

Open Vernacular.

Exploring the Potential of an Autopoietic Framework
for Critical Dialogue between Tradition and Modernity
to Address Future Complexity in Addis Ababa

*“In particular, what’s missing in modern urbanism is a **sense of time** – not time looking backwards nostalgically but forward-looking time, **the city understood as process**, its imagery changing through use, an urban imagination **image formed by anticipation, friendly to surprise.**”*

Richard Sennett, The Open City

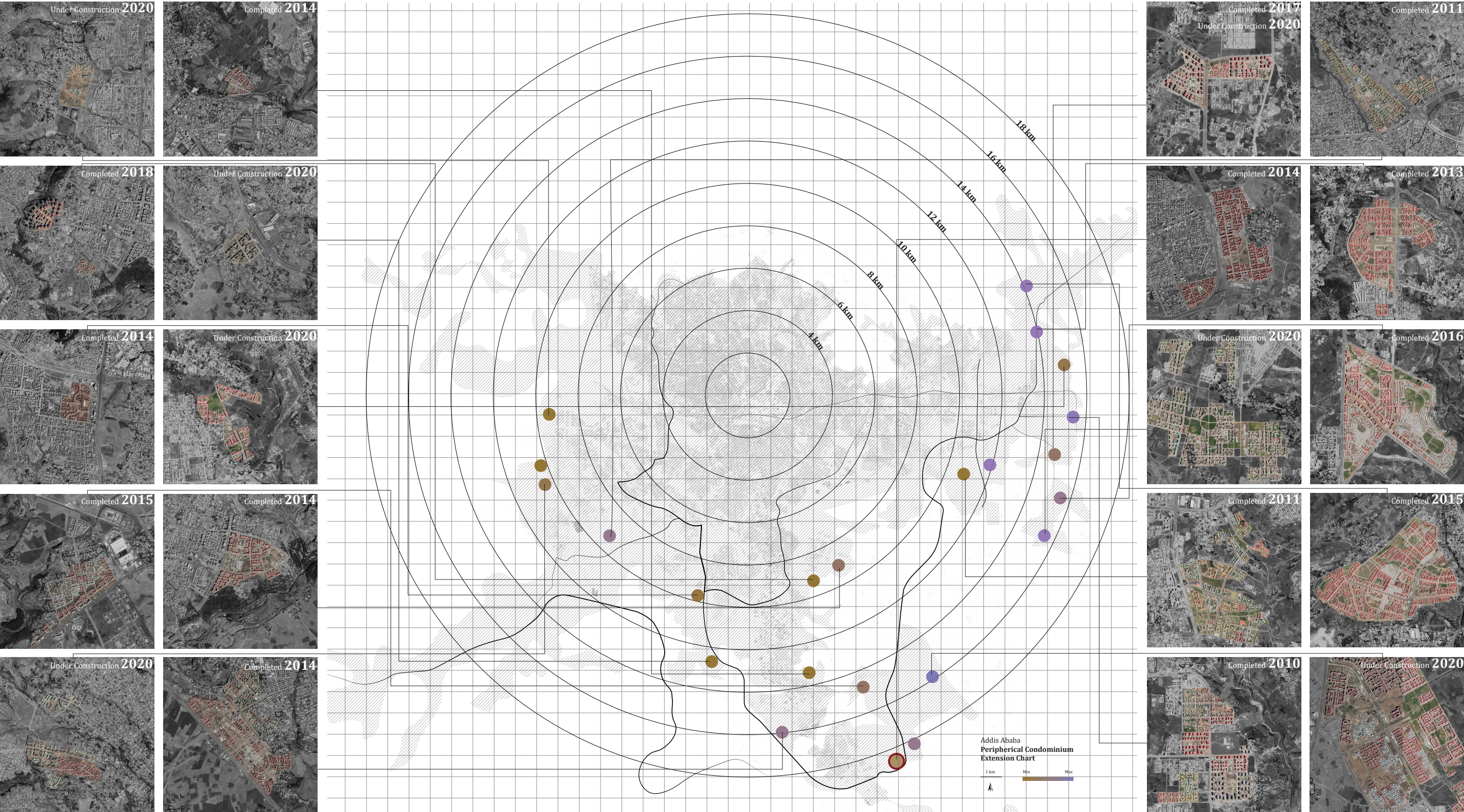


20:80-Condominium Greenfield Developments

A Critical Reflection

Road to Nowhere
Ayat Condomunium

Urban Segregation



Location Overview

Condominium Greenfield Developments



Ayat Condominium
Completed in 2010



Summit Condominium
Completed in 2011

Tafo Condominium
Completed in 2013





Gelan Condominium
Completed in 2014

Tulu Dimtu Condominium
Completed in 2014



Kilinto Condominium
Completed in 2015





Yeka Abado Condominium
Completed in 2015



Bole Arabsa Condominium
Completed in 2016



Koye Feche Condominium
Under construction



Gelan Condominium
Completed in 2014

Urban Segregation

Dormitory Villages in the
Countryside



Bole Arabsa Condominium

Completed in 2016

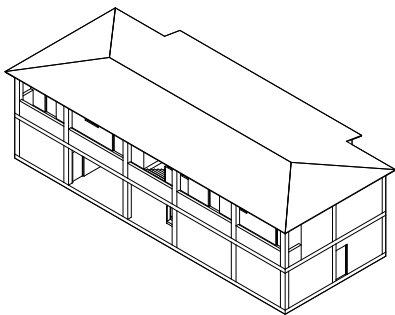
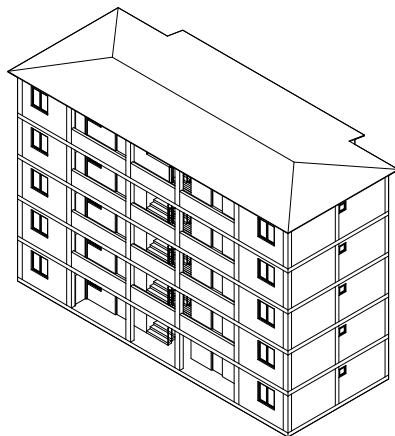
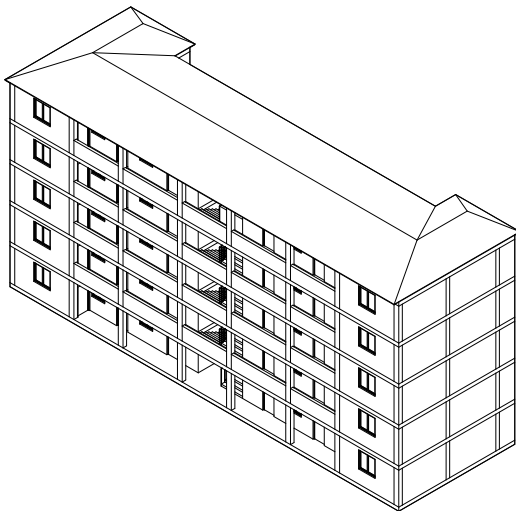
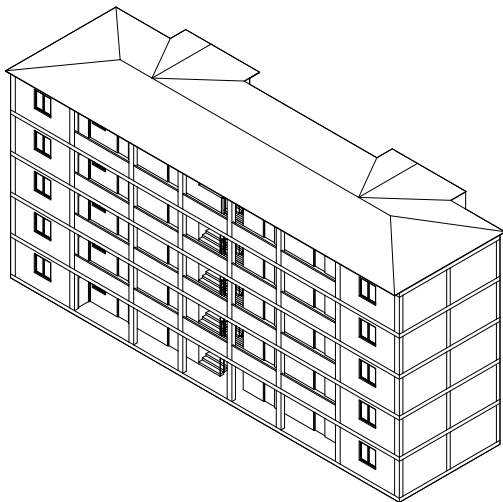
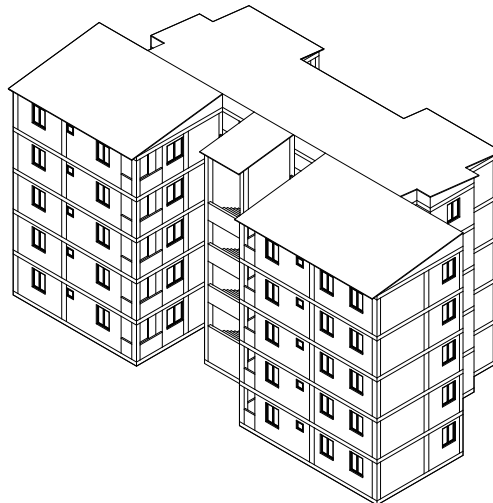
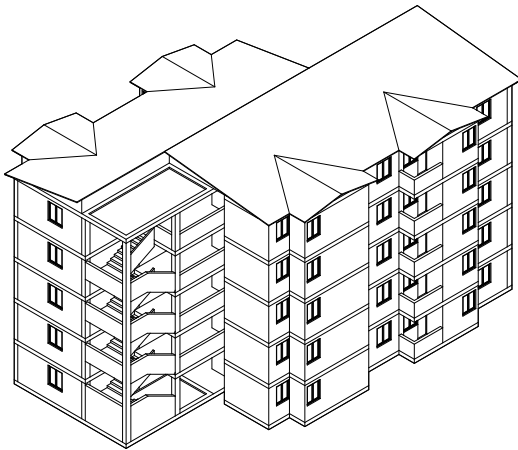
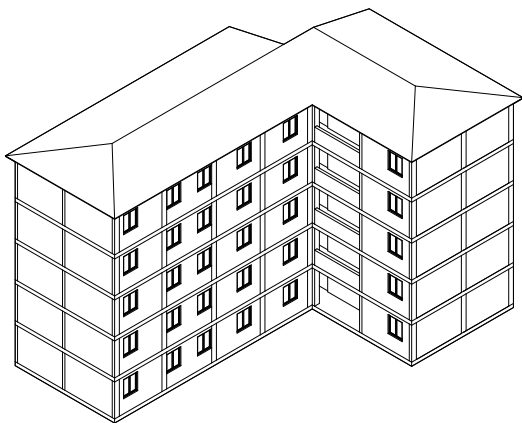


Bole Arabsa Condominium
Completed in 2016

Tulu Dimtu Condominium
Residual spaces turned
into dump sites

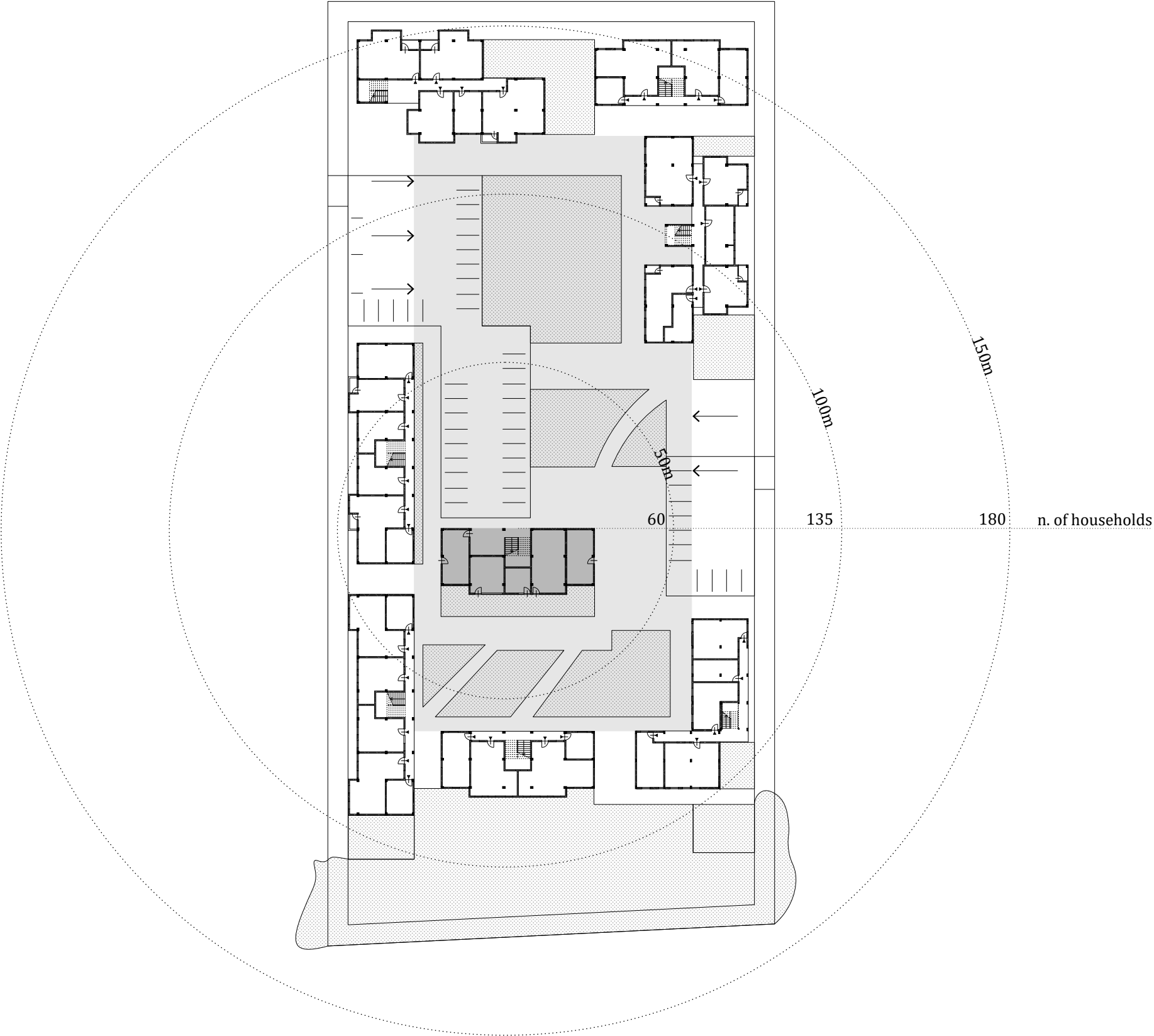


Object-based
Reiteration



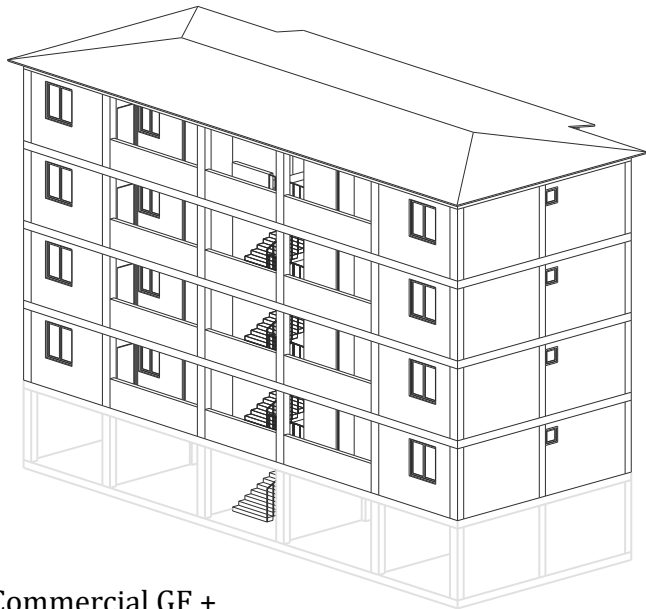
Condominium Blocks
Configurations

**Spatial
(in-)Definition**
Scales of Associations

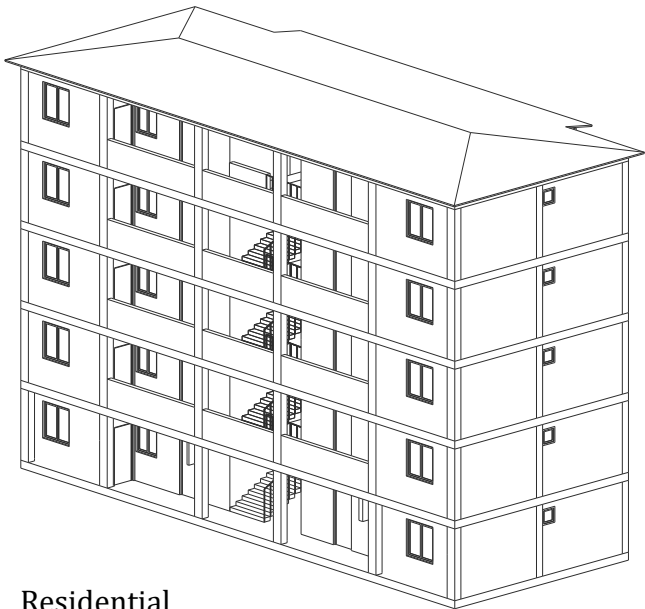


**Operational Scale
of Collective Spaces**
Typical condominium plot floor plan

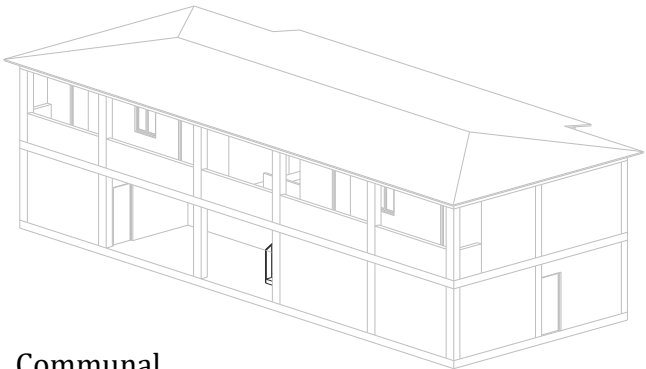
(mono-)Program



Commercial GF +
Residential (1-4)
Block

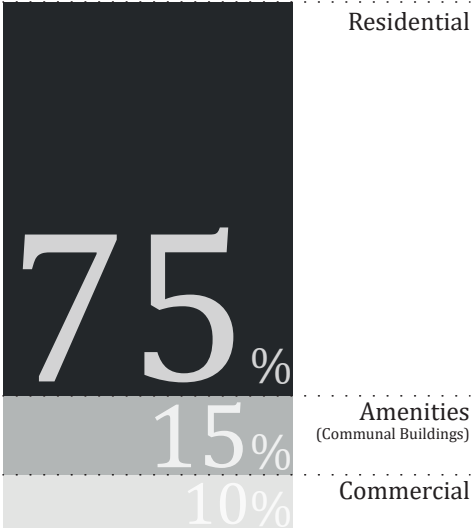


Residential
Block

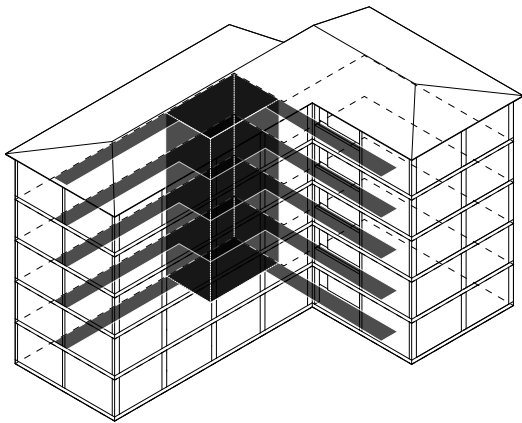


Communal
Block

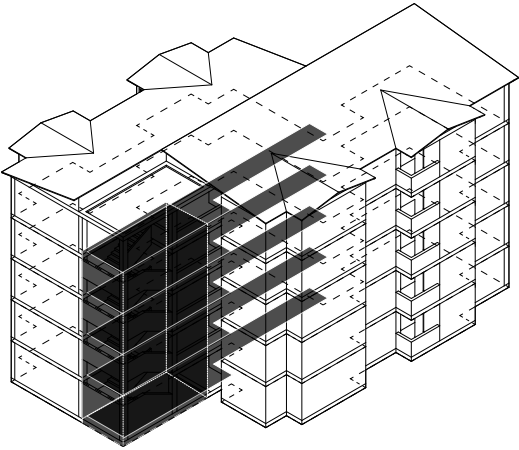
Typologies Analysis
Function-based



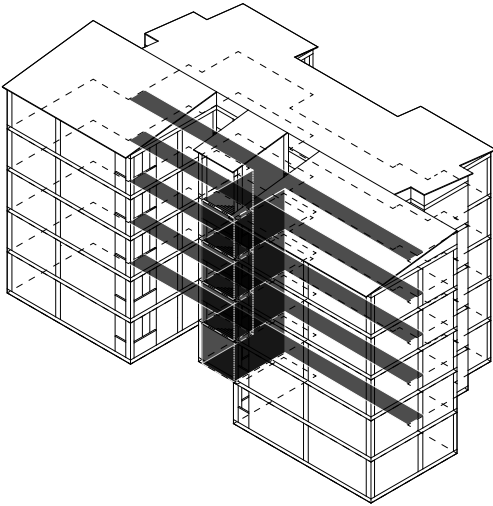
(mono-)Typology



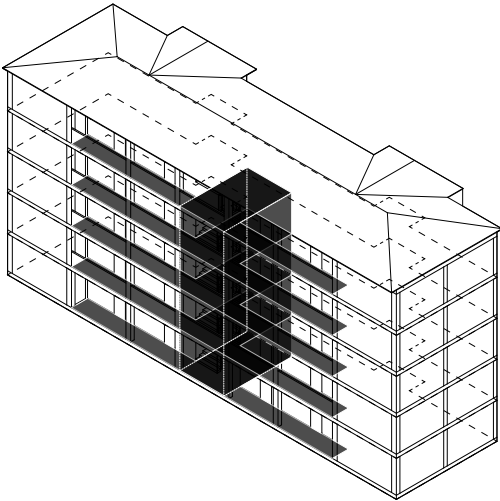
25 Units
Gallery Apartments



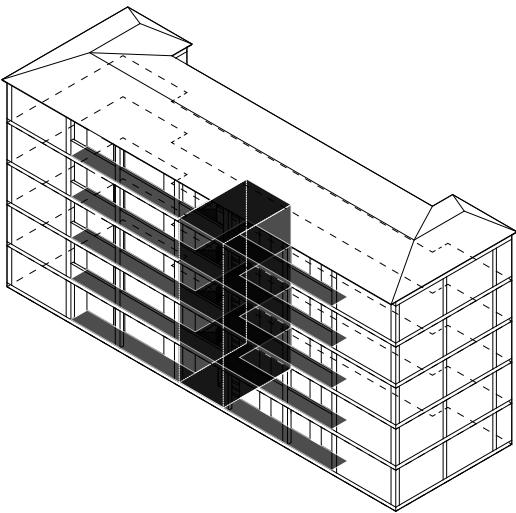
25 Units
Gallery Apartments



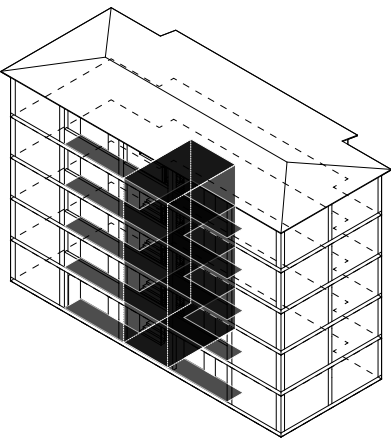
30 Units
Gallery Apartments



30 Units
Gallery Apartments



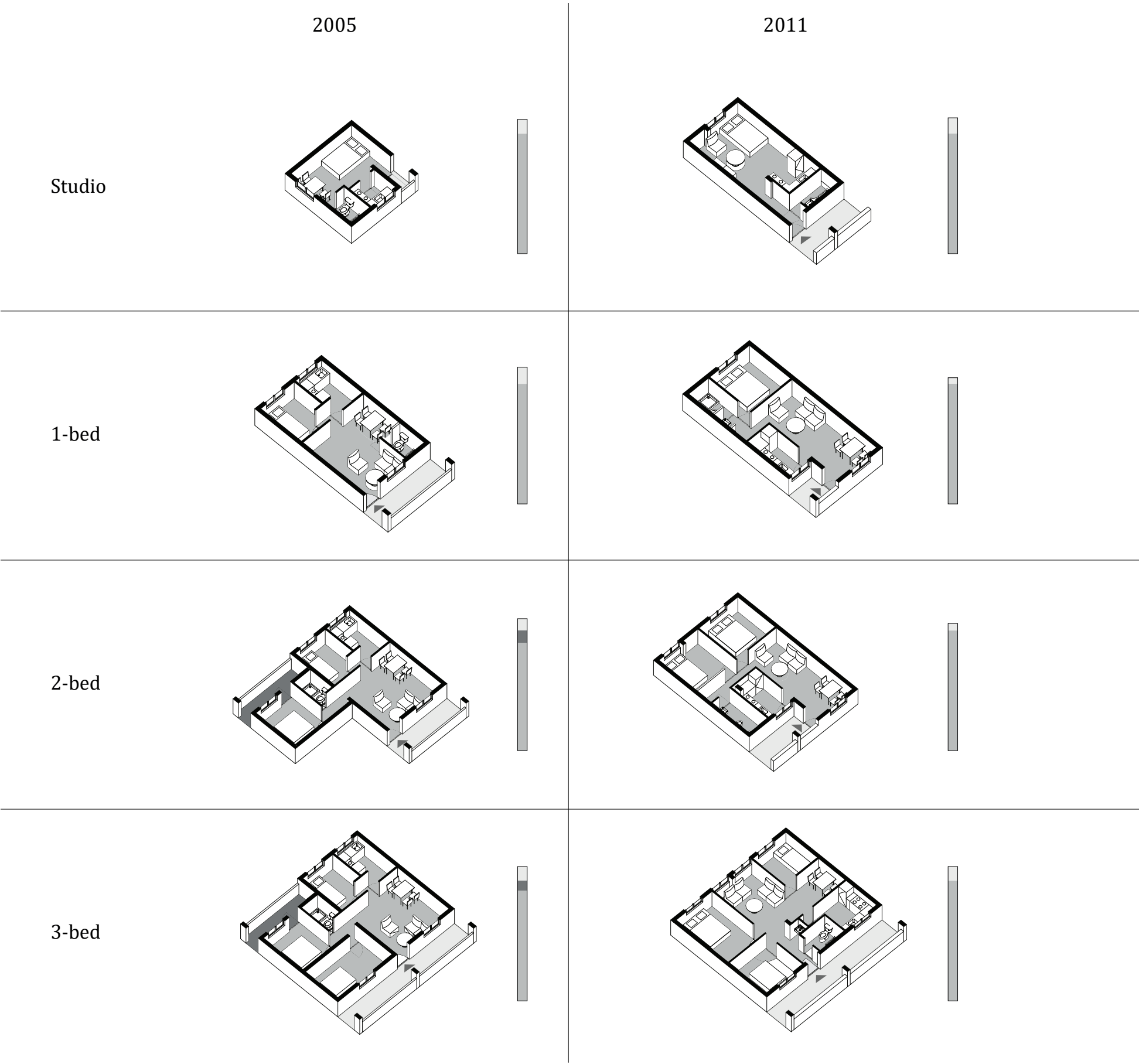
30 Units
Gallery Apartments



20 Units
Gallery Apartments

Form Variations

Spatial Relations
Dwelling Units

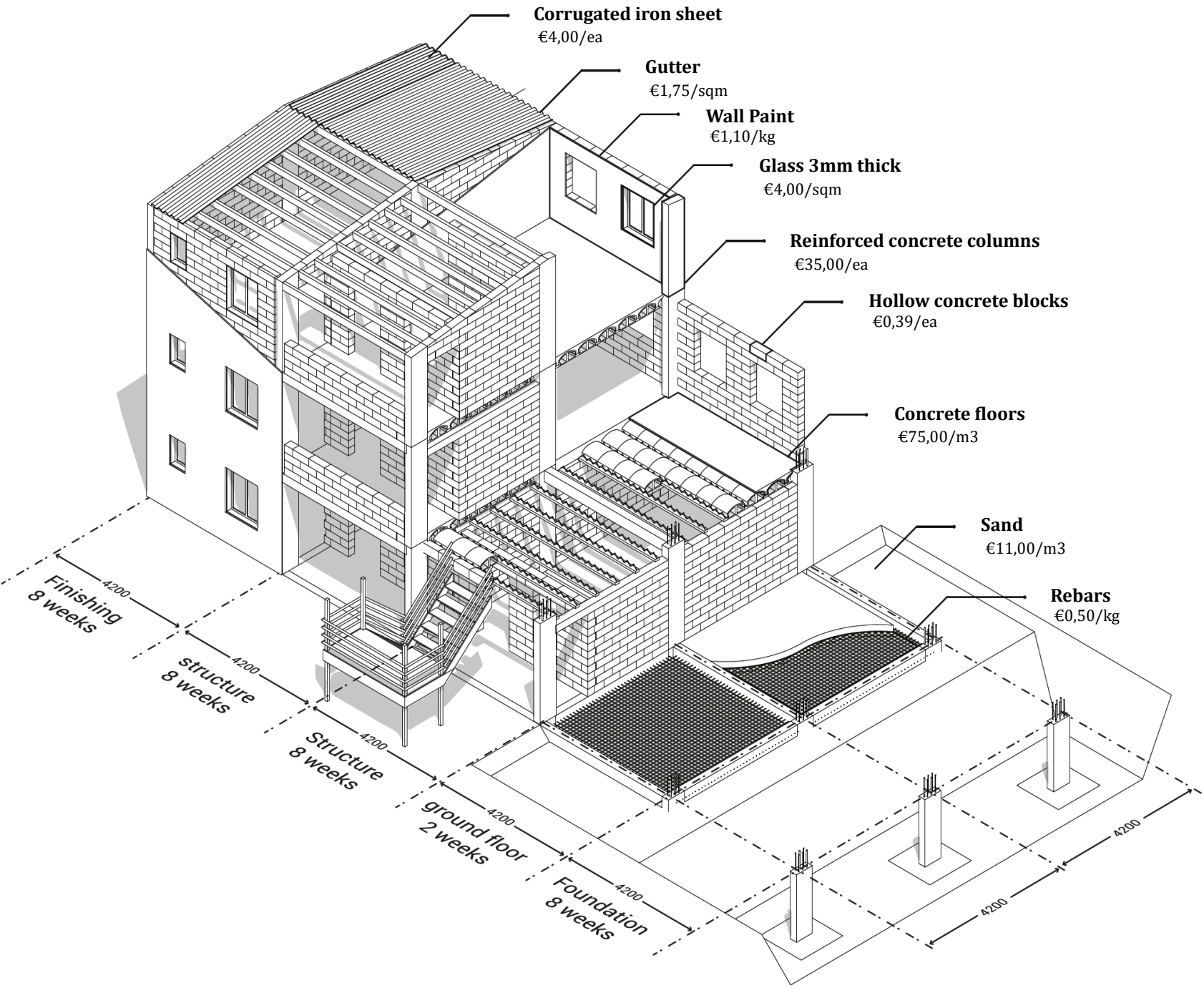


Indoor-Outdoor Ratio
Development through time

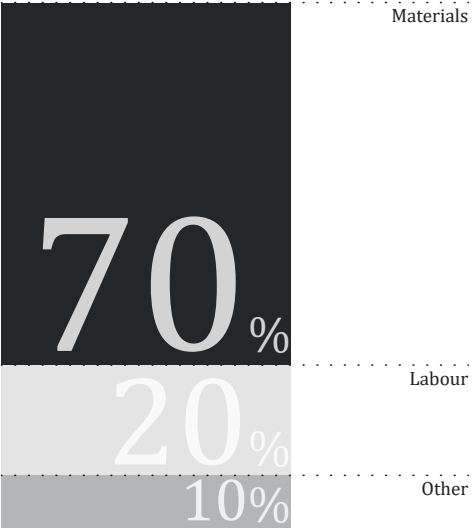


Construction

(in-)Efficient
(in-)Affordable
Use of Resources



Materials & Construction
Cost-time analysis



Post-Occupancy

Long-term

(un-)Affordability

70%

condominium units
are rented out



Tulu Dimtu Condominium

Residual Spaces Turned
into Dump Sites



Jemo Condominium
Gated Communities



Yeka Abado Condominium

Abandoned Communal Block
and Open Spaces



Condominium
Courtyard turned into
Satellite Dishes Yard



Condominium Gallery
An alternative to the ground



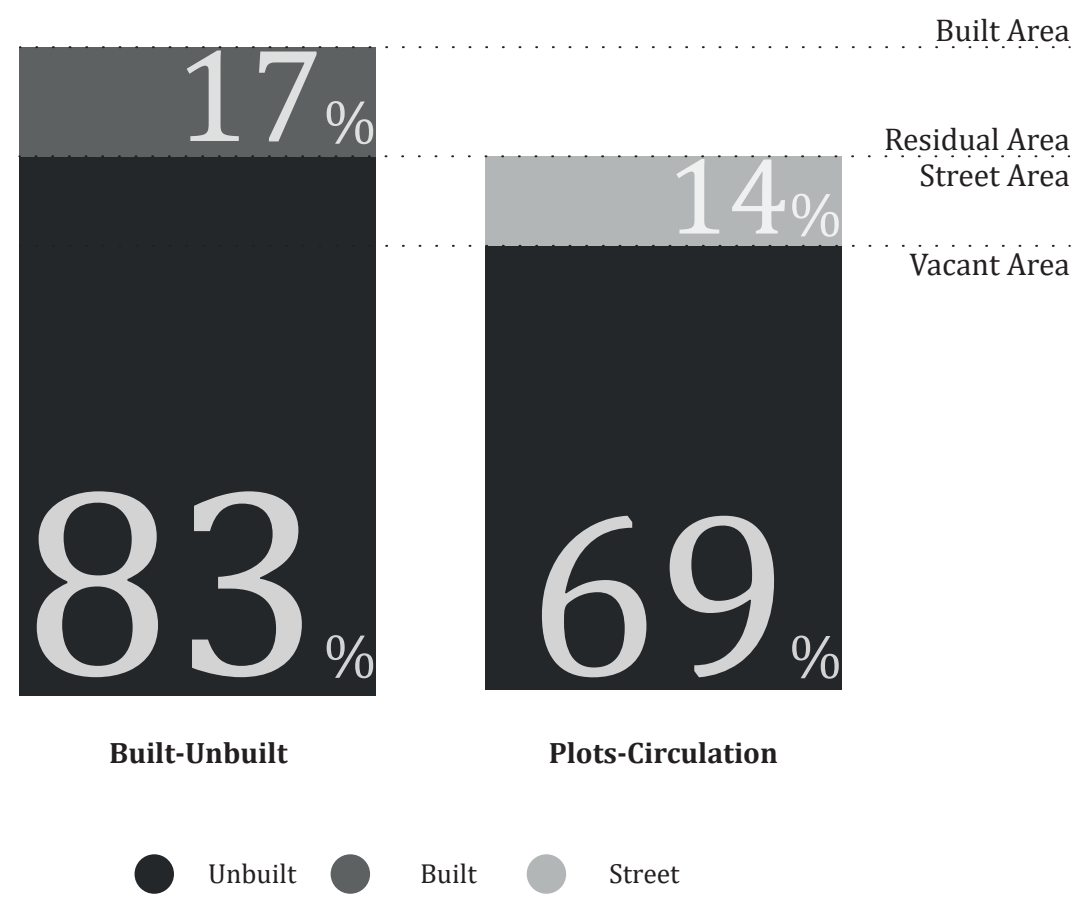
Condominium Gallery
Laundry space/cooking space/
storage space

Open Spaces

Vacant Spaces

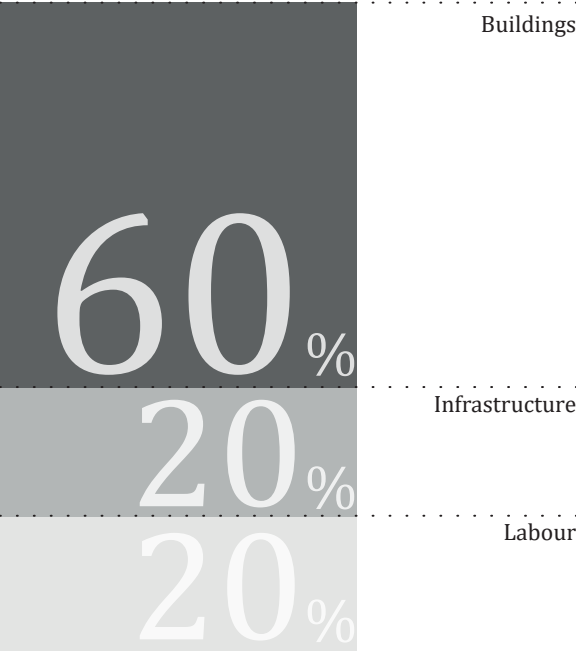


Vacancy



Ground Use Analysis

Urbanization
Costs



Finance Allocation
Analysis

How can we **turn the condominium** into an **active participant** in the process of city-making of an inclusive and **open Addis Ababa**?

