

# Craig Trompetter

## Global Housing\_P5 Presentation\_12/07/2019

Part 1: Problem Statement & Research Question *(4min)*

Part 2: Key Precedents *(4min)*

Part 3: Planning Strategy & Feasibility Diagram *(5min)*

Part 4: Design: Urban Arrangement *(4min)*

Part 5: Design: Cooperative *(6min)*

Part 6: Design: Building Technology *(6min)*

Part 7: Conclusion *(1min)*

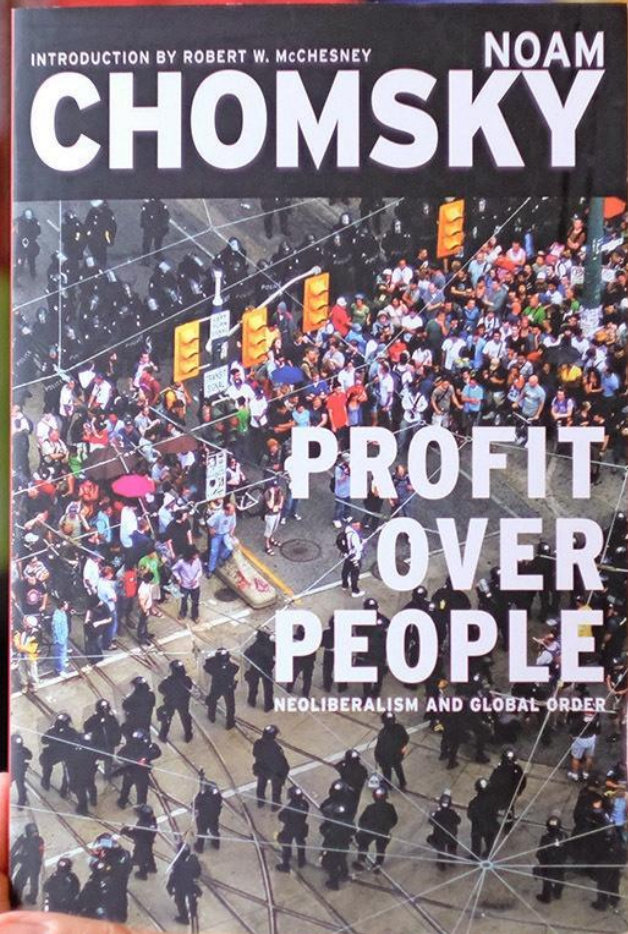
# Part 1:

## Problem Statement & Research Question

# Housing for Community: Re-imagining co-housing in the age of Neo-liberalism

# Framing the Problem: Neo-liberalism and the Commodification of housing

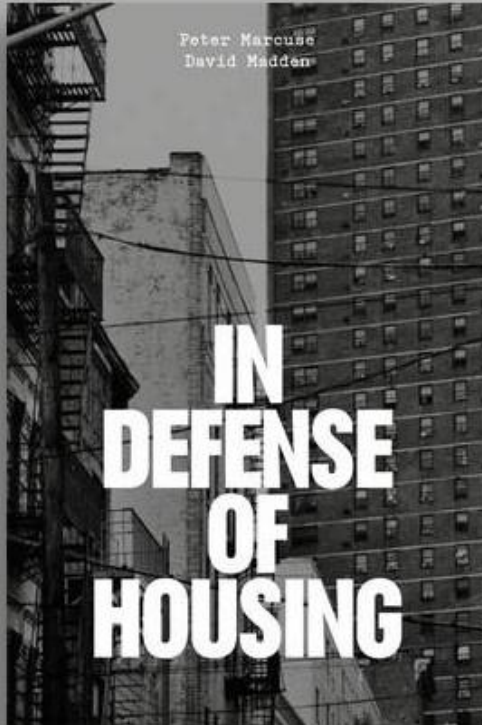




## Neo-liberalism

“Instead of citizens, it produces consumers. Instead of communities, it produces shopping malls. The net result is an atomized society of disengaged individuals who feel demoralized and socially powerless.”

- Noam Chomsky, Profit Over People: Neoliberalism and Global Order [1999]



## Hyper-commodification

“together, these interlocking processes of deregulation, financialization, and globalization have meant that housing functions as commodity to a greater extent than ever before”

- David Madden & Peter Marcuse, In Defense of Housing: The Politics of Crisis [2016]





## Auckland, New Zealand

In New Zealand, the predominant housing type is detached housing. Commodification is facilitated by the 'Certificate of Title' system, the government privatising its state housing stock, and increasing uniformity through franchise housing schemes.

Photo: New Auckland settlement for northern outskirts, ODT [2017]



## Mumbai, India

In Mumbai, the predominant housing type is apartment buildings. Commodification is facilitated through uniformity of apartment units within all target markets - LIG, MIG, HIG, etc.

Photo: MHADA housing scheme, Virar [2018]

# Problem Statement:

## Nalasopara - housing for the individual versus housing for the community





East Nala Sopara  
Project Site





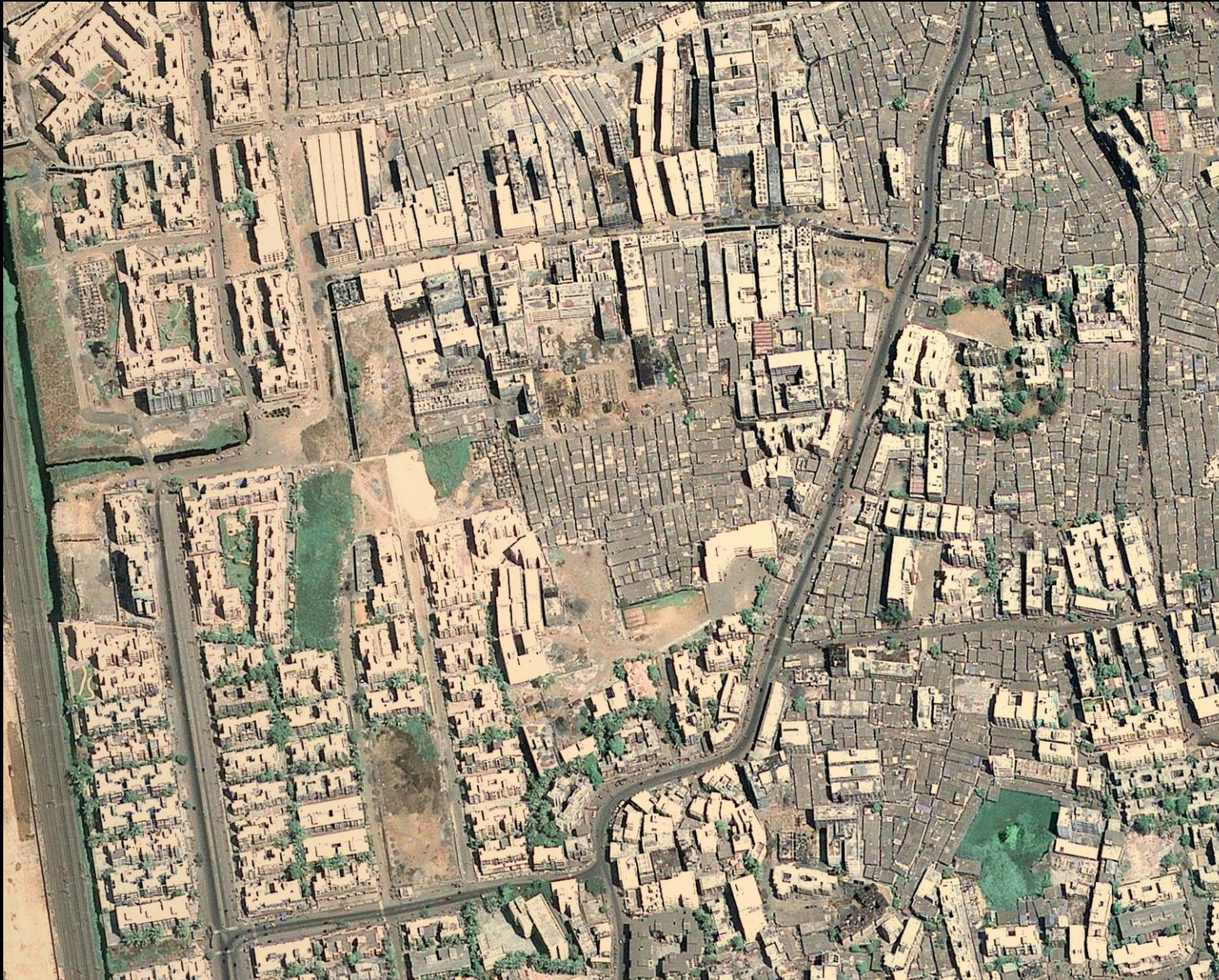


Nalasopara, 2002

Existing single story  
Baithi Chawls.

Google Earth [2002]





Nalasopara, 2009

Sections of Baithi  
Chawls replaced with 5  
storey chawls.

Google Earth [2009]



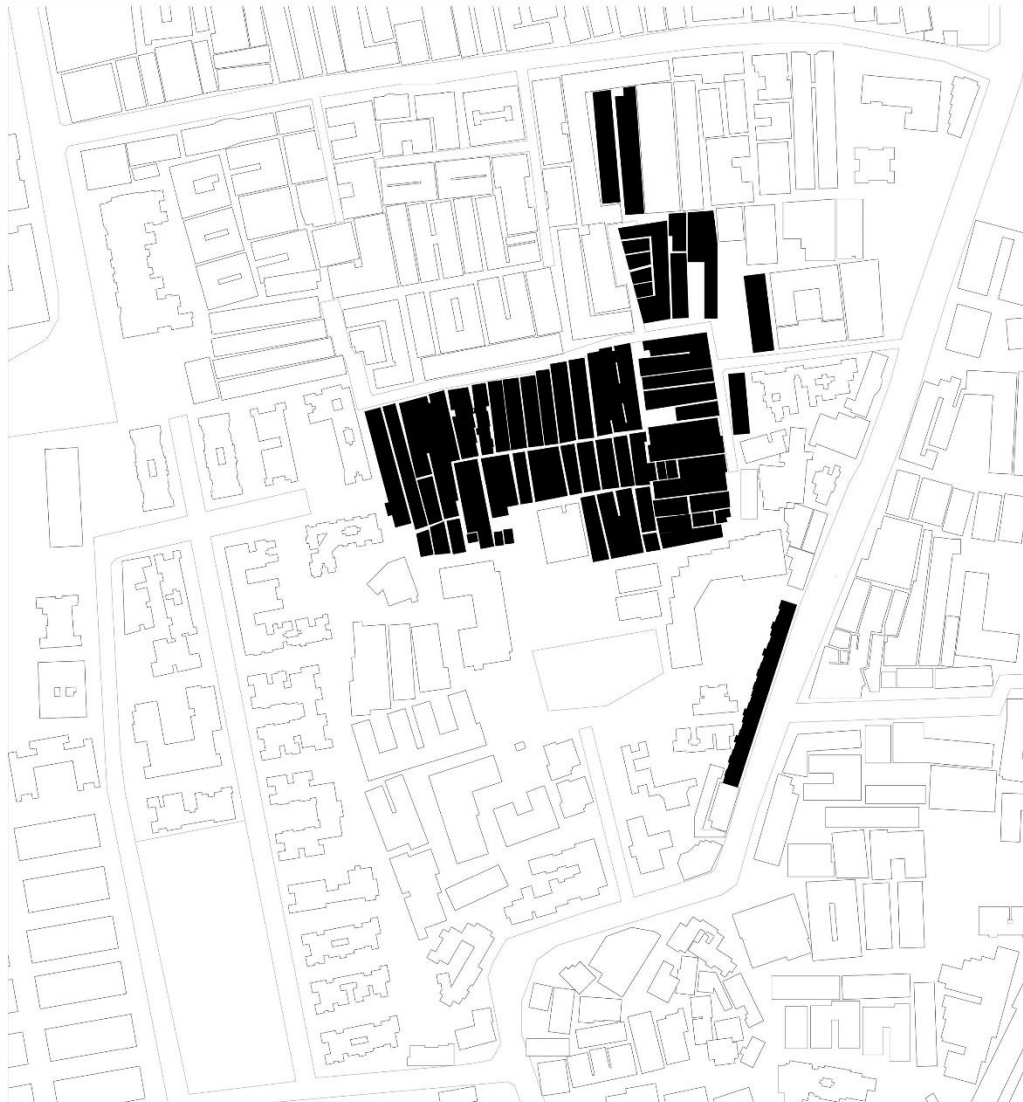


## Nalasopara, 2018

More sections of Baithi chawls replaced with 5 storey chawls.  
Construction of higher end apartment towers.

Google Earth [2018]





## Baithi Chawls

Insufficient living standards.  
Sufficient daylight, personalised houses, expandable, existing community based on common facilities and hardships.



## Handshake Chawls

5 story chawl apartment buildings. Characterised by unit apartments, tightly packed together, poorly maintained services, no community facilities.





## Walled Apartment

Characterised by unit apartments, high standard of construction and maintenance, walls and fences separate individual buildings.





Baithi Chawl: Shared space



Baithi Chawl: Common facilities





Interface: Walled Apartment



Interface: Chawl Apartment

Continued migration and city development is likely to fuel accelerating densification in the Vasai-Virar sub district. Left without intervention, this pattern of urban densification is likely to get worse.

## Research Question [part 1]:

Within the context of the Hyper-commodification of housing in Mumbai: how can a new model of affordable co-housing act as a framework to preserve, strengthen, and develop community, while meeting density requirements and living standards?



# Research Question [part 2]:

How can dwelling design decommmodify housing to better match how people live rather than how people invest?

# Part 2:

## Key Precedents



## Slum Rehabilitation Association Scheme

Babasaheb Ambedkar Nagar

- SRA was launched in 1996 and was intended to rehouse eligible slumdwellers free of cost in new buildings.
- The builder pays only 25% of ready reckoner rates, gets consent of 70% of slum-dwellers and develops the plot to house the original tenants. In return the builder receives additional construction rights to build luxury apartments.



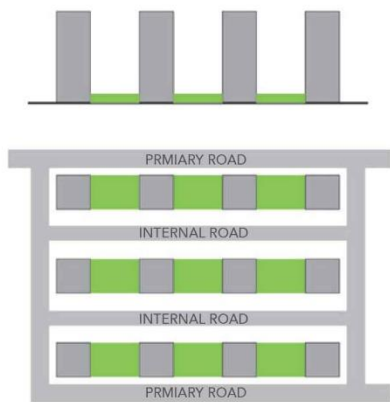


## Slum Rehabilitation Association Scheme Nalasopara (Project site)

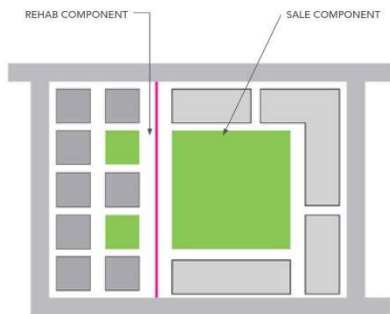
- The scheme is successful in coordinating affordable rehabilitation housing with open market housing.
- The scheme is a failure in that the existing residents are treated as dispensable. Just another obstacle to profit. The existing residents interests and positive city development need to be prioritised.

## NOTIONS OF EQUITY IN DESIGN

### COMMON IDEAS OF EQUITY

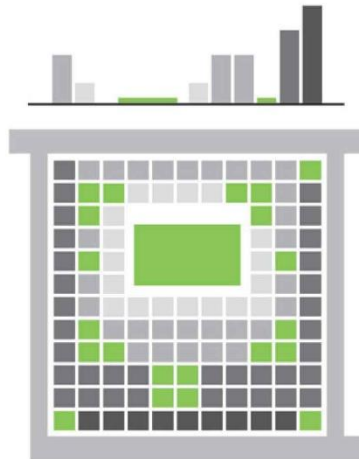


REPETITIVE BLOCKS, SAME CONDITIONS

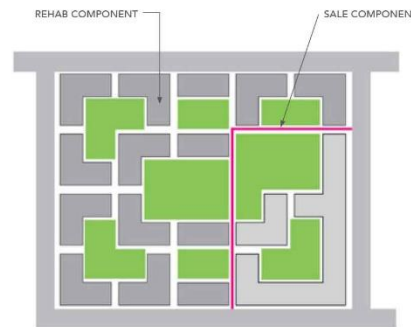


UNEQUAL ALLOTMENT OF LAND FOR SALE AND REHAB

### PROPOSED CONCEPTS



FREEDOM OF CHOICE FROM VARYING OPTIONS



A PLANNED RELATIONSHIP BETWEEN REHAB AND SALES PLOTS

## Design: BDD Chawls Redevelopment PK Das & Associates

- Redefining the concept of equity in housing
- Freedom of Choice from various options
- A planned relationship between rehabilitation and open market housing
- Allotment of land to better represent the city inhabitants.



## Design: BDD Chawls Redevelopment

PK Das & Associates

- Focus on quality of living conditions. Open space, light, ventilation and access to amenities are available for all
- Does not represent the different needs of inhabitants/owners of affordable housing vs. open market housing.





## FUCVAM Model Cooperative Housing Uruguay - Latin America

### Basic Principals

1. Solidarity
2. Democratic participation
3. Self-management
4. Mutual aid
5. Collective ownership



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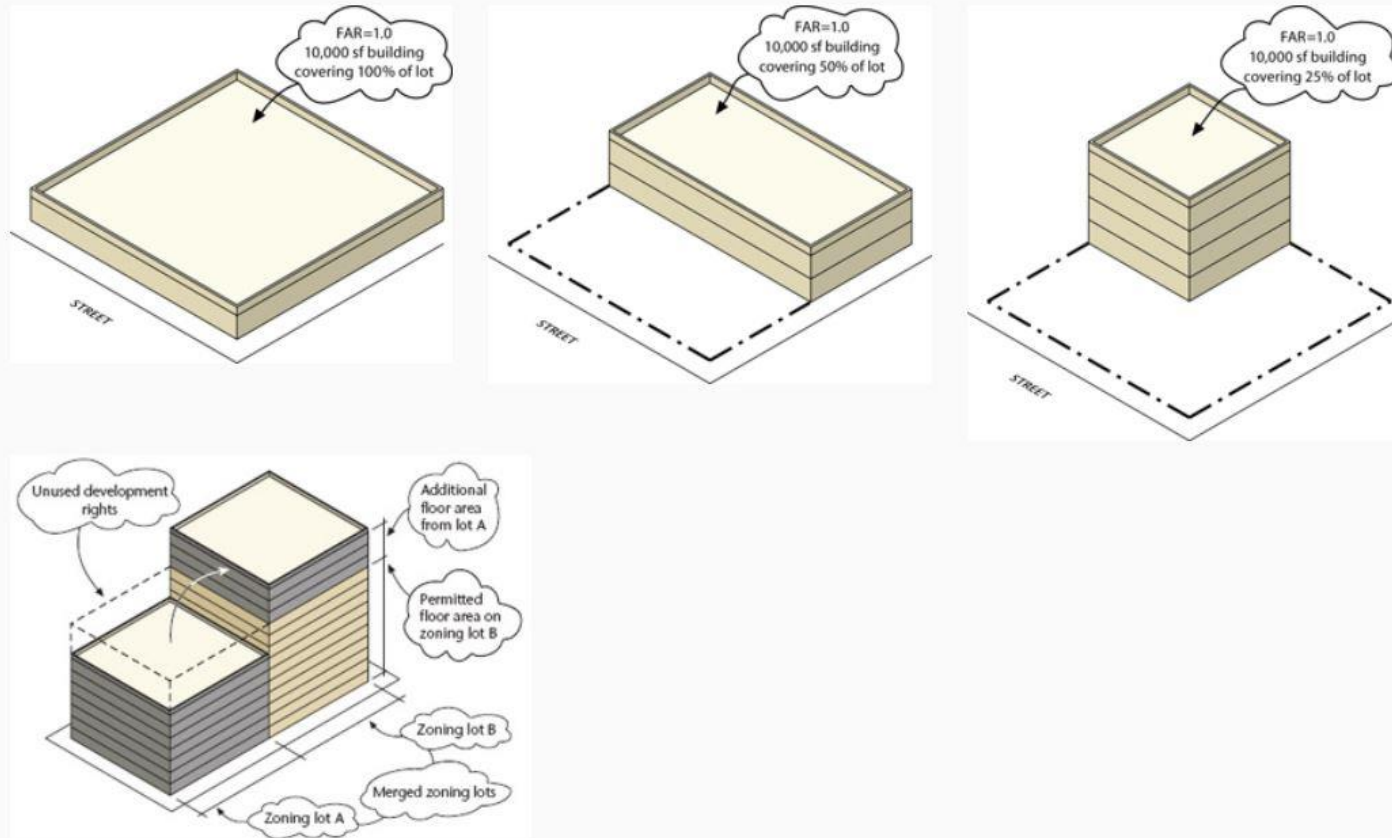




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## F.A.R.1.0. Air Rights Principle New York

The owners of plots can trade floor area with the owners of adjacent parcels of land, turning the 'Floor Area Ratio', "FAI" (or FSI) into "Air Rights". This effectively commodifies the space above a plot which can then be sold.

