

Jonathan M. Chester
Columbia GSAPP
M.Arch Portfolio, 2023



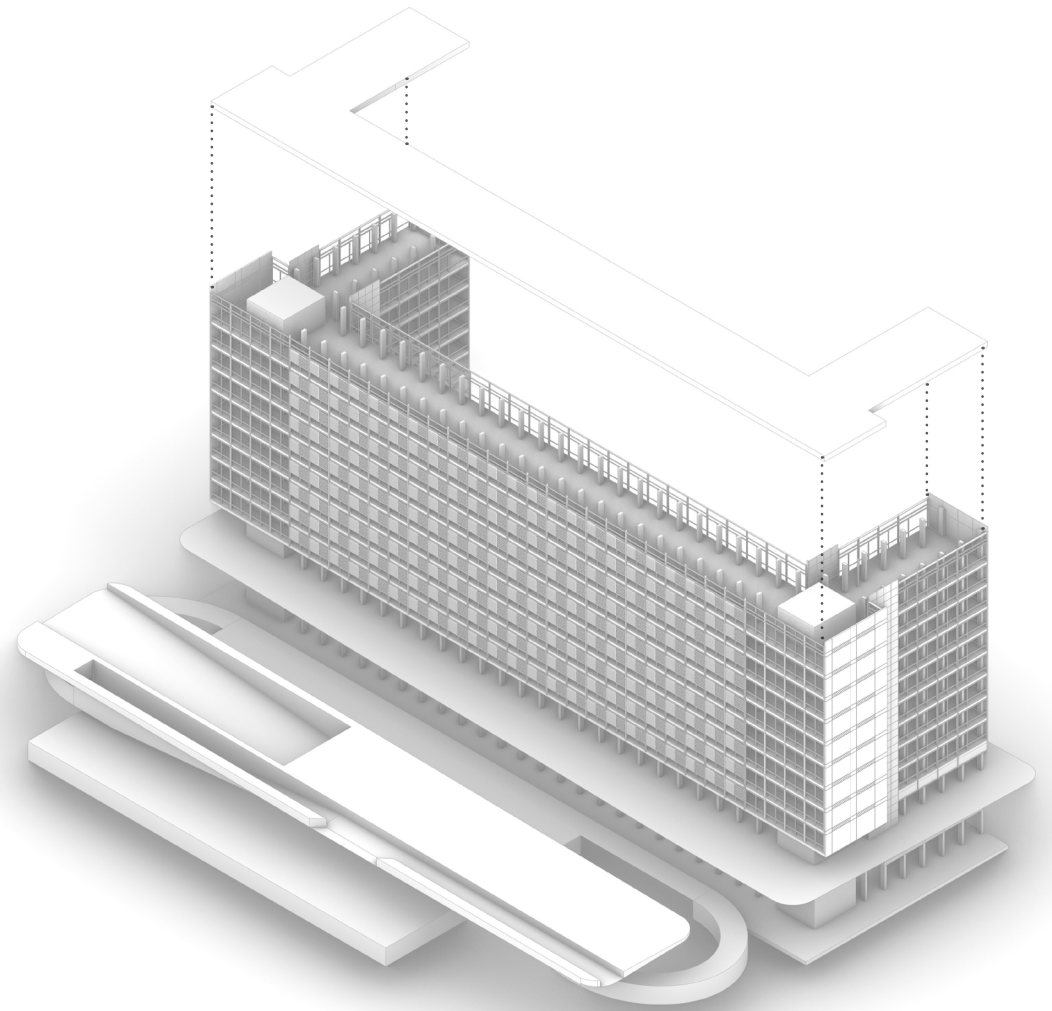
01 / Vertical Gardens

Advanced Studio VI, Spring 2023
Project: Adaptive Reuse, Mixed-Use Office,
Short-Term Housing, Museum, Transit Connection
Location: Buenos Aires, Argentina
Size: 500,000 SF
Professor: Galia Solomonoff
Mentor: Oscar M Caballero
Individual Project

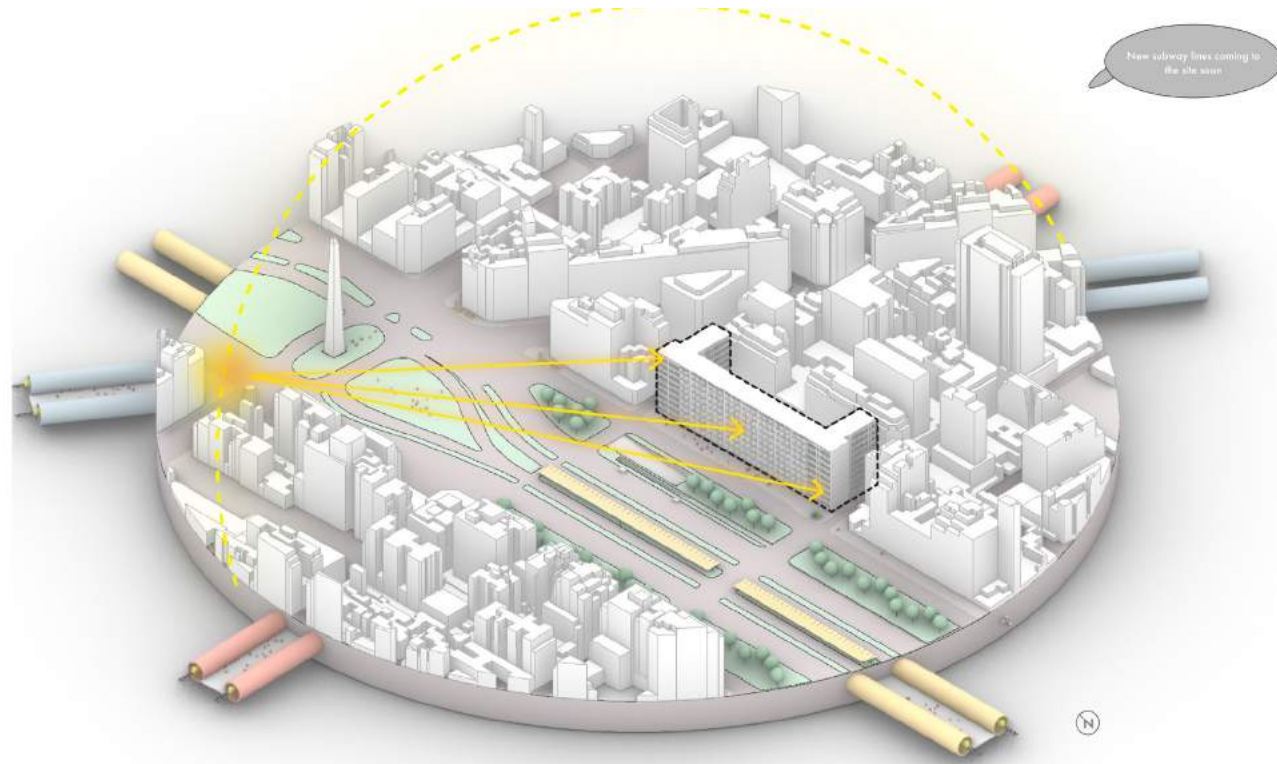
This project addresses the diverse needs of a rapidly growing and densifying city, while prioritizing 2030 sustainability goals that have been set by the city. The existing structure is eroded to form a lush public park that cools down the neighborhood and shades a new office tower that slots in behind it. The dense mixed-use program also includes short-term conventillo style corporate housing, publicly accessible event space, a transit connection, light retail and a museum. The project has 2 main intentions - firstly to develop a program that attracts locals and tourists alike, and secondly to create a sustainable landmark that celebrates the 2030 goals set by the city of Buenos Aires. The city plans to plant 100,000 trees by 2030.



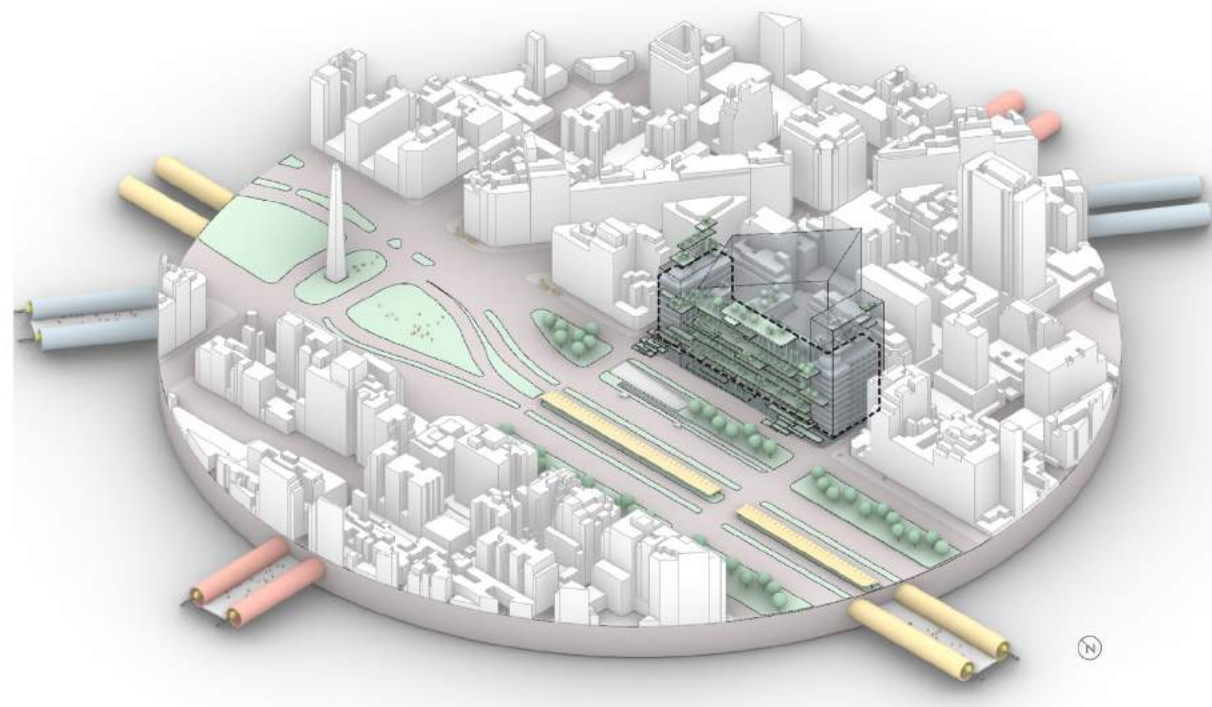
Existing Conditions



Environmental Considerations

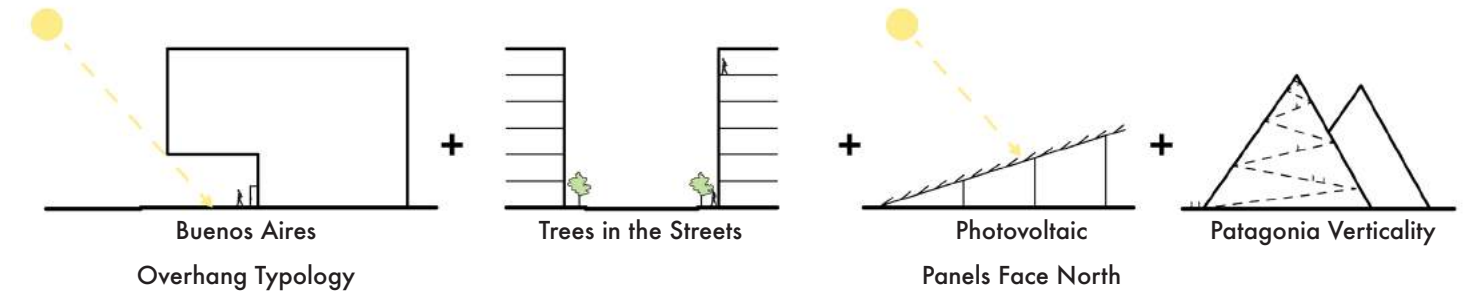


Sun Path

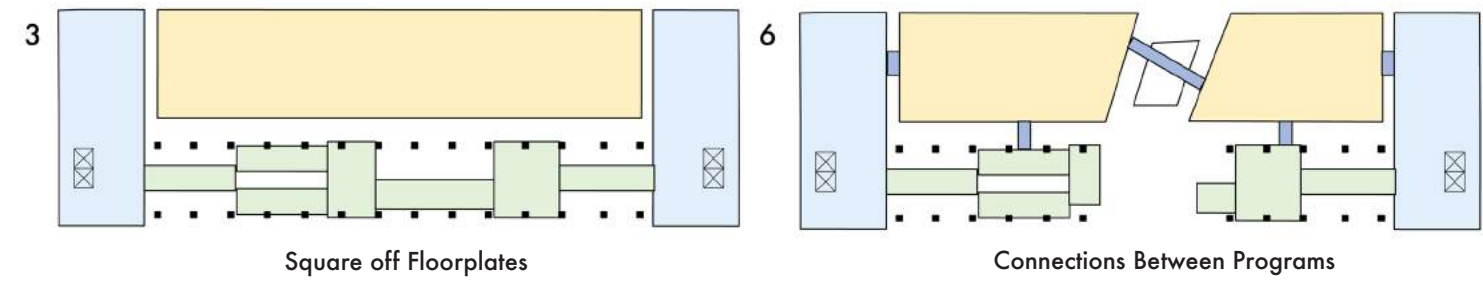
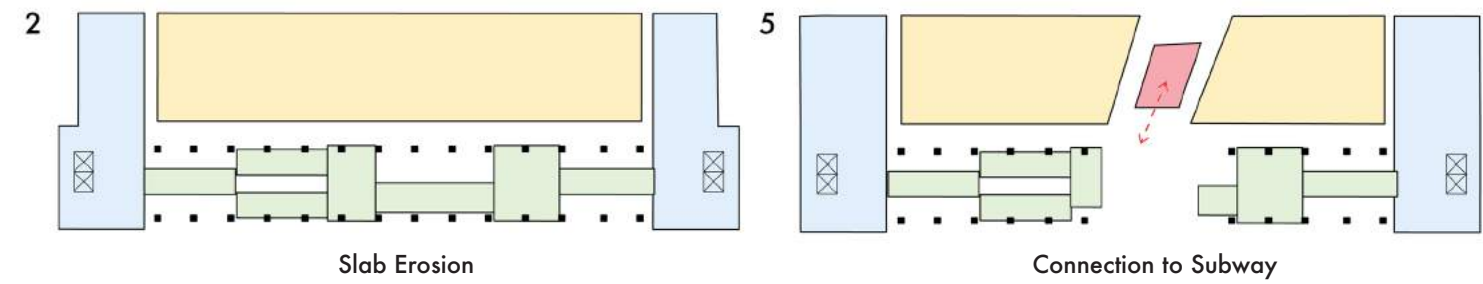
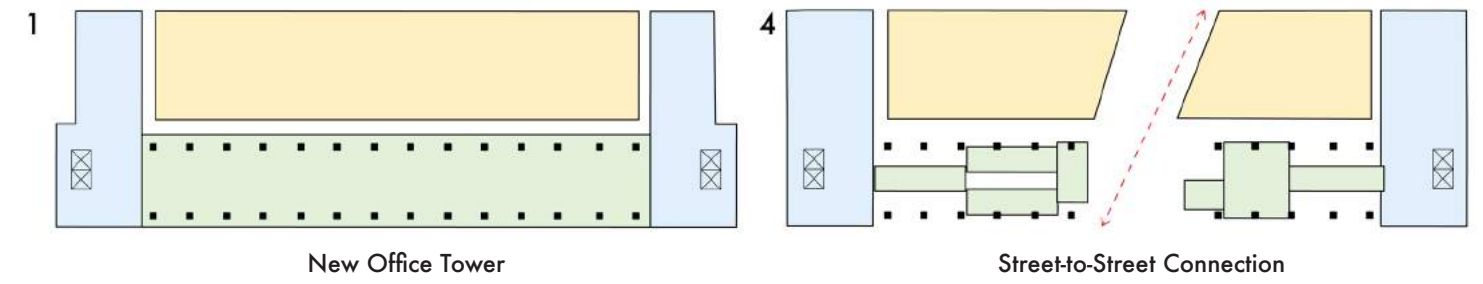


New Tower & Eroded Garden Slabs

Environmental Considerations

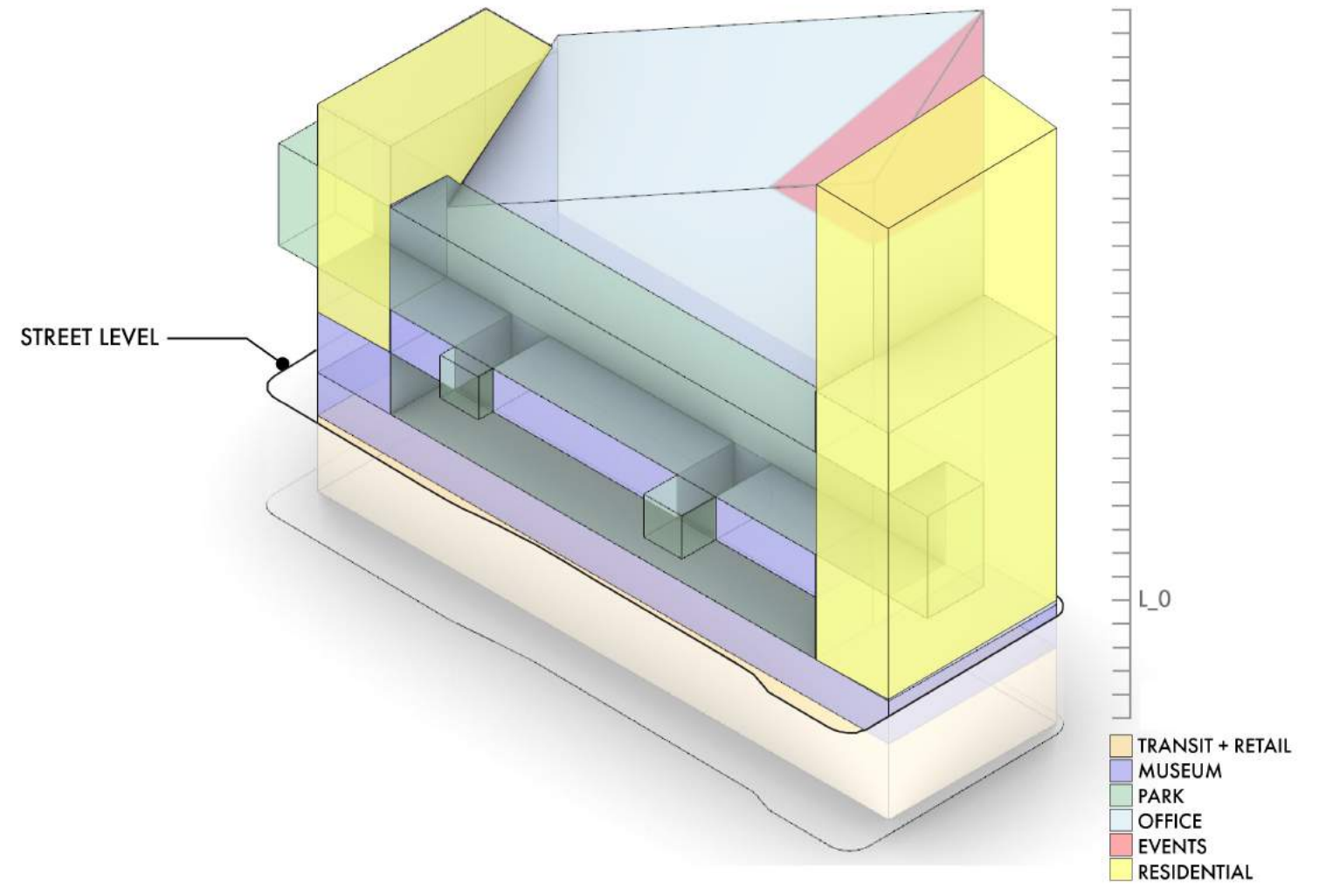
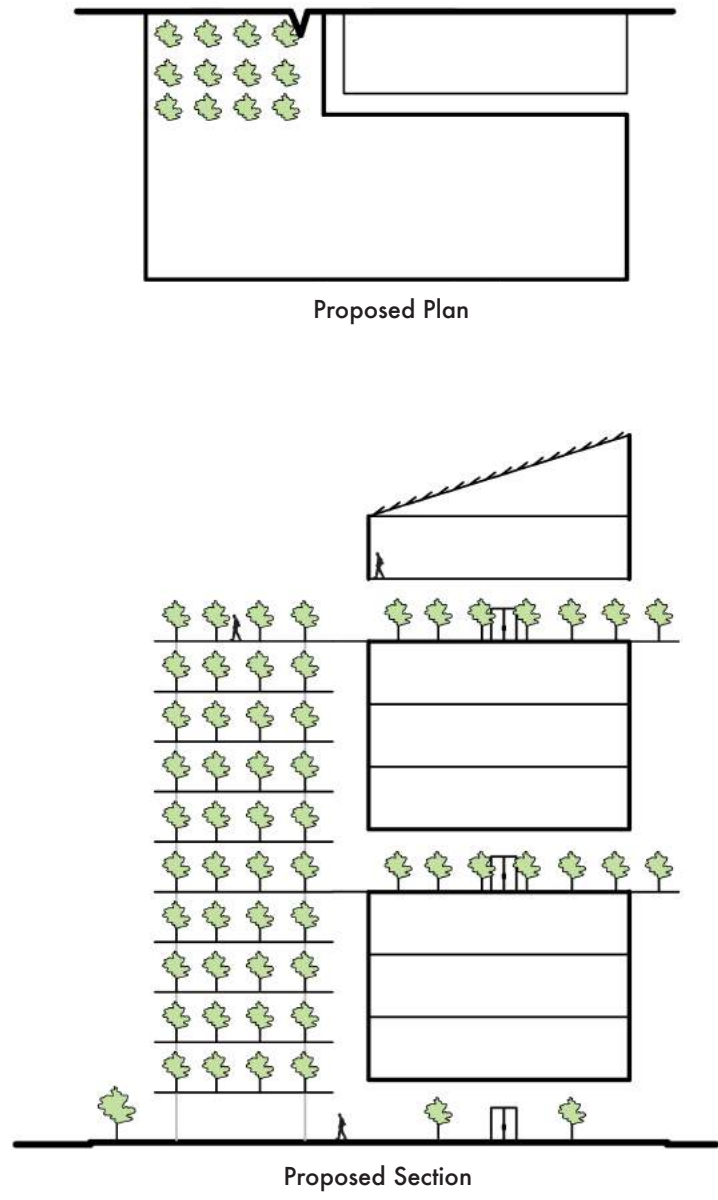


