

SUXIANG DENG

ARCHITECTURE DESIGN PORTFOLIO

Best Work from 2014 to 2020
Urban Planning - Architecture - Immersive Design

SUXIANG DENG

Born in Beijing, China

Lives & Studies in Savannah, GA, US now

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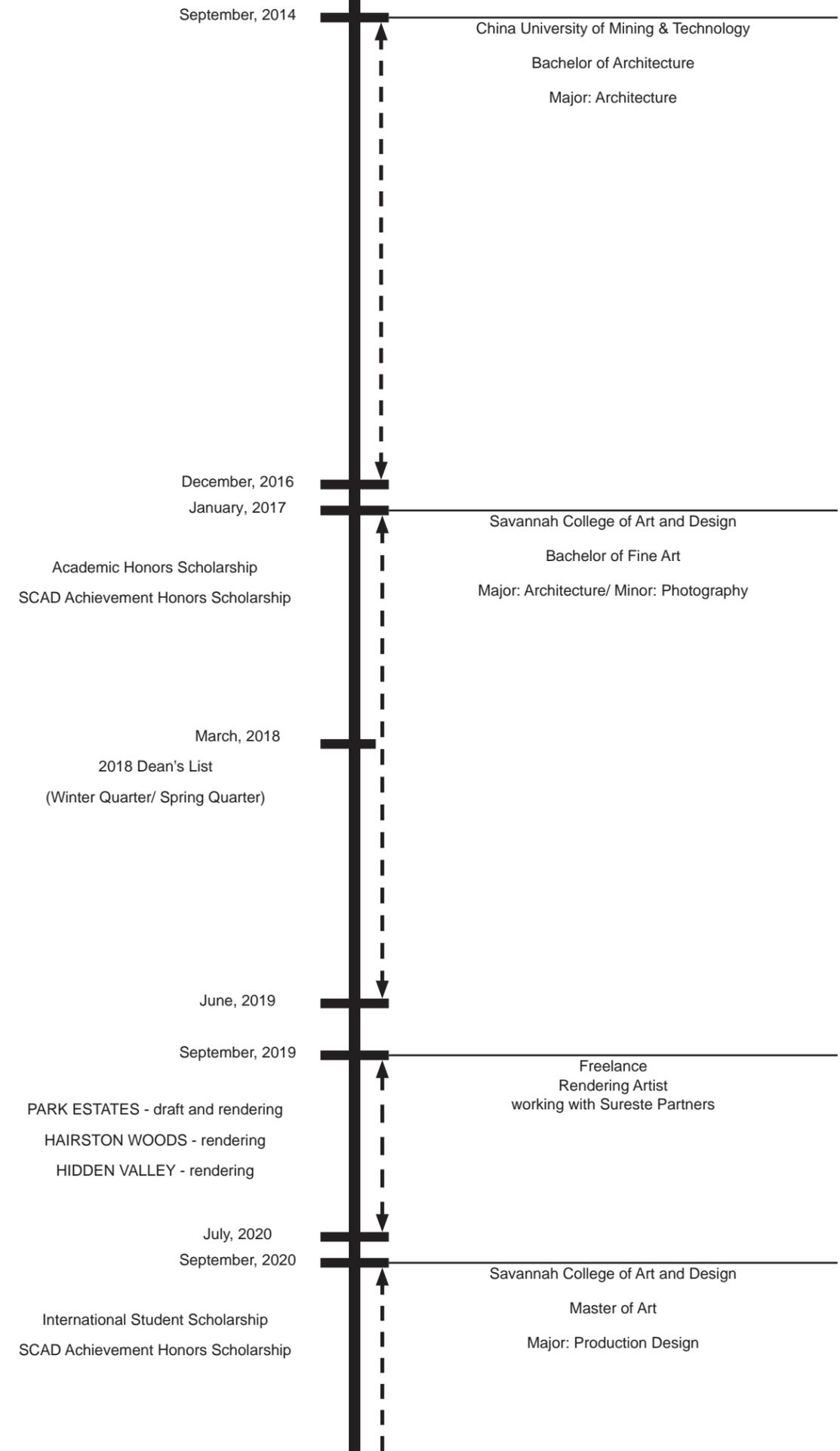
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Project 1

04

Timber in the City: Life 360

2019
Green Building (Competition) Design
Long Island City, NY, USA

				Comments
(Sub-total)	1.20%	\$360,796	\$360,796	1.2% Construction Cost
(Sub-total)	1.20%	\$360,796	\$360,796	1.2% Total Adjusted Cost
Architectural	0%	\$1,503,317	\$1,503,317	0% Total Adjusted Cost
Structural	1.20%	\$360,796	\$360,796	1.2% Total Adjusted Cost
Mechanical	0.80%	\$240,531	\$240,531	0.8% Total Adjusted Cost



Project 2

11

Surviving Box

2020
Experimental Future Design
Aoyamacho, Japan



Project 3

17

Beyond the City

2018
City Problem Solving Design
Savannah, GA, USA



Project 4

23

Board 365

2017
Animal Shelter
Savannah, GA, USA



Additional Works

28

2014-2020
Sketching, Mix-Art, Rendering Work, Modeling, Photograph



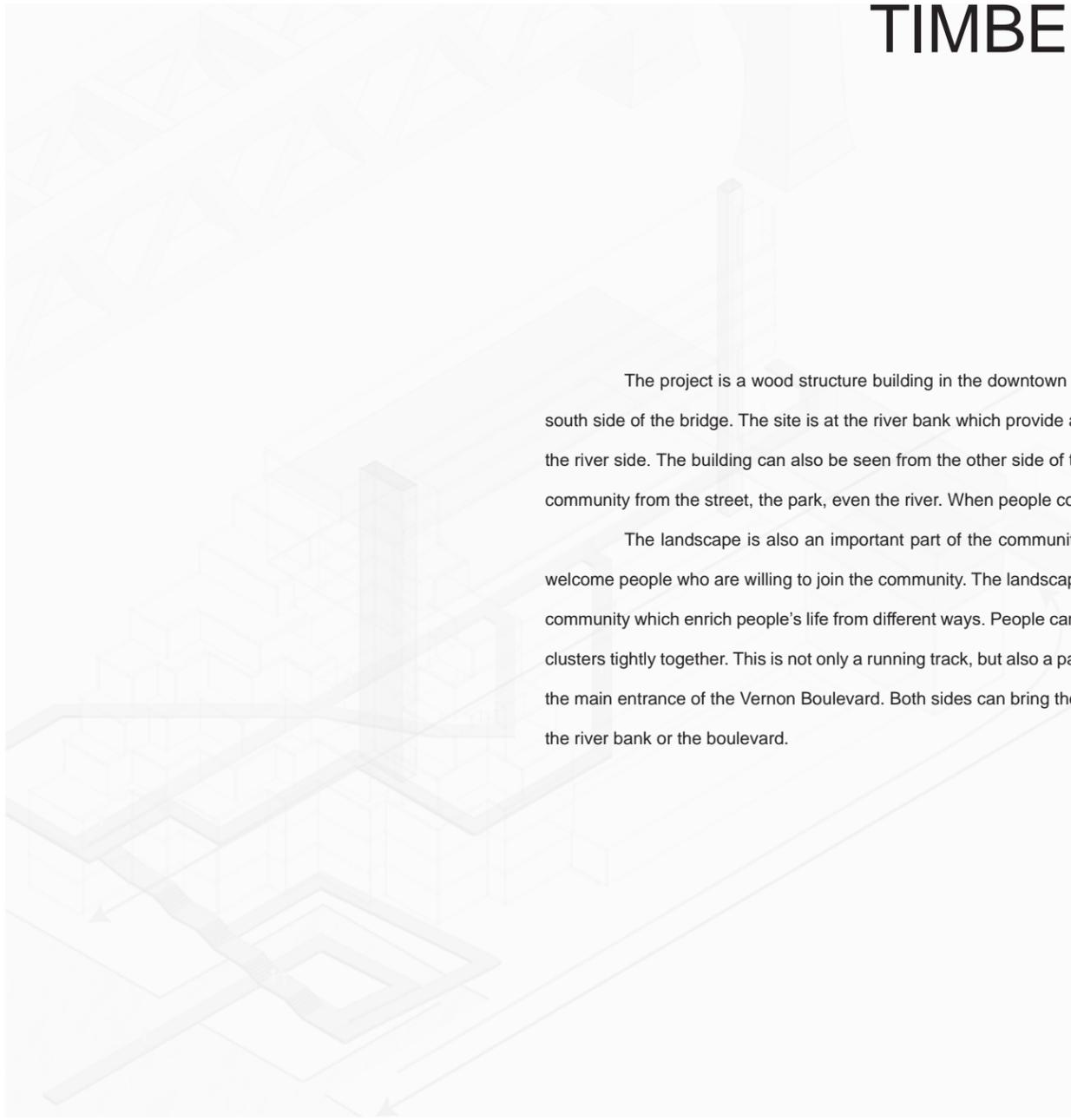
				Comments
(Sub-total)	1.20%	\$360,796	\$360,796	1.2% Construction Cos
(Sub-total)	1.20%	\$360,796	\$360,796	1.2% Total Adjusted C
Architectural	5%	\$1,503,317	\$1,503,317	5% Total Adjusted Cos
Structural	1.20%	\$360,796	\$360,796	1.2% Total Adjusted C
Mechanical	0.80%	\$240,531	\$240,531	0.8% Total Adjusted C

				Comments
(Sub-total)			\$100,000	
(Sub-total)			\$200,000	
(Sub-total)			\$220,000	
(Sub-total)			\$120,000	
(Sub-total)			\$60,000	
			\$0	
Misc-A	1	\$0.00	\$0	
Misc-B	1	\$0.00	\$0	
Misc-C	1	\$0.00	\$0	

				Comments
			\$60,000	
	1.05			0.5% of Construction C
			\$200,000	
			\$0	
Contingency-A	1	\$0.00	\$0	
Contingency-B	1	\$0.00	\$0	
Contingency-C	1	\$0.00	\$0	

				Comments
es			\$0	
Total, Unadjusted Project Cost =			\$34,147,928	

Variation	Comments
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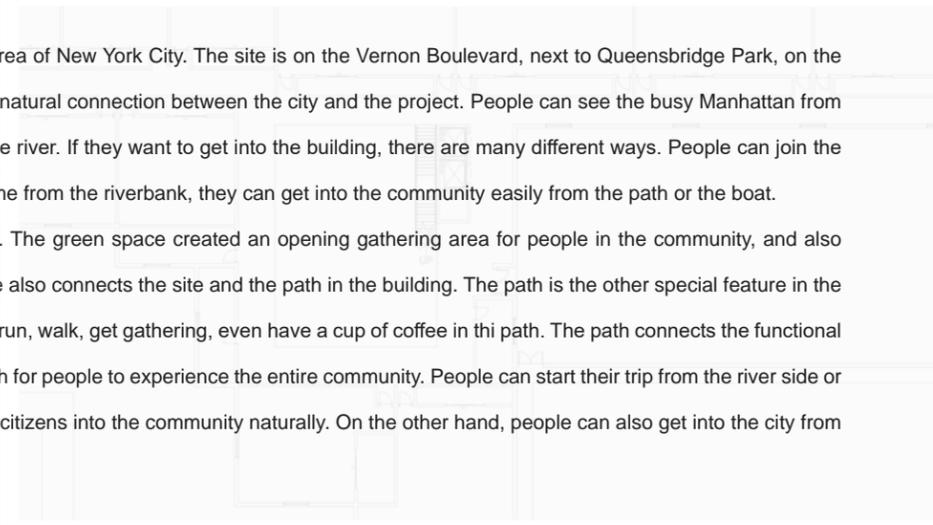


TIMBER IN THE CITY: LIFE 360

Green Building (Competition) Design Long Island City, NY, USA

The project is a wood structure building in the downtown area of New York City. The site is on the Vernon Boulevard, next to Queensbridge Park, on the south side of the bridge. The site is at the river bank which provide a natural connection between the city and the project. People can see the busy Manhattan from the river side. The building can also be seen from the other side of the river. If they want to get into the building, there are many different ways. People can join the community from the street, the park, even the river. When people come from the riverbank, they can get into the community easily from the path or the boat.

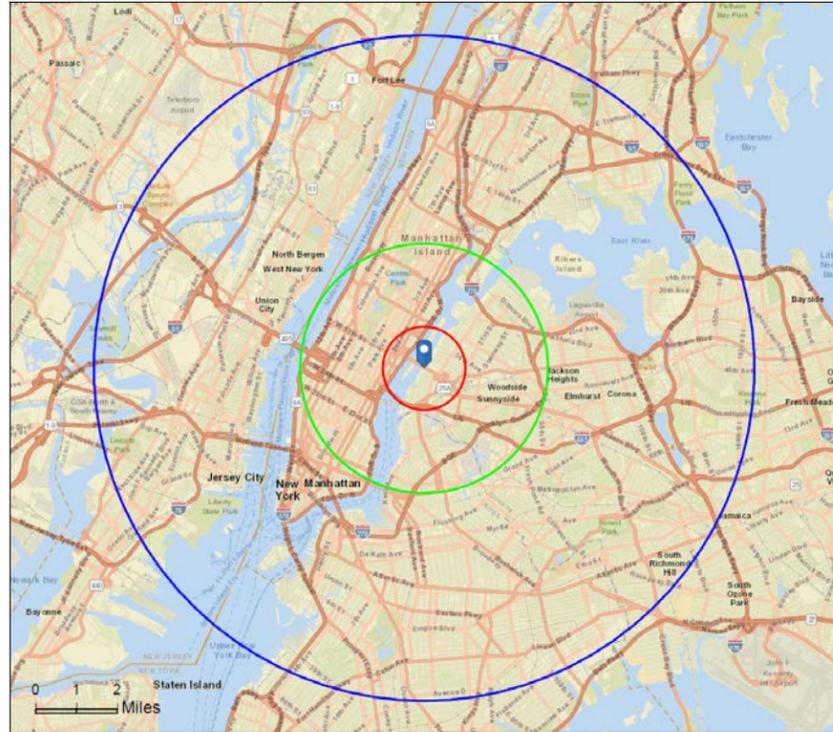
The landscape is also an important part of the community. The green space created an opening gathering area for people in the community, and also welcome people who are willing to join the community. The landscape also connects the site and the path in the building. The path is the other special feature in the community which enrich people's life from different ways. People can run, walk, get gathering, even have a cup of coffee in thi path. The path connects the functional clusters tightly together. This is not only a running track, but also a path for people to experience the entire community. People can start their trip from the river side or the main entrance of the Vernon Boulevard. Both sides can bring the citizens into the community naturally. On the other hand, people can also get into the city from the river bank or the boulevard.



SITE COMMUNITY ANALYST

Ed Koch Queensboro Bridge (Lower Level), Long Island City, NY, USA
Rings: 1, 3, 8 radii

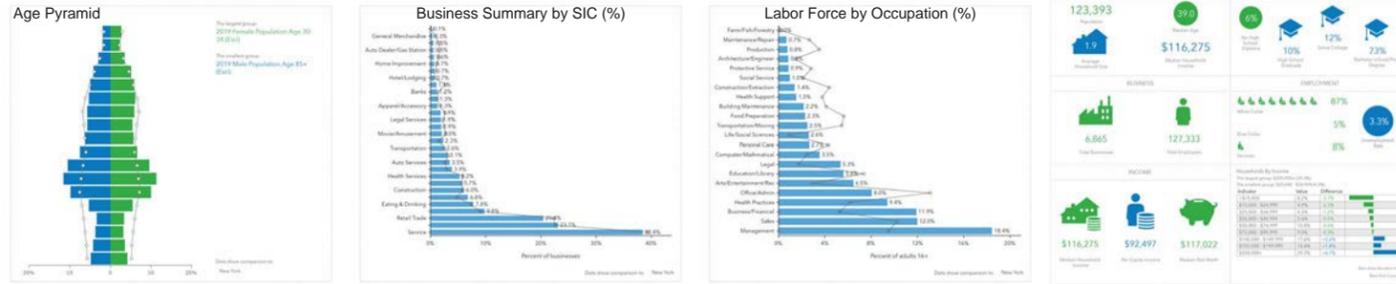
Site Details Map
Latitude:40.75
Longitude: -73.95



This site located in:

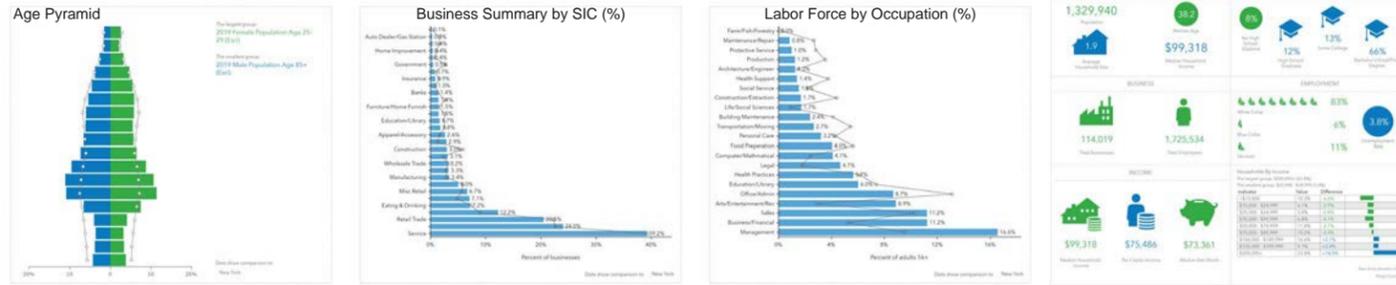
City: New York
County: Queens County
States: New York
Zip Code: 11101
Latitude and Longitude: 40.75 and -73.95

1 MILE RATIO



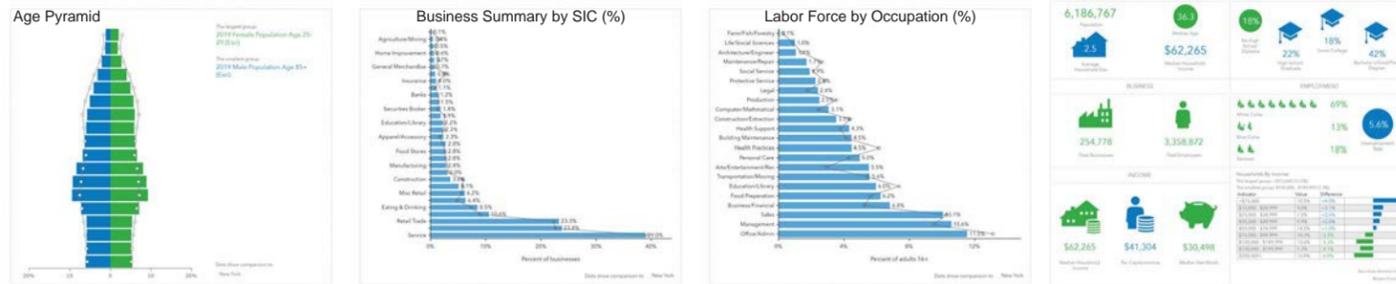
It is a one-mile ratio from the site. The total population is around 123,000. The median age is 39. Most residents are around age 35, and gender is average. Besides, The smallest group is the age of over 85. It is a high income and well-educated area. Over 70% of the residents have bachelor's degrees or higher, and the median household income is \$116,275. The largest business in this area is service, and the second is retail trade. However, the labor force is more in management. People usually live in two as a group, and most of them are white-collar.

3 MILES RATIO



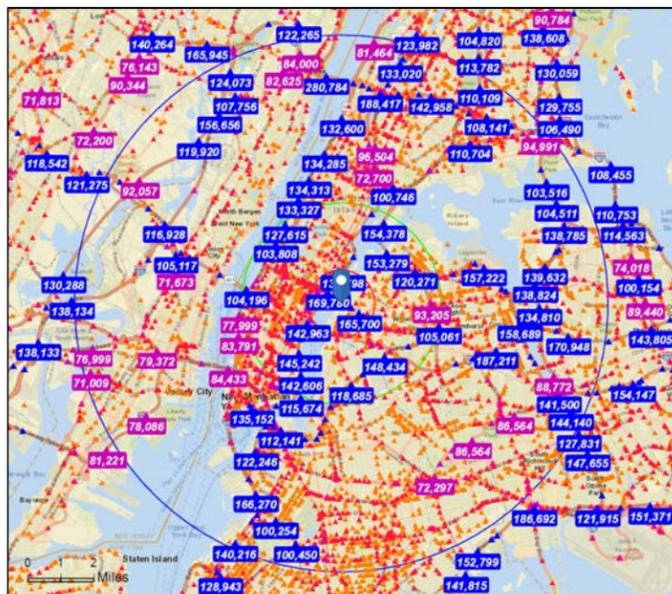
It is a three-mile ratio from the site. The population is around 1,330,000, which is much larger than the one-mile ratio. Most residents are around age 30. The average age is a little smaller than above. Over 60% of the residents have bachelor's degrees or higher, and the median household income is \$99,318. This data doesn't present better than above. The largest business and labor force are still the same. Average household size is similar, and most of them are still white-collar. However, there is some blue-collar start to appear.

8 MILES RATIO



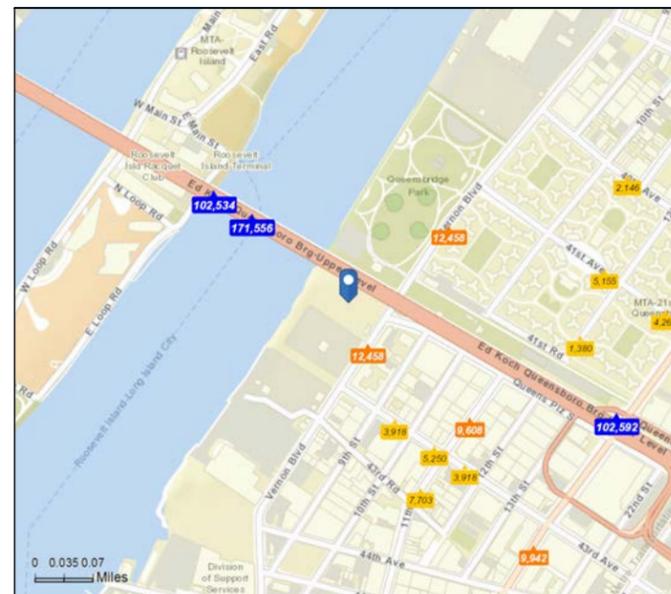
It is an eight-mile ratio from the site. The population is around 6,187,000. Most residents are around age 25. The average age is smaller than the one-mile ratio. Only 42% people have bachelor's degrees or higher, and the median household income is \$62,265. This is much lower than before. Besides, almost 20% of the residents don't have a high school diploma. The largest business is still the same, but the largest labor force is the office and administrator. The average household size reaches 2.5, which means there's more three-people family.

