

## **GROSSFORM WATERLOO**

Large scale housing in Hanover, Germany

2020

Diploma Project  
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## HISTORIC CONDITION

The project is located on the Waterlooplatz (Waterloo Square) in the city of Hanover, the capital of the federal state of Lower Saxony in northern Germany. When the square was laid out in the 19th century, it served as a military parade square and had a prominent position within the urban fabric. Its axis, starting at the southern end of the square with a 43-meter tall victory column was aligned with the royal castle in the north and the Market Church in the center of the city.



## PRE-WAR

In the wake of World War I and the collapsed German Kaiserreich, the square declined somewhat in importance in the city. There simply seemed to be no need for a military square anymore, and the symbolism of the axial alignment and the overall layout of the square started to be questioned.



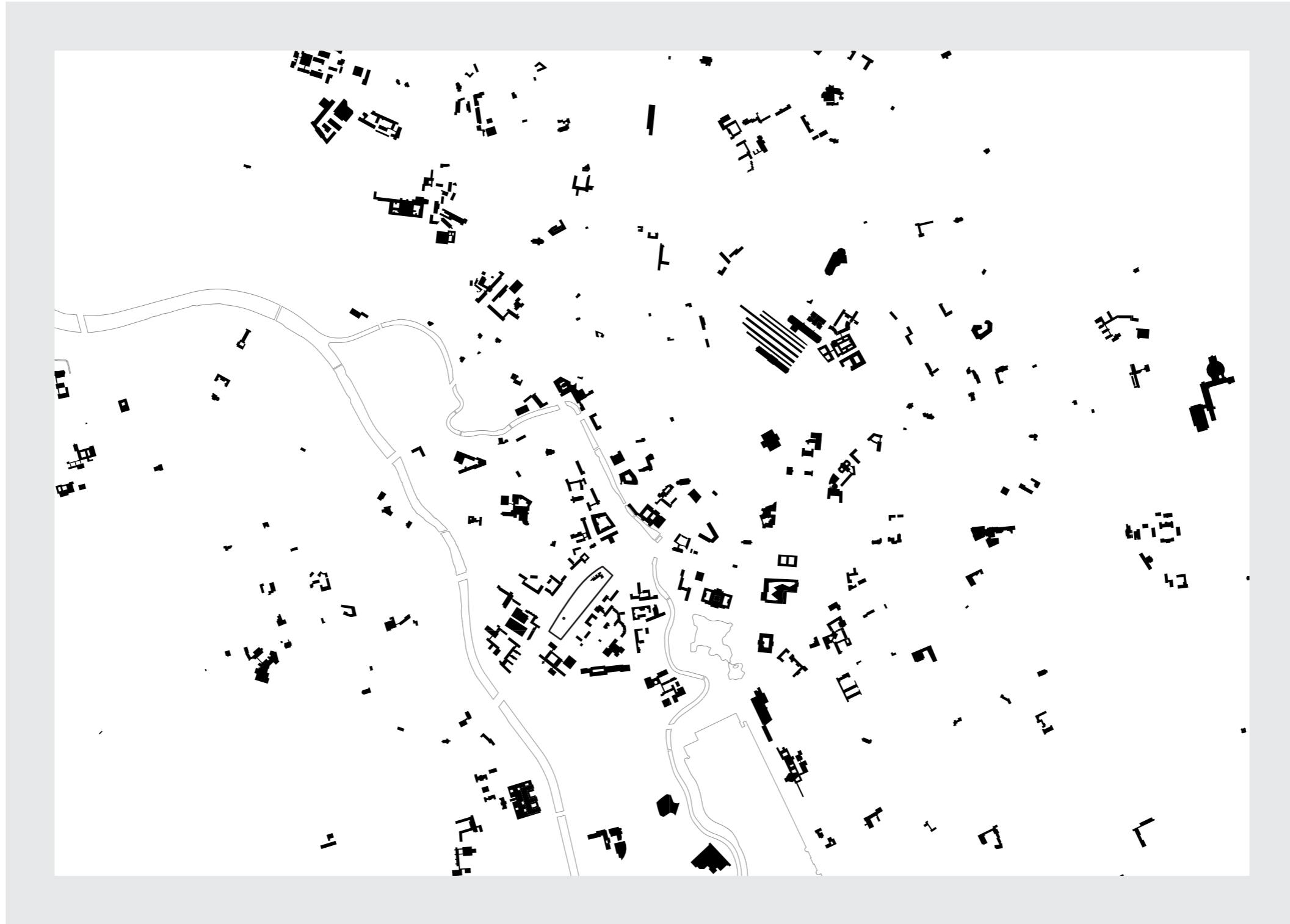
## TODAY

After the destruction and rebuild of the city after the second world war, the square lost not only importance but primarily its connection to the rest of the city. The implementation of the City Ring, a four to six-lane highway around the city center, and five feeder roads connecting it with the suburbs detached the square from the historic center. One of the feeder roads passes by the Waterlooplatz in a long stretched curve and dissolves the old symmetry of the square and dictates its present shape.



## TODAY

The square's old function as a military parade square might not be visible in its appearance anymore but it reflects in the buildings and the urban structure around it. After the war, the old military facilities were transformed and now house offices, ministries, police facilities, and schools.



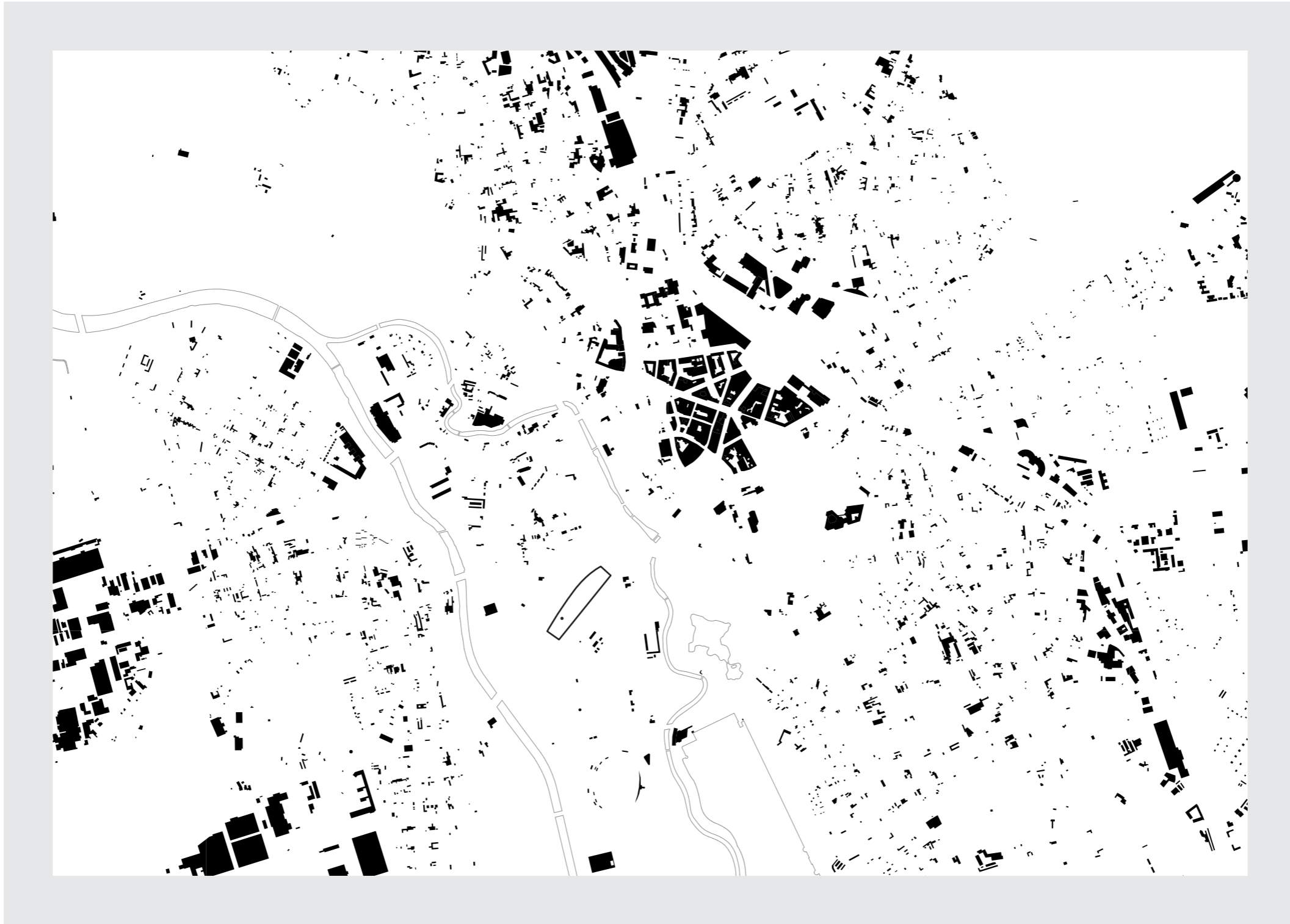
## TODAY

The closest residential area is the Calenberger Neustadt north of the Waterlooplatz where the urban structure is gradually changing from large office buildings, both from the 1970s as well as the Gründerzeit era to a more fragmented apartment block structure dominated by the expediency of postwar reconstruction.



## TODAY

The commercial and historic center of Hanover lies north-east of the square. It is disconnected from the Waterlooplatz by the City Ring and the river Leine