Contextual Considerations

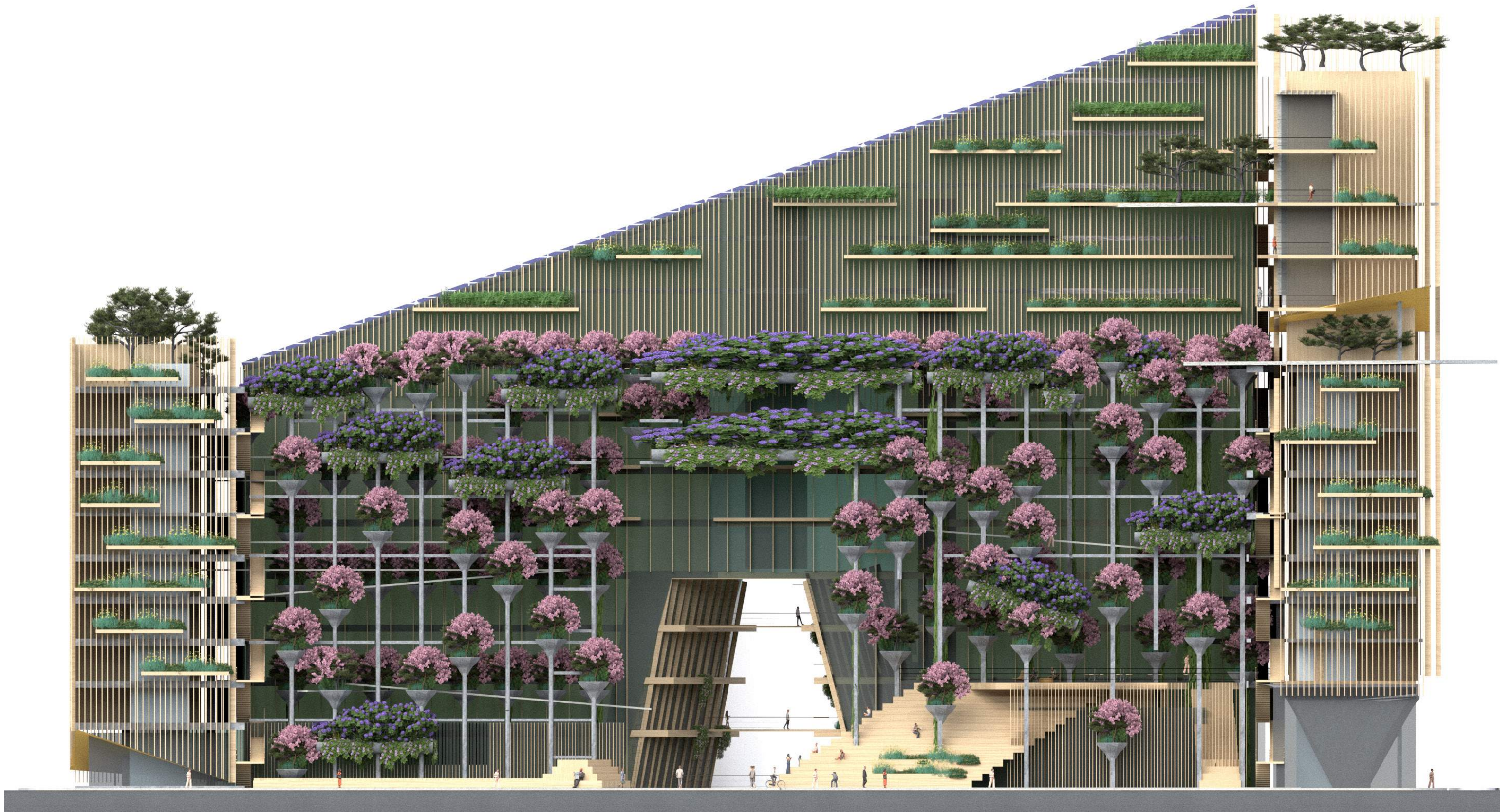


Environmental & Contextual Considerations Combined in Existing Building

Program



West Elevation with Garden as Shade

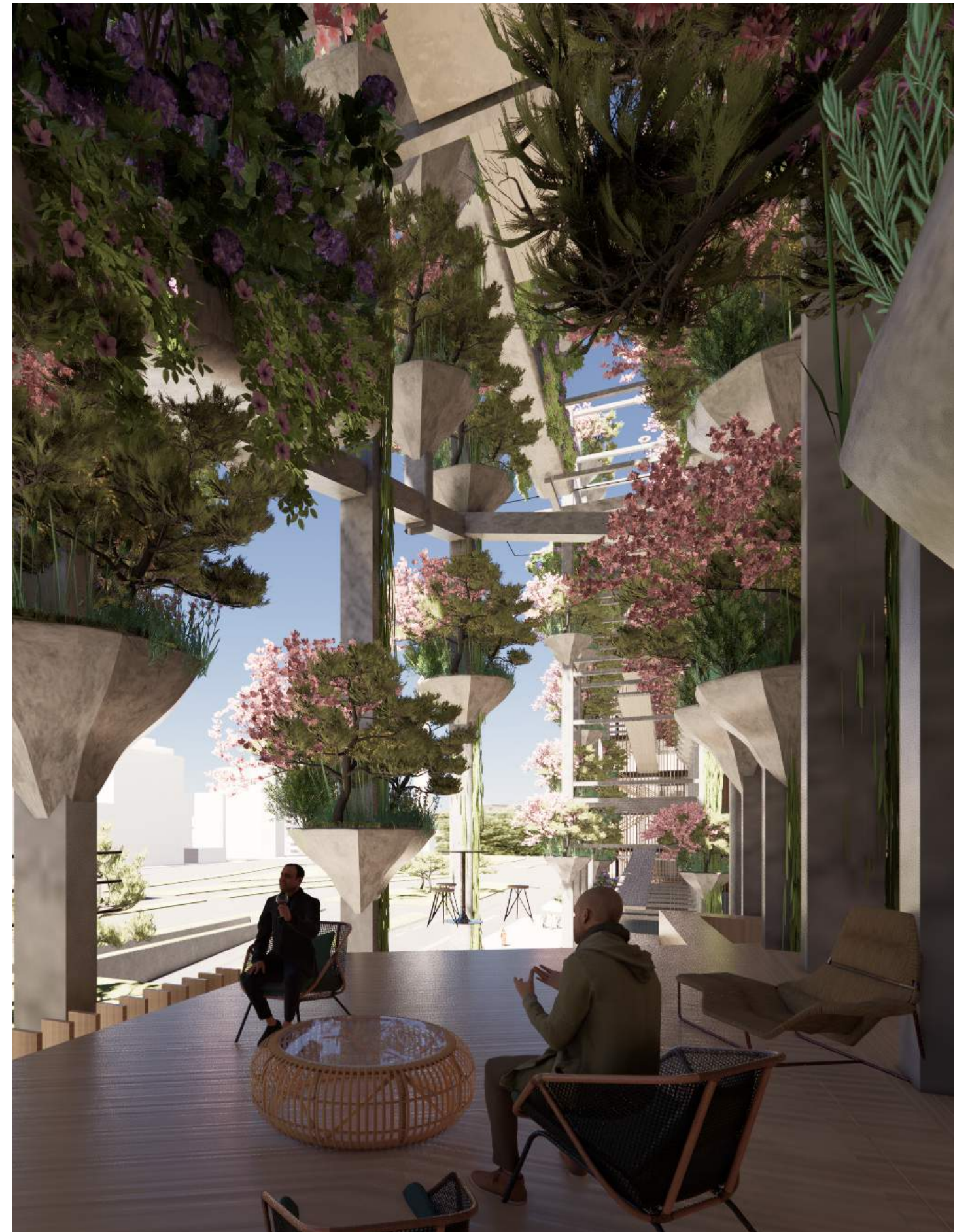


Structural Approach

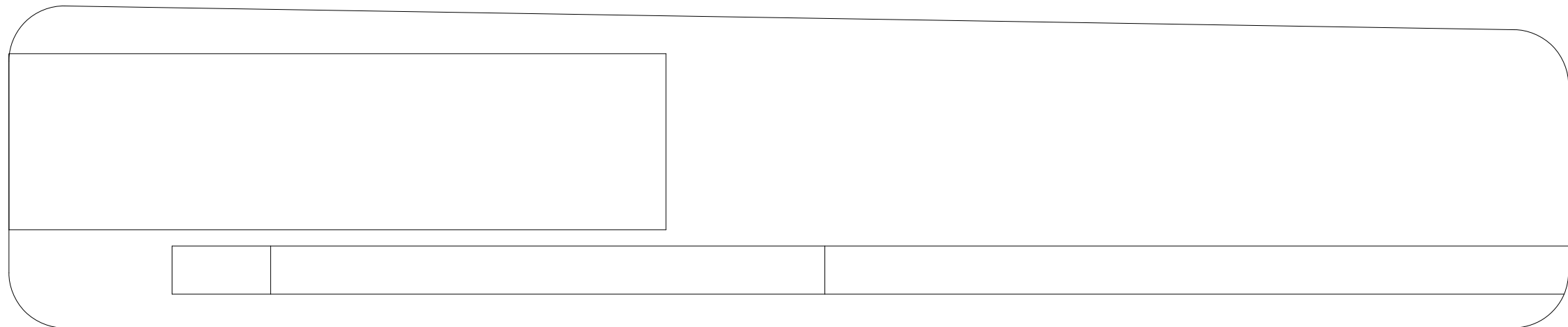
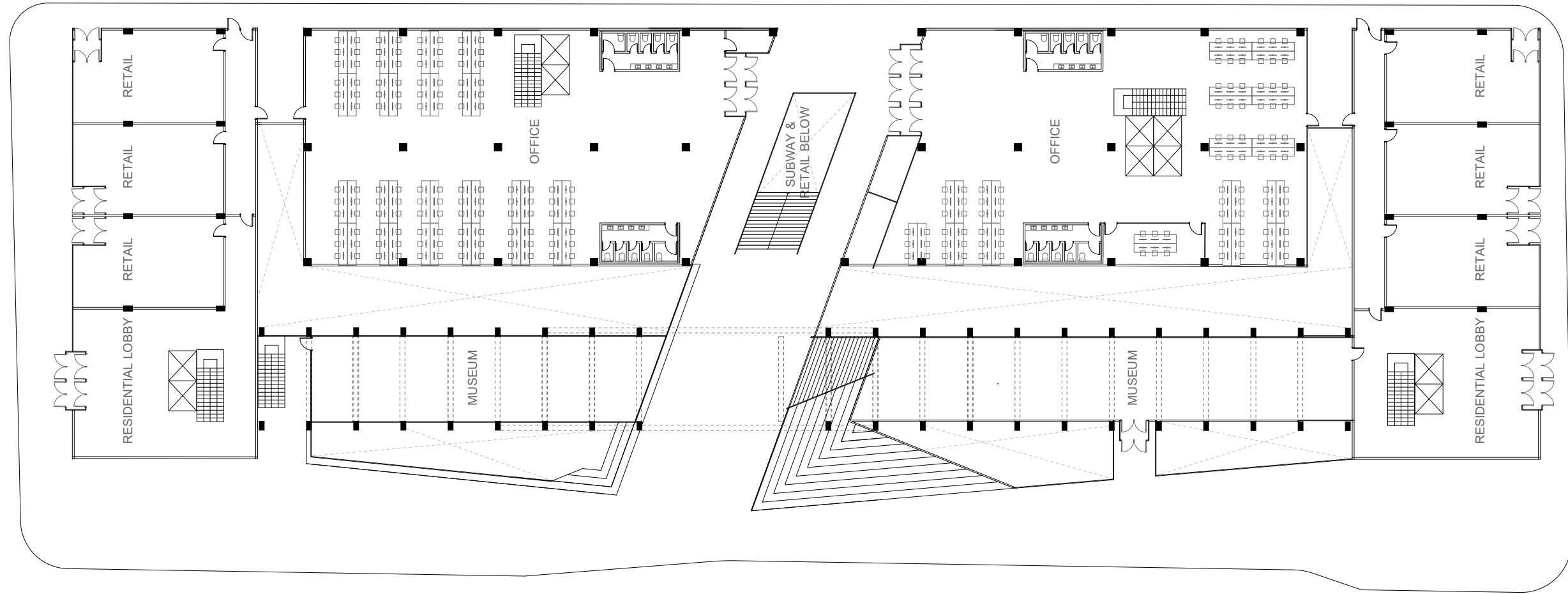


Column caps distribute tree loads directly down into the columns, minimizing the need for thick slabs below planters

Structural Approach

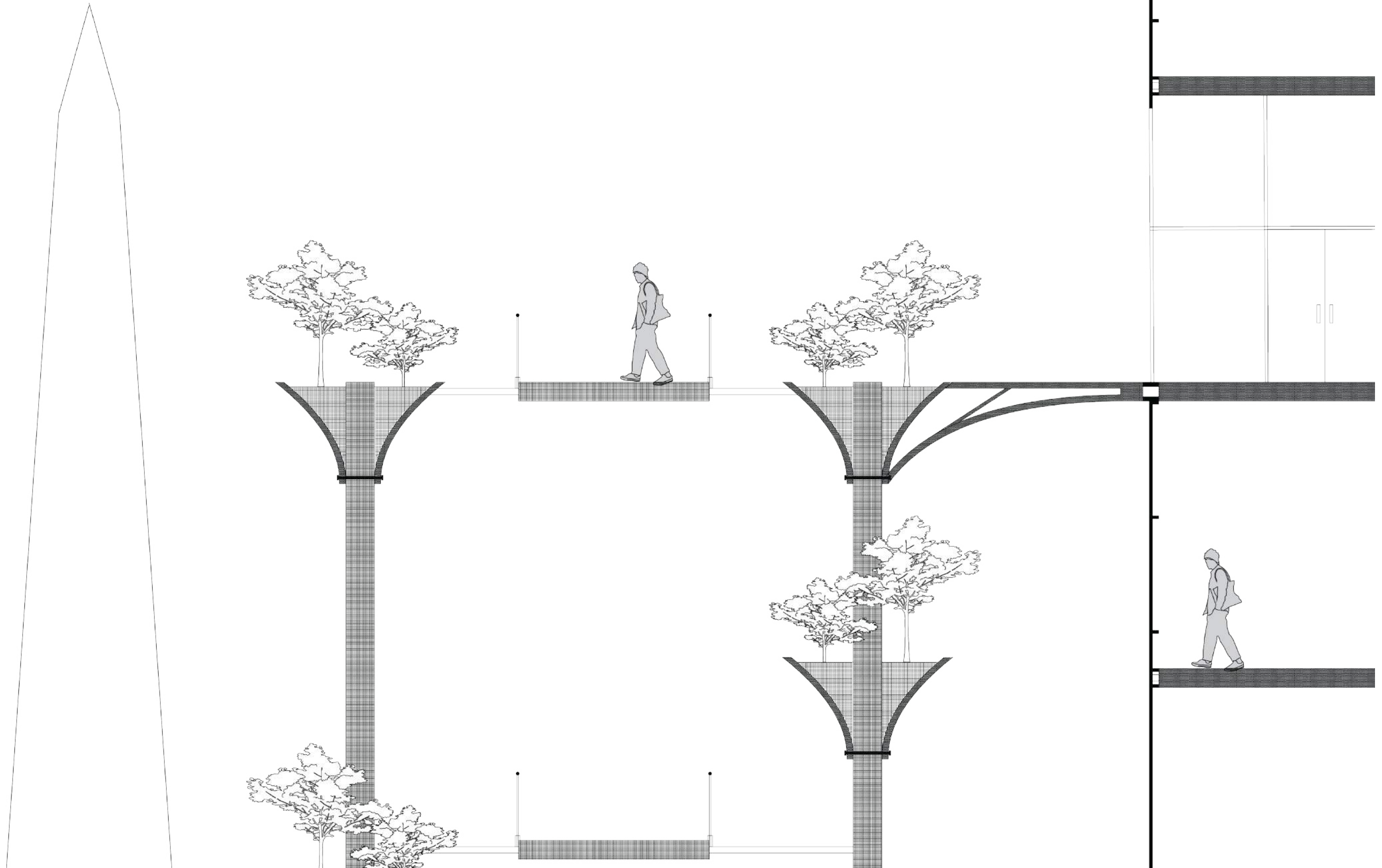


Ground Level Plan



1/32"=1' N

Vertical Garden Section



Section Axon - Level 3 (Residential & Office Connection)



Physical Model



Subway Portal Connection



Main Entry Street View







02 / A Studio for Gathering

Advanced Studio V, Fall 2022

Project: Adaptive Reuse / School of Architecture

Location: New York, NY

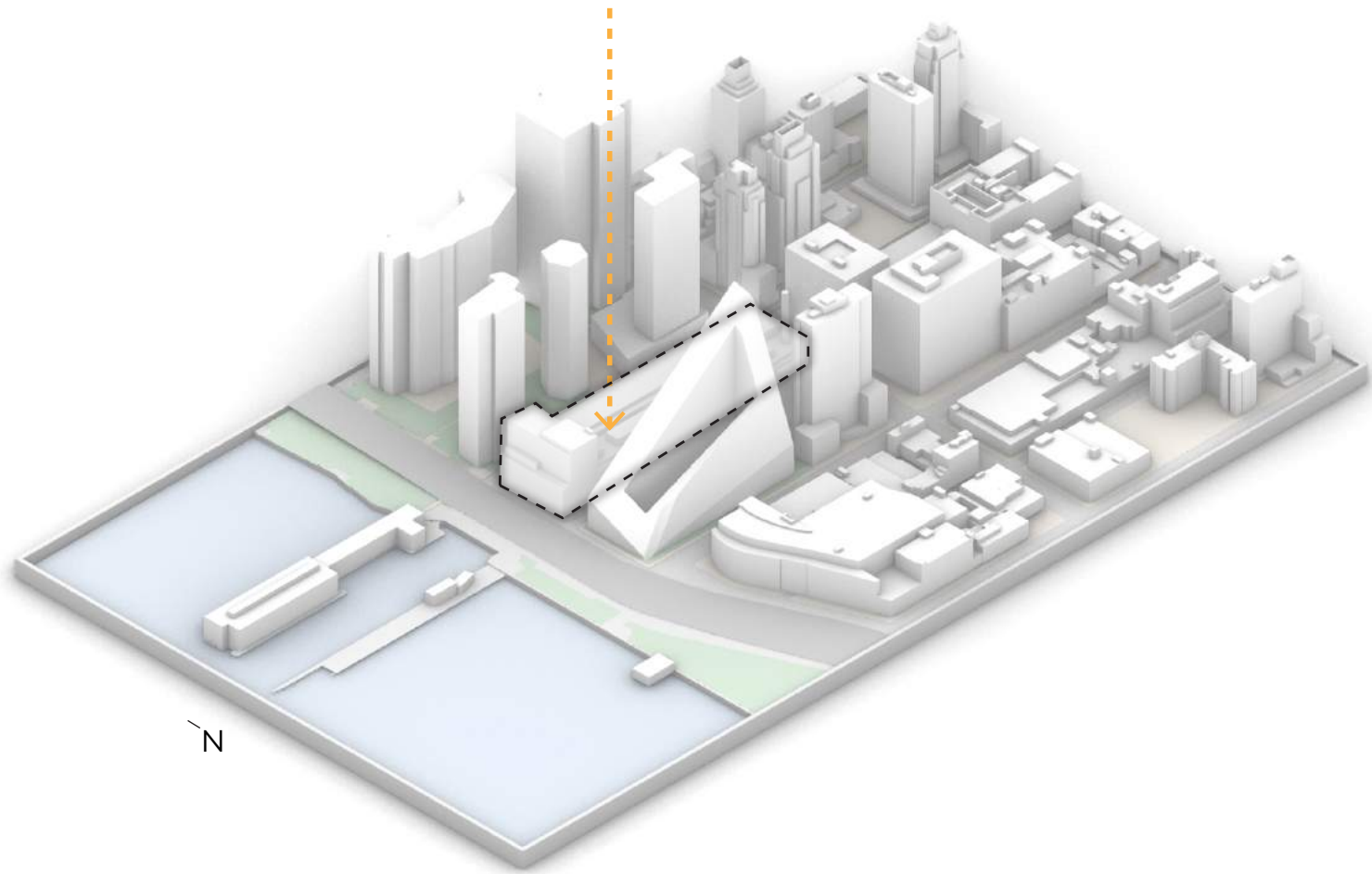
Partners: Maria Candelaria Ryberg, Wesley Kinsey

