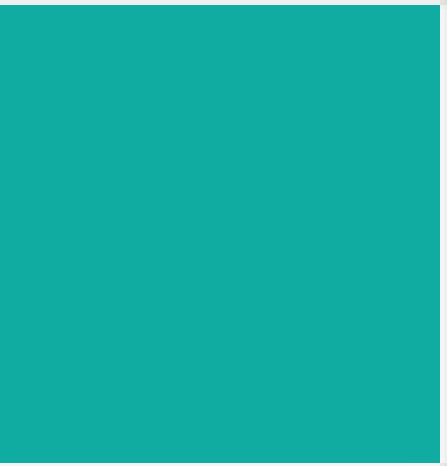


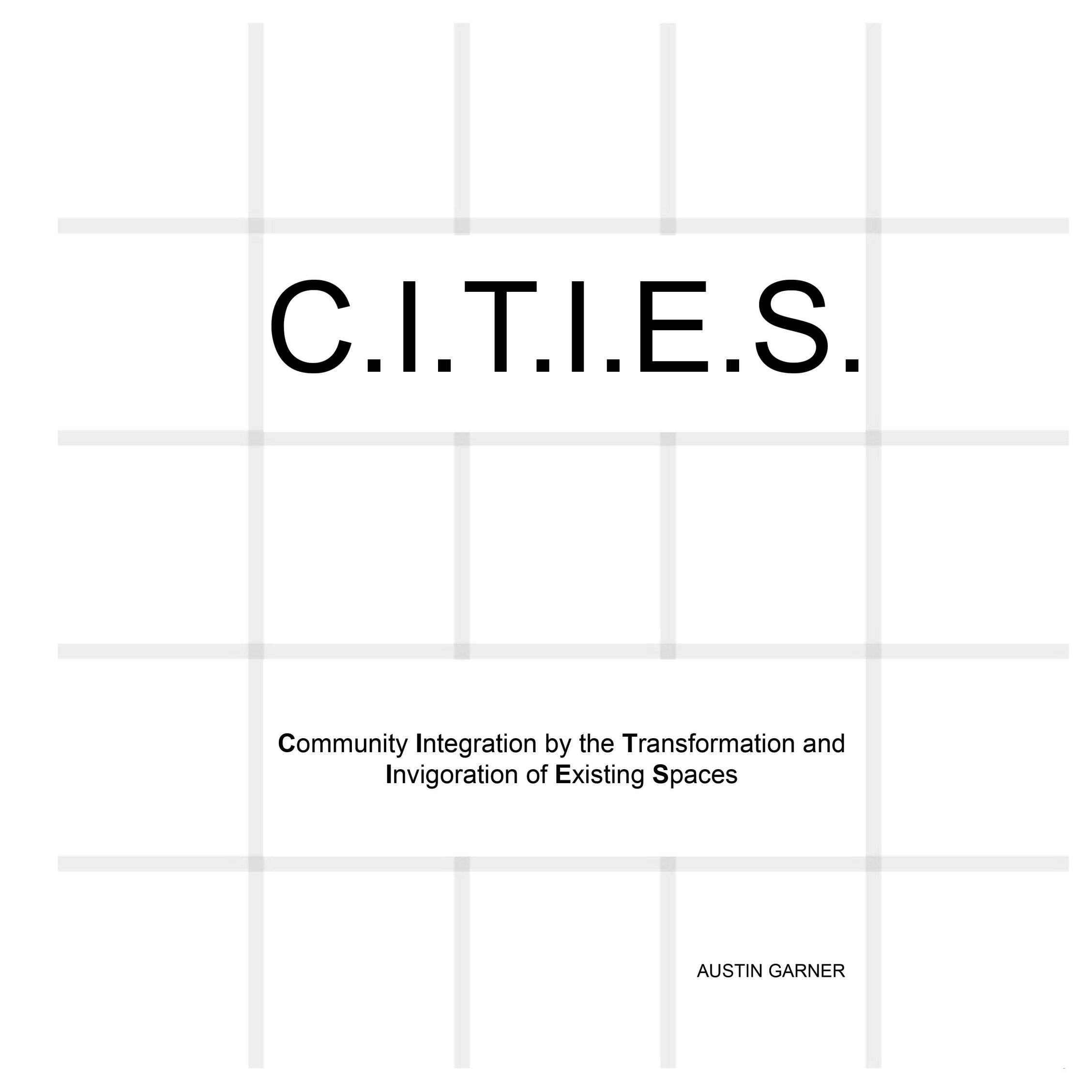
# C.I.T.I.E.S.

2022

AUSTIN GARNER

C.I.T.I.E.S.

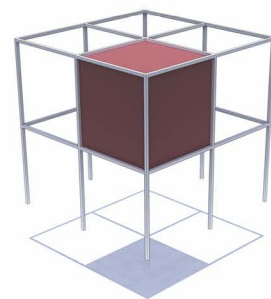




# C.I.T.I.E.S.

Community Integration by the Transformation and  
Invigoration of Existing Spaces

AUSTIN GARNER



## Dedication

To my Family:

I want to thank my parents for always being so supportive. This journey took longer than expected and I want to thank you for staying by my side and helping me from start to finish. I want to also thank my little brother for being home base and doing more than enough from any brother.

To my Committee:

Thank you for continued support throughout the year and taking time to teach me. I truly value the advice and input you all have shared with me.

To my Professor, Andrew Hawkins:

I genuinely enjoyed your class. You taught me so much and did not fail me, what more could I ask. I feel more like an architect thanks to you.

To my Chair, Davi Xavier:

From Career Change to graduation, you have taught me so much. Much of my architectural knowledge is thanks to you, thank you for the many years of guidance.

## Committee



**Davi Xavier**  
Dept. of Architecture  
Chair

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**Koichiro Aitani, PhD.**  
Dept. of Architecture  
Co-chair

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**Shelley Holliday**  
Dept. of Architecture  
Member

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**Galen Newman, PhD.**  
Dept. of Landscape Architecture  
Member

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**Andrew Hawkins, AIA**  
Dept. of Architecture  
Studio Professor

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# Introduction

Even though there are many forms of transportation, the individual car is the primary form of transportation in the United States and is the only form of transportation available to many. This has been the case for me my entire life living in either College Station or the greater Houston area.

In the summer of 2018, I studied abroad in Barcelona, Spain. The city was organized in such a way that cars were virtually unnecessary for us. Our day to day tasks, which included eating, site-seeing throughout the city, school, and shopping were available through other modes of transportation such as subway, bus, train, and simply walking. I thoroughly enjoyed the lack of car dependence and wanted to enjoy this aspect in my everyday life back in the United States.

This created my interest in walkability and creating a more walkable America. Unfortunately, the United States is already so car dependent, so there would need to be a way to change the space that is normally only available to cars to spaces that the citizens are comfortable using as well.

An idea that also originated in Barcelona called superblocks could be used to give more space to people and increase walkability by densifying the areas within the superblock. This will be the basis of my project.



*The civilized man has built a coach, but has  
lost the use of his feet.*

- Ralph Waldo Emerson

**PROBLEM**

# Problem

In the 1950s the suburban lifestyle was the American Dream. Getting out of the city and having your own piece of land was possible due to the mass production of the individual car. Unfortunately, we did not know the repercussions of massive development in such a short amount of time.

This with the heavy push for an expansive highway system led to a dependency on automobiles. Because of this, more than 76% of the United States population drive alone to work, creating high traffic and congestion, especially at peak hours during the morning and afternoon. Travel time from work to home is steadily increasing, with cities being notorious for commutes of over an hour. Even with all the freedom the individual cars give, our dependency on it is causing us to lose much of this freedom. Less than 5% commute by either walking or biking, increasing these ways of travel will reduce the amount of traffic and bring back some of that freedom we have lost to traffic and congestion.

Most jobs are concentrated within the city, giving the most opportunity for creating walkability. Current housing prices and sizes are the major deterrent when people are thinking about moving into the city. Increasing the amount of housing would reduce the prices by increasing supply. City housing also does not have to only be apartment living, suburban style houses with yards can be designed for the city while still increasing supply.

These ideas will help reduce a number of other problems. The increase in walking and biking will reduce air and noise pollution, improve community physical and mental health, along with creating a safer community.

# Walkability

A common misunderstanding of walkability is that all you need for successful walkability is close proximity to a variety of use, but true walkability is much more than this. While access is important, you must also look at interest, comfort, and safety.

A generally accepted area of walkability is a radius of 0.25 miles. Access includes more than just proximity though. Access also includes the ability for all people to reach its destination no matter their physical abilities. Vertical access should also be limited to 4 stories for walkability.

Interest is an important aspect of walkability that is overlooked in walkability. Walkability is easy to quickly implement but difficult to keep consistent. If you want a citizen to walk to work over 200 times a year, you want to create scenery throughout that route that keeps them interested and walking. Greenery and a variety of shapes, colors, materials, and uses in the surrounding buildings give a sense of place and identity to the area. Parks and places of social activity give the area liveliness and variety to an otherwise unchanging landscape.

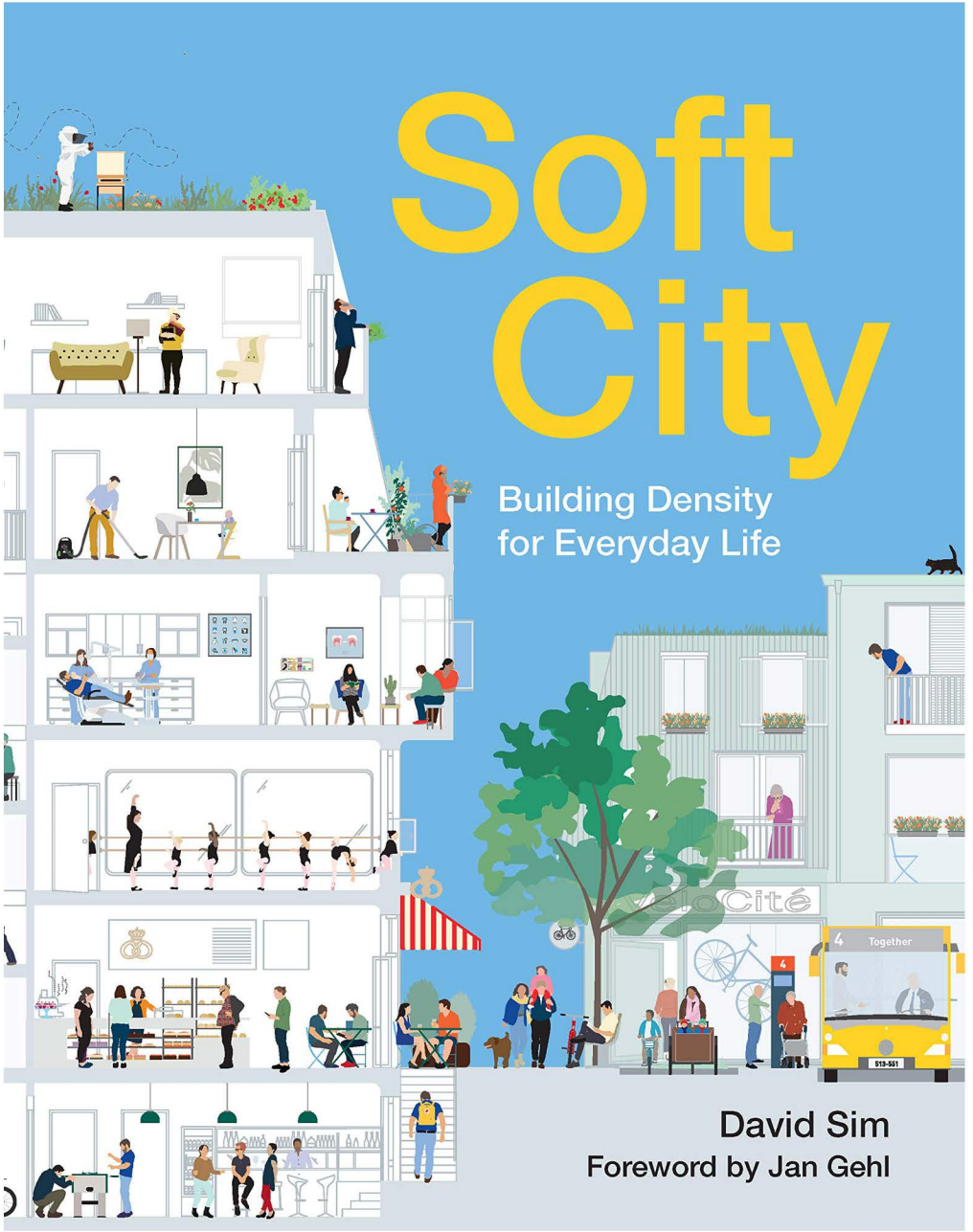
Comfort is the aspect of walkability that depends most on the environment. Colder places need to be designed for more sun while hotter places need to use methods to reduce the heat like shading and using the wind. Safety is also a part of comfort, if people don't feel safe walking, then they won't feel comfortable taking that route. People feel safer walking when there is a barrier between them and the street. This can be a static physical barrier like walls or trees and bushes or a more variable barrier like parking next to the sidewalk. Well-lit streets are also important for walking at night and areas that would still be populated at night would help people feel safer.



*To create, one must first question everything.*

- Eileen Gray

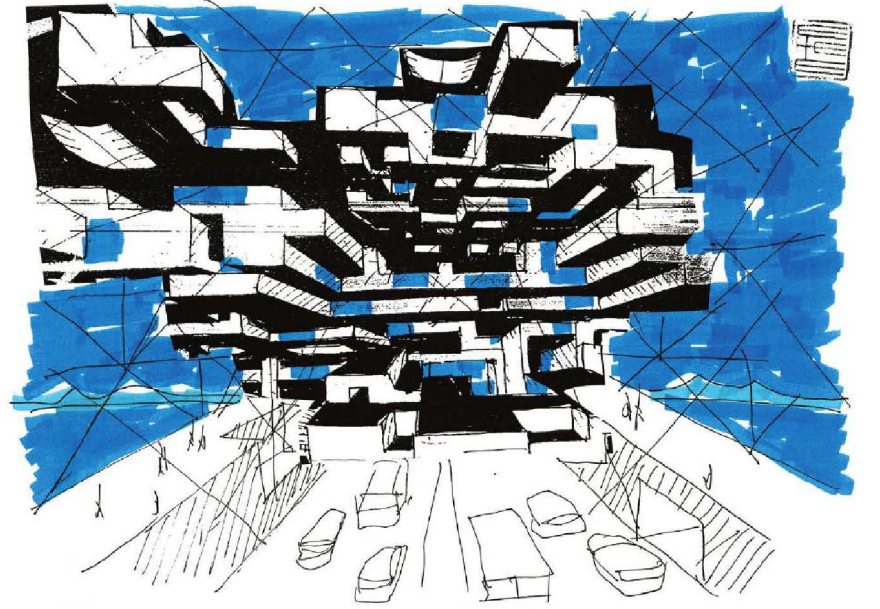
**RESEARCH**



Soft City by Jan Gehl defines what a city could be. Jan explores every aspect of city design and analyzes what cities do wrong and right in order to help create a more walkable, more comfortable community. This book became more of a textbook for my project rather than a reference.

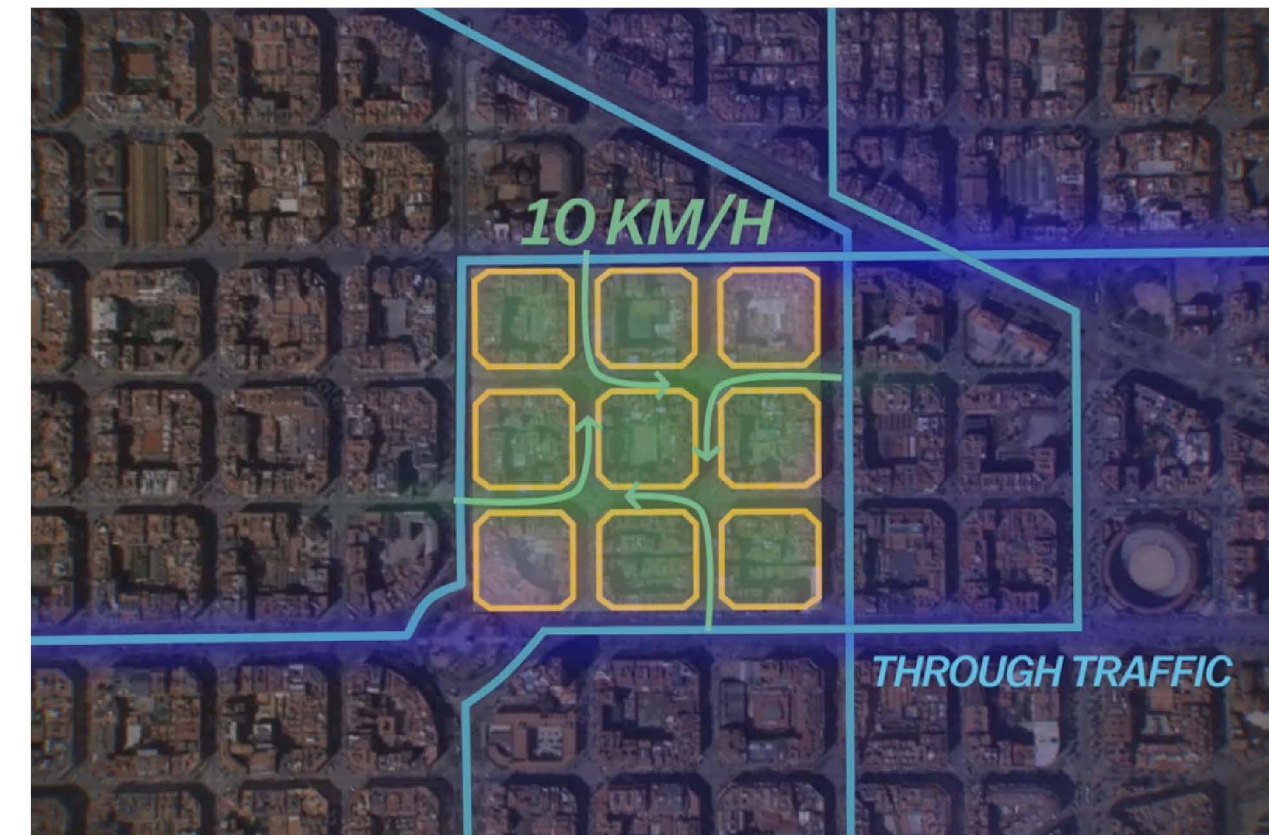
Principles such as block organization, courtyard positioning, and layering were all principles that heavily influenced my designs and helped structure my project.

Yona Friedman has had an influence on my style and designs since I have heard of him in 2019. His "Ville Spatiale" was specifically referenced in this project. The idea of Ville Spatiale put simply is using a structural grid to build above the city, densifying cities and building up rather than out. I took this idea and brought it down to the ground and built in between the buildings rather than above them.

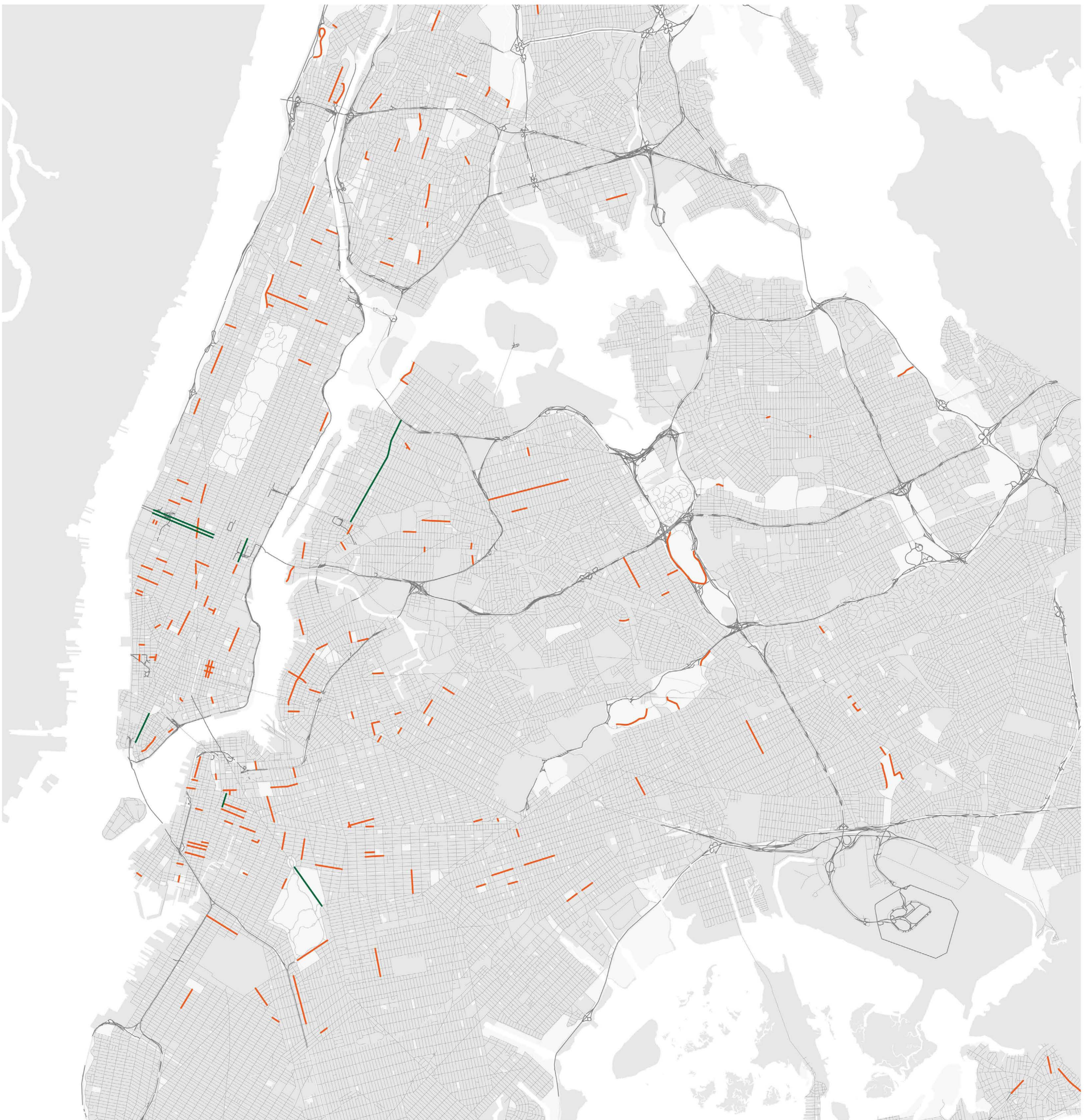


## Yona Friedman Pro Domo

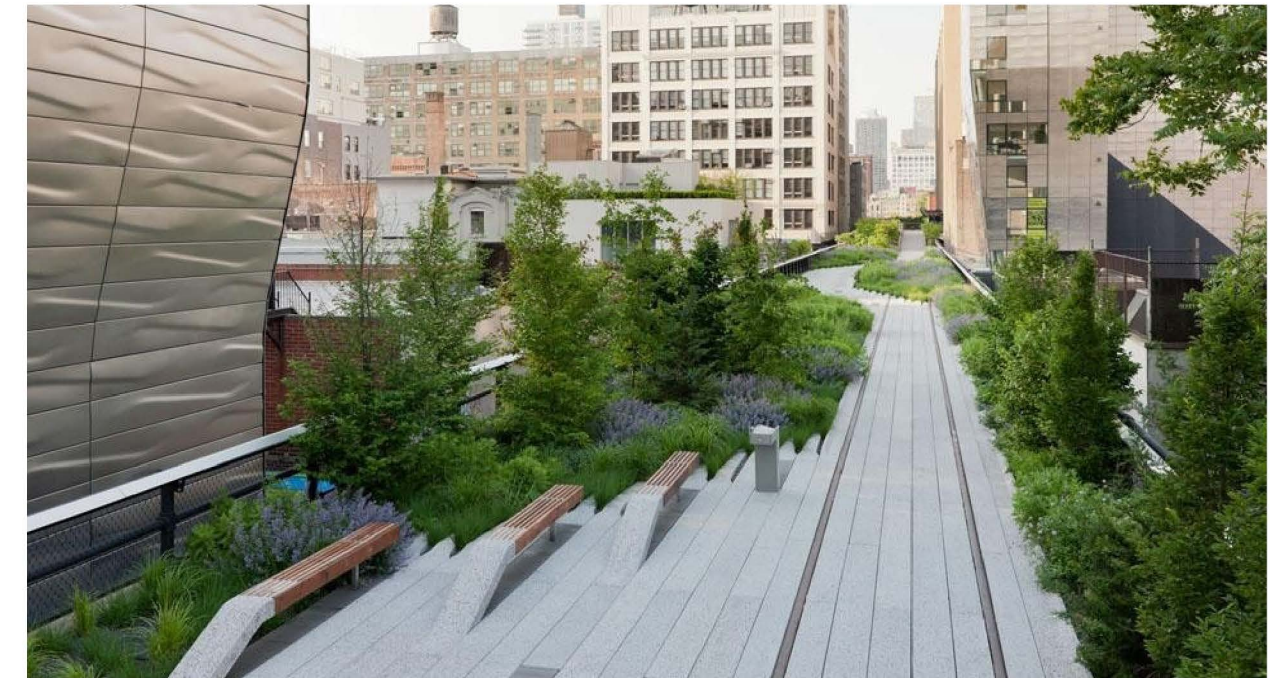
This book is not actually a "book". It is a collection of fragments on scattered topics produced in different periods of my life. Unrelated as they might seem, I selected them according to the sentimental value I attached to them. I feel they are milestones of my preoccupations, but milestones not in chronological order.



