

HANNAH STOLLERY

GSAPP Portfolio
2019-2022



MIND AND BODY

a short reflection of my time at GSAPP

During my 6 semesters at GSAPP, I've paid close attention to how architecture influences our mind and body. When designing spaces and programs, I've often thought about the link between body-mind-world and how architecture plays an important role in people's cognitive and physical processes. This series of projects is an exploration of this thought process.

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EMERGENCY INSTITUTE

Spring 2022

Instructor: Galia Solomonoff

Partners: Kurt Cheang, Sunghyun Kim

Site: Santa Monica Mountains

Type: Institute/Think Tank

Los Angeles is particularly vulnerable to the destructive effects of wildfires, floods, droughts, extreme heat, landslides, air pollution, and earthquakes and because of climate change, these disasters will become increasingly frequent and harmful. Because of the many threats that Los Angeles faces, the importance of readiness as a city and for residents cannot be overstated. The Next Emergency Institute will be an institute for research for disaster preparedness, mitigation, and relief for emergencies due to environmental disasters. Scholars and researchers will study and apply new ways to tackle disasters. The Institute will bring together people in various disciplines, scientists, lawyers, political theorists, political scientists, government leaders, and most importantly the people on the front lines such as firefighters, veterinarians, doctors, nurses, police. The institute will not only be for research but it will be adapted to accommodate emergencies, providing shelter and resources for the surrounding neighborhoods. The building is built along the ridge of the mountain and is embedded in the rock. Rather than a typical campus with many separated buildings, our design utilizes the strategy of one continuous roof that is supported by 3 primary nodes, the auditorium node, main institute node and housing node. The bridging between the nodes acts as energy collection/ resource generation areas for solar, water and food, but it also creates a free flowing circulation between levels of the site and buildings through bridging. The building we designed for the institute provides a framework which fosters the exchange of ideas and knowledge and provides the opportunity for researchers to live in a shared environment. The ground floor level is a flexible space that allows for adaptation for emergencies. During non-emergency, the space can be used for gallery and exhibition space for artists, but also photographers to display their work, capturing the dangerous effects around the world of climate change and natural disasters. During a disaster, the space can be converted into smaller rooms using accordion walls that expand to quickly form temporary partitions, allowing for privacy for emergency beds, nursing stations, water stations, rehabilitation rooms. Between the nodes of the building the bridge weaves through. Scattered throughout the bridging are the planted columns which collect and filter water and grow vegetables for the residents. In patches throughout the bridging there are also cactus gardens that researchers can promenade through.





Main Entrance
Tram Station

Hwy 405

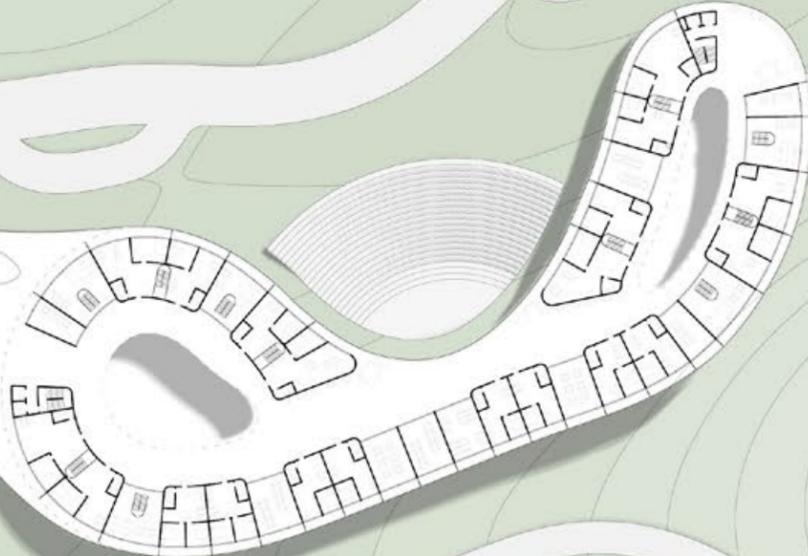
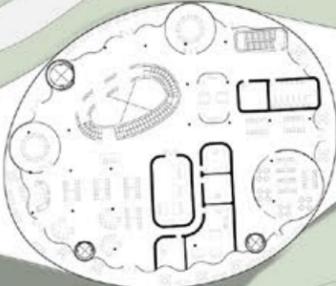
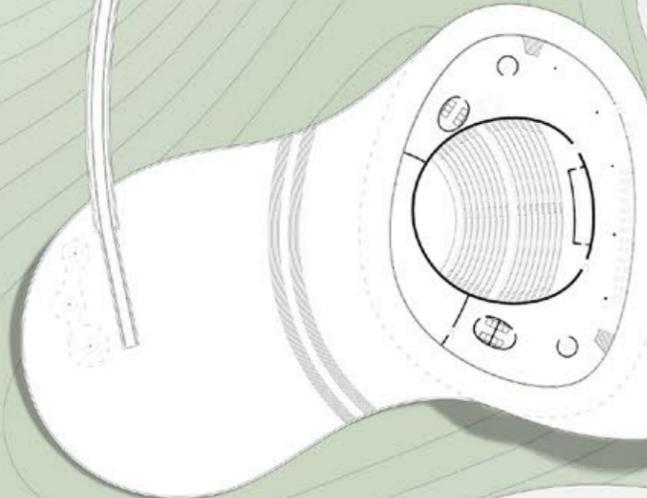
Main Entry Plaza

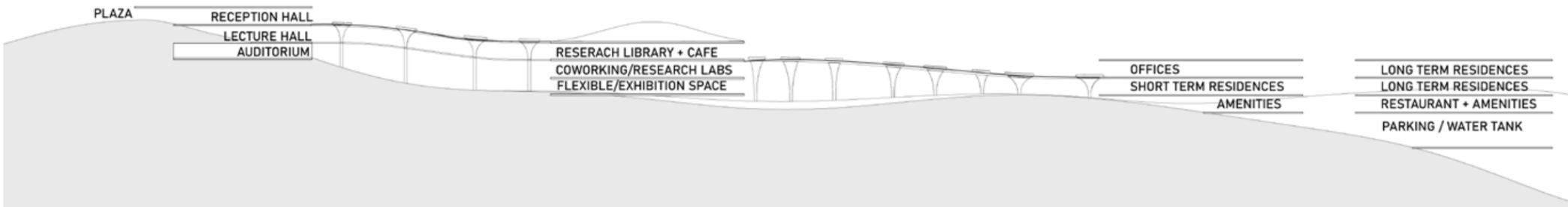
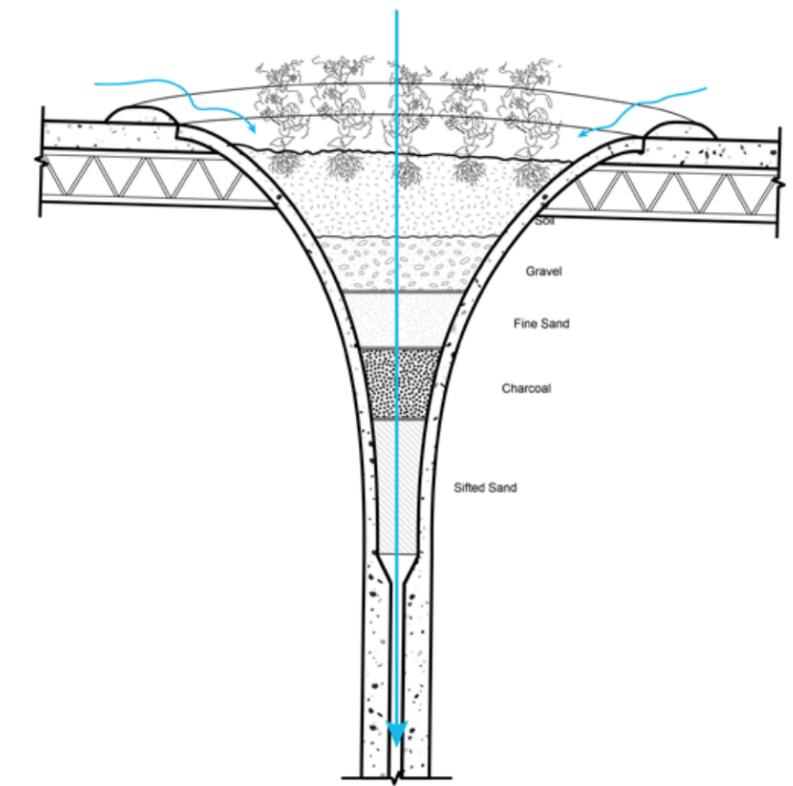
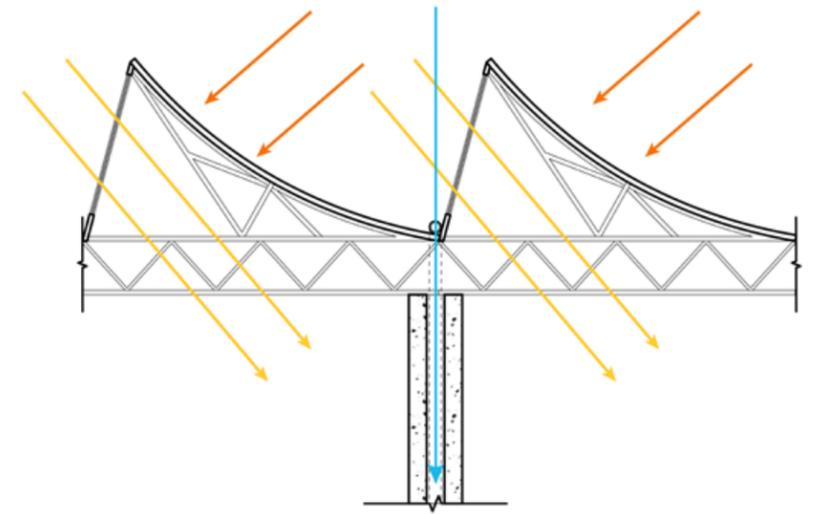
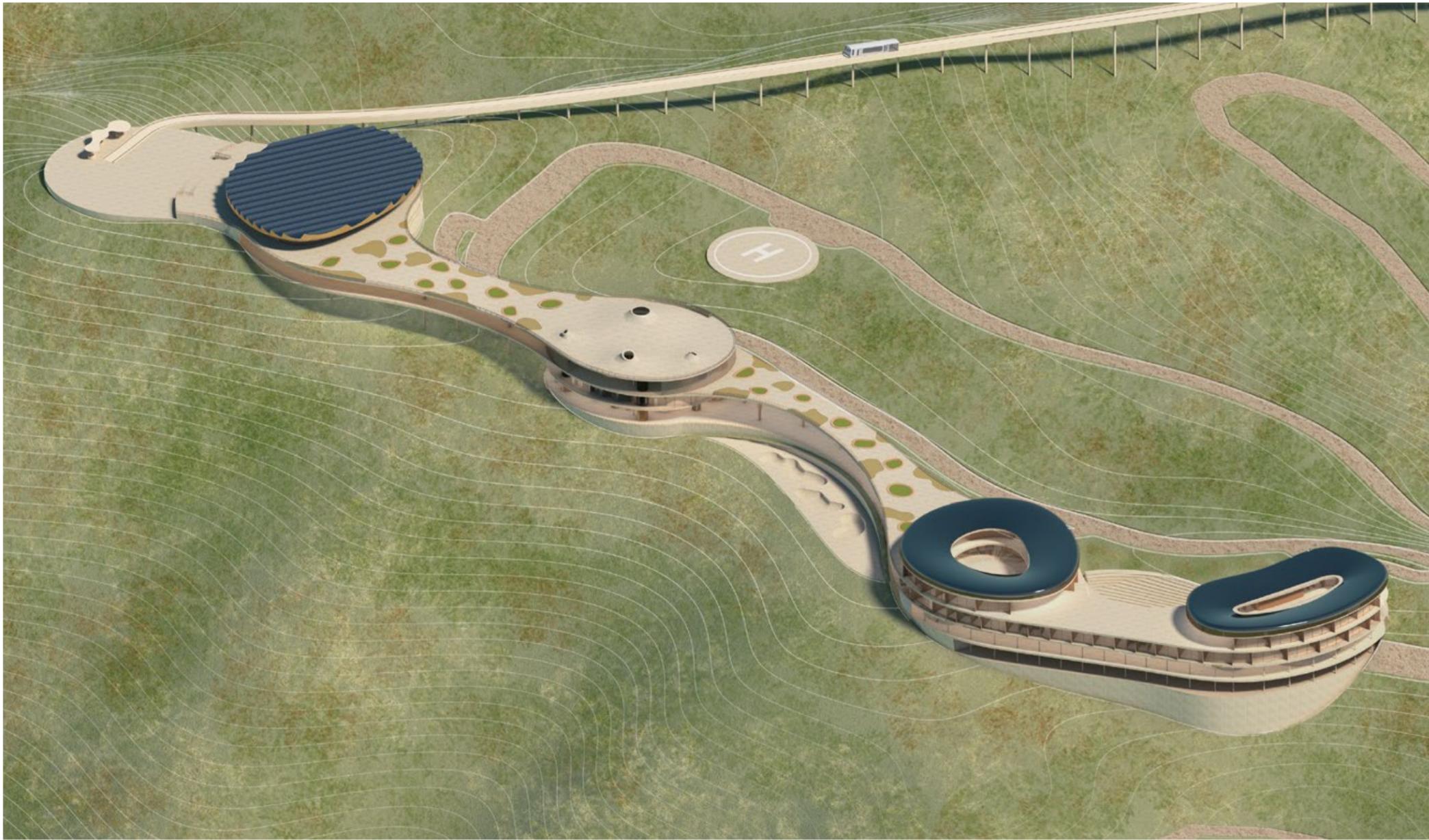
H

Main Auditorium

Communal Working

Housing, Amenities,
and private offices

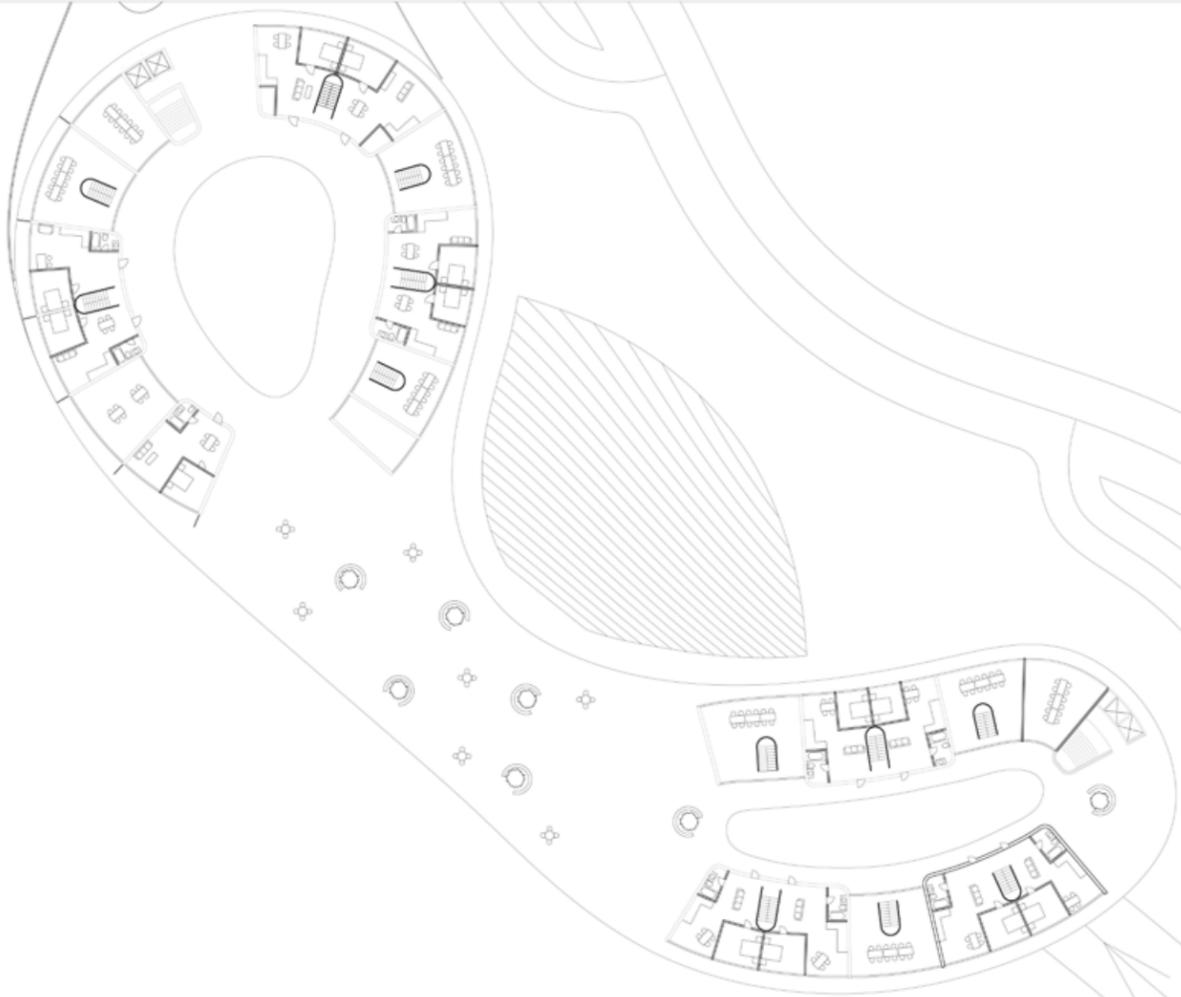
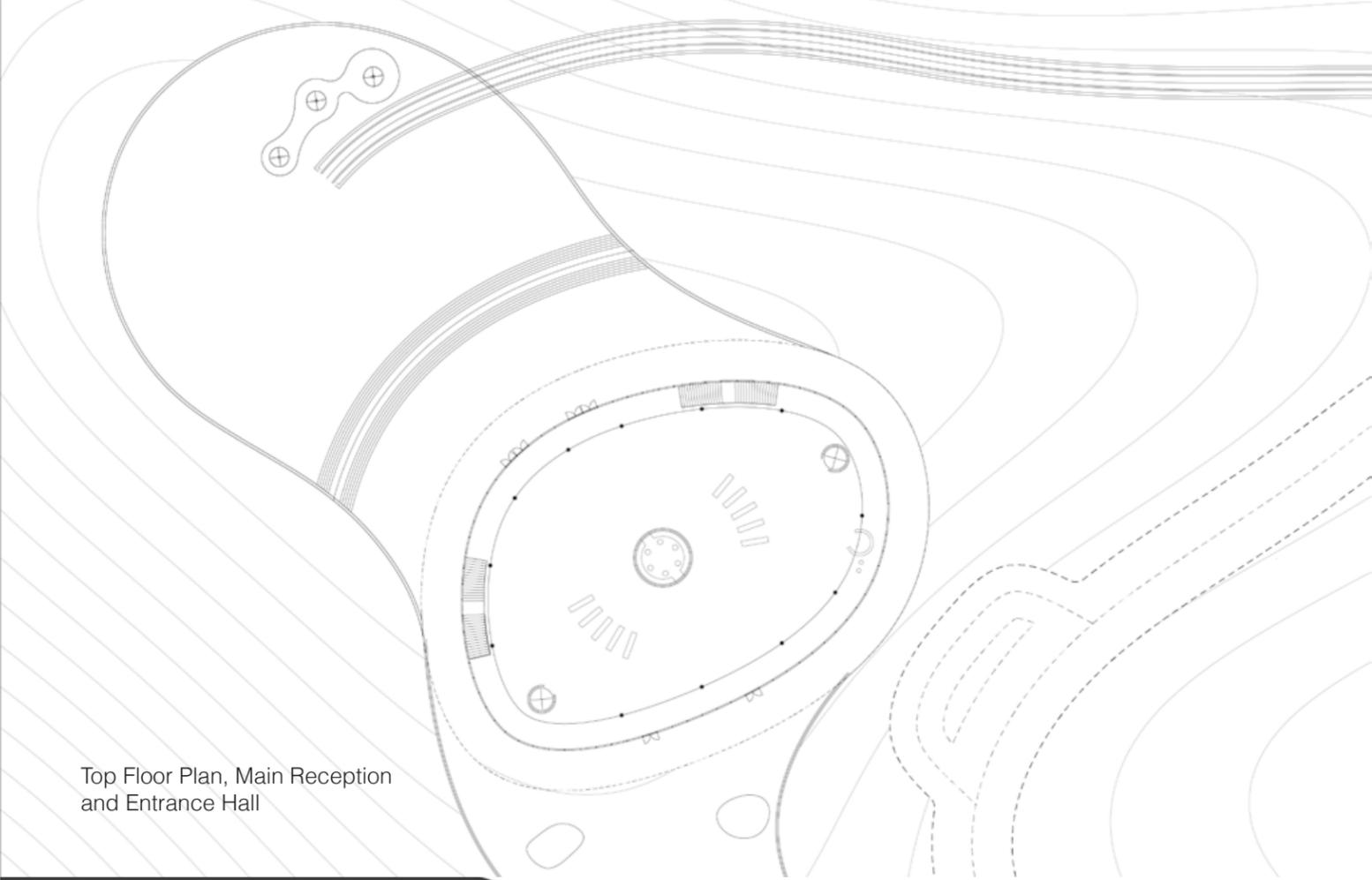




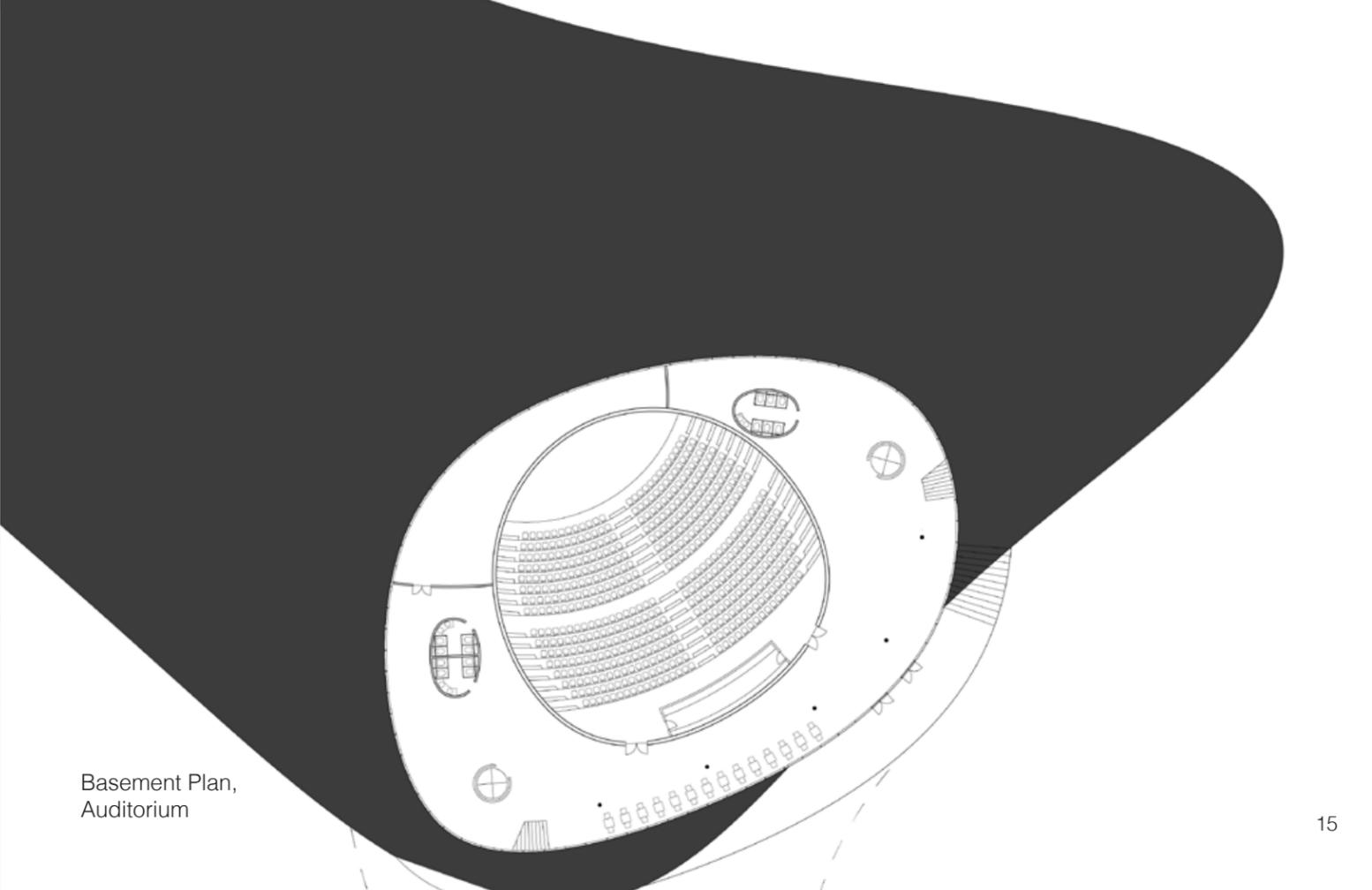


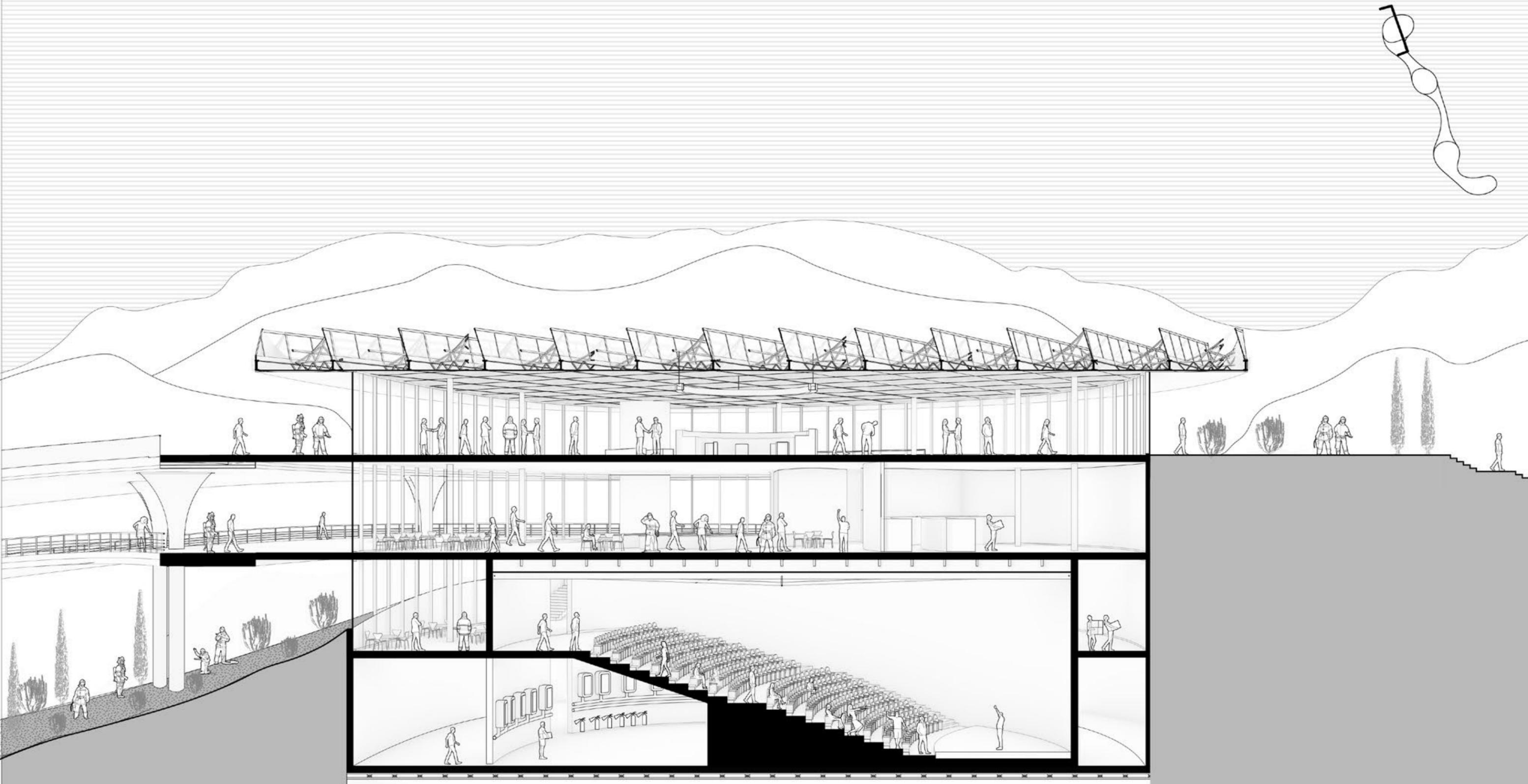


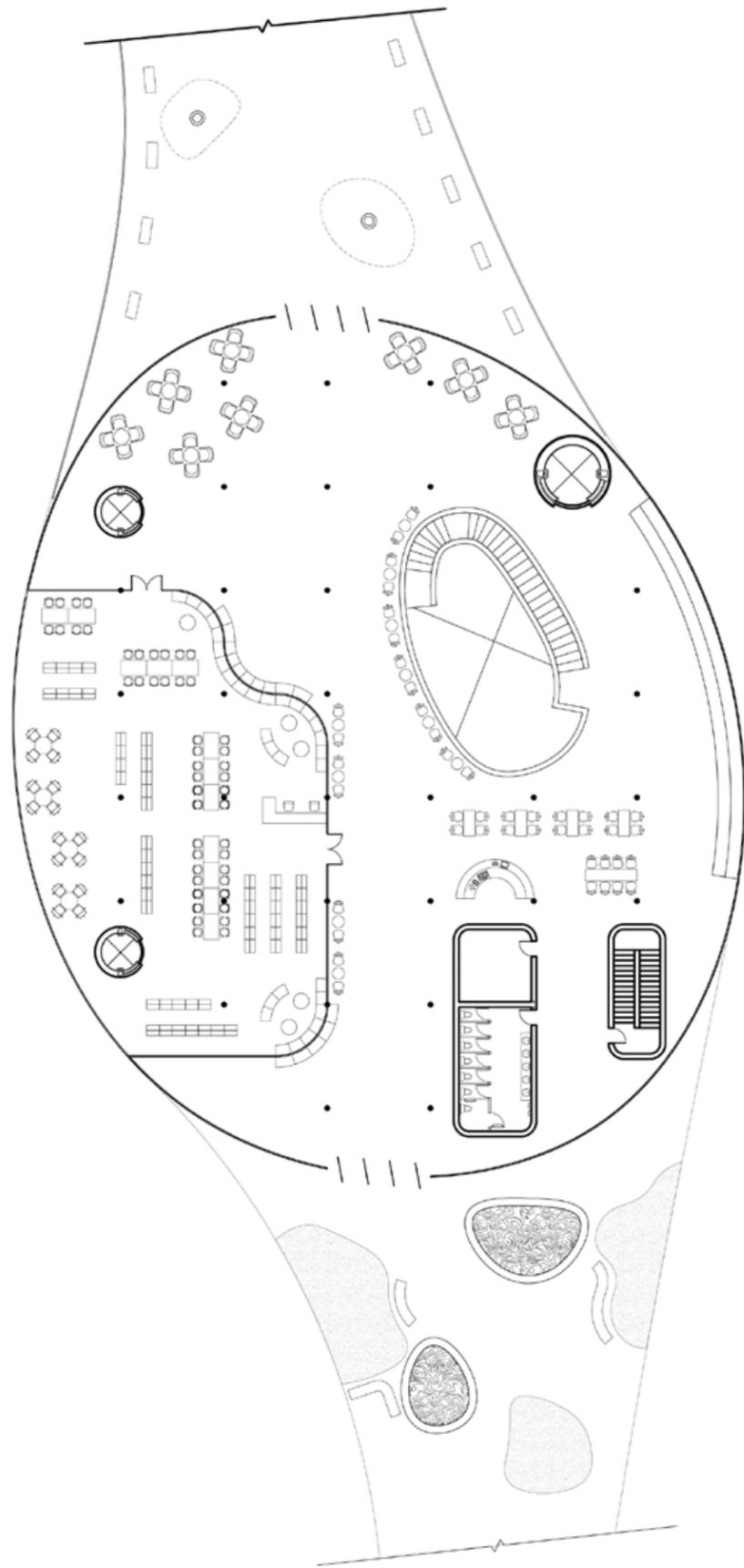
Top Floor Plan, Main Reception and Entrance Hall



