

# T-BOX COMMUNITY

Student name:  
Tutor:

Shijie Zhang  
Anne Snijders  
Maarten Meijs  
Pieter Stoutjesdijk

# **I. PROJECT OVERVIEW**

1.1 PROBLEM STATEMENT

1.2 TRANSFORMABLE & FLEXIBILITY

1.3 DESIGN IDEOLOGY

# **II. TBOX SYSTEM**

2.1 PREVIOUS DESIGN

2.2 STRUCTURE DEVELOPMENT

2.3 SEPARATION PANEL SOLUTION

2.4 INSTALLATION PROCESS

2.5 STANDARD COMMUNITY SETTING

# **III. SITE DESIGN**

3.1 COMPARISON WITH THE EXISTING

3.2 TECHNICAL DRAWING

# **IV. CLIMATE DESIGN**

# **V. FUTURE DEVELOPMENT**

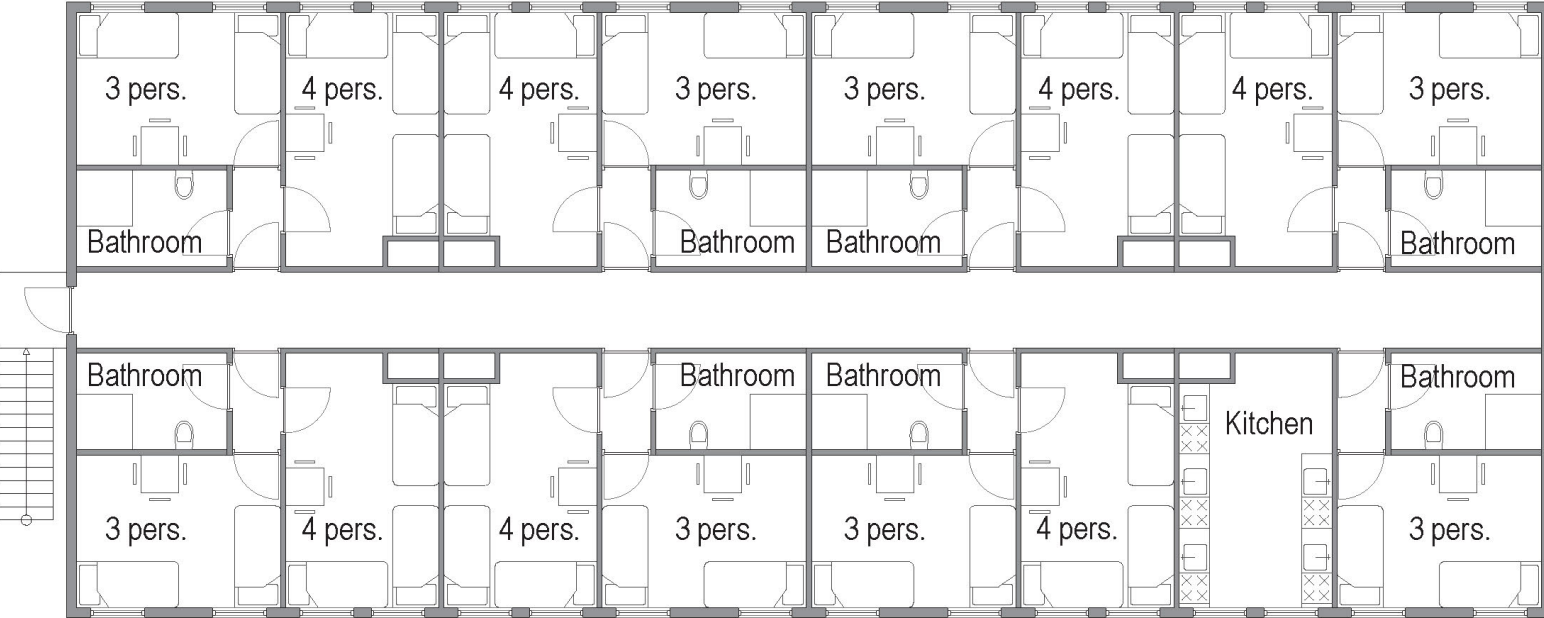
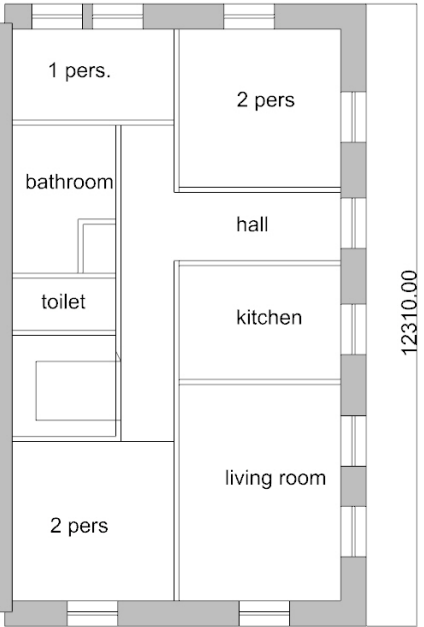
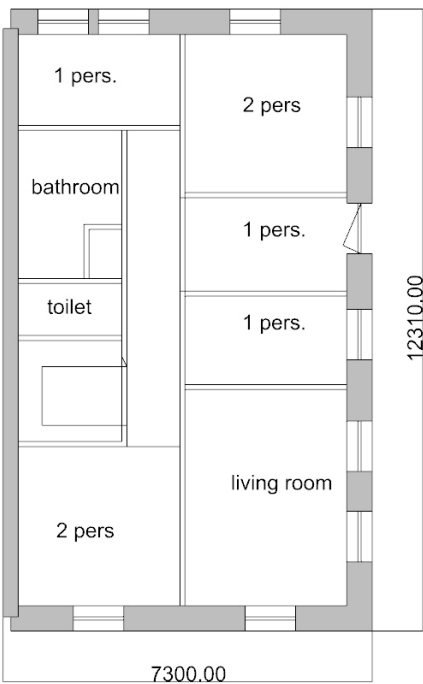
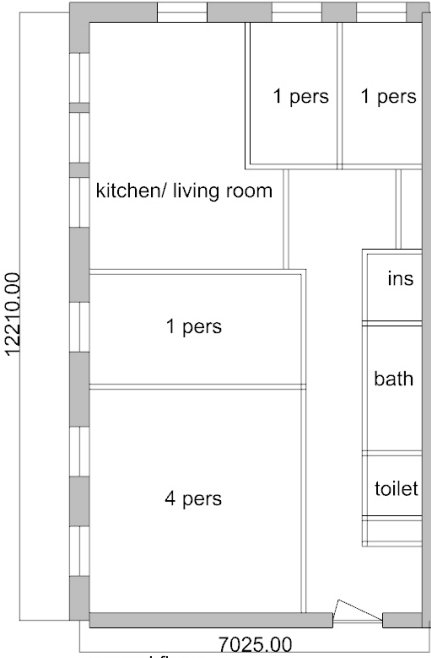
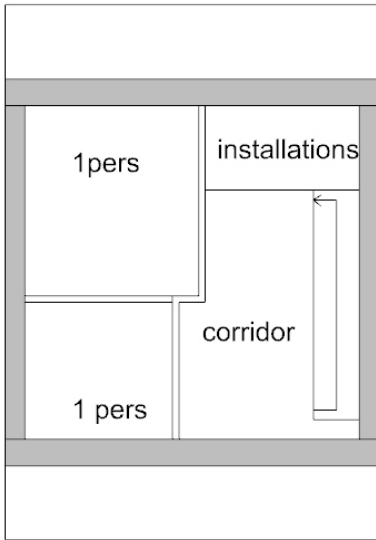
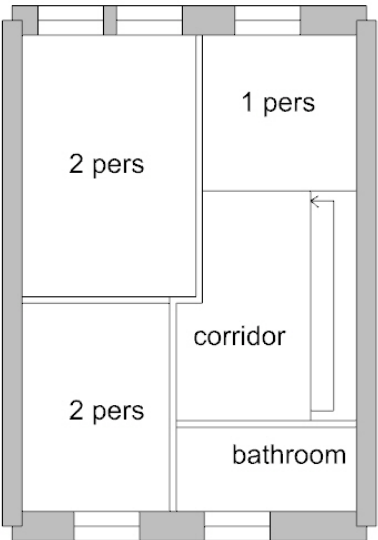
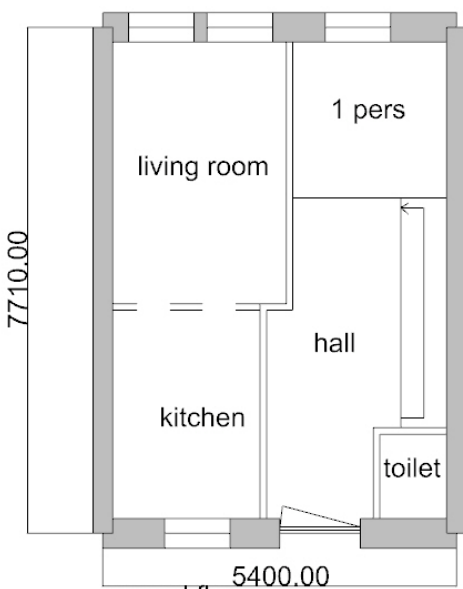
# **VI. ALI'S NEW LIFE**



# I PROJECT OVERVIEW

**1.1 PROBLEM STATEMENT**

**mapping of the existing**



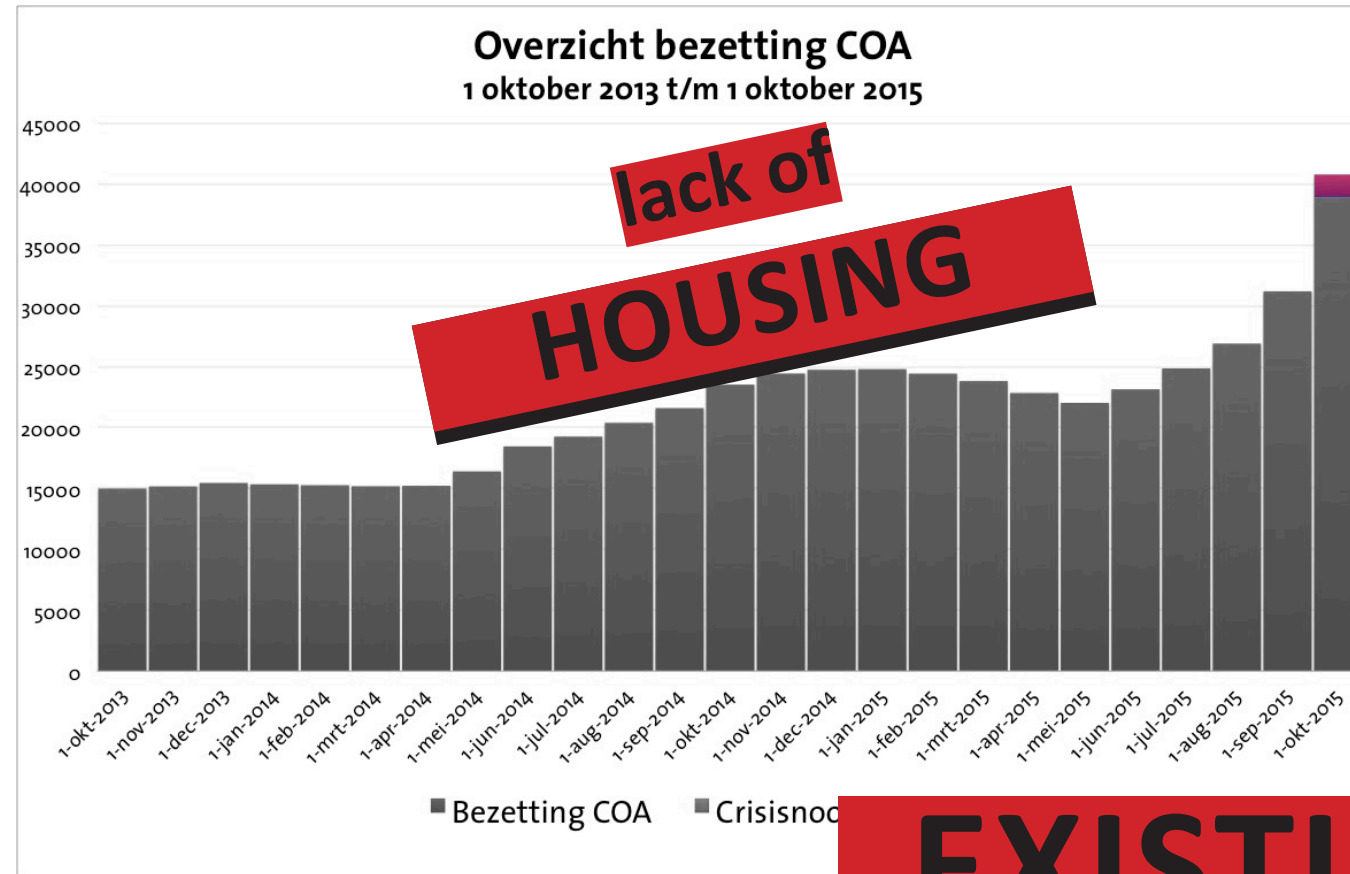
**1.1 PROBLEM STATEMENT**  
mapping of the existing

**DATA:**

<b>BEDROOM:</b>	<b>5M<sup>2</sup> /person</b>
<b>KITCHEN:</b>	<b>5.7M<sup>2</sup>/8person</b>
<b>BATHROOM+TOILET:</b>	<b>5M<sup>2</sup>/8person</b>
<b>LIVING ROOM:</b>	<b>10M<sup>2</sup>/8person</b>

# 1.1 PROBLEM STATEMENT

mapping of the existing



## EXISTING AZCS



## 1.1 PROBLEM STATEMENT

How to create a fast constructed transformable room system for asylum seeker community?

