



HONGAN NAN
ARCHITECTURE PORTFOLIO
2023-2026

MASTER OF ARCHITECTURE
COLUMBIA GSAPP

HONGAN NAN

COMMUNITY, ENVIRONMENT, MATERIAL

My design approach begins with the communities that architecture serves. I am interested in how buildings can support not only functional needs, but also everyday rituals, social exchange, and collective identity. Rather than understanding program as a fixed list of rooms, I see it as a flexible framework that can evolve with its users over time. Architecture, in this sense, becomes a social infrastructure: a space where people gather, learn, work, rest, and share knowledge through daily use. I am especially drawn to projects that engage specific communities, whether through cultural practice, informal occupation, or shared forms of care. By observing how people already use space, I aim to design environments that strengthen existing relationships while creating new possibilities for interaction and belonging.

My work also focuses on the relationship between architecture and its surrounding context, including landscape, climate, existing urban fabric, and ecological systems. I am interested in sustainability as a site-specific design attitude rather than a separate technical layer added at the end of a project. This means paying attention to natural ventilation, daylight, thermal behavior, material reuse, vegetation, water, and long-term adaptability. I often think about how architecture can respond to environmental conditions while also shaping new relationships between people and nature. Instead of treating a building as an isolated object, I see it as part of a larger system of air, light, materials, movement, and seasonal change. For me, sustainable design is not only about performance, but also about creating spaces that encourage care, awareness, and a more responsible way of living with the environment.

Material selection is central to how I think about architecture as something both conceptual and buildable. I am interested in materials not only for their appearance or atmosphere, but also for their structural behavior, assembly logic, durability, and environmental performance. A material decision should clarify how a building is made, how it ages, and how it supports the experience of its users. My work often explores the relationship between material expression and construction systems, whether through reused structures, lightweight additions, natural materials, or carefully detailed assemblies. I see detailing as an important design tool, where technical resolution can strengthen the larger architectural idea. Through this approach, material becomes more than a surface treatment; it becomes a way to connect concept, structure, environment, and human experience.

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INTERWOVEN | HERBAL HEALTH CENTER

Location
Sunset Park, Brooklyn, NY

Partner
Yake Wang

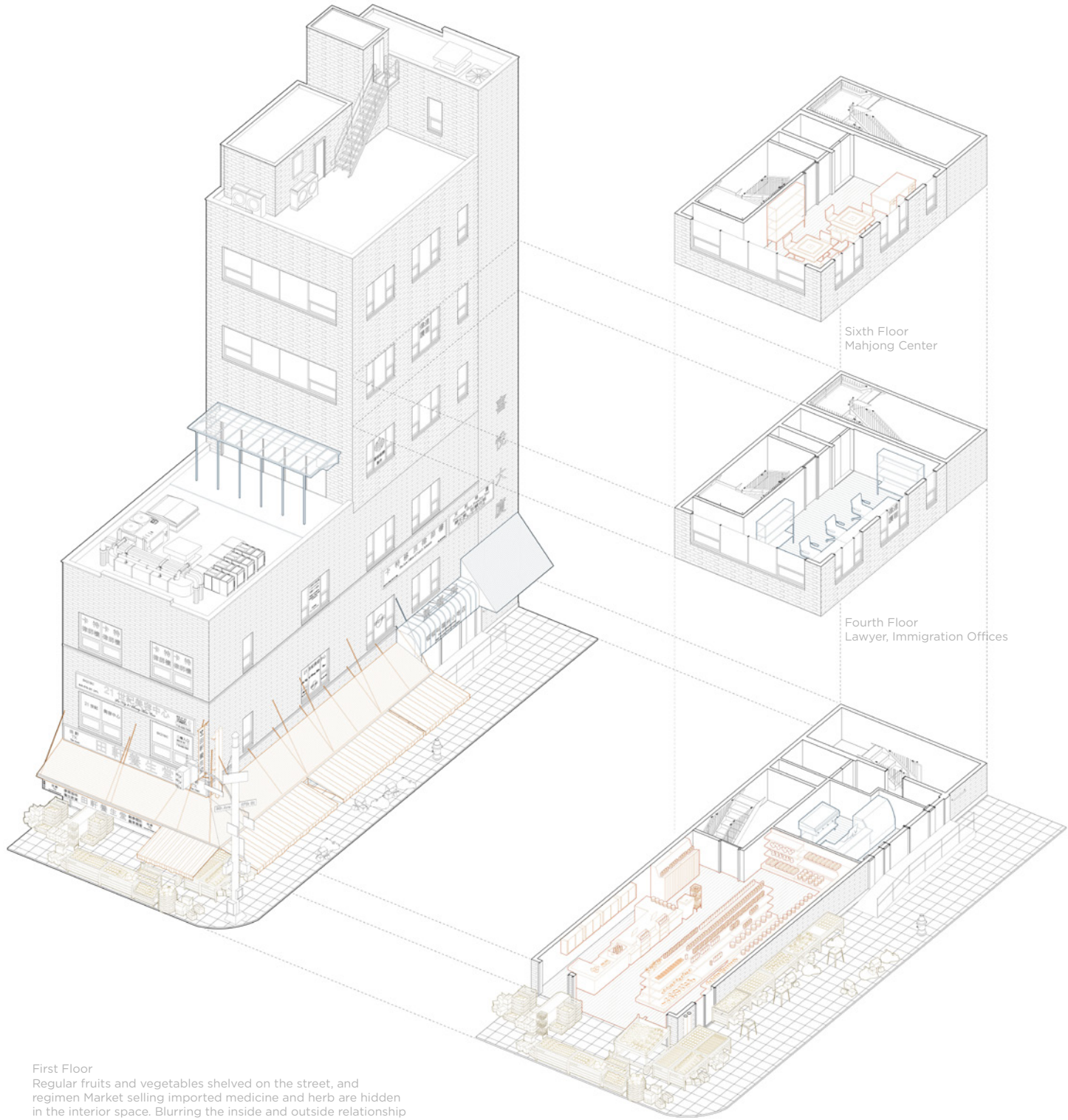
Instructor / Coordinator
Phu Hoang

Course
Advanced V Studio

ADAPTIVE REUSE, IMMIGRANT COMMUNITIES, HEALTH

Interwoven reframes architecture as a flexible infrastructure for community health rooted in cultural practice. It adapts existing brick factory buildings by preserving their facades, structures, and column grids, transforming them into an open armature that supports healing, learning, and daily rituals as they evolve through use. A suspended wooden system introduces controlled micro-climates, reinforcing an environmental logic that supports herbal practices and communal care. Programs are interlaced rather than separated: herb drying overlaps with cooking, circulation becomes informal learning space, and climatic gradients shape sensory transitions. Knowledge is shared through lived experience and seasonal practice, allowing culture and wellness to co-develop. Architecture operates not as a fixed container, but as a mediator that enables collective care and bottom-up knowledge to unfold.

