Ben Fox

Columbia GSAPP Portfolio

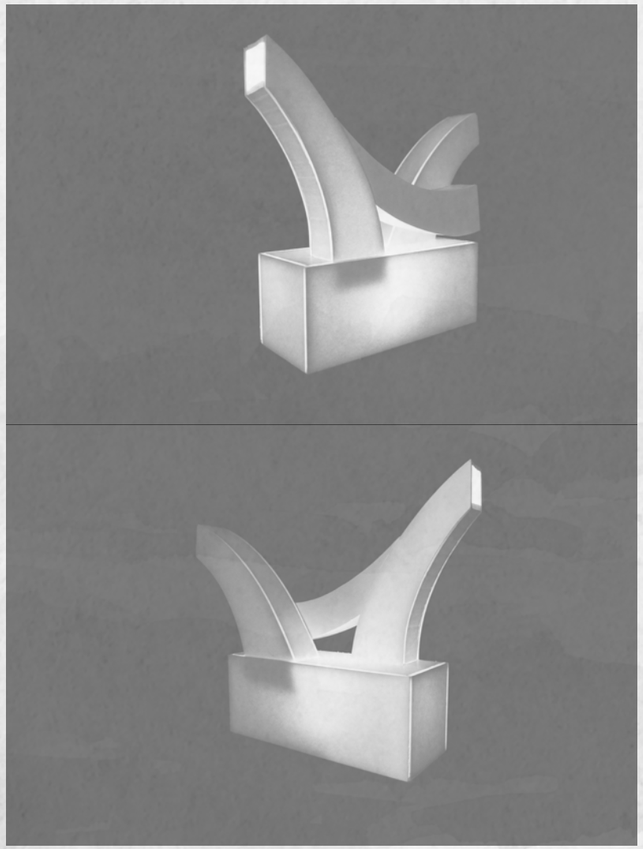
Contents:

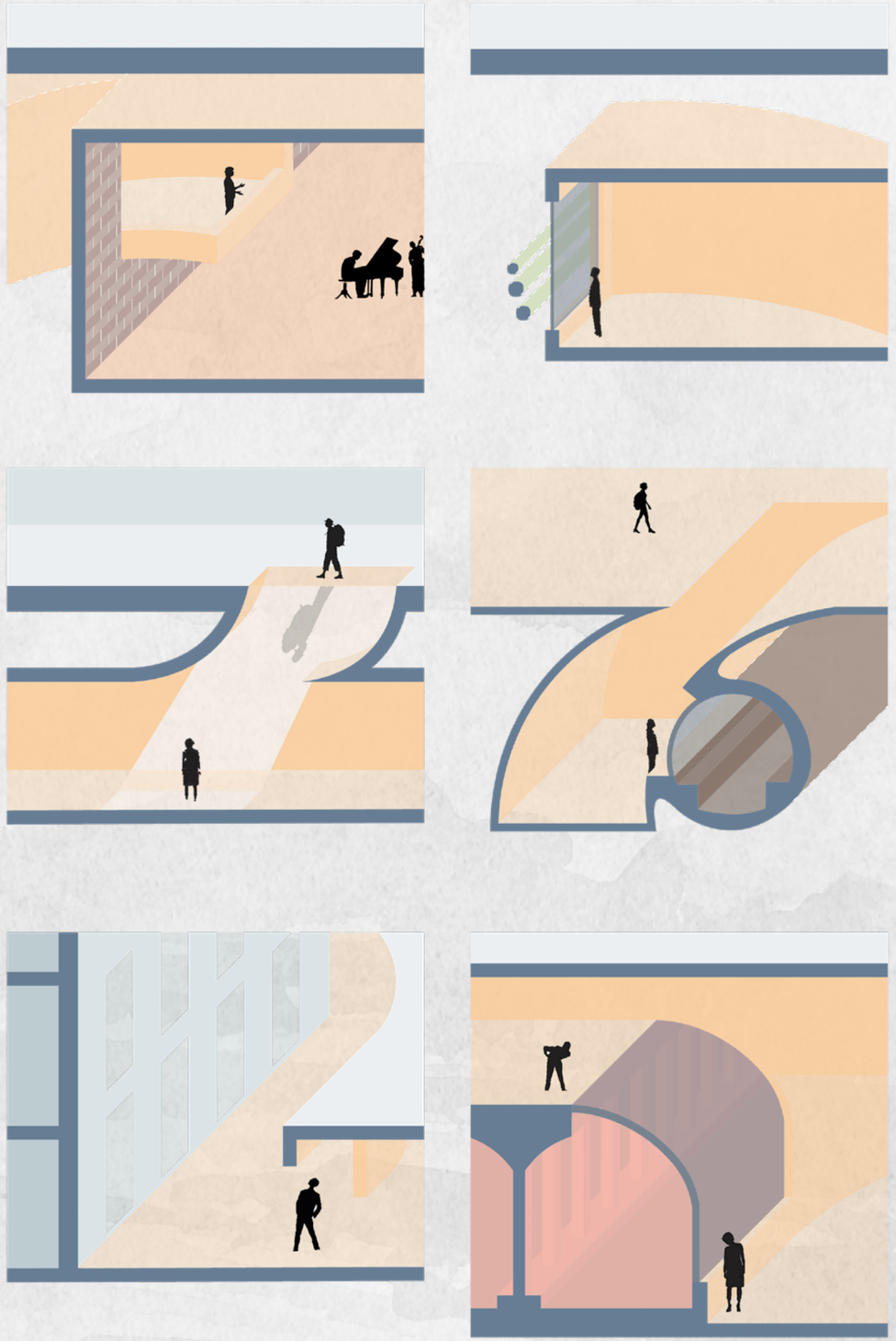
[Architecture Studio Projects]

Behind the Scenes Museum NYC

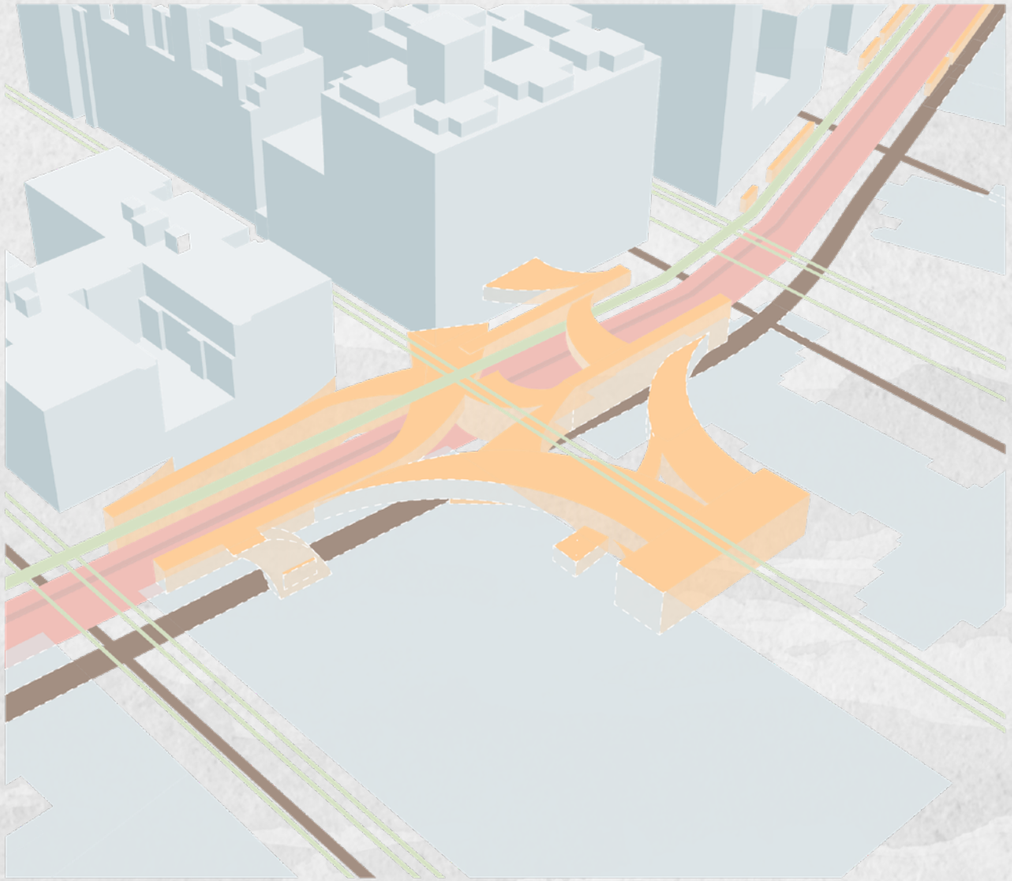
Fall 2018 | Columbia GSAPP | Core I Studio | Professor: Stephanie Lin