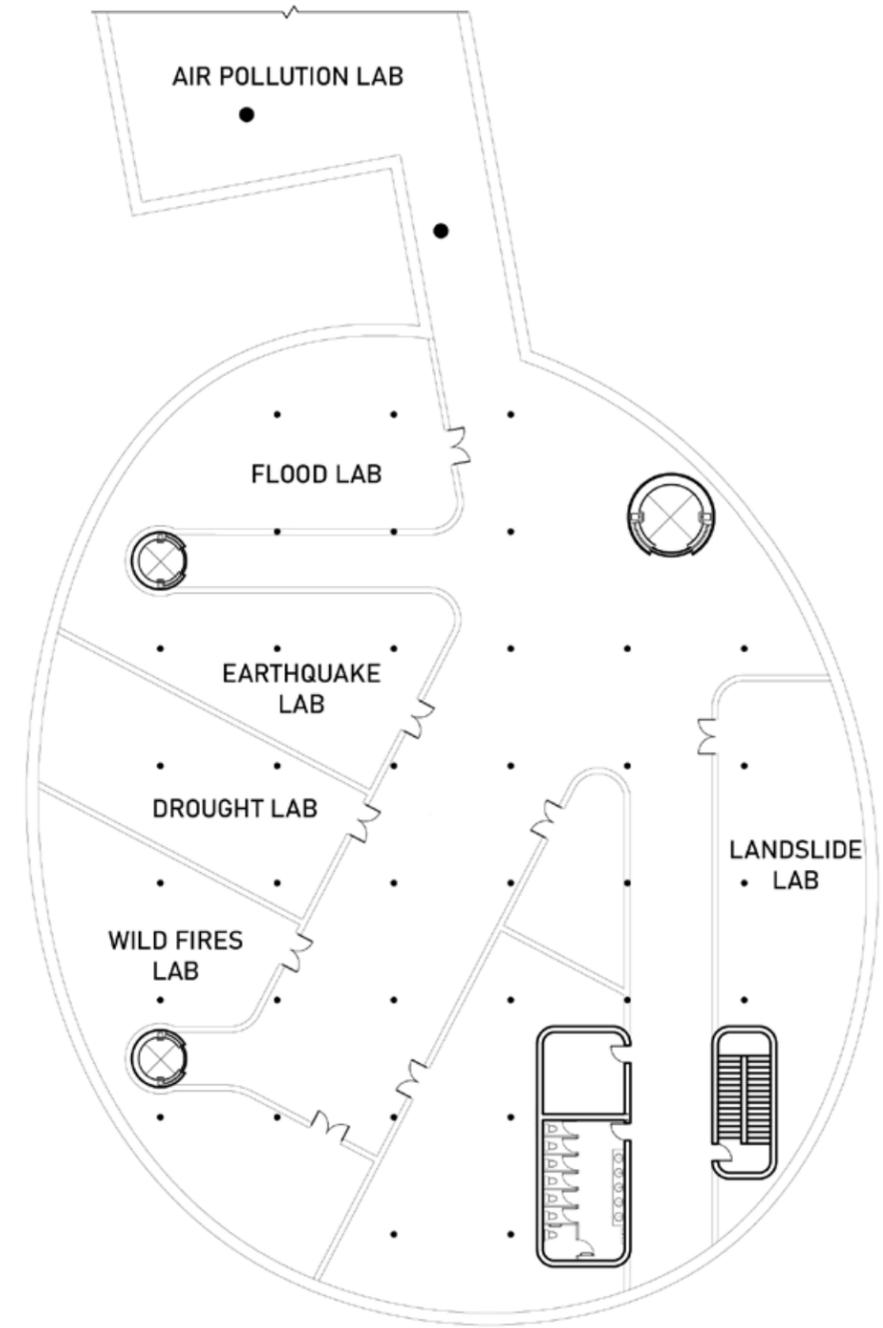
Basement Plan, Auditorium



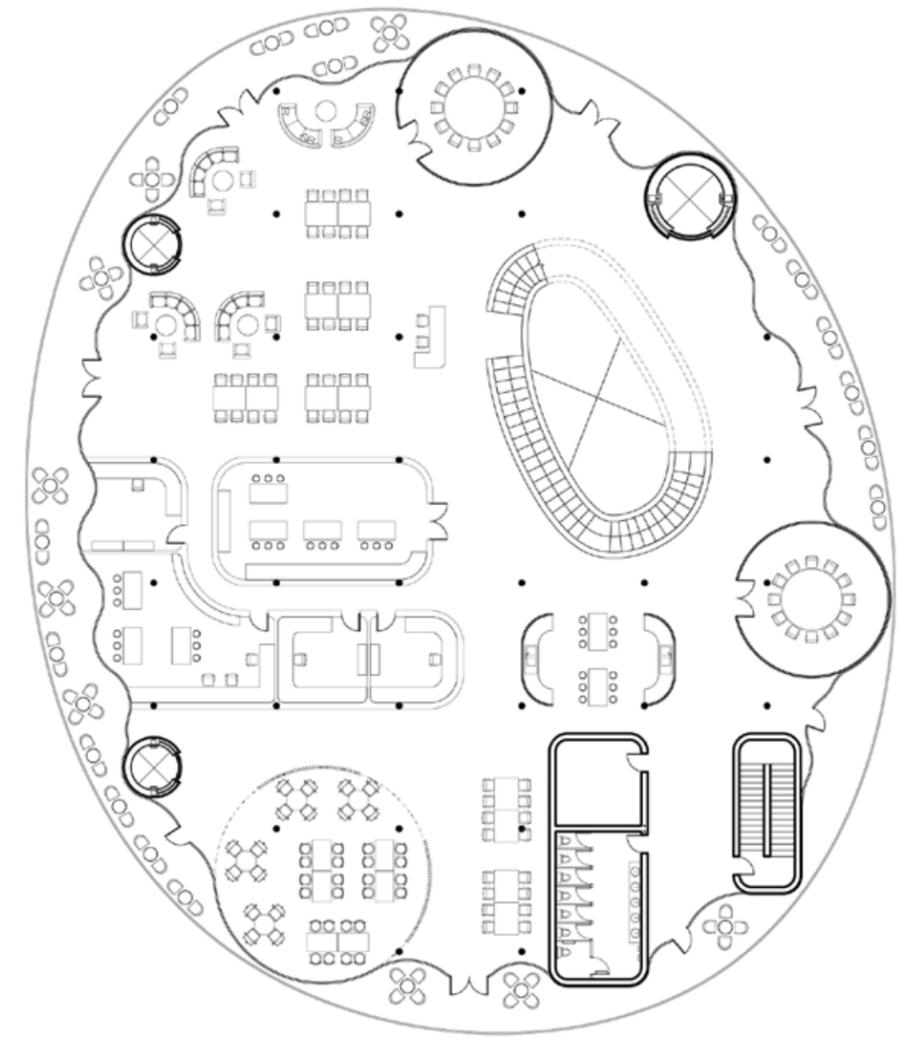




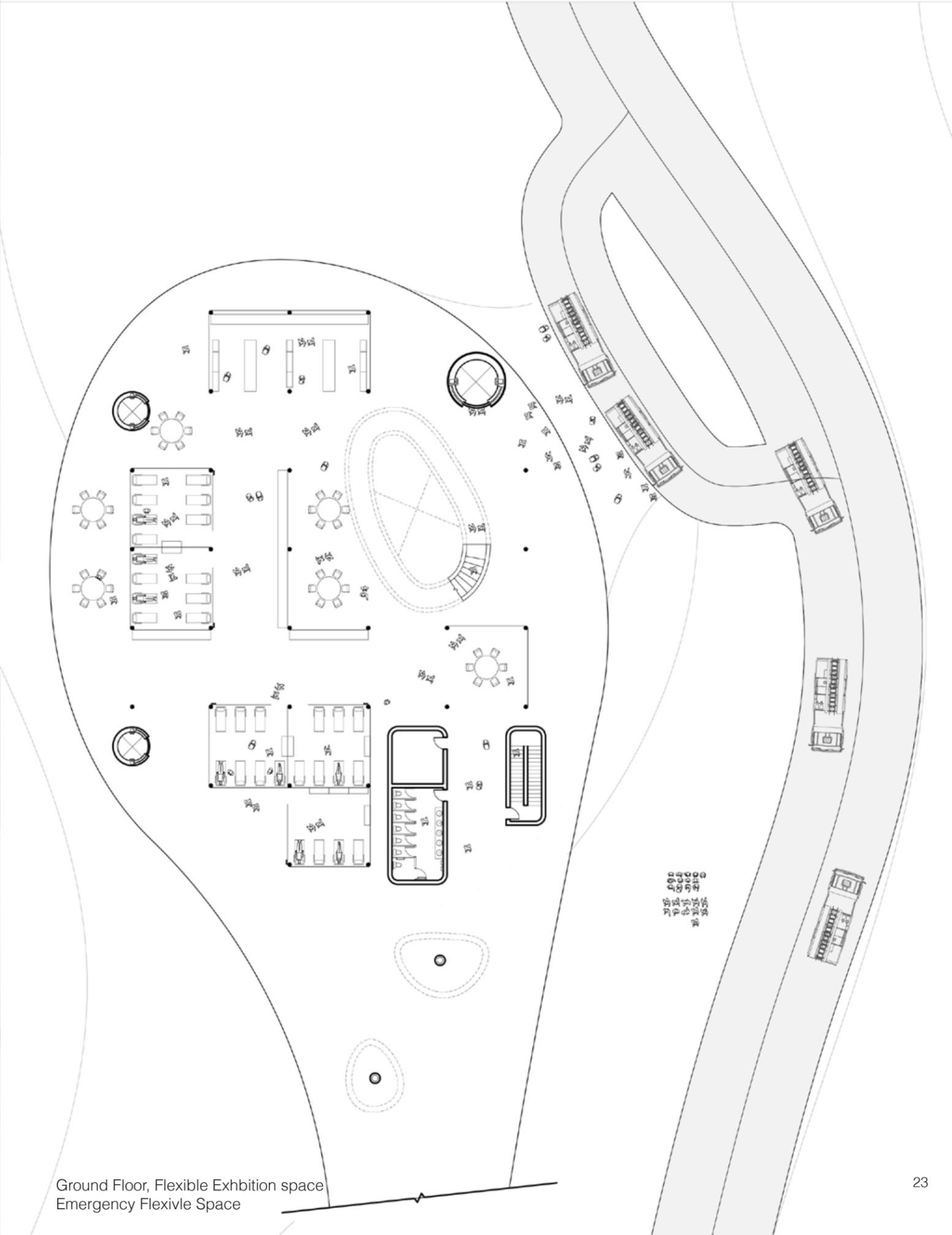
Research Library, Top Floor



Basement Floor, Experimental Research Labs



Collaborative Work Spaces, 2nd Floor



Ground Floor, Flexible Exhibition space
Emergency Flexible Space



MELROW HOUSING

Fall 2020

Instructor: Hilary Sample

Partners: Henderson Beck

Site: Melrose, South Bronx

Type: Affordable Housing

Melrow Housing examines the clustering of row house-inspired units, creating porosity with courtyards and thoroughfares, encouraging moments of interaction with the existing site, and reflecting the scale of Melrose's urban environment. To reflect the architectural history and nature of the neighborhood, we wanted the massing of this project to be low scale high density. By using the typical measurements of a row house we were able to configure clusters of units in creating smaller pockets of incomplete courtyards. When studying the Melrose neighborhood, we wanted to further our own understanding of existing row house typologies by cataloguing a series of row houses that reflects the low-scale high density nature of the Melrose community. As we are interested in reimagining the old and new character of the Bronx rowhouse, we wanted to celebrate the brick-lined facades of the existing site while also creating interior courtyards which provide an added level of privacy and community. The basement acts as the connective tissue of the project, interlinking the seemingly fragmented clusters on the ground. Shared residential amenities are primarily located on this level, such as central heat and cooling, greywater collection tanks, laundry facilities, workout zones, and lounges. As the topography of the site slopes downward toward the East, more of the basement is daylit, in reference to the quintessential garden level of a New York City townhome. Each unit has windows on either side: a thinness which creates abundant lighting while also maximizing cross ventilation through the units. Depending on the orientation, each unit has access to a terrace or a winter garden. The basement acts as a connective tissue and provides the potential connection for shared utilities. antilevered terraces above. The private residential terraces create a visual connection to the other units and the courtyard, but also provides a space of respite. The facades of our units are made from various colored brick. As a visual connection to the materiality of the context buildings, a gradient of brick facades flows from the burnt red brick of the BDC to the muted greyish brick of the existing apartments. on Melrose Avenue. Individual entrances to units are accessible from both the street and courtyards. The thoroughfare that cuts through is here in the middle of the block and weaves between the old and the new housing typologies. In these series of images we imagined the variety of potential uses in this space and at different times of the day. Acting as a sort of street extension in some ways. Community garden planters are also scattered around this thoroughfare. The staggered units serve to organically envelop the inner courtyards, creating an intimate space with moments of reflection and areas of congregation.







GROUND FLOOR





MORNING



MORNING



AFTERNOON



AFTERNOON



EVENING



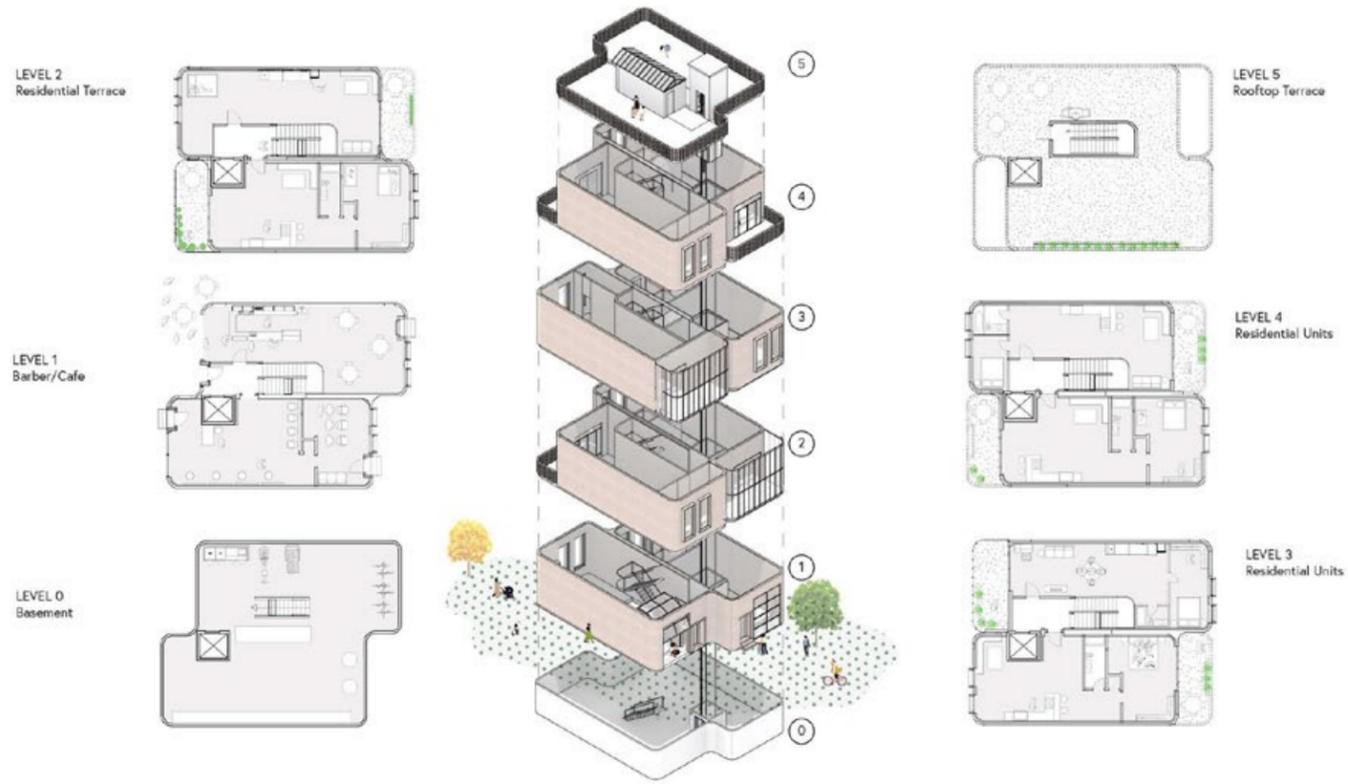
EVENING



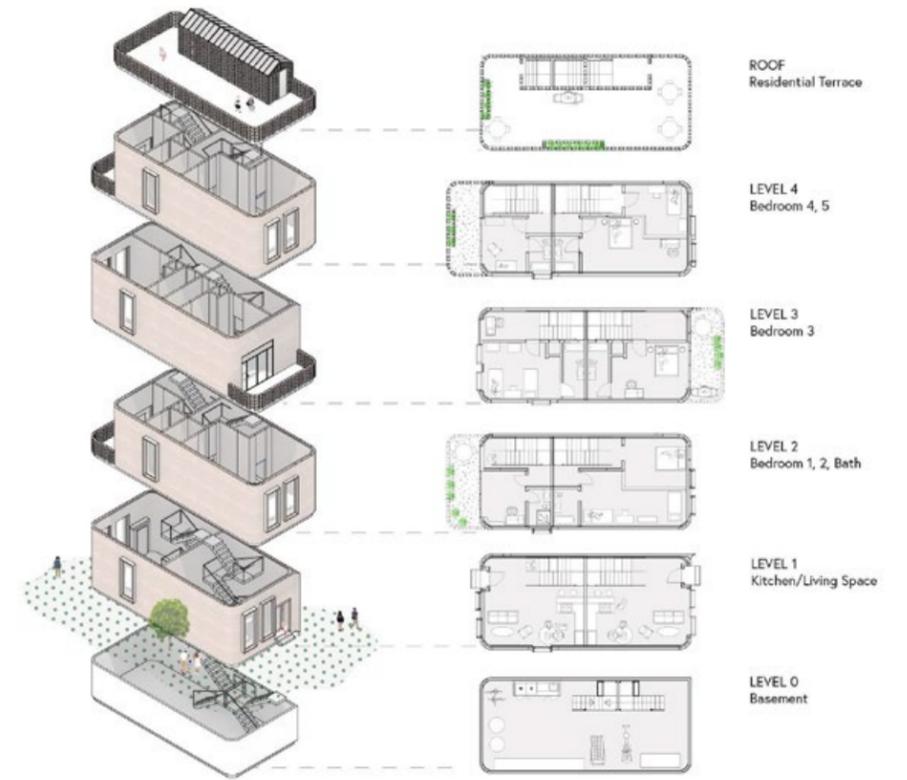
Top: South Elevation



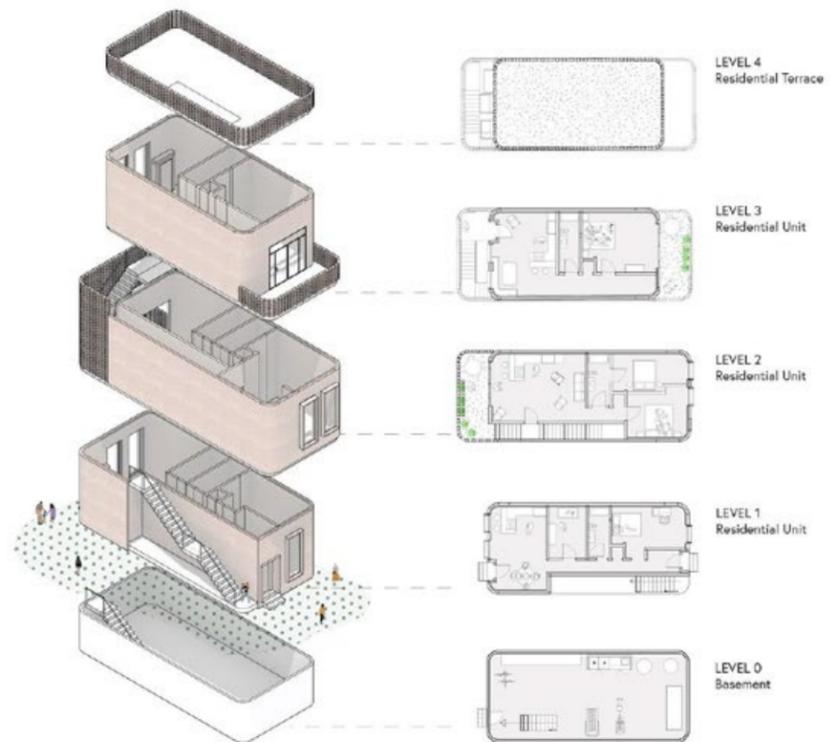
Type 1



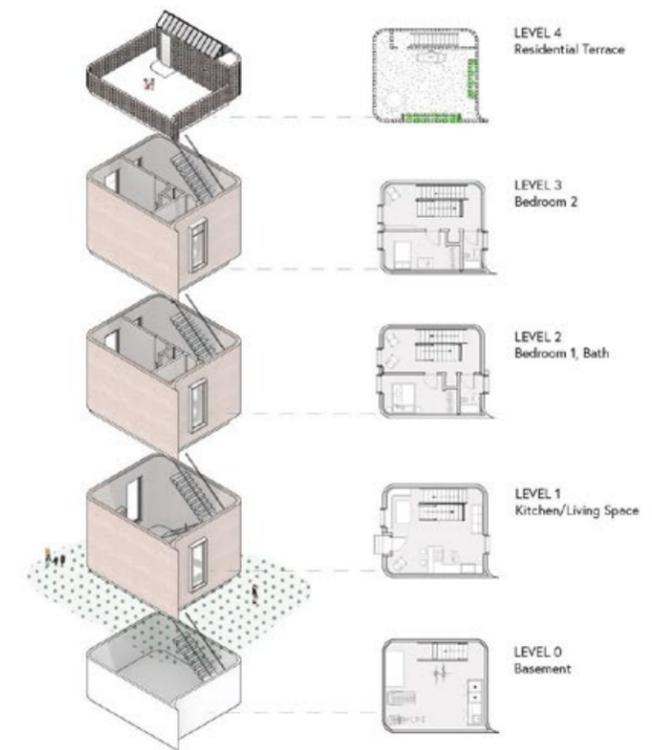
Type 3



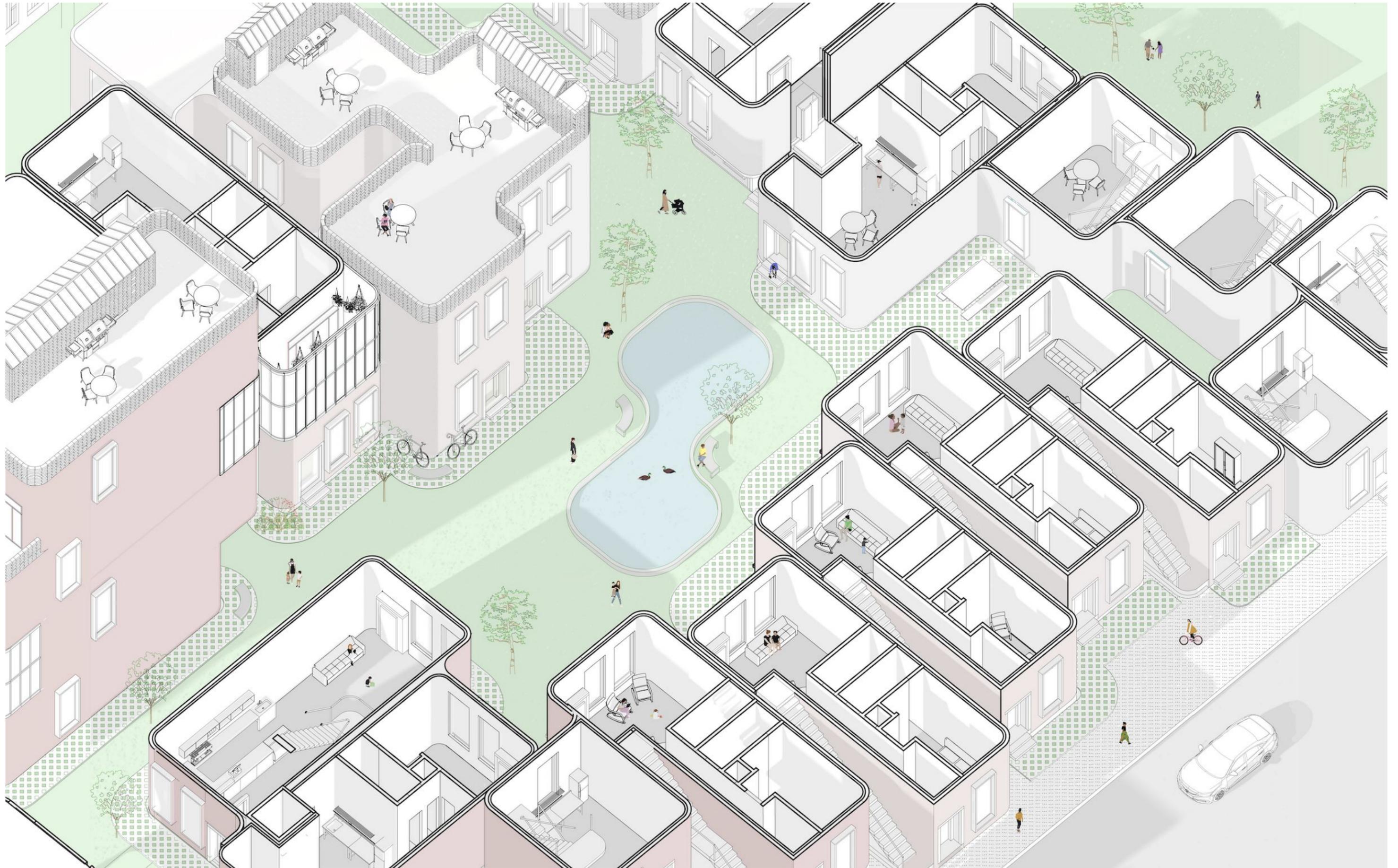
Type 2



Type 4







NATURAL HISTORY SENSORY PAVILIONS

Fall 2021

Instructor: Bryony Roberts

Site: Upper West Side, New York

Type: Pavilion

Natural History Sensory Pavilions are located in the Theodore Roosevelt park which surrounds the museum of Natural History. The park has beautiful pockets of greenspace with large trees, but the pockets are completely fenced off and therefore inaccessible to the public. The museum is one of the biggest in the US with nearly 13,000 visitors a day. It has many large spaces with harsh lighting, loud echoing, big objects, and crowds that can be very sensory overstimulating. The 81st street entrance is one of the only 2 handicap accessible entrances. The park in front of the entrance has a drastic slope from 81st street down to the museum entrance and currently feels very detached from the museum. I am proposing pavilions that would both allow access to the park and also allow for neurodiverse learning environments for the museum. People who have visited the museum have encountered the phrase "Don't touch the objects!". My goal was to provide alternative methods and experiences for accessing the objects and information featured in museum exhibitions. The pavilions will provide tactile exhibitions that invite visitors to touch replica objects, which can translate the experiences of a museum to visitors who learn by touching and sensory experiences. Travelling from exhibit to exhibit, visitors will be able to enjoy the park, rather than the crowded halls of the museum. And when a visitor gets overwhelmed, they can quickly go to one of the resting zones to escape and have a quiet space. These new learning spaces will display many different replicas from the museum and other tactile objects that will allow visitors to get up close with insects, explore the solar system, excavate dinosaur bones, and touch rare gems, stones and rocks. Each node varies in shape, size, and atmosphere and are embedded in the landscape of the park's natural slope. Some become more enclosed, like the solar system pod and some are more open field-like spaces like the dinosaur excavating zone. The pavilions will create an inclusive environment for museum-goers that will allow them to learn by sensory experiences.



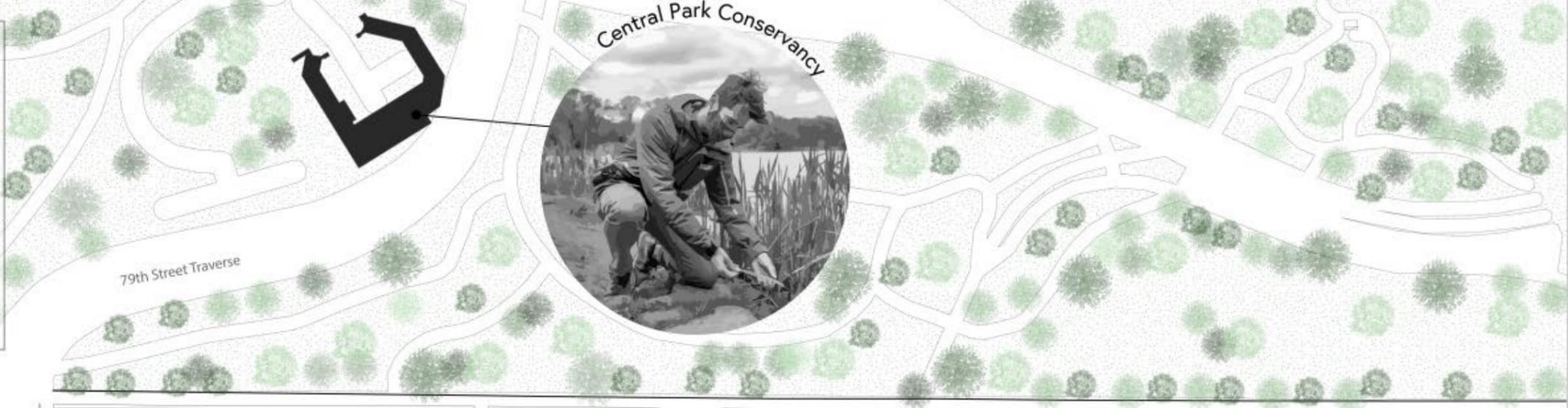
Catalog of most common trees in area

London Planetree
Trunk diameter: 16 inches
2668 gallons of stormwater intercepted each year

Ginkgo
Trunk diameter: 6 inches
468 gallons of stormwater intercepted each year

American Elm
Trunk diameter: 49 inches
8638 gallons of stormwater intercepted each year

Silver Linden
Trunk diameter: 10 inches
1456 gallons of stormwater intercepted each year



A Social Story AMNH: How to prepare for visit

Arrive at Museum

Access on 81st Street
ACCESSIBLE ENTRANCE

Temp. Check/Face Mask

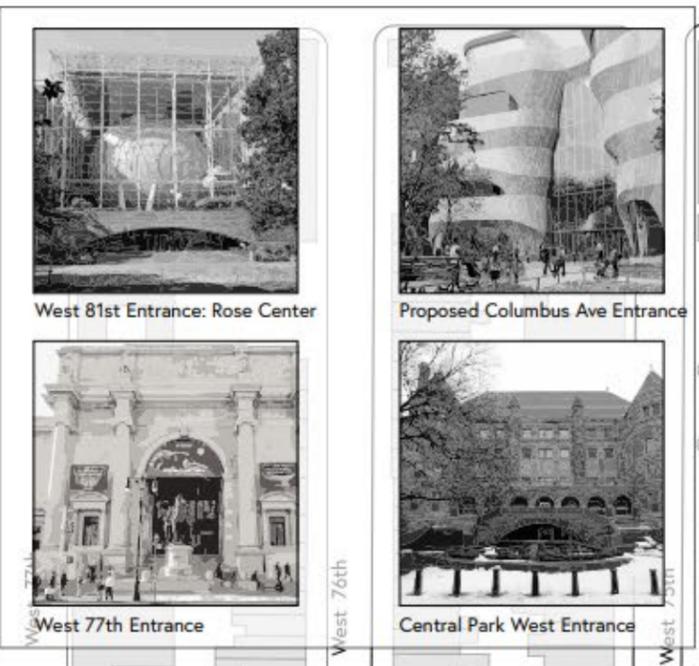
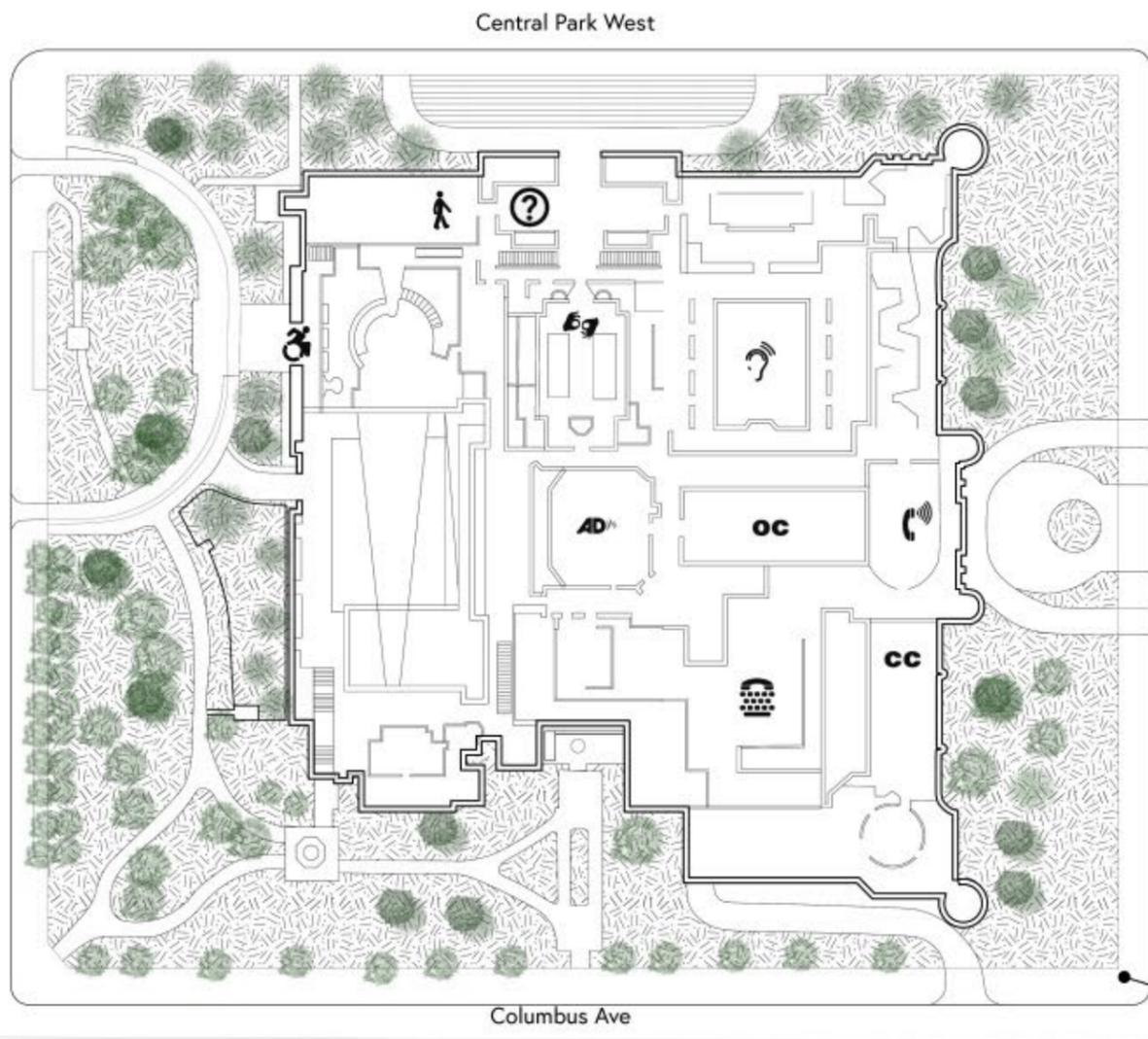
Plan Visit with Explorer App

Follow walking signs
Please keep to the right.

Explore 4 floors and 10 exhibition halls

Some halls are quite dim and dark

There will be some large animals



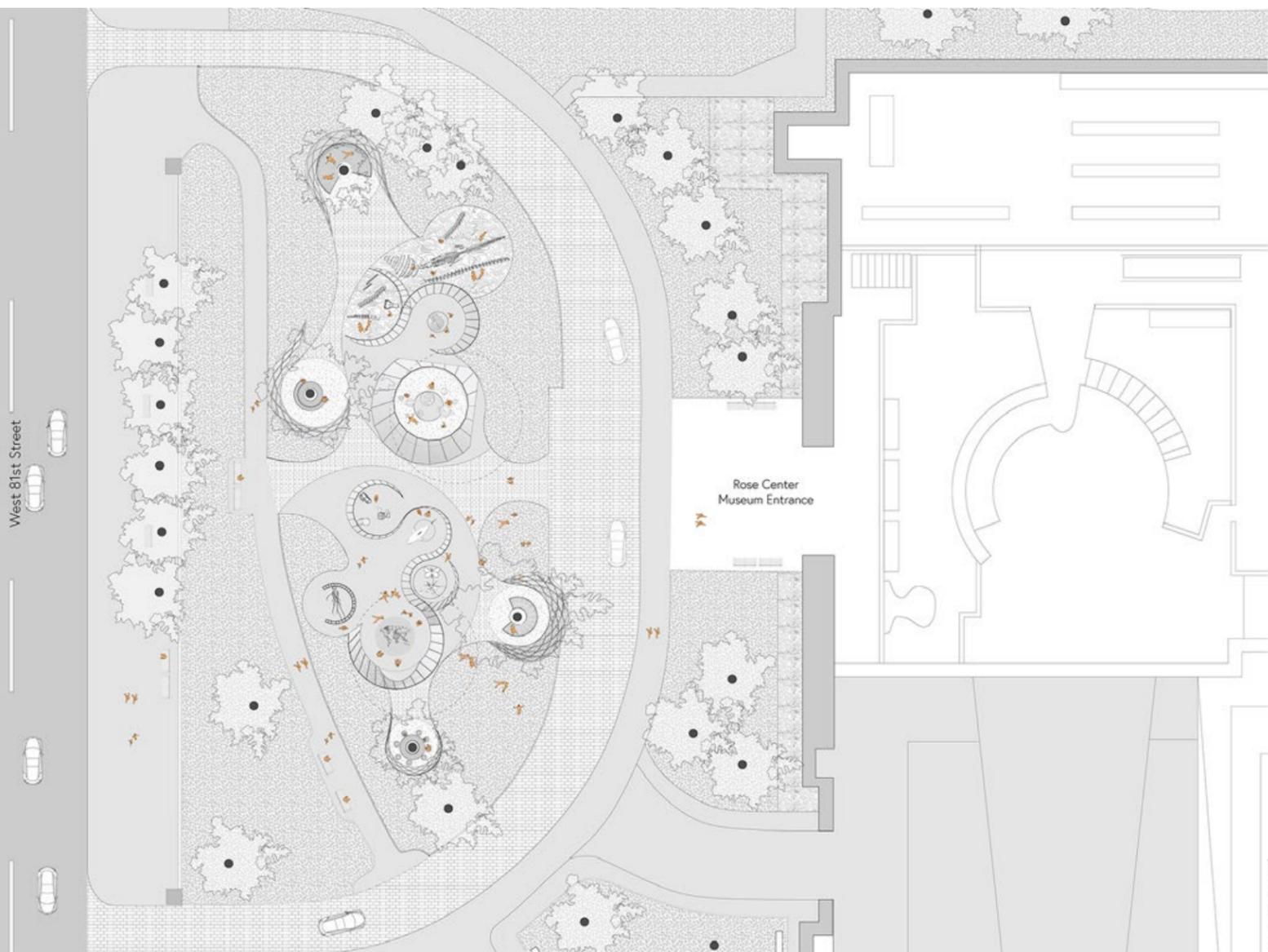
Census Tract 165 - Upper West Side
 \$183,343 Median Household Income
 51% Family Households
 44% Population between 35-64
 38% Owner Occupied Housing Units
 72% Workers Take Public Transportation
 14% Renter Occupied Housing: 50% or more of Income



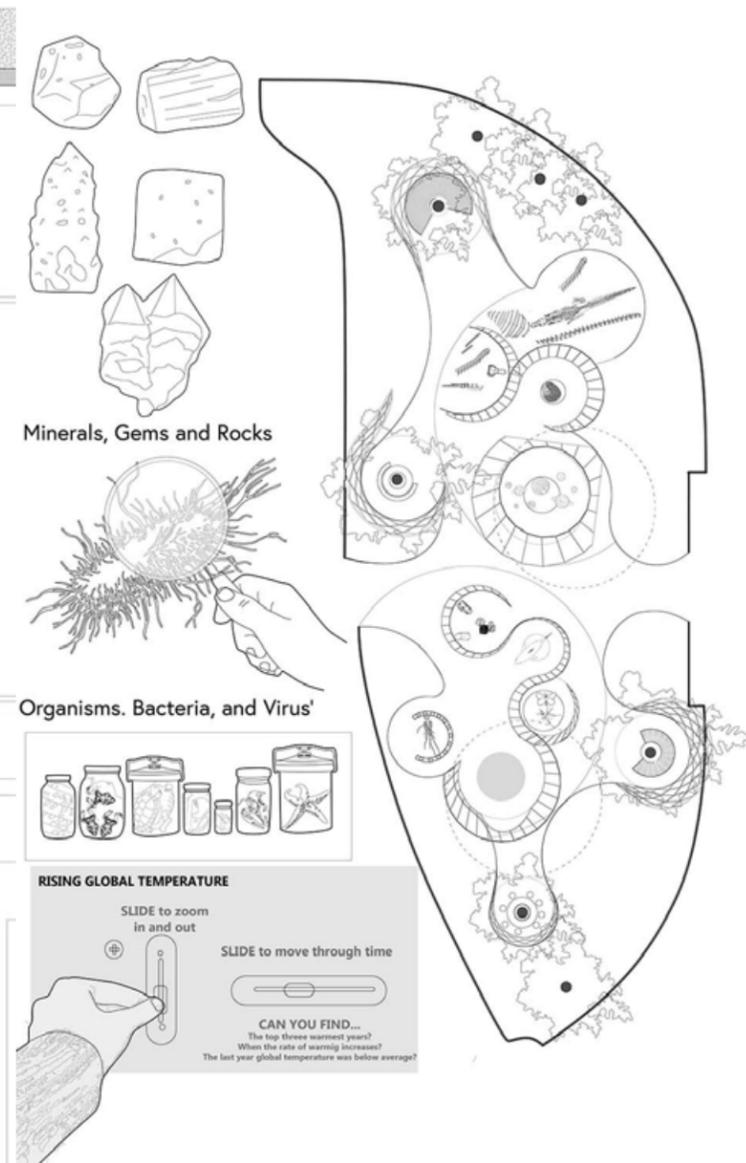
OPEN STREET



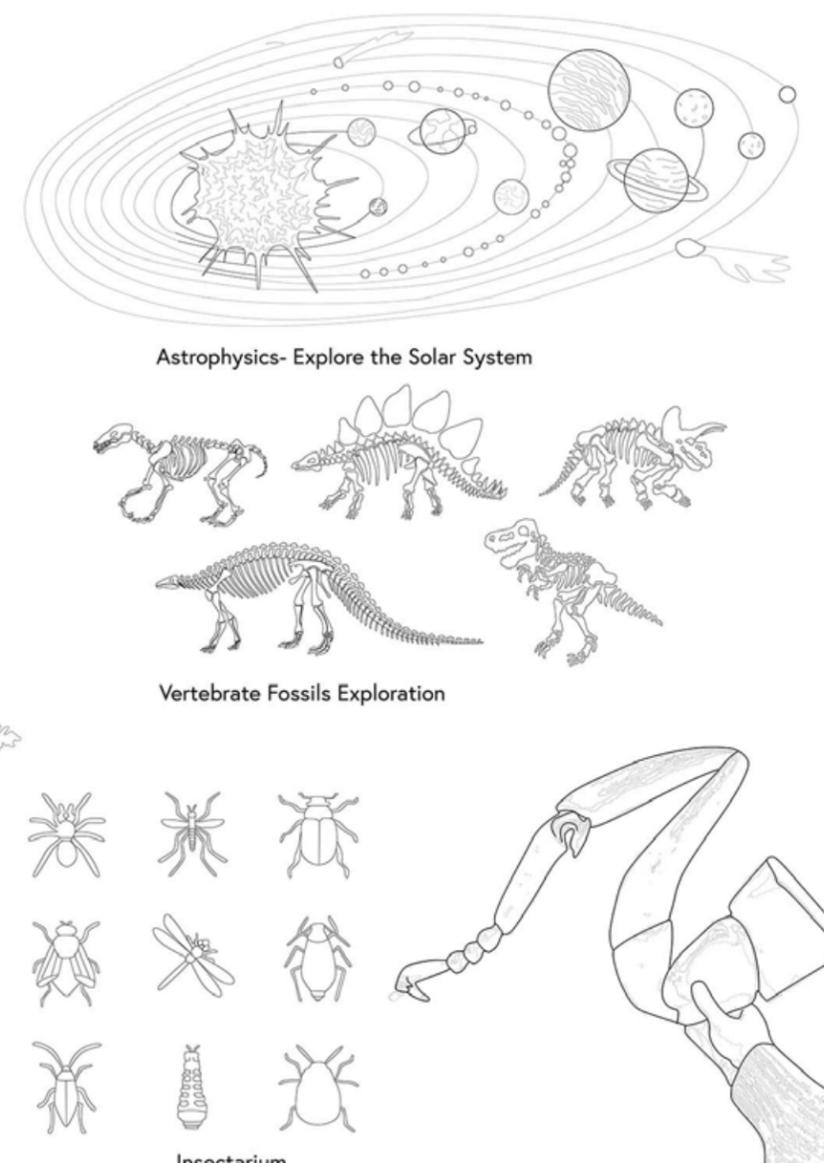
As part of initial research into sensory environments, we were asked to design a wearable device that would make an uncomfortable space for us more comfortable. This paper mache globe provided a calming environment whenever things felt a bit hectic in the outside world.