5623 8th Ave



First Floor
Regular fruits and vegetables shelved on the street, and regimen Market selling imported medicine and herb are hidden in the interior space. Blurring the inside and outside relationship

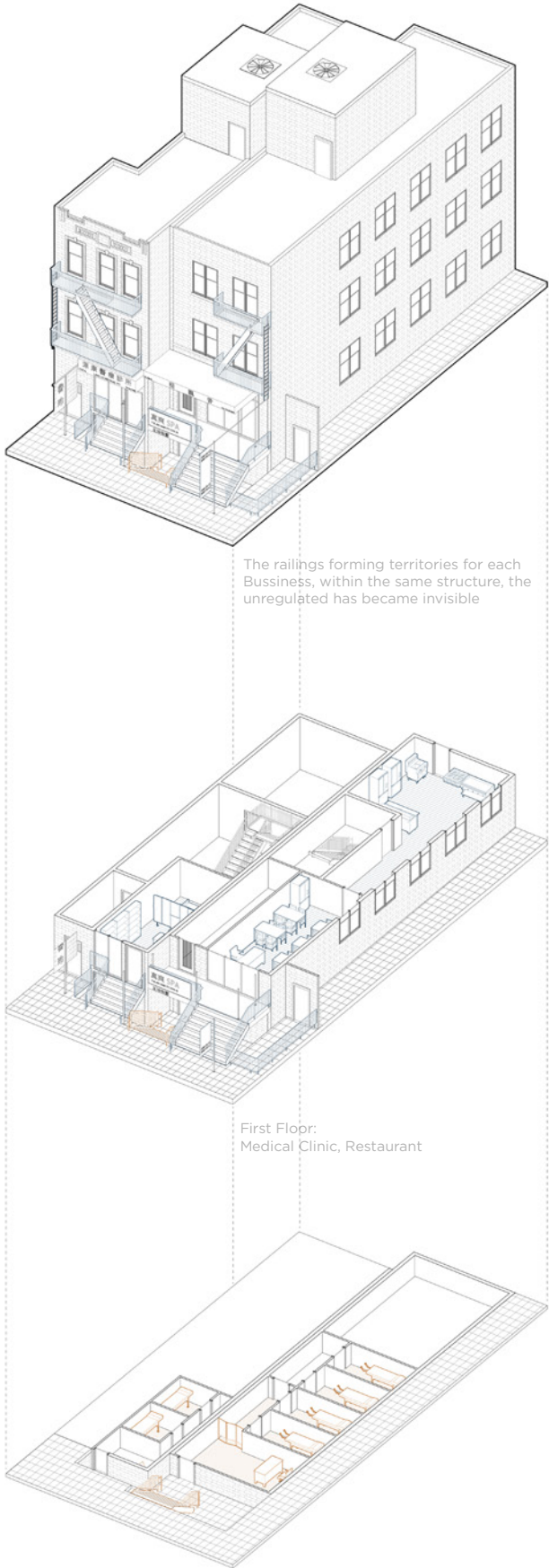
Sixth Floor
Mahjong Center

Fourth Floor
Lawyer, Immigration Offices

Anti-Typology Building Research - Unregulated vs Regulated

The anti-typology of Sunset Park emerges as a flexible spatial matrix where regulated and informal programs coexist through fluid boundaries and everyday architectural elements, shaped by diasporic practices that continuously negotiate use, visibility, and community health outside formal zoning

5628 8th Ave

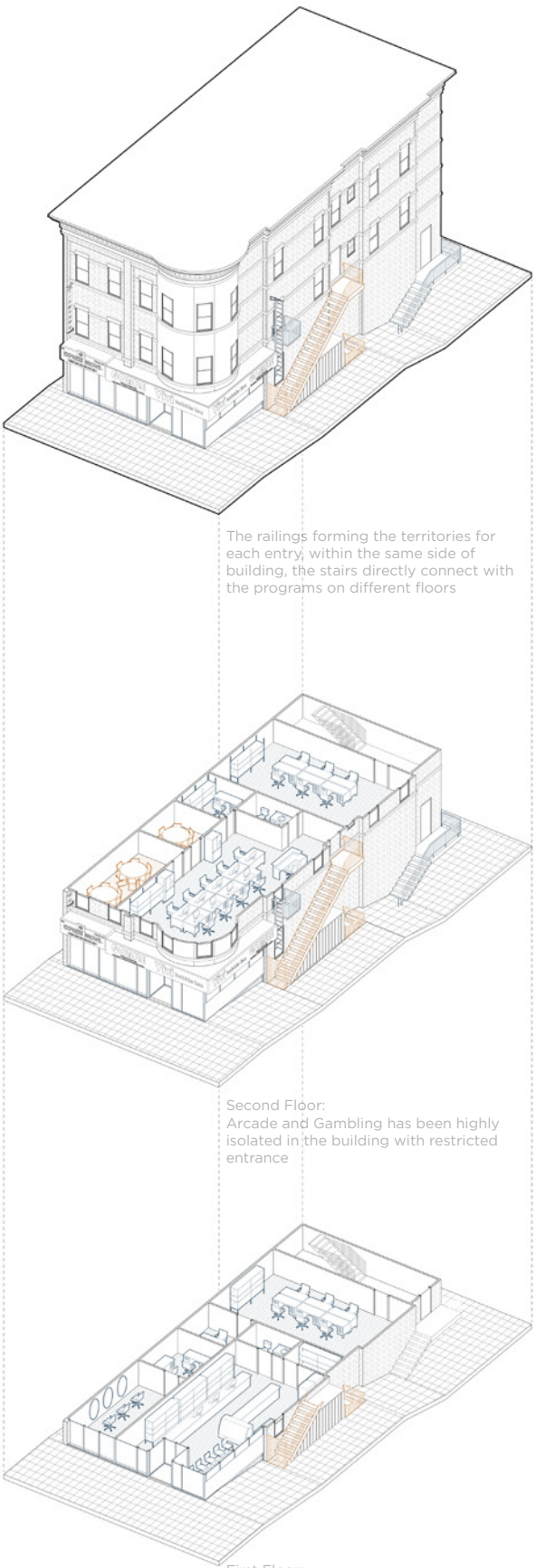


The railings forming territories for each Business, within the same structure, the unregulated has become invisible