Professors: Bernard Tschumi & Valeria Paez Cala & Pedro Camara

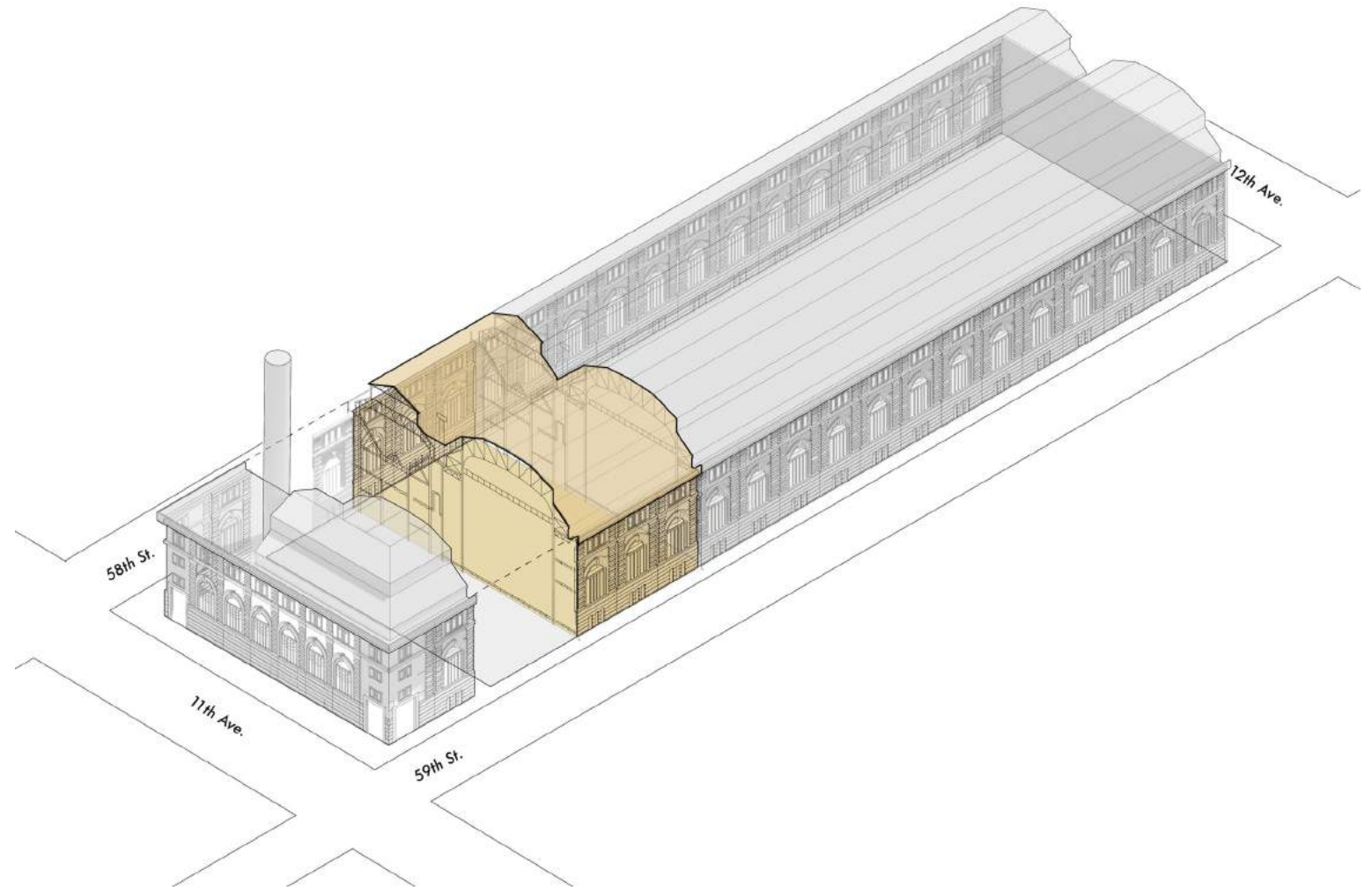
Mentor: Abriannah Aiken

This project speculates on the future of architectural education and the studio. In a post-pandemic context where many educational activities are functioning well online, gathering generally still requires physical space. Studio is proposed as circulation that ramps up the building around a central atrium. In the center of the atrium, an elevator platform is used for critique spaces that can move from level to level, as needed. The blending of students leads to the blending of ideas and an expansion of the architectural complexity as it responds to political, ecological and social forces.

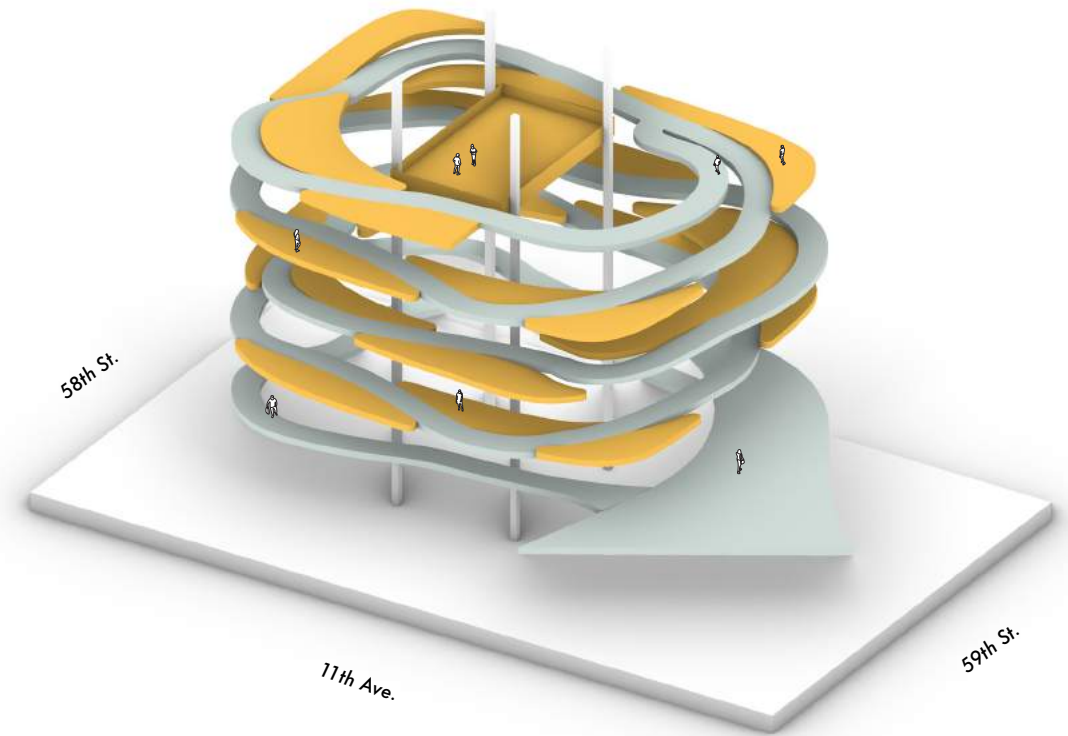
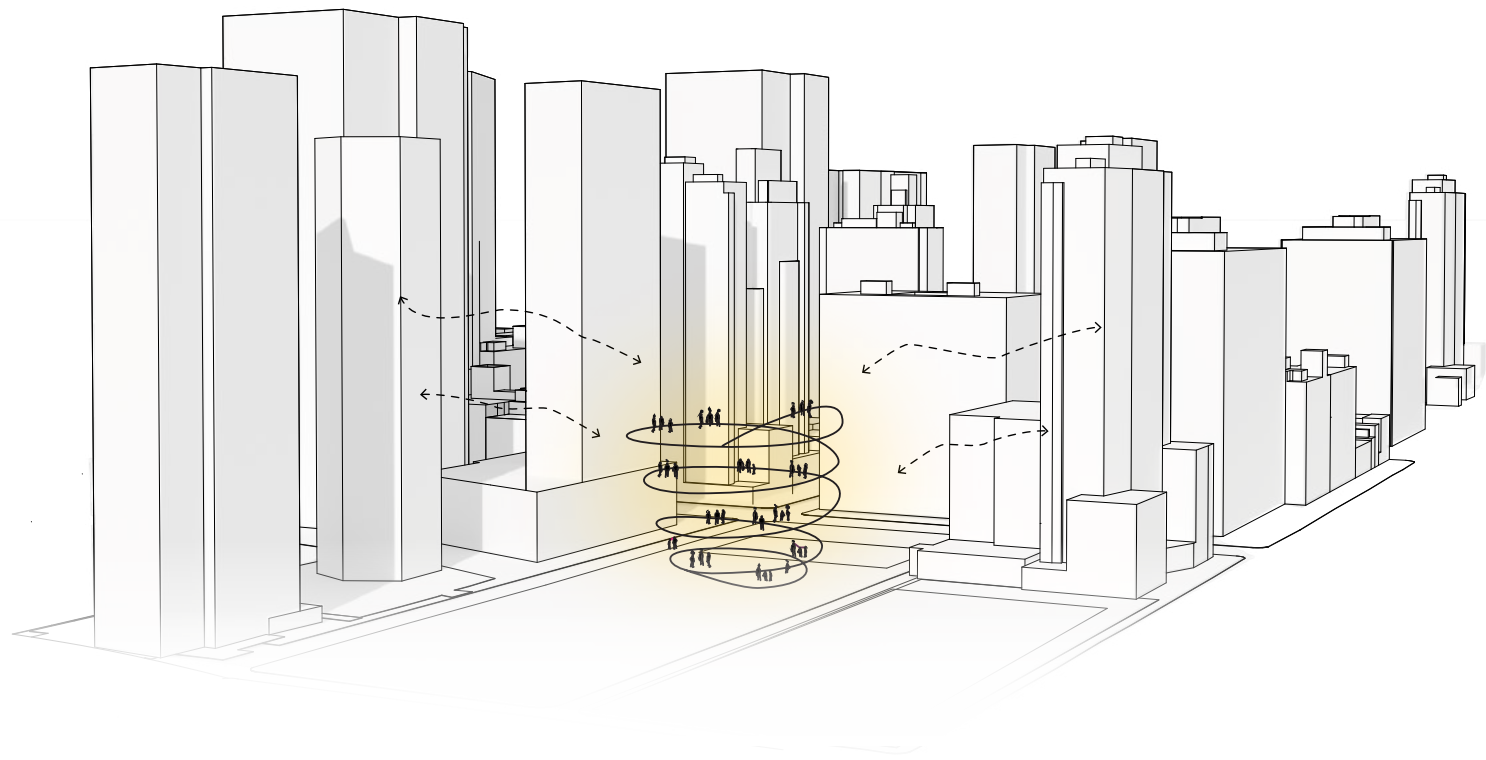
Existing Decommissioned Power Station



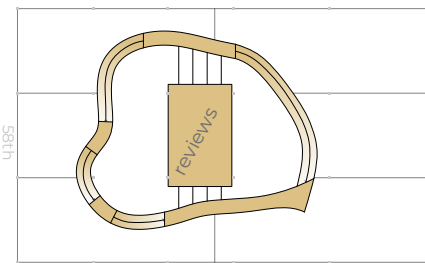
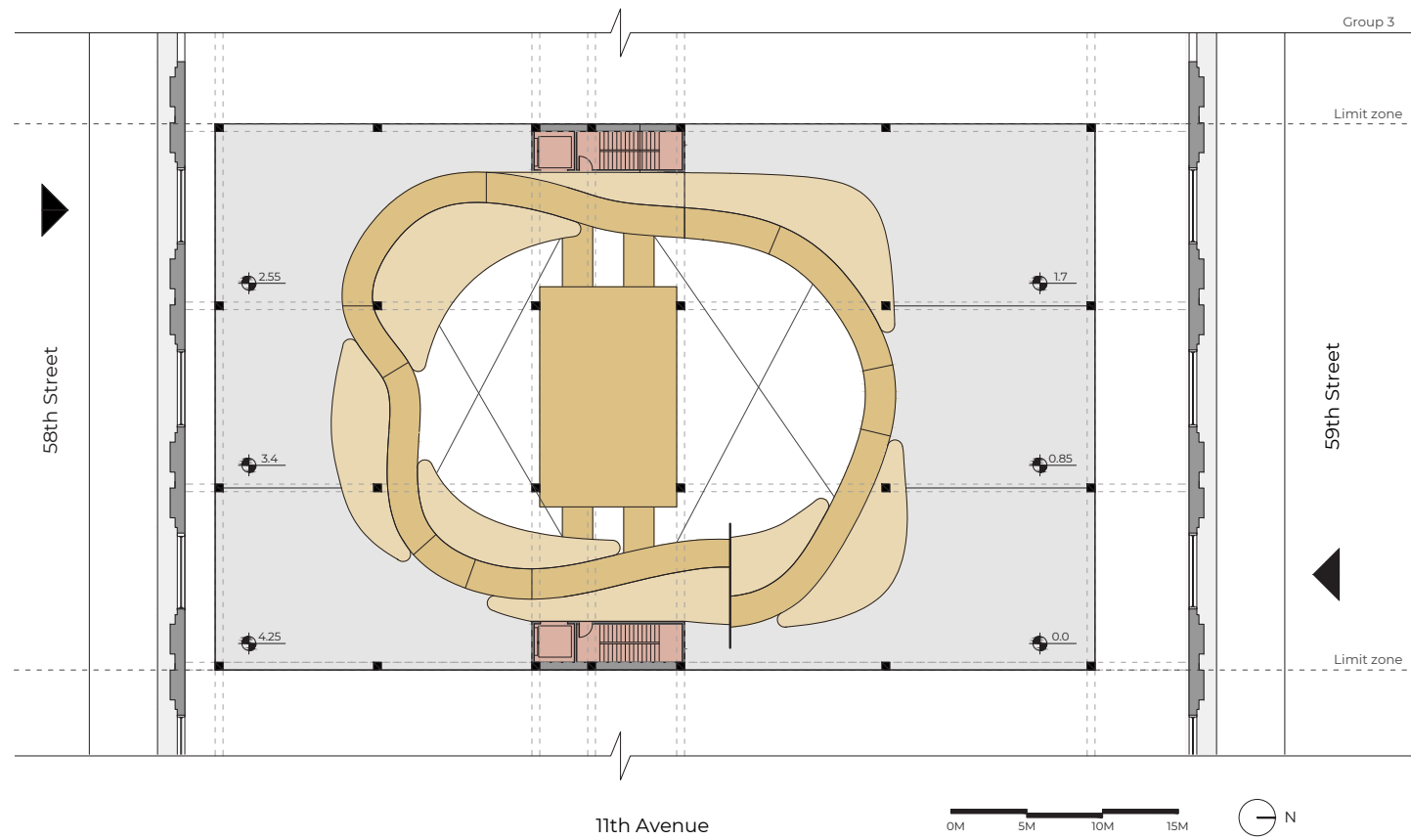
Zone for Intervention



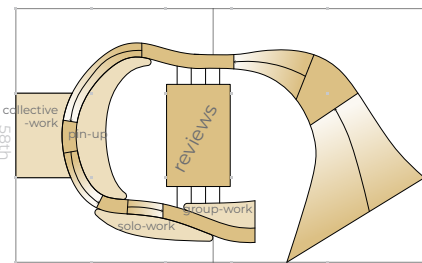
Studio as Circulation to Promote Gathering



