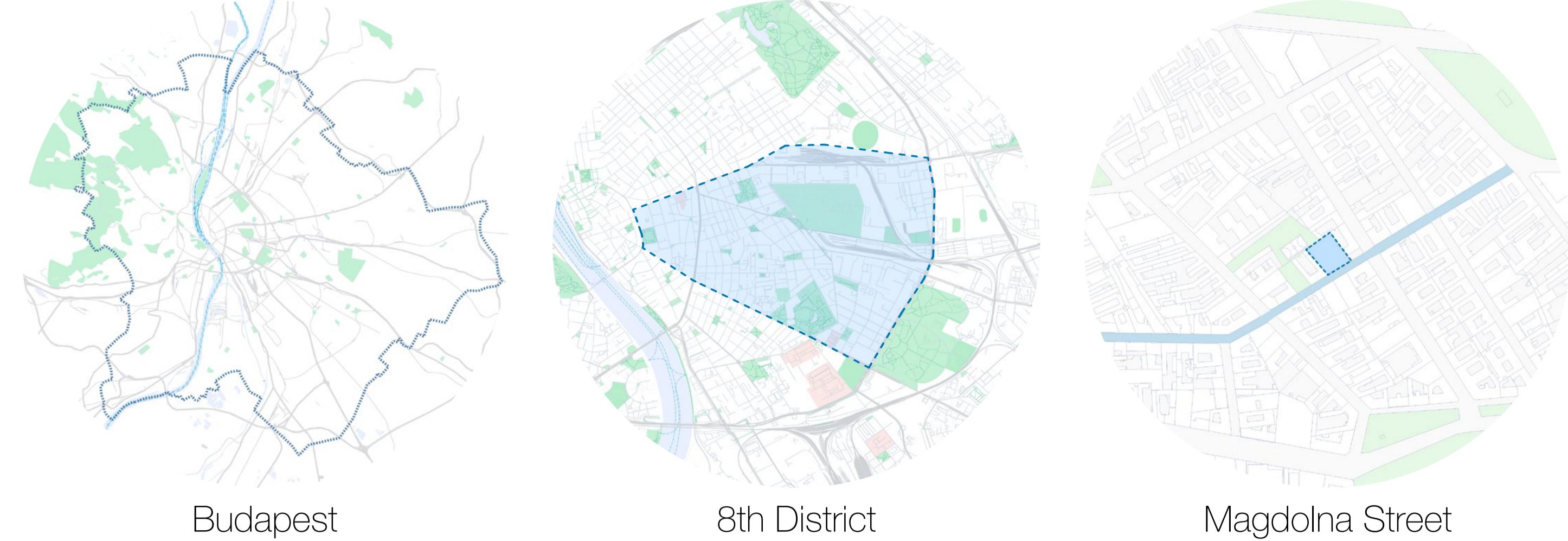


MAGDOLNA HOUSING AND HUB

2025

BME / Faculty of Architecture / Department of Urban Planning and Design

Binderiya BATNASAN / CONSULTANT: Dr. Melinda BENKŐ

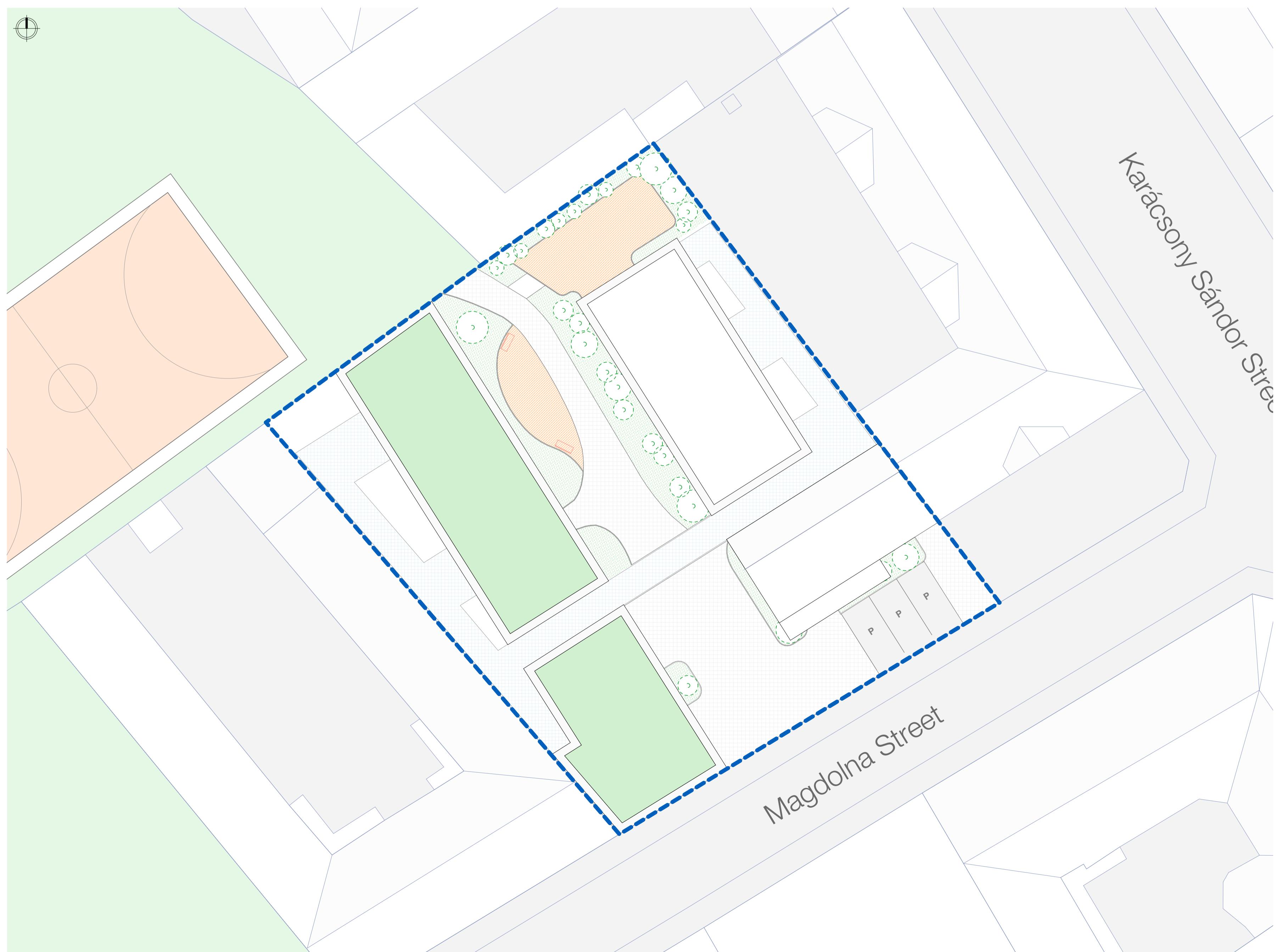
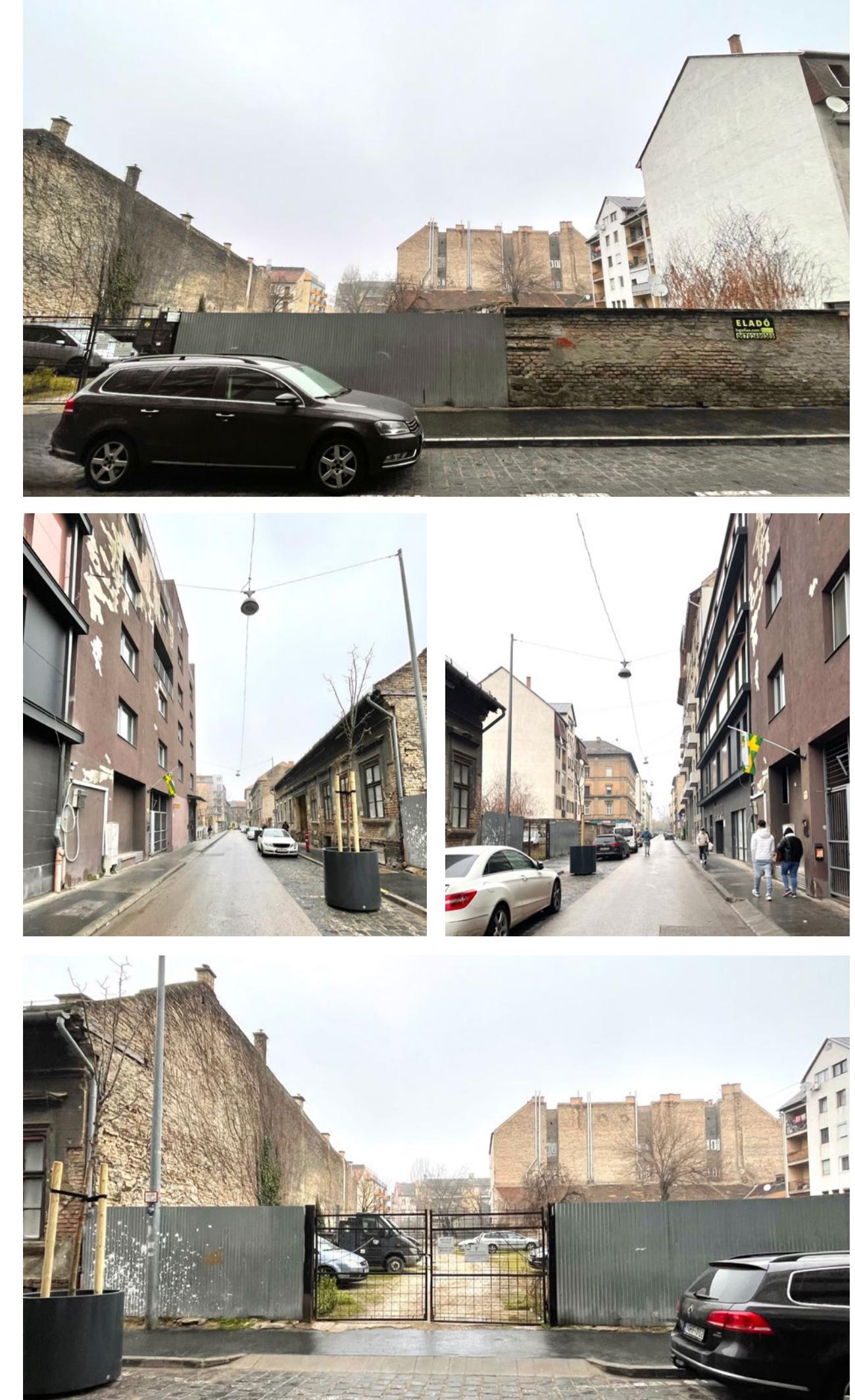
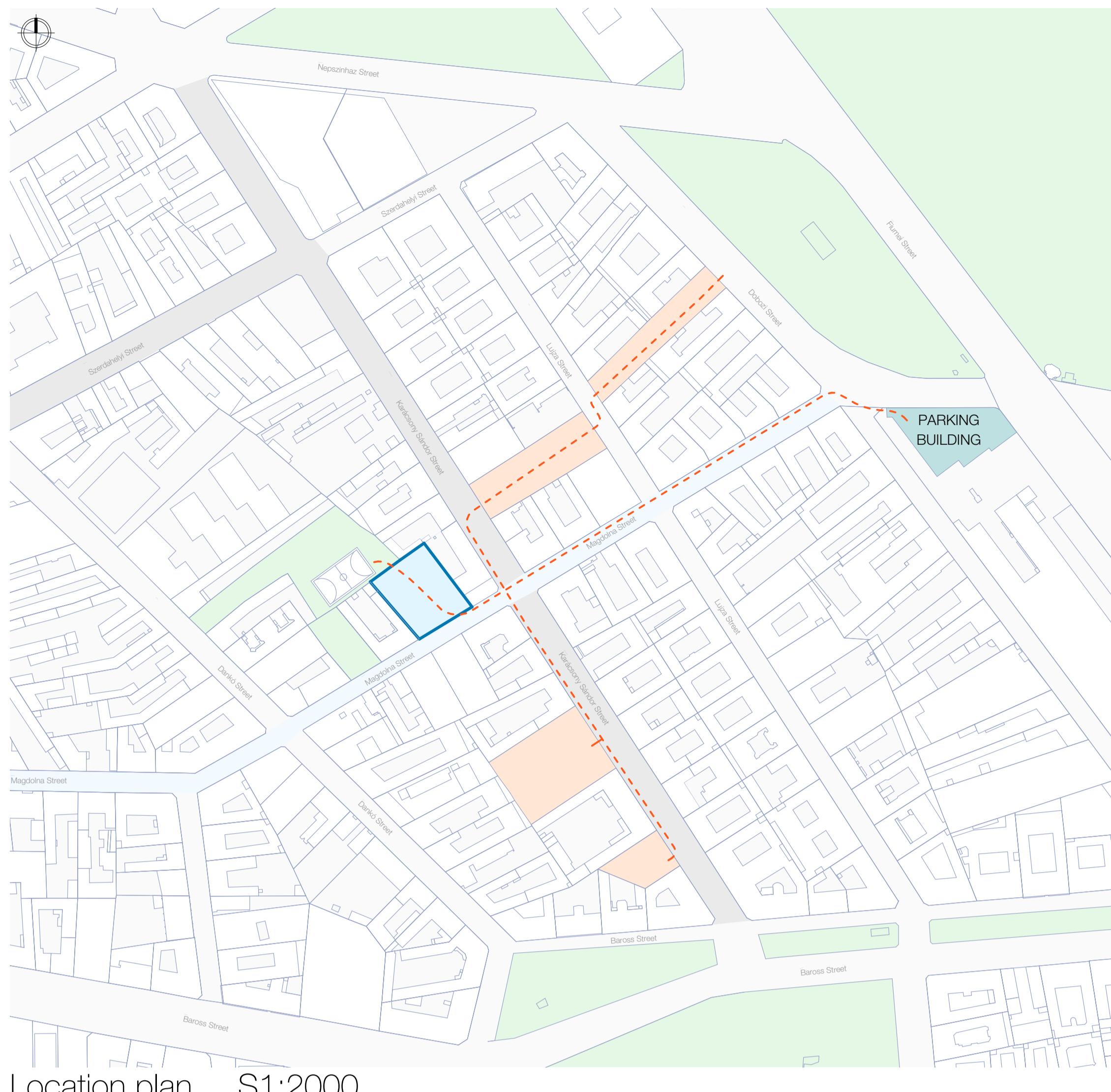


