

YOUNG & SENIOR CO-HOUSING

Frankfurt University of Applied Sciences | E8 Entwerfen | Prof. Dr. Arch Marta Pelegrín | SS 20 | M.Sc. Master Advanced Architecture

The current situation in Bockenheim is characterized by a young and vibrant vibe due to the Goethe university facilities' nearby location. Places like cafe Koz and many other pubs attract people during the evening, not to mention the vast stores and supermarkets that also makes the area appealing for shopping.

Nevertheless the areas surrounding the buildings 50 & 52 lack of connectivity with the existing green structure, there are also potential areas for interaction which are degraded or occupied for parking.

The concept aims to energize the social, educational and cultural activities of the neighborhood by linking the building to its surroundings and its existing activity circuit. Pedestrians are protagonist in the space and green areas are increased in order to inject liveliness in the area. The building as well becomes a gate to discover those new spaces and also serves as a vessel for discovering another way of life, co-housing.

The intervention in the buildings preserves in majority its existing structure but get rid of almost all the walls. Slabs are cut in order to shape a central courtyard, a large social interaction space where the communal areas revolve around it. On the ground floor, a coffee is placed to function as link with the neighborhood, this supported by the plaza, which will host cultural events or temporary markets.

The building program presents 33 housing units on three different typologies and different common areas (common kitchen and dining room, lounges, co working areas, laundry, multifunctional rooms and common balconies), which should enhance community life through transitions between private and public spaces. The second floor will open to the exterior and offer the resident active (gym) and passive activities. On the rooftop, terraces will be placed as well as gardens for growing vegetables or fruits, in this way give the opportunity to people for a healthier alimentation.

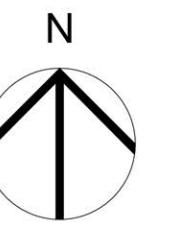
In terms of facilities, the roof of building 50 is used as a rainwater harvesting element, this water will be transported into a tank in the basement and from there redistributed to water the gardens and new green areas. Wet cores are placed in a band distribution in all the levels, this strategy allows the housing units to connect between themselves and offers more flexibility for changes.

Finally, timber walls and wood finishes are applied since it is an ecofriendly material, also lightens the load to the structure and offers easily assembly. Not to mention the warm feeling that transmits to the resident and the urban image.

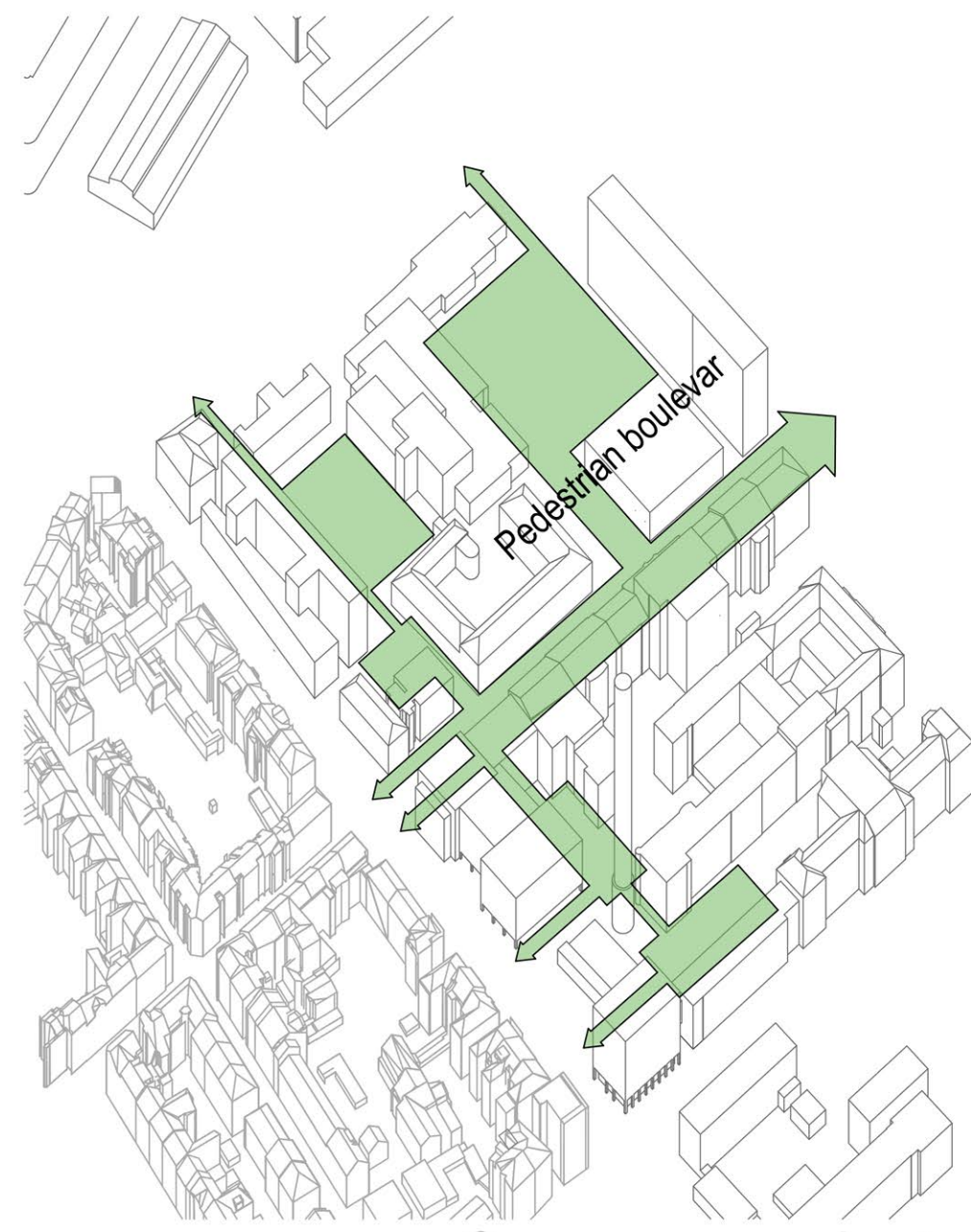


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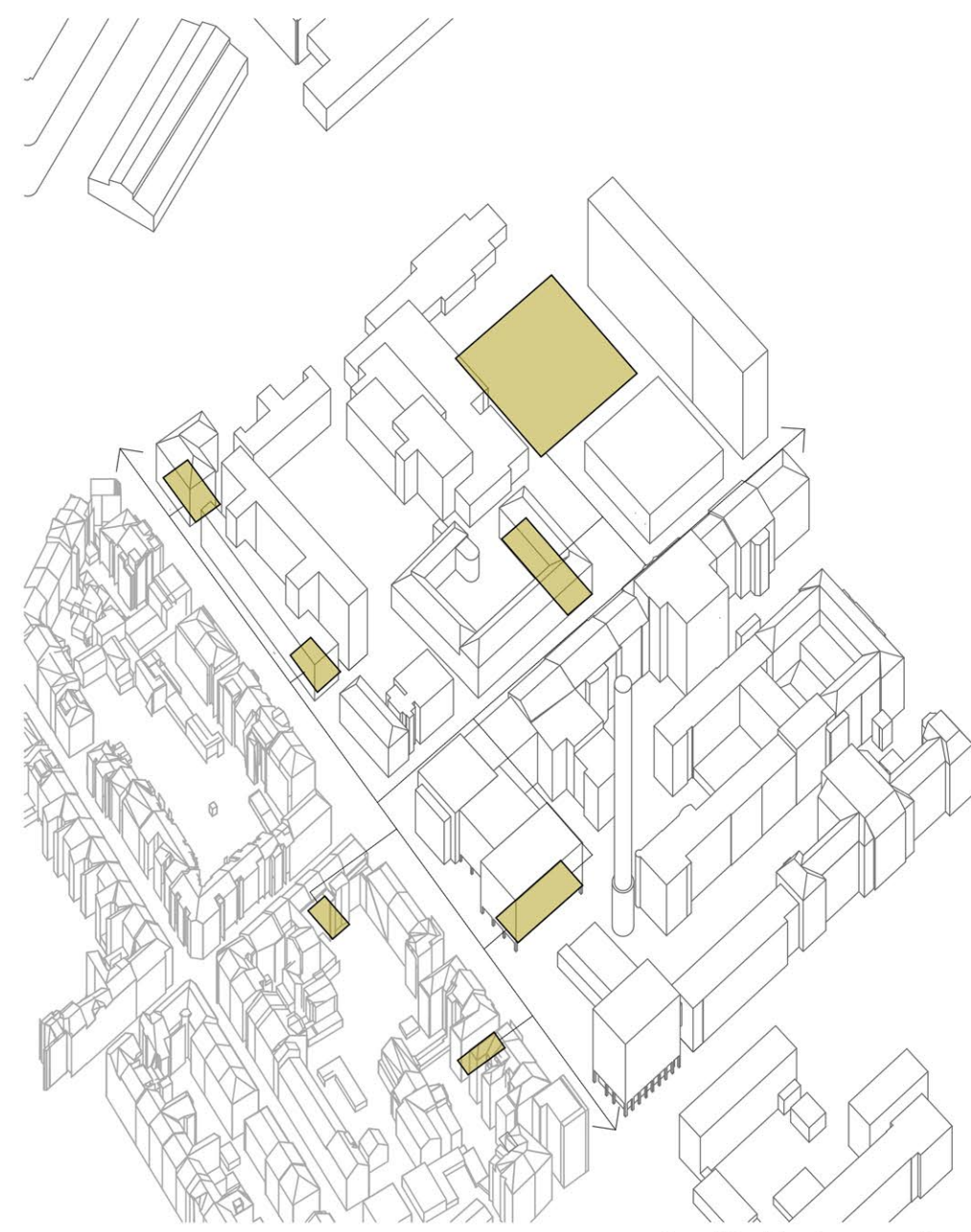
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Urban concept / Scale 1:2500



Common spaces' network



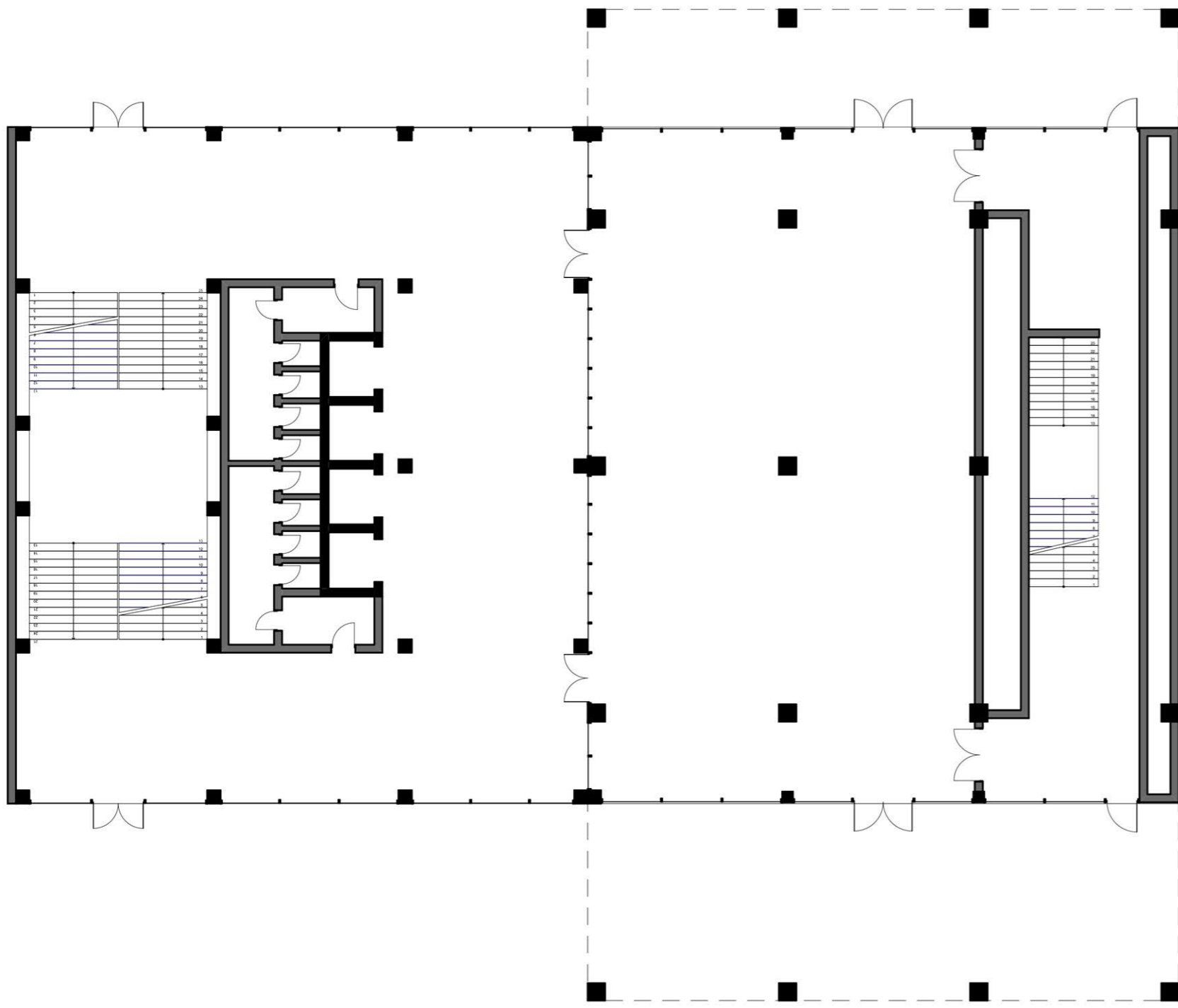
Activity's network



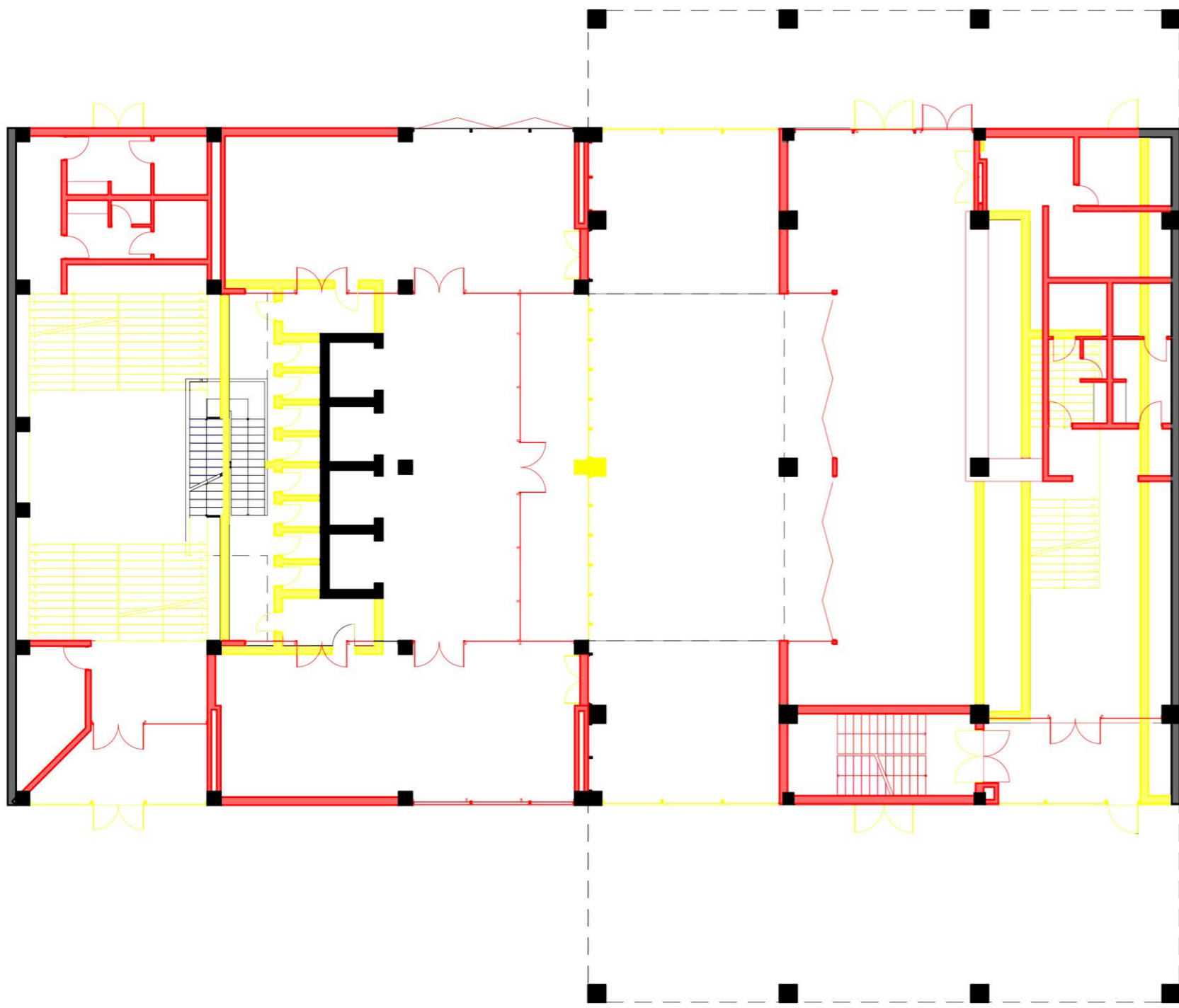
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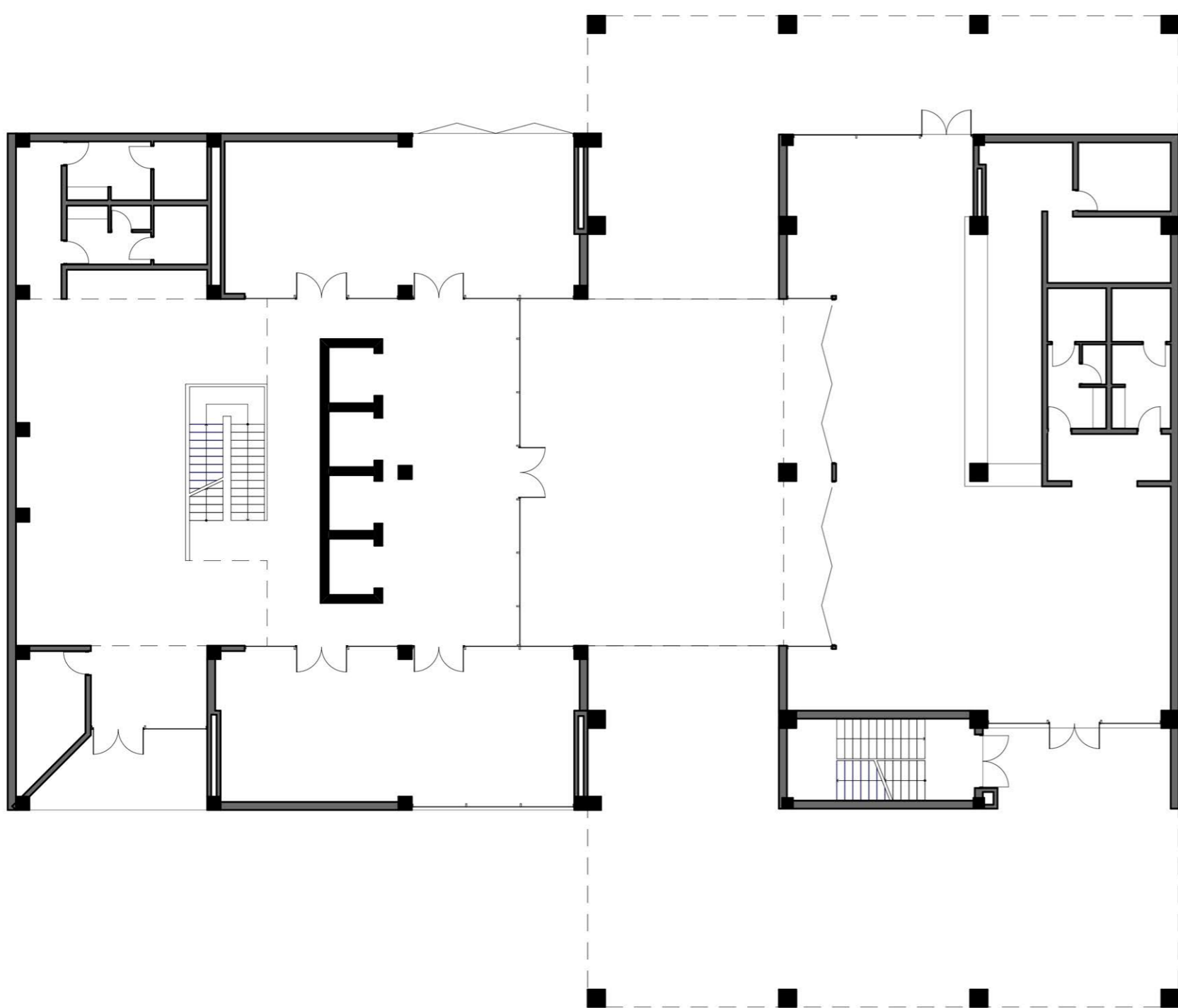
CURRENT