**Superblocks** are an idea in Barcelona that create an area within a 400 x 400 meter space (3 blocks x 3 blocks) used mainly for the residents of the area. Cars are still allowed to pass through the area but only at a low speed which encourages the use of the surrounding streets. This creates a safer space inside the Superblock and allows for more public activities outside. Many have created small parks and playgrounds for children to play and report a rise in community relations. My project will look at what parts of this system works best on inhibiting cars without increasing traffic in the surrounding areas. This will also be coupled with enhanced public transportation methods to further reduce traffic in the area.



The Department of Transportation, DOT, started the **Open Streets** campaign that blocks off streets from all traffic except local and allows people to use the space freely, giving the space back to the people. During the program, walking and bicycling increased exponentially with only minimal to no change to traffic in the surrounding traffic that was rerouted to avoid the blocked off streets. The program is not permanent and has specific times that it goes into effect but the community is hoping for more than a temporary fix to the lack of pedestrian support on the streets of New York City. Currently over 67 miles of streets are part of the program with the goal of opening 100 miles of streets.



The **High Line** is an architectural project done in New York City. This adaptive reuse project designed a mile and a half public park from an old railroad track that cut across the city. The high Line sees an average of 8 million people per year and is a massive success that both greatly increased walkability and traffic for the areas connected by the High Line. Benches and theater seating is placed throughout the park creating a variety of gathering spaces and places to view the city. The park also hosts a number of different species of plants help create an interesting walk and adds color and nature to the concrete jungle.

*A world which sees art and engineering as  
divided is not seeing the world as a whole*

- Sir Edmund Happold

# PRECEDENTS





Pappelallee 45 (2021)  
Architect: J. Mayer H.  
Location: Berlin, Germany  
Area: 277,200 ft<sup>2</sup>  
Mixed-Use - Apartments, Retail



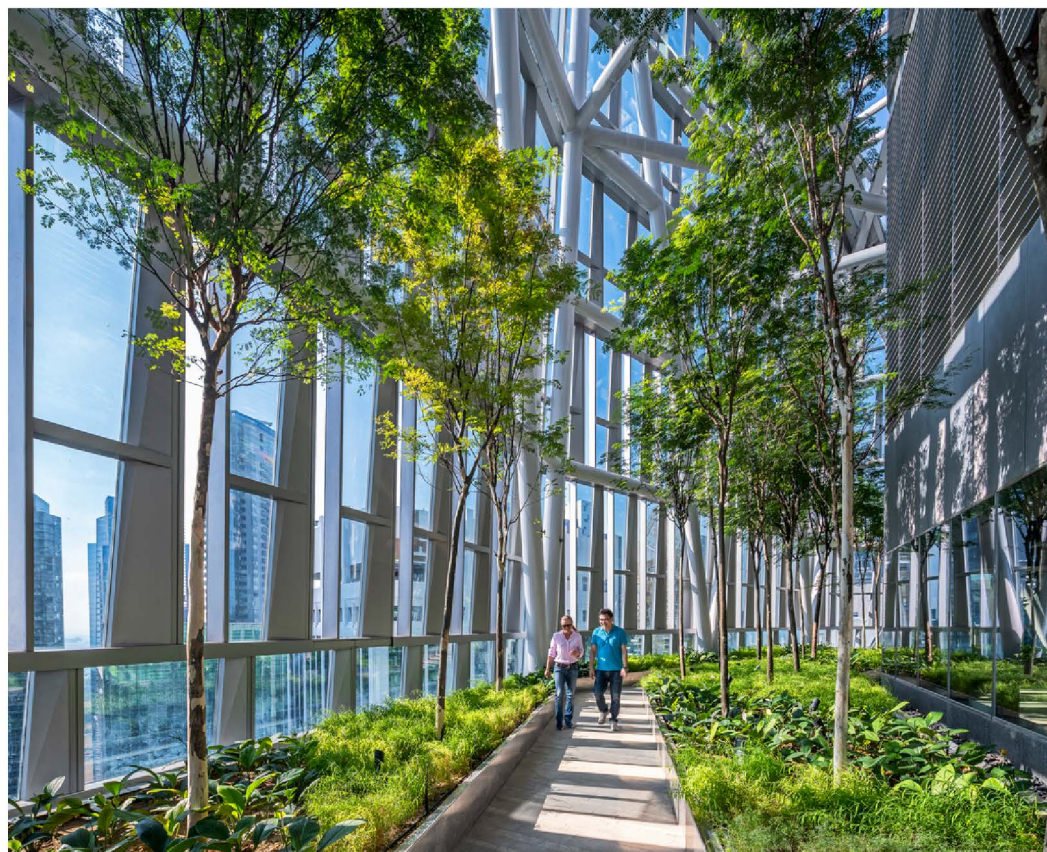
Pappelallee 45 is organized so the lower levels are used for public and the higher floors are more private. The first floor is used for retail and the remaining floors for apartment housing. The addition of roof terraces on the third, fourth, and fifth create green spaces that can be utilized by the residents of the buildings without direct connection to the general public. The design also utilizes open public spaces inside the perimeter of the building to create green spaces that are available for both the residents and the general public. The project breakdown is similar to the program of my project.







18 Robinson (2018)  
Architect: KPF  
Location: Singapore  
Area: 237,600 ft<sup>2</sup>  
Office Building



The 18 Robinson building uses unorthodox design and problem solving to respond to conditions set by both the site and the climate. The hot and humid climate of Singapore can create uncomfortable outdoor conditions which may discourage walking. This project uses trees and the building itself as shading elements, along with green spaces to reduce outdoor temperature. The project also hosts an indoor green space to completely protect its residents from the elements while using large glass panels to keep its connection with the outdoors. The multi-levelled patio space gives different levels of connection and gives a hierarchy to the space.





Sla rot(2021)  
Architect: Riksbyggen and Sweco Architects  
Location: Gothenburg, Sweden  
Area: ~45,000 ft<sup>2</sup>  
Mixed-Use - Apartments, Retail



This 8-floor multi-use building provides a great reference for multi-use design. The first floor is used for retail while the upper floors are all used for residential. Green spaces are placed behind the building and on the roof. The green spaces behind the building are used for both residents and the general public and give the public more circulation through the blocks, while the spaces on the roof are primarily utilized by the residents of the building. The design also hosts modular housing for one, two, three, or four bedroom apartments which both saves on space and cost.

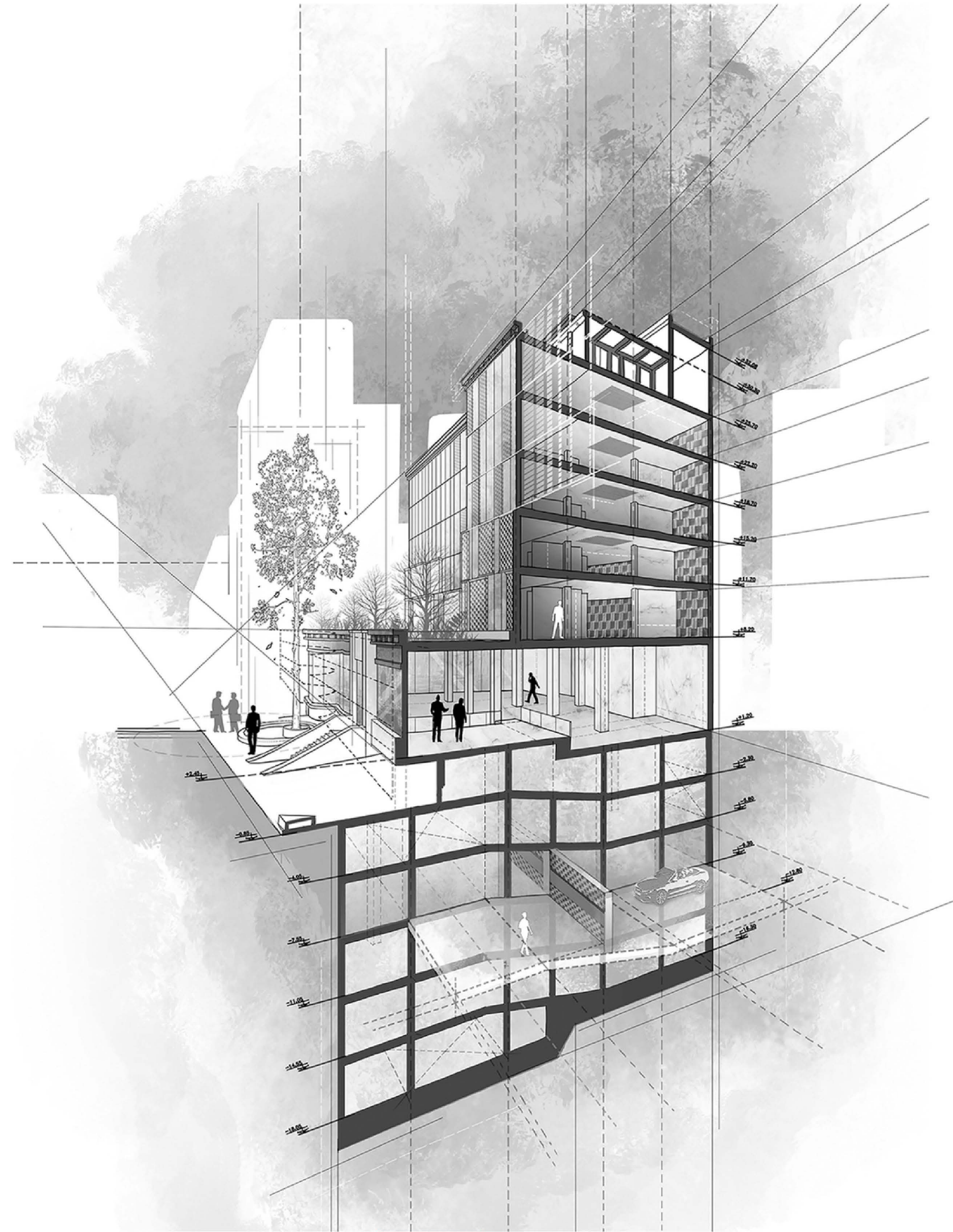




Bricks on the Move  
Architect: Ákaran Architects  
Location: Tehran, Iran  
Area: 112,000 ft<sup>2</sup>  
Apartments



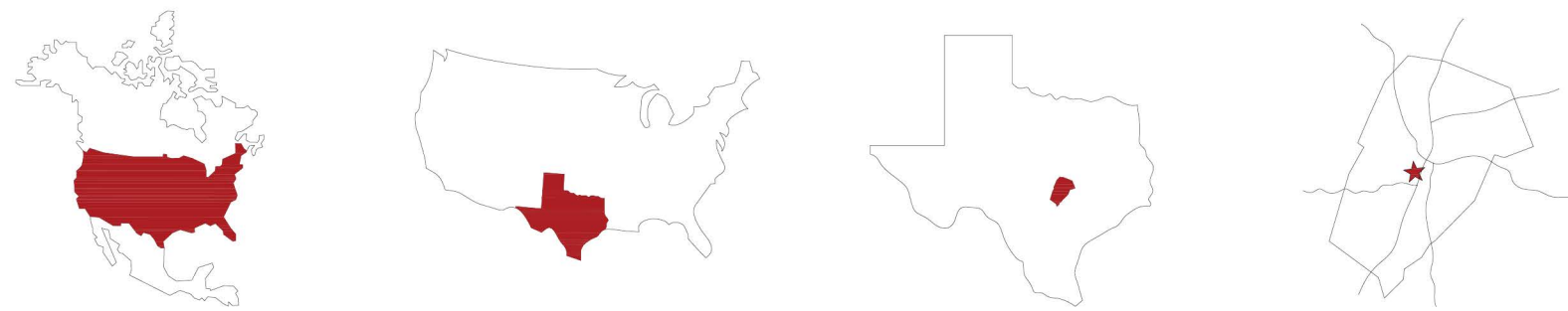
The project give an excellent example of how brick and glass can compliment each other. The glass gives an open feel and lets in plenty of light for the corridors while the brick is used to create a little more privacy but can also be designed in a way that will still let some light in with small opening in the brick construction. The idea of brick wall sections on rollers to give the building shifting walls that can create different spaces and control light is a great exploration in how these two materials can interact with each other.



*Everywhere is within walking distance if you  
have the time*

- Steven Wright

**SITE & CONTEXT**



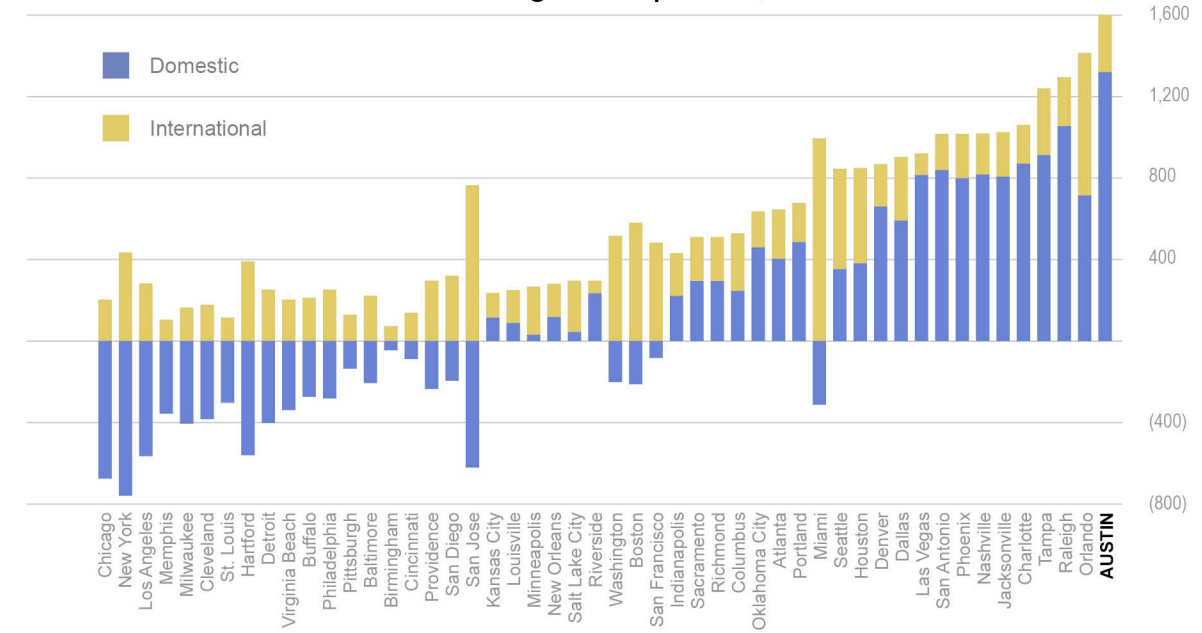
I knew I wanted my project to stay in the United States. I am most familiar with the practice here and want to bring aspects of other countries into the United States.

Within the United States, I chose Texas. Again, I am most familiar with Texas and have noticed issues in the architecture and urban design in many of the places I have lived which inspired this project. Finding a city in Texas required research to find the best place to execute my ideas.

I chose Austin, Texas for a few reasons. Austin is an incredibly fast growing city, one of the fastest growing cities in the country. The city already experiences all the issues mentioned earlier, that paired with its rapid growth means the issues will only continue to build. Creating a solution in this city will benefit the citizens of Austin and create a precedent for other cities to follow if needed.

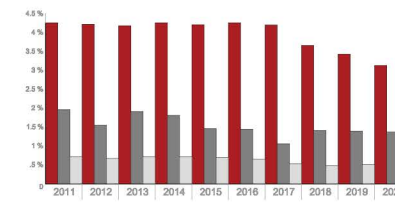
This area within Austin is close enough to the center of the city to fully utilize my solutions. Being within the city center means distance will not be an issue when incorporating the surrounding area into the designs. This also gives the opportunity to create any uses needed within the city, onto the site. The area has been developed enough to have the issues mentioned but is also still developing enough so the design solutions can be enacted effectively without it feeling out of place or forced.

Net Migration per 10,000

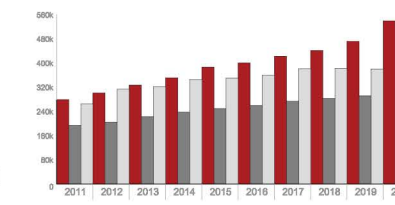


The large influx of international immigration will not only increase populations, but also impact the lifestyles and culture of the area. The adaptability of the project will be able to integrate many different lifestyles and cultures.

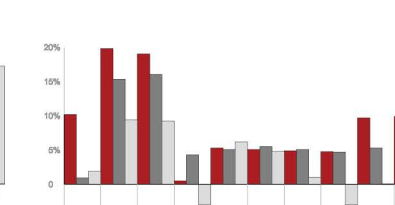
Population Change



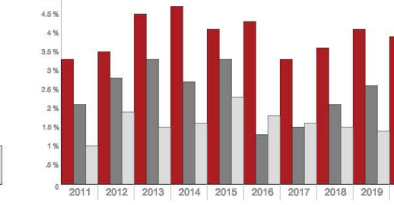
Housing Prices



Housing Sales



Jobs



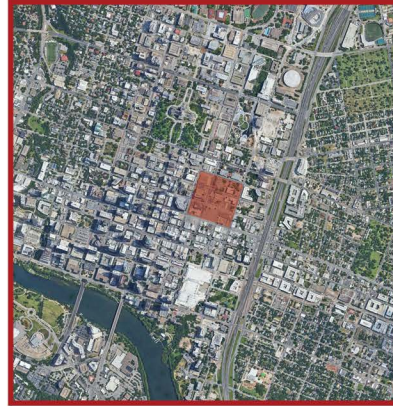
■ Austin  
■ Texas  
■ United States

Due to Austin's immense population growth, the housing prices are rising at a greater rate than the rest of the state. The housing market cannot

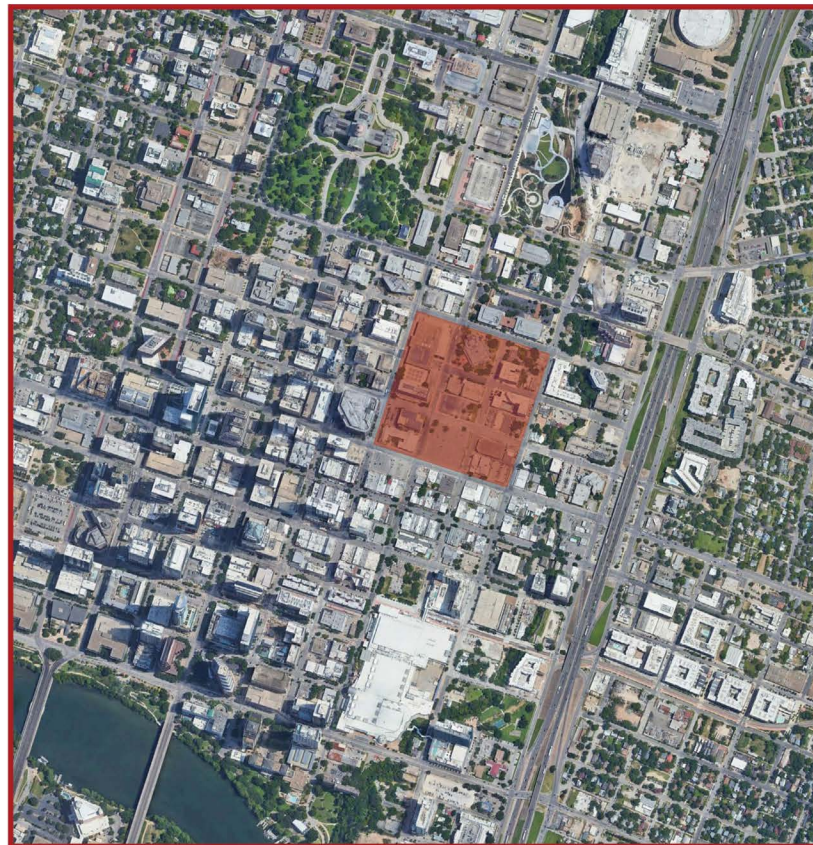
keep up with the influx of residents to the city. This makes the houses within the city less and less affordable for the average resident. Jobs are also

increasing in the city but also struggles to keep up with the large population growth, creating an ever increasing unemployment rate. Both of these issues

can be solved by densifying the city using methods seen in Soft City and the works of Yona Friedman.



The site is located between the capital building, I-35, and the Colorado River. The central downtown location guarantees heavy use when designed for people rather than automobiles.



The streets that contain the site are E 7<sup>th</sup> Street to E 10<sup>th</sup> Street and San Jacinto Boulevard to Red River Street for a total of 9 blocks. The site includes large parking lots are parking garages that can built upon.

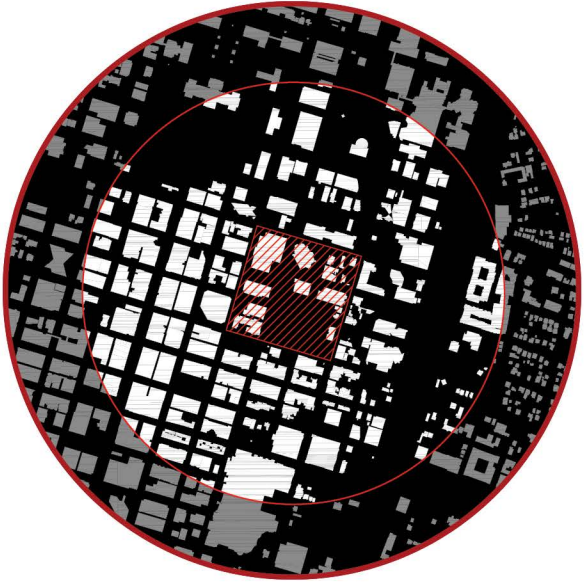


The 9 blocks that form the site are 1020' x 1020' for a total area of slightly over 1 million ft<sup>2</sup>. All of the pre-existing buildings will remain (other than the parking garages). The site has a variety of uses within it, government, office, religious, retail, and others.

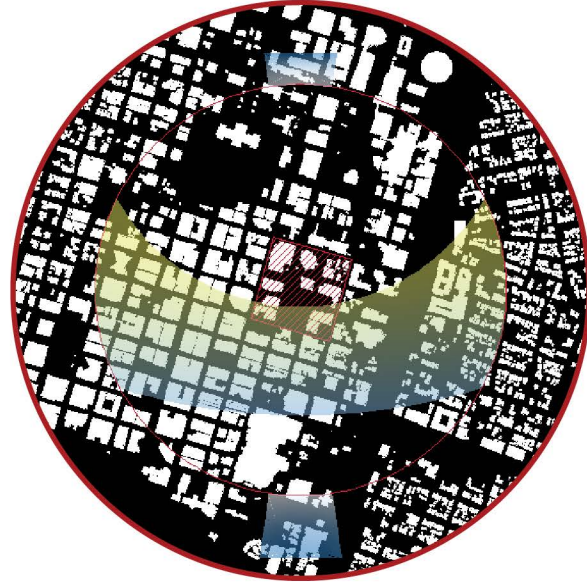


The 5-Minute Walk demonstrates a quarter mile radius. This is considered the distance one can cover in five minutes while walking. This is an estimated that can vary based on the surroundings but is a helpful representation of what is within a comfortable distance. This information is important when deciding the types of uses to best support the residential aspects of the project.

5-Minute Walk



Wind/Sun Map



Sun is always an important aspect when it comes to design. It dictactes window/openings placement for natural lighting and shading elements to protect from the hot sun. The sun in Austin, Texas comes primarily from the south and high during the summer. The winds come mainly from the south with the remaining winds coming from the north allowing for cross ventilation and natural cooling during the summer months.