Site Location: Magdolna Street 28, 8th District, Budapest

Site Area: 1 430 sq.m.

The site is located on Magdolna Street in Budapest's 8th District (Józsefváros), a historically layered and culturally diverse neighborhood currently undergoing steady transformation. Despite its central location and proximity to schools, community institutions, and public transport, the street remains largely underutilized, with closed-off ground floors and limited street activity. Situated next to a community courtyard and garden, the site holds strong potential to enhance local social infrastructure and establish stronger links between existing public spaces.

This context offers a unique urban opportunity: to design a development that not only preserves the calm, residential atmosphere of the street but also introduces carefully integrated public functions at the ground level—bringing life to the street, encouraging social interaction, and strengthening connections with local community initiatives already active in the district.



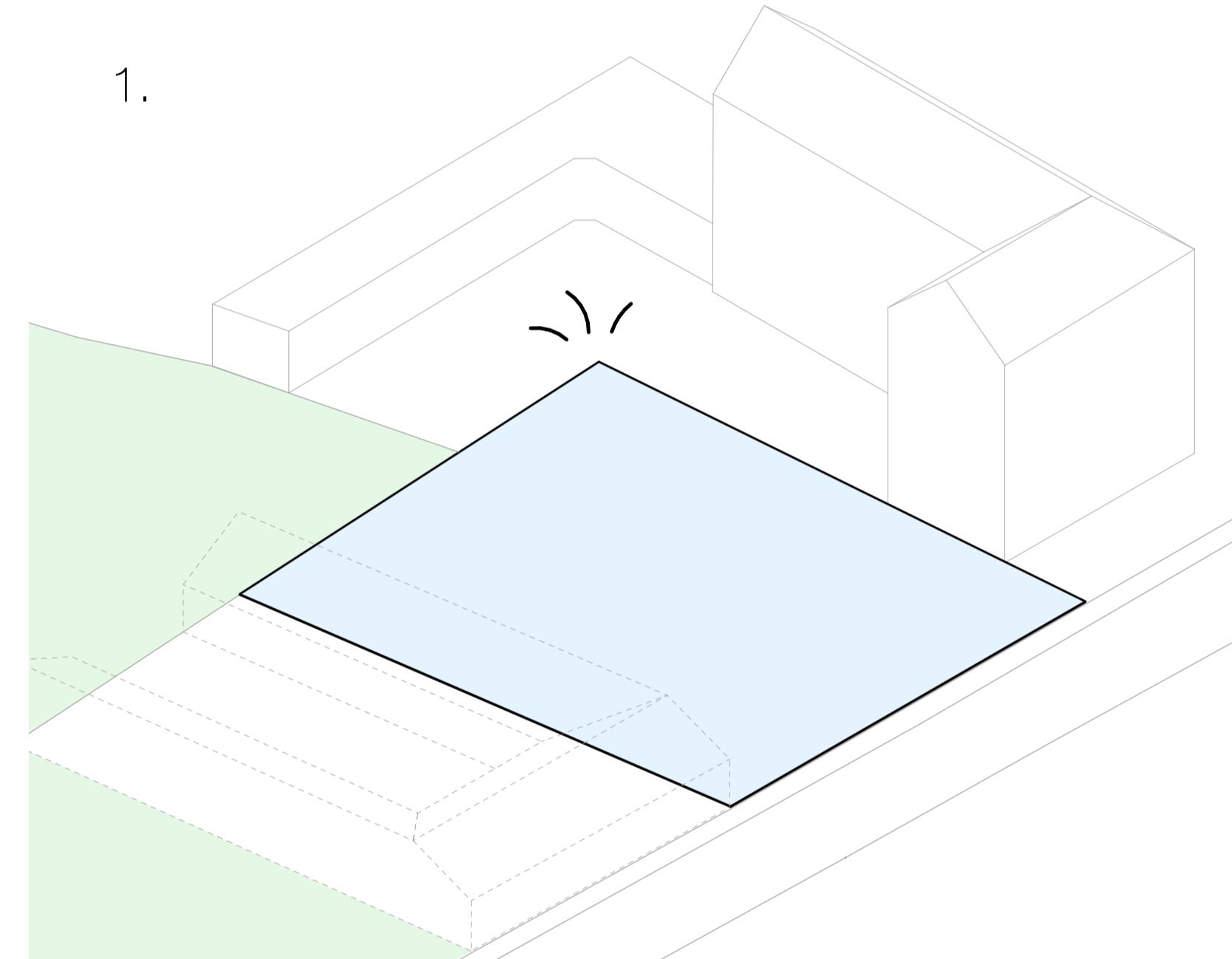


View from Magdolna street

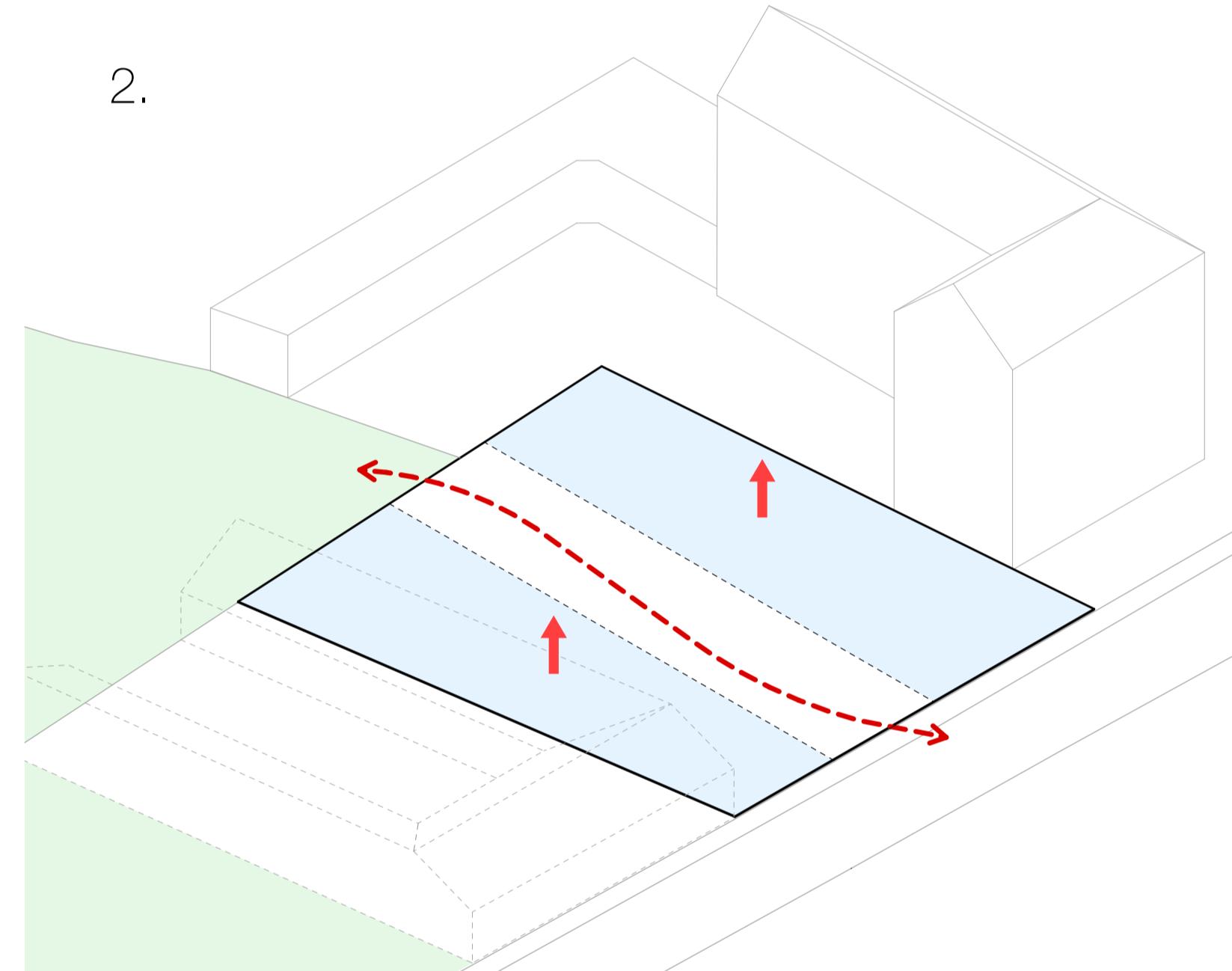


View to the open corridor

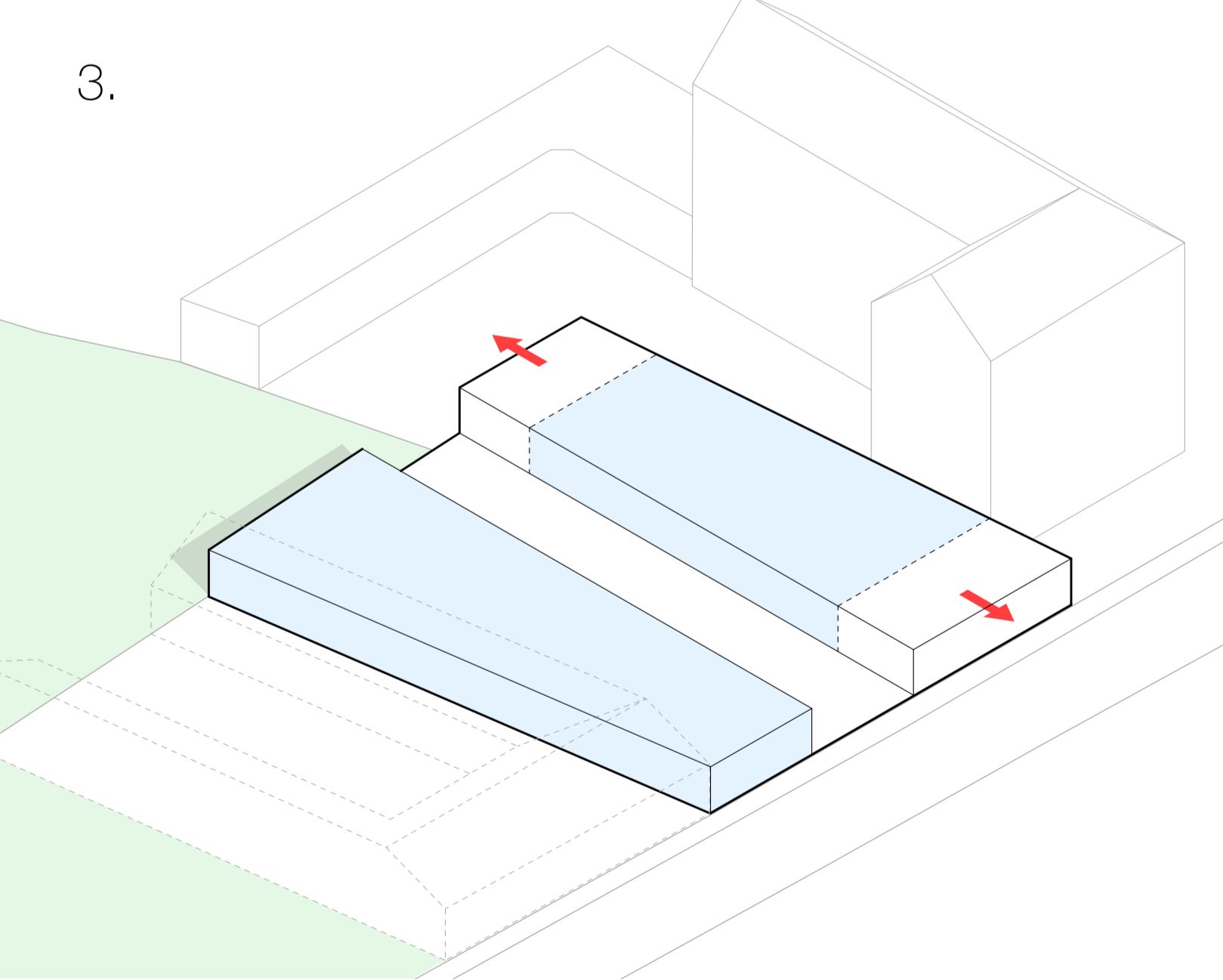
Form Evolution Diagram



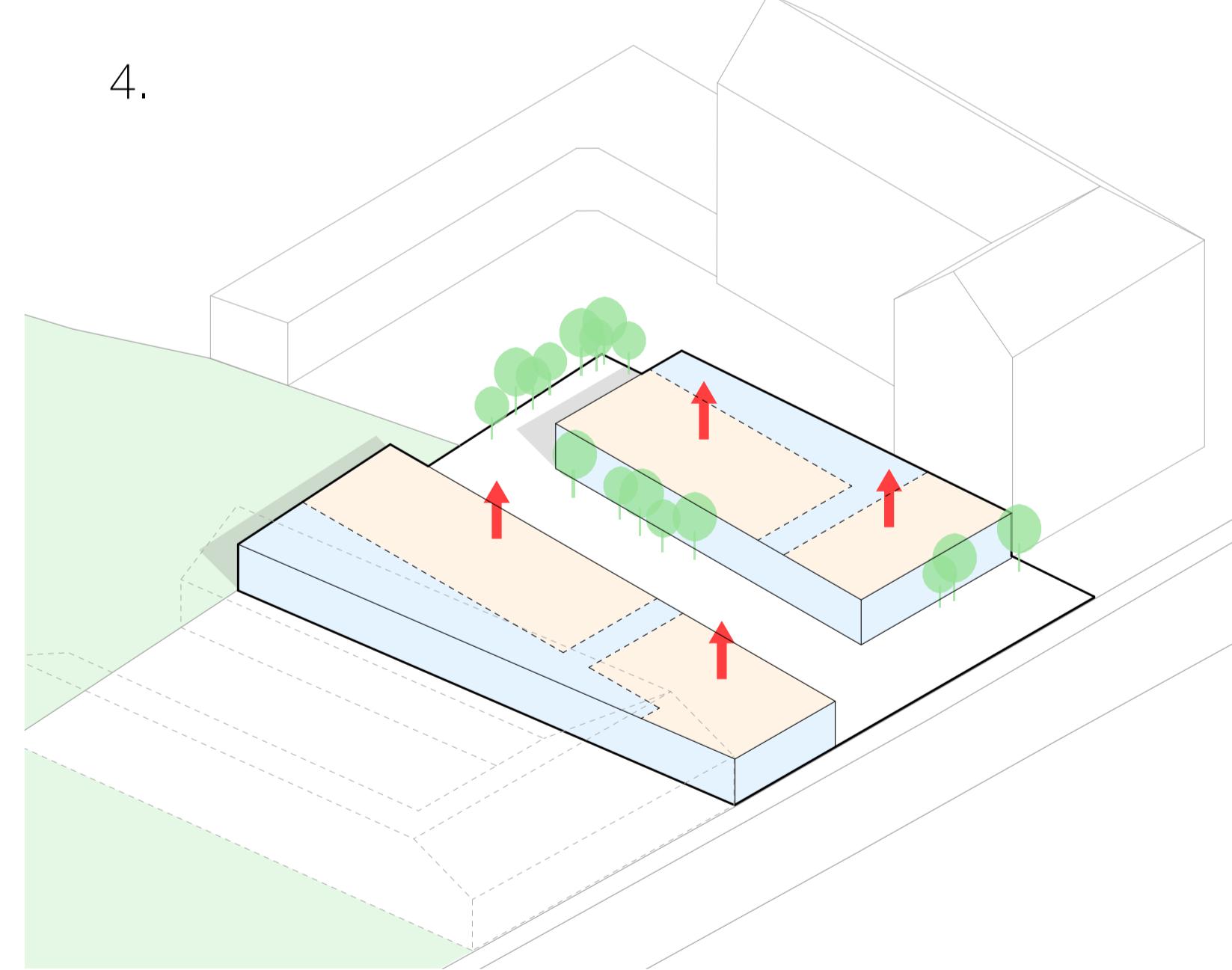
1430 sq meter plot located connecting Magdolna street and Danko Udvart community garden



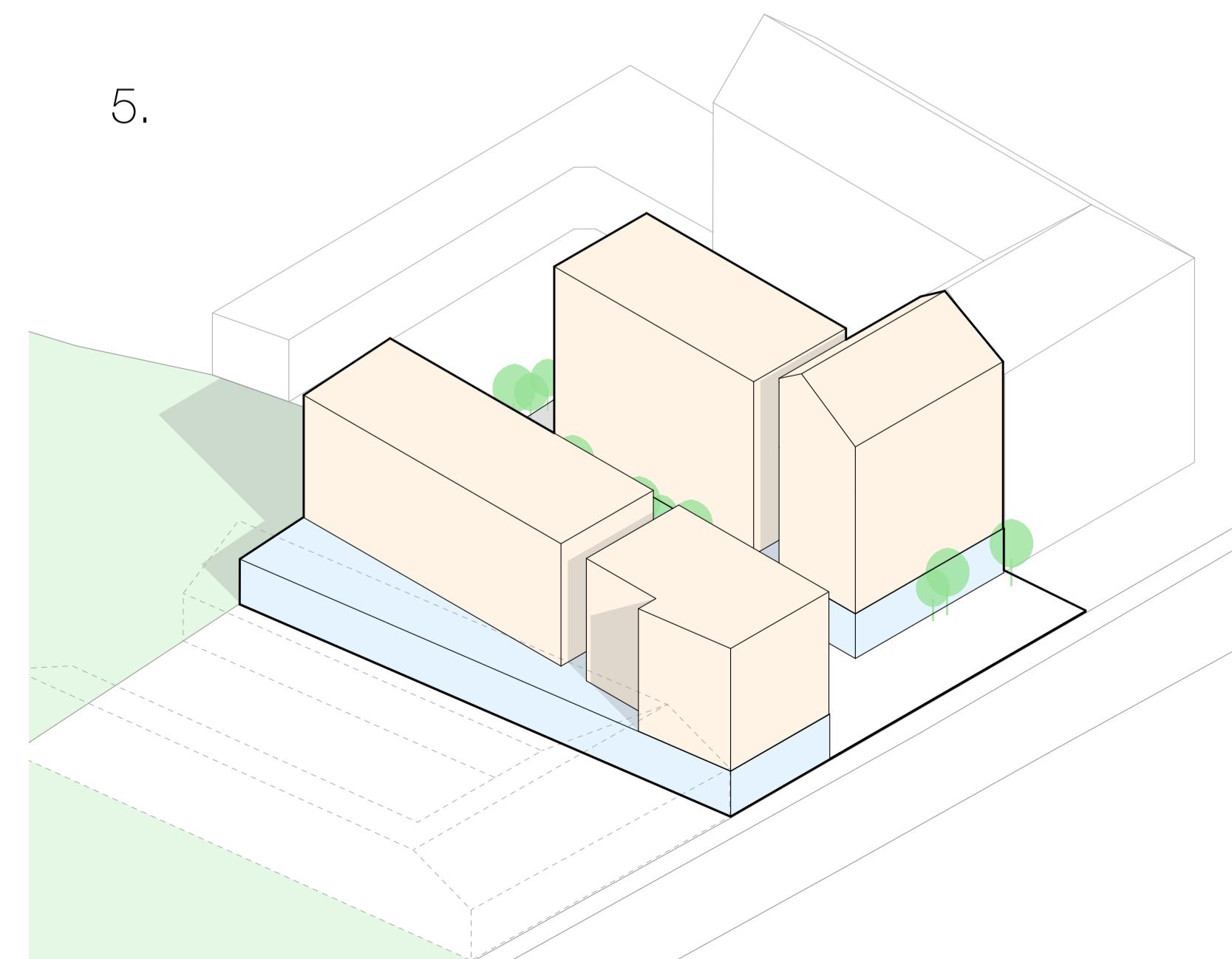
A passage between Magdolna street and Danko udvar is created



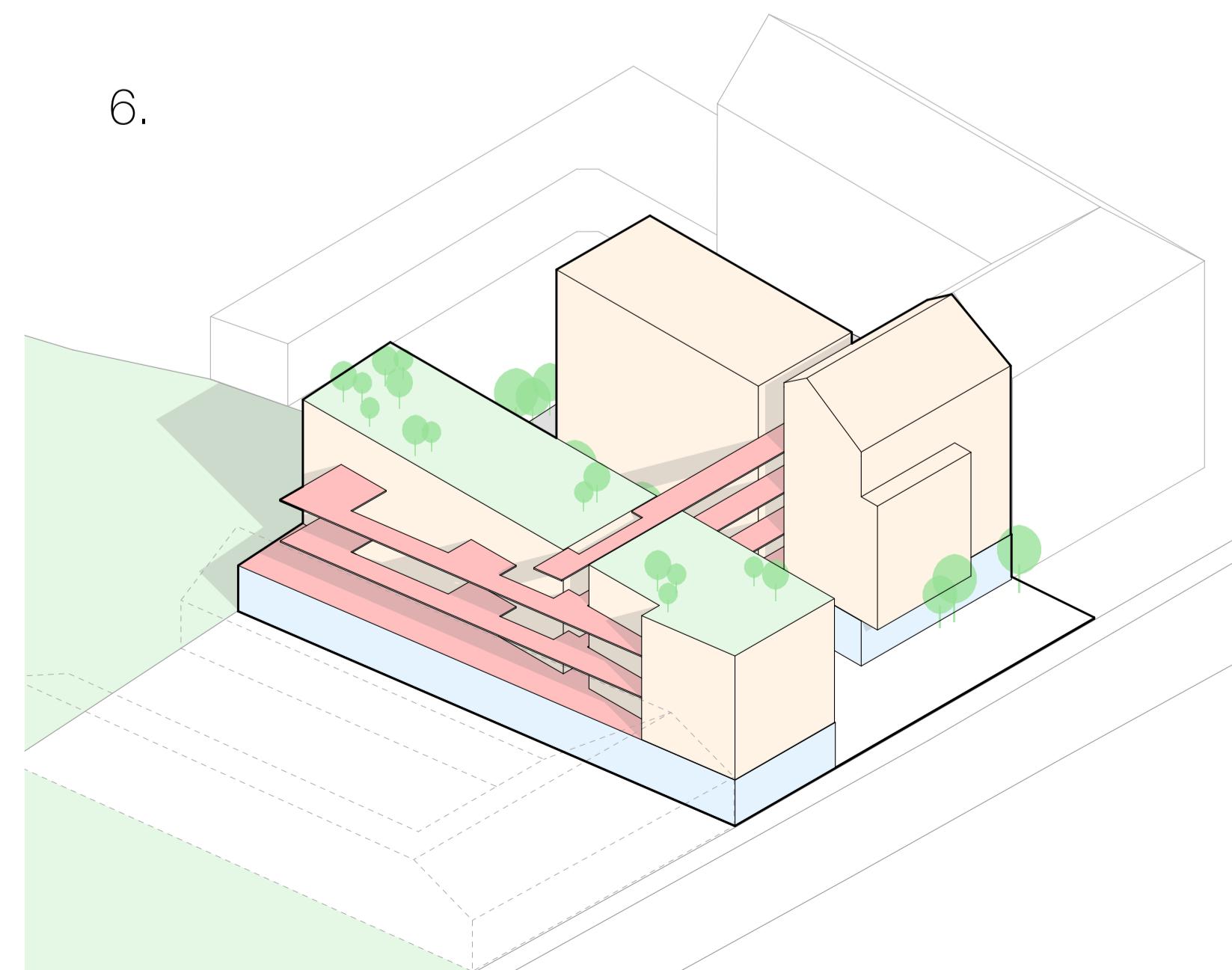
A private courtyard is created at the back, while a more public, welcoming entrance is created facing the street



The upper residential blocks are positioned to maximize openings for natural light, ventilation, and views.