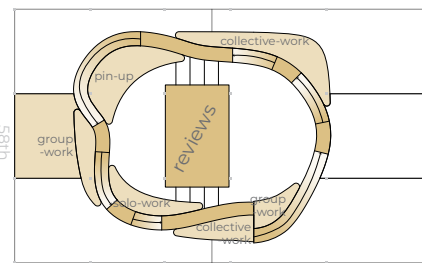
Realising the Ramp as Studio



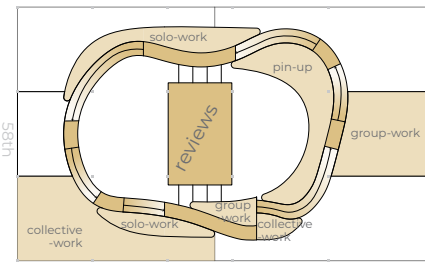
level -1



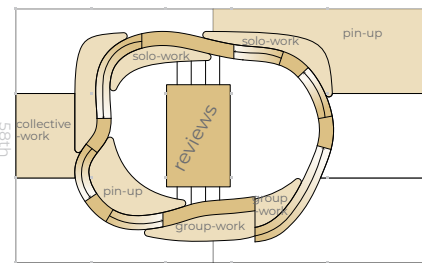
ground



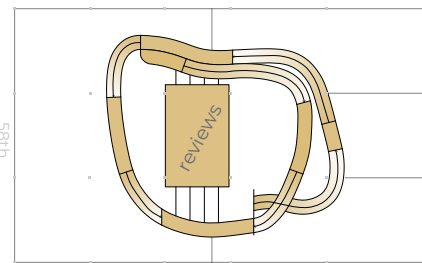
level 2



level 3

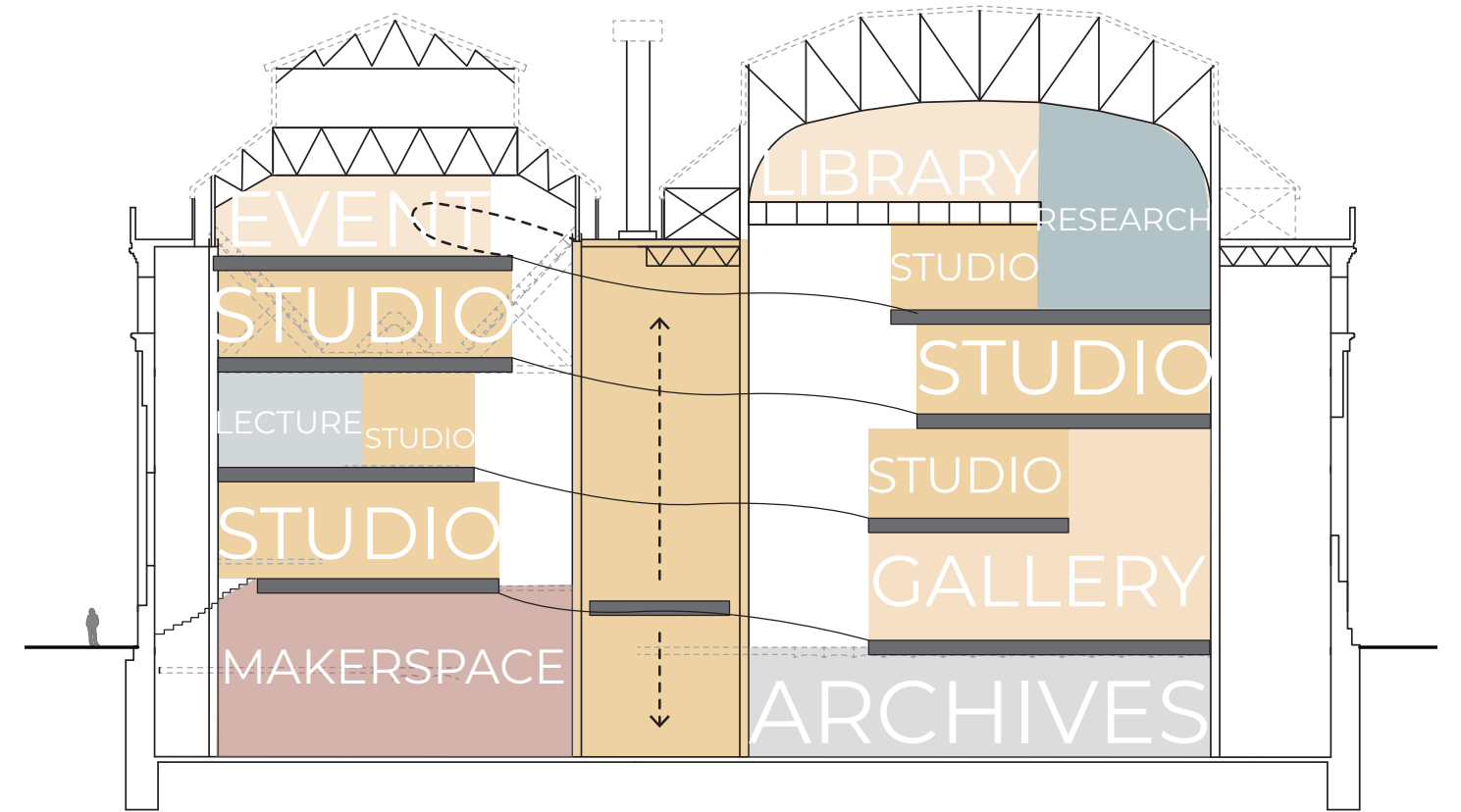


level 4

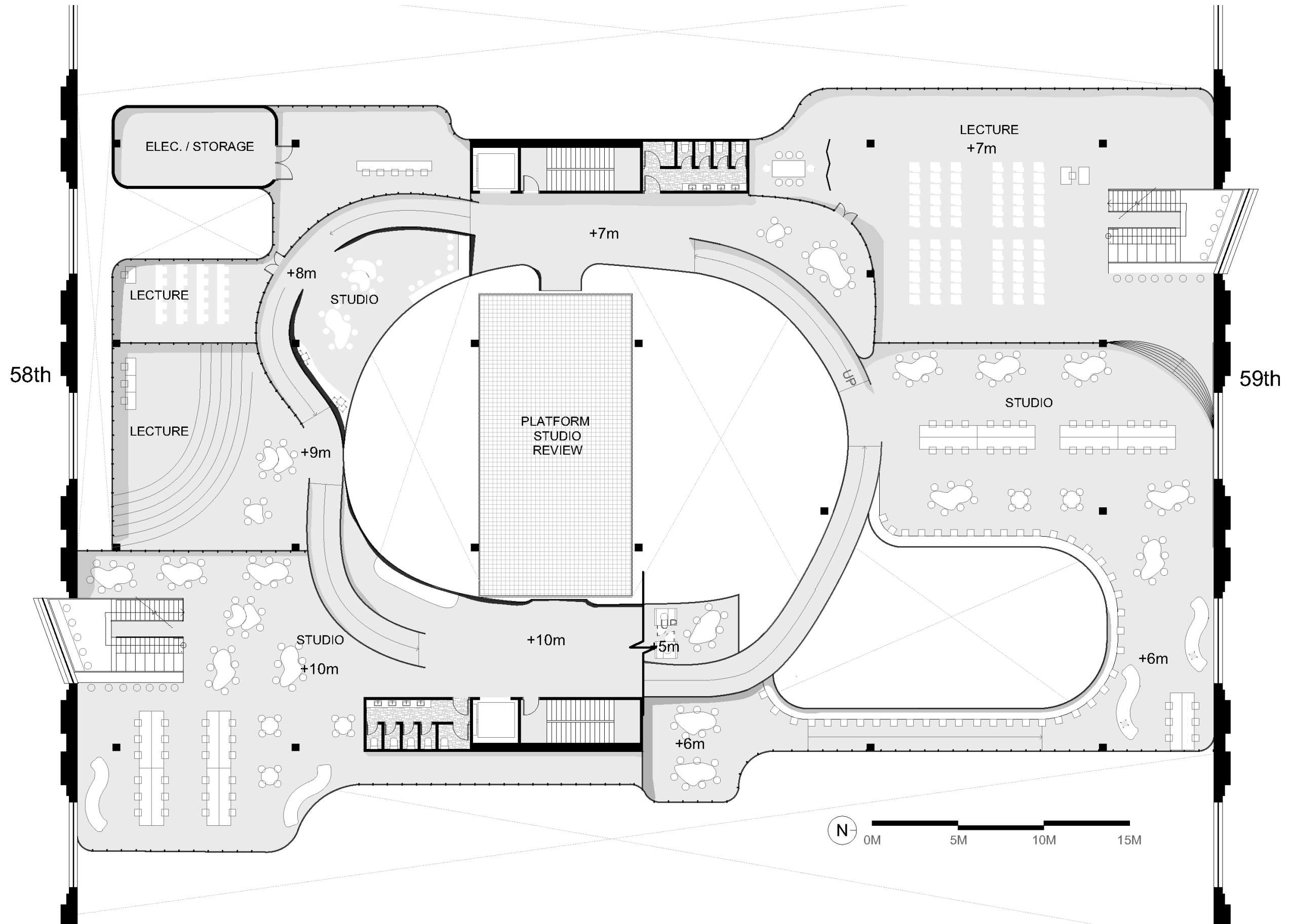


level 5

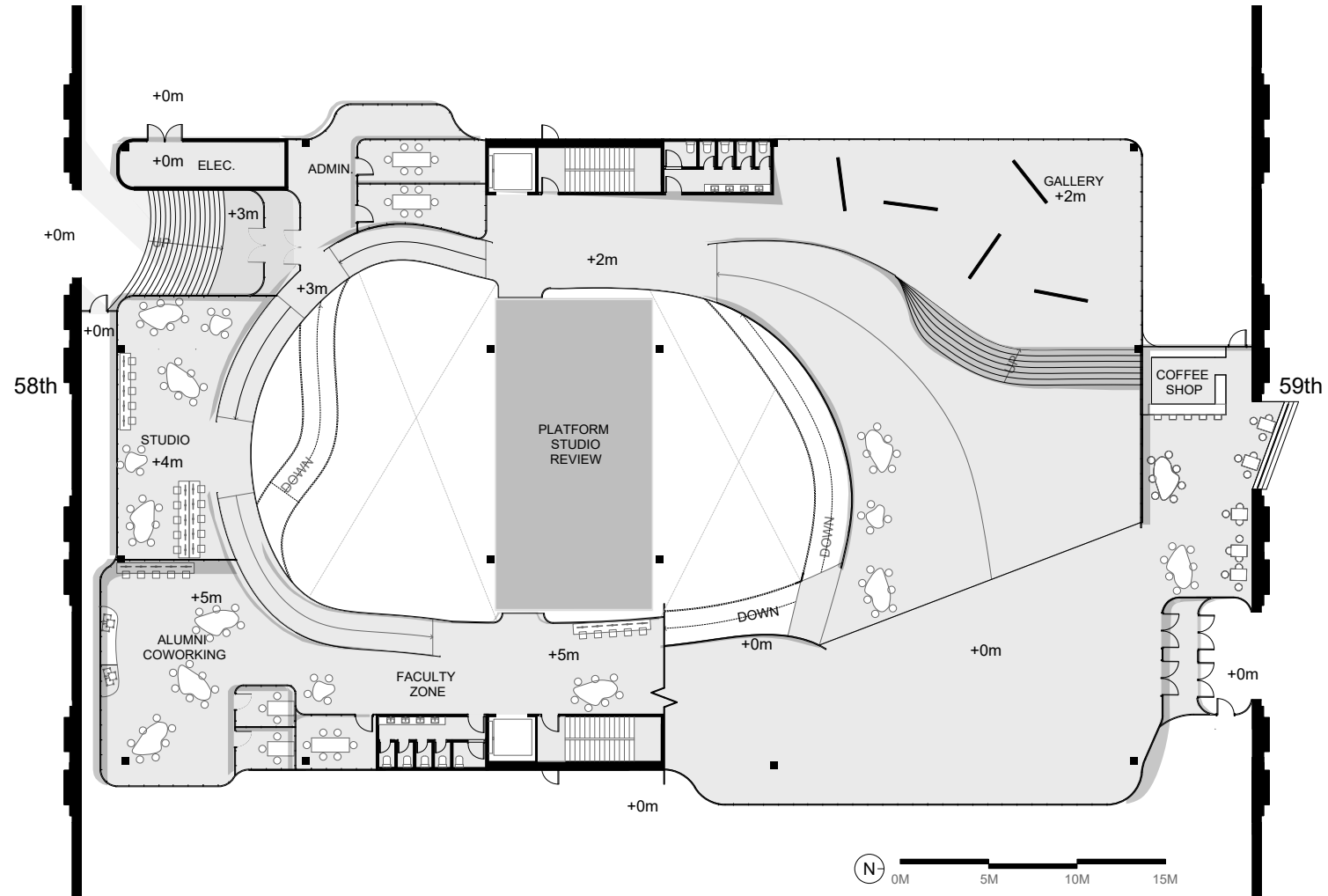
Program - Studio is Circuation & Studio is Core



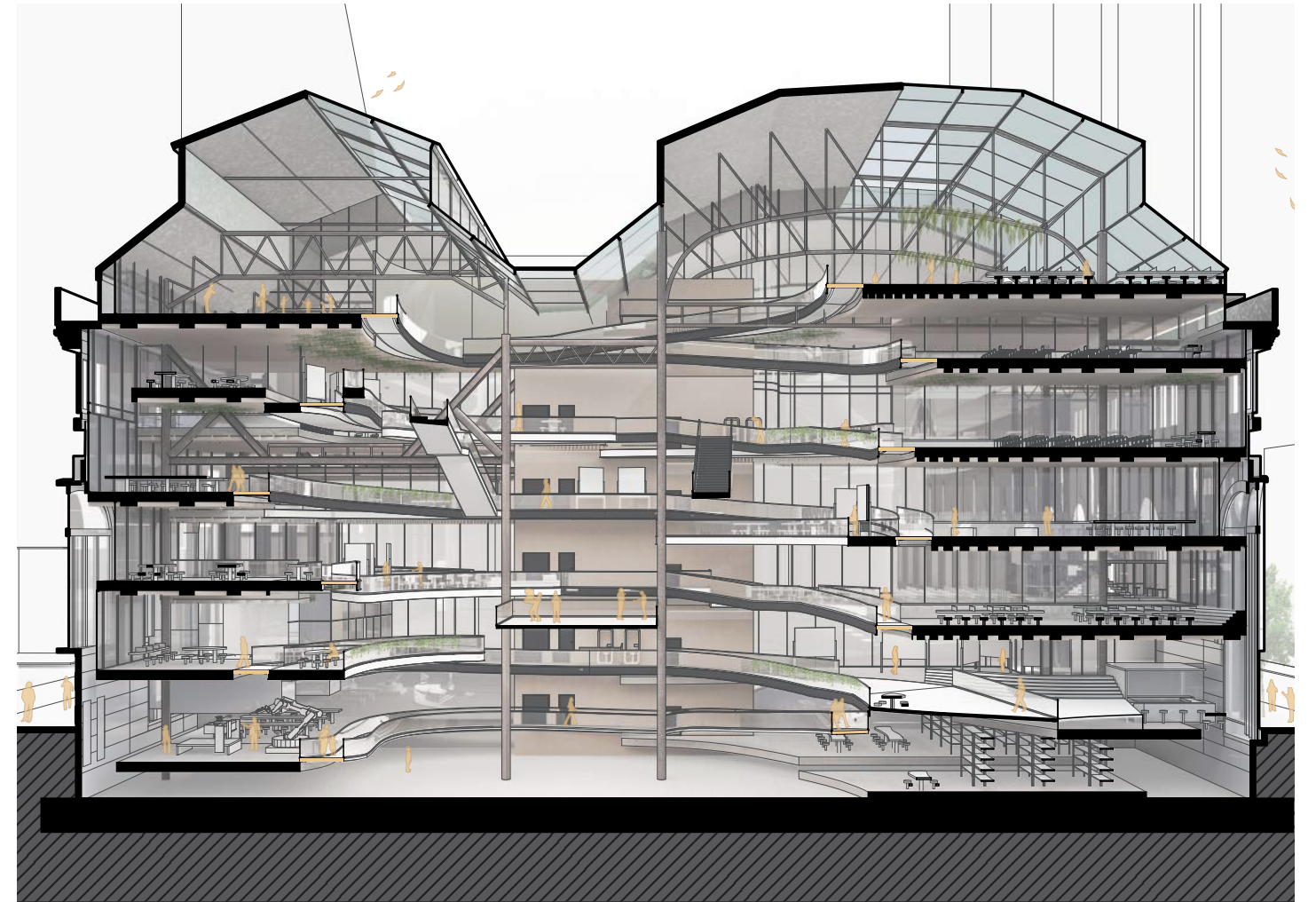
Typical Studio Level Plan



Ground Level Plan



Section Through Atrium

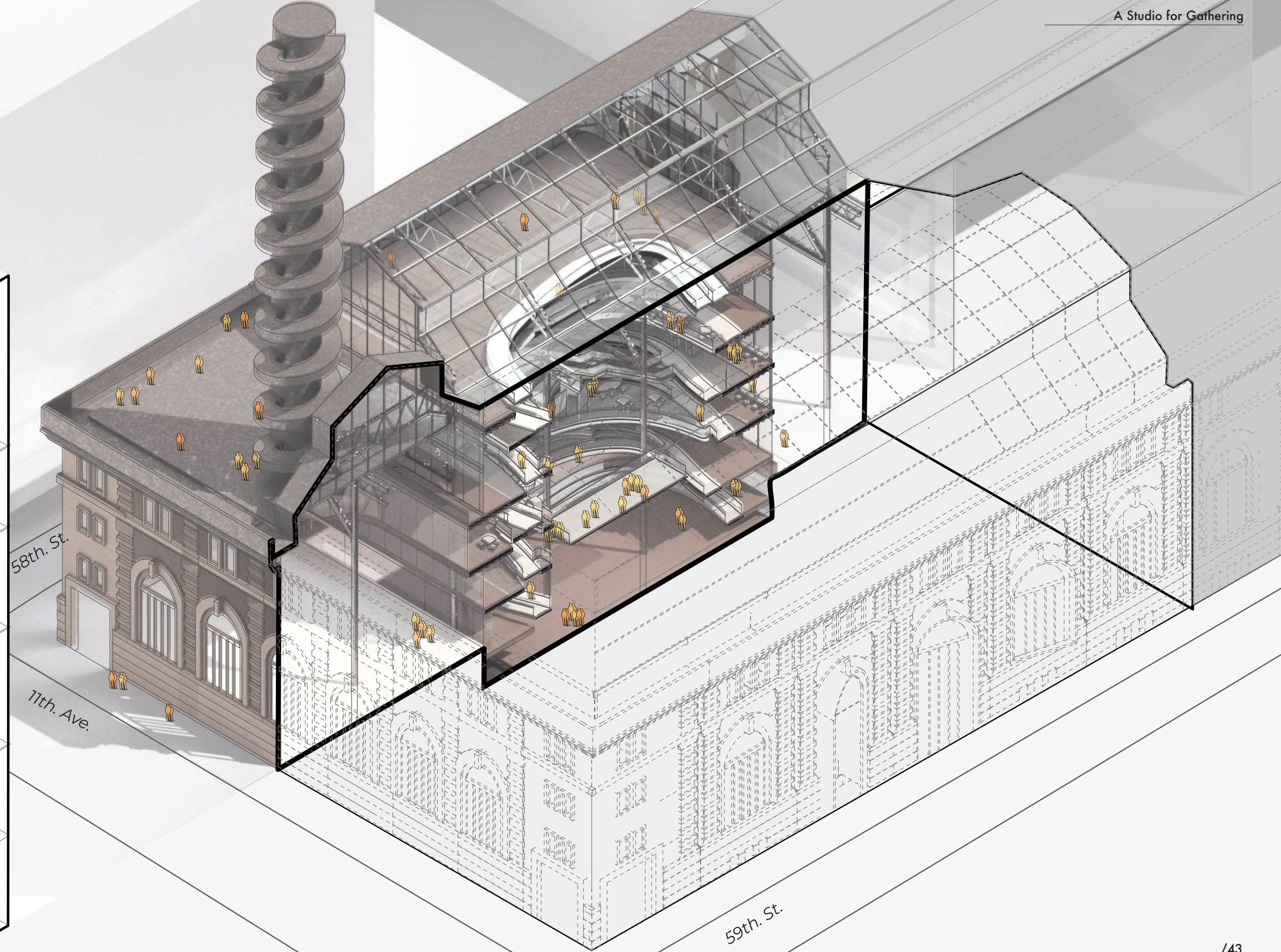


Operable Studio Review Platform in Atrium



Typical Studio





03 / Last Resort: Center for Earth Ethics

Advanced Studio IV, Spring 2021
Project: Climate Refugee Center
Location: Lake George, NY
Professor: Lindsey Wikstrom
Individual Project

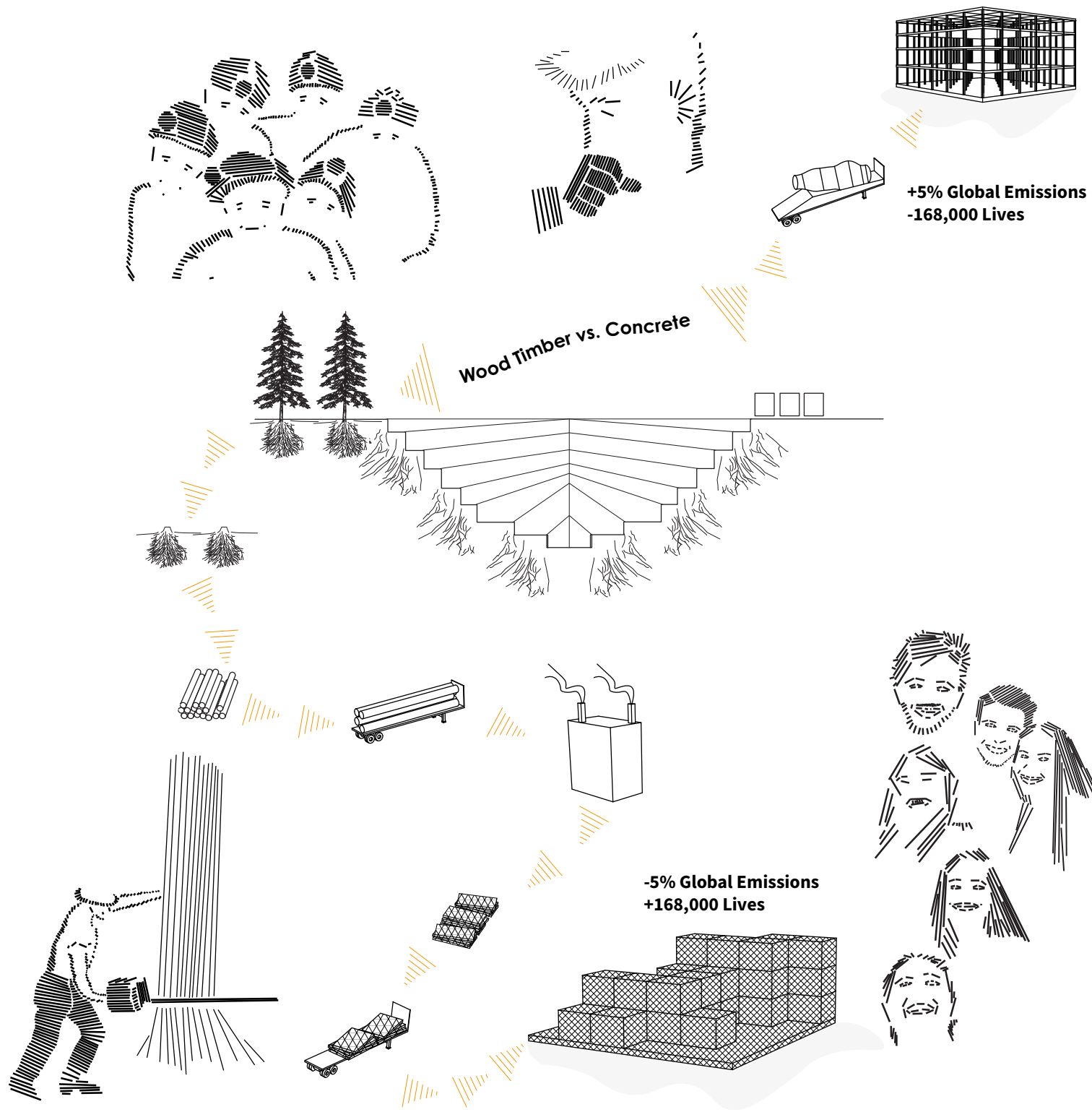
This proposal showcases what is possible with CLT construction now that CLT structures up to 18 stories are allowed in New York City.