First Floor:
Medical Clinic, Restaurant

Basement Floor:
"Gray" SPA has been hidden, occupying two building basement

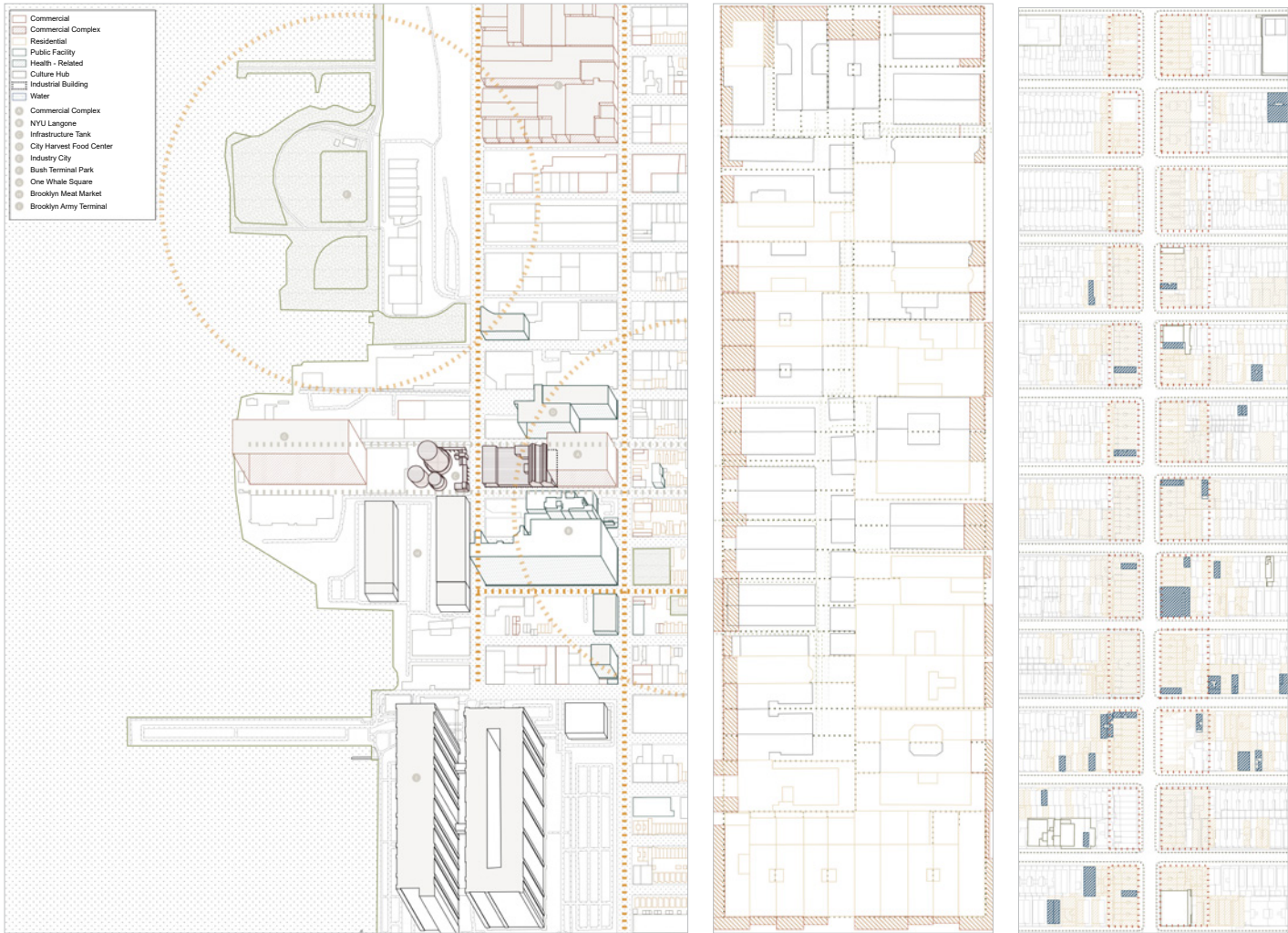
4998 5th Ave



The railings forming the territories for each entry, within the same side of building, the stairs directly connect with the programs on different floors

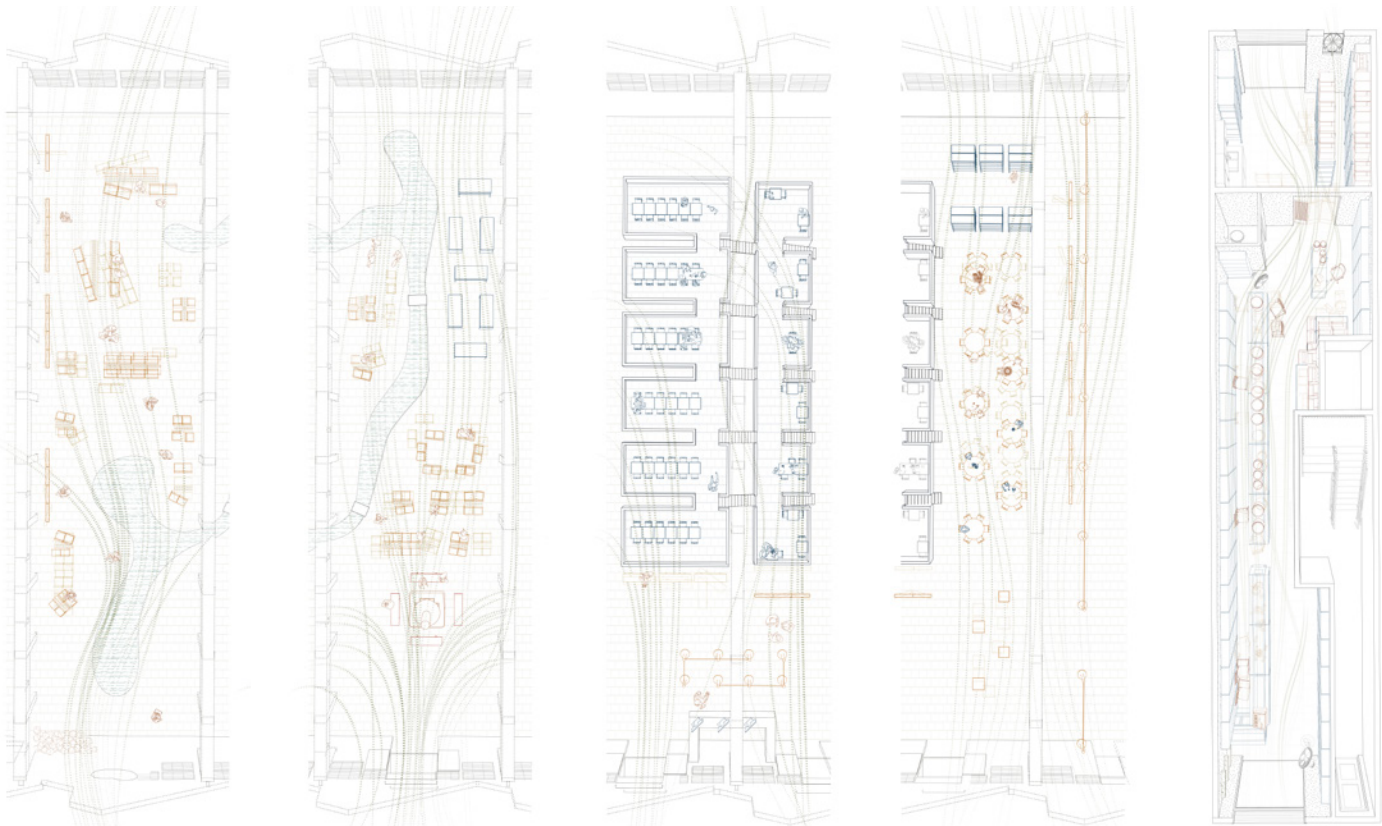
Second Floor:
Arcade and Gambling has been highly isolated in the building with restricted entrance