Ground Floor Plan



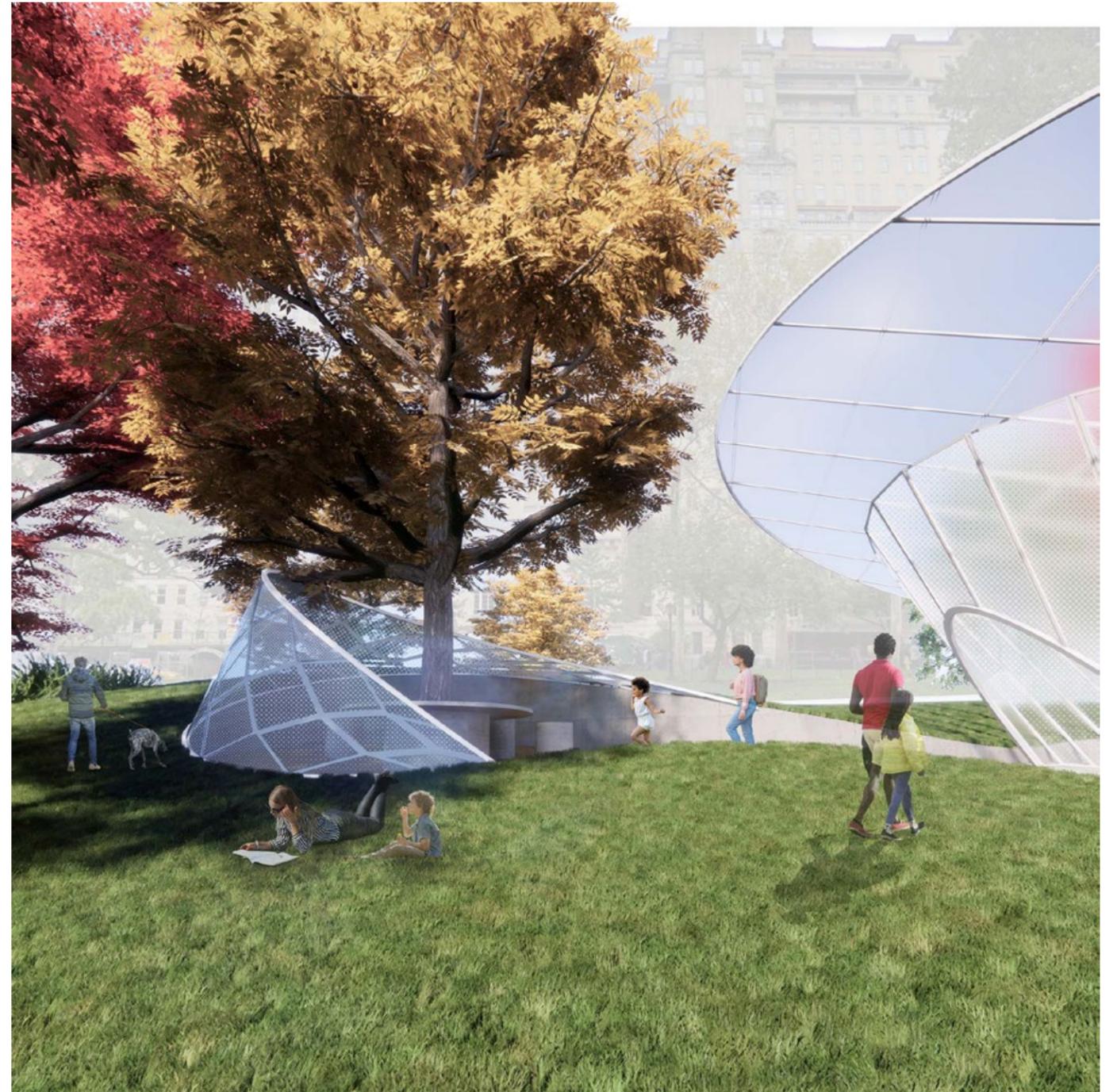
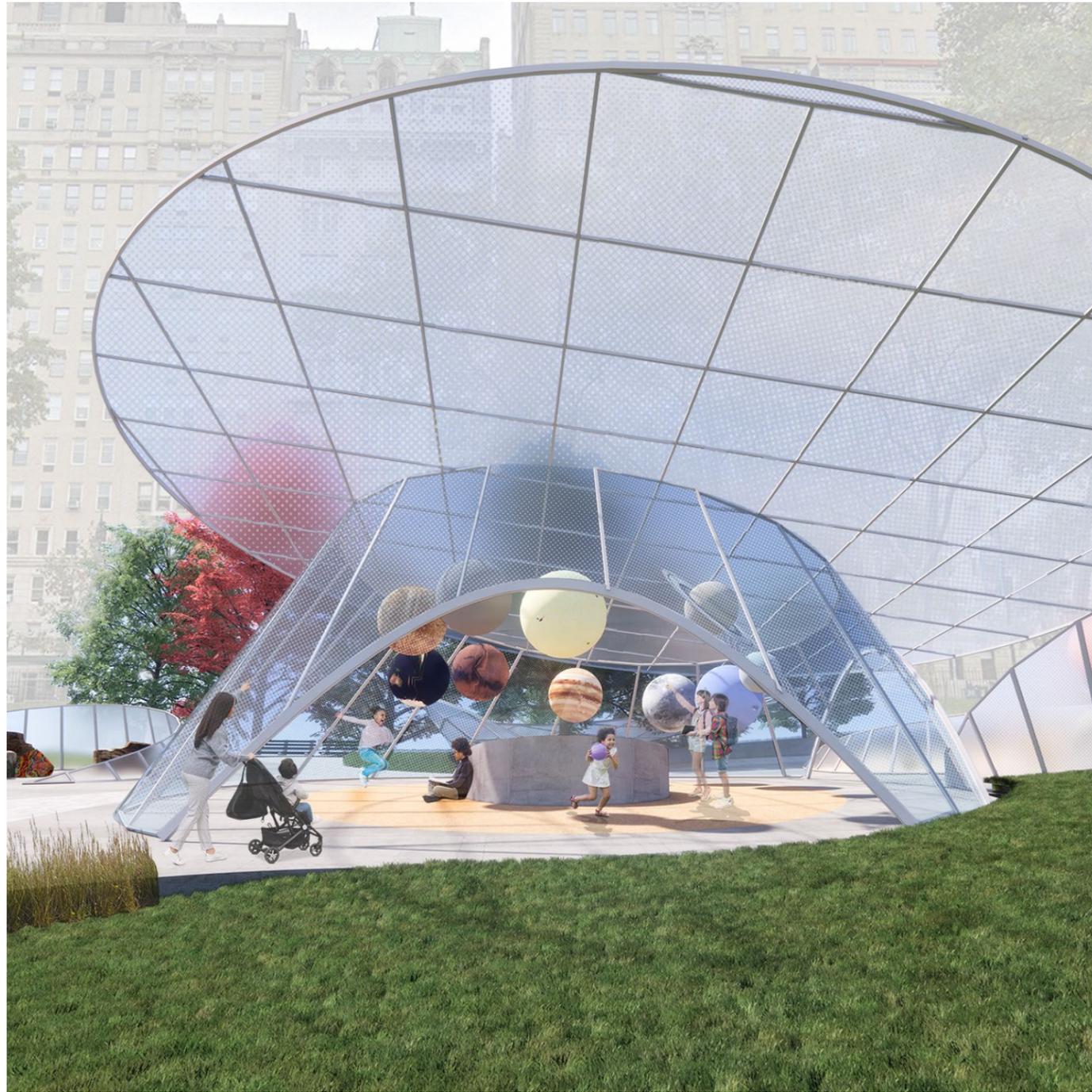
Tactile objects and content inside the pavilions

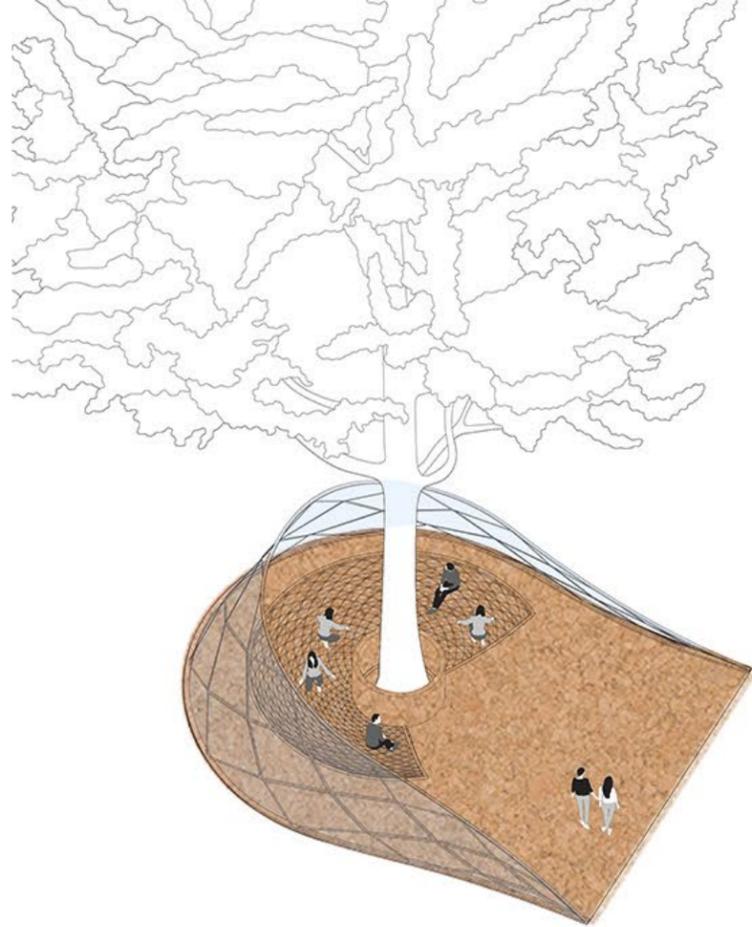




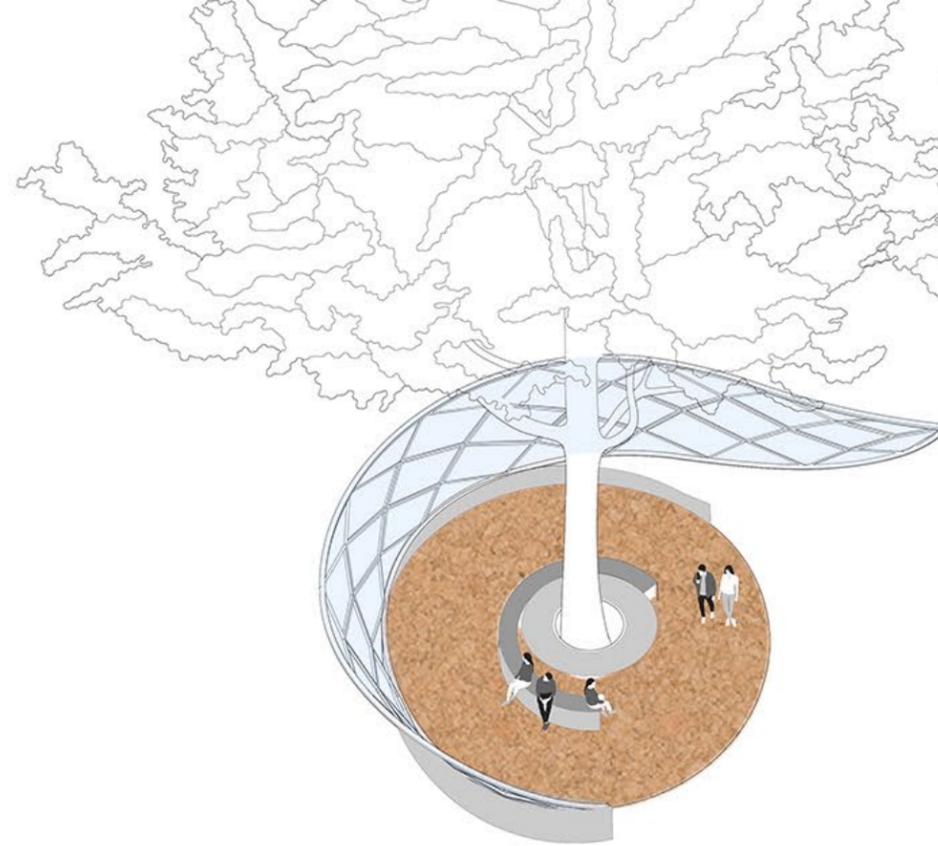
Cross Section



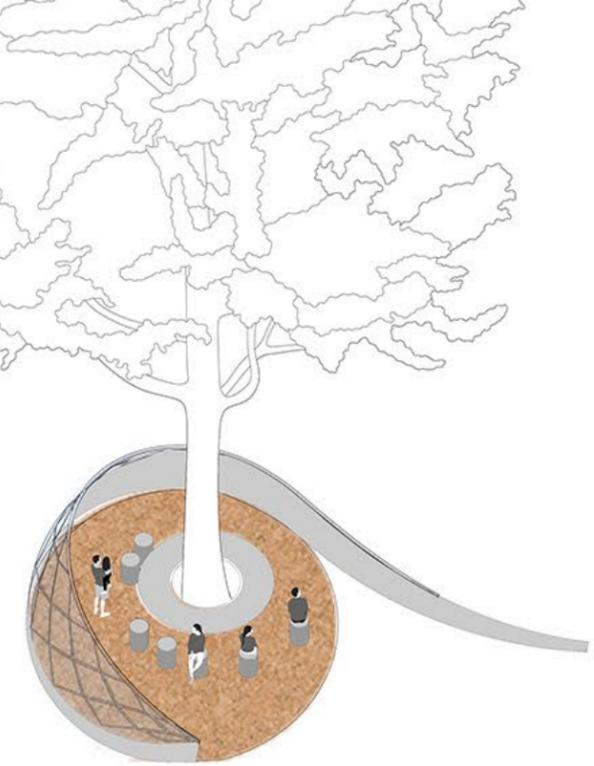




Quiet Tree Node with mesh hammock

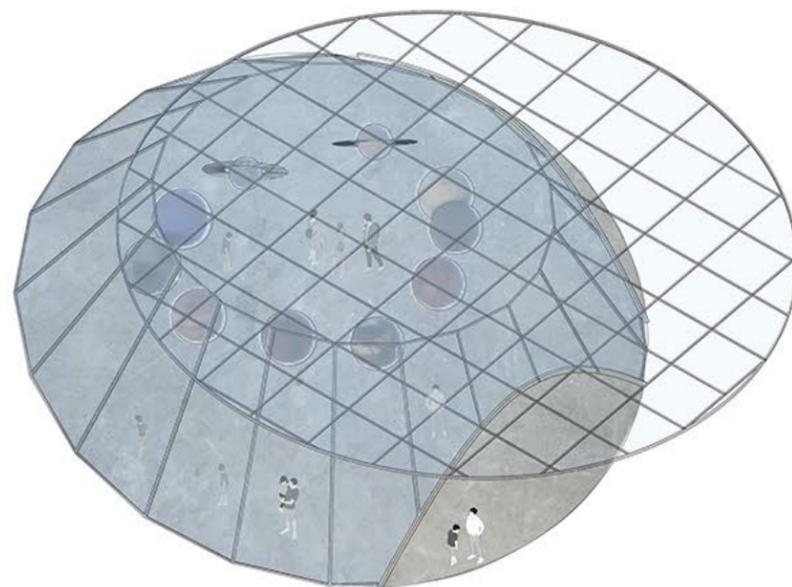


Quiet Tree Node with resting bench and table

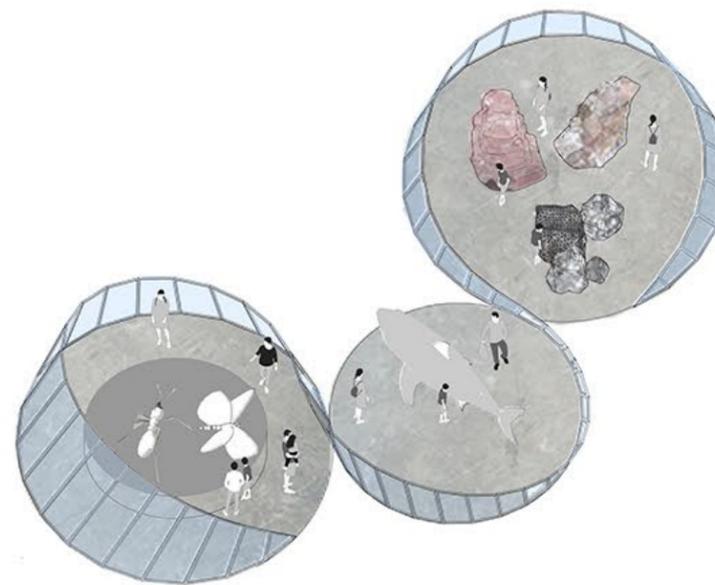


Quiet Node with seating and table

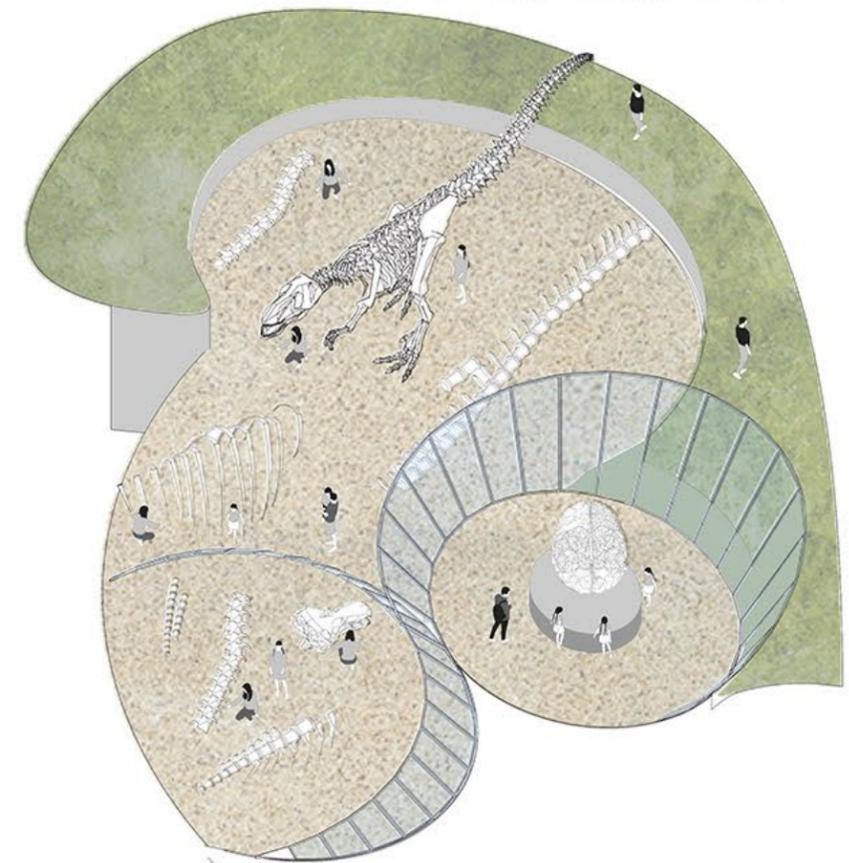
Planetary Experiential Node

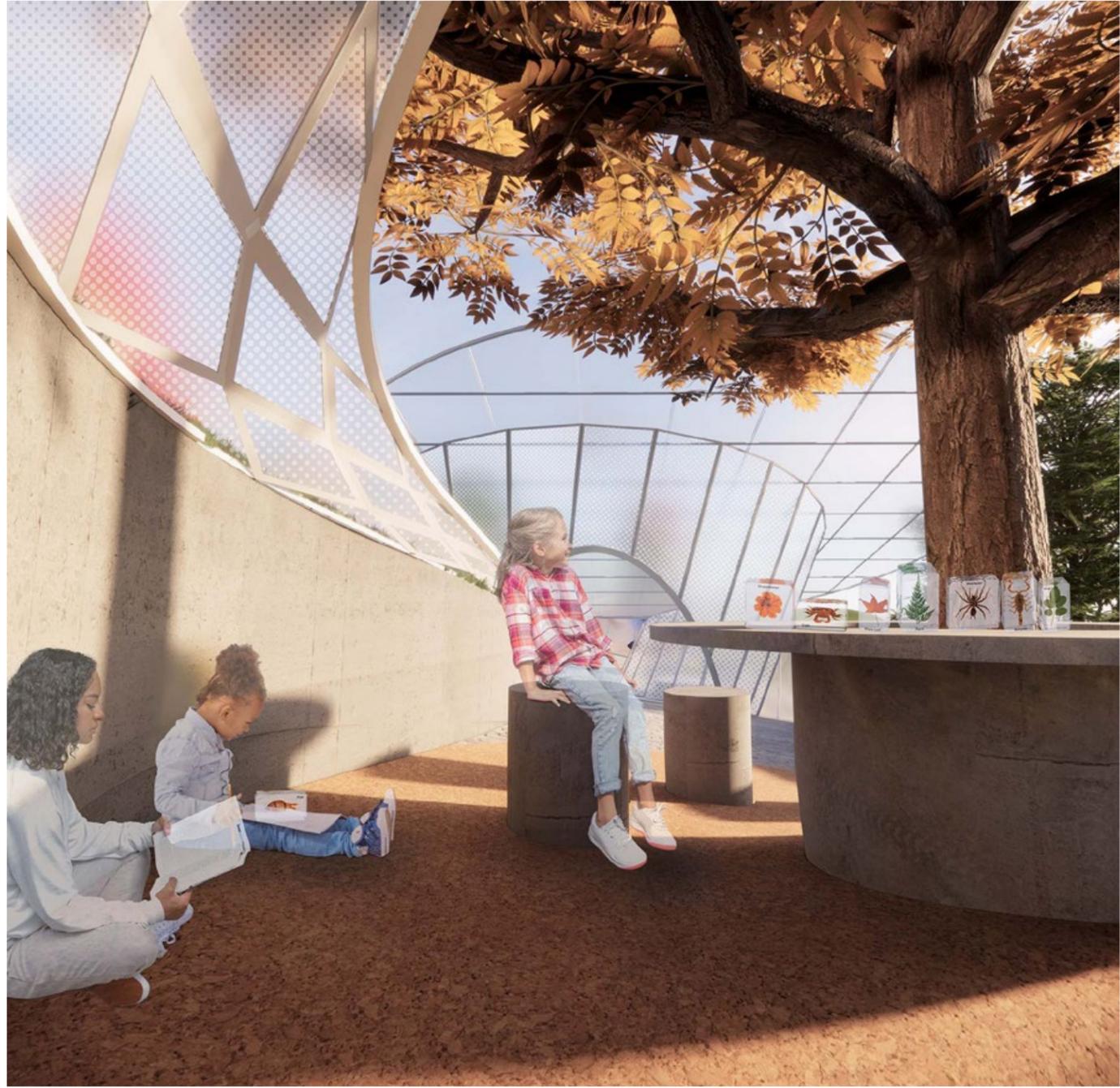


Insect, Marine Biology, and Geology Educational Nodes



Dinosaur Excavation Node / Neautoscience Node



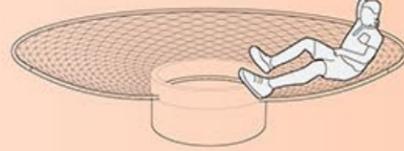


Stationary Child + Stationary Object

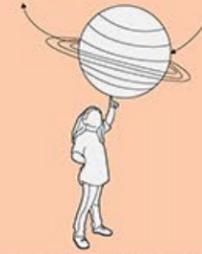
Less Stimulation / Complexity



Stationary Child + Moving Object



Moving Child + Stationary Object



Moving Child + Moving Object

More Stimulation / Complexity





THE GUIDANCE SCHOOL

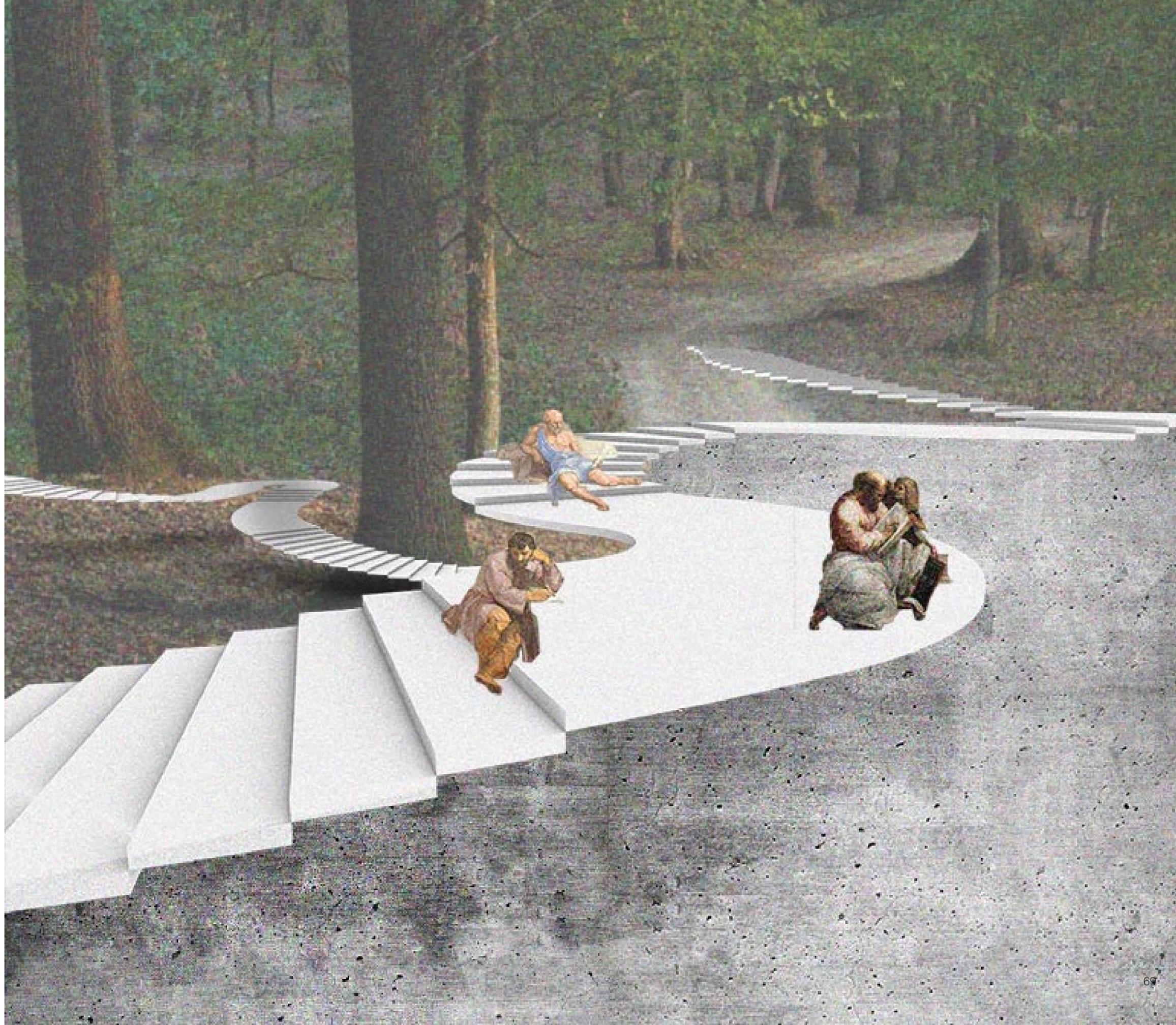
Spring 2020

Instructor: Daisy Ames

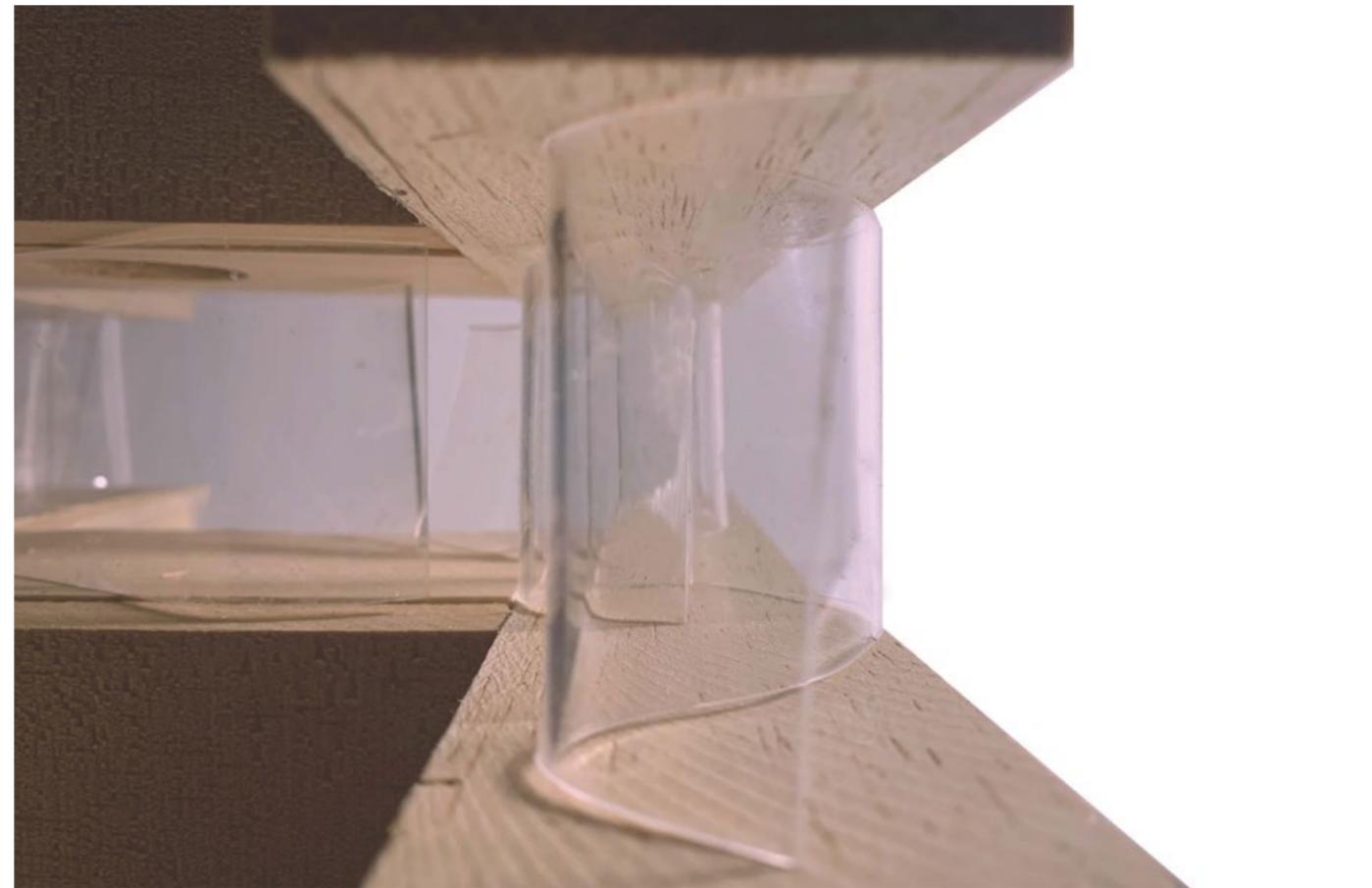
Site: Easy Village, Manhattan P.S. 64

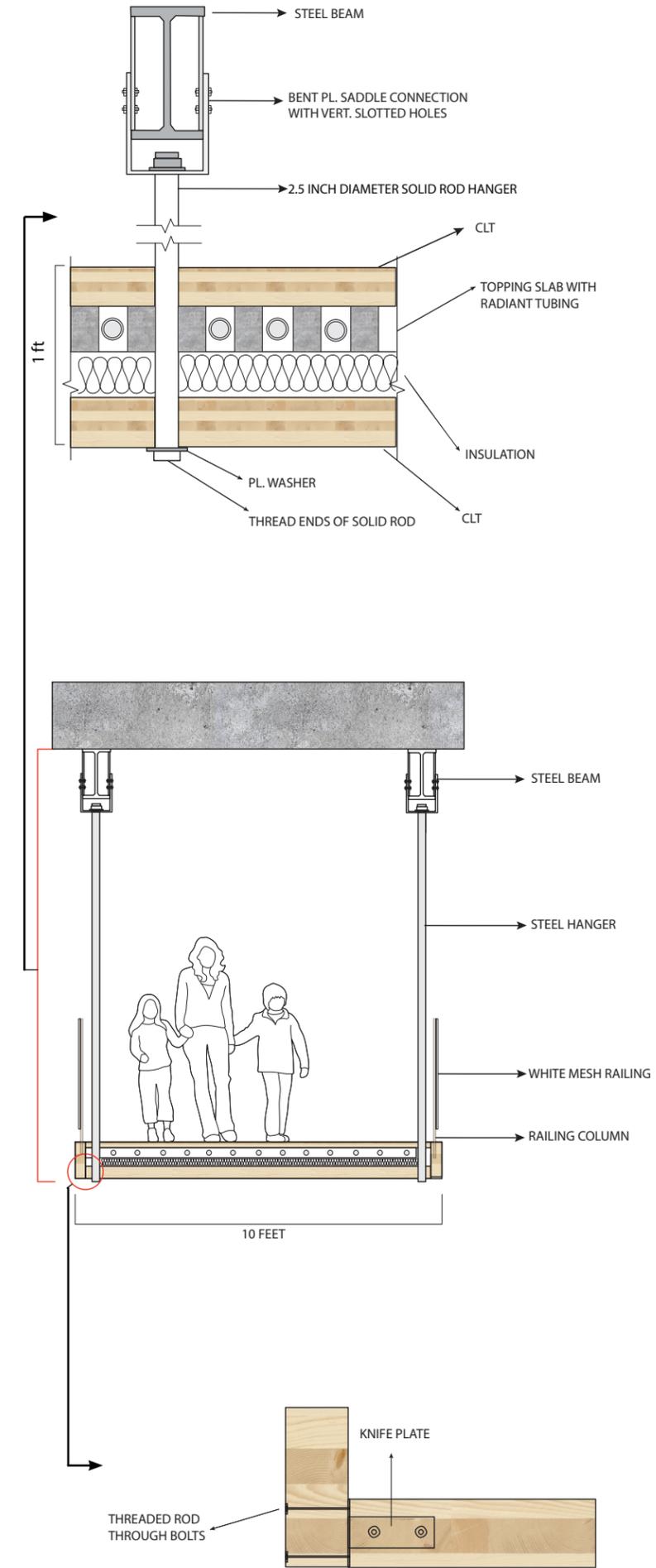
Type: Elementary School

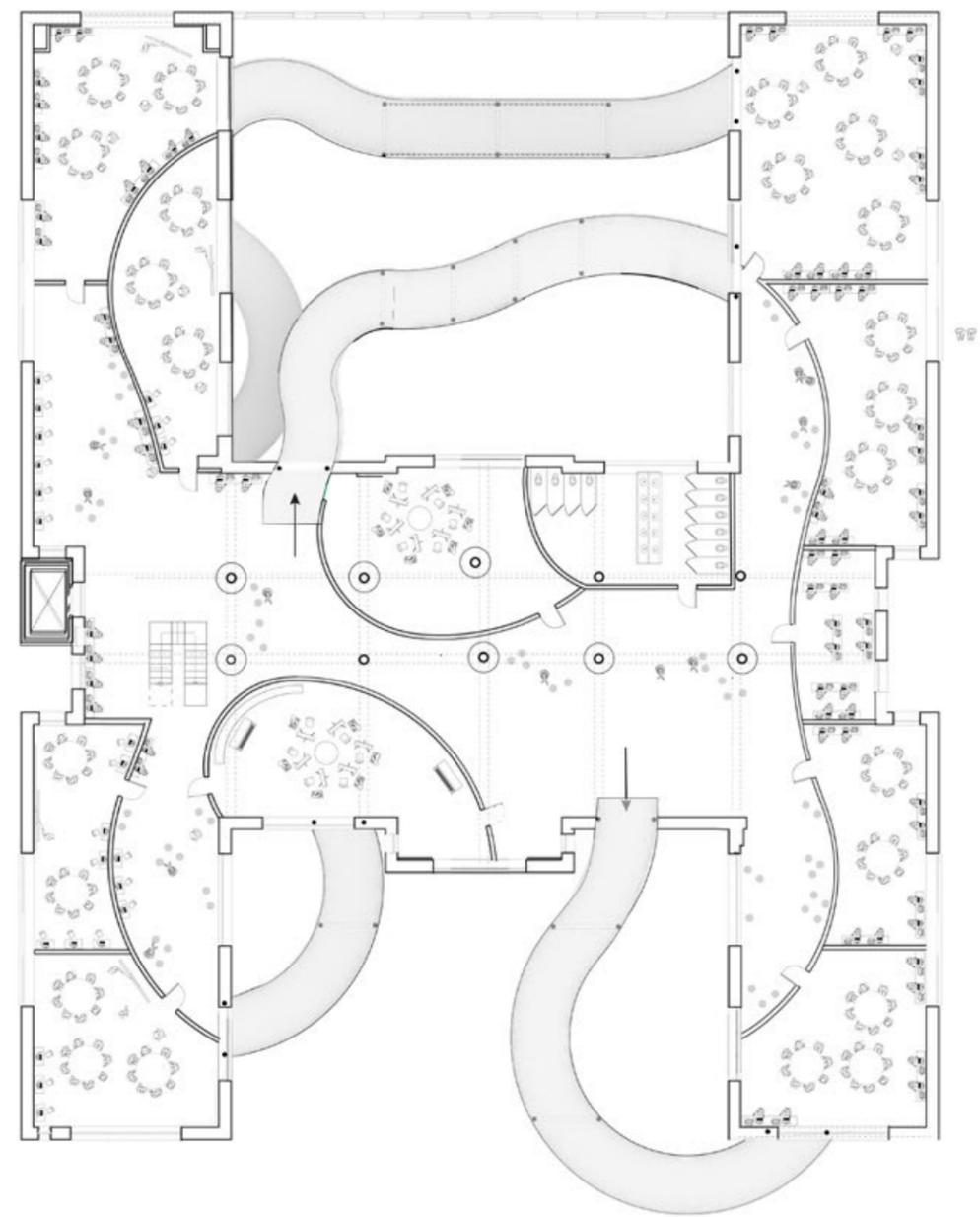
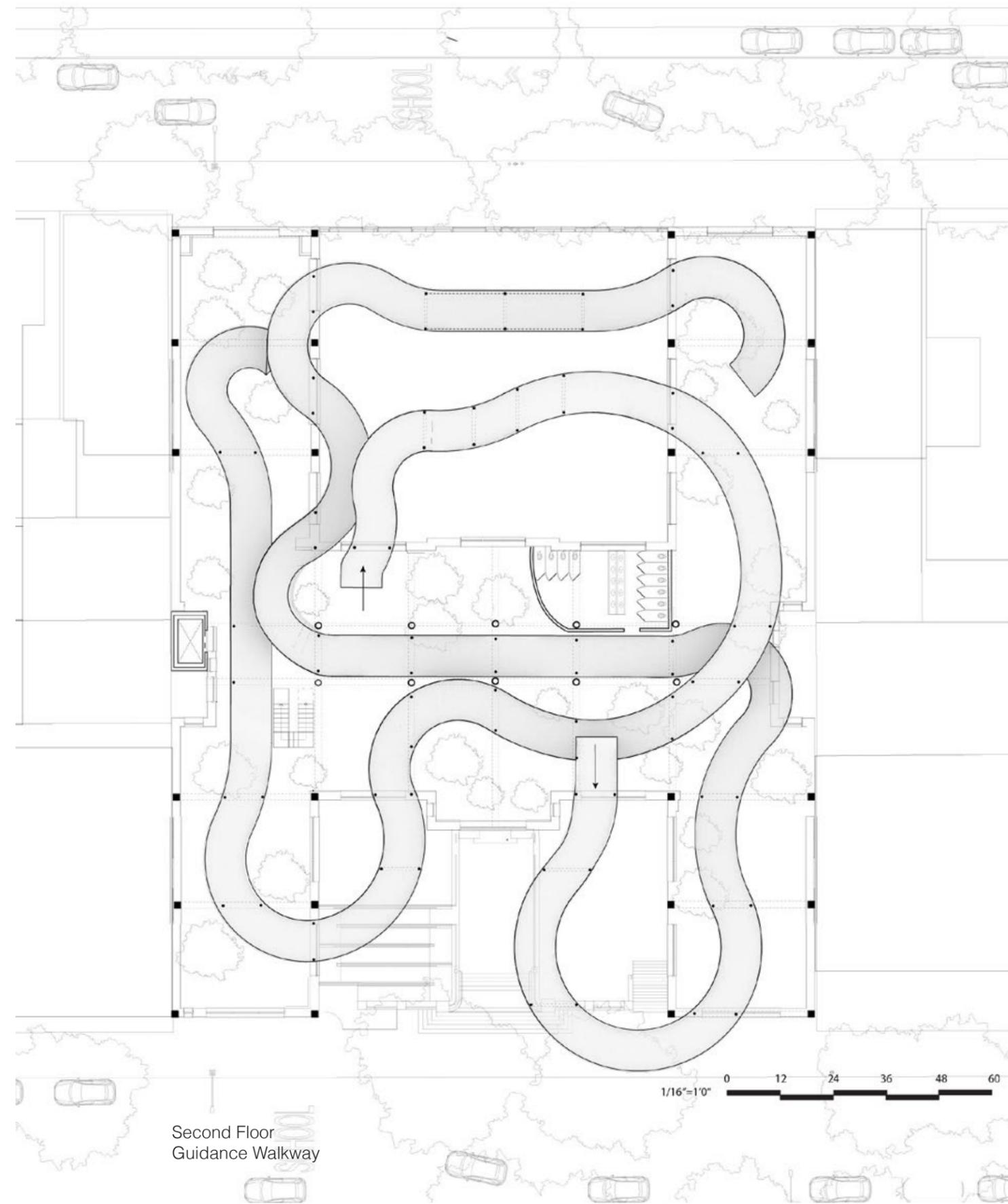
The Guidance School's pedagogical approach is about prioritizing mental health and the accessibility of guidance counsellors for students. Guidance rooms should not be hidden in the back of schools, instead they should be embedded in the schools everyday flow and be a part of every child's day. Studies have shown that walking can release stress and help students learn better. After visiting the site I noticed that the existing building is very heavy and dark and I wanted to insert lightness in my new proposal. I looked at how a chunk of the building can be taken out to increase lightness and how the heart of the building can facilitate flow. I started experimenting with incisions in the building and inserting a light element which would become the heart of the building. I wanted a green space to occupy this light element in the school. This green space however, would be different from the existing green spaces in the neighborhood because it would be safe, private, elevated from street level, and semi-sheltered from the elements. I wanted this light element in the school to also facilitate as a guidance walkway. In the Guidance school, the heart of the building is a place that students can think and escape from the confinements of a classroom. The middle two floors of the school are extracted and the top two floors hover above a table top structure that allows for this open space sandwiched between the existing. In my proposal I investigate the physical and metaphorical "in-between". The Guidance school re-invents the heart of the building and how circulation can provide students an escape with moments of reflection. The stairs will provide a gradient of privacy so that students can choose whether they want to be in solitude or not. Group reflection zones and personal reflection zones will be accessible. Meandering around from the classroom levels to the second floor, students' sight will be obscured by trees that weave around the stairs and lead them to the green space on the second floor. These stairs will encourage the flow of movement throughout the school, will increase the connectivity between students and teachers and will create moments of peace and tranquility for the students. With the insertion of this green guidance walkway, the guidance school facilitates mental and physical flow which will lead to students with healthier minds, clearer thinking, and reflective experiences. The organic and meandering pathways allow students to get lost in the greenspace, slowing down the process from getting to class for moments of reflection. Students can quickly escape from a working environment to a meditative environment from out the preexisting windows. So that the ramps are accessible year round, they will be heated with radiant tubing.



