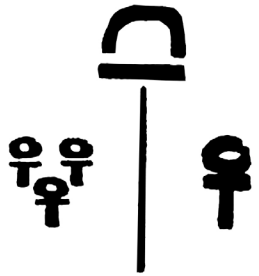
Open Building Approach
Toward
Inclusive Urban Space



Prelude

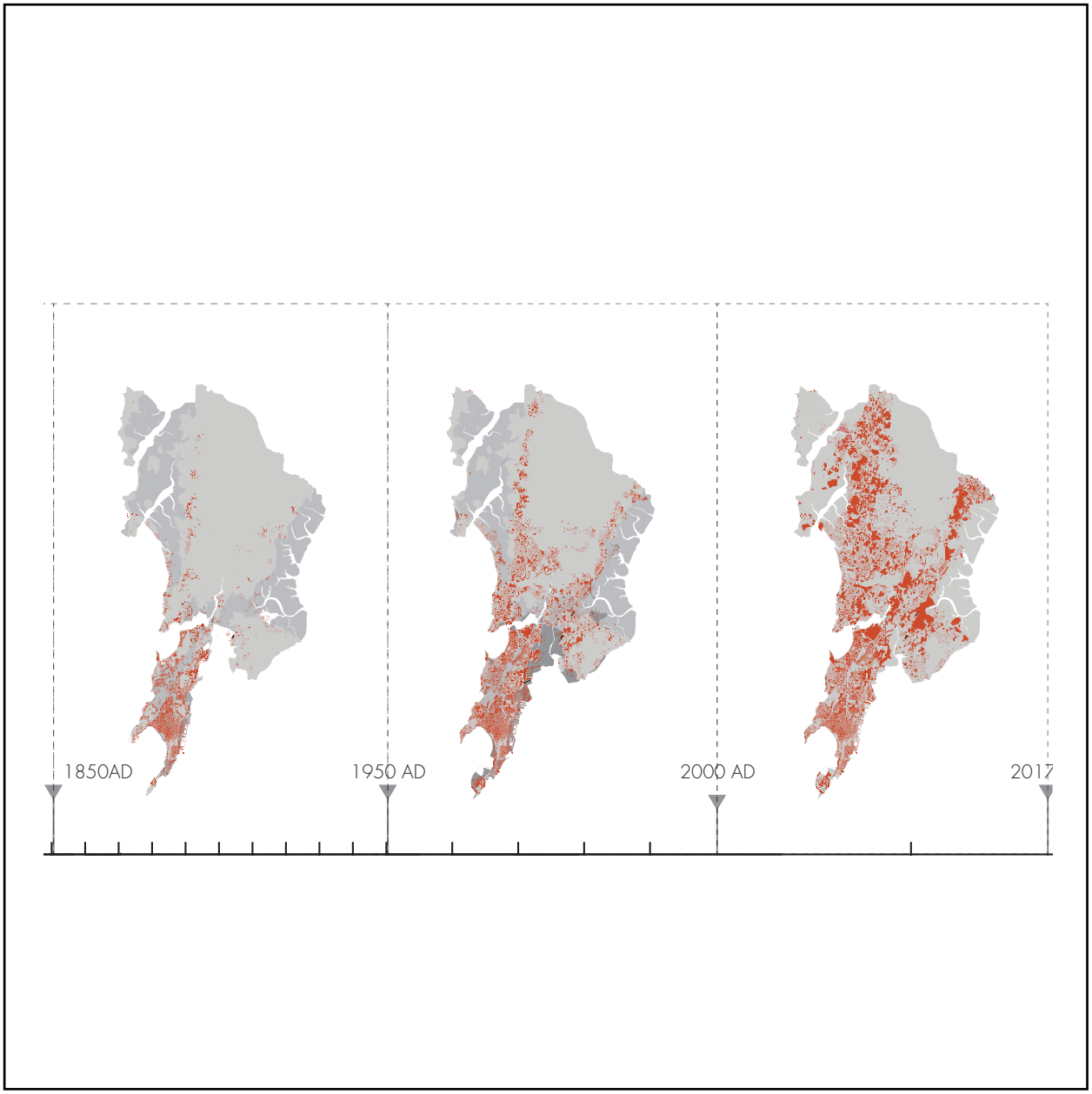
Location

India

Vasai Virar

Mumbai

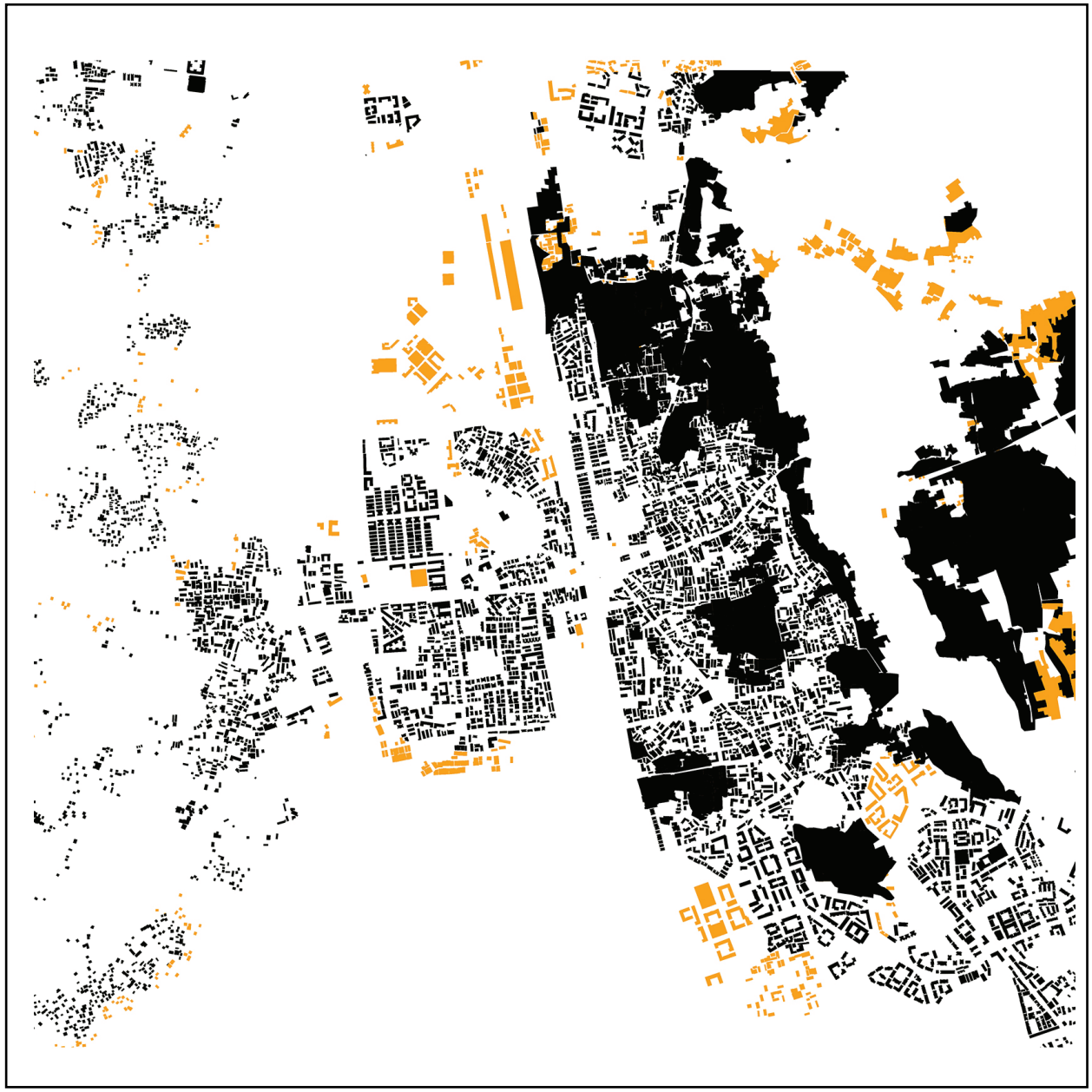
Mumbai Urban Growth

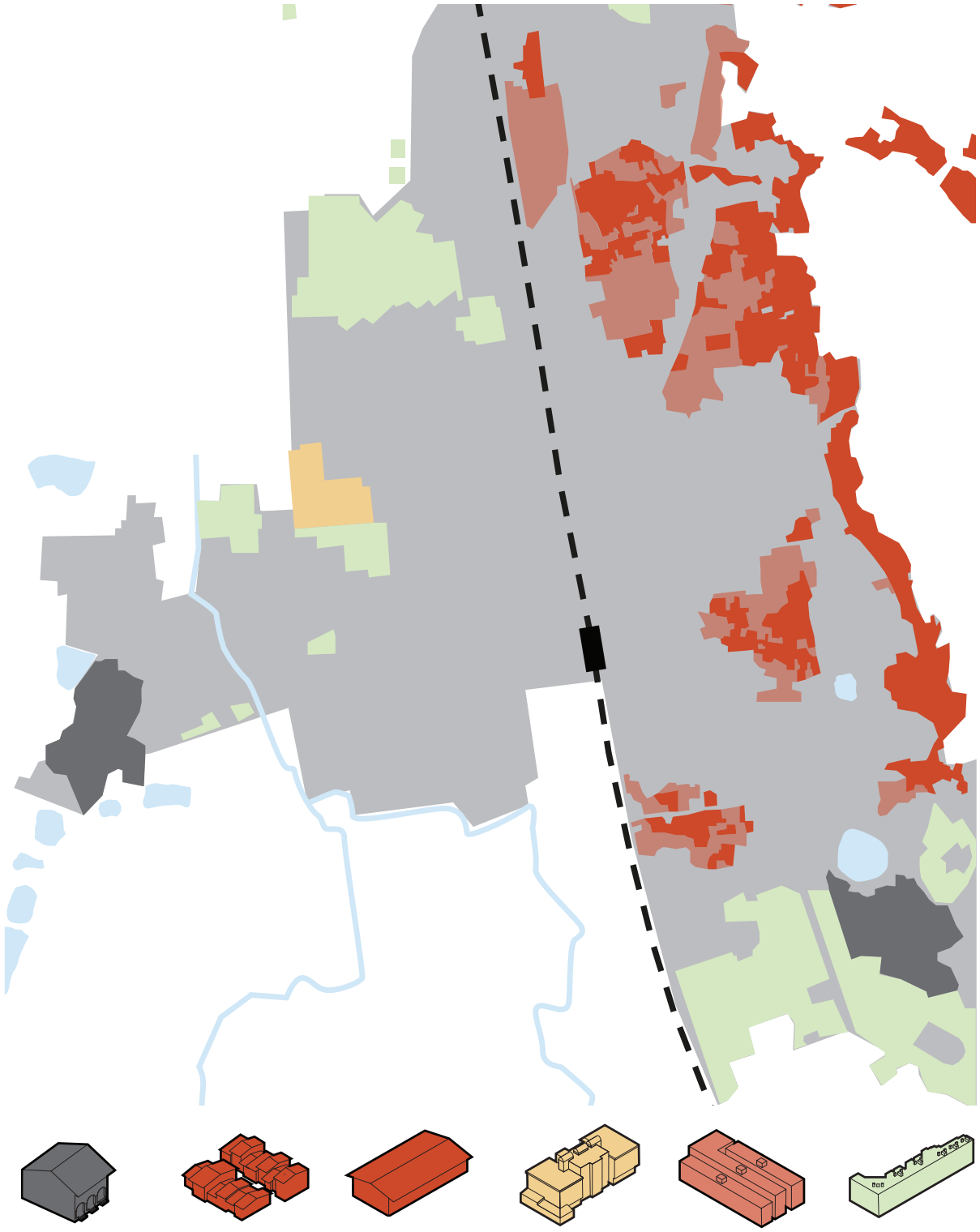


Nalasopara

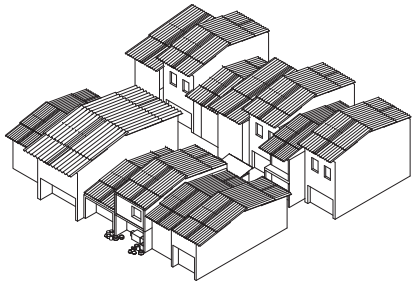
Nalasopara Urban Transfromation

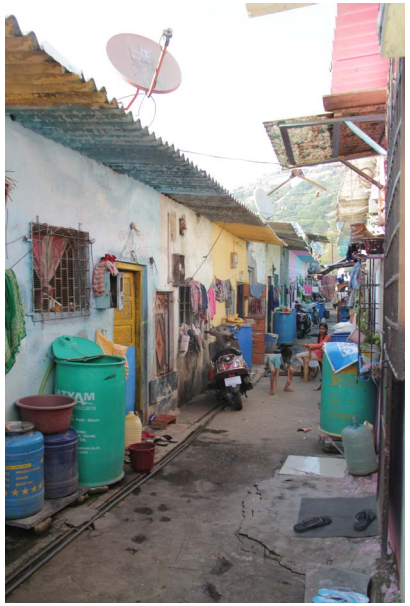
Nalasopara Urban Transfromation

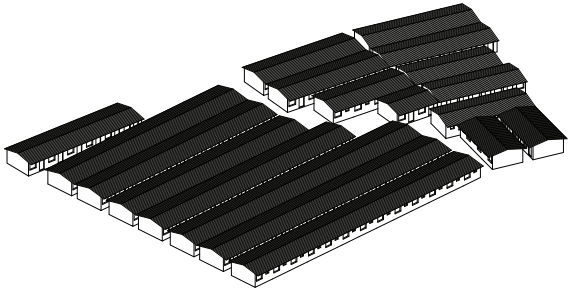


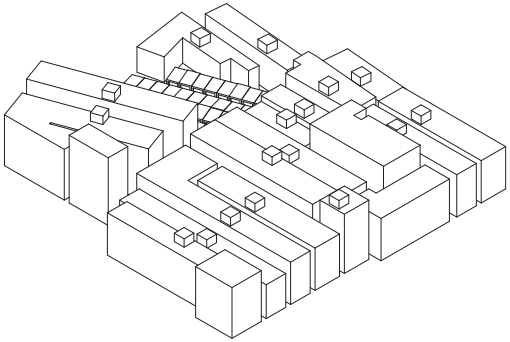


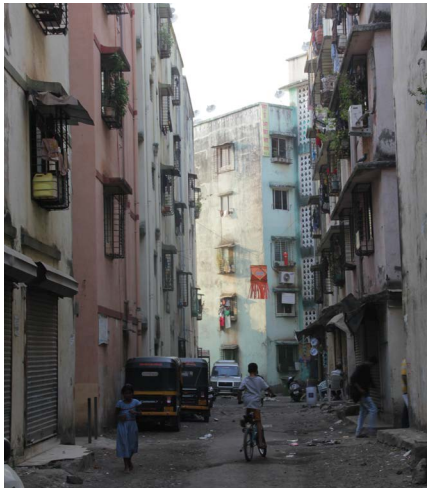
What Has Been Created on the East?



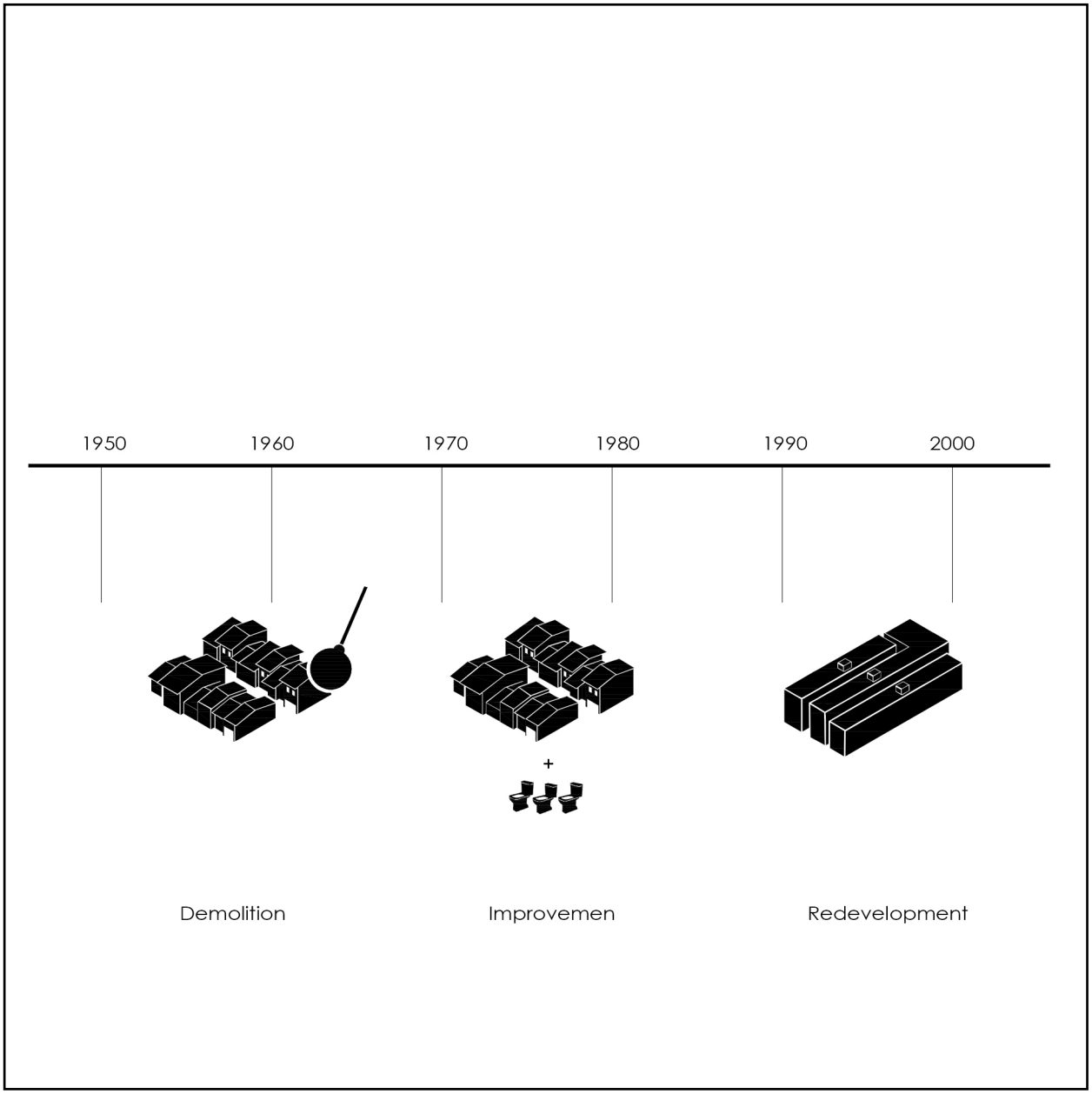




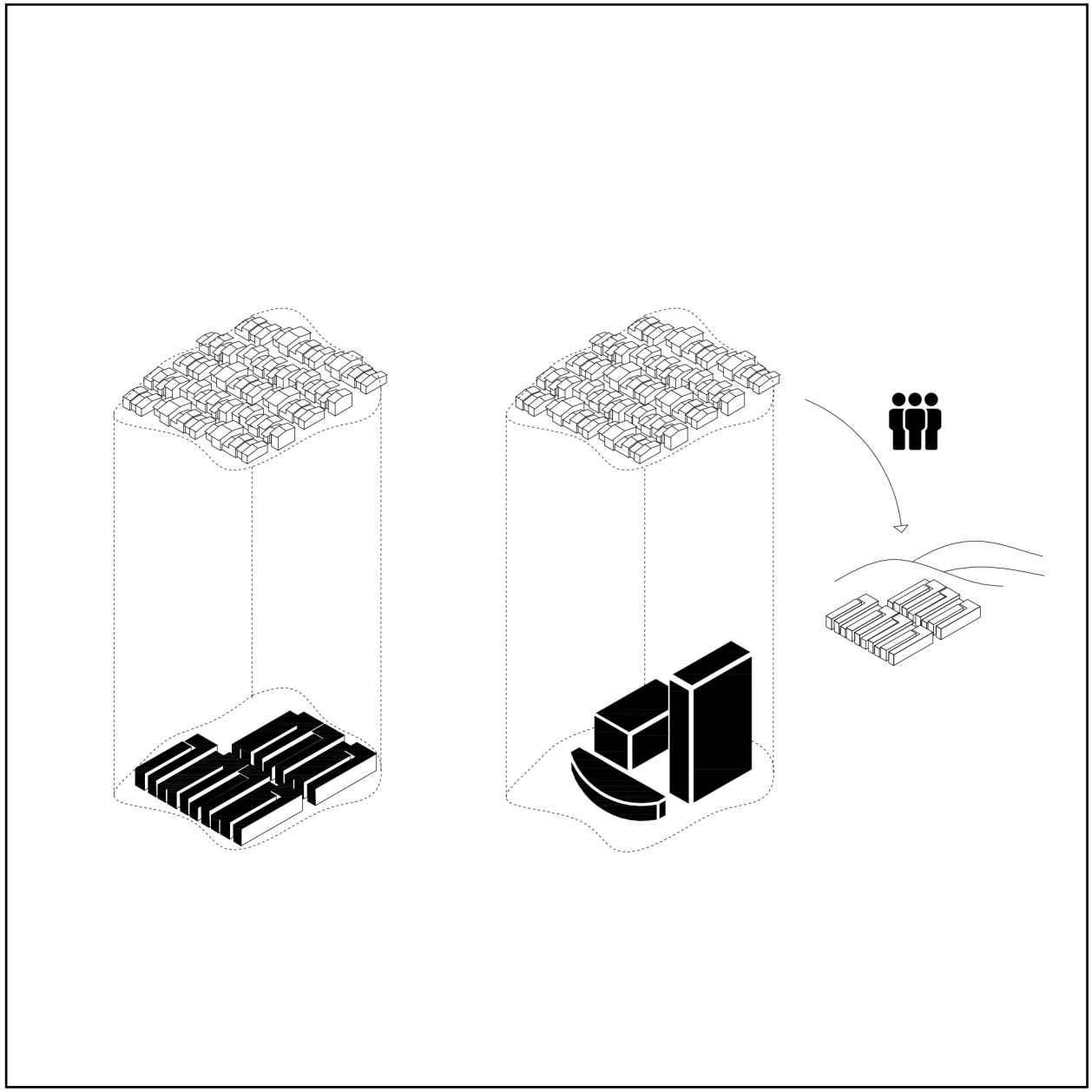




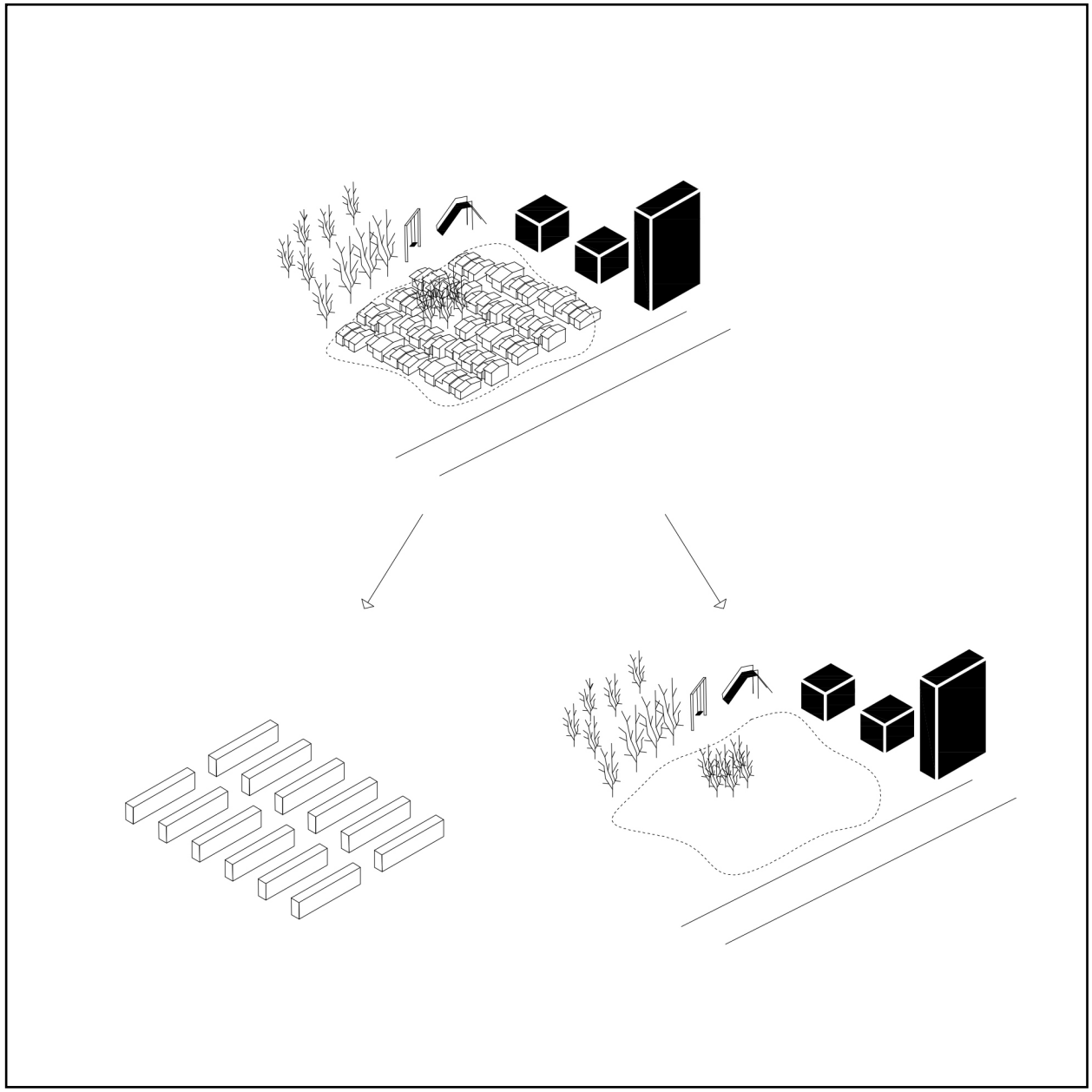
Addressing the Problem of Slums in India



