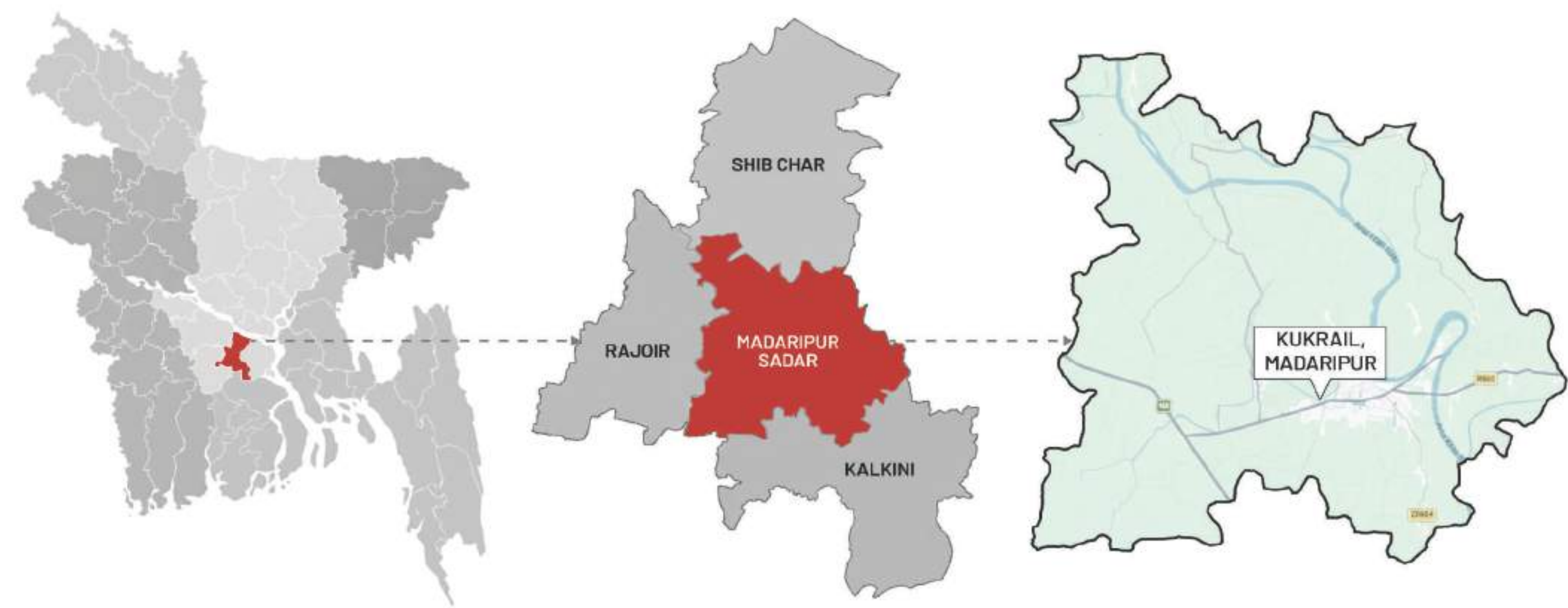
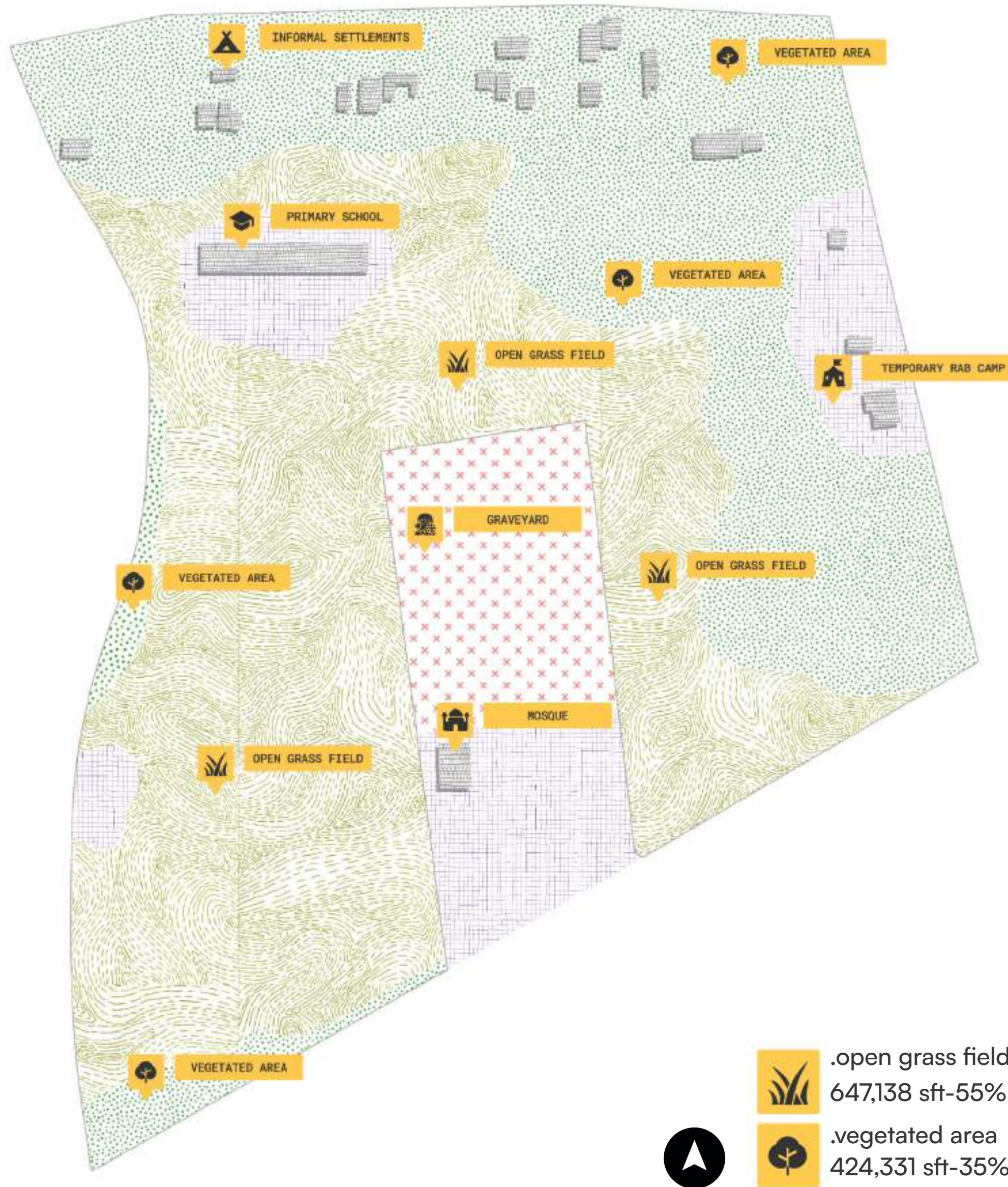


AFFORDABLE HOUSING FOR URBAN MARGINALIZED IN KUKRAIL, MADARIPUR

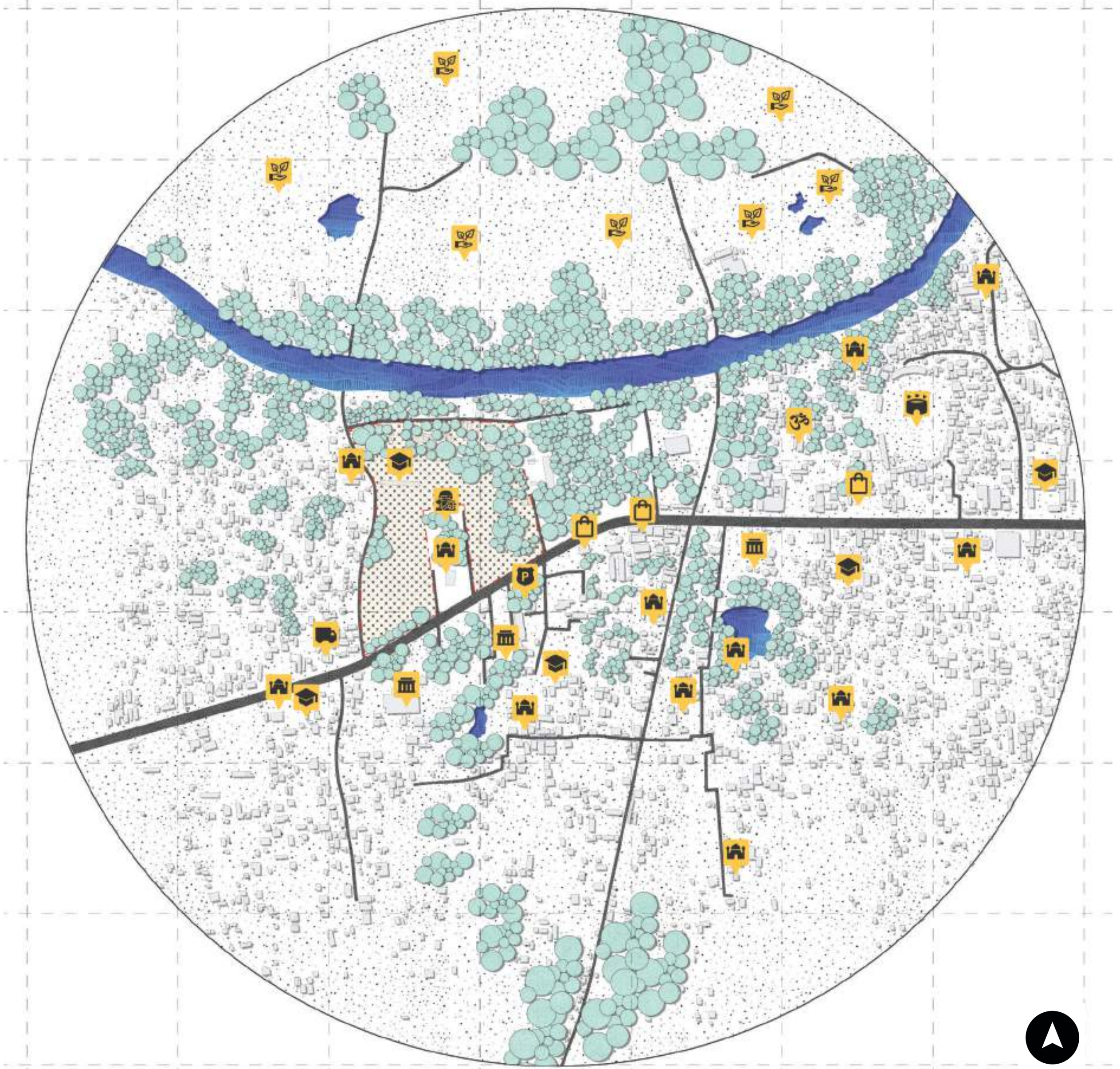
.site location



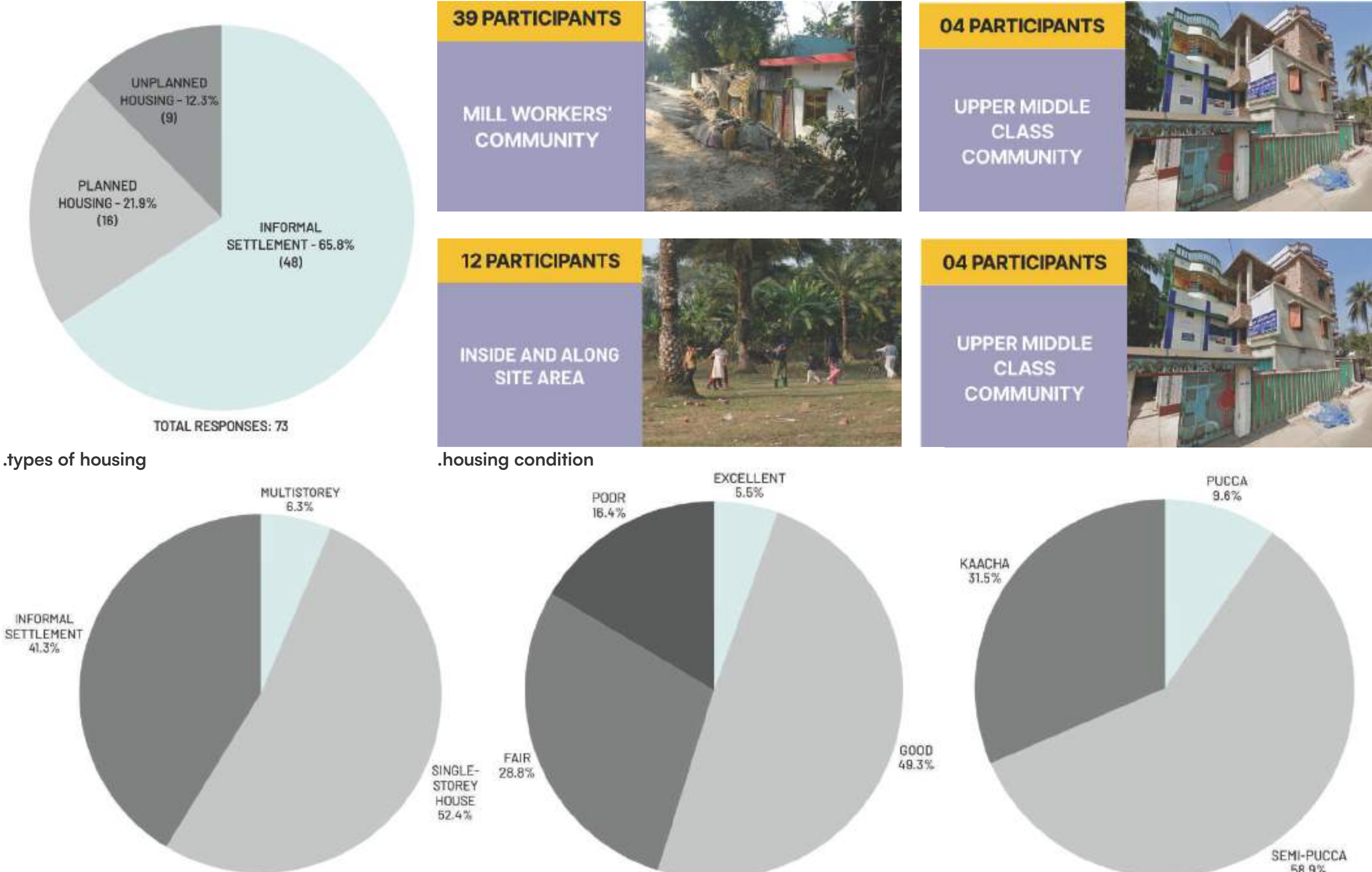
.site landuse



.site surrounding



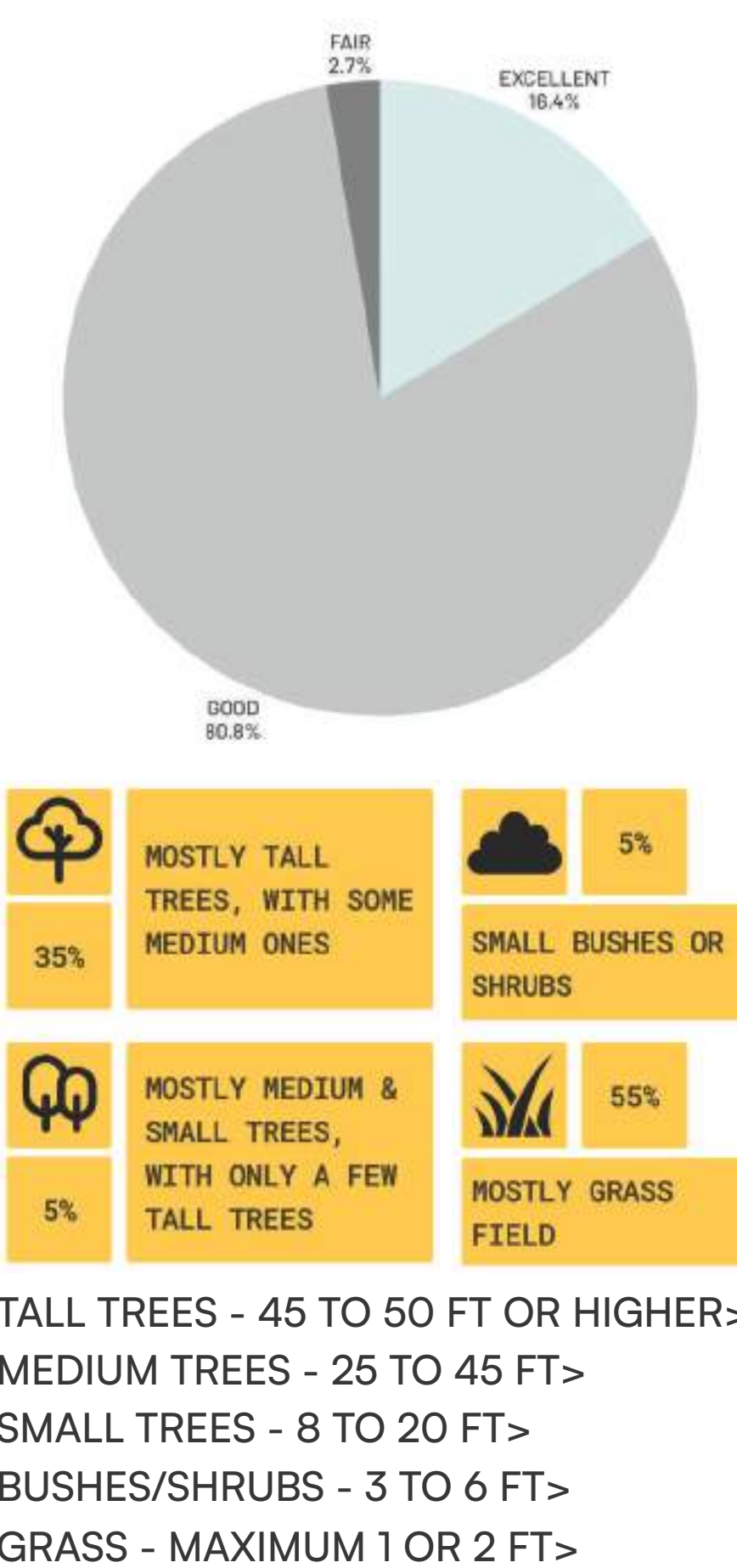
.survey



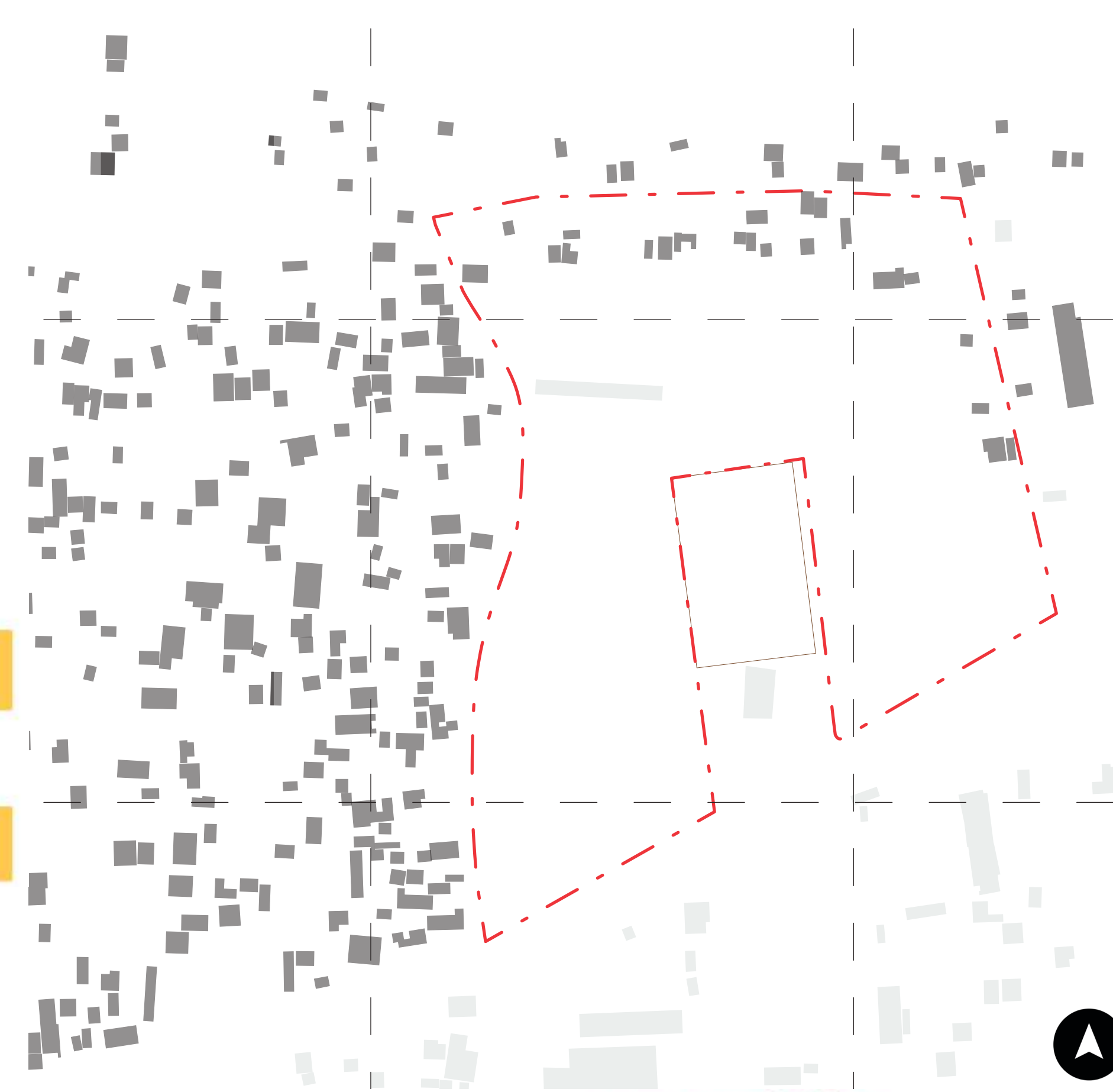
.vegetation mapping



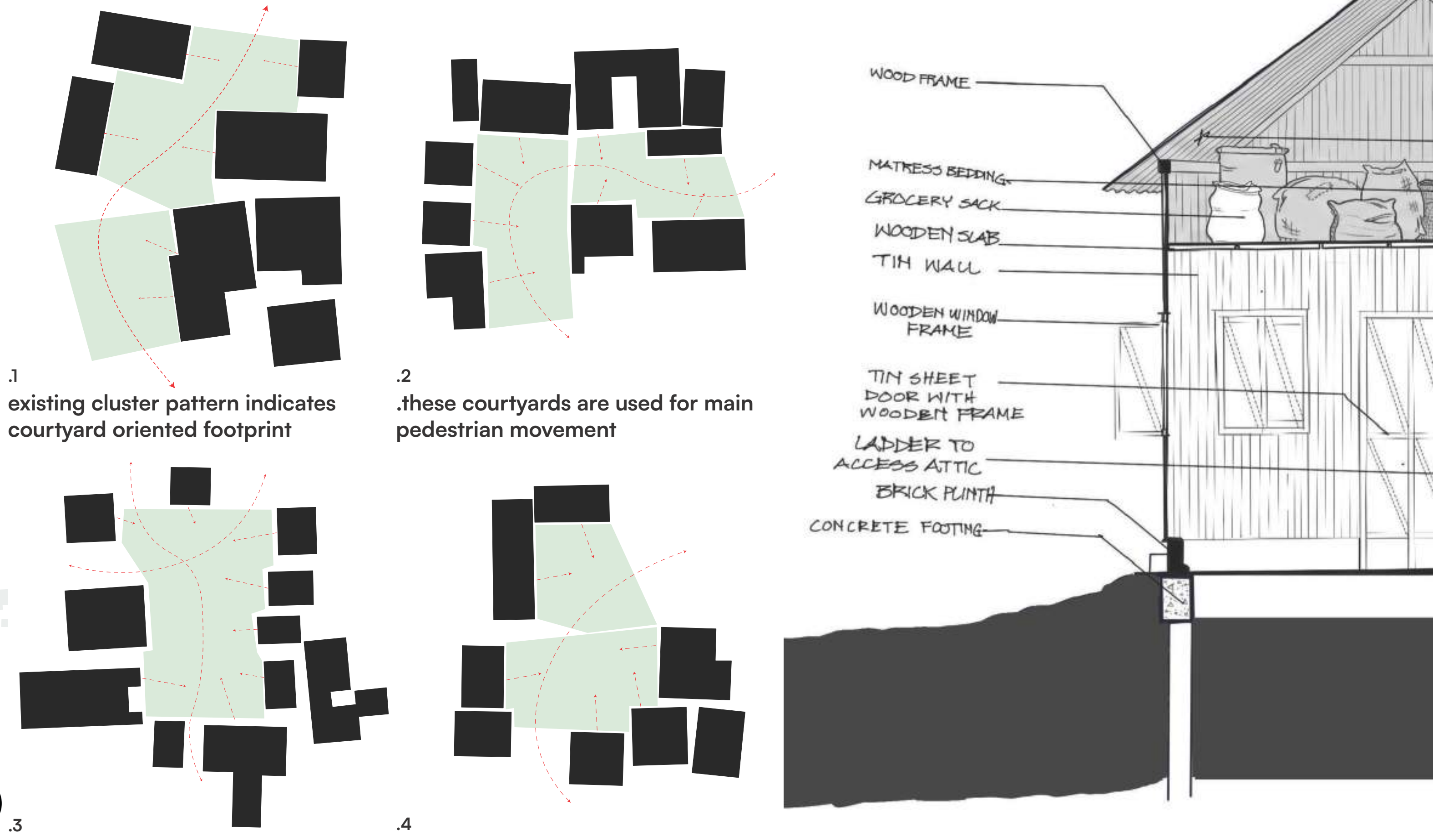
.environmental quality of the area



.targetted settlements



.existing cluster analysis



.existing housing types



.kuccha 1

Singlestorey>
Use of Attic>
Tin walls>
Use of Color>
Average 220sqft>

.semi pucca

Singlestorey>
Use of Attic/Mezzanine>
Brick walls>
Use of color>
Average 300 sqft>