## 1.1 PROBLEM STATEMENT

EFFICIENCY ————— FOR BUILDING SPEED

PRIVACY ————— FOR INDIVIDUAL

FLEXIBILITY ————— FOR FAMILY

AFFORDABILITY ————— FOR GOVERNMENT

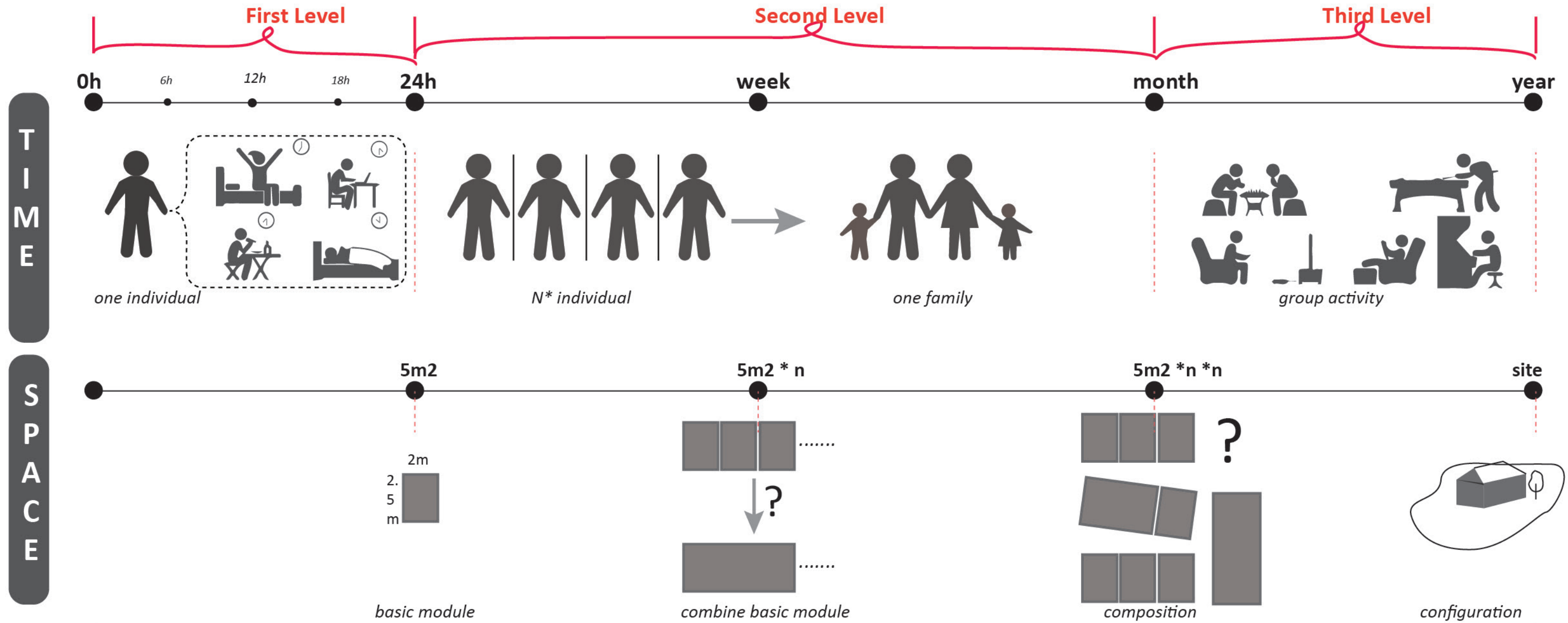
QUALITY ————— FOR RESIDENTS

DURABILITY ————— FOR USERS

SUSTAINABILITY ————— FOR ENVIRONMENT

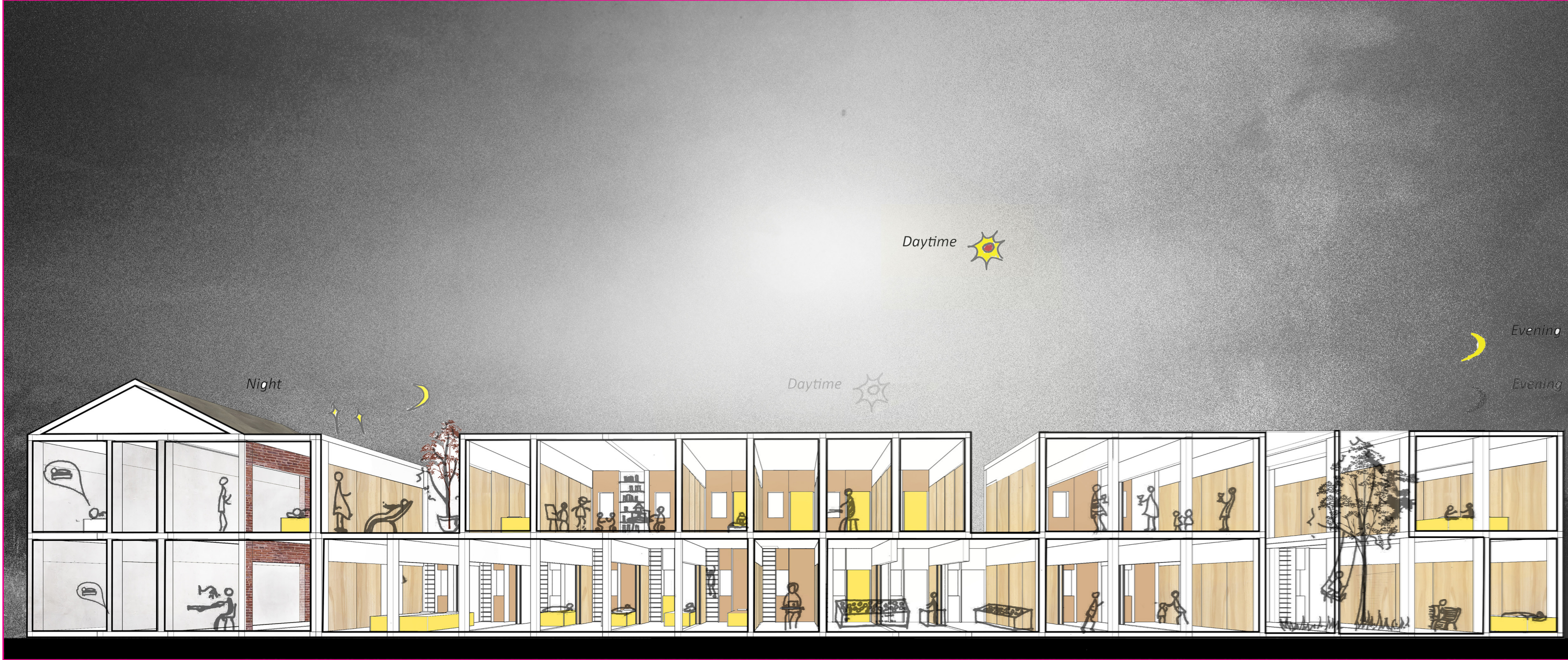


## 1.2 TRANSFORMABLE & FLEXIBILITY





1.3 DESIGN IDEOLOGY



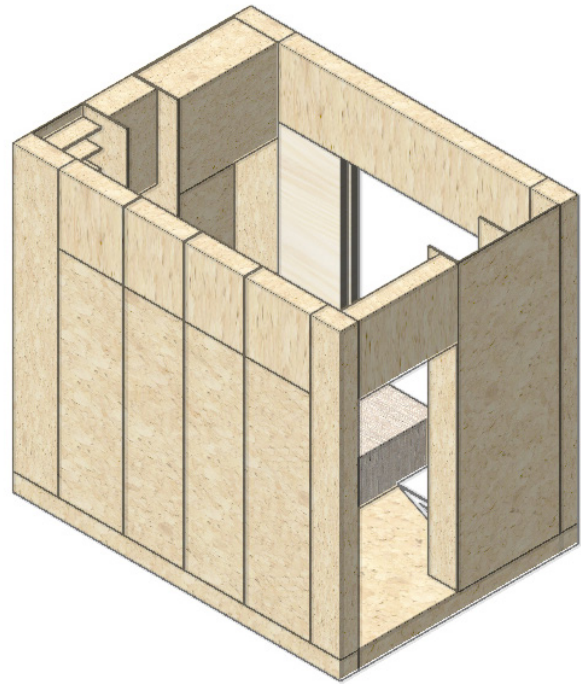


## II. TBOX SYSTEM



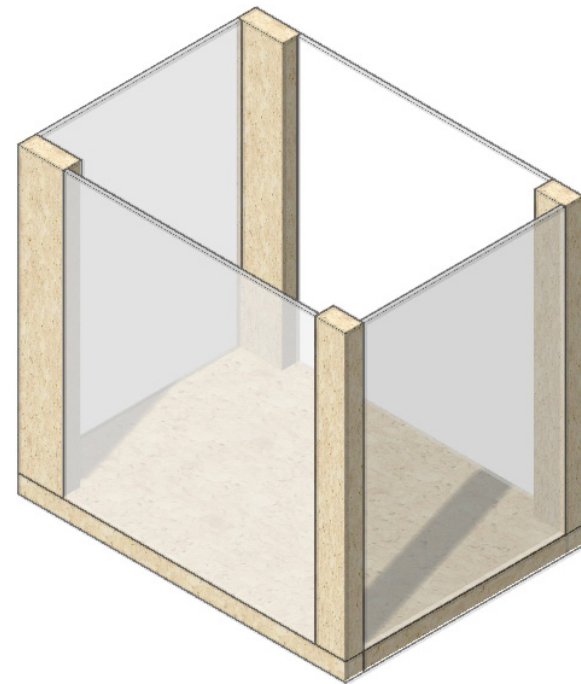
## 2.1 PREVIOUS DESIGN

5M<sup>2</sup> VARIATION



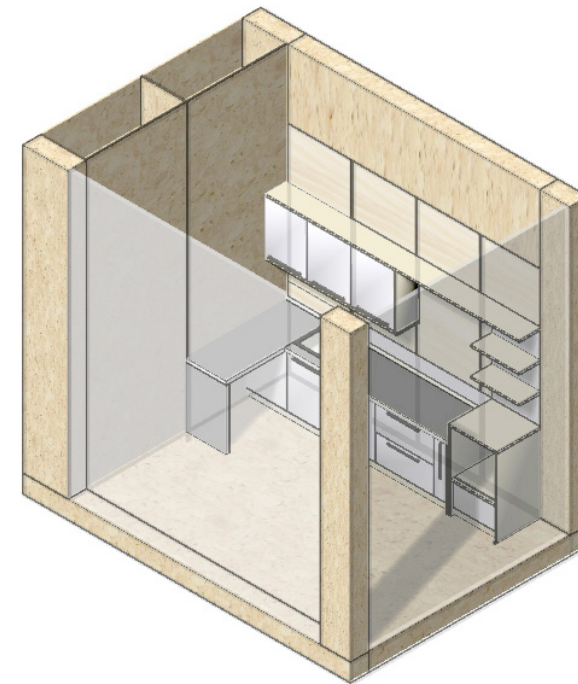
bedroom

5M<sup>2</sup> VARIATION



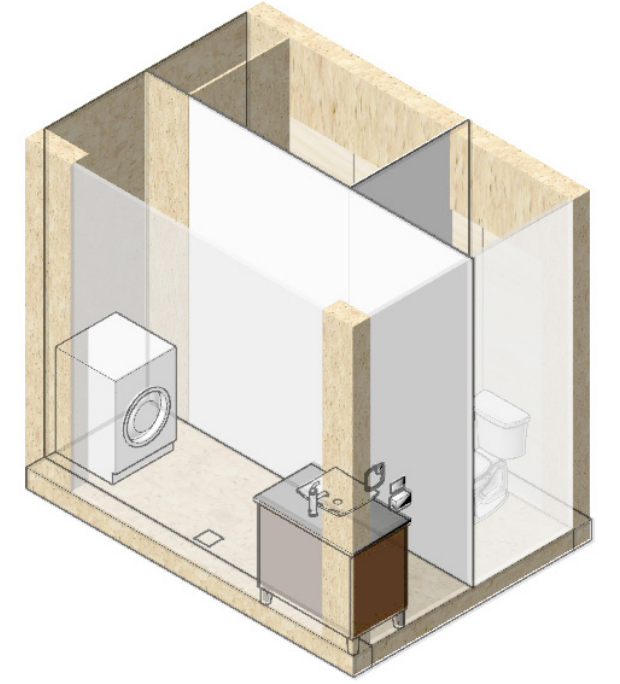
lighting

5M<sup>2</sup> VARIATION



kitchen

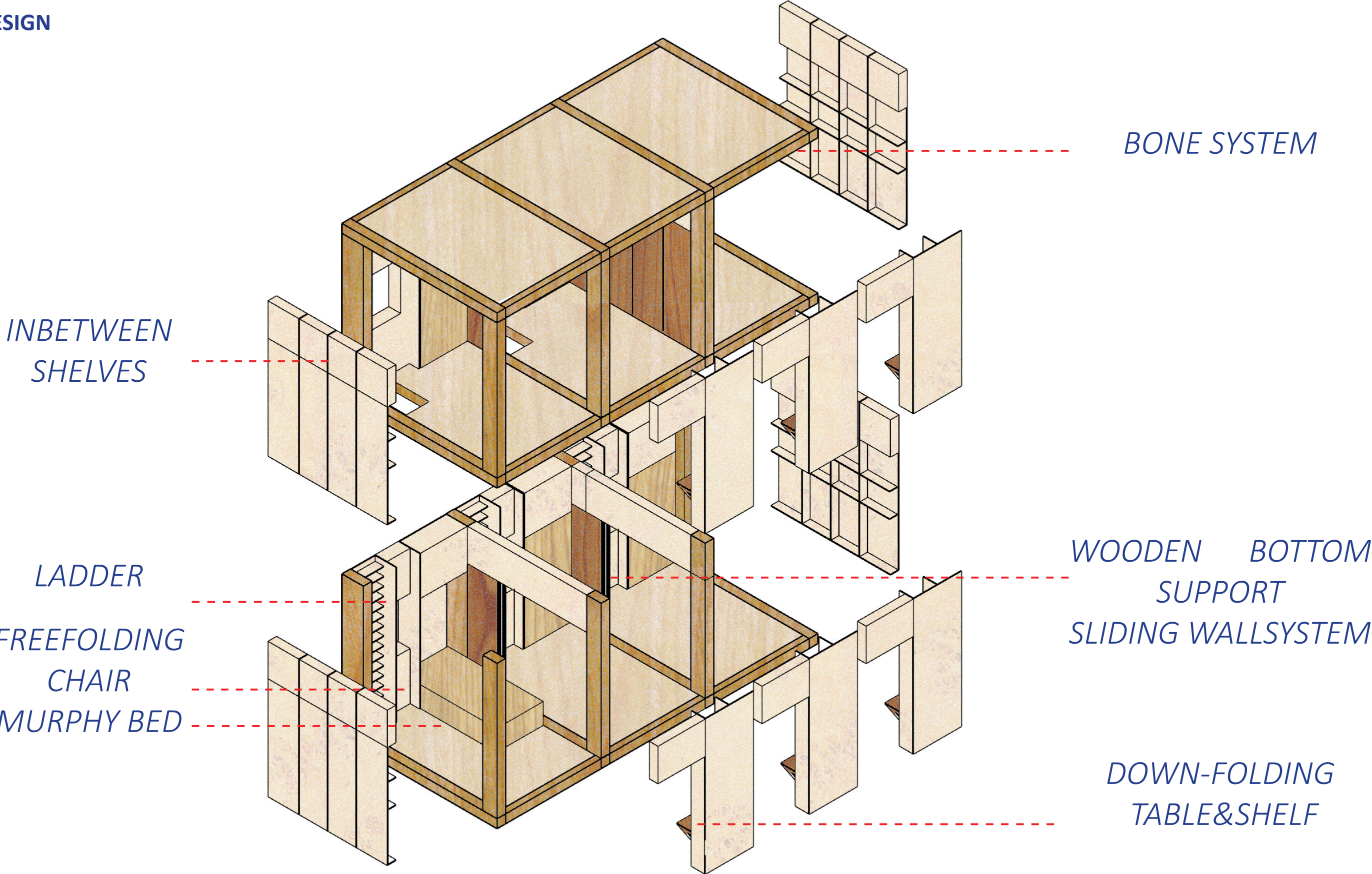
5M<sup>2</sup> VARIATION



toilet+bathroom



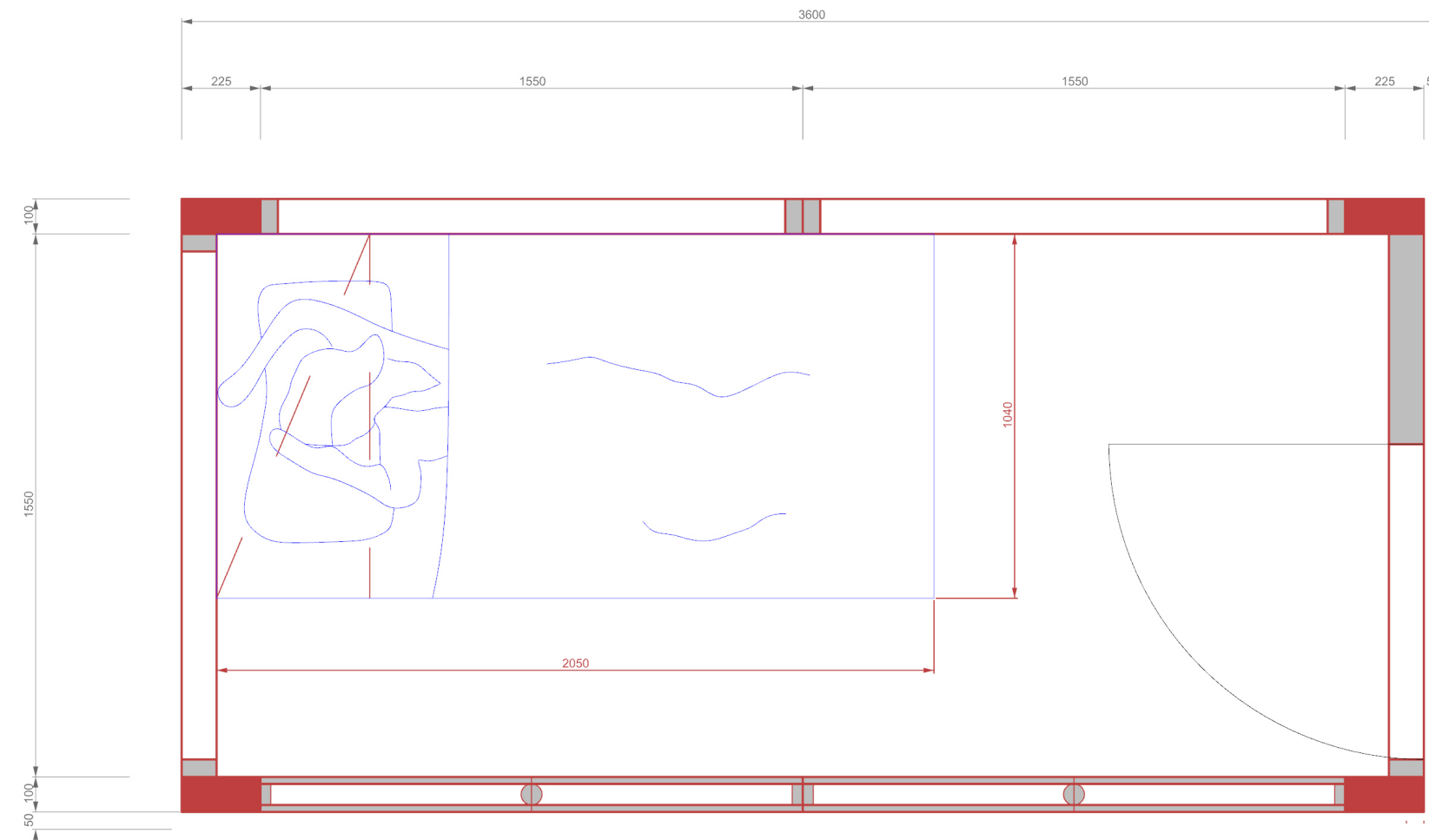
2.1 PREVIOUS DESIGN



**EVERYROOM STRUCTURALLY SEPARATED**

**BETTER ACOUSTIC EFFECTS**

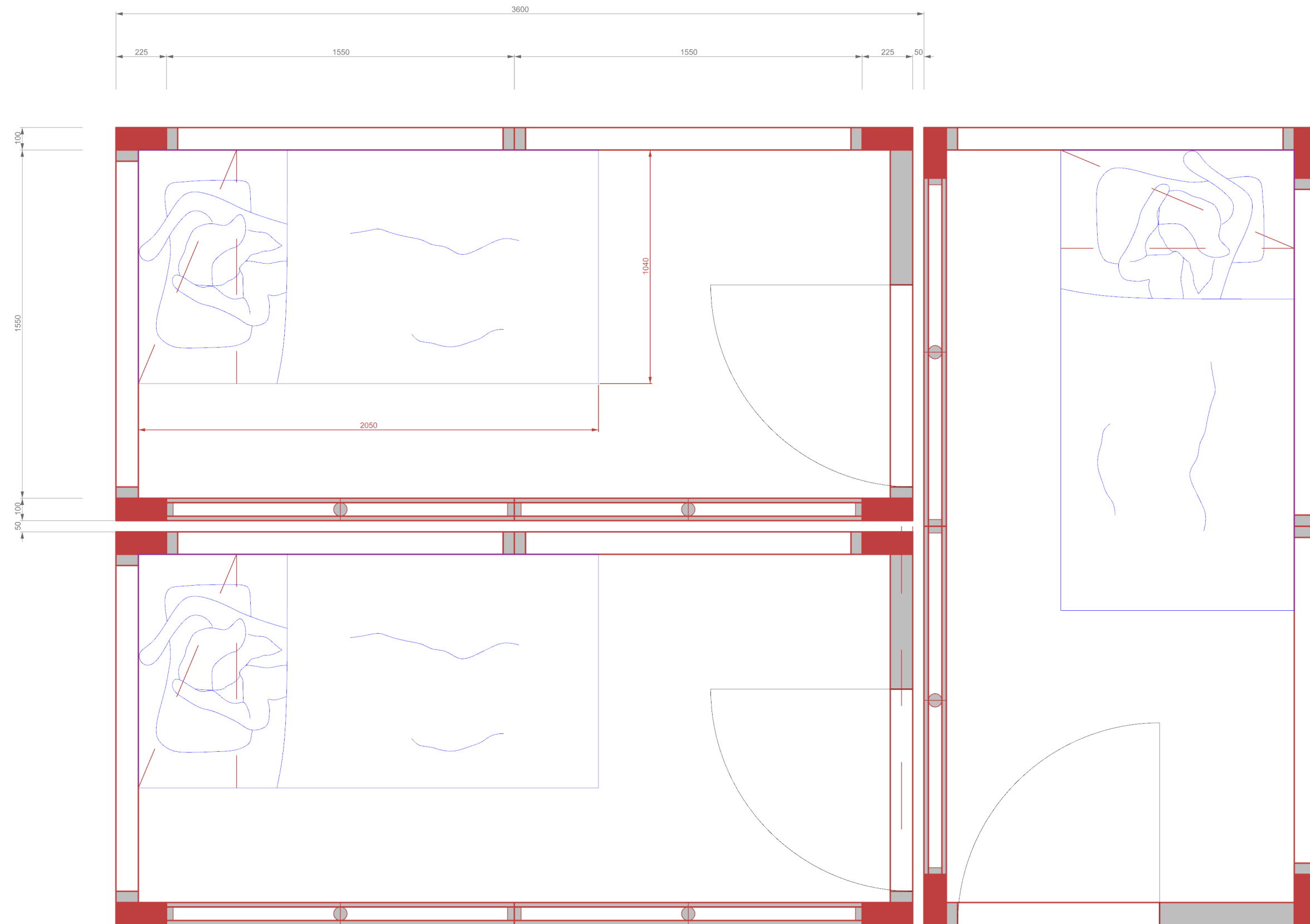
## 2.2 STRUCTURE DEVELOPMENT



minimum room dimension

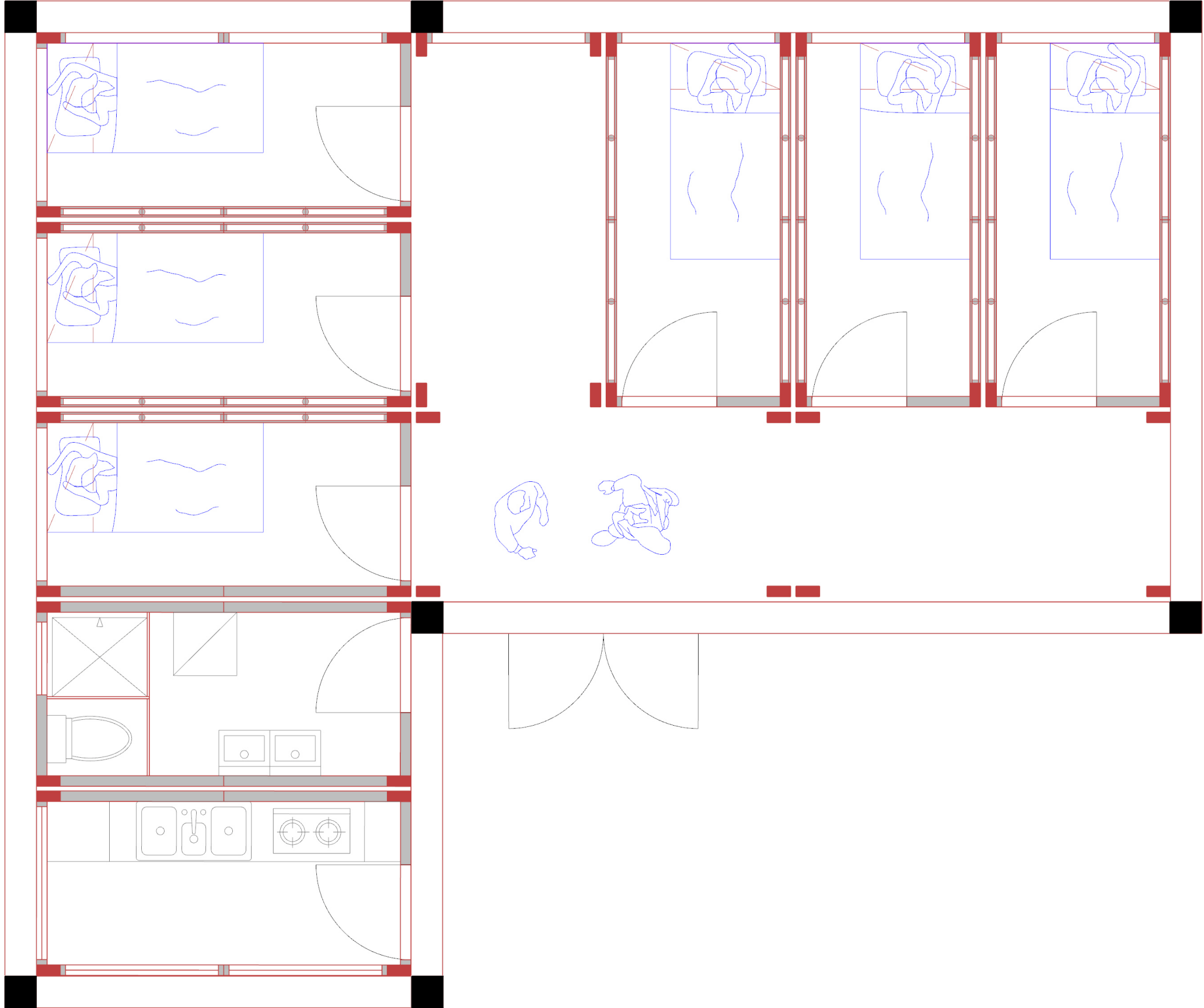


## 2.2 STRUCTURE DEVELOPMENT



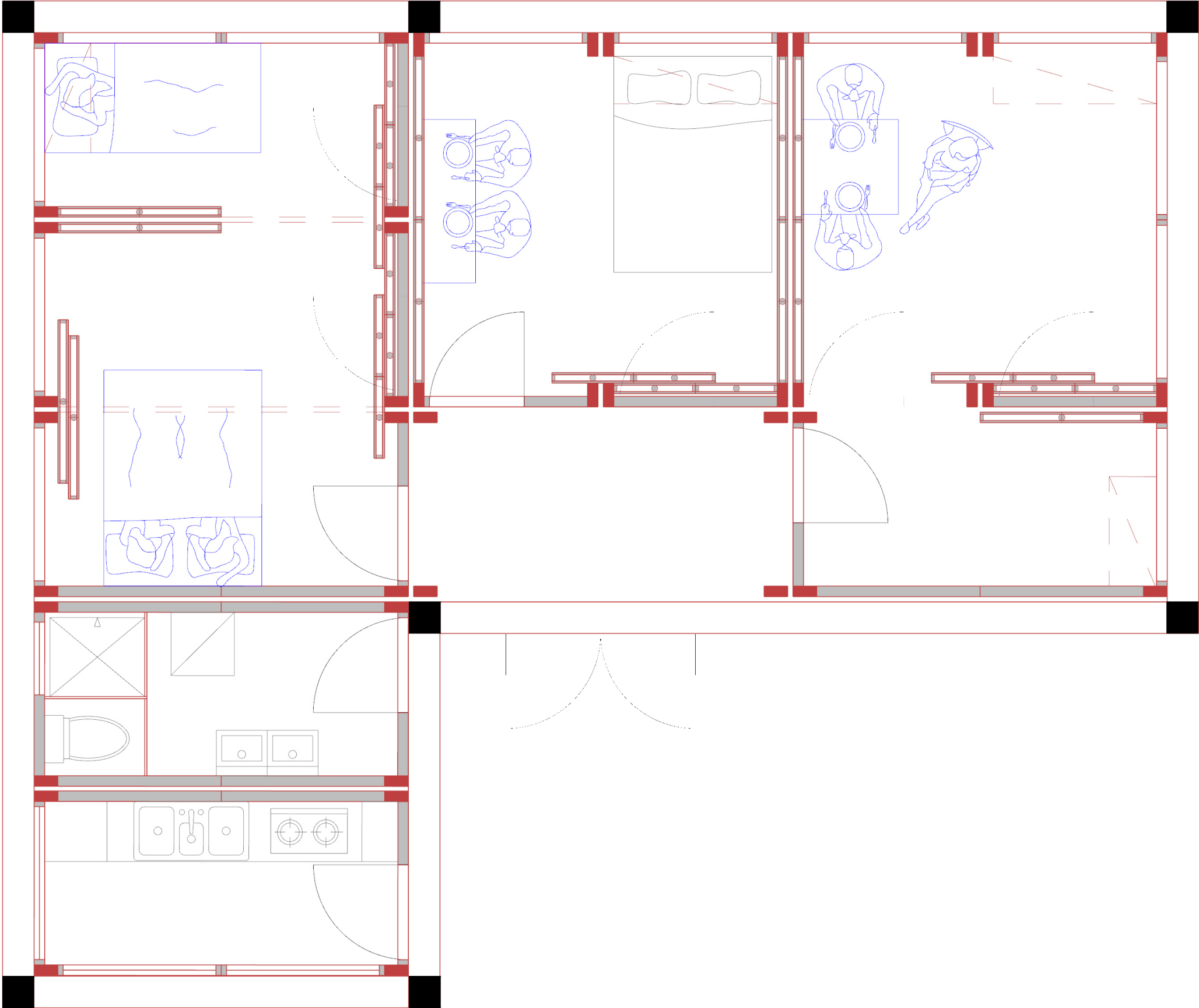
easy combination in two direction

2.2 STRUCTURE DEVELOPMENT

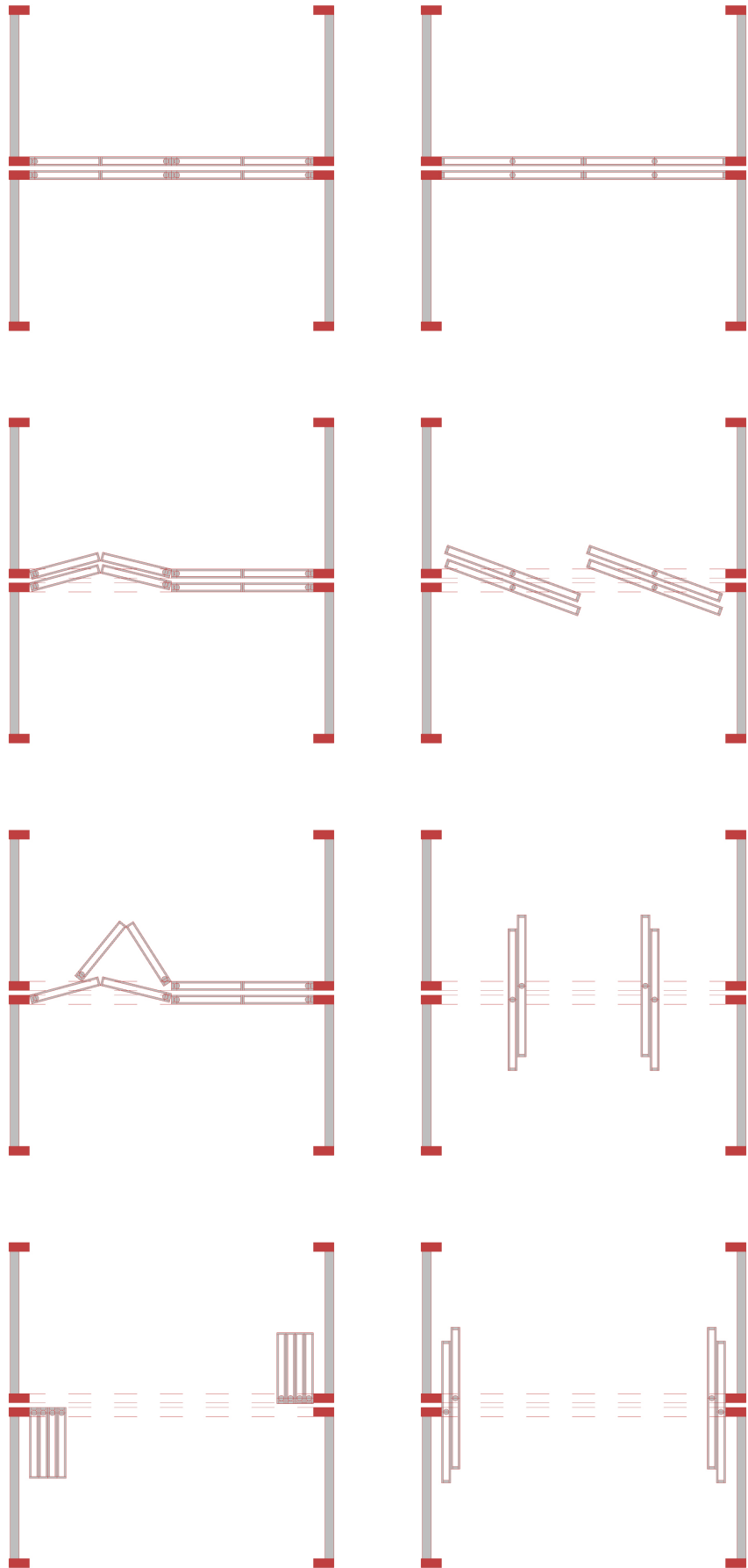




2.2 STRUCTURE DEVELOPMENT



2.3 SEPARATION PANEL SOLUTION



**ROOM SEPARATION PANEL:**  
easy removable  
less storage  
cover the gap  
lightweight

### 2.3 SEPARATION PANEL SOLUTION

#### option 1: REPLACEMENT

change the panel directly into a sliding panel when needed.  
extra panel to cover the vertical gap

TWO MUCH STORAGE  
UNSURE AMOUNT OF DIFFERENT PANELS  
EXTRA PANEL

#### option 2: FOLDING PANELS

fold the panels into two direction  
and cover the vertical gap

SMALL PANELS LESS THAN 30CM COULD ENABLE THE  
FOLDING OF BOTH SIDES  
NO STORAGE  
NO EXTRAL PANEL

#### option 3: ROTATING PANELS

rotate the panels into two direction  
and cover the vertical gap

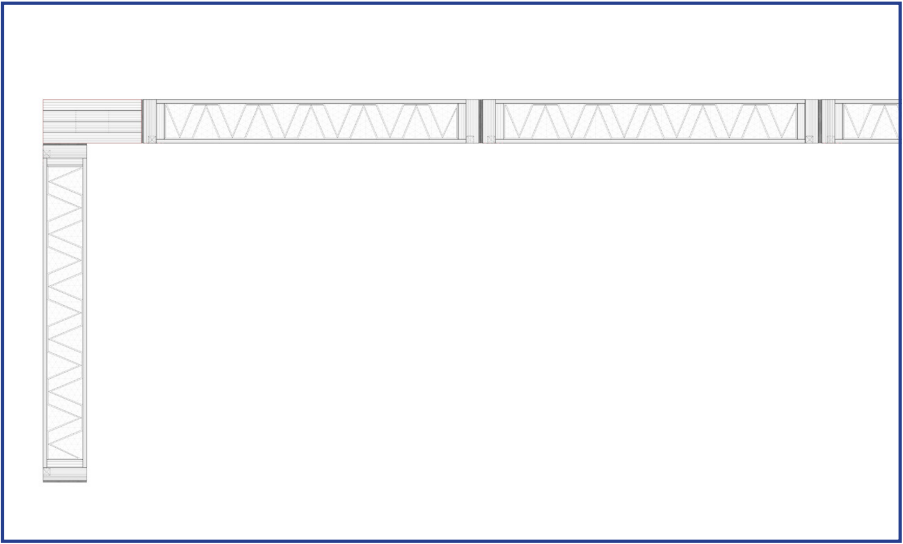
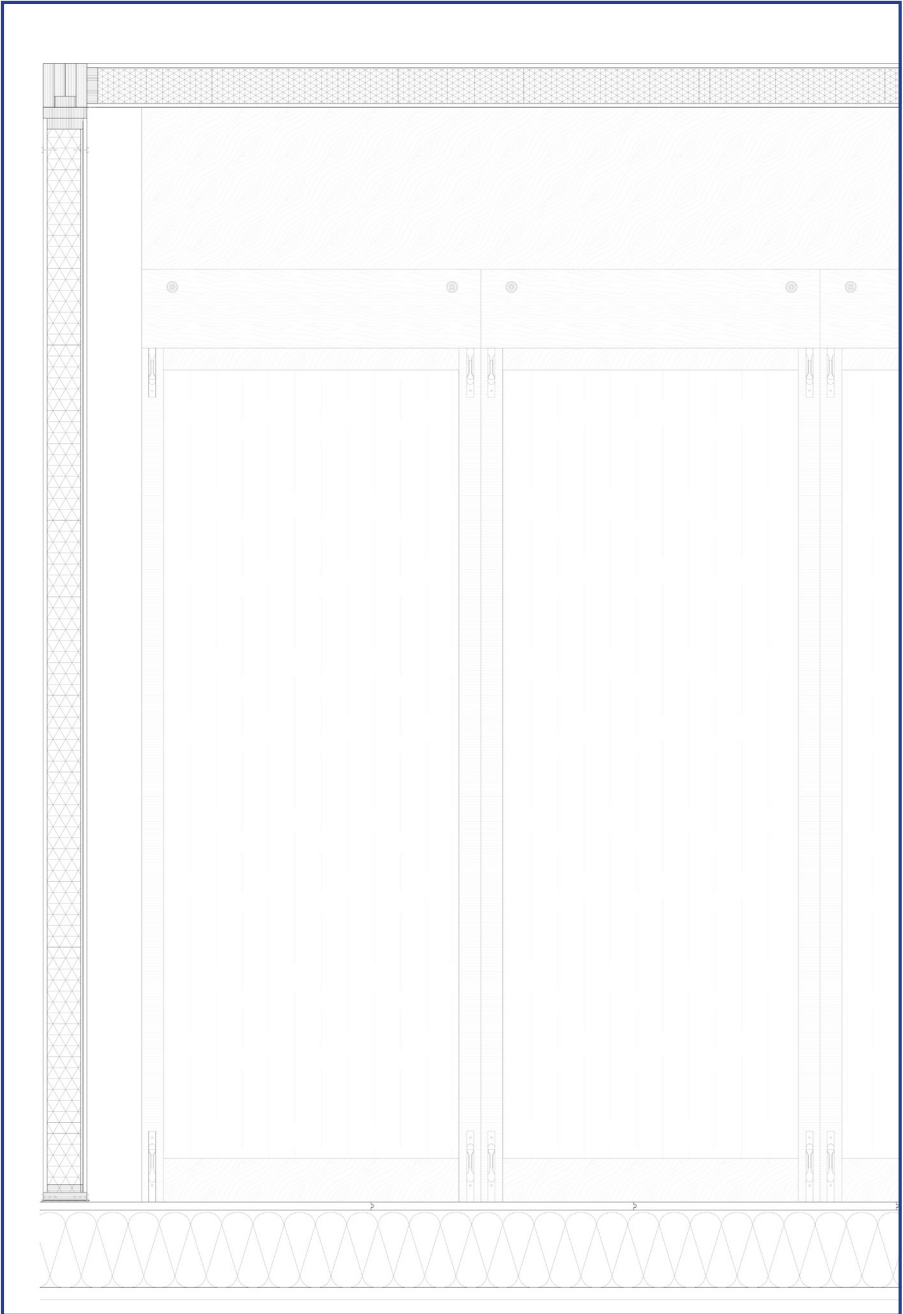
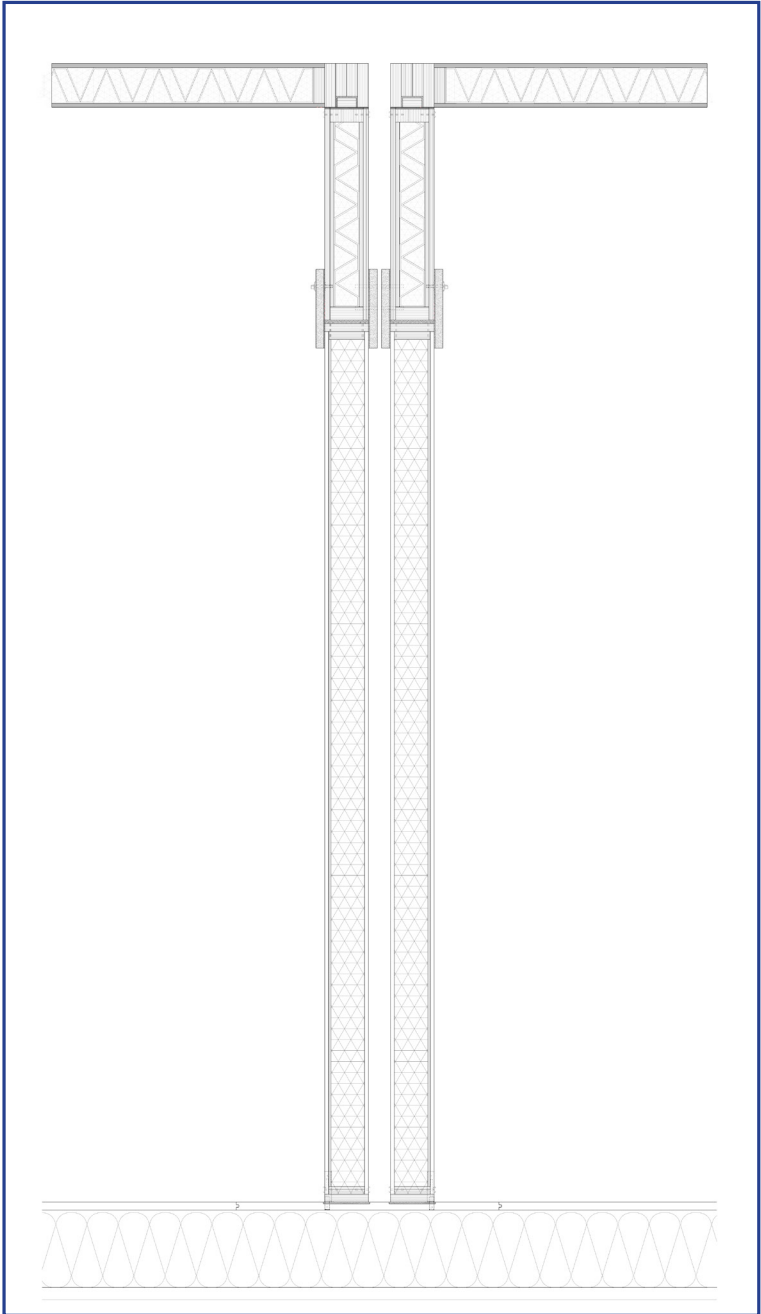
TRACKS ON THE GROUND AND CEILING  
MECHANICAL SYSTEM COMPLICATED  
NO STORAGE  
NO EXTRAL PANEL

#### option 4: REMOVABLE PANELS

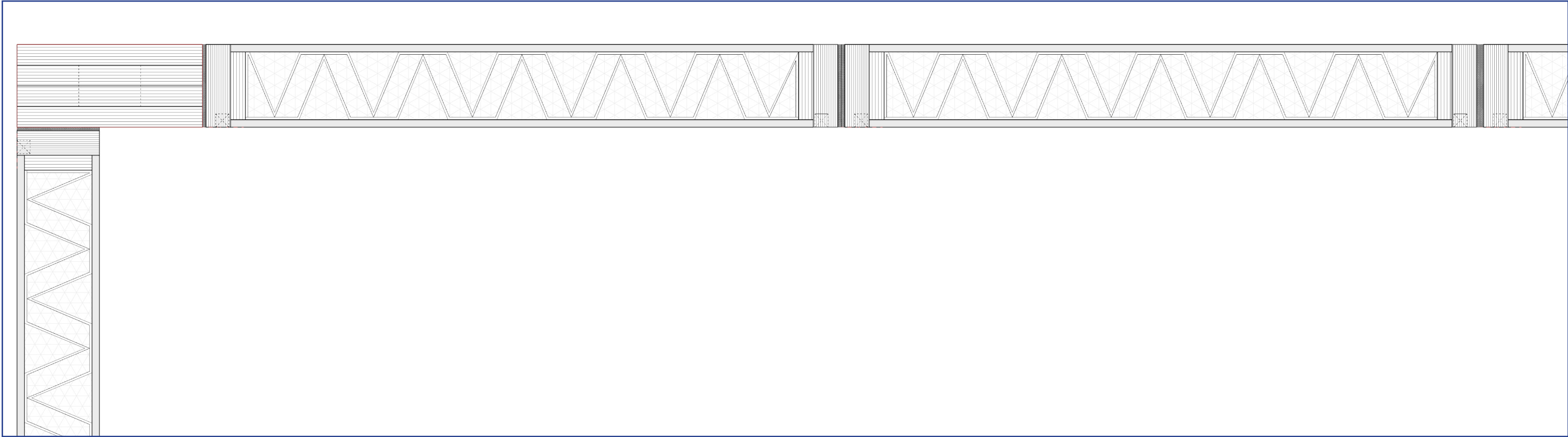
remove the panel and rotate it into the other direction  
and cover the vertical gap.