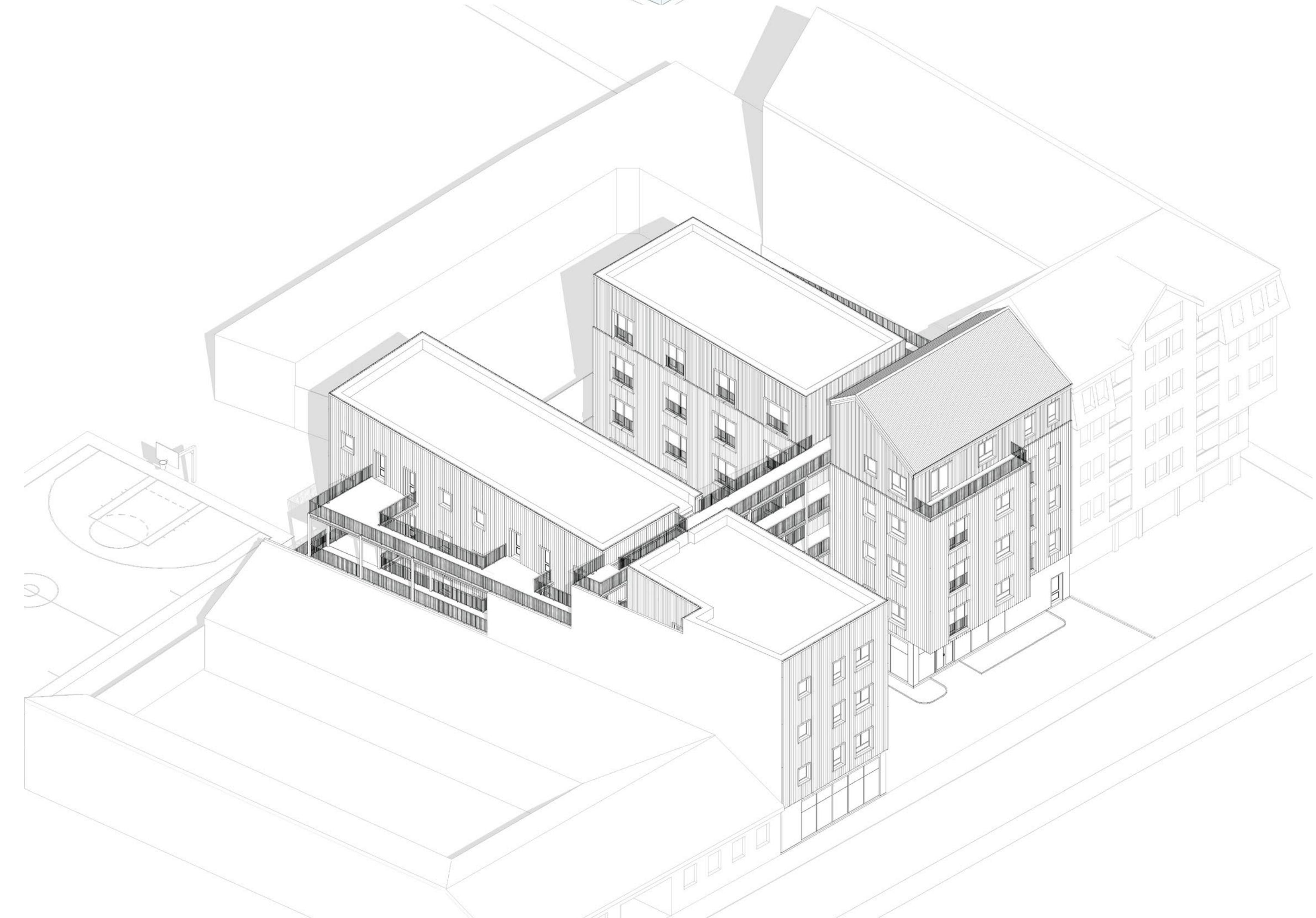
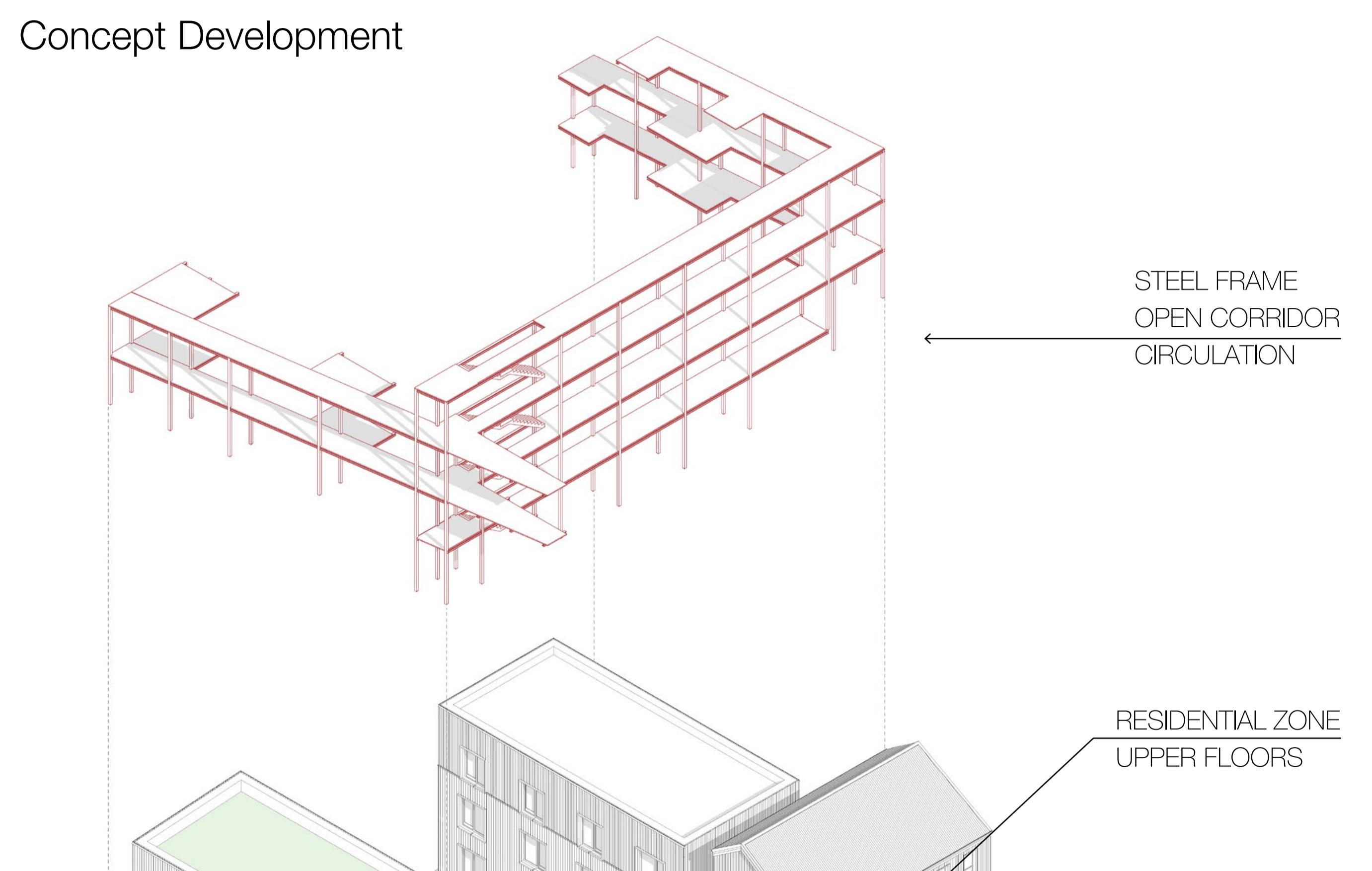


One wing is lower for a rooftop garden, the other is higher to align with the neighboring building.