First Floor:
Beauty Salon, Tech Center, and Boba Tea Shop



56th St | 57th St

8th Ave



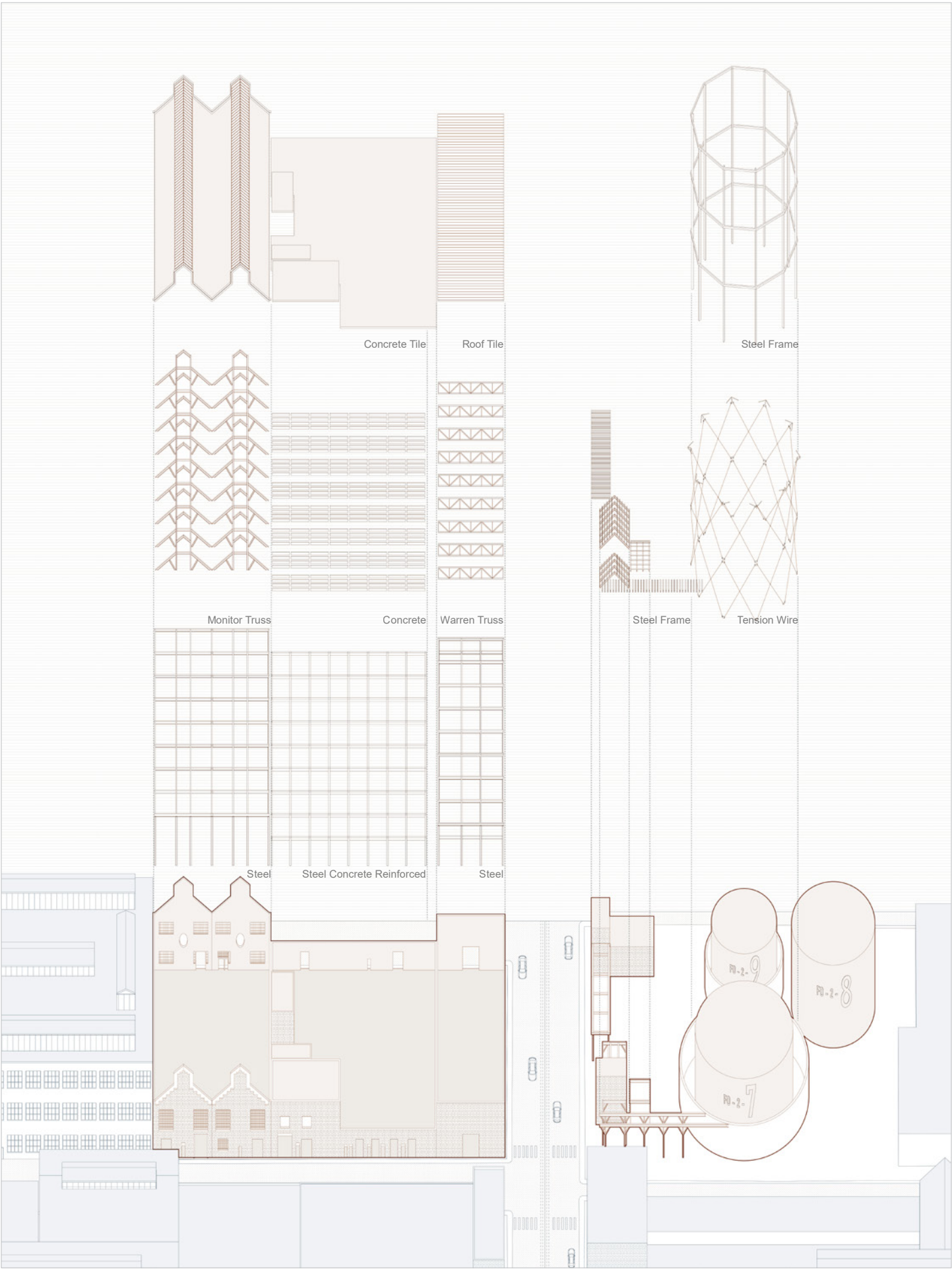
Waterfall

Hearth

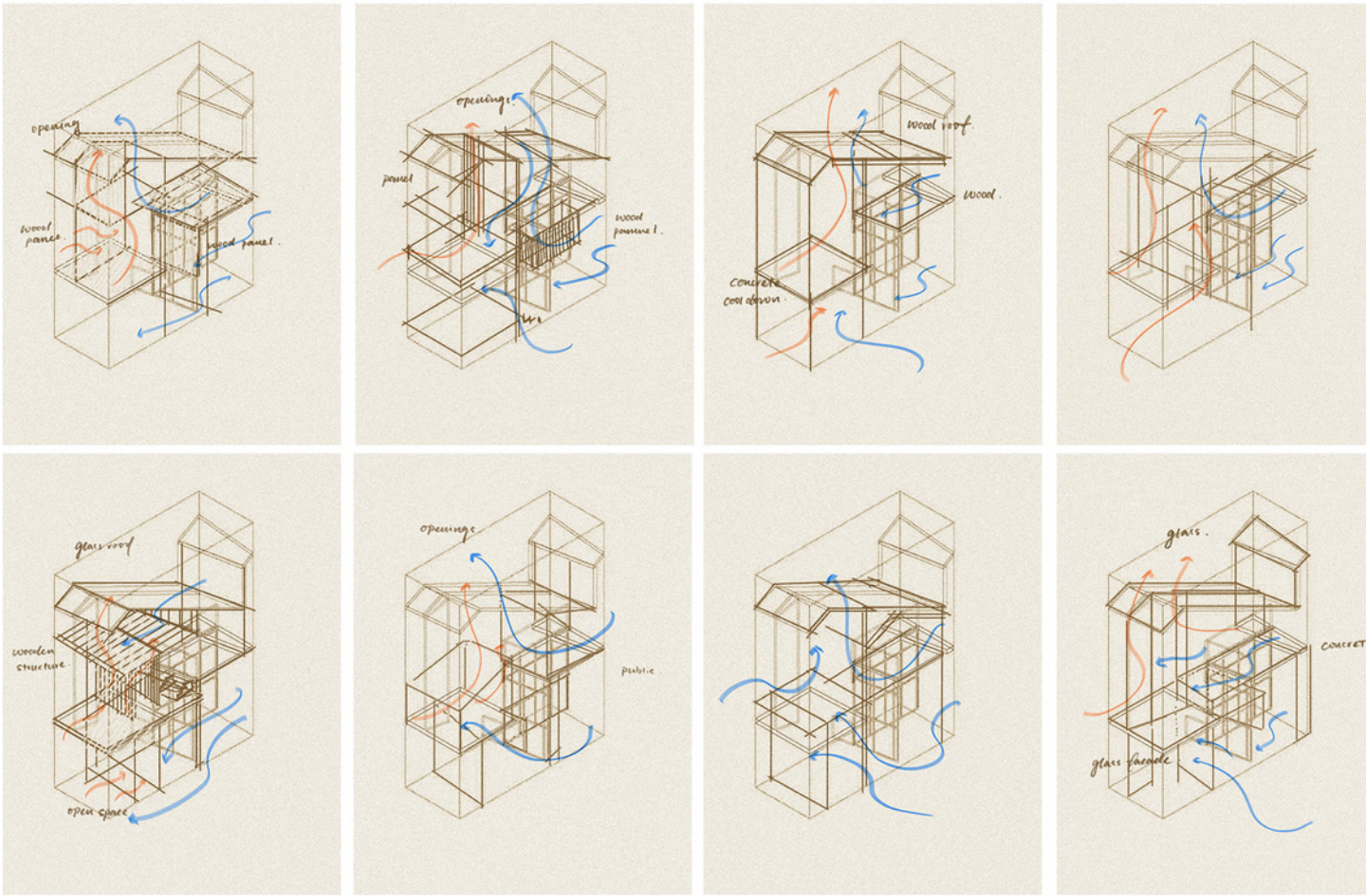
Air

Ground

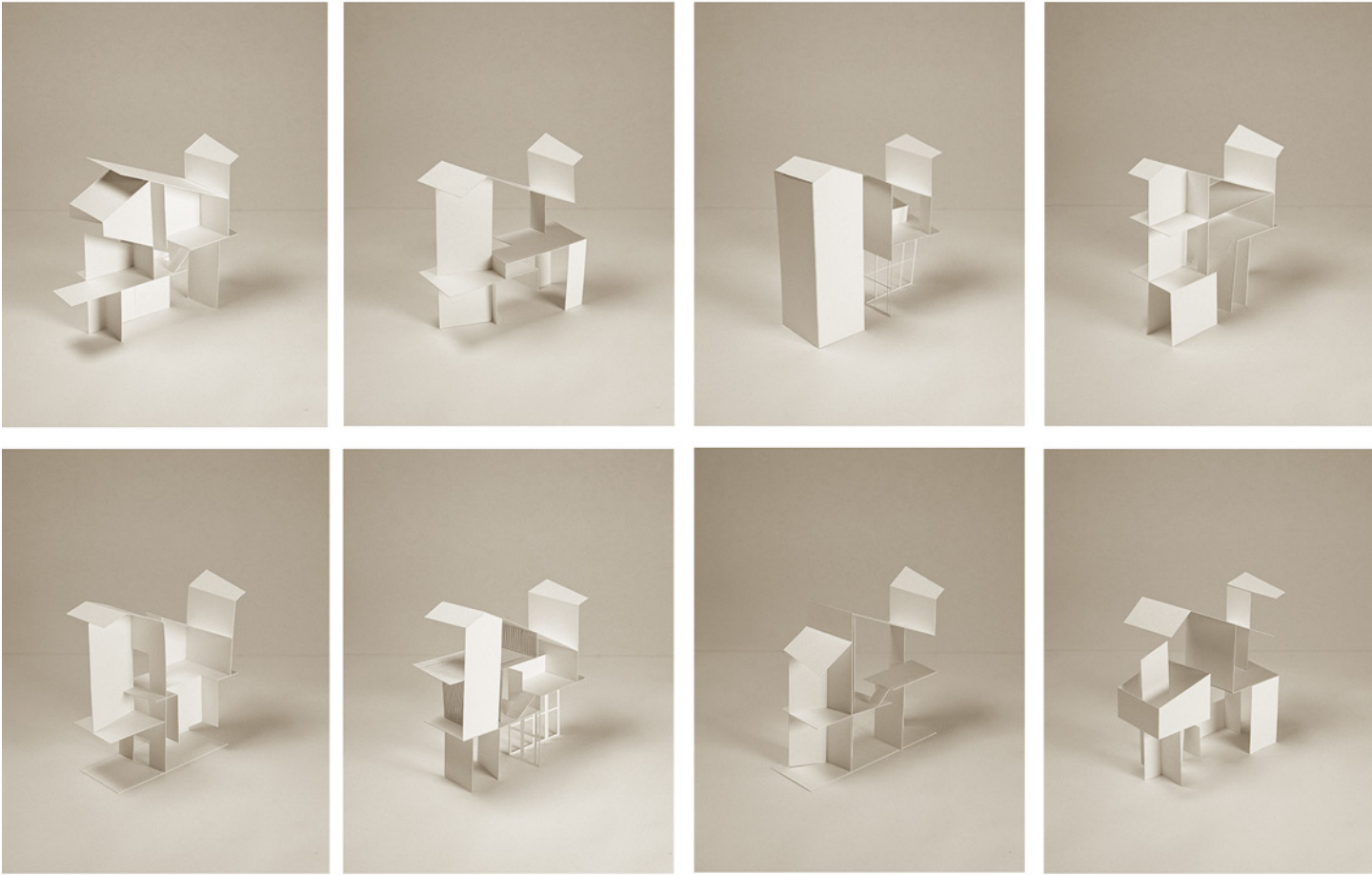
Herb Store



Site Research - Existing Structure



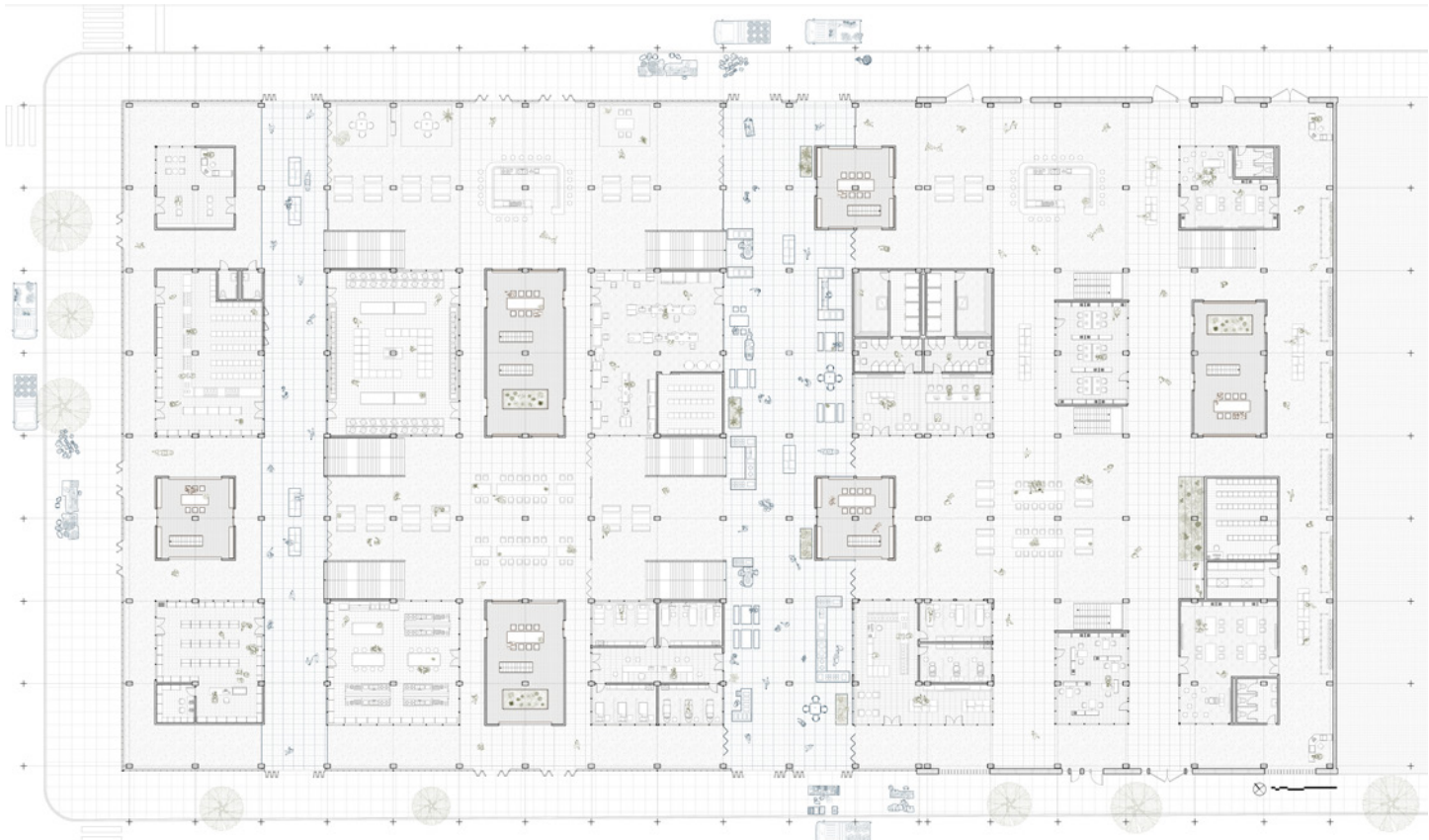
Ventilation, Material, Programs



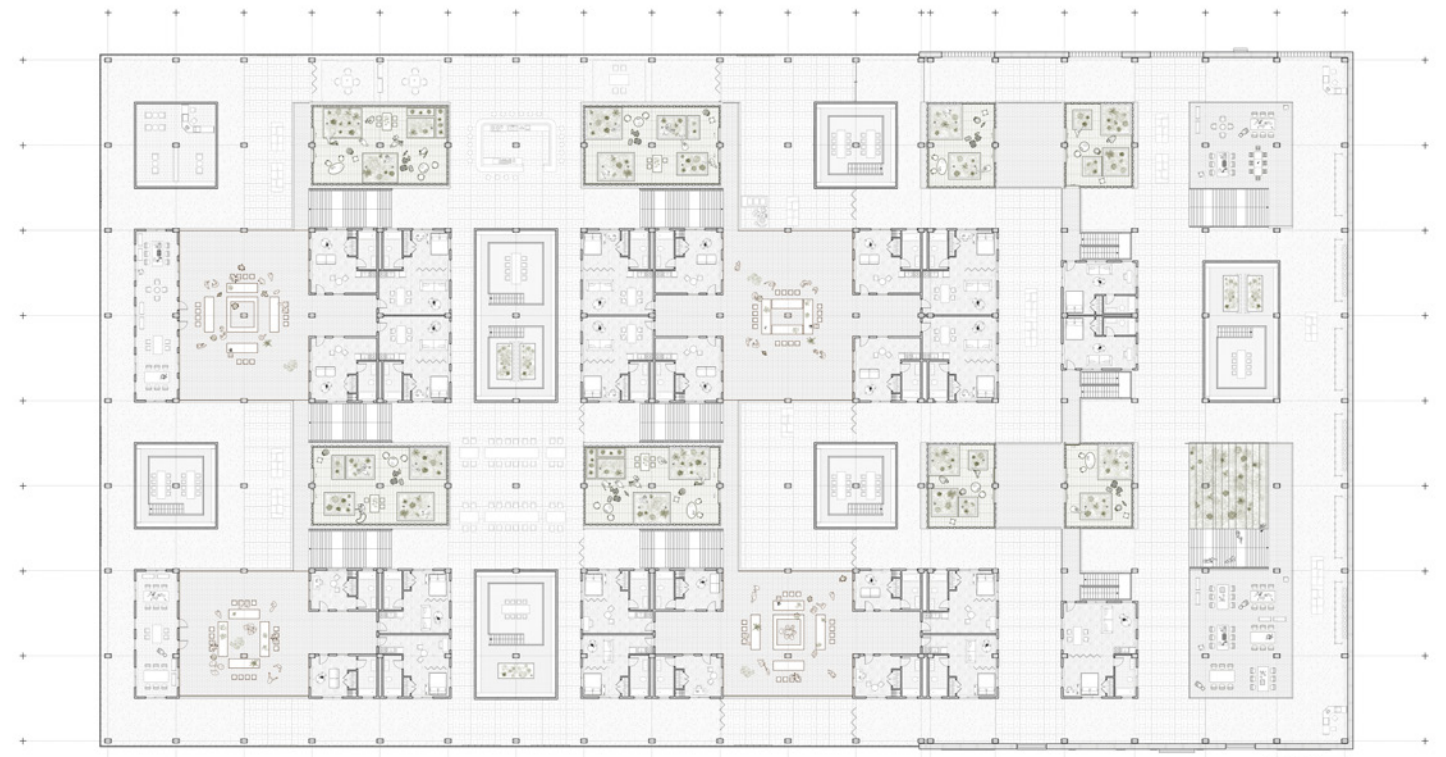
Massing Iteration Models



Design Massing Chunk Model - 1/8" = 1' - 0"



Ground Floor Plan



Second Level Floorplan



Air Corridor



Knowledge Core



Community Core



Greenhouse Core



Projection - Outside to Inside

The translucent polycarbonate facade softens the industrial exterior into a porous civic surface, visually drawing people from both 5th and 8th Avenues inward through light, activity, and layered thresholds



Long Sectional Perspective - Air, Program, Circulation

The drawing reveals the building's layered armature, highlighting air corridors, herb planting cores, community stairs, and knowledge spaces as an interconnected system of climate, movement, and collective learning



Hybrid Long Drawing - Oblique Interwoven Programs

Drawing showcase programs are interwoven across the herb planting, community, and knowledge cores, allowing learning, cultivation, and daily life to overlap rather than remain isolated



1/8" = 1' - 0"

Physical model is divided into five distinct yet interconnected zones



Spilt One - Existing

Community stair as a shared spine where herb planting cores and living spaces are interwoven



Spilt Two - Existing | New

Herb planting cores are shared with new living spaces and knowledge cores



Spilt Three - New

Herb planting cores shared with living spaces, where cultivation and daily life overlap



Spilt Four - New

Environmental layering of the same relationship, revealing light, air, and material systems



