



*Jinseon Noh*

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Records of the things that I've been dreaming of  
2019-2022





## 01 M-MOS : Metamaterial - Mobile Office System

*Project Info*  
ADV VI / Columbia GSAPP

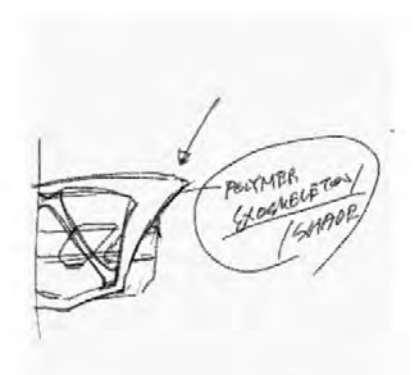
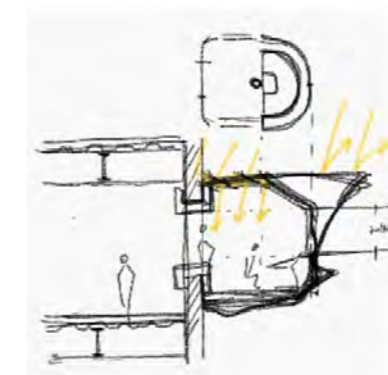
*Instructor*  
Michael Bell

*Date*  
Jan 2022 - May 2022

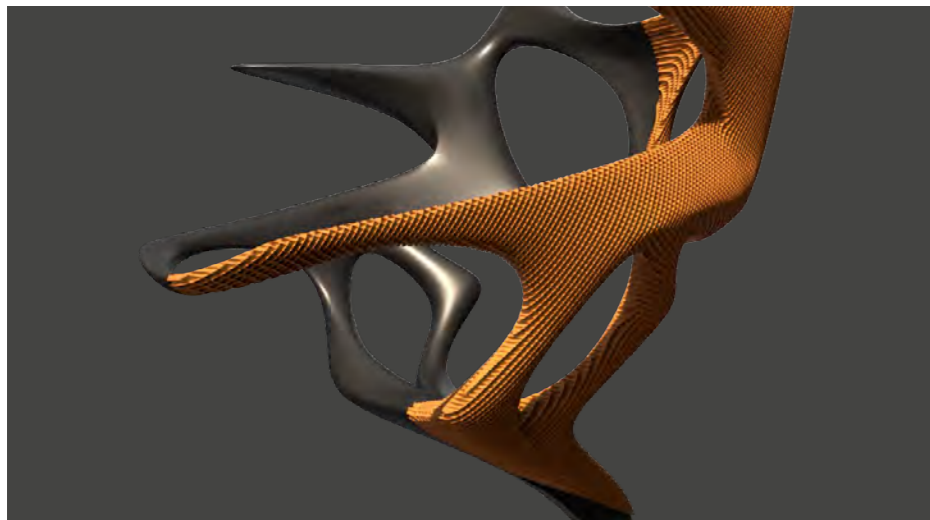
*Site*  
-

*Program*  
Mobile Office

*Size*  
140 sqft



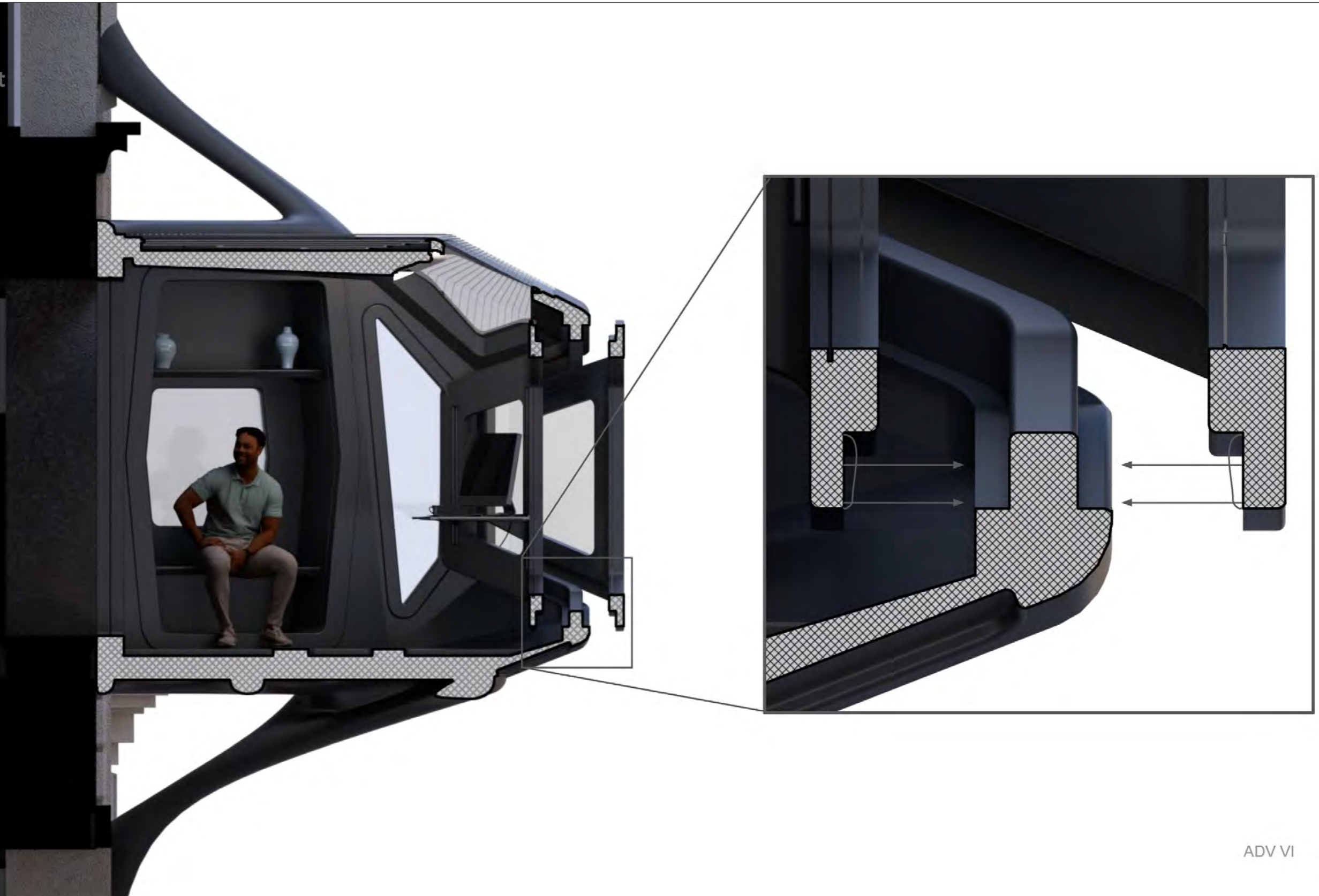




Meta Aeron is a transcription work of Aeron Chair, an icon of office chair. By implementing metamaterial technology, the Meta Aeron achieves the same motion of the original Aeron Chair.

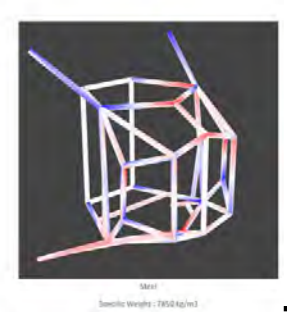


# Panel Joint



ADV VI JIN NOH

Metamaterial allows manufacturer to control softness of material. Different parts of a single 3d printed Window chassis now can have different softness. This will replace the function of silicone gaskets that are typically used in modern window system.

















# Unitized Curtain Wall

**Project Info**  
 Advanced Curtain Wall  
 / Columbia GSAPP

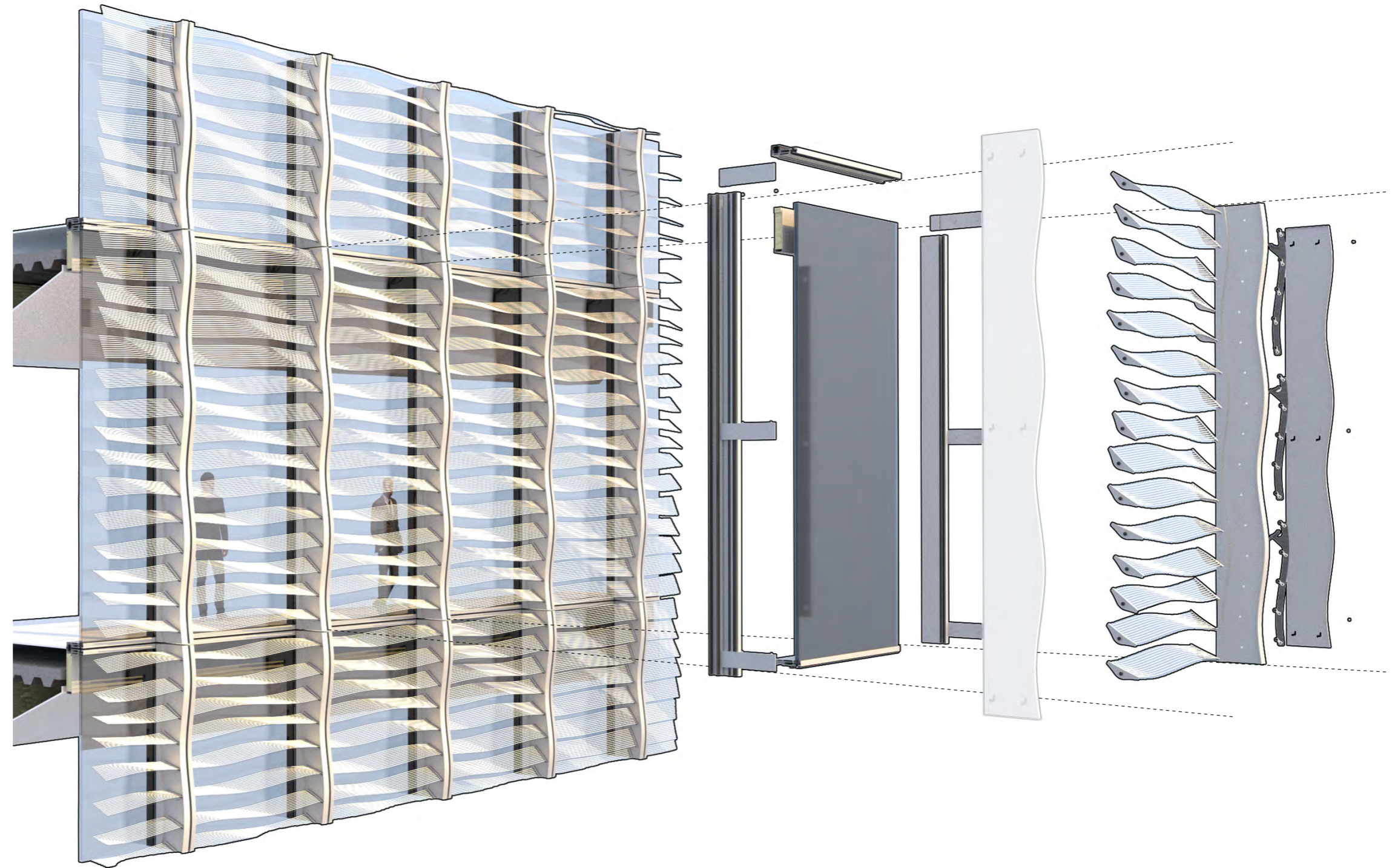
**Date**  
 Sep 2021 - Dec 2021

**Program**  
 Unitized Curtain wall with  
 Motorized Louver System

**Instructor**  
 Daniel Vos

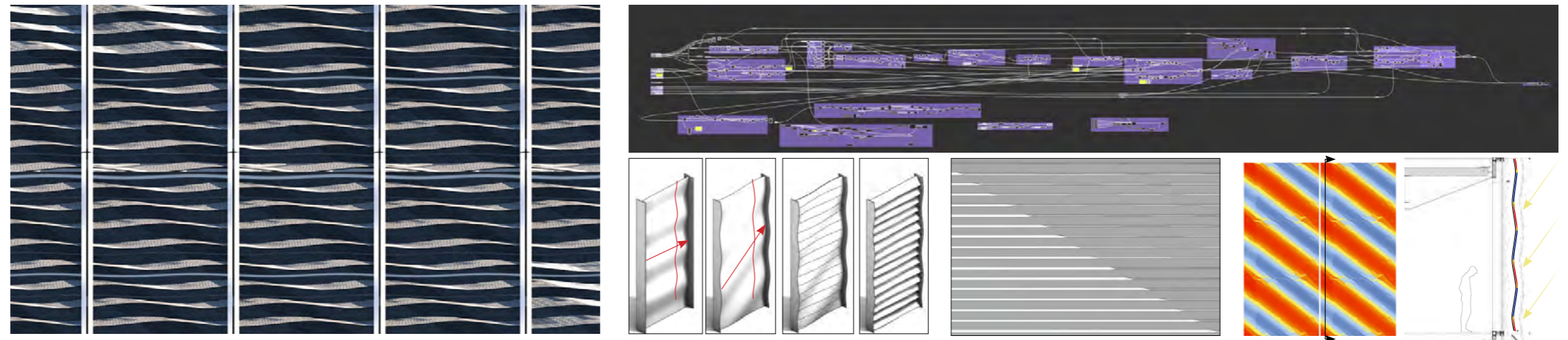
**Site**  
 504 9th Ave.

**Size**  
 Nominal 4500\*2000

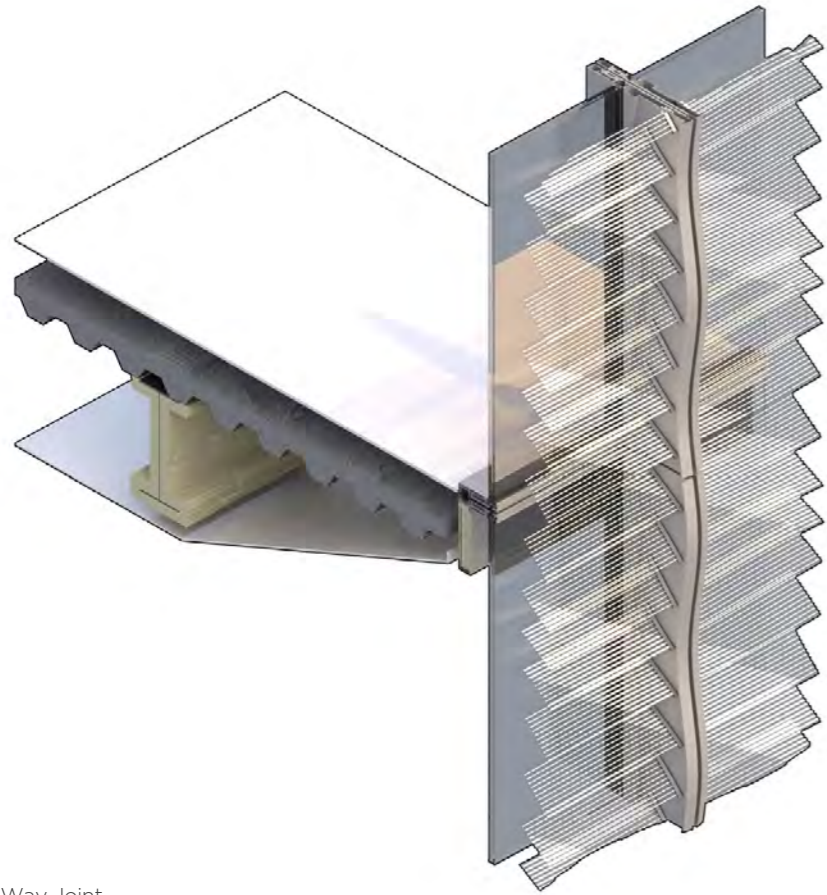


Perspective, 504 9th Ave.

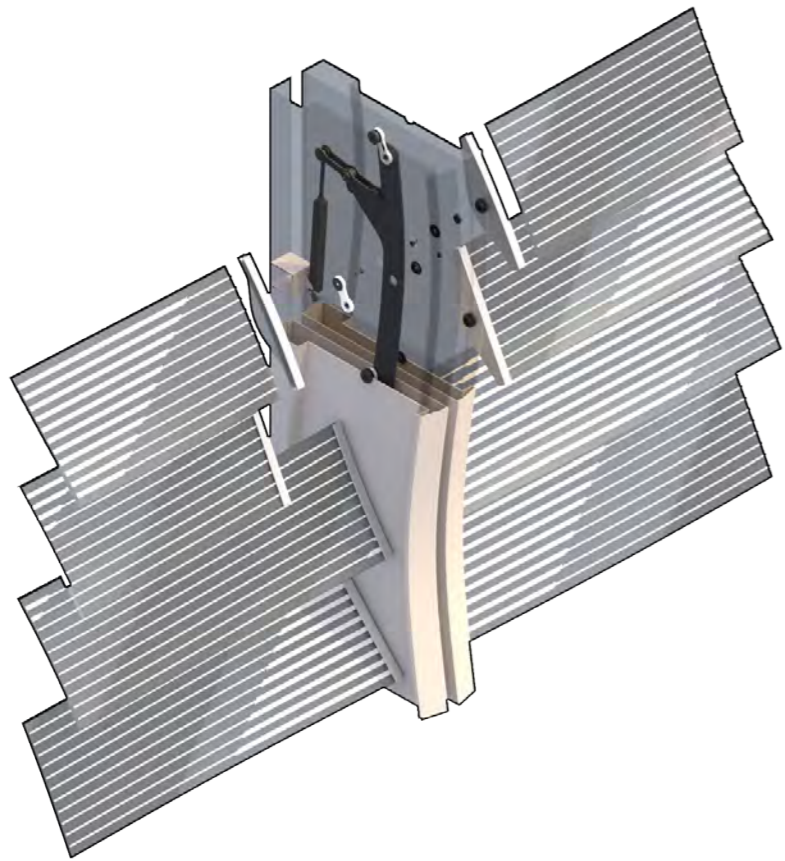
**Brief**  
 This project features a unitized curtain wall system for an office building on 504 9th Ave. in Manhattan. The main goal was to provide convincing detail for motorized-glass louver system. The Curtain Wall Unit has a nominal dimension of 4500mm x 2000mm with triple-glazed unit and curved glass louver.



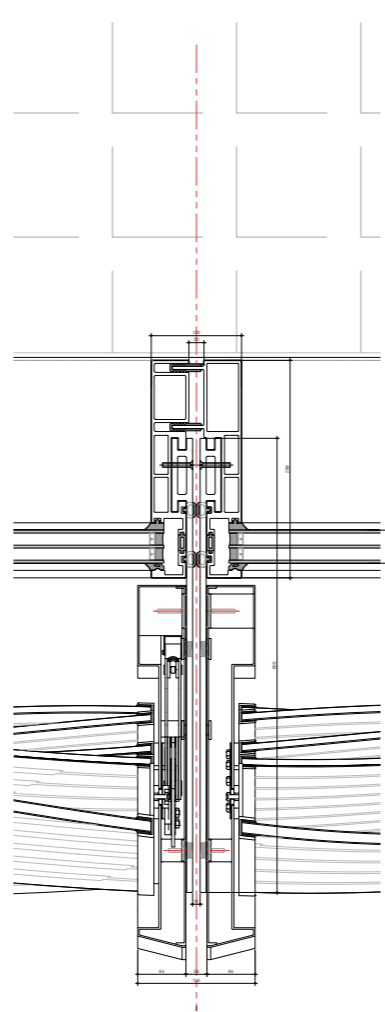




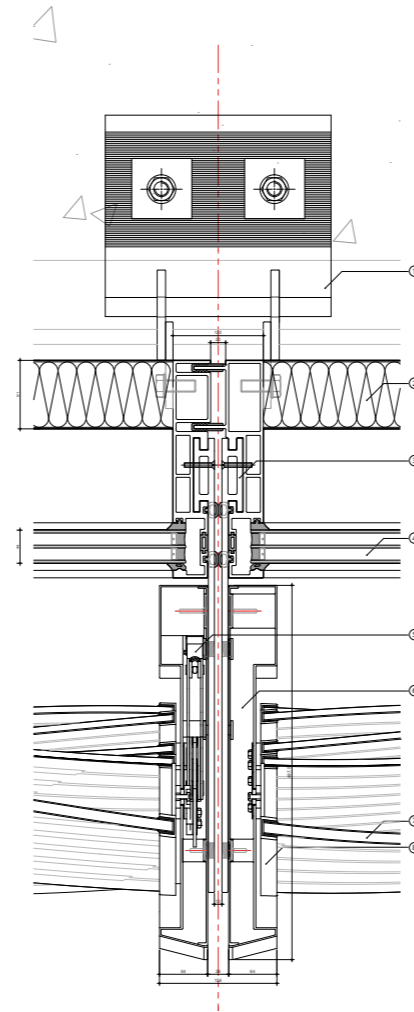
4-Way Joint



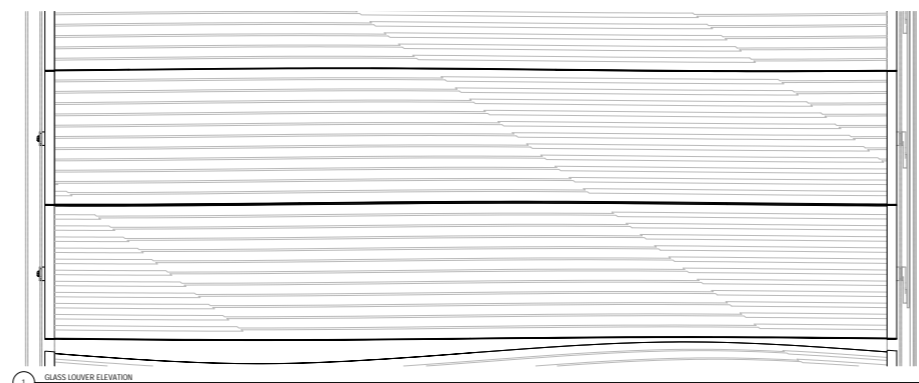
Motorized Louver System Detail



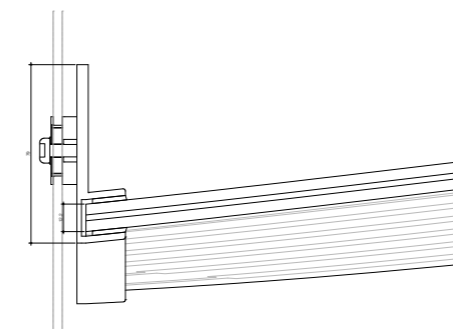
1 MULLION DETAIL 1.3



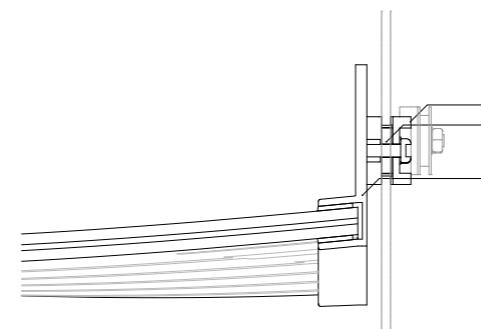
2 MULLION DETAIL 1.3



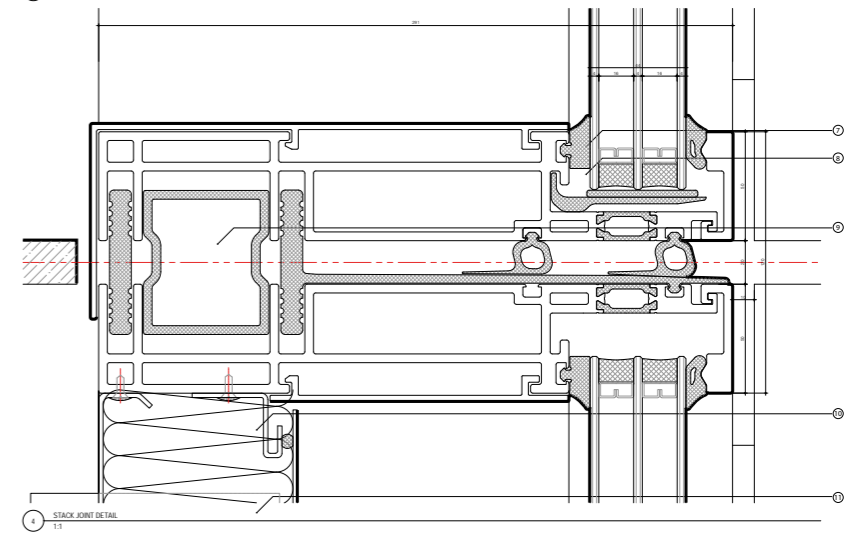
3 GLASS LOUVER ELEVATION 1.5



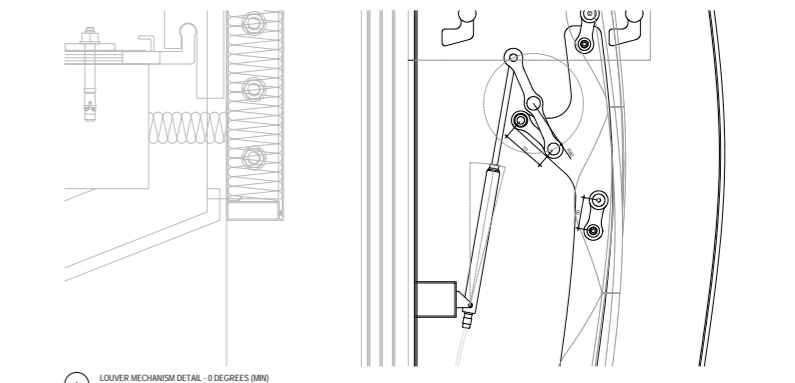
4 GLASS LOUVER DETAIL - NON DRIVING SIDE 1.1



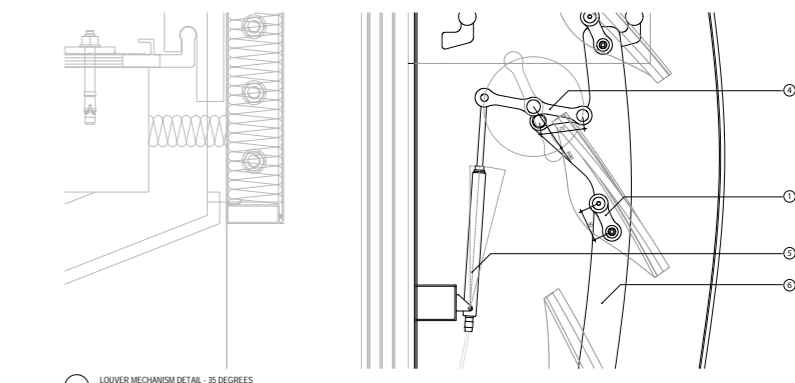
5 GLASS LOUVER DETAIL - DRIVING SIDE 1.1