CHANGES

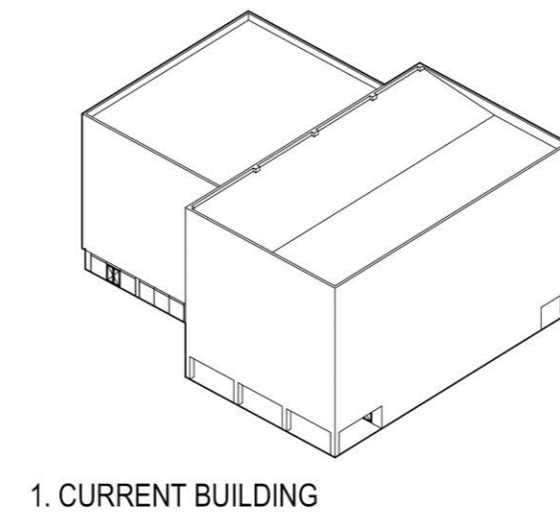


PROPOSAL

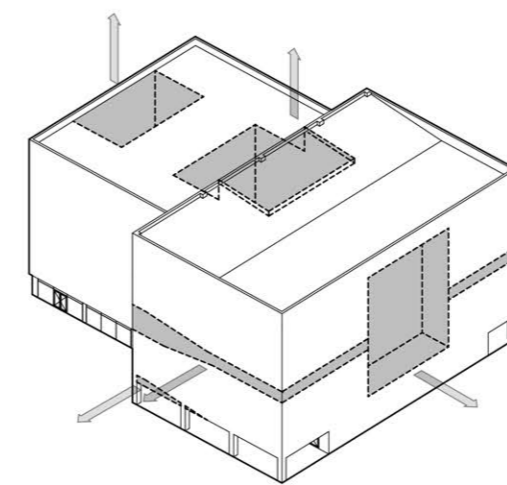


RED & YELLOW INTERVENTION / Scale 1:200

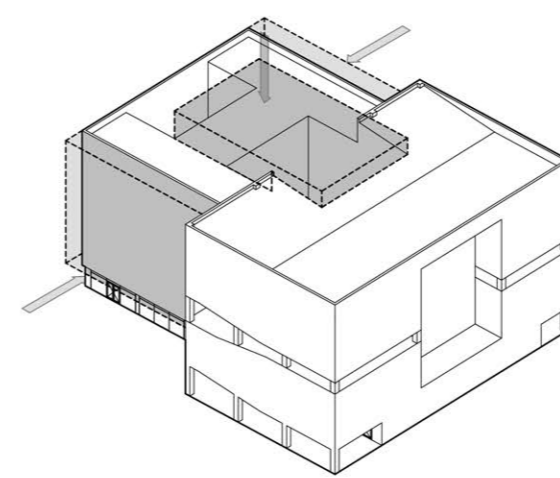
VOLUMETRIC COMPOSITION



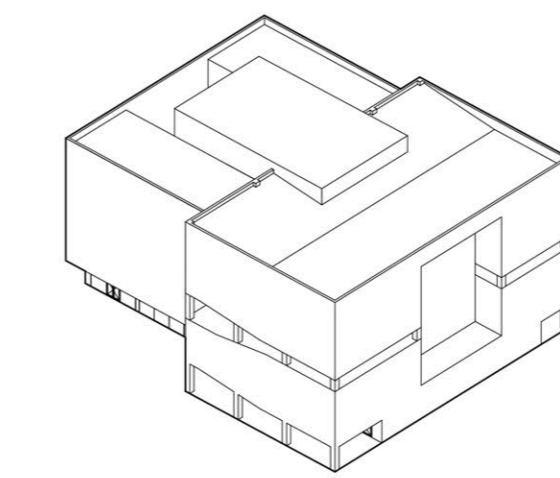
1. CURRENT BUILDING



2. SUBTRACTION

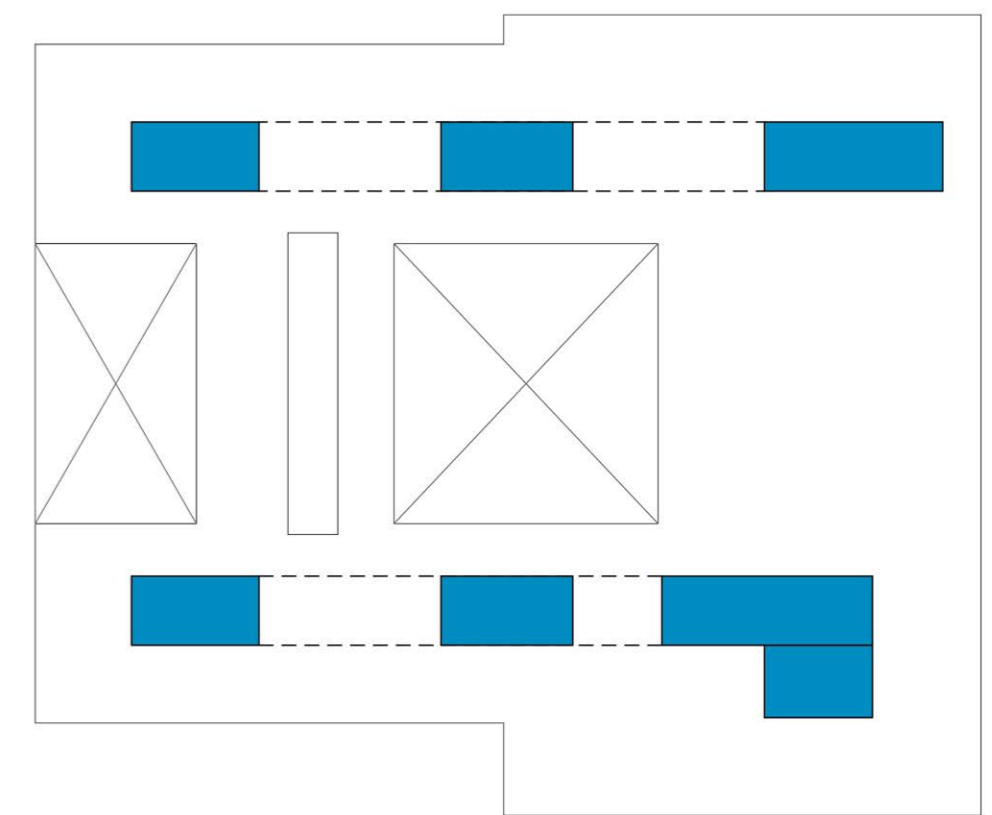


3. ADDITION

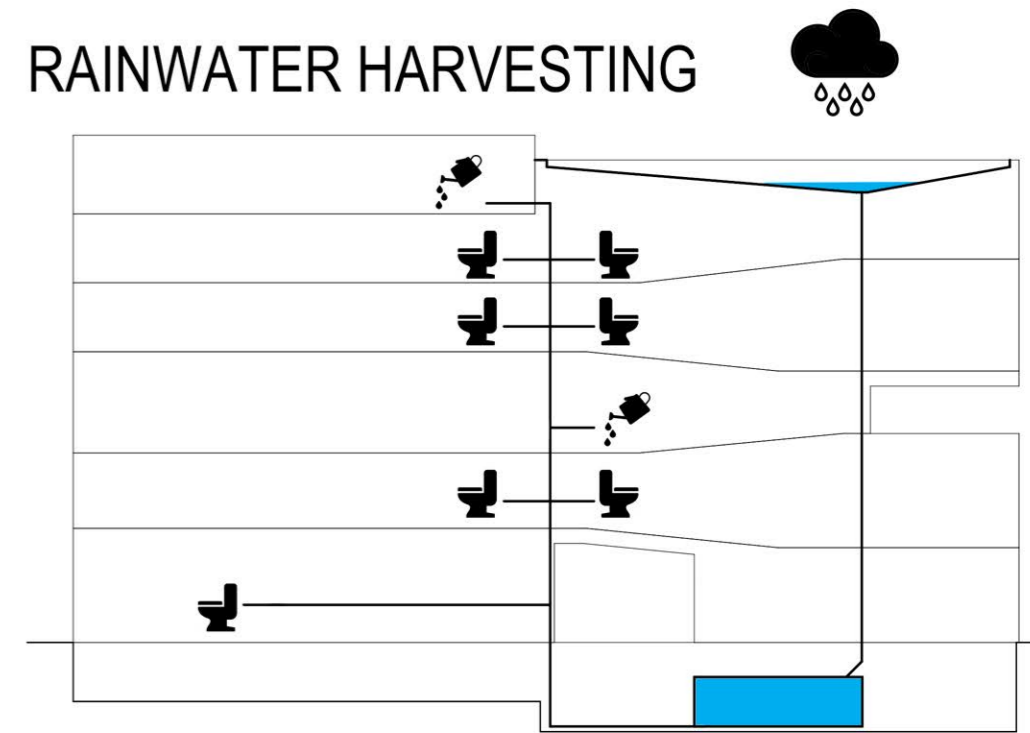


4. PROPOSAL

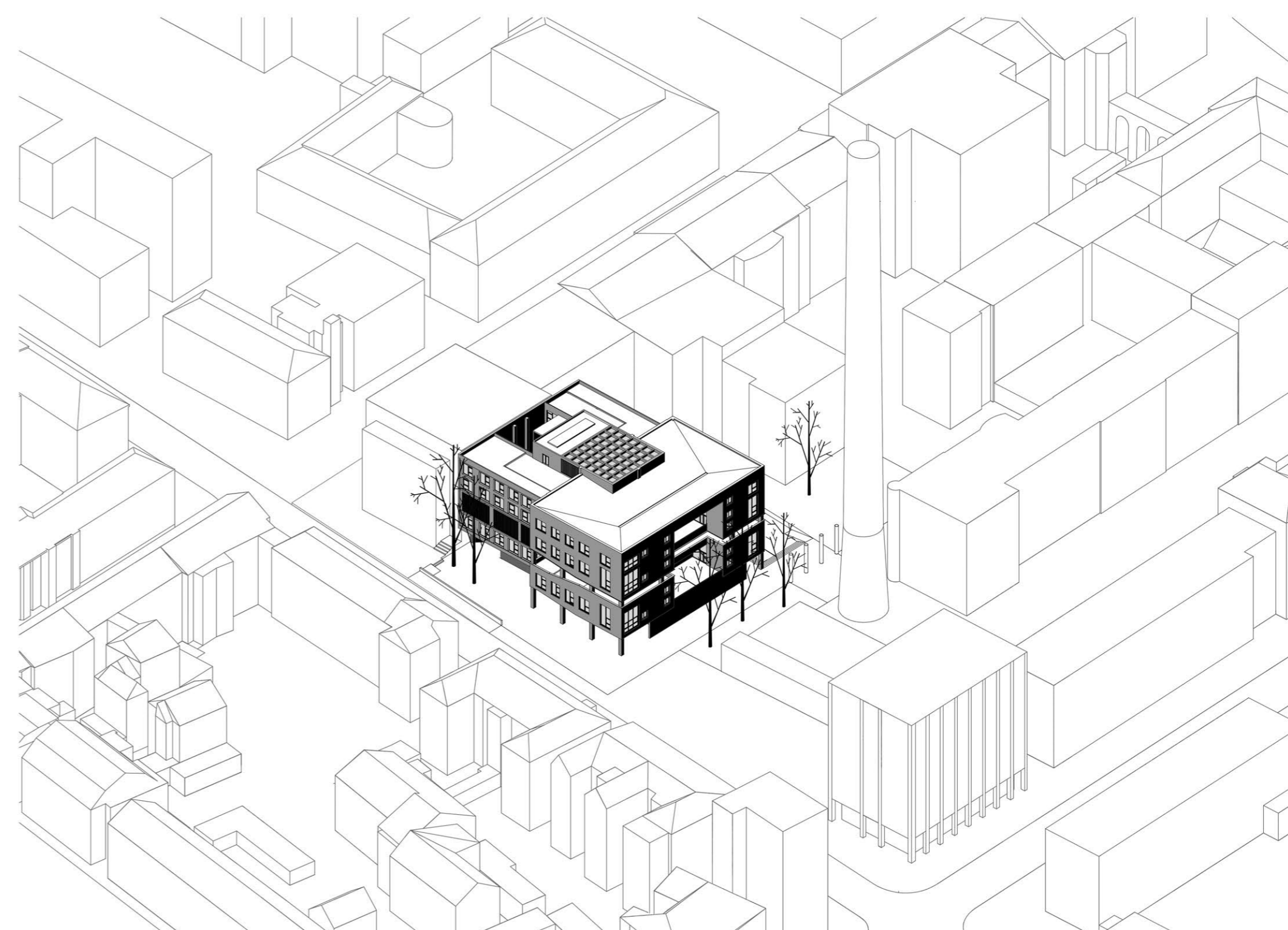
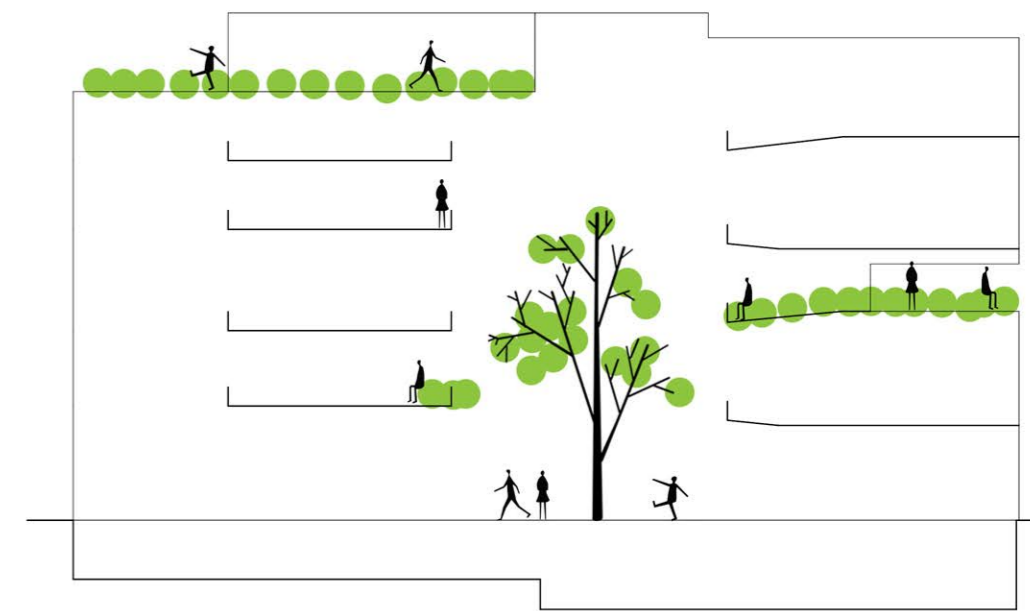
BAND WET CORE



RAINWATER HARVESTING

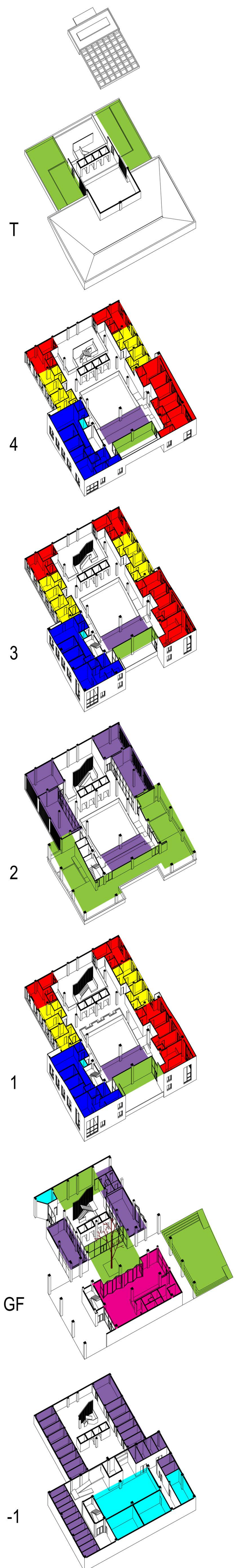


INNER GREENERY



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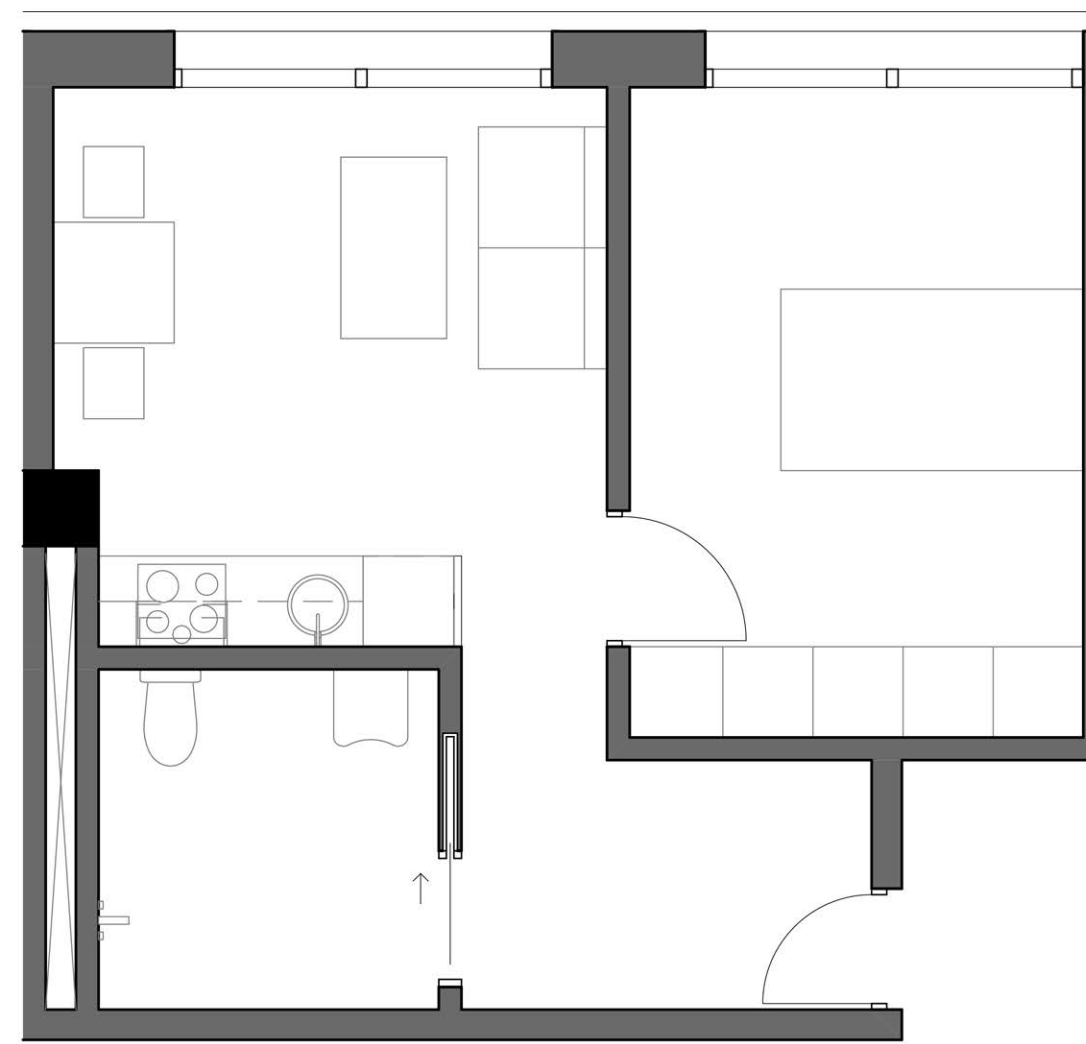