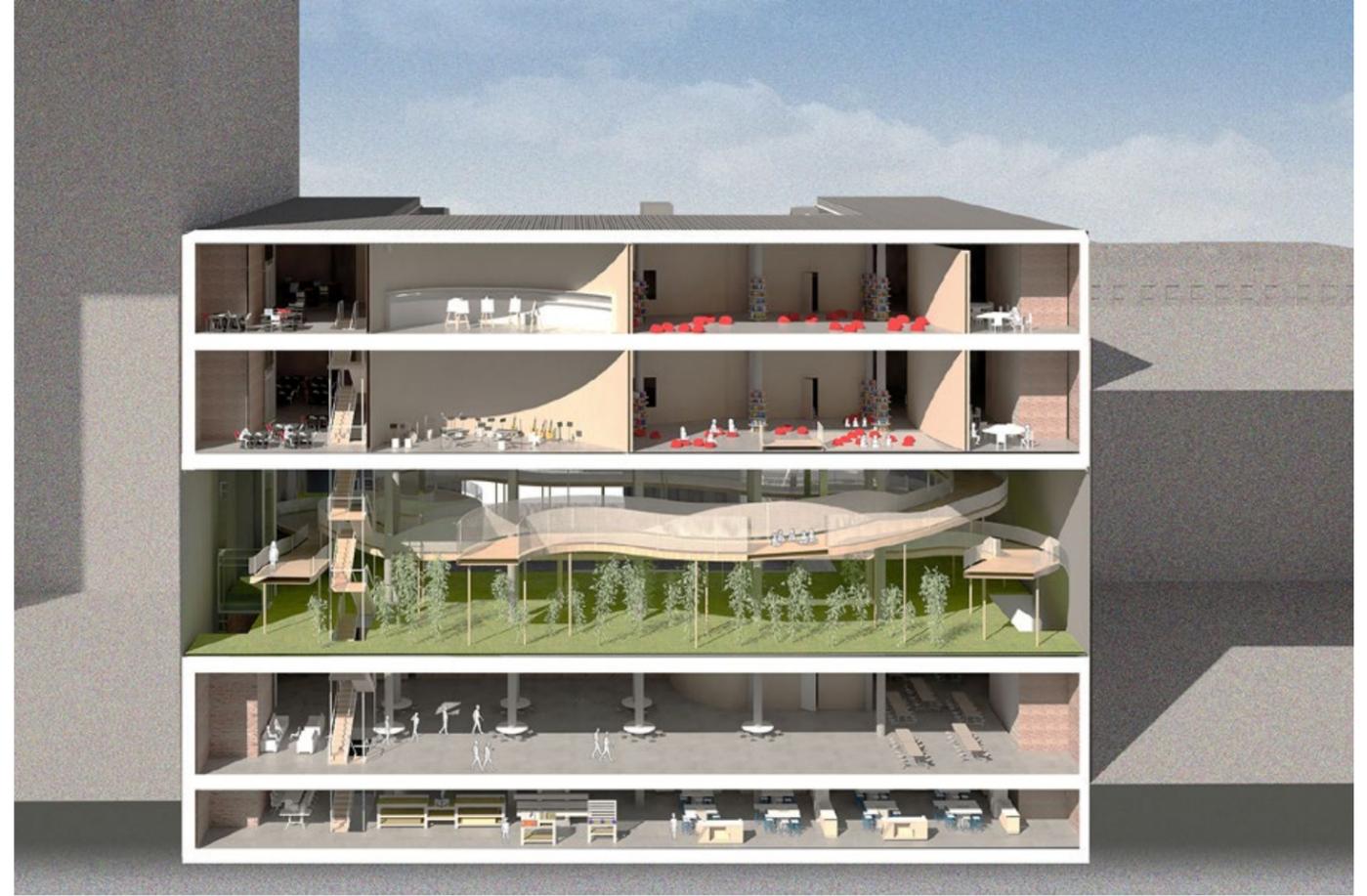


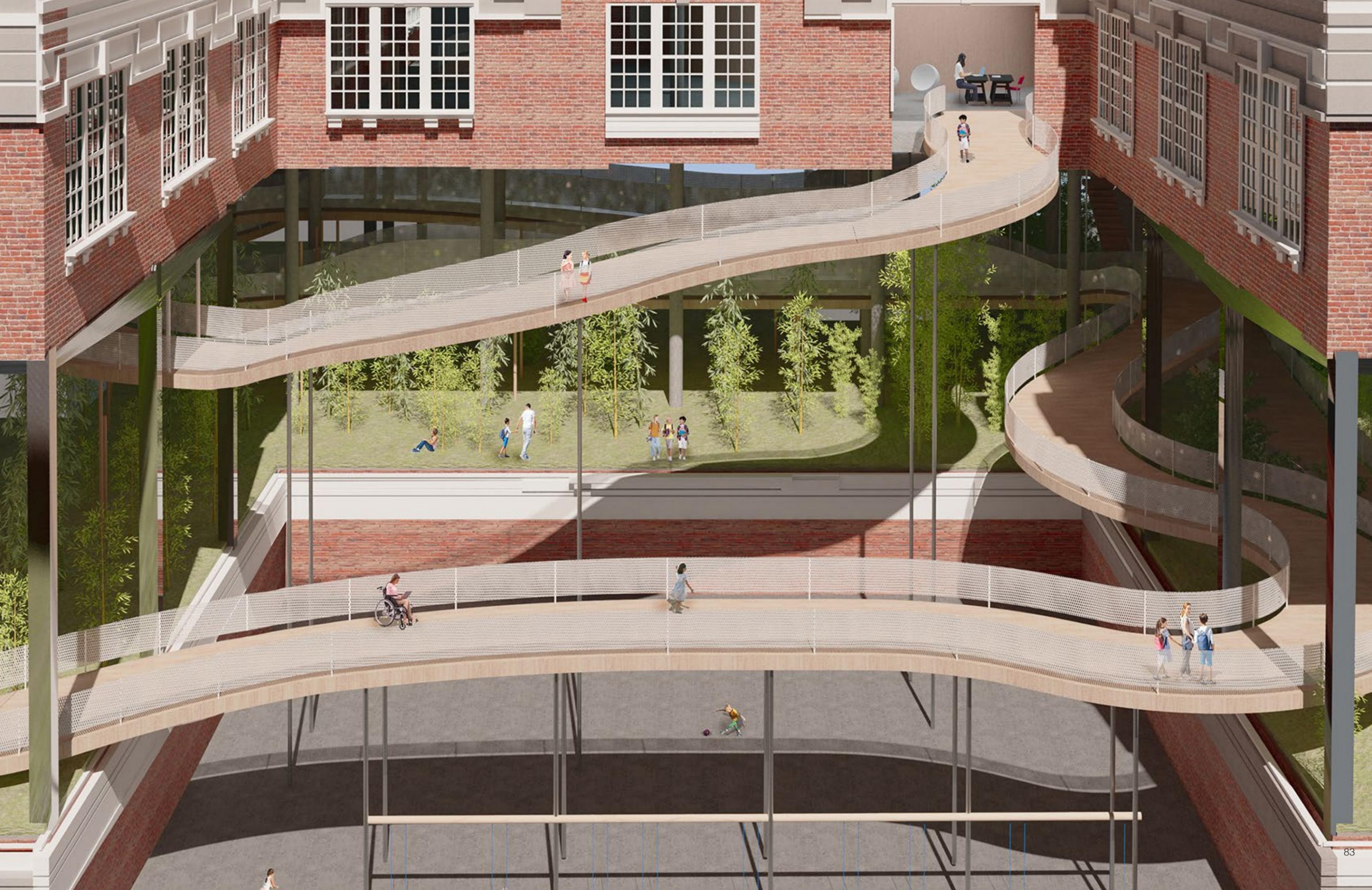












THE FIBER FACTORY

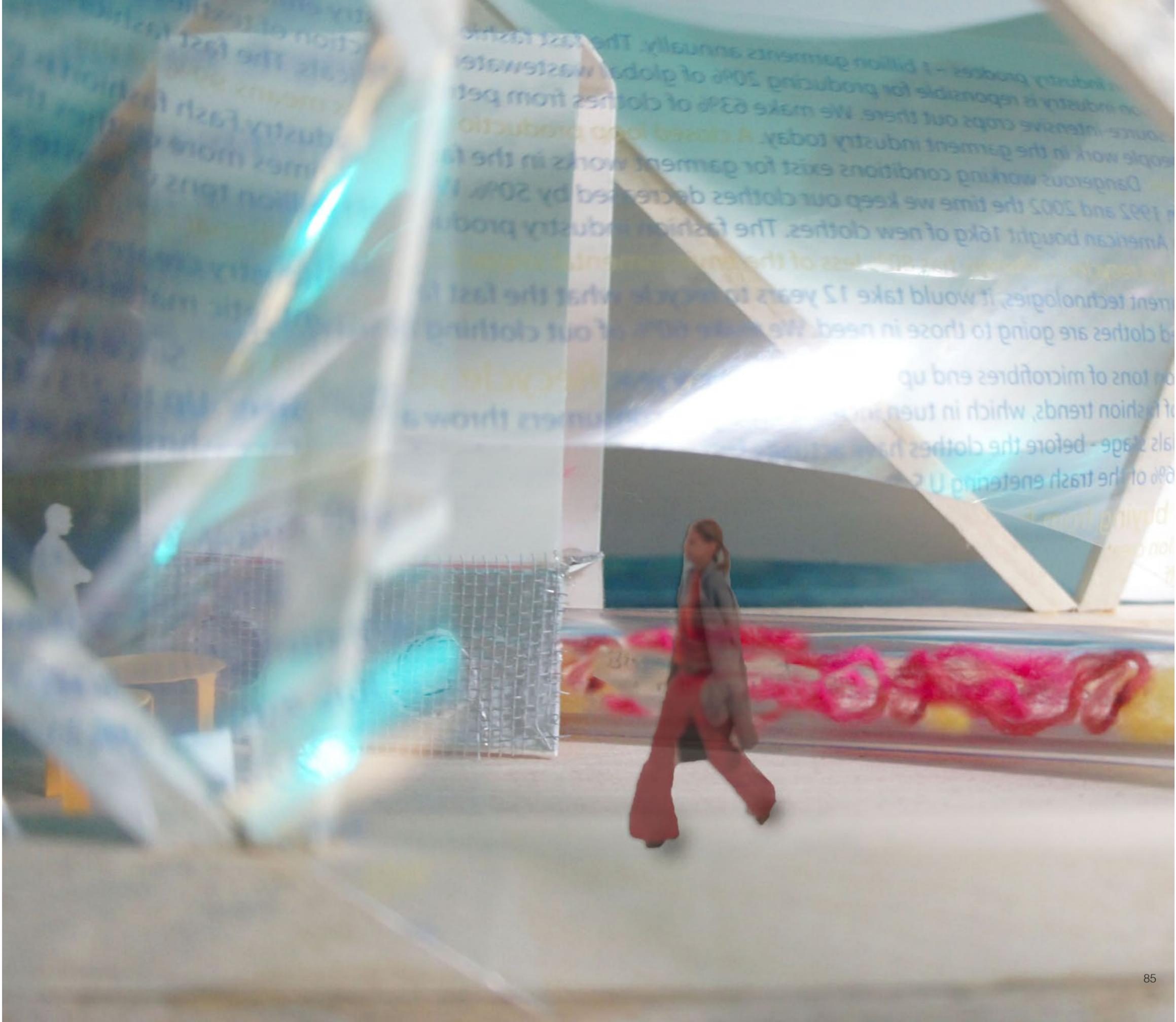
Fall 2019

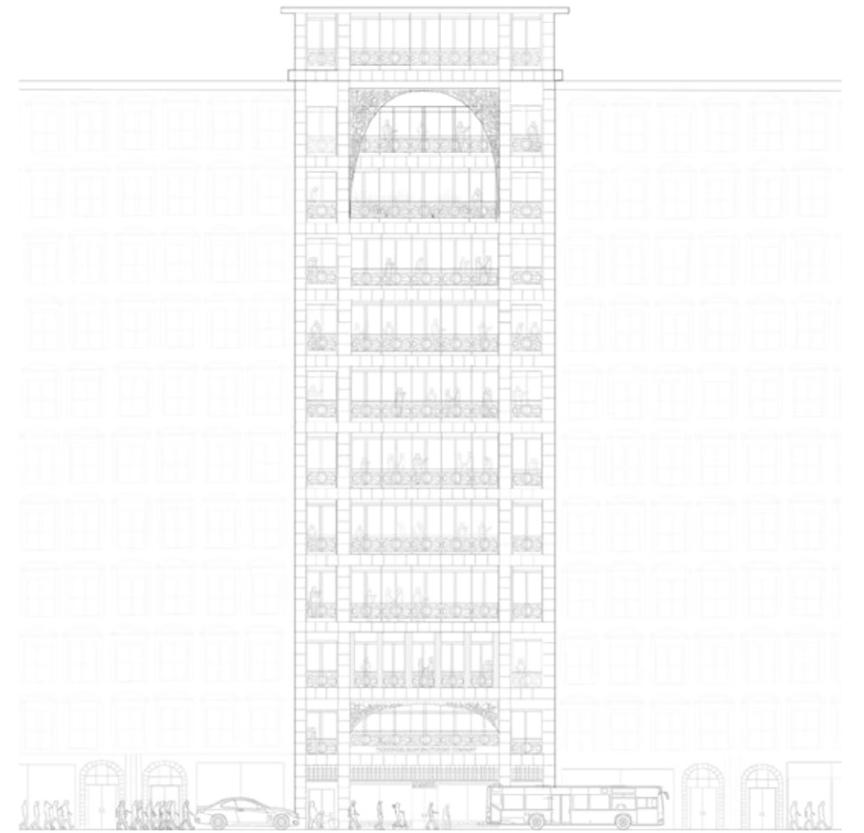
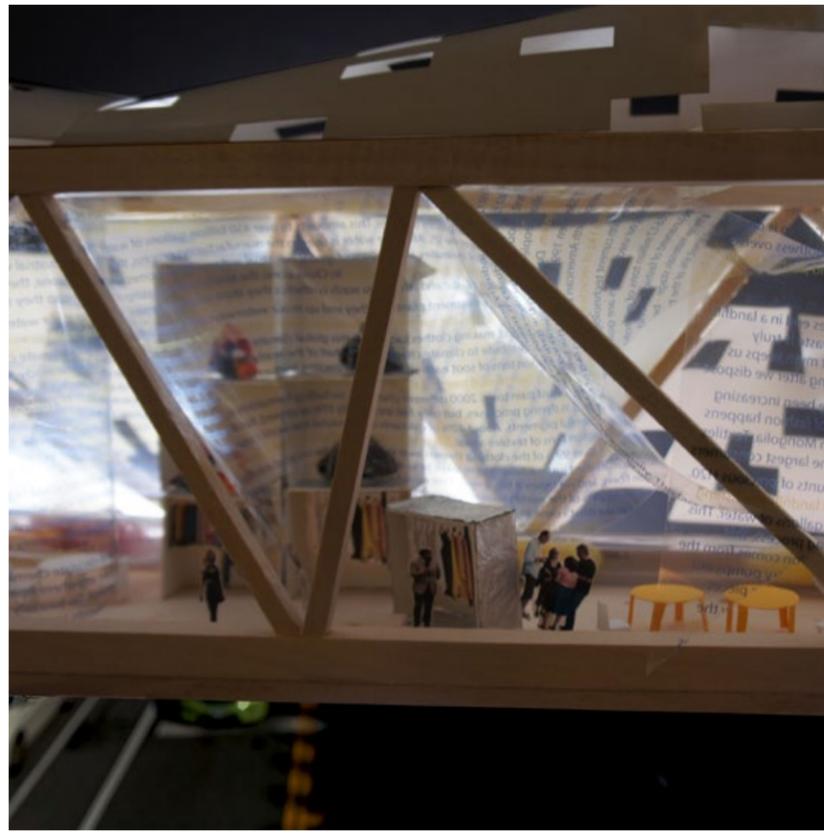
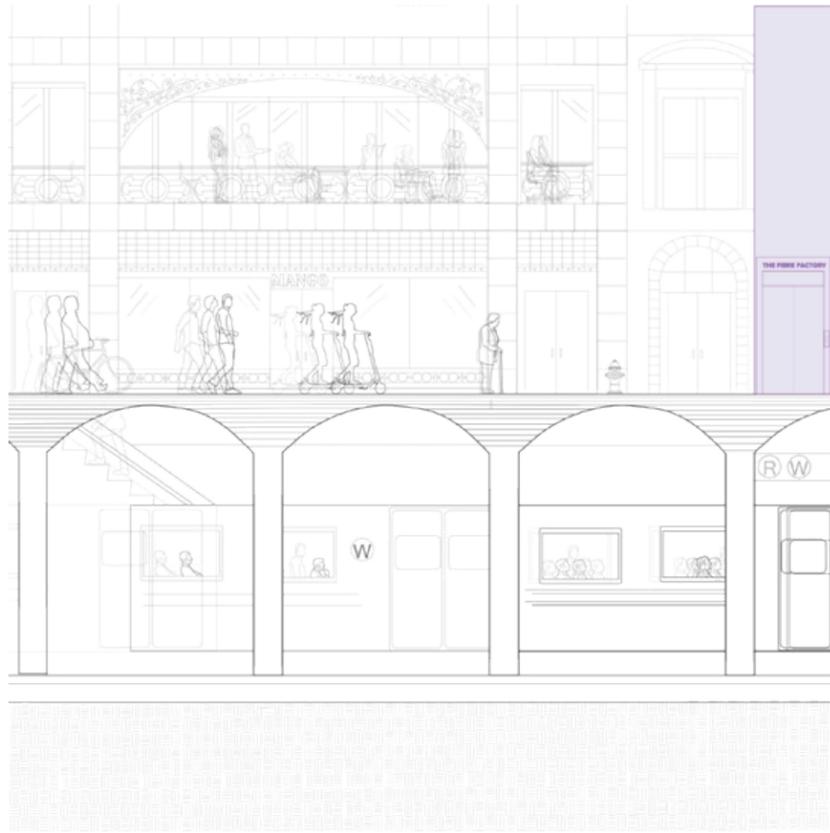
Instructor: Lindsey Wikstrom

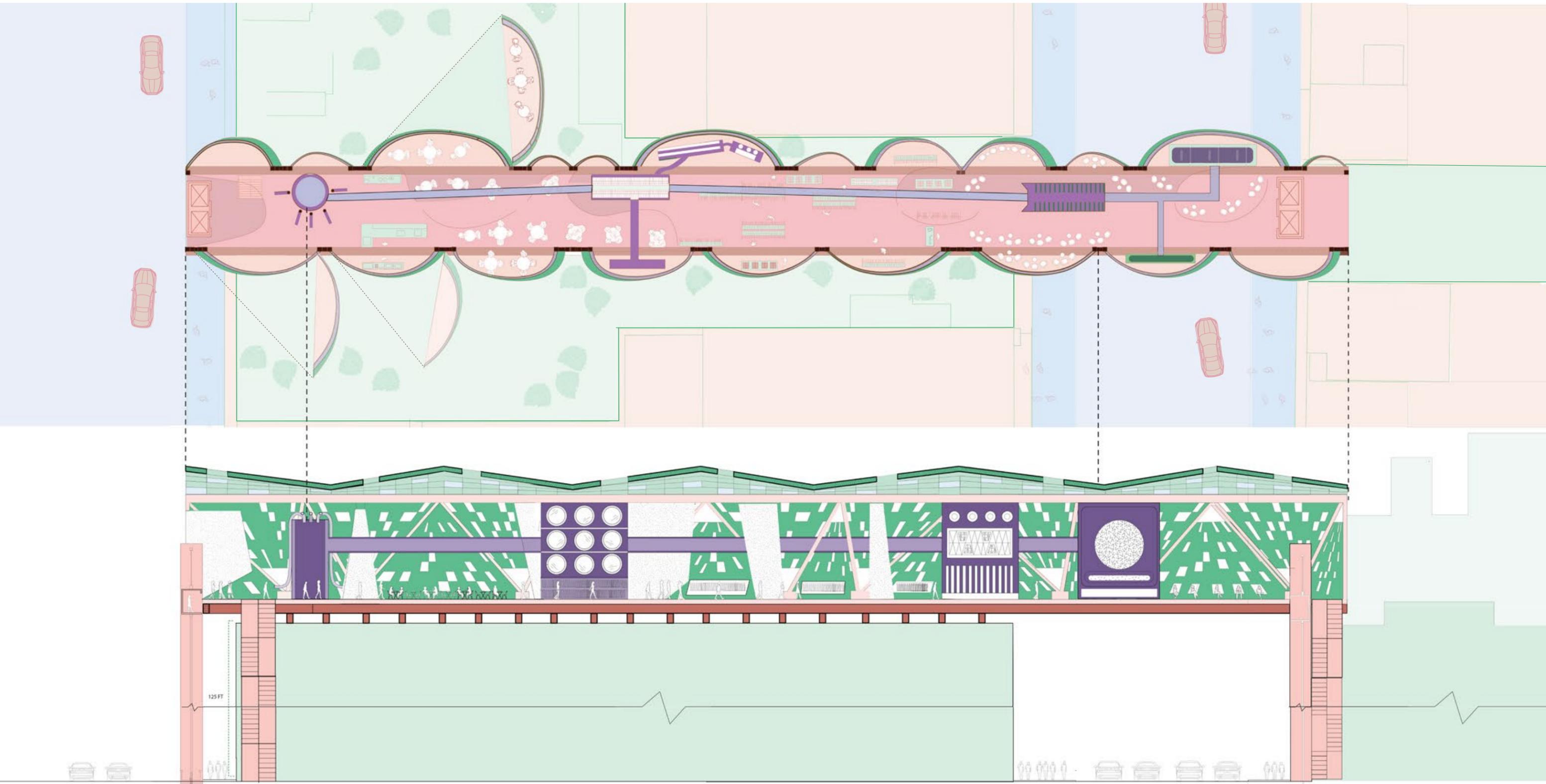
Site: Soho, Manhattan

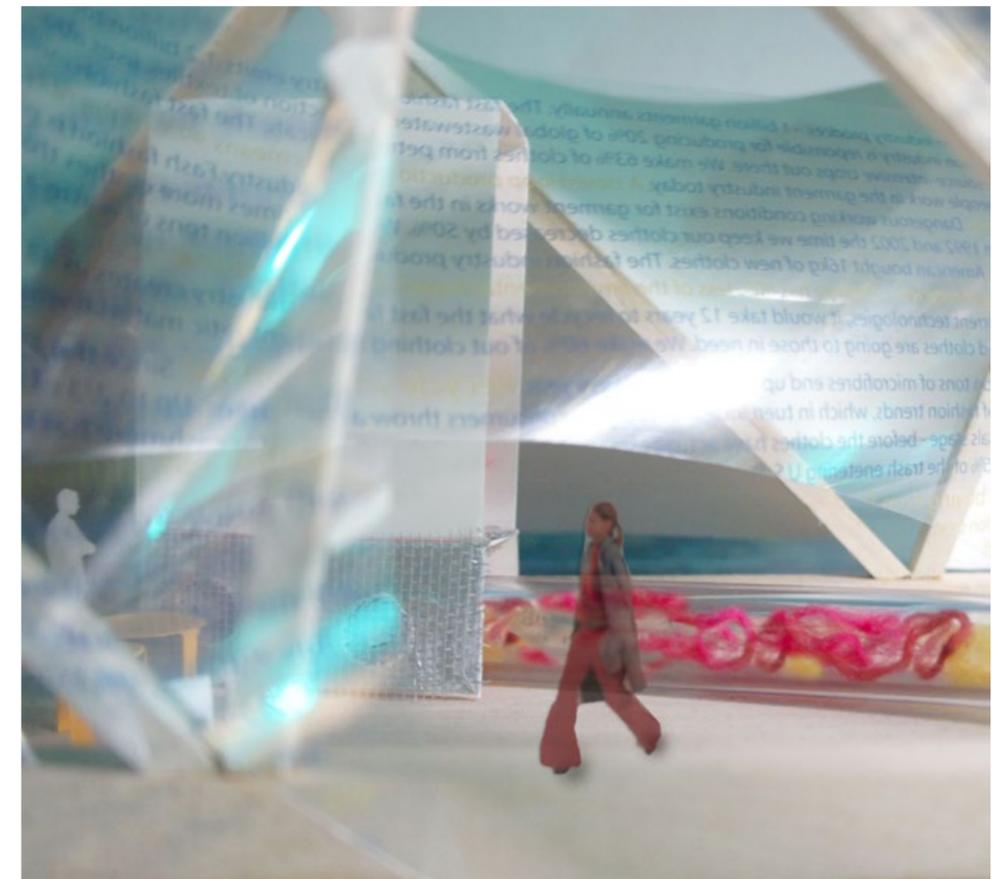
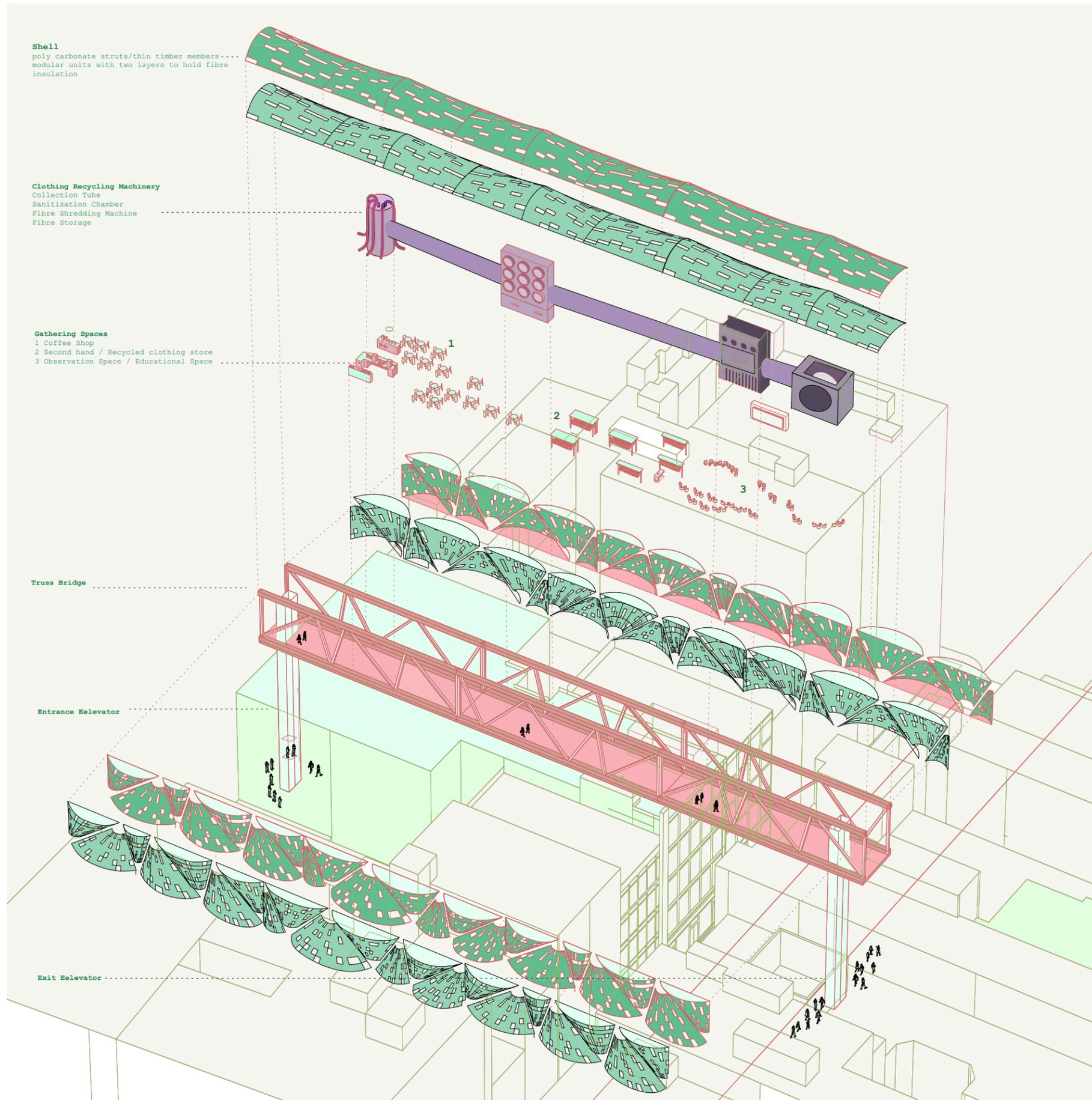
Type: Fiber Recycling Factory

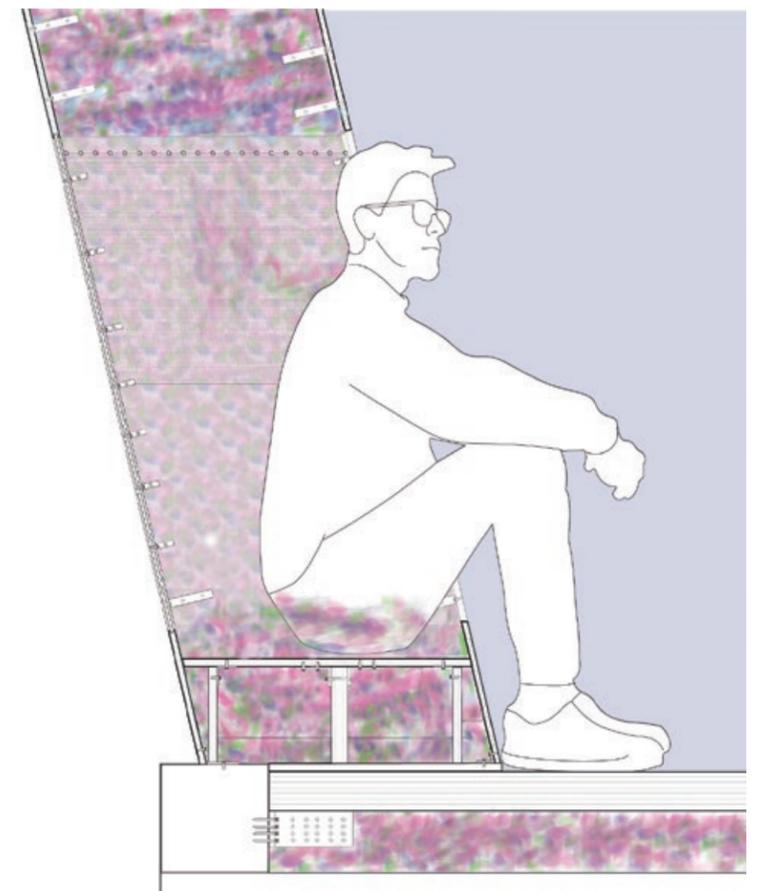
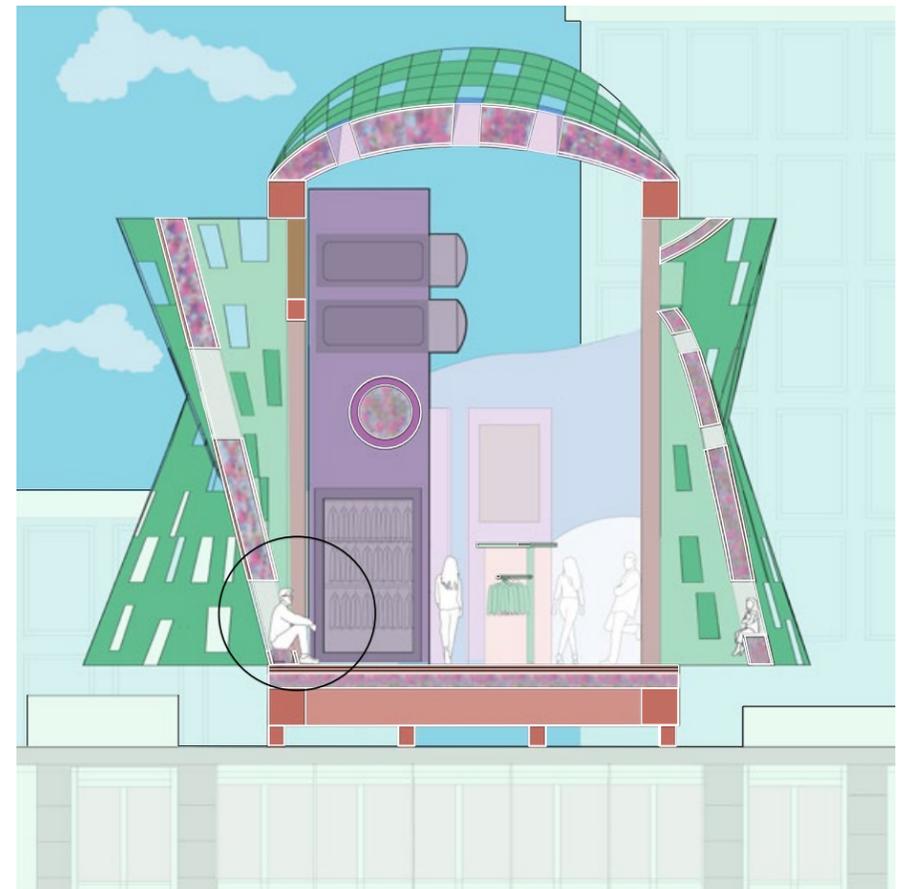
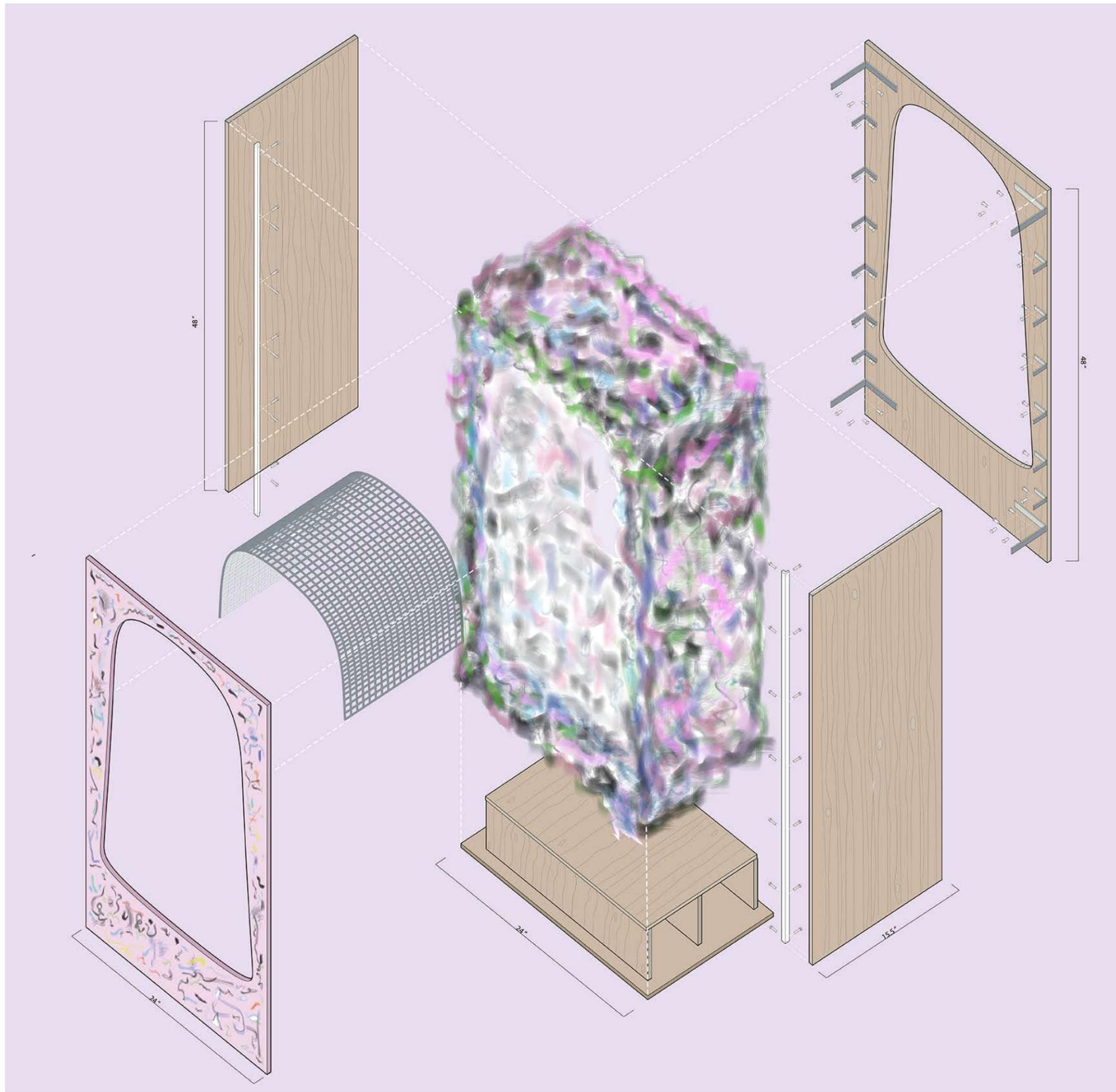
While Soho is a center for shopping, it is also the heart of unsustainable consumerism and is one of the biggest culprits of material waste in the clothing industry. Visible from every store from Spring Street to Houston street and beyond, the Fiber Factory bridges across Broadway and is an experience where new habits are formed and the value of materials is re-imagined. The Fiber Factory reverses this process by re-purposing and recycling post-consumer clothes, while providing a space that educates visitors on the great potential to lengthen the lifespan of fabrics that typically end up in landfills. The fiber factory quite literally builds on top of old regimes and cultural habits to reveal and promote a hidden and vital process and makes the circular system between production and consumption part of everyday life. The bridge creates new modes of connection and new vantage points of the city. Spaces are woven together underneath the conveyor tube with polycarbonate struts threaded through a structural timber truss, creating small pockets of space that simultaneously look inward and outward. The curved shell has a thick layer of insulation made from shredded fibers directly from the factory. The cutouts in the wall, which expose the fiber insulation, act as bay windows, putting visitors in direct contact with the material. Weaving between the programs and the recycling phases, didactic screens separate each phase of the recycling process and subsequent gathering programs: a coffee shop, a second hand clothing shop, and an observation and education space. The perforated shell with sun windows allow visitors to look out to the street but also cast different light throughout the space, while light cone spot lights illuminate each step of the manufacturing process. At the end of the bridge, you slowly descend down onto Broadway, both more aware of the real amount of your material impact as a consumer, having seen the volume of recycled fibers, and leaving with a small bit of satisfaction of having contributed to a circular clothing system. Recycled fibers are stored in the walls and are circulated throughout the building as temporary storage before it is either transported to new manufacturers or made into a new product in the factory. The model is made from 100% recycled and shredded fibers from FABSCRAP in Brooklyn. The wall is made from a resin and fiber mixture.