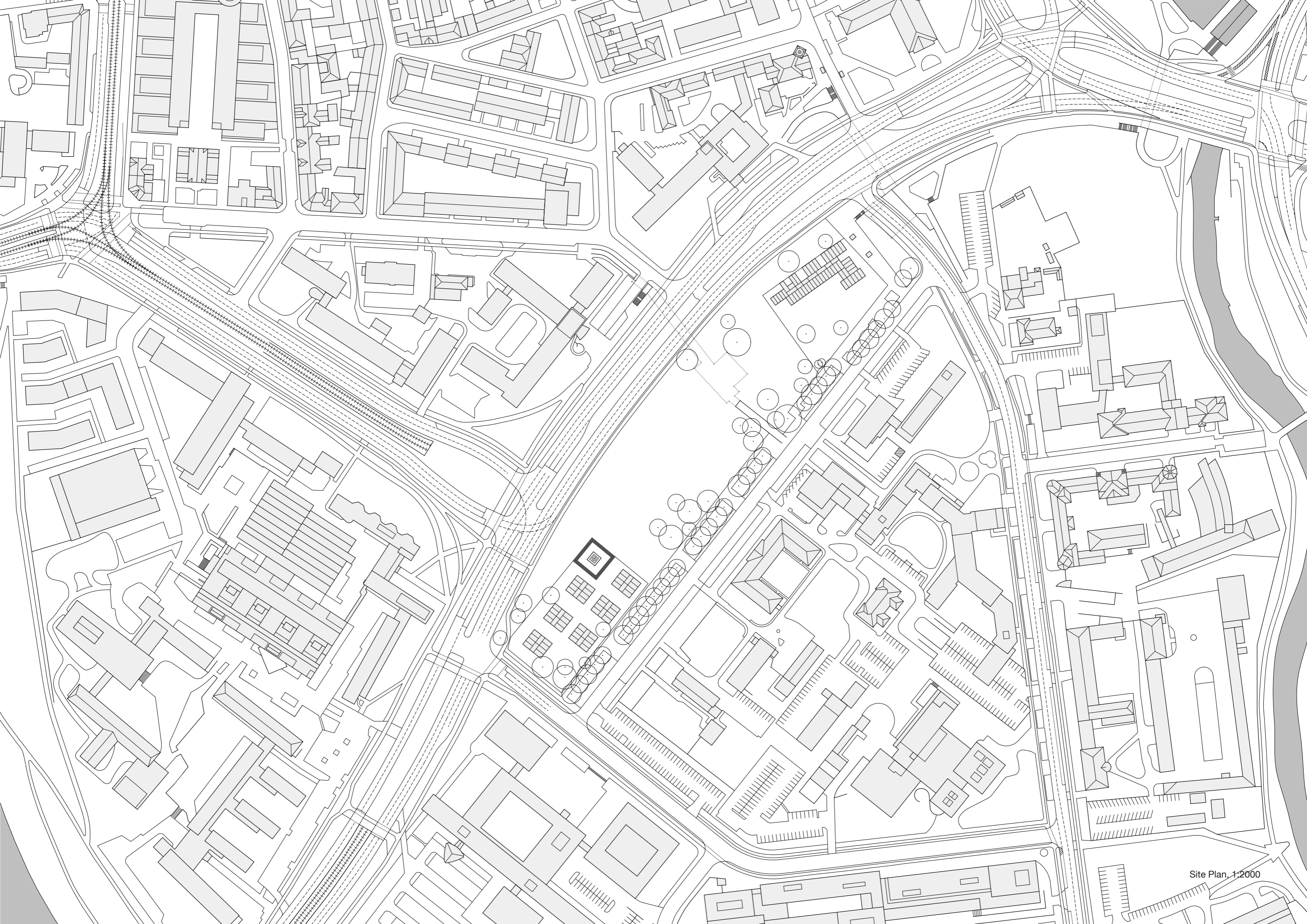


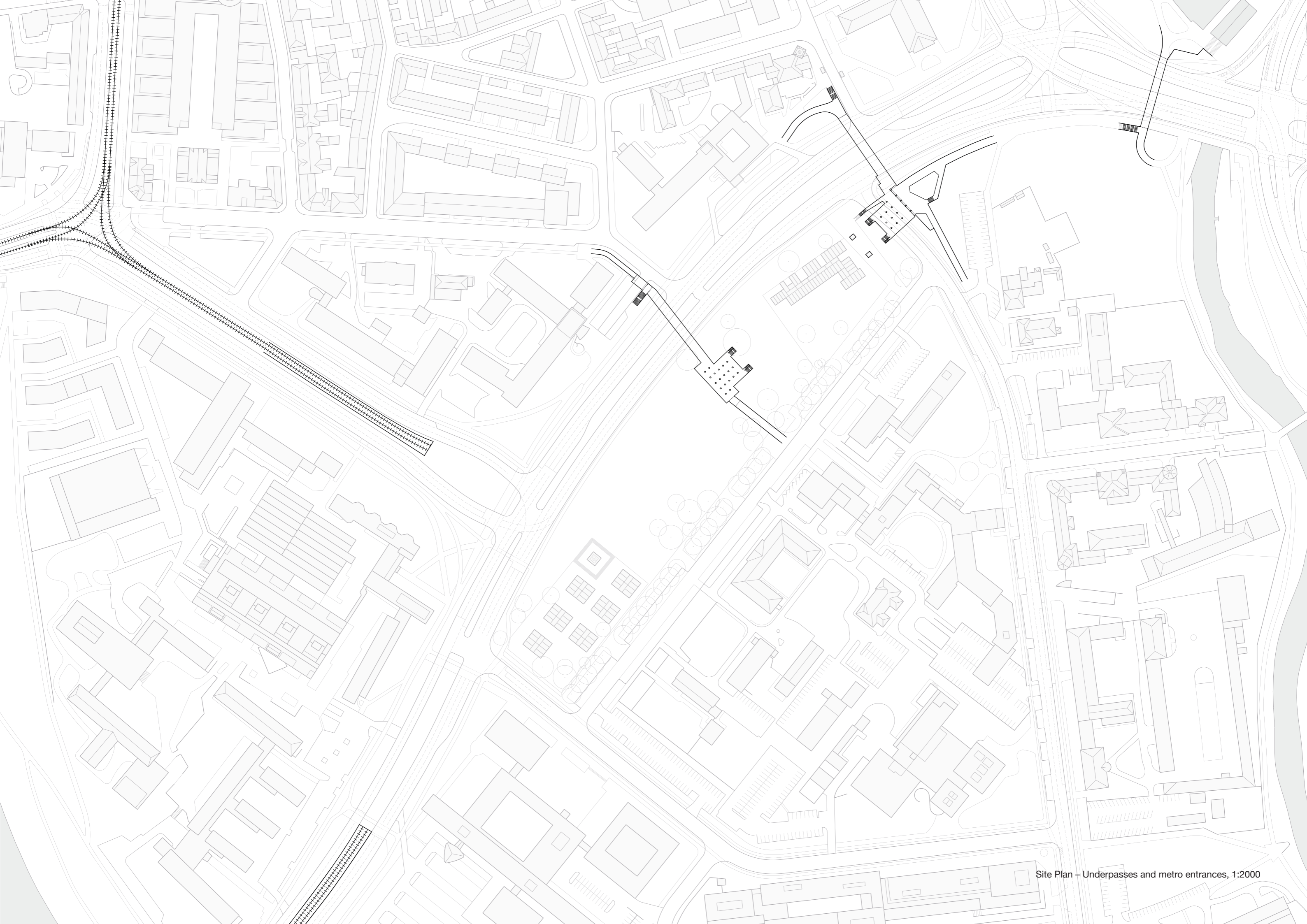


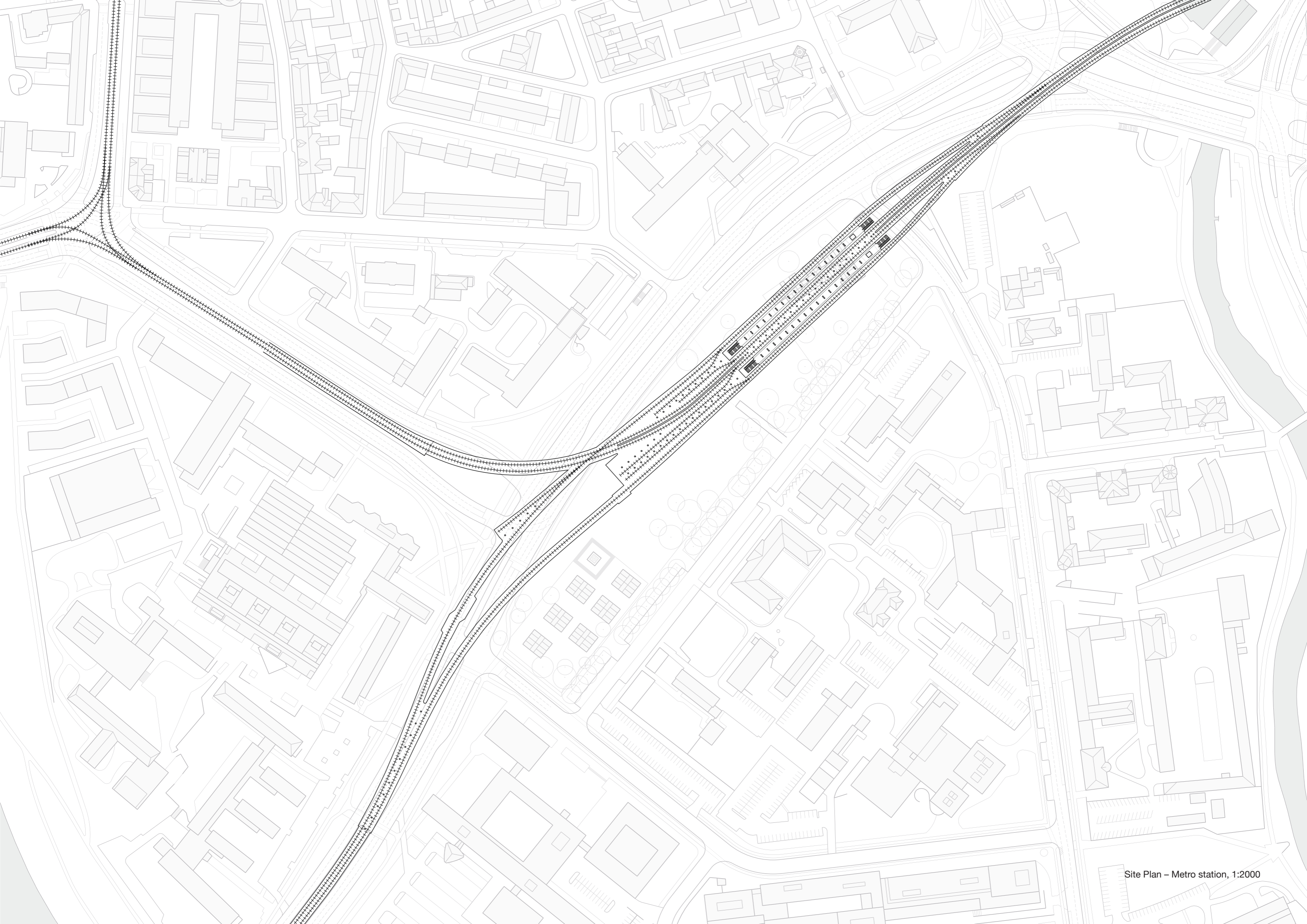
## TODAY

The City Ring is not the only piece of infrastructure closely connected to the Waterlooplatz. Three metro lines pass by below the square and a metro station is located at its northern tip.

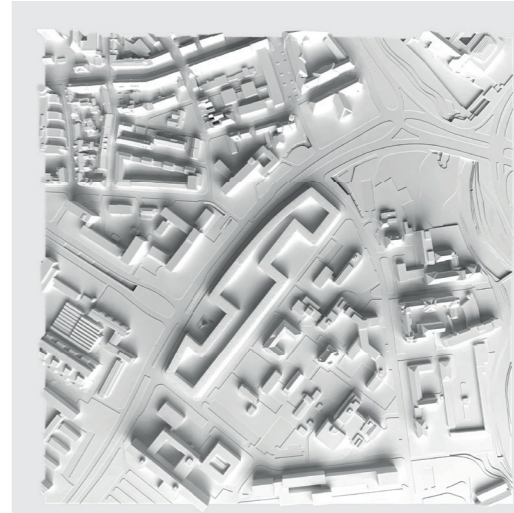
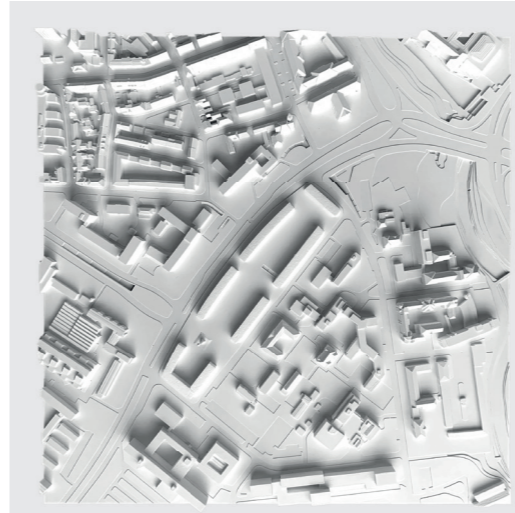
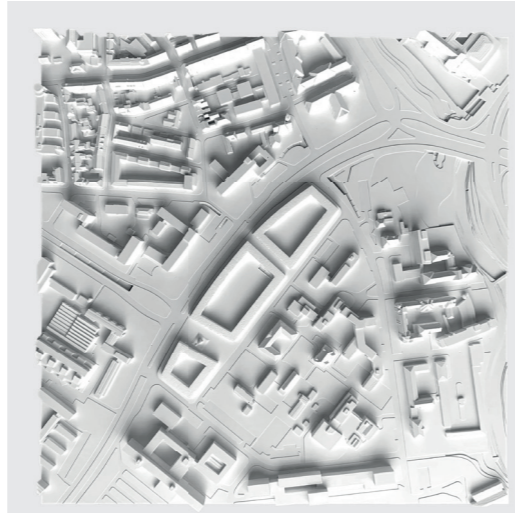
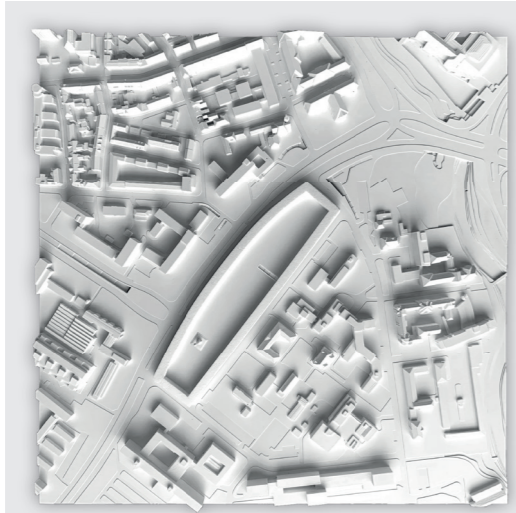




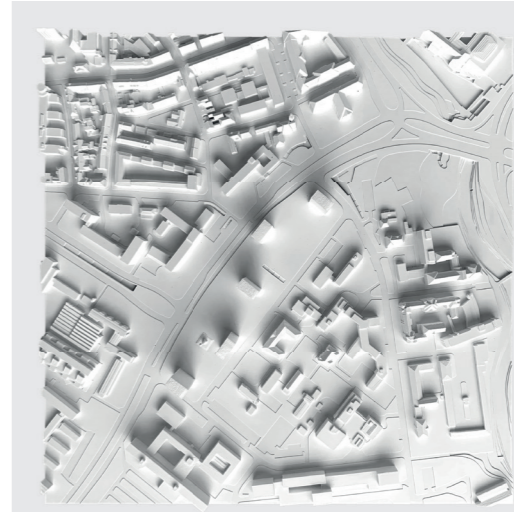
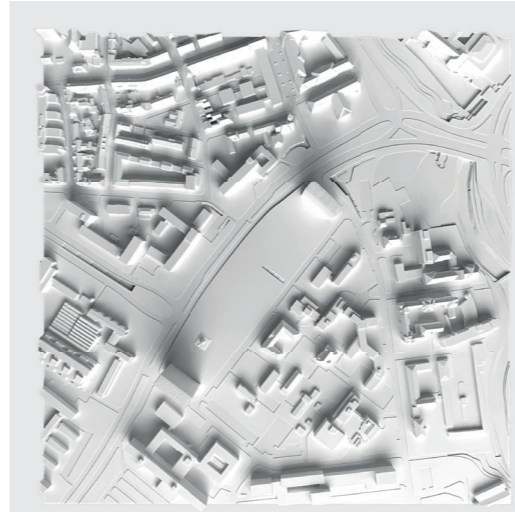
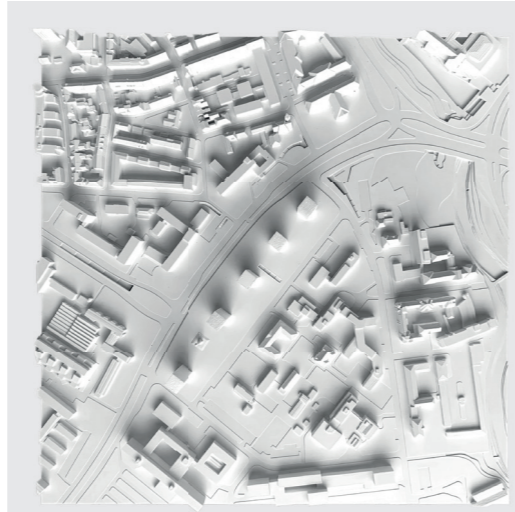
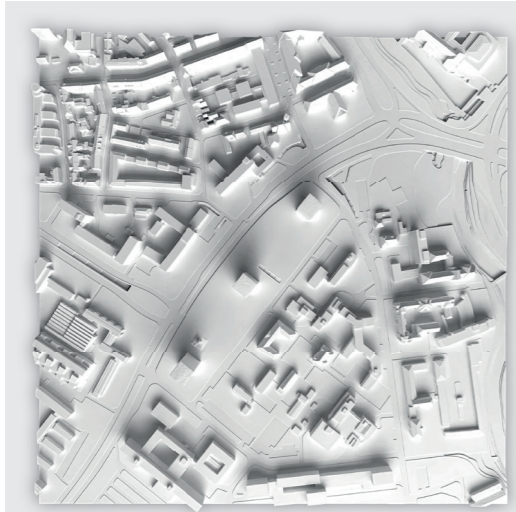




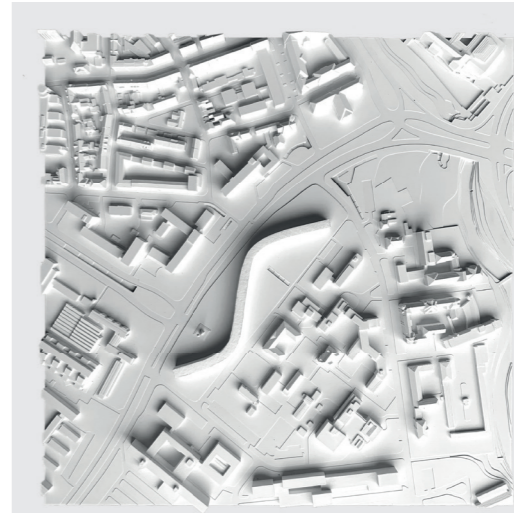
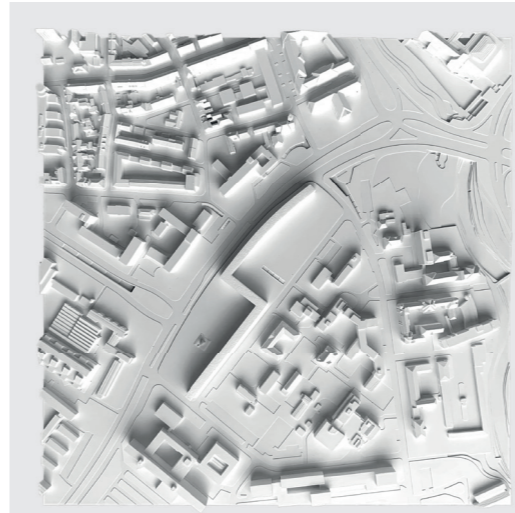
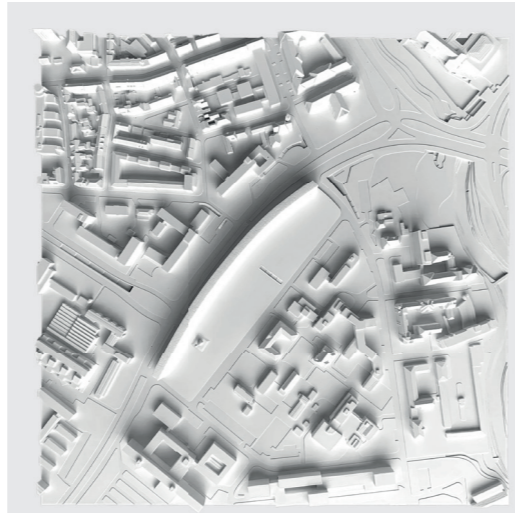
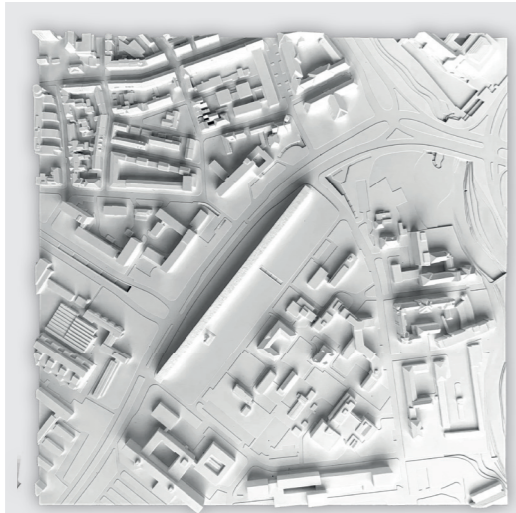
BLOCK



TOWER

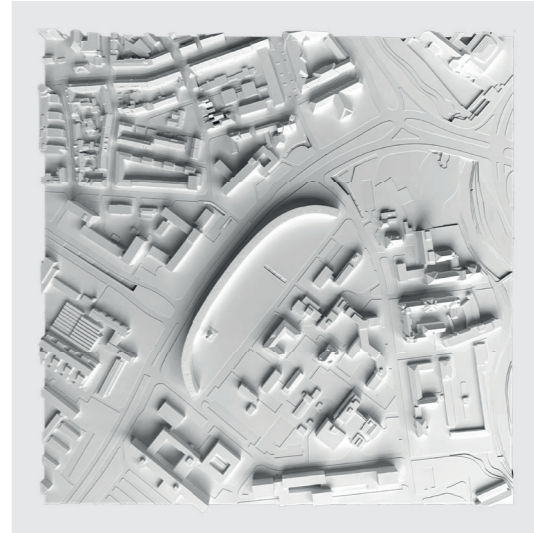
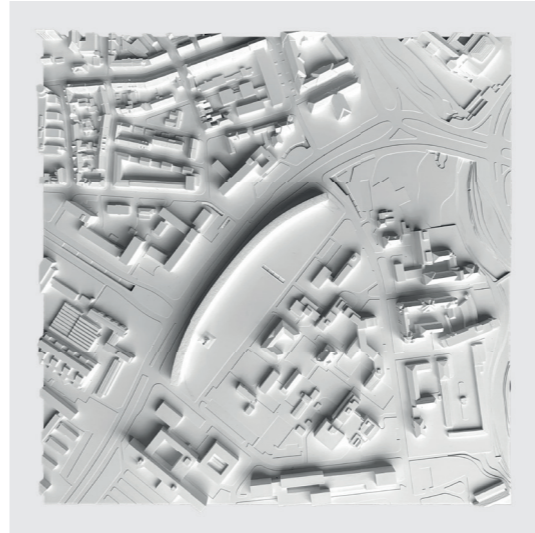
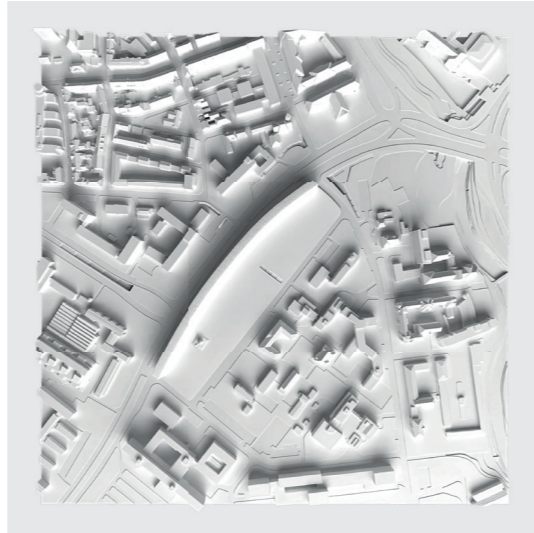