TRAFFIC COUNT



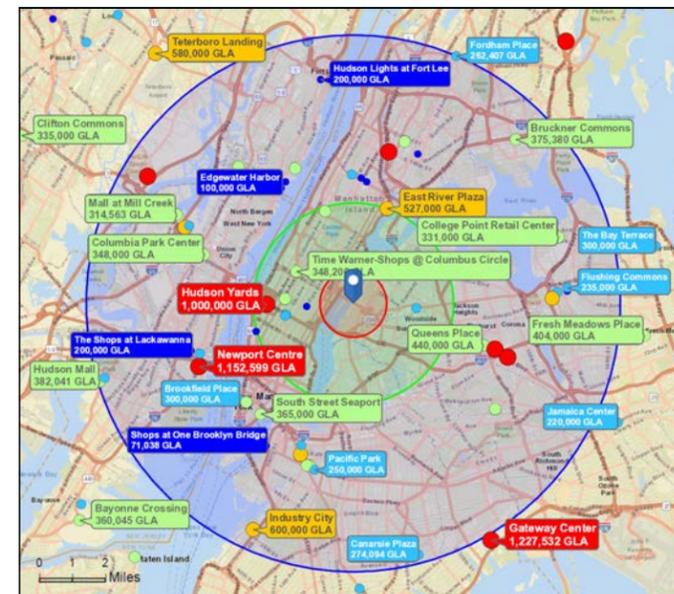
Average Daily Traffic Volume
 ▲ Up to 6,000 vehicles per day
 ▲ 6,001-15,000
 ▲ 15,001-30,000
 ▲ 30,001-50,000
 ▲ 50,001-100,000
 ▲ More than 100,000 per day

TRAFFIC COUNT CLOSE - UP



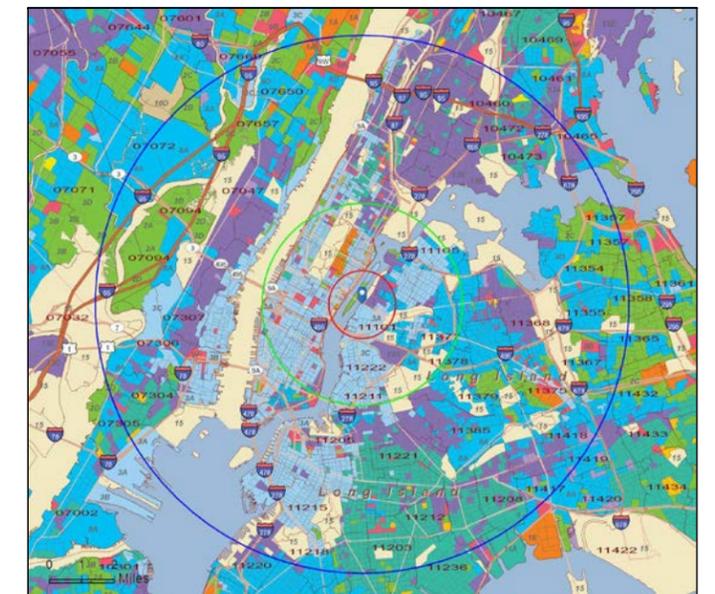
Average Daily Traffic Volume
 ▲ Up to 6,000 vehicles per day
 ▲ 6,001-15,000
 ▲ 15,001-30,000
 ▲ 30,001-50,000
 ▲ 50,001-100,000
 ▲ More than 100,000 per day

MAJOR SHOPPING CENTER



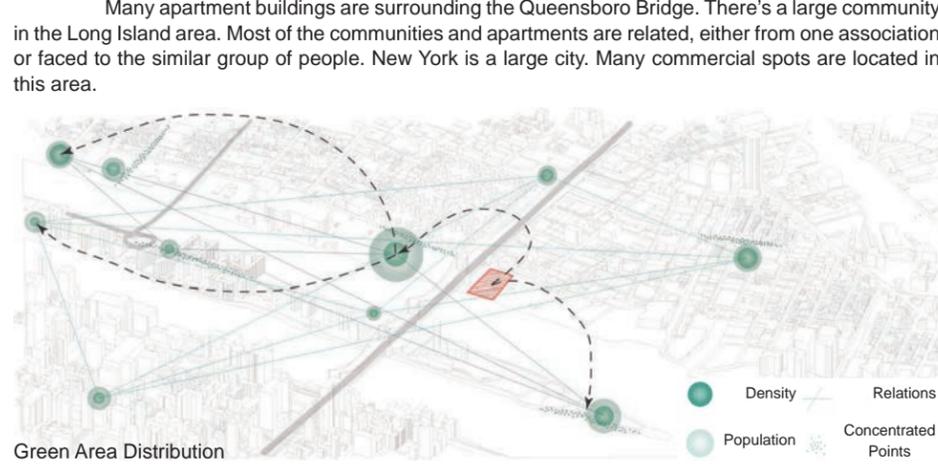
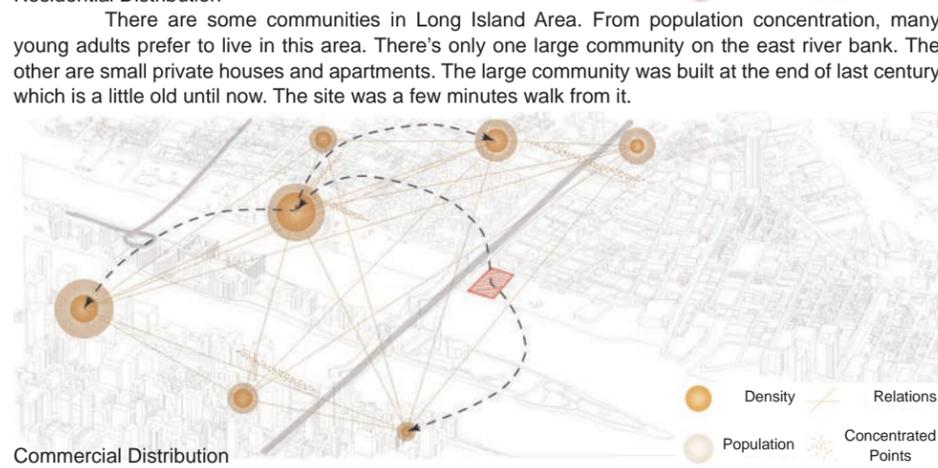
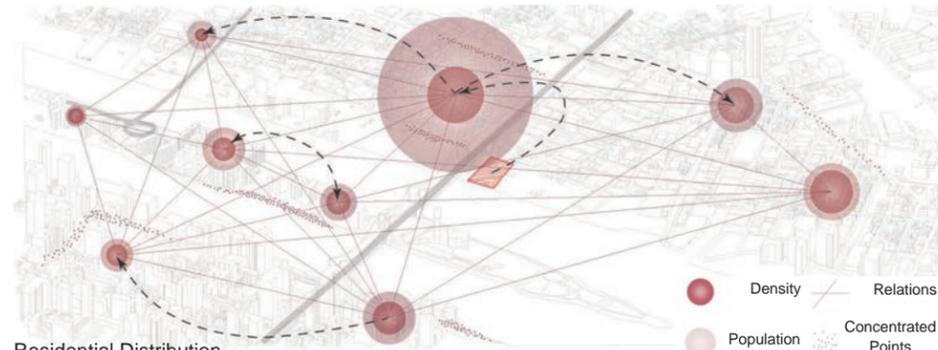
Gross Leasable Area
 ● Less than 200,000 sq ft
 ● 200,001-300,000
 ● 300,001-500,000
 ● 500,001-800,000
 ● More than 800,000

DOMINANT TAPESTRY

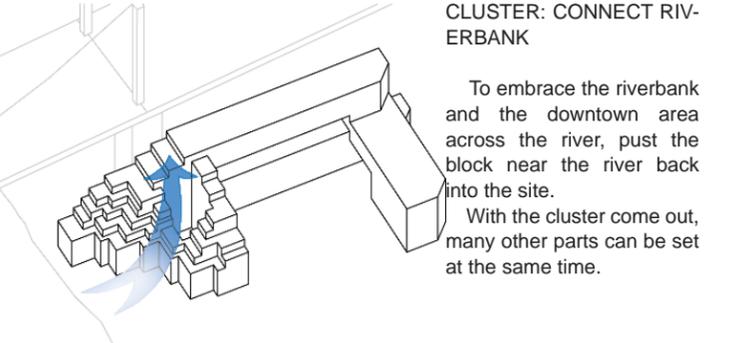
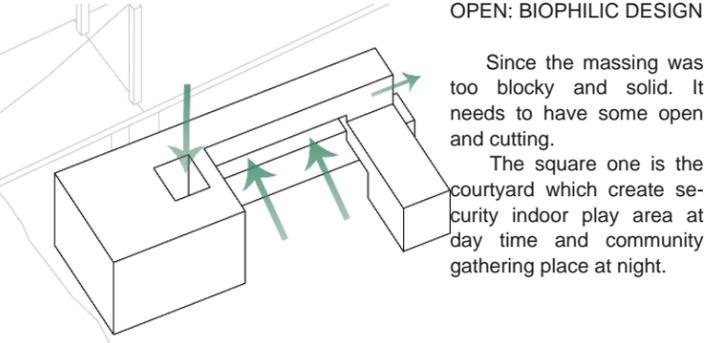
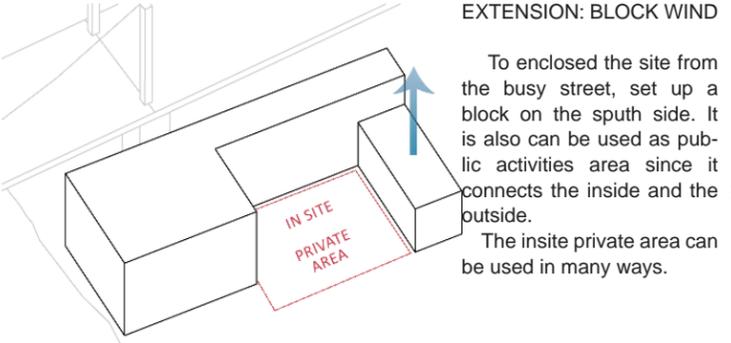
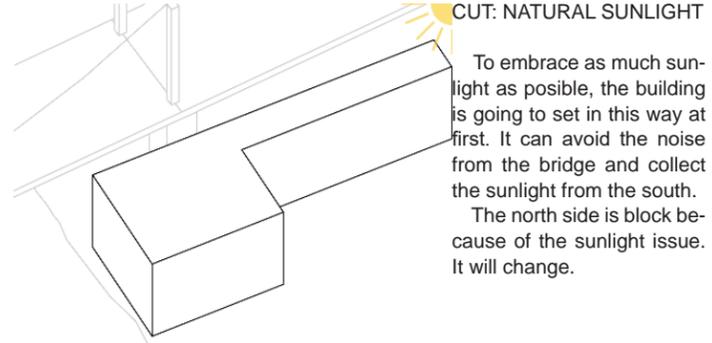


Tapestry LifeMode
 ■ L1: Affluent Estates ■ L8: Middle Ground
 ■ L2: Upscale Avenues ■ L9: Senior Styles
 ■ L3: Uptown Individuals ■ L10: Rustic Outposts
 ■ L4: Family Landscapes ■ L11: Midtown Singles
 ■ L5: GenUrban ■ L12: Hometown
 ■ L6: Cozy County ■ L13: Next Wave
 ■ L7: Ethnic Enclaves ■ L14: Scholars and Patriots

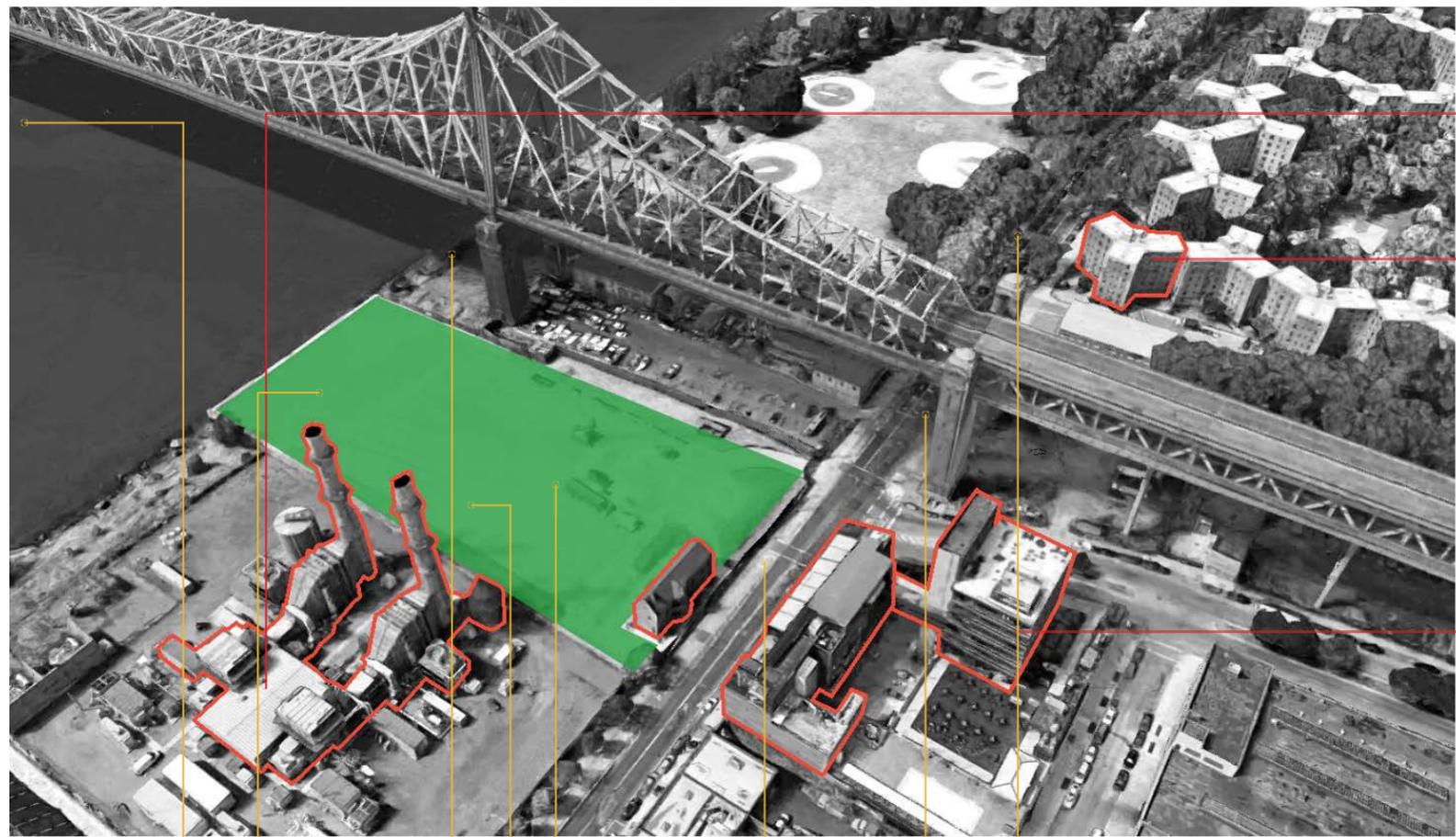
GENERAL SITE ANALYSIS



MASSING DEVELOPMENT



SITE REVIEW



SITE PHOTO



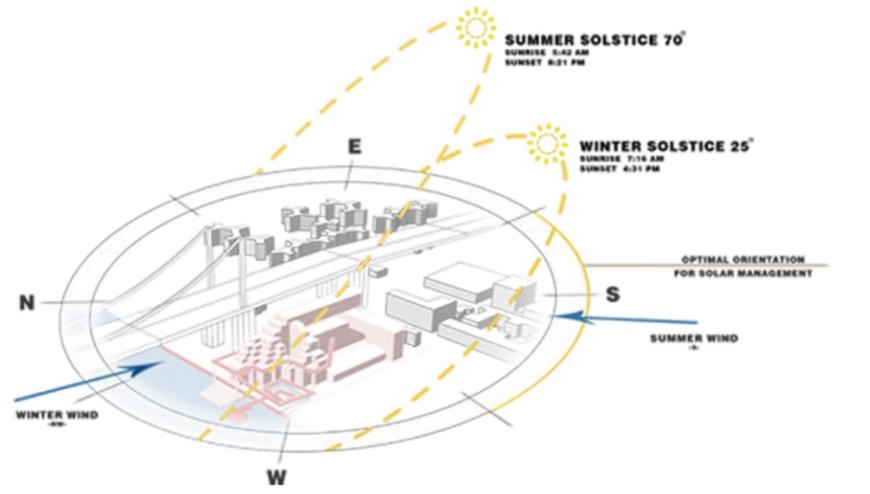
INDUSTRIAL AREA

RESIDENTIAL AREA

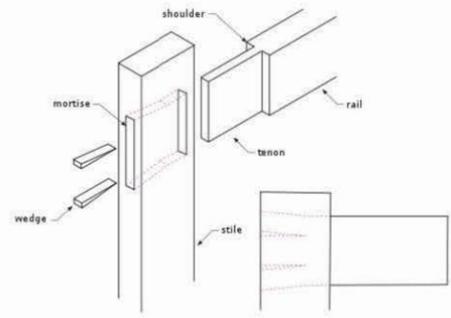
Block: 477
 Lot: 15
 Lot Area: 106,200 SQ FT (678' x 606')
 Primary Zoning: M1-5/R10
 Maximum Allowable Residential FAR: 10
 Maximum Allowable Commercial FAR: 5
 Maximum Allowable Facility FAR: 10
 Flood Zone: Zone A

COMMERCIAL AREA

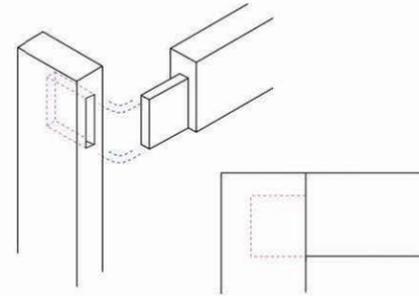
River bank is on the north side which get less sunlight. However, the south side is the street. It is a public area with noise. The bridge is also close to the site which should also considered about the noise from the heavy traffic.



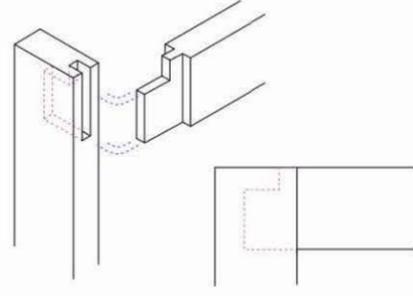
WOOD STRUCTURE DETAILS RESEARCH



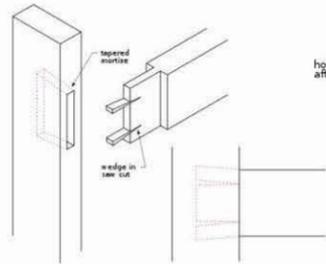
A traditional through, wedged, mortise and tenon joint



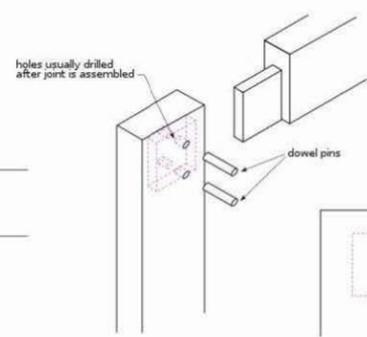
A stub tenon corner joint



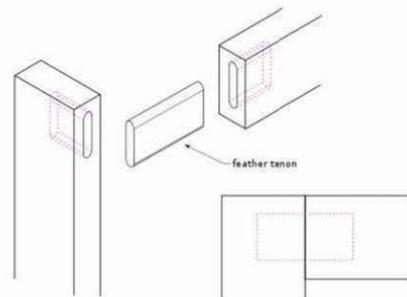
A haunched stub tenon corner joint



A foxtail wedged tenon joint



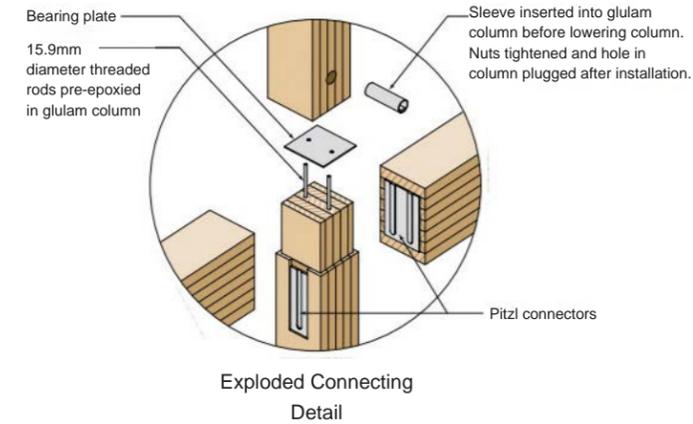
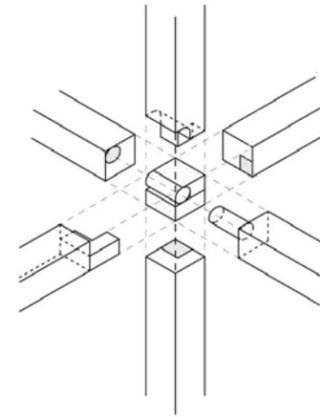
A pinned corner tenon joint



A modern feather tenon joint (primarily called a loose tenon)

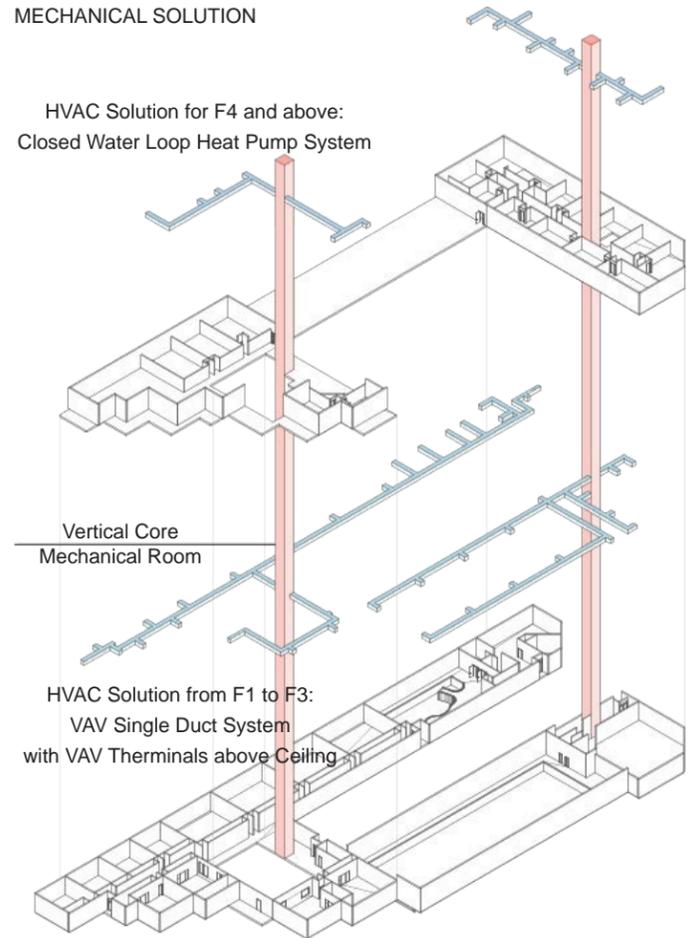
Final Solution (General)

The central wood piece needs to support the force from different directions. Therefore, the shape needs to be asymmetrical in case of unstable force bearing. Different parts may have different shapes. The image is only an example under the conditions it presents.