Finally adding the open corridor passage between the blocks

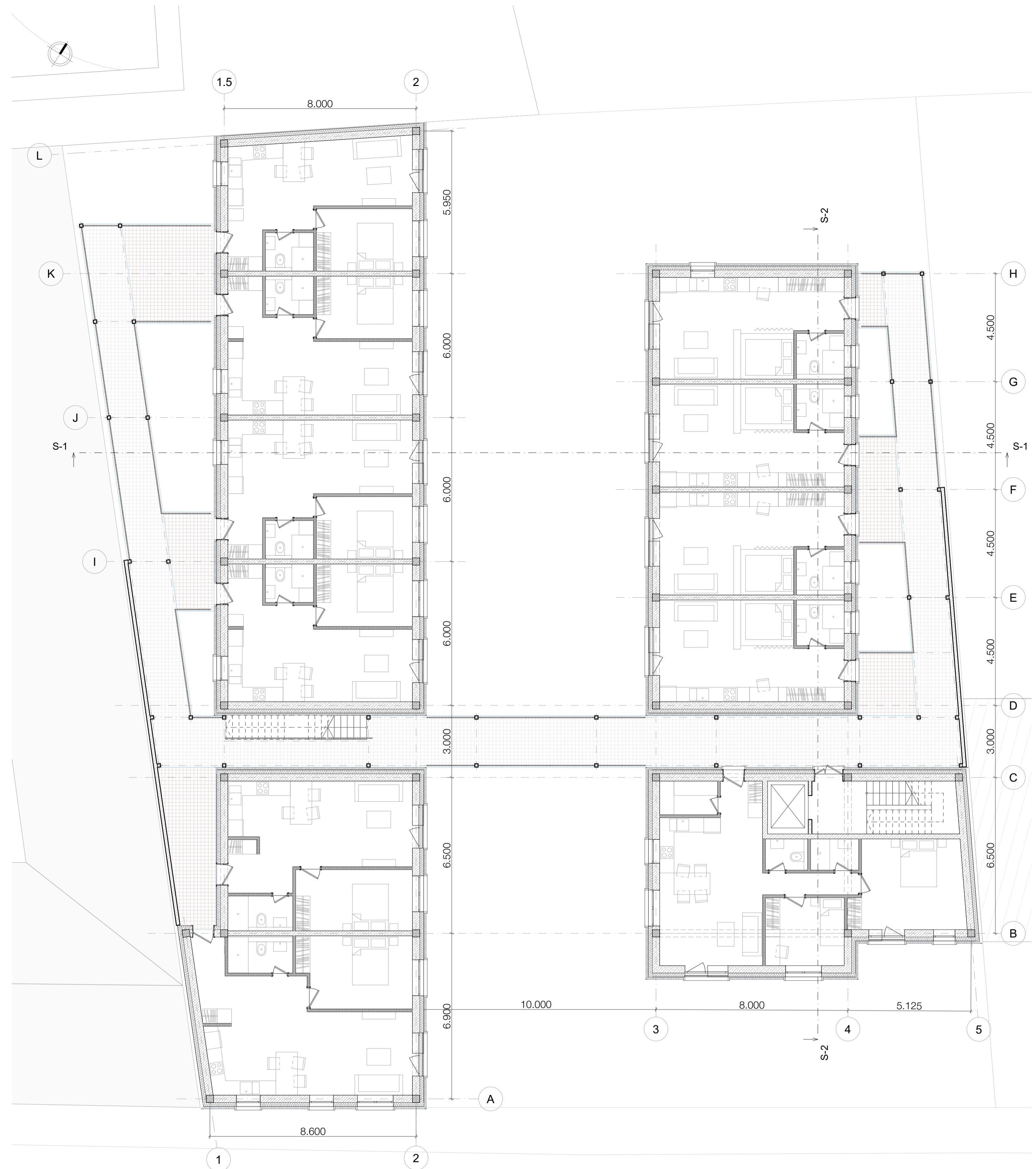
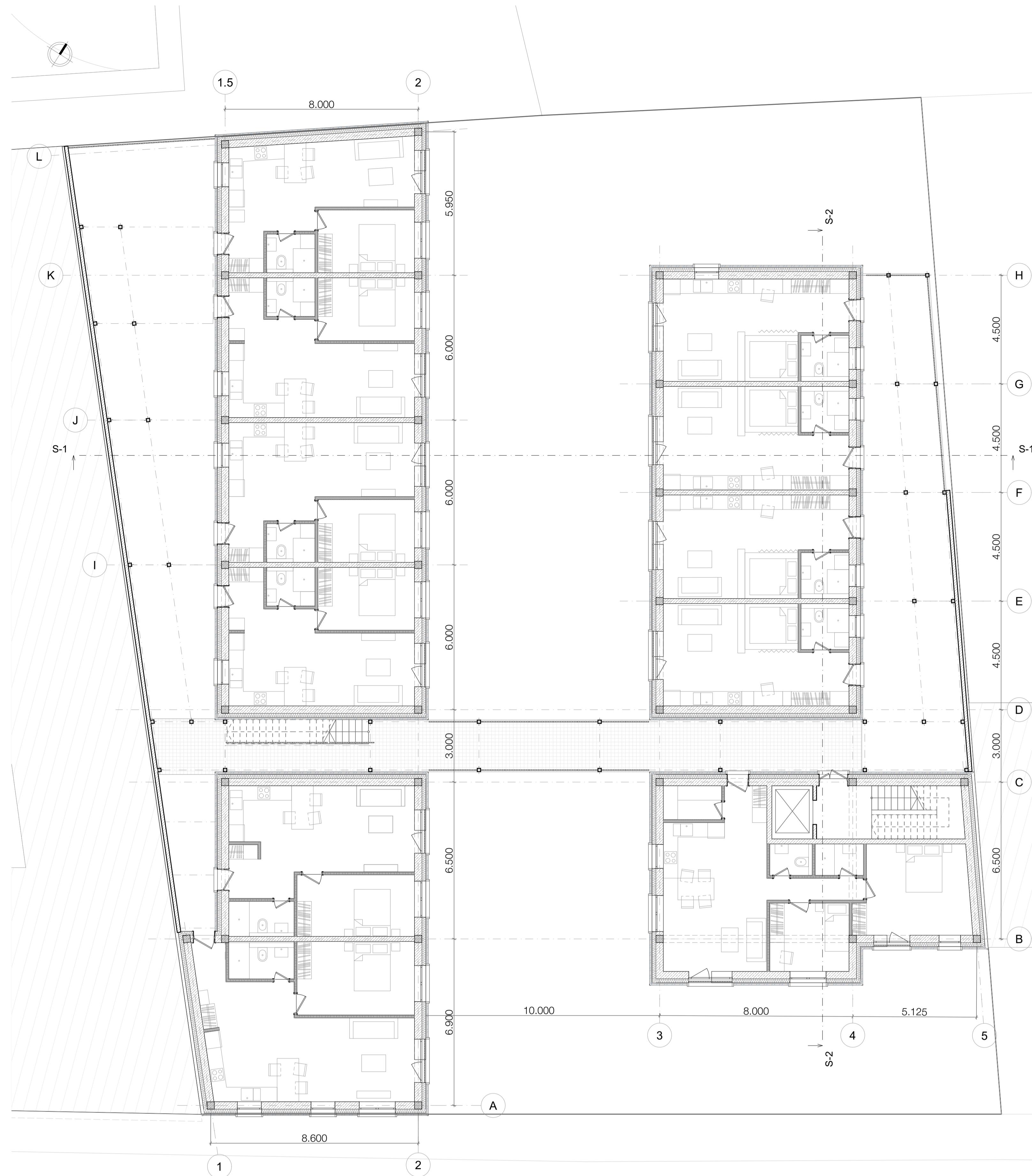
Concept Development