Reference: [opennewyork.city/zoning.html](https://opennewyork.city/zoning.html)





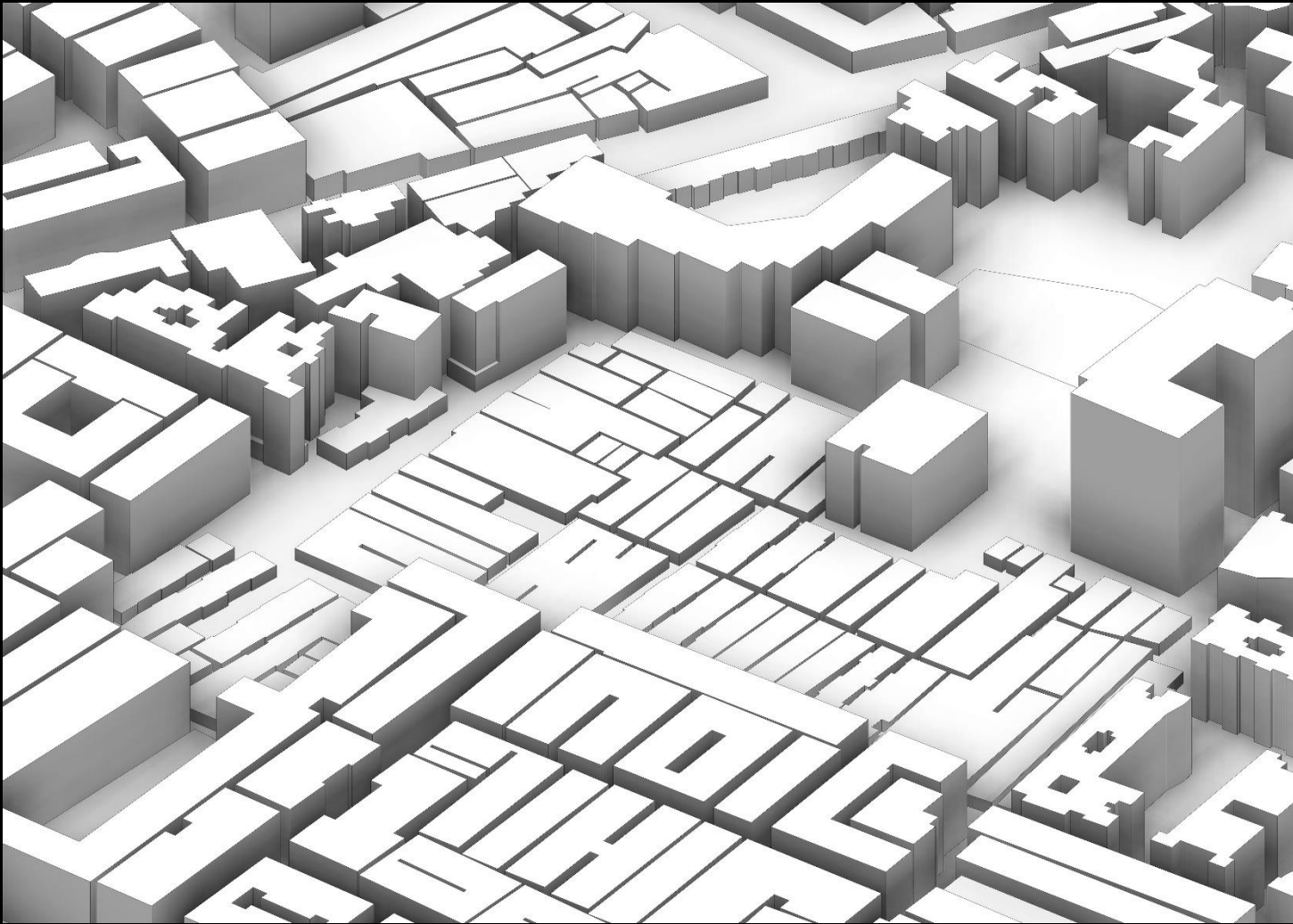
## F.A.R.1.0. Air Rights Principle New York

Jean Nouvel's tower 53W53 purchases air rights from the adjacent Museum of Modern Art and Saint Thomas Church for \$85M collectively. The money was used to renovate the Museum and repair the church.

Reference: [opennewyork.city/zoning.html](https://opennewyork.city/zoning.html)

# Part 3:

## Planning Strategy



## Commodify space: Axonometric progression

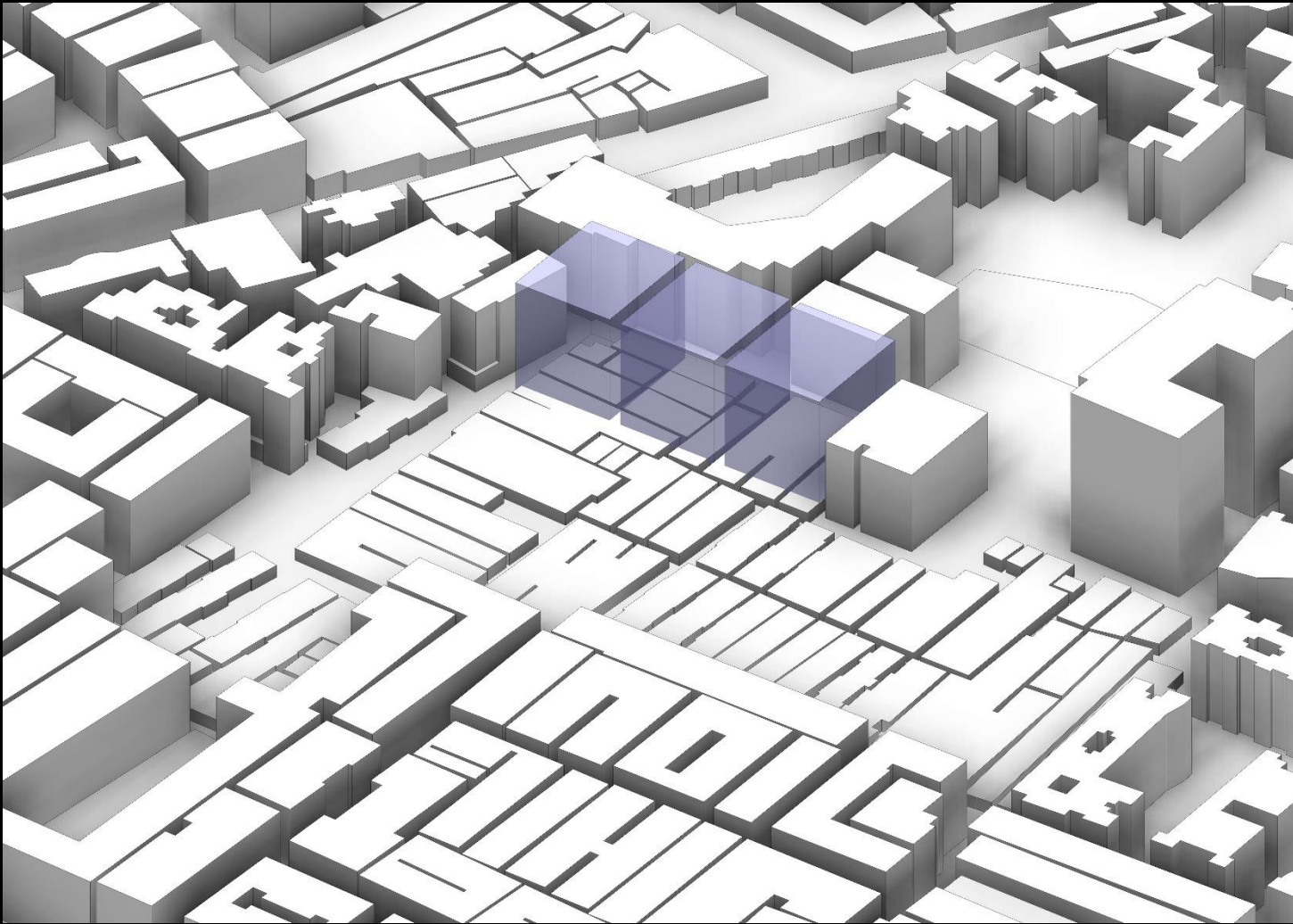
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8. Repeat
9. Incremental Masterplan
10. Individual Project Design



