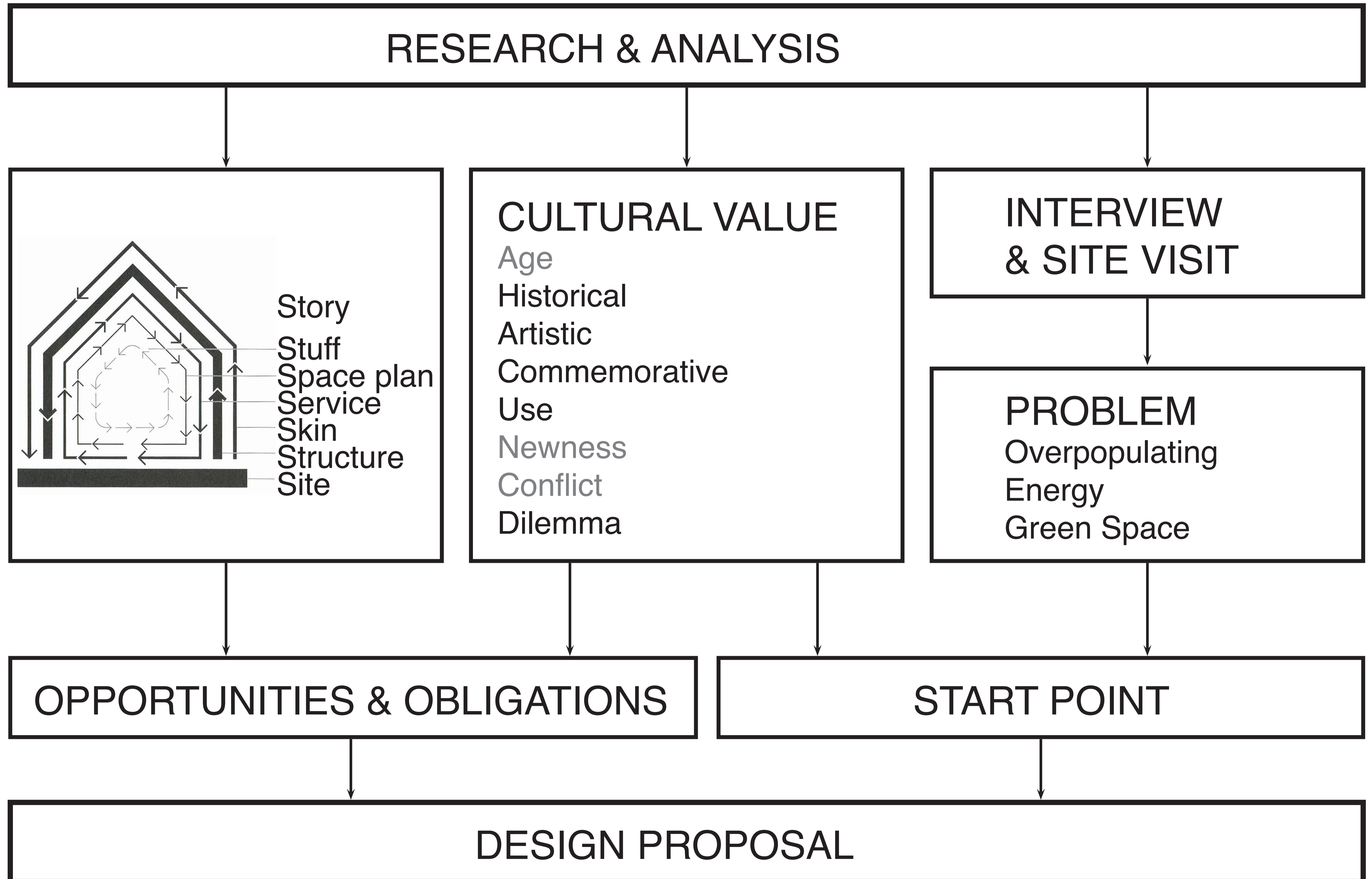
**Space**

**Het Nieuwe Bouwen**

# Monument Worthy

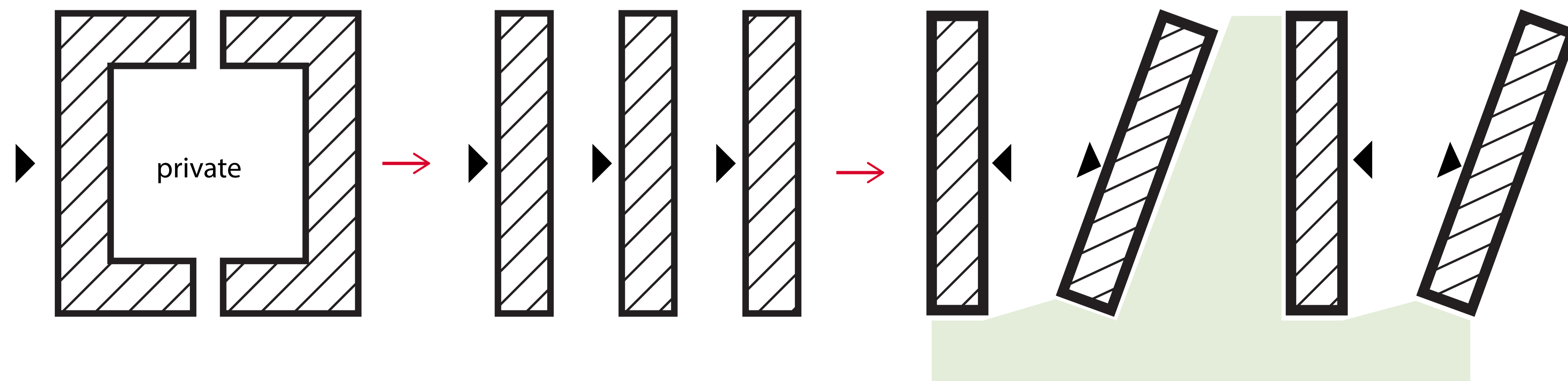


# RESEARCH

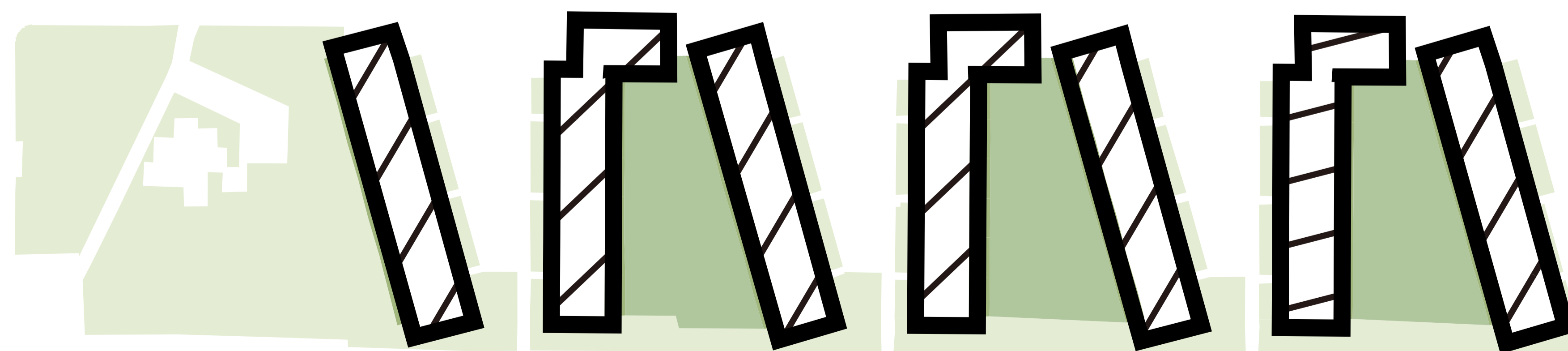


# CULTURAL VALUE

Light



# Air



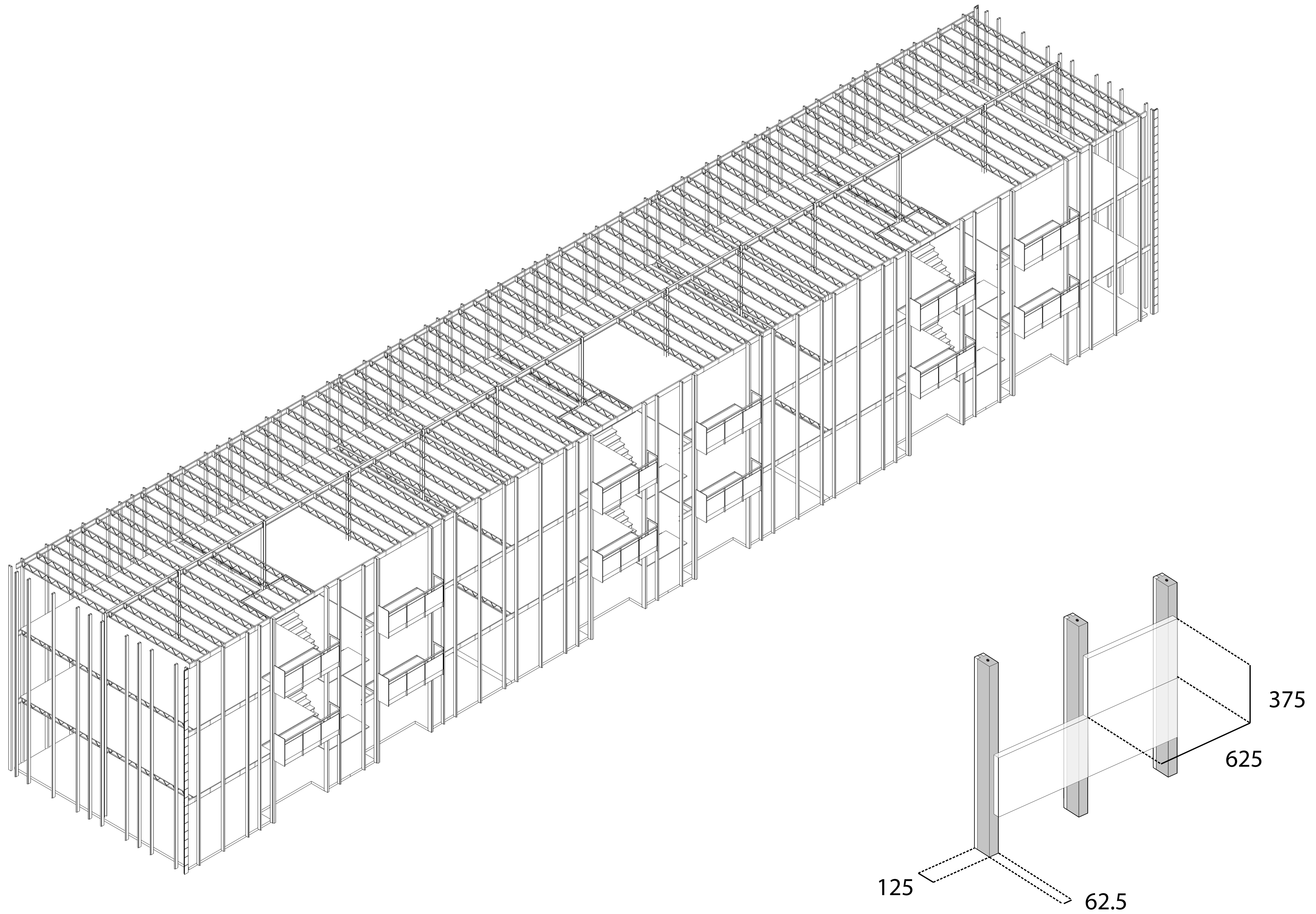
# Space



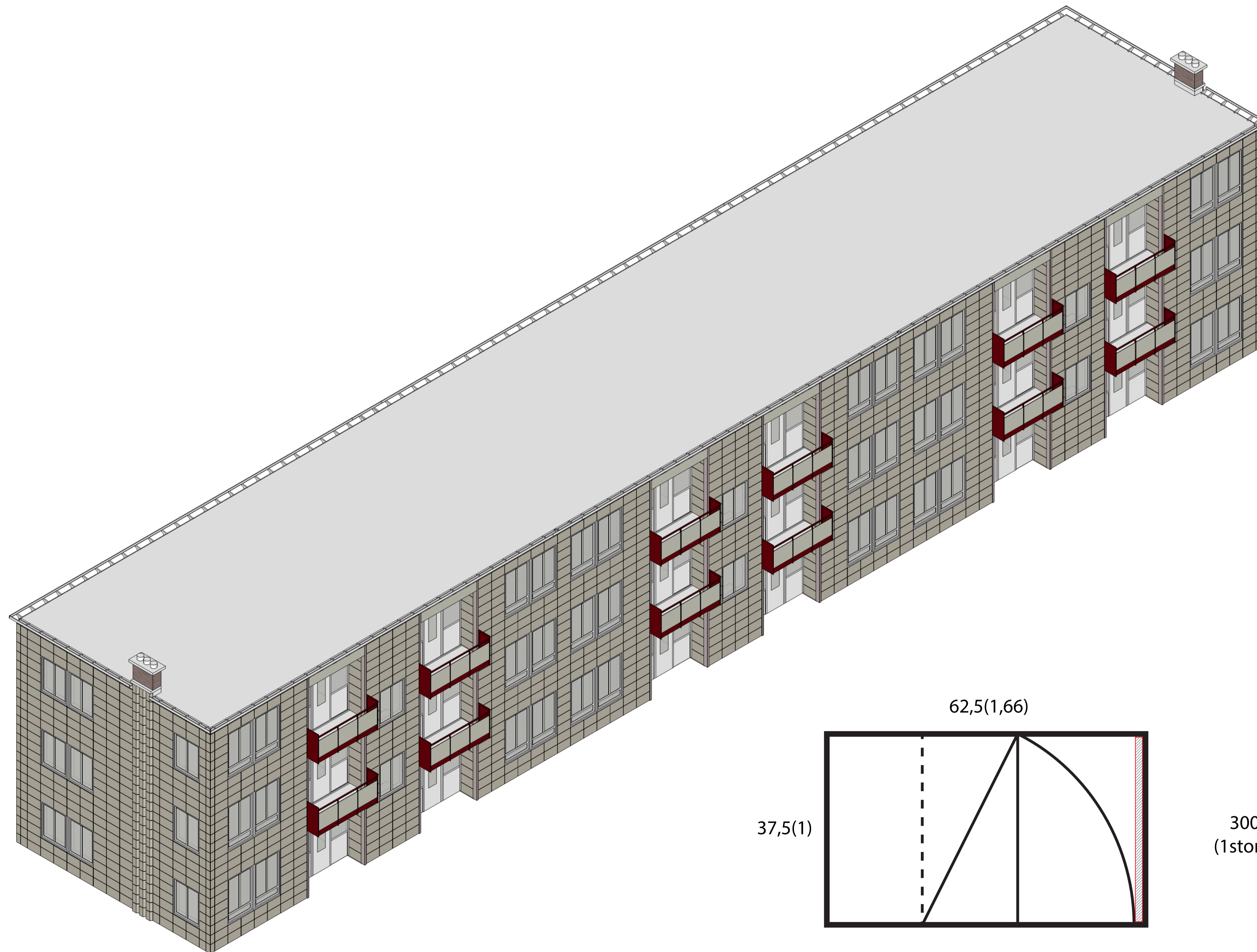
# Envelope



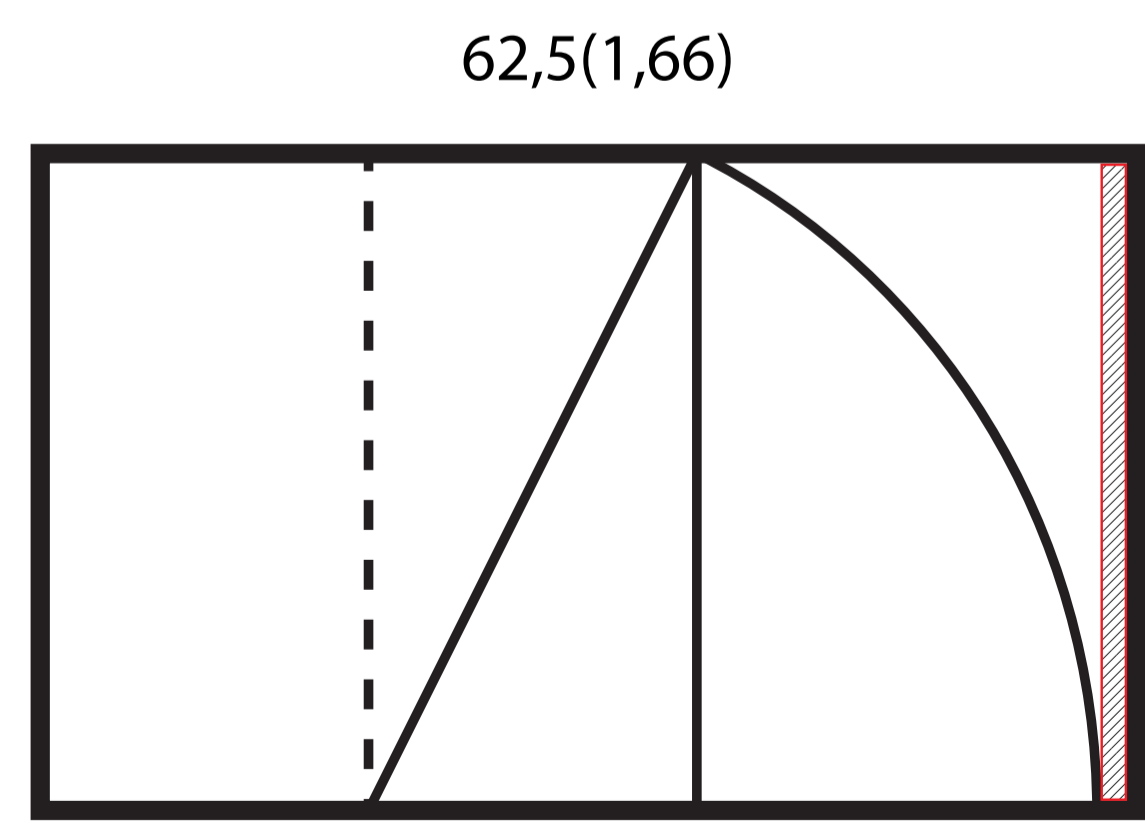
# Module



# Tile - Grid

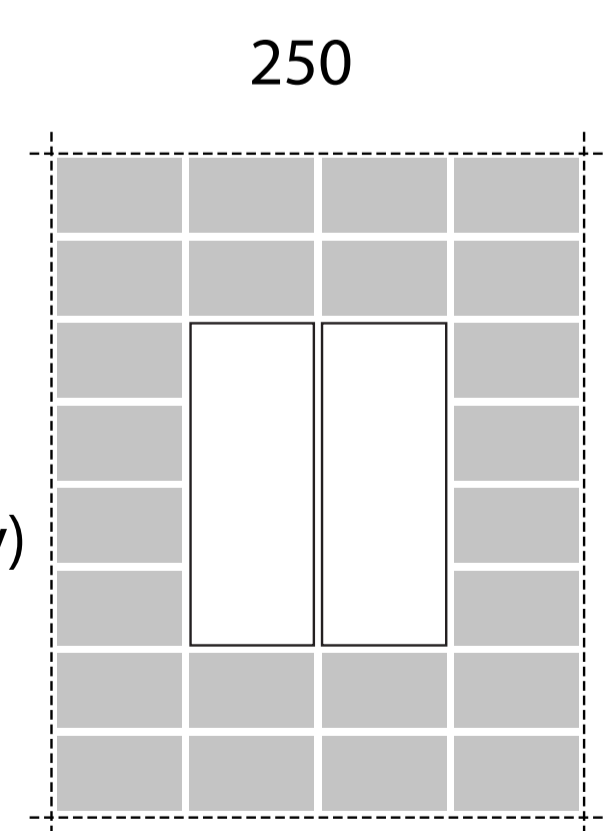


37,5(1)