MECHANICAL SOLUTION

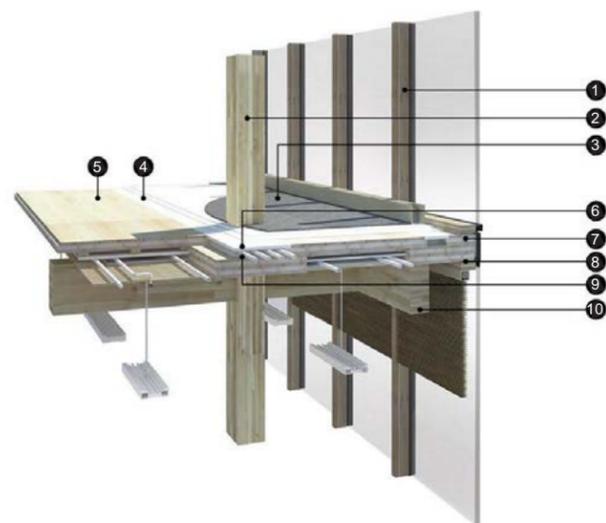
HVAC Solution for F4 and above:
Closed Water Loop Heat Pump System



MATERIAL CHOICE

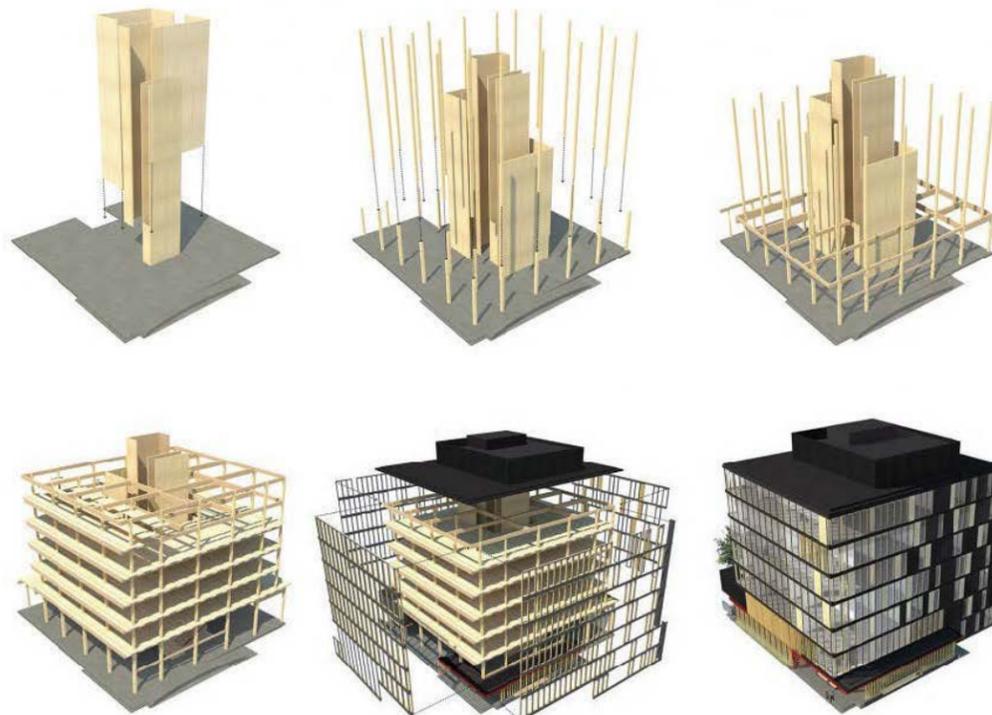


WALL AND FLOOR CONNECTION DETAIL

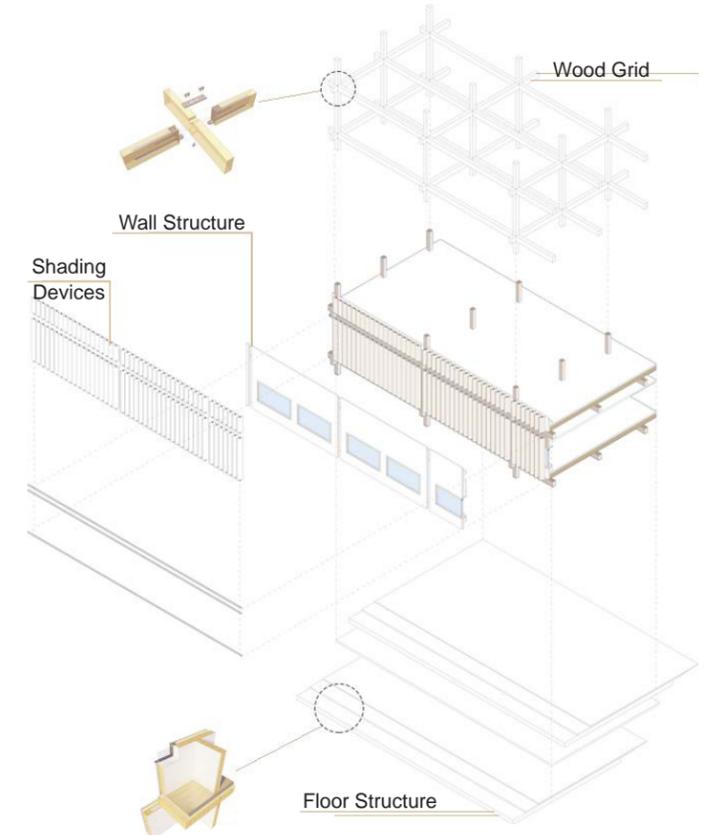


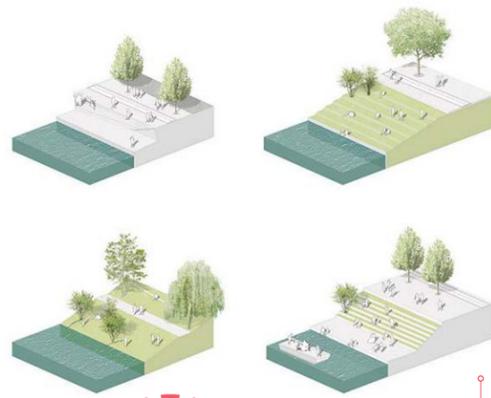
- | | |
|-----------------------------------|---|
| 1. Laminated veneer lumber mulion | 6. 13mm plywood (two-ply) |
| 2. Glulam column, 12"x11 1/2" | 7. 99mm three-layer CLT panel |
| 3. Carpet | 8. 169mm five-layer CLT panel |
| 4. 1/4" acoustical underlayment | 9. 25mm semi-rigid glass-fiber insulation board (two-ply) |
| 5. 99mm three-layer CLT panel | 10. Glulam beam, dimensions vary |

OVERALL STRUCTURE SOLUTION



STRUCTURE DETAILS





RIVERFRONT DESIGN

It is a place for people to take a walk and share happiness. The design makes the riverbank get closer to the community. It also connects surrounding communities, business area, and the park.



CENTRAL UNIT

This kind of apartment is in the central area. It faces to the community private green space and the swimming pool. It is a quite and composed space to live. Highly recommend to a person who is single. No one can deny a tiny delicate room like that in this way.



RIVERBANK UNIT

This apartment is facing to the riverbank which is quite and peace. There's a huge terrace for each apartment. People can have social activities or just sitting there appreciate the beautiful scenery.



FREELANCER AREA

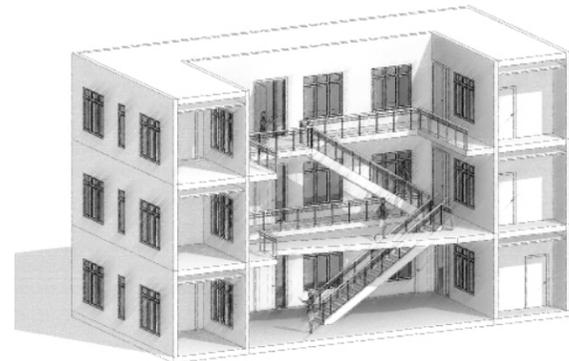
More than 20% of people working as a freelancer in Long Island area and 18% of people in Manhattan. The project set a freelancer working area to attract more people whose working as a freelancer.

CENTRAL ATRIUM

It was designed for daylight collection at first. Then it becomes a special feature in the building. Different layers have different sceneries in this atrium. It was half-open in the middle and total open on the top. It is also the main circulation area, especially for high-level users. It is also an open area that connects the river with the pool. The grassland and open space reach a natural balance between two water features.

APARTMENT

The apartment face to the river has a balcony that can enjoy their own riverview. There's also a green roof for people to experience nature outside the bedroom. The northwest side is a stairs-up shape which can make more outside area for users.

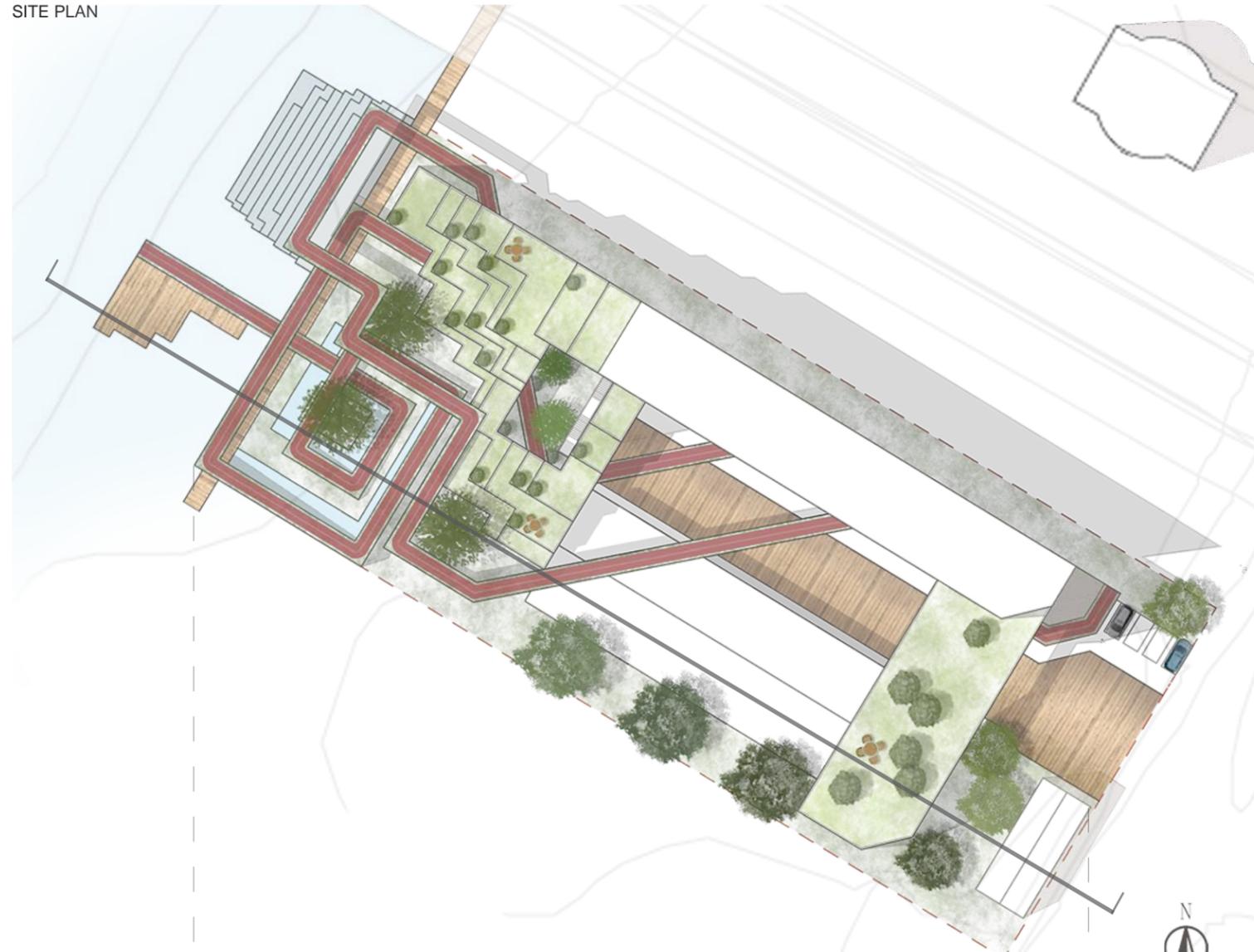


COURTYARD UNIT

This is facing the central courtyard. People who like group activities or like meeting new friends can try here. The courtyard is totally open. People can always find someone who had similar interests to you.

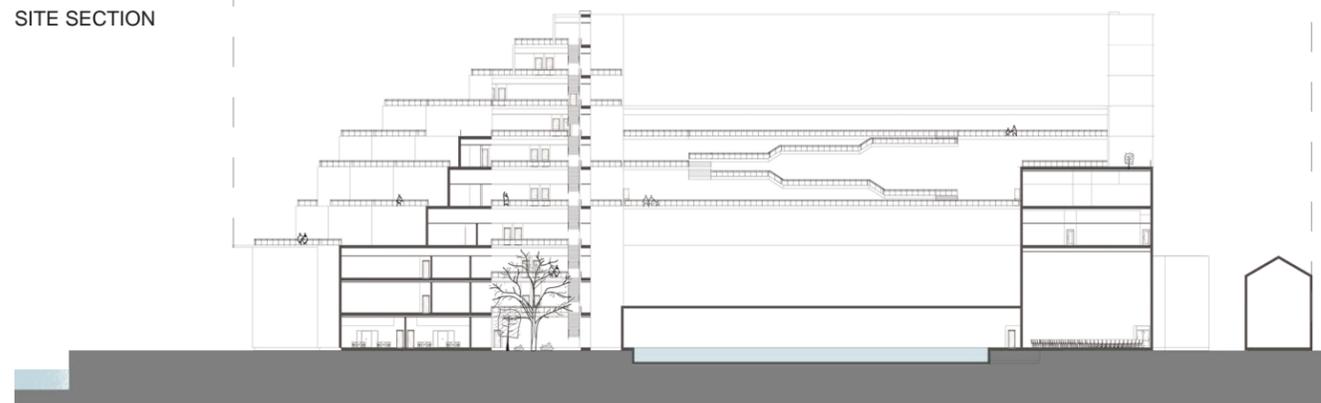


SITE PLAN

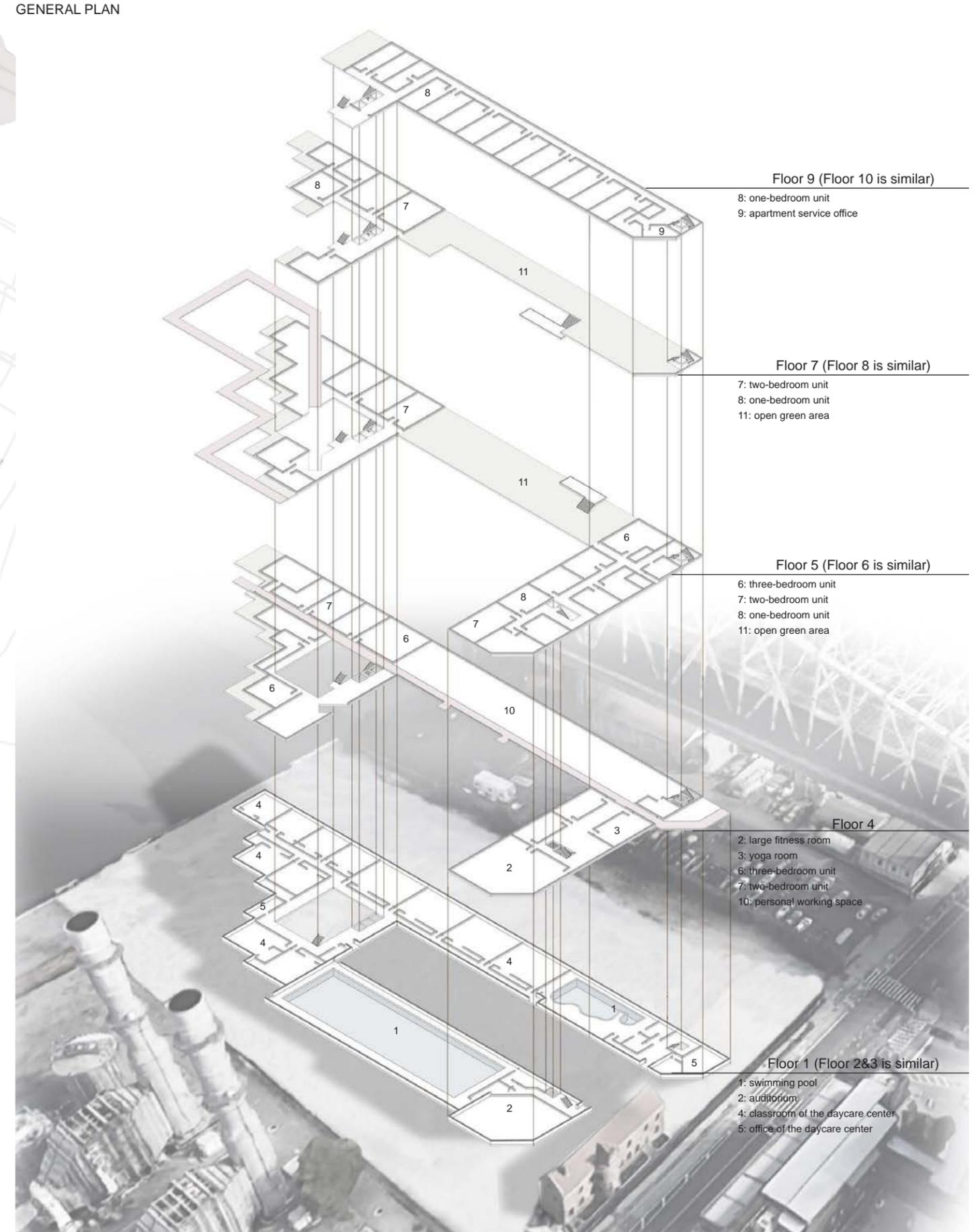


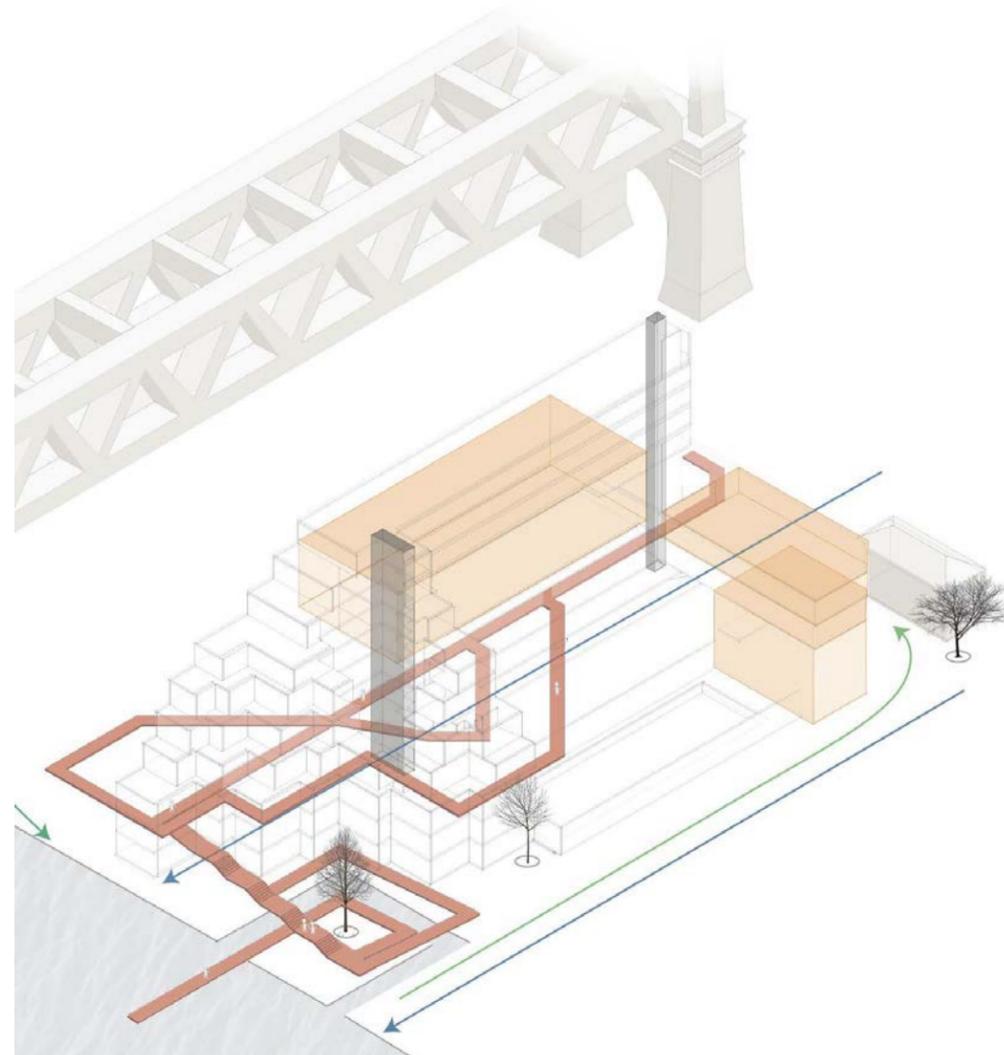
The drawing above is the site plan, and it shows almost all the special features in the design. The red part is the running track, which connects the fitness center with the apartment on the fourth and fifth floor. The green area is the open green space, including the riverfront balcony. Wood panels cover the walking path on the ground. There's a central atrium on the northwest of the building. According to the section, people can see the open space in the building. Besides, the swimming pool and the river link the building in some ways.

SITE SECTION

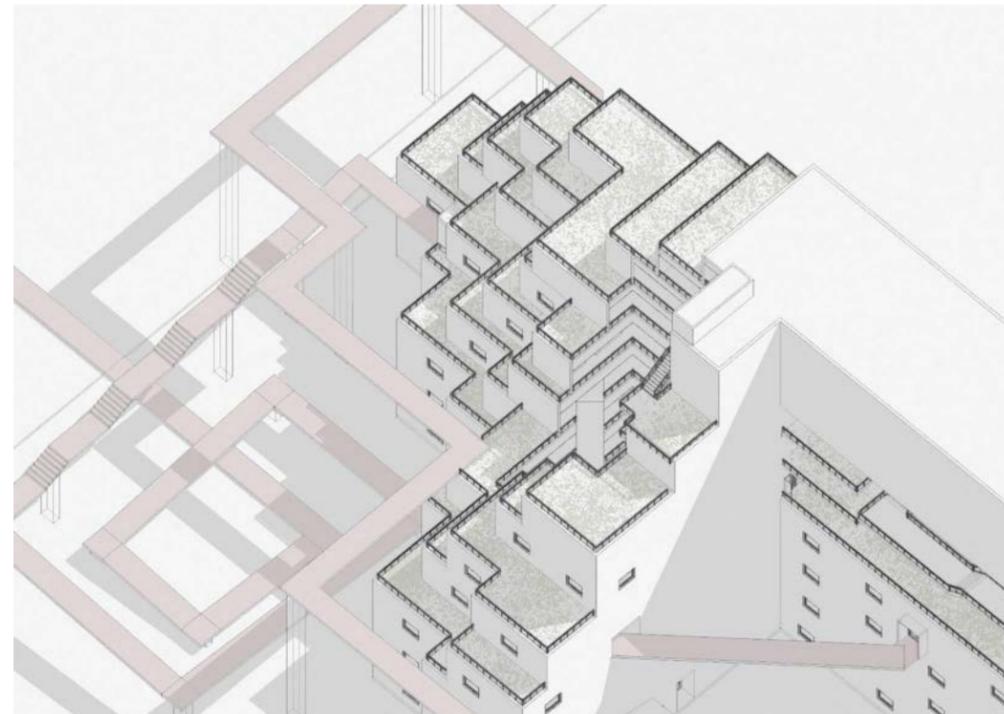


GENERAL PLAN





CONCEPTUAL VISUALIZATION II



LEED v4 for BD+C: New Construction and Major Renovation
Project Checklist

Project Name: Timber in the City: LIFE 360
Date: May 29, 2019

Y ? N
Credit

Integrative Process **1**

24	0	0	Location and Transportation	16
12			Credit LEED for Neighborhood Development Location	16
1			Credit Sensitive Land Protection	1
1			Credit High Priority Site	2
3			Credit Surrounding Density and Diverse Uses	5
4			Credit Access to Quality Transit	5
1			Credit Bicycle Facilities	1
1			Credit Reduced Parking Footprint	1
1			Credit Green Vehicles	1

9	0	0	Sustainable Sites	10
Y			Prereq Construction Activity Pollution Prevention	Required
1			Credit Site Assessment	1
2			Credit Site Development - Protect or Restore Habitat	2
1			Credit Open Space	1
2			Credit Rainwater Management	3
2			Credit Heat Island Reduction	2
1			Credit Light Pollution Reduction	1

7	0	0	Water Efficiency	11
Y			Prereq Outdoor Water Use Reduction	Required
Y			Prereq Indoor Water Use Reduction	Required
Y			Prereq Building-Level Water Metering	Required
1			Credit Outdoor Water Use Reduction	2
3			Credit Indoor Water Use Reduction	6
2			Credit Cooling Tower Water Use	2
1			Credit Water Metering	1

23	0	0	Energy and Atmosphere	33
Y			Prereq Fundamental Commissioning and Verification	Required
Y			Prereq Minimum Energy Performance	Required
Y			Prereq Building-Level Energy Metering	Required
Y			Prereq Fundamental Refrigerant Management	Required
4			Credit Enhanced Commissioning	6
14			Credit Optimize Energy Performance	18
1			Credit Advanced Energy Metering	1
1			Credit Demand Response	2
1			Credit Renewable Energy Production	3
1			Credit Enhanced Refrigerant Management	1
1			Credit Green Power and Carbon Offsets	2

5	0	0	Materials and Resources	13
Y			Prereq Storage and Collection of Recyclables	Required
Y			Prereq Construction and Demolition Waste Management Planning	Required
2			Credit Building Life-Cycle Impact Reduction	5
1			Credit Building Product Disclosure and Optimization - Environmental Product Declarations	2
1			Credit Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
0			Credit Building Product Disclosure and Optimization - Material Ingredients	2
1			Credit Construction and Demolition Waste Management	2

11	0	0	Indoor Environmental Quality	16
Y			Prereq Minimum Indoor Air Quality Performance	Required
Y			Prereq Environmental Tobacco Smoke Control	Required
1			Credit Enhanced Indoor Air Quality Strategies	2
1			Credit Low-Emitting Materials	3
1			Credit Construction Indoor Air Quality Management Plan	1
1			Credit Indoor Air Quality Assessment	2
1			Credit Thermal Comfort	1
2			Credit Interior Lighting	2
3			Credit Daylight	3
1			Credit Quality Views	1
0			Credit Acoustic Performance	1

2	0	0	Innovation	6
2			Credit Innovation	5
0			Credit LEED Accredited Professional	1

1	0	0	Regional Priority	4
1			Credit Regional Priority: Outdoor Running Track	1
0			Credit Regional Priority: Specific Credit	1
0			Credit Regional Priority: Specific Credit	1
0			Credit Regional Priority: Specific Credit	1

82 0 0 TOTALS Possible Points: **110**
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110

PROJECT BUDGET AND BUILDING COST ANALYSIS (ROUGH VERSION)