*“In particular, what’s missing in modern urbanism is a **sense of time** – not time looking backwards nostalgically but forward-looking time, **the city understood as process**, its imagery changing through use, an urban imagination **image formed by anticipation, friendly to surprise.**”*

Richard Sennett, The Open City

Could a **balance between** the excess **efficiency of the condominium** and the excess **resilience of informal processes** be achieved by introducing the **vernacular as a mediator**, this being by nature characterized by efficiency and resiliency as complementary components, in order **to turn the condominium** into an **active participant** in the process of city-making of an inclusive and **open Addis Ababa?**

*“Vernacular architecture comprises the dwellings and all other buildings of the people. **Related to their environmental context and available resources**, they are customarily owner- or community-built, utilizing traditional technologies. All forms of vernacular architecture are **built to meet specific needs, accommodating values, economies and ways of living of the culture that produces them.**”*

Definition of ‘vernacular architecture’, Paul Oliver

T h e “ O p e n C o n d o m i n i u m ”

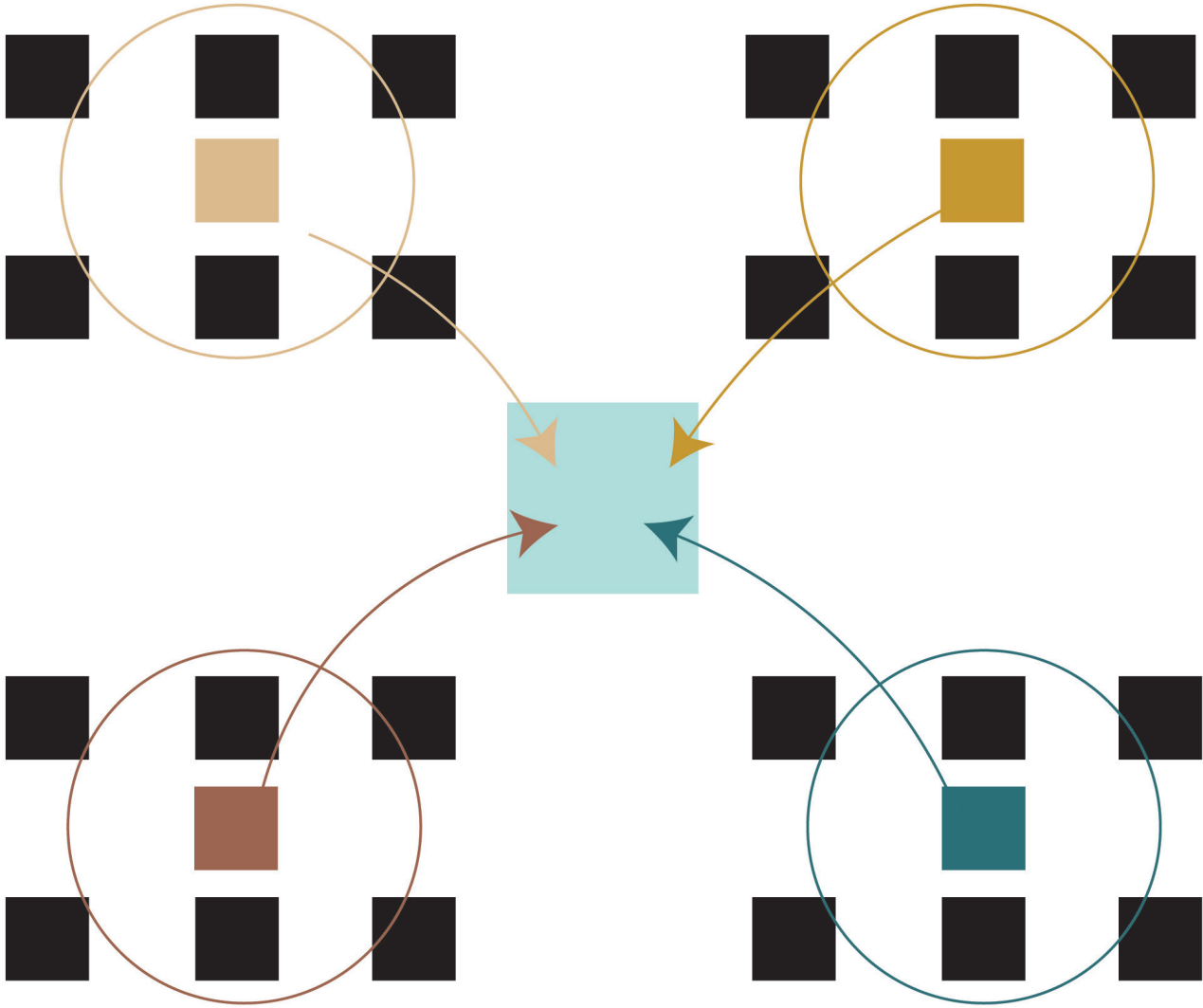
Strategies' Toolbox

People & Program

Space

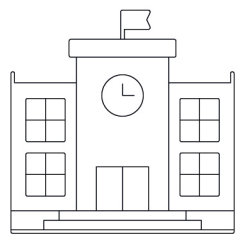
Resources

People and (re-)Program

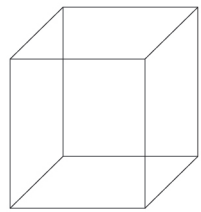


People Involvement

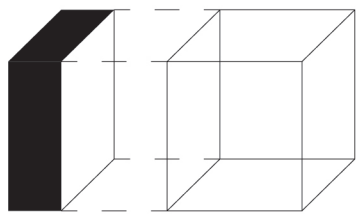
Condominium Residents → Residents Association ← New Residents



Public
Amenities



Unit Typology
and size



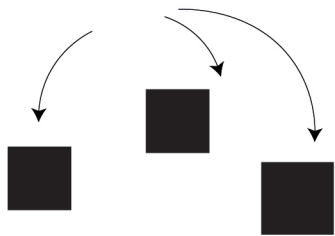
Block/Dwellings
Extensions



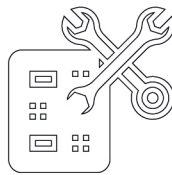
Construction



Self-building
and finishings

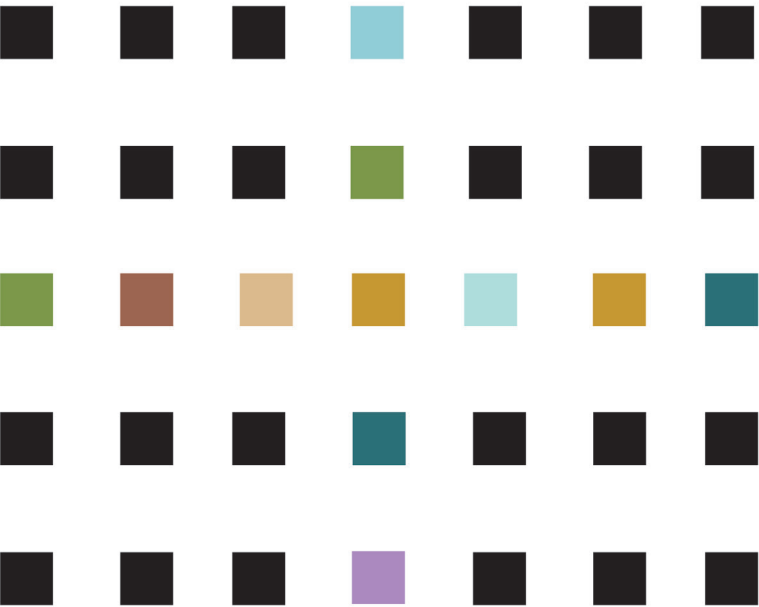
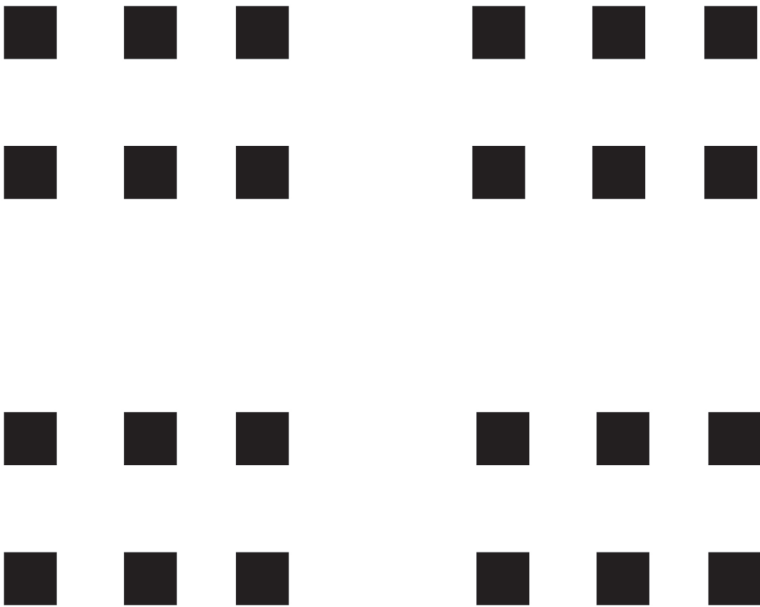


New Units
Allocation



Maintenance

Public Amenities

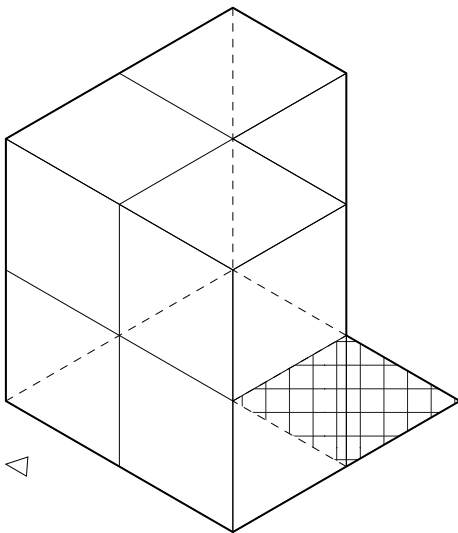


Social Mix

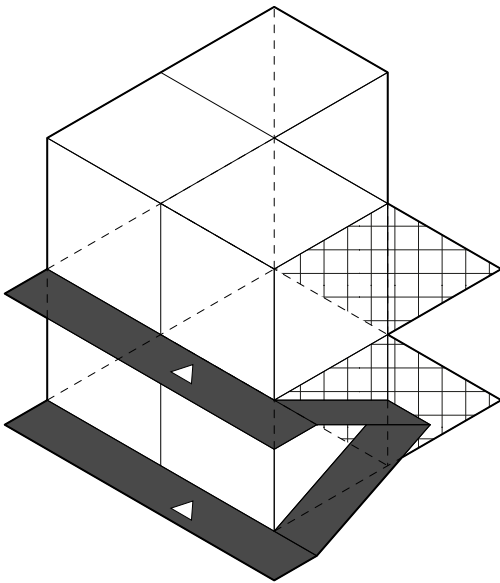
(middle)High-Income

Middle-Income

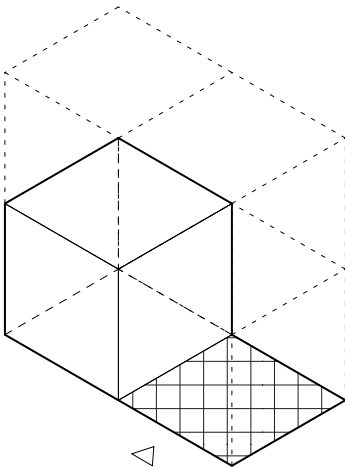
Low-Income



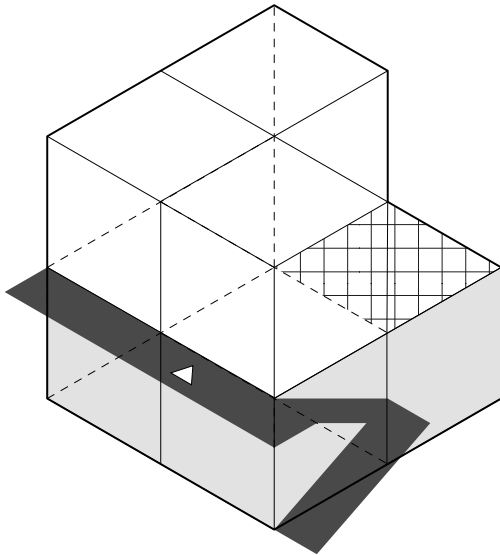
Villas



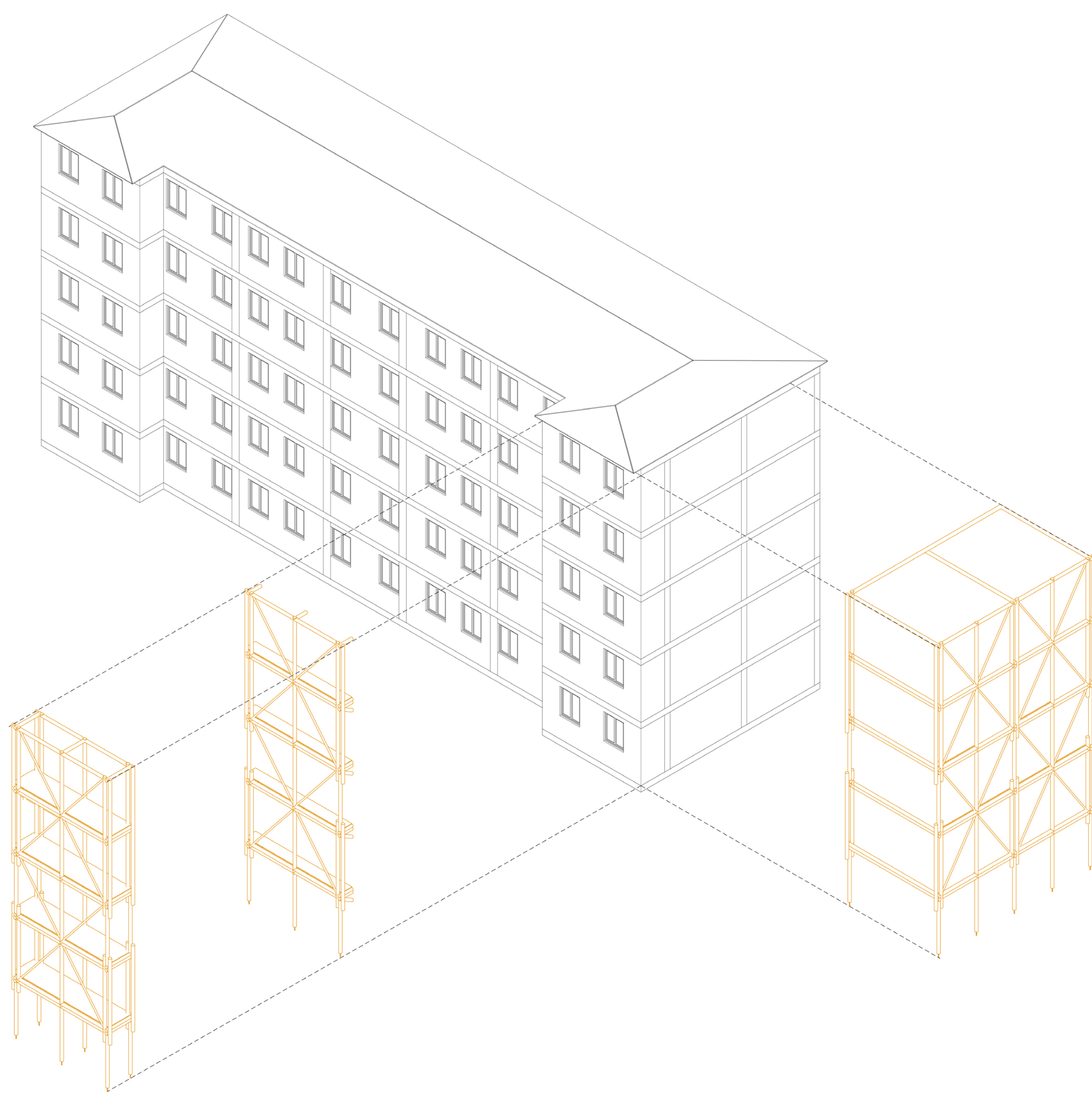
Gallery Apartments



Incremental Units

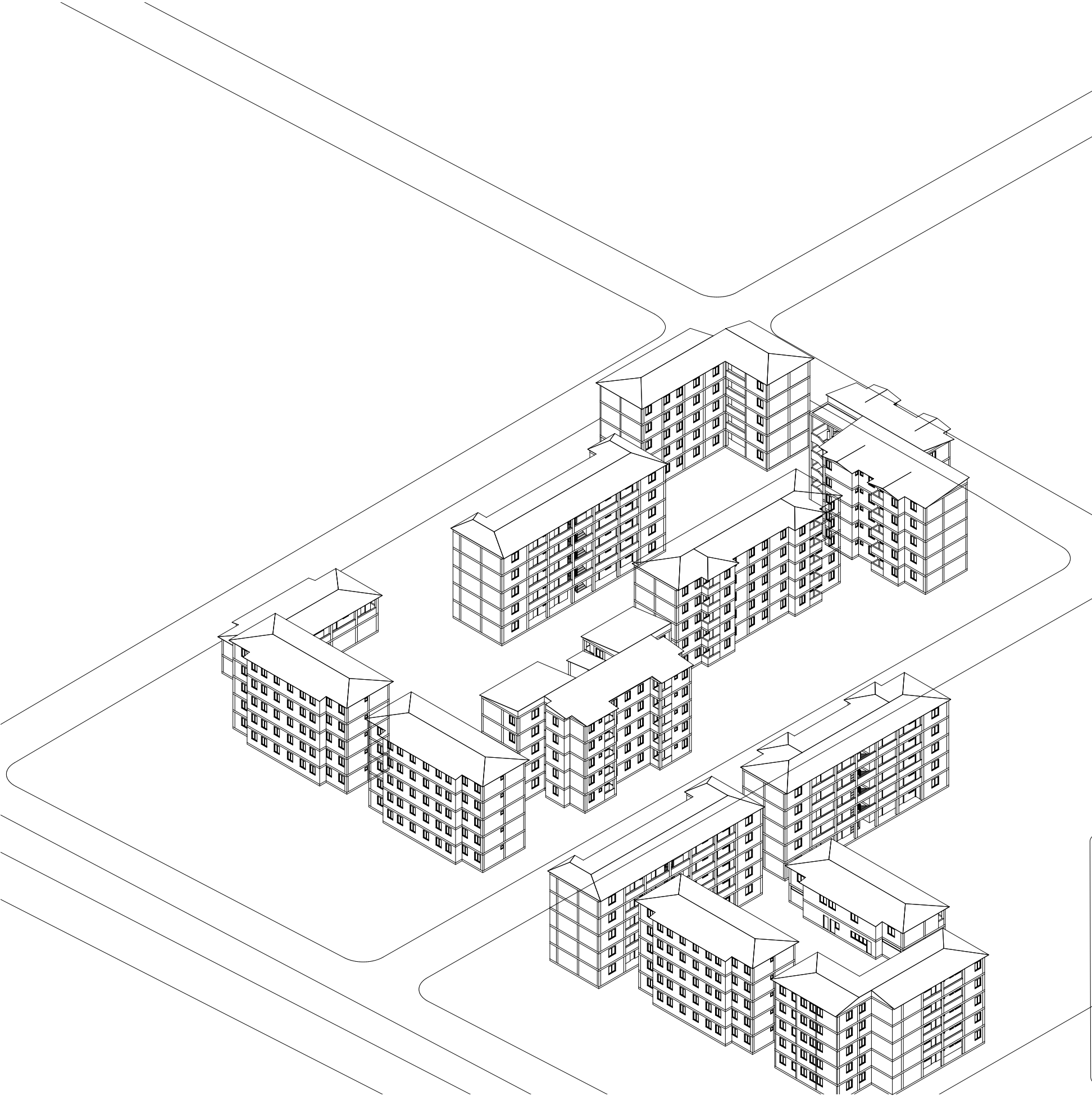


Gallery Apartments
+ Commercial Ground Floor

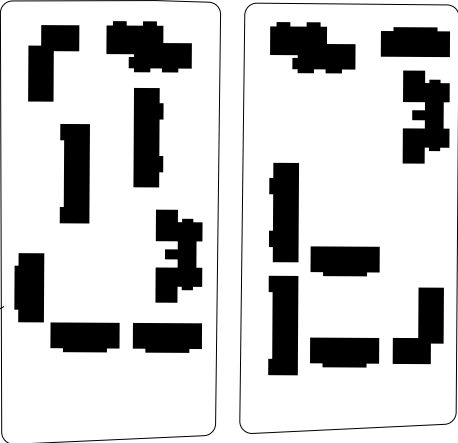


(re-)Definition of Spaces

Re-Definition of
Open Spaces

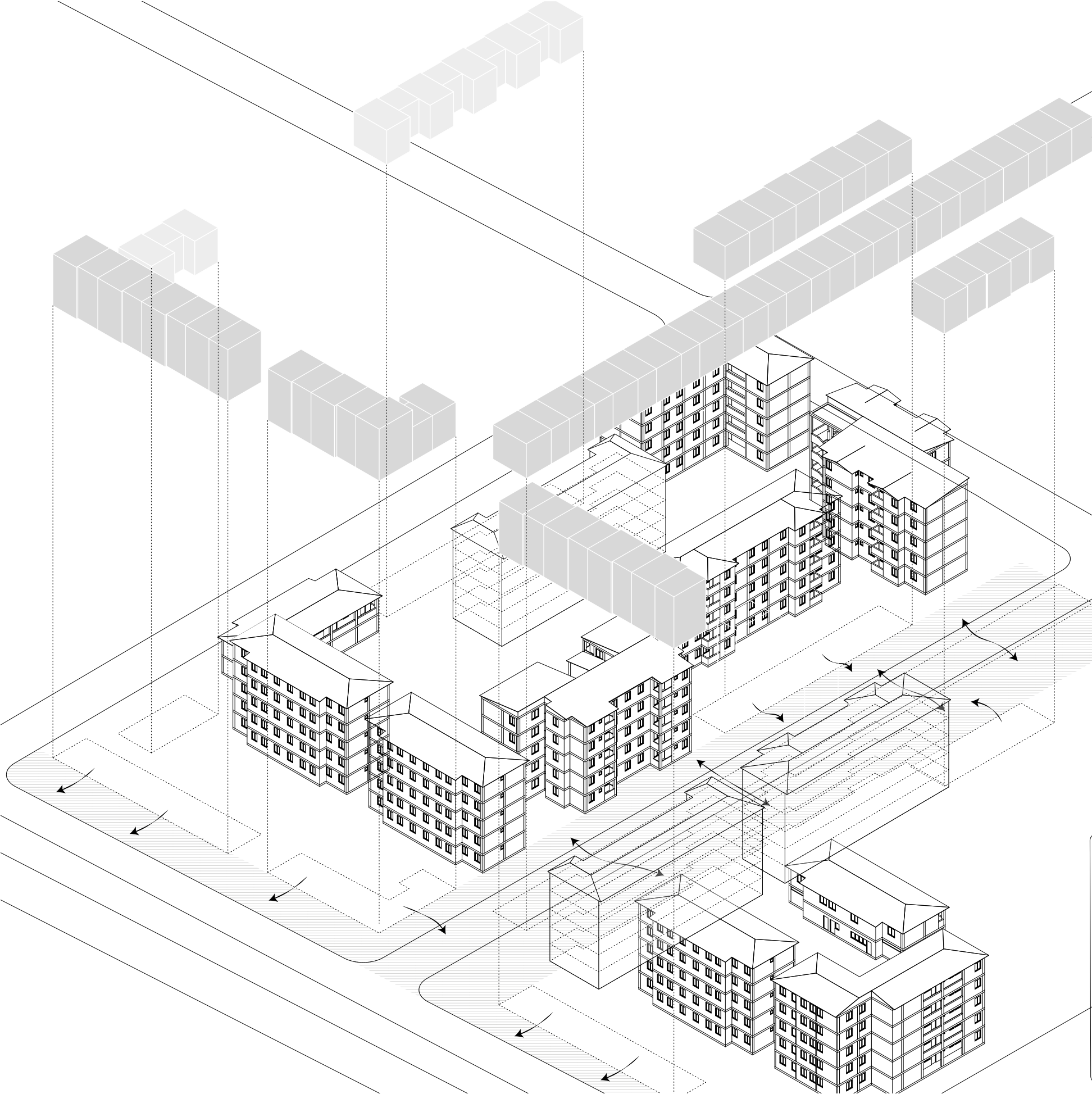


Typical Condominium Plot

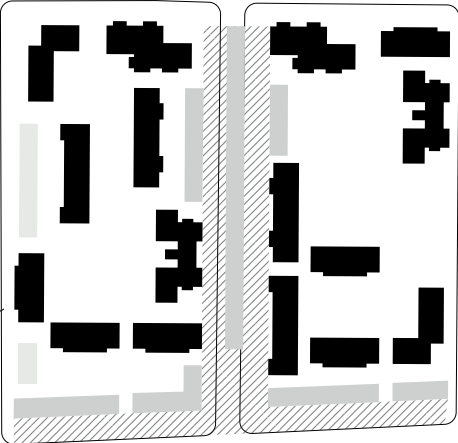


**Re-Definition of
Open Spaces**

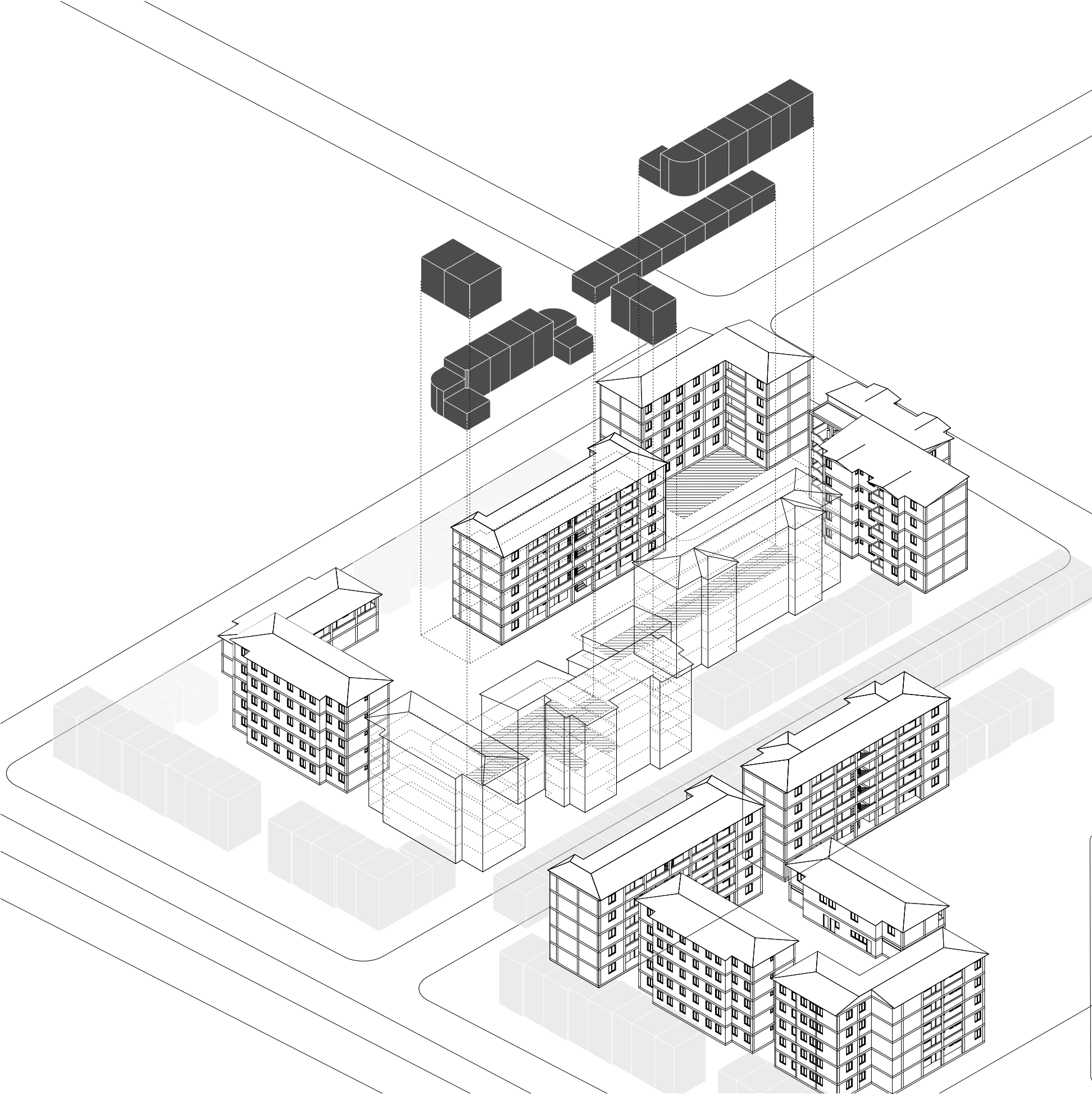
Borders



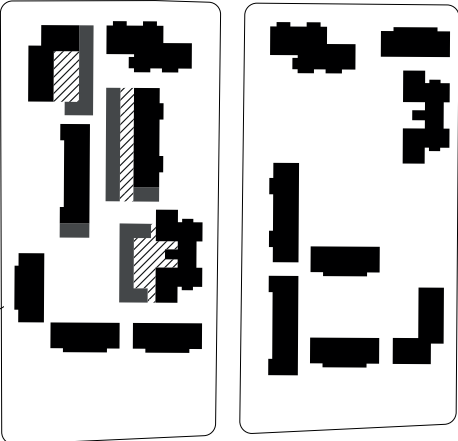
**Definitions of Permeable
Borders through
Densification**