Golden Ratio

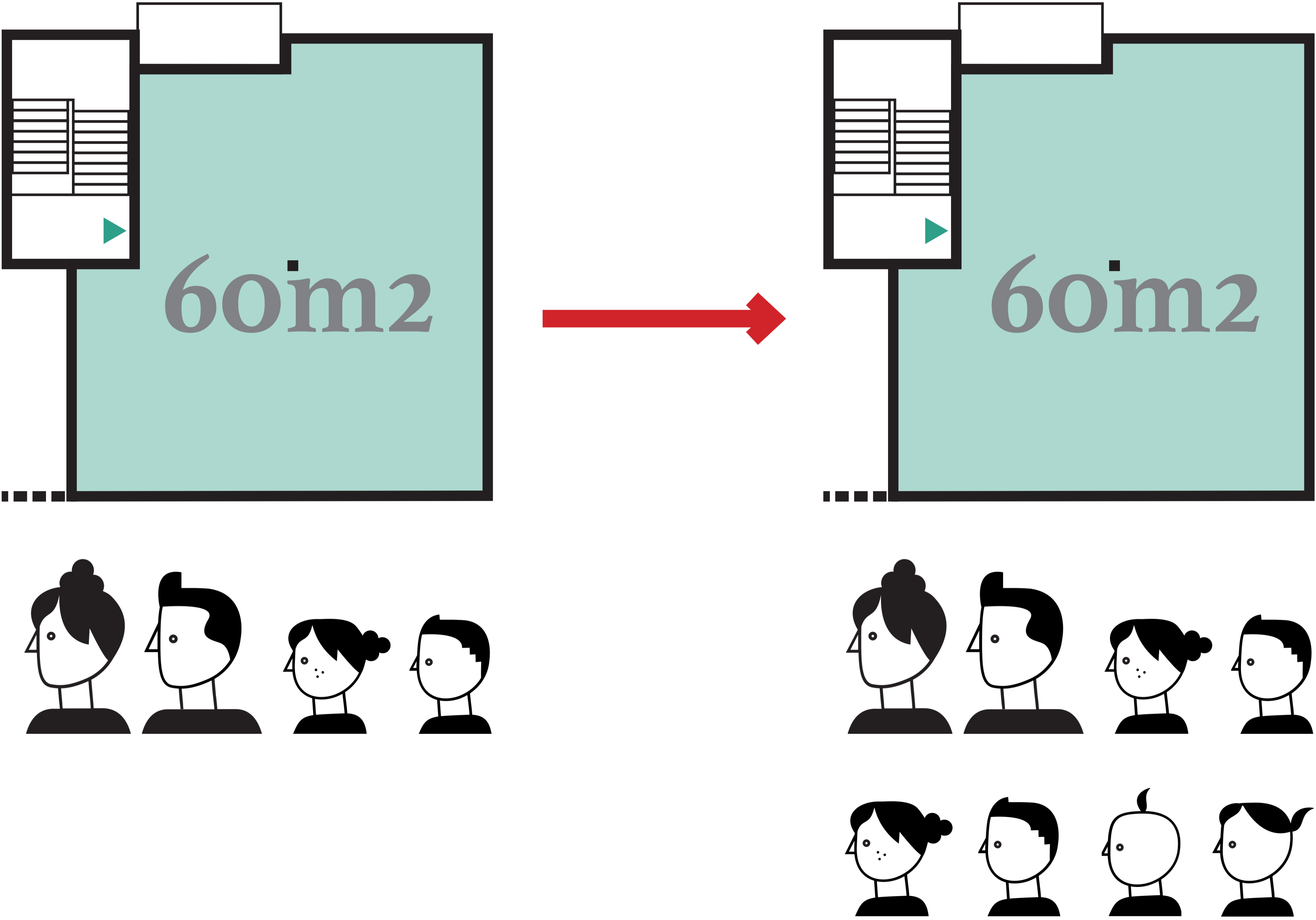
300  
(1story)



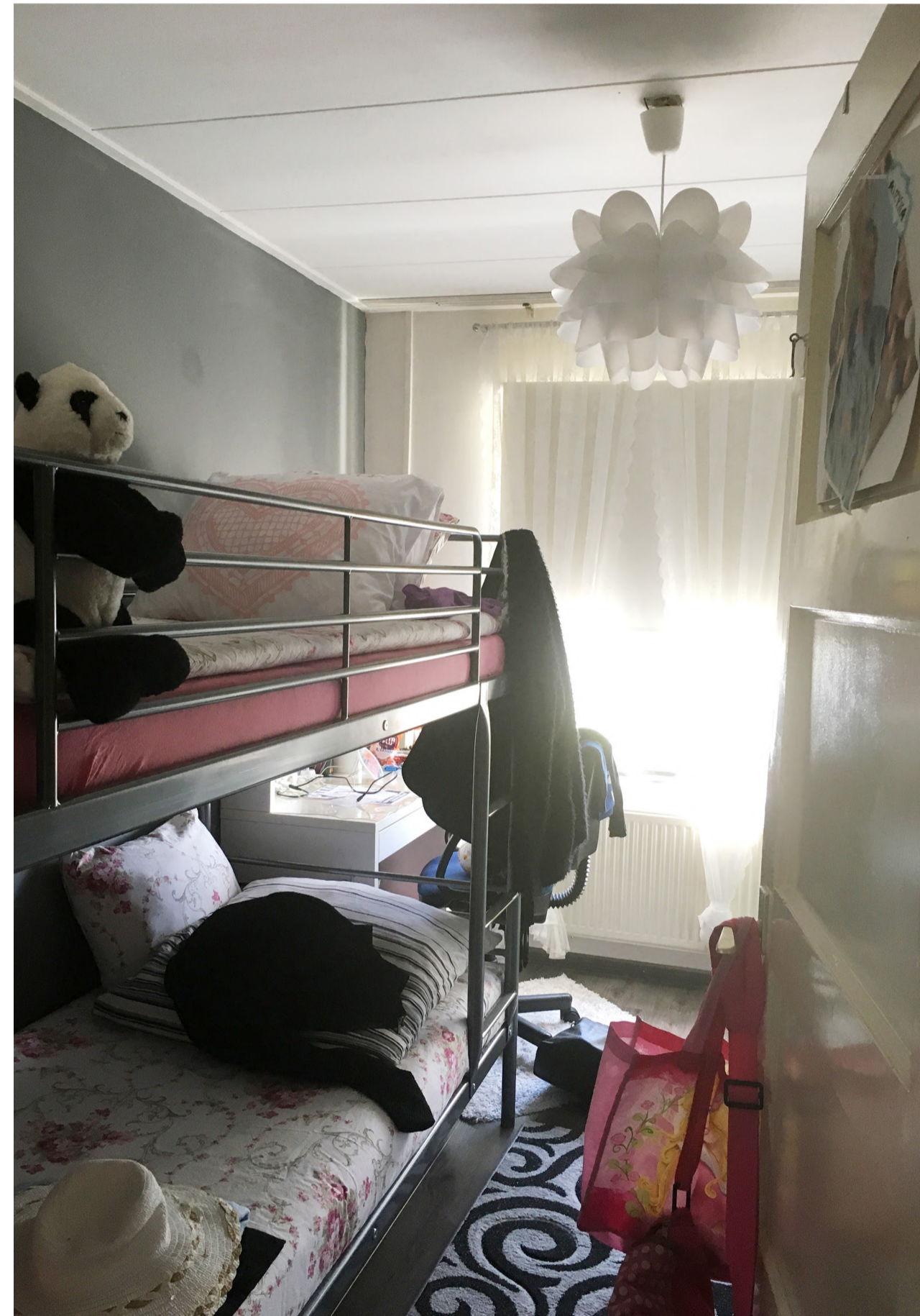
Metric System

# INTERVIEW

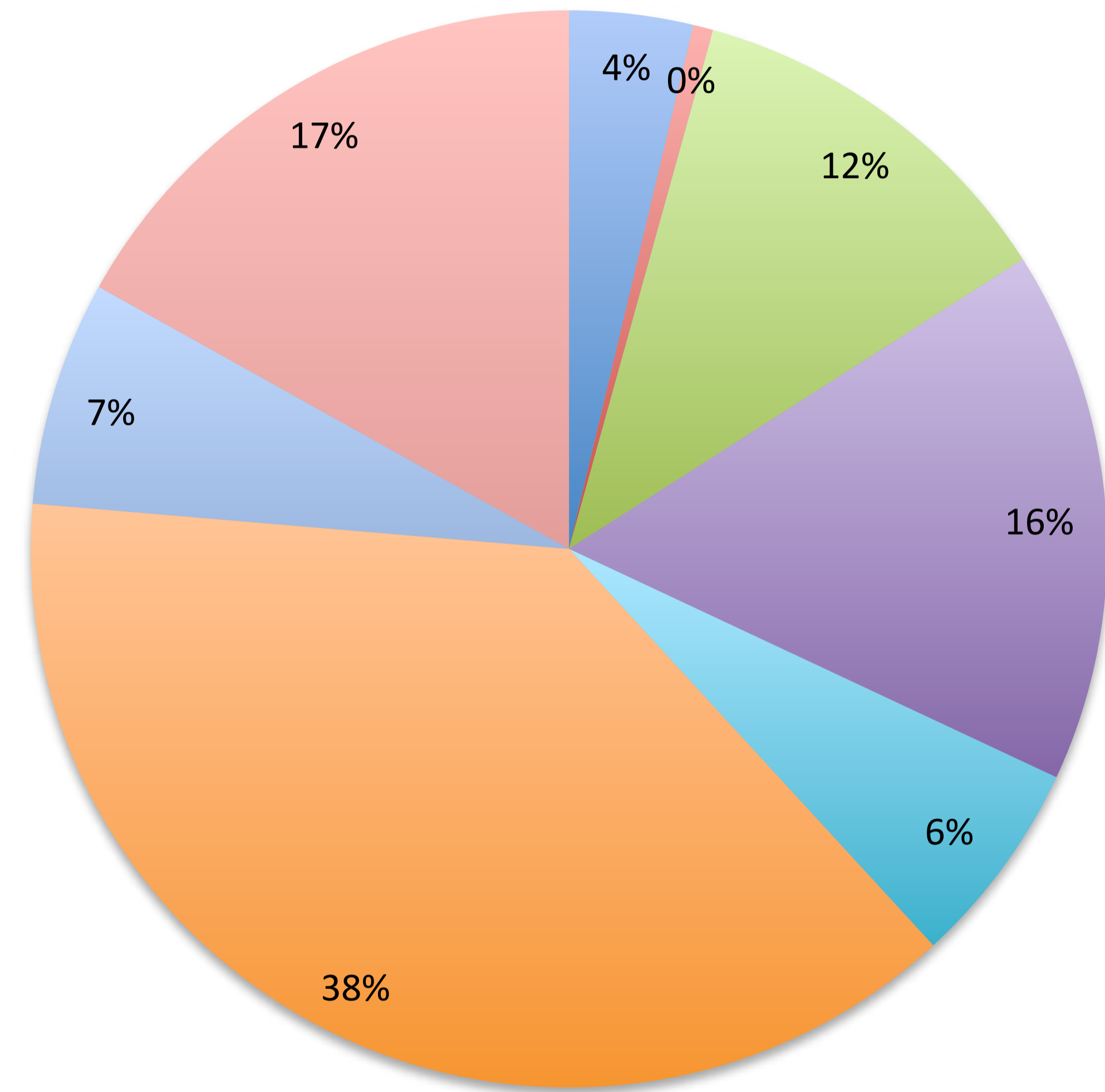
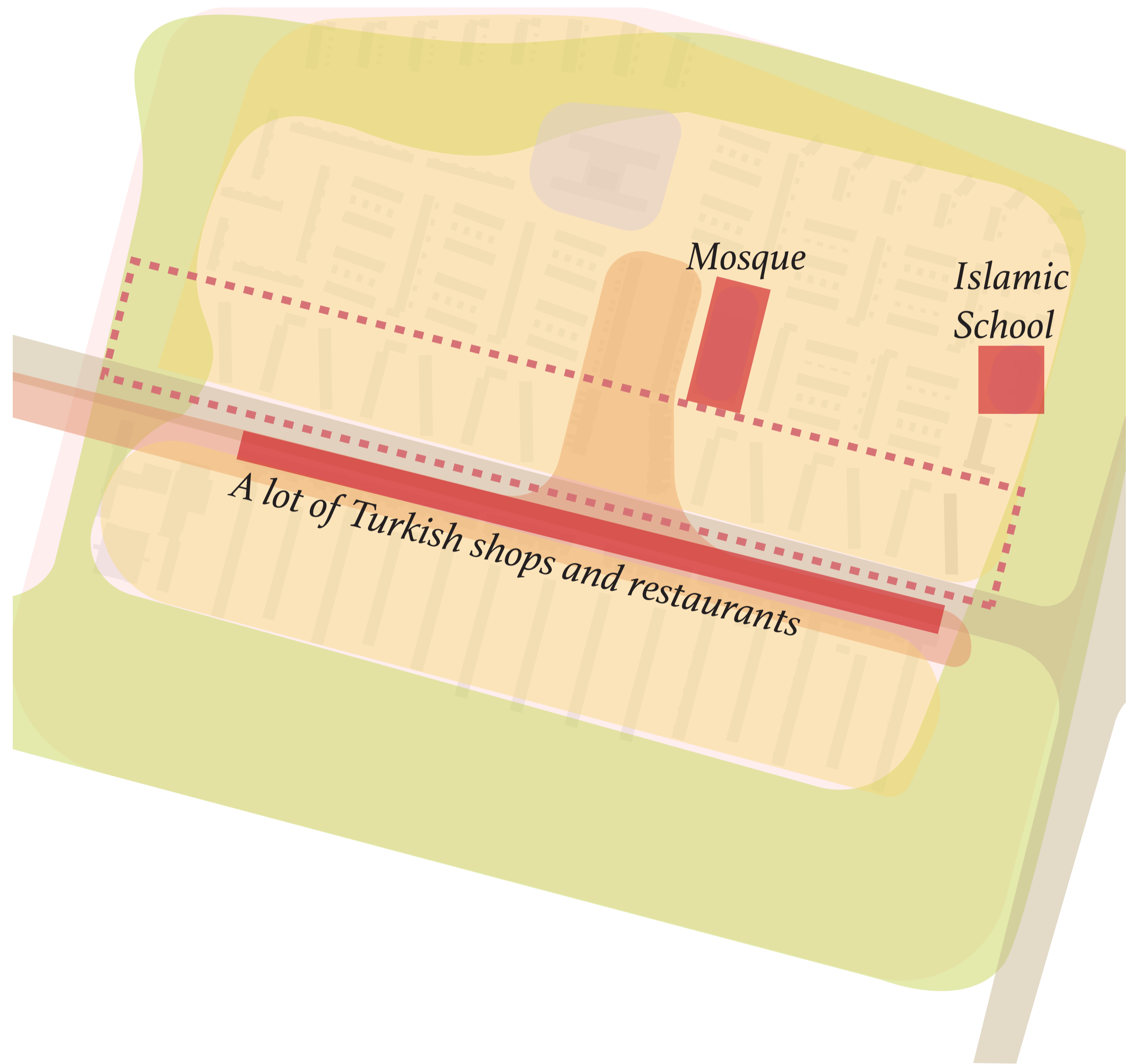
## Problem 1 Overpopulating



# lack of living space



# change of demographics



- Surinamese
- Moroccans
- Western immigrants
- Antilleans
- Other Non-Western immigrants
- natives
- Turkish
- Non Western immigrants

# Problem 2 Green Space

## looking green (Kijkgroen)



# Problem 3 Energy

lack of insulation  
noise

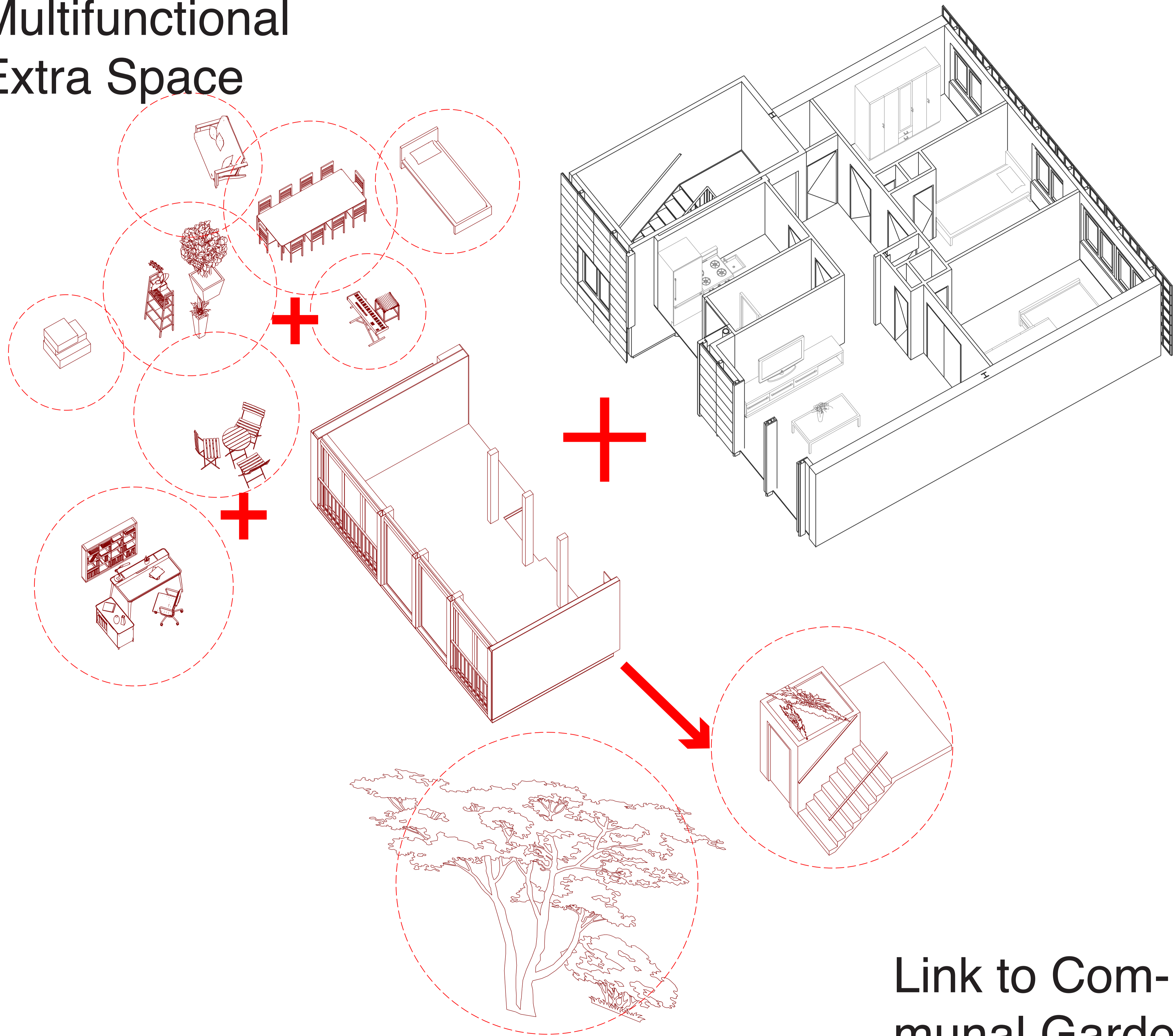


# START POINT

## Interpretation of 'Light, Air and Space'

	<b>BUILDING TECHNOLOGY INTERPRETATION</b>	<b>ARCHITECTURAL INTERPRETATION</b>	<b>HISTORICAL INTERPRETATION</b>
<b>EASY</b>	<b>Reduce time in site</b> ; Easy to maintenance; No complicated components; The components are easy to transport	Convenient for residents to use	Faster construction method; Prefabrication; Unskilled labor in site
<b>AFFORDABLE</b>	<b>Cheap</b> materials; <b>Cheap</b> construction method	<b>Do not greatly increase the rent</b>	Cheaper construction method
<b>NEUTRAL (AESTHETICS)</b>		Mimic the <b>composition</b> ; Original material texture; No exaggerated color or form	Original material texture; Grid (reflects its construction way: prefabrication); Division (golden ratio)
<b>FLEXIBLE</b>	Long life span; Easy to maintenance	<b>Free to use</b> (free to arrange the furniture; Could be used as different functional space)	Efficient floor plan
<b>TRANSPARENT</b>		Big opening to allow more <b>daylight</b> ; Good view	Nothing to hide from society; To be visible for anyone

