

# from **UNITS** to **COMMUNITY** **LIVING**

Sustainable Student Housing  
Design Proposal for Istanbul, Turkey





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## Abstract

With its many universities and students increasing exponentially every day, Istanbul is Turkey's most dense city in terms of student-academician population. Despite all its educational opportunities, the city does not have the infrastructure to support this dense population. The existing real estate options cannot meet the needs of the new student who will move to Istanbul with a limited budget or security concerns.

Housing options for higher education students in Turkey can be divided into three categories. Sta-

te-funded dormitories, University and foundation subsidized dormitories, and private student accommodations. Among these options, state-funded KYK dormitories, are the most budget-friendly, while private student housings are the most expensive.

However, considering the lack of capacity of KYK dormitories and the disadvantages of the university-funded dormitories, it is a great need to build budget-friendly student accommodation in strategic locations in the city.

In this context, the İçerenköy Neighborhood, the second most populated neighborhood of the city and the fourth most populated neighborhood in the country, was chosen as the project area. As a result of the urban analyses, it can be deduced that the district has opportunities for a possible student housing project and the existing options for student accommodation are insufficient.

Examination of case studies shows that the most optimal solution to the needs of the students was to produce units with a concept based on the use of communal spaces. Creating spaces for plural usage by combining singular units is

the focus of this design proposal. The concept is developed by connecting units with different variations and establishing both individual and communal spaces, with the consideration of the environmental factors of the site.

The proposed design aims to best adapt to the dominant wind currents (northeast and southwest) affecting Istanbul and reach thermal comfort. Other main aims are to create green spaces in a neighborhood where green elements are lacking and to create a central node for locals in an area where the existing abandoned site arouses unsafe feelings for pedestrians.

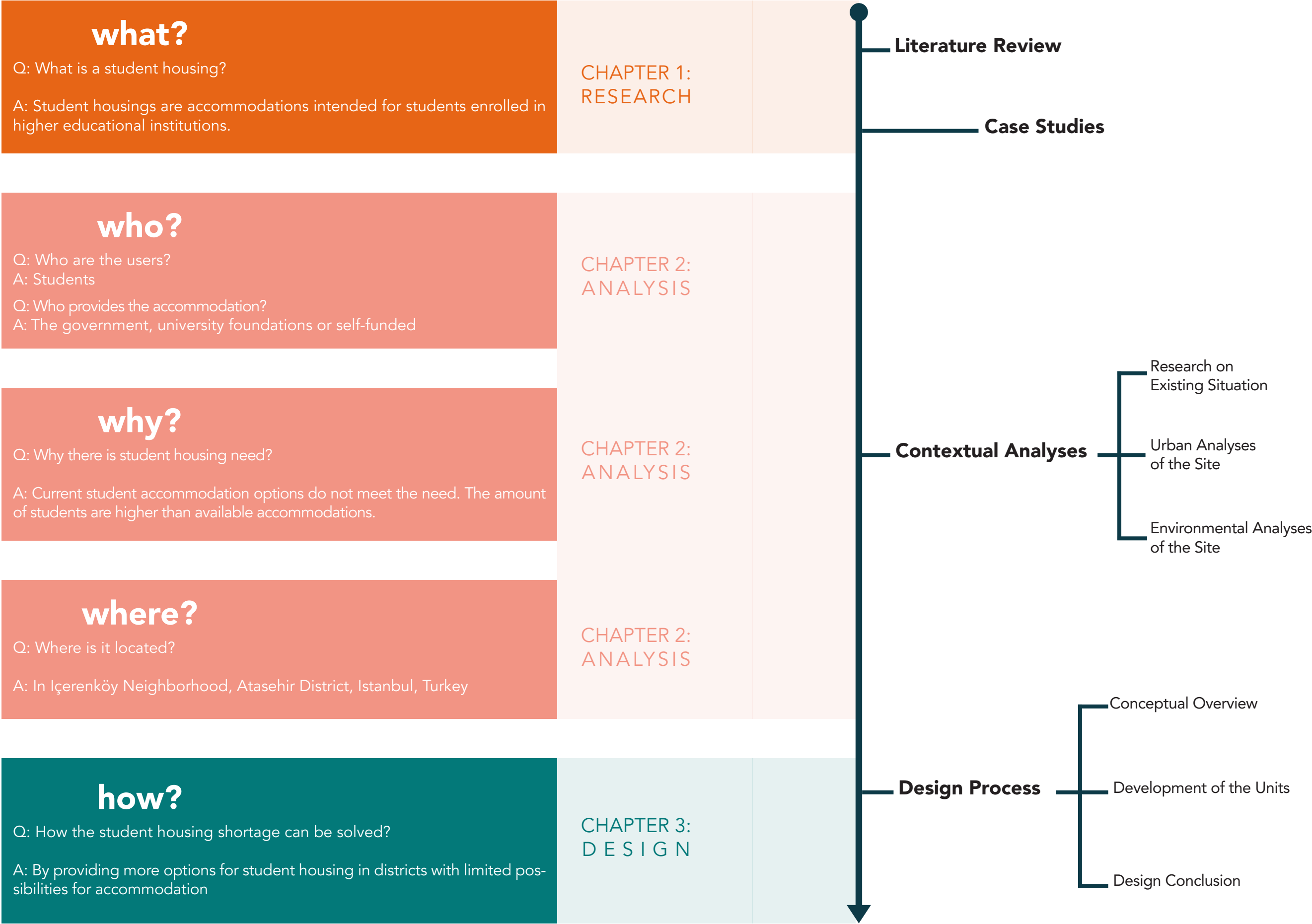
**Keywords:** *Student Housing, Dormitories, Istanbul, İçerenköy, Case Studies, KYK Dormitories, Unit Design, Co-Living Spaces for Students*

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# Methodology



# CHAPTER ONE

## RESEARCH OVERVIEW

## What is Student Housing / Residence?

### Definition:

According to City Council of Pueblo, the definition for student housing is a residence for occupancy by groups of people not defined as a family, where such building is specifically designed for students of a college, university, trade school or nonprofit organization for the purpose of providing rooms for sleeping and living purposes. Common gathering spaces, kitchen, cafeteria and sanitary facilities may also be provided. Typical uses include, but are not limited to, fraternity or sorority houses,

dormitories, residence halls and boarding/lodging houses. (City Council of Pueblo, Colorado, 2015)

Another dictionary definition made by TDK (Turkish Language Association) is that student housing is "a place or building specially constructed for students to easily afford their accommodation, food, and study". (Büyük Türkçe Sözlük, TDK, trans. "Öğrenci Yurdu Sözlük Tanımı." In Güncel Türkçe Sözlük, 2768–68. Ankara, Türkiye: Atatürk Kültür, Dil ve Tarih Yüksek Kurumu, Türk Dil Kurumu, 2005. Öğrenci Yurdu. )

## Difference Between Student Residences and College Dormitories

Although thought to mean the same thing, student residences and college dormitories are facilities with different features. The purpose of both is to meet the accommodation needs of the students.

### Similarities:

Student residences and college dormitories are both designed to have all the household equipment, with the notion that the student does not bring any household items with them. This includes kitchen and bathroom appliances, supplies, and basic furniture.

Separate bills and expenses are not charged for the student according to the cost of spending, but monthly (or annual) rent is paid on an all-inclusive basis.

Another common feature is that communal living is guaranteed in both types of homes, which means having spaces for students to use with other students. One of the big reasons why students from different cities choose housing types with shared living spaces is to make friends and not be alone in this process. In addition, students' parents see this as a safety advantage. (Collegiate, 2021)

### Differences:

College dormitories are buildings belonging to a certain university and built by that university for certain groups of students. They are fully committed to the university by rules and regulations. Student/university residences, on the other hand, are buildings built for students who do not have to have an affiliation with a particular university. It determines and implements the rules within itself.

In addition to undergraduate students, postgraduates and academic staff can accommodate these university residences.

Therefore, the greatest difference between residences and dormitories is whether it is affiliated with a university or not. (Residencias Vitium, 2020)

Apart from this, college dorms also organize workshops and events within their universities. Whether this is a positive or negative feature is relative for the student.

College dorms may have stricter rules as they are directly under the supervision of the university.

Accommodation in college dorms is made with annual agreements. How-

ever, this is more flexible in student residences. It can change according to the duration of education and the student's request. (Collegiate, 2021)

The student residences are funded by private investors. Due to this, they may have higher budgets. However, college dormitories are funded according to the budget allocated by the university to which it is affiliated. Having different budgeting systems can create a quality difference between dorms and residences.

Student residences are usually located in city centers or central locations, while college dorms are located in or near the university campus. While this is more convenient for the quality of education, it is a disadvantage for students studying at a campus far from the city center. (Residencias Vitium, 2020)

One other difference between the two types of housing is the issue of privacy. Sharing areas such as the kitchen and bathroom can be a problem for people who want to live more privately. Some college dorms have rooms with private bathrooms, but the kitchen area is shared. In student residences, both options of a common kitchen and a private one can be found. Especially residences, where postgraduates and academics are the target users, a private kitchen and bathroom are optional.



## Brief History of Student Housing

With the foundation of the world's first university, the University of Bologna, in the 11th century, university students' accommodation started to be a subject that needed to be issued. University students were seen between adulthood and childhood, due to their ages.

The requirement of accommodation with spaces for studying, socializing, and making this space accessible from the university was apparent. But still, until the foundation of the University of Harvard, creating this purpose-built accommodation remained an unfulfilled plan. (Smithsonian, 2019)

In the mid-17th century, the first purpose-built residence for university students was built in Boston. The main reason for this was to keep white male students from Native American students. A British Religious Society's ideas about creating anti-diverse living environments for students with different ethnicities and backgrounds started the foundations of today's architectural concepts for student accommodations. (Smithsonian, 2019)

Harvard was not the only university that separated students according to their religious identity. Cambridge and Oxford also started to assign students to dormitories to raise well-mannered Christian boys in the UK. The friendships in these dormitories were supported by the religious society, so much so that roommates were encouraged to marry each other's sisters to tighten their bond. (Smithsonian, 2019)

Until the 20th century, university dormitories did not accept any female students. Women in higher education were rare and except for a few selected universities, women were not admitted to universities as students or academics. In 1915, the first student dormitory for women opened in Michigan, USA called Martha Cook Hall and Helen Newberry Residence.

15 years later, six more student accommodations for women opened in the city. Thus began the accommodation for both men and women and mixed student accommodation that we see today disregarding the students' gender, religion, ethnicity, or race. (Governance Judiciary Council, 2011)



**Figure 1.1.**  
A Harvard dormitory  
pictured in the late  
19th or early 20th  
century  
Photo: The Print Collector / Getty Images



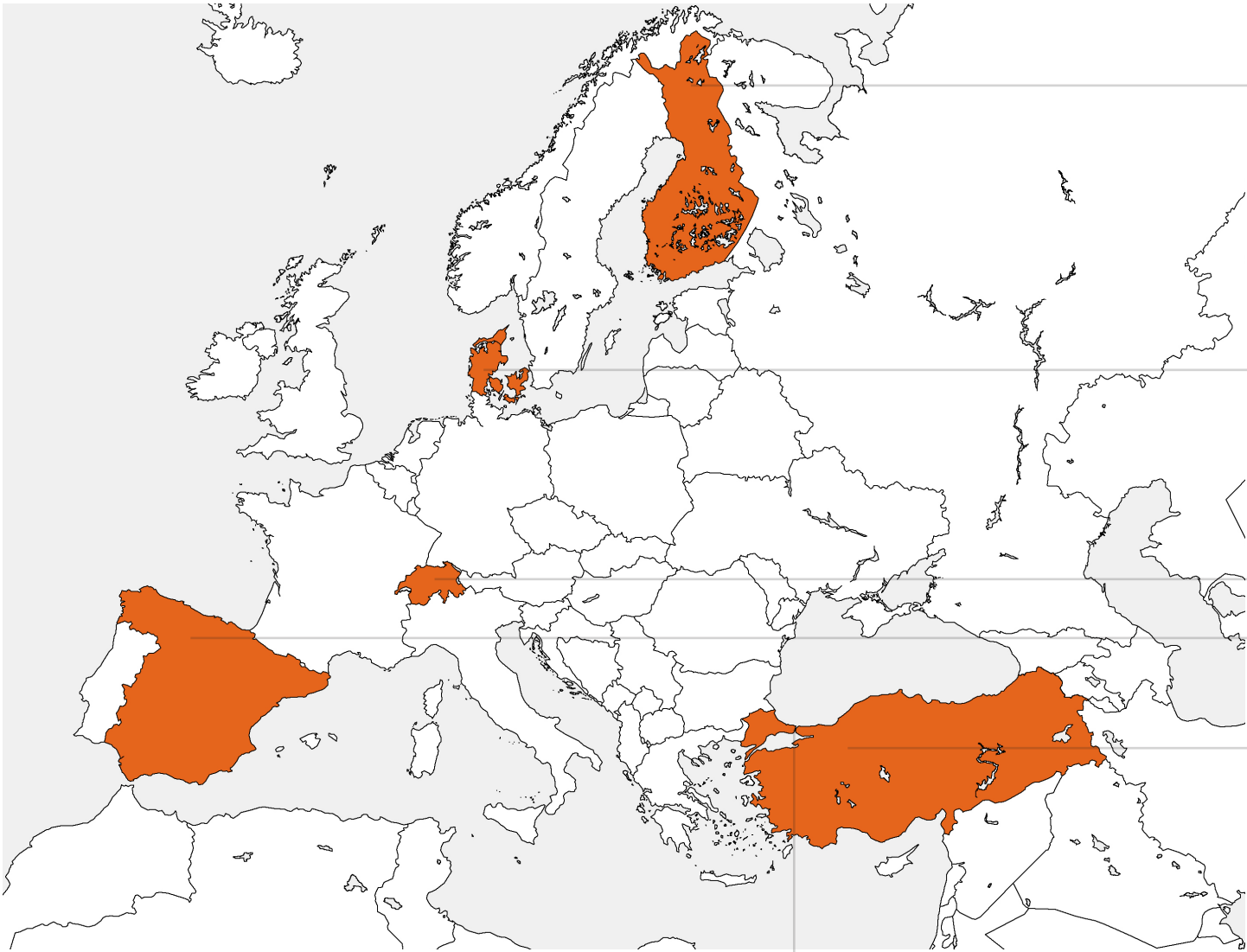
**Figure 1.2.**  
"Martha Cook Building," A Dangerous  
Experiment: Women  
at the University of  
Michigan  
Photo: University of  
Michigan Photographs  
Vertical File

# CHAPTER ONE

## **RESEARCH** CASE STUDIES



# Case Studies



**Figure 1.3.**  
Case Studies' Country  
of Origin shown on  
European Map  
Source: Author

In this section of the research, student dormitories in various university cities in Europe are examined. The case studies are located in the following countries: Finland, Spain, Switzerland, Denmark, and Turkey, respectively. Because Istanbul is the location of the project proposal of this thesis, five Student Residence projects are selected in Turkey. The common point of these case studies is that they emphasize certain sustainability strategies. Selected case studies not only have a variety of student profiles but also varied in user capacity. Another common feature of the examples is the creation of typologies for the rooms. Projects with different room typologies were compared and examined by considering their positive and negative aspects to guide the proposed project design. The advantages and disadvantages are listed in the conclusion sections at the end of the case studies research.

## EUROPE

- Case Study One:** Kumpula Student Housing
- Case Study Two:** Besòs Student Residence
- Case Study Three:** TWIST Studentisches Wohnen
- Case Study Four:** Odense Student Housing
- Case Study Five:** Bilkent University Student Residences
- Case Study Six:** METU Graduate Students Guesthouse
- Case Study Seven:** Republika Academic Apartments
- Case Study Eight:** Özyegin University Student Residences Dorm 4-5
- Case Study Nine:** Özyegin University Student Residences Dorm 6

## TURKEY



## Case Study One

# Kumpula Student Housing



**LOCATION:** Helsingfors, Finland  
**ARCHITECTS:** Playa Architects  
**YEAR:** 2018  
**AREA:** 14810 m<sup>2</sup>  
**CAPACITY:** 200 apartments

Kumpula Student Housing is for the students of Helsinki University's campus in the Kumpula neighborhood. Designed by Playa Architects, a firm that designed many other student residences in Finland. The building can accommodate more than 200 students. (Playa Architects, 2018)



**Figure 1.4.**  
 Kumpula Student Housing Entrance  
 Photo: Tuomas Uusheimo

**Figure 1.5.**  
 Kumpula Student Housing Masterview  
 Photo: Tuomas Uusheimo



**Figure 1.6.**  
 Kumpula Student Housing Street View  
 Photo: Tuomas Uusheimo

Kumpula Student Housing's design was the 1st prize winner of the Design and Build Competition of 2016. The project site had many challenges for the architects, such as its steep slope, its closeness to the main road which had heavy traffic. These challenges made the design team draw their focus on the facade design for the solution. The facade that faces the main road looks closed and windowless from the south but has many window openings from the north. This facade creates opportunities to eliminate

excessive traffic noises and protects against solar overheating. The steep slope of the land affected the entrances and the communal spaces. Due to the sloped land, the main roadside entrance is from the underground level, whereas the courtyard entrance is from the second floor. The shared spaces are located between the basement and the second floor, as they can be seen from both entrances. (Archdaily, 2019)



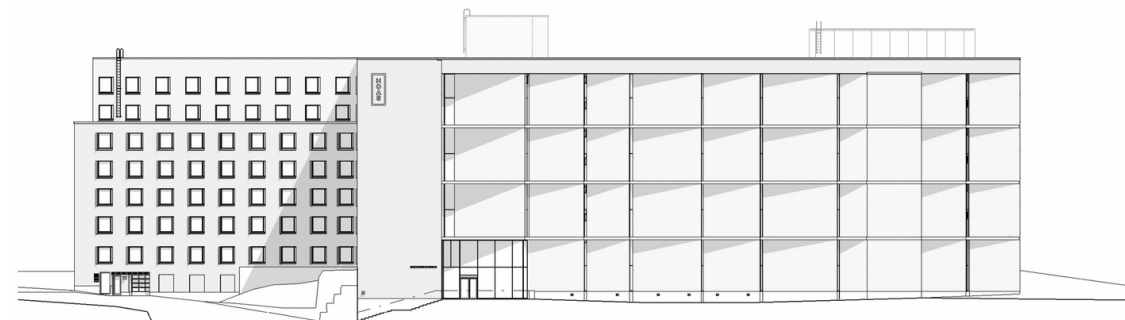
**Figure 1.7.**  
 Kumpula Student Housing Street View  
 Photo: Tuomas Uusheimo

**Figure 1.8.**  
 Kumpula Student Housing Hallways  
 Photo: Tuomas Uusheimo





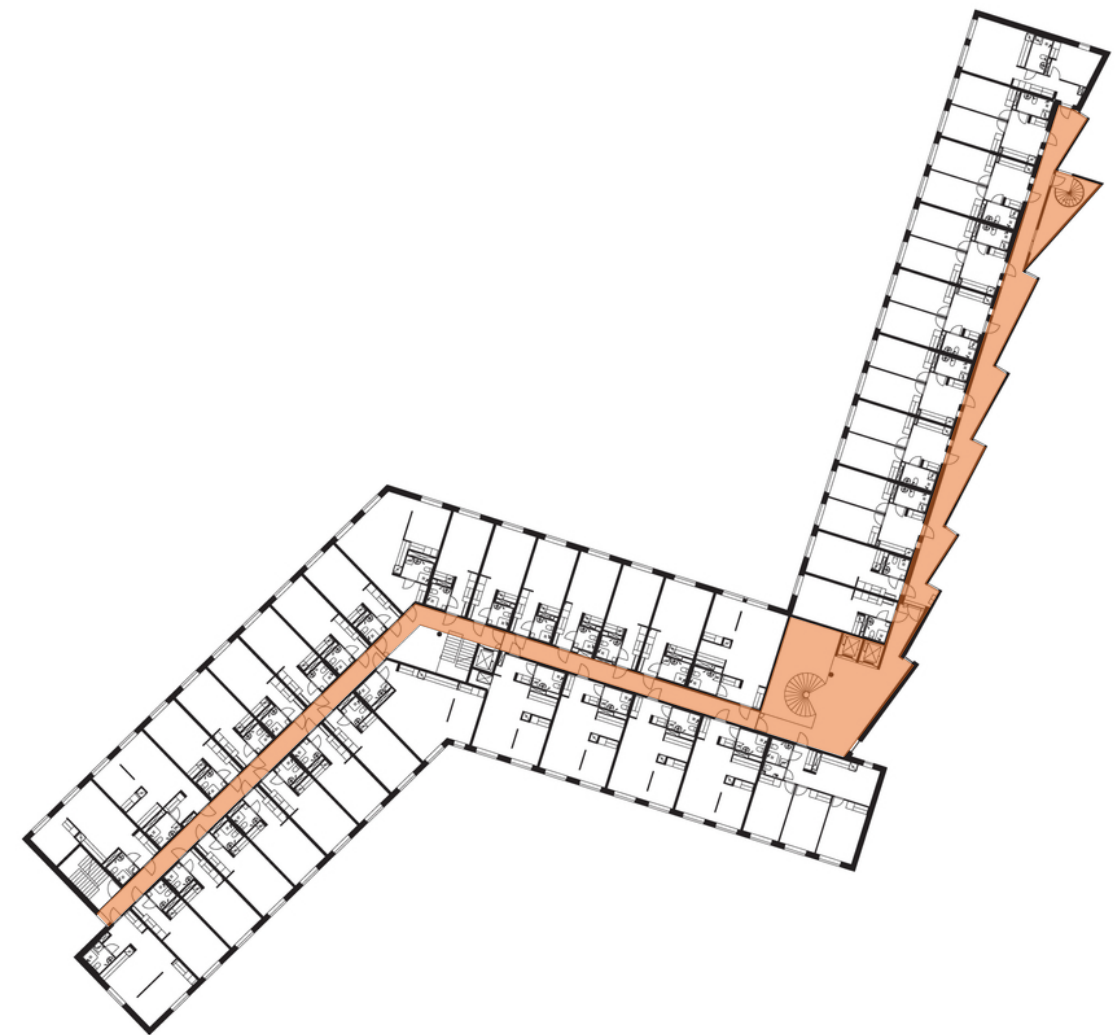
**Figure 1.9.**  
Kumpula Student  
Housing Site Plan  
Source: Playa Architects



**Figure 1.10.**  
Kumpula Student Hou-  
sing Southeast Facade  
Source: Playa Architects

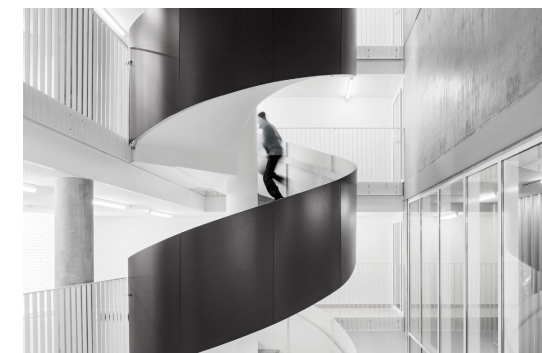


**Figure 1.11.**  
Kumpula Student  
Housing Facade and  
Section to Northwest  
Source: Playa Architects

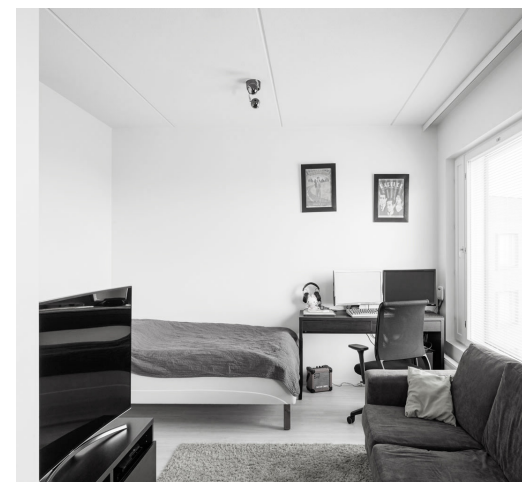


**Figure 1.12.**  
Kumpula Student  
Housing 3rd, 4th, 5th  
Floor Plans  
Source: Playa Architects

As the dominant material, pale-colored bricks are used in the facade. The brickwork itself and the grid organization of the window openings created an abstract facade that connects the university's soul to the surrounding residential buildings without looking out of place.



**Figure 1.13.**  
Kumpula Student Hou-  
sing Main Stairways  
Photo: Tuomas Uus-  
heimo



**Figure 1.14.**  
Kumpula Student  
Housing Room  
Photo: Tuomas Uus-  
heimo



**Figure 1.15.**  
Kumpula Student  
Housing View from  
Southeast Facade  
Photo: Tuomas Uus-  
heimo



## Case Study Two

# Besòs Student Residence



**LOCATION:** Barcelona, Spain  
**ARCHITECTS:** MDBA, POLO Architects  
**AREA:** 8,875 m<sup>2</sup>  
**CAPACITY:** 191 residential units

posals of creating a communal center is realized in the developing Forum district. (POLO Architects, 2019)

The residence is intended to be the “social center and meeting corner” title with urban units and shared spaces.

The Campus Diagonal-Besòs or Besòs Student Residence is located at an important intersection in the campus. After winning the design competition, POLO Architects’ pro-

One of the most distinguishable qualities of this residency is that it’s not only for students but also for researchers and teachers.



**Figure 1.16.**  
 Diagonal Besòs Student Residence  
 Photo: Aldo Amoretti

**Figure 1.17.**  
 Diagonal Besòs Student Residence  
 Facade  
 Photo: Aldo Amoretti



**Figure 1.18.**  
 Diagonal Besòs Student Residence  
 Facade Details  
 Photo: Aldo Amoretti



**Figure 1.19.**  
 Diagonal Besòs Student Residence  
 Courtyard  
 Photo: Aldo Amoretti

The surrounding buildings shaped the design of the project site of the residence. The surrounding buildings and the residence’s lot are divided (and connected) with wooden decks, a symbol of the campus’ aspiration: a place to exchange ideas and knowledge, a bright sustainable future. The designers thought of the student residences as a place where the formality of the university meets the

informality. This is a theme that can be observed throughout the whole design.

The building has an open courtyard in its center. The central courtyard allows benefiting from the sunlight at maximum, and it reaches the basement (-1) floor that has communal spaces like gardens, fitness rooms, study rooms, etc. (Archdaily, 2019)



**Figure 1.20.**  
 Diagonal Besòs Student Residence  
 Courtyard Balcony View  
 Photo: Aldo Amoretti



**Figure 1.21.**  
Diagonal Besòs  
Student Residence  
Courtyard  
Photo: Aldo Amoretti



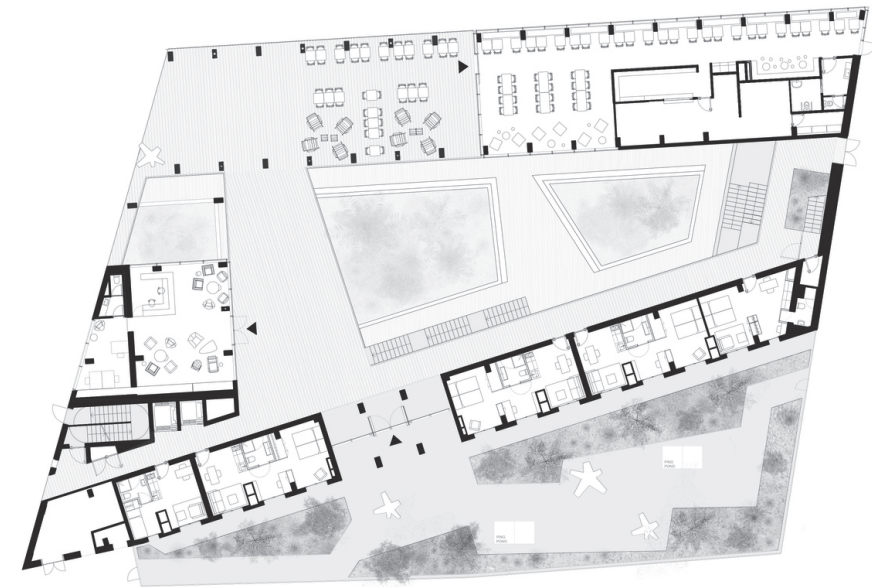
The residence has 191 units. Similar to traditional Mediterranean housing examples, entrances to residential units are carried out by exterior corridors, not interior hallways. These exterior corridors are faced the central courtyard.

Rooms have options to see either the street side or the inner courtyard, due to the placement of sanitary facilities. (POLO Architects, 2019)

**Figure 1.22.**  
Diagonal Besòs  
Student Residence  
Terrace  
Photo: Aldo Amoretti



**Figure 1.23.**  
Diagonal Besòs  
Student Residence  
Courtyard Balcony  
Photo: Aldo Amoretti



**Figure 1.24.**  
Diagonal Besòs  
Student Residence  
Groundfloor Plan  
Source: MDBA Architects



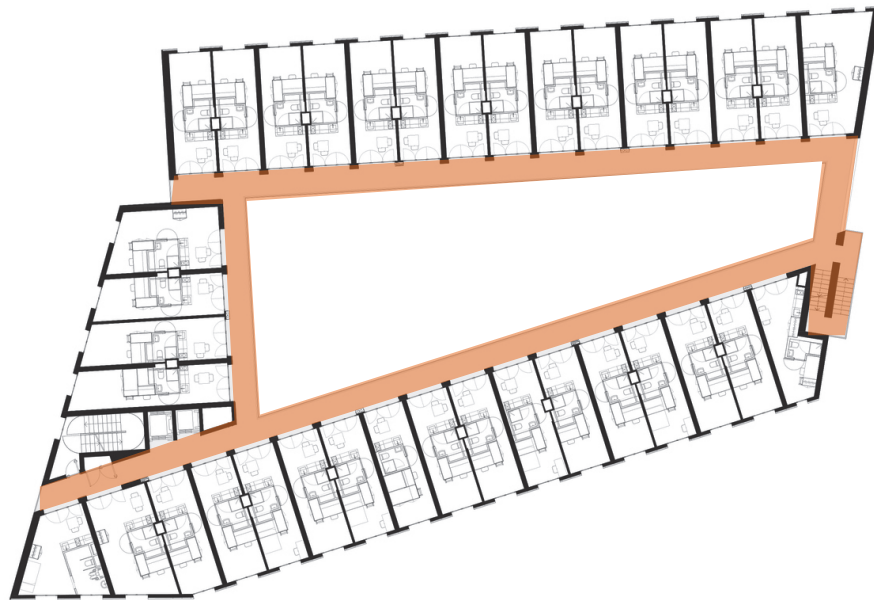
**Figure 1.25.**  
Diagonal Besòs Student  
Residence East Elevation  
Source: MDBA Archi-  
tects



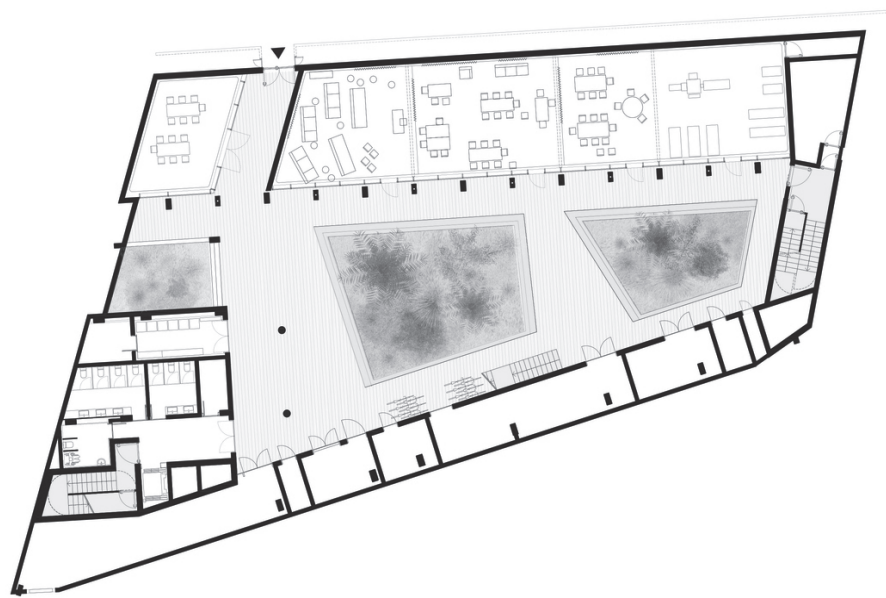
**Figure 1.26.**  
Diagonal Besòs Stu-  
dent Residence South  
Elevation  
Source: MDBA Archi-  
tects



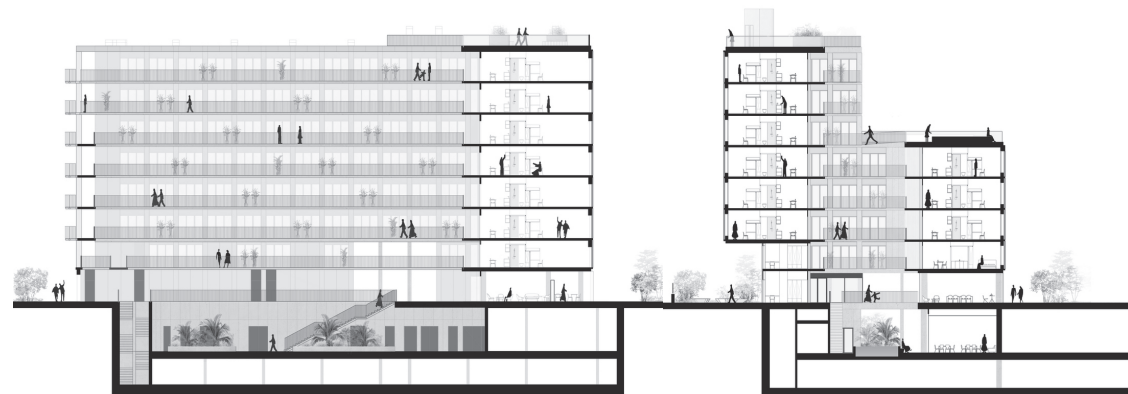
**Figure 1.27.**  
Diagonal Besòs  
Student Residence  
Second Floor Plan  
Source: MDBA Architects



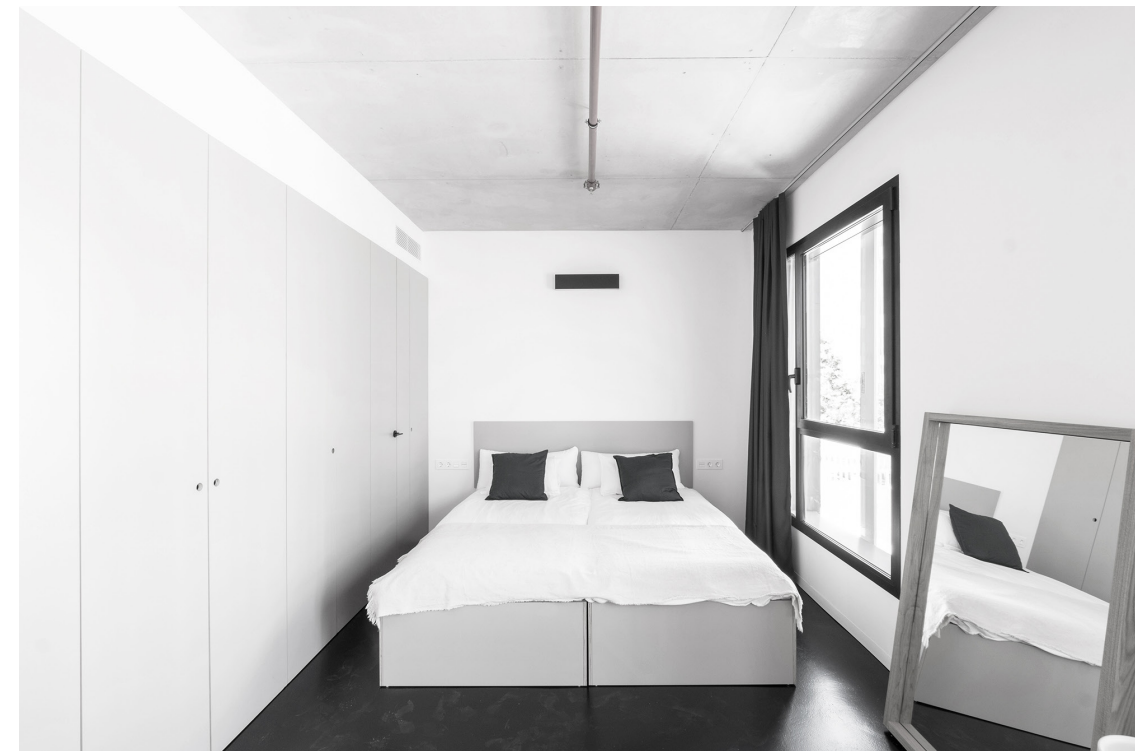
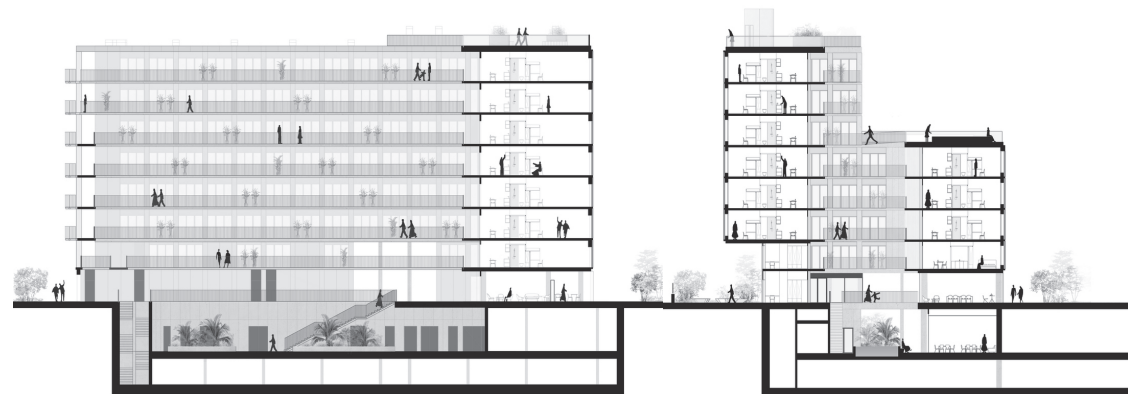
**Figure 1.28.**  
Diagonal Besòs  
Student Residence  
Basement Floor Plan  
Source: MDBA Architects



**Figure 1.29.**  
Diagonal Besòs Stu-  
dent Residence AA  
Section  
Source: MDBA Architects



**Figure 1.30.**  
Diagonal Besòs Stu-  
dent Residence CC  
Section  
Source: MDBA Architects



**Figure 1.31.**  
Diagonal Besòs Stu-  
dent Residence Room  
Photo: Thibault De  
Schepper

Precast concrete panels are mixed with bronze aluminum panels for fixed cladding on the south and north facades. Aluminum sunshades and parapets are installed. The building can reflect its appropriate residential characteristic while also playing with the textures and colors of the current structure in this way. As a result, the Campus' identity as a sophisticated but powerful urban unit is respected.

As for the community shared areas, an outdoor pool is designed for the users. A roof terrace with sitting arrangements is organized to enjoy the sea view on the eighth floor. (Archdaily, 2019)



**Figure 1.32.**  
Diagonal Besòs  
Student Residence  
Terrace  
Photo: Aldo Amoretti

**Figure 1.33.**  
Diagonal Besòs  
Student Residence  
Interiors  
Photo: Aldo Amoretti



# TWIST Studentisches Wohnen



**LOCATION:** Zürich, Switzerland  
**ARCHITECTS:** Architektick  
**YEAR:** 2016  
**AREA:** 22475 m<sup>2</sup>  
**CAPACITY:** 63 apartments with 485 rooms and 12 studio apartments

TWIST Studentisches Wohnen is a student accommodation located in Zürich, Switzerland with a shared living concept by Architektick. Positioned in a slightly sloped lot, it used both organic curves and rational corners in its facade and mass volumes.



**Figure 1.37.**  
 TWIST Studentisches Wohnen  
 Photo: René Dürr

The design of the student accommodation won the 1st prize in the project competition in 2008, and the construction was finished in 2016. To welcome students at ETH Zurich, Twist is primarily designed to solve the problem of “affordable”

accommodation for students. Unlike many other European student cities, Zurich is a city where accommodation is quite expensive, and students are therefore mostly choosing to rent a shared room. (ETH Zürich, 2022)

**Figure 1.34.**  
 TWIST Studentisches Wohnen  
 Photo: René Dürr



**Figure 1.35.**  
 TWIST Studentisches Wohnen  
 Photo: Lerichti

**Figure 1.36.**  
 TWIST Studentisches Wohnen Facade Details  
 Photo: Lerichti



**Figure 1.38.**  
 TWIST Studentisches Wohnen  
 Photo: René Dürr



**Figure 1.39.**  
TWIST Studentisches  
Wohnen  
Ground Floor Plan  
Source: Architektick



**Figure 1.43.**  
TWIST Studentisches  
Wohnen Second Floor  
Plan  
Source: Architektick



The given construction area is occupied by one building at each of the southern corners. The third building strengthened the northern edge. They spanned the construction site and anchor the first piece of the puzzle in the southwest master plan area of Science City.

The three-building volumes are smoothly intertwined. They created a succession of diverse room sequences and formed a varied open space that had a high quality of stay and invited individuals to linger and communicate. The guidance became the central element that allowed users to get an overview within a short time. (Architektick, 2018)

The arrangement of the buildings and the formulation of the building geometries accentuated the alternation between the external environment and the interior, provoking a change in perception: from the institutional to arriving at home.

**Figure 1.40.**  
TWIST Studentisches  
Wohnen Nursery  
School  
Photo: Achim Birnbaum



**Figure 1.41.**  
TWIST Studentisches  
Wohnen Classroom  
Photo: Achim Birnbaum



**Figure 1.42.**  
TWIST Studentisches  
Wohnen Section A  
Source: Architektick



**Figure 1.44.**  
TWIST Studentisches  
Wohnen Student Flat  
Aisle  
Photo: Achim Birnbaum





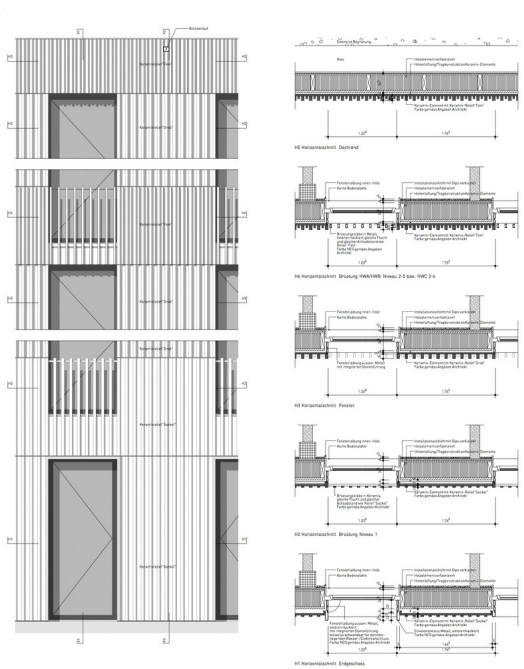
**Figure 1.45.**  
TWIST Studentisches  
Wohnen Student Flat  
Photo: Achim Birnbaum



**Figure 1.48.**  
TWIST Studentisches  
Wohnen Courtyard at  
Night  
Photo: René Dürr



**Figure 1.46.**  
TWIST Studentisc-  
hes Wohnen Student  
Room  
Photo: Achim Birnbaum



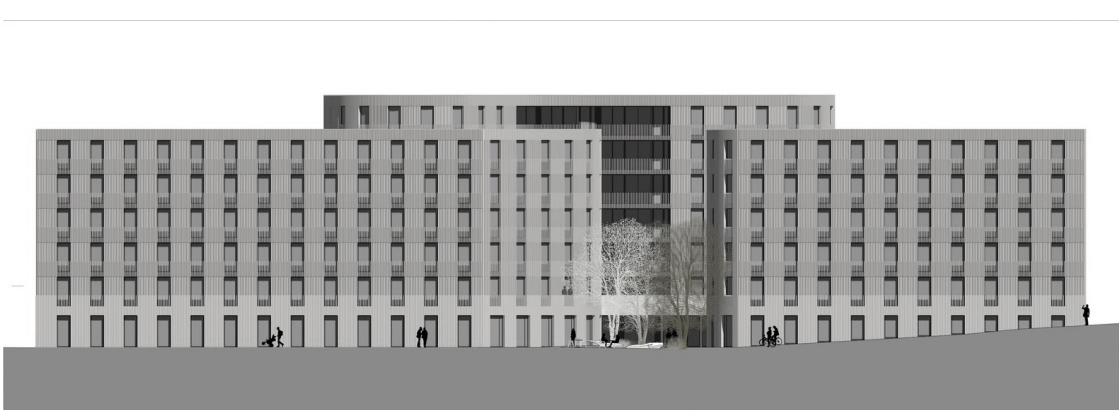
**Figure 1.49.**  
TWIST Studentisches  
Wohnen Facade and  
Concept  
Source: Architektick

**Figure 1.50.**  
TWIST Studentisc-  
hes Wohnen Student  
Room Balcony  
Photo: René Dürr



**Figure 1.47.**  
TWIST Studentisches  
Wohnen Student Flat  
Bath  
Photo: Achim Birnbaum

On the ground floor, there is a common room, student workspaces, a crèche, and additional rooms for student accommodation. The standard floors are reserved exclusively for living and are designed for shared apartments. An apartment share consists of 6 to 10 people. A total of 485 rooms and 12 studios are offered in 63 apartments. (Caballero, 2018)



**Figure 1.51.**  
TWIST Studentisches  
Wohnen South Facade  
Source: Architektick



## Case Study Four

# Odense Student Housing University of Southern Denmark



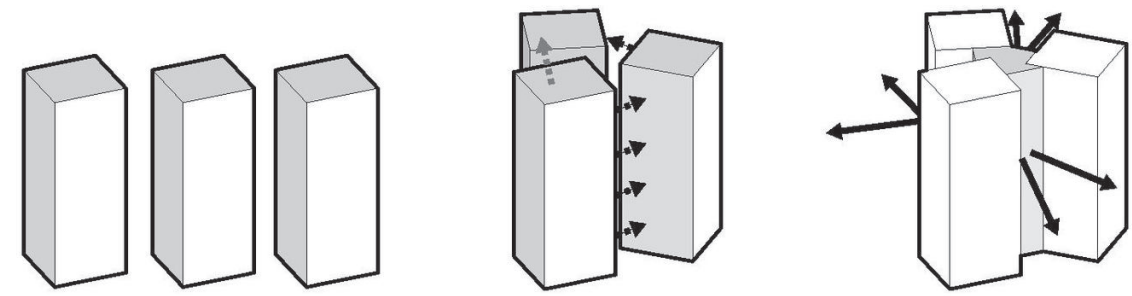
**LOCATION:** Odense, Denmark  
**ARCHITECTS:** C.F. Møller  
**YEAR:** 2015  
**AREA:** 13700 m<sup>2</sup>  
**CAPACITY:** 250 student residences

**Figure 1.52.**  
 Odense Student Housing  
 Photo: Torben Eskerod

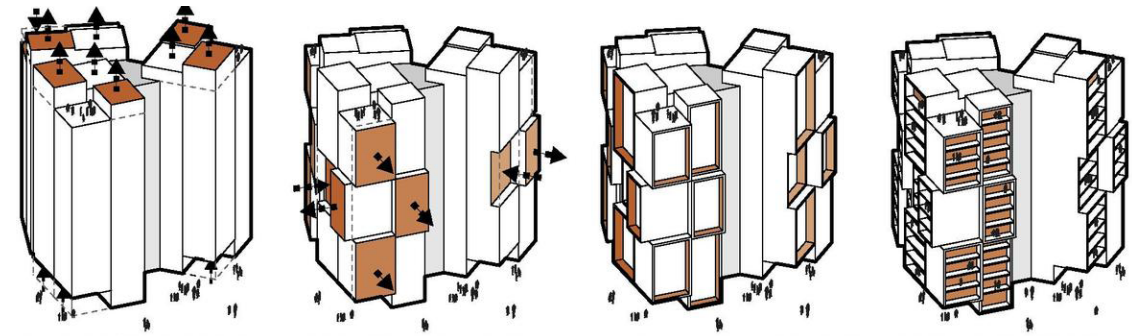
Designed for the students of the University of Southern Denmark, the Odense Student Housing focuses on the spirit of co-living. The design of the student housing has a link between the linear campus, the Cortex and Research Parks, which are also designed by the same architecture firm: C. F. Møller.

The University campus' layout has horizontal human-scaled elements, whereas the student housing's layout uses vertical elements.

The University campus' layout has horizontal human-scaled elements, whereas the student housing's layout uses vertical elements.



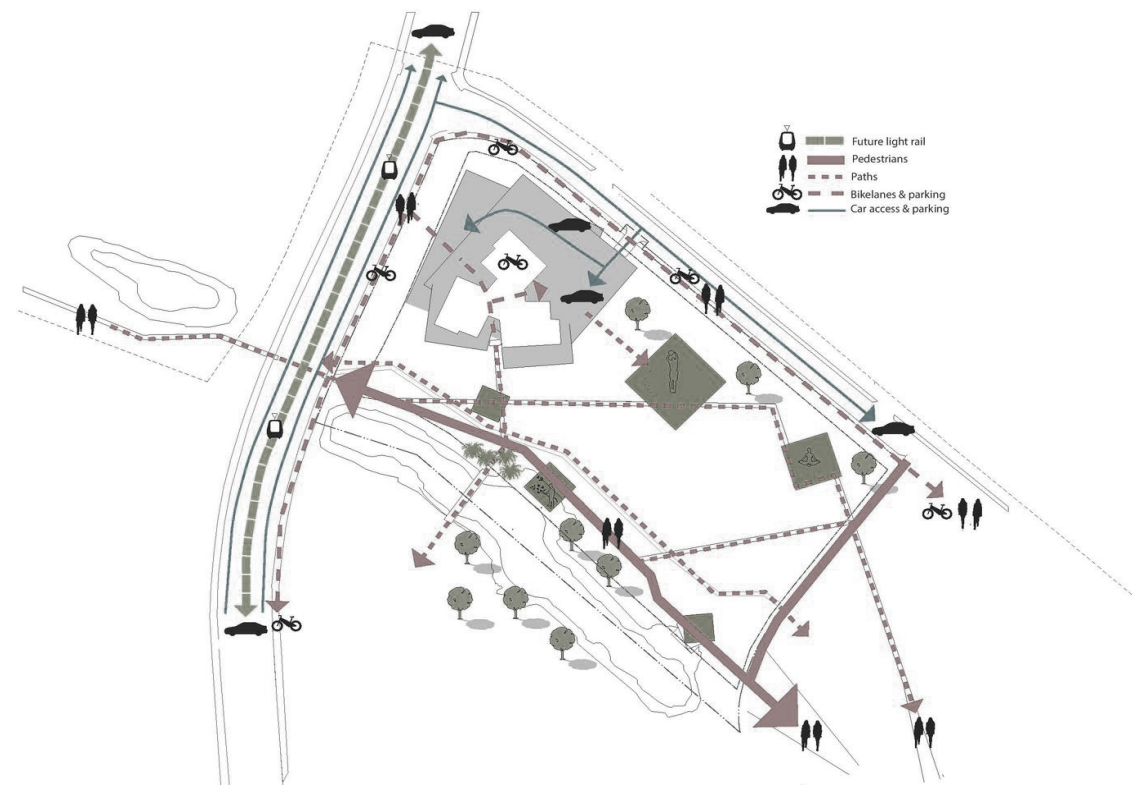
**Figure 1.53.**  
 Odense Student Housing  
 Mass Diagram  
 Source : C.F. Møller



**Figure 1.54.**  
 Odense Student Housing  
 Mass Diagram  
 Source : C.F. Møller

The Odense Student Housing is a combination of three interconnected buildings. Each building consists of 15 floors. Due to having an interconnecting system, the building has a 360-degree perspective, meaning there is not a front or back facade. (C.F. Møller Architects, 2015) The unique design of the building

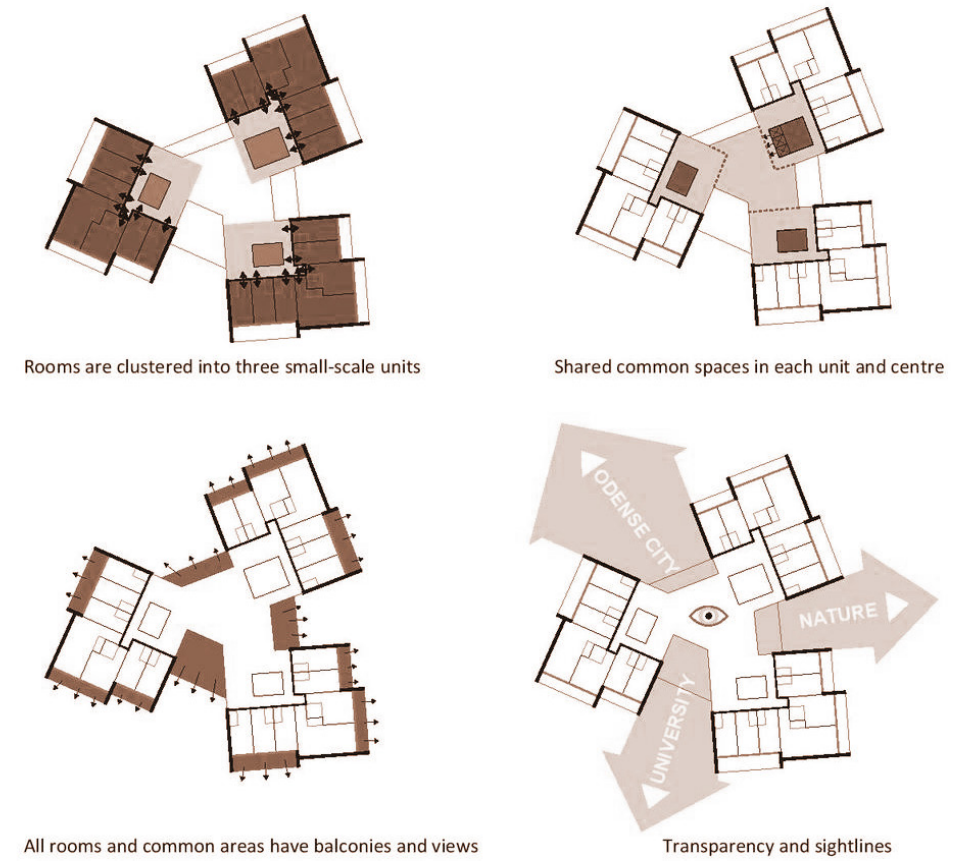
creates an opportunity for students who reside in the dorms to have privacy without any other rooms looking inside. All rooms have private balconies with a view of the countryside, not only to enjoy the scenery but also to contribute to saving the energy by solar gain. (Rojas, 2016)



**Figure 1.55.**  
 Odense Student Housing  
 Flows Diagram  
 Source : C.F. Møller



**Figure 1.56.**  
Odense Student Housing  
Topview  
Source : C.F. Møller



**Figure 1.60.**  
Odense Student Housing  
Diagram  
Source : C.F. Møller

**Figure 1.57.**  
Odense Student Housing  
Terrace  
Photo: Torben Eskerod



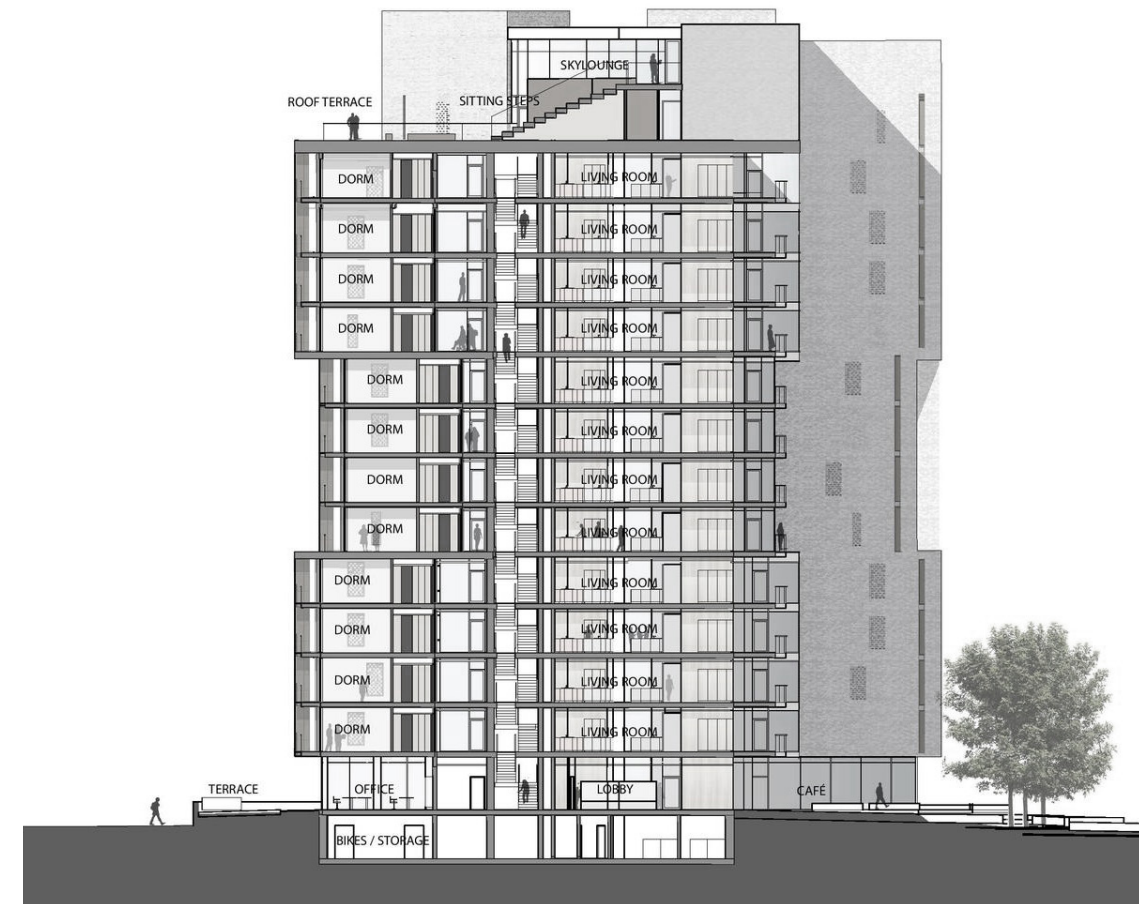
The interconnection areas of each floor are for the shared spaces such as kitchens in the center.