EASY REMOVABLE NO EXTRA PANEL  
NO STORAGE

2.3 SEPARATION PANEL SOLUTION

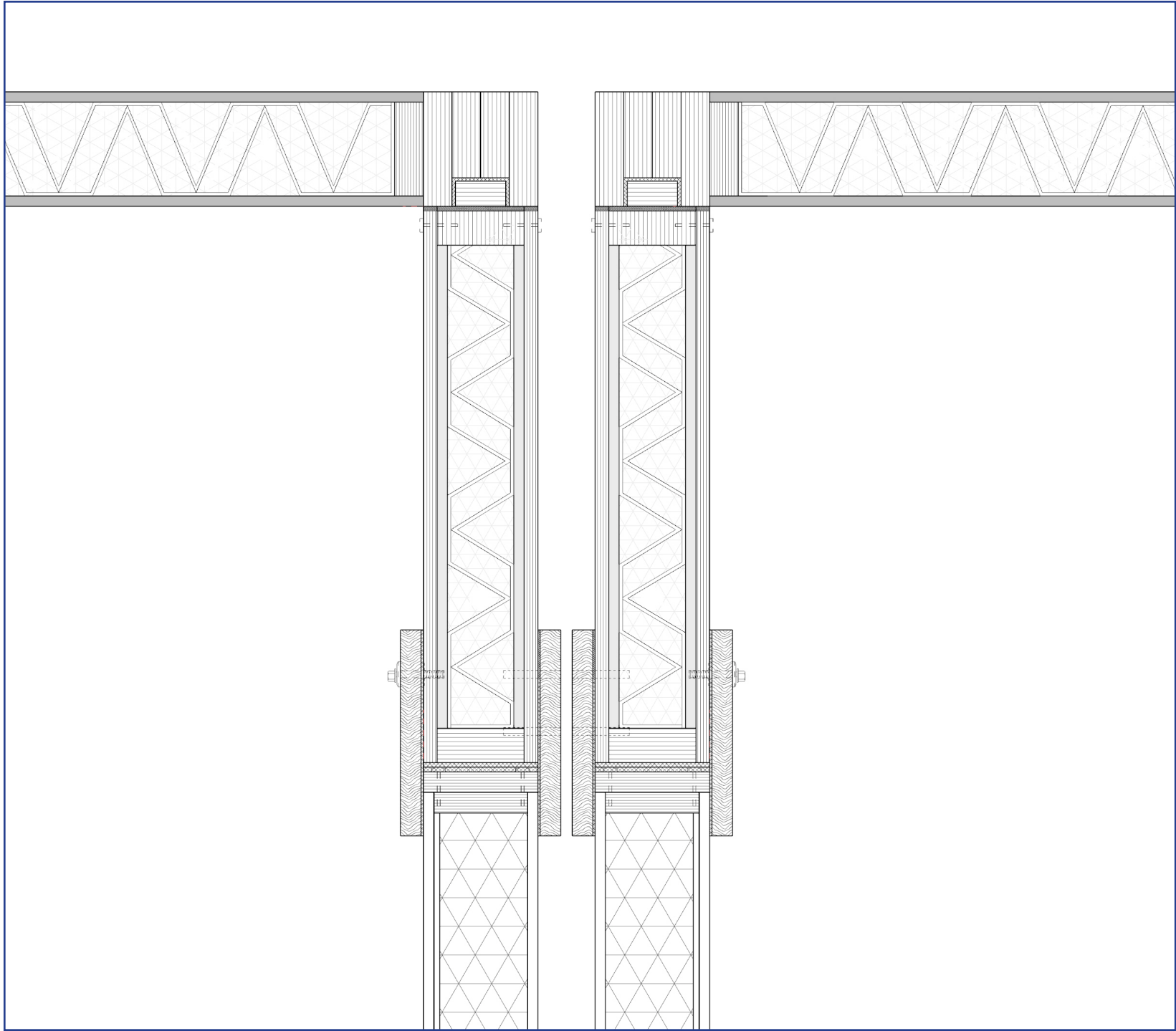


2.3 SEPARATION PANEL SOLUTION

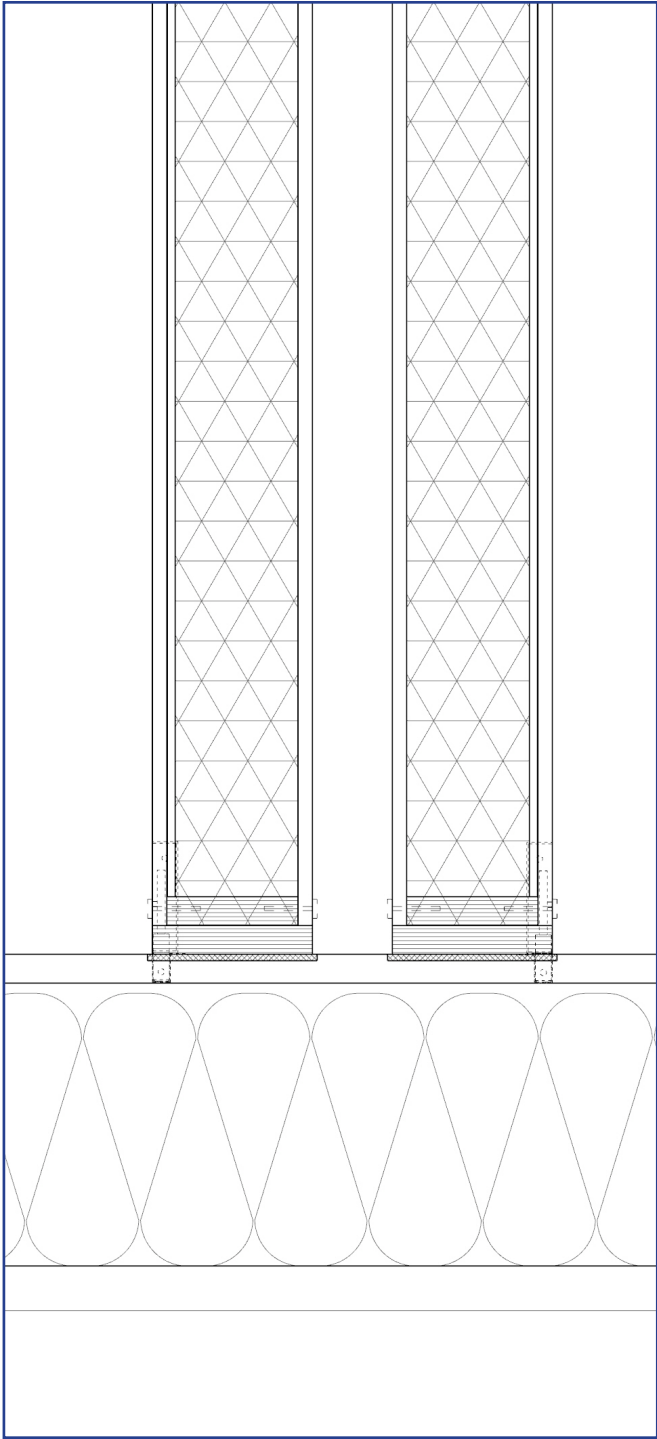


plan of the removable panel

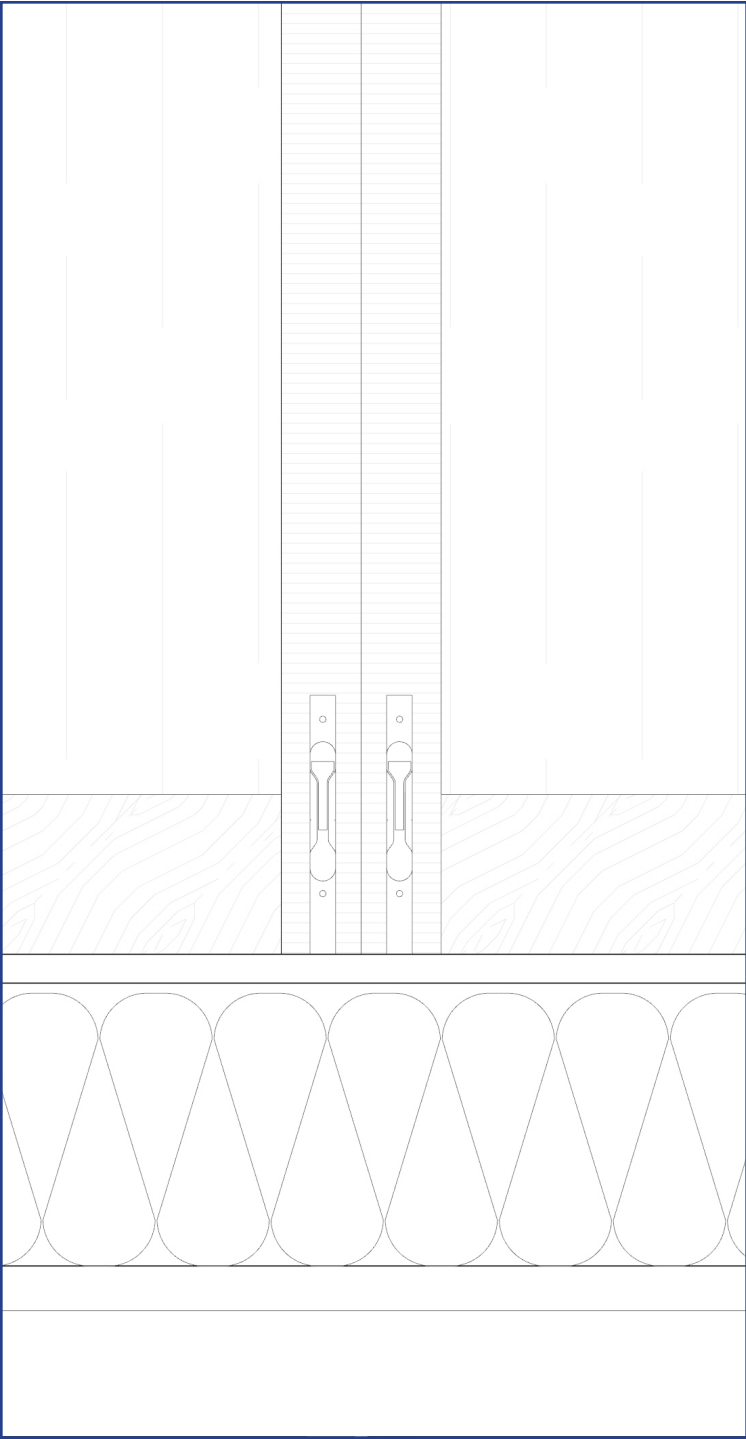
**2.3 SEPARATION PANEL SOLUTION**



**section top part**



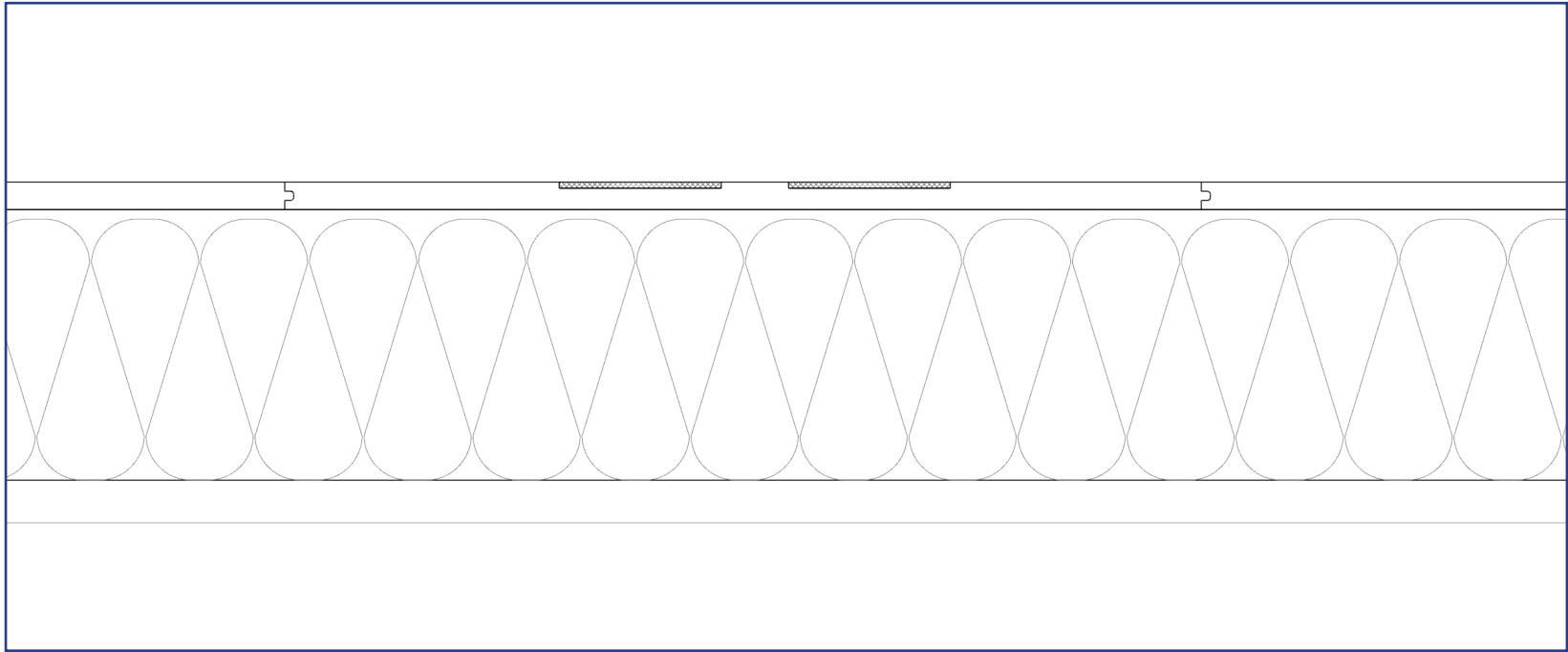
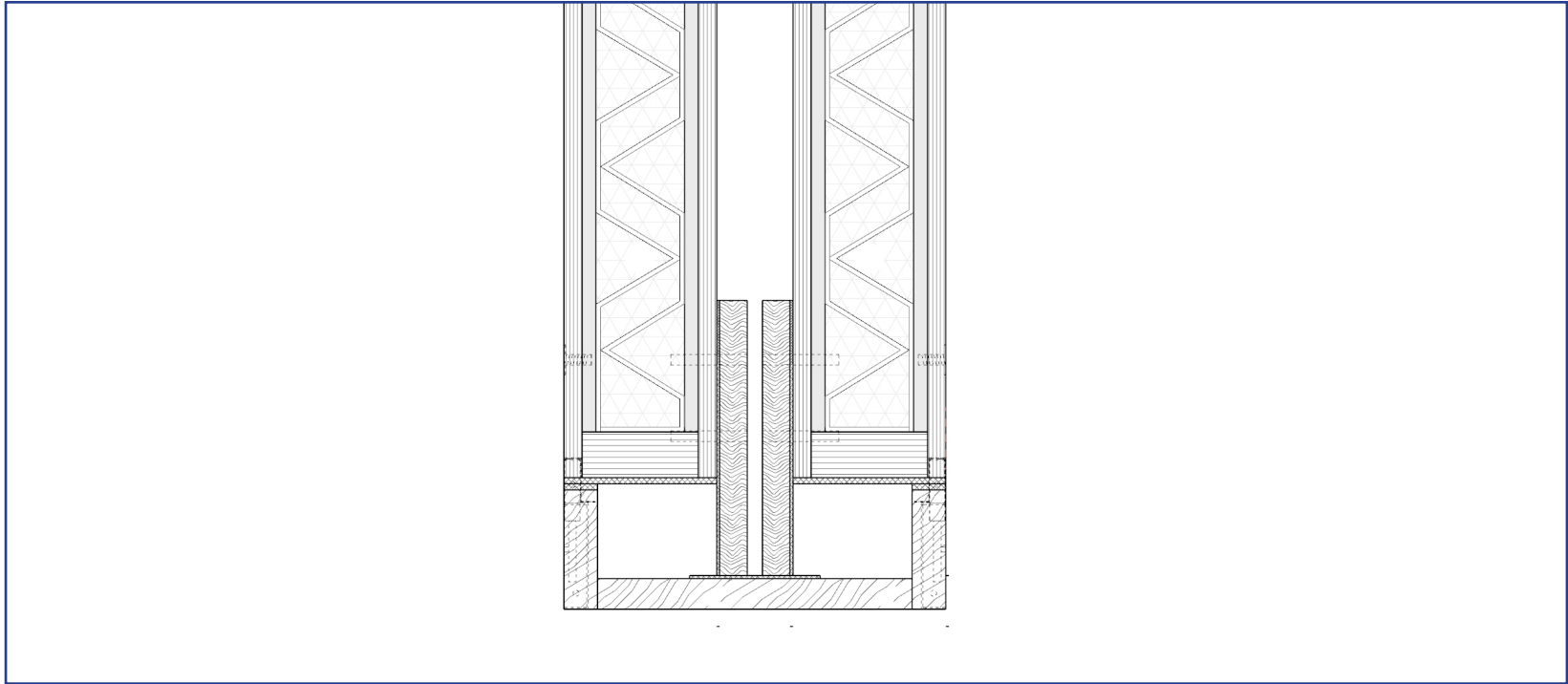
**section bottom part**