# Multifunctional Extra Space



Link to Com-  
munal Garden

# DESIGN



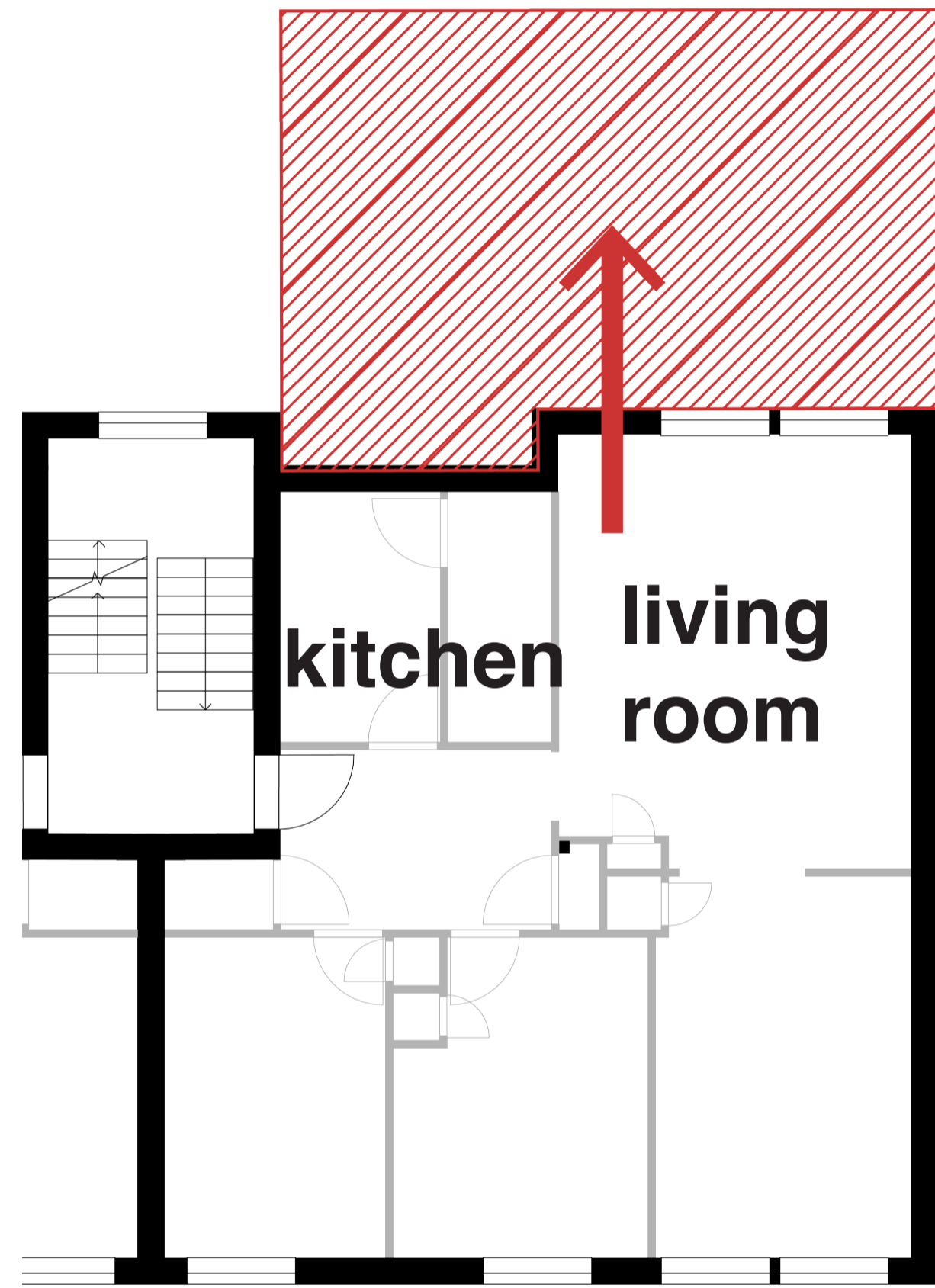
# DESIGN



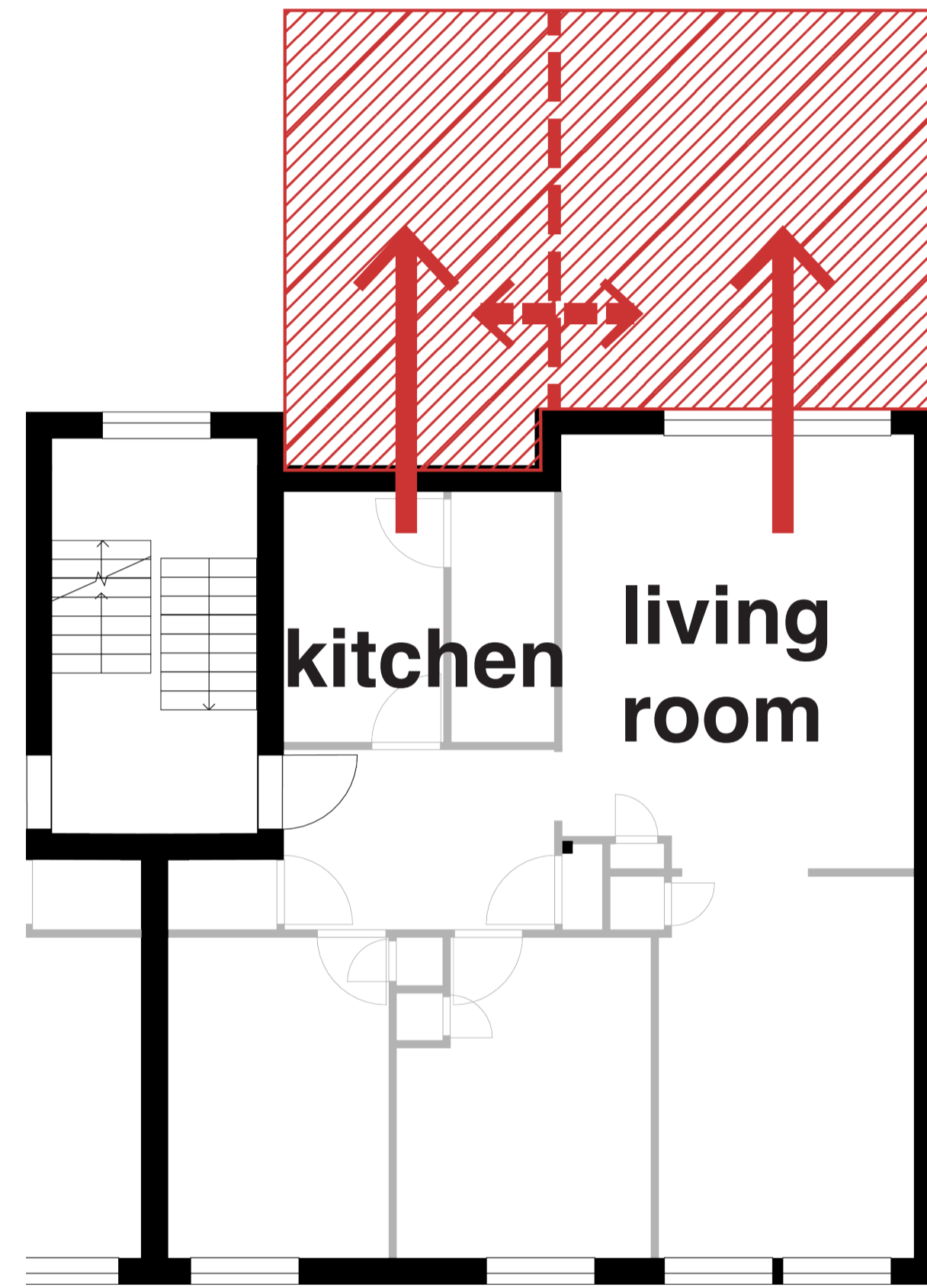
# Apartment Scale



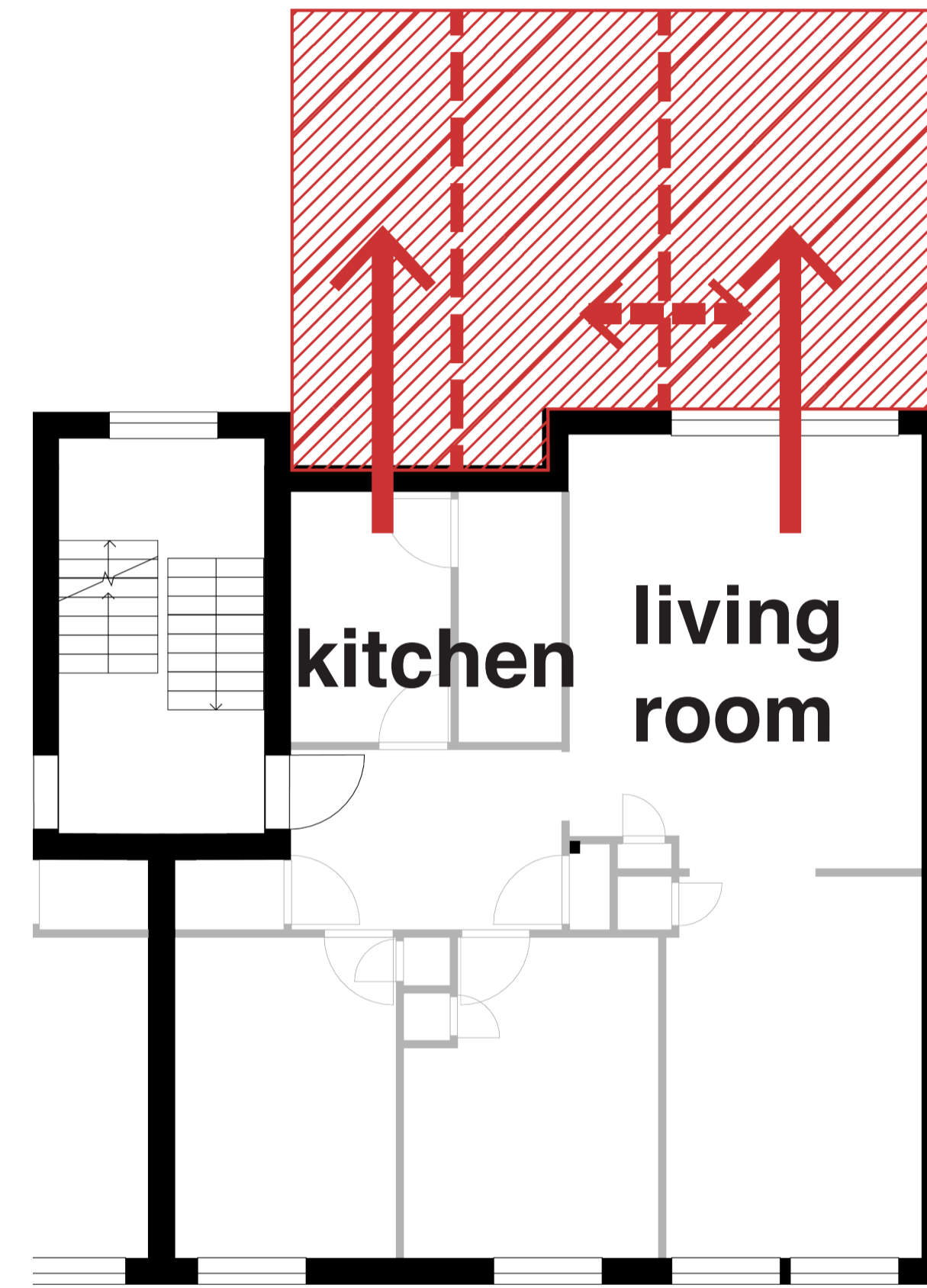
# Strategy



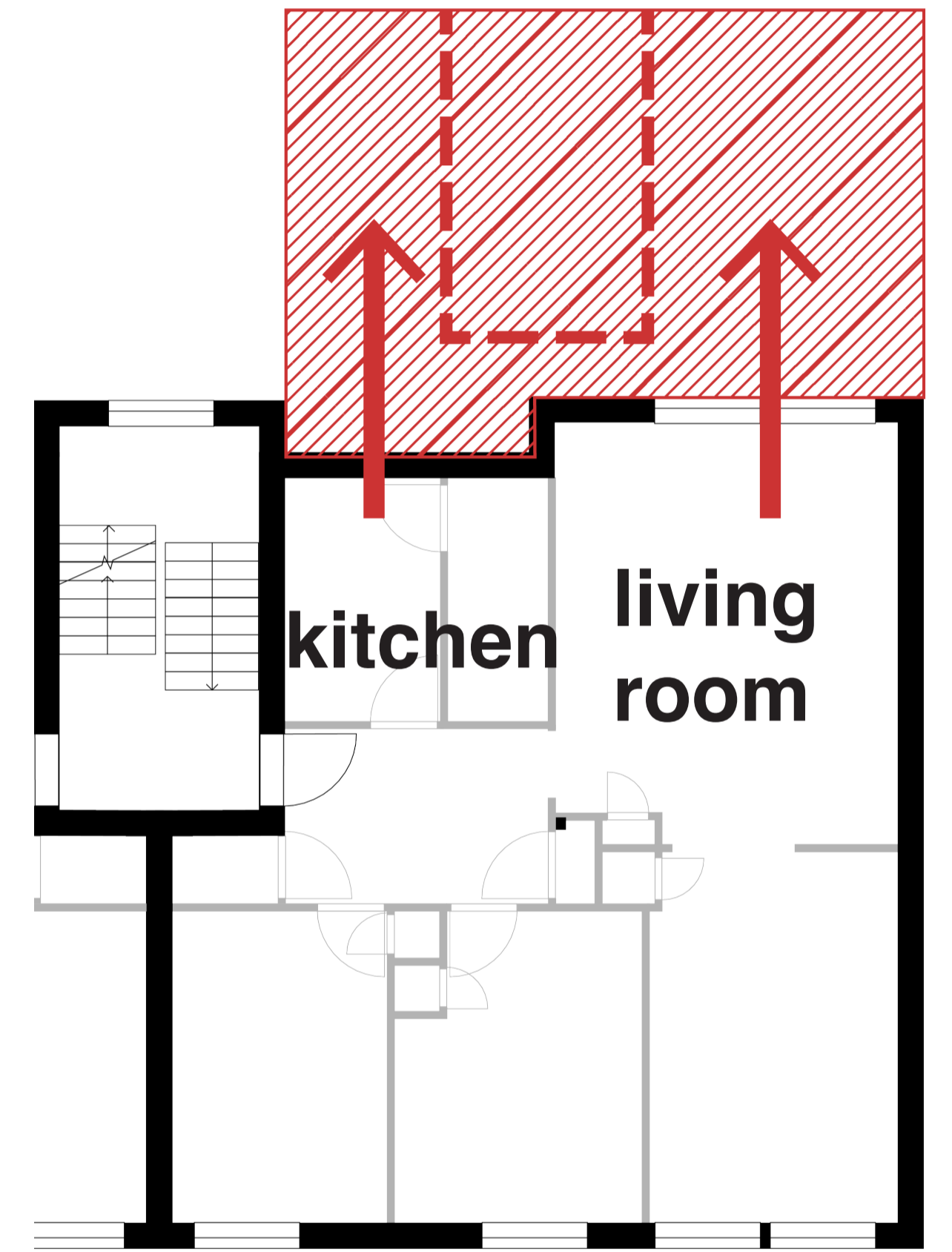
**One big space**  
connected to living room  
and kitchen