Even though the kitchens are located at the central points on each floor, they all feature glazed facades to benefit from sunlight. (Rojas, 2016)

**Figure 1.58.**  
Odense Student Housing  
Facade and Balcony  
Photo: Torben Eskerod



**Figure 1.59.**  
Odense Student Housing  
Facade Details  
Photo: Torben Eskerod



**Figure 1.61.**  
Odense Student Housing  
Section  
Source : C.F. Møller



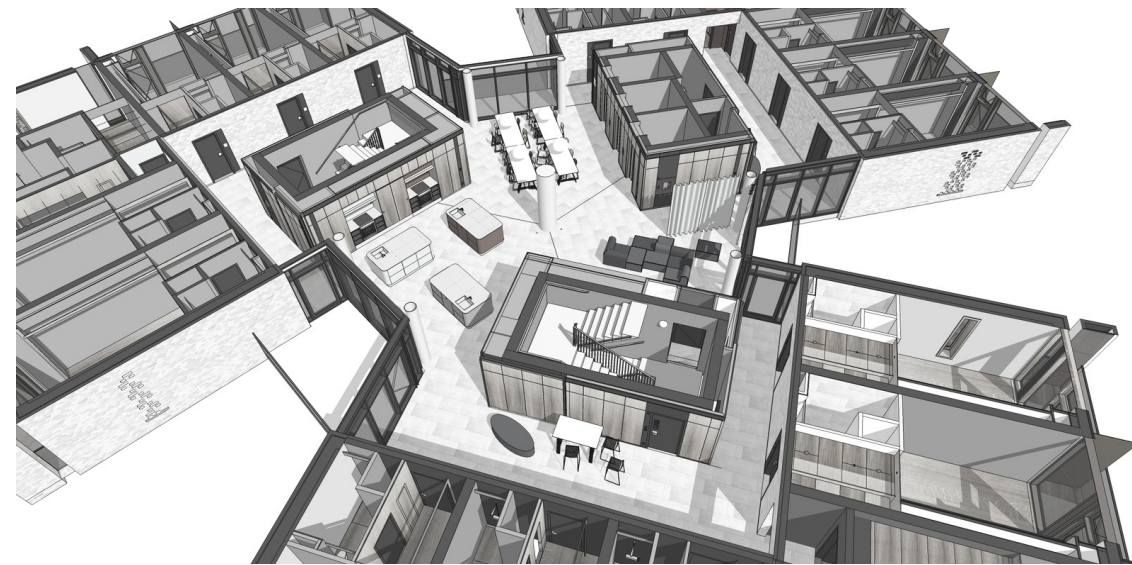
**Figure 1.62.**  
Odense Student Housing  
Ground Floor Plan  
Source : C.F. Møller



**Figure 1.63.**  
Odense Student Housing  
Second Floor Plan  
Source : C.F. Møller



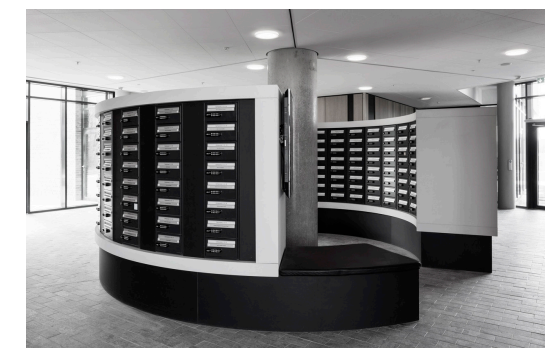
Second Floor Plan



**Figure 1.64.**  
Odense Student Housing  
Living Room 3D Model  
Source : C.F. Møller



**Figure 1.65.**  
Odense Student Housing  
Living Room Dining  
Area  
Photo: Torben Eskerod



**Figure 1.66.**  
Odense Student Housing  
Living Room Sitting  
Area  
Photo: Kirstine Mengel

**Figure 1.67.**  
Odense Student Housing  
Common Area  
Photo: Torben Eskerod

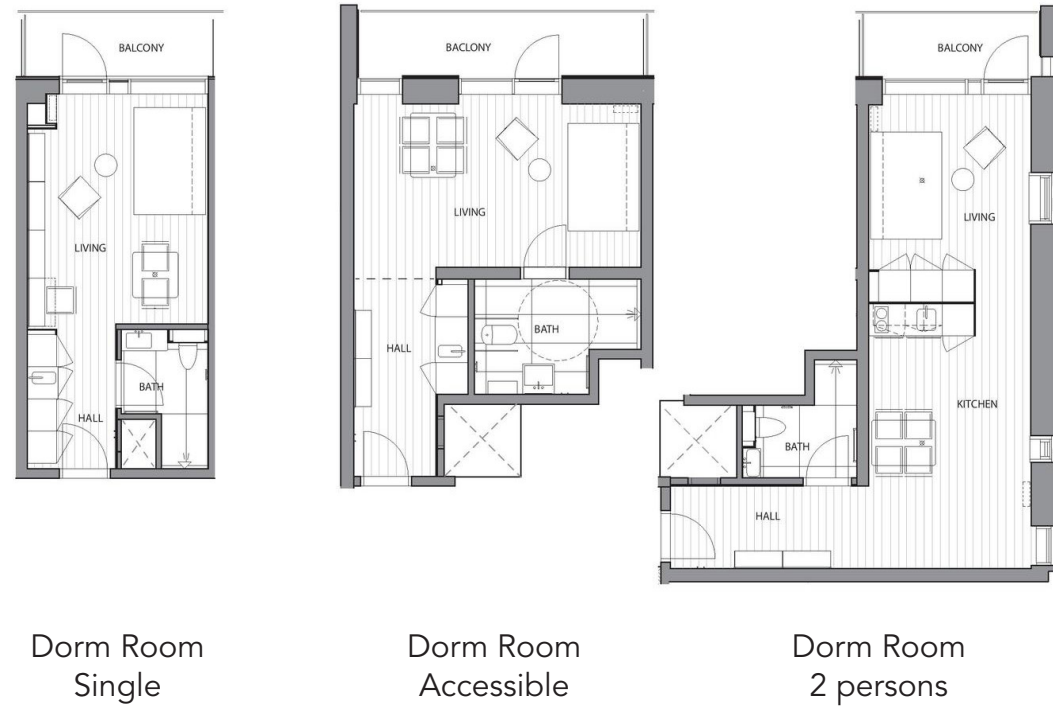
A living area serves as a communal gathering place for seven bedrooms. Every seven rooms, and their shared spaces, are grouped.

Residential floors are not the only floors that have communal spaces. The ground floor includes a cafe and study rooms. (Rojas, 2016)



**Figure 1.68.**  
Odense Student Housing  
Bike Parking Area  
Photo: Torben Eskerod





**Figure 1.69.**  
Odense Student Housing  
Dorm Room Typologies  
Source : C.F. Møller

The top floor includes a roof terrace and party spaces. (Rojas, 2016)

The student housing uses passive design strategies as an energy concept. The aim is to accomplish Denmark's code for low energy by optimizing parameters such as orientation, mass shape, thermal mass, high insulation, natural ventilation, etc. (C.F. Møller Architects, 2015)



**Figure 1.70.**  
Odense Student Housing  
Photo: Torben Eskerod

## Case Study One, Two, Three, Four Conclusion

### Advantages

- In most case studies, target users are a specific group of people. Facilities are designed for a certain university's students. Because of this, it is advantageous that dormitories in these large capacities are under a university's name.
- Most case studies in Europe have shared spaces like kitchens, study rooms, and tv rooms. These commonly used areas create a sense of community and it's a good way for students to socialize.
- Placing a similar group of students/ academic staff may create a more harmonious group to socialize and create a sense of community.
- Materials are usually environment friendly and sustainable.
- Variety of room types are available for the users with different budgets and preferences.

### Disadvantages

- Target users are a specific university's students, which makes it harder to connect with students from other universities and backgrounds.
- The case studies (except Besòs Student Residence) are usually in a deserted lot or far away from the city center, which may be disadvantageous in occasion.
- Due to location, options to hang out outside the campus and dormitories are very limited and isolated.
- All case studies that are examined lacks commercial areas, including stores, restaurants, cafes, markets.
- Some of the case studies has shared bathrooms and do not have access to a private bathroom.



## Case Study Five

# Bilkent University

### Student Residences (Dorm 81-82)



**LOCATION:** Ankara, Turkey  
**ARCHITECTS:** FXCollaborative  
**YEAR:** 2019  
**AREA:** 23000 m<sup>2</sup>  
**CAPACITY:** 784 student residences

**Figure 1.71.**  
 Bilkent University  
 Student Residences  
 Photo: Thomas Mayer

Bilkent Institution is a large university located west of Ankara, Turkey's capital. The dormitories of Bilkent University consist of 26 buildings in total. (Bilkent University, 2019) This case study will focus on the new

dormitory buildings of 81 and 82. These buildings house a total of 784 students and can be studied into two parts: an 8-floor boys' dormitory and a 12-floor girls' dormitory.

Designed by an American design team, FXCollaborative, the student residence pays special attention to the environment. Solutions related to sustainability and thermal comfort have been one of the focal points of the project.



**Figure 1.72.**  
 Bilkent University  
 Student Residences  
 Entry  
 Photo: Thomas Mayer

Designed by an American design team, FXCollaborative, the student residence pays special attention to the environment. Solutions related to sustainability and thermal comfort have been one of the focal points of the project. Decisions such as

the selection of materials to be used on the facades, ventilation systems, shading, and orientation of the buildings are designed to cause minimal damage to the environment and to obtain the highest efficiency.

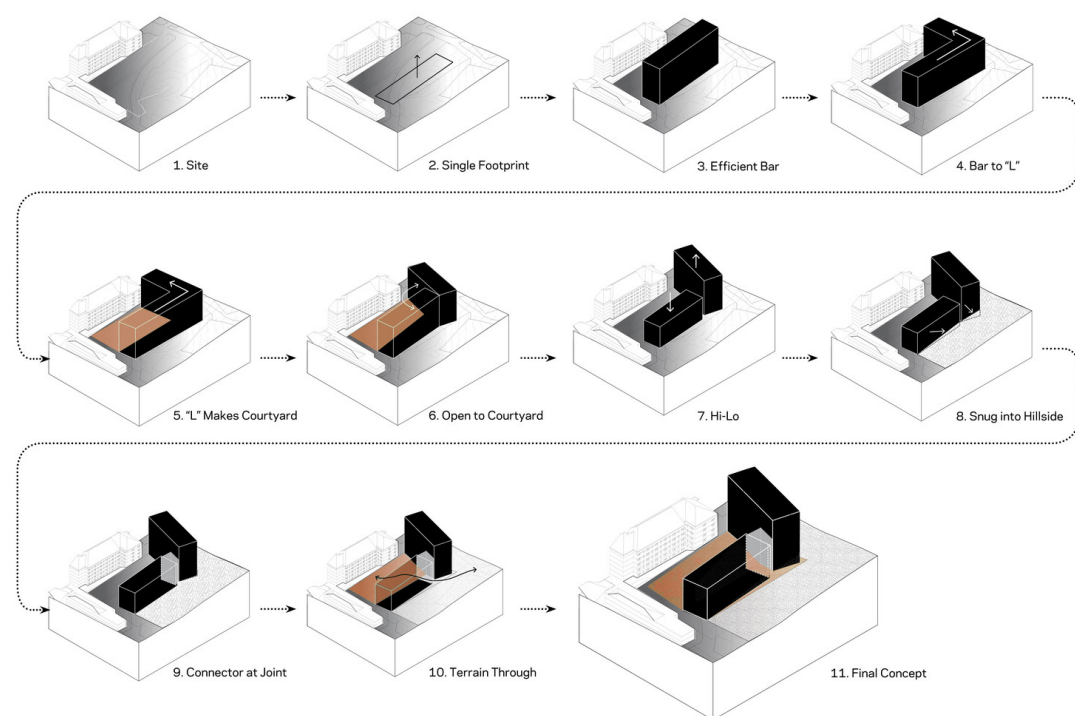


**Figure 1.73.**  
 Bilkent University  
 Student Residences  
 Facade Detail  
 Photo: Thomas Mayer

**Figure 1.74.**  
 Bilkent University  
 Student Residences  
 Facade Detail  
 Photo: Thomas Mayer



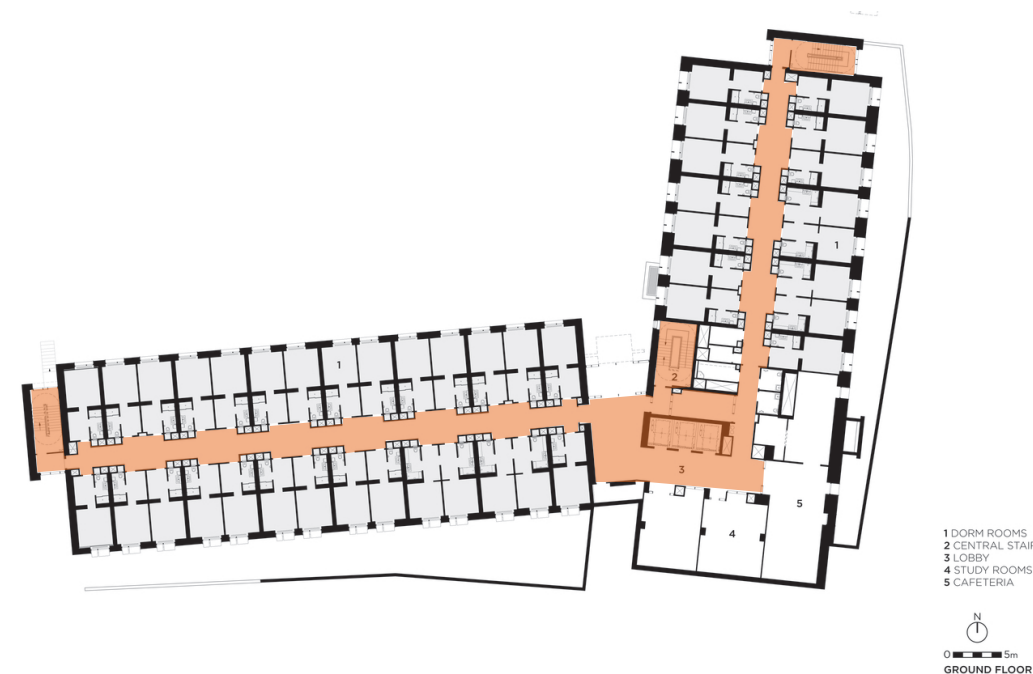
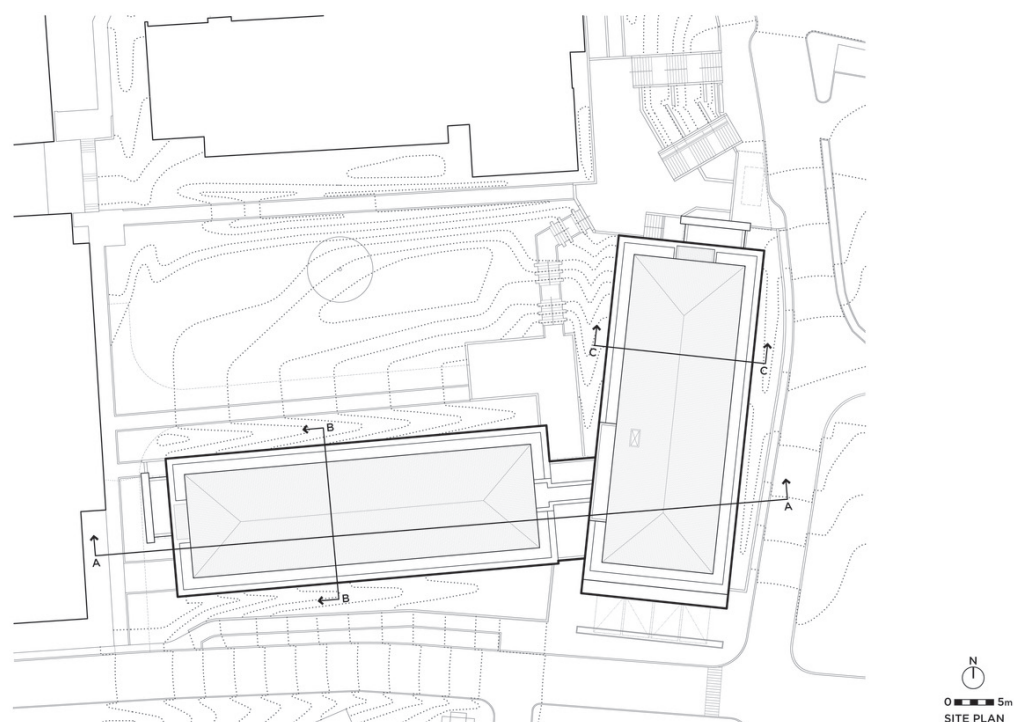
**Figure 1.75.**  
Bilkent University  
Student Residences  
Site Massing Diagram  
Source: fxcollaborative



The dormitories are located inside the main campus. Since they are between existing university facilities and former dormitories, the design team used an L-shaped layout for the new buildings. As a result, it provided the opportunity to create a courtyard between two buildings. The entrance to both of

the buildings is in this bridge connection. In addition, to use sunlight most effectively, new buildings were requested to be as far away from old buildings as possible. To use local resources and to use materials suitable for climatic conditions, the entire exterior is covered with Turkish travertine and basalt stone.

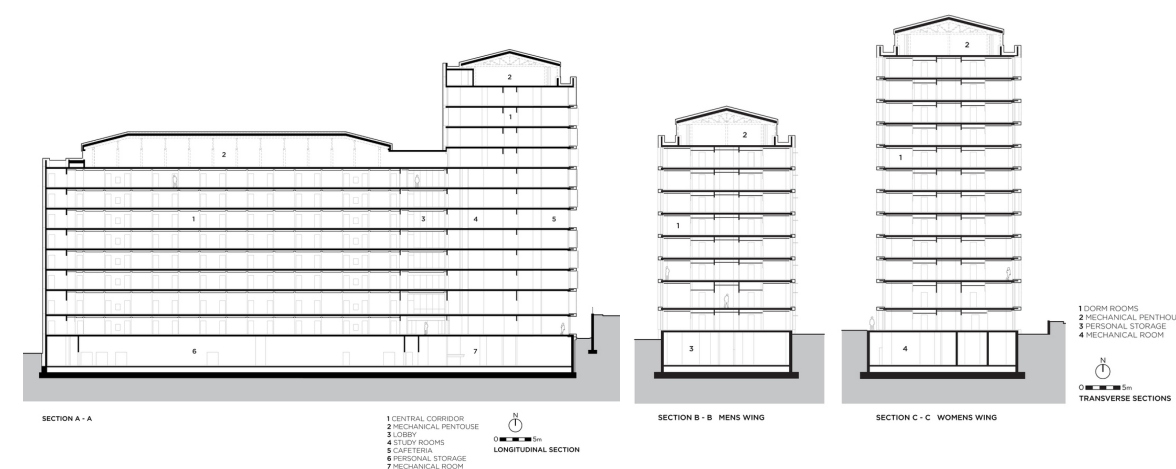
**Figure 1.76.**  
Bilkent University  
Student Residences  
Site Plan  
Source: fxcollaborative



**Figure 1.77.**  
Bilkent University  
Student Residences  
Ground Floor Plan  
Source: fxcollaborative

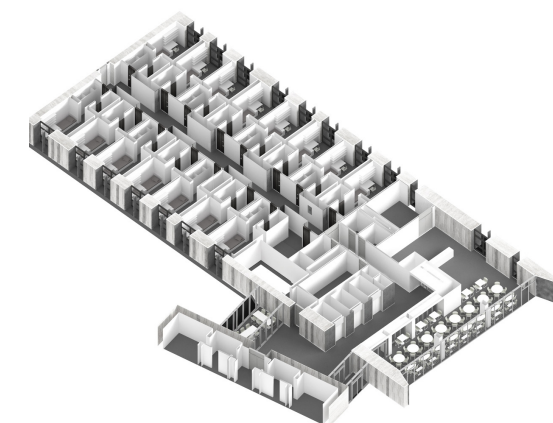
The student residence was designed with passive cooling and natural ventilation strategies. The building is deeply inspired by the Passive House Standard, utilizing ample insulation, thermal bridge

mitigation, enhanced airtightness measures, triple glazing, and energy recovery ventilation. Each façade is designed to optimize its specific solar orientation. (fxcollaborative, 2019)



**Figure 1.78.**  
Bilkent University  
Student Residences  
Sections AA, BB, CC  
Source: fxcollaborative

In both buildings, there are only two types of room options. These rooms, placed on both sides of a corridor, all face a windowed façade. Although all rooms have the exact measurements (3.80 x 7.40 m), they are divided into two as single or double rooms. Single rooms have been designed in accordance with the use of wheelchairs so that disabled students can use them without difficulty.



**Figure 1.79.**  
Bilkent University  
Student Residences  
Axonometric Residential Layout  
Source: fxcollaborative



## Case Study Five Conclusion

### Advantages

- The residences are inside the main campus. Considering the weather conditions of Ankara, dormitories close to or within the campus will provide convenience for students.
- Every floor has common areas like kitchens, study rooms, and tv rooms. These commonly used areas create a sense of community and it's a good way for students to socialize.
- All rooms have access to a private bathroom.
- There is a restaurant and cafe on the first floor. It is an important advantage to have an option other than the kitchen to meet the need for meals during the day.

### Disadvantages

- Being located inside a campus has both advantages and disadvantages. Since the dormitory is affiliated with a specific university, it only meets the needs of selected students of the university. However, dormitory needs for students are not suitable for those studying at different faculties and campuses. In addition, it is not intended to meet the housing needs of students studying at different universities but living in this part of the city.
- Even though the common areas are a great way to socialize, some students may prefer using private spaces for cooking, doing laundry, watching television, etc. The fact that there are only two types of room options in the dormitory and neither of them has kitchen space, dishwasher, and washing machine is a disadvantage for students who want privacy in this regard.
- - Absence of commercial areas other than one restaurant and cafe.



**Figure 1.80.**  
Bilkent University  
Student Residences  
Typical Room  
Photo: Thomas Mayer



**Figure 1.81.**  
Bilkent University  
Student Residences  
Student Space  
Photo: Thomas Mayer



**Figure 1.82.**  
Bilkent University  
Student Residences  
Outdoor Lounge  
Photo: Thomas Mayer

All rooms, both on the buildings of 81 and 82, have a private bathroom. There are common-use kitchen areas, study rooms, and laundry rooms on all floors for every student's disposal. There is also a restaurant and cafe on the first floor.



**Figure 1.83.**  
Bilkent University  
Student Residences  
Reception  
Photo: Thomas Mayer



**Figure 1.84.**  
Bilkent University  
Student Residences  
Student Lounge  
Photo: Thomas Mayer



Case Study Six

METU Graduate Students Guesthouse



LOCATION:

Ankara, Turkey

ARCHITECTS:

Uygur Architects

YEAR:

2015

AREA:

11,870m<sup>2</sup>

CAPACITY:

120 rooms with  
373 bed capacity

The student guesthouse, which was started to be built in 2011 after the design of Uygur Architects won the first prize in the Architectural Ideas Competition opened by the METU Development Foundation, was completed in 2015.



Figure 1.85.

METU Graduate Students Guesthouse

Photo: Yercekim Architectural Photography

Figure 1.86.

METU Graduate Students Guesthouse

Photo: Yercekim Architectural Photography

Located in Ankara, the guesthouse belongs to a specific student group of the second largest university in Turkey with a campus of approximately 7600 hectares. (BiletAll, 2016)

METU, employs about 791 faculty (professors, associates professors), 225 academic instructors and 1.273 research assistants, and 28.000 students.(METU, 2021) Due to the high number of academicians and students, the university chose to categorize the dormitories according to their users. In case study six, the student guesthouse for graduate students (and academic staff) is examined.



Figure 1.87.

METU Graduate Students Guesthouse Site Plan

Photo: Yercekim Architectural Photography

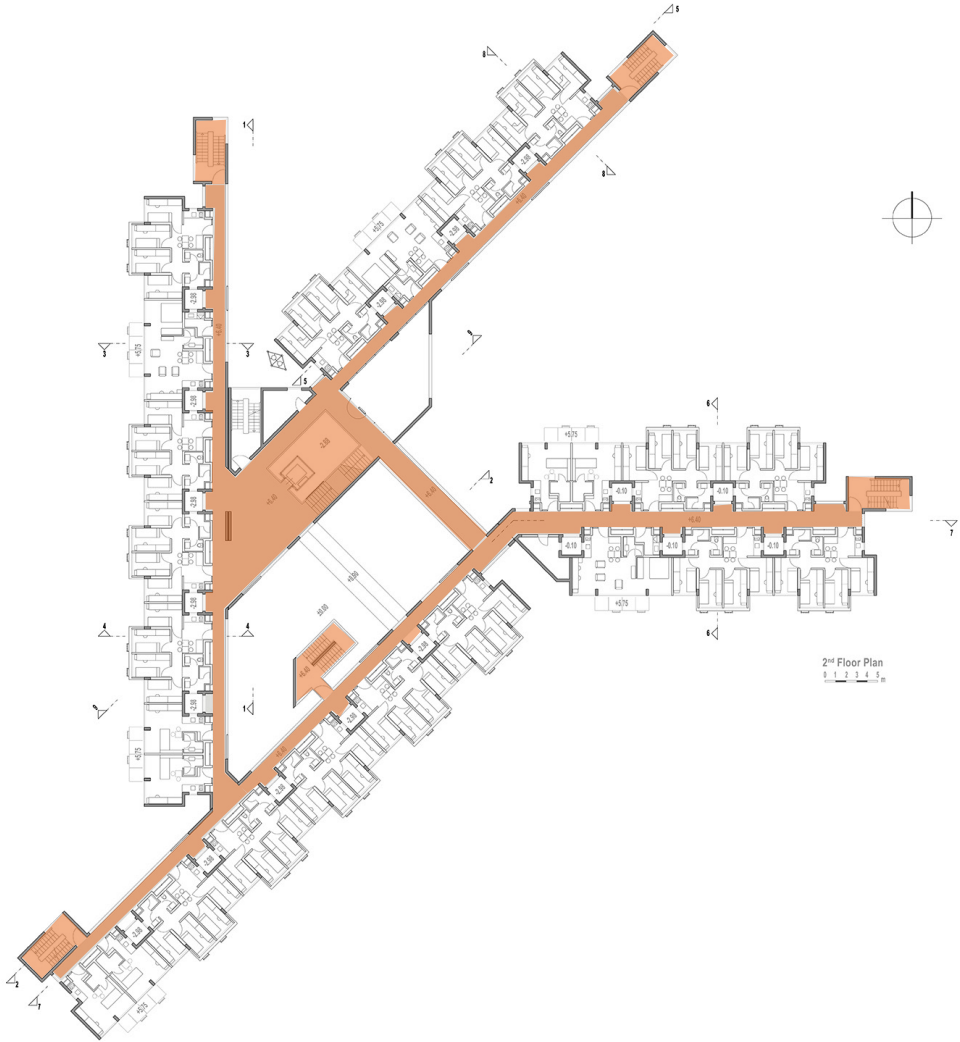


Figure 1.88.

METU Graduate Students Guesthouse 2nd Floor Plan

Source: Uygur Architects

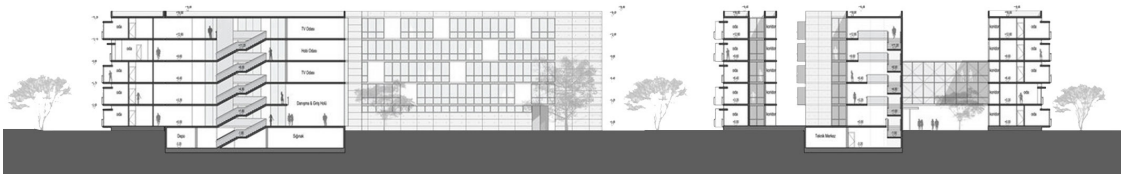


Figure 1.89.

METU Graduate Students Guesthouse Sections

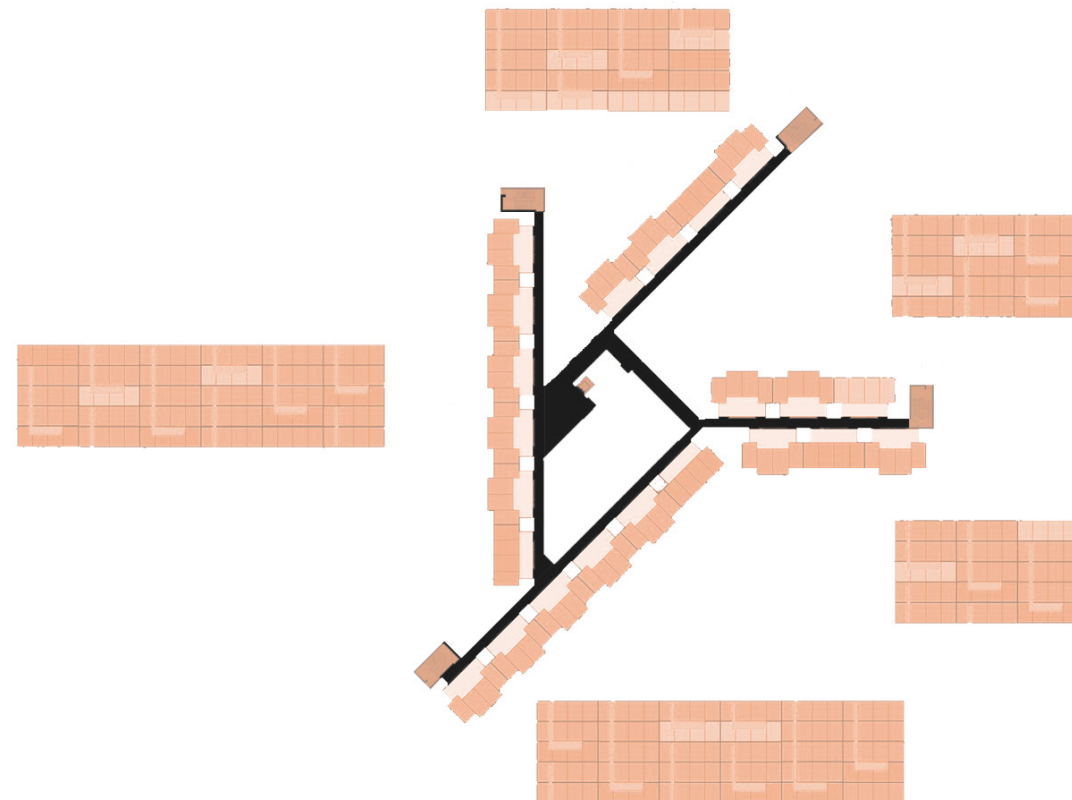
Source: Uygur Architects



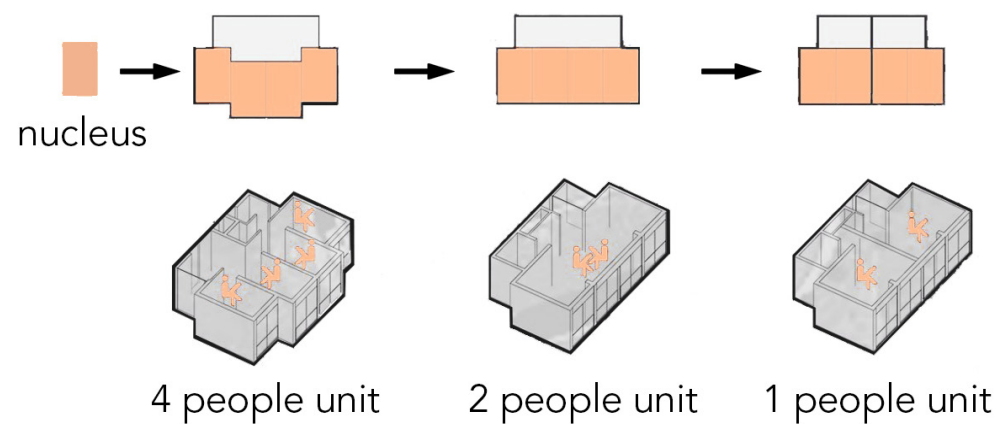
**Figure 1.90.**  
METU Graduate  
Students Guesthouse  
Bridge Connection  
Photo: Yercekim Archi-  
tectural Photography



**Figure 1.91.**  
METU Graduate  
Students Guesthouse  
Bridge Connection  
Photo: Yercekim Archi-  
tectural Photography



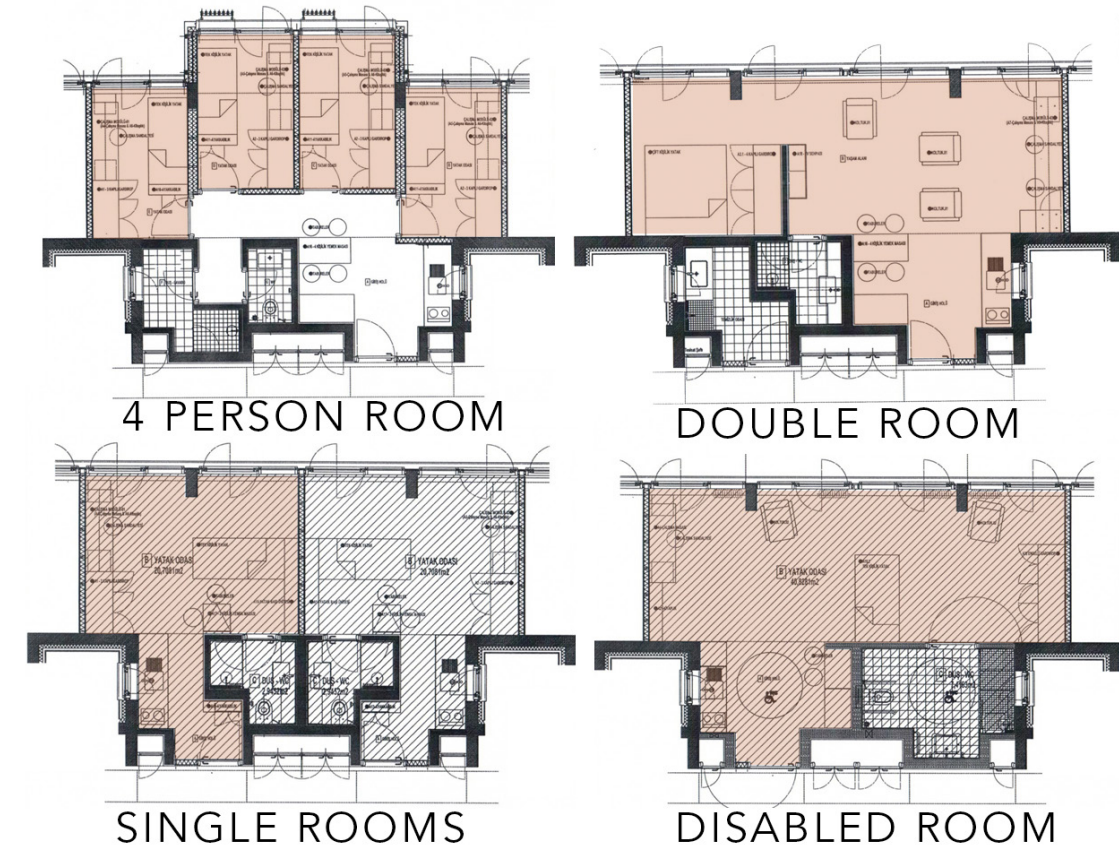
**Figure 1.92.**  
METU Graduate  
Students Guesthouse  
Room Typology (Units)  
Distribution Diagram  
Source: Uygur Architects



**Figure 1.93.**  
METU Graduate  
Students Guesthouse  
Room Typology (Units)  
Diagram  
Source: Uygur Architects

The project's core unit is designed as a single cell for one person that includes sleeping and studying space. By using and multiplying this unit, different types of cells are created such as single, double, and quadrup-

le persons. There was no hierarchical order of placement for these units to experience different lifestyles and layers within the guesthouse. The diverse way of placing the units creates a linear plan for the building.



**Figure 1.94.**  
METU Graduate  
Students Guesthouse  
Room Typology (Units)  
Plans  
Source: Uygur Architects

It also varied concerning the wind, size of the project area, the direction of the sun path. As a result, an angular plan has been designed with a good level of privacy for its users.

The Graduate Guesthouse has a total of 120 rooms: 28 single, 10 double, 81 4-person (kitchen, bathroom, sink shared rooms are independent), and a disabled room. (METU Dormitory Management, 2022)

The design has subtle references to the METU Architecture Faculty entrance hall designed almost 50 years ago. (Uygur Architects, 2017)



**Figure 1.95.**  
METU Graduate  
Students Guesthouse  
Double Room  
Photo: Yercekim Archi-  
tectural Photography



**Figure 1.96.**  
METU Graduate  
Students Guesthouse  
Four Person Room  
Photo: Yercekim Archi-  
tectural Photography



**Figure 1.97.**  
METU Graduate  
Students Guesthouse  
Single Room  
Photo: Yercekim Archi-  
tectural Photography



**Figure 1.98.**  
METU Graduate  
Students Guesthouse  
Single Room  
Photo: Yercekim Archi-  
tectural Photography



All rooms have a kitchen and a bath-  
room (shared use in 4-person rooms).  
On the ground floor of the guest-  
house, laundry facilities are available  
to guests. There are also common TV  
rooms on the middle floors. (METU  
Dormitory Management, 2022)

The intention was to create a low-  
cost construction with minimum ma-  
intenance requirements. Therefore,  
simple and strong materials such as  
raw concrete and undulated metal  
panels are used with their colors,  
while some of the doors and the  
windows on the corridors of living  
spaces and vertical circulation units  
are painted in vivid colors or have  
semi-transparent colored sheet app-  
lications. (Uygur Architects, 2017)

**Figure 1.99.  
and Figure 1.100.**  
METU Graduate  
Students Guesthouse  
Corridors  
Photo: Yercekim Archi-  
tectural Photography



## Case Study Six Conclusion

### Advantages

- Target users are a specific group of people, and it does not include all stu-  
dents of the university, only the graduate students and academicians. Due to  
the very high demand for housing, categorizing the users is an advantageous  
solution for students who are looking for housing options.
- Placing a similar group of students/ academic staff may create a more harmo-  
nious group to socialize and create a sense of community.
- Because the guests are expected to have graduated from Bachelor's Studies  
(minimum 22 years old) to earn a right to rent a room here, the age ratio of the  
guesthouse is higher than most university student housing. But also it ables to  
have a variety of age groups in one facility.
- All rooms have access to a private kitchen area except the four-person rooms.  
Unlike most student residency examples, not having to share the kitchen provi-  
des more privacy to its users.

### Disadvantages

- The fact that it is a guesthouse built for the use of a very specific user group  
necessitates a candidate elimination system to be eligible for this category. The  
order of priority consists of research assistants, doctoral students, and graduate  
students, respectively. It can be a problem for people who do not qualify even  
though they need it.
- The guesthouse does not have a sufficient amount of community spaces to  
socialize. Having private kitchens results in cooking in the rooms and dining  
inside, which affects the time guests can socialize together.
- The Guesthouse does not have commercial areas, including stores, restau-  
rants, cafes, markets.



# Republika Academic Apartments



**LOCATION:** Istanbul, Turkey  
**ARCHITECTS:** Autoban  
**YEAR:** 2014  
**AREA:** 3,600 m<sup>2</sup>  
**CAPACITY:** 83 rooms with 188 bed capacity

**Figure 1.101.**  
 Republika Student  
 Residences  
 Main Entrance  
 Photo: Ali Bekman

In Autoban's student dormitory project, the grid system of modules with simple geometric forms determines the architectural plan of the building.

Republika Academic Apartments, which set out with the slogan of "hotel comfort, home warmth", serves as a new generation of student dormitories in three branches located in different districts of Istanbul. (Arkitera, 2022)

Dormitories designed by Autoban; raise the standard of accommodation for students with its interior architecture, where the relationship between private and public spaces is correctly constructed.



**Figure 1.102.**  
 Republika Student  
 Residences  
 Photo: Ali Bekman



**Figure 1.103.**  
 Republika Student  
 Residences  
 Outdoors  
 Photo: Ali Bekman

Designing well-planned living spaces to provide maximum comfort in minimum spaces was another highlight of the project's aims.

The first two branches, located in Ortaköy and Büyükçekmece, have a capacity of 230 rooms and approximately 650 beds, as a result of the transformation of structures previously built for different purposes in accordance with the project. The third branch in Florya provides service with a capacity of 83 rooms and 188 beds in a new building whose architectural design was also realized by Autoban. (Autoban Architects, 2014)

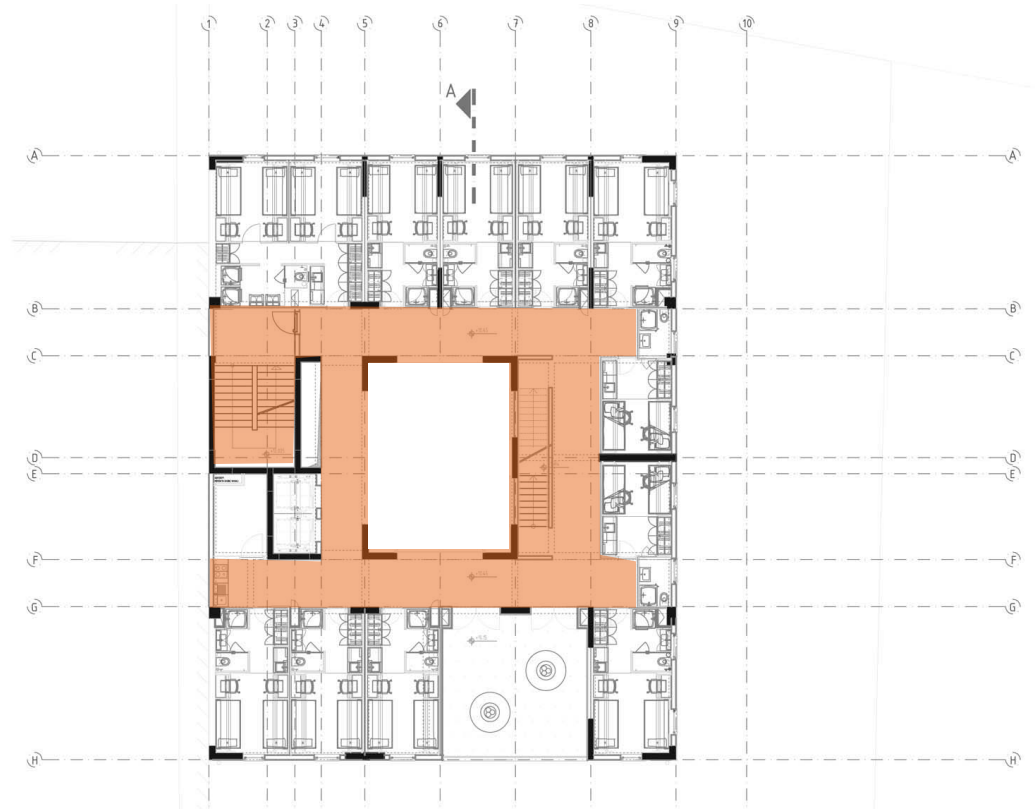
Based on the basic principles of modern architecture in the Republika Academic Apartments project, Autoban followed an approach in which modules with repeating simple geometric forms constitute the architecture.

While the said modules were placed in the plan by considering the physical properties of the existing buildings in the first two branches; In the Florya branch, placing the modular units on a grid system determined the architectural plan of the building. (Arkitera, 2022)



**Figure 1.104.**  
 Republika Student  
 Residences  
 Common Area  
 Photo: Ali Bekman





**Figure 1.105.**  
Republika Student  
Residences  
3rd Floor Plan  
Source: Autoban



**Figure 1.106.**  
Republika Student  
Residences  
Common Area Topview  
Photo: Ali Bekman



**Figure 1.107.**  
Republika Student  
Residences  
Common Area  
Photo: Ali Bekman

The primary goal of the project was to design an accommodation facility for students, using low-cost and durable materials, to meet all their needs while at the same time enjoying themselves. The project also required architectural solutions to maximize the usage of daylight, height, and space. (Autoban Architects, 2014)



**Figure 1.108.**  
Republika Student  
Residences  
Three Person Suite  
Photo: Ali Bekman



**Figure 1.109.**  
Republika Student  
Residences  
Hallway to Rooms  
Photo: Ali Bekman

The living spaces of the students are designed to be in the smallest possible square meters, within the modules that contain all the functions.

To encourage social communication between students the common areas were designed much larger. In the modules covering sleeping, studying, and storage functions, the bathrooms are designed as separate furniture in order not to disturb the integrity of the space. (Arkitera, 2022)

The layout organization of the modules that form the structure of the building was made in line with the

maximum benefit from daylight for each unit.

The corridors connecting the modules were painted in a different tone of a lively color on each floor, enabling the identification of the differences between the floors and at the same time warming the environment.

Lounge areas with kitchenettes where students can meet their food and beverage needs were placed on each floor. (Autoban Architects, 2014)



**Figure 1.110.**  
Republika Student  
Residences  
Duplex Double Room  
Photo: Ali Bekman

## Case Study Seven

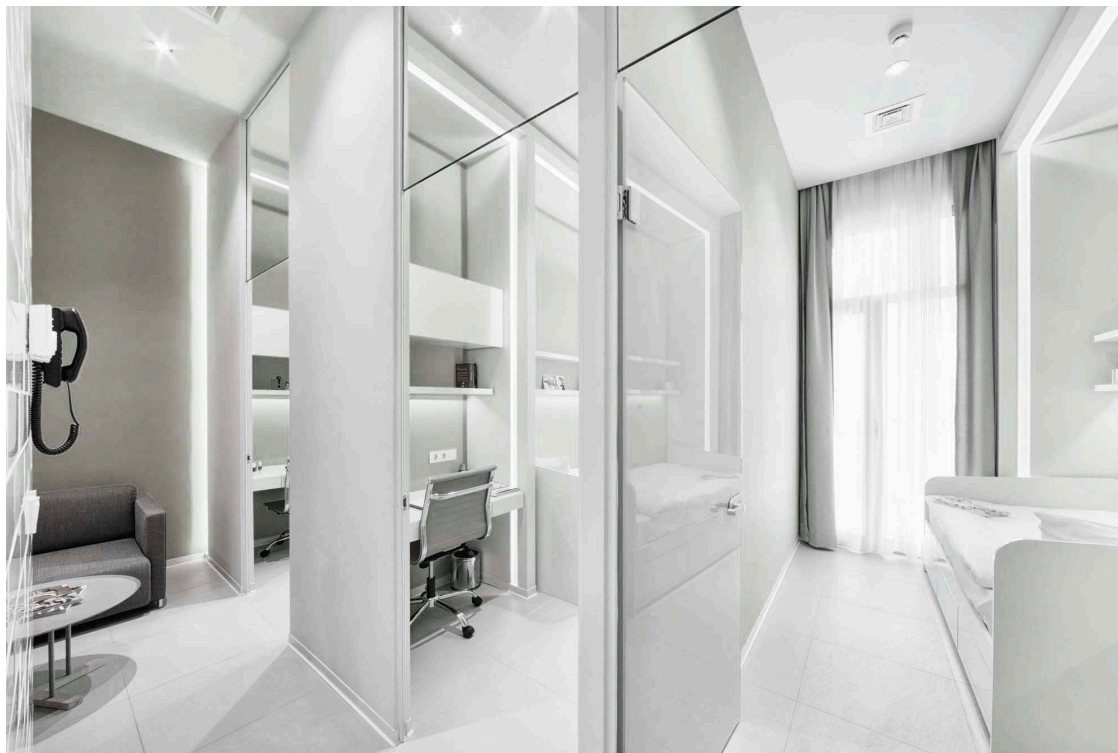
### Conclusion

#### Advantages

- Target users are not specific group of people, such as one certain university's students. Due to the housing's central location, it has an opportunity to host different type of residents. This may result in creating a diverse social environment.
- The Academic Apartments have limited space but it is a great example how to accommodate maximum individuals inside minimum spaces. It makes designing creative interior solutions a necessity for the same challenge.
- Variety of room types are available for the users.
- Kitchens are usually built as kitchenettes and located in room units. Except the single rooms, kitchenettes are shared with other students inside the room. A kitchenette is used maximum by three students. Unlike most student residency examples, not having to share the kitchen provides more privacy to its users.

#### Disadvantages

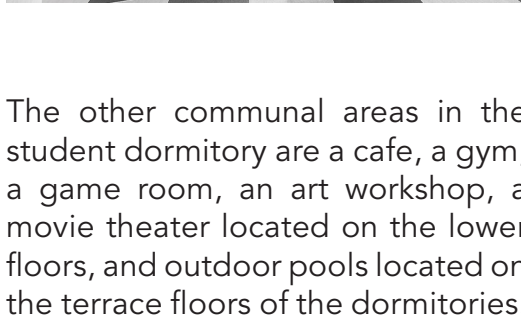
- The Academic Apartments have very limited bed capacities.
- Due to building's size, it does not have a sufficient amount of community spaces to socialize.
- Having private kitchens results in cooking in the rooms and dining inside, which affects the time guests can socialize together.
- Republika Academic Apartments does not have commercial areas, including stores, restaurants, cafes, markets.