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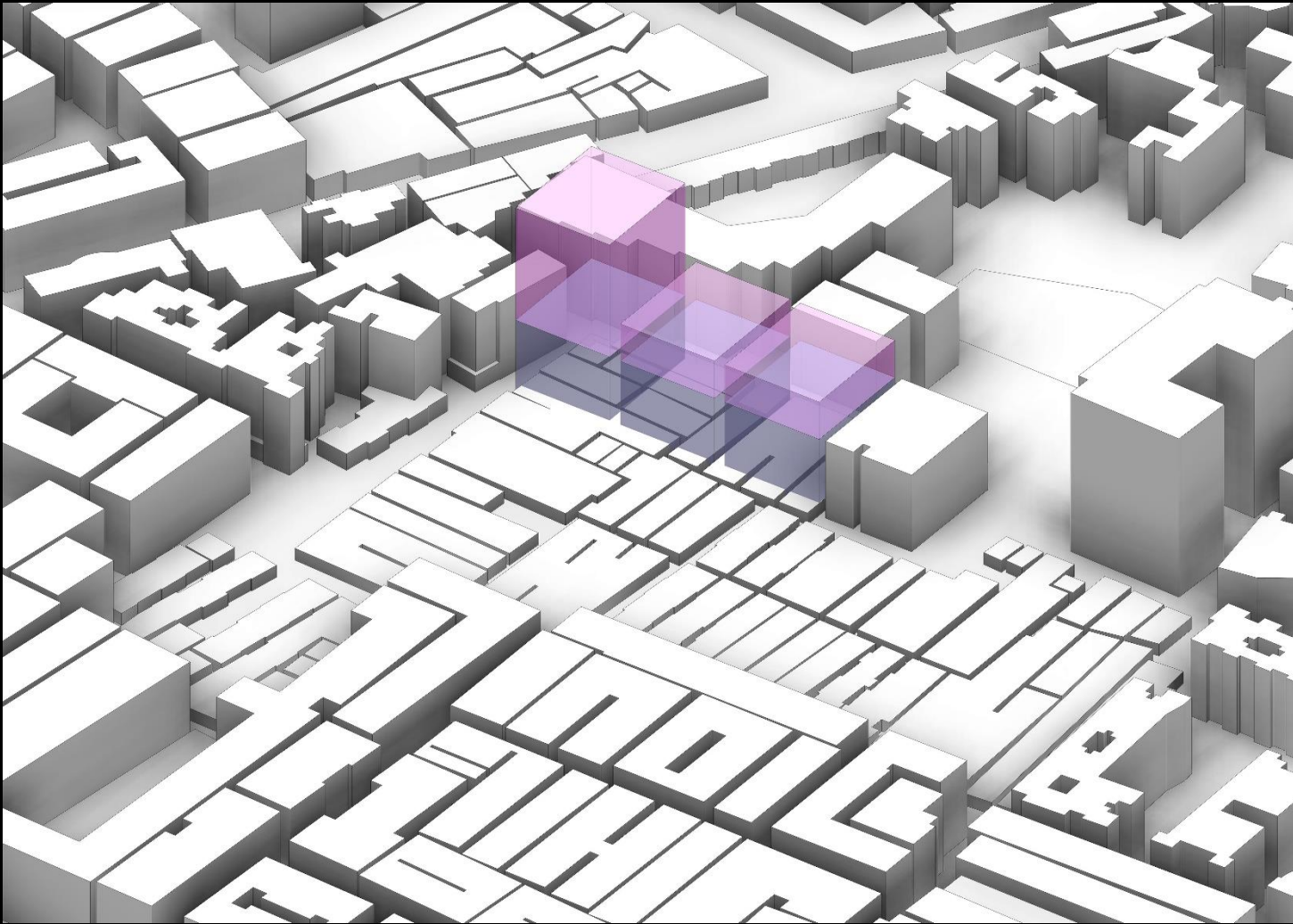
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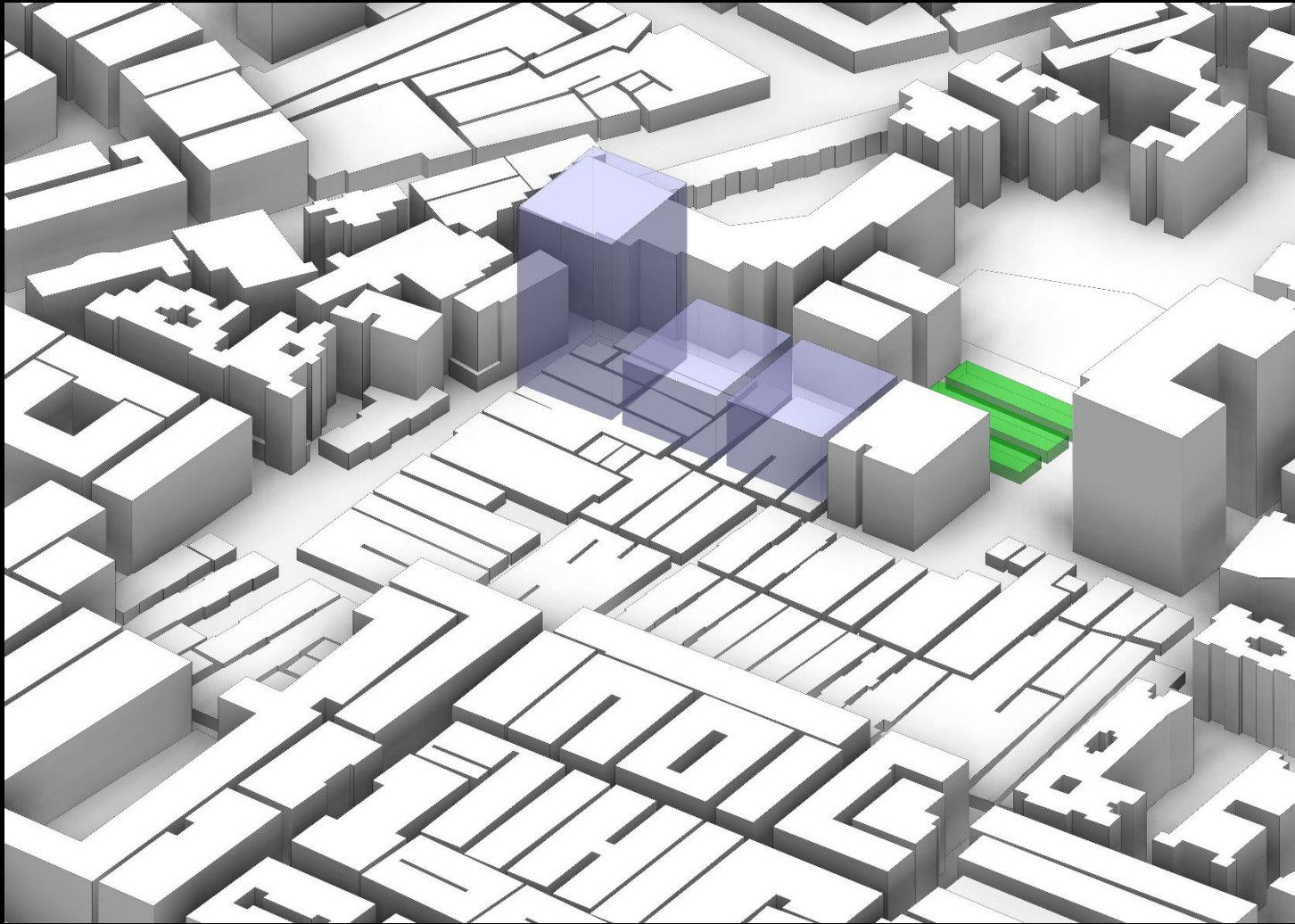
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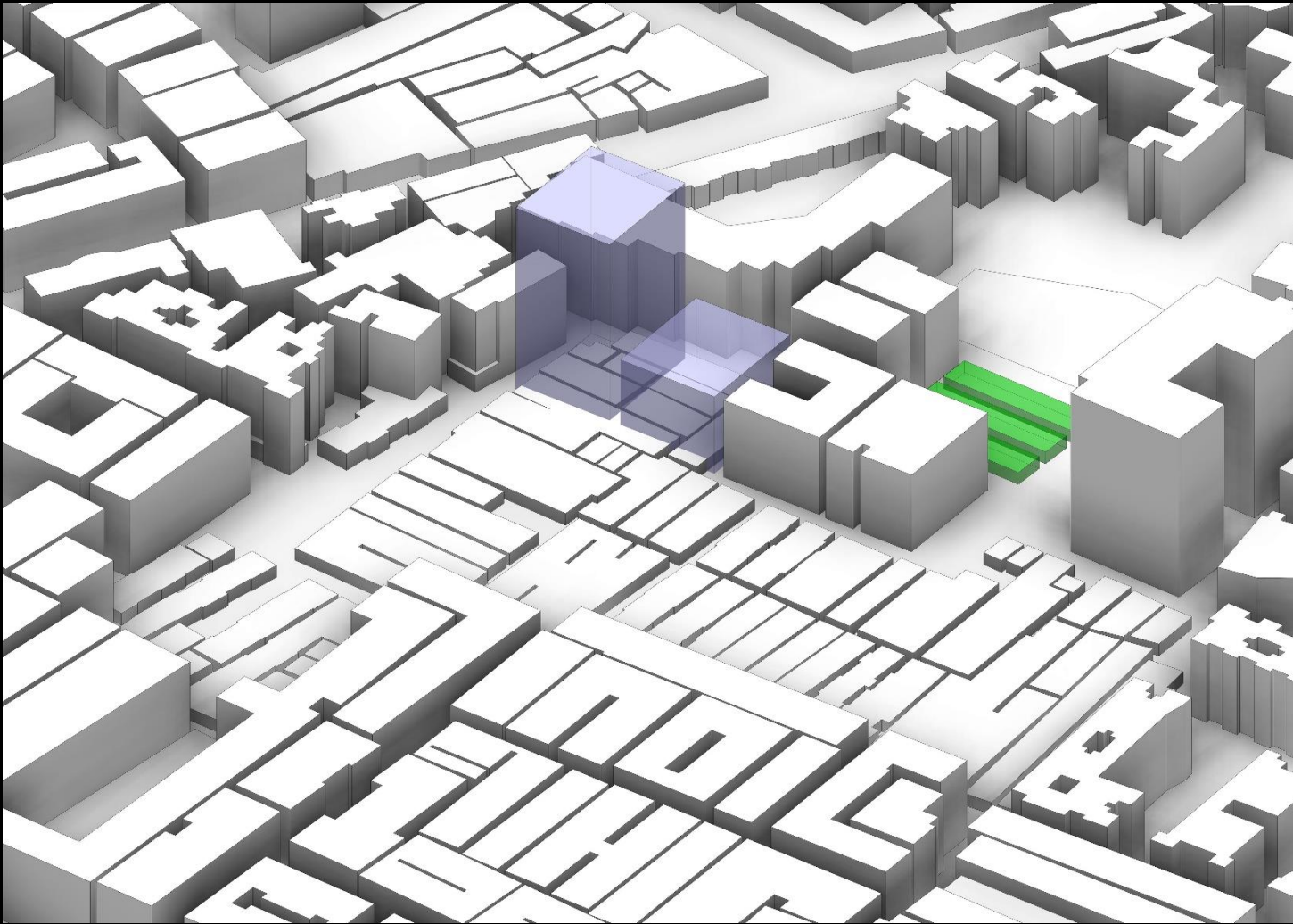
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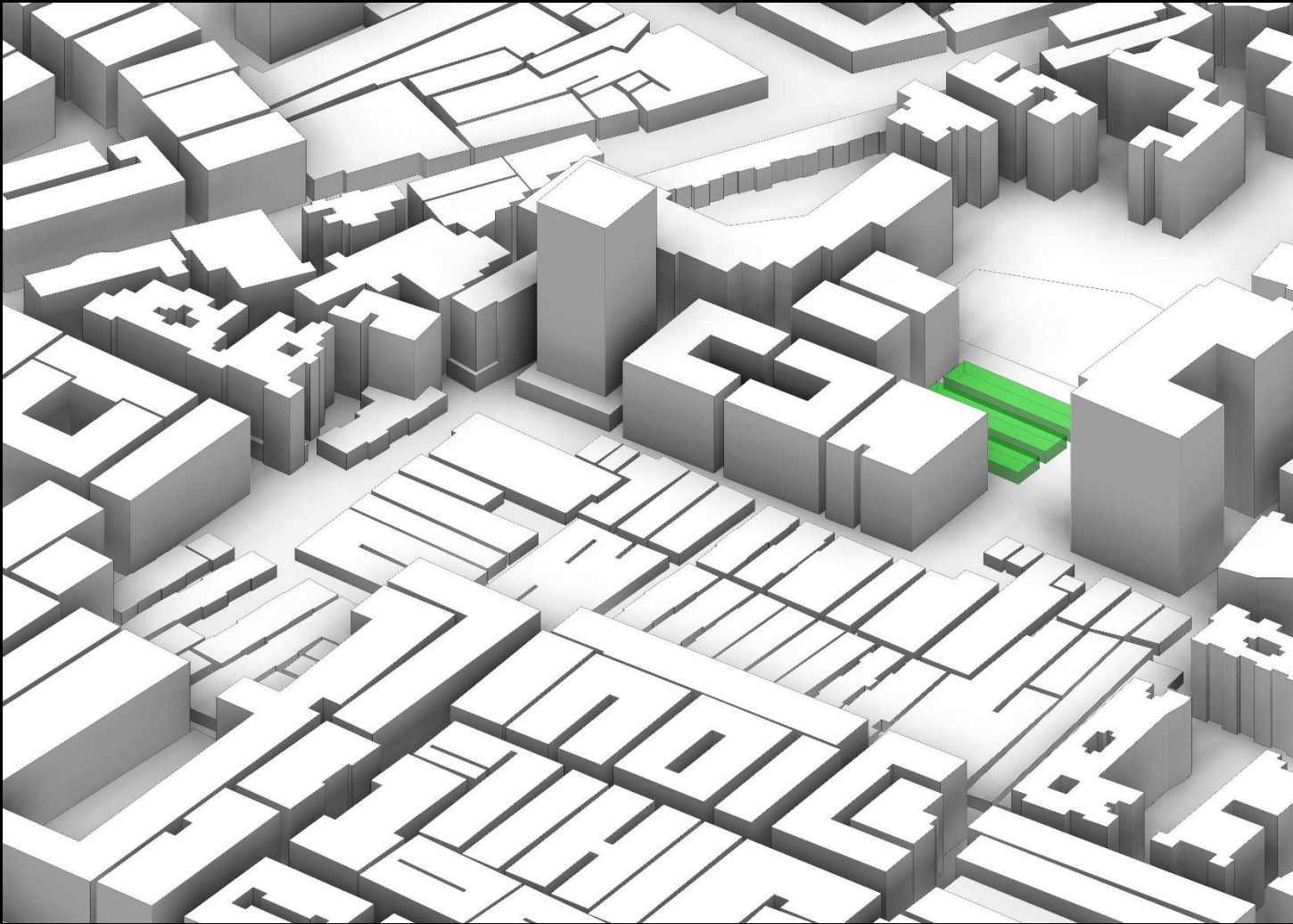
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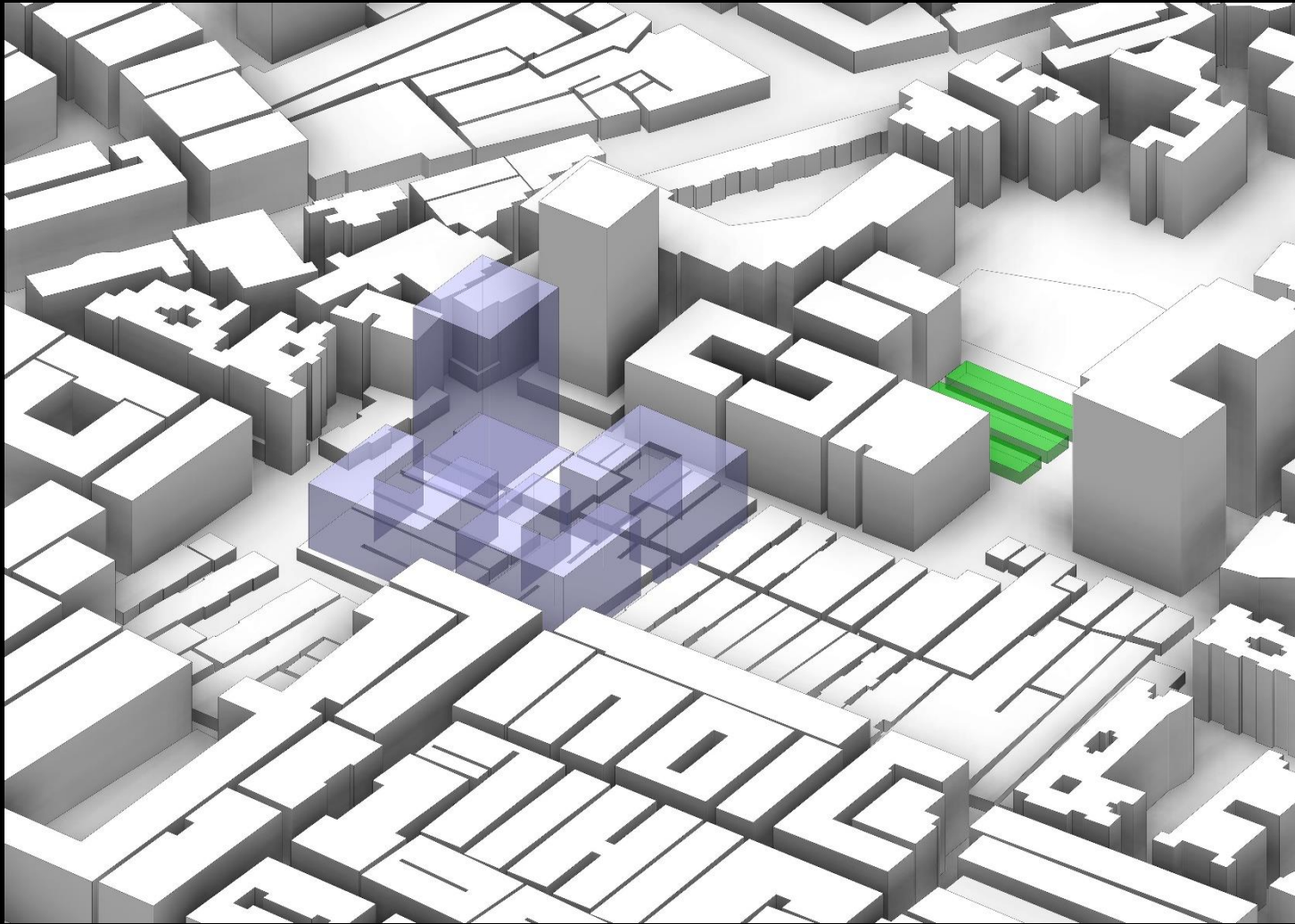
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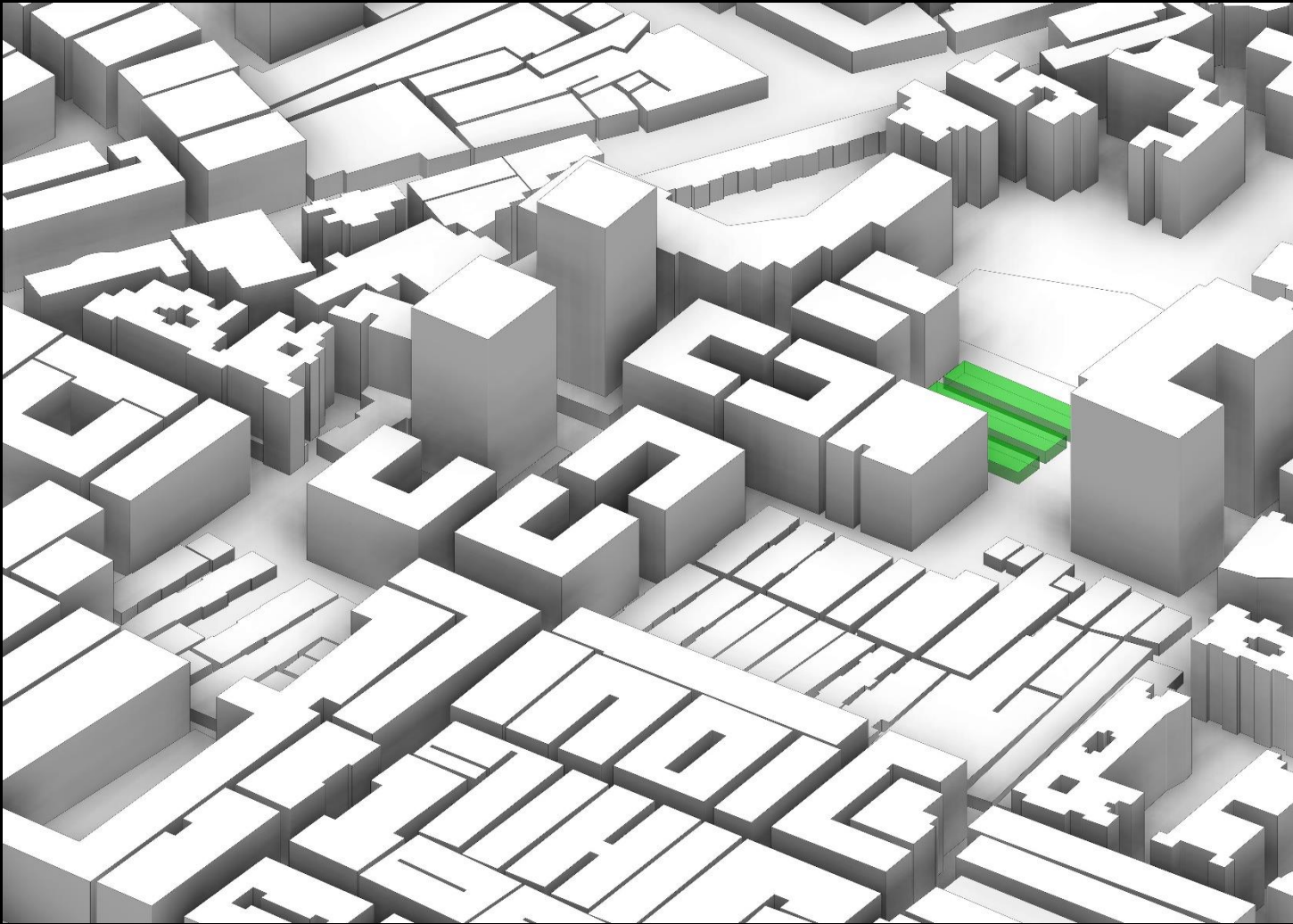
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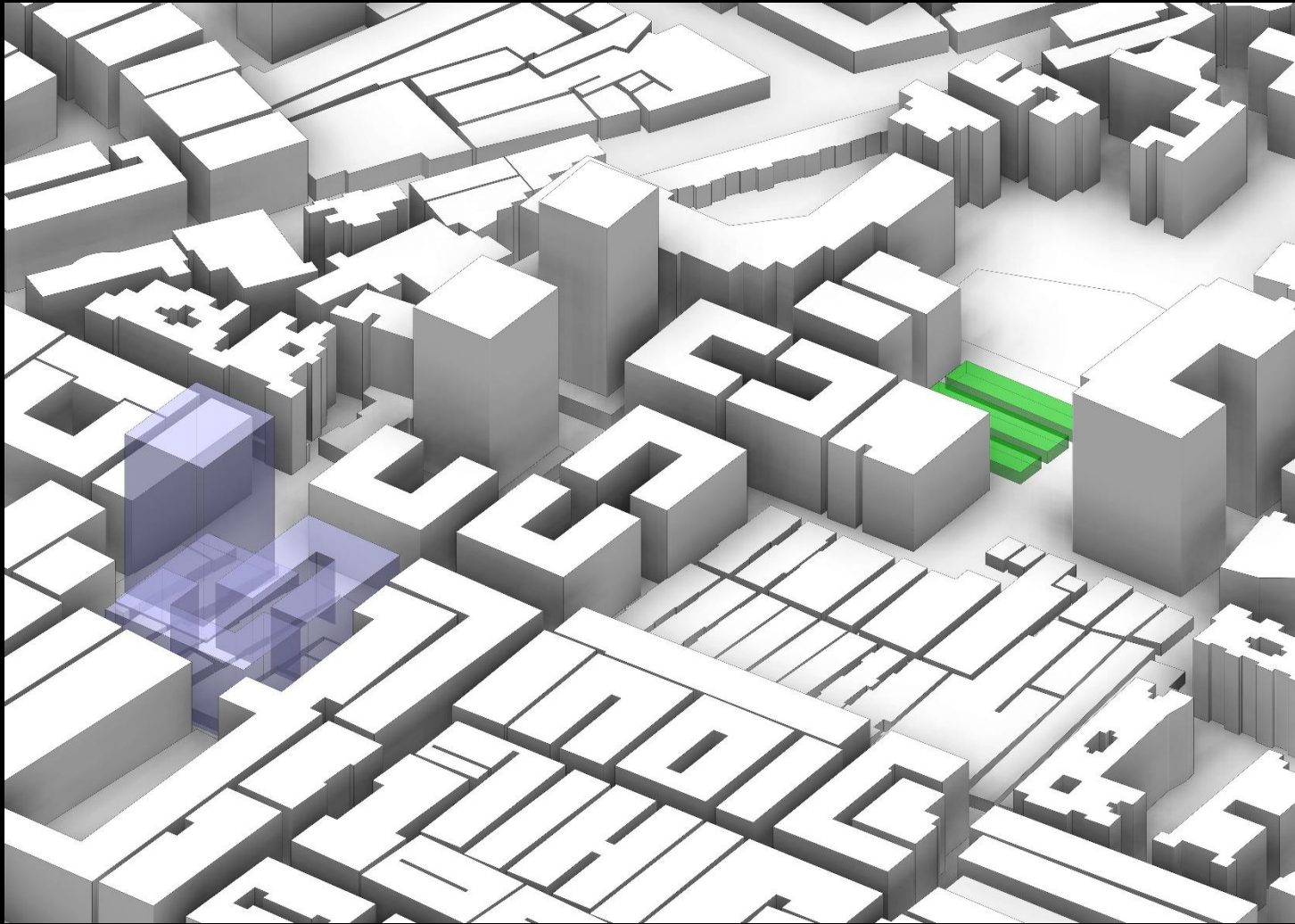
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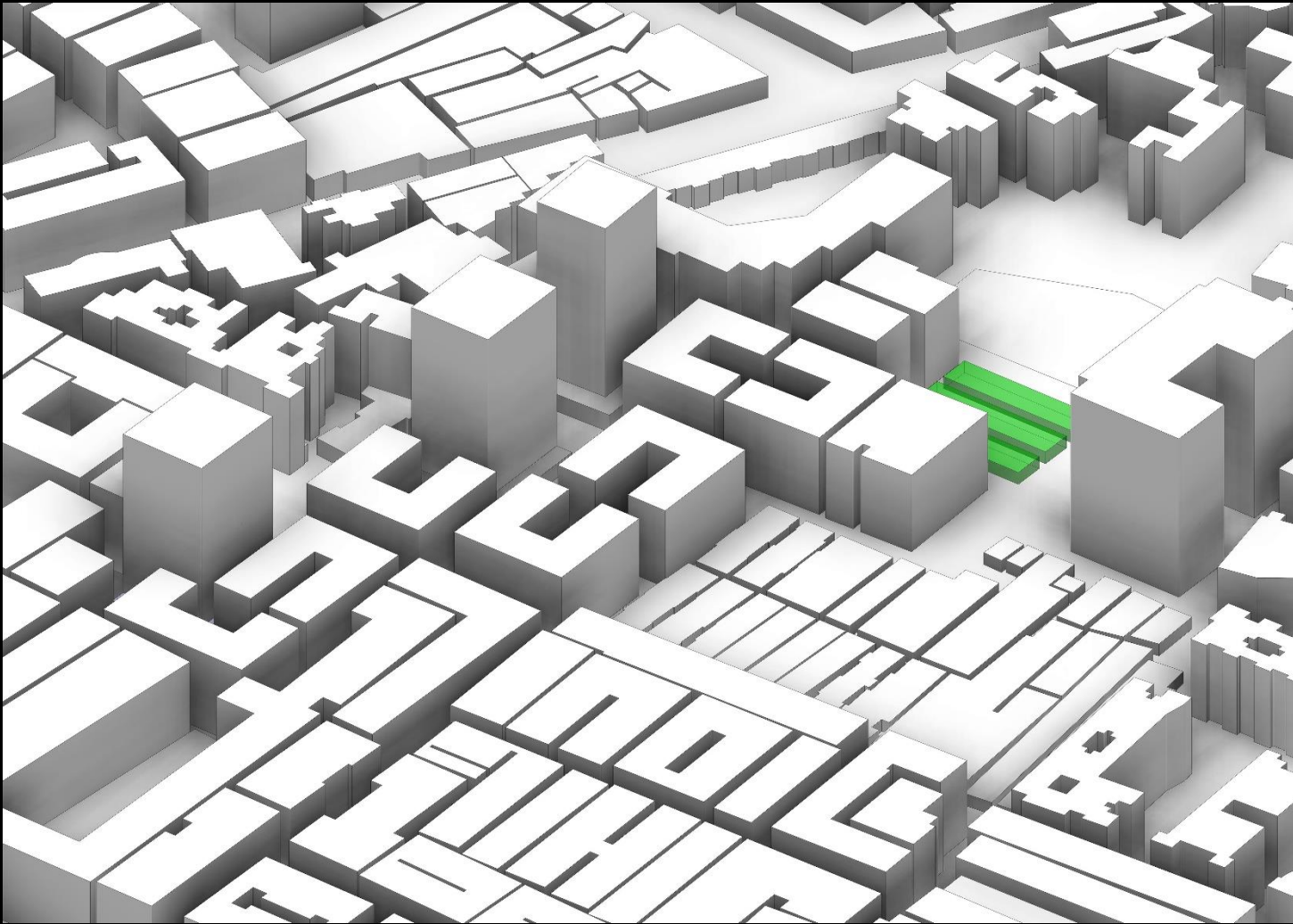
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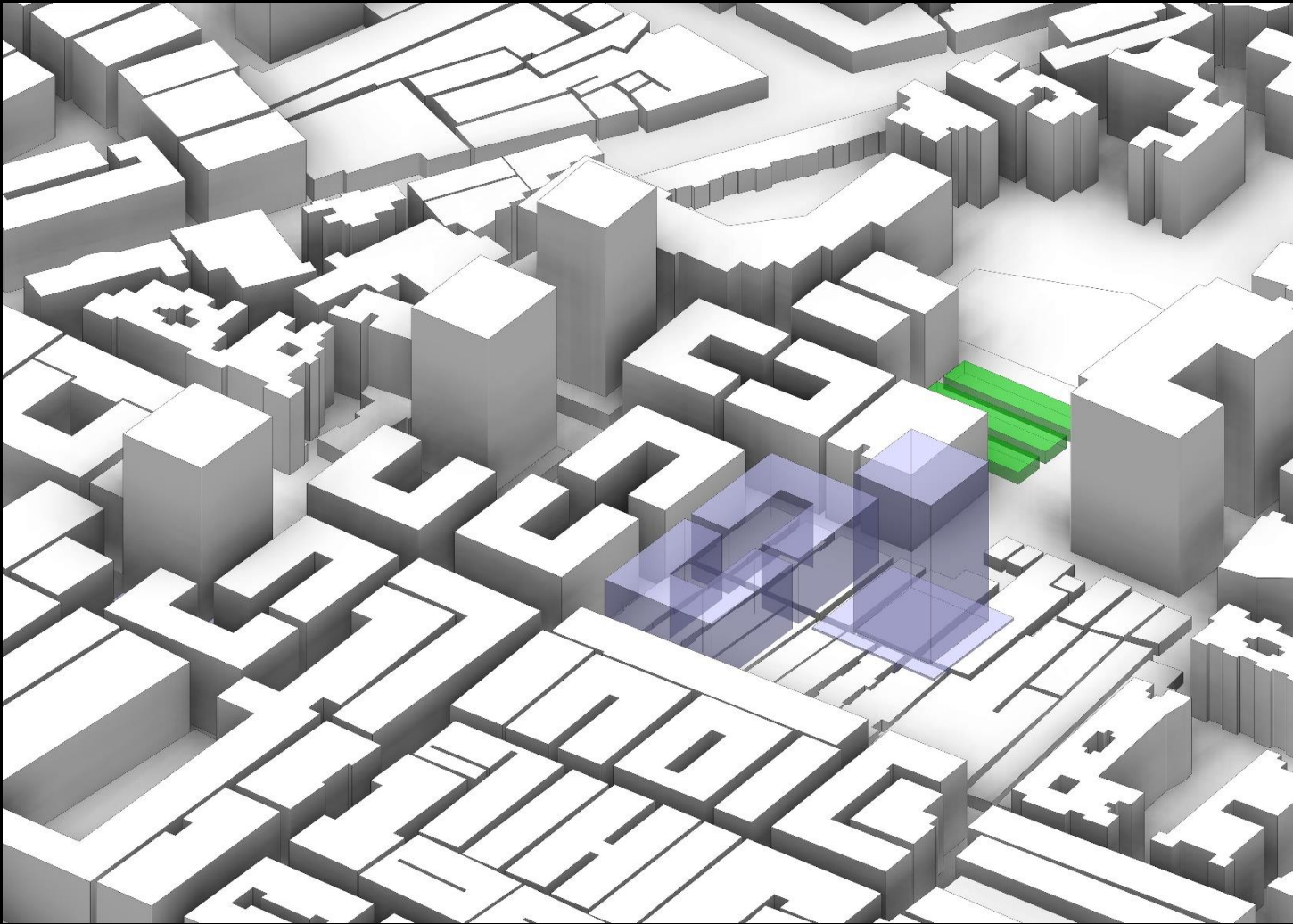
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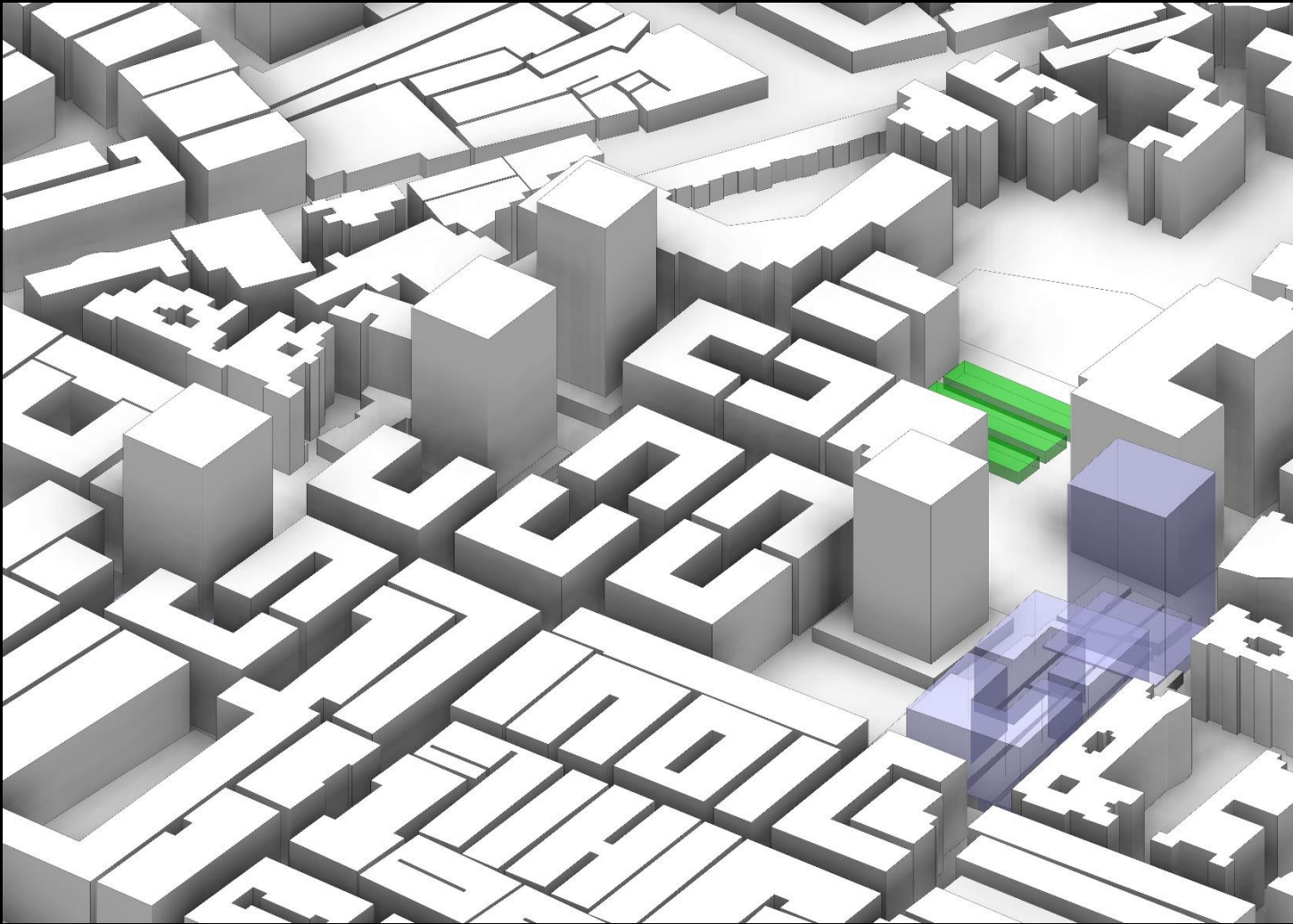
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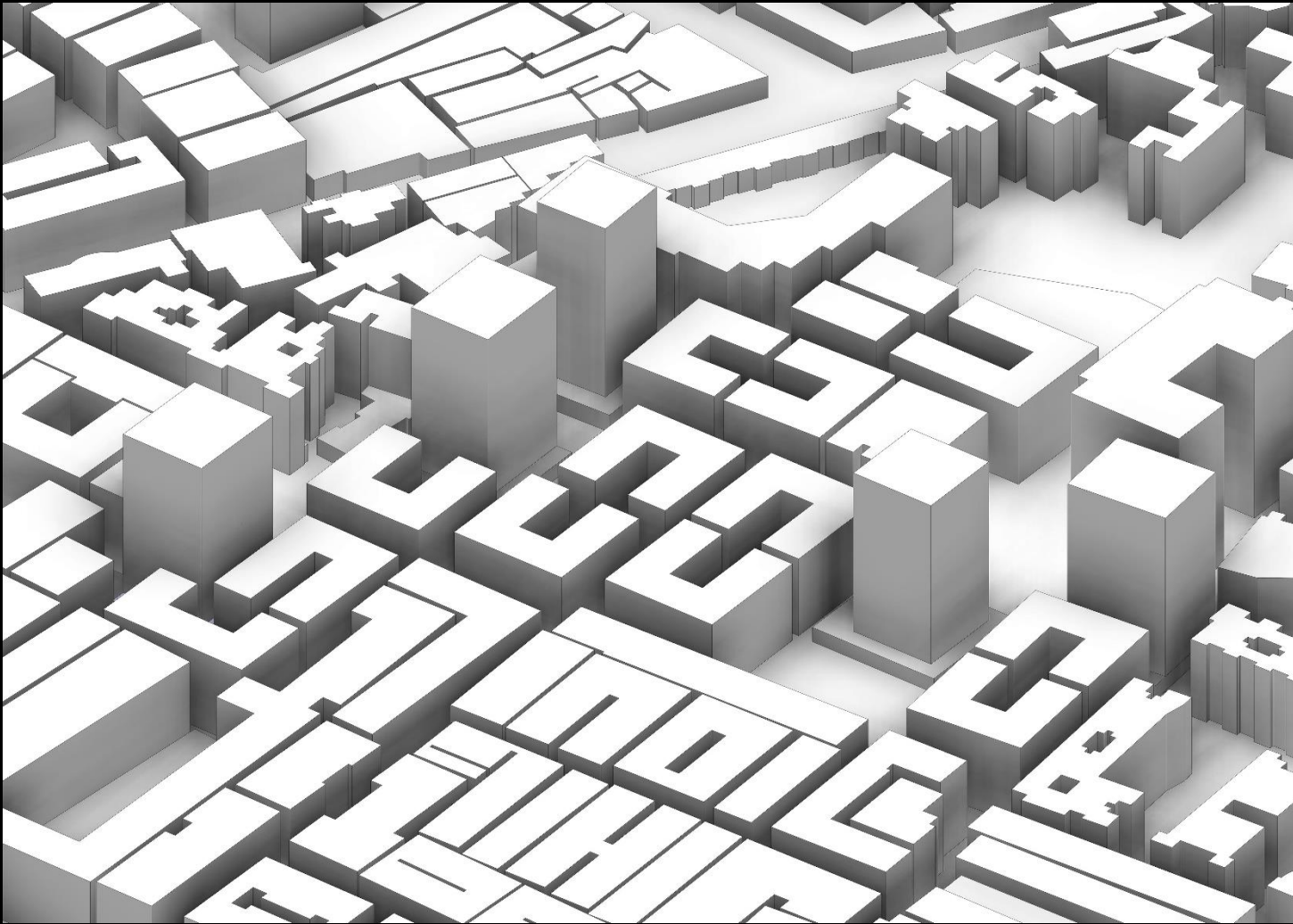
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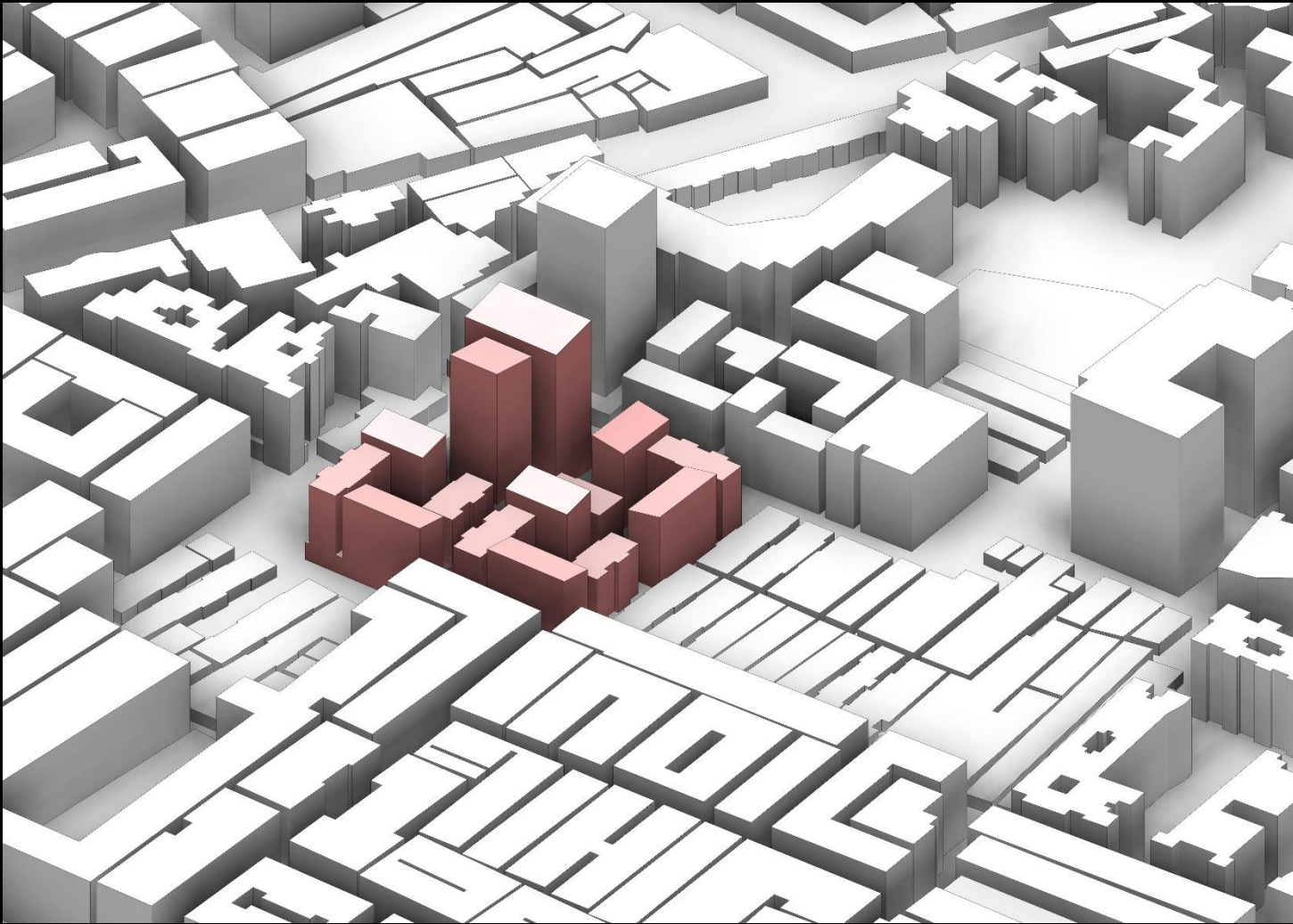
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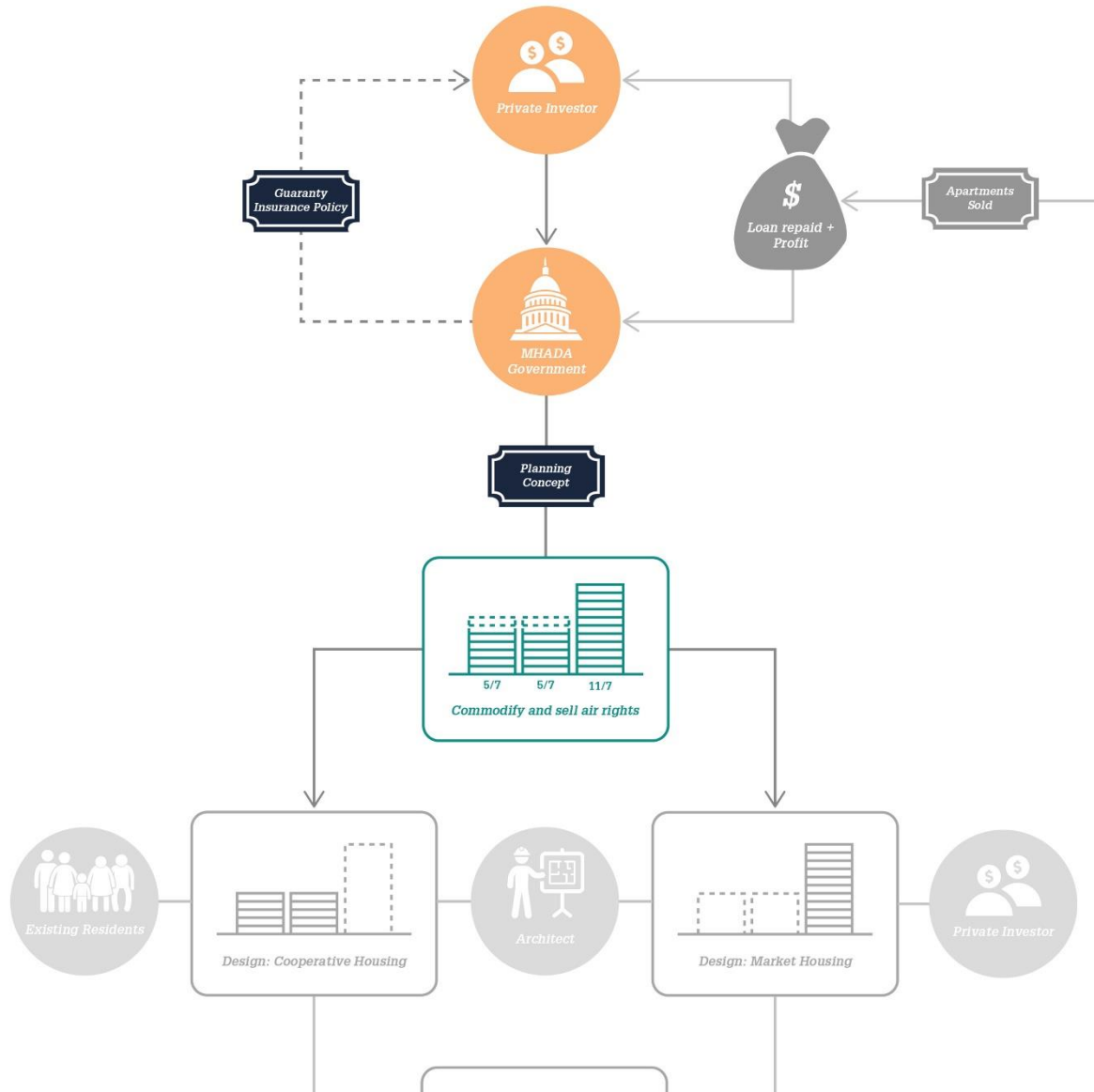