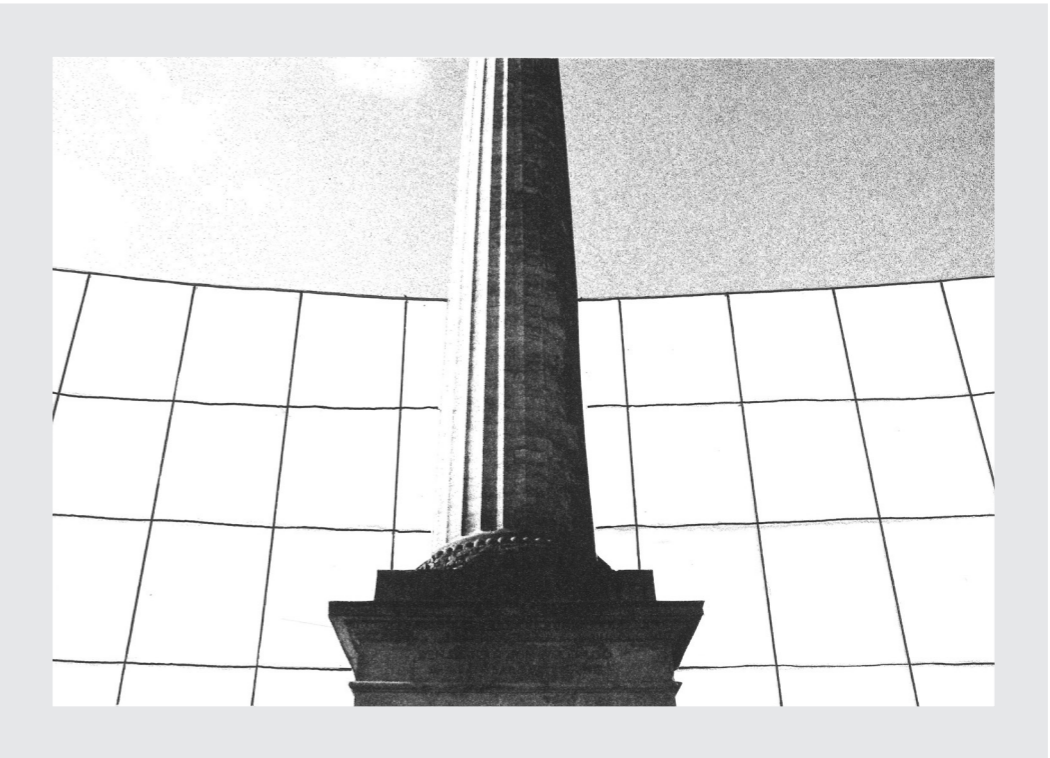
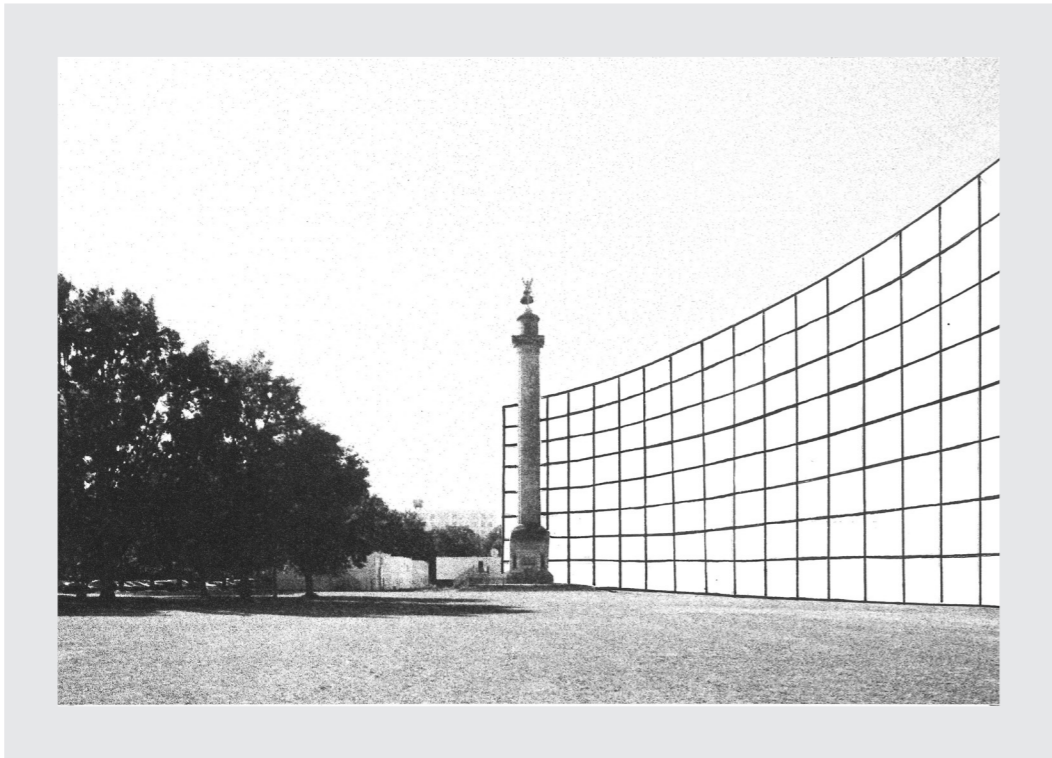
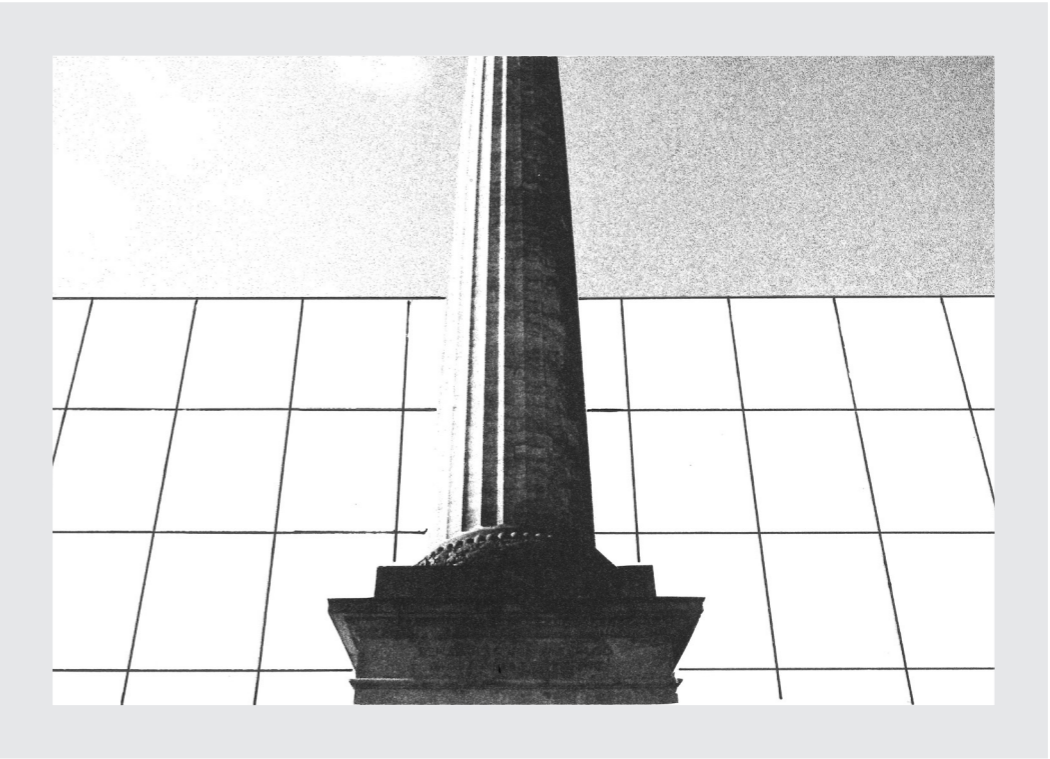
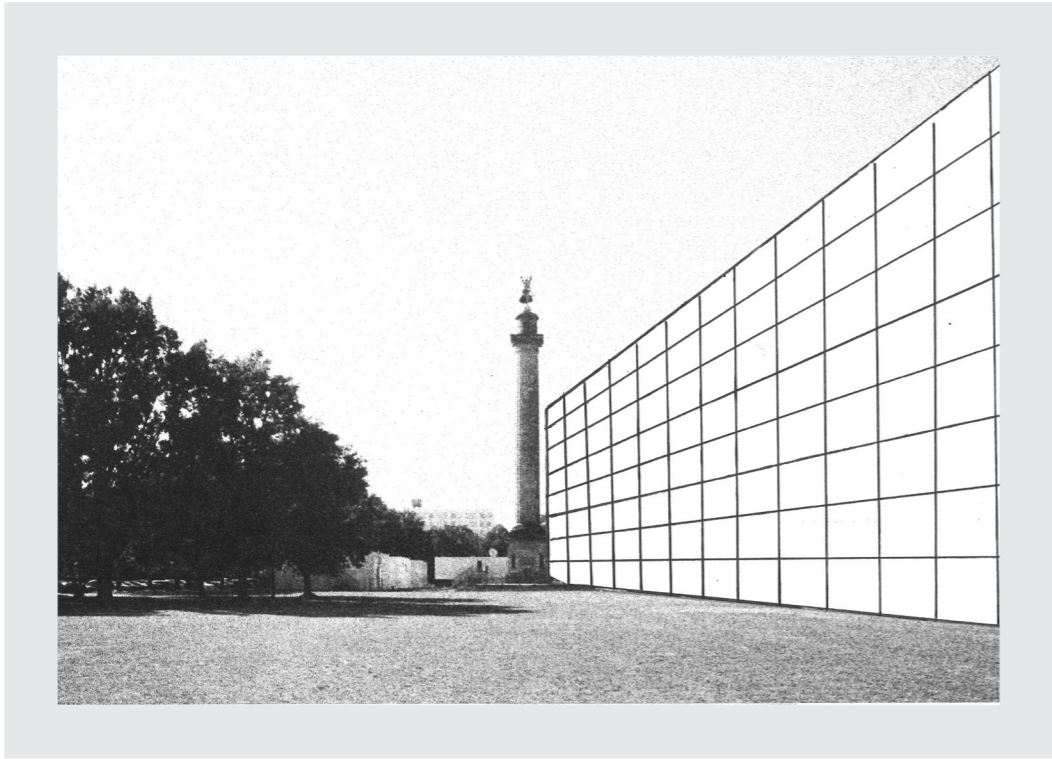
WALL

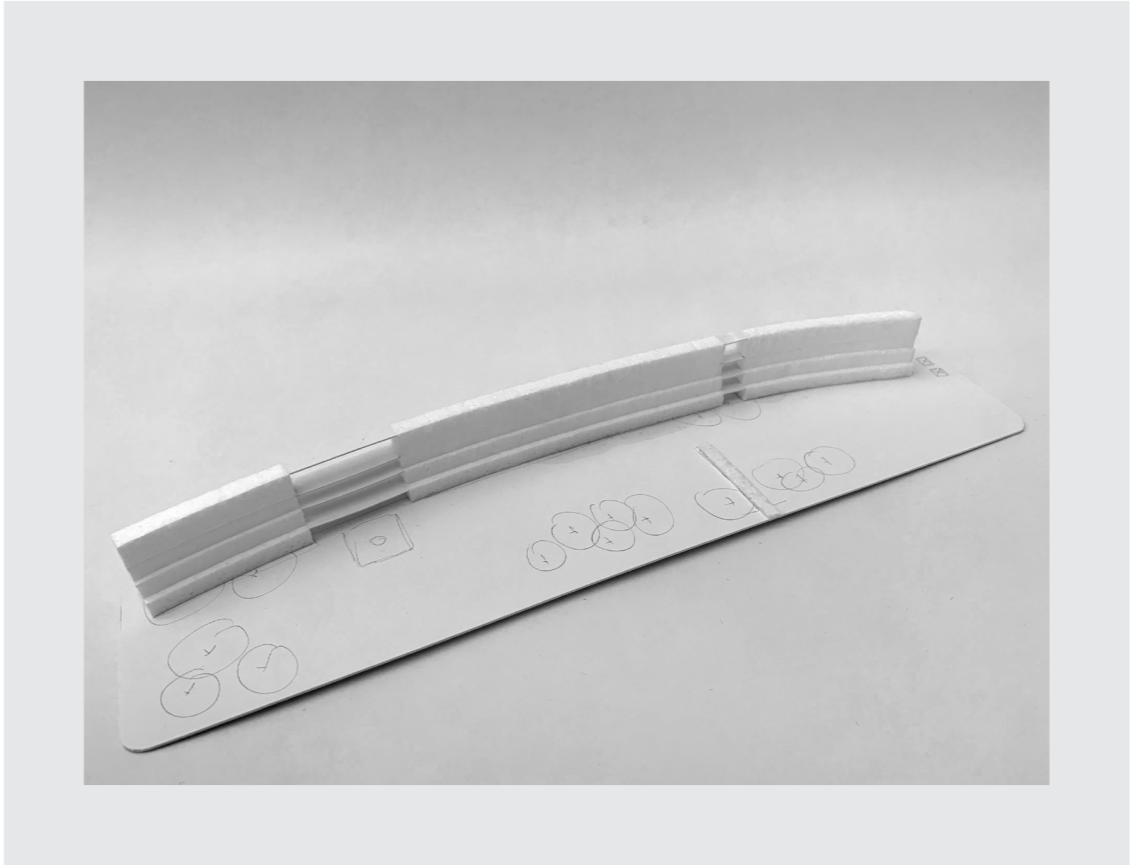
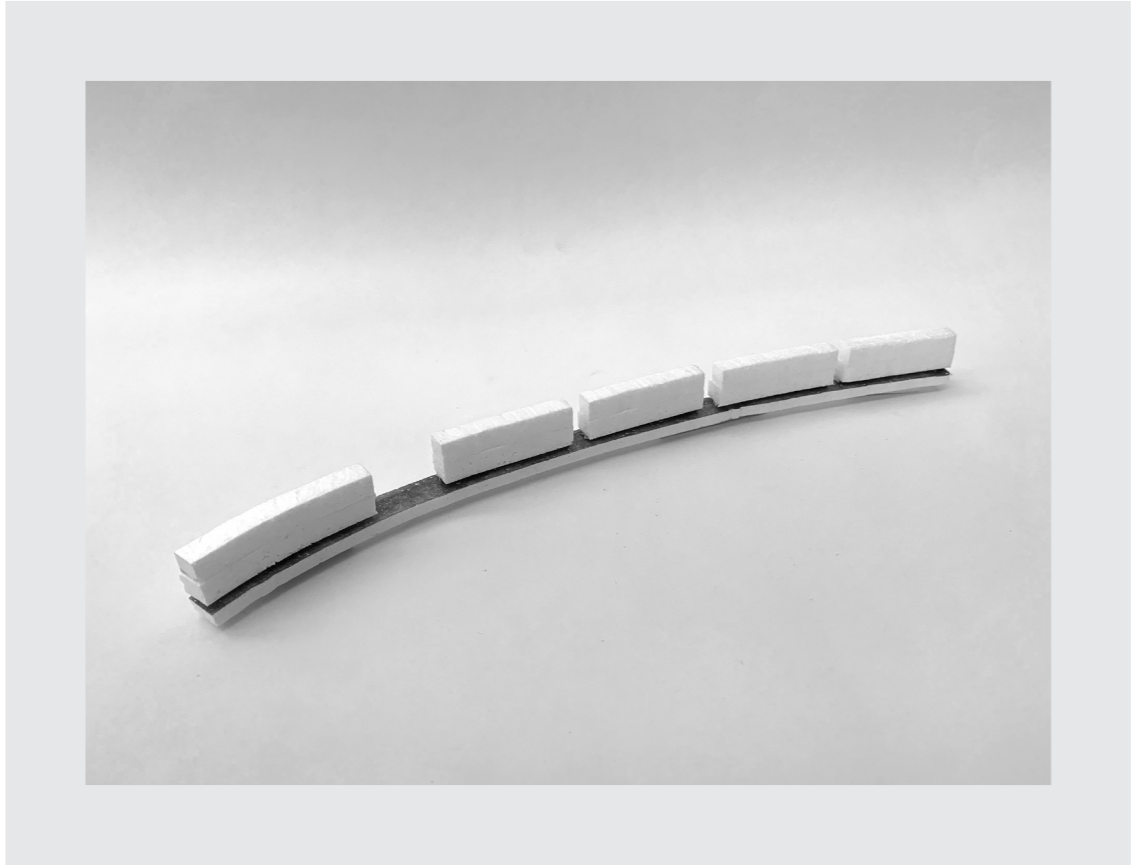


## THE OVER ACCENTUATED ELEMENT

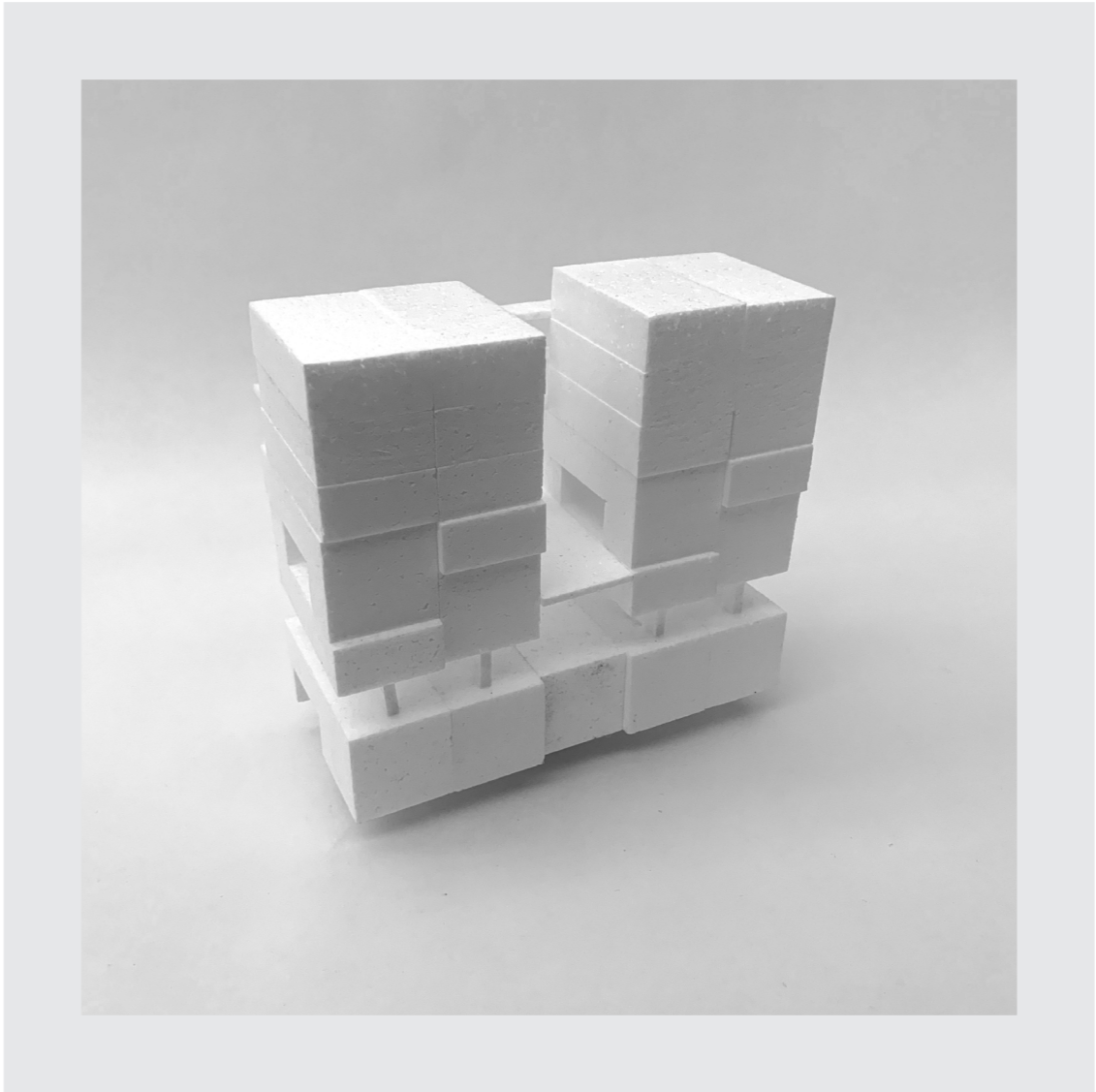
The volume studies on The Over Accentuated Element describe the search for an element or a series of elements that have the strength to define the whole site in a single gesture. I started with three basic typologies, block, tower, and wall, and then started to alter them to identify potentials and opportunities. The Wall articulated as a perfectly straight line is a radical gesture but by entirely ignoring the context the object feels foreign on the site. By bending it along the street it starts to embrace the park in front and to create a sort of backdrop for the column.