**Figure 1.111.**  
Republika Student  
Residences  
Three Person Suite  
with Individual Rooms  
Photo: Ali Bekman



**Figure 1.112.**  
Republika Student  
Residences  
Single Room  
Photo: Ali Bekman



**Figure 1.113.**  
Republika Student  
Residences  
Double Room  
Photo: Ali Bekman

The other communal areas in the student dormitory are a cafe, a gym, a game room, an art workshop, a movie theater located on the lower floors, and outdoor pools located on the terrace floors of the dormitories.

Autoban describes the Republika Academic Apartments' goal as to provide students with the key to not only the room they will stay in but also a lifestyle, the dormitories offer them an environment where they can meet all their needs and with pleasure. (Autoban Architects, 2014)



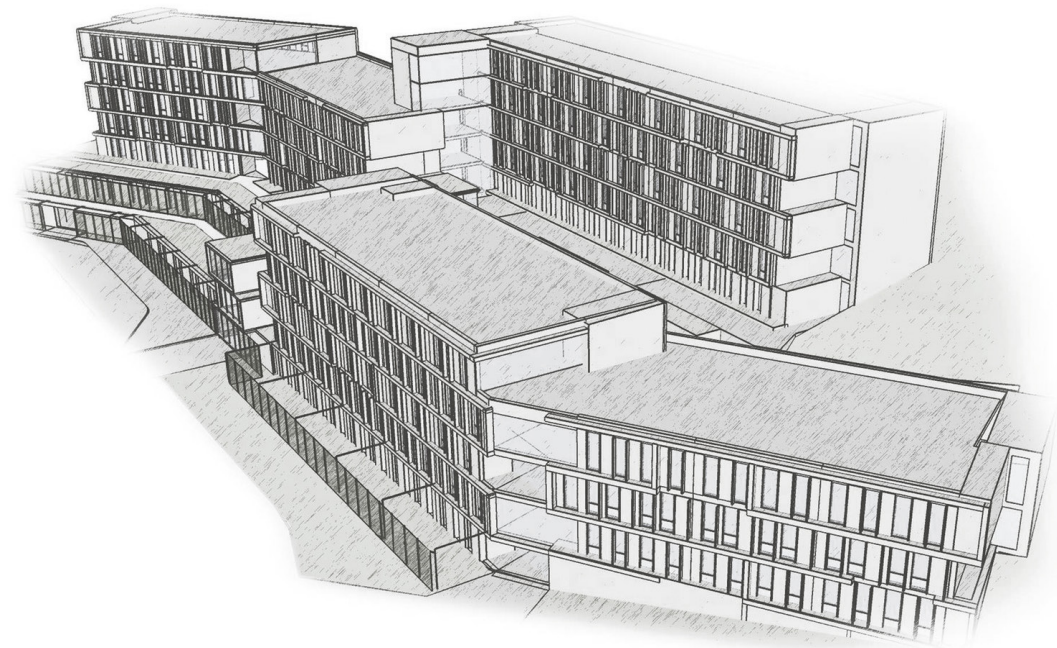
## Case Study Eight

# OzU (Özyegin University) Student Residences (Dorm 4-5)



**LOCATION:** Istanbul, Turkey  
**ARCHITECTS:** ARK-itecture  
**YEAR:** 2011  
**AREA:** 22000m<sup>2</sup>  
**CAPACITY:** in total (dorm 4 & dorm 5)  
 316 rooms with 695 bed capacity

Designed by ARK-itecture, Özyegin University Dormitory 4-5 is the continuation of the dormitory 1, 2, and 3 buildings of the same university's student accommodation. (Arkitera, 2020)



**Figure 1.116.**  
 Ozu Student Residences  
 Dorm 4-5 Complex  
 Sketches  
 Source: ARK-itecture

The Dormitory 4 is designed for male students and has two types of room options, whereas the Dormitory 5 is designed for female students with three different types of room options. (Sarıaydın, 2021)

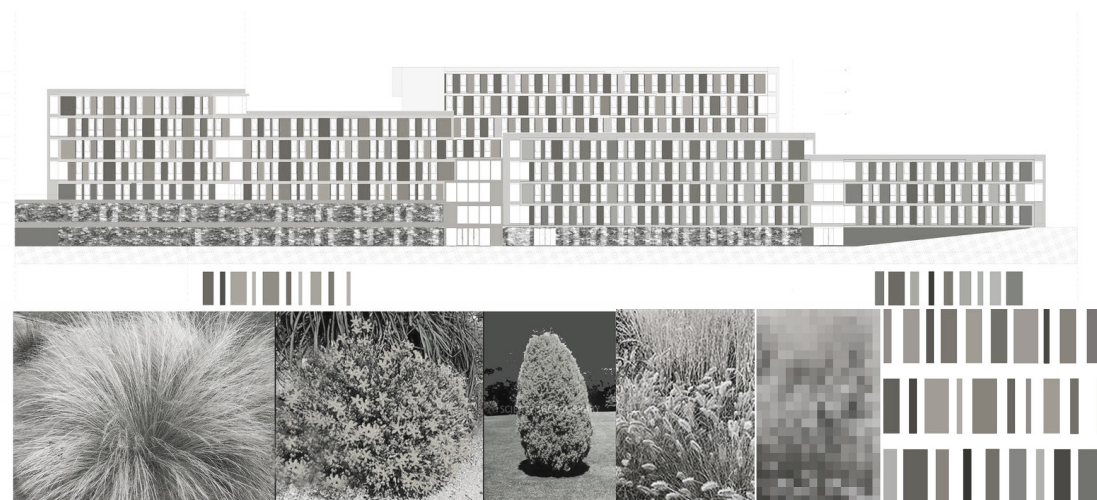
Özyegin University Dormitory is set on the existing steep land and preserves the natural land elevations as much as possible. The building mass is positioned to embrace the valley that is located at the spine of the campus and separates the education buildings and the dormitory blocks. In this way, it is ensured that the rooms benefit from the valley view. (Arkitera, 2020)



**Figure 1.117.**  
 Ozu Student Residences  
 Dorm 4-5 Complex  
 Facade Detail  
 Photo: Koral Oral

**Figure 1.114.**  
 Ozu Student Residences  
 Dorm 4-5 Complex  
 Photo: Koral Oral

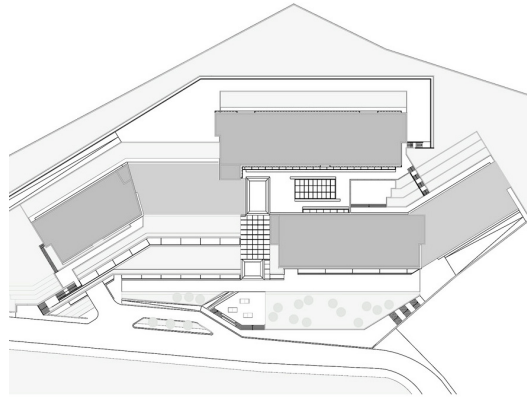
**Figure 1.115.**  
 Ozu Student Residences  
 Dorm 4-5 Complex  
 Concept  
 Source: ARK-itecture



**Figure 1.118.**  
 Ozu Student Residences  
 Dorm 4-5 Complex  
 Facade Detail  
 Photo: Koral Oral



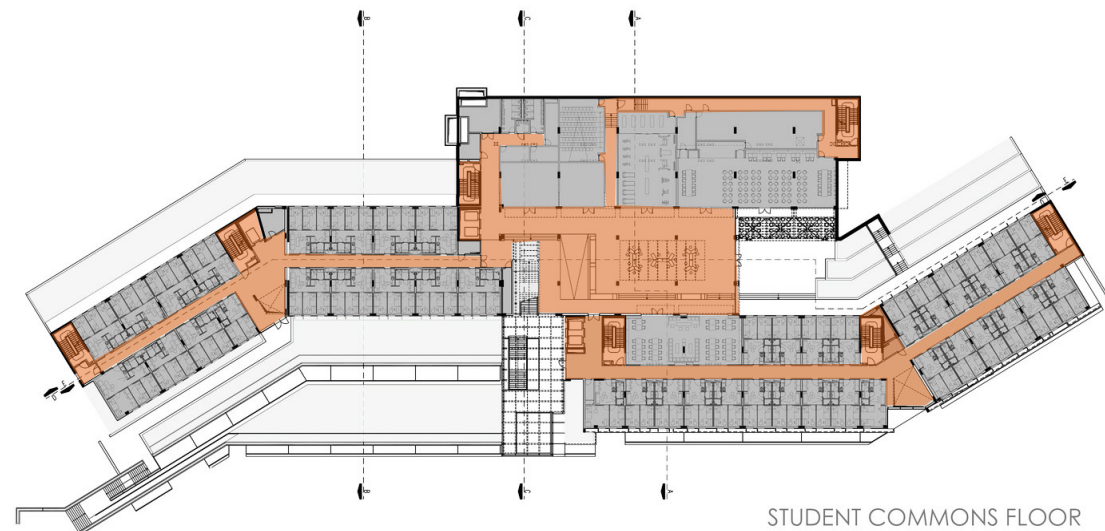
**Figure 1.119.**  
Ozu Student Residences  
Dorm 4-5 Complex  
Site Plan  
Source: ARK-itecture



While designing the façade of this building, the monotony was broken by making decisions that are opposite to the concept of the existing dormitory buildings. (Sanchez, 2014)

The building is divided into three different room blocks on a planned basis. A transparent entrance mass with a steel structure connecting these arms is designed.

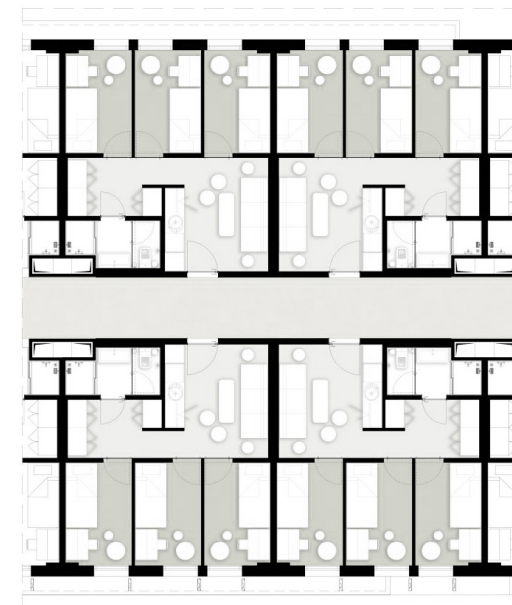
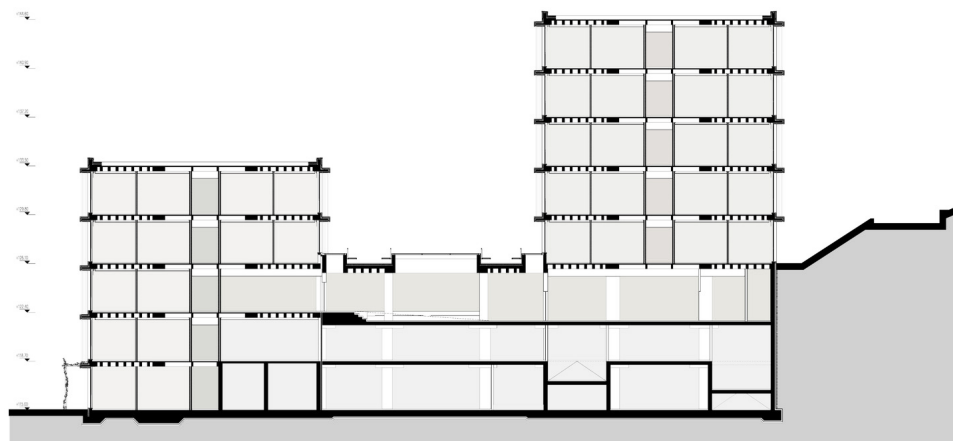
**Figure 1.120.**  
Ozu Student Residences  
Dorm 4-5 Complex  
Student Commons Floor  
Source: ARK-itecture



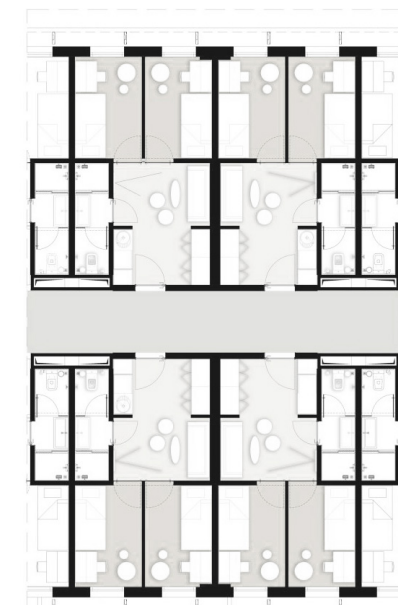
The rooms are appointed to students according to their legal residence address. The first priority belongs to the students who have accommodation scholarships. The second priority belongs to the international students and then to the student who lives in cities that are far from Istanbul. (Sariaydin, 2022)

In addition, the inner courtyard and indoor common areas on the upper level are positioned so that all arms can benefit. It is aimed that all these designed spaces will benefit from daylight in the maximum way possible. (Sariaydin, 2021)

**Figure 1.121.**  
Ozu Student Residences  
Dorm 4-5 Complex  
Section  
Source: ARK-itecture



three person suite plan



two person suite plan

**Figure 1.122.**  
Ozu Student Residences  
Dorm 4-5 Complex  
Room Typologies  
Source: ARK-itecture

In the rooms, students' sleeping and study units, as well as common living areas are designed. (Arkitera, 2020)

Özyegin University's all six dormitory complexes have minor differences in comparing the room types to each other to create more diversity for students with different budgets.

In Dormitory 4, which is reserved for male students, there isn't a single room type option. Also, the bathrooms are shared and there is not any private bathroom.

In the Dormitory 5, built for the female students, single and triple rooms have shared bathrooms, but the single rooms have private bathrooms. (Sariaydin, 2021)



**Figure 1.123.**  
Ozu Student Residences  
Dorm 4-5 Complex  
Single Room  
Photo: Koral Oral



**Figure 1.124.**  
Ozu Student Residences  
Dorm 4-5 Complex  
Single Room Kitchen  
Photo: Koral Oral



**Figure 1.125.**  
Ozu Student Residences  
Dorm 4-5 Complex  
Cafe and Restaurants  
Photo: Koral Oral



**Figure 1.126.**  
Ozu Student Residences  
Dorm 4-5 Complex  
Study Rooms  
Photo: Koral Oral



## Case Study Nine

# OzU (Özyegin University) Student Residences (Dorm 6)



**LOCATION:** Istanbul, Turkey  
**ARCHITECTS:** Hatırlı Mimarlık  
**YEAR:** 2017  
**AREA:** 44.500 m<sup>2</sup>  
**CAPACITY:** 659 bed capacity

The construction of the guesthouse and dormitory building, designed

by Hatırlı Architects, for Özyegin University, was completed in 2017.

The dormitory is in a location that has a highly sloping topography in the northwest and southeast direction. The topography, climatic conditions, and orientation stand out as contextual priorities in the design criteria. (Hatırlı Mimarlık, 2022)



**Figure 1.129.**  
Ozu Student Residences  
Dorm 6 Complex  
Connections Between  
Buildings and Entrances  
Photo: Hatırlı Mimarlık



**Figure 1.130.**  
Ozu Student Residences  
Dorm 6 Complex  
Bridge Connection  
Between Buildings  
Photo: Hatırlı Mimarlık

While the social facilities are solved under the ground level to form a base, the dormitory is solved by starting above this base and breaking away from the ground. By organizing the functions in this way, maximum green space is tried to be obtained. Thus, the common activity areas needed due to the undeveloped environmental conditions were designed on the southeast facades opening to the lan-

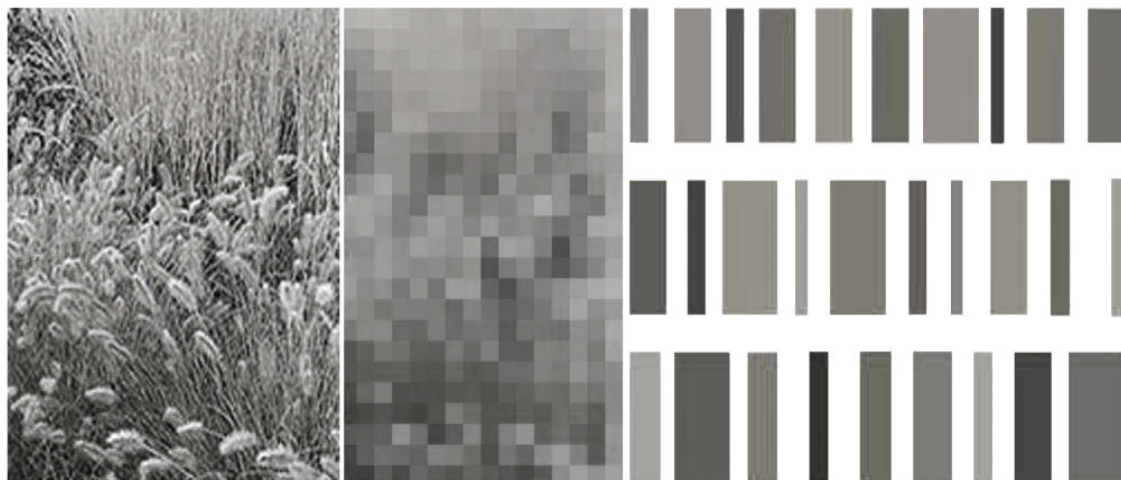
dscape and campus view. At the same time, controlled access to the bedroom floors was provided by separating the bedroom floors and social areas vertically from each other. The single entrances in each building for pedestrians and vehicles control the visitor entrances. (Hatırlı Mimarlık, 2022)

**Figure 1.127.**

Ozu Student Residences  
Dorm 6 Complex  
Photo: Hatırlı Mimarlık

**Figure 1.128.**

Ozu Student Residences  
Dorm 6 Complex  
Concept  
Source: Hatırlı Mimarlık





**Figure 1.131.**  
Ozu Student Residences  
Dorm 6 Complex  
Photo: Hatırlı Mimarlık



Özyegin University Yurt 4-5 are visible from this view

Study areas that are suitable for both individual and group study sessions



**Figure 1.134.**  
Ozu Student Residences  
Dorm 6 Complex  
Study Areas  
Photo: Hatırlı Mimarlık

In the dormitories for girls and boys, 1-person, 2-person, and 3-person rooms are designed, there is a shared kitchen and resting area on each floor, and study rooms and drawing rooms with terraces of different sizes are designed on the social equipment floors. Consider-

ring the cold winter conditions, a compact architectural solution was aimed by providing controlled closed passage from the vertical circulation cores of the dormitory units to the social reinforcement areas. (Arkitera Mimarlık Merkezi, 2022)

Common Area that includes an amphi-shaped event space, a cafeteria and gathering spaces



**Figure 1.135.**  
Ozu Student Residences  
Dorm 6 Complex  
Common Areas  
Photo: Hatırlı Mimarlık

**Figure 1.132.**  
Ozu Student Residences  
Dorm 6 Complex  
Photo: Hatırlı Mimarlık



Free movement on the ground floor

Variety of common spaces to socialize



**Figure 1.136.**  
Ozu Student Residences  
Dorm 6 Complex  
Common Areas  
Photo: Hatırlı Mimarlık

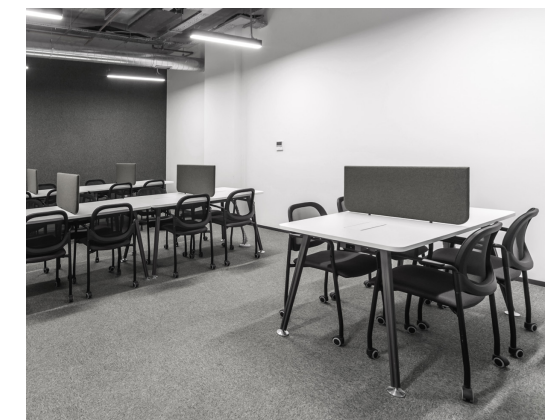
**Figure 1.133..**  
Ozu Student Residences  
Dorm 6 Complex  
Photo: Hatırlı Mimarlık



Free movement on the ground floor



study area with drawing tables

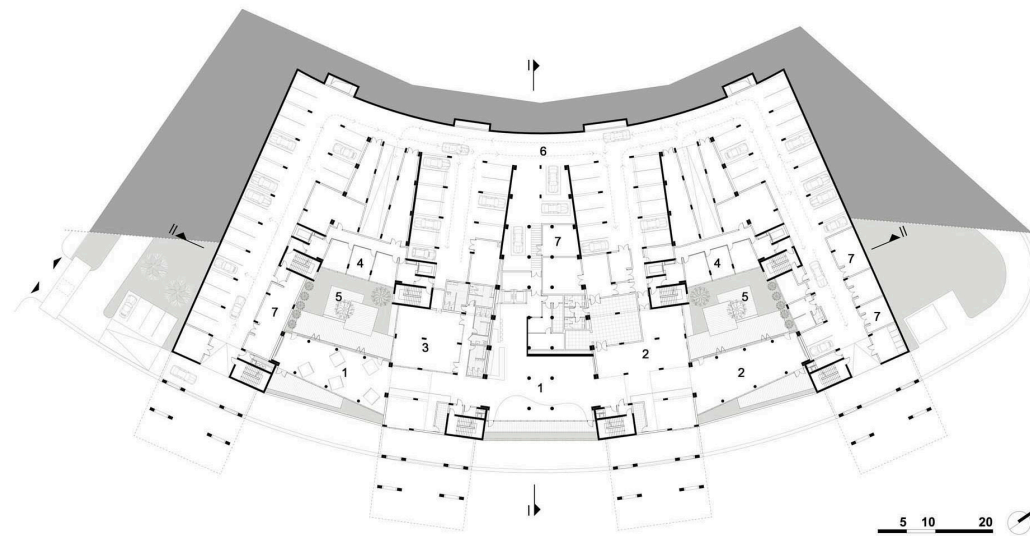


study area

**Figure 1.137.**  
Ozu Student Residences  
Dorm 6 Complex  
Study Areas  
Photo: Hatırlı Mimarlık

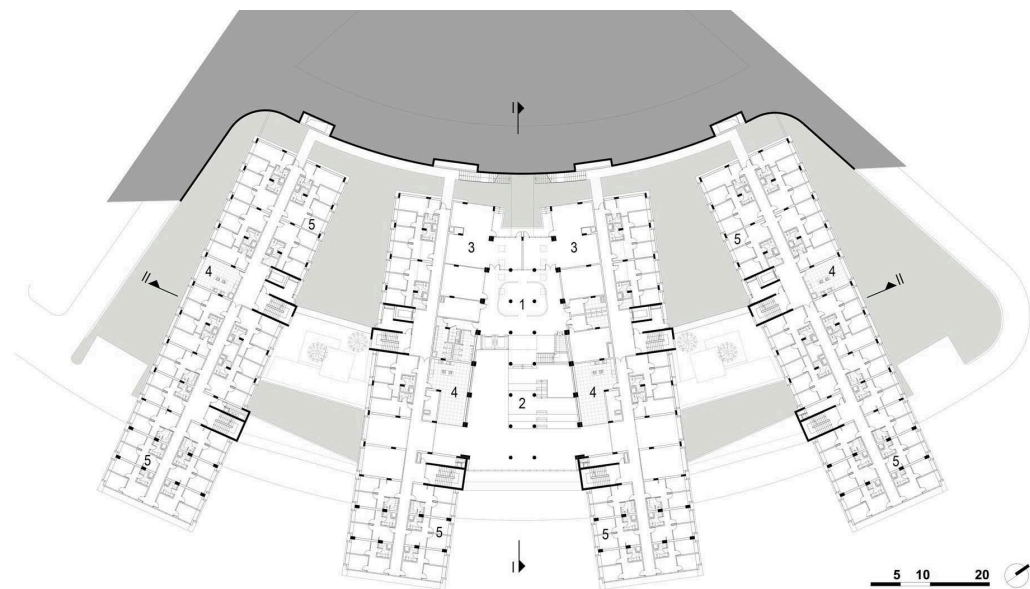
**Figure 1.138.**  
Ozu Student Residences  
Dorm 6 Complex  
Study Areas  
Photo: Hatırlı Mimarlık





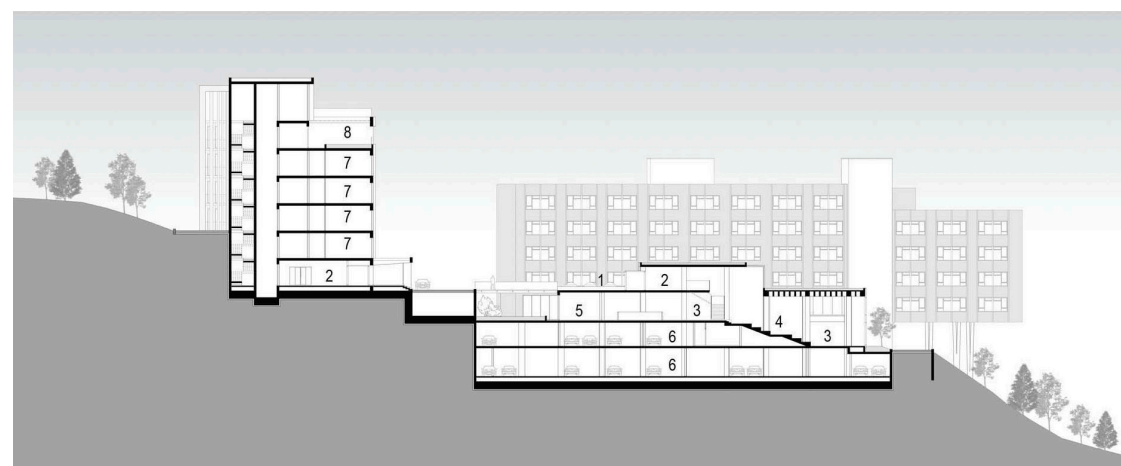
**Figure 1.139.**  
Ozu Student Residences  
Dorm 6 Complex  
1st Basement Floor Plan  
Source: Hatırlı Mimarlık

- 1- Social Area      3- Sports Area      5- Inner Courtyard      7- Technical Rooms  
2- Dining Area      4- Study Rooms      6- Parking



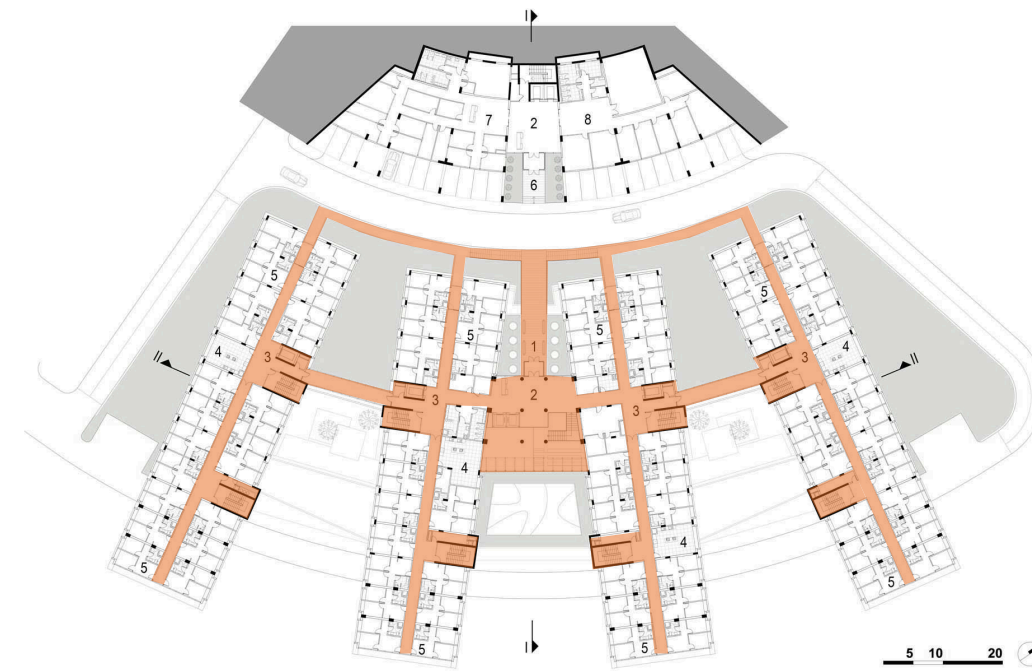
**Figure 1.140.**  
Ozu Student Residences  
Dorm 6 Complex  
Ground Floor Plan  
Source: Hatırlı Mimarlık

- 1- Social Area      3- Study Rooms      5- Dorm Rooms  
2- Amphi      4- Common Kitchen



**Figure 1.141.**  
Ozu Student Residences  
Dorm 6 Complex  
Section I-I  
Source: Hatırlı Mimarlık

- 1- Main entrance      3- Social Area      5- Study Rooms      7- Guesthouse  
2- Reception      4- Amphi      6- Parking      8- Green Terrace



**Figure 1.142.**  
Ozu Student Residences  
Dorm 6 Complex  
1st Floor Plan  
Source: Hatırlı Mimarlık

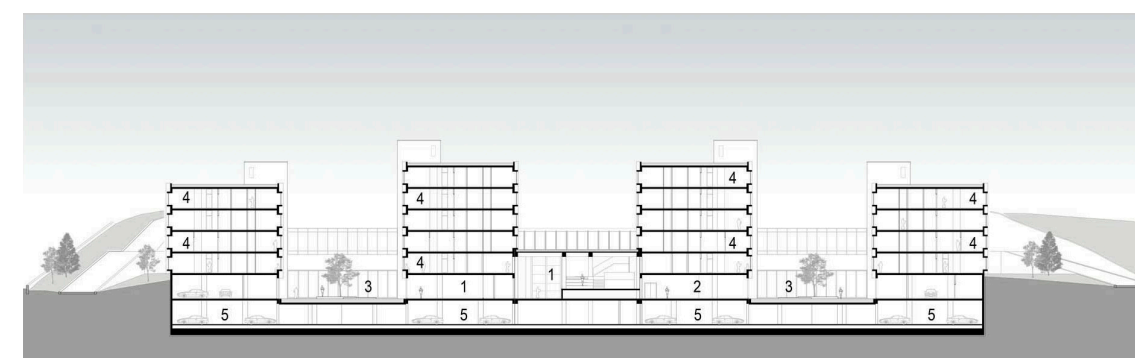
- 1- Main entrance      3- Elevator Hall      5- Dorm Rooms      7- Family Center  
2- Reception      4- Common Kitchen      6- Guesthouse      8- Professor Rooms

In the building, which is located in a very windy area, inner courtyards that provide climatic comfort in all seasons are planned, and common areas such as the cafeteria, sitting rooms, and gathering rooms are opened to these courtyards.

The transition from the entrance level of the dormitory to the social facilities is provided by an amplified staircase, and this area offers students the opportunity to come together for various activities. (Arkitera Mimarlık Merkezi, 2022)

While the circulation areas are kept to a minimum on the floors where the dormitory rooms are located, it was thought that easy access and shared spaces would facilitate the use of the students staying in the dormitory. (Arkitera Mimarlık Merkezi, 2022)

There are three different unit options: 1+1, 2+1, and 3+1 (+1 is the added common living area that would not be included as a sleeping space).



**Figure 1.143.**  
Ozu Student Residences  
Dorm 6 Complex  
Section II-II  
Source: Hatırlı Mimarlık

- 1- Social Area      3- Inner Courtyard      5- Parking  
2- Dining Area      4- Dorm Rooms



**Figure 1.144.**  
Ozu Student Residences  
Dorm 6 Complex  
Room Typology for  
3 Person Suites  
Source: Hatırlı Mimarlık



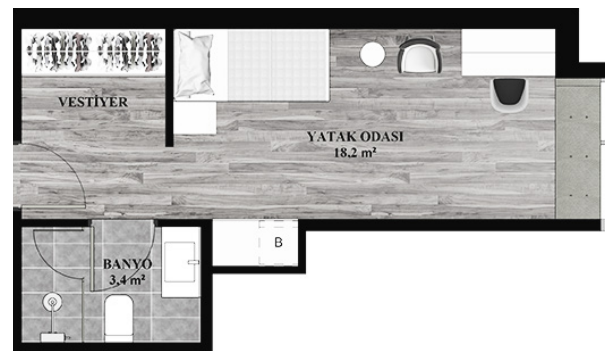
three person suite plan

**Figure 1.145.**  
Ozu Student Residences  
Dorm 6 Complex  
Room Typology for  
2 Person Suites  
Source: Hatırlı Mimarlık



two person suite plan

**Figure 1.146.**  
Ozu Student Residences  
Dorm 6 Complex  
Room Typology for  
Single Suite  
Source: Hatırlı Mimarlık



single suite plan

In the double and triple rooms, the single volumes with the beds and study desks of the students open to the common areas where the living/TV corner, kitchenette, and bathroom are located.

Bay windows that offer sitting in front of the window are designed in each room and the common kitchens.

(Sarıaydın, 2016)

A simple and plain architecture was adopted throughout the building, the use of exposed concrete and color on the exterior was also reflected in the interior design, besides, the ceilings were left as bare concrete in the interior spaces, taking into account the operating and maintenance costs, and paint, plaster and coating surfaces were avoided as much as possible. (Arkitera Mimarlık Merkezi, 2022)



**Figure 1.147.**  
Ozu Student Residences  
Dorm 6 Complex  
Common Kitchen Area  
Photo: Hatırlı Mimarlık



**Figure 1.148.**  
Ozu Student Residences  
Dorm 6 Complex  
Common Area of a Suite  
Photo: Hatırlı Mimarlık



**Figure 1.149.**  
Ozu Student Residences  
Dorm 6 Complex  
Common Area of a Suite  
Photo: Hatırlı Mimarlık

**Figure 1.150.**  
Ozu Student Residences  
Dorm 6 Complex  
Individual Room  
Photo: Hatırlı Mimarlık

## Case Study Eight & Nine

# Conclusion

### Advantages

- Target users are a specific group of people. Facilities are designed for a certain university's students. Due to the university's remote location, the district's student housing needs are coming from the said university (Özyegin University) and not others. Because of this, it is advantageous that dormitories in these large capacities are under a university's name.
- The fact that it is a guesthouse built for the use of a specific user group necessitates a candidate elimination system to be eligible for this category. The order of priority is determined regarding the student's residence's distance, meaning students from cities farther away from Istanbul have more chance of getting a dorm room. It is a fair elimination system considering the alternative selection options such as random picks or the pricing.
- Placing a similar group of students/ academic staff may create a more harmonious group to socialize and create a sense of community.
- Both student houses have a sufficient bed capacity and shared spaces to socialize and study.
- Variety of room types are available for the users with different budgets.

### Disadvantages

- Target users are a specific university's students, which makes it harder to connect with students from other universities and backgrounds.
- The student's residence's distance determines how the dorm rooms are appointed, meaning students from cities farther away from Istanbul have more chance of getting a dorm room. Even though it is a fair elimination system, it may still cause problems for students who come from cities near Istanbul (The Anatolian side) but require accommodation.
- The dormitories are located far away from the city center of the Anatolian side and almost all attraction points of Istanbul.
- Due to location, options to hang out outside the campus and dormitories are very limited and isolated.

# CHAPTER TWO

## **ANALYSIS** SITE SELECTION



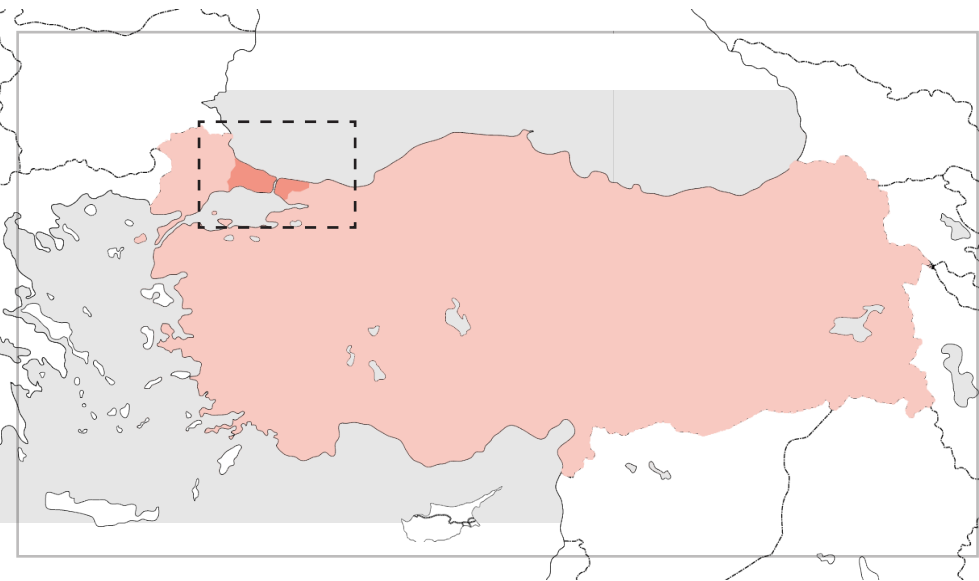
## Brief Glance at Istanbul



**Figure 2.1.t**  
Turkey's Location on  
World Map  
Source: Author

Istanbul's history dates back almost 8500 years. The city, formerly known as Constantinople, was the capital home to great empires such as Roman, Byzantine, and Ottoman. Being in an advantageous geographical location that connects the European continent to the Asian, made Istanbul very valuable throughout history. As of 2019, Istanbul has 1796 historical sites, which include 28 palaces, 91 museums, 93 Turkish baths, and 595 fountains. (Istanbul Valiligi, 2022)

Istanbul is Turkey's most populated city with 15.840.900 people due to receiving immigration in every period of history. (Türkiye İstatistik Kurumu, 2022) According to the Turkish Statistical Institute, 18,71%



**Figure 2.2.**  
Istanbul's Location in Turkey  
Source: Author

of the country's residents legally reside in Istanbul.

The city covers a 5.712 km<sup>2</sup> surface area and has a 647 km long coastline that sees nine islands in the Marmara sea called Prince Islands.

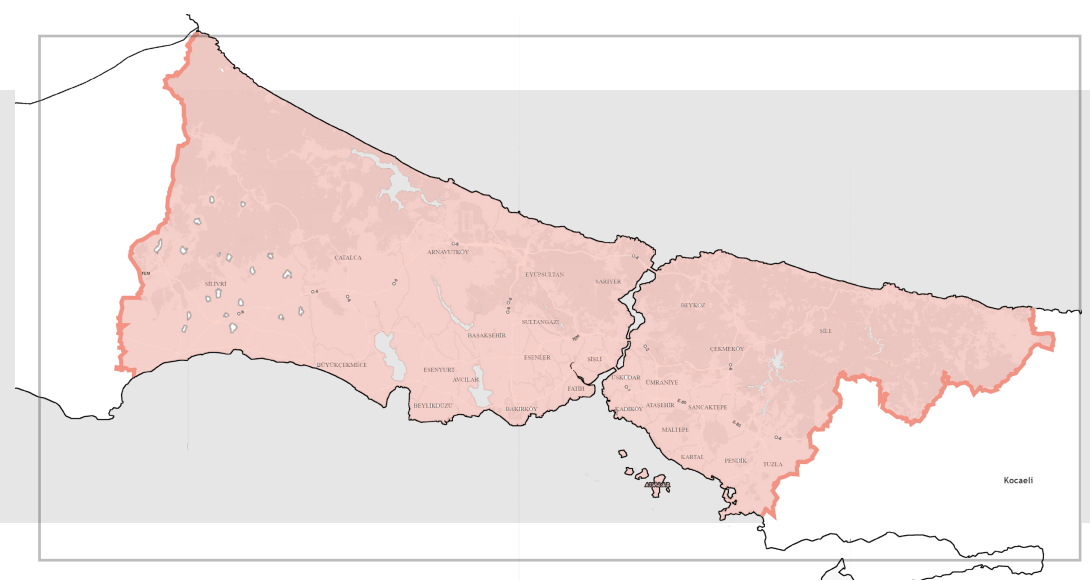
Between the European side and Asian (or Anatolian) side of the city, three Bosphorus bridges connect the continents. Other than the bridges, Eurasia Tunnel connects two continents under the sea for fast car traffic. 43 ferry ports with 28 ferries are also commonly used by pedestrians because the bridges and the Eurasia tunnel are closed for pedestrian traffic. (Istanbul Valiligi, 2022)

Istanbul has 39 districts and almost all of them have an attraction center of their own even though some district centers are better-known by tourists. Besides the historical focused tourism, culinary-focused tourism is an important reason to visit Istanbul.

In 2019, the record number of fo-

reign visitors reached 14.906.663, which is very close to the city's crowded resident population.

Unlike most foreigner attraction cities of the world, Istanbul has the opportunity to have tourism all four seasons in its 738 hotels and more than 31 thousand restaurants. (Istanbul Valiligi, 2022)



**Figure 2.3.**  
Istanbul's Map  
Source: Istanbul Şehir Haritaları

One of the bigger reasons why Istanbul is the most popular Turkish city and preferred over other cities is that it's a cultural center for the young population. As of 2021, 5.041.743 residents of Istanbul are between the ages of 15 and 34. (Türkiye İstatistik Kurumu, 2022) The city is home to 227 theaters, 882 cinemas, 38 libraries, 7.437 schools, and a record number of universities with 60 universities. (Istanbul Valiligi, 2022)

Istanbul has been a city of trade and production throughout the ages. The value of Istanbul is increasing day by day with its tourism sector, industry, and trade potential. Istanbul, which has a unique socio-economic

structure in Turkey, is the country's capital of commerce, business, investment, finance, and tourism. The share of Istanbul in Turkey's workforce is 20.3%, its share in exports is 50.6% and its share in imports is 54.6%. (Istanbul Valiligi, 2022)

Bosphorus connects the Black Sea to the Marmara Sea, which is connected to the Aegean Sea and the Mediterranean Sea. This gives Istanbul a great opportunity to be the intersection point from the south to the north part of the world. The Black Sea is the only sea connection to the countries such as Bulgaria, Romania, Ukraine, Russia, and Georgia. Thus, making Istanbul an important route for trade and tourism.



## Istanbul as a University City

Istanbul is the leading city in Turkey with its high number of universities. There are 61 universities in Istanbul, of which 14 are state-owned, 44 foundation-owned universities, and 3 foundation-owned vocational schools. In addition to these, there are Air Force Academy and Naval Academy, and 4 foundation-owned vocational schools that are not affiliated with any university. Istanbul is home to 29.61% of the universities in Turkey. (Republic of Turkey Governorship of Istanbul, 2019)

Istanbul's universities are popular amongst students due to the high quality of education and social activity opportunities. Universities renew themselves and offer new opportunities to their students with the modern education systems of the age to compete with the other educational institutions.

In total, 1.001.834 students are studying in higher education. Out of this number, 553.203 students studying at state-owned universi-

ties, 440.586 students at foundation-owned universities, and 8.045 students at foundation-owned vocational schools. (Republic of Turkey Governorship of Istanbul, 2019)

State-owned and foundation-owned universities host a large number of international students from abroad, especially from Europe, every year. Students who come to Istanbul both as exchange students and to complete their higher education here, play a role in the promotion of Istanbul abroad, as well as making a great contribution to the city's economy. (Republic of Turkey Governorship of Istanbul, 2019)

Istanbul University, a state-owned public university, is Turkey's oldest university. The university was founded in 1453, the year the city was conquered by Ottoman Empire. It also holds a pride place of being one of the first ten universities that was established in Europe. (Istanbul Üniversitesi, 2022)



**Figure 2.4.**  
Gate of Istanbul University  
Source: Tugçe Ayçin

## List of Universities in Istanbul

### Foundation Universities

- Bahçeşehir University
- Yeditepe University
- Beykent University
- Istanbul Bilgi University
- Istanbul Aydın University
- Koç University
- Istanbul Gelisim University
- Istanbul Okan University
- Üsküdar University
- Istanbul Kültür University
- Sabancı University
- Özyegin University
- Maltepe University
- Istanbul Sabahattin Zaim University
- Kadir Has University
- Haliç University
- Dogus University
- Altınbas University
- Fatih Sultan Mehmet Foundation University
- Acıbadem Mehmet Ali Aydınlar University
- Piri Reis University
- Istanbul Galata University
- MEF University
- Bezmialem Foundation University
- Istanbul Ayvansaray University
- Istanbul Kent University
- Beykoz University
- Istanbul 29 Mayıs University
- Fenerbahçe University
- Biruni University
- Istanbul Gedik University
- Isık University
- Istanbul Arel University
- Istanbul Esenyurt University
- Istanbul Health and Technology University
- Istanbul Rumeli University
- Nisantasi University
- Istanbul Yeni Yüzyıl University
- Istanbul Medipol University
- Istanbul Commerce University
- Istanbul Atlas University
- İstinye University
- İbn-i Haldun University
- Demiroglu Science University

### State Universities

- Istanbul University
- Marmara University
- Bogaziçi University
- Istanbul Technical University
- Yıldız Technical University
- Mimar Sinan Fine Arts University
- Turkish-German University
- Galatasaray University
- Istanbul Medeniyet University
- Health Sciences University
- University of National Defense
- Istanbul University Cerrahpasa
- Turkey Japanese Science and Technology University
- Turkey International Islamic, Science and Technology University

### Foundation-Owned Vocational Schools of Higher Education

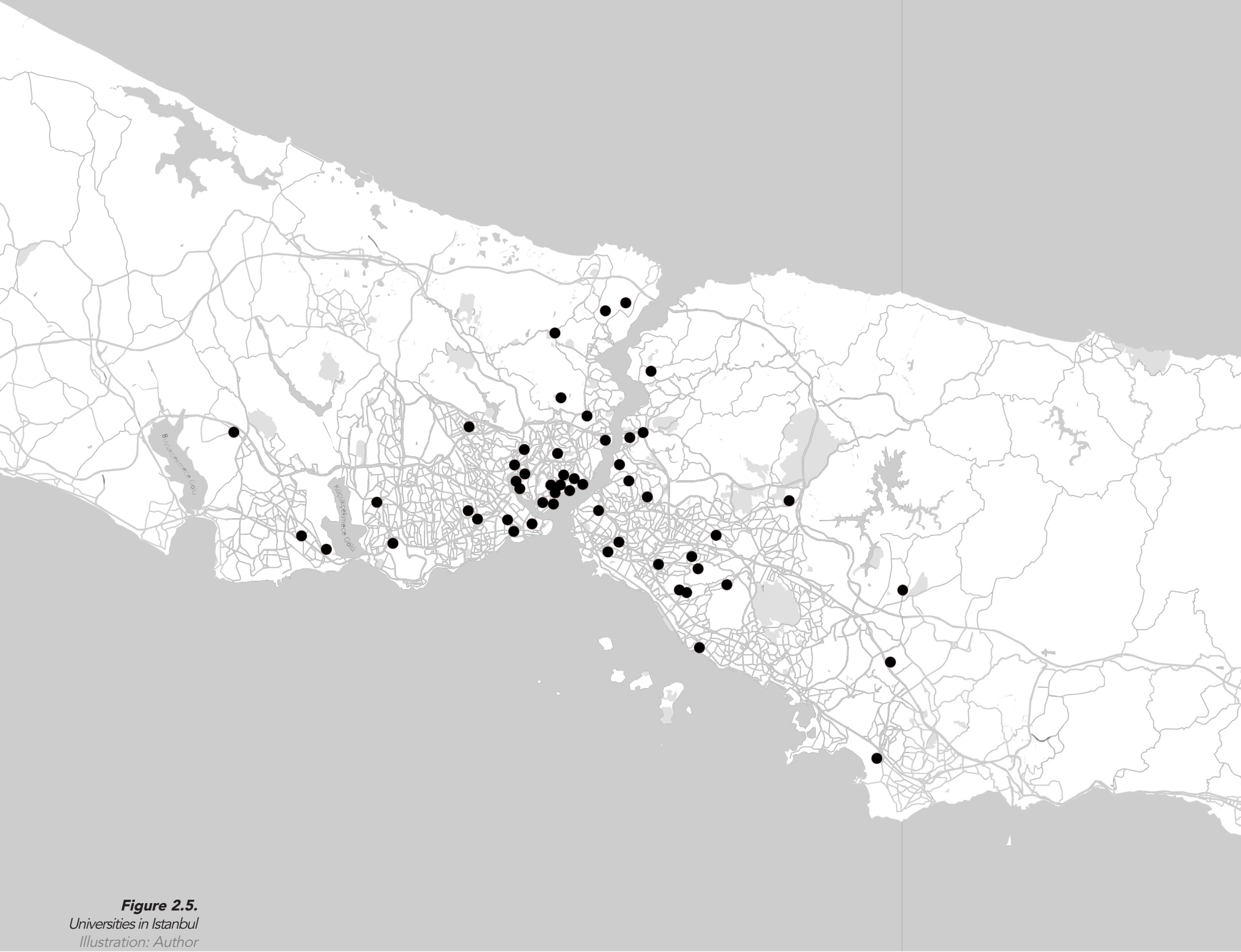
- Istanbul Vocational School of Health and Social Sciences
- Atasehir Adıgüzel Vocational School of Higher Education
- Istanbul Sisli Vocational School of Higher Education
- Faruk Saraç Design Vocational School of Higher Education
- Istanbul Kavram Vocational School of Higher Education

The list is taken from Republic of Turkey Governorship of Istanbul's official website under the title: *The City of Universities: Istanbul* (Republic of Turkey Governorship of Istanbul, 2019)

Additional information about educational institutions established after 2019 are taken from *Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları* (Yükseköğretim Bilgi Yönetim Sistemi, 2021)



# List of Universities in Istanbul



**Figure 2.5.**  
Universities in Istanbul  
Illustration: Author

In Turkey, higher education institutions have been united under the roof of The Council of Higher Education (YÖK) with Law No. 2547 in 1982. YÖK is a constitutional establishment that mainly focuses on the strategic planning and organization of the higher education institutions by issuing and maintaining the quality of said institutions. In addition, YÖK also is responsible for the selection of the students and academic staff of universities, academies, conservatories, and vocational higher schools. (YÖK Tarihçe, 2018)

Statistics of Students in Istanbul According to the Level of Education		
Associate Degree	Female	172.391
	Male	130.312
	Total	302.703
Bachelor's Degree	Female	488.605
	Male	374.651
	Total	863.256
Master's Degree	Female	46.535
	Male	45.116
	Total	91.651
PhD	Female	15.405
	Male	15.692
	Total	31.097
Total	Female	722.936
	Male	565.771
	Total	1.288.707

**Figure 2.6.**  
Table: Statistics of  
Students in Istanbul  
According to the Level  
of Education  
Source: Yükseköğretim  
Bilgi Yönetim Sistemi -  
Öğrenci Sayıları, 2021

According to the statistical data for the 2020-2021 educational year of YÖK, 1.288.707 students from different levels of education enrolled and continued their studies in Istanbul's 61 registered universities. (Yükseköğretim Bilgi Yönetim Sistemi, 2021)

Out of the total student population of Istanbul, 56,09% of the students are female.



Statistics of Enrolled Students in Foundation Universities in Istanbul					
University	Associate	Bachelor's	Master's	PhD	Total
Acıbadem M. Ali Aydınlar Uni.	1714	2646	278	144	4782
Altınbas University	1387	7219	2826	247	11679
Bahçeşehir University	1486	19830	5410	496	27222
Beykent University	10067	18914	1424	162	30567
Beykoz University	2656	1901	383	0	4940
Bezm-i Alem University	769	2453	109	80	3411
Biruni University	3448	6012	485	83	10028
Demiroğlu Science University	799	1986	31	7	2823
Doğuş University	3355	7017	316	77	10765
Fatih Sultan Mehmet University	969	5166	786	251	7172
Fenerbahçe University	447	1359	0	0	1806
Haliç University	1839	9506	1068	109	12522
Isık University	1370	5182	939	93	7584
Ibn Haldun University	0	707	620	151	1478
Istanbul Arel University	5428	4735	1802	242	12207
Istanbul Atlas University	325	552	27	0	904
Istanbul Aydın University	15283	17771	3991	347	37392
Istanbul Ayvansaray University	5455	1554	560	2	7571
Istanbul Bilgi University	4388	15891	1420	115	21814
Istanbul Esenyurt University	2502	3509	198	0	6209
Istanbul Galata University	225	457	0	0	682
Istanbul Gedik University	1794	2795	852	97	5538
Istanbul Gelisim University	13044	16103	2333	132	31612
Istanbul Kent University	986	2223	446	0	3655
Istanbul Kültür University	3755	10810	1204	168	15937
Istanbul Medipol University	12301	22958	1162	674	37095
Istanbul Okan University	3802	9822	2360	447	16431
Istanbul Rumeli University	2294	1719	658	0	4671
Istanbul Sabahattin Zaim Uni.	0	7873	2579	664	11116
Istanbul Health & Technology	194	380	0	0	574
Istanbul Commerce University	46	6472	2259	534	9311
Istanbul Yeni Yüzyıl University	2390	5363	930	58	8741
Istanbul 29 Mayıs University	0	1769	312	94	2175
Istinye University	3095	7082	396	3	10576
Kadir Has University	127	5035	513	241	5916
Koç University	0	7305	851	753	8909
Maltepe University	1654	8646	1301	335	11936
MEF University	0	3580	241	0	3821
Nisantasi University	8758	10985	1312	33	21088
Özyegin University	0	7455	707	205	8367
Piri Reis University	1697	3133	40	35	4905
Sabancı University	0	4156	777	381	5314
Üsküdar University	7512	12107	3132	216	22967
Yeditepe University	279	18178	2176	1133	21766

**Figure 2.7.**  
Table: Statistics of Enrolled Students in Foundation Universities in Istanbul According to the Level of Education  
Source: Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları, 2021

Statistics of Enrolled Students in State Universities in Istanbul					
University	Associate	Bachelor's	Master's	PhD	Total
Bogaziçi University	0	12766	2168	1045	15979
Galatasaray University	189	2595	1182	367	4333
Istanbul Medeniyet University	0	10127	1310	502	11939
Istanbul Technical University	0	25645	8082	3881	37608
Istanbul University	145319	382226	9703	5908	543156
Istanbul University - Cerrahpasa	8605	20177	2218	2255	33255
Marmara University	8586	50520	9290	4340	72736
Mimar Sinan Fine Arts University	305	8179	985	684	10153
Health Sciences University	5584	11190	614	651	18039
Turkish - German University	0	2711	231	29	2971
Yıldız Technical University	82	26804	6654	2626	36166

**Figure 2.8.**  
Table: Statistics of Enrolled Students in State Universities in Istanbul According to the Level of Education  
Source: Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları, 2021

Statistics of Enrolled Students in Foundation Vocational Schools in Istanbul					
Institution	Associate	Bachelor's	Master's	PhD	Total
Atasehir Adıgüzel Vocational School of Higher Education	1001	0	0	0	1001
Faruk Saraç Design Vocational School of Higher Education	328	0	0	0	328
Istanbul Kavram Vocational School of Higher Education	218	0	0	0	218
Istanbul Sisli Vocational School of Higher Education	4846	0	0	0	4846

**Figure 2.9.**  
Table: Statistics of Enrolled Students in Foundation Vocational Schools in Istanbul According to the Level of Education  
Source: Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları, 2021

Statistics of Enrolled Students in Higher Education Institutions in Istanbul					
	Associate	Bachelor's	Master's	PhD	Total
All Institutions Included: Vocational School of Higher Education and Universities	302703	863256	91651	31097	1288707

**Figure 2.10.**  
Table: Statistics of Enrolled Students in Istanbul According to the Level of Education  
Source: Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları, 2021

The statistics of enrolled students for the 2020 - 2021 educational year in Turkey according to YÖK state that there are,

- 3.114.623 students in associate level programs,
- 4.676.657 students in the bachelors level programs,
- 343.569 students in masters level programs,
- 106.148 students in Ph.D. level programs.