Bus/Bike Paths

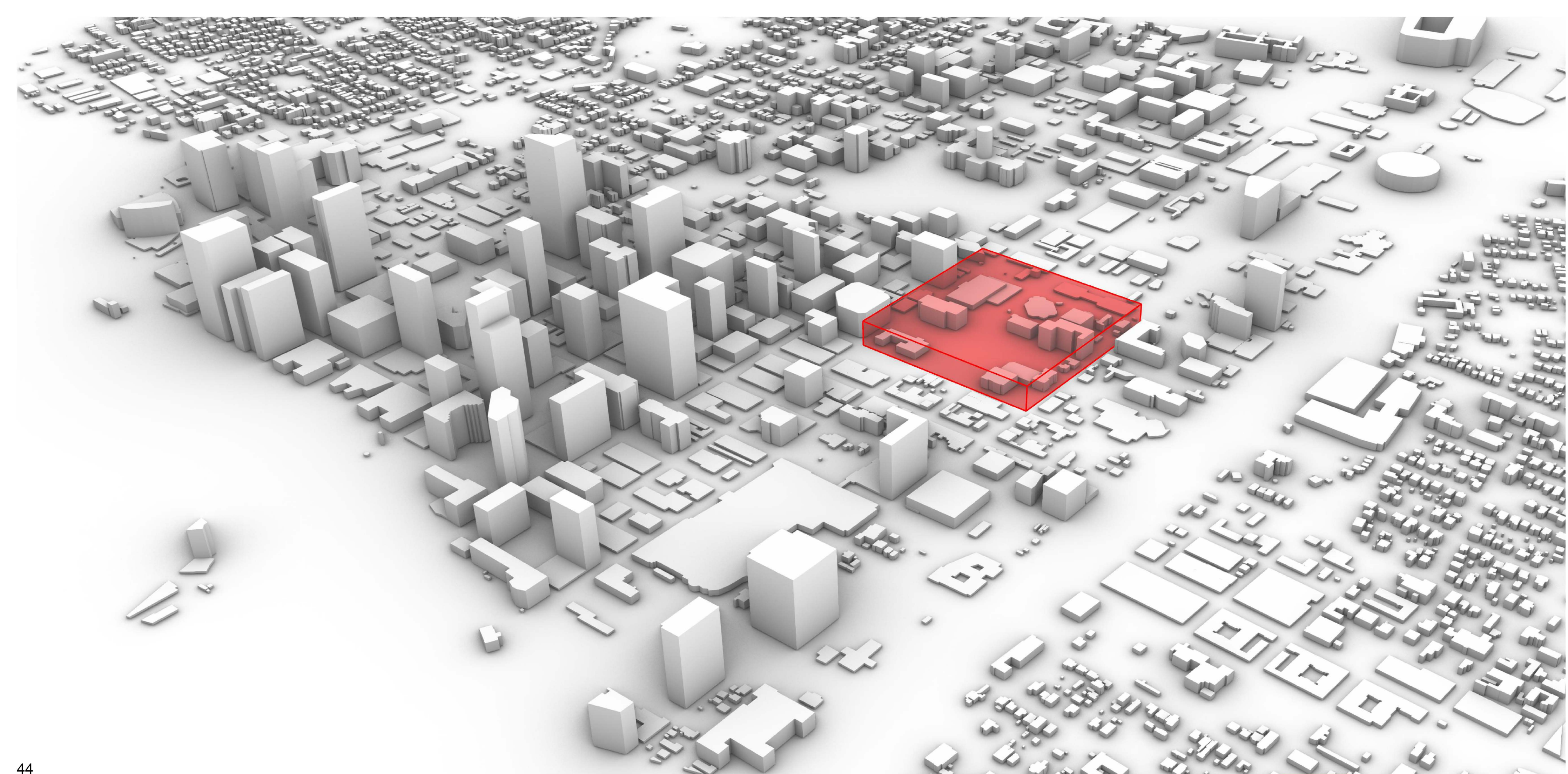


Biking and using public transportation are other forms of transportation that follow the theme of fighting car dependency. The location these forms of transportation are important when organizing the project. They can effect the location of heavily residential areas or major parks and circulation elements.

Green Spaces



Green spaces are important community spaces and help with circulation, cooling the surrounding area, and boost mental health. This map identifies where green spaces are more likely needed and potential routes residents will take.

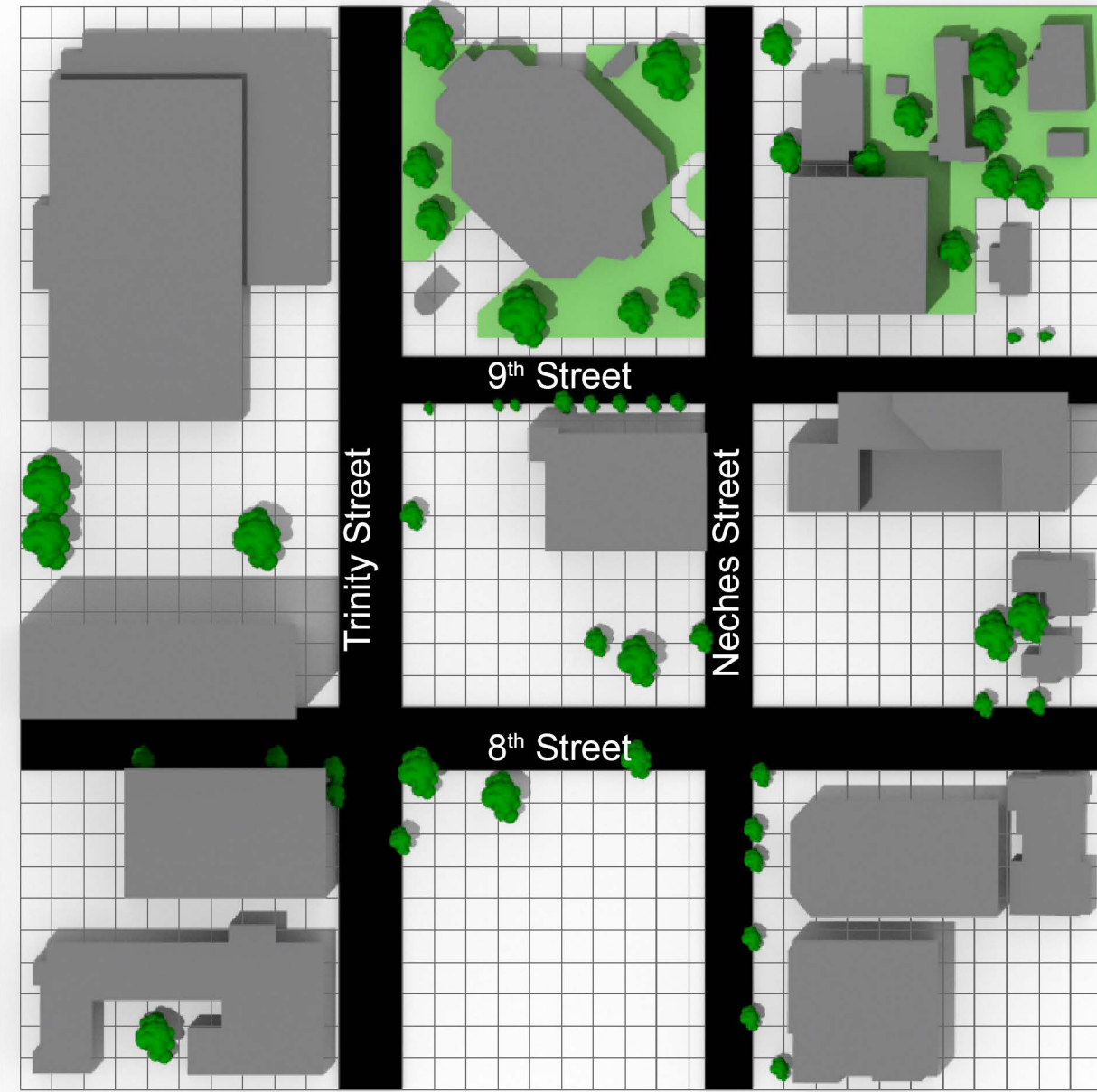




*All truly great thoughts are conceived by walking*

- Friedrich Nietzsche

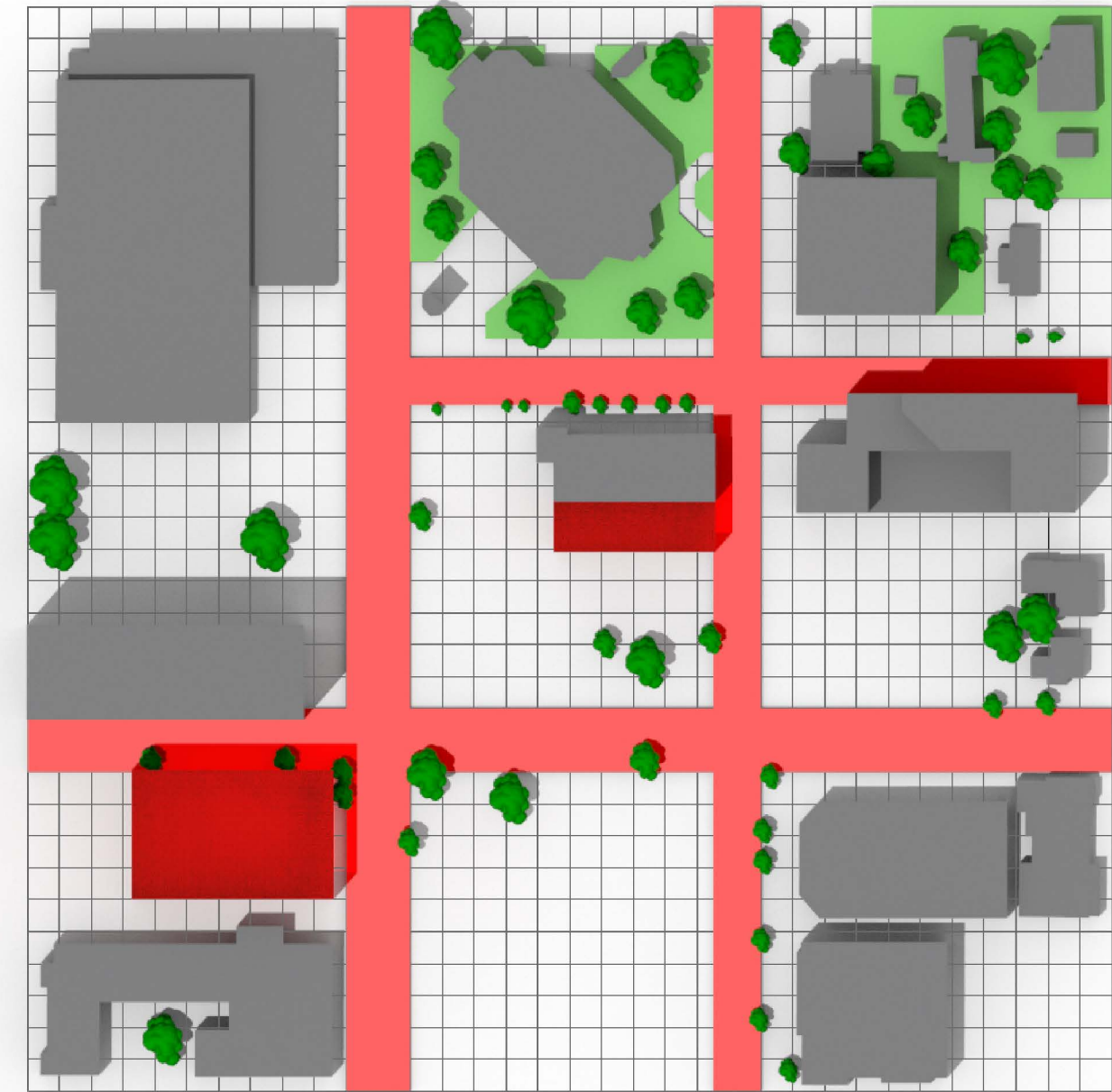
**RESPONSE**



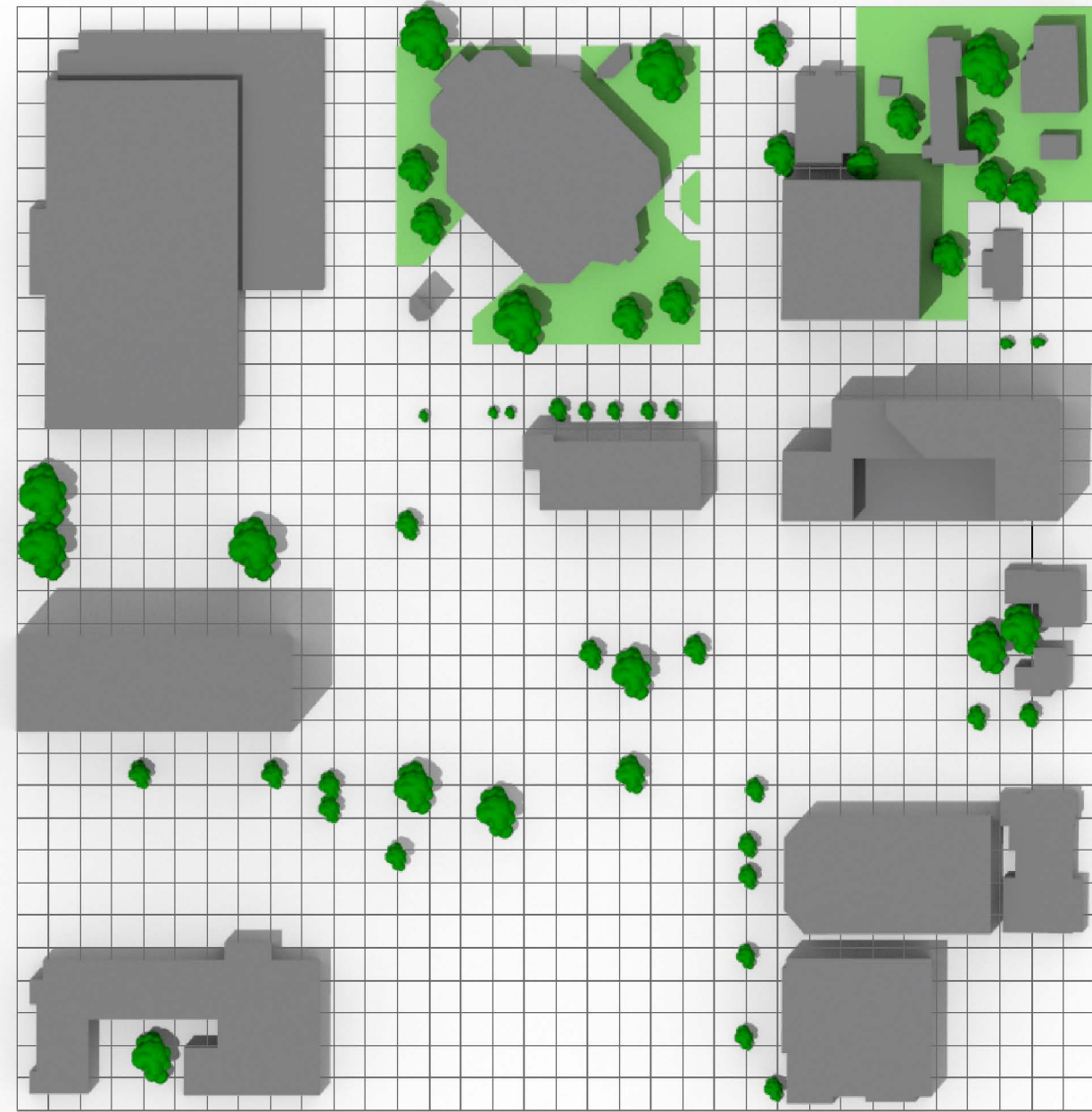
The image shown is the unaltered plan view of the site over the 30' x 30' grid. More than half the space is either used for parking/driving or not utilized at all. Outside of peak driving hours, these roads see very little traffic, Trinity Street only sees 675 cars a day and Neches Street only sees 134 cars a day. The horizontal streets, 8<sup>th</sup> Street (lower) and 9<sup>th</sup> Street (upper) see more traffic at around 1,000 - 2,000 cars a day but this is much less compared to the 4,000 - 6,000 the other streets see. While Austin is known for its bad traffic, these streets are not essential for traffic and could be better utilized for residents.

Existing Site

The roads within the site take up too much space and are unnecessary to the goals of this project. All parking in this project will be placed under the ground level for underground parking. Many would see taking out streets in downtown Austin as detrimental to the city's already problematic traffic issues. As noted before, the streets that are being removed are low traffic compared to the surrounding streets. The Open Streets program also proved that blocking commonly used streets will have little to no impact on the surrounding traffic, and Barcelona has been enacting similar restrictions with Superblocks. Creating more living and work within the city will also reduce the total number of automobiles on the road. Losing these streets and parking garages will have little to no impact on the surrounding area and improve traffic conditions in the long run.



Demolition



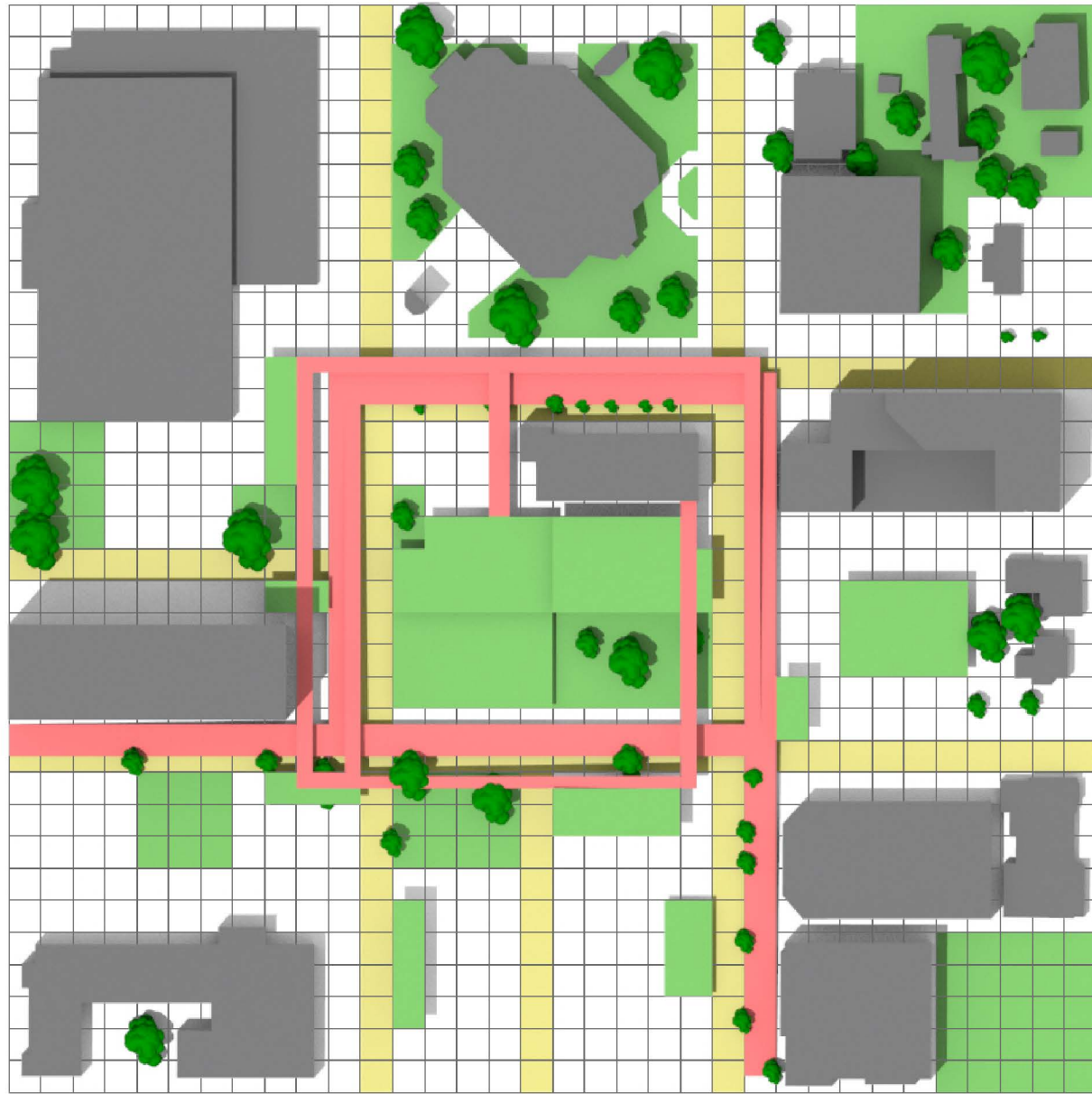
After demolishing all the unnecessary elements in the site, the following remains. With the new spaces I have created by removing the automobile, I can begin to design for a more walkable integrated community.

Working Site

Ground paths that are level with the surrounding area replaced the streets. Courtyards were then added to use as focal points for each block and to control the massing. The courtyards used the existing trees and placed so each block has access to green space. A main courtyard is placed in the central block taking up almost the entire area with varying levels. This courtyard organizes the whole project and is used as a multi-leveled connection from each end of the project to every other end. Many courtyards are placed above the ground level to give multiple levels of access. They are connected both horizontally and vertically.



Ground Paths/Courtyards



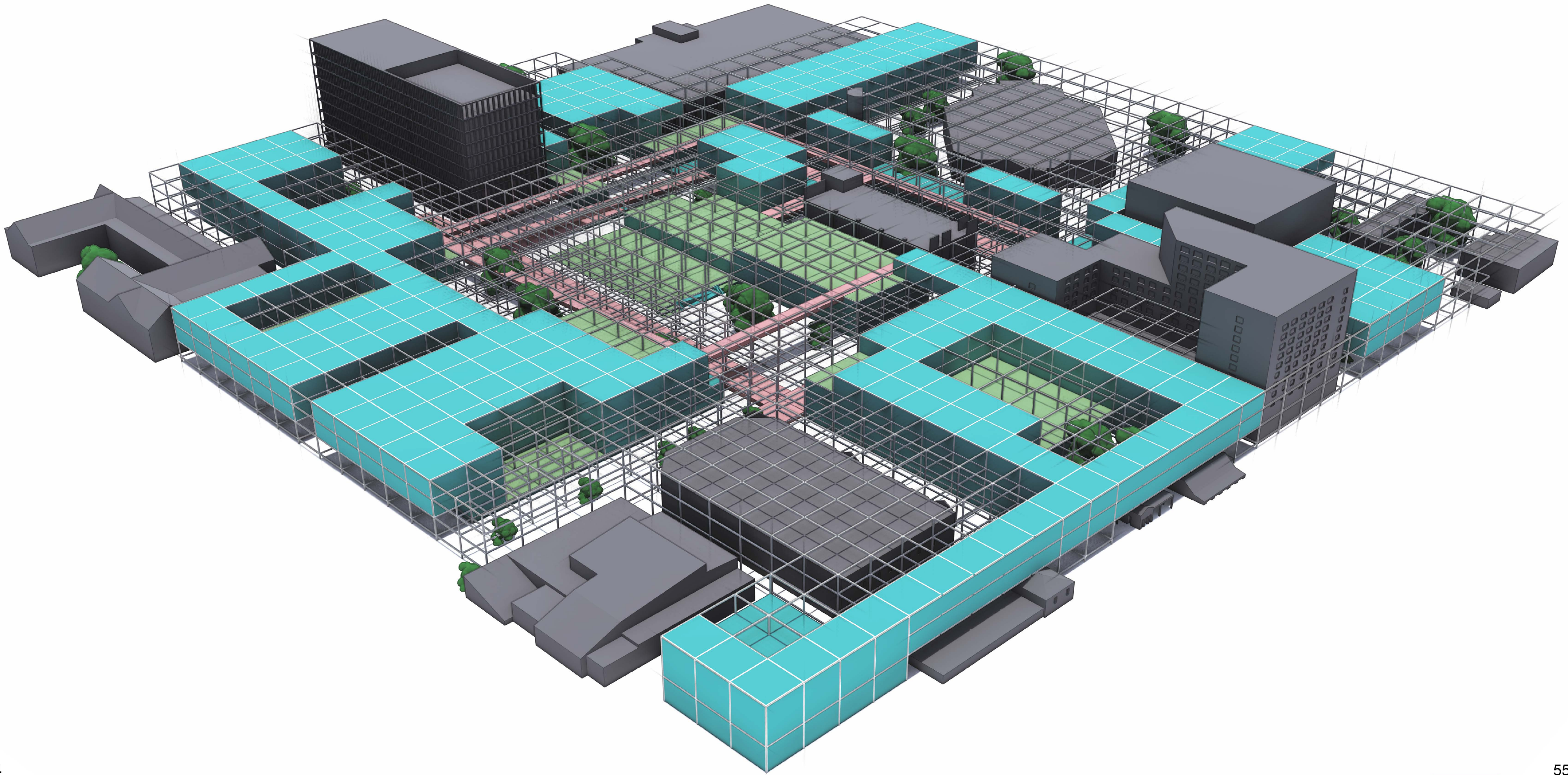
Vertical paths were placed to create a vertical connection throughout the project. These paths are organized around the central courtyard and connects to all 4 levels of the project. The paths will also be used to connect different parts of the project together from a variety of levels creating easy circulation from every location. The paths will be usable for both pedestrians and cyclists. The maximum slope is 1:25, an easy slope for both walking and bicycling. The paths also joins to the pre-existing buildings, adding a new level of connection to these buildings.