This project addresses a realization I had while visiting our site and during the bus tour our class took along Broadway, through Manhattan. Namely that a significant portion of New York's identity, as well as a majority of the infrastructure, mechanisms, and processes which allow the city to function in the way that it does are hidden either underground or behind walls. Additionally, I noticed that there exists an extensive and cavernous network of unoccupied volumes devoted to subway ventilation which, through my research, I have also discovered are slipping into obsolescence as new systems and technologies arise. Inspired by Michel de Certeau's essay, "The Practice of Everyday Life," I began to wonder what else might be able to pass through these vents if hot, stinky subway air no longer does? I believe knowledge, information, and history pass could through these vents instead and My project aims to achieve this by inhabiting and extending this system of subway ventilation to form a Behind the Scenes Museum of New York.

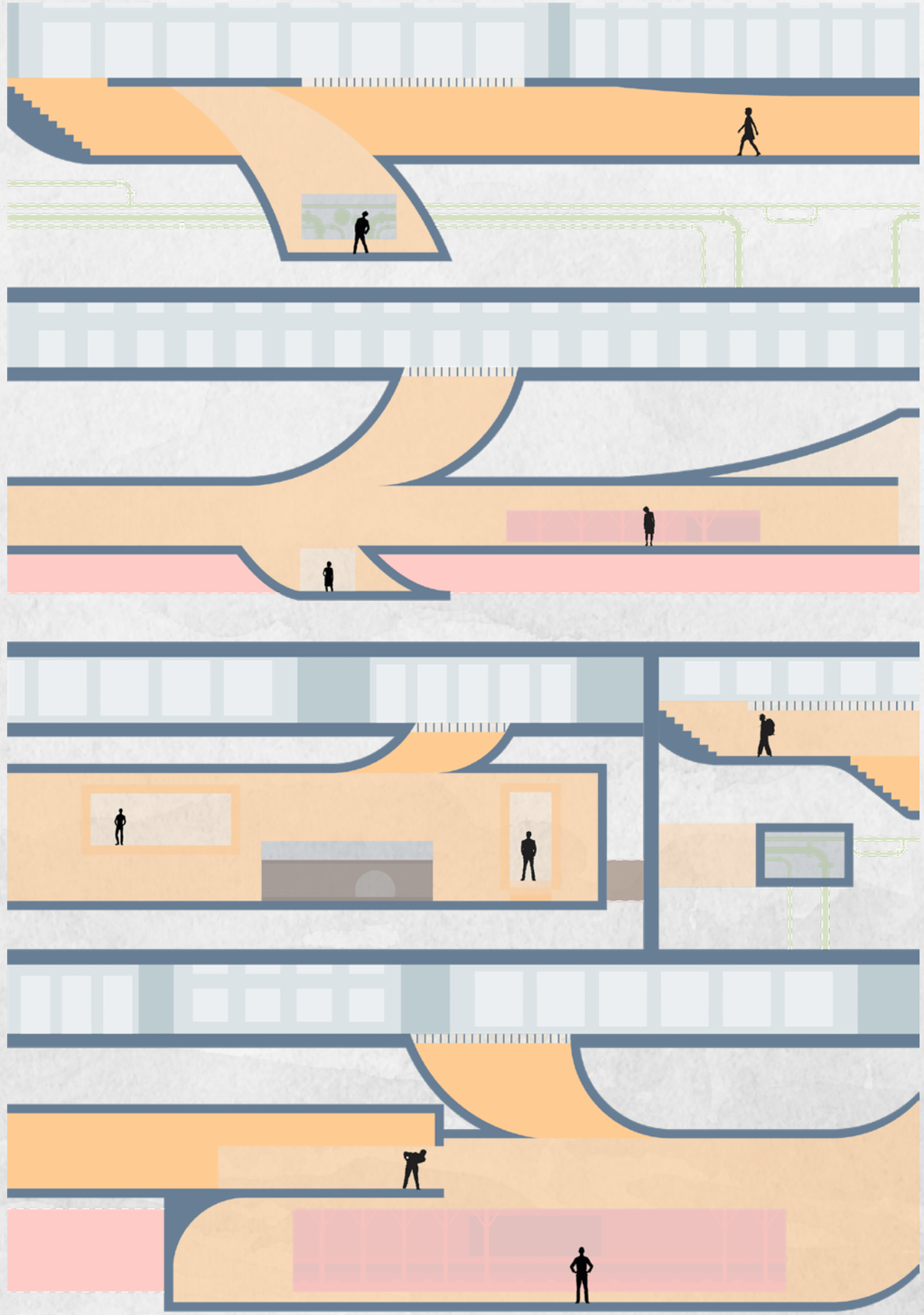




Left: Model Photos | Right: Moment Vignettes



Left Top: Section Perspective | Left Bottom: Axon | Right: Site Plan

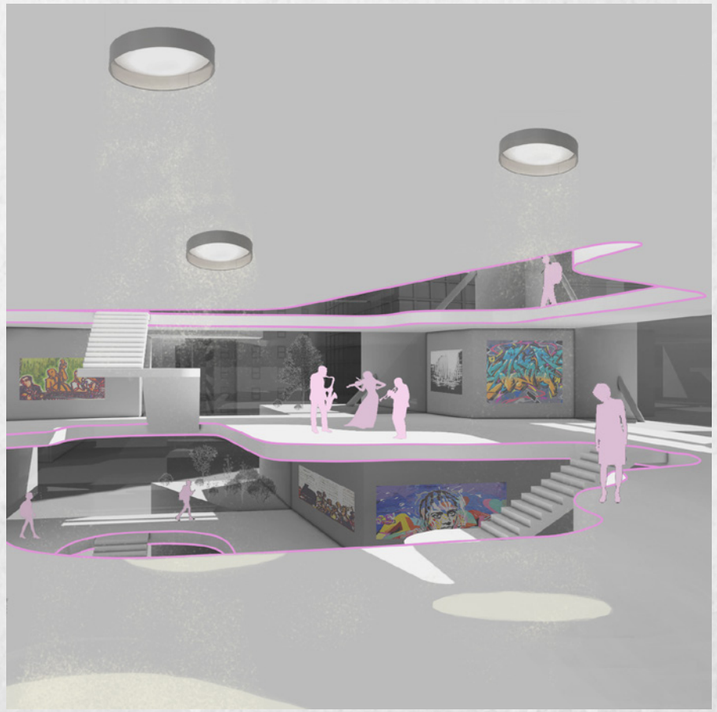


Left: Level B1 Plan | Right: Unrolled Section

Library for Sara D Roosevelt Park

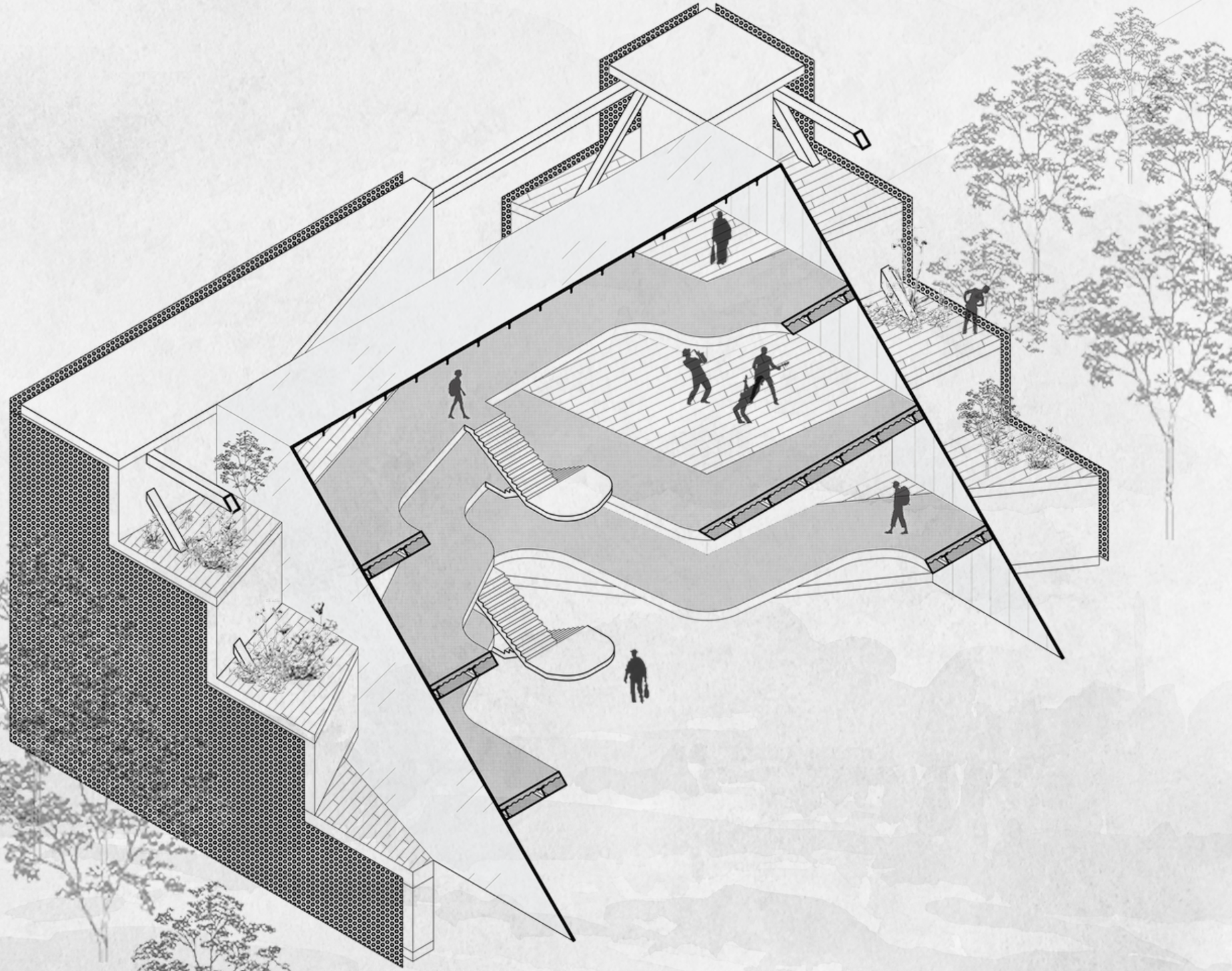
Spring 2019 | Columbia GSAPP | Core II Studio | Professor: Gordon Kipping