**elevation bottom part**

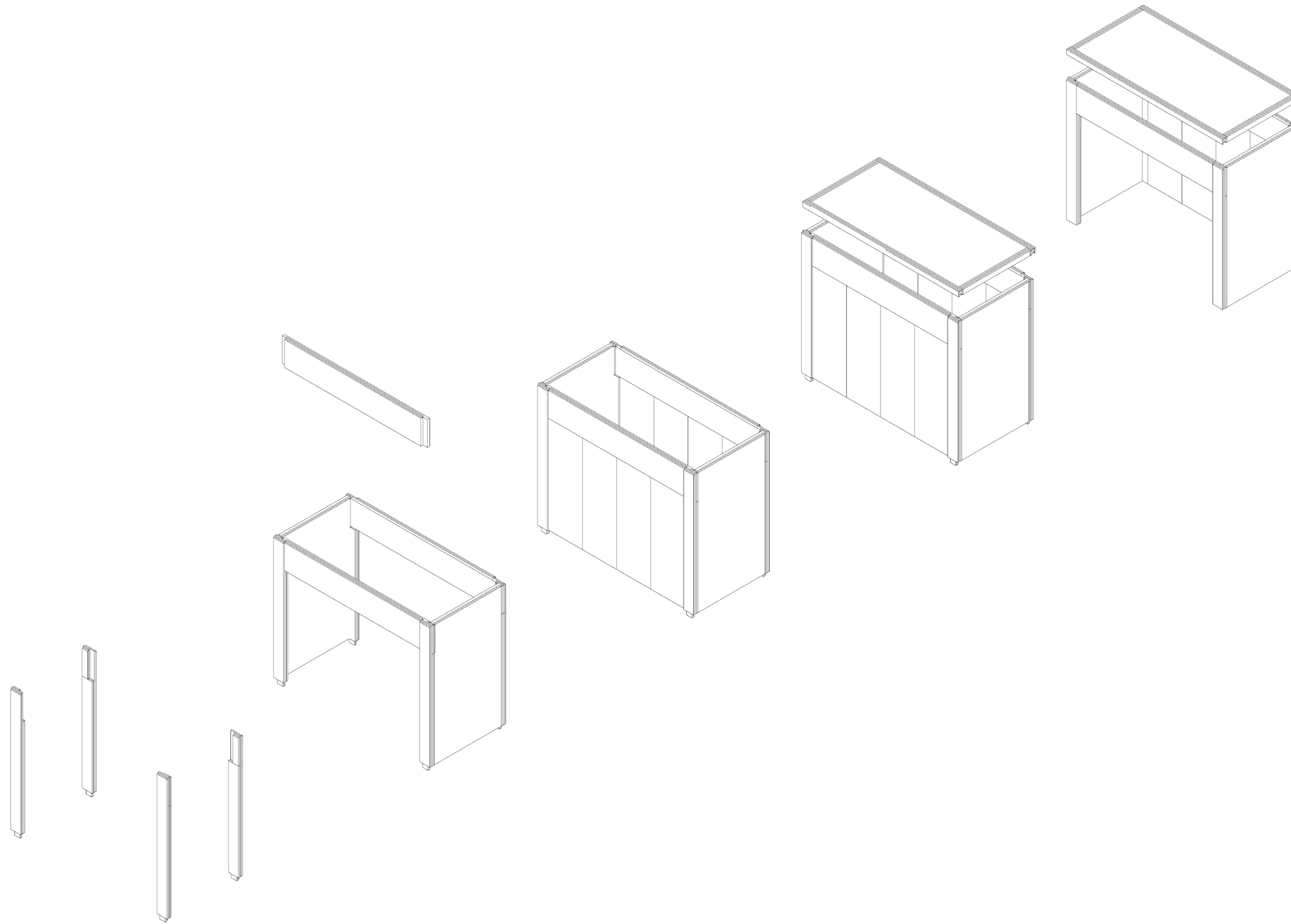


2.3 SEPARATION PANEL SOLUTION



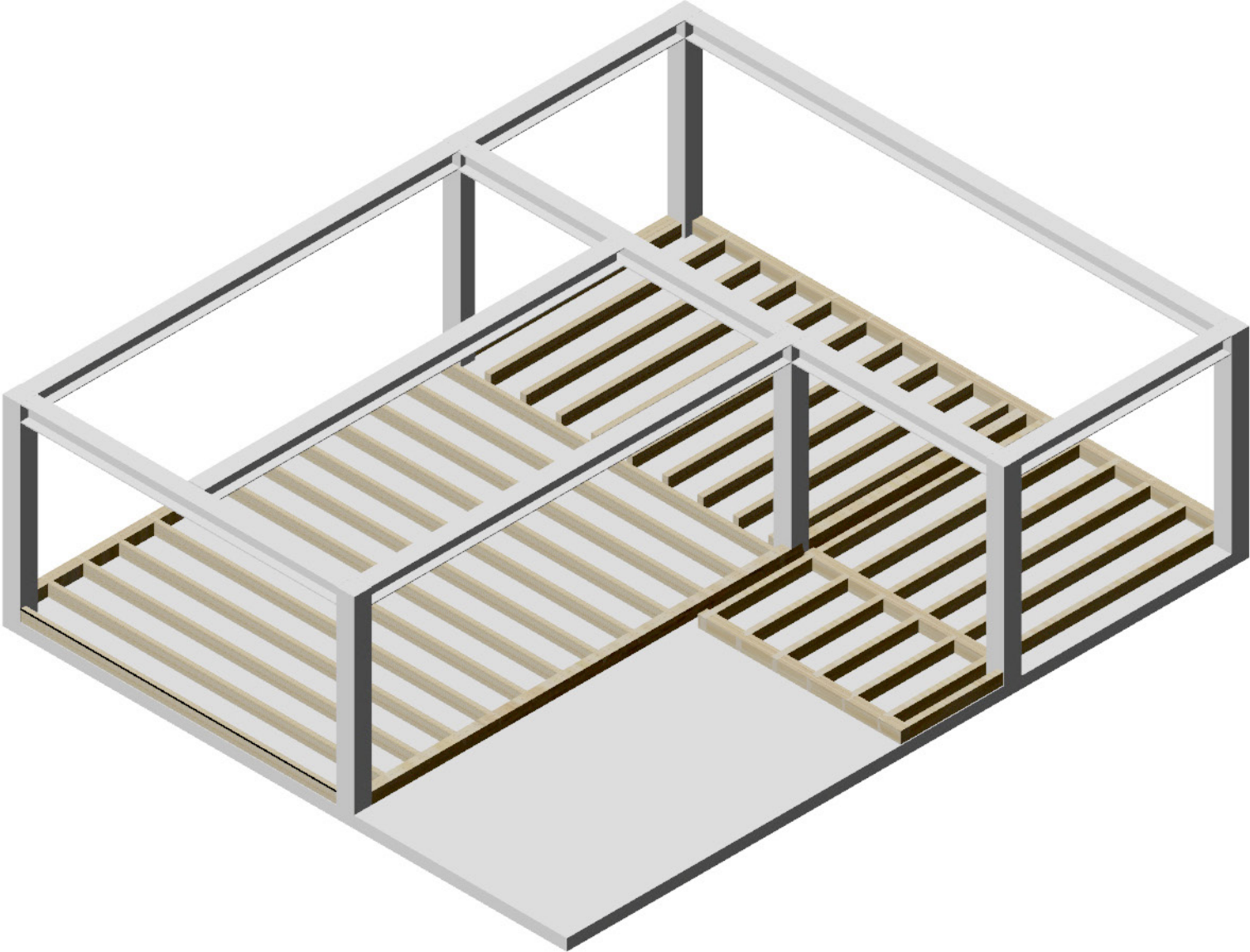
section cover for the gap

## 2.3 SEPARATION PANEL SOLUTION



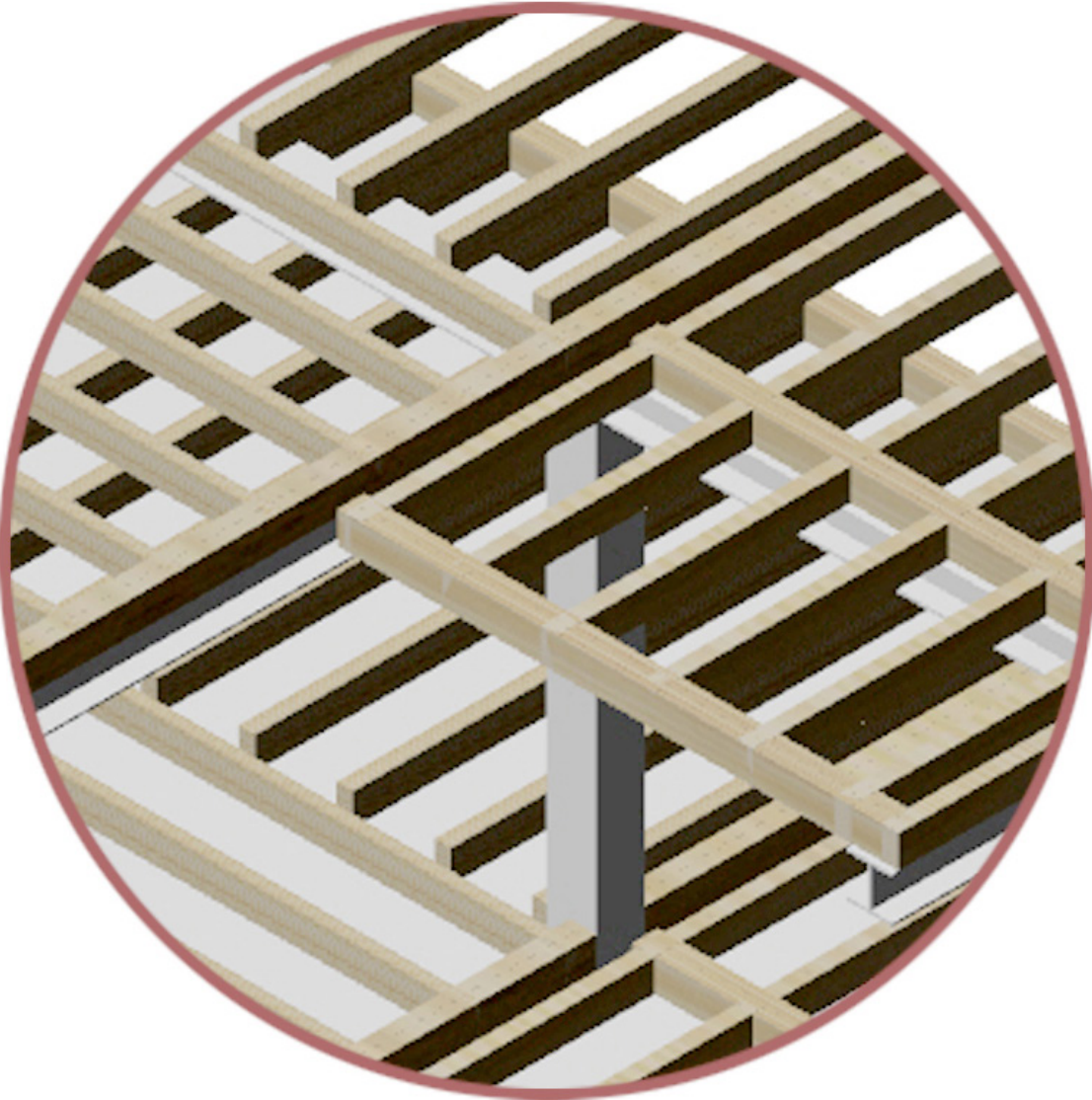
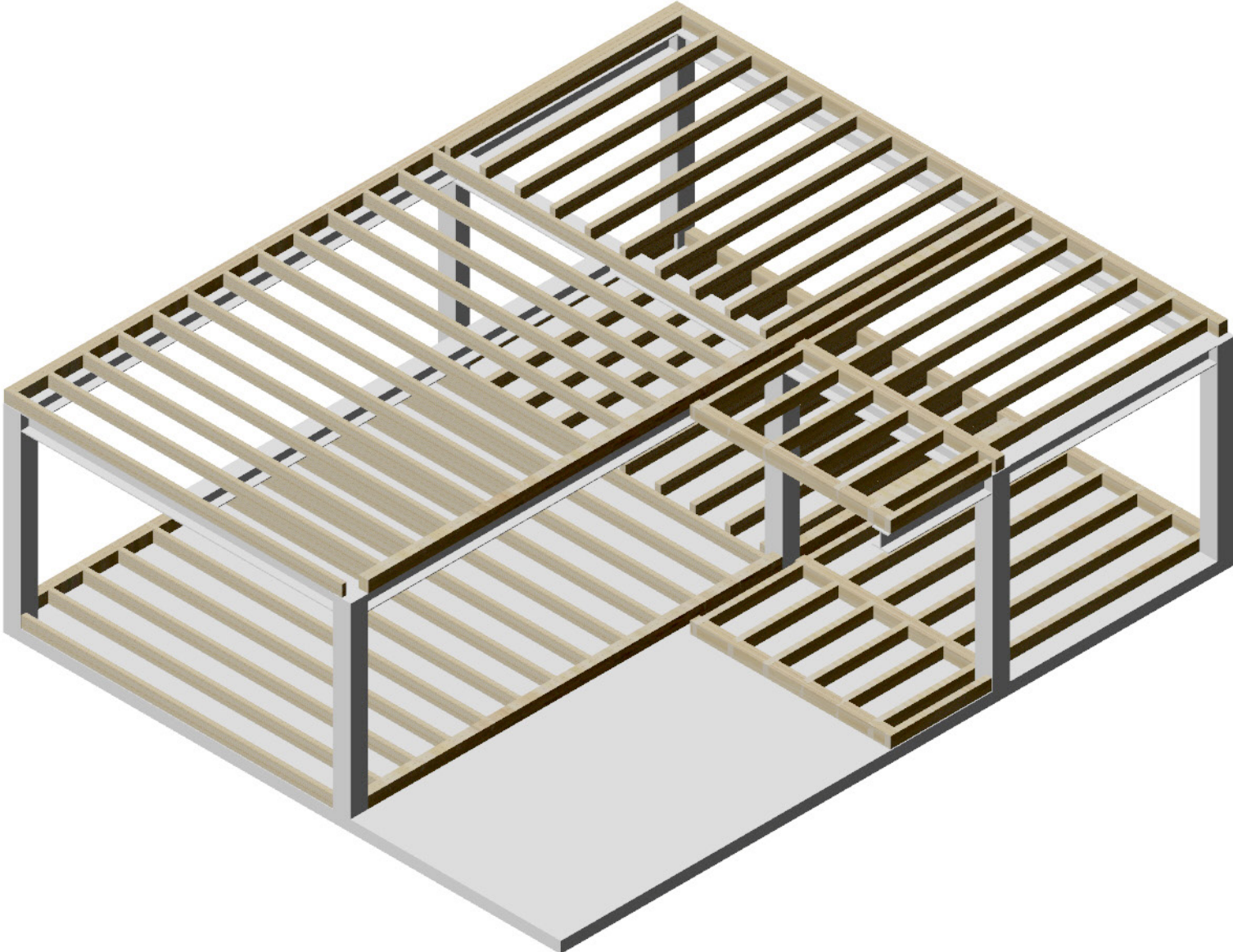


2.4 INSTALLATION PROCESS



concrete plate  
timber joist  
steel structure

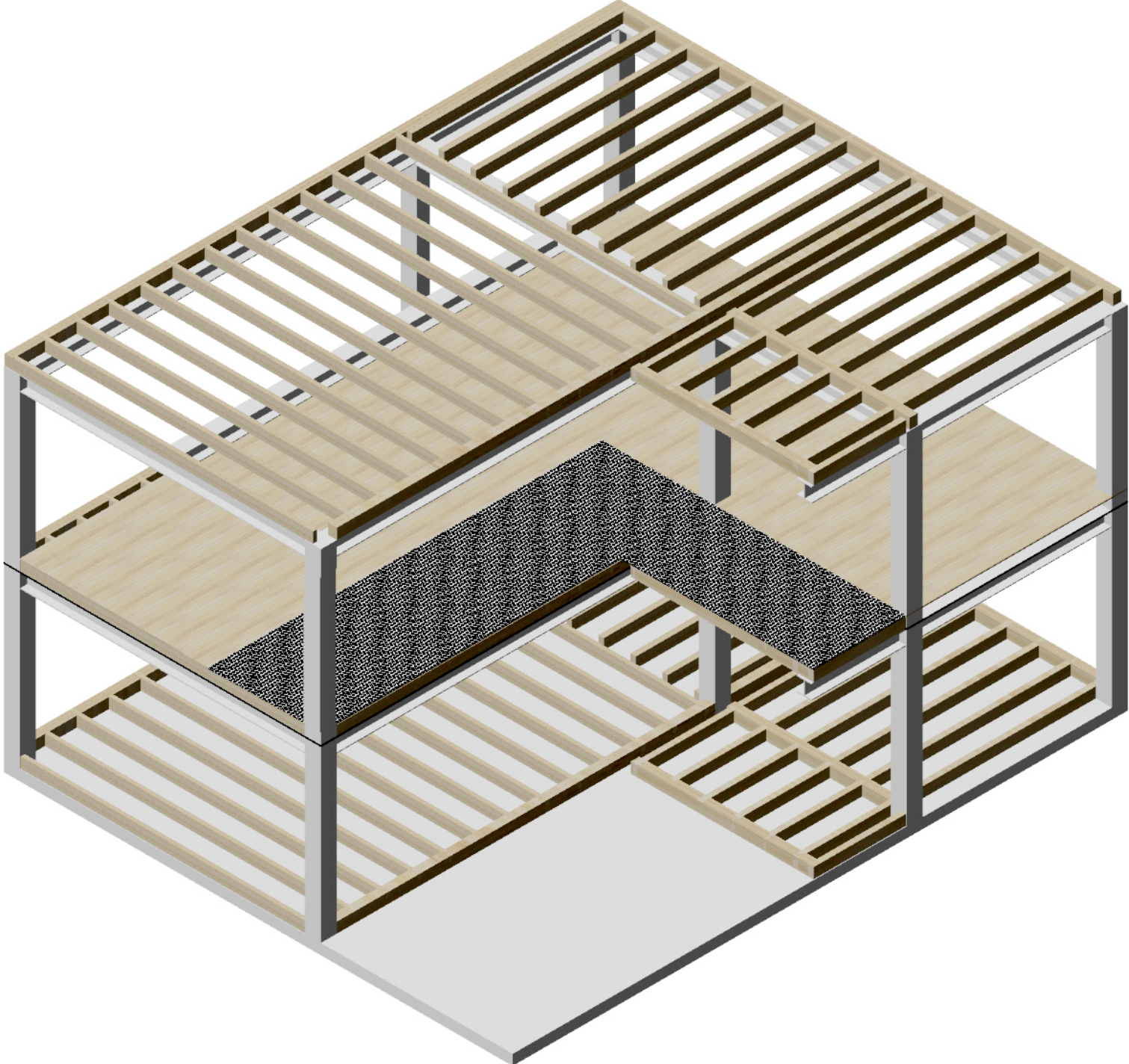
2.4 INSTALLATION PROCESS



timber joist  
steel structure

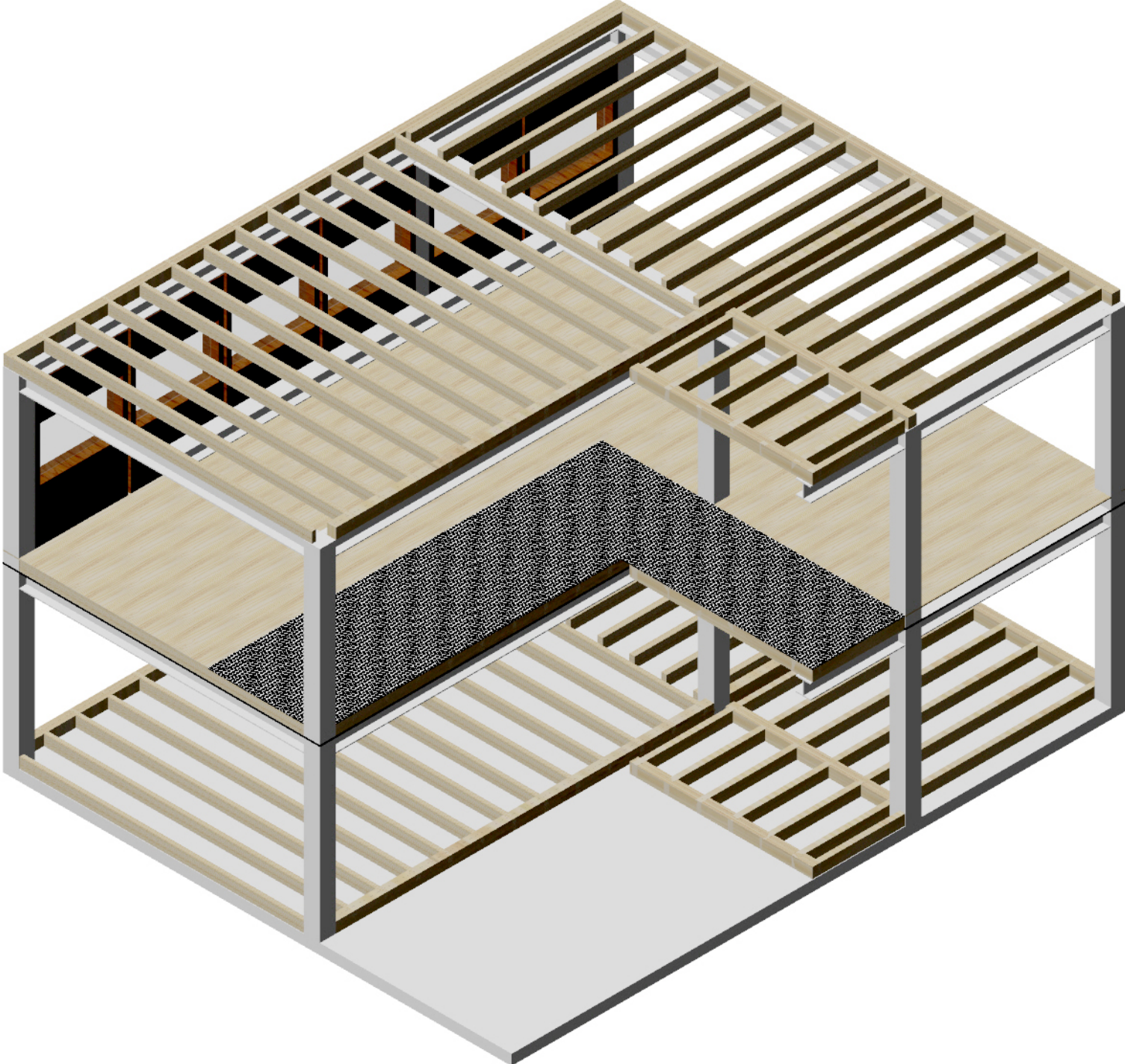


2.4 INSTALLATION PROCESS



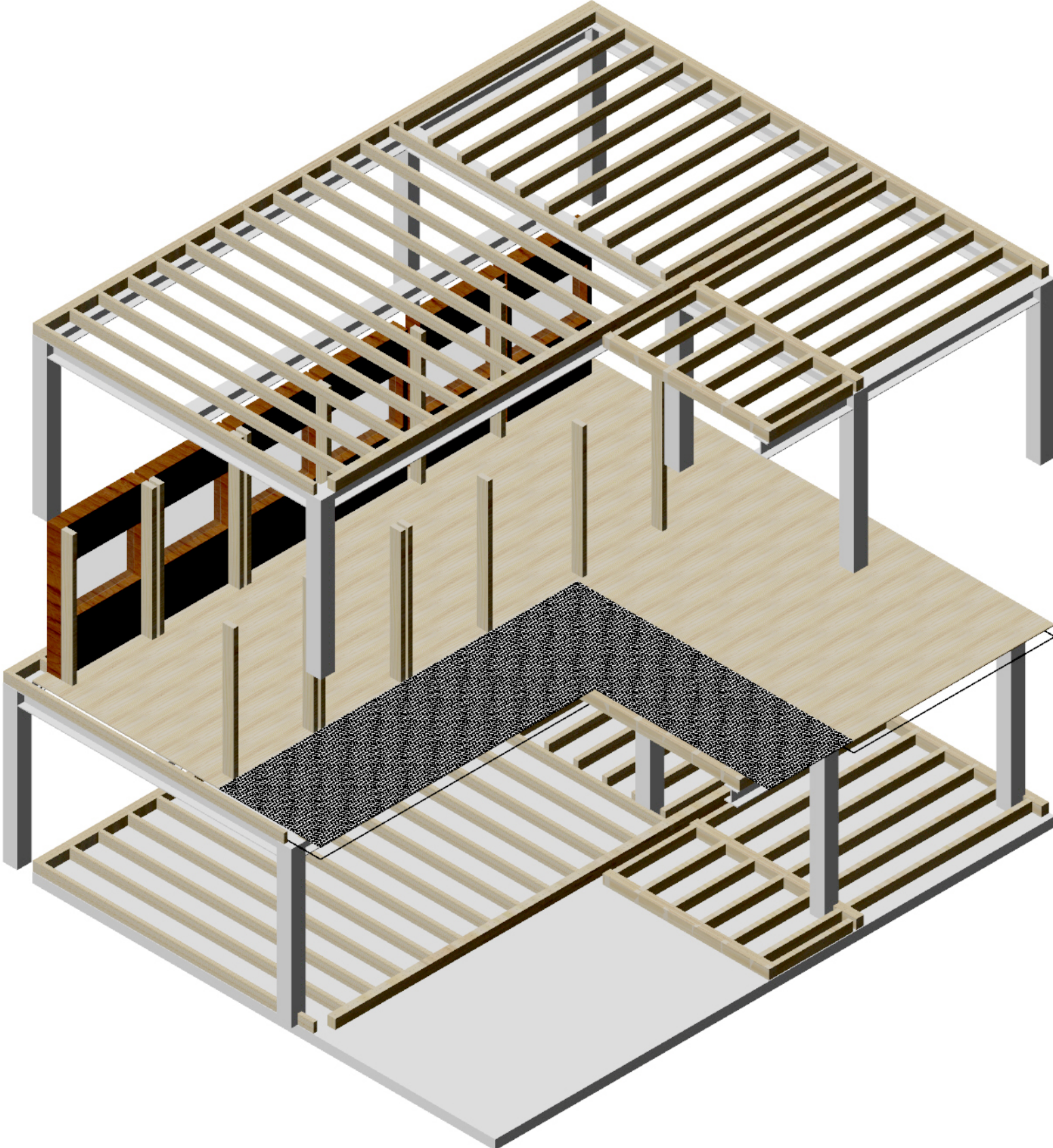


2.4 INSTALLATION PROCESS



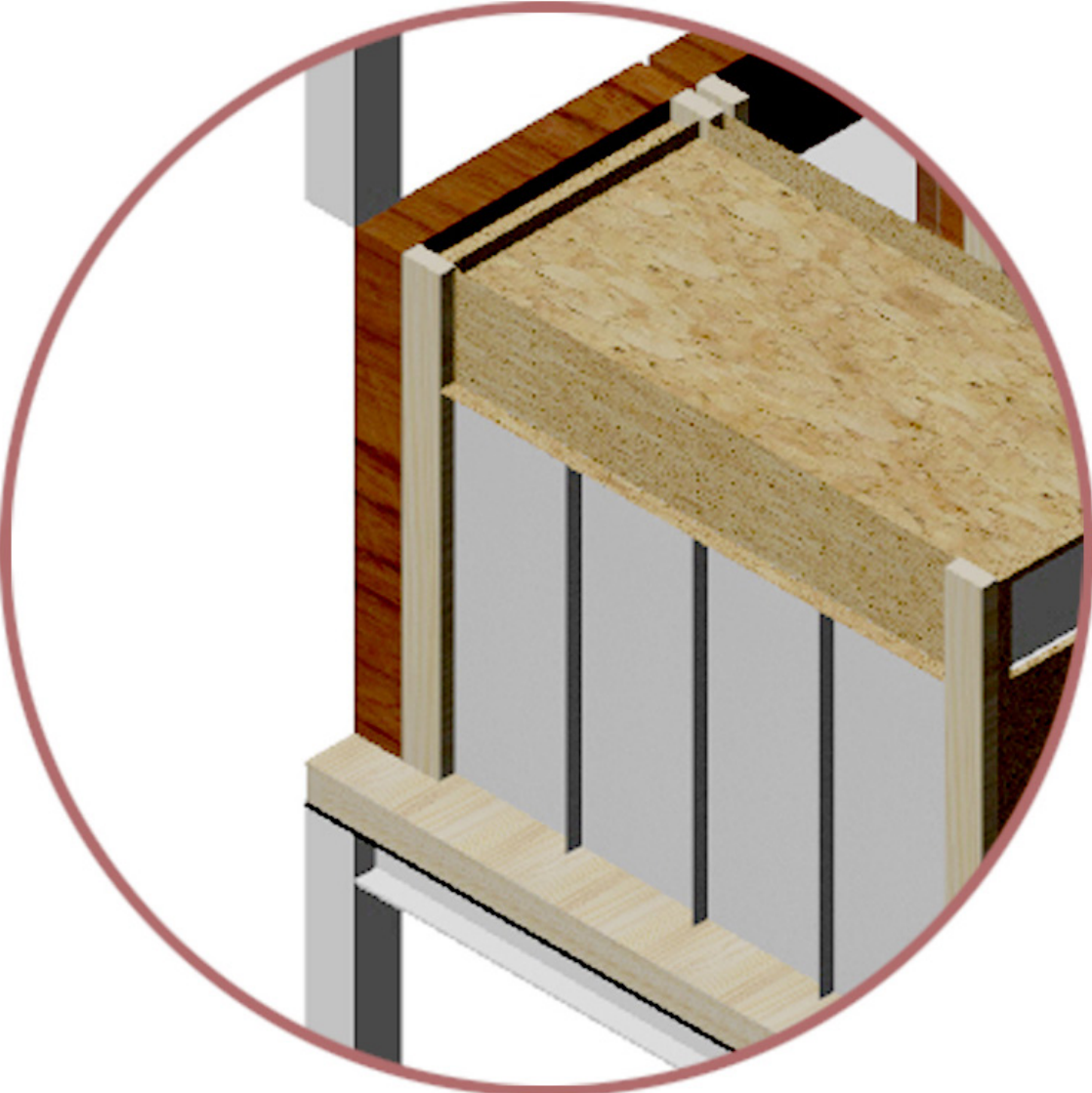
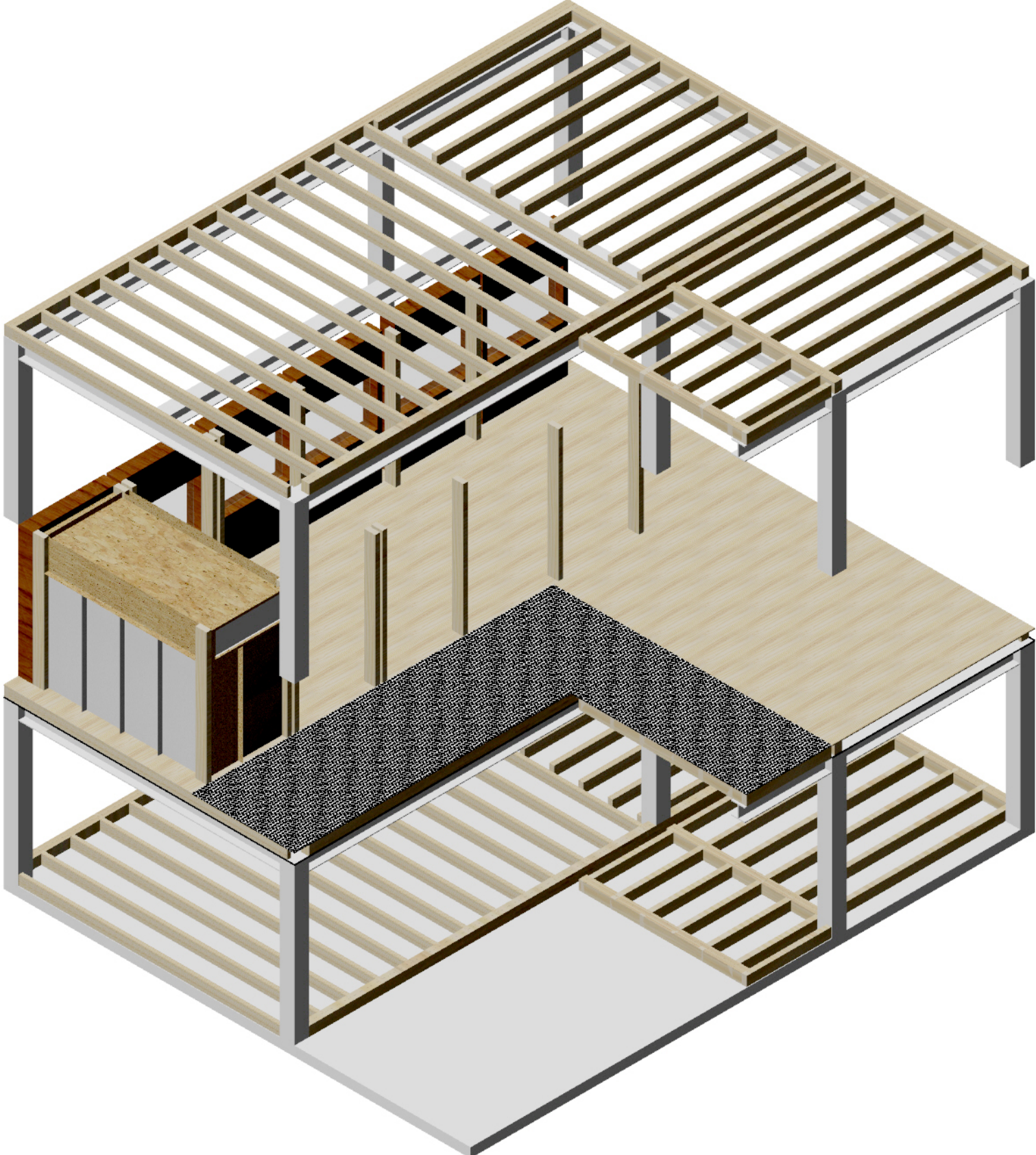