**Re-Definition of
Open Spaces**
Courtyards

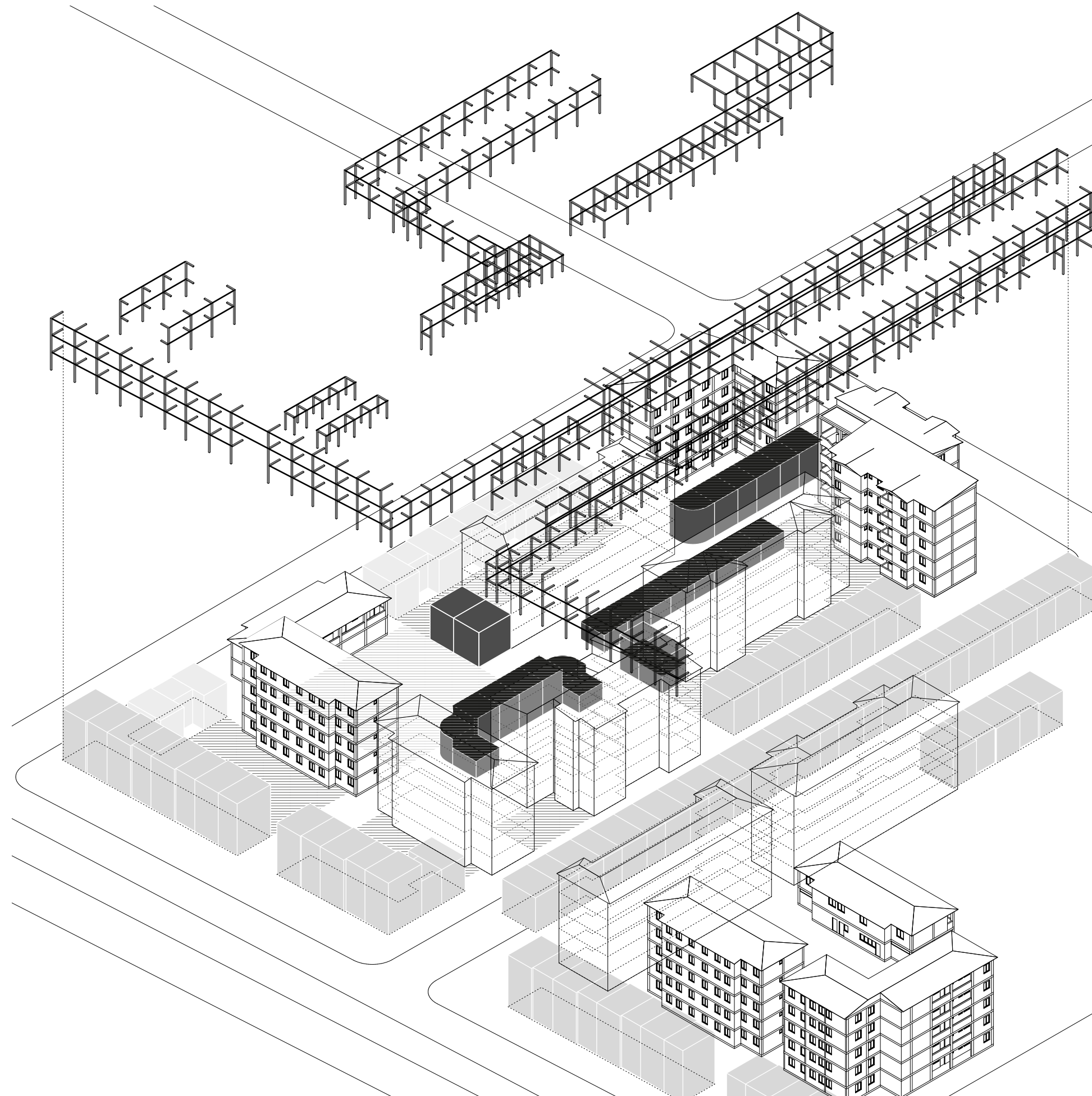


**Definition of Private
Courtyards through
Densification**

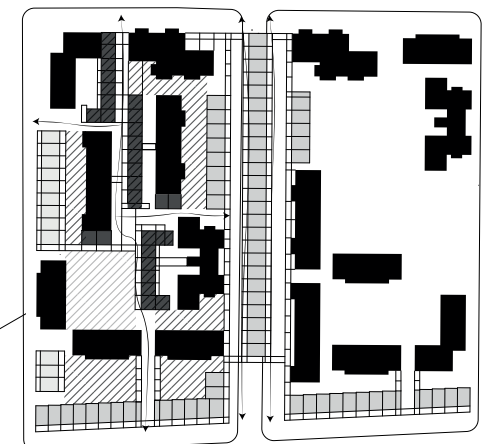


Re-Definition of Open Spaces

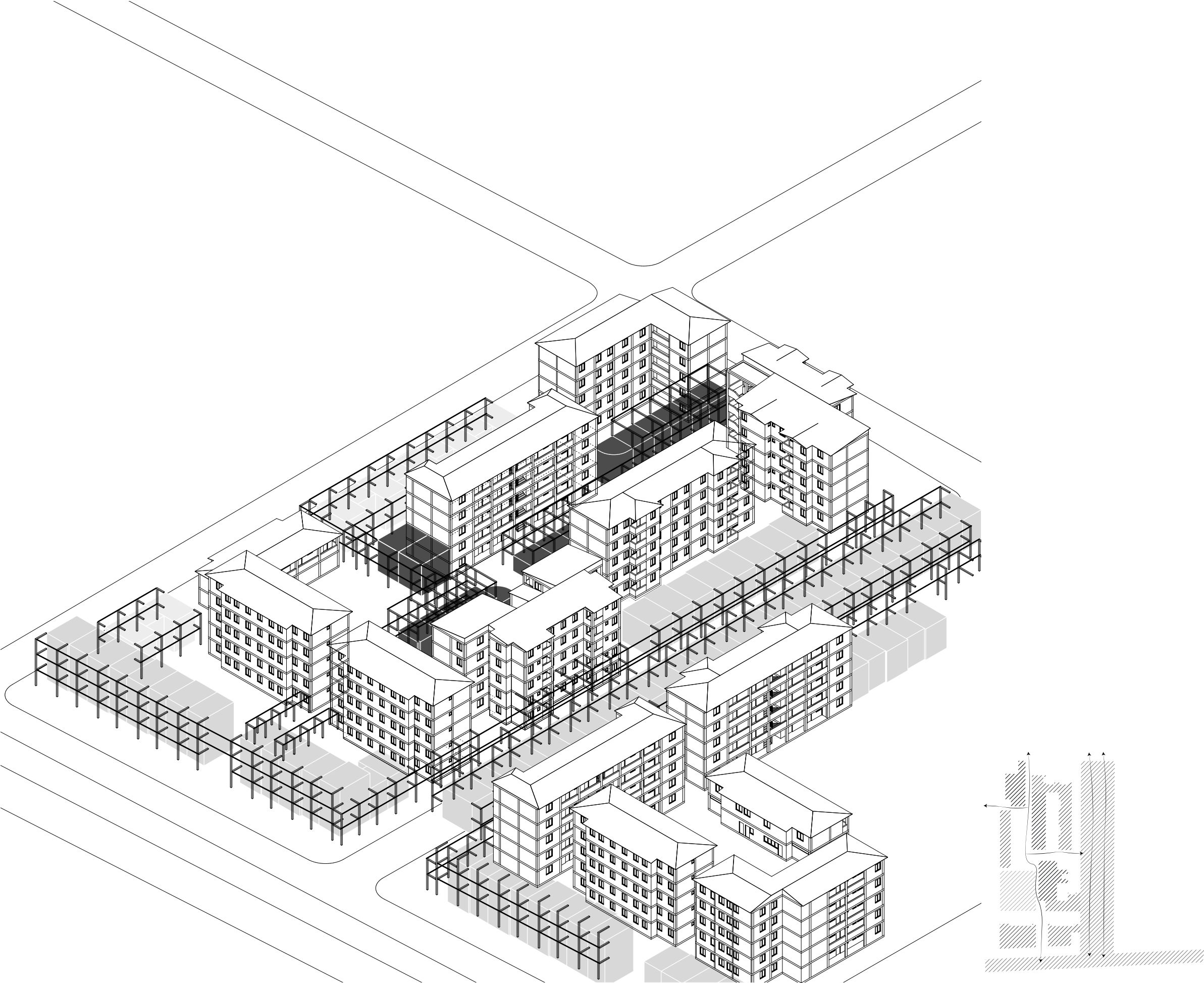
Roofs and In-between spaces



Unifying Infrastructure
for in-between Spaces



Re-Definition of
Open Spaces

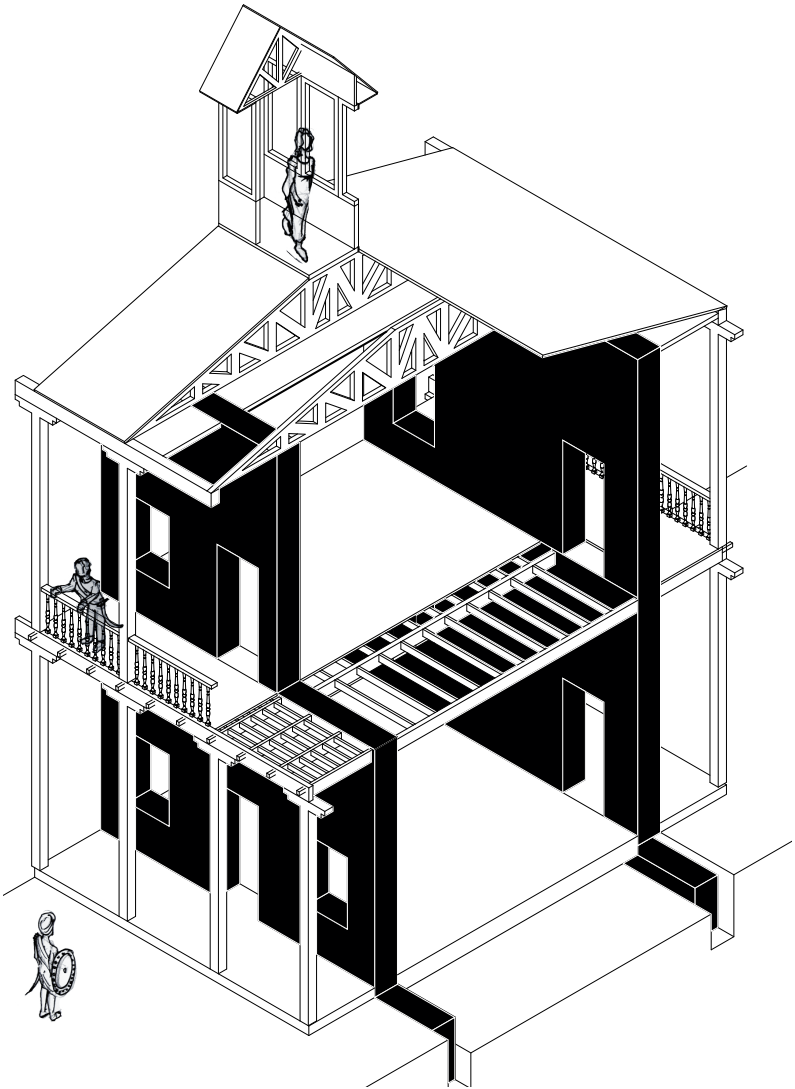


Open Spaces (re-)Defined

(re-)Use of Resources

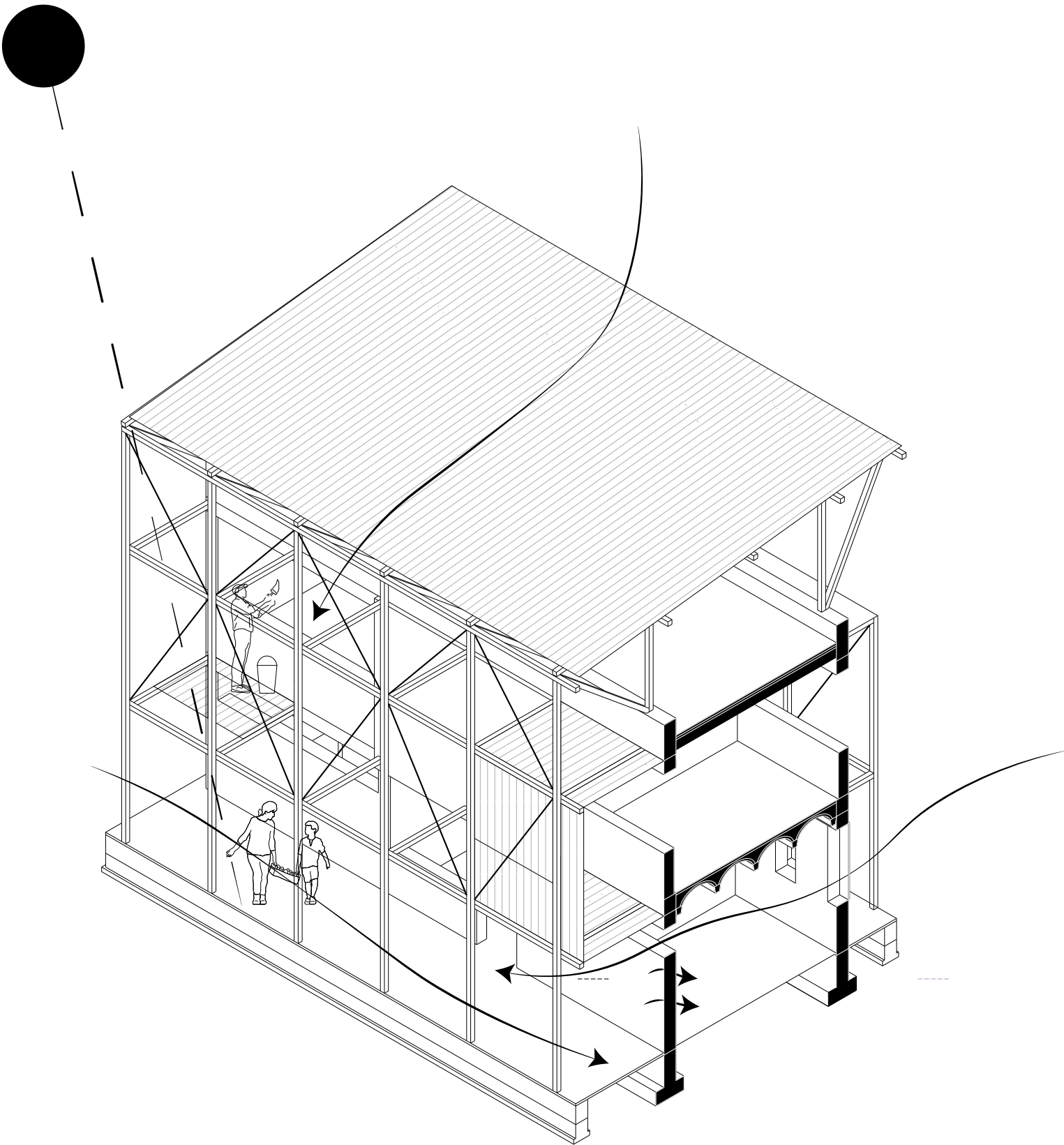
Ras Palace

Climate Solutions



Ras Plalace
Typical Section

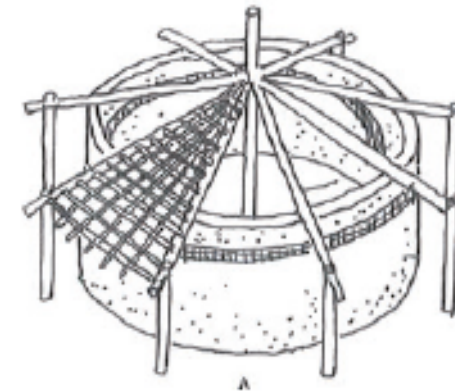
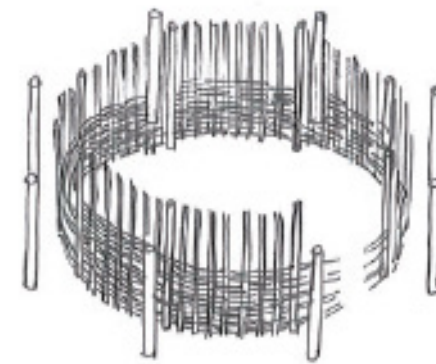
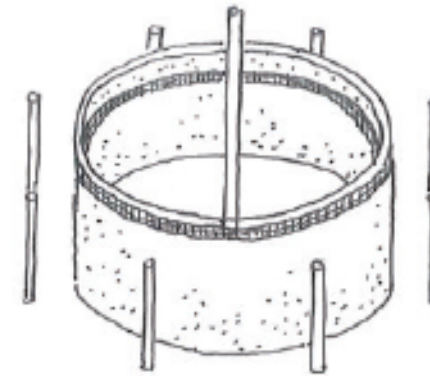
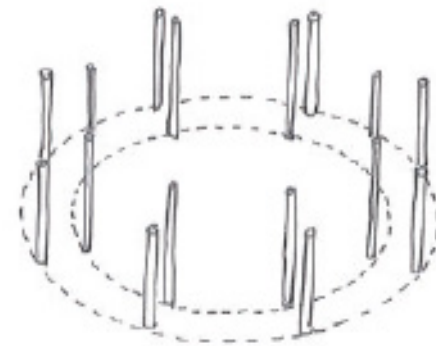
Heavy Core and
light membrane