There are many places in the city which homeless members of our society consider more desirable than others. Parks, such as Sara D Roosevelt park, are some of these types of spaces. Yet the park was designed to be a place for families to take their kids to the playground, for people to play basketball and soccer, or for spending time in the community garden and any benefits for the homeless are an unconsidered consequence of other design objectives. Save for the small number of homeless shelters and soup kitchens in New York, there almost no spaces in the city whose primary concern is the wellbeing of the homeless population. The city isolates, ignores, and leaves this subset of the population to fend for themselves. I am interested in flipping this hierarchical model, in exploring the development of a space intent foremost on being of value to the homeless population.

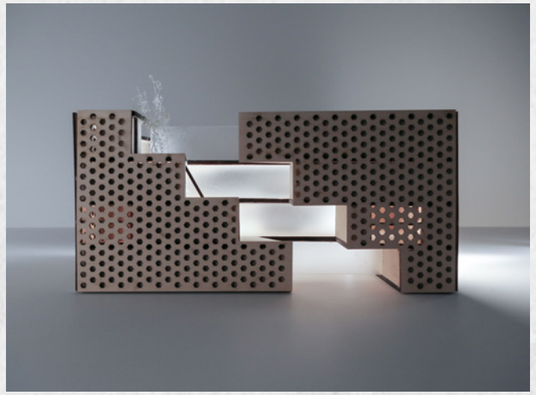


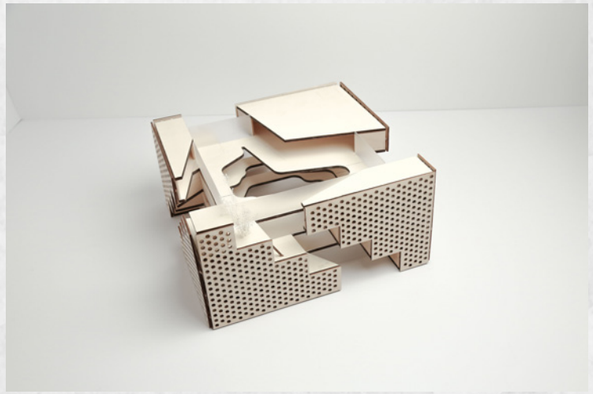
Interior Collage

In interviewing a number of homeless people down in the park, one of the most unexpected and enlightening observations I made was that all of the people with whom I spoke were enormously interested and enthusiastic to be interacting and conversing with me. I presume this must be because of the frequency with which they are ignored, and undervalued on a daily basis. This being said, not only does my library intend to provide resources of education, access to information, shelter, food, and clothing, but also a sense of belonging, integration, inclusivity, and engagement. Therefore, somewhat paradoxically, to design a library whose primary goal is to benefit the homeless population, I aim to design a library that is desirable to everyone so that this integration, engagement and convergence might take place.