Considering the total of 8.240.997 students are studying in Turkey, 31,27% of them choose to study in Istanbul. (Yükseköğretim Bilgi Yönetim Sistemi, 2021) This statistic also shows that between 2019 and 2021, the percentage of students in Istanbul increased from 29,16% to 31,27%.



Statistics of New and Total Enrolled Students in Foundation Universities		
University	New Enrolled Students	Total Enrolled Students
Acıbadem M. Ali Aydınlar Uni.	1625	4782
Altınbas University	4177	11679
Bahçeşehir University	7076	27222
Beykent University	7326	30567
Beykoz University	1900	4940
Bezm-i Alem University	1009	3411
Biruni University	3383	10028
Demiroğlu Science University	784	2823
Doguş University	3354	10765
Fatih Sultan Mehmet University	1998	7172
Fenerbahçe University	1267	1806
Haliç University	3903	12522
Isık University	2082	7584
Ibn Haldun University	416	1478
Istanbul Arel University	3819	12207
Istanbul Atlas University	839	904
Istanbul Aydın University	11535	37392
Istanbul Ayrınsaray University	3752	7571
Istanbul Bilgi University	4297	21814
Istanbul Esenyurt University	1772	6209
Istanbul Galata University	653	682
Istanbul Gedik University	1715	5538
Istanbul Gelisim University	9802	31612
Istanbul Kent University	1714	3655
Istanbul Kültür University	3651	15937
Istanbul Medipol University	12289	37095
Istanbul Okan University	3846	16431
Istanbul Rumeli University	2322	4671
Istanbul Sabahattin Zaim Uni.	2843	11116
Istanbul Health & Technology	574	574
Istanbul Commerce University	2678	9311
Istanbul Yeni Yüzyıl University	2691	8741
Istanbul 29 Mayıs University	803	2175
Istinye University	3830	10576
Kadir Has University	1226	5916
Koç University	1820	8909
Maltepe University	3047	11936
MEF University	972	3821
Nisantasi University	7014	21088
Özyegin University	2082	8367
Piri Reis University	1298	4905
Sabancı University	1480	5314
Üsküdar University	7670	22967
Yeditepe University	4607	21766

**Figure 2.11.**  
Table: Statistics of New and Total Enrolled Students in Foundation Universities in Istanbul  
Source: Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları, 2021

Statistics of New and Total Enrolled Students in State Universities		
University	New Enrolled Students	Total Enrolled Students
Bogaziçi University	3378	15979
Galatasaray University	1244	4333
Istanbul Medeniyet University	3556	11939
Istanbul Technical University	7705	37608
Istanbul University	186695	543156
Istanbul University - Cerrahpasa	6959	33255
Marmara University	15306	72736
Mimar Sinan Fine Arts University	1721	10153
Health Sciences University	5967	18039
Turkish - German University	969	2971
Yıldız Technical University	10014	36166

**Figure 2.12.**  
Table: Statistics of New and Total Enrolled Students in State Universities in Istanbul  
Source: Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları, 2021

Statistics of New and Total Enrolled Students in Foundation Vocational Schools		
Institution	New Enrolled Students	Total Enrolled Students
Atasehir Adıgüzel Vocational School of Higher Education	231	1001
Faruk Saraç Design Vocational School of Higher Education	328	328
Istanbul Kavram Vocational School of Higher Education	0	218
Istanbul Sisli Vocational School of Higher Education	1676	4846

**Figure 2.13.**  
Table: Statistics of New and Total Enrolled Students in Foundation Vocational Schools in Istanbul  
Source: Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları, 2021

Statistics of New and Total Enrolled Students in All Higher Education Institutions		
	New Enrolled Students	Total Enrolled Students
All Institutions Included: Vocational School of Higher Education and Universities	392690	1288707

**Figure 2.14.**  
Table: Statistics of New and Total Enrolled Students in All Higher Education Institutions in Istanbul  
Source: Yükseköğretim Bilgi Yönetim Sistemi - Öğrenci Sayıları, 2021

According to YÖK's statistics of new and total enrolled students for the 2020 - 2021 educational year, 392.690 students got accepted to higher education institutions in Istanbul, where the total number of enrolled students in these higher education institutions is 1.288.707. (Yükseköğretim Bilgi Yönetim Sistemi, 2021)

The statistics indicate that almost

four hundred thousand students start their higher education in Istanbul every year.

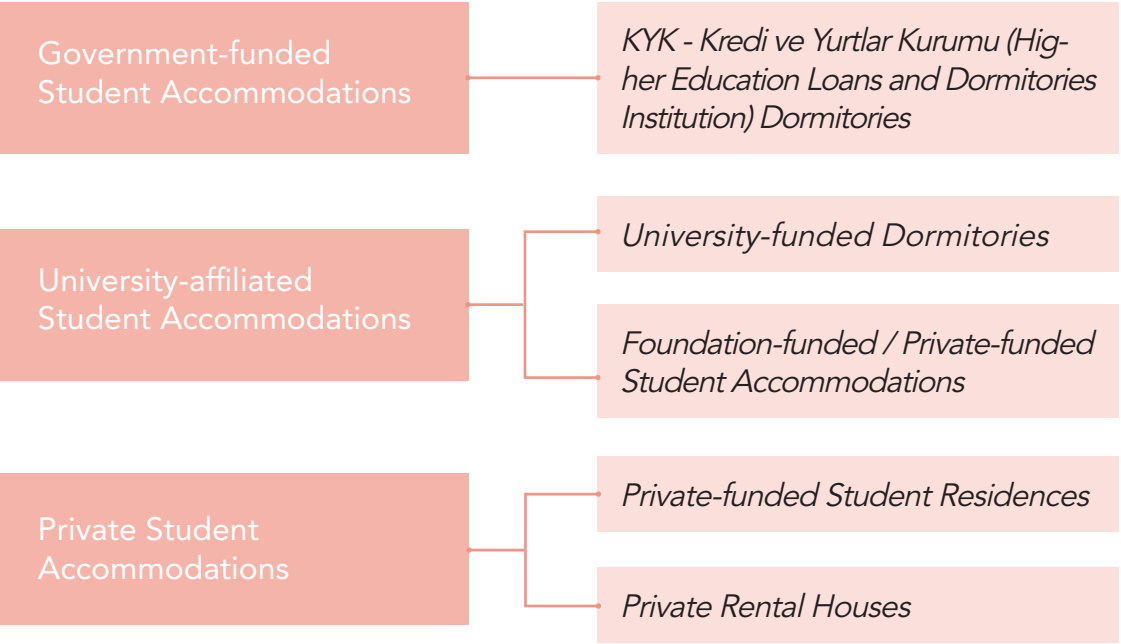
Out of this large number, some of the students' families may already reside in the city and they may not need to find new accommodation. In other cases, students' families may live in another city or live in the farther parts of Istanbul so a new accommodation is required.



## Housing Options for Students in Istanbul

Like other student cities in Europe, Istanbul offers a variety of options when it comes to the accommodation of students. The options may vary depending on the student's budget, proximity to the student's university, proximity to city centers, the overall price range of the selected neighborhood, etc.

For this thesis research analysis, student accommodation options are categorized according to their budget/funding. The division is made into three parts such as government-funded student accommodations, university-affiliated student accommodations, and private student residences.



As categorized above, it is an option to differentiate according to which institution or person the student accommodation is in. By this distinction, each accommodation option chooses among the candidate students within the framework of the rules it has determined on its own. Student dormitories within

the body of the state/government may have different selection criteria, while dormitories within the university may have other selection criteria. On the other hand, private dormitories and residences may have more flexible selection criteria and higher housing quality.

Article 50 of the Turkey's 1961 Constitution states that "The government provides the necessary assistance through scholarships and other means to enable successful students who lack financial means to reach the highest education degrees" In accordance with this provision, the Higher Education Loans and Dormitories Institution was established with Law No. 351, which entered into force on August 22, 1961. Under the Presidential Permit in 1970, the institution was related to the Ministry of Youth and Sports. (Kredi ve Yurtlar Genel Müdürlüğü, 2022)

As of 17.06.2021, the statistics of the General Directorate of Higher Education Loans and Dormitories Institution declare that 773 dormitories are located in the whole country with a 695.834-bed capacity. Interestingly, in total bed capacity, 264.488 beds are reserved for male students, whereas 431.346 beds are for females. It indicates that only 38,01% of students are male. (T.C. Ministry of National Education, 2021)

In Istanbul, 21 student dormitories are under KYK, with a bed capacity of 23.651. (T.C. Ministry of National Education, 2021)

Statistics of KYK Dormitories' Bed Capacities in Istanbul			
Dormitory Name	Female	Male	Total
1453 Student Dormitory	658	0	658
Akkadın Hacı Mustafa Tarman Female Dormitory	1082	0	1082
Anadolu Hisarı Dormitory	374	0	374
Atatürk Student Dormitory	3555	0	3555
Avclar - Atatürk Student Dormitory	348	0	348
Bahçeköy Student Dormitory	0	506	506
Edirnekapi Female Student Dormitory	284	0	284
Esenyurt Male Student Dormitory	0	400	400
Esenyurt Female Student Dormitory	506	0	506
Fatih Sultan Mehmet Student Dormitory	0	3240	3240
Florya - Besyol Student Dormitory	1205	0	1205
Kadirga Male Student Dormitory	0	723	723
Kanuni Sultan Süleyman Student Dormitory	0	2492	2492
Mahir İz Student Dormitory	0	500	500
Mimar Sinan Student Dormitory	0	4104	4104
Sadabad Student Dormitory	752	0	752
Vali Muammer Güler Student Dormitory	286	0	286
Vezneciler Student Dormitory	1000	0	1000
Çemberlitas Student Dormitory	790	0	790
Iyımaya Student Dormitory	648	0	648
Sisli Male Student Dormitory	0	198	198
Total	11488	12163	23651

**Figure 2.15.**  
Table: Statistics of KYK Dormitories' Bed Capacities in Istanbul  
Source: T.C. Ministry of National Education' Publication of National Education Statistics of Formal Education, 2021



## Application Requirements for KYK Dormitories

Dormitory applications of preparatory, first-year, and intermediate-class students who are entitled to enter a higher education program for the first time by taking the State Higher Education Institutions Exam (YKS); After the exam results are announced by the Student Selection and Placement Center, done through government's online database. Even though every student who took the State Exam to enter a university can apply for KYK dormitories or scholarships, there is a priority list that the Ministry follows. Some of the priority reasons are:

- Being a war martyr's spouse, child, or single sibling
- Being a war veteran's spouse, child, or single sibling
- Being 40% or more disabled
- Having completed the high school in orphanages affiliated with the Ministry of Family and Social Services
- Being under the state protection by law

- Being graduated from Darüssa-faka High School (a boarding high school for students who have lost one or both parents)
- Having the national athlete certificate from the Ministry of Youth and Sports
- Having a parent who worked as volunteer security guards, died while working, or retired

In order to be eligible for a dorm room, it is stated on Higher Education Loans and Dormitories Institution' Official website that the student's family home must be located outside Istanbul borders (for the students who attend universities in Istanbul). The student also has to have a clean criminal record and has to prove that they have no mental illness records. Another obligation is that the student should be unemployed or employed with a salary that's equal to minimum wage or lower, which indicates that part or full-time working while studying is not possible for said students. The candidate student has to be under 35 years old.



**Figure 2.16.**

A dorm room in Sisli Male Student Dormitory of KYK  
Source: kykyurtlar.com

As stated in Erol Kavuncu's "Student-Dormitory Services and Housing Problem in Universities in Turkey" article, for a long period, KYK dormitories were known as places where dozens of people lived together in small rooms, and they did not prefer KYK accommodations unless they have no other options left.

But according to Kavuncu, who is also a KYK dormitory manager, serious breakthroughs and investments made in recent years to modernize facilities and increase quality. (Kavuncu, 2014)

According to a study titled "The relationship between student's reasons for living in dormitories of Credit and Dormitories institutions and their satisfaction levels" by Erkan Hasan Atalmıs and Gülse-da Kırisci, there are many reasons why students choose to apply for KYK dormitories. The research and interviews that have been done about the subject show the primary reason is that students find KYK dormitories safer than alternative accommodation options. (Kırisci & Atalmıs, 2017) The other reasons and students' answers are listed below:

Reasons and Levels of Students' Accommodation in KYK Dormitories			
Students' Reasons:	Average	Level	Satisfaction
The dormitory is safer	4.13	I Agree	Satisfied
I can spend more time on my studies because there are no chores such as cleaning, food preparation, etc.	4.13	I Agree	Satisfied
The attractiveness of the opportunities provided by the dormitory	4.00	I Agree	Satisfied
My family wants me to stay in a government dormitory	3.86	I Agree	Satisfied
Dorm life is more disciplined	3.56	I Agree	Satisfied
Educational, social, cultural, and sports activities organized in the dormitory	3.41	I Agree	Satisfied
KYK Dormitory is financially viable	3.40	Undecided	Partially Satisfied
Most of my friends live in the dormitory	2.92	Undecided	Partially Satisfied
The dormitory is close to my school	2.66	Undecided	Partially Satisfied

**Figure 2.17.**  
Table: Reasons and Levels of Students' Accommodation in KYK Dormitories  
Source: Kırisci and Atalmıs, Dergipark

On a 5-point Likert scale, the lowest answer is 1 (strongly disagree) since the highest is 5 (strongly agree). The range of 1-1.80 is determined to be "strongly disagree", 1.81-2.60 "disagree", 2.61-3.40 "undecided", between 3.41-4.20 is accepted as "agree" and between 4.21-5.00 as "strongly agree".

In the current study about satisfaction, the range of 1-1.80 is "not satisfied at all", 1.81-2.60 is "not satisfied", 2.61-3.40 "partially satisfied", and 3.41-4.20 "satisfied" and 4.21-5.00 is considered "quite satisfied".

The satisfaction level of the students in the KYK dormitories was calculated as 3.18. In this study, the value found falls within the range is "I am partially satisfied".



University-affiliated Student Accommodations

University dormitories are organizations, that provide solutions for accommodation, nutrition, and other problems for students on the campuses of universities with their own budgets. The number of dormitories has been increasing rapidly in recent years. The students whose families do not reside in the cities they study in are sheltered. Middle East Technical University's, Hacettepe University's and Bogaziçi University's dormitories are the first university dormitories opened in Turkey. (Kavuncu, 2014)

In university dormitories, students generally have accommodation, food, a canteen, and study halls. But issues related to health facilities, sports facilities, libraries, guidance, etc. are addressed within the campus.(Kavuncu, 2014)

The financing of these places is from the fees, dues, and canteen incomes collected from the students. Due to the rapid increase of universities in recent years, students are having trouble finding accommodation in KYK dormitories. As a second choice university dormitories are high in demand for

the students who have to be careful with their budgeting. Since the fees of university dormitories are similar to those of private dormitories, this search/preference deepens the problem rather than being a solution to the housing problem. (Kavuncu, 2014)

The determination of the students who are eligible for the accommodation may vary according to each university or university-affiliated dormitory. State-owned universities generally have the determination system that KYK dormitories use. Similar to KYK, an online application process concludes the candidates by prioritizing them in accordance with their qualifications. (ITU Burslar ve Yurtlar Koordinatörlüğü, 2022)

When the facilities are compared, KYK dormitories and state-owned dormitories bear quite a resemblance, thus making it affordable and preferable for students with low budgets. As for foundation-owned university dormitories, options are wider. These dormitories are more similar to private student residences than KYK dormitories.

Private Student Accommodations

Private dormitories are organizations that prioritize individuals' profit and have no connection to the government or any universities. These dormitories provide accommodation, meals, and study rooms. State-owned KYK dormitories are cheaper compared to private dormitories. The prices of university dormitories vary according to region and universities. Private dormitories or private student residences are generally commercial establishments that increase their prices daily. The market economy sees the student as a customer and private dor-

mitory enterprises have become a favorite area. (Kavuncu, 2014)

When university dormitories and KYK dormitories are not accommodation options for students, private student residences are the only option left. There are advantages and disadvantages to be considered if private residences to government/university-owned dormitories are compared. Since every student's criteria for choosing accommodation is subjective, the decision of which option is more advantageous also changes according to the priority of each student.

Comparison of Housing Options for Students

	KYK Dormitories	State University Dormitories	Foundation University Dormitories	Private Student Residences	Private Rentals
Prices	<b>cheapest</b> option (230-390tl)	<b>2nd cheapest</b> option (485-1.715tl)	<b>expensive</b> (9.100-33.500tl for özyegin dorns)	<b>most expensive</b> (9.000-68.000tl)	<b>Variable</b>
Closeness to Universities	Disadvantageous	Advantageous	Advantageous	Advantageous	Variable
Choosing Roommates	Disadvantageous	Disadvantageous	Advantageous	Advantageous	Advantageous
Common Spaces	Disadvantageous	Disadvantageous	Advantageous	Advantageous	Advantageous
Room Facilities	Disadvantageous	Disadvantageous	Advantageous	Advantageous	Advantageous
Entry Hours	Inflexible	Inflexible	Inflexible	Flexible	Flexible
Cleaning	Advantageous	Advantageous	Advantageous	Advantageous	Disadvantageous
Study Spaces	Advantageous	Advantageous	Advantageous	Advantageous	Advantageous
Meals	Advantageous	Advantageous	Advantageous	Advantageous	Disadvantageous
Maximum Occupancy	6 student per room	4 student per room	3-4 student per room	3-4 student per room	Variable

The data is collected from Ilgaz Park's comparison from "KYK Devlet Yurdu ve Özel Öğrenci Yurdu Arasındaki Farklar" (Park, 2021) and T24 Independent Online Newspaper's "Öğrenci Evi mi Öğrenci Yurdu Mu?" (T24 , 2021) article. KYK Dormitories' prices are collected from "KYK Yurt Ücreti ve Depozito 2021-2022" (Basarı Sıralamaları, 2021), Istanbul Technical University's prices are from ITU Scholarships and Dormitories Coordinator's (ITU Burslar ve Yurtlar Koordinatörlüğü, 2021) official website. The pricing for private residences are taken from YeniSafak Newspaper (Piri Medya, 2021).

Figure 2.18. Istanbul Technical University Binali Yıldırım Male Student Dormitory Photo: ITU Burslar ve Yurtlar Koordinatörlüğü



Figure 2.19. KYK Ankara Yenisehir Student Dormitory Photo: kykyurtlar.com



# CHAPTER TWO

## **ANALYSIS** URBAN ANALYSIS



**Figure 2.20.**  
Istanbul Metropolitan  
Municipality Panoramic  
Maps - Atasehir South  
Source: panorama.istanbul



**Figure 2.21.**  
Istanbul Metropolitan  
Municipality Panoramic  
Maps - Atasehir South  
Source: panorama.istanbul



**Figure 2.22.**  
Istanbul Metropolitan  
Municipality Panoramic  
Maps - Atasehir South  
Source: panorama.istanbul



## Site History: İçerenköy

The project site is located in the İçerenköy Neighborhood within the boundaries of the Municipality of Atasehir. The district of Atasehir is a new district that was established on March 6, 2008, with Law No. 5747 on Establishing a District within the boundaries of the Metropolitan Municipality. Seven neighborhoods from Kadıköy, three neighborhoods from Üsküdar, and a neighborhood from Kartal were added to Atasehir when the boundary of the district was being decided. Thus, making Atasehir a municipality that has 17 neighborhoods within its borders. (T.C. Atasehir Kaymakamlığı, 2022)

Before 2008, İçerenköy Neighborhood was in Kadıköy District. Kadıköy's history dates back thousands of years. So much so that the civilization designed before Christ lived in this way. B.C. Born in 1000, where the Phoenicians existed under the name of Harhadon in Fikirtepe. The city of Chalcedon (Kadıköy) was a stopped city founded by the Phoenicians to provide access to the colonies on the Black Sea. The year 675 BC is considered the first establishment date of the district. (Kadıköy Kaymakamlığı Bilgi İşlem Sefliği, 2022)

Moda Cape and Yogurtçu in Halkedon, namely Chalcedon are also located here. Chalcedon was famous for its Temple of Apollo. The city became so powerful that it spread from Kadıköy to İzmit and became a country called Chalcedonian. Chalcedon changed hands time and time again, like Persians, Bithynians, Romans, Byzantines, Arabs, Crusaders, and Turks passed through the area, which was badly damaged during the Fourth Crusade and came into Ottoman hands in 1353, a full century before Constantinople. Because of this, Kadıköy has the oldest mosque in Istanbul, built almost a century before the conquest of Constantinople in 1453.

At the time of the conquest, Chalcedon was a rural settlement outside the protection of the city. It was soon put under the jurisdiction of the Constantinople courts, hence the name Kadıköy, which means Village of the Judge. In the Ottoman period, Kadıköy became a popular market for agricultural goods and in time developed into a residential area for people who would commute to the city by boat. (Tongar, 2017)



When Mehmed the 2nd conquered Istanbul in the year 1453, Kadıköy was no more than a town gathered around a marketplace which exists today, in the form that is no bigger than a village.

The majority of the population living in Kadıköy were poor Roman Greeks and the Turkish population didn't increase even after the conquest. The district was used by high-level military officials who had summer houses there. Other than summer houses, Kadıköy had lots of recreational areas.

In the 18th century, while the Greek population who earned their living by fishing chose seaside regions, the Turkish population who earned their living on vineyard agriculture chose inner regions such as Erenköy. For both Greeks and Turks recreational areas like Haydarpaşa, Kusbili, Yagurtcu, and Moda were very popular. (Kadıköy Kaymakamlığı Bilgi Islem Sefligi, 2022)

It can be said that Kadıköy was one of the most developed districts of Istanbul on the eve of the foundation of the Republic. Kadıköy had a very colorful population structure that continued more or less until the Republic. Kadıköy was connected to

Üsküdar Sanjak, which was a larger and more important center at that time, in 1869.

Kadıköy, which was a part of Üsküdar for a long time, became a district on September 1, 1930. At this date, Kadıköy had two subdivisions, Kızıltoprak and Erenköy.

The transformation of this spatial structure, which forms the unique character of Kadıköy, mainly takes place in the 1960s. After the 1960s, with the concentration of trade and service sectors in Kadıköy, the district turned into a second-level metropolitan sub-center after first-level centers such as Sirkeci-Eminönü-Karaköy-Beyoglu and lost its old district center characteristics.

Various arrangements were made in the 1980s, and projects that are now called the characteristic features of Kadıköy begin to materialize. These can often be counted as filling the coastline and opening coastal roads.

Throughout its history, Kadıköy has been one of the most important districts of Istanbul in terms of population size, economic activity, and development. (Kadıköy Kaymakamlığı Bilgi Islem Sefligi, 2022)



**Figure 2.24.**  
Archive photo of İçerenköy Meydanı, date unknown  
Source: Erkin Ataç, pinterest.com

While the first human settlements around Istanbul emerged between 3000-5000 BC, the discovery of stone-age hand axes in İçerenköy takes the history of this region centuries ago. The following information is available in the Ottoman records of the State Archives for this date: "Orhan Gazi defeated Byzantine King Andronicus III in Kartal-Cevizlik and marched to Üsküdar. One of their commanders in the region, Konuralp, also visited Aydos Castle and Ayazma Village on the western skirts of Kayisdagi. (now İçerenköy) and merged with Orhan Bey in Üsküdar. Today's İçerenköy was the settlement of the Christian community at that time. The church whose ruins can be found today is the only place of worship in the region. There were also very large vineyards, a bath, and a cistern. (Atasav, 2013)

When the region passed into the hands of the Turks, the people brought from Anatolia were settled in the region, especially in Merdivenköy. Warrior clergy from Geyik-

li Baba's students such as Gözcü Baba, Eren Baba, Kartal Baba, Ali Gazi, Sarı Gazi, and hundreds of their followers were settled in Christian villages. These warriors were uniting with the Greeks to protect themselves from pirate raids. This is how Tekkebag Village was established in 1335. The only problem in the village was the scarcity of water. This region was under the rule of Eren Baba and Ali Gazi. After 1465, the region began to be called Erenköy.

After 1639, when Kayisdagi water was brought to current Erenköy with pipes, the people of Karaman Farm and Tekkebag migrated to Erenköy. In 1872, the railway crossed the west of the region, and the station was built. The name of Erenköy was given to the current area with the suggestion of the line commander, Transport Captain Ali Bey.

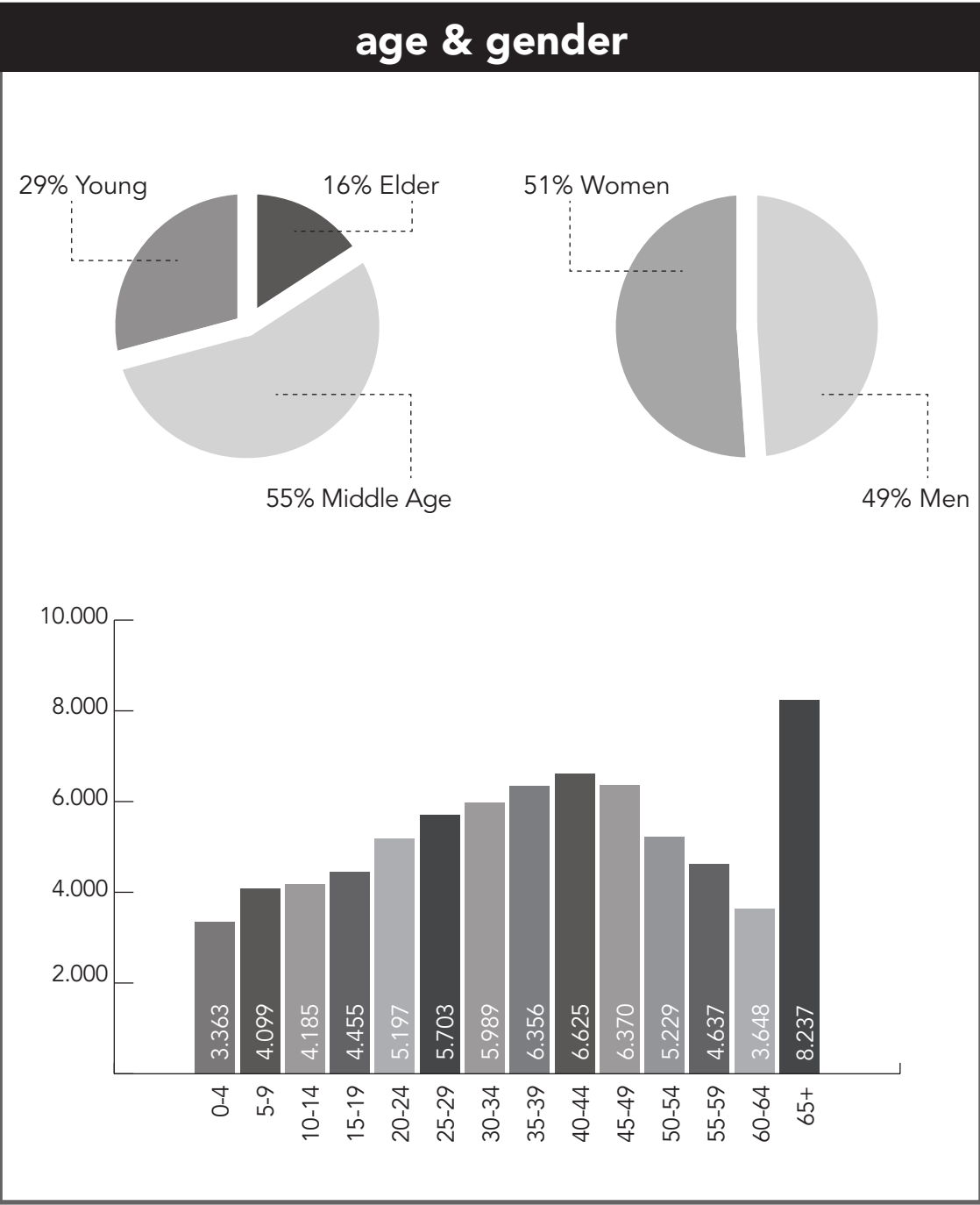
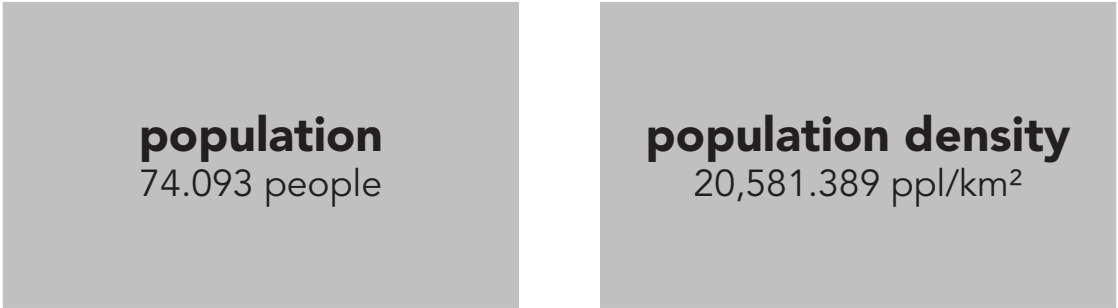
Since the original Erenköy remained inside, the neighborhood took the name İçerenköy." (Atasav, 2013)



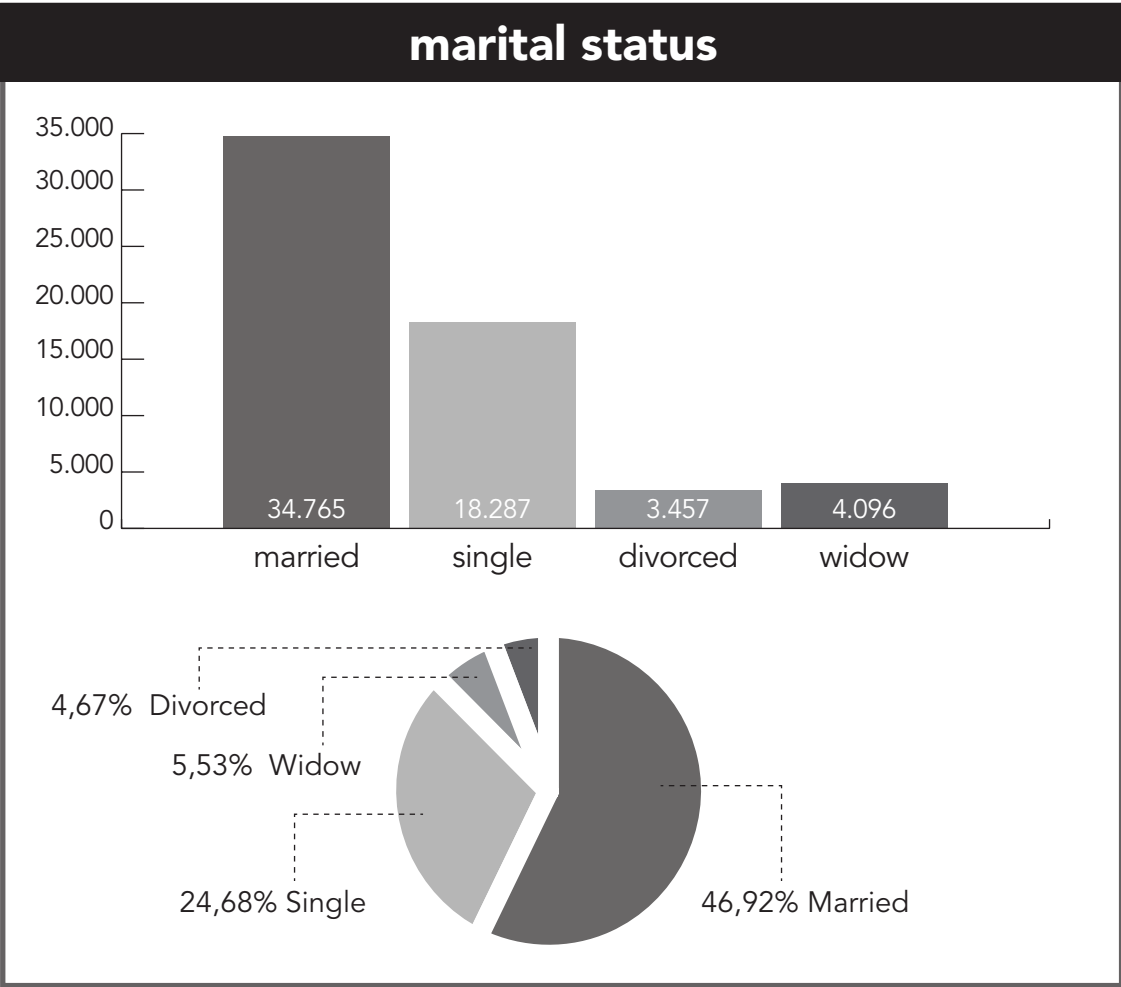
**Figure 2.23.**  
Archive photo of İçerenköy with Bostancı and Islands view in 1939  
Source: kadikoybostanci.com



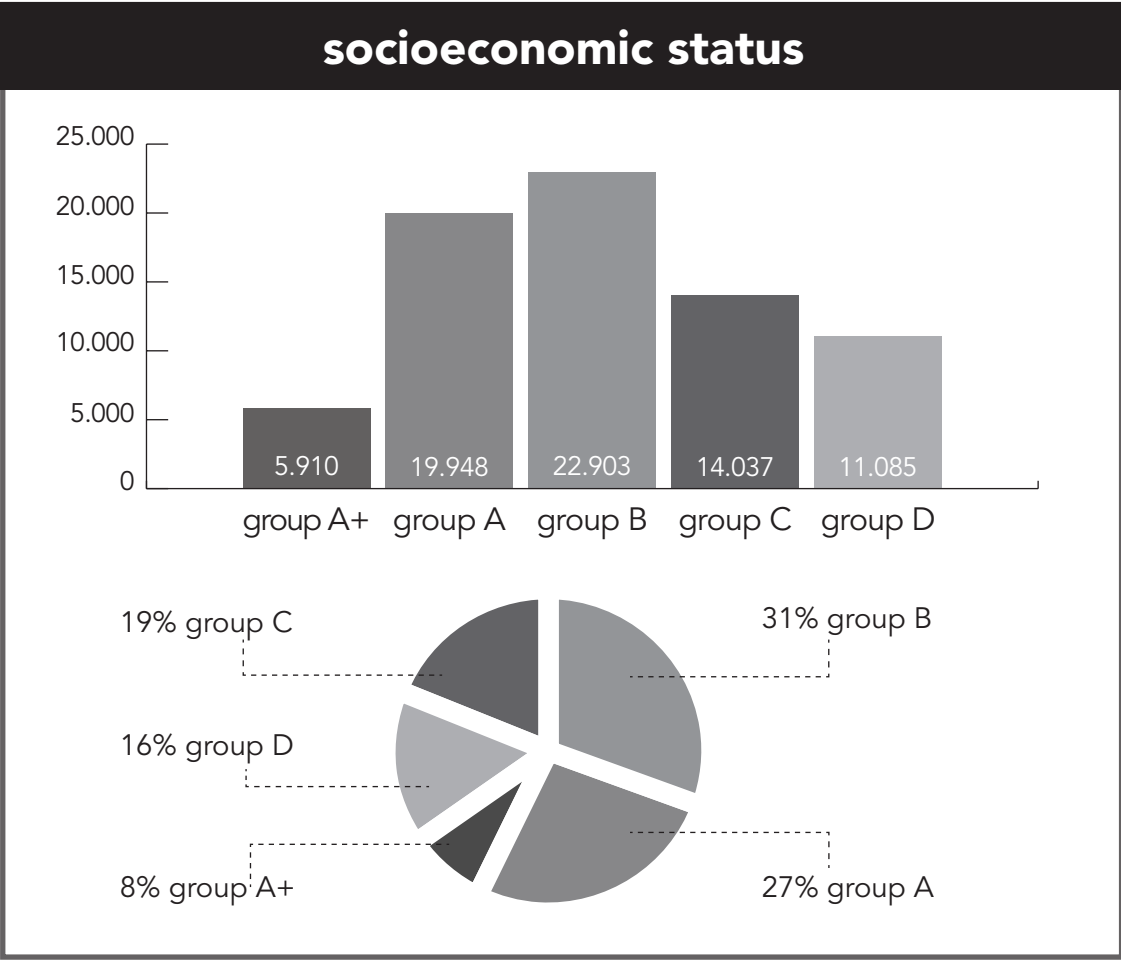
Demographic Data of İçerenköy Neighborhood



All data is collected from Turkish Statistical Institute's "Adrese Dayalı Nüfus Kayıt Sonuçları" News Letter that has been published on 4th of February 2022, Number 45500. (Türkiye İstatistik Kurumu, 2021)



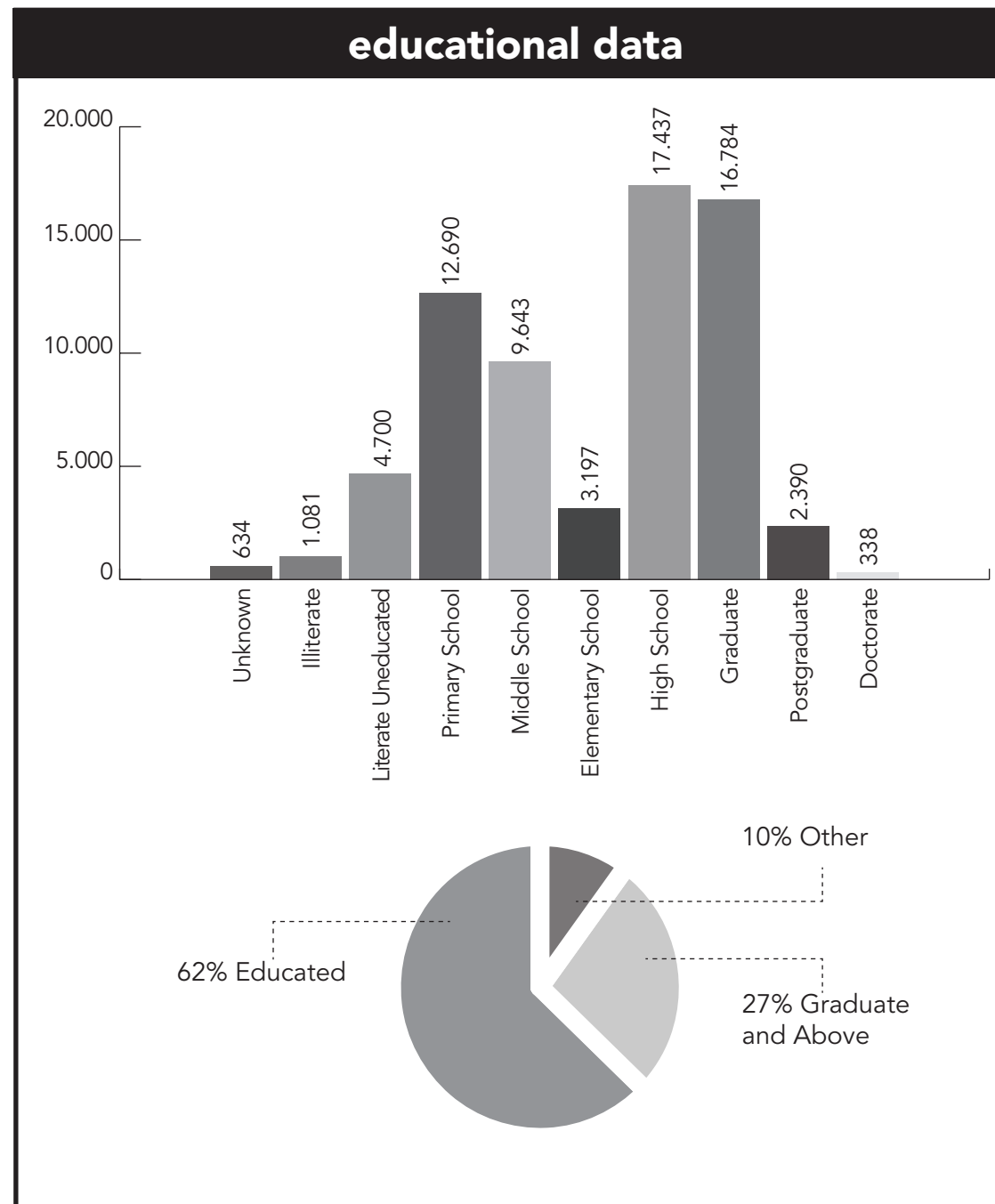
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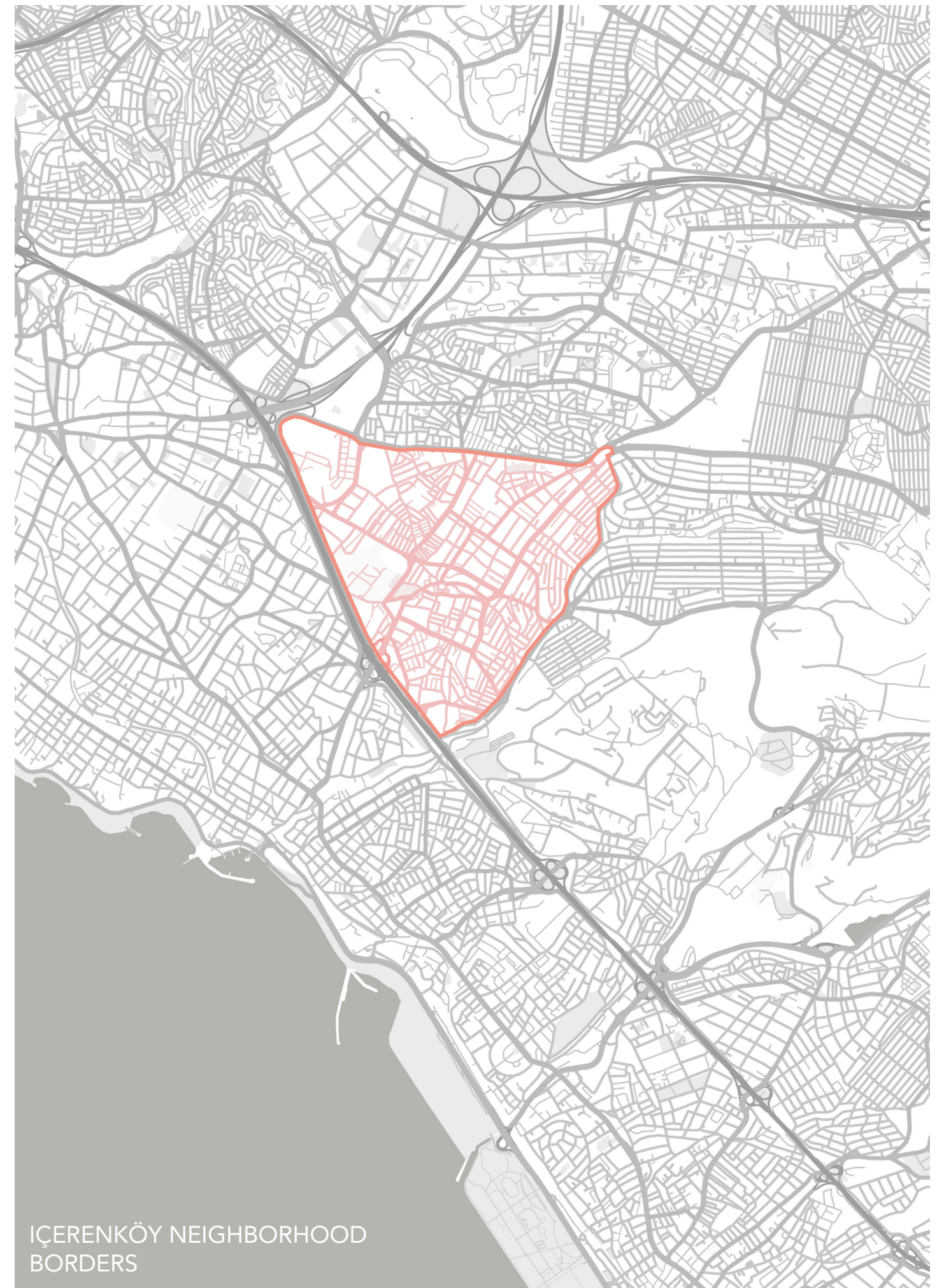
All data is collected from Turkish Statistical Institute's "Adrese Dayalı Nüfus Kayıt Sonuçları" News Letter that has been published on 4th of February 2022, Number 45500. (Türkiye İstatistik Kurumu, 2021)



According to the Turkish Statistical Institute's statistical data, the Içerenköy is Istanbul's second, Turkey's fourth-most crowded neighborhood. The majority of locals are middle-aged (55%) and young (29%). Approximately 47% of the locals are married and 25% are single. (Türkiye İstatistik Kurumu, 2021) This data indicates that the neighborhood has a considerable number of families and students. Another important statistic that signifies this conclusion is the percentage of students who attend primary, middle,

elementary, and high schools. Therefore, it can be deduced that there are many families with children living in Içerenköy, due to the high number of underage students.

Based on Turkish Statistical Institute data, locals who obtained higher education degrees are high whereas illiterate locals are significantly low. The data also show that the socioeconomic situation of residents is above average. 66% of the residents are in group A+B. (Türkiye İstatistik Kurumu, 2021)



İÇERENKÖY NEIGHBORHOOD BORDERS



## Site Analyses

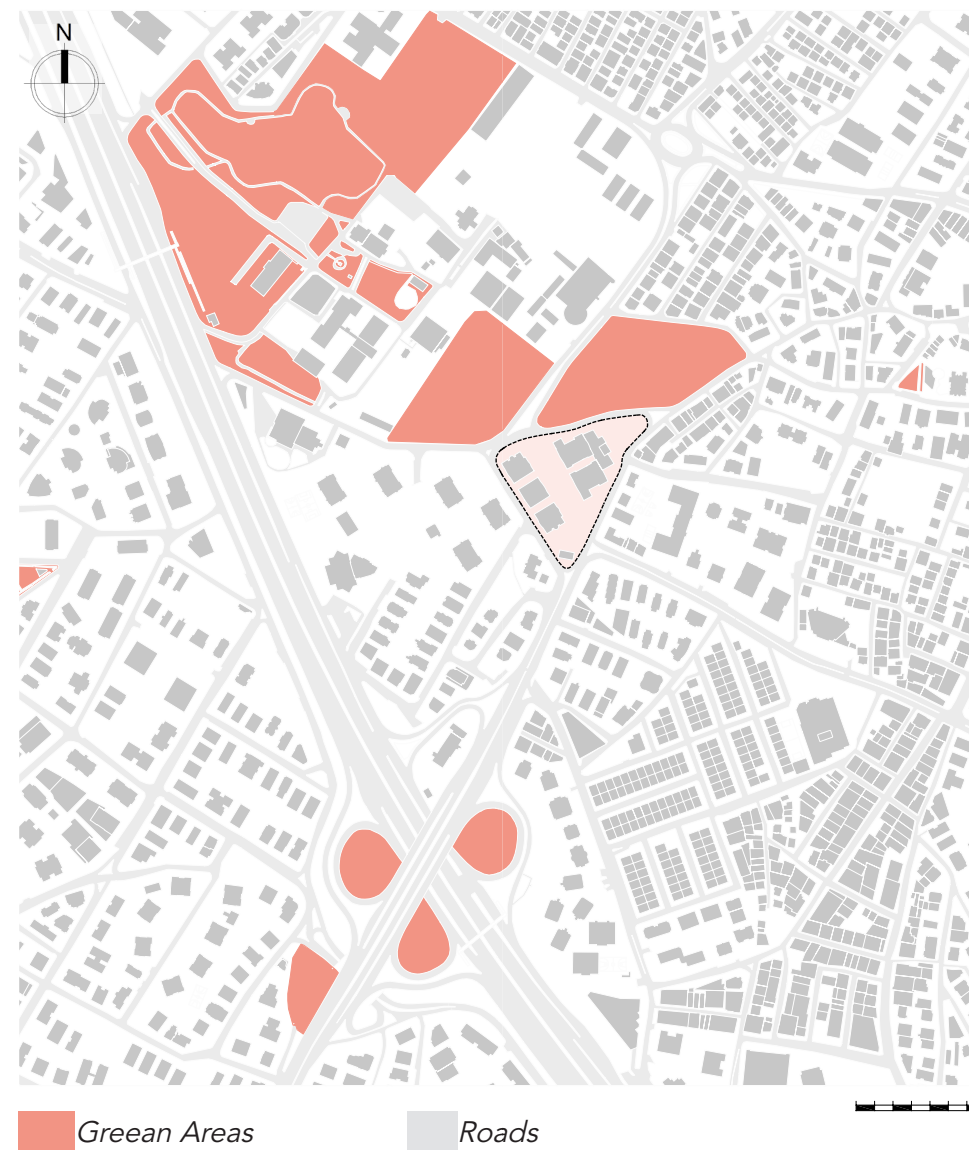
### Occupancy - Void Analysis



**Figure 2.25.**  
Occupancy - Void Analysis  
on Atasehir District,  
Icerenköy Neighborhood  
Municipality Plans  
Source: Municipality of  
Atasehir, Planning and  
Project Directorate

The occupancy-void analysis is the type of analysis obtained by coloring the buildings with black, regardless of their function or the number of occupants they may have. This analysis helps to explain the occupancy rate of the project area and its surroundings with buildings, which is a limited part of the Içerenköy Neighborhood. According to the results of the analysis, there are small-scale settlements as well as large-scale settlements near the site selected for the project. In addition to this, there are also areas with no visible settlements.

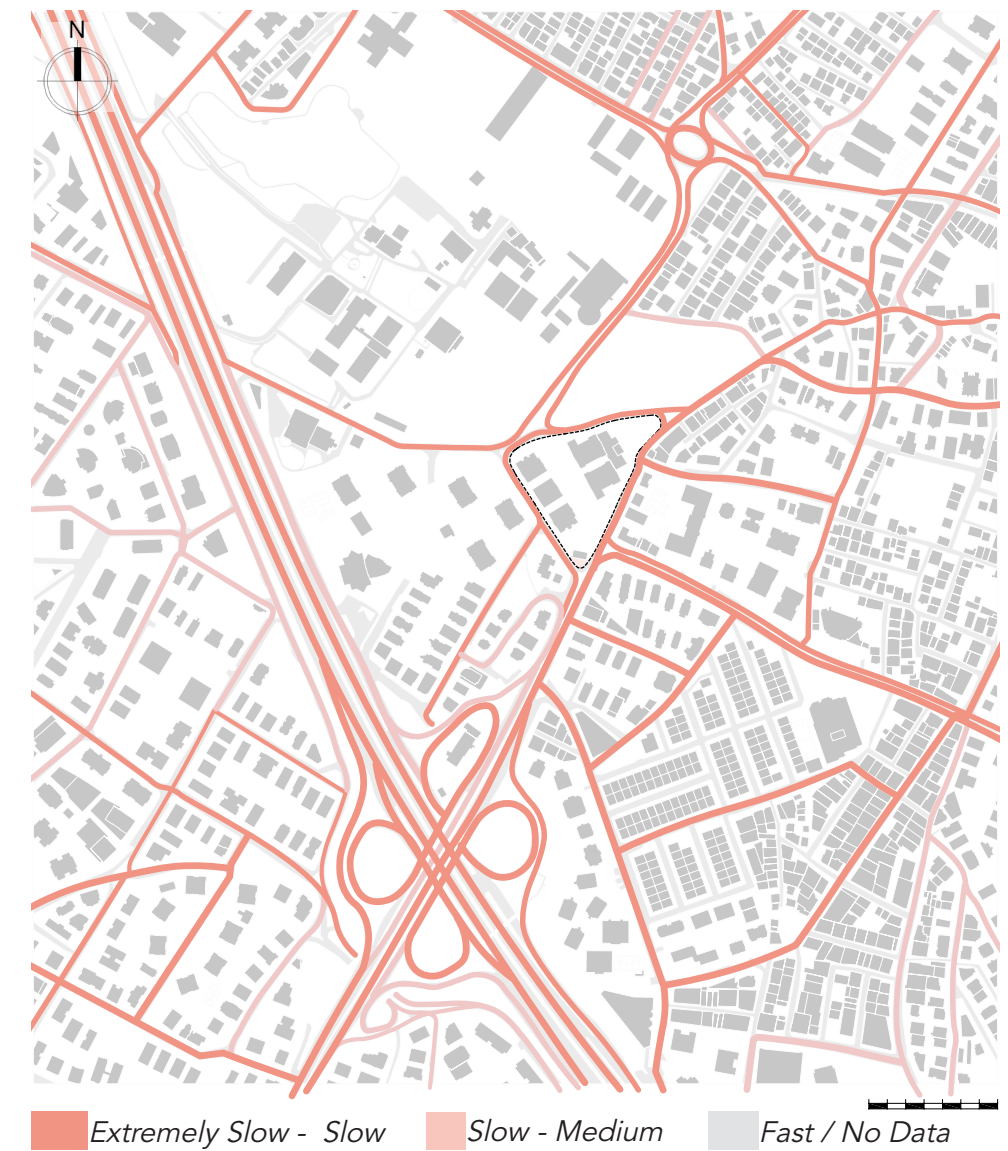
### Green Area Analysis



**Figure 2.26.**  
Green Area Analysis on  
Atasehir District,  
Icerenköy Neighborhood  
Municipality Plans  
Source: Municipality of  
Atasehir, Planning and  
Project Directorate

Green Area Analysis is carried out to examine the green areas in a limited part of the Içerenköy Neighborhood near the project site. The green areas shown in the master plans drawn by Istanbul Metropolitan Municipality's Department of Urban Planning were taken as the main source. Whereas green areas open to public use on google maps are also marked. For example, the park section of Fatih Sultan Mehmet State Hospital is a green area open to the public, but it is not specified in the Master Plan of Istanbul Metropolitan Municipality. According to the analysis, it can be concluded that the green area around the project site is not sufficient for this part of the neighborhood.