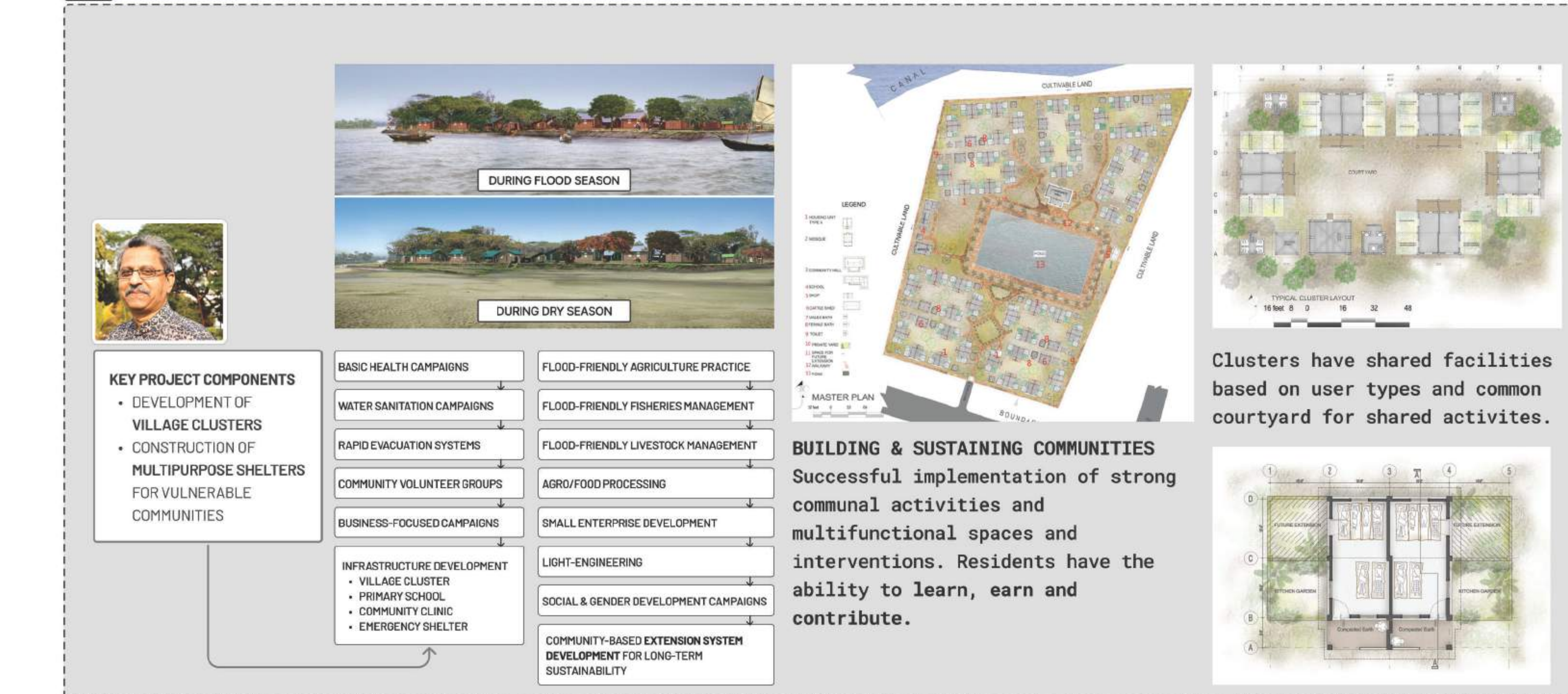
.kuccha 2

Singlestorey>
Commercial use>
Tin walls>
Use of Color>
Average 120sqft>

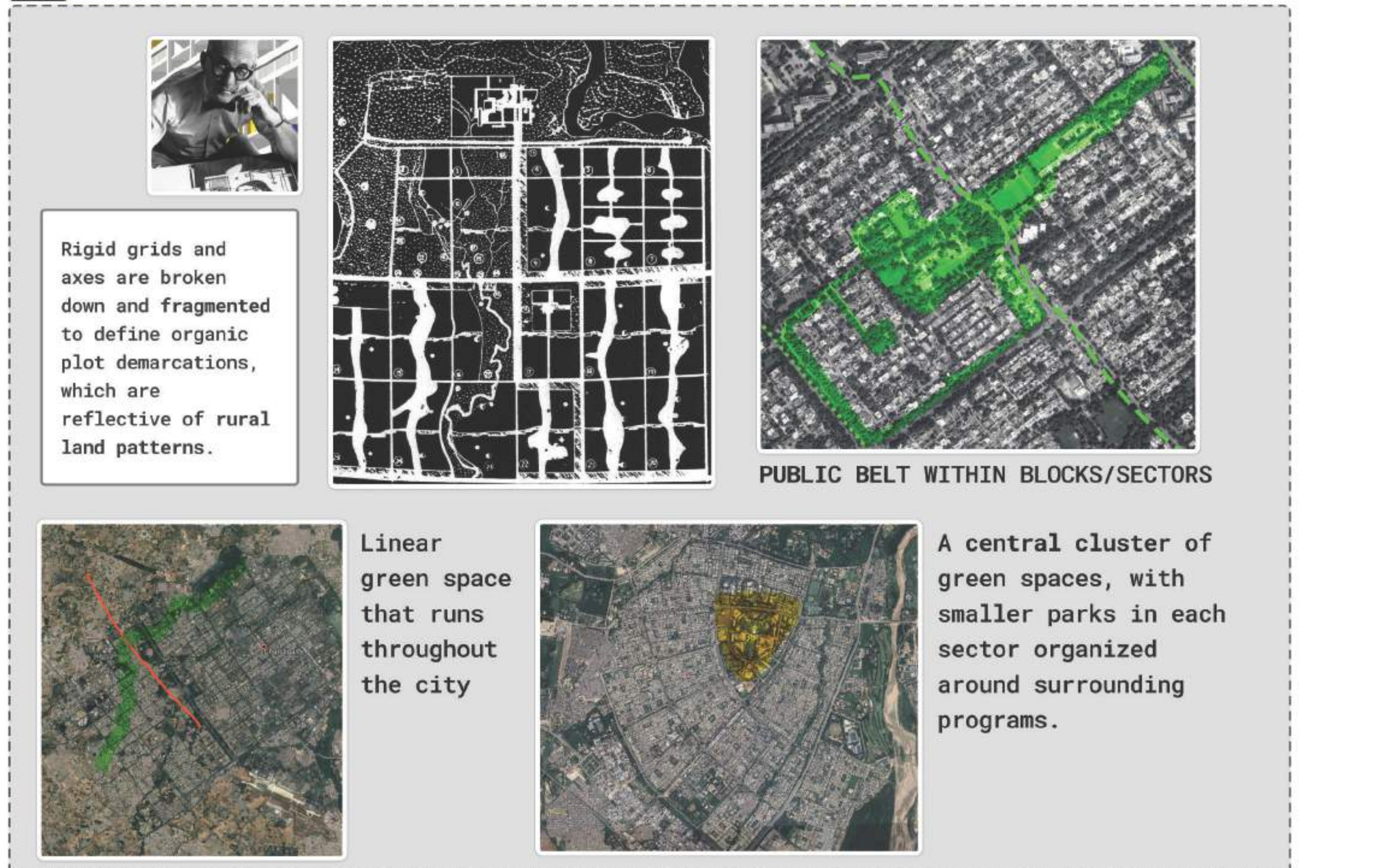
.pucca

multistorey>
mixed use>
brick walls>
concrete roof>
Average 500sqft>

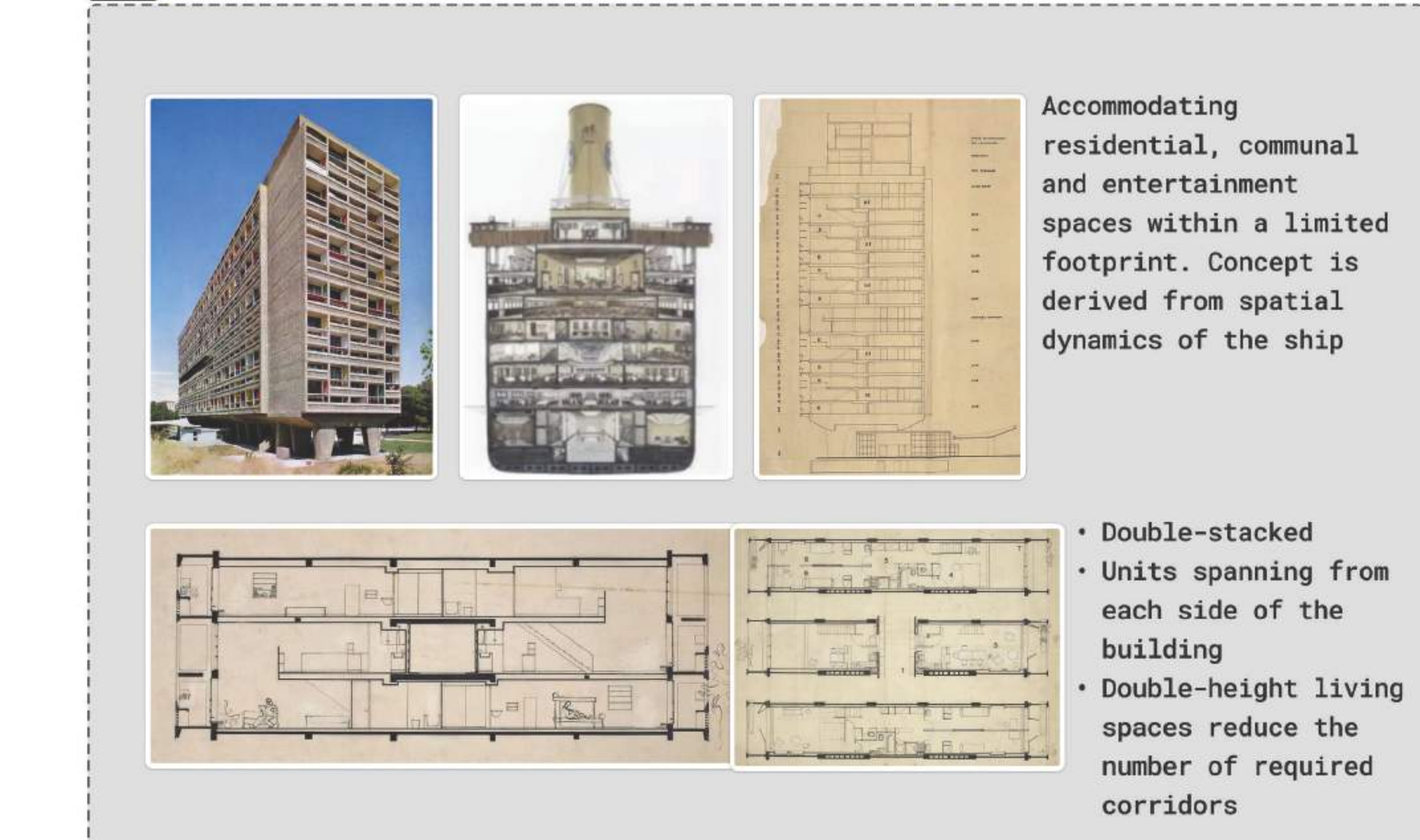
Disappearing Lands / Ar. Jalal Ahmed



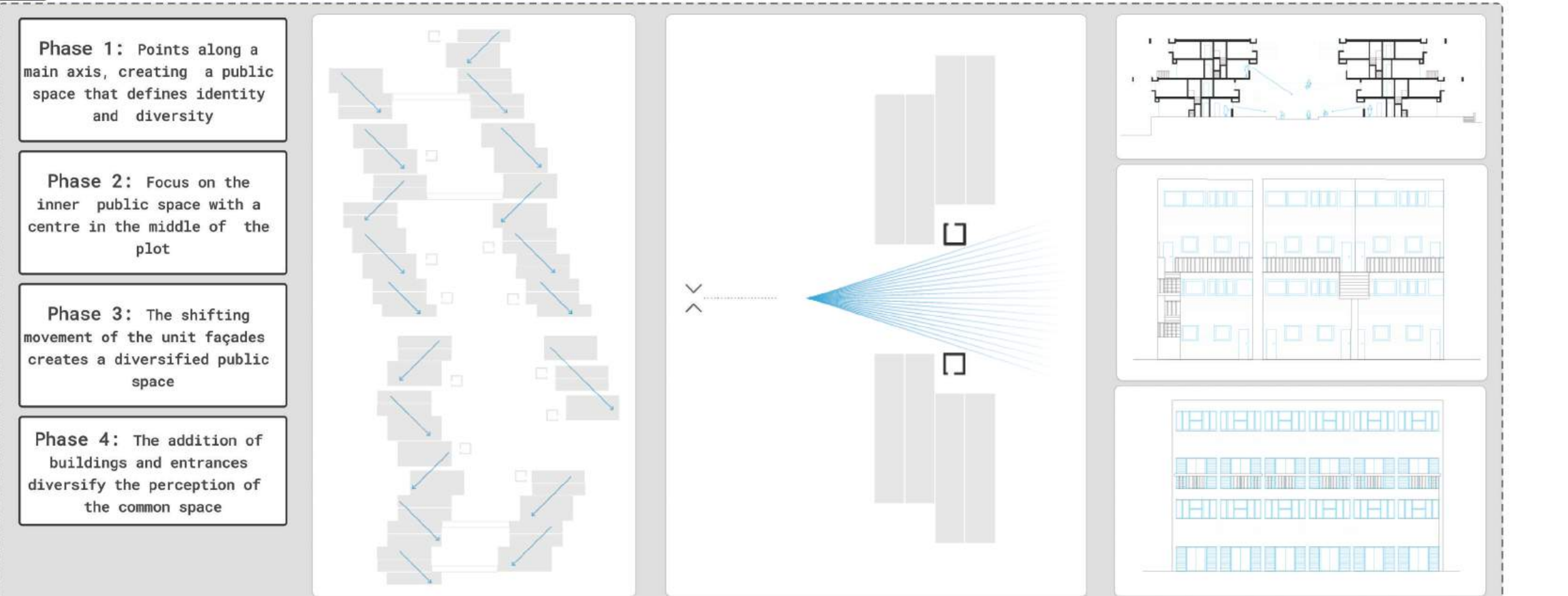
Chandigarh & Panchkula / Le Corbusier



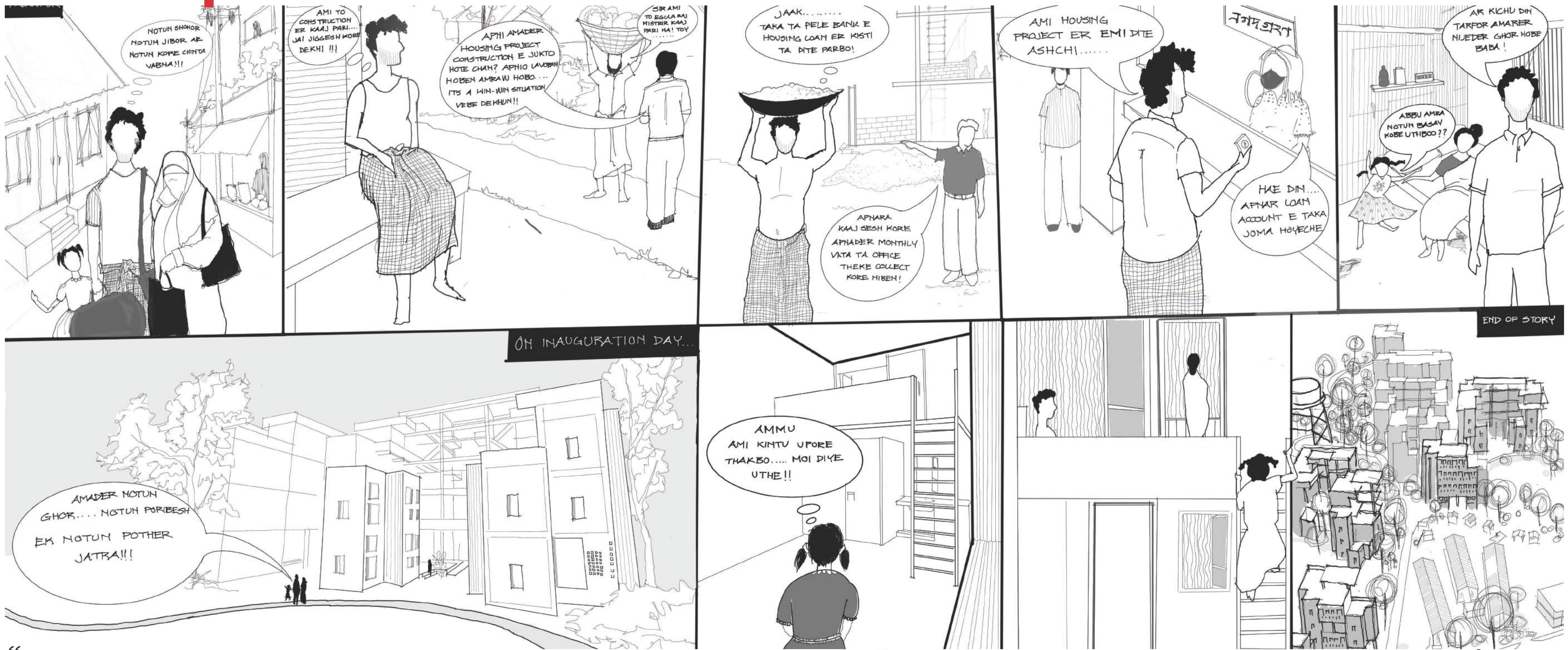
Unité d'Habitation / Le Corbusier



Tara Group Housing / Charles Correa

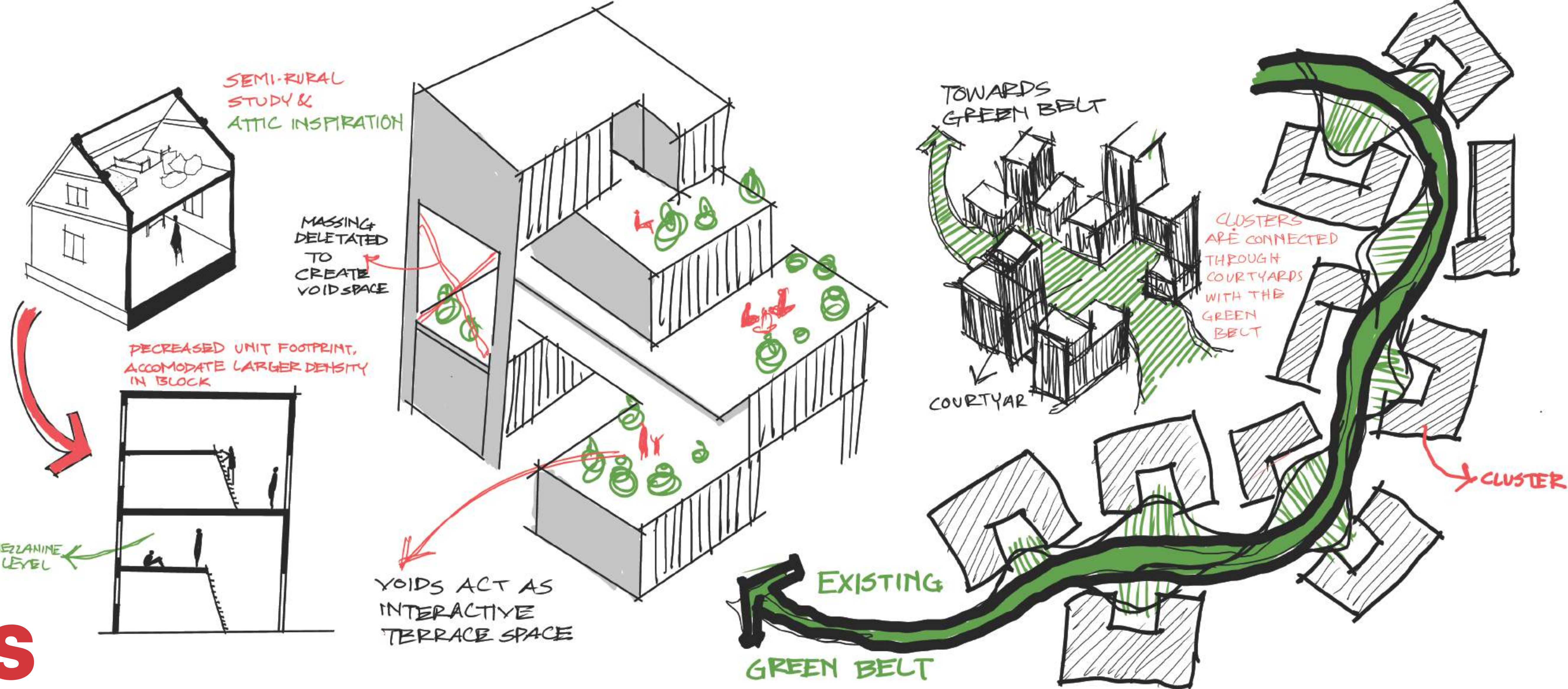


.conceptual framework



“The design decisions begin with a study of context settlements, where attic spaces inspired the formation of mezzanine-based units to significantly reduce building footprints. By selectively removing units to create intentional voids, terraces, and an open ground floor, the design fosters active community and commercial hubs within the structure. These buildings are then arranged in controlled clusters to achieve a target density while forming central communal interaction spaces. Networking these diverse cluster types establishes a vibrant, mixed-use environment with a legible and distinct identity. The masterplanning and zoning strategy is guided by the core axes of the existing green belt.

