

2022

ERNESTO ALVISO RODRIGUEZ

ACTIVE SENIOR COMMUNITY

The Coast Condos

A Senior Active Community

Health + Space + Activity



ERNESTO ALVISO RODRIGUEZ

COMMITTEE

Chair

Koichiro Aitani



Co-Chair

D Kirk Hamilton



Member

Cherrie L Pullium



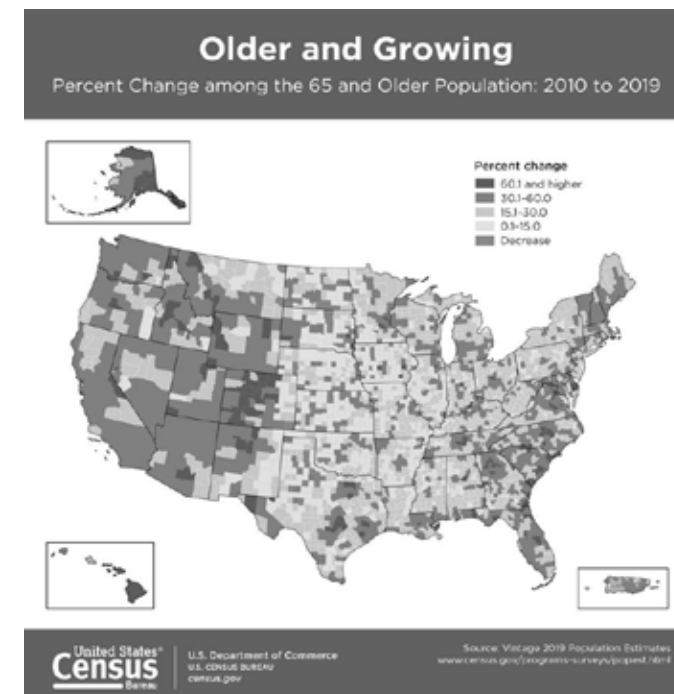
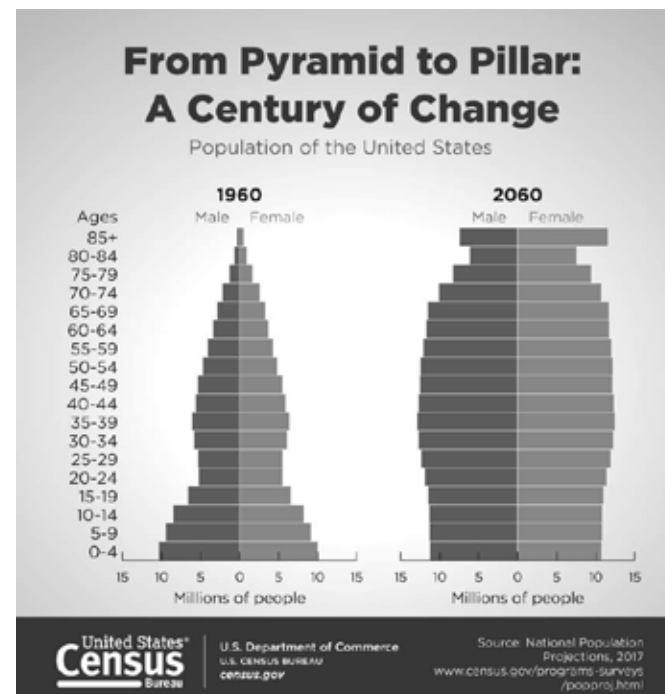
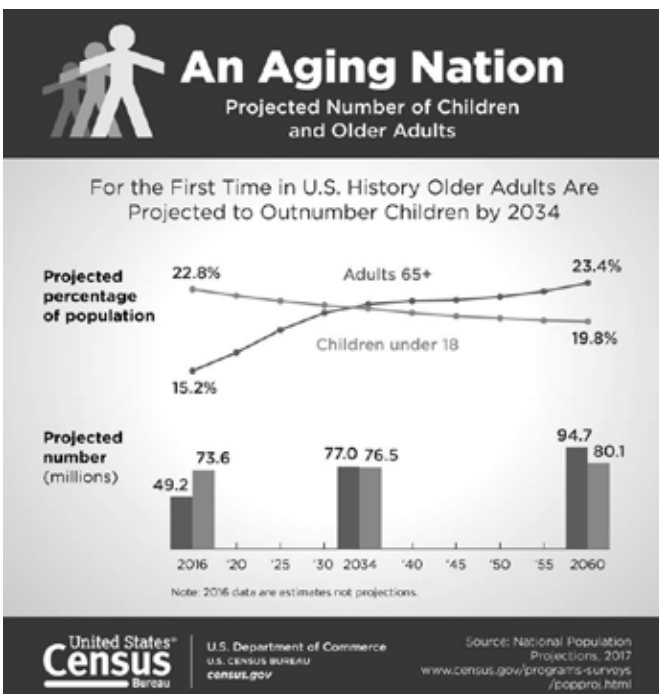
Studio Professor

Brian Gibbs



CONTENT

Reaserch	pg. 4
Project description	pg. 6
Site	pg. 8
Climate	pg. 10
Design response	pg. 12
Program	pg. 14
Site design	pg. 16
Building program	pg. 18
Beach render	pg. 20
Floor plans	pg. 22
Elevations	pg. 32
Sections	pg. 36
Apartment plan/ renders	pg. 38
Apartment Elevations/ section	pg. 44
Site Section/ renders	pg. 46
Site/ building renders	pg. 50
Conclusion	pg. 56



CHANGES THAT COME WITH AGING



Physical Change

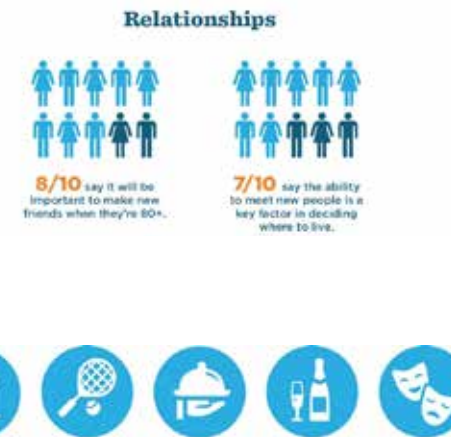


Social Change



Mental Change

SOCIAL AND ACTIVITY NEEDS



What will prevent loneliness at 80+?
Survey says: having a variety of activities and events, places to gather with friends and family, and social or cultural activities.

Source: The 2017 Aging in Cities Survey, Weltonville. WhereYouLiveMatters.org

What activities do or would most interest you in senior housing? (749 respondents, ages 50-89, survey conducted May 10-31, 2016)

Exercise / yoga classes	39.1%
Walking/hiking	36.2%
Swimming and water aerobics	34.0%
Trips to museums, cultural events	31.5%
Movie nights	28.5%
Singles nights / meet-and-greets	24.2%
Arts and crafts	22.7%
Restaurant outings	20.0%
Dancing	18.8%
Educational classes (languages, etc.)	15.5%
Cooking and baking	15.3%
Religious services and study	15.2%
Card and board games	15.2%
Bingo	13.8%
Gardening / flower-arranging	13.8%
Shopping trips	13.5%
Trips to sporting events	12.8%
Book clubs	12.7%
Other	9.6%
Billiards / ping pong	8.9%
Lawn games (horseshoes, mini-golf)	5.3%
Sing-alongs / karaoke	4.9%
Tennis / pickleball / badminton	3.2%
Wii sports and video games	2.8%

UNDERSTANDING THE CLIENT

The aging population is growing, thus there is a major call to respond to the needs of this growing demographic. This demographic faces physical, social, and mental changes that create unique issues. The challenges and issues that arise from aging can be addressed through design. How do we redesign the way we deal with the issues of aging and provide a place where senior citizens can enjoy and feel at home with like-minded active adults in this community project.

AARP: RETIREES IN THE LABOR MARKET



"Doris McGhee Collins went back to work full time as the human resources director for a group of Washington, D.C., charter schools."



"In 1995, Amy Kaiser was hired by the St. Louis Symphony, where she now conducts the chorus."



"Bruce Chabner, M.D., is the director of clinical research at Massachusetts General Hospital."

RESEARCH

Modern medicine, awareness of health, and self-care have increased over the past decades. This has allowed an increase in longevity and people's quality of life. A recorded census report has estimated that by 2034 the older adult population will outnumber the children population and will continue to grow (US Census, 2022). The need for housing that assists that aging population is currently increasing and will continue to do so. Population charts show older adults' life longevity will continue to grow as will their quality of life. A survey conducted in the 2017 Aging in Cities

survey and also published in Where you live matters (2017), has shown that many older adults are open to moving because "eight out of ten say the ability to meet new people is a key factor in deciding where to live"(p.1). The conducted survey consisted of 3,000 older adult participants, in over ten major cities. Surveys highlight the importance of relationships with other people. This is due to health risks caused by loneliness. Research also suggests "have a variety of activities, events, places to gather with friends, family, and social or cultural. While reducing the stress of keeping up with a

home and allowing them social interaction with their peers. According to the 2017 Aging in Cities survey and also published in Where you live matters (2017) Exterior activities to enjoy and keep them connected with their peers and family, social or cultural activities"(p.1). Furthermore, other surveys talk about what physical and social activities seniors enjoy. The top activities are walking/hiking, swimming trips to museums, movie night, and single-night meet and greets (Edelen 2016). AARP studies have discussed the importance of the aging population keeping their employment because it continues to give them purpose and happiness.



Activity



Community



Comfort

PROJECT DESCRIPTION

This project is a Senior Living Community that rethinks the way we see existing Senior Living Home projects. The reassessment begins with understanding the positive impact activity and community has on adult residents. Therefore, this project will be an independent living community that promotes physical activity and a strong sense of community for the adult population over the age of 65. This project will include amenities that are intended to appeal to the studied demographic, offering endless opportunities to stay active and engage with peers.

CLIENTS

Couple



Singles



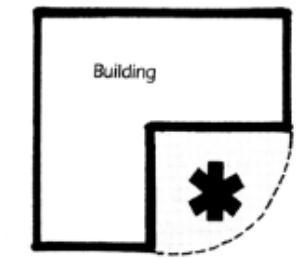
Siblings/ Friends



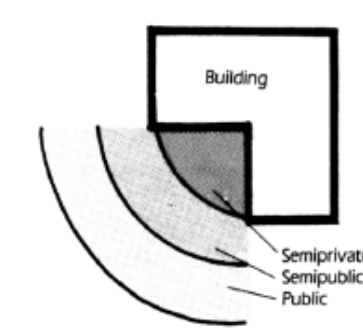
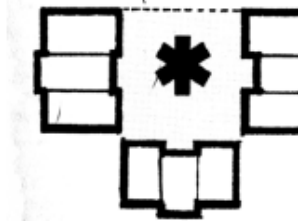
PROJECT GOALS & CONCEPTS

This Active Senior Living Community Project intends to achieve a design that helps older adults continue building their lives by providing spaces that make senior residents feel excited and eager to navigate new chapters in their lives. This design seeks to achieve and create a variety of opportunities for residents to connect, interact, and stay active. Therefore, key concepts that drive this design are promoting physical activity, strong sense of community, and maximizing comfort.

ACTIVITY AREA LOCATION



Good Location For Activity Area

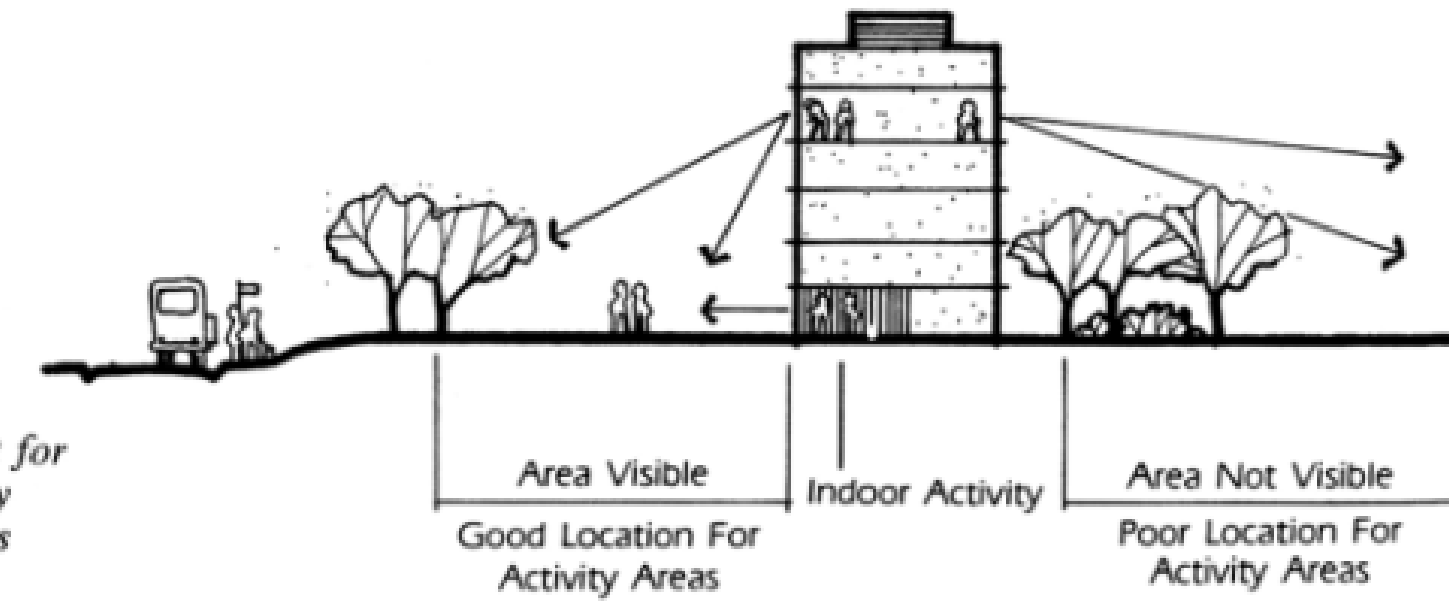


5-7. Defined zones, from private to public spaces, help to define appropriate uses for a space while promoting safety and security.

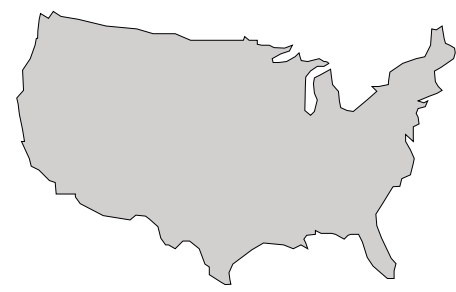
5-6 (left) Physical protection provided by a building edge or cluster of units offers a needed sense of security for many outdoor spaces, especially those for socializing and for use by the more frail.

(Carstens, 1993)

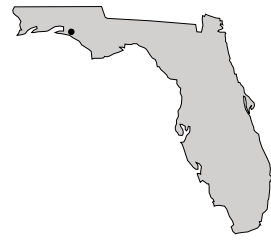
5-5. Visual surveillance is important for both real and perceived security outdoors—especially for the less able.



(Carstens, 1993)



Florida, USA



Mary Esther, Florida

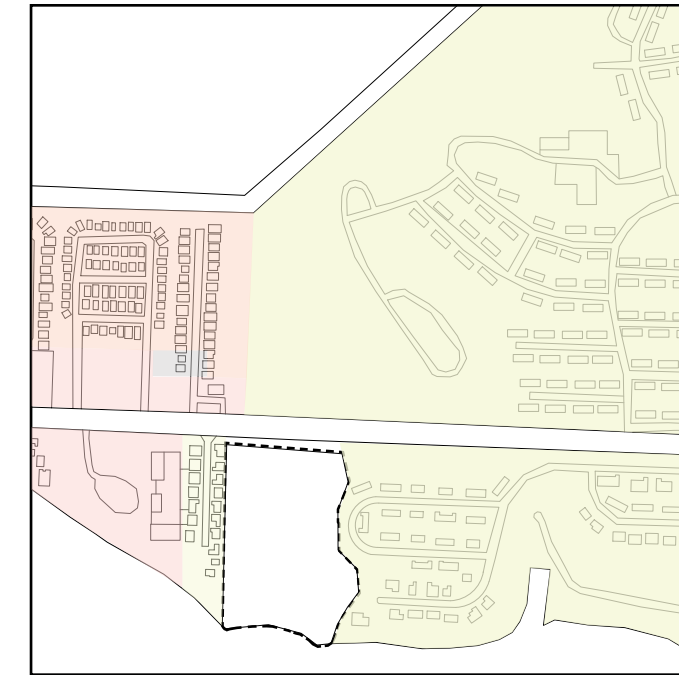
SITE ANALYSIS

Florida has one of the lowest costs of living in the country with a significant senior population and with more migration. Mary Esther is a city that holds a variety of amenities. This city is near a high tourist destination, Panama City Beach. Mary Esther's slight retraction from this high tourist destination allows access to beautiful beaches in a slower-paced smaller town, which would be ideal for an Active Senior Living Community. The location of the site within the Mareeaster city was influenced by its proximity to the beachfront, a 15- 20 min drive from a mall, golf

course, museums, and other retail strip shops. The chosen site has beachfront access that allows for the resident to live close to the water which is a dream for many older adults to live and enjoy. The site is about 15 acres and is large enough to bring a project of this size to life.