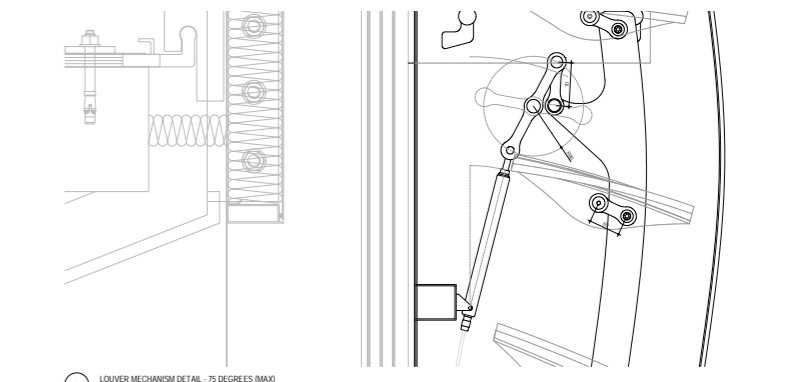
6 STACK JOINT DETAIL 1.1



7 LOUVER MECHANISM DETAIL - 0 DEGREES (MIN) 1.4



8 LOUVER MECHANISM DETAIL - 35 DEGREES 1.4



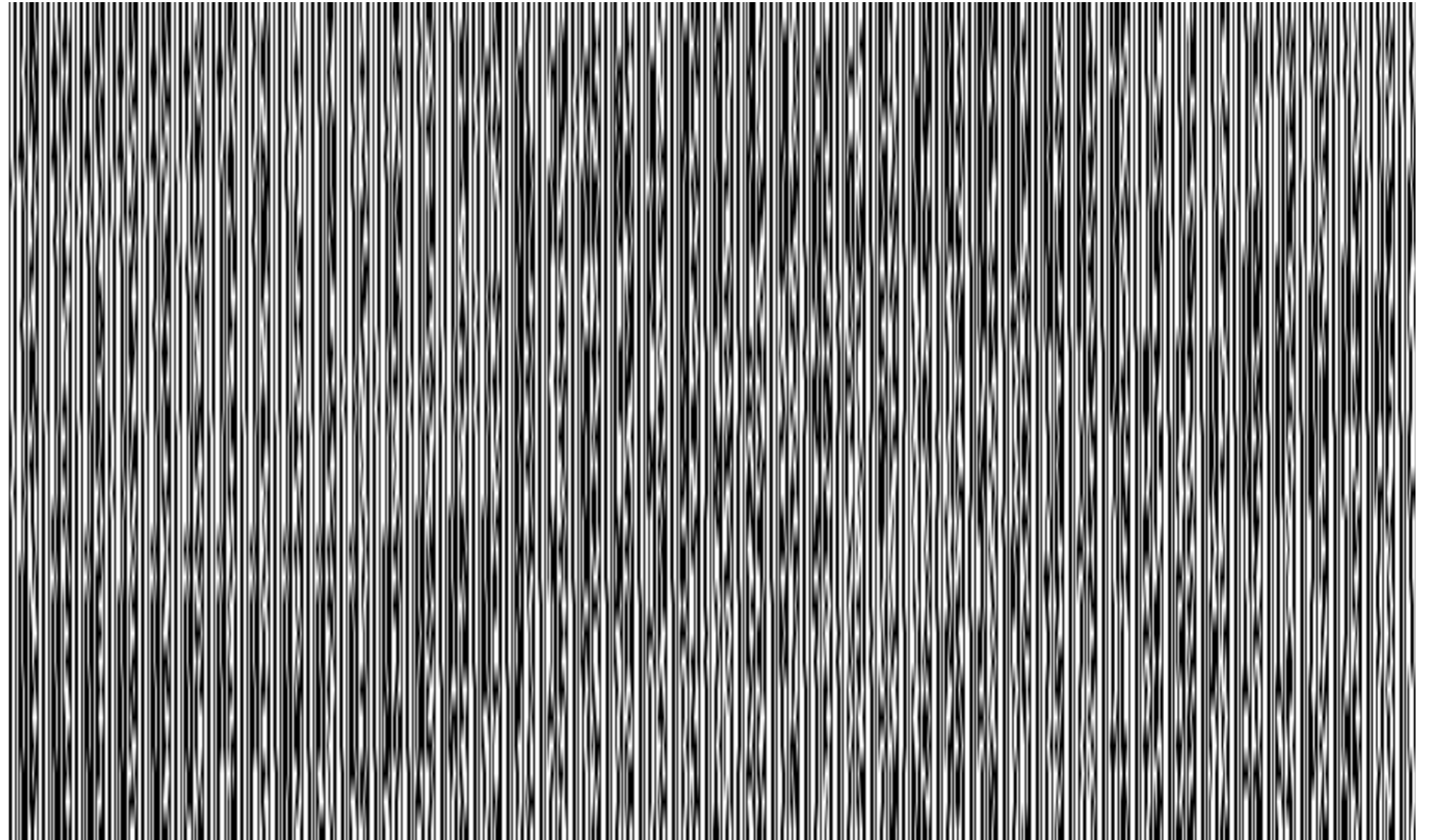
9 LOUVER MECHANISM DETAIL - 75 DEGREES (MAX) 1.4



# Bar-Coded : Machine Vision



Screen shot of Bar-Coded



Project Info  
ADR 2 / Columbia GSAPP

Instructor  
Violet Whitney

Date  
Jan 2020 - Apr 2020

Site  
-

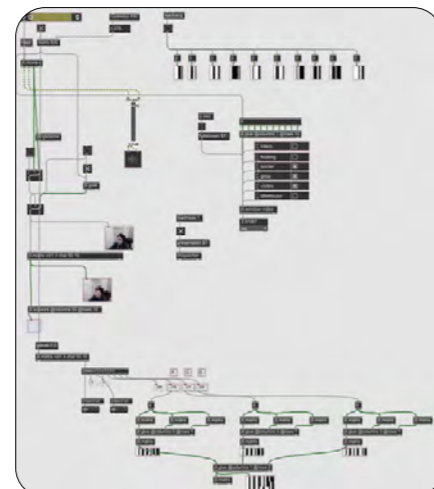
Format  
Standalone software  
Written in MAX 8

Size  
-

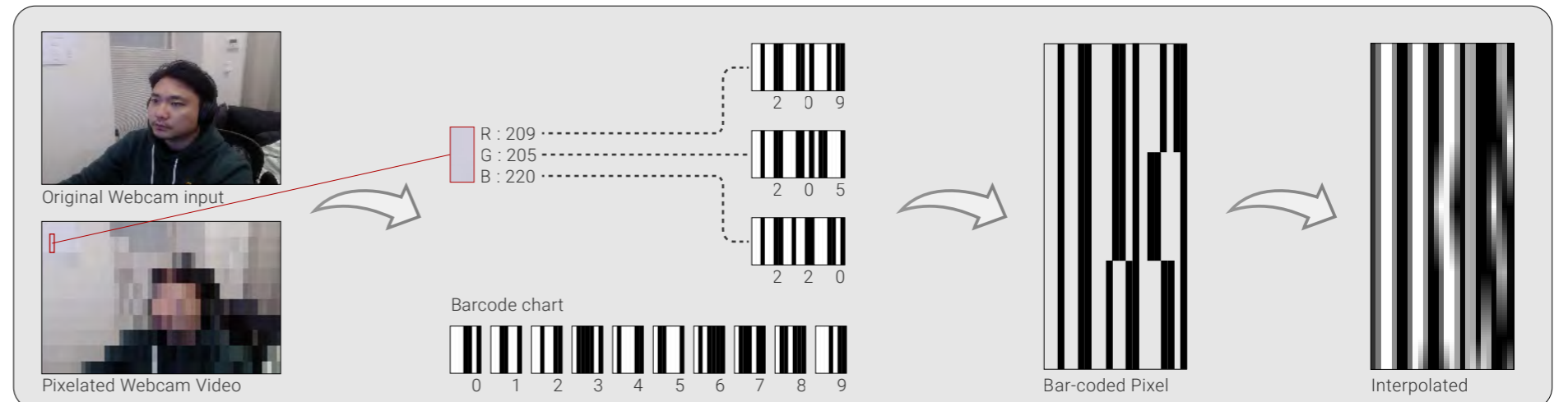
Brief  
Bar-Coded is a program that translates video into barcodes.

This project started with an idea to encrypt vision into something that human mind cannot perceive, but machines can.

With right translating code, robots will have no problem translating the video back to the original one.

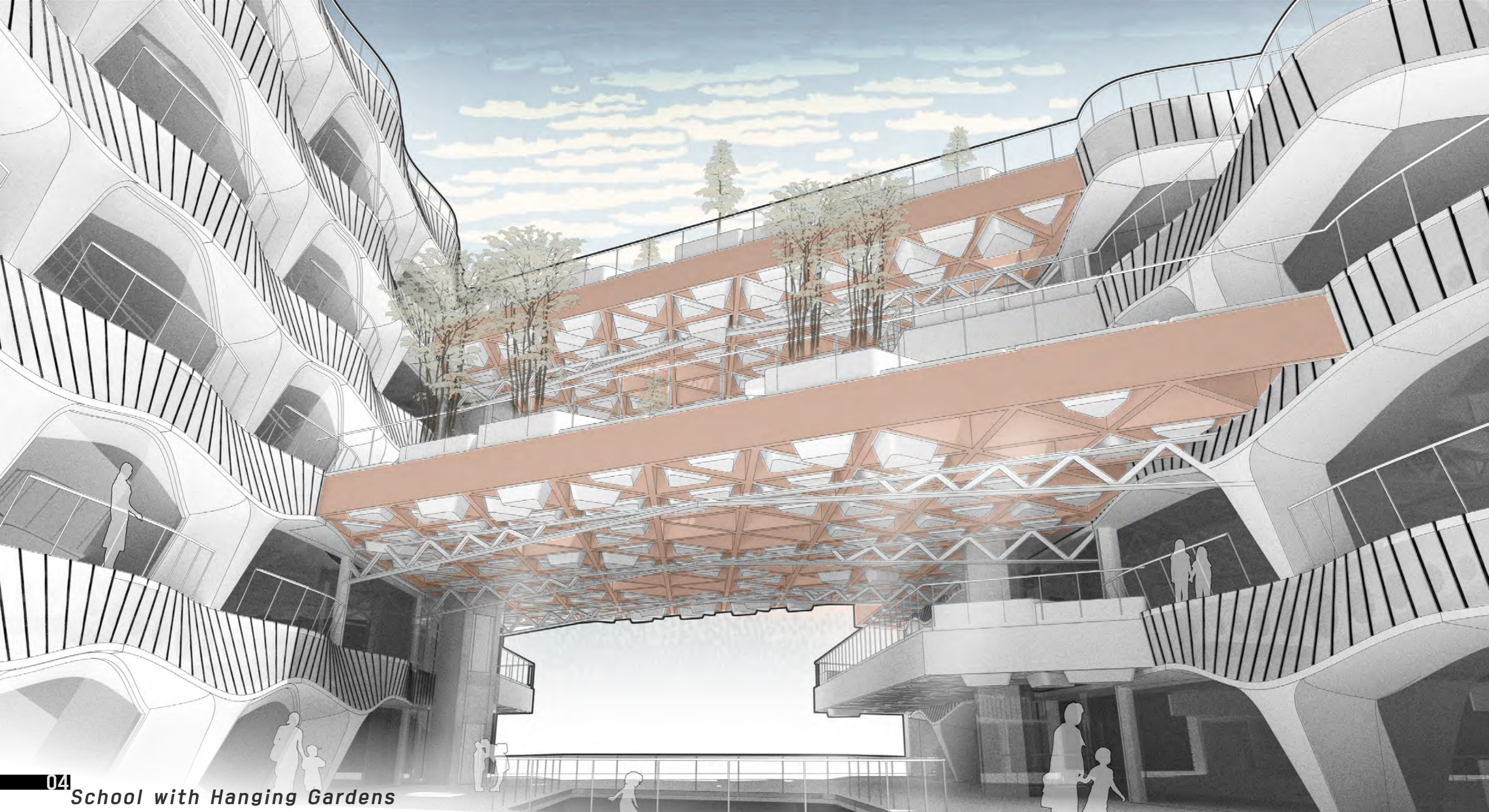


Script written in MAX 8



Bar-coding Process





**04** *School with Hanging Gardens*

*Project Info*

Core II / Columbia GSAPP

*Date*

Sep 2019 - Dec 2019

*Program*

Public School

*Instructor*

Daisy Ames (Studio)  
Kevin Schorn (Facade Details)

*Site*

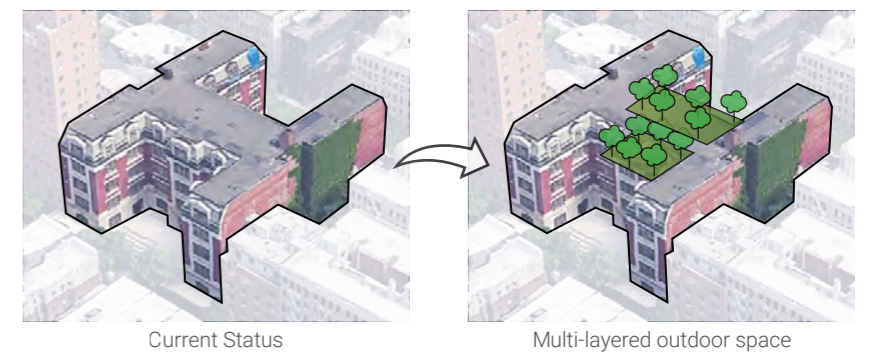
New York, NY

*Size*

38,760 sqft

*Brief*

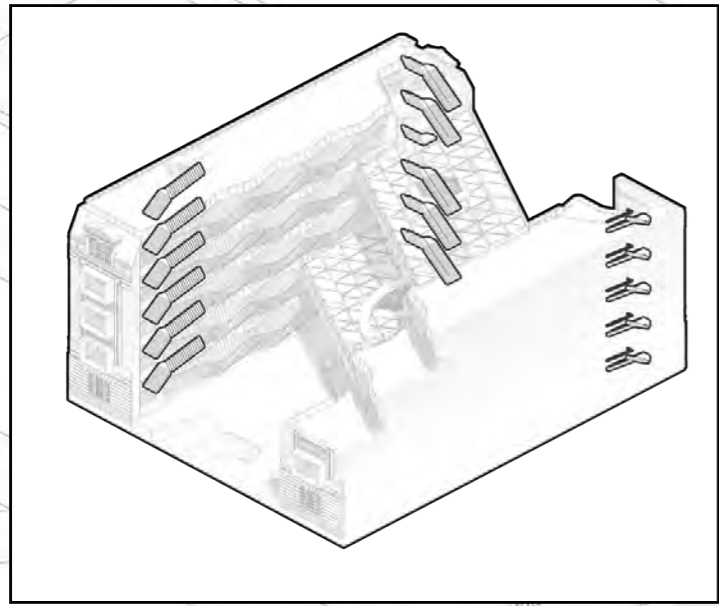
Public Schools in metropolitan cities around the world, especially ones in Manhattan, lack one important thing in common - its connectivity to nature. Therefore, this school mainly focuses on how to connect the children inhabiting this school with a natural environment including natural sun lighting and easily-accessible greenspace.



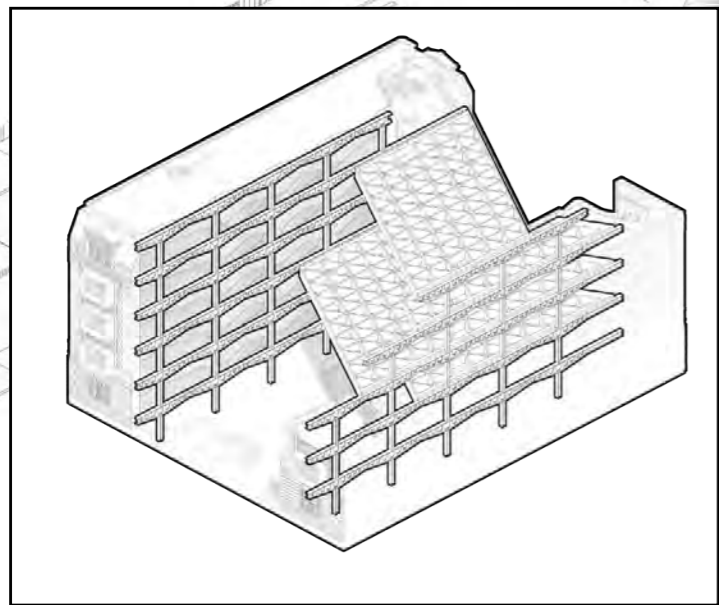
Current Status

Multi-layered outdoor space

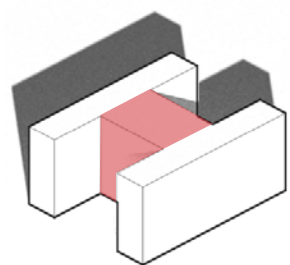
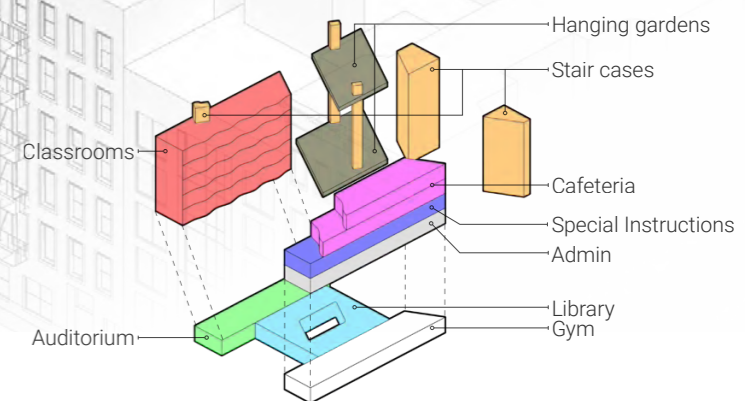
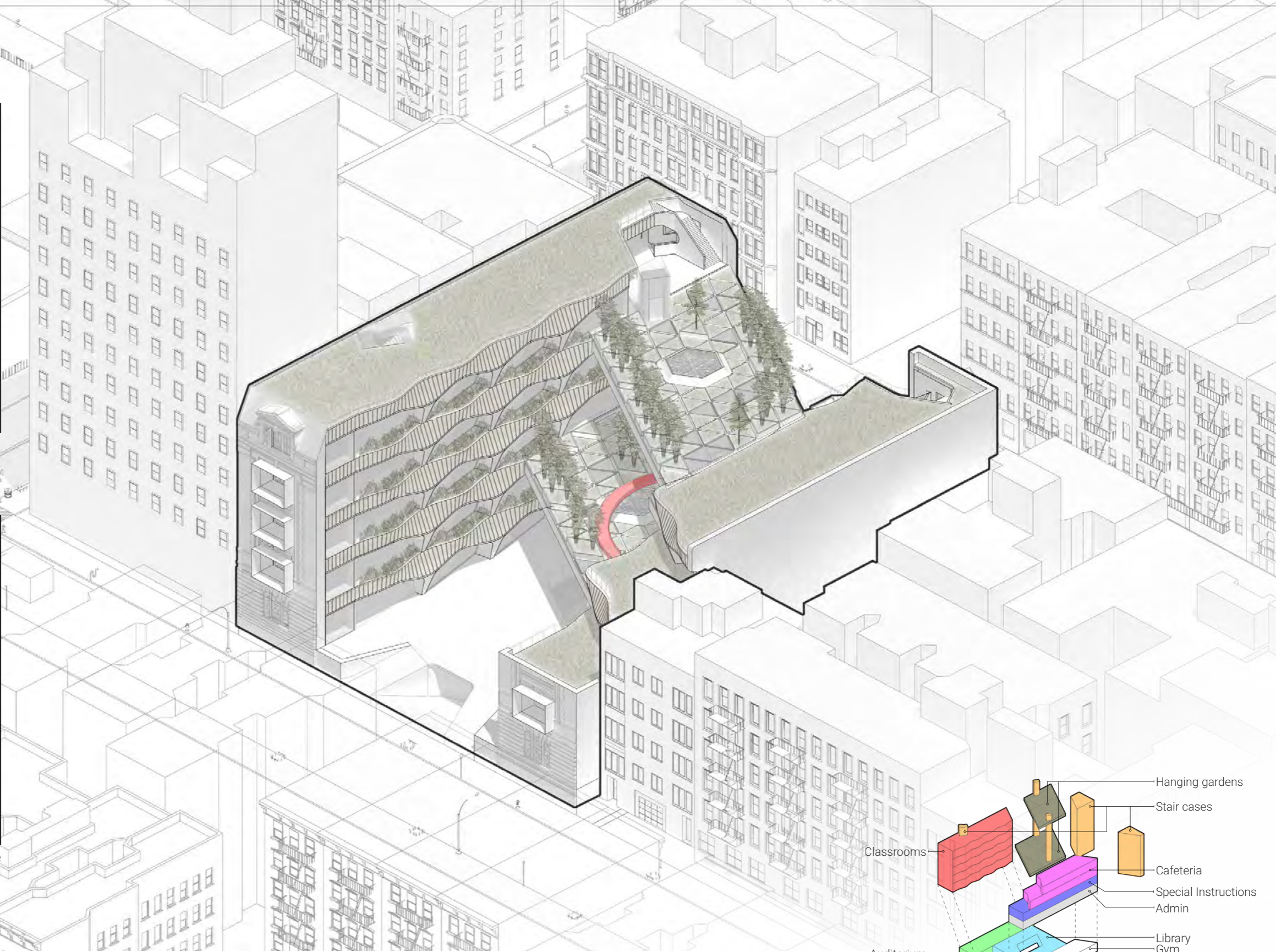




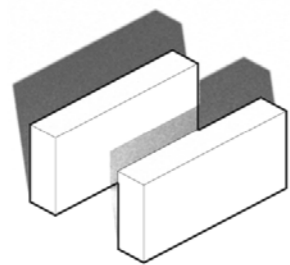
Vertical Connections



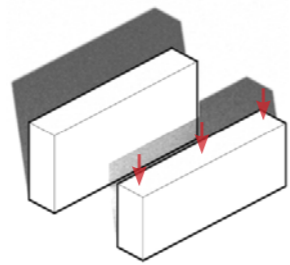
Newly added structure



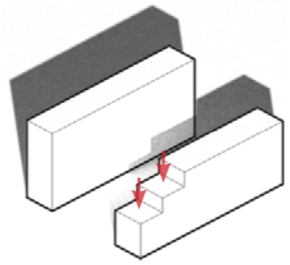
Removing Center of 'H'



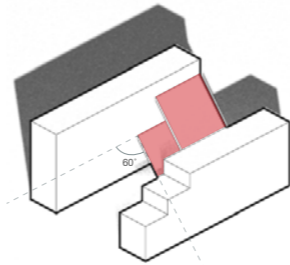
Lowering Right wing



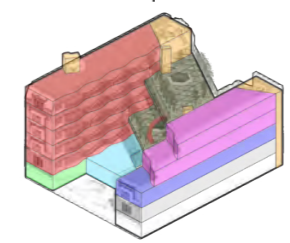
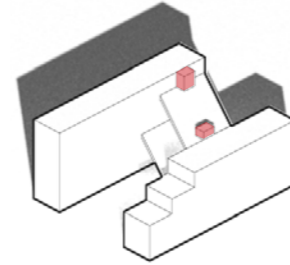
Pushing down s-e end



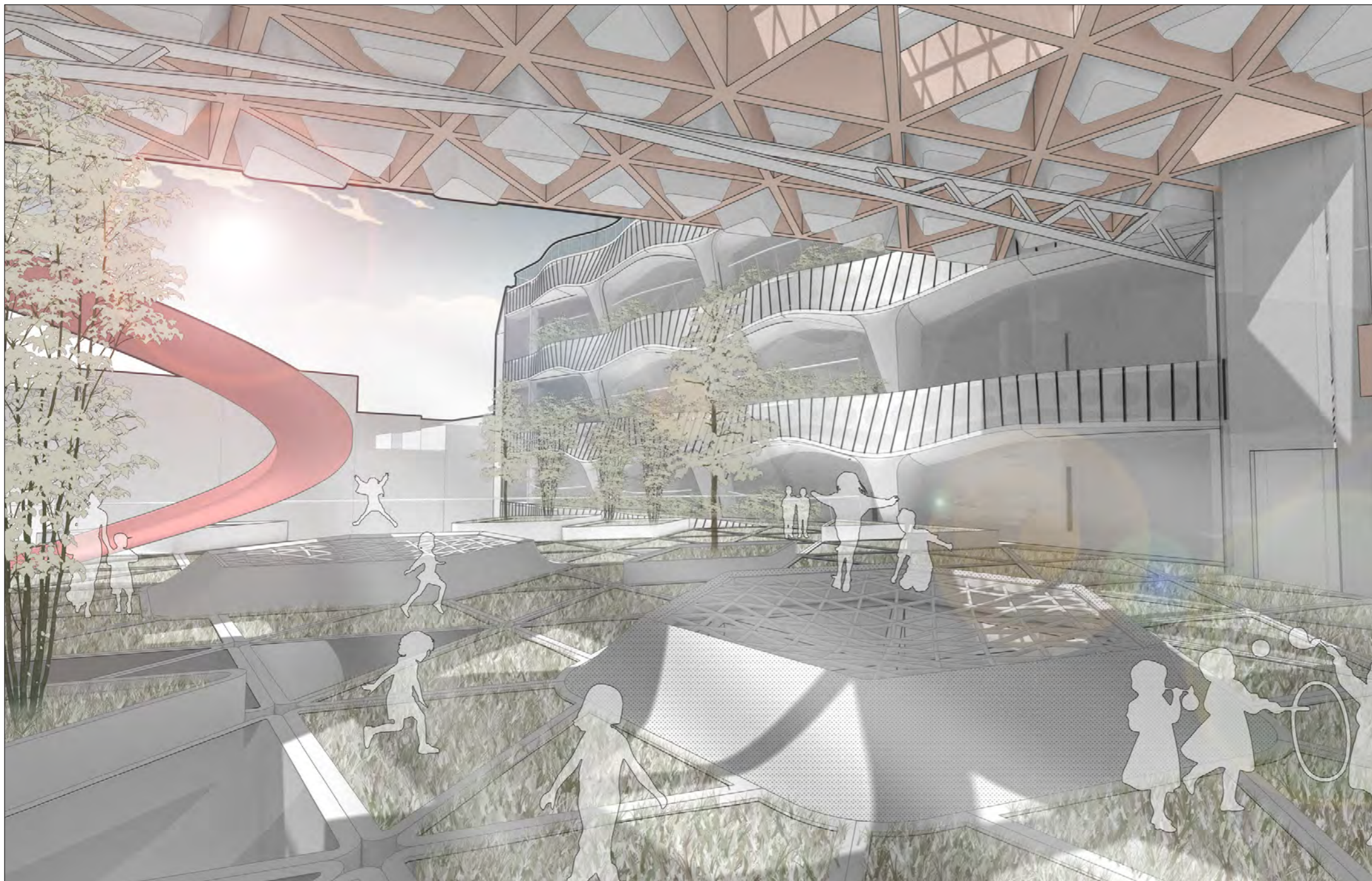
Connecting two wings with Gardens



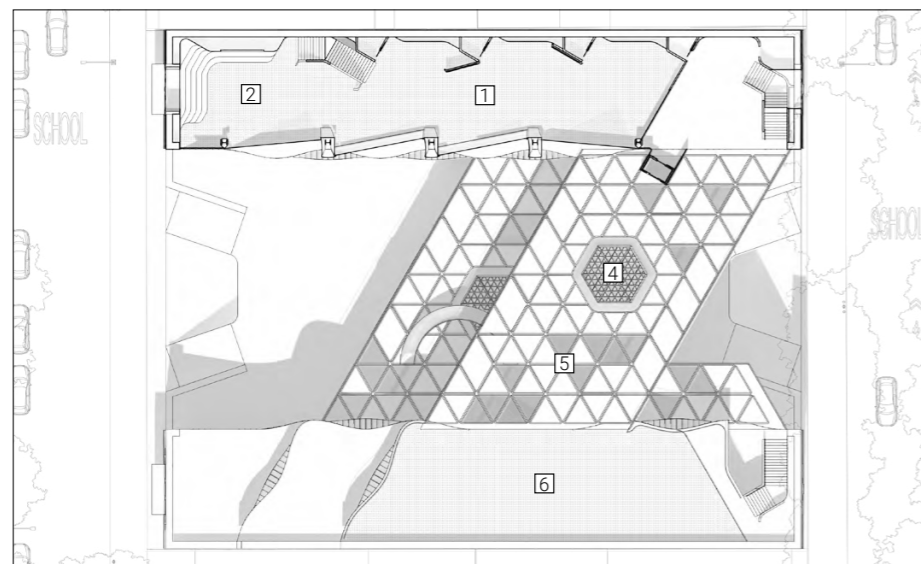
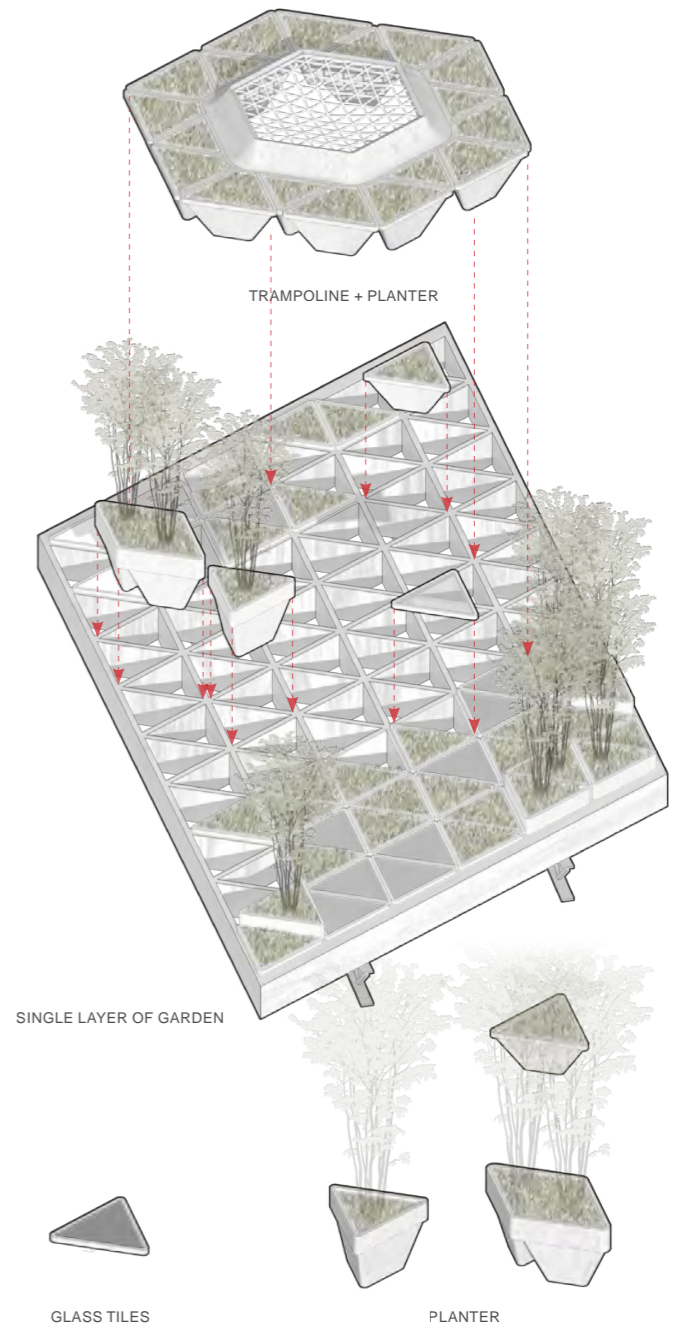
Installing elevator cores