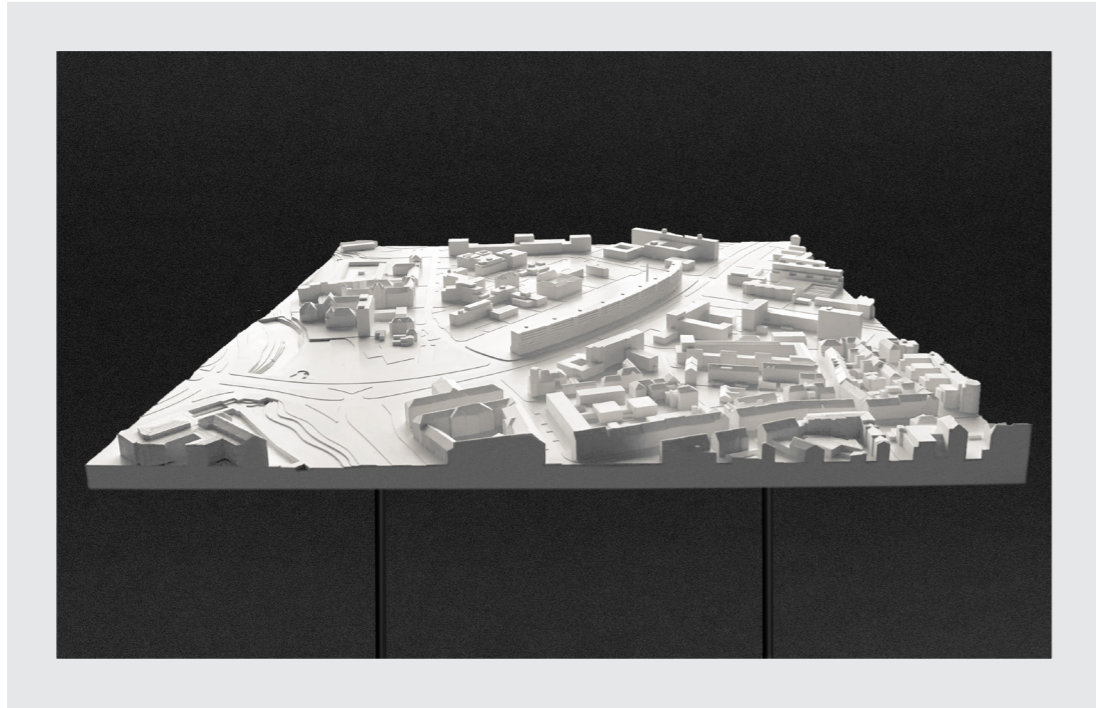












North



East



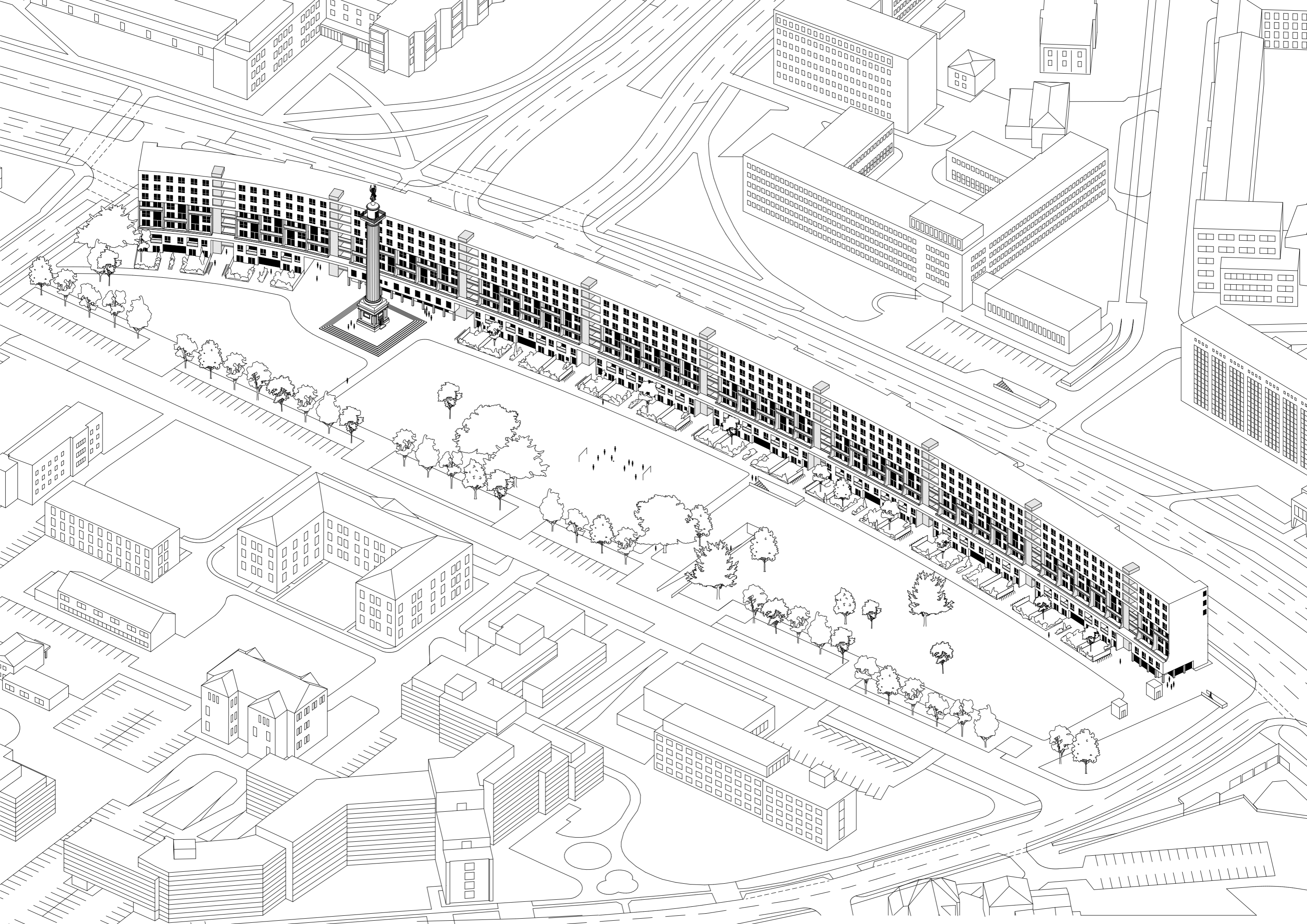
South



West



Building seen from the north



**HOUSING TYPOLOGIES**

The building is vertically structured in three layers. Each layer is defined by a different housing typology and offers a distinct quality to the residents. The open staircase acts as the vertical connection and creates informal communication spaces at the intersection with each layer.

**Collective:**

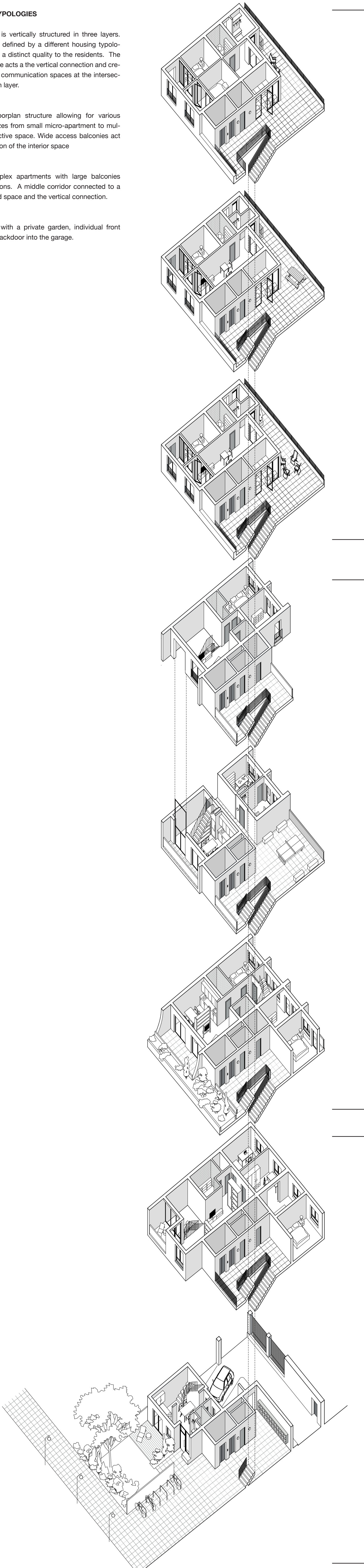
A flexible floorplan structure allowing for various apartment sizes from small micro-apartment to multi-room collective space. Wide access balconies act as an extension of the interior space

**Duplex:**

Compact duplex apartments with large balconies in two directions. A middle corridor connected to a neighborhood space and the vertical connection.

**Townhouses:**

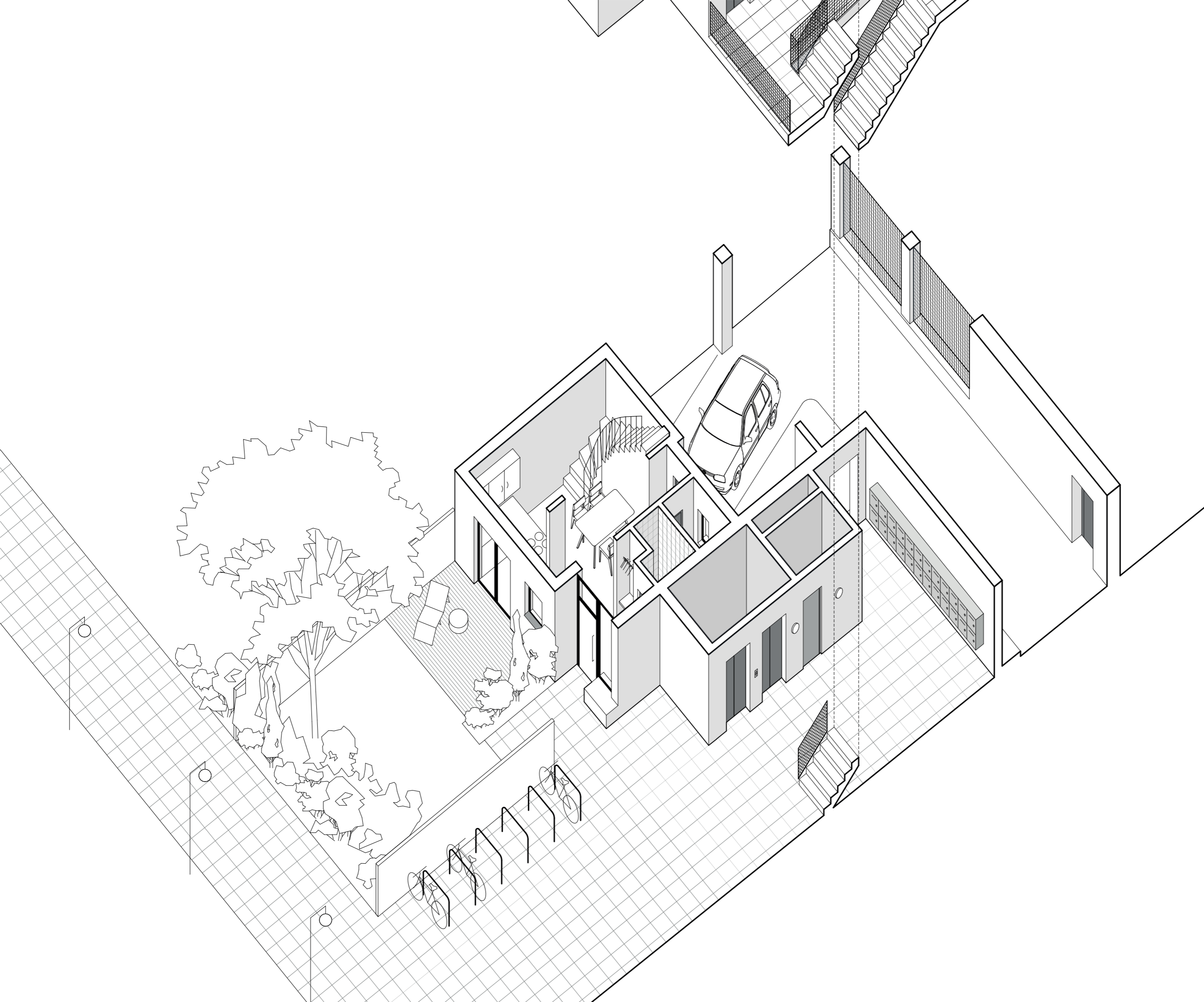
Townhouses with a private garden, individual front door, and a backdoor into the garage.