HOUSING FOR PLANT LOVERS

Location
127th St, West Harlem, NYC

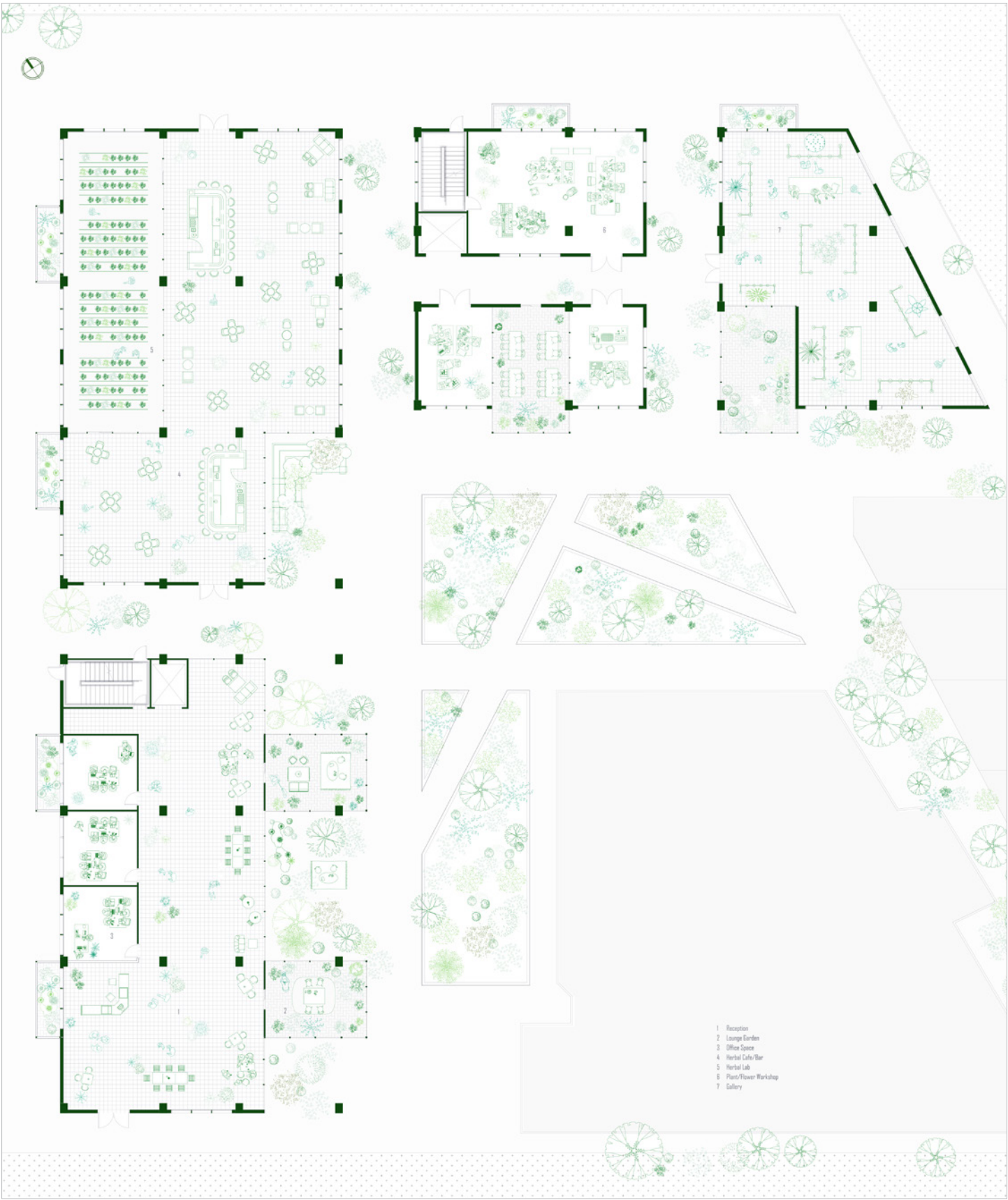
Partner
Yake Wang

Instructor / Coordinator
Hilary Sample

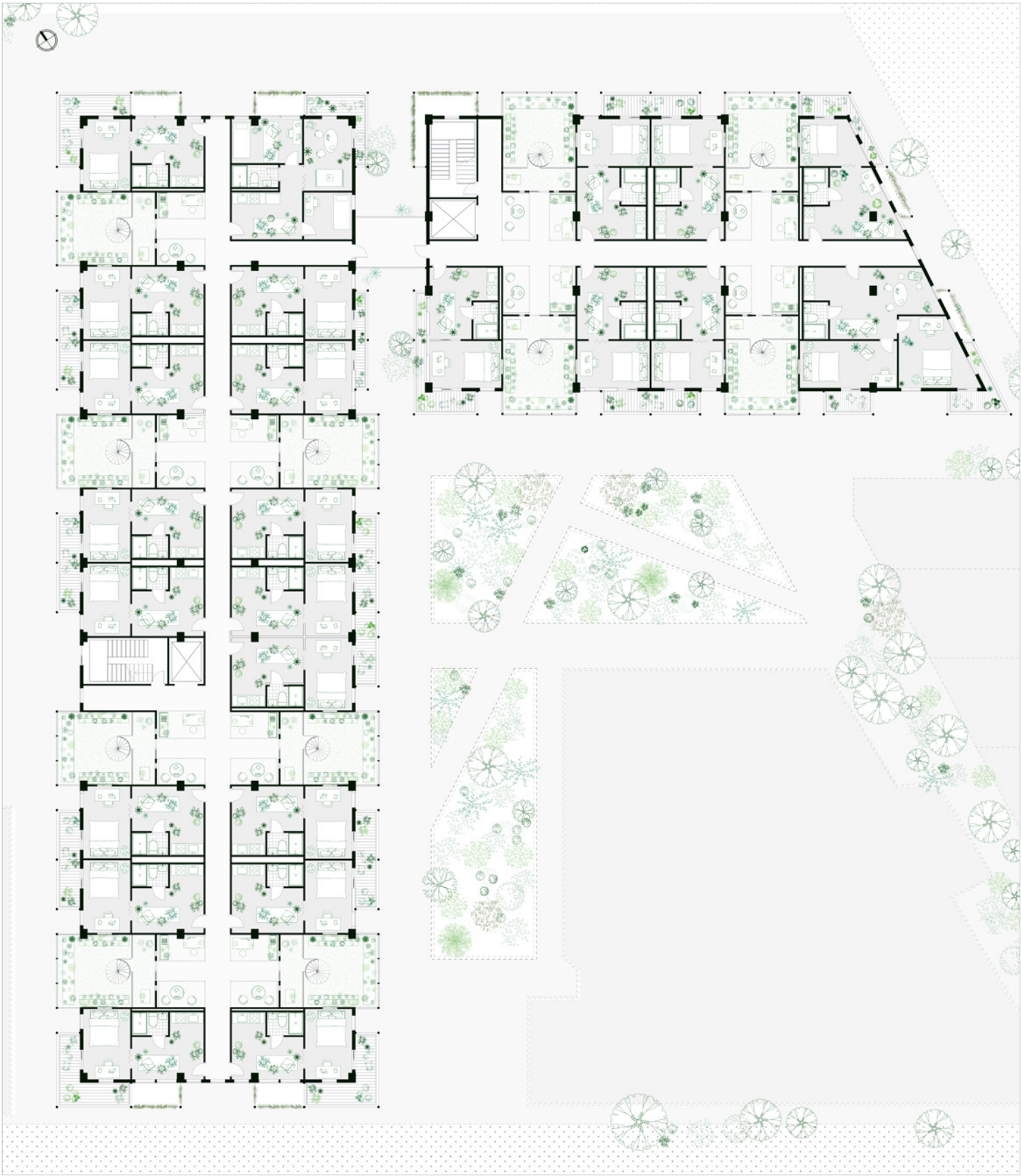
Course
Core III Studio

HOUSING, GARDEN, COMMUNITY

Our project is designed specifically to the community of phytophilia in New York City, integrating their passion for plants into the fabric of urban living. This innovative affordable housing development is centered around shared gardening spaces, ideal for individuals and families who cherish gardening and seek cost-effective living solutions. By incorporating these communal gardens into the design, the project not only provides a unique, engaging environment that promotes social interactions among residents but also supports a healthy, sustainable lifestyle. The integration of green spaces within the housing structure aims to enhance community well-being, making it a model for combining urban development with environmental consciousness.



Ground Floorplan



Level Five Floorplan

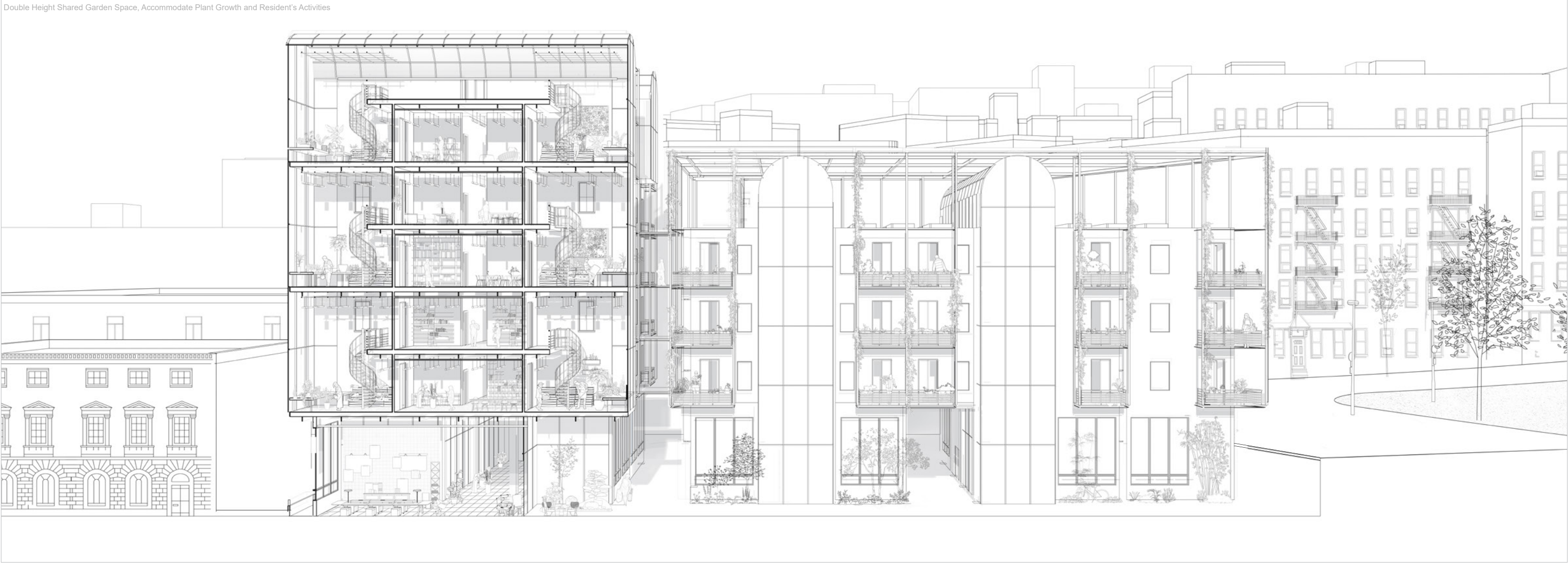
150 units are arranged within a 15,000-square-foot floor plate, with every four units sharing a garden space that integrates collective living with daily plant care