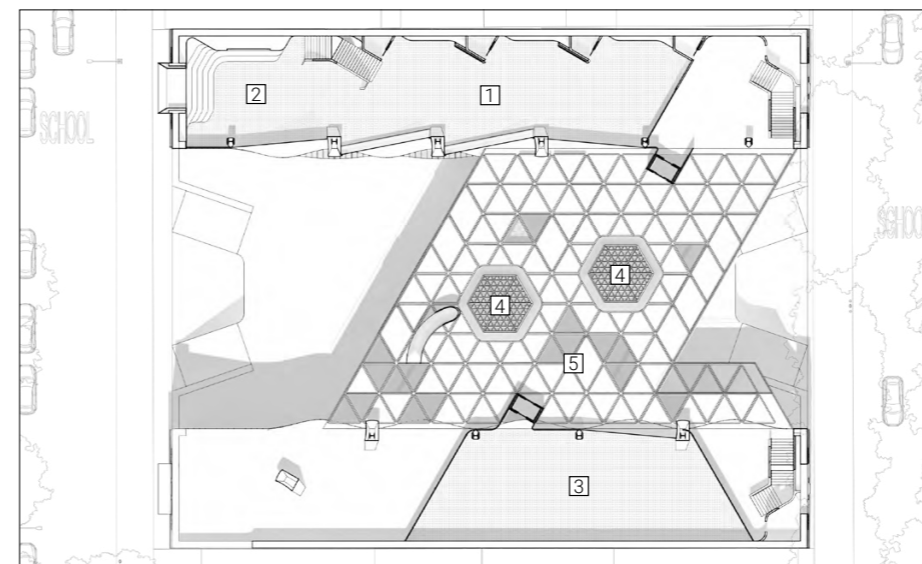




Perspective of Hanging Gardens

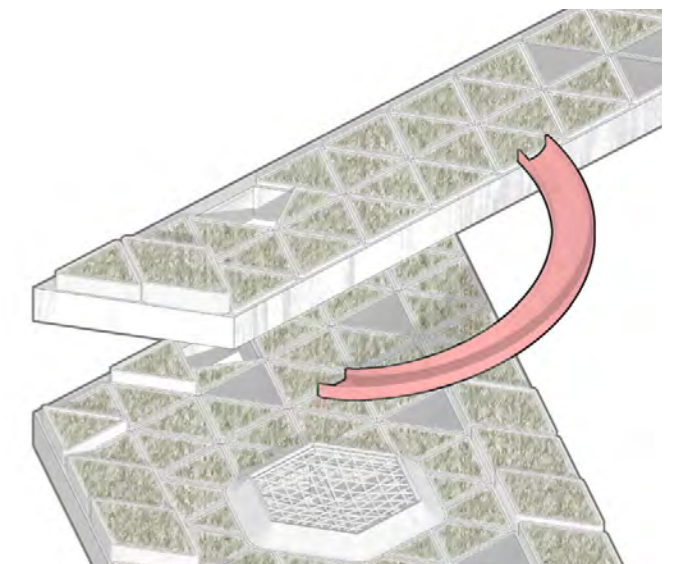


5F Plan



3F Plan

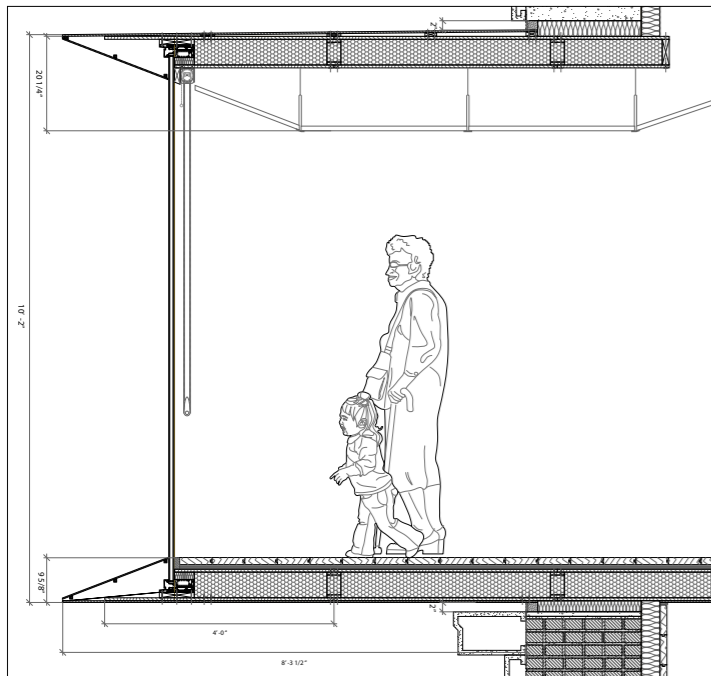
- 1. Classroom
- 2. Auditorium
- 3. Cafeteria
- 4. Outdoor Trampoline
- 5. Hanging Garden
- 6. Special Instructions



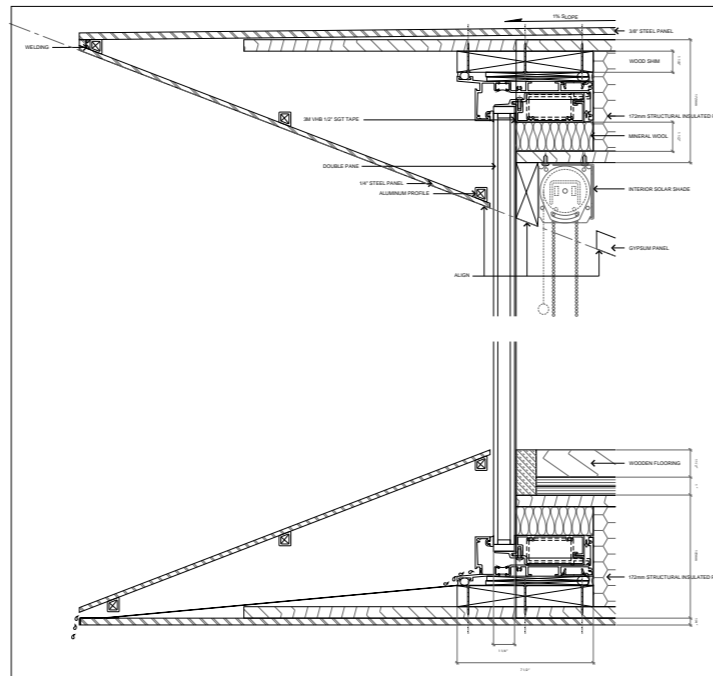




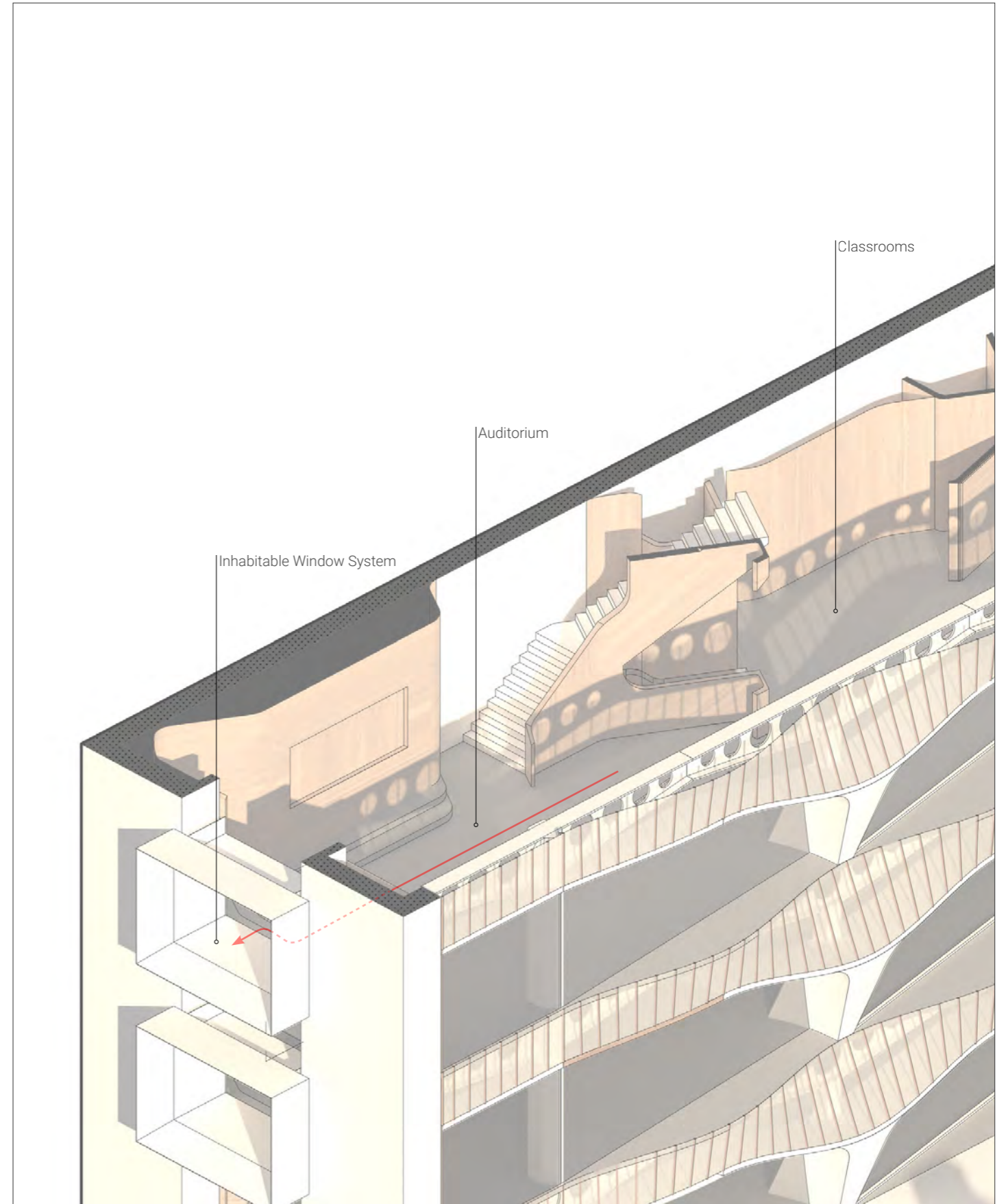
Perspective of Auditorium



Section of inhabitable window system



Detail Section of Window Joints

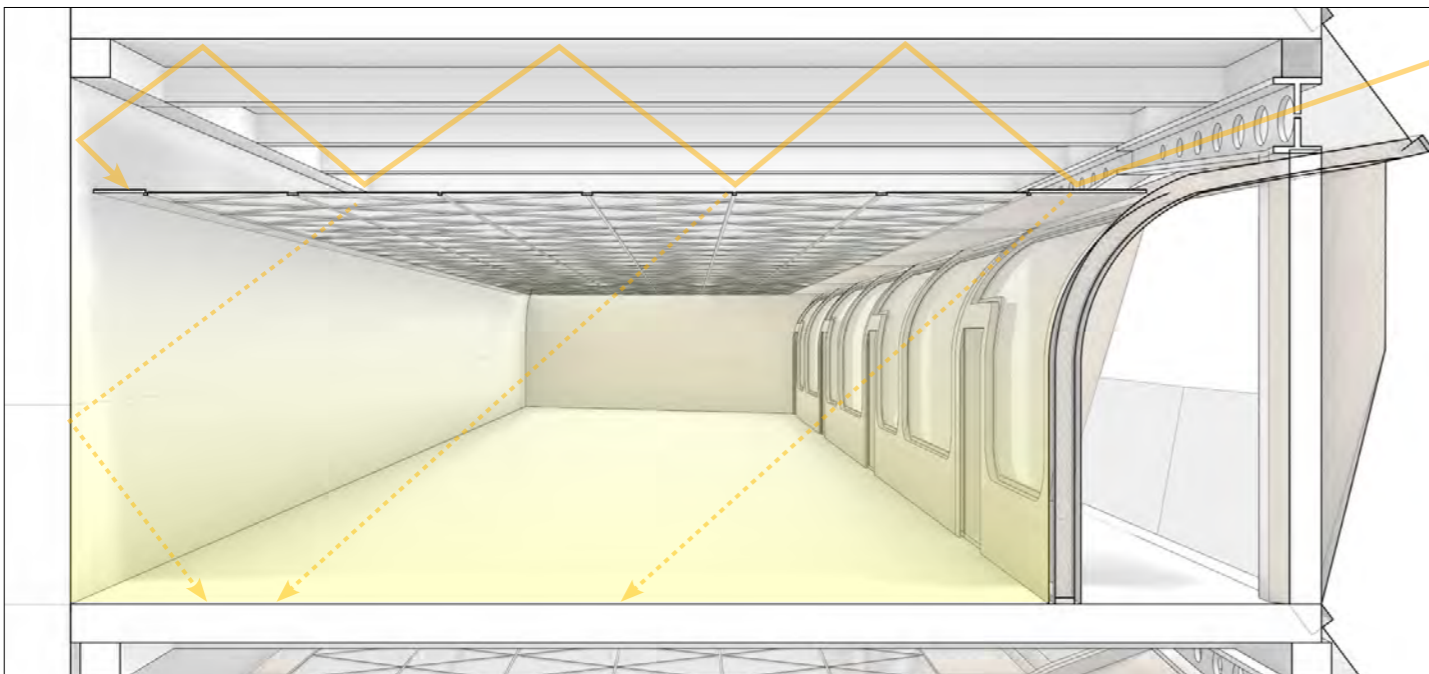


With the use of wooded panels on the interior walls, the classrooms and auditoriums provide warm atmosphere to the entire indoor pace. In the Auditorium, original window system is replaced with the inhabitable window system where children can step on and look out to the street.

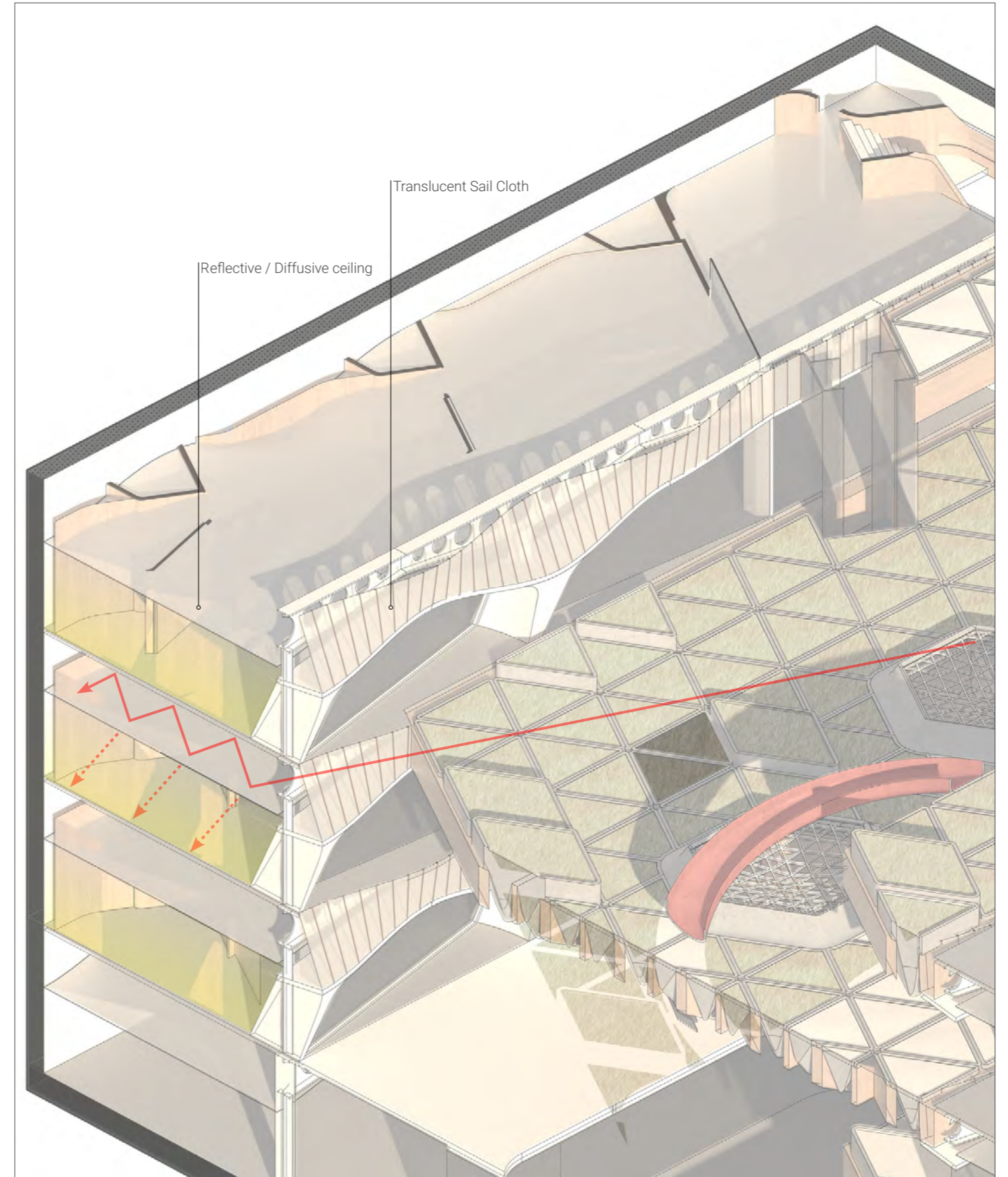




W-E Section



Light Diffusive Ceiling System



Getting enough natural sunlight is another essential value when it comes to bringing nature into the school. This Light diffusive ceiling connects through the entire length of the school and is connected with slanted translucent Sail cloth. When the sunlight hits the sail cloth, the sunray is diffused and keeps on reflecting and diffusing inside the ceiling cavity, to provide natural and smooth lighting.



# Re-thinking Kisho Kurokawa

**Project Info**  
ADR 1 / Columbia GSAPP

**Instructor**  
Zachary White

**Date**  
Sep 2019 - Dec 2019

**Site**  
Osaka, Japan

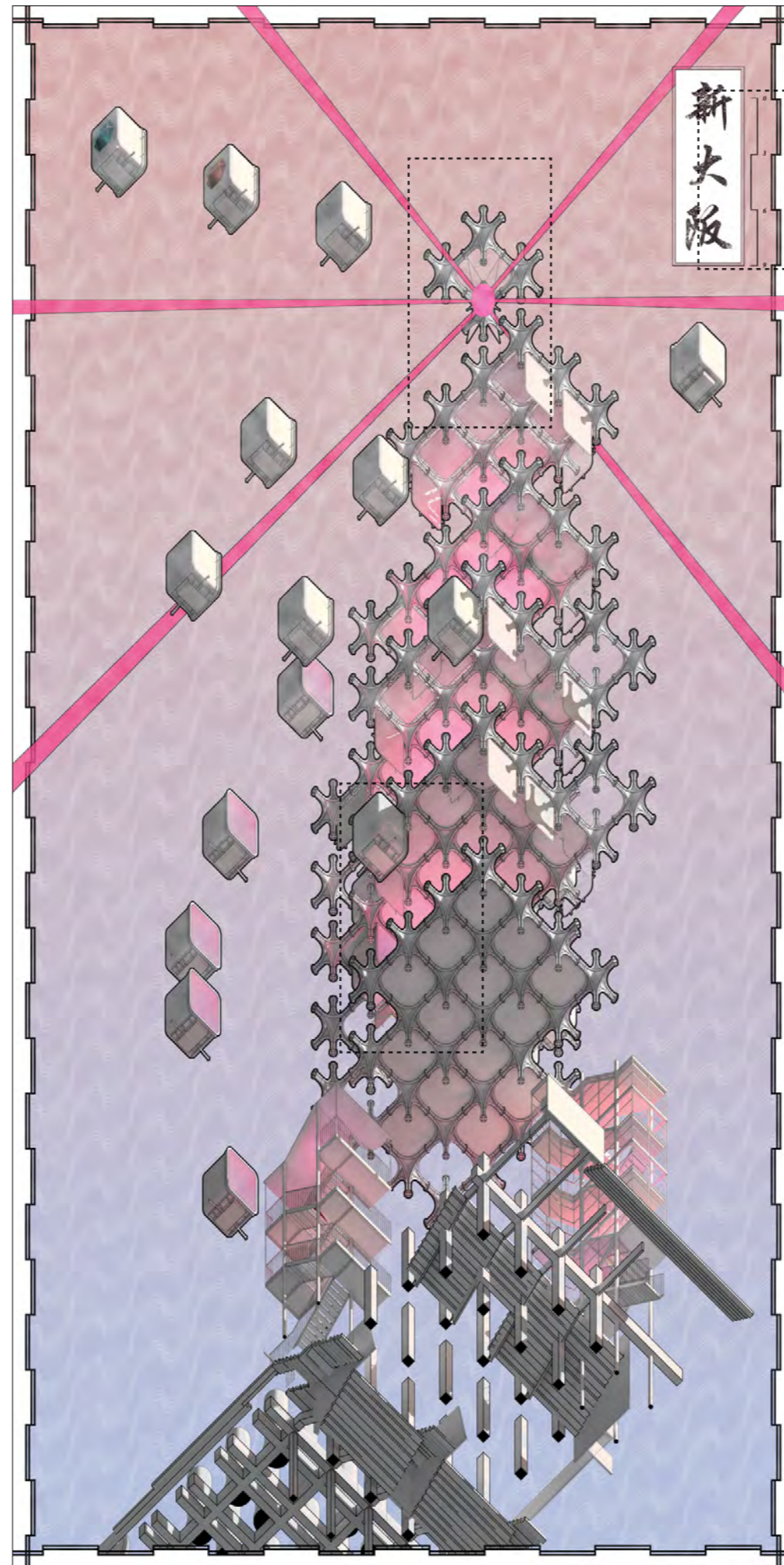
**Format**  
Digital Art Poster /  
Physical Step Sequencer

**Size**  
-

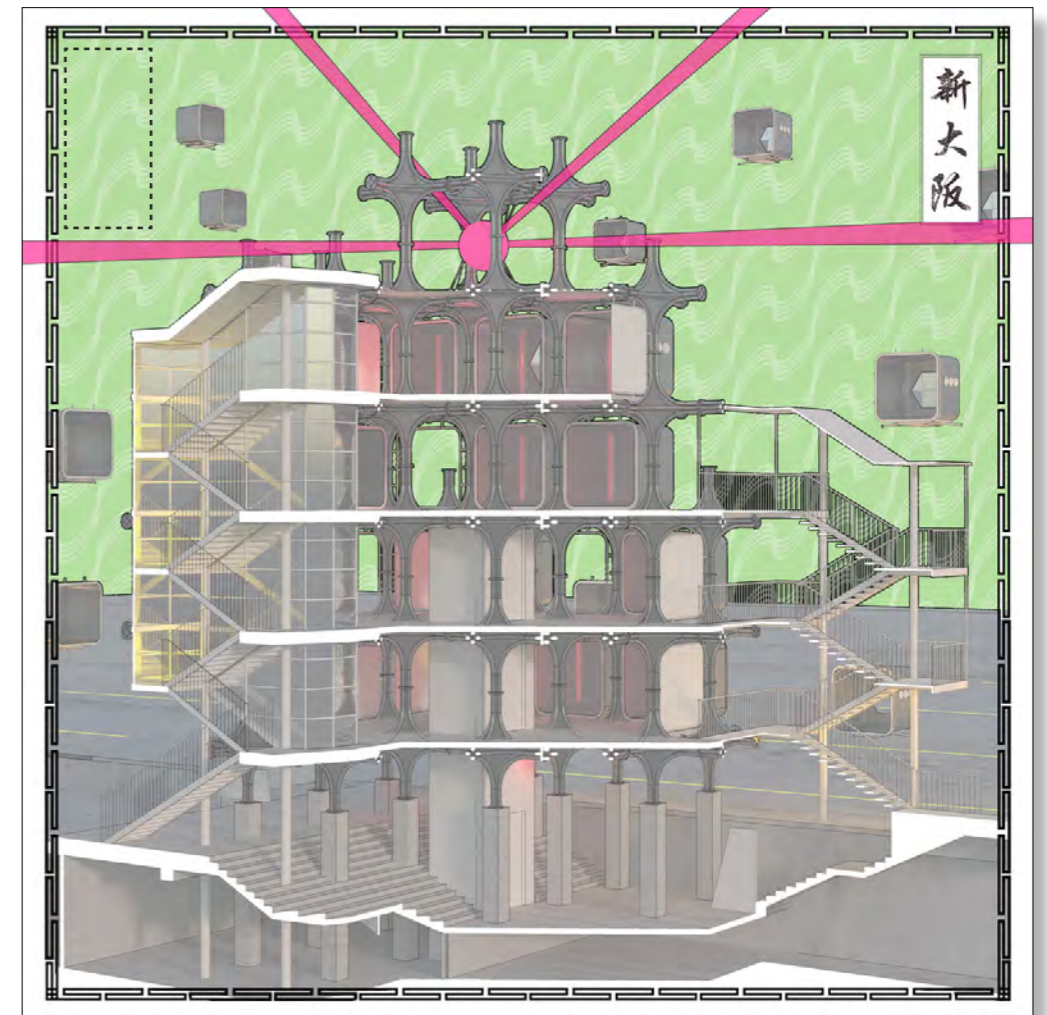


Takara Beutilion, Kisho Kurokawa (1970, Osaka Int'l Exposition)

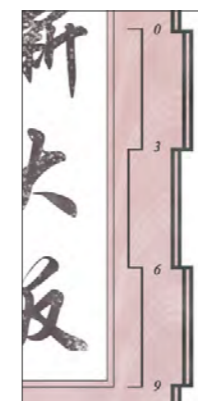
**Brief**  
Takara Beutilion is the symbol of Japanese Metabolism architecture at its peak. The architect and the founding member of Metabolism movement, had a strong idea that buildings should be built like a living organism. In this project, Takara Beutilion is deconstructed and re-interpreted.