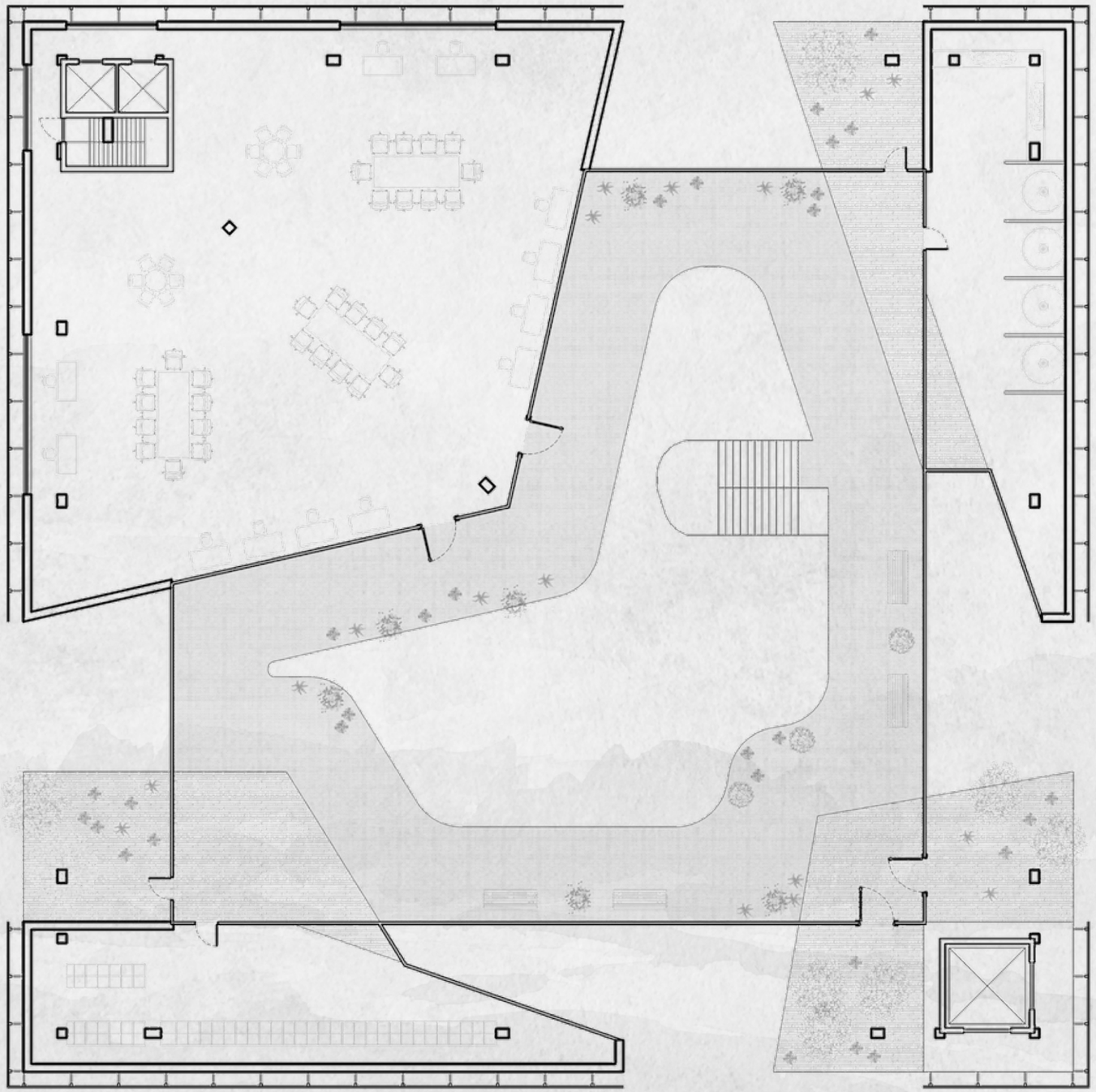


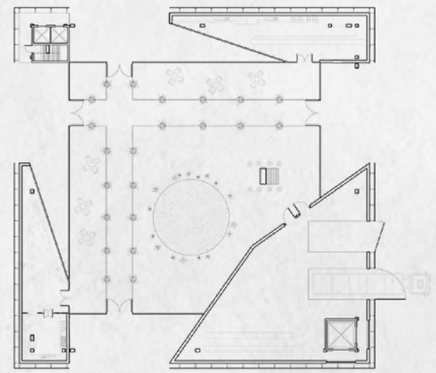
Section Perspective





Model Photos





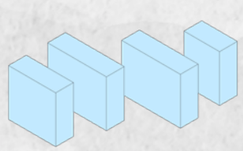
Left: Level 4 Plan | Right: Level 1-3 Plan

Avenues of Atmosphere

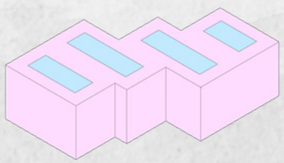
Fall 2020 | Columbia GSAPP | Core III Housing Studio | Professor: Erica Goetz

The goal of this project is to create a building that wraps itself around the space of air. The atmosphere carves through the building instead of the building carving through the atmosphere. Therefore the building becomes defined by the air and light that move through it. It attempts to fold the atmosphere into the building, and cradle it in a network of volumes and pockets that stretch throughout the building. This strategy towards the space of air results in an inward facing architectural typology.

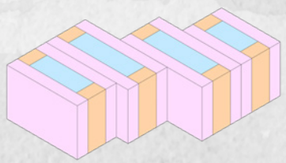
Initial Concept Collages



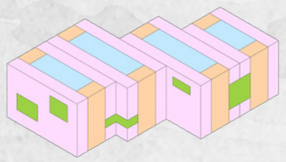
Vertical Void



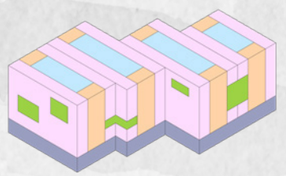
Occupiable Units



Vertical Circulation



Outdoor Green Space



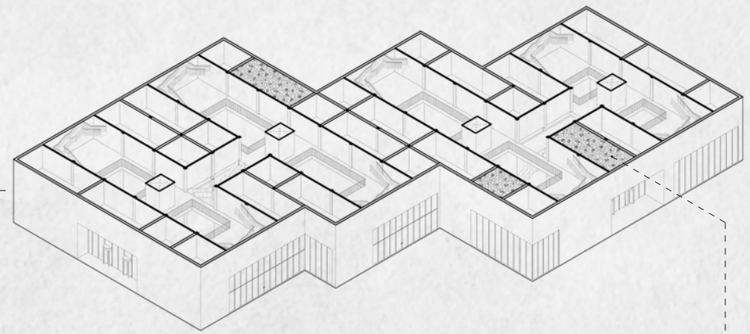
Community Space // Building Amenities

Top: Interior Avenue Perspective | Bottom: Concept Diagrams

Ground Floor

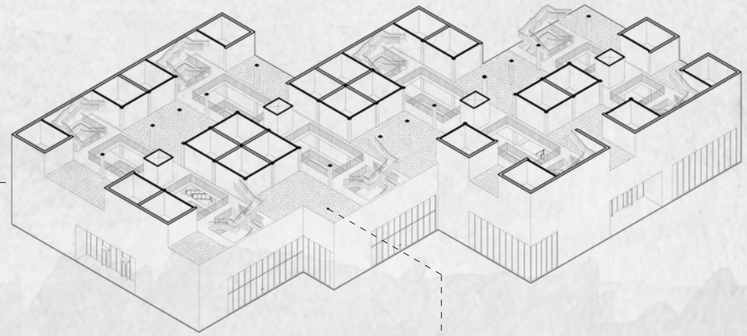
Community Space // Retail // Building Amenities

2nd Floor



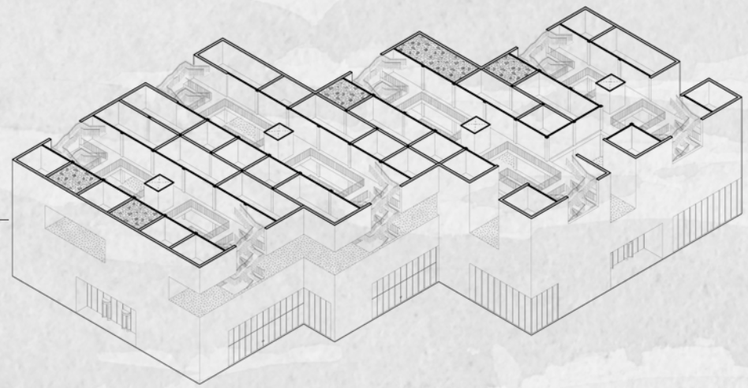
Earth-Fill Units: Allows for large vegetation above