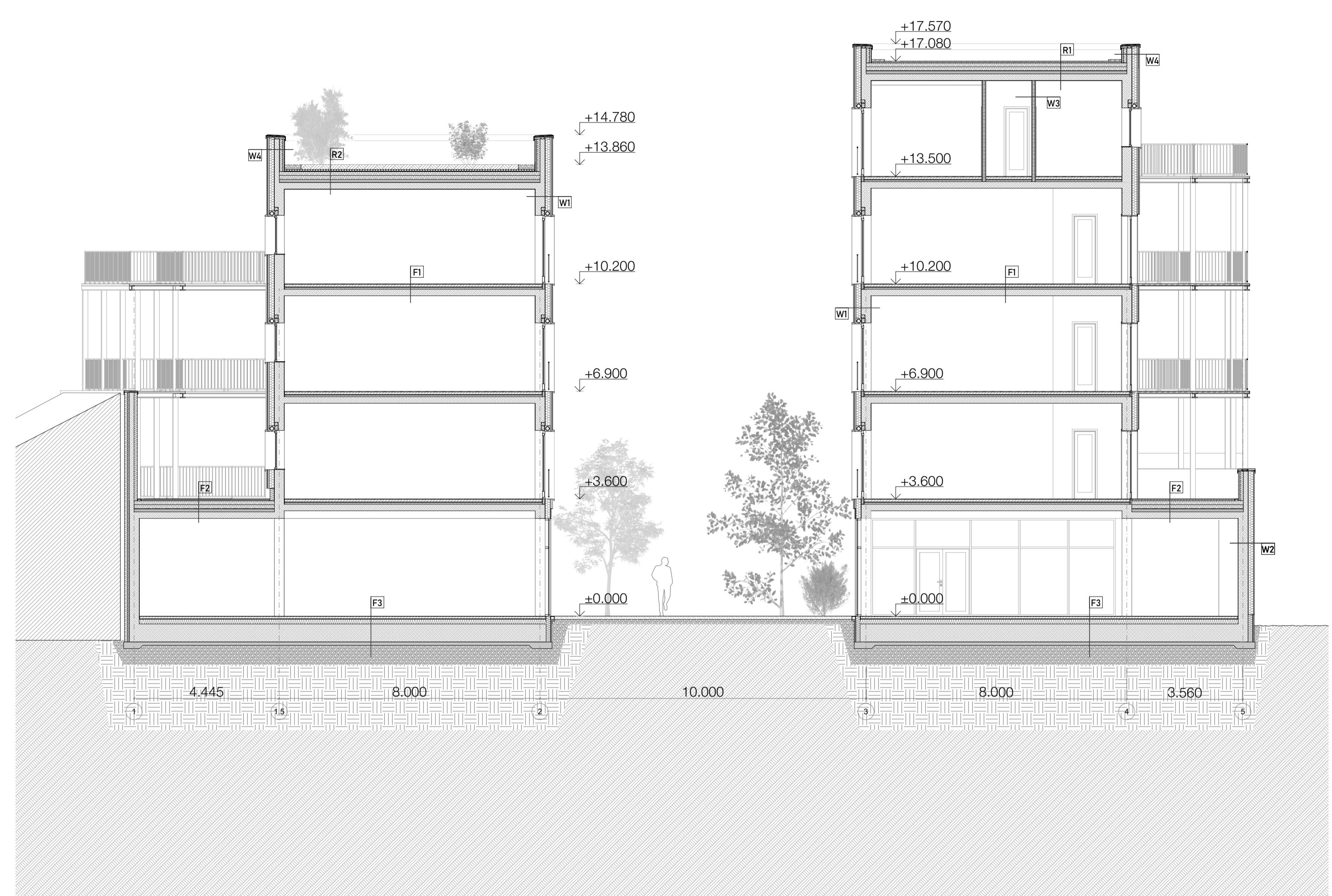




South Elevation S1:100



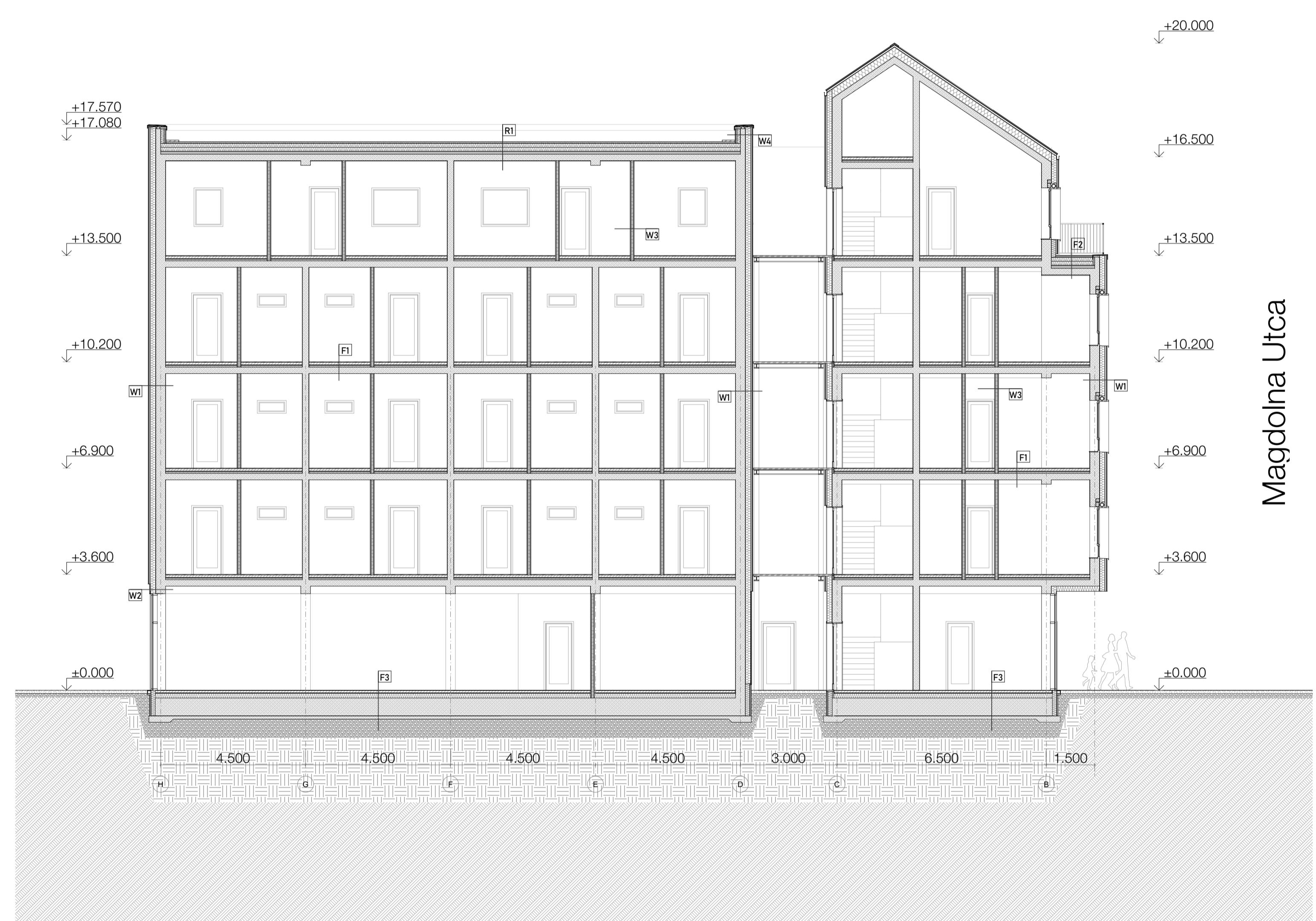




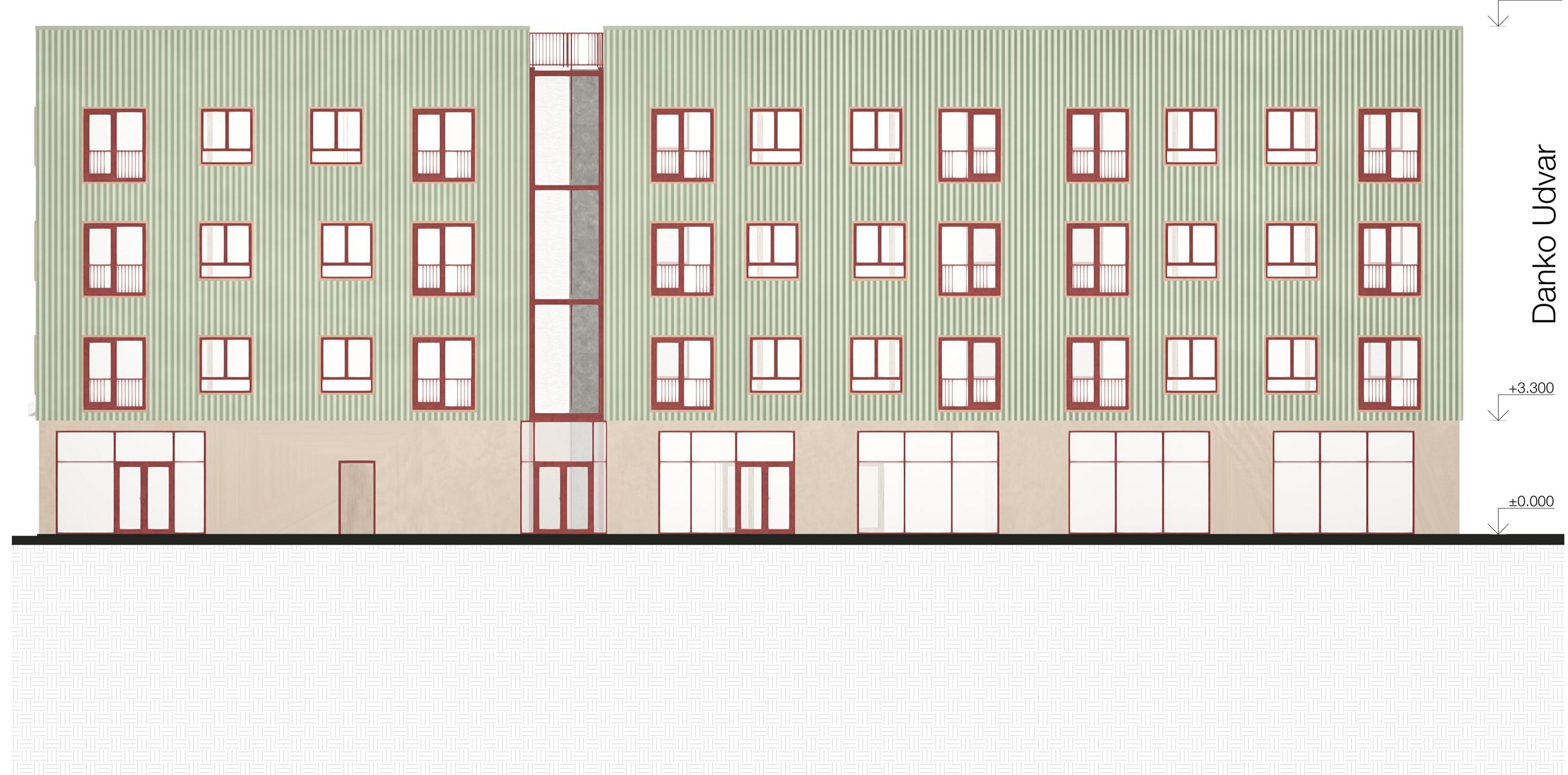
Section 1-1 S1:100



View from Magdolna street



Section 2-2 S1:100



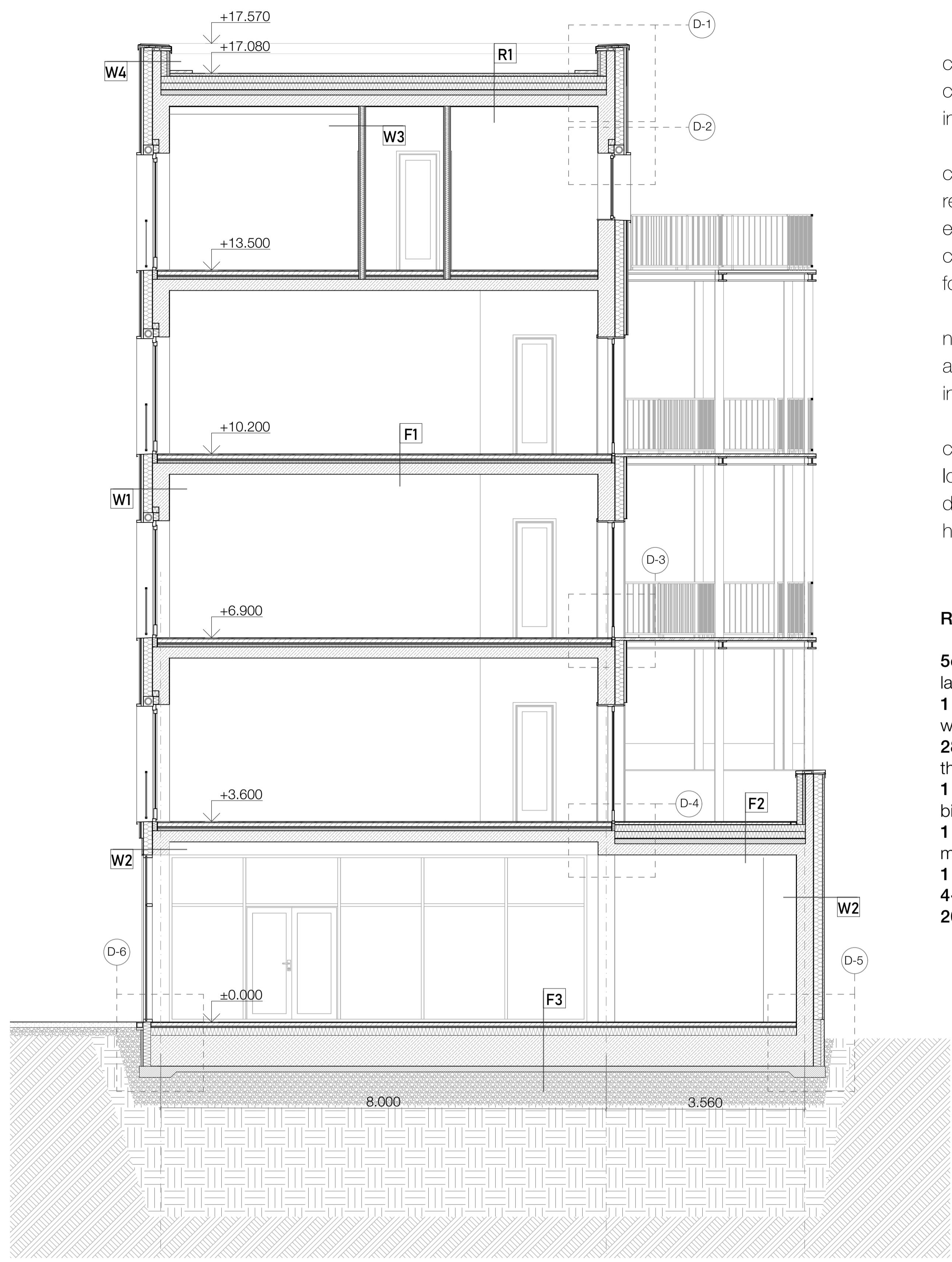
"Magdolna street - Danko Udvar" Elevation S1:100



"Danko Udvar - Magdolna street" Elevation S1:100



North Elevation S1:100

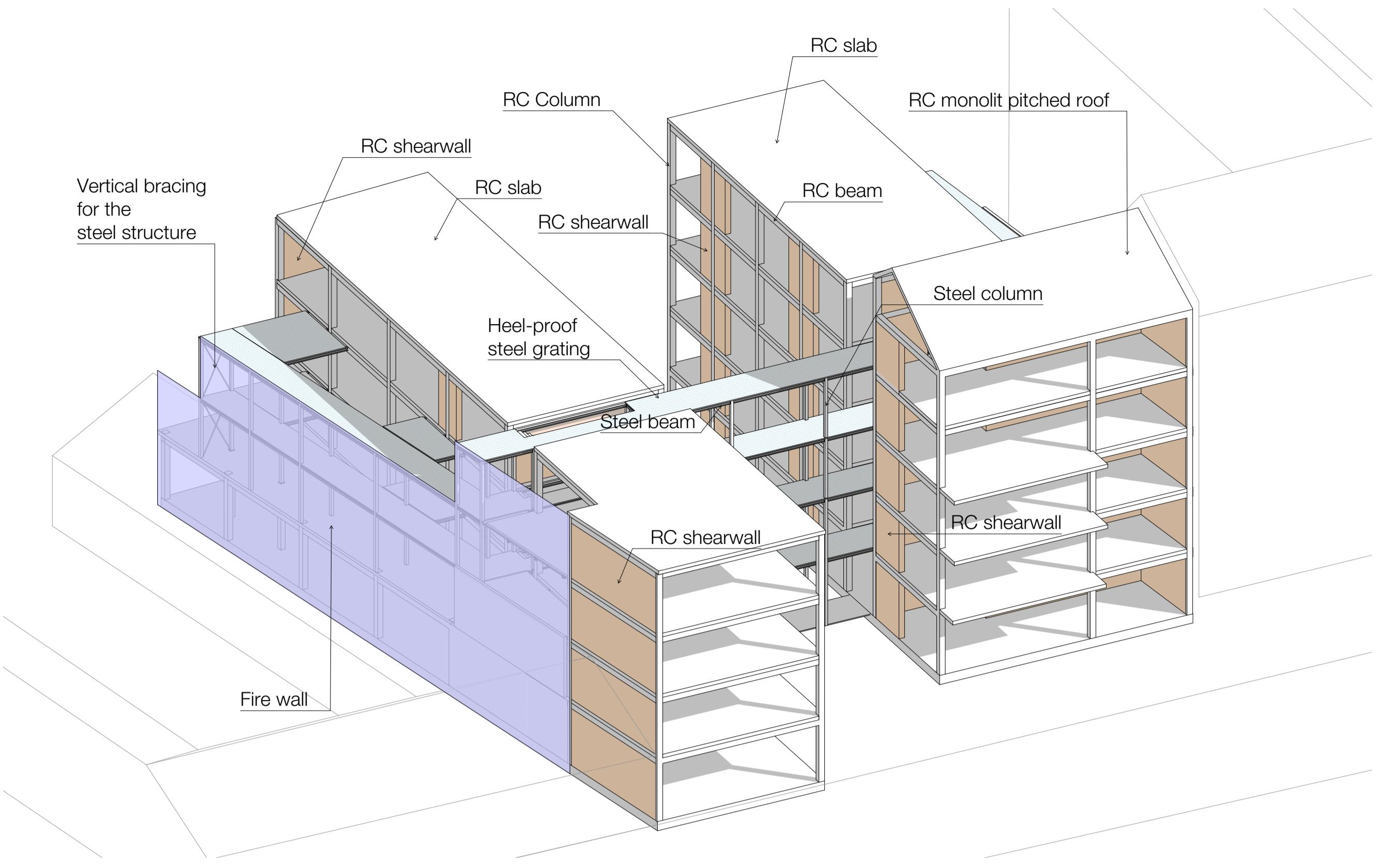


The project's main structure is a reinforced concrete frame with slab floors and load-bearing cores, ensuring strong stability and flexibility in interior layouts.

The residential blocks feature open corridors constructed from lightweight steel, which not only reduce the building's overall weight but also enhance natural ventilation, daylight penetration, and create visual connections to the adjacent courtyard, fostering a sense of openness and community.

One block has a pitched roof that aligns with the neighboring building, adding visual interest and allowing efficient water drainage, integration of insulation, and architectural expression.

The exterior is corrugated fiber cement panels, chosen for their durability, weather resistance, and low maintenance requirements. These panels add a dynamic texture and rhythm to the façade while harmonizing with the surrounding urban fabric.