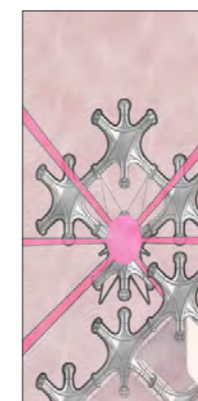
24" x 48", printed on heavy weight



24" x 24", printed on heavy weight



Pictureframe / Scale



Beacon



Spaceship docking



Wave pattern for sky

## Part 1 : Re-drawing Osaka



### Neo Osaka

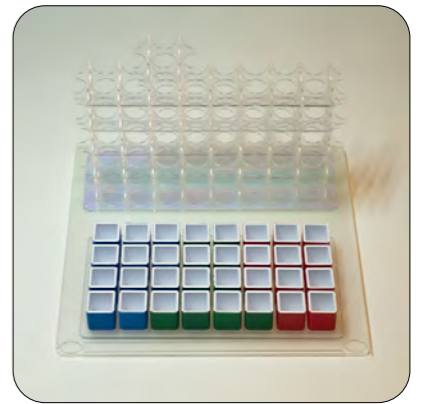
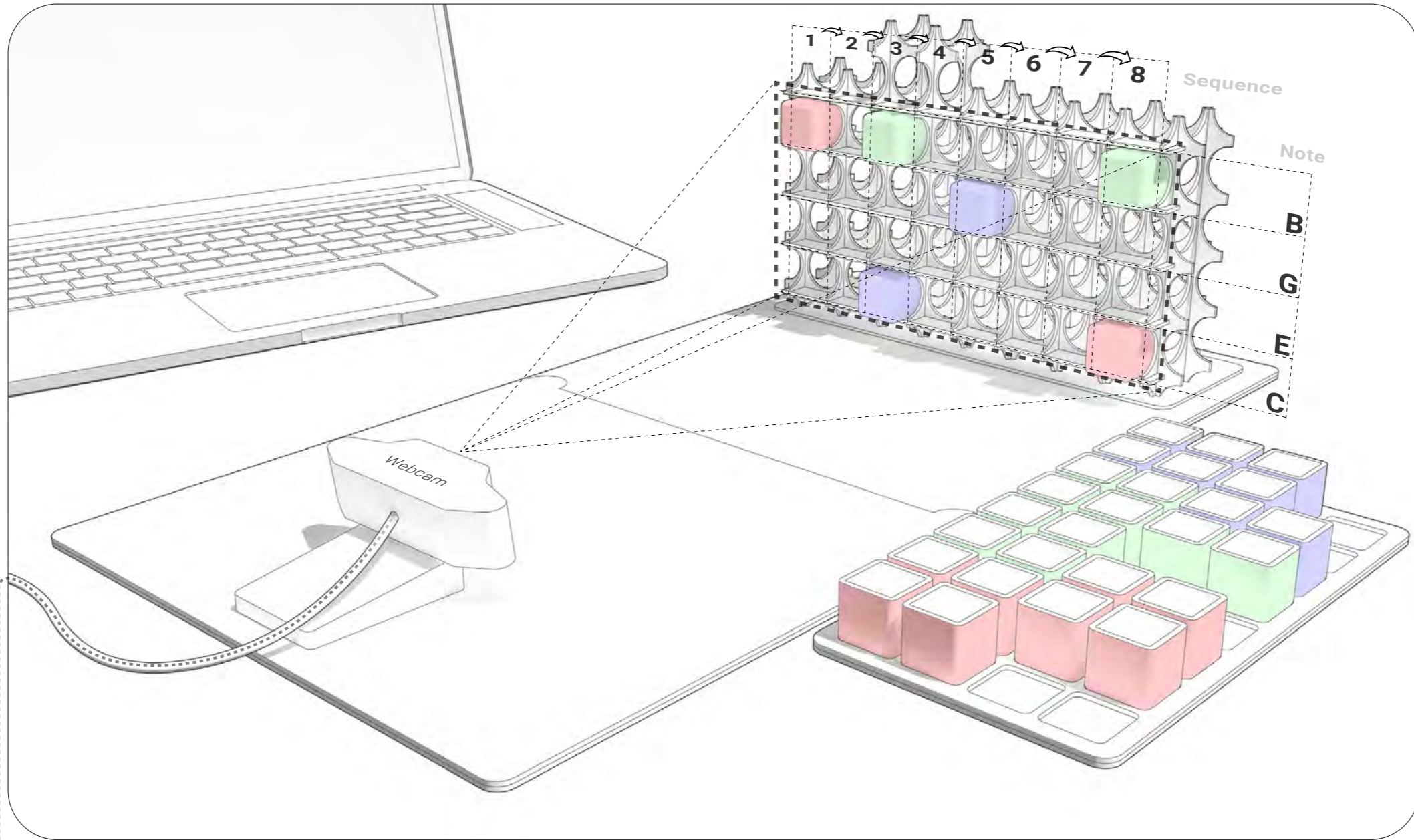
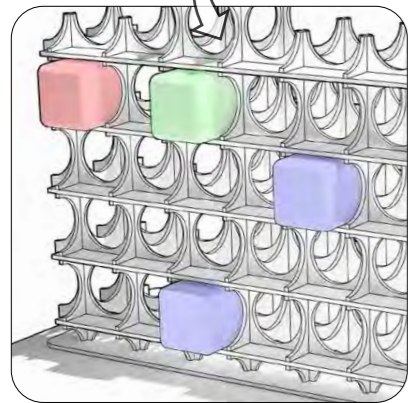
This work started with looking at the pods that are attached to the modular spine structure of Takara Beutilion. The pods have very distinctive look with a cube with a rounded corners, sometimes with windows, and the legs which makes them look like a small spaceships. If the pods were to be spaceships, wouldn't the spine be the mother ship that small spaceships can dock into? The idea was developed a retro-futurism art represented in a form of traditional Japanese tapestry. These two posters were named Neo-Osaka, a home to space-nomads.



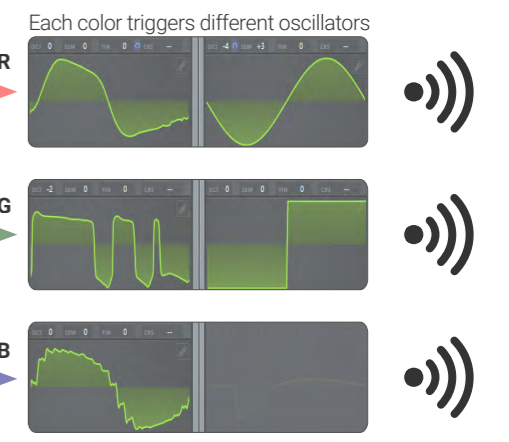
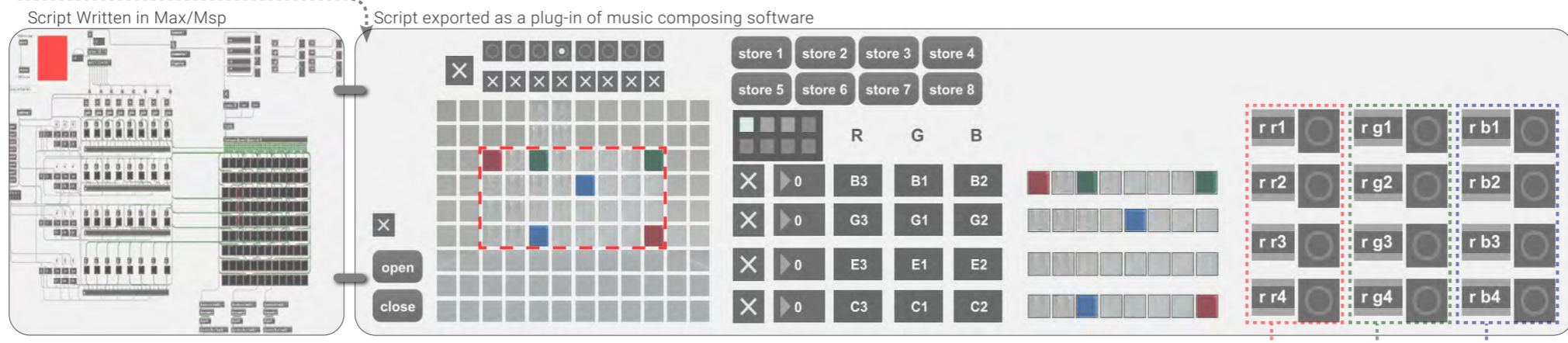
Part 2 : Re-thming Osaka  
Interactive Beat Maker



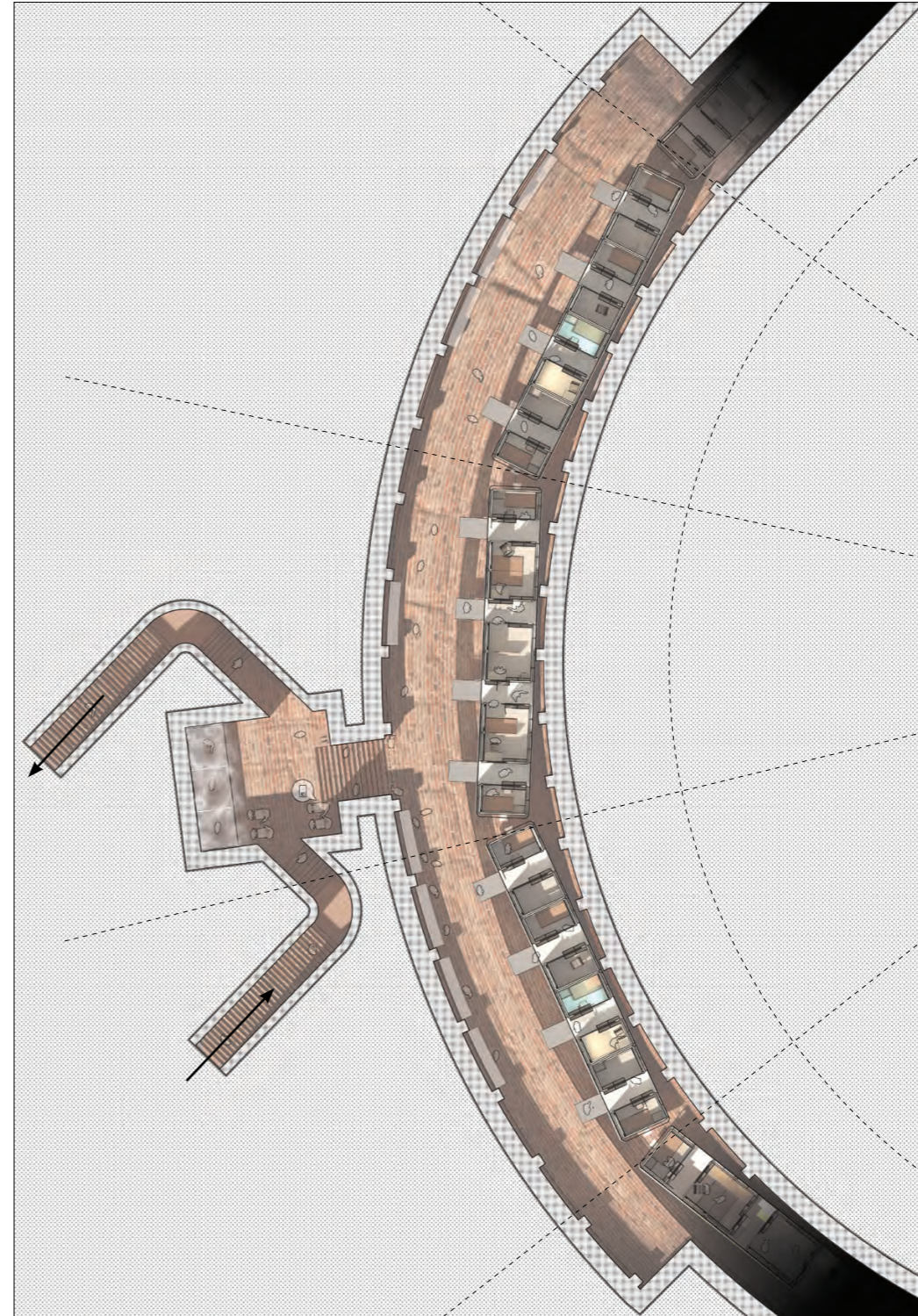
Beat machine in action!



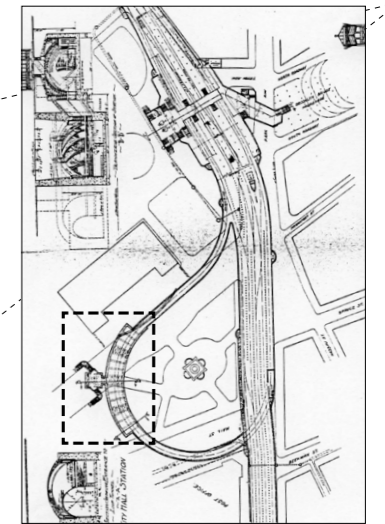
Takara Beutilion has 3 types of modular pods that are attached to the main structure, and if looked from far, the arrangement of different pods forms certain 'rhythm'. This interactive model aims to amplify the rhythmic feature of the building and transform this into a musical toy. Depending on the arrangement of users, there is unlimited possibility of creating a new rhythm.







Plan of Renovated Old City Hall station



**Old City Hall Station**

In this project, the old City Hall station is renovated to be used as a platform where homeless people can hop on 'PAL', the temporary shelter train and spend a night or two as well as providing foods.

**06 PAL : Provisional Accommodation Locomotive**  
**Temporary Subway Housing for Homeless**

Project Info

Core I Studio / Columbia GSAPP

Instructor

Lindsey Wikstrom

Date

Sep 2019 - Dec 2019

Site

New York, NY

Program

Temporary Shelter for Homeless

Size

Diameter 1,000mm

Brief

Homeless people in U.S. is surging more than any time in history. As of January 2019, New York had an estimated 929,091 experiencing homelessness on any given day. However, the amount of homeless people that conventional shelter can provide is limited to very small amount. This projects proposes using an old & abandoned city infrastructure to perform as a new way of providing shelter to the most vulnerables.

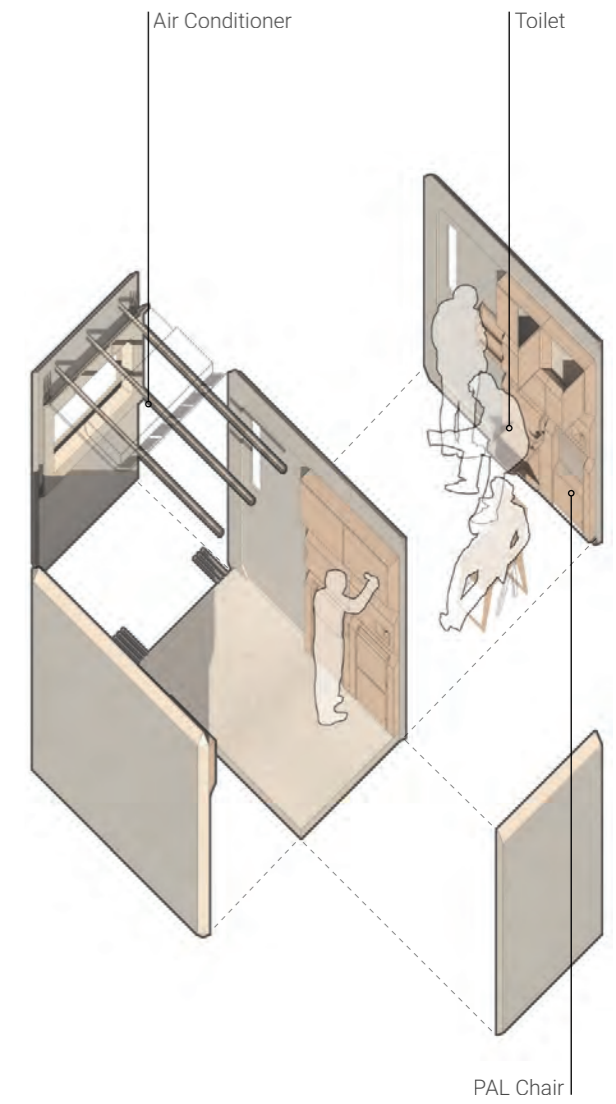
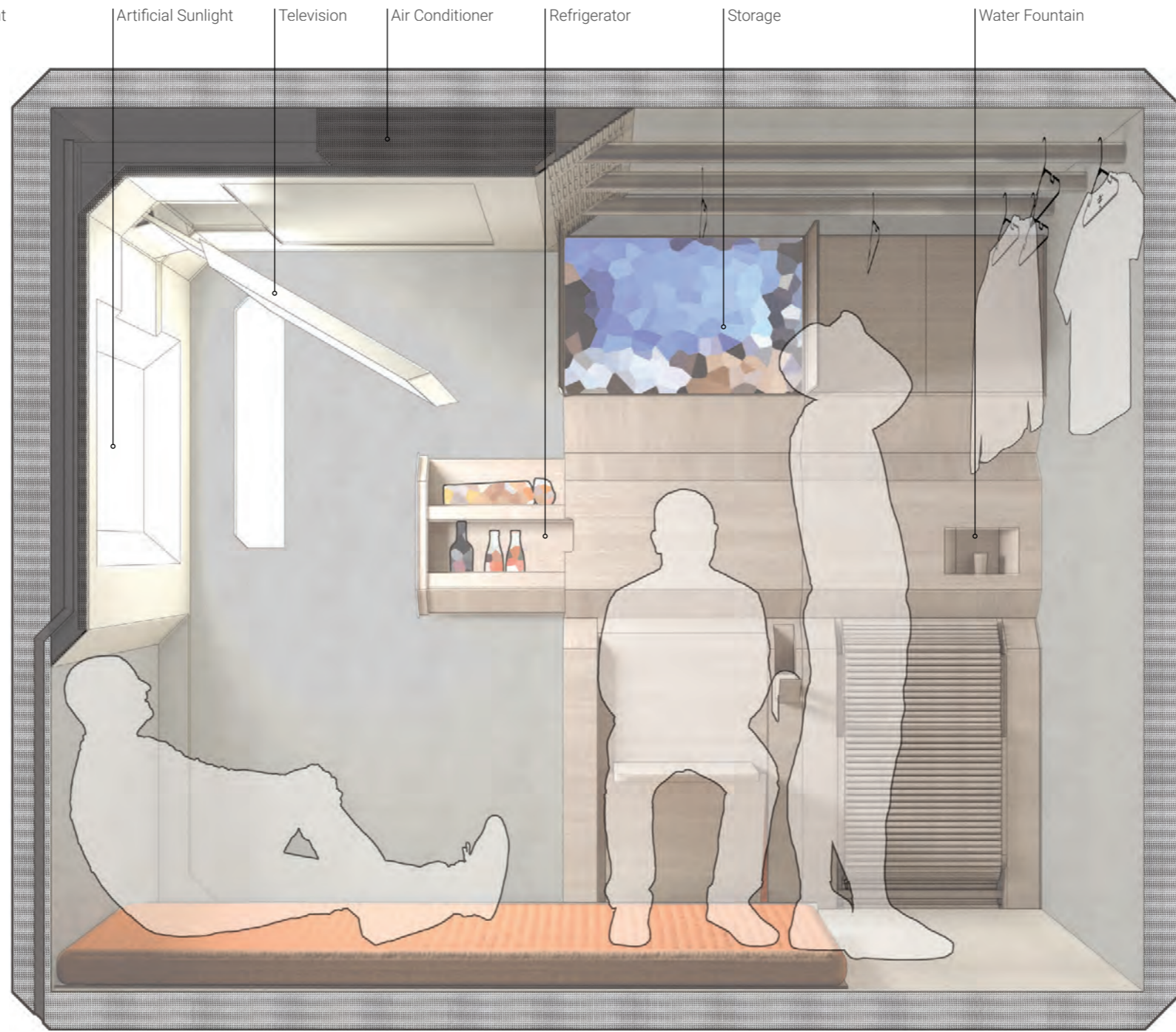


*It was lookin' real dangerous, 'cause even in the daytime it was dark.  
 And, like, I was scared.  
 I said, "Somewhere down the line, it can't be bad as it is up top."  
 Because out in the street, you had kids fuckin' with you.  
 You had the police fuckin' with you.  
 I mean, anybody can walk by you while you're sleeping on a bench and bust you in the head.  
 At least down in the tunnel, you ain't gotta worry about that.*

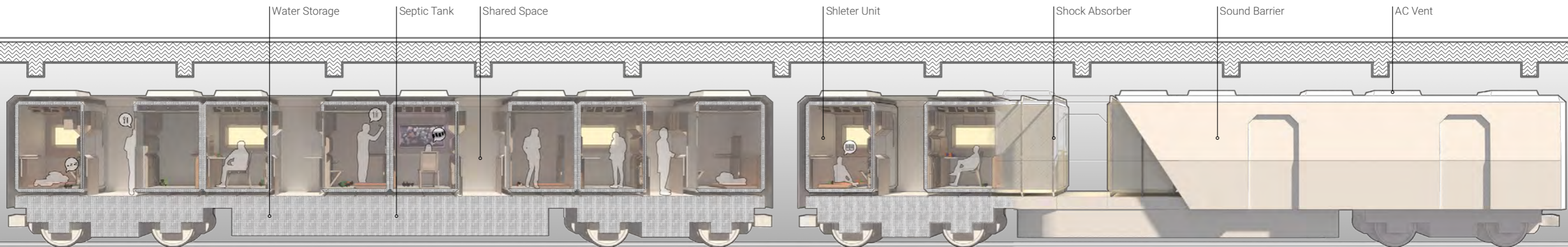
**DARK DAYS**

Dark Days (2000) is a documentary about homeless people living in the dark underground tunnel. This documentary shows how much vulnerable their life is. These people had to find a shelter to protect themselves, eventually leading them to dark underground.



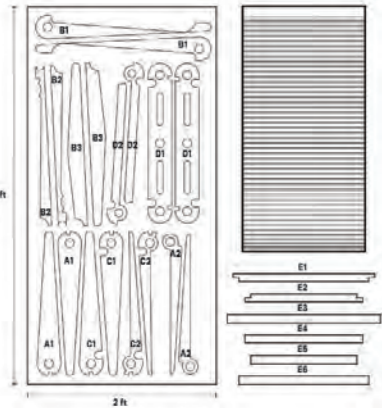
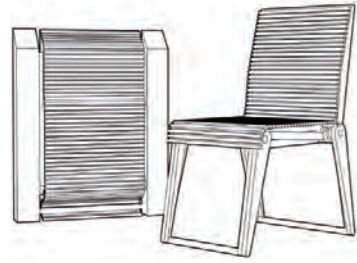


**Modular Wall system**  
In the PAL Unit, each walls are packed with different functions from folding bed to storage and even Television. By making the amenities modular, it can be repaired and replaced relatively easily, eventually lowering maintenance cost.