PROGRAM AXONOMETRY

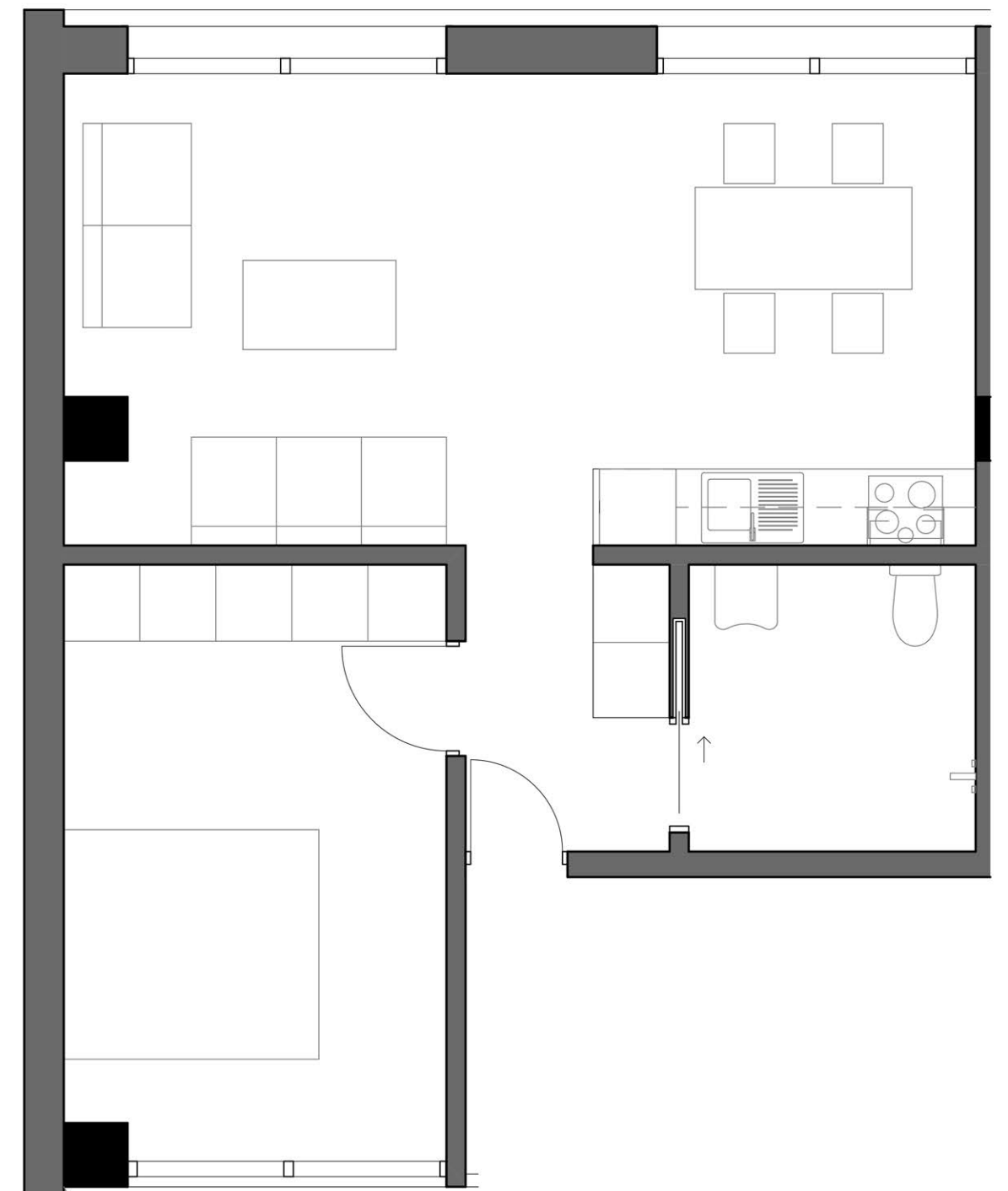
- | | | |
|---|--|--|
| Typology A (Single) | Common area - conditioned
Kitchen + Dining room
Co-working
Laundry
Fitness room
Multifunctional room
Lounge | Coffee |
| Typology B (Couple) | | |
| Typology C (Family) | | |
| Technical room - installations | Common area - non conditioned
Courtyard
Terrace
Plaza | |

HOUSING TYPE

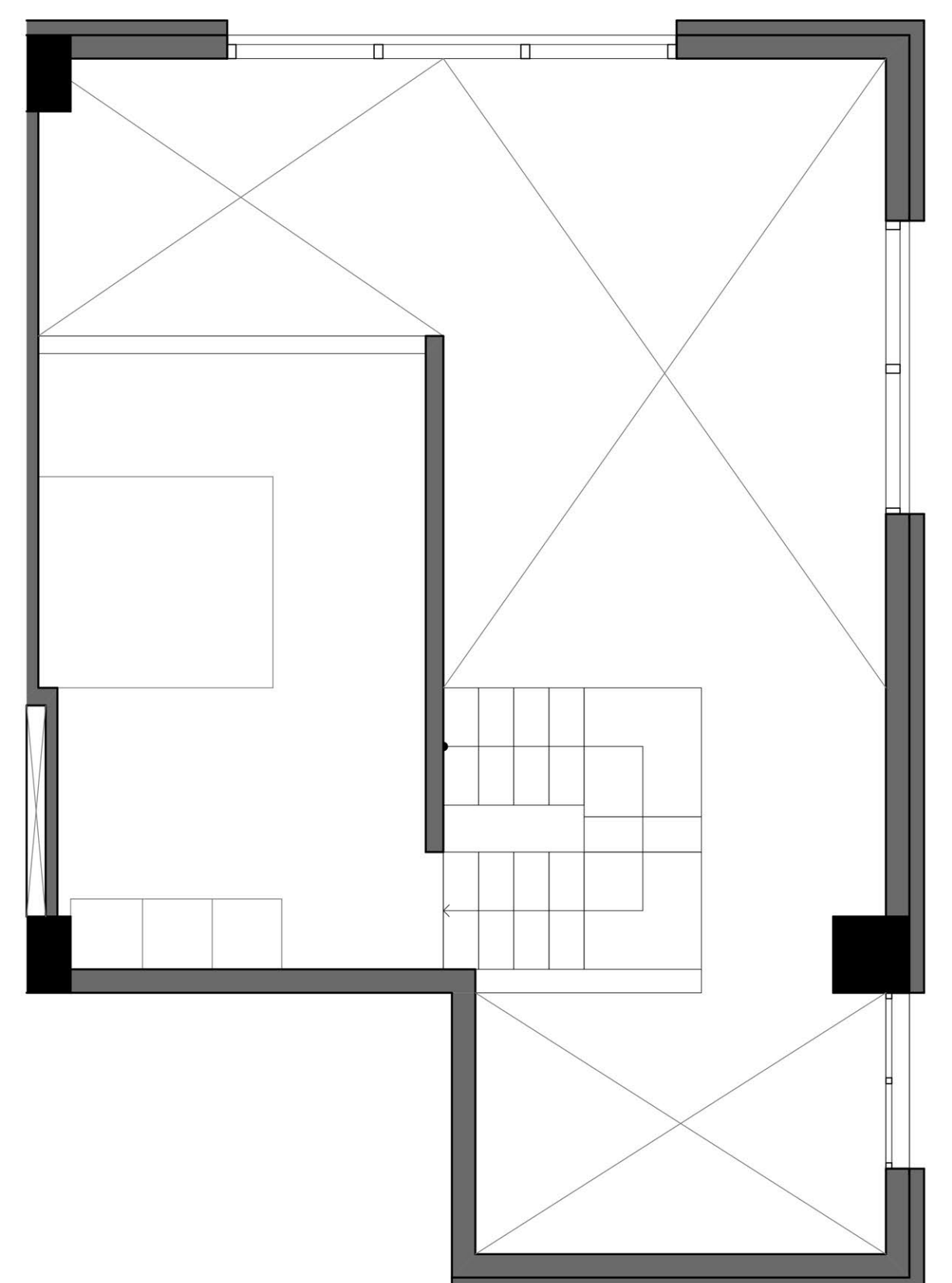
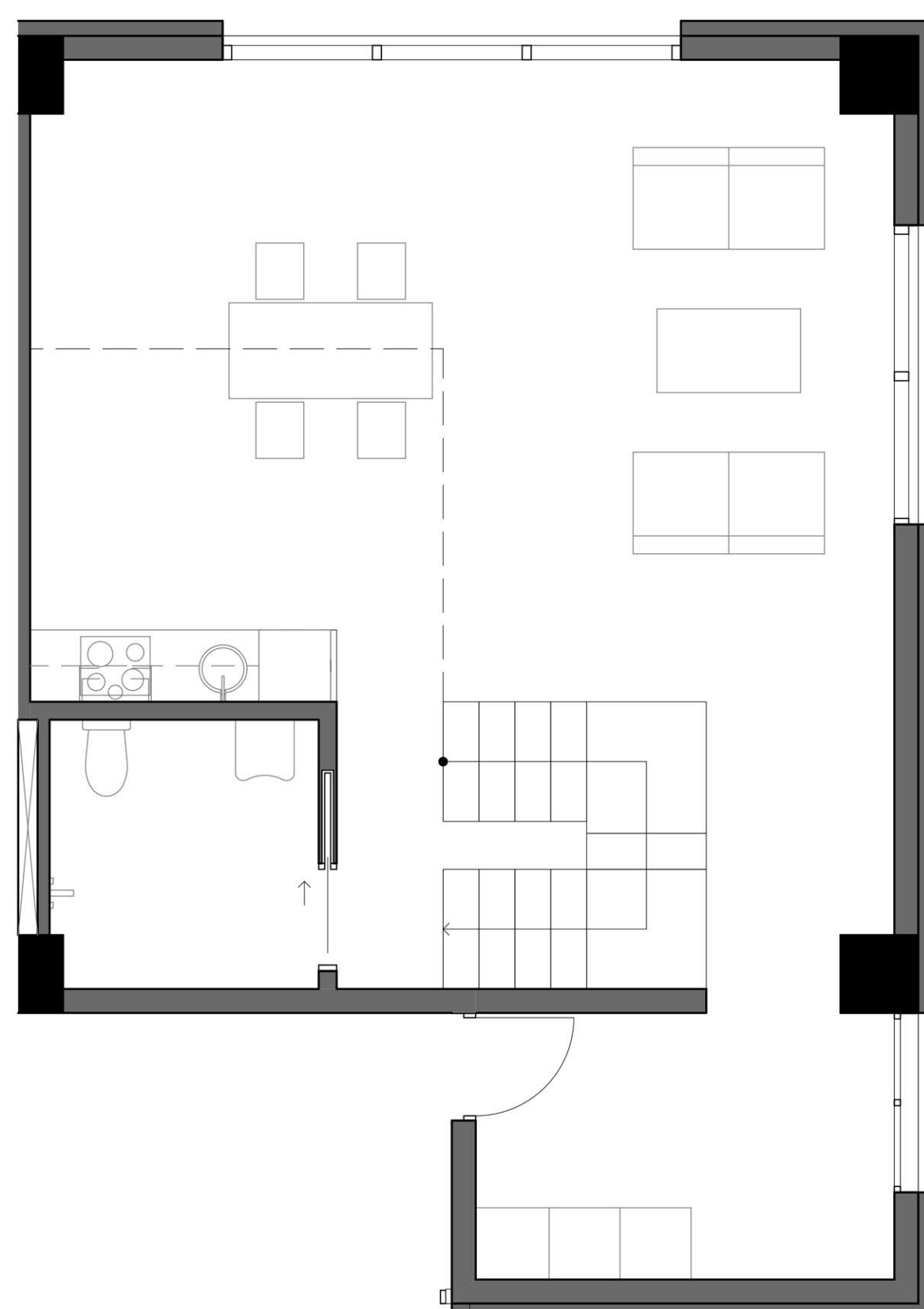
Typology A (Single) - 44,67 sqm



Typology B (Couple) - 59,81 sqm



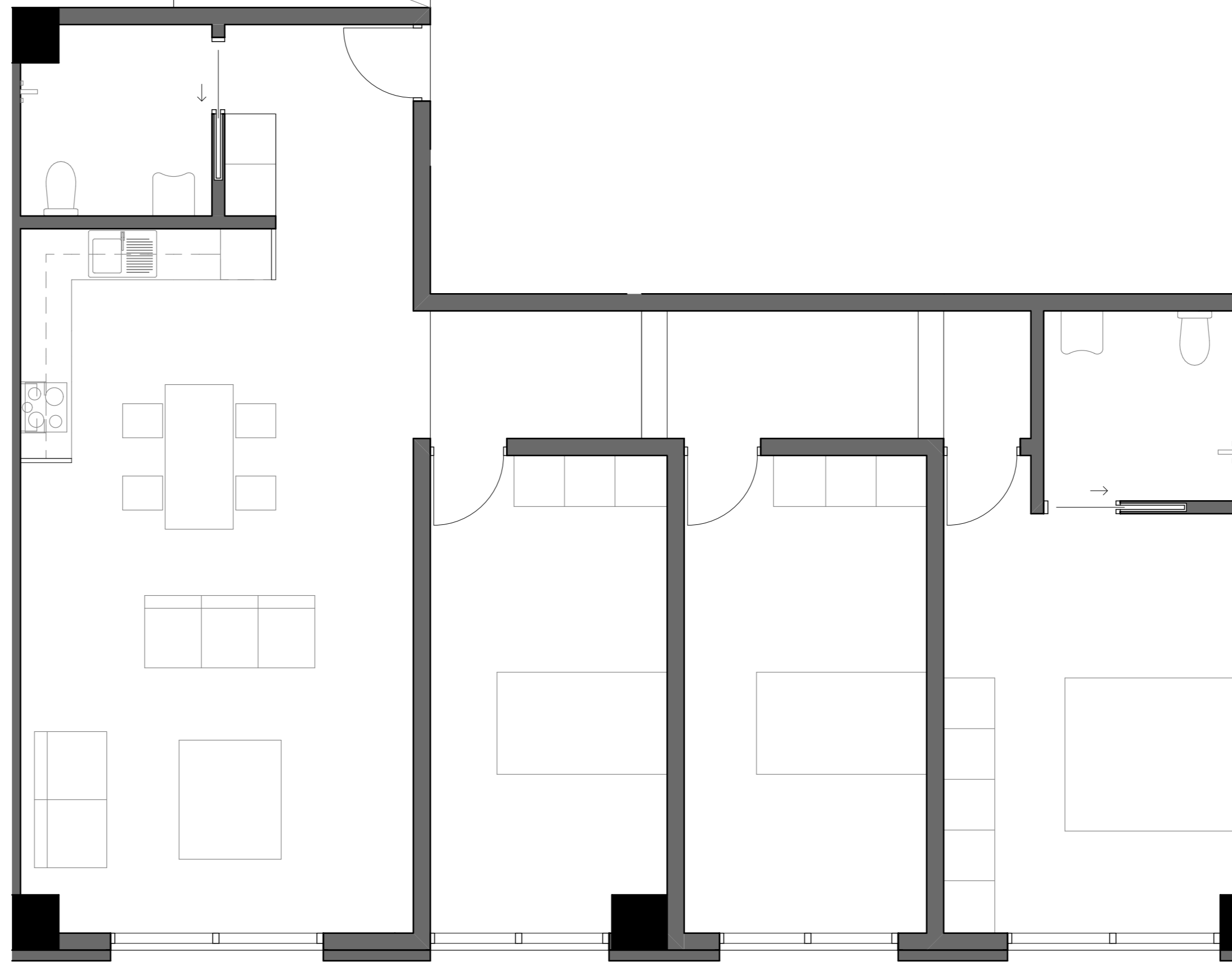
Typology B (Couple) / loft type - 91,09 sqm



