

Redefining Collective Housing Space
in Vietnam

A methodological recovery project
for KTT in Thành Công Area in Hanoi.

A degree thesis that explores the **"beauty"** and the **"beast"** of
the welfare system, the so-called **Khu Tập Thể** (KTT).
The beauty as it holds **memories**,
the beast as it holds numerous **issues**.

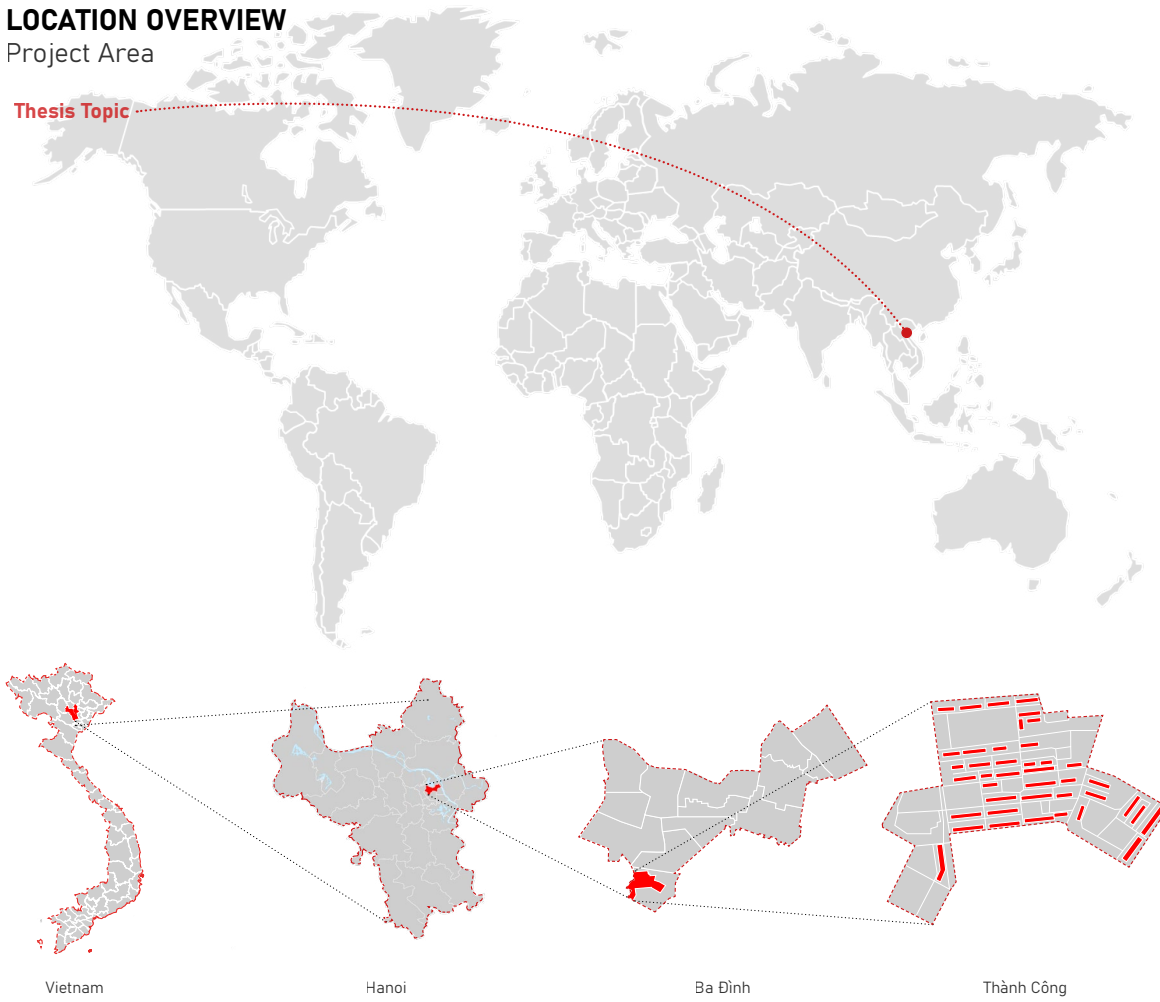
ASSTRACT


The rapid change in today's living style has affected
housing choices and lifestyle preference. This study will
present alternatives on how to compose their own space in
KTT. It aims to provide a systematic approach to craft skills
to collective housing that emphasize the provision of diverse
substitutes tailored according to the user needs.

The methodology of this study involves a thorough
exploration of catalogues of choices from the ground floor
shops, to the residential parts and to the roof or upper
part of the building to also set a limit. The aim is to also
empower users to actively shape their living environments by
incorporating a range of materials, construction techniques
and spatial configurations.

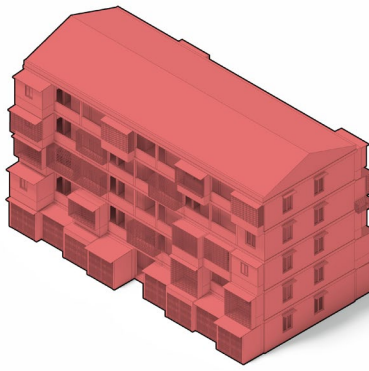
The outcome of this exploration serves as a conceptual
guide and methodological framework for users of collective
housing but also for the policy-makers and developers to
have another approach on how to accordingly plan housing
designs and living lifestyle for the people of Northern Vietnam.
Thus, we present a toolbox of possibilities to help individuals
be conscious of their choices in order to enhance their living
space.

In conclusion, this research is simply a kit of design
choices that can meet individual or peers preferences and
needs to give awareness that skyscrapers are not the only
solution after demolishments.



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CONCEPT SCHEME
Design process

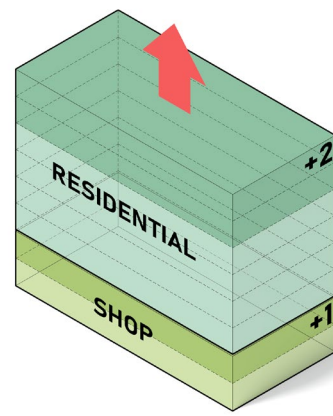


DEMOLITION

KTT's current state is so dire that it could collapse at any time. In order to construct a brand-new KTT, the entire building must be demolished.

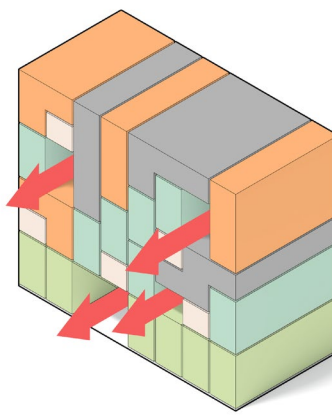
BUILT AREA

The average built area is computed with the extension of the previous KTT taken into account. This is the mean area of KTT original area combined with the current extension.