Location: Queens, NYC
Date: April 30, 2019

Building Function/Type: Mixed Residential
Construction Type: Midrise Timber

Net Area = 196,725 sq.ft
Gross Area = 240,000 aq.ft
Efficiency Ratio = 81.97%

1. Site Acquisition Cost	Enter the project site purchase/acquisition cost at right: \$2,500,000	5. Contingencies	Bidding Contingency: \$60,000
2. Construction Cost	Building Construction (Sub-total): \$30,066,336		Construction Contingency: \$200,000
3. Professional Services	Surveys (Sub-total): \$360,796	6. Financing	Subtotal of Financing Expenses: \$0
	Soil Analysis (Sub-total): \$360,796		Total, Unadjusted Project Cost = \$34,147,928
	Architecture/Engineering (Architectural): \$1,503,317	II- COST FACTOR ADJUSTMENTS	Total Cost Factor Adjustments = 0.84 (Variation) \$25,861,860
	Architecture/Engineering (Structural): \$360,796	III- ADDITIONS AND SUBTRACTIONS	Outside Jogging Track (2055 linear ft, \$1000/lf): \$2,055,000
	Architecture/Engineering (Mechanical): \$240,531		(material: wood slab/ heavy timber)
4. Miscellaneous	Advertising (Sub-total): \$100,000		Terrace+Greenroof (Sub-total): \$1,960,000
	Utility Connections (Sub-total): \$200,000		Sub-total Additions and Subtractions = \$4,015,000
	Building Permit (Sub-total): \$220,000		Total, Adjusted Project Cost = \$64,024,788
	Inspection (Sub-total): \$120,000		Project Cost per sq.ft. = \$266.77
	Testing (Sub-total): \$60,000		

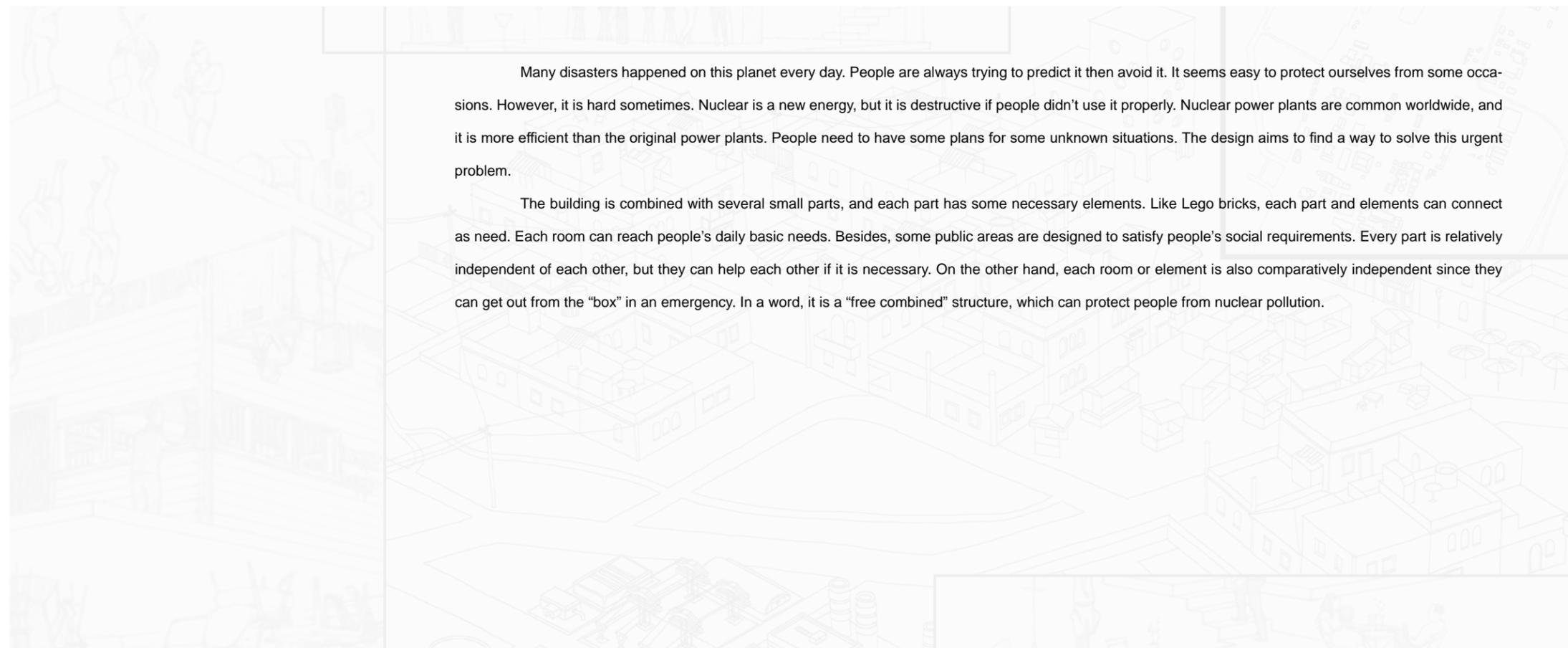


Surviving Box

Experimental Future Design
Aoyamacho, Japan

Many disasters happened on this planet every day. People are always trying to predict it then avoid it. It seems easy to protect ourselves from some occasions. However, it is hard sometimes. Nuclear is a new energy, but it is destructive if people didn't use it properly. Nuclear power plants are common worldwide, and it is more efficient than the original power plants. People need to have some plans for some unknown situations. The design aims to find a way to solve this urgent problem.

The building is combined with several small parts, and each part has some necessary elements. Like Lego bricks, each part and elements can connect as need. Each room can reach people's daily basic needs. Besides, some public areas are designed to satisfy people's social requirements. Every part is relatively independent of each other, but they can help each other if it is necessary. On the other hand, each room or element is also comparatively independent since they can get out from the "box" in an emergency. In a word, it is a "free combined" structure, which can protect people from nuclear pollution.



USUAL LIFE BEFORE VOLCANO ERUPTION



9: 00 AM Library

The library is quiet in the morning, and it opened an hour ago. People can do research and reading here. It is a public area for the city; also a part of the represents of culture and civilization.



10: 00 AM Hospital

The hospital has just opened, so there are not that many people. It is usually busy at this location since many workers are effect by the radiation after a long time working in the nuclear power plant.



12: 00 AM School

It is lunch-time right now. The school lab is empty because students are happy to relax for a while during lunch break. There's still someone in the corner since there's always someone working harder than others.



2: 00 PM Gallery

This is the largest gallery in the town. It is usually busy during weekends, so it's hard to see many visitors now. There's a group of students who are following their teachers visiting the exhibition right now.



4: 00 PM Park

This is the largest park outside town, including a small farm for visiting and experiencing. Many families would like to come here during weekends. Only a few people come here to take a relax on weekdays.



5: 00 PM Kitchen

This is the kitchen in a high-rise apartment. It is a single-family. A young lady just moved inside, and she hasn't come back home right now. She always works very late. It's hard to see her at home before eight in the evening.



6: 00 PM Bedroom

It is the bedroom in the same high-rise apartment building. This is the home for a young couple. They have lived here since they got married. Both of them need to work outside on weekdays, and they are on the way back home now.



7: 00 PM Living Room

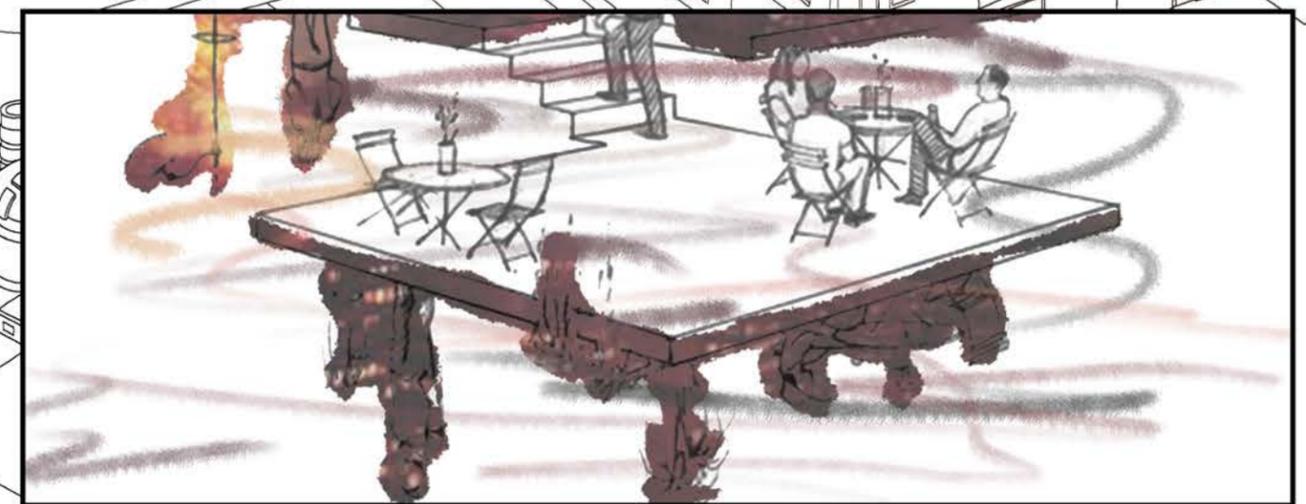
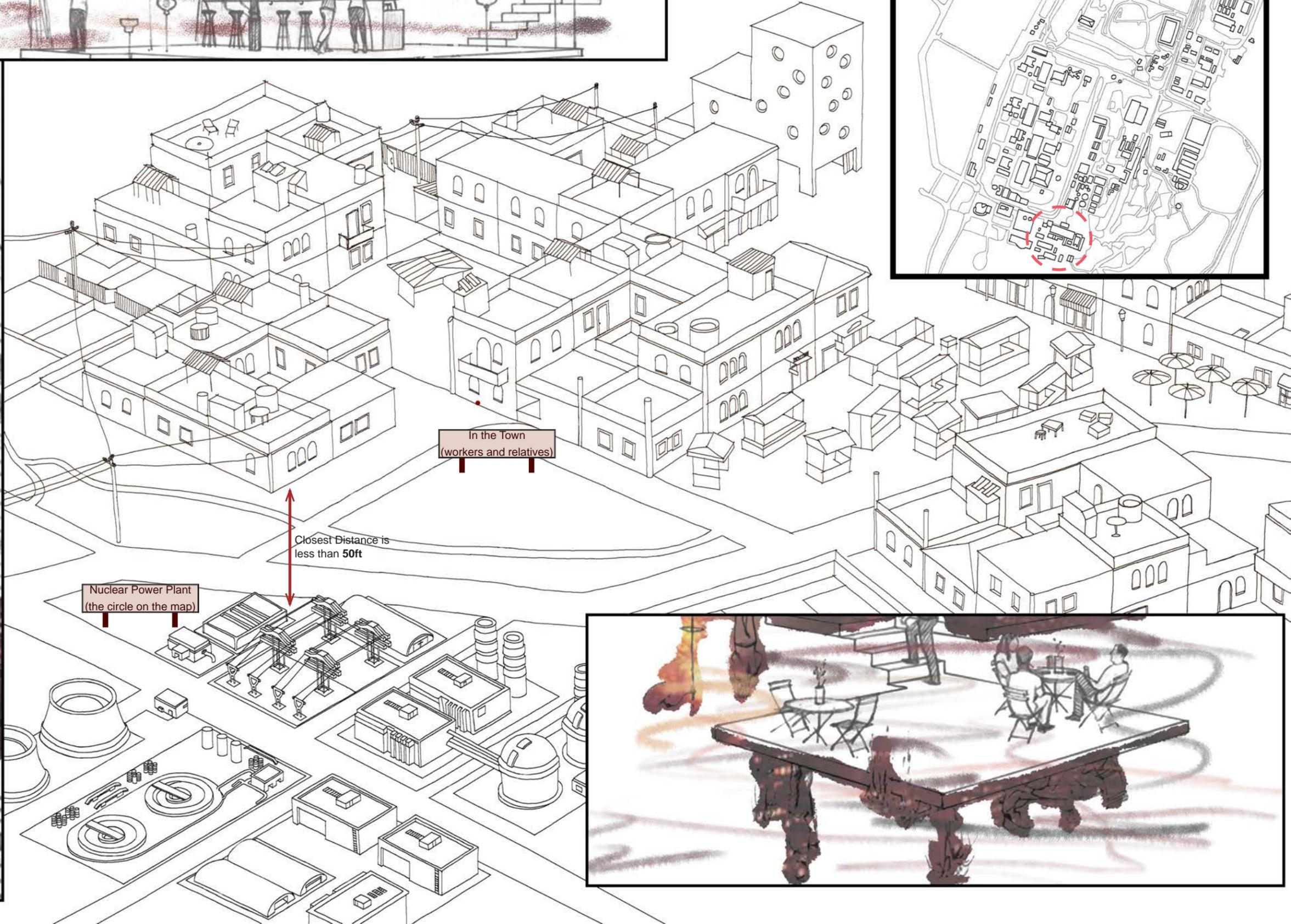
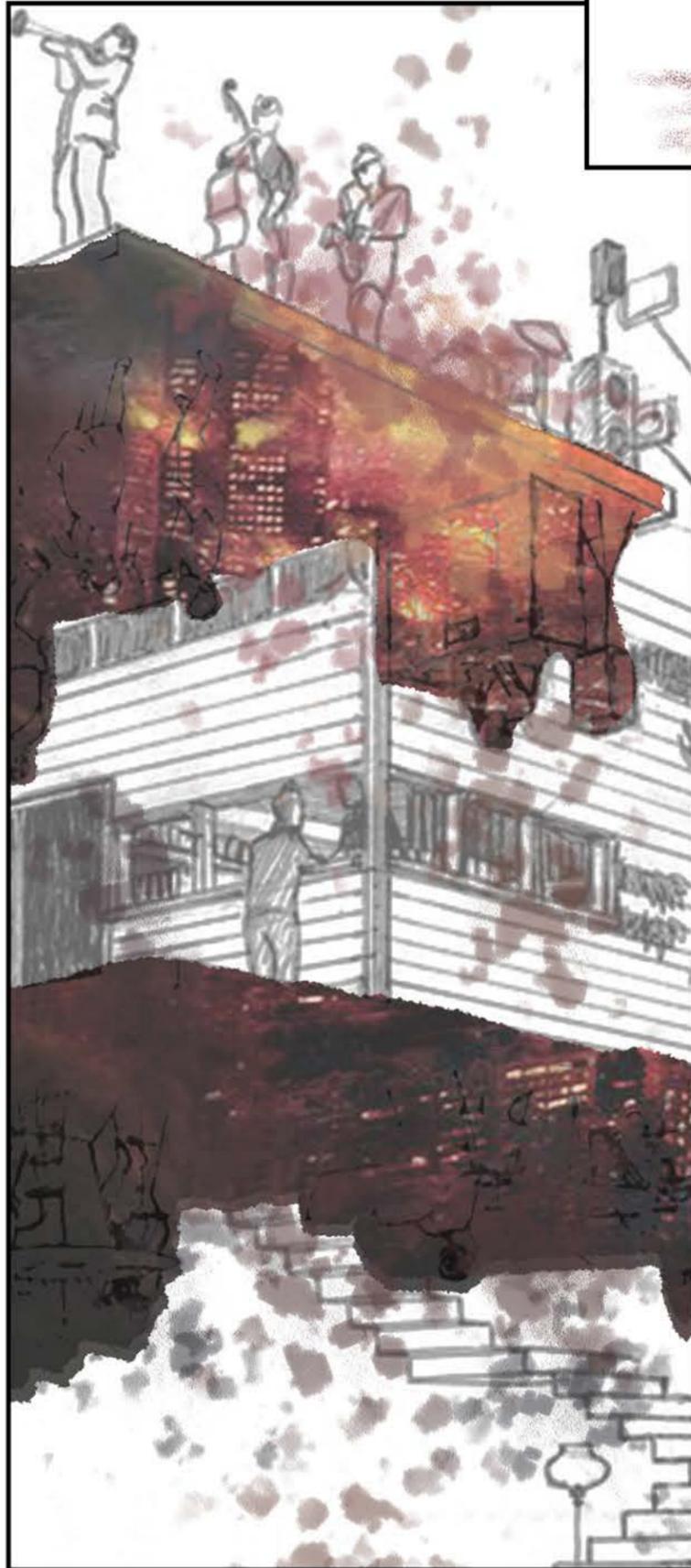
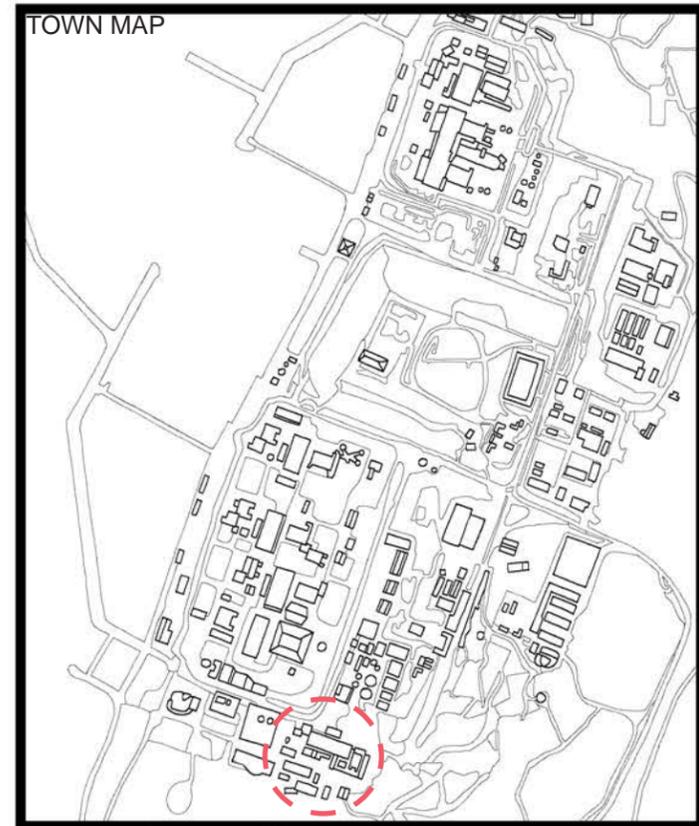
This is a small living room in a mid-rise apartment building. A family has lived here for over ten years. It is the activity room for their young daughter, and she usually holds parties here. However, she's out today.



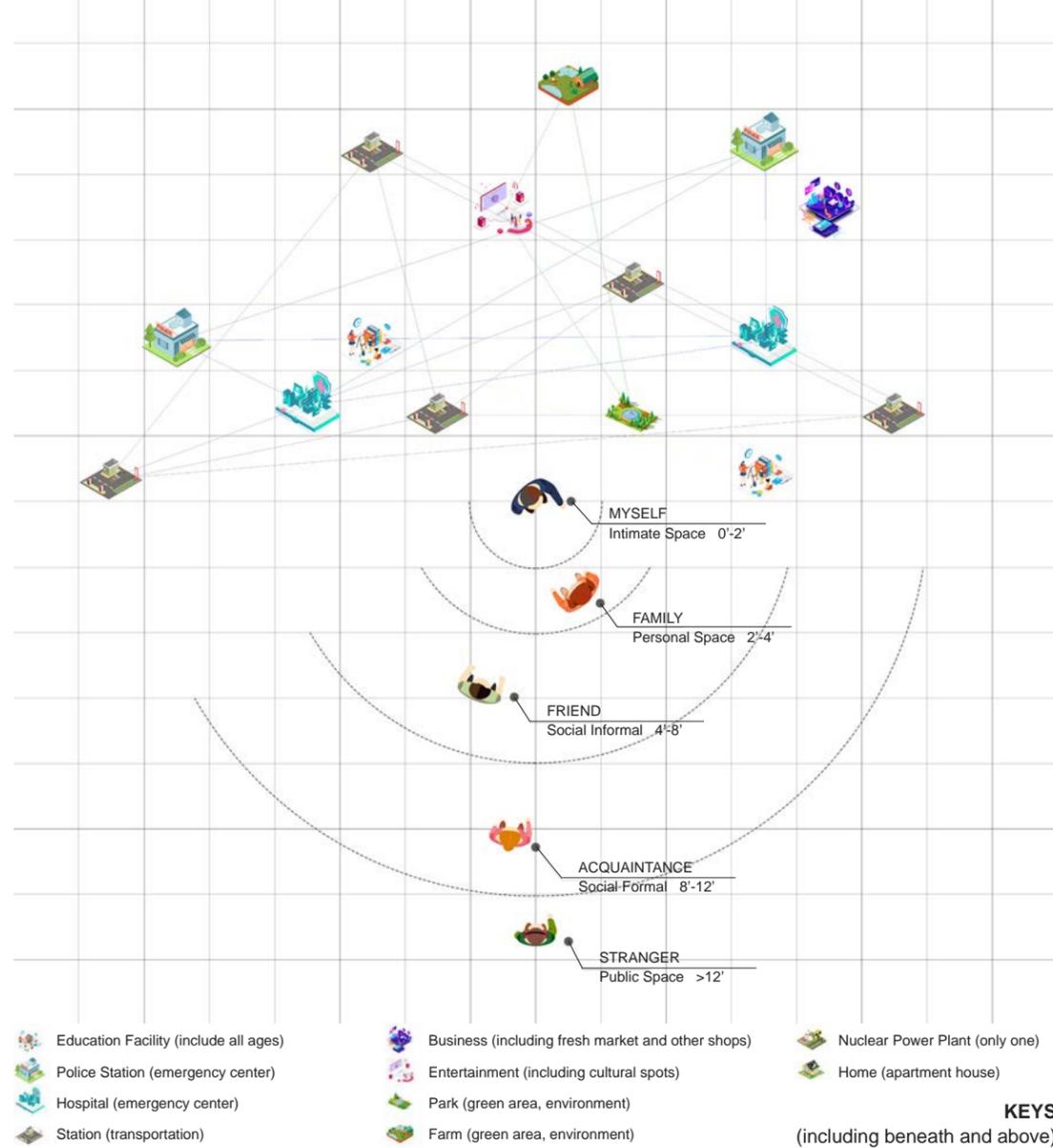
8: 00 PM Laundry Room

This is a villa outside town. It is the laundry room on the first floor, and it's the place for the servant working. She usually does the laundry in the daytime when the household outside to work. Therefore, there's no one here now.

PEOPLE'S LIFE IN THE TOWN



ACTIVITIES DISTANCE BETWEEN PEOPLE AND NECESSARY SPOTS



After the explosion, the box becomes an enclosed space that can protect the inside from nuclear pollution. Each box is an individual community that can support itself. As an independent system, some necessary facilities must be included, such as an emergency center, education, cultural center, park, etc. The top half image shows the covering ratio of each facility. Transportation is the most important thing in the community, so it should have multiple spots and connections to each other. Emergency centers include police stations and hospitals. There're also several in the box. Education and entertainment facilities are building for intelligence and psychology requirements. The education facility includes an elementary school, high school, and university to cover all ages. Entertainment spots are various, such as libraries, galleries, and even some outside playgrounds. Another important part of a complete society is retail trades. Fresh markets, shopping malls, and shops are in this category. To support all these social activities continuously working, a farm on the edge of each layer offers agricultural products every day.

These functional elements are located on different layers so that each of them can cover most of the apartment in the box. Some of them are necessary, but some are not. All of them can be divided into different groups, as the form on the right shows.

The bottom part of the image on the left shows the relationship between humans and humans. The top part shows the relationship between locations, including distance. Human relationships have four levels, as shows. The location has several properties, such as timeliness, receptivity, quantity, and hierarchy. Considering all these reasons, details of the location can be set in each box.

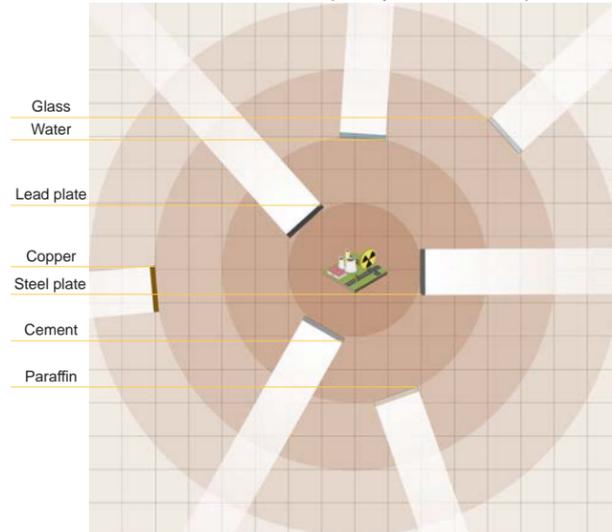
NECESSARY SPOTS COVER RATIO



The left image shows the distance from the apartment to each functional spot. The color circle range represents the working range of each location. The distance can reflect timeliness and receptivity in the neighborhood.