**Two separated room**  
connected to living room  
and kitchen



**Three separated extra**  
**room**

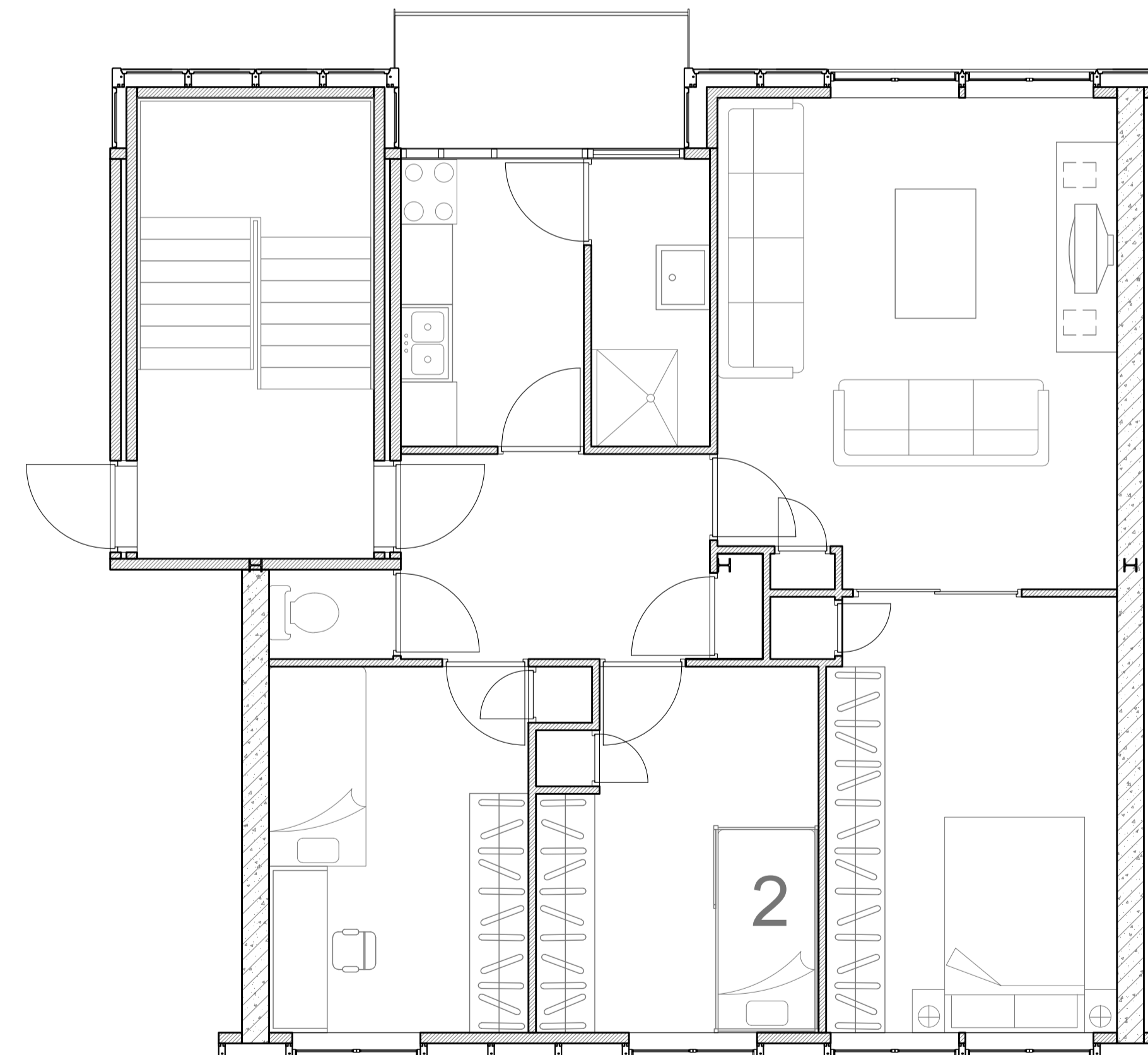


**Three separated extra**  
**room**

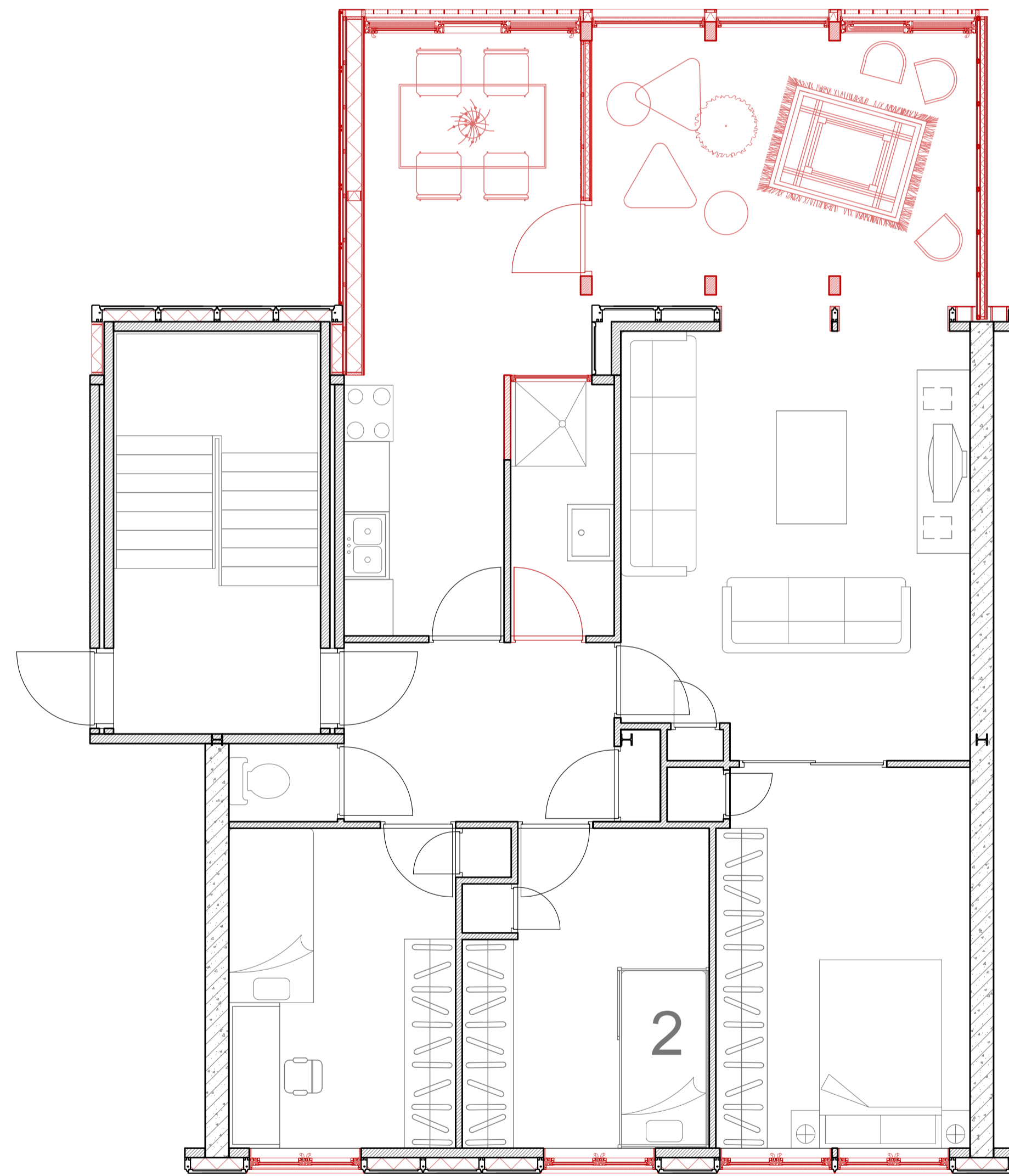
# Case 1.



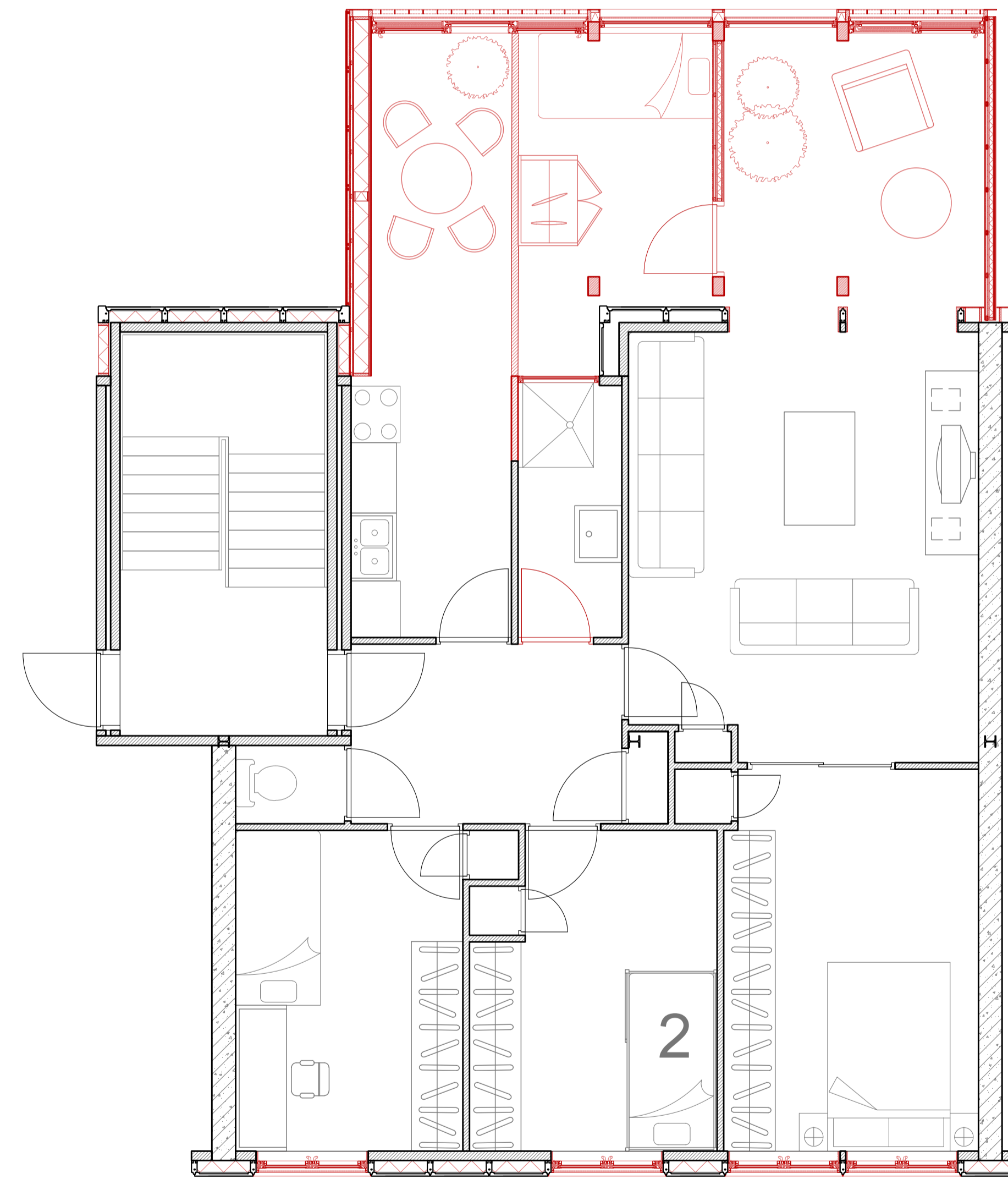
The existing floor plan and family:  
Rent: €460 p/month  
Period: 13yrs  
Inhabitants: 2 pers and 4 kids  
**Demands: more space for kids,  
dining room**



Extension option 1:  
Dining room + one big playroom for  
kids



Extension option 2:  
Small dining room + baby bedroom +  
extension of living room





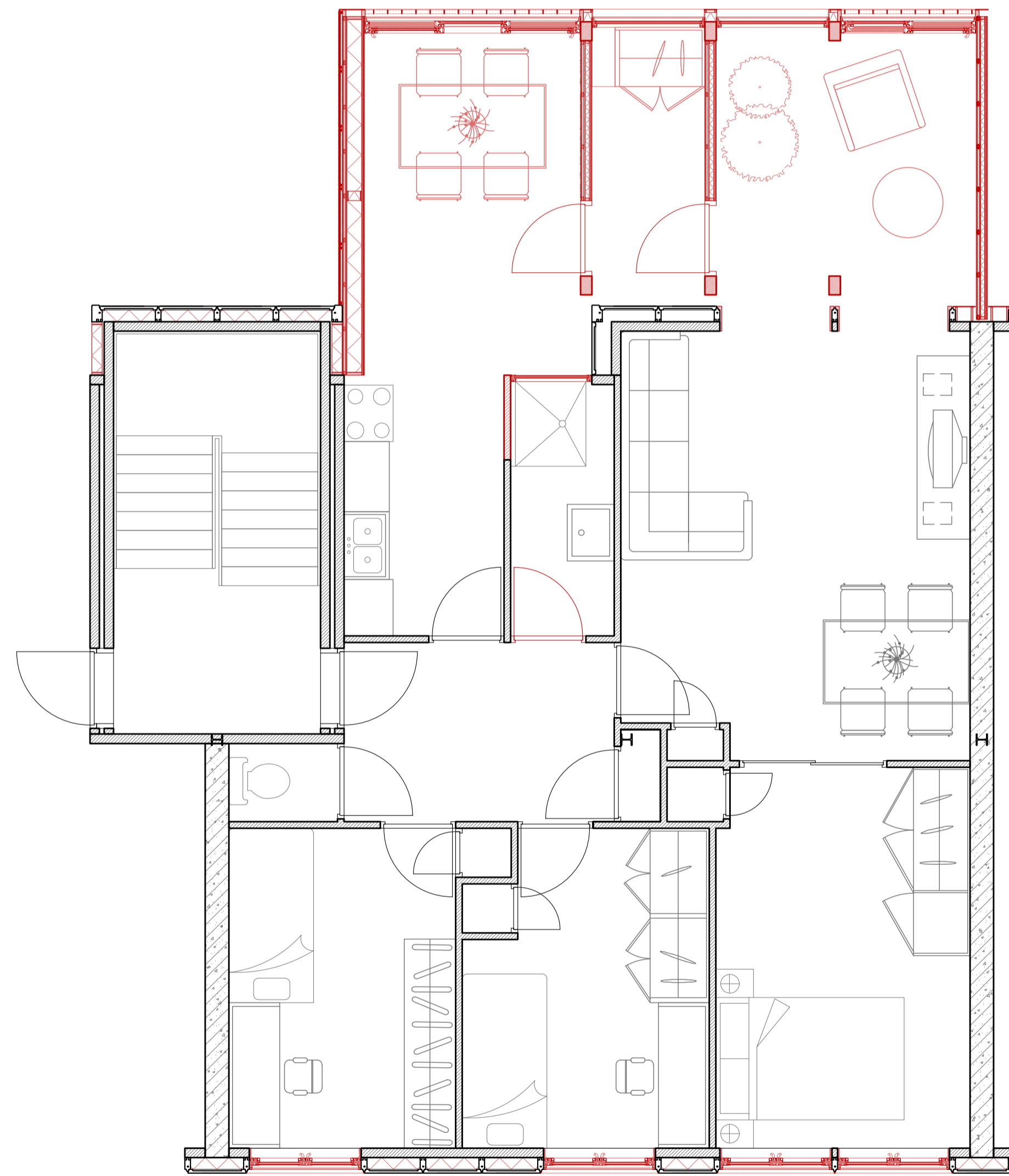
## Case 2.



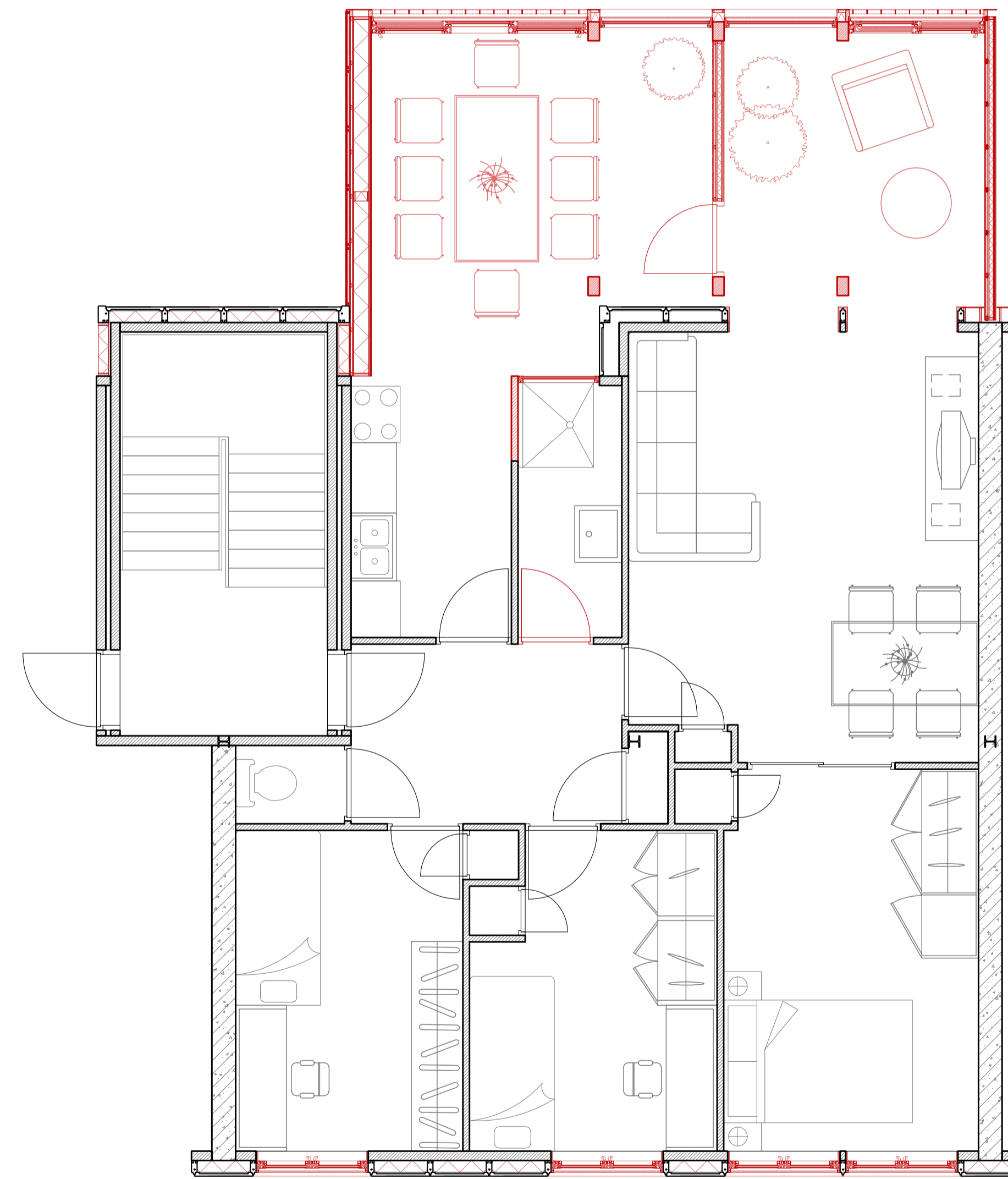
The existing floor plan and family:  
Rent: €550 p/month  
Period: 17yrs  
Inhabitants: 4 pers  
**Demands: more space for dining**



Extension option 1:  
Small dining room + storage +  
extension of living room



Extension option 2:  
Big dining room + extension of living  
room





# Case 3.



The existing floor plan and family:

Rent: €627 p/month

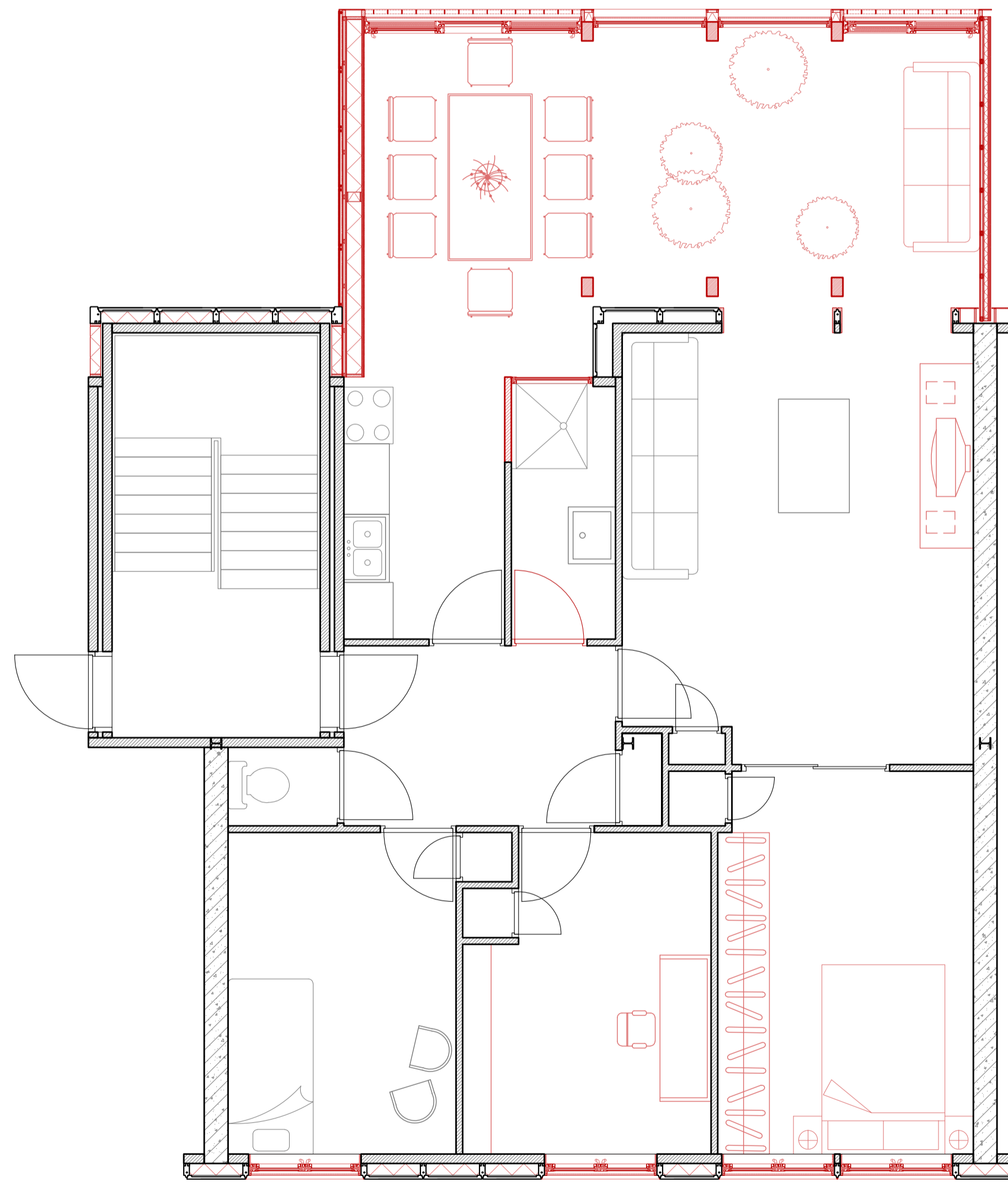
Period: 2yrs

Inhabitants: 1 pers

**Demands: space connected to living room and kitchen, garden**



Extension option:  
One big room connected to living room  
and kitchen.