### Traffic Analysis



**Figure 2.27.**  
Traffic Analysis on  
Atasehir District,  
Icerenköy Neighborhood  
Municipality Plans  
Source: Municipality of  
Atasehir, Planning and  
Project Directorate

The traffic information in this analysis is obtained at 9:00 am on Monday, which is a typical traffic hour for the region. During these hours, which can be defined as the time to go to work and school, the traffic speed in the project and its surrounding area is extra slow. This area at the junction of the e-5 highway with the Atasehir and Maltepe districts suffers from traffic problems. Almost all main roads in the limited area analyzed in the analysis are heavy in traffic.



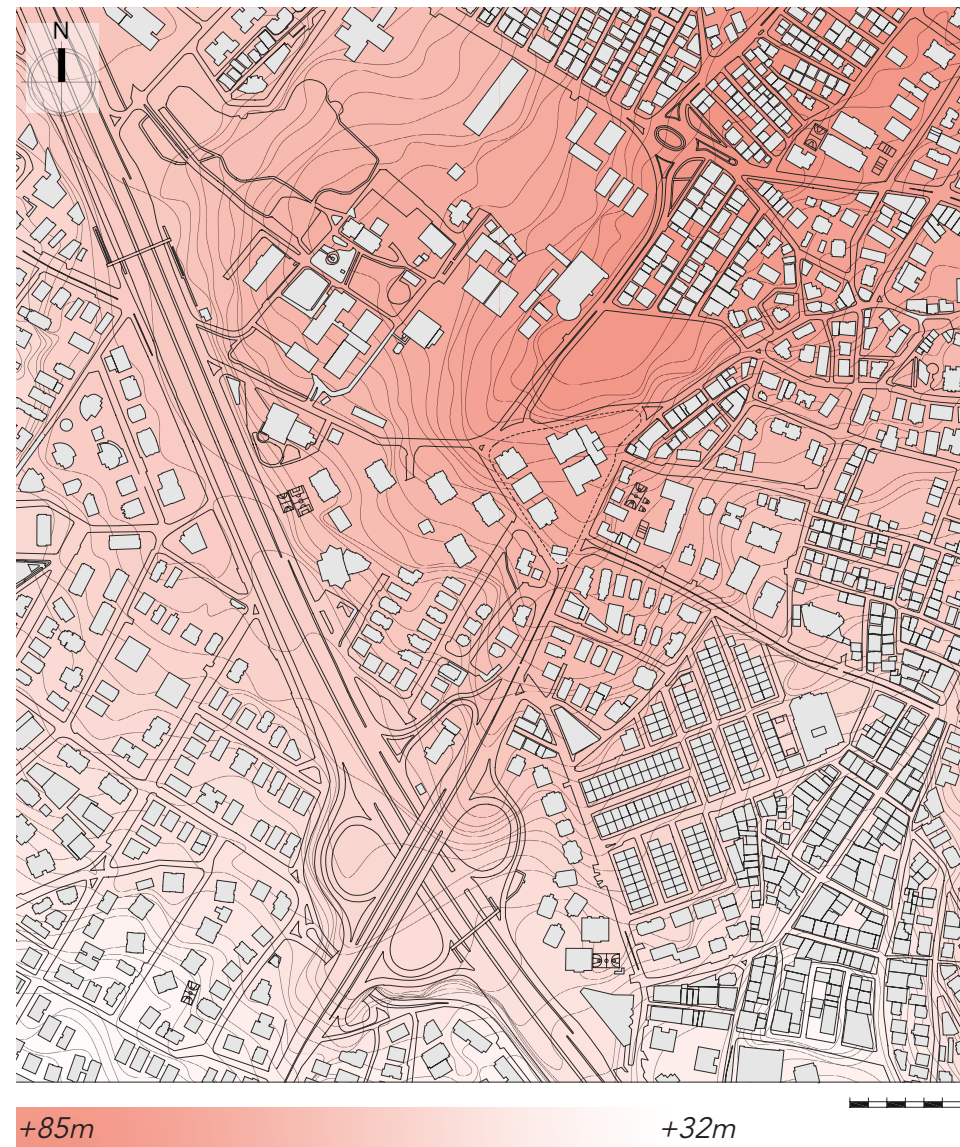
## Building Heights Analysis



**Figure 2.28.**  
Building Heights Analysis  
on Atasehir District,  
Içerenköy Neighborhood  
Municipality Plans  
Source: Municipality of  
Atasehir, Planning and  
Project Directorate

Building Heights analysis is carried out to compare the heights of the buildings in the project area and the surrounding area around it. According to the analysis, there are buildings with less than five floors as well as buildings with a height of more than fifteen floors in the neighborhood. It is deducible that low-rise buildings are concentrated in specific streets, and that the majority of the buildings are between 5-9 floors. Another assumption from the analysis is that most high-rise buildings (more than 15 floors) are located on the main axes.

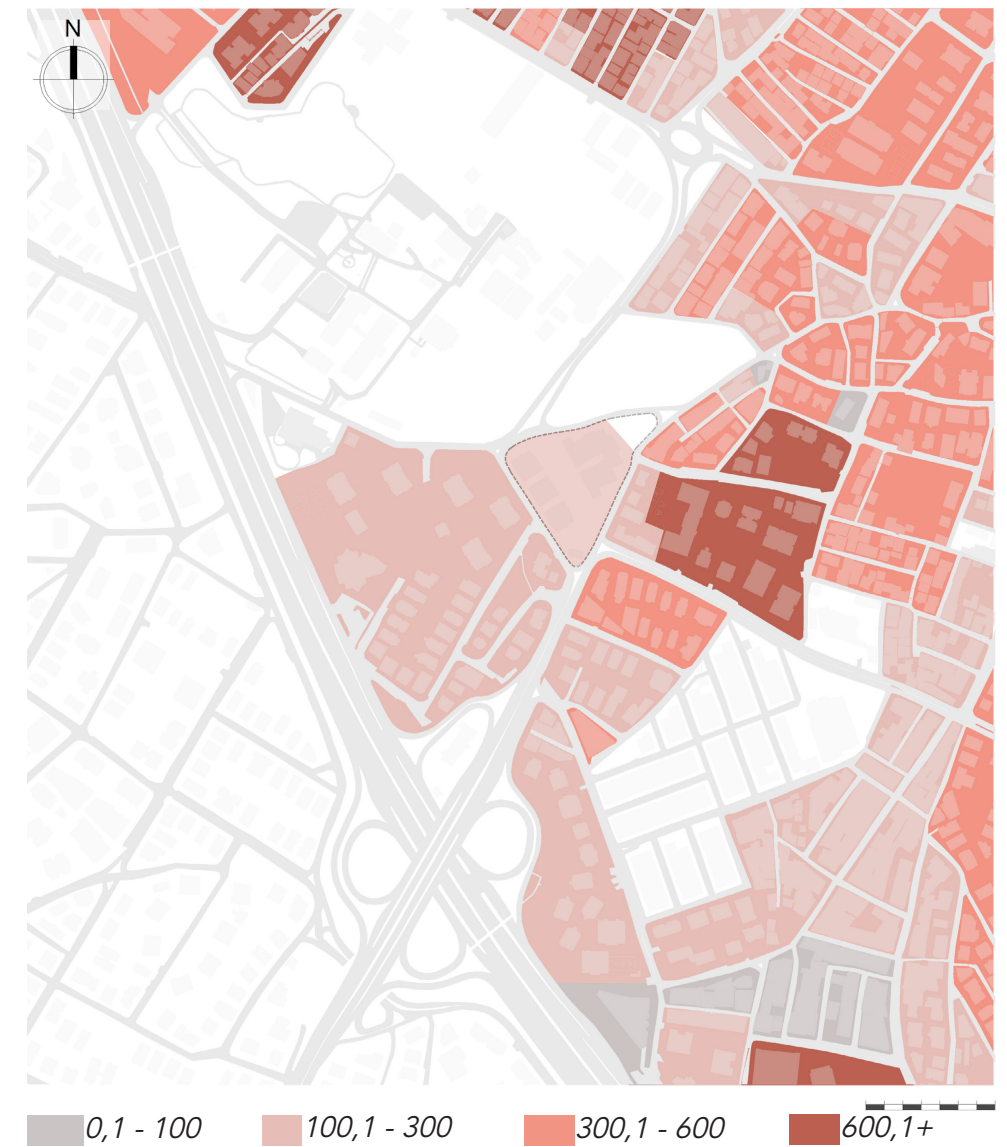
## Topography Analysis



**Figure 2.29.**  
Topography Analysis on  
Atasehir District,  
Içerenköy Neighborhood  
Municipality Plans  
Source: Municipality of  
Atasehir, Planning and  
Project Directorate

The İçerenköy neighborhood rises from +32m to +85m in the southwest-northeast direction. Accordingly, the slope in the project area is around 3%. Nine one-meter isohypse lines pass through the project site. Therefore, the difference between the most southwestern point and the most northeastern note is 9 meters. The lowest elevation is 72 meters on the project site. (Şehir Planlama Müdürlüğü, 2022)

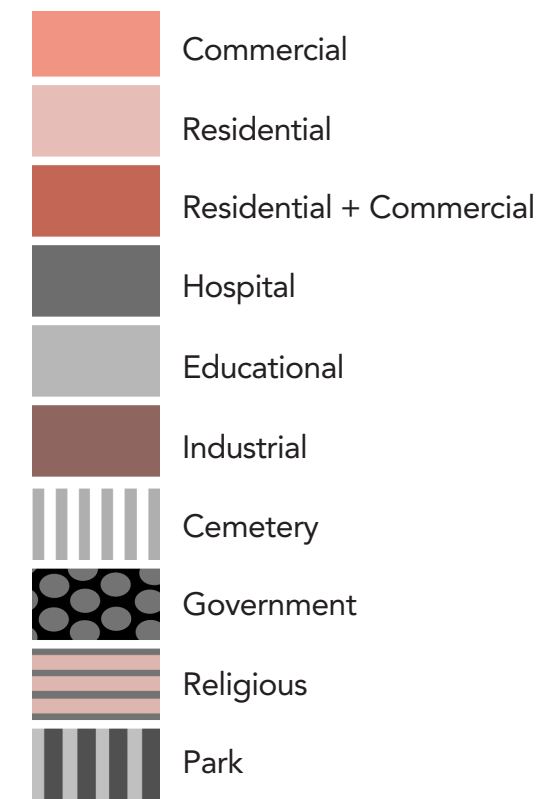
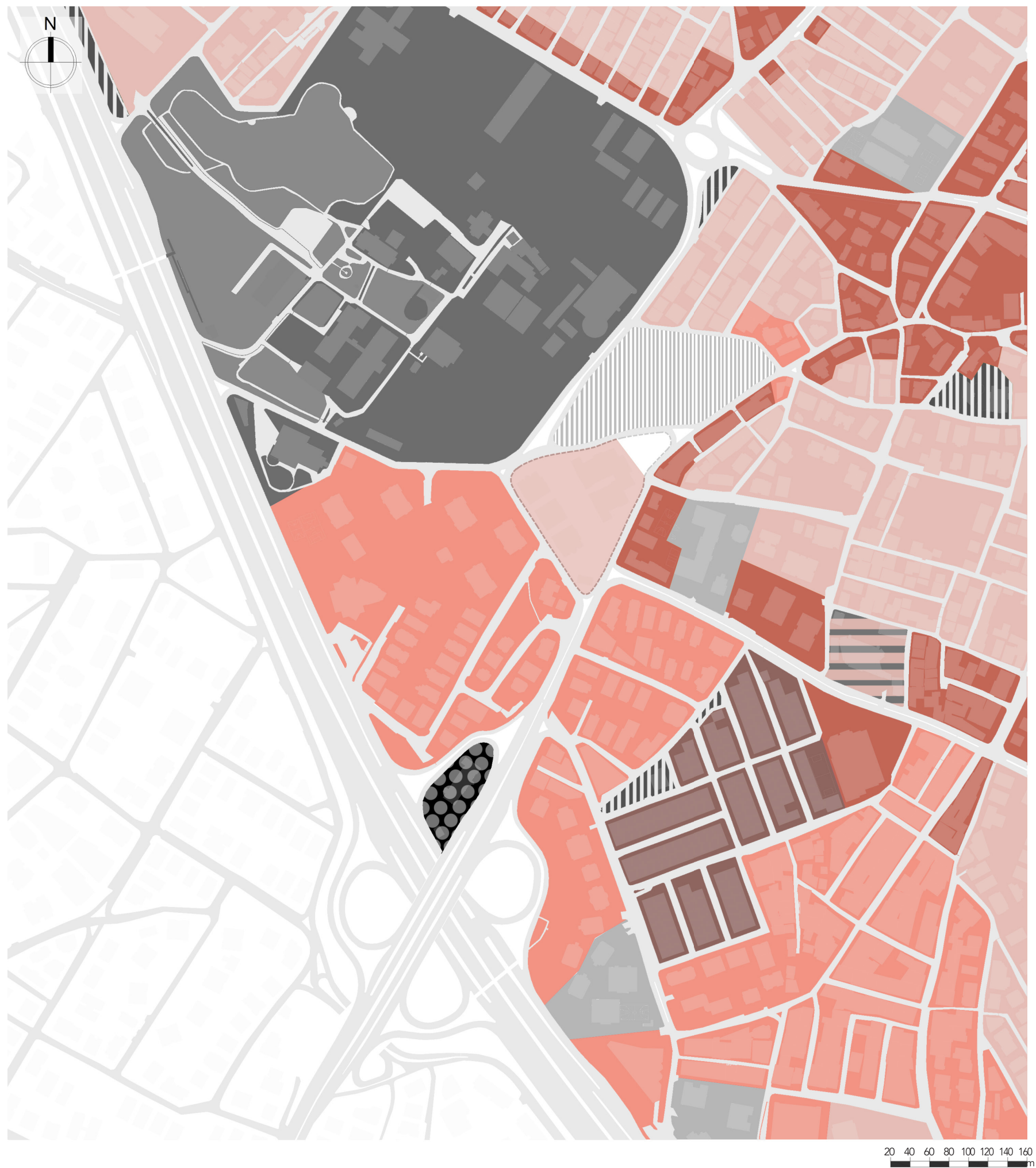
## Population Density Analysis



**Figure 2.30.**  
Population Density Analysis  
on Atasehir District,  
Içerenköy Neighborhood  
Master Plans  
Source: Istanbul Met-  
ropolitan Municipality,  
Department of Urban  
Planning, Directorate  
of Urban Planning, Plan  
Explanation Report

Density Analysis shows densely populated areas at a much smaller scale than the neighborhood scale. In this analysis, the district that is not within the borders of Atasehir Municipality was not taken into account. Hospitals, cemeteries, and auto industrial zones that do not have a stable population in the neighborhood are also not included in the analysis. In parallel with the analysis of building heights, it is seen that the density of high-rise building zones is high. The fact that the İçerenköy Neighborhood is a very densely populated area and that there are streets with a very dense population near the project area are among the inferences that can be made.





The functions of the buildings in the selected area are examined in this analysis. According to the results of the analysis, this part of the Icerenköy Neighborhood stands out mostly with residential, commercial, and hospital areas. In addition, an industrial zone focusing on automobiles is also within the borders of the selected area. The scarcity of green zones and official government offices marked according to the Istanbul Metropolitan Municipality's Department of Urban Planning master plans are visible in the analysis. Also adjacent to the project area is a cemetery, two large hospital complexes, commercial areas, and a residential area.

A third function type, a combination of residential and commercial function types, is examined in the analysis: residential+commercial. This specific type of function is a function whose basement and ground floor are used for commercial activities, but whose upper floors are residential. At the same time, commercial areas are concentrated on the main streets in the neighborhood. (Sehir Planlama Müdürlüğü, 2022)

**Figure 2.31.**  
Function Analysis on  
Atasehir District,  
Icerenköy Neighborhood  
Master Plans  
Source: Istanbul Metropolitan Municipality,  
Department of Urban  
Planning, Directorate  
of Urban Planning, Plan  
Explanation Report



# S

## Strengths

- The project site is very close to Higher Education Institutions such as universities and foundation vocational schools.
- The project site is located in a family and student-friendly neighborhood.
- The project site is inside Ataşehir Municipality, a new district with newer buildings and facilities. Newer structures are safer against earthquakes.
- The project site is within walking distance of two major hospital complexes. In case of an emergency, medical help is highly accessible.
- The accessibility of this district with the main transportation axes is very high. Many transportation alternatives are present such as bus lines, metro lines, and more importantly minibus lines, which are the most common transportation alternatives in the neighborhood.

# W

## Weaknesses

- The project site is located in a very populated neighborhood.
- The project site is near a major highway and its connection to the other parts of Istanbul, which causes the area to have heavy traffic.
- The Icerenköy Neighborhood is a fairly new settlement. Even though it may be advantageous to have newer structures in an earthquake-prone city like Istanbul, the neighborhood has no significant historical background.
- The project site and its surrounding area lack parking spaces for automobiles.
- The neighborhood is very sloped and positioned on a hill.
- Due to having a large cemetery adjacent to the project site, the area becomes unsafe after dark.

# O

## Opportunities

- Thanks to the closeness of central spots and the accessibility of the area, this part of the neighborhood has the potential of becoming a social center.
- The neighborhood is close to large university campuses, making the area
- The project site also has the potential of solving the housing shortage for the students who are enrolled at near universities.
- The project site is within walking distance of two major hospital complexes. Both are university hospitals, meaning that some of the interns and doctors who work at these hospitals are also students. The project site has the potential of solving their accommodation problem as well.
- The accessibility of this district with the main transportation axes is very high.

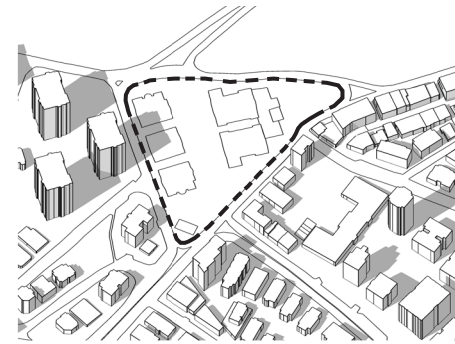
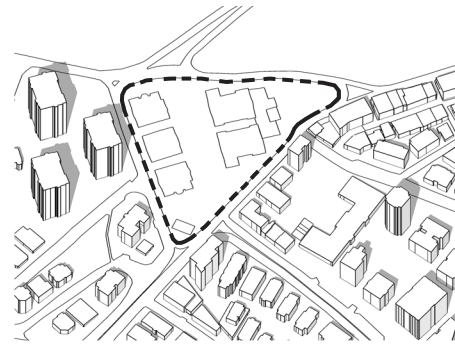
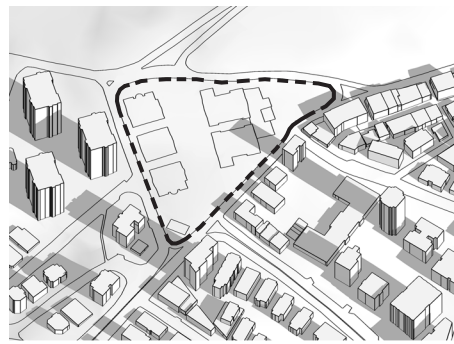
# T

## Threads

- The Icerenköy Neighborhood has insufficient open and green spaces in densely built housing texture.
- There are areas at risk in terms of seismicity in some streets of the Icerenköy district. The reason for these structures is that they are shanty settlements.
- The transportation infrastructure of the region is insufficient compared to the population density.
- The density created by Bostancı Oto Sanayi (the industrial zone for automobiles) and the polluting effect of unqualified enterprises reduce the value of the neighborhood.
- The socio-economic differences seen in the current population cause an inhomogeneous distribution within the neighborhood. While the A-B group prefers closed and secure apartment complexes, the C-D group prefers low-rise buildings located on certain streets.
- Land prices have increased a lot due to the shortage of housing supply.

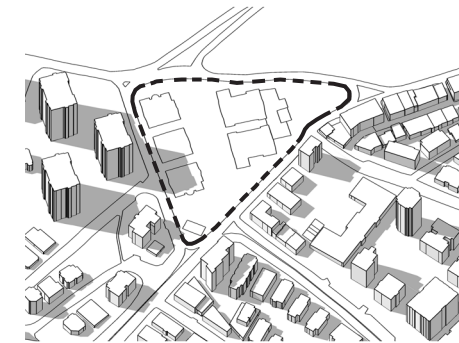
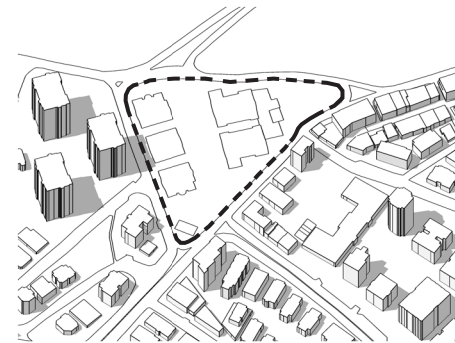
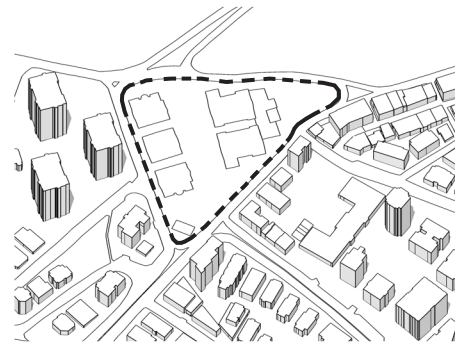
All information is collected from "Plan Açıklama Raporu (Masterplan Explanation Report)" by Istanbul Metropolitan Municipality's Department of Urban Planning that has been published on 10th of May 2022, Page 62. (Şehir Planlama Müdürlüğü, 2022)





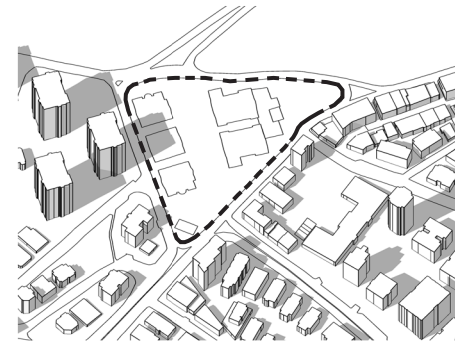
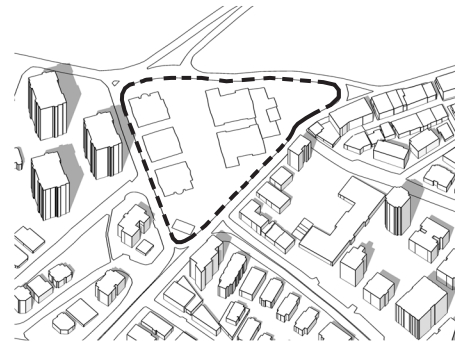
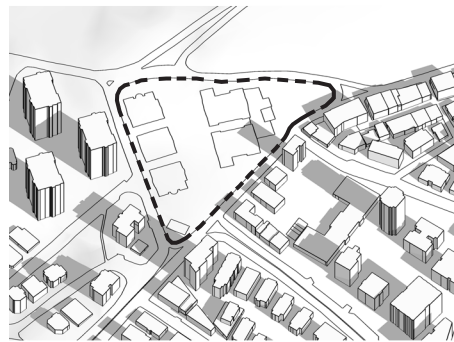
**20th March**  
*Spring Equinox*

**Sunrise:** 07:06  
**Sunset:** 19:14  
**Daylight Duration:**  
12 hours 8 minutes  
**Daylight Ratio:** 50,56%



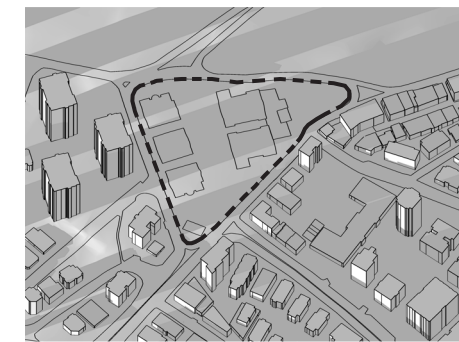
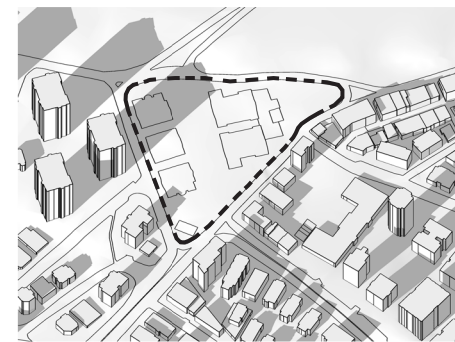
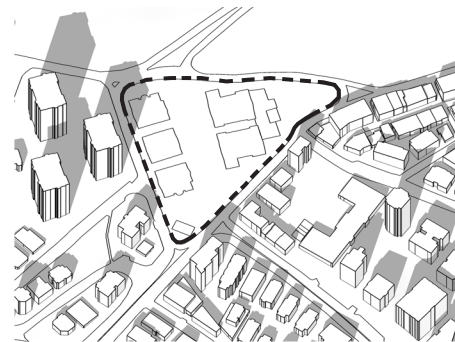
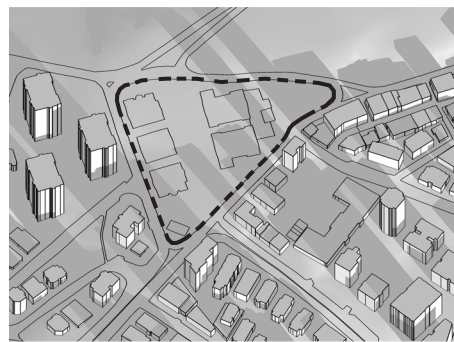
**21st June**  
*Summer Solstice*

**Sunrise:** 05:32  
**Sunset:** 20:38  
**Daylight Duration:**  
15 hours 6 minutes  
**Daylight Ratio:** 62,92%



**22nd September**  
*Autumn Equinox*

**Sunrise:** 06:51  
**Sunset:** 19:00  
**Daylight Duration:**  
12 hours 9 minutes  
**Daylight Ratio:** 50,56%



**21st December**  
*Winter Solstice*

**Sunrise:** 08:25  
**Sunset:** 19:37  
**Daylight Duration:**  
9 hours 12 minutes  
**Daylight Ratio:** 38,33%

All information is collected from "Gün Doğumu Hesaplama" by Hesaplama.com's online calculation website. (Hesaplama.com, 2022)

Calculation Information:

Location:  
Atasehir,Istanbul,Turkey

Location Coordinates:  
40.986444, 29.107112

Dates:  
20.03.2021,21.06.2021,  
22.09.2021,21.12.2021

Timezone:  
Turkey, UTC+3.00

**Overlay**



**09:00**

**13:00**

**15:00**

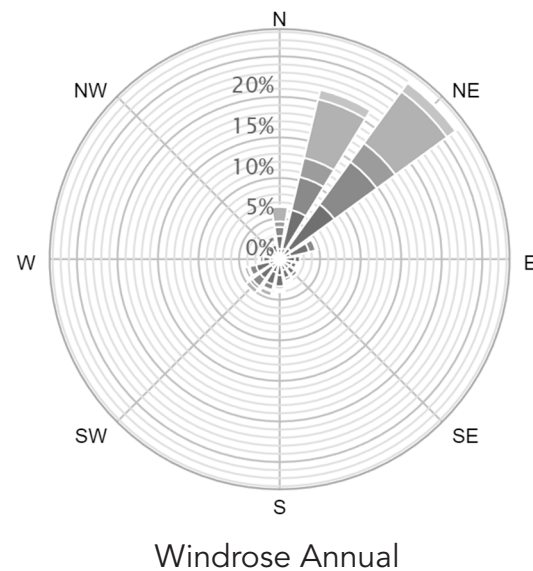
**17:00**

**Figure 2.32.**  
Shadow Analysis on  
Atasehir District,  
Icerenköy Neighborhood  
Source: Istanbul Metropolitan Municipality,  
Department of Urban Planning, Directorate  
of Urban Planning, Plan Explanation Report





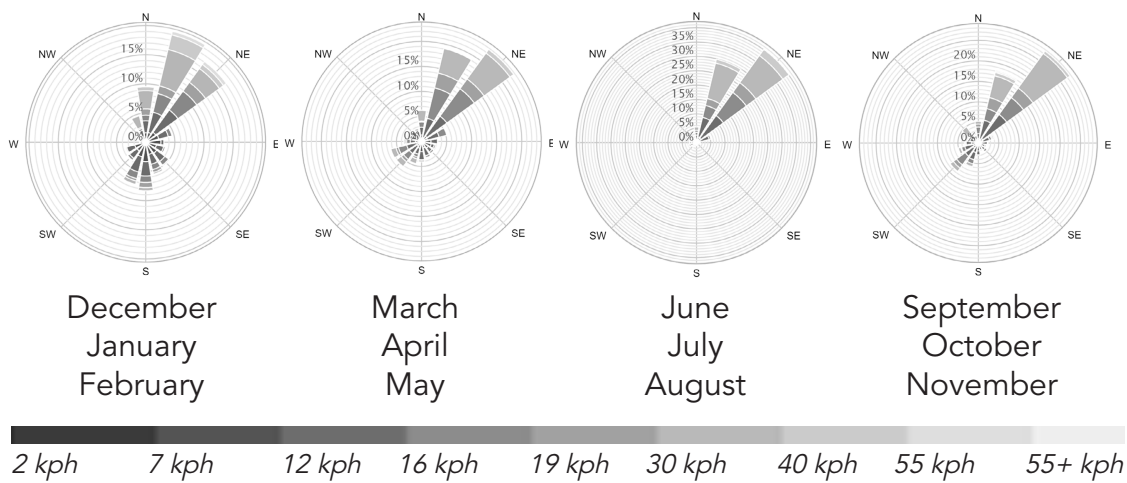
**Figure 2.33.**  
3D Model of Wind Direction Analysis on Atasehir District, Icerenköy Neighborhood  
Source: Graphics modelled by Author according to the epw weather location data from Energyplus.net (Energyplus, 2021)



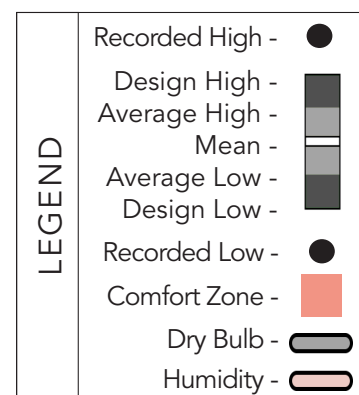
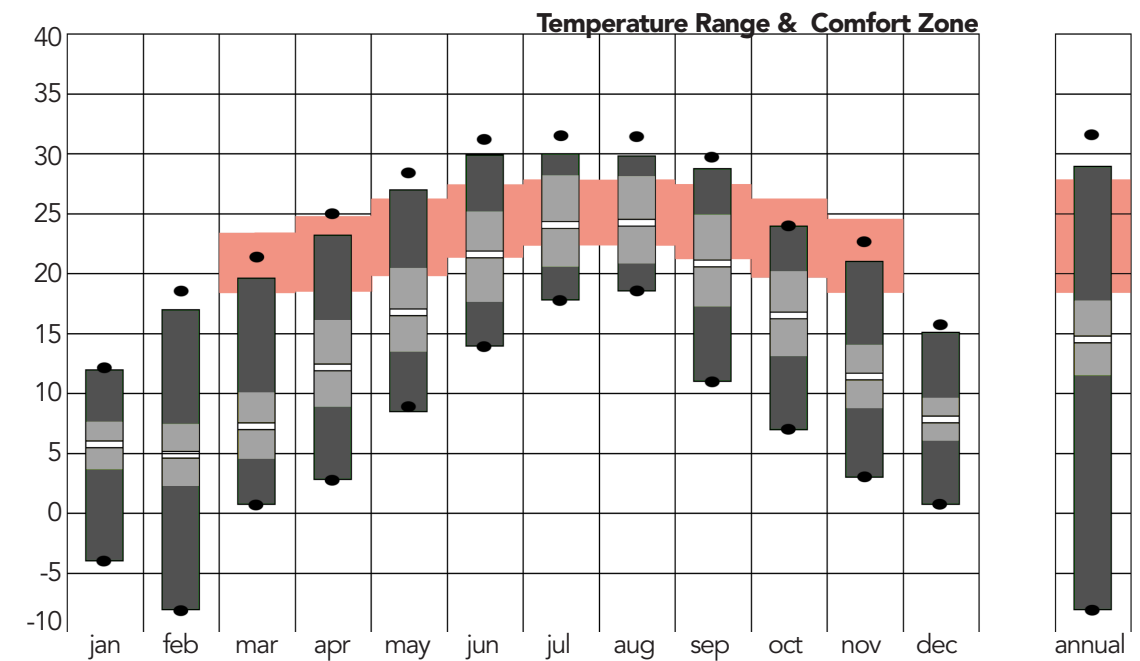
The district where the project area is located is strongly affected by the "Poyraz" wind blowing in the northeast direction, accompanied by other strong airflows blowing from the north. These winds that bring cold air are effective all over Istanbul and Icerenköy Neighborhood most days of the year. The third dominant wind is the southwest wind, called "Lodos" by locals. (Energyplus, 2021)

The project area has a northeast-southwest slope parallel to the dominant winds. Due to the 3-15% slope, which is an increasing force in the advance of the wind. (Sehir Planlama Müdürlüğü, 2022)

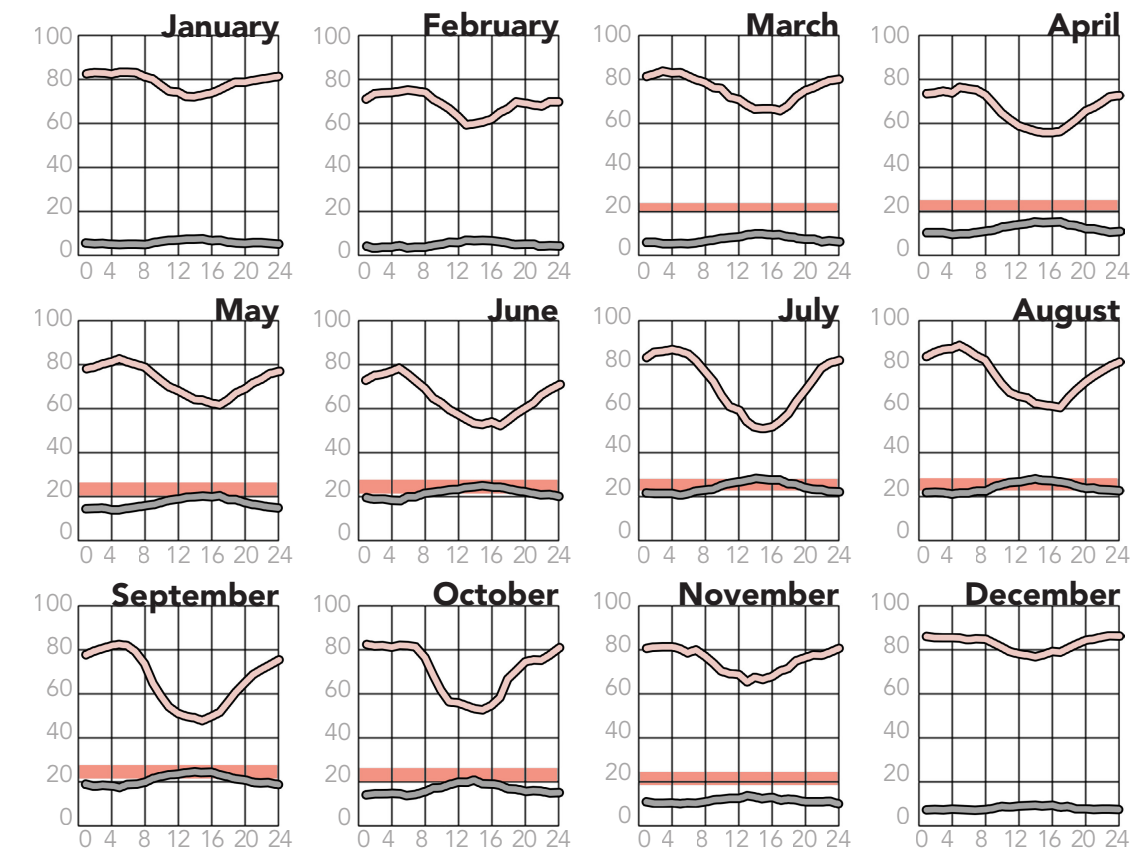
**Figure 2.34.**  
Windrose Annual Analysis on Atasehir District, Icerenköy Neighborhood  
Source: weather location data from Energyplus.net (Energyplus, 2021)



**Figure 2.35.**  
Windrose Monthly Analysis on Atasehir District, Icerenköy Neighborhood  
Source: weather location data from Energyplus.net (Energyplus, 2021)



Adaptive comfort simulation is created with the weather location data obtained for the project site using the Climate Consultant 6.0 to analyze comfort zone degrees for a residential building. According to analysis, the temperature values between March and November are approaching the comfort zone, and between June and September, they are sufficiently within the comfort zone. However, for the winter, additional methods should be developed to reach thermal comfort. In the second graph, the humidity values at different times of the day indicate that the humidity rate increases at night, especially in the summer.



**Figure 2.36.**  
Temperature Range Analysis on Atasehir District, Icerenköy Neighborhood  
Source: Climate Consultant Simulation with epw weather location data from Energyplus.net (Energyplus, 2021)

**Figure 2.37.**  
Monthly Dry Bulb X Humidity Graphs and Analysis on Atasehir District, Icerenköy Neighborhood  
Source: Climate Consultant Simulation with epw weather location data from Energyplus.net (Energyplus, 2021)



# CLIMATE ANALYSIS

## design guidelines

According to the Climate Consultant Simulation with epw weather location data from Energyplus, some useful design guidelines are achieved. Due to the climate conditions of the project site, the advice listed below is beneficial for a sustainable and comfortable building environment to reach thermal comfort. (Energyplus, 2021)

### Warming In Winter

#### Protection from Cold Winds

1. The most effective wind orientation should be taken into account when designing window openings. The project site is affected by northeast and southwest winds the most. Due to this reason, building openings should not be placed in these axes to prevent cold airflow. (Loggains, 2013)

#### Beneficial Sun Utilization

1. Solar energy can be used for domestic needs such as water heating, and electricity.
2. Insulation must be continuous.
3. Light-colored roofs and walls must be used to absorb sun radiation.
4. Compact designs should be used to prevent heat loss during colder days. (Loggains, 2013)

#### Orientation

1. Windows facing south facades should be implemented.
2. Rooms and areas that need the most solar heating should face south orientation.
3. Usage of thermal mass is beneficial to gain and protect the passive solar gains.
4. Dividing the place according to its function may be effective for maximum utilization. For example, south-facing rooms that need warm air can be occupied at nighttime, and north-facing rooms that have cool air can be used during the daytime. (Loggains, 2013)

#### Plantation

1. Trees should not be in the south facades. Only deciduous trees can be planted in south, southeast, or southwest facades.

### Cooling In Summer

#### Natural Ventilation

1. Natural ventilation can work as air conditioning in warm weather.
2. Building orientation can help the air to flow more effectively by cooling the interior air.
3. High ceilings can be used for stack ventilation.
4. Building plans that have long axes and corridors can help cross-ventilation.
5. Cross-ventilation is most effective when the large building openings are placed on opposite facades in the winding route. (Loggains, 2013)

#### Protection from Sun

1. Reflecting ground material should be avoided to prevent heat from coming inside from the windows.
2. Building surfaces should be reflective and in light colors.
3. Horizontal glazing should be avoided if there is not any shading to protect the windows from the sun.
4. Glazing that faces west orientation should be minimized. (Loggains, 2013)

#### Shading

1. Shaded porches or balconies can provide cool outdoor areas and prevent overheating the building opening such as windows and doors.
2. If windows are shaded, it can prevent from interiors getting extra warmer.
3. Buildings' shape can work as a shade.
4. Outdoor areas should also have parts that are shaded.
5. Window shading should be implemented in every direction except north facades.
6. Shading solutions must be able to let the air in, otherwise, it will work as a heating feature, not a cooling one. (Loggains, 2013)

#### Plantation

1. Placing plants are a good way to provide shading with natural sources. (Loggains, 2013)



## Current Situation of the Project Site



**Figure 2.38.**  
Bostancı Mall unfinished  
construction  
Source: google.maps

The project site has an unfinished construction of a shopping mall on it. The shopping mall, which was started to be built in 1995 in Istanbul Bostancı (currently within the borders of İçerenköy Mahallesi, Atasehir Municipality), could not be completed after the contractor went bankrupt and the landlord increased the square meter price. (Çelik, 2013)

The unfinished construction, which is surrounded by a screen and can contain various criminal elements, has been the residence of paper collectors and votive sacrifices for years. Despite many complaints from the people of the district, a solution could not be found due to the fact that the construction site is under jurisdiction. In addition to its potential for crime, there is

a huge traffic problem as it is because the site is on the main road connected to the e-5 highway. Although this unfinished construction is not the cause of the problem, it is thought by the people of the neighborhood that an area of this density has a derelict area and that alternative solutions can be brought to the traffic jam by opening this area. (ITV Haber, 2016)

The contractor Ismail Demirkan, who said that he would build a shopping mall in 1995, collected hundreds of thousands of dollars from 80 people. When the contractor who started the shopping mall construction in Upper Bostancı (now İçerenköy), one of the most valuable districts of Istanbul, went bankrupt, days of suffering began for 80 people. (Çelik, 2013)

The bankrupt contractor promised that the owner of the land, Nazif Yılmaz Örnek, would complete the construction. However, after a while, the landlord Örnek, said that an additional \$800 per square meter was needed to finish the construction. The beneficiaries, who followed the contractor, learned that the first contractor of the construction, İsmail Demirkan, had died. After Örnek did not give up on his stubbornness, a legal struggle began that lasted for years. (Çelik, 2013)

As of 2022, the problem of the site is still yet to be solved. Some store owners and claimants either moved abroad, died, or gave up. But the importance of the problems and the value of the land forced the Municipality of Atasehir to seize the situation. The Municipality, which thinks that the building, which has more than 300 tons of water on its floor for more than 12 years, carries a risk of collapse, took concrete samples from different parts of the building and sent them to the test. If the next report is negati-

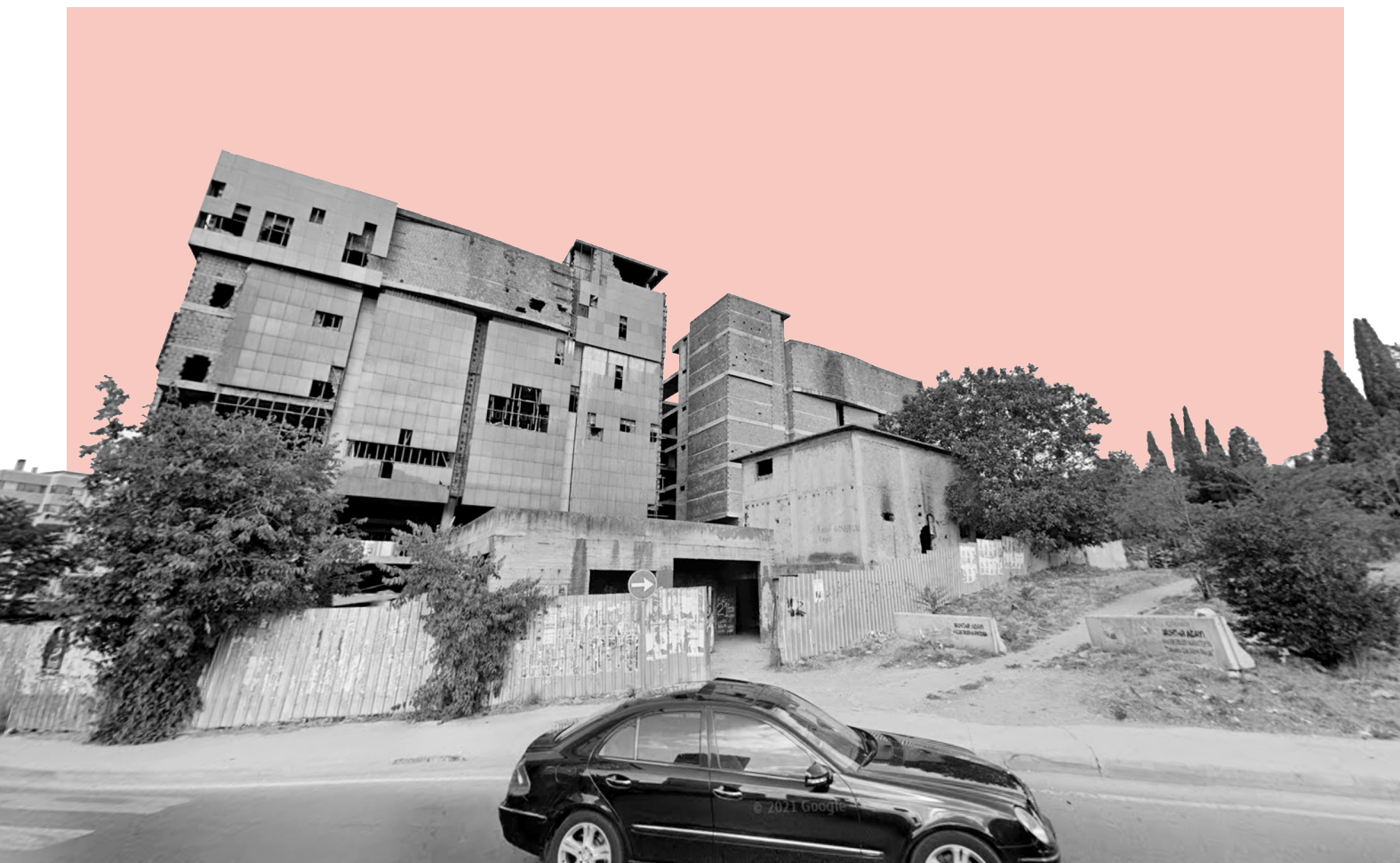
ve, the “Ghost Building” will be demolished and the danger will be removed. (Kadıköy Life, 2017)

At the same time, the municipality started to work on relieving traffic by opening the existing zoning road to deal with the traffic problem. While preparing to open the zoning road to traffic with the work done by the teams affiliated with the Atasehir Municipality Department of Civil Works and Engineering, the Park and Gardens Department teams continue their landscaping activities. Department of Civil Works and Engineering Director Deniz Kutlu stated that the traffic, which was even more congested with the metro works in the region, swelled in that area, and that they aimed to solve these problems by opening the zoning road, which is in the registered plans. It was stated that the teams affiliated with the Police Department also arranged for the paper collectors left in the unfinished shopping mall construction and regular controls were started. (ITV Haber, 2016)

**Figure 2.39.**  
Bostancı Mall unfinished  
construction  
Source: google.maps







**Figure 2.40.**  
Bostancı Mall unfinished  
construction  
Source: google.maps

**Figure 2.41.**  
Bostancı Mall unfinished  
construction  
Source: google.maps



**Figure 2.42.**  
Bostancı Mall unfinished  
construction  
Source: google.maps

**Figure 2.43.**  
Bostancı Mall unfinished  
construction  
Source: google.maps

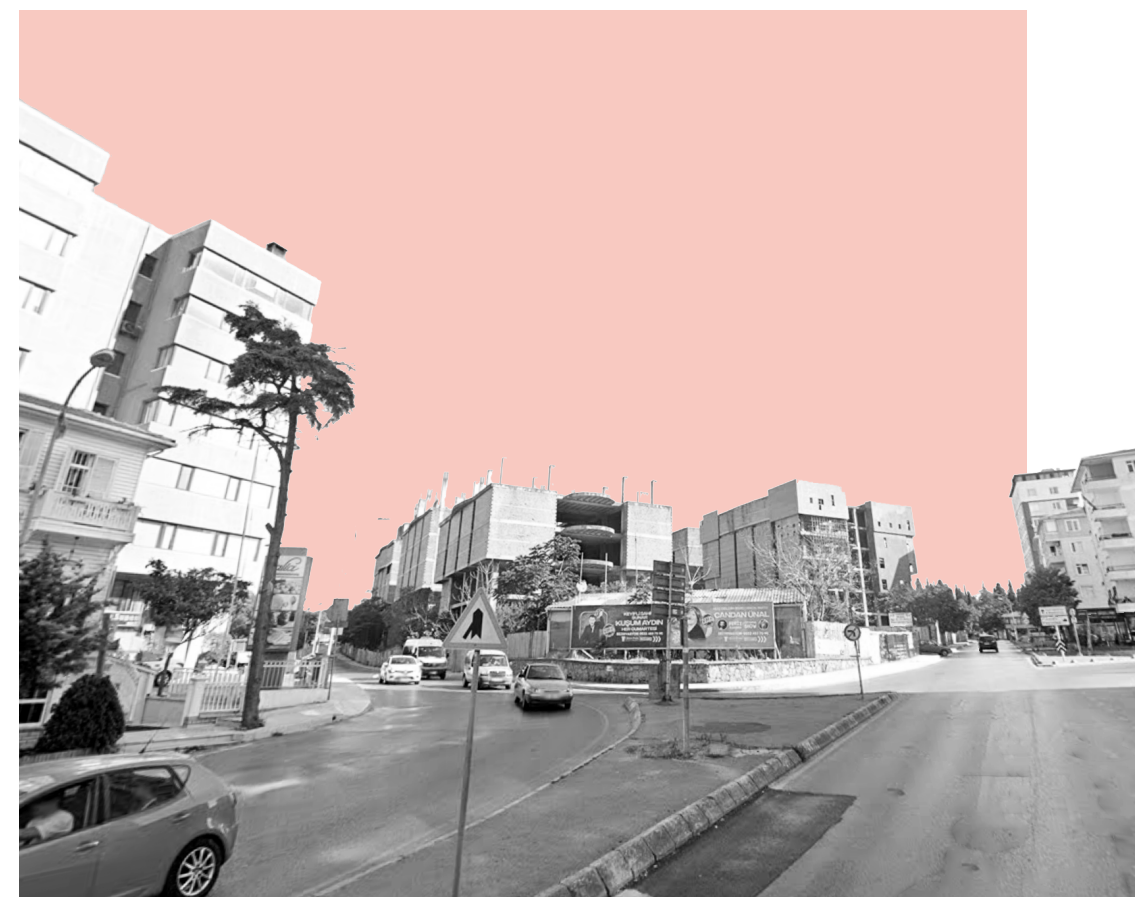






**Figure 2.44.**  
Bostancı Mall unfinished  
construction  
Source: google.maps

**Figure 2.45.**  
Bostancı Mall unfinished  
construction  
Source: google.maps



**Figure 2.46.**  
Bostancı Mall unfinished  
construction  
Source: google.maps

**Figure 2.47.**  
Bostancı Mall unfinished  
construction  
Source: google.maps



## Cadastral Information



**Figure 2.49.**  
İçerenköy Neighborhood Improvement Zoning\_Revision Zoning Plan  
Source: Atasehir Belediyesi E-İmar sorgulama (Atasehir Belediyesi, 2022)

Name	İçerenköy Neighborhood Improvement Zoning_Revision Zoning Plan
Plan Function	Commercial Area

Cadastral Parcel Information	
District	Atasehir
Administrative Neighborhood	İçerenköy
Land Registry Neighborhood	İçerenköy
Layout	201
Block / Parcel	1412 / 1
Parcel Area	4.087,19 m <sup>2</sup>
Coordinates	40°58'5.971"N 29°6'26.642"E

**Figure 2.48.**

Table: İçerenköy Neighborhood Improvement Zoning\_Revision Zoning Plan Cadastral Parcel Information  
Source: Atasehir Belediyesi E-İmar sorgulama (Atasehir Belediyesi, 2022)

Building Information	
Building Height	Maximum 15 floors
Front Yard	Minimum 5 meters
Side Yard	Minimum 4 meters
Back Yard	Minimum 4 meters
Construction Area	Seperated
K.A.K.S ( Building Coverage Ratio)	2.07

**Figure 2.50.**  
Table: İçerenköy Neighborhood Improvement Zoning\_Revision Zoning Plan Building Information  
Source: Atasehir Belediyesi E-İmar sorgulama (Atasehir Belediyesi, 2022)

KAKS is the number obtained from the ratio of the total floor area of the building to the parcel area. The maximum net sqm construction area that can be built on that plot ( the total area of the flats) is calculated by multiplying the area of a plot by the value on the zoning plan. The calculation for this project is  $4087,19 \times 2.07 = 8.460,48 \text{sqm}$ . This figure is the net construction area remaining after the common areas that are not included in the KAKS calculation are subtracted. (Emlaksat, 2022)



## Conclusion of the Urban Analysis

### Aim One:

#### Creating A Central Node

Even though the project site's location is very central, it does not have a central purpose as of 2022. The abandoned mall construction's barriers and unsafe feeling of the mall have been some of the reasons why it is not a gathering point for locals.