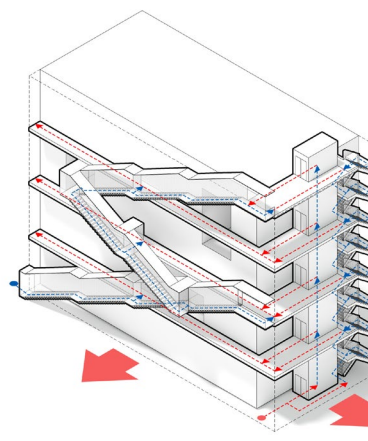
NEW VOLUME

To provide the user with greater room, a new volume is generated. Compared to the existing KTT, the store area now has two floors instead of one, while the residential area has six floors instead of four. This proposal centers on the vertical axis rather than expanding the facade horizontally.



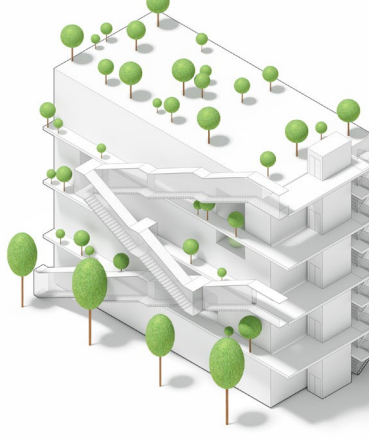
VERTICAL PROGRAM

The building's program is mostly divided into vertical sections, much like a traditional Hanoi tube house. There will be tunnel holes used as common areas for tenants' public activities spaced a few units apart.



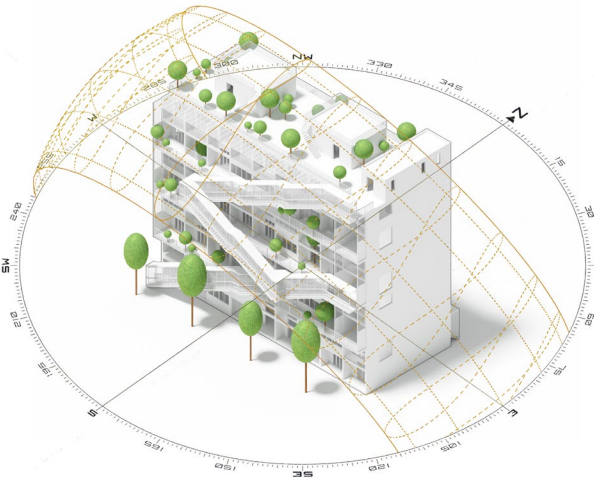
ADAPTIVE FACADE

Vertical and horizontal distribution characterizes and unifies the building layout, with common corridors spaced every two-story level, providing more private balconies than public corridors.



THREE DIMENSION PARK

When pot plants surround a structure, it transforms into a park that spans both horizontal and vertical axes, improving user comfort and improving the city's environmental friendliness.



CIRCULATION

The building's two faces are expanded to form the circulation. Because most of the units inside are arranged vertically, only one corridor is required for every two floors. As a result, create a double-height corridor to give each unit more natural light and to minimize the overall number of corridors that are required.

PROGRAM

The structure is divided into **three primary sections: open space, residential, and shop**. While residential space spans from the second to the seventh level and the tenant's open space is located on the roof, the shop occupies the ground and first floors.

ROOFTOP: OPEN SPACE

● Technical room

2ND-7TH FLOOR: RESIDENTIAL

● Studio Flat
● Duplex
● Triplex
● Quadruplex

GROUND FLOOR-1ST FLOOR: SHOP

● Shop



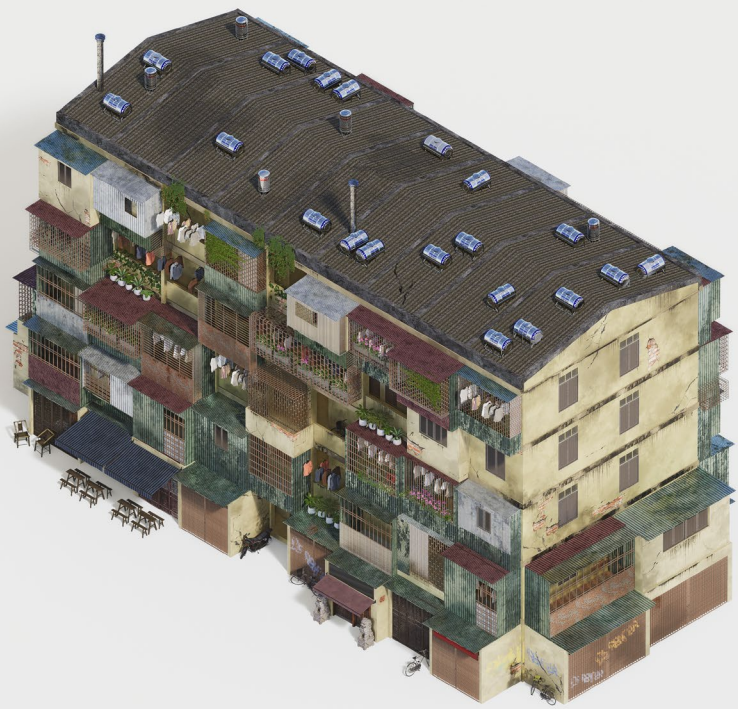
SHOP

Every store and service is housed on the building's first two floors. Recognize the necessity of increasing the area for this purpose; the extension follows a vertical axis rather than a horizontal one, and a floor is added rather than the facade being extruded as in the case of KTT.