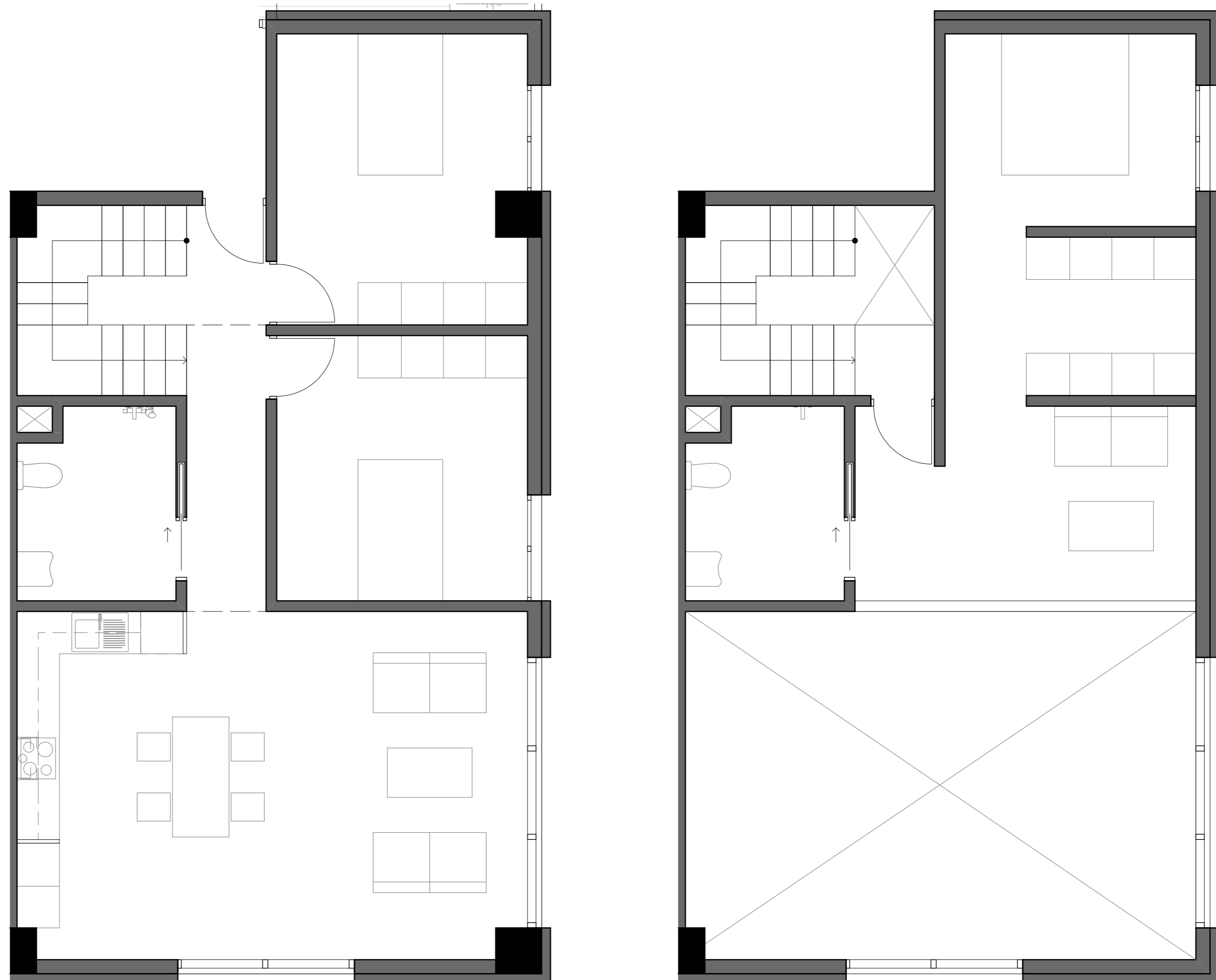
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Typology C (Family) - 131,05 sqm



Typology C (Family) / loft type - 137,97 sqm

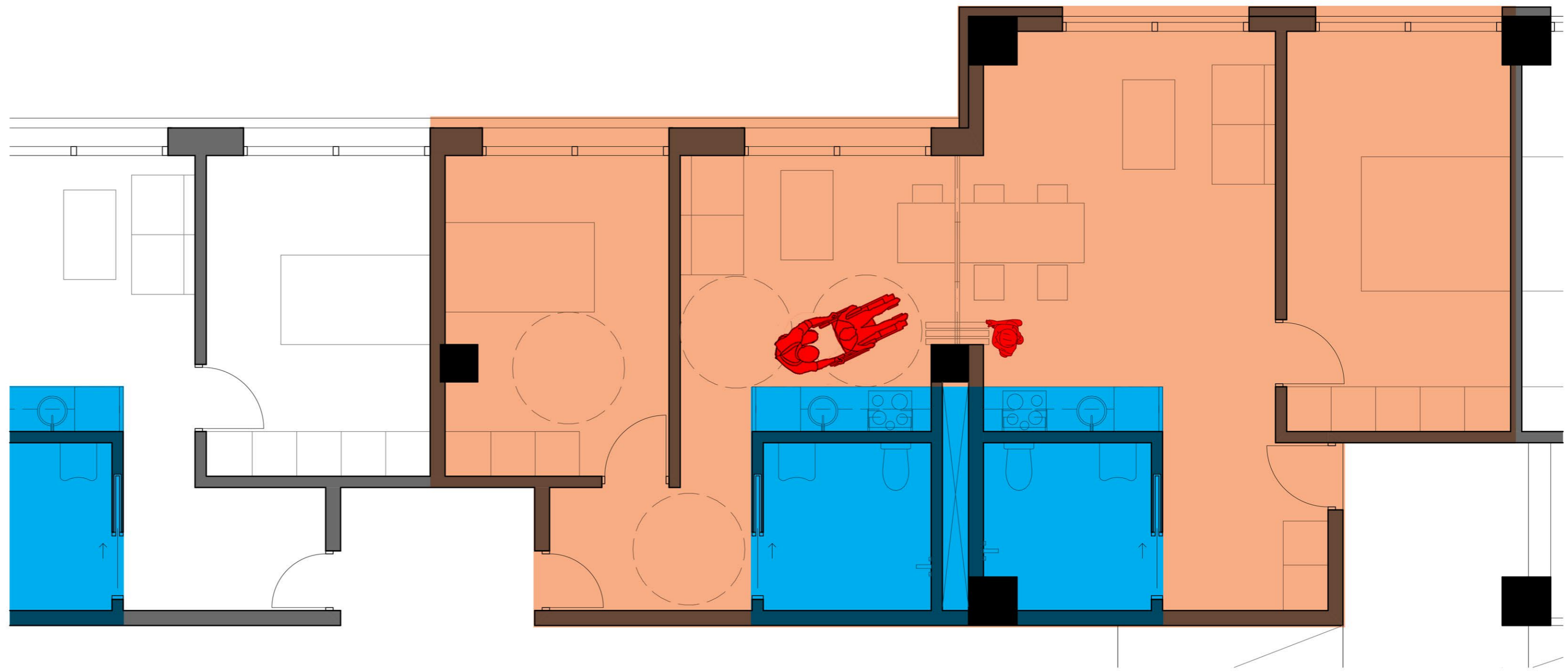


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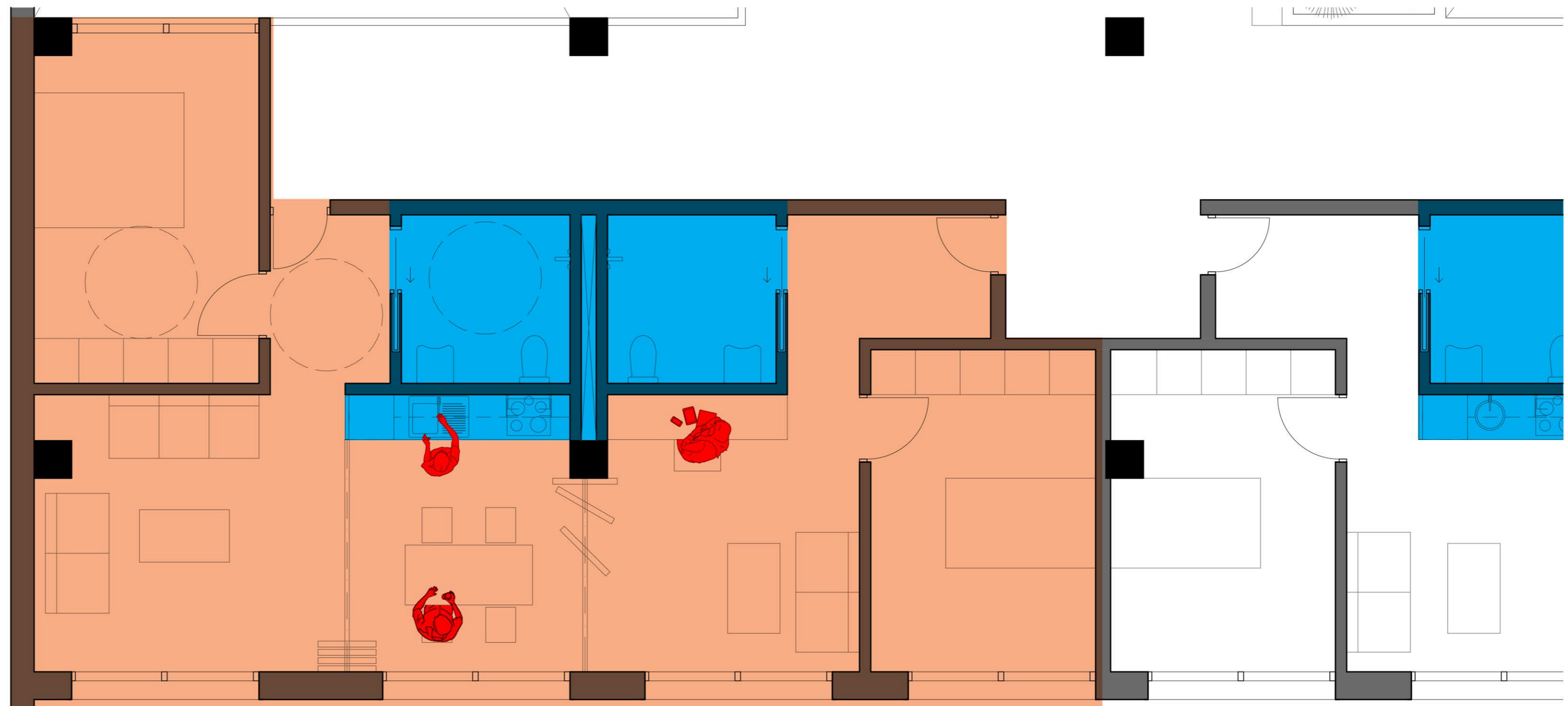
EXAMPLE 1 - SHARED DINNING

Disabled or elder resident +
Young couple



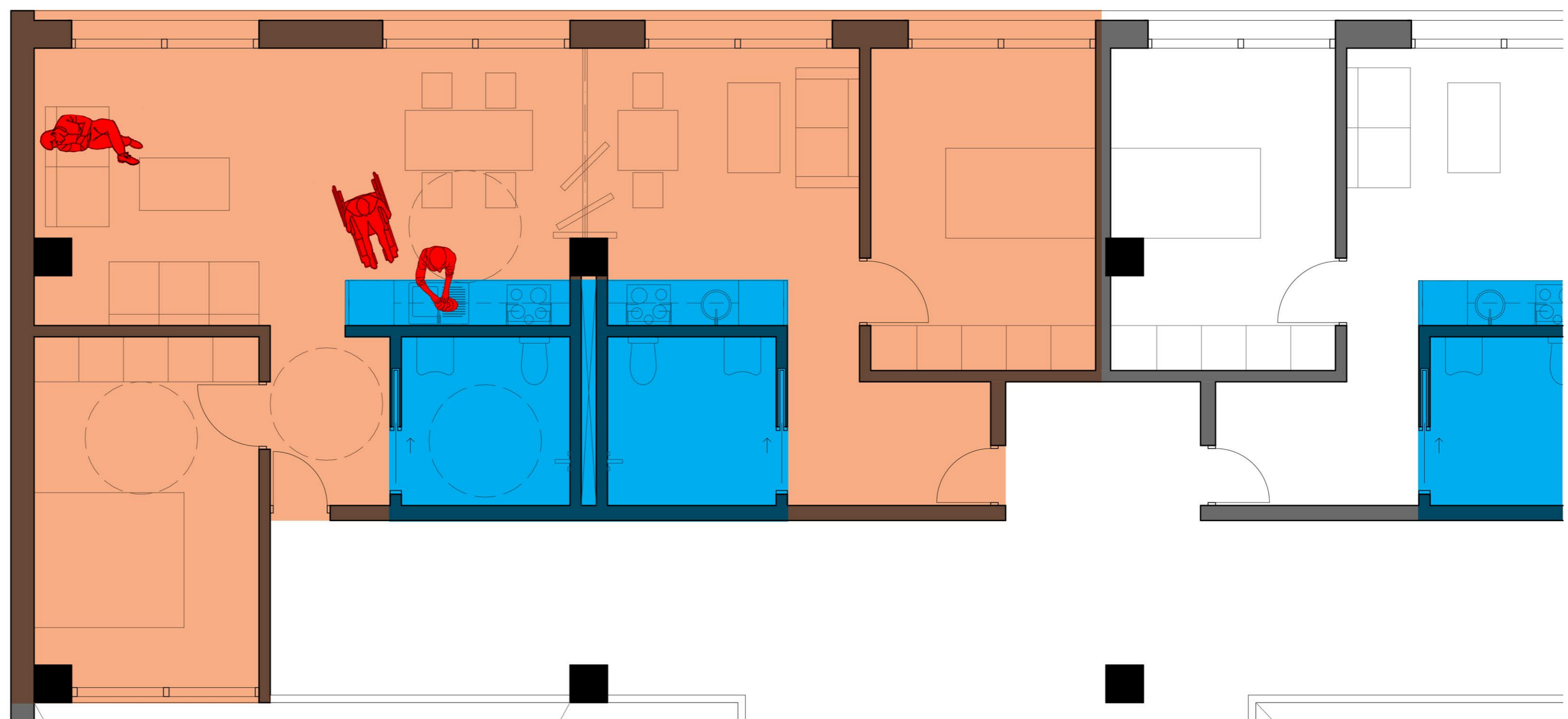
EXAMPLE 2 - SHARED KITCHEN

Disabled or elder couple +
Young adult



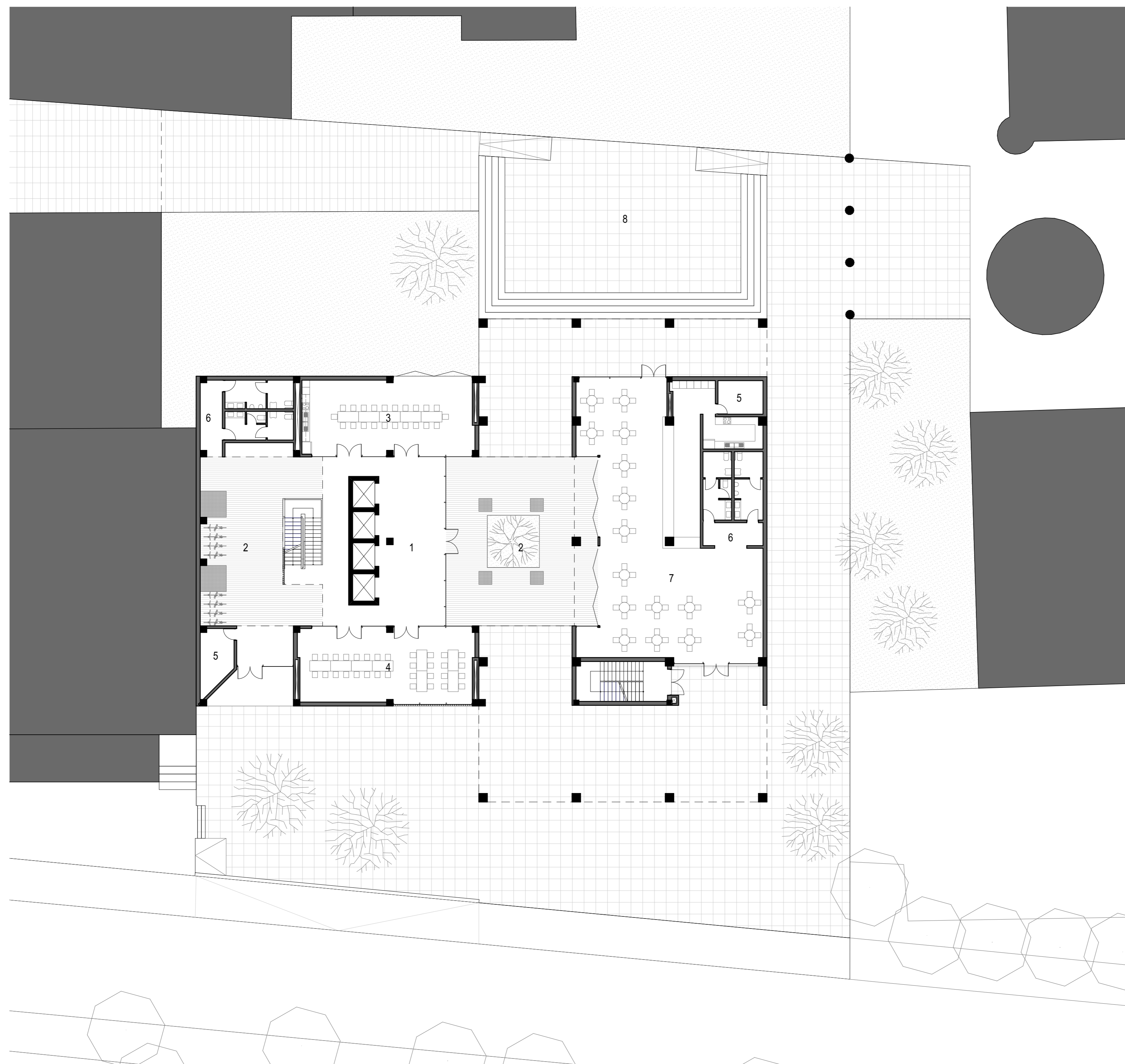
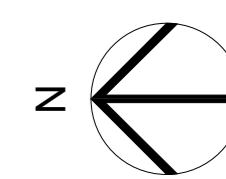
EXAMPLE 2 - SHARED DINNING