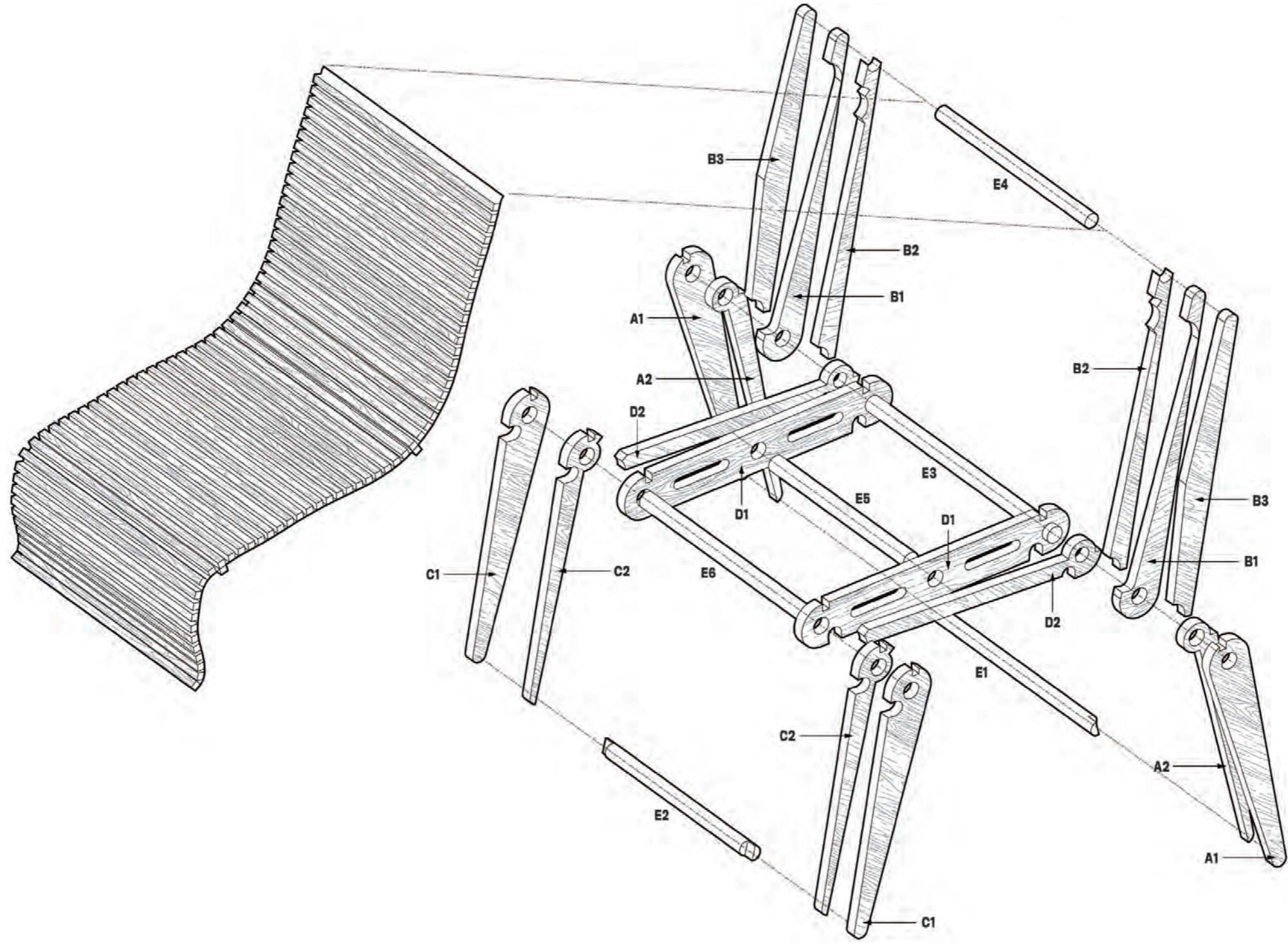




HOW TO ASSEMBLE  
**PAL CHAIR**

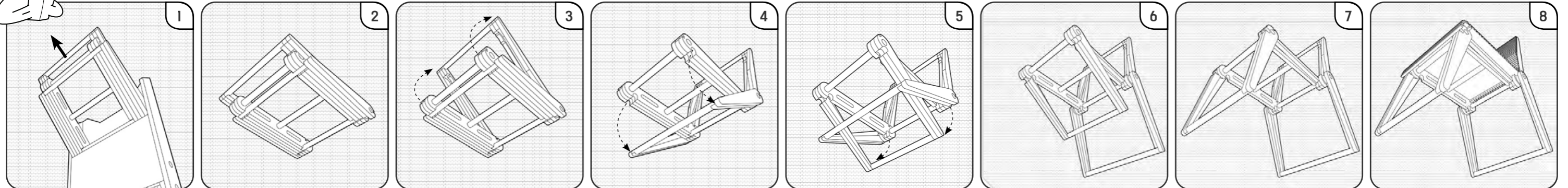


Parts needed for the chair

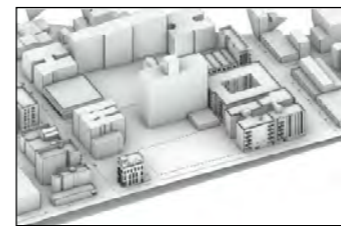


PAL Chair is a foldable chair that is mounted inside the PAL module. It can be folded into the wall-mount system. CNC-ed from a single 2' x 4' sheet of plywood, it can be easily mass-produced and assembled. No screw driver or drilling is needed. To emphasize how easy it can be assembled, this manual followed the style of IKEA product manuals.

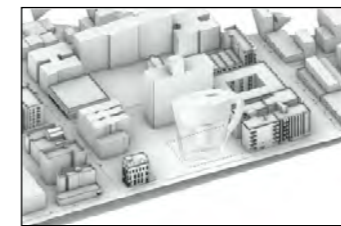
HOW TO UNFOLD



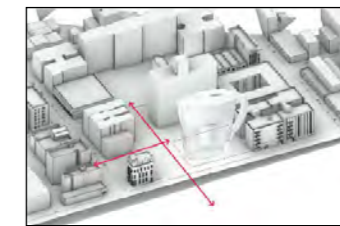




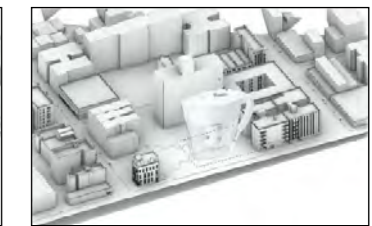
Site / Property Line



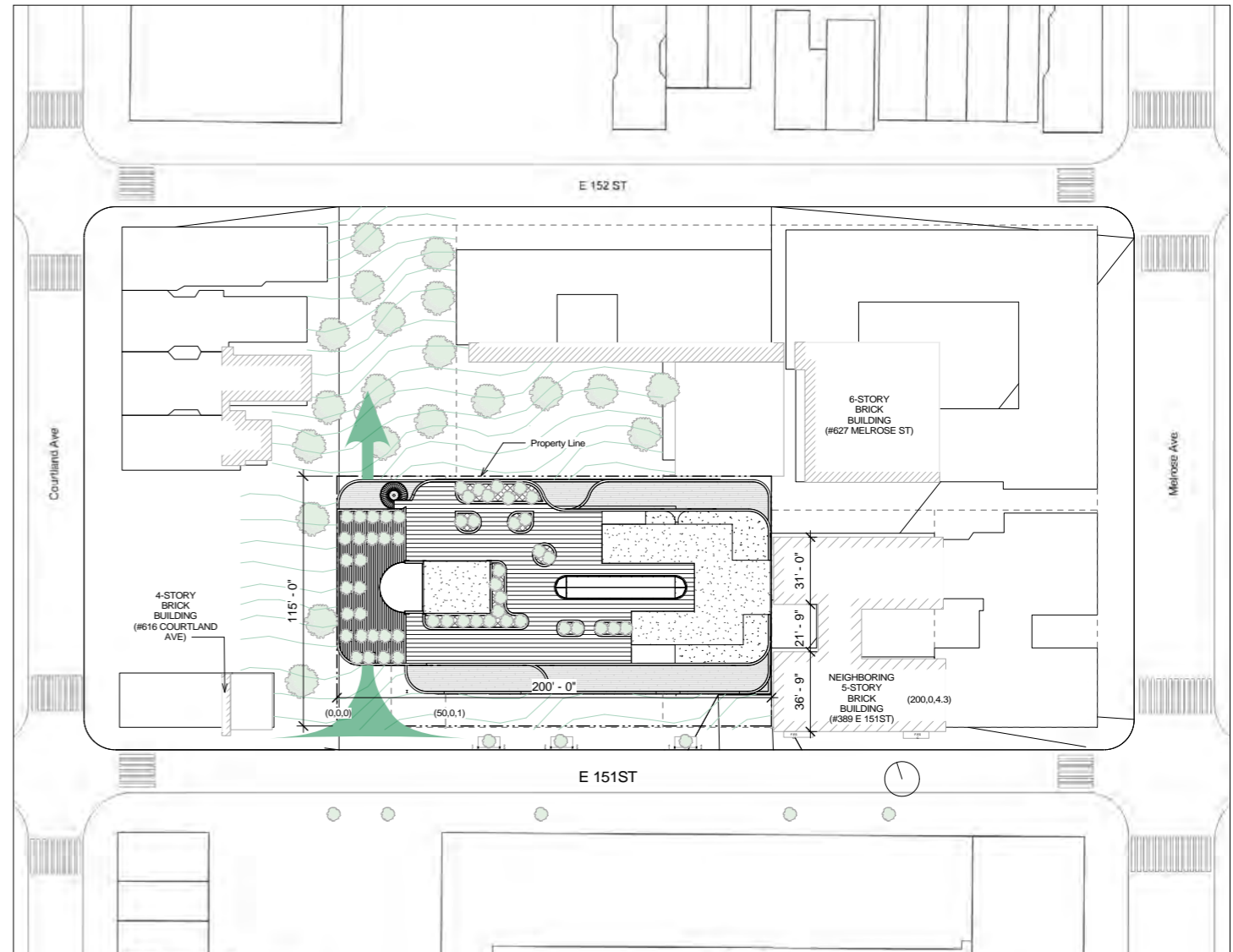
Adjusting Ground Boundary  
Adding Filter Function



Increasing Accessibility



Engagement Back to context



Site Plan

## 07 BIM : Melrose Community Center

**Project Info**  
AT IV Columbia GSAPP

**Instructor**  
Sarah Kahn

**Team (Plus - Minus 14)**  
**Jinseon Noh**

**Brief**  
This Community Center in Melrose, Bronx aims to become a local hub for water filtration and urban farming in heavily packed city context, as well as a conventional function of community center such as gym, class rooms.

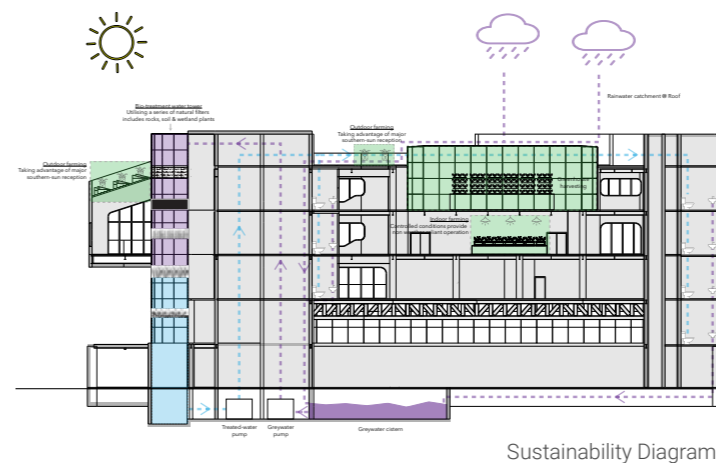
**Date**  
Sep 2020 - Dec 2020

**Site**  
Bronx, NY

Revit model / Structure  
Jui Yu Bianca Lin  
Detail Section  
Jo Hee Lee  
HVAC System / Evacuation  
John Trujillo  
Structure Details

**Program**  
Local Community Center

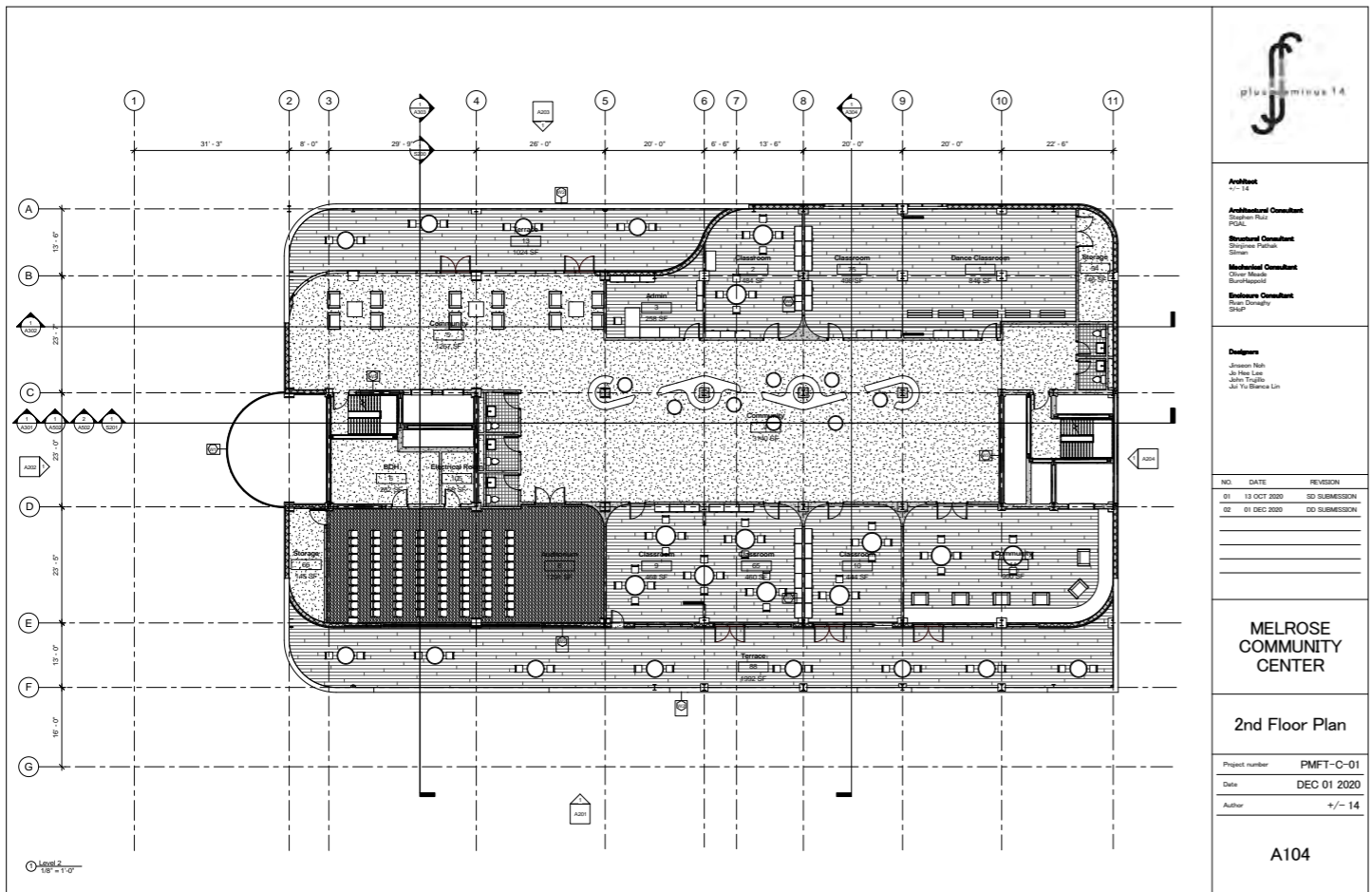
**Size**  
58,408 sqft



Sustainability Diagram

- Rainwater + Greywater collection and treatment (Greywater recycling + Rainwater harvesting) ☁️ 🚰
- Treated Greywater + Rainwater used for non-potable purposes (Lessen dependence on municipal supply) 🚽
- Mixture of Outdoor + Greenhouse + Indoor farming (Composting + Ensures year-round operation + educational value regardless of weather season) 🌿 🏠 🌱

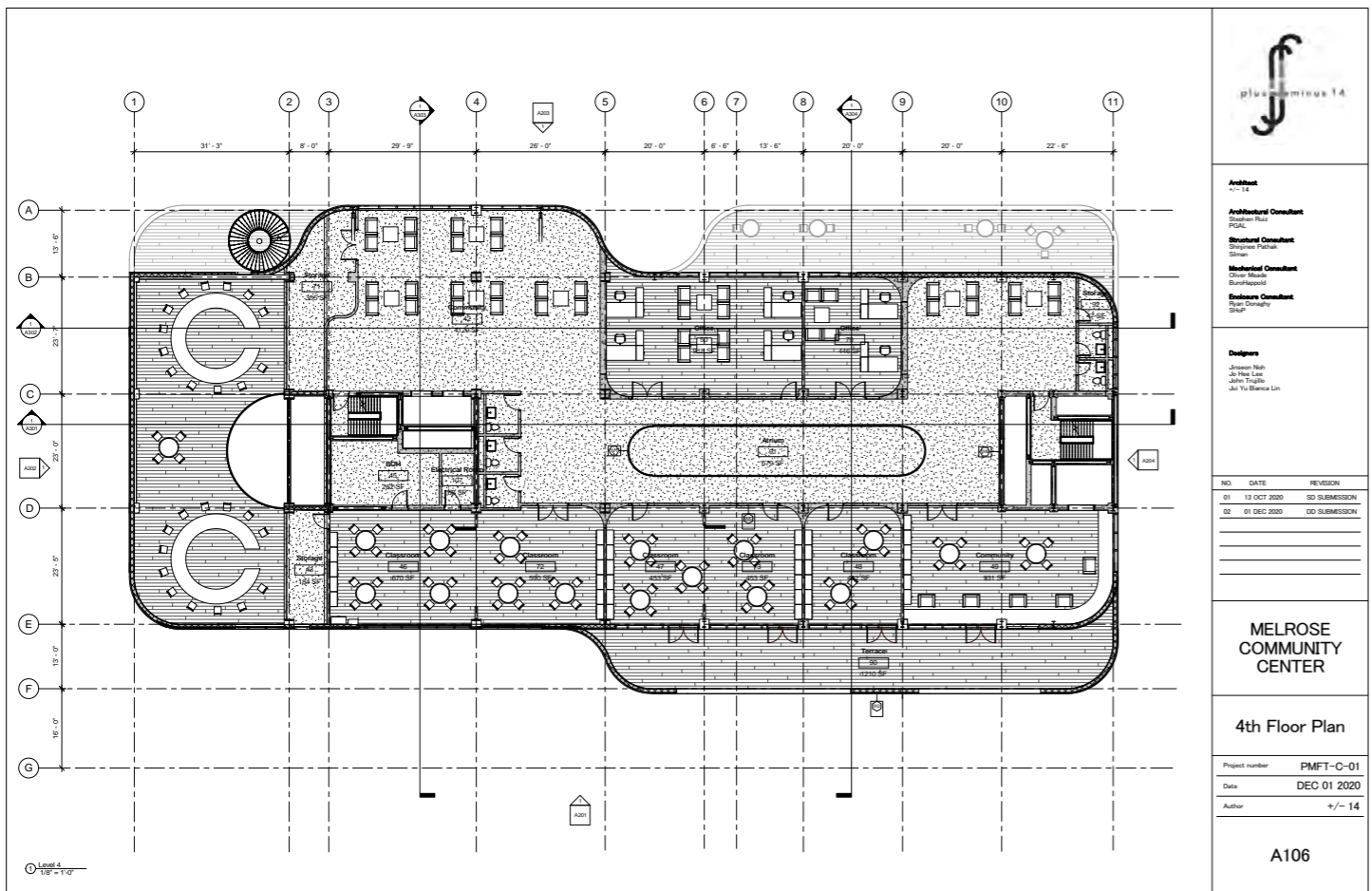




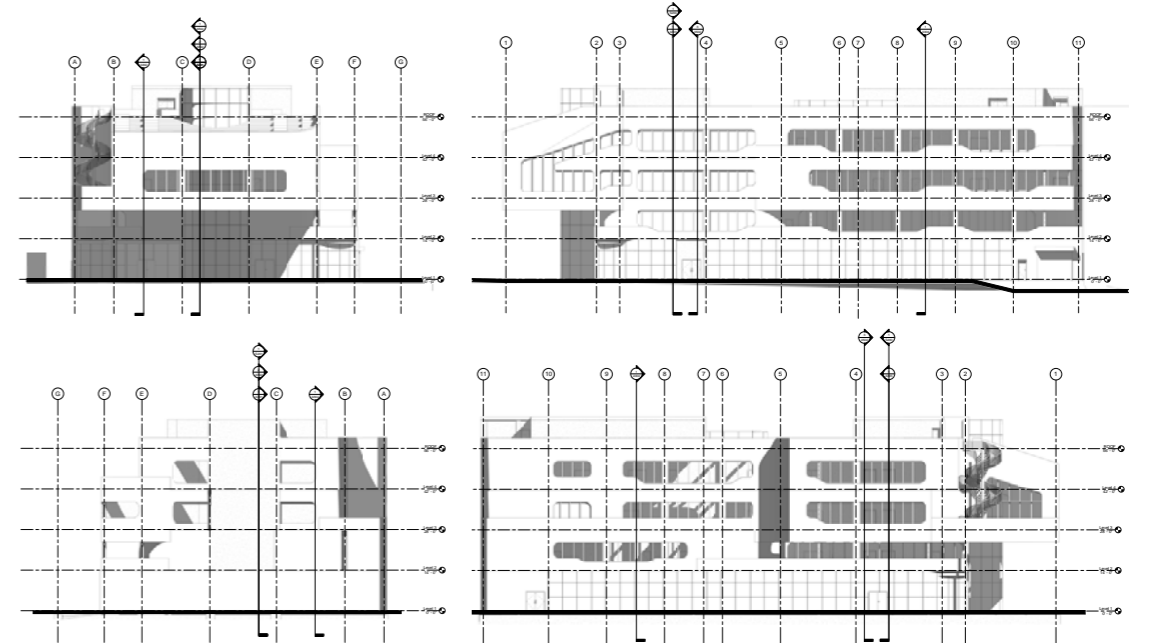
2F Plan



Perspective from the main street



4F Plan



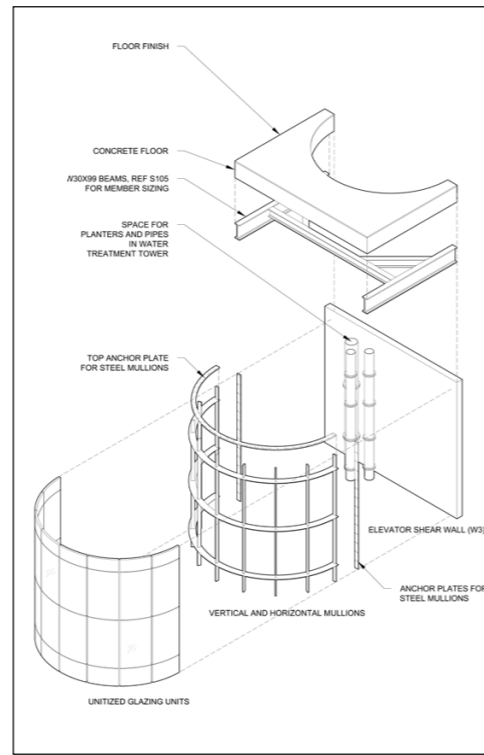
Elevations

By having cantilevered space, this community center allows visitors walk through the block also creating architecturally interesting feature by having exposed atrium space that goes from the underground to the roof. The basket ball court is exposed to the street, which allows visitors watch the game even without entering the building.

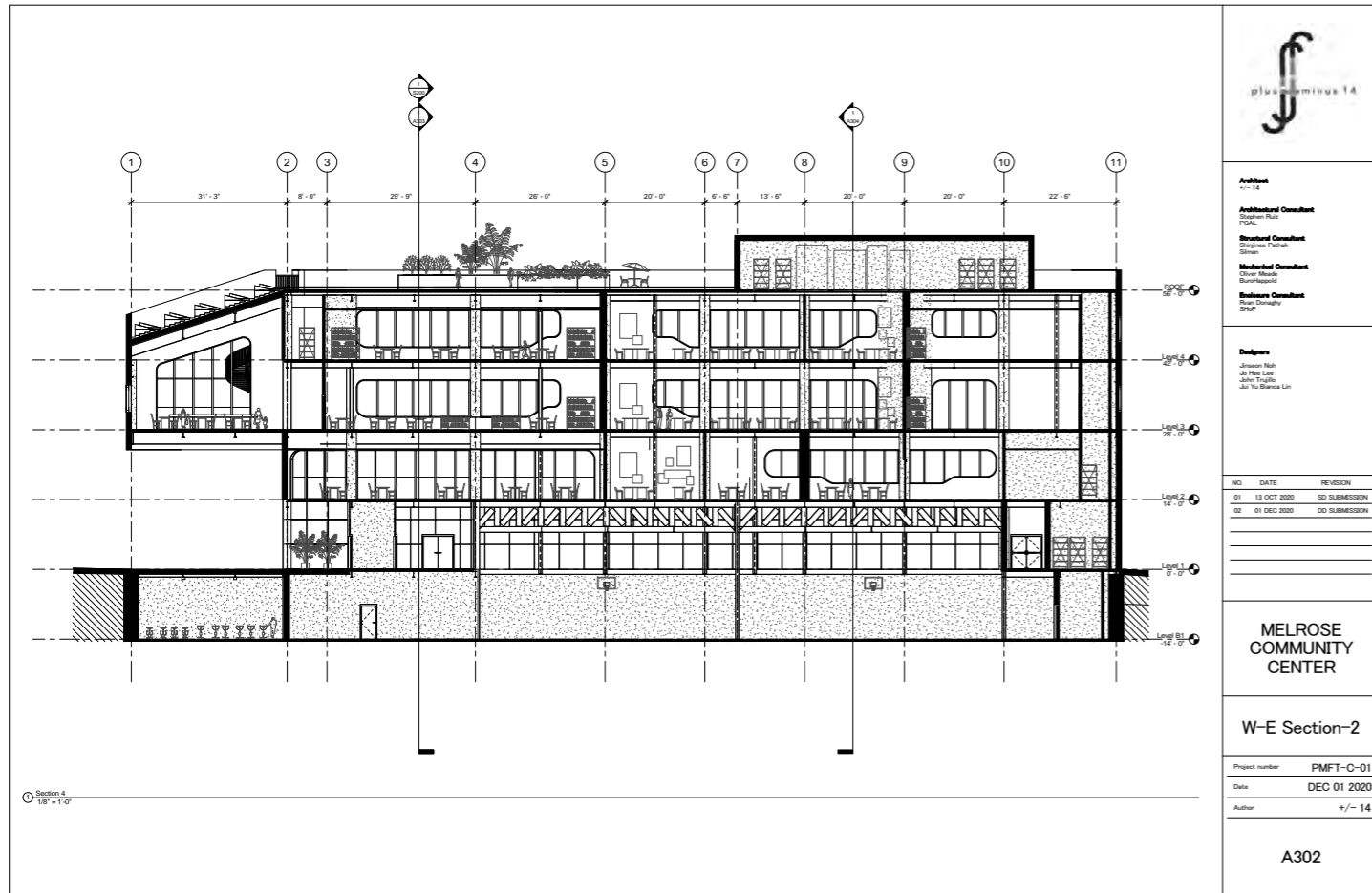
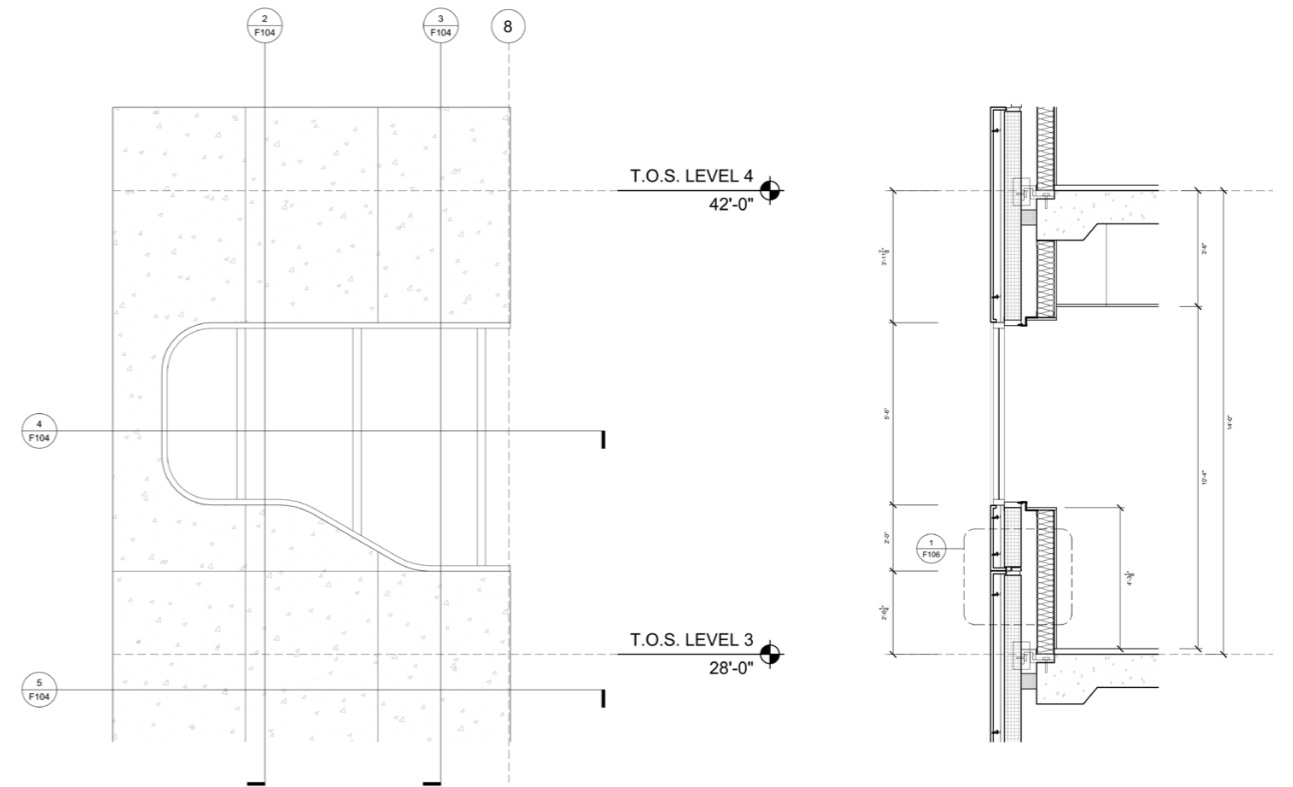