R1. layers:

5cm d16-32 mm gravel ballast and protecting layer (against wind uplifting forces)
1 layer water resistant, vapour open PE microfiber sheet with high tear resistance as a drainage, separating layer
28 cm extruded polystyrene foam thermal insulation
1 layer 4mm, polyester fibre reinforced SBS modified bitumen membrane waterproofing
1 layer 4mm, glass fibre reinforced SBS modified bitumen membrane waterproofing
1 layer cold bitumen patching compound
4-cm concrete inclination layer
20 cm reinforced concrete slab

R2 green roof layers:

15 cm soil
2 mm synthetic filter layer
6 cm drainage and water storage layer
28 cm extruded polystyrene foam thermal insulation
1 layer 4mm, polyester fibre reinforced SBS modified bitumen membrane waterproofing
1 layer 4mm, glass fibre reinforced SBS modified bitumen membrane waterproofing
1 layer cold bitumen patching compound
4-cm concrete inclination layer
20 cm reinforced concrete slab

F1. layers:

18 mm parquet floor
3 mm adhesive layer
5 mm self-leveling smoothing compound
65 mm concrete screed
1 layer PE foil
25 mm Mineral Wool floating layer
5 cm EPS installation layer
20 cm reinforced concrete slab

F3. layers:

7 mm non slipping ceramic tile
3 mm adhesive layer
20 mm self-leveling smoothing compound
65 mm concrete screed
1 layer PE foil
25 mm Mineral Wool floating layer
14 cm XPS insulation
60 cm reinforced concrete raft foundation
1 layer PVC waterproofing membrane
10 cm concrete screed
Gravel

F2. layers:

4 cm granite stone paving
4 cm stone chipping and drainage layer
1 layer synthetic filter layer with specific density of 125g/m²
12 cm XPS thermal insulation
12 cm XPS thermal insulation
1 layer 4 mm, polyester fibre reinforced modified bitumen membrane waterproofing
1 layer 4 mm, glass fibre reinforced modified bitumen membrane waterproofing
1 layer cold bitumen patching compound
4-cm concrete inclination layer
20 cm reinforced concrete slab

W2. layers:

5 cm stucco over metal lath
16 cm insulation EPS
Self-adhesive tape
30 cm reinforced concrete wall
1 cm gypsum plasterboard

W3. layers:

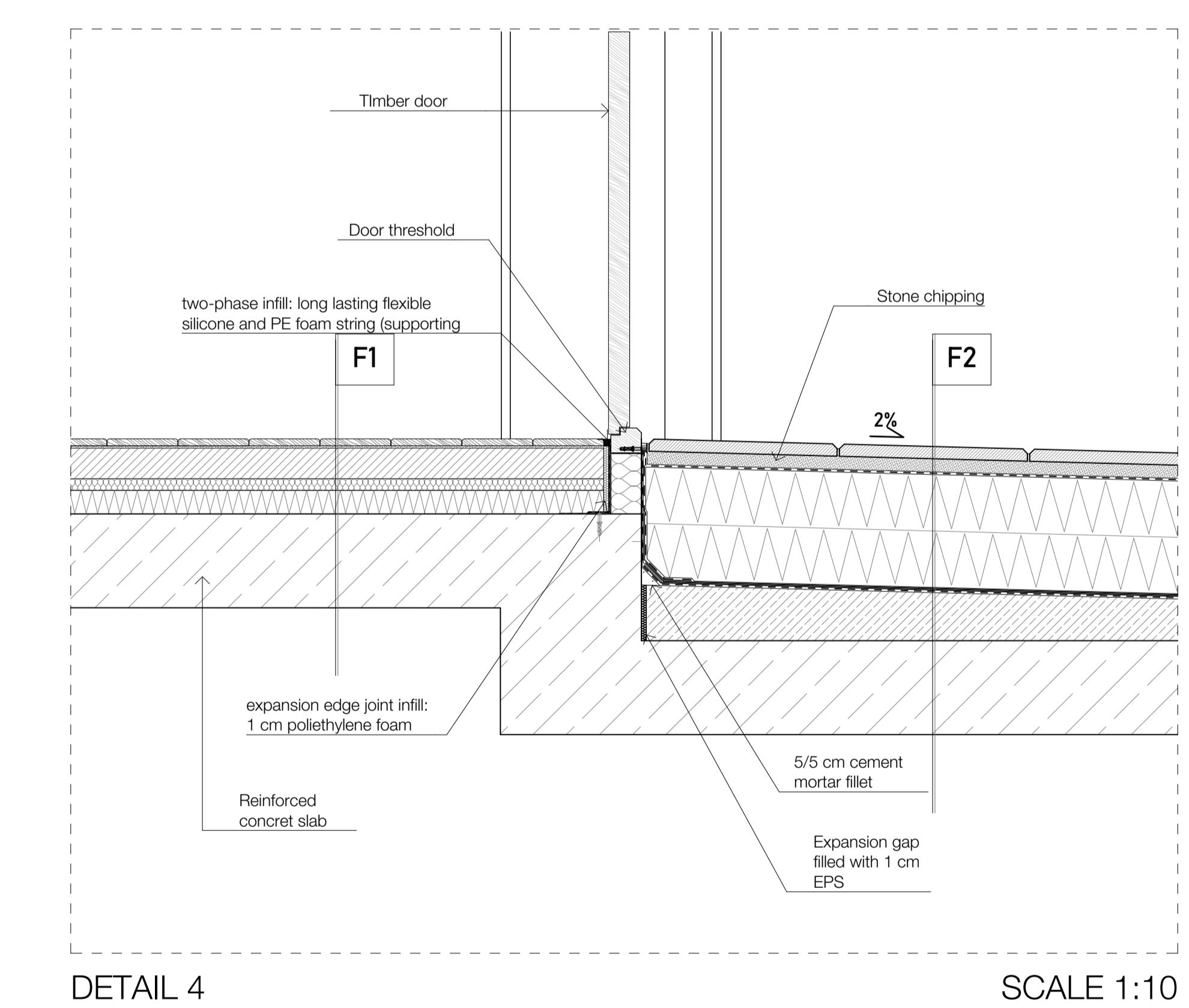
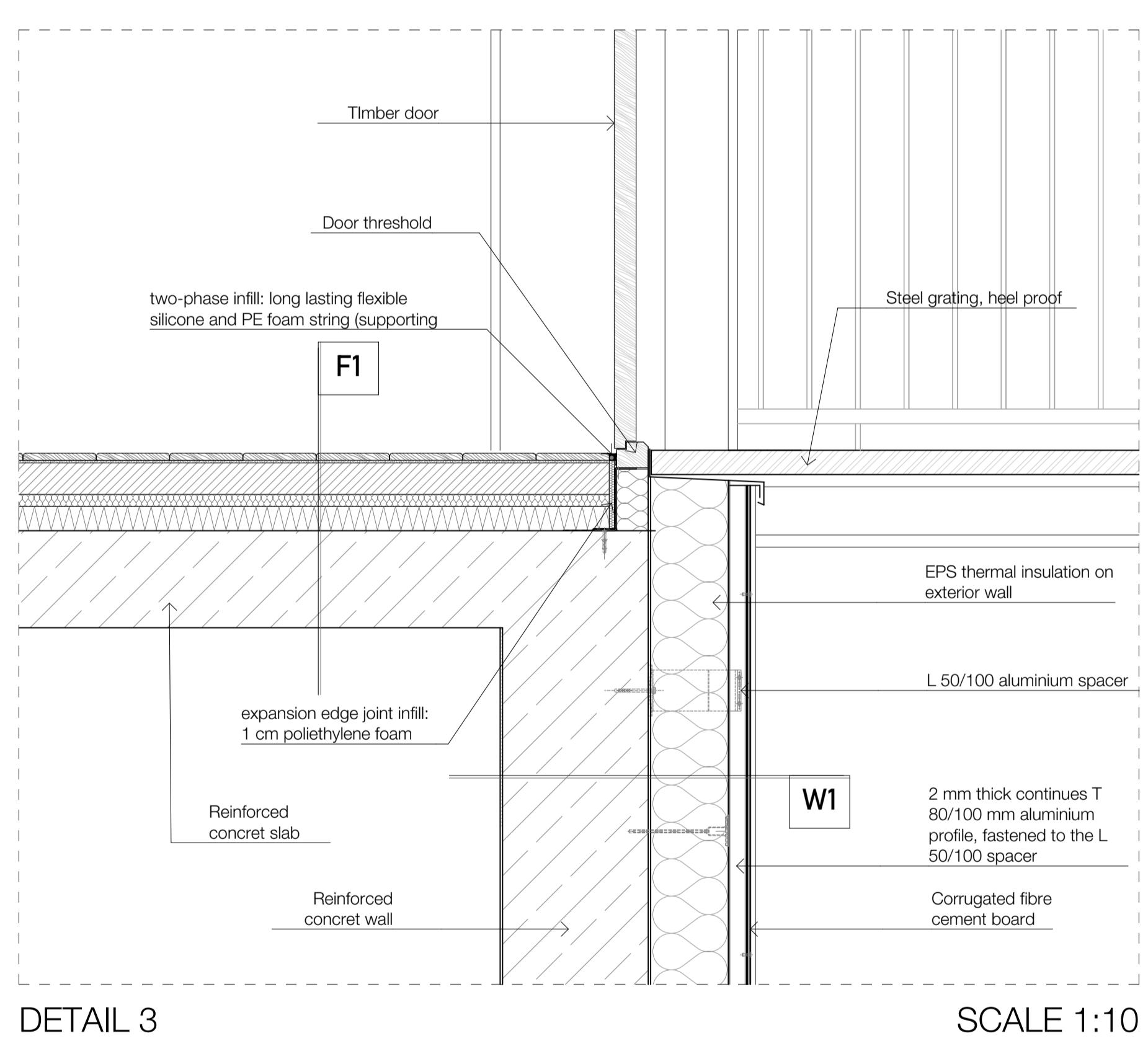
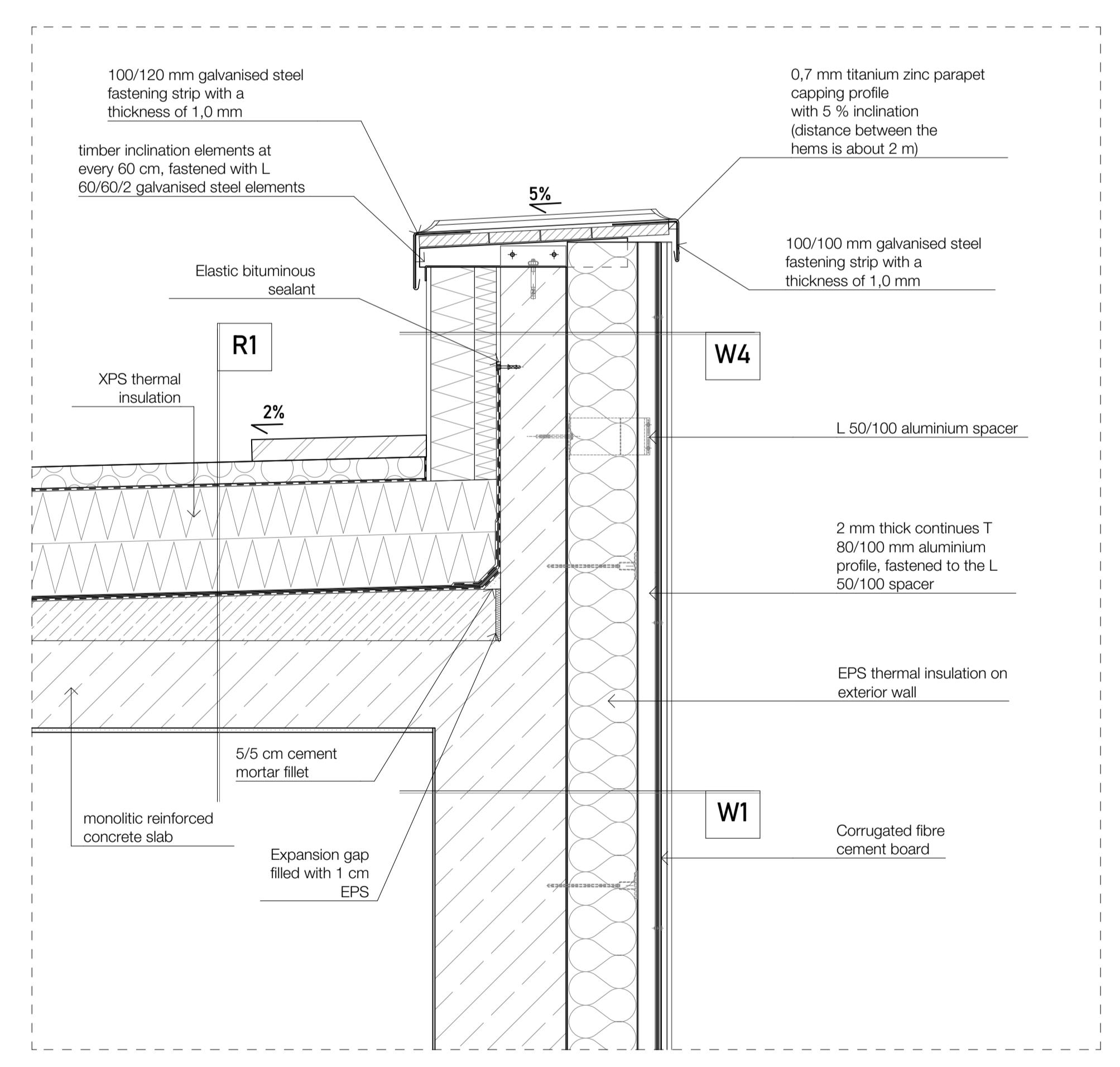
1.25 cm gypsum board
1.25 cm gypsum board
7.5 cm fiberglass insulation
1.25 cm gypsum board
1.25 cm gypsum board