Proposed
Climate Solution

Chicka House

Construction Materials



Chicka House
Construction Process

Adobe & Bamboo

Enhancing Local Resources



Construction

Material Production



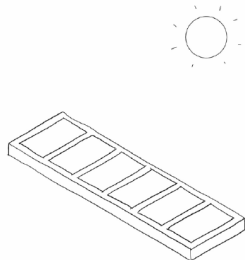
1. Situ sandy loam subsoil



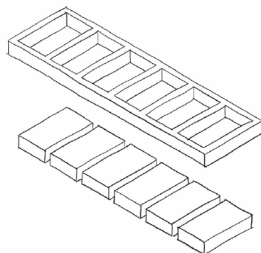
2. Mix of clay, water, sand and straw



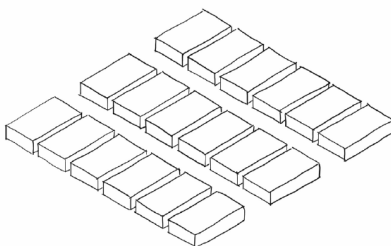
3. Fermentation period



4. Pour mix into the formwork



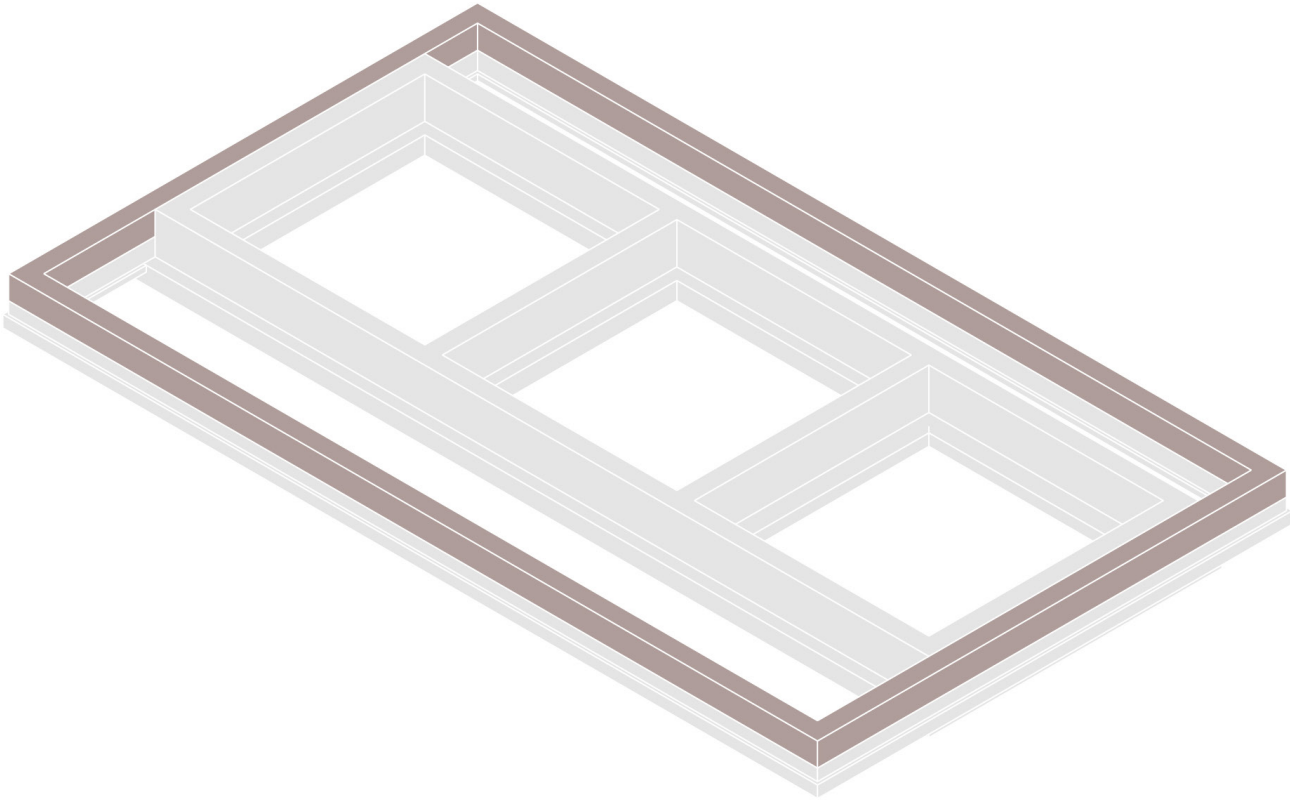
5. Formwork removal after 1 day



6. Sun-drying up to 4 weeks

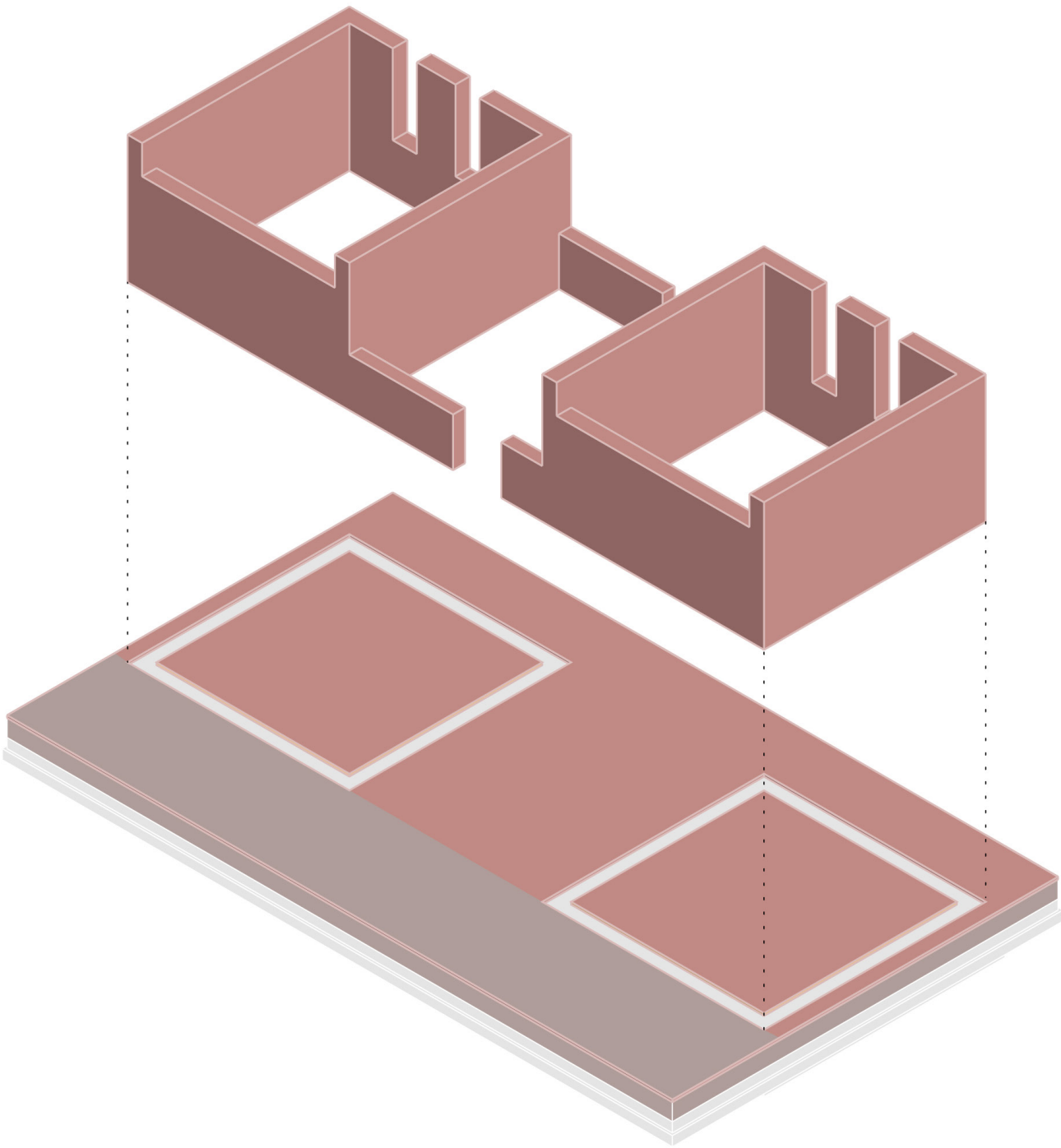
Construction

Concrete Foundations and
Natural Stone Plinth



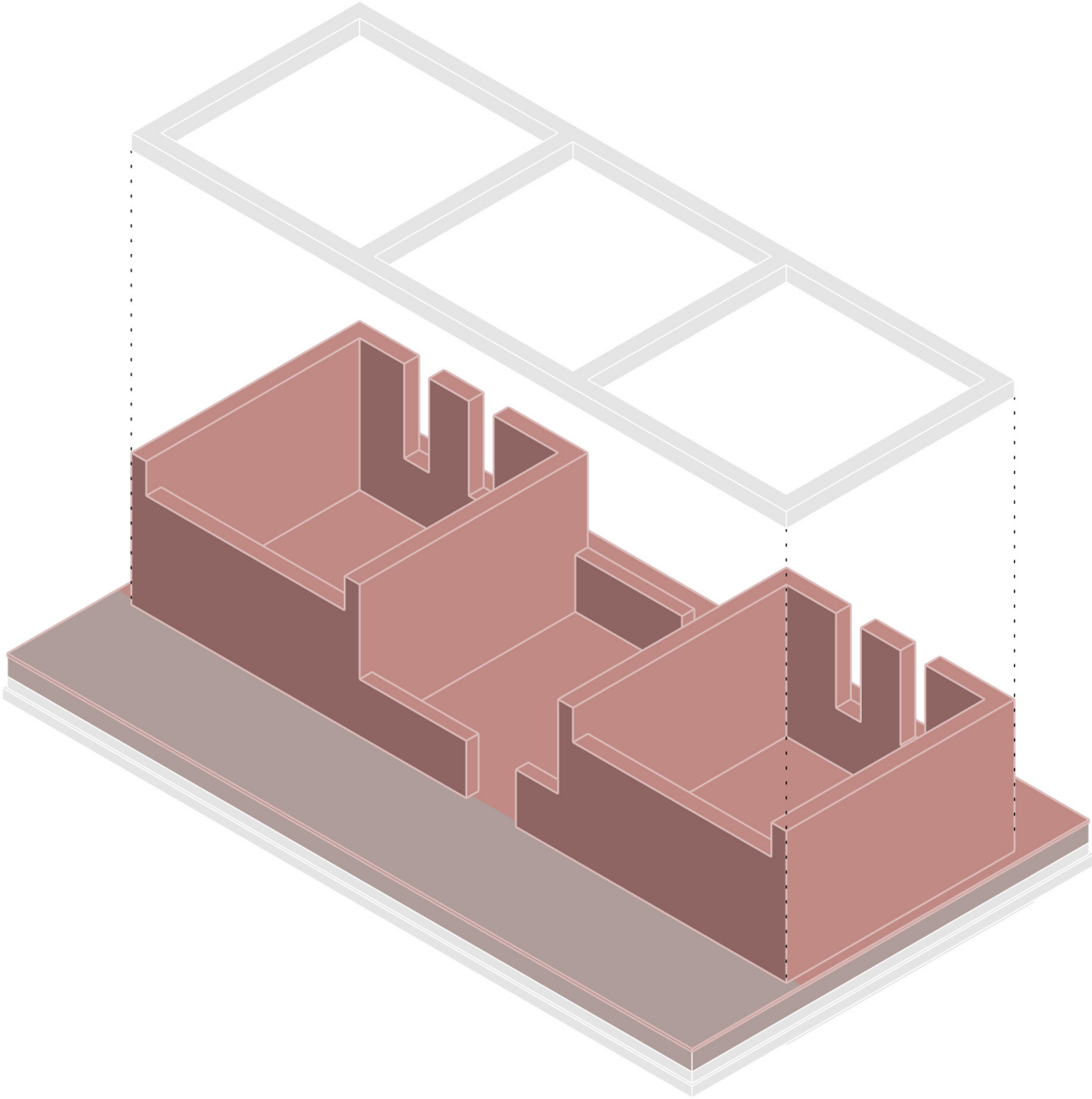
Construction

Adobe Walls Construction



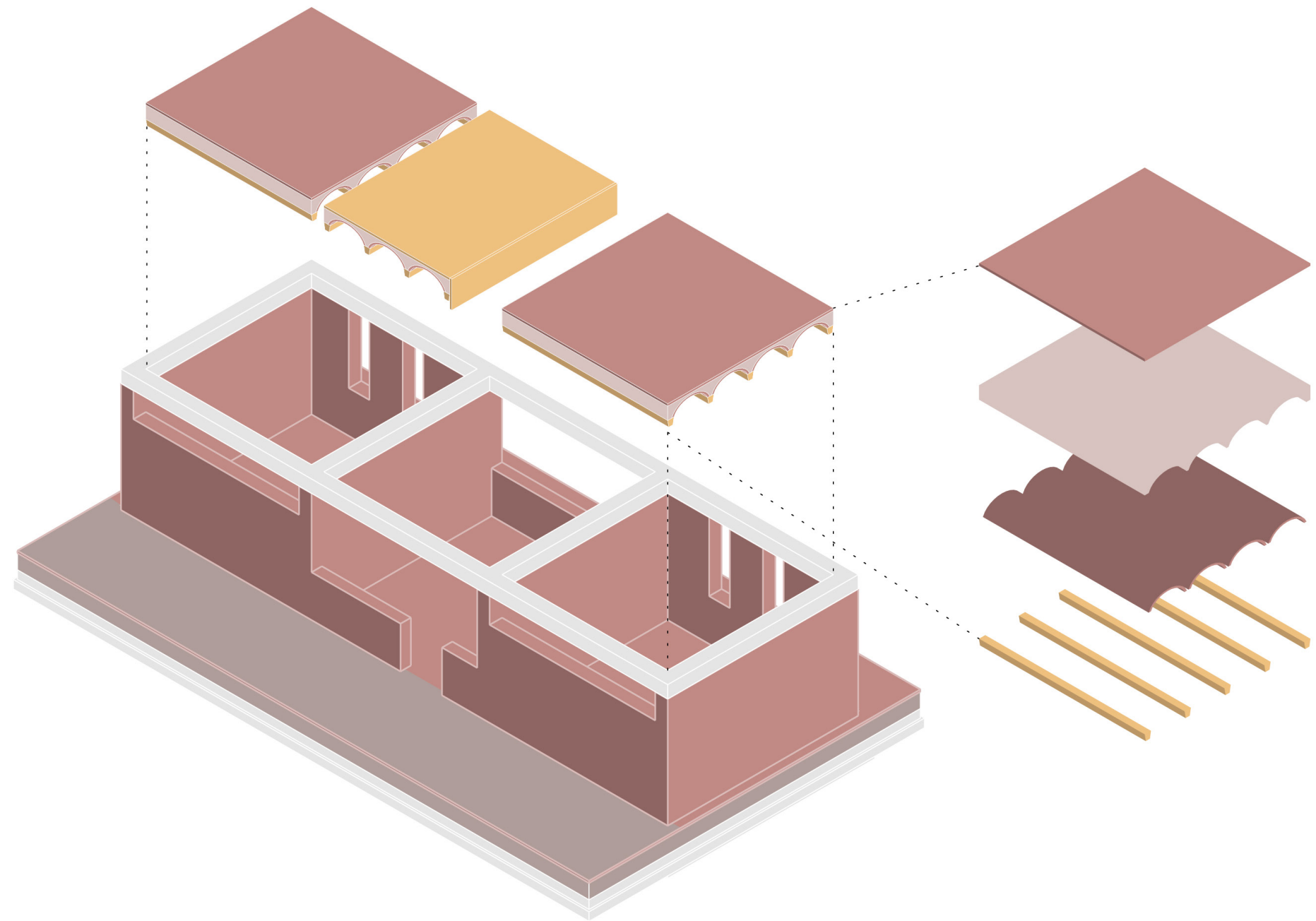
Construction

Concrete Ring-beam

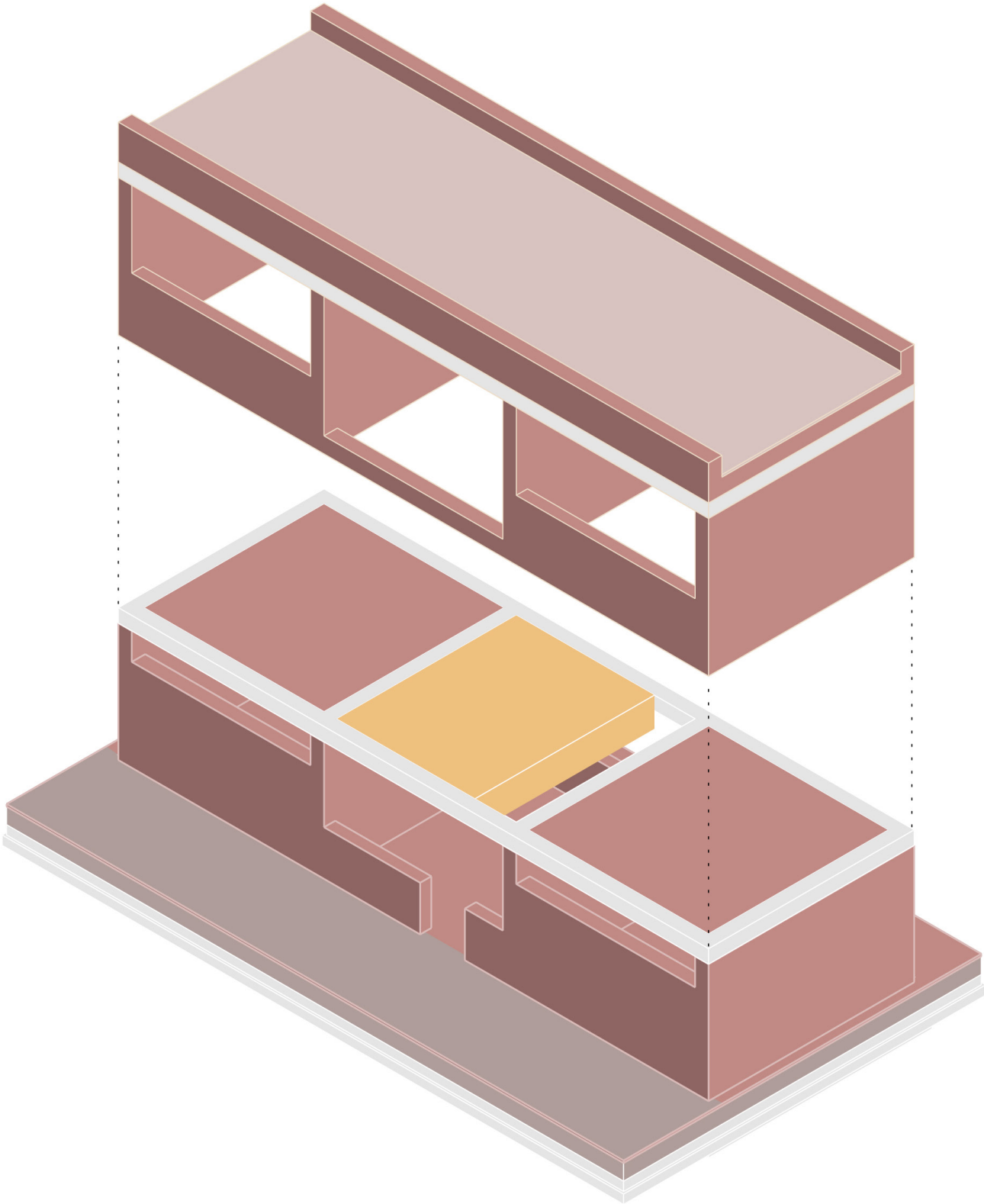


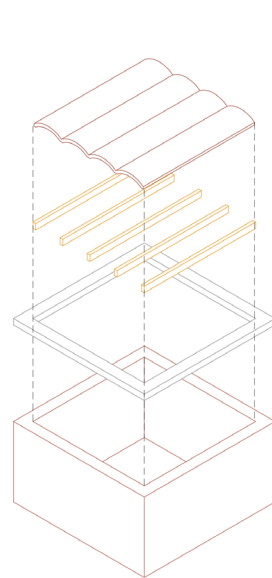
Construction

Horizontal Partitions

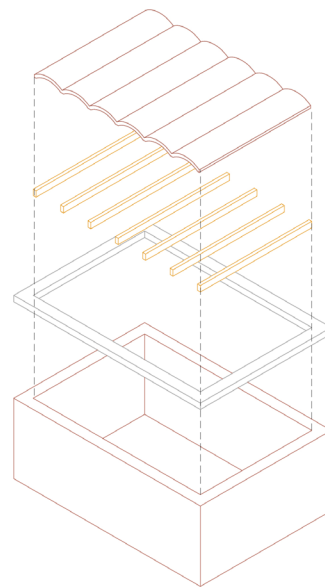


Construction

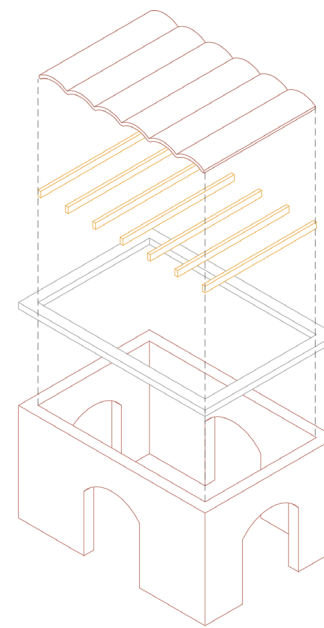




4x4m



6x4m



6x4m

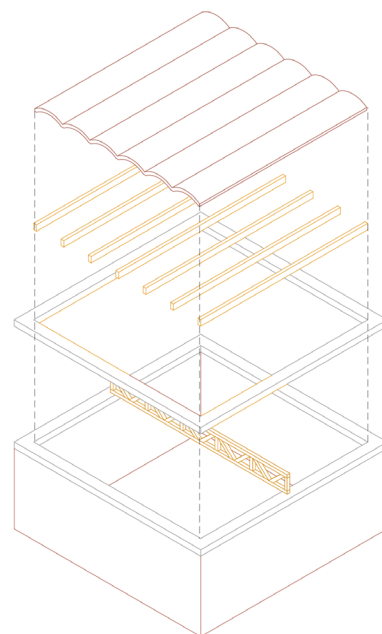


Stabilized CEB vaults

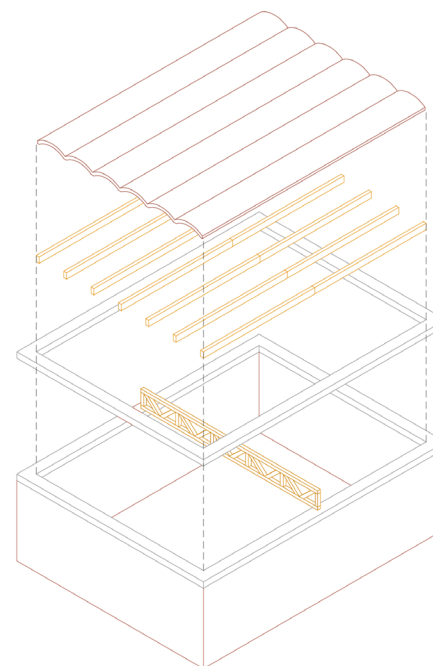
Eucalyptus beams

Concrete ring beam

Adobe wall



6x6m



6x8m



Stabilized CEB vaults

Eucalyptus beams

Concrete ring beam

Timber truss

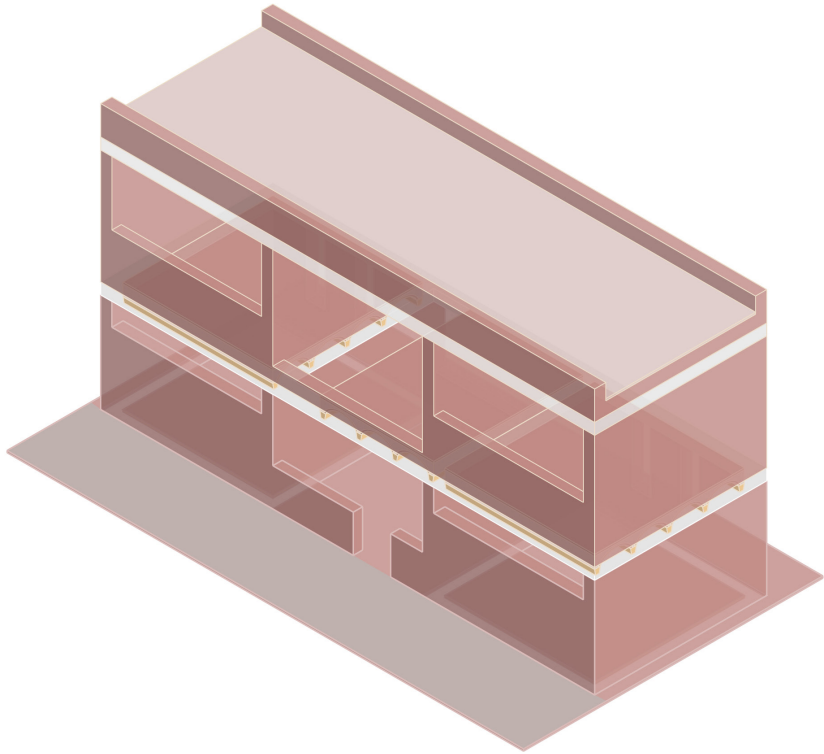
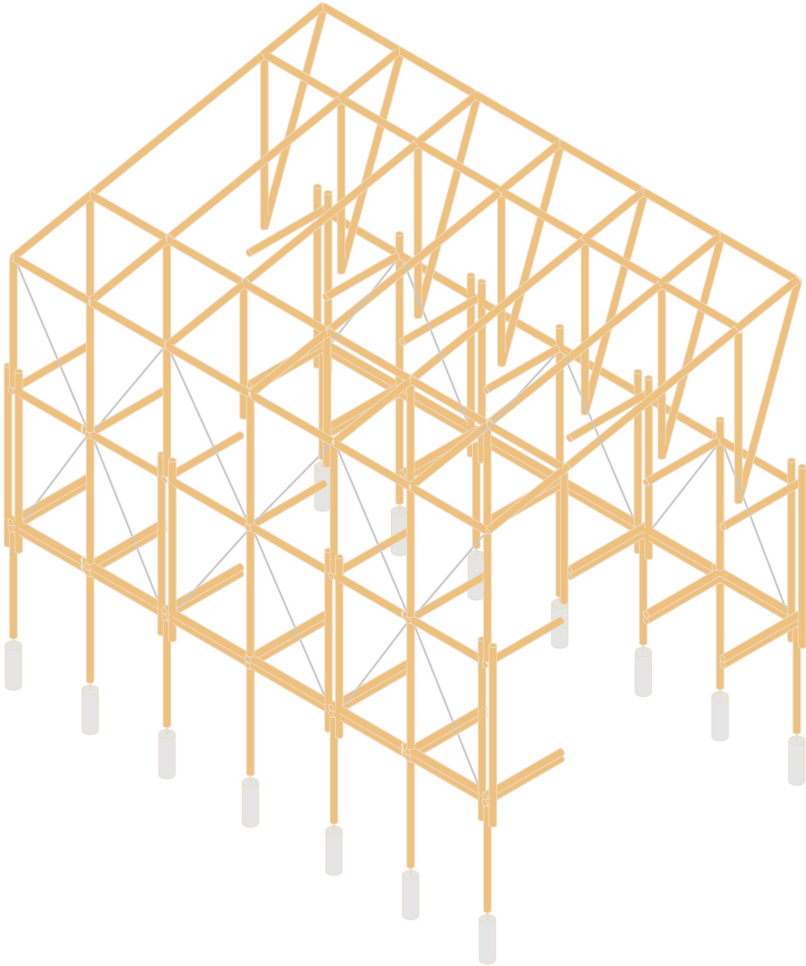
Concrete ring beam

Adobe wall

Adobe Modules Variations

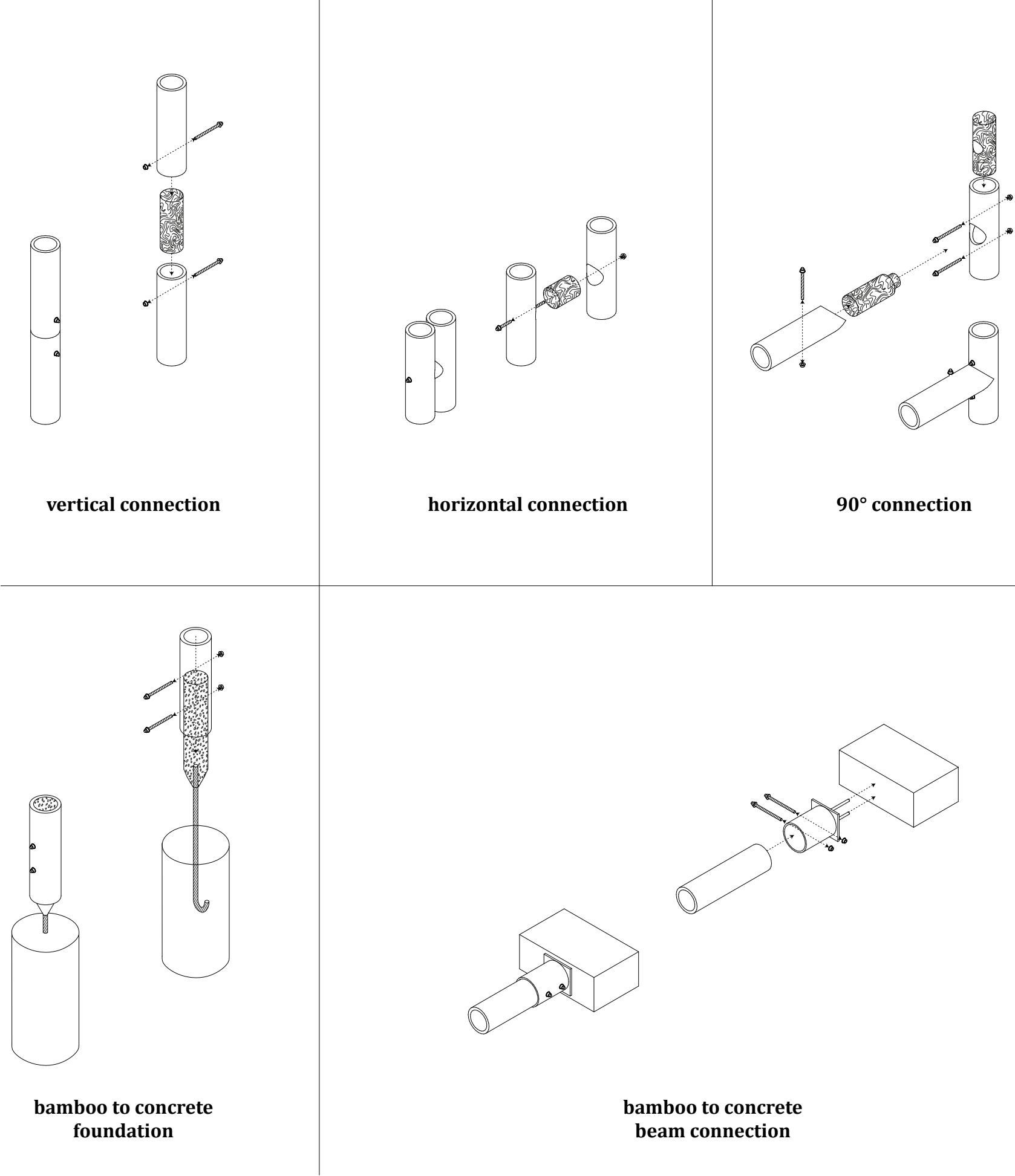
Construction

Bamboo Membrane



Construction

Bamboo Joints



Nut-Bolt-Threaded Stud
12mm

Threaded Hook Stud
12mm

Galvanized Post Bracket

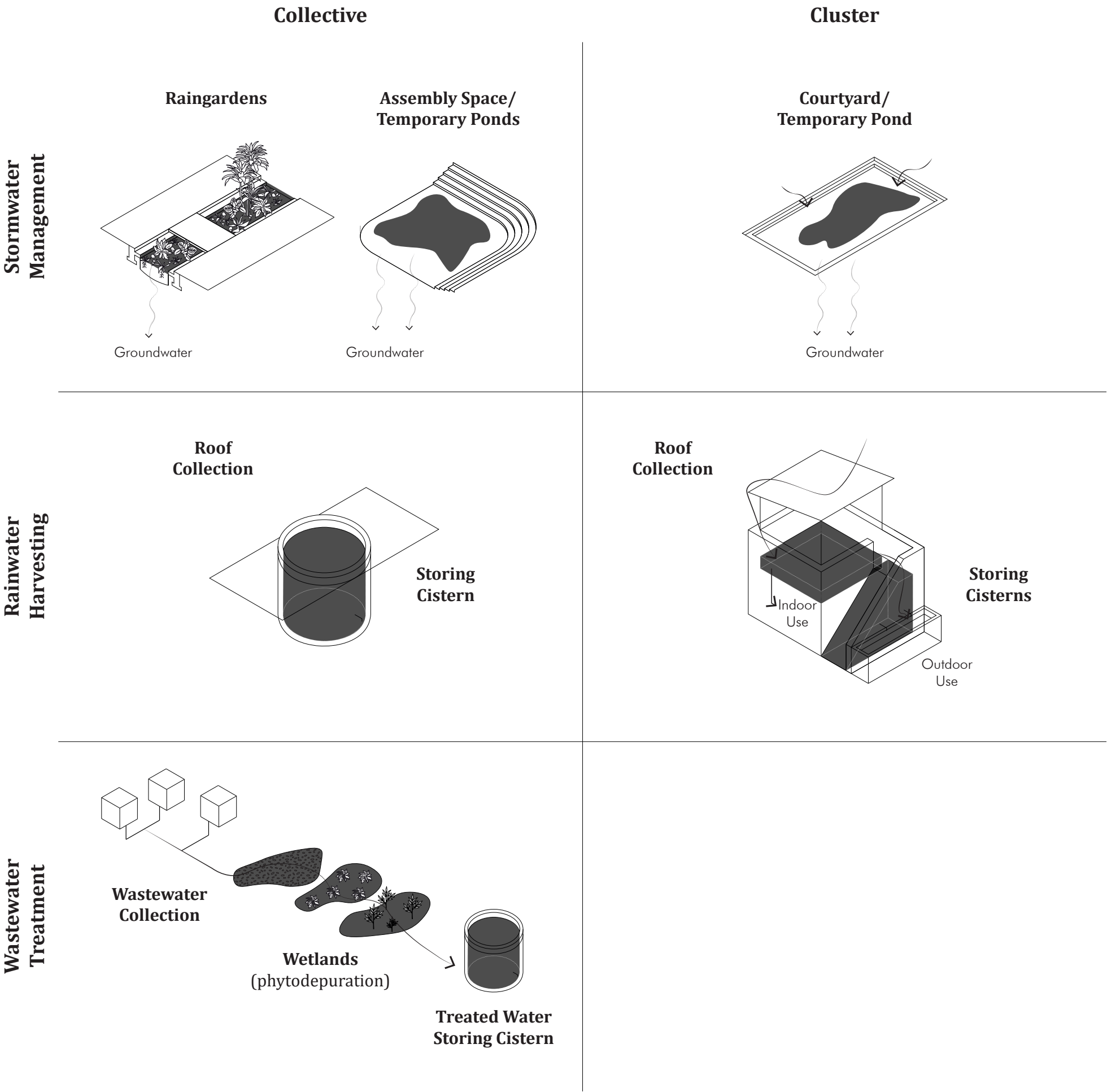
Hardwood Bars
(same diametre as bamboo culm)

Concrete
(pured on site)

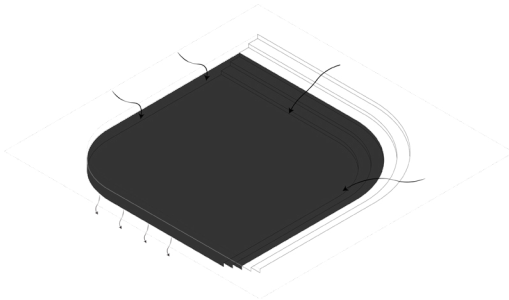
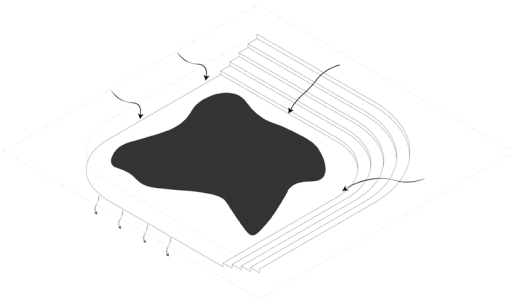
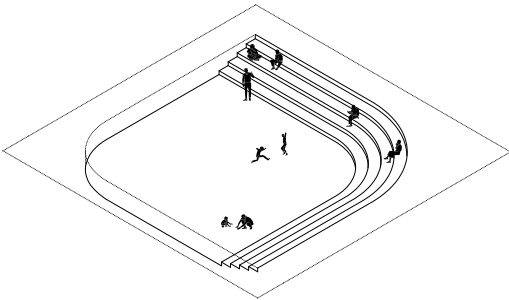
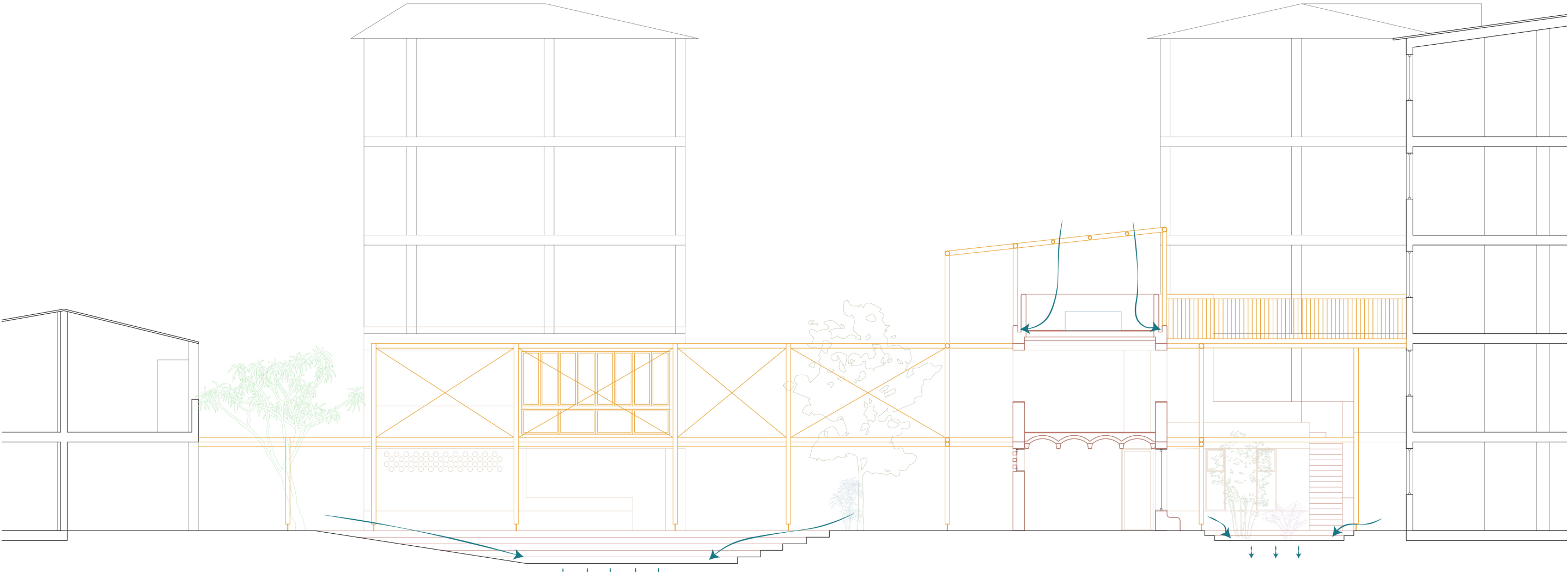
Plastic Bottle Cone

Water

Manage, Collect, Recycle

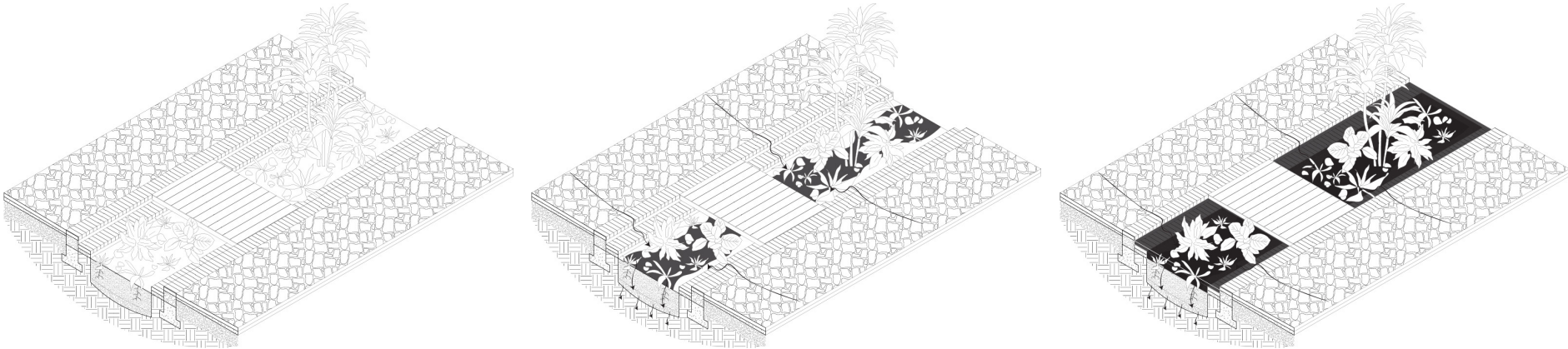
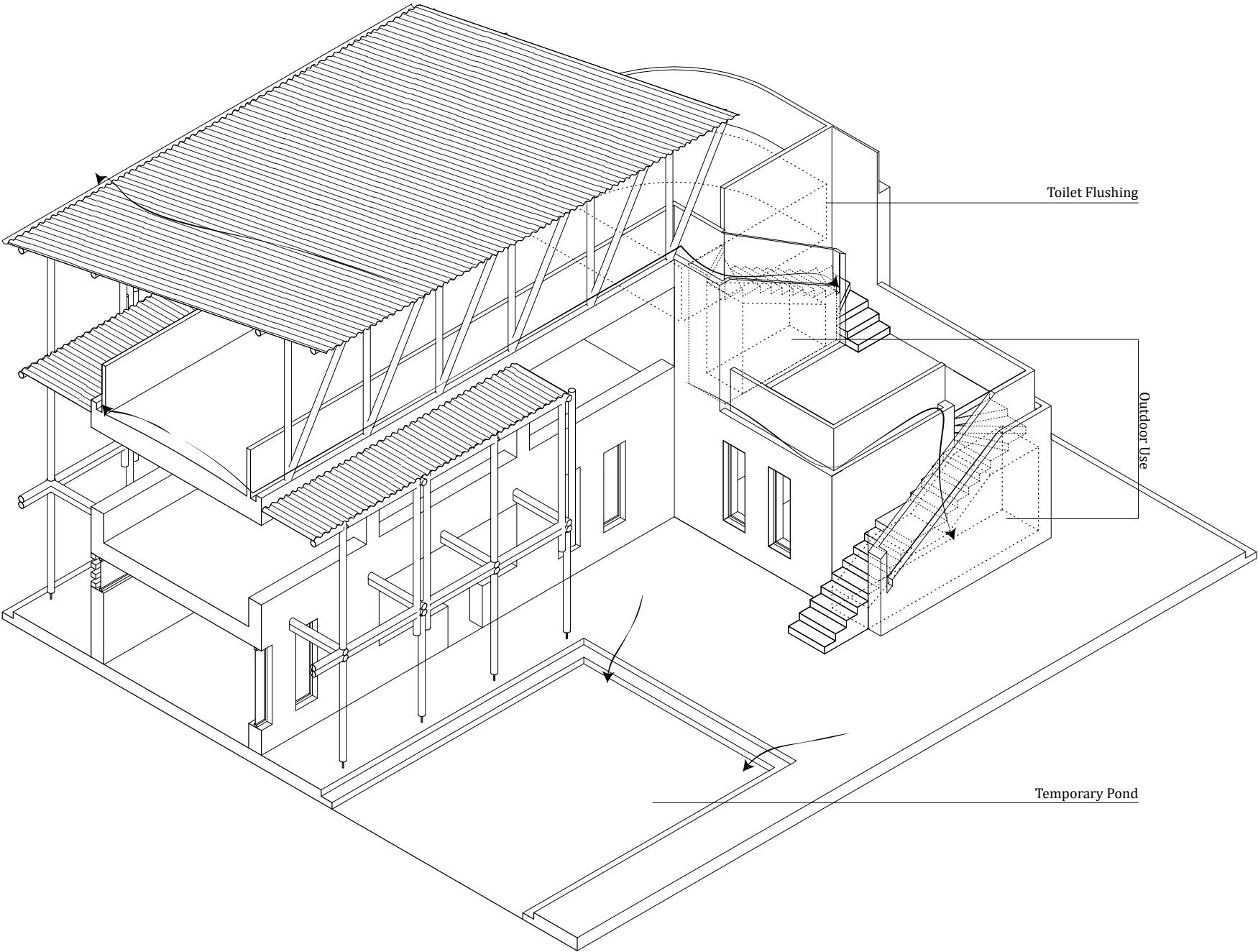


Management and
Collection



Water Strategy
Urban Scale

Management and
Collection



Water Strategy
Cluster Scale



A k a k y - K a l i t y
Condominium-Site

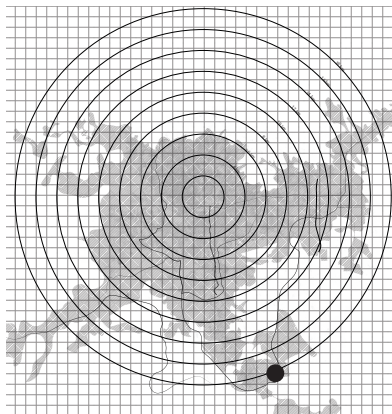
Testing Ground

Akaky Kality
Condominium

20/80 Condominium Scheme

Greenfield Development
(18km ca. from the city centre)

Construction Years: 2012-2015



Site Location



Current Masterplan

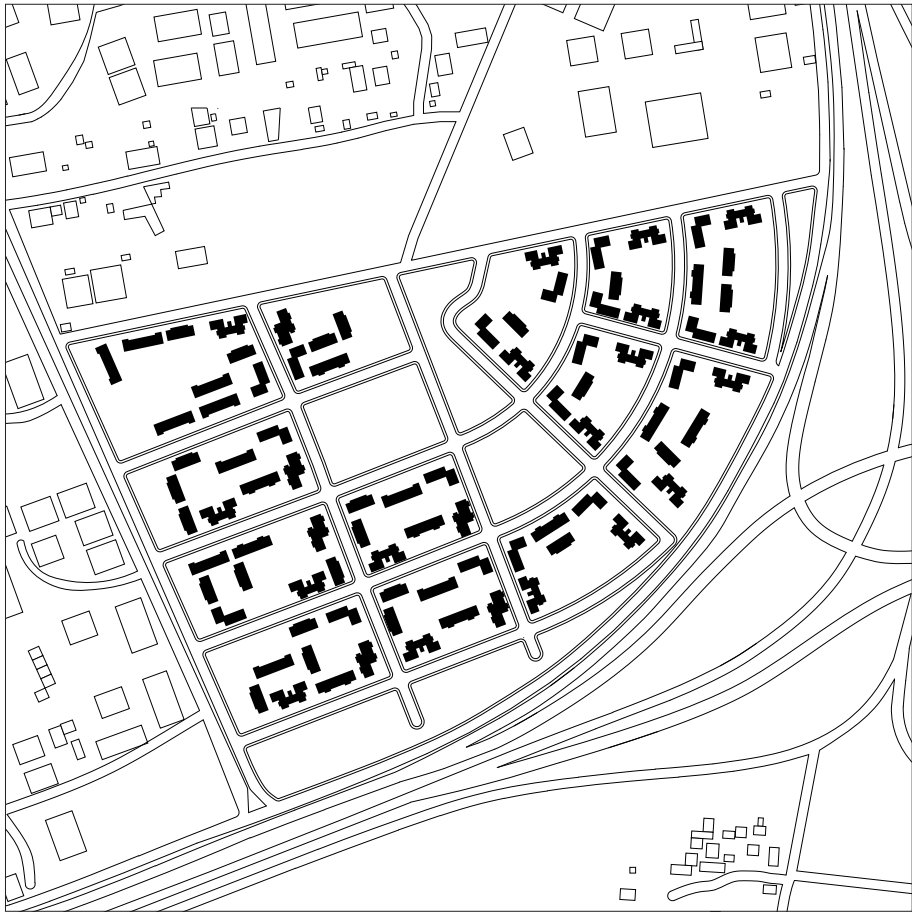


Proposed Masterplan

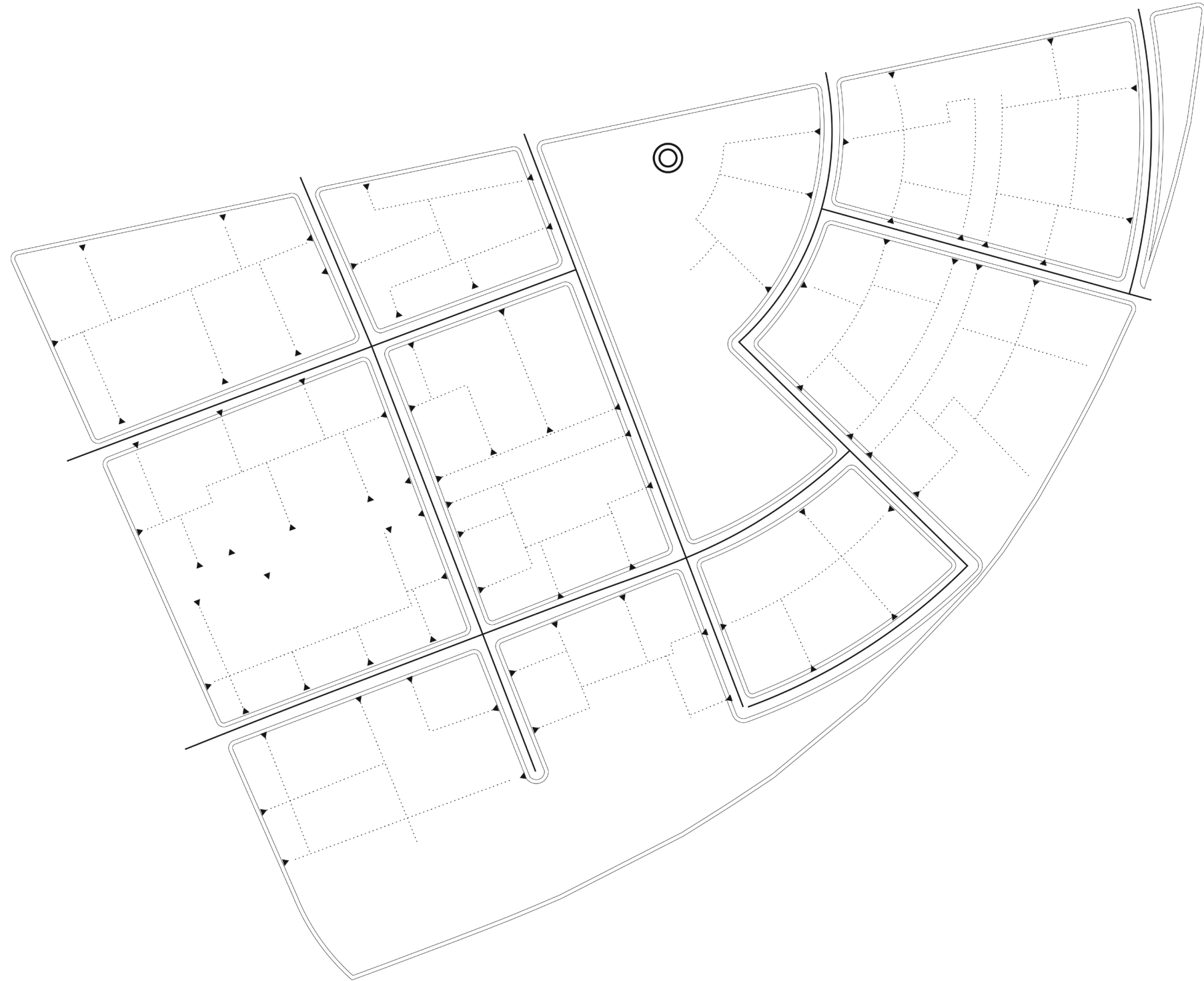


FSI 0,78
GSI 0,17
N. of Dwellings 1925
Density (dw/ha) 105,2

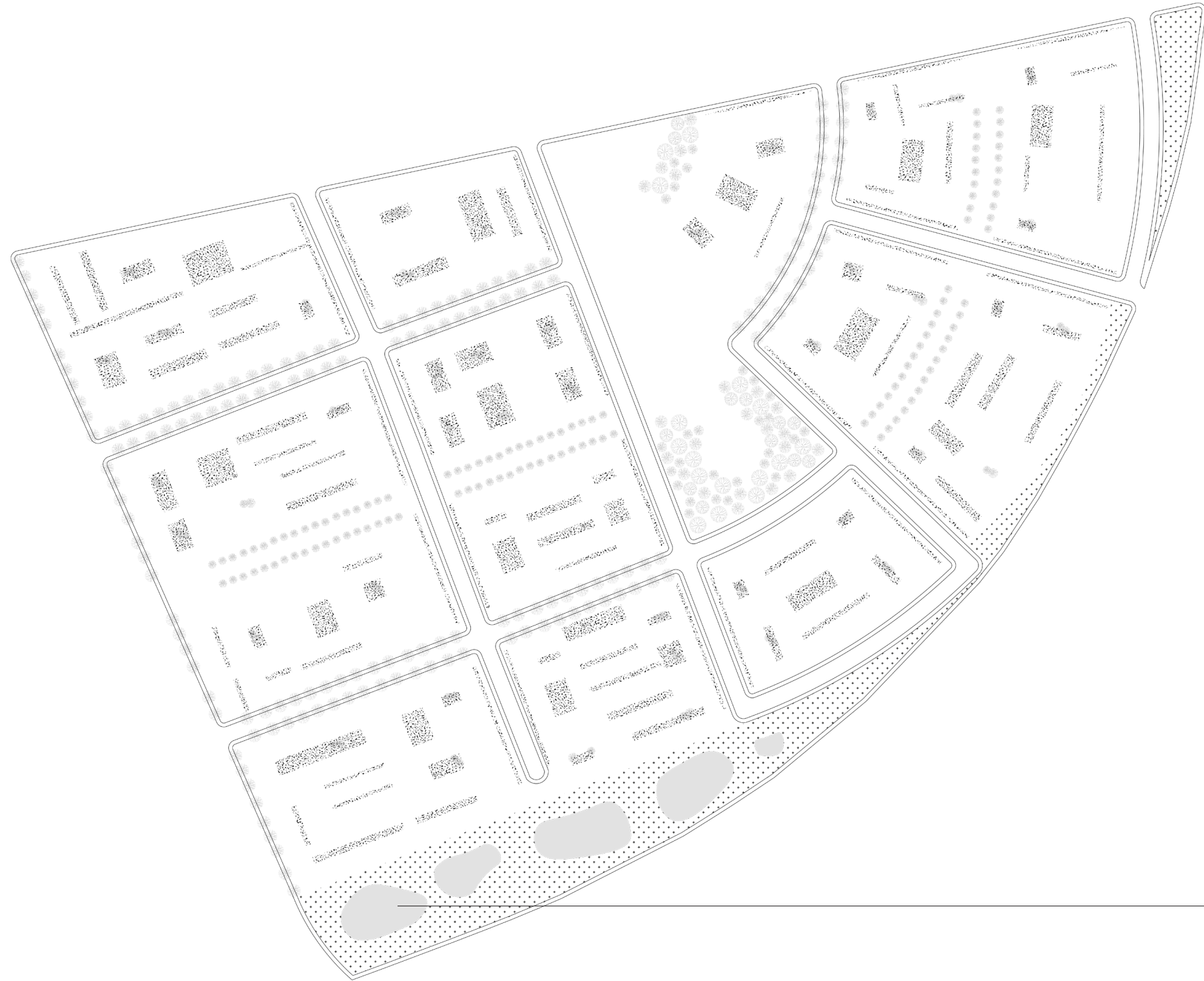
1,02
0,25
2410 **+485(+25%)**
131,7 **+26,5(+25%)**