Perspective of Cooking Class Kitchen



Assembly of Atrium system



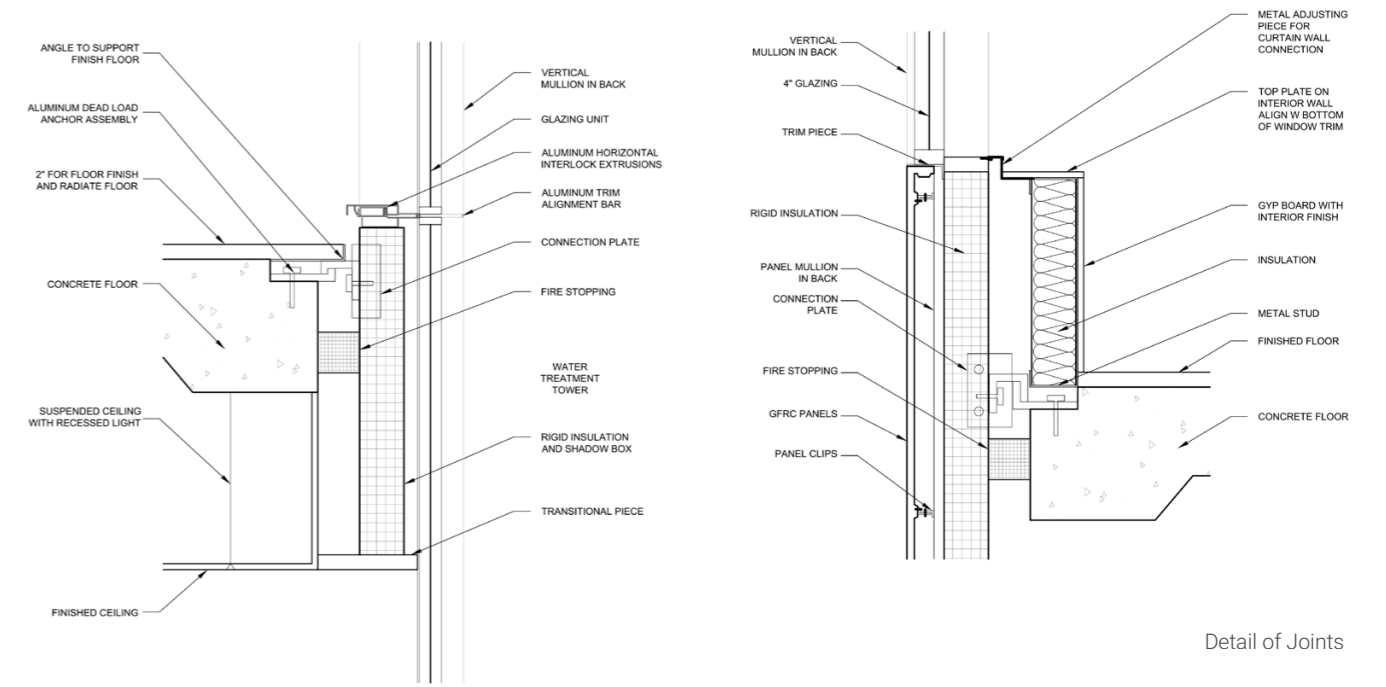
MELROSE  
COMMUNITY  
CENTER

W-E Section-2

Project number	PMFT-C-01
Date	DEC 01 2020
Author	+/- 14

A302

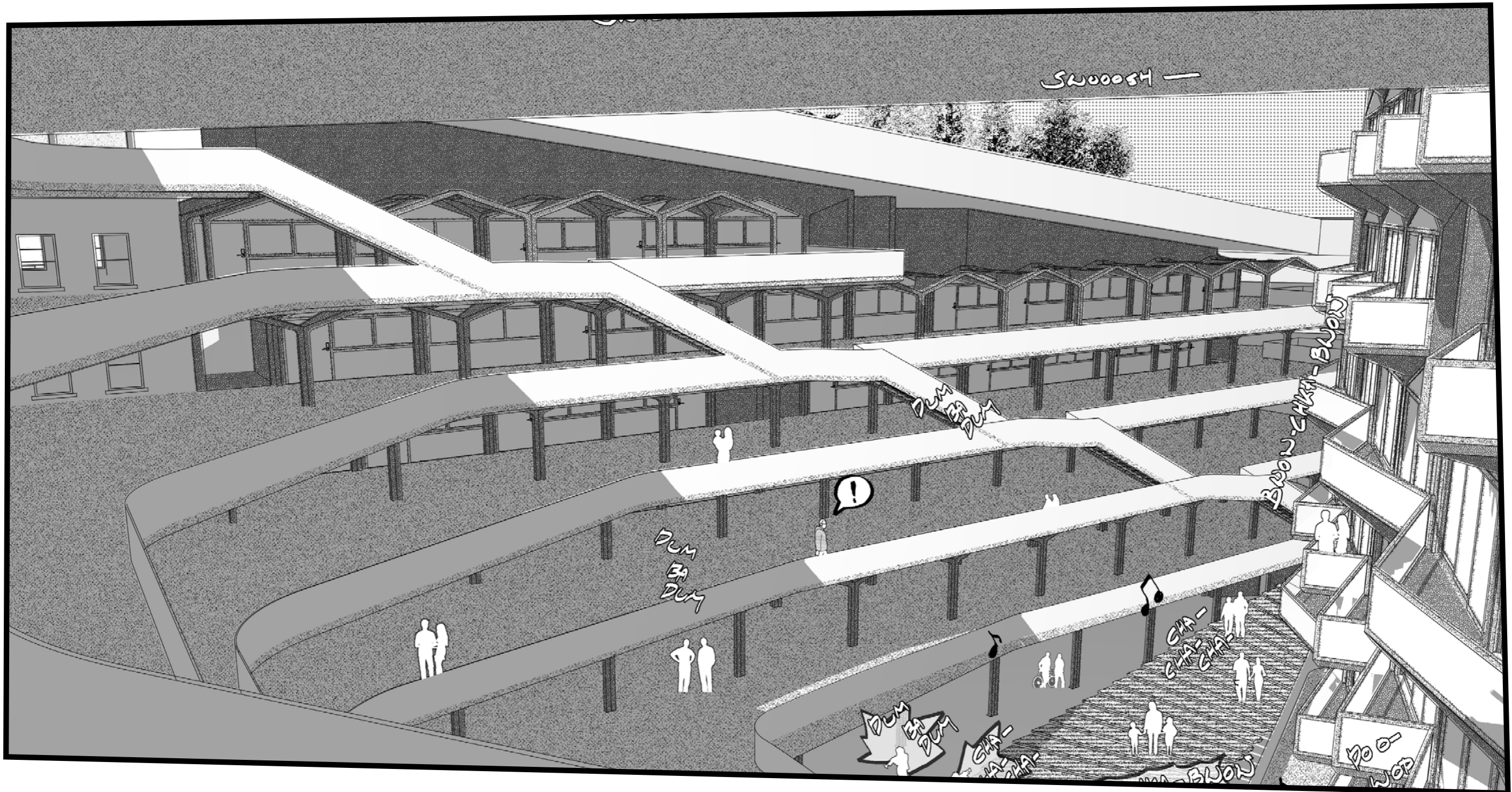
W-E Section



Detail of Joints

This community center is not only equipped with indoor farming facilities, but also a cooking class kitchen on the third floor. The atrium in the center of the kitchen brings natural light as well as ventilation in to the building. Having a curved corners, the team focused on how to minimize using the curved glass on the facade to minimize the cost.





**08** Cleff : Housing With / Without Sound

*Project Info*  
Core III / Columbia GSAPP

*Instructor*  
Hilary Sample

*Date*  
Sep 2020 - Dec 2020

*Site*  
New York, NY

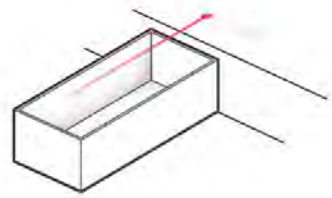
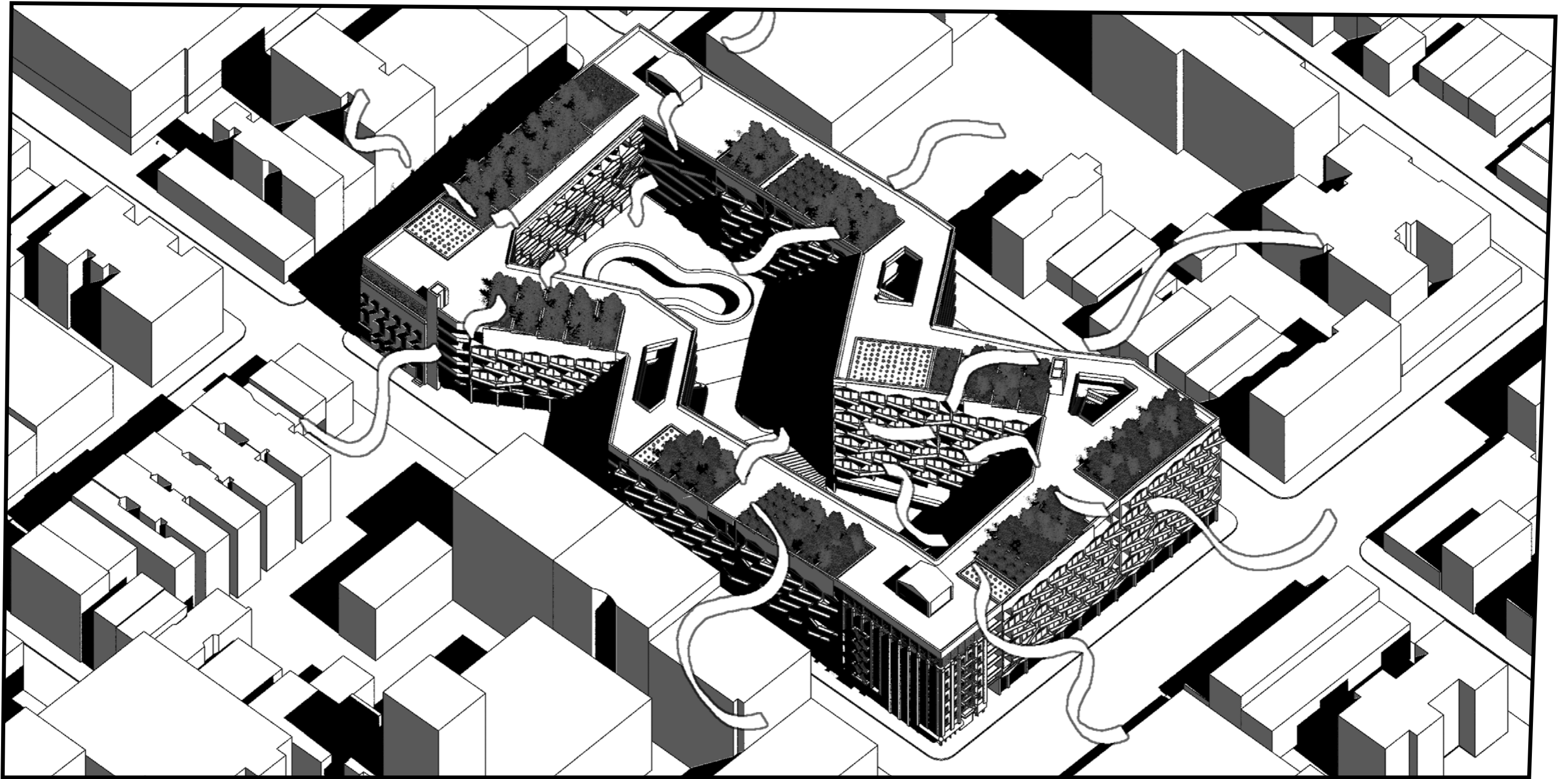
*Program*  
Public Housing

*Size*  
38,760 sqft

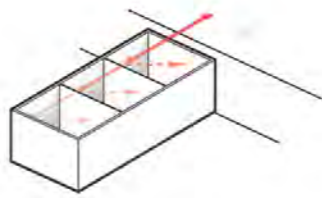


Film : Quietly Controversial

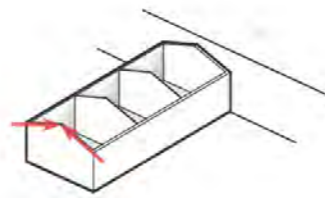




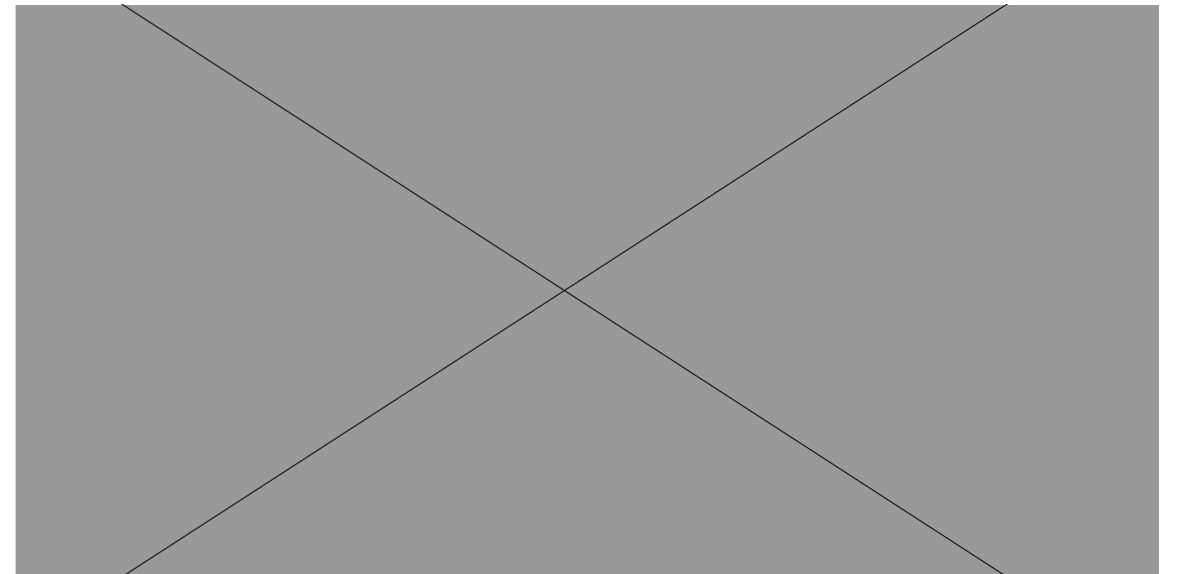
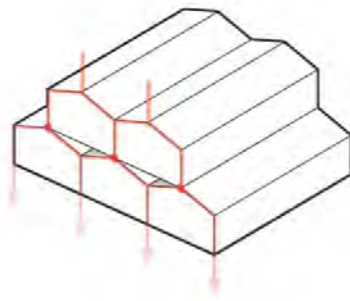
LONG / NARROW PLAN  
+ DISTANCE - NOISE



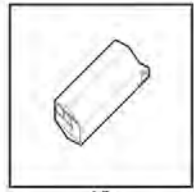
ACOUSTIC SCREEN  
+ ACOUSTIC LAYER - NOISE



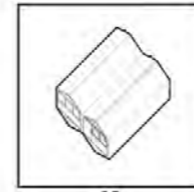
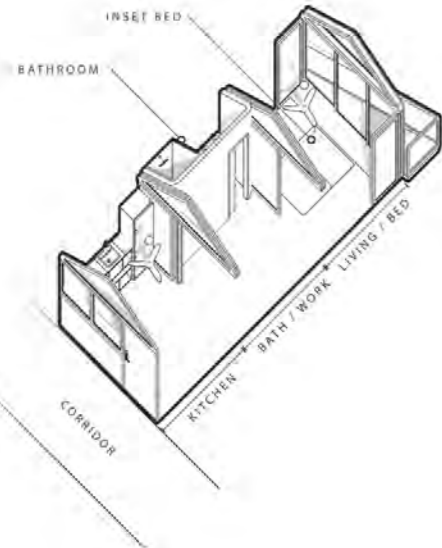
POINTY ROOF  
- CONTACT SURFACE - NOISE FROM UPSTAIRS + STRUCTURE



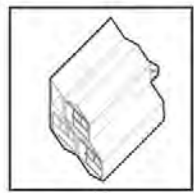
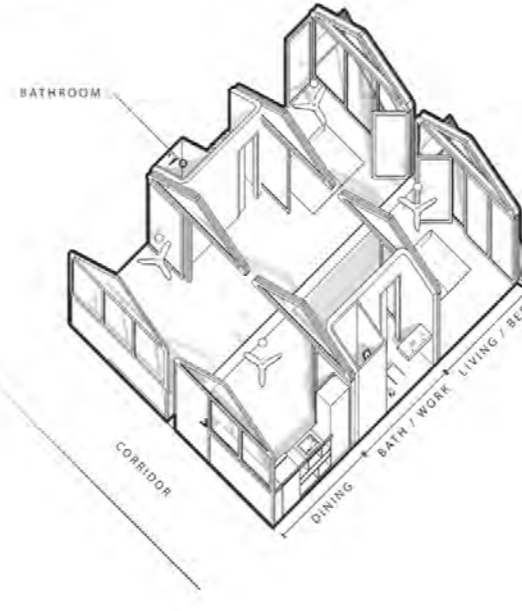




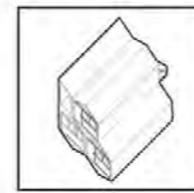
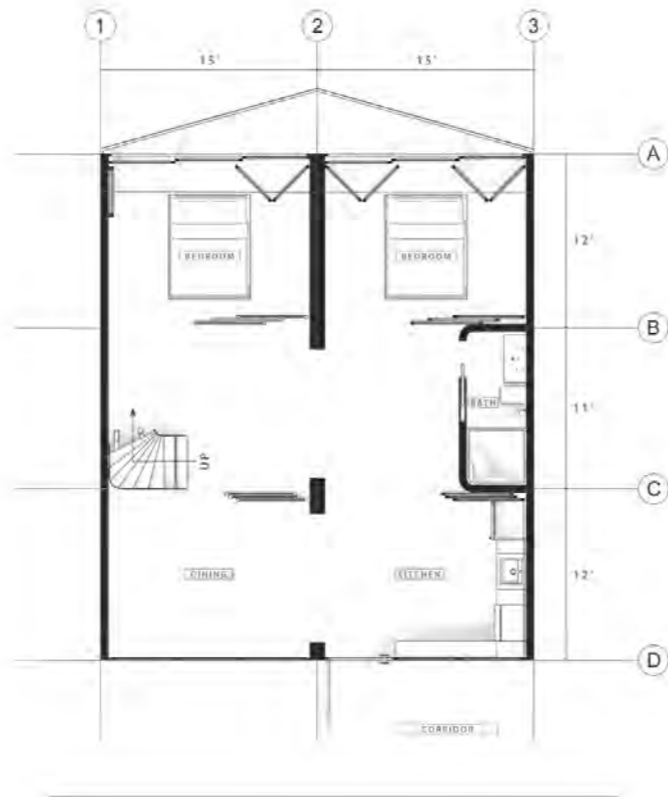
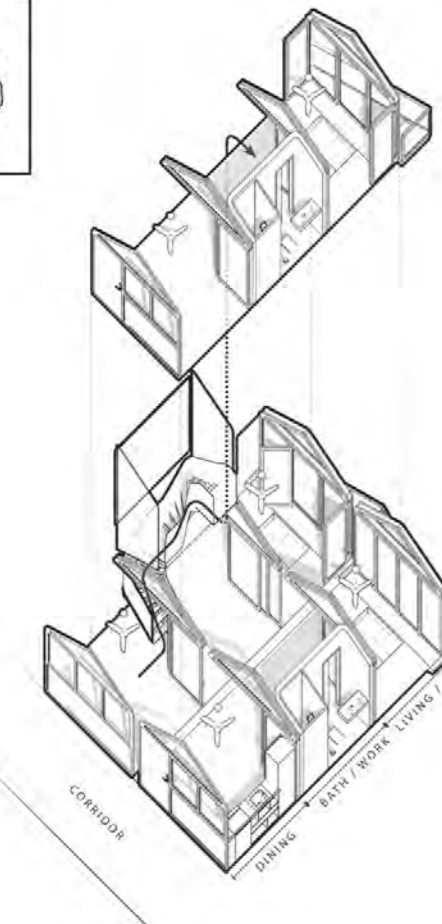
1B



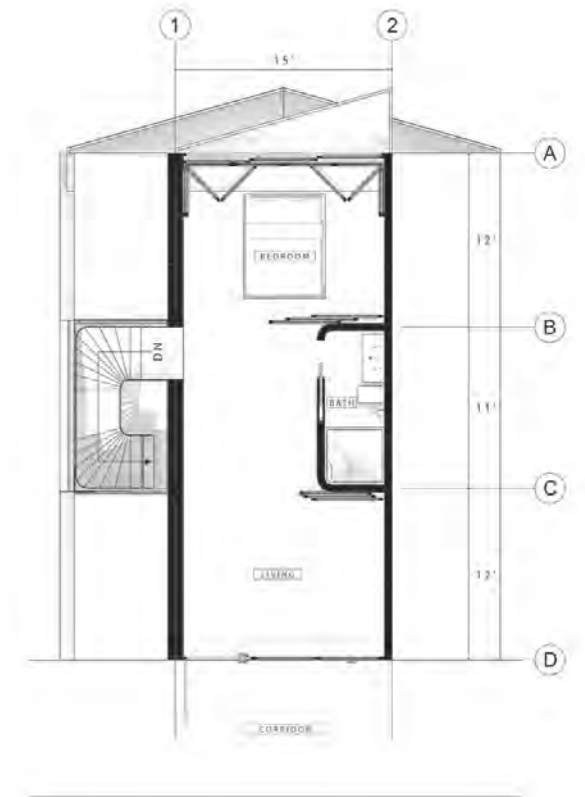
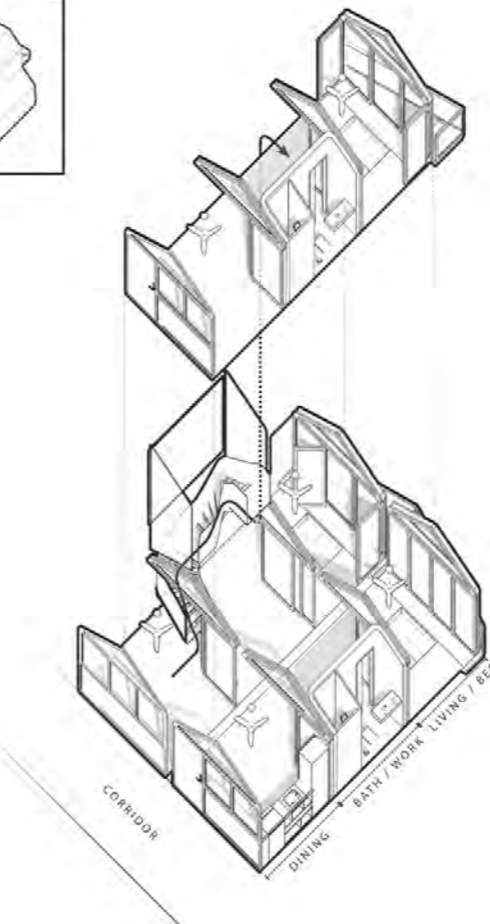
2B