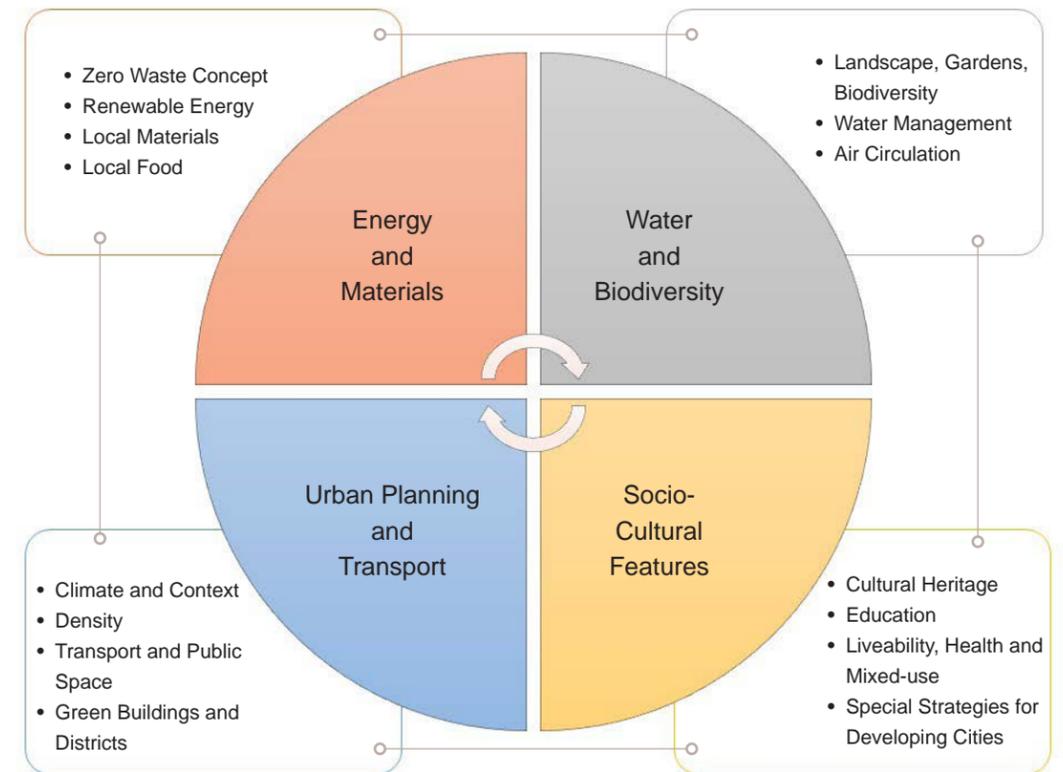
The right image shows the material that can be used as a nuclear safety structure. There is seven common material used in our daily life, and they can be divided into three-level. These three levels are named because of the protection ratio.

MATERIAL AFFECTION (radioprotection ratio)



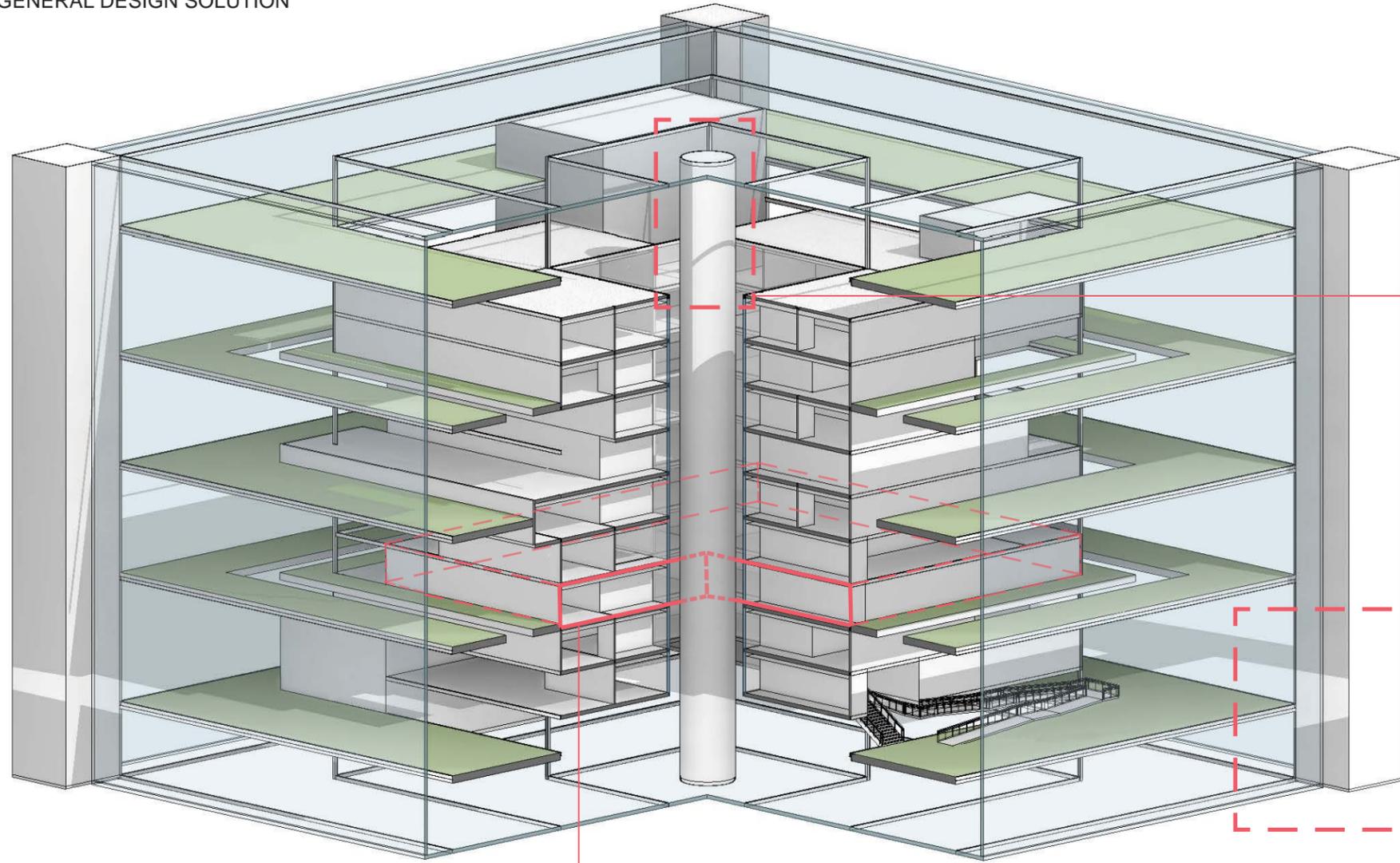
Facility Type		Education	Medical	Emergency	Security	Transportation	Park	Public Library	Museum	Trash Recycle	Nuclear Power Plant
Timeliness	urgent										
	non-urgent										
Receptivity	neighbor										
	non-neighbor										
Quantity	single										
	multiple										
Hierarchical	one-grade										
	multi-grade										
Average Area/ ft²		4,000	4,000	2,000	3,500	300X5	N/A	N/A	N/A	N/A	N/A

COMMUNITY NECESSITY AND HUMAN REQUIREMENT RESEARCH

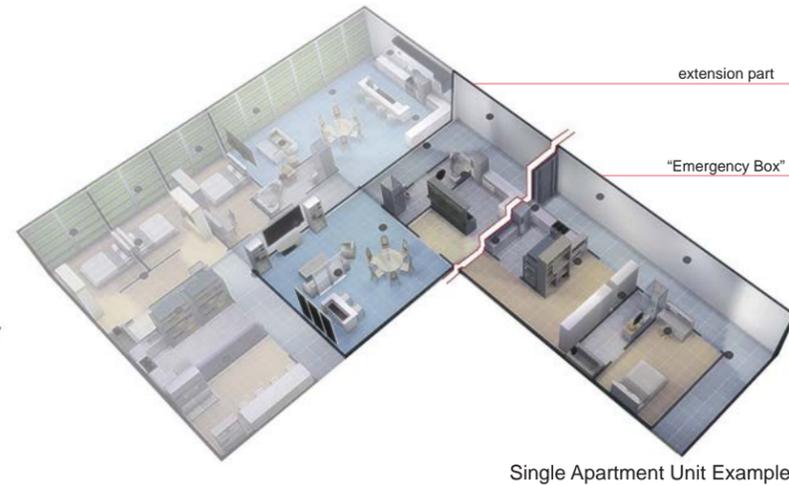
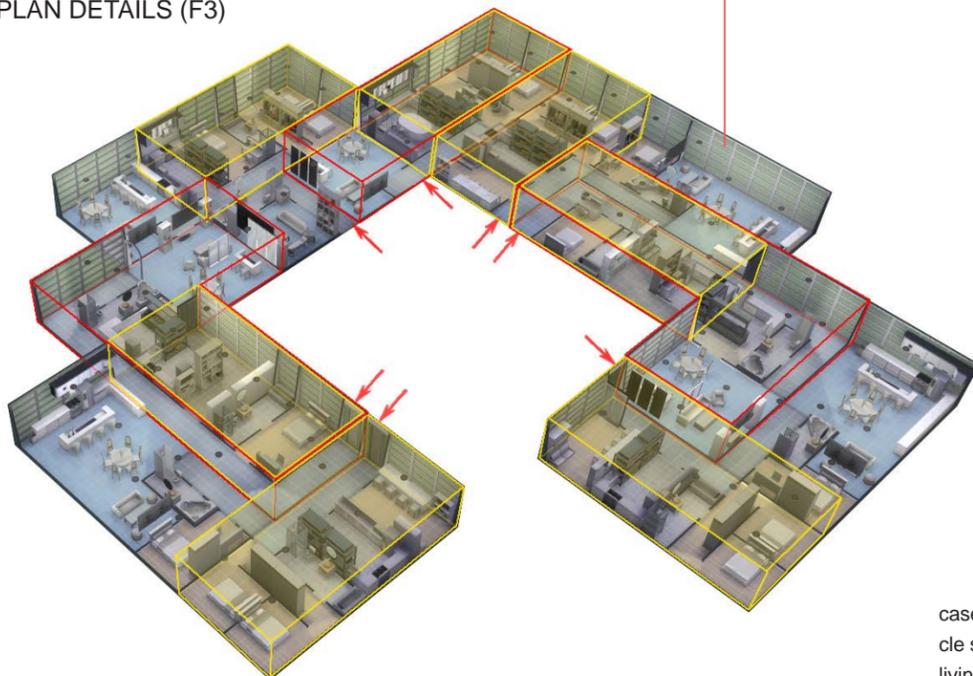


Floor Number	F1	F2	F3	F4	F5	F6	F7	F8	F9
Apartment Number	6	8	7	8	6	6	6	8	8
Apartment Set (L/ M/ S)	0/ 5/ 1	1/ 5/ 2	1/ 5/ 1	0/ 8/ 0	1/ 4/ 1	0/ 6/ 0	0/ 6/ 0	1/ 6/ 1	2/ 4/ 2
Public Place (Quantity)	2	1			2			2	3

GENERAL DESIGN SOLUTION

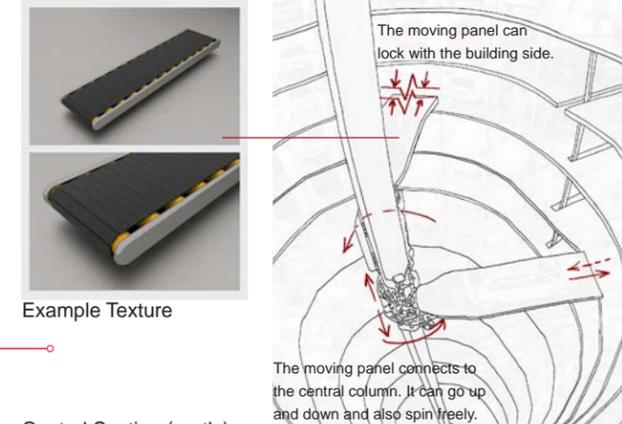


PLAN DETAILS (F3)



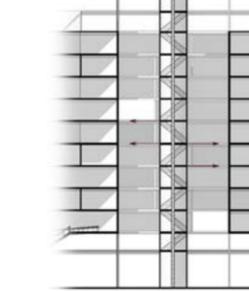
The yellow box is the "Emergency Box", which can reject from the building in special cases. It can move individually, and it is relatively independent of the building. The redline circle some apartment units, and the rest are not circled. The emergency box can reach all basic living requirements for people, including food, sleeping, toilet, and simple entertainment.

HUMAN-FLOW SOLUTION



Example Texture

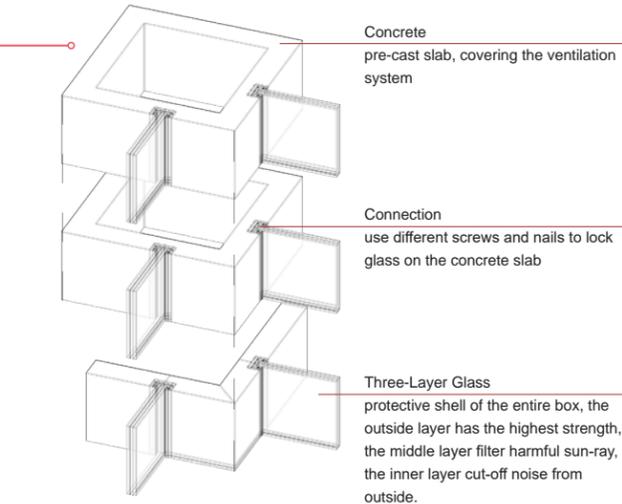
Central Section (partly)



CENTRAL TRANSPORT MACHINE

This is the main transportation method in the building, or we can say it's the circulation system. It has a similar theory with the elevator, but more flexible in operation. The column at the center is the major element. It holds one side of the moving panel, and the panel is the carrier for people moving up and down. The other side of the panel connects to the building.

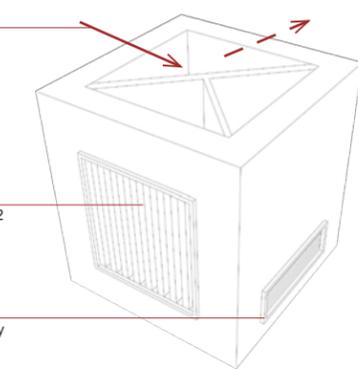
VENTILATION CORE STRUCTURE DETAILS



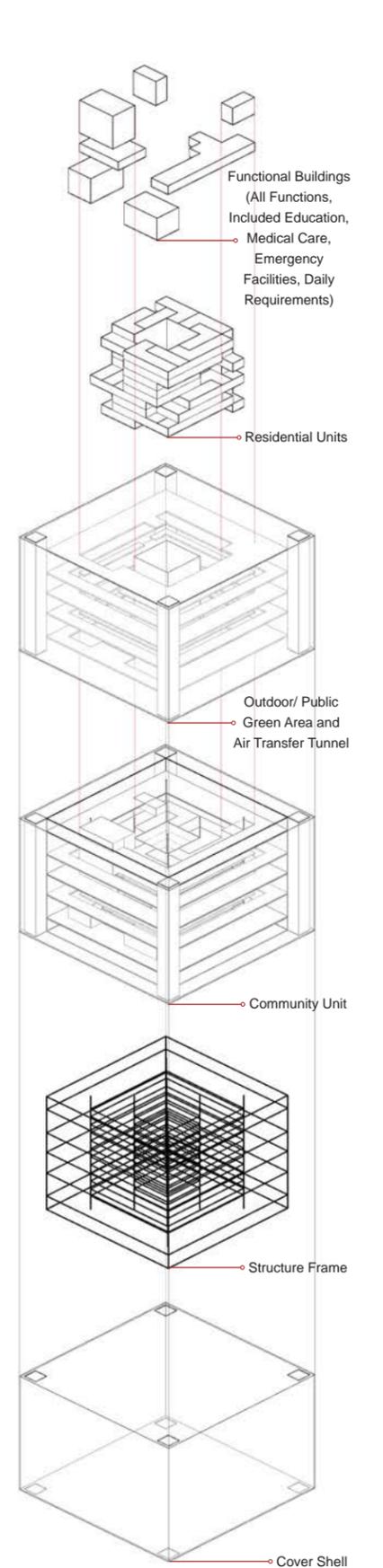
Air Direction
the way that airflow (include inside and outside)

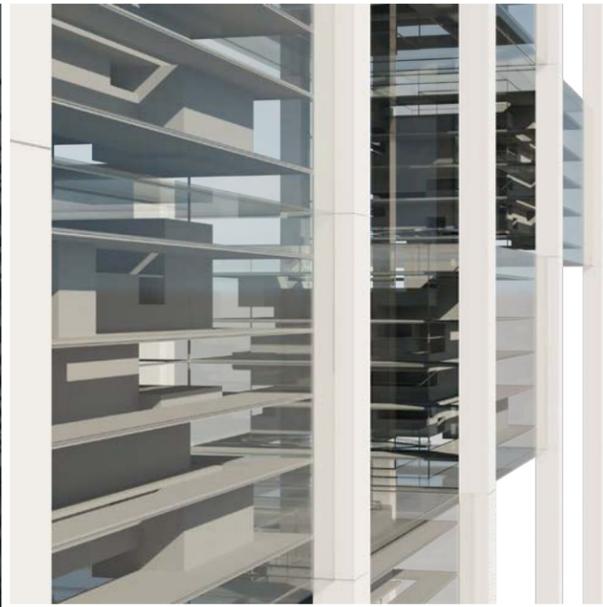
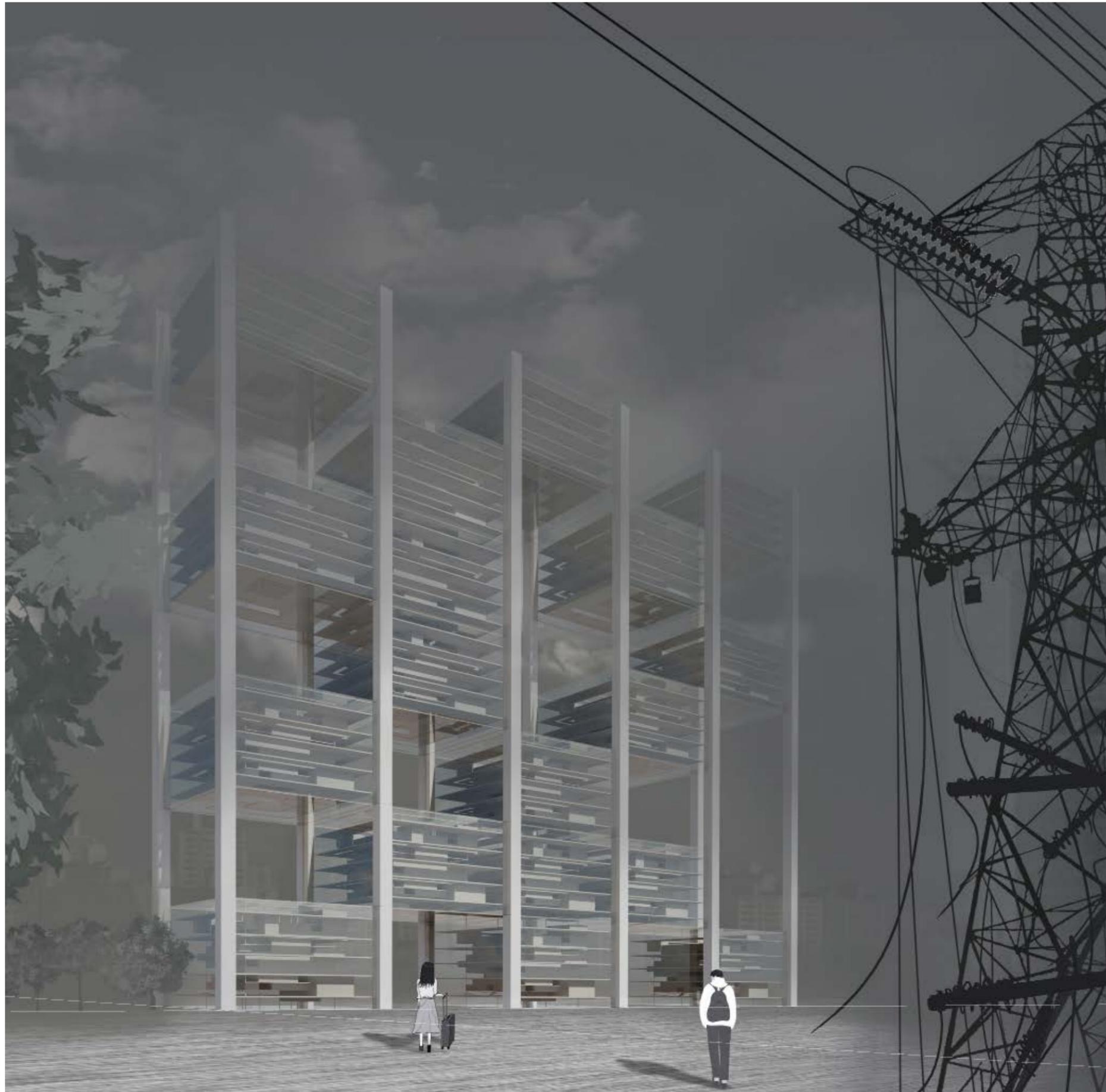
Return Vent
polluted air goes in, collect CO2 from inside box

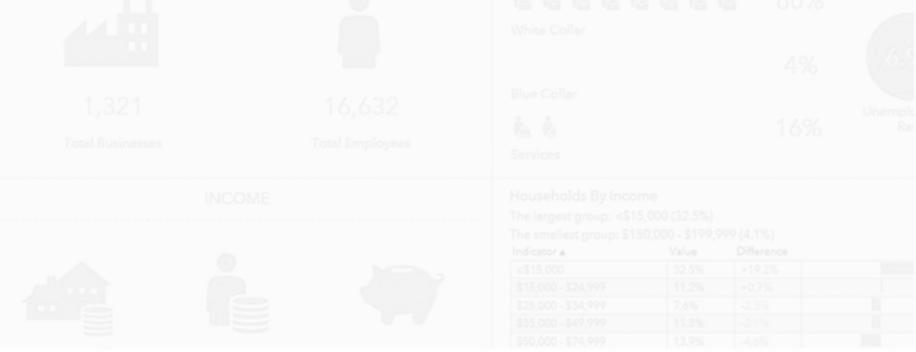
Supply Vent
supply fresh air that has already filter from outside



GENERAL STRUCTURE ELEMENTS





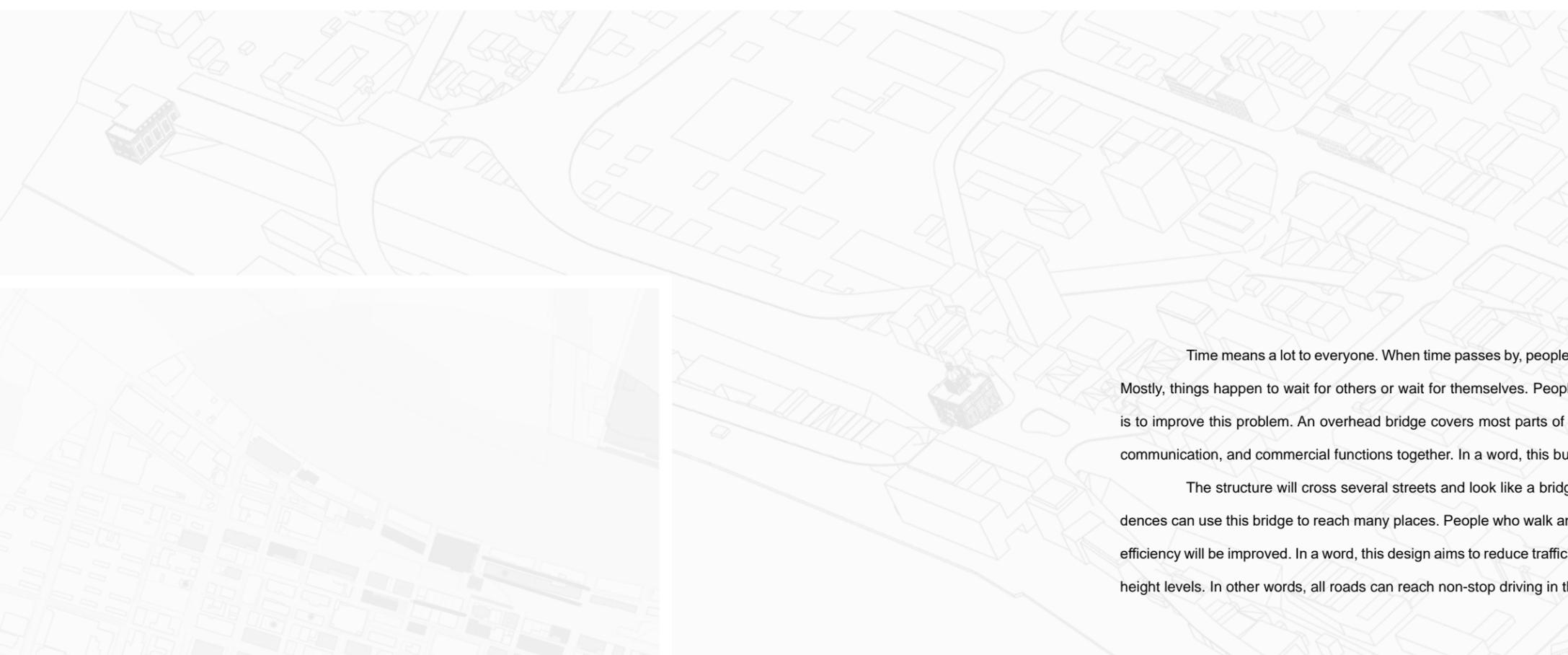


- GATOR SOUL SW 0.0
- POLY OF SAVANNAH SW 0.0
- EPOLIS LOUNGE & GRILL NE 0.0
- ER TASTES SE 0.0
- TA 1875 NE 0.0
- N THAI CUISINE SE 0.0



Beyond the City

City Problem Solving Design Savannah, GA, USA



Time means a lot to everyone. When time passes by, people start to miss it. However, they didn't notice that before. People wastes time in different aspects. Mostly, things happen to wait for others or wait for themselves. People can see the power of time when we collect them together. What this project wants to reach is to improve this problem. An overhead bridge covers most parts of the downtown area may shorten people's walking path. This structure collects transportation, communication, and commercial functions together. In a word, this building is built for convenient people.