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# Finance Diagram: Flowchart

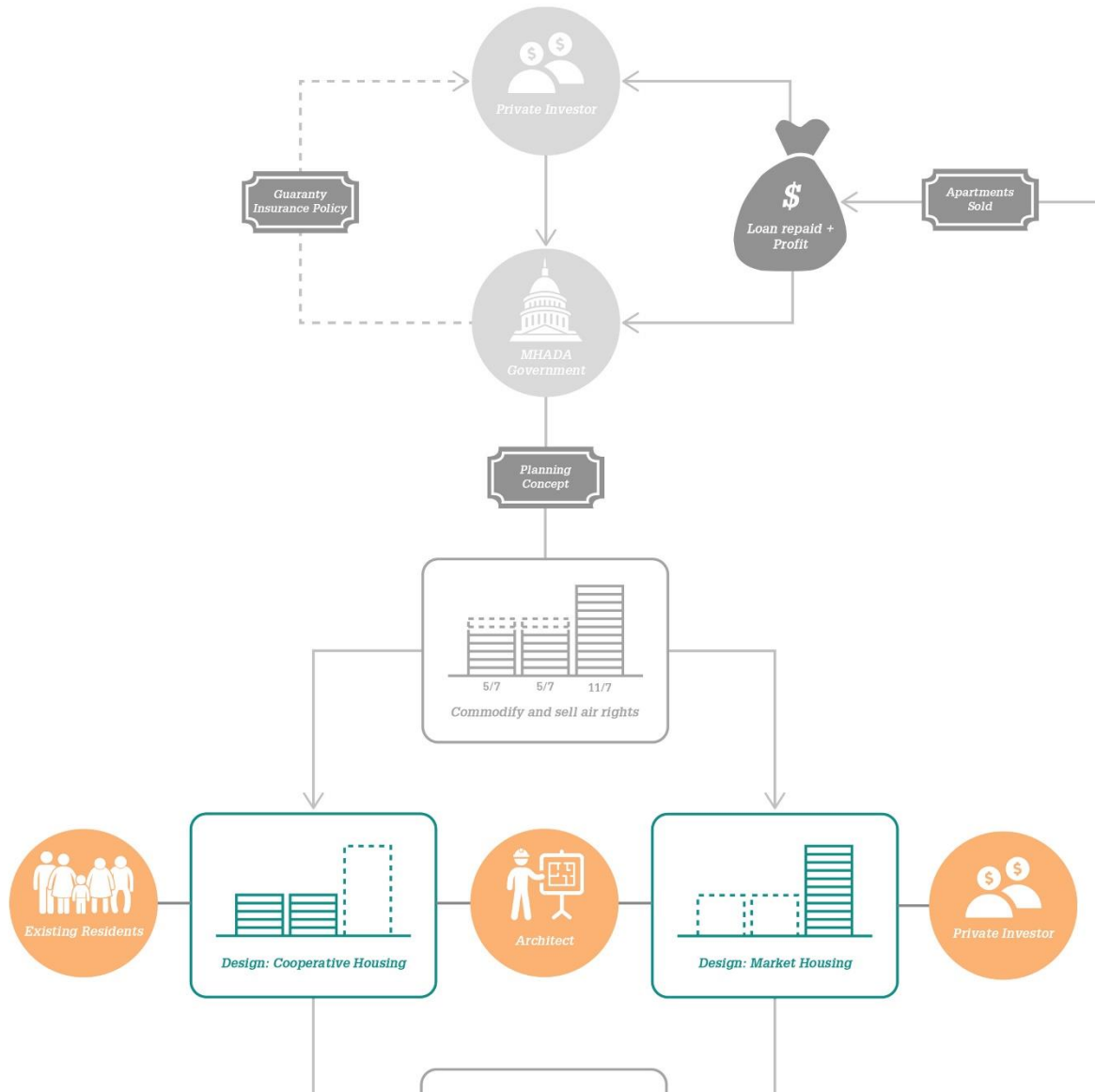
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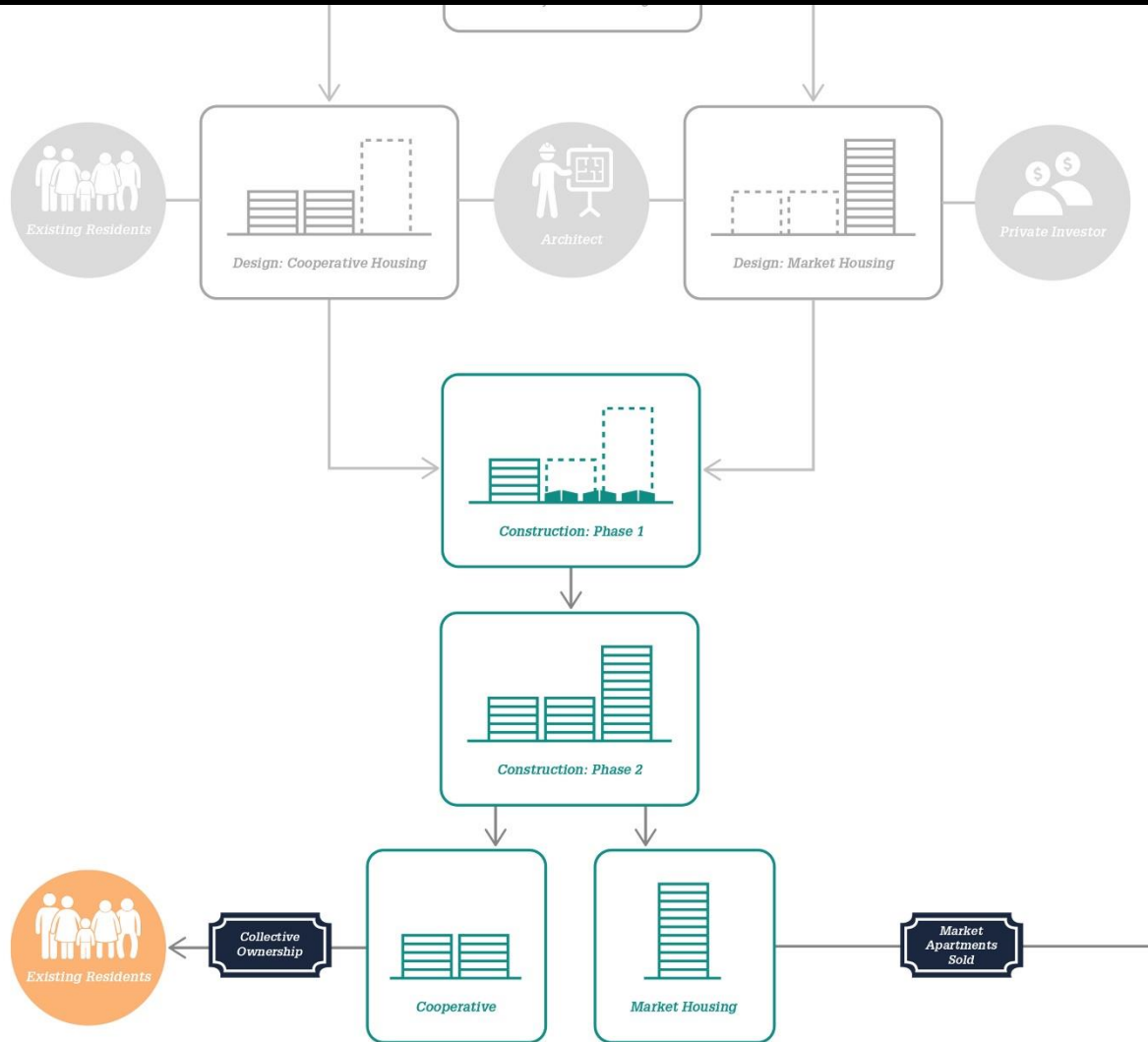




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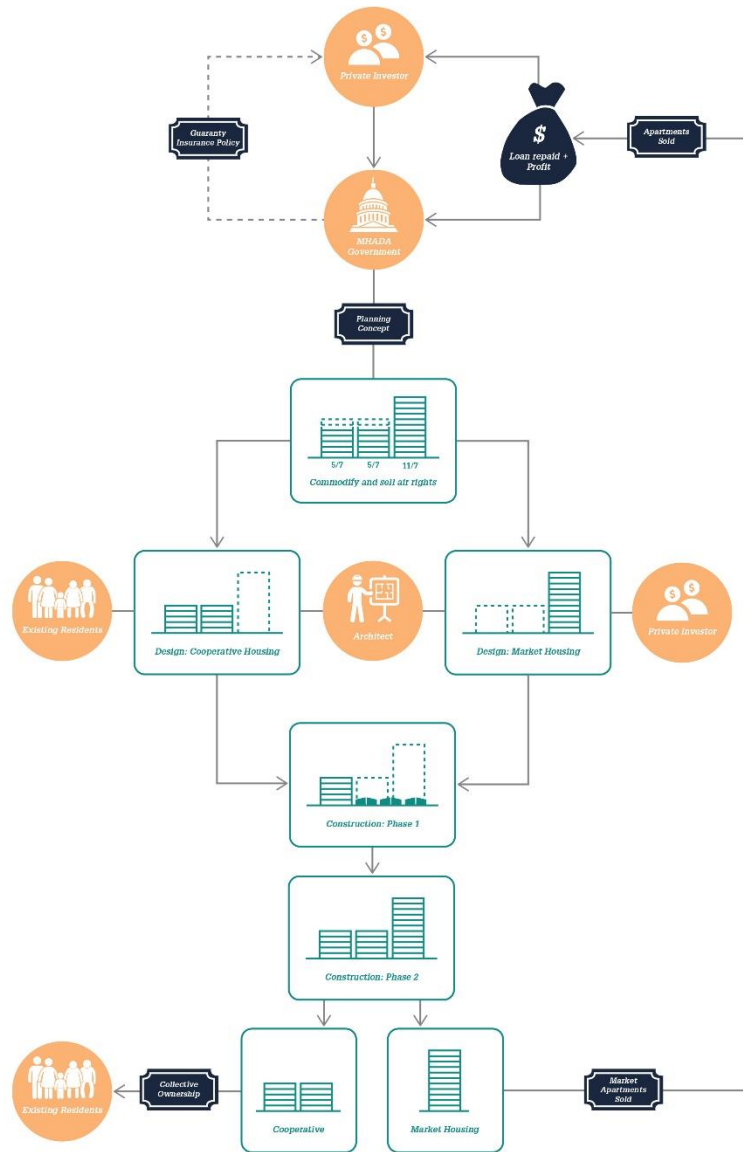