2.4 INSTALLATION PROCESS



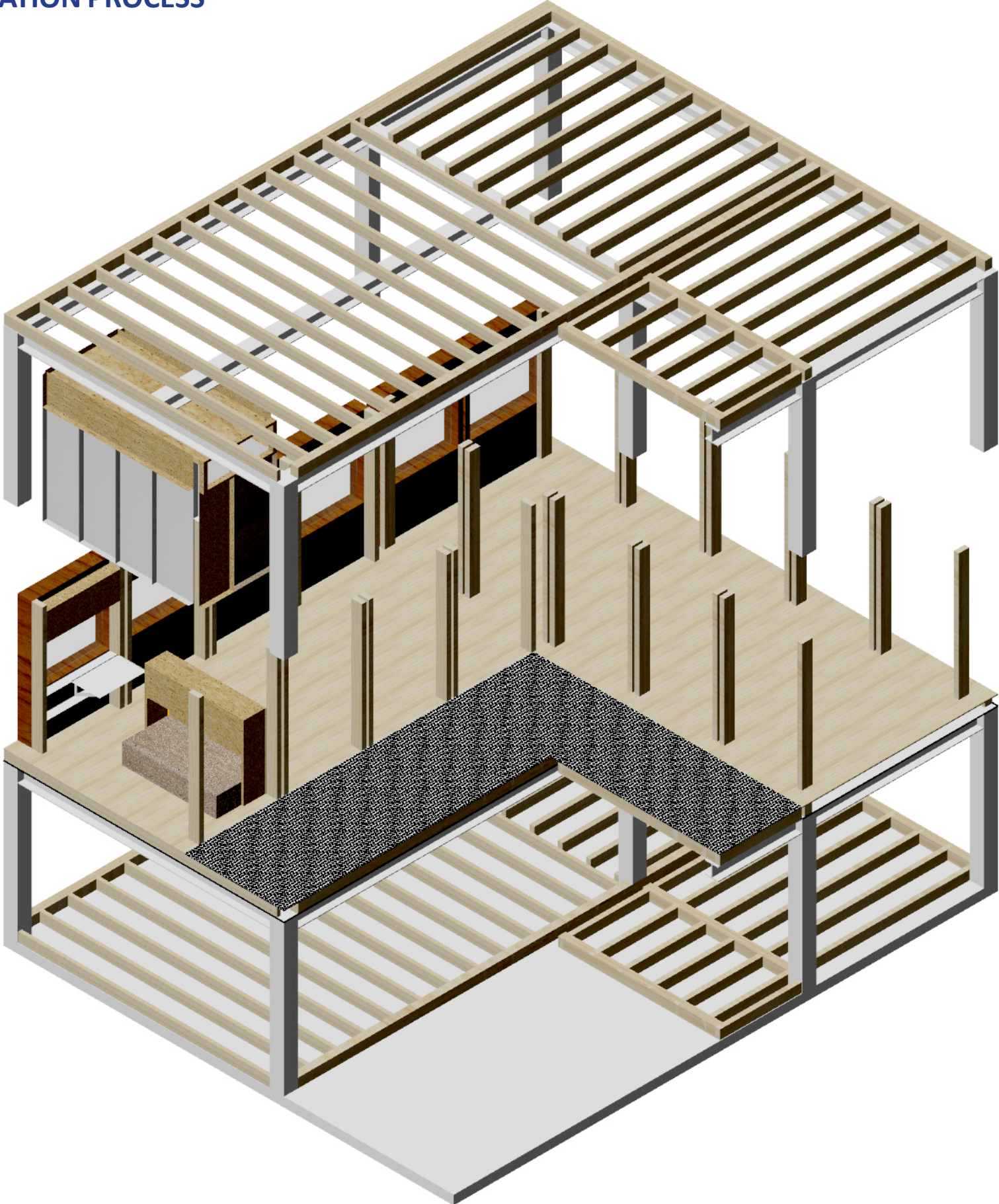


2.4 INSTALLATION PROCESS



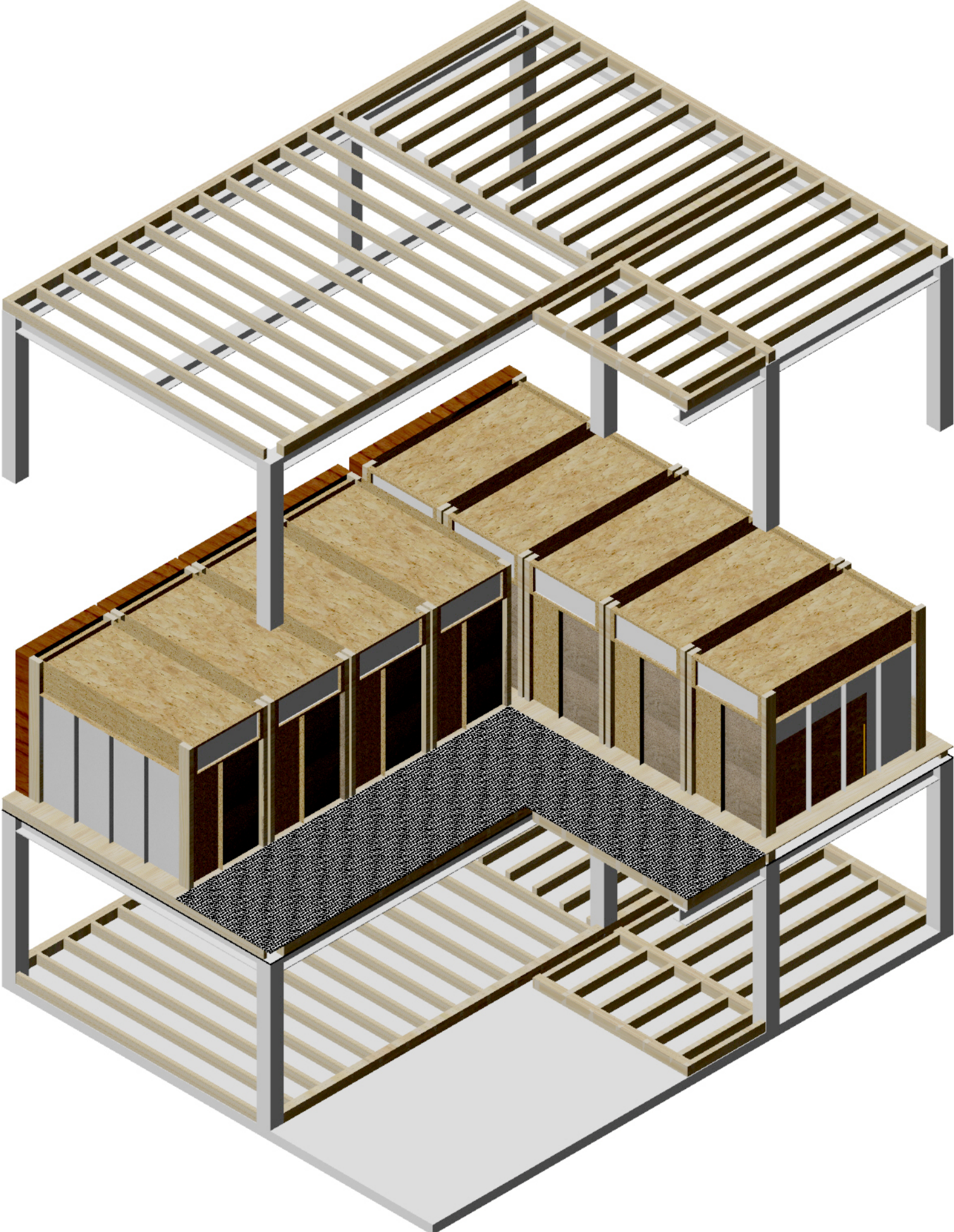


2.4 INSTALLATION PROCESS





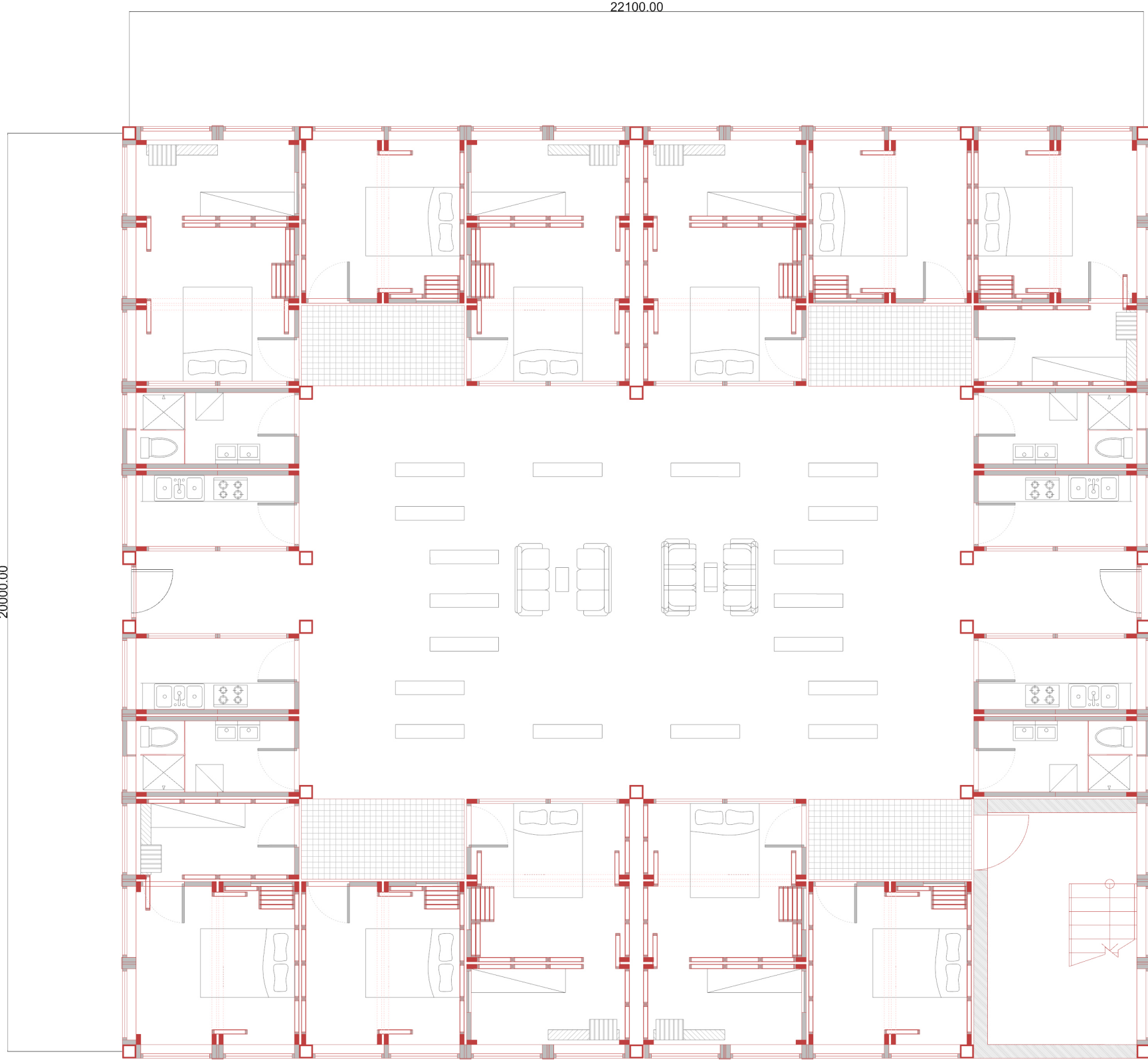
2.4 INSTALLATION PROCESS





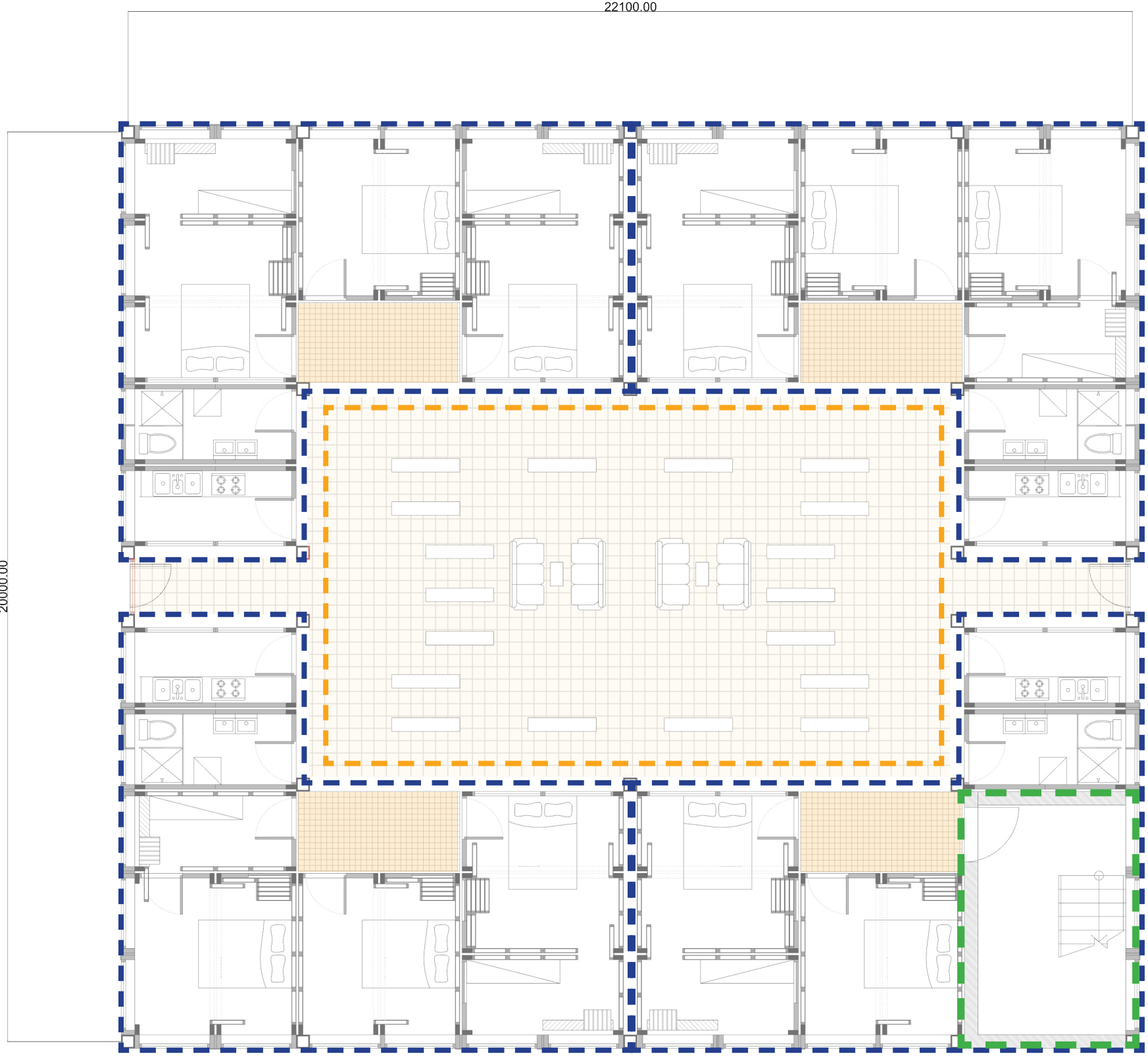
## 2.5 STANDARD COMMUNITY SETTING

2.5 STANDARD BLOCK SETTING



groundfloor plan

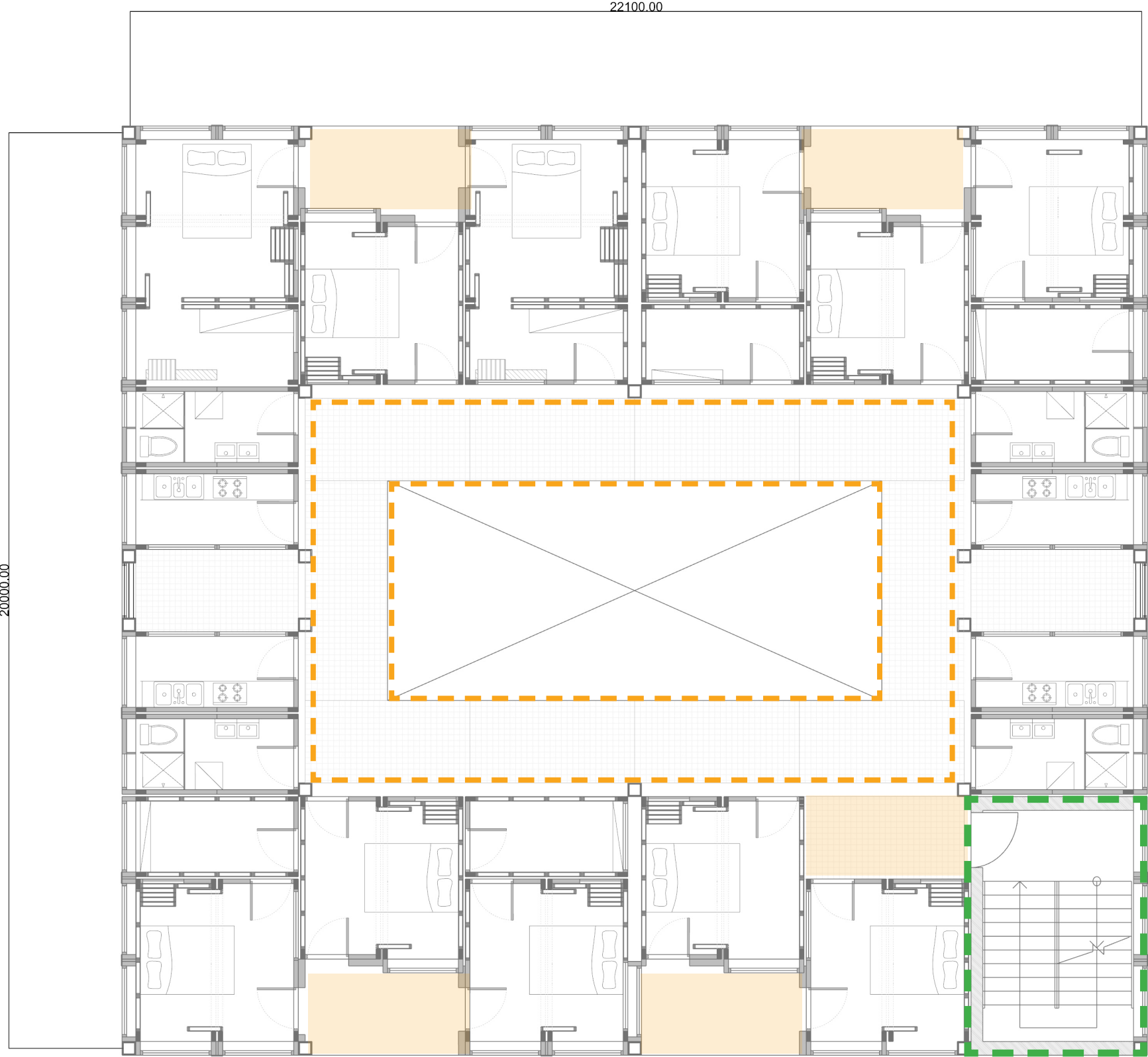
2.5 STANDARD BLOCK SETTING



firstfloor plan

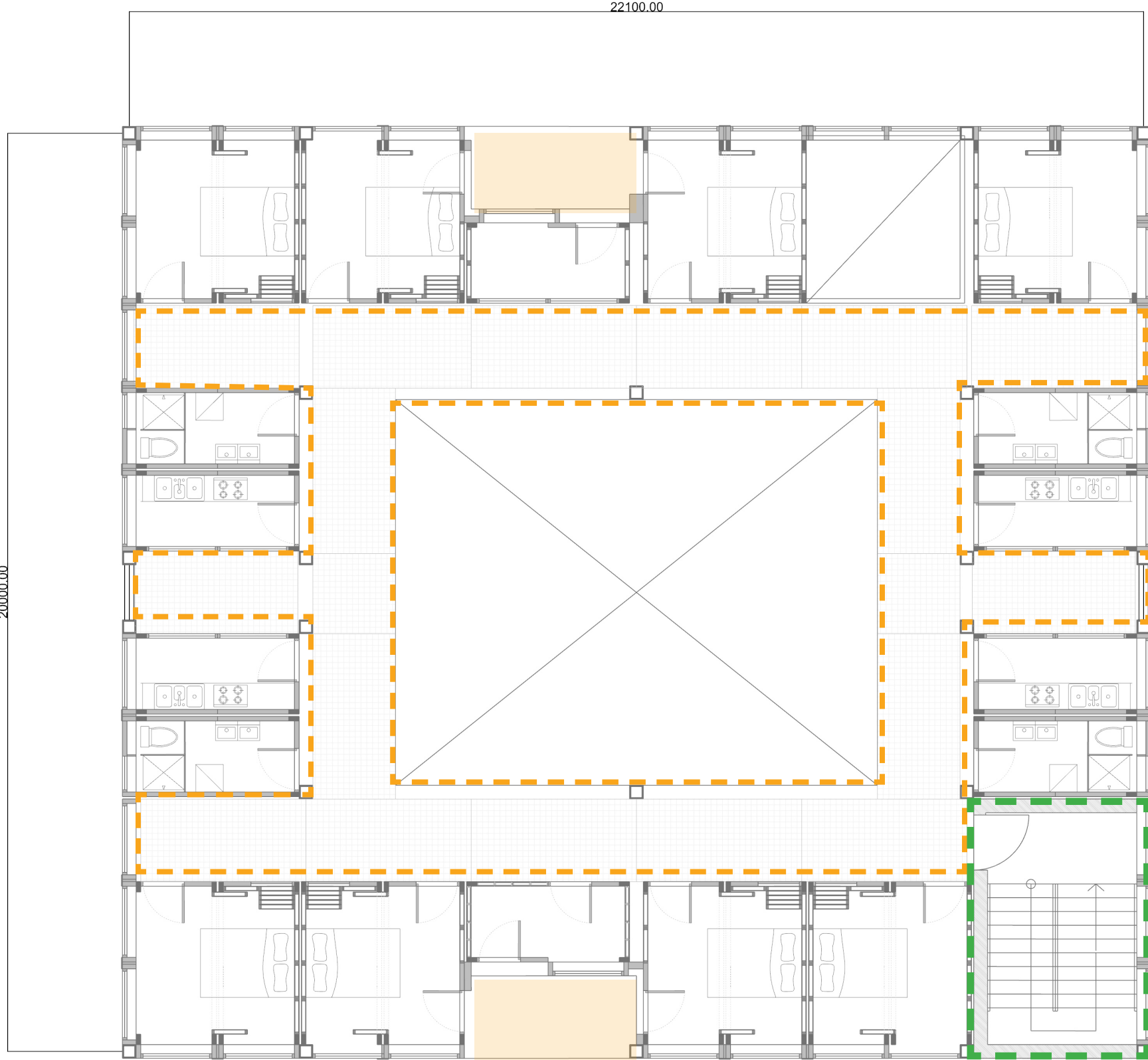
3level of space:  
communal space  
group entrance space  
living space

2.5 STANDARD BLOCK SETTING



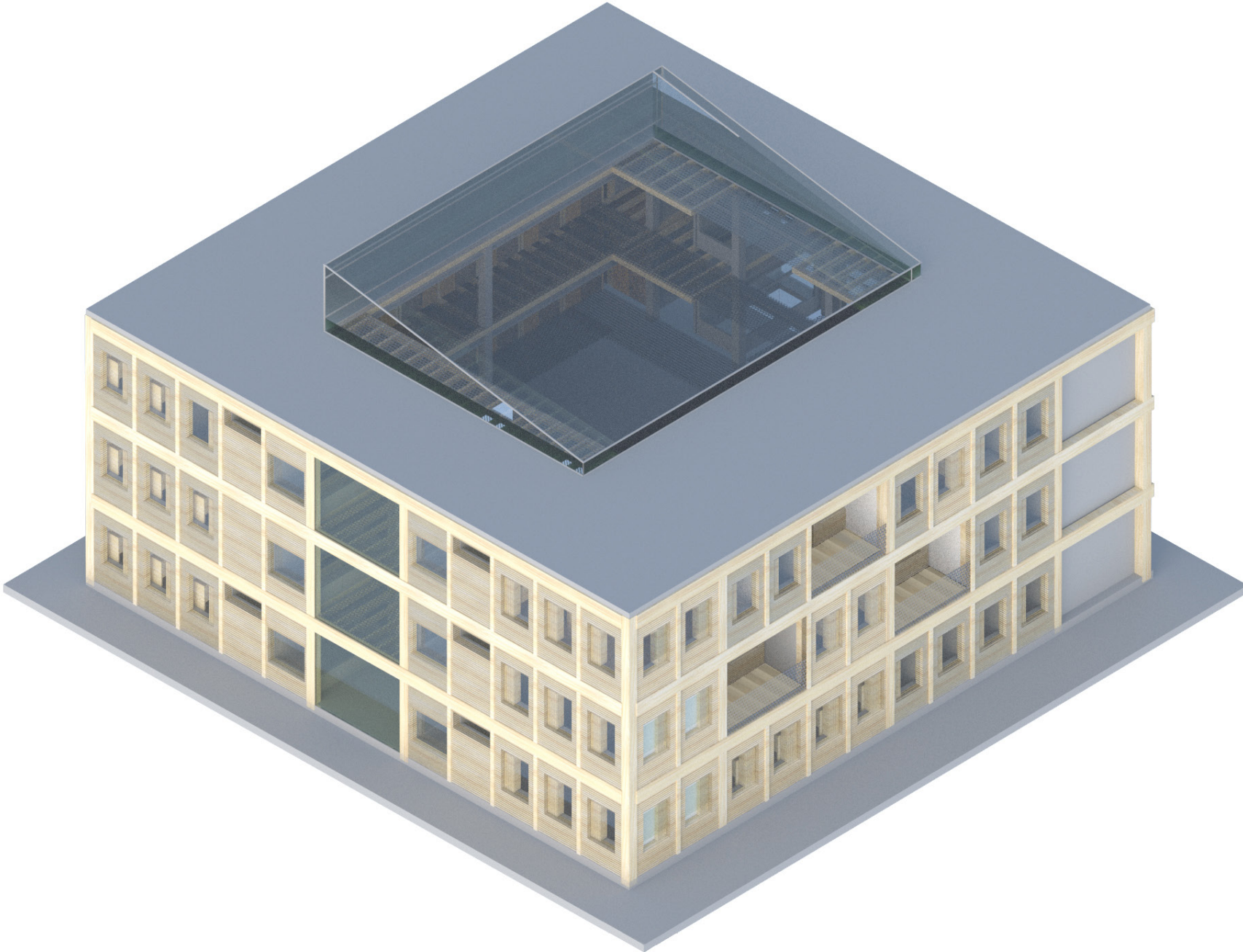
thirdfloor plan

2.5 STANDARD BLOCK SETTING

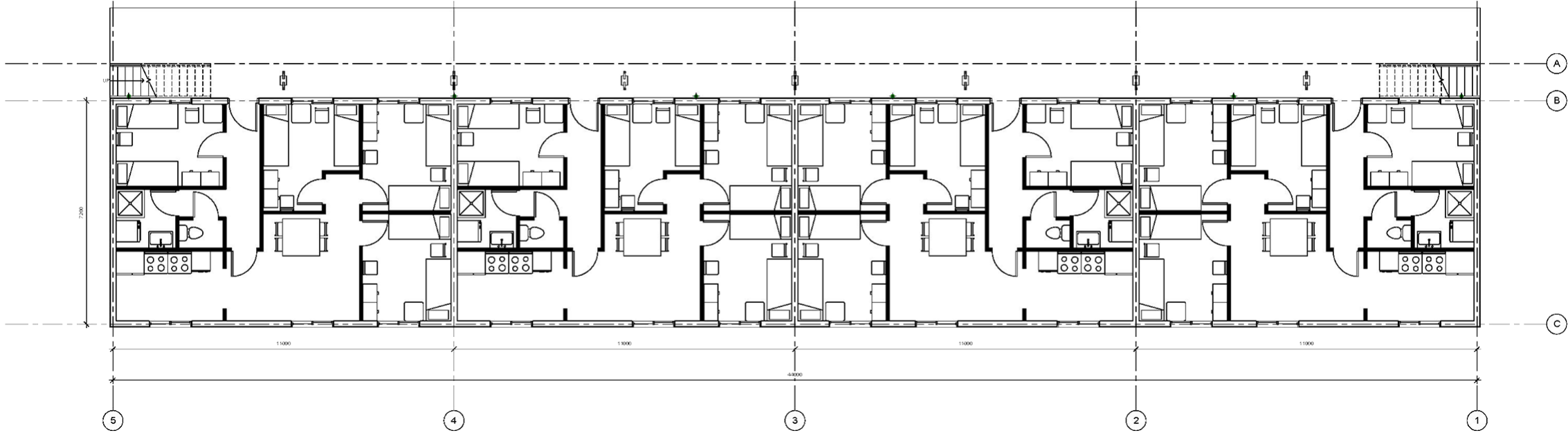




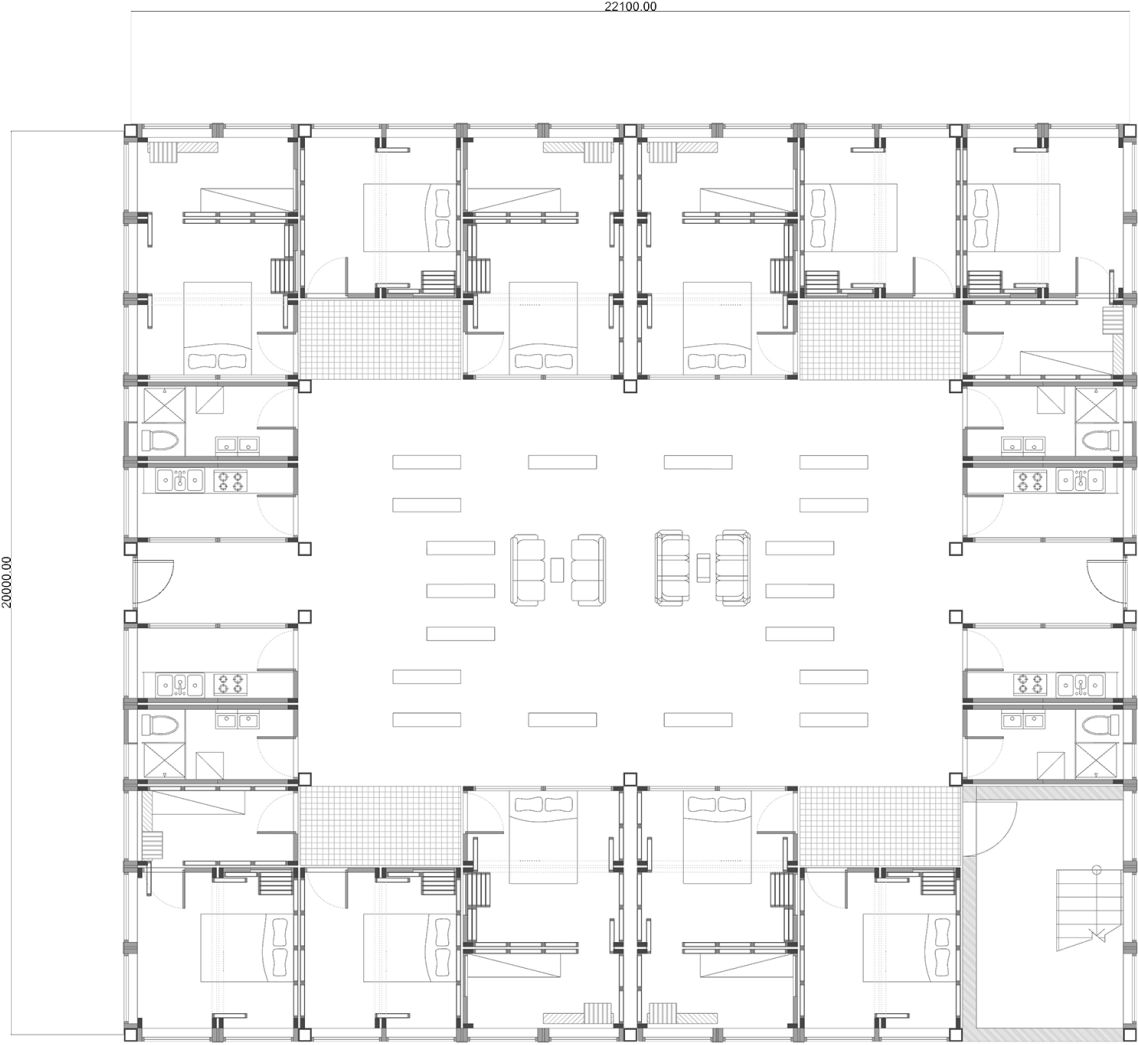
2.5 STANDARD BLOCK SETTING



**2.6 COMPARISON WITH THE EXXISTING**



NUMBER OF ACCOMODATED PEOPLE(4groups):  
 ground floor 32  
 first floor 32  
  
 IN TOTAL : 64  
 COUMMUNAL SPACE:  
 groundfloor 10 m2\*4 =40 m2  
 firstfloor 10 m2\*4 = 40m2  
  
 IN TOTAL: 80m2  
 OCCUPIED ARE :366M2



NUMBER OF ACCOMODATED PEOPLE(4groups):  
 ground floor 29  
 first floor 29  
 second floor 18  
 IN TOTAL : 76  
 COUMMUNAL SPACE:  
 ground 181.44 m2  
 first 25.92 m2  
 second 25.92m2  
 IN TOTAL: 233.28  
 OCCUPIED AREA: 440 M2