3rd Floor

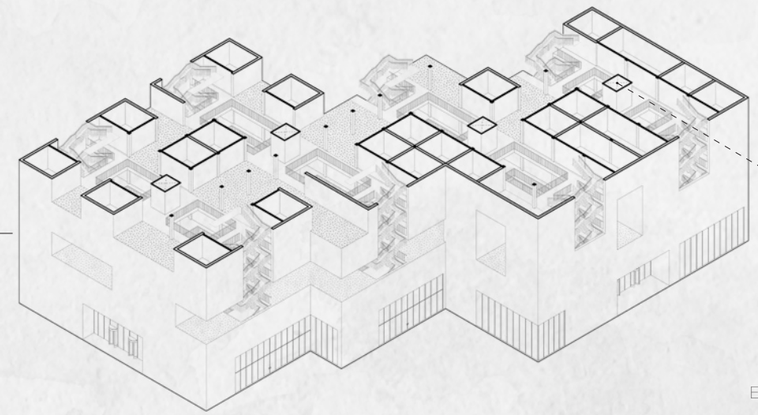


Green Space

4th Floor



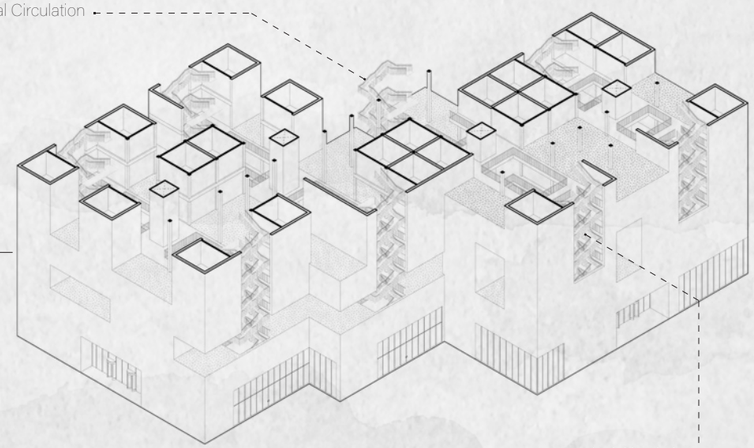
5th Floor



Elevator Cores

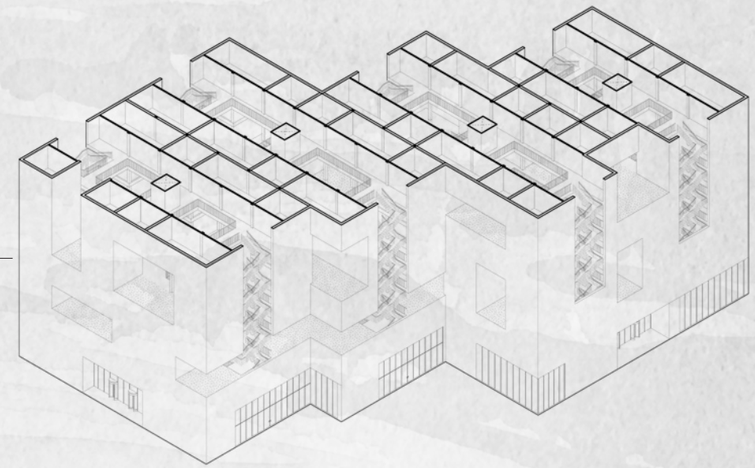
Vertical Circulation

6th Floor



Vertical Circulation

7th Floor



Building Plan-Axonometrics

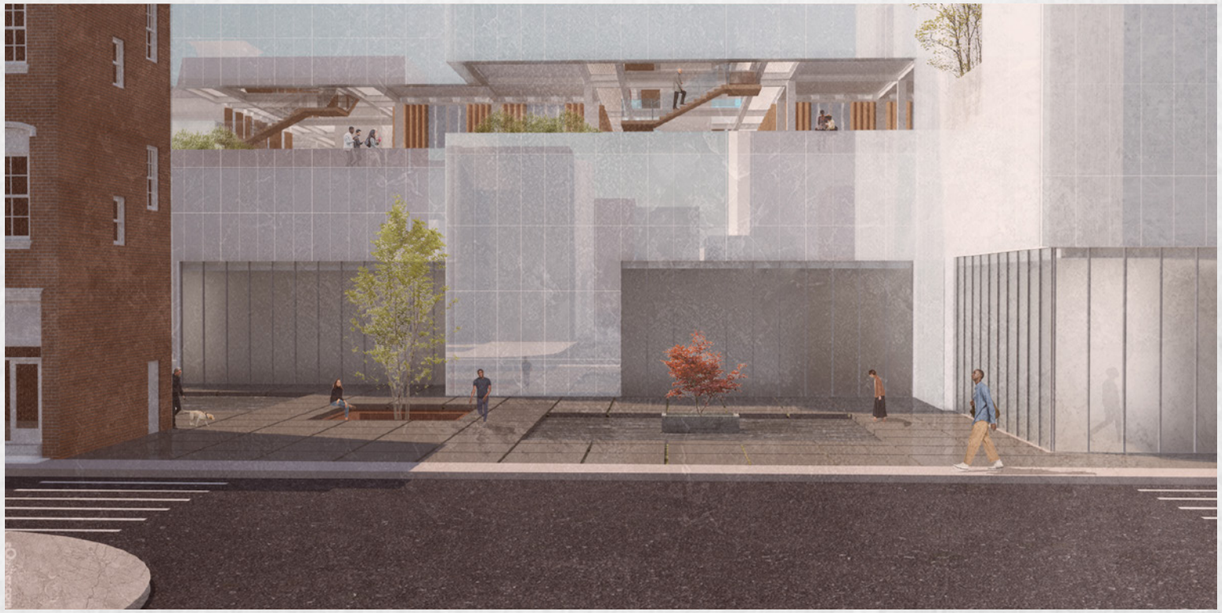
4th Floor Plan

Ground Floor Plan

Site Plan

The units open onto this internal, interconnected network of light and air instead of outward to the city streets. To reinforce this interiority, the exterior of the building is encased in a translucent trombe wall. This allows for light to enter from the outside, while preventing the experience of the interior avenues from becoming overly saturated with external visual stimulation.

Top Left: 5th Floor Plan | Bottom Left: Key | Top Right: Floor Plans



Left: Exterior Perspective | Right: Perspective from Top Floor Avenue

Bottom: Exterior Render

Re-Wild

Main House for the Schaghticoke First Nations Land

Spring 2021 | Columbia GSAPP | Indigenous Futurism Studio | Professor: Vanessa Keith

This design for the main house is part of a larger site plan for a parcel, in up-state New York, belonging to the Schaghticoke First Nations people. Drawing on native insight and environmental consciousness as a catalyst for ecological respect, indigenous communities live in moral opposition to the Western-centric attitude of untempered consumption. Yet, Indigenous communities are forced to rely on fractured systems of food and energy resources designed to maximize profit rather than fulfill the needs of its patrons. These infrastructures often shift resources that should be benefiting those who produce them towards major metropolitan centers, undermining the needs of Indigenous populations. This project seeks to aid in establishing an alternative path forward for native communities through the installation of infrastructure and sustainable strategies that would enable these populations to become self-reliant, producing food and resources through sustainable, innovative and ecological strategies.

Guest Room

Guest Room

Office

Gallery

Archive

Conference Room

Library

Level 1 Plan

Bottom: Plans and Section | Top: Interior and Exterior Renders

Mindfulness Garden

Fall 2021 | Columbia GSAPP | Sensory Publics Studio | Professor: Bryony Roberts

The premise of this studio is to address the sensory aspects of the public realm, exploring how a greater range of sensory environments can celebrate and support neurodiversity. My project aims to create a mindfulness garden that offers considerations for a range of sensory preferences and experiences. Gently guided by the principles of a Japanese promenade garden, the project is meant to be experienced by walking a path through it, stopping periodically, and encountering a curation of architectural moments and landscape elements along the way. Yet, it re-thinks the singular, prescribed path to allow for a network of intersecting paths and spaces that create a gradient of sensory experiences so that visitors may choose their own path to a mindful experience.

The site I chose is an abandoned overpass structure at 72nd Street and Riverside Park. This site is situated along the riverside pedestrian and bike paths and is directly adjacent to a park that has a lot of pedestrian traffic. So, not only does this site have a constant flow of people passing by it, many of these people are there to exercise, and recreate already. Therefore I am promoting the addition of a mindfulness component to this experience in order to create a more well rounded spatial typology of wellness.

Promenade Garden Design Principles:

Asymmetry
Japanese promenade gardens are not laid on straight axes, or with a single feature dominating the view. Buildings and garden features are usually placed to be seen from a diagonal, and are carefully composed into scenes that contrast right angles.

Concealment
("Hide and reveal") The promenade garden is meant to be seen one landscape at a time, like a scroll of painted landscapes unrolling. Features are hidden behind hills, trees, groves or bamboo, walls or structures, to be discovered when the visitor follows the winding path.

Borrowed scenery
Smaller gardens are often designed to incorporate borrowed scenery, the view of features outside the garden such as hills, trees or temples, as part of the view. This makes the garden seem larger than it really is.

Left Bottom: Site Photo | Right: Initial Concept Collages

Low Sensory Path

The low sensory paths dampen both internal and external sensory inputs through the use of a multi-layered tensile fabric shell, gravel ground, and dense planting which limits visual and auditory exposure. Undulating apertures allow for visitors to choose and experience moments from adjacent spaces without having to immerse or overwhelm themselves. The forms follow a path designed for a low level of spatial complexity so that the hierarchy of the spaces are easily understood.