Densification

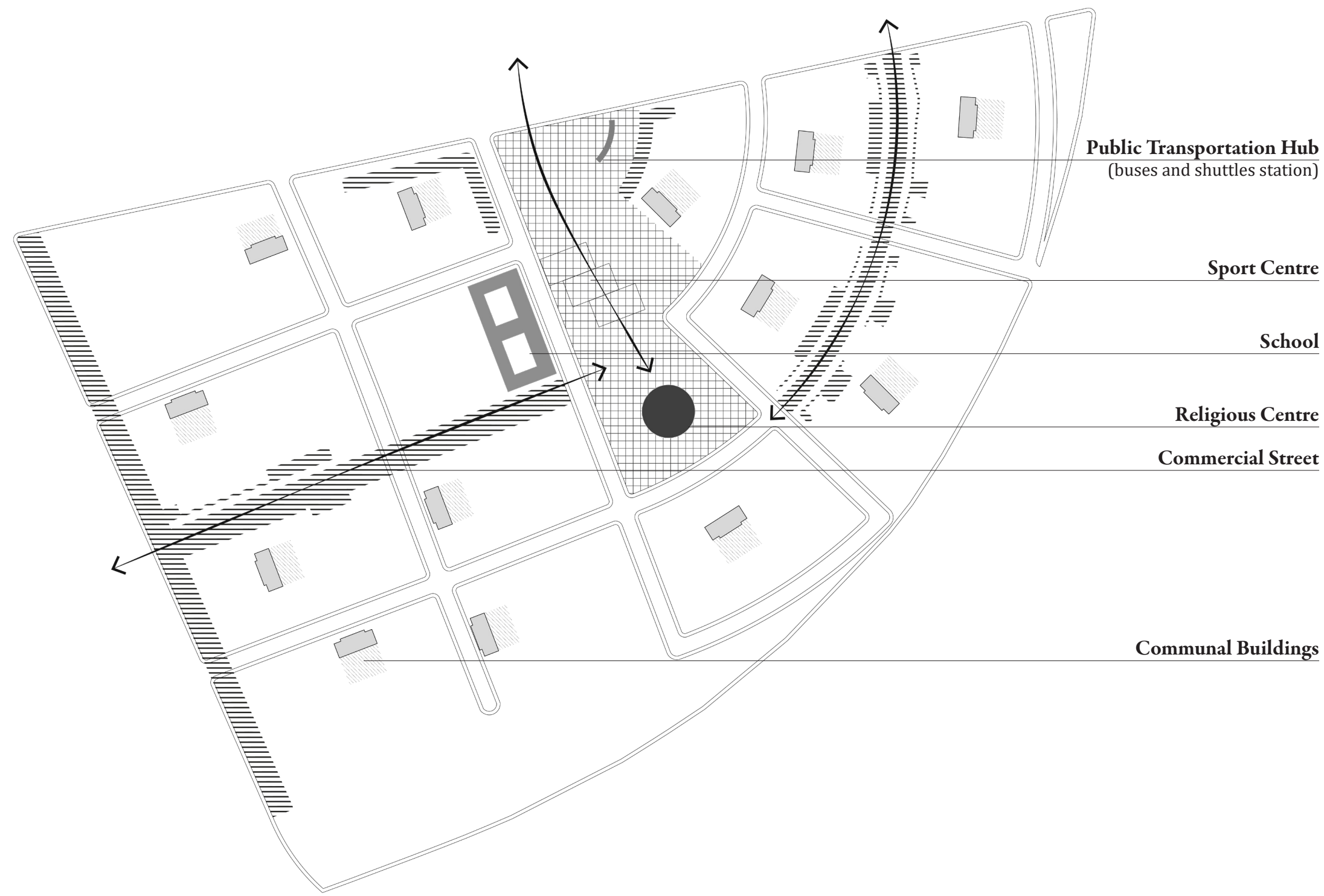


**Re-Definition of
Mobility Infrastructure**



Water Treatment Plant

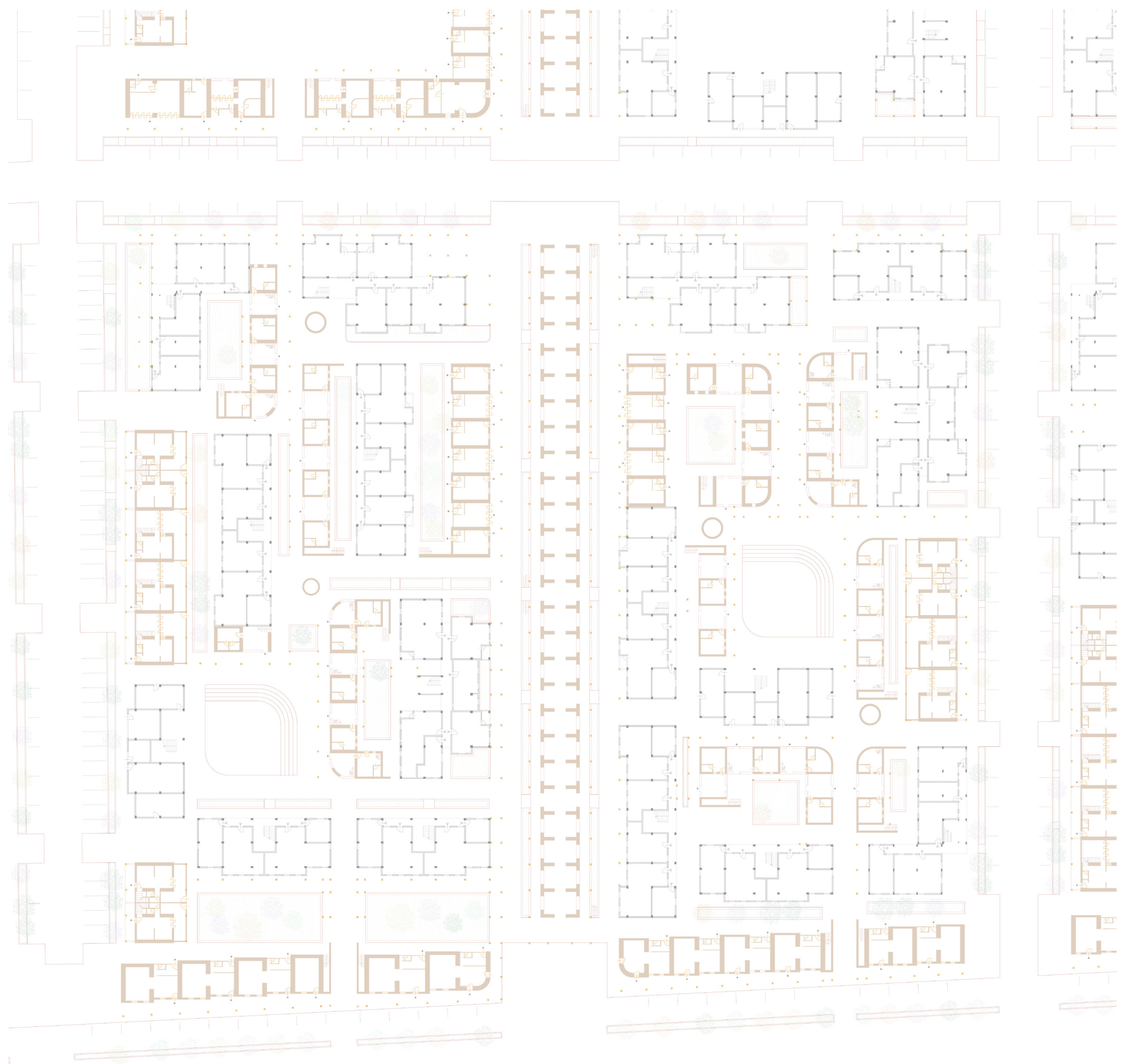
**Re-Definition of Green
and Water Infrastructure**



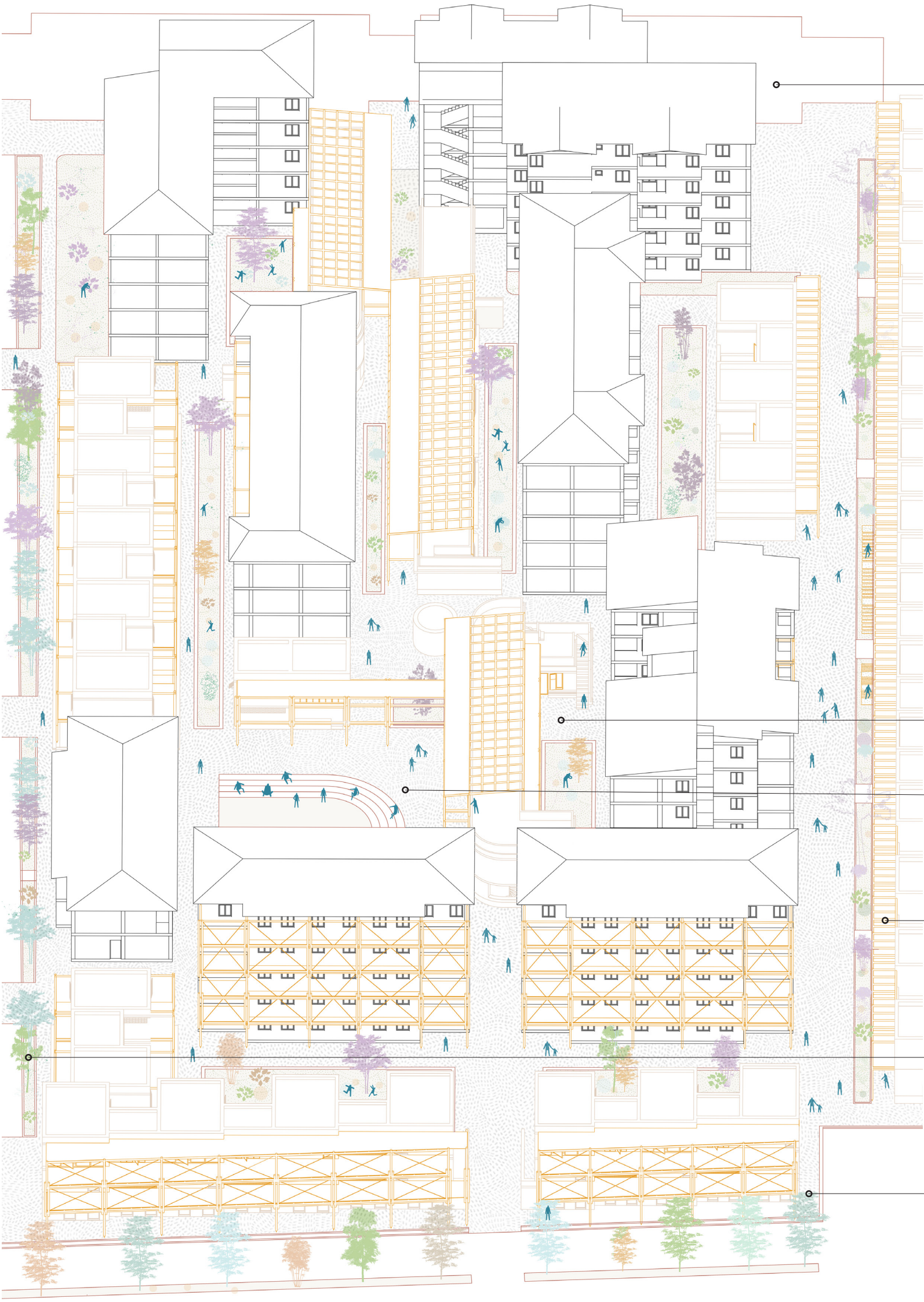
**Re-Definition of
Public Program**

Re-Definition of
Social and Typological Mix





Space Index



2. Around: Active Street

6. Inside: Shared Courtyard

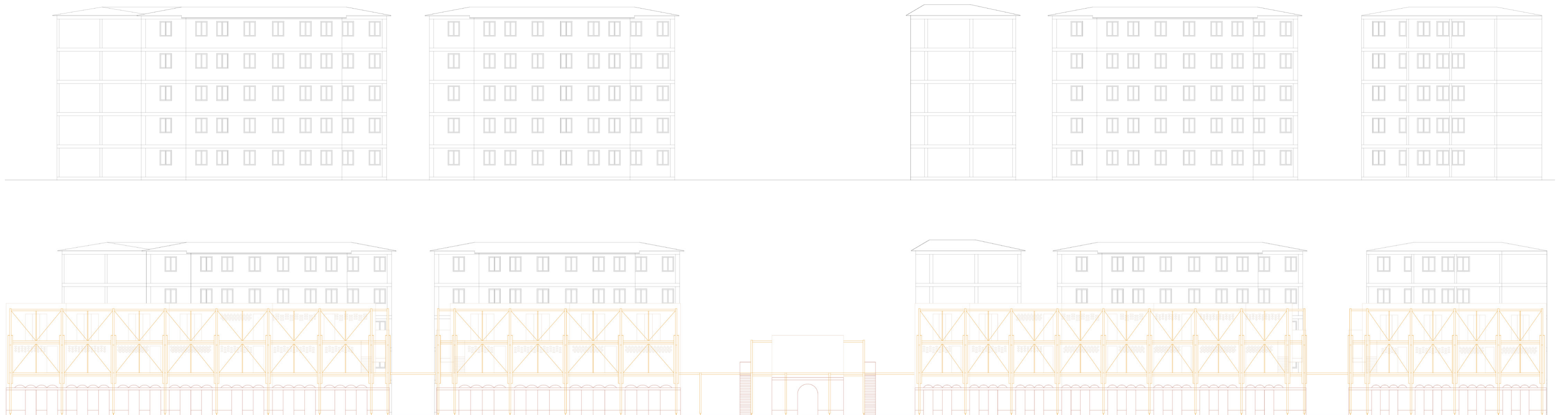
5. Inside: Collective Plaza

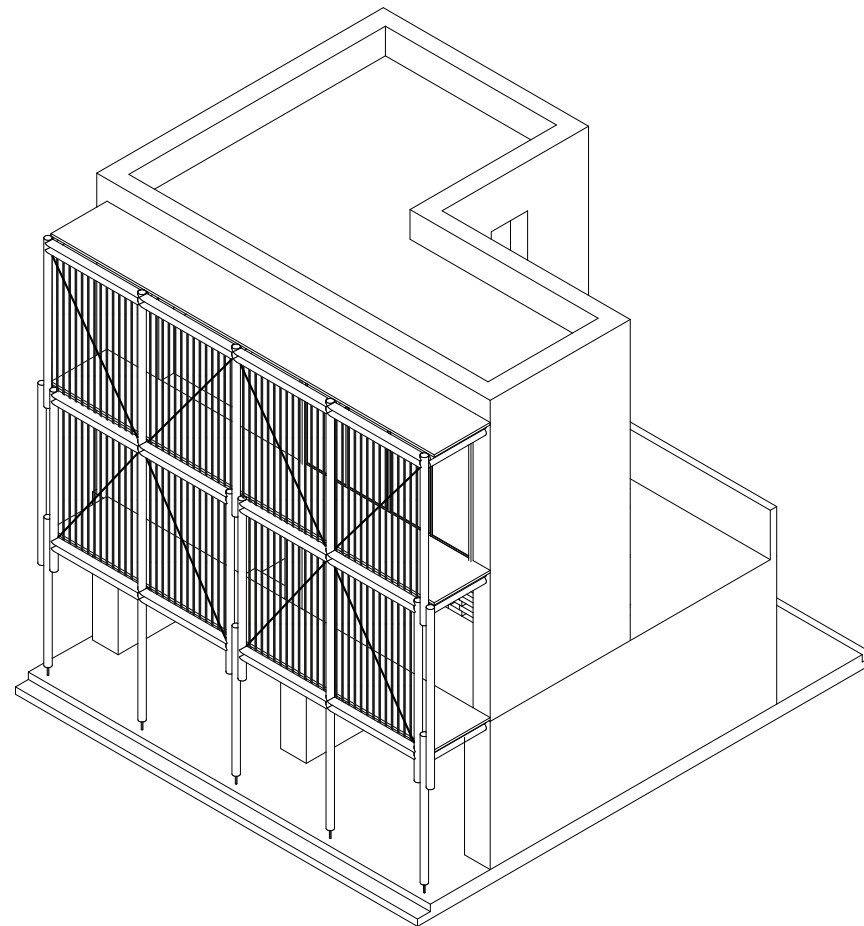
4. In-between: Market Street

3. Around: Residential Street

1. Around: Edges

Around

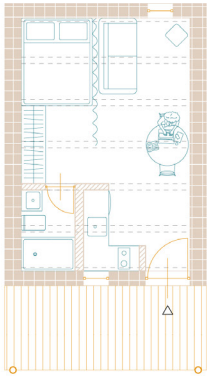




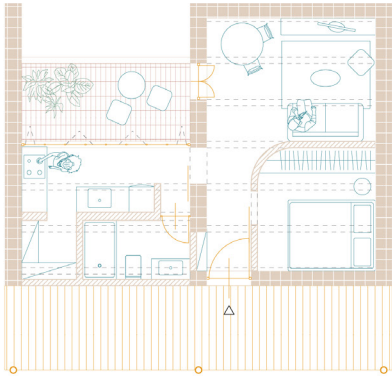
Mixed Typology

Residential

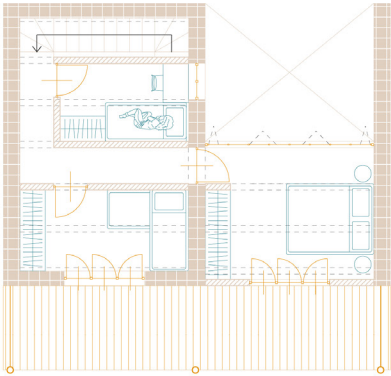
Studio
25 m²



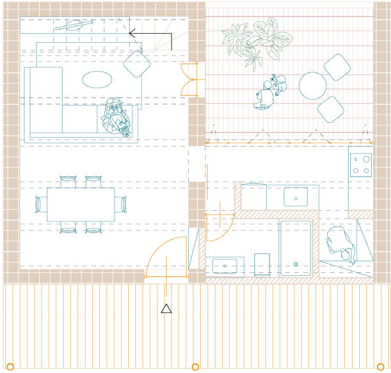
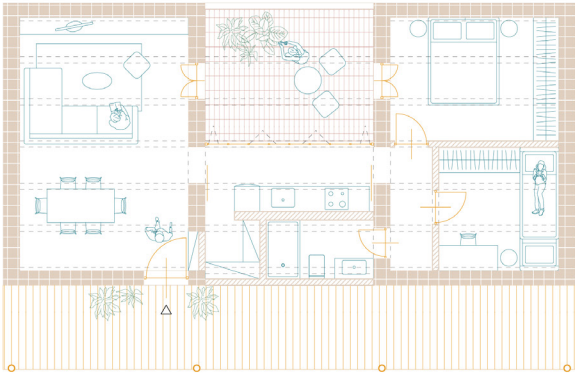
1-bedroom
42 m²



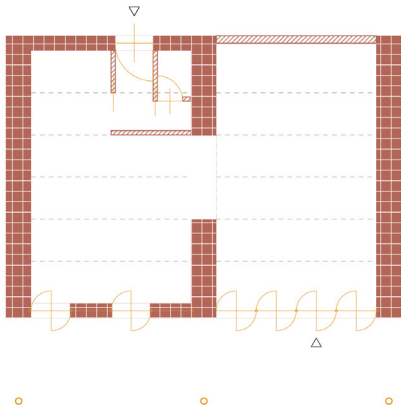
3-bedrooms
110 m²



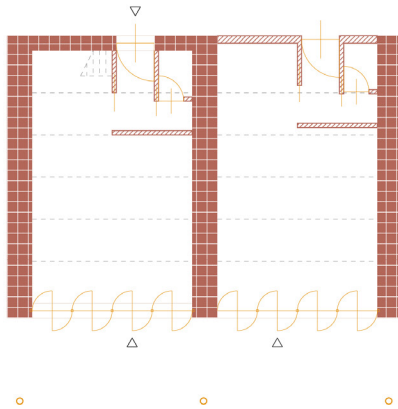
2-bedrooms
75 m²



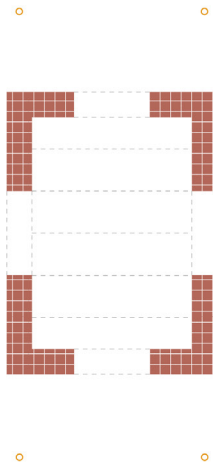
Commercial



2 modules
48m²

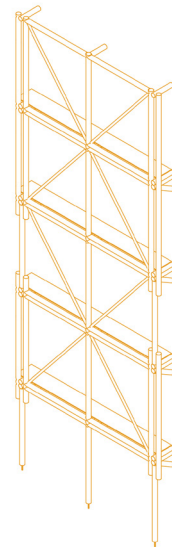


1 module
24m²

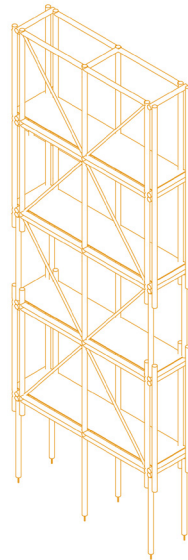
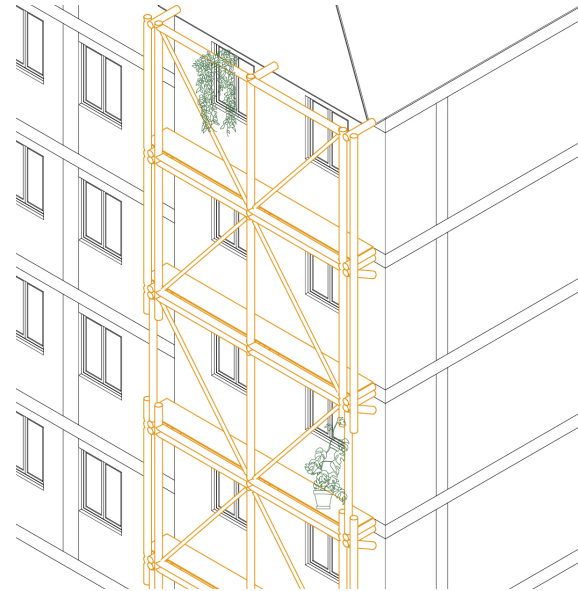


1 module
24m²

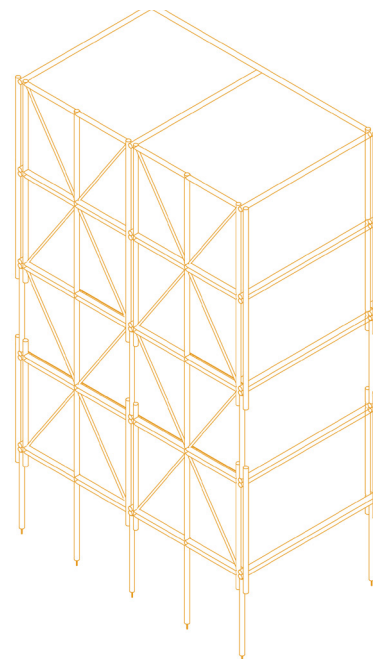
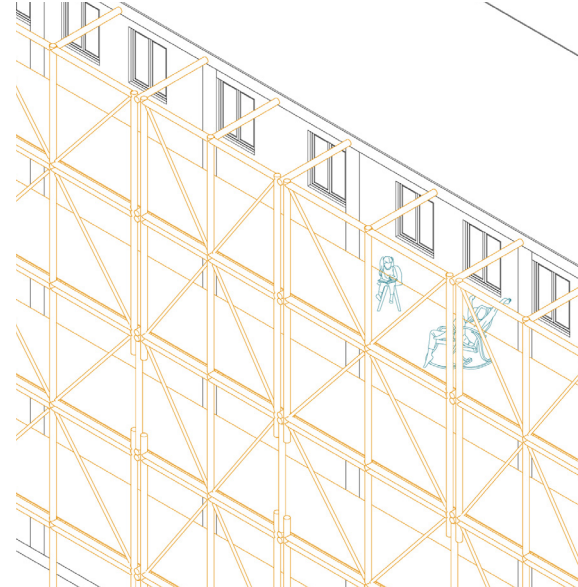
Mixed Typology



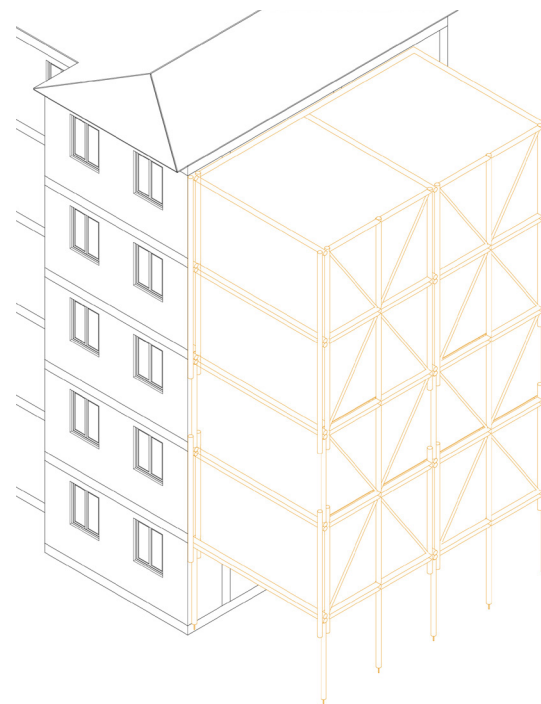
French balcony/Solar screen



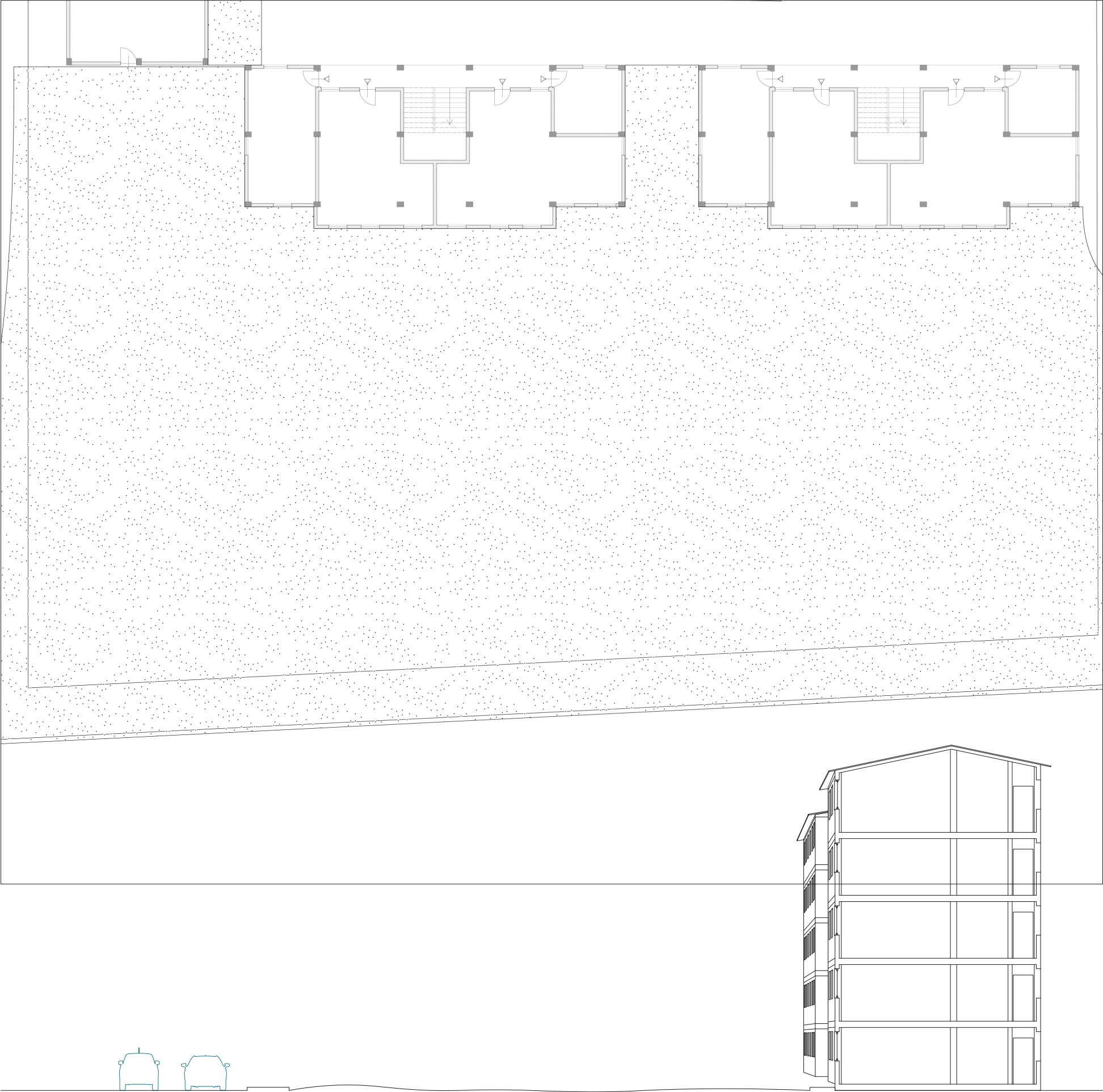
Balcony/Veranda



Unit Extension



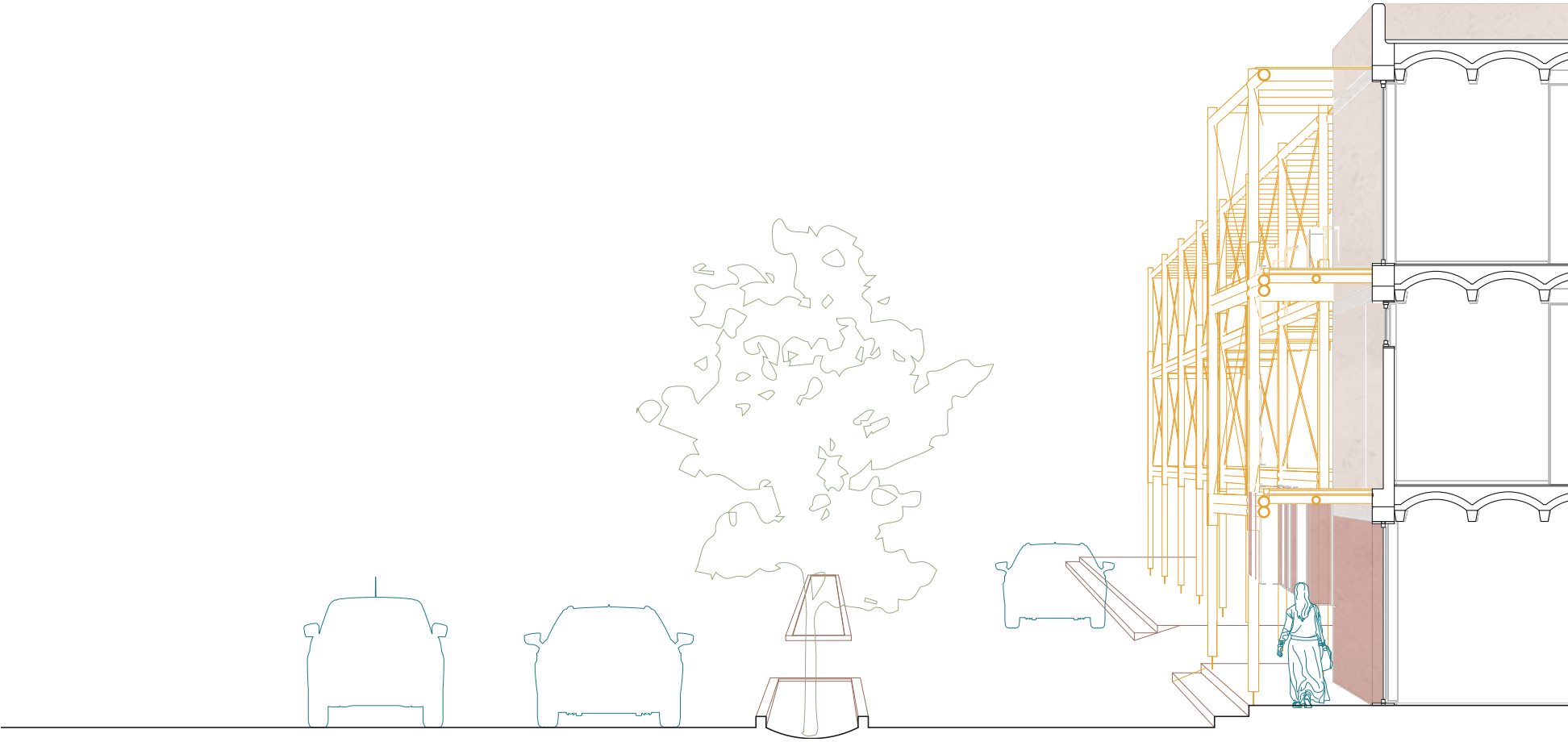
Condominium Add-ons



Edges



Re-defined Edges

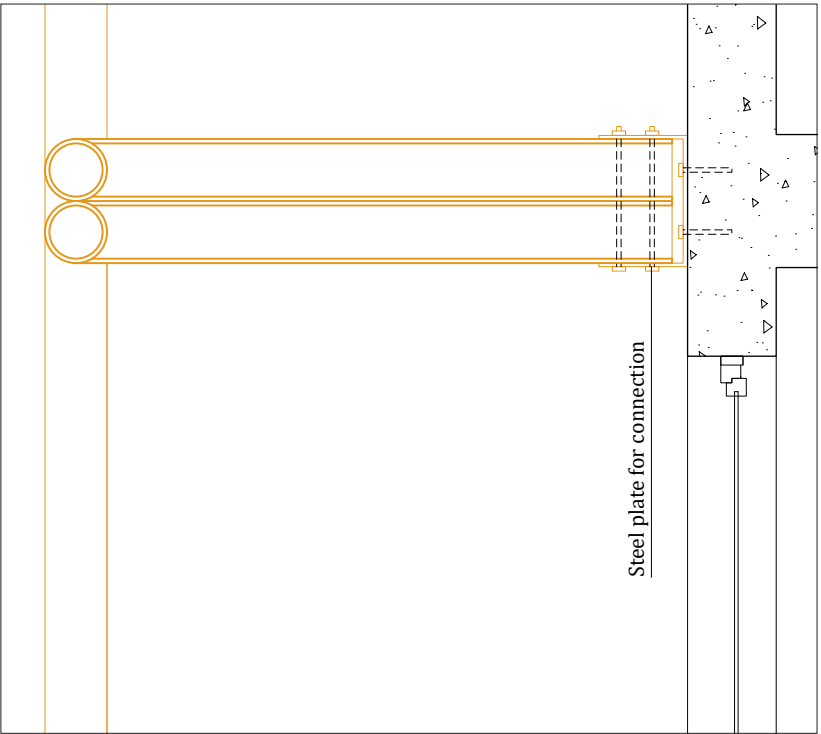
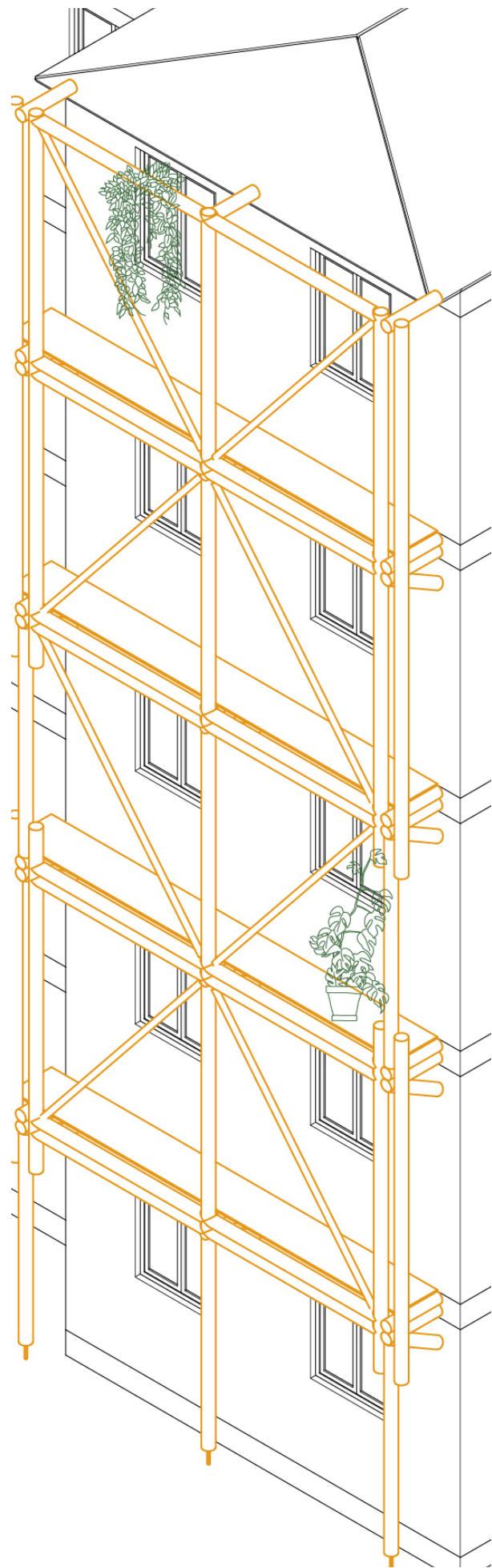