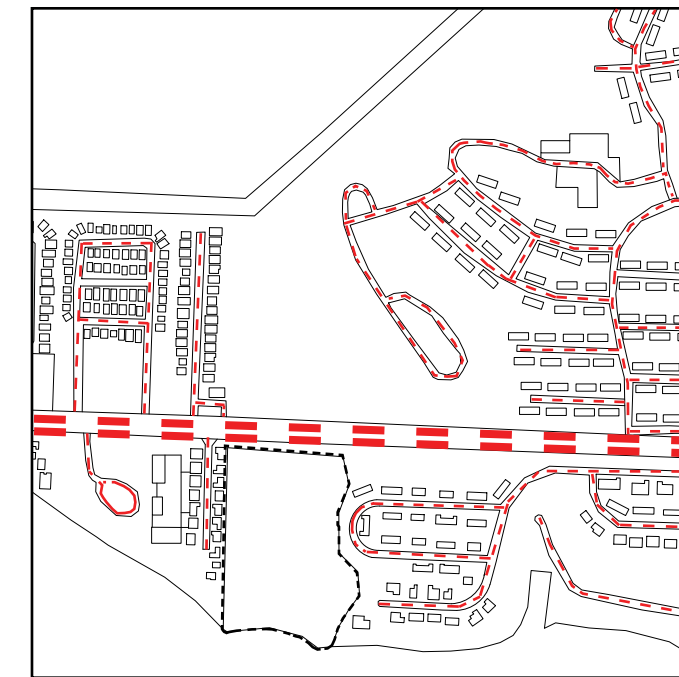


BUILDING USE



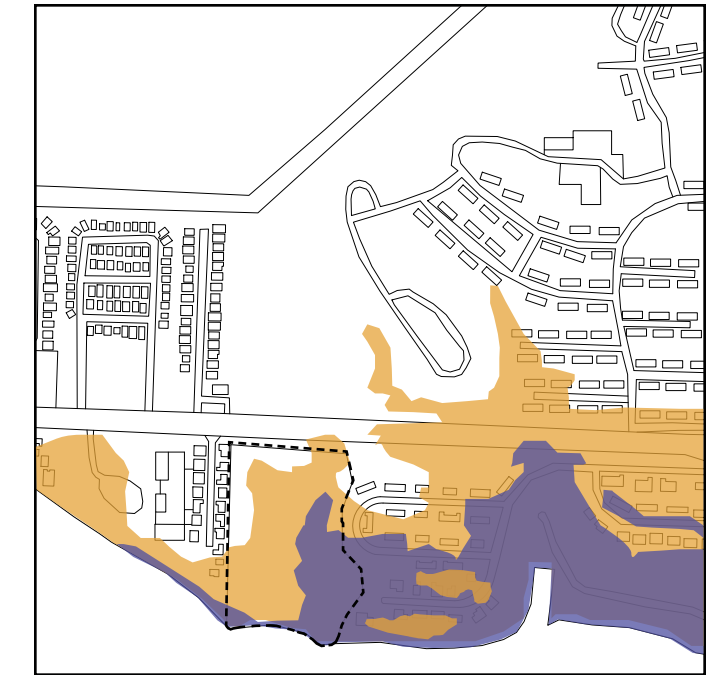
- R-1 Residential 1
- R-1 Residential 2
- INST-Institutional
- Hulburt Fields
- C-3 General Commercial

ROADS



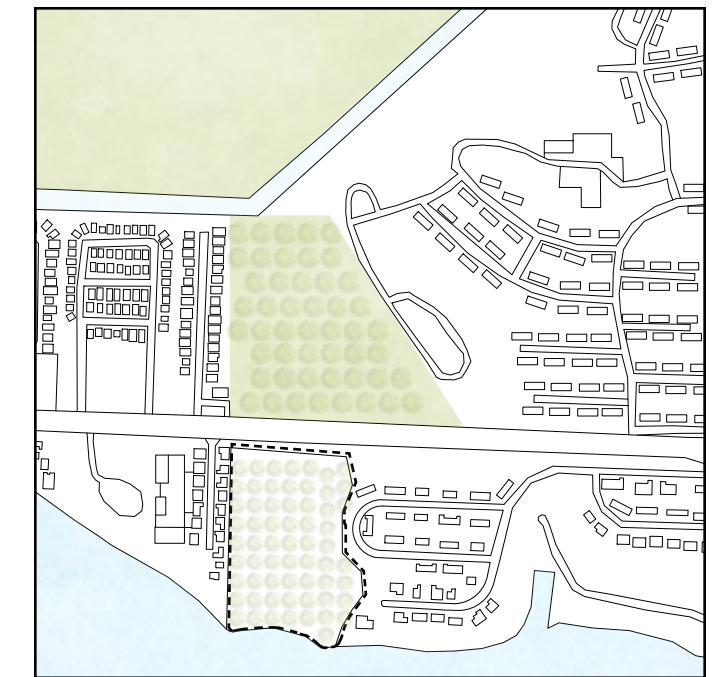
Surrounding site roads directly in front of highway 98 and surrounded by residential home roads.

FLOOD LEVELS



- Zone X 2PCT
- Zone AE

VEGETATION & WATER



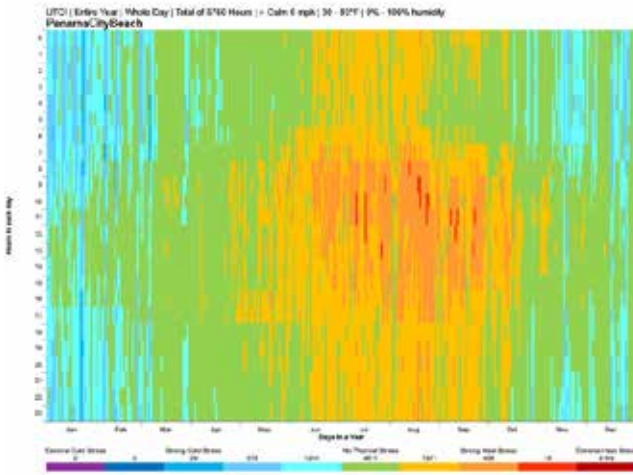
Maintain as local trees and vegetation.

CLIMATE

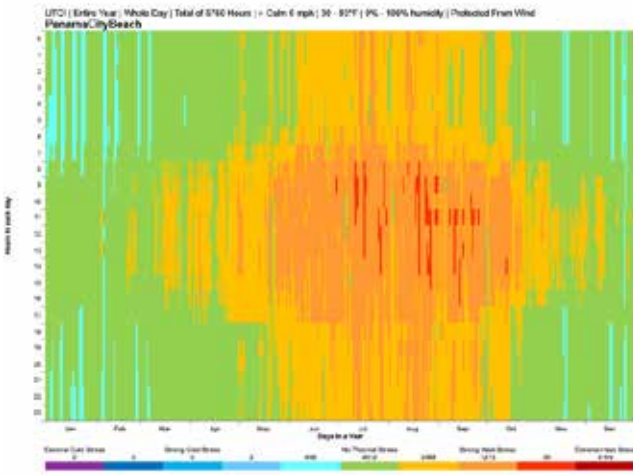
Florida is a Gulf Coast region with cool and short winters. Summers are hot, very humid, and long. Flat damp ground and frequent rain create very humid climates creating thermal discomfort and mildew problems. Reliable sea breeze is strong during the day, and weak at night because breezes are nonexistent during the morning and evenings due to wind reversing in direction. Annual precipitation is 60% uniformly throughout the year. Climate analysis and sustainable techniques are used in the design to minimize heat gain while providing the necessary daylight on the building and

reducing the building loads. Natural ventilation both cools and removes excess moisture in summer. Primarily, in the exterior areas. It also helps protect from the summer sun. Additional humidity can be avoided during the summers using fan-forced air movement if needed to make the climate comfortable and pleasant. Additional strategies include lowering the impact of the cold winter winds and allowing the winter sun into the building. For this type of climate, the building would be envelope-dominated which means that the building would need to be very well insulated and protected from being infiltrated by the exterior climate.

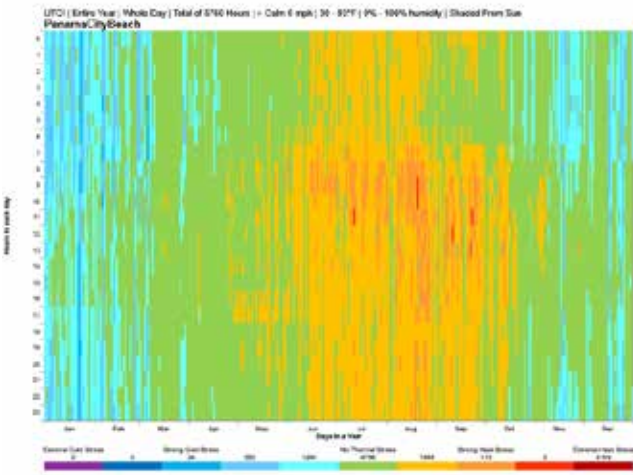
The intent is to provide a building that is centered on climate comfort to accomplish a sensible climate-aware design. The site and climate goals for this project is to use sustainable and climate control strategies to be able to reduce building load and ultimately the cost of running the building on a day-to-day basis. This in turn will pass on those savings to the user.



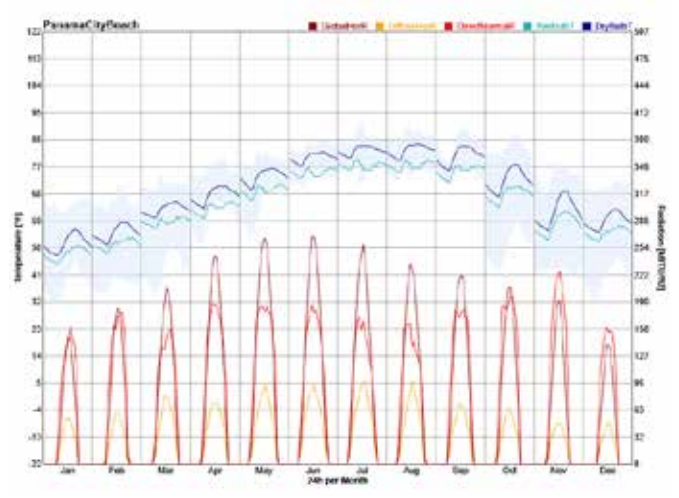
UTC



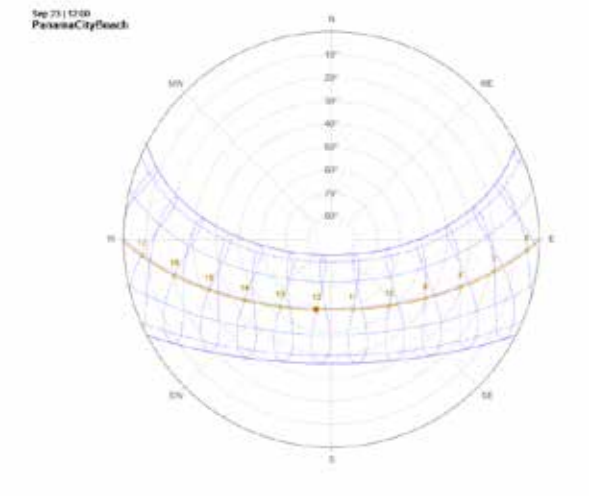
UTC - Winter winds protection



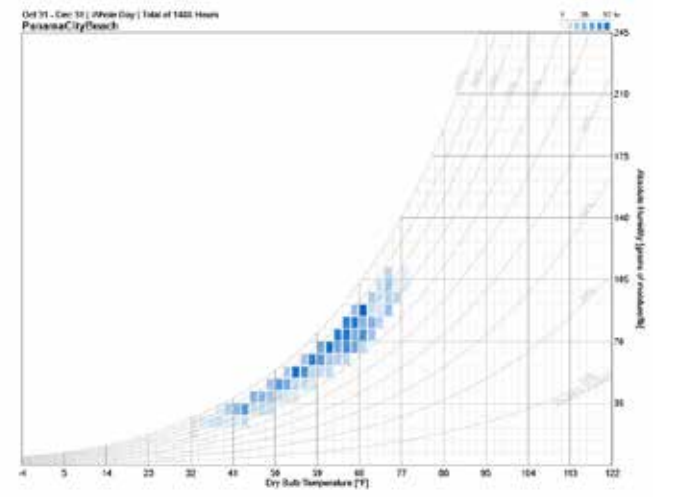
UTC - Summer sun protection



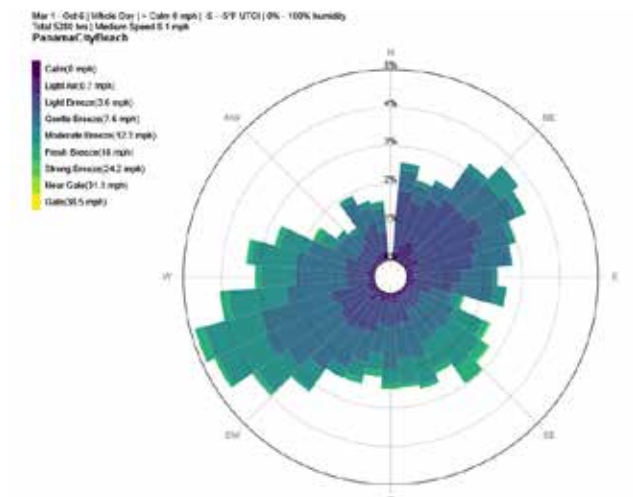
Temperature



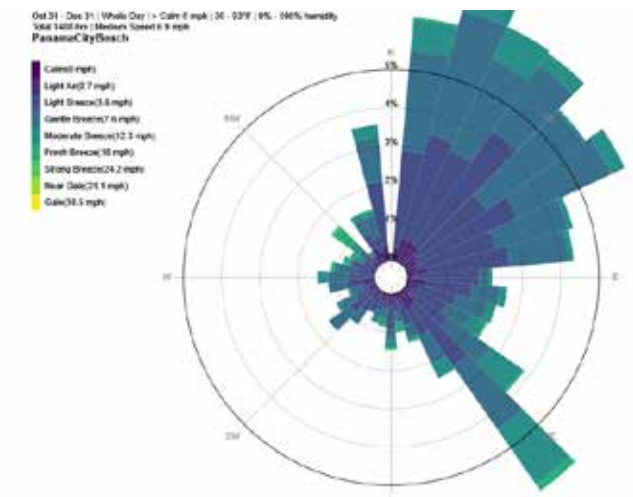
Sun Path



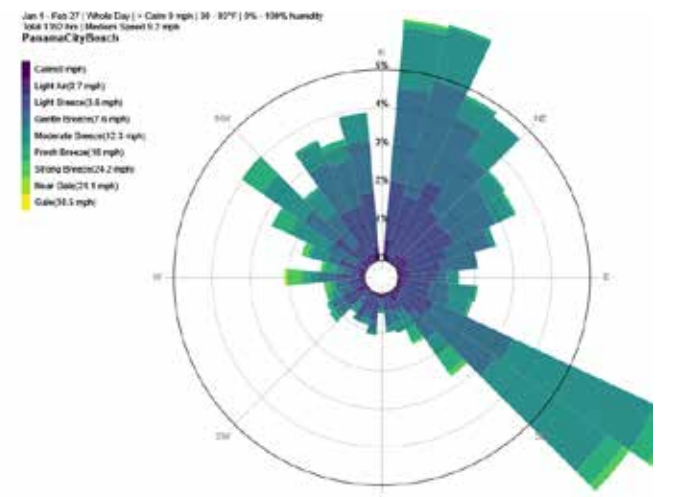
Psychrometric Chart



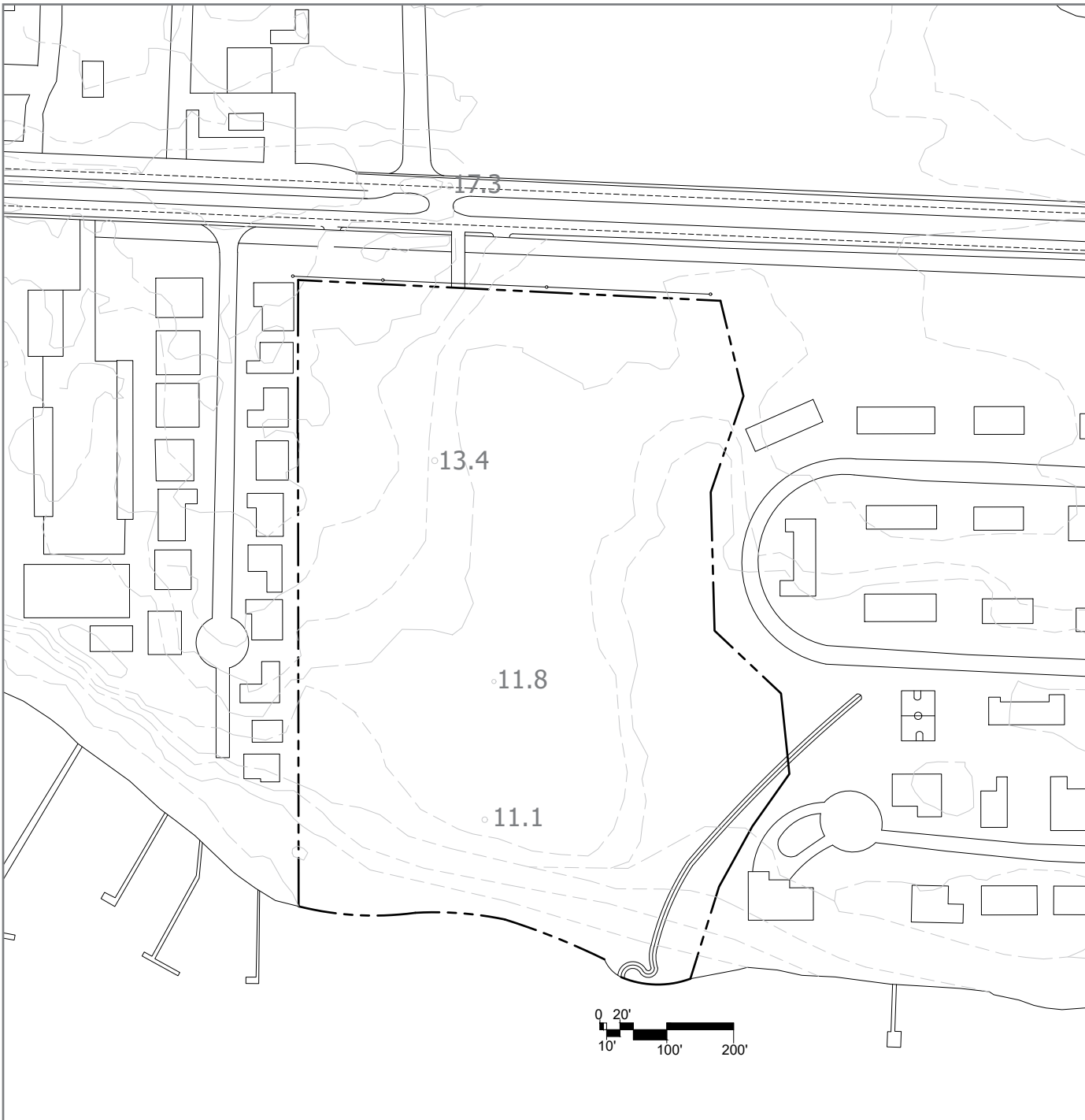
Summer Prevailing Wind



Winter Wind Oct 31-Dec 31

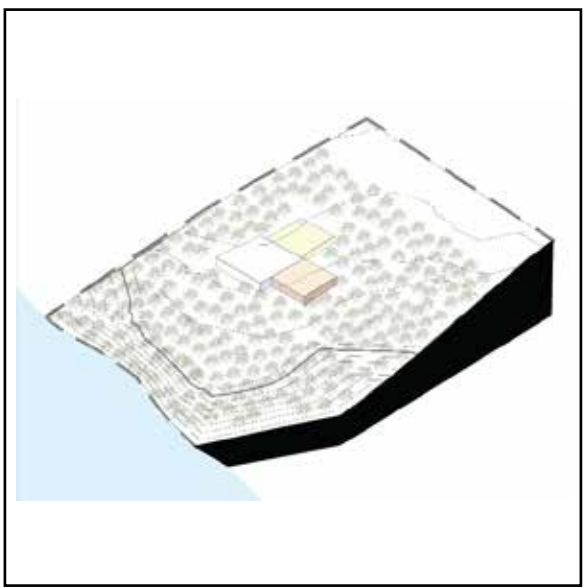
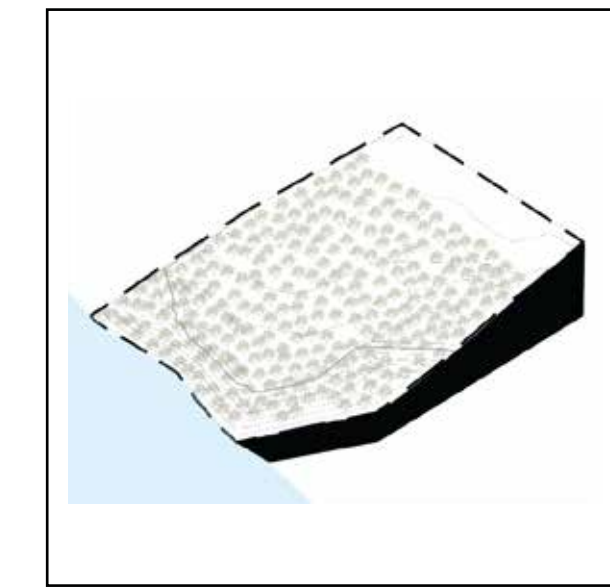