### **III. SITE DESIGN**



3.1 COMPARISON WITH THE EXISTING





3.1 COMPARISON WITH THE EXISTING



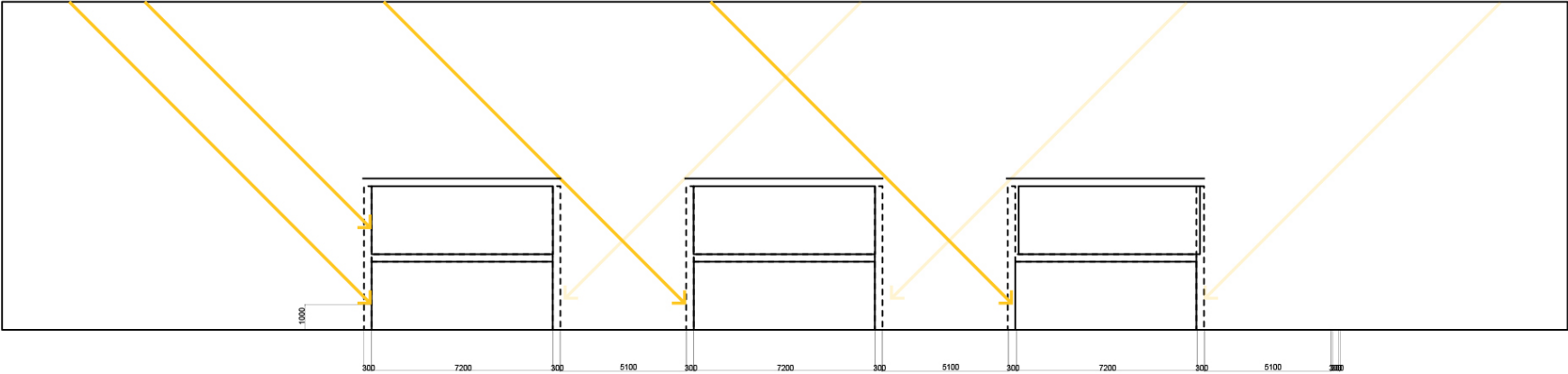
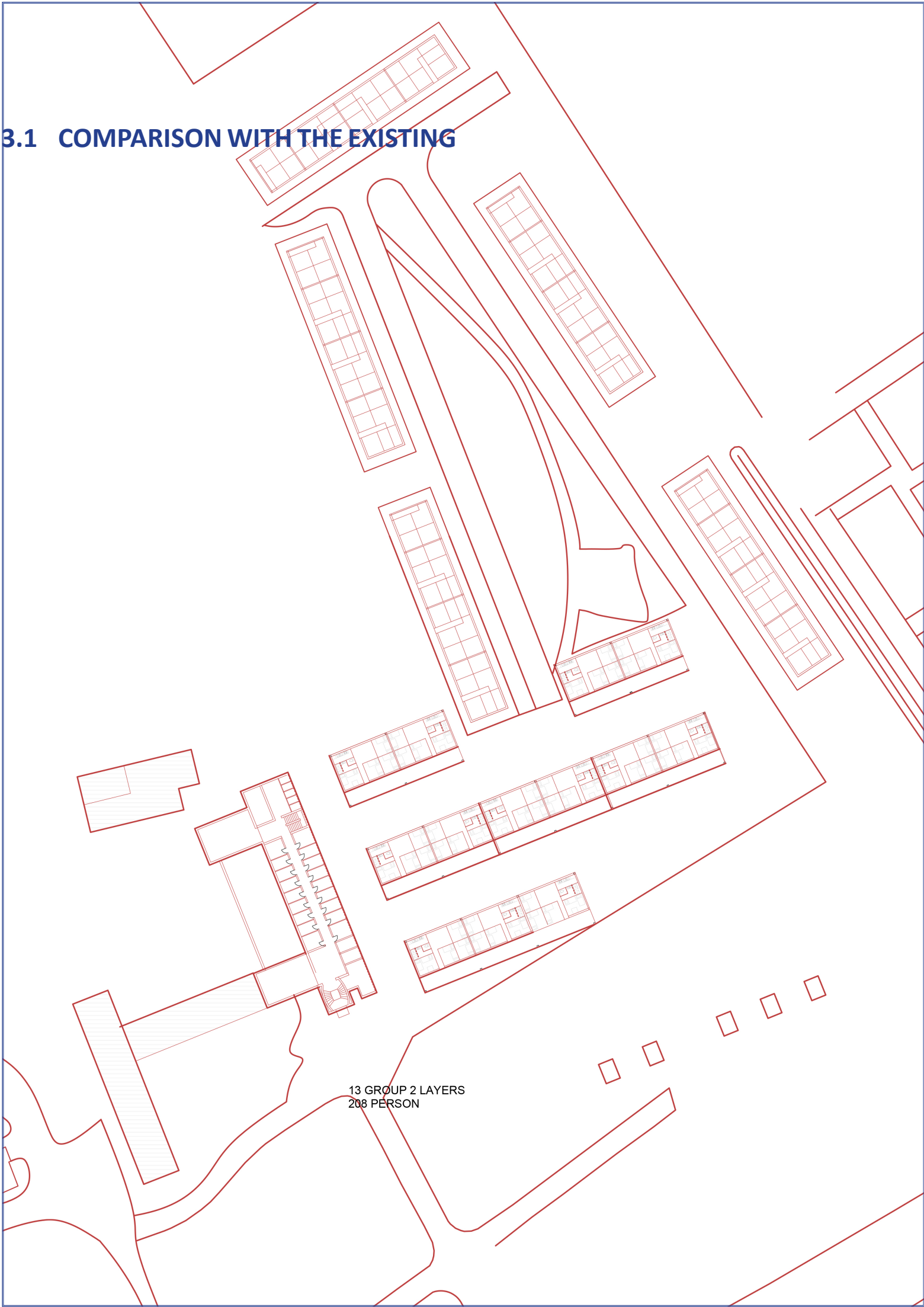


3.1 COMPARISON WITH THE EXISTING

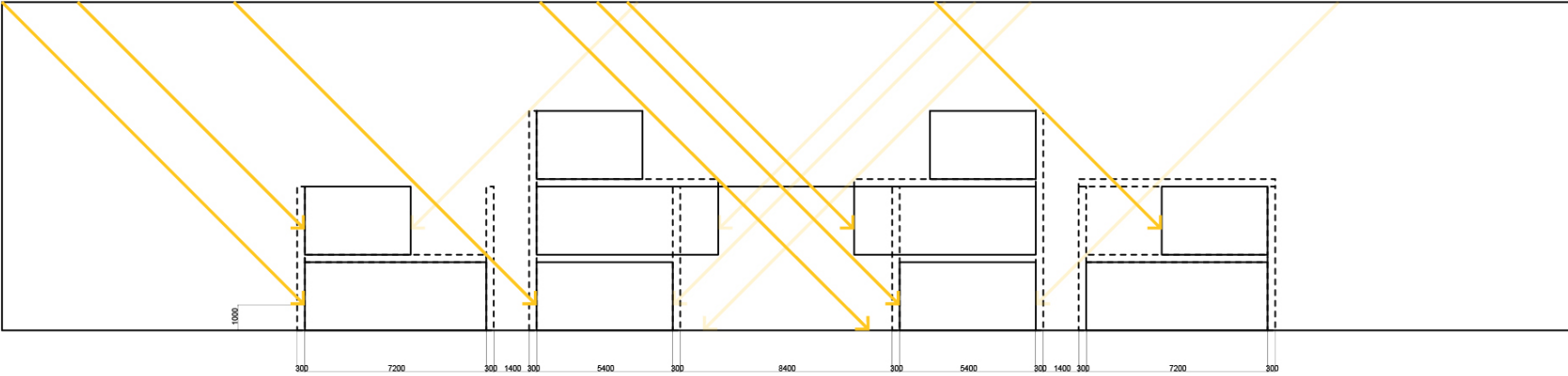
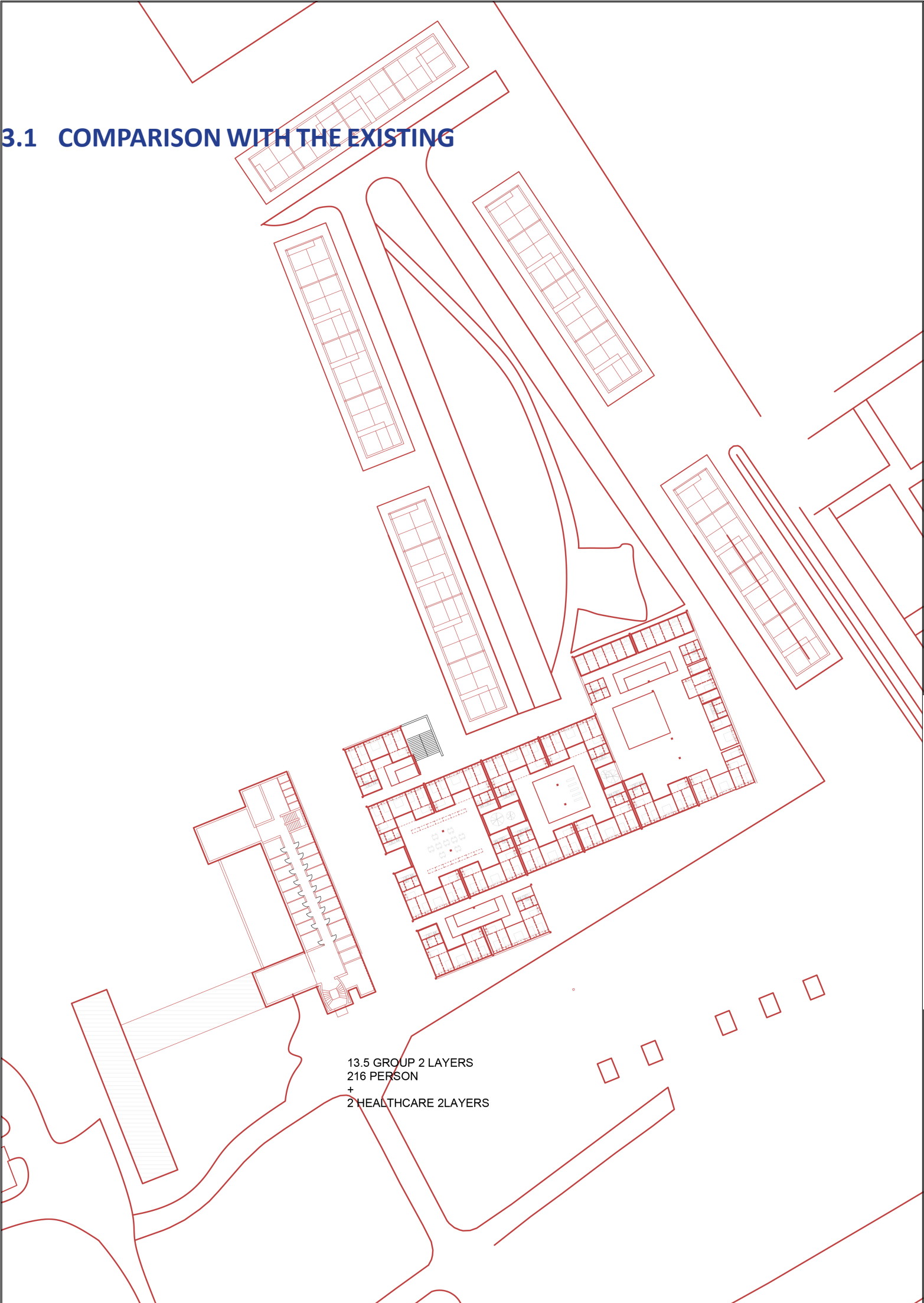




**3.1 COMPARISON WITH THE EXISTING**

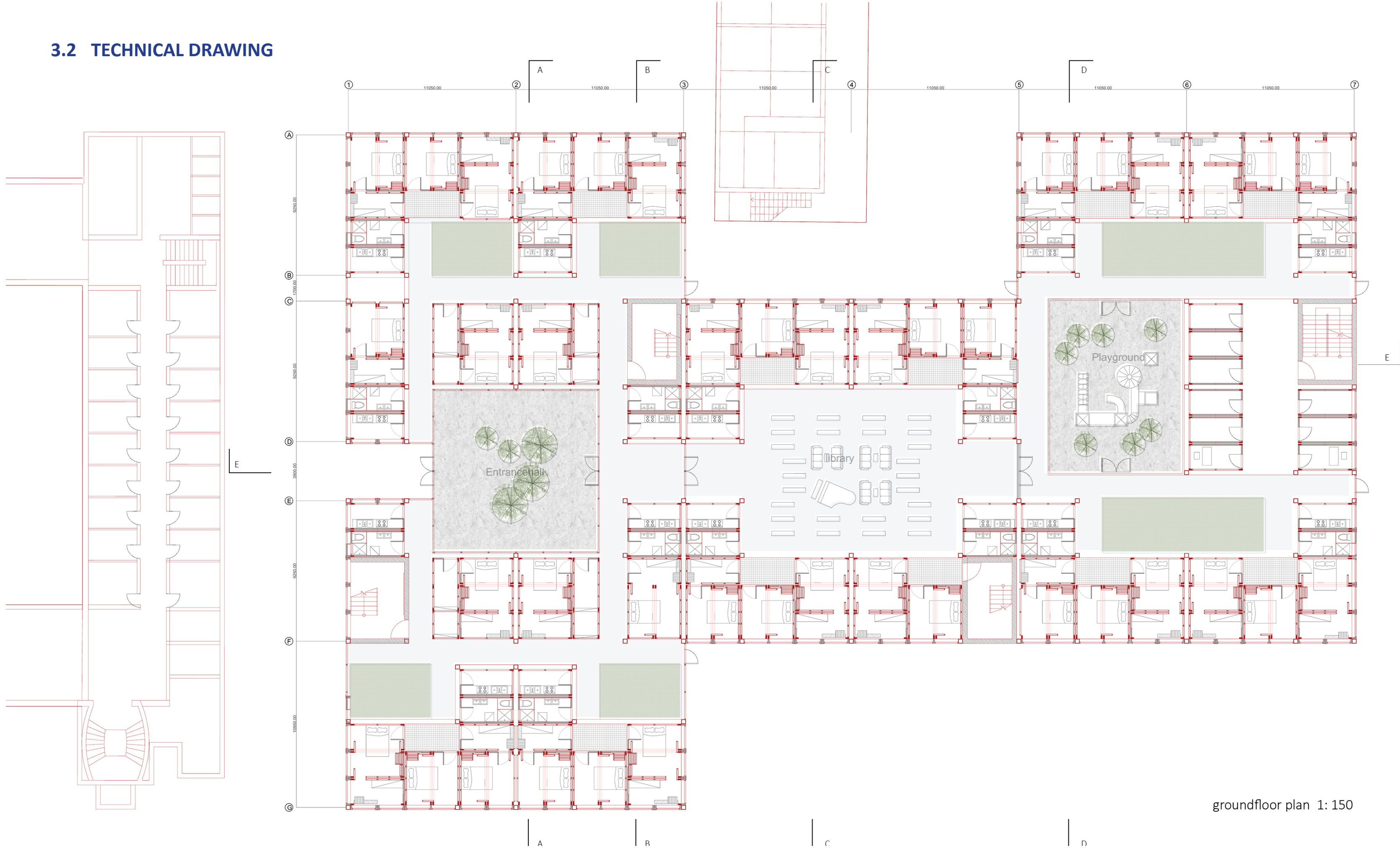


3.1 COMPARISON WITH THE EXISTING





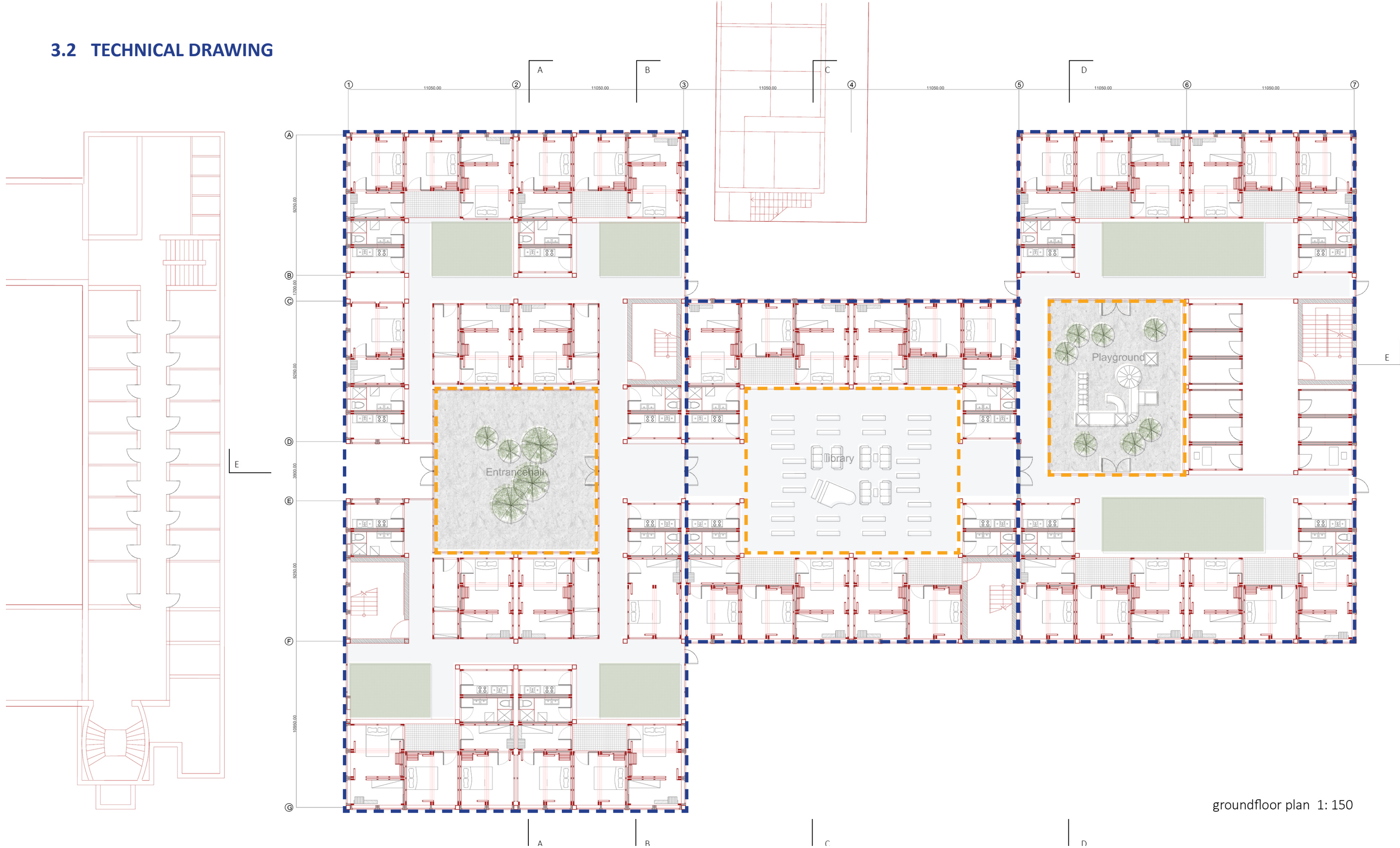
3.2 TECHNICAL DRAWING



groundfloor plan 1: 150

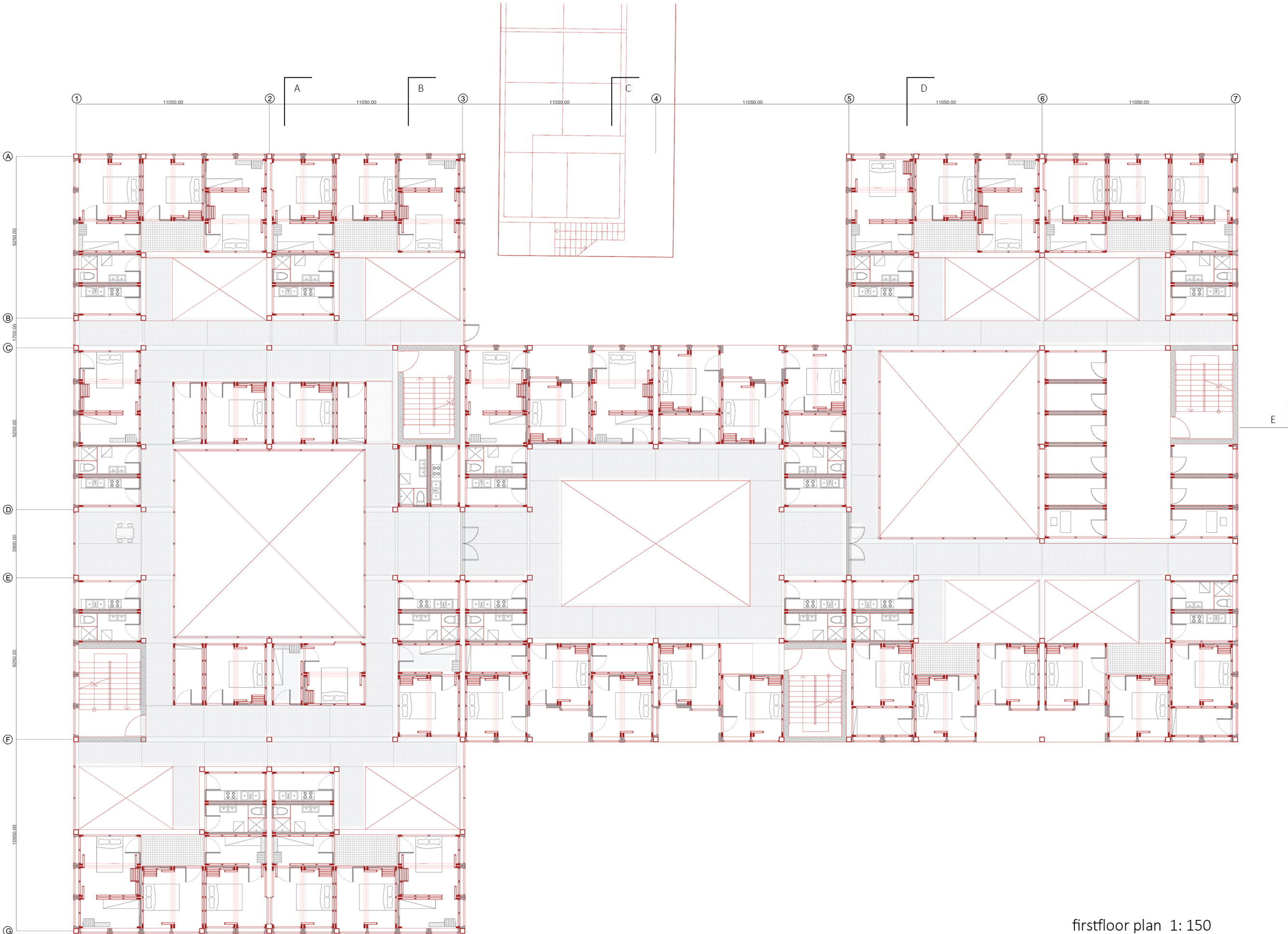
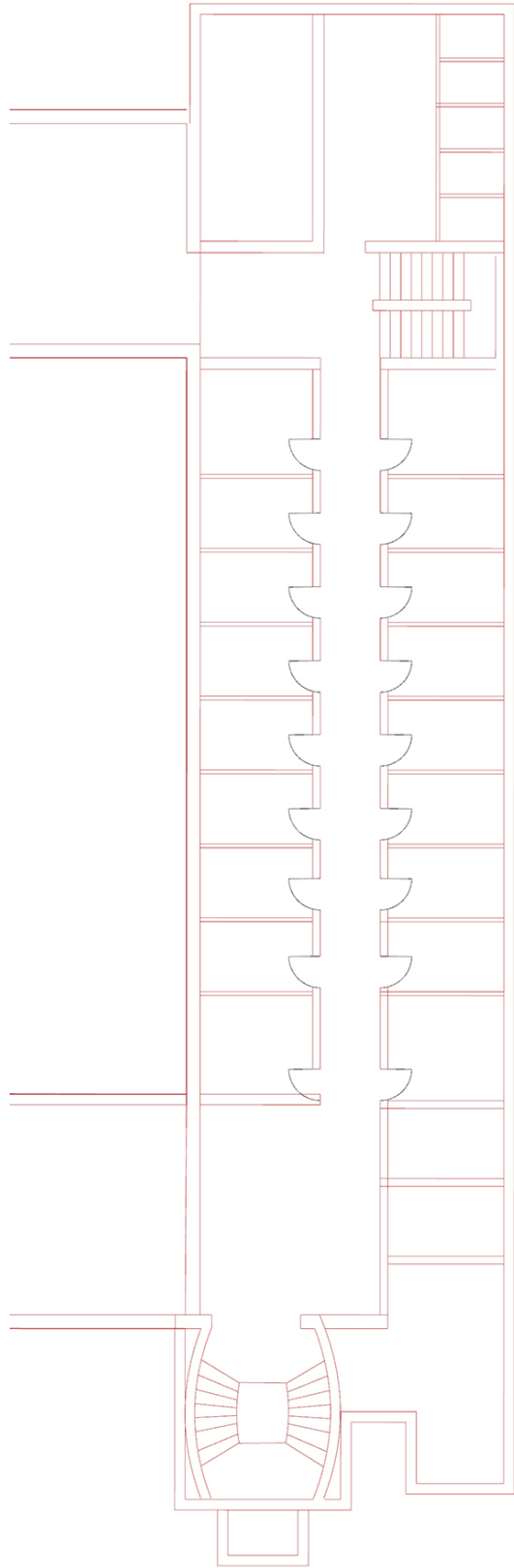