Activated Street

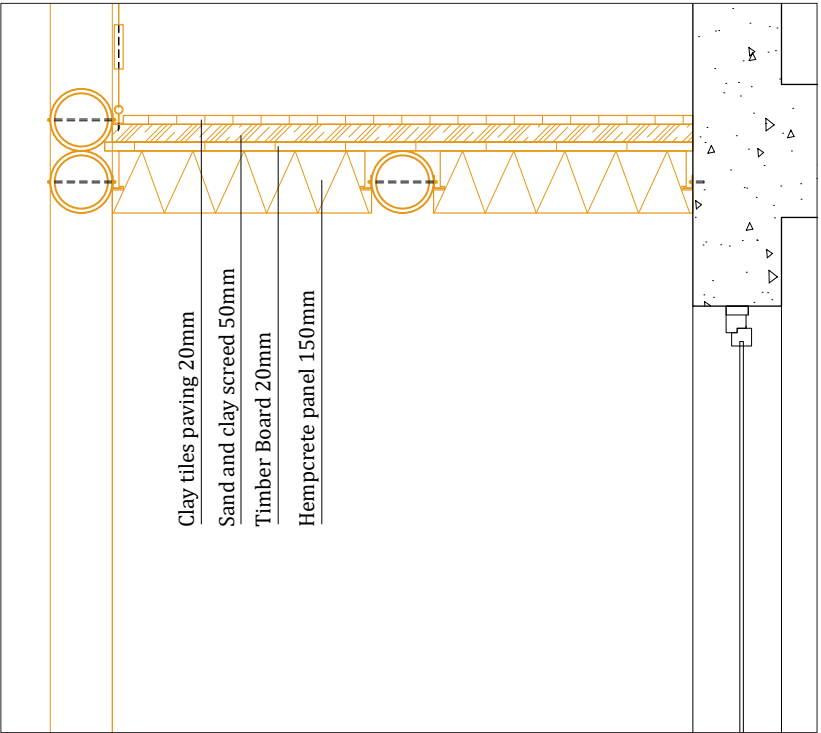


**Courtyard
as Filtering Space**

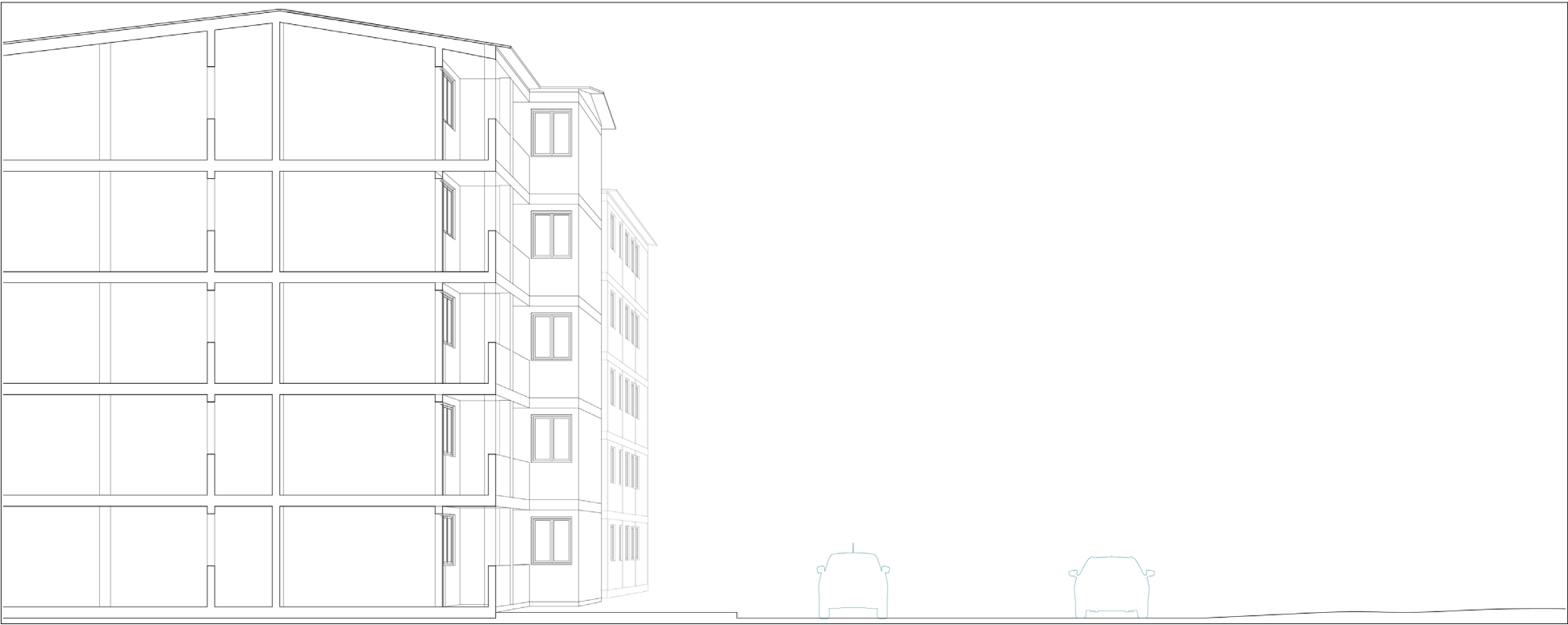
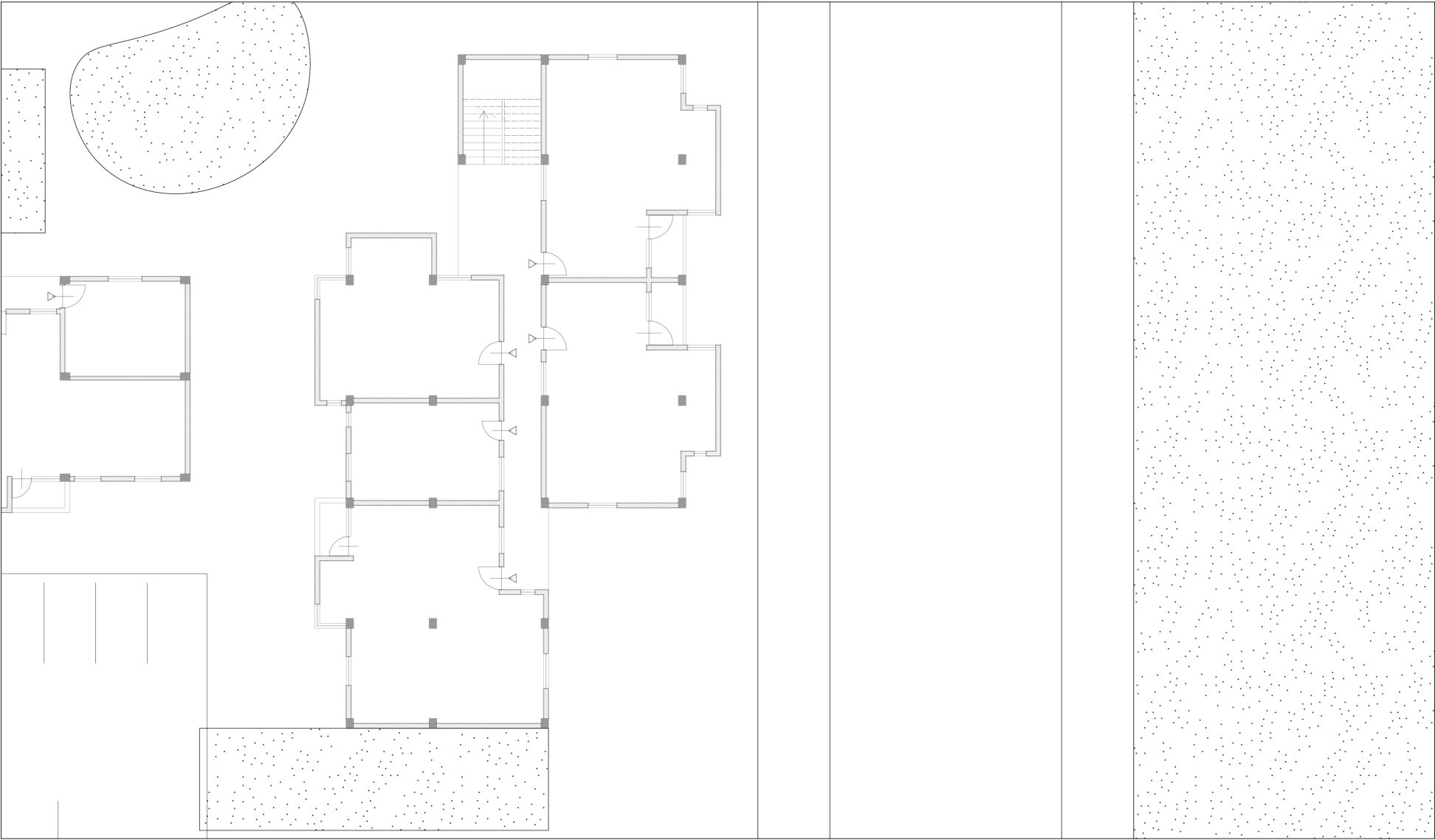
Condominium Add-on
as a Filter



Connection to existing building



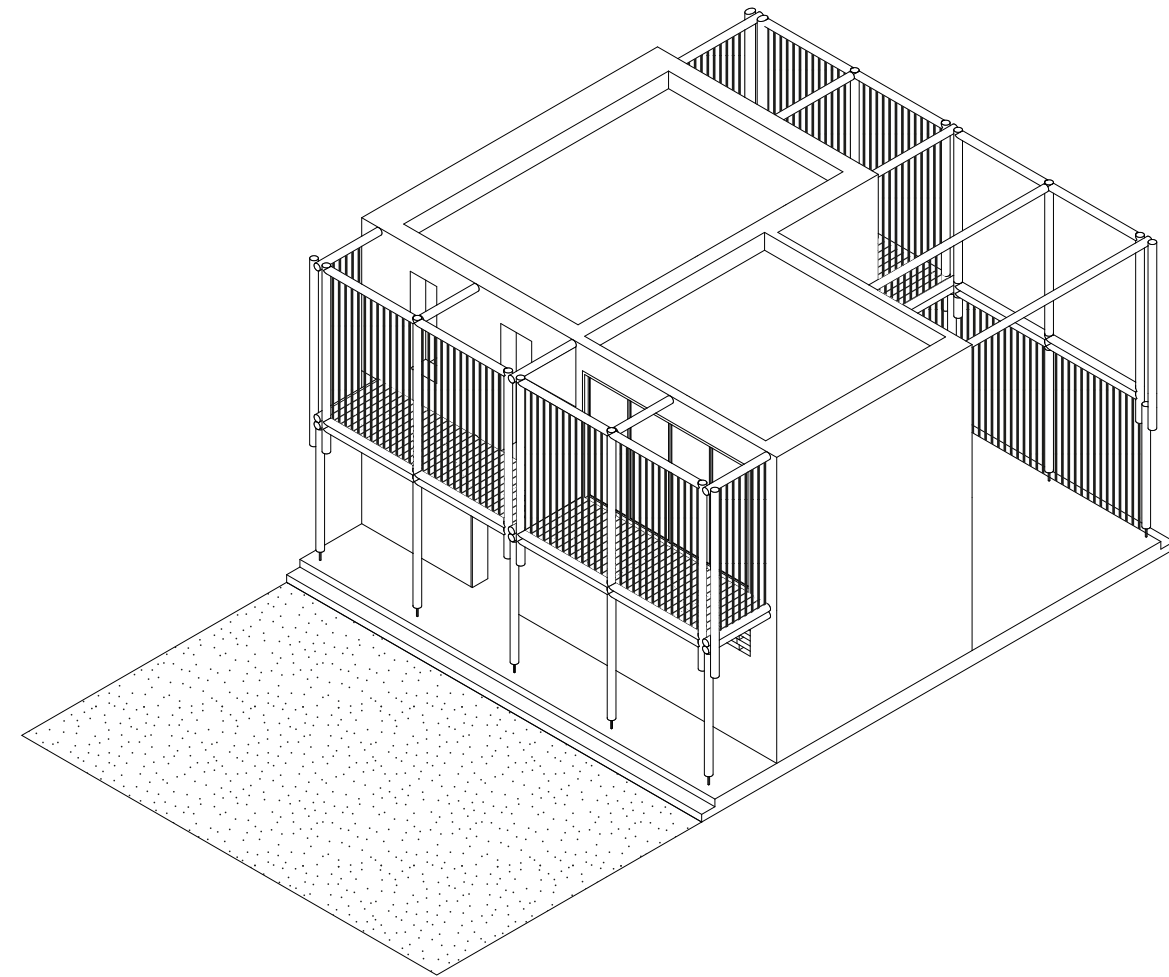
Bamboo structure fire-proofing



Inner Street

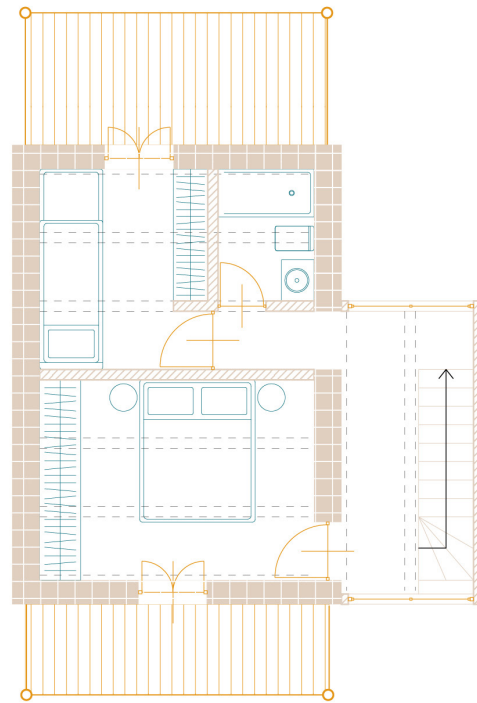
**Re-defined Active
Inner Street**



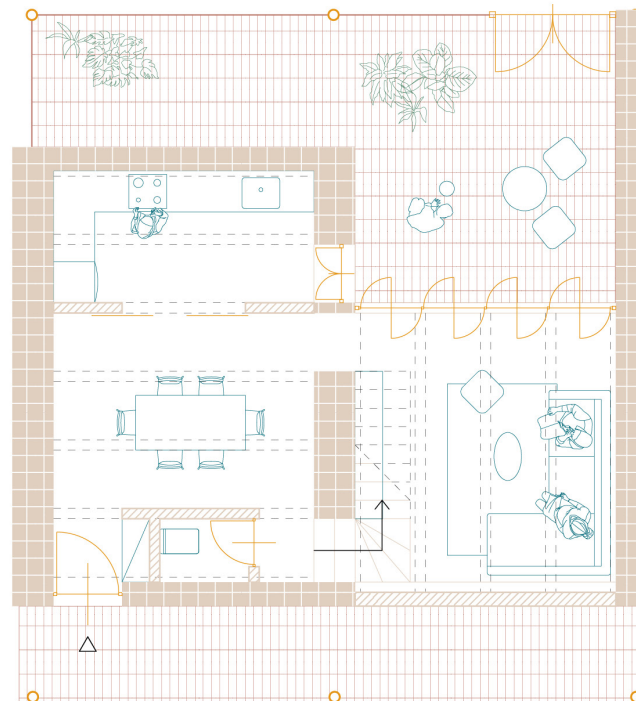
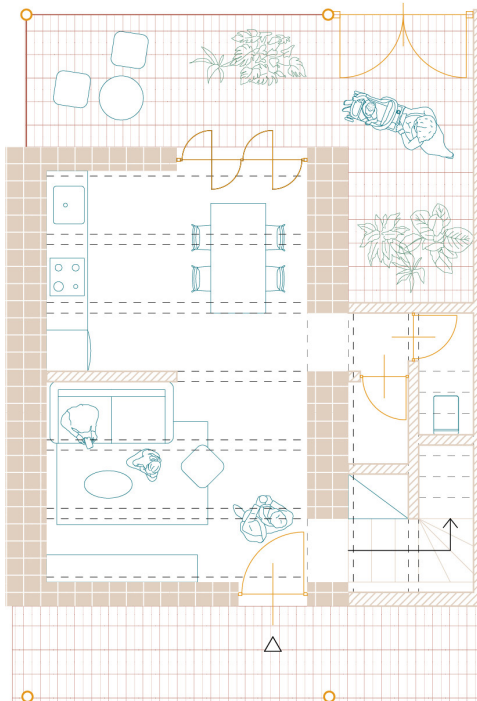
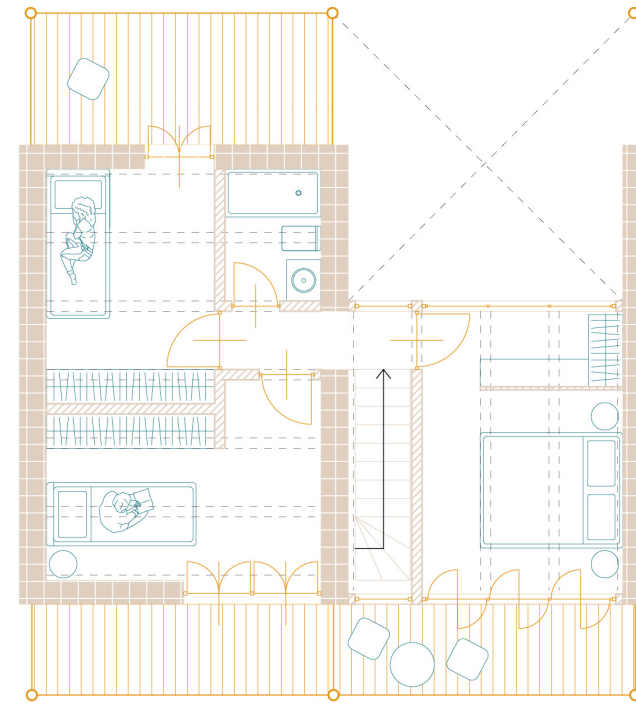


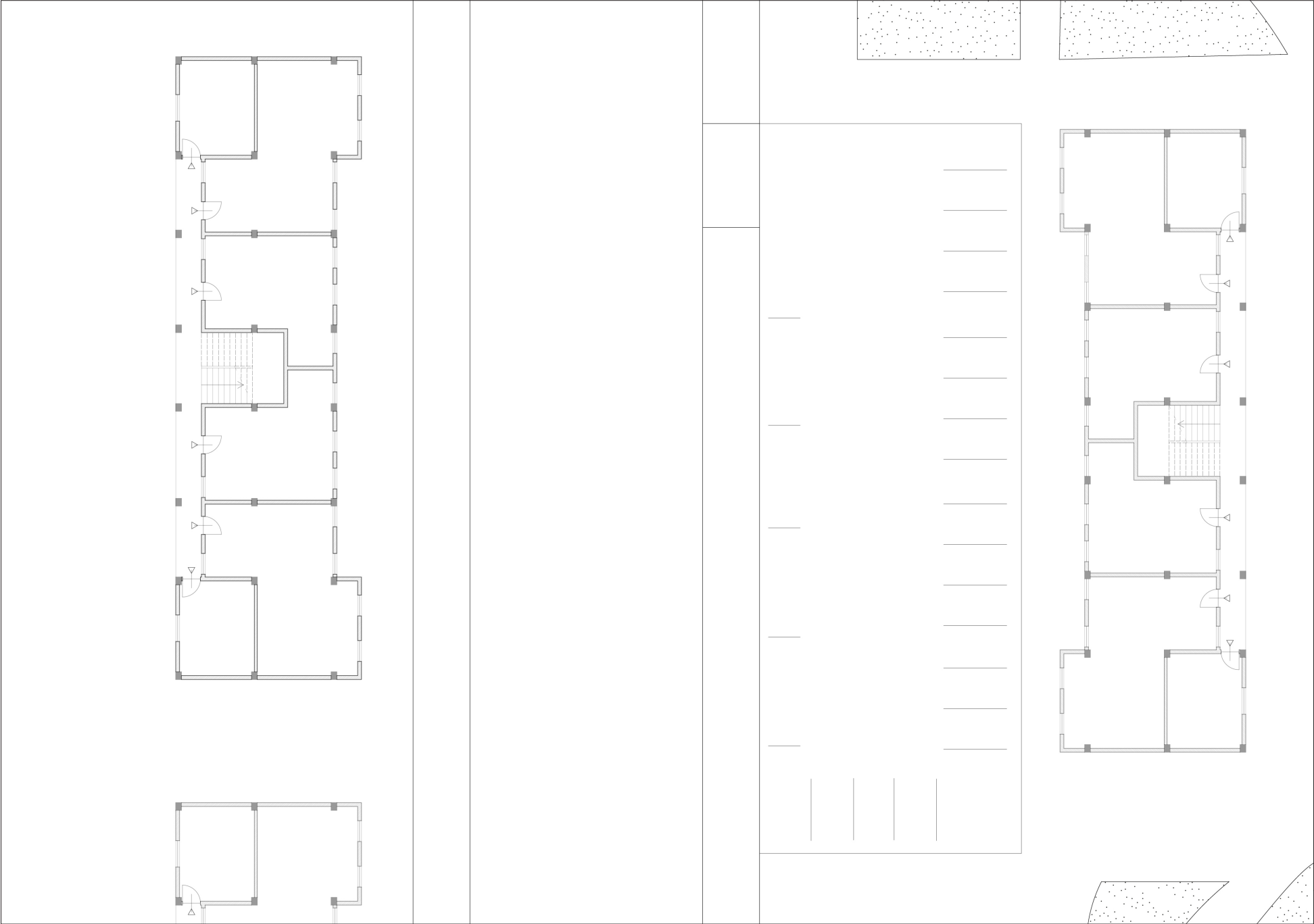
Row House
Typology

2 bedroom
120 m²
(70 indoor+50 outdoor)

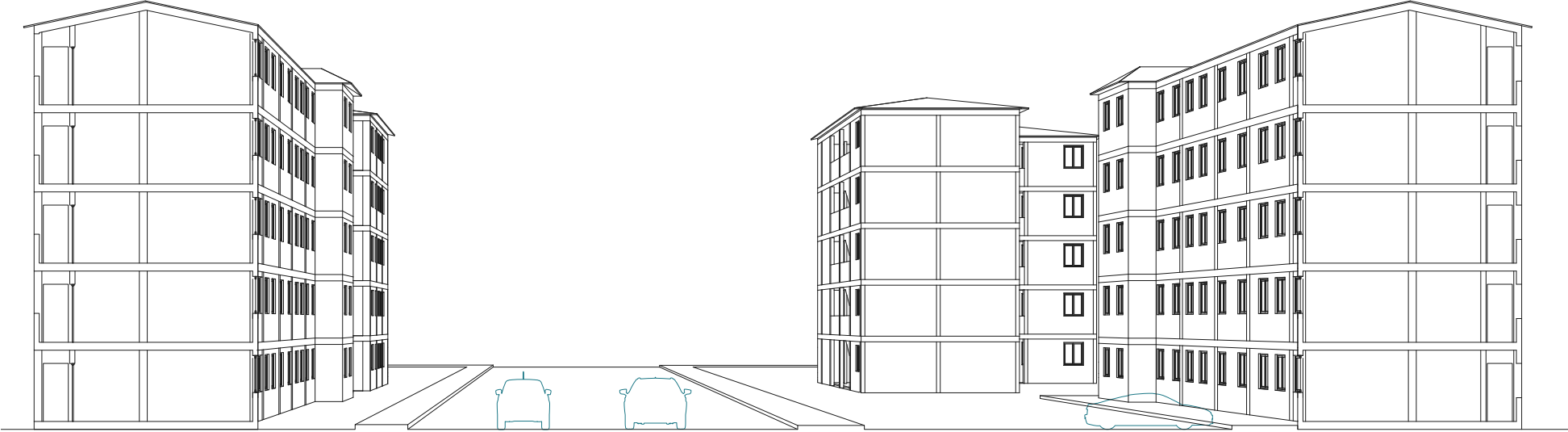


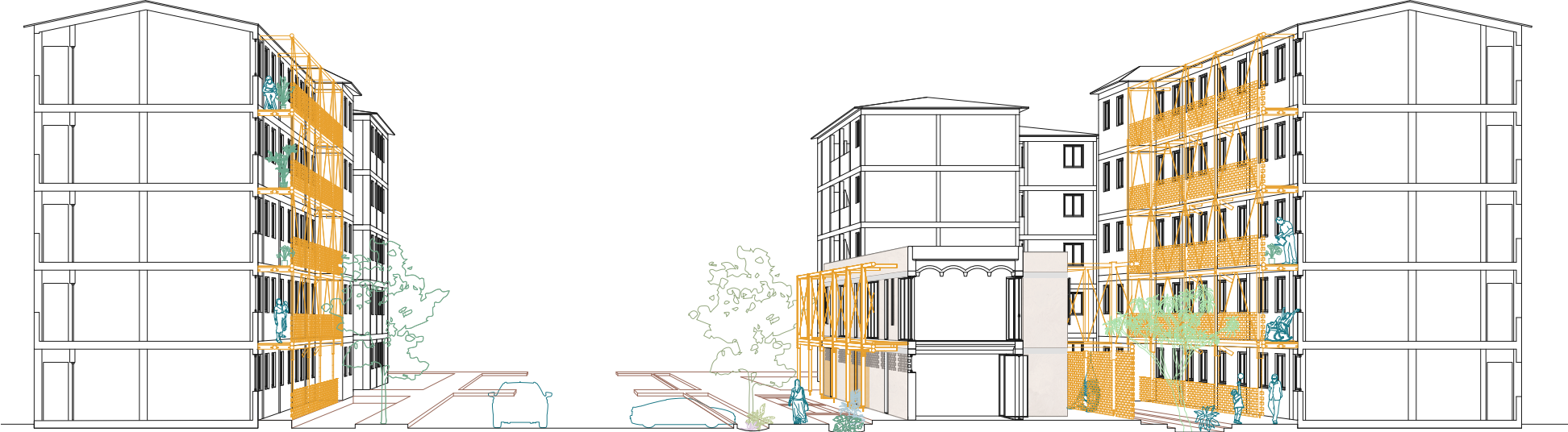
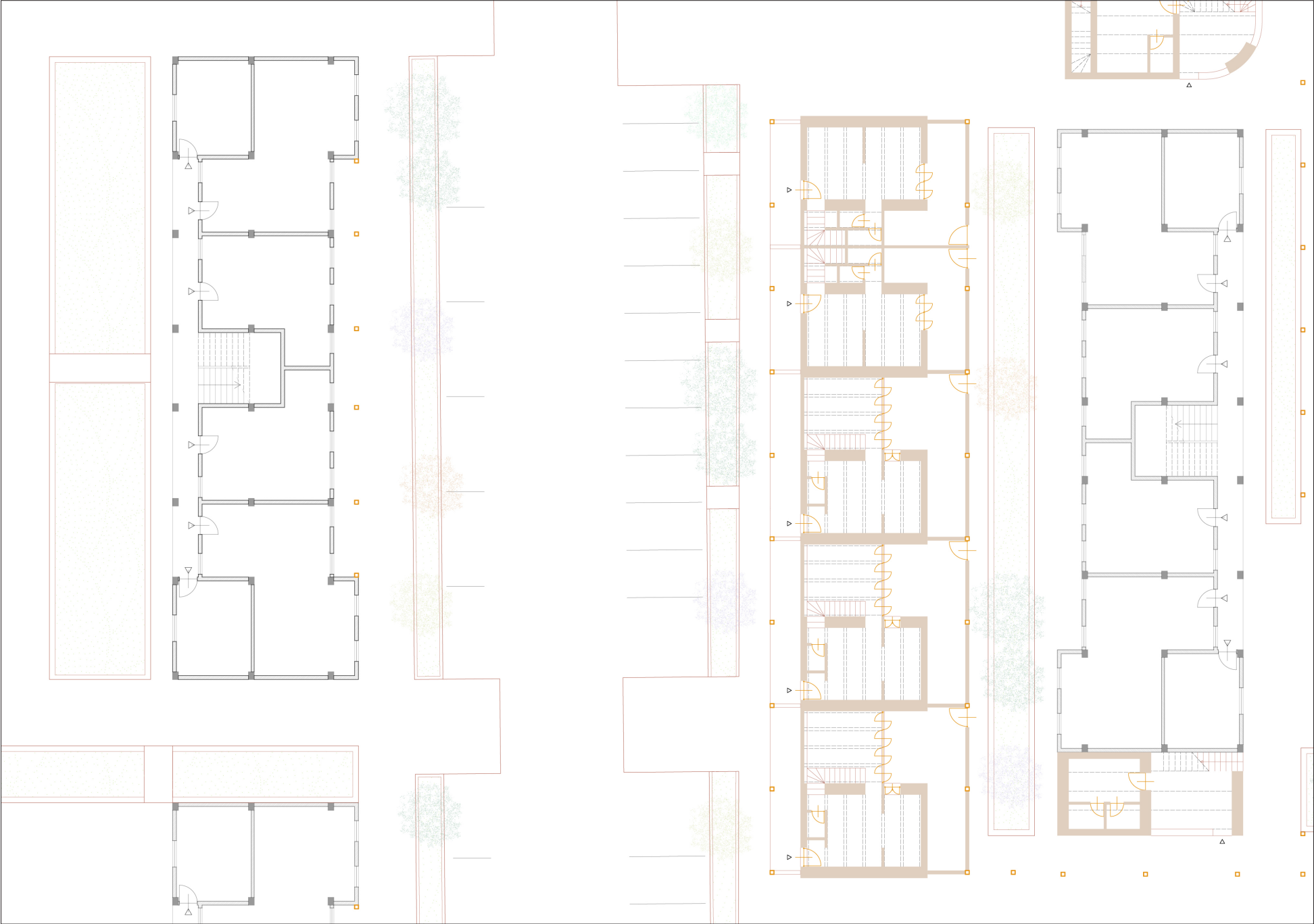
3 bedroom
145 m²
(85 indoor+60 outdoor)