3B



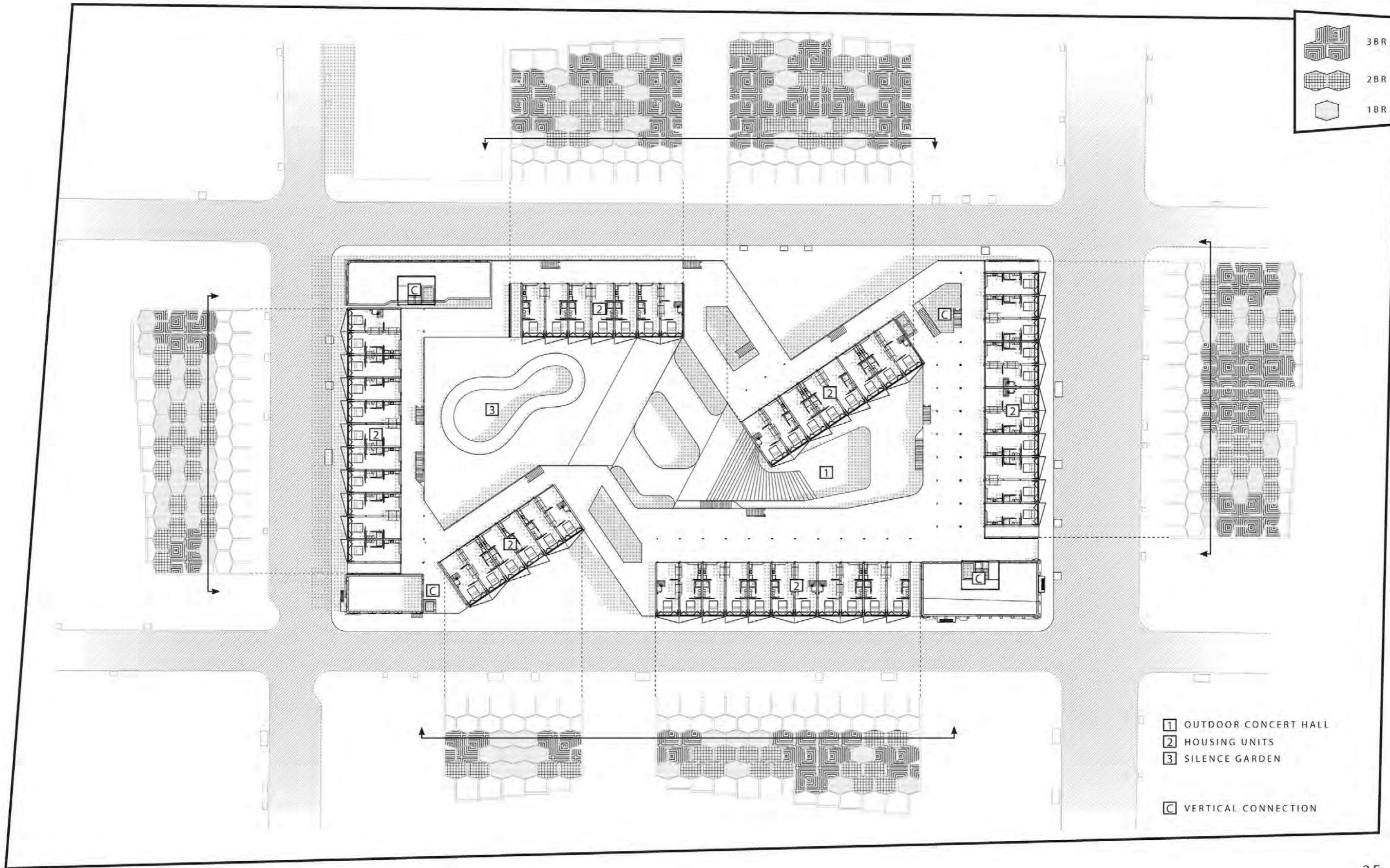
3B















## 09 Learning from Insects : Indigenous Futurism

*Project Info*  
ADV IV / Columbia GSAPP

*Instructor*  
Vanessa Keith

*Date*  
Jan 2021 - May 2021

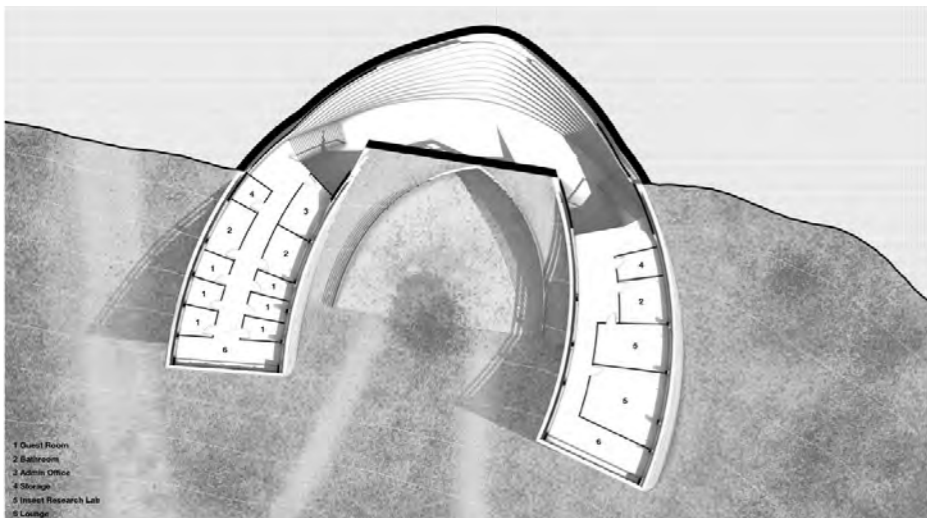
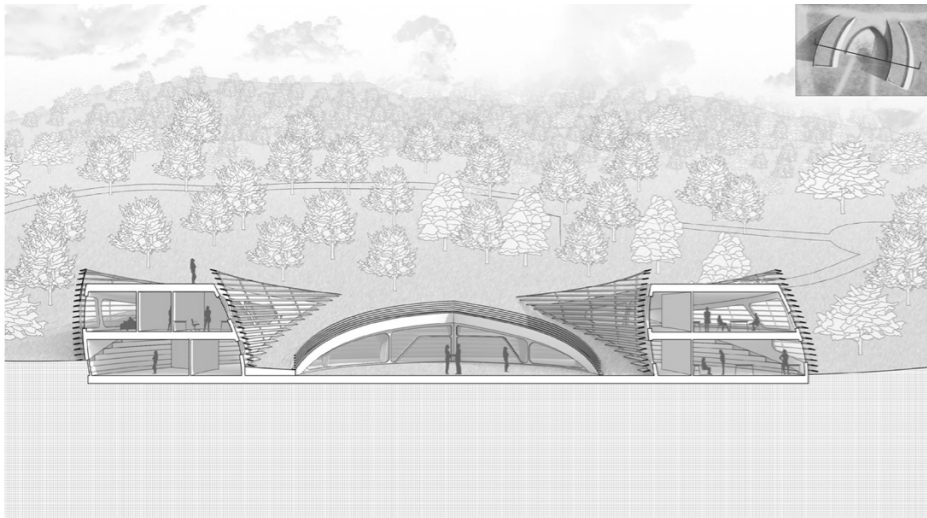
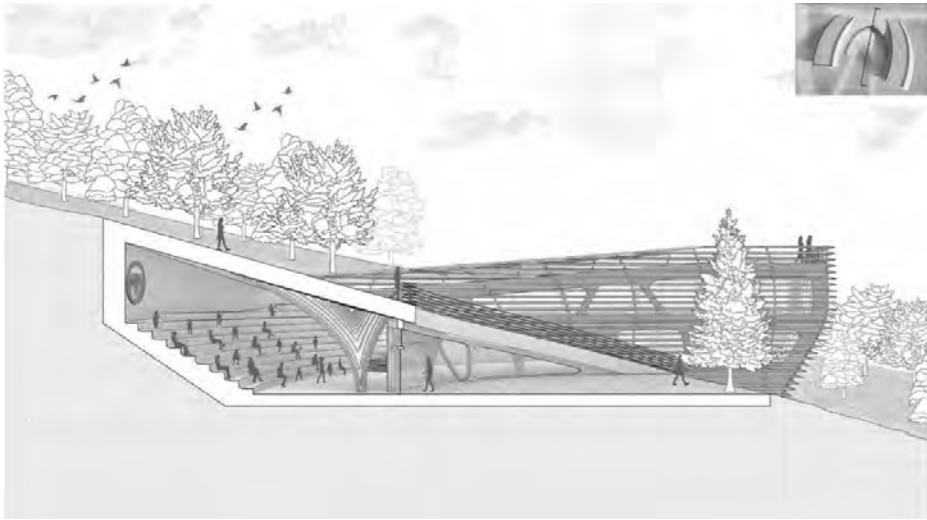
*Site*  
New York, NY

*Program*  
Community Center

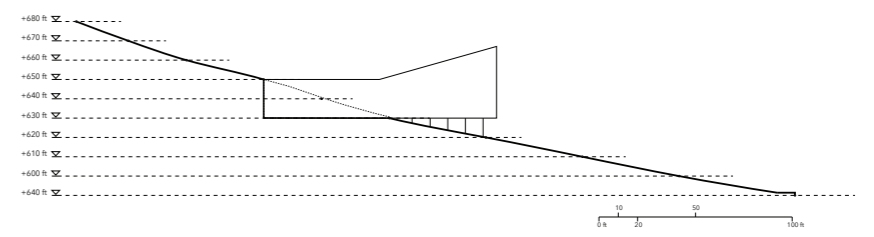
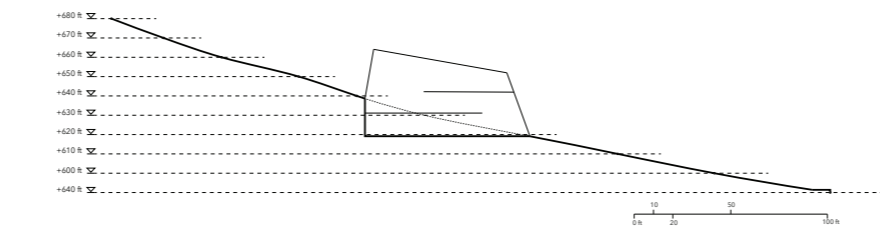
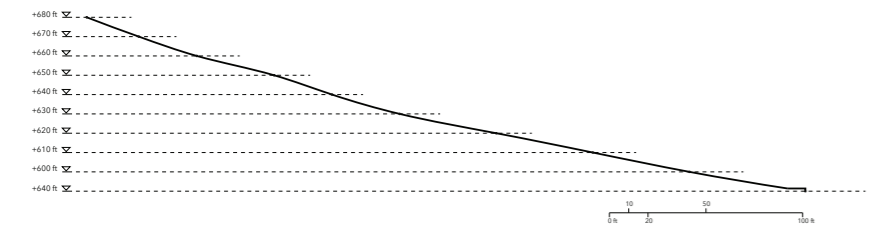
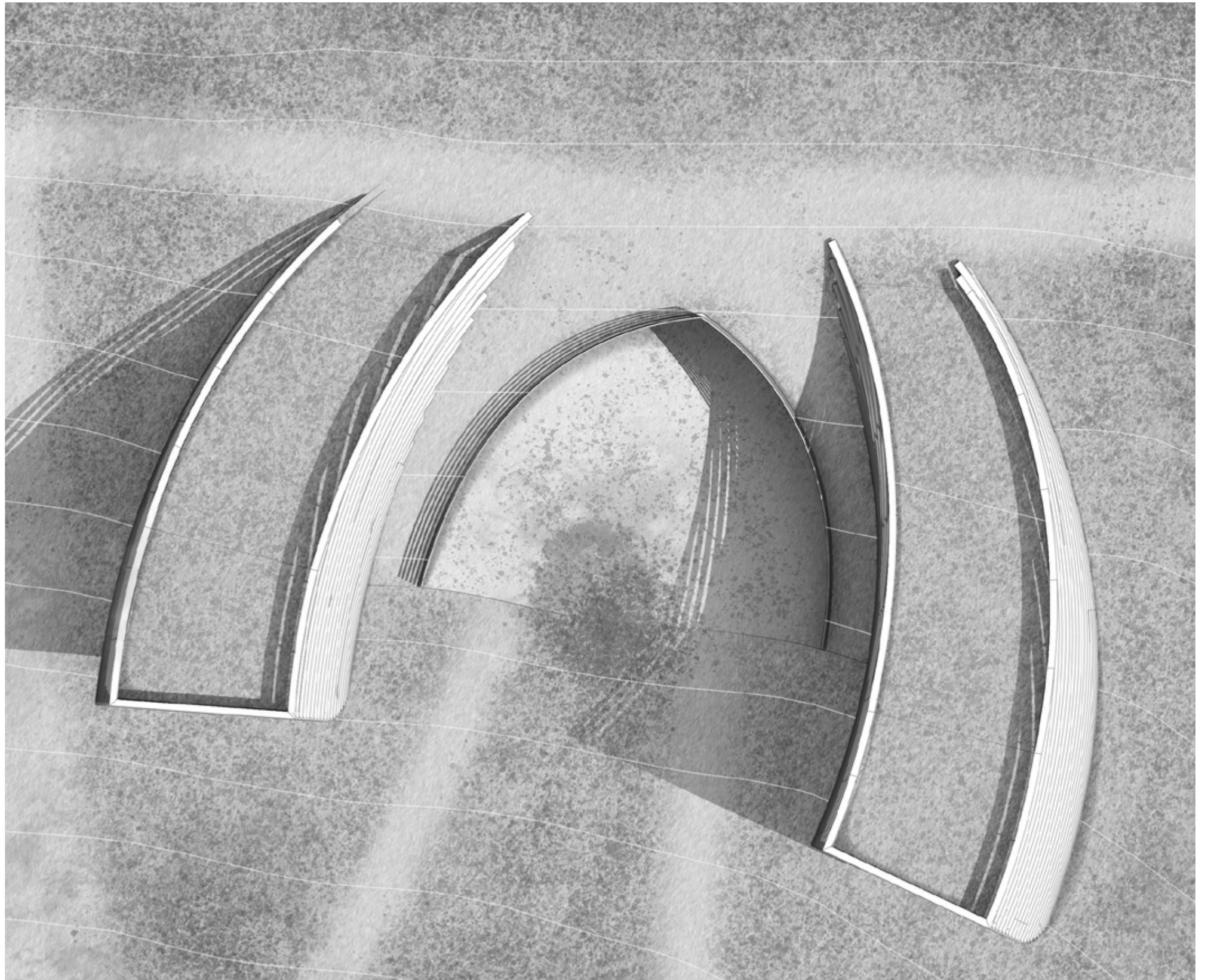
*Size*  
38,760 sqft







- 1 Queue Room
- 2 Bathroom
- 3 Admin Office
- 4 Storage
- 5 Visual Research Lab
- 6 Lounge











## 10 Oceanographic Center in Jamaica : Future Current

### Project Info

ADV V / Columbia GSAPP

### Instructor

Vanessa Keith

### Date

Sep 2021 - Dec 2021

### Site

New York, NY

### Program

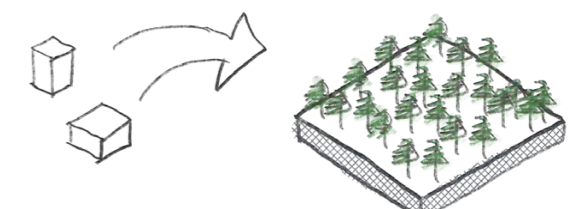
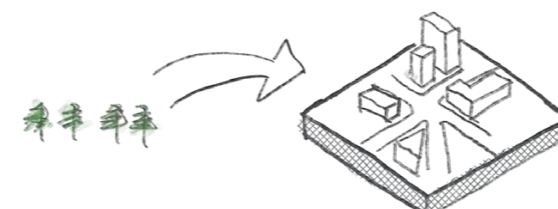
Oceanographic Center

### Size

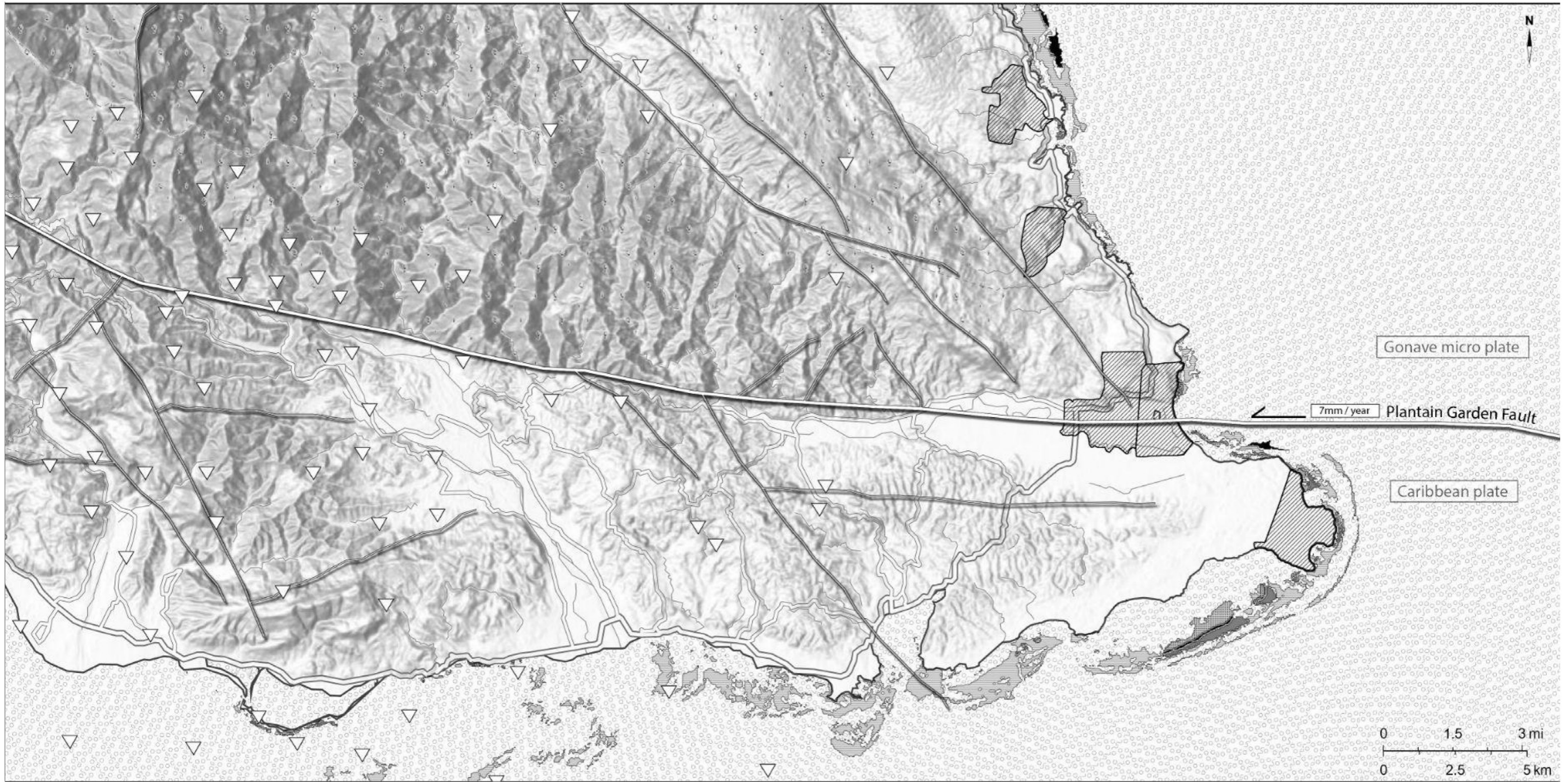
38,760 sqft

### Brief

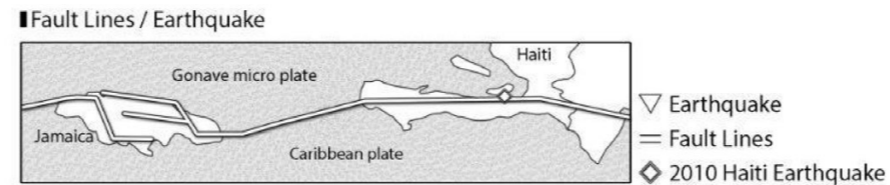
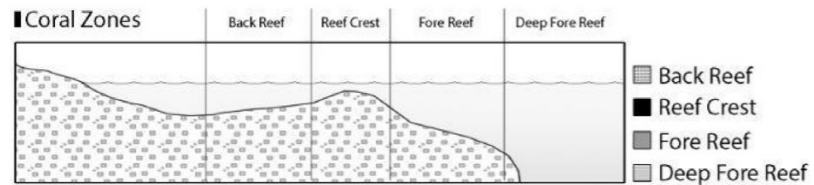
Public Schools in metropolitan cities around the world, especially ones in Manhattan, lack one important thing in common - its connectivity to nature. Therefore, this school mainly focuses on how to connect the children inhabiting this school with a natural environment including natural sun lighting and easily-accessible greenspace.



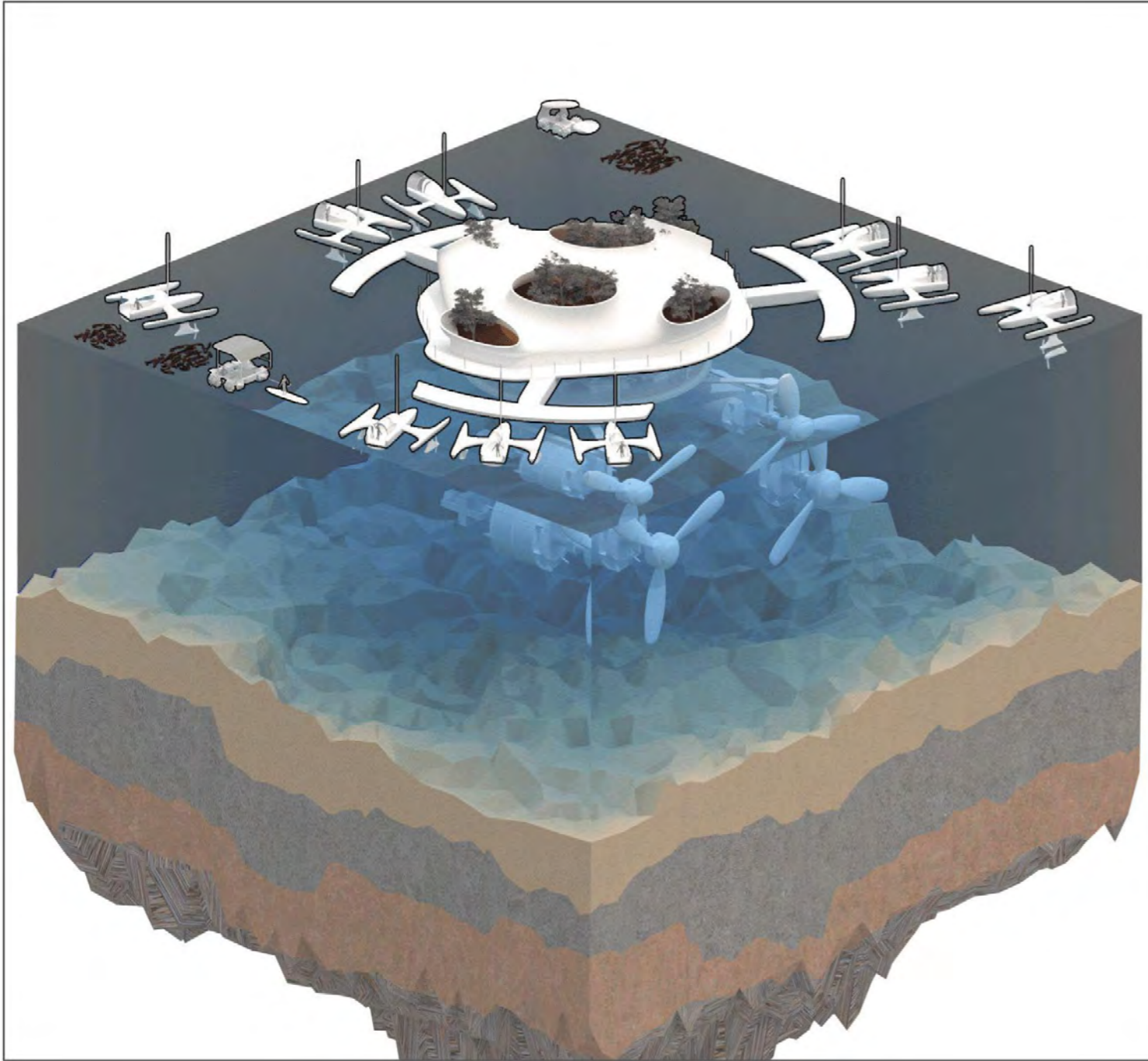




### Geology - Fault Lines and Earthquakes



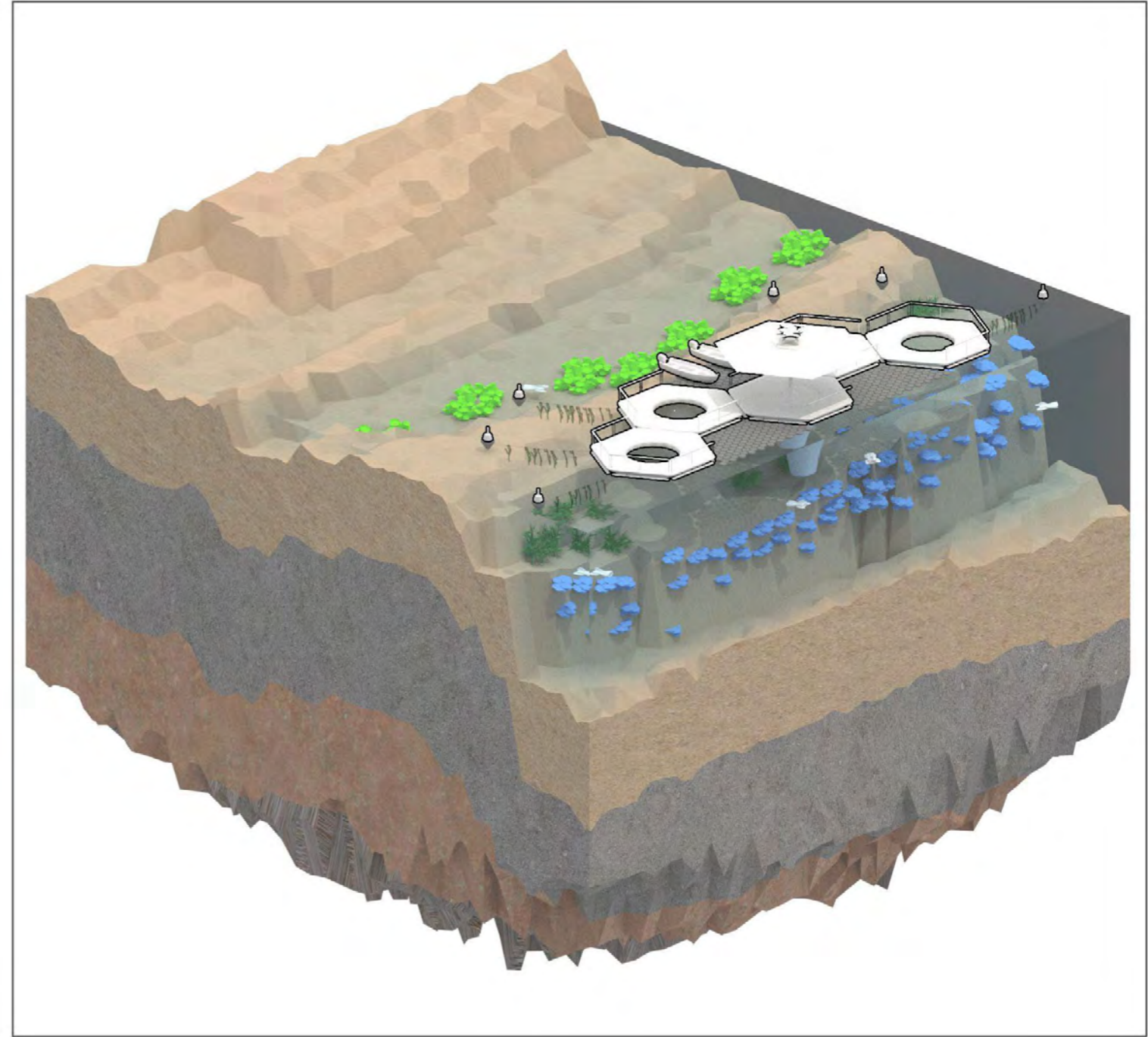




### Floating Island

[01]

The floating island mission is to compensate for the loss of the precious mangroves forests and raise the public's awareness of the significance of preserving these coastal guardians. How to reclaim the lost forests? How to deal with extreme climate changes such as unprecedented-scale hurricanes and floods? With these intents in mind, we orient our project as a mobile forest which would be capable of deploying at a particular sea area and further protecting the fragile coastal environments.