Through livestock herd mimicry (a holistic farming practice), mixed with tree cultivation, visitors learn how to capture carbon while sustainably harvesting lumber for construction, since demand for natural materials is increasing with the allowance of CLT highrise buildings.

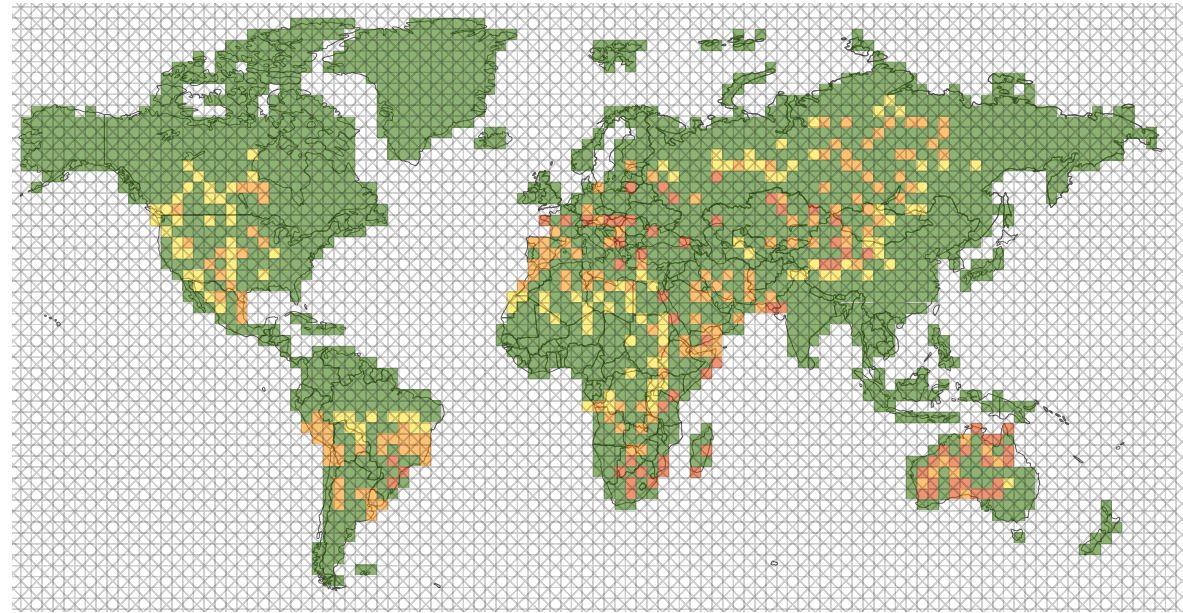
Situated in upstate New York, the site borders the heavily forested Adirondack Park and expansive plains where trees are plentiful and livestock can roam freely.



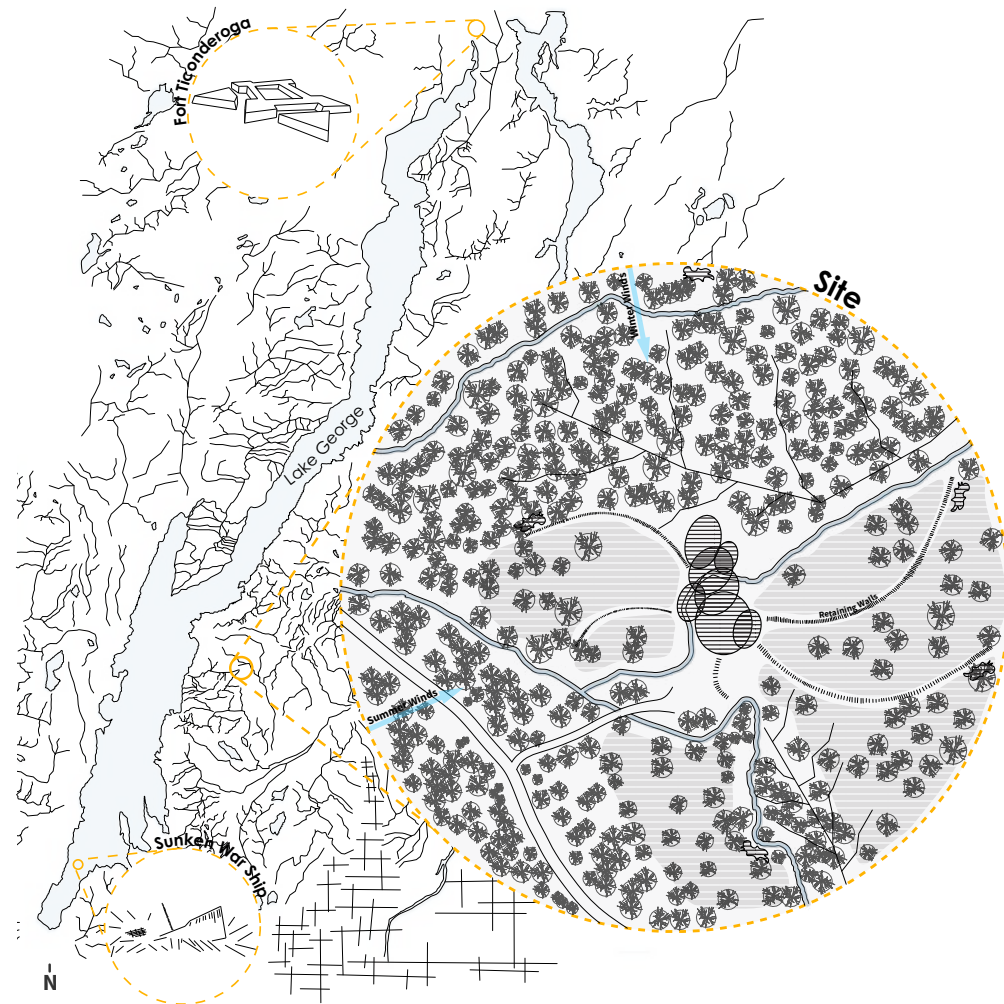
Drawing Climate Displacement & Preventative Activities



Desertification is a Major Global Concern



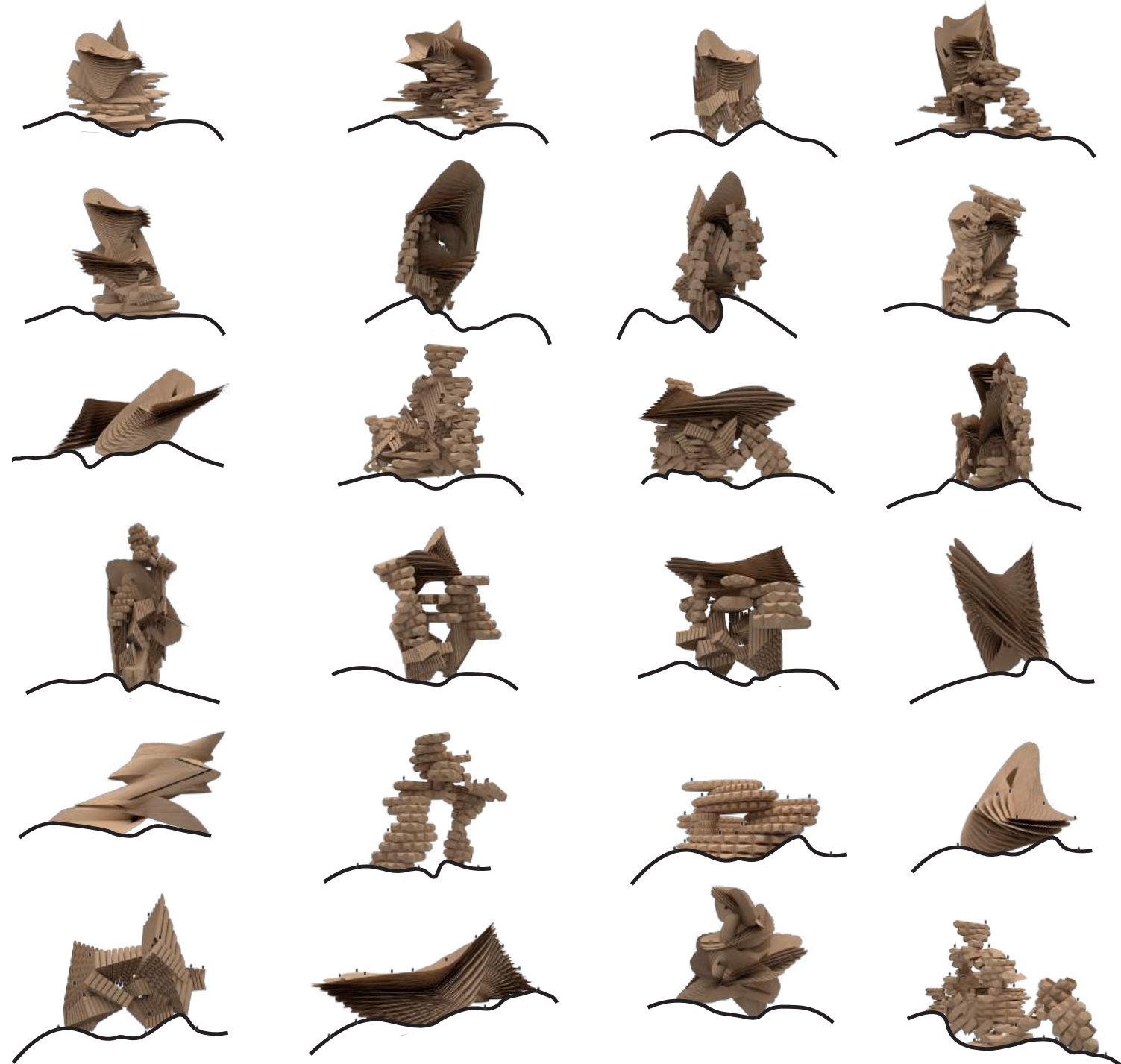
Forested Site on Lake George, NY



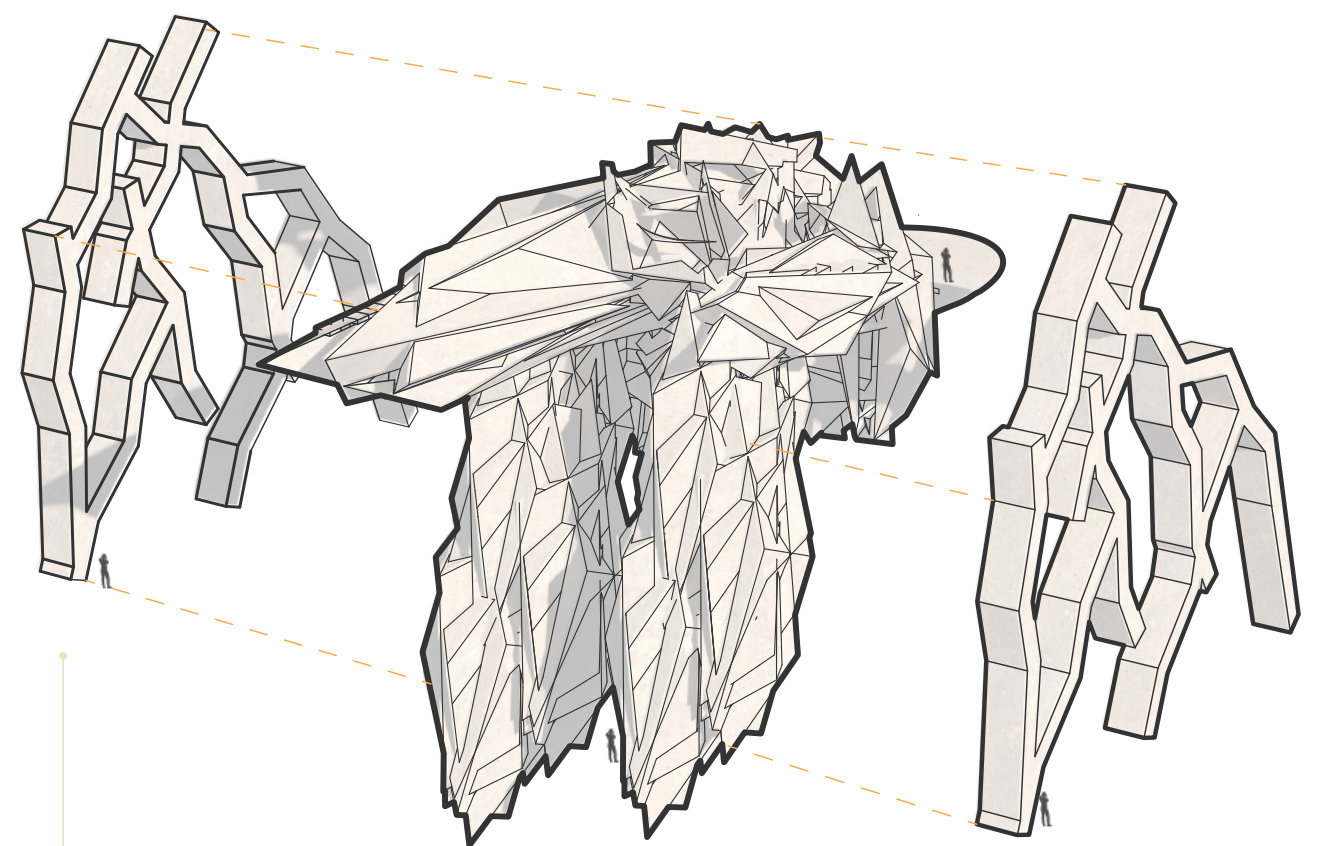
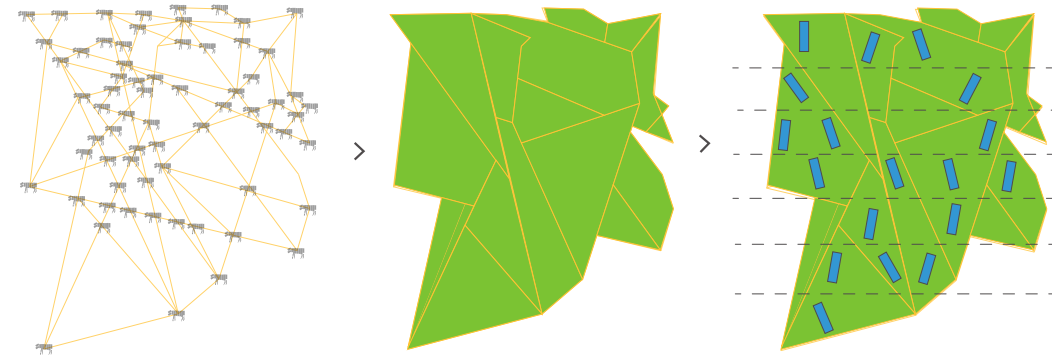
A Site for Learning Carbon Capturing Methods



Iterations - Mass Timber



Facade Developed From Livestock Movement Patterns



CIRCULATION / STRUCTURE

TOWER MASSING

CIRCULATION / STRUCTURE

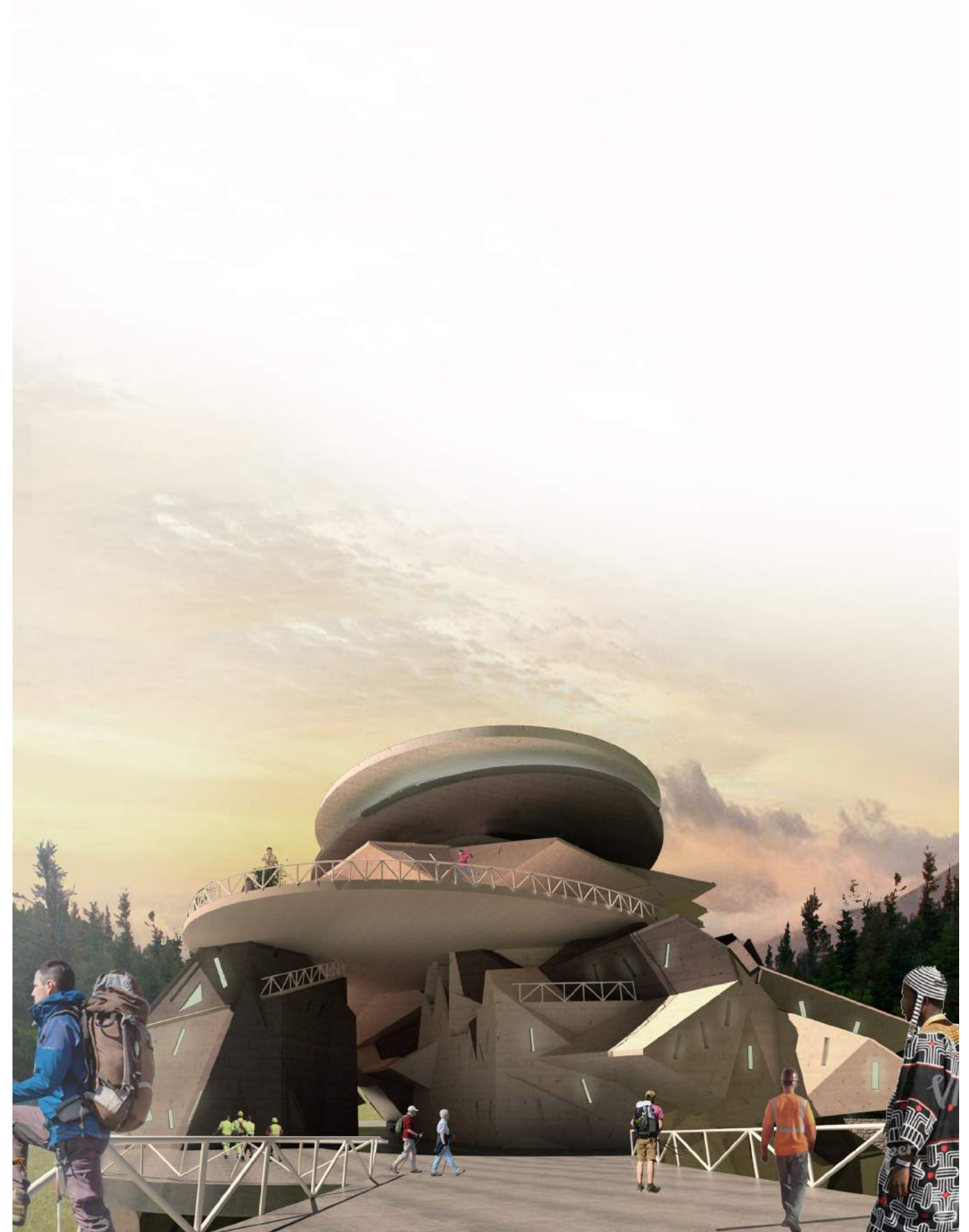
Observation Deck



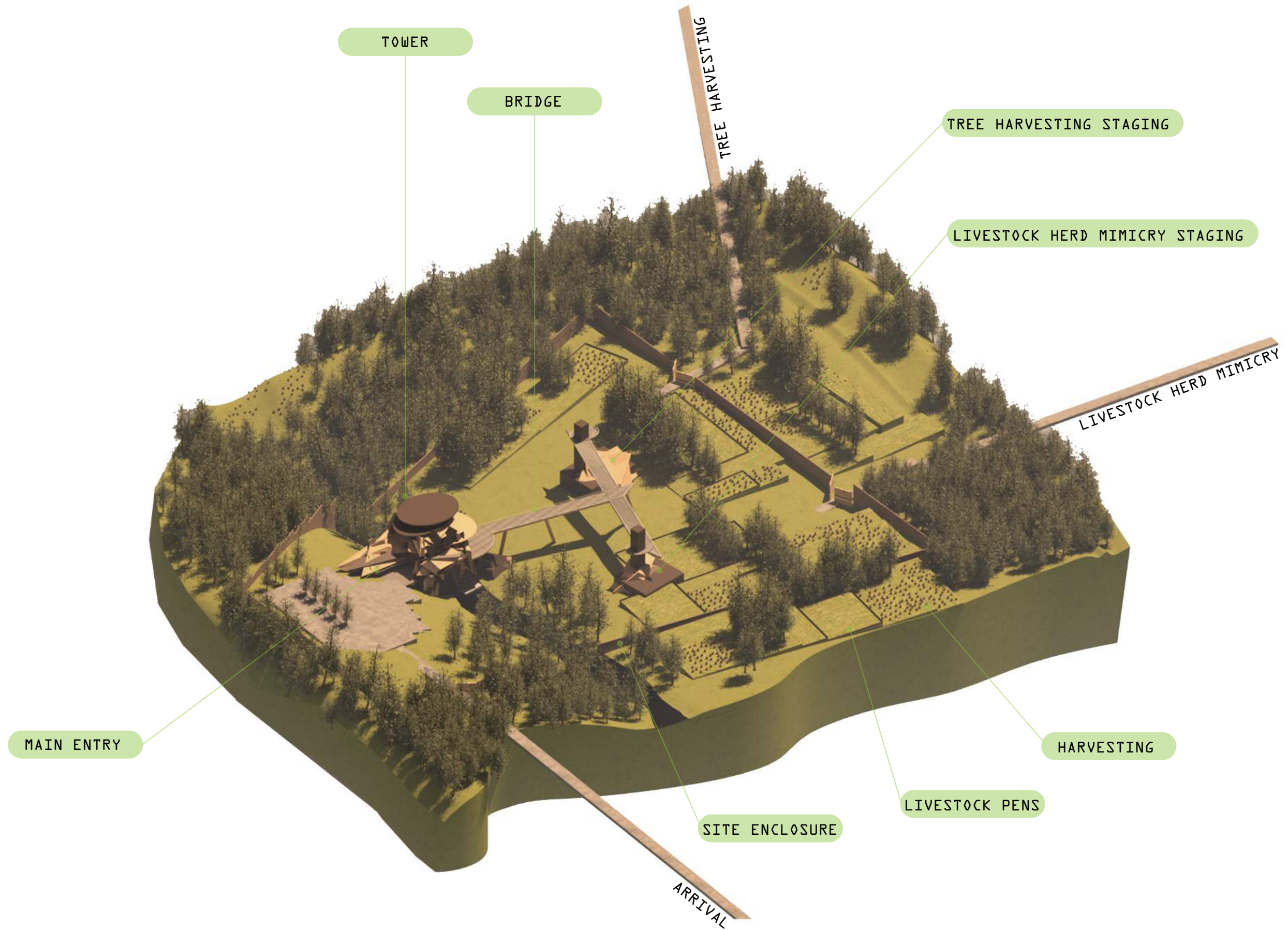
Arrival



Bridge to Tree Harvesting and Livestock Herd Mimicry Programs



Site Arrangement







04 / Astral Waterworks

Architectural Technology V, Spring 2021
Project: A masterplan for a new mixed-use work+live+play+grow development
Location: Brooklyn, NY
Professor: Lola Ben-Alon & Scott Demel
Partners: Novak Djogo, Ethan Davis, Daniel Vanderhorst