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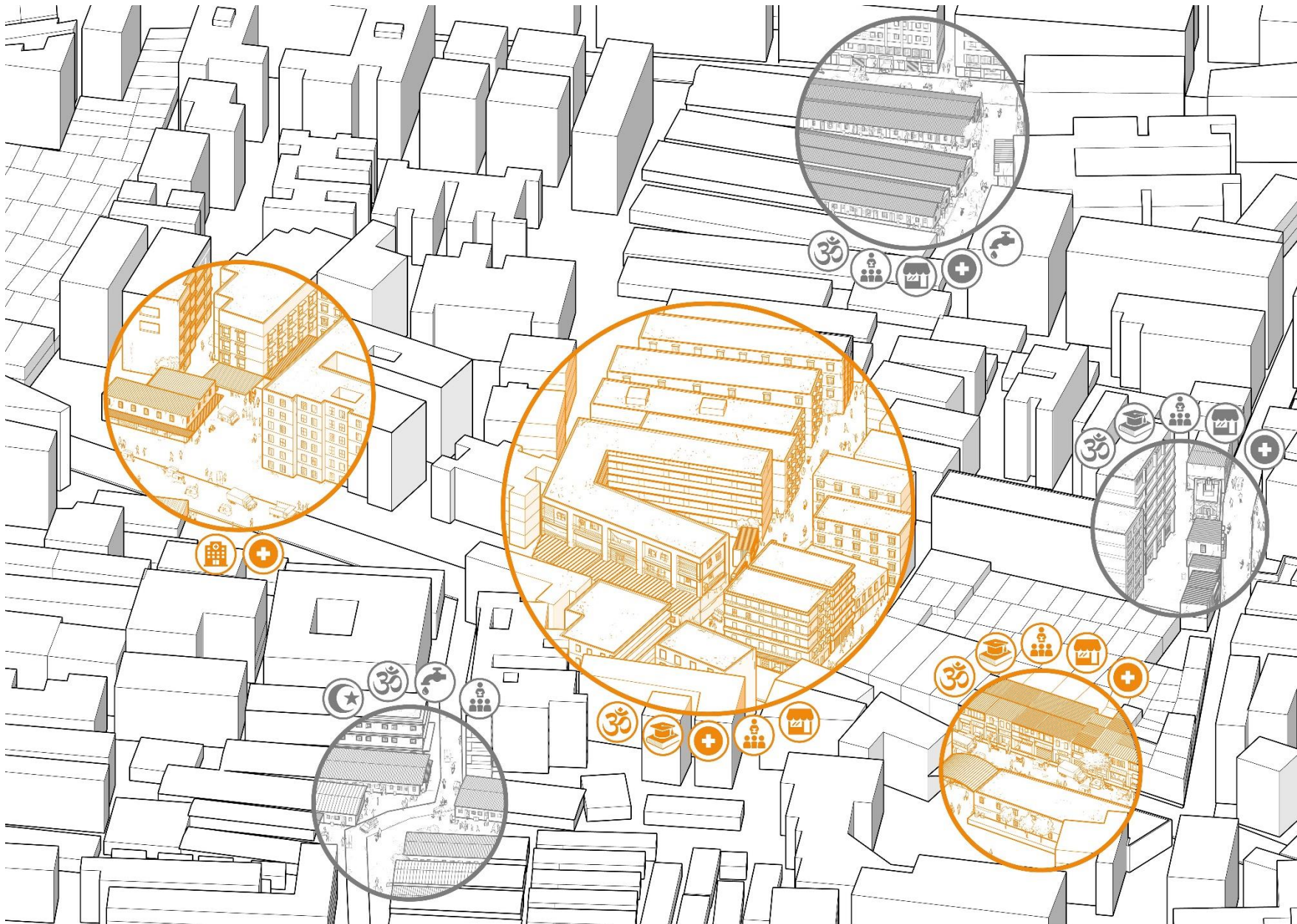
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*“The role of the Architect is to coordinate interests and enable the empowerment of the poor, in a effort to create a whole which is greater than the sum of its parts.”*

# Part 4:

## Urban Design



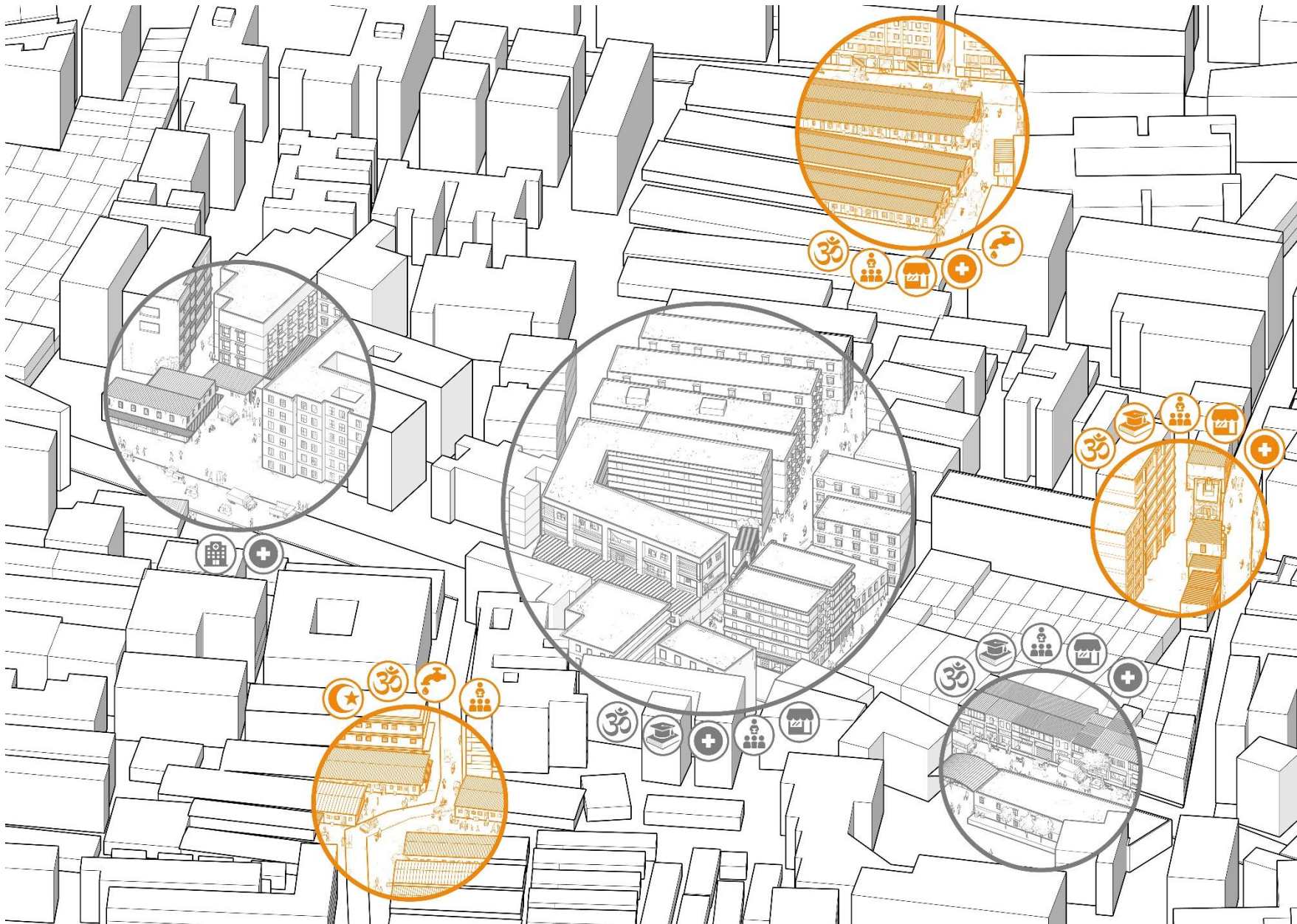


# Site Analysis:

## Amenity Patterns

1. **Virar Road: Main Commercial Street.**
2. Clusters of amenities on side streets.
3. Project site





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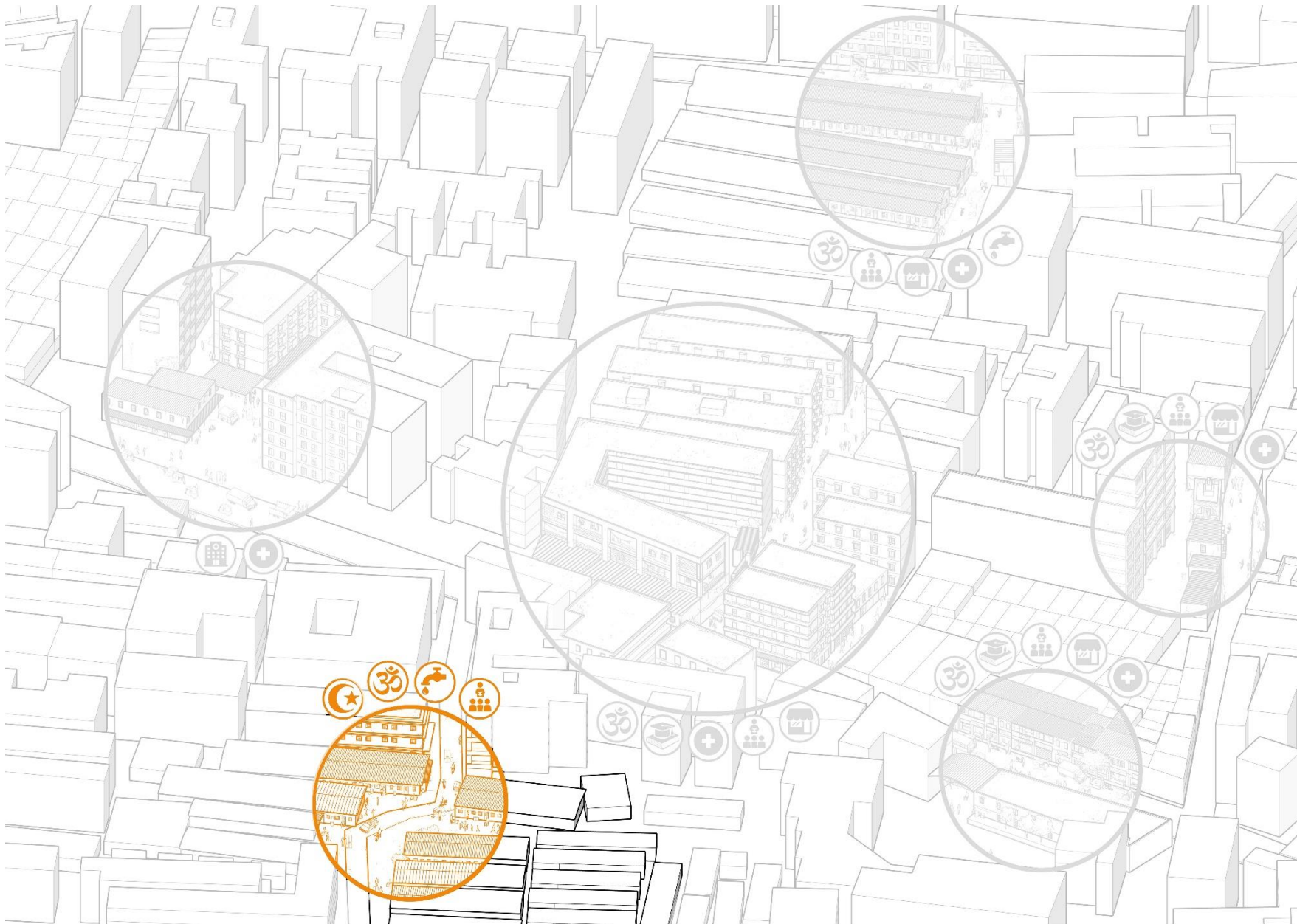
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## Urban Arrangement

1. **Existing Commercial and Temple retained**
2. Proposed Commercial Plinth and new plaza adjacent street
3. Dedicated residential blocks separate from commercial
4. Planned relationship between market housing and cooperative



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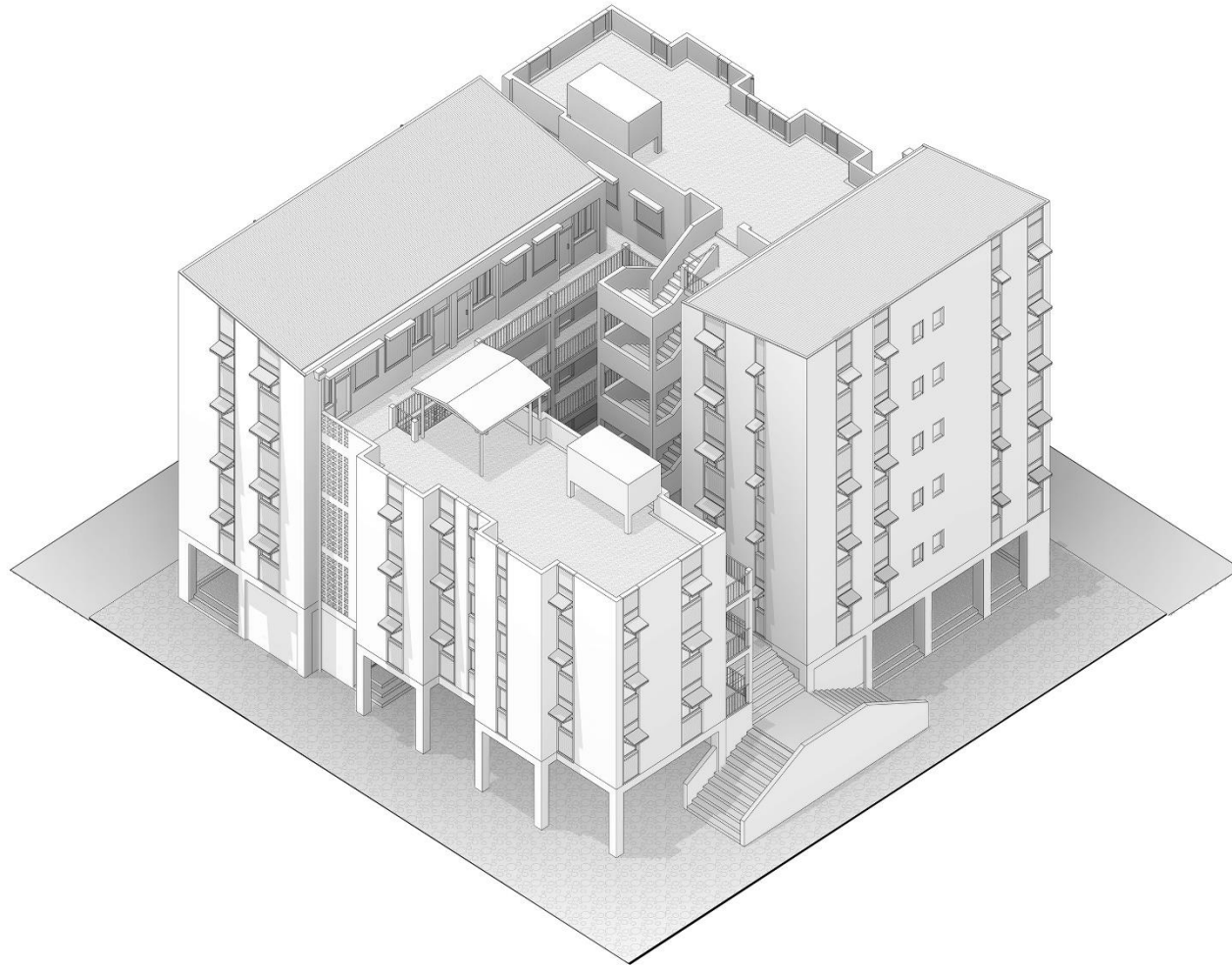
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# Part 5:

## Cooperative Housing Design

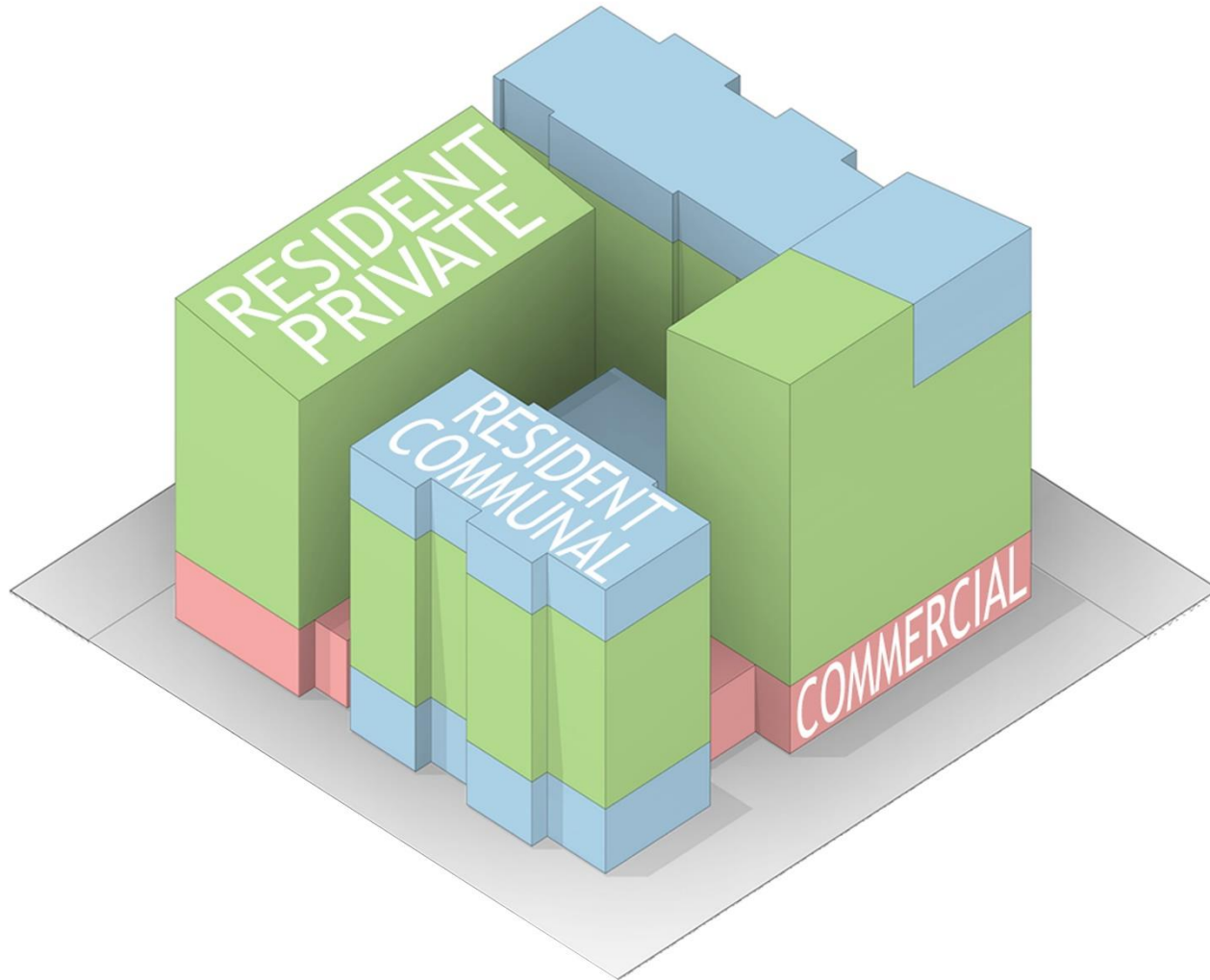




# Co-housing

## Building design

1. **Broken form courtyard building**
2. Mixed use building
3. Resident circulation
4. Dwelling design, FSI & dwellings per hectare
5. Project floor plans
6. Sectional Perspective: Ingredients for design.