Winter Wind Jan 1-Feb 27



SITE
Existing Conditions

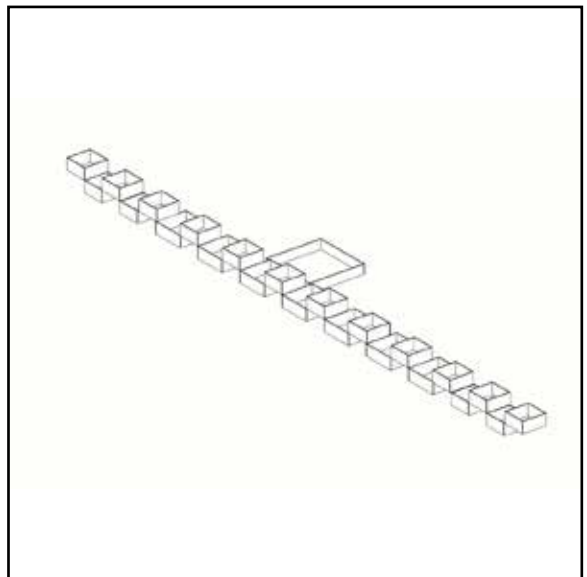
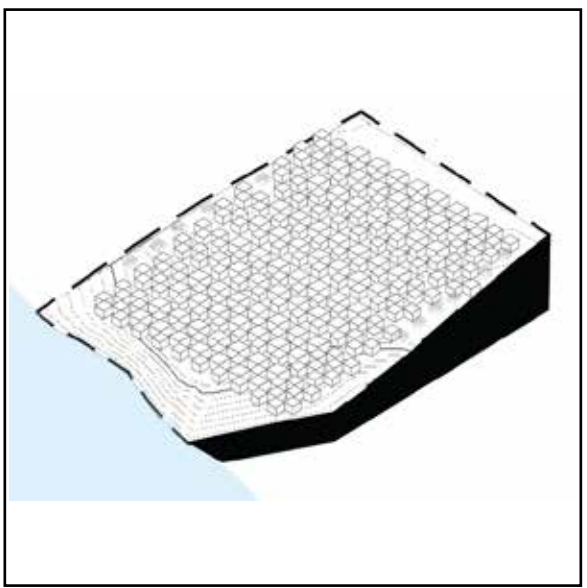
PLACING PROGRAM
Residential, Parking, & Commercial



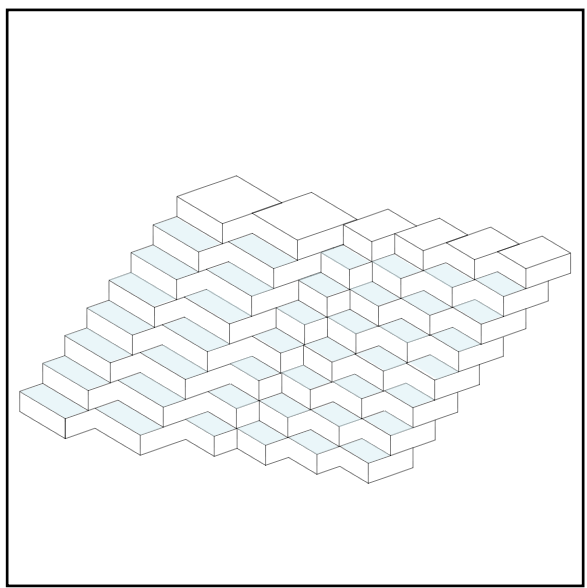
DESIGN RESPONSE

I have chosen to take on an Active Senior Living Community project to rethink the way we see existing Senior Living Home projects. The reassessment begins with understanding the positive impact activity and social life has on adult residents. Therefore, this project will be an independent living community that promotes physical activity and a strong sense of community for the adult population over the age of 65. This project will include amenities that are intended to appeal to the studied demographic, offering endless opportunities to stay active and engage with peers. This senior active living project allows people to do what they enjoy, socially interact with peers, stay active, stay healthy, continue learning, and connect with family. A place that helps older adults to continue building their lives, and provides them with the connections and interactions they need at home.

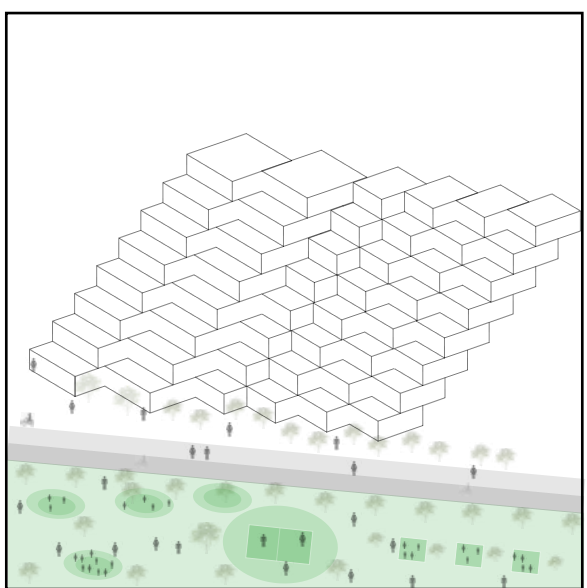
MAXMIZING
Units In Site



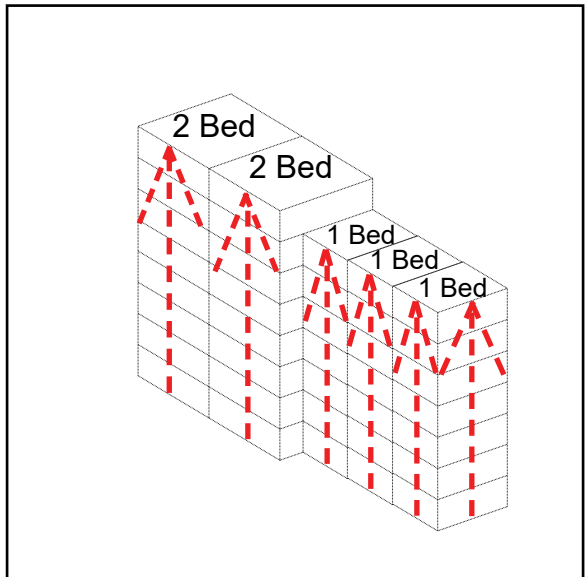
VIEWS
Spread bedroom units across the site for beach and south sun exposure.



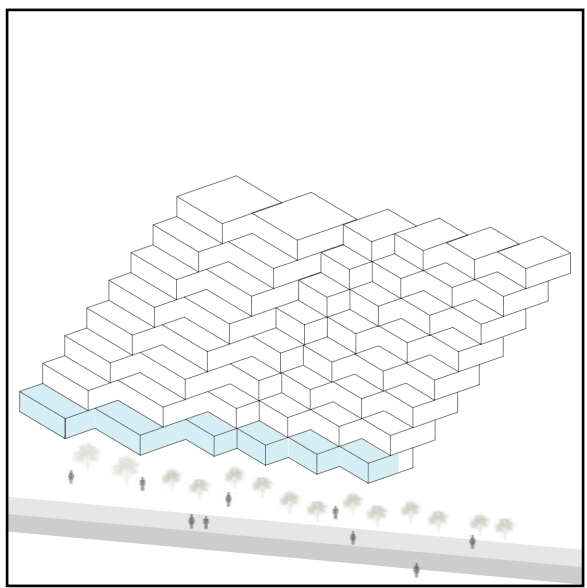
PATIO
Front south facing patio areas.



ACTIVITY SPACES
Activity spaces are added to include all the community to participate.



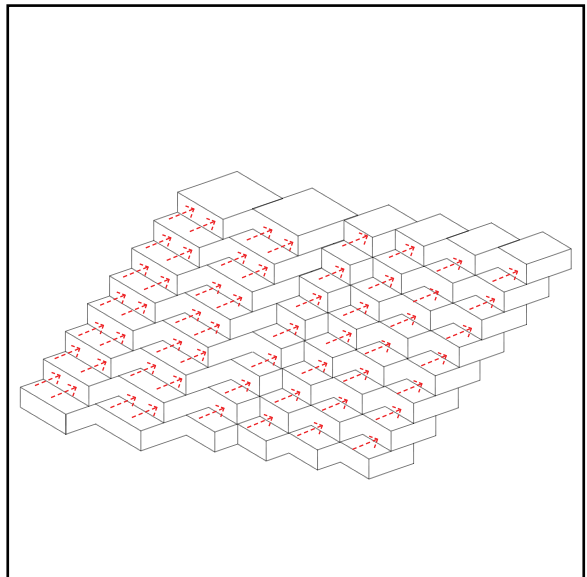
STACKING UNITS
The stacking of of units to maximize units.



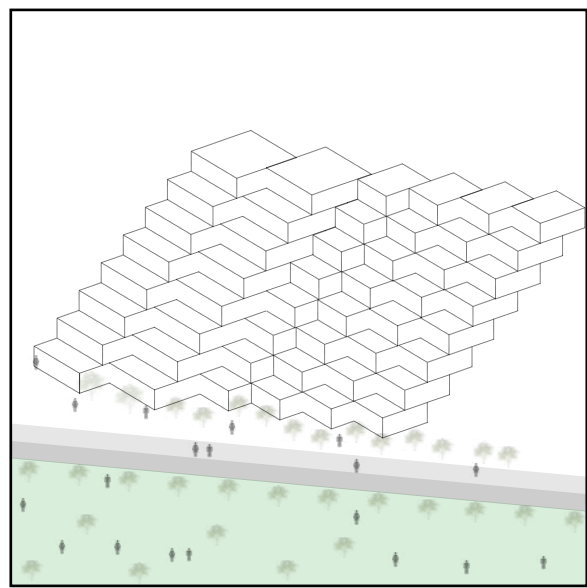
RETAIL SHOPS
Reatail shops and parking places at bottom floor to elevated apartmetns.

DESIGN DEVELOPMENT

Building Orientation is facing towards the south side to maximize the south sun all year round. Building the building up to six floors to maximize the number of units as well as the units that would have a beach view. Four buildings with 24 units placed on the site sound facing in specific locations to allow all of them to have a beach view towards the beach on their patio area. The four buildings divide the major interactive activities into four buildings on the second floor that are intranet



SHIFT 1/3
Shirft units 1/3 horizontally and vertically to create active space and patio.








COMMUNITY SPACES
Community spaces and reatil areas are formed because of is building shift.

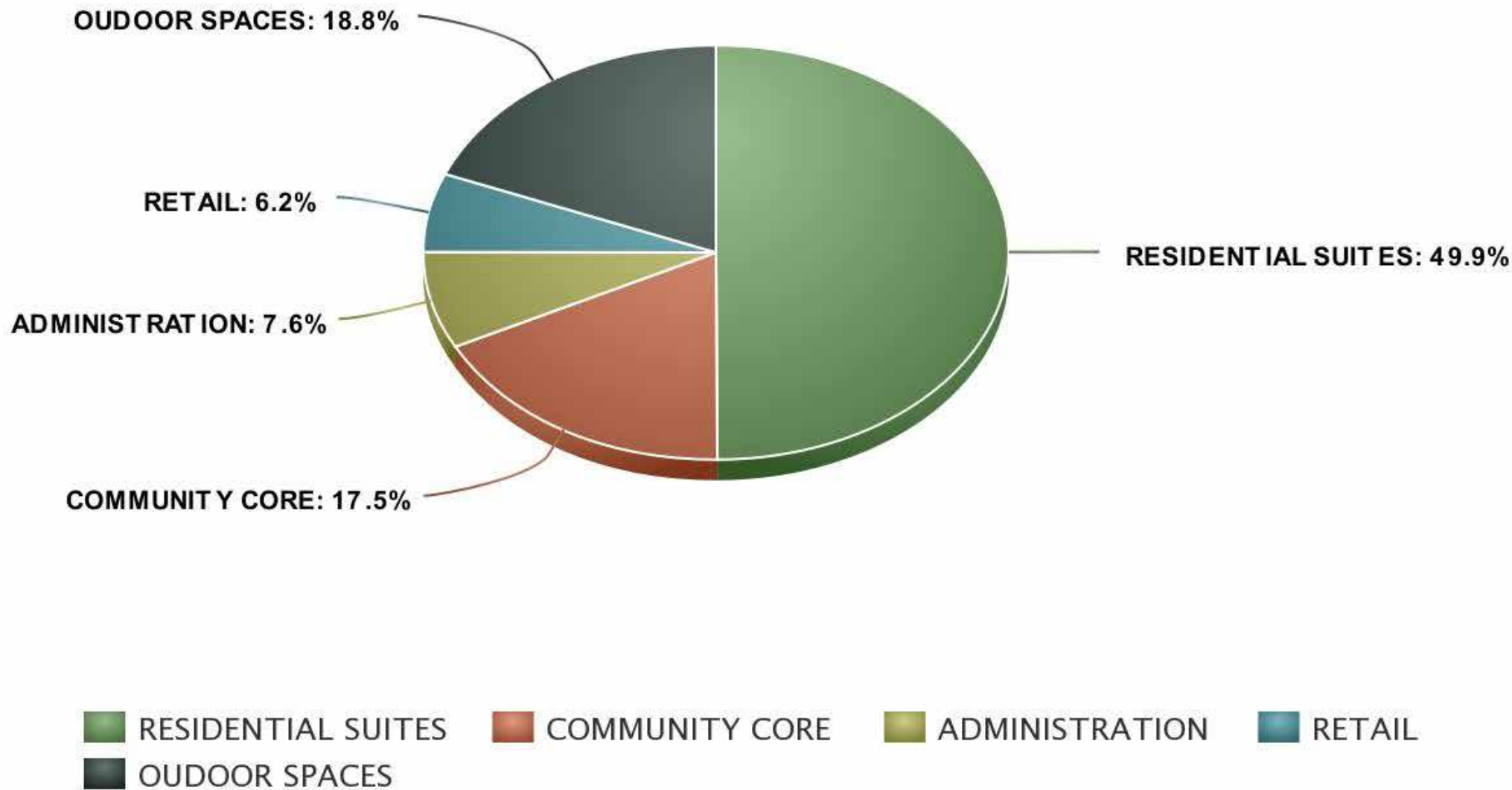
learning, physical, meditation, and entertainment. Connection to the site and the connection with the surrounding communities was achieved by opening the site to other surrounding residents to enter the site to show, eat and have a good time in all the retail strip areas with the beautiful beachfront view. The retail spaces provided the perfect opportunity to amplify the sense of community by connecting to those outside of the Active Living Residences

PROGRAM

Roads were pushed to the side of that site to be a walking-friendly site with connecting plazas between the buildings by this middle access pathway in the site. Road circles around the first parking area on the first floor of the building. The left road has access to the beachfront in case of emergency. A resident garden on site is created in between buildings for all residents that enjoy gardening. The idea of having four-building strategically laid out on the site allowed for two pools on the site on each side of the middle axes in between the buildings. The placement of the four buildings

TOTAL BUILDING FOOTPRINT 47,460
TOTAL BUILDING FOOTPRINT & OTHER SPACES 51,480

	SPACES	QUANTITY	SIZE (SQFT)	TOTAL (SQFT)
	RESIDENTS SUITES			
	1 bedroom	24	150	18,000
	2 bedroom	6	1,100	6,600
	Subtotal			27,600
	COMMUNITY CORE			
	Main Entrance Area	1	500	500
	Lobby	1	500	1000
	Offices	3	100	300
	Chapel	1	500	500
	Cafe	1	300	300
	Library	1	900	900
	Gym	1	1,000	1,000
	Game room	1	1,500	1,500
	Dining	1	1,000	1,000
	Private Dining	1	400	400
	Crafts Studio (activities)	1	400	400
	Multipurpose Spaces	2	400	800
	Community Kitchen	1	1,000	1,000
	Pantry	1	100	100
	Subtotal			9,700
	ADMINISTRATION			
	Public Restroom	1	400	400
	House Keeping	1	400	400
	Elevators	2	50	100
	Janitor Rooms	1	100	100
	Electrical Room	1	100	100
	Mechanical Room (5%)	1	1,200	1,200
	Laundry Room	1	400	400
	Stairs	3	240	480
	Other			
		Subtotal		
	RETAIL			
	Yoga Studio	1	600	600
	Pharmacy	1	1,000	1,000
	Hair Salon/ Barber shop	1	1,000	1,000
	Other			
	Subtotal			3,400
	OUTDOOR SPACES			
	Parcking Spaces	40	160	6,400
	Green Spaces	2	2,000	4,000
	Subtotal			10,400