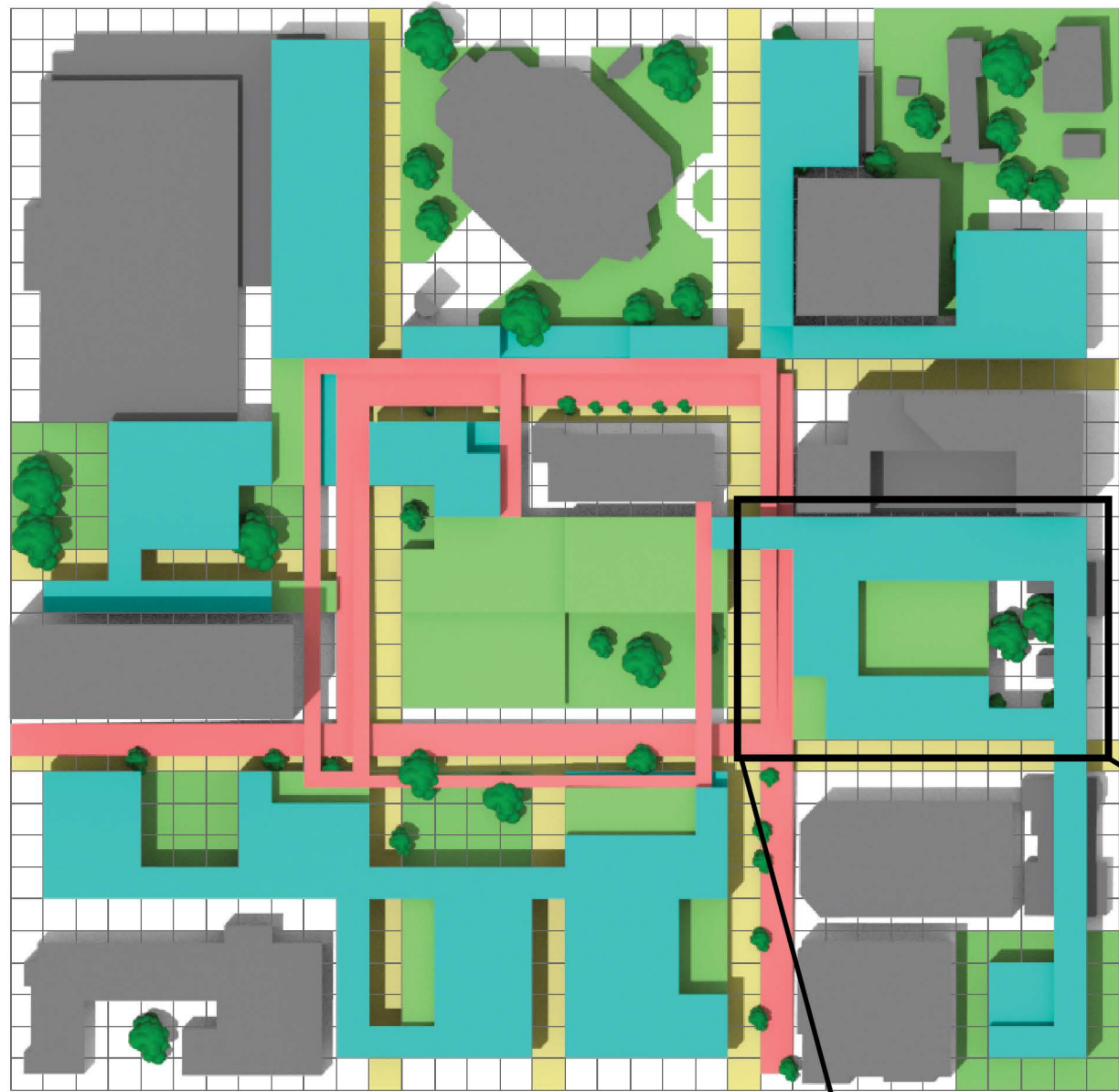
Vertical Paths

The final mass fell into place once all the other elements were established. Following Austin city regulation I set back my project from the remaining streets on the edge of the site. To follow the grid I increased the setback to 30'. The mass on each block connects to the vertical paths in at least two places with the exception of the secluded block in the bottom right. The mass shown is one of many possibilities and would change when uses and relationships with other buildings become more specific.

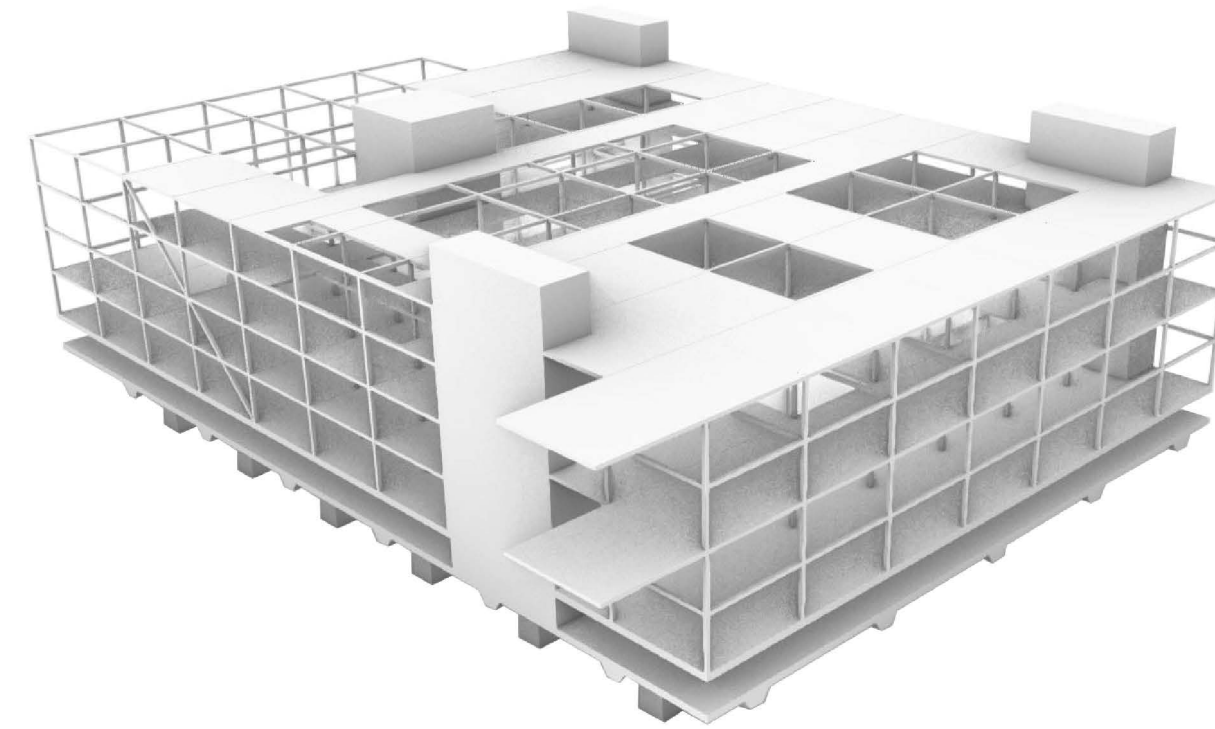
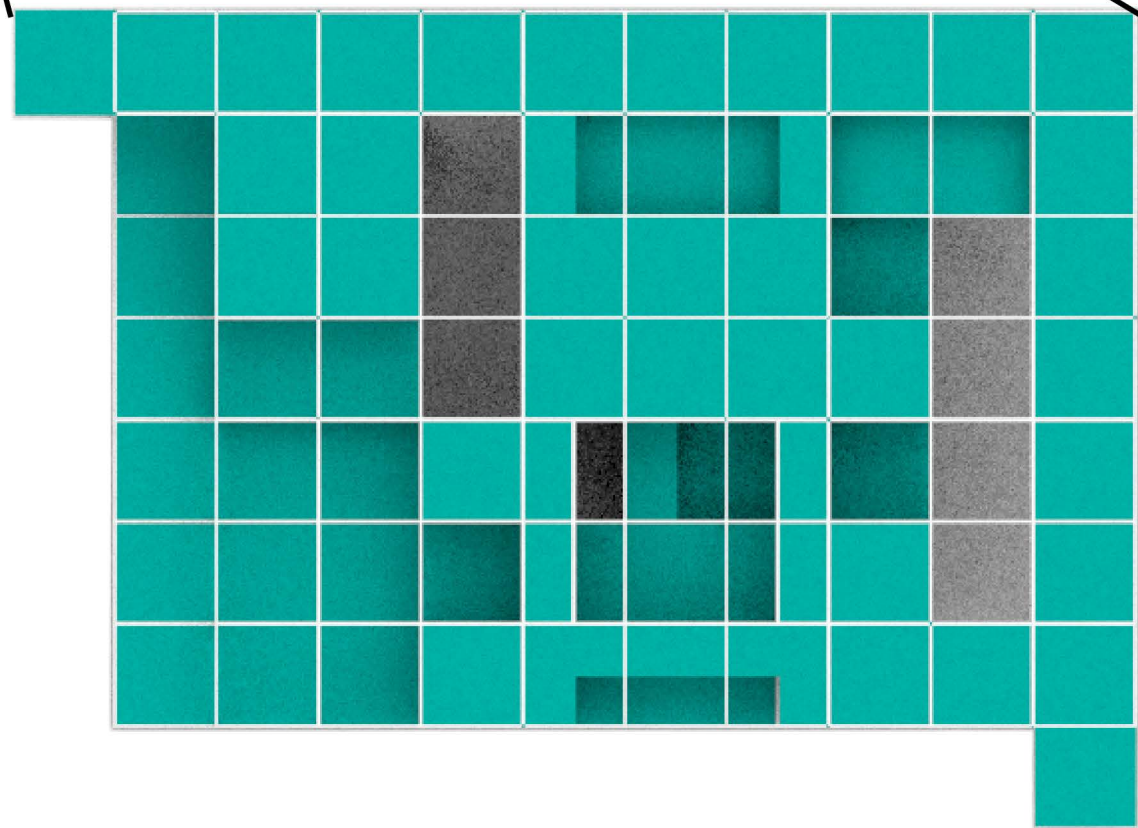


Final Mass

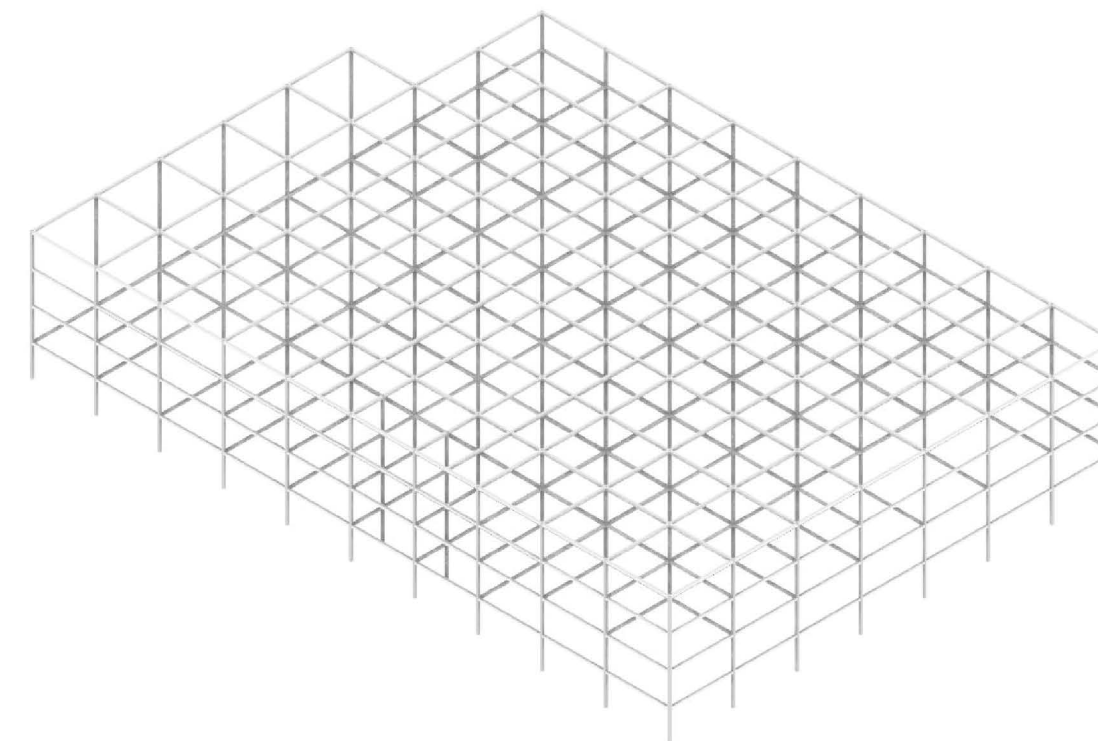




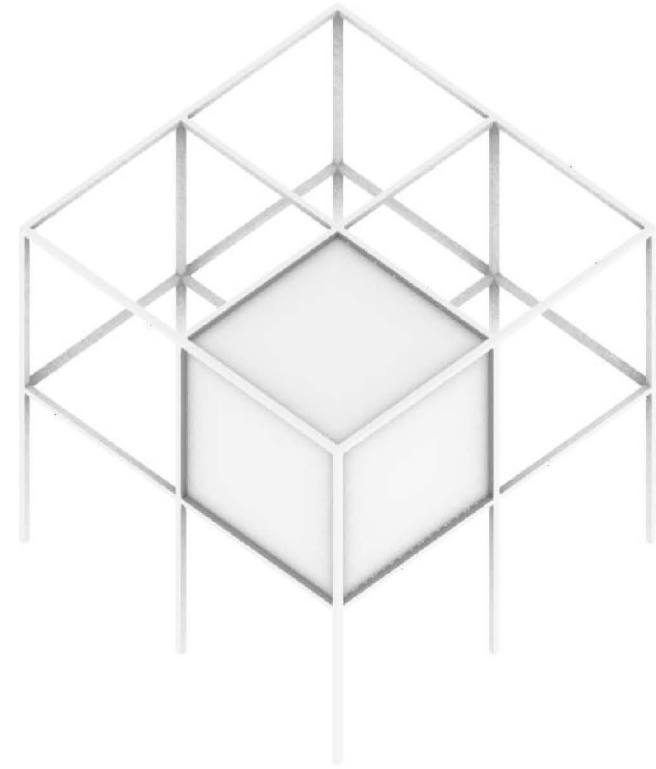
Due to the size and timeline of the project, only a single block was fully designed and detailed. The block was chosen because of the connections it has with the main courtyard, vertical paths, and isolated block, along with the opportunity to demonstrate how the project interacts with pre-existing buildings.



The steel structure is weak to torsion and lateral loads. Shear walls around the cores and support from the concrete slabs counter much of the loads but a bracing element is needed on the southwestern side of the structure.

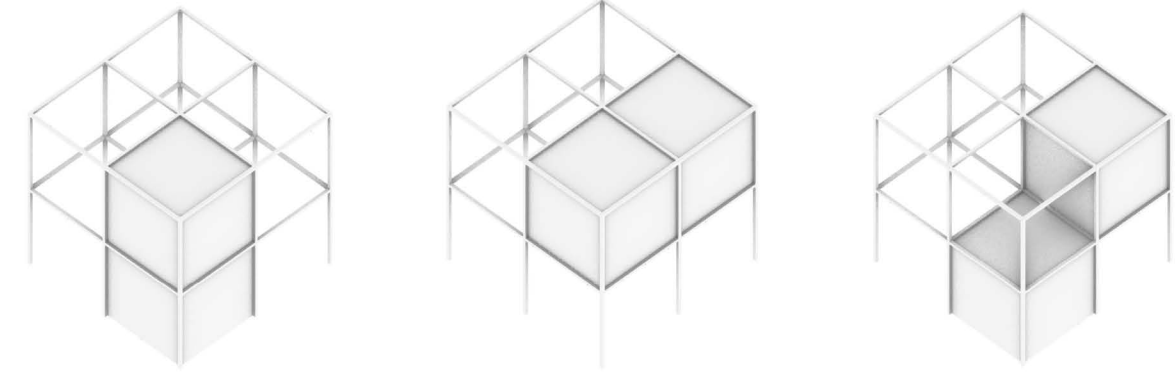


To the left is a visual representation of the structural grid for the section of the project. Extra columns are placed around major circulation elements for the additional support needed. Here the span is 15' rather than 30'.

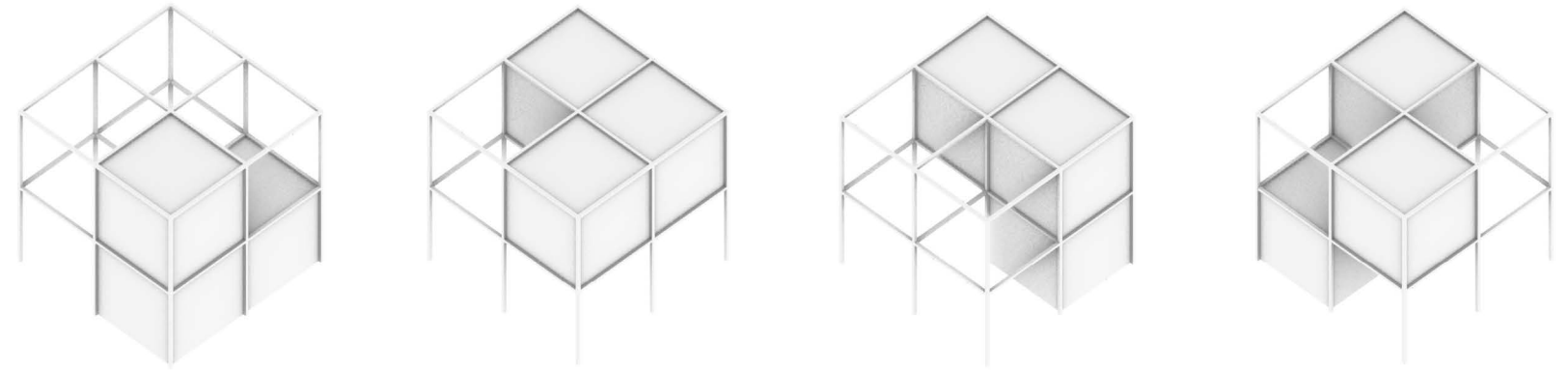


One of the greatest assest of this project is its adaptability. A structural grid of 30' x 30' x 15' is used to form the mass. This grid creates cells that can be used to create any type of space needed. The space a cell occupes will be enclosed spaces that will protect from the elements and can be used for any number of needs. The cells can also create interesting negative spaces with varying amounts of importance and atmosphere. The structural grid is also an element that can control space and create soft barriers when solid walls are unnecessary or unwanted. The images to the right show a few different possibilities the grid offers with very little space used.

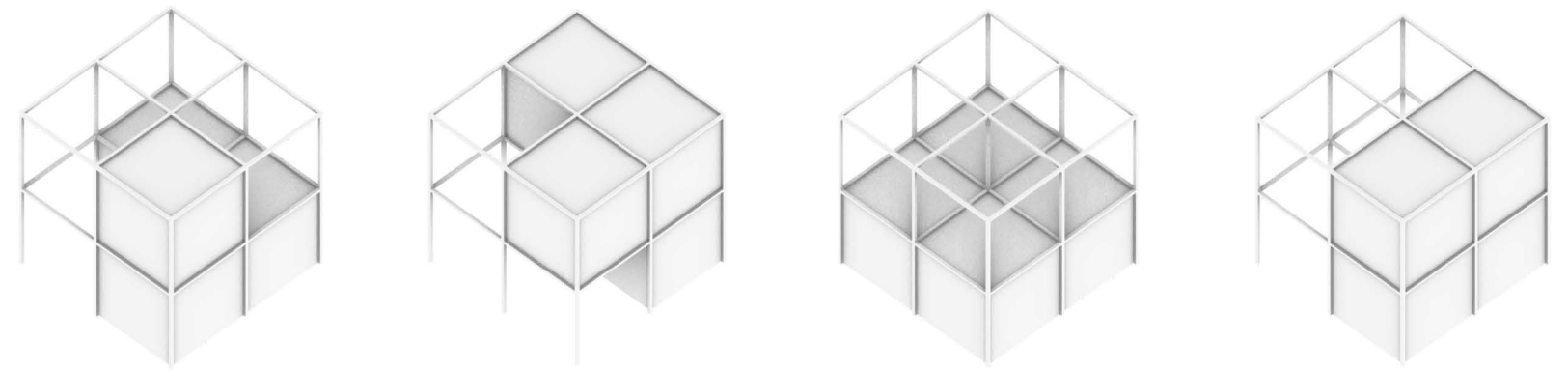
Two Cells

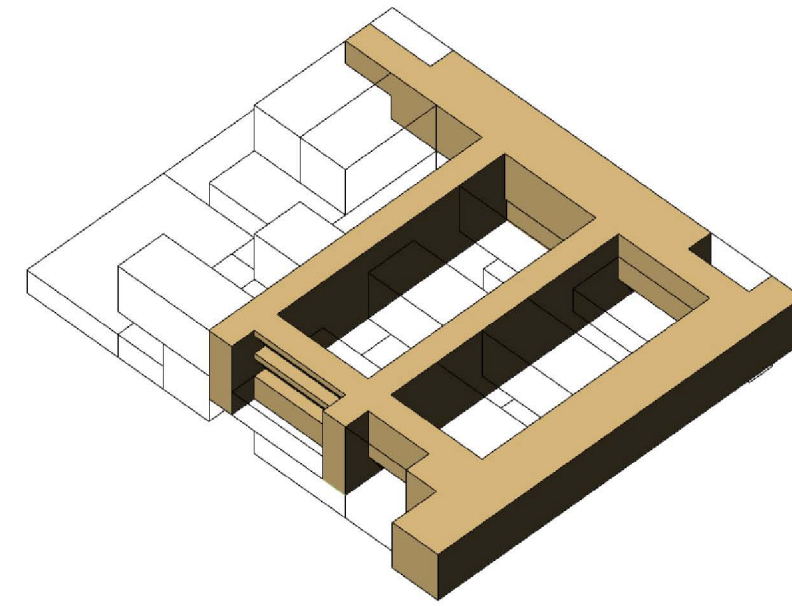
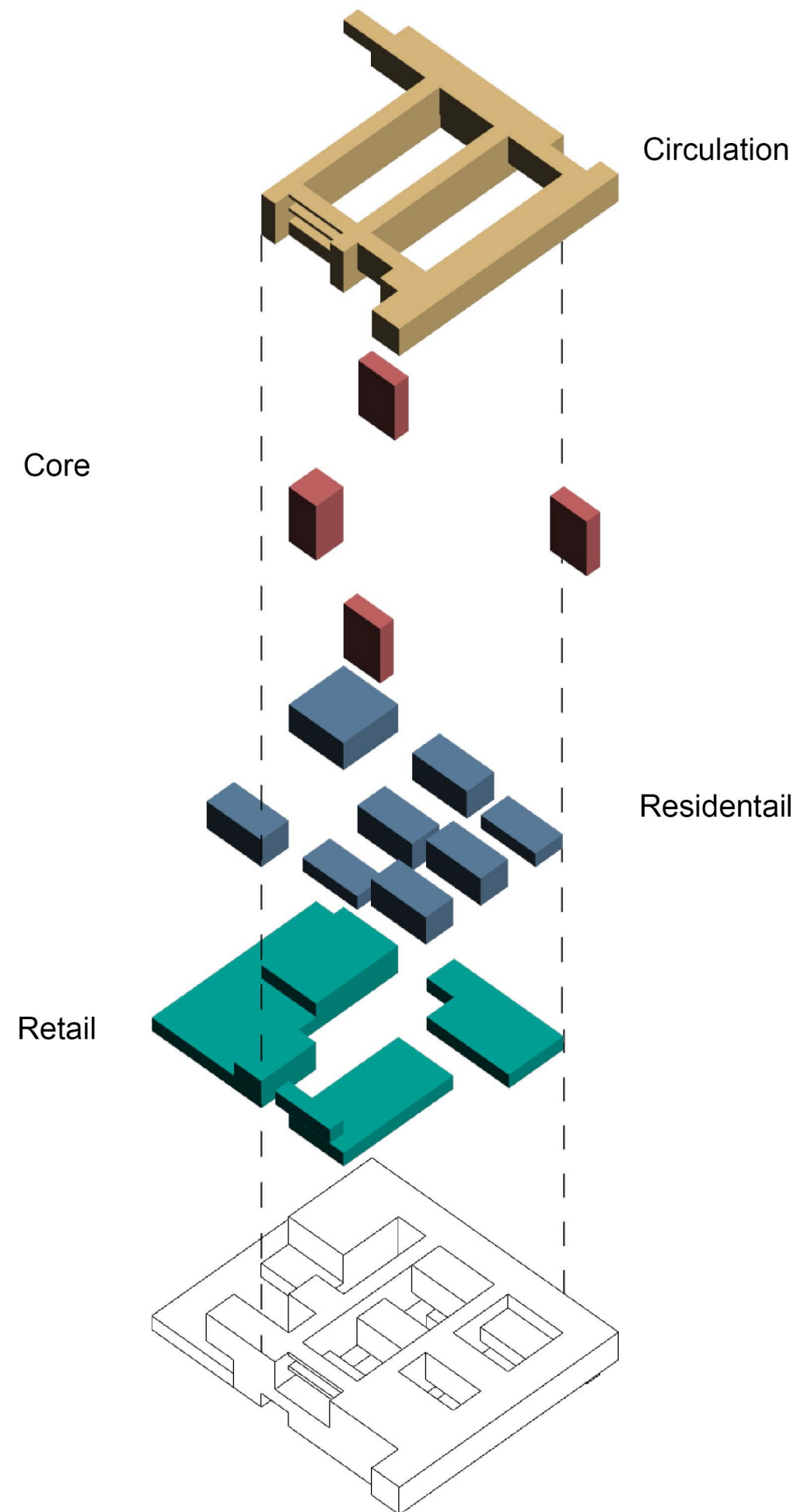