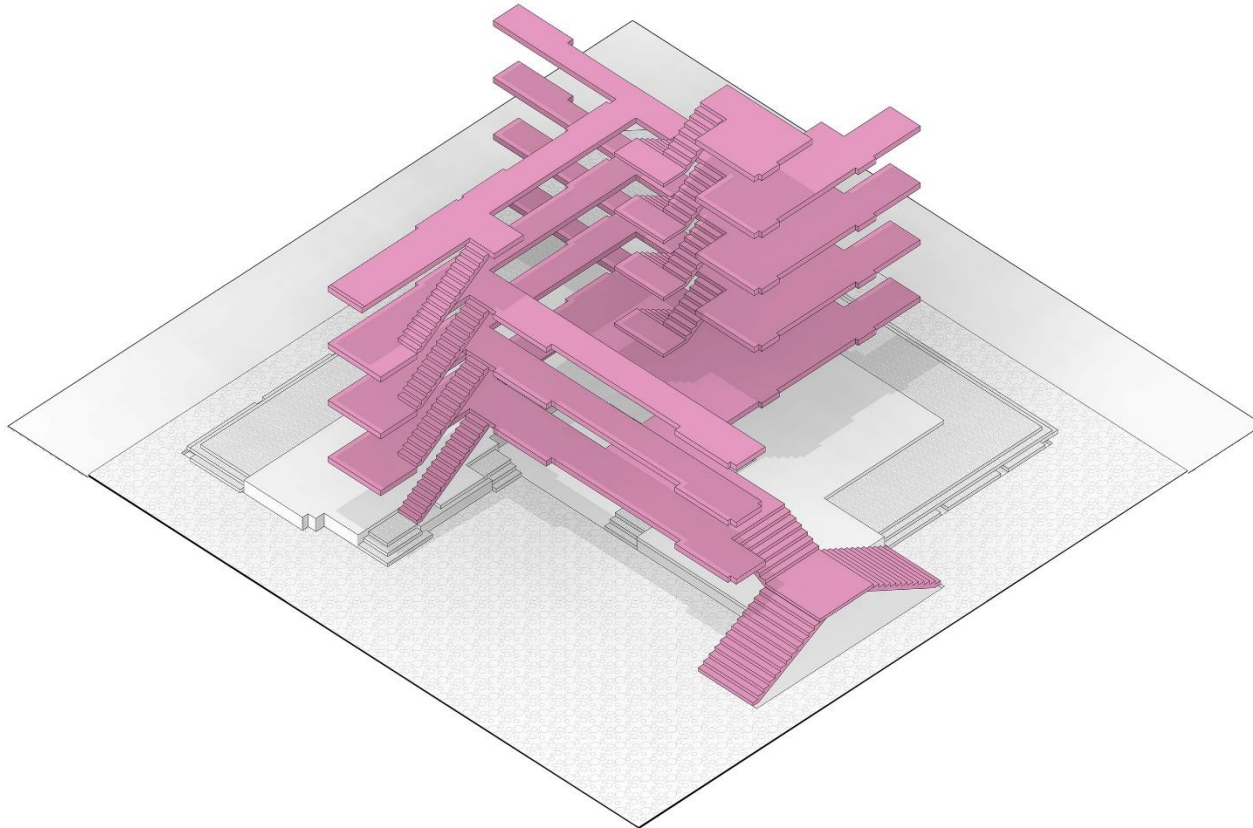
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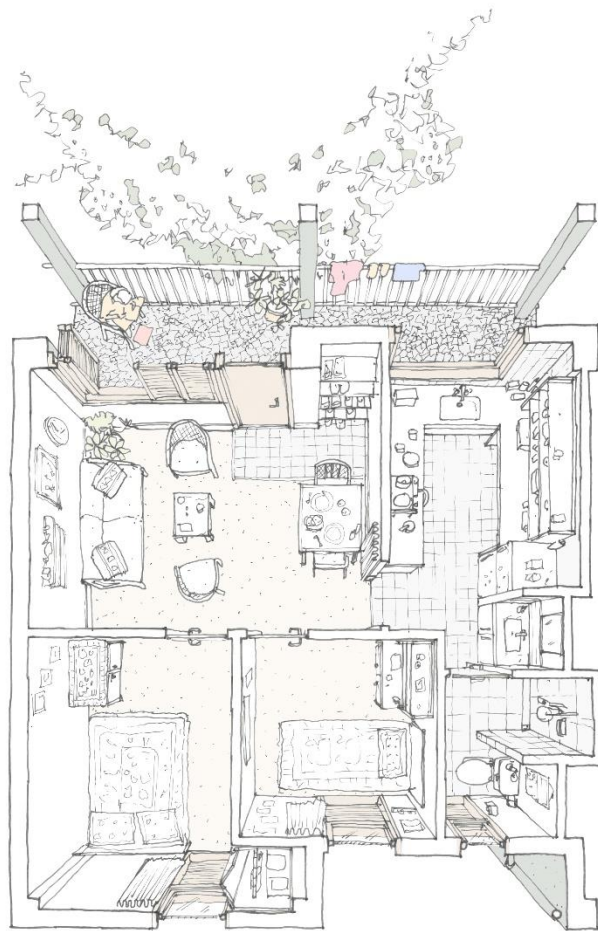
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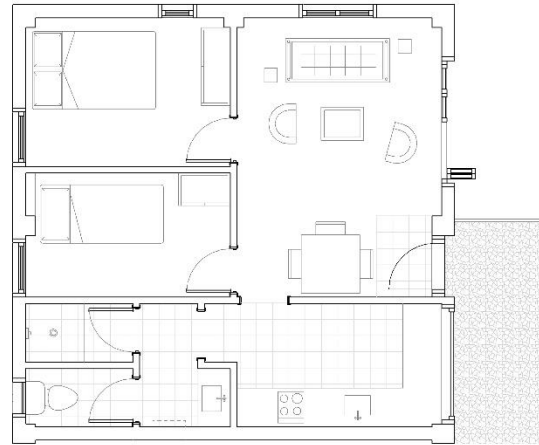


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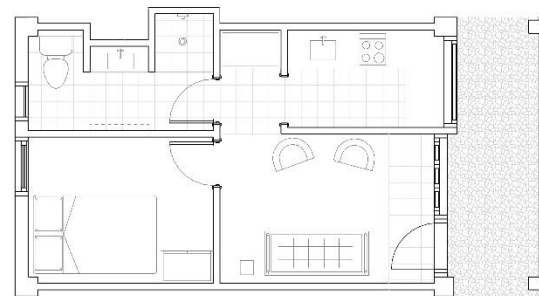




Unit type A  
1:50



Unit type B  
1:50



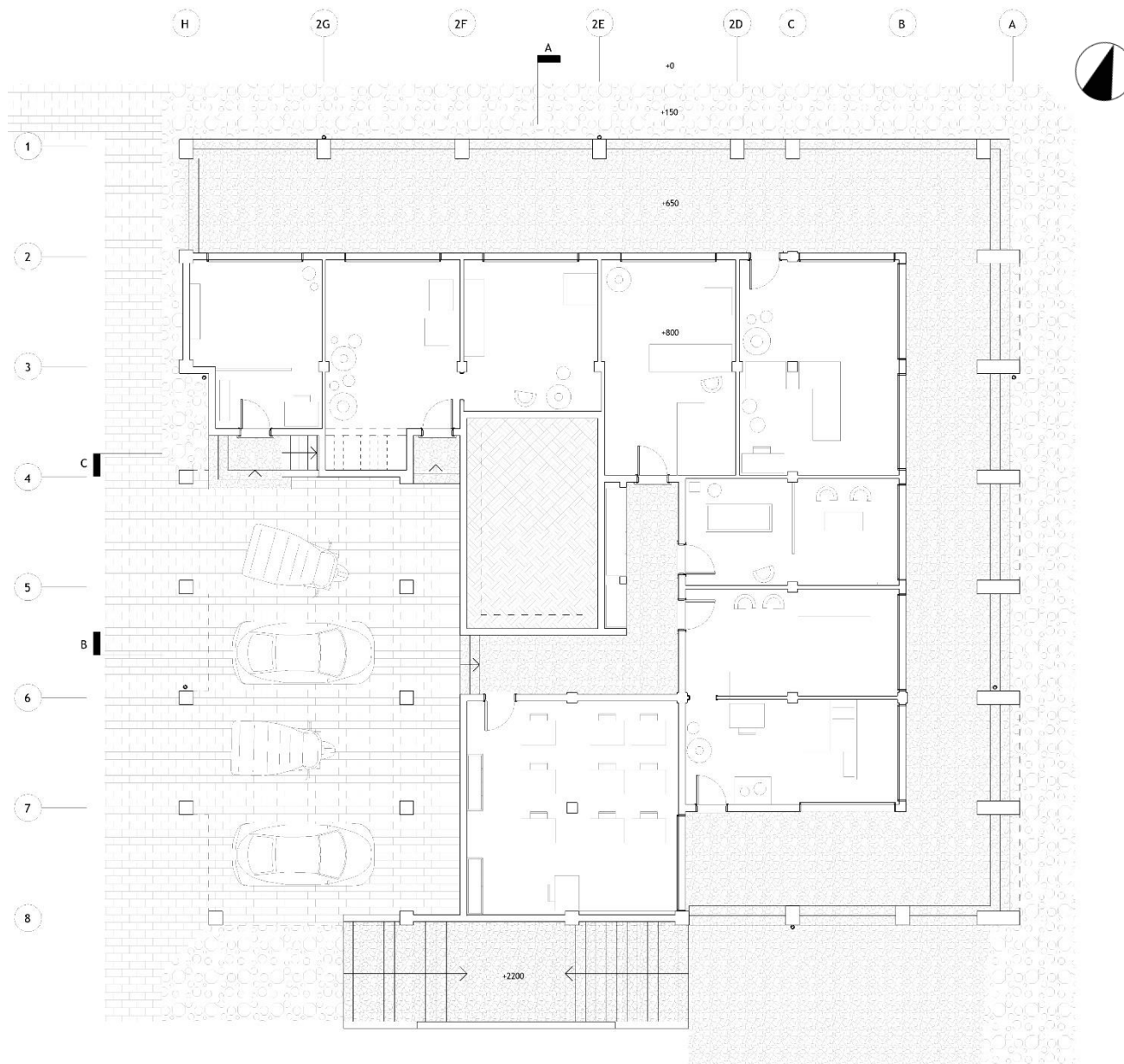
Unit type C  
1:50

|   | Size | Count |
|---|------|-------|
| Unit A  | 37m2 | 14    |
| Unit B  | 40m2 | 9     |
| Unit C  | 25m2 | 18    |
| Total   |      | 41    |
| Commercial Units                                      |      | 9     |
| FSI = Total floor area (2490m2) / Plot size (685m2) = |      | 3.64  |
| Dwellings per hectare = 10,000 / (685m2 / 41) =       |      | 599   |

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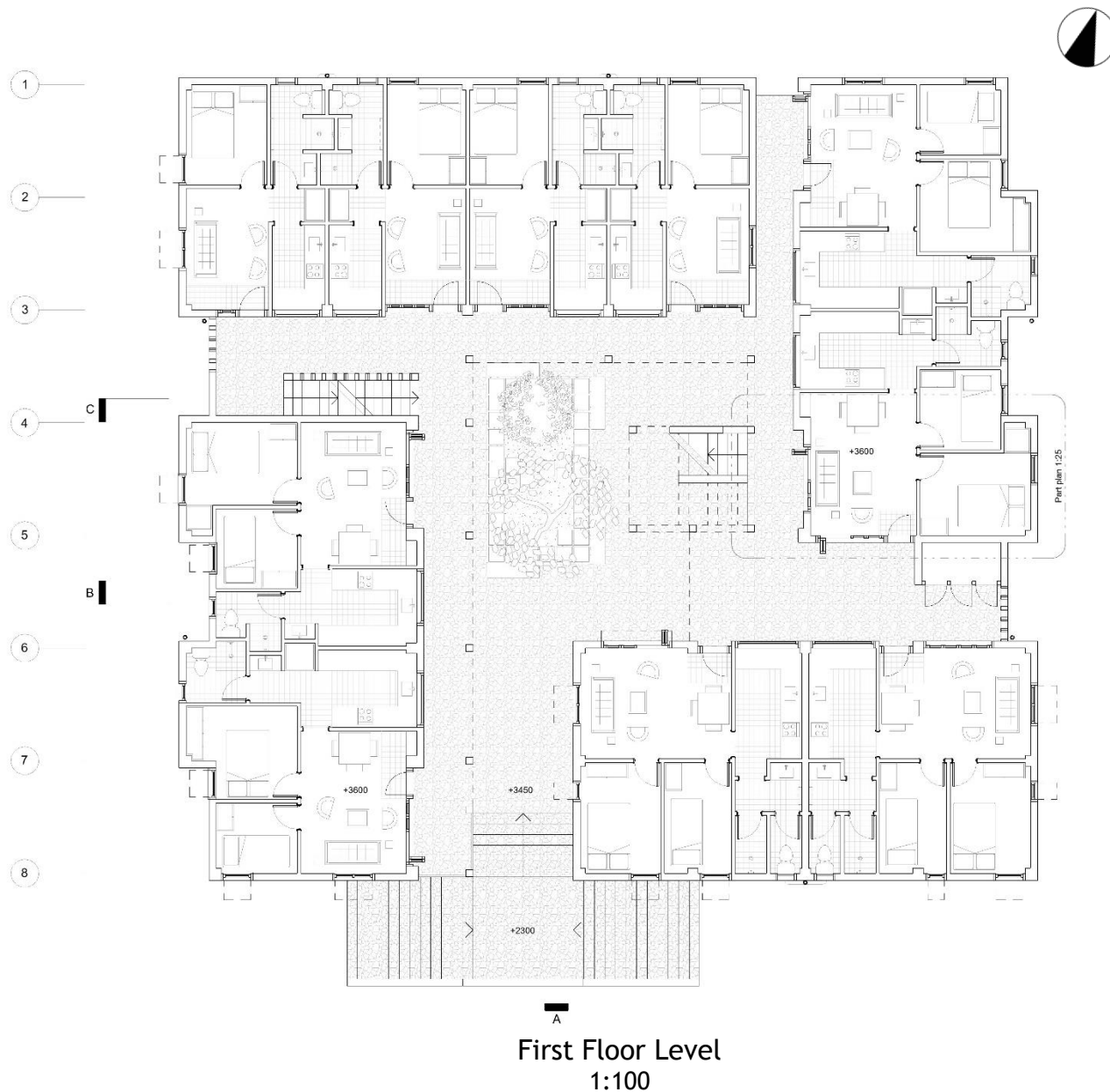


Ground Floor Level  
1:100

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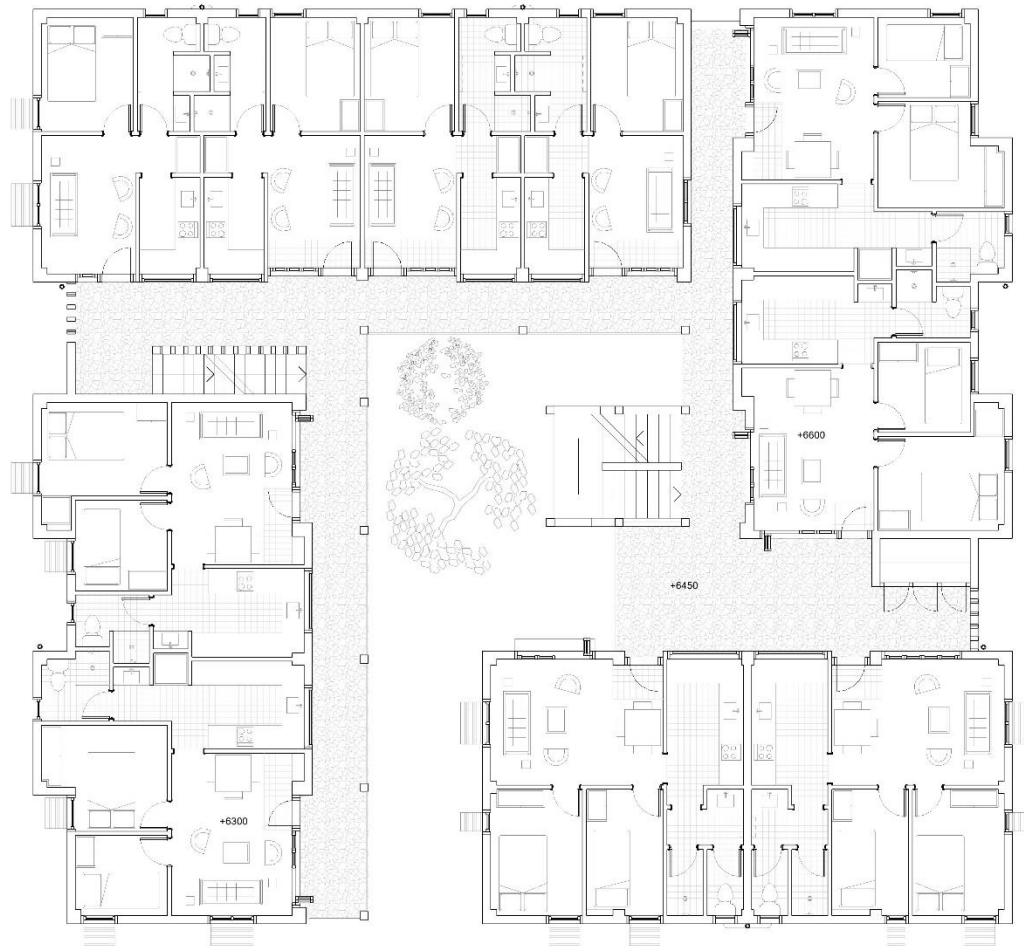


# Co-housing

## Building design

1. Broken form courtyard building
2. Mixed use building
3. Resident circulation
4. Dwelling design, FSI & dwellings per hectare
- 5. Project floor plans**
6. Sectional Perspective: Ingredients for design.





Second Floor Level  
1:100

# Co-housing

## Building design

1. Broken form courtyard building
2. Mixed use building
3. Resident circulation
4. Dwelling design, FSI & dwellings per hectare
- 5. Project floor plans**
6. Sectional Perspective: Ingredients for design.



Third Floor Level  
1:100

# Co-housing

## Building design

1. Broken form courtyard building
2. Mixed use building
3. Resident circulation
4. Dwelling design, FSI & dwellings per hectare
- 5. Project floor plans**
6. Sectional Perspective: Ingredients for design.



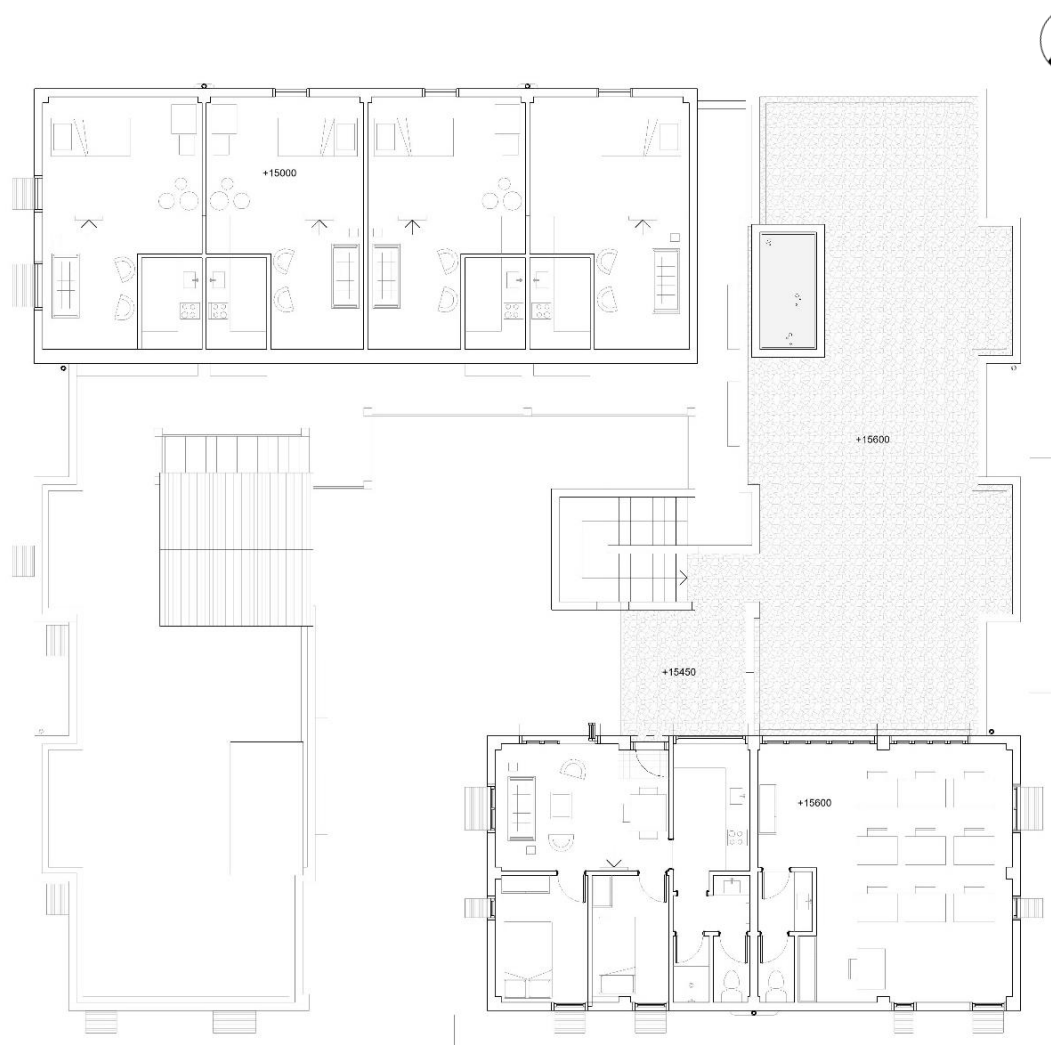
Fourth Floor Level  
1:100

# Co-housing

## Building design

1. Broken form courtyard building
2. Mixed use building
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4. Dwelling design, FSI & dwellings per hectare
- 5. Project floor plans**
6. Sectional Perspective: Ingredients for design.





Fourth Floor Level  
1:100

# Co-housing

## Building design

1. Broken form courtyard building
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3. Resident circulation
4. Dwelling design, FSI & dwellings per hectare
- 5. Project floor plans**
6. Sectional Perspective: Ingredients for design.