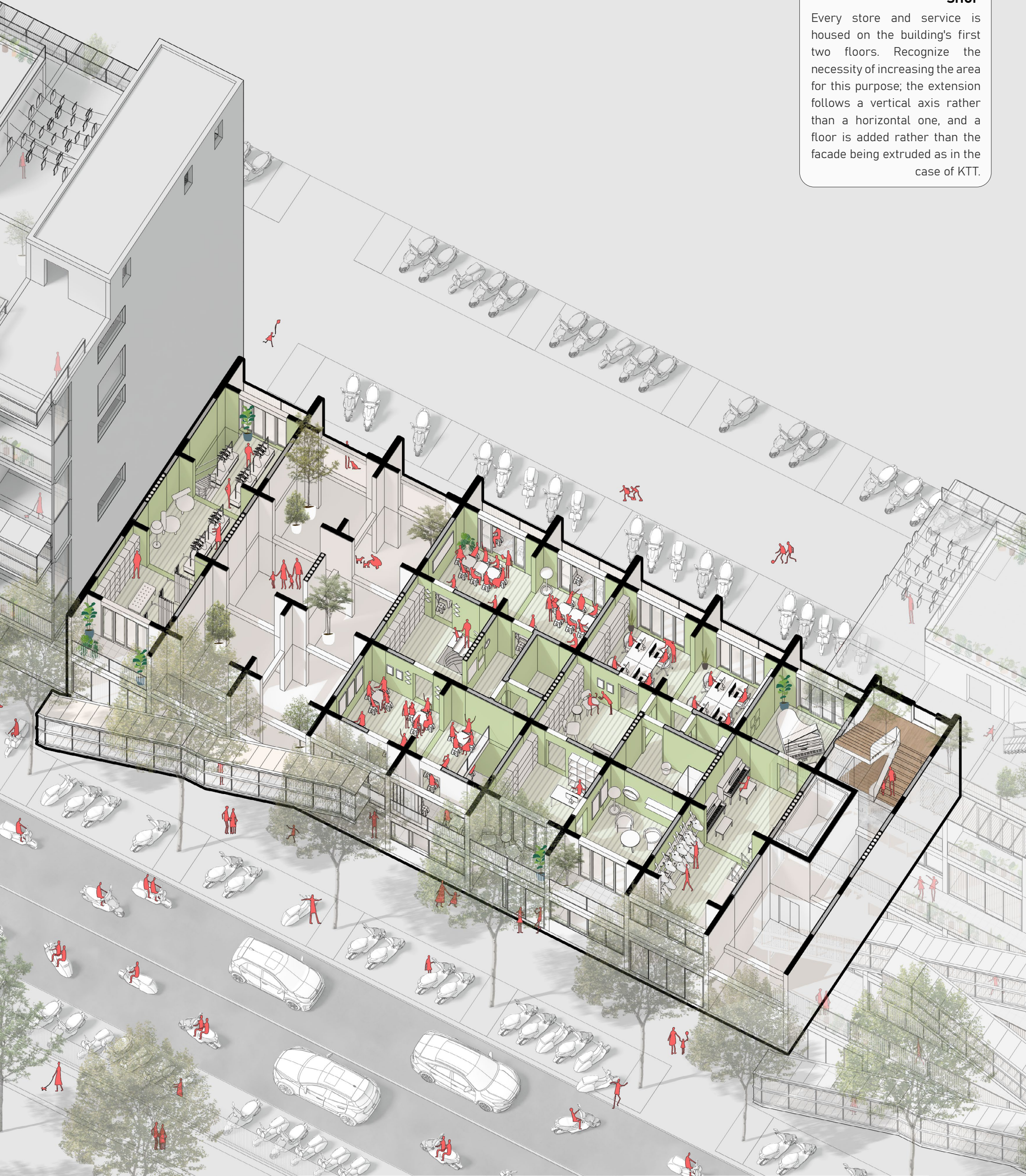
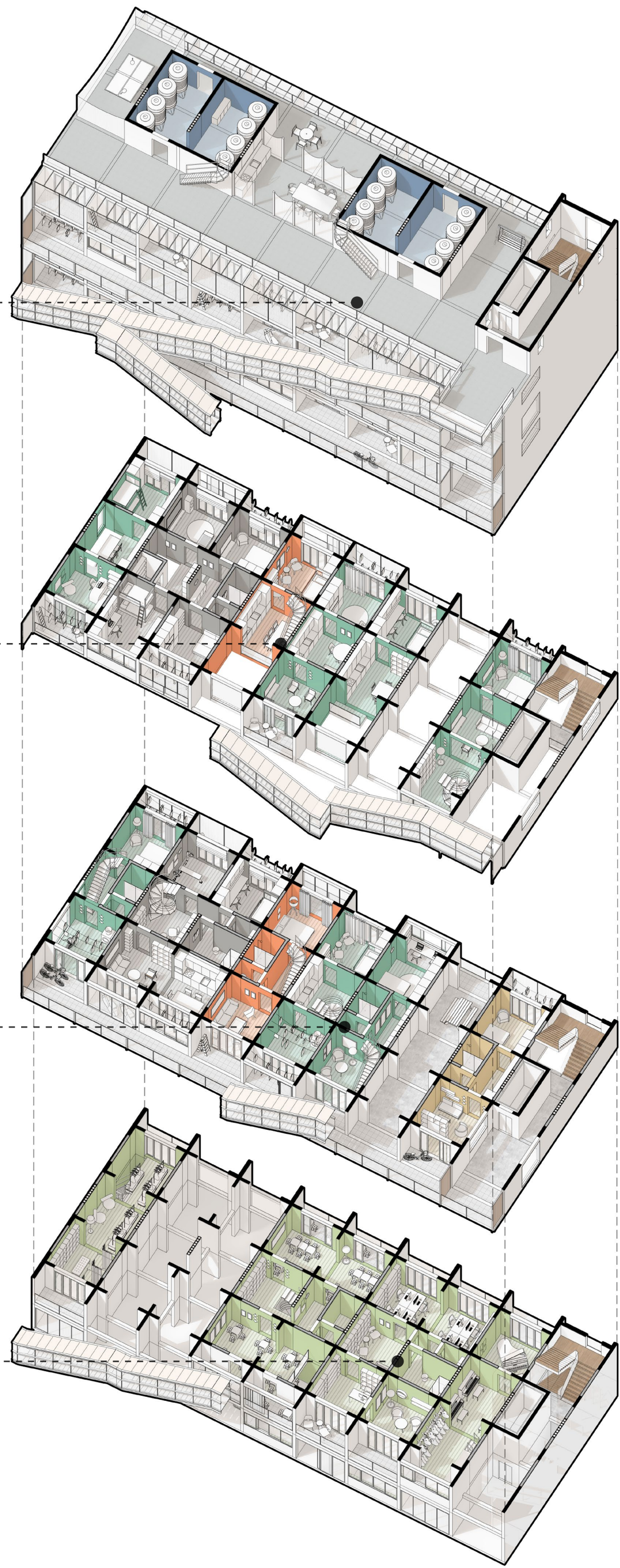
MASTERPLAN
Axonometric