Three Cells



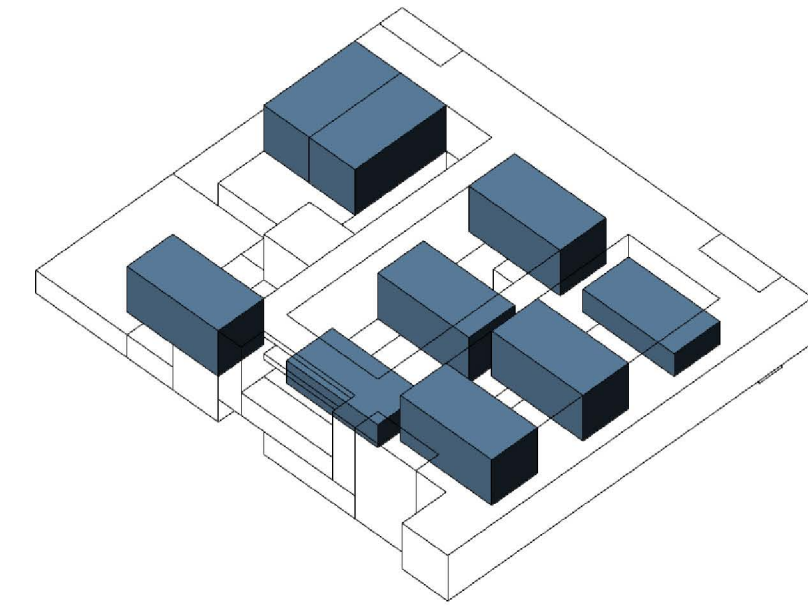
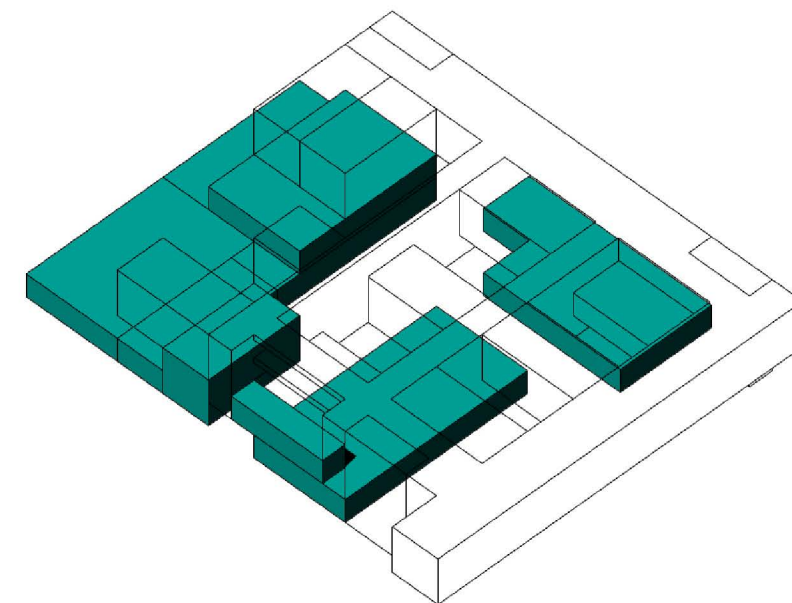
Four Cells





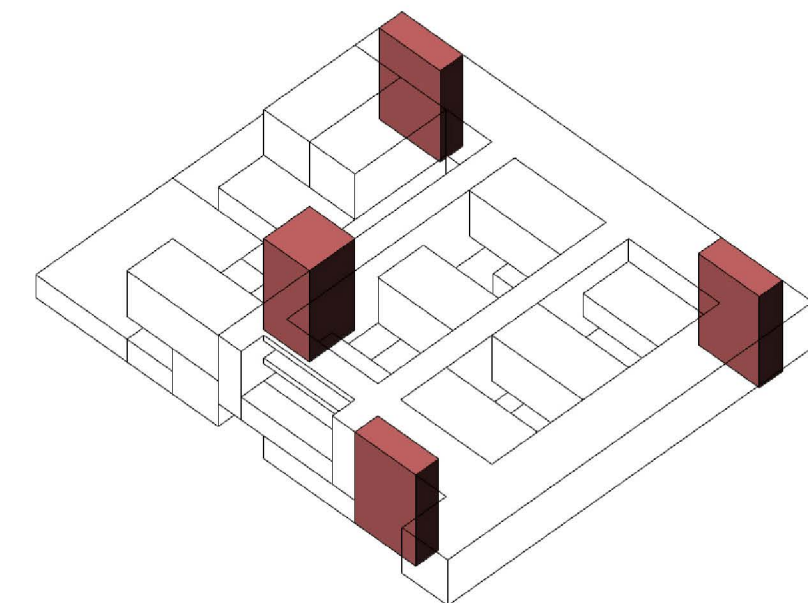
The circulation here is used for more than only movement, such as leisure. The space is also large enough to add greenery inside the building and use the circulation space on the roof effectively.

The retail spaces are focused on the first two floors, making these floors more public. This also gives more importance to the connection between it and the vertical circulation.

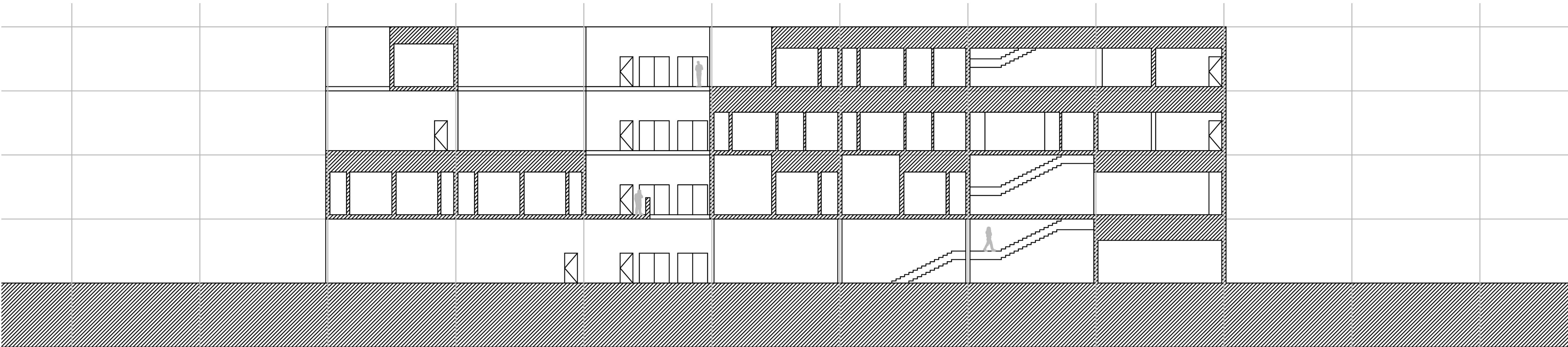


The residential units are mainly on the third and fourth floors to give more privacy. Each unit is placed to give maximum natural lighting and potential cross ventilation. Each unit also has two access points for circulation and egress.

One core is located in each quadrant of the building and placed at major connecting points to improve egress and help support the building from lateral loads.



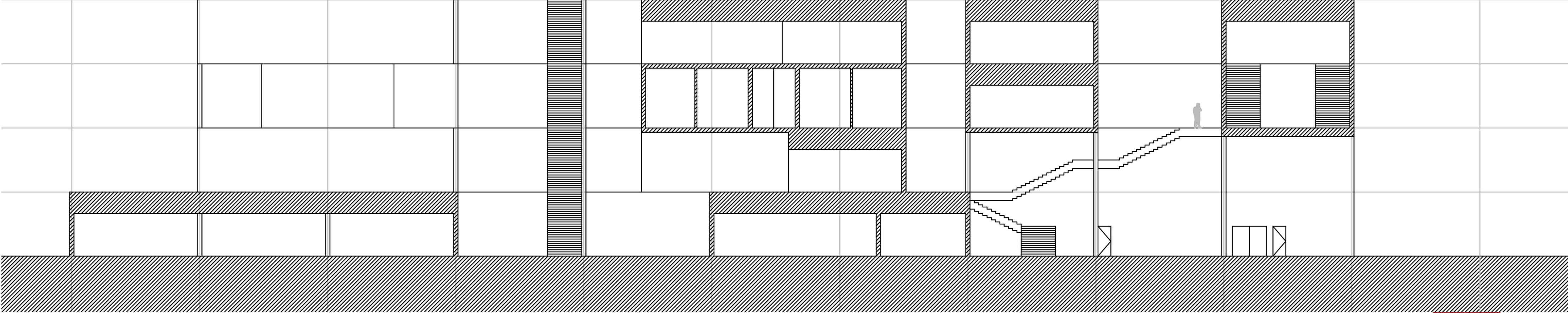


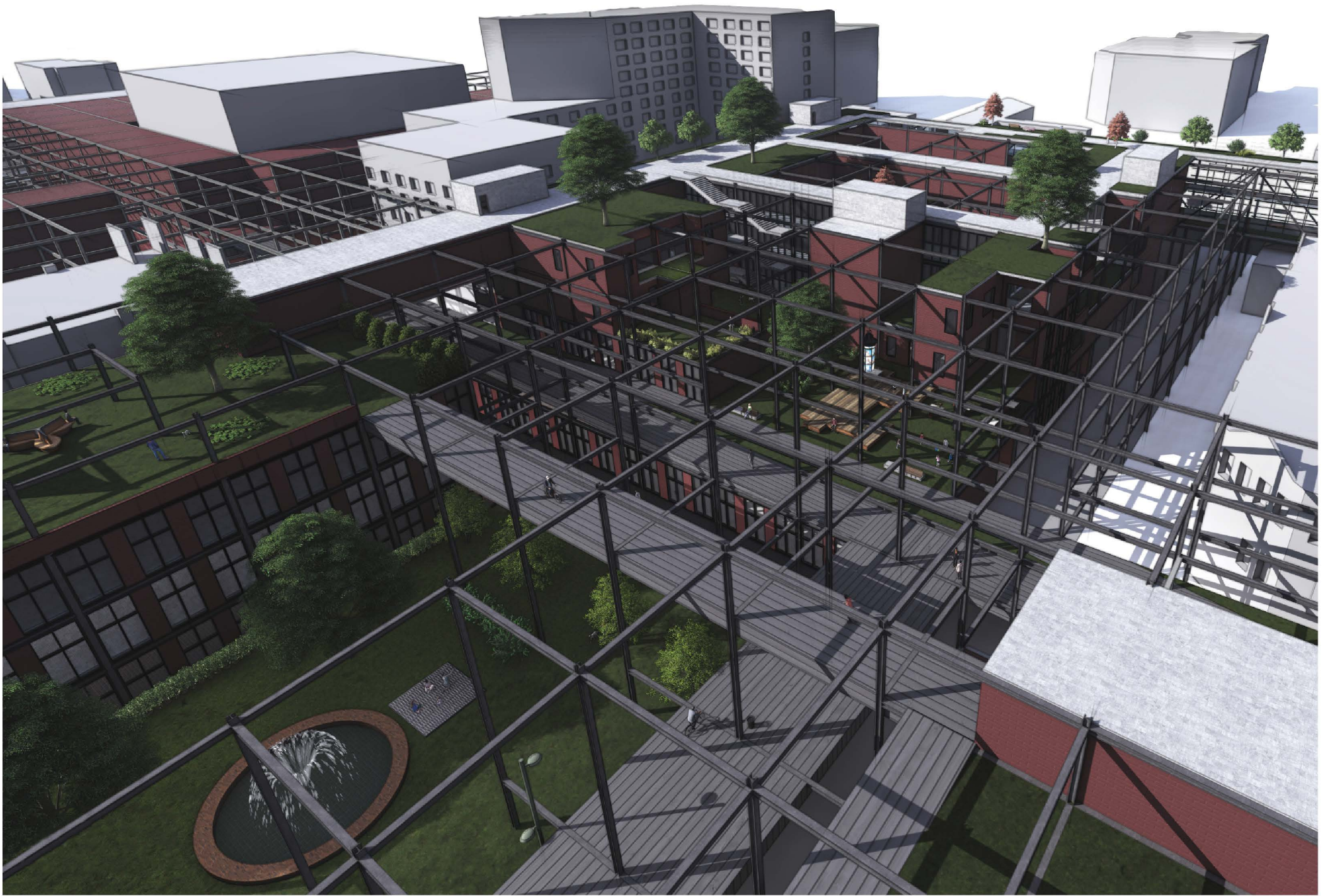


Section A



Section B

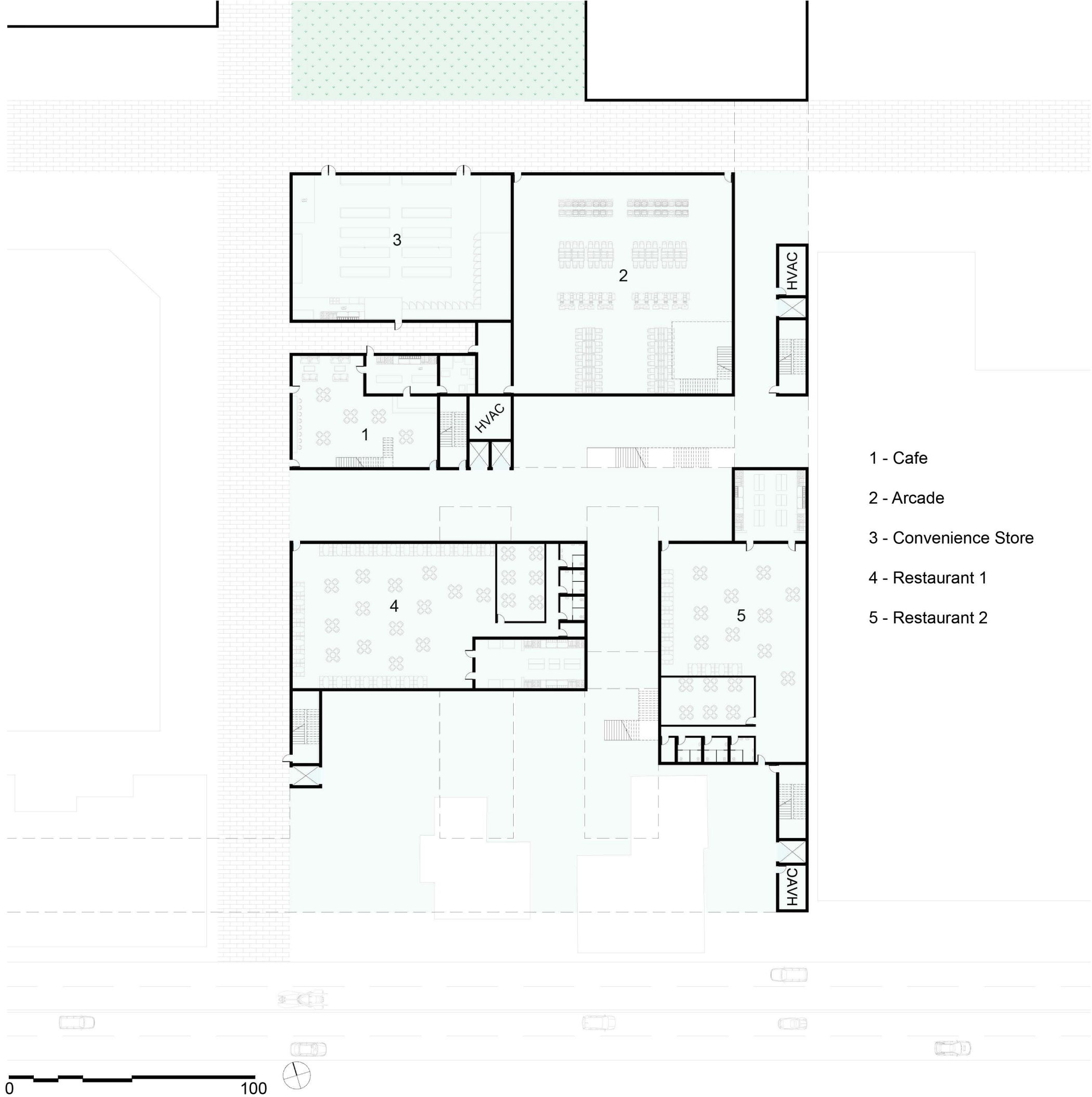




The first floor of the block is completely public. It consists of two restaurants, a convenience store, an arcade, and a cafe. There is direct access to two of the main streets and sites next to the central courtyard.

The area is mostly covered with light wells offering natural lighting to keep the area well illuminated.

Floor 1

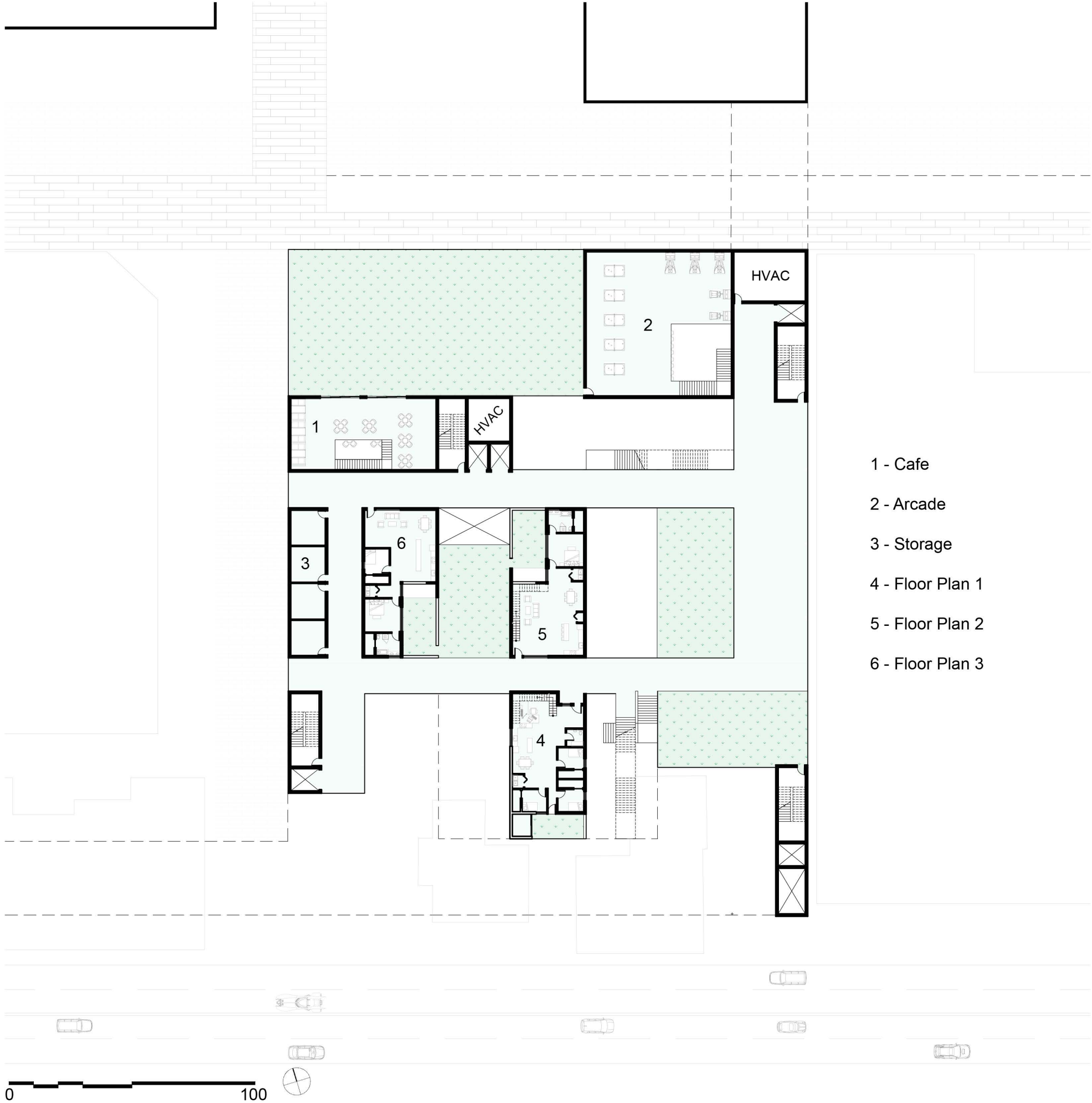
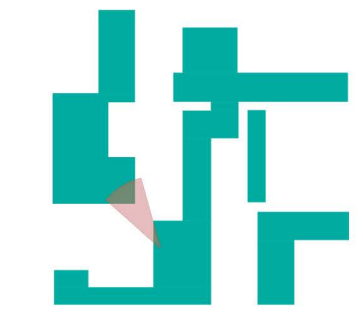




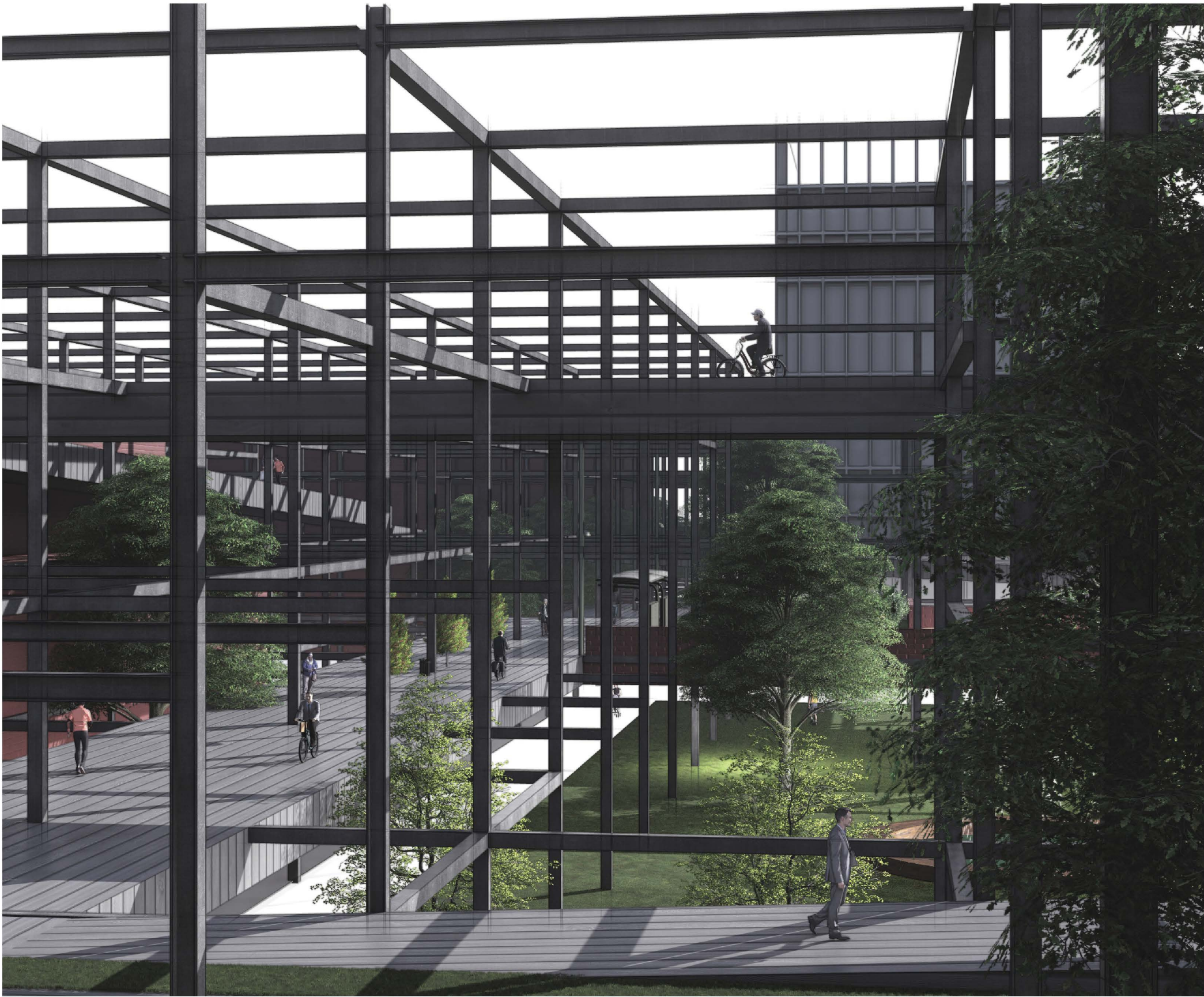
Floor 2

The public area is pushed towards the main courtyard. A smaller courtyard is connecting the second stories of the cafe and arcade to the vertical path and by extension, the rest of the project.