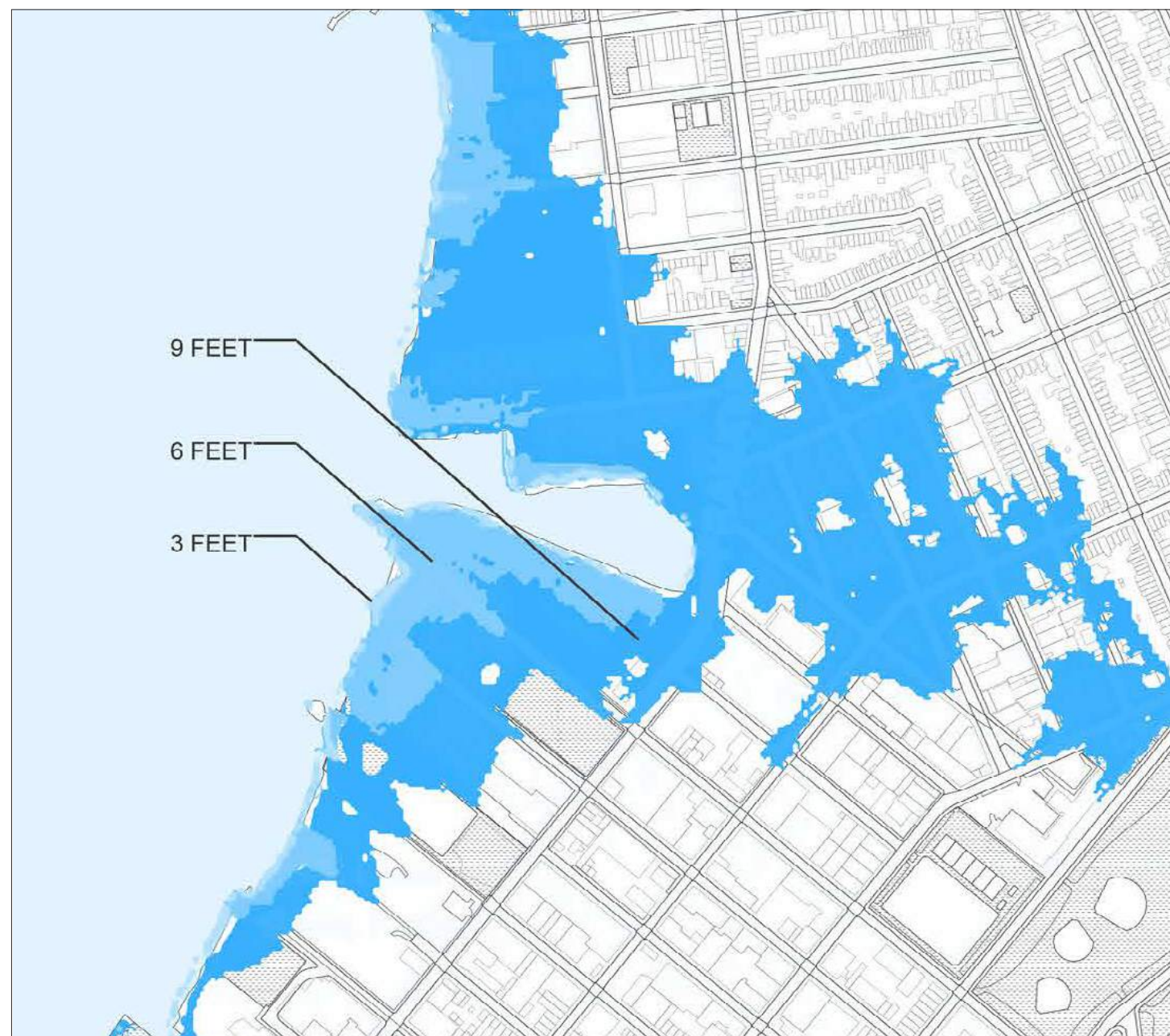


Nestled along the banks of New York's East River lies Bushwick inlet! A small bay that once served as home to the Canarsie People of the Lenape Tribe and later on as the home base of the grand American Astral Water Works.

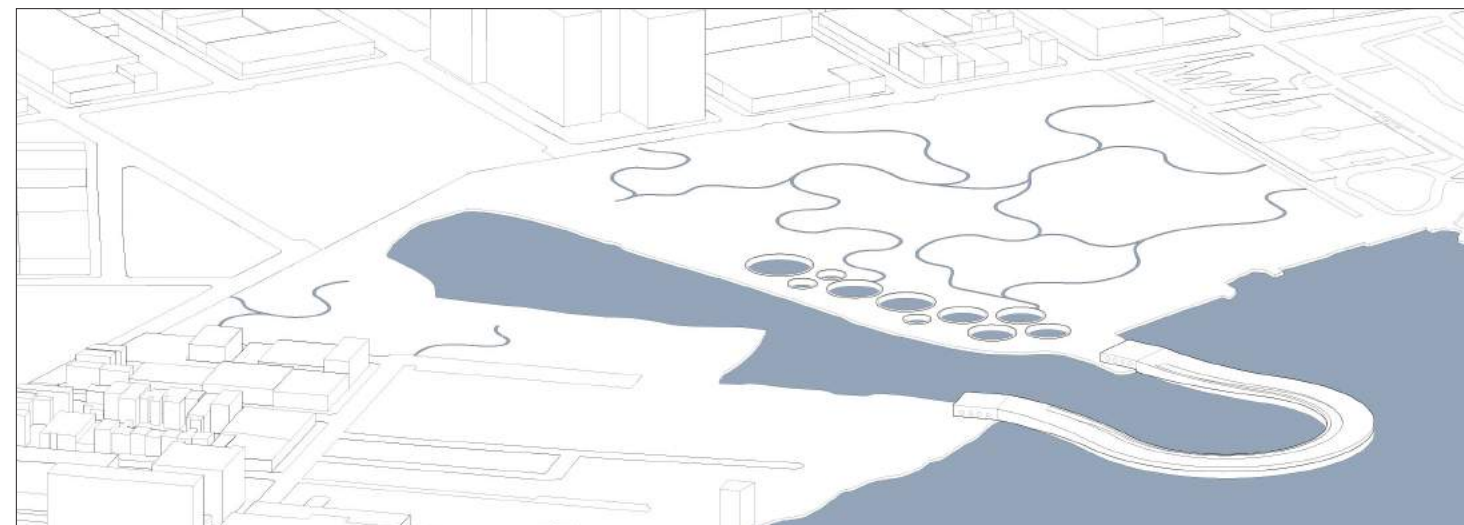
A small bay that now lies polluted and derelict. A relic of a bygone industrial era when New York was dominated by heavy manufacturing. Although also a site lying on the edge of mass redevelopment and demographic change. 7th Round Proposes a reinvention rather than a blank slate.

A renewal and a nod to the past. In the former ground that housed Astral Oil Works we now propose Astral Water Works. An ecologically and economically resilient work-live community for the 21st century. Where the lines between the natural and manmade are blurred and infrastructure/amenity become one. Where the buildings become form and the water becomes park.

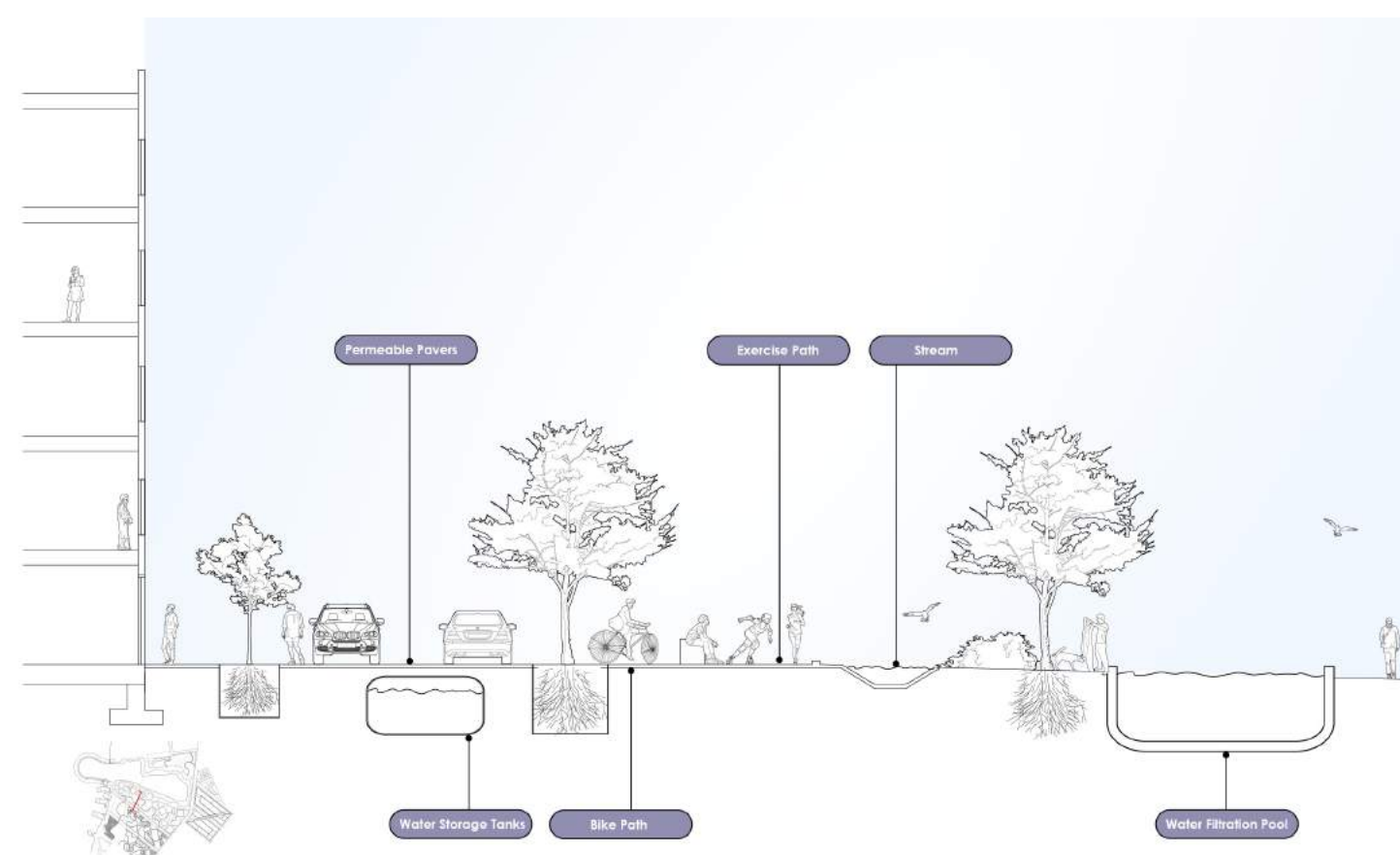
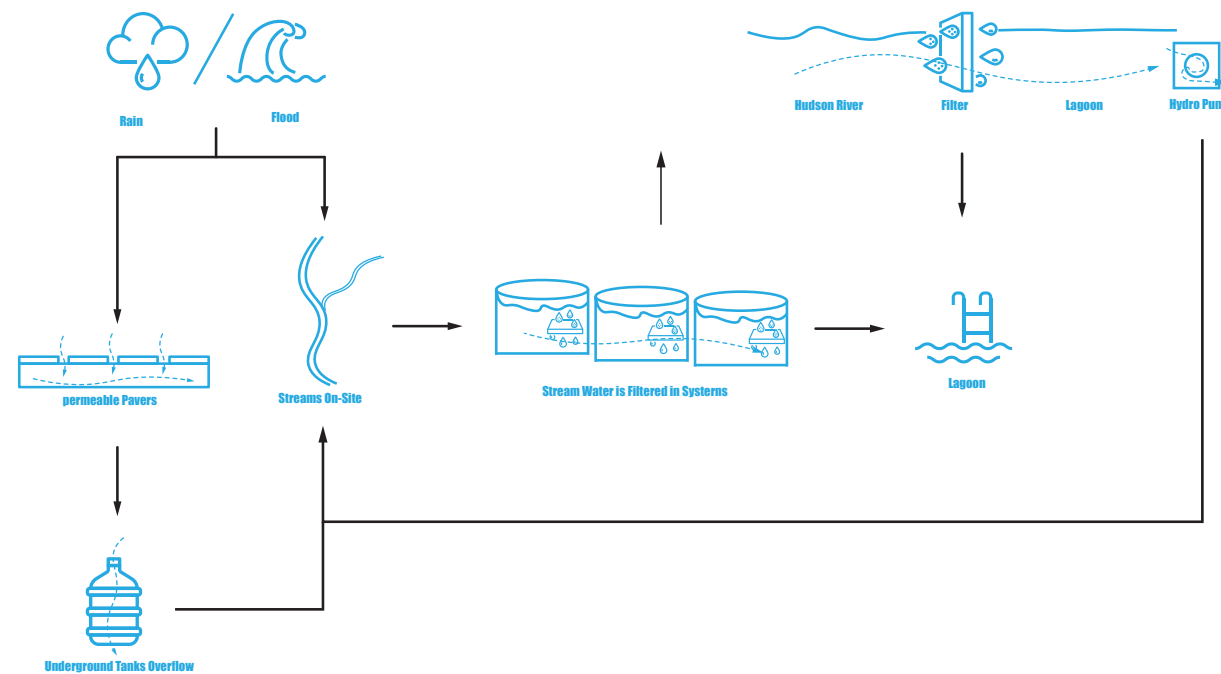
Flood Zone



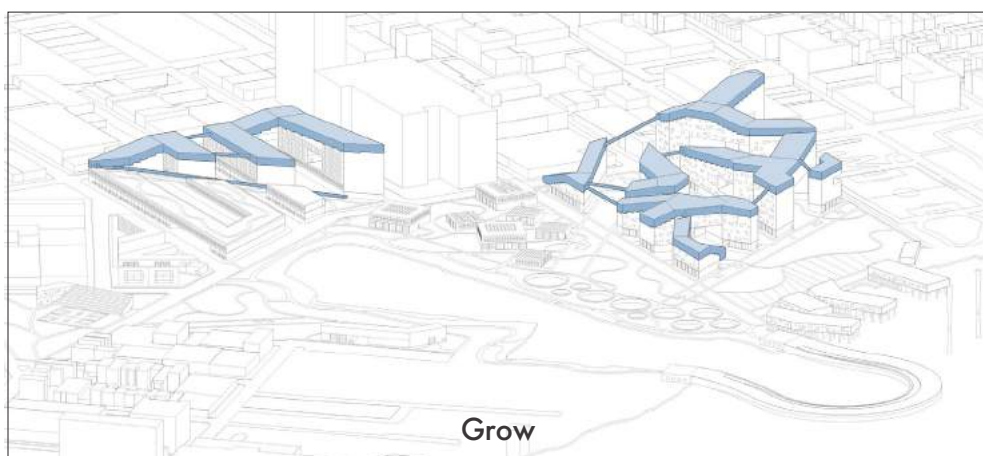
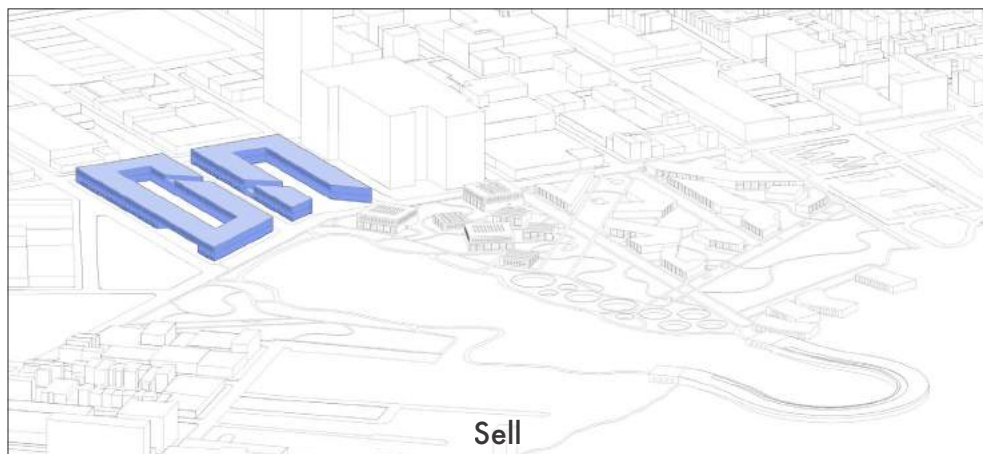
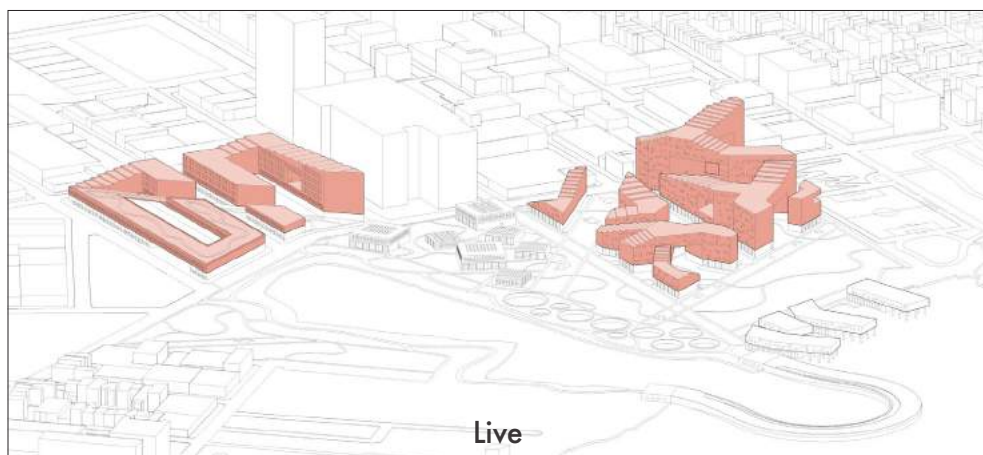
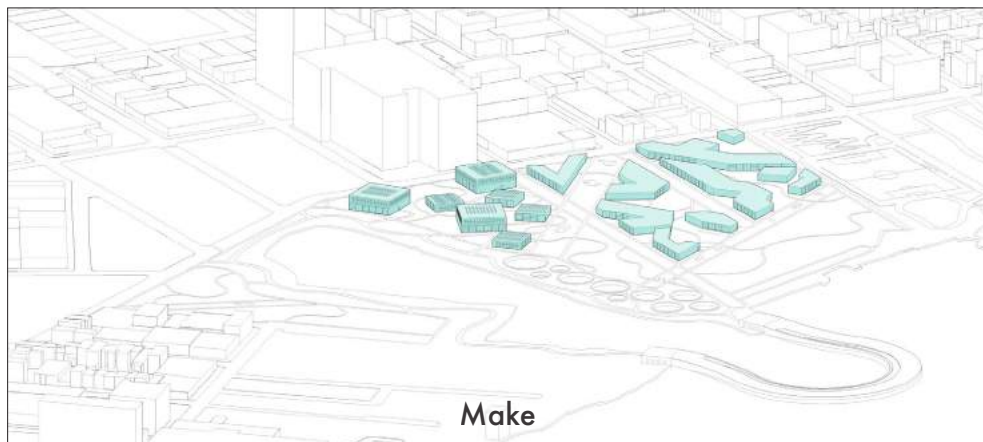
Flood Mitigation Strategy