THE BLACK DIRT SANCTUARY

Spring 2021

Instructor: Nahyun Hwang

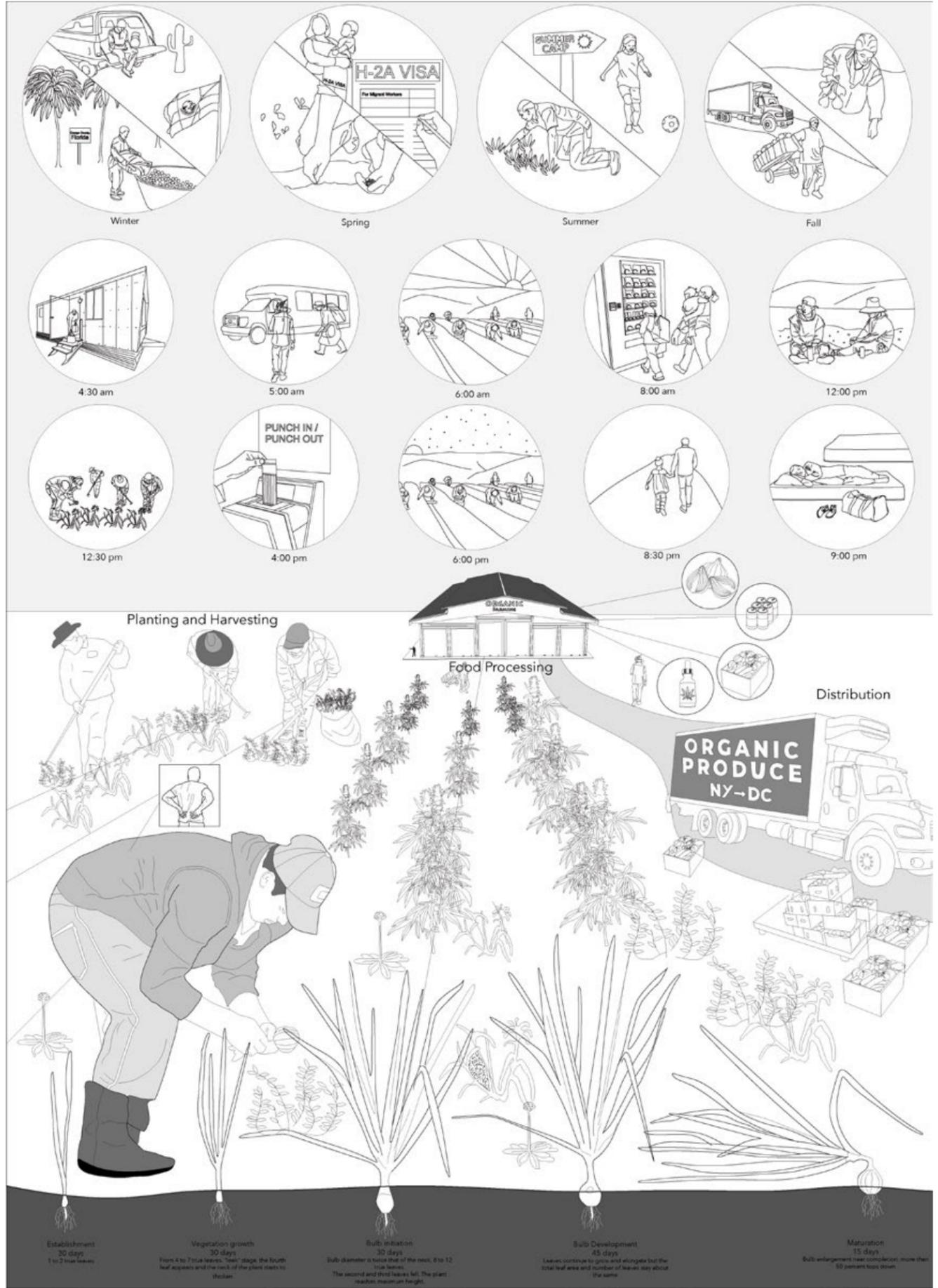
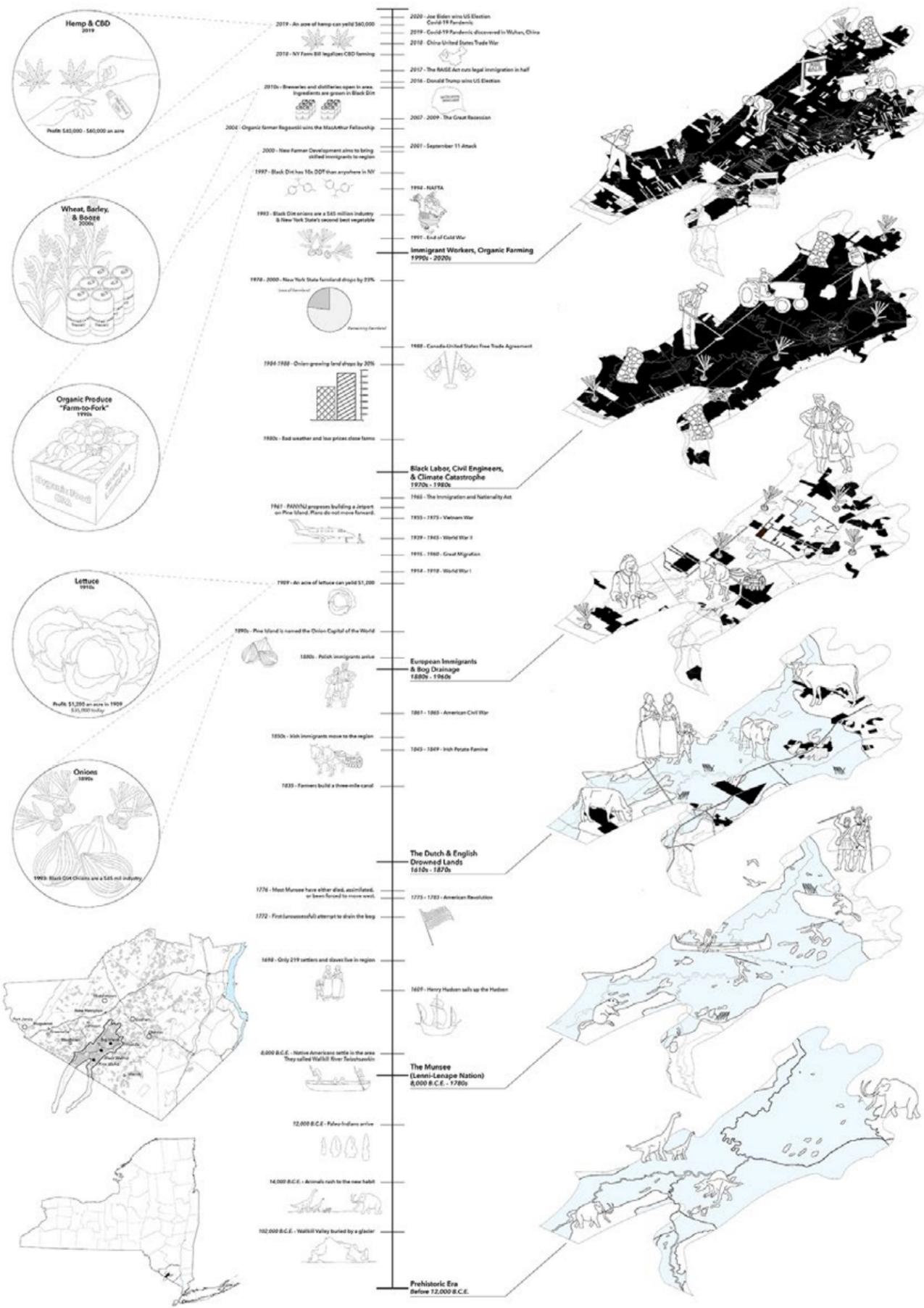
Partner: Camille Newton

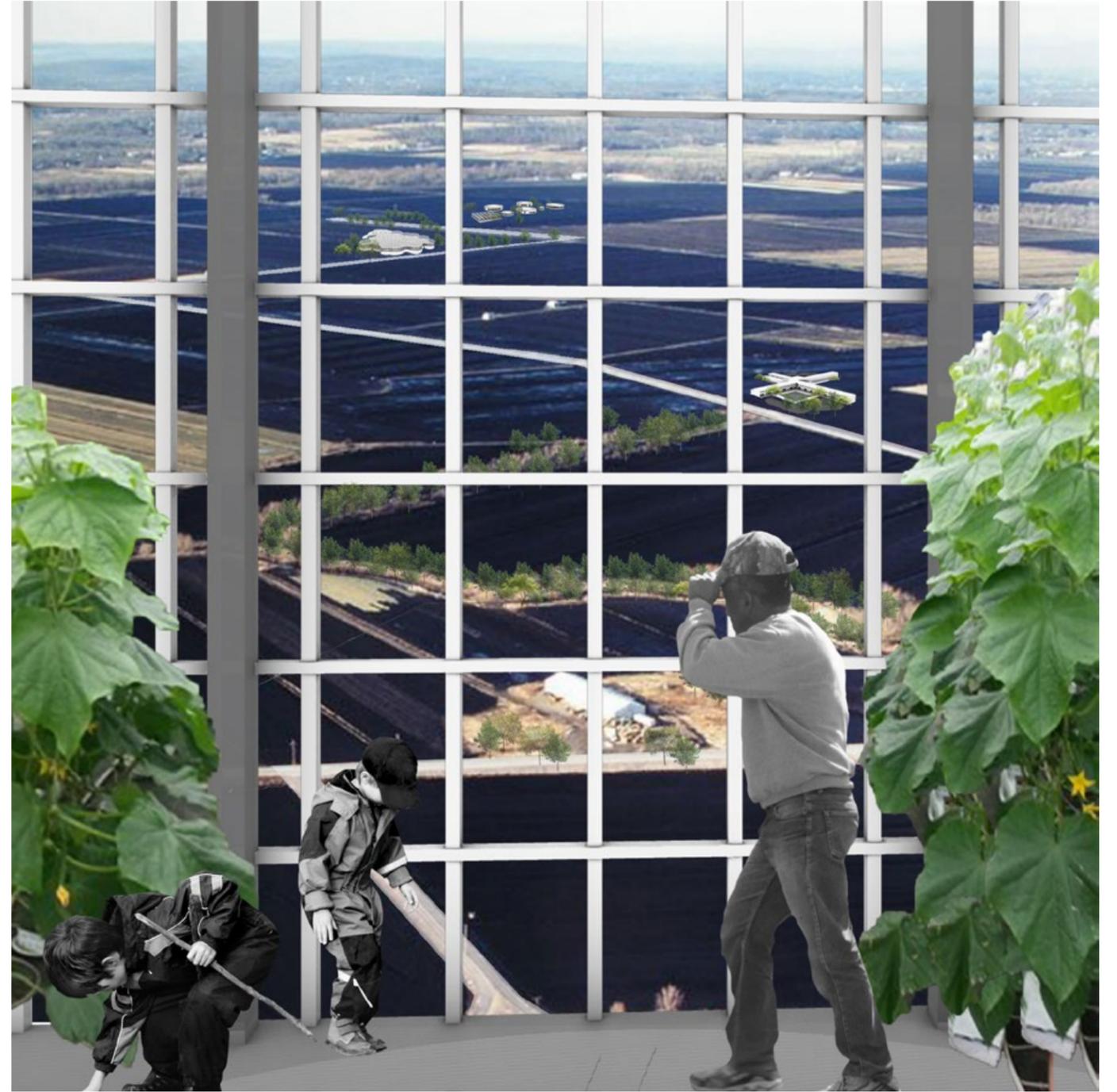
Site: Orange County, New York

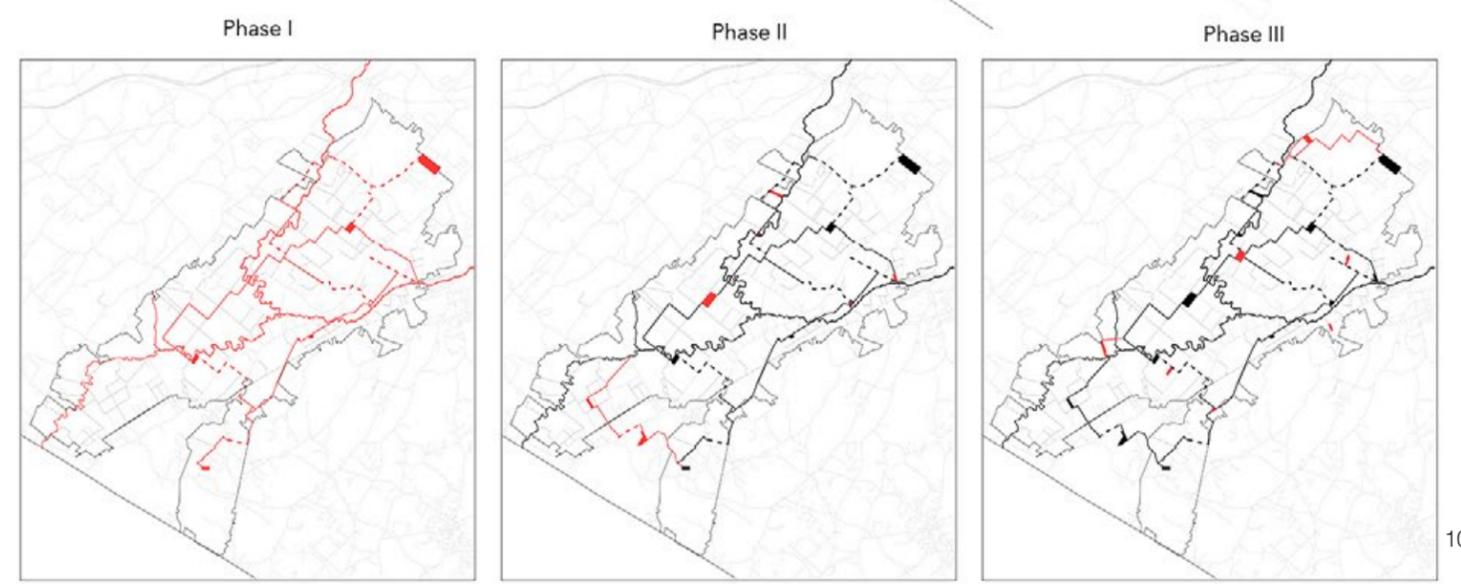
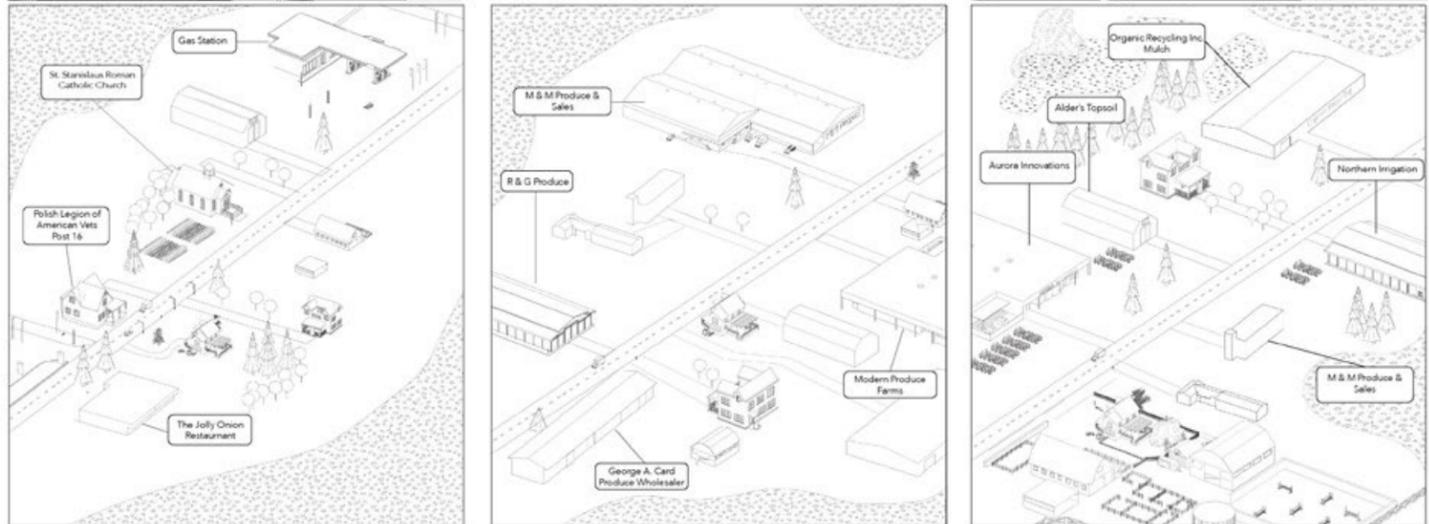
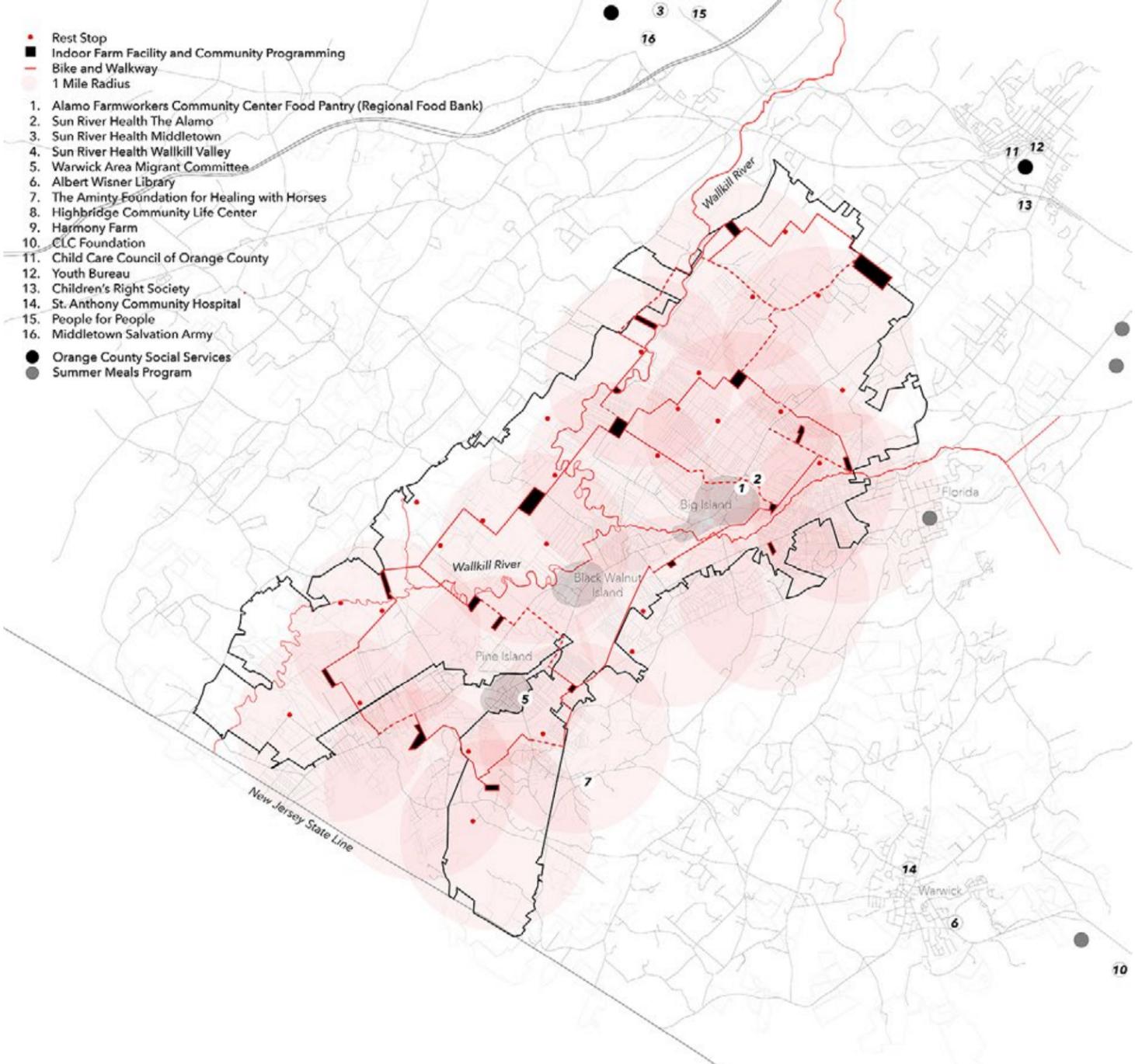
Type: Greenhouse and Community programming, Housing

The Black Dirt Region in Orange County has the most fertile soil in the United States. Compared to a typical topsoil depth of two to eight inches in most of the US, the muck in the Black Dirt is between 10-30 inches deep. Around 12,000 years ago glaciers in the region began to subside leaving accumulations of boulders and glacier deposits and a vast murky swamp. Many attempts were made to drain the swamp, but the land was not suitable for agricultural production until the 1880s when Polish, German, and Italian immigrants successfully drained the land. While onions still remain the most prominent crop in the region, farmers have gambled with risky high profit crops since the 1900s. Confident farmers and producers have tried their hands at lettuce, organic produce, barley and wheat for craft alcoholic beverages, and Hemp CBD. All of these ventures require more labor than conventional onion farming would. Today 71% of the farm workers are undocumented. Many don't speak much English if any at all and are not aware of the health, legal, and educational services that are available to them. Transportation is also an issue as there is no public transport, so they have to rely on other sources to get to services that are available to them. From the perspective of the consumer, obscured by the illusion of organic and sustainable practices, these farms are hiding a very important social cost. Most of the labor is provided by migrant workers who are at risk of being exploited. While there is a connective tissue in the towns surrounding Black Dirt, it is often not accessible to the migrant workers. Our concept is to create a new network of sites and routes centered around black dirt rather than the main Pulaski highway. The sites are dispersed throughout the farmland in patches. We imagine these sites will give the region more connectivity between farms but also will create a bike and pedestrian network of trails for migrant farmers and local residents. Each node will have a relationship with already existing organizations that currently provide services for residents in and around Black Dirt. These will include potential partnerships with Alamo Farmworkers, Sun River Health, and Warwick Area Migrant Committee. We are designing 5 prototypes that combine indoor farming, a secondary production facility, and community programming in partnership with location organizations. Each site will also contain a communal kitchen and housing. With the completion of the network, these facilities will provide over 1000 jobs.

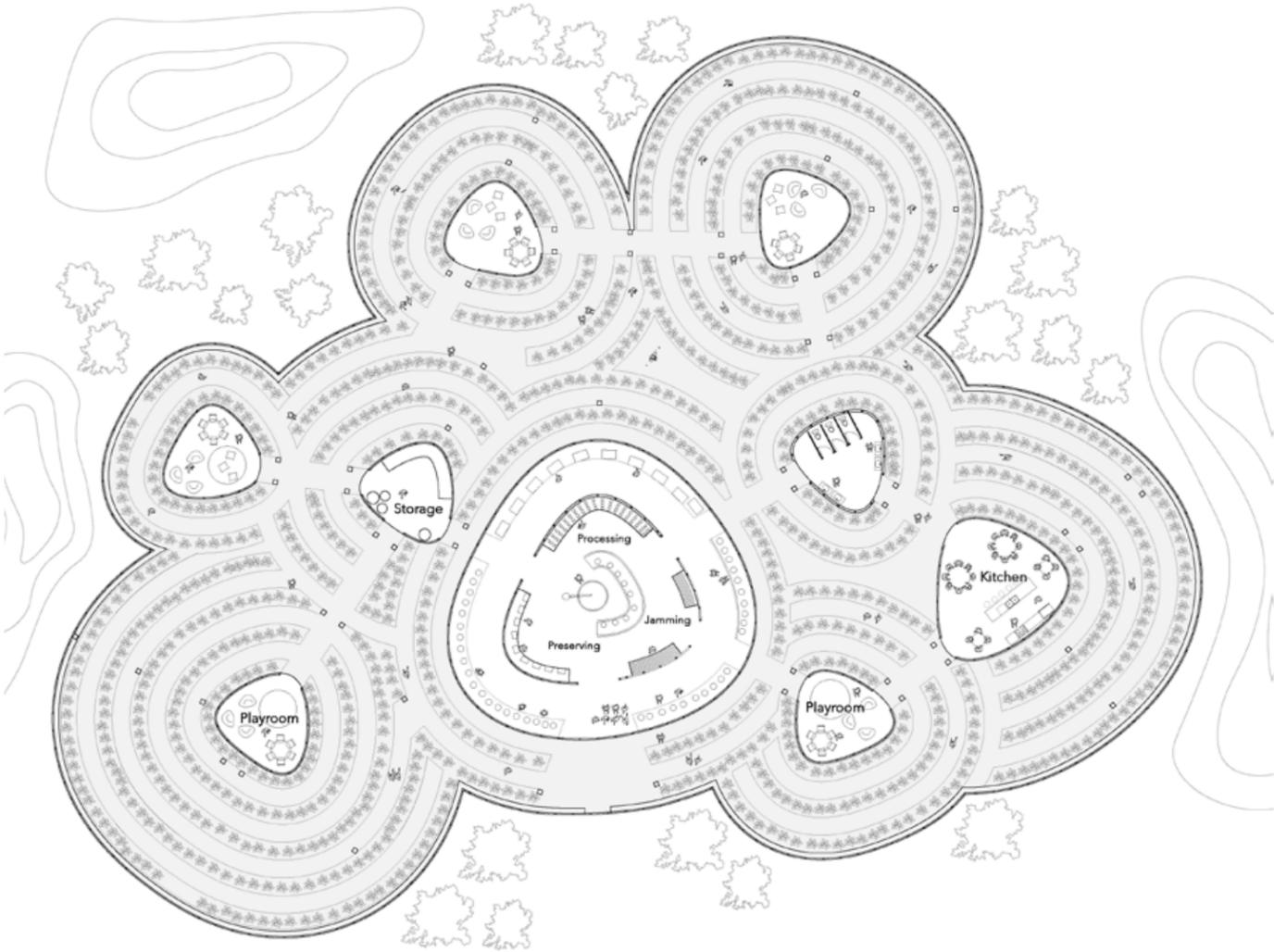




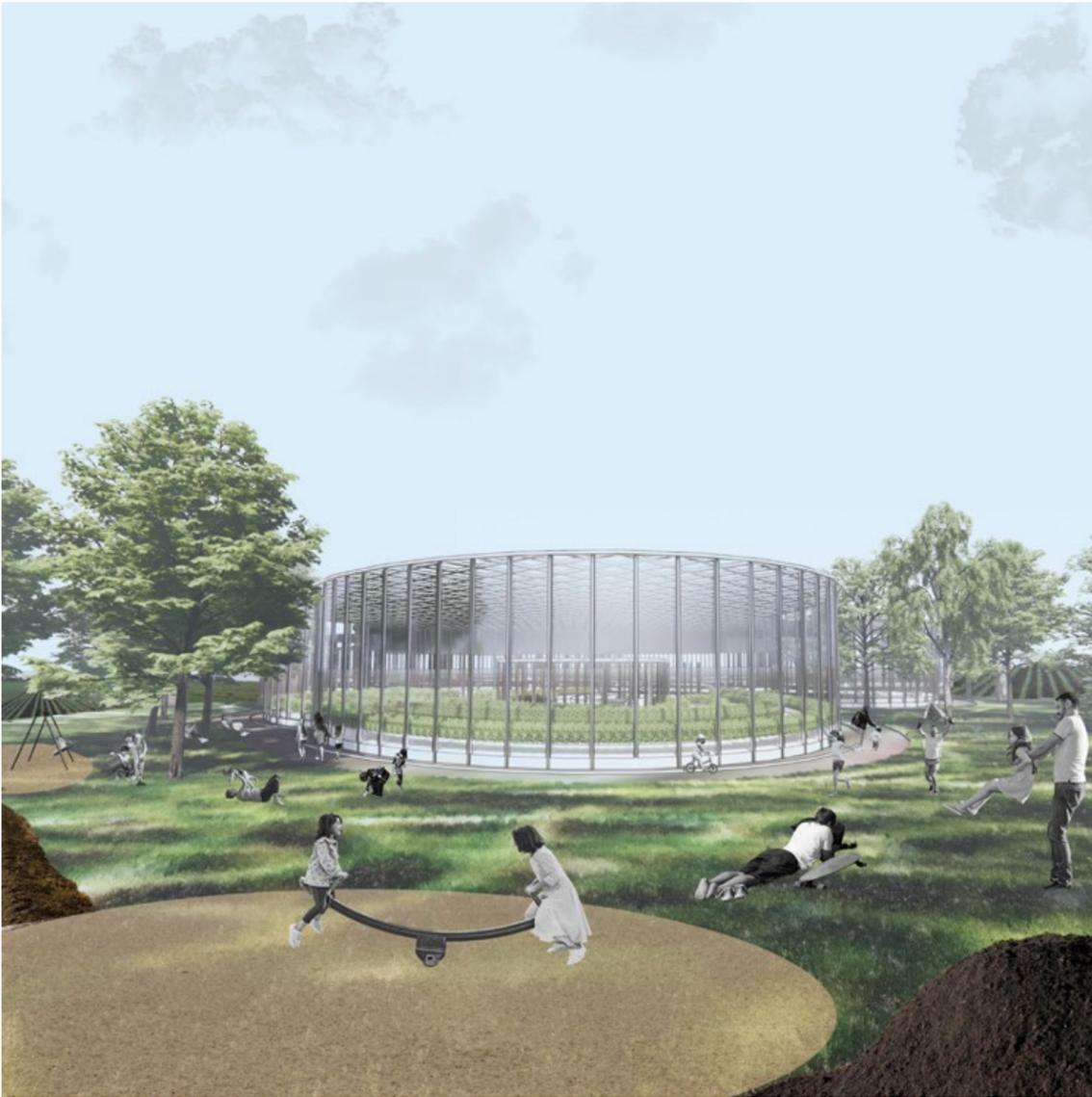


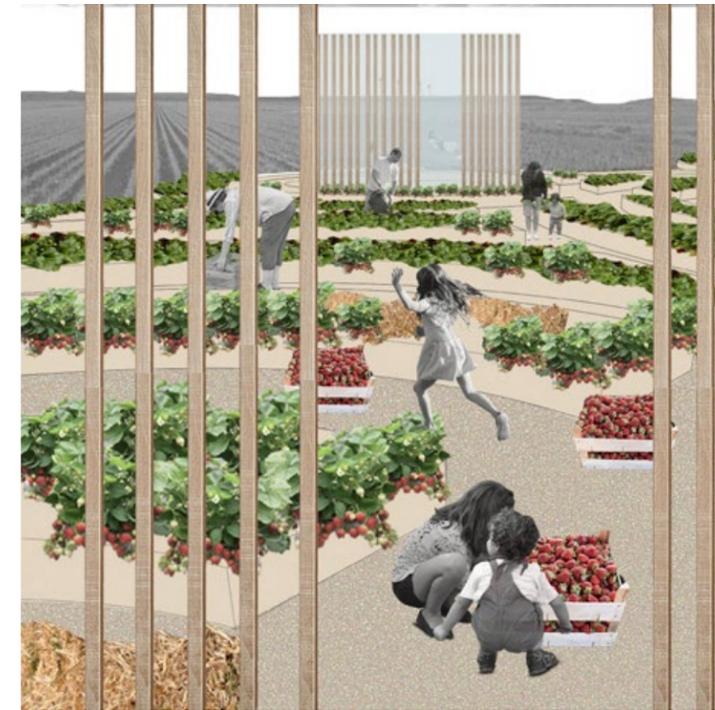
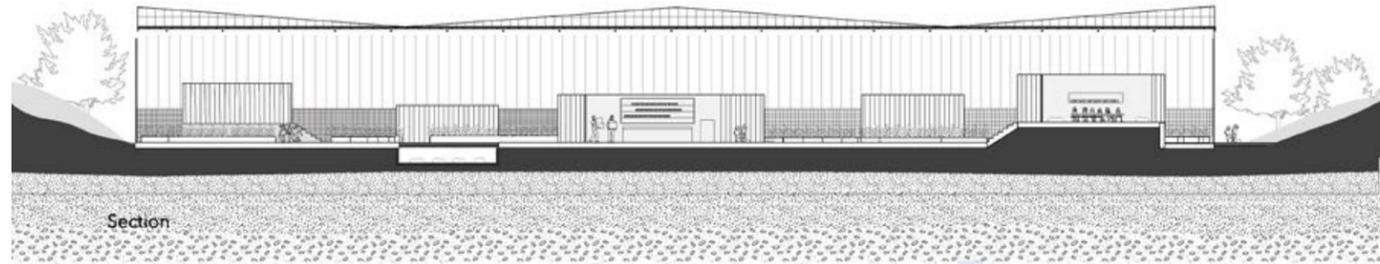


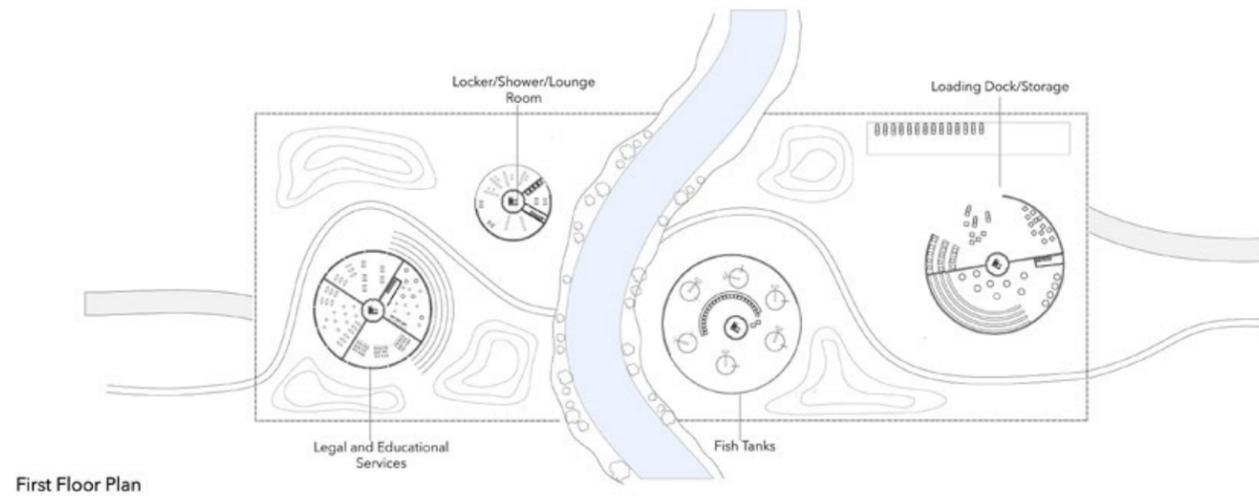
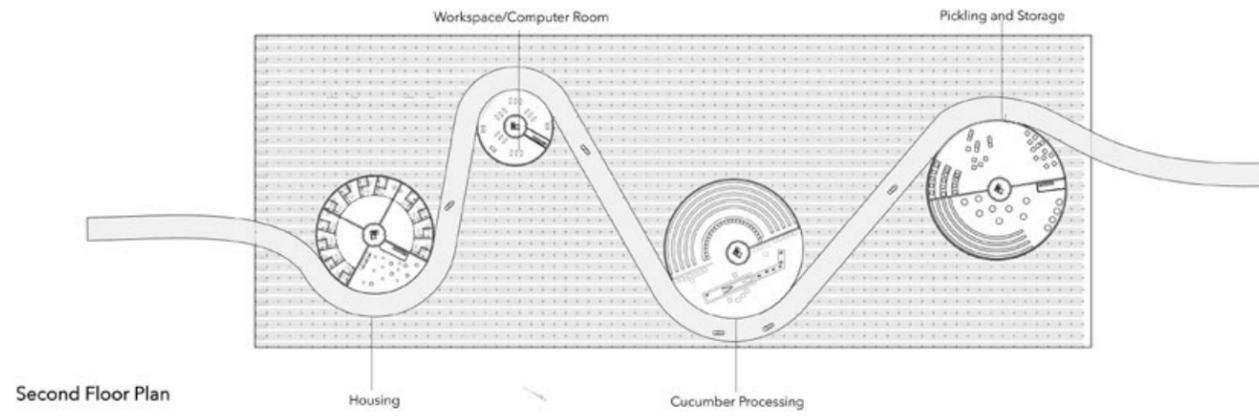
Hydroponic Berry Greenhouse
Preservative and Jamming
Childcare