# Block Scale

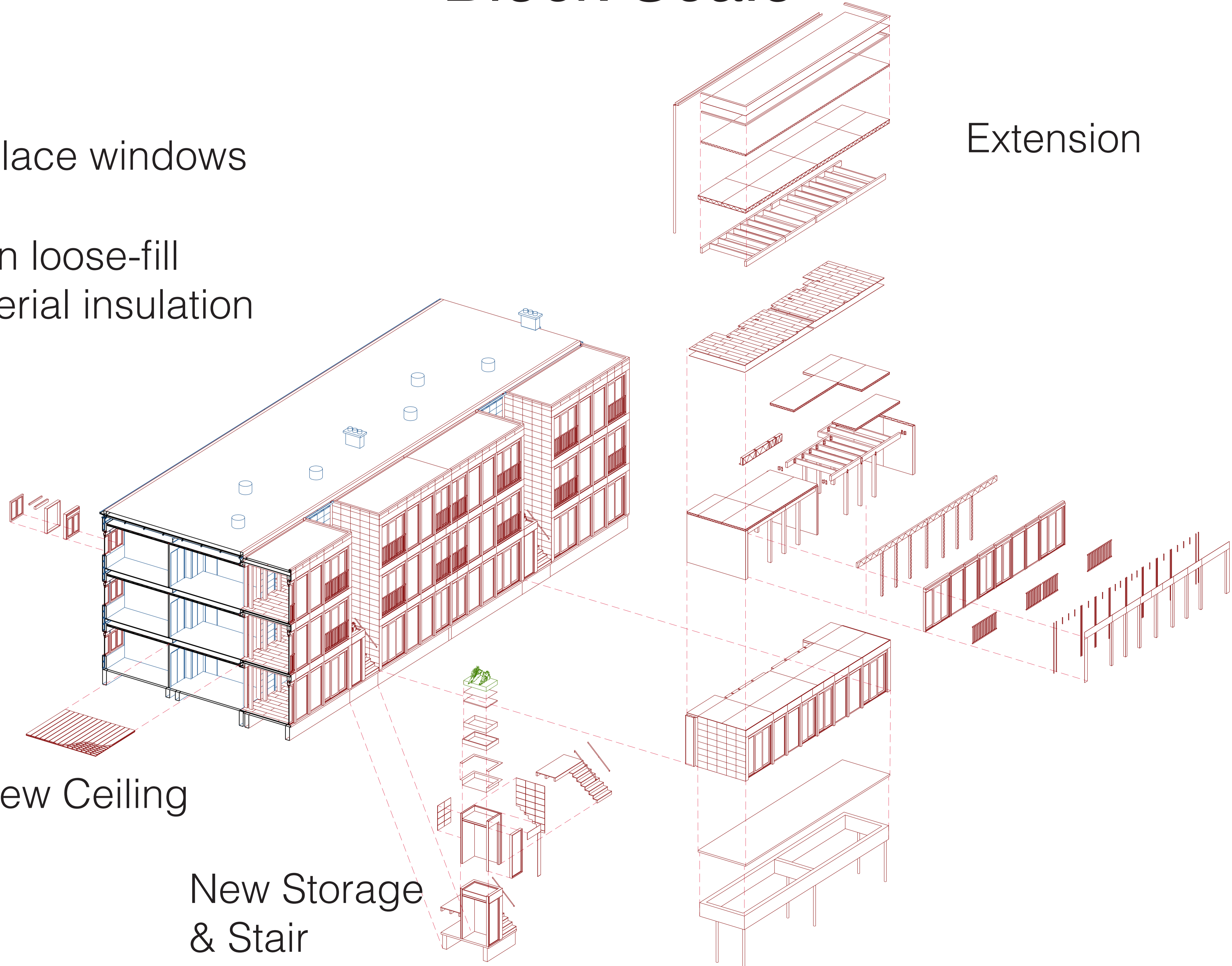
Replace windows

Fill in loose-fill  
material insulation

Extension

New Ceiling

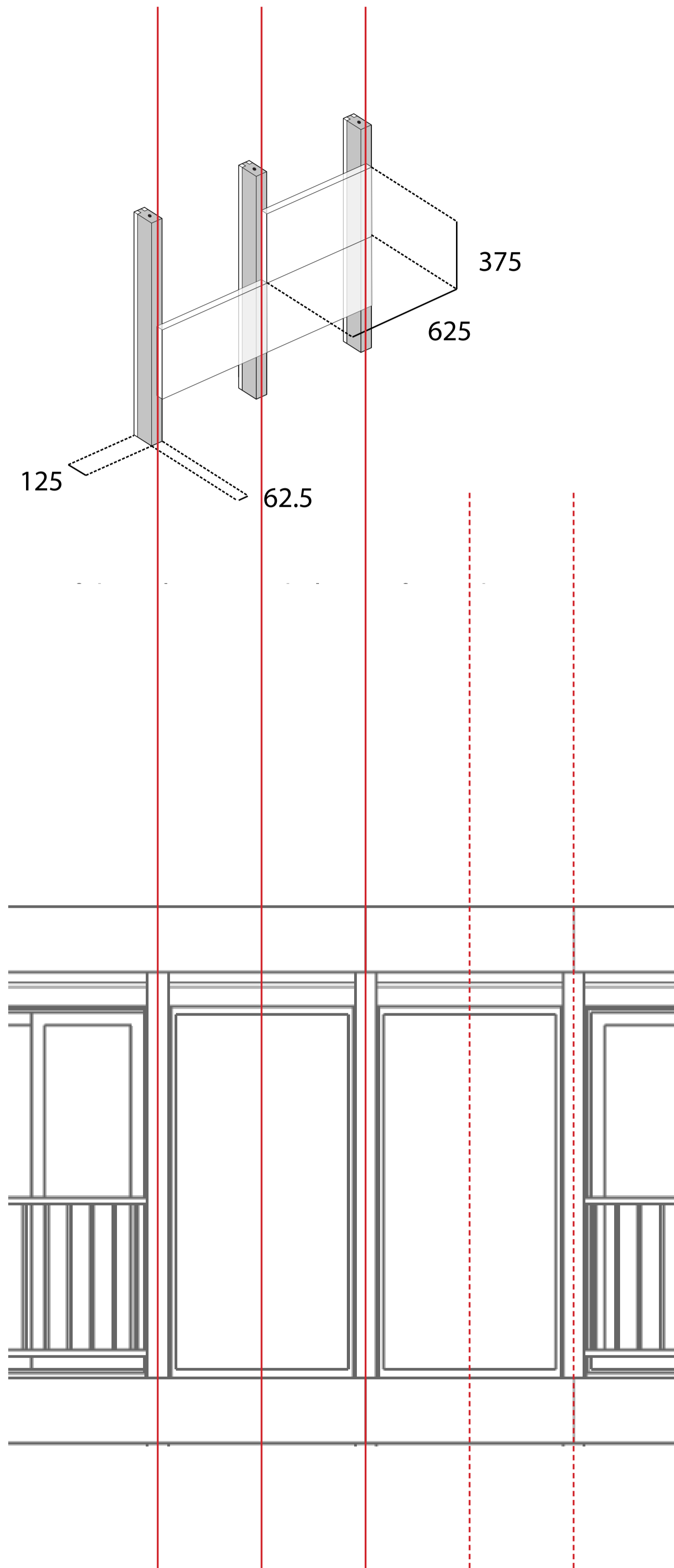
New Storage  
& Stair



# New Facade



# Dimension & Composition

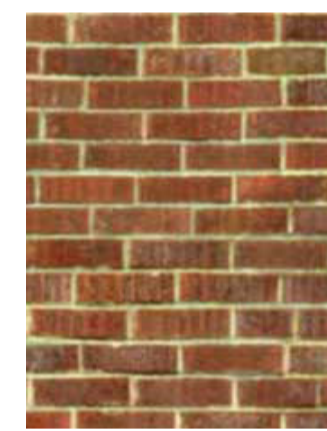


# Material

The material of existing Airey blocks:



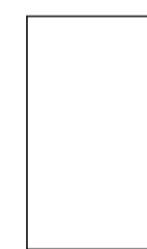
Concrete Tile



Brick  
(Chimney)



Red steel  
handrail



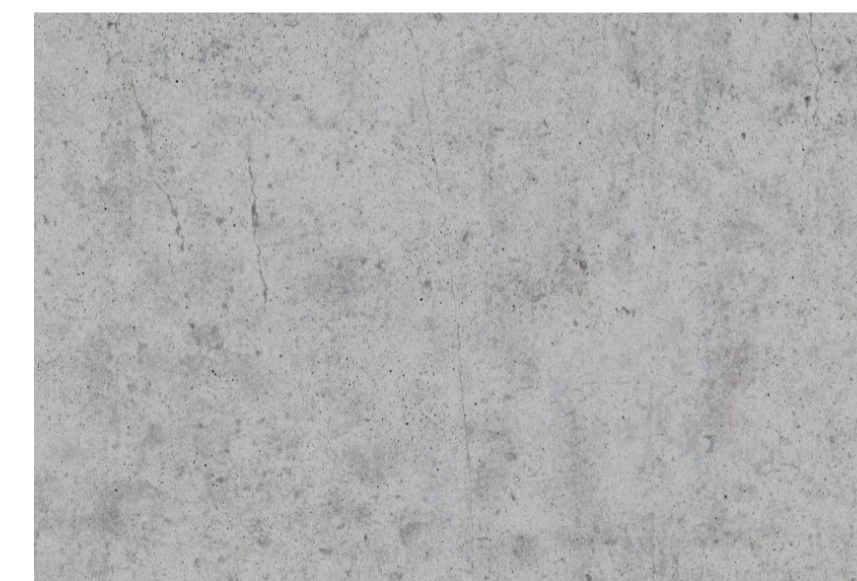
White steel  
window frame

The material of existing Airey shops:



Concrete Tile

Concrete

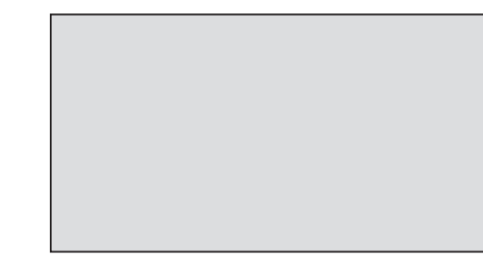
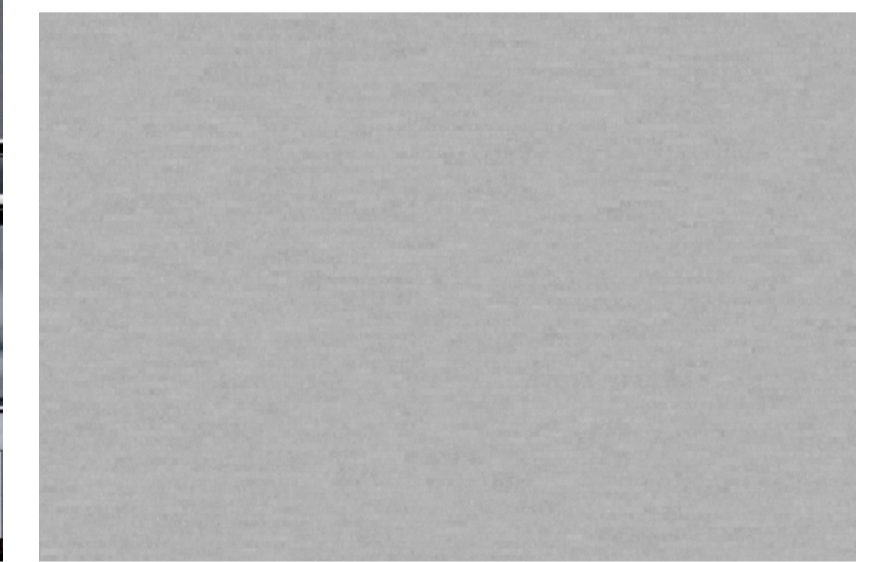


White steel  
window frame

The material of Renovated part:



EQUITONE  
[tectiva] Tile



Light grey aluminum  
window frame



Red steel  
handrail



Wood  
Stair

# End Block

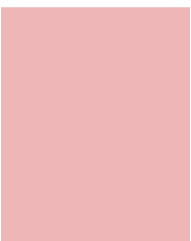




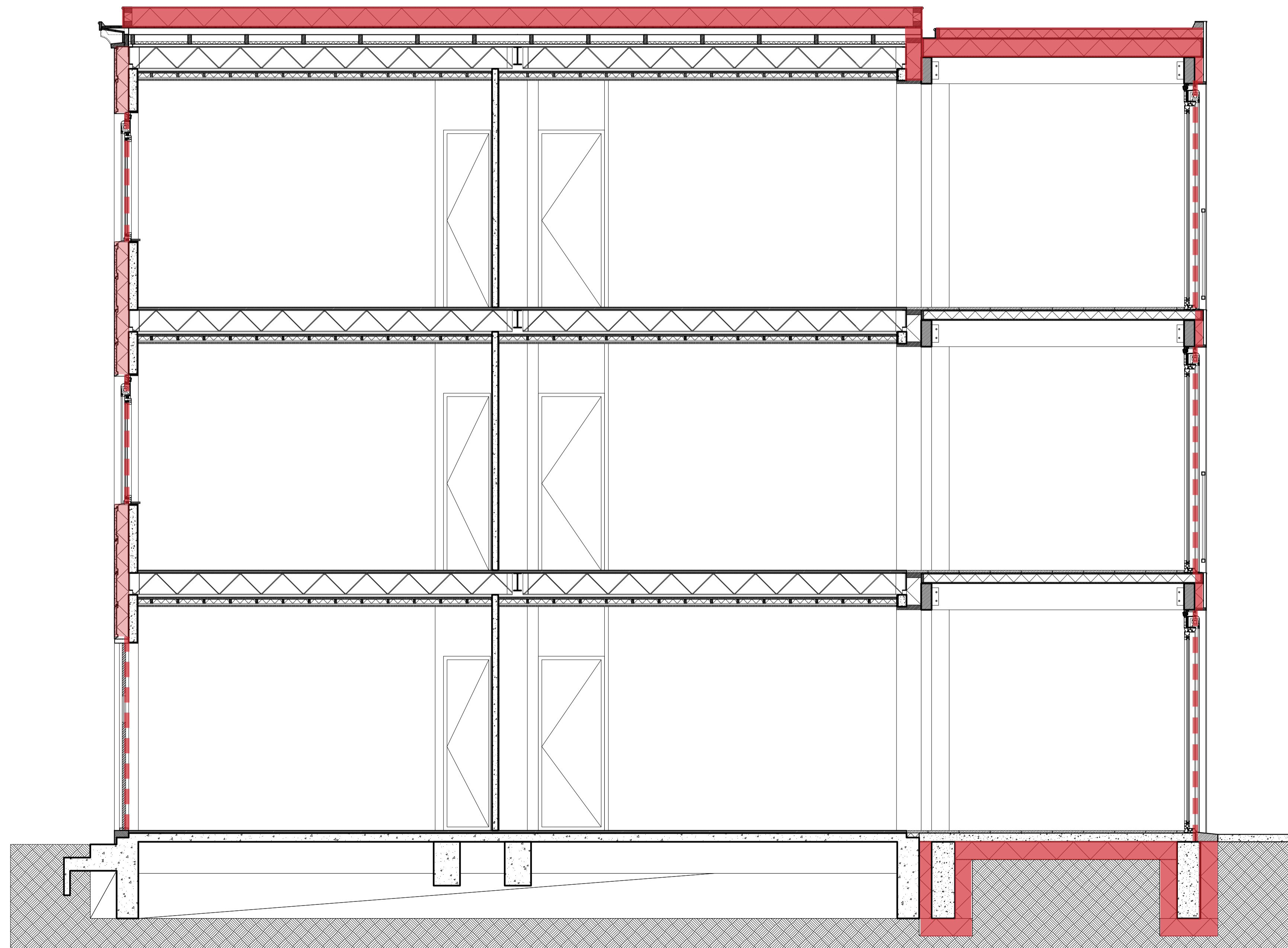
# New Entrance



# Climate

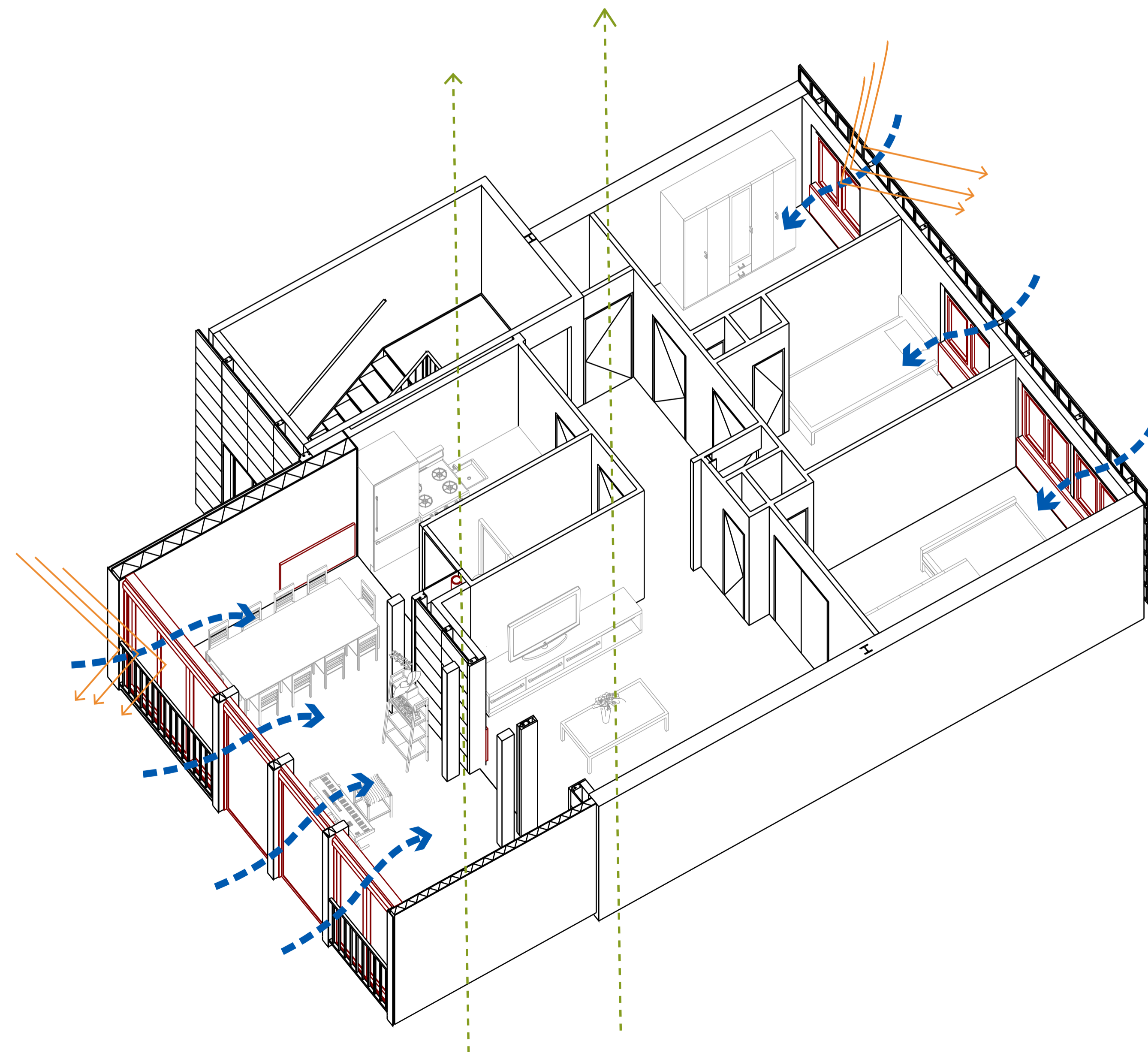
## Thermal Insulation

-  Installing loose fill materials in between the concrete facade tile and the partition walls
-  Installing optimal insulation outside the structure
-  Installing new thermal insulated window frames



# Summer

- - -> Natural Ventilation:  
ventilation profile installed at the top of windows or doors ( Reynaers Ventalis )
- - -> Original mechanical Ventilation for Bathroom & Toilet
- Sunscreen:  
- - -> the curtain combined with the windows or doors ( Reynascreen )



# Winter

Gas Central Heating System:

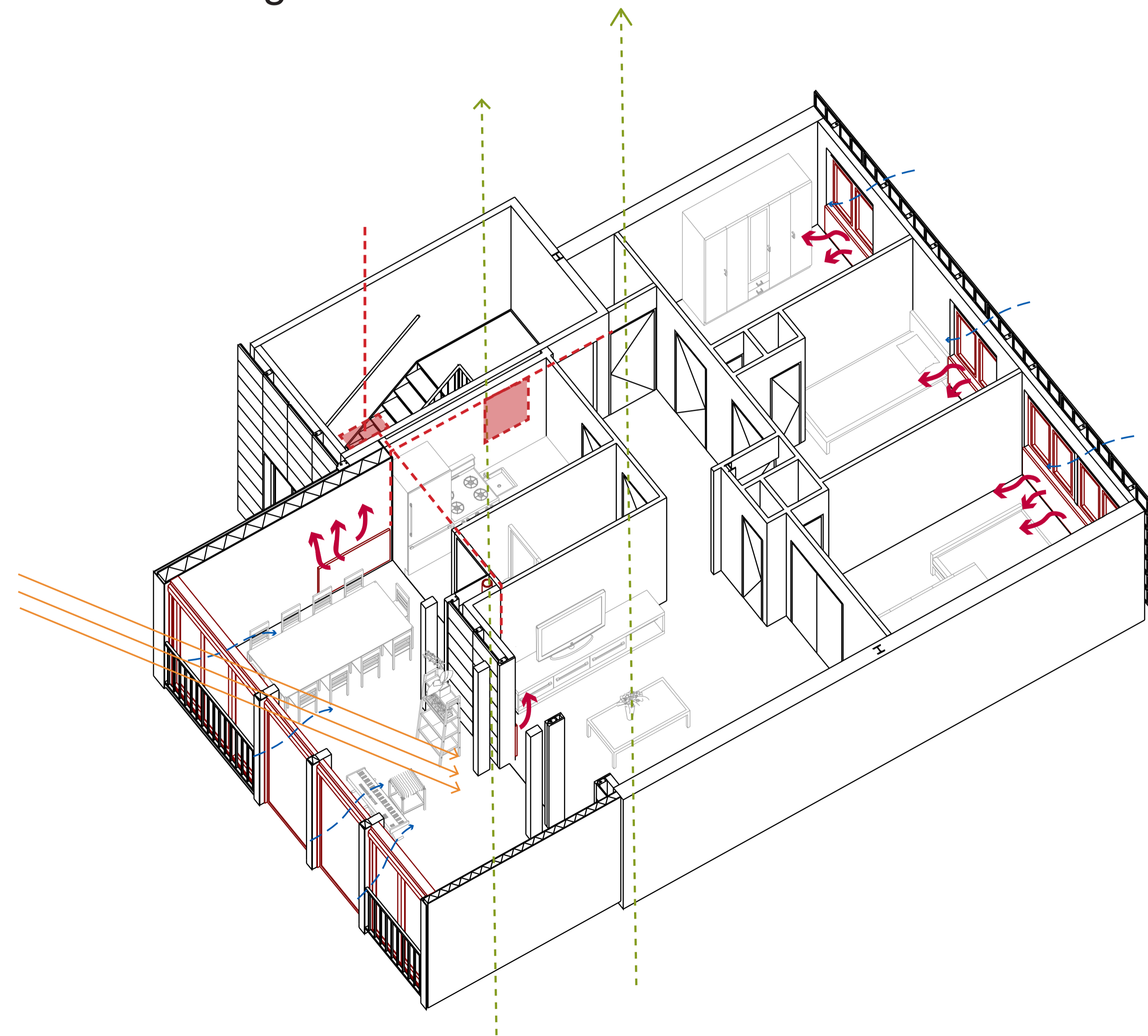
→ ventilation profile installed at the top of windows or doors ( Reynaers Ventalis )

---→ Original mechanical Ventilation for Bathroom & Toilet

Natural Ventilation:

---→ ventilation profile installed at the top of windows or doors ( Reynaers Ventalis )

→ Sunlight



# Garden Scale







# Connection

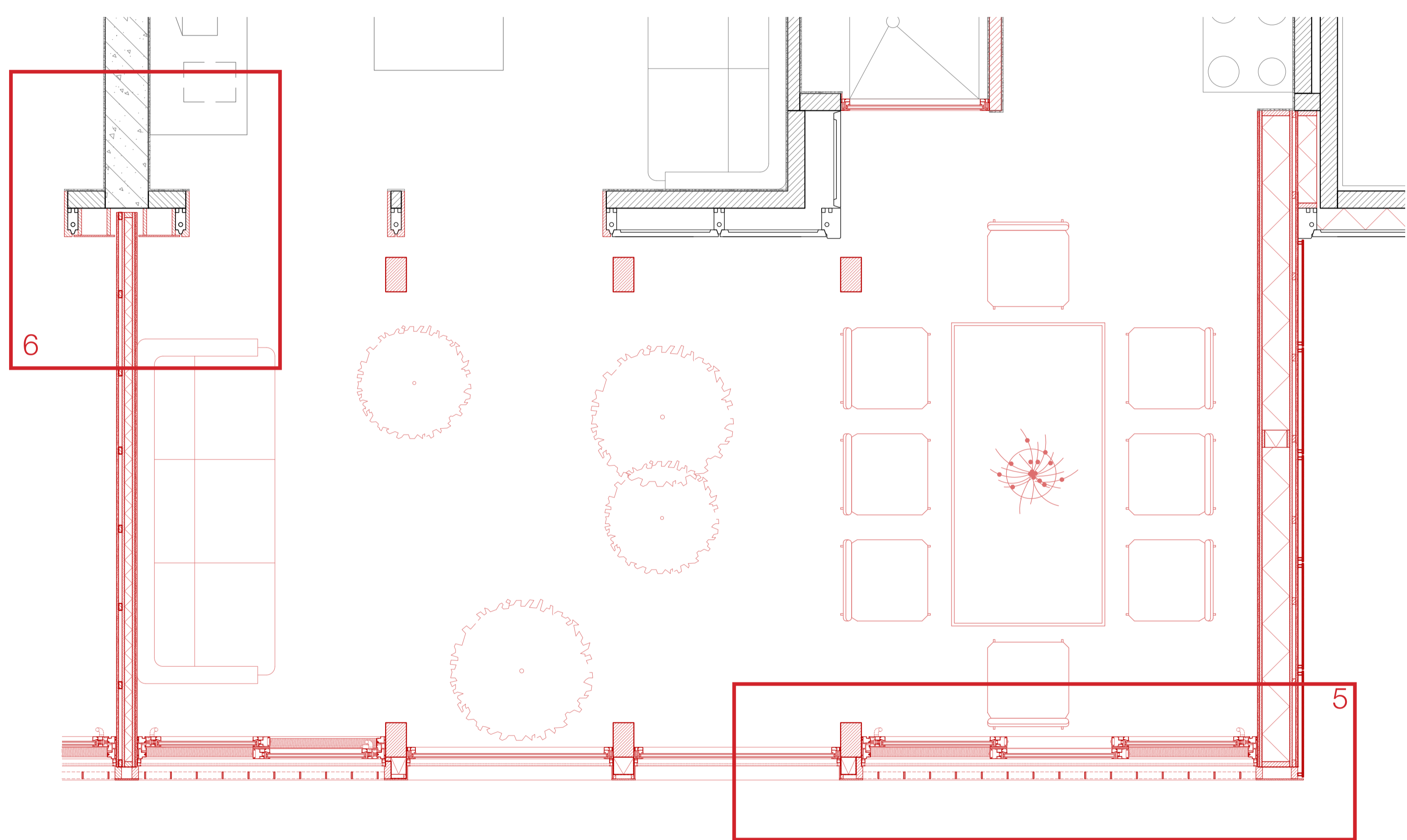
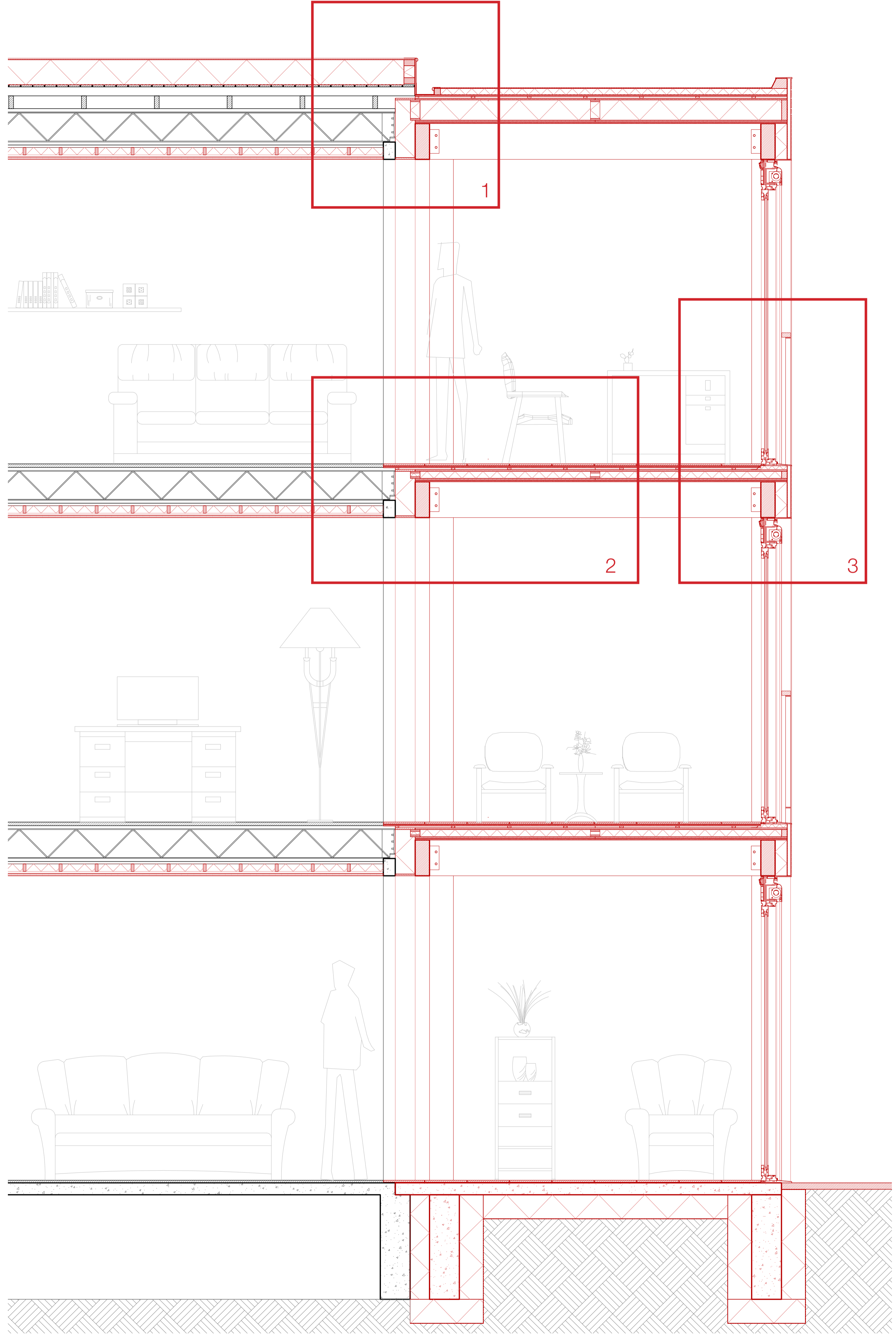