The two major university hospitals are adjacent to the site, and the streets surrounding the site are the main axes of this highly populated area. Residential and commercial complexes also encircle the project site, making it an ideal central node.

The aim is to make this abandoned plot a place where people gather and enjoy.

### Aim Two:

#### Reviving and Repurposing the Area

Urban function analysis clearly shows that there are invisible barriers dividing the surrounding area of the project site. This division can be listed as close residential complexes, close hospital complexes, the cemetery, and some small-scale commercial stores. The project site itself is a closed area as well. Due to the current situation of the site, and its current misuse, this part of the İçerenköy neighborhood feels unsafe and closed with barriers.

The aim is to revive and repurpose the site so that these barriers would be blurred. Giving the project site a new purpose to help people get together and enjoy co-living, will create a more homogenous space.

### Aim Three:

#### Connecting Campuses

University campuses with thousands of students like Yeditepe University, Maltepe University, and Marmara University along with the university hospital adjacent to the project site require space that will act as a bridge connecting them. Creating a connection point for this target group is one of the aims of the design proposal.

### Aim Four:

#### Using Topography to Advantage

The project site has a 3% slope and 9 meters of height difference inside its borders. The aim is to work with the topographical difference to its advantage. If designed correctly, a better view can be achieved on the upper floors of the proposed buildings.

### Aim Five:

#### Meeting Student Housing Needs

According to YÖK, for the 2020 - 2021 educational year, the total number of enrolled students in these higher education institutions is 1.288.707. (Yükseköğretim Bilgi Yönetim Sistemi, 2021) KYK dormitories and university-affiliated residences are not sufficient to accommodate all students who need housing. The main aim of the proposal is to provide a solution to this housing problem.



# CHAPTER THREE

## DESIGN CONCEPT



## Concept

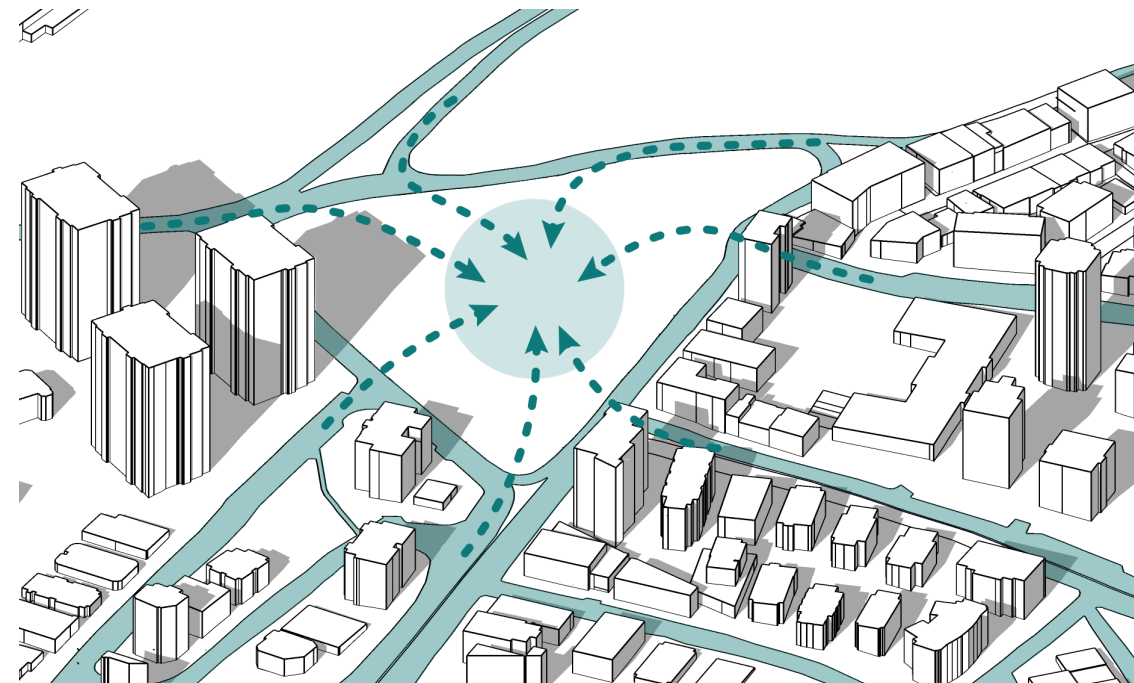
Step zero is made as an initial step, to create a design concept coherent with the aims of the urban analysis.

The first aim is to create a central node. Two major university hospitals are adjacent to the site, and the streets surrounding the site are the main axes of this highly populated area. Residential and commercial complexes encircle the project site, making it an ideal central node. The current misuse of the abandoned construction makes the site unsafe with barriers.

The pedestrian and vehicle ways around the project site are connected via imaginary connection lines as if there were no barriers that close the project site from access. The intersection point of these lines can act as a center inside the plot. Thus, the central node with multiple entrances is developed.

Having various options as entry points removes the barriers surrounding the site by creating new pedestrian paths, and produces a sense of safety for both students and locals.

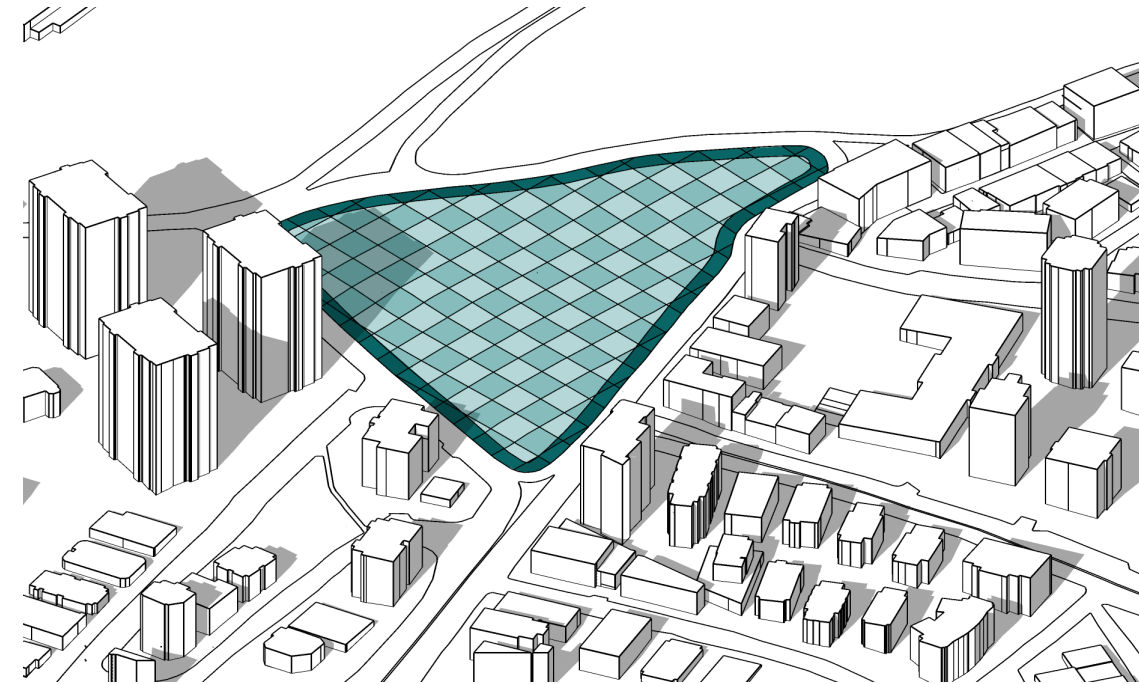
### step zero



**Figure 2.51.**  
Concept Diagram Step 0  
Source: Author

The concept started with the idea of dividing the area into a grid composed of 10x10m urban modules. This method enabled detecting more correctly the misused and potential areas throughout the sloped project site, making it easier to divide areas equally and use these squares as units according to the needs.

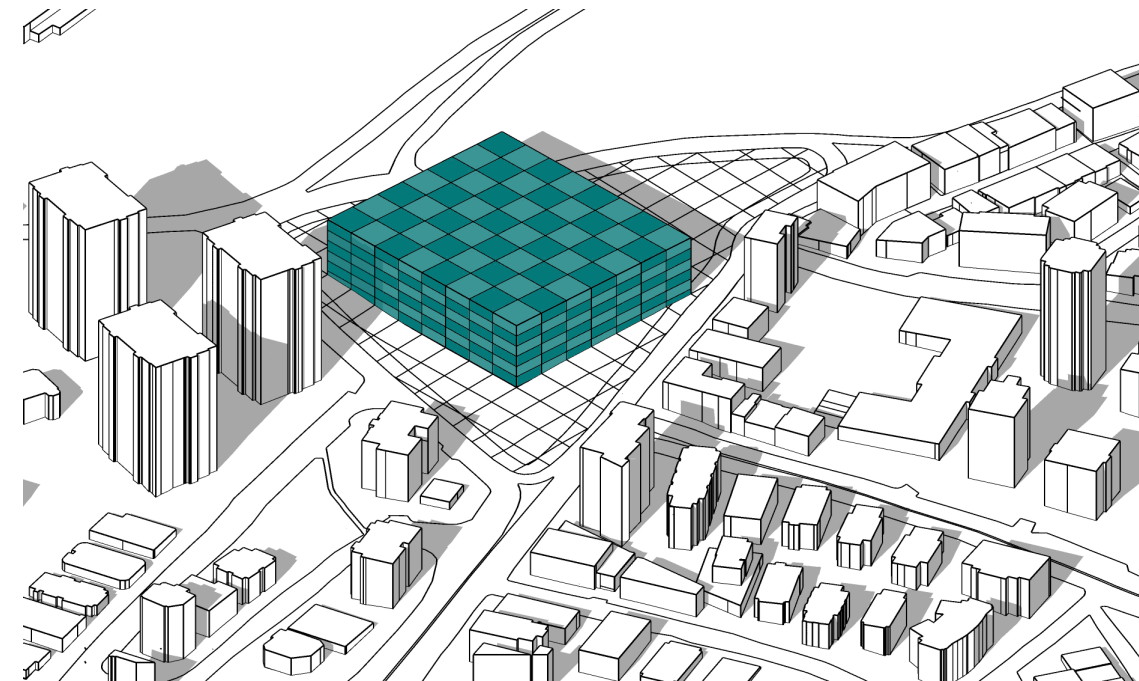
### step one



**Figure 2.52.**  
Concept Diagram Step 1  
Source: Author

After offsetting 4 meters from the plot's borders to follow the Municipality's cadastral rules, the grid is placed on the site. The grid is rotated according to the wind analysis results, thus making the orientation in northeast-southwest axes.

### step two



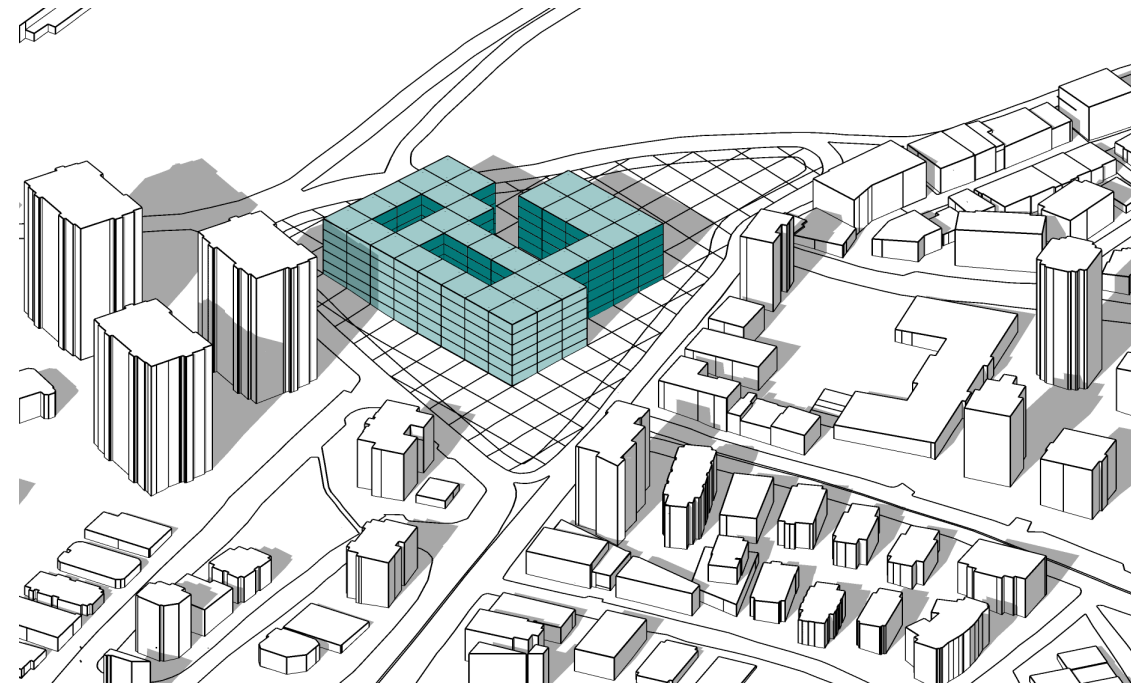
Inner modules have been removed to create courtyards and protected outdoor spaces, but not entirely. Specific modules remained to connect upper floors.

For the northeast wind (the most dominant wind of the site) to pass through without causing too strong airflow, the selection of modules has been removed.

**Figure 2.53.**  
Concept Diagram Step 2  
Source: Author



### step three

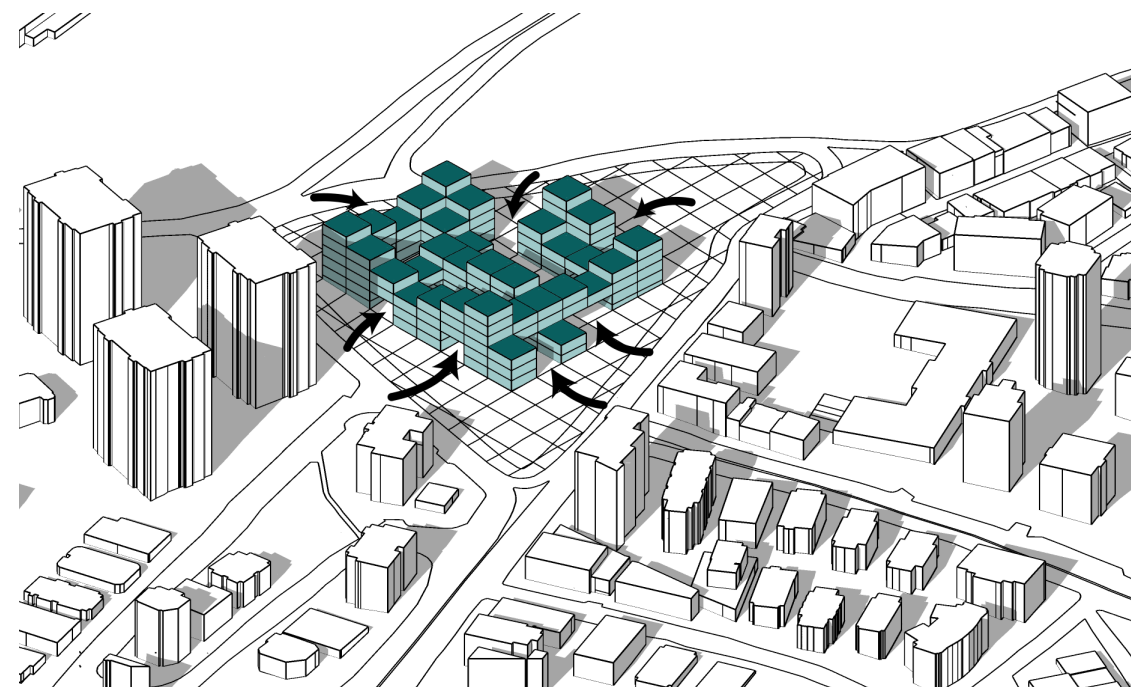


**Figure 2.54.**  
Concept Diagram Step 3  
Source: Author

According to the cadastral rules of the municipality, a maximum of 8.460sqm can be the total of constructed area, underground parking and 10% of balcony areas excluded. Strategic modules have been removed to follow this limitation rule. In order to produce the open space and terraces in utmost number and between floors, modules have been selected in a certain order and eliminated.

Multiple entrances are provided by removing some modules from all directions, to create a meeting node that can be accessed from different entrances.

### step four



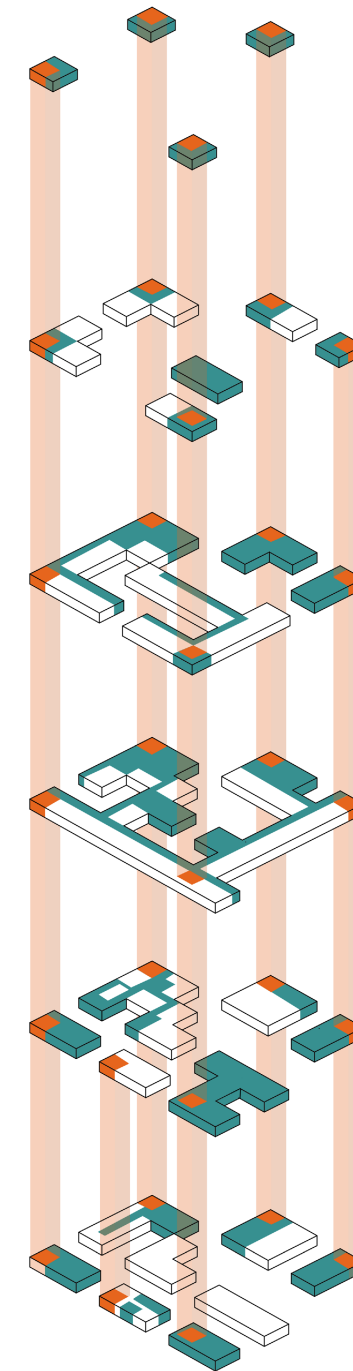
**Figure 2.55.**  
Concept Diagram Step 4  
Source: Author

### LEGEND

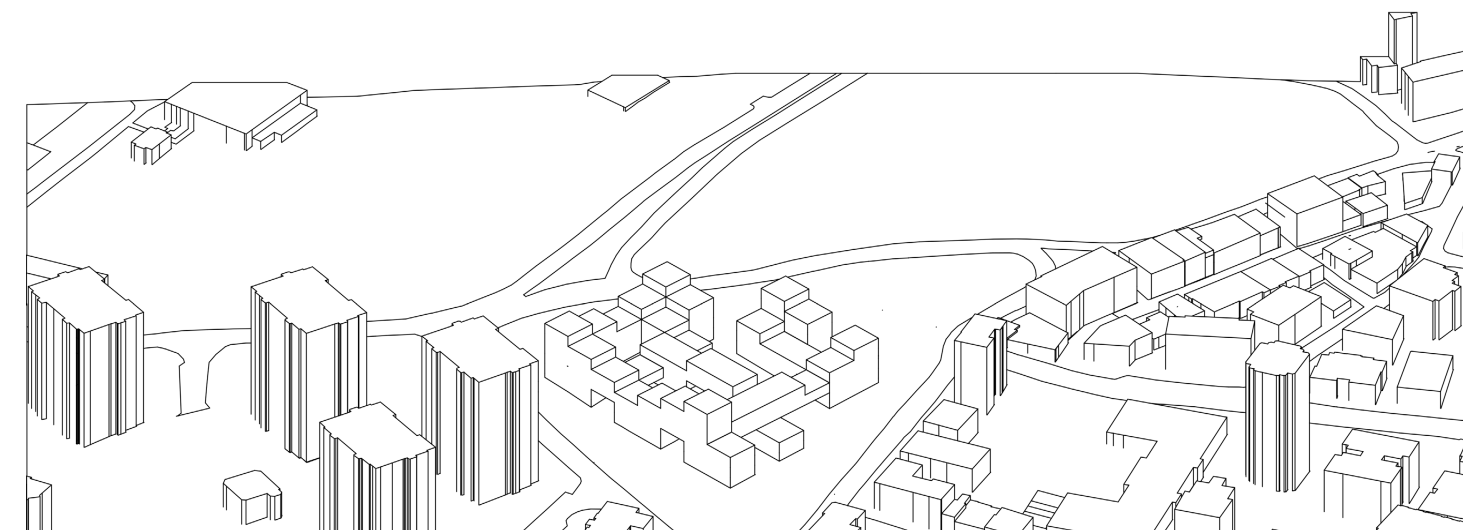
- Cores  
stairs and lifts
- Circulation Areas  
Corridors, common spaces that have open plan

The circulation diagram shows all the areas that have no walls that limit them. This includes corridors that connect cores to other rooms and accommodation, common spaces such as common kitchen area, dining area, etc that have open plans and are not closed rooms.

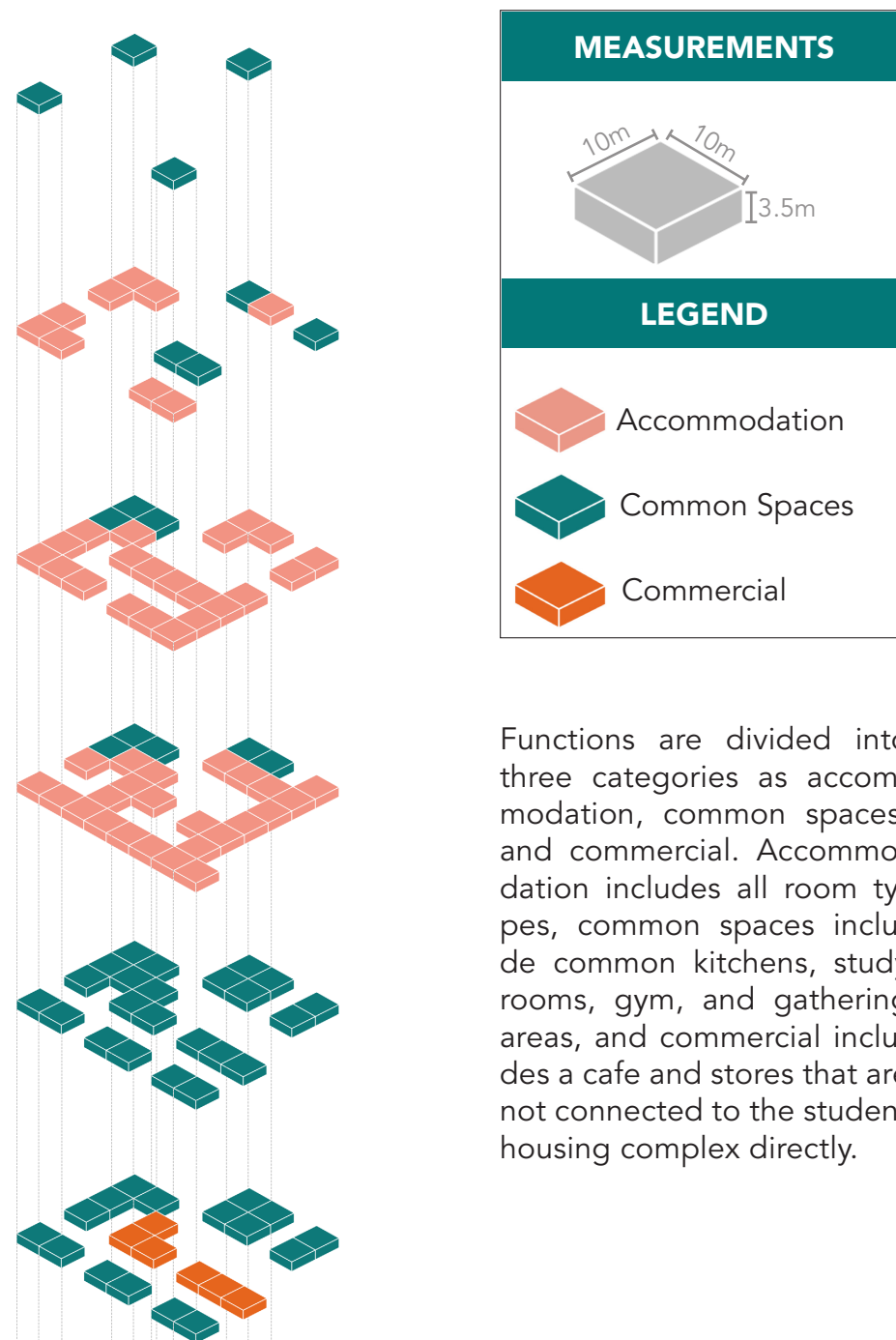
By connecting common spaces in this way without borders, a sense of community was aimed to be achieved.



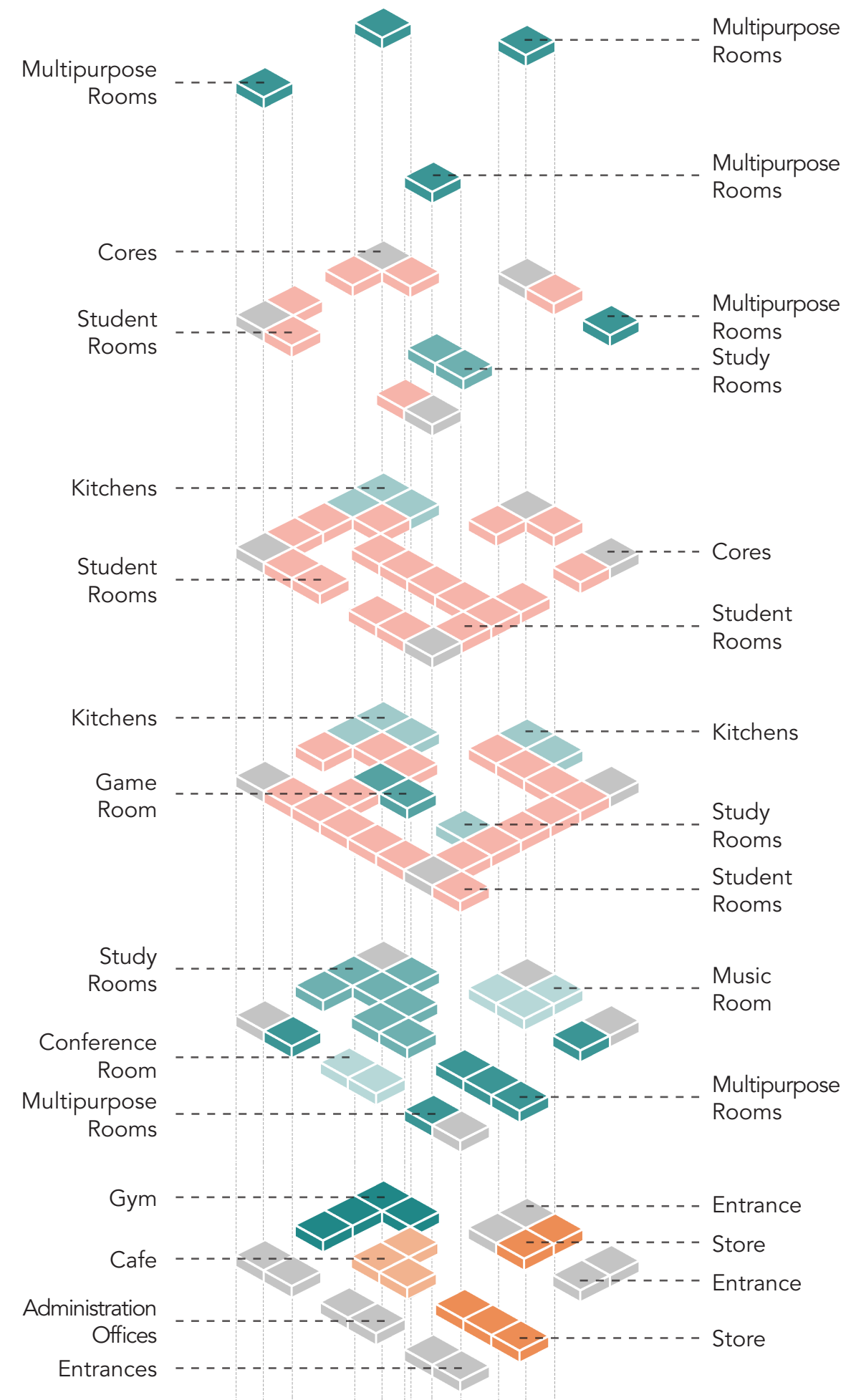
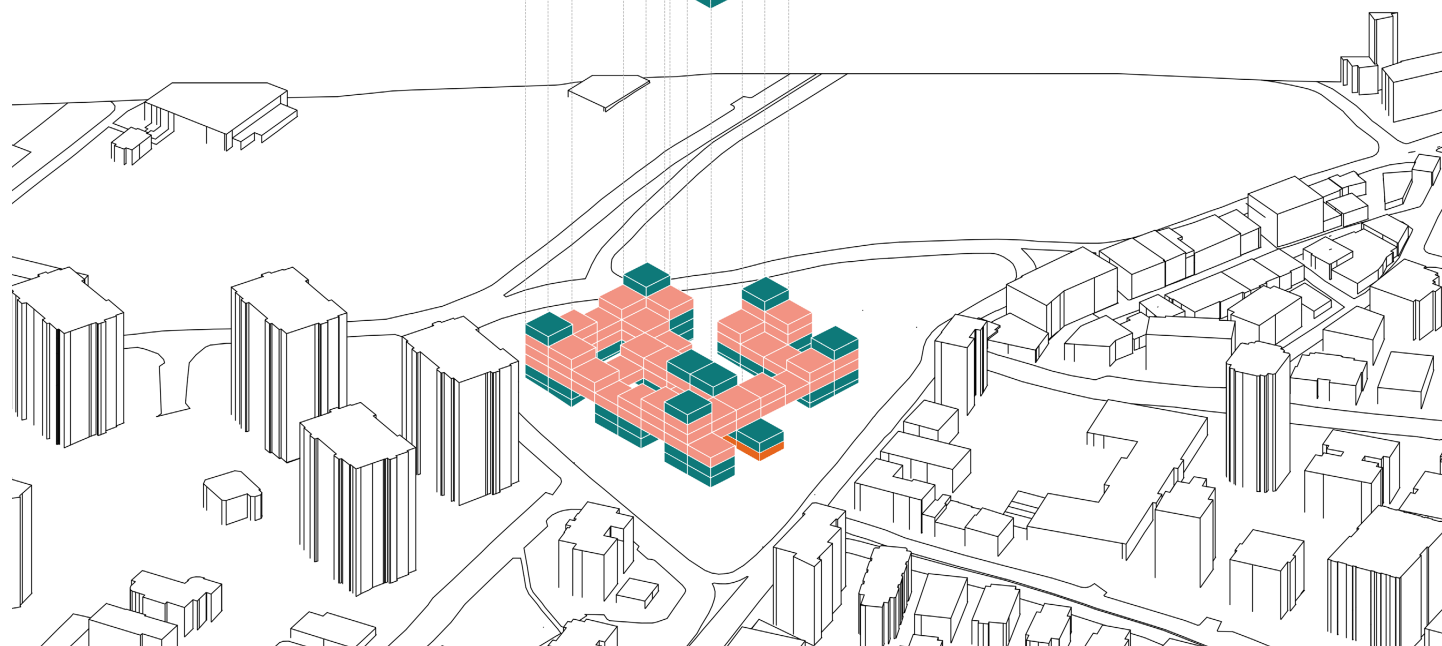
**Figure 2.56.**  
Circulation Diagram  
Source: Author







**Figure 2.57.**  
Function Diagram  
Source: Author

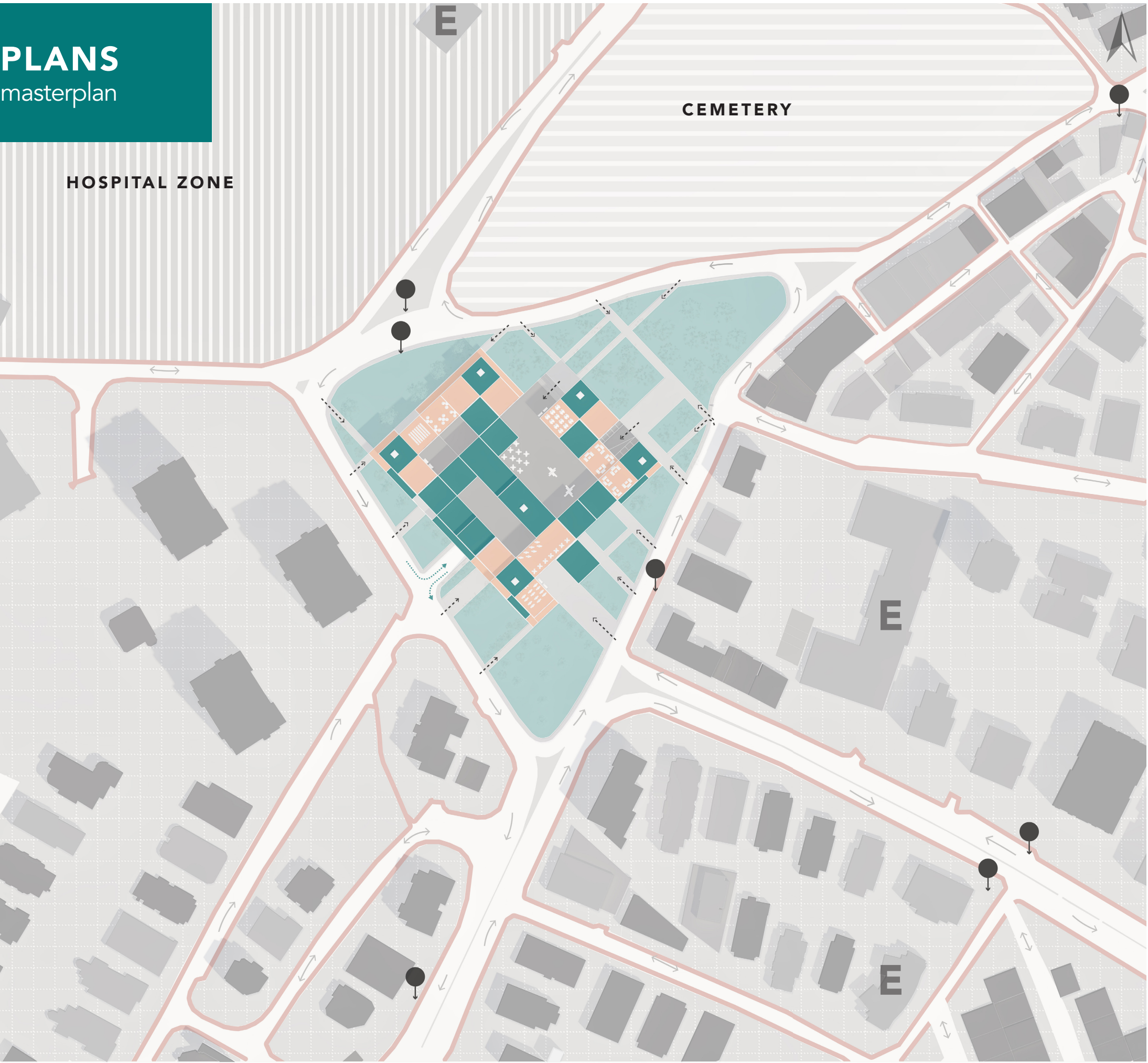


**Figure 2.58.**  
Detailed Function Diagram  
Source: Author



# PLANS

masterplan



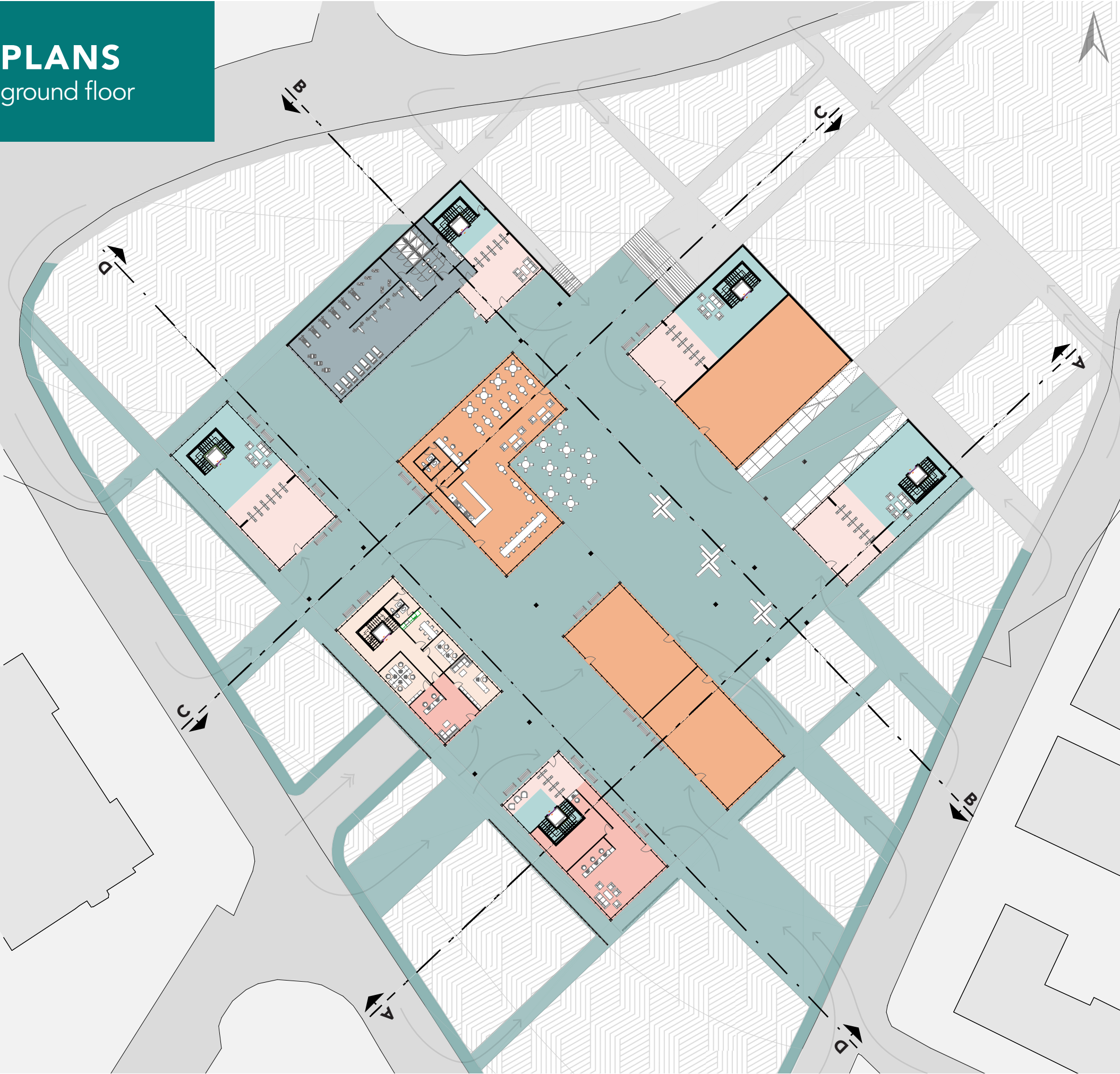
LEGEND		
	P/C	Urban Functions
	P	Existing Buildings Only Residential
	P	Existing Buildings Residential & Commercial
	C	Hospital
	C	Cemetery
E	C	Education
	C	Residential Area
Mobility Functions		
	C	Vehicle Traffic Direction
	C	Pedestrian Path
	C	Bus Stop
Proposal Functions		
	C	Pedestrian Entrances
	C	Public Green Spaces
	C	Pedestrian Path Inside Complex
	P	Green Roofs
	C	Public Courtyard
	C	Terraces
	P	Underground Car Parking

**Figure 2.59.**  
Masterplan  
Source: Author



# PLANS

ground floor



LEGEND		
	P / C	Function
	C	Outdoor Courtyard
	C	Corridors and Open Common Spaces
	P	Administration Offices
	C	Commercial Areas
	C	Gym
	C	Reception
	C	Secure Entrance

P/C: Private Space / Common Space  
 Commercial Areas: Cafe and various types of stores.

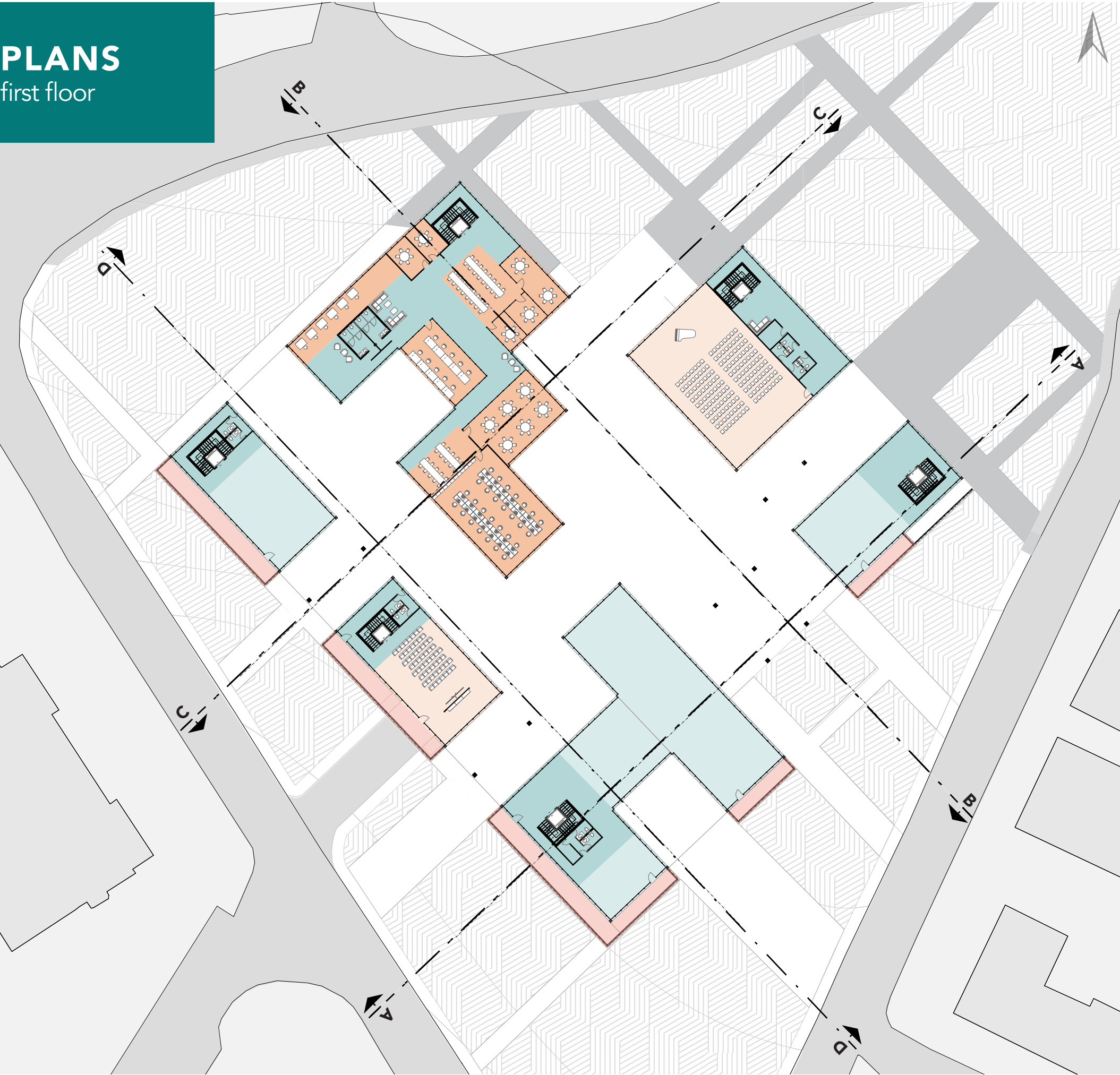
GENERAL INFO	
Floor	Ground floor
Scale	1/500
Level	+72,00
Entances from exterior	Yes. - Six Entrances for Student Rooms. - Seven Entrances for Commercial Areas. - One Entrance for Offices.
Total Closed Area	2.180 sqm
Total Open Area	2.650 sqm
Common / Private Spaces Ratio	19 / 2
Cores: Stairs & Elevator	6

**Figure 2.60.**  
 Ground Floor Plan  
 Source: Author



# PLANS

first floor



LEGEND		
	P / C	Function
	C	Corridors and Open Common Spaces
	C	Music and Conference Rooms
	C + P	Study Rooms
	C	Multipurpose Spaces
	C	Balconies

P/C: Private Space / Common Space

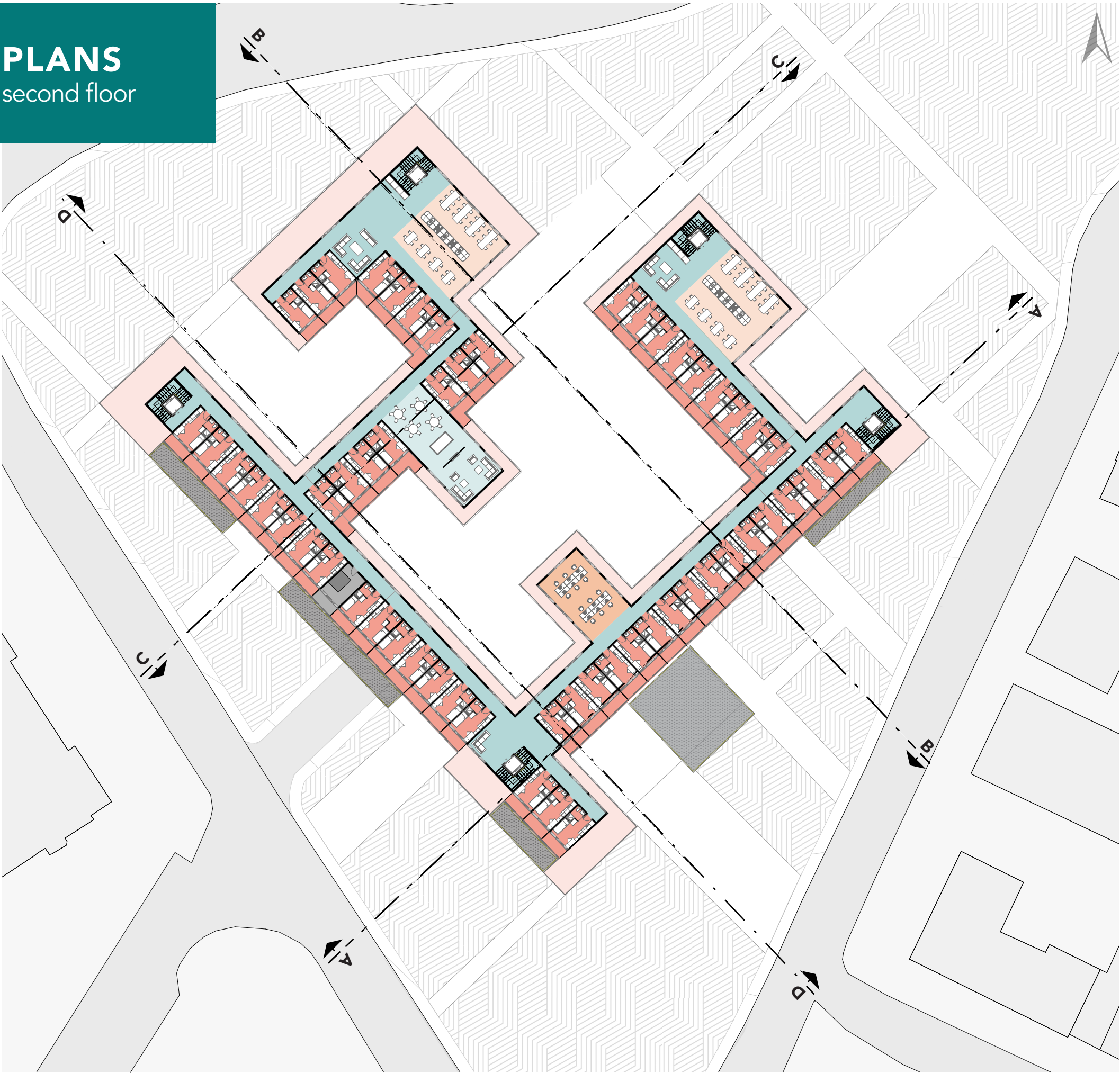
GENERAL INFO	
Floor	1.st floor
Scale	1/500
Level	+75,50
Entances from exterior	No
Total Area	2.638 sqm
Common / Private Spaces Ratio	24/ / 7
Cores: Stairs & Elevator	6

Total Area: Balconies and terraces are included with the rooms.

**Figure 2.61.**  
First Floor Plan  
Source: Author



# PLANS second floor



LEGEND		
	P / C	Function
	C	Corridors and Open Common Spaces
	P	Single Rooms
	C + P	Study Rooms
	C	Multipurpose Spaces
	C	Kitchens & Dining
	C	Balconies
	*	Technical Room
	*	Green Roofs

P/C: Private Space / Common Space  
 \*: Authorized Personal Only Areas

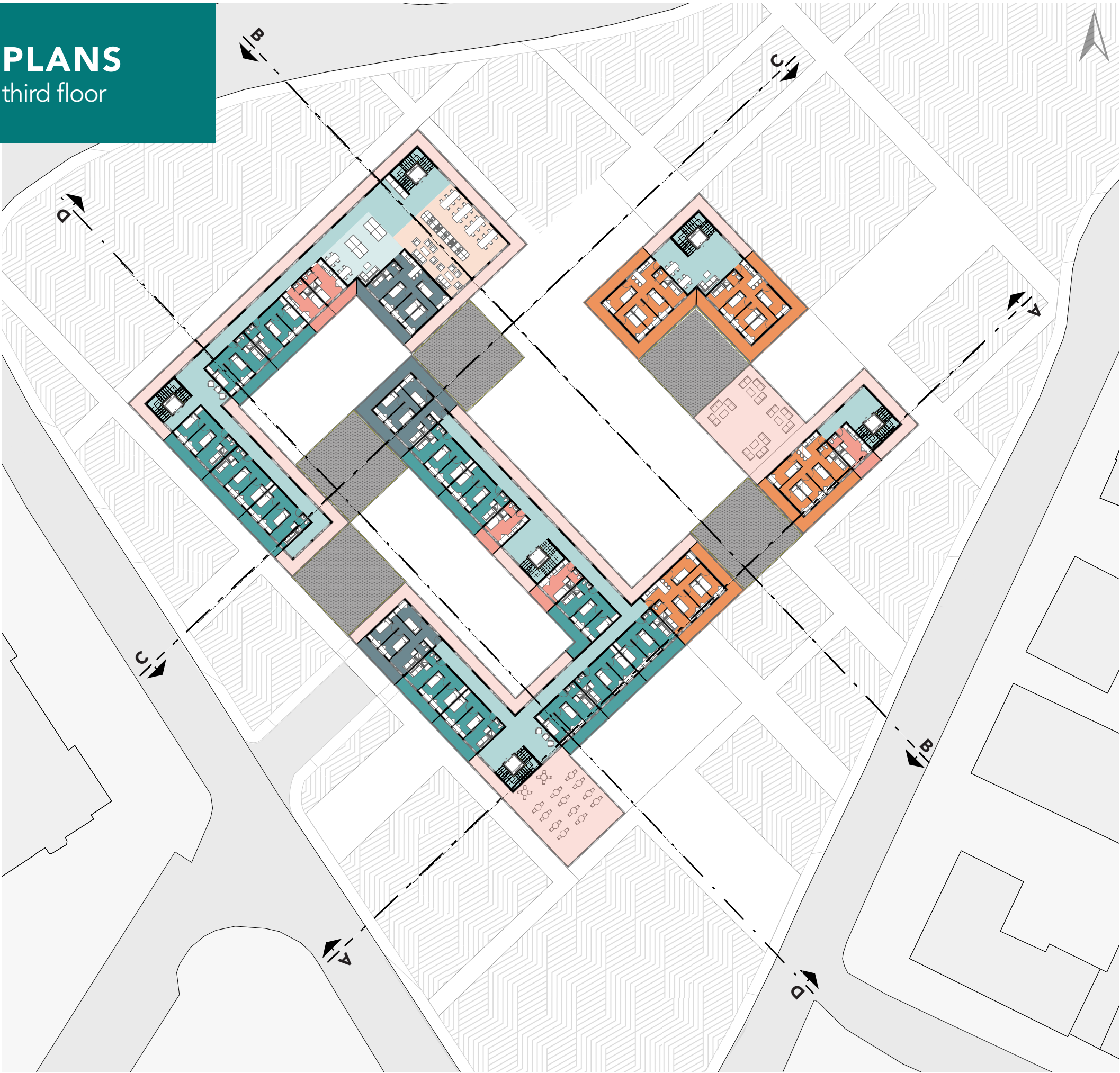
GENERAL INFO	
Floor	2.nd floor
Scale	1/500
Level	+79,00
Entances from exterior	No
Total Area	3.200 sqm
Common / Private Spaces Ratio	9 / 20
Cores: Stairs & Elevator	5

Total Area: Balconies and terraces are included with the rooms.