Inner Street



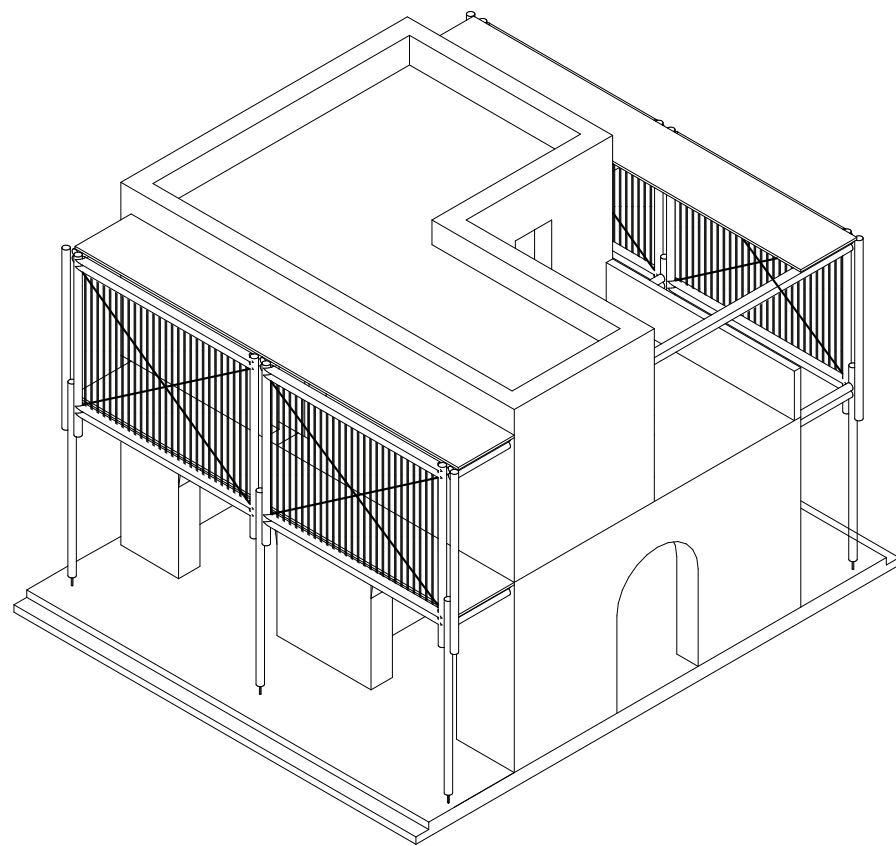


Re-defined Residential
Inner Street

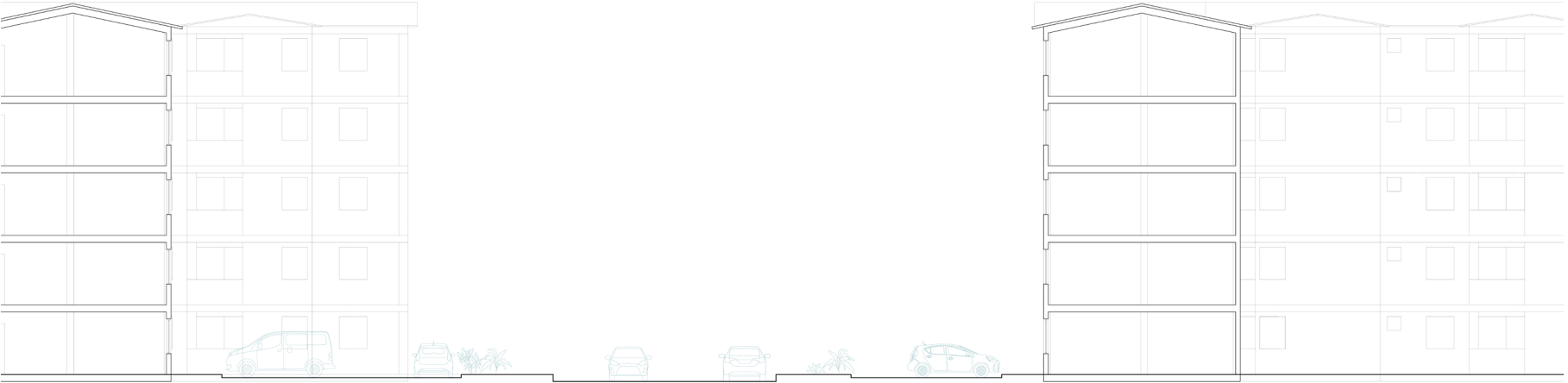
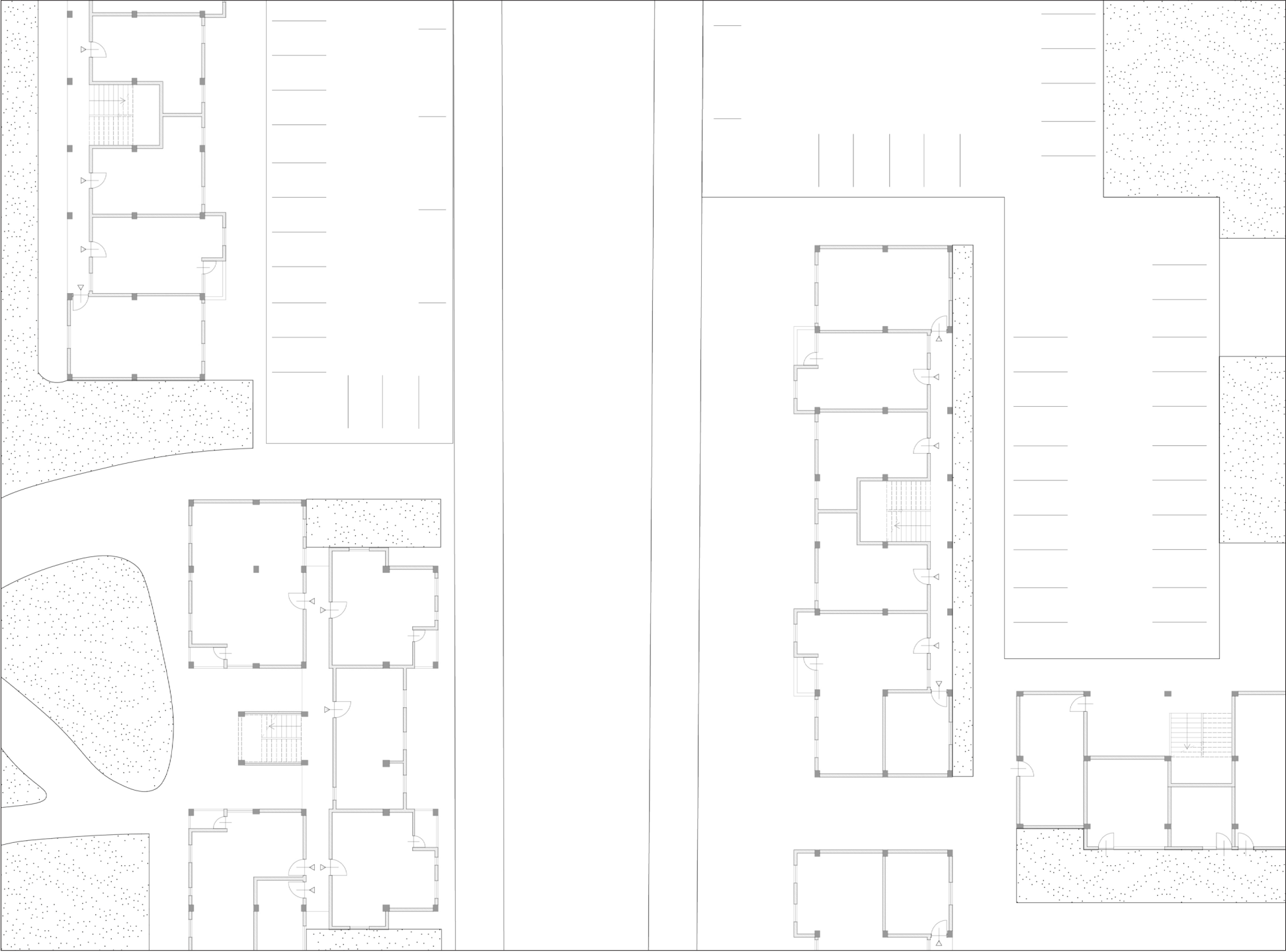


Activated Street

In-between

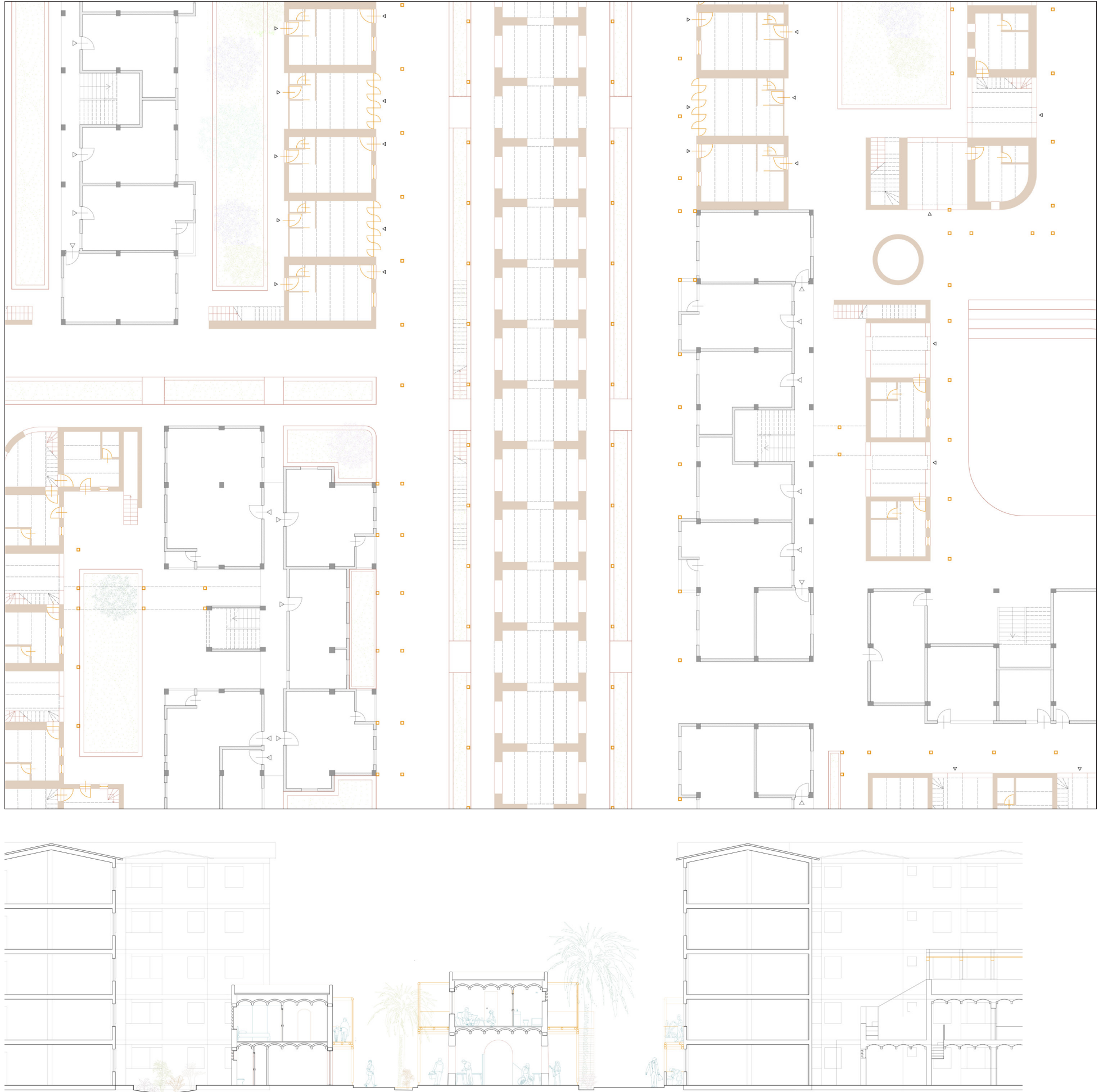


Mixed Typology

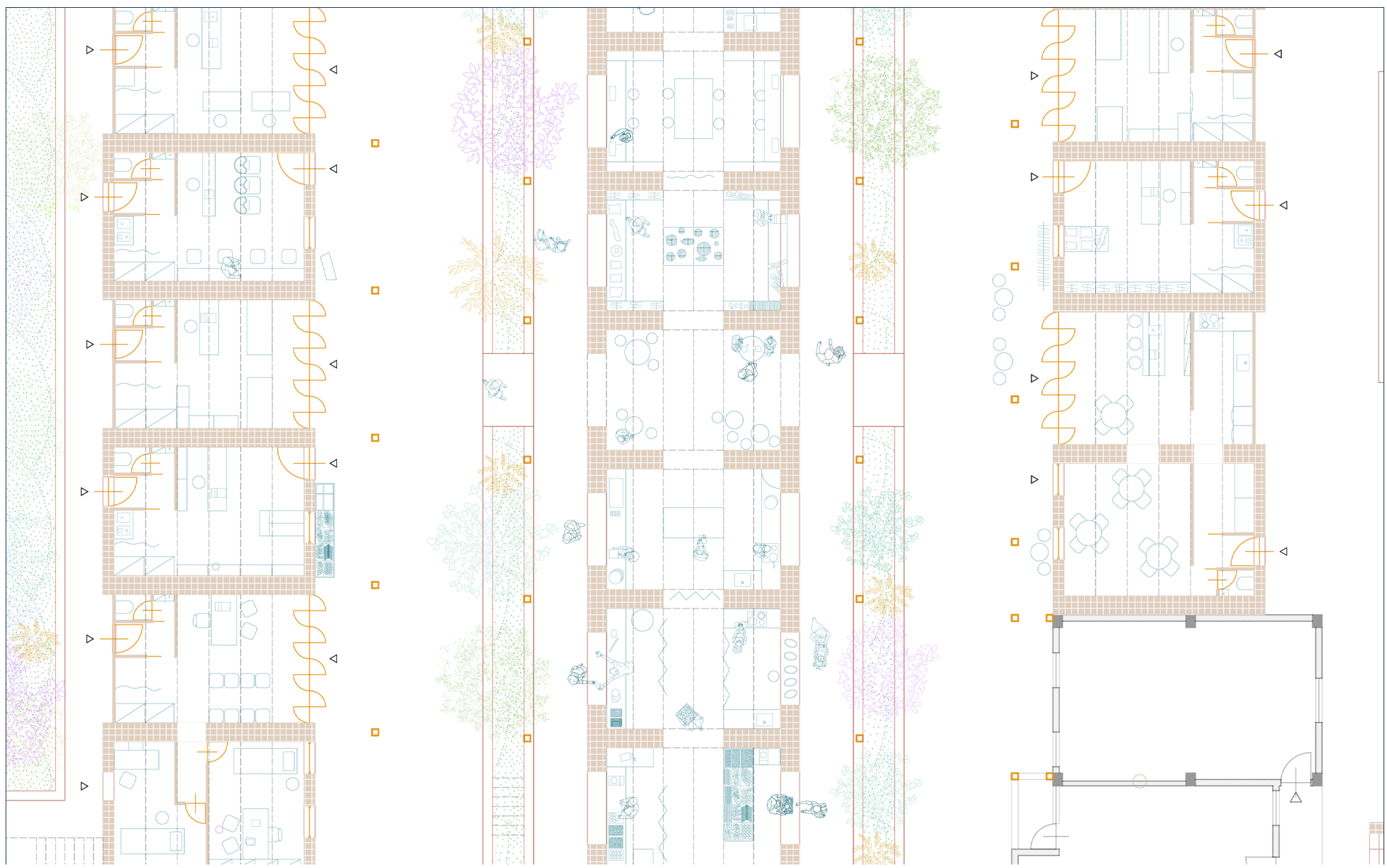
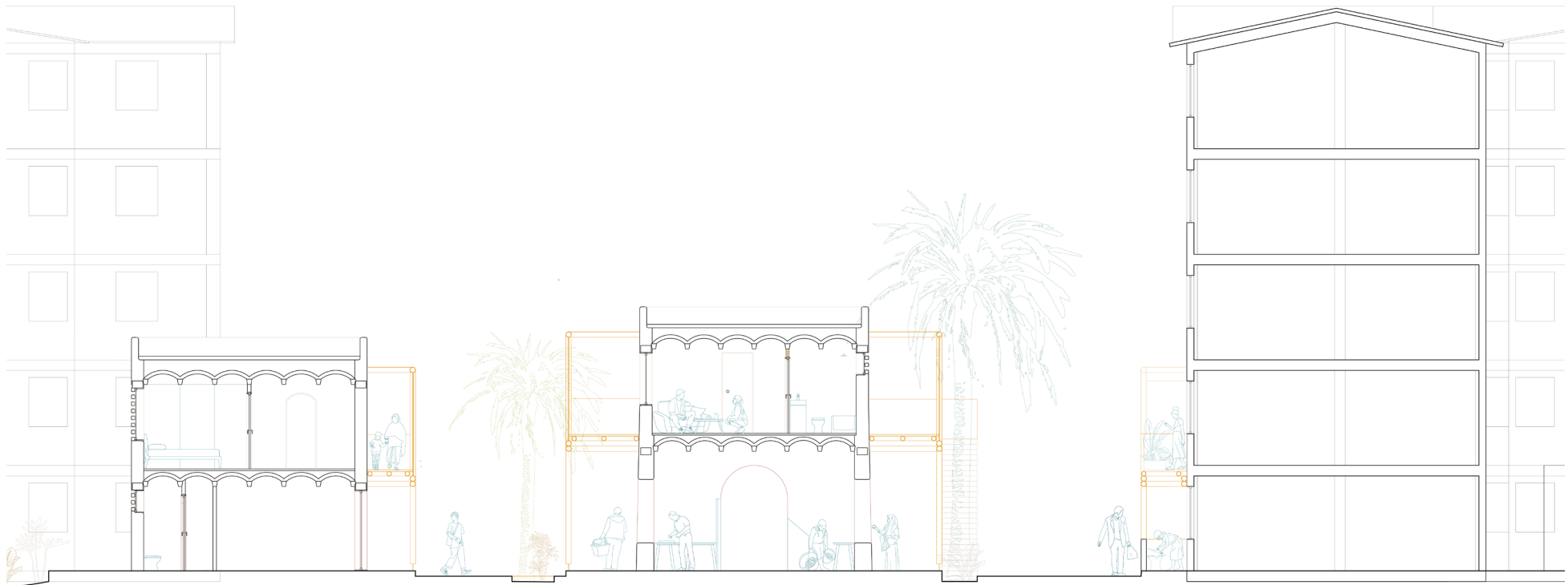


Inner Street

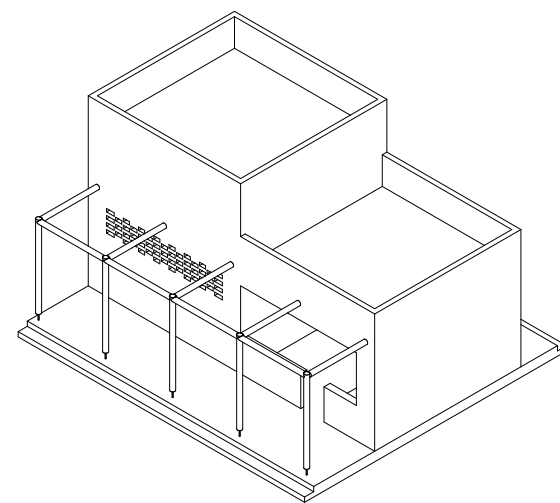
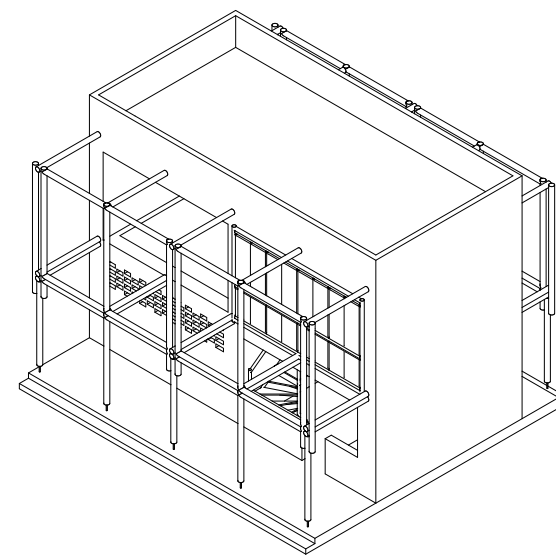
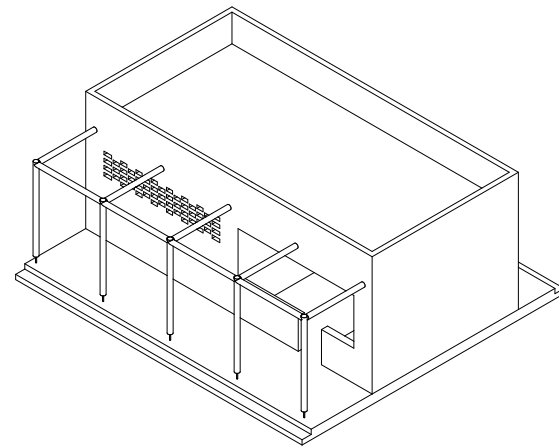
Re-defined Market Street



Flexibility

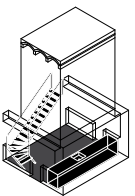

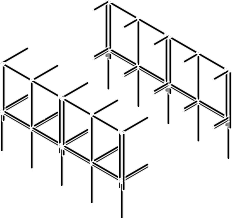
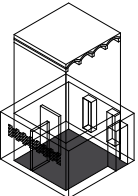
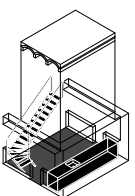
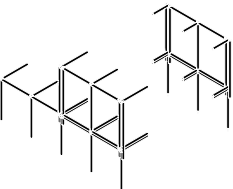
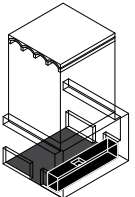

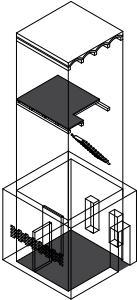
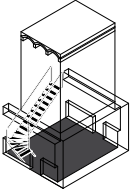

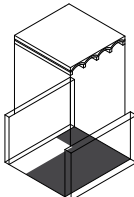
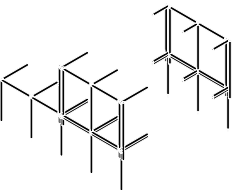


Inside



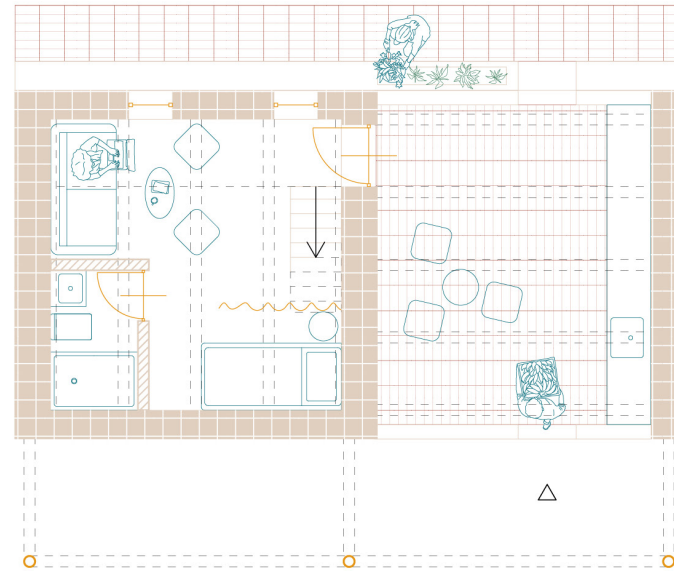
Incremental Typology

Incremental Typology
Abacus

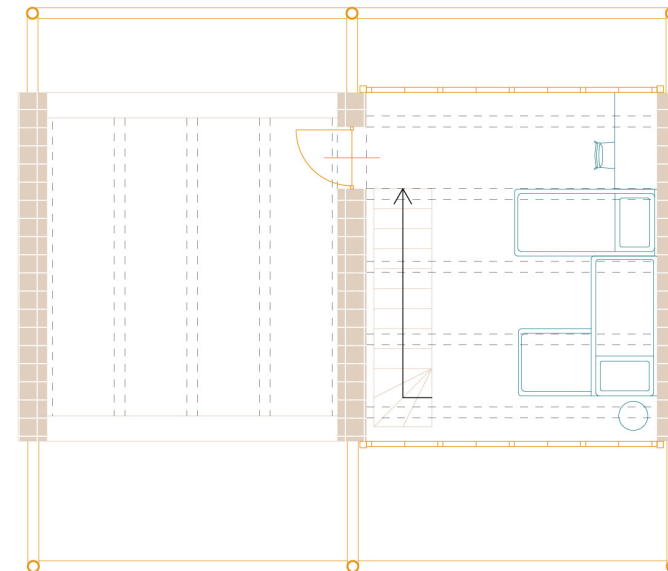
	Enclosed Unit + Toilet	Open Unit + Kitchen	Vertical Connection	Mezzanine	Undeveloped Unit(s)	Veranda
Basic Unit + 2						
Basic Unit + 1						
Basic Unit						
Basic Unit + 1/2						
Basic Unit + 1/2 + 1						

Basic Unit
Growth Tools

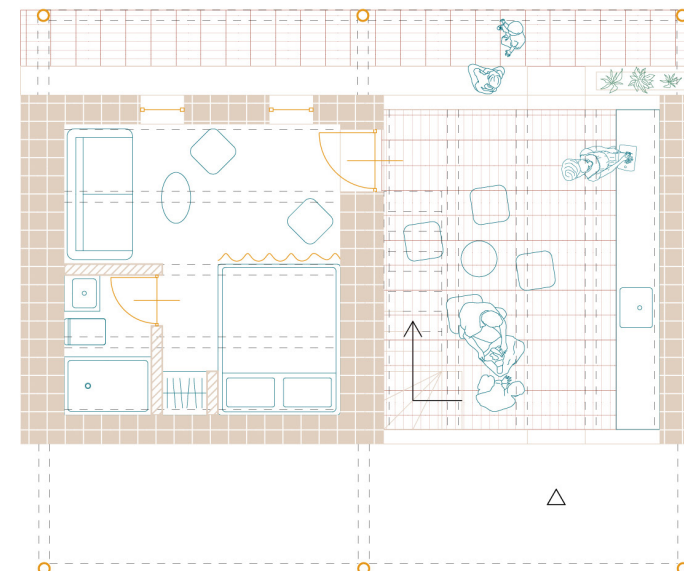
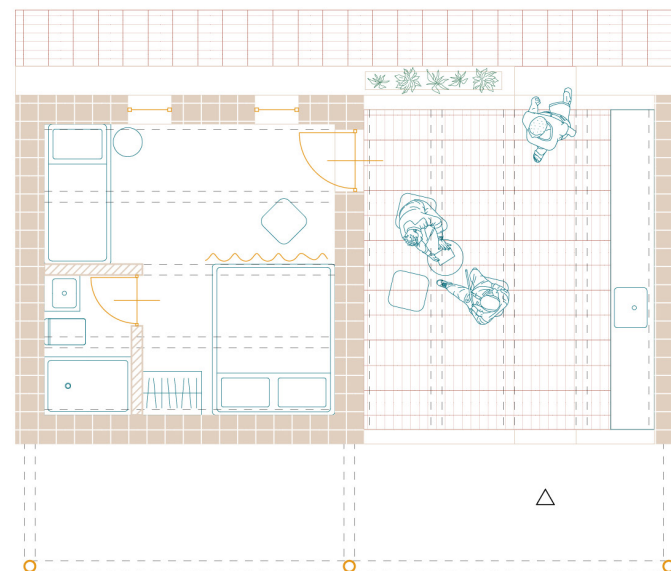
Basic Unit with mezzanine
44 m²



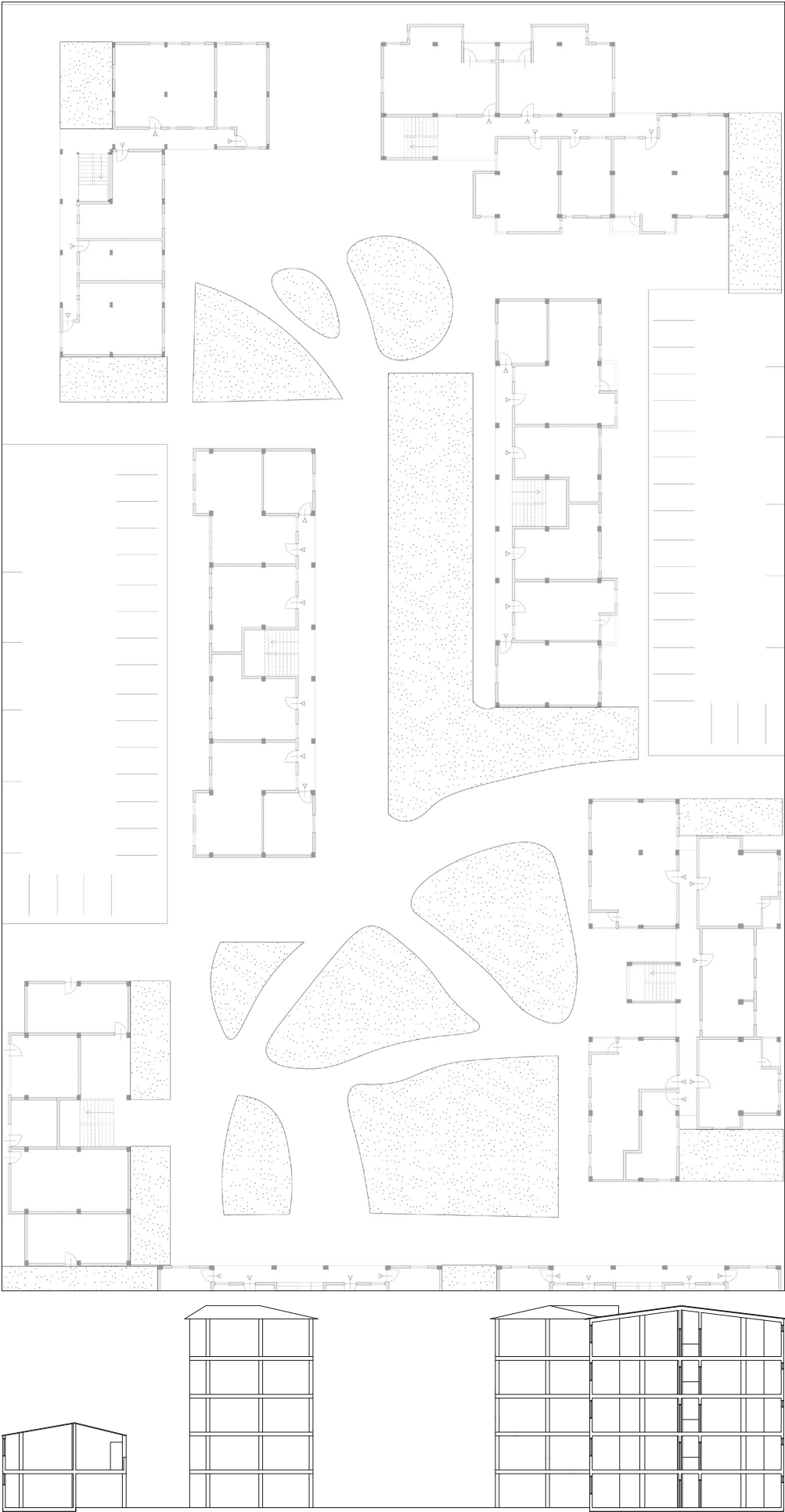
Basic Unit + 2
64m²(+25)