Urban Response to Flood Risk

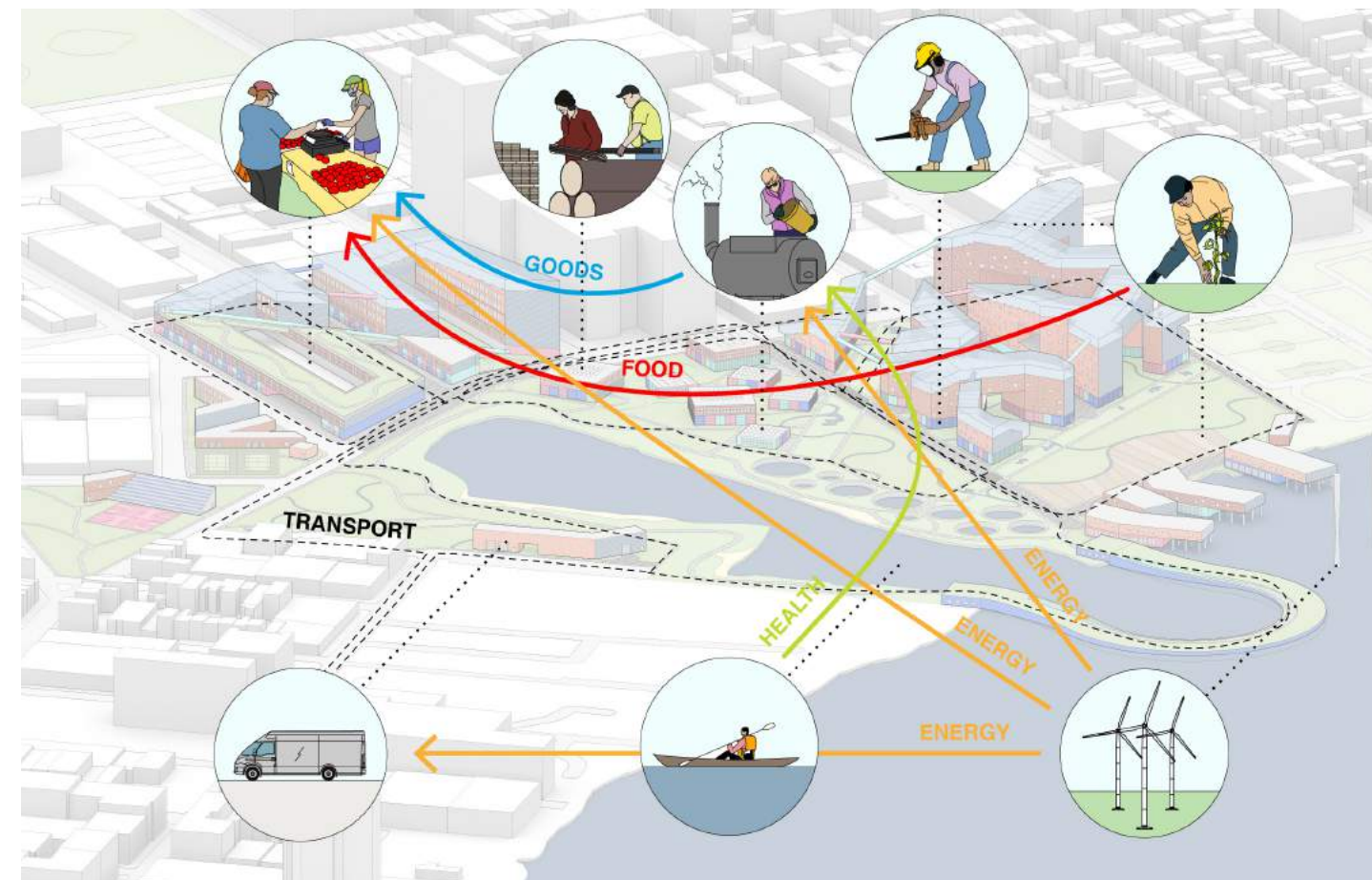


Program Distribution

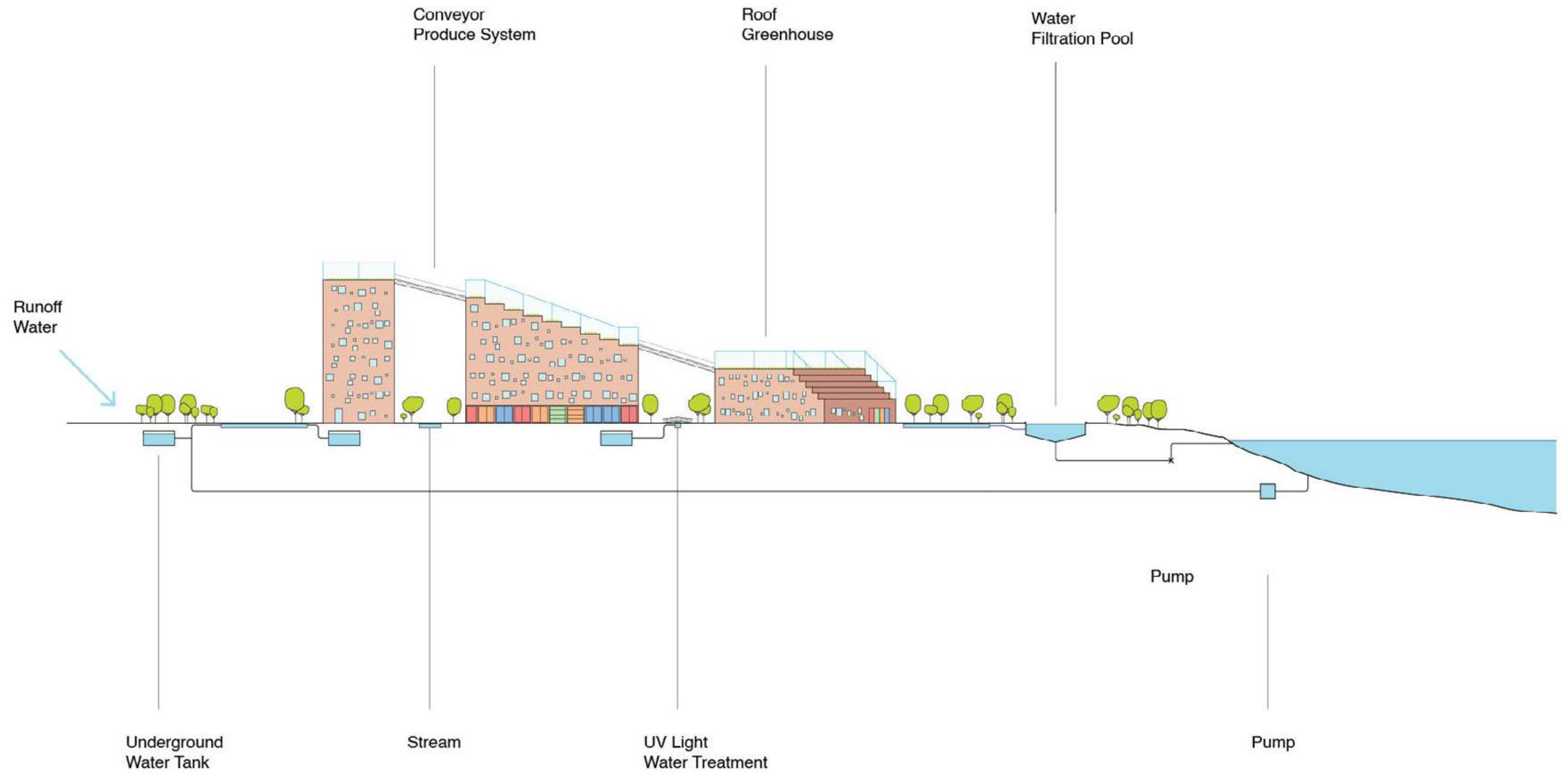


Programs Working in Unison

Research Center Program	# of buildings	Gross Area	Efficiency (%)	Net Area	Occupancy	Total Occupancy	Max Allowance per Person
Buildings							
Light manufacturing							
Urban farm (greenhouses)	10	171,582	90%	154,424	1,029		150SF
Makerspace (with digital fab. equipment)	7	162,357	85%	138,003	920		150SF
Retail						1949SF	
Farmers/fishers/artisanal market	6	130,500	75%	97,875	2,175		45SF
Residential						2175SF	
High-rise	3	340,500	89%	303,045	1,515		200SF
Low-rise	3	135,000	85%	114,750	573		200SF
Education/museum						2088SF	
College satellite campus for research on urban aqua and agriculture	1	50,000	79%	39,500	1,580		25SF
Public swimming area, boardwalk/piers, park		880,500					
Public changerooms.	1	2,500	90%	2,250	45		50SF
Restaurant / Pier	4	29,900	85%	25,415	2,117		12SF
Office						12,000	15SF
						14162SF	



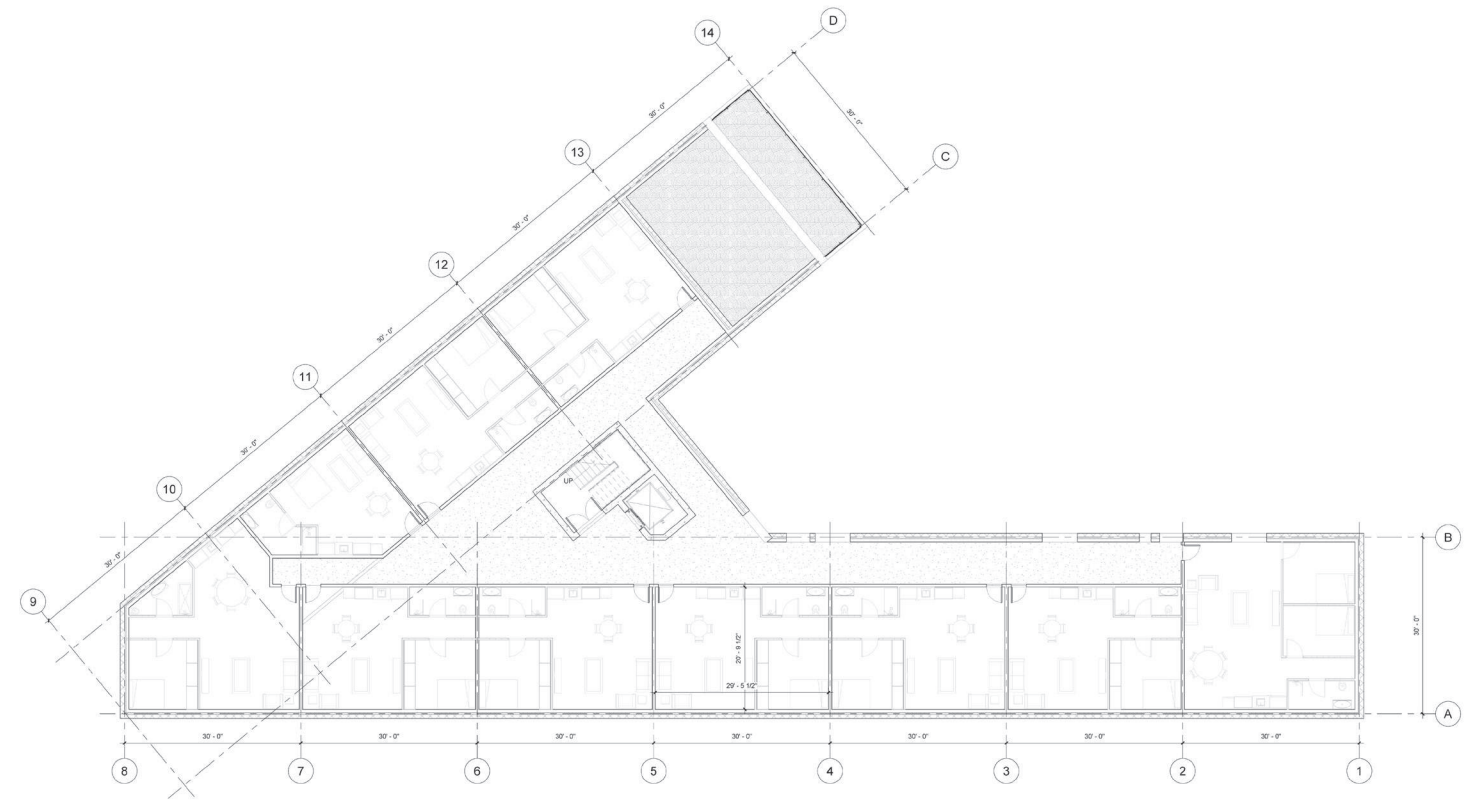
River to Roof Connection



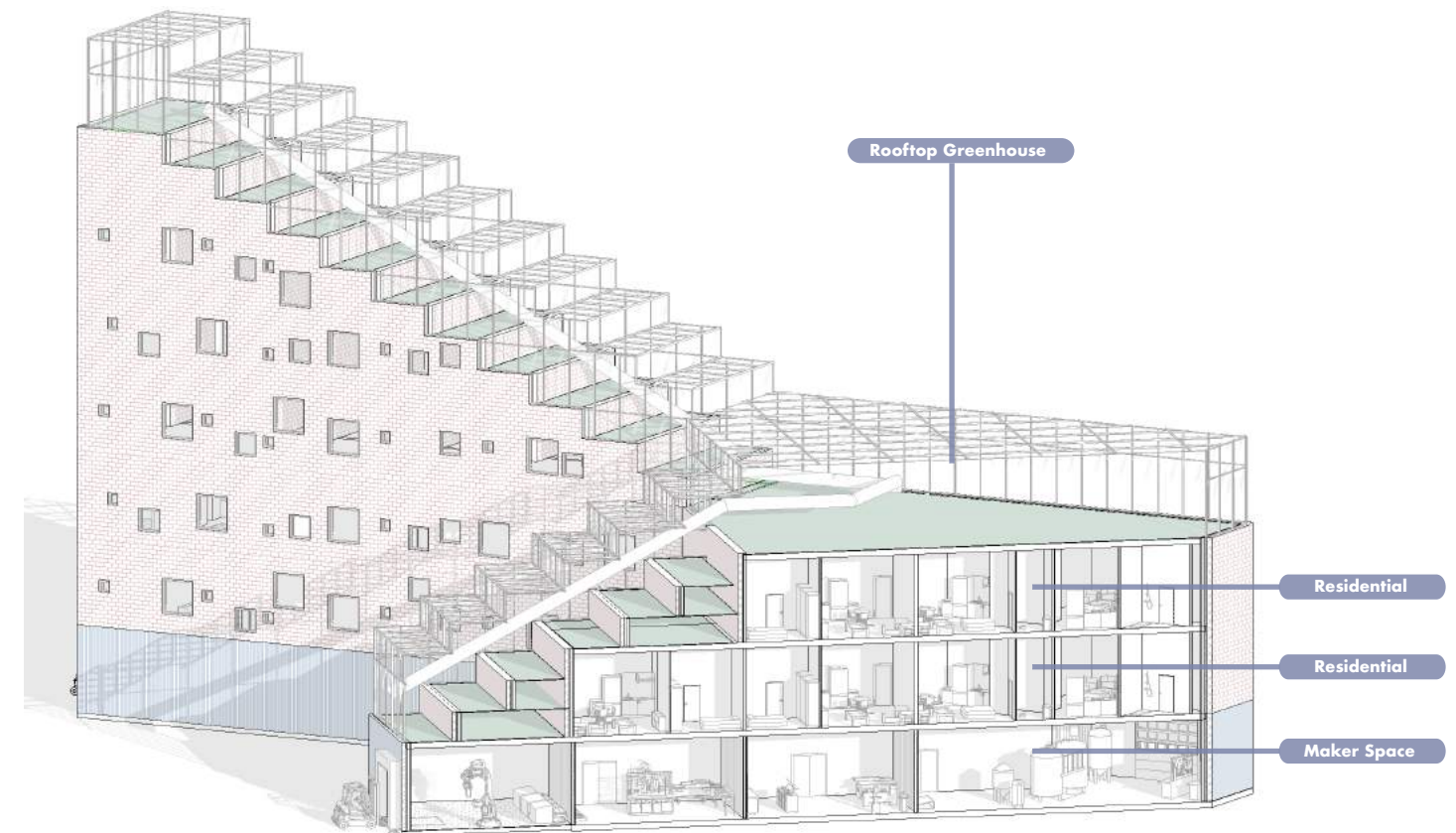
Human Experience



Typical Live Floor Plan



Proposal of Architecture Defined by Water Systems





05 / Stoop City

Core Architecture Studio III, Fall 2020

Project: Affordable Housing

Location: Bronx, New York

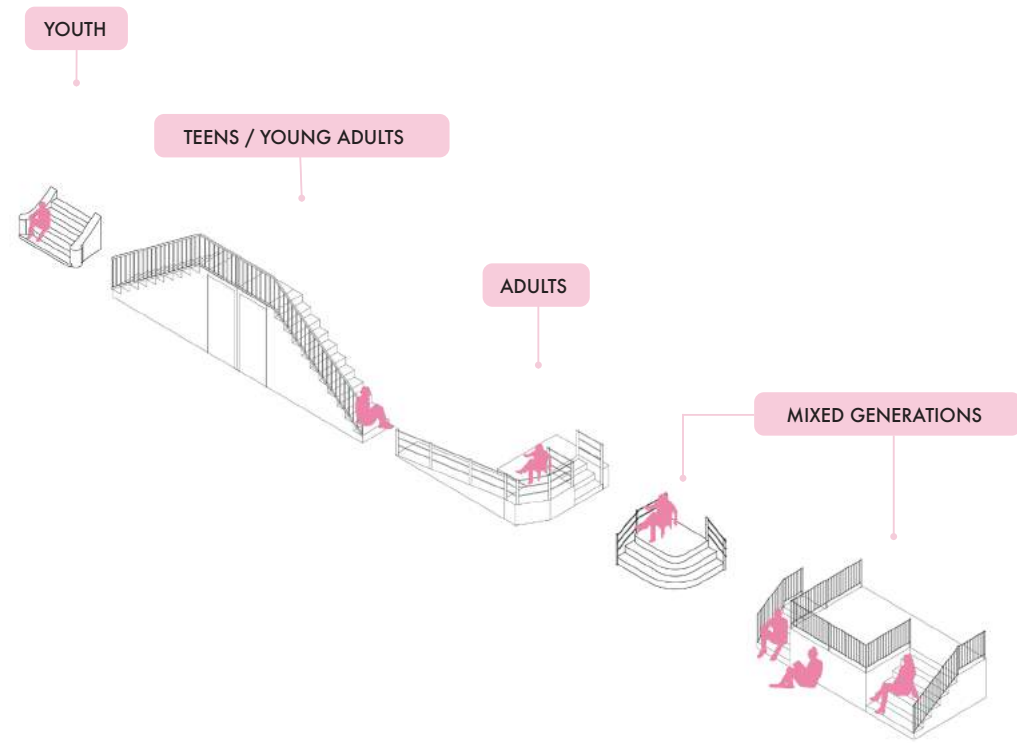
Size: 110 Units

Partner: Daniel Vanderhorst

Professor: Hilary Sample

The brief was to design a housing project in the Bronx up to as large as the entire city block between 151st and 152nd street. Our approach was to study the stoop then carve out stairs from an aggregate form to allow for forms and spaces that would have been difficult to design without this system. This arrangement creates stoop conditions on all 6 levels throughout the building while simultaneously eliminating the notion of the double loaded corridor. The complex system of stairs means that there are multiple paths residents can take from the street to their apartments.