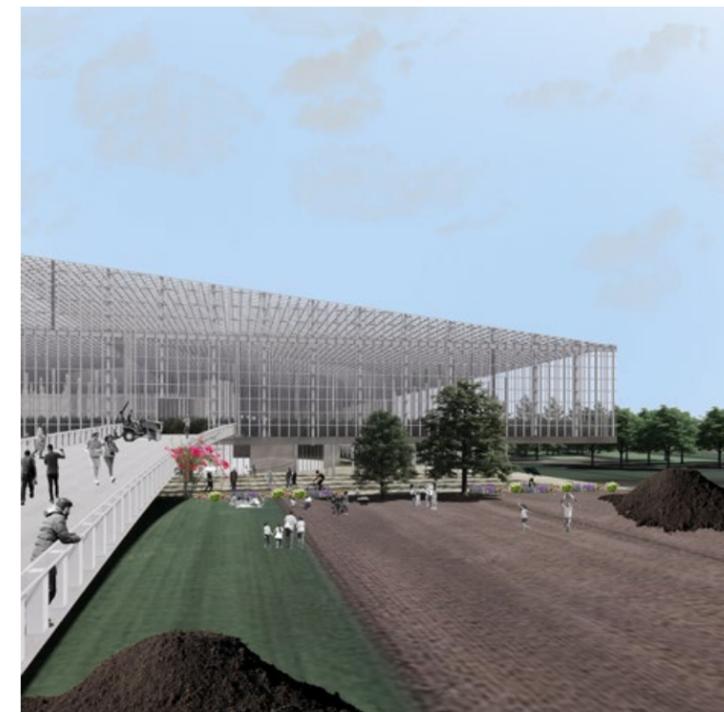
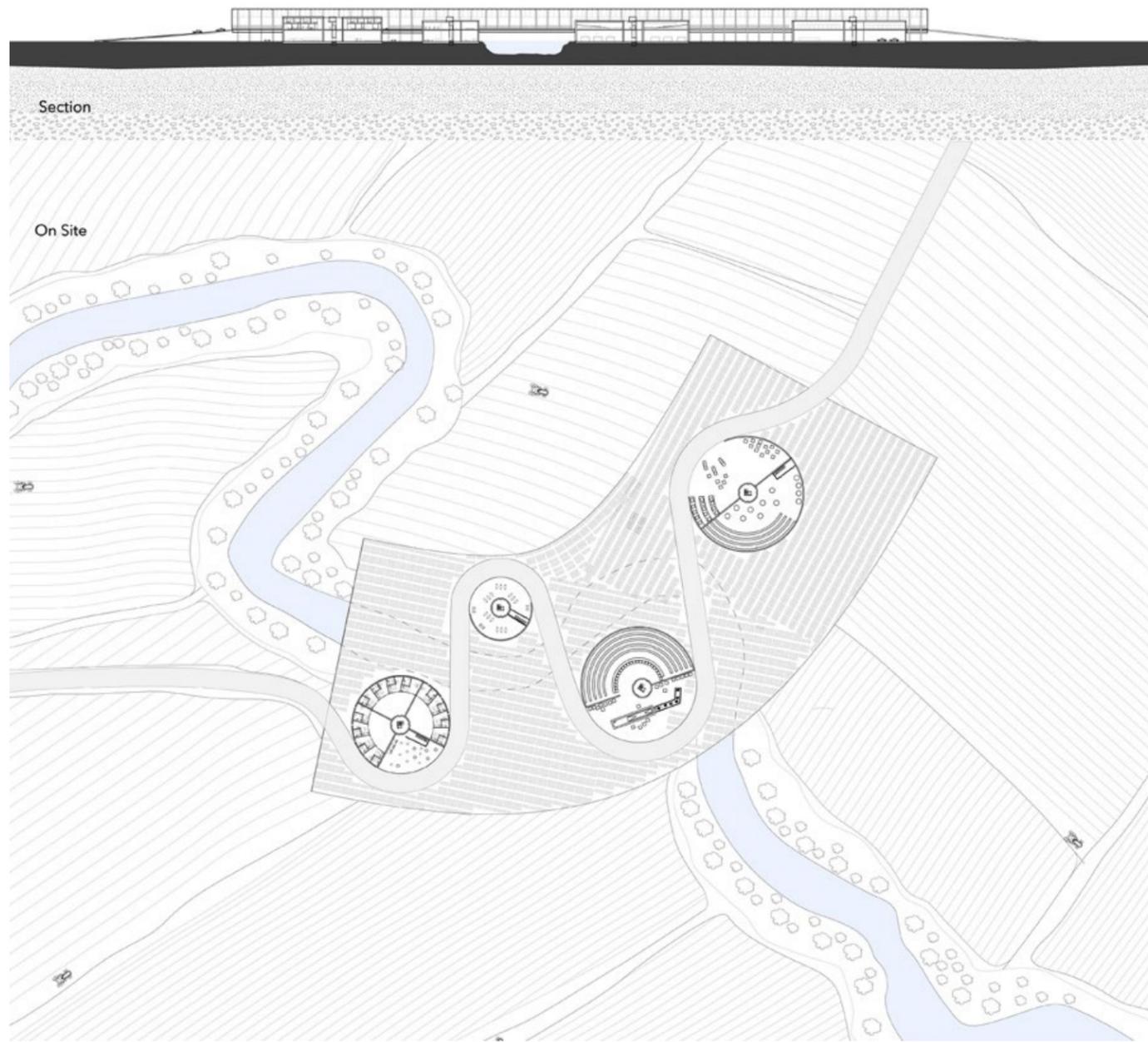


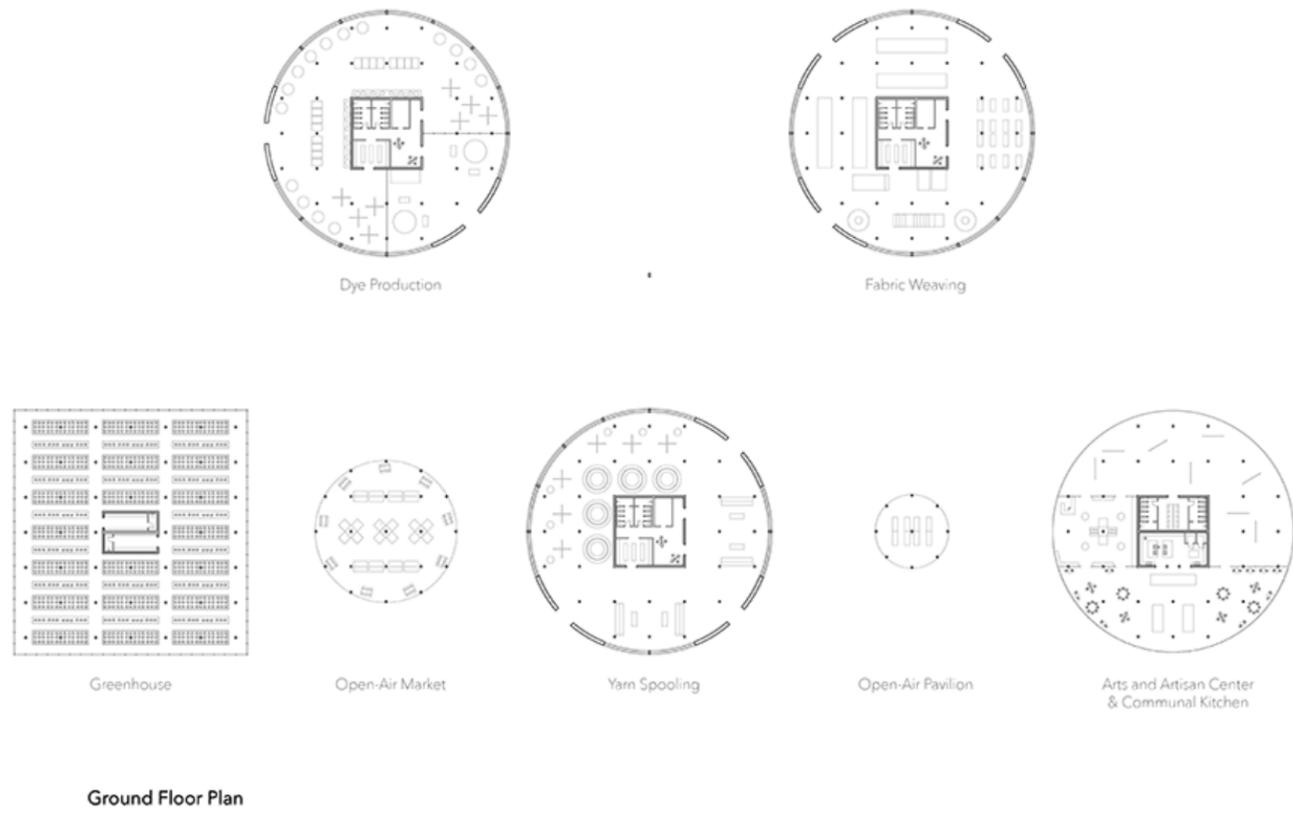
Plan



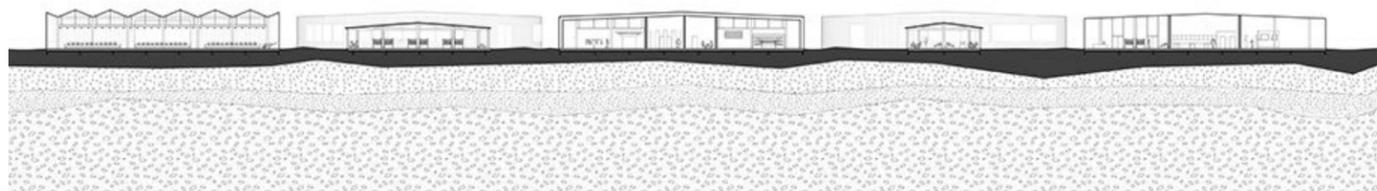








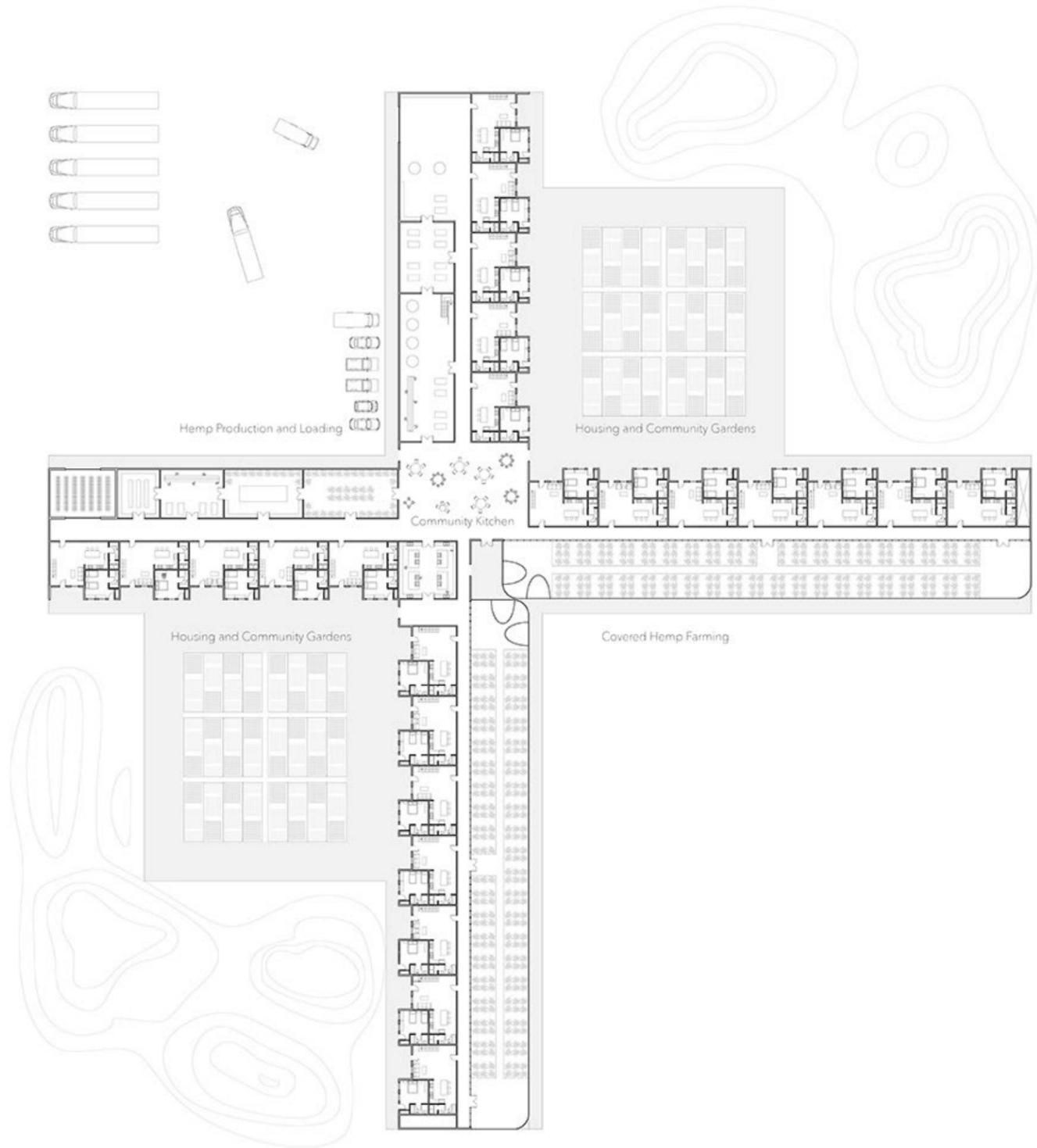
Section



On Site

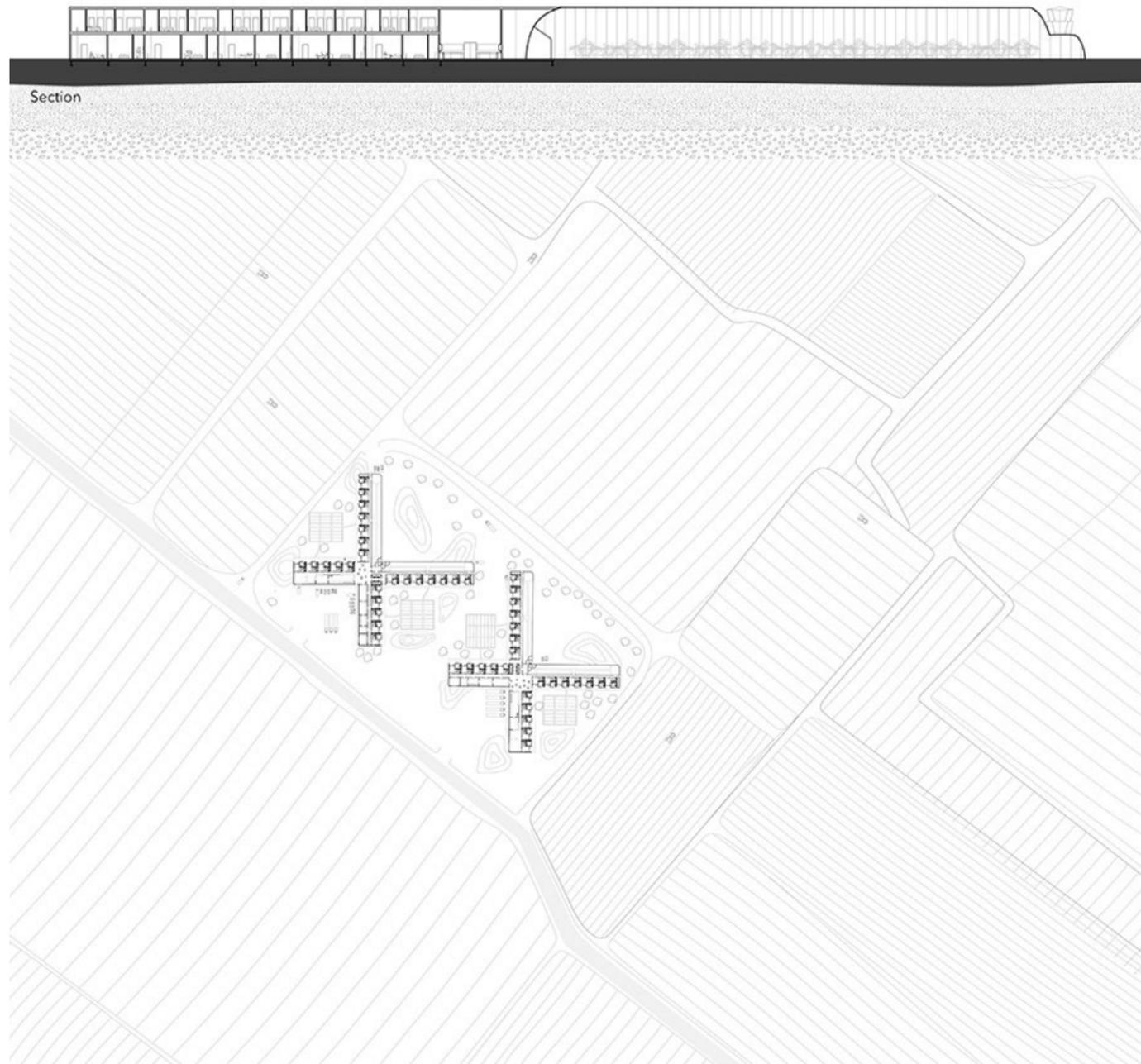


Air Stream Covered Field
Hepcrete Factory
Housing

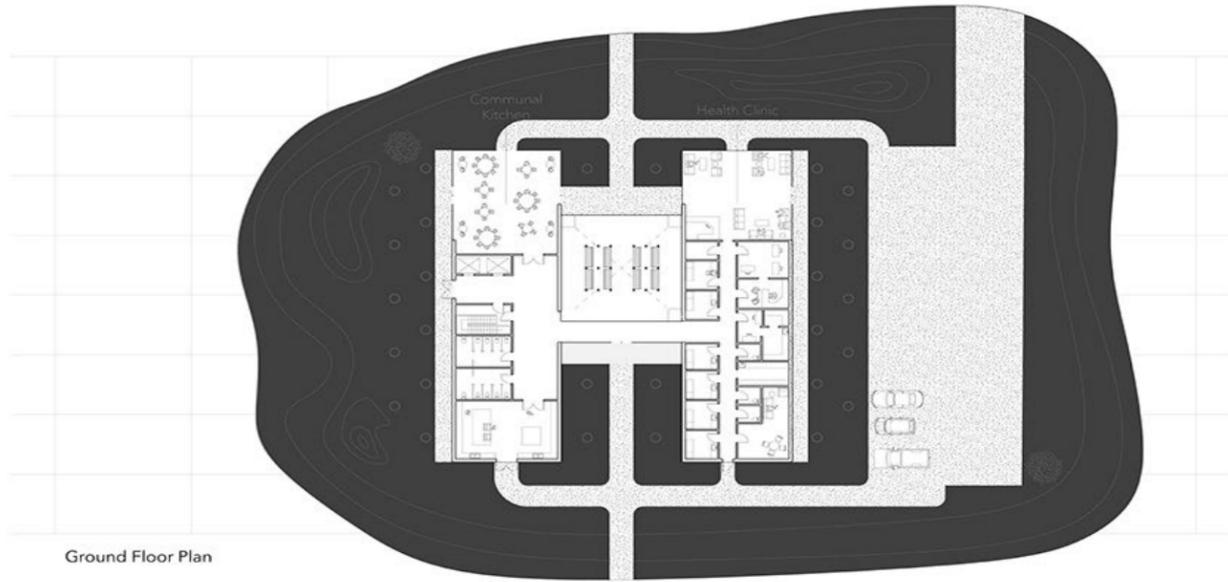


Ground Floor Plan

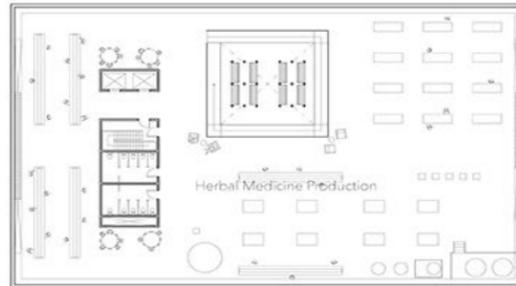




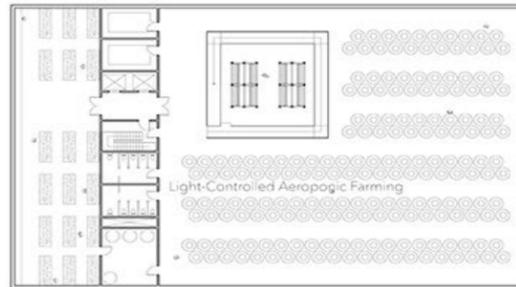
Aeronic Vertical Farm
Herbal Medicine Factory
Health Clinic

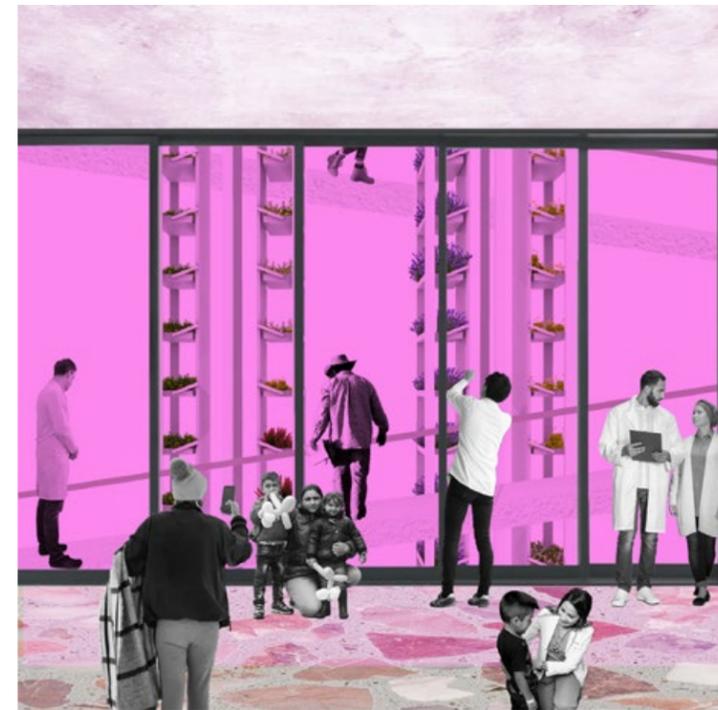
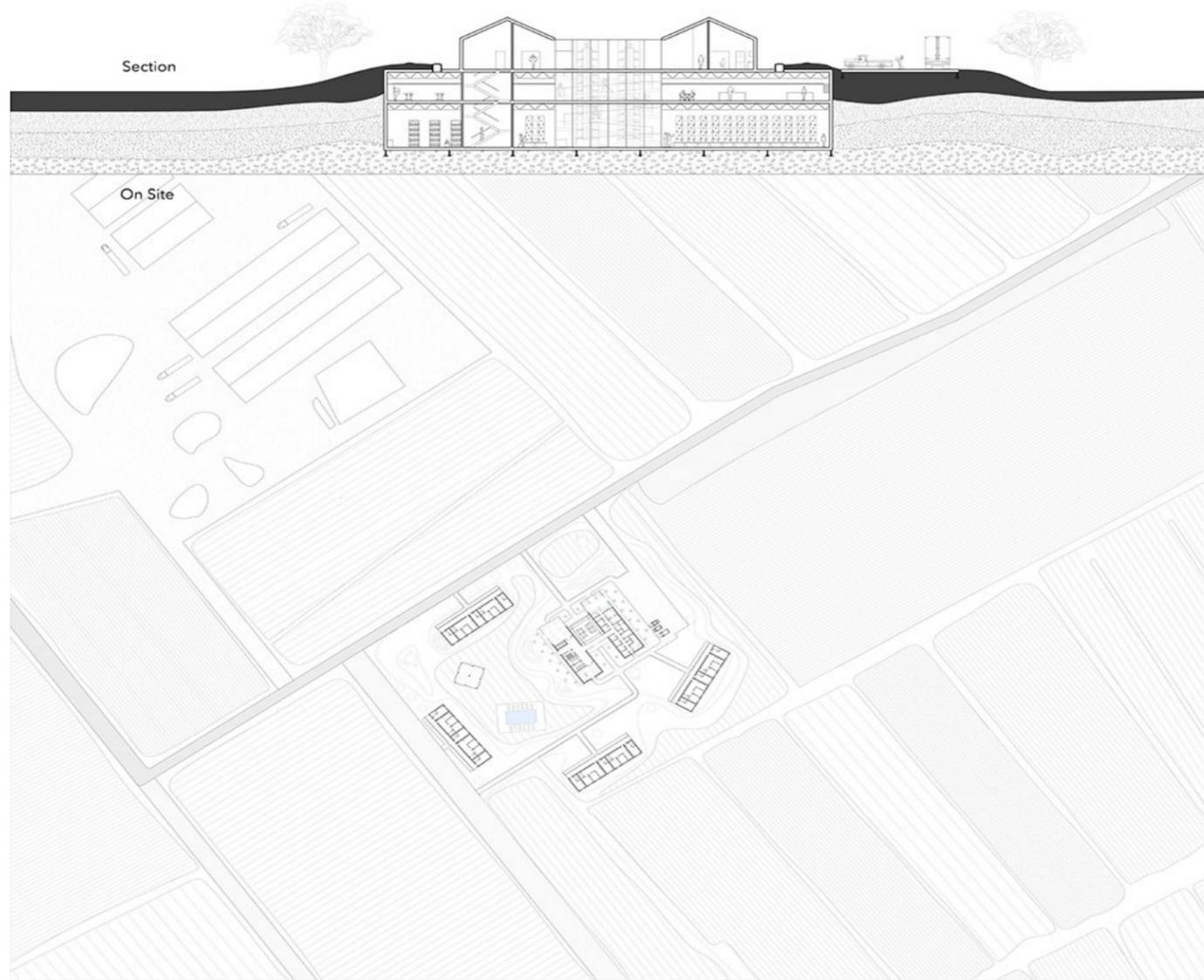


First Basement Plan



Second Basement Plan

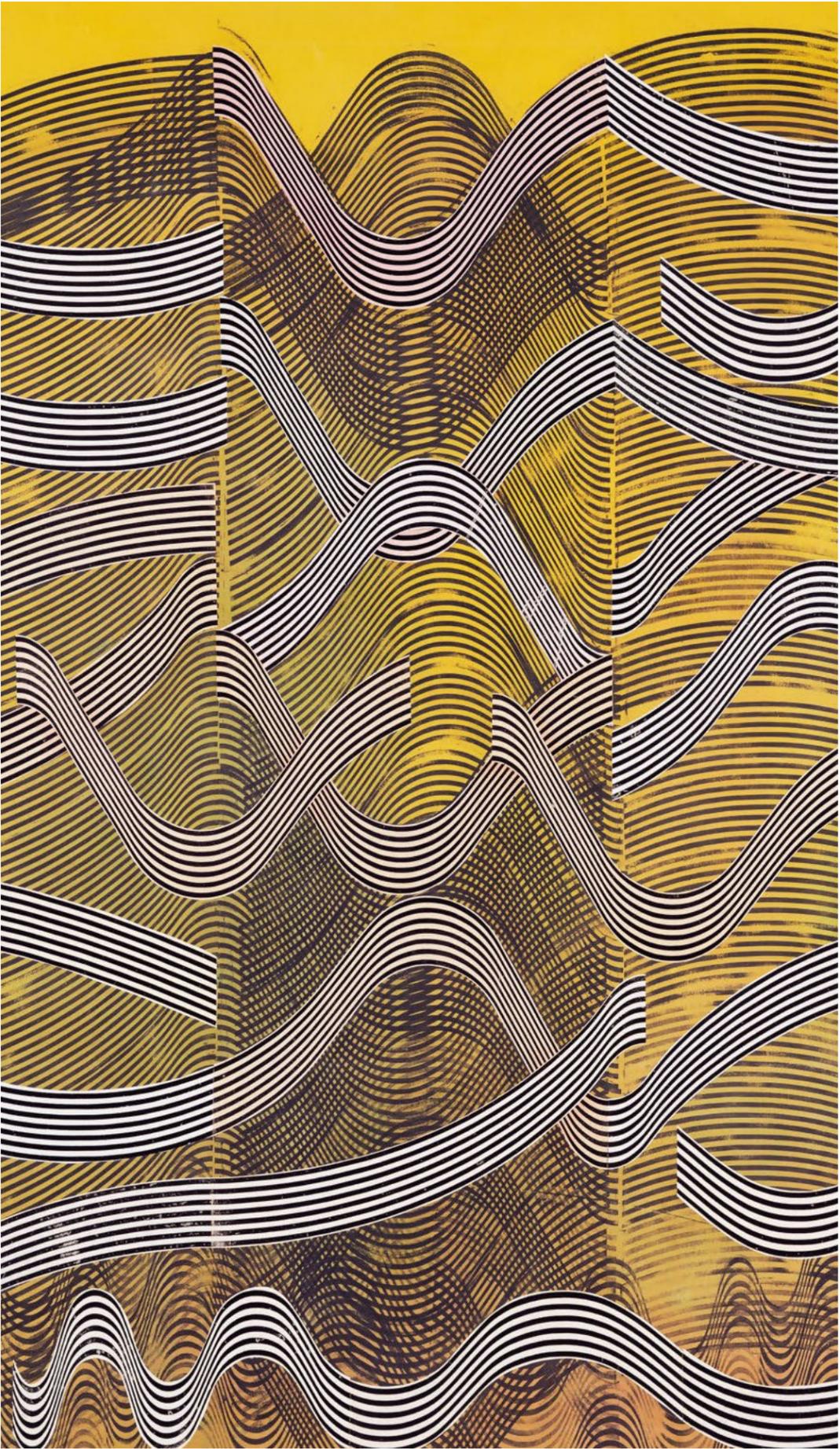


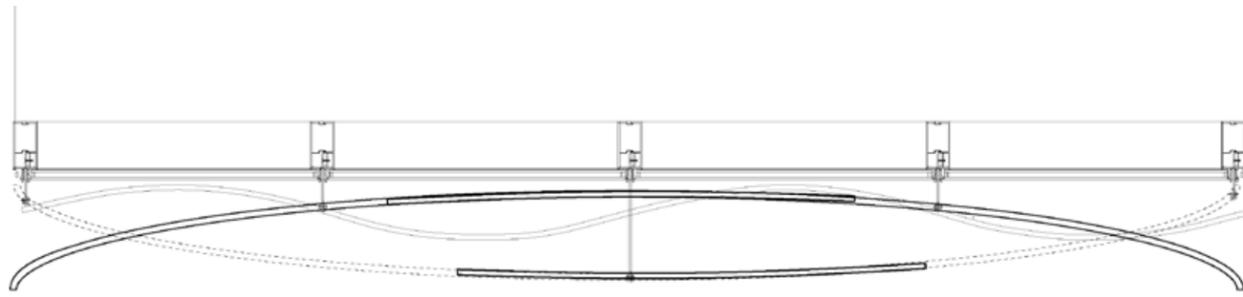


THE RIBBON

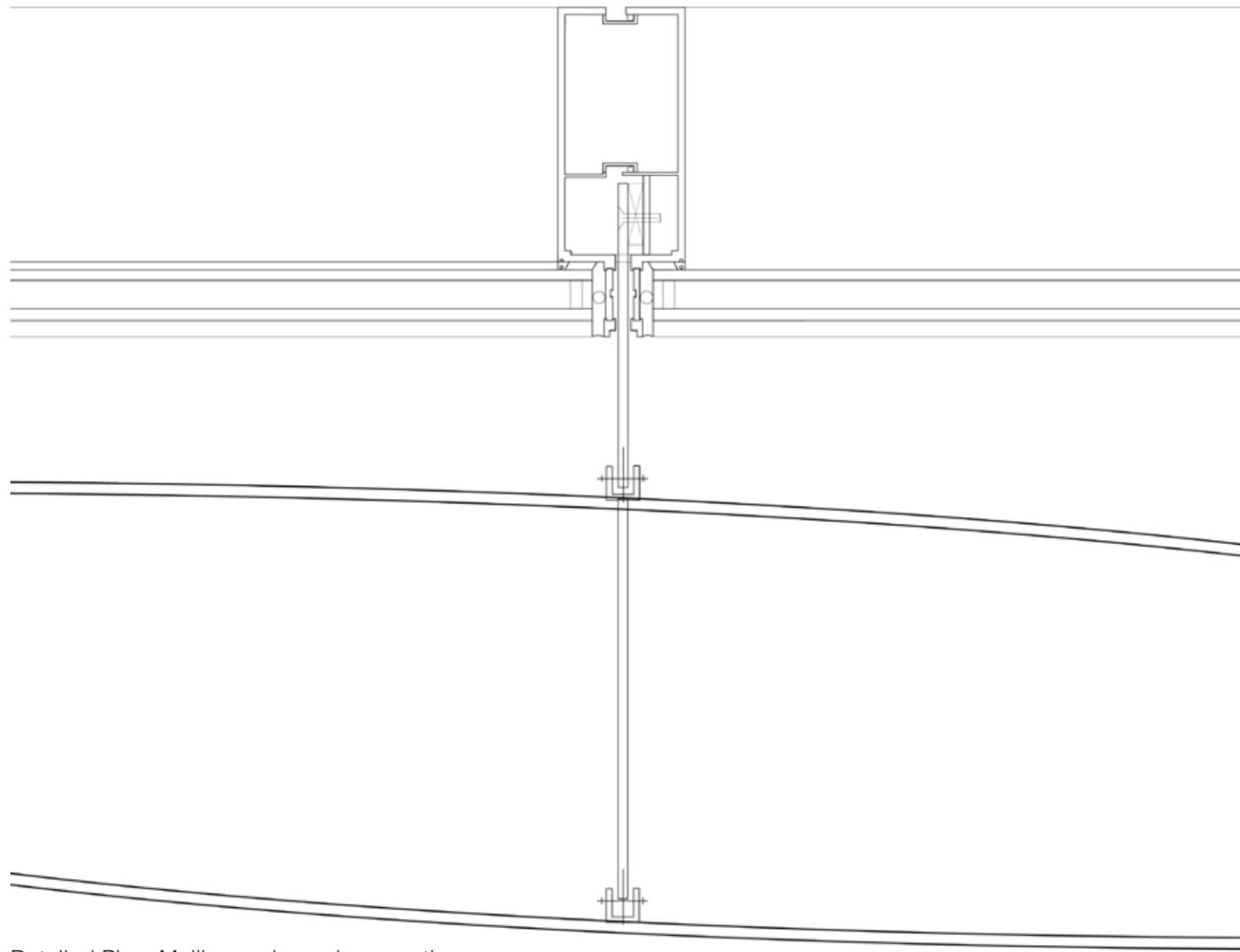
Fall 2021
Instructor: Daniel Vos
Class: Curtain Walls
Site: Soho, New York
Type: Commercial and Office

The façade system of this 6 story building in Soho New York will have a street facing curtain wall. "Ribbons" will be a mixed use office and commercial building. The façade of the building is inspired by the Philip Taaffe painting Inner City. The painting has a series of different kinds of horizontal ribbons across the pages; all a little bit different. The curtain wall consists of unitized extruded aluminum frames, mullions and joints that support insulated glass that is custom fritted, and custom painted aluminum ribbon panels that are attached at the mullions.