In-Situ Slum-redeveopment | Relocation

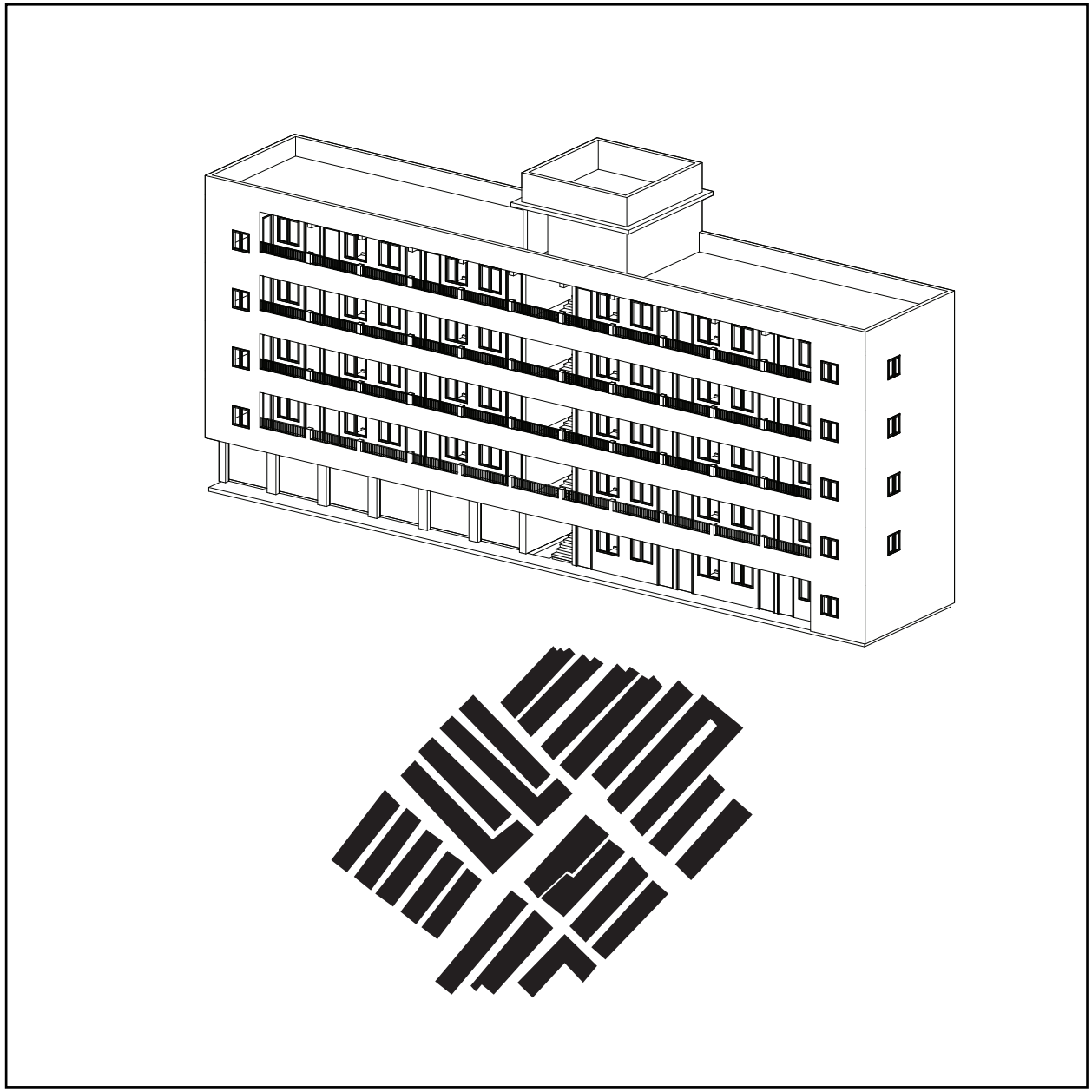


In-Situ Slum-redeveopment's Goal



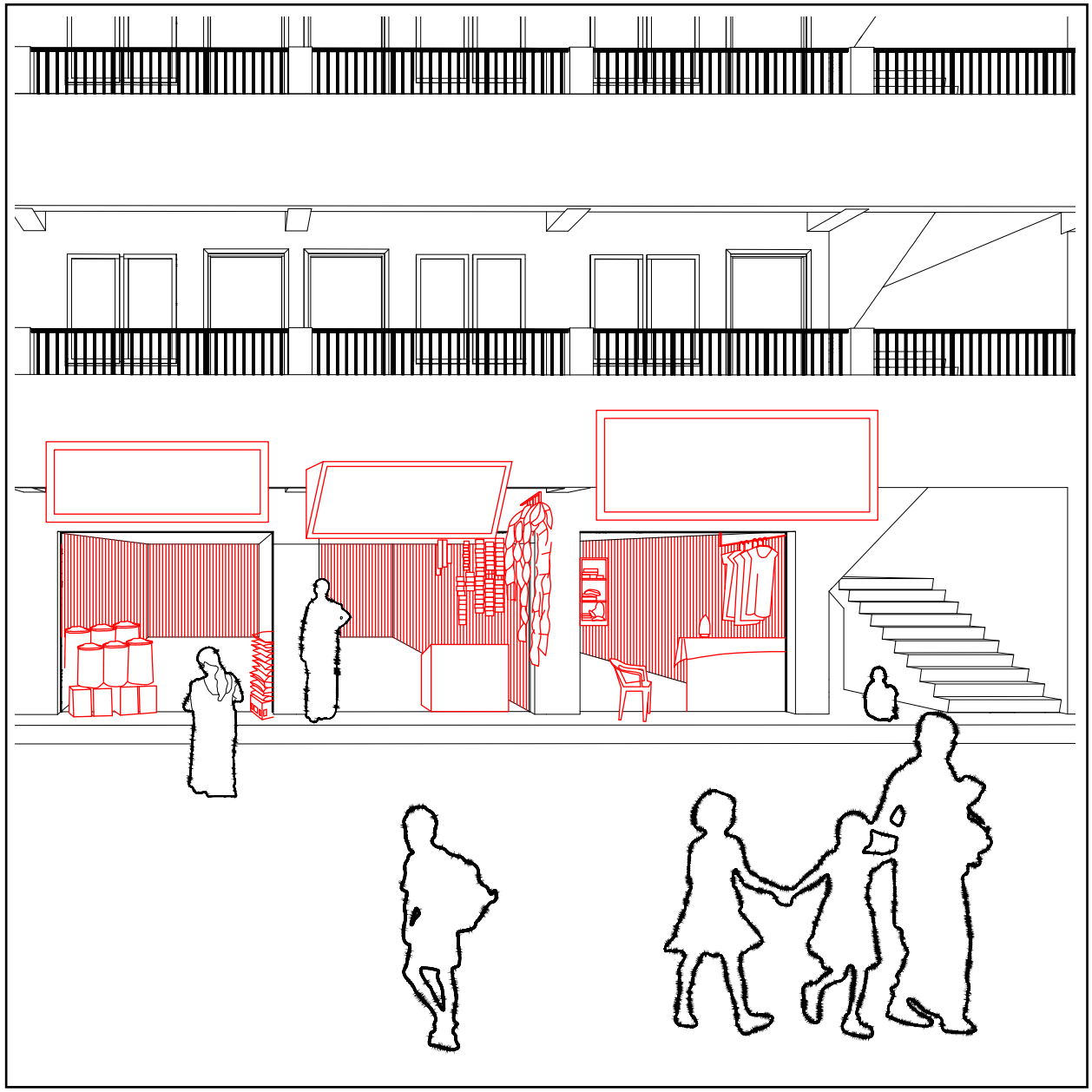
Problem Statement

Low-rise High Density Blocks

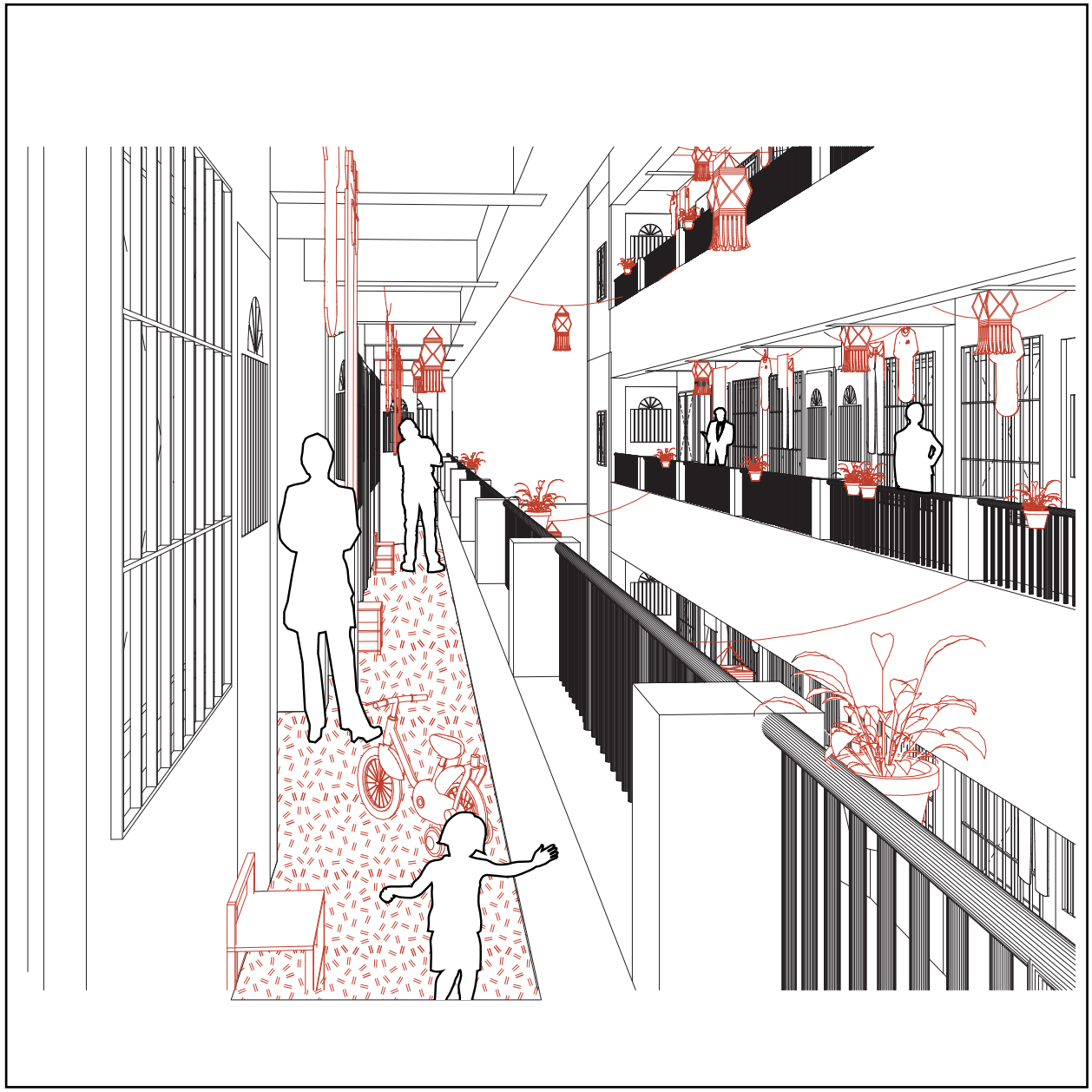


Problem Statement

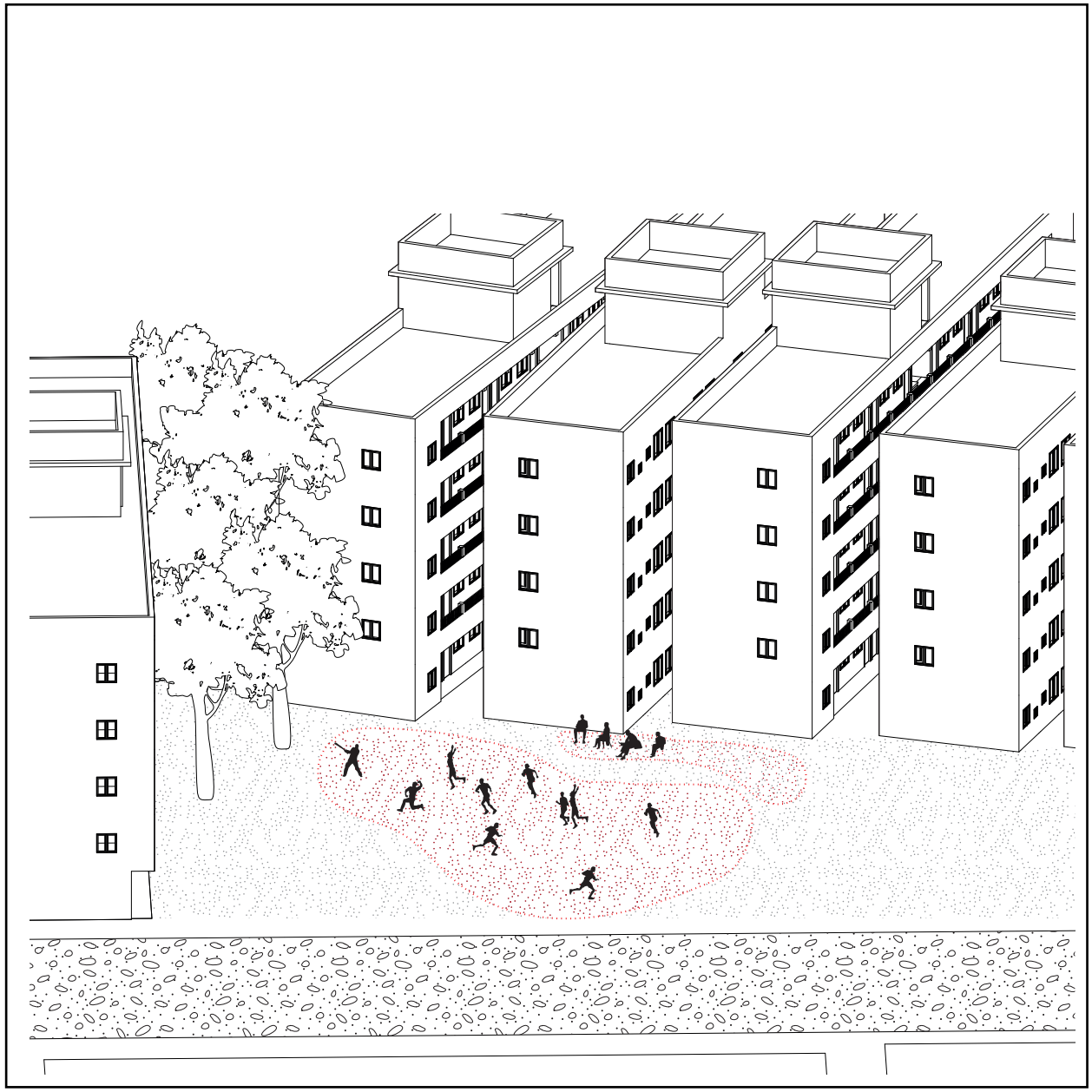
Plinth



Corridor

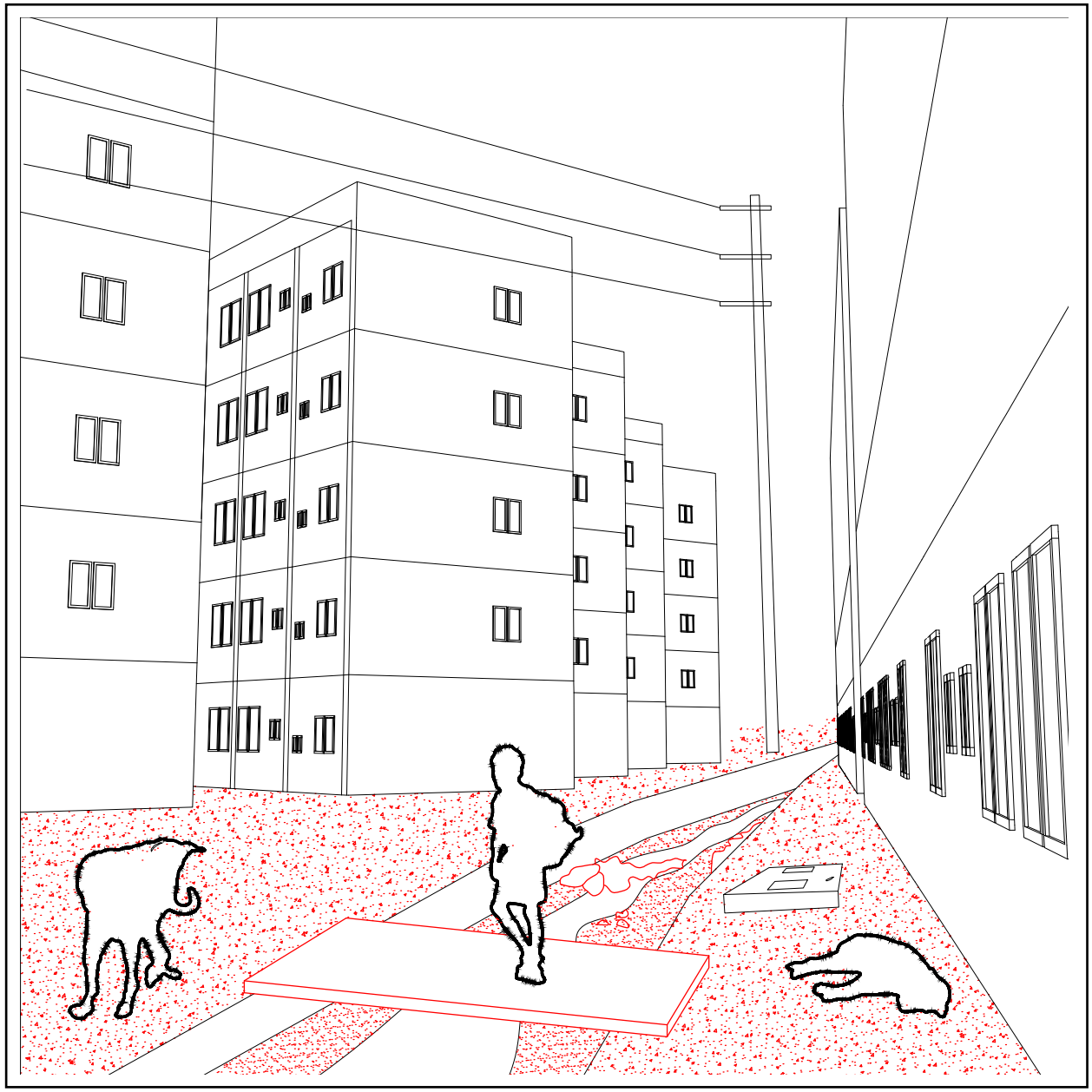


Random Open Space



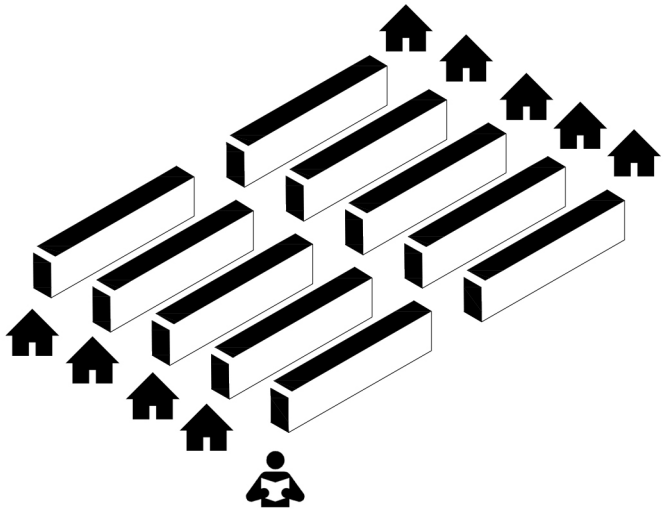
Problem Statement

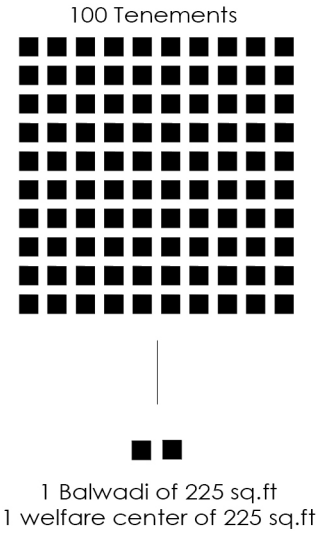
Urban Borders



Problem Statement

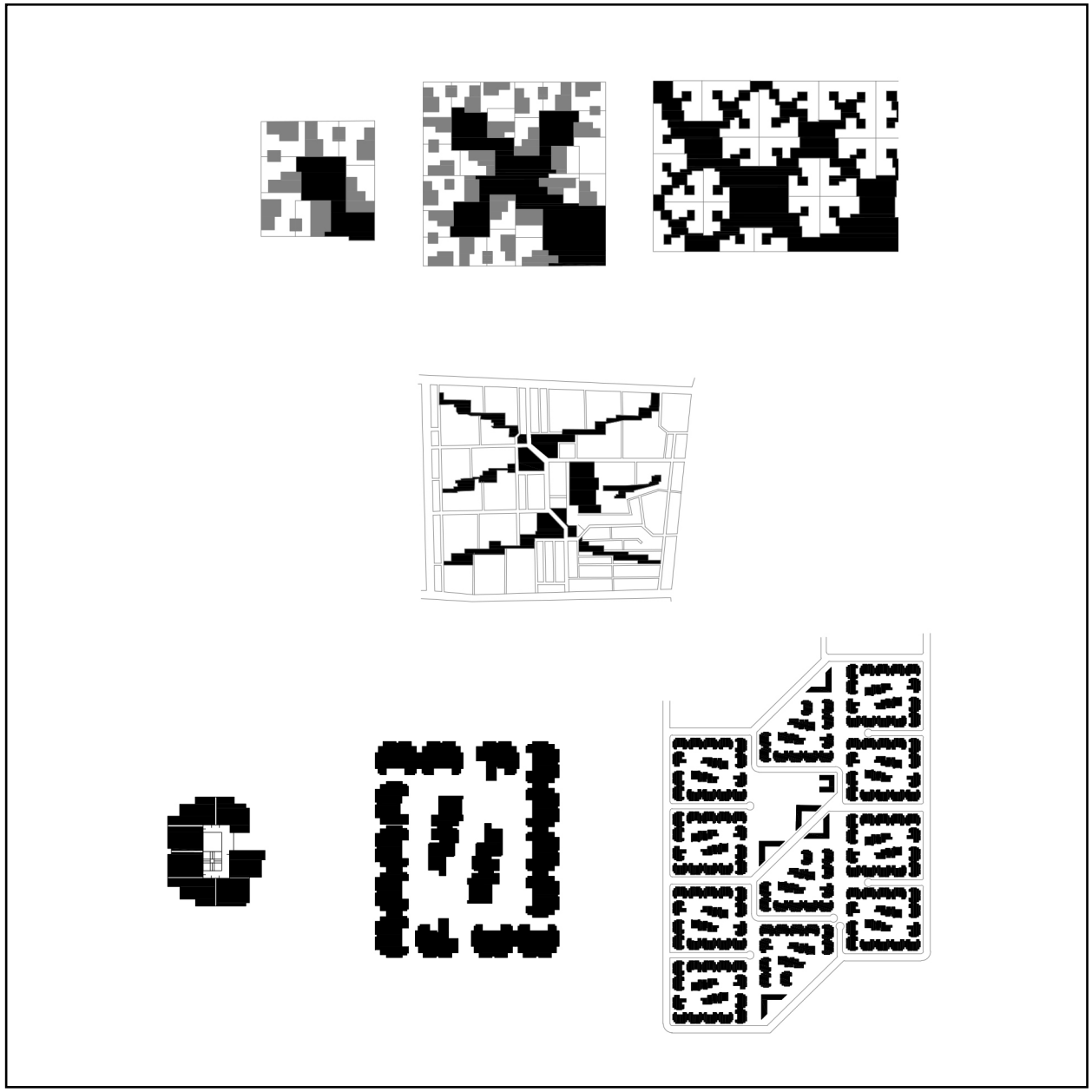
Lack of Public Amenities



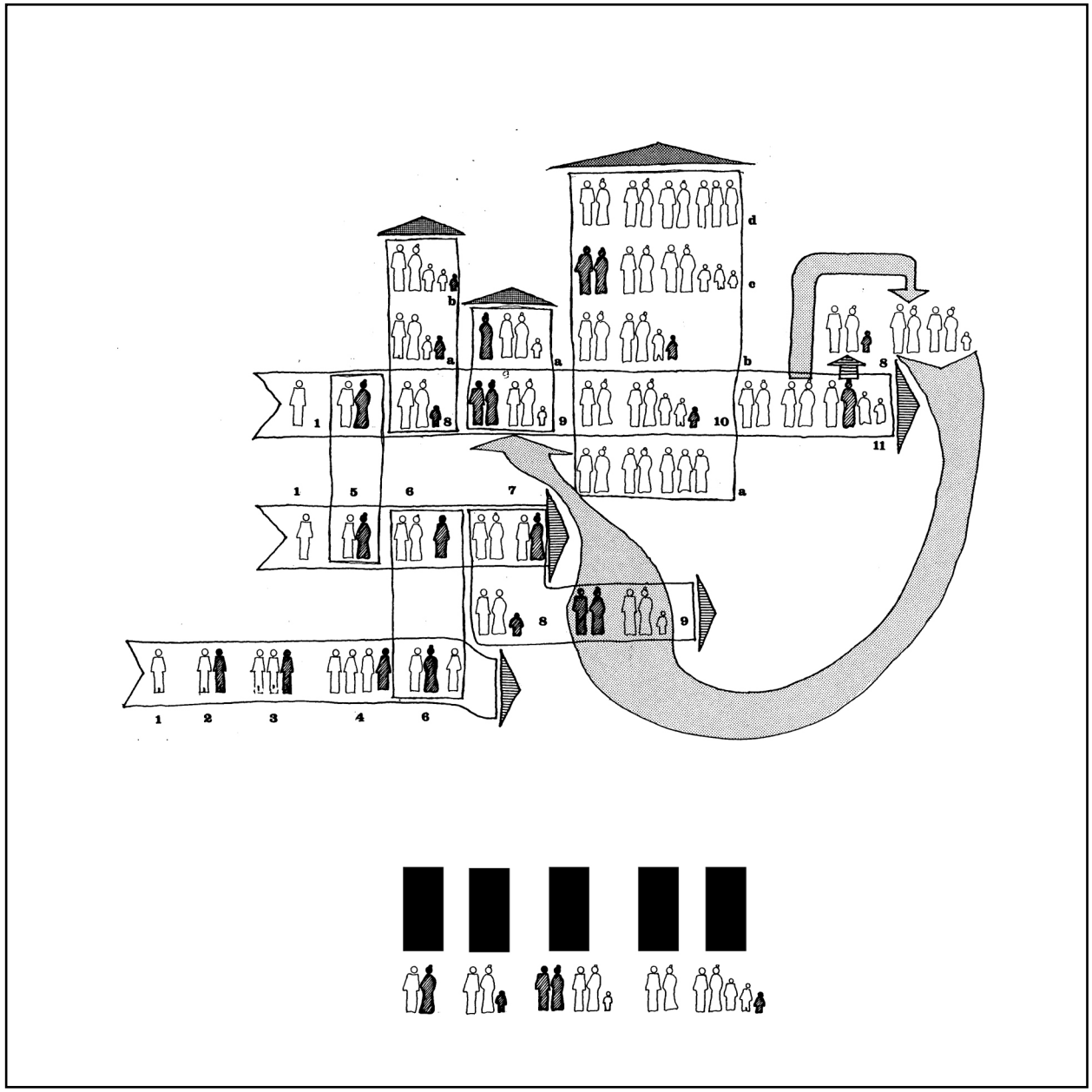


Problem Statement

Clustering and Hierarchy of Open Space

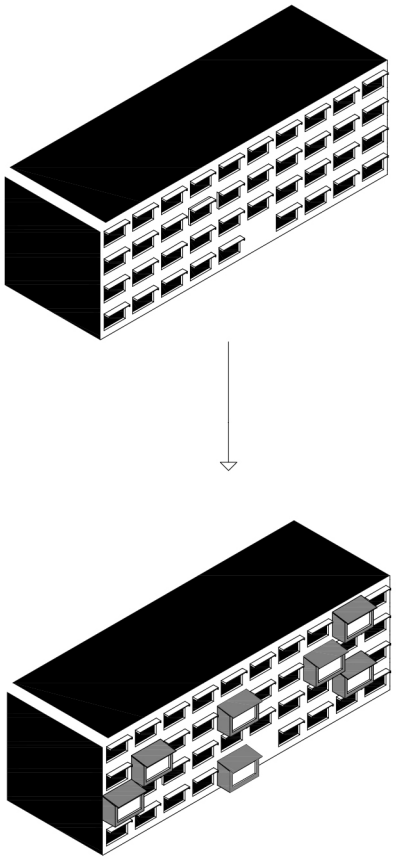


Ignoring Dynamic Nature of Life

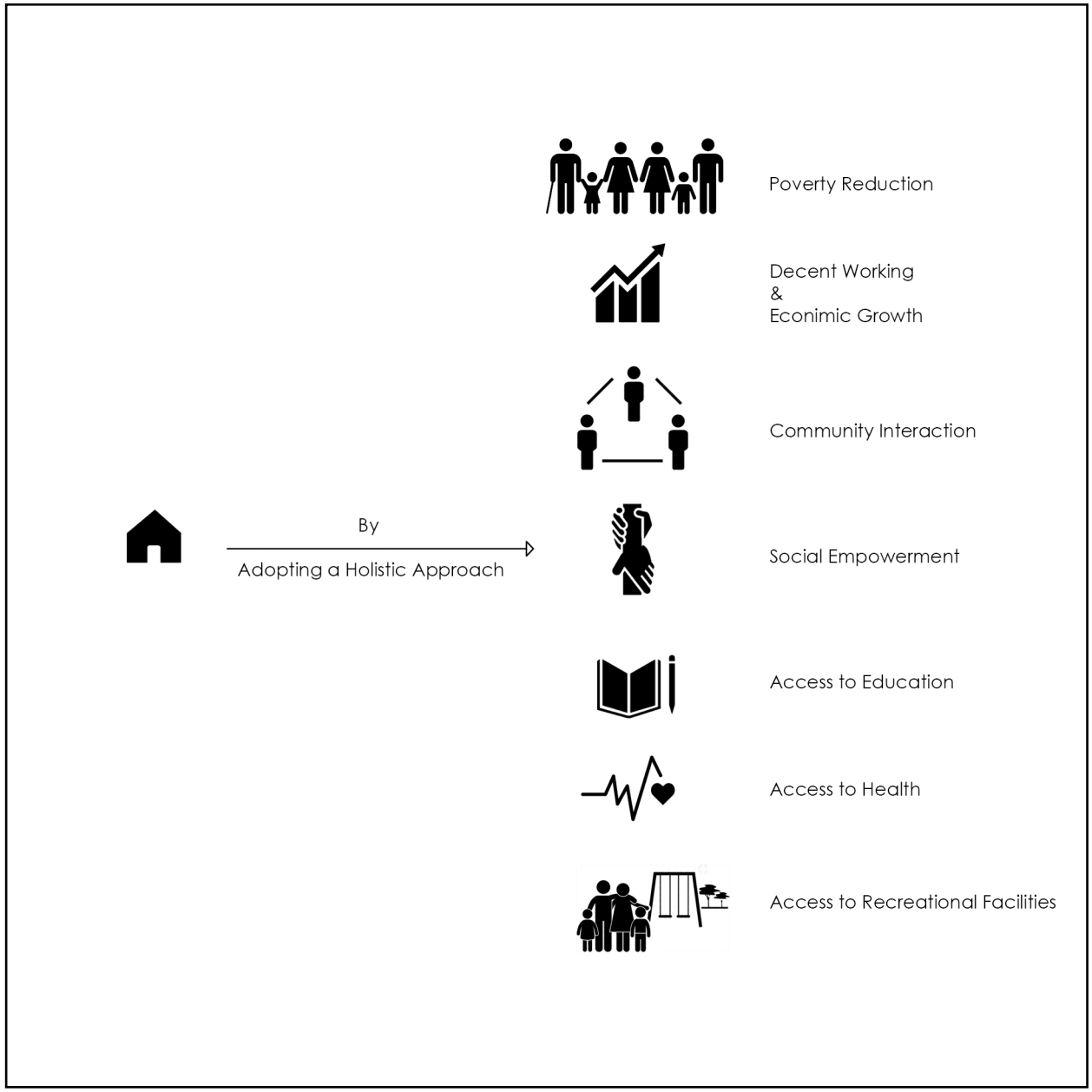


Problem Statement

Encroachment at BDD Chawls in Mumbai

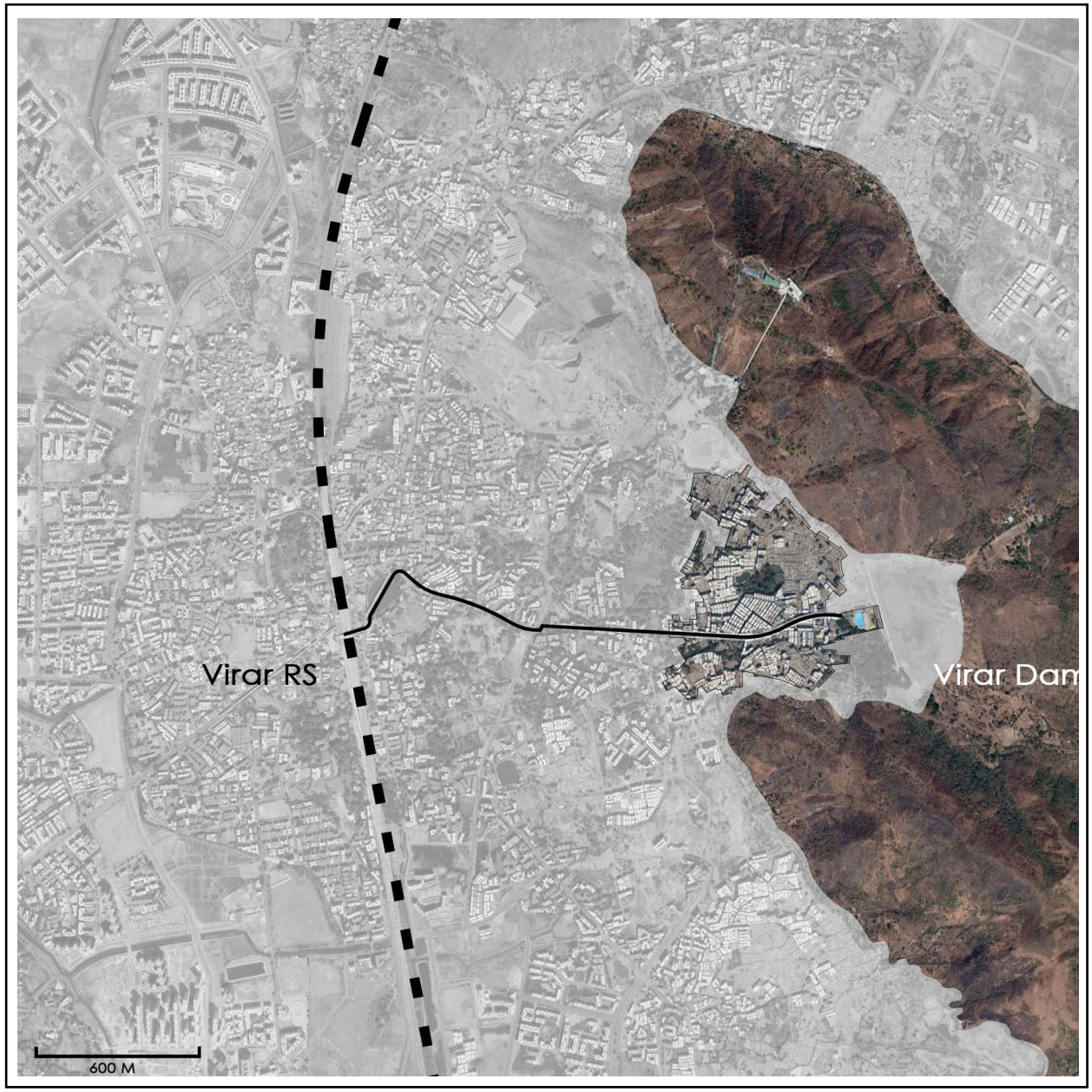


Inclusive Housing



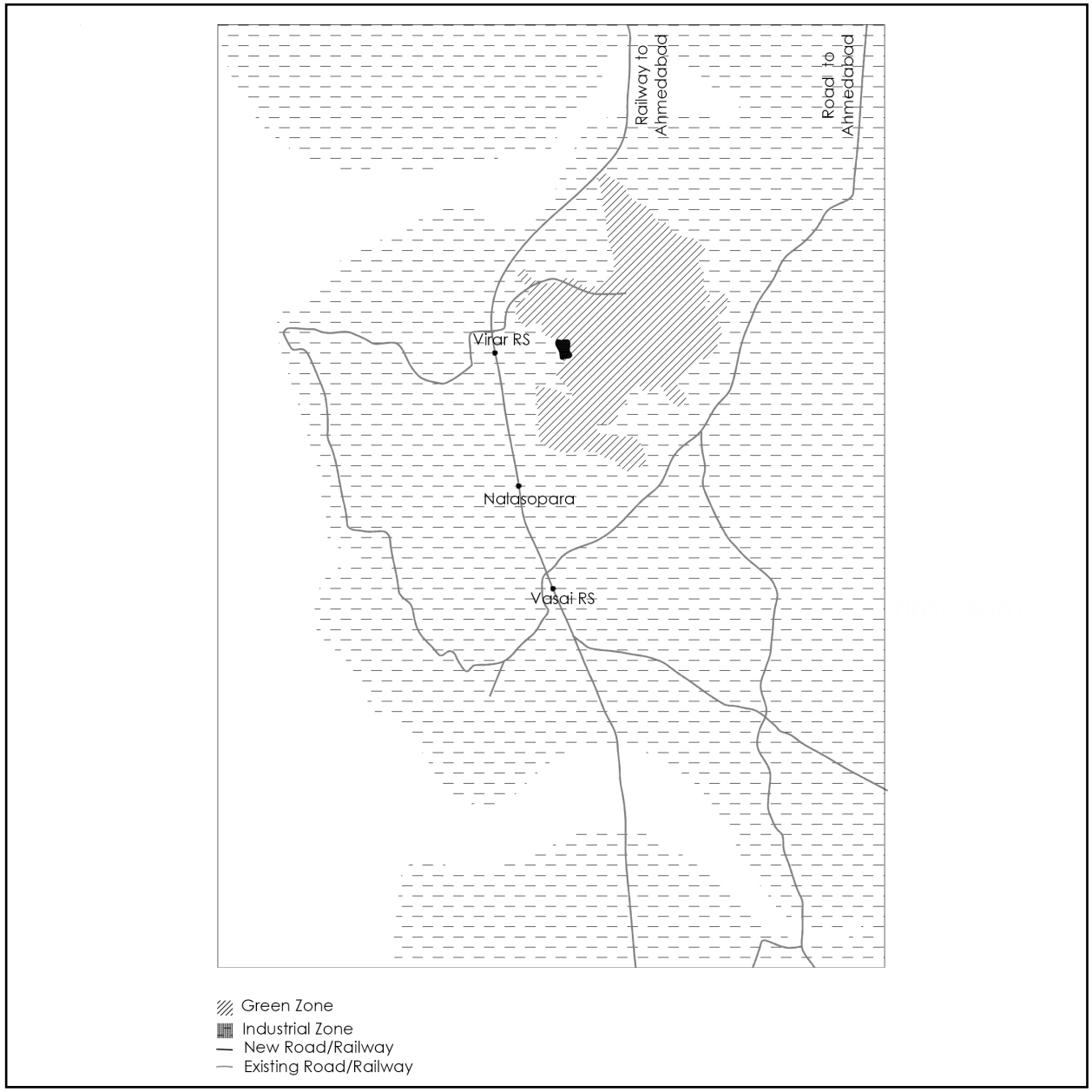
Location

Virar Dam



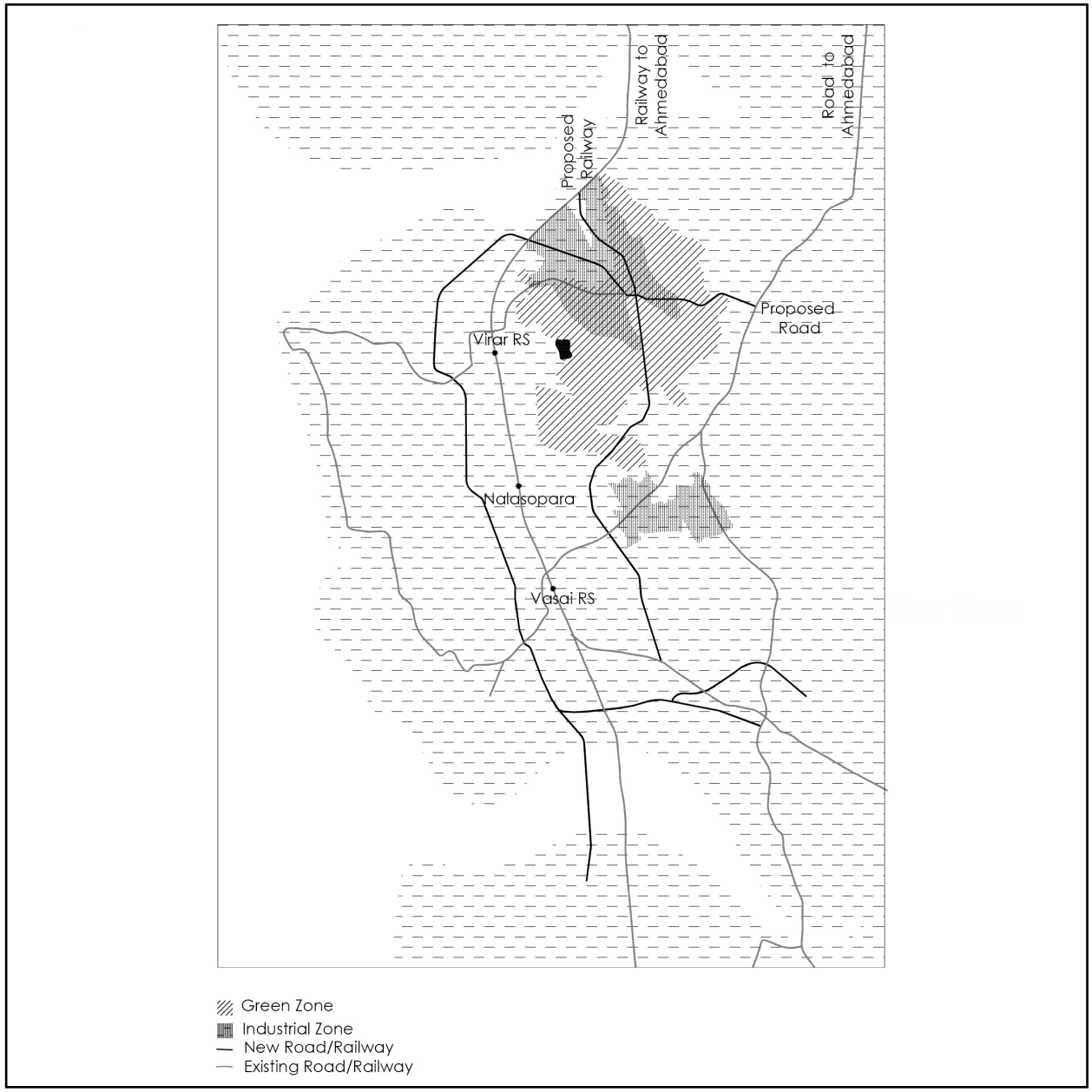
Location

Existing Land Use Plan for MMR-2016



Location

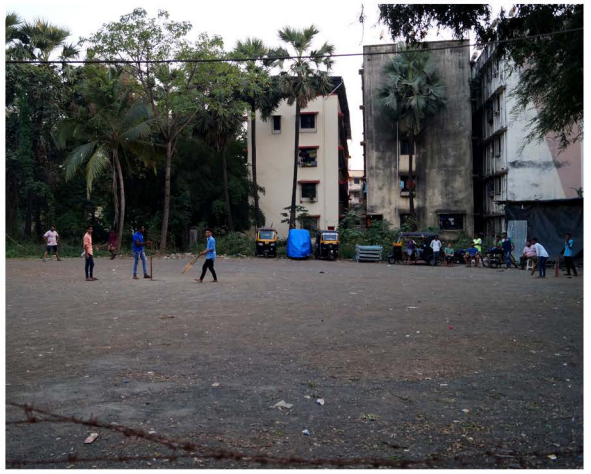
Proposed Land Use Plan for MMR-2036



Location


Sc 1:2500
Mass
Green Area
Water Body
Cricket Field
Road

Virar Dam Area's Social Spine



2

Location

Virar Dam Area's Social Spine

3

4

Location

Virar Dam Area's Social Spine

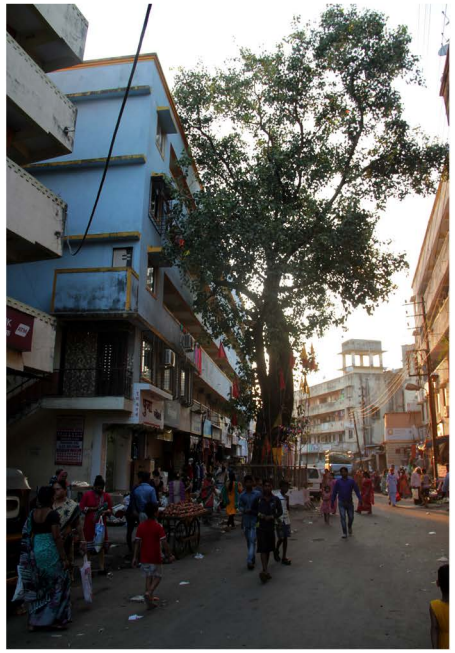
5

6

Location

Virar Dam Area's Social Spine

7



8

Location

Virar Dam Area's Social Spine

9

Location

Virar Dam Area's Social Spine

Location


Cricket Field
Unaccessible Green
Lake / Virar Dam
Commercial Street
Swimming Pool
Transportation Hub