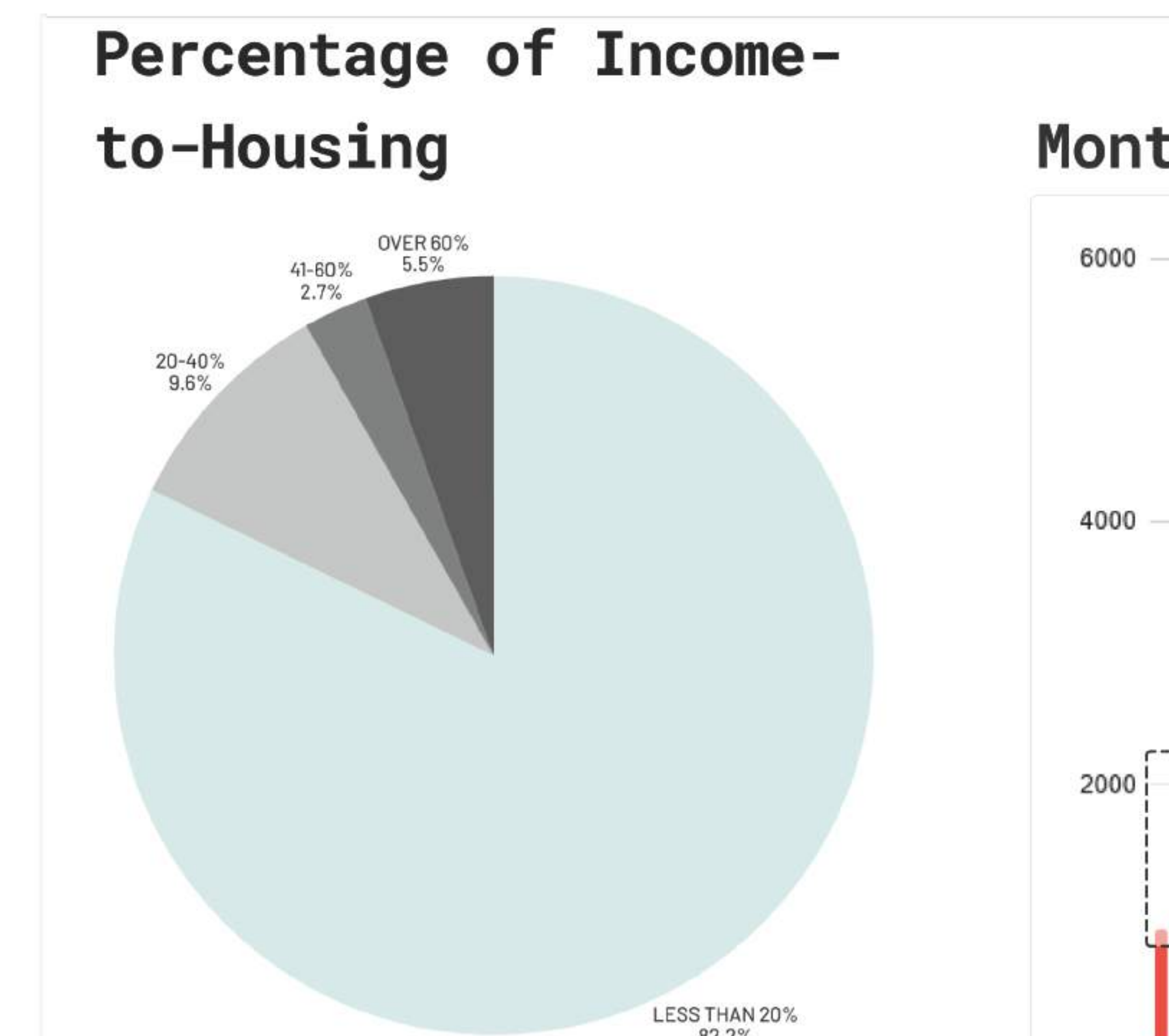
.designing for efficiency & compactness



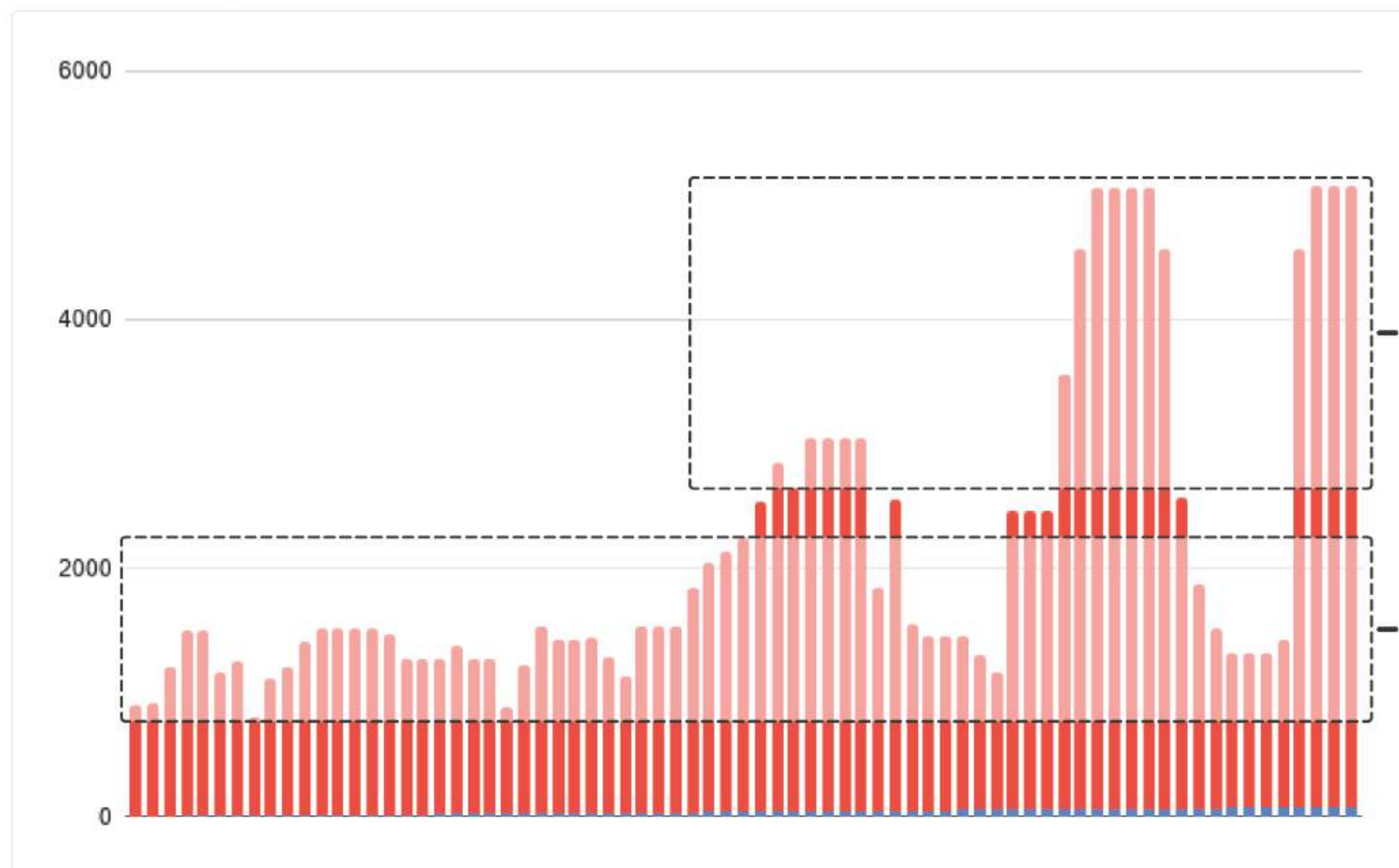
.shading & temperature control

.rainwater absorption & mild-flood control

.circulation & communal activity

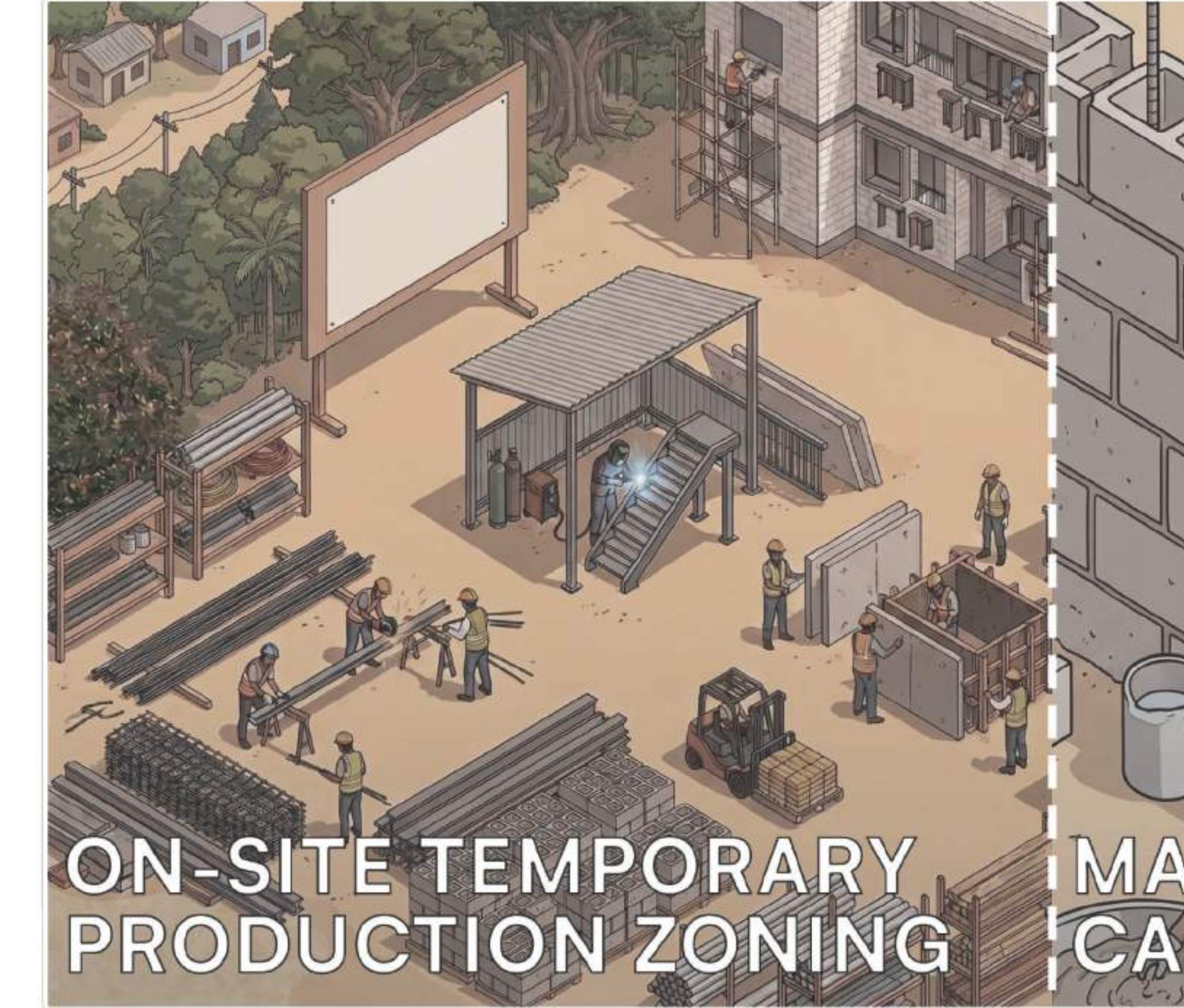
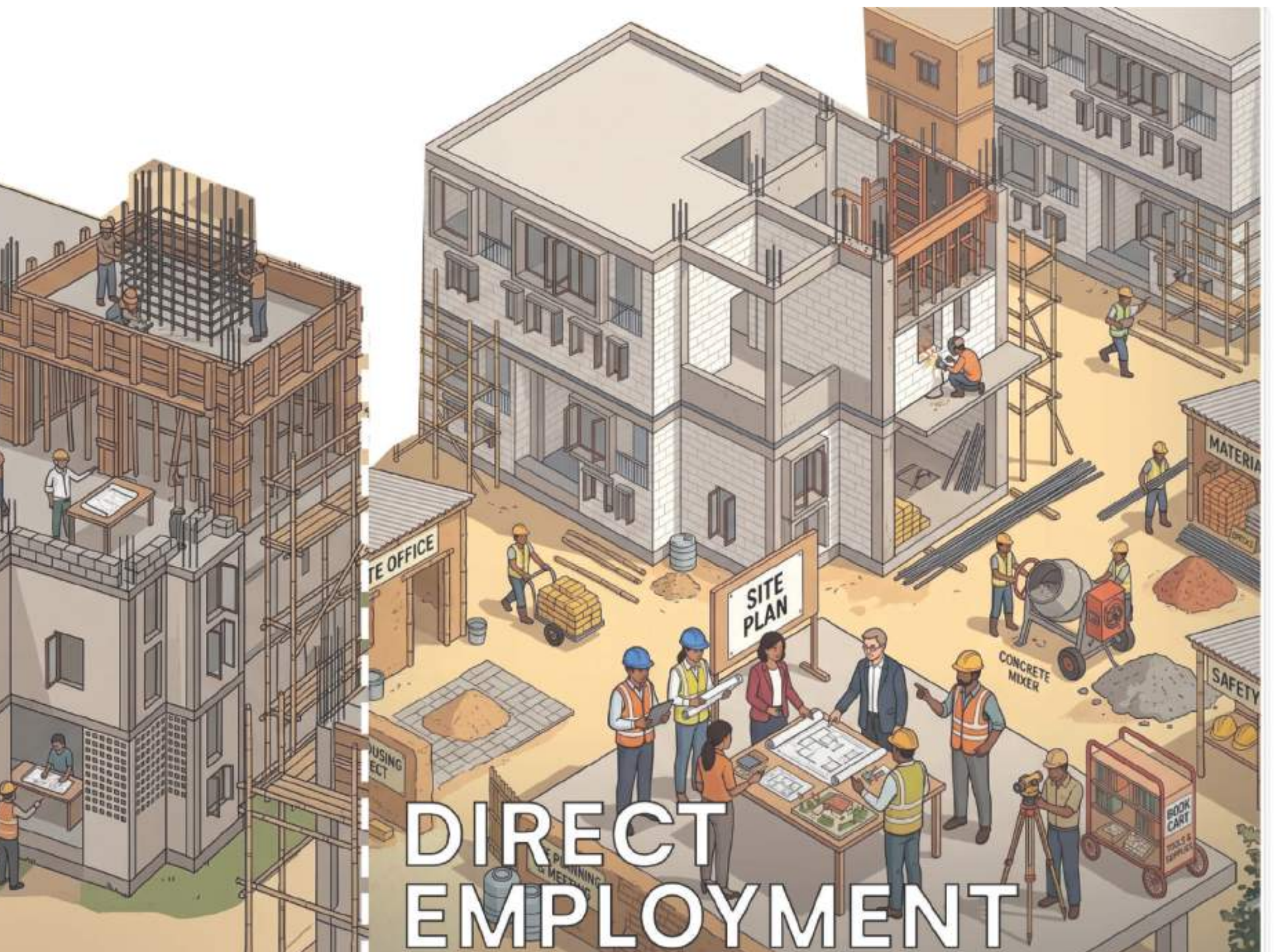


Monthly Household Rent



→Unsustainable Financial Management

 Unpaid loans from business owners & acquaintances	 Insufficient savings from day labor & temporary work	 Child & teenage labor, instead of proper education
 Organizations occasionally give small loans, for income-generating activities	 Unsafe, discreet storage of cash at home, rather than in banks	 Valuable jewelry easily sold for quick money

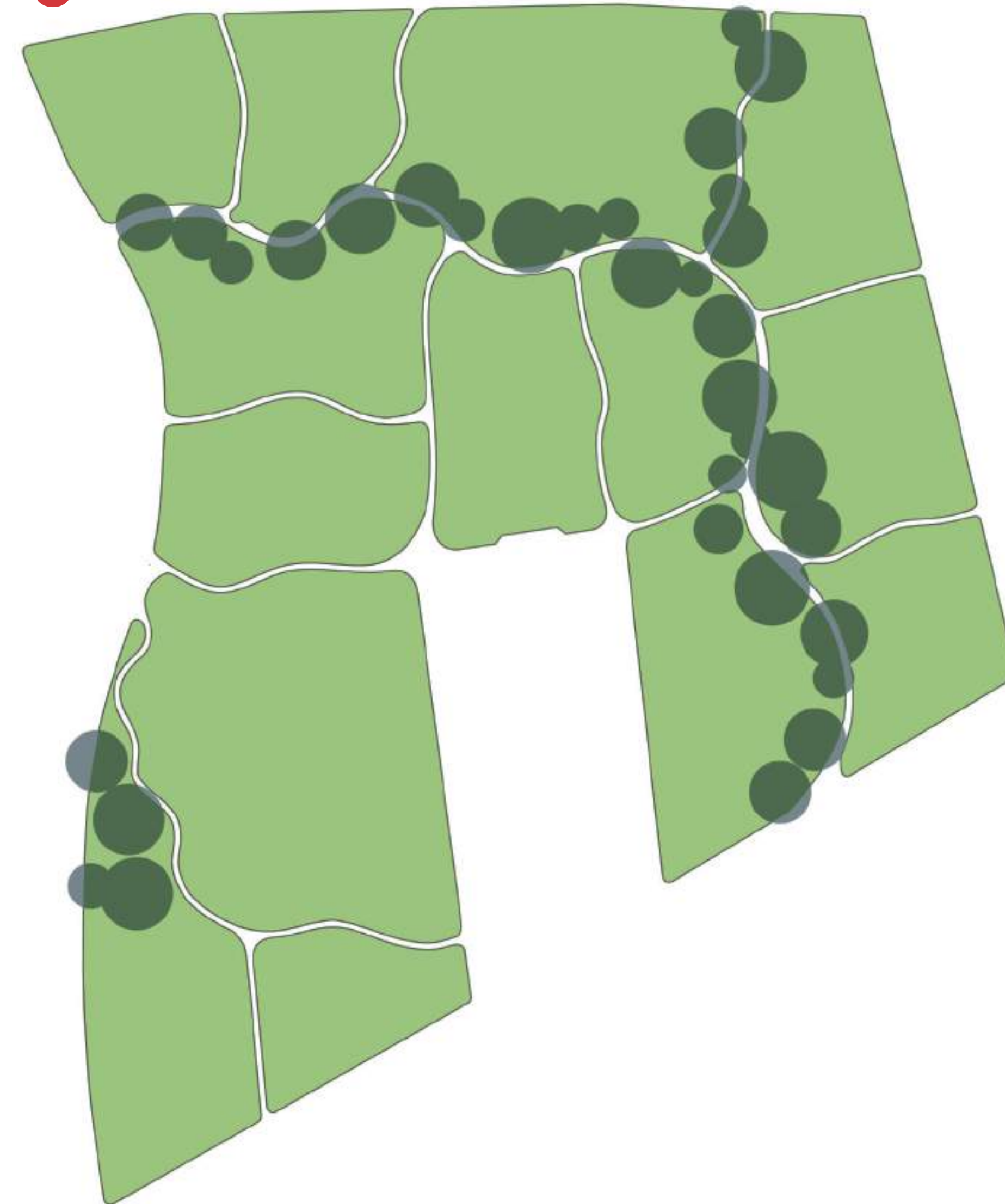




.master plan

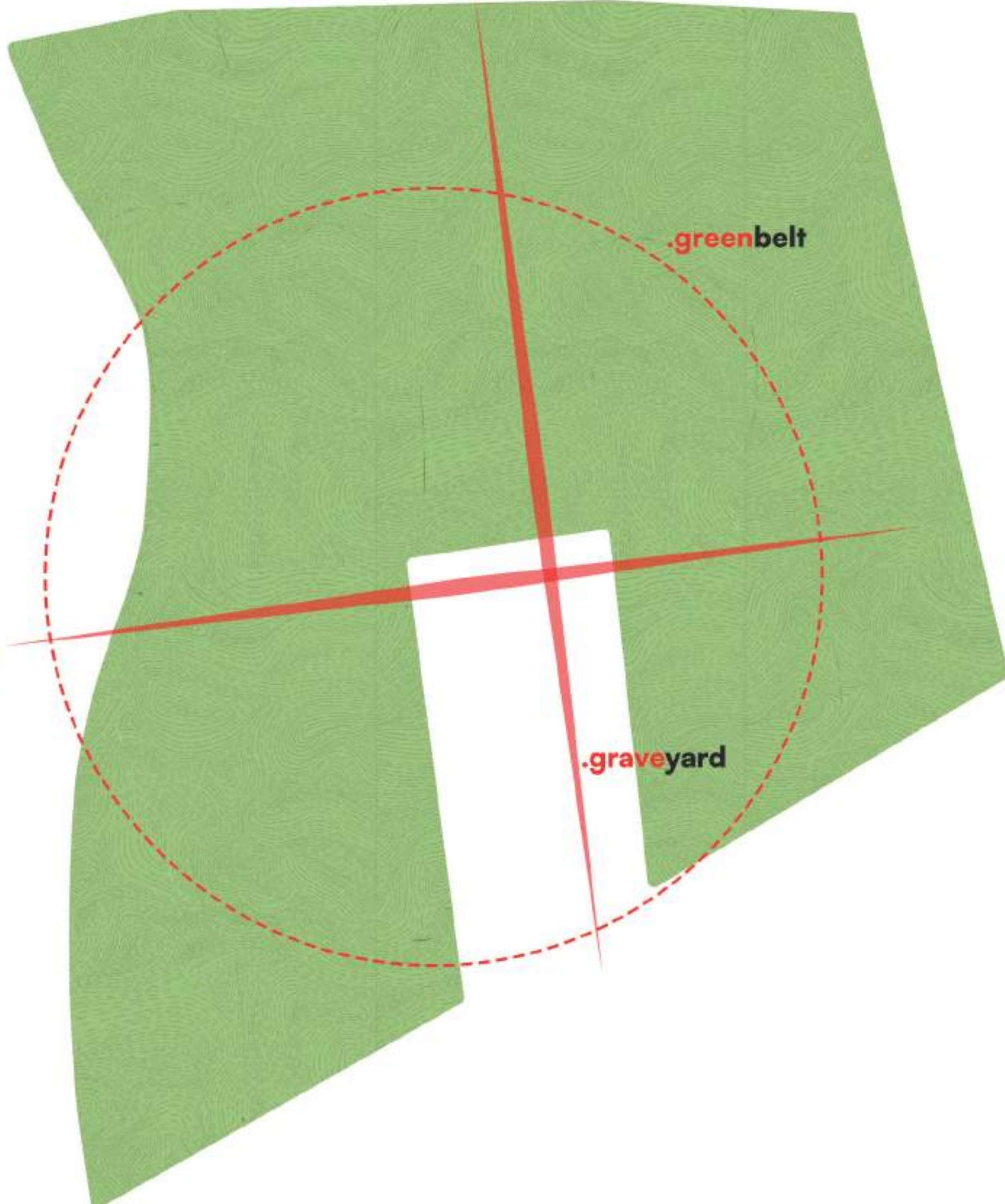
scale- 1:500

.green belt



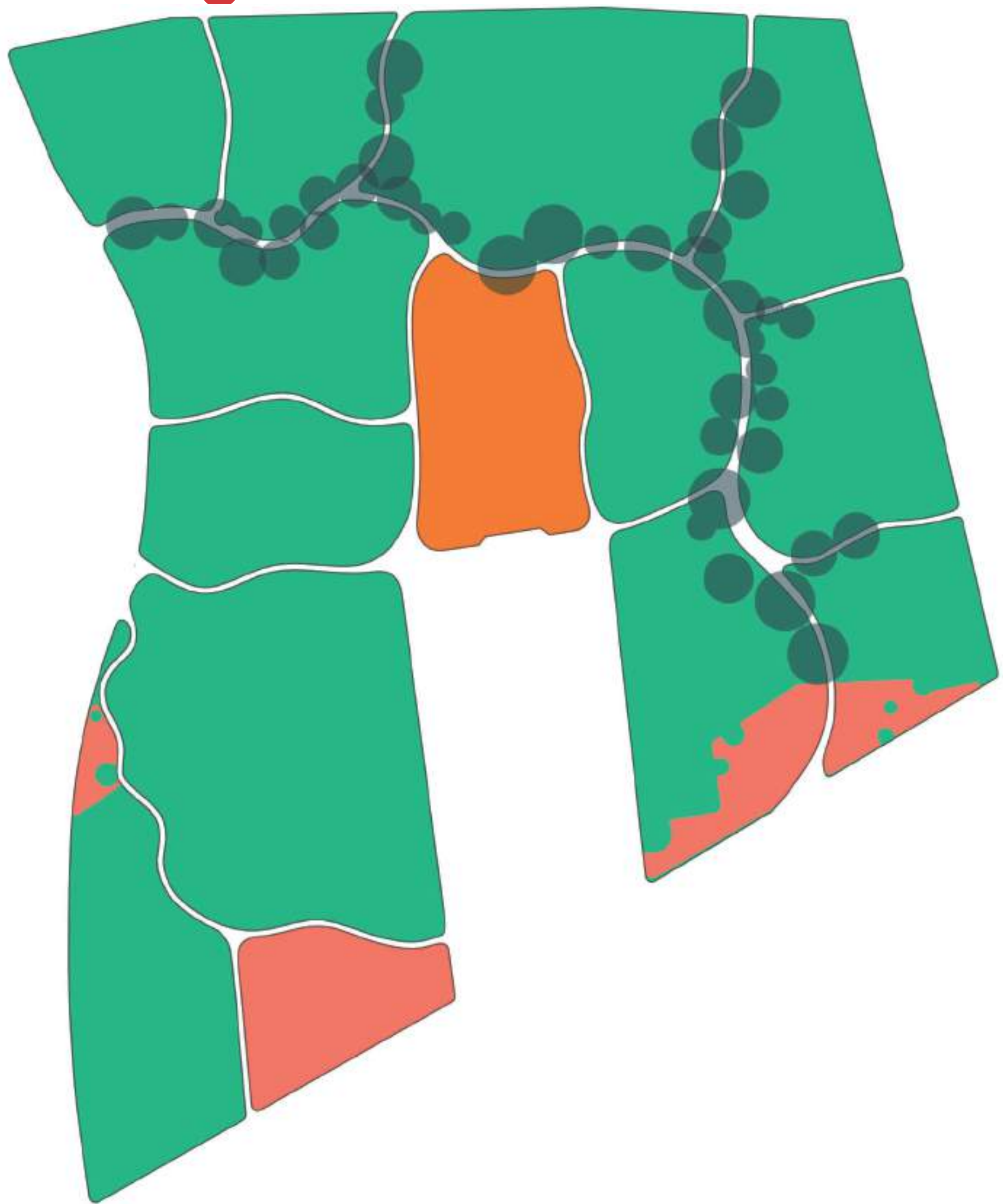
.the heart of the housing is a resilient multifunctional landscape, a green belt which is designed to promote health, wellbeing & biodiversity.