Medium Sensory Path

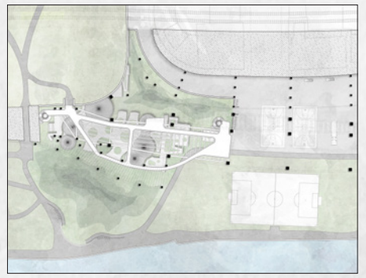
The medium sensory paths offer more visual integration and exposure to the sensory inputs of the surrounding site, while still providing the layering of an architectural enclosure. These spaces consist of a series of intersecting volumes creating several pockets of space along the paths. Seating elements, staircases, and fluctuation in the porosity of the enclosure generate a slightly higher variance of sensory and spatial conditions throughout the paths.

High Sensory Path

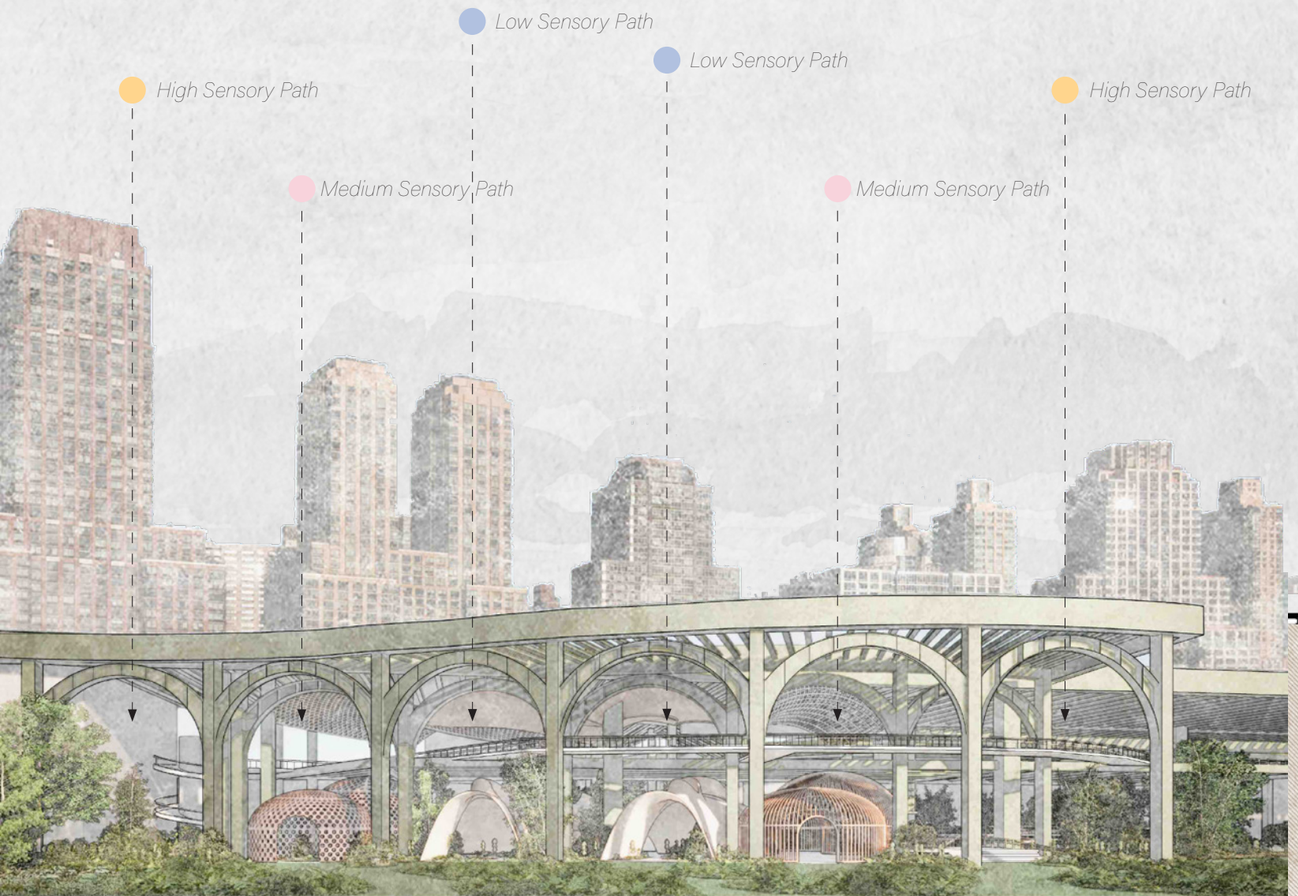
The high sensory paths have the least amount of architectural layering making them the most exposed to the sensory conditions of the site. These spaces are designed to be busier both in terms of sensory input as well as architectural form and landscape integration. There is a higher level of spatial complexity allowing for both multiple distinct areas and multiple intersecting routes within the path as a whole. These paths include interactive elements such as rope bridges and area hammocks.

Left: Level 1 Plan | Right: Sensory Path Perspectives

Left: Night Render of Back Garden | Middle: Level 2 Site Plan | Right: Level 1 Roof Plan

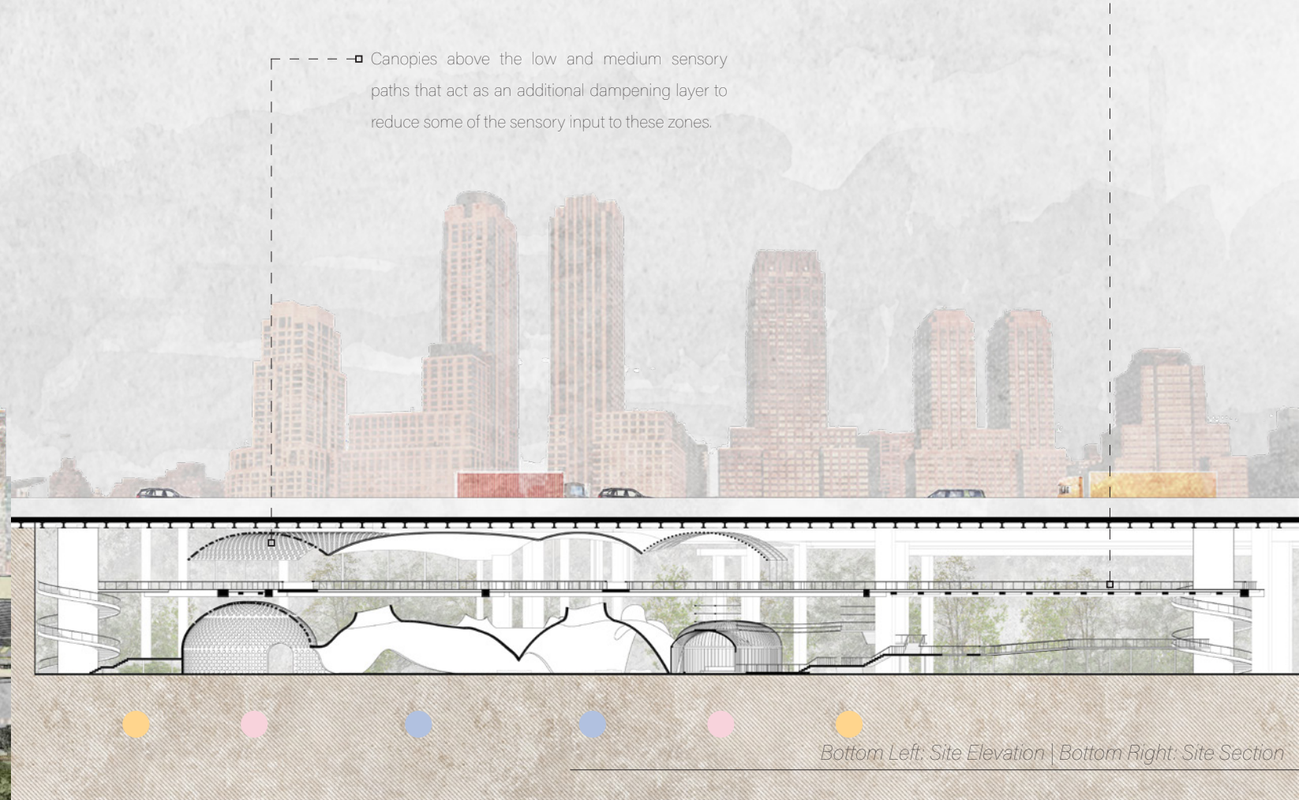


Responding to the existing language and spatial hierarchy of the abandoned overpass structure, each of the 6 sensory paths is placed within one of the six arches. Each path begins abutting the opening of an arch and extends back towards the large light well in the rear of the site, serving to connect the two most compelling spaces of the existing site with a network of sensory experiences. Additionally, the pairs of paths are arranged in a way so that, when you move between them, you are always following the gradient, and never moving directly from a low to a high sensory path. This avoids abrupt or overwhelming transitions.