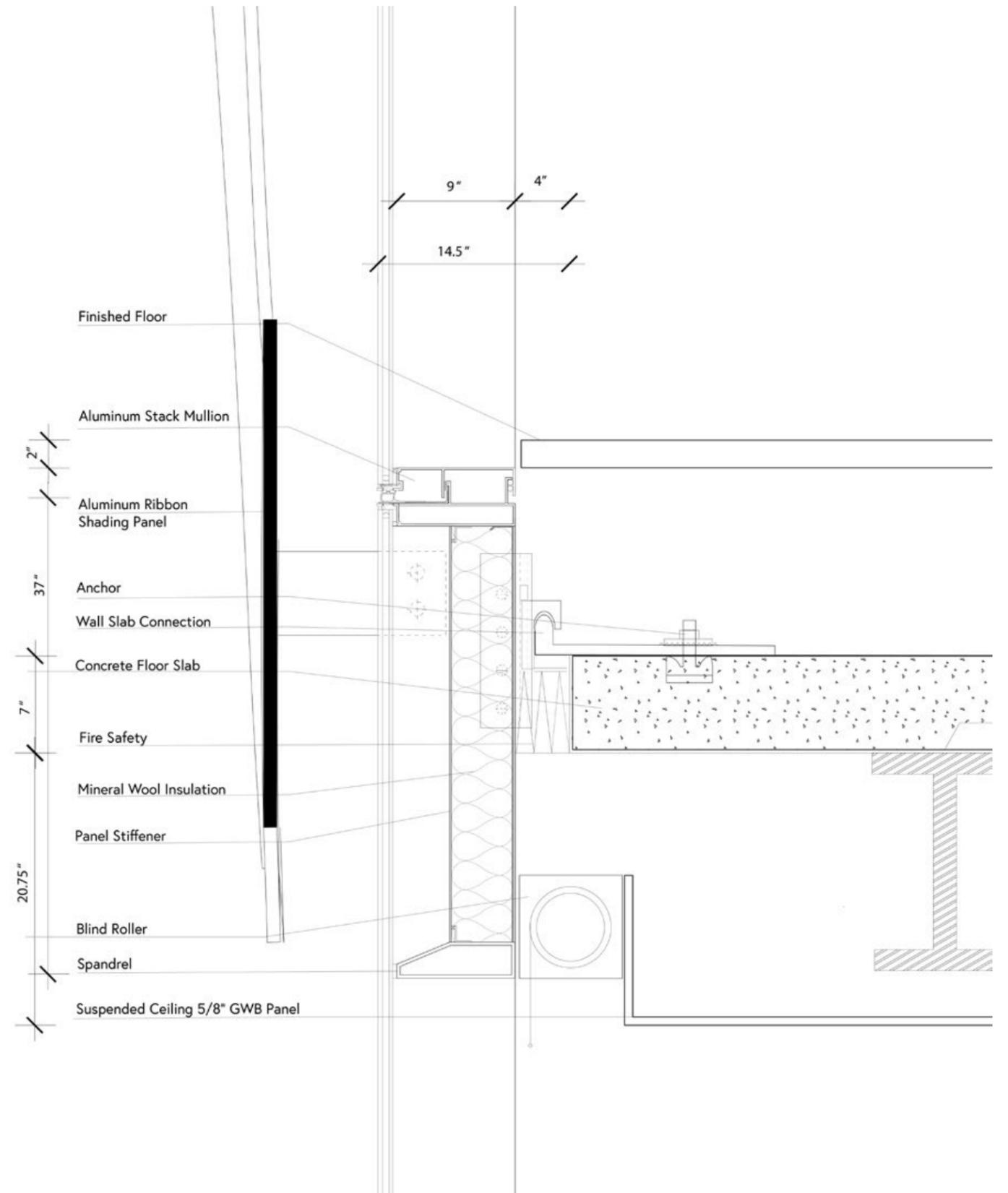




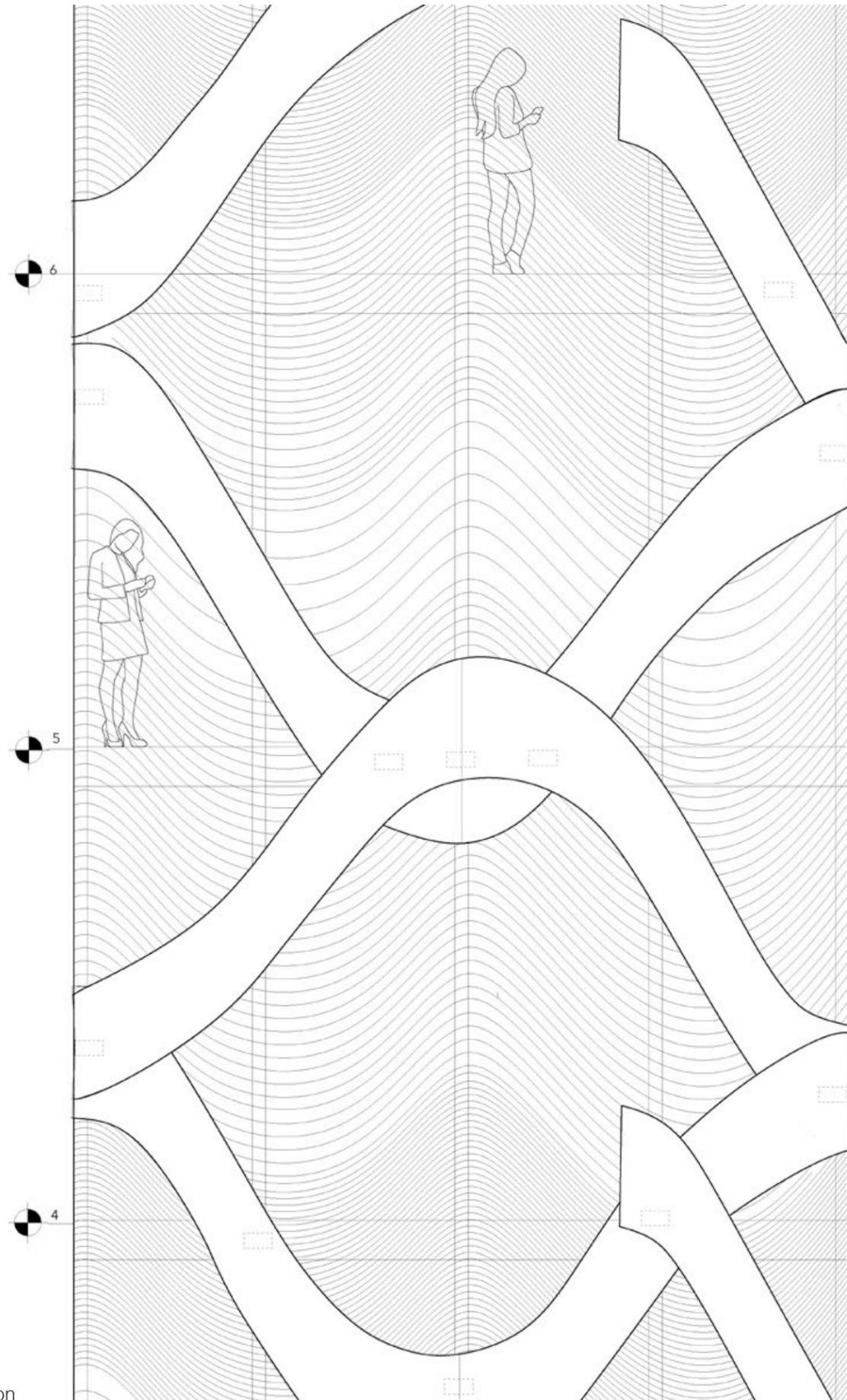
Curtain Wall Plan



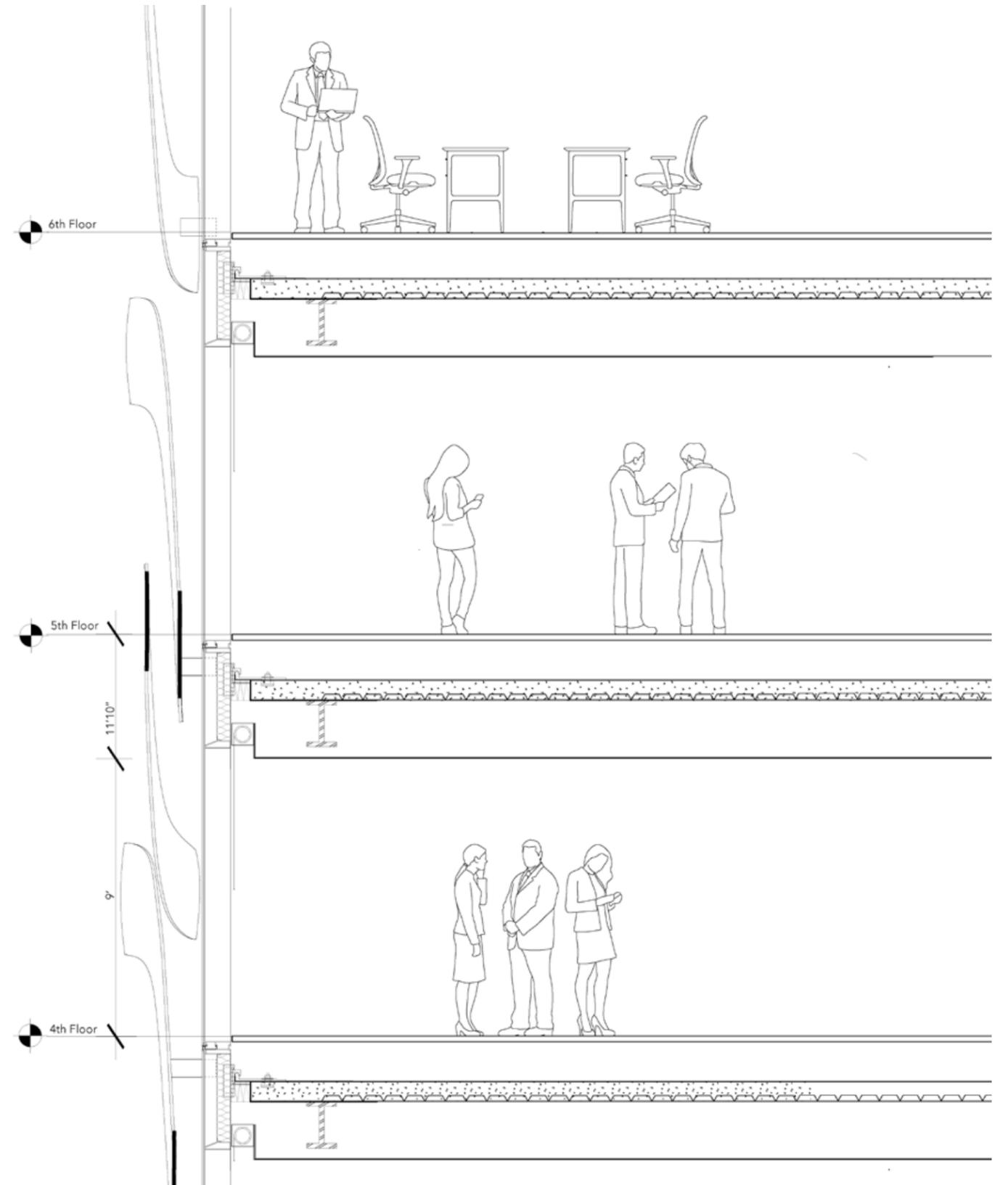
Detailed Plan, Mullion and panel connection



Detail Stacked Mullion



Elevation



Section

THE BRONX COMMUNITY CENTER

Fall 2020

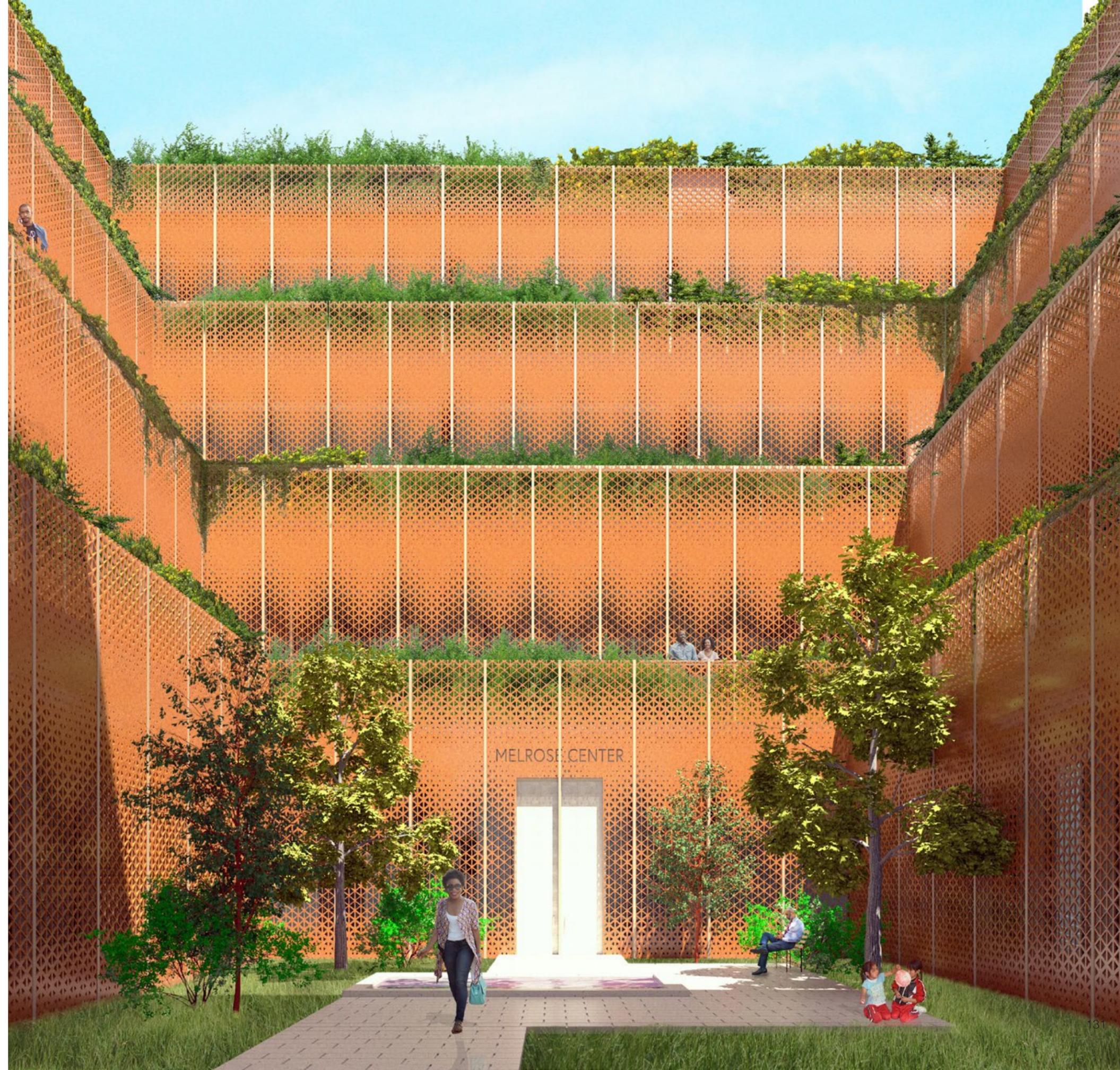
Instructor: Sarrah Khan

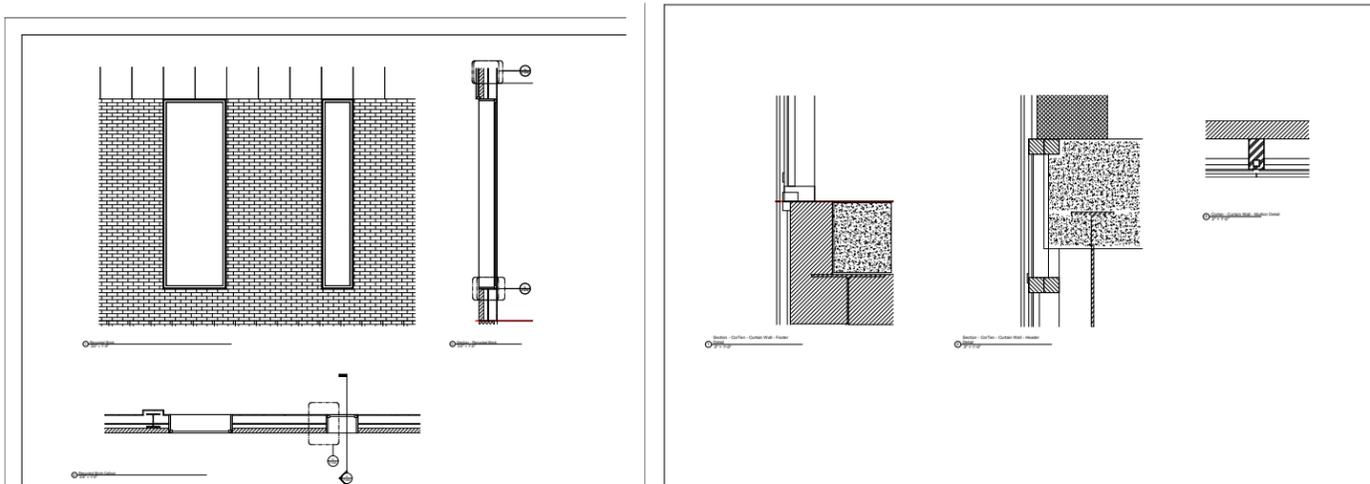
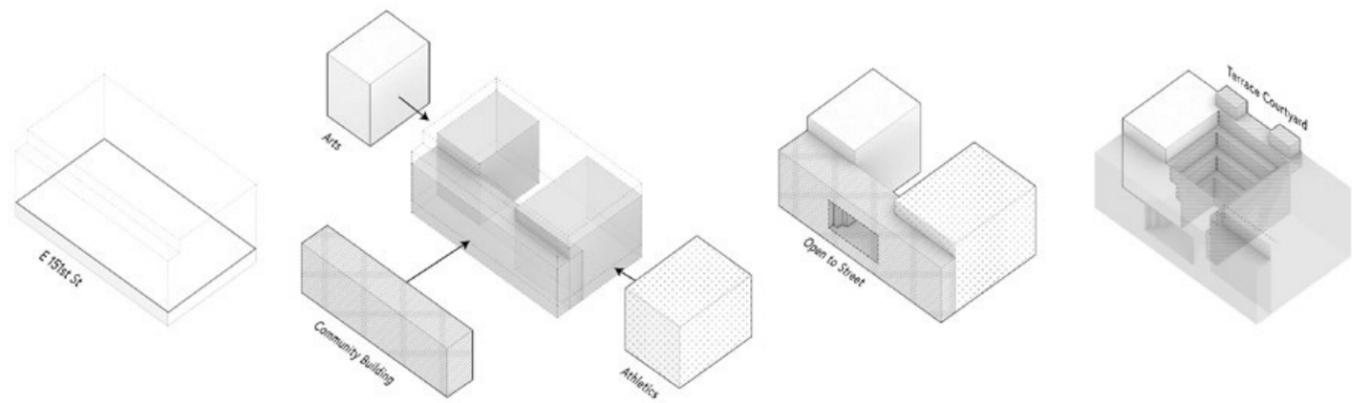
Team: Allison Shahidi, Andrew Magnus, Ryan Hansen

Site: Melrose, New York

Type: Community Center

The Bronx Community Center's main focus is about maximizing light and air into the community center. The main entrance to the center is accessed away from the street and after walking through the large interior courtyard. Terracing along the courtyard is an important aspect of the community center as it allows all levels of the center to have access to the central courtyard. The terracing allows for maximum light into the bottom of the courtyard. The facade of the building is made out of corten steel with curtain wall behind.





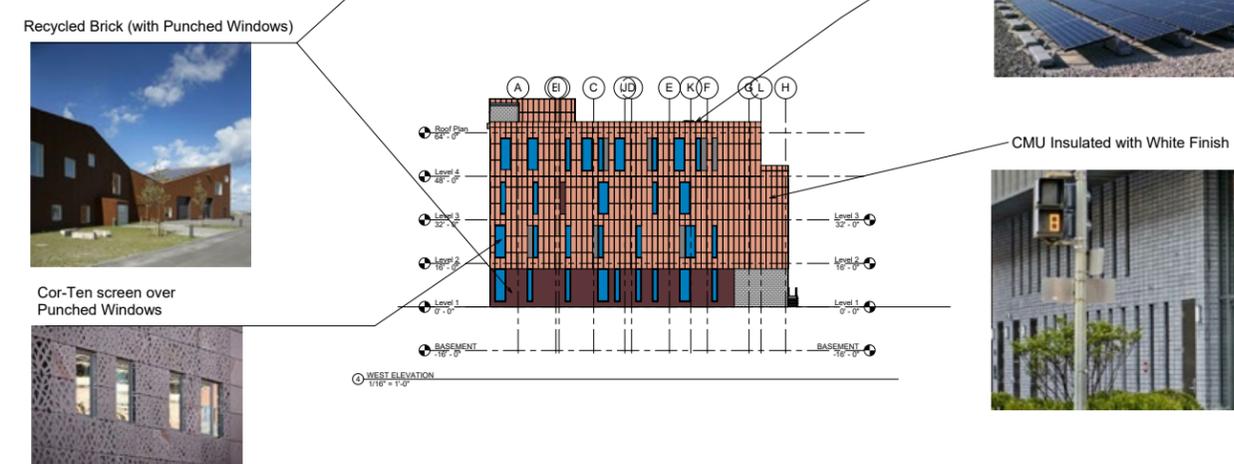
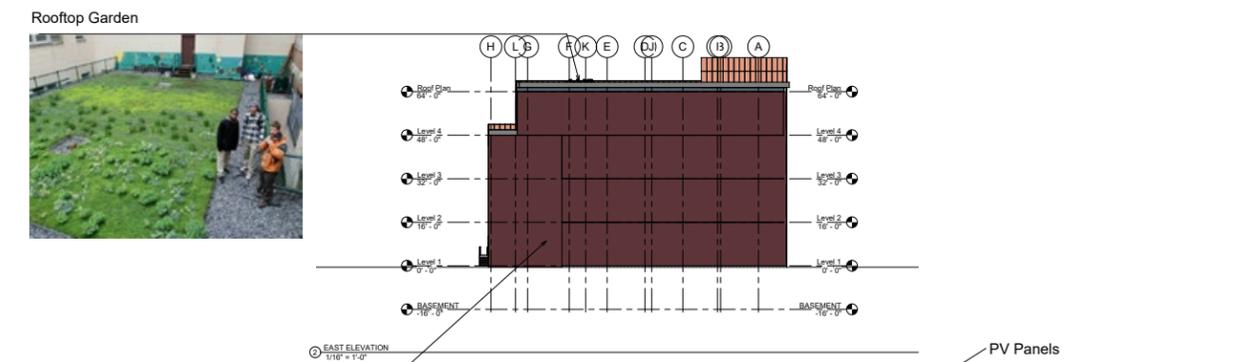
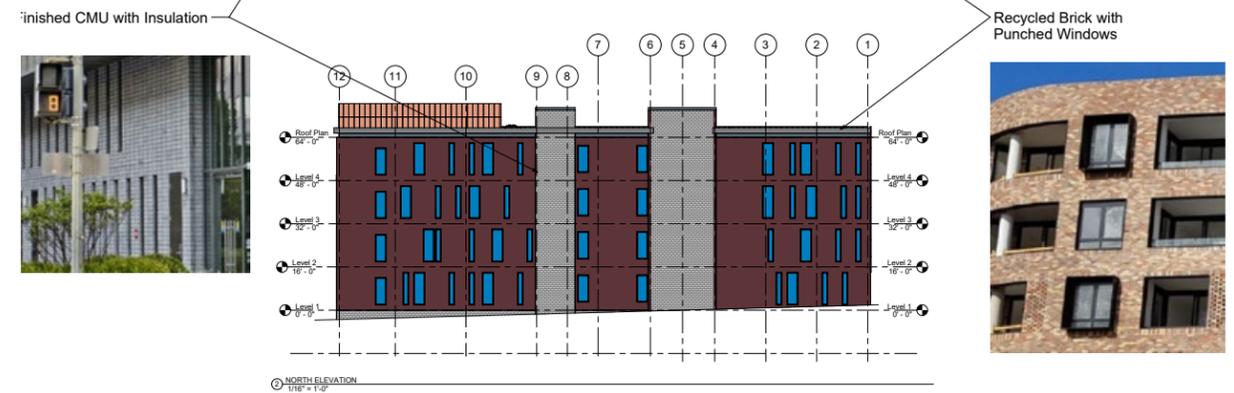
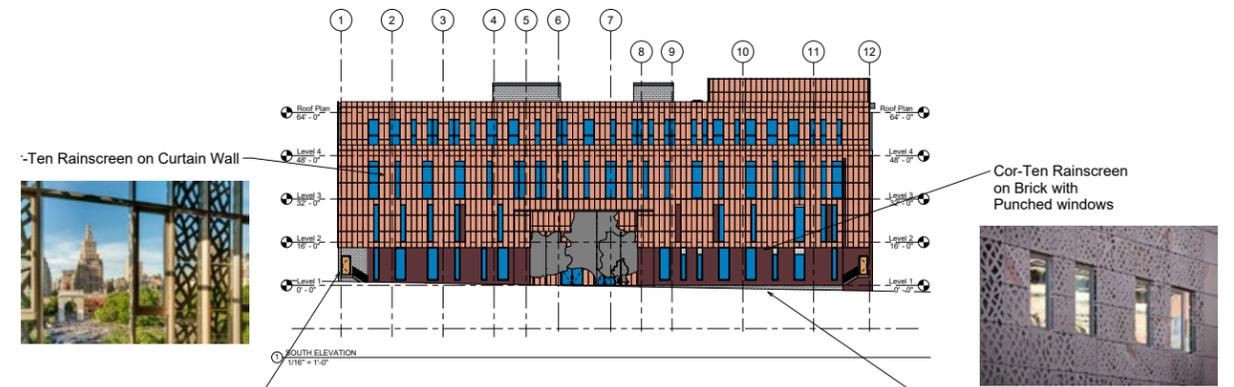
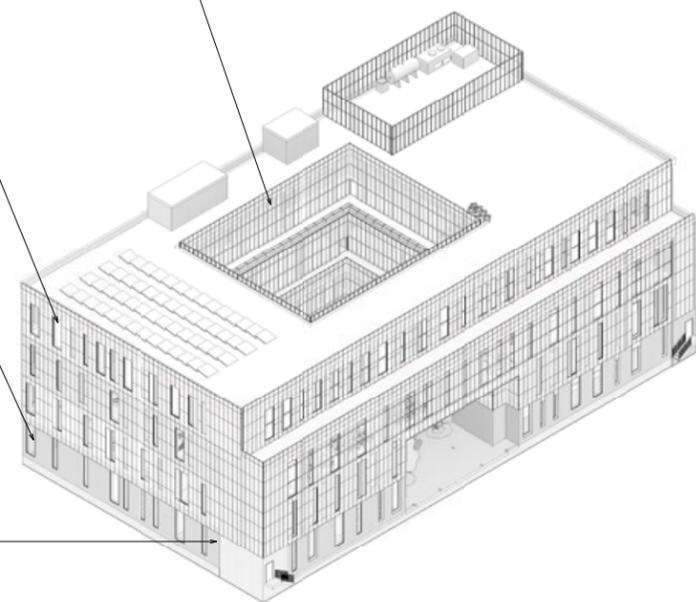
WT-01
Curtain wall with Cor-Ten Screen

WT-02
Cor-Ten rain screen punched windows

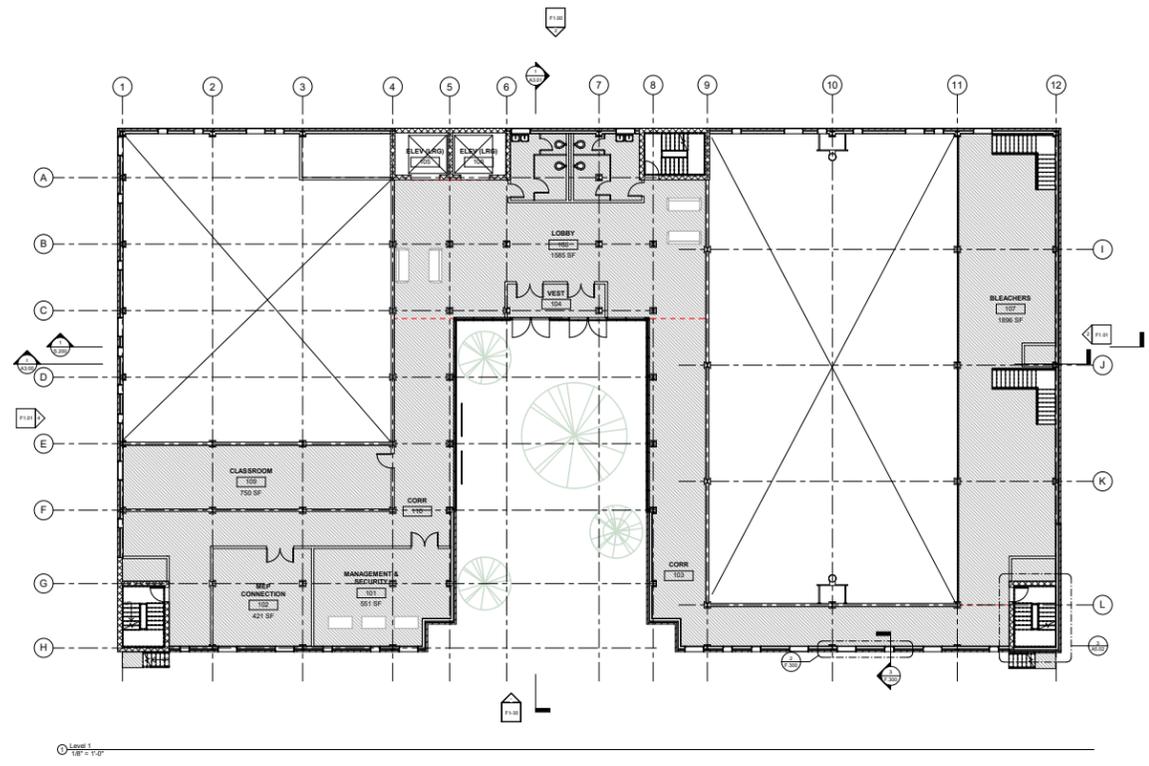
WT-03
Recycled brick with punched windows

WT-04
CMU Insulated Fire-Wall with Finish

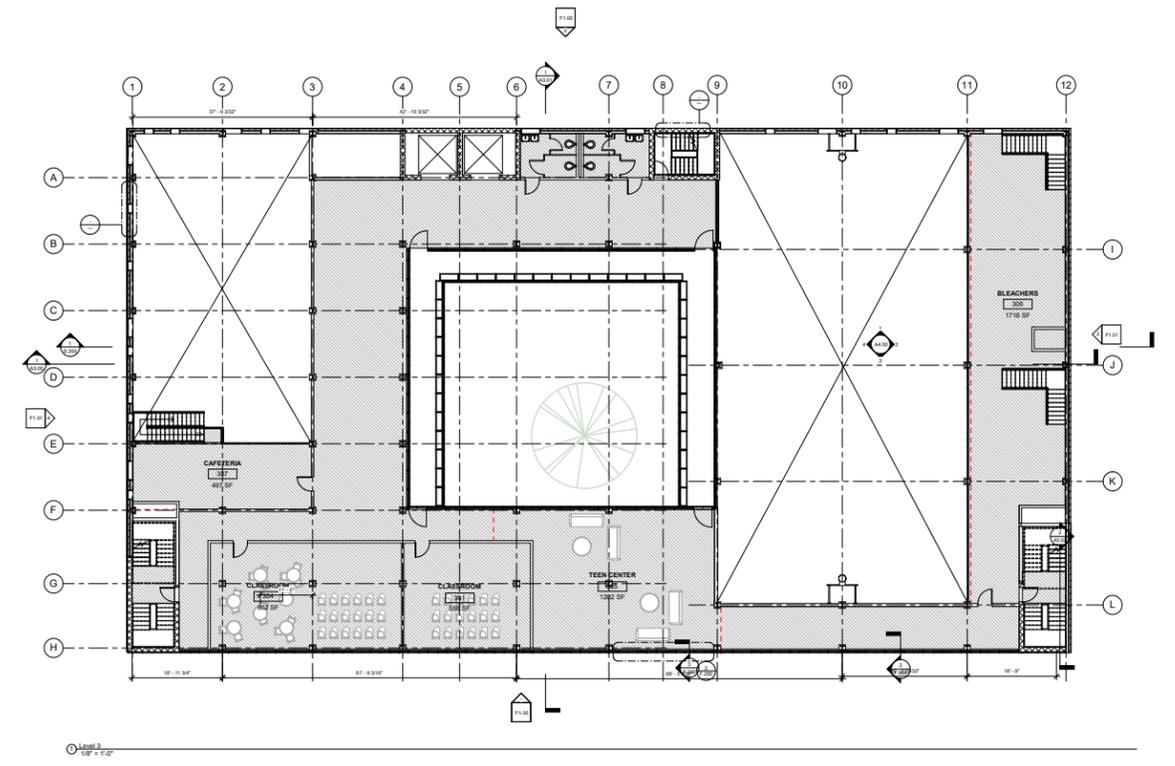
WT	DESCRIPTION	SF
WT-01	Cor-Ten Screen Curtain Wall (6.5")	17222
WT-02	Cor-Ten Screen Brick (8")	22766
WT-03	Recycled Brick on Metal Stud (12")	16744
WT-04	CMU (12")	26148