.site force



.a circular reference from the green belt and a strong green axis through graveyard. Decisions were made based on these forces.

.zoning



.housing was planned in orientation to accomodate residential, commercial and community function

.project brief

Total Land Size	81.7 Bighas	27.7 Acres
Total Population	16,020	
Land Value (Per Decimel)	150,000	
Site Proximity (from City Center)	2.5 km	10-15 minutes (by walking)

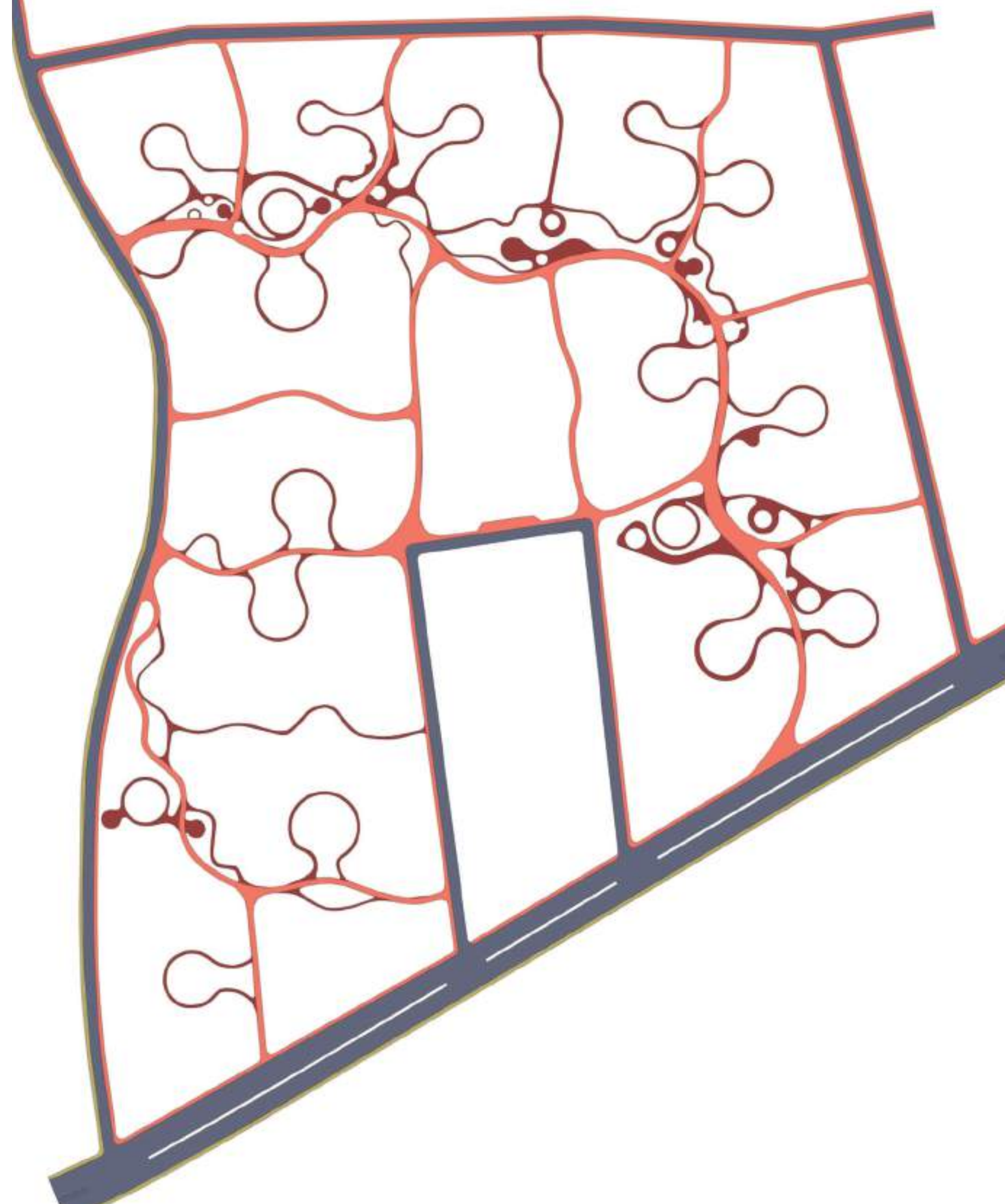
Unit Type	Number of Units	Area (sft)	Initial Unit Cost (tk)	Reduced Unit Cost (tk)
A	481	500	1,253,880	1,083,400
B	791	340	856,126	701,000
C	1,932	250	623,388	498,200
Grand Total	3,204			

Block Type	Unit Types Included	Module Type	Number of Units	Number of Blocks
1	A & B	Single-module	Type A: 10 Type B: 25	20
2	A & B	Double-module	Type A: 14 Type B: 34	8
3	B & C	Single-module	Type B: 18 Type C: 12	5
4	B & C	Double-module	Type B: 27 Type C: 26	12
5	C	Single-module	Type C: 34	16
6	C	Double-module	Type C: 54	17
Grand Total				78

	Area (sft)	Percentage of Total Land Area	Achieved Density (Units per Acre)
Residential Coverage	326,640	28.1%	427
Community Facilities	77,533	6.67%	
Commercial Facilities	95,318	8.2%	
Grand Total of Built Area	499,491	42.97%	

	Area (sft)	Percentage of Total Open Area
Green	573,866	49.4%
Paved (Roads & Pedestrian)	89,062	7.7%
Grand Total of Open Area	662,928	57.03%

.circulation



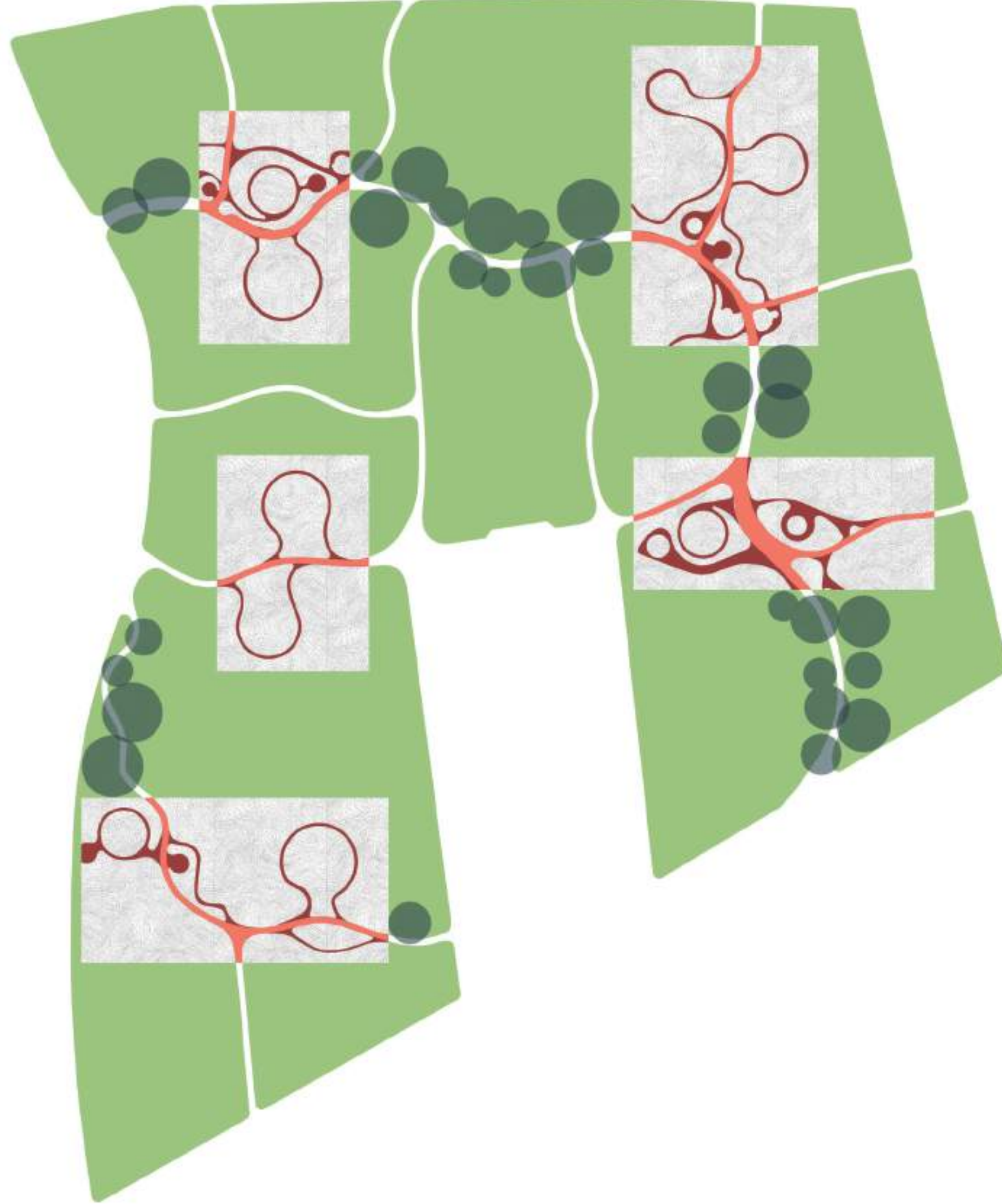
.walking networks are connected with other to offer residents the safest, most convenient and enjoyable travel to every aspect of the housing.

.residential footprint



.densification of the city as optimized to reduce walking distances for majority of population.

.points of interest



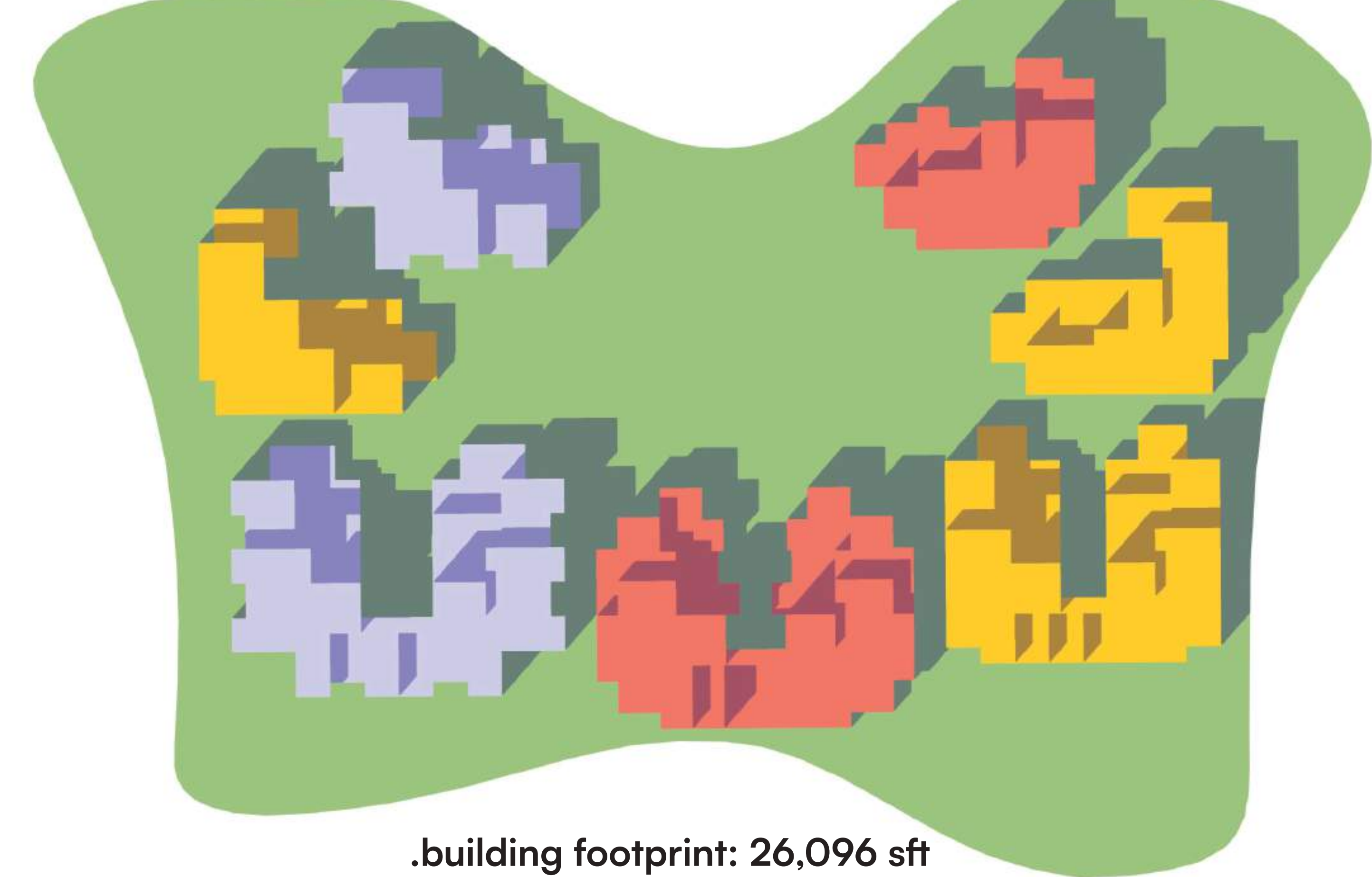
.points of interest placed to ensure so that everyone living in this housing gets a piece. Ensuring cluster to cluster connectivity and communal activity.



.typical cluster plan

scale- 1:100

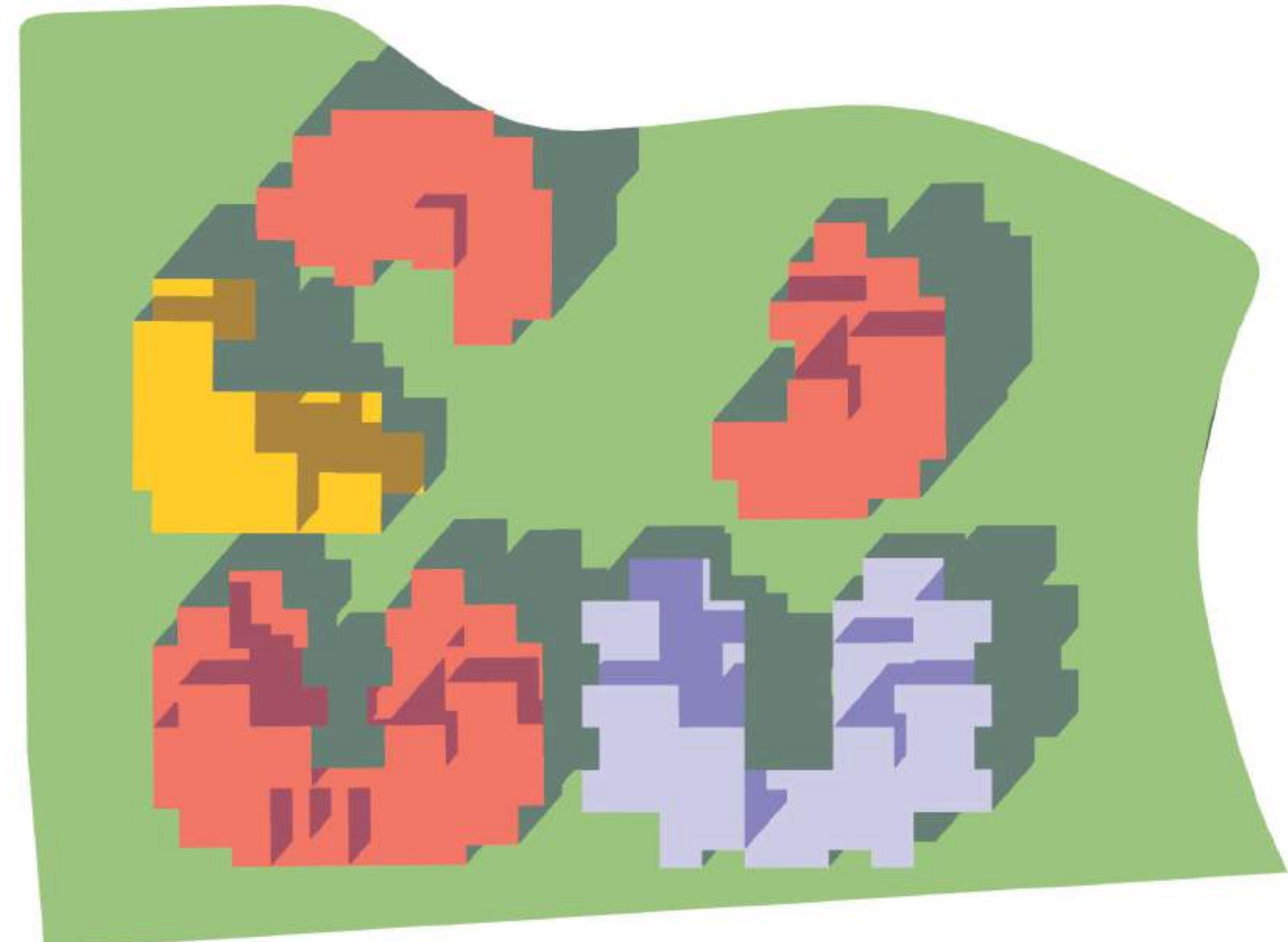
.cluster type formations



.building footprint: 26,096 sft



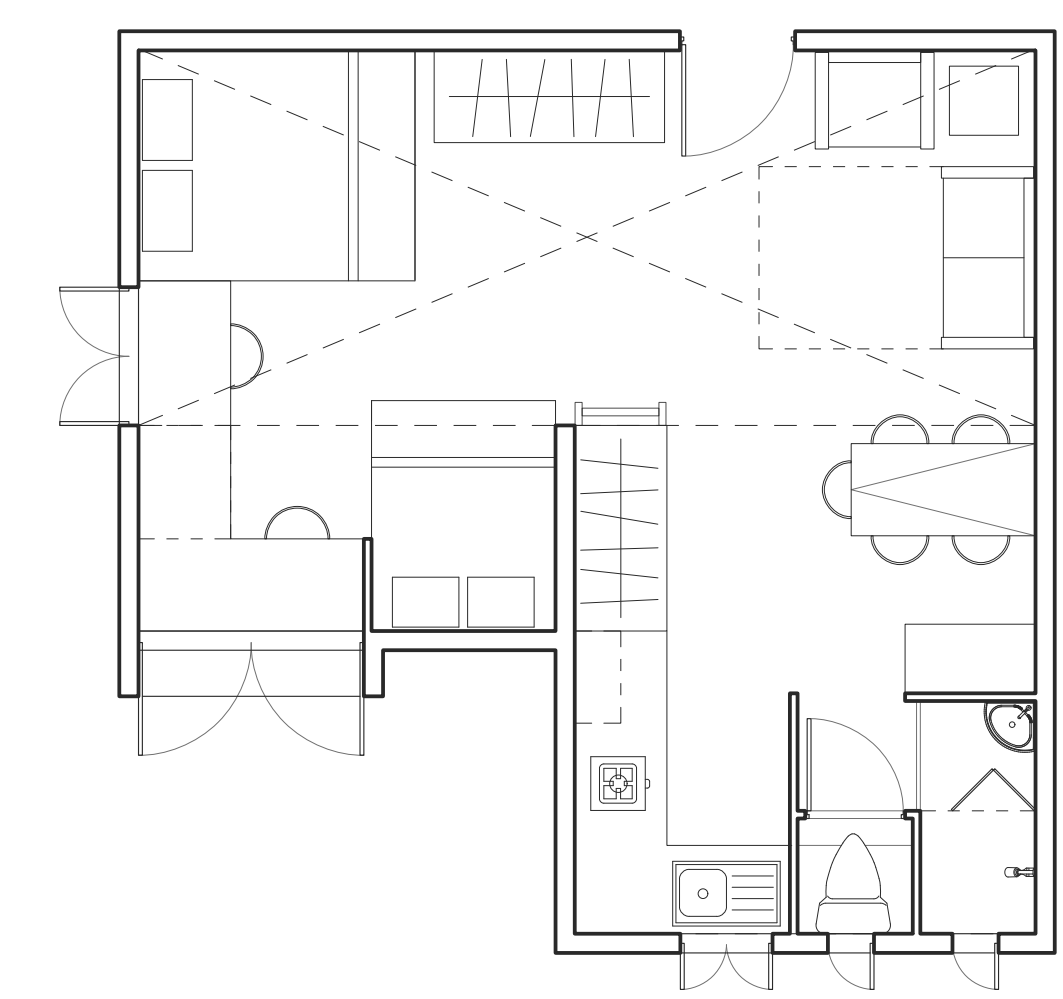
.building footprint: 25,961 sft



.building footprint: 18,747 sft

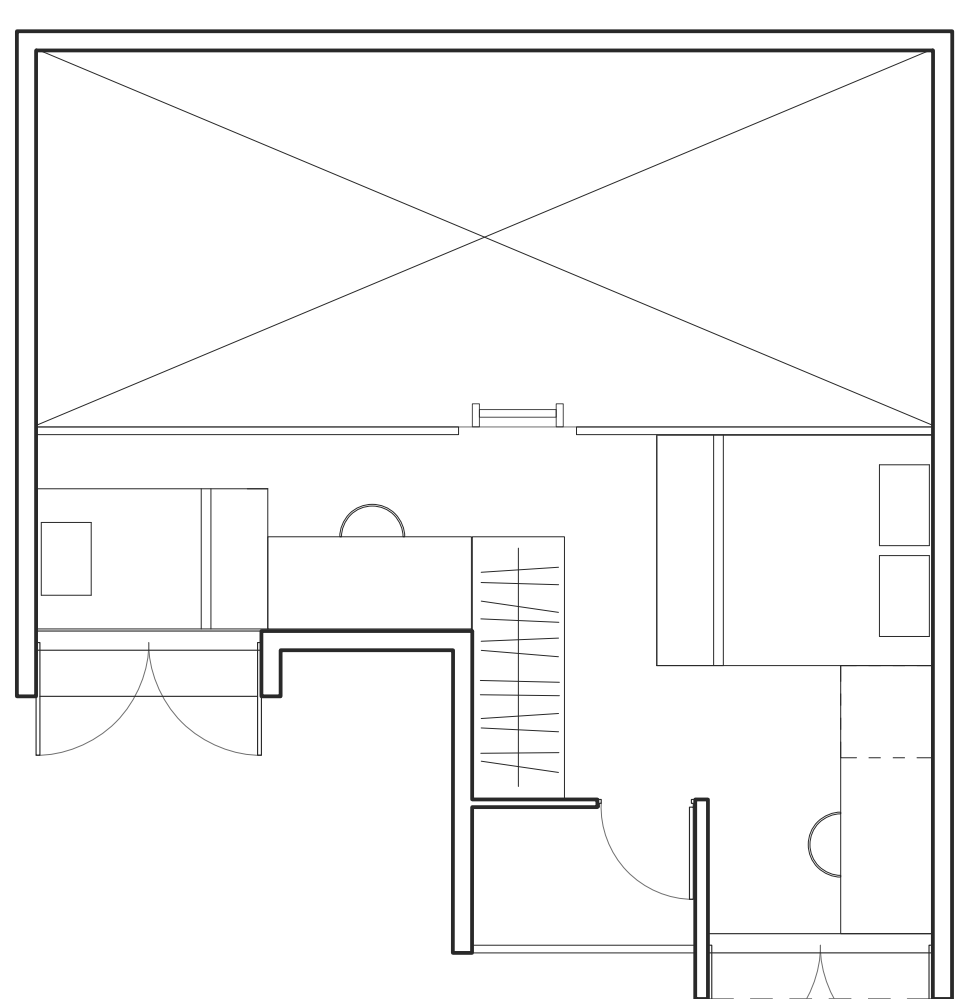
.unit types

.type A



.main level plan

scale- 1:50



.mezzanine plan

scale- 1:50



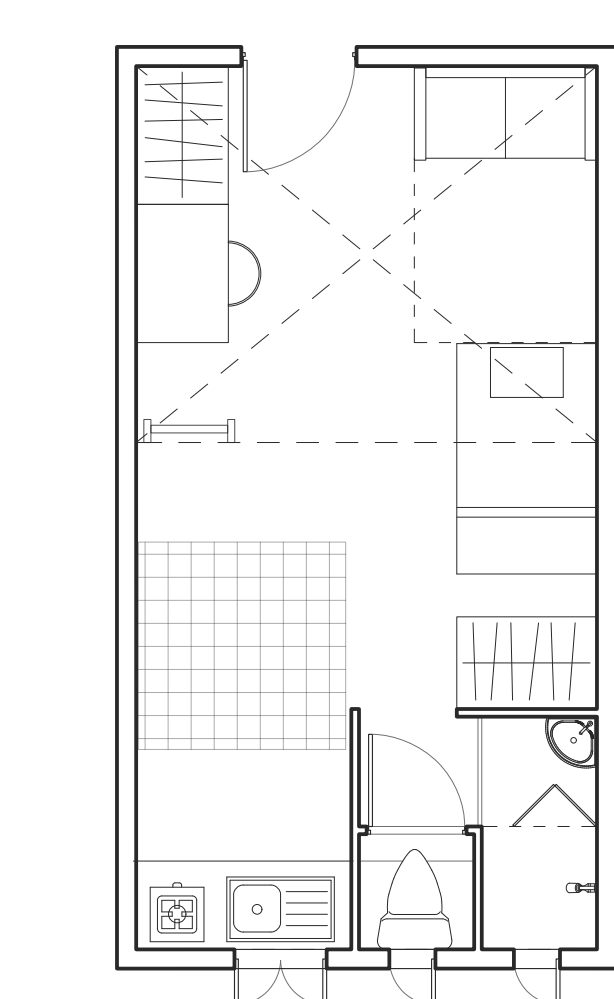
500sft

- 1 Bunk bed for kids
- 2 Foldable dining table
- 3 Double bed for parents
- 4 Retractable sofa cum bed
- 5 Open floor plan
- 6 Free spaces can be used as storage