Disabled or elder couple +
Young adult



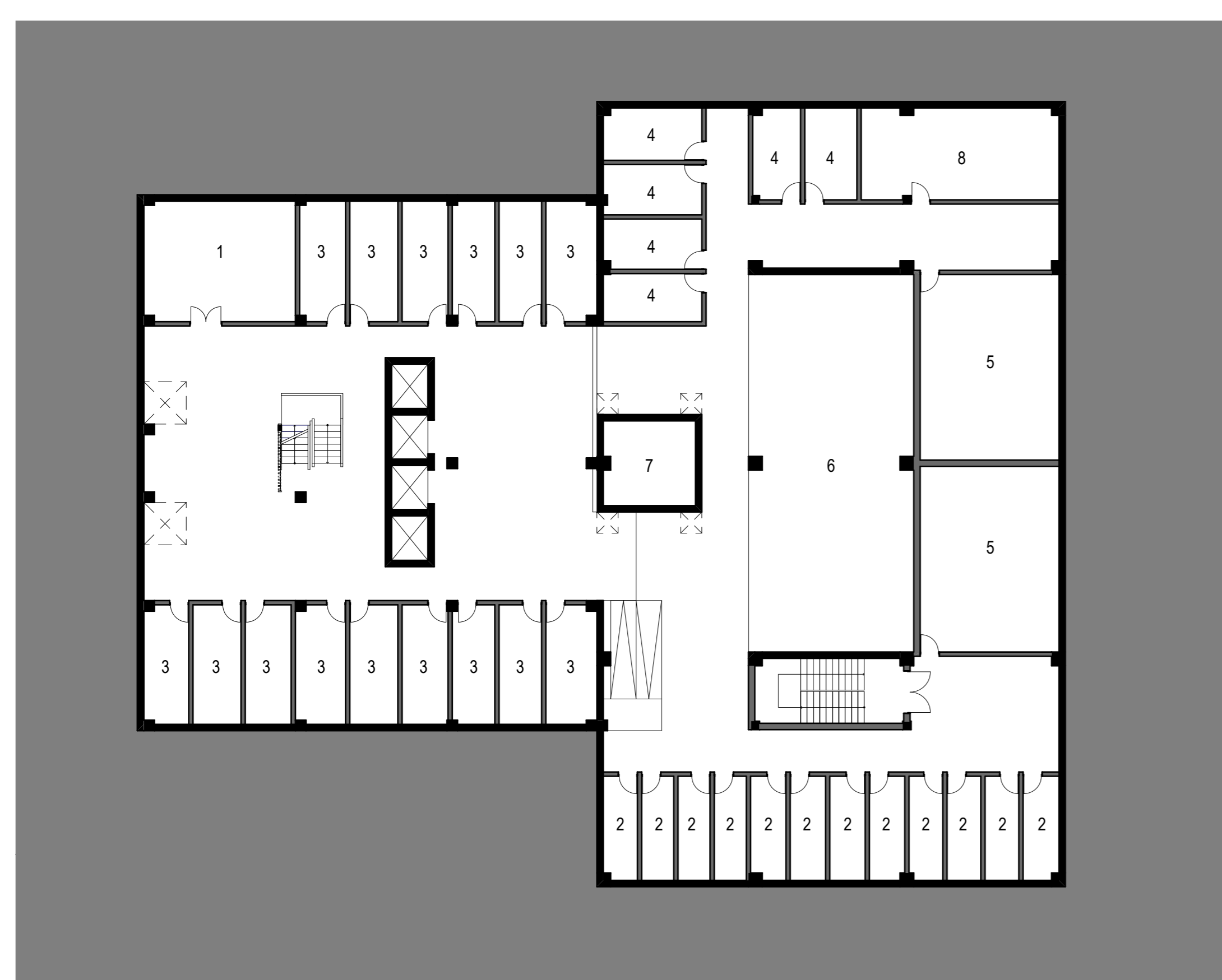
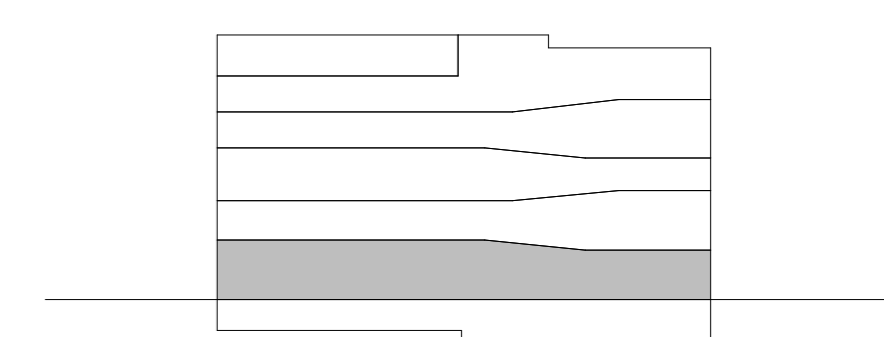
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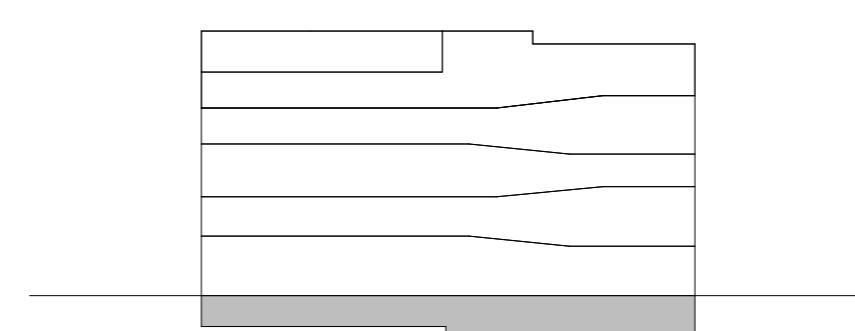
GROUND FLOOR

- 1 Hall
- 2 Inner patio
- 3 Communal kitchen
- 4 Co working room
- 5 Storage
- 6 Restrooms
- 7 Coffee
- 8 Plaza



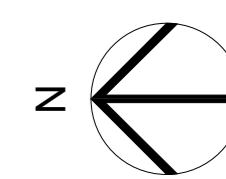
-1. LEVEL

- 1 Laundry room
- 2 Single housing unit's storage
- 3 Couple housing unit's storage
- 4 Family housing unit's storage
- 5 Facilities room
- 6 Rainwater tank
- 7 Tree's pot
- 8 Storage



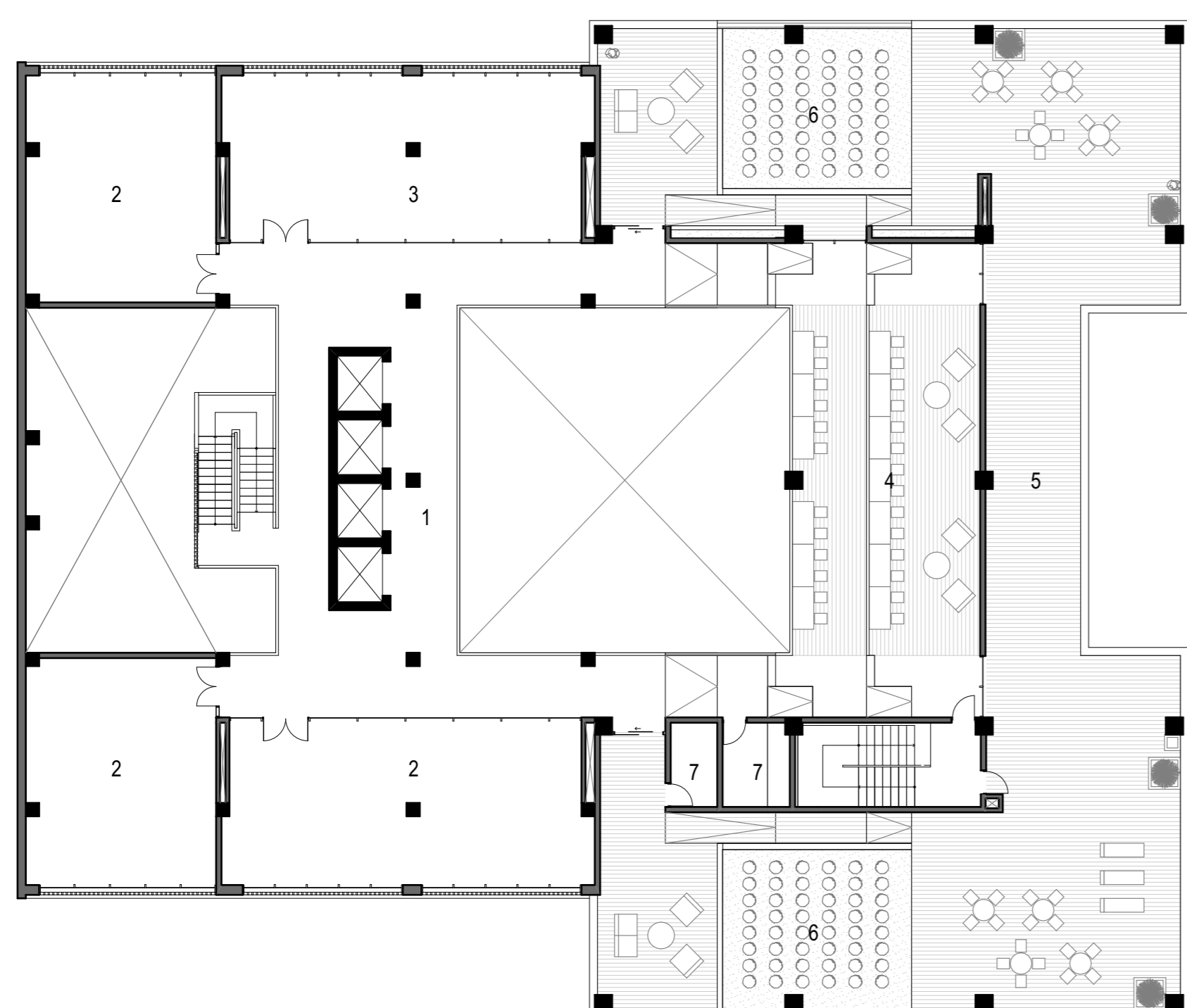
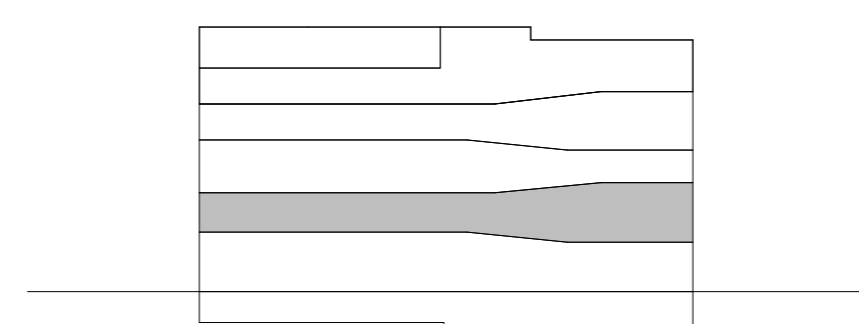
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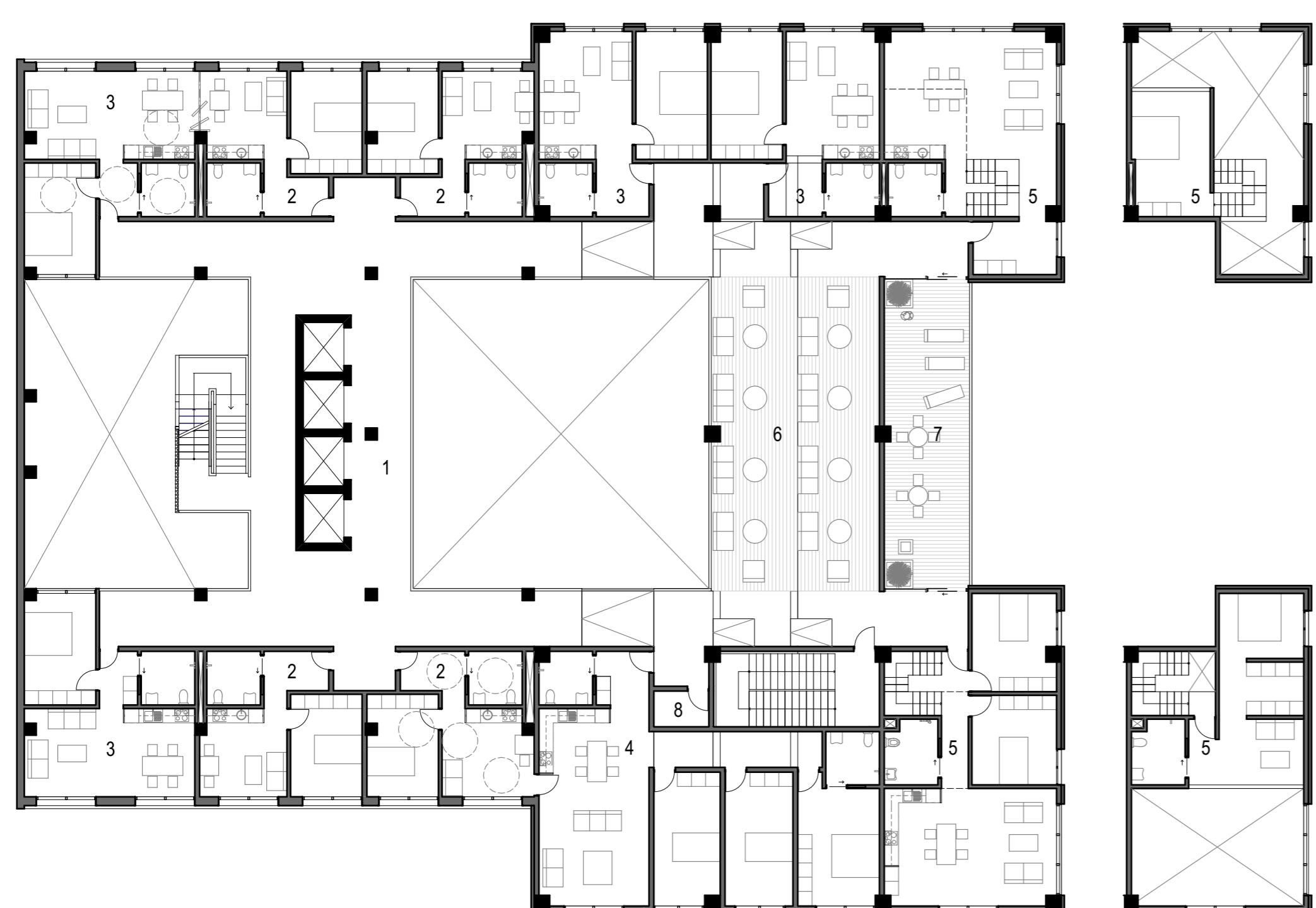
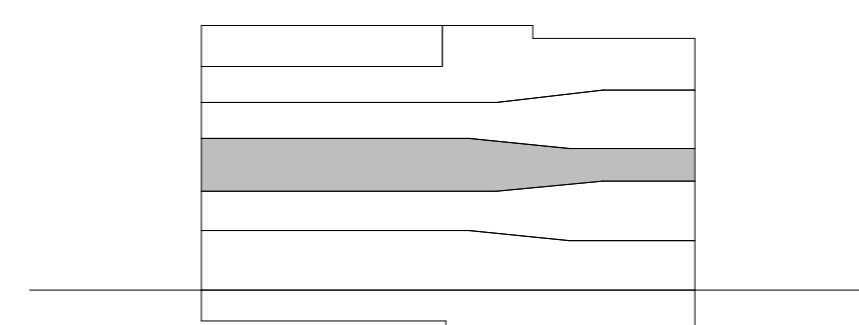
1. LEVEL

- 1 Hall
- 2 Single housing unit
- 3 Couple housing unit
- 4 Family housing unit
- 5 Double height housing unit
- 6 Lounge
- 7 Common terrace
- 8 Storage



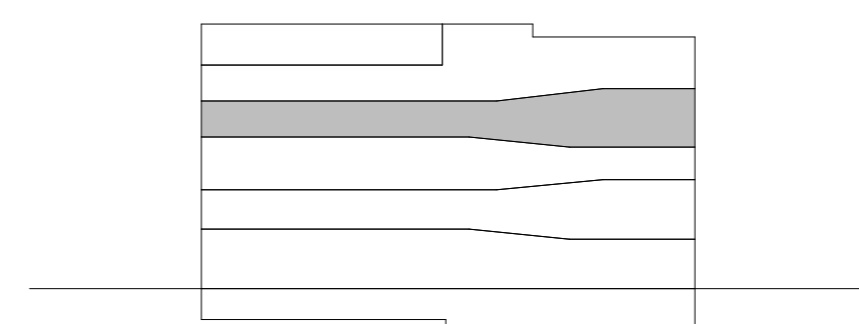
2. LEVEL

- 1 Hall
- 2 Fitness room
- 3 Multifunctional area
- 4 Common study
- 5 Common terrace
- 6 Garden
- 7 Storage

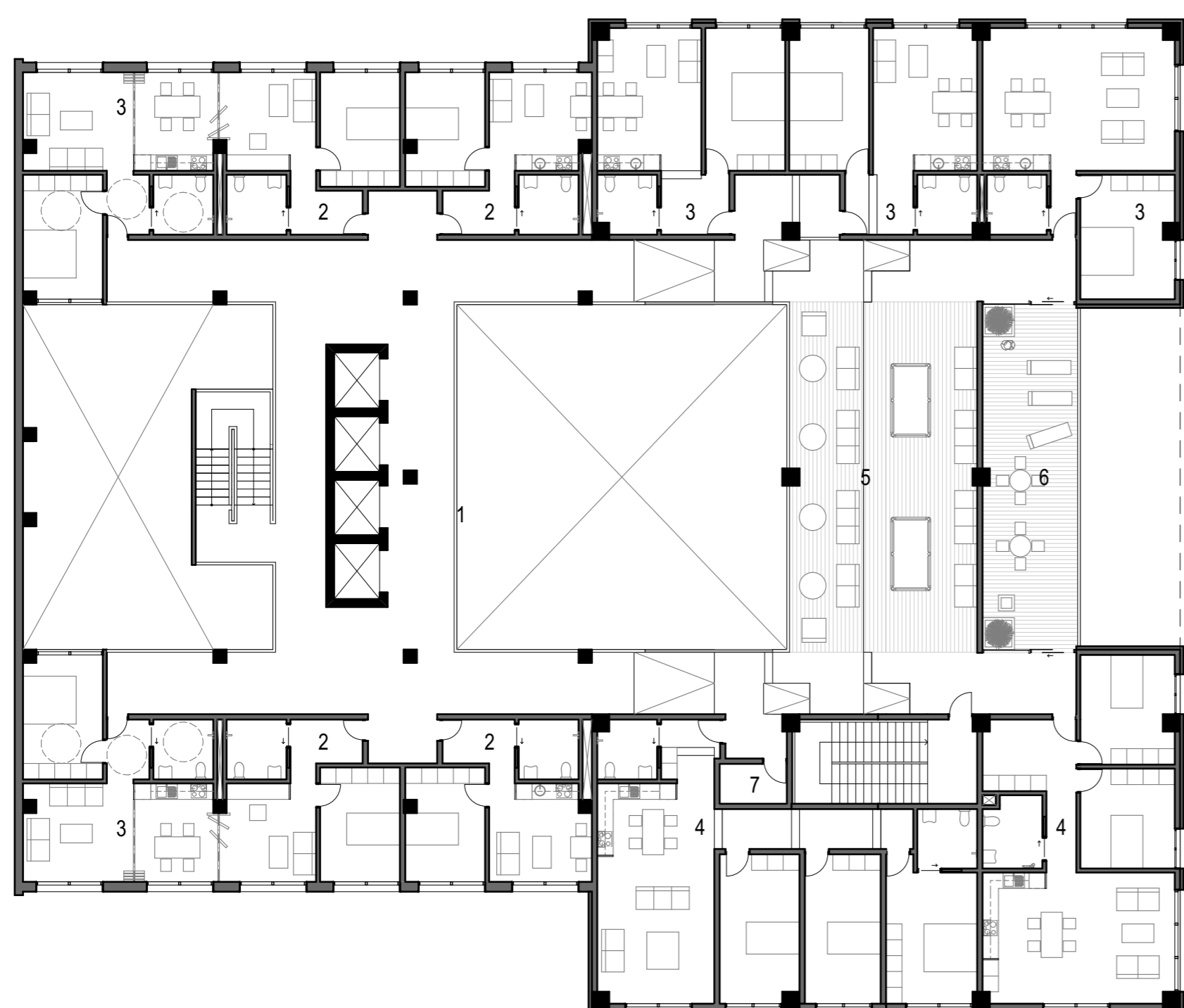
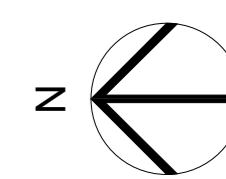


3. LEVEL

- 1 Hall
- 2 Single housing unit
- 3 Couple housing unit
- 4 Family housing unit
- 5 Double height housing unit
- 6 Lounge
- 7 Common terrace
- 8 Storage