Section AA

# Co-housing

Building design

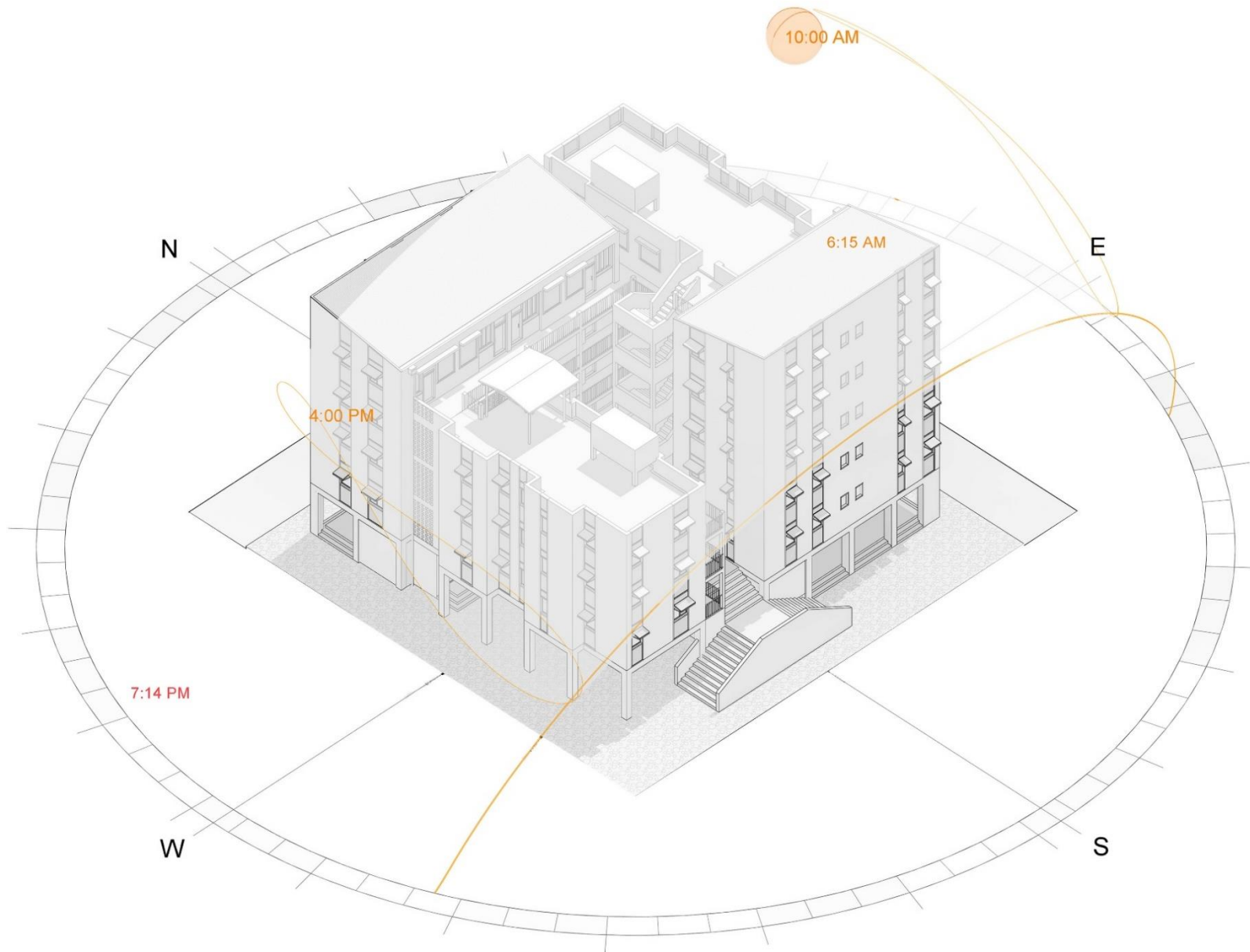
## Sectional Perspective: Ingredients for design.

- a) Human Scale
- b) Collective ownership
- c) Integrated communal facilities
- d) Democratic Self-management
- e) Security

# Part 6:

## Building Technology Design

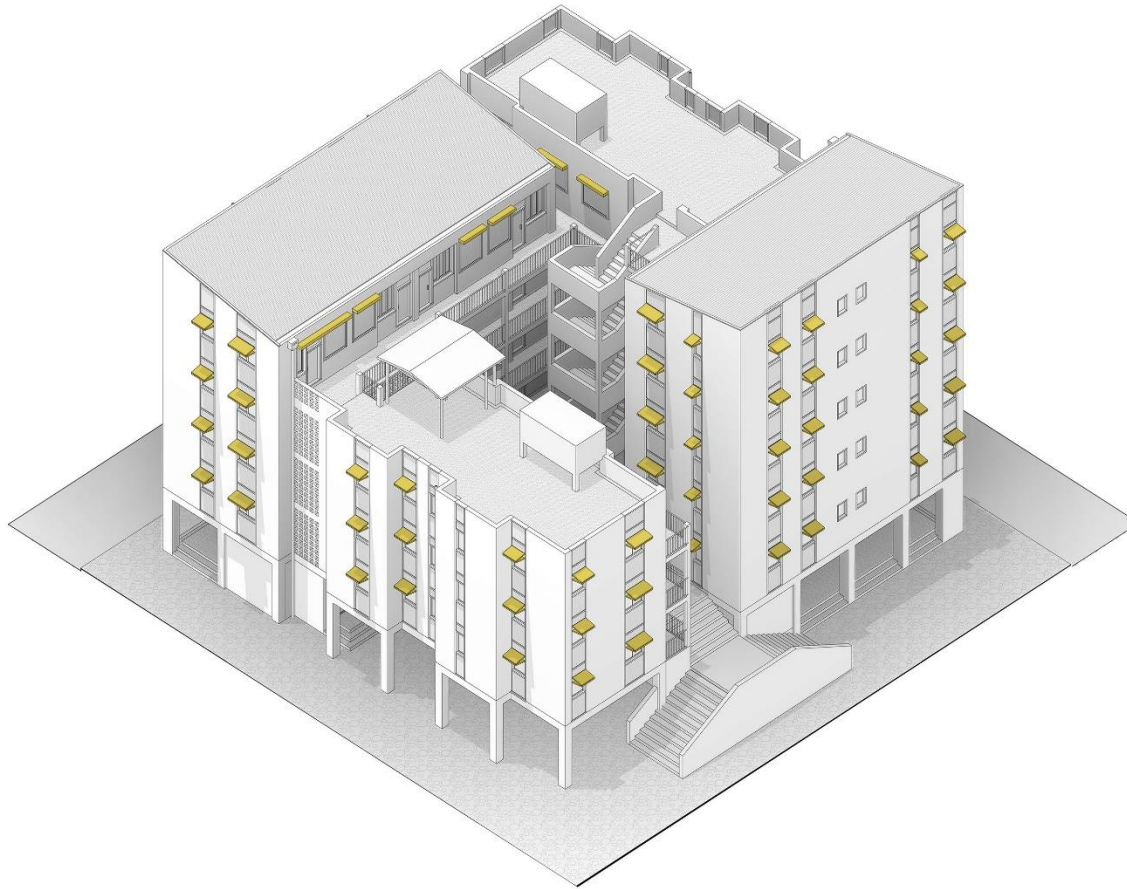




# Climate Design

Mumbai Specific

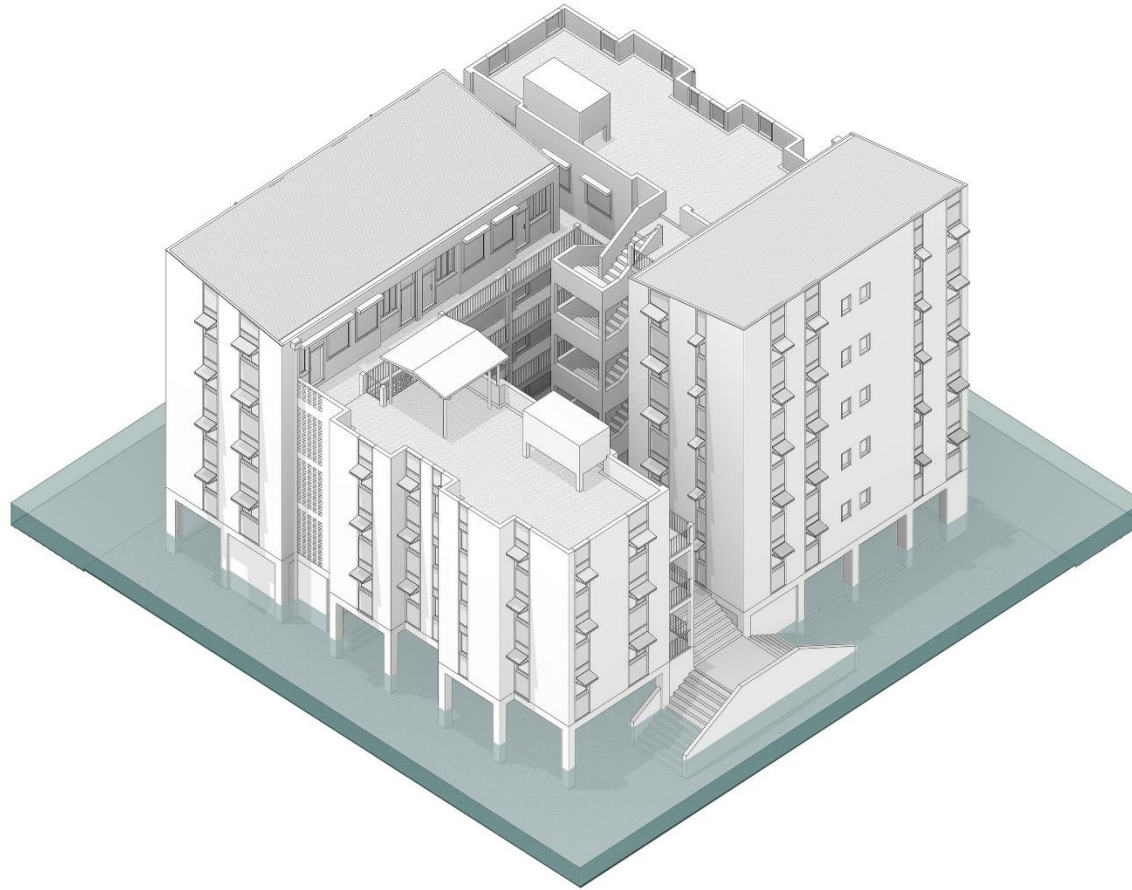
1. Solar diagram
2. Shading devices
3. Flood protection
4. Sheltered Courtyard
5. Cross-ventilation



# Climate Design

Mumbai Specific

1. Solar diagram
- 2. Shading devices**
3. Flood protection
4. Sheltered Courtyard
5. Cross-ventilation

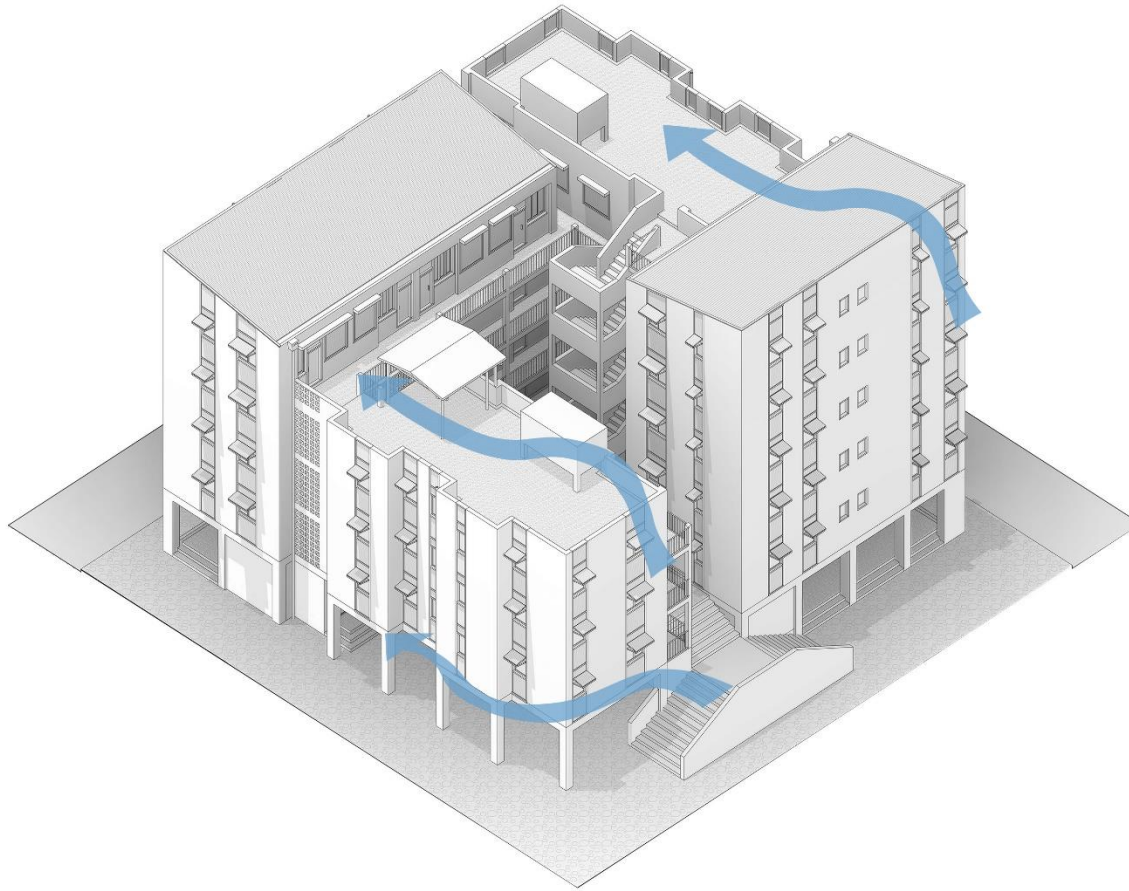


# Climate Design

Mumbai Specific

1. Solar diagram
2. Shading devices
- 3. Flood protection**
4. Sheltered Courtyard
5. Cross-ventilation

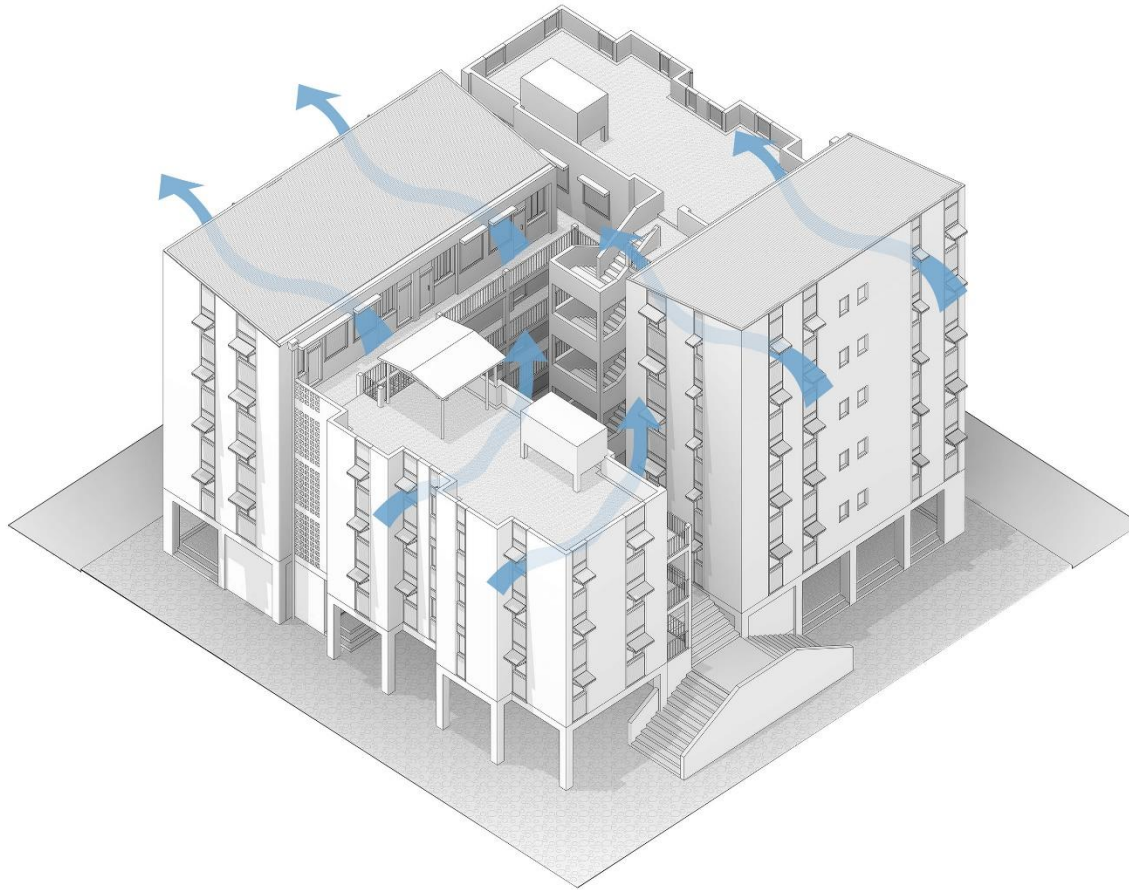




# Climate Design

Mumbai Specific

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# Climate Design

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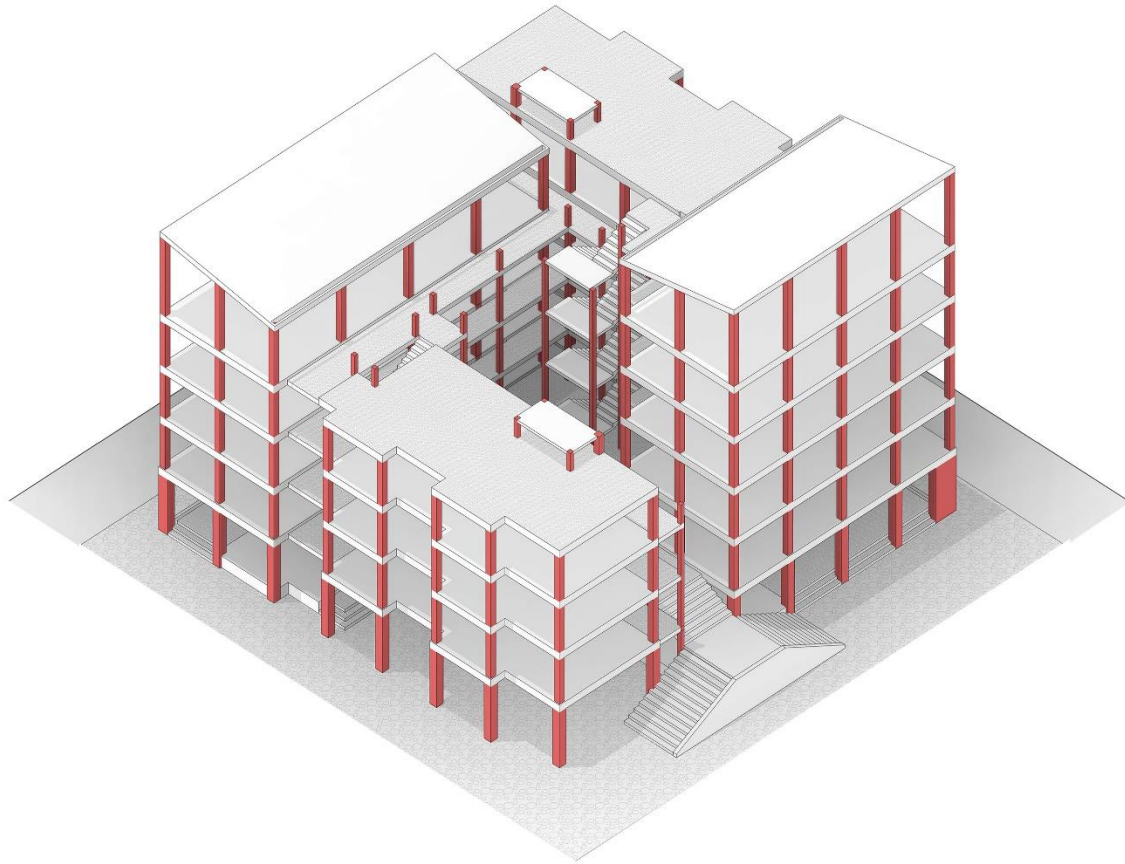


# Construction

## Detail Design

1. **Simple familiar construction technique**
2. Vertical Load Elements
3. Lateral Load Elements
4. Part Plan: Apartment
5. Façade system
6. Details: Basement
7. Details: Wall openings
8. Details: Roof and Gallery
9. Details: Parapet walls