Research Question

To what extent/How can an in-situ redevelopment scheme be used to generate an inclusive urban space?

The other questions that have arisen in this research are:

To what extent/How could an in-situ redevelopment scheme, as a solution for existing squatter settlements, be used to provide meaningfull social space and other public amenities, be adaptive to the existing context , and to change the determining factor of affordability by providing right of choice for the inhabitants and flexibility for future growth in housing units?

Goals and Objectives

To what extent/How can an in-situ redevelopment scheme be used to generate an inclusive urban space?

Social Aspect

1. **Social Space** >>>>> Social /Open Spaces , considering Hierarchy of it

2. **Public Amenities** >>>>> How to finance public amenitiies? If design provide a density that is more than the amount that conventional design approches provide, then the profit of selling extra units can compensate the costs for public amenities.

3. **Social Mix** >>>>> Unlocking the borders
>>>>> Redevelopment

Right of Choice

1. **Growth** >>>>> Considerations of Design

2. **Initial Role of inhabitants**>>>>> Providing people freedom of defining their living spaces
>>>> Open Buildings, Jahn Habraken Ideas

Economic Aspect

1. **Location** >>>>> Site's proximity to industrial zones

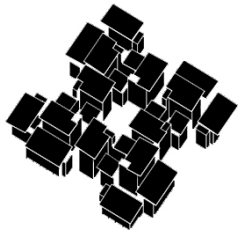
2. **Stimulating Small Businesse** >>>>> Considerations of Design
>>>> Defined business spaces
>>>> Undefined business spaces
(Pilottis, Open Plazas, etc.)

Site Specific

1. **Protecting Forest Zone**
>>>>> Redevelopment Stops enchroachment of Forest
>>>>> Making a Developed Wall