2,184,000 tk

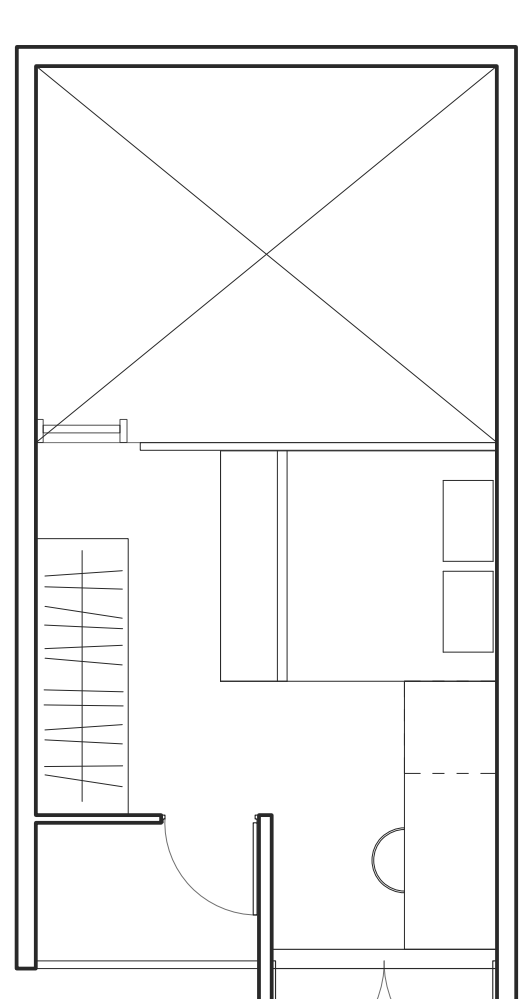
350sft+150sft

.type B



.main level plan

scale- 1:50



.mezzanine plan

scale- 1:50



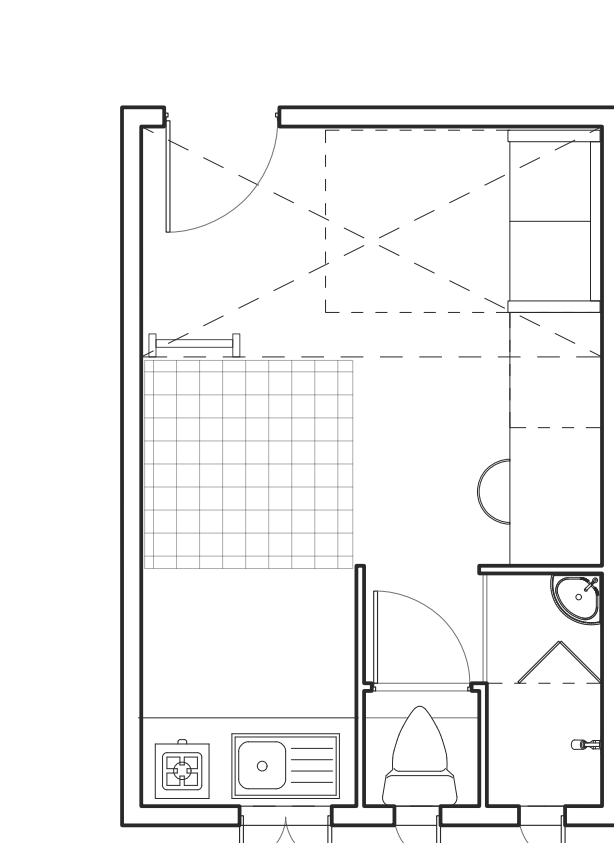
340sft

- 1 Bunk bed for kids
- 2 Double bed for parents
- 3 Ladder
- 4 Extended Kitchen
- 5 Open floor plan

1,554,000 tk

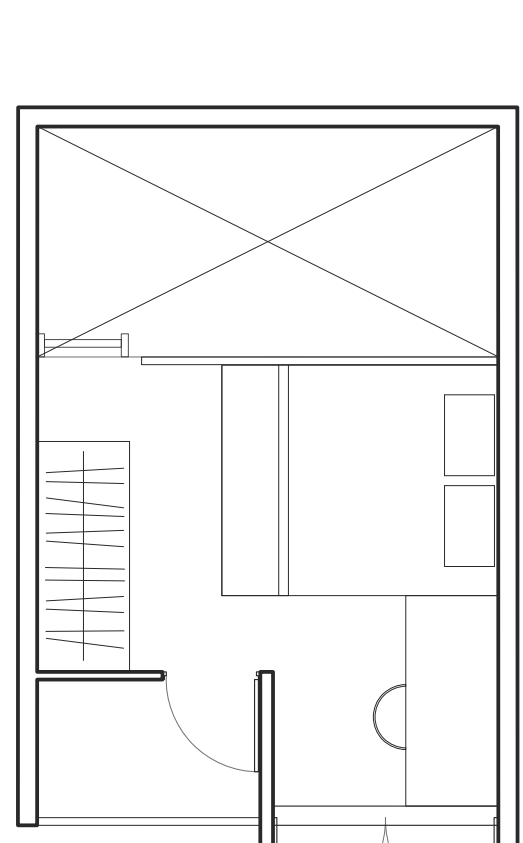
210sft+130sft

.type C



.main level plan

scale- 1:50



.mezzanine plan

scale- 1:50



250sft

- 1 Ladder
- 2 Double bed for parents
- 3 Storage
- 4 Kitchen
- 5 Retractable sofa cum bed

1,312,500 tk

170sft+80sft

.unit costing breakdown

.approximately 18-20% reduction

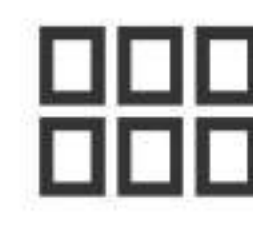
CATEGORY	UNIT A (Tk)	UNIT B (Tk)	UNIT C (Tk)
HOLLOW BLOCKS	191,290	116,908	77,027
FERRO CEMENT	60,557	44,341	35,454
RCC	131,421	105,441	76,248
DOORS	4,699	4,656	4,038
WINDOWS	1,690	837	726
LABOR	97,414	68,046	48,368
STEEL	97,414	68,046	48,368
CEMENT	46,759	32,659	23,214
SAND	46,759	32,659	23,214
ELECTRICAL	19,481	13,620	9,676
PLUMBING	27,276	19,049	13,548
LANDSCAPE	38,966	27,218	19,349
OTHERS	38,966	27,218	19,349
CIRCULATION (CORRIDORS, STAIRS, TERRACES, ETC)	200,673	140,172	99,638
GRAND TOTAL	1,003,400	701,000	498,200



High-cost items (RCC, Steel, Labor) remain dominant



Material efficiency



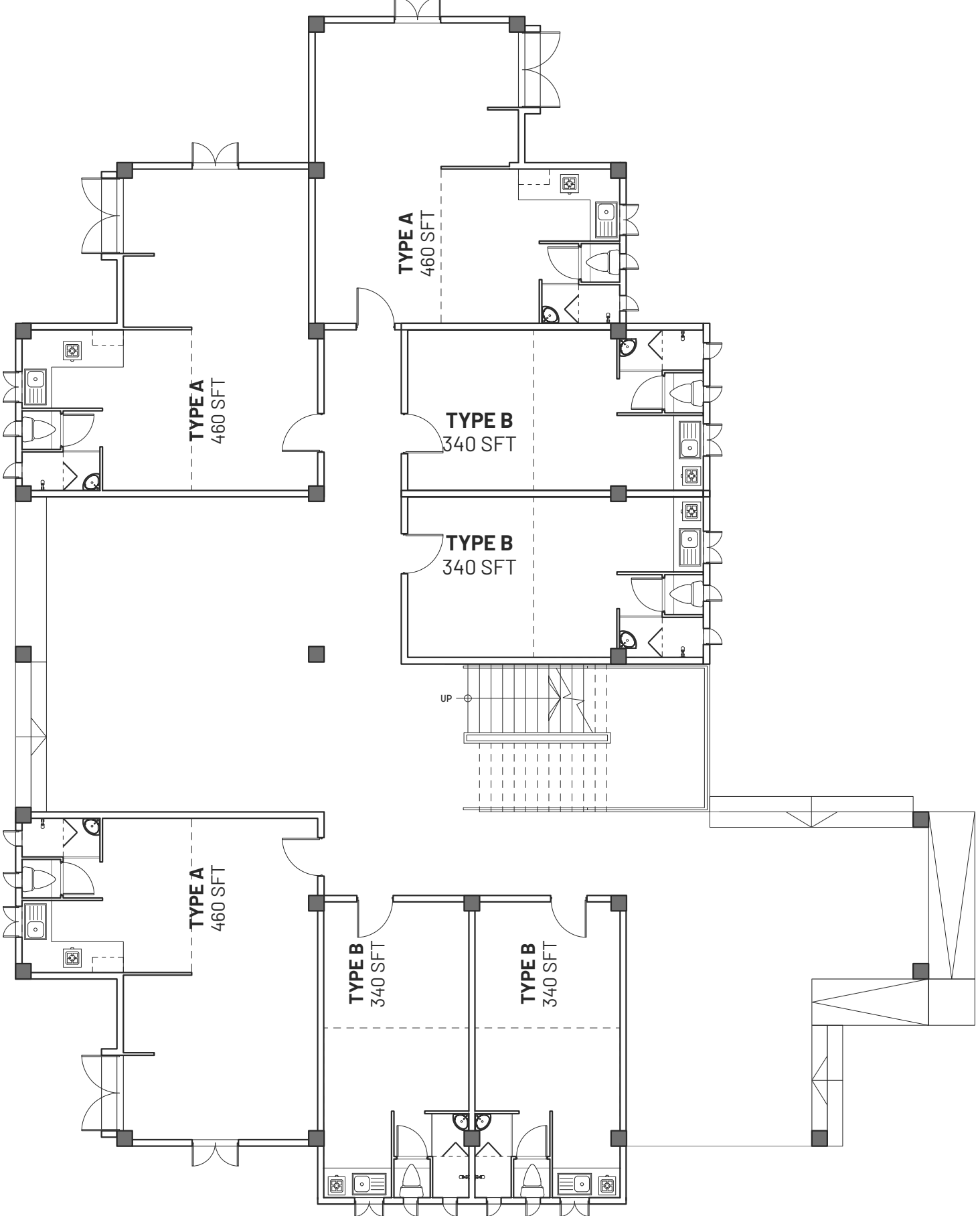
Modular planning & bulk supply



Reduced finishes or simplified detailing

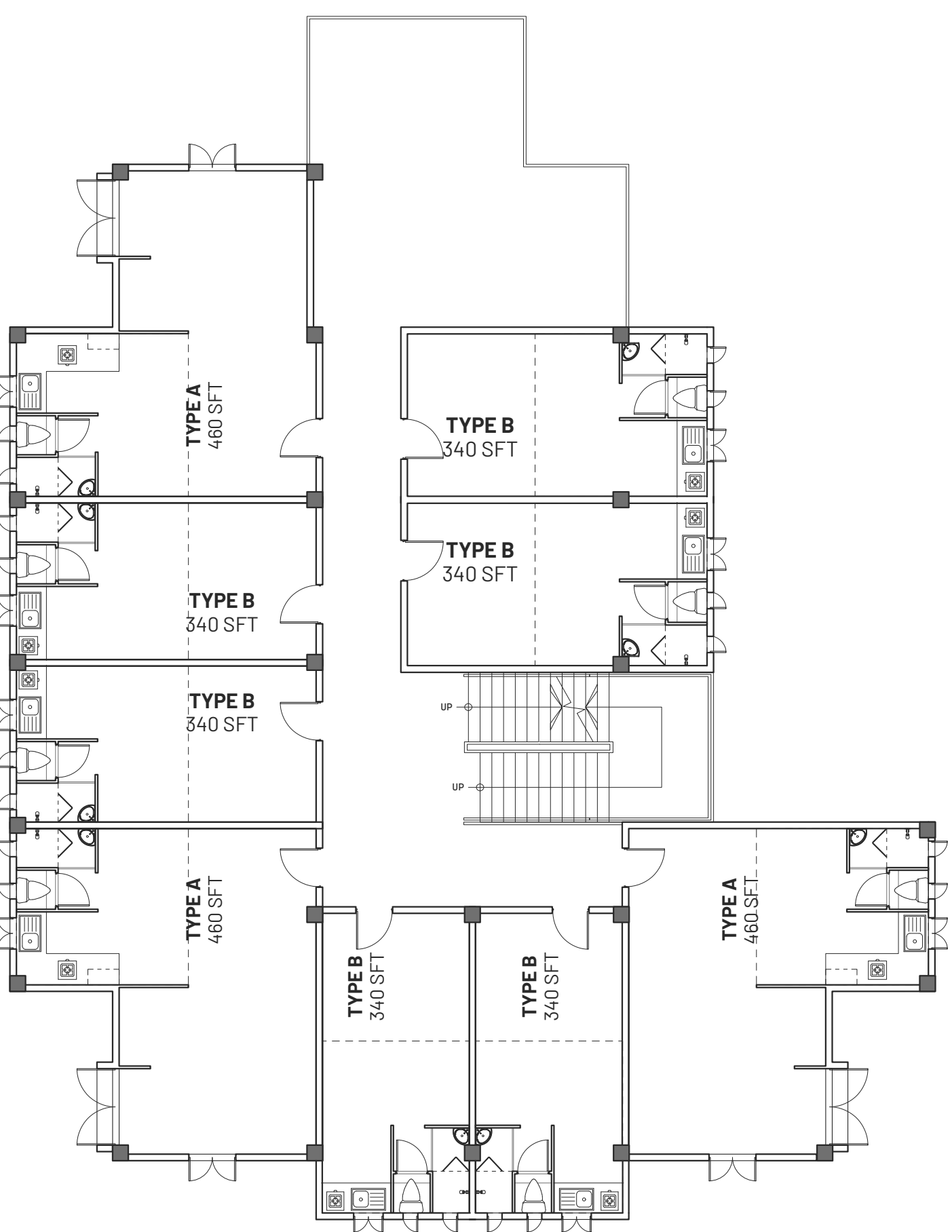
.block type 1- single module
.block type 2- double module