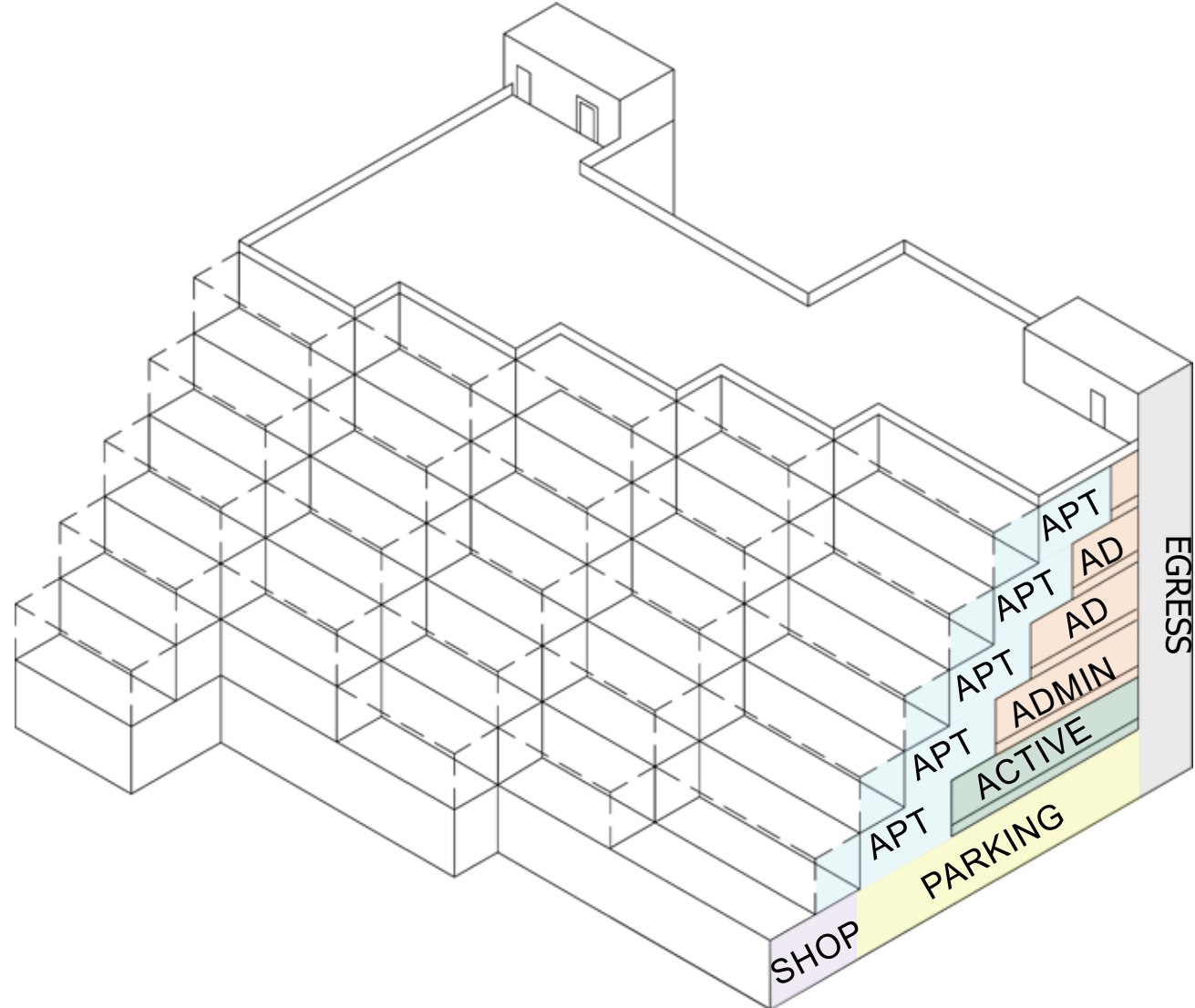


- LEGEND**
- 1. Site Entrances
 - 2. Nature Trail
 - 3. Guest Parking lots
 - 4. Middle Walking Path
 - 5. Building 1
 - 6. Building 2
 - 7. Pool
 - 8. Garden
 - 9. Pergola
 - 10. Building 3
 - 11. Building 4
 - 12. Beach Front

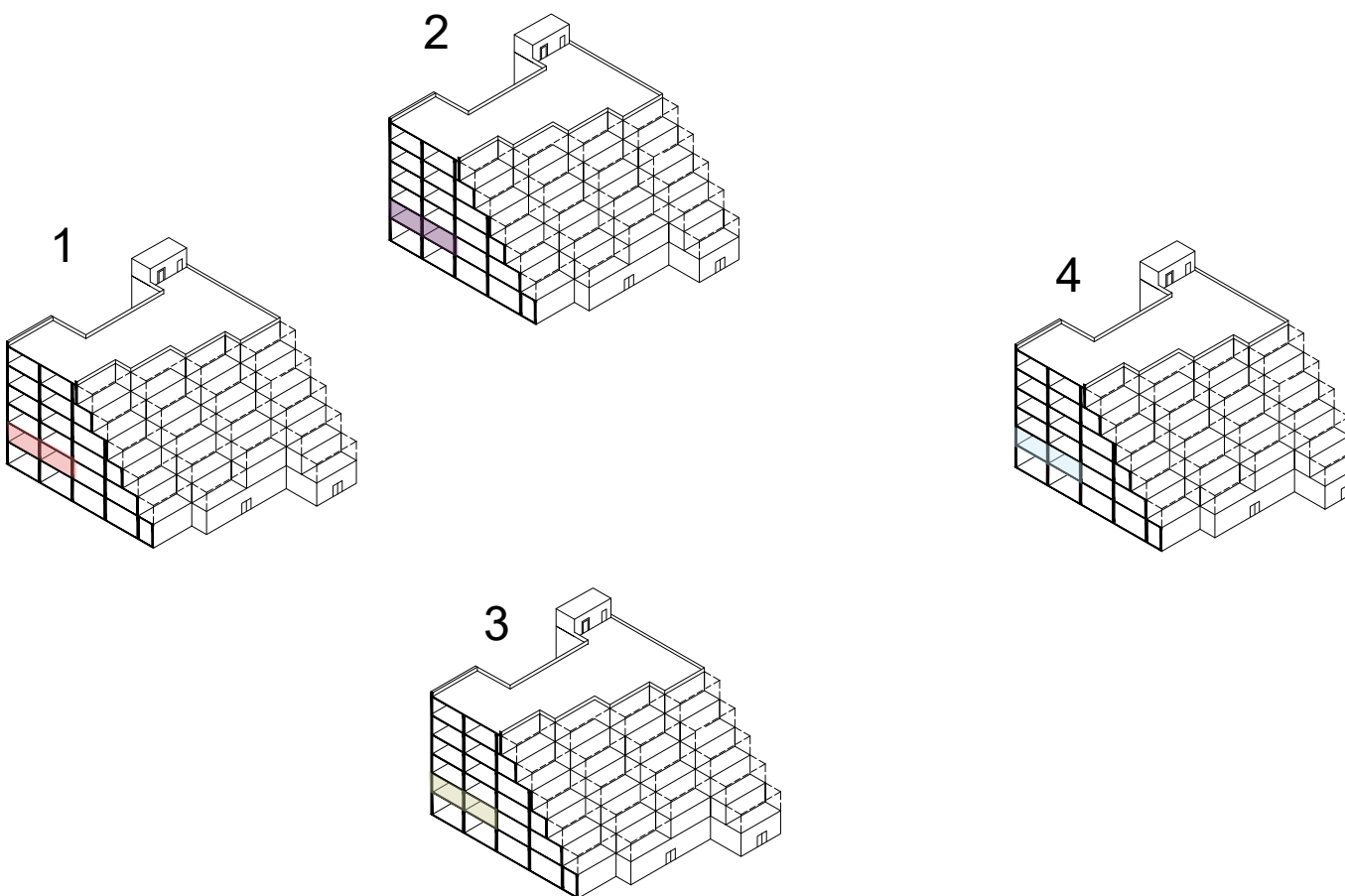
SITE DESIGN

Roads were pushed to the side of that site to be a walking-friendly site with connecting plazas between the buildings by this middle access pathway in the site. Road circles around the first parking area on the first floor of the building. The left road has access to the beachfront in case of emergency. A resident garden on site is created in between buildings for all residents that enjoy gardening. The idea of having four-building strategically laid out on the site allowed for two pools on the site on each side of the middle axes in between the buildings. The placement of the four buildings also created a central space that helped connect the residents. The site also incorporates reflecting ponds that provide serene meditations spots, quiet and evaporative cooling.

PROGRAM

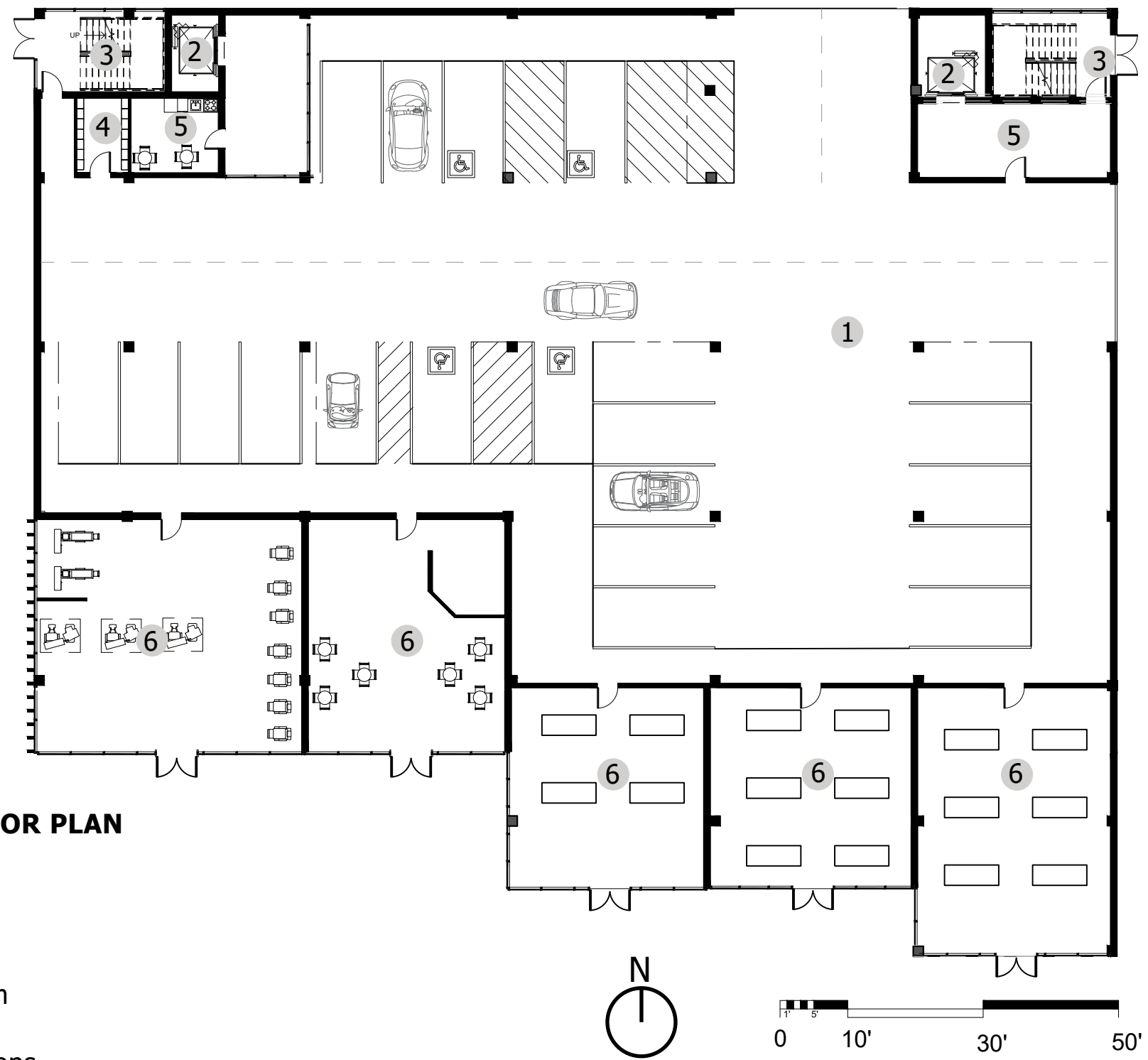


BUILDING PROGRAM
 The program consists of four buildings. The placement of these buildings on the site was arranged in a way that created a central space. Each building concentrated on four activity elements: physical health, spirituality, learning, and entertainment. Separating the four different activity spaces between the four buildings on the site, it's intended to encourage residents to interact with others by moving through the building. Other services that are included in all four buildings include necessities such as maintenance, housekeeping.



- LEGEND**
- Gym
 - Game room
 - Meditation space
 - Library





FIRST FLOOR PLAN

- 1. Parking
- 2. Elevator
- 3. Stairs
- 4. Mail room
- 5. Lobby
- 6. Retail shops

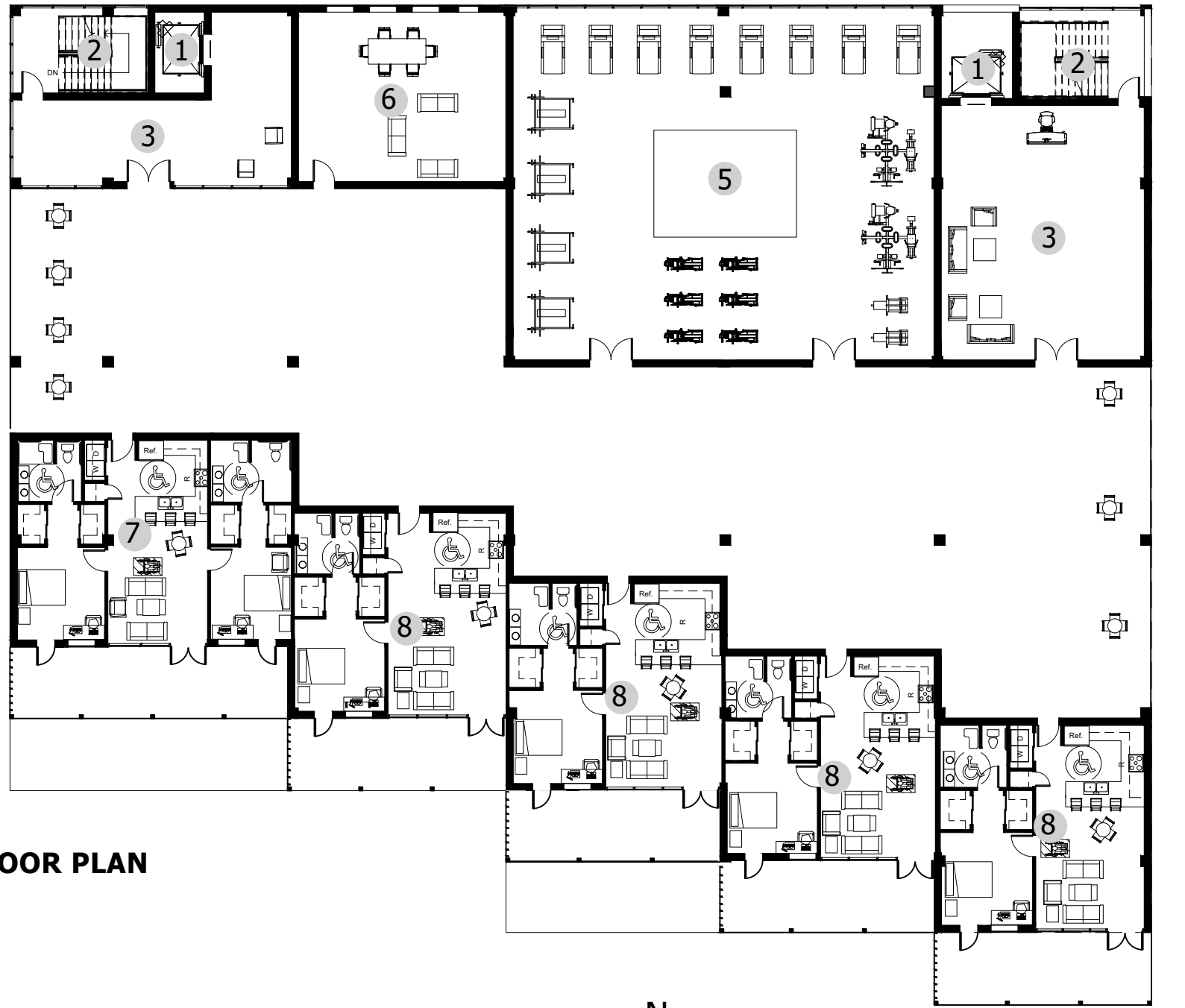


FLOOR PLANS



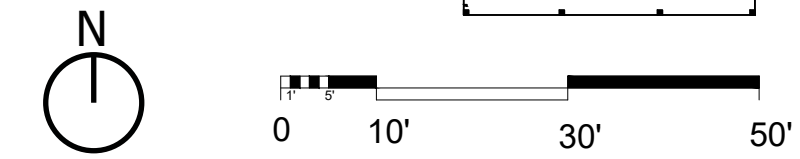
LEGEND

● View Location



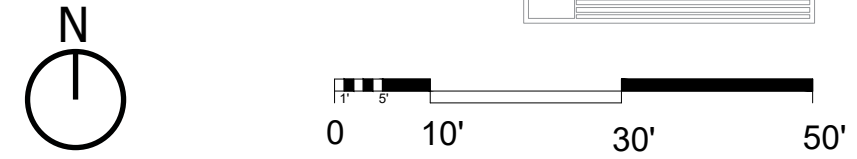
SECOND FLOOR PLAN

- 1. Elevator
- 2. Stairs
- 3. Lobby
- 4. Outdoor space
- 5. Gym
- 6. Lounge room
- 7. Two bedroom unit
- 8. One bedroom units



THIRD FLOOR PLAN

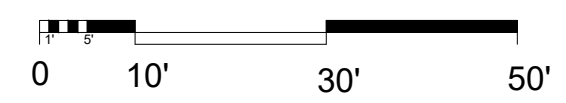
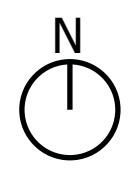
- 1. Elevator
- 2. Stairs
- 3. Lobby
- 4. Computer room
- 5. Entry space
- 6. Laundry room
- 7. Outdoor space
- 8. Two bedroom unit
- 9. One bedroom units





FOURTH FLOOR PLAN

- 1. Elevator
- 2. Stairs
- 3. Green space
- 4. Lobby
- 5. Outdoor space
- 6. Dining room
- 7. Two bedroom unit
- 8. One bedroom units