Private units and semi-private courtyards are placed further from the center of the site to give more privacy and easier access from outside the site.

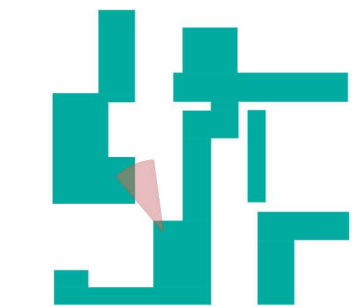


- 1 - Cafe
- 2 - Arcade
- 3 - Storage
- 4 - Floor Plan 1
- 5 - Floor Plan 2
- 6 - Floor Plan 3



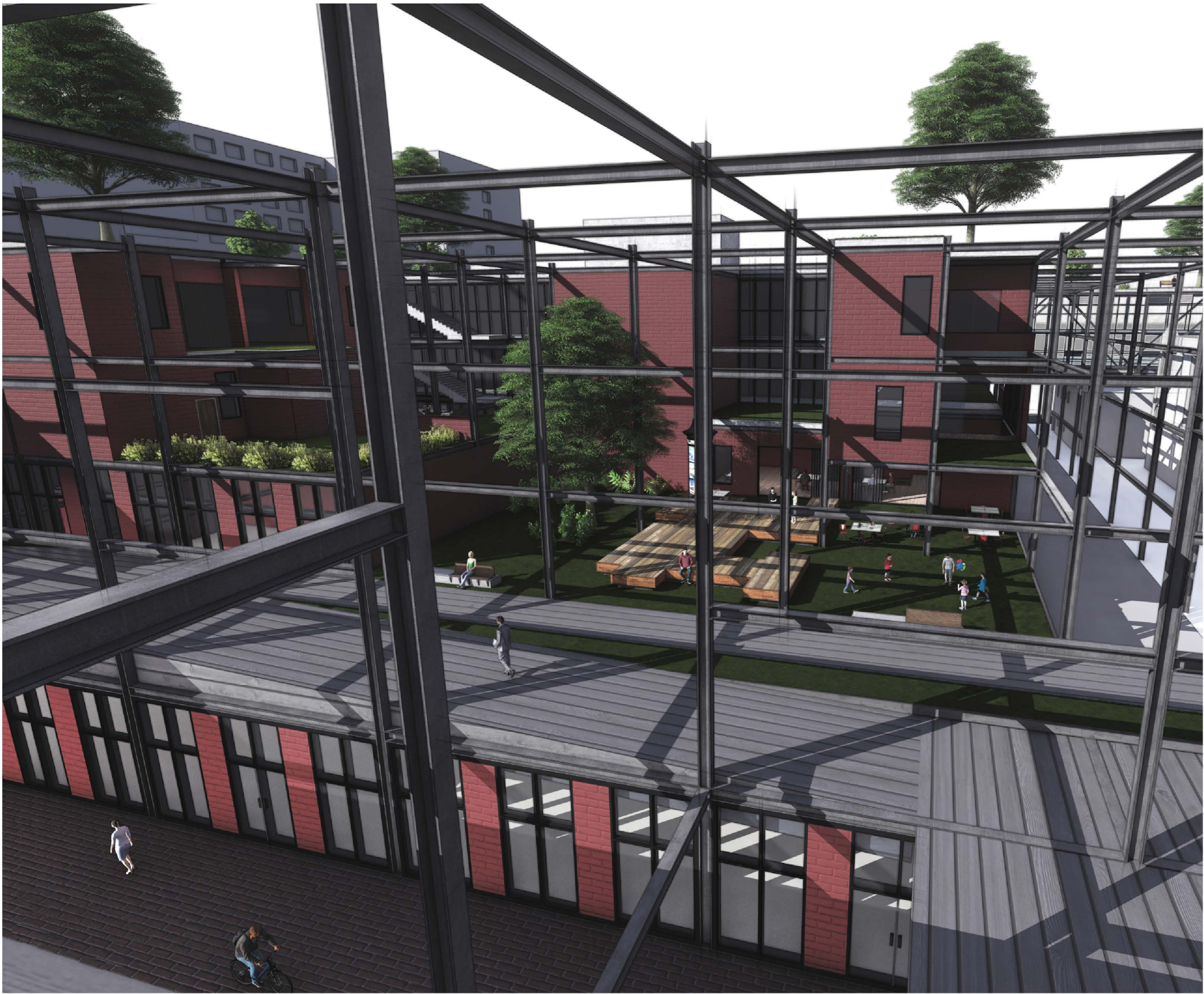
The building becomes completely private on the third floor outside of the green bridge. There are seven residential units with three semi-private greens spaces. The green bridge adds another connection to the block. This begins to create an expansive system of routes and connections around the site, which supports the idea of variety in walkability, keeping the walks interesting for longer.

Floor 3



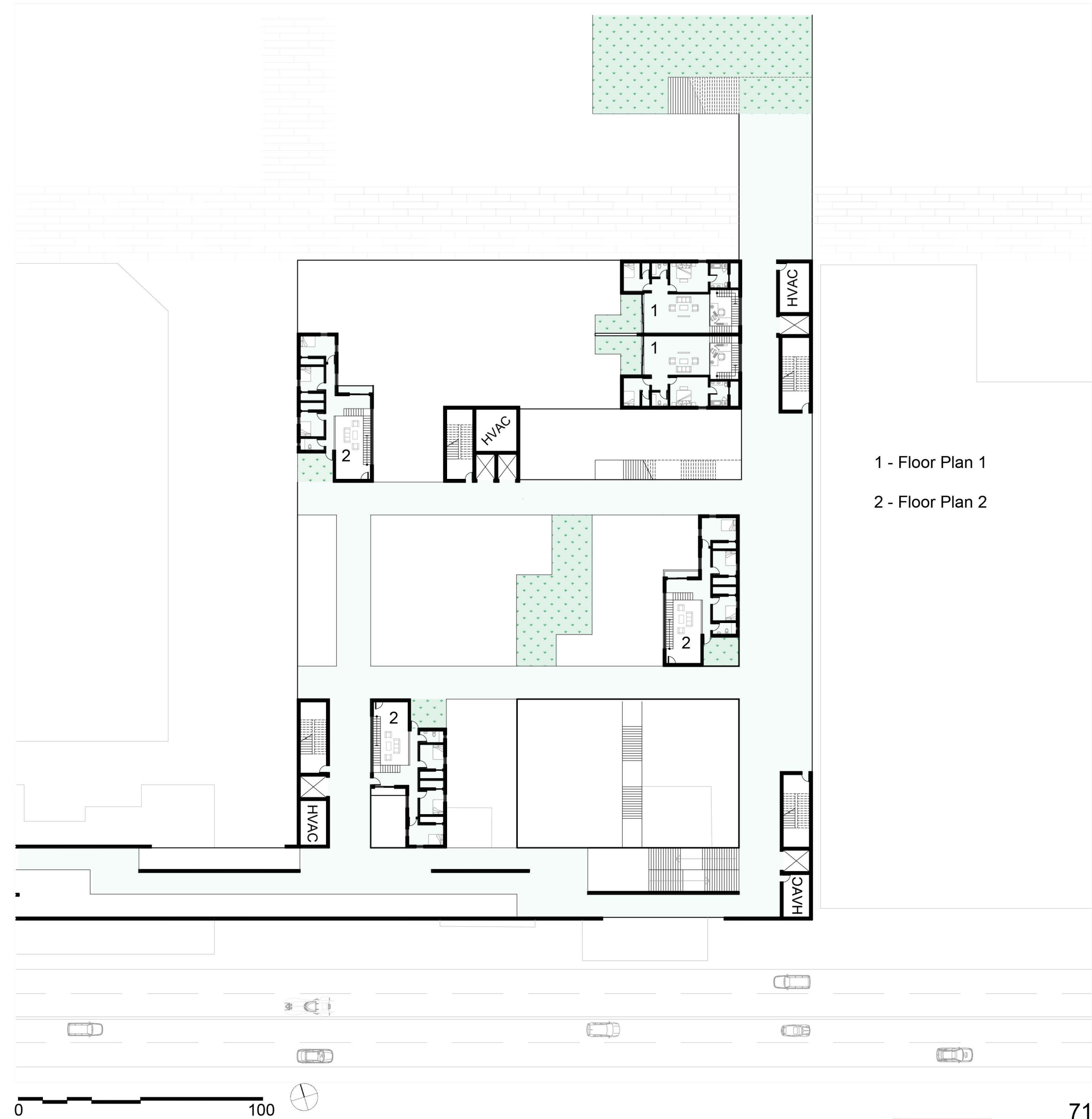
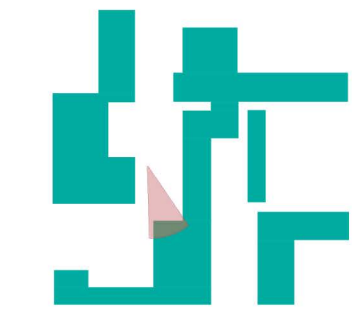
1 - Floor Plan 1

2 - Floor Plan 2



Floor 4

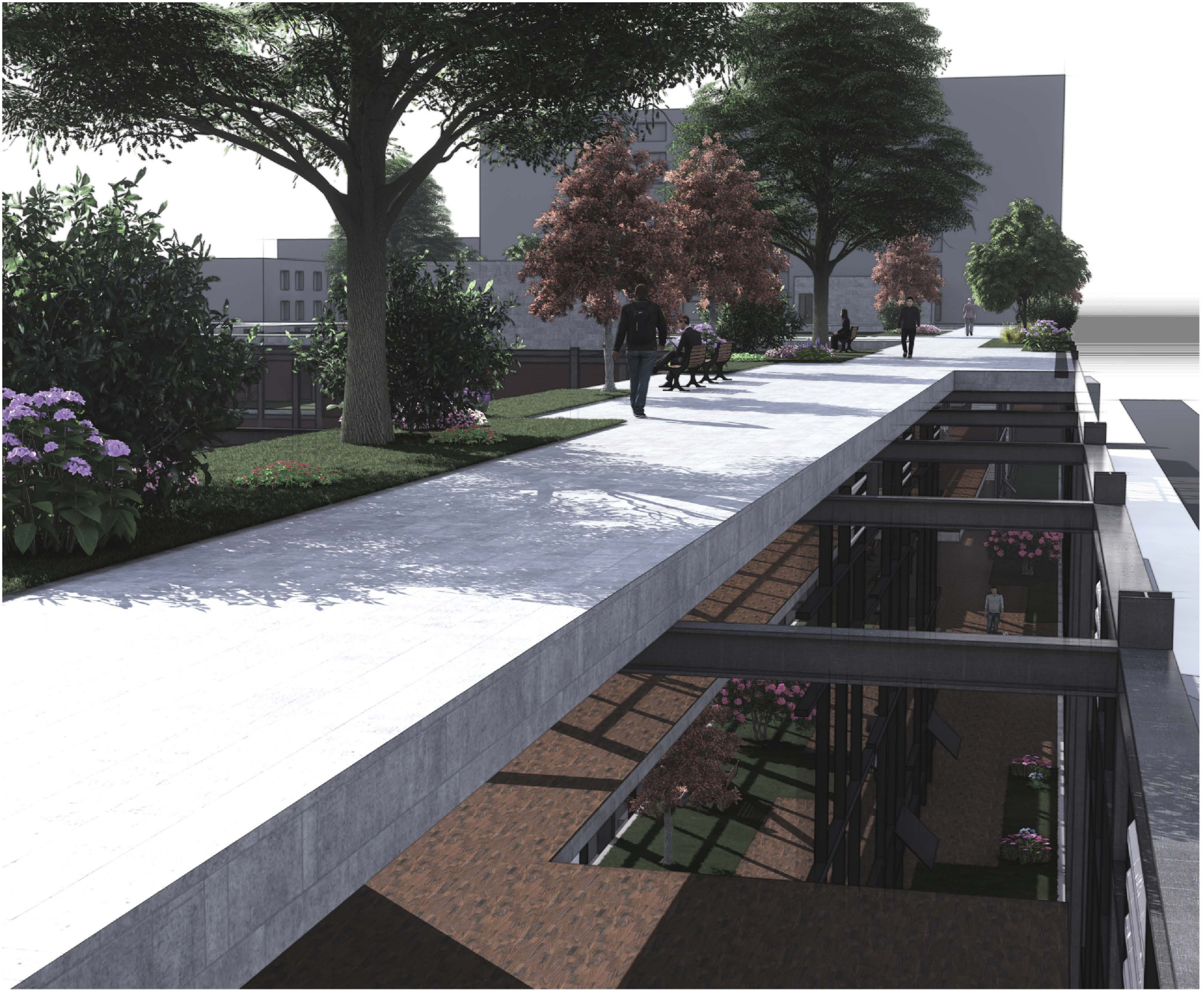
The fourth floor continues the private area with exclusively residential units with the exception of the green bridge. This floor gives allows for second story access to the residential units. A single semi-private courtyard is placed here which can also be used as another circulation element. Here the green bridge does not have any vegetation. This is because the paths are thinner and more focused on movement while the third floor and roof can be used for both circulation and leisure.



1 - Floor Plan 1  
2 - Floor Plan 2

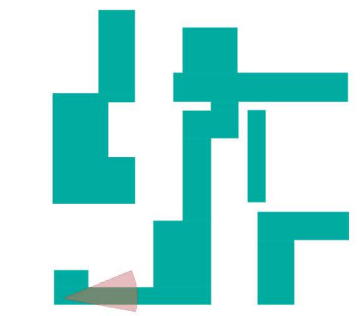
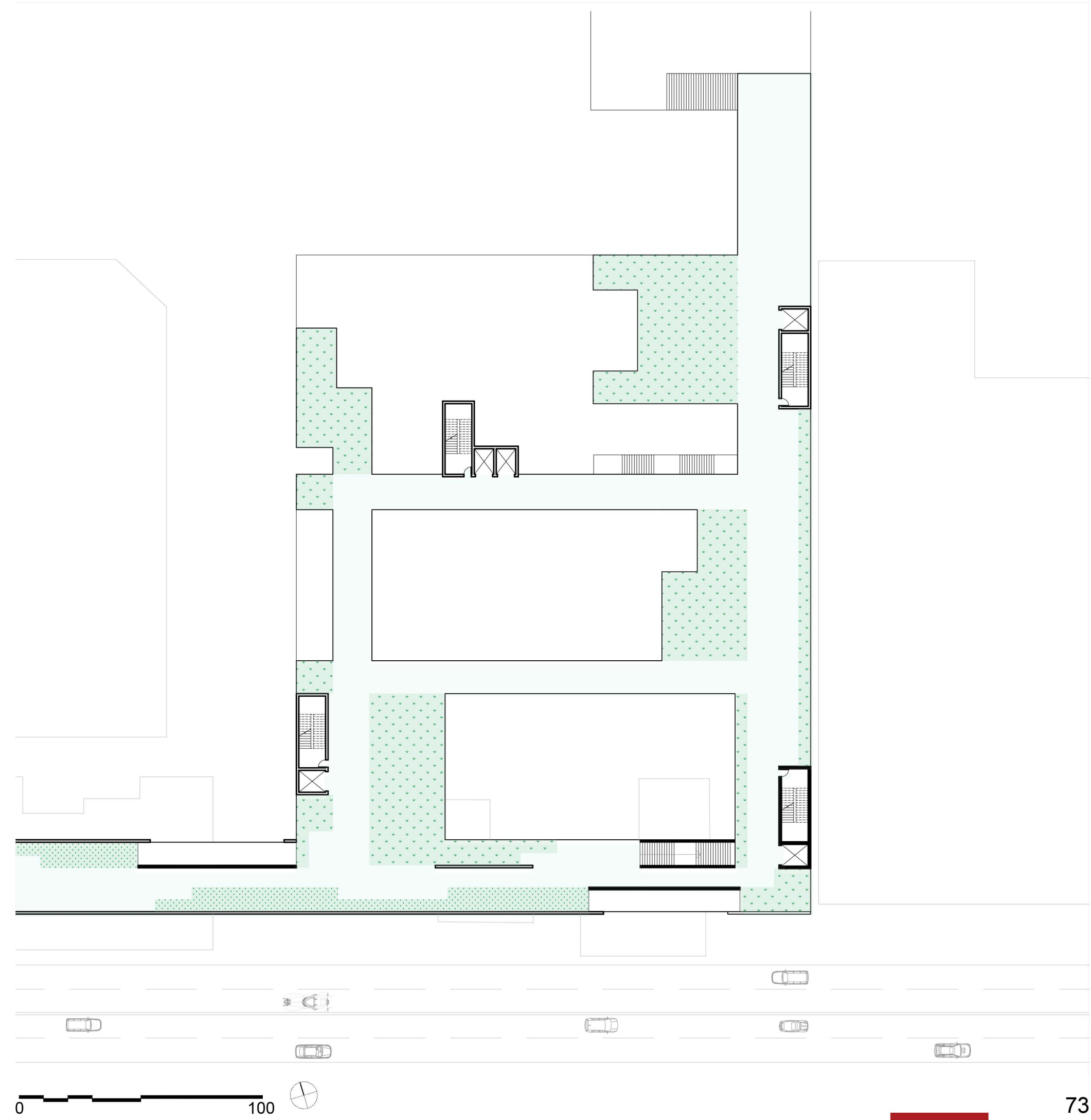
0 100

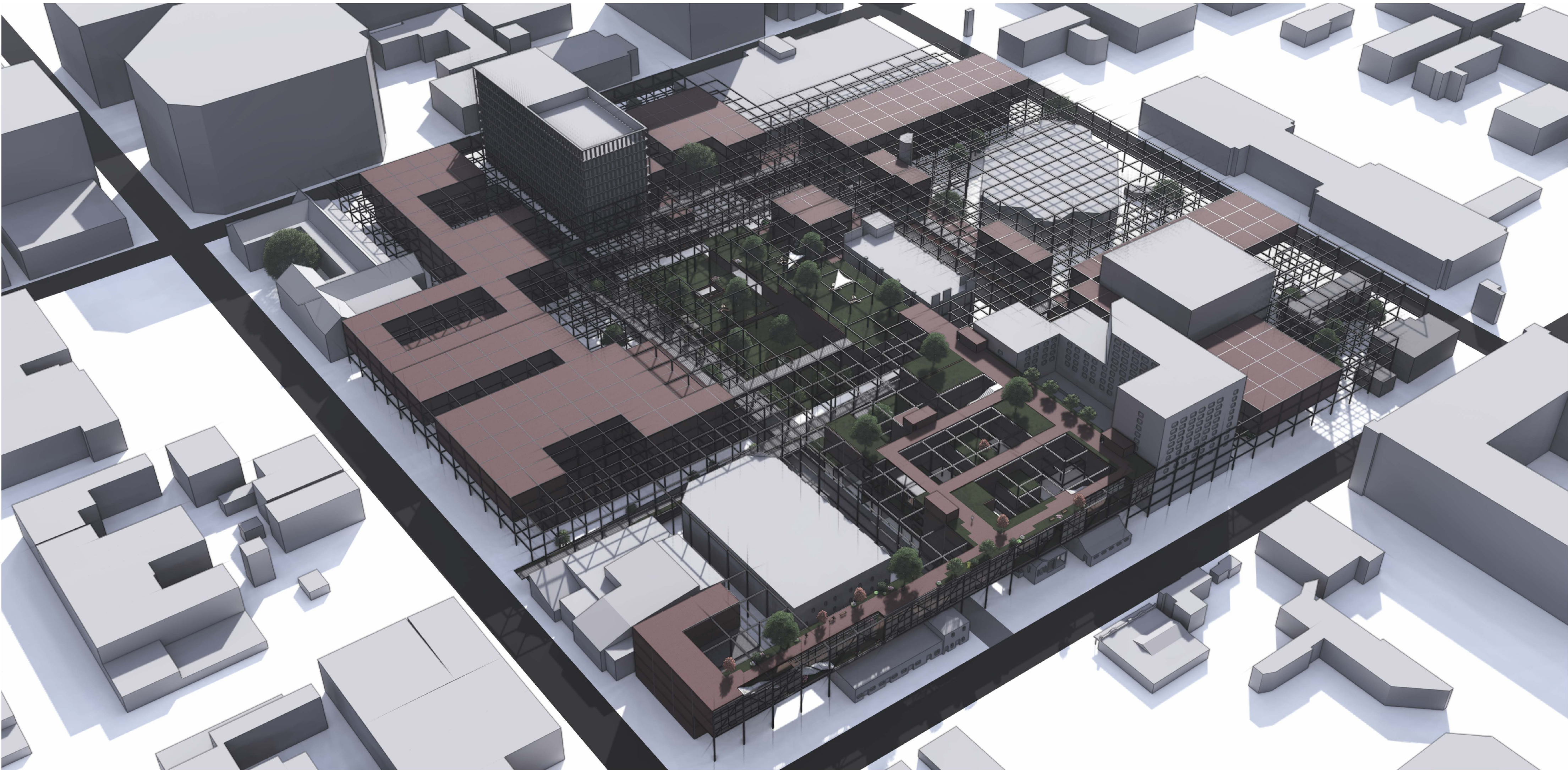


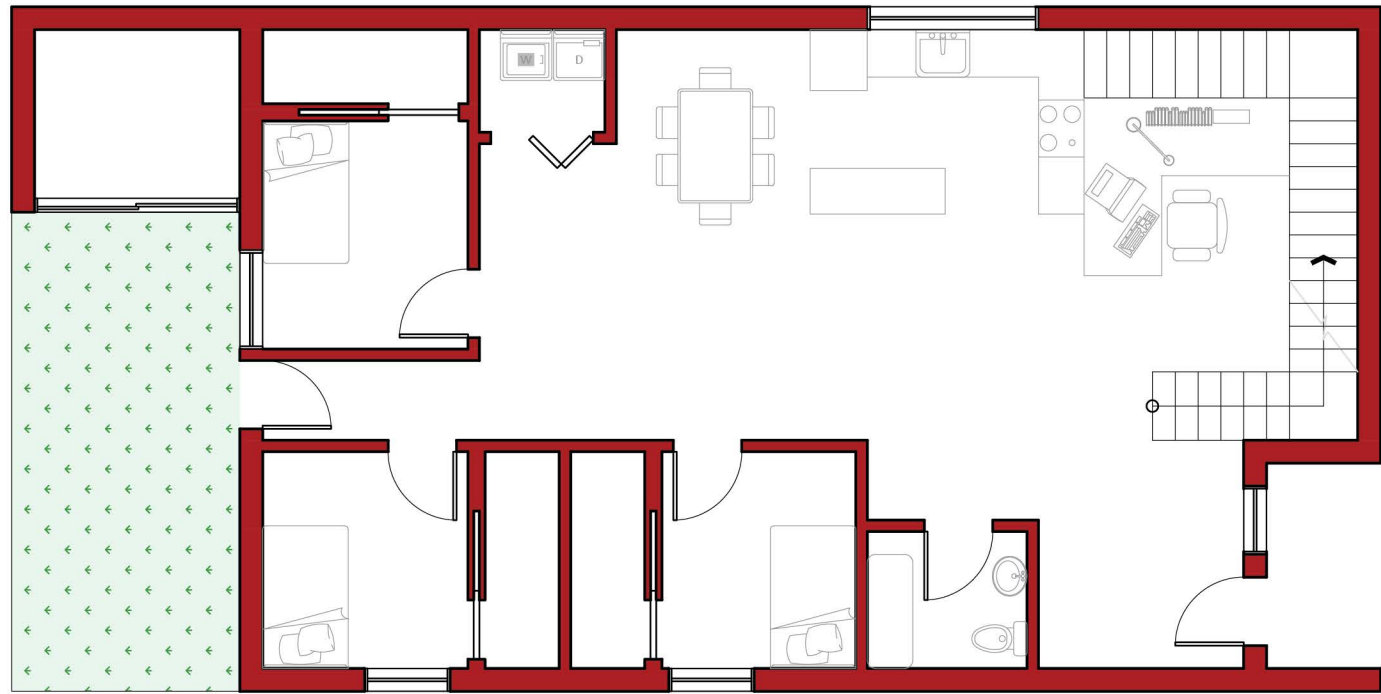


The building becomes public again on the roof. The roof is used for circulation and leisure with four public courtyards and the green bridge which has vegetation once again. The roof also connects to the upper floors of the central courtyard.