units A & B



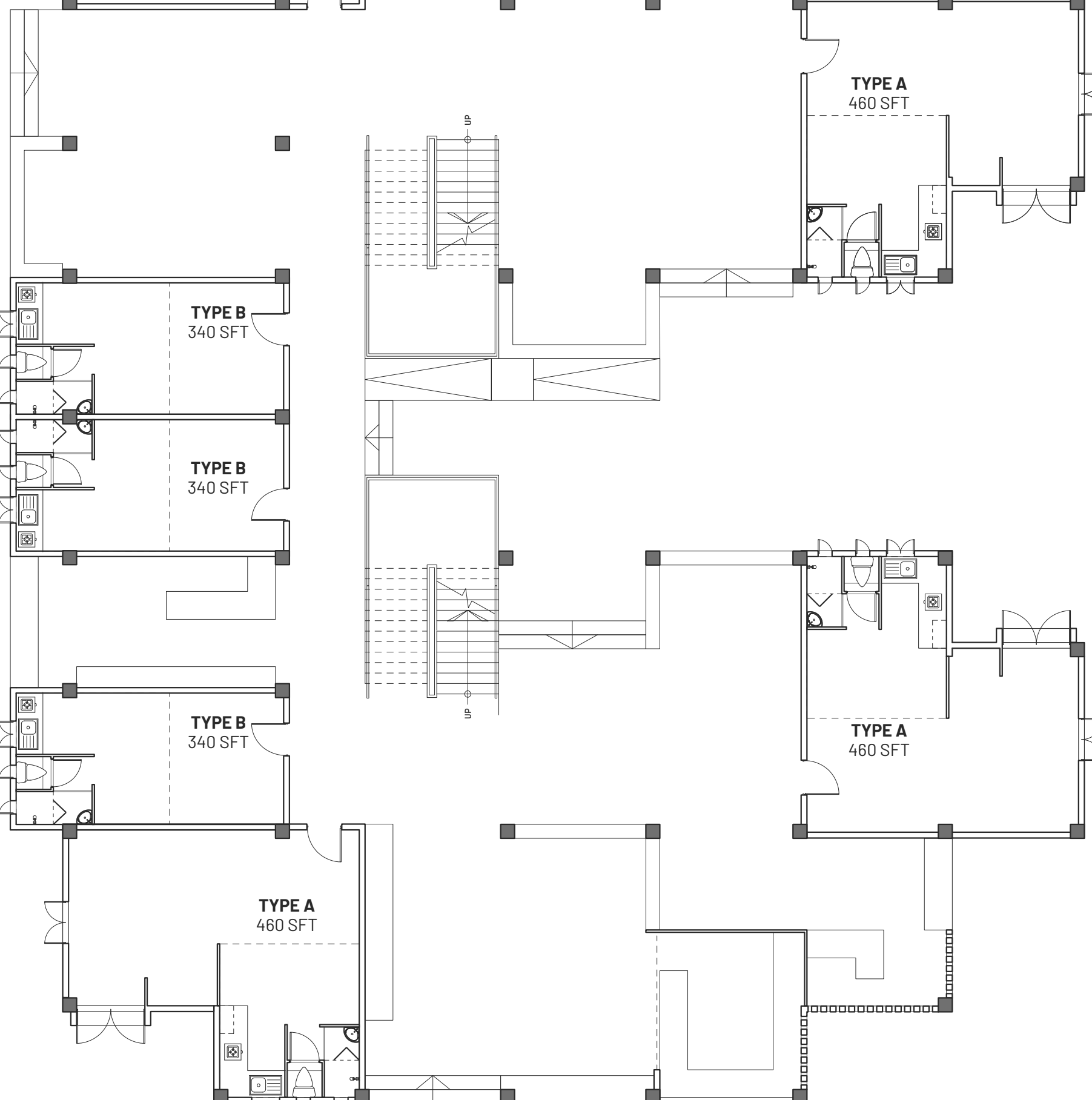
.ground floor plan

scale- 1:100



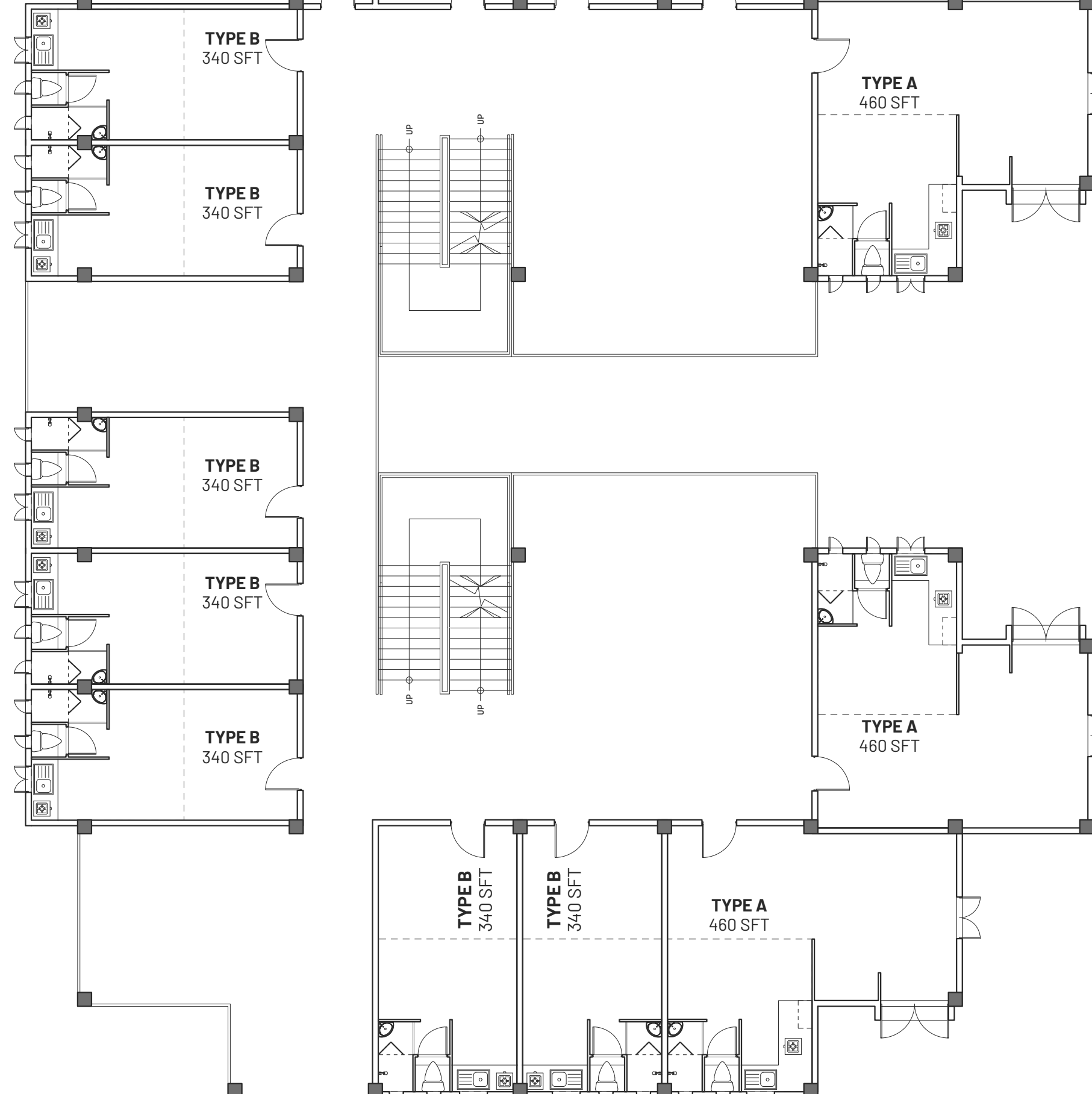
.first floor plan

scale- 1:100



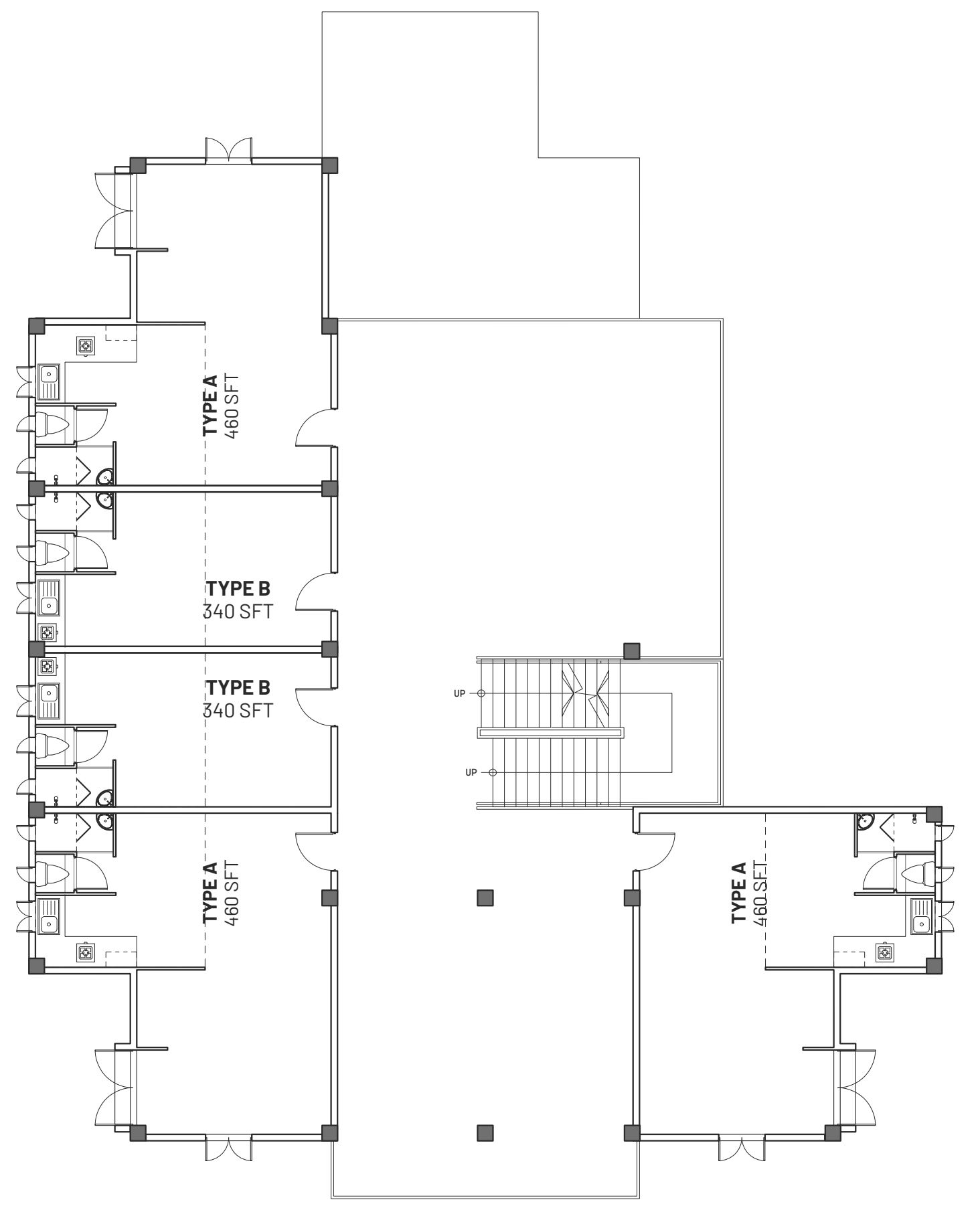
.ground floor plan

scale- 1:100



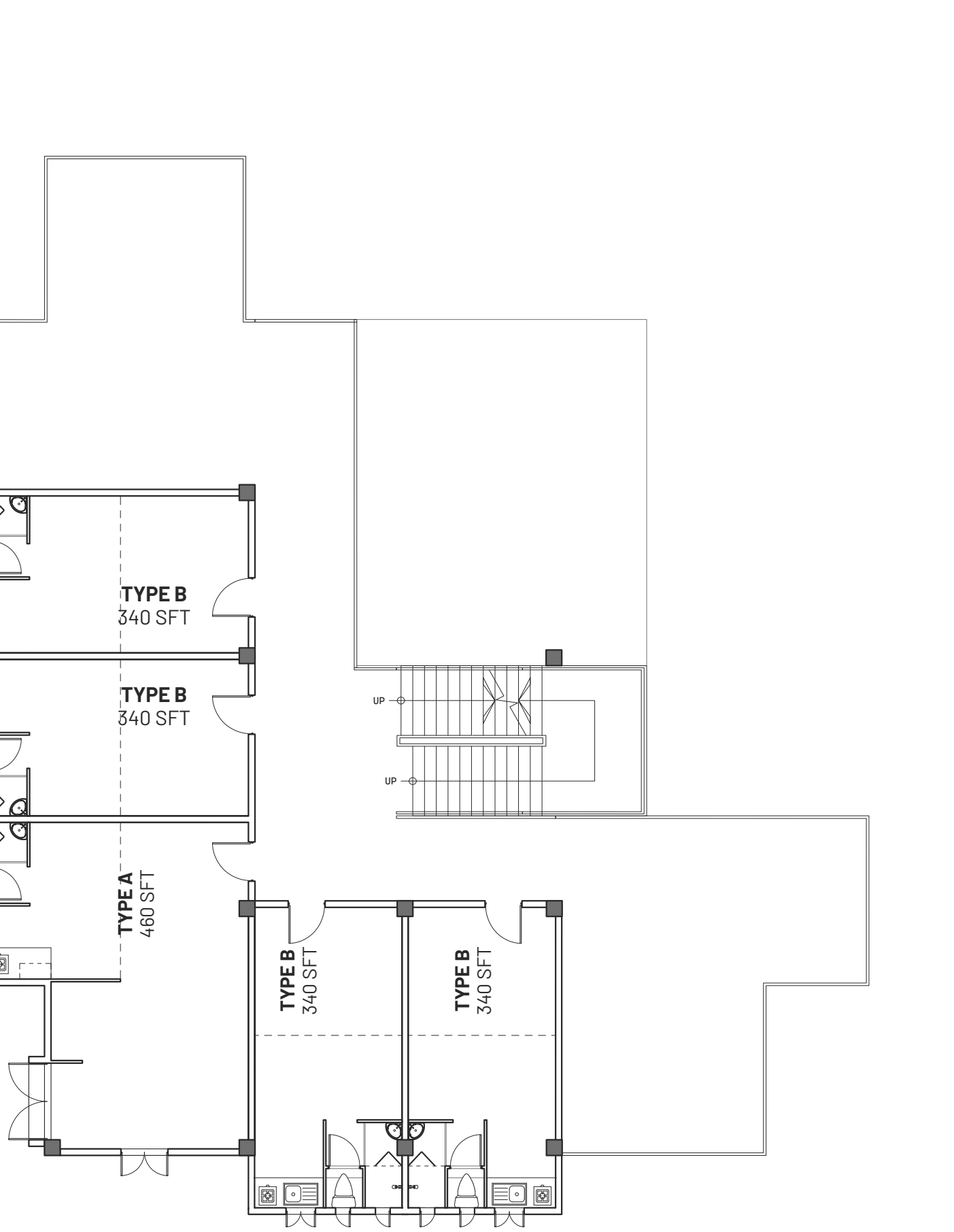
.first floor plan

scale- 1:100



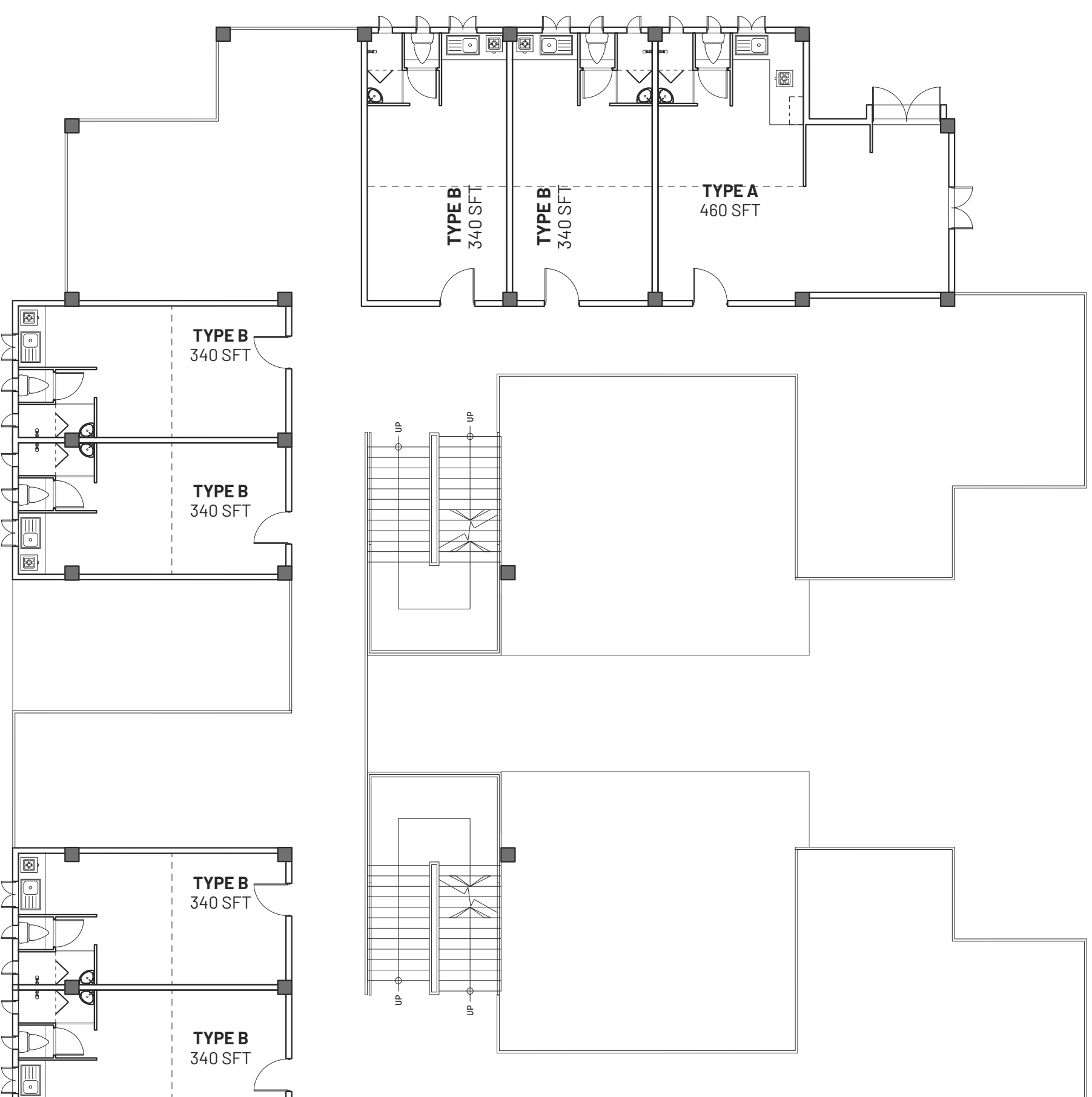
.second floor plan

scale- 1:100



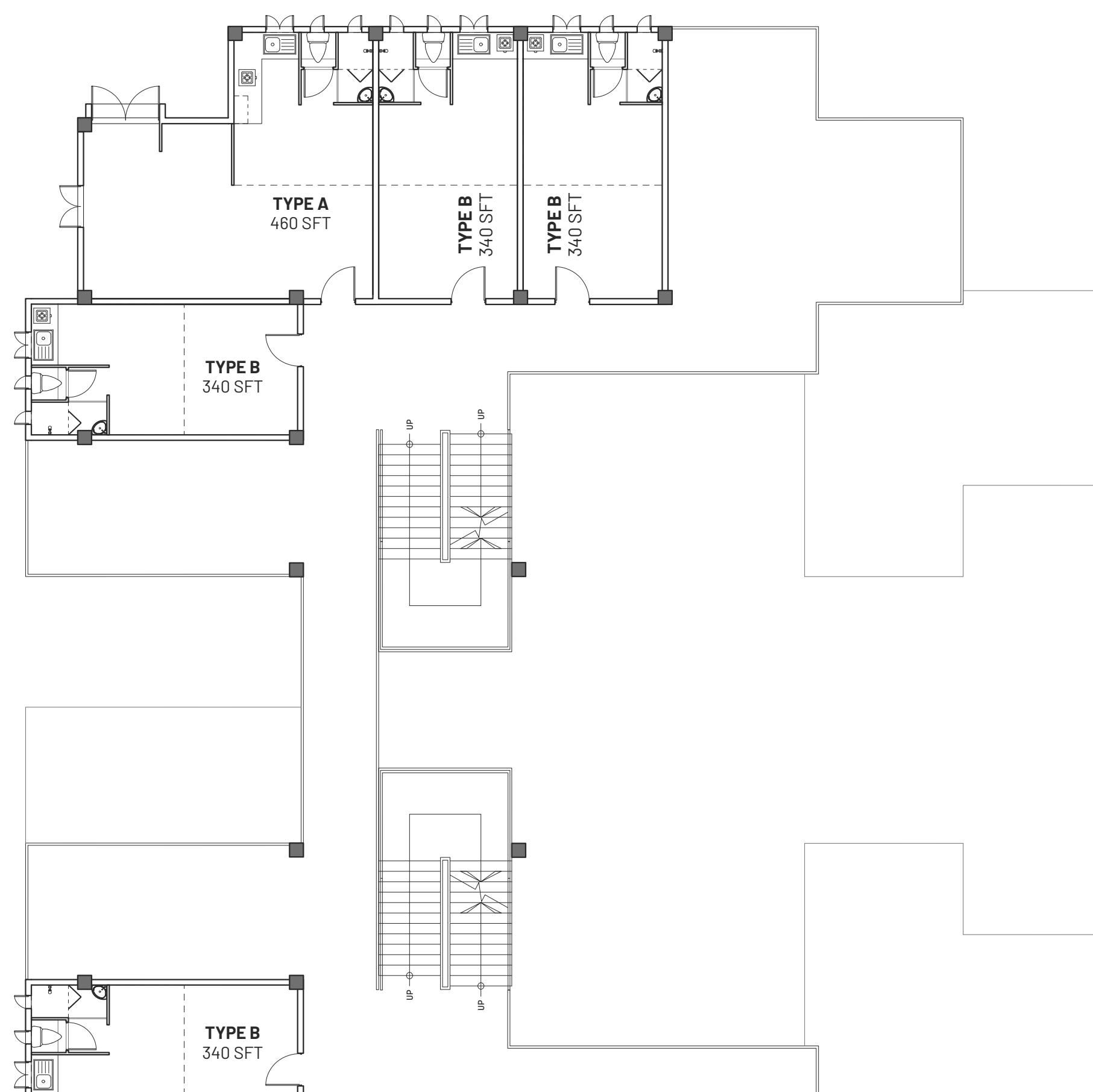
.third floor plan

scale- 1:100



.second floor plan

scale- 1:100

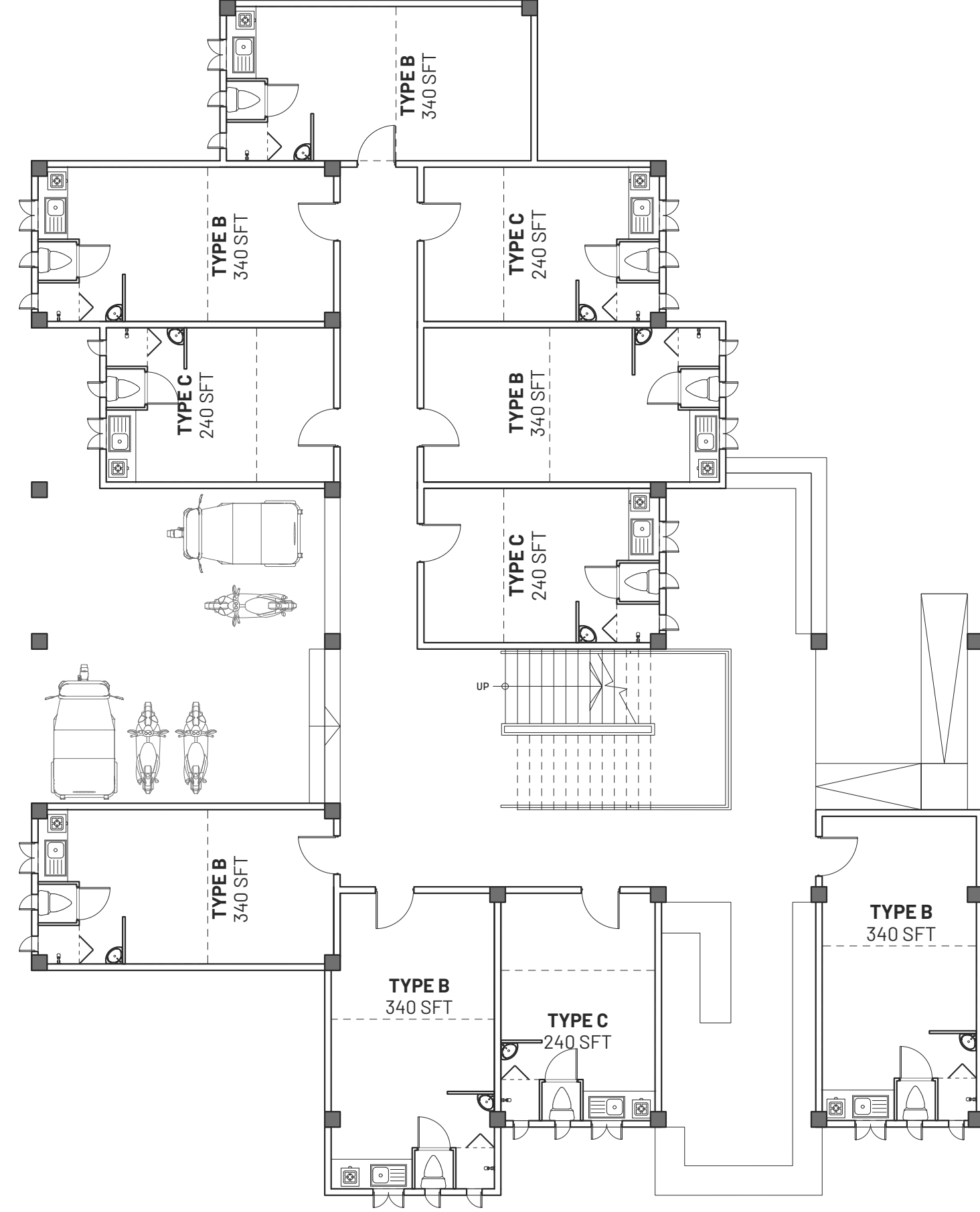


.third floor plan

scale- 1:100

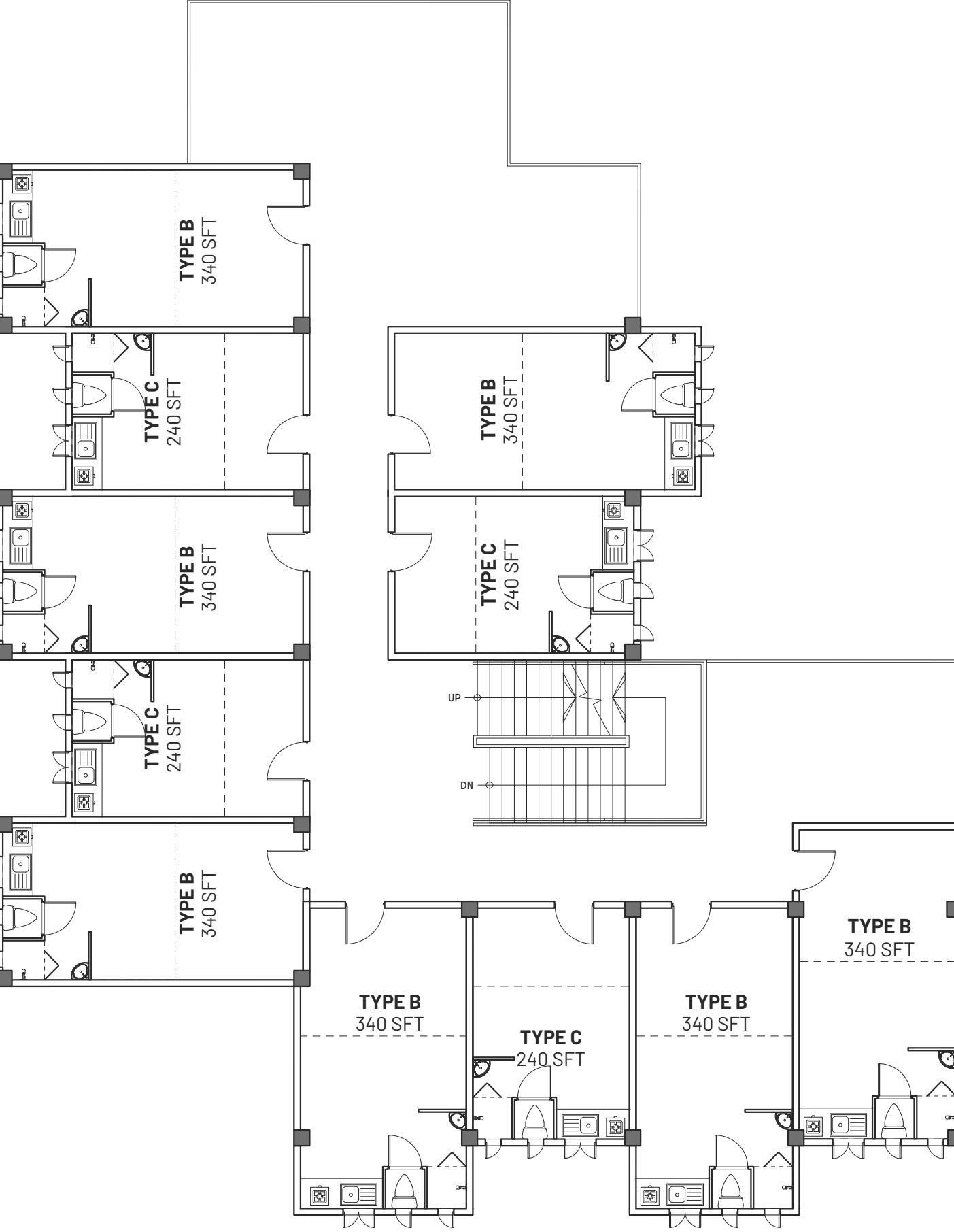
.block type 3- single module
.block type 4- double module