W1. layers:

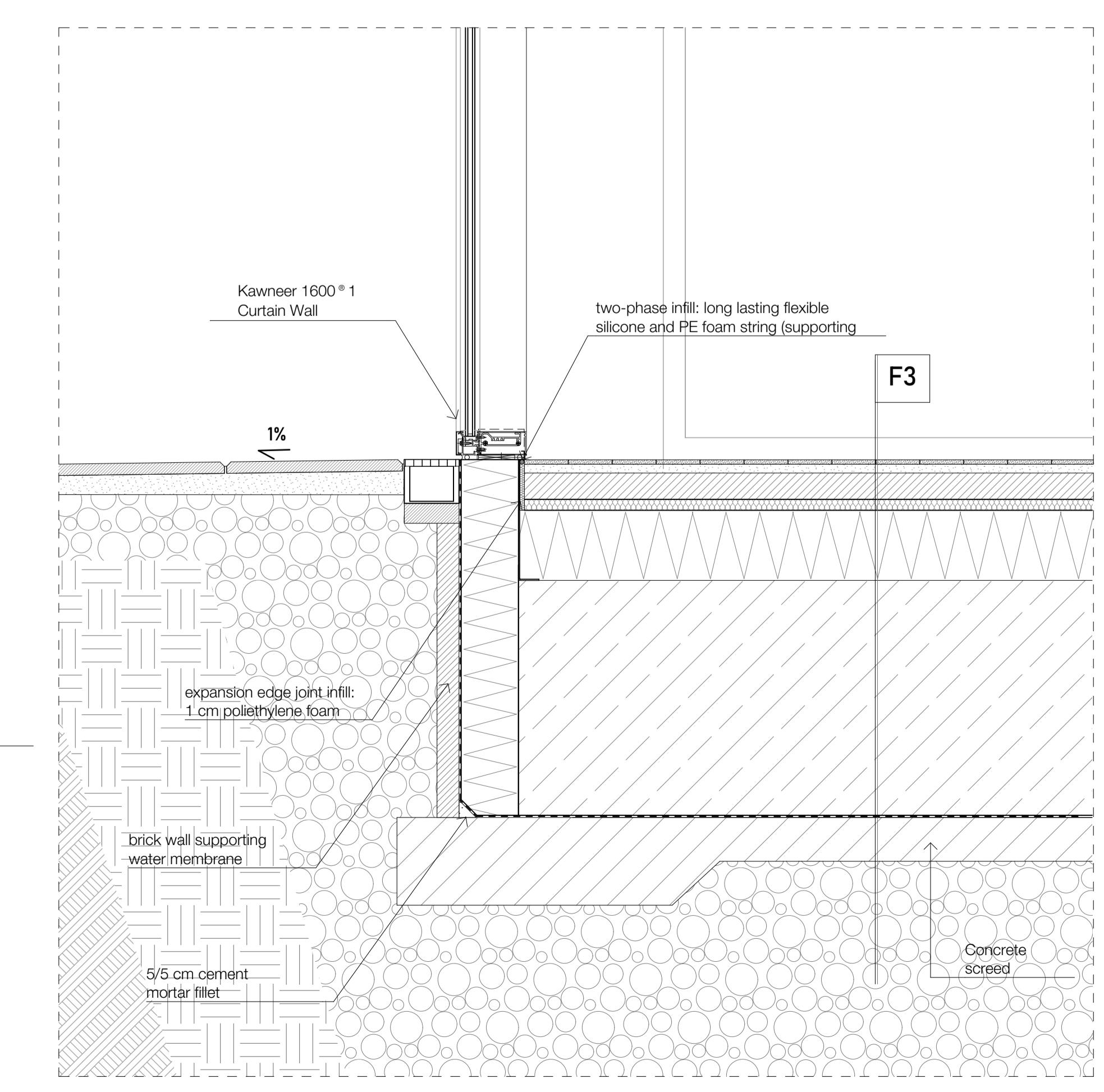
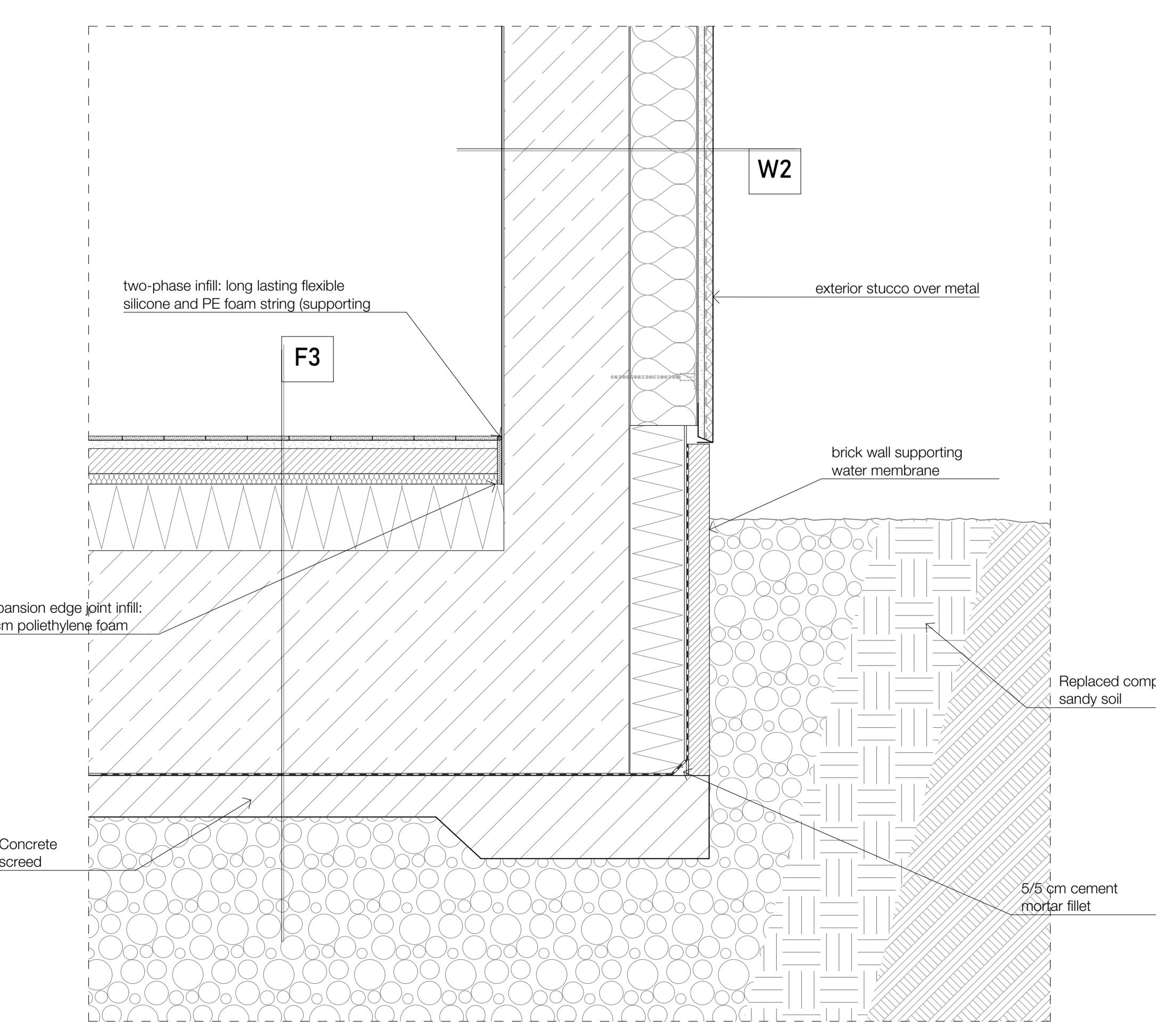
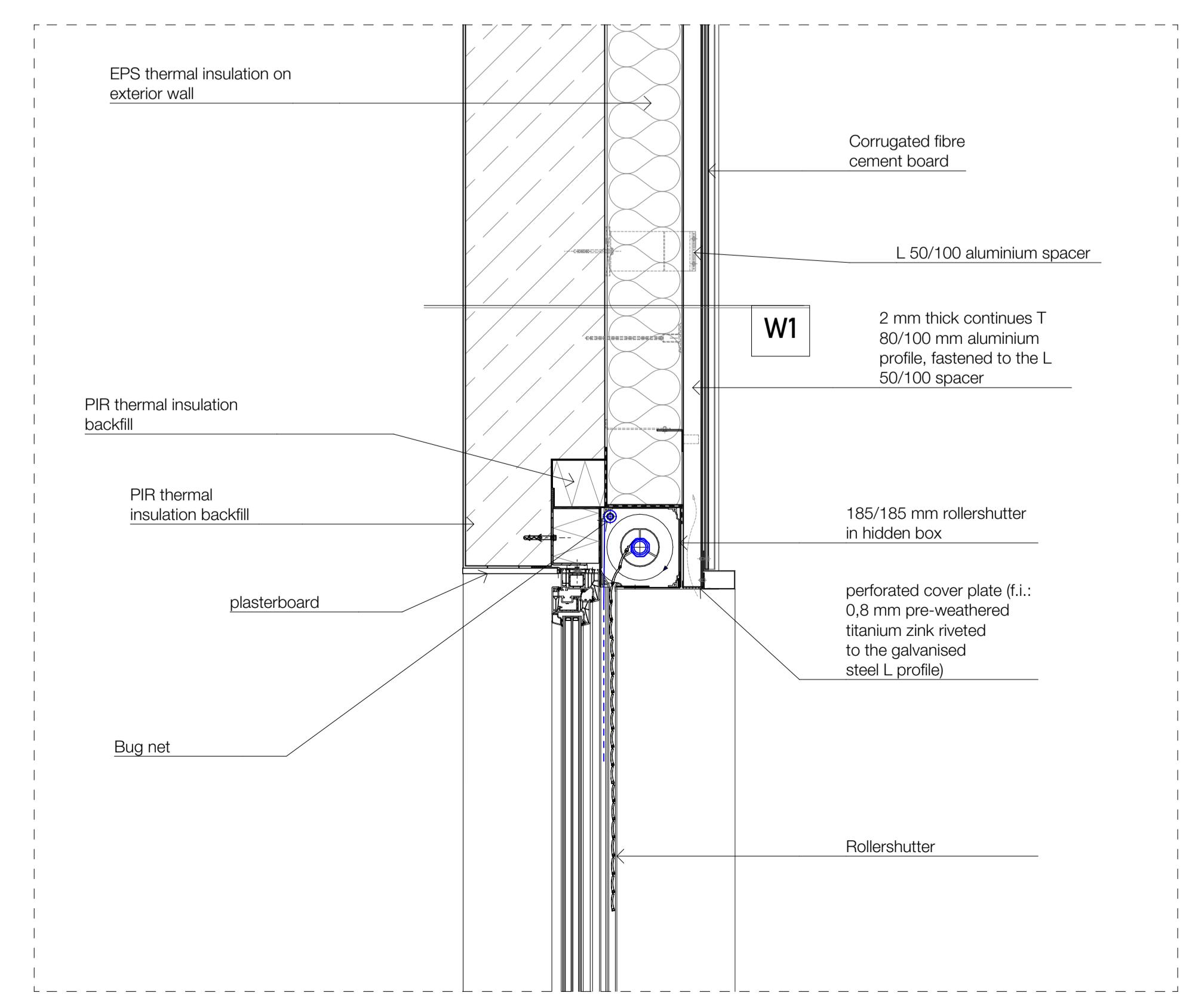
8.5 cm corrugated fibre cement sheet
5 cm air gap
16 cm insulation EPS
Self-adhesive tape
30 cm reinforced concrete wall
1 cm gypsum plasterboard

W4. layers:

8.5 cm corrugated fibre cement sheet
5 cm air gap
16 cm insulation EPS
Self-adhesive tape
10 cm insulation XPS
5 cm insulation XPS
1 cm synthetic concrete external protecting layer



DETAIL 1 SCALE 1:10



DETAIL 2

DETAIL 5

DETAIL 10

DETAIL 6

SCALE 1:10

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