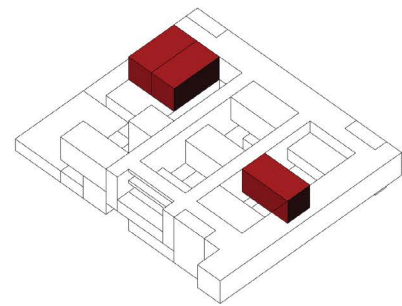
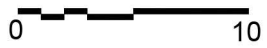
Roof



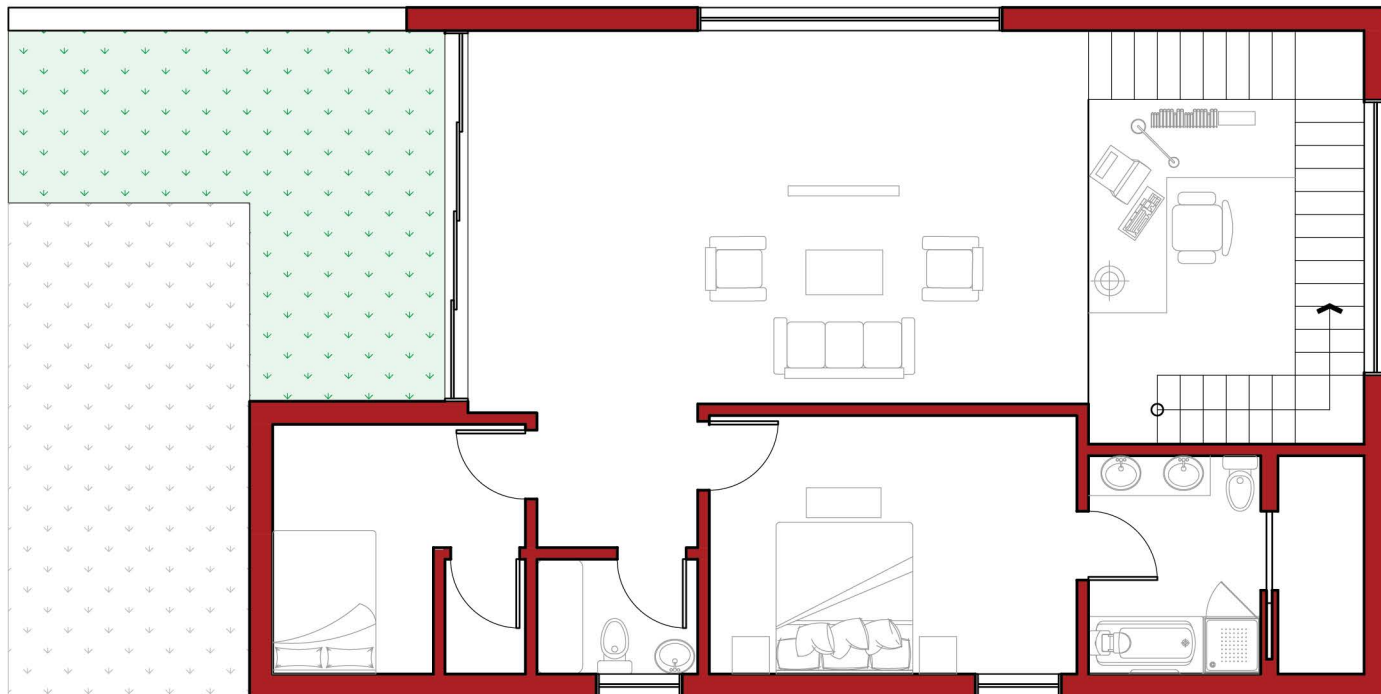




Floor 1



Floor 2



The residential units are the best example of how the cells can interact with the grid. The unit can use as many of the cells needed to let people choose their home size and organization. The cell organization used for the units presented here are shown to the right, two cells stacked on top of another two cells, for a total of 3,600 ft<sup>2</sup>.

Part of the idea of this project is to bring the middle class into the city. Along with prices, the lack of private green spaces, yards, is a common deterrent from moving to the city. The grid structure allows for private green spaces which can vary in size using said grid. Both of the unit plans presented here have multi-level private green spaces.



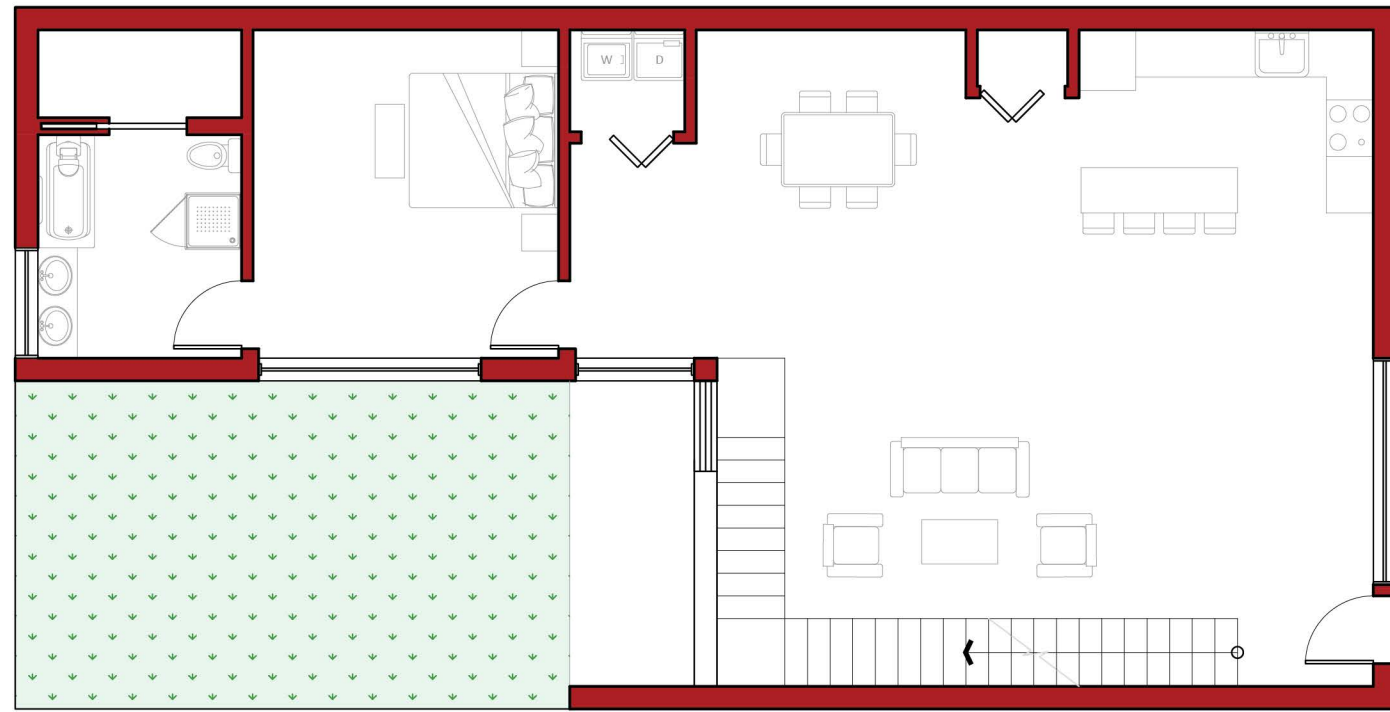
The plan represented here is an open concept, 5 bed, 3 bath with an office space.

The first floor enters into a transition space that takes you either to an open kitchen/dining room area or upstairs. The office uses the two-story high space created by the stairs. The three bedrooms then create a short hallway that ends to the first level green space with a shed.

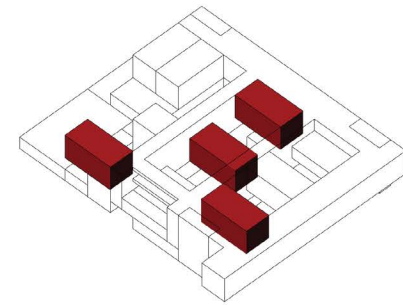
The second floor holds another bedroom along with the master bedroom and the living room space. The living room connects to the second level green space with a full length sliding glass door that when opened, creates one large space.



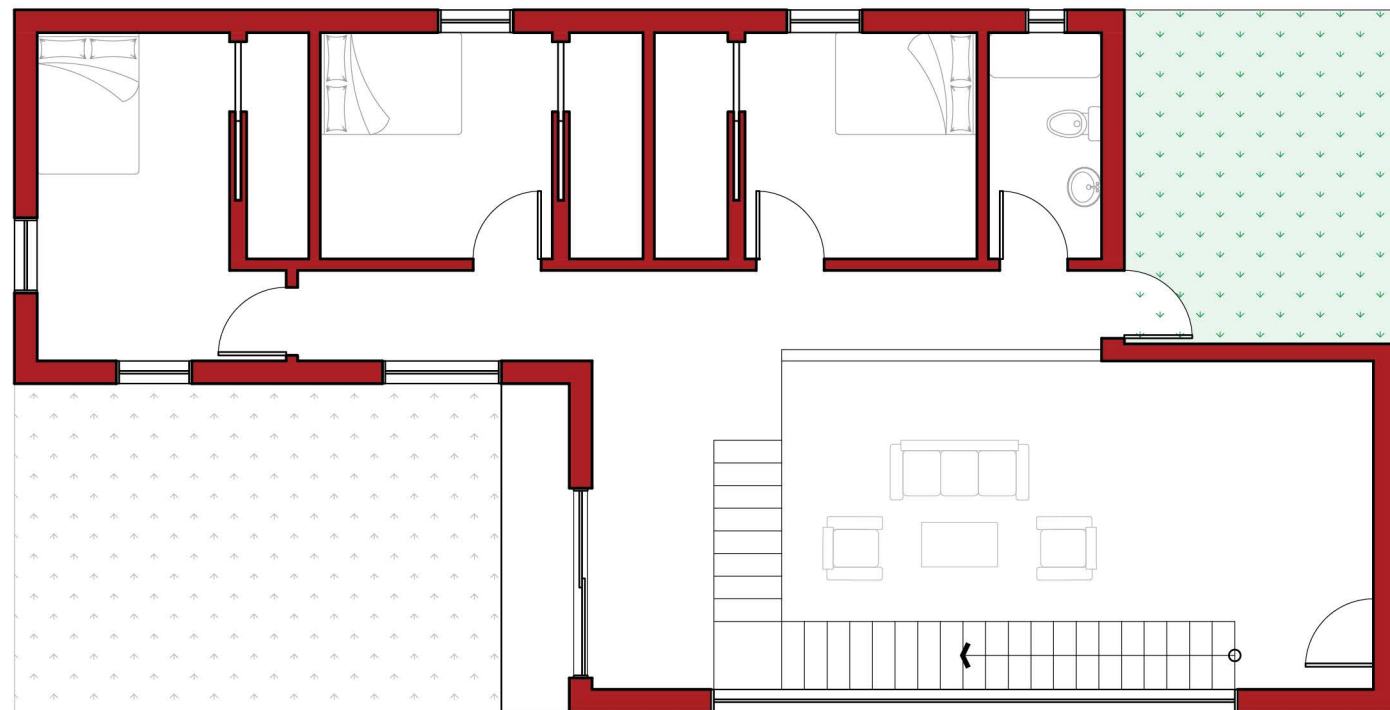




Floor 1



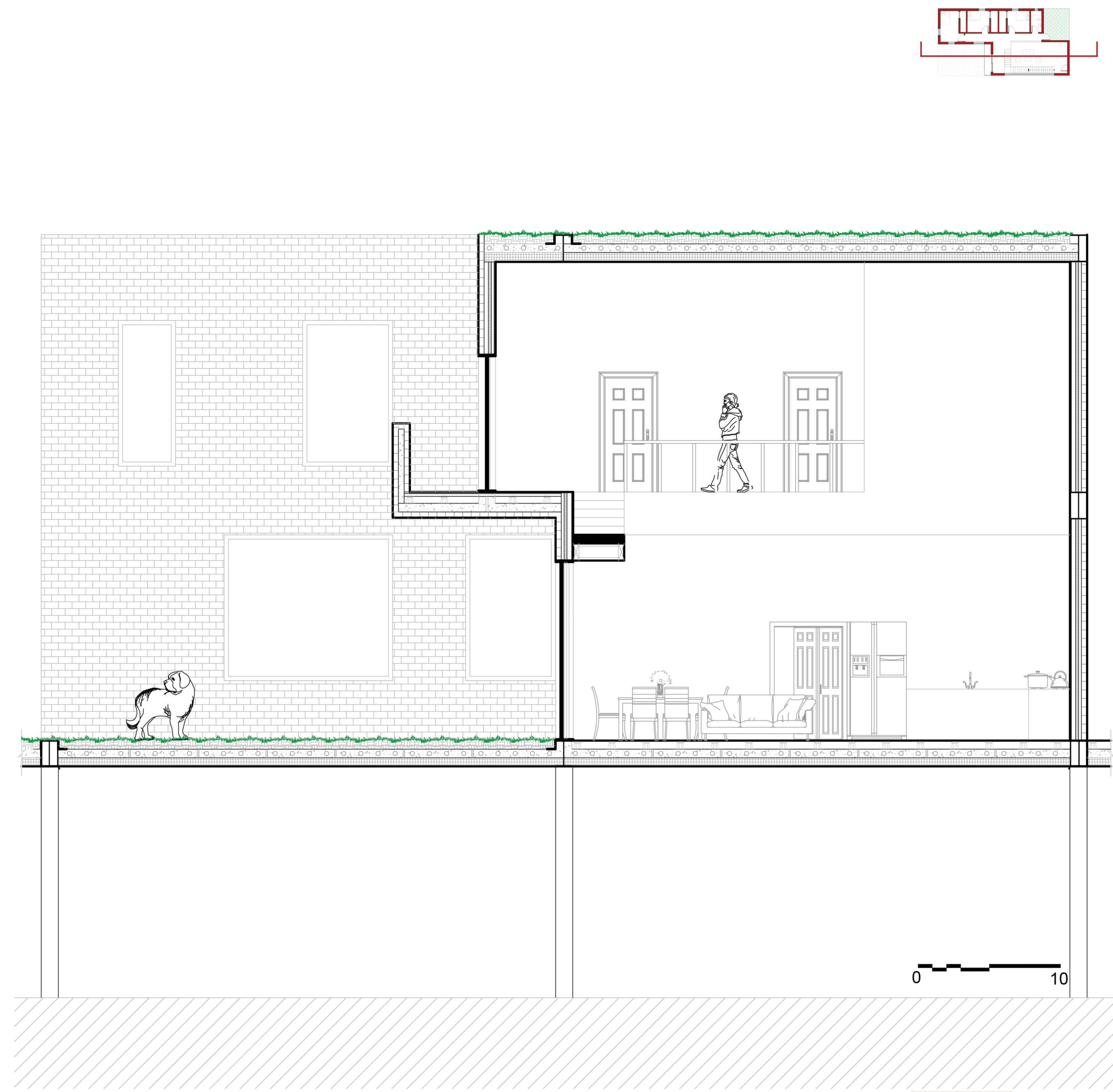
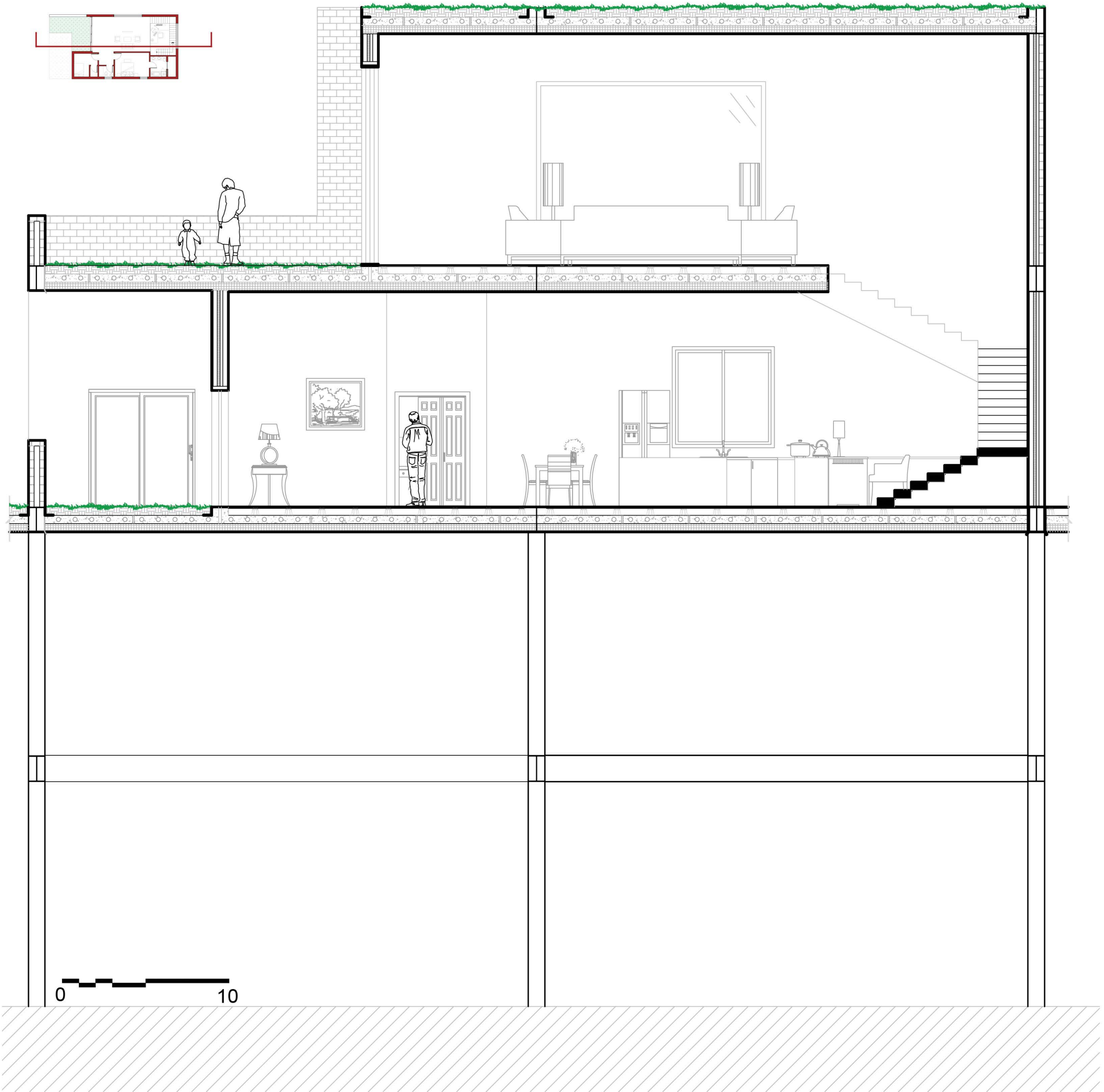
Floor 2