Second level walkway provides a connection to the park on the other side of the overpass as well as lateral circulation across the entire site.

Canopies above the low and medium sensory paths that act as an additional dampening layer to reduce some of the sensory input to these zones.

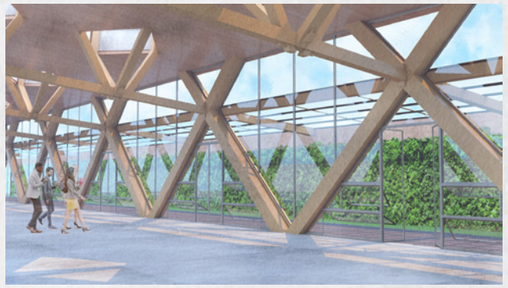


Bottom Left: Site Elevation | Bottom Right: Site Section

The Bamboo Cafe

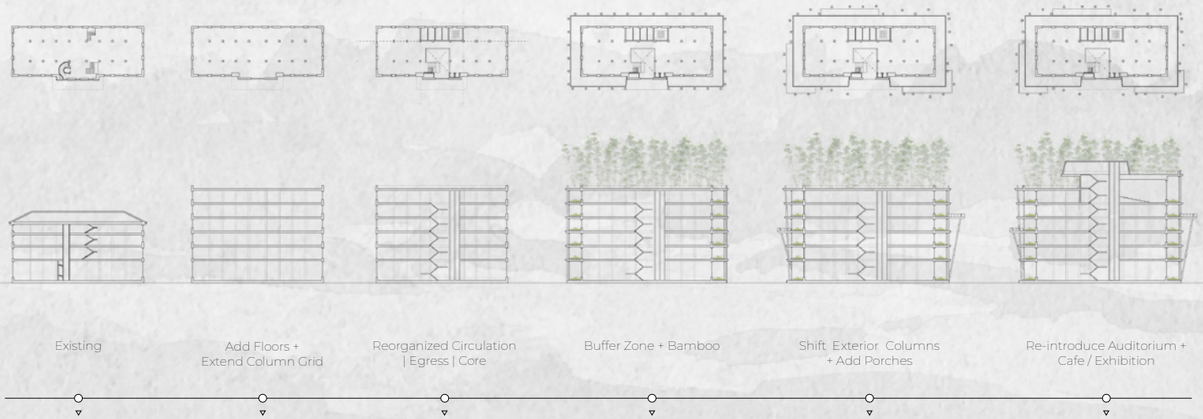
Spring 2022 | Columbia GSAPP | Advanced VI Studio | Professor: Gordon Kipping

This studio focused on re-defining the relationship between wood construction, plants, and architectural space. My approach to this integration was to create a building system that self conditions through the use of natural air purification and ventilation, as well as self-maintains through the implementation of material farming which serves to offset the construction materials of the project. Plants and the wood they produce are treated as indispensable components of this building system.



Top: Initial Concept Render | Middle: Initial Concept Section | Bottom: 3D Joinery Mock-Up

During the early stages of the design process, I became interested in the idea of offsetting building materials on site the same way we do energy with solar or wind. I quickly realized that conventional construction lumber needs far too much area and time to be a feasible solution to this so I began investigating bamboo. I have designed my building with bamboo composites and laminates, products similar to glulam beams and CLT panels, with an increased structural performance over those made with conventional lumber. The shifting of the columns seen on the exterior of the building and in the cafe space is responding to the visual language of the bamboo that built them.