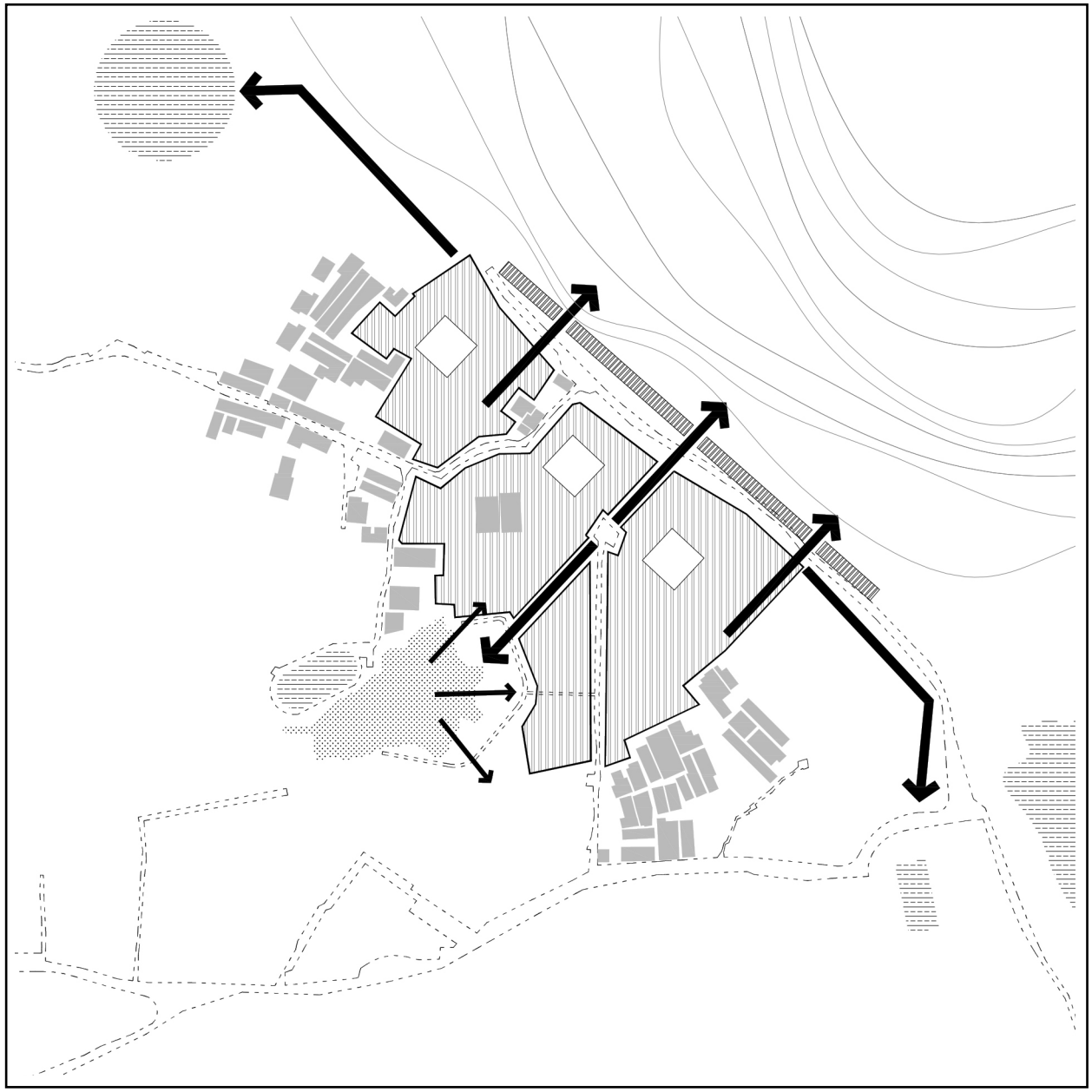
Proposal

Urban Strategy



Existing Constraints

Urban Concept



Open to Sky Network

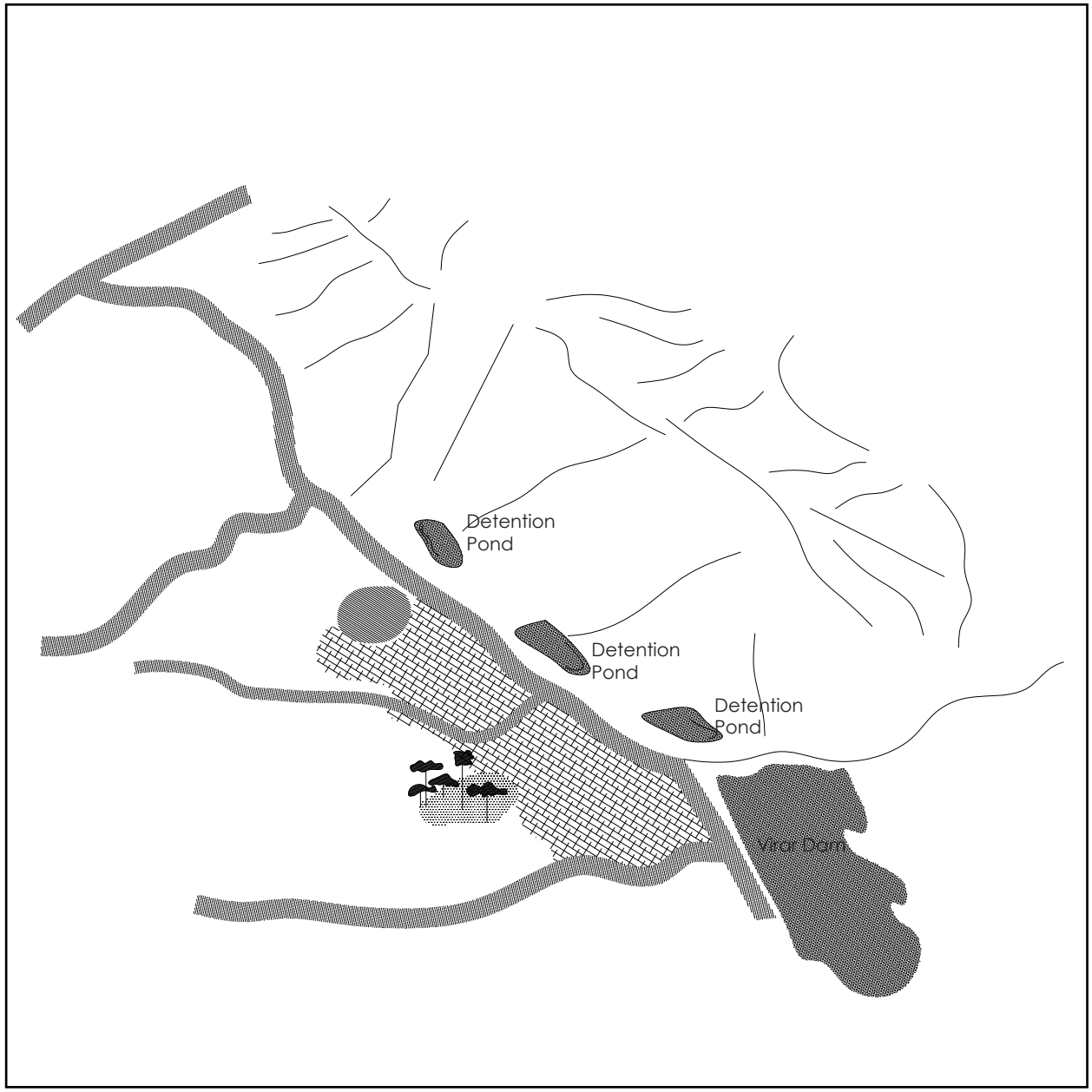
Traffic Circulation

Traffic Circulation

Amenities

Amenities

Managing Moonsoon Rainwater



1st Phase of Redevelopment

2nd Phase of Redevelopment

3rd Phase of Redevelopment

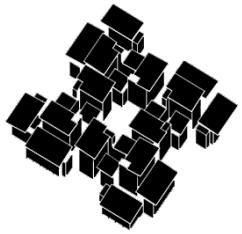
4th Phase of Redevelopment

5th Phase of Redevelopment

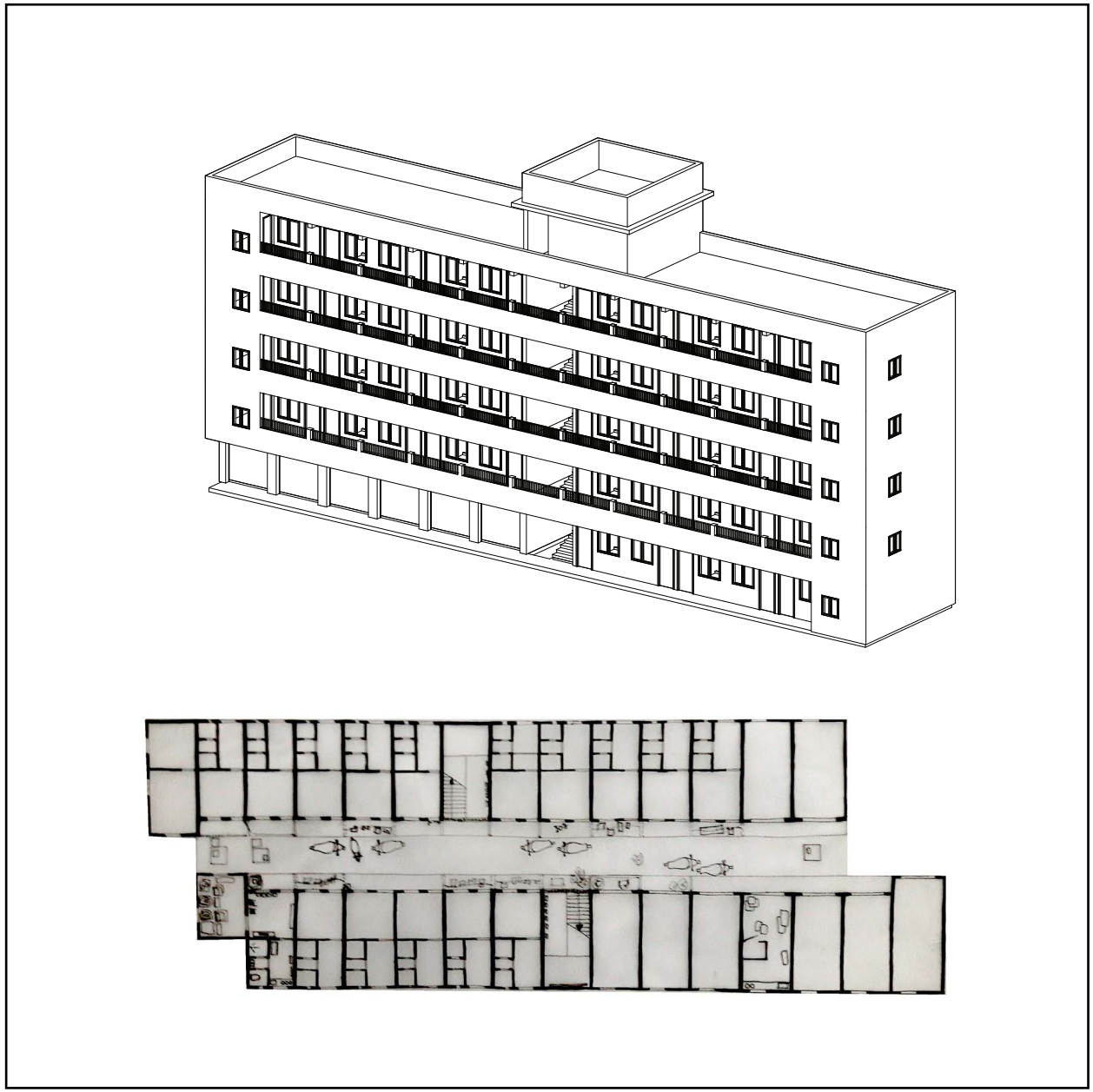
6th Phase of Redevelopment

Proposal

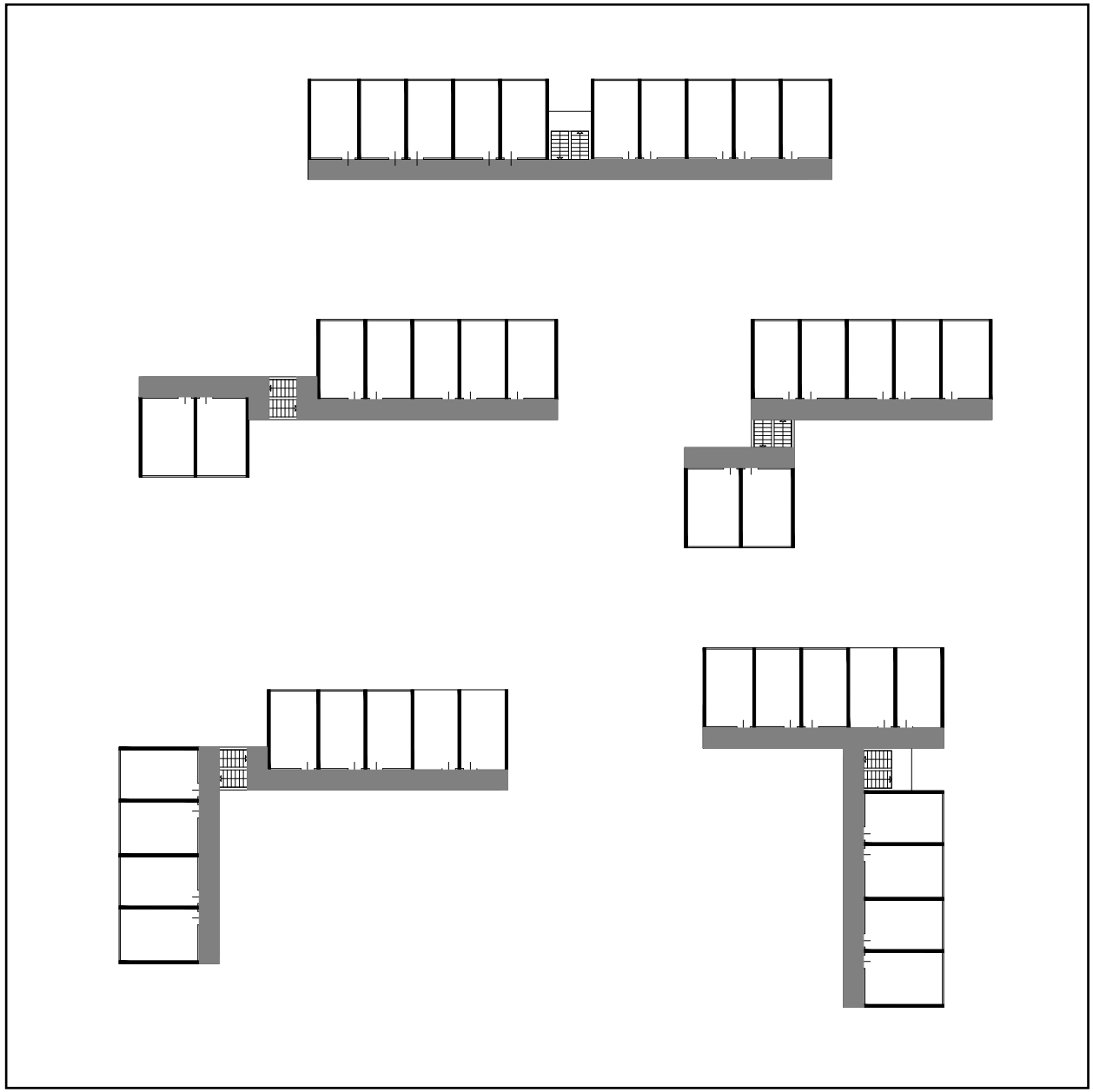
Building Types



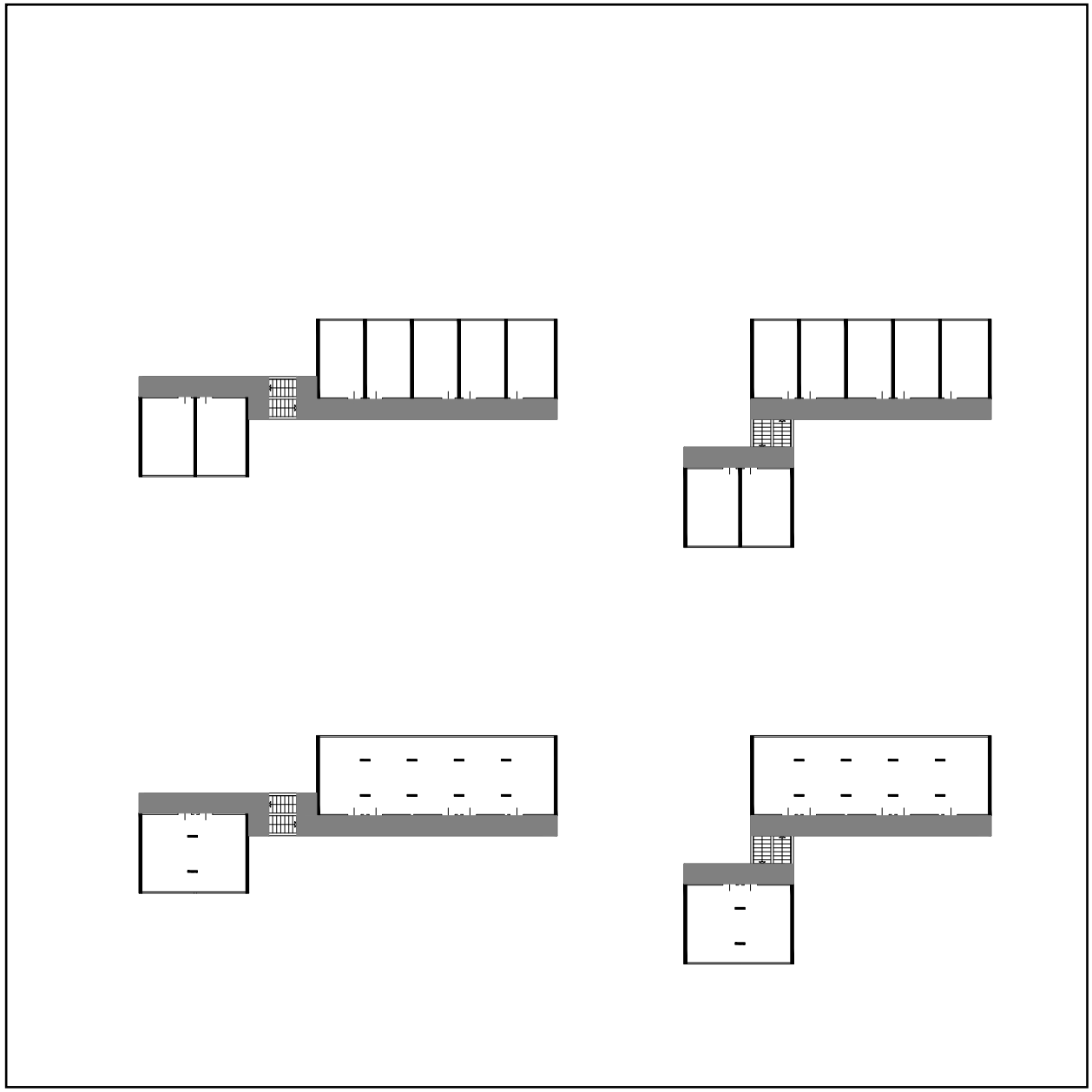
Low-rise High Density Blocks



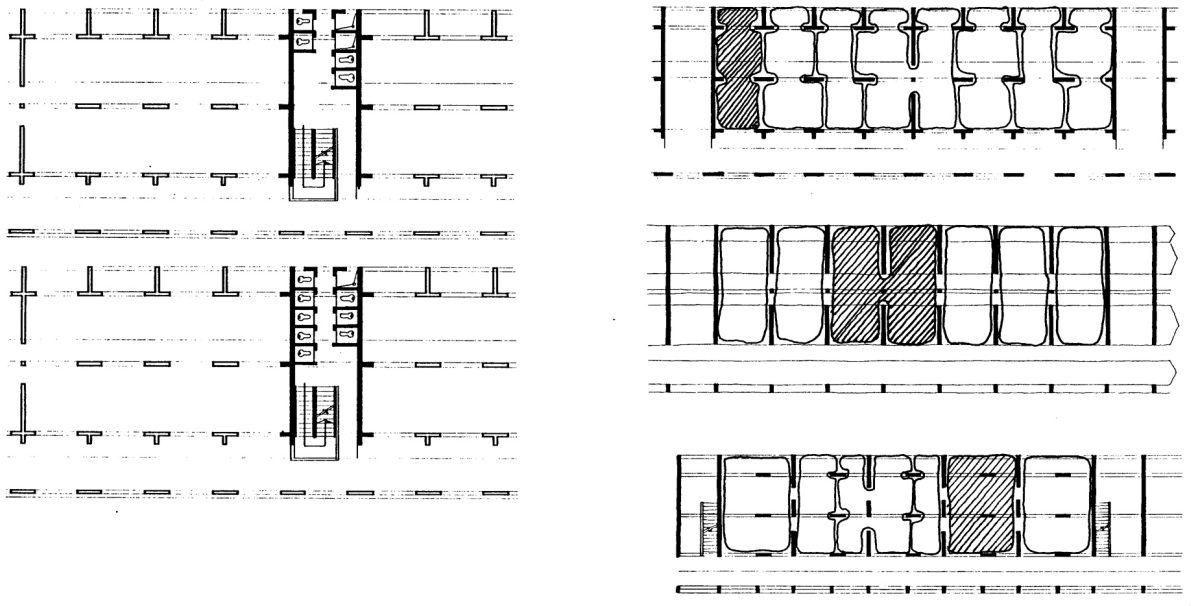
Staircase as Joint

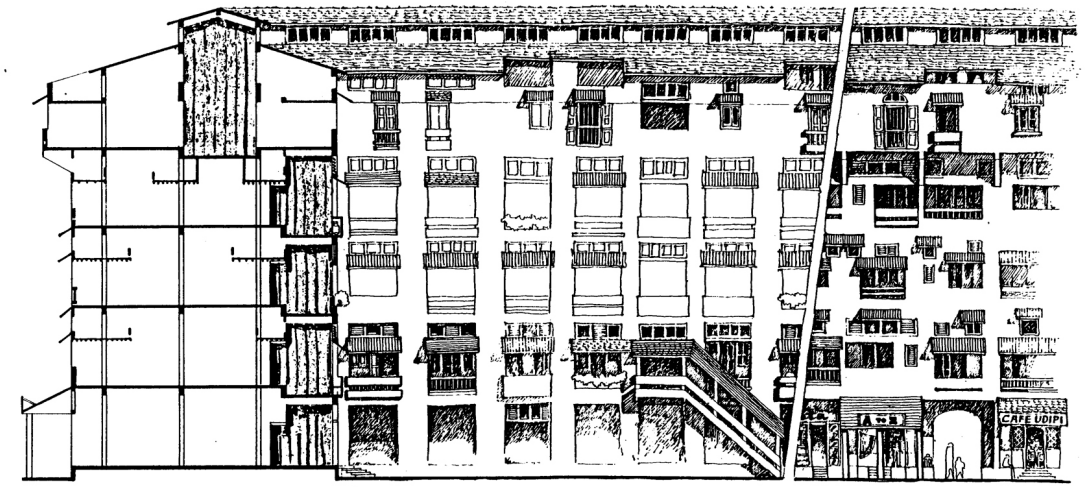


Open Building Style



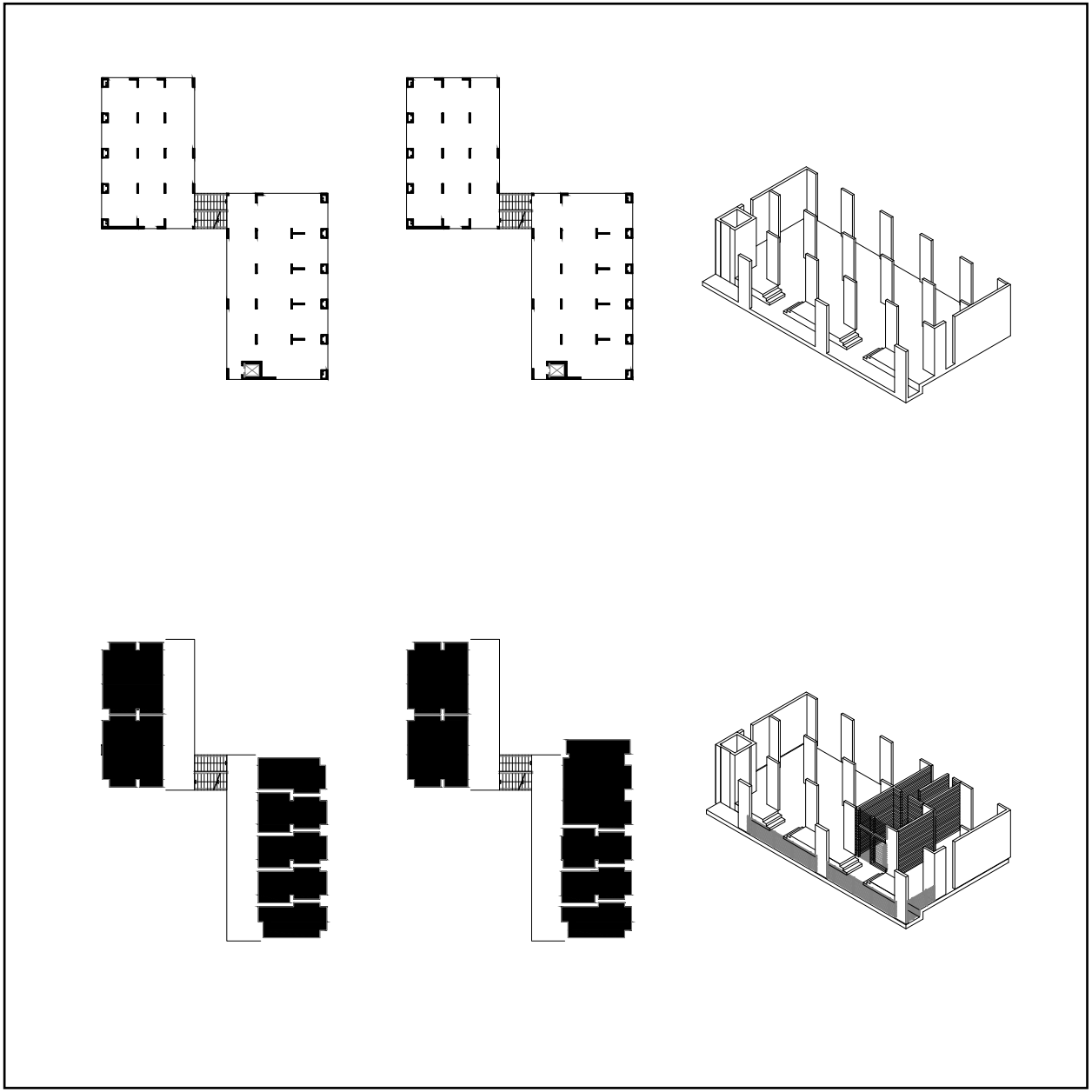
The Margin of Fluctuation in Affordability



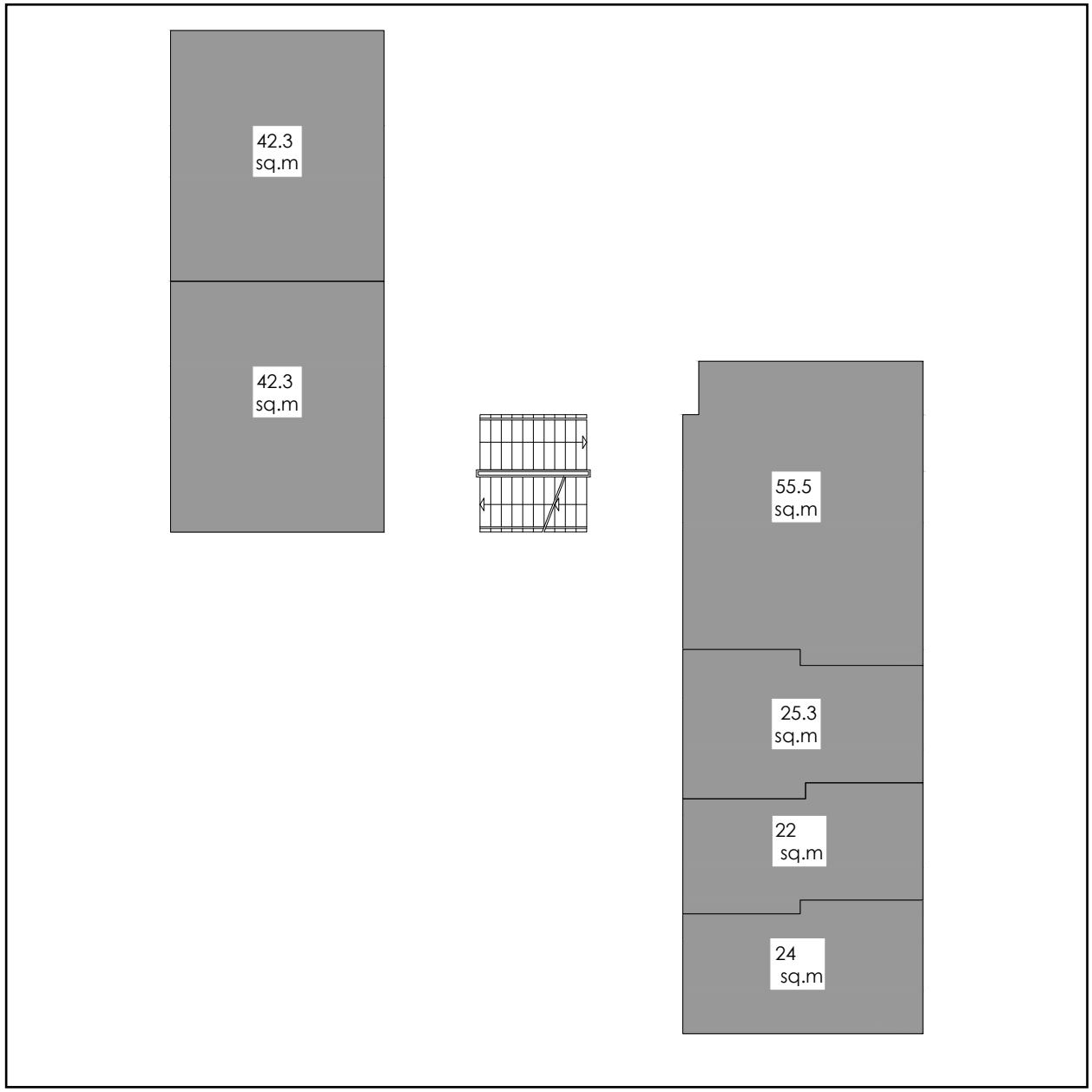


Finally, something deep down reminds me that even while writing this study, there are hundreds of chawls awaiting their final verdict from the authorities on their future - will they survive another monsoon, or .....?