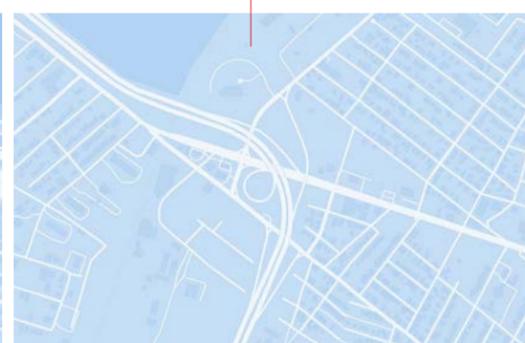
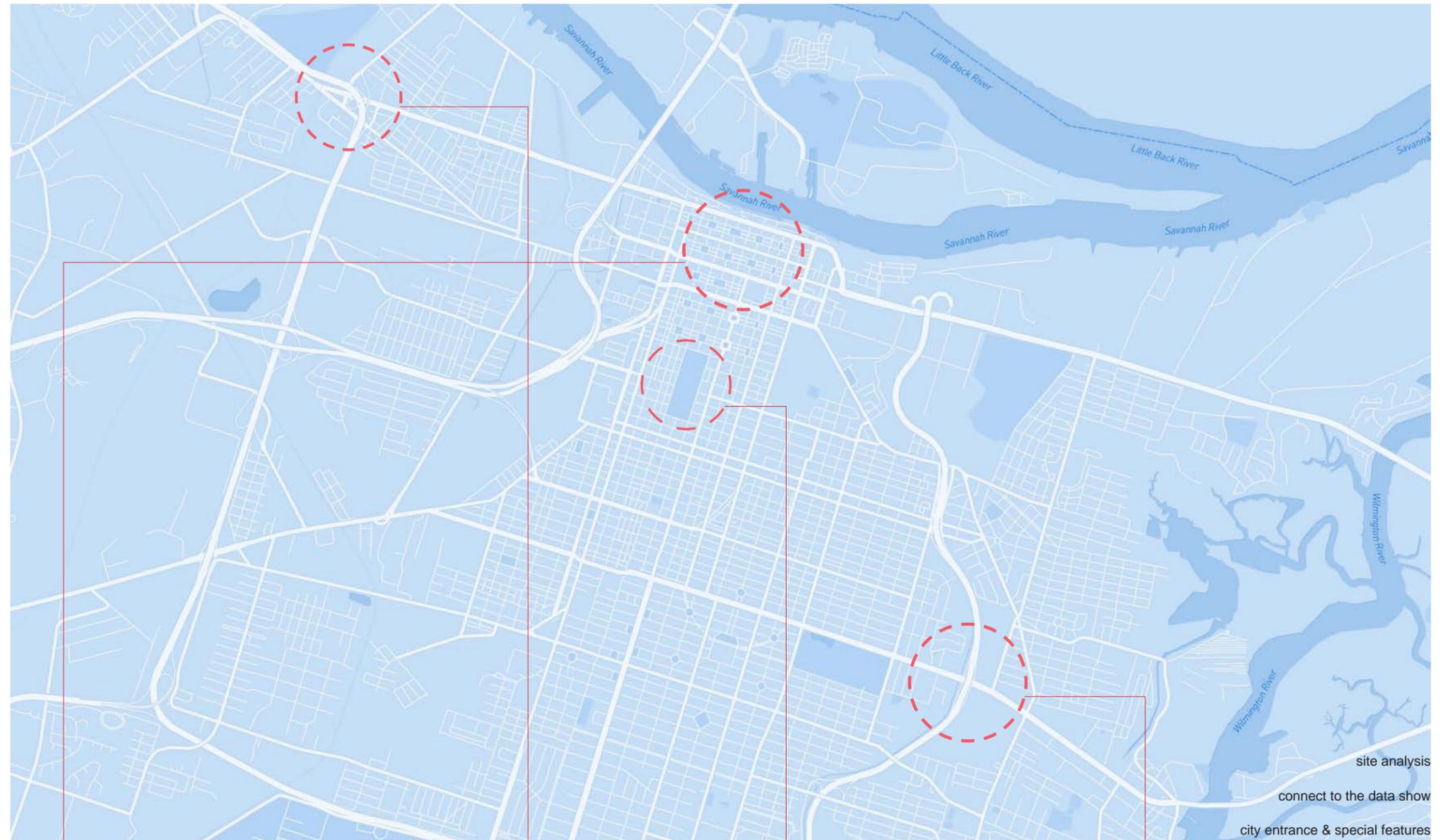
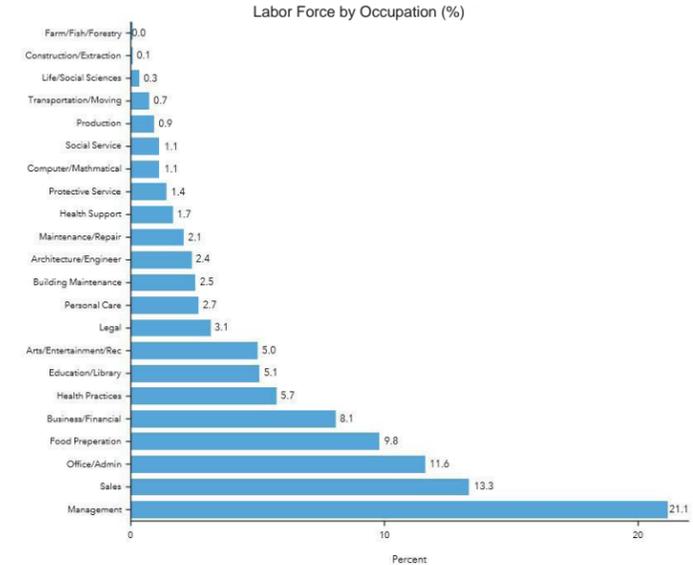
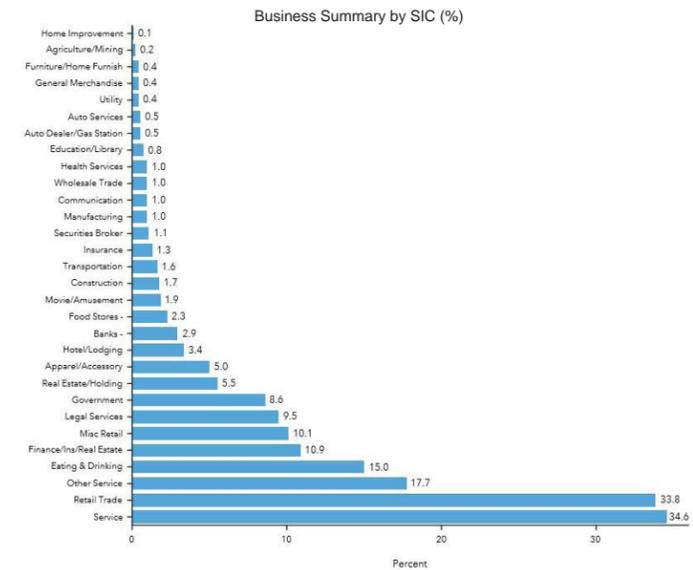
The structure will cross several streets and look like a bridge up high in the sky. The cars will drive through under it on the streets. Both visitors and residences can use this bridge to reach many places. People who walk and drive will totally separate into two paths at different heights in this area. Therefore, the travel efficiency will be improved. In a word, this design aims to reduce traffic jams in some ways. All the lanes will be separated into different bridges that present at different height levels. In other words, all roads can reach non-stop driving in their journey on this street.



GENERAL SITE ANALYSIS



Savannah is a historic city on Georgia's eastern coast. It has one of the largest harbors on the eastern coast of the US. Living here makes people relaxed and peaceful. Two largest business summary is service and retail trade. However, management takes a large percentage of the labor force. It probably because more than half of the residents have a bachelor's degree. It is a young city since the median age is 23.8, and it is a very competitive number for city development. If the city wants to have rapid progress, solving some social problems is necessary. Making people's life more efficient is an important issue.



This is the downtown area and also an important part of the historical protection area. The main activity here is retail trade, and it's an important part of the business. Urban planning was the early European style based on historical reasons. The road is easy to walk through and remember. However, there are still some people confuse.

This is the residential area. It is far away from the downtown area, which is quiet and peaceful. The highway connects it to the city easily, and it only takes less than 10 minutes to drive. There are over ten communities or properties in this area. In other words, most of the residents live in this area.

This the largest park in the downtown and midtown area. There are two markets, a school building, and two lawyer offices around this park. The rest of the area are all residents. The population density is very high since the house in this area is old, and most of them have changed into a small apartment house.

This one of the busiest areas of the city. All the exits of the highway directly face a shopping court. Traffic jam happens all the time, especially in rush hour and holidays. The bridge blocks the fluency of this area in some ways. However, it brings more visitors. On the other hand, it is a noisy area, so it's hard to find residents living in this area.

Integration



COUNTY DEPTHMAP ANALYSIS

This is the integration in the segment map analysis.

R 250m **R 1000m** **R 2000m** **R 3000m**

Mean Depth



This is the mean depth in the axial map analysis.

R 3 **R 7** **R 11** **R 15**

Total Depth



This is the total depth in the axial map analysis.

R 3 **R 7** **R 11** **R 15**

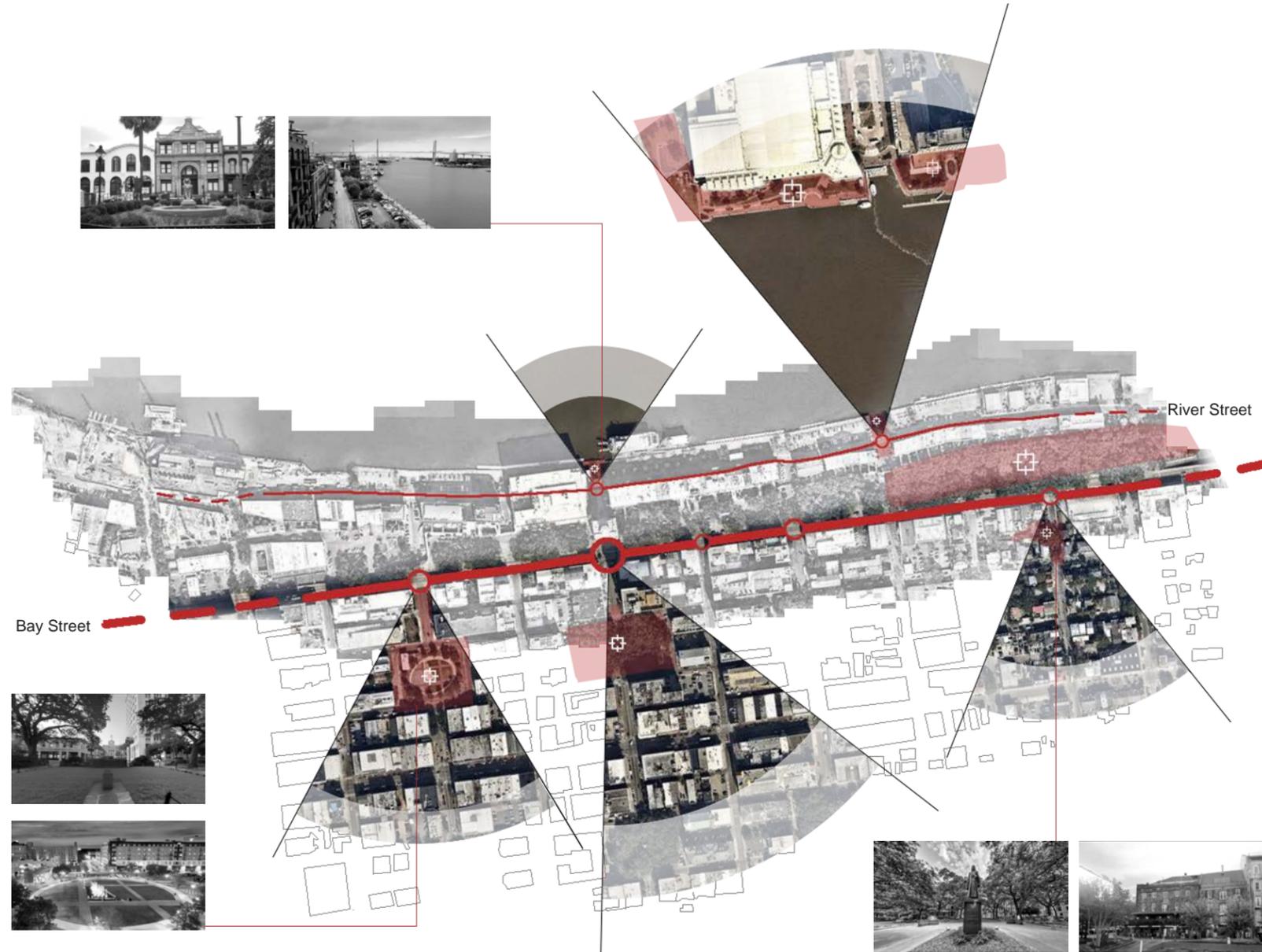
Choice



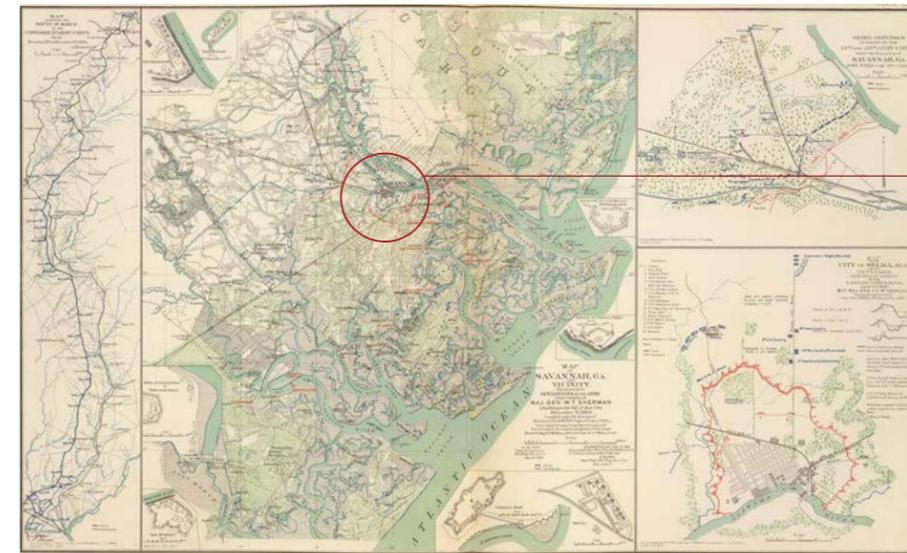
This is the choice density in the segment map analysis.

R 250m **R 1000m** **R 2000m** **R 3000m**

DOWNTOWN AREA ANALYSIS



SAVANNAH OLD MAP



Georgia North Border Map 1947
The railroad is much more developed than before. Besides, some bridges started to build at the time between the river.

Savannah City Map (partly) 1961
The entire Savannah city had basically set, especially the downtown and midtown area. Some state highway had built, which shorten the time to the town nearby.

Savannah City Map (partly) 1978
The entire city didn't change a lot. It only expanded a little from 20 years ago. Speedway and highway were much more developed than before.



BUILDING HEIGHT



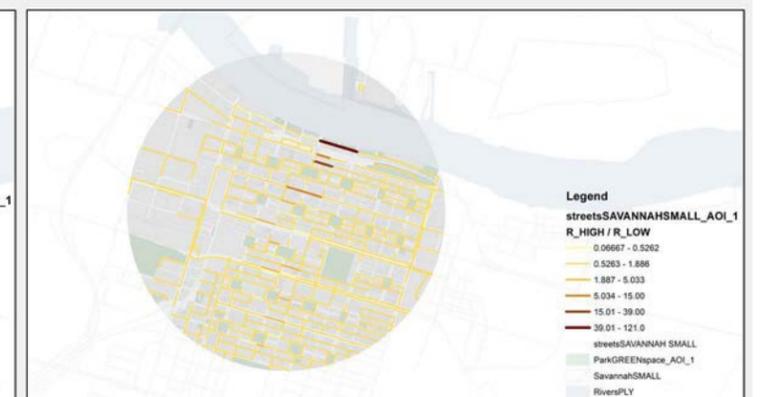
LAND VALUE



TRAFFIC VOLUME IN RUSH HOUR



TRAFFIC VOLUME IN SPARE TIME



Plan I

Axial Analyst



Mean Depth R3/ R7/ R11/ R15



Total Depth R3/ R7/ R11/ R15

Segment Analyst



Integration R500/ R2000/ R3500/ R5000



Node Count R500/ R2000/ R3500/ R5000



Total Segment Length R500/ R2000/ R3500/ R5000

Plan II

Axial Analyst



Mean Depth R3/ R7/ R11/ R15



Total Depth R3/ R7/ R11/ R15

Segment Analyst



Integration R500/ R2000/ R3500/ R5000



Node Count R500/ R2000/ R3500/ R5000



Total Segment Length R500/ R2000/ R3500/ R5000

Plan III

Axial Analyst



Mean Depth R3/ R7/ R11/ R15



Total Depth R3/ R7/ R11/ R15

Segment Analyst



Integration R500/ R2000/ R3500/ R5000



Node Count R500/ R2000/ R3500/ R5000



Total Segment Length R500/ R2000/ R3500/ R5000

Plan IV

Axial Analyst



Mean Depth R3/ R7/ R11/ R15



Total Depth R3/ R7/ R11/ R15

Segment Analyst



Integration R500/ R2000/ R3500/ R5000



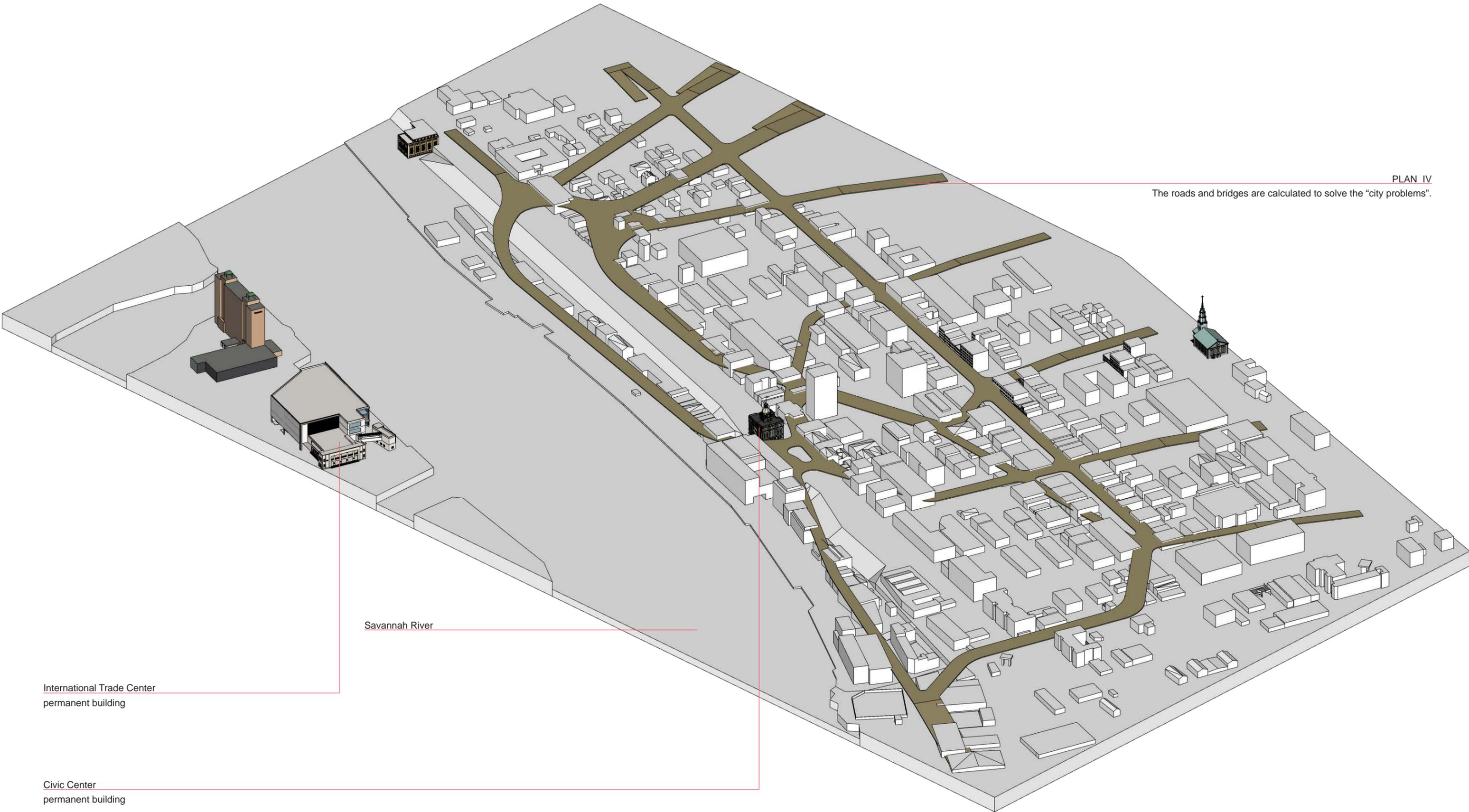
Node Count R500/ R2000/ R3500/ R5000



Total Segment Length R500/ R2000/ R3500/ R5000

This is the final plan. It releases traffic jam efficiently. The effect goes obviously when the range gets larger from the mean depth and total depth axial map. According to the integration segment map, the crowding point is separated into two parts, which can release the traffic pressure, especially in the downtown area. Node count segment map shows that more people will be led to other roads in the midtown area. Therefore, the downtown traffic pressure can be released.

The roads and bridges are calculated to solve the "city problems".



Savannah River

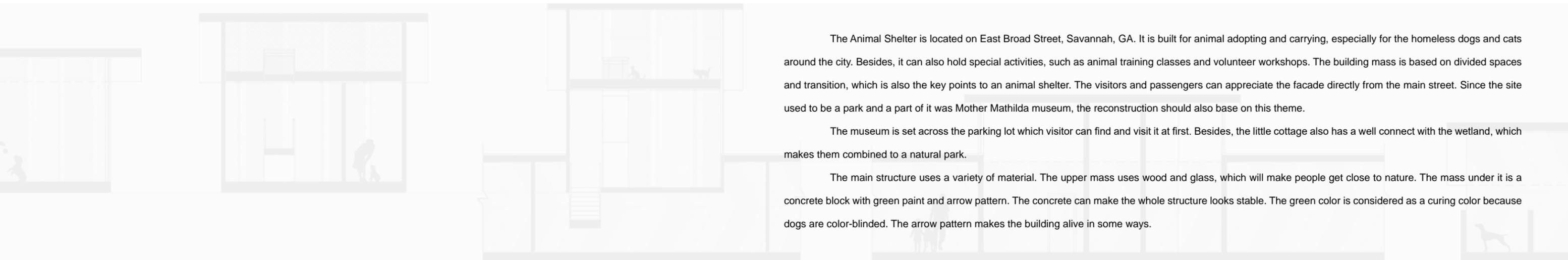
International Trade Center
permanent building

Civic Center
permanent building



BROAD 365

Animal Shelter
Savannah, GA, USA



The Animal Shelter is located on East Broad Street, Savannah, GA. It is built for animal adopting and carrying, especially for the homeless dogs and cats around the city. Besides, it can also hold special activities, such as animal training classes and volunteer workshops. The building mass is based on divided spaces and transition, which is also the key points to an animal shelter. The visitors and passengers can appreciate the facade directly from the main street. Since the site used to be a park and a part of it was Mother Mathilda museum, the reconstruction should also base on this theme.

The museum is set across the parking lot which visitor can find and visit it at first. Besides, the little cottage also has a well connect with the wetland, which makes them combined to a natural park.

The main structure uses a variety of material. The upper mass uses wood and glass, which will make people get close to nature. The mass under it is a concrete block with green paint and arrow pattern. The concrete can make the whole structure looks stable. The green color is considered as a curing color because dogs are color-blinded. The arrow pattern makes the building alive in some ways.