3.2 TECHNICAL DRAWING



groundfloor plan 1: 150

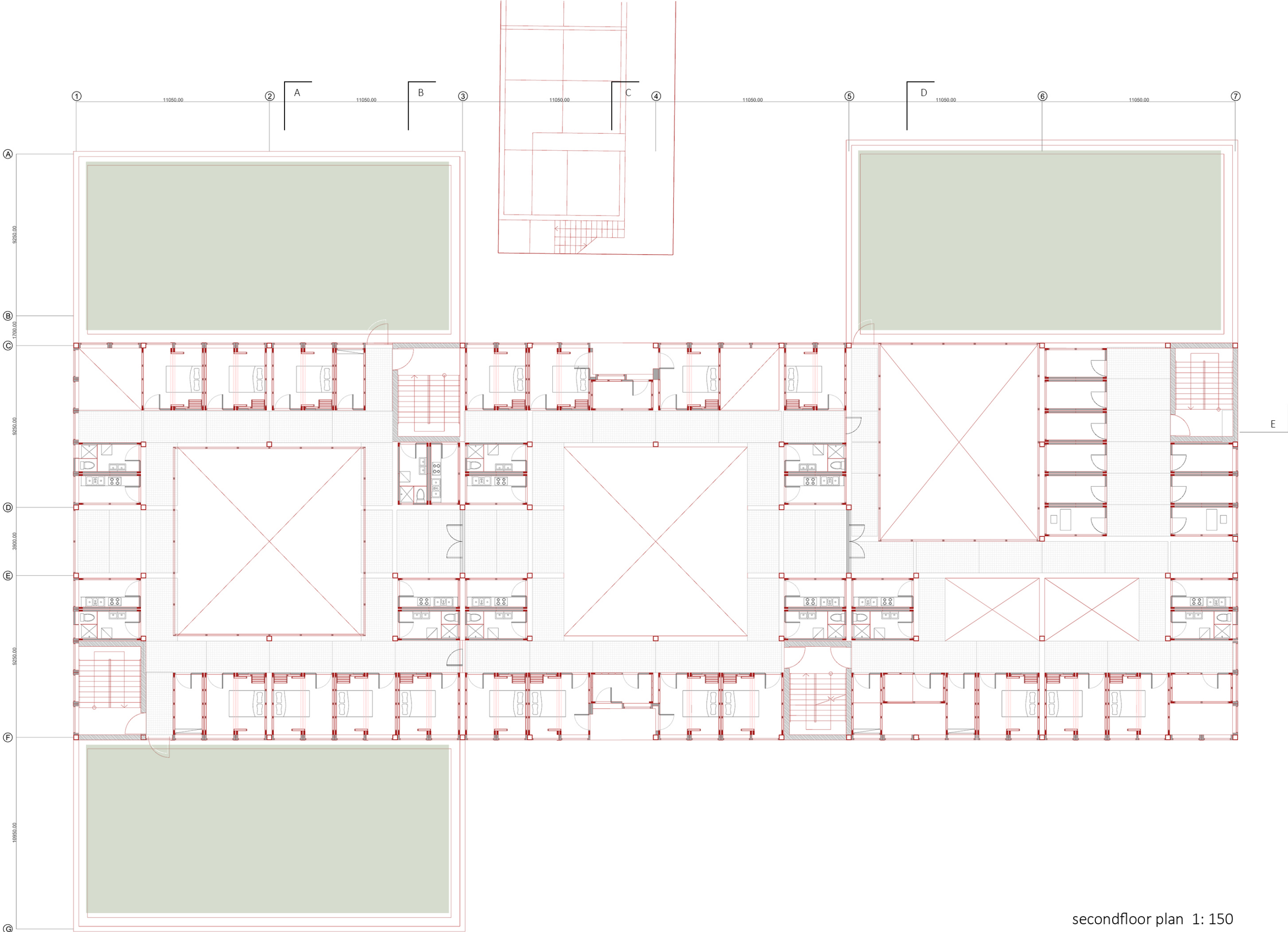
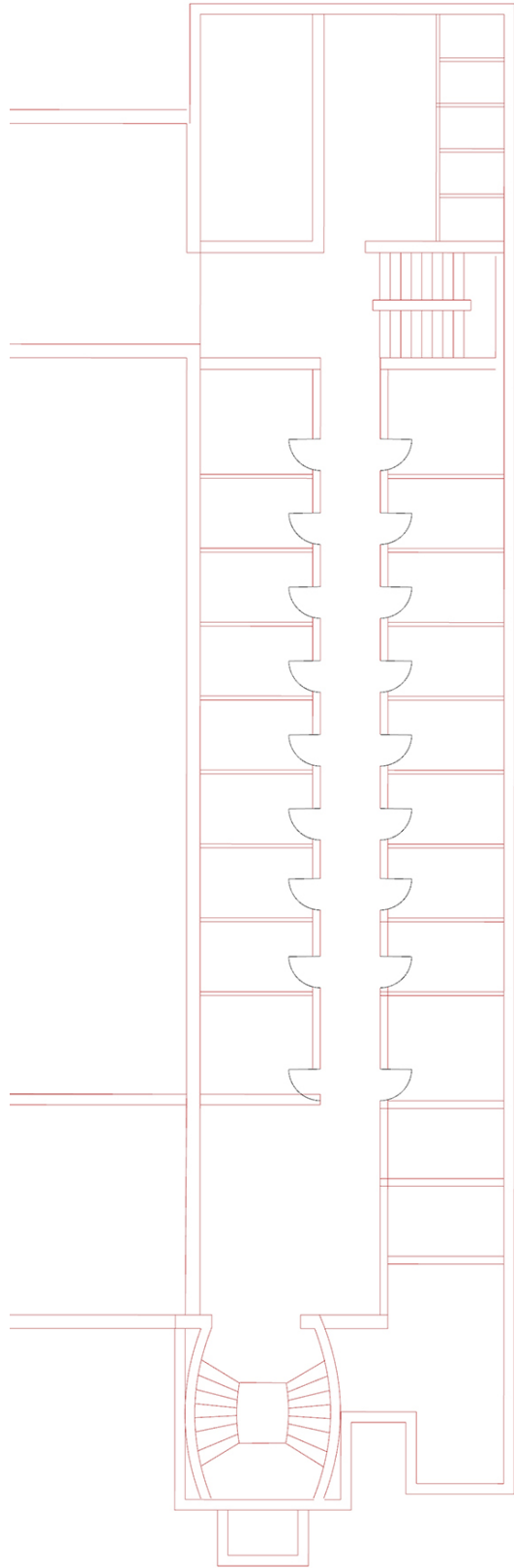
3.2 TECHNICAL DRAWING