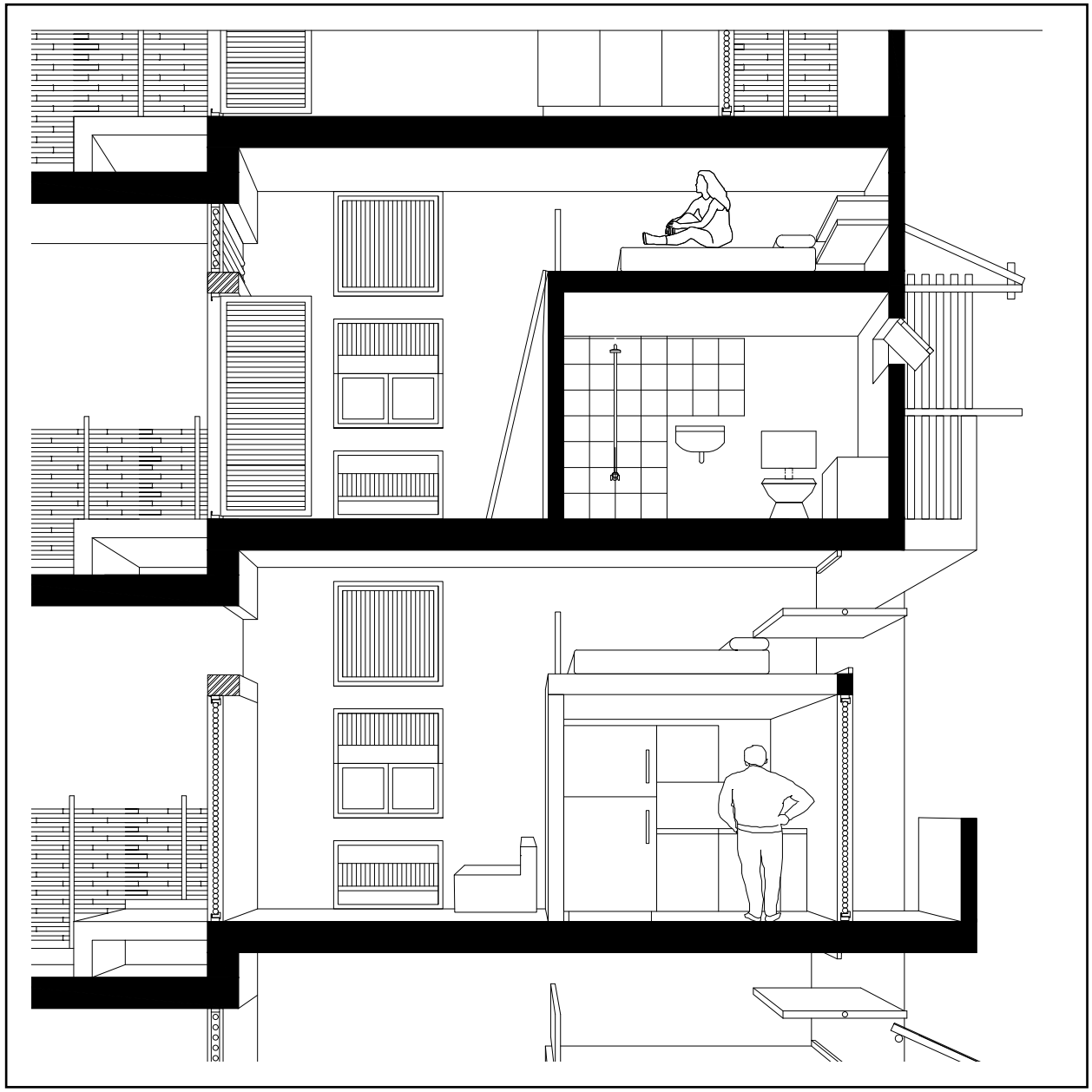
Support and Infill



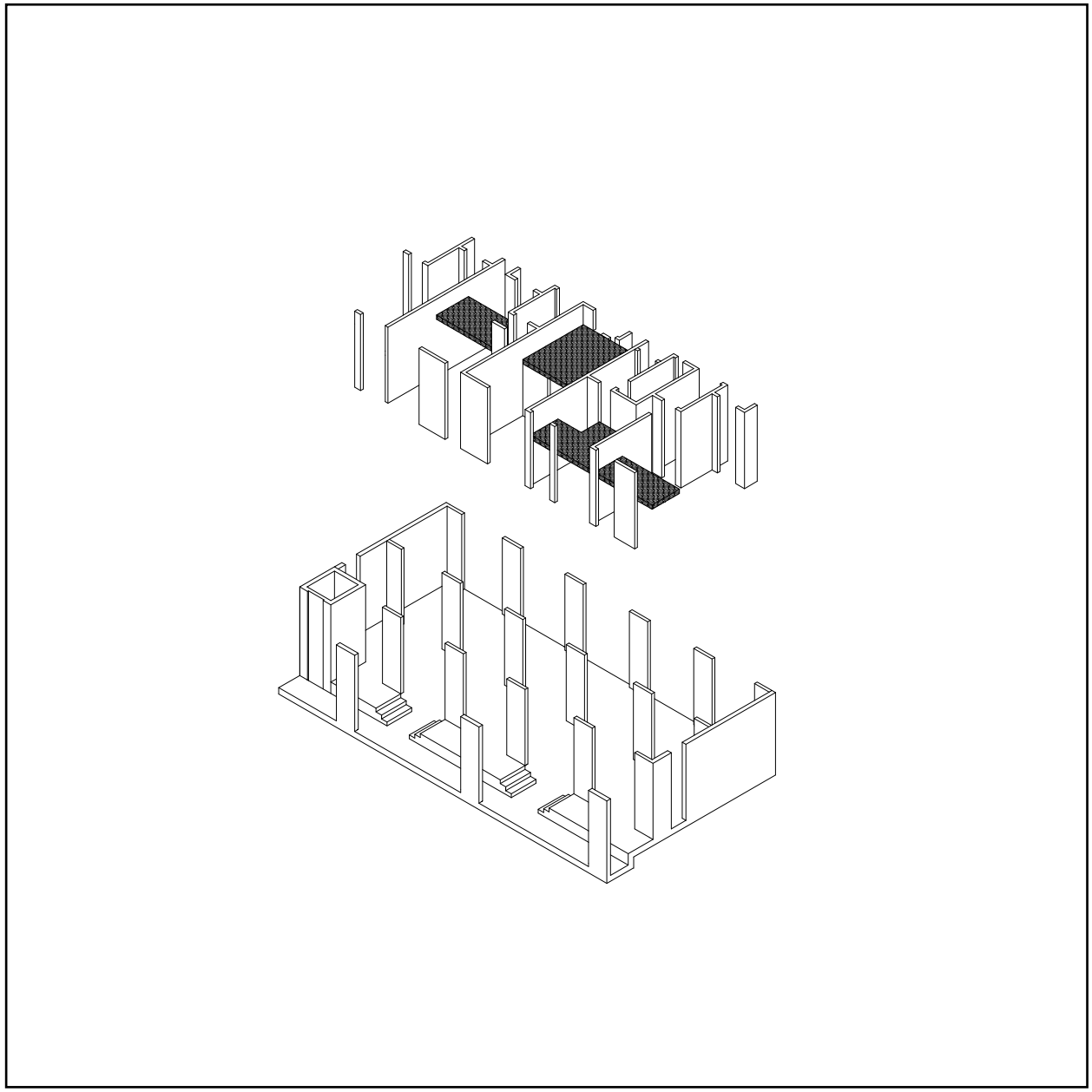
Variety of Units' Area



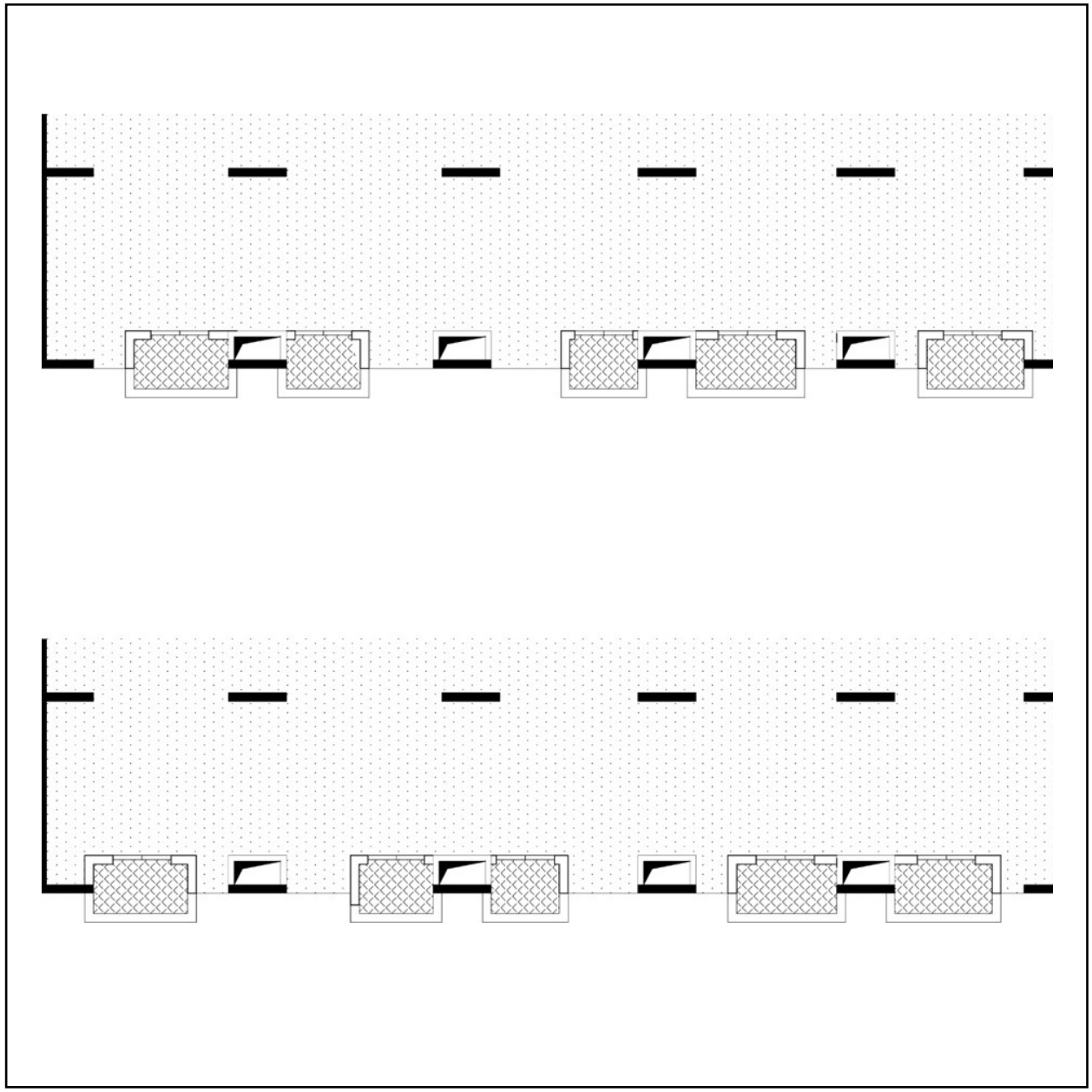
Vertical Growth



Vertical Growth

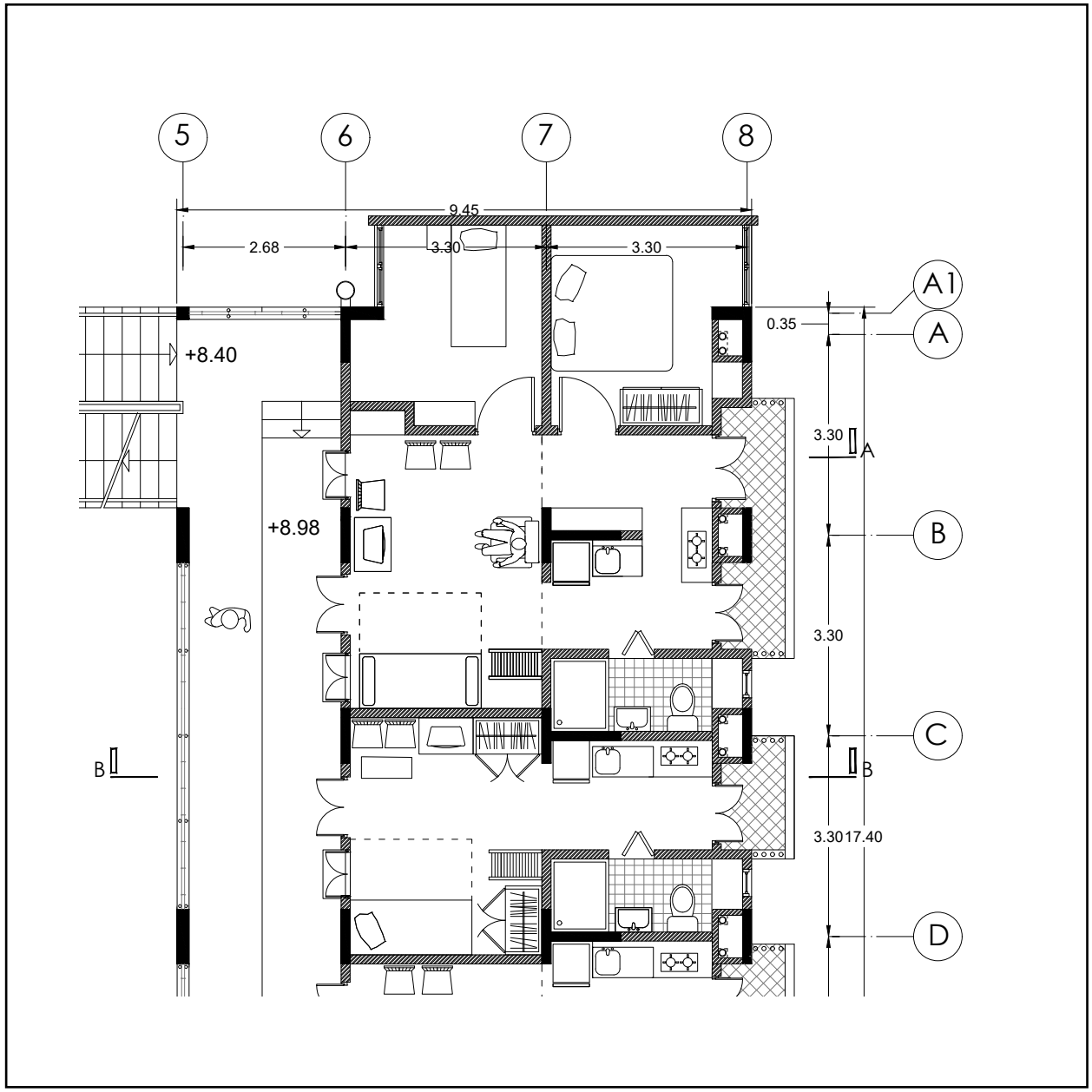


Mechanical Shaft

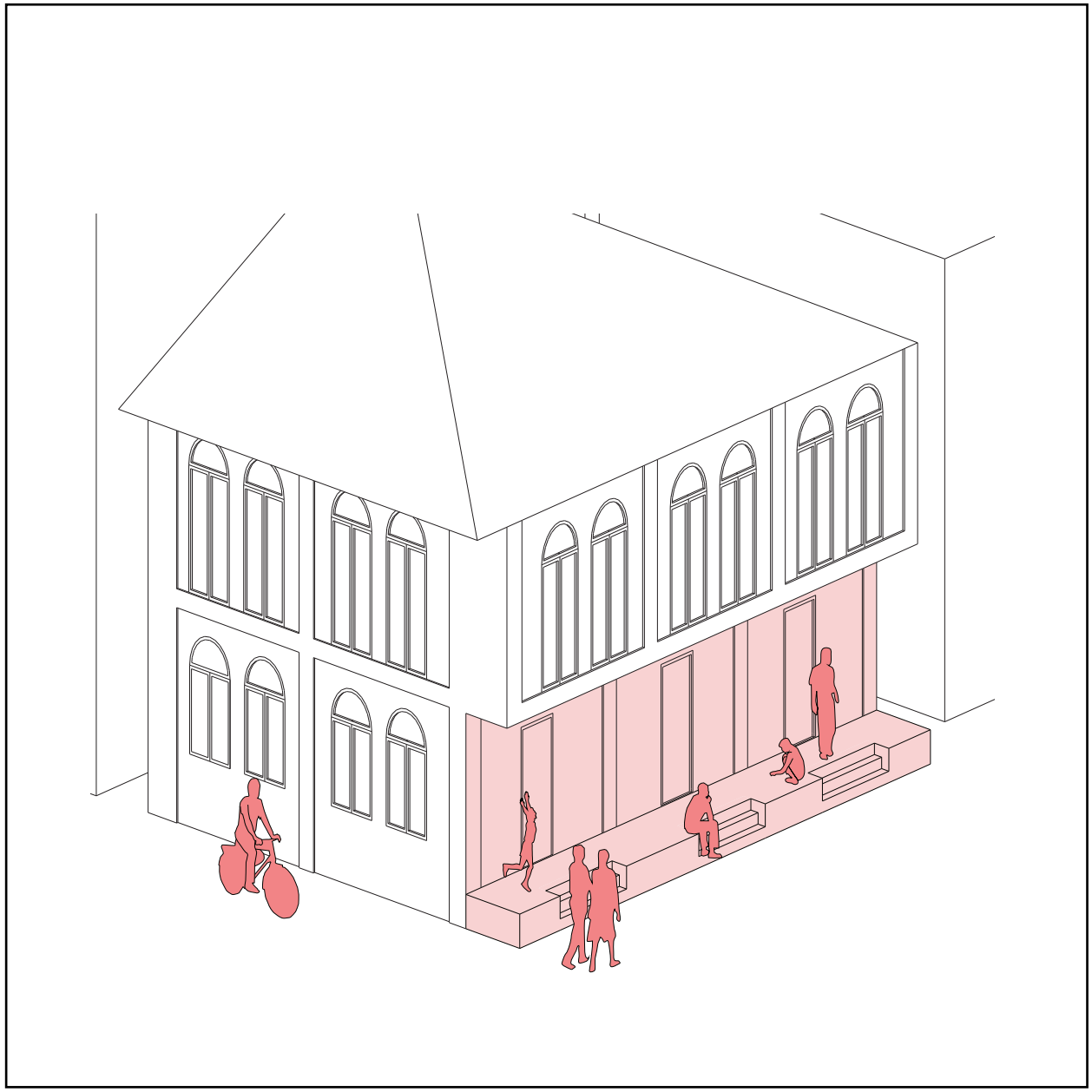


Windows Position

Floor Plan Layout

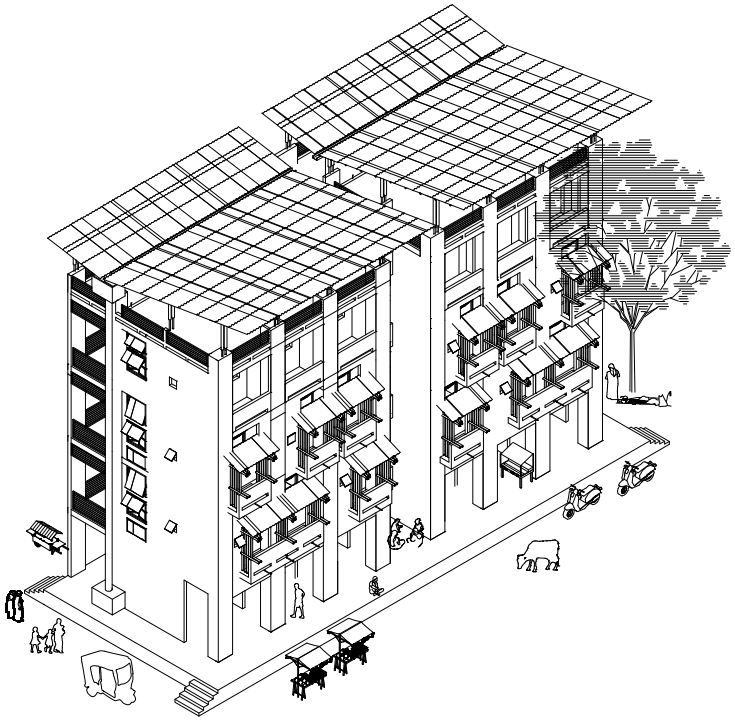


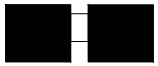
Ottla



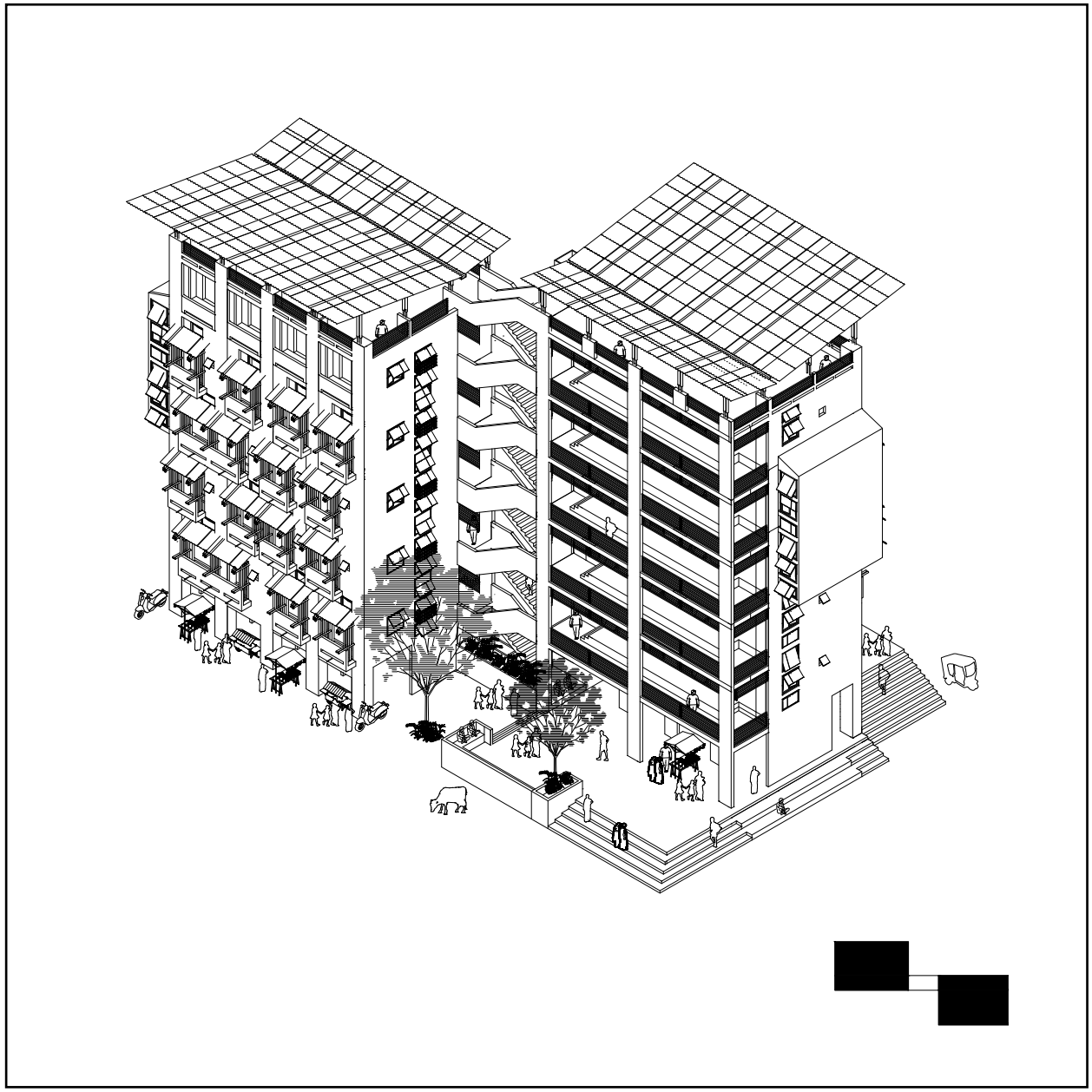
Ottla in the Height

Building's Shape

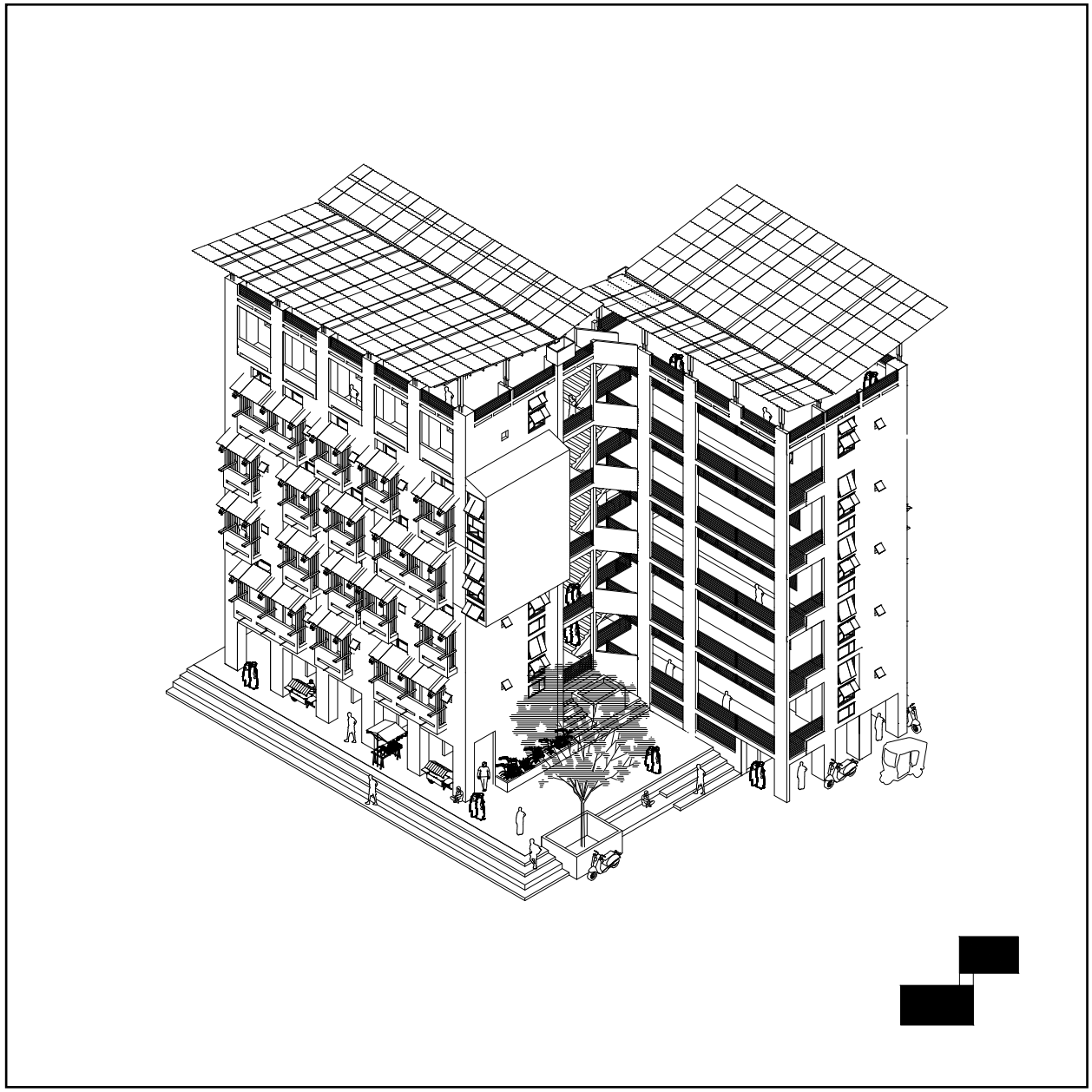




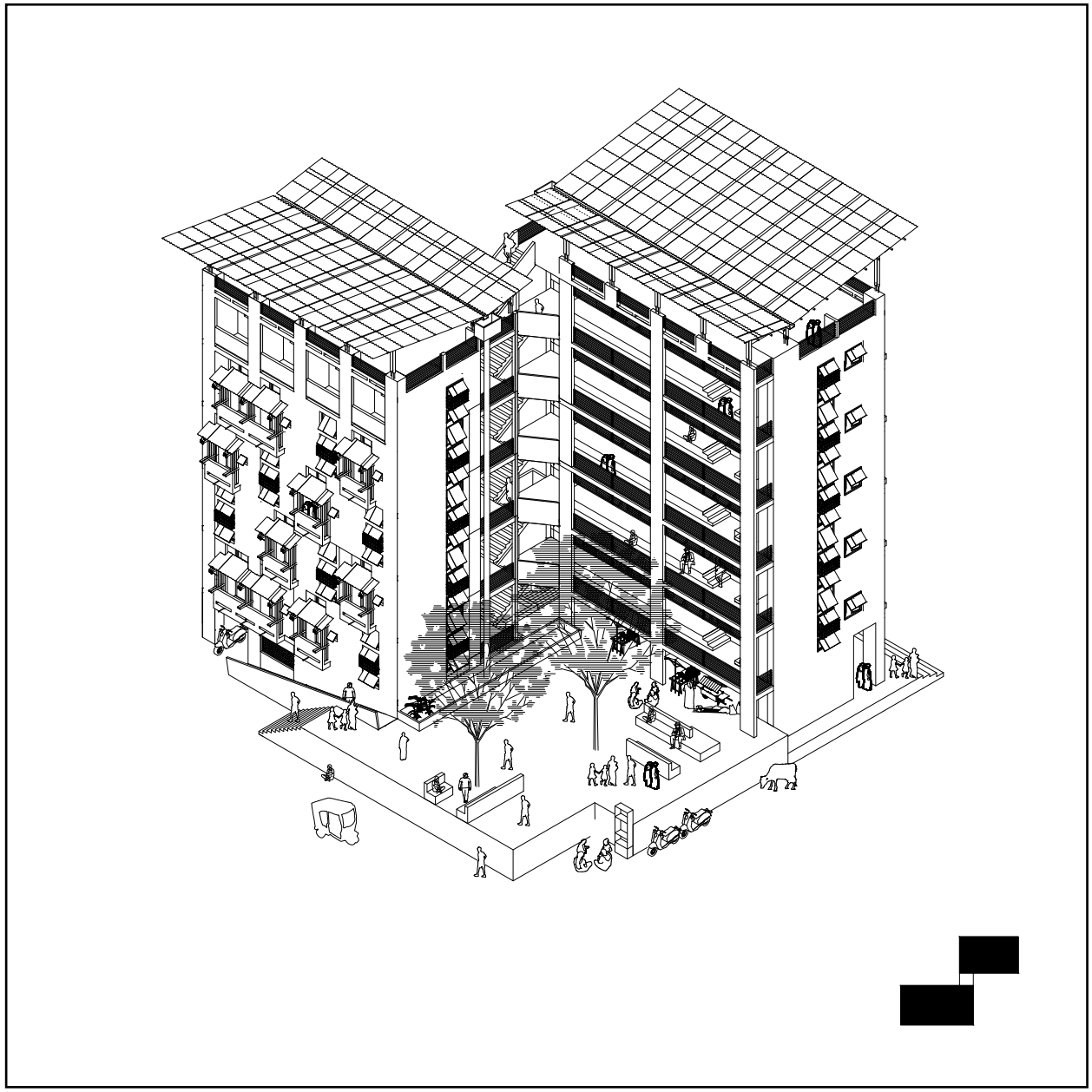