# Entrance



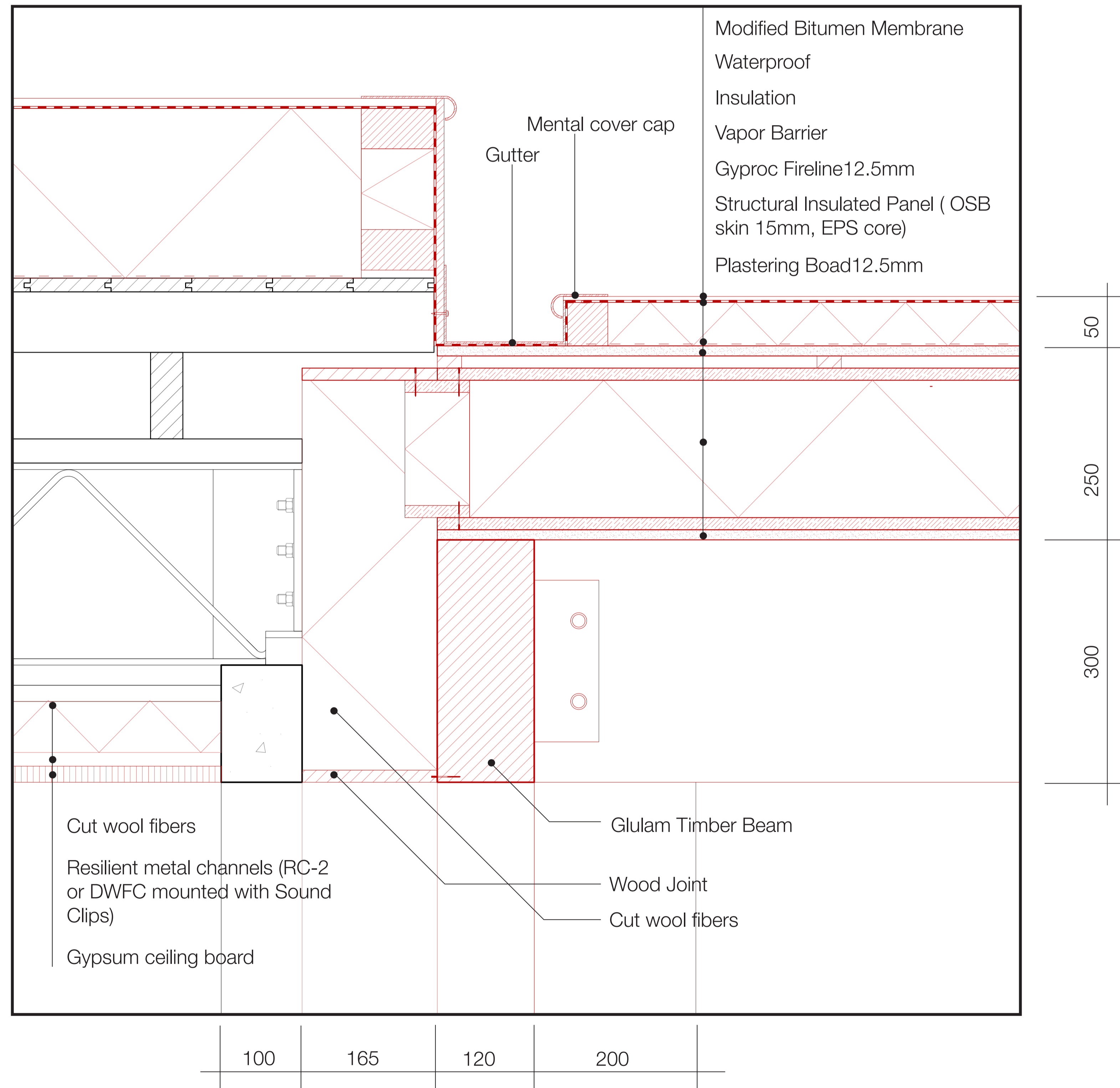
# Detail Scale



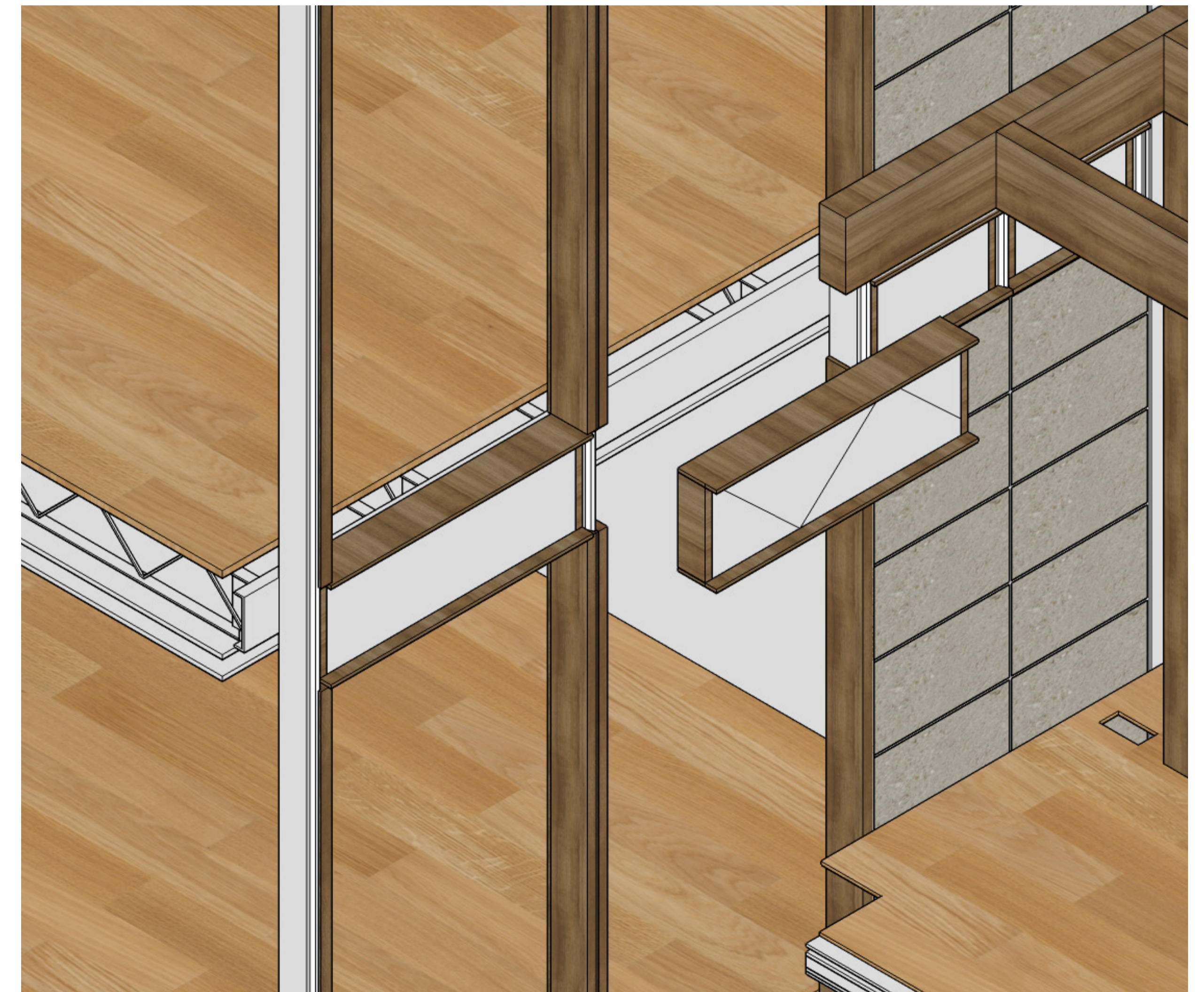


# Roof

Detail 1 1:5

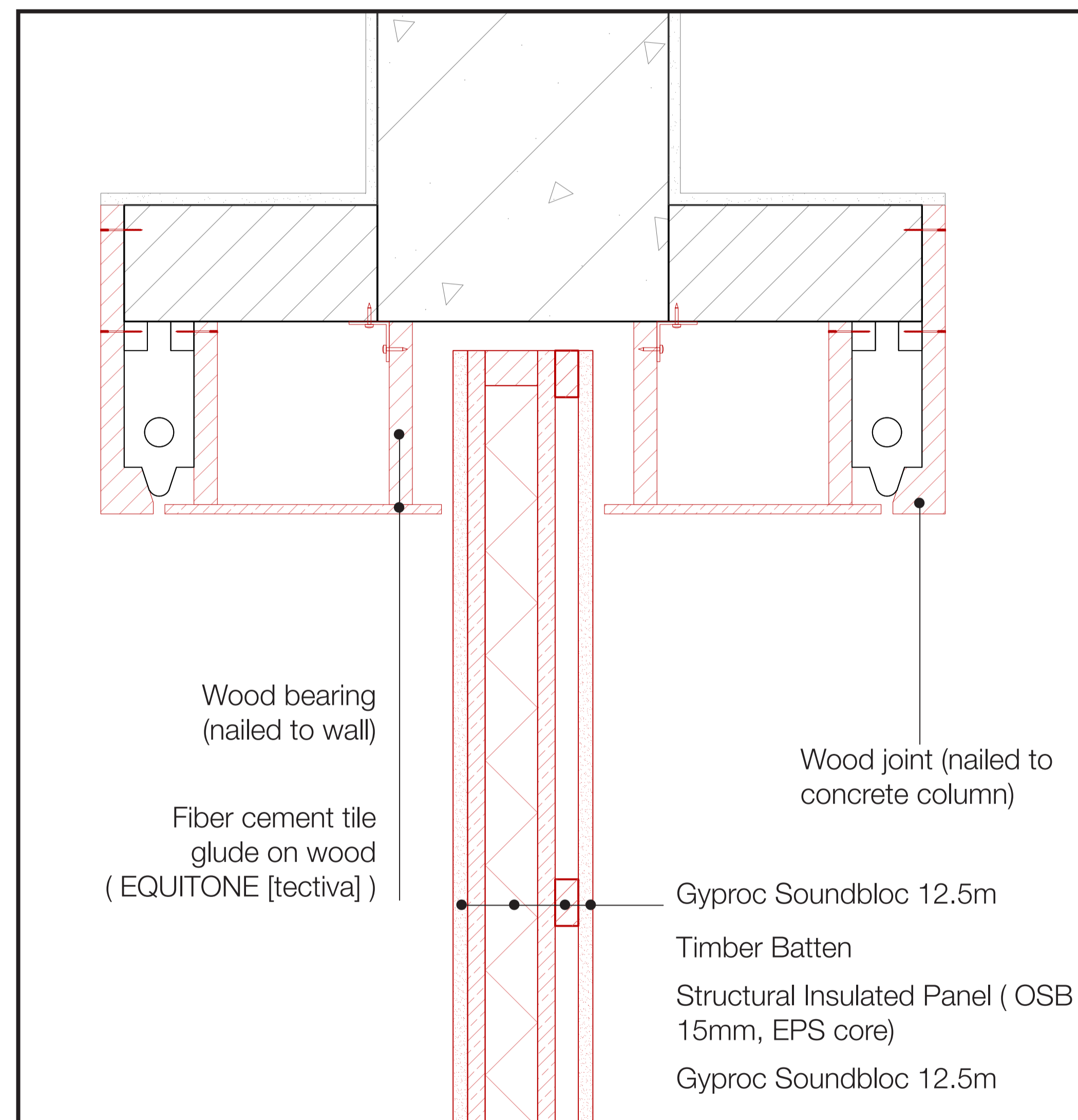


Joint connect new structure and old column



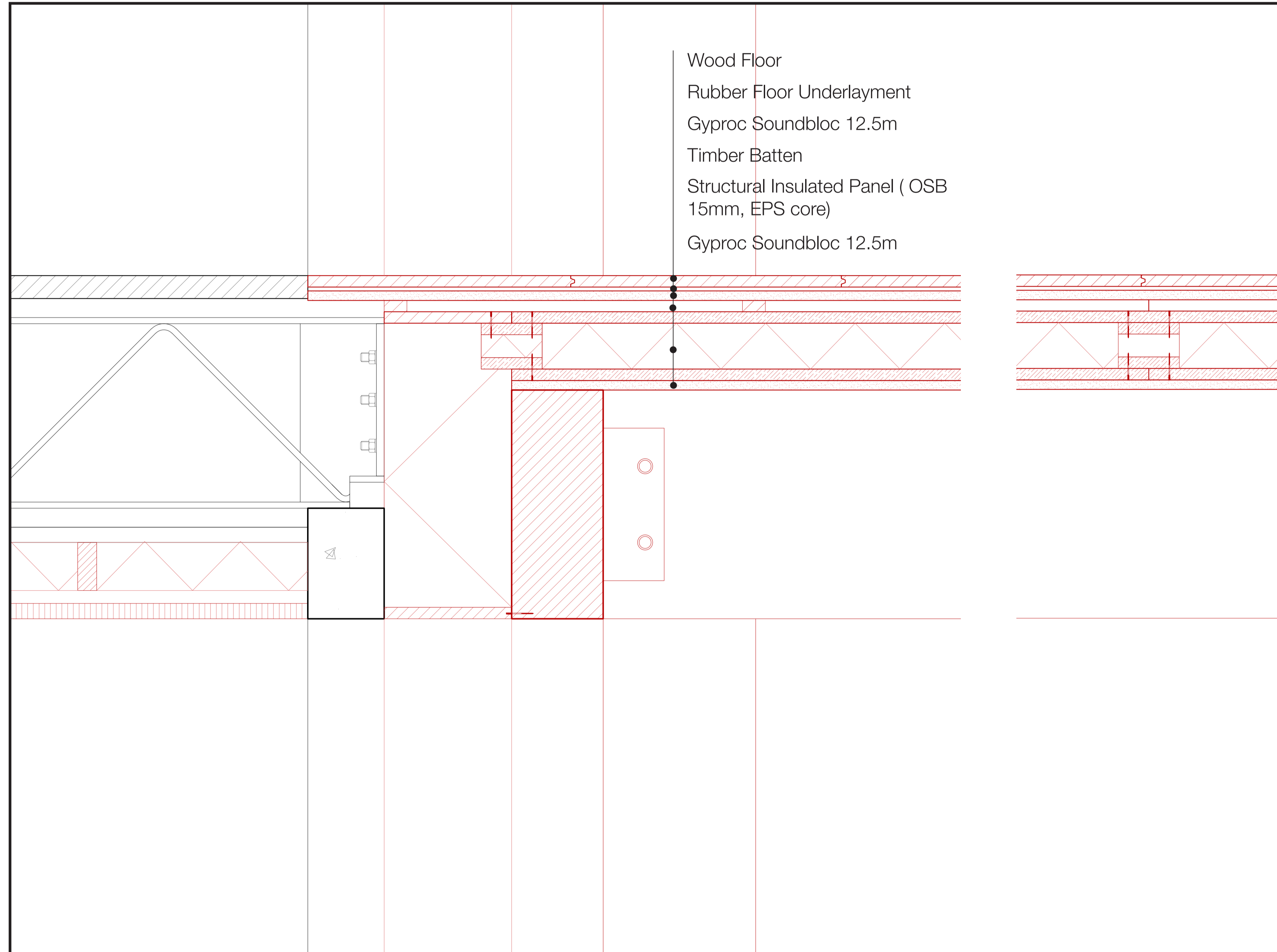
# Party Wall

Detail 6 1:5



# Floor

Detail 2 1:5



## Electrical Line

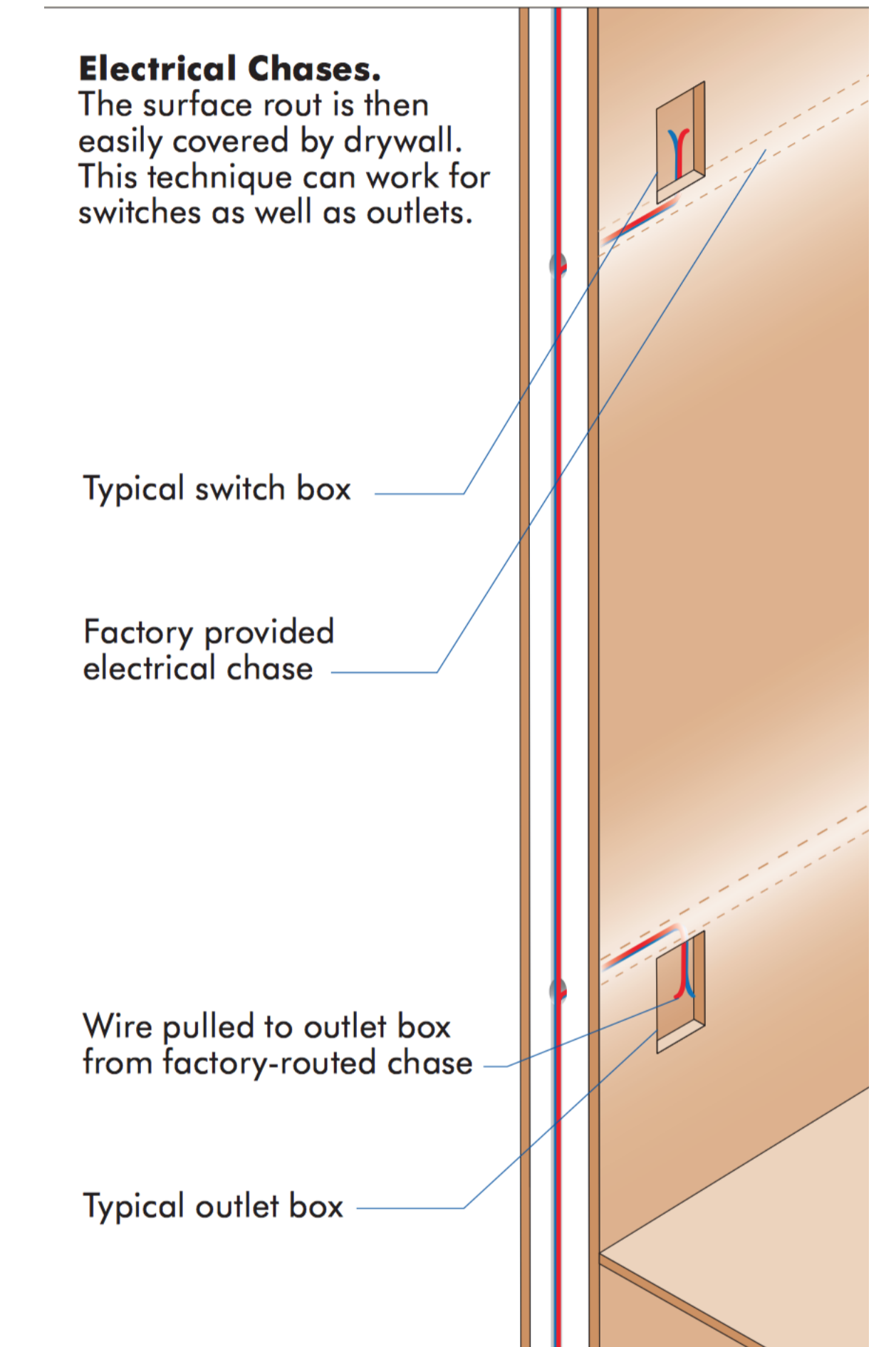
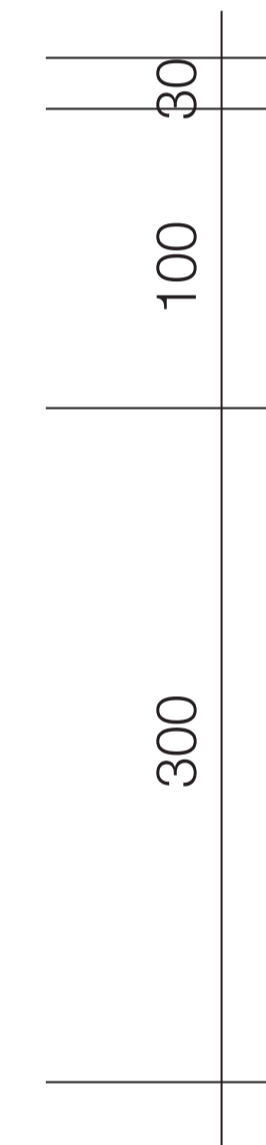
**Electrical Chases.**  
The surface rout is then easily covered by drywall. This technique can work for switches as well as outlets.

Typical switch box

Factory provided electrical chase

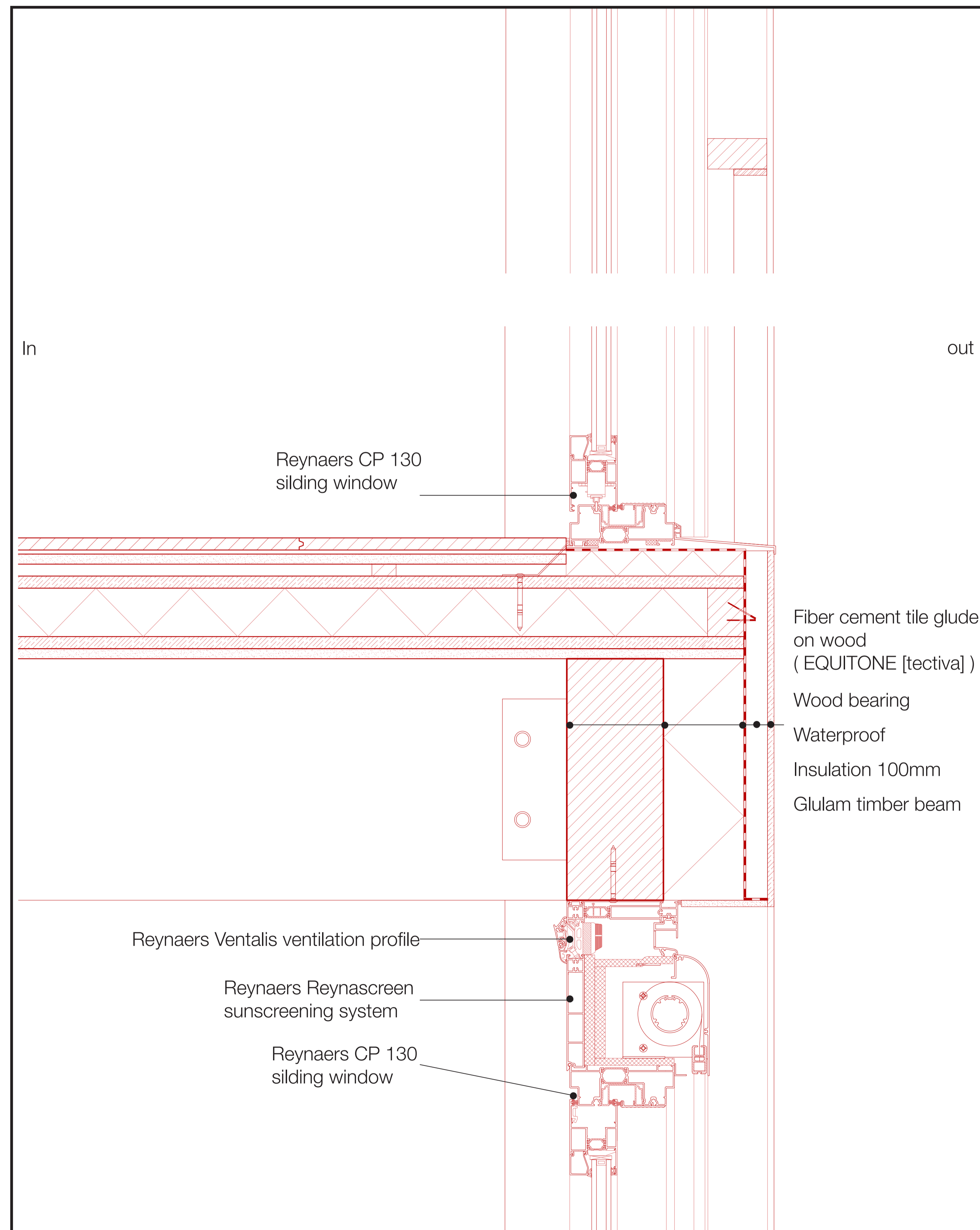
Wire pulled to outlet box from factory-routed chase