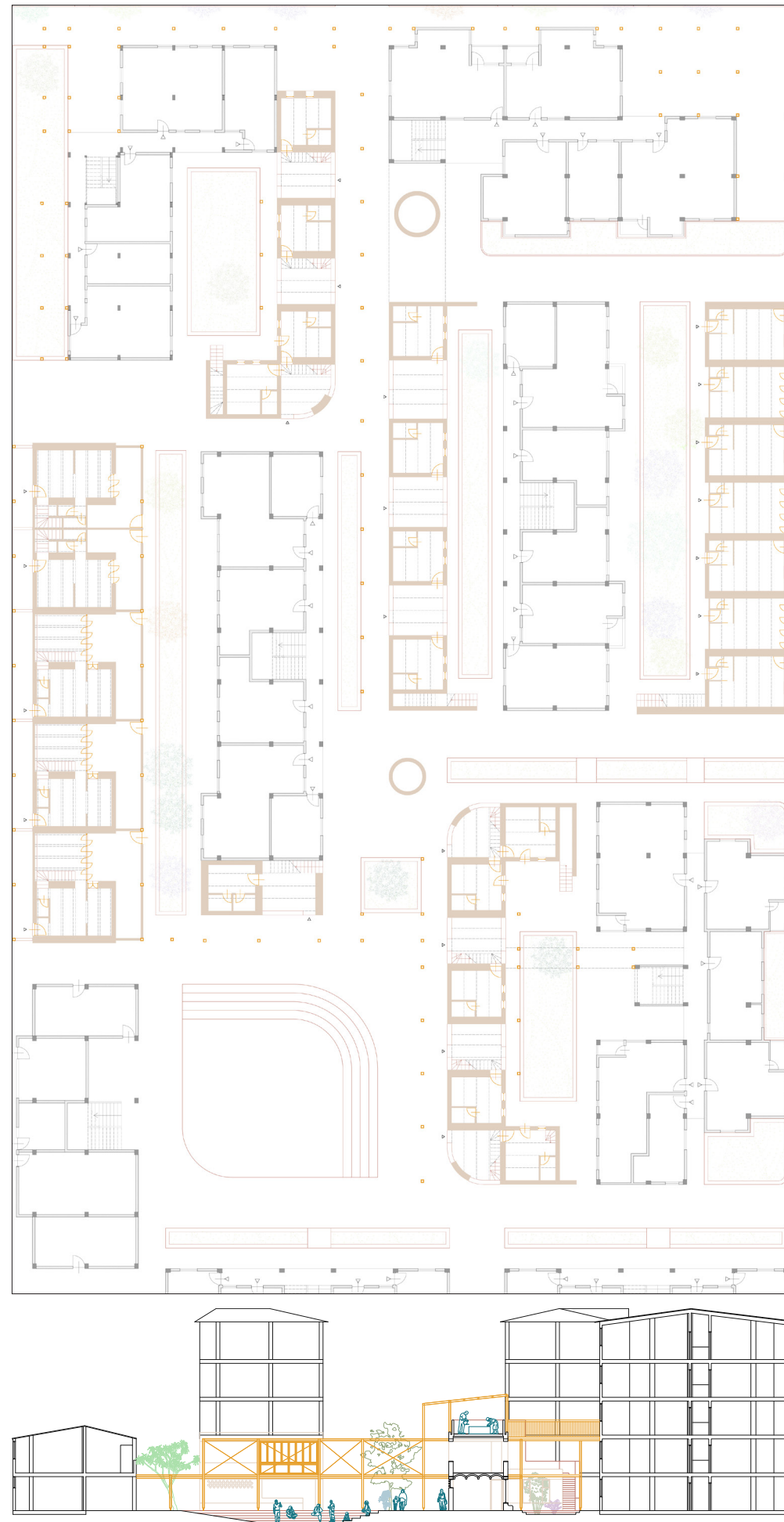
Basic Unit
32m²

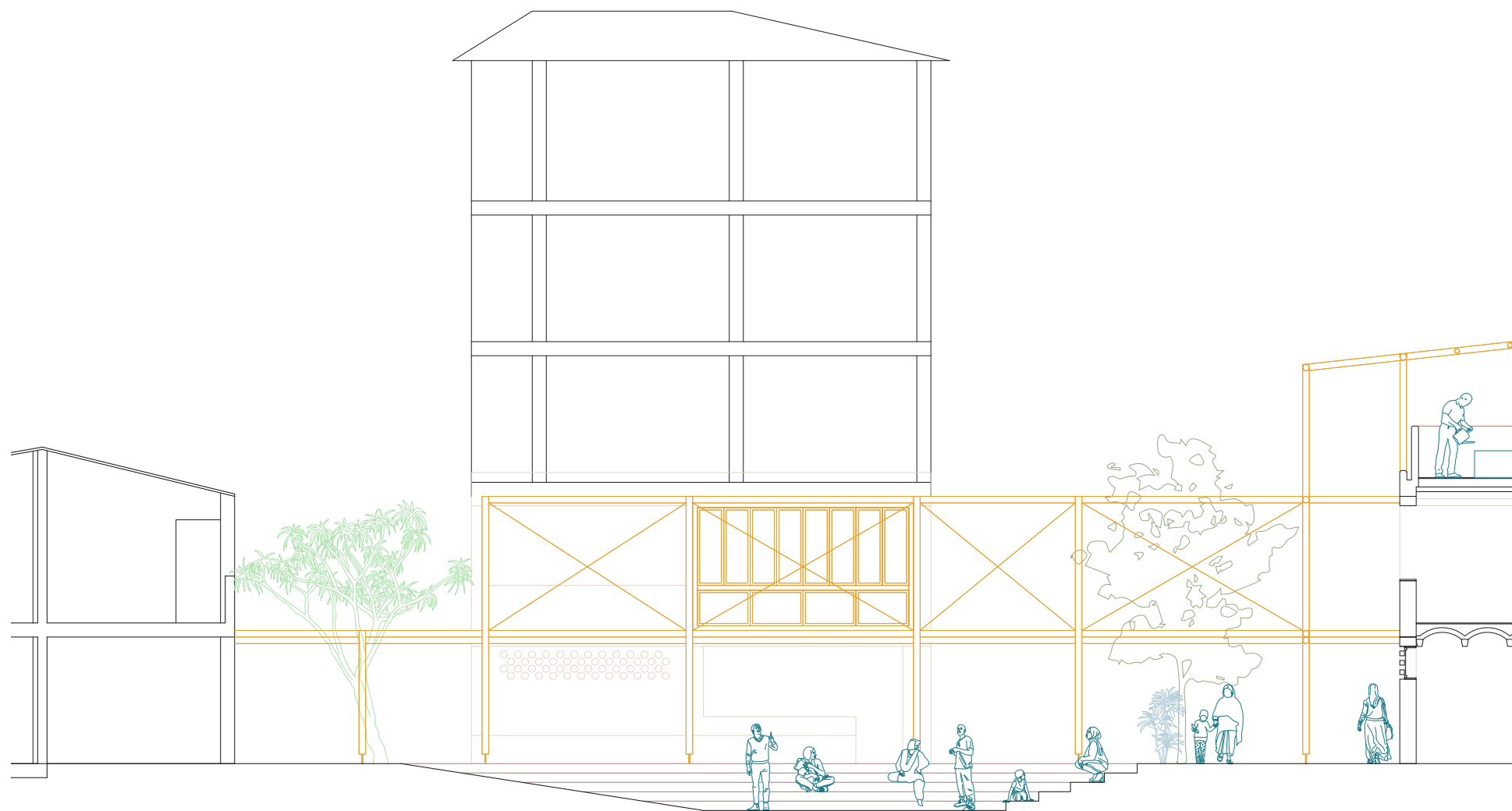


Inner Courtyard

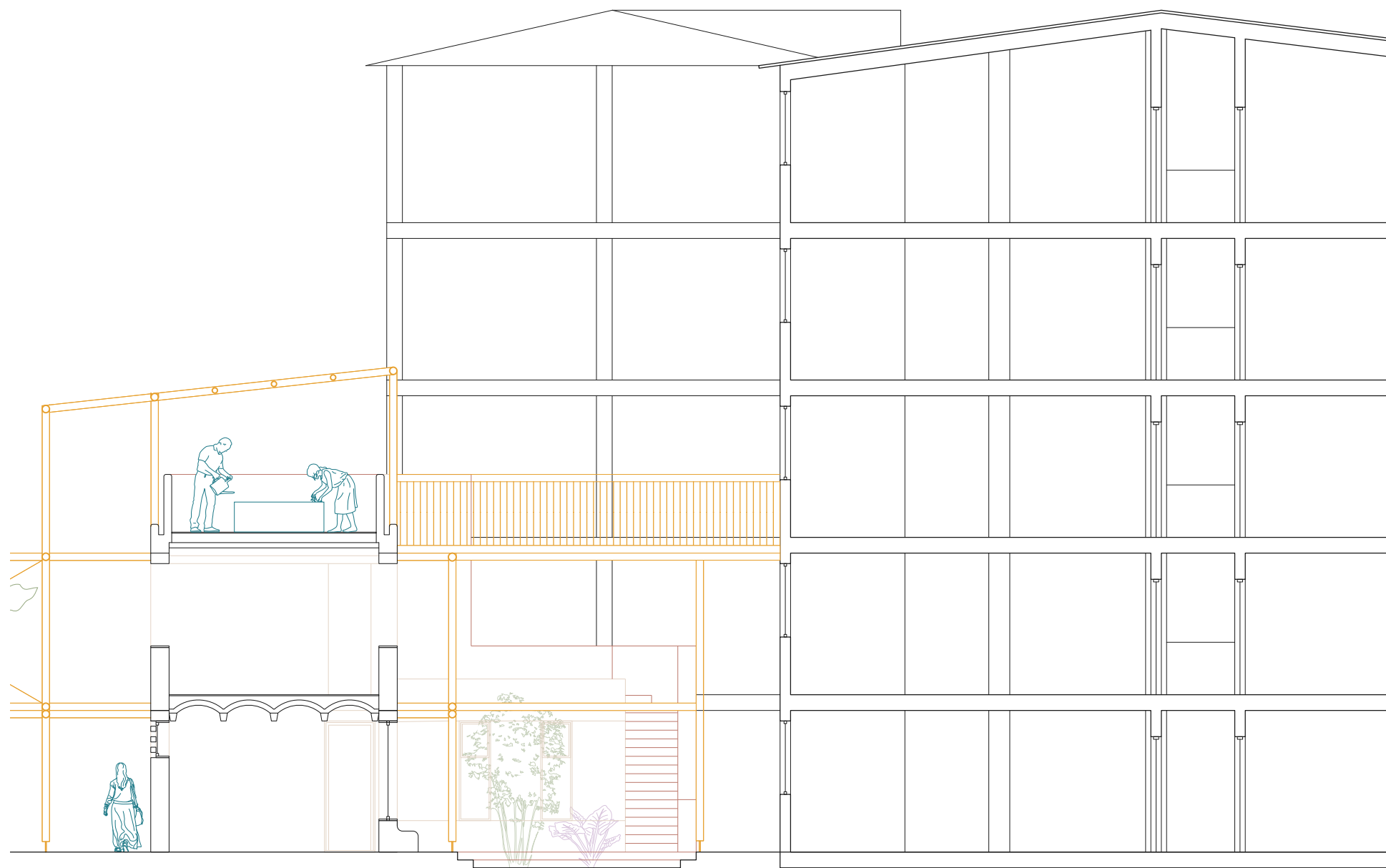


**Re-defined
Inner Courtyard(s)**





Collective Plaza



Shared Courtyard

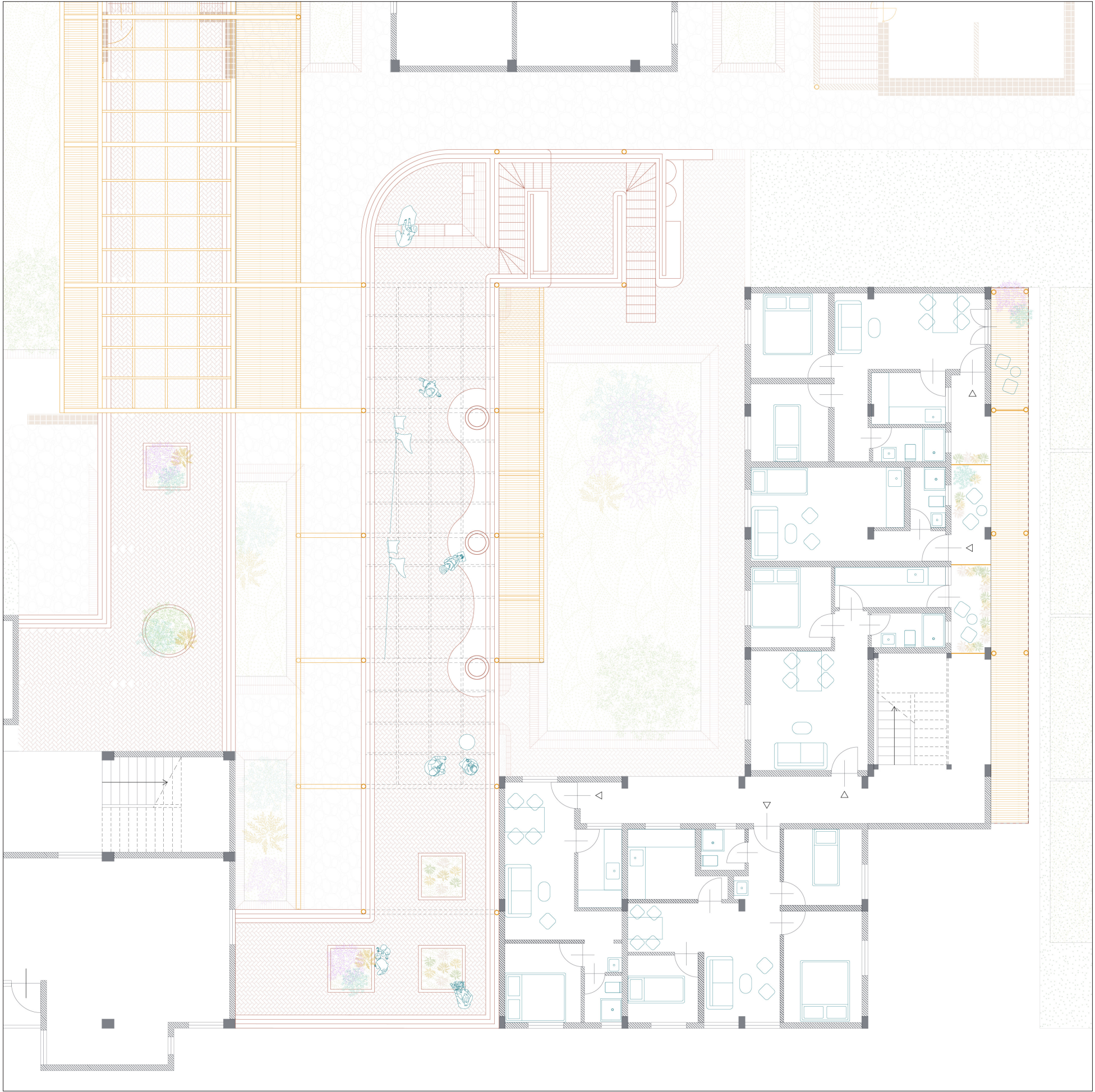
Inner Courtyard



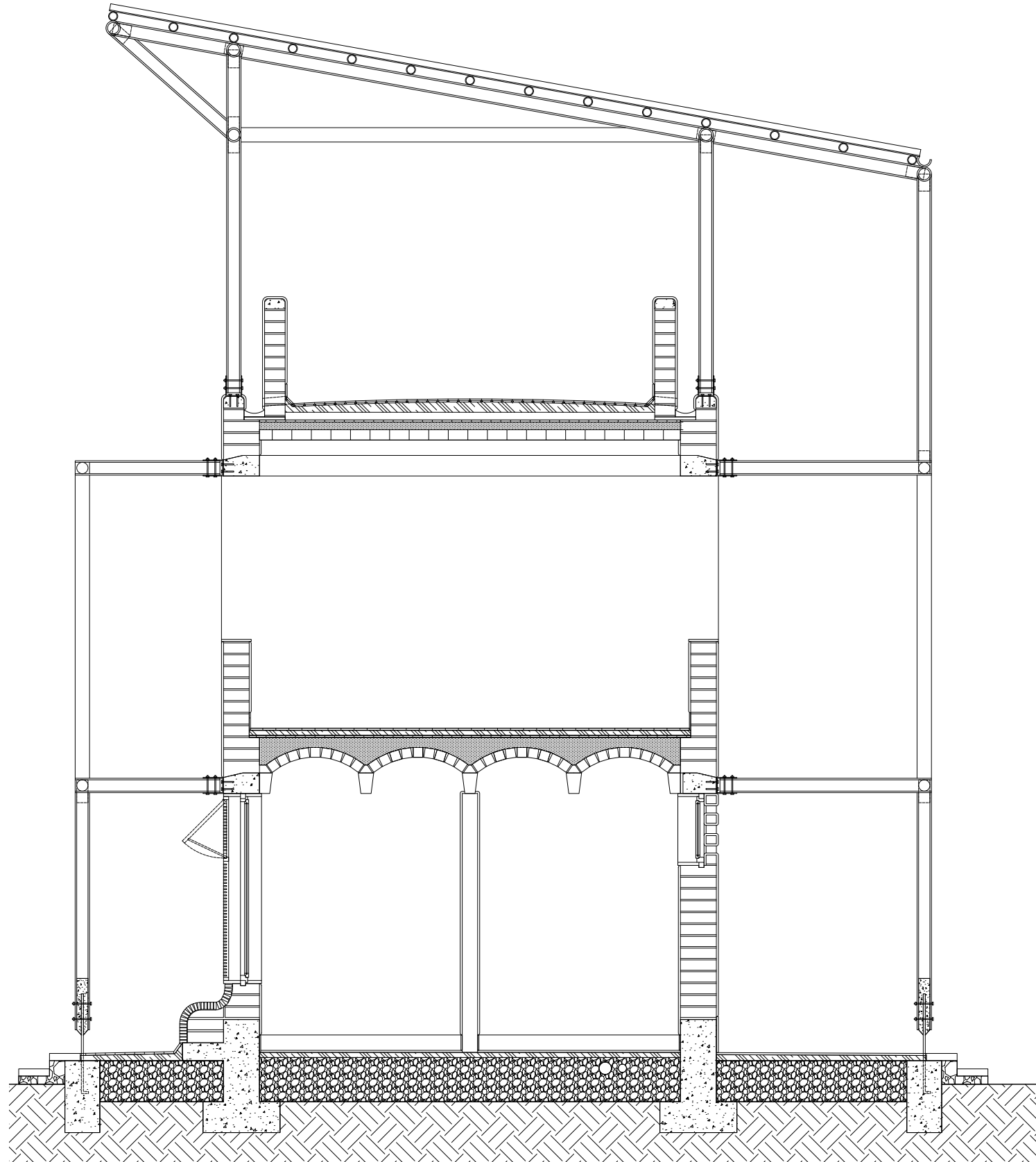
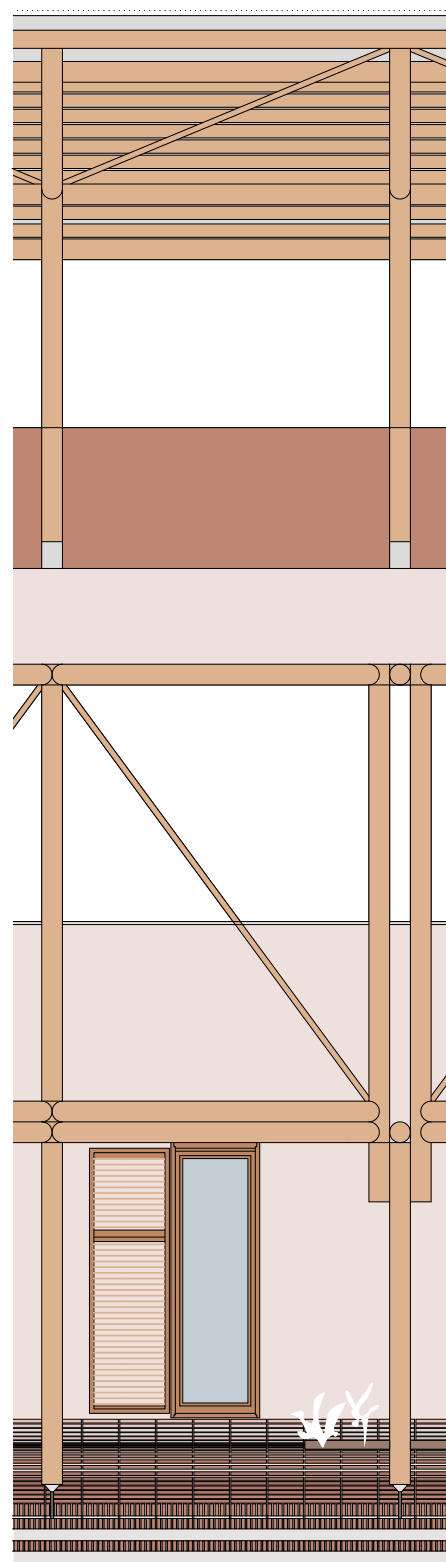
**Re-defined
Inner Courtyard**



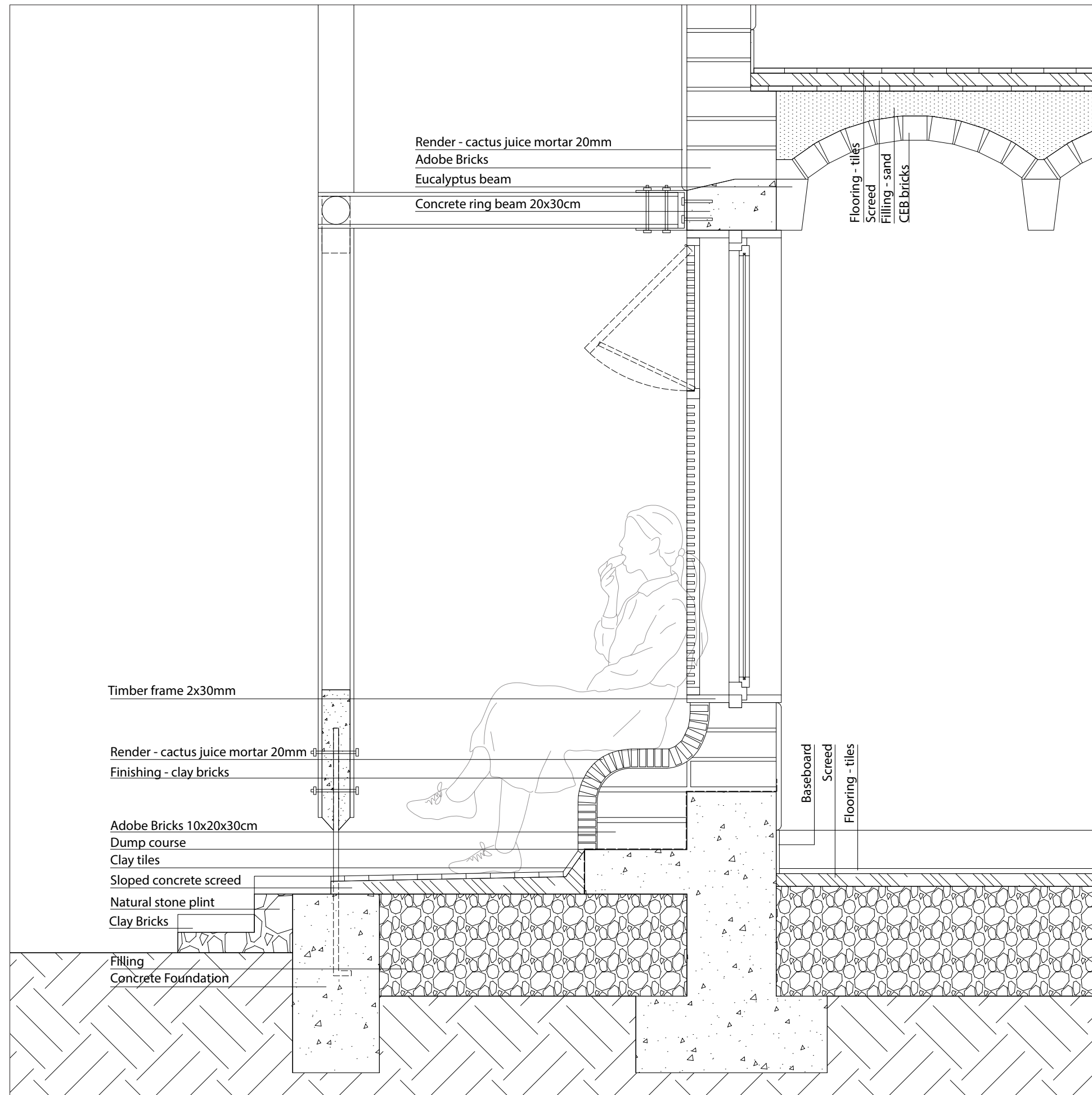
Activated Roof



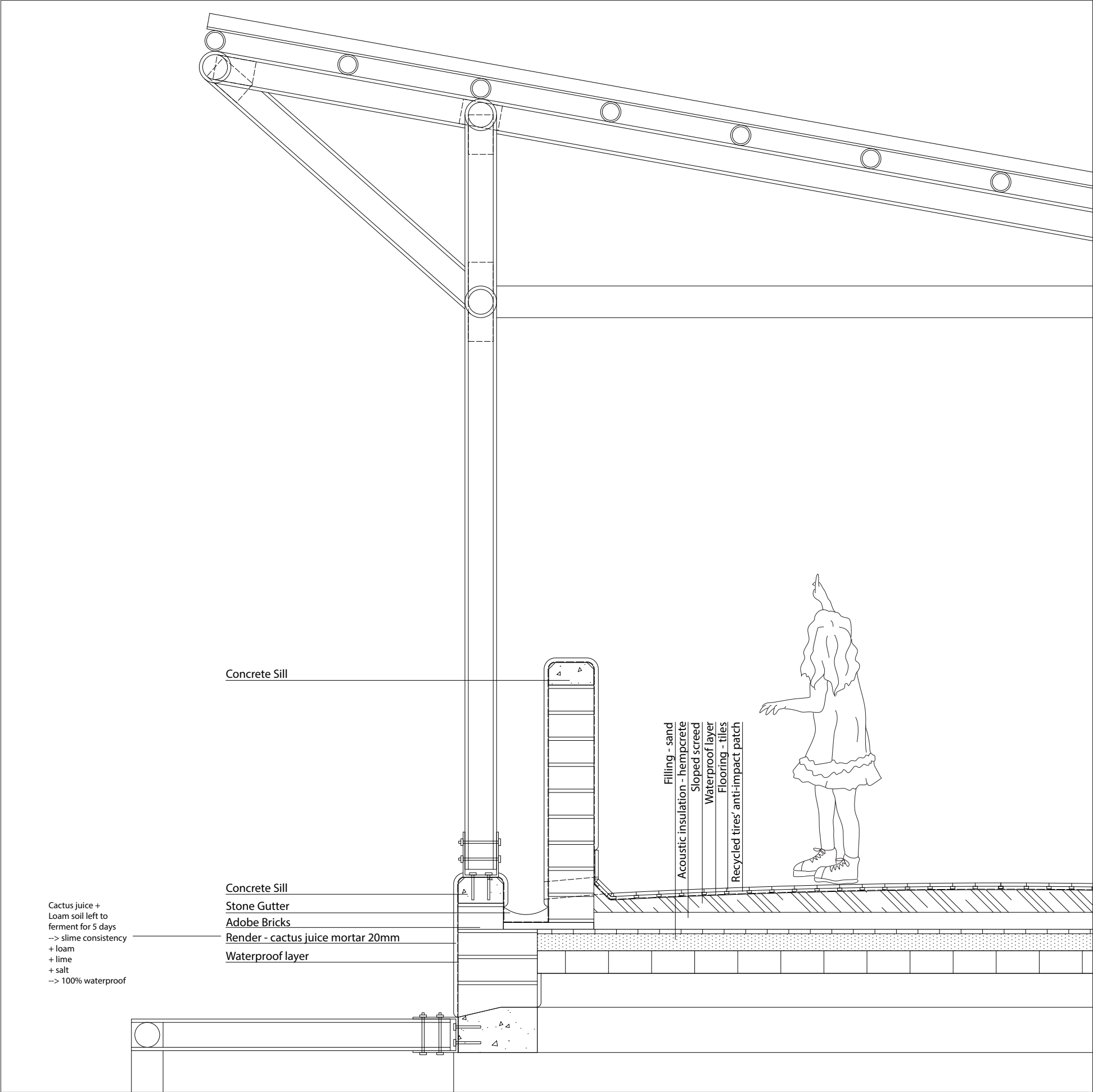
Section Adaptation



The Bench



Collective Roof



Sequence of Spaces



Bordering Spaces
Street-scapes



Places of Exchange
Market Street

Places of Exchange
Pedestrian Street





Places of Aggregation
Collective Plaza



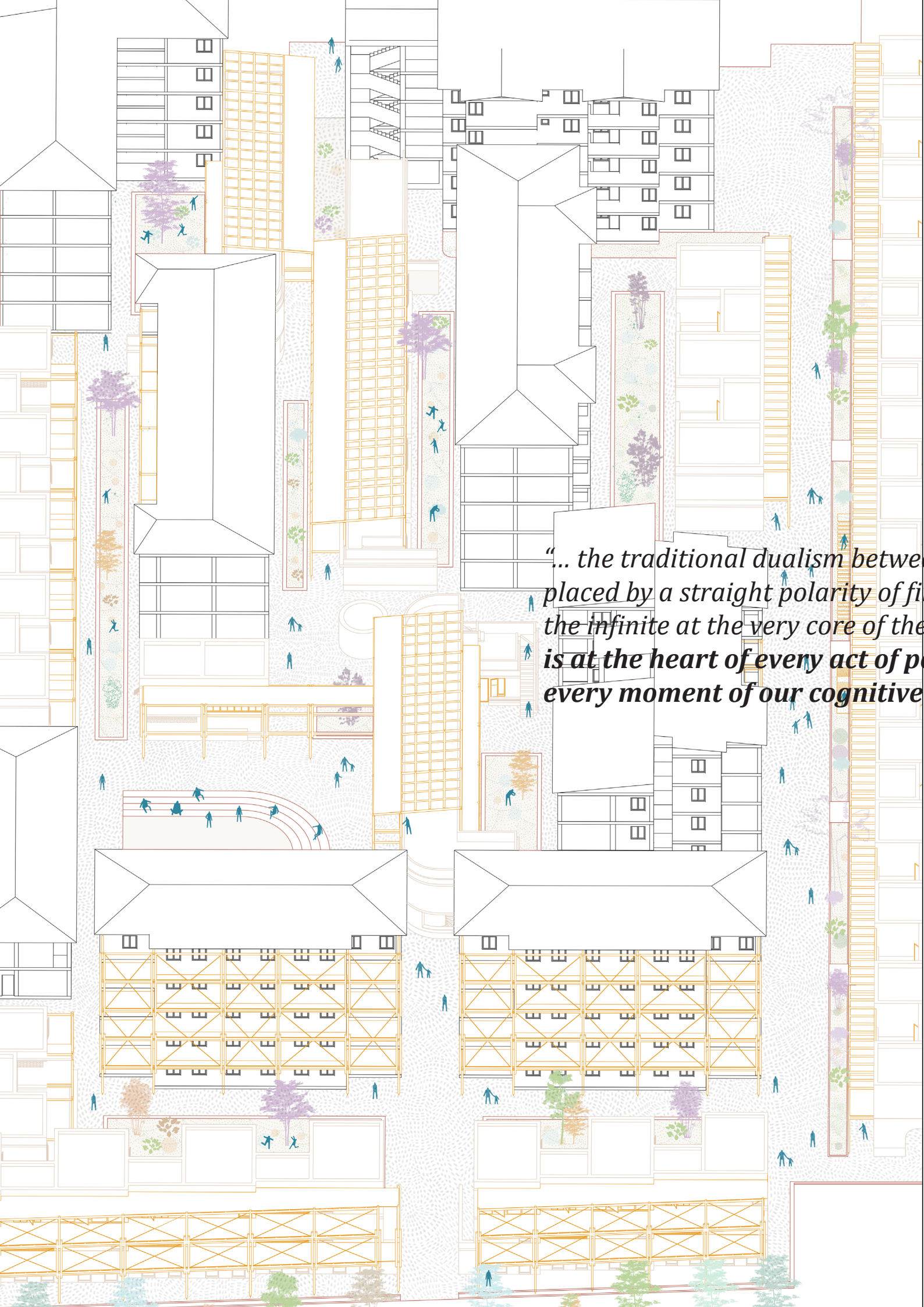
Places of Aggregation
Shared Courtyard



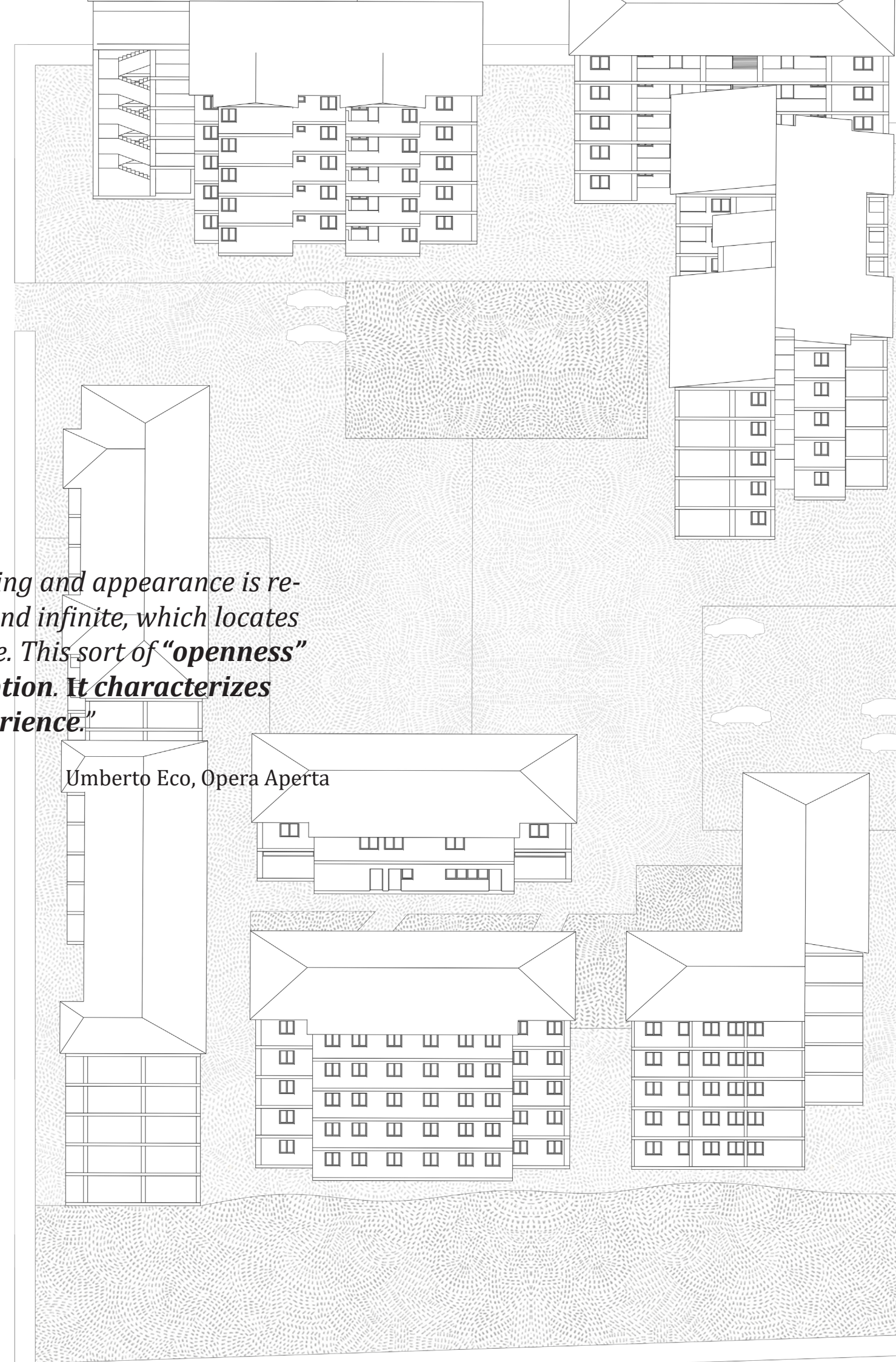
Places of Aggregation
Shared Courtyard

*“... the traditional dualism between being and appearance is replaced by a straight polarity of finite and infinite, which locates the infinite at the very core of the finite. This sort of **“openness”** is at the heart of every act of perception. It characterizes every moment of our cognitive experience.”*

Umberto Eco, Opera Aperta



*“... the traditional dualism between being and appearance is replaced by a straight polarity of finite and infinite, which locates the infinite at the very core of the finite. This sort of **“openness”** is at the heart of every act of perception. It characterizes every moment of our cognitive experience.”*



Umberto Eco, Opera Aperta