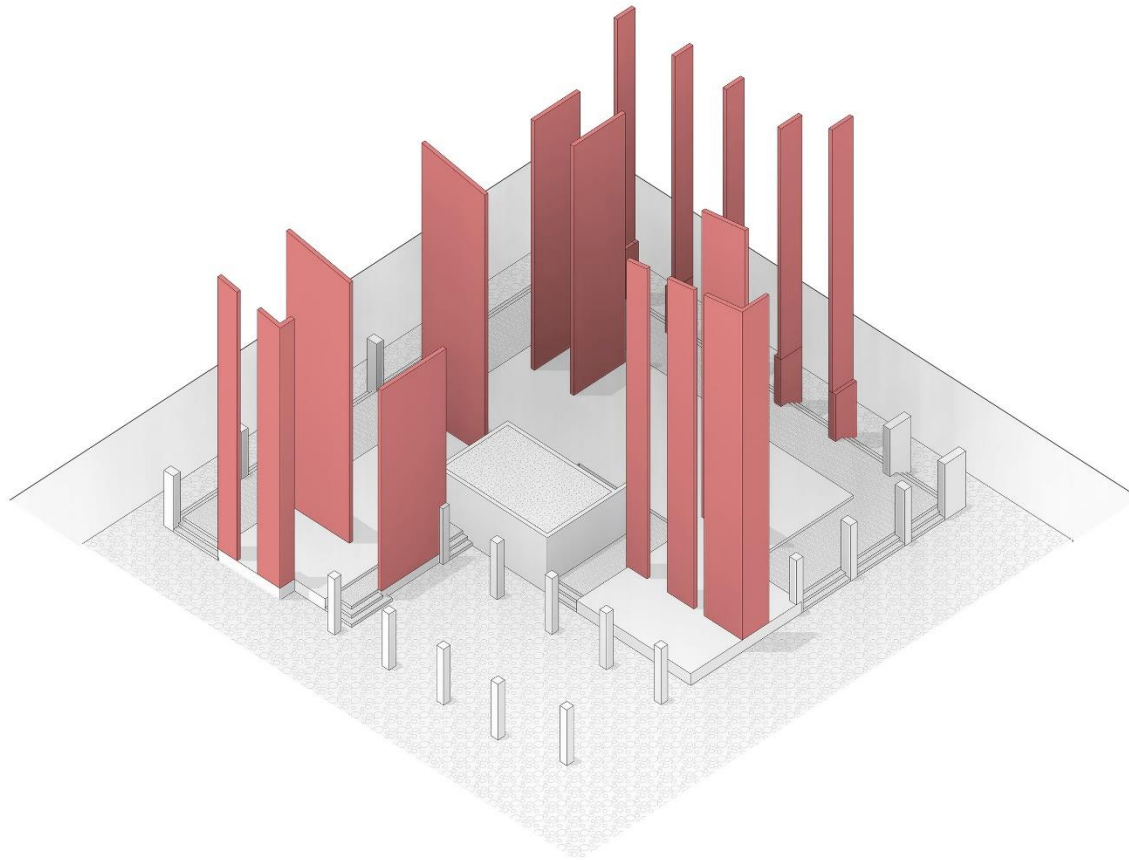




# Construction

## Detail Design

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# Construction

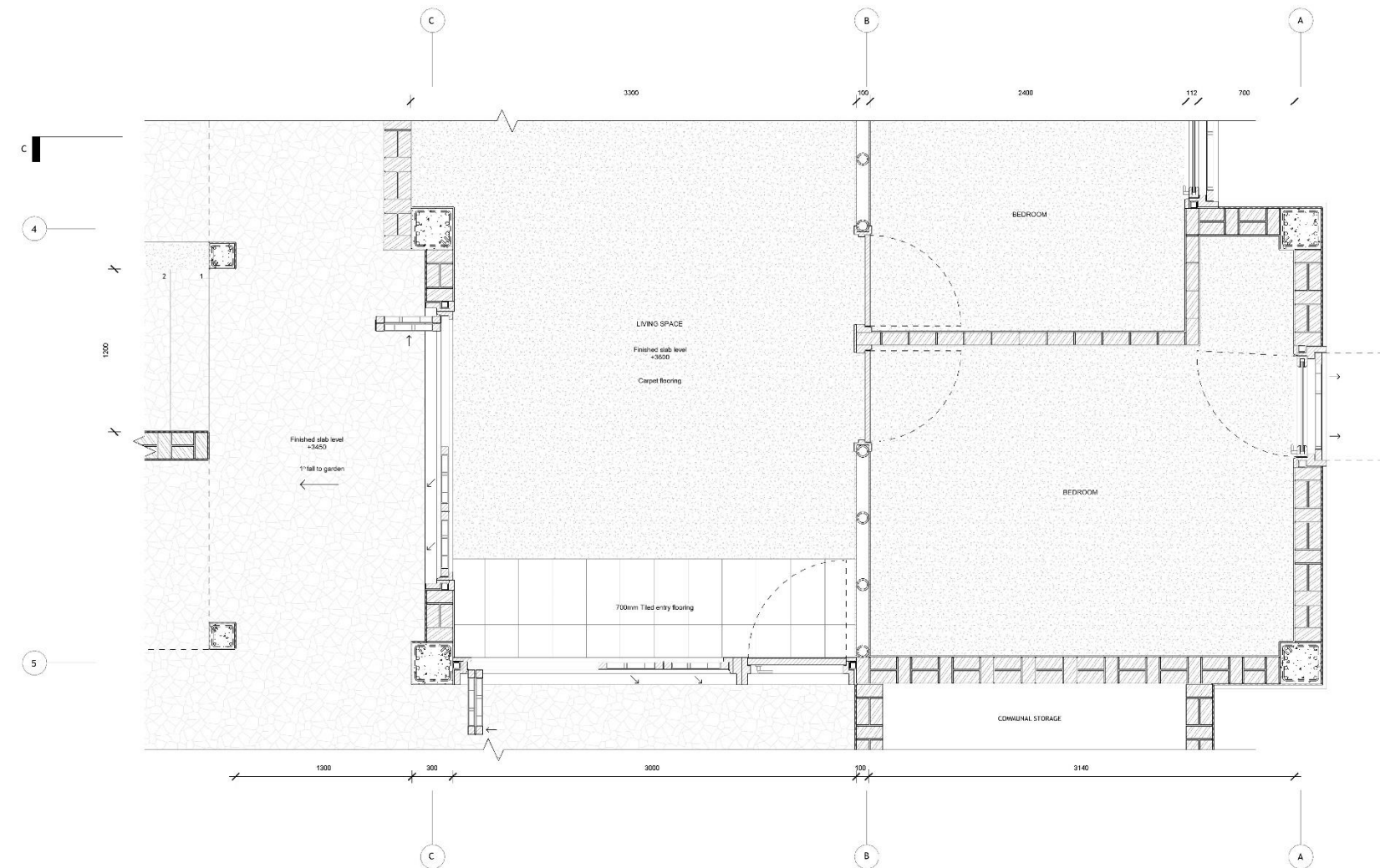
## Detail Design

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# Construction

## Detail Design

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## Detail Design

## Detail Design

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- ## 2. Vertical Load Elements

- ### 3. Lateral Load Elements

- #### 4. Part Plan: Apartment

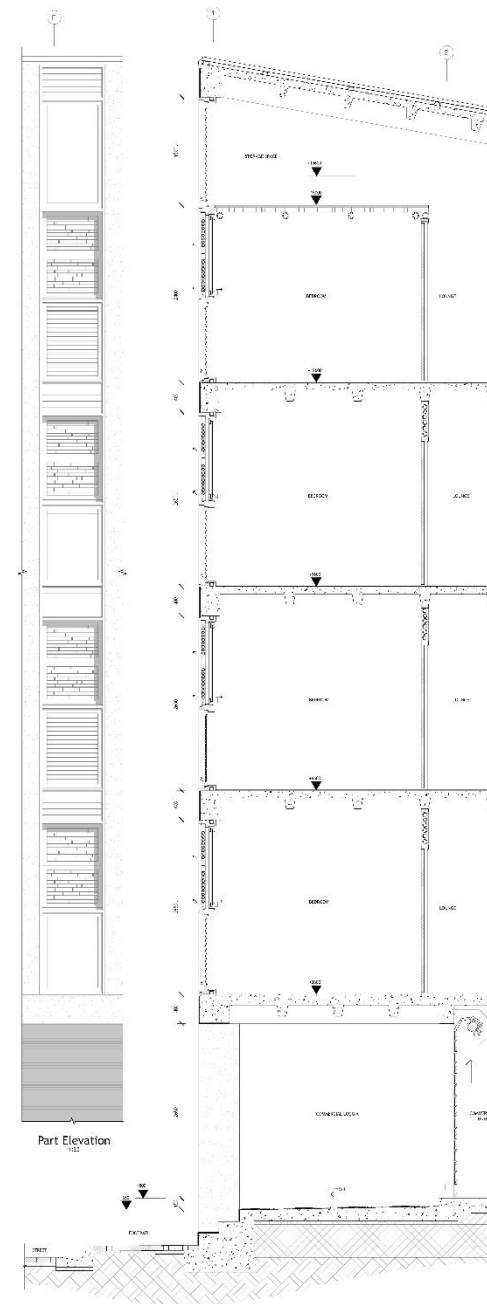
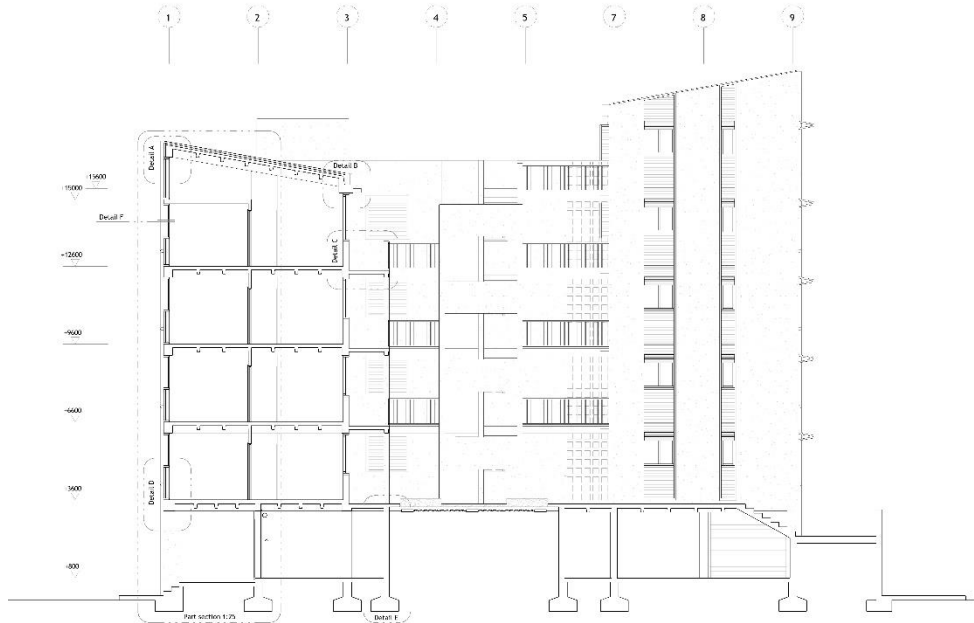
- ## 5. Façade system

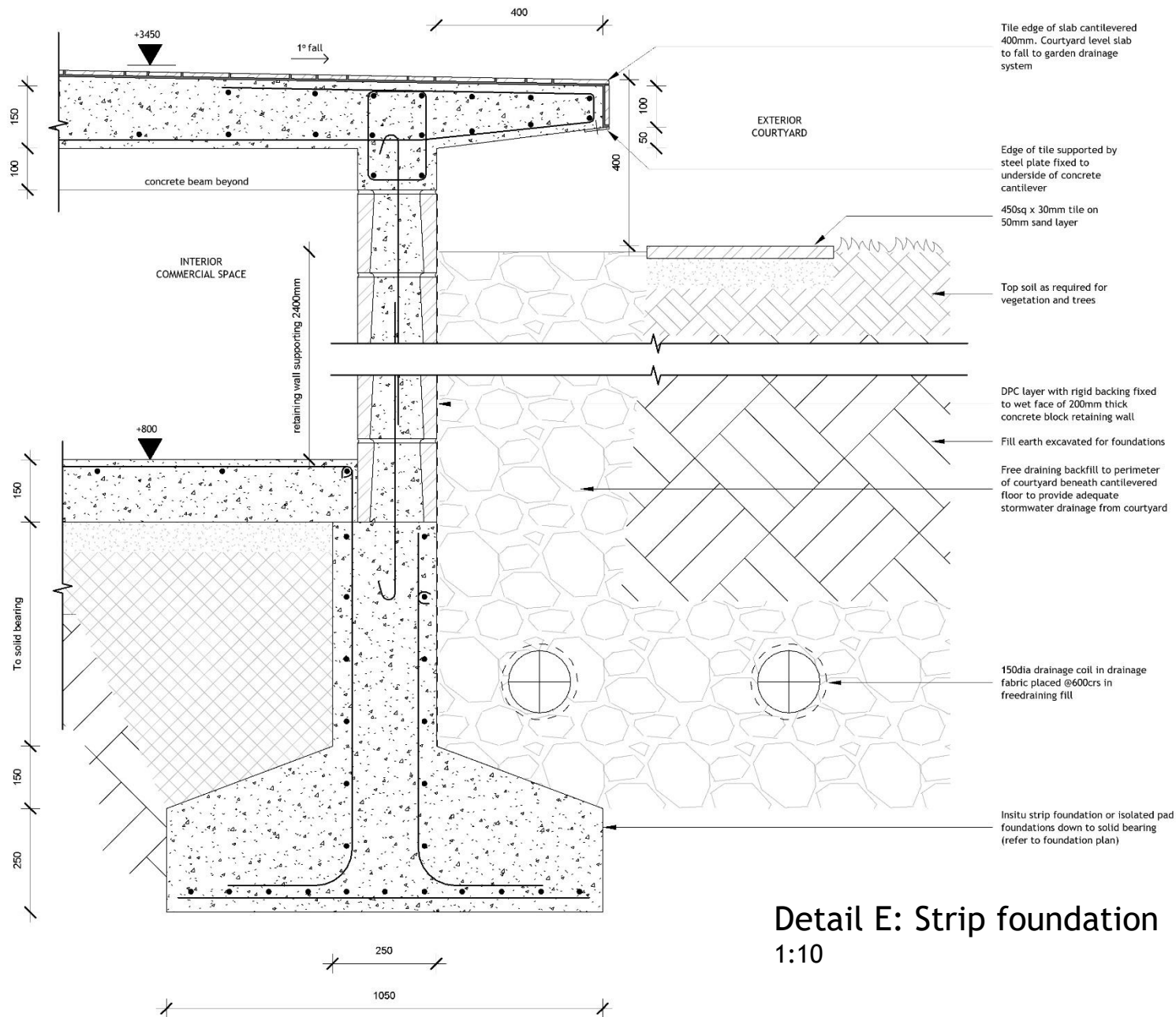
- ## 6. Details: Basement

- ## 7. Details: Wall openings

- ## 8. Details: Roof and Gallery

- ## 9. Details: Parapet walls



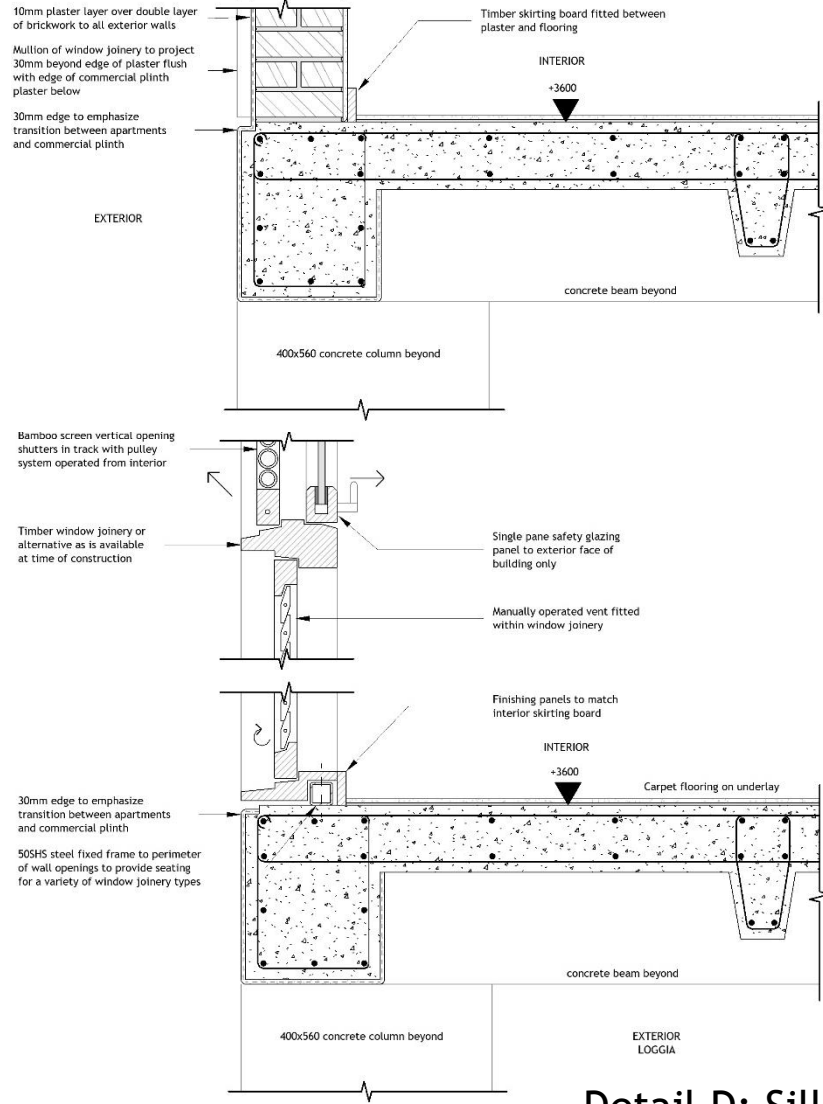


Detail E: Strip foundation  
1:10

# Construction Detail Design

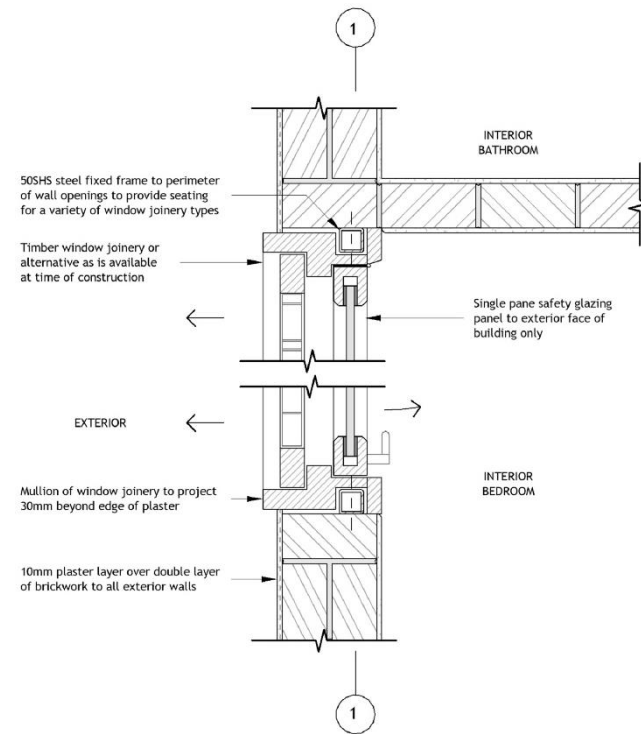
1. Simple familiar construction technique
2. Vertical Load Elements
3. Lateral Load Elements
4. Part Plan: Apartment
5. Façade system
- 6. Details: Basement**
7. Details: Wall openings
8. Details: Roof and Gallery
9. Details: Parapet walls

Detail D: Soffit  
1:10



Detail D: Sill  
1:10

Detail F: Jamb  
1:10



# Construction Detail Design

1. Simple familiar construction technique
2. Vertical Load Elements
3. Lateral Load Elements
4. Part Plan: Apartment
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7. **Details: Wall openings**
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9. Details: Parapet walls

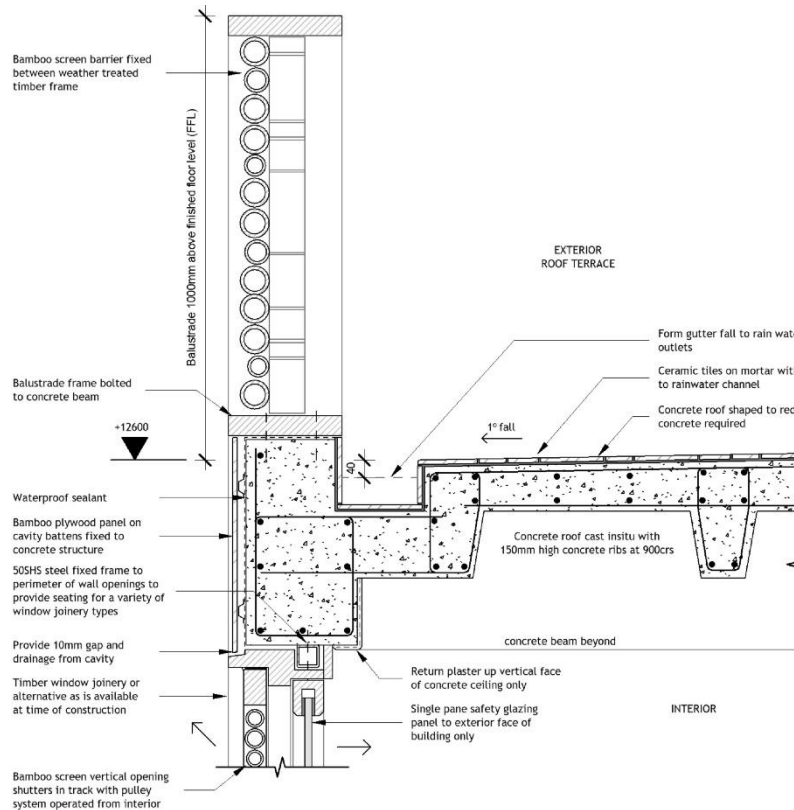




# Construction

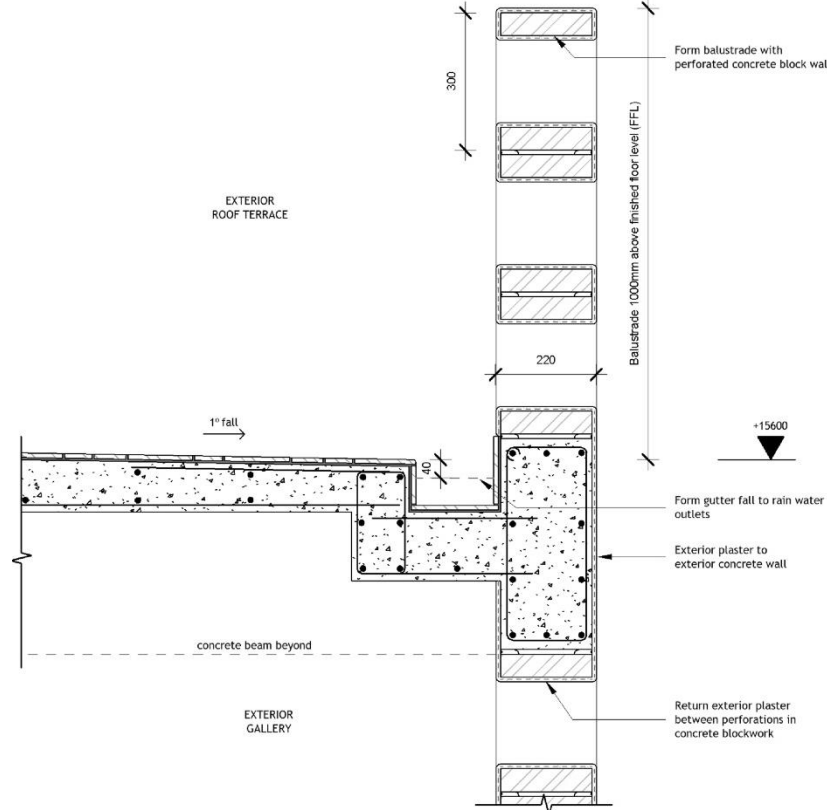
## Detail Design

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4. Part Plan: Apartment
5. Façade system
6. Details: Basement
7. Details: Wall openings
8. Details: Roof and Gallery
9. **Details: Parapet walls**



Detail G: Bamboo Balustrade

1:10



Detail H: Block Balustrade

1:10

# Part 7:

## Conclusion

### Research Question [part 1]:

Within the context of the Hyper-commodification of housing in Mumbai: how can a new model of affordable co-housing act as a framework to preserve, strengthen, and develop community, while meeting density requirements and living standards?

### Research Question [part 2]:

How can dwelling design decommodify housing to better match how people live rather than how people invest?



Thank you