Building's Shape



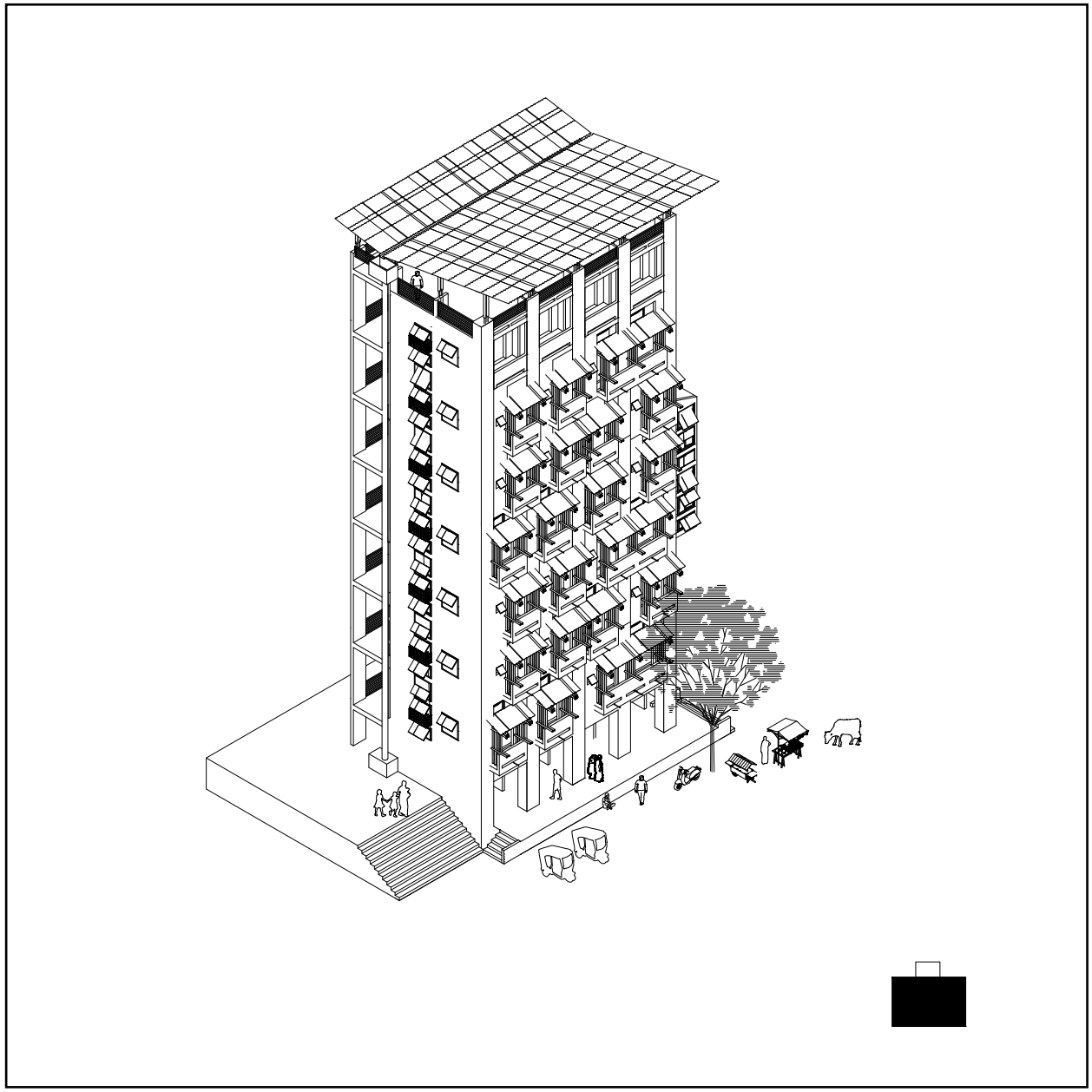
Building's Shape



Building's Shape

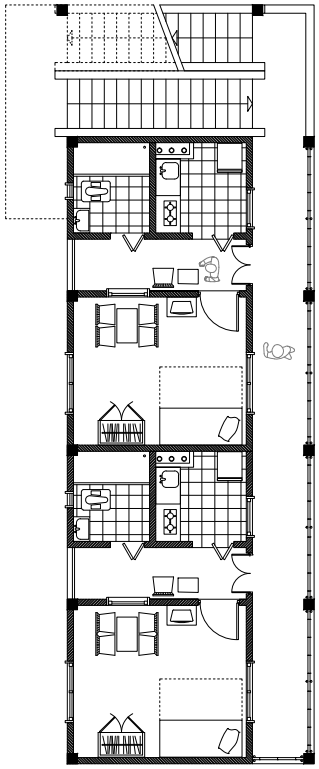


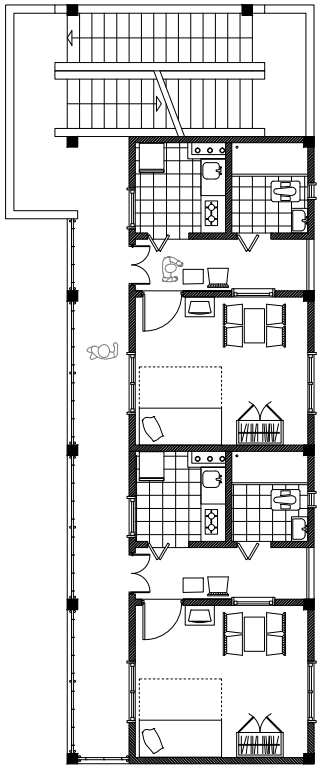
Building's Shape

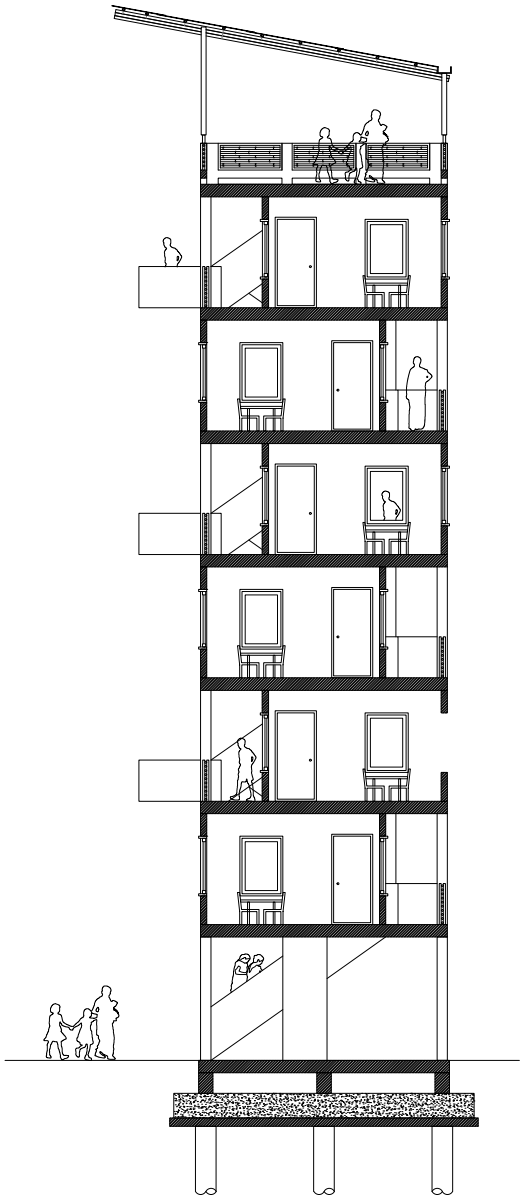


Building As a Barrier

Building As a Barrier

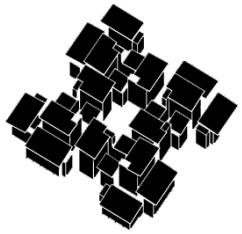






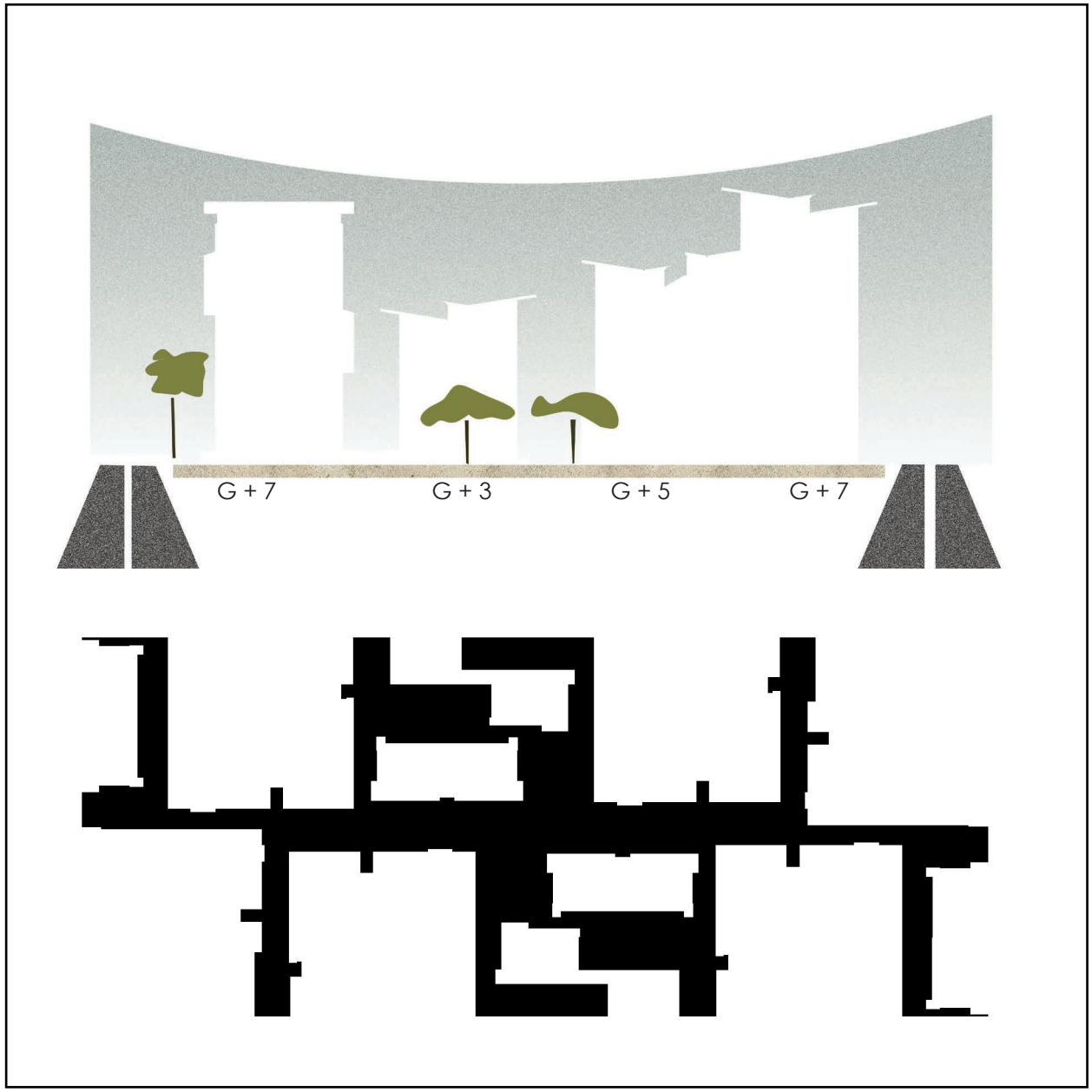
Proposal

Clustering

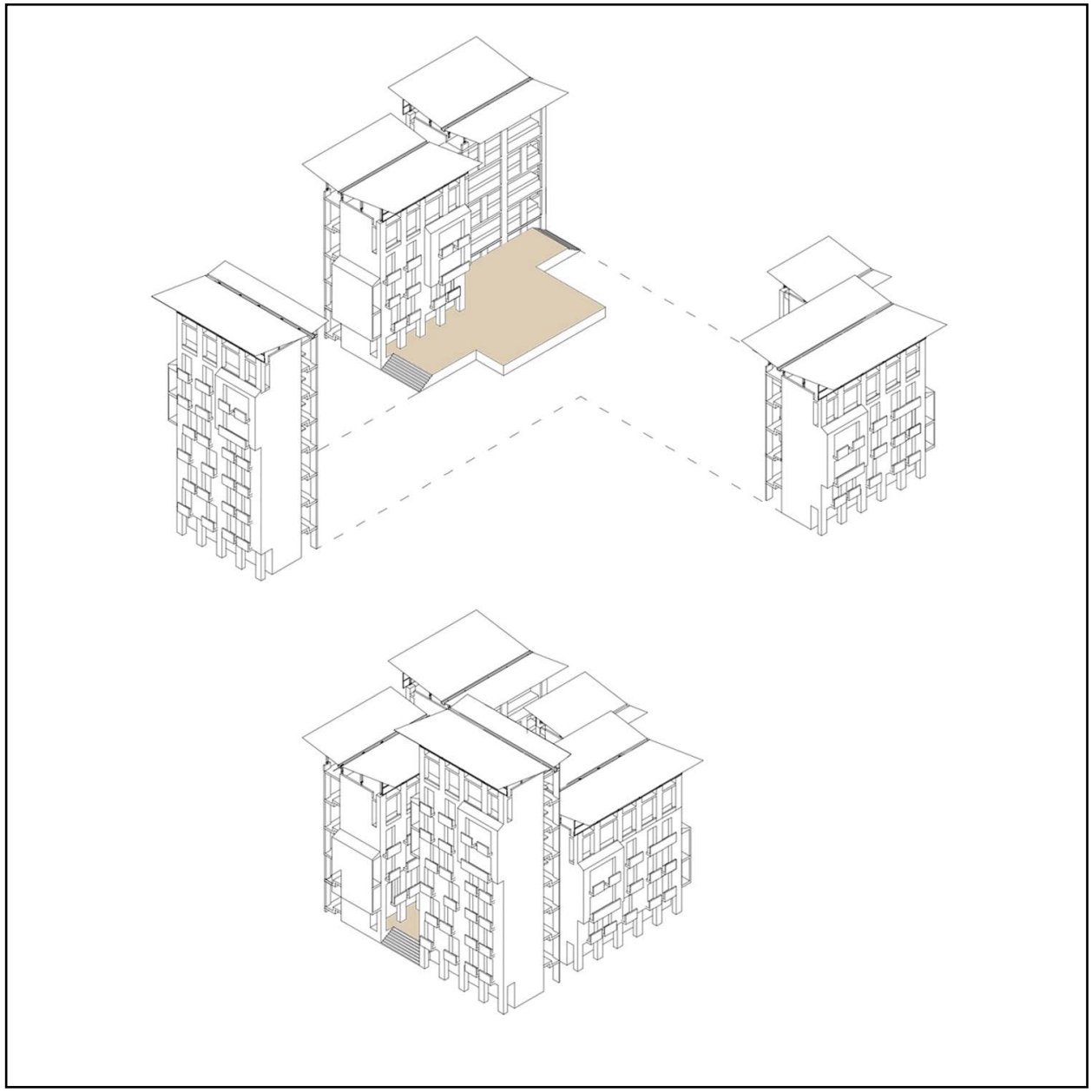


Cluster Types

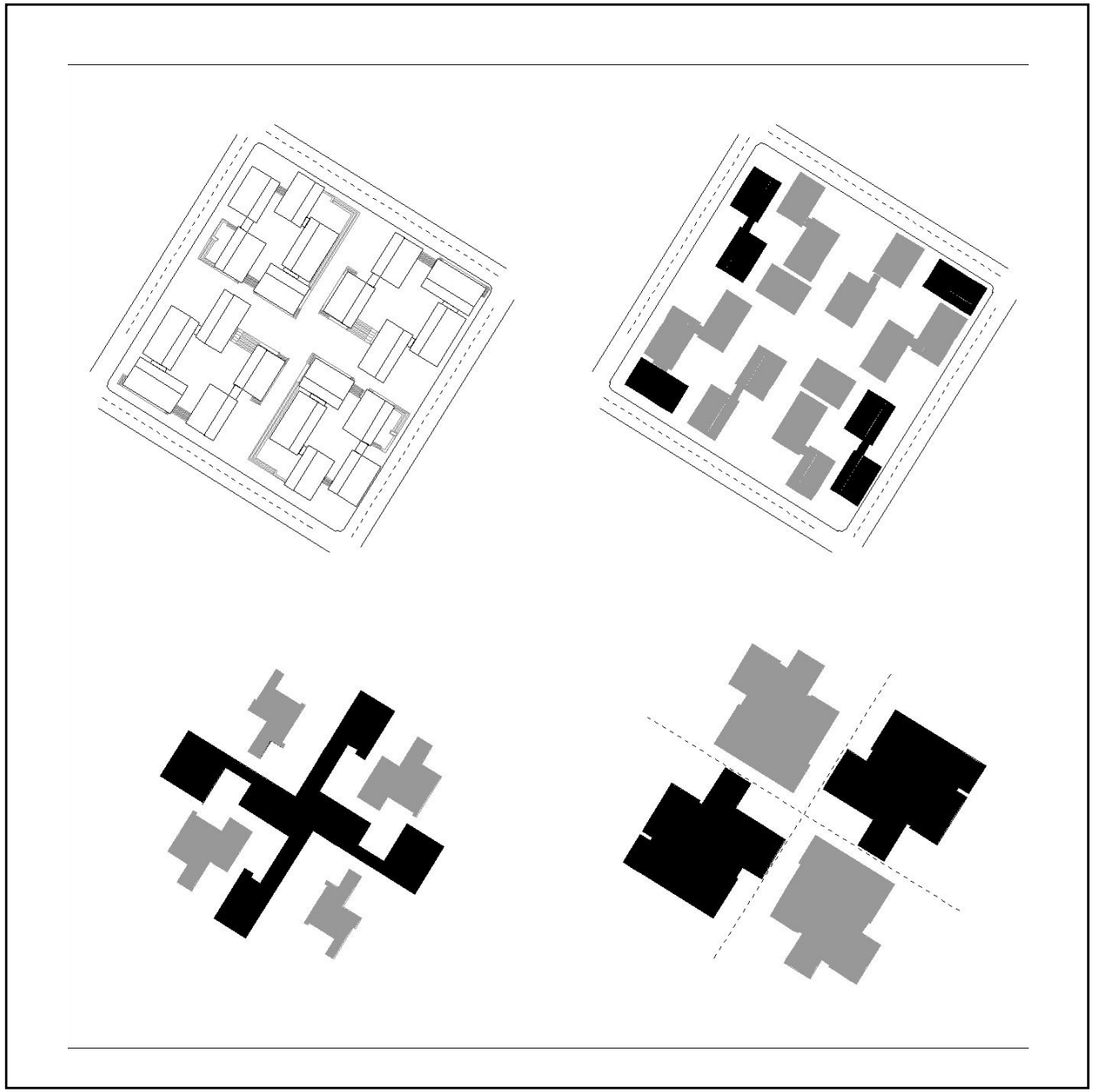
Clustering Principles



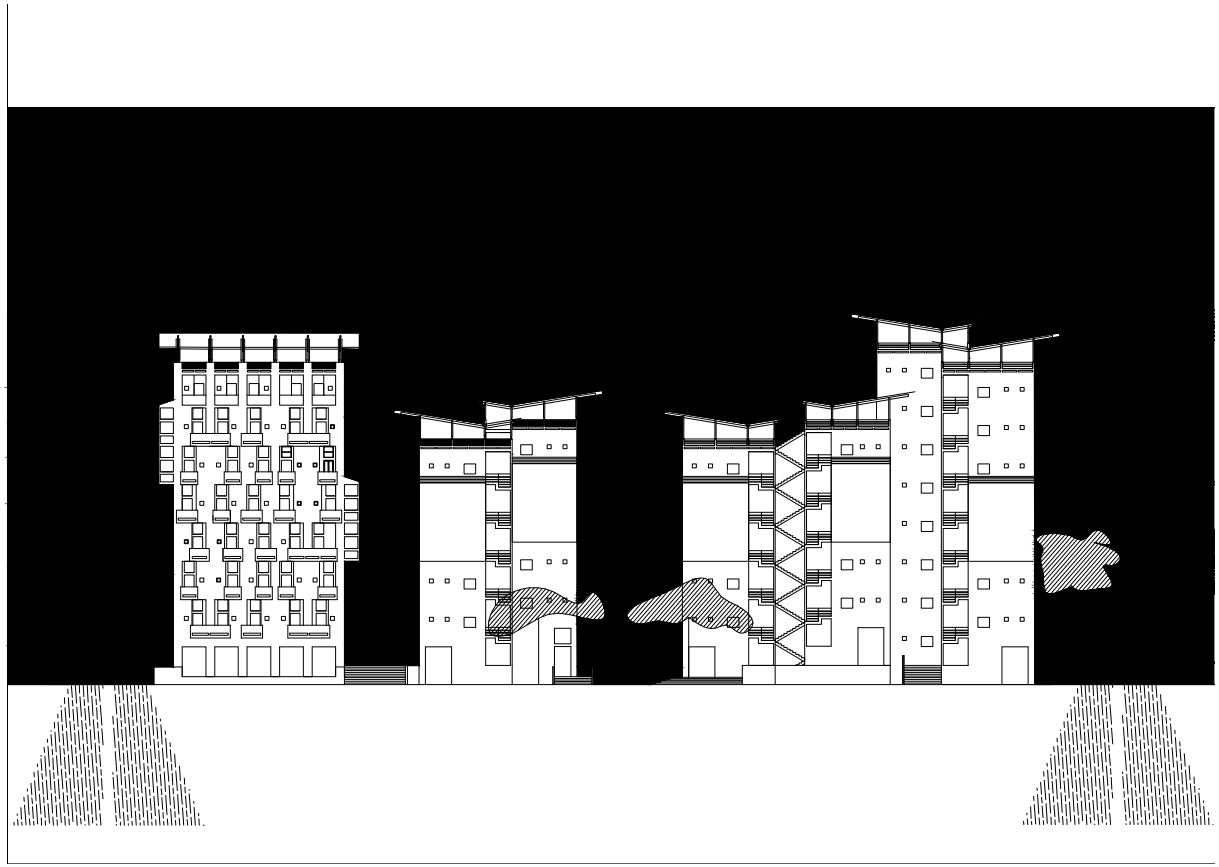
Building Block



Cluster Type A