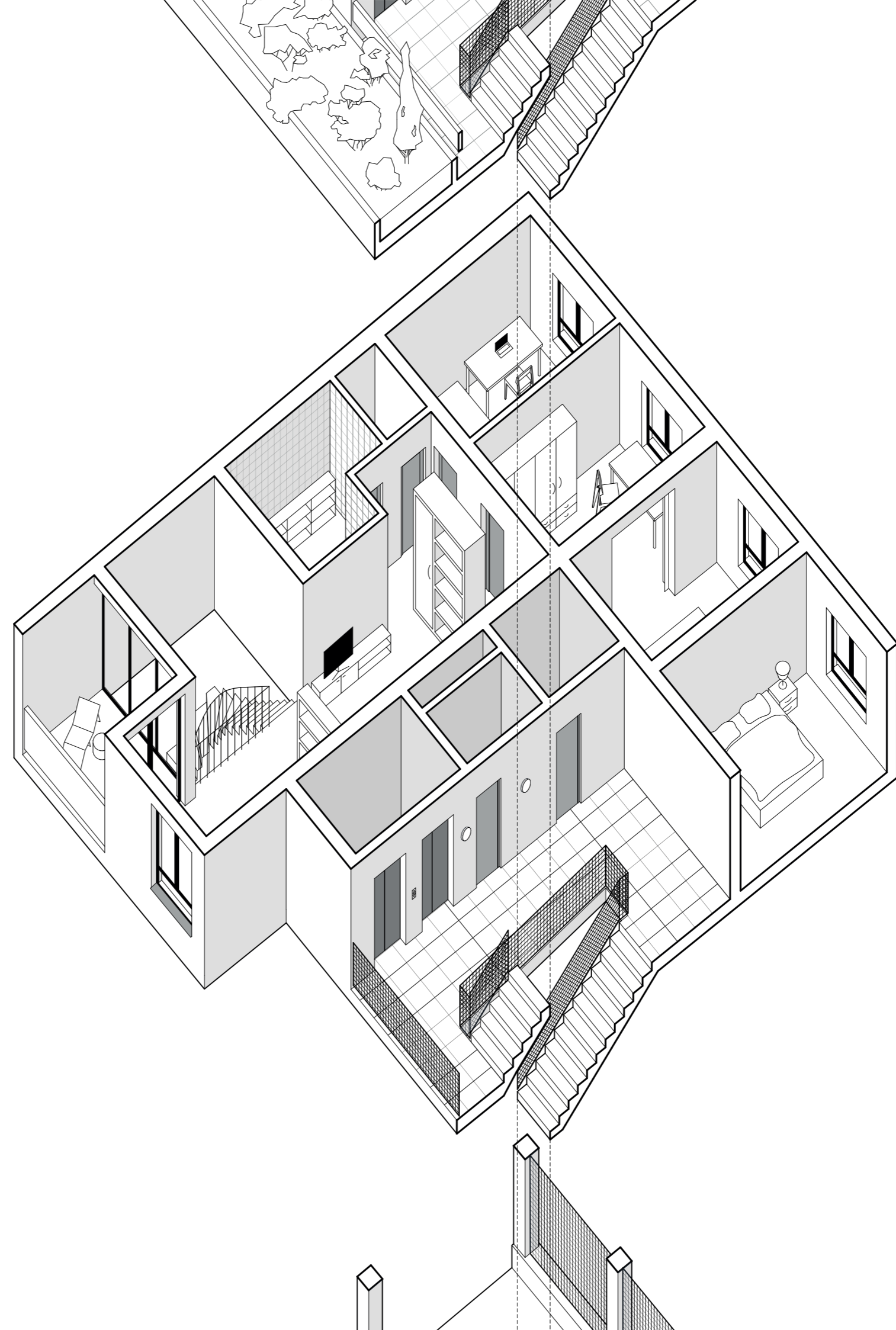


COLLECTIVE

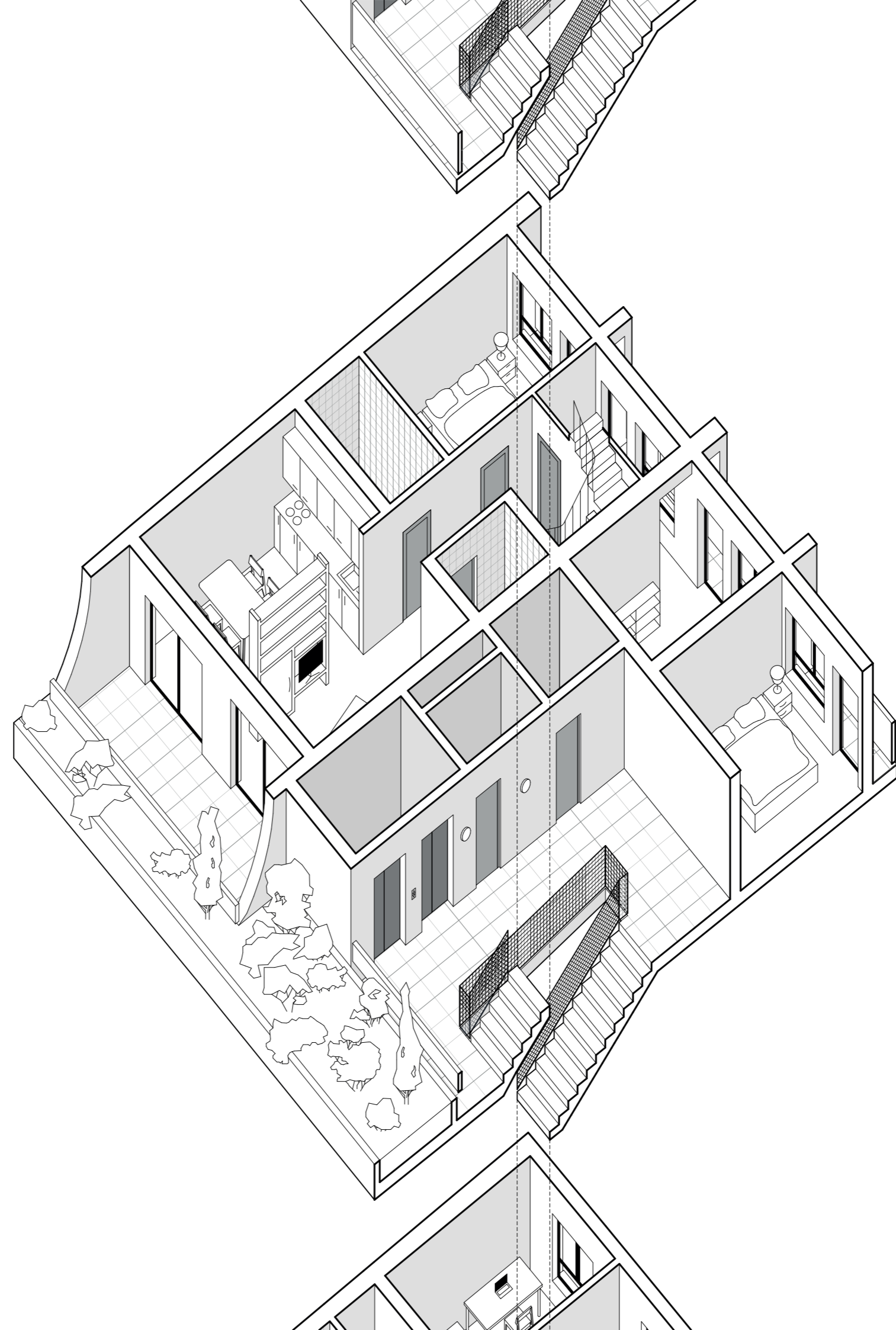
DUPLEX

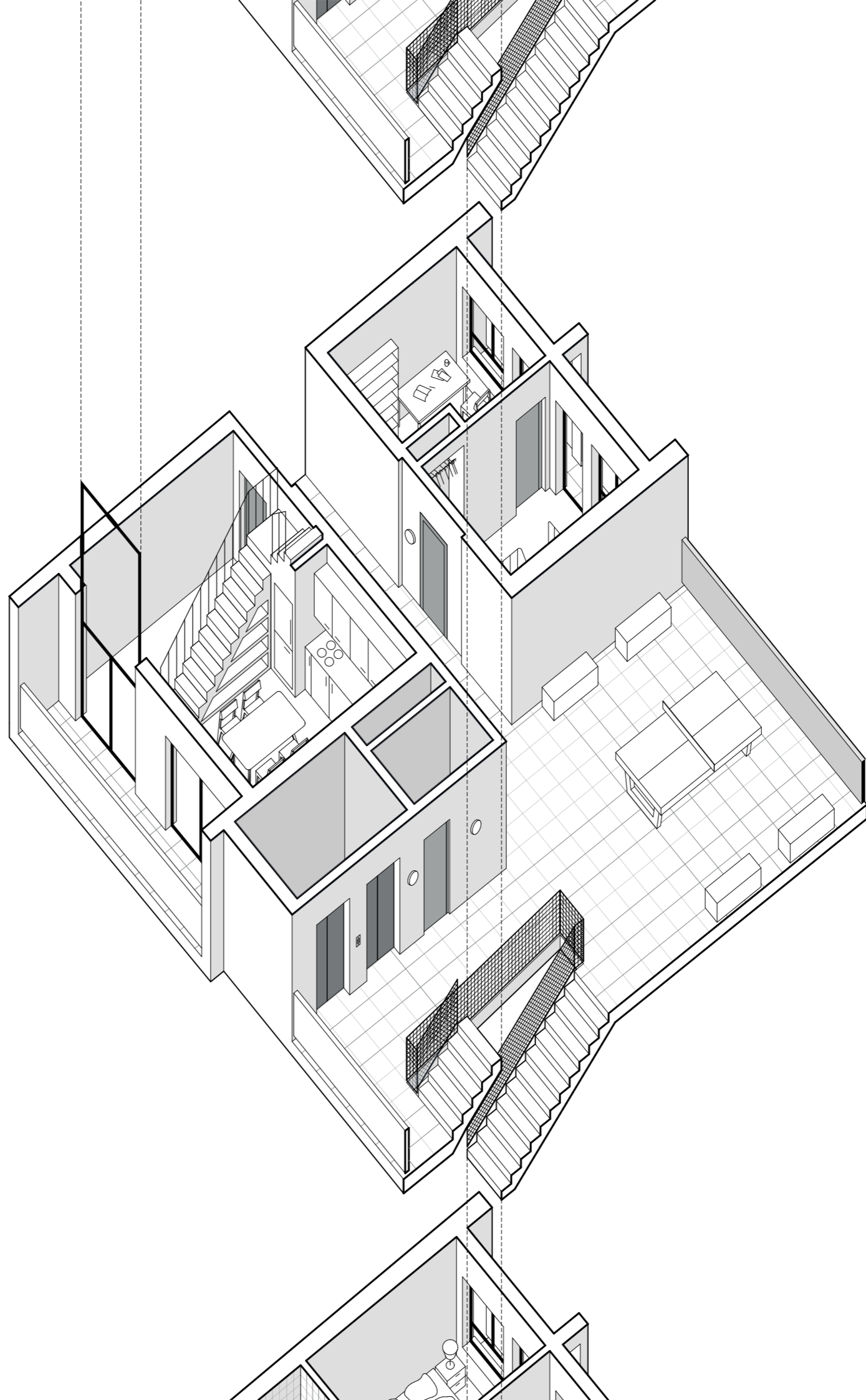
TOWNHOUSE

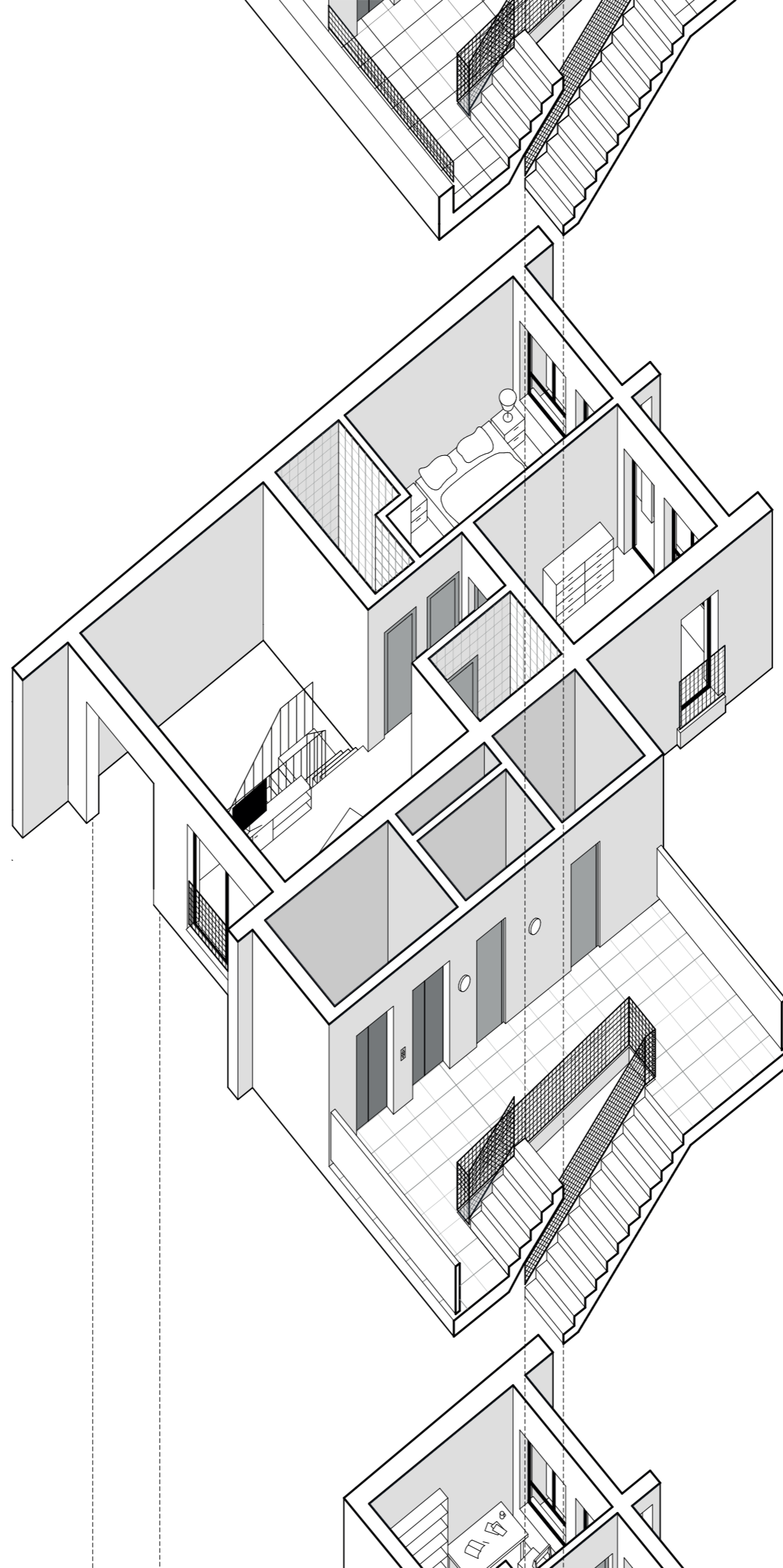


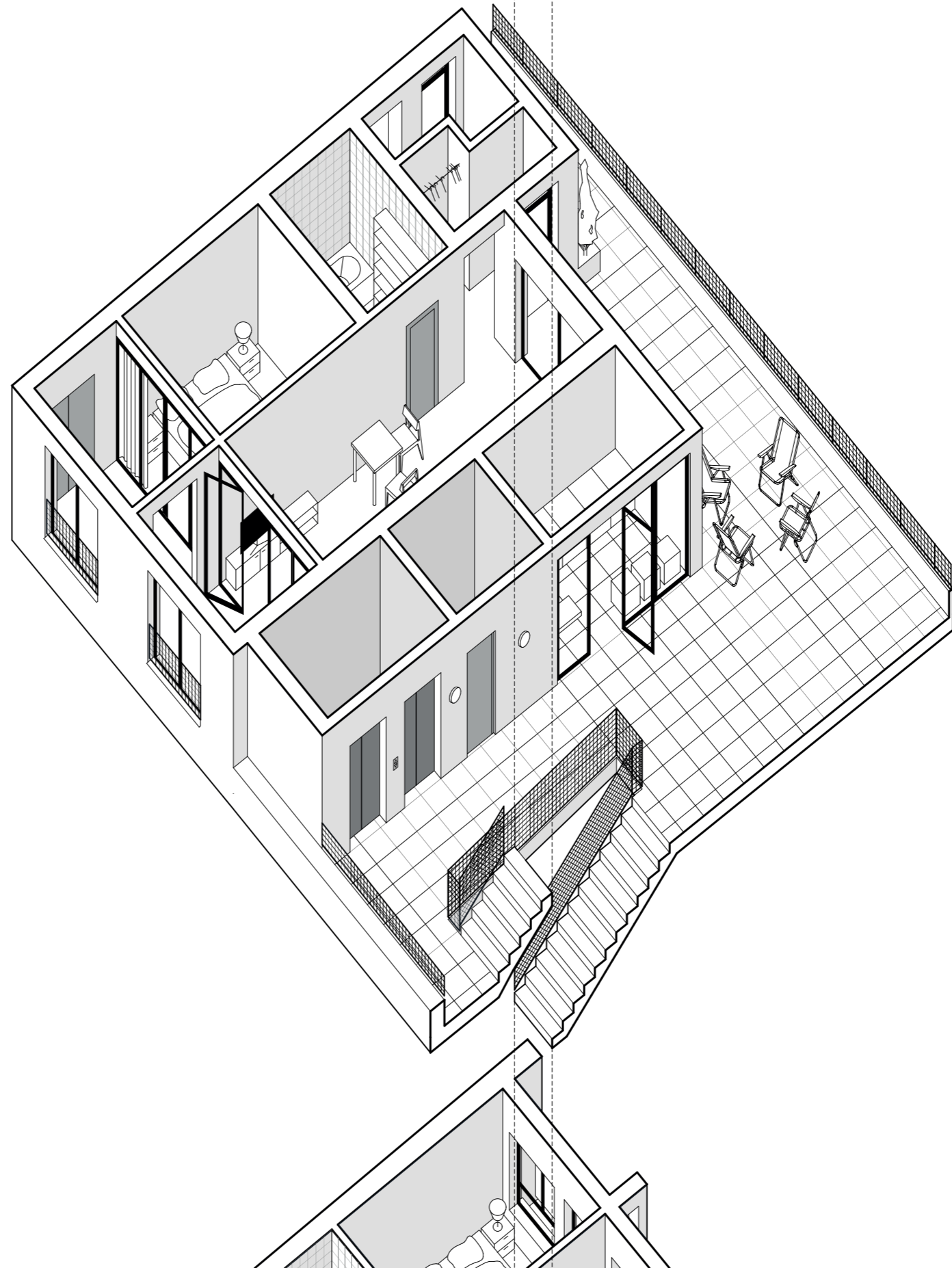


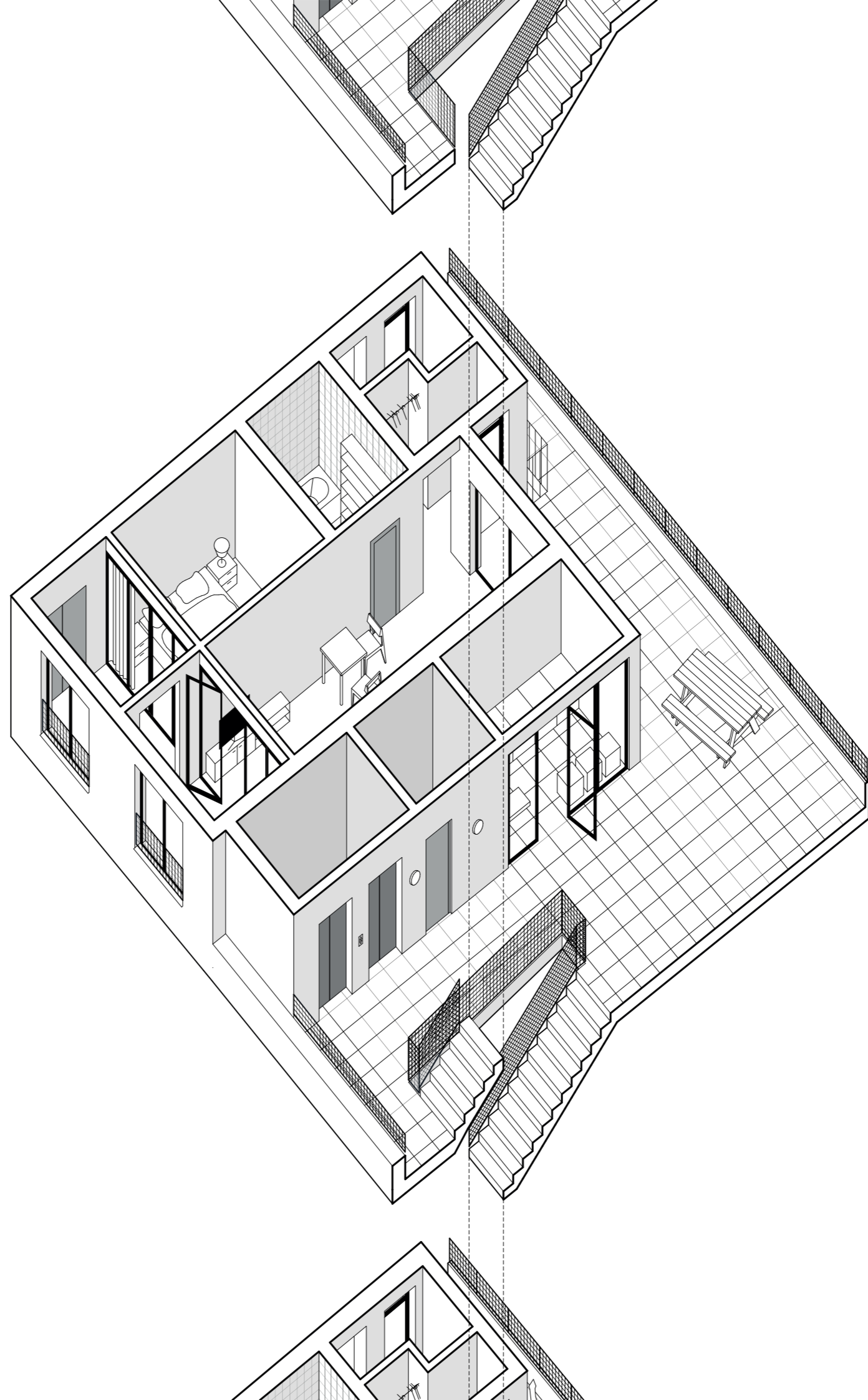