**Figure 2.62.**  
 Second Floor Plan  
 Source: Author



# PLANS third floor



LEGEND		
	P / C	Function
	C	Corridors and Open Common Spaces
	P	Single Rooms
	P	Double Rooms
	P	Triple Rooms
	P	Qaudruple Rooms
	C	Multipurpose Spaces
	C	Kitchens & Dining
	C	Balconies
	*	Green Roofs

P/C: Private Space / Common Space  
 \*: Authorized Personal Only Areas

GENERAL INFO	
Floor	3.rd floor
Scale	1/500
Level	+82,50
Entances from exterior	No
Total Area	2.602 sqm
Common / Private Spaces Ratio	8 / 18
Cores: Stairs & Elevator	6

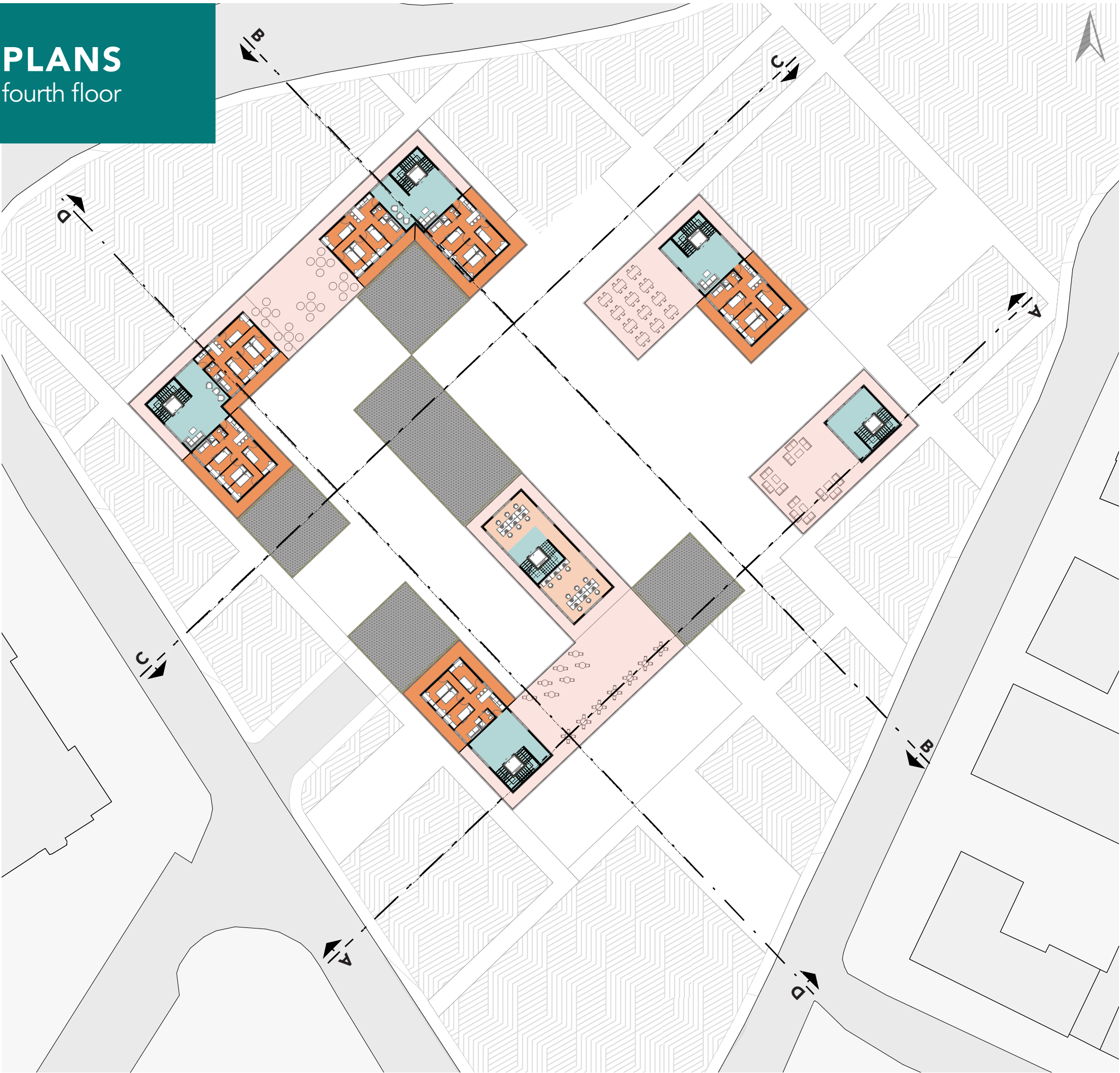
Total Area: Balconies and terraces are included with the rooms.

**Figure 2.63.**  
 Third Floor Plan  
 Source: Author



# PLANS

fourth floor



LEGEND		
	P / C	Function
	C	Corridors and Open Common Spaces
	C	Study Rooms
	P	Qaudruple Rooms
	C	Balconies
	*	Green Roofs

P/C: Private Space / Common Space  
 \*: Authorized Personal Only Areas

GENERAL INFO	
Floor	4.th floor
Scale	1/500
Level	+86,00
Entances from exterior	No
Total Area	1.805 sqm
Common / Private Spaces Ratio	12 / 6
Cores: Stairs & Elevator	6

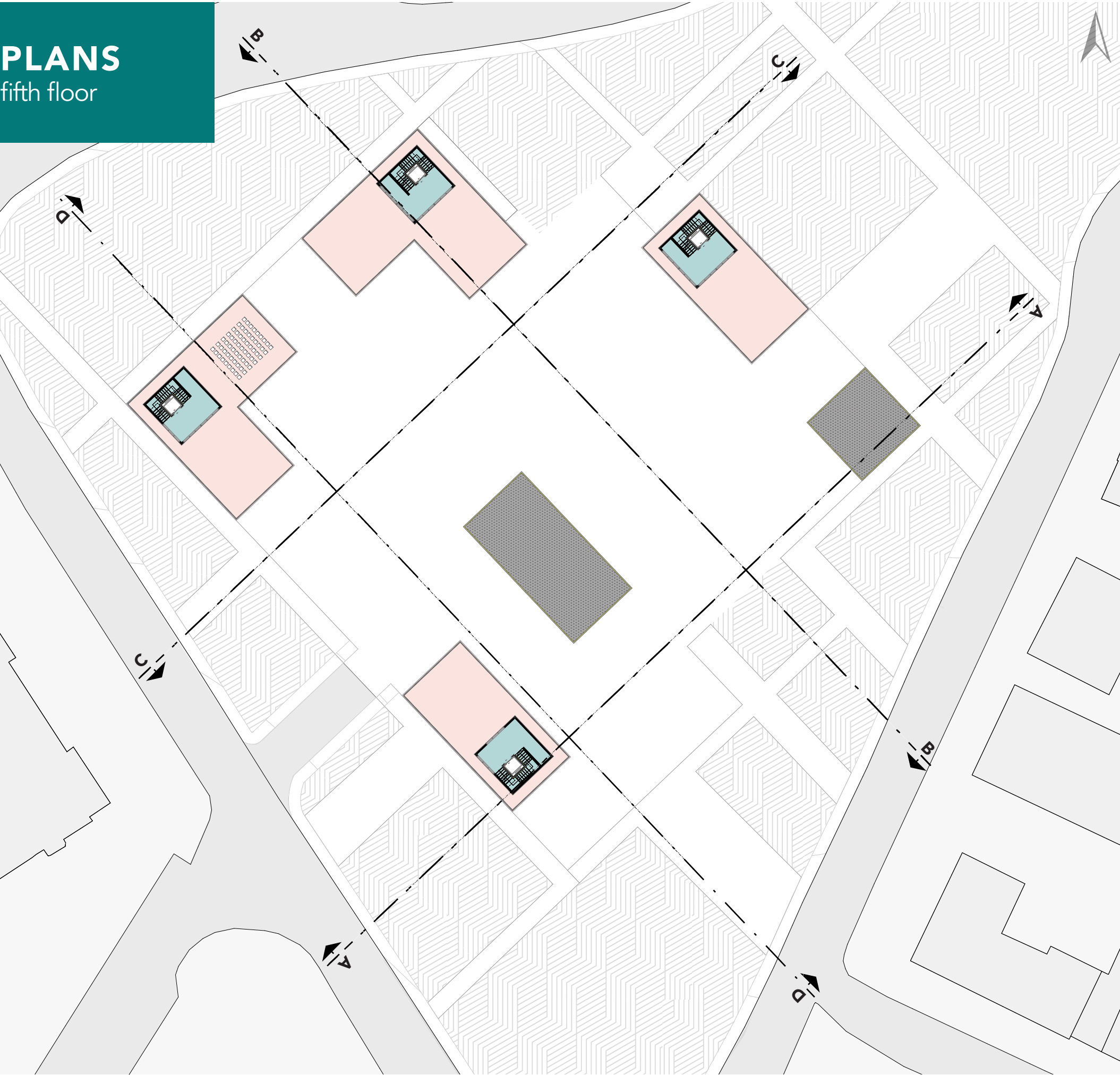
Total Area: Balconies and terraces are included with the rooms.

**Figure 2.64.**  
 Fourth Floor Plan  
 Source: Author



# PLANS

fifth floor



LEGEND		
	P / C	Function
	C	Corridors and Open Common Spaces
	C	Balconies
	*	Green Roofs

P/C: Private Space / Common Space  
 \*: Authorized Personal Only Areas

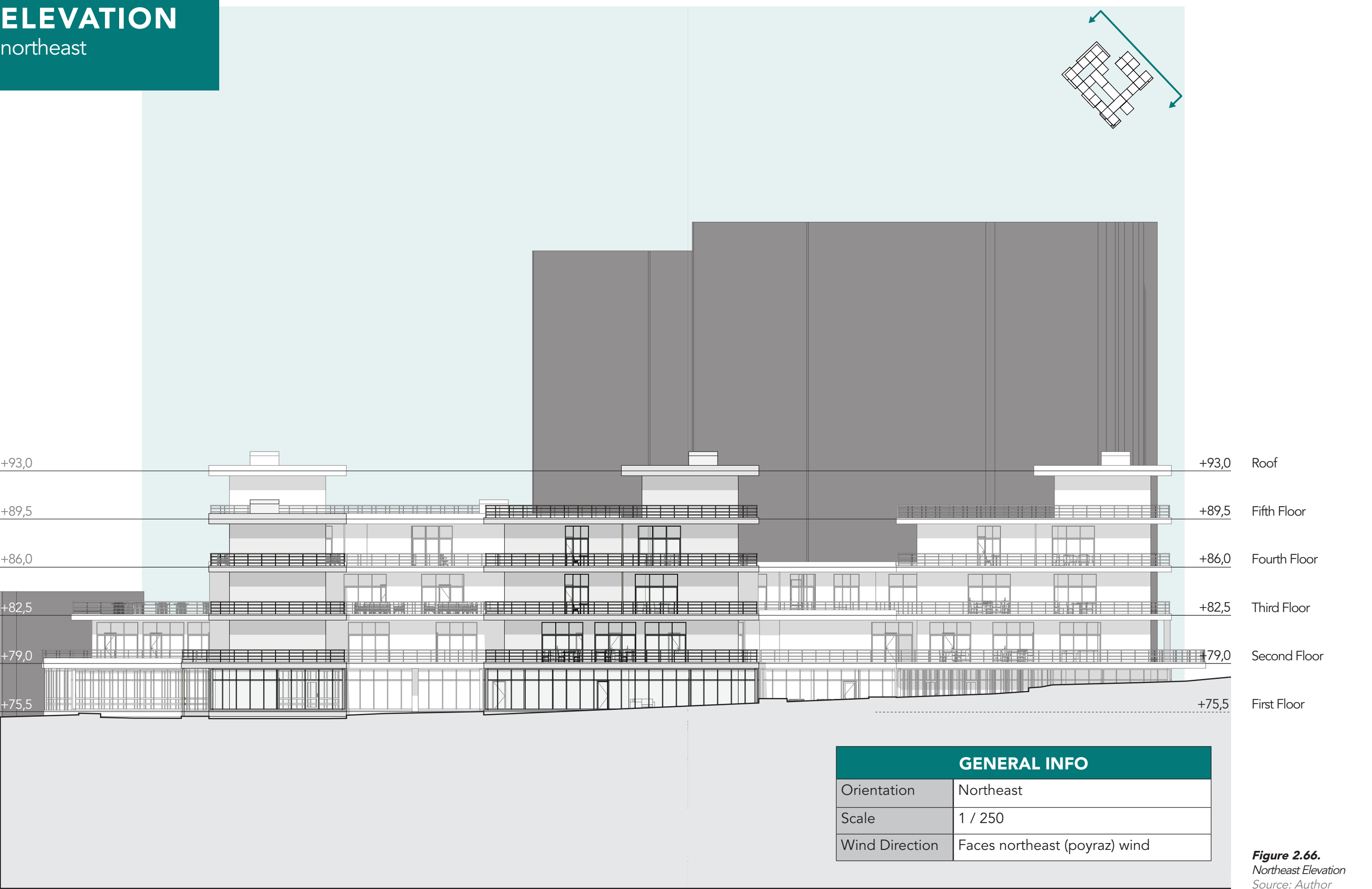
GENERAL INFO	
Floor	5.th floor
Scale	1/500
Level	+89,50
Entances from exterior	No
Total Area	1.036 sqm
Common / Private Spaces Ratio	10 / 0
Cores: Stairs & Elevator	4

Total Area: Balconies and terraces are included with the rooms.

**Figure 2.65.**  
 Fifth Floor Plan  
 Source: Author



ELEVATION  
northeast

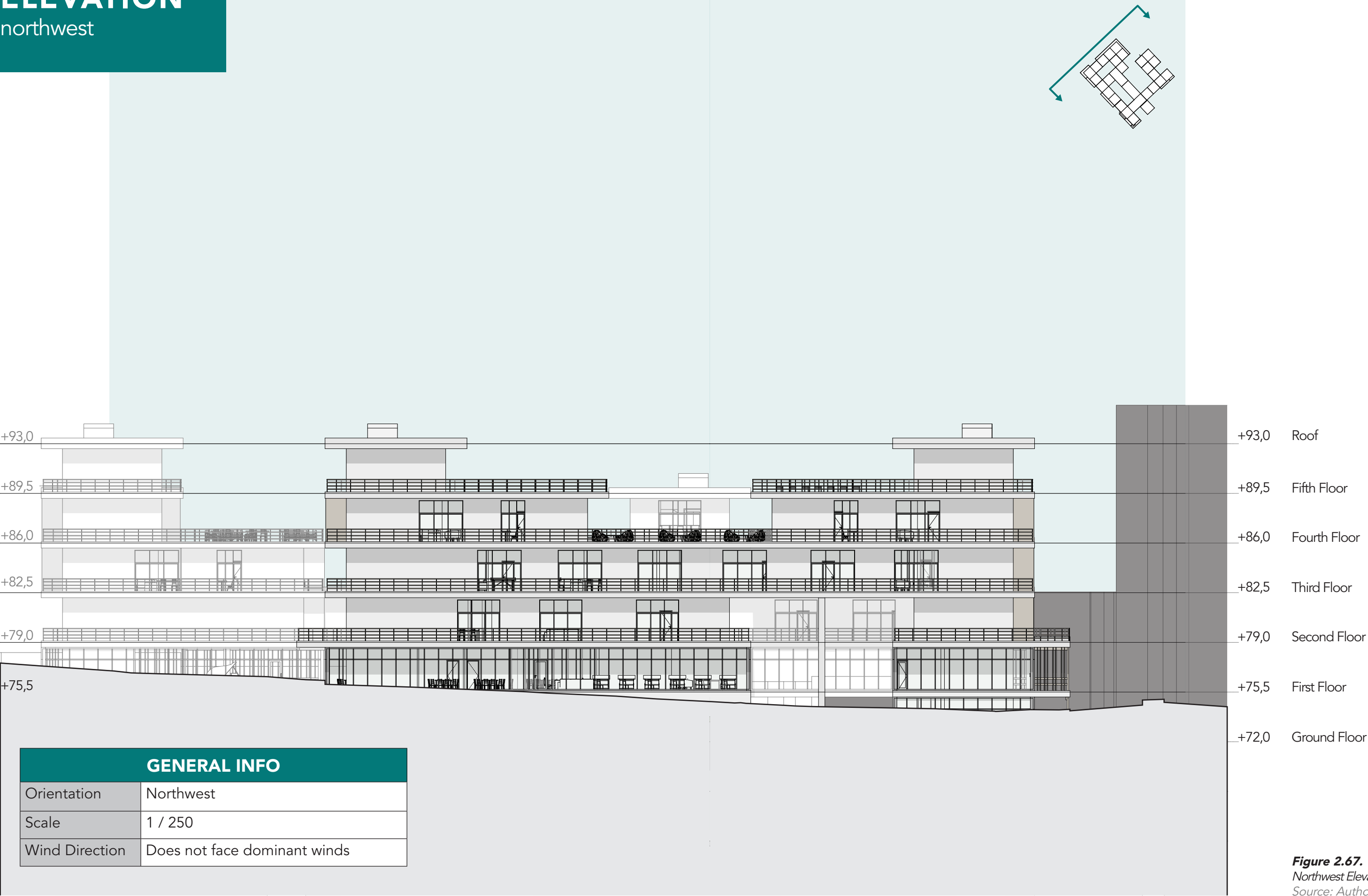


**Figure 2.66.**  
Northeast Elevation  
Source: Author



# ELEVATION

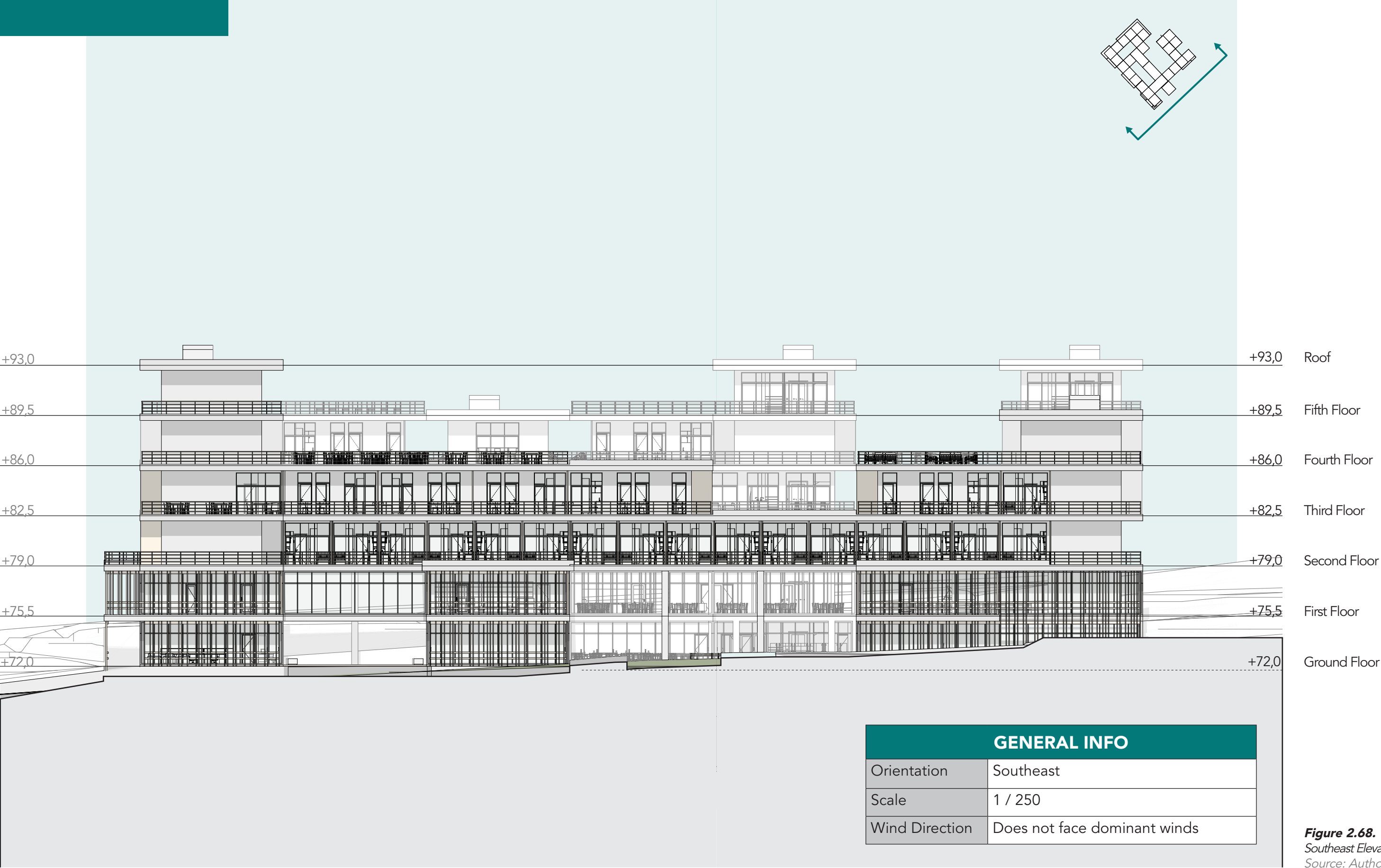
northwest



**Figure 2.67.**  
Northwest Elevation  
Source: Author



ELEVATION  
southeast

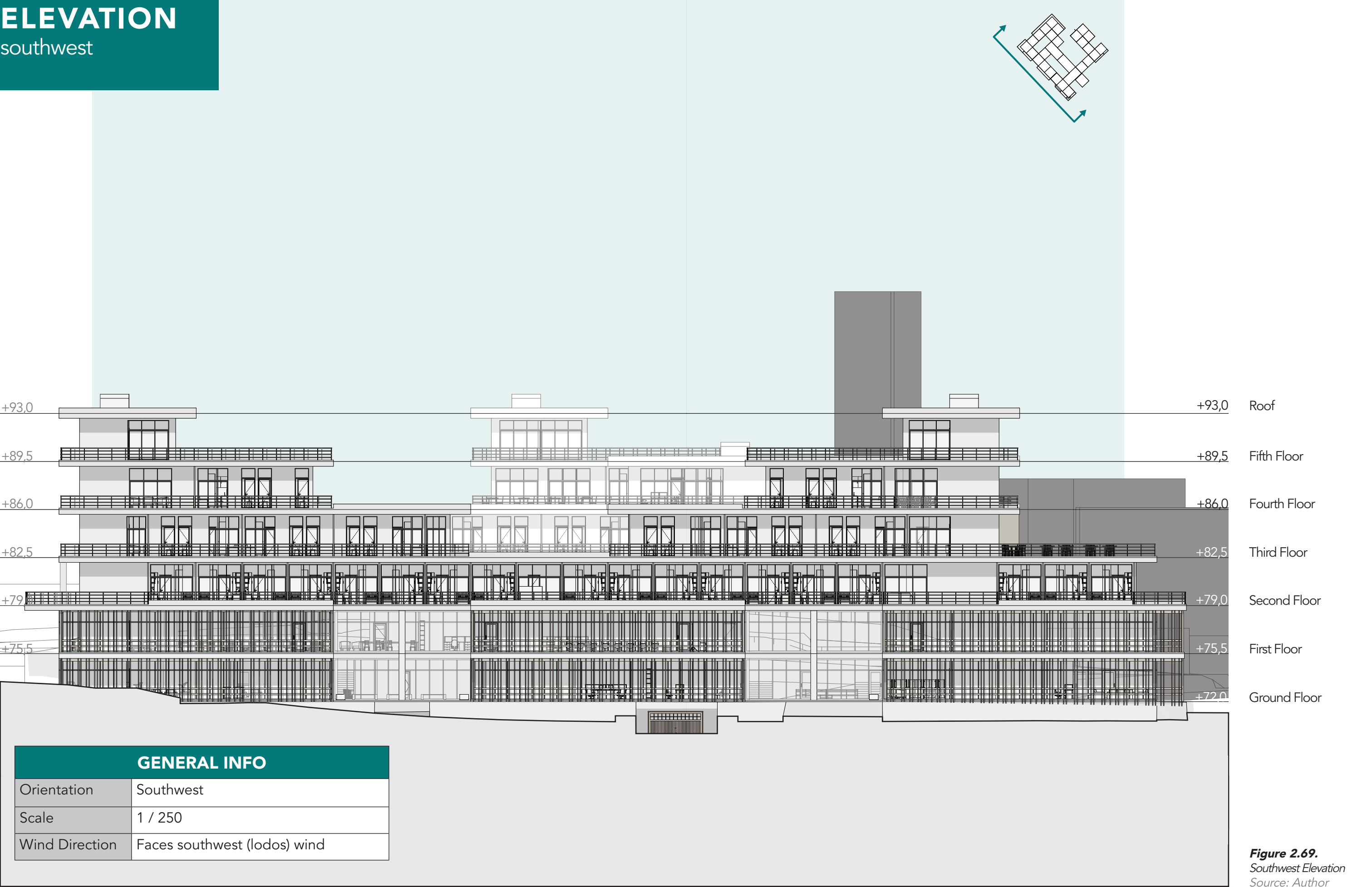


**Figure 2.68.**  
Southeast Elevation  
Source: Author



# ELEVATION

southwest





PLANS  
section AA

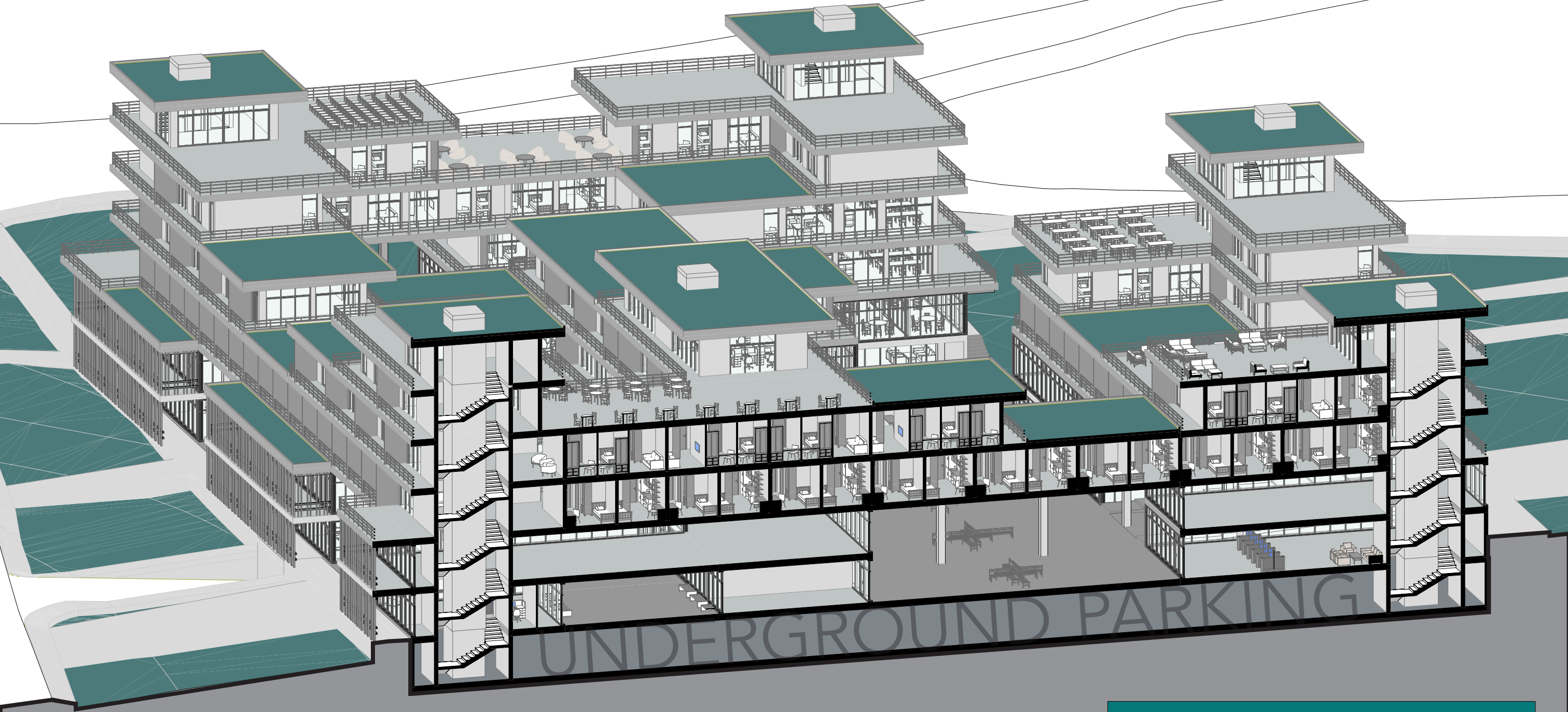
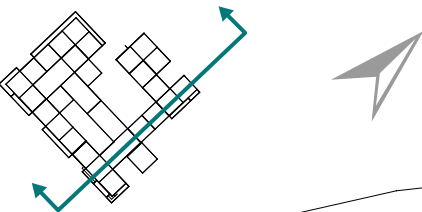


Figure 2.70.  
Section AA  
Source: Author

GENERAL INFO	
Name	Section AA in 3D View
Scale	1 / 250



PLANS  
section BB

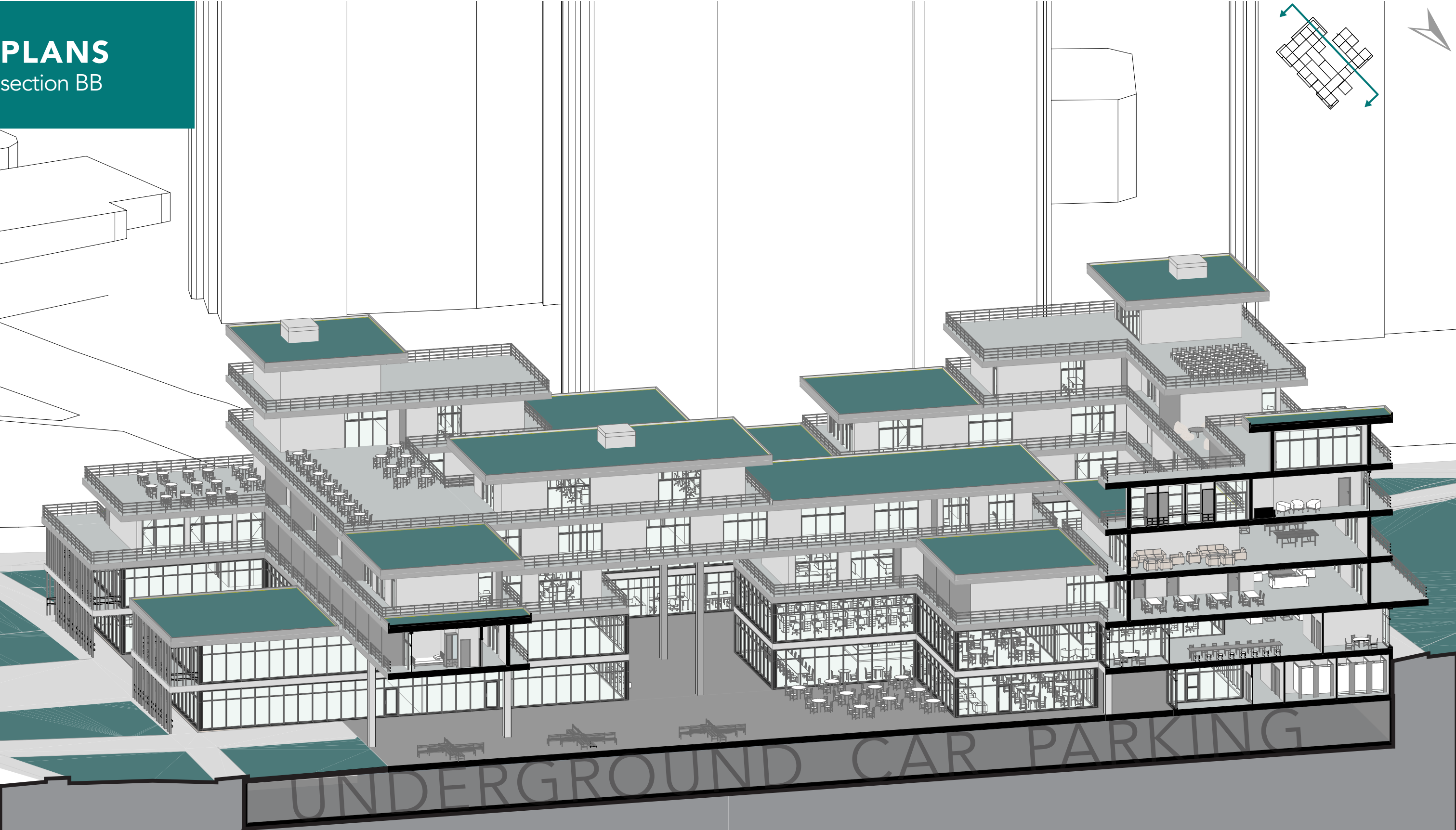


Figure 2.71.  
Section BB  
Source: Author

GENERAL INFO	
Name	Section BB in 3D View
Scale	1 / 250



PLANS  
section CC

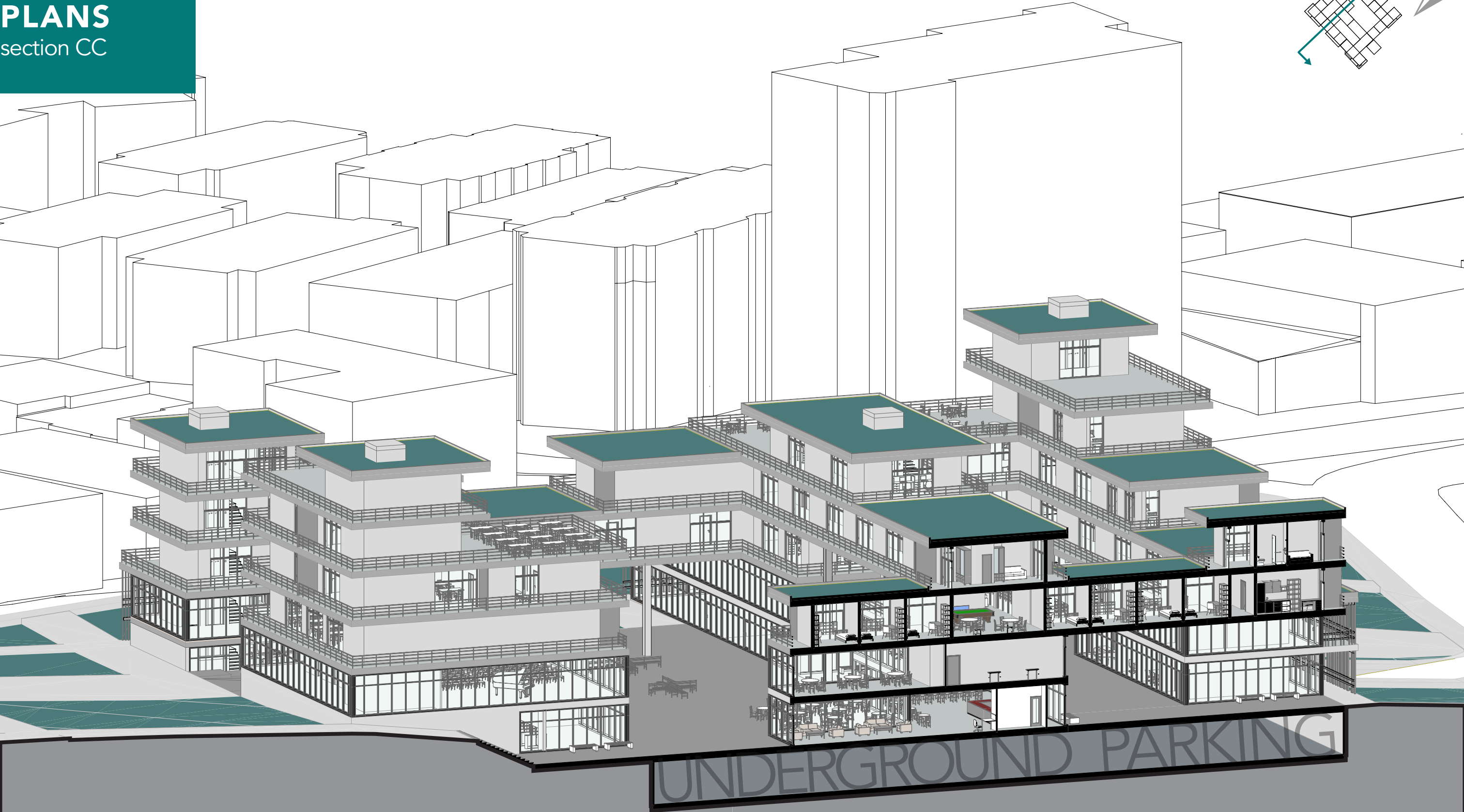
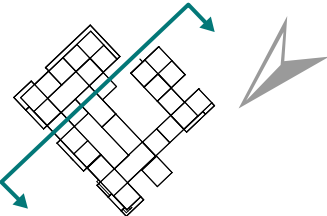


Figure 2.72.  
Section CC  
Source: Author

GENERAL INFO	
Name	Section CC in 3D View
Scale	1 / 250



PLANS  
section DD

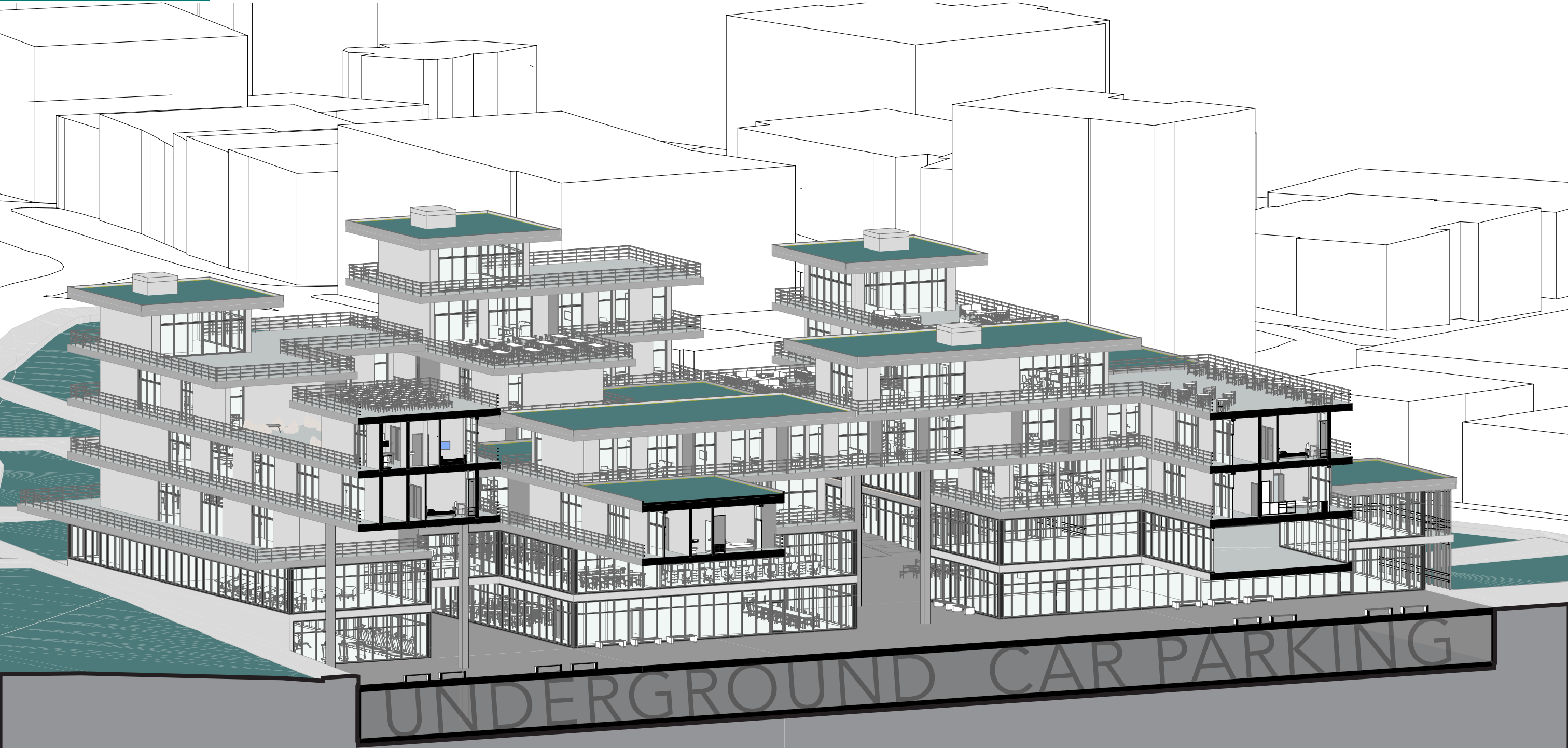
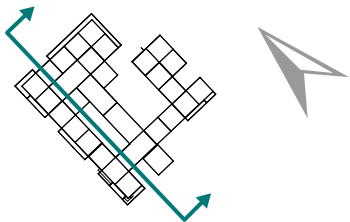


Figure 2.73.  
Section DD  
Source: Author

GENERAL INFO	
Name	Section DD in 3D View
Scale	1 / 250

# ENVIRONMENTAL STRATEGIES

## Wind and Shading

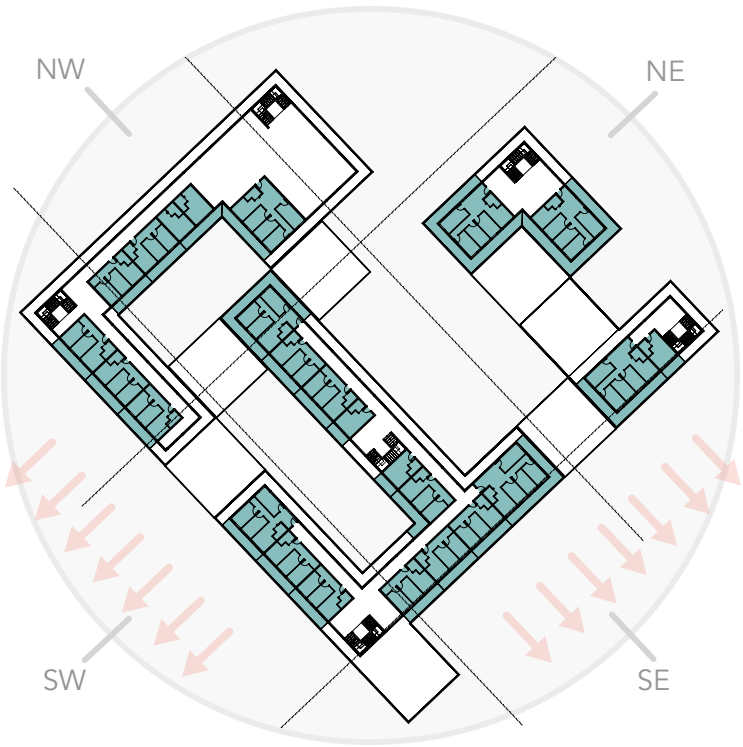
The project site is strongly affected by the northeast wind that brings cold air throughout the year. (Energyplus, 2021) The building is positioned in the northeast-southwest direction to adapt to the wind and apply cross ventilation.

Creating continuous air paths is avoided to control the strength of the wind. Cross ventilation is achieved as a passive cooling strategy by window openings.

Deciduous trees on the southeast and southwest provide shadow in summer and sunlight in winter. Whereas evergreen trees in the northeast and northwest protect from strong winds in the winter.

### Orientation of the Living Areas:

Room placement is done according to the orientation as well. All rooms and their balconies face southeast and southwest directions to benefit the sun. The concrete slabs over the balconies act as a shading element.

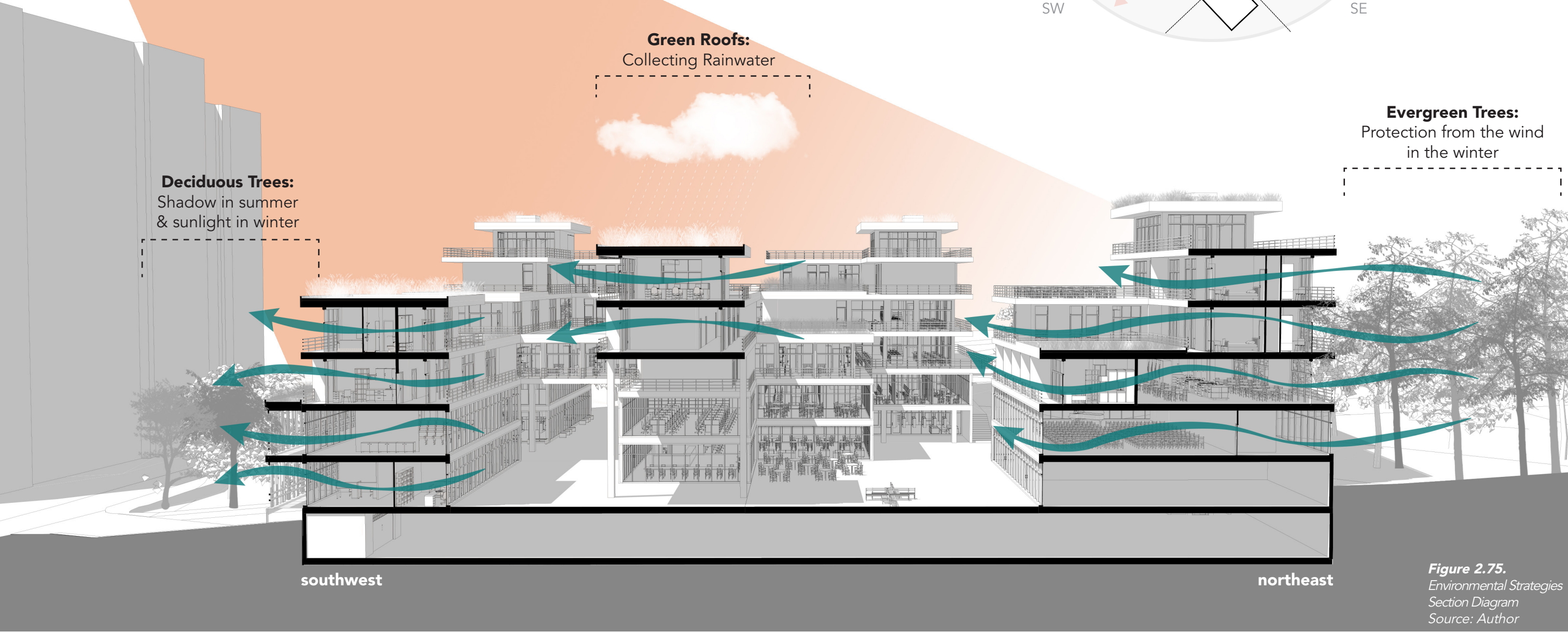


**Figure 2.74.**  
Orientation of the Living Areas Diagram  
Source: Author

### Green Roofs: Collecting Rainwater

### Deciduous Trees: Shadow in summer & sunlight in winter

### Evergreen Trees: Protection from the wind in the winter

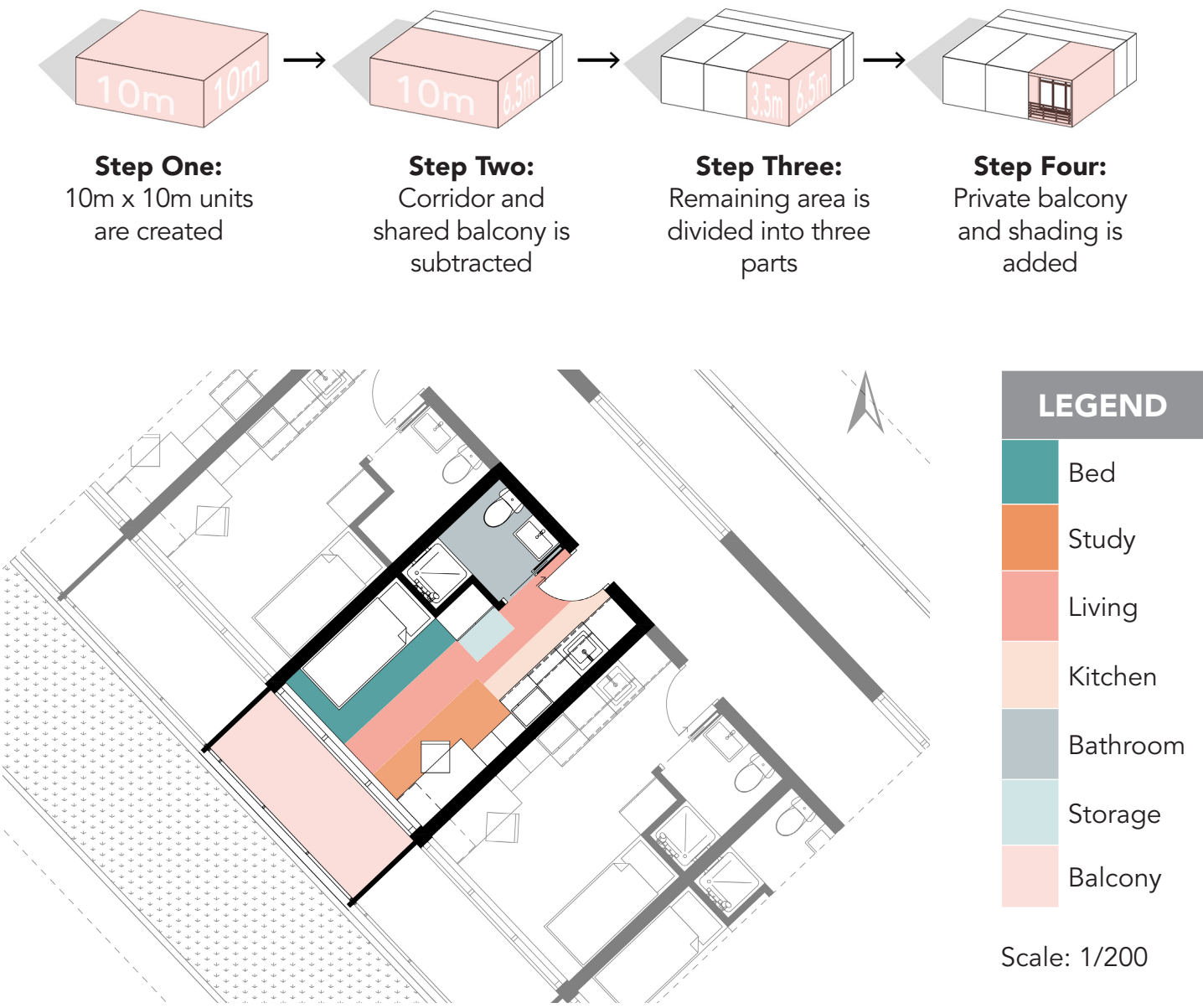


**Figure 2.75.**  
Environmental Strategies Section Diagram  
Source: Author



# UNIT TYPOLOGY

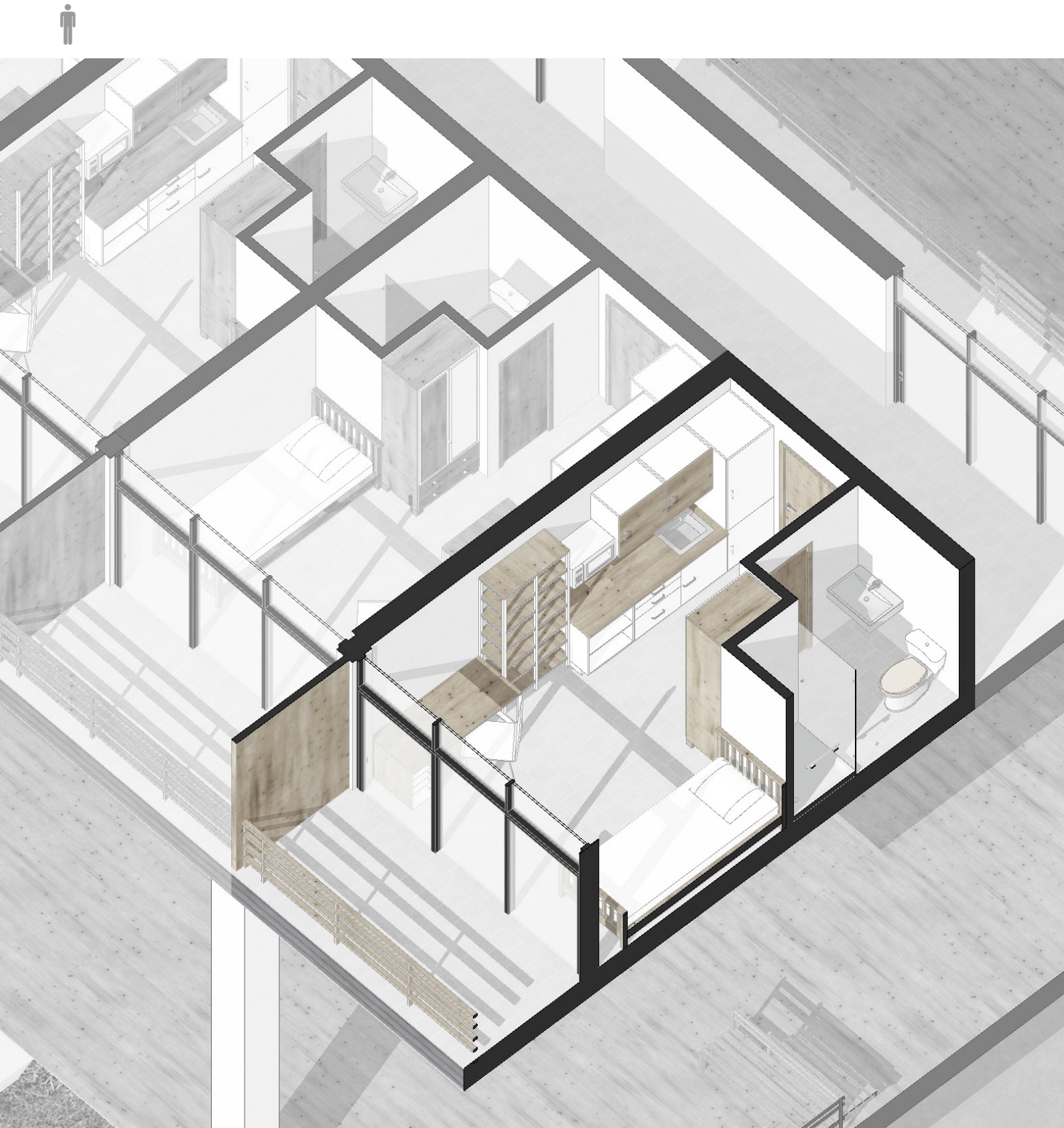
## Single Room



**Figure 2.76.**  
Unit Typology -  
Single Room Diagrams  
Source: Author

**Figure 2.77.**  
Unit Typology -  
Single Room Plans  
Source: Author

Total Number of Rooms in the Building	63
Bed Capacity of the Room	1
Location of the Rooms	2. & 3. Floors
Individual Area per Student	19,5 sqm
Total Area without Balconies	19,5 sqm
Total Area of Balconies	7,5 sqm
Total Area with Balconies	26 sqm