Site and Project Information

Location: Mother Mathilda Beasley, Savannah, GA, US

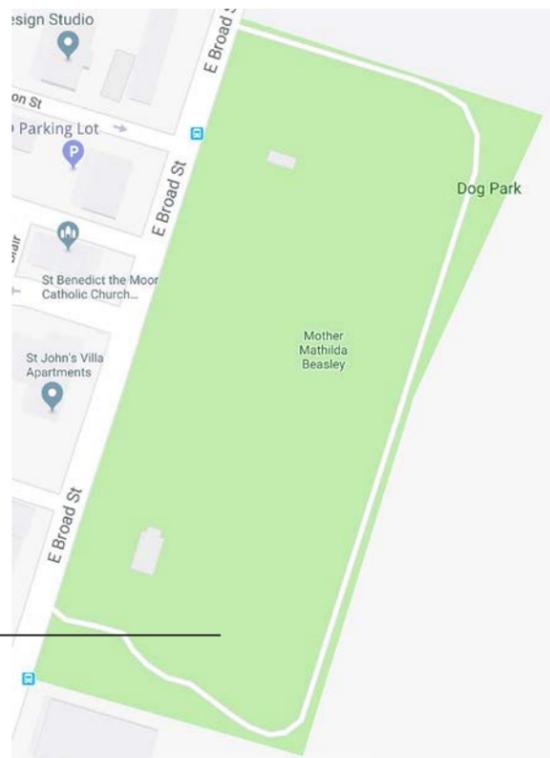
Dimension: 285,000 ft²

Climate: tropical marine climate

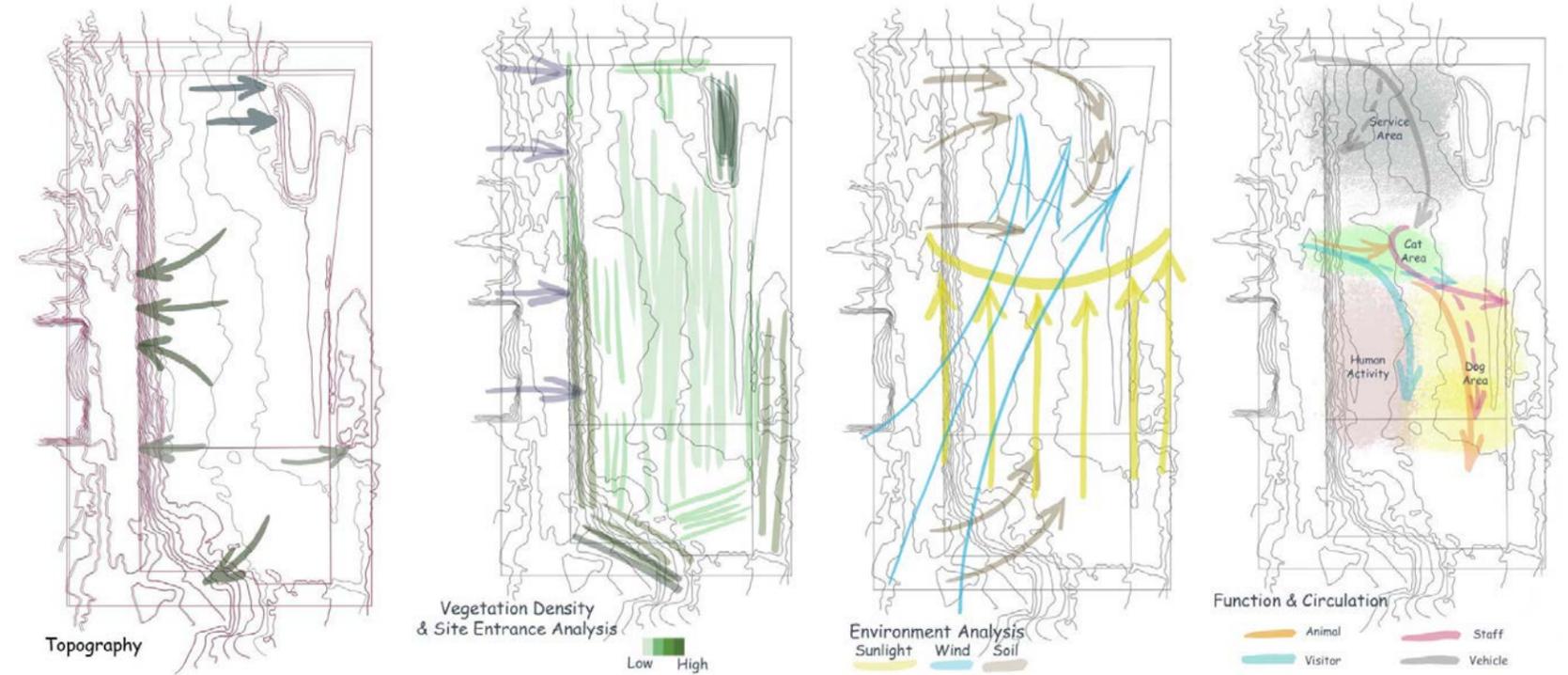
Surrounding: mid-town area, residential area

Texture: vegetation, grass mainly

Function: public social area, playground, sport field



Site Analysis

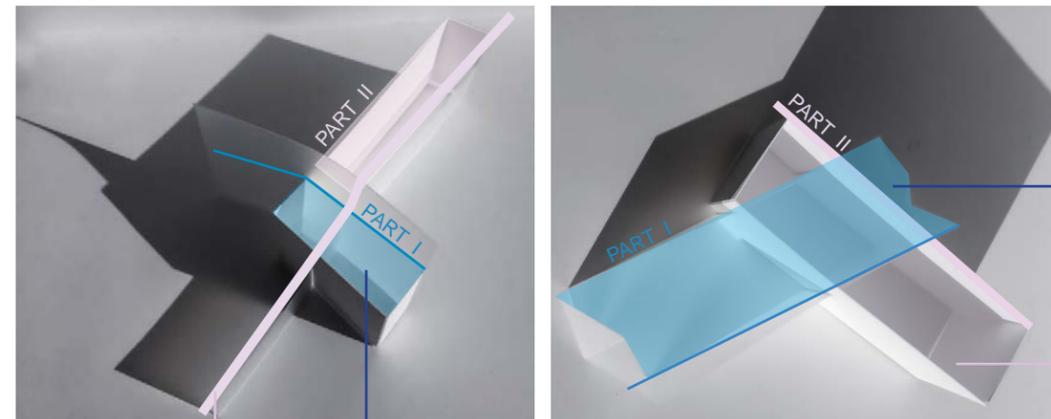


Dogs need to be accompanied. Sometimes they also need to be managed by people directly. Most importantly, they need activity area indoor and outdoor.

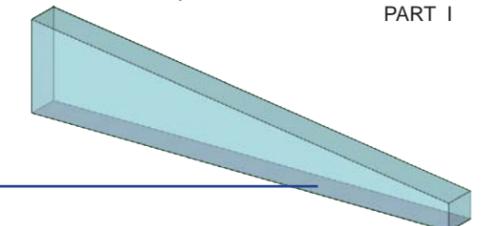


Cats are more independent than dogs, which means they prefer a separate space. They love climbing high. A tower with enough sunshine is a good choice for them.

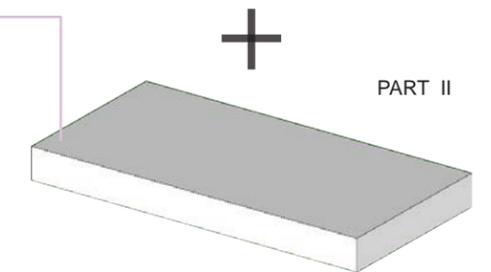
Conceptual Model & Function Module



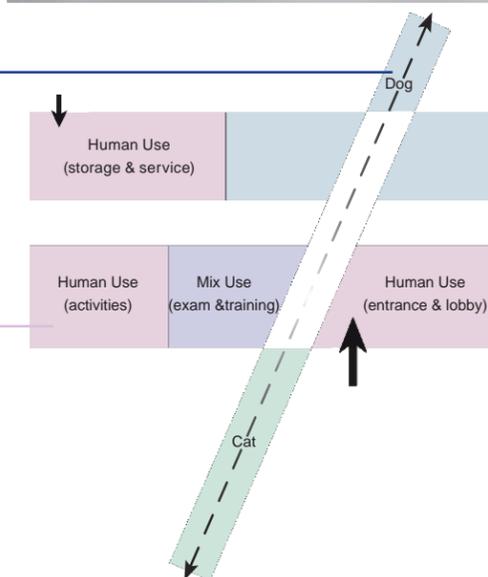
Mass Development



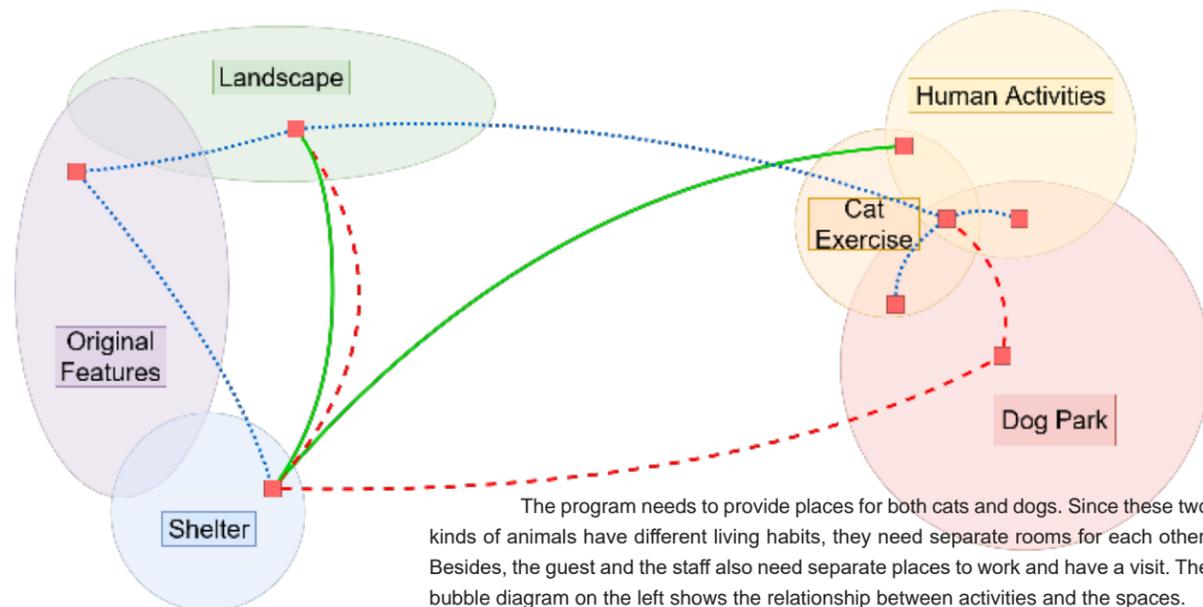
This irregular shape includes a cat tower and a dog cage. So it has a tall side, and it's for the cats. The other lower side connects better to the outside, and it's for the dogs.



It is a regular box shape, and most of this part is for humans. This kind of shape is familiar to human beings, and it has the highest using efficiency.

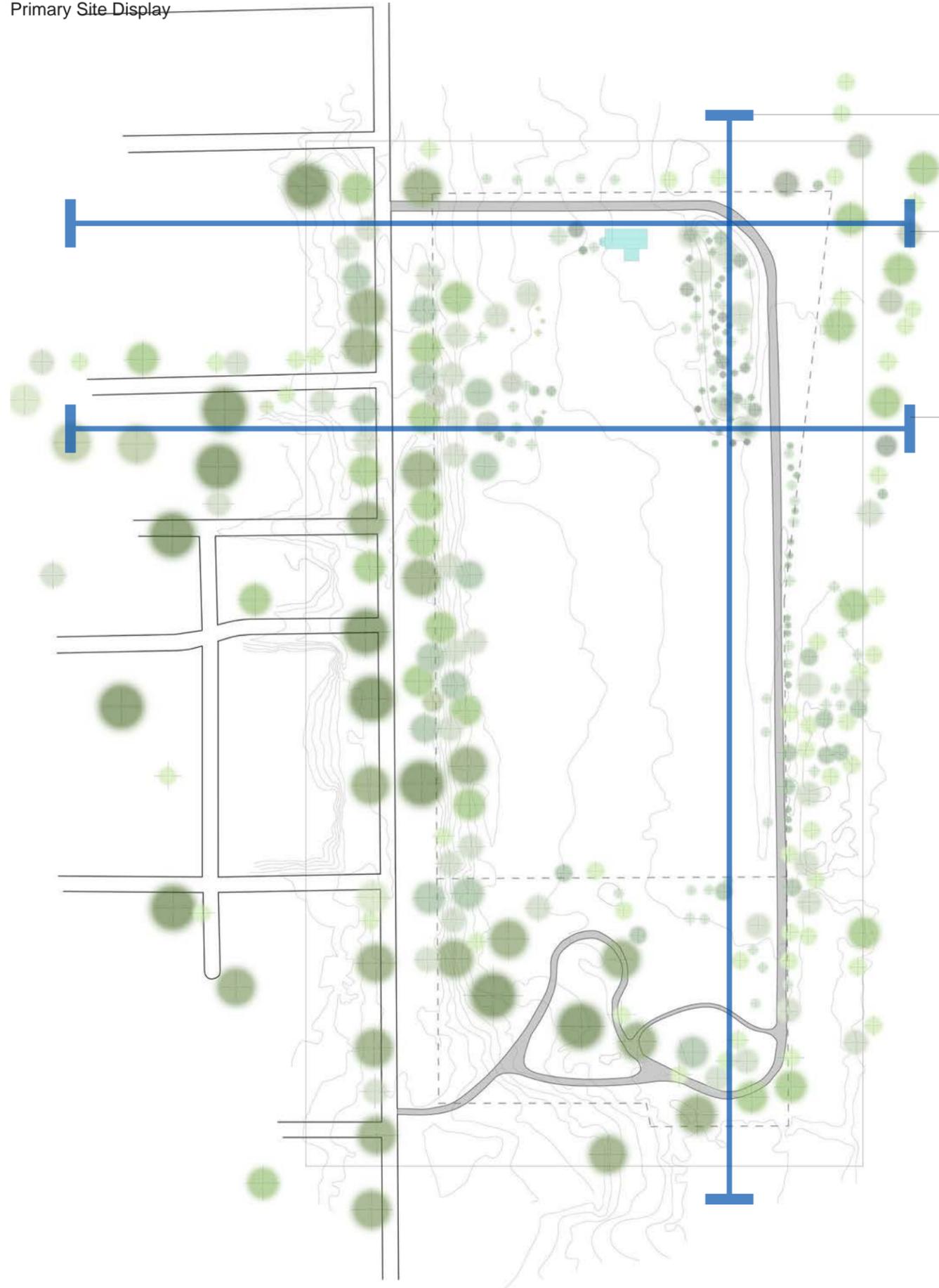


There are two concept formats basic on the research of the site and animals' habitat. Combined these two function concepts above, it comes out the mass below. Each function is located logically and related to the requirement. The entire building can be divided into three groups of functions: the first is for human use, the second is for animals, and the rest is for the mix-use.

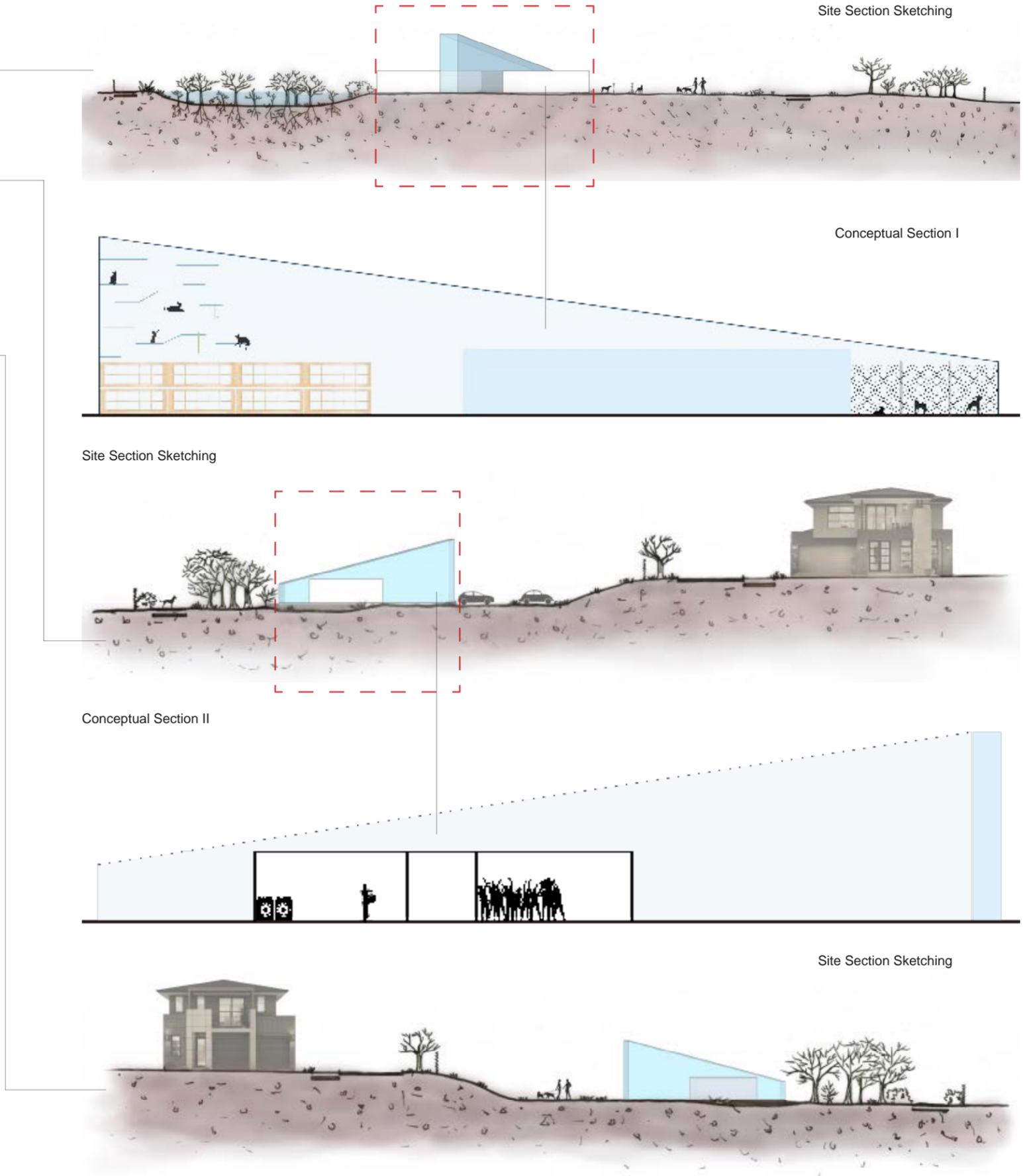


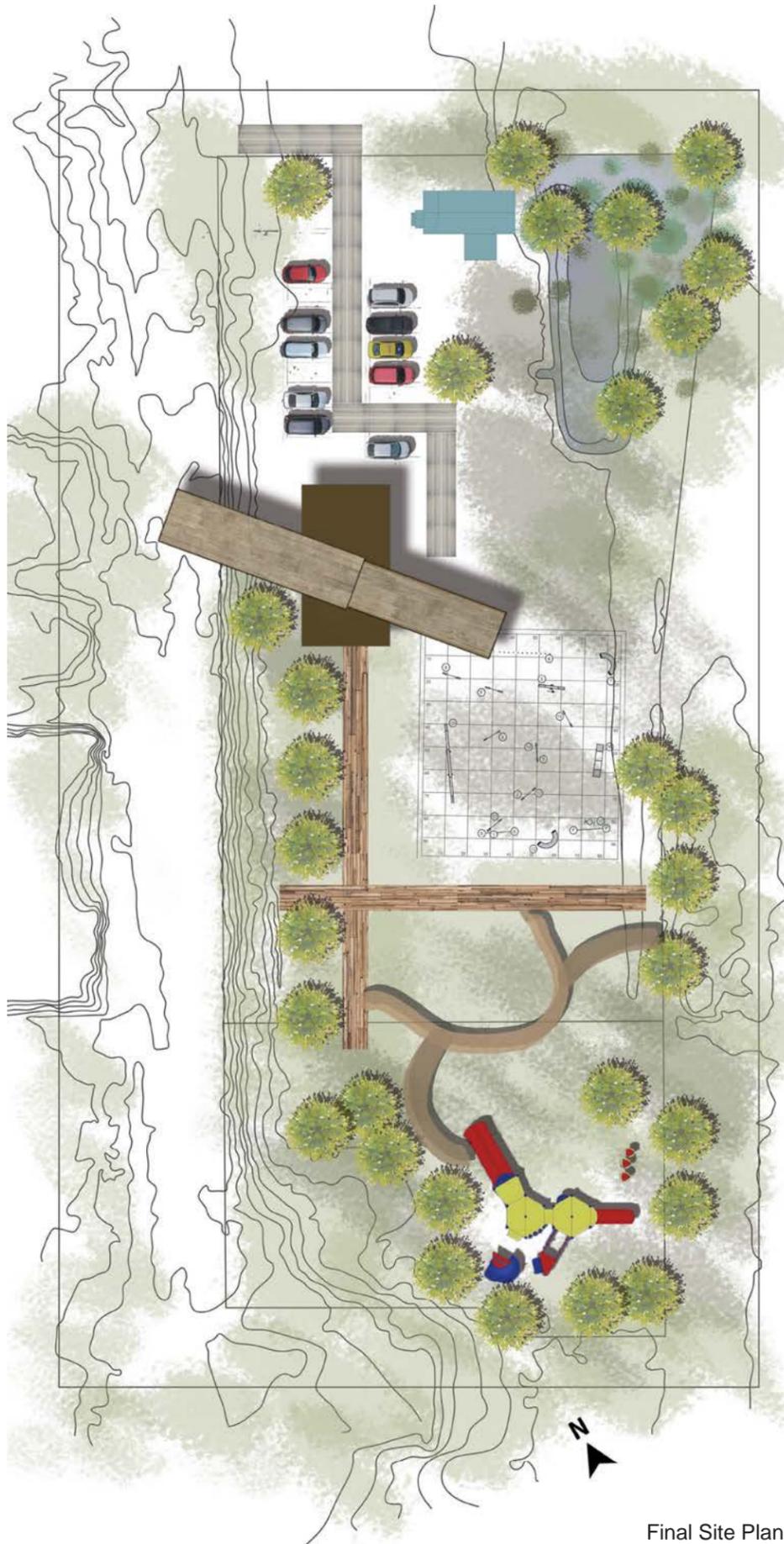
The program needs to provide places for both cats and dogs. Since these two kinds of animals have different living habits, they need separate rooms for each other. Besides, the guest and the staff also need separate places to work and have a visit. The bubble diagram on the left shows the relationship between activities and the spaces.