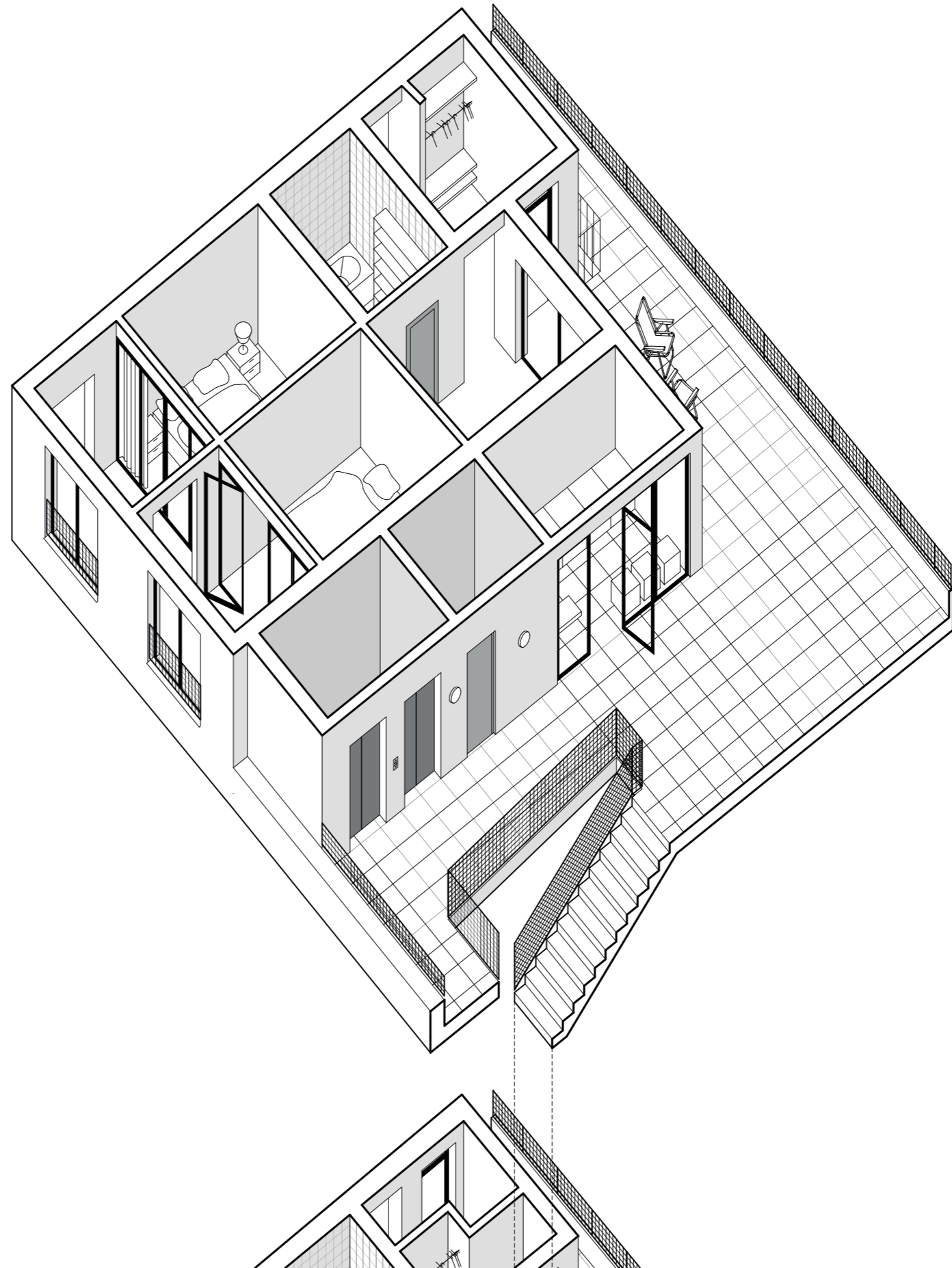


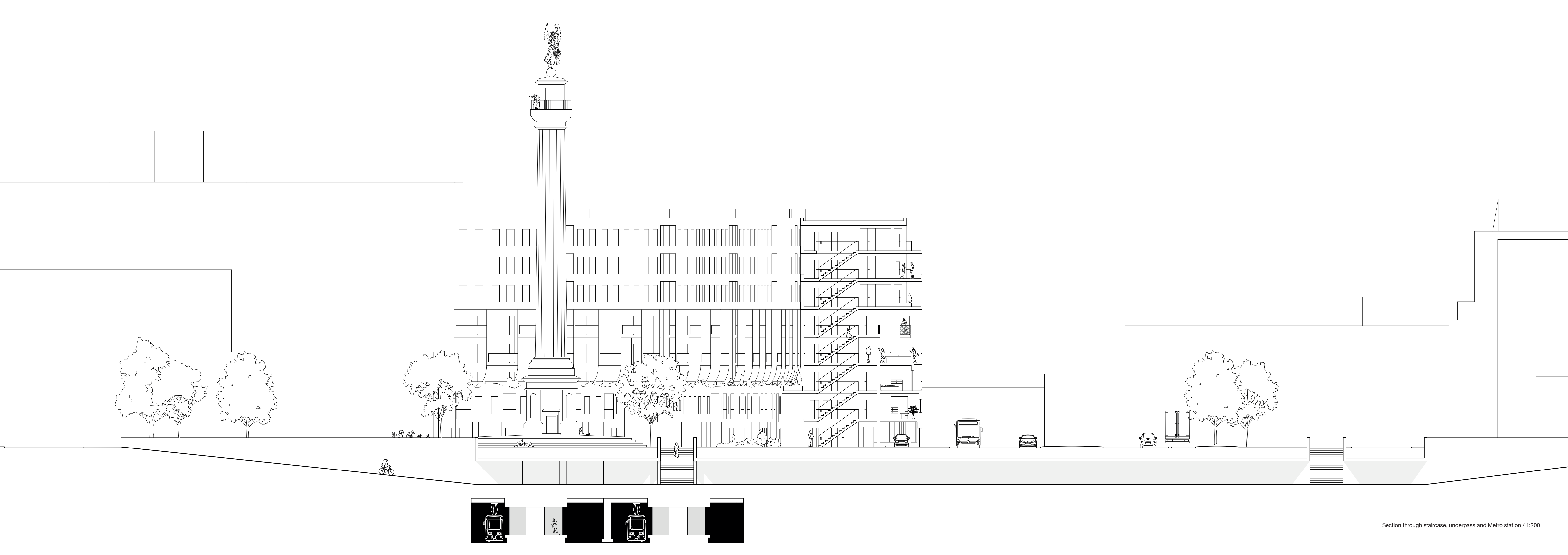




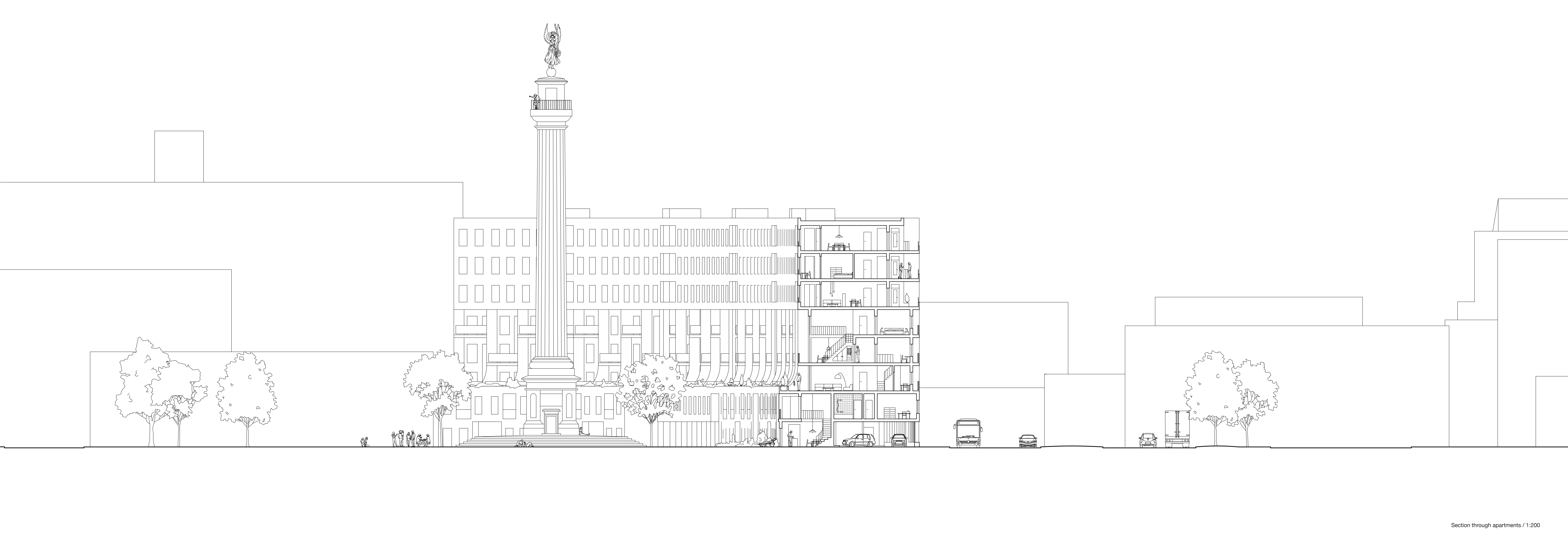




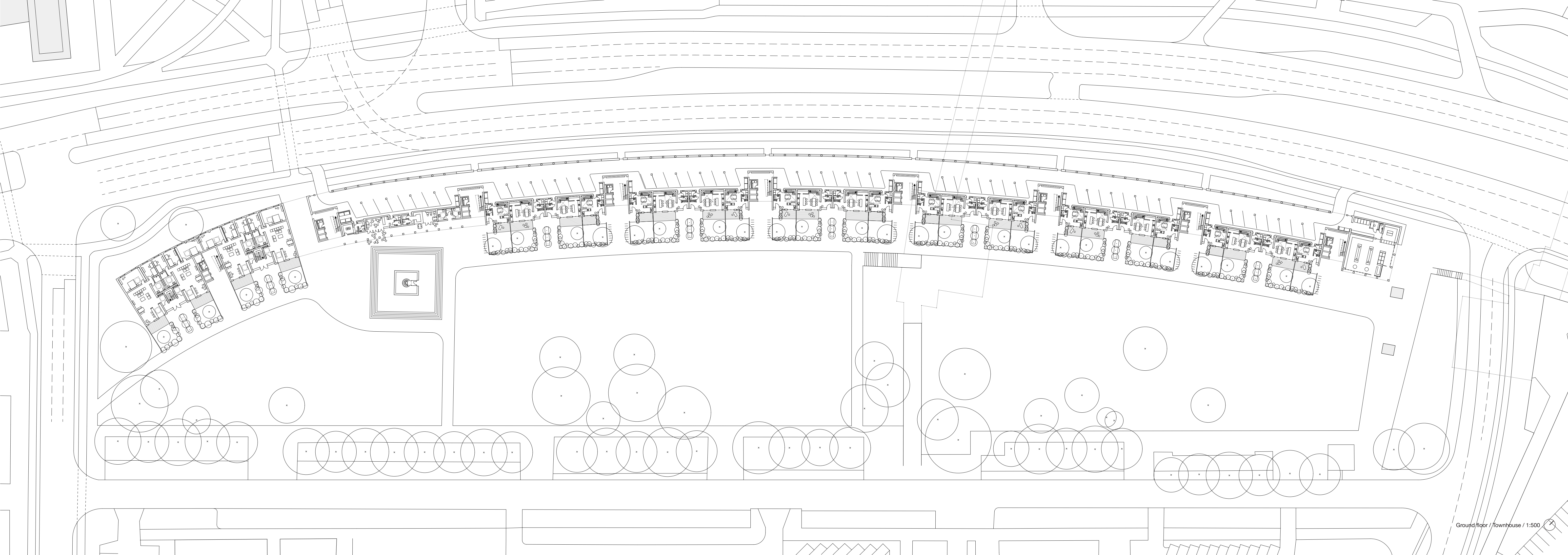


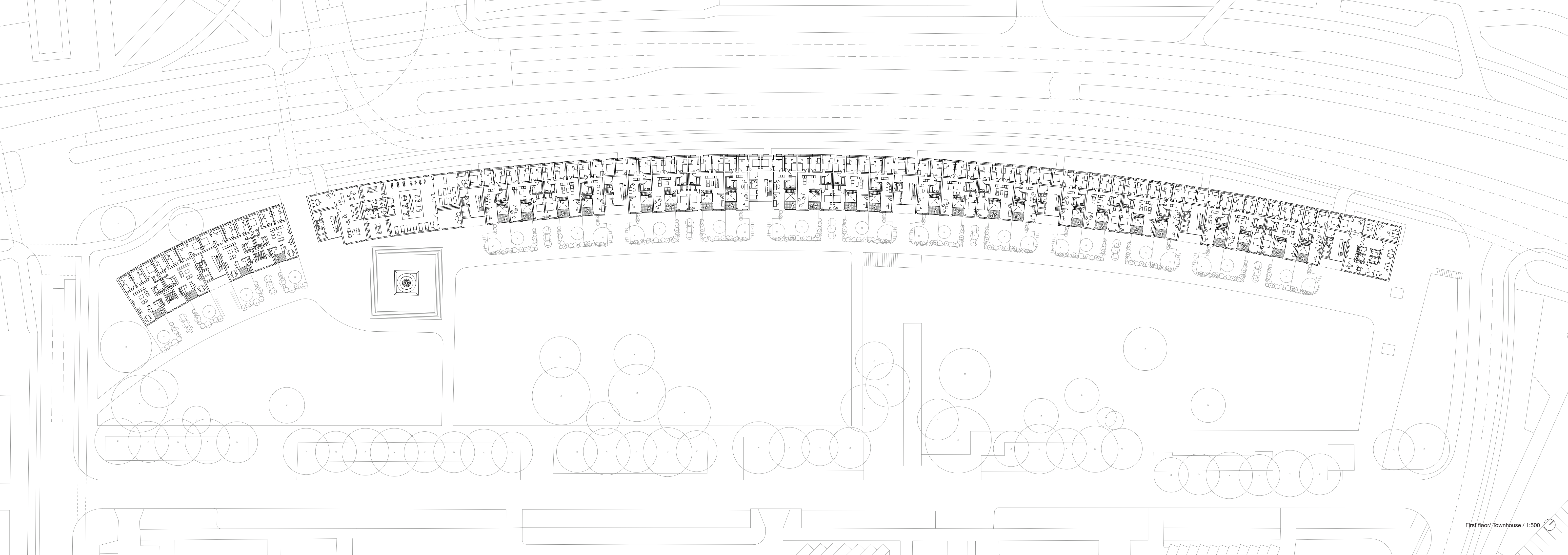


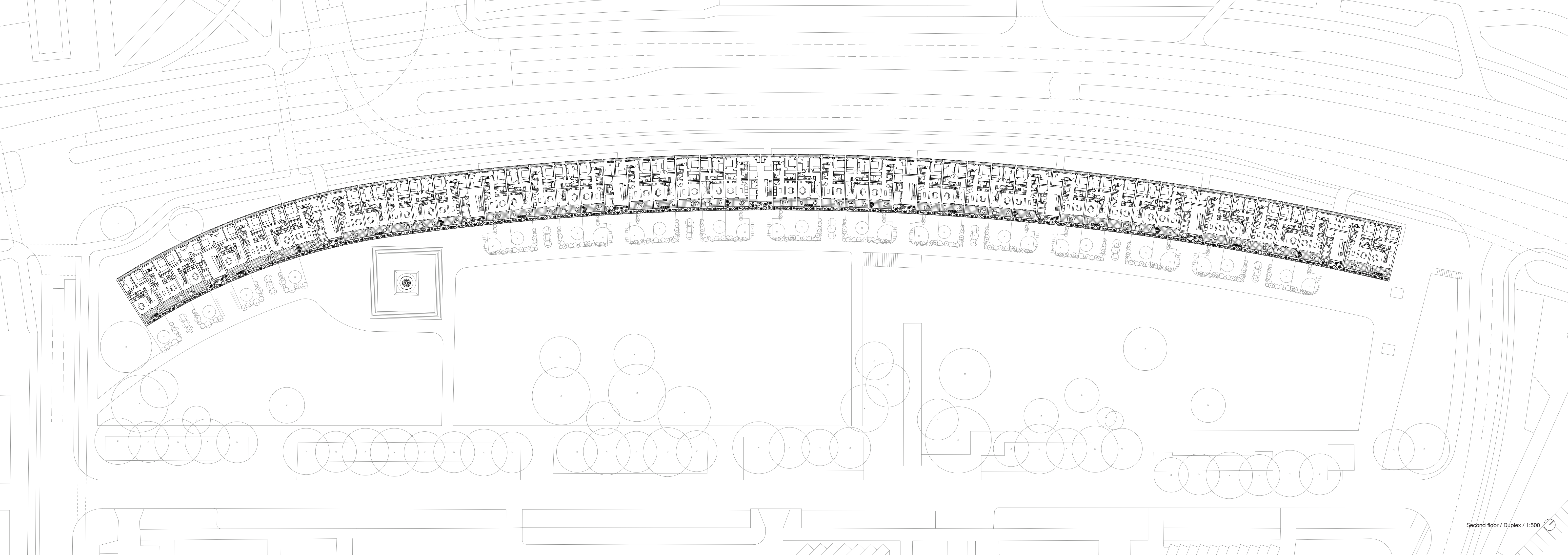
Section through staircase, underpass and Metro station / 1:200