EXISTING



PROPOSAL





Corridor Porch Room Facility core Balcony

+27.10m

+24.10m

+21.10m

+18.10m

+15.10m

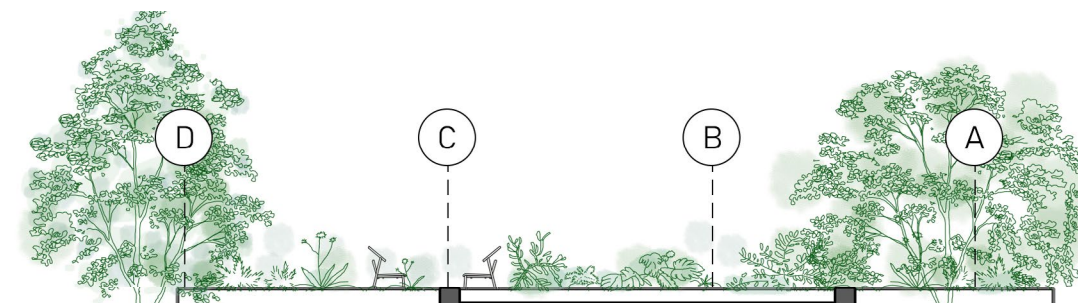
+12.10m

+9.10m

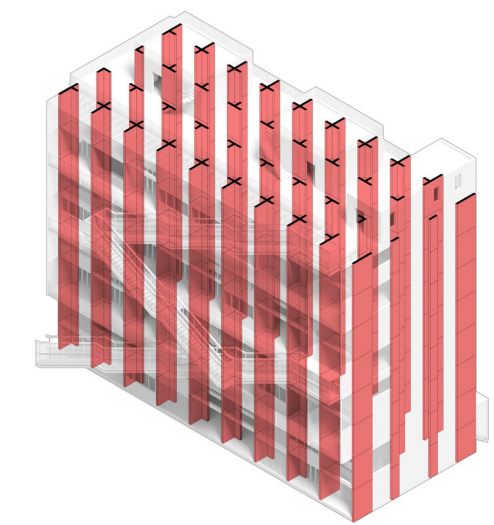
+6.10m

+3.10m

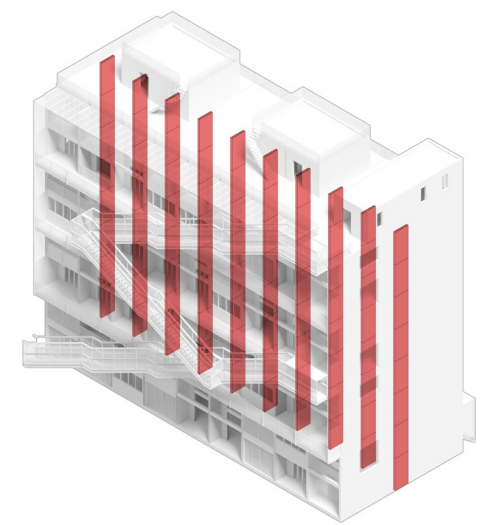
+0.10m



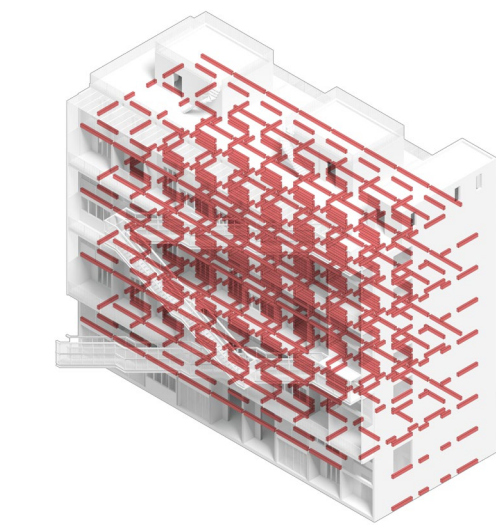