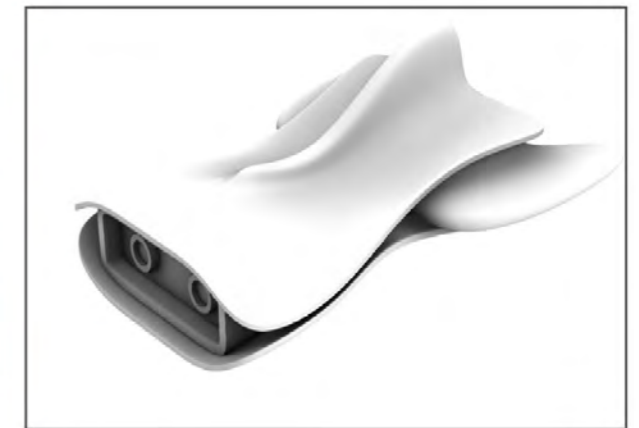
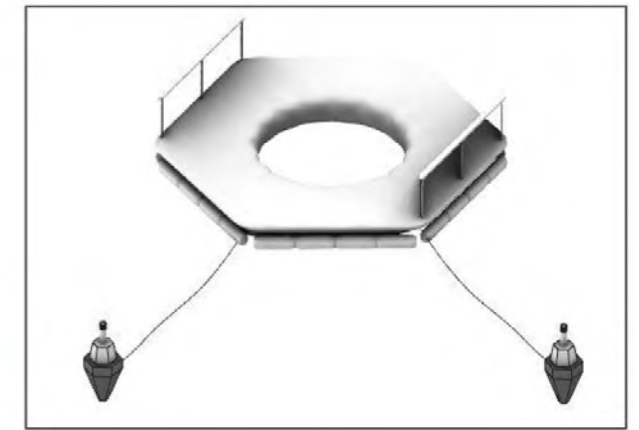
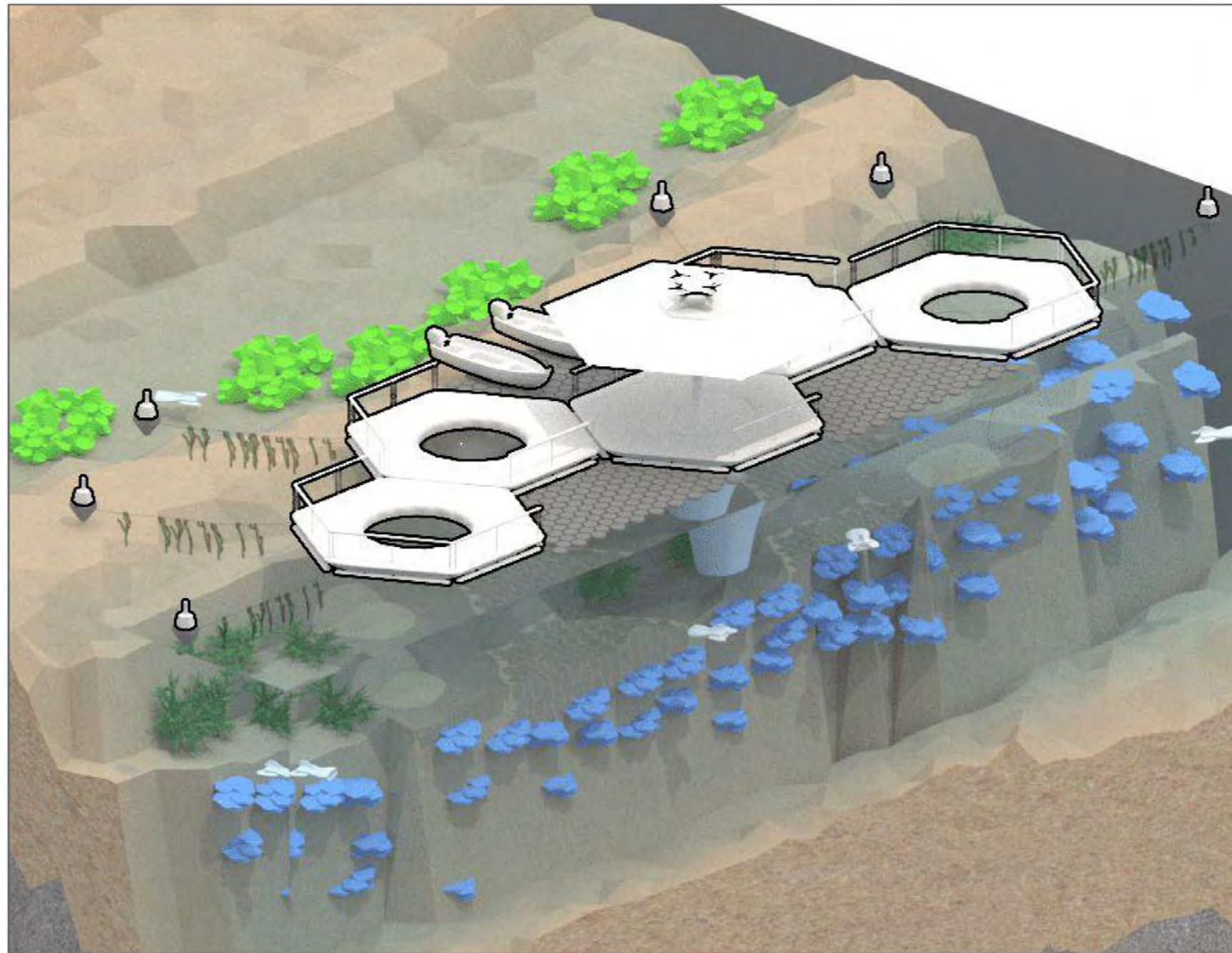
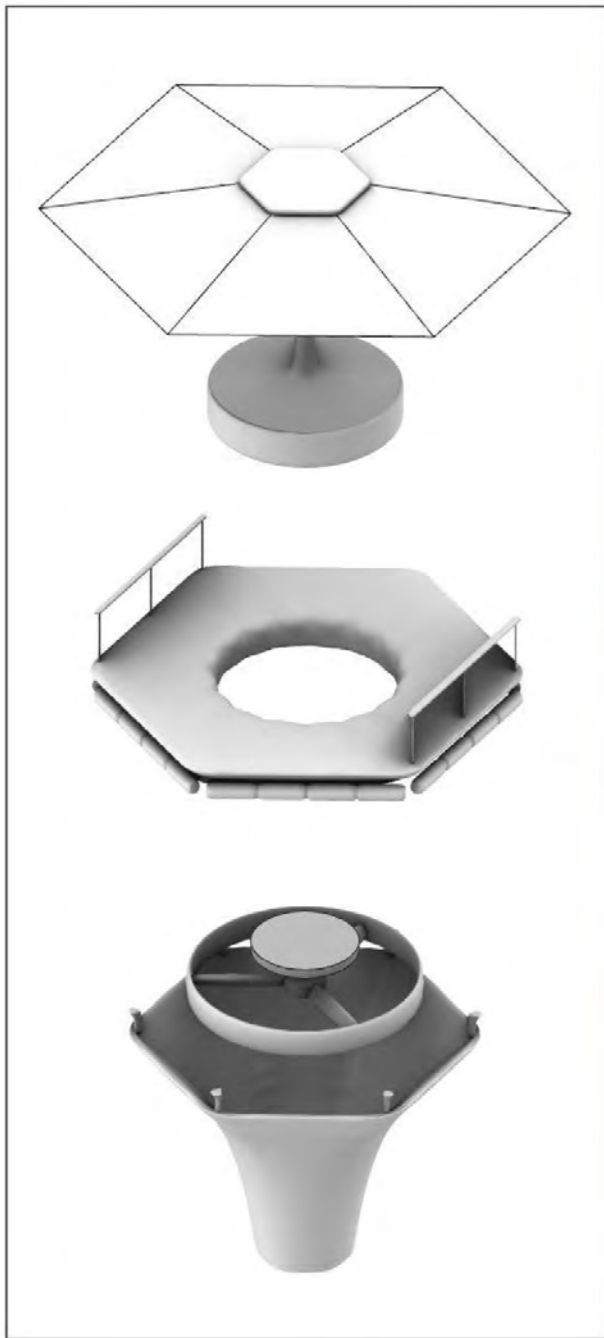


### Floating Tiles

[02]

Floating Tiles are a device designed to revive bleached coral reefs, and restore coral ecosystem. The main tile in the center lifts up the cooler water from deeper ocean and redirect the flow towards bleached coral reefs. This device will be especially useful for the coral reefs that are closer to the surface of ocean. Surrounding tiles will provide a seaweed farm for regional deacidification, coral gardening zone, and coral observing deck.





#### Details / Zoom Ins

[01]

150 x 87 = 13,050 Watt  
13,050 Watt x 12hr = **156.6 kWh / day**

\*average household usage = 28.9 kWh / day

12hrs of operation / day = **12 kWh / day**

**52800 gallons** of cool water pumped up

#### Floating Tiles

This modular device will be centered around the main tile with coral cooling function. Its shade will be covered with PV panels, generating electricity of 5 household usage amount daily, which will power water cooling fan and drones. The electricity generated will power the water impeller and charge drones.

[04]

Buoy from harvested sargassum

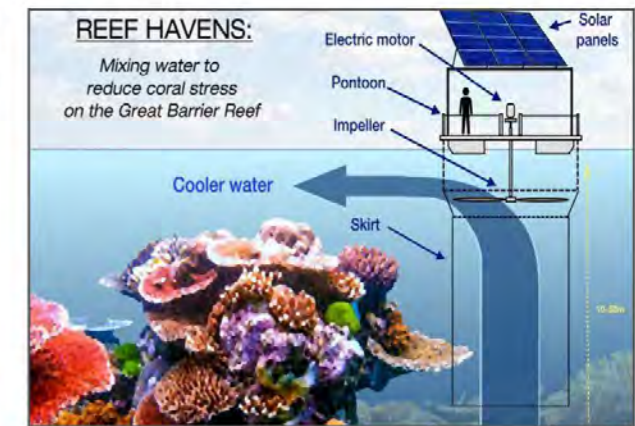
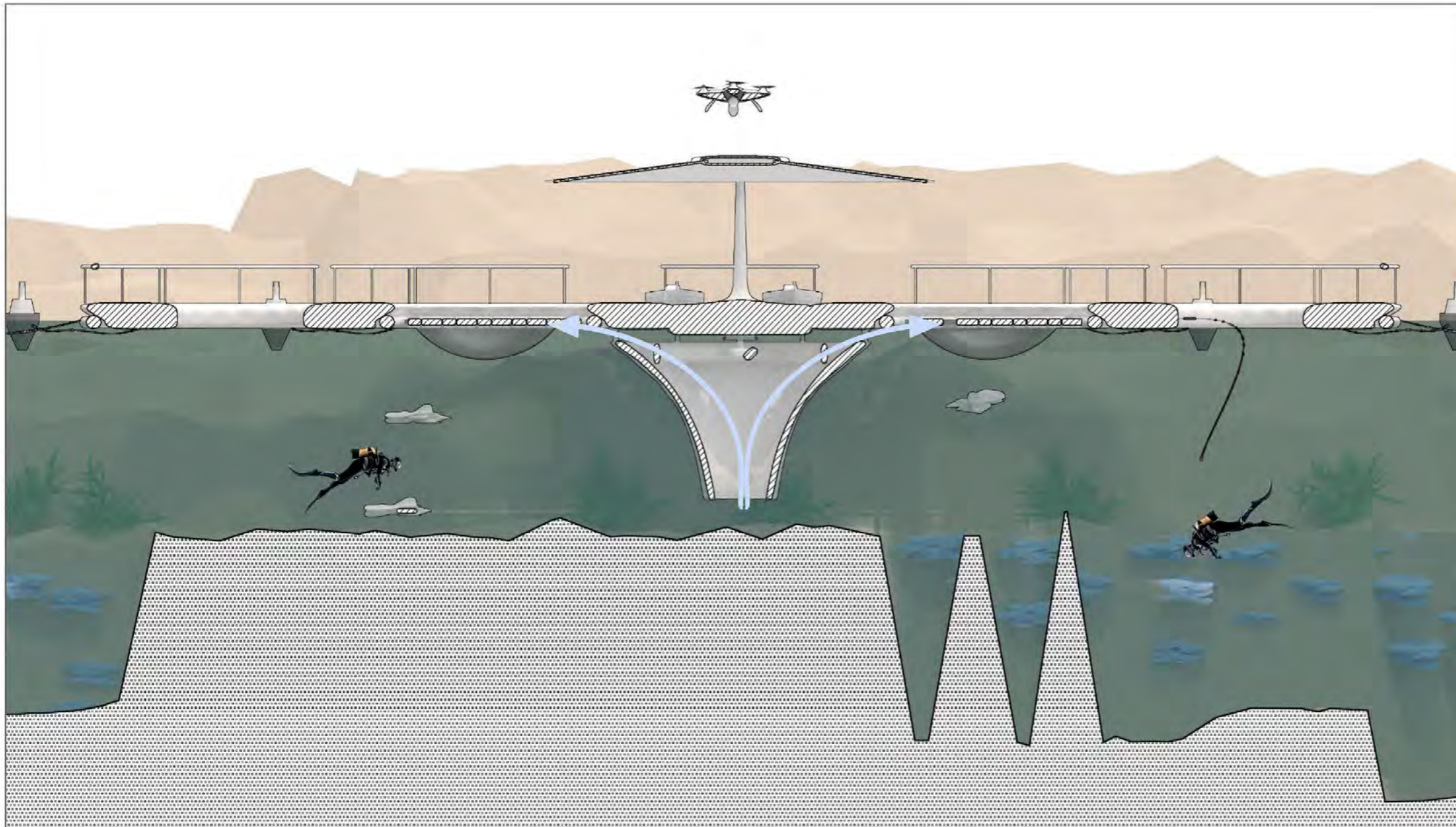
[05]

Drone for monitoring sargassum, surface water temperature

[06]

Underwater drone for monitoring coral reefs, and temperature.





**Floating Tiles**

The water impeller will function 12hrs a day to offset the heat gain from the sunlight and global warming. 52800 gallons of water is pumped up from the deeper ocean. Pumped up water will be redirected to the coral reef zones that are located closer to the surface of the ocean. This process will also accelerate the undersea water flow, benefitting the coral reefs in deeper level.

The original design was proposed by the great barrier foundation research group. Recently they installed temperature monitoring device to figure out when and where to cool down the temperature.

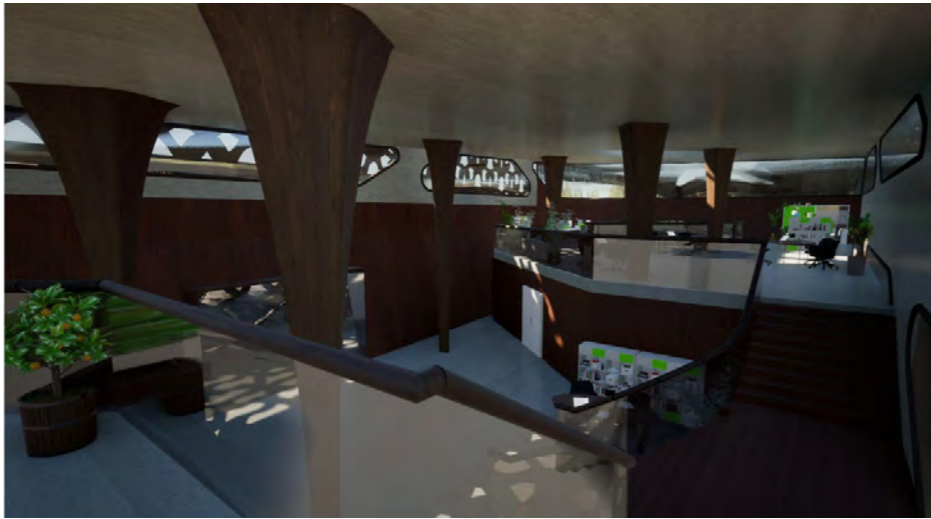
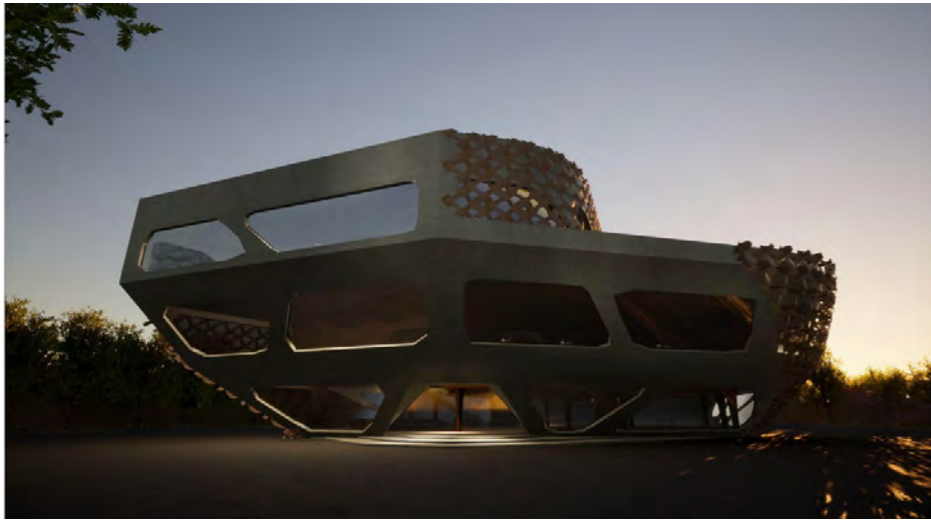
**Details / Zoom Ins**

[01]  
Drone / Charging deck

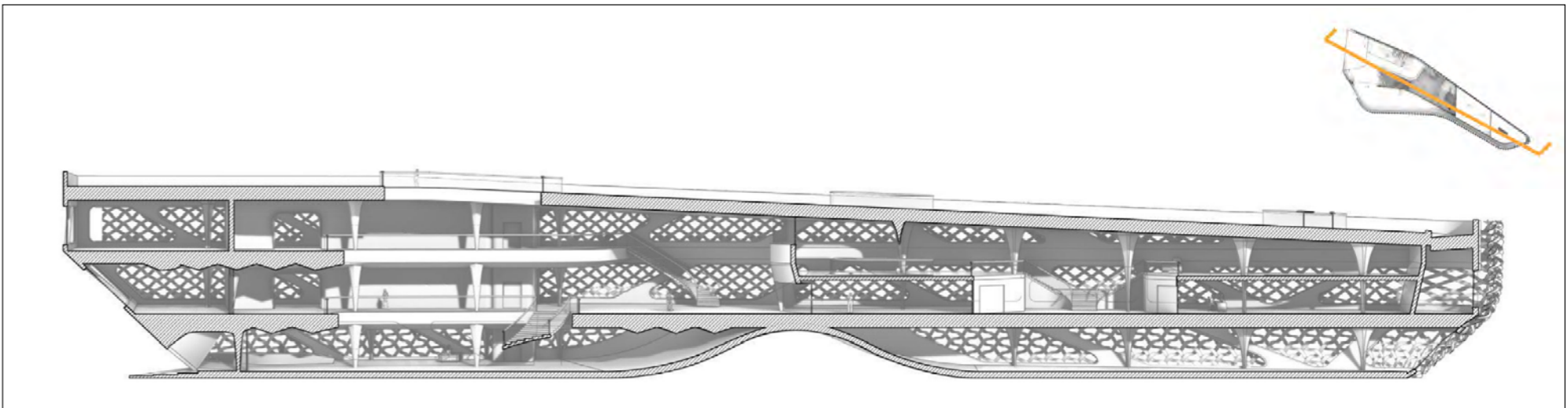
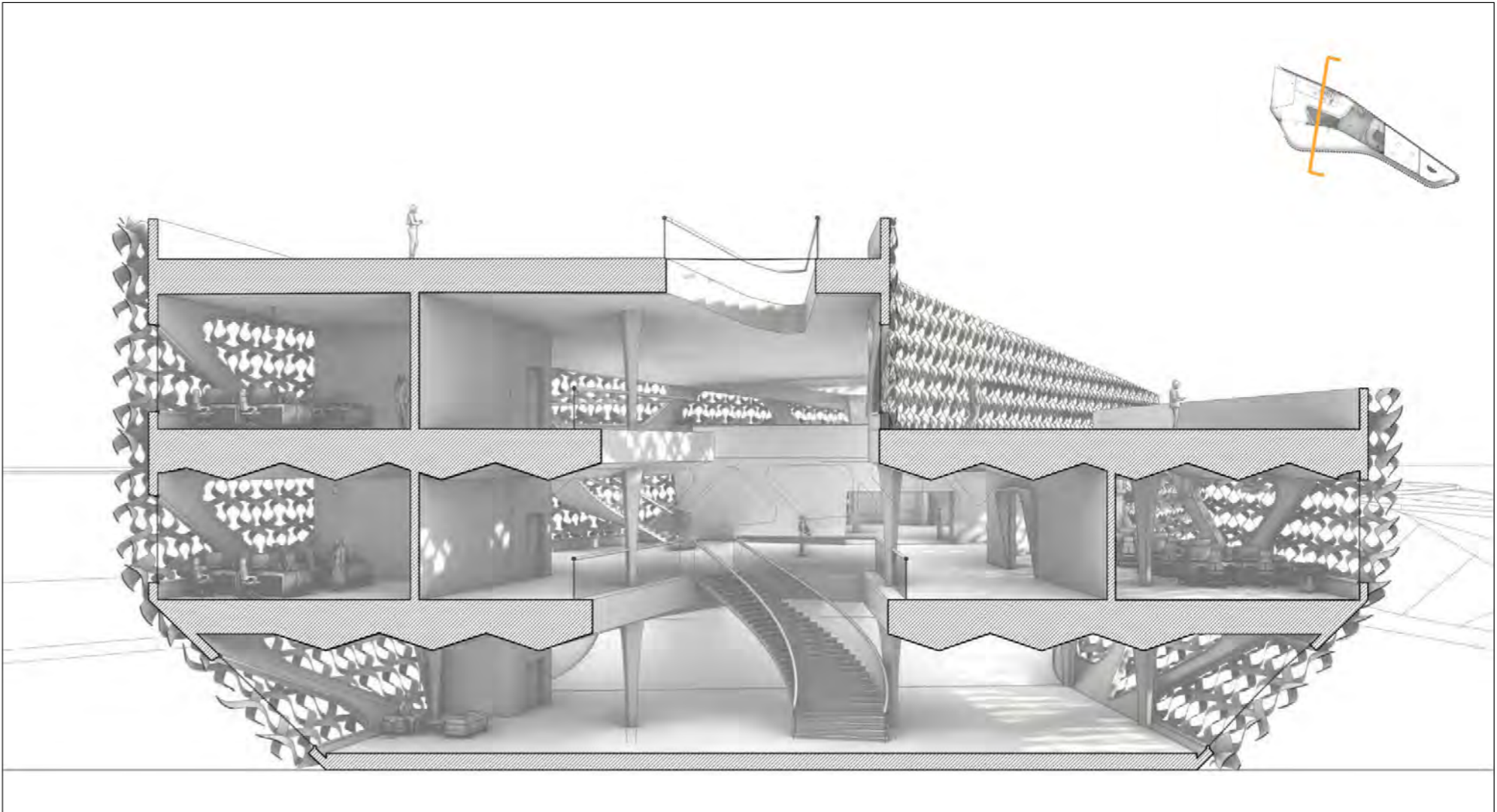
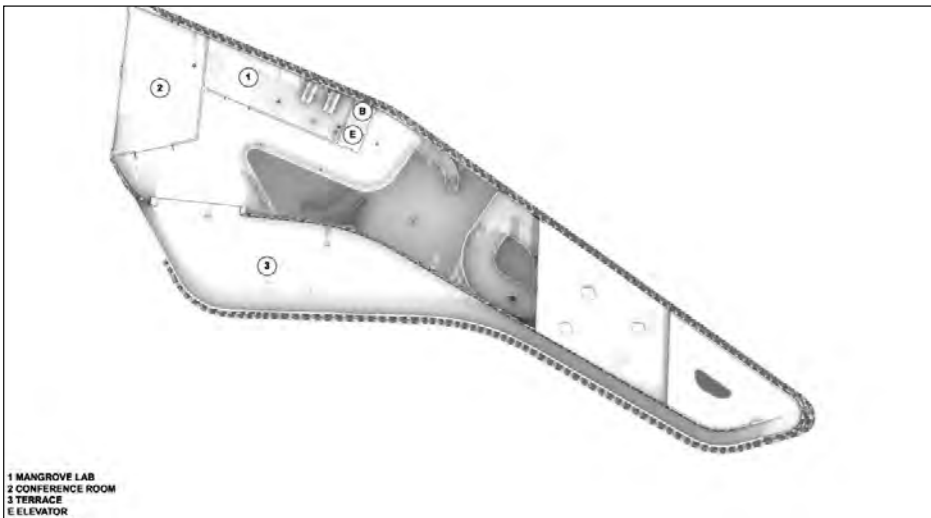
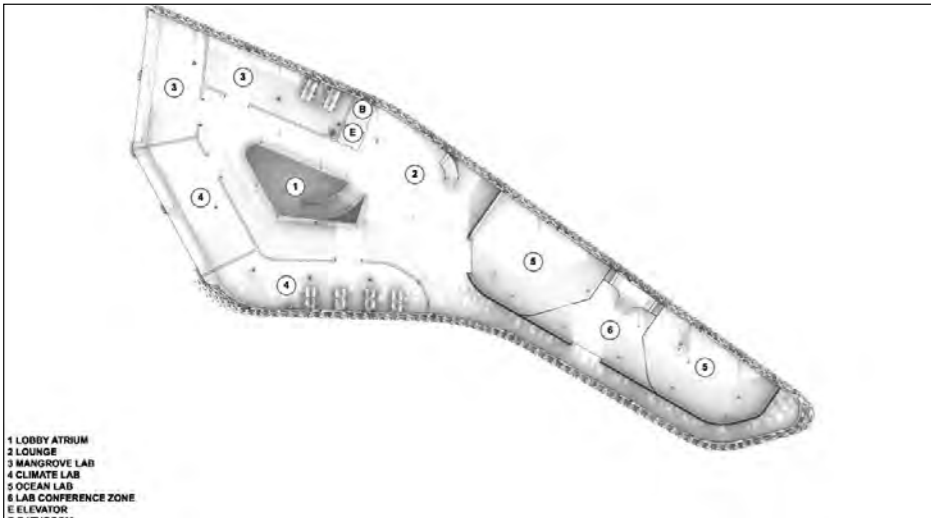
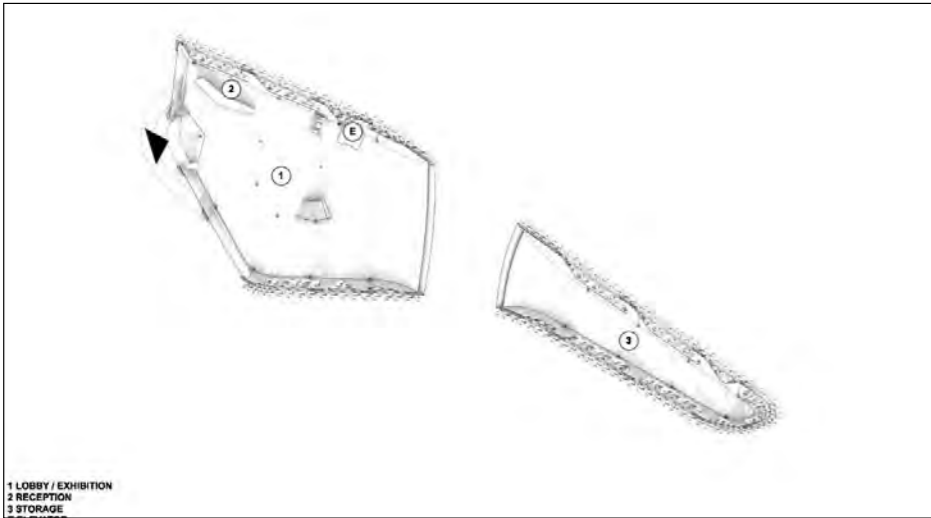
[02]  
Coral reef cooler

[01]  
Temperature monitoring









Mangrove / On-land