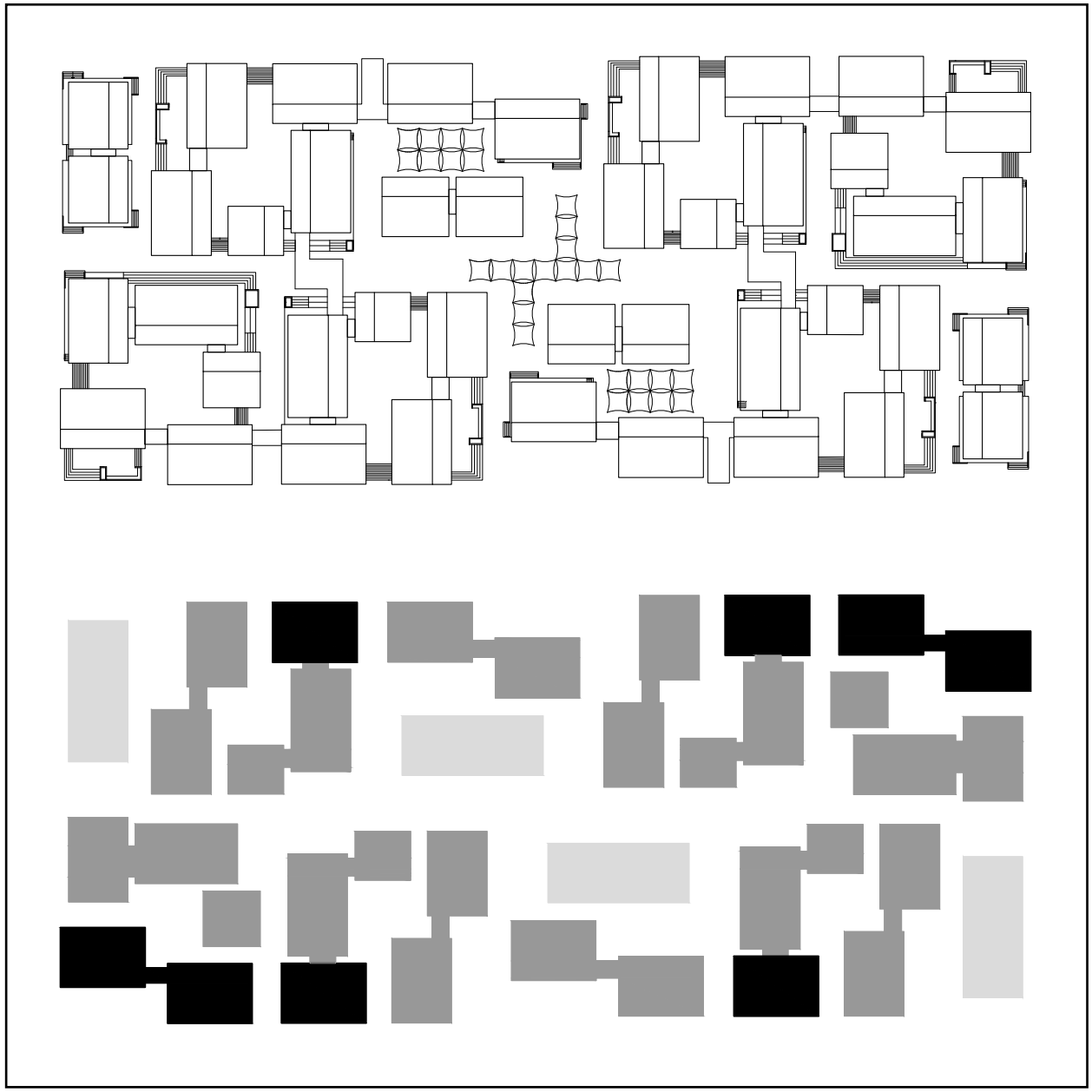


Cluster Type A



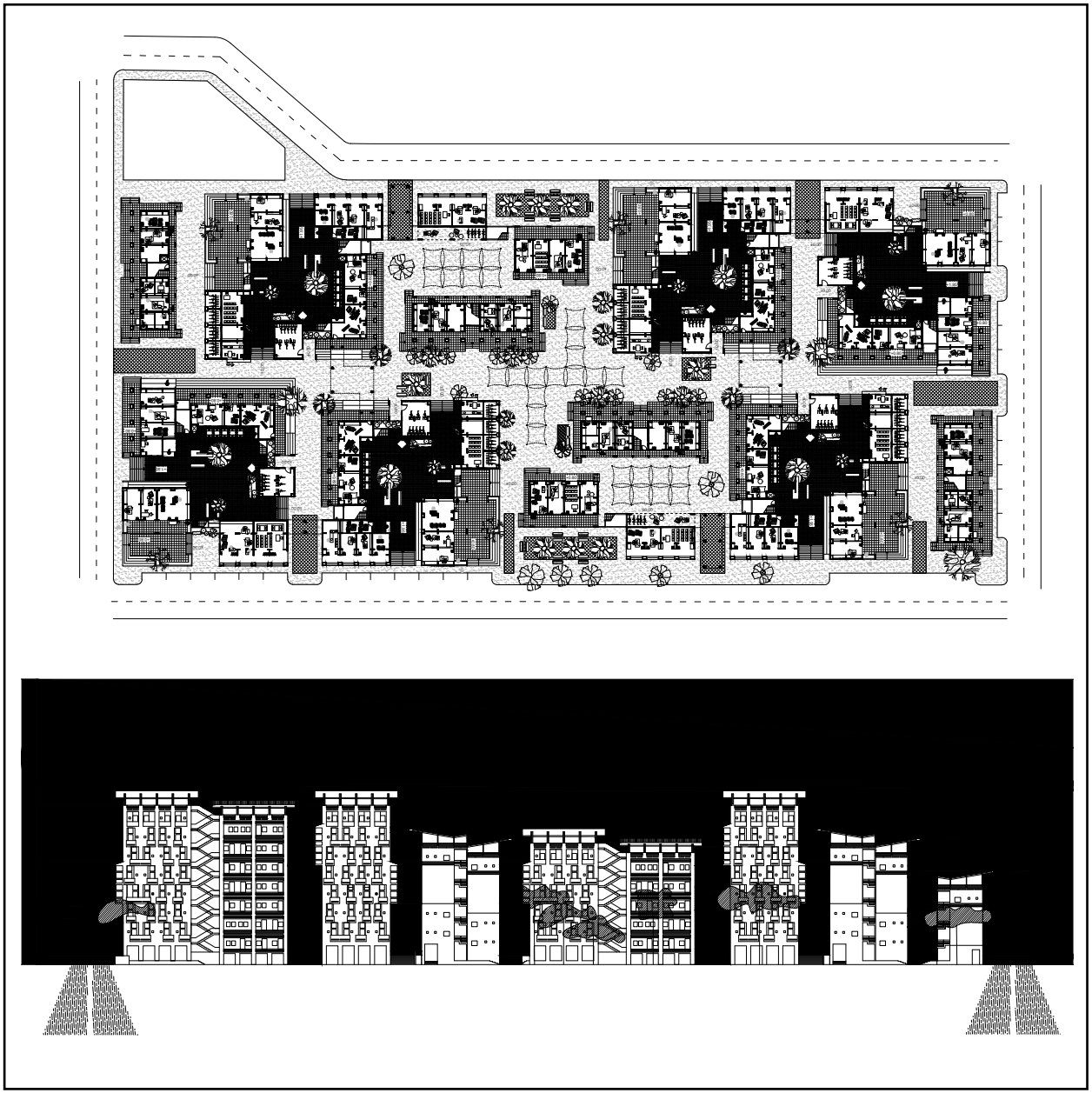
Cluster Type A

Cluster Type B

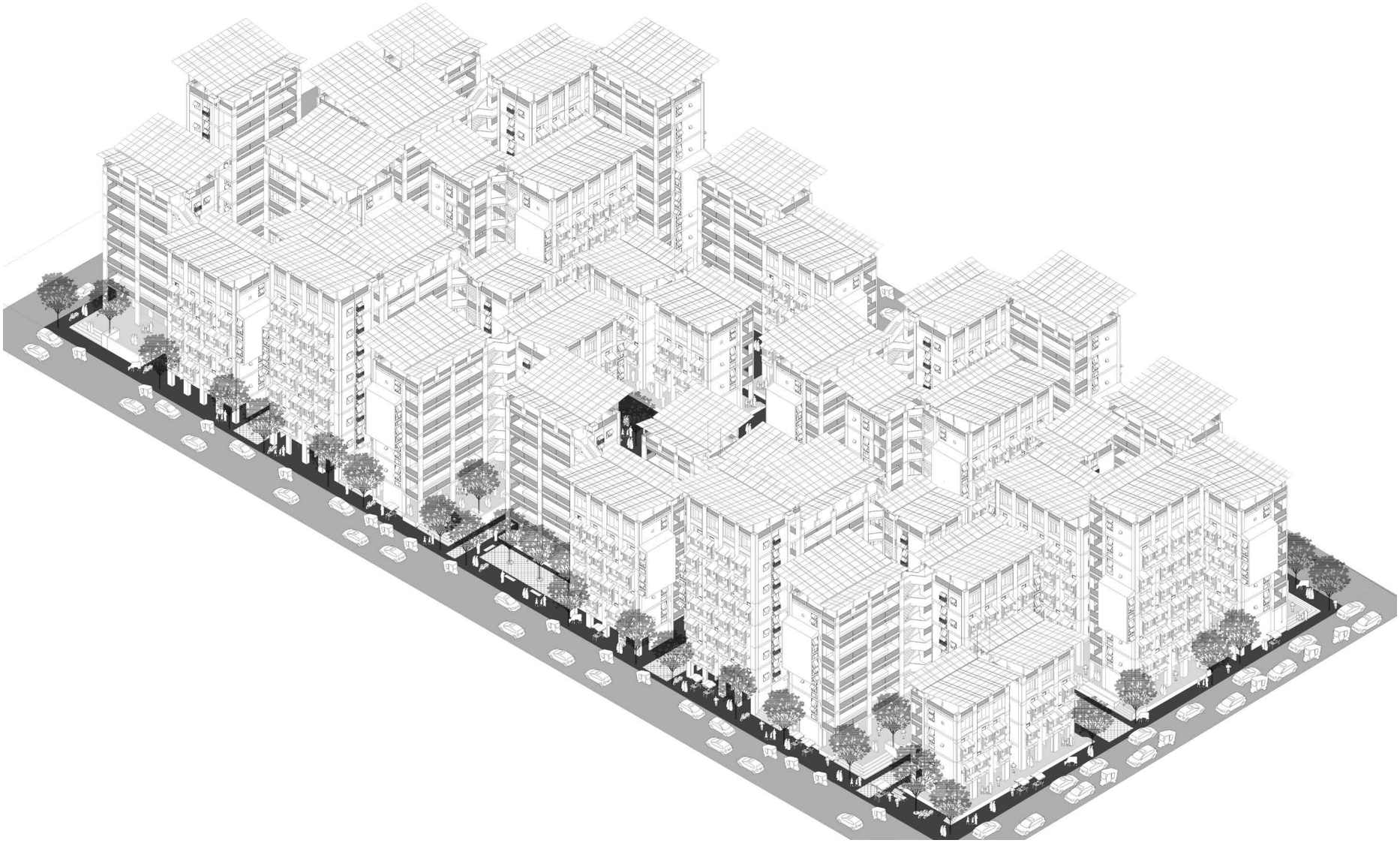


Cluster Type B

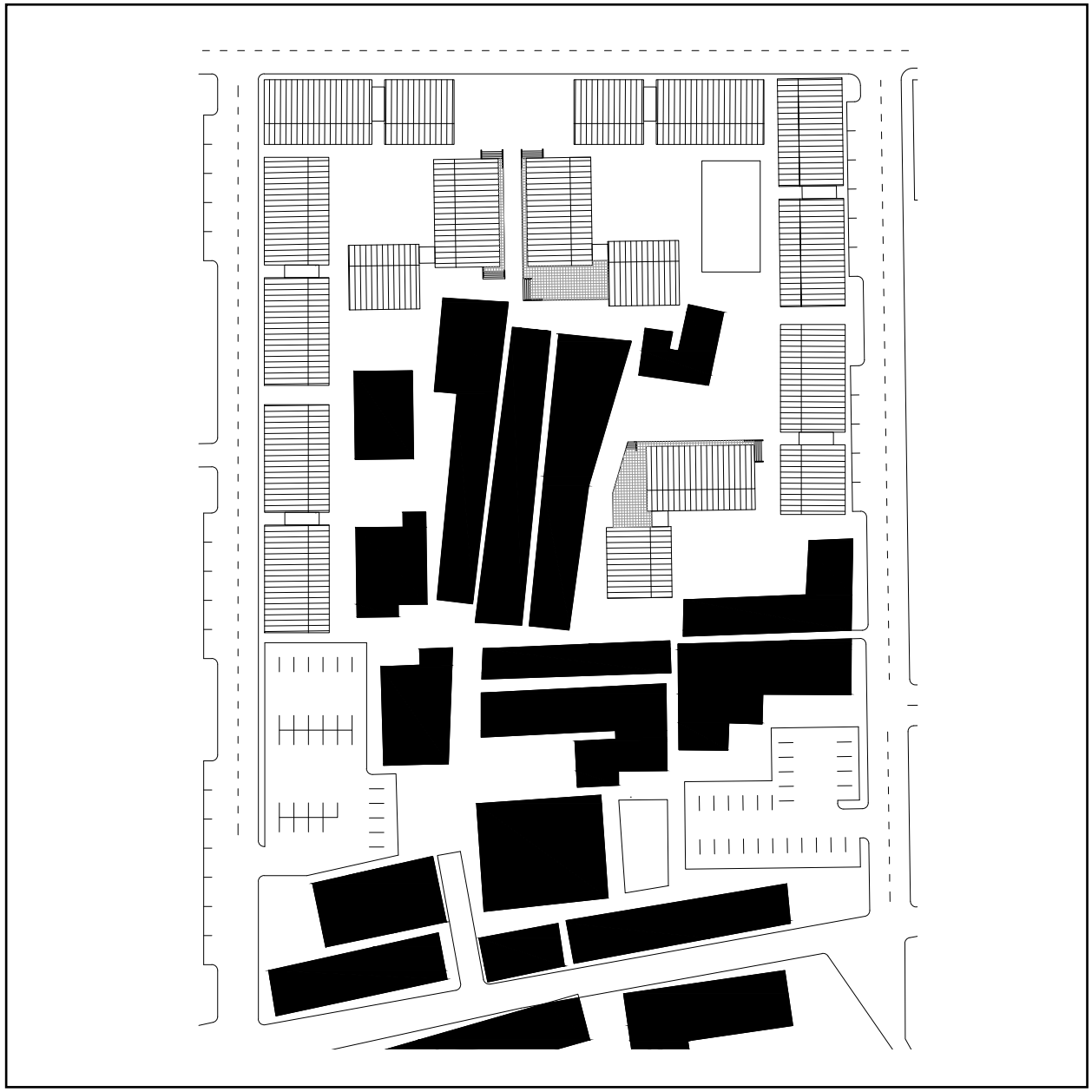
Cluster Type B



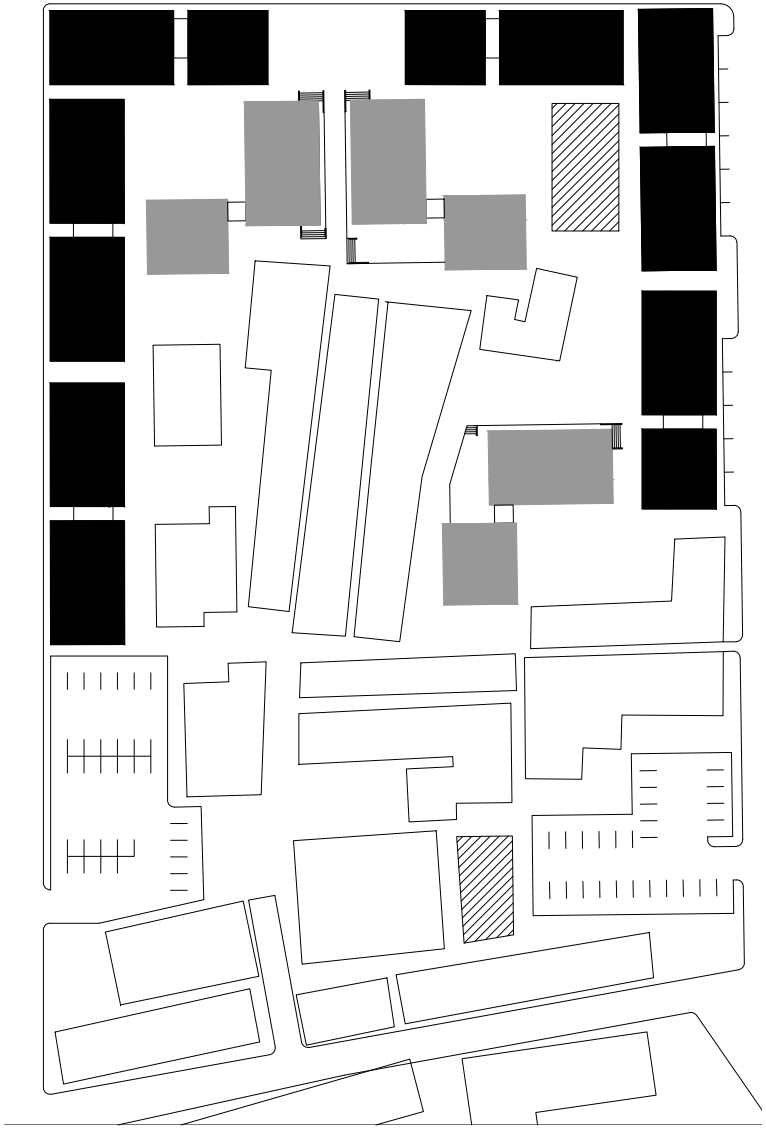
Cluster Type B

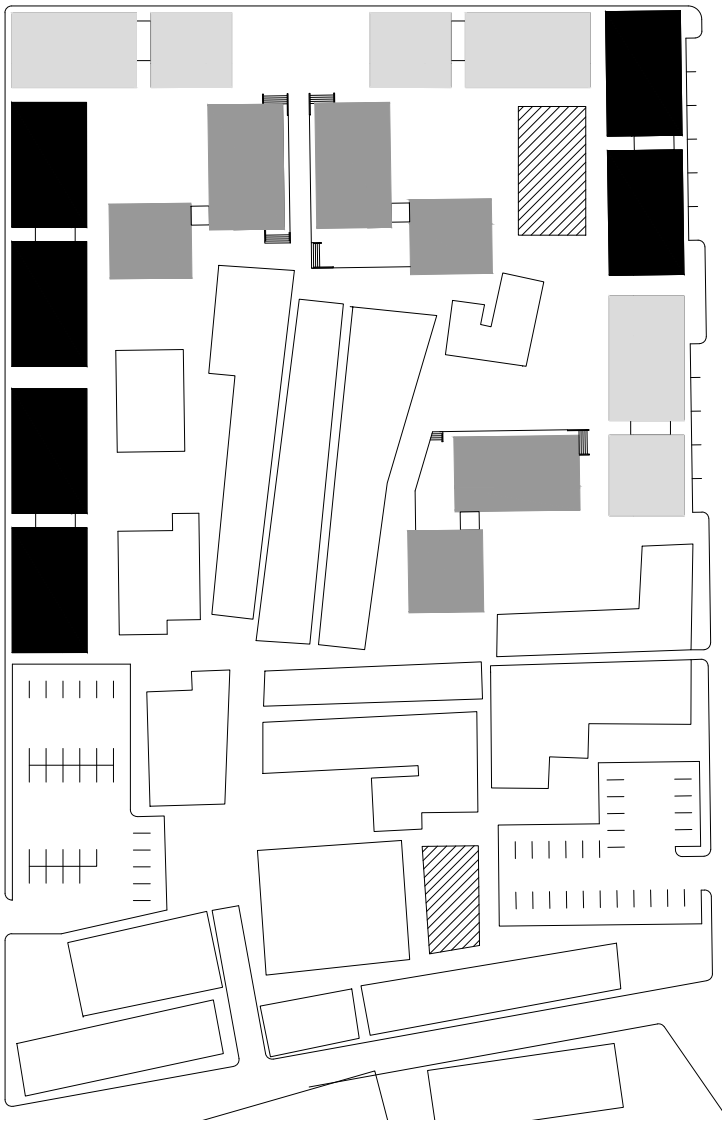


Cluster Type C



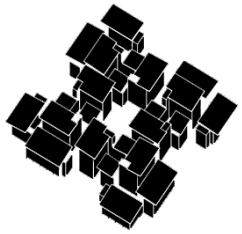
Cluster Type C





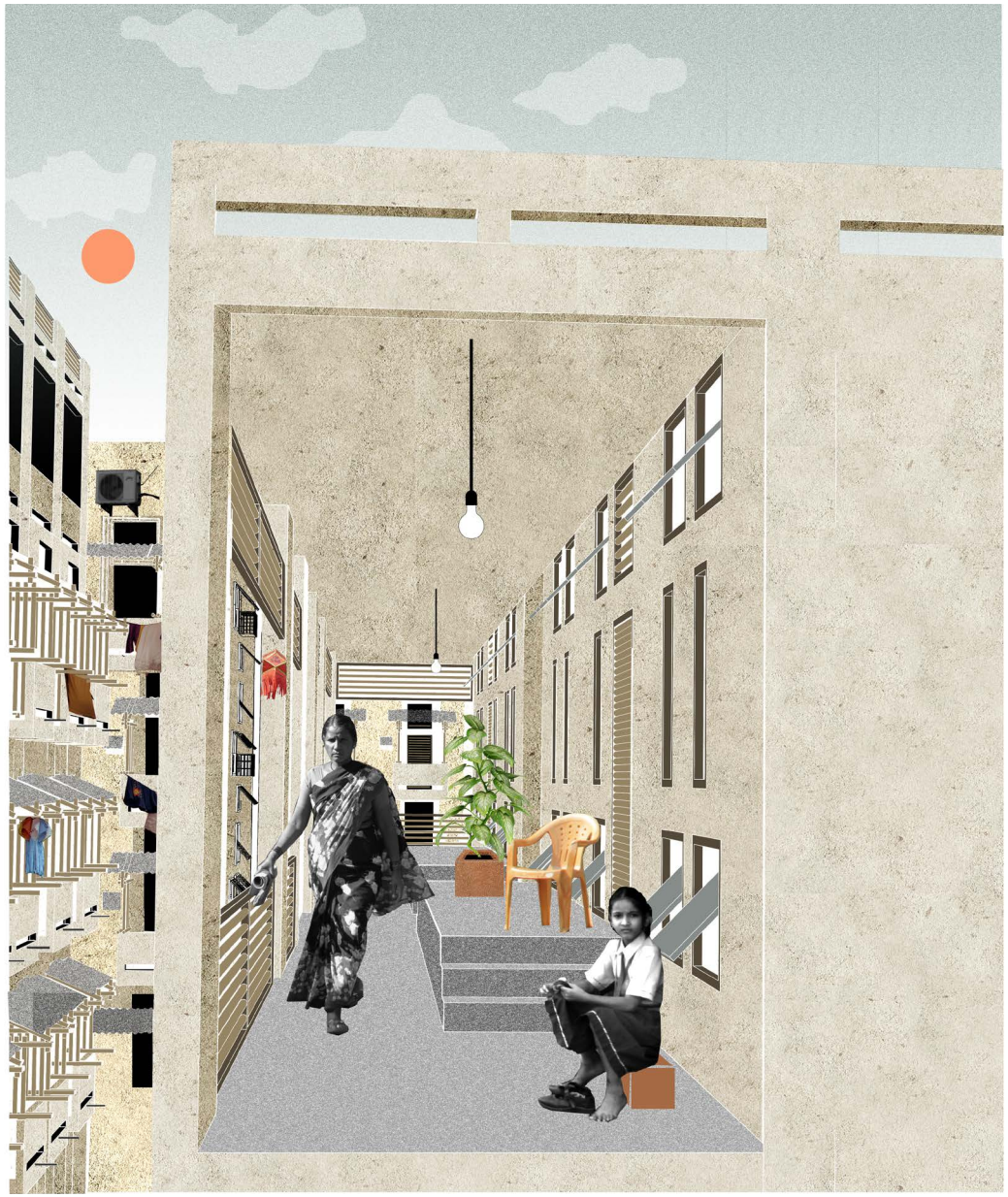
Proposal

Experience.



Family

Ottla



Proposal | Experience

Courtyard

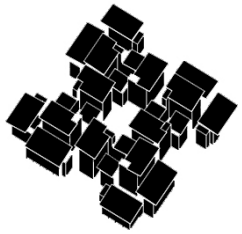
In Between the Blocks'