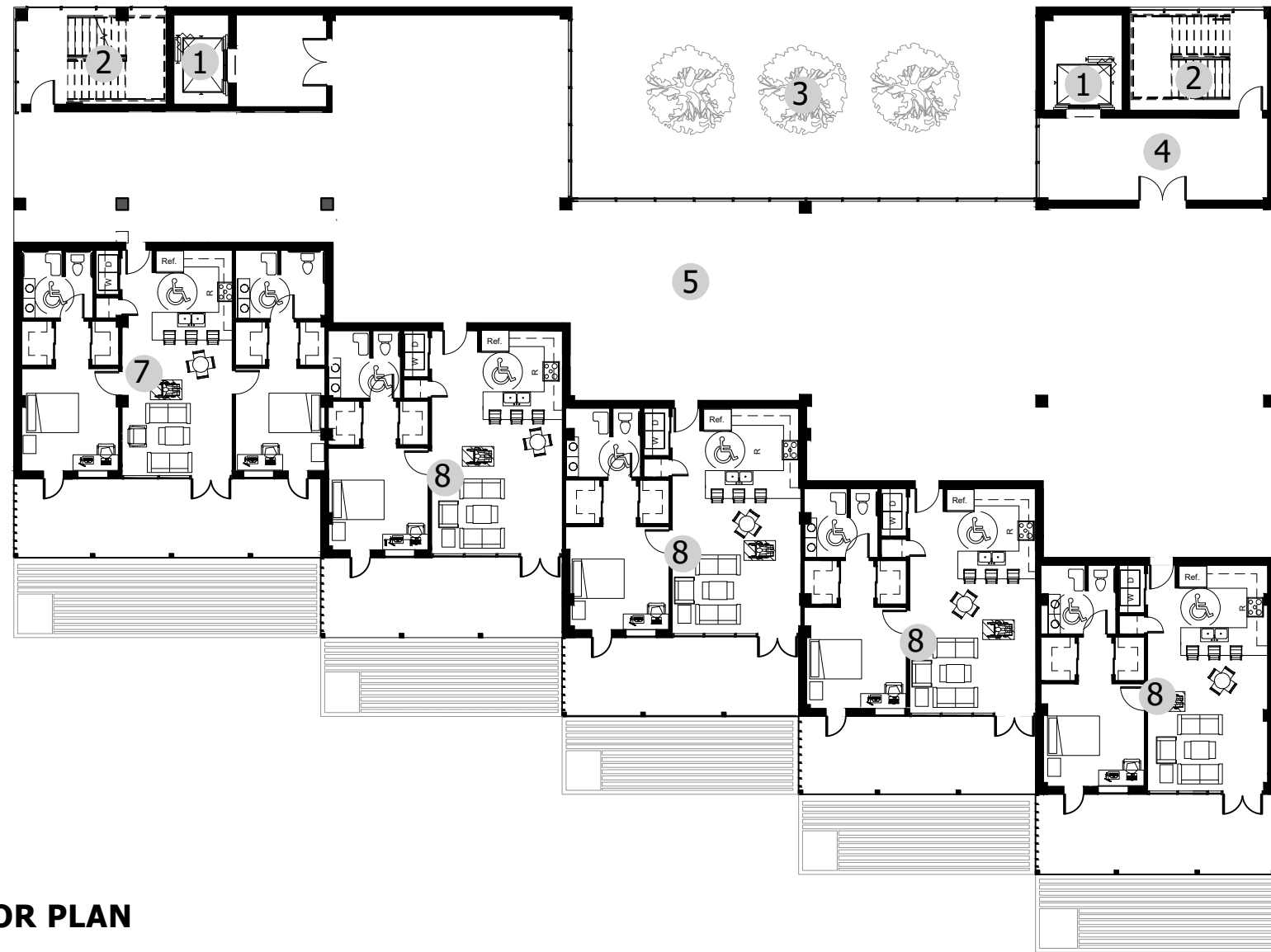
GARDEN SPACE



LEGEND

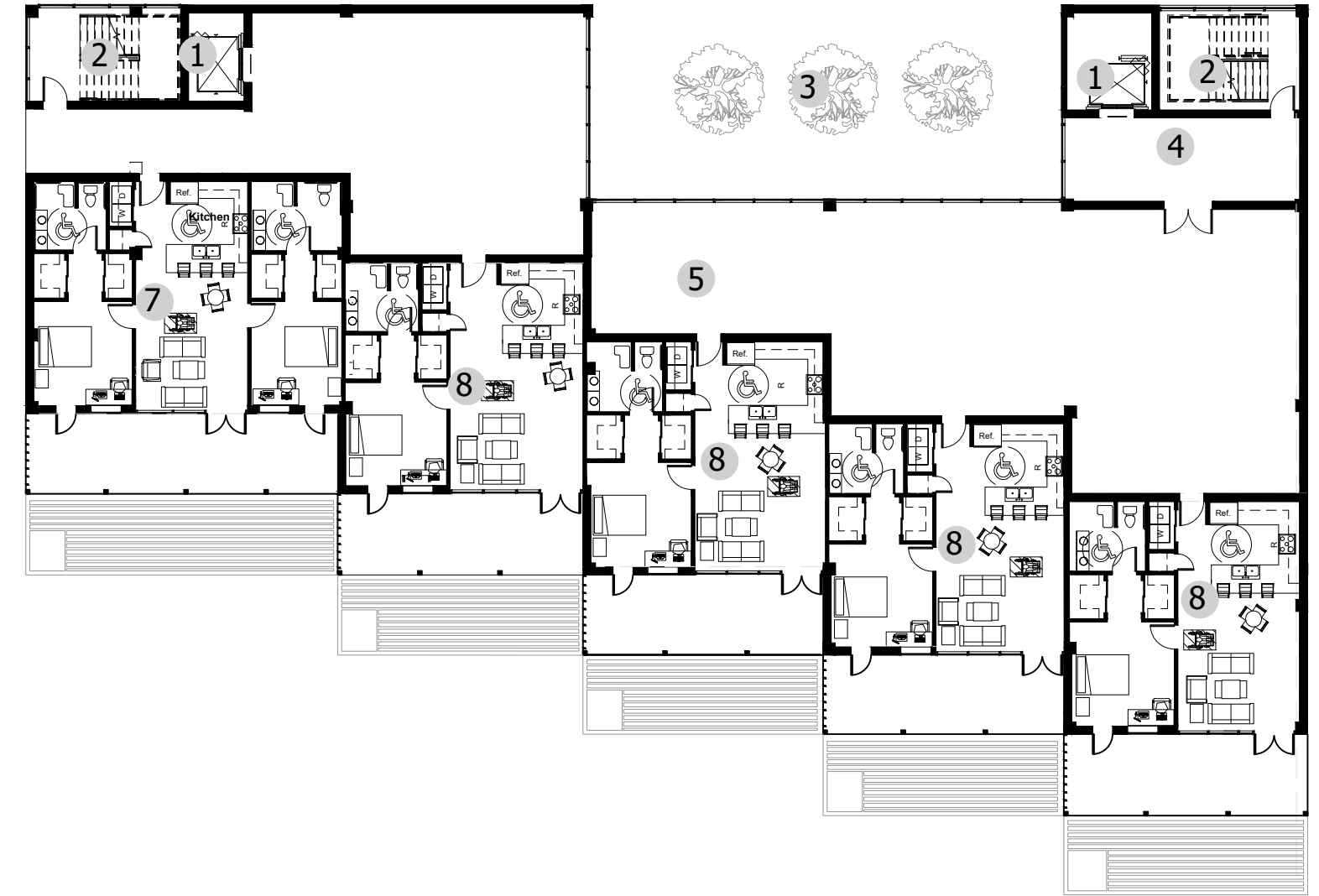
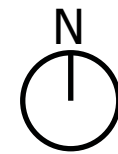
- View Location





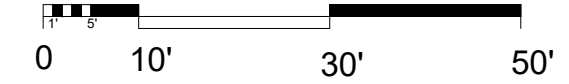
FIFTH FLOOR PLAN

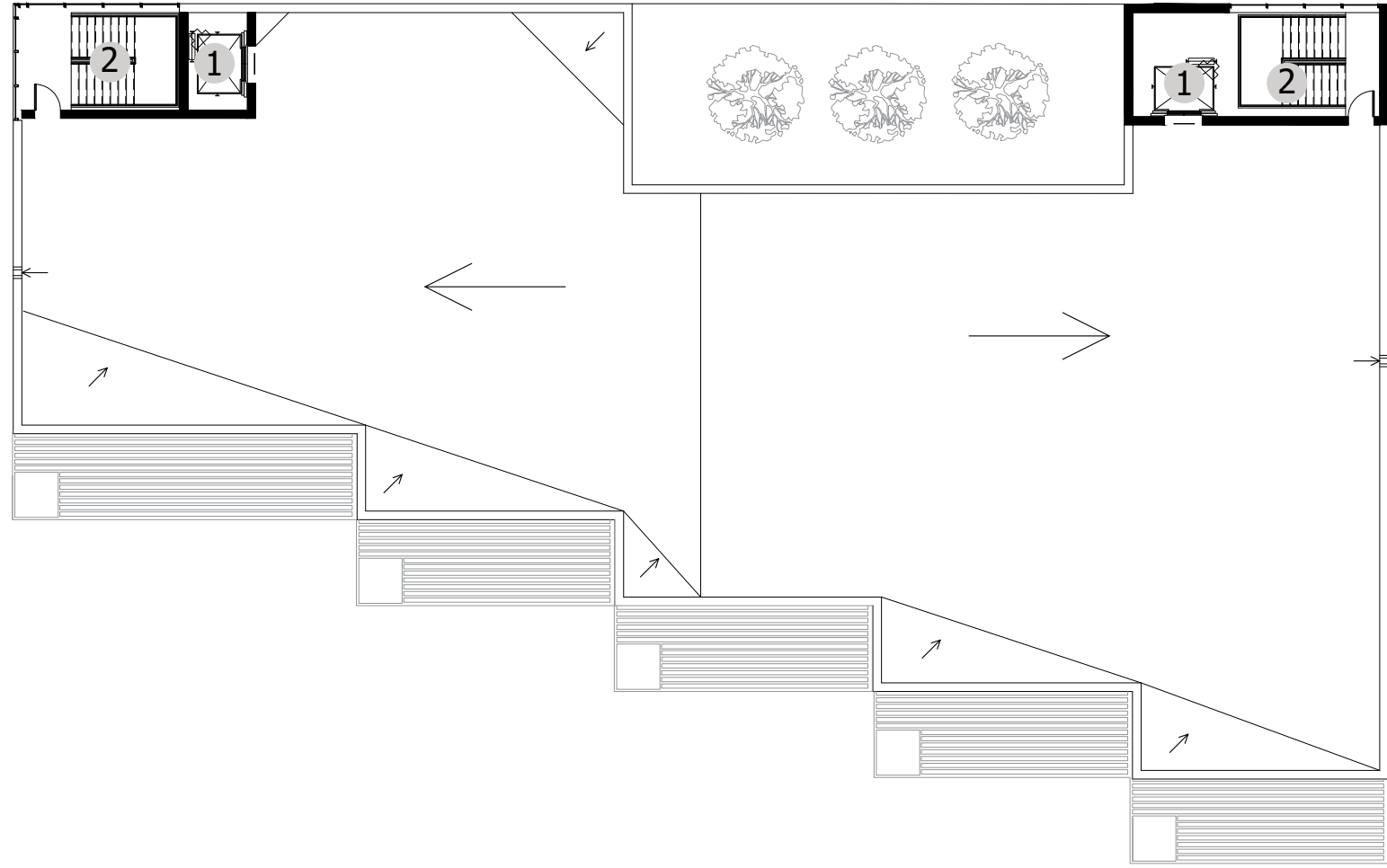
- 1. Elevator
- 2. Stairs
- 3. Green space
- 4. Lobby
- 5. Cover outdoor
- 6. Outdoor space
- 7. Two bedroom unit
- 8. One brdroom units



SIXTH FLOOR PLAN

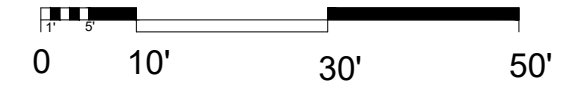
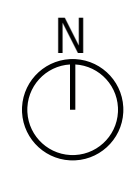
- 1. Elevator
- 2. Stairs
- 3. Green space
- 4. Lobby
- 5. Dining room
- 6. Outdoor space
- 7. Two bedroom unit
- 8. One brdroom units