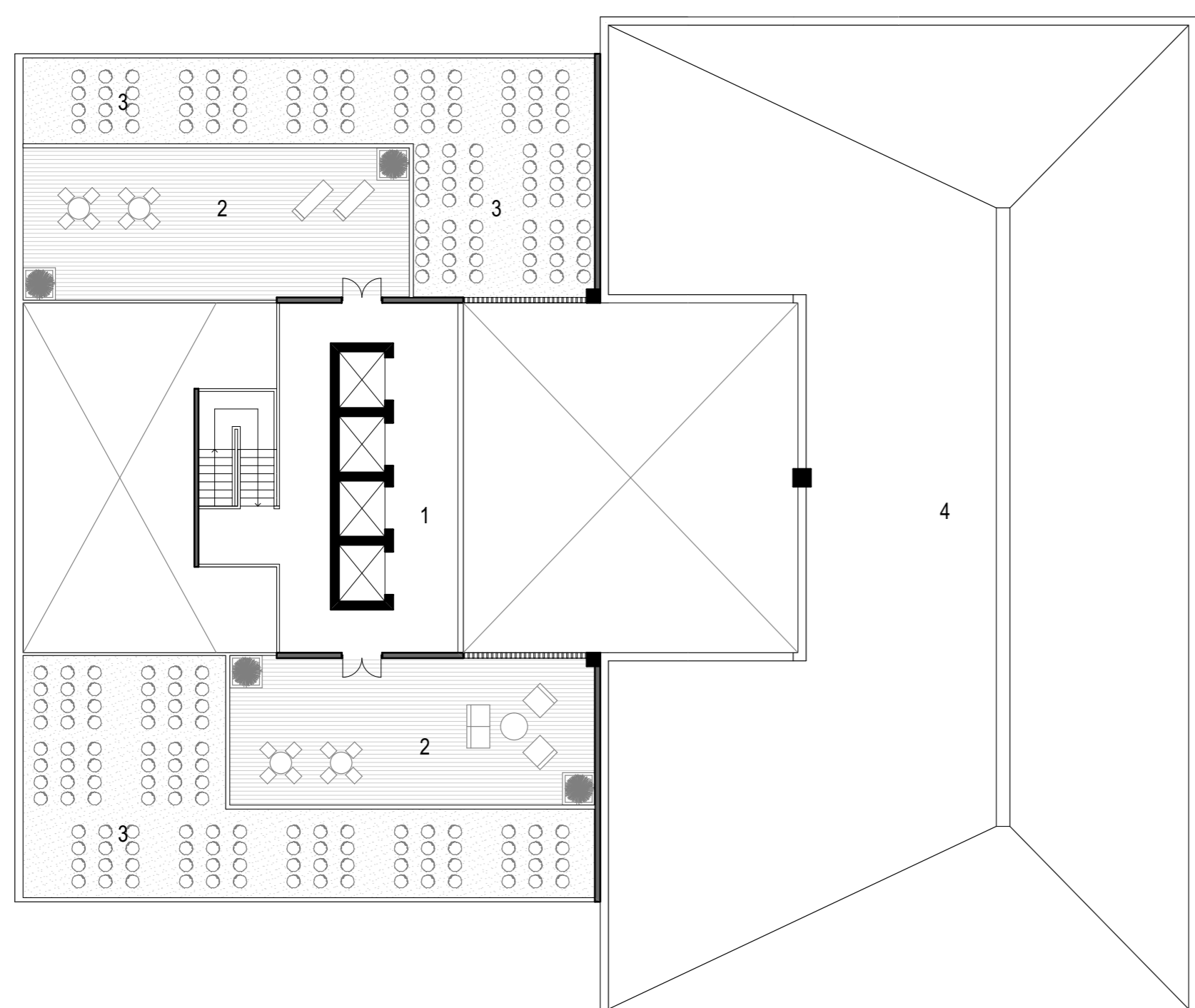
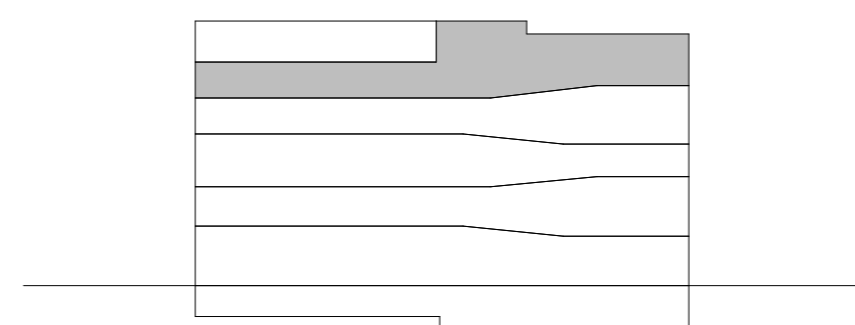


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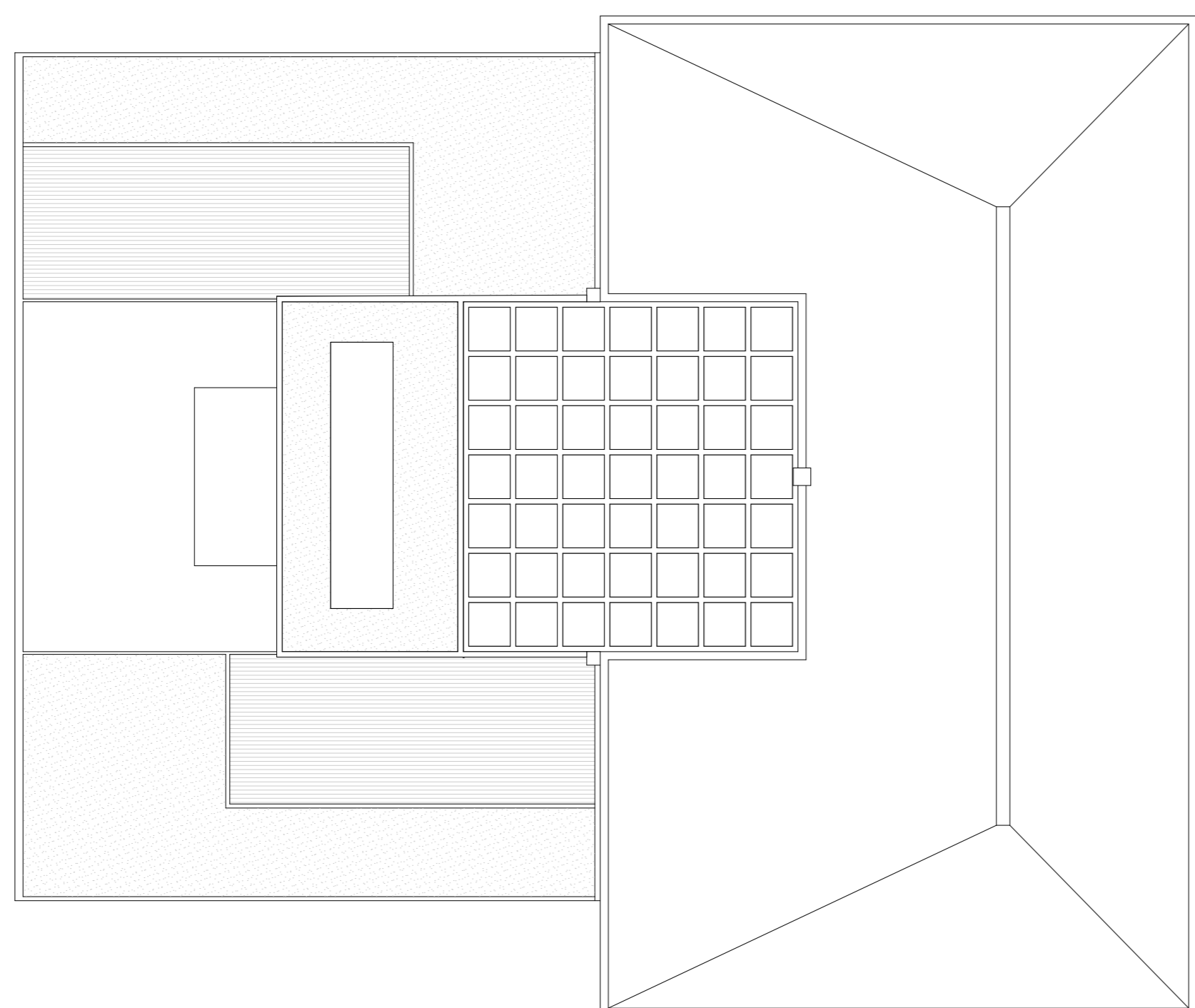
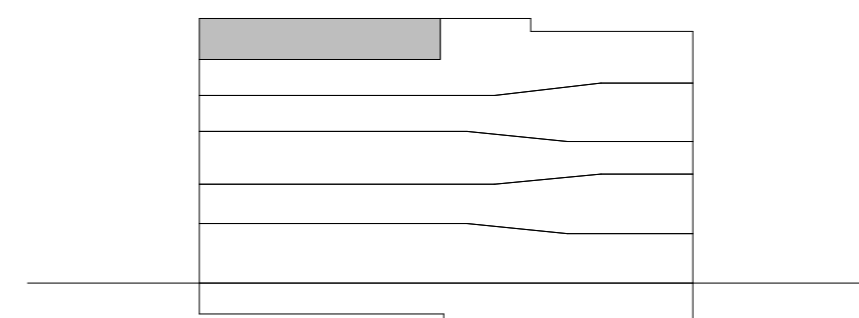
4. LEVEL

- 1 Hall
- 2 Single housing unit
- 3 Couple housing unit
- 4 Family housing unit
- 5 Lounge
- 6 Common terrace
- 7 Storage

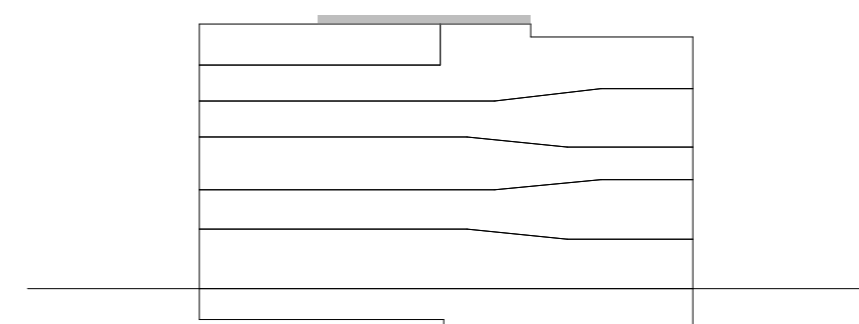


5. LEVEL

- 1 Hall
- 2 Common terrace
- 3 Garden
- 4 Rainwater harvesting roof



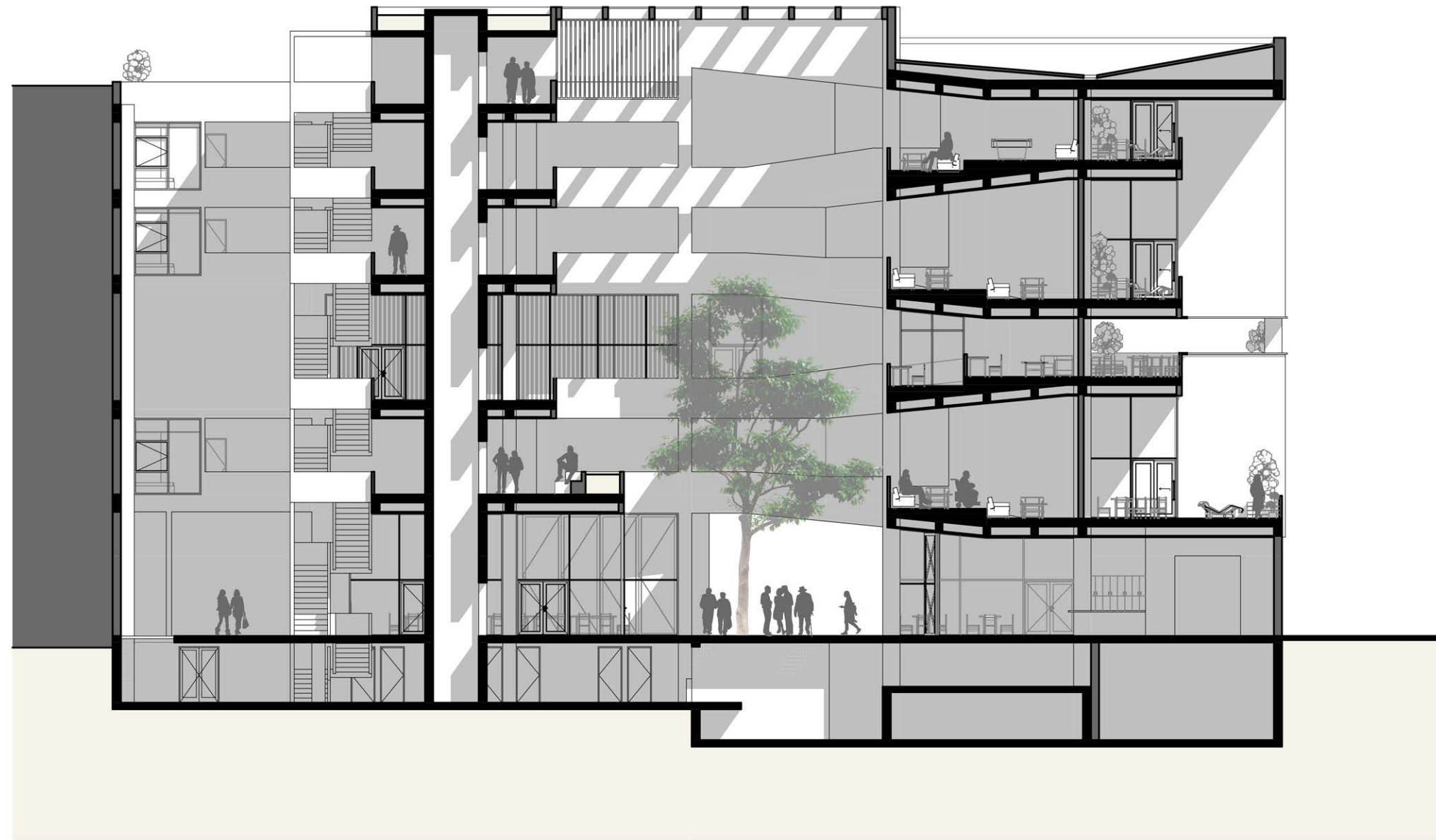
6. ROOF



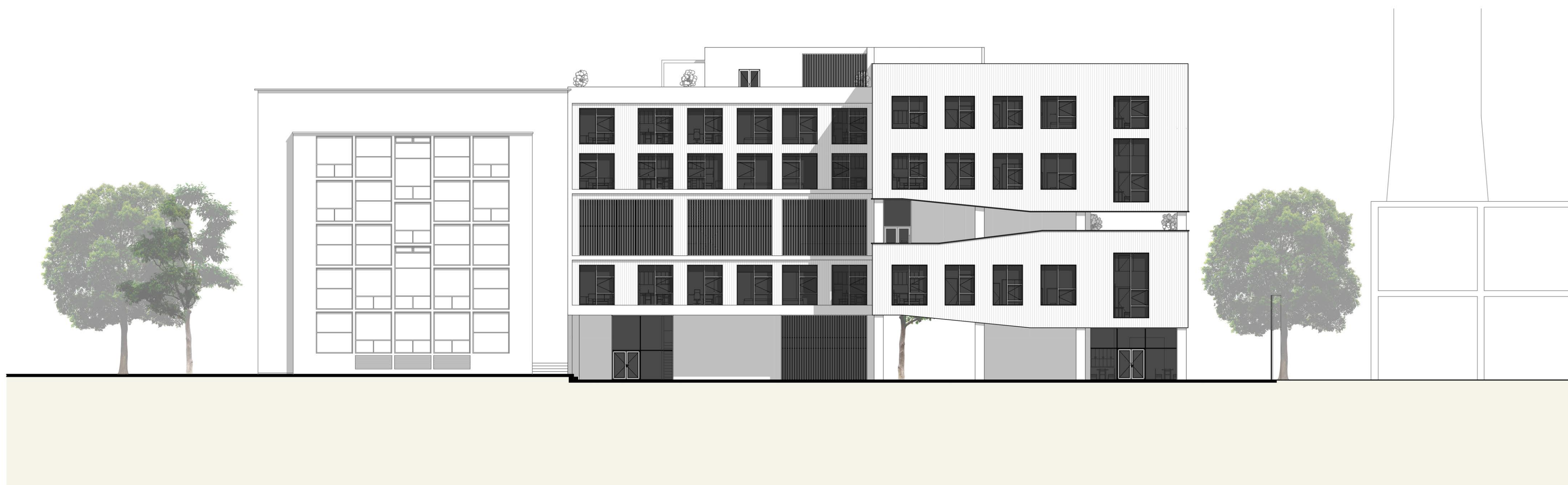
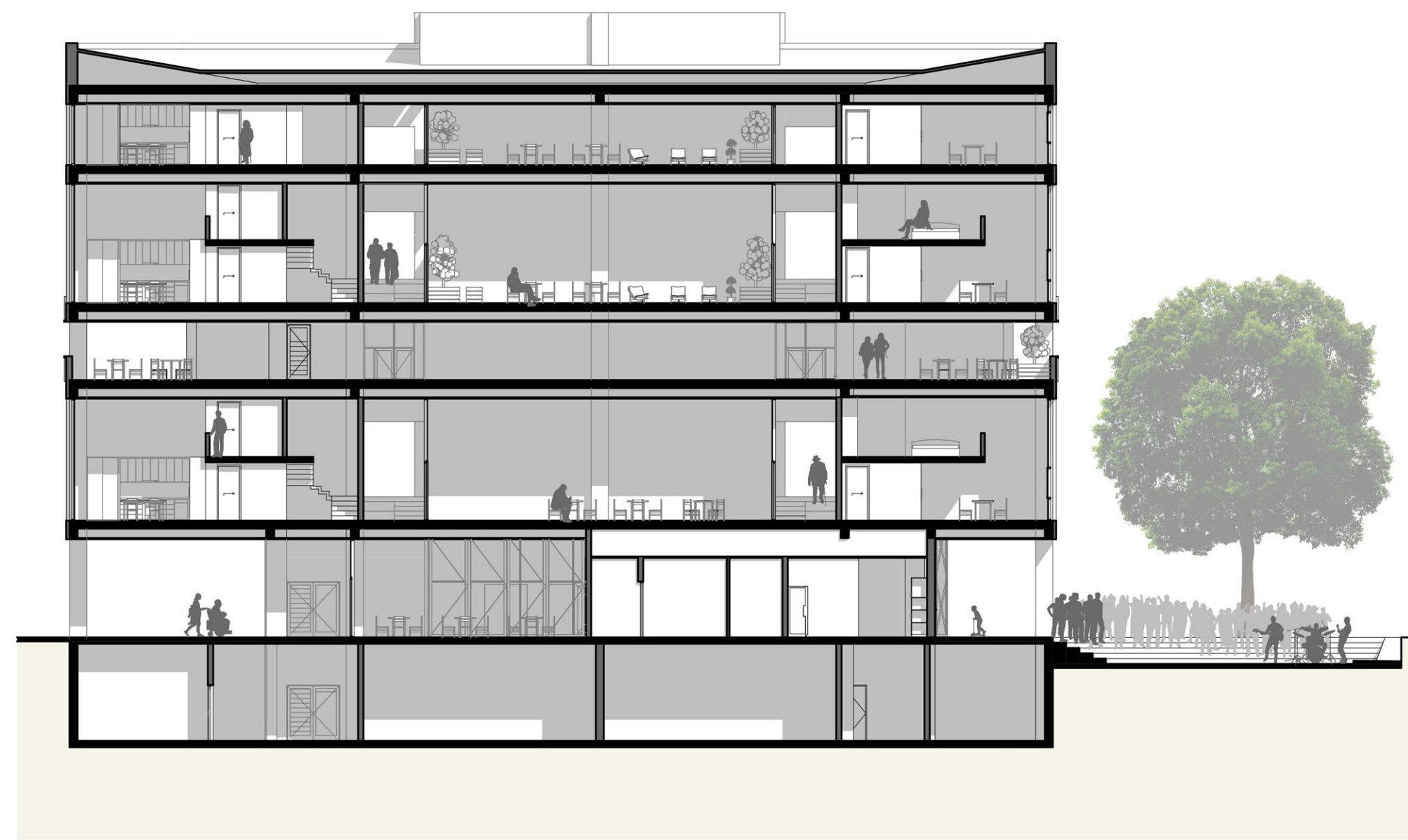
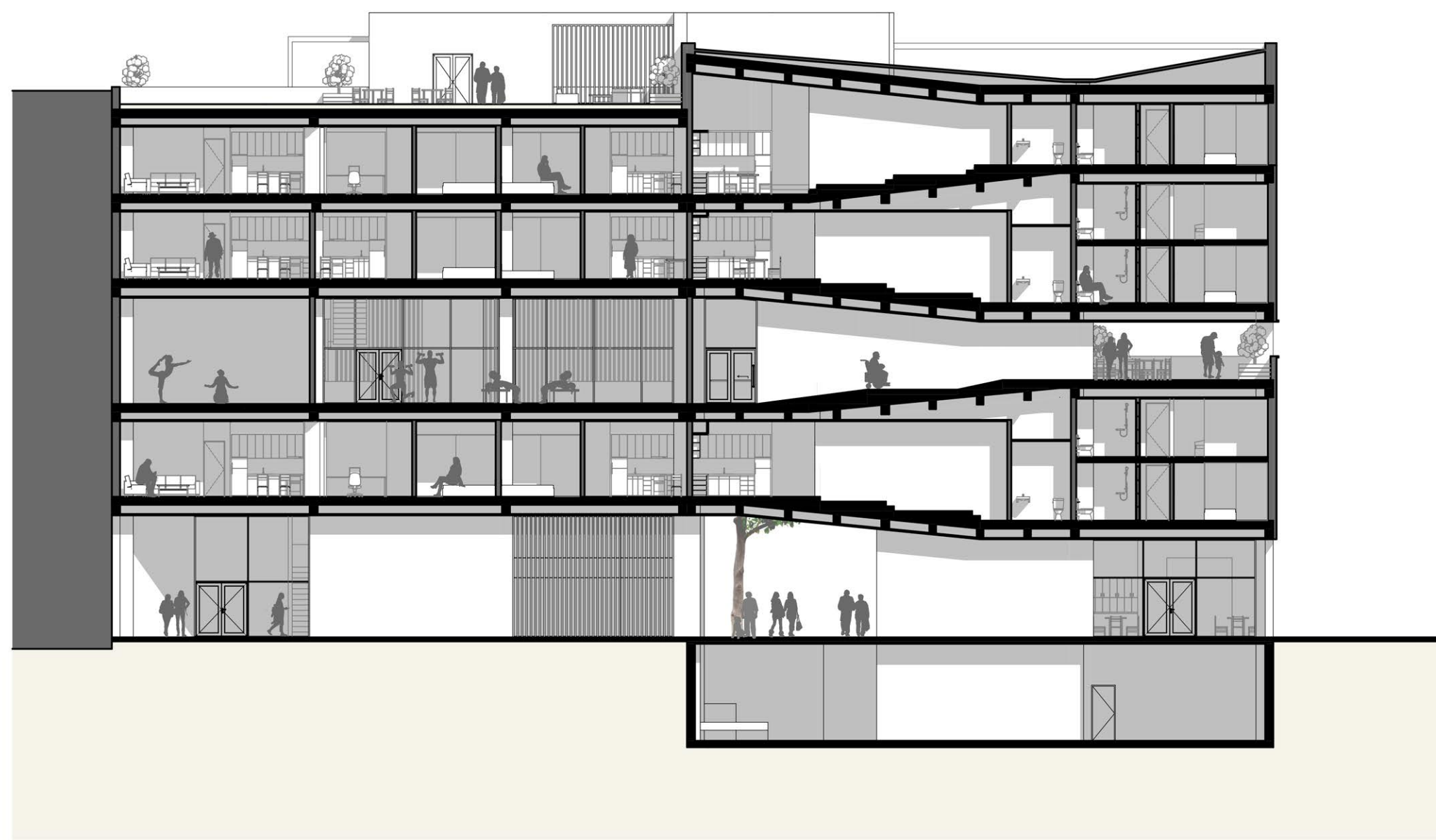
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LONGITUDINAL