units B & C



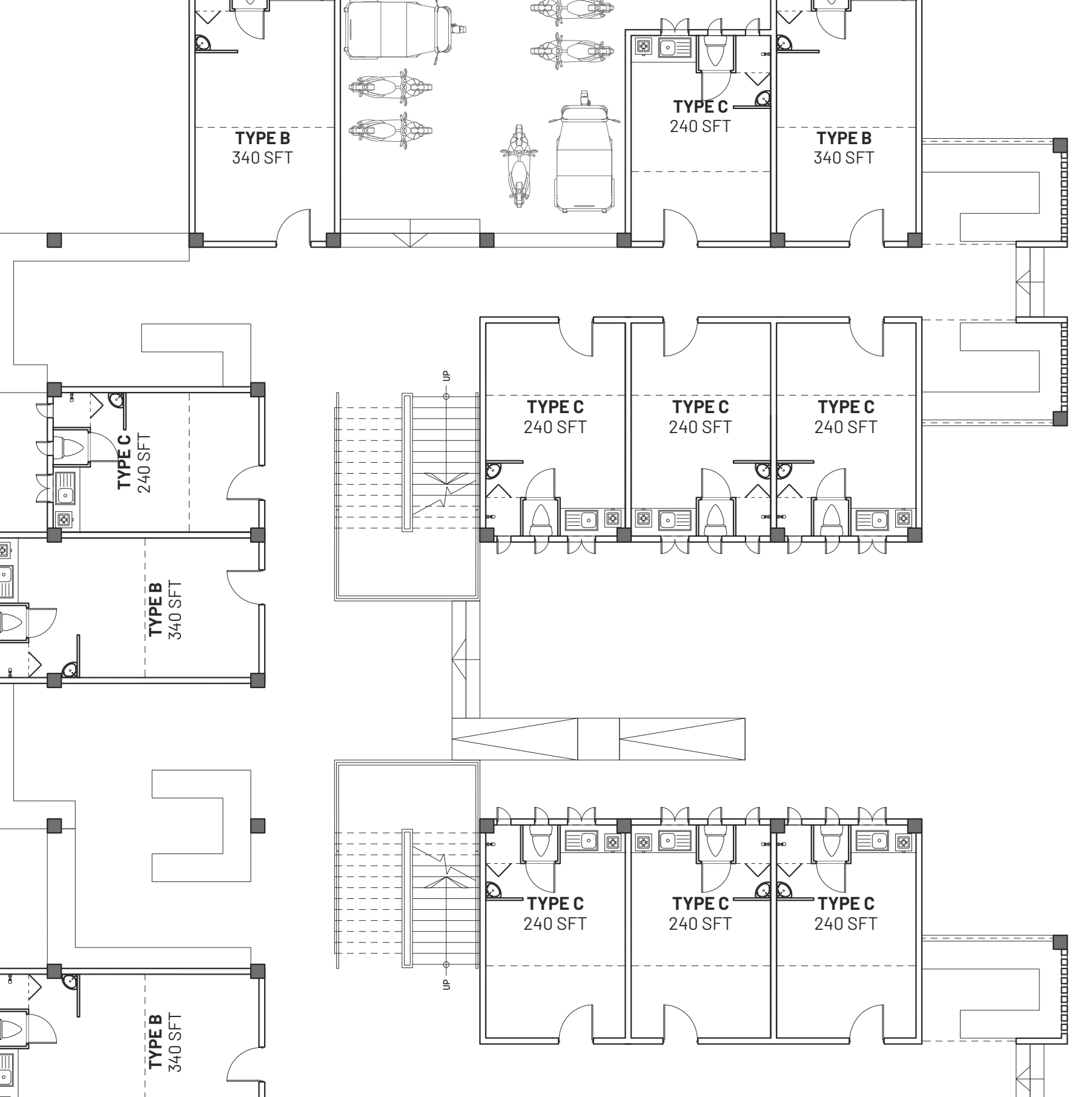
.ground floor plan

scale- 1:100



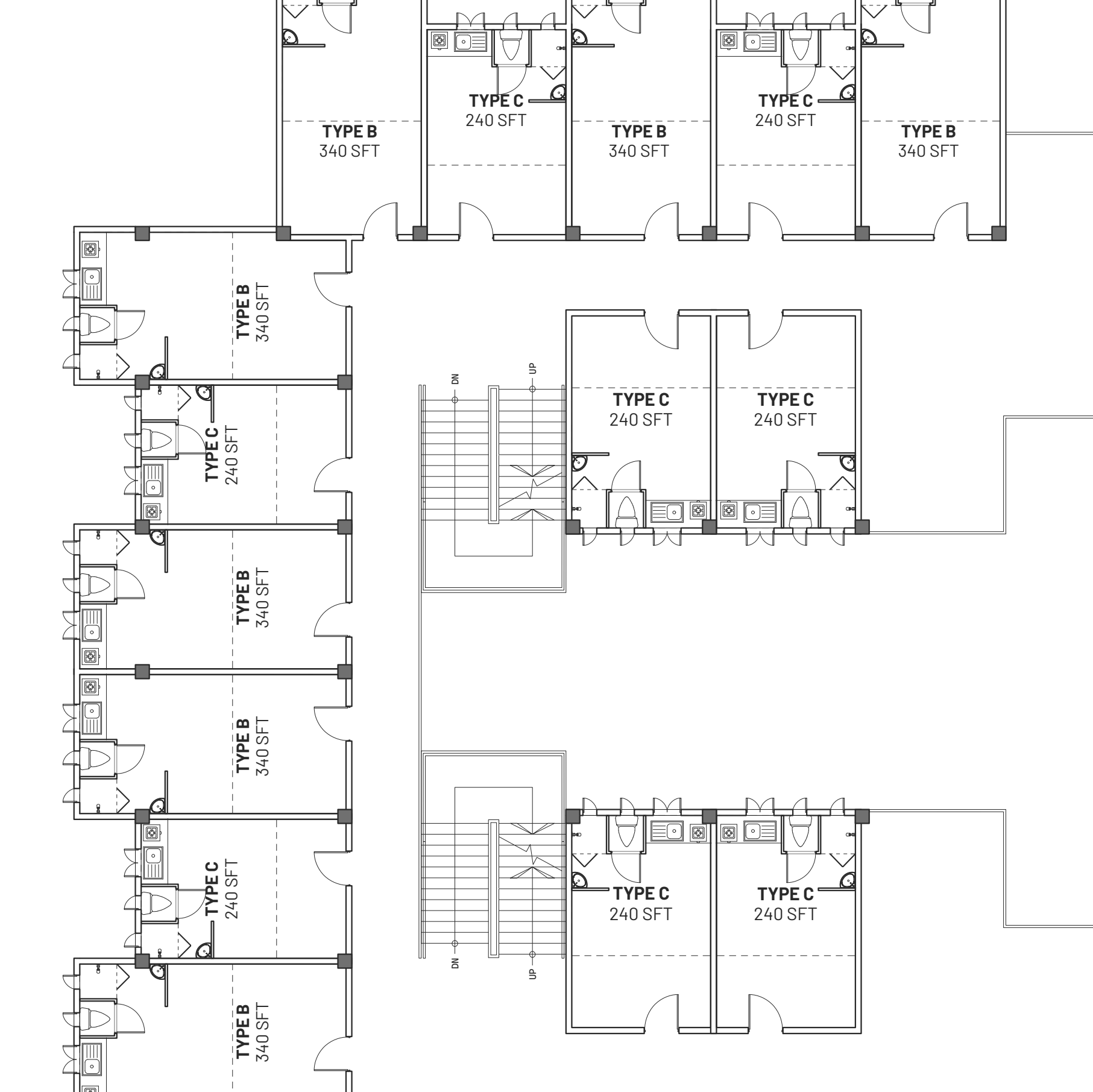
.first floor plan

scale- 1:100



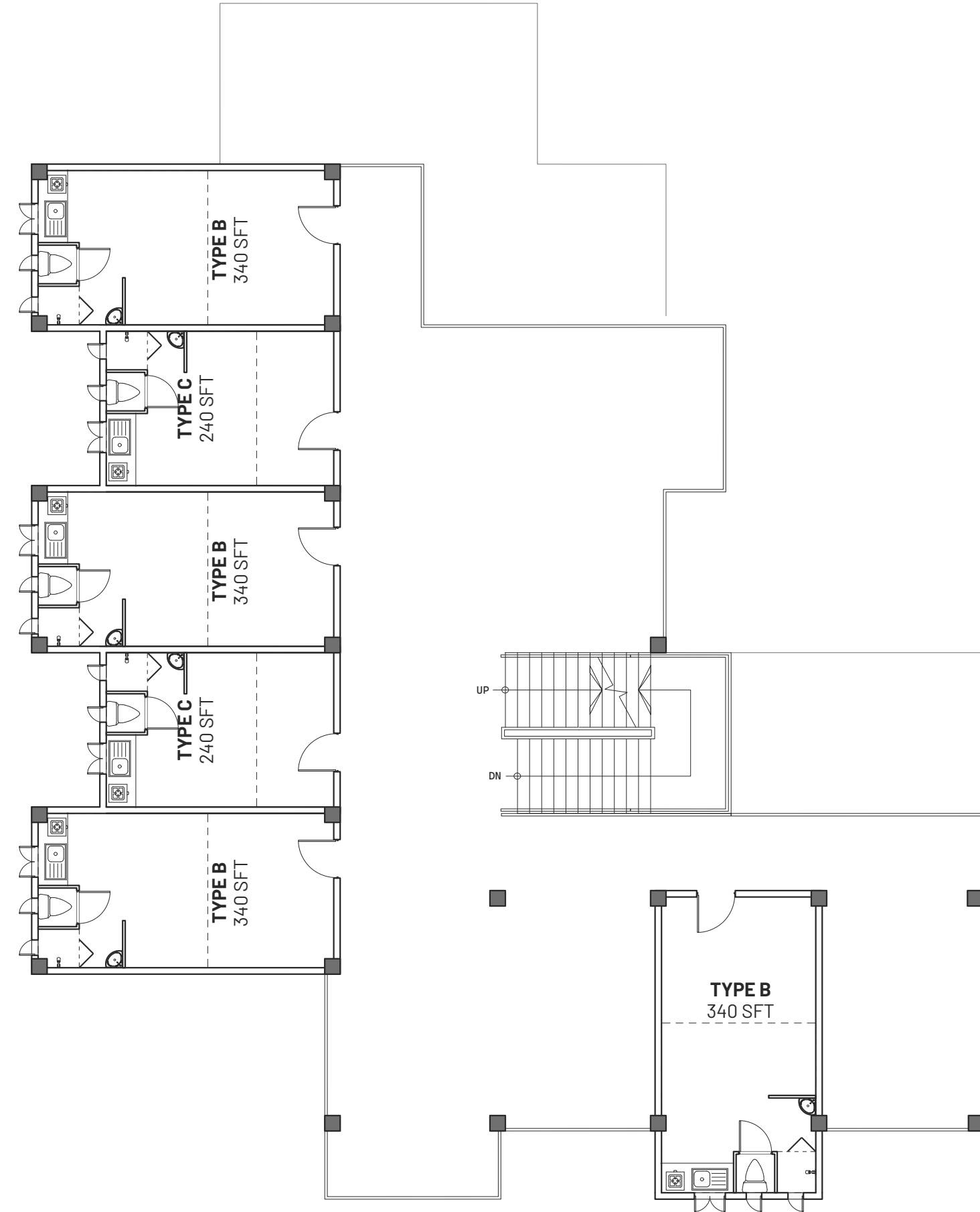
.ground floor plan

scale- 1:100



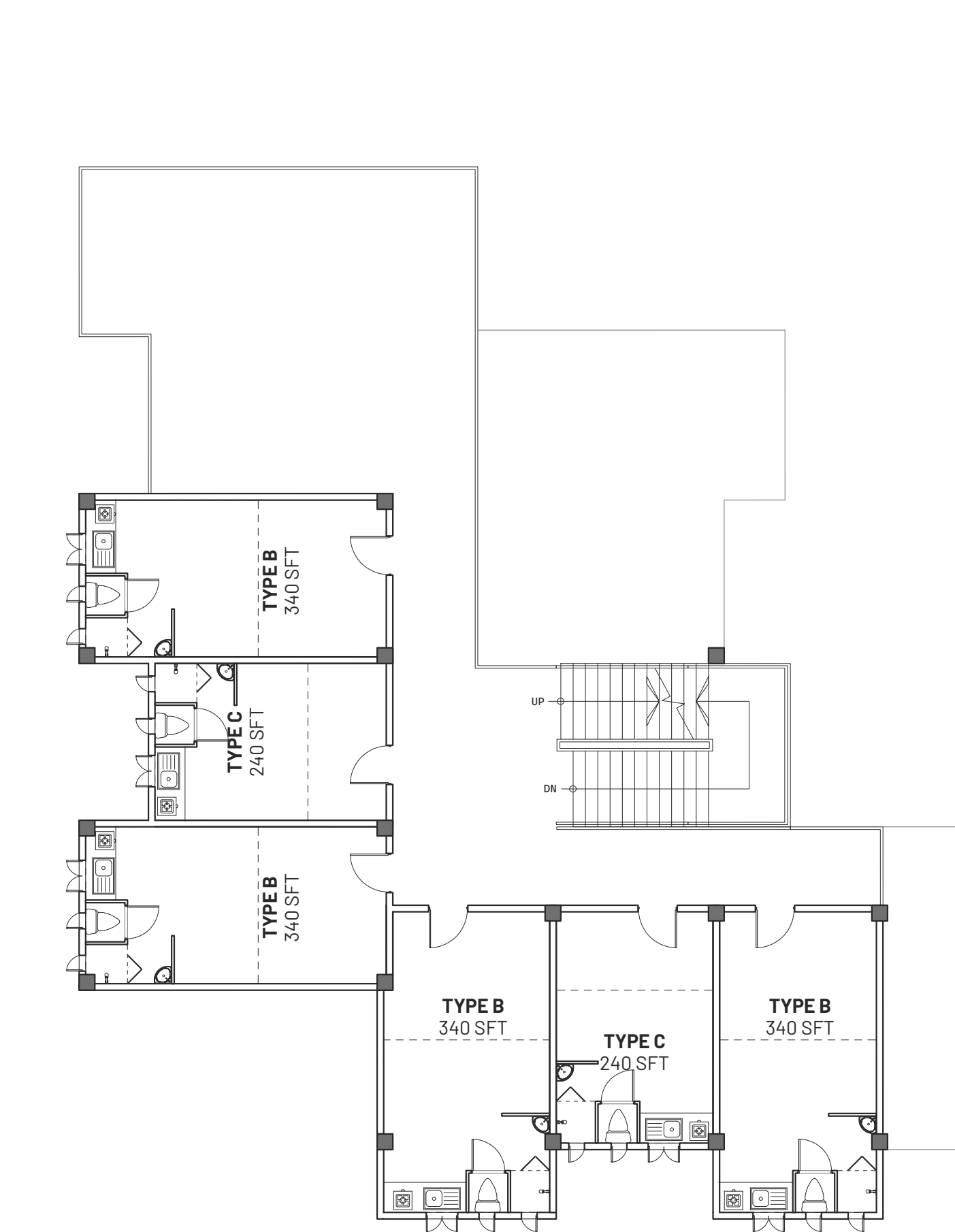
.first floor plan

scale- 1:100



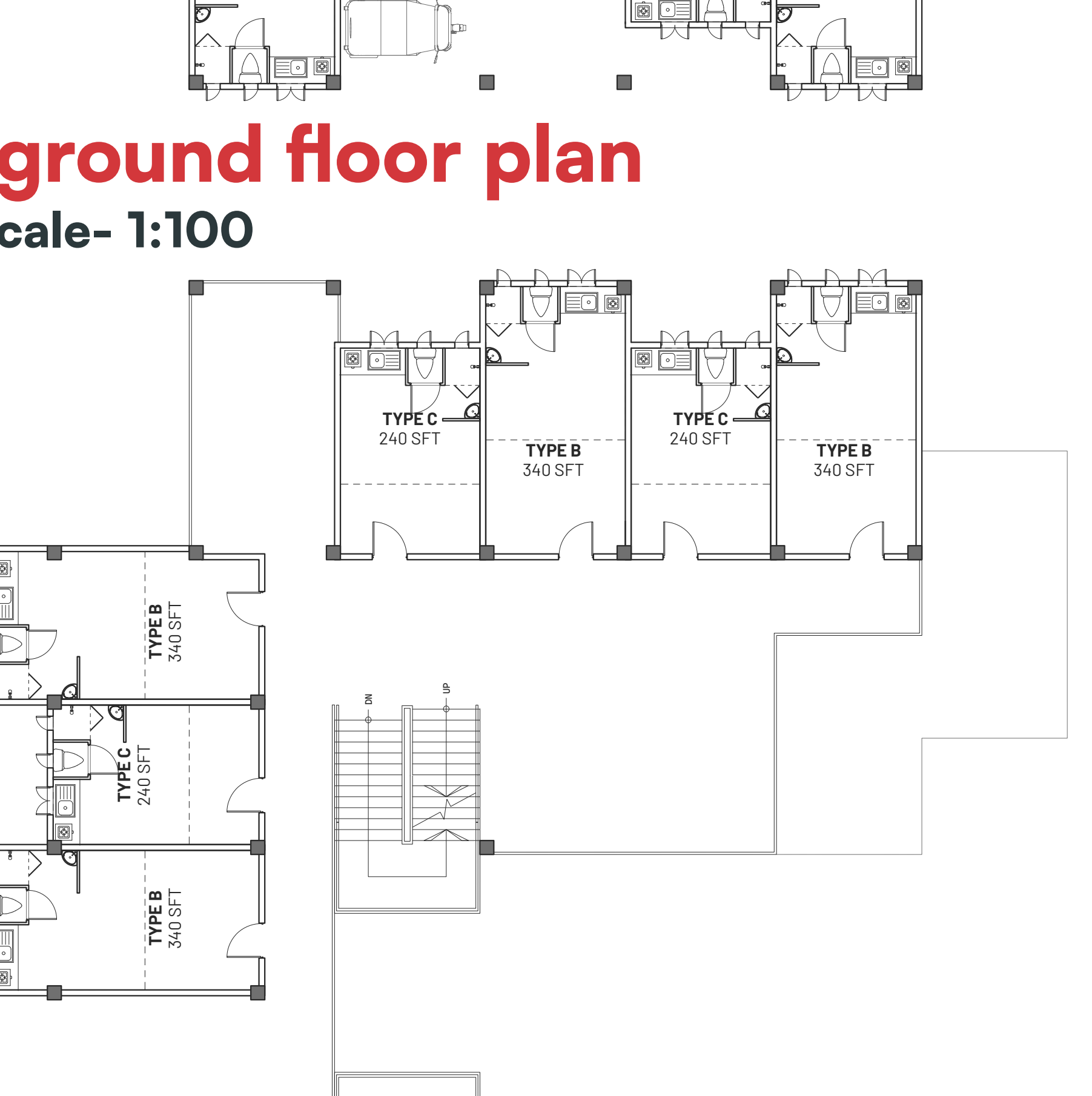
.second floor plan

scale- 1:100



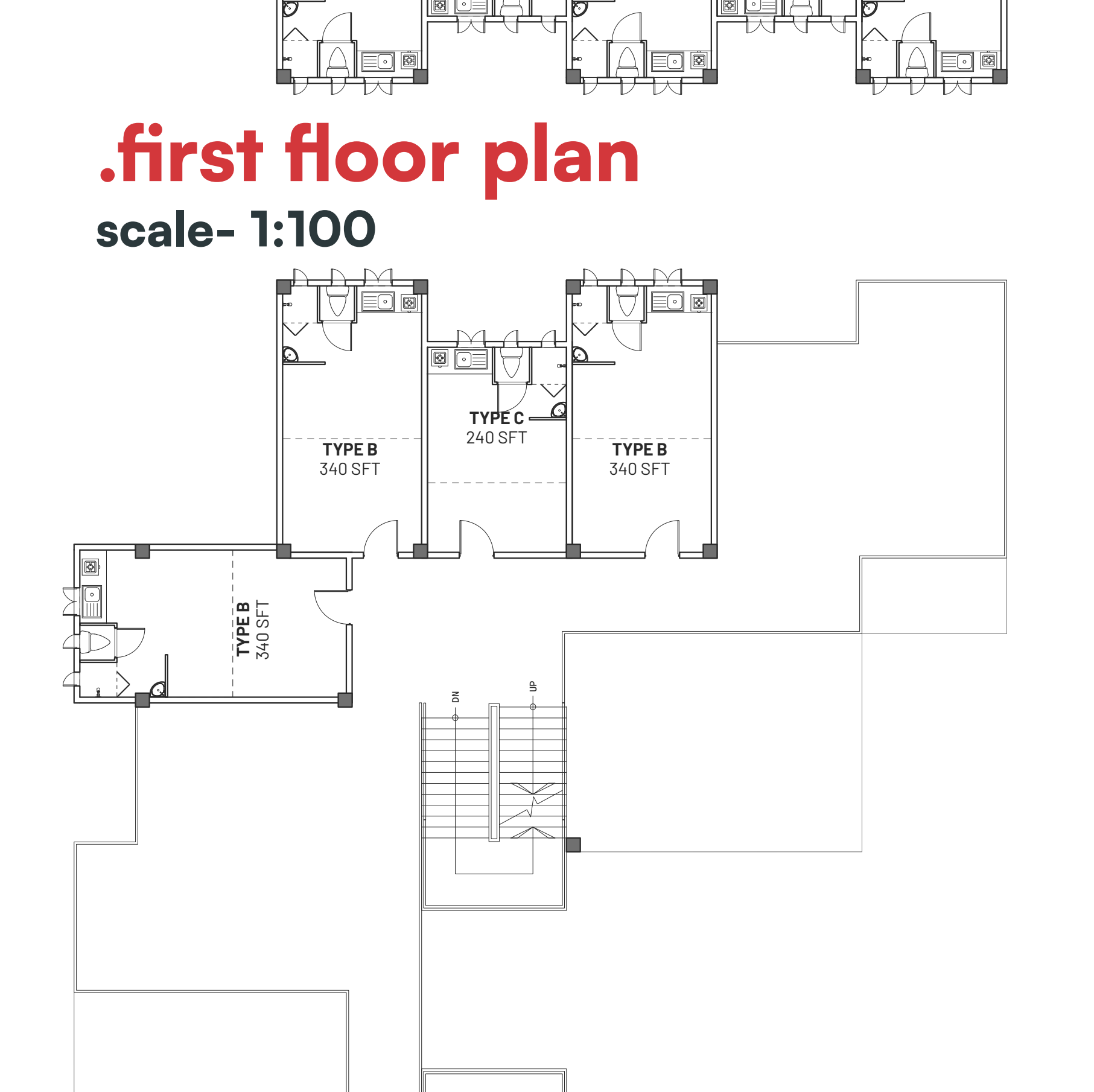
.third floor plan

scale- 1:100



.second floor plan

scale- 1:100

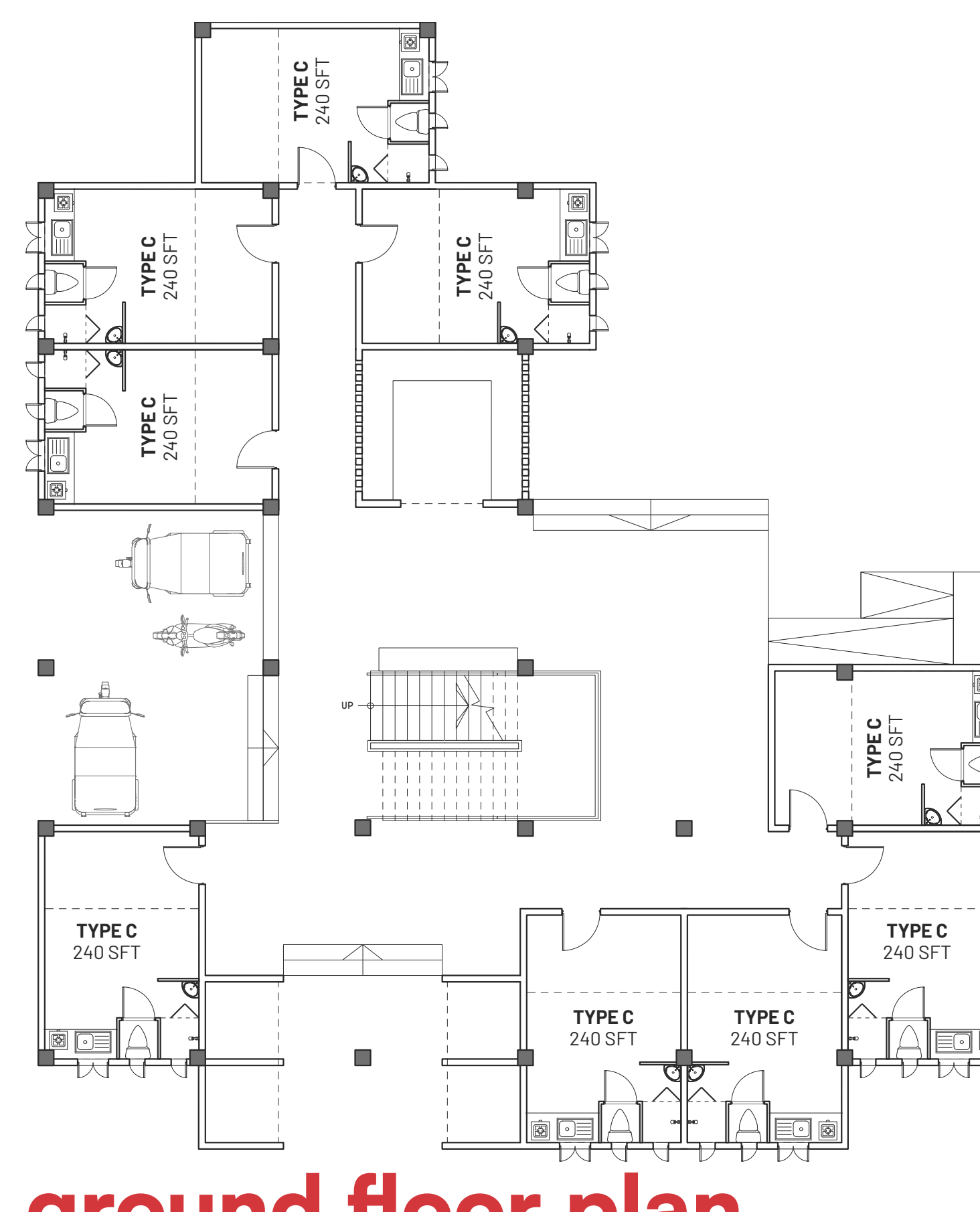


.third floor plan

scale- 1:100

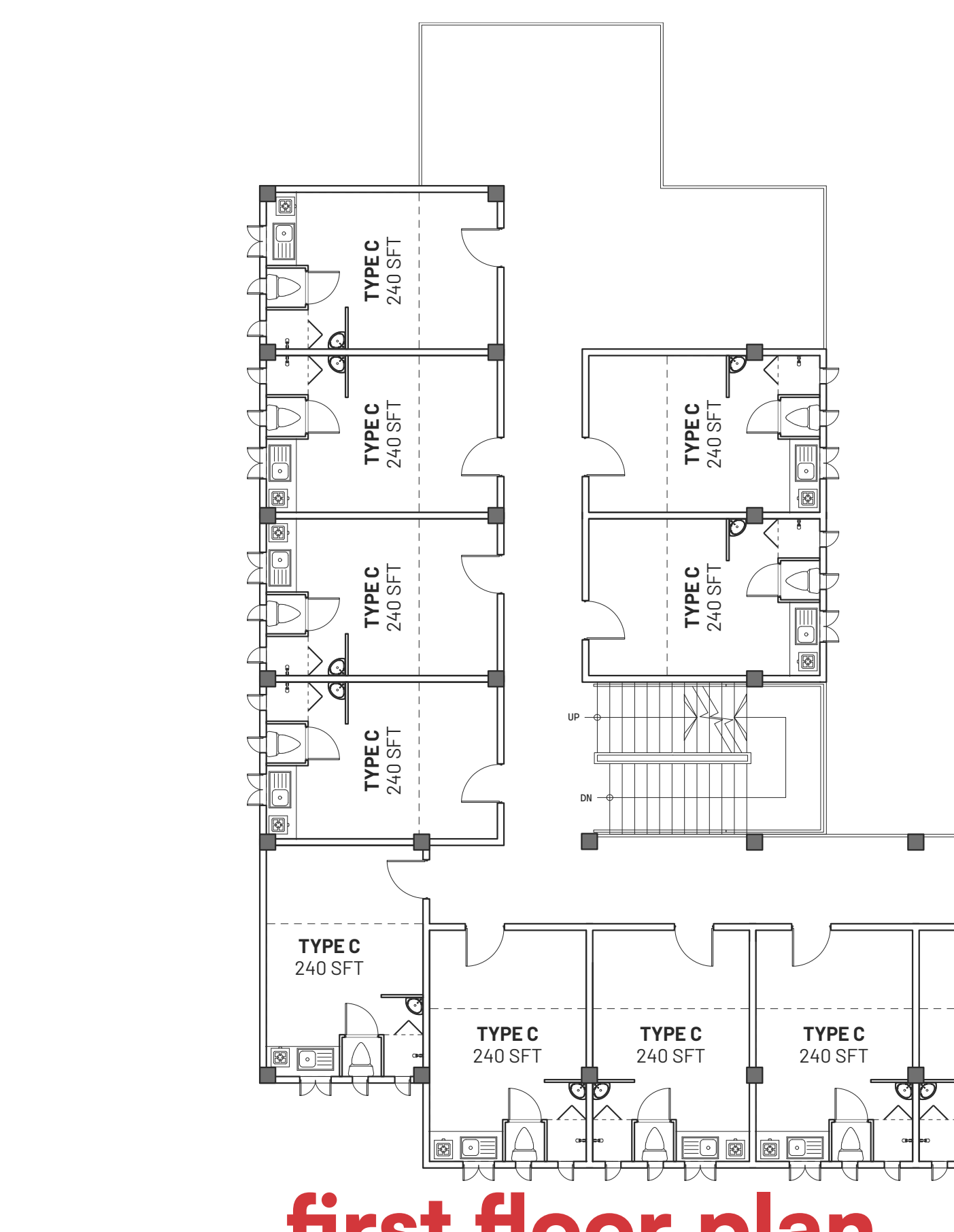
.block type 5- single module
.block type 6- double module