BUILDING STRUCTURE



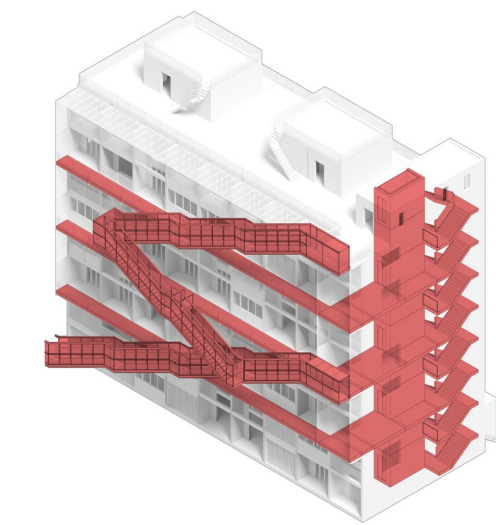
Cross pillar



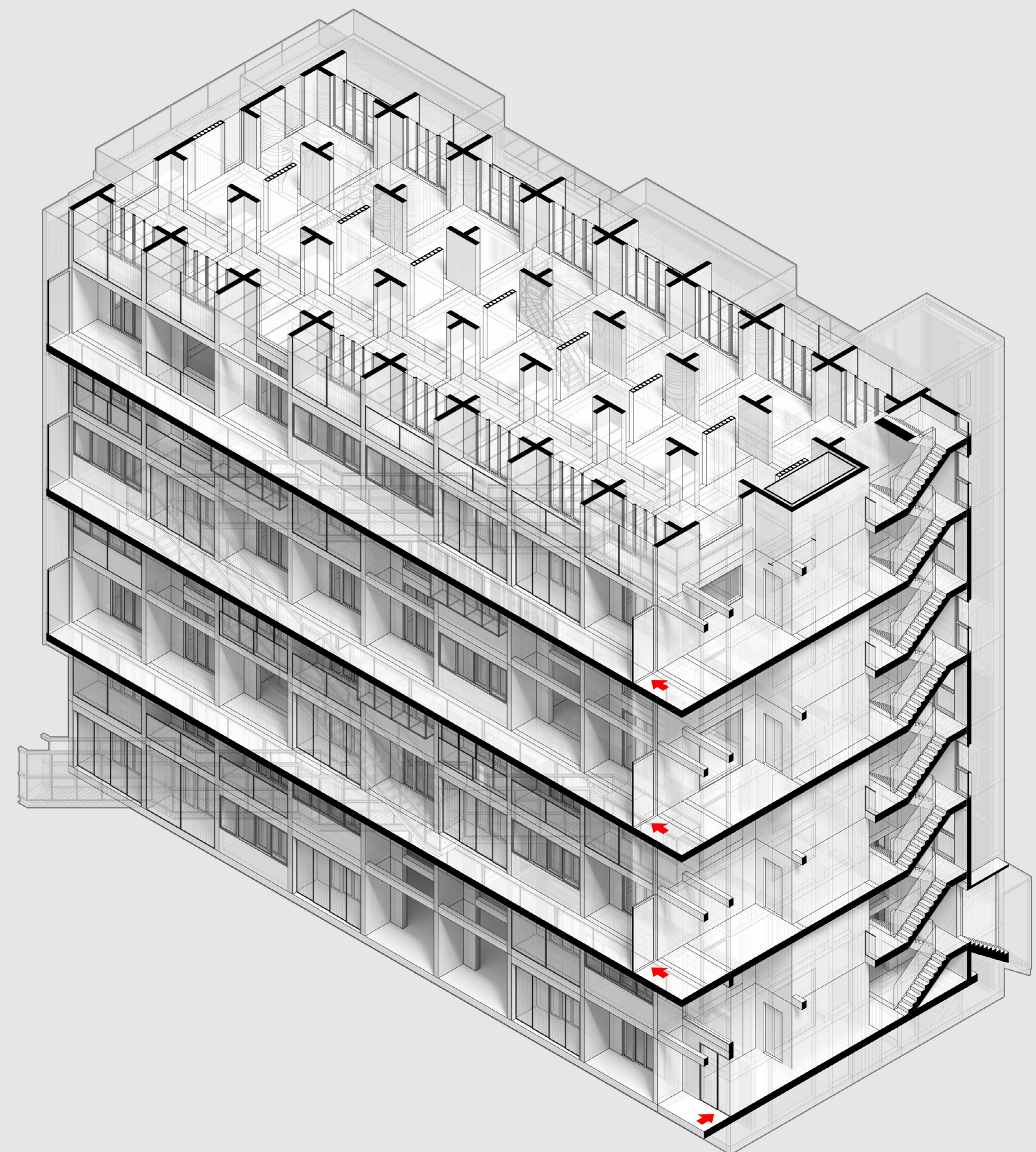
Wet wall



Beam

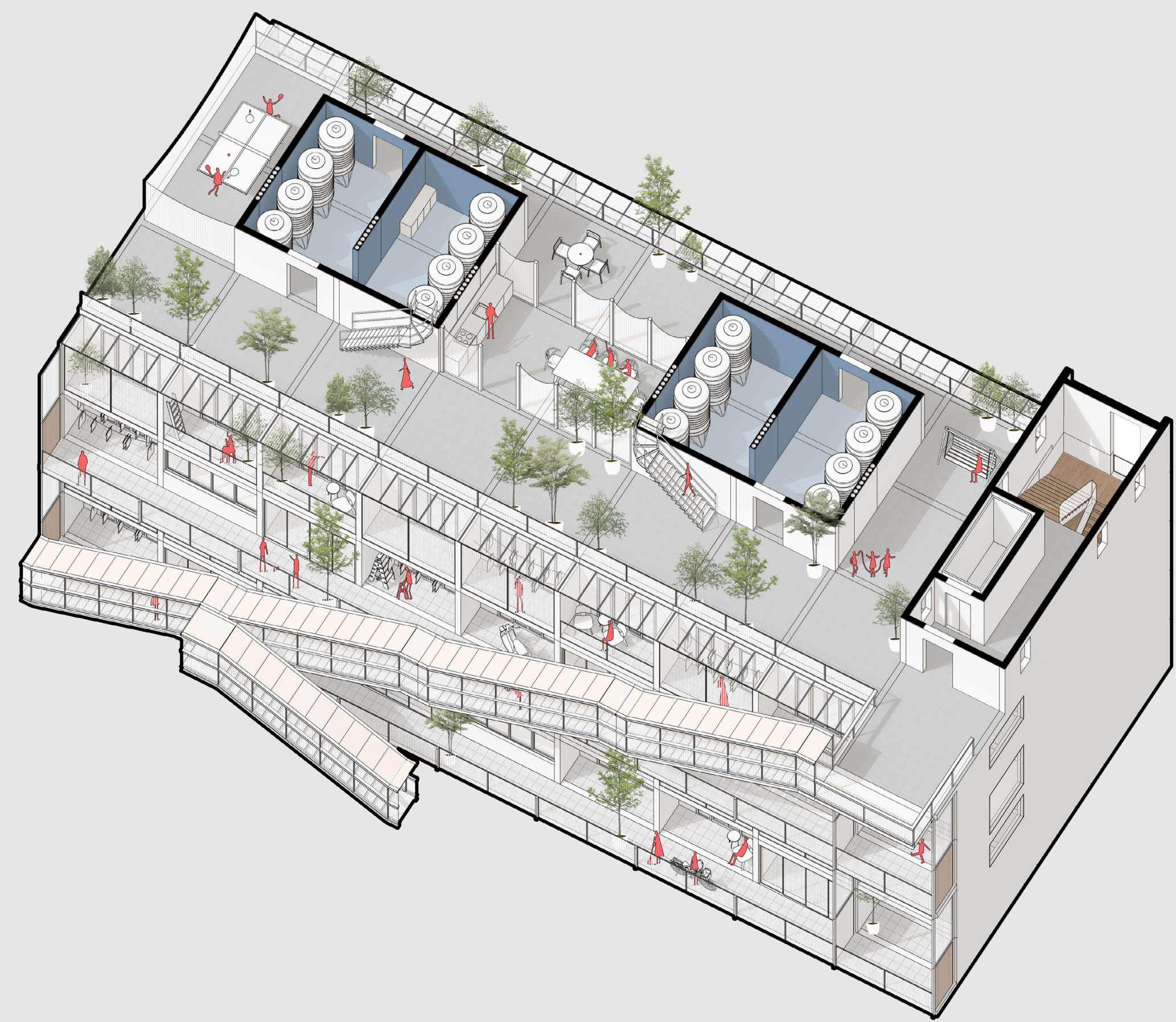


Movement



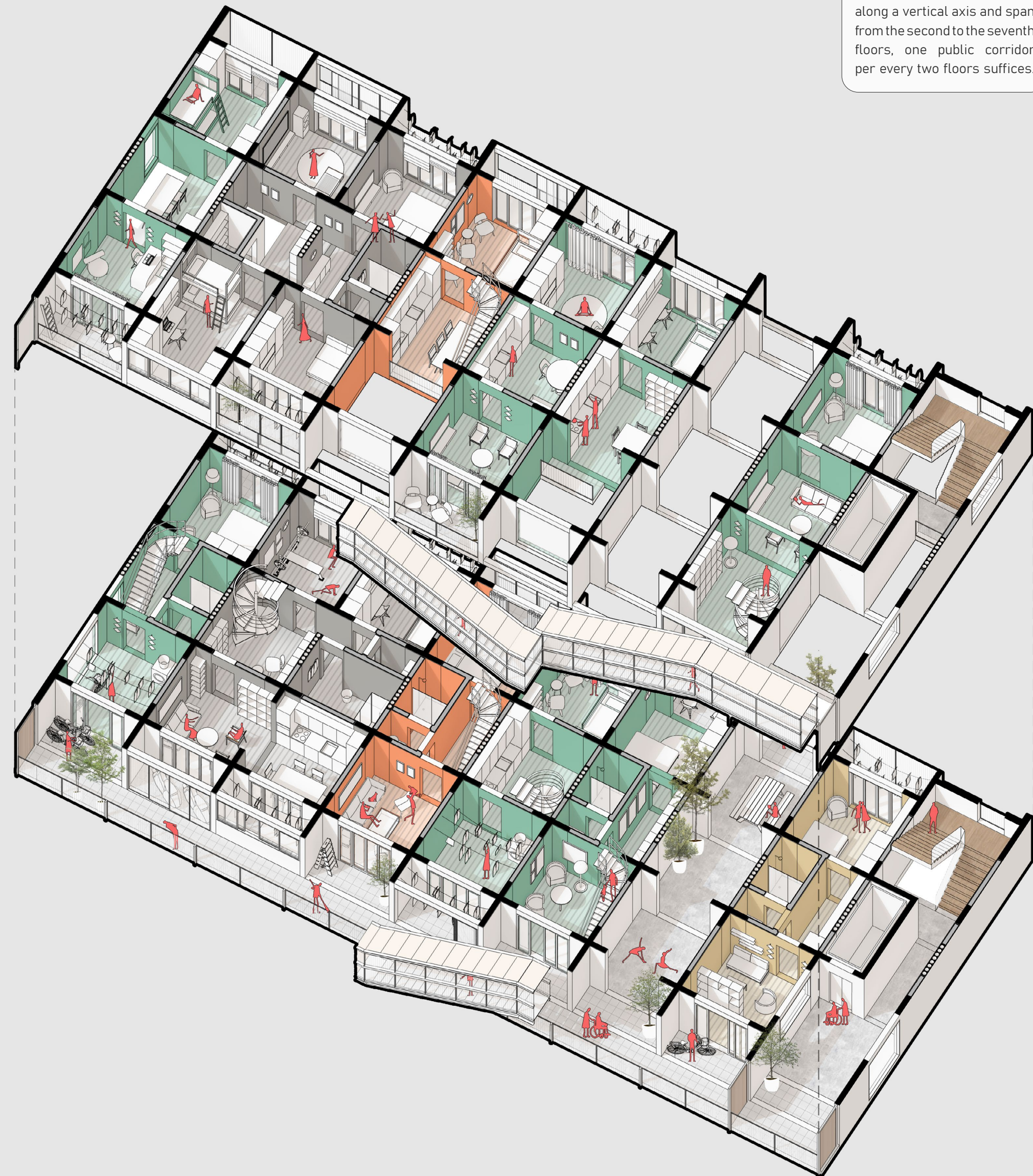
OPEN SPACE

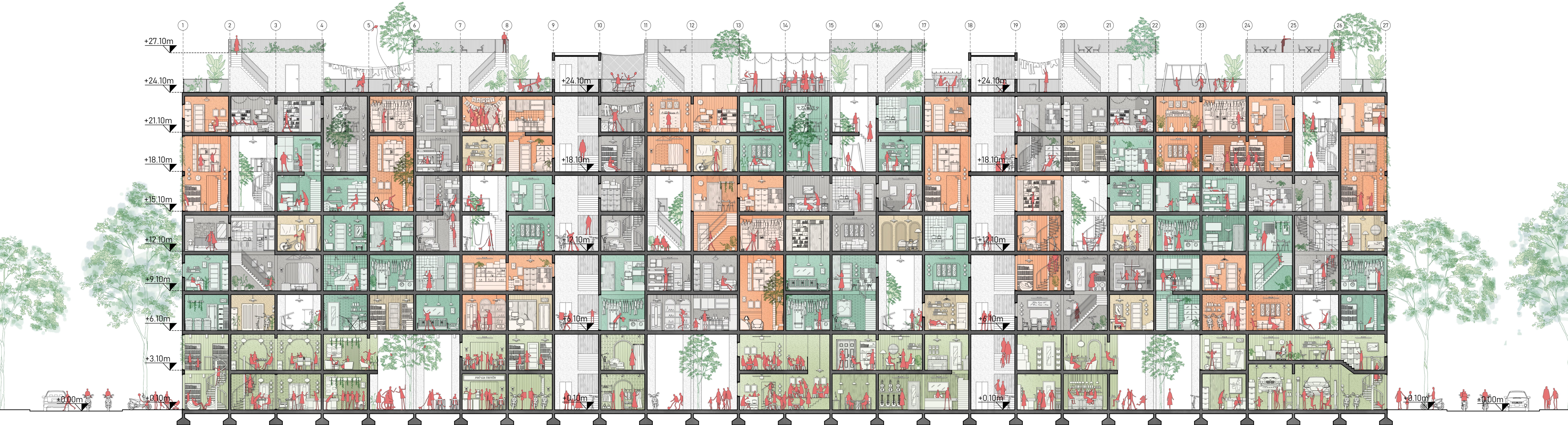
Situated on the roof, the open space serves as a communal