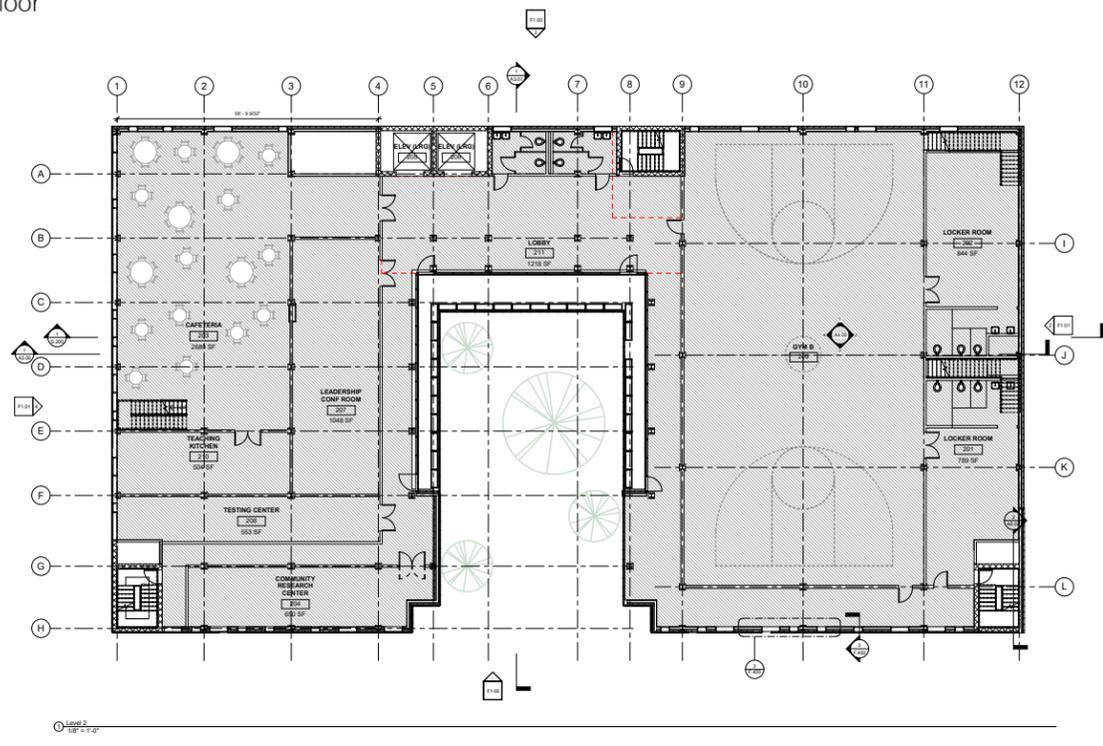
First Floor



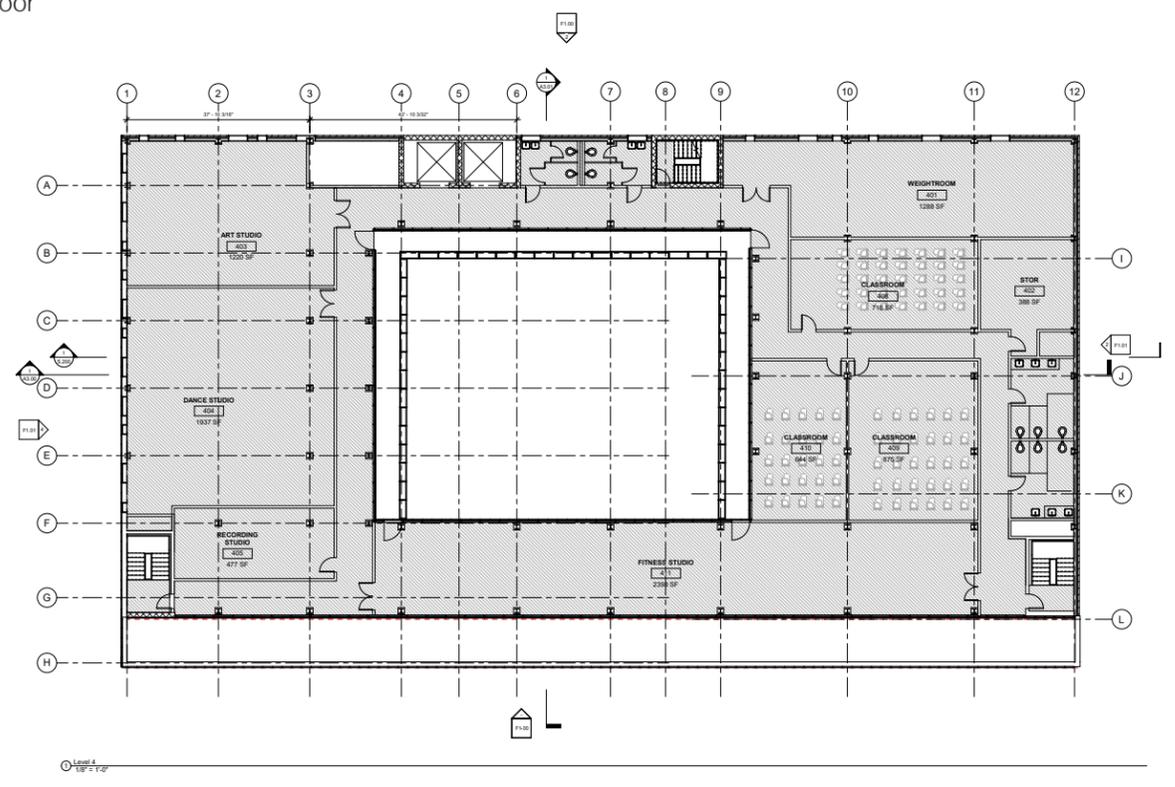
Third Floor

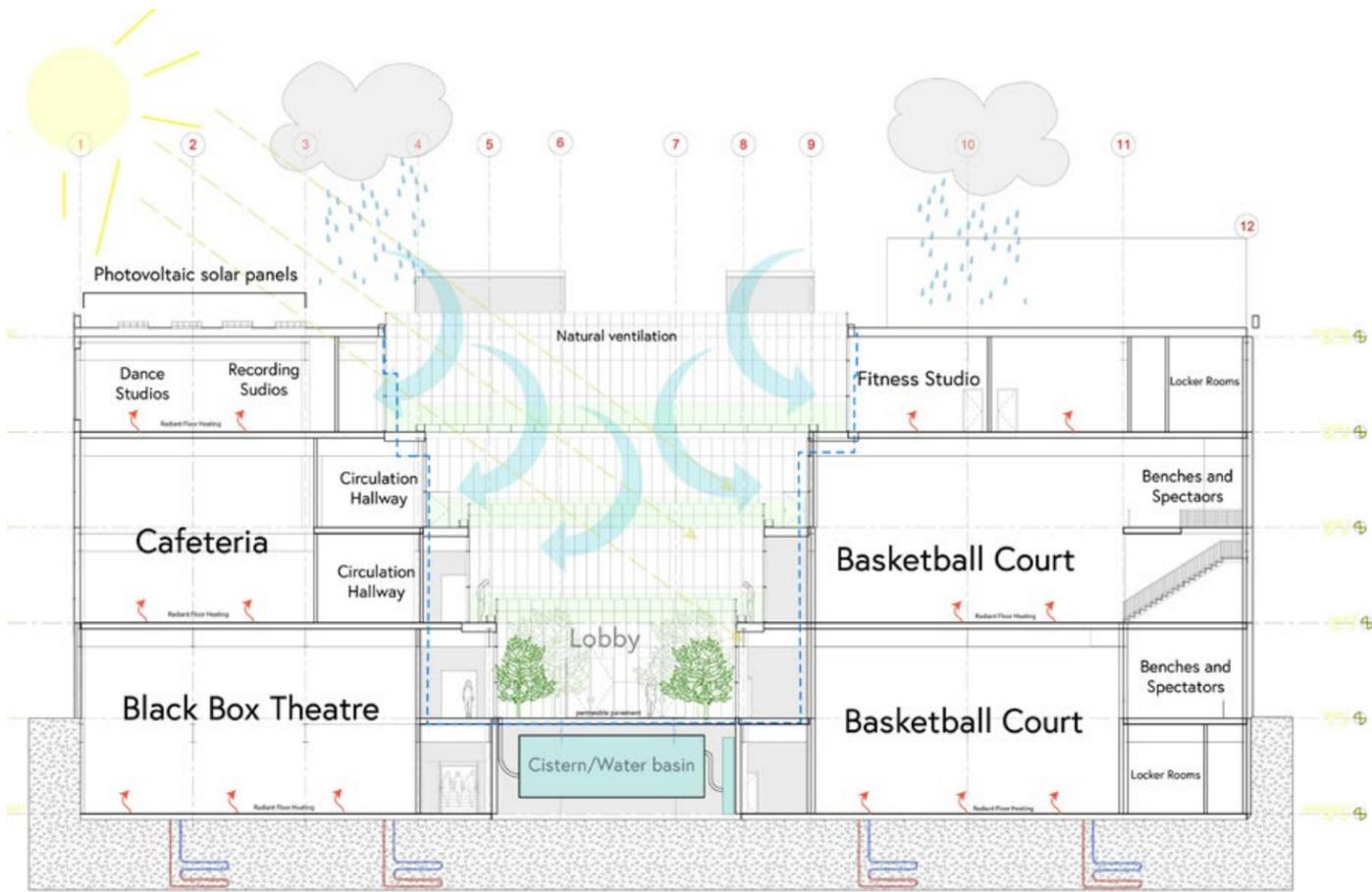


Second Floor

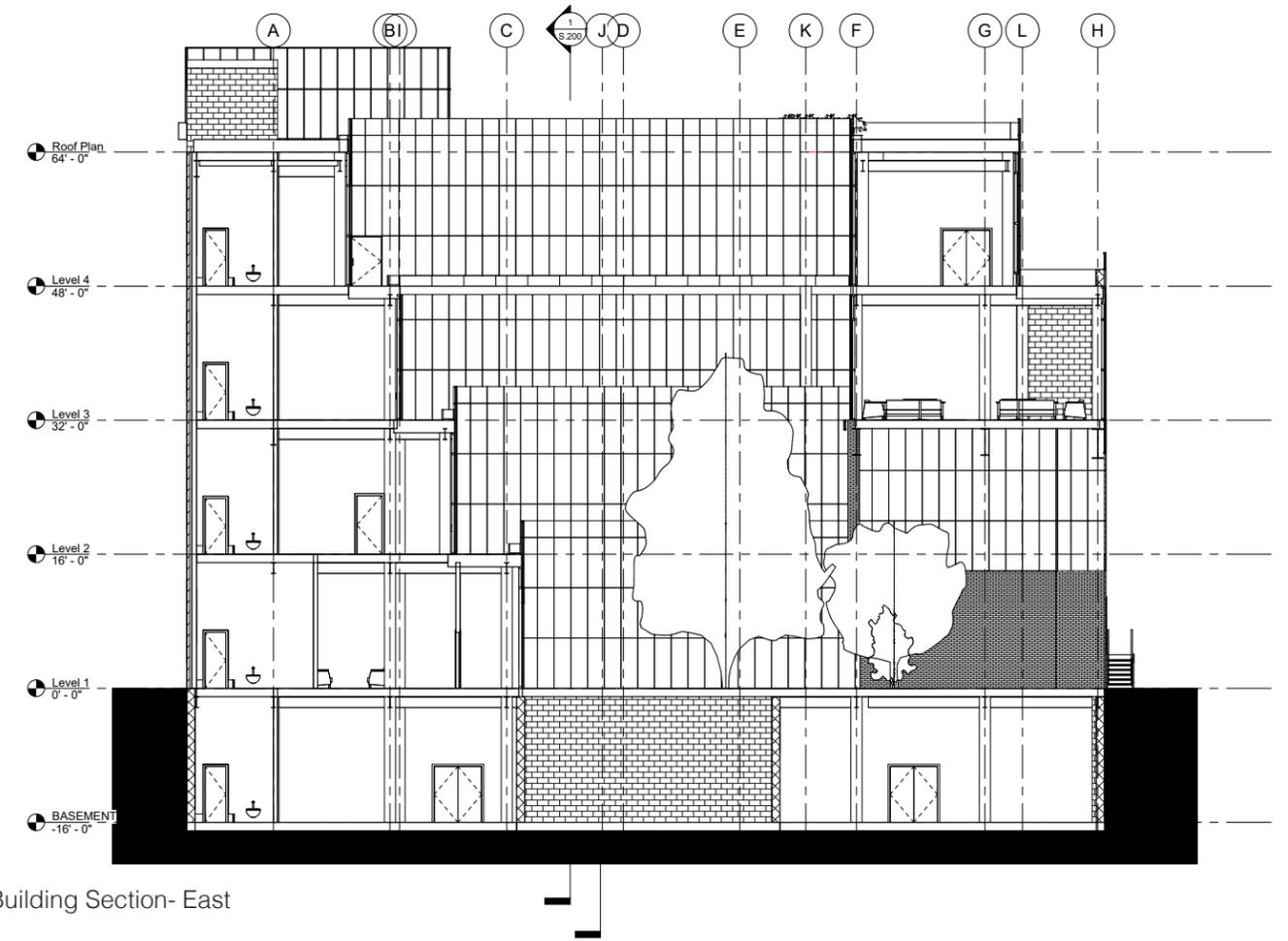


Fourth Floor

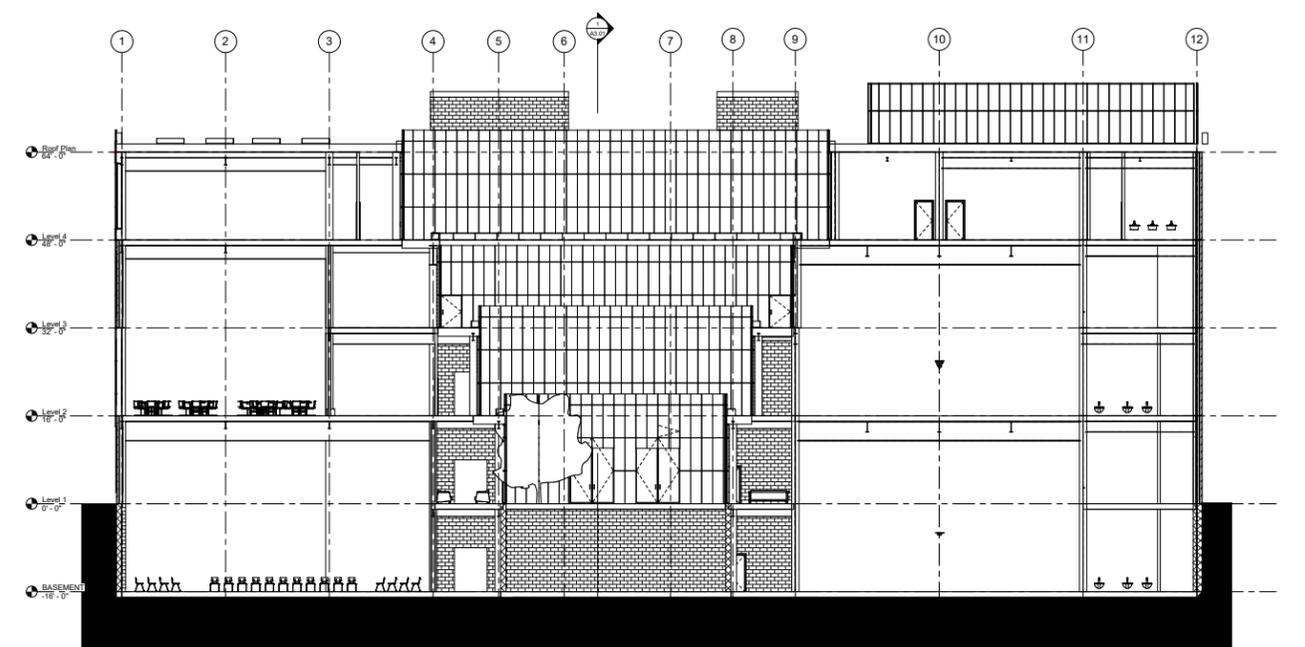




Sustainability Diagram



Building Section- East



Building Section- North

BUSHWICK'S WATERLOO

Spring 2021

Instructor: Lola Ben-Alon

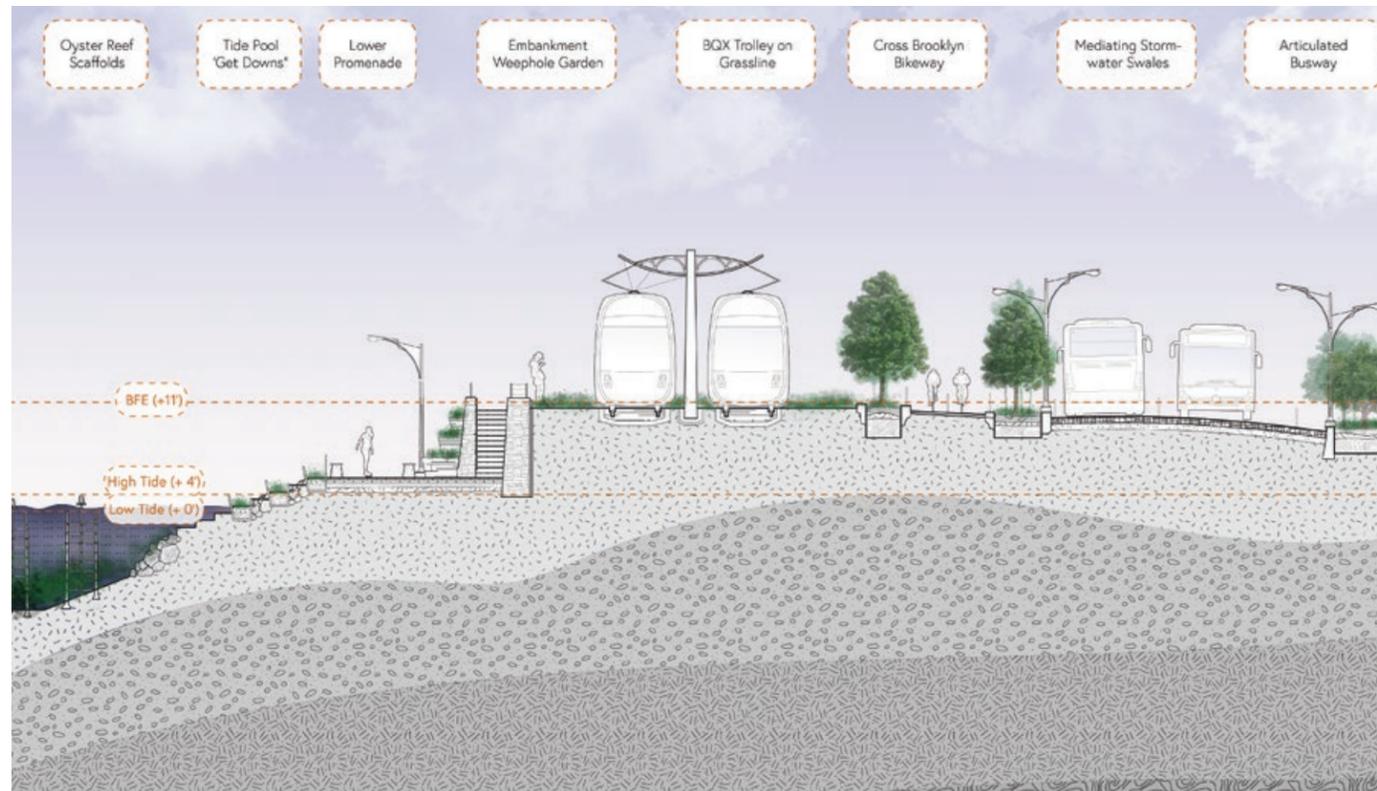
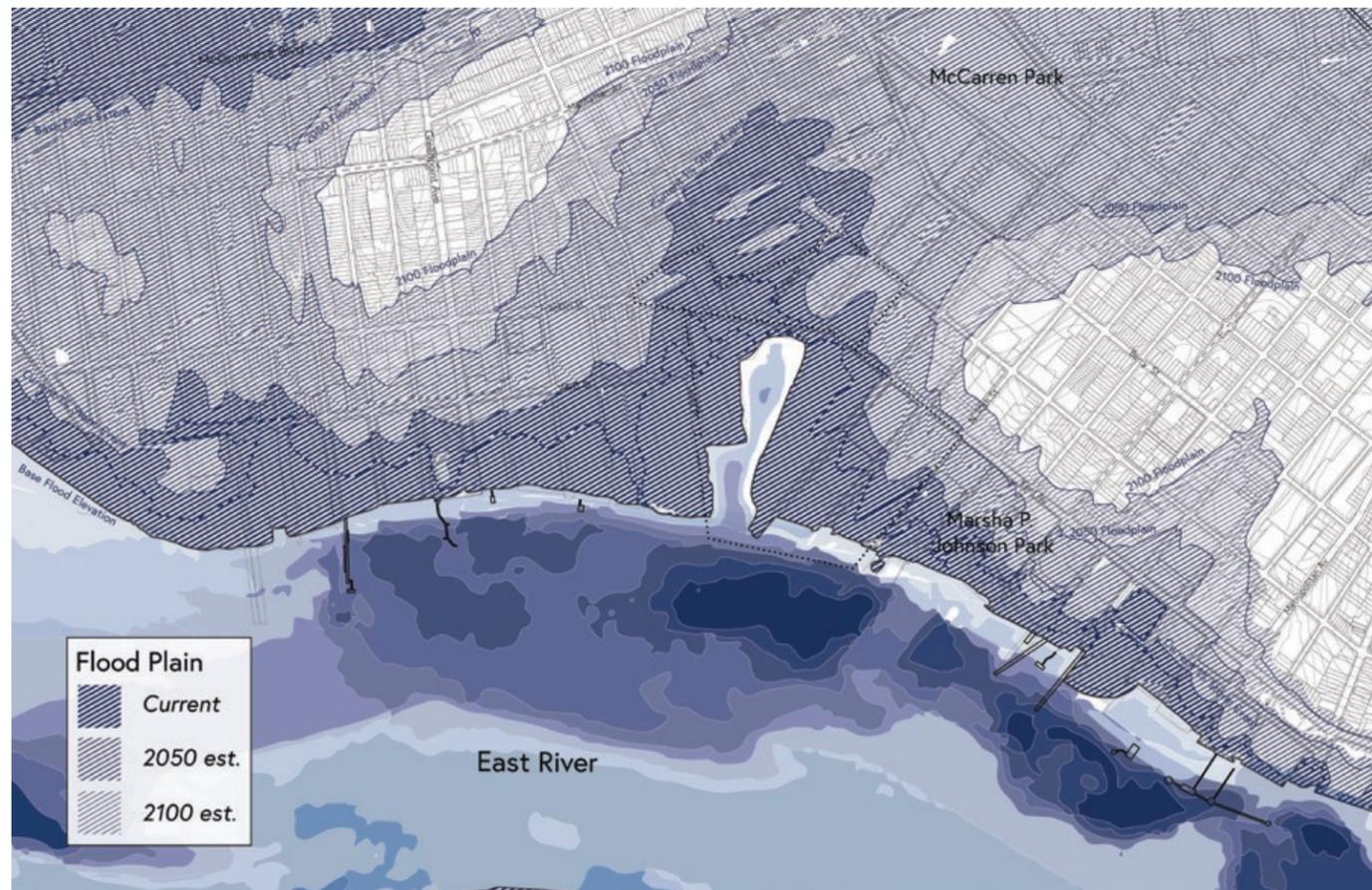
Team: Alexa Greene, Camille Newton,
Andrew Magnus

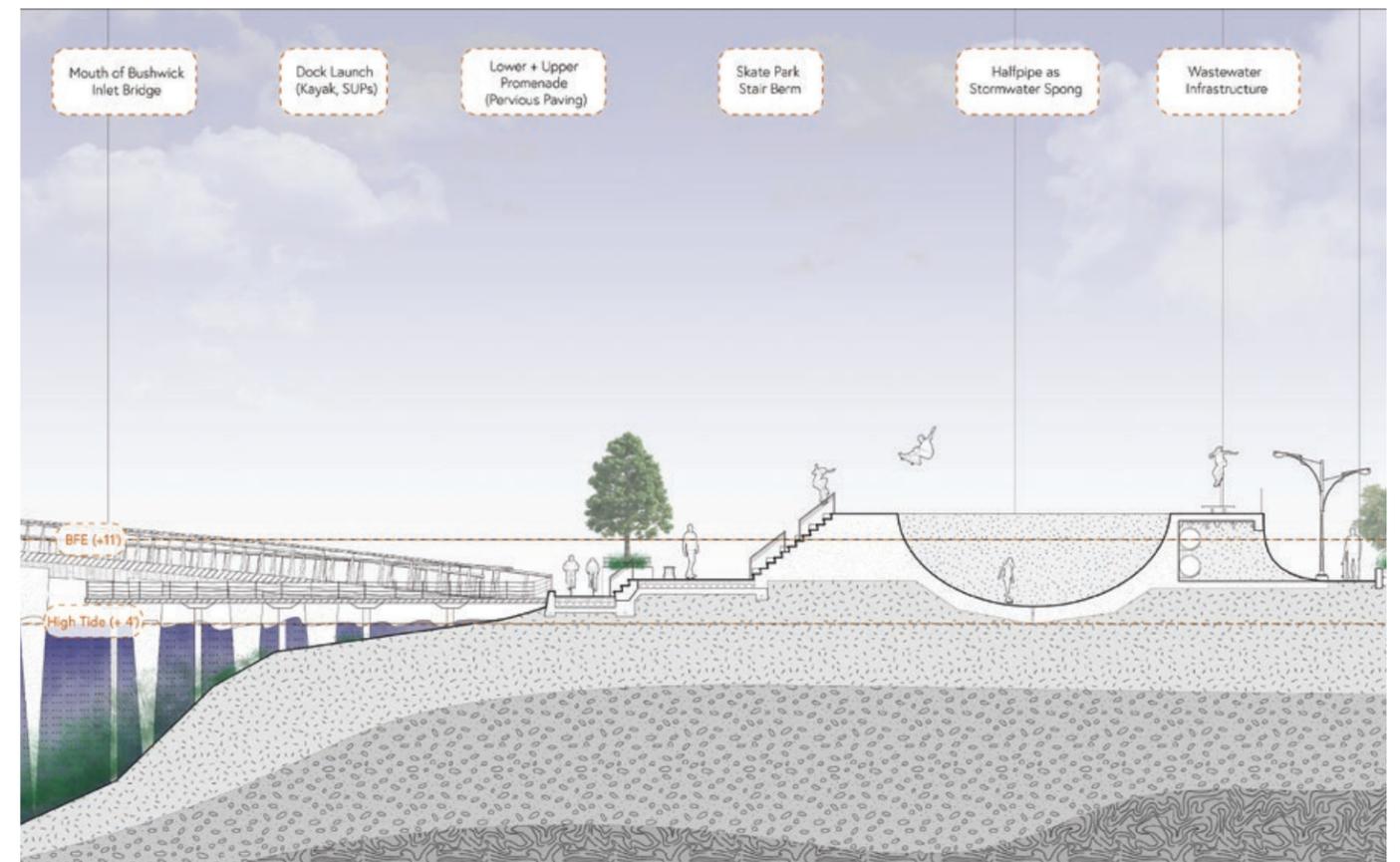
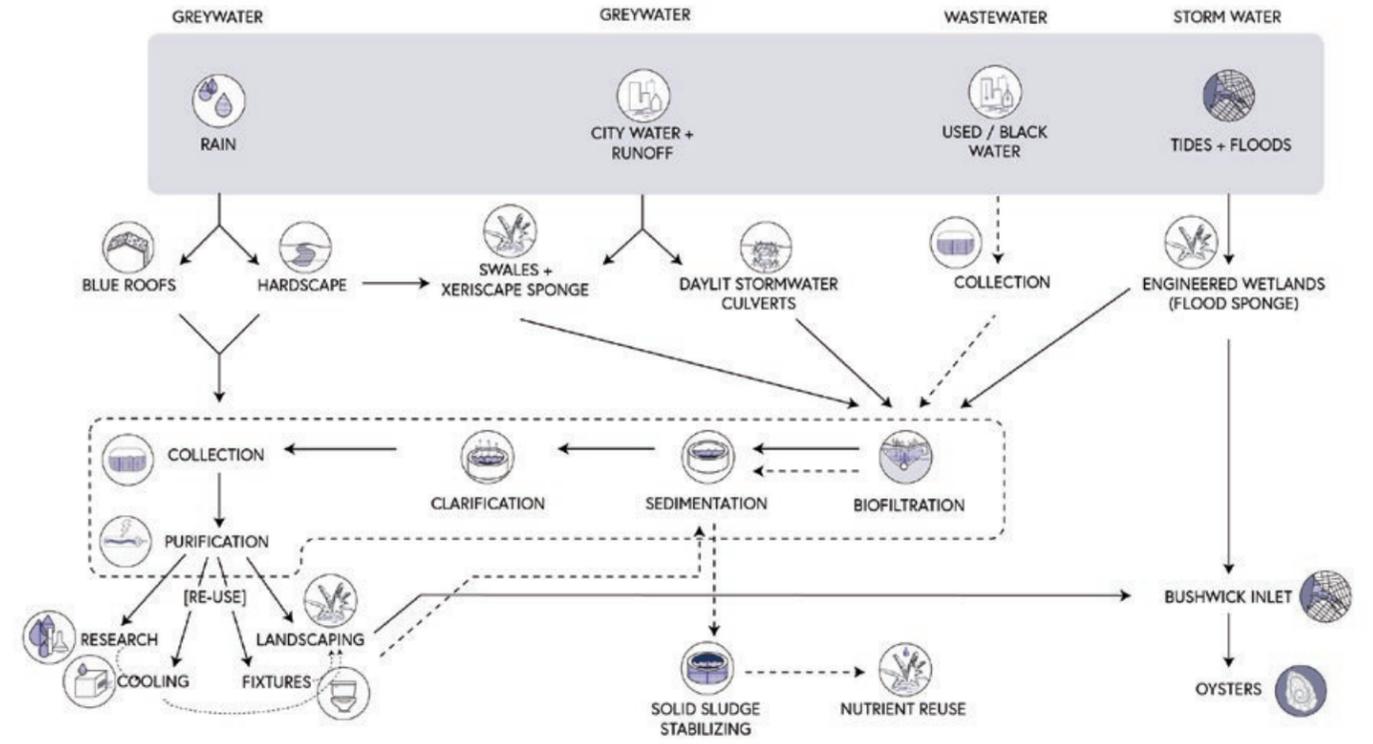
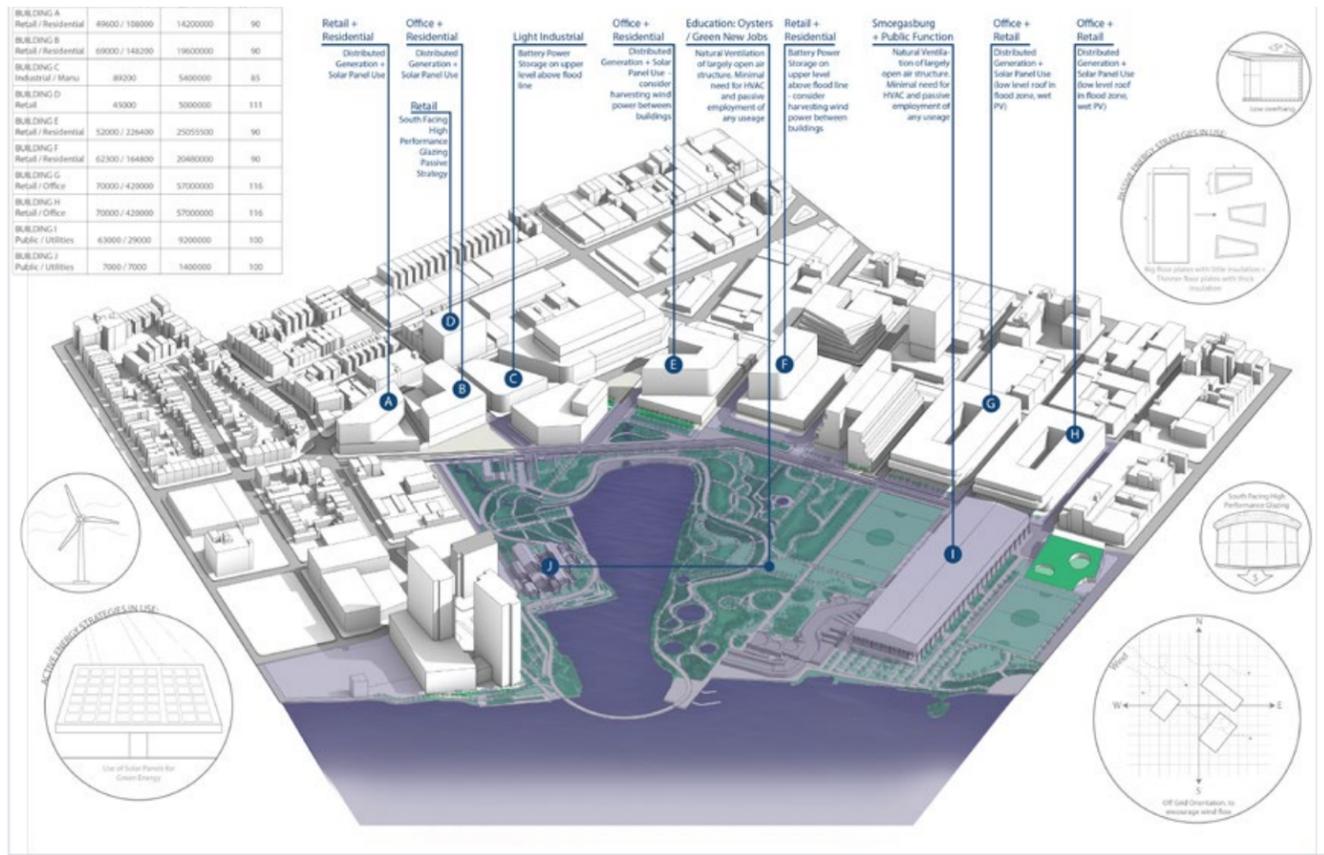
Site: Bushwick, Brooklyn

Type: Water Resilient Campus

Bushwick's Waterloo masterplan imagines a mixed used, public-facing development that focuses on how to live with water. Data has shown that by 2050 the New York City Climate will closely resemble Charleston, SC. The proposal aims to resolve local water quality, and includes a series of bioswales, rain gardens, wet meadows, oyster reef scaffolds. The Waterloo proposal takes into consideration the already proposed private building proposals and assume they will be built. To create a cohesive and interconnected mobility strategy, the Waterloo proposal will house a BQX transportation hub adjacent to the park, which will catalyze future green new jobs available in the area, and ensure that affordable housing has access to the all of the waterfront.







THE WEB

Spring 2022

Instructor: Galia Solomonoff and Laurie Hawkinson

Site: Avery Plaza, Columbia University

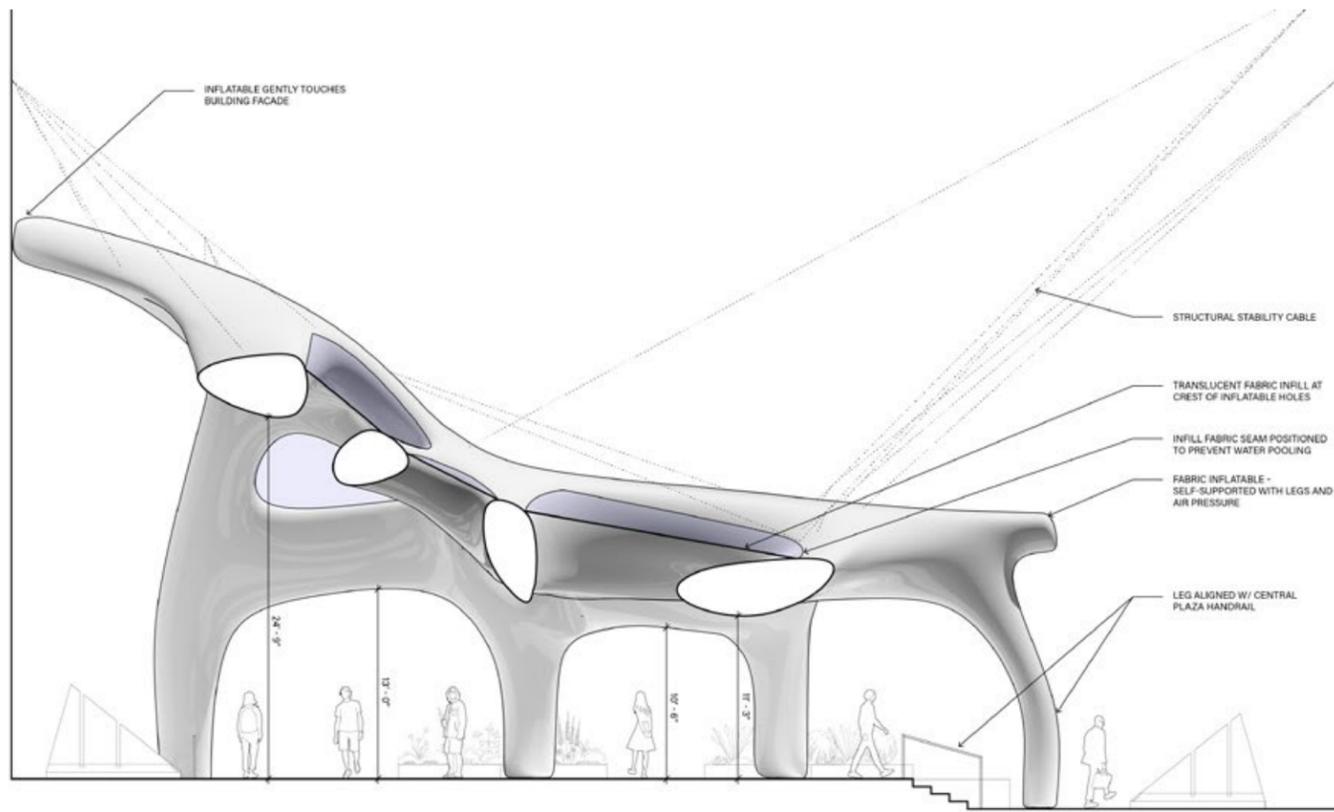
Designed and constructed by students in the Spring 2022 seminar "The Outside Project" led by faculty Laurie Hawkinson and Galia Solomonoff, WEB is a temporary project consisting of an inflatable pavilion and a collection of custom furniture installed at Columbia University's Avery Plaza. Massive yet buoyant, WEB touches ground at just seven points and frames entrances into the courtyard evoking a feeling of organic intrigue and uneasy uncertainty, questioning the solidity of architecture. Walking through it, WEB feels more like an organism than a building as 1010 patches of white and blue hues undulate to invite visitors to experience a myriad of different perspectives and interpretations. Anchored using a network of ropes and carabiners attached to steel beams in Avery and Fayerweather Halls and weighted ballasts in each of its seven feet, WEB sustains its voluptuous form with the help of four blowers, located in its two rear feet, constantly blowing air throughout the structure. The formal configuration elucidates a strong contrast between the campus's existing fabric and its new inflatable counterpart, a contrast best witnessed through an unassuming view from the library inside Avery Hall to the structure beyond.

Patterned fabric highlights the four thresholds and grows contiguously across the surface as a viewer passes into the pavilion, the uniform distribution inevitably pulling one's attention with it. Looking up, one's gaze dances playfully from one translucent skylight to the next. The daylight shining through emitting a light blue glow changes the atmosphere within the interior and becomes an ephemeral record of WEB's footprint. At night, roles are reversed, LED's installed throughout the structure project light through the fabric making it an expression of exteriority. The intensity of light changes depending on what hue of blue it shines through and draws all attention to the surface of the WEB, inverting the introverted atmospheric qualities it takes on in the daytime.

WEB is an immersive installation that invites its participants to be introspective about architectural possibilities. Highly calibrated to squeeze experience out of its confined courtyard location it promises a unique and subjective sequence of possibility from each and every vantage point it offers.

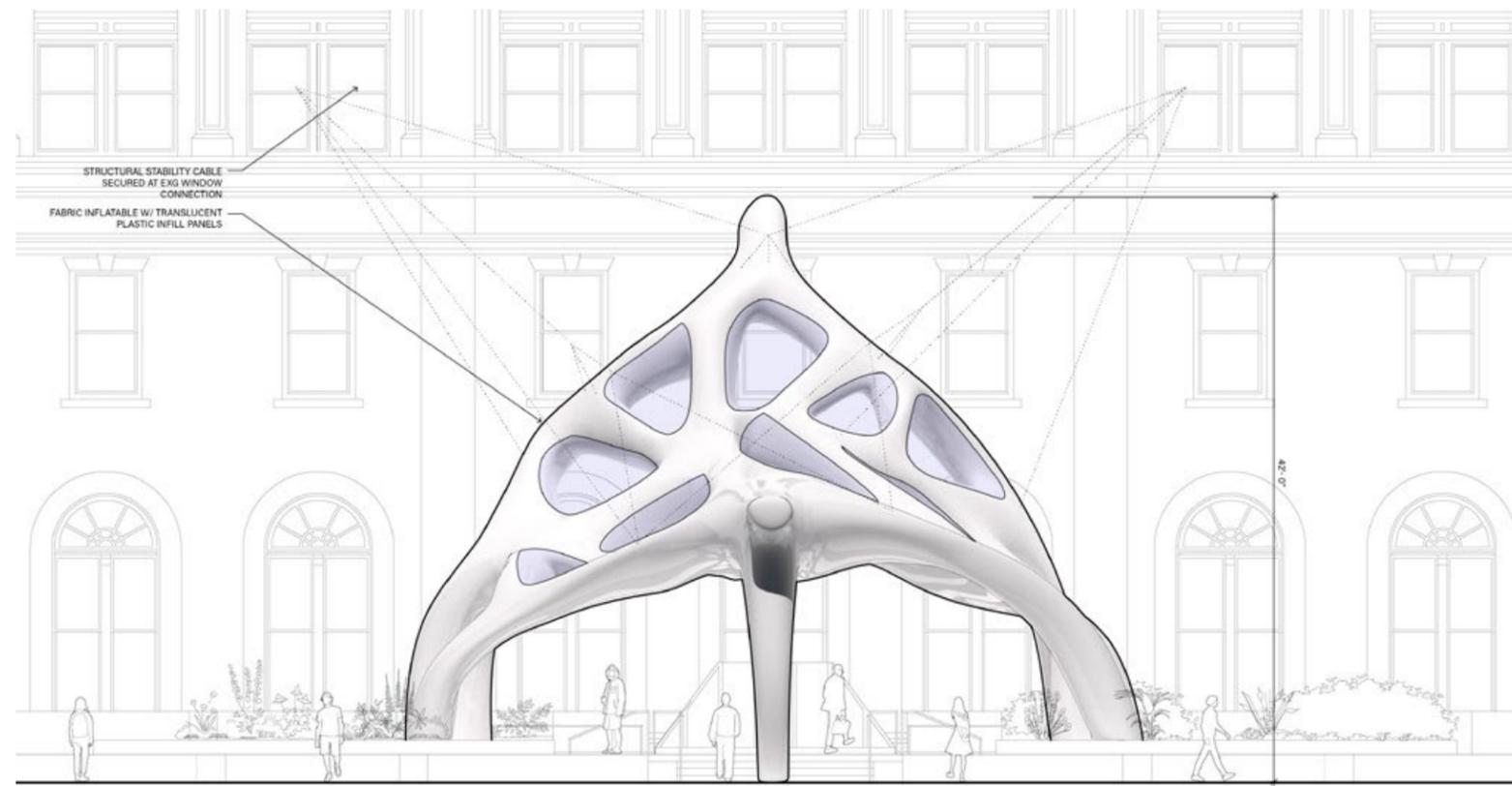


EVERY HALL



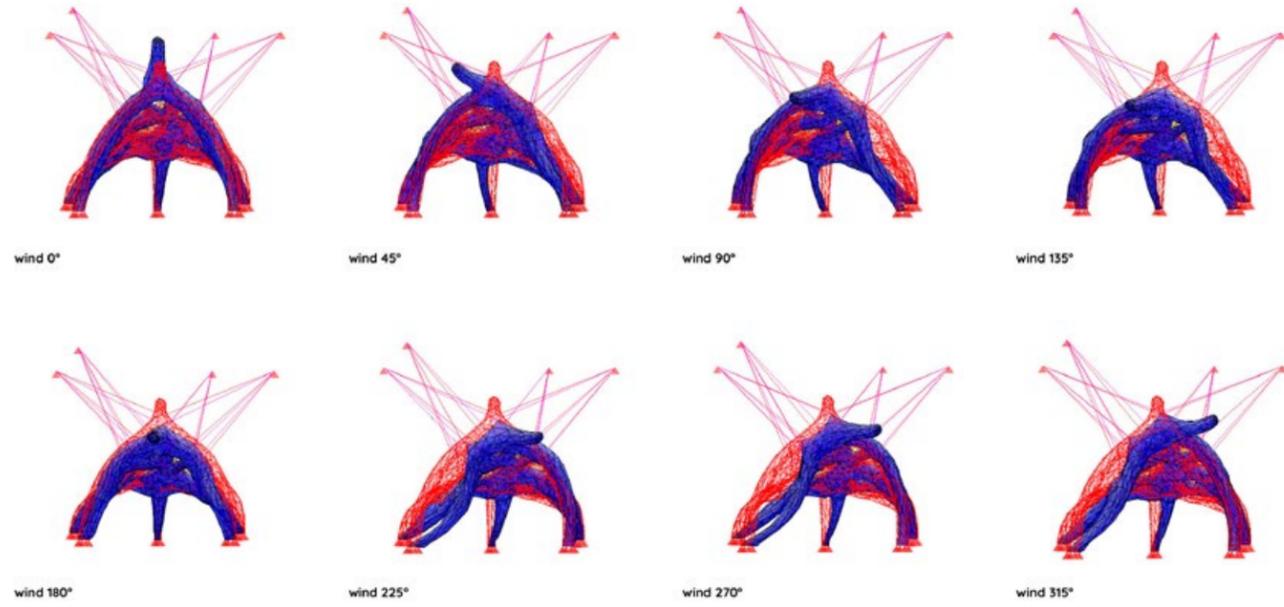
EVERY PLAZA

FAYERWEATHER HALL



5 Results

5.1 Deformation Summary



5 Results

5.1 Deformation Summary