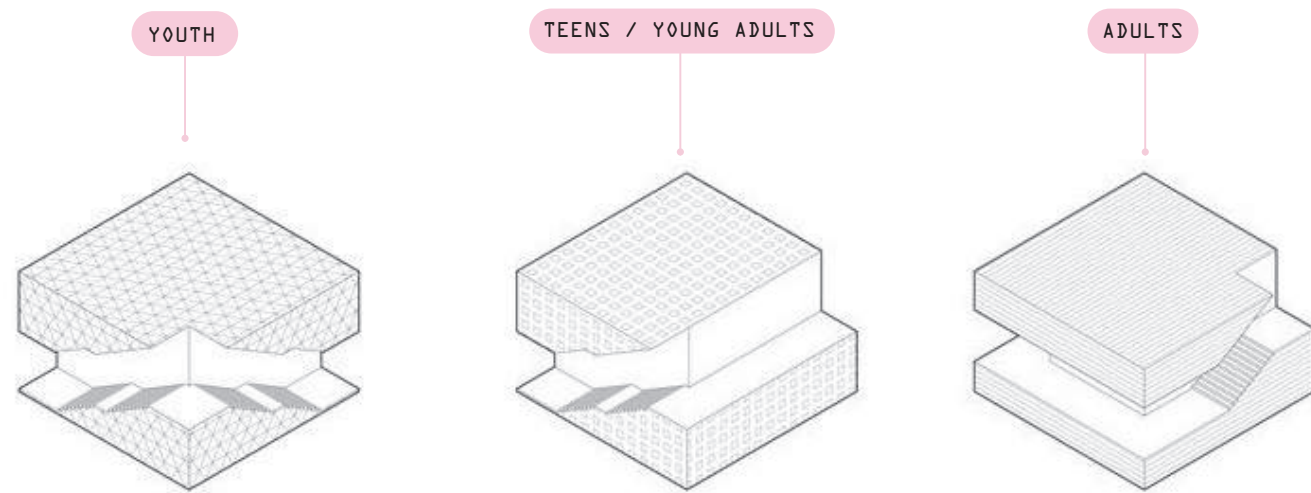
Stoop Analysis



Spatial Experience



Carving of Space



Translation to Architecture

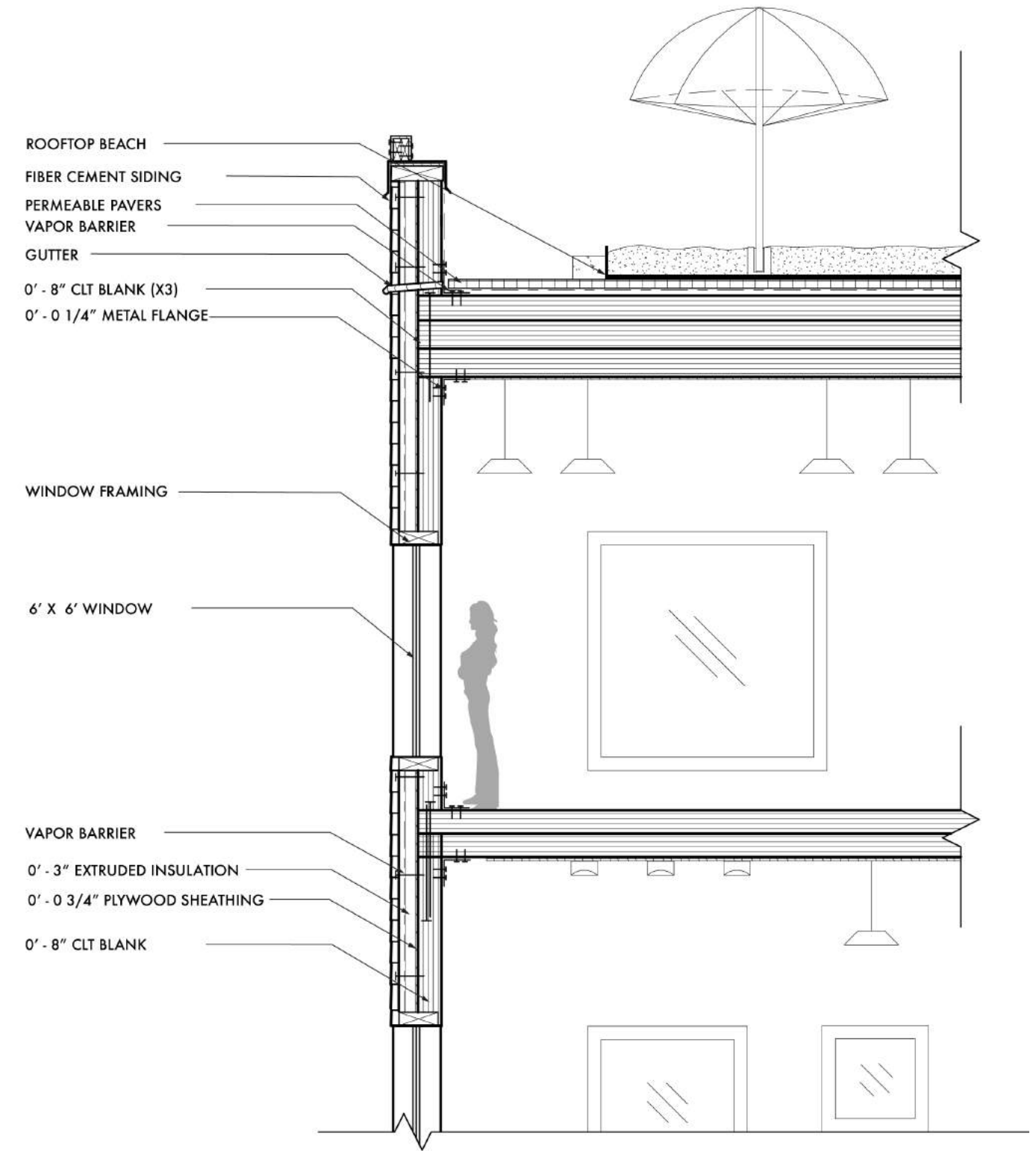
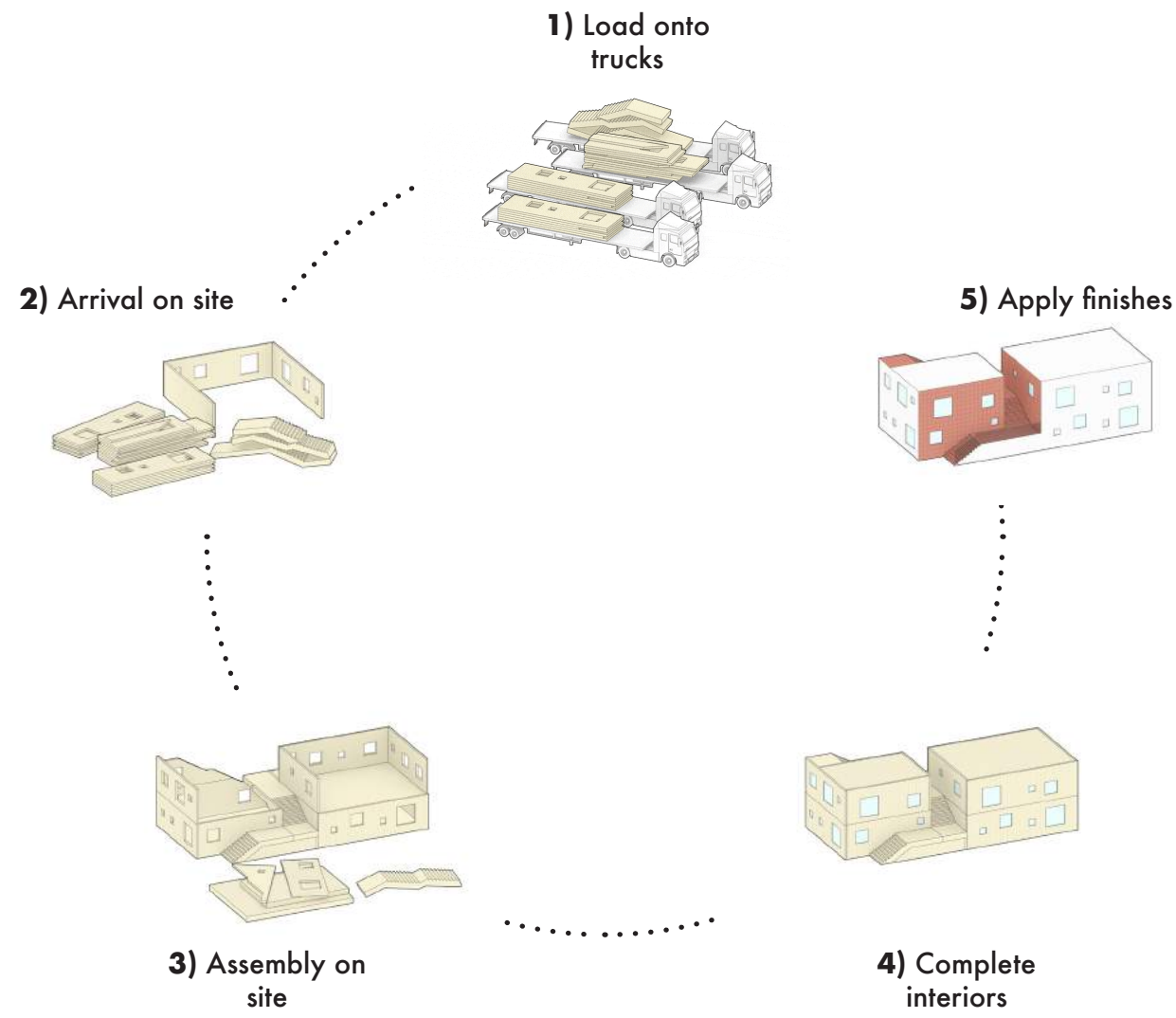


Ground Level Plan

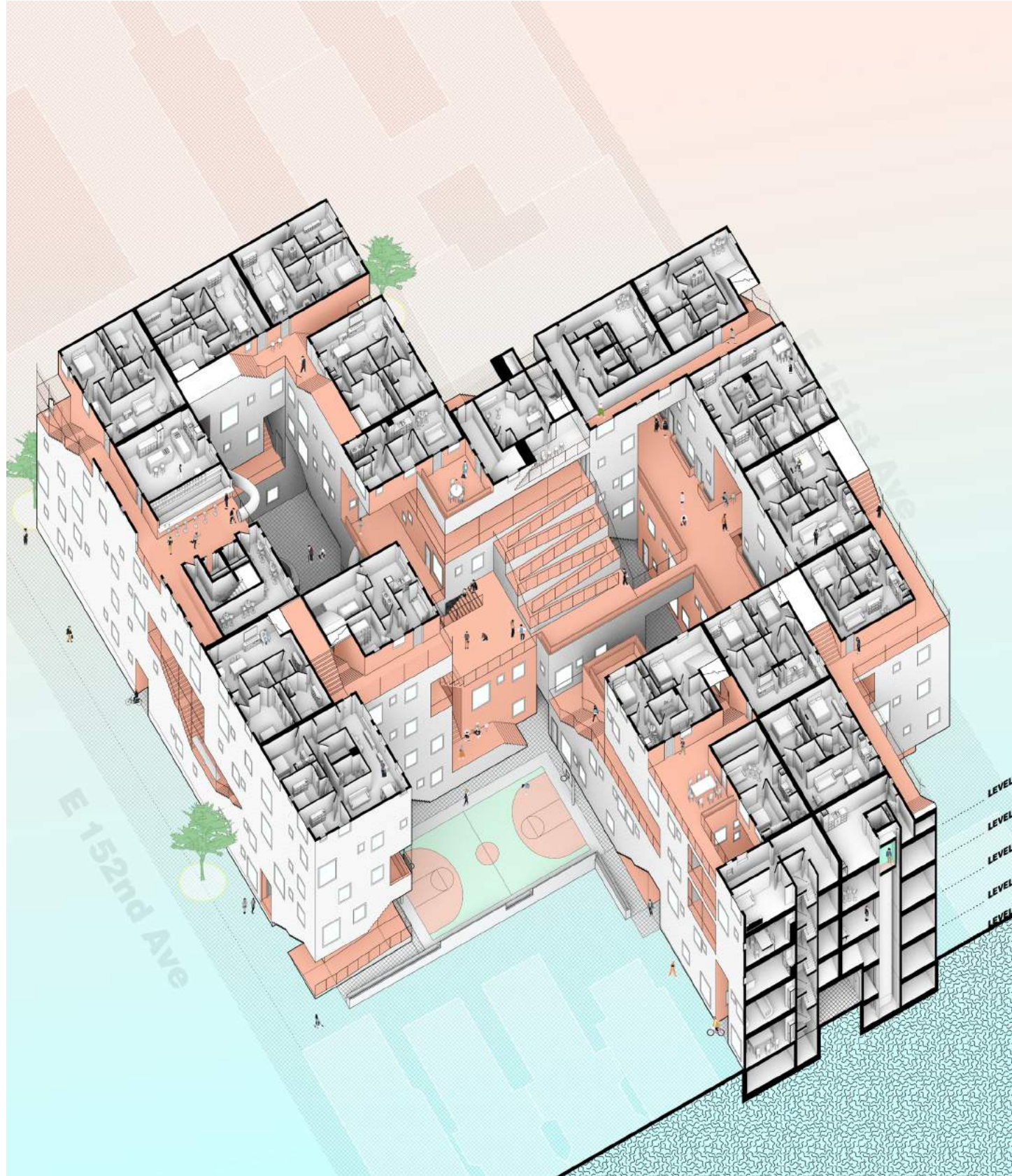


CLT Shipping Logistics

Cross Laminated Timber (CLT) Wall Section



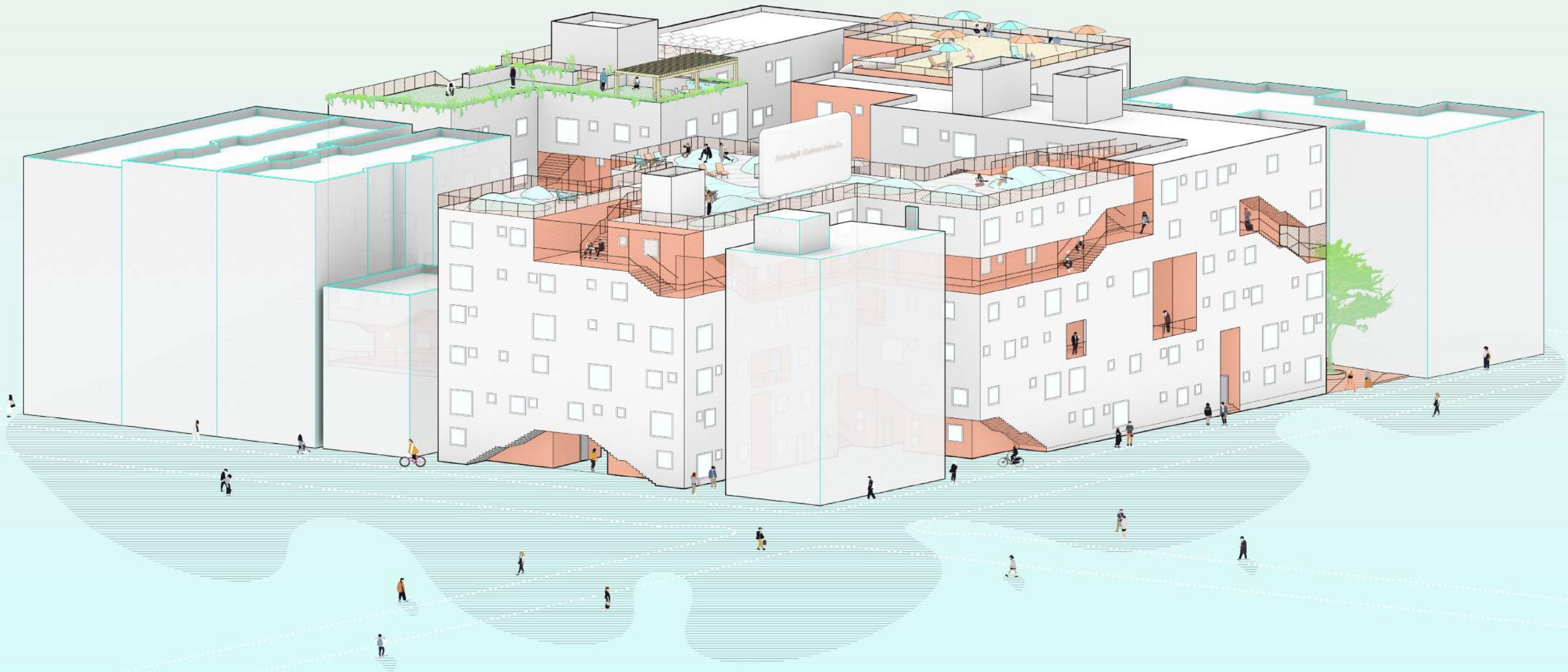
5th Level Axon Section Oblique

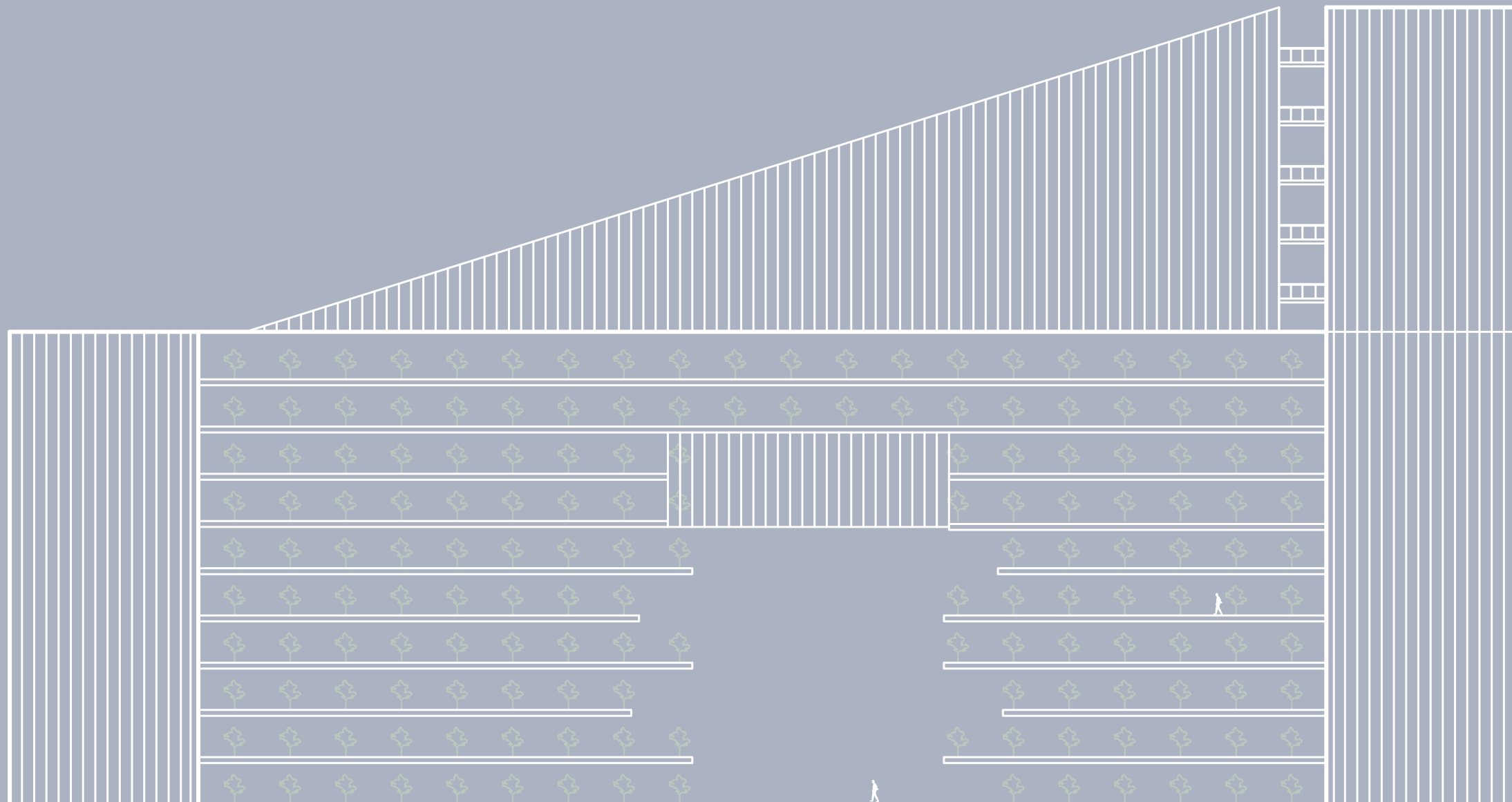


Axon Oblique



Slotting into Context





Thank you.

Jonathan M. Chester