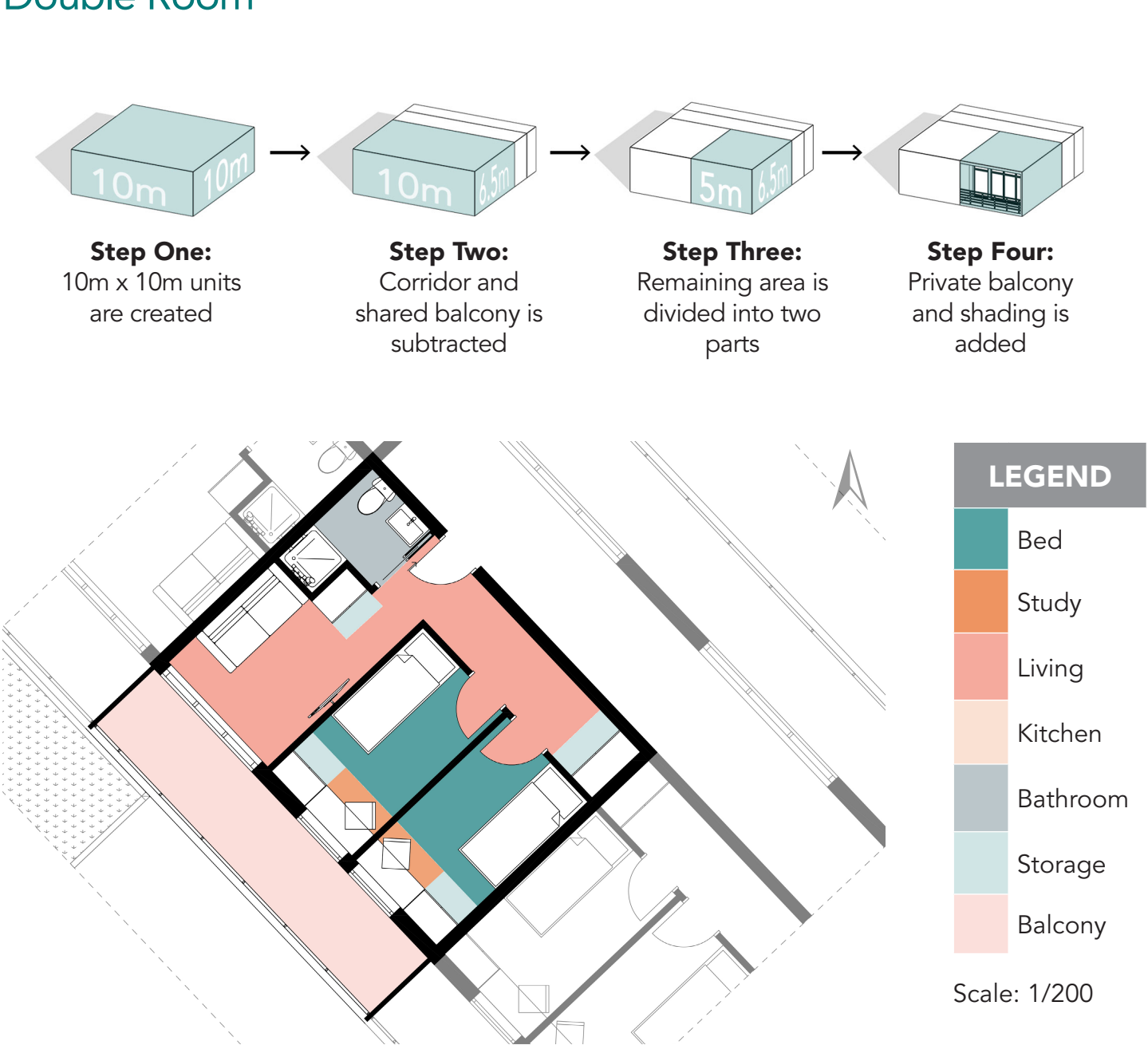


**Figure 2.78.**  
Unit Typology -  
Single Room 3D Section  
Source: Author



# UNIT TYPOLOGY

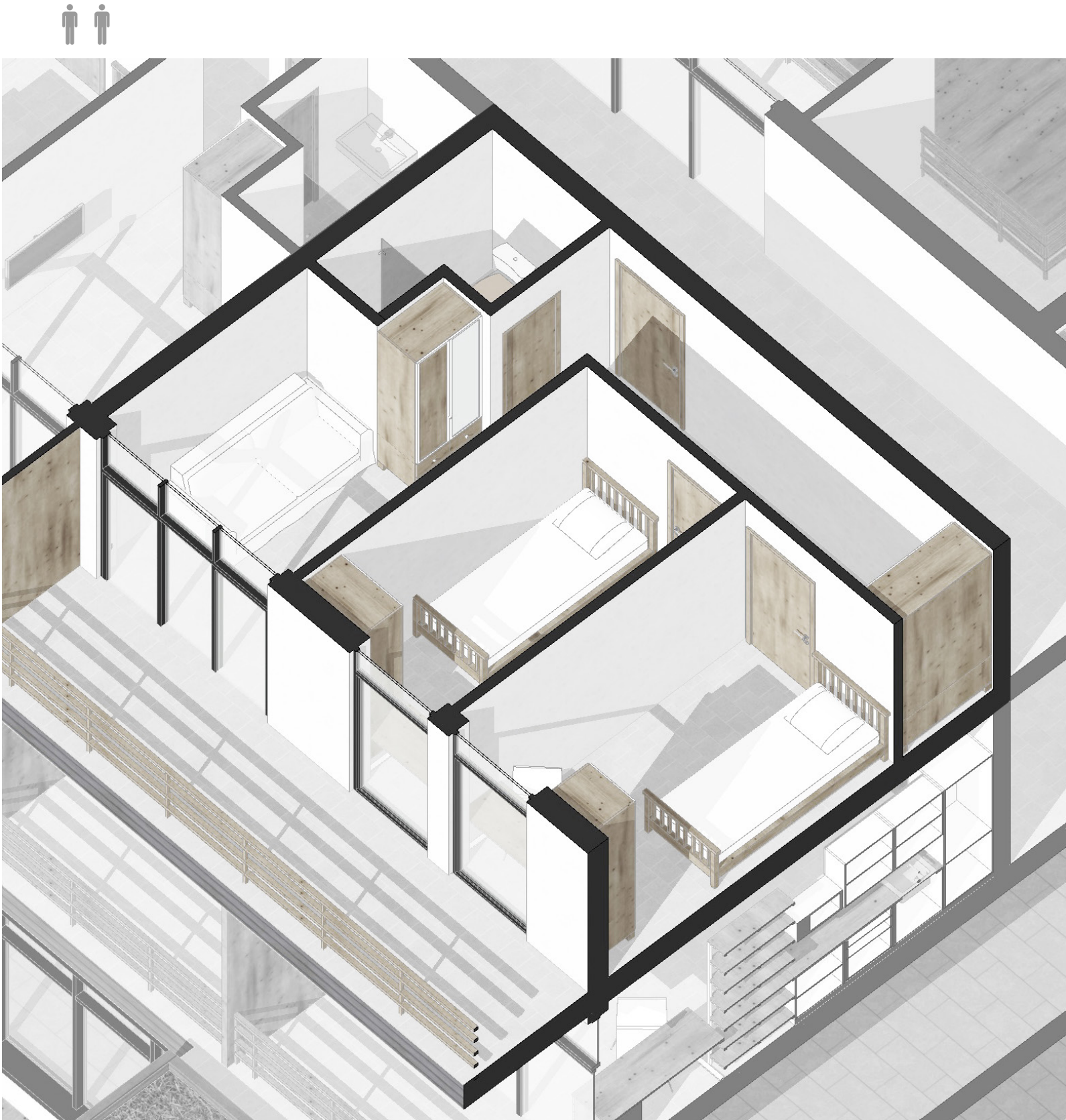
## Double Room



**Figure 2.79.**  
Unit Typology -  
Double Room Diagrams  
Source: Author

**Figure 2.80.**  
Unit Typology -  
Double Room Plans  
Source: Author

Total Number of Rooms in the Building	13
Bed Capacity of the Room	2
Location of the Rooms	3. Floor
Individual Area per Student	10 sqm
Total Area without Balconies	38 sqm
Total Area of Balconies	15 sqm
Total Area with Balconies	53 sqm

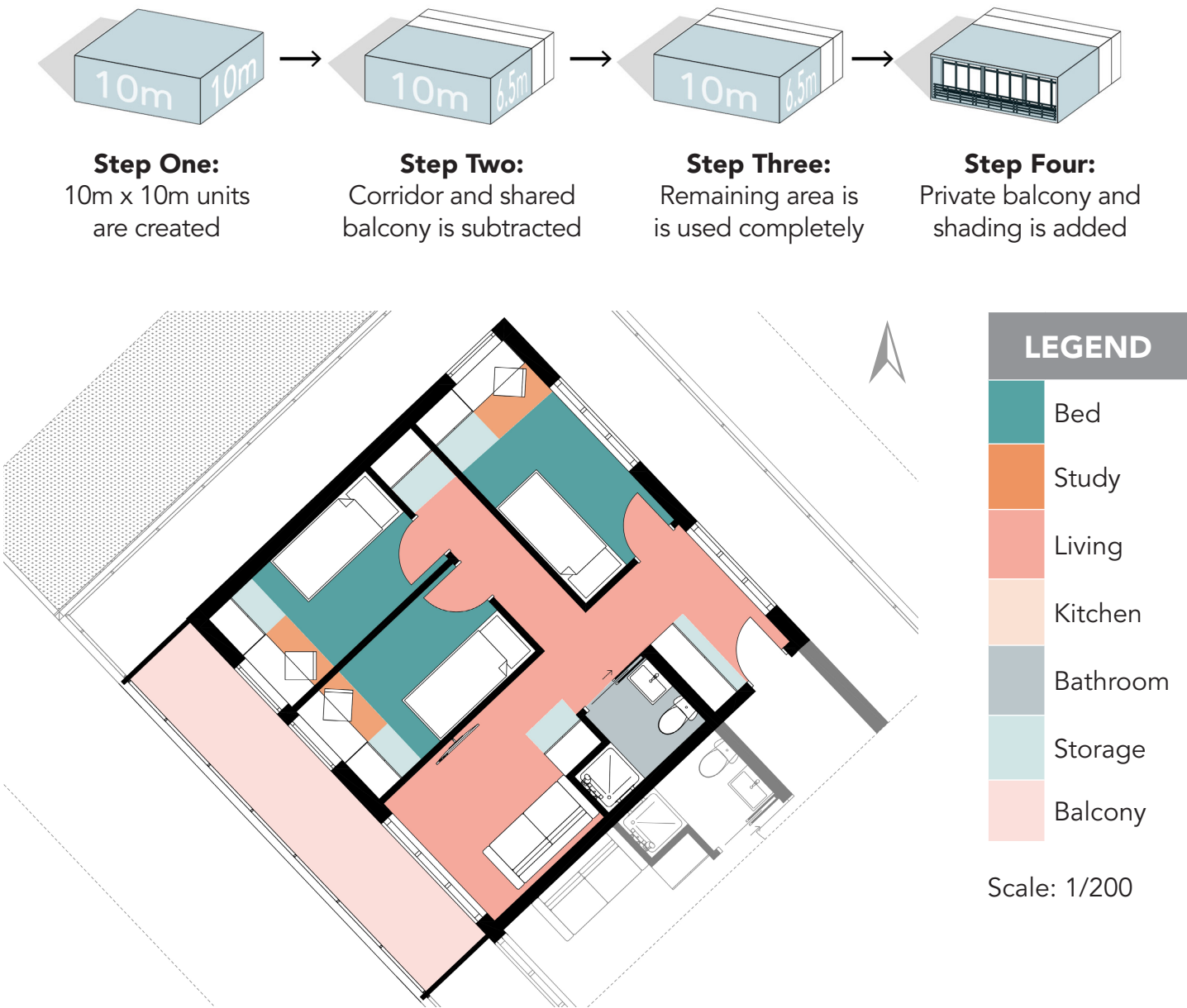


**Figure 2.81.**  
Unit Typology -  
Double Room 3D Section  
Source: Author



# UNIT TYPOLOGY

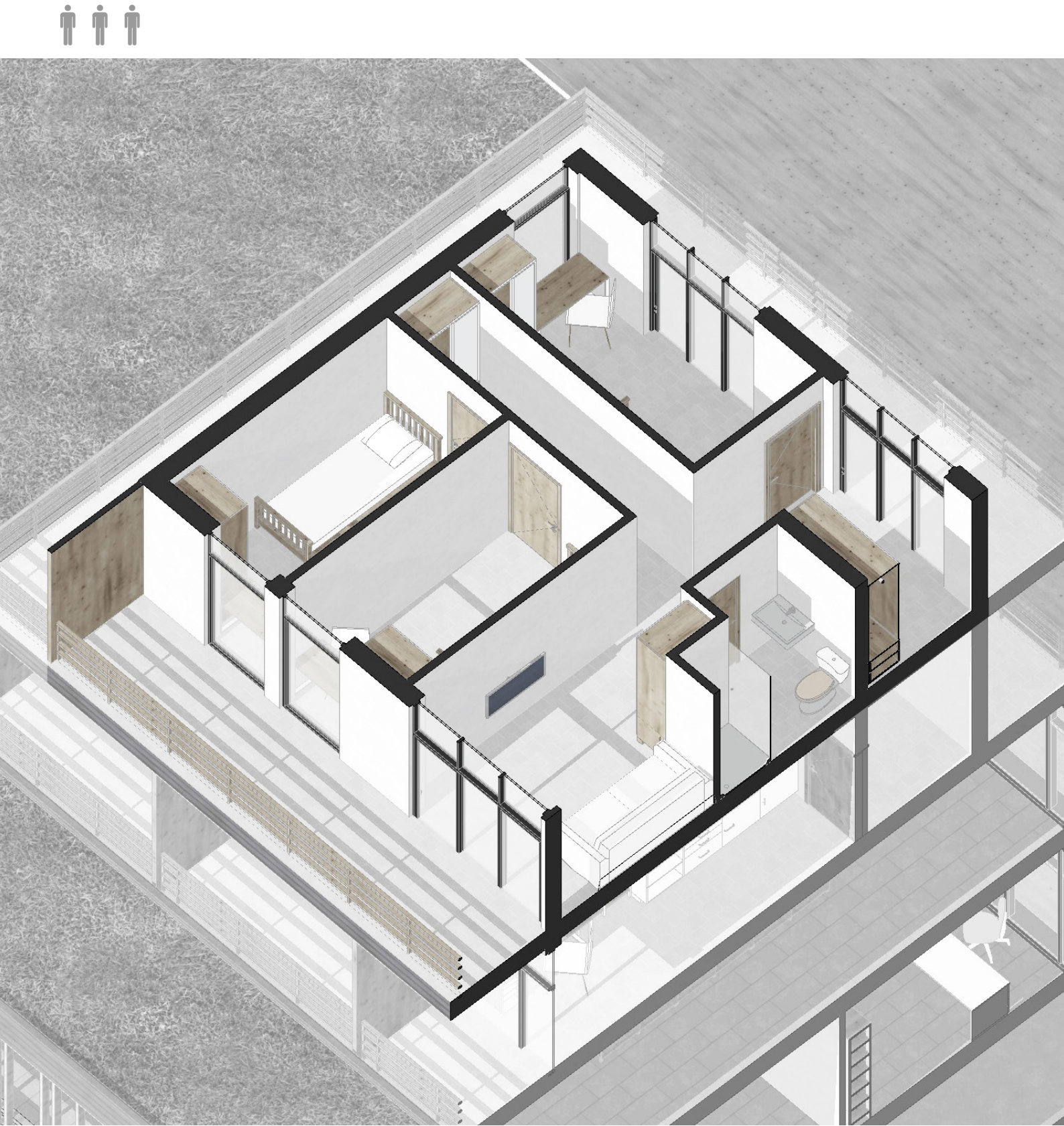
## Triple Room



**Figure 2.82.**  
Unit Typology -  
Triple Room Diagrams  
Source: Author

**Figure 2.83.**  
Unit Typology -  
Triple Room Plans  
Source: Author

Total Number of Rooms in the Building	3
Bed Capacity of the Room	3
Location of the Rooms	3. Floor
Individual Area per Student	10 sqm
Total Area without Balconies	55 sqm
Total Area of Balconies	15 sqm
Total Area with Balconies	70 sqm

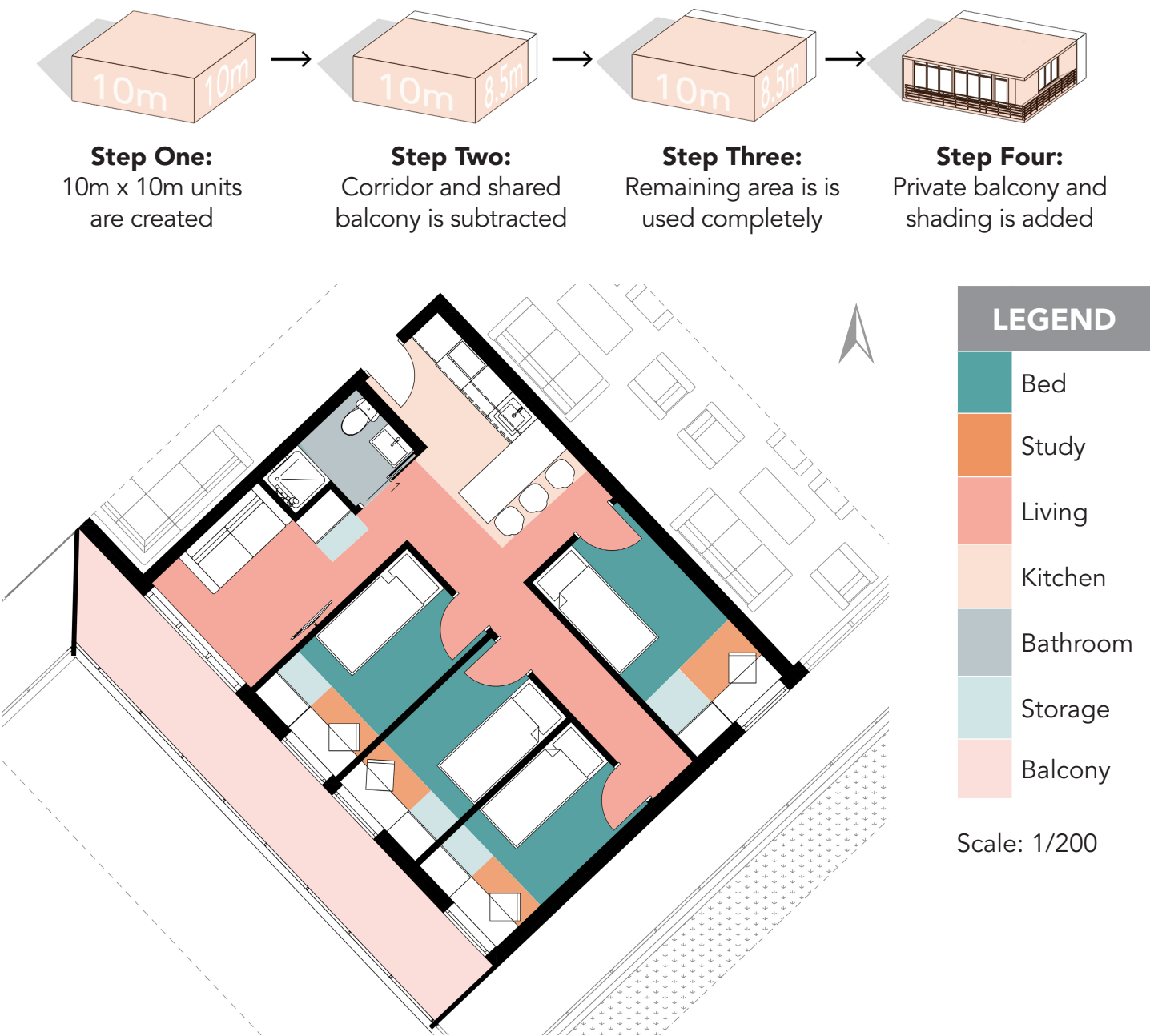


**Figure 2.84.**  
Unit Typology -  
Triple Room 3D Section  
Source: Author



# UNIT TYPOLOGY

## Quadruple Room



**Figure 2.85.**  
Unit Typology -  
Quadruple Room Diag-  
rams

**Figure 2.86.**  
Unit Typology -  
Quadruple Room Plans  
Source: Author

Total Number of Rooms in the Building	10
Bed Capacity of the Room	4
Location of the Rooms	3. & 4. Floor
Individual Area per Student	10 sqm
Total Area without Balconies	68 sqm
Total Area of Balconies	20 sqm
Total Area with Balconies	88 sqm



**Figure 2.87.**  
Unit Typology - Quad-  
ruple Room 3D Section  
Source: Author





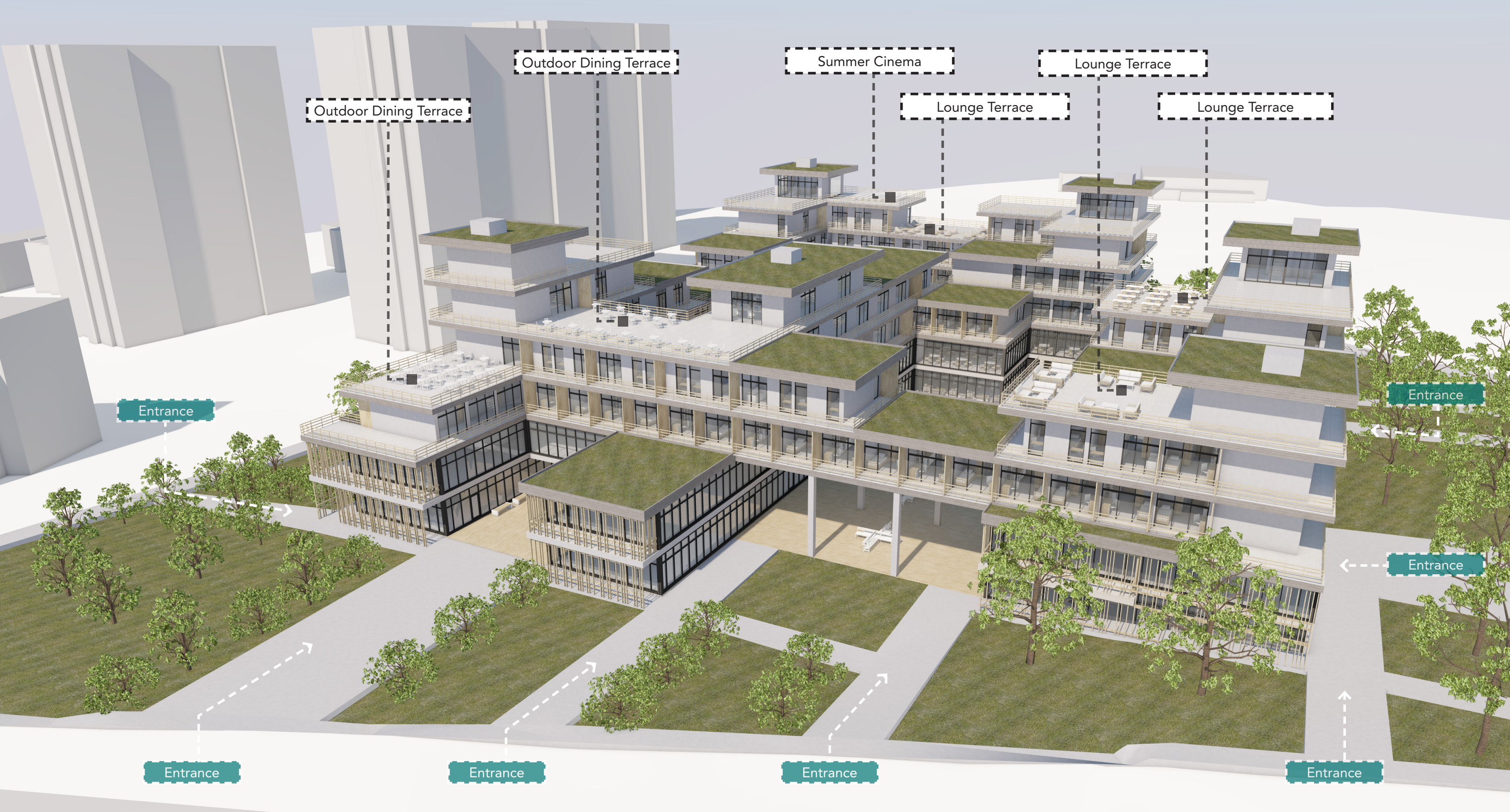
LEGEND			
	Green Roofs		Green Landscape

**Figure 2.88.**  
Green Spaces  
Source: Author



AXONOMETRIC VIEWS

Main Entrances

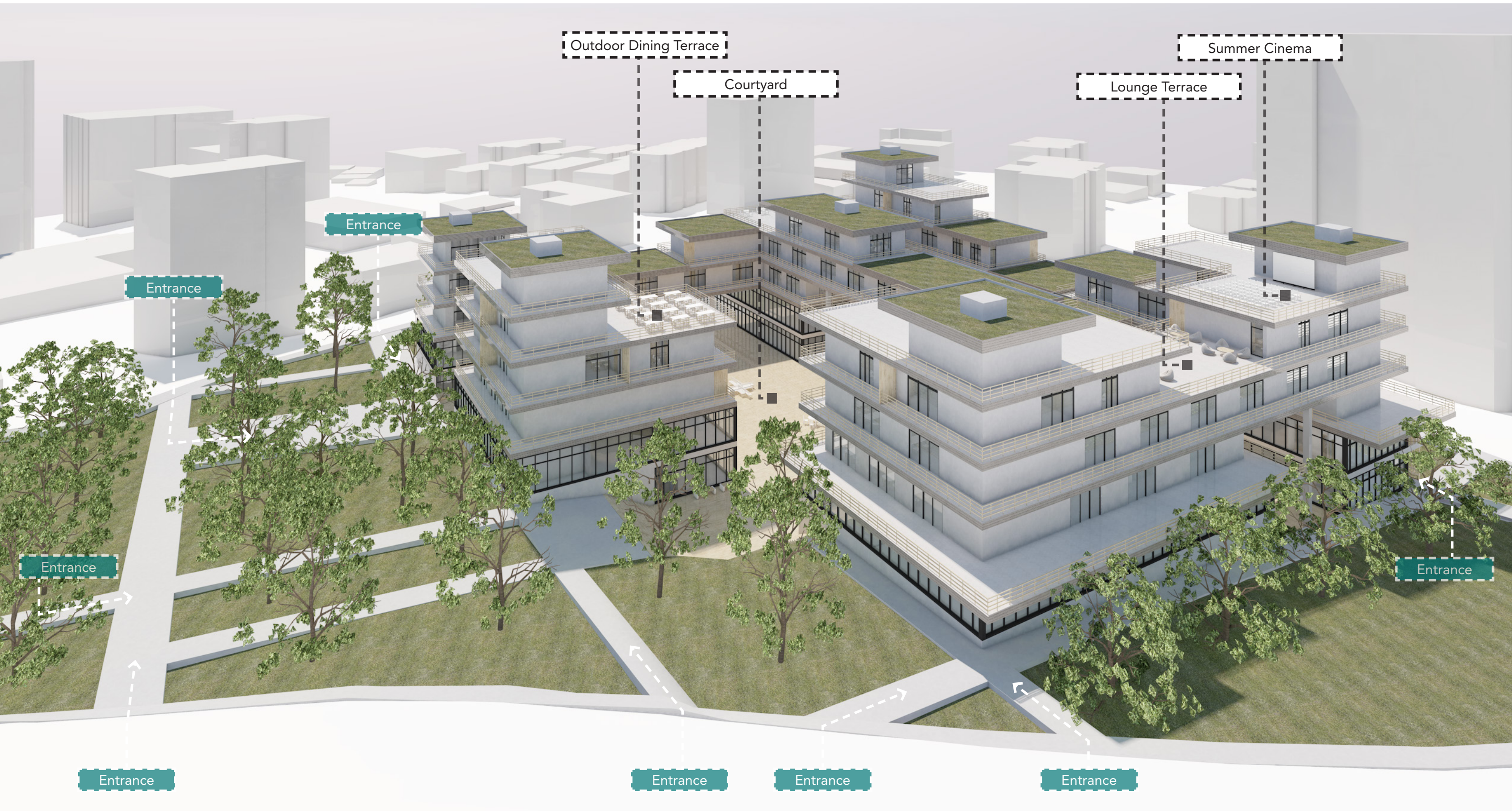


**Figure 2.89.**  
Axonometric Views -  
Main Entrances  
Source: Author



AXONOMETRIC VIEWS

Back Entrances From The Park



**Figure 2.90.**  
Axonometric Views - Back  
Entrances from the Park  
Source: Author



**VIEWS**  
Main Entrances



**Figure 2.91.**  
Views - Main Entrances  
Source: Author



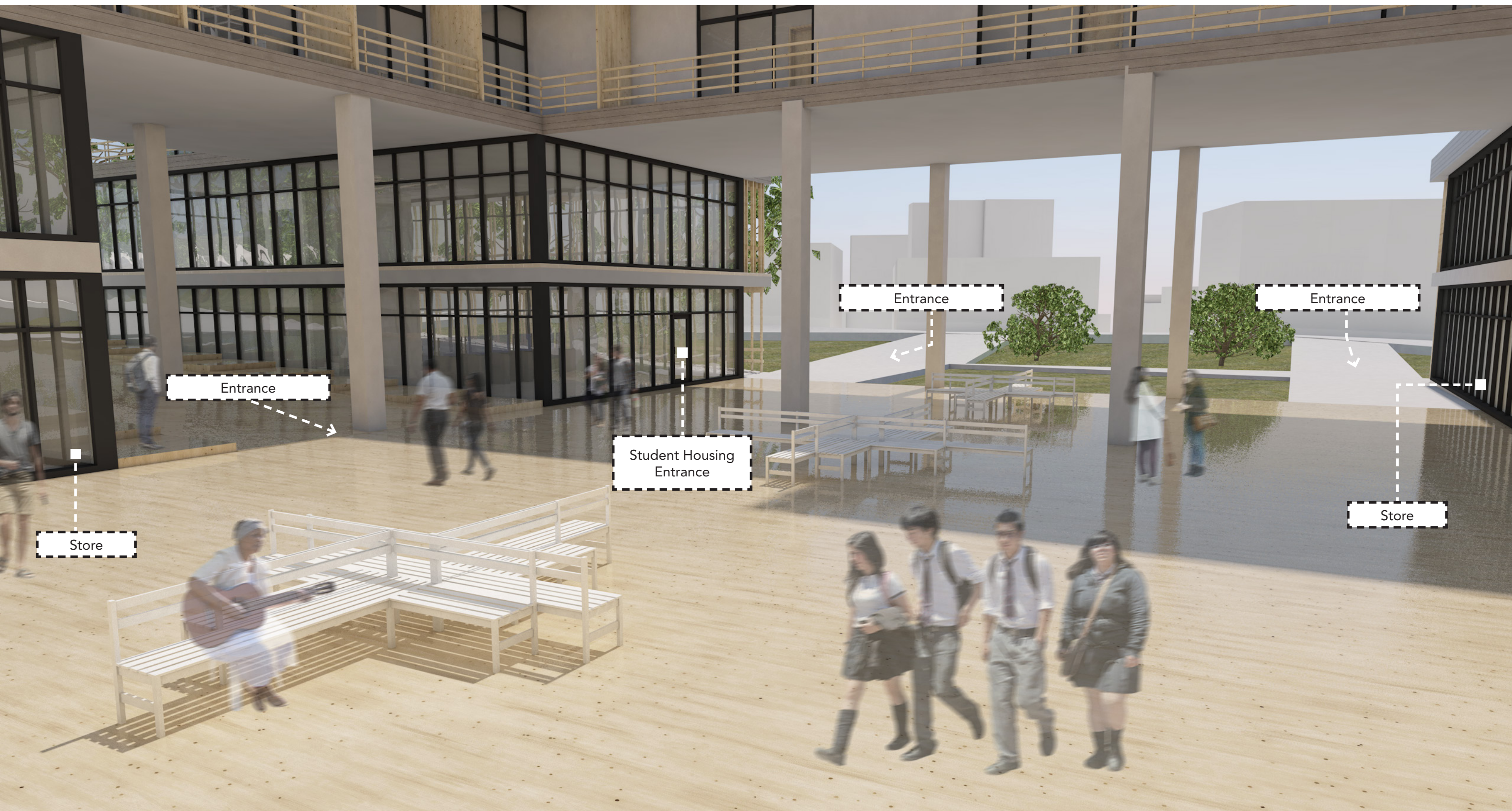
**VIEWS**  
Main Entrances



**Figure 2.92.**  
Views - Main Entrances  
Source: Author



CO - LIVING SPACES  
Courtyards



**Figure 2.93.**  
Co-Living Spaces -  
Courtyards  
Source: Author



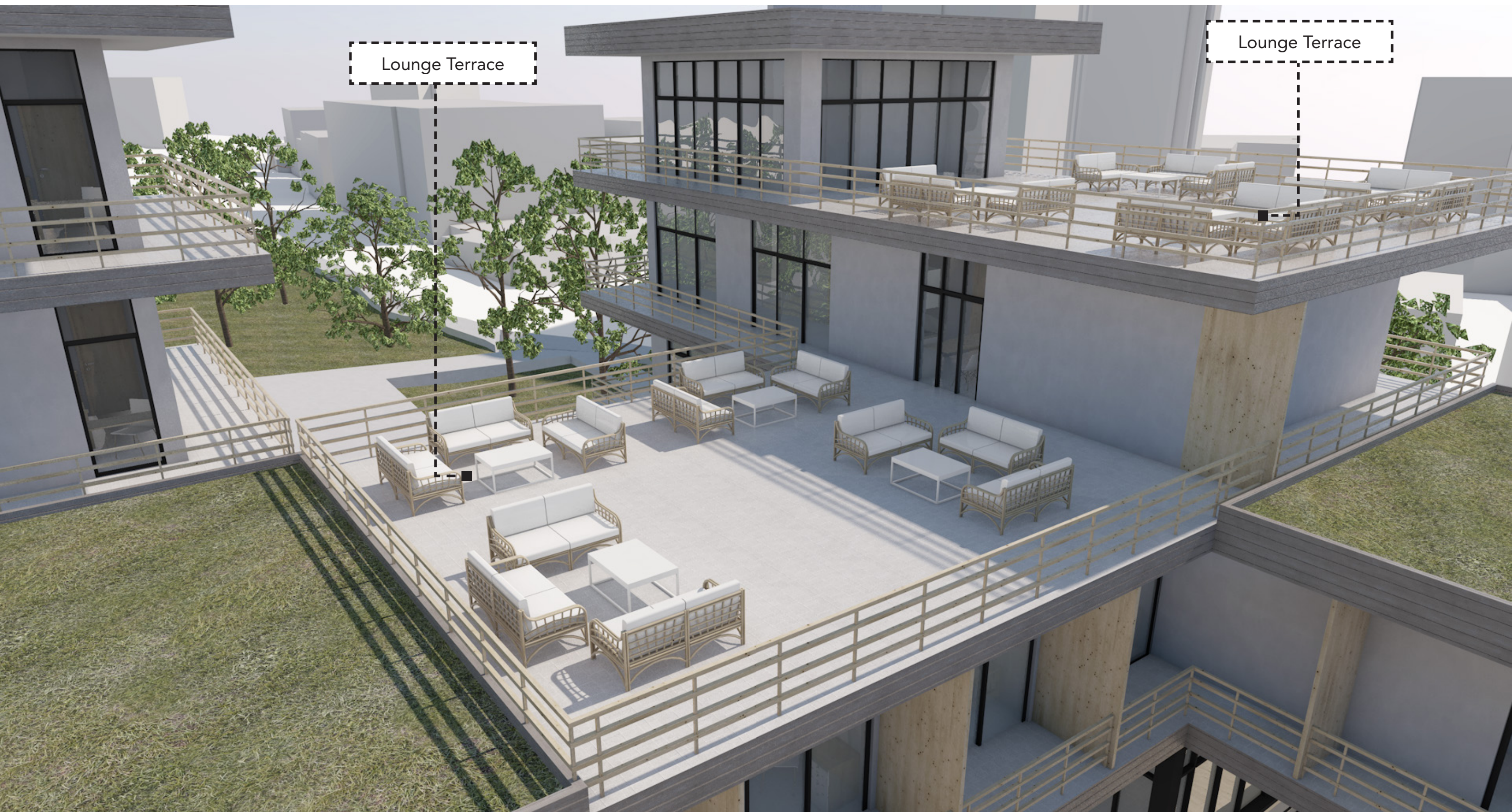
CO - LIVING SPACES  
Courtyards



**Figure 2.94.**  
Co-Living Spaces -  
Courtyards 2  
Source: Author



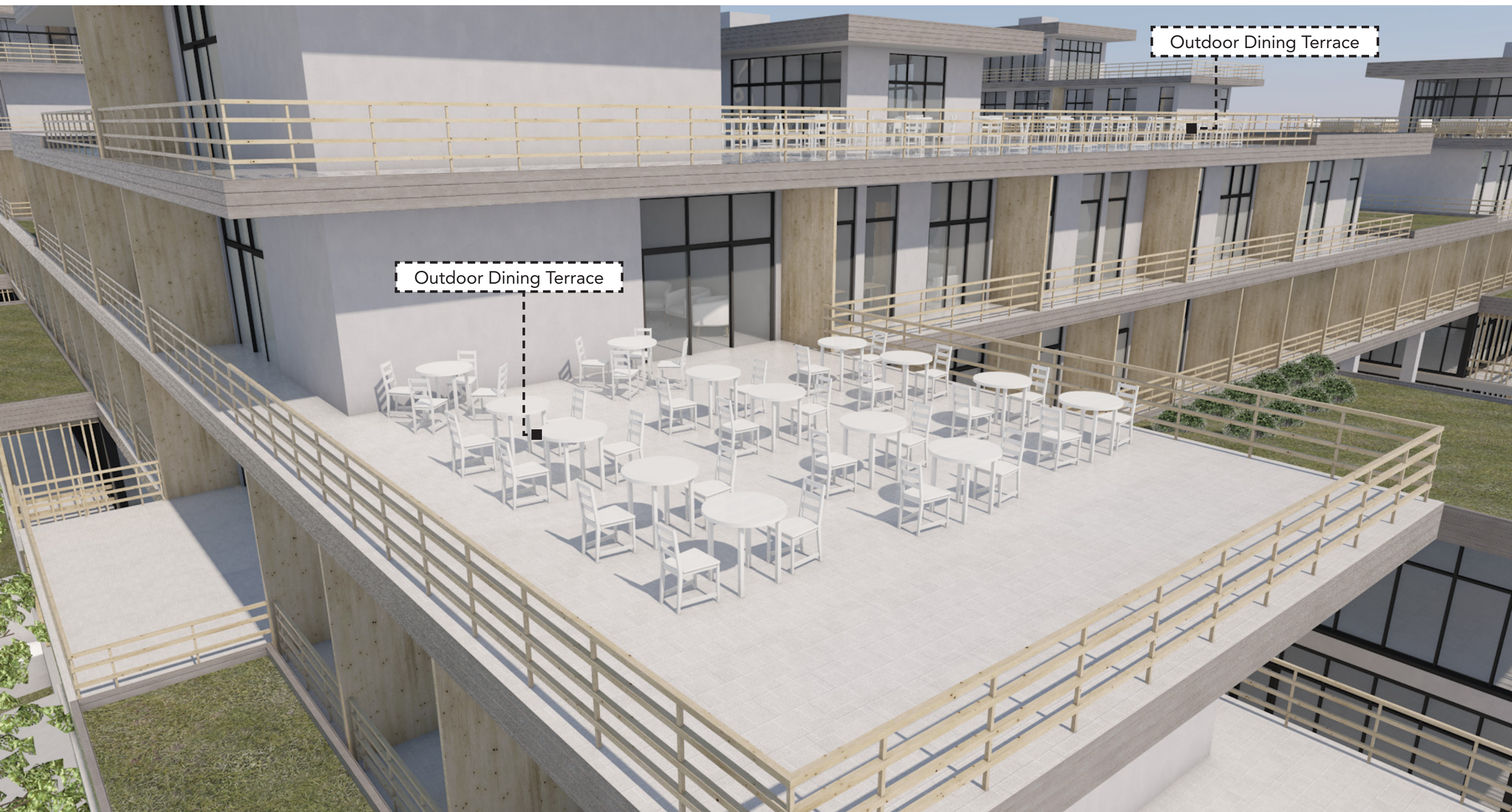
CO - LIVING SPACES  
Terraces



**Figure 2.95.**  
Co-Living Spaces -  
Terraces  
Source: Author



CO - LIVING SPACES  
Terraces

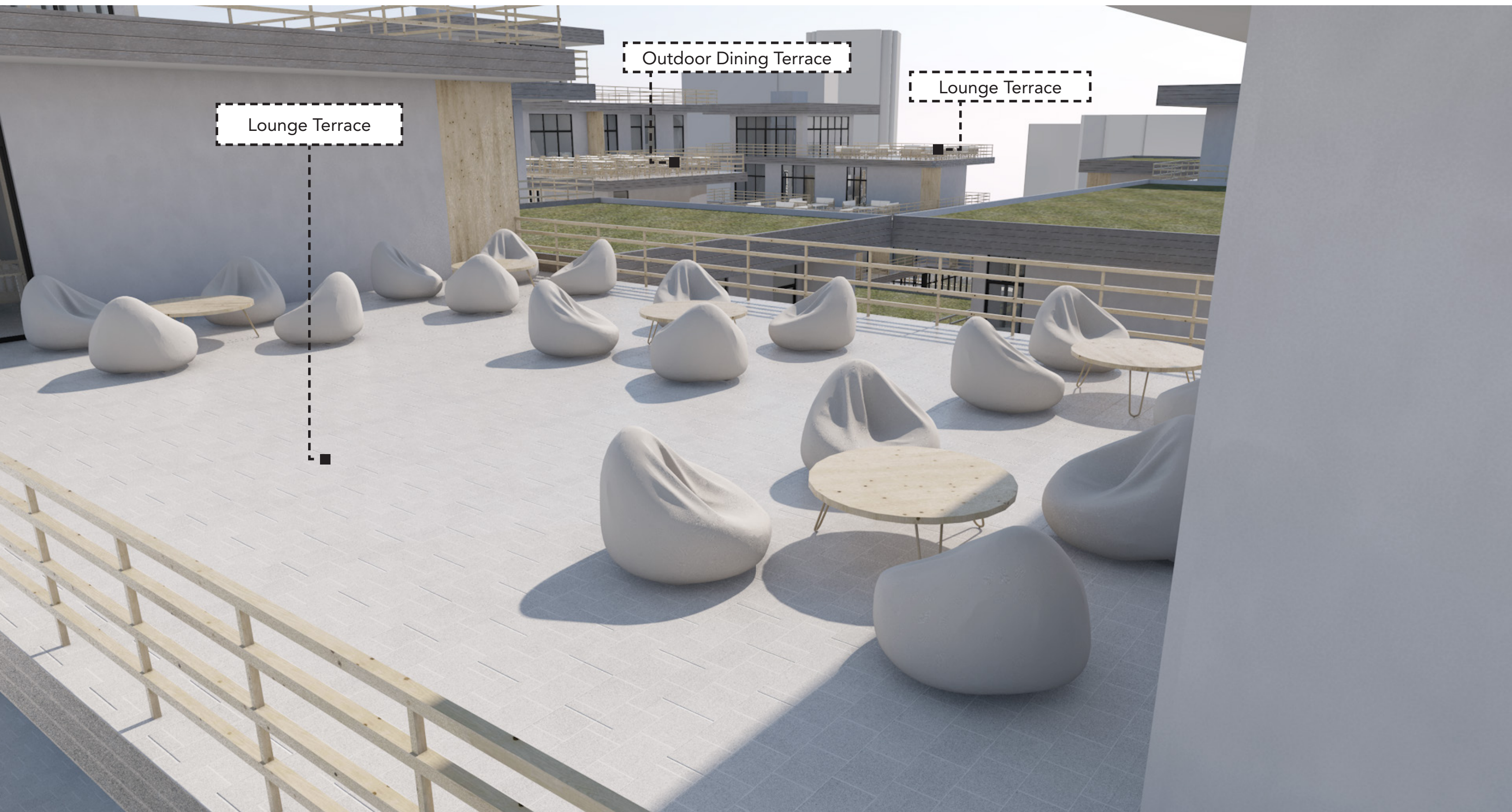


**Figure 2.96.**  
Co-Living Spaces -  
Terraces 2  
Source: Author



CO - LIVING SPACES

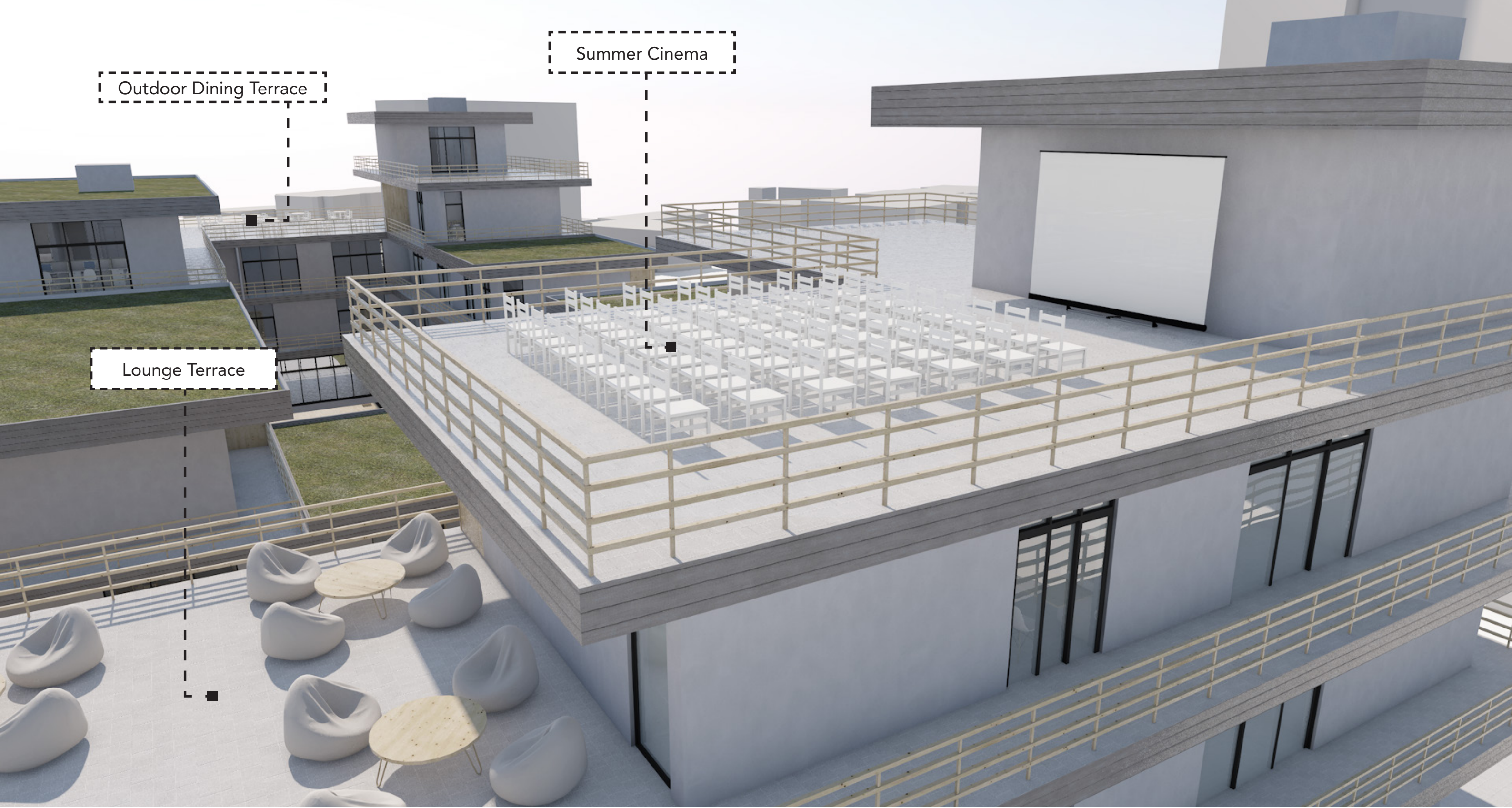
Terraces



**Figure 2.97.**  
Co-Living Spaces -  
Terraces 3  
Source: Author



CO - LIVING SPACES  
Terraces



**Figure 2.98.**  
Co-Living Spaces -  
Terraces 4  
Source: Author



CO - LIVING SPACES

Kitchens



**Figure 2.99.**  
Co-Living Spaces -  
Kitchens  
Source: Author



CO - LIVING SPACES

Kitchens



Figure 2.100. - 2.101.  
Co-Living Spaces -  
Kitchens  
Source: Author



Figure 2.102.  
Co-Living Spaces -  
Kitchens  
Source: Author



CO - LIVING SPACES

Study Rooms



**Figure 2.103.**  
Co-Living Spaces -  
Study Rooms  
Source: Author



CO - LIVING SPACES

Study Rooms



Figure 2.104. - 2.105.  
Co-Living Spaces -  
Study Rooms  
Source: Author



Figure 2.106.  
Co-Living Spaces -  
Study Rooms  
Source: Author



CO - LIVING SPACES

Miscellaneous Activities



**Figure 2.107. - 2.108.**  
Co-Living Spaces -  
Miscellaneous Activities  
Source: Author

**Figure 2.109. - 2.110.**  
Co-Living Spaces -  
Miscellaneous Activities  
Source: Author



# Conclusion and Calculations

Floor	Total Area without Balconies	Total Area of Balconies	Total Area with Balconies
Ground Floor	2.180 sqm	-	2.180 sqm
First Floor	2.403 sqm	235 sqm	2.638 sqm
Second Floor	1.045 sqm	2.155 sqm	3.200 sqm
Third Floor	1682 sqm	920 sqm	2.602 sqm
Fourth Floor	785 sqm	1.020 sqm	1.805 sqm
Fifth Floor	360 sqm	676 sqm	1.036 sqm
Underground Parking	4.814 sqm	-	4.814 sqm
Total Building	13.269 sqm	5.006 sqm	18.275 sqm
Total Building without Underground Parking	8.455 sqm	5.006 sqm	13.461 sqm

**Figure 2.111.**  
Table: Total Area Calculations of the Building  
Source: Author

## The Municipality's Cadastral Laws and Rules:

KAKS is the number obtained from the ratio of the total floor area of the building to the parcel area. The maximum net sqm construction area that can be built on that plot ( the total area of the flats) is calculated by multiplying the area of a plot by the value on the zoning plan. The calculation for this project is  $4087,19 \times 2.07 = 8.460,48$  sqm.

This figure is the net construction area remaining after the common areas that are not included in the KAKS calculation are subtracted.

Underground car parking areas, balconies and terraces are not included when the calculations are being made. (Emlaksat, 2022)

## The Student Housing Design Proposal's Calculations:

According to the law that must be followed for the calculation of the KAKS, the project site's maximum of buildible construction area (8.460,48 sqm) has not been exceeded. Balconies, terraces and underground parking areas are excluded in the final calculation and the number of 8.455 sqm has been reached. This proves the calculation obeys the rules that was set for this plot.

Room Typology	Total Area without Balconies	Total Area of Balconies	Individual Area per student	Total Area with Balconies
Single Room	19,5 sqm	7,5 sqm	19,5 sqm	26 sqm
Double Room	38 sqm	15 sqm	10 sqm	53 sqm
Triple Room	55 sqm	15 sqm	10 sqm	70 sqm
Quadruple Room	68 sqm	20 sqm	10 sqm	88 sqm

**Figure 2.112.**  
Table: Total Area Calculations of the Room Typologies  
Source: Author

Room Typology	Second Floor	Third Floor	Fourth Floor	Total Building
Single Room	57	5	-	63
Double Room	-	13	-	13
Triple Room	-	3	-	3
Quadruple Room	-	4	6	10

**Figure 2.113.**  
Table: Total Area Calculations of the Room Typologies  
Source: Author

## Total Capacity of the Student Housing Design Proposal:

Each room typology has a minimum of 10 sqm area reserved for an individual student, except the single rooms that have 19,5 sqm for a student. Double, triple, and quadruple rooms have shared spaces for the usage of the students who are sharing the rooms.

All room types have balconies for the students. In the single typed room, balconies are for individual students. Whereas in other room typologies, they are shared spaces with the students who reside in that specific room.

In the student housing complex, the total bed capacity is 138. Of this number, 63 students have access to a private kitchenette and a private bathroom inside their single rooms, making the 75 remaining students share common areas such as kitchens and dining areas outside the rooms. Bathrooms are excluded as common areas because each room type has a bathroom, but they are being shared with the students who reside in the rooms, which is four students maximum (in quadruple rooms).



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