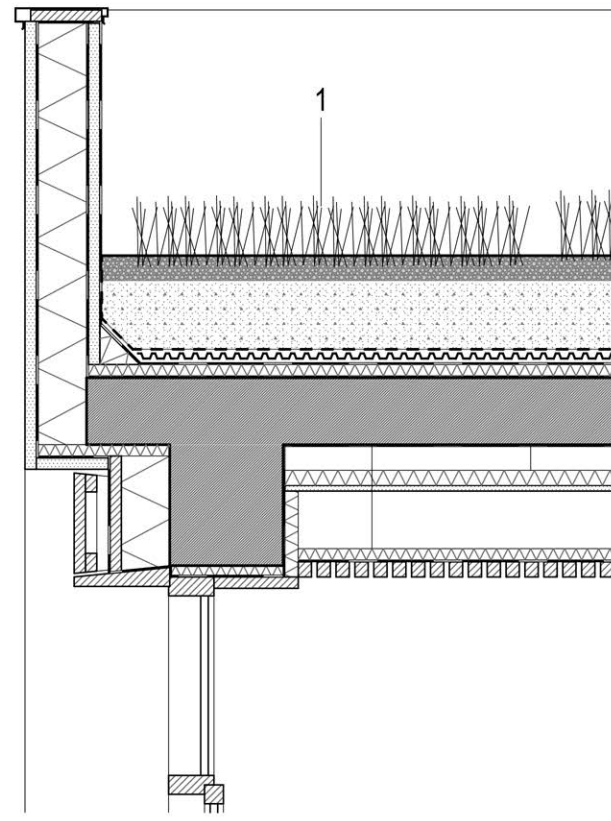
TRANSVERSAL



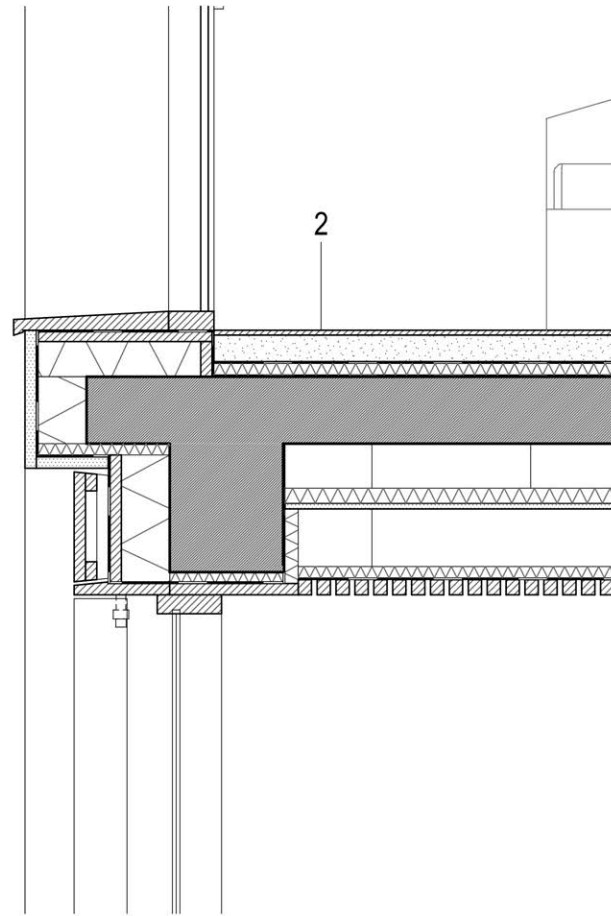
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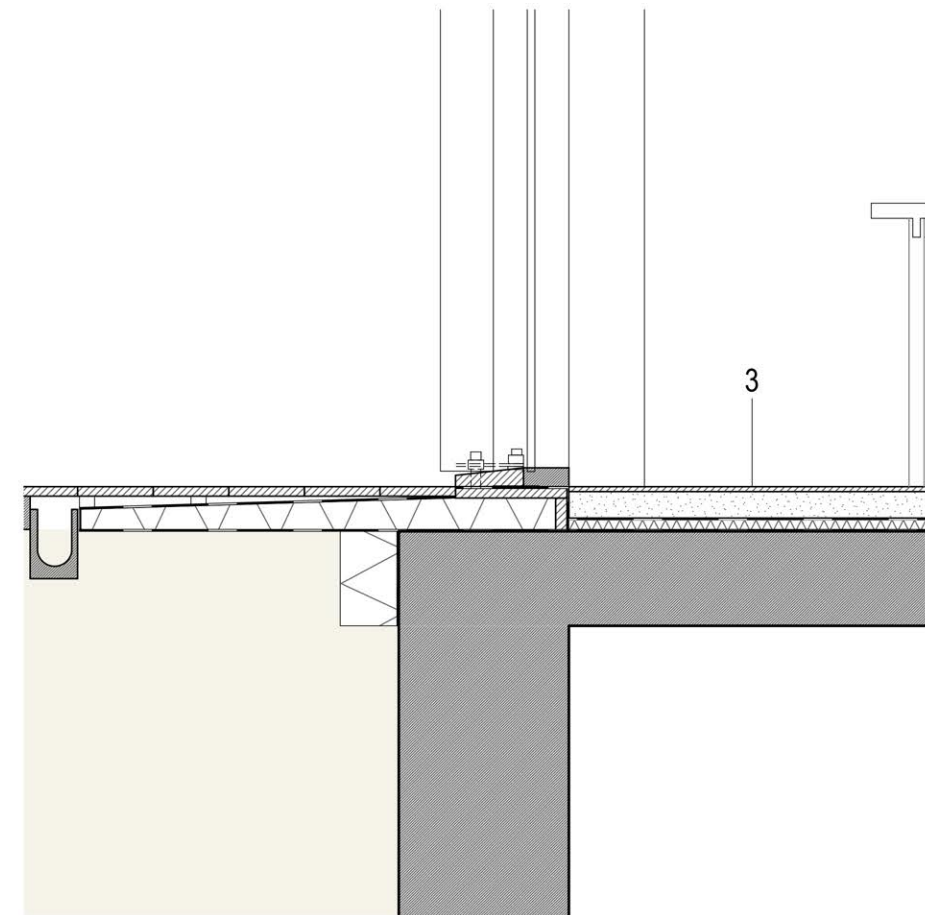
- 1 hydrophilic membrane
 geo membrane
 metal sheet 0,50 mm
 vapour barrier
 27/100 mm softwood tongued + grooved boarding
 2 mm polythene back-up roof sealing layer
 existing structure
 polythene vapour-diffusing layer
 40 mm sheep-wool sound insulation
 15 mm gypsum fibreboard
 services layer
 30 mm sheep-wool acoustic insulation
 black moisture-resisting mat
 40/35 mm untreated silver-fir strips



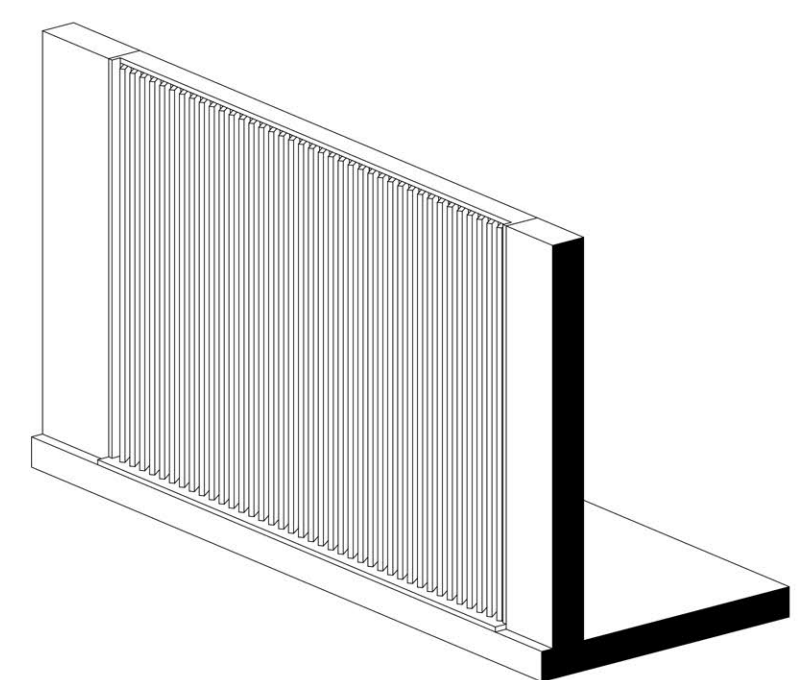
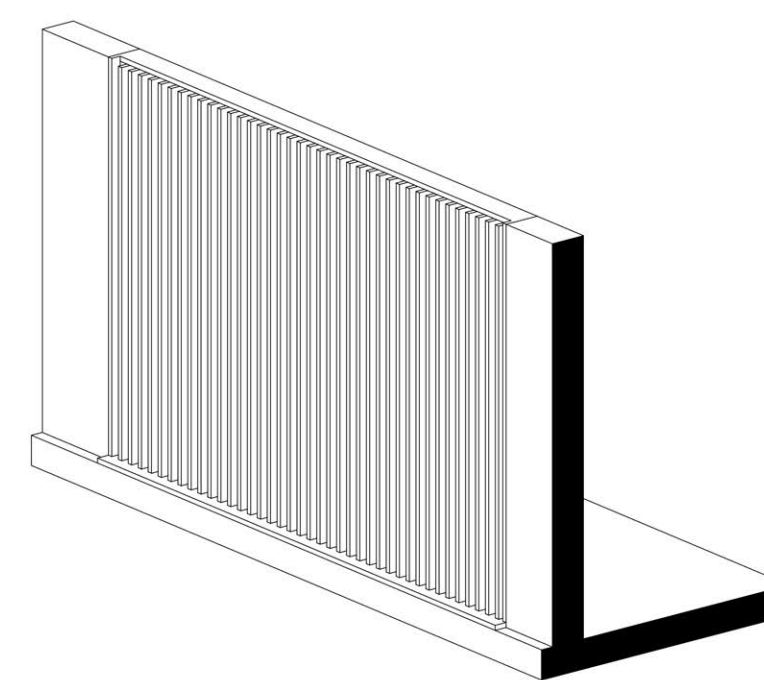
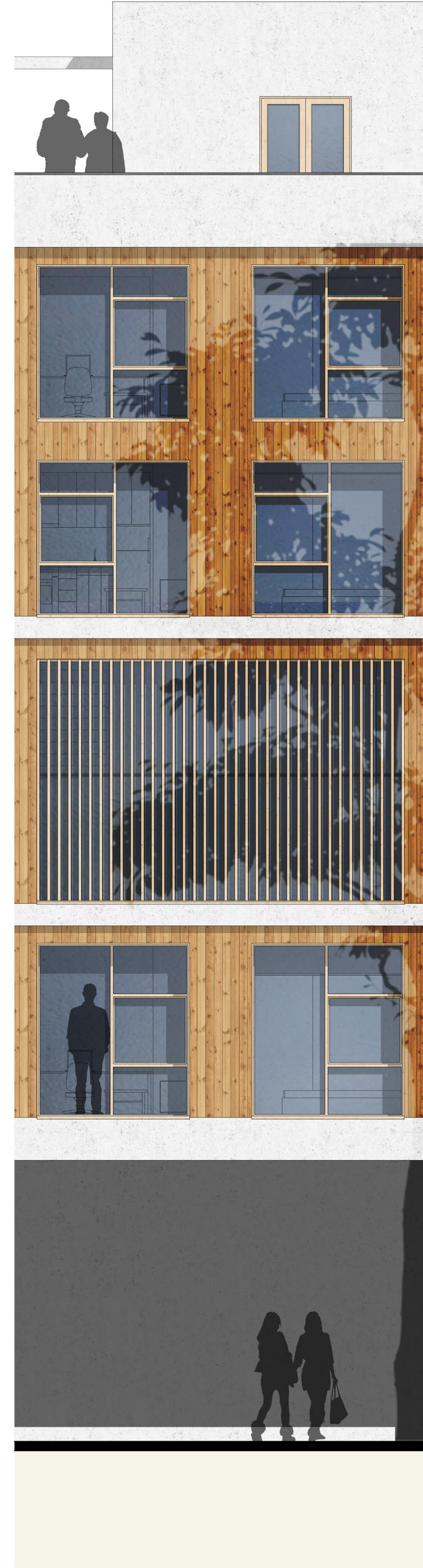
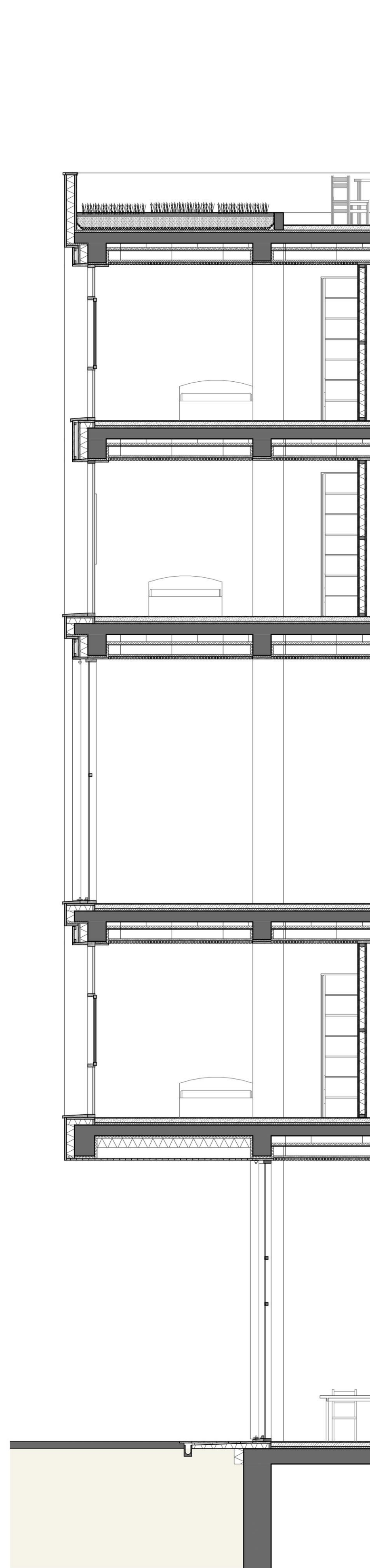
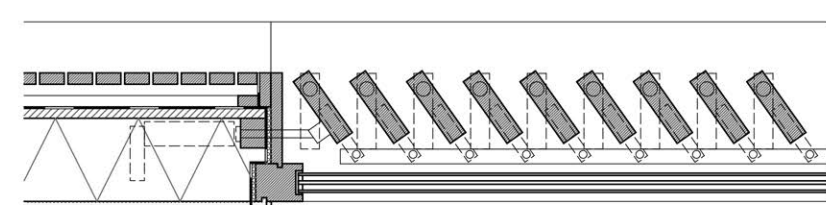
- 2 floor covering
 70 mm screed
 30 mm wood-fibre impact-sound insulation
 moisture-insulation layer
 existing structure
 services layer
 40 mm sheep-wool sound insulation
 15 mm gypsum fibreboard
 services layer
 30 mm sheep-wool acoustic insulation
 black moisture-resisting mat
 40/35 mm untreated silver-fir strips