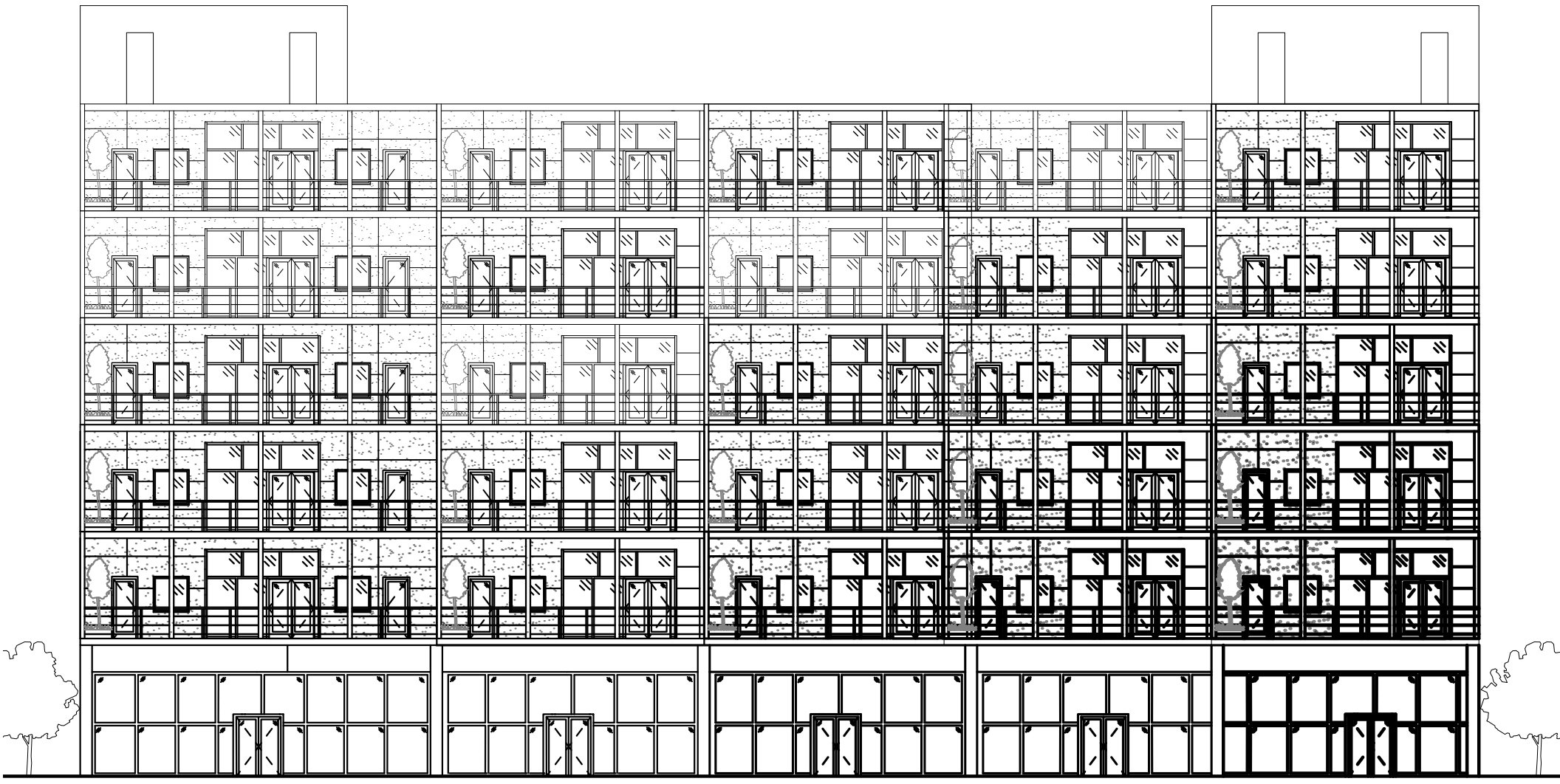




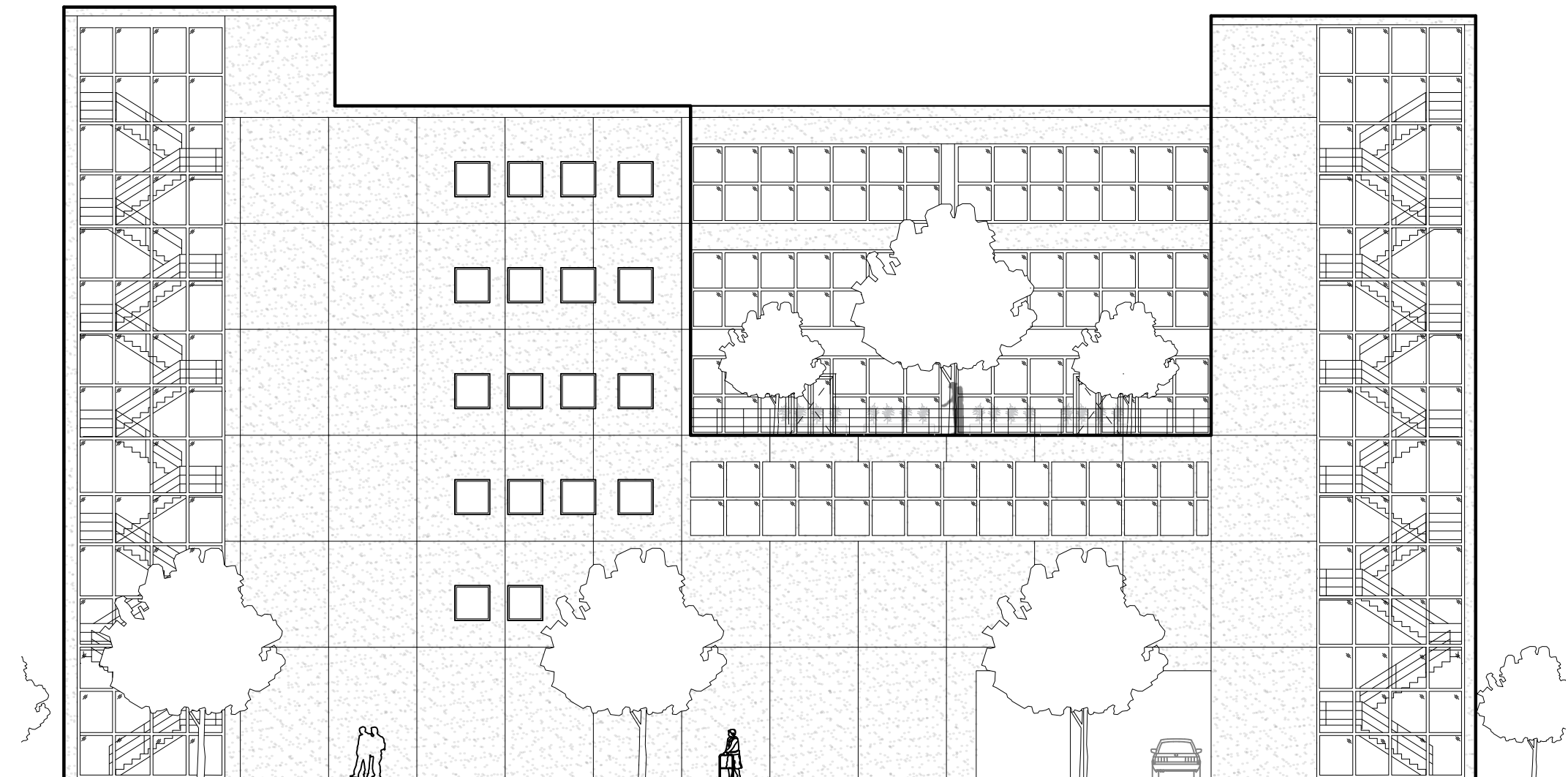
ROOF PLAN

- 1. Elevator
- 2. Stairs



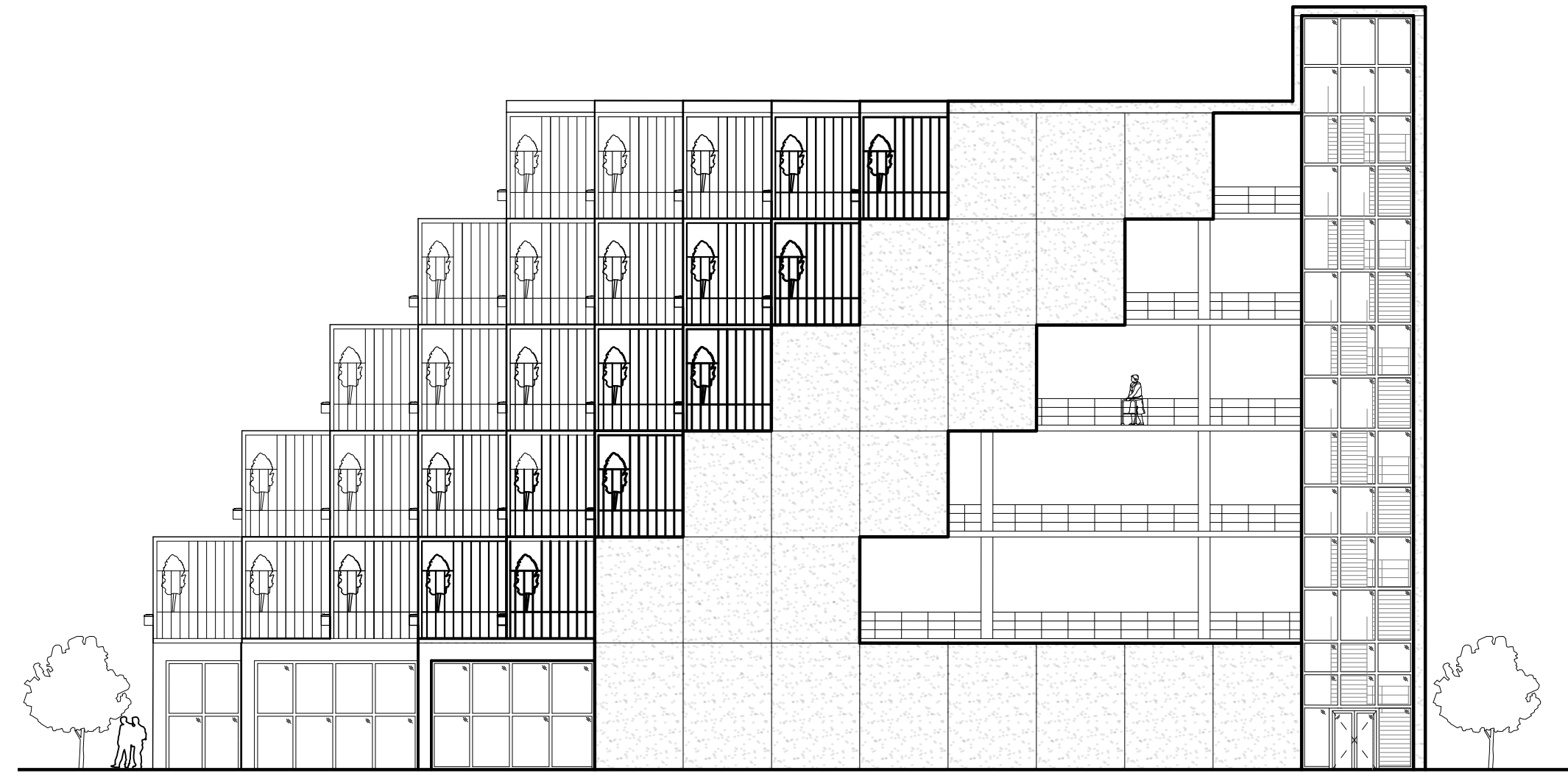


SOUTH ELEVATION

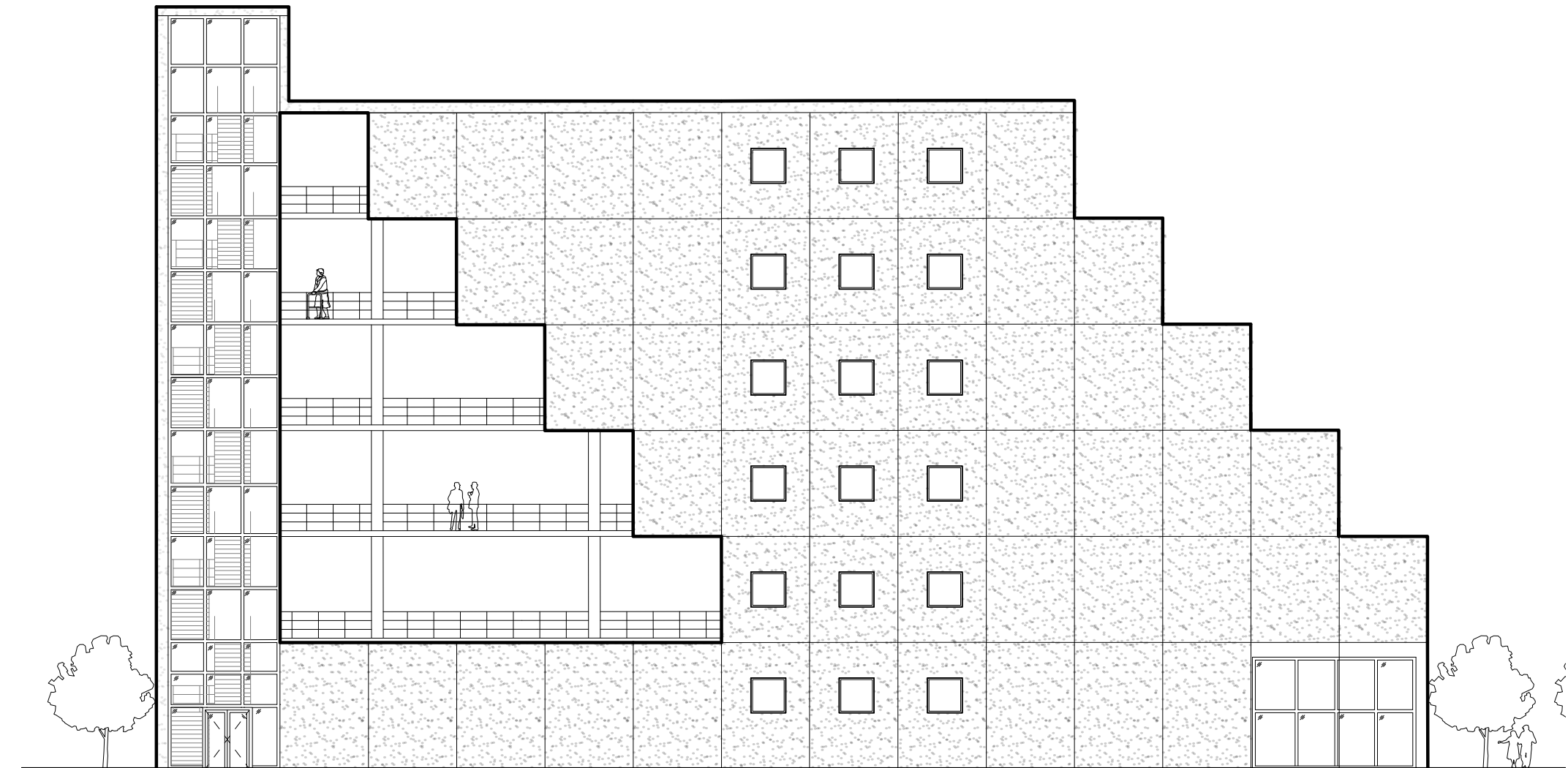


NORTH ELEVATION

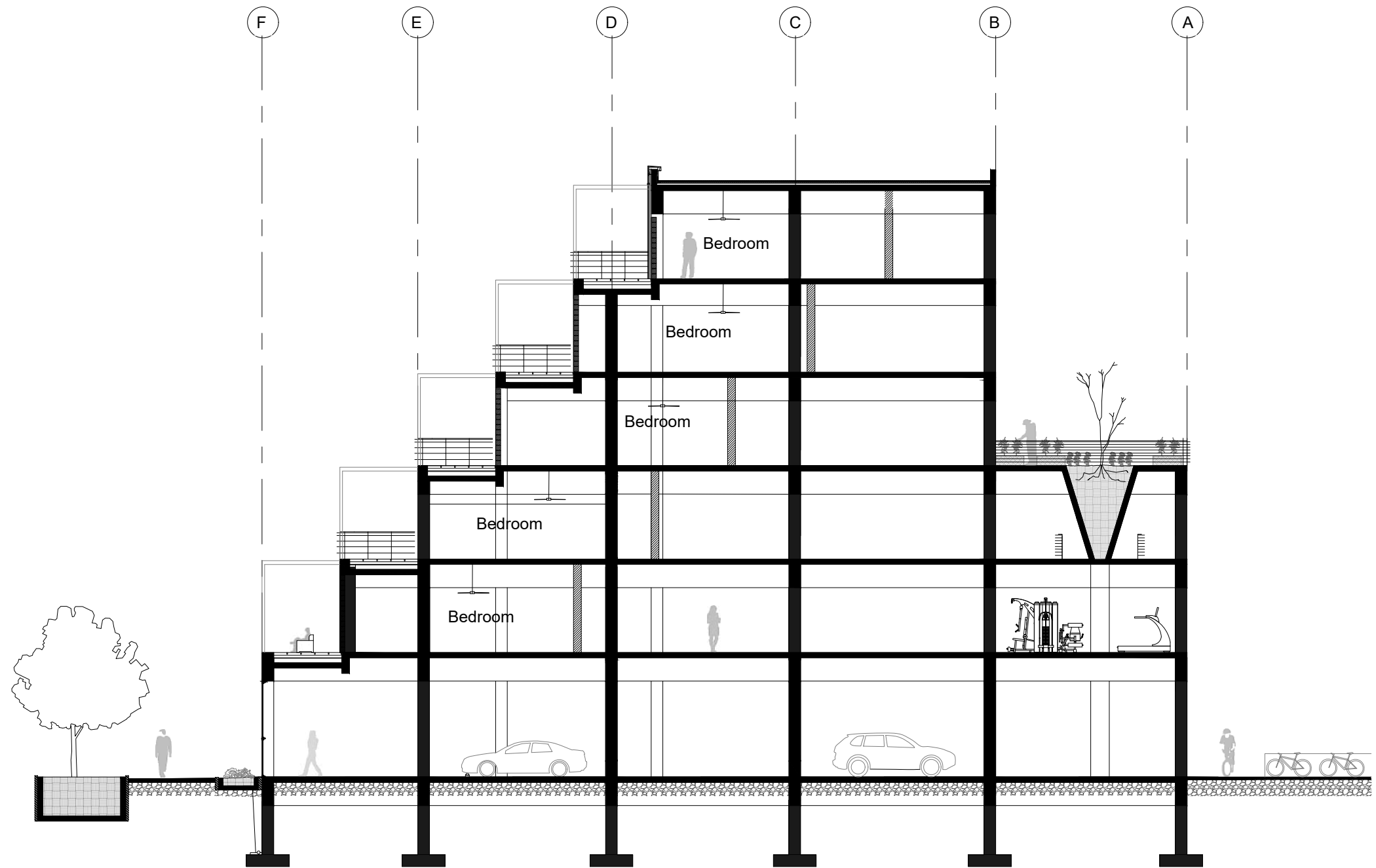
ELEVATIONS



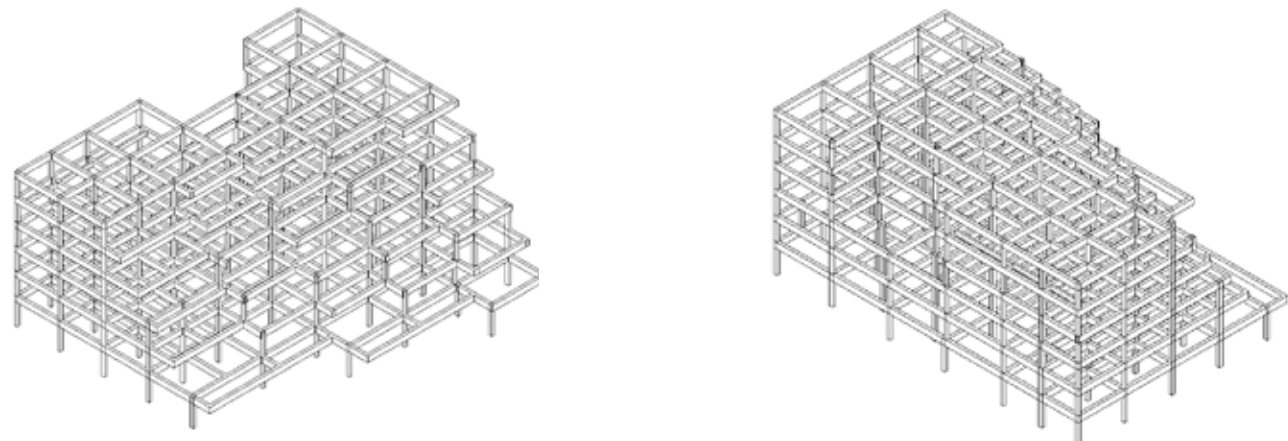
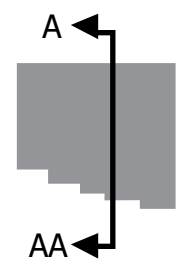
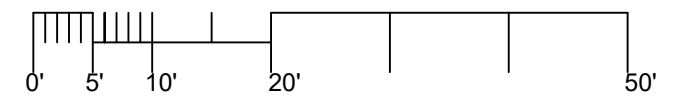
EAST ELEVATION



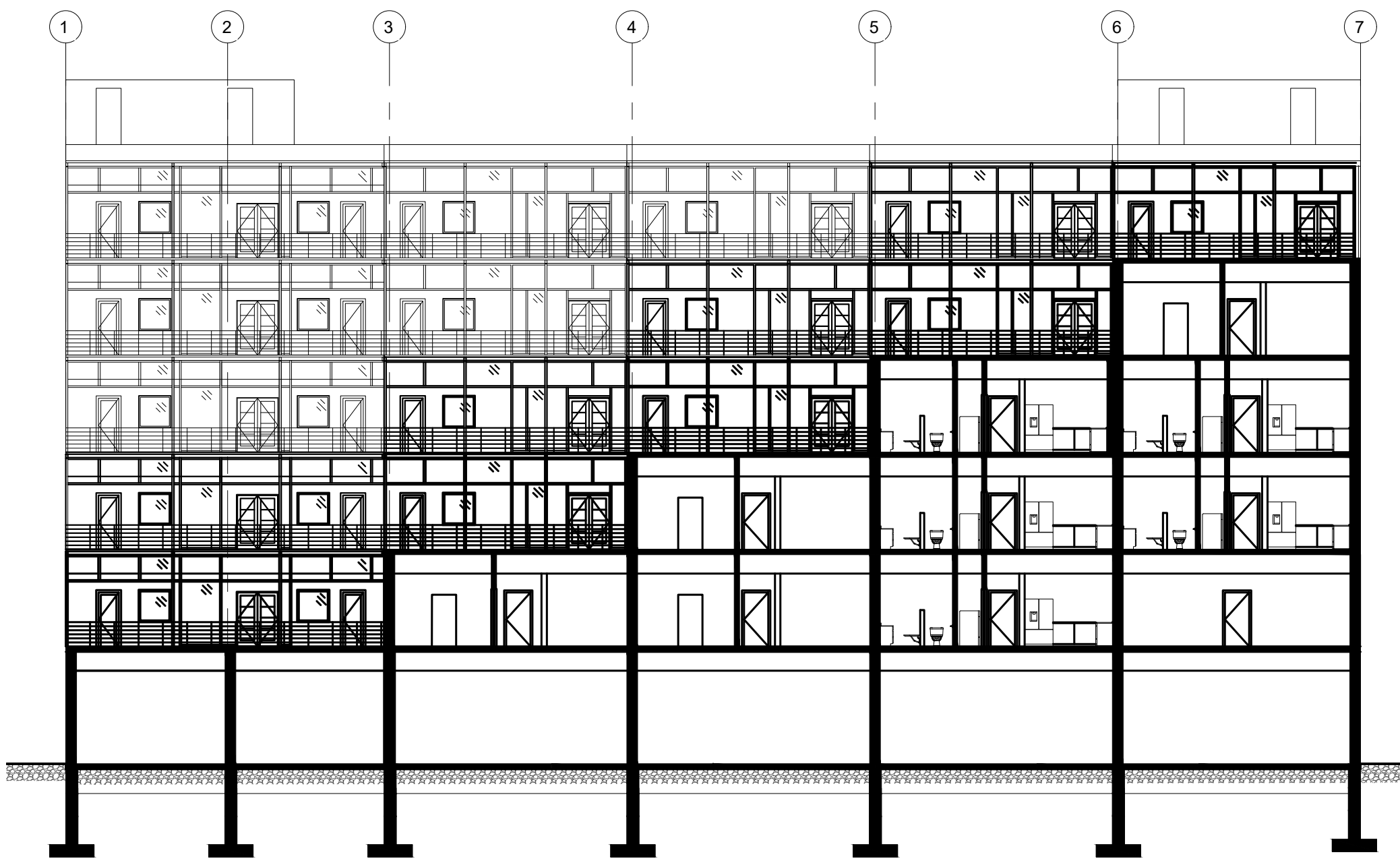
WEST ELEVATION



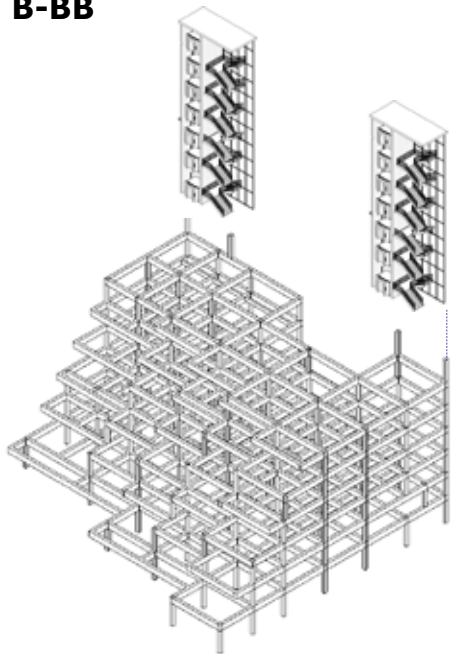
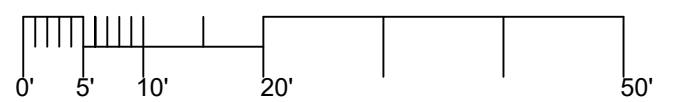
SECTION A-AA