Studio Space
Total: 20,250 sq ft – 70% Increase

Classroom
Total: 4,000 sq ft – 35% Increase

Office
Total: 5,200 sq ft – 125% Increase

Auditorium
Total: 5,200 sq ft – Relocated

Cafe | Exhibition
Total: 2,500 sq ft – Relocated

Bathroom
Total: 2,650 sq ft – 100% Increase

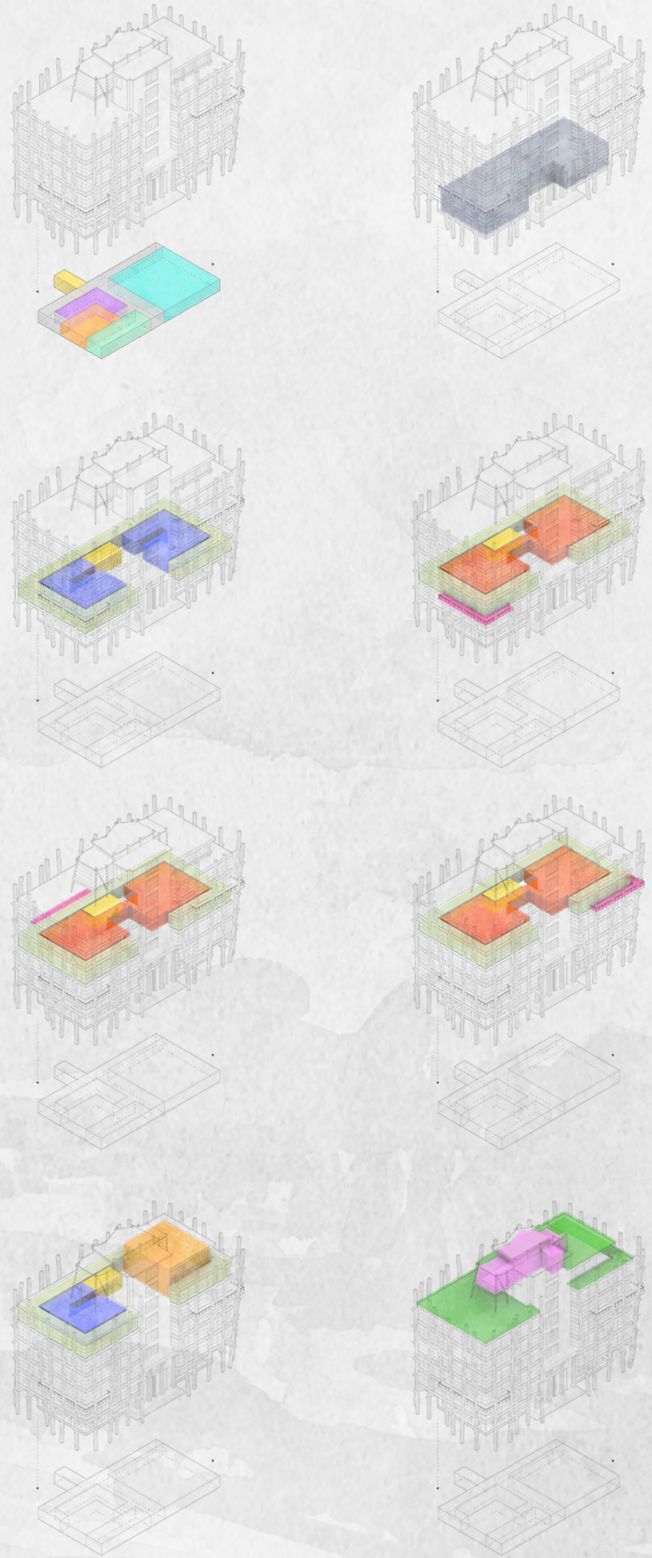
Shop
Total: 5,400 sq ft – 30% Increase

Buffer Zone
Total: 20,250 sq ft – 70% Increase

Bamboo Growth
Total: 12,950 sq ft

OPS
Total: 1,330 sq ft – 95% Increase

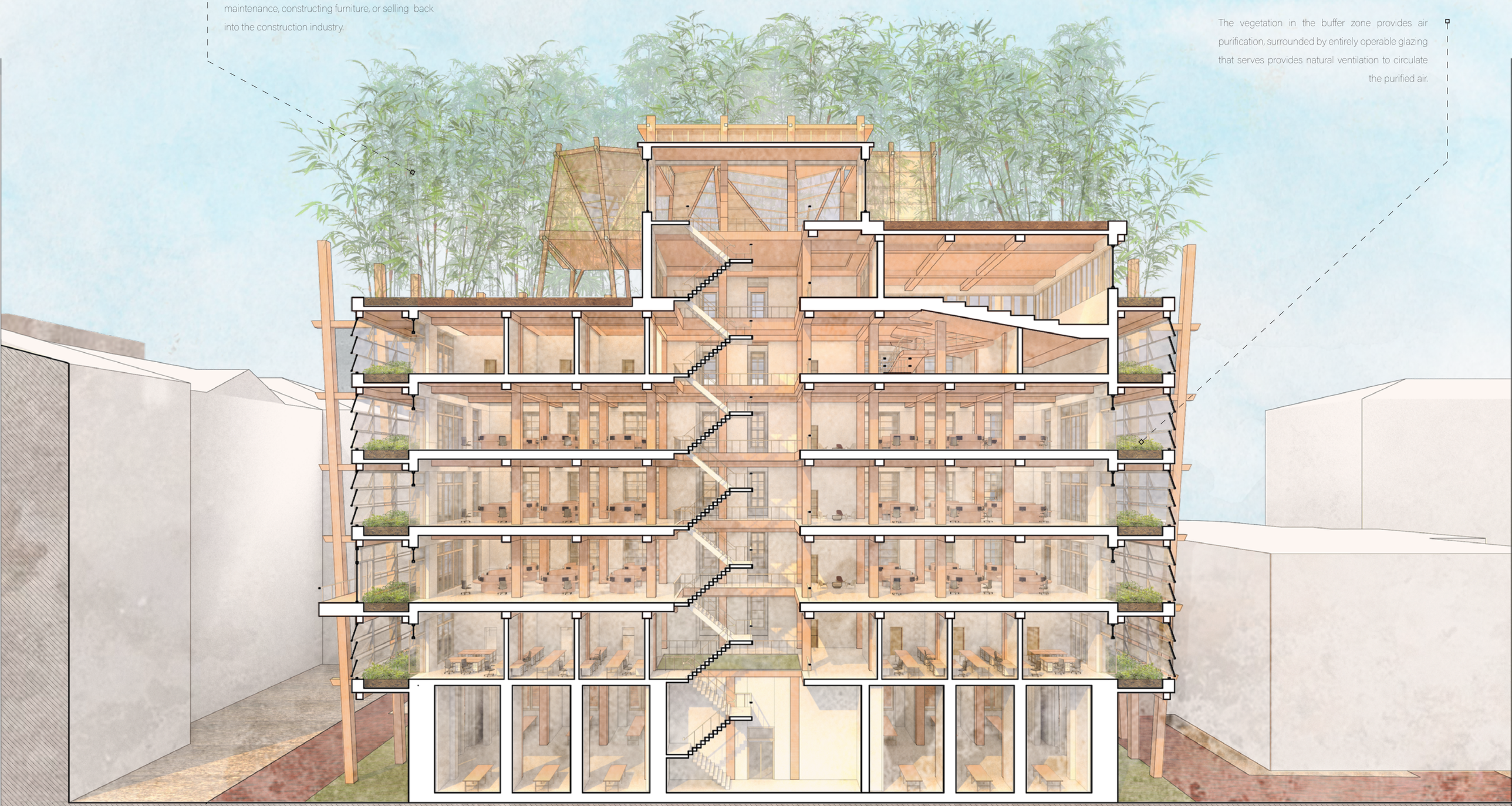
Porch Space
Total: 1,770 sq ft



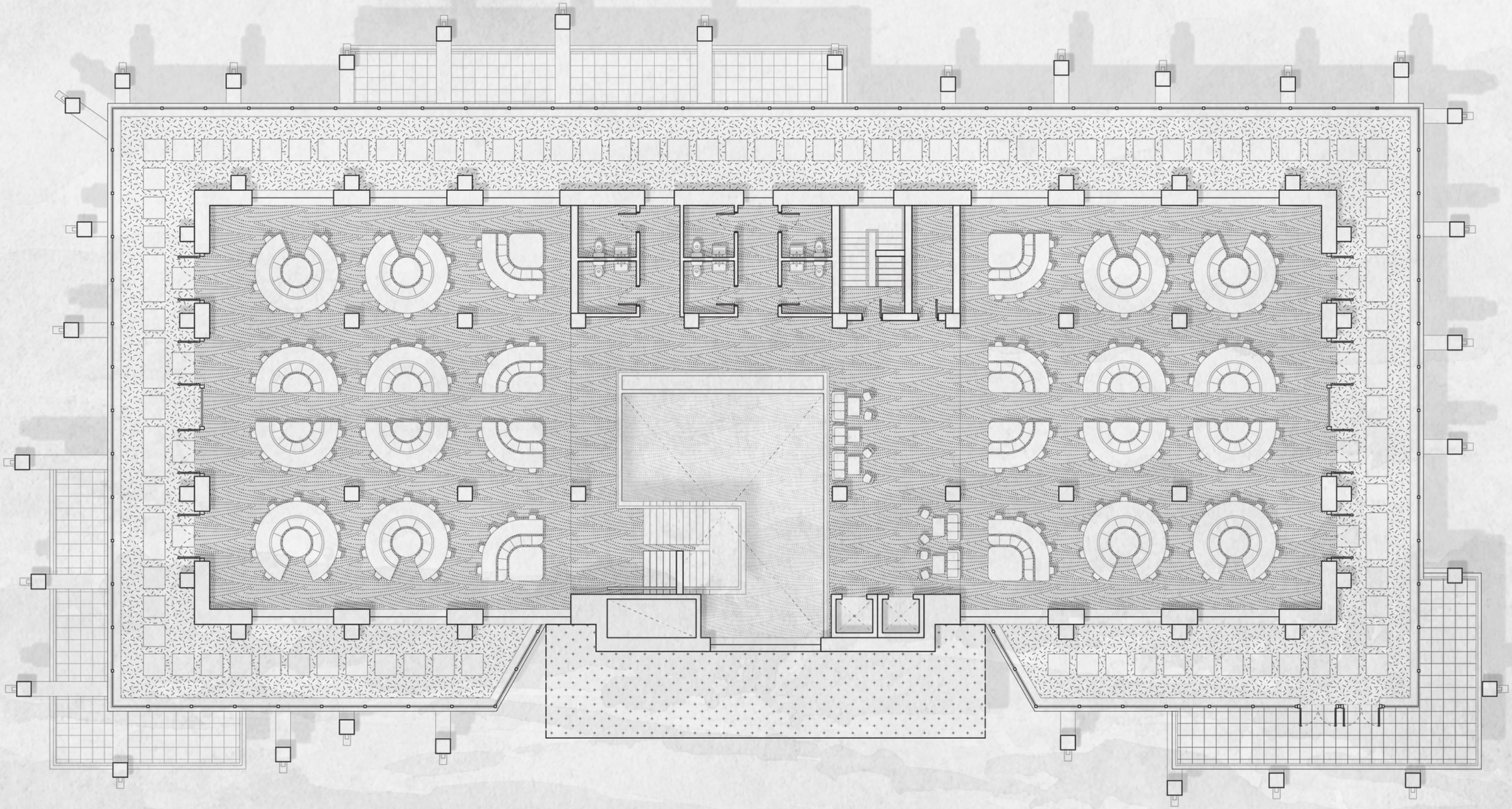
Left Bottom: Operations Diagram | Left Middle: Exterior View | Right: Proposed Program Diagrams

Bamboo production provides harvestable fibers that can then be used to offset construction materials by means of replacing of structural members during maintenance, constructing furniture, or selling back into the construction industry.

The vegetation in the buffer zone provides air purification, surrounded by entirely operable glazing that serves provides natural ventilation to circulate the purified air.



Section Perspective Detail



Studio Level Floor Plan

Left: Studio View | Right: Bamboo Cafe Render