- 3 floor covering
 70 mm screed
 steam barrier-insulation layer
 30 mm insulation felt sheep wool
 moisture-insulation layer
 existing structure

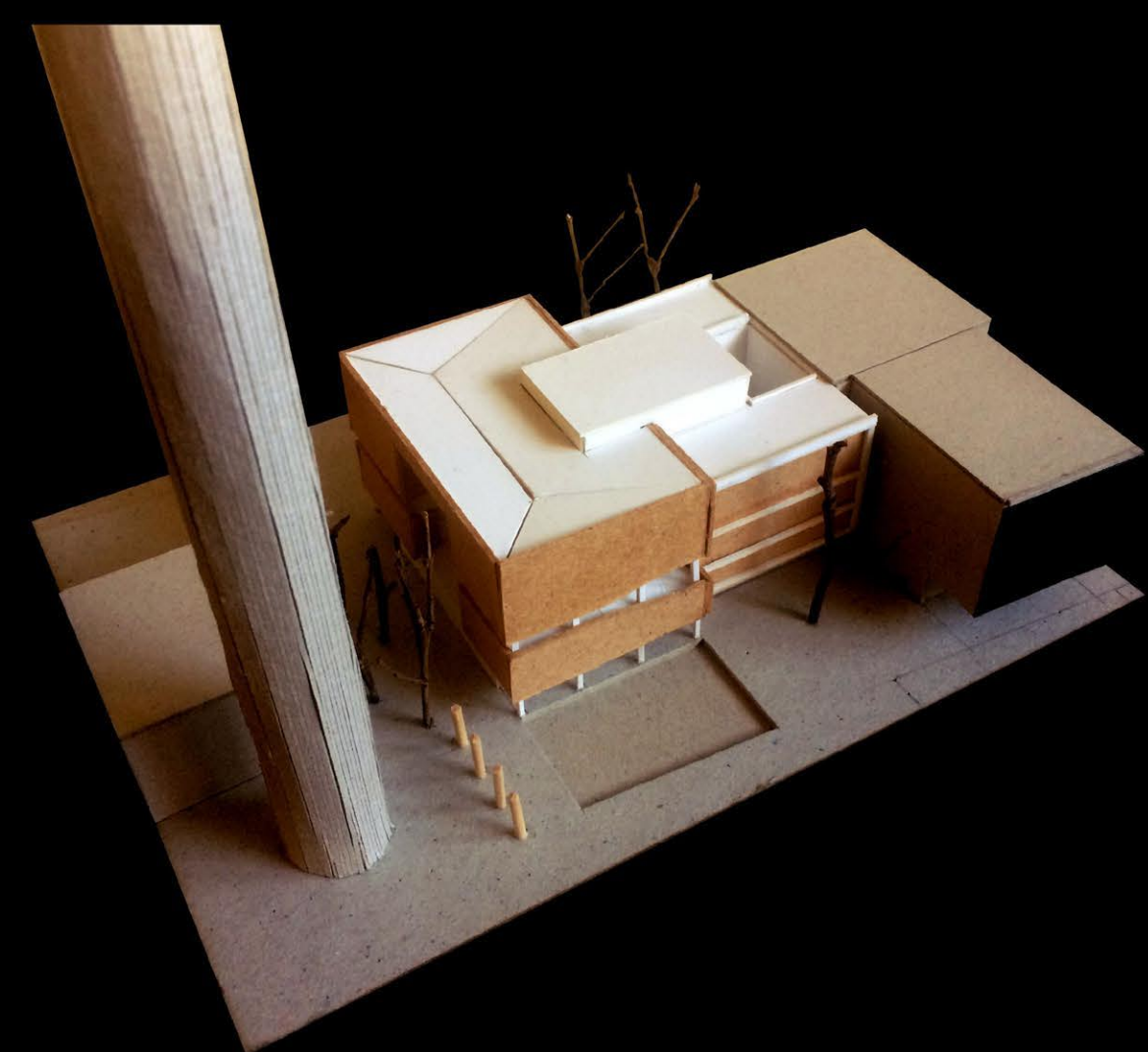
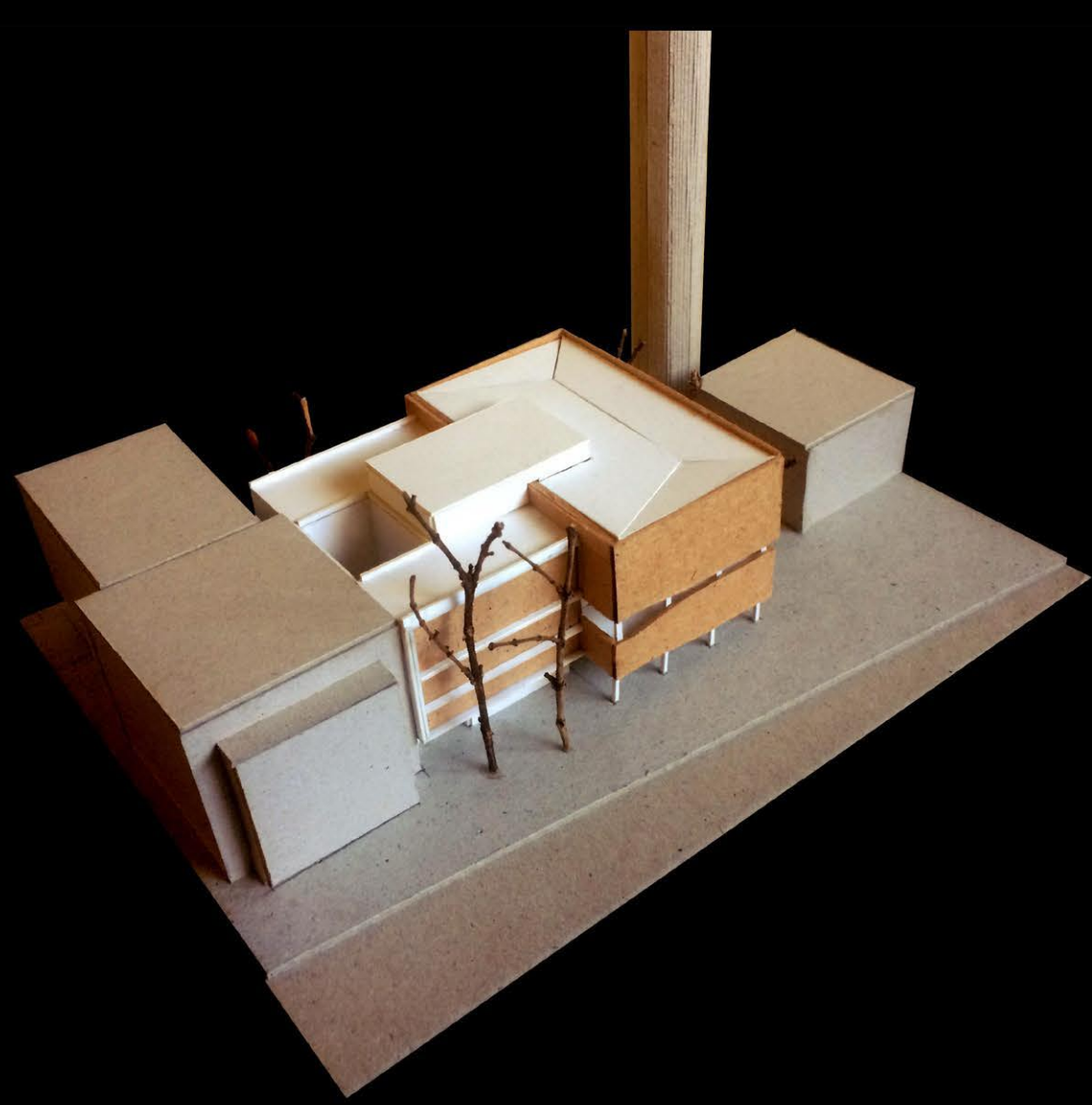
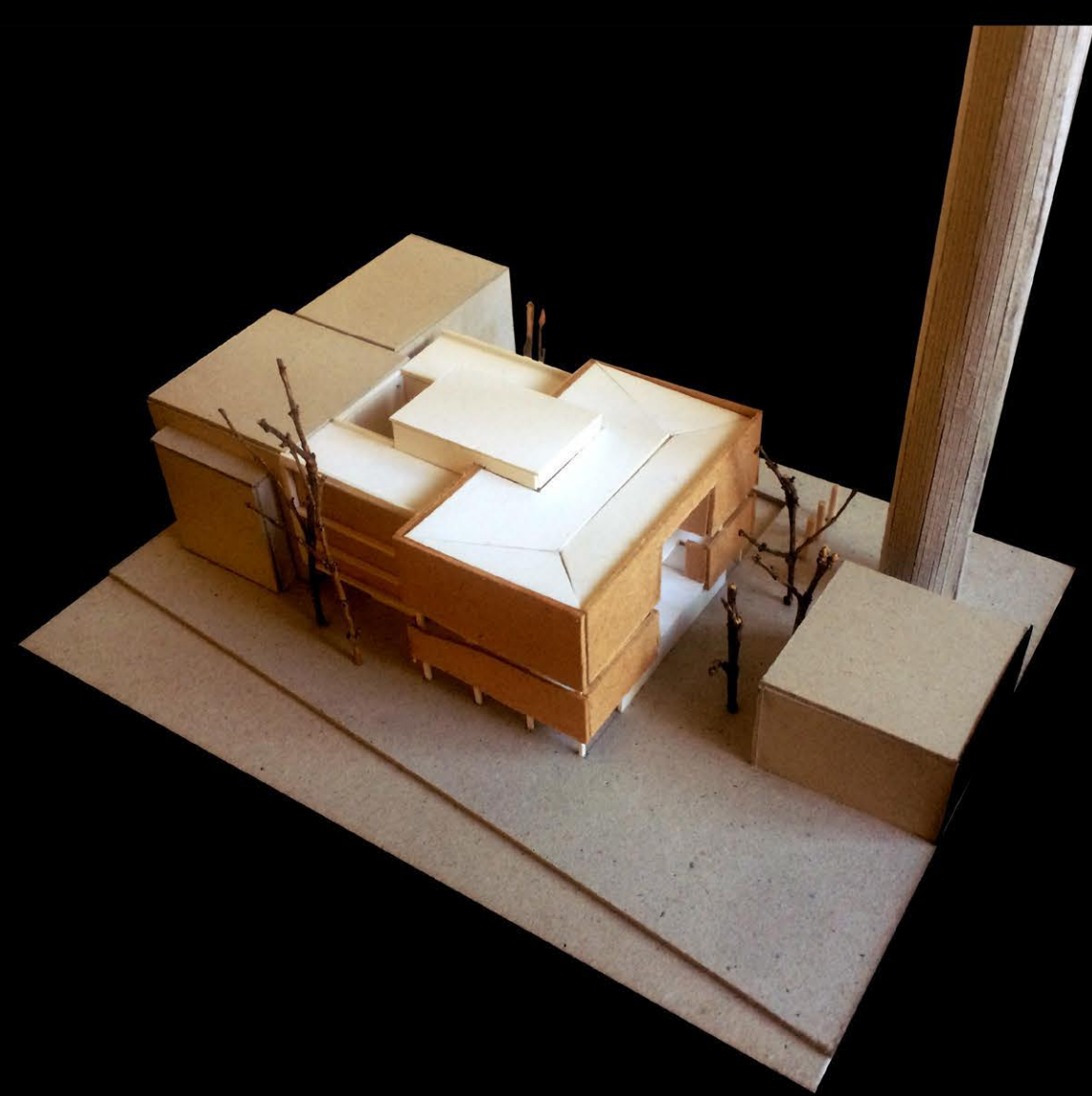
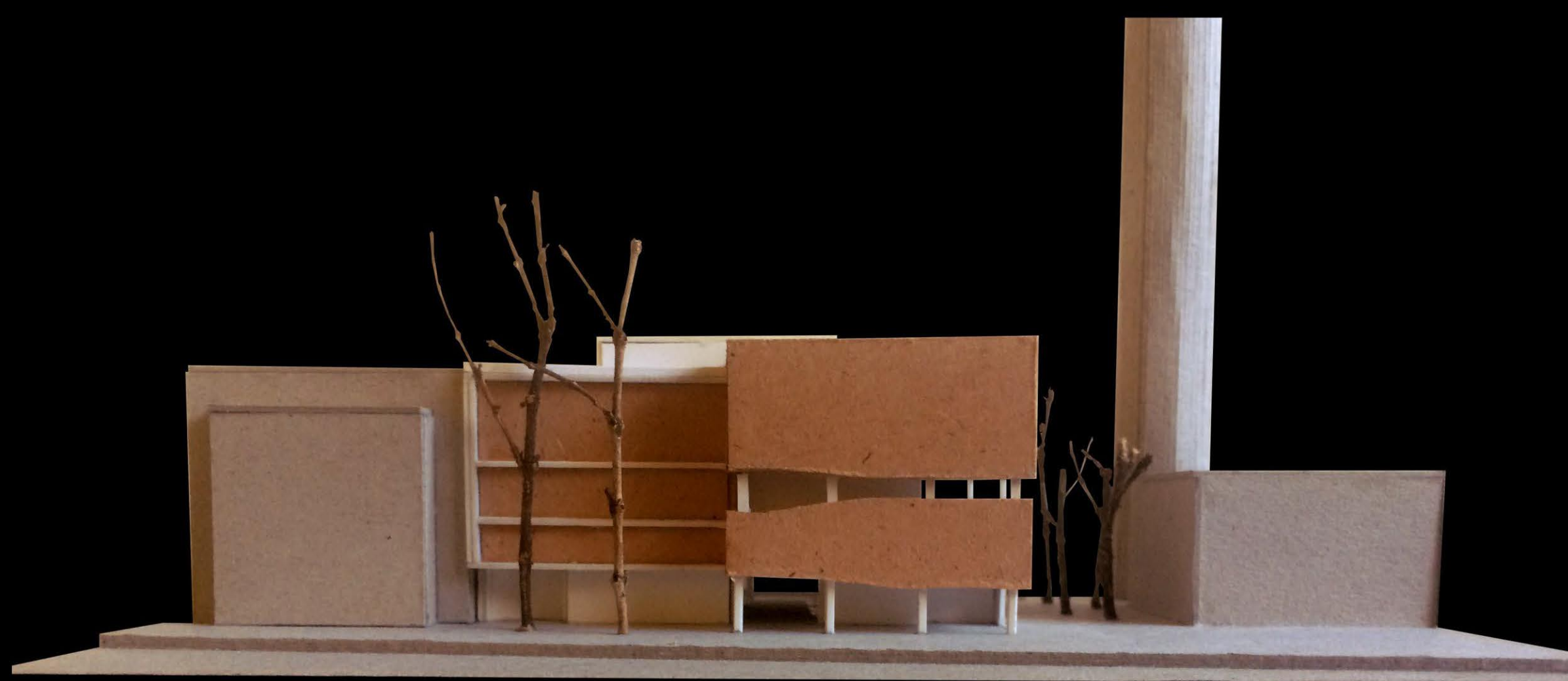
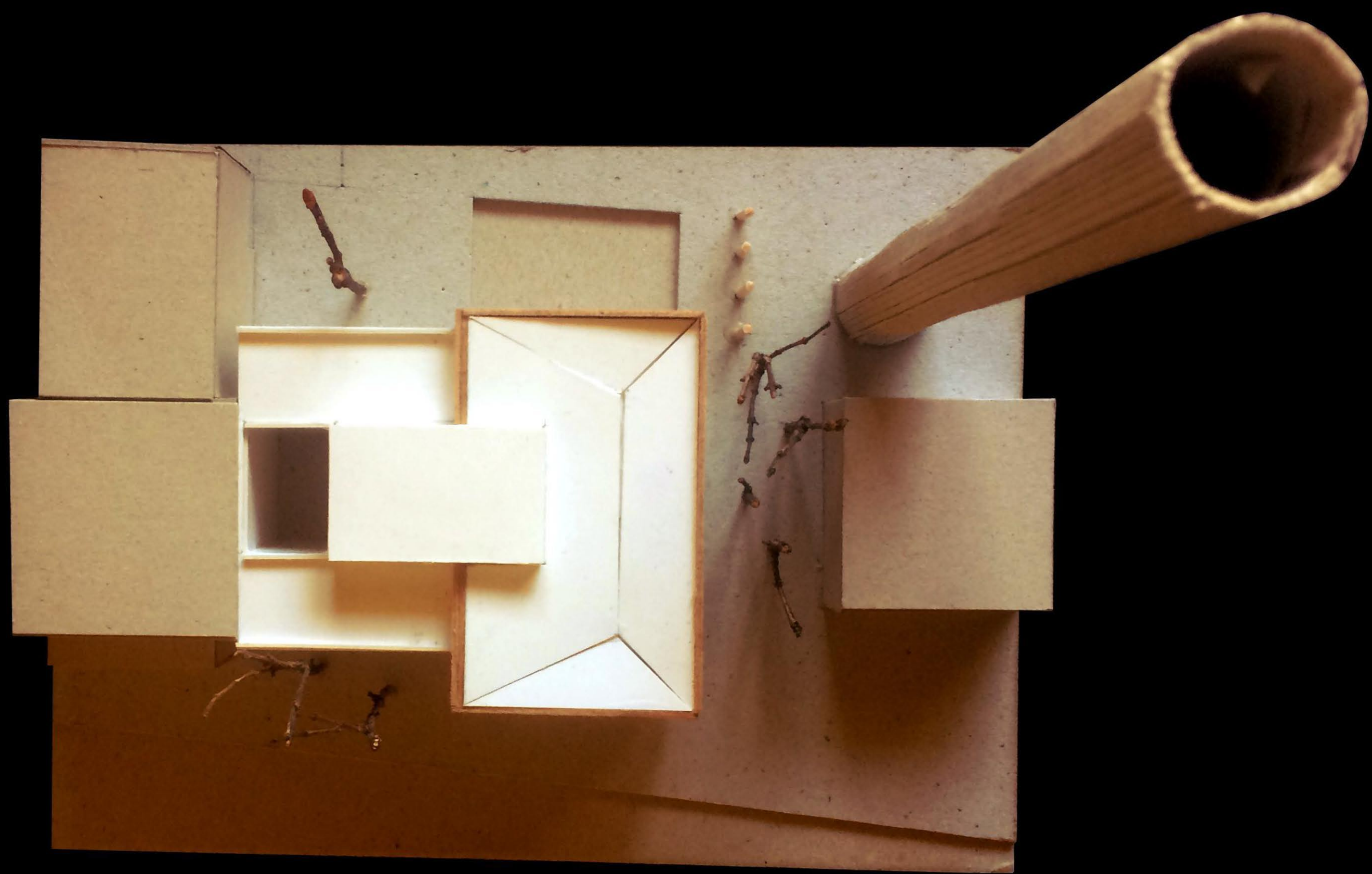


- 4 30/50–120 mm sawn silver-fir strips
 30/50 mm softwood battens painted black
 30/50 mm softwood counterbattens/ventilated cavity;
 black windproof paper
 30 mm gypsum fibreboard
 220 mm timber studs, thermal insulation
 12,5 mm gypsum fibreboard
 PE foil vapour barrier
 12,5 mm Gypsum fibreboard
 50/200 mm untreated silver-fir sunscreen
 fins, pivotable via sliding rod



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