STRUCTURAL 3D MODEL

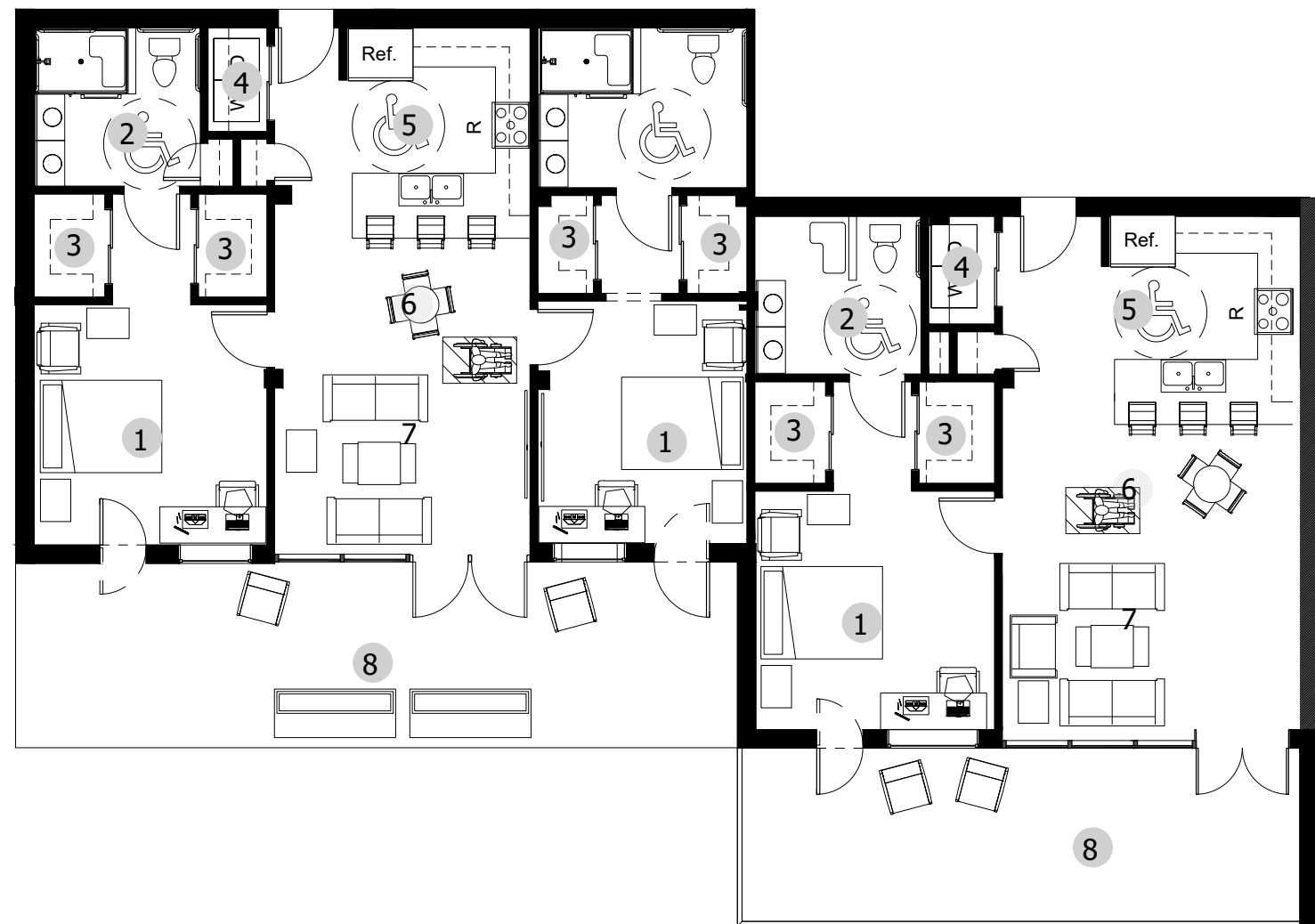


SECTION B-BB



BUILDING SECTIONS

Opening the site to other surrounding residents to enter the site to show, eat and have a good time in all the retail strip areas with the beautiful beachfront view. The retail spaces provided the perfect opening the site to other surrounding residents to enter the site to show, eat and have a good time in all the retail strip areas with the beautiful beachfront view. The retail spaces provided the perfect oo.

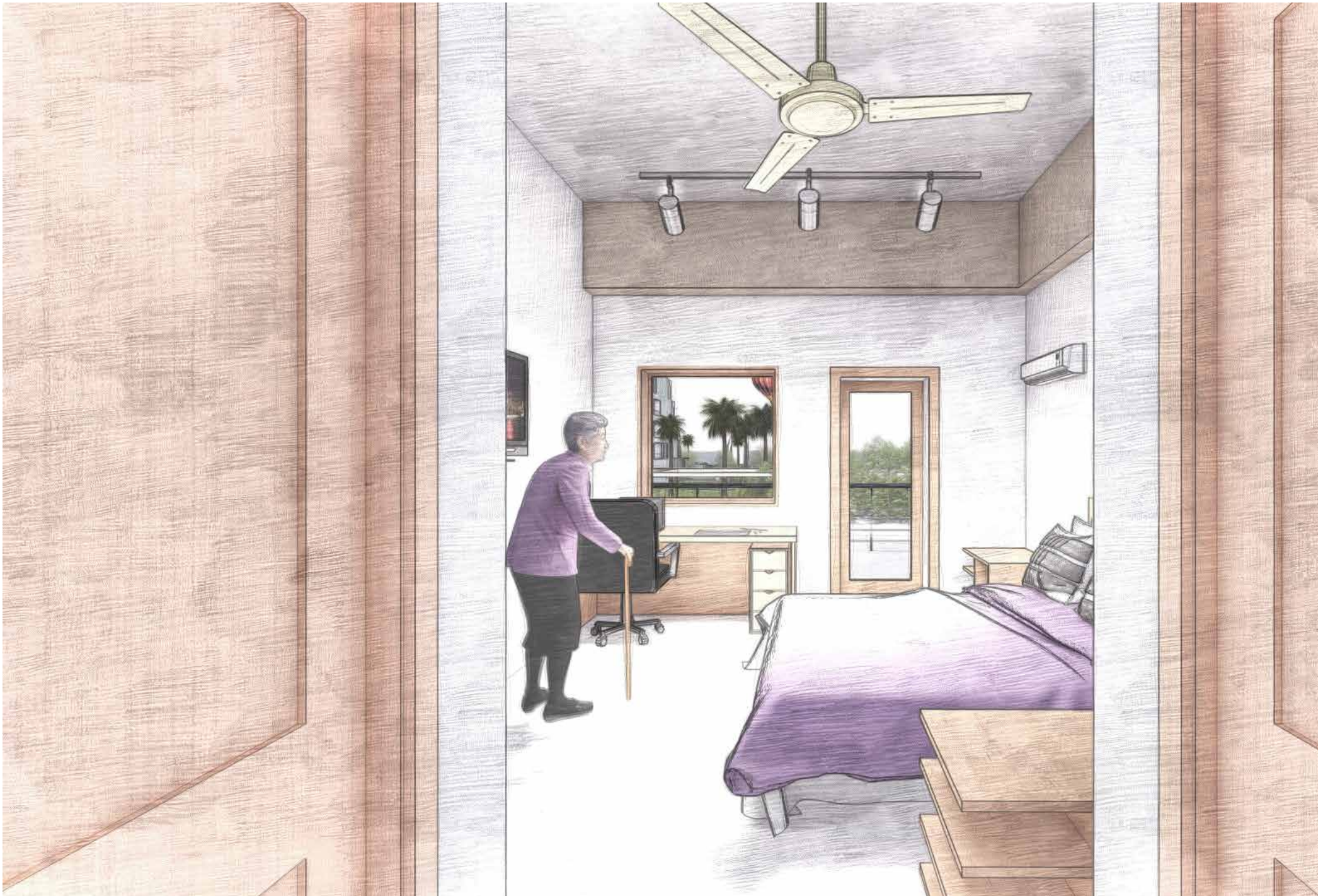


APARTMENT FLOOR PLAN

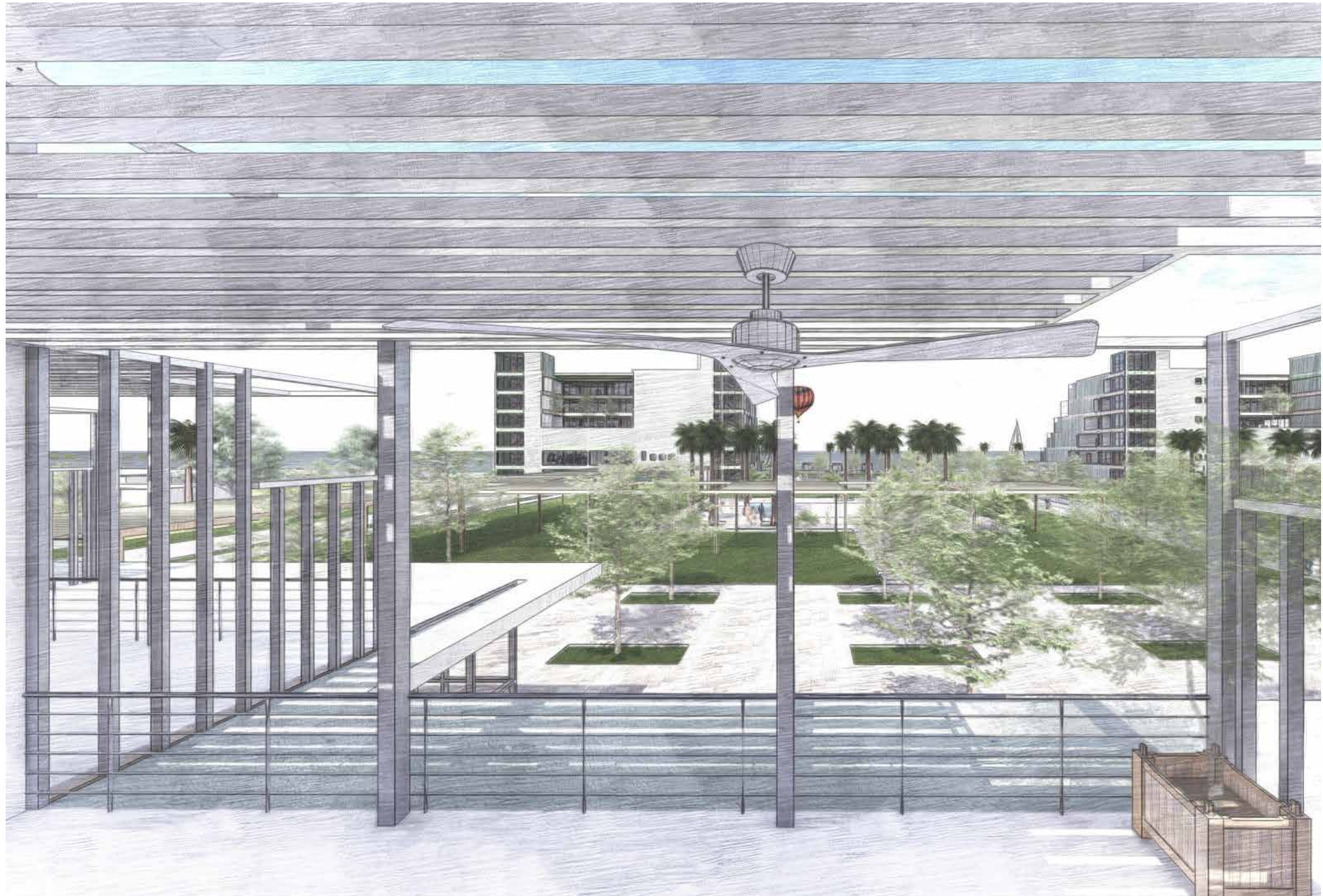
- 1. Bedroom
- 2. Bathroom
- 3. Closet
- 4. Laundry
- 5. Kitchen
- 6. Dining
- 7. Living room
- 8. Patio