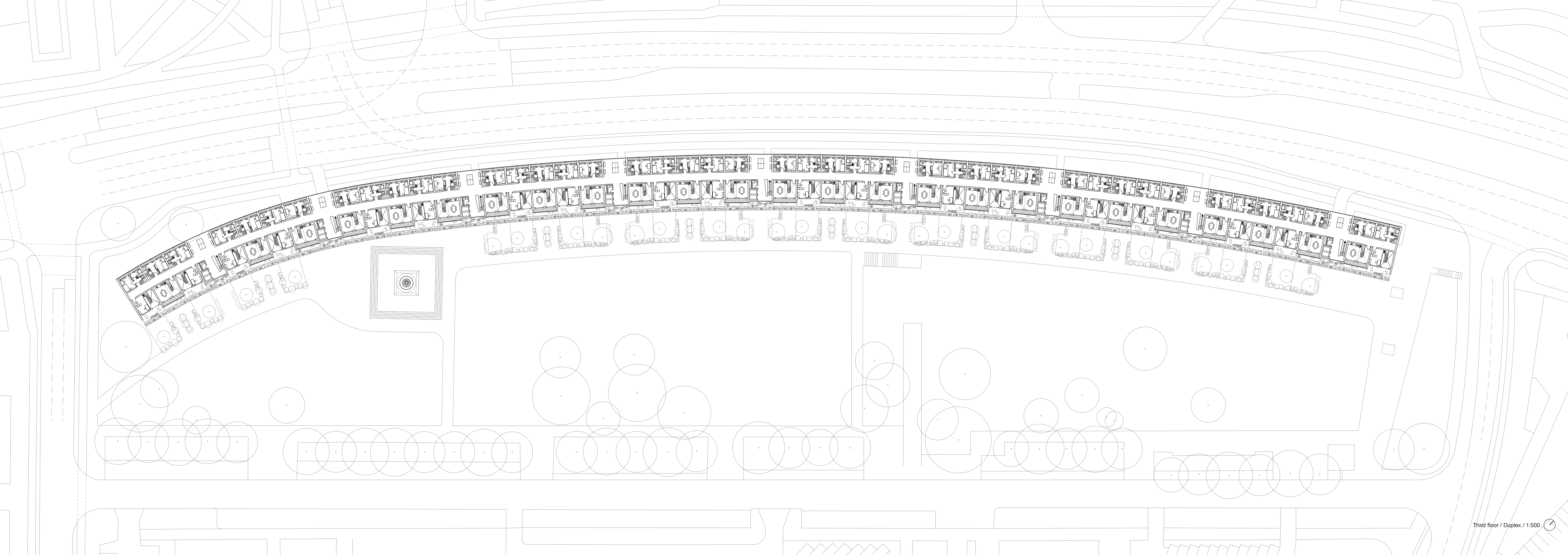


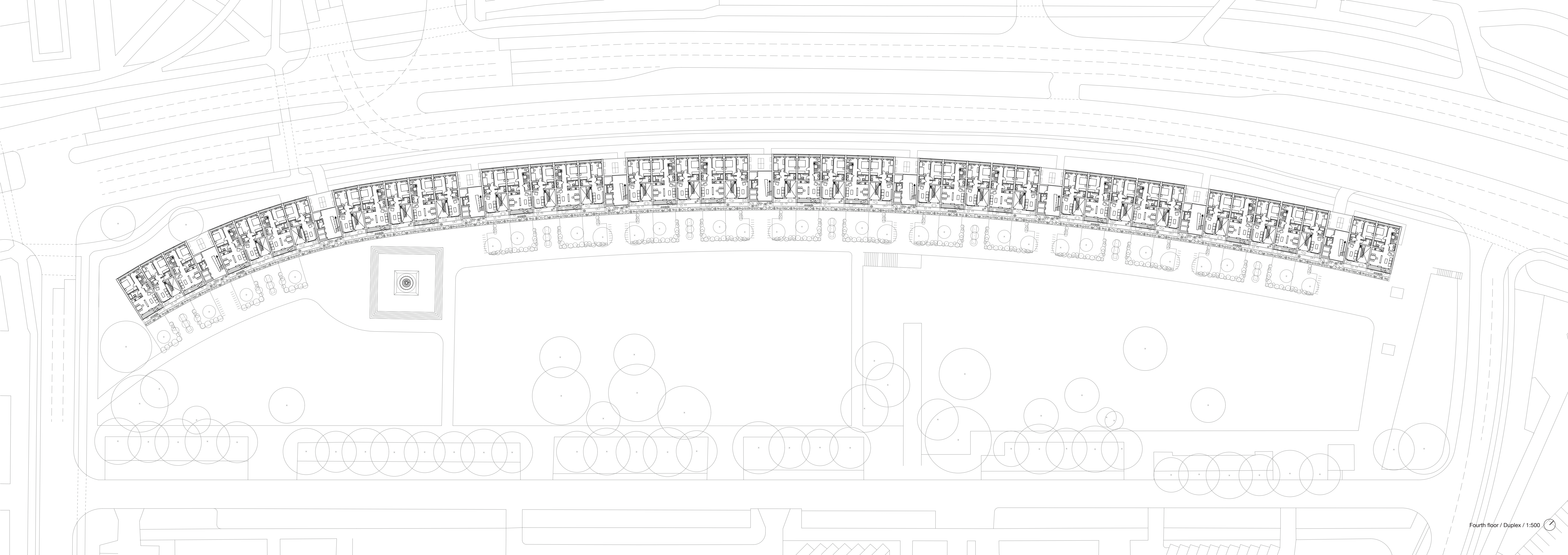


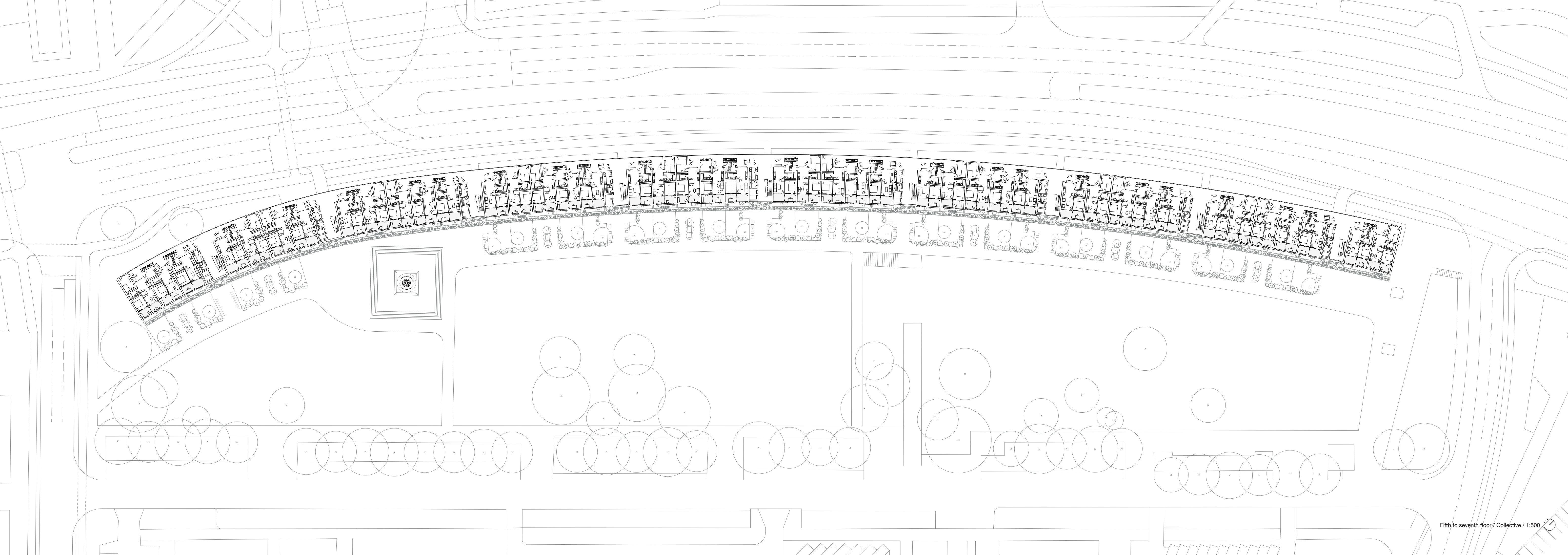












Apartment types  
**TOWNHOUSE**

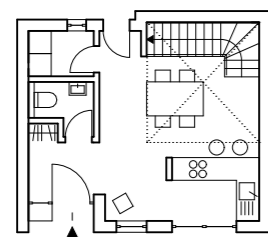
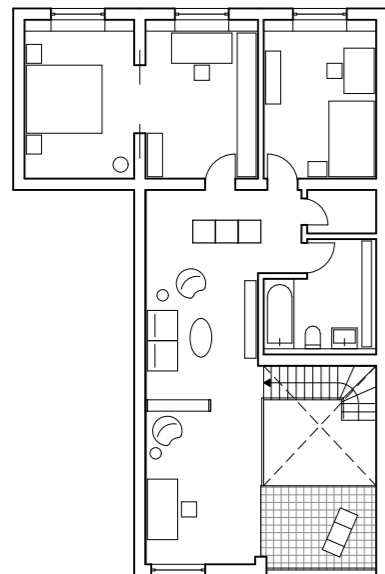
Each townhouse is an independent unit. They work as duplexes and are located on the ground floor and the first floor along the whole building. The townhouses are not connected to the main staircases but have an individual front door and a private garden (Type TH 1). At the southern end of the building, where the bend creates more distance to the street, the type alters slightly and becomes a single floor wheelchair accessible unit in the ground floor (TH 2). On the first floor, it becomes a slightly more compact apartment with a Loggia (TH 3).

**Type TH 1.1**

Units 12  
Sqm 105  
Rooms 2,5

+ private garden

First floor



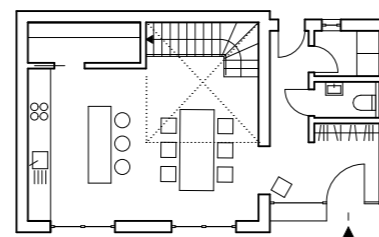
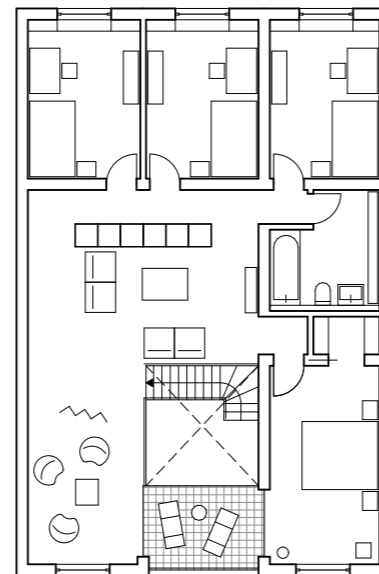
Garden

**Type TH 1.2**

Units 12  
Sqm 147  
Rooms 4

+ private garden

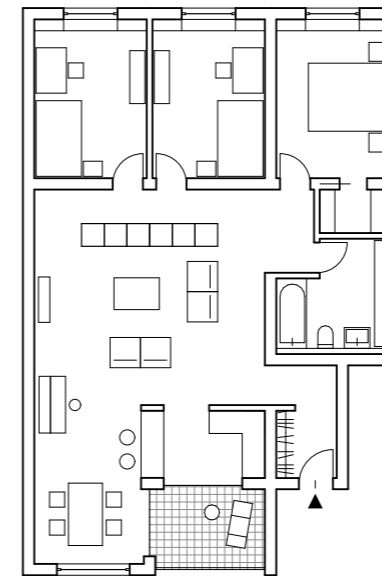
First floor



Garden

**Type TH 3.1**

Units 2  
Sqm 108  
Rooms 3

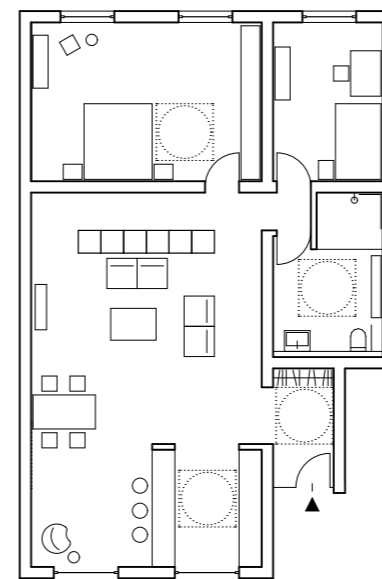


First floor

**Type TH 2.1**

Units 2  
Sqm 111  
Rooms 2

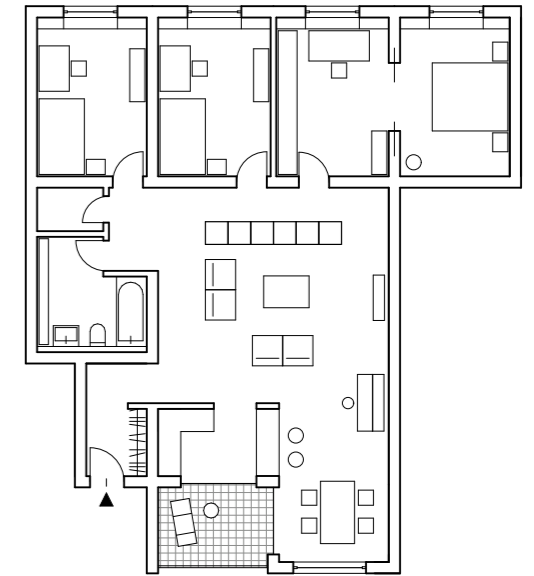
+ private garden  
+ wheelchair accessible



Garden

**Type TH 3.1**

Units 2  
Sqm 120  
Rooms 3,5

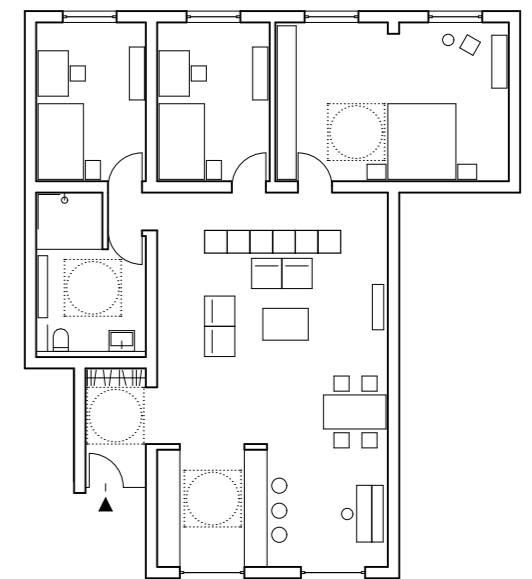


First floor

**Type TH 2.2**

Units 2  
Sqm 124  
Rooms 3

+ private garden  
+ wheelchair accessible



Garden

Apartment types  
**DUPLEX**

The duplex apartments are located on the second to the fourth floor. They are accessed through a middle corridor on the third floor and continue alternately on the floor below and above. Individual rooms are located towards the north-west whereas the kitchen and living spaces orientate towards the park in the south-east. Large openings and a double-height space let light enter deep into the apartment. In both directions, balconies allow to step outside of the building.