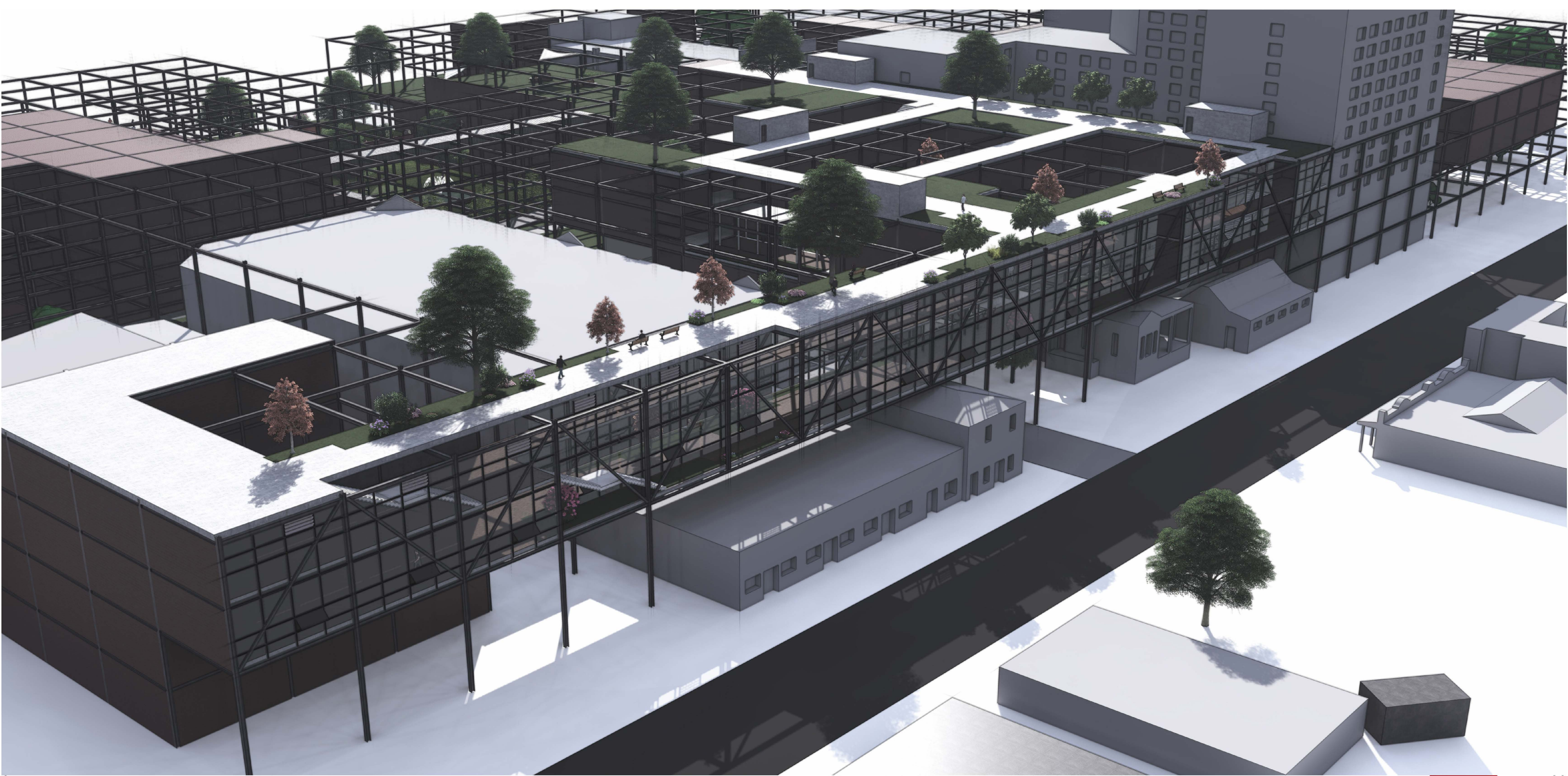


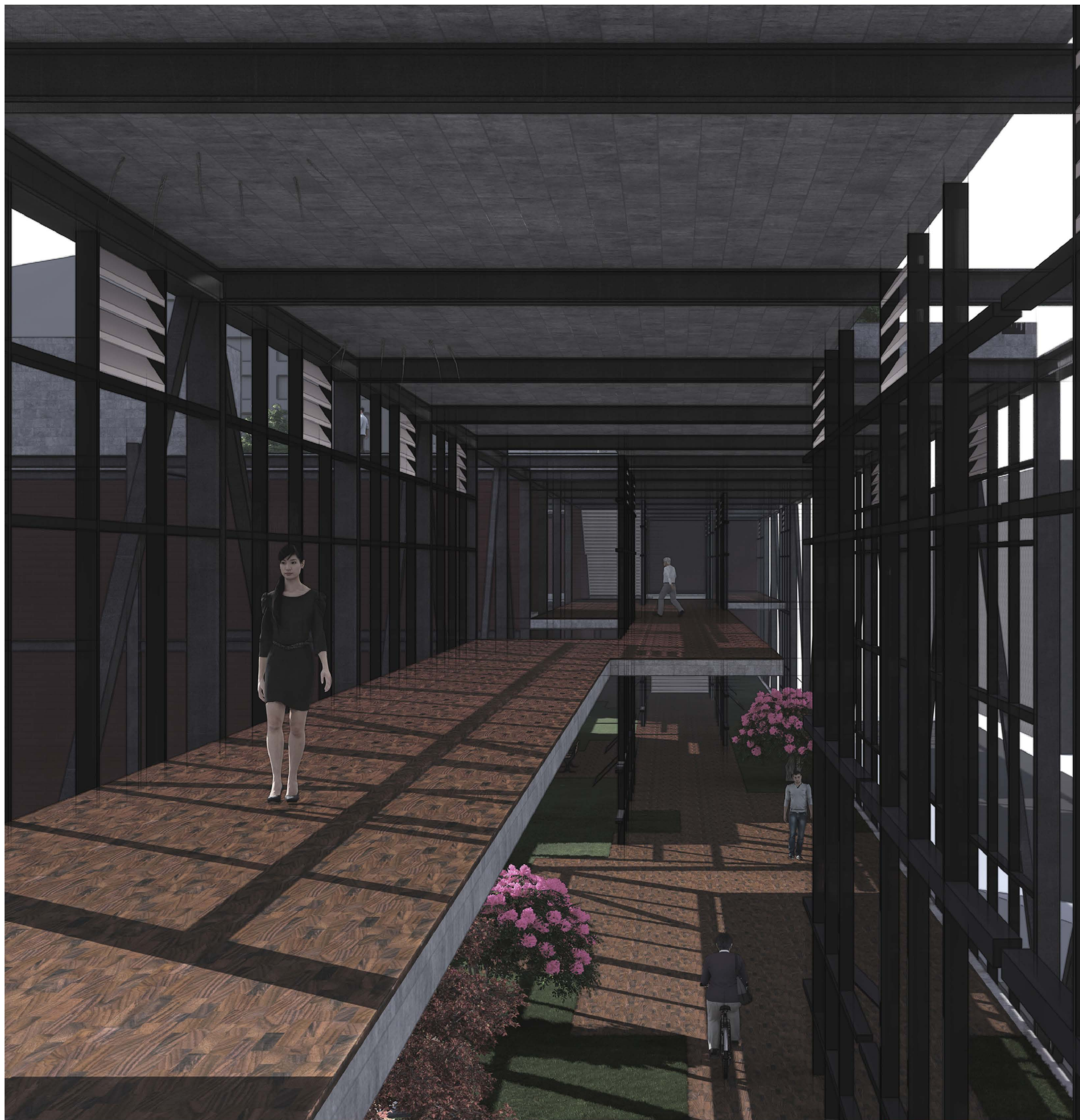
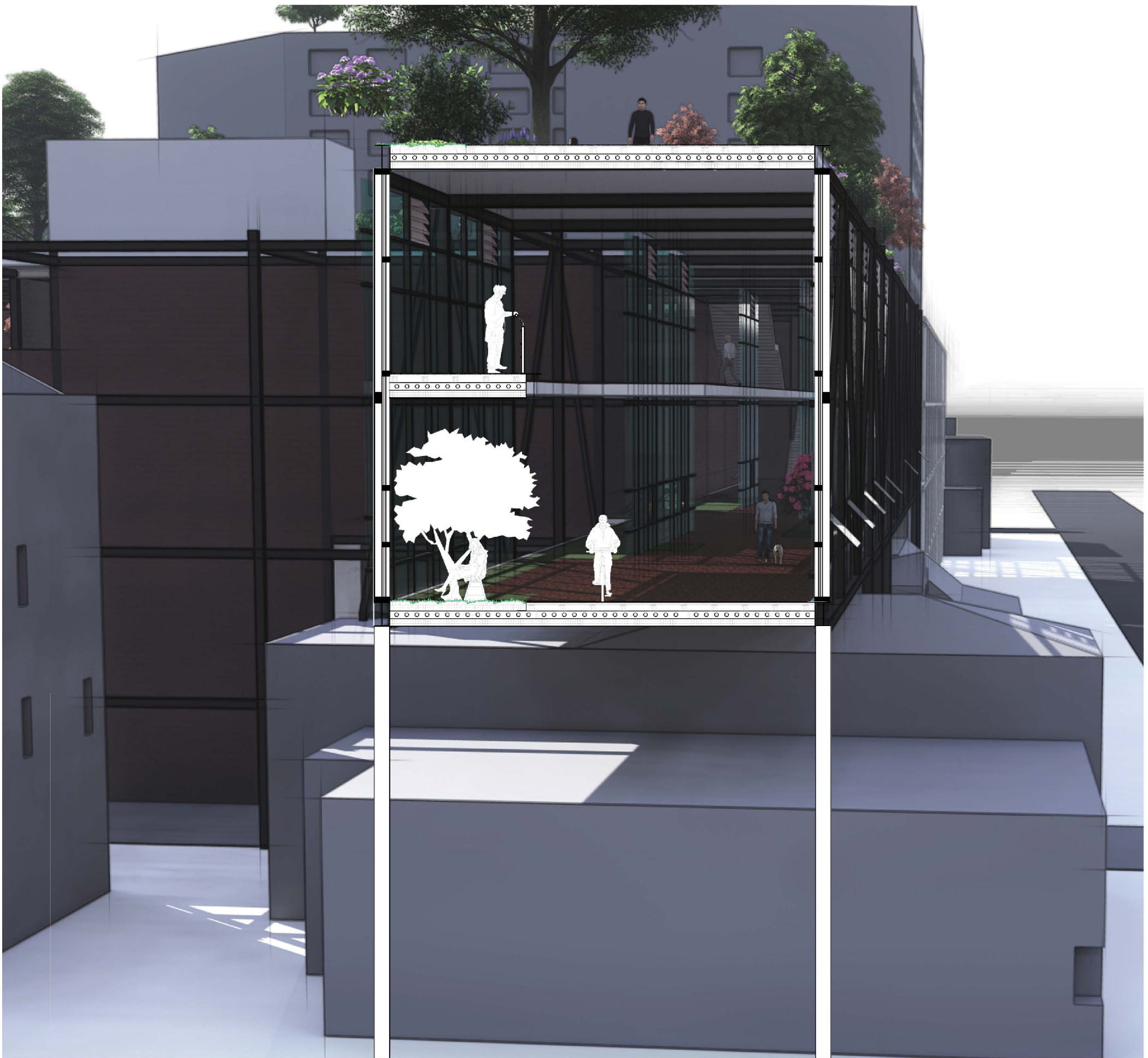
This plan has 4 bed, 2 bath with two green spaces on either side. The first floor uses all the public spaces to create a large central space that potentially becomes larger when opening the sliding glass doors to the first floor green space. One design challenge that was explored on the first floor was no windows on the sides of the unit. The goal was to use natural lighting from the green space and entrance/exit to light the area.

This design may be required if the unit organization is more dense leaving these walls closed to natural light. The second floor contains all the regular bedrooms and a smaller green space. Each green space connects to the hallways in the main mass, allowing the green spaces to be used as circulation.

The multi-leveled grid organization also allows for access from any floor, rather than only the first floor in traditional suburban households. This gives new possibilities for the primary entrance, the interaction of spaces, and aspects from floor plans can be mixed and matched easier to create more personal homes.







Design allows for rooms with different ceiling heights

The grid gives the opportunity for a variety of uses

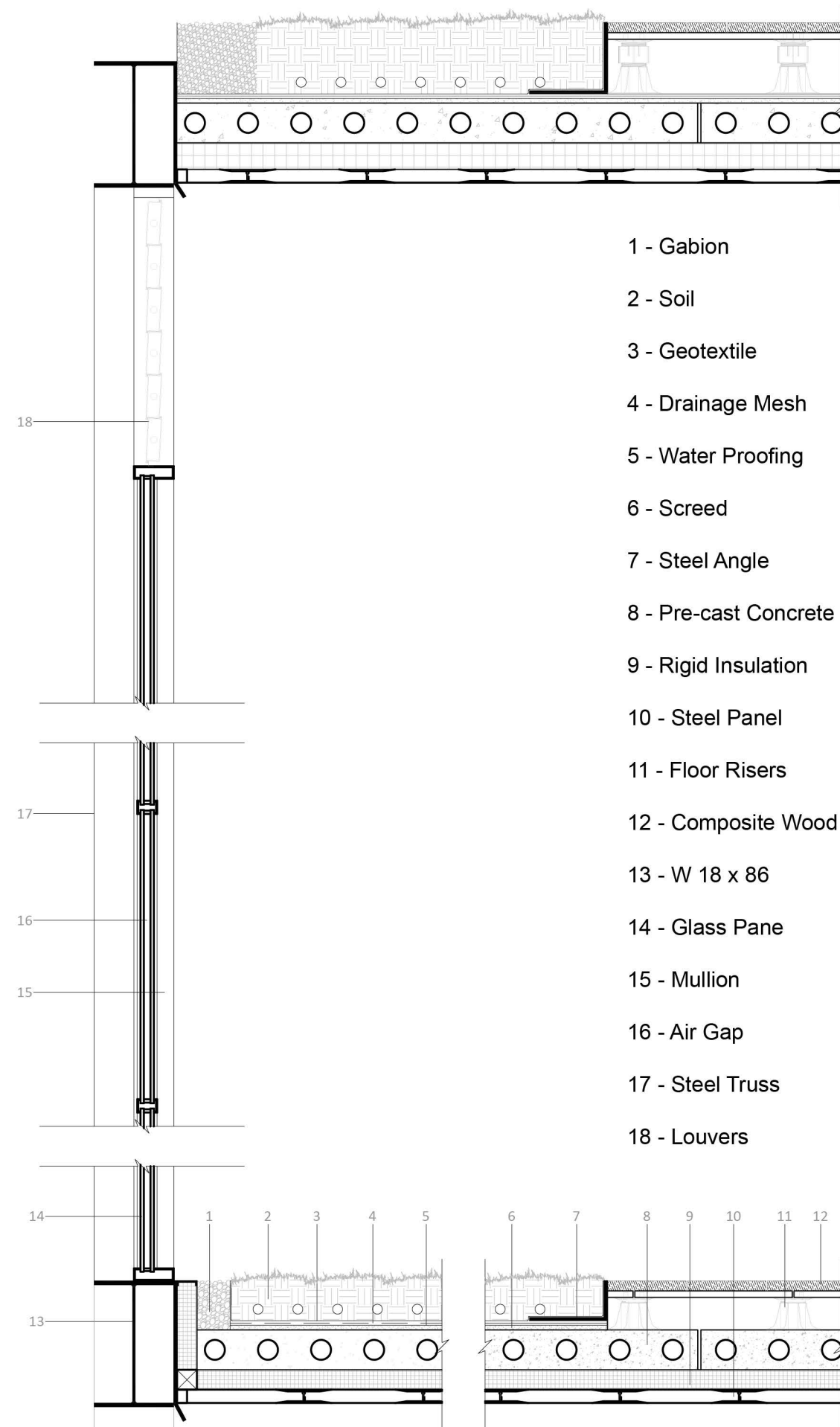
Exposed structural grid can be used to support shading elements and other functions

Light wells bring light to the lower levels

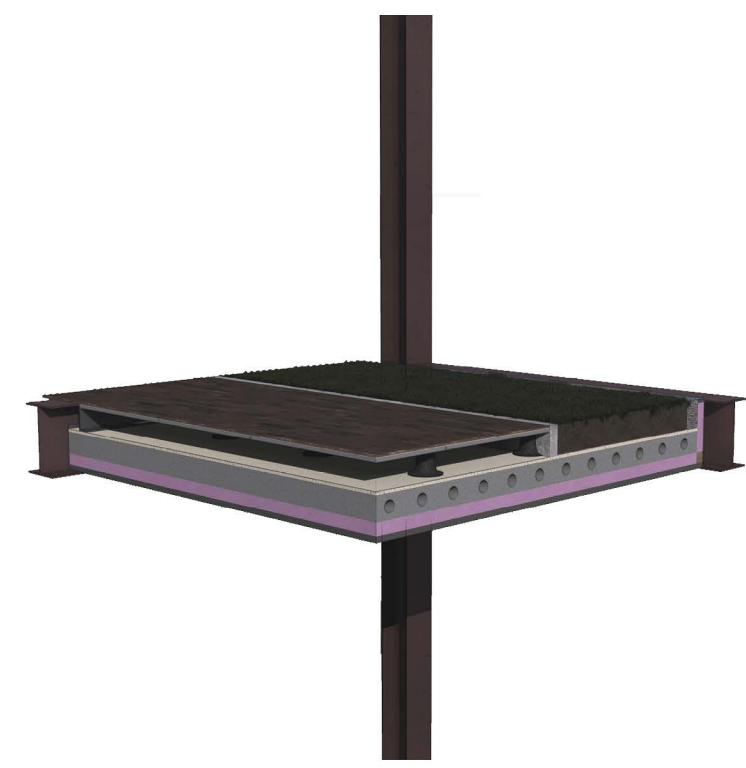
Elevated green spaces serve as a central connection for the second level throughout the project

Vertical circulation elements connect the whole project vertically, making traversing easier



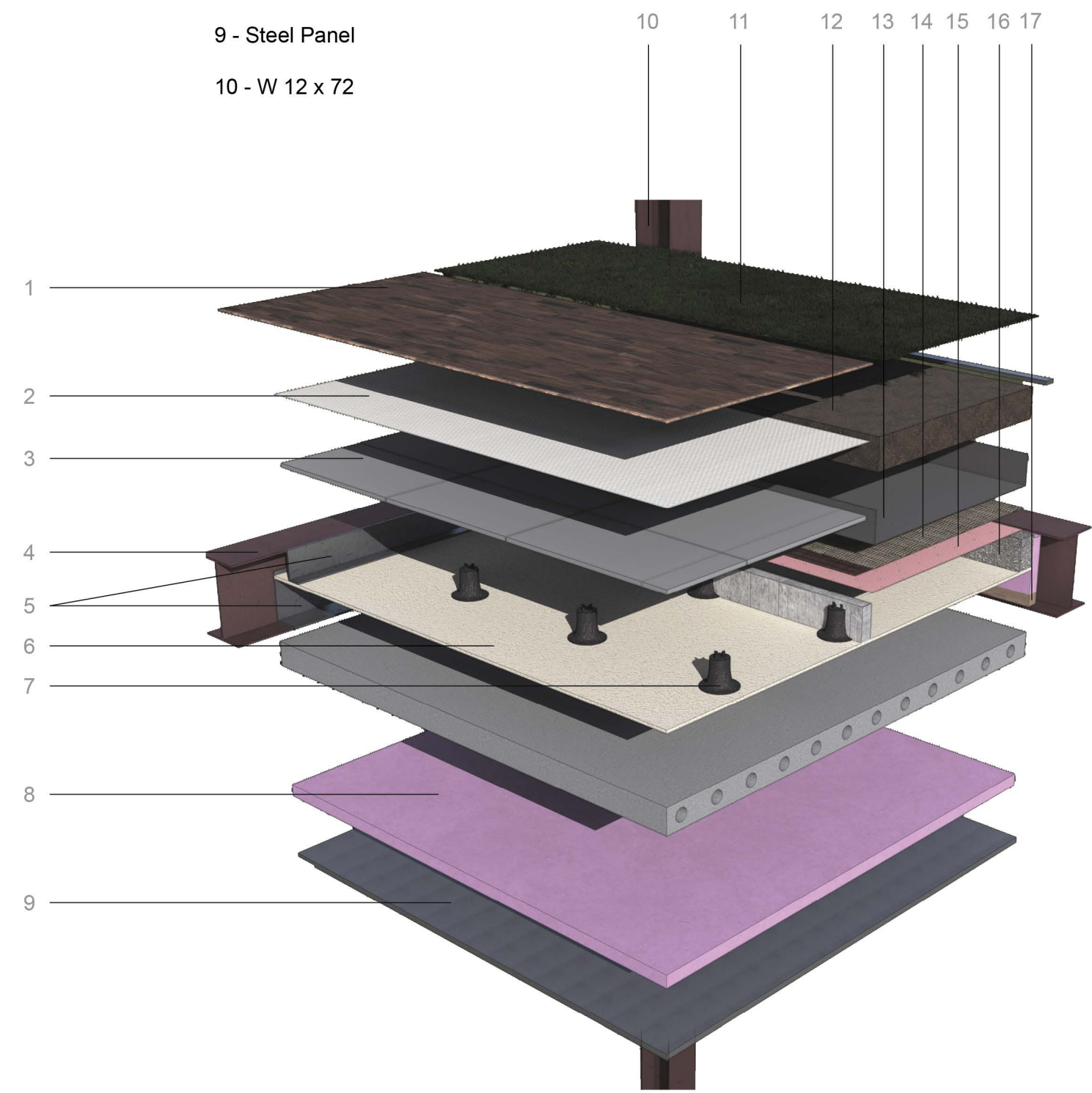


- 1 - Gabion
- 2 - Soil
- 3 - Geotextile
- 4 - Drainage Mesh
- 5 - Water Proofing
- 6 - Screed
- 7 - Steel Angle
- 8 - Pre-cast Concrete
- 9 - Rigid Insulation
- 10 - Steel Panel
- 11 - Floor Risers
- 12 - Composite Wood
- 13 - W 18 x 86
- 14 - Glass Pane
- 15 - Mullion
- 16 - Air Gap
- 17 - Steel Truss
- 18 - Louvers



- 1 - Composite Board
- 2 - Vapor Barrier
- 3 - Floor Risers Support
- 4 - W 18 x 86
- 5 - Steel Angle
- 6 - Screed
- 7 - Floor Risers
- 8 - Rigid Insulations
- 9 - Steel Panel
- 10 - W 12 x 72
- 11 - Vegetation
- 12 - Soil
- 13 - Waterproofing
- 14 - Drainage Mesh
- 15 - Geotextile
- 16 - Gabion
- 17 - Wood Stud

To the right shows an exploded 3D detail of a standard floor in the project. Most of the project has either a typical finished floor of wood or carpet, or green spaces. This detail explains how both are organized and how they interact with each other when located next to each other. There are other floor systems in the project along with the potential for most any system needed, but this system is the most common and covers most of the project. This detail also demonstrates how the floor system interacts with the W-Beams and the many connections.



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

# Layers

## External

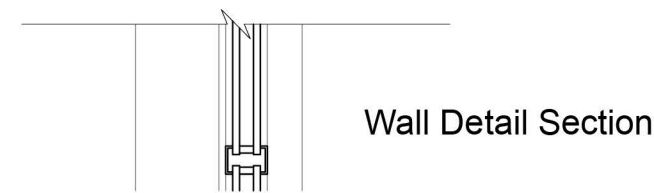
- SAND
- BRICK
- WOOD
- CONCRETE
- PLANTING
- METAL
- INSULATION
- MEMBRANE
- GLASS
- MULLION

## PRINCIPAL

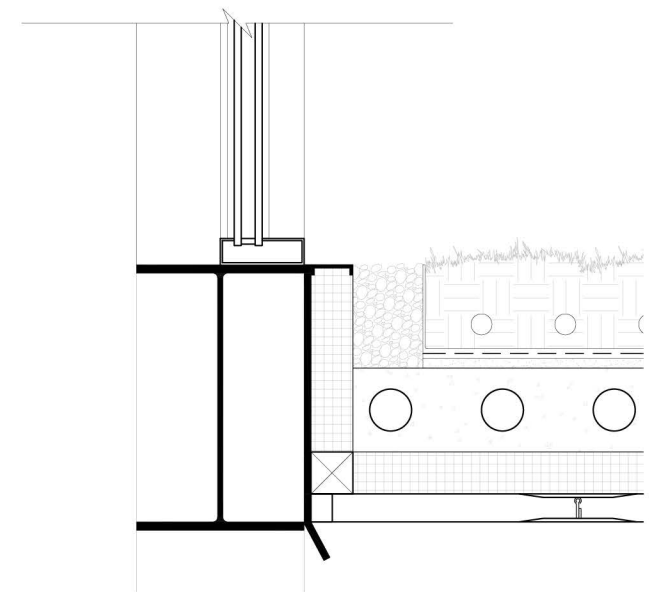
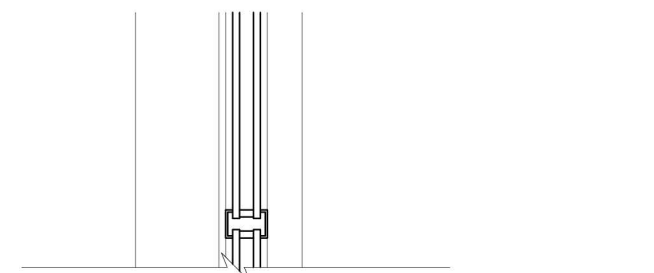
- CONCRETE
- METAL

## INTERNAL

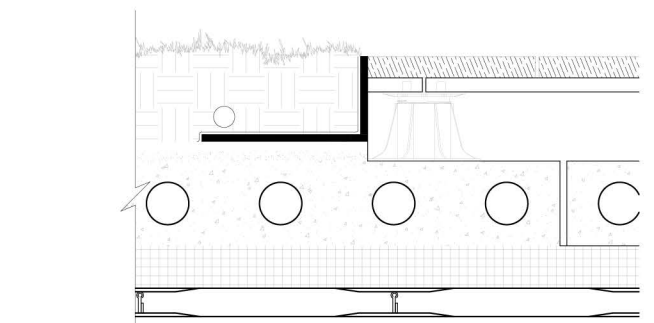
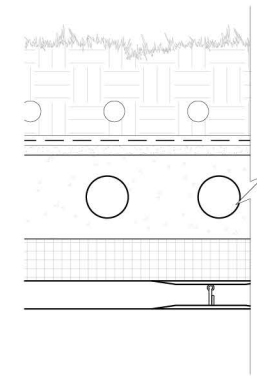
- GYPSUM BOARD
- MEMBRANE
- PARTICLE BOARD



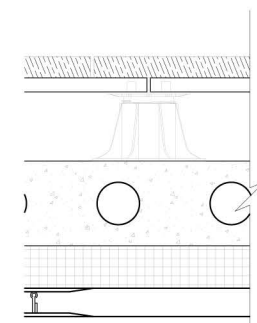
Wall Detail Section



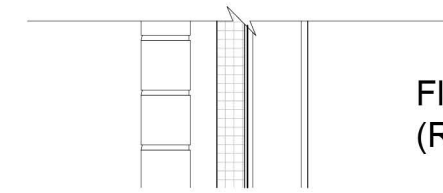
Floor Detail Section (1)



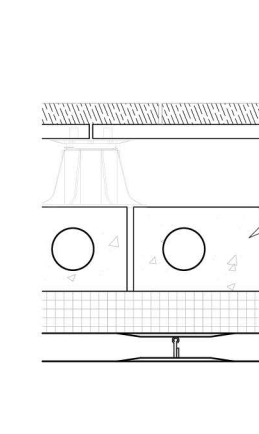
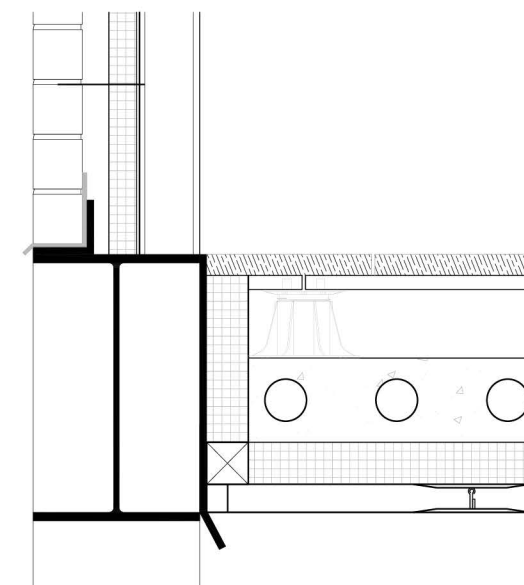
Floor Detail Section (2)



The images here are a graphic representation of the detail sections to help readers visualize the layering of the materials and where said materials are used.



Floor/Wall Detail Section (Residential Unit)



# Layers

## External

- SAND
- BRICK
- WOOD
- CONCRETE
- PLANTING
- METAL
- INSULATION
- MEMBRANE
- GLASS
- MULLION

## PRINCIPAL

- CONCRETE
- METAL

## INTERNAL

- GYPSUM BOARD
- MEMBRANE
- PARTICLE BOARD

# Conclusion

This project tackles the issues of car dependency, rising housing prices, lack of walkability, and all the underlying problems caused by these issues. The project reduces car dependency by creating more dense areas in the city and creating opportunities to walk, bike, or take public transportation over using an individual automobile. The rising housing prices is combated by increasing the amount of housing within cities and creating houses that middle class suburban will find appealing. Lastly, the lack of walkability issue is resolved by creating a comfortable, interesting walk that combines business and pleasure. Creating areas that people can relax or use for travel.

The solutions displayed here are only a few of limitless possibilities when implemented in needed areas. Creating more dense areas that are more affordable will not only increase city economy and healthy living, but will also free up land that would otherwise be used for massive suburban dwellings. This project can be the building blocks for a new style of urban development and change the way we move about cities here in the United States and possibly the world.

I am still learning

-Michelangelo



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