area for building tenants. Tenants can engage in any recreational and social activities here.



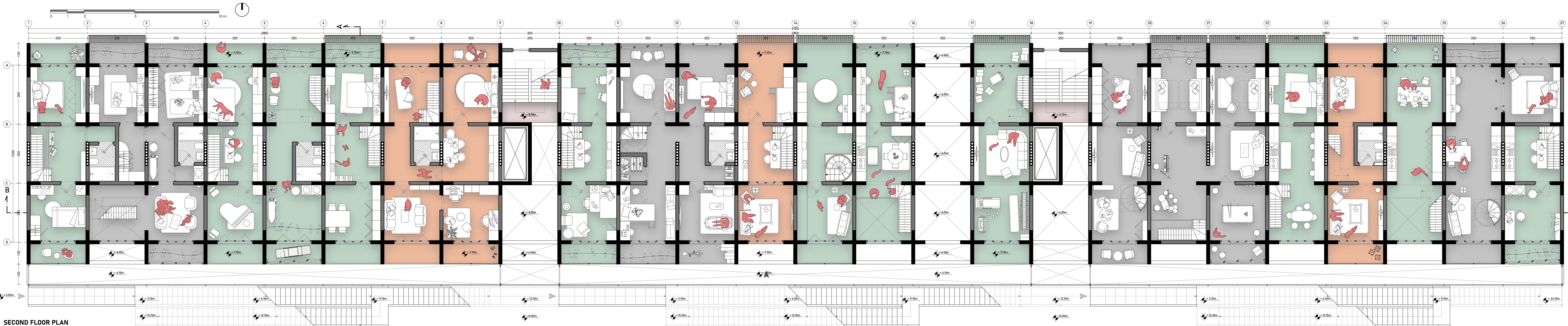
RESIDENTIAL

Since all of the residential units are arranged mostly along a vertical axis and span from the second to the seventh floors, one public corridor per every two floors suffices.