Type	DPLX 1.1
Units	16
Sqm	92
Rooms	3

Type	DPLX 1.2
Units	8
Sqm	80
Rooms	2,5

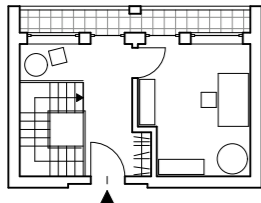
Type	DPLX 2.1
Units	2
Sqm	86
Rooms	2,5

Type	DPLX 2.2
Units	17
Sqm	75
Rooms	2

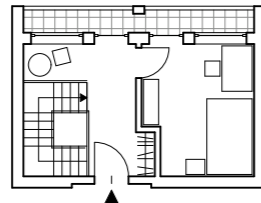
Type	DPLX 3
Units	25
Sqm	73
Rooms	2

Type	DPLX 4
Units	19
Sqm	74
Rooms	2,5

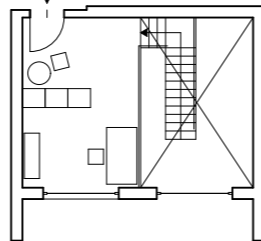
Entrance floor



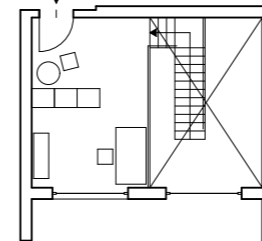
Entrance floor



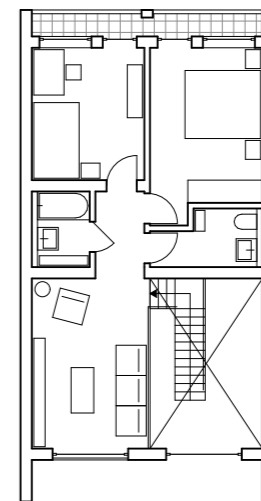
Entrance floor



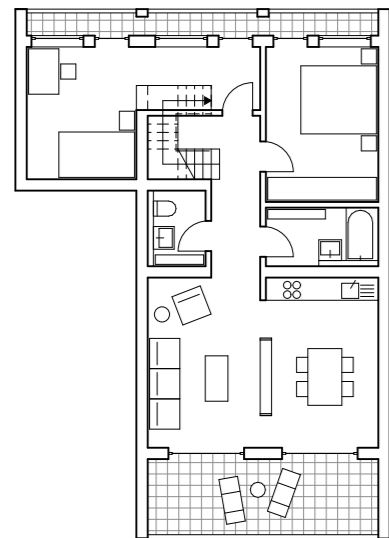
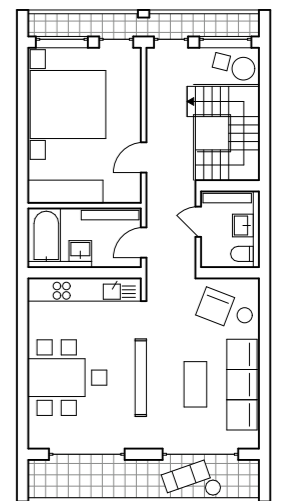
Entrance floor



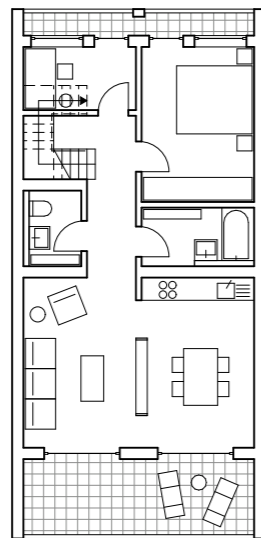
Upper floor



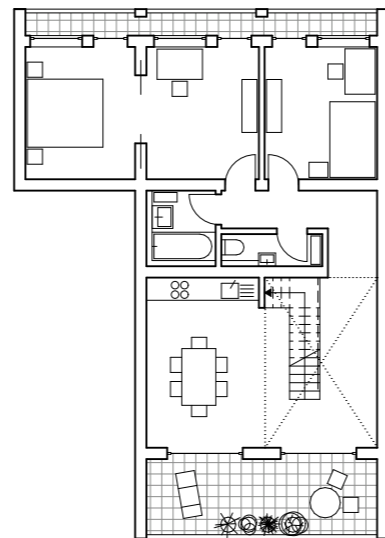
Upper floor



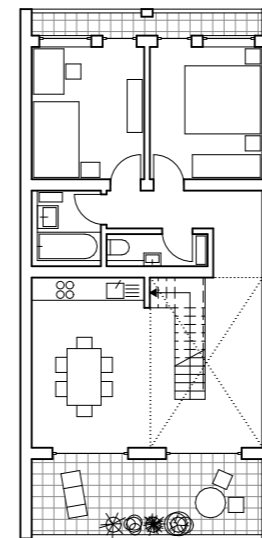
Lower floor



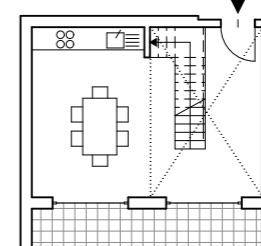
Lower floor



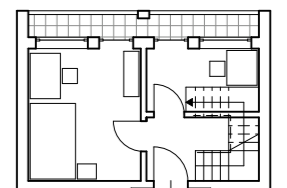
Lower floor



Lower floor



Entrance floor



Entrance floor



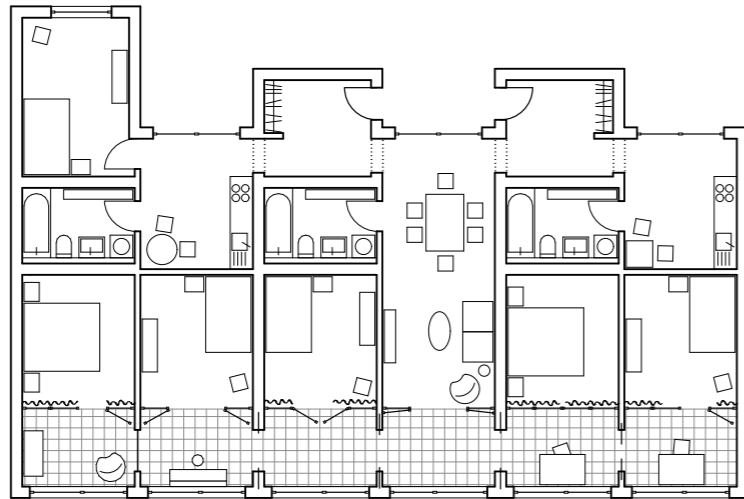
Apartment types  
**COLLECTIVE**

The floorplan structure in the collective typology is flexible. The Basic Configuration can be divided into several different ways to create either many individual studio apartments (configuration 4) or more continuous multi-room collective spaces (configuration 1). The apartments are accessed through a wide access balcony in the north. In the south, an enfilade of small rooms can be used as a loggia, extension of a bedroom, or separate passage room depending on the configuration of the apartment.

**CONFIGURATION 1**

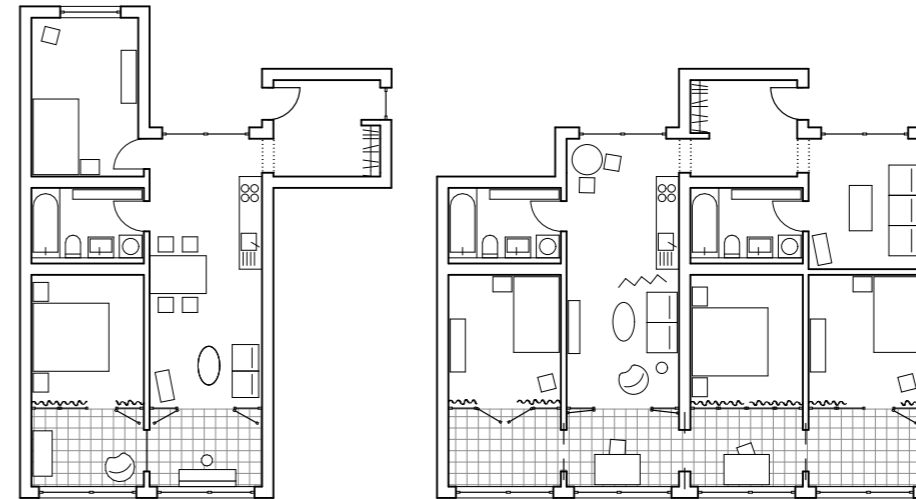
Units 1  
 Sqm 172  
 Rooms 6

+ 3 Bathrooms  
 + 2 Kitchens



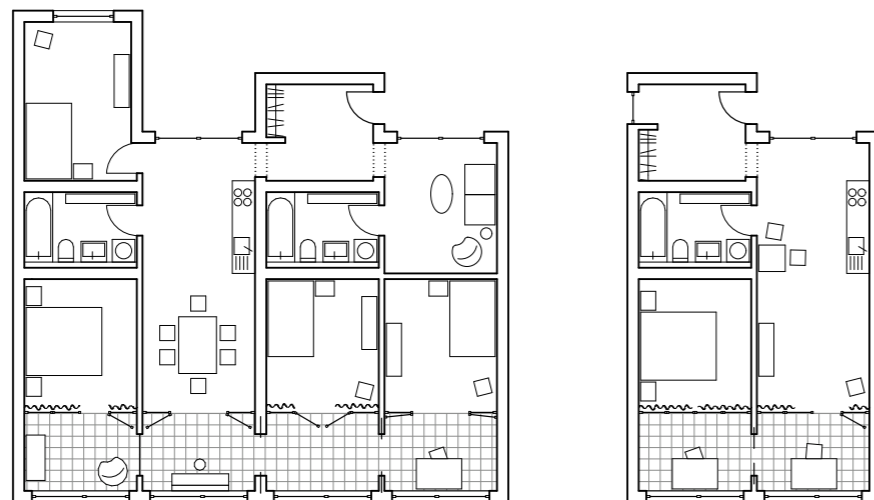
**CONFIGURATION 3**

Units 2  
 Sqm 68 / 104  
 Rooms 2 / 3



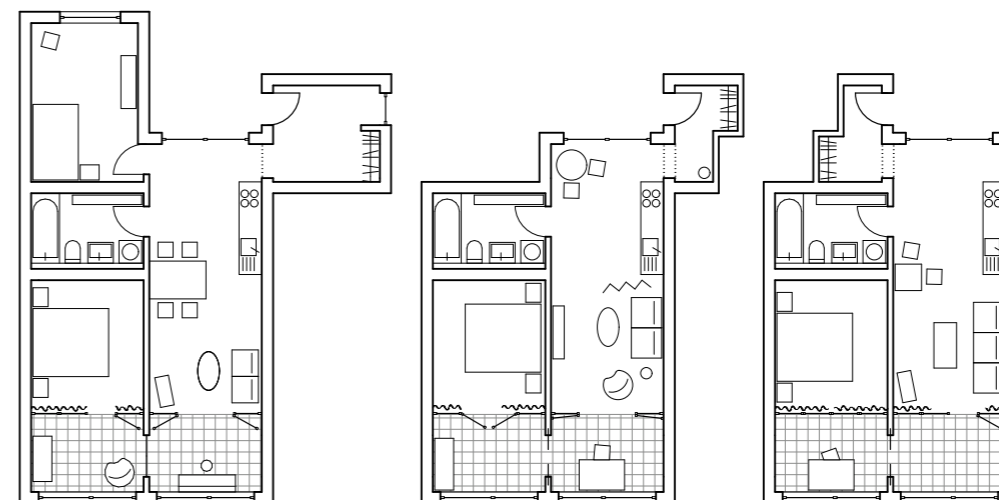
**CONFIGURATION 2**

Units 2  
 Sqm 116 / 55  
 Rooms 4 / 1

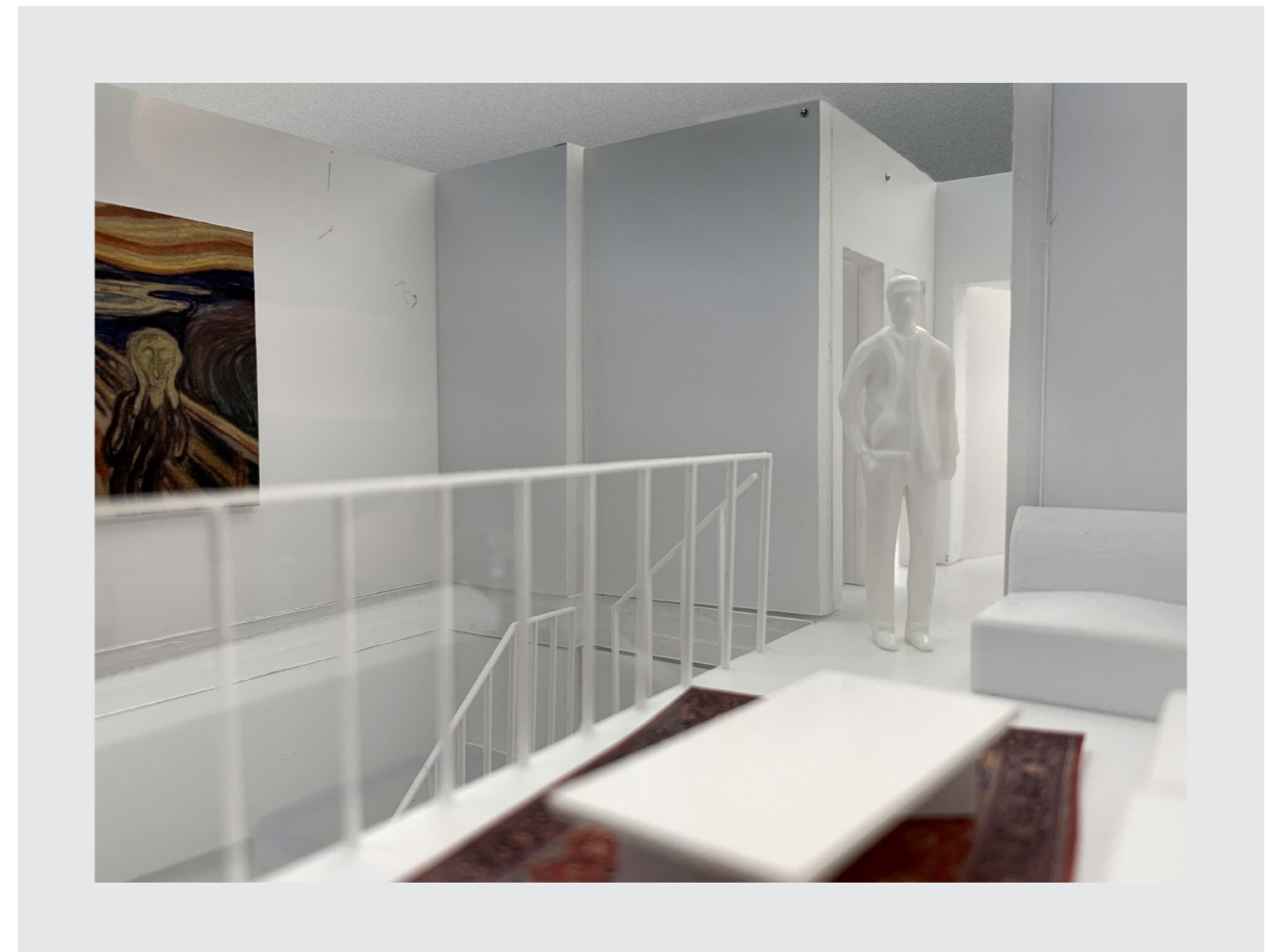


**CONFIGURATION 4**

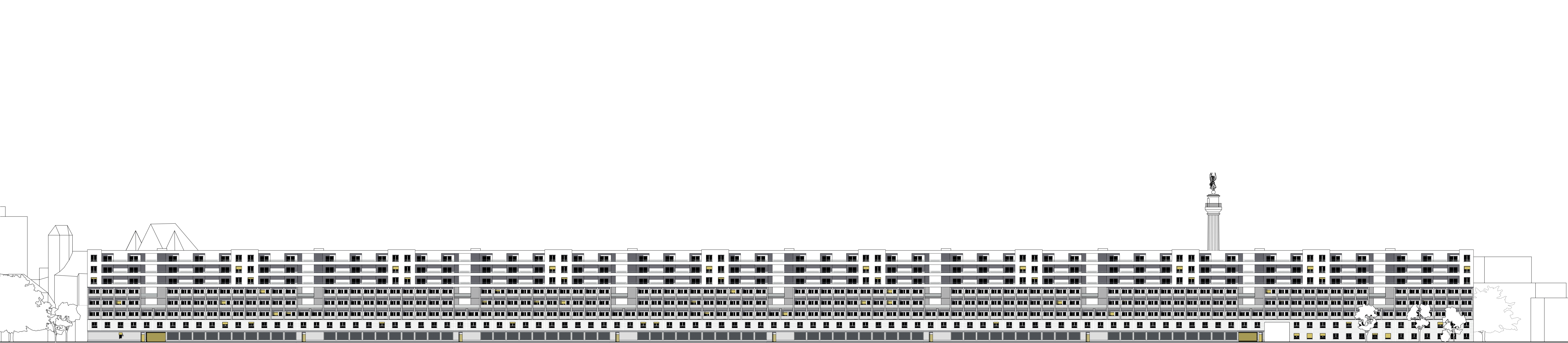
Units 3  
 Sqm 68 / 52 / 52  
 Rooms 2 / 1 / 1













Elevation of a typical facade sequence / Model in 1:50



View from inside the Park towards the column



Kiosk by the column