Proposal | Experience

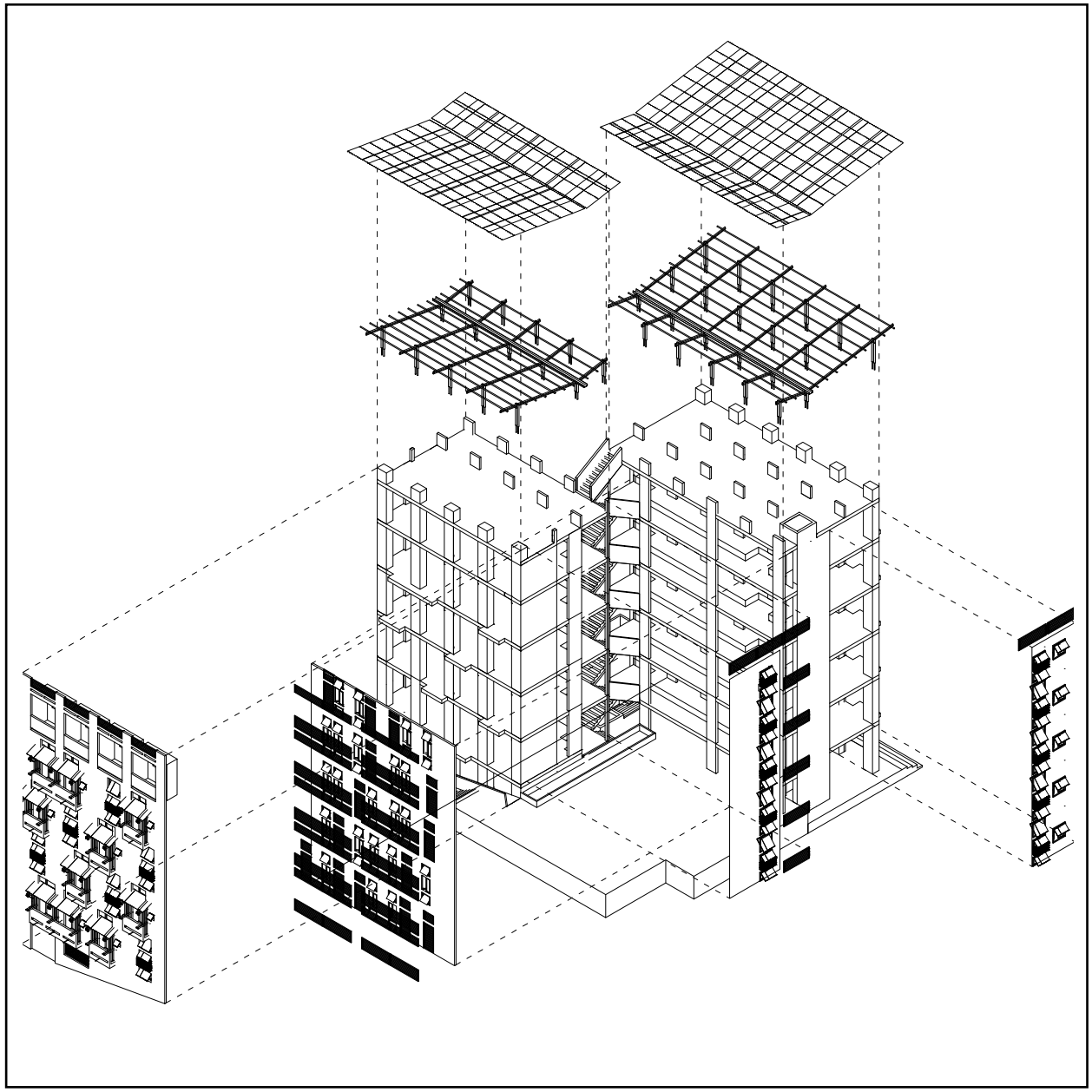
Bulding as a Barrier/Animator

Proposal

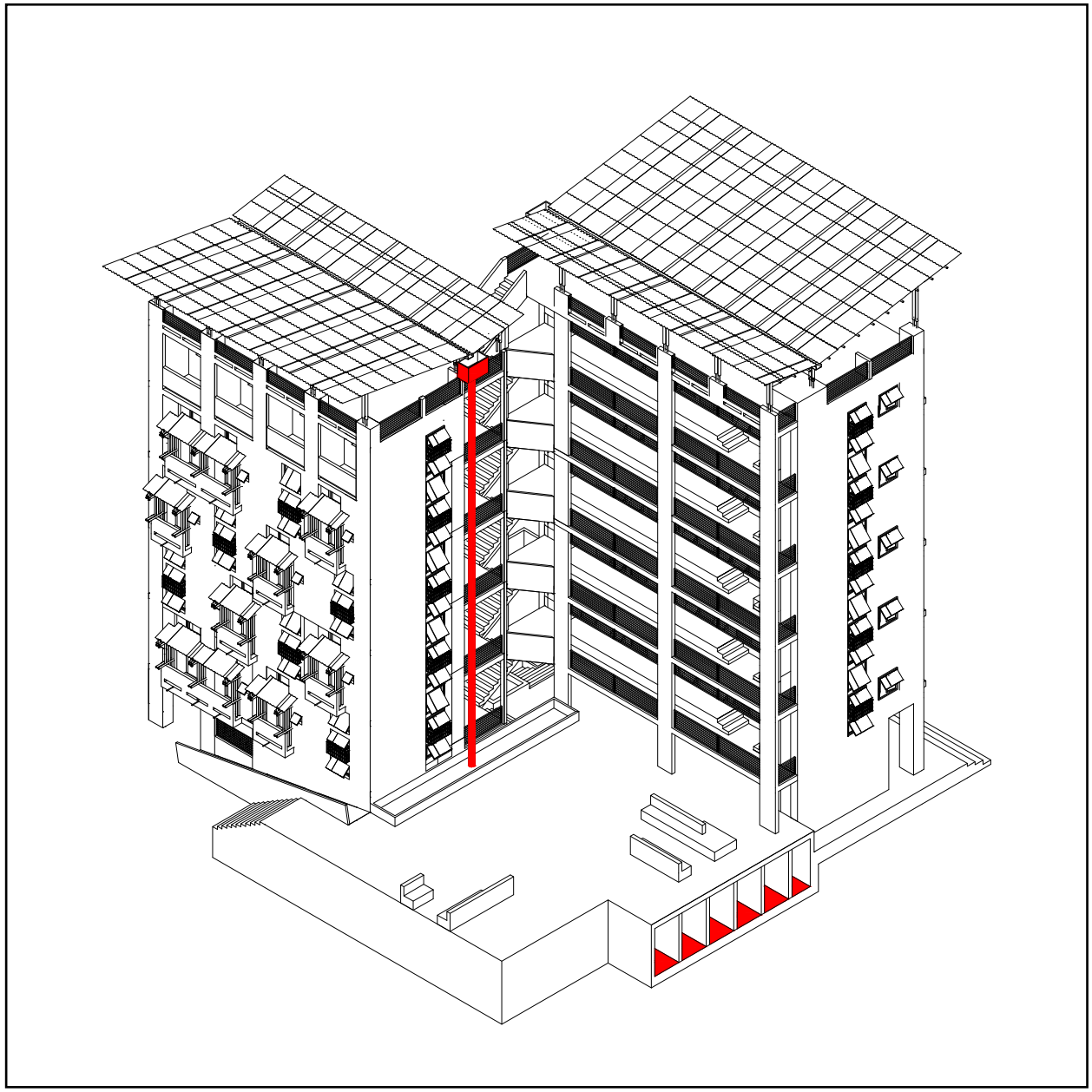
Building Technology



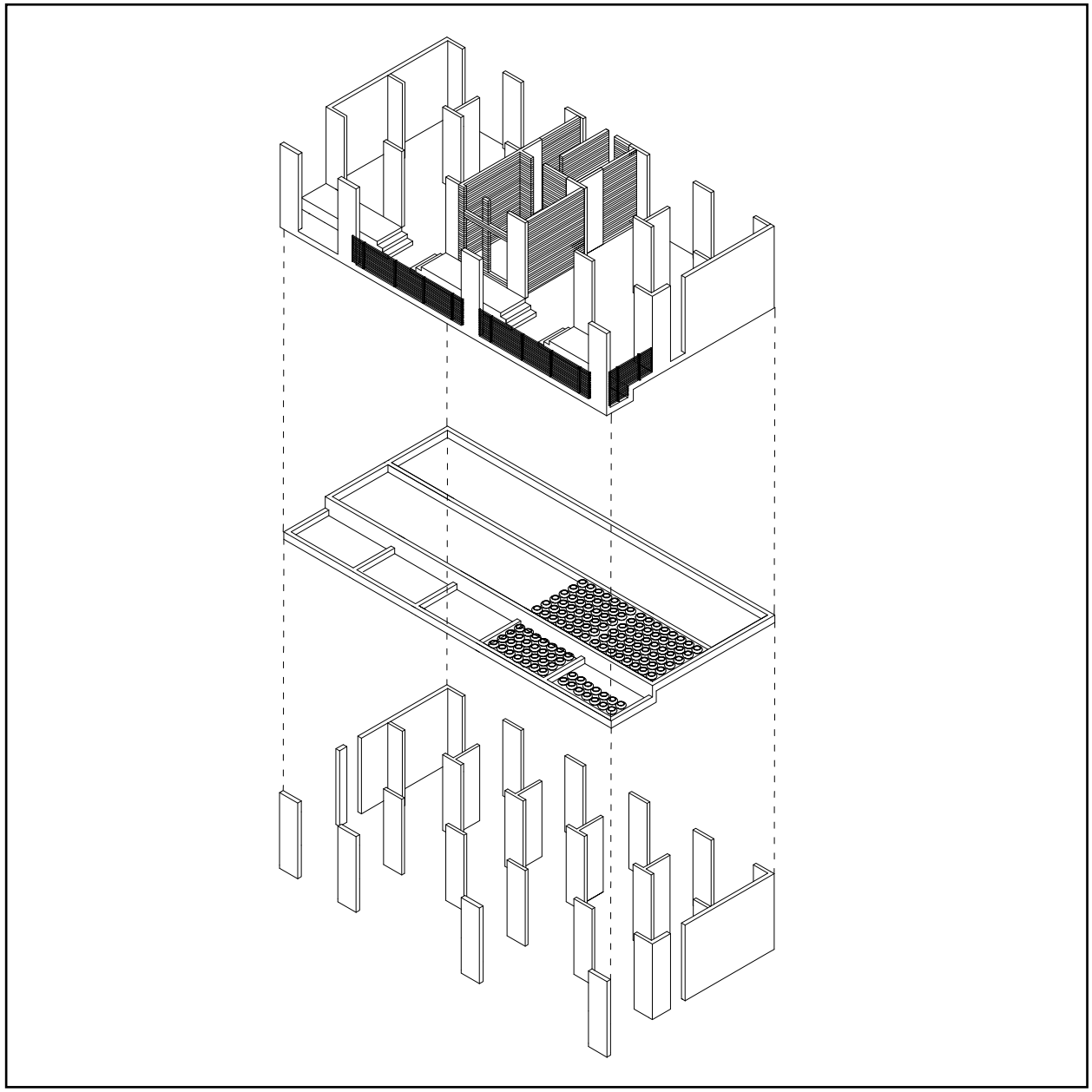
Building's Elements



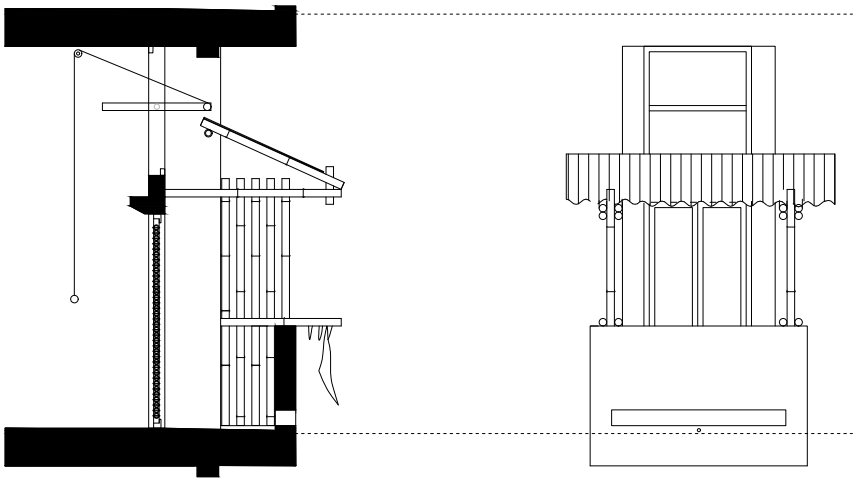
Building's Elements

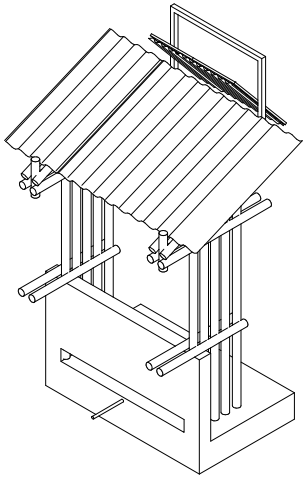


Building's Elements

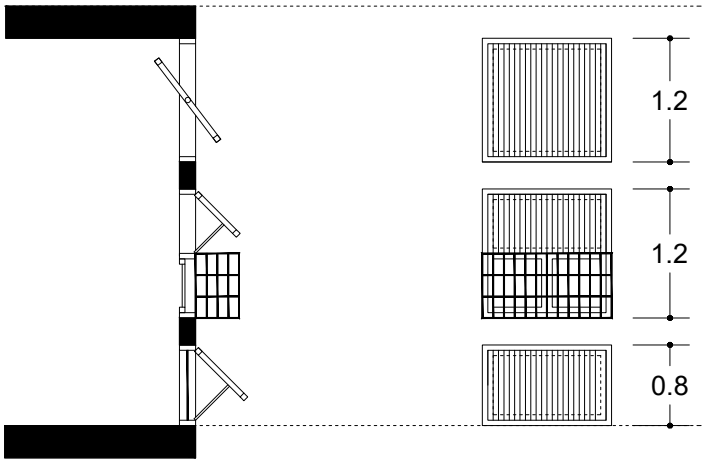


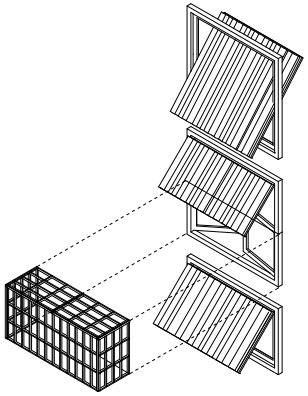
Building's Elements



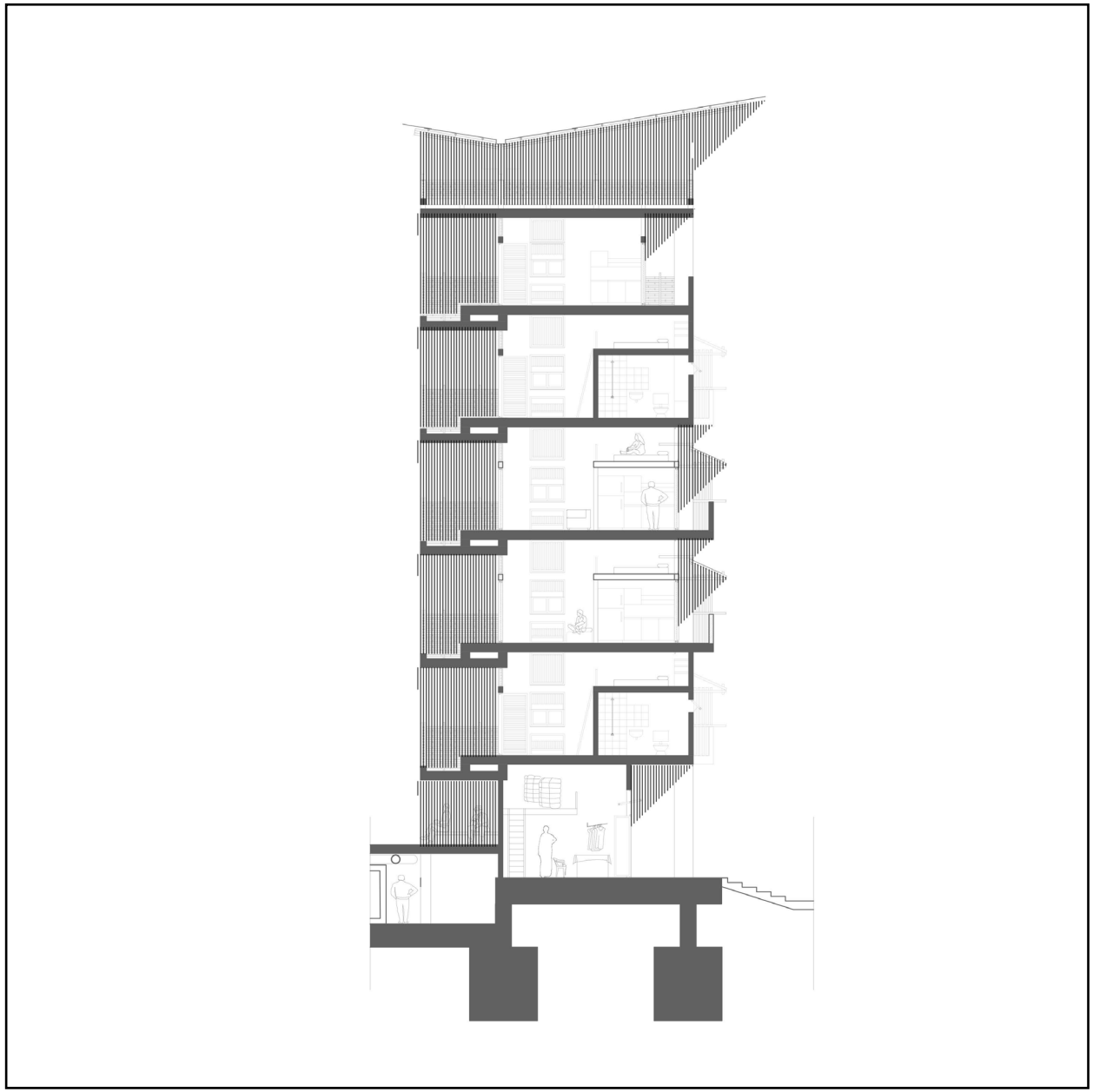


Building's Elements

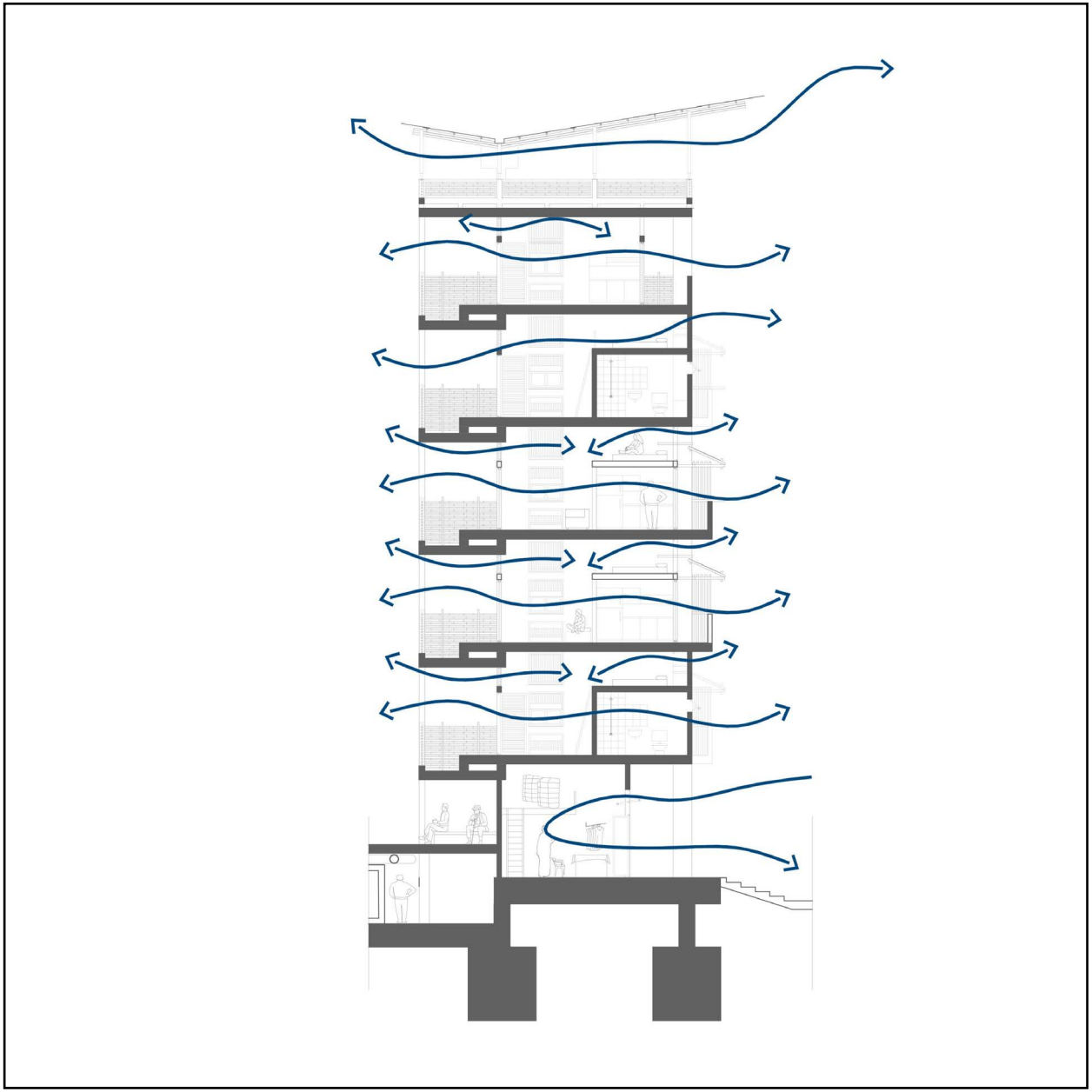




Shaded Area



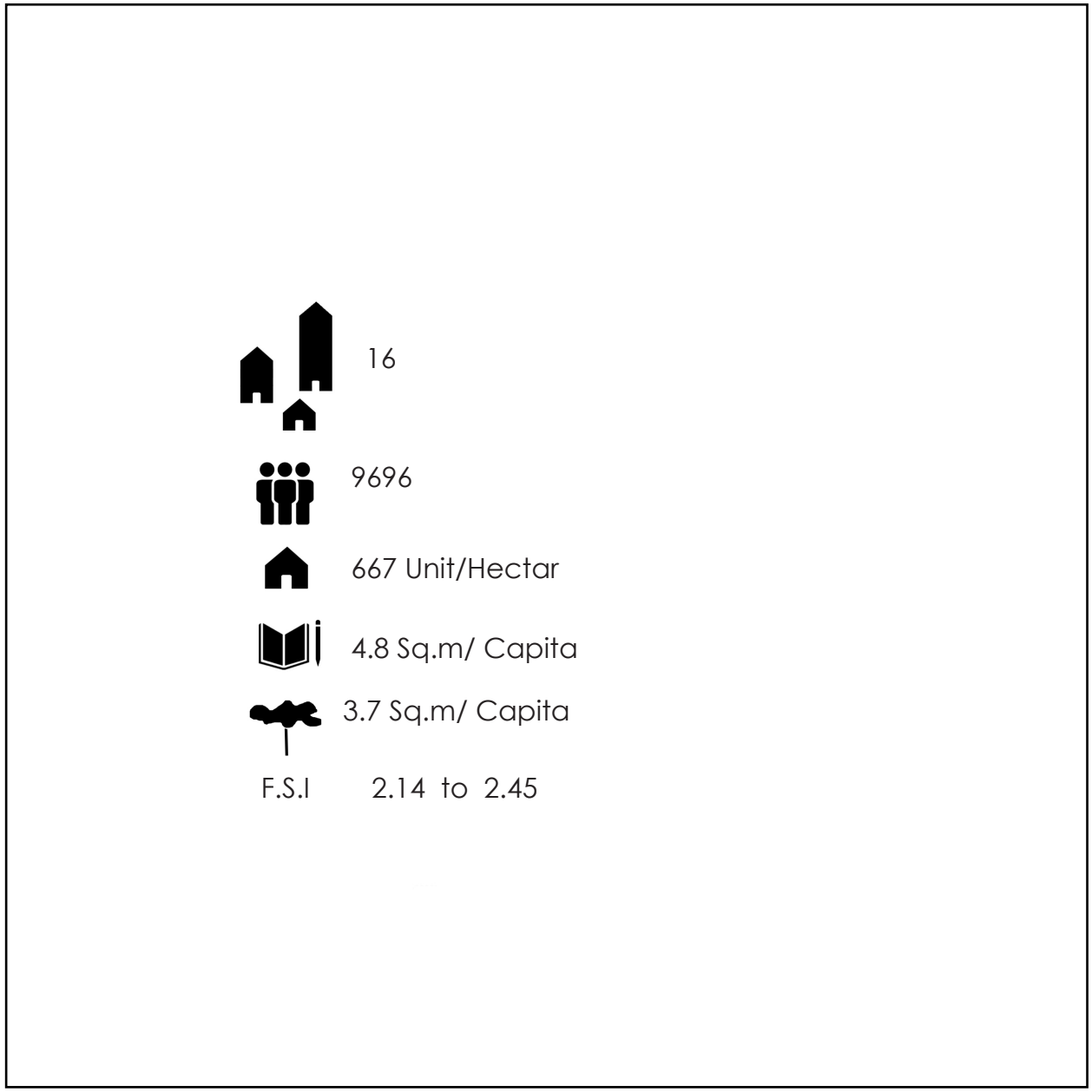
Natural Ventilation



Figures & Comparisons

Figures and Comparisons

Density & FSI



Figures and Comparisons

Density & FSI

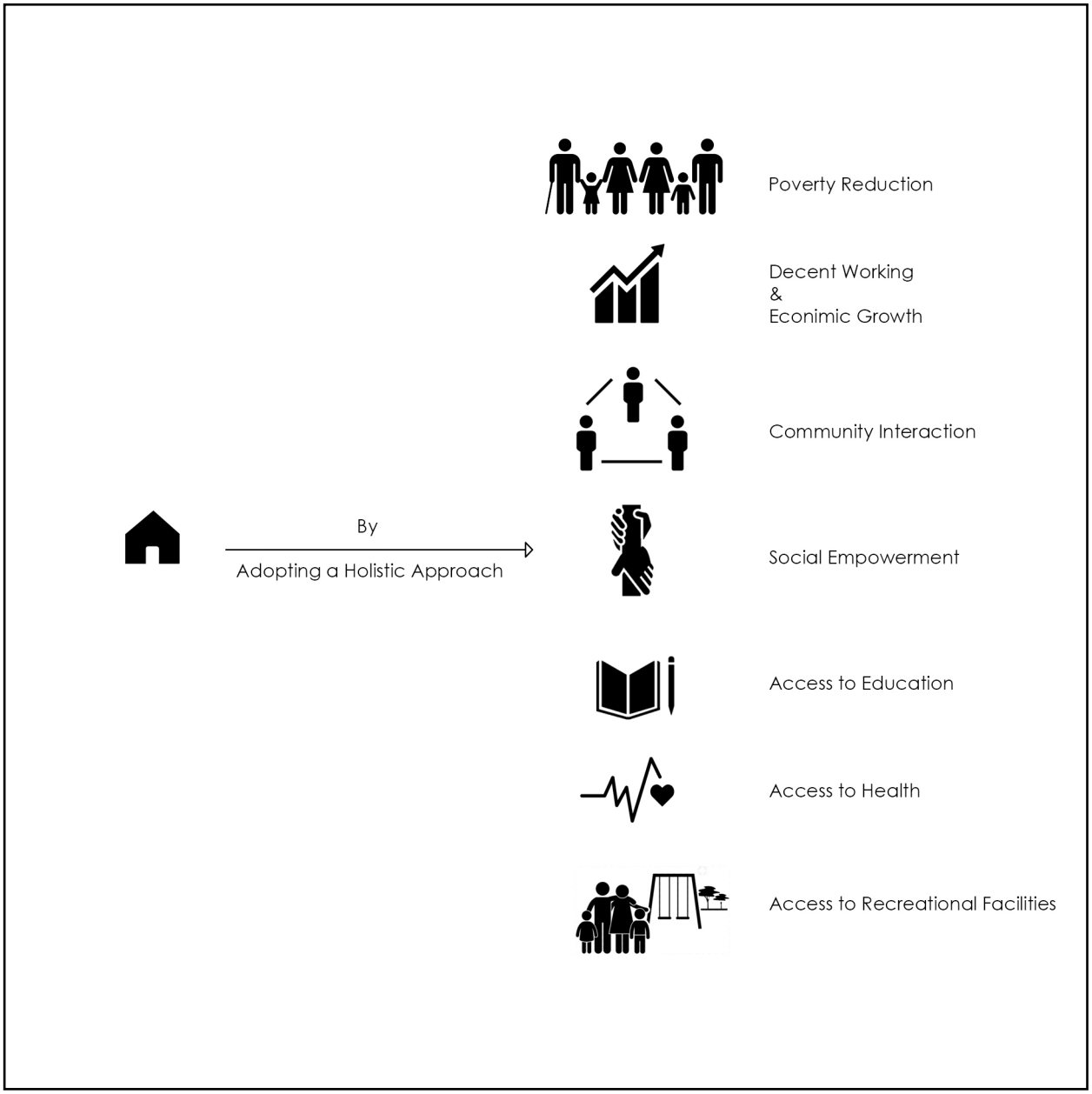
Proposed Height Mix	Number of Dwelling units	Number of Shops/Workshops	Population	Built up Area (sq.m)
Integrated into context Cluster	472	38	1888	21791.6
Cricket Field Cluster	526	76	2104	14021
Rectangular shaped Cluster	706	138	2824	38792
Square shaped Cluster	492	88	1960	23578
Wall	216	36	864	9412.2
Bare Structure	61		244	1220
Filling Blocks	594	65	2376	23110
Amenities				46835
Total	**3067 units**	**441**	**12260**	**178760**

Height of G+7 for all	Number of Dwelling units	Number of Shops/Workshops	Population	Built up Area (sq.m)
Integrated into context Cluster	472	38	1888	21791.6
Cricket Field Cluster	500	80		24223.7
Rectangular shaped Cluster	600	136	2400	43743
Square shaped Cluster	496	76		24223.7
Wall	216	36	864	9412.2
Bare Structure	61		244	1220
Filling Blocks	594	65		28937
Amenities				65177
Total	**2939 units**	**431**		**217630.2**

	Height as proposed	Height of G+7 for All the blocks
Area of the site (sq.m)	85680	85680
Open space (sq.m)	35942	35942
Population	9696	12012
Roads (sq.m)	22760.6	22760.6
Density (unit/hectar)	667	785
FSI	2.14	2.45

Figures and Comparisons

Inclusive Housing



Thank You