firstfloor plan 1: 150

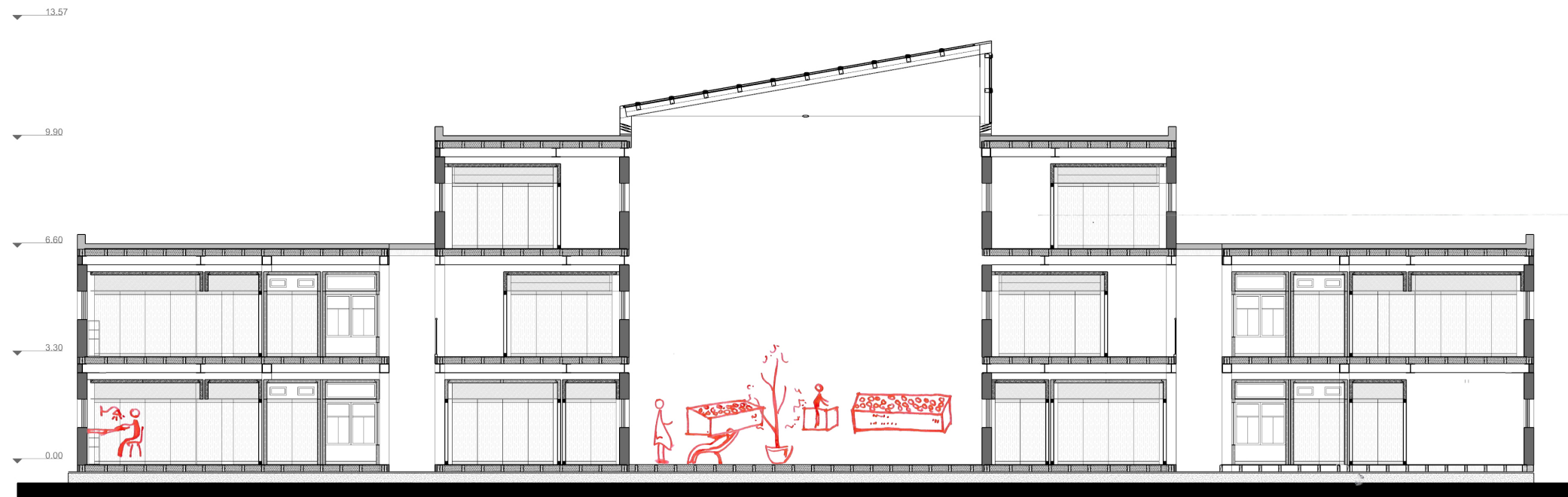


3.2 TECHNICAL DRAWING



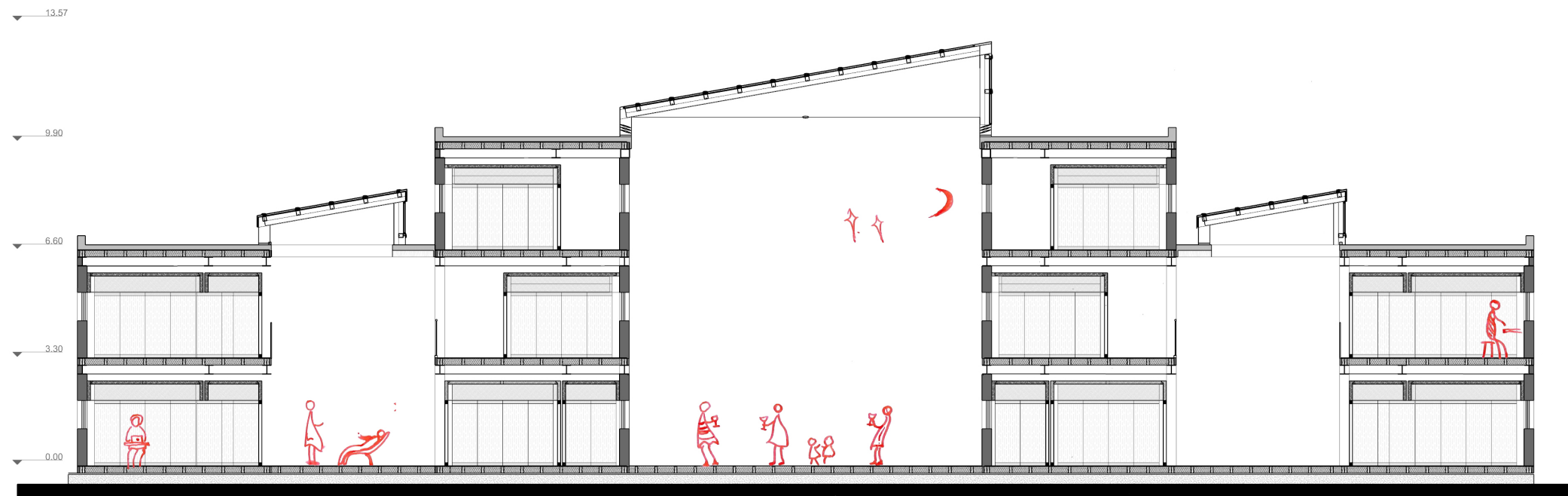
secondfloor plan 1: 150

### 3.2 TECHNICAL DRAWING



section a-a

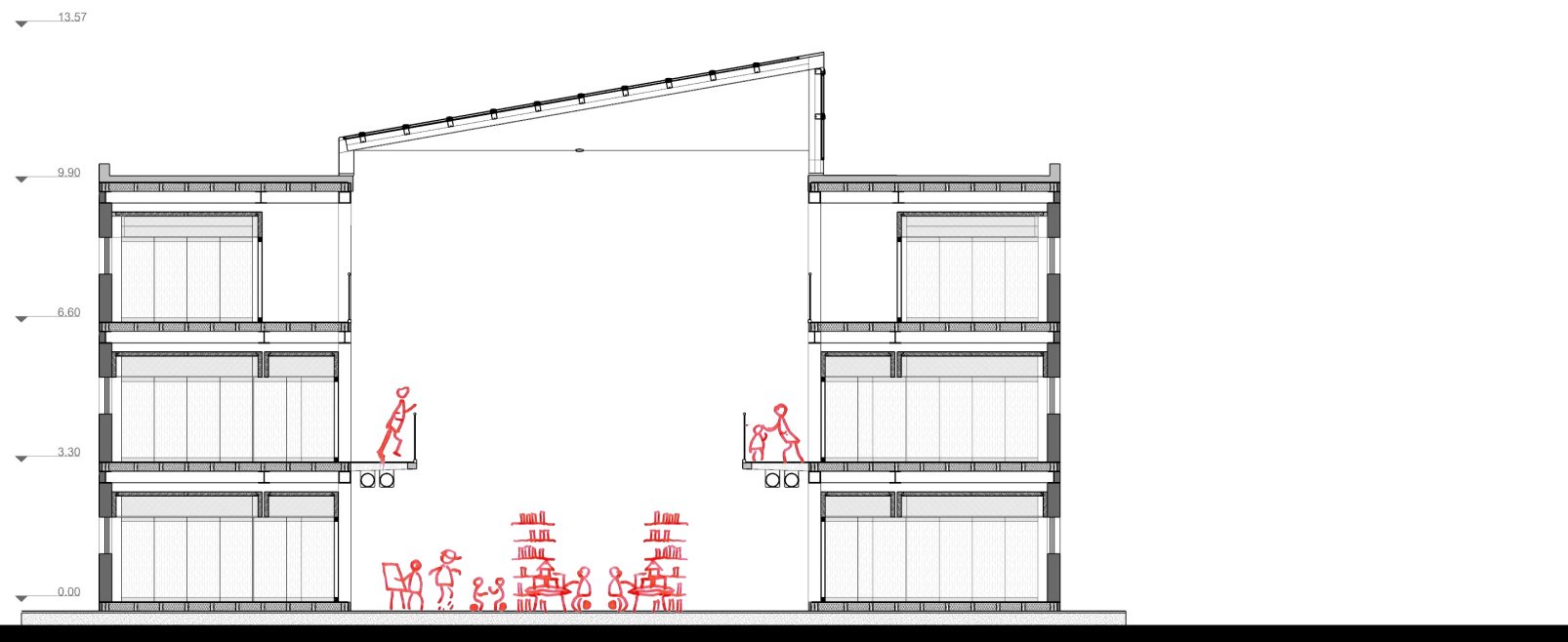
### 3.2 TECHNICAL DRAWING



section b-b

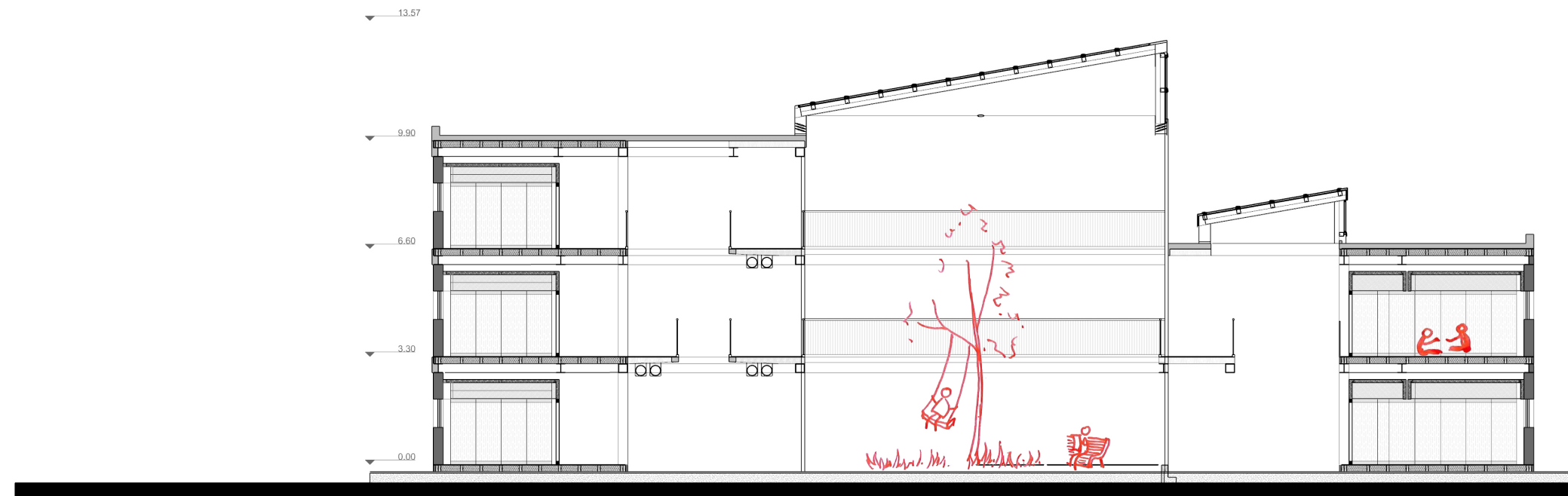


### 3.2 TECHNICAL DRAWING



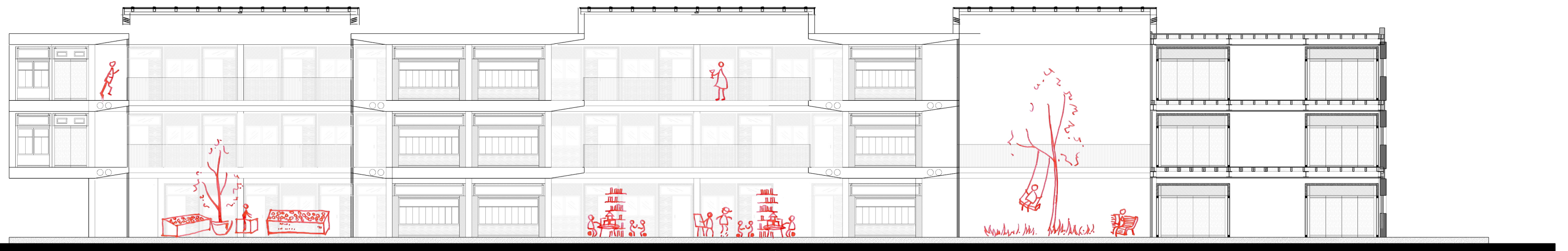
section c-c

### 3.2 TECHNICAL DRAWING



section d-d

### 3.2 TECHNICAL DRAWING

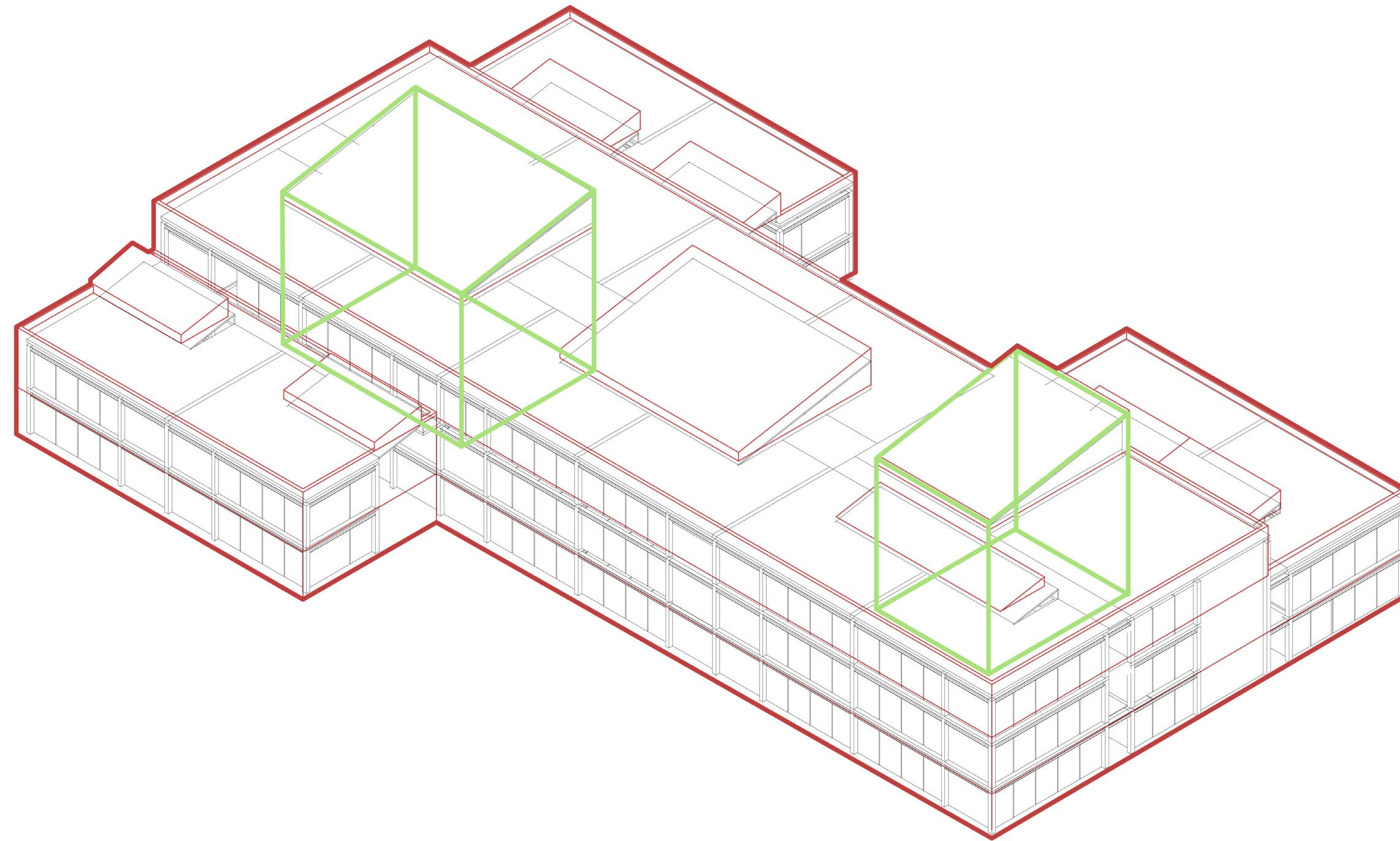


section e-e

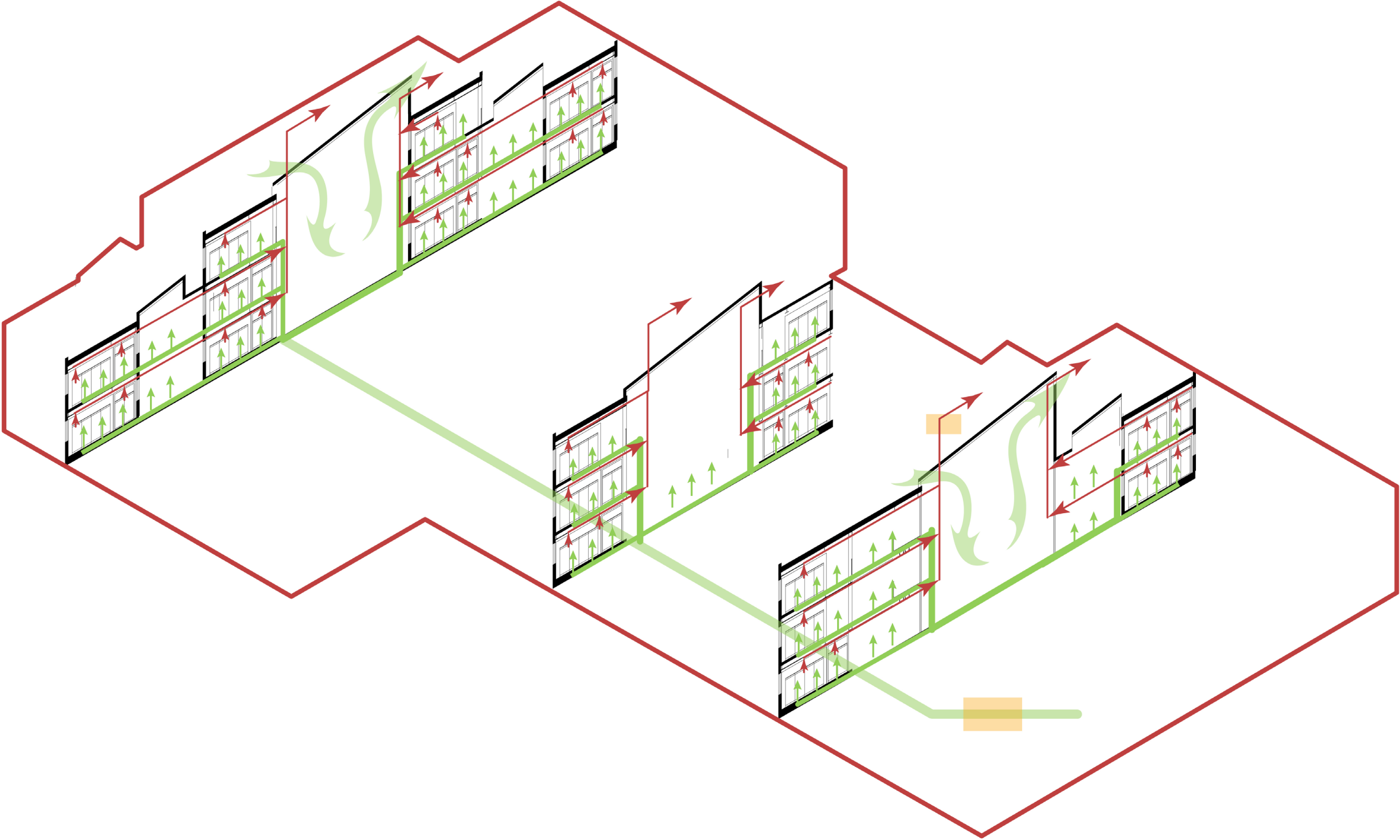


## **IV. CLIMATE DESIGN**

insulation layer

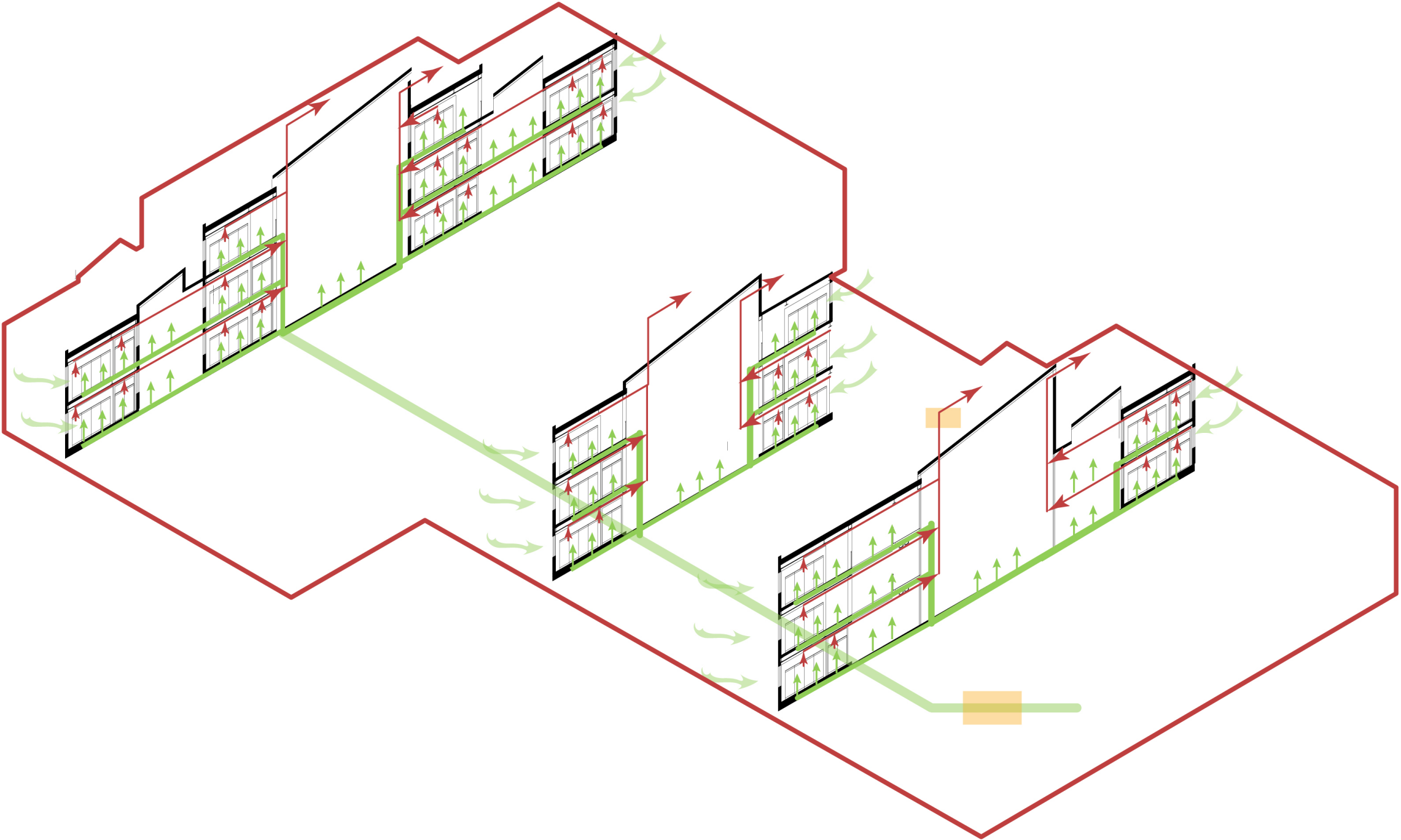


winter ventilation

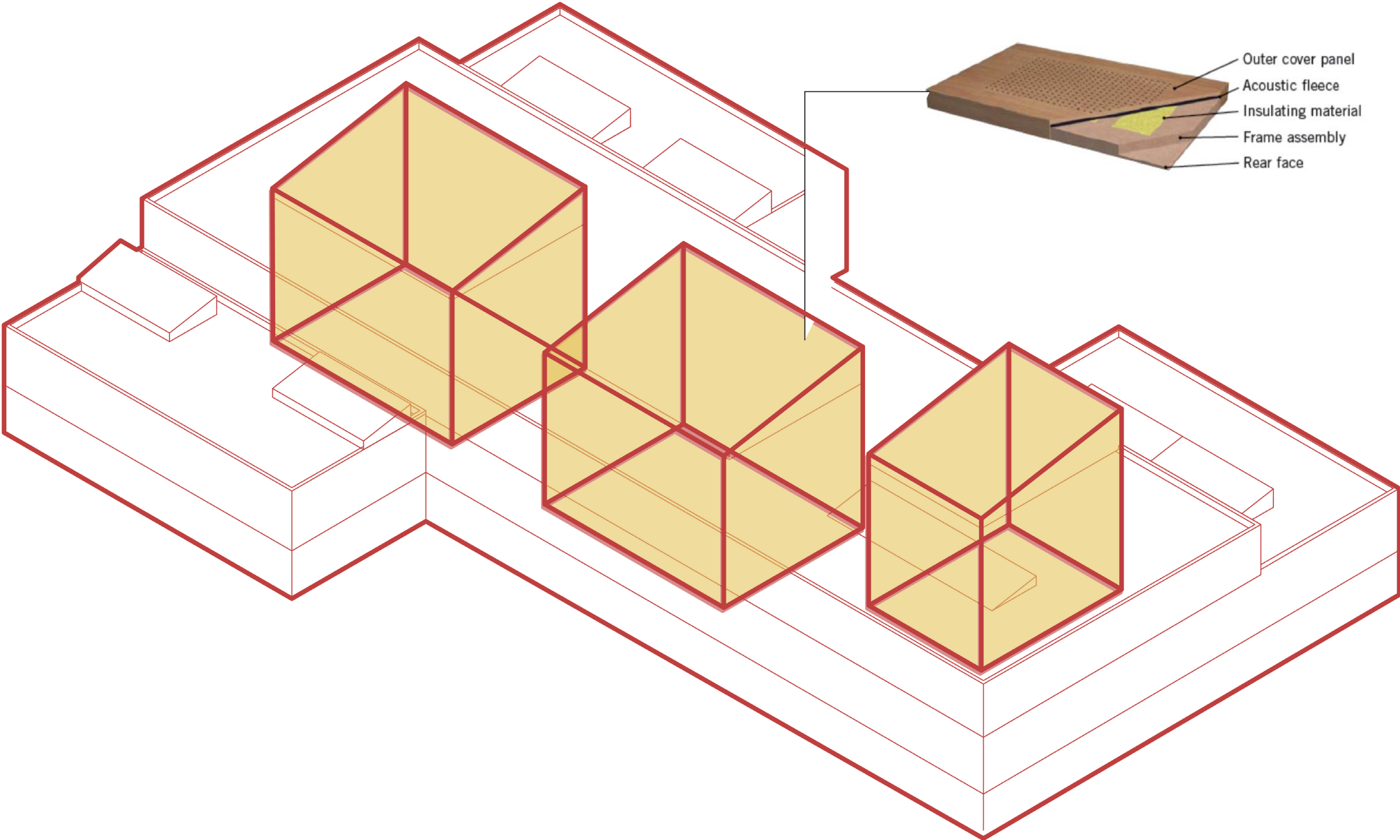




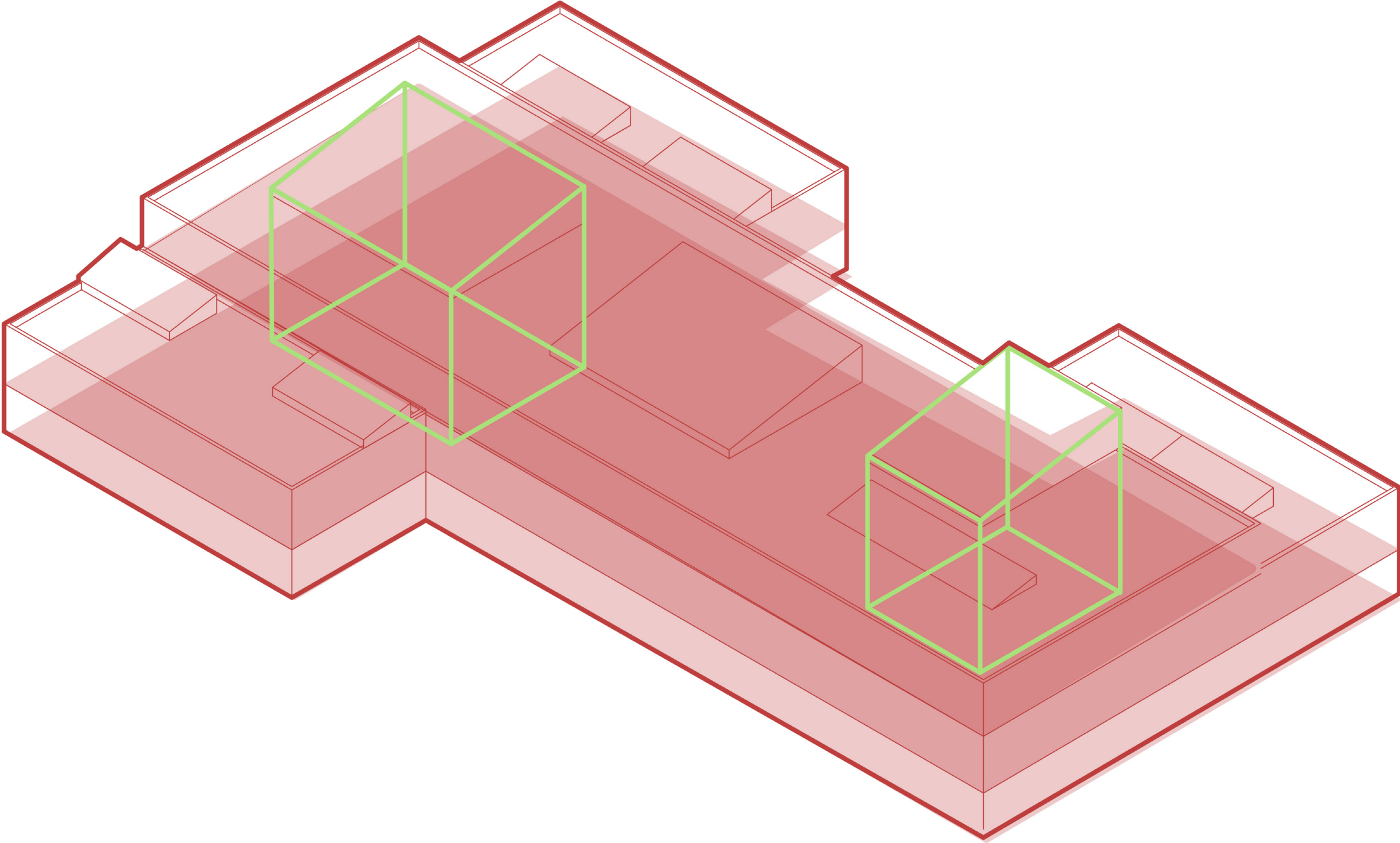
summer ventilation



public acoustic



heating system

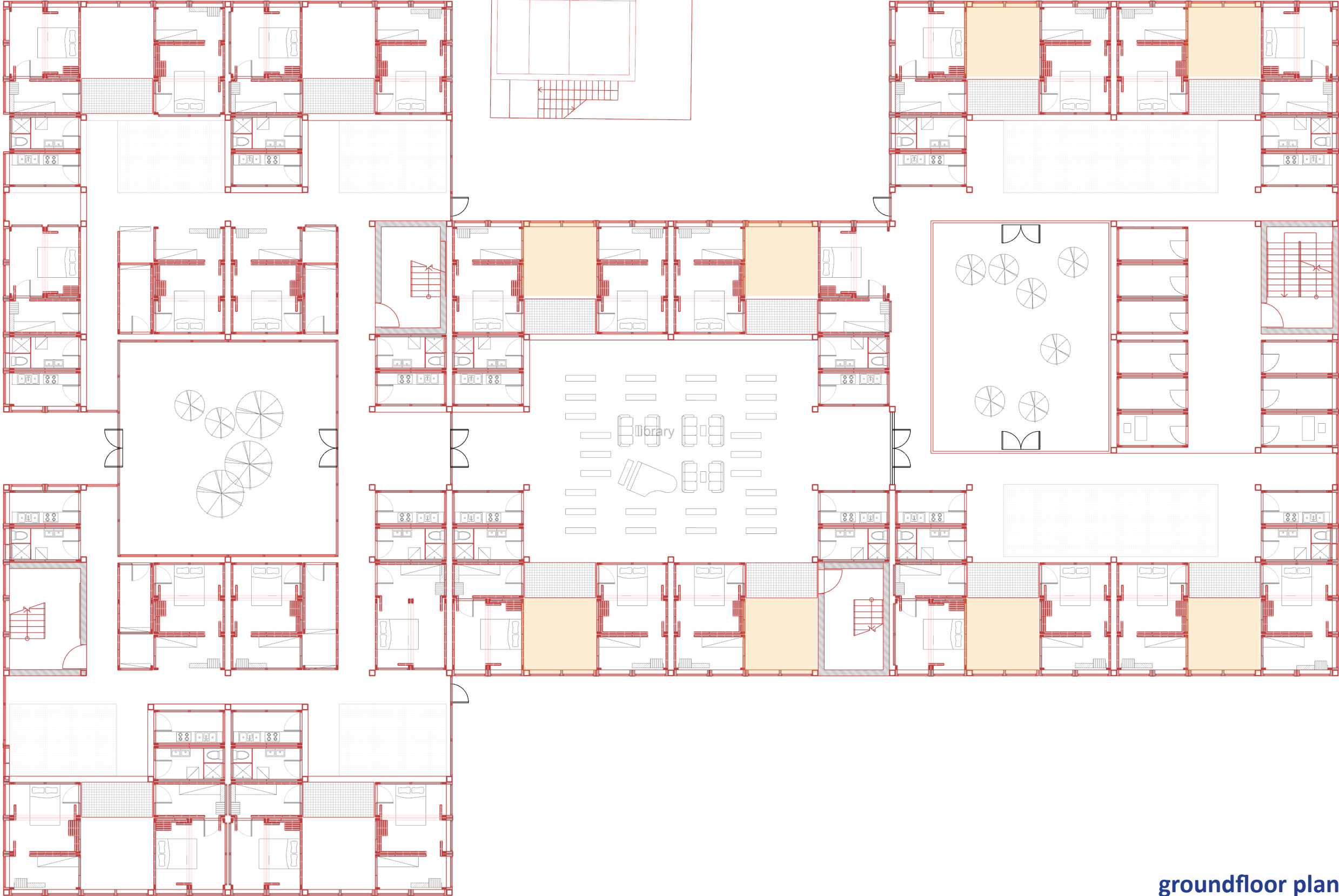
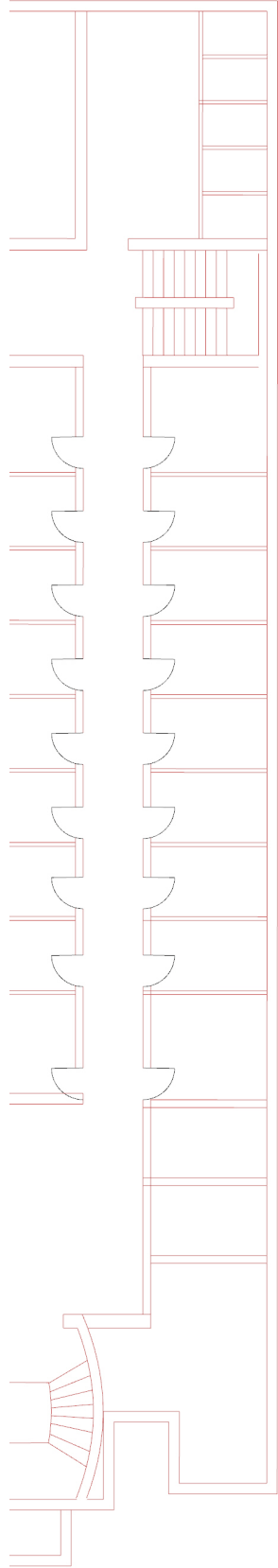




# V. FUTURE DEVELOPMENT

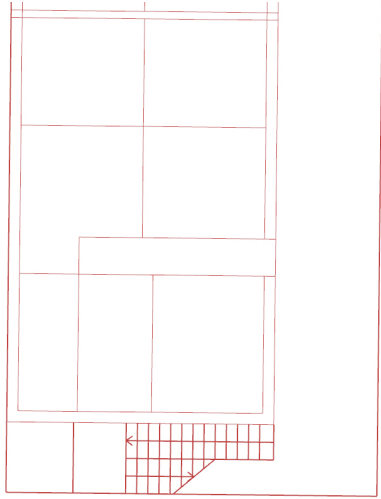
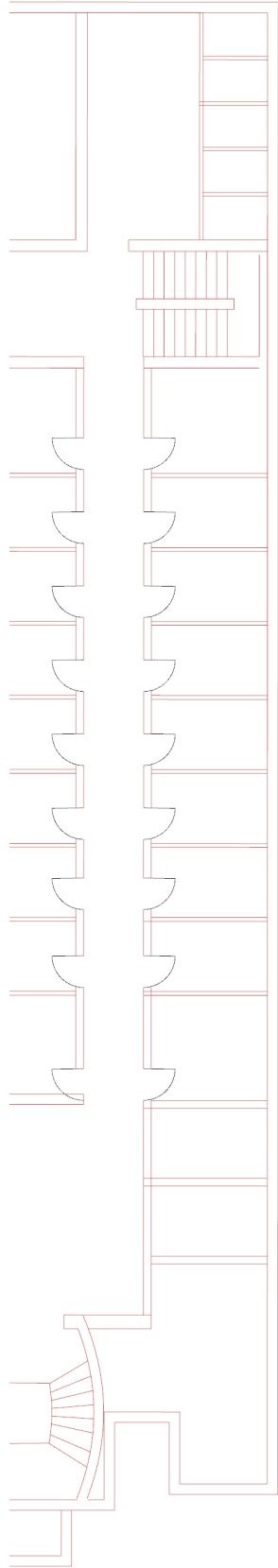
WHEN POPULATION DECREASE  
CHANGE OF THE COMMUNAL SPACE

**DECREASING**



**groundfloor plan  
after decreasing**

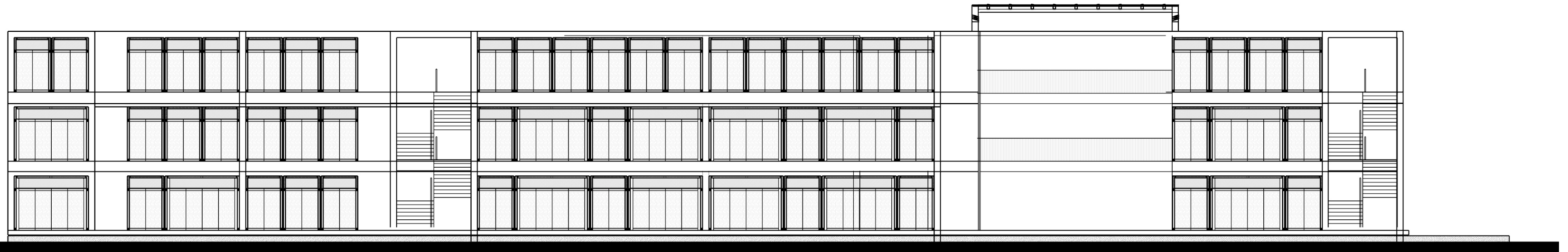
**DECREASING**



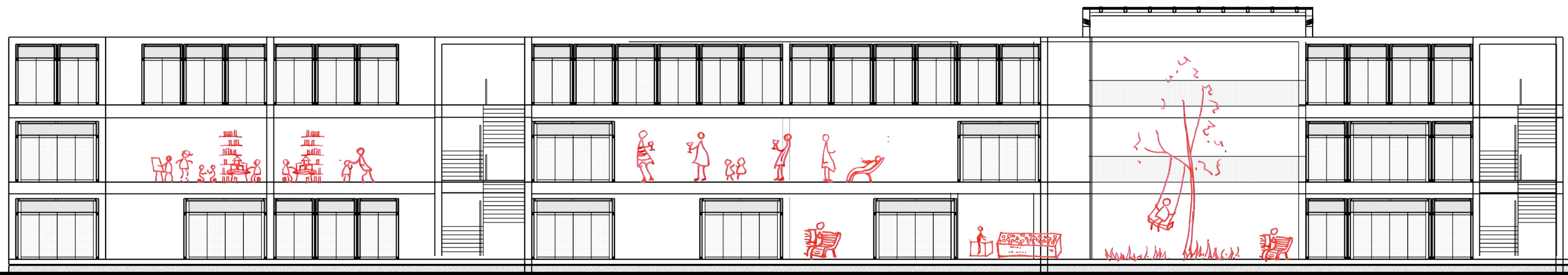
**firstfloor plan  
after decreasing**



DECREASING



current situation



after decreasing

## **VI. ALI'S NEW LIFE IN NETHERLANDS**

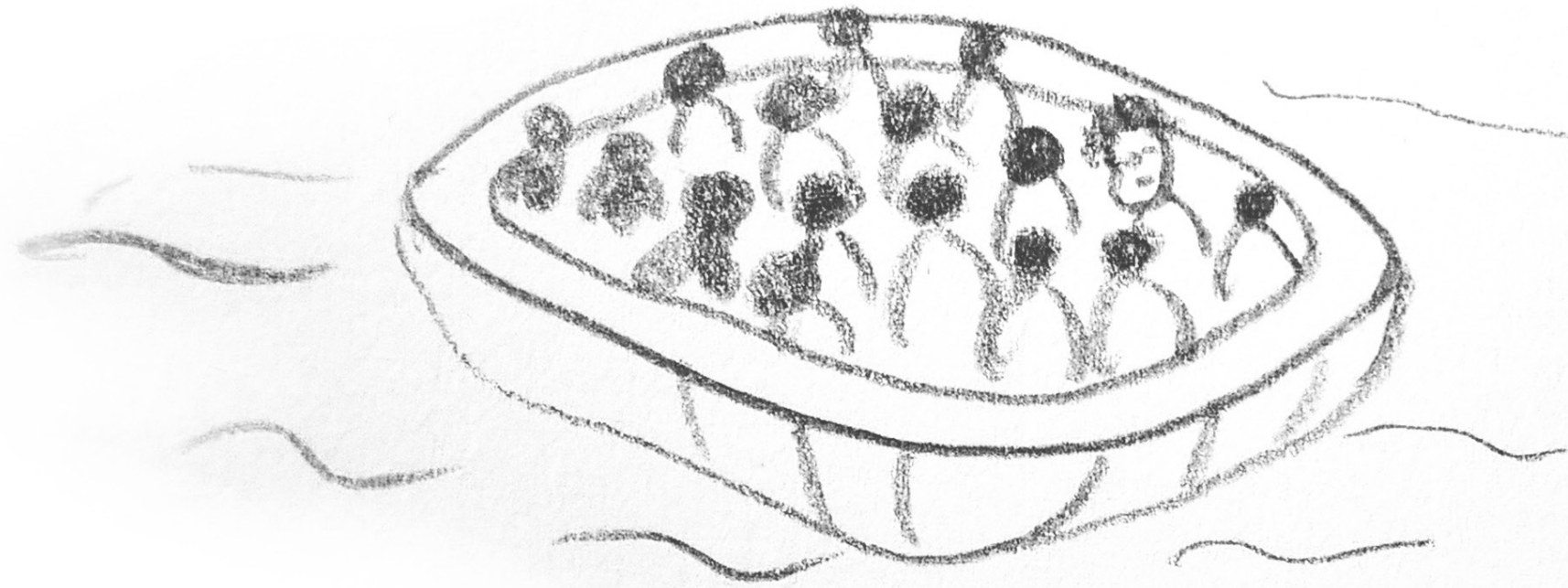




<b>NAME:</b>	<b>ALI</b>
<b>GENDER:</b>	<b>Male</b>
<b>AGE:</b>	<b>30</b>
<b>NATIONALITY:</b>	<b>Syrian</b>
<b>MARITAL STATUS:</b>	<b>Married</b>

# Ali's family members





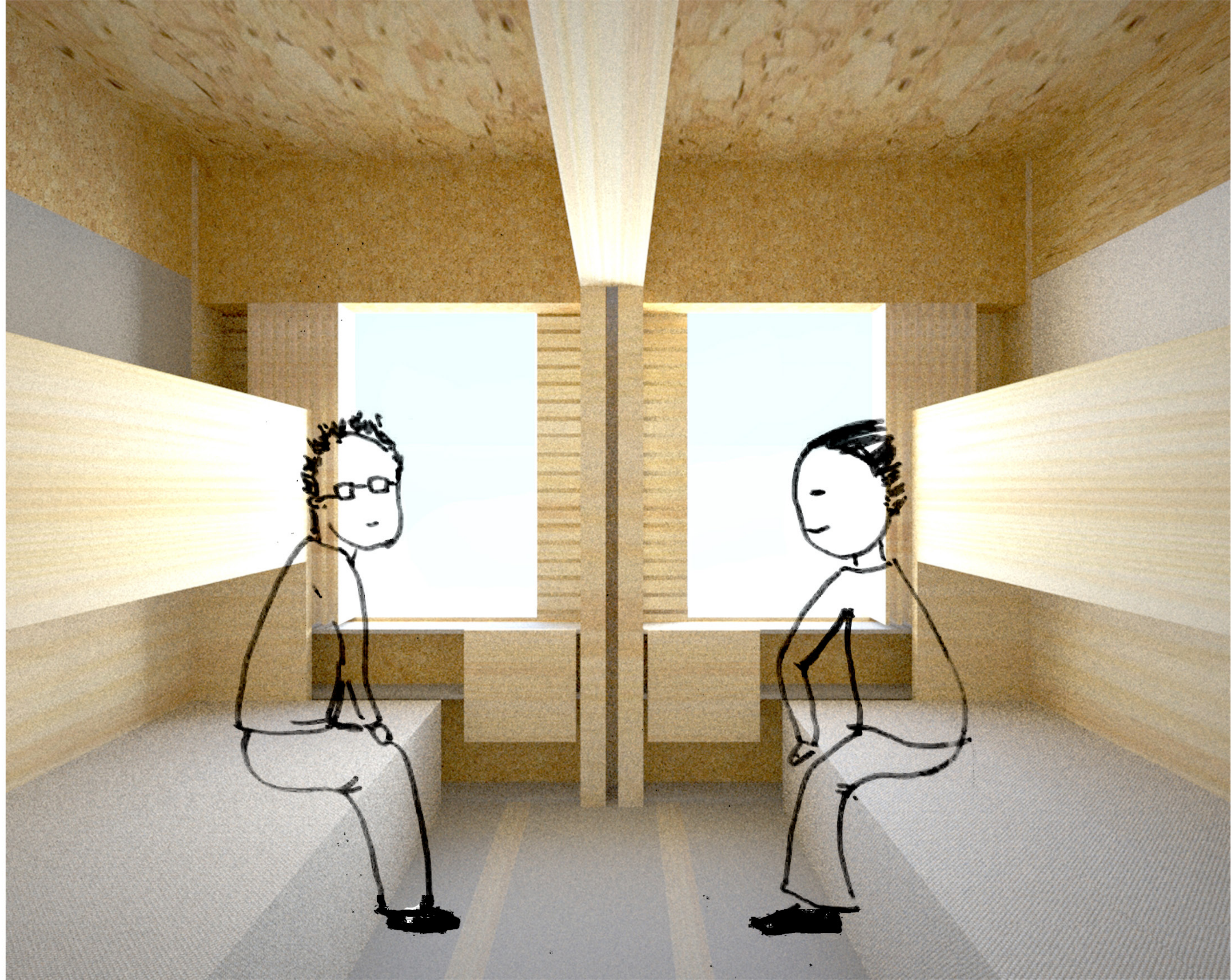




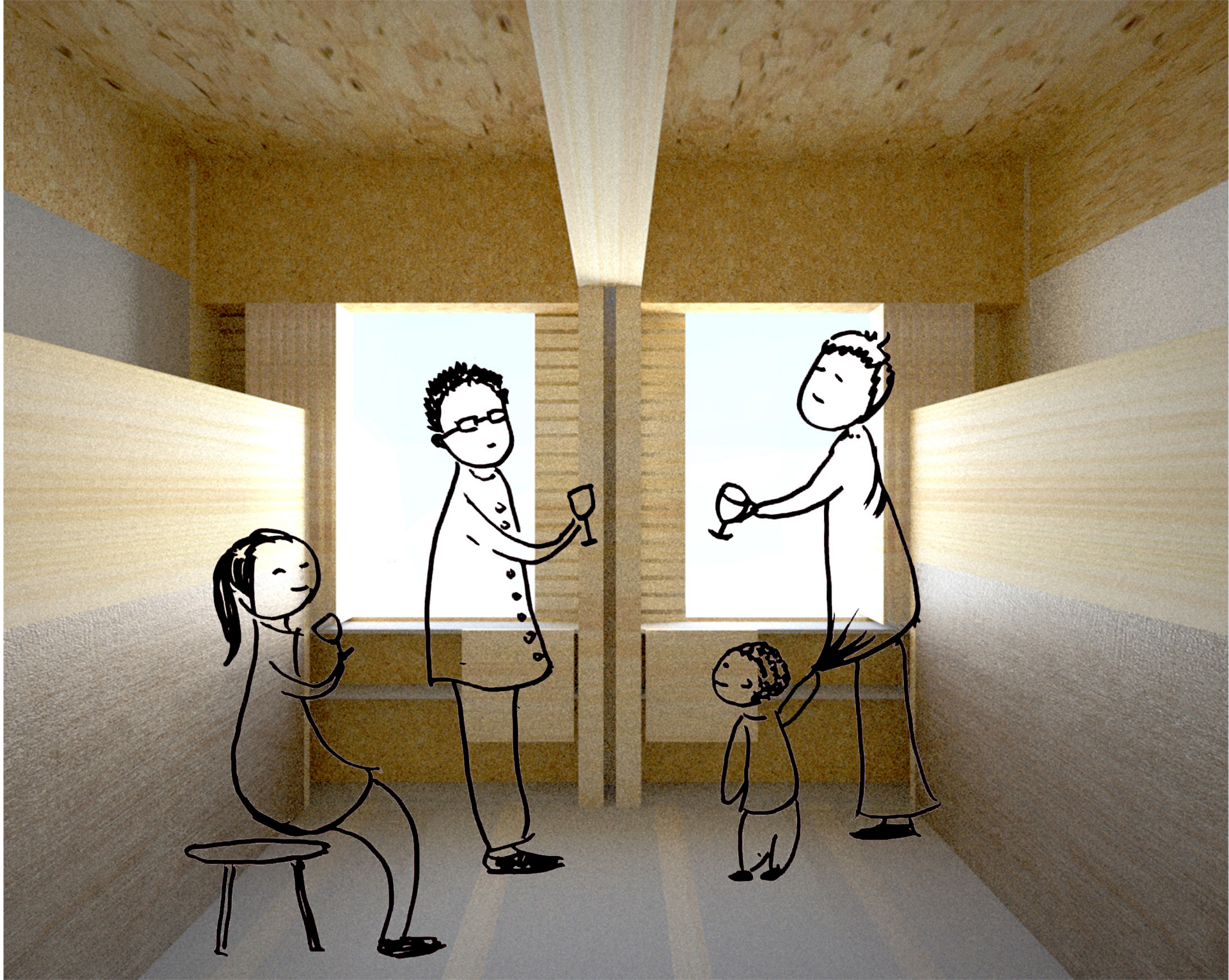












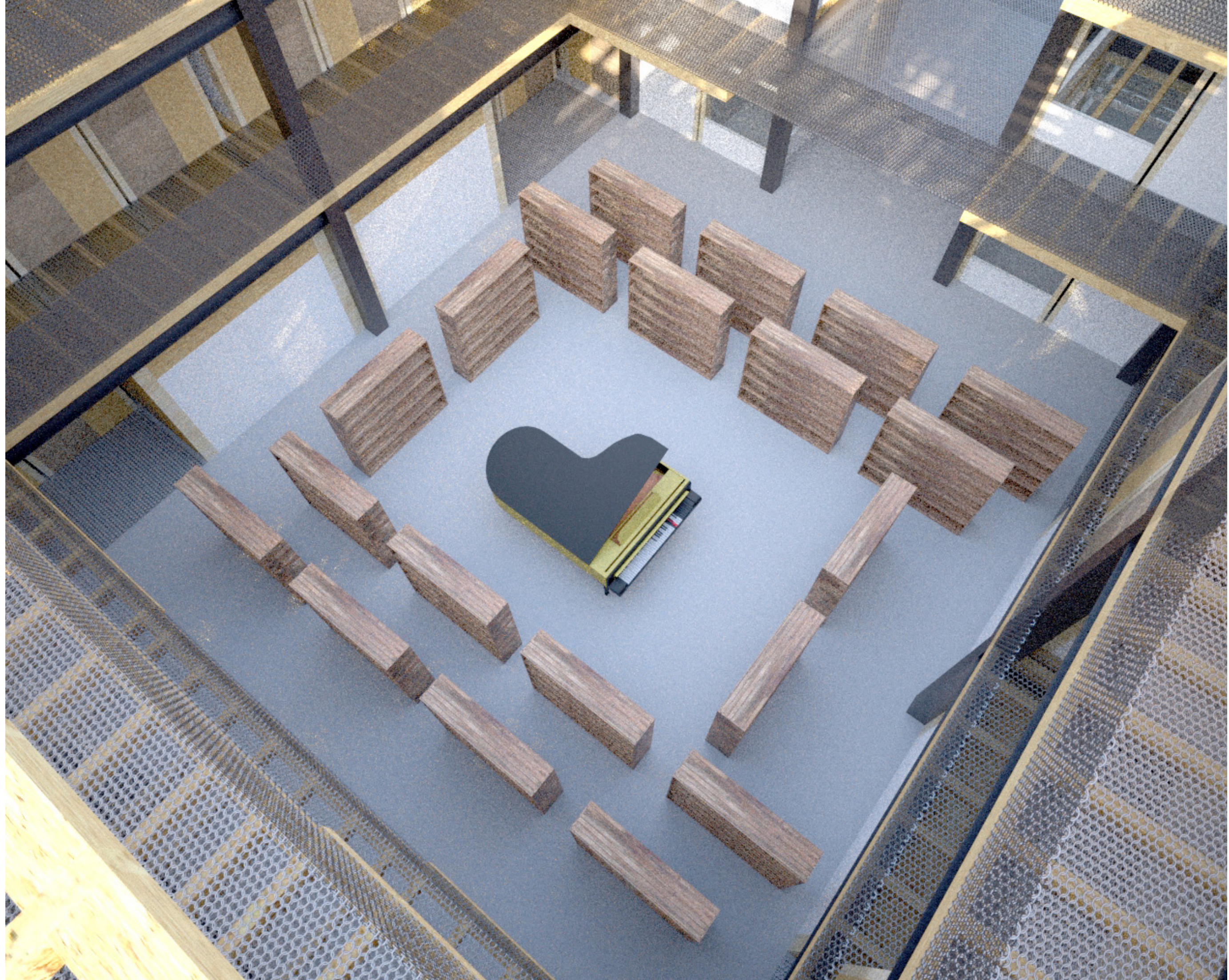


















THANKS~