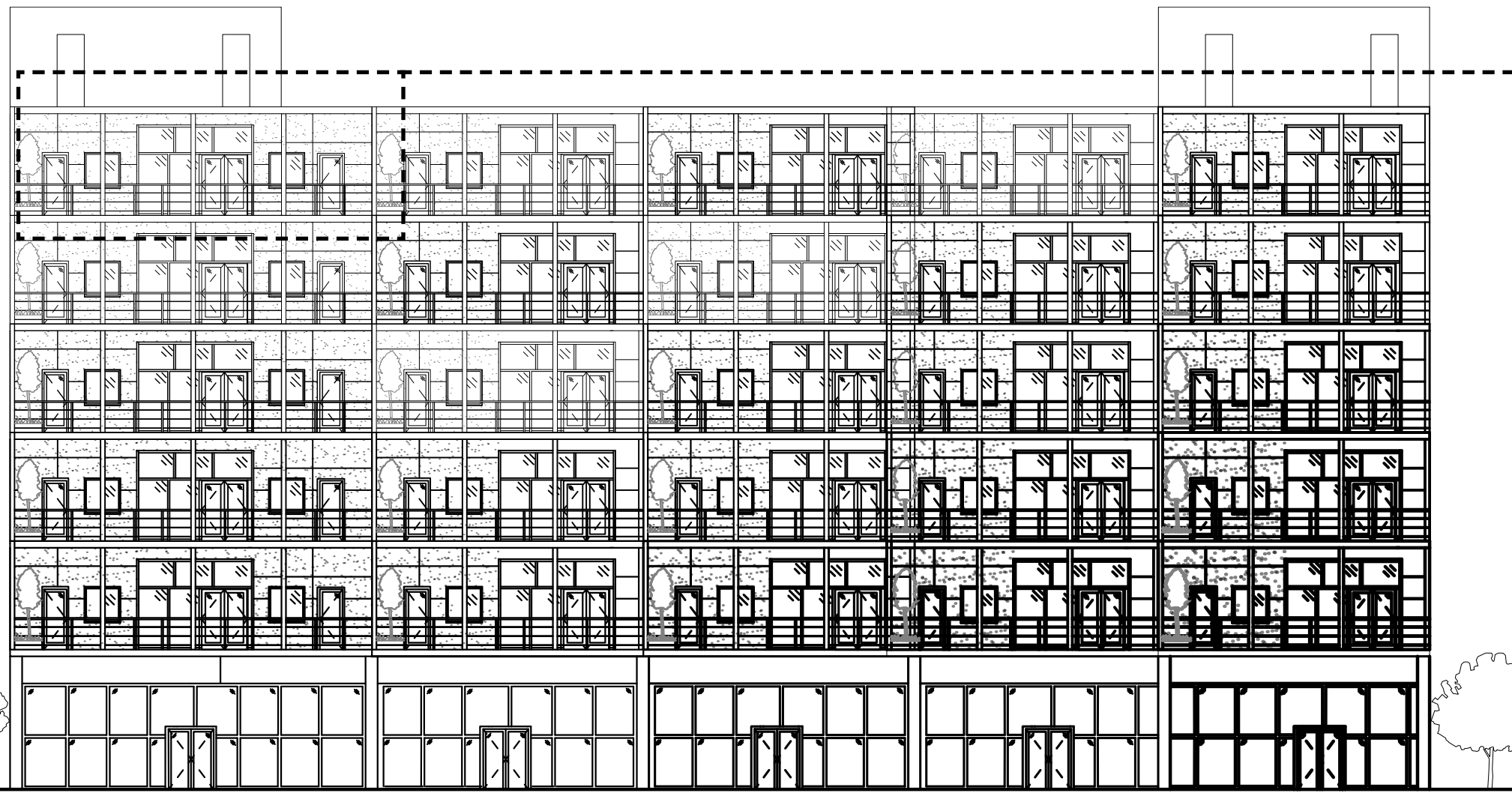
LIVING ROOM VIEW



BEDROOM VIEW



PATIO VIEW

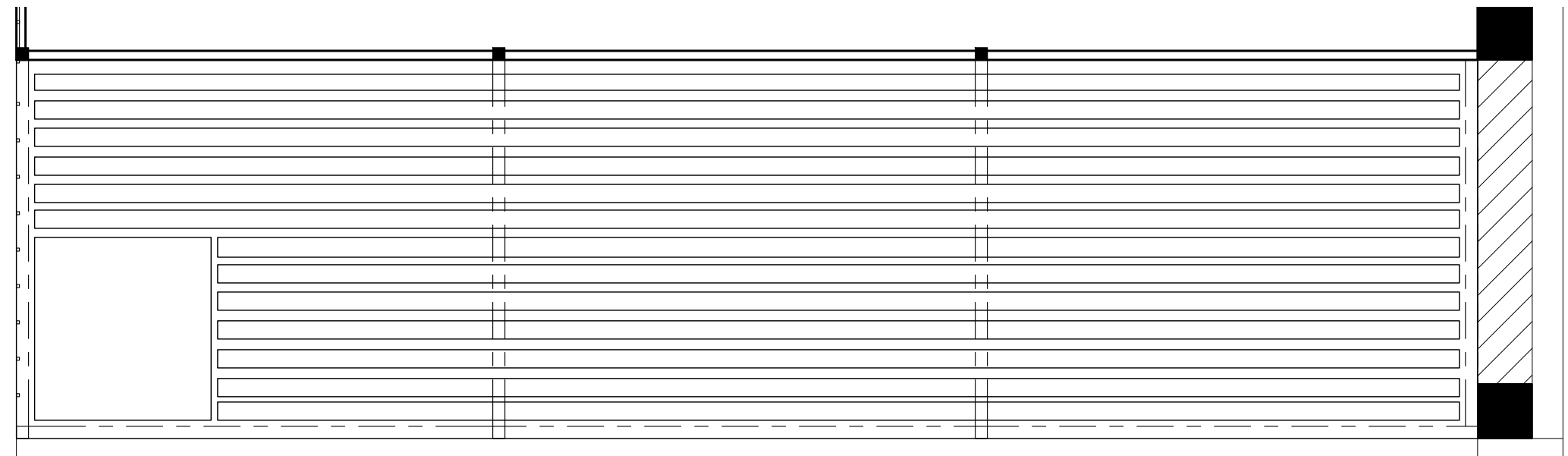


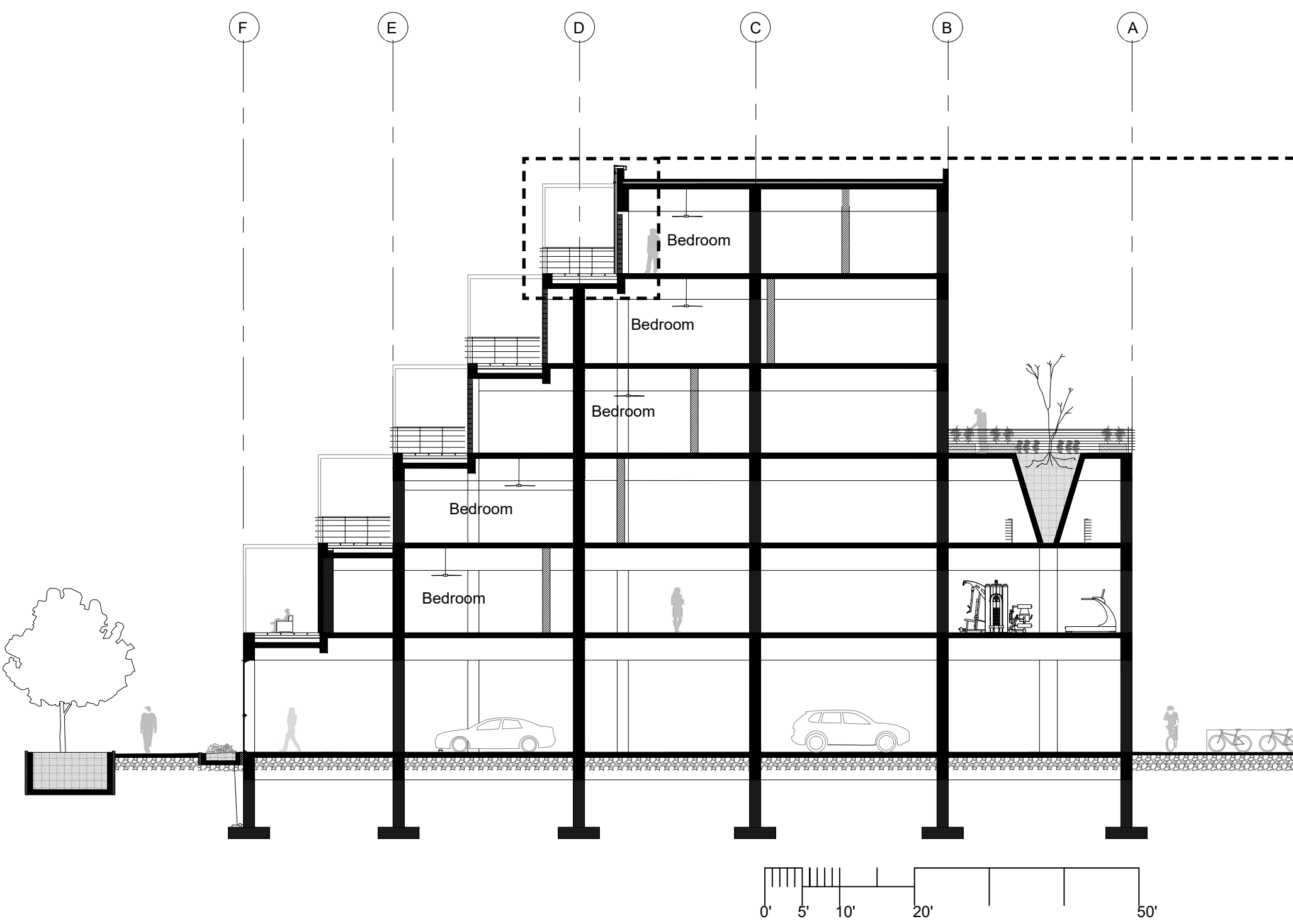
SOUTH ELEVATION

APARTMENT FACADE ELEVATION



APARTMENT FACADE FLOOR PLAN





STUCCO FINISH
 CAST IN PLACE CON-
 CRETE STRUCTURE

MOTORIZED OUTDOOR WATER-
 PROOF ALUMINUM PERGOLA

8" CMU BLOCK

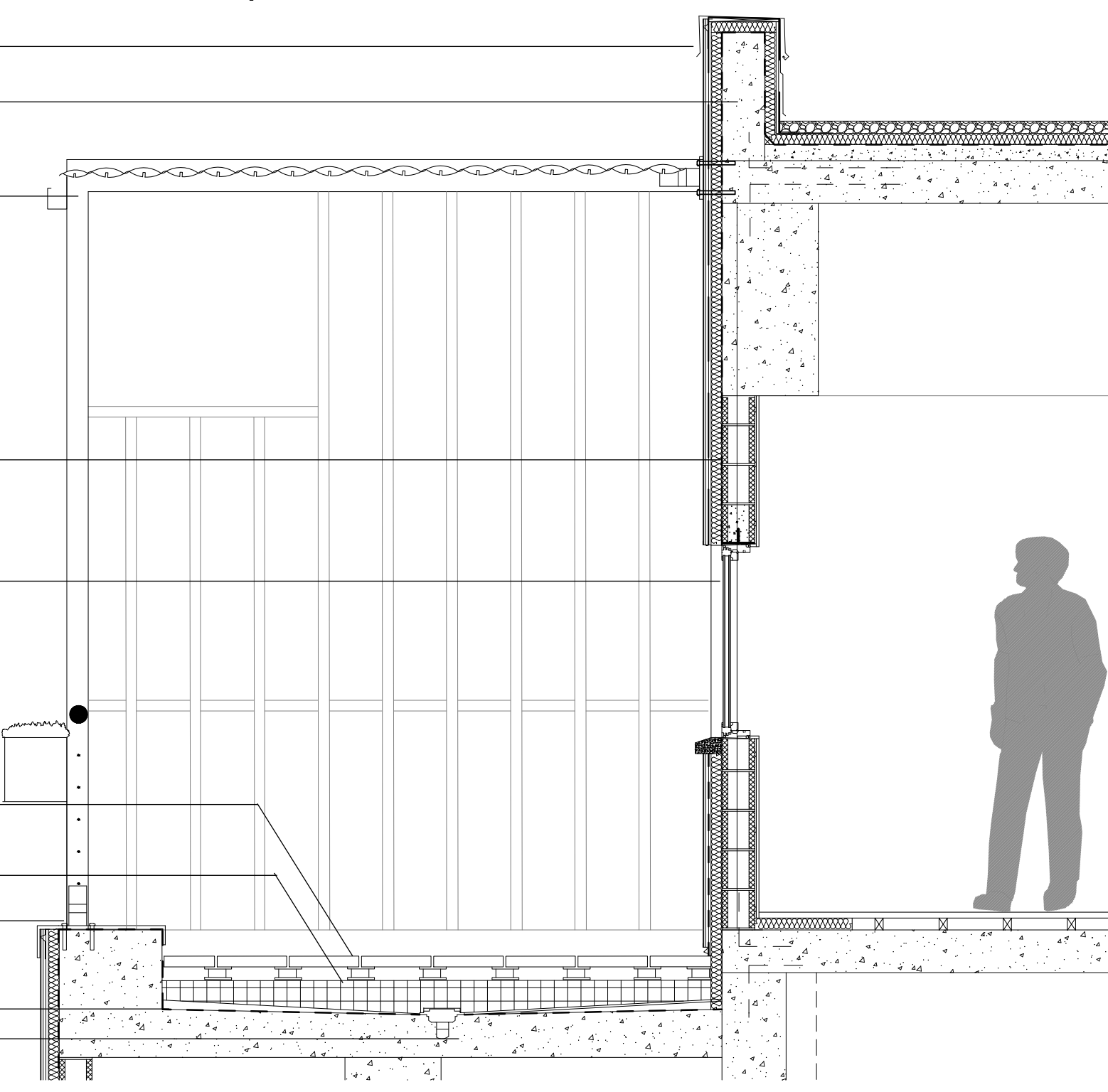
LOE-E WINDOW

PAVERS

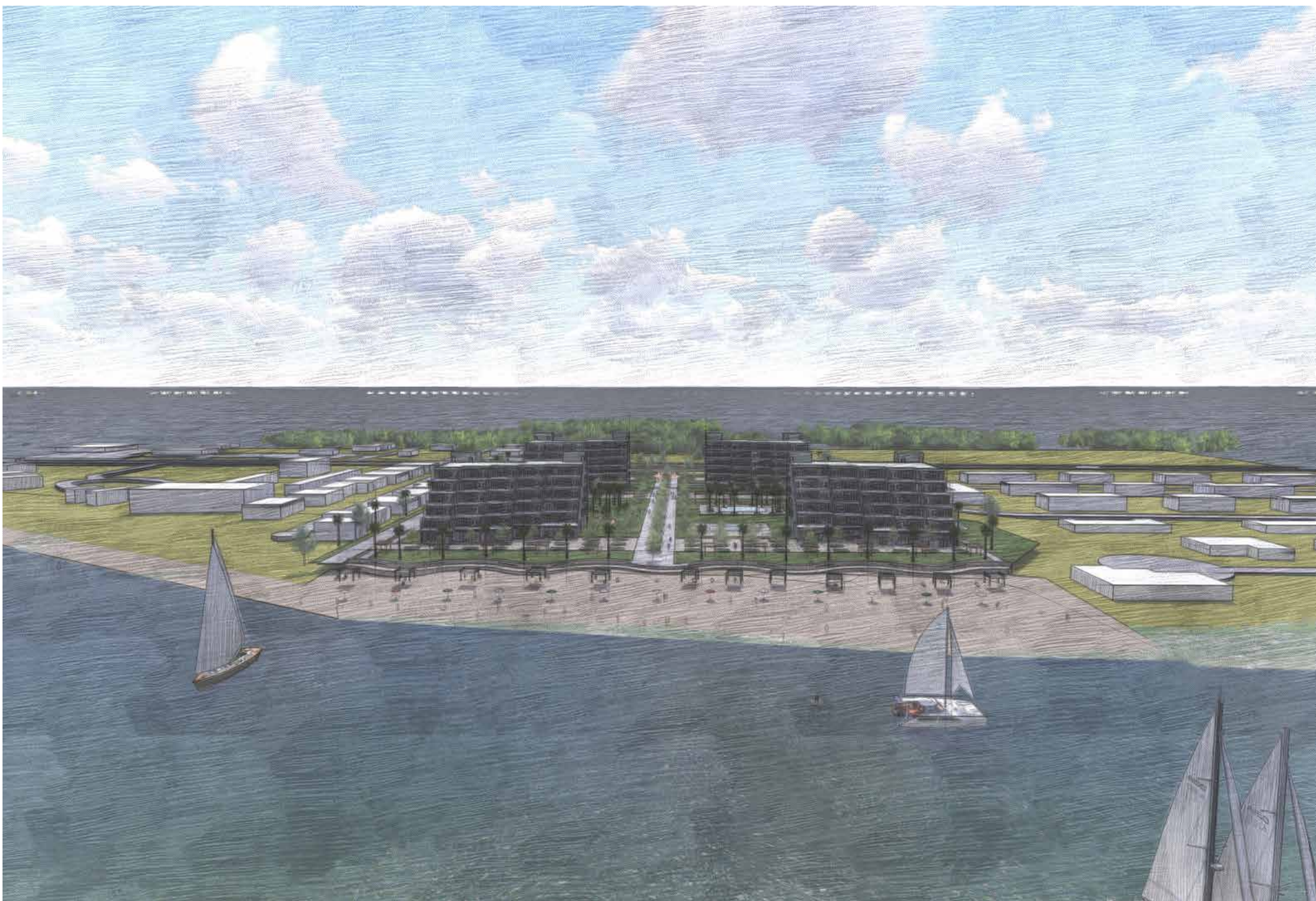
DRAINAGE COMPONENT

BASE POST CONNECTION

WATERPROF MEMBRANE
 DRAIN



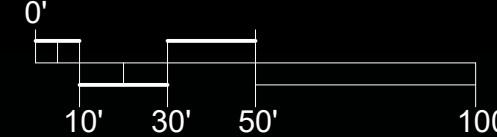
- FRAME TYPE:** Wood Vinyl, or fiberglass
- GLASS:** Clear argon triple pane Low-E Insulation Fiberglass ASHRAE 13 ch 15 double or triple glazing 1/4" w/ 1/2 air space tinted double glazing blue/ green
- LEVEL INSULATION:** Super Insulated 2.0 current R-value code
- REFLECTION FOIL RADIANT (IN ATTIC):** Radiant Barrier installation (shiny surface into vented attic above insulation in ceiling) flat (shiny surface facing into a vented
- WALLS: EXTERIOR FINISH:**
 8" concrete block with insulated filled cores exposed plaster exposed or plaster (high thermal mass)
 Or Stucco or unfinished solid 8" masonry
- ROOF CONSTRUCTION:** Cool roof sloped w/ natural vented attic light weight construction
- FLOOR CONSTRUCTION:** slab on grade (carpeted)
- INFILTRATION BUILDING WRAP:** Passive House Standards extreme air sealing requirements SLA: square crack per 10,00 sq ft conditioned floor area ACH50 Air changes 50 pascals pressure measure with blower door test (corrected outdoor temp and wind)
- INDOOR AIR VELOCITY FOR COOLING:** Strinc air velocity: air motion up to 300 FPM (6.6F cooler)



**BEACH VIEW
LONGITUDINAL SECTION**



BALCONY VIEW





PARK ENTRY VIEW



PARK VIEW

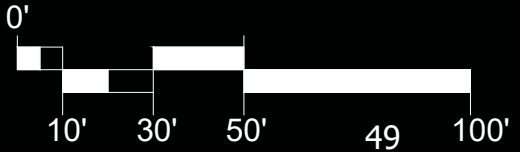
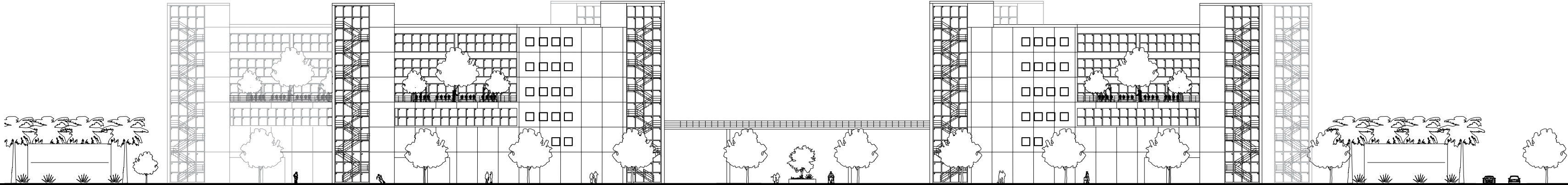


ENTRANCE VIEW



ENTRANCE VIEW

TRANSVERSE SECTION





MIDDLE PATH VIEW



GARDEN VIEW



MIDDLE PATH VIEW



MIDDLE PATH VIEW



BUILDING VIEW



BUILDING VIEW



CONCLUSION

I chose this topic because I found the push for Active Living Communities extremely interesting. Personally, in my culture and family we hold our older family members very close. Generally, the older generations continue to live independently after 65 until they can't, they then live with a family member. Senior homes are a rarity in Mexican culture. We view the older generation as people who are still highly capable and respected. Personally, I think there is a general notion about the older population that depicts them as weak and incapable with little life to live, but I believe the contrary. Which is why I find the Active Senior Living communities fascinating. I believe the older population when 65 plus, their life in a sense has just begun. They can offer so much more. There is still more to explore and their vibrancy should be kept.

Through research in this project I learned loneliness and loss of physical activity are detrimental factors that worsen the quality of life of older adults, which is why I focused so much on community and activity. I intended this design to be a place where the older adults can continue learning, exploring, and finding purpose. In accordance with my personal reflection of this design project, I have learned so much on how extensive a project can be. The process can become limitless with endless possibilities. This process begins from precedent analysis to research to implementing and developing the ideas of climate and social design of this project. I learned through the use of drawing and the expression of ideas. I also hope to be using these ideas and concept skills to learn to put into practice as an emerging architecture professional to bring those concept skills to real-world scenarios.

As this final Study project comes to mind I am working through the ideas and developing concepts and being able to analyze their importance to the final design. I have learned the value of intentionality and strength in strong concepts. I have pushed myself to design this Active Senior Living community to maximize comfort within the adult population in different aspects. I made a conscious decision based on evidence that pointed to best practices. During this final study project, I took classes that helped me design for climate control, which heavily influenced my overall building form. I finally would like to thank all professors and Architecture that consulted me in working on the importance of working with professionals to solve design problems in a meaningful and real-life scenario.

REFERENCES

- 2017 Aging in Cities Survey by Welltower. (2022). Retrieved 30 March 2022, from (2022). Retrieved 30 March 2022, from <https://www.census.gov/content/dam/Census/library/visualizations/2020/comm/map2-percent-change-65-older.pdf>
- Bureau, U. (2022). Older Population and Aging. Retrieved 30 March 2022, from <https://www.census.gov/topics/population/older-aging.html>
- Bureau, U. (2022). Population and Housing Unit Estimates. Retrieved 31 March 2022, from <https://www.census.gov/programs-surveys/popest.html>
- Edelen. (2022). Favorite Senior-Living Activities in Retirement | After55.com Survey. Retrieved 30 March 2022, from <https://www.after55.com/blog/senior-living-activities-survey-results/>
- Floodplain Management | Mary Esther, FL. (2022). Retrieved 30 March 2022, from
- Herman, H. (2017). Lessons for student in architecture. nai010 publishers.
- High-Rise Lifestyle for Active Seniors | Condo.com Blog. (2022). Retrieved 30 March 2022, from <http://www.condo.com/blog/high-rise-lifestyle-for-active-seniors/>
- How Innovation and Technology are Helping Seniors Living in Condos | Condo.com Blog. (2022). Retrieved 30 March 2022, from <http://www.condo.com/blog/how-innovation-and-technology-are-helping-seniors-living-in-condos/>
- How to Find the Right Senior Living Option? Prioritize. (2022). Retrieved 30 March 2022, from <https://www.wherewelivematters.org/find-right-senior-living-option-prioritize/>
- Lechner, N., & Andrasik, P. Heating, cooling, lighting.
- Miller, M. (2022). Still Hard at Work in Retirement Age. Retrieved 30 March 2022, from <https://www.aarp.org/work/working-after-retirement/info-2015/work-over-retirement-happiness.html>
- Moore, R., & Moore, R. (2022). Estimates for Health Care Costs in Retirement Continue to Rise | PLANSPONSOR. Retrieved 30 March 2022, from <https://www.plansponsor.com/estimates-health-care-costs-retirement-continue-rise/>
- The Average Cost of Senior Living: Can You Afford It? | AssistedLiving.org. (2022). Retrieved 30 March 2022, from <https://www.assistedliving.org/the-average-cost-of-senior-living/>