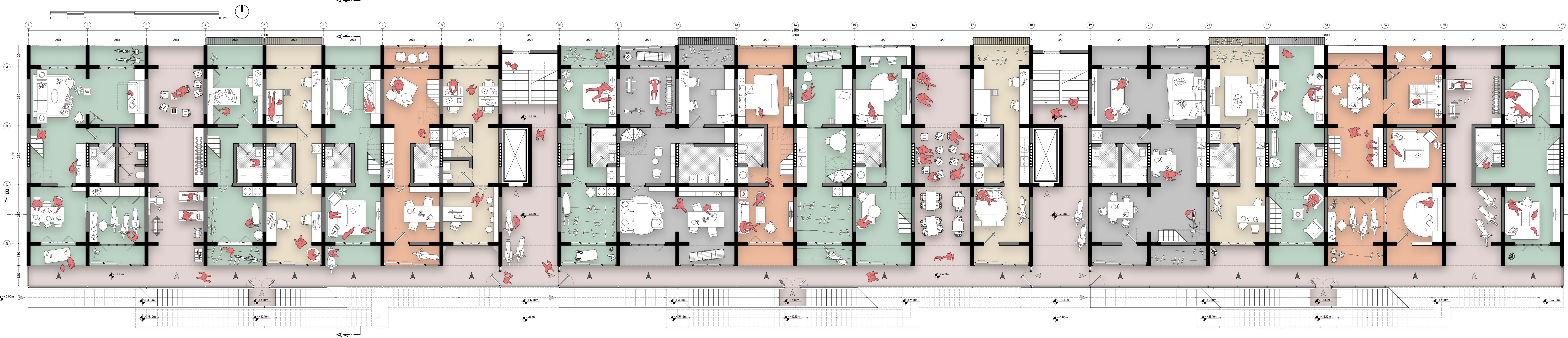




THIRD FLOOR PLAN
Proposal Palette



SECOND FLOOR PLAN
Proposal Palette



LEGEND AND SYMBOLS

UNIT Studio Flat

- 1-2
- minimum 32.70 m²
- 2nd, 4th, 6th
- student, worker, young couple

UNIT Duplex

- 3-4
- minimum 54.50 m²
- 2nd, 3rd, 4th, 5th, 6th, 7th
- young/old couple with/without children, students, workers

UNIT Triplex

- 5-6
- minimum 76.30 m²
- 2nd, 3rd, 4th, 5th, 6th, 7th
- student, worker, young couple, couple with children and parents

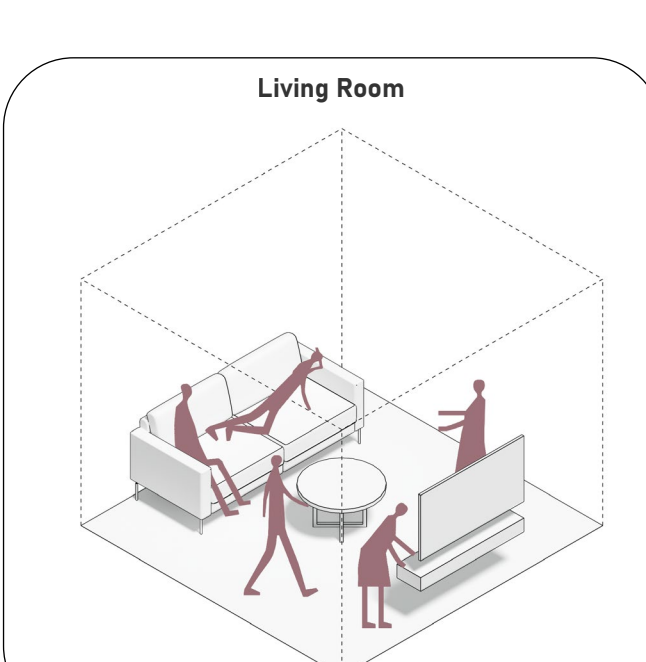
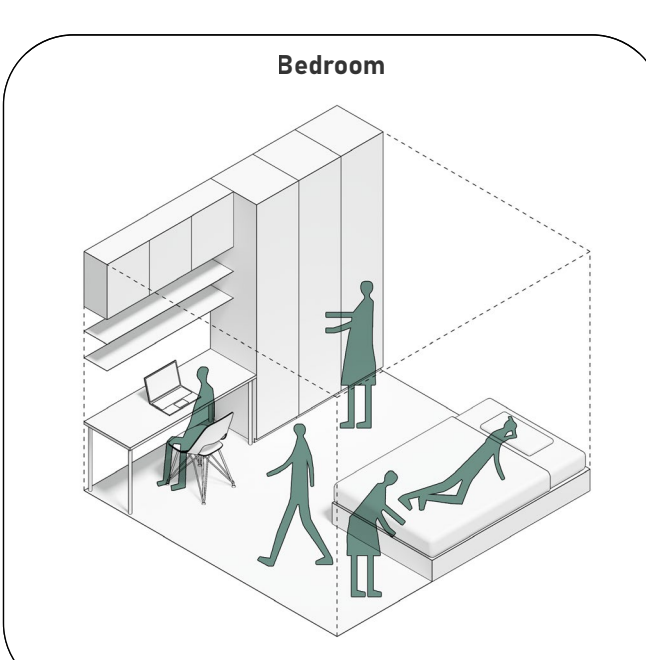
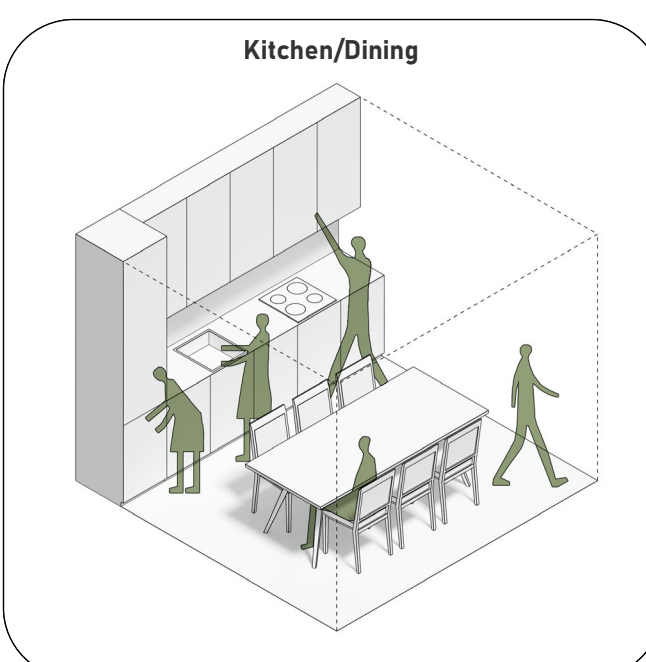
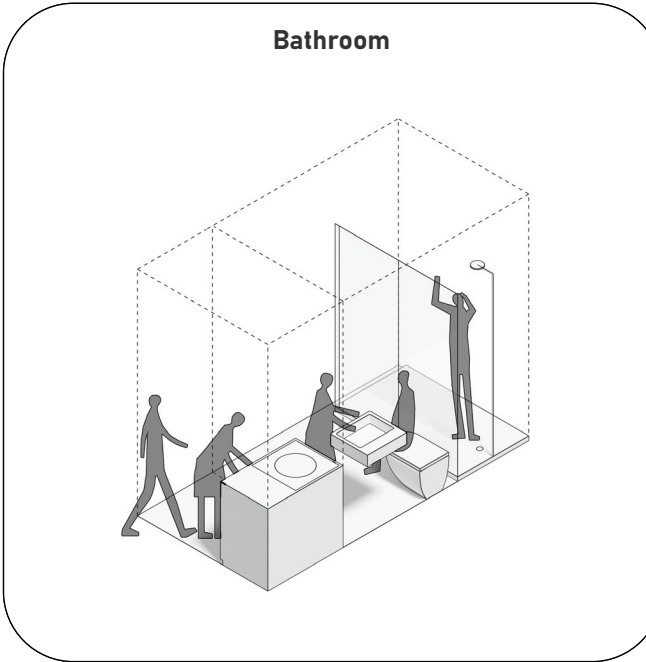
UNIT Quadruplex