Primary Site Display

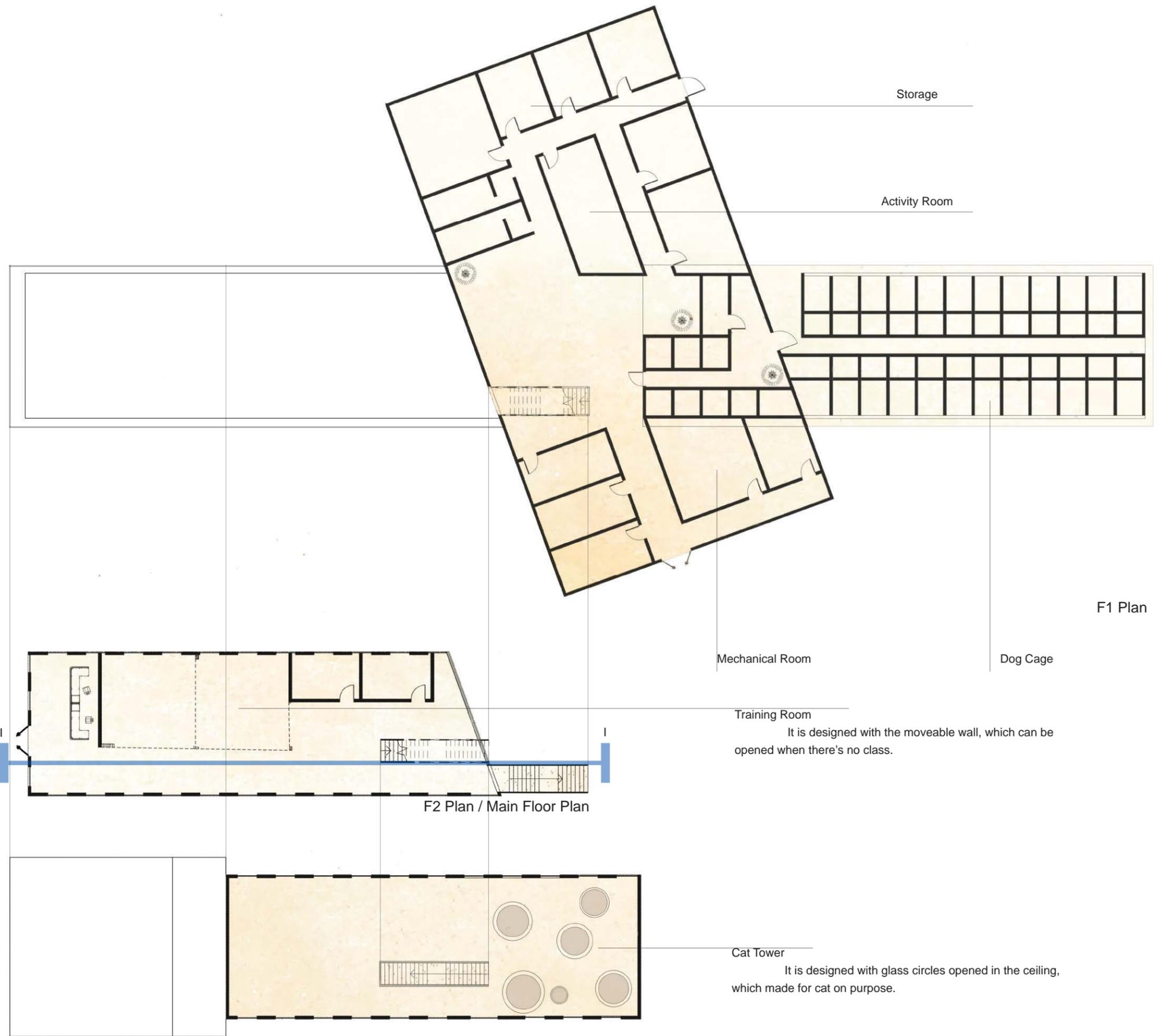


Primary Building and Site Analysis Display





Final Site Plan



F1 Plan

F2 Plan / Main Floor Plan

F3 Plan

Storage

Activity Room

Mechanical Room

Dog Cage

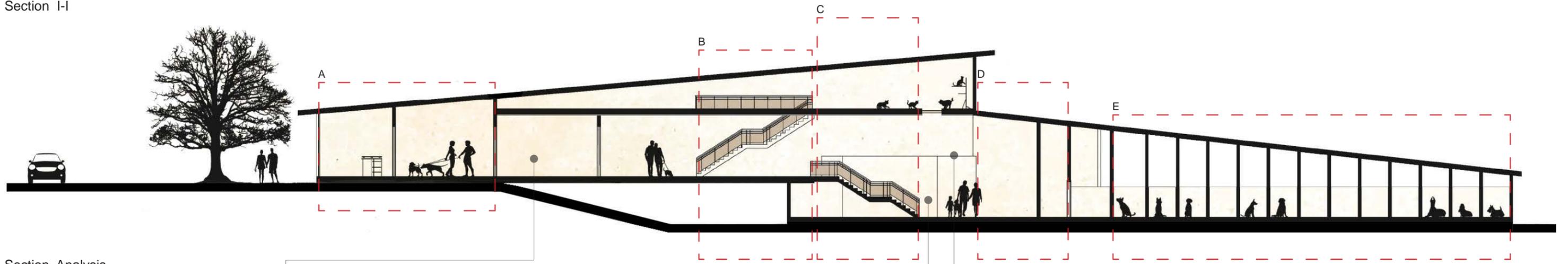
Training Room

It is designed with the moveable wall, which can be opened when there's no class.

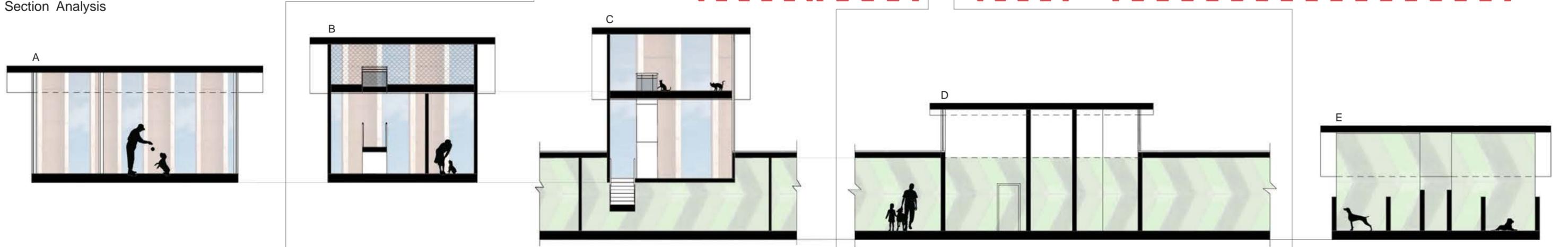
Cat Tower

It is designed with glass circles opened in the ceiling, which made for cat on purpose.

Section I-I



Section Analysis



Watercolor Rendering View



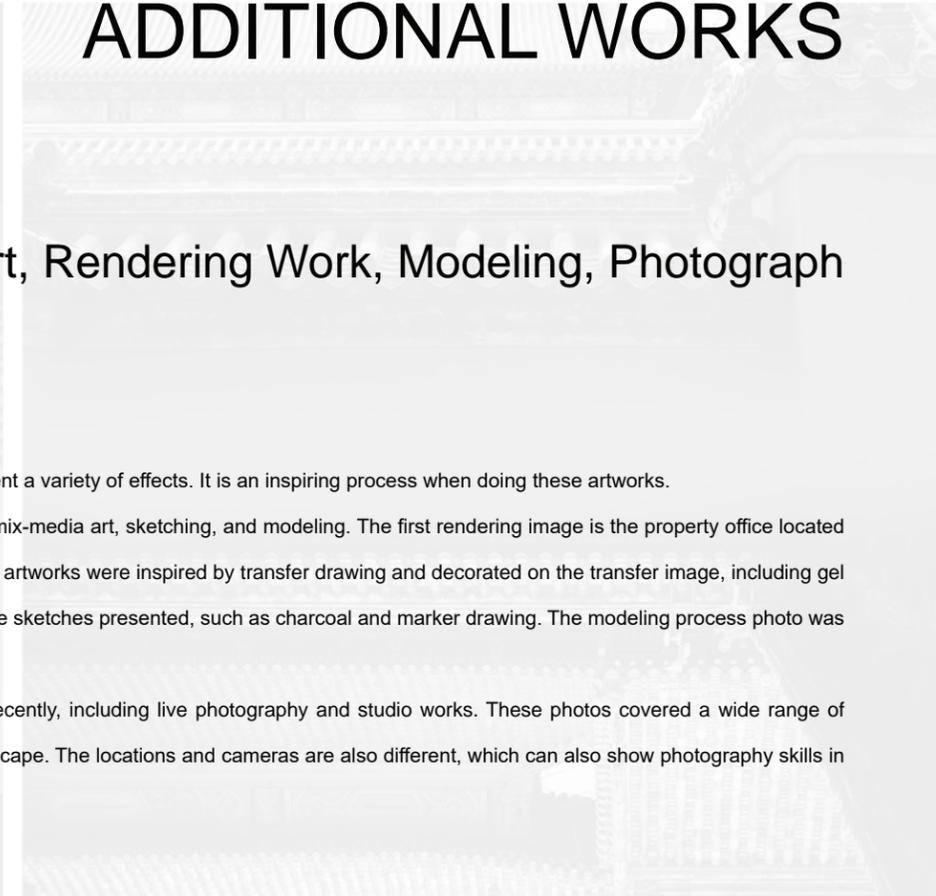
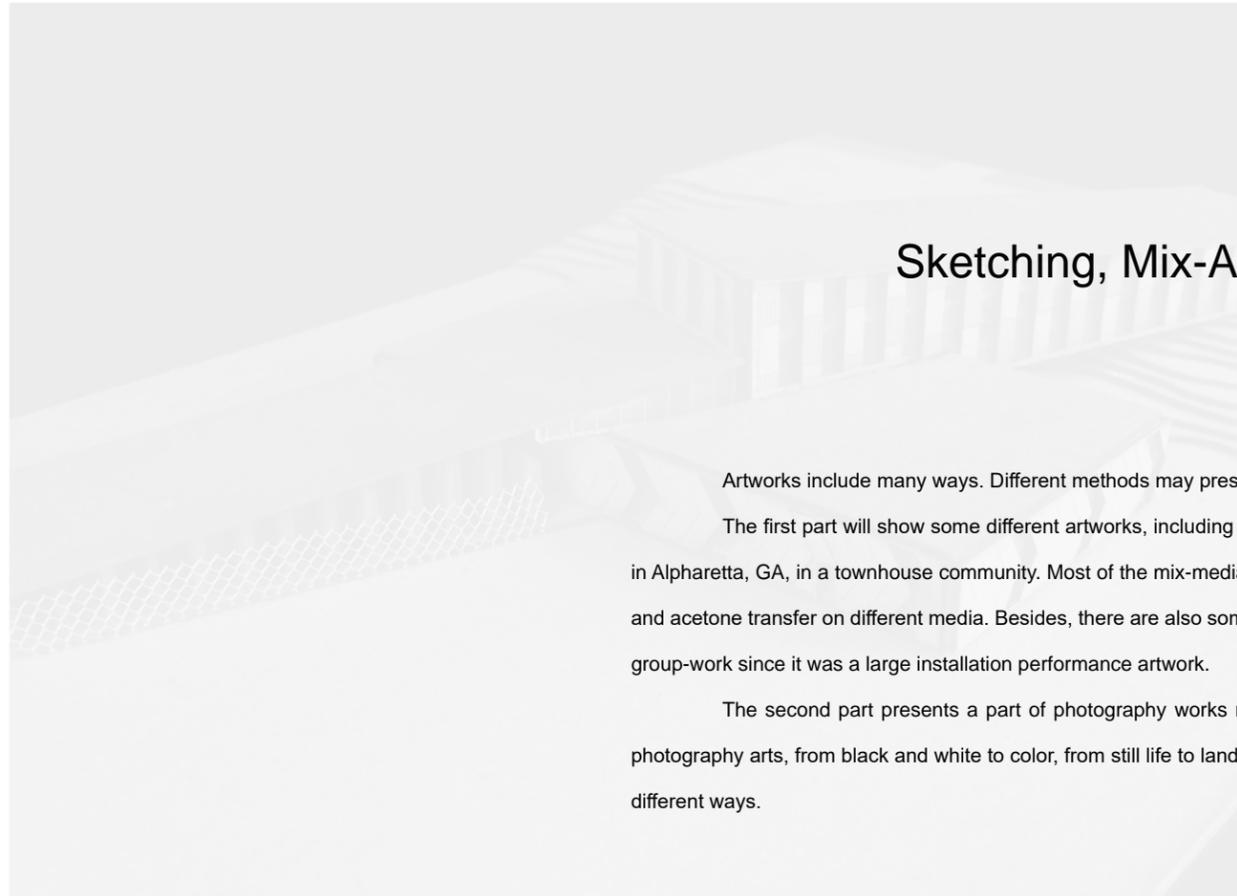
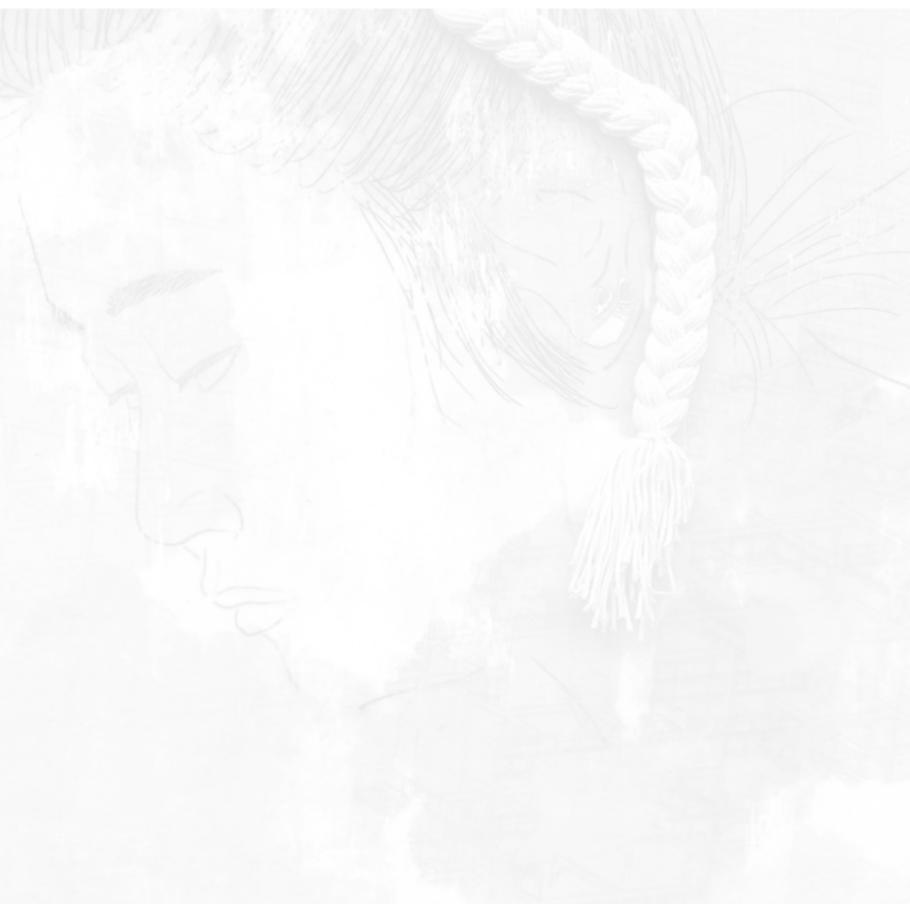
ADDITIONAL WORKS

Sketching, Mix-Art, Rendering Work, Modeling, Photograph

Artworks include many ways. Different methods may present a variety of effects. It is an inspiring process when doing these artworks.

The first part will show some different artworks, including mix-media art, sketching, and modeling. The first rendering image is the property office located in Alpharetta, GA, in a townhouse community. Most of the mix-media artworks were inspired by transfer drawing and decorated on the transfer image, including gel and acetone transfer on different media. Besides, there are also some sketches presented, such as charcoal and marker drawing. The modeling process photo was group-work since it was a large installation performance artwork.

The second part presents a part of photography works recently, including live photography and studio works. These photos covered a wide range of photography arts, from black and white to color, from still life to landscape. The locations and cameras are also different, which can also show photography skills in different ways.



Rendering Works



HAIRSTONWOODS

It is a leasing office of a community. The building is a reconstruction project. Here are the draft rendering images. It includes a fitness center, a yoga room, a swimming pool, a barbecue garden, a meeting area, and offices.

Mix-Art



Self-Portrait, 2019

Gel-Transfer on Canvas with Glass Bead Gel on the Top

20in X 20in



Stairs, 2019

Gel-Transfer and Wax Encaustic Painting on Wood Panel

6in X 6in

Sketching



Interior Sketching, 2015

Marker Drawing on Cardboard

8.5in X 11in



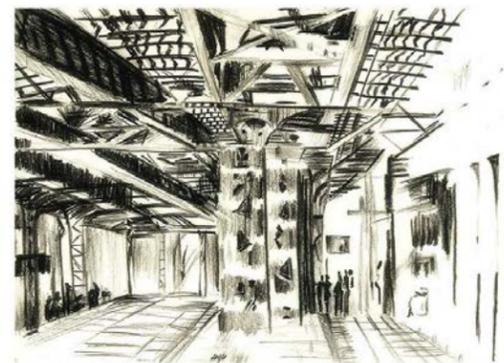
Old Downtown, 2019

Acetone-Transfer and Printmaking on Bristol Board

22in X 17in



Quick Sketching (left), 2015



Charcoal Drawing on Drawing Paper

8.5in X 11in

Quick Sketching (right), 2015

Charcoal Drawing on Drawing Paper

8.5in X 11in



NYC, 2019

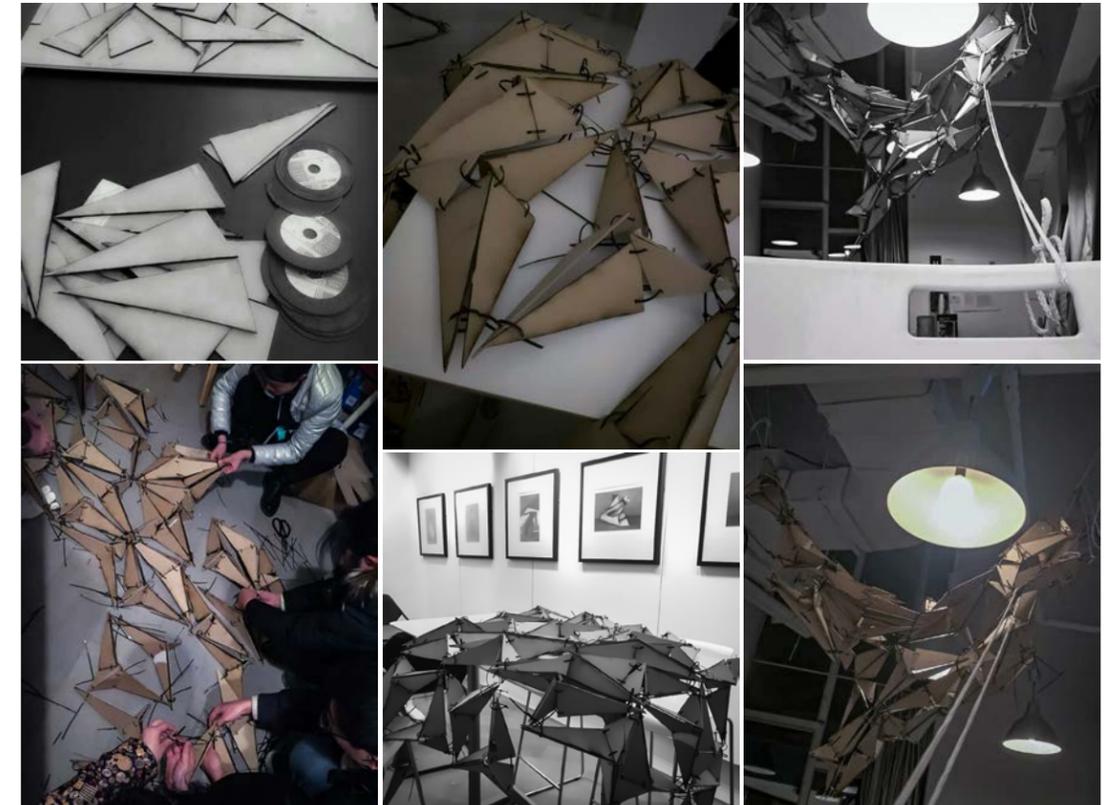
Acetone-Transfer and Oil-Free Pastel on Chipboard

24in X 8in

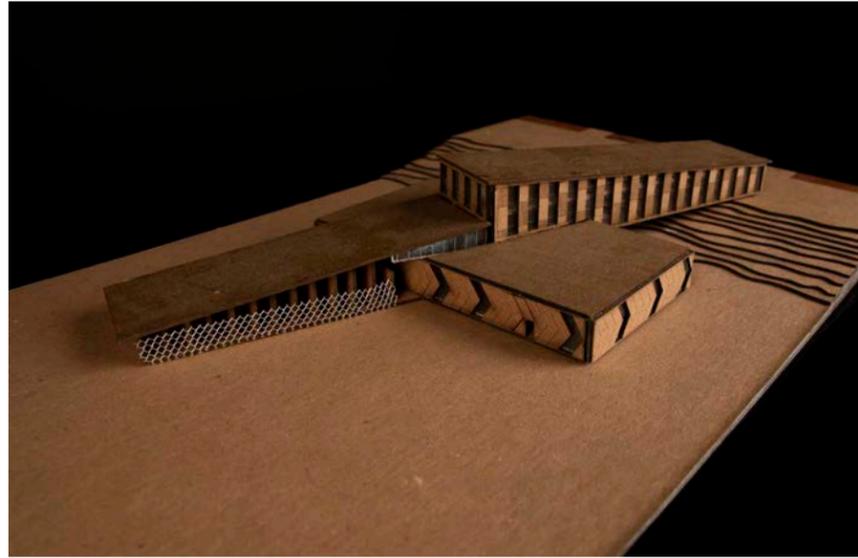
Phoenix, 2016

Installation Art, Wood Panel connected by Plastic Clip

5m X 1.5m



Photography: Studio & Live Work

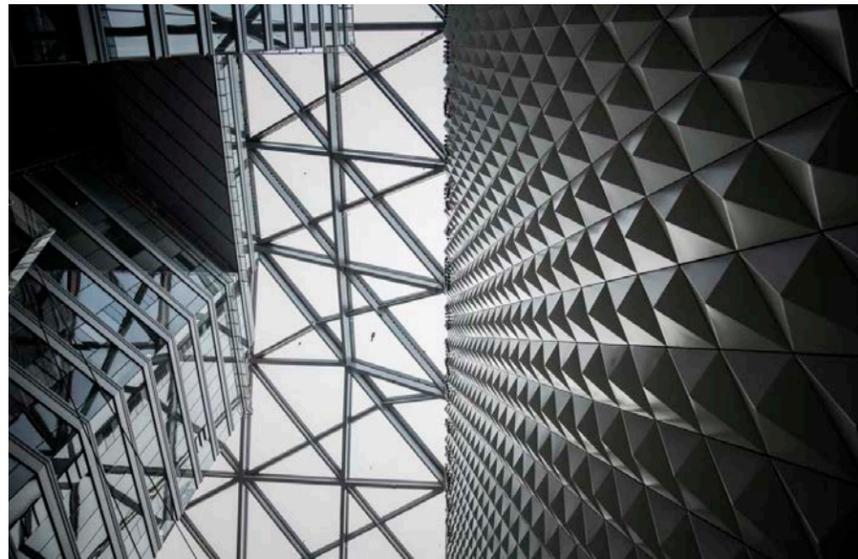


Animal Shelter Model, 2017

Studio Photography
Adler Hall, Savannah, GA

11in X 17in, Color
Digital Copy

DSLR camera
Canon EOS 5D Mark V



Geometry Shape #7, 2018

Live Photography
Parkview Green, Beijing

11in X 17in, Color
Digital Copy

DSLR camera
Canon EOS 5D Mark III



Stairs #2, 2019

Live Photography
Jen Library, Savannah, GA

11in X 17in, Black and White
Digital Copy

DSLR camera
Canon EOS Rebel T6



Still Life #6, 2017

Studio Photography
Adler Hall, Savannah, GA

11in X 17in, Color, Digital Copy
DSLR camera, Canon EOS 5D Mark V

Geometry Shape #2, 2019
Live Photography
Jen Library, Savannah, GA

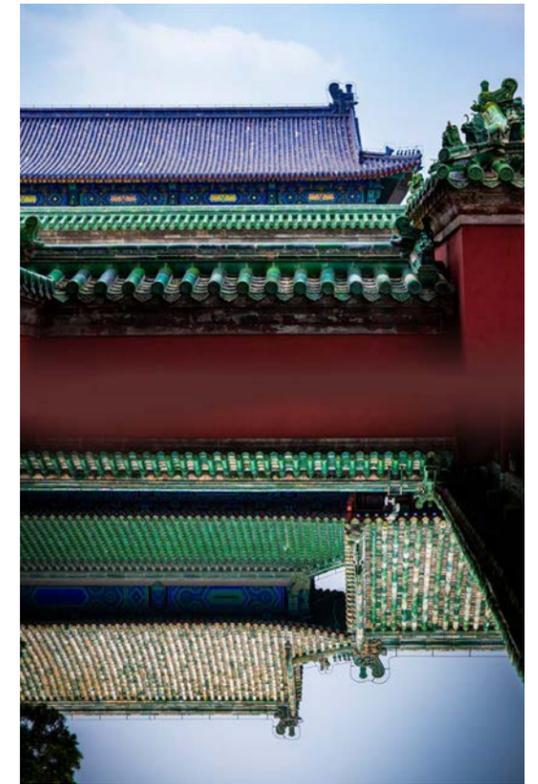
11in X 17in, Color, Digital Copy
DSLR camera, Canon EOS Rebel T6



Still Life #9, 2017

Studio Photography
Adler Hall, Savannah, GA

11in X 17in, Black and White, Digital Copy
DSLR camera, Canon EOS 5D Mark V



Barrier #2, 2017

Live Photography
Temple of Heaven, Beijing

11in X 17in, Color, Digital Copy
DSLR camera, Canon EOS 5D Mark III

Organic Shape #2, 2017
Live Photography
Galaxy SOHO, Beijing

11in X 17in, Color, Digital Copy
DSLR camera, Canon EOS 5D Mark III