unit C only



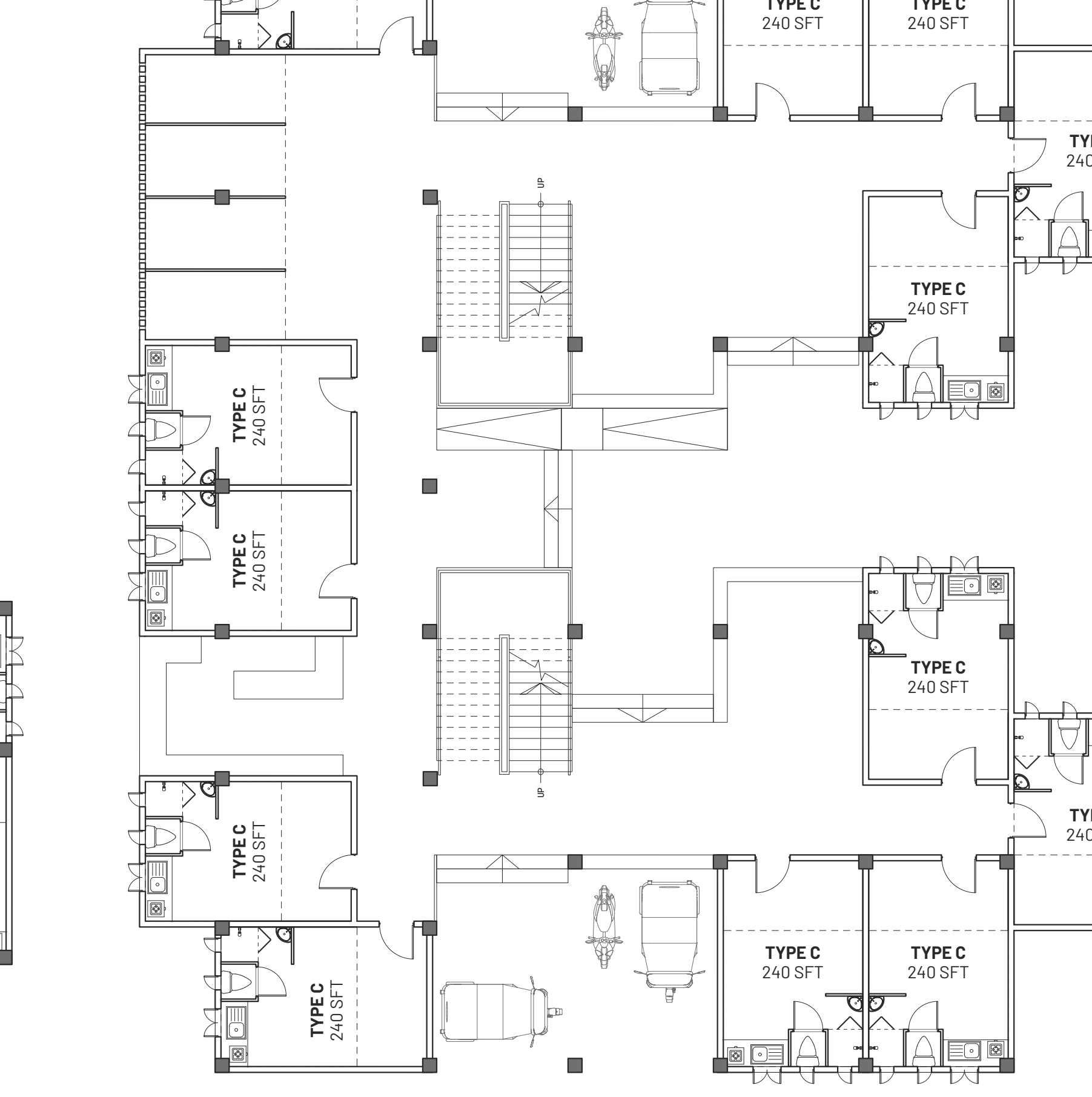
.ground floor plan

scale- 1:100



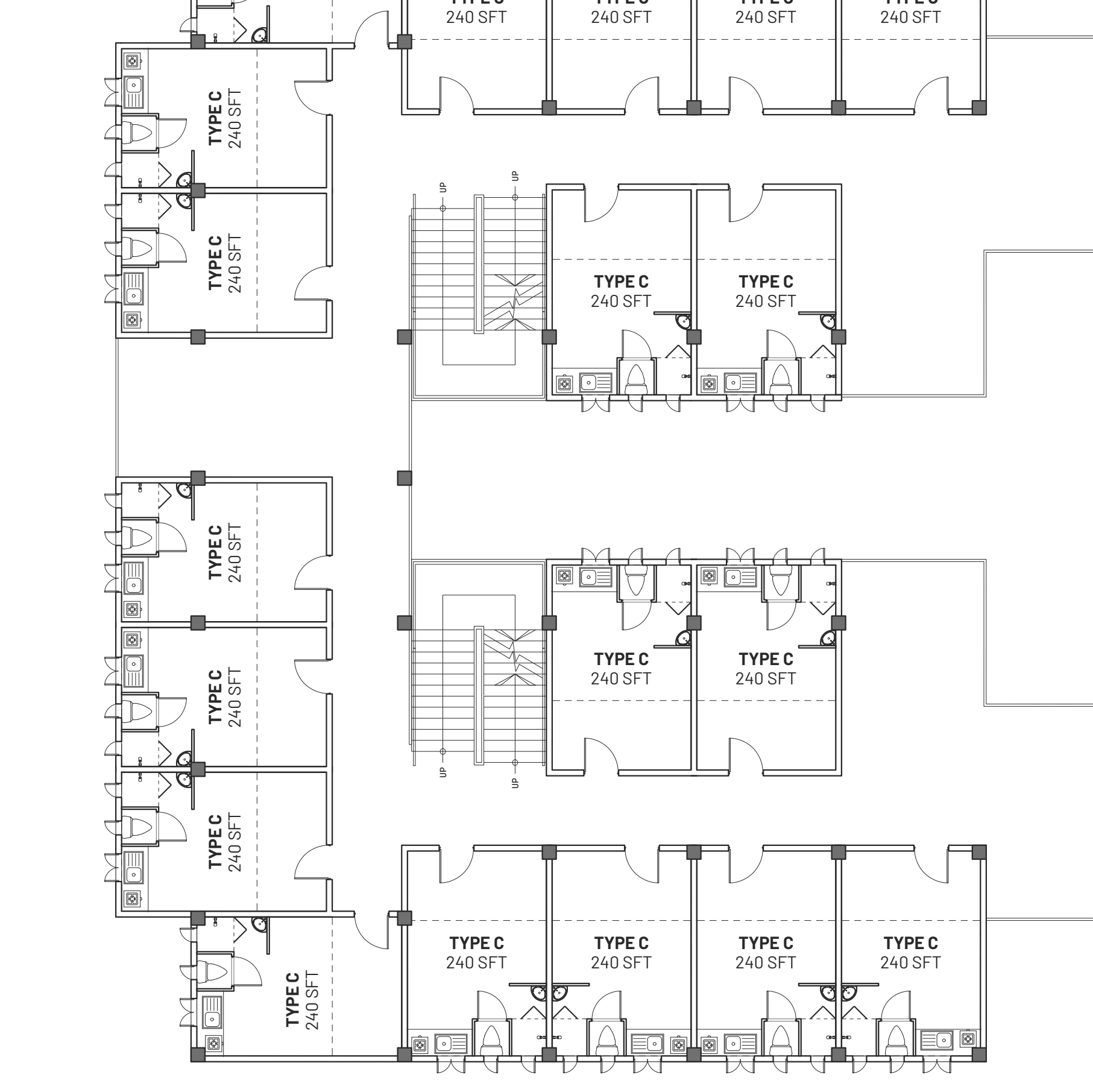
.first floor plan

scale- 1:100



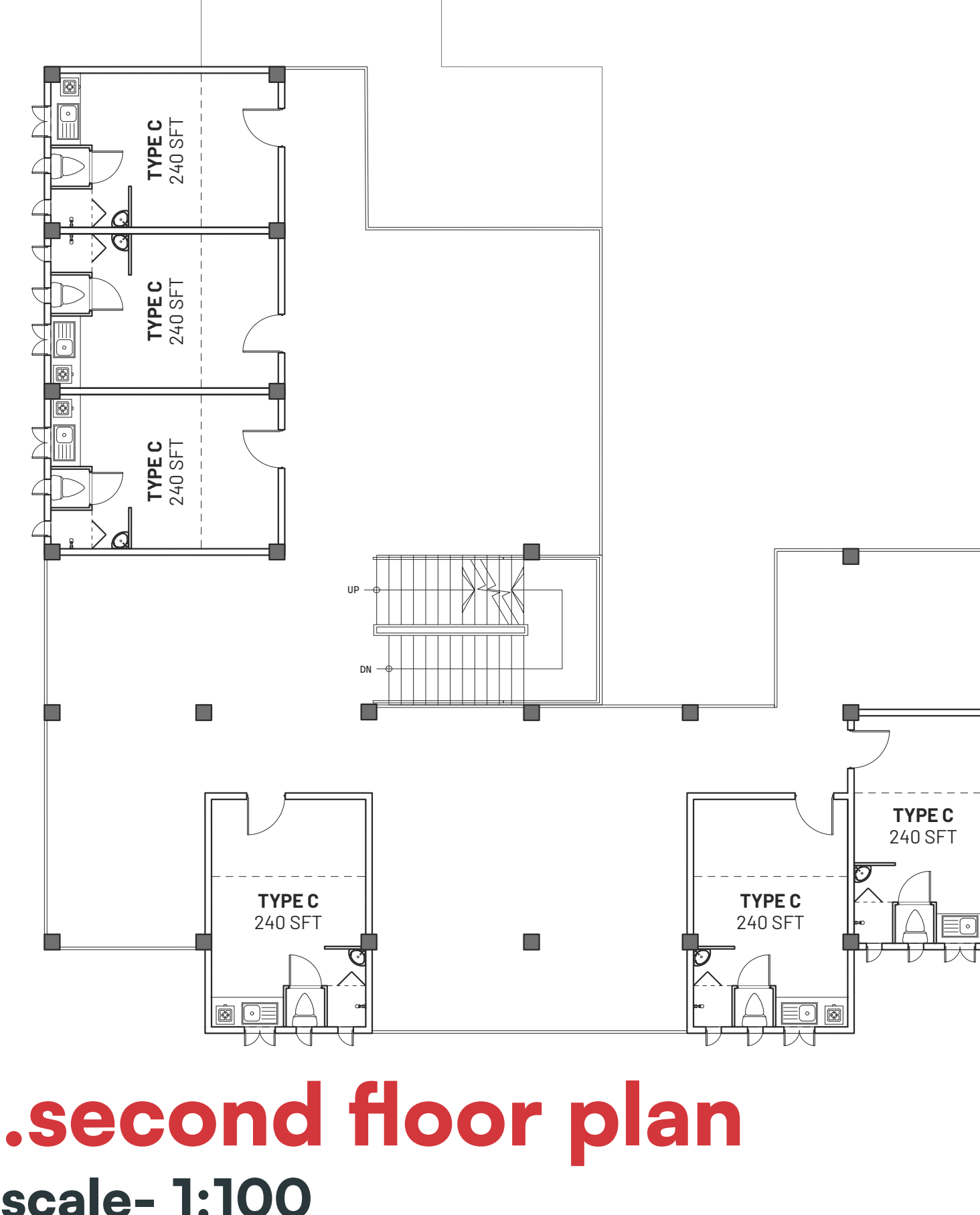
.ground floor plan

scale- 1:100



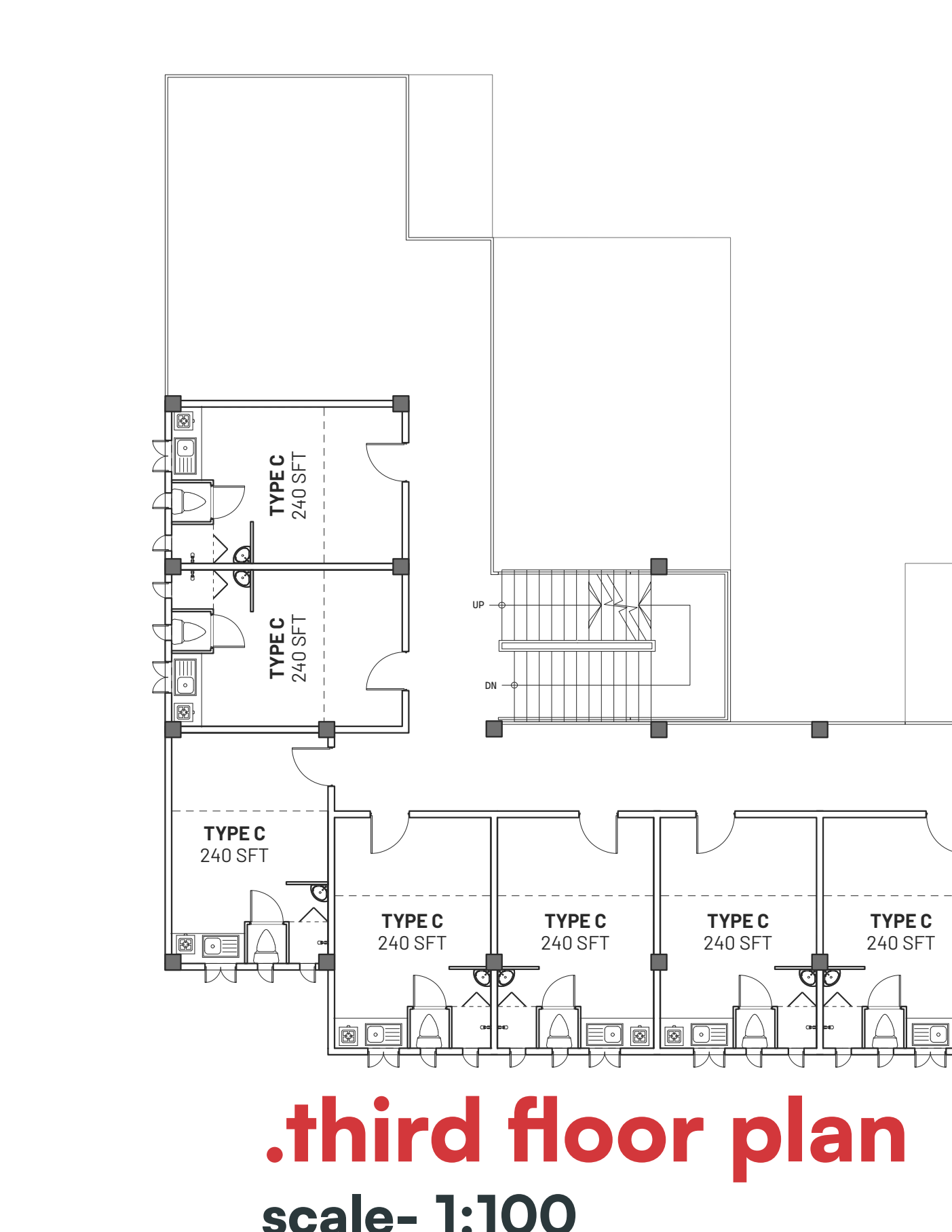
.first floor plan

scale- 1:100



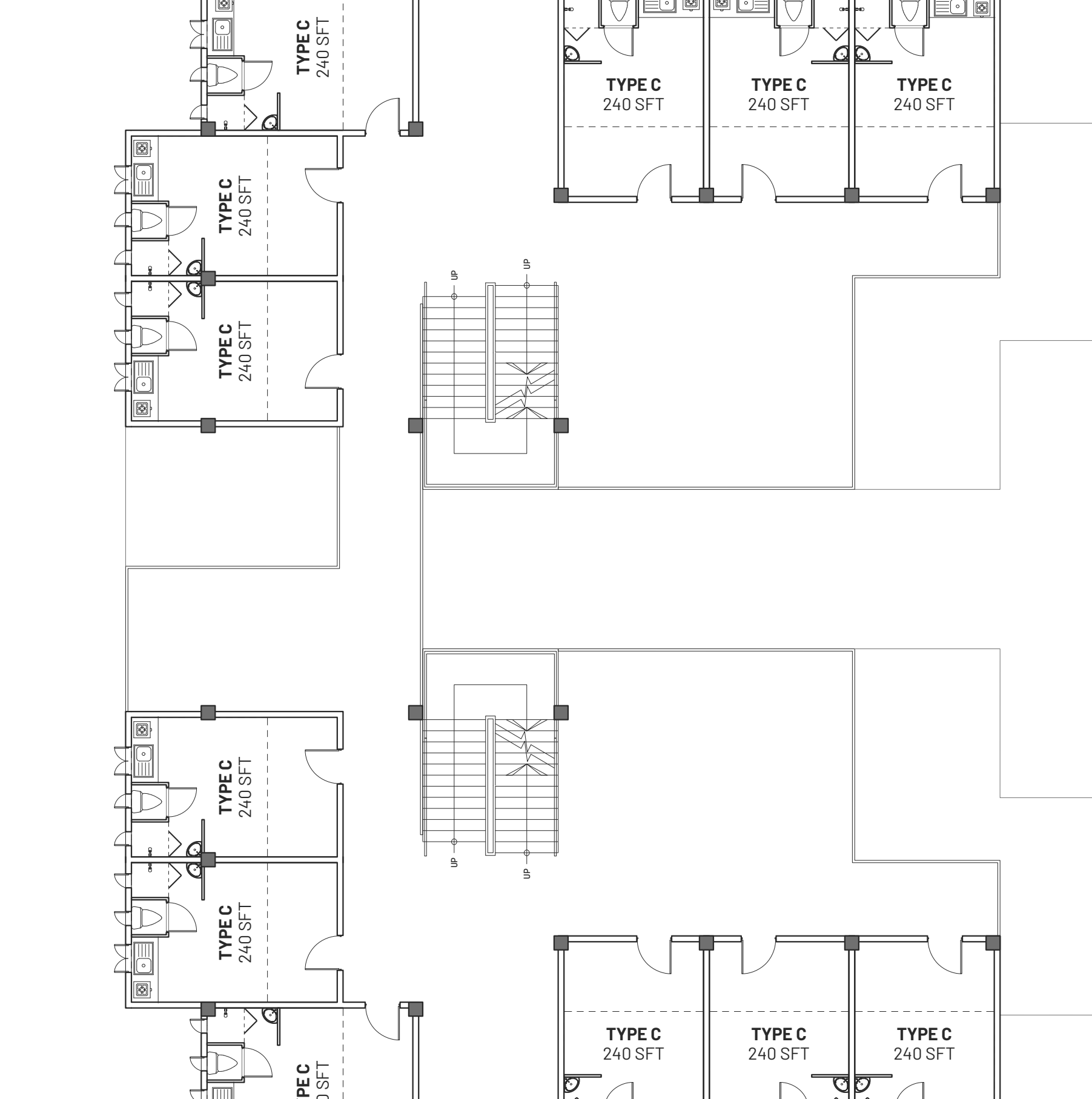
.second floor plan

scale- 1:100



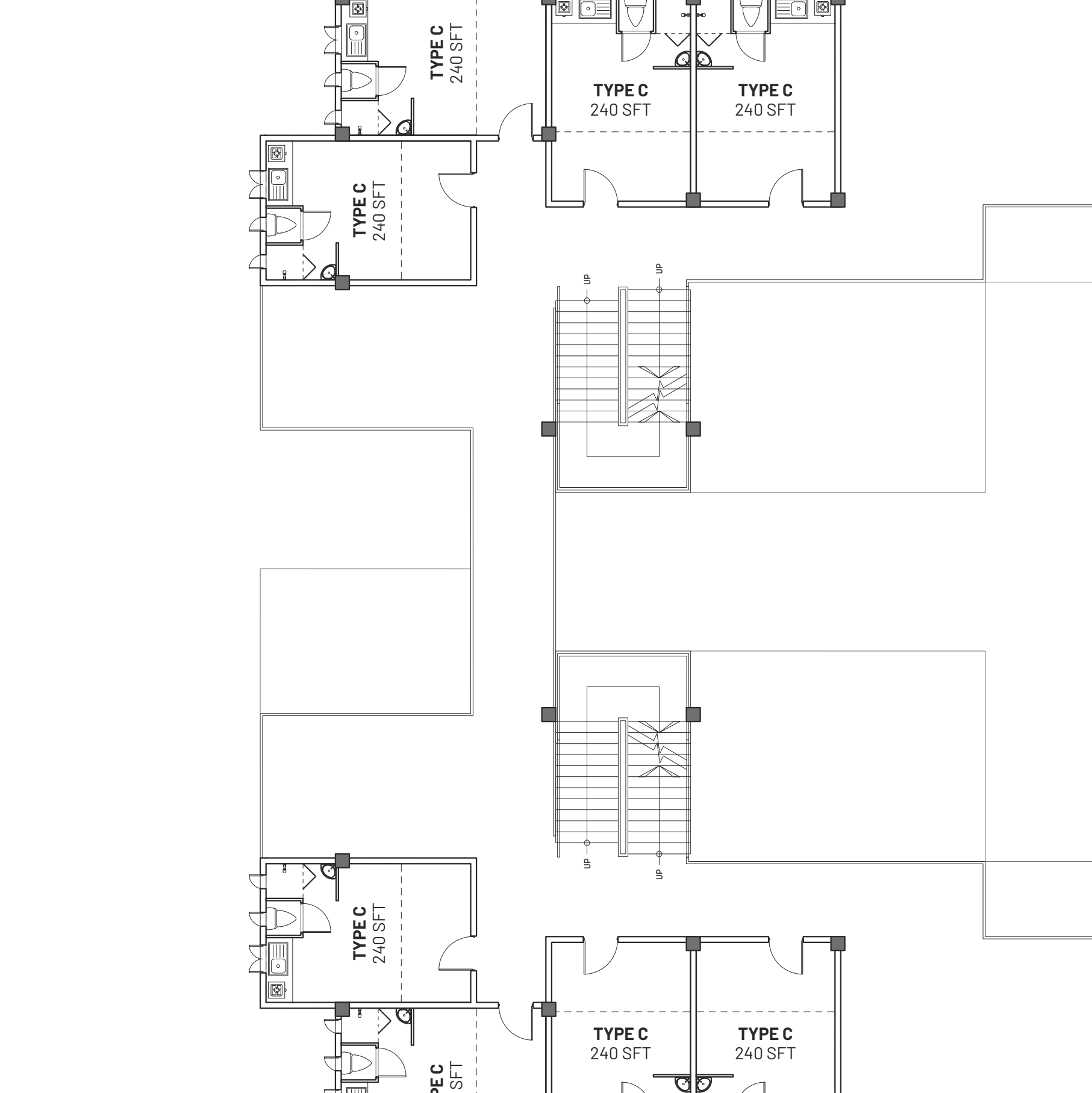
.third floor plan

scale- 1:100



.second floor plan

scale- 1:100



.third floor plan

scale- 1:100



.west elevation (block types 1, 2 & 4)
scale- 1:100



.section aa (block types 1 & 3)
scale- 1:100



.section bb (block types 2, 4 & 6)
scale- 1:100



.section cc (block type 5)
scale- 1:100



.north elevation (block type 6)
scale- 1:100





.site section 1
scale- 1:300



.site section 2
scale- 1:300