Typical outlet box

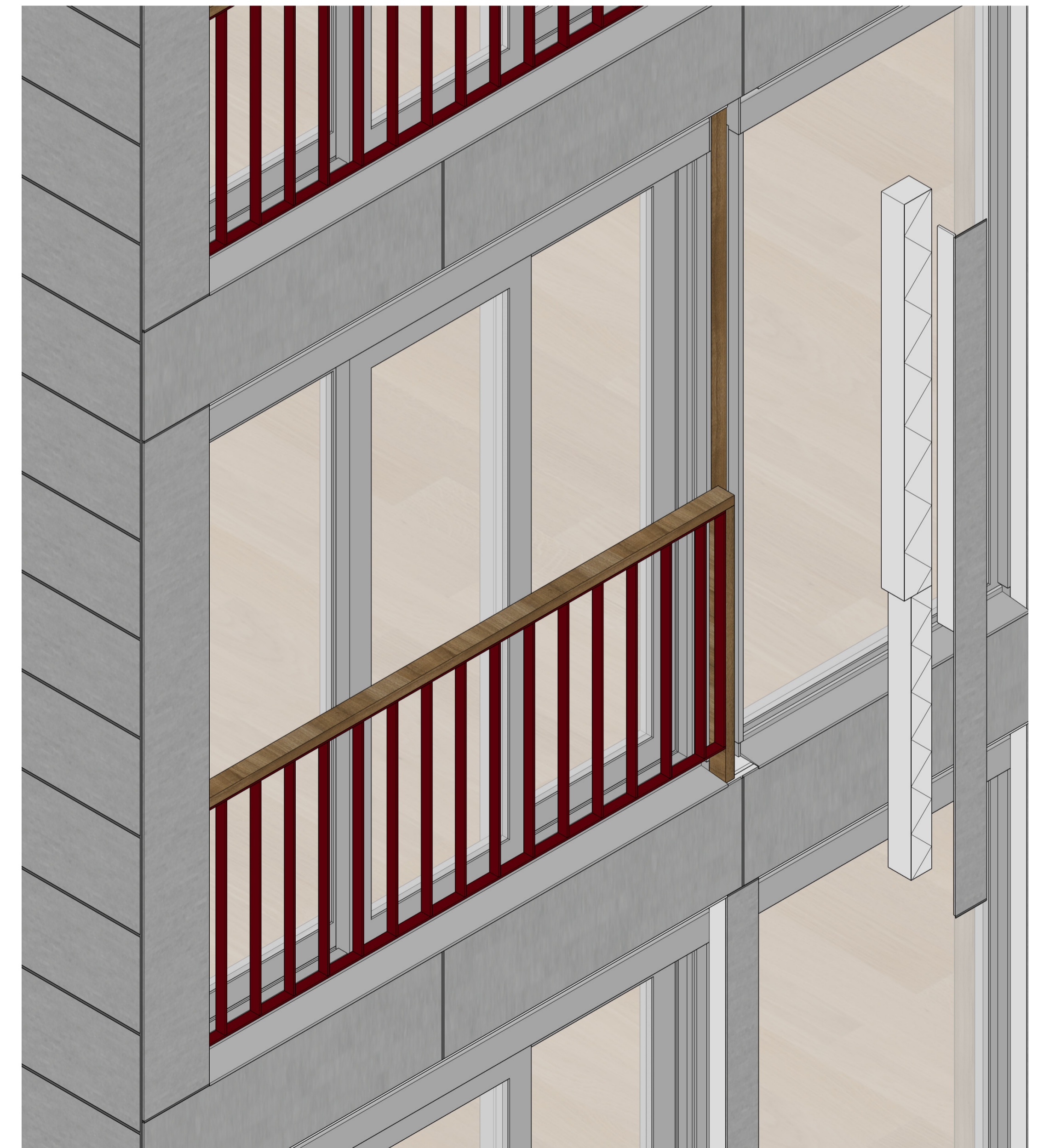


# Window & Handrail

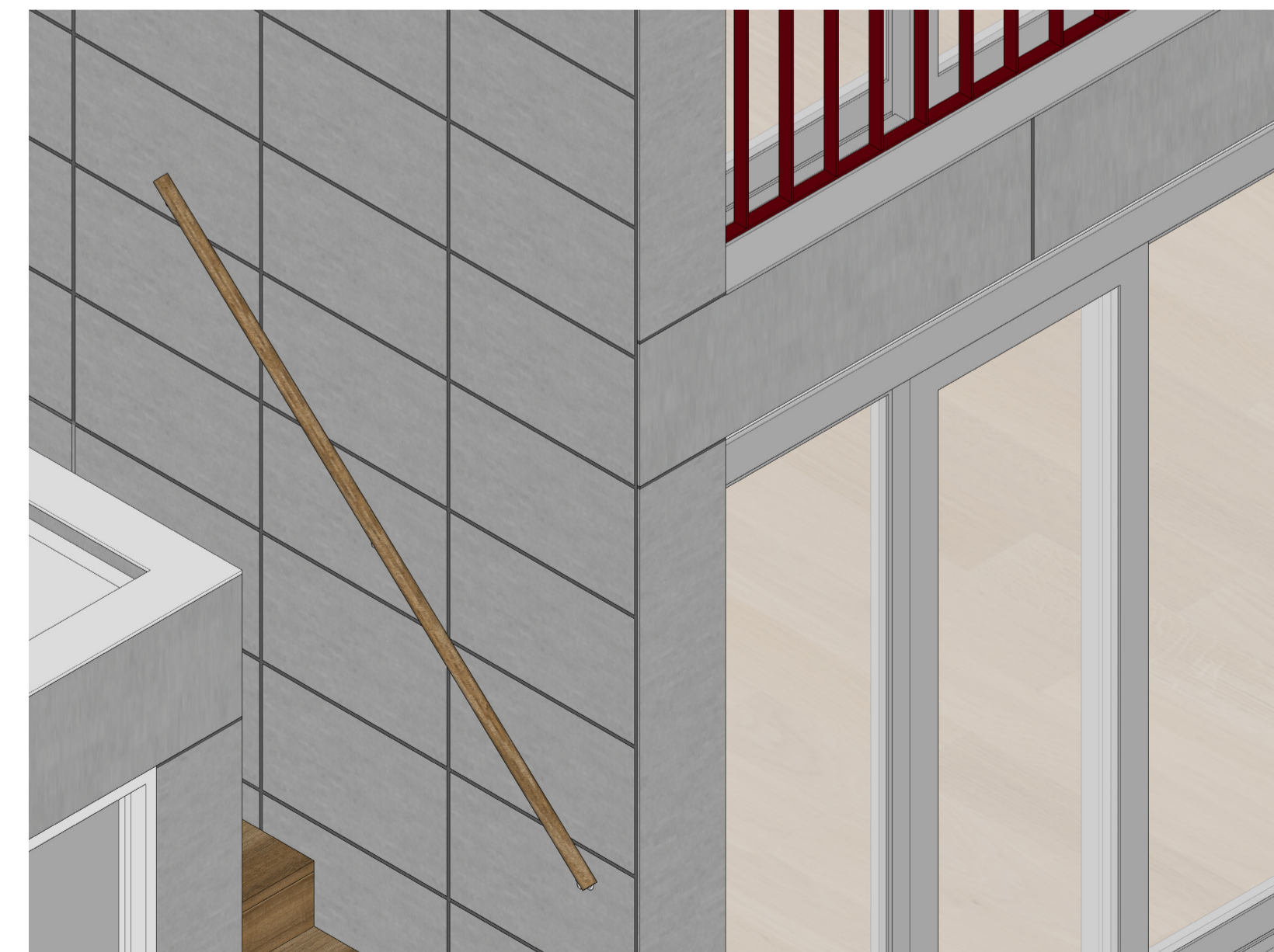
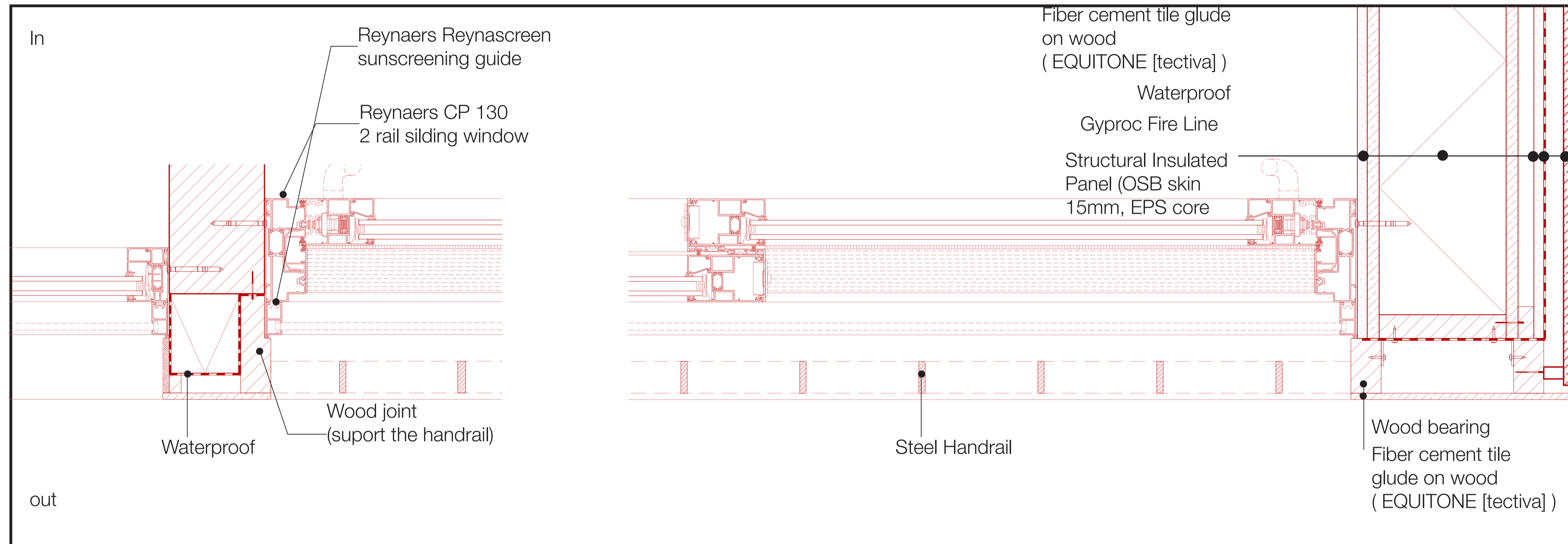
Detail 3 1:5



Handrail



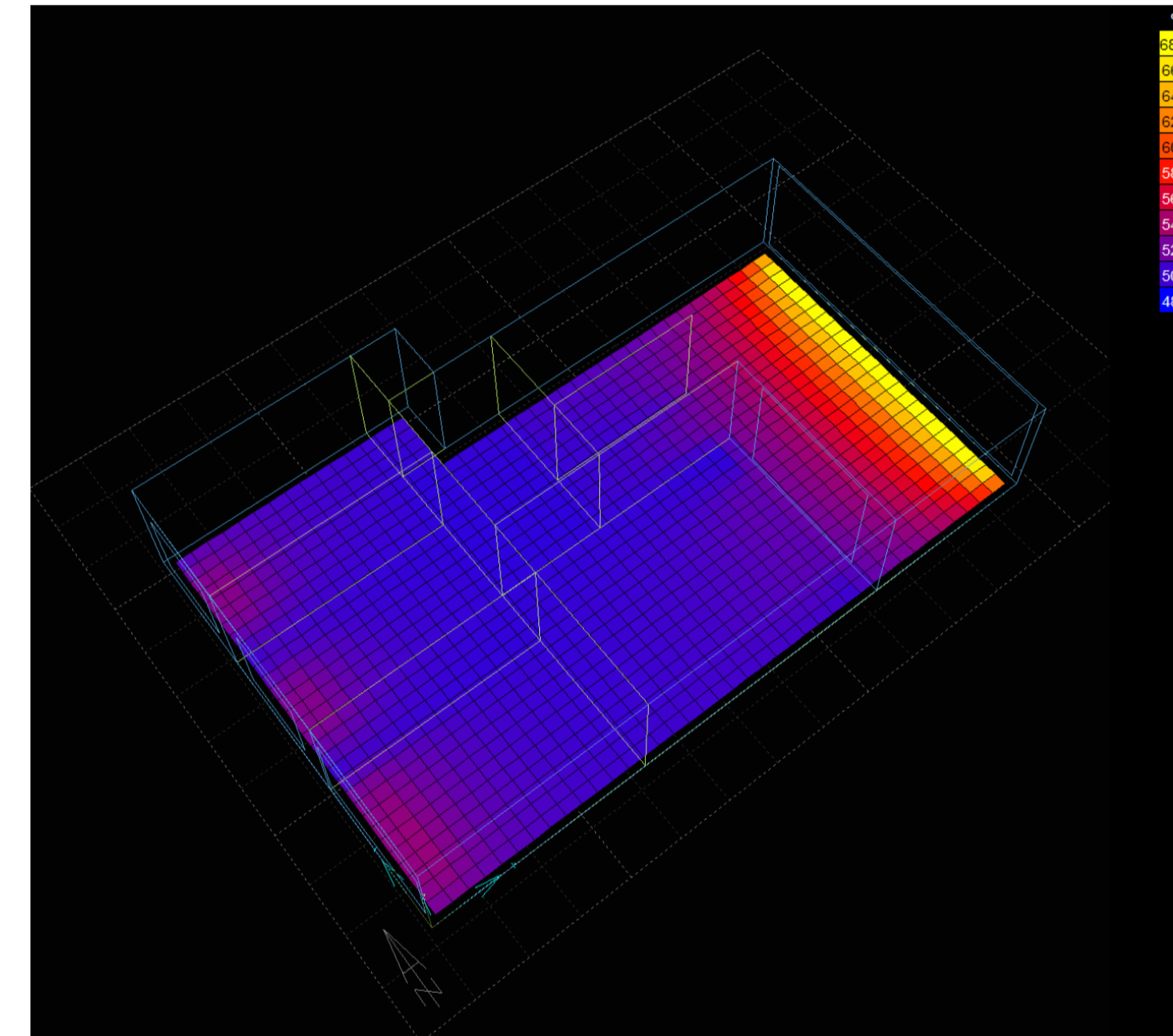
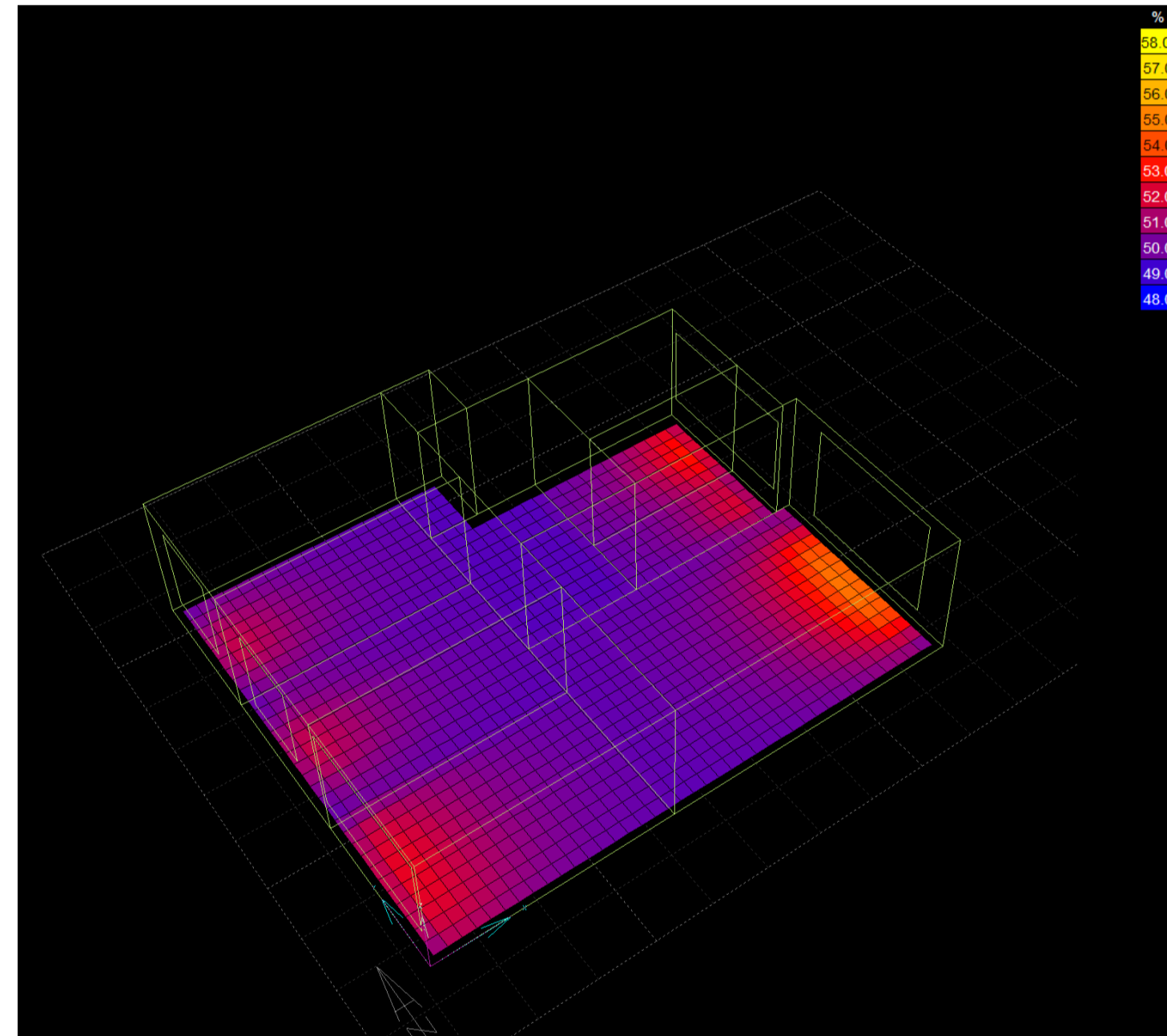
Detail 5 1:5



# REFLECTION

## Residents

Increase 23m<sup>2</sup> per dwelling  
Improve the noise problem  
Improve the thermal insulation



## Public Space

Reactivate of communal garden

## Social Aspect

Efficient renovation for low-income family

**THANKS**