- 7-8
- minimum 98.10 m²
- 2nd, 3rd, 4th, 5th, 6th, 7th
- student, worker, young couple, couple with married children

UNIT Common Space

- all residents/visitors
-
- 2nd, 3rd, 4th, 5th, 6th, 7th
- all residents/visitors

ACTIVITIES PALETTE
Typical Daily Routine



- walking
- sitting
- standing/showering
- standing/washing
- bowing

- walking
- sitting/eating
- standing/reaching
- standing/washing/cooking
- bowing

- walking
- sitting
- lying down
- standing/washing
- bowing

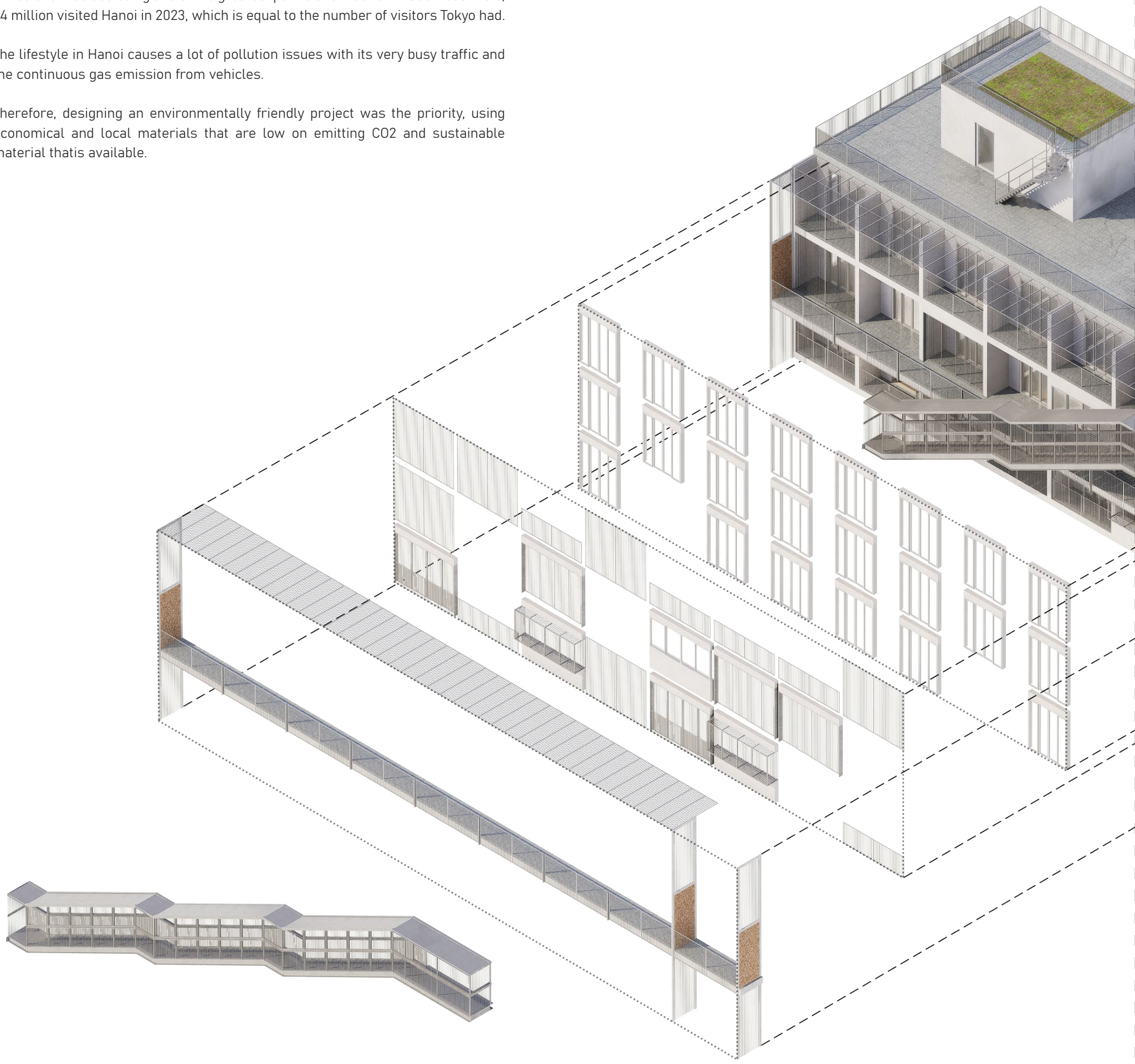
- walking
- sitting
- lying down
- standing
- bowing

SUSTAINABLE URBAN FACADE

Hanoi is a busy city with a high number of motorbikes that causes a lot of CO2 emissions. Besides being one of the greatest points of attraction in Southeast Asia, 24 million visited Hanoi in 2023, which is equal to the number of visitors Tokyo had.

The lifestyle in Hanoi causes a lot of pollution issues with its very busy traffic and the continuous gas emission from vehicles.

Therefore, designing an environmentally friendly project was the priority, using economical and local materials that are low on emitting CO2 and sustainable material that is available.



Green concrete

Concrete with high performance and sustainable life cycle, or whose production process does not harm the environment, or both, must contain at least one component made of waste material.



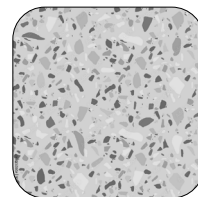
E-low glass

Is a glass that has been coated, significantly increasing the energy efficiency of windows and doors.



Terrazzo

Is a recycle materials to the aggregated. Terrazzo can be on-site manufacturing and minimize the post-commercial waste and transportation costs.



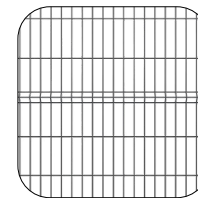
Timber wood

Is a wood that has been processed into planks, a stage in the process of wood production. The primary use of lumber are in finishing (floors, wall panels, window frames).



Metal net

Utilizing it to prevent warmth within the structure and to create shade that doesn't obstruct the view outside



Planting

Reduces noise pollution, blocks out direct sunlight, offers natural ventilation and shading, and absorbs CO2.



FACADE VARIATIONS

Every user has a unique set of requirements for their utilities, and each utility is unique. Consequently, each user's facade design must be modified to best serve their needs. Variations in facade have been made to accommodate the majority of common tasks while taking into account the various daily activities of users.

○ Apply to facade with corridor

✗ Apply to facade without corridor