1:300 Building Model with Context Southeast



1:300 Building Model with Context Southwest



Section Perspective: Building View W 127th St



Seasonal Facade
Summer | Autumn | Winter



1b1b

Enhancing personal connection with nature



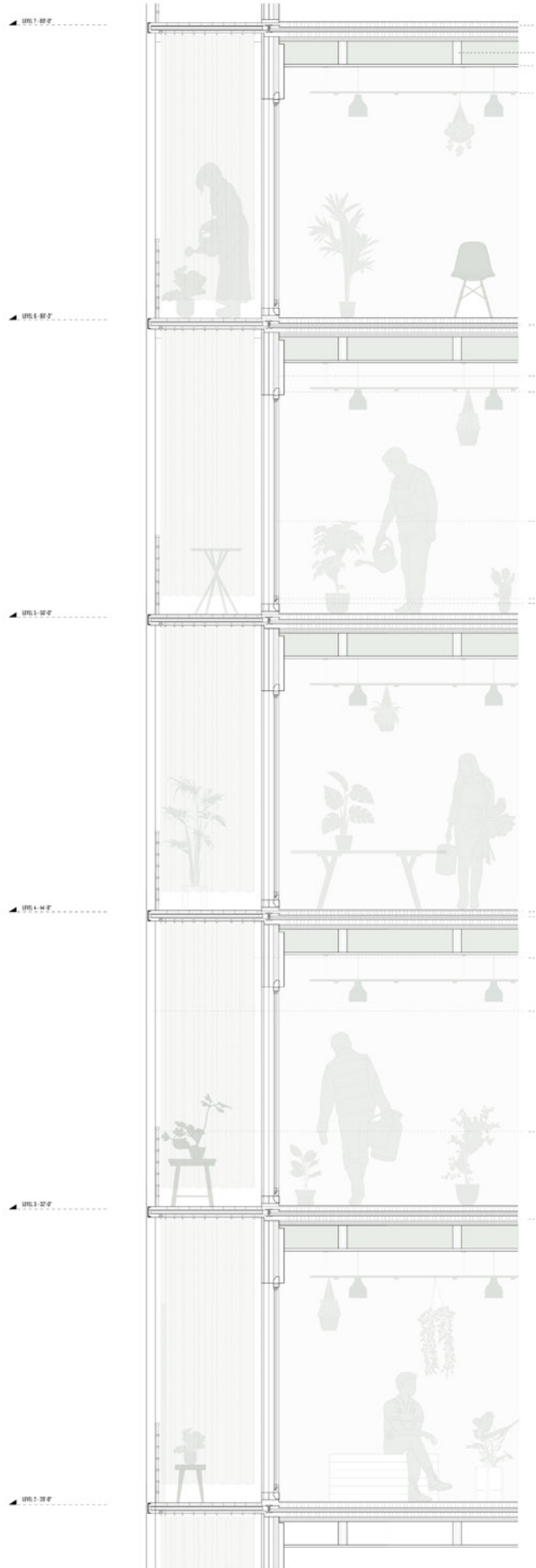
2b1b

Sharing activities of the residents, gatherings around the corner terrace

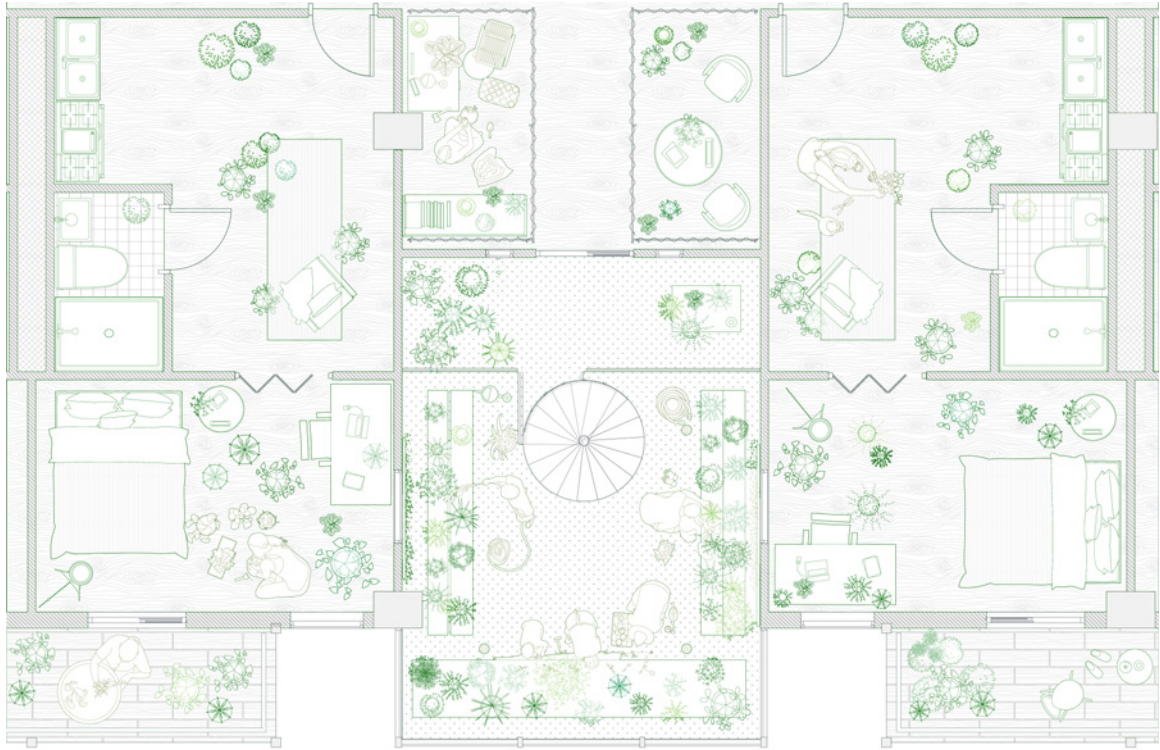


2b1b trapezoid

Individual balconies for each resident, and a central gathering space

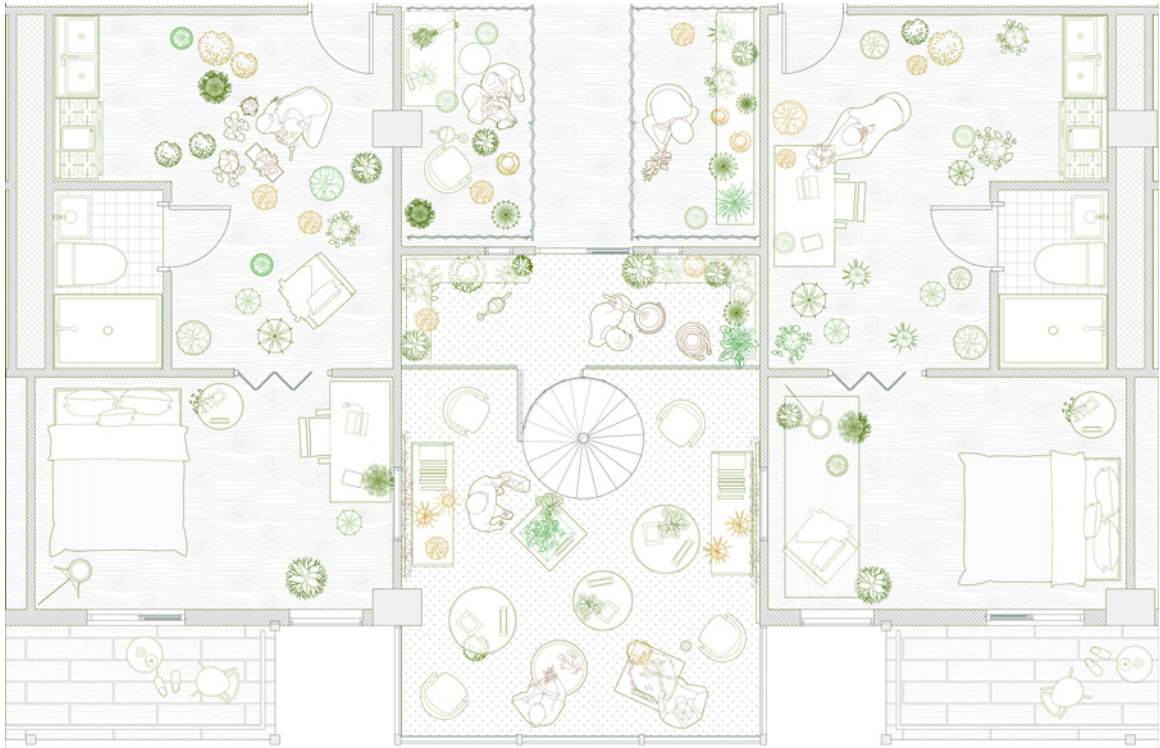


FULL FACADE MODEL 1/4" = 1' - 0"



Detail Plan - Summer

Plants requiring more sunlight are placed near windows and on balconies, while shade-tolerant varieties are inside, ensuring optimal growth



Detail Plan - Autumn

Strategic relocation of plants to interior areas for protection, while the shared garden space shifts focus from plant cultivation to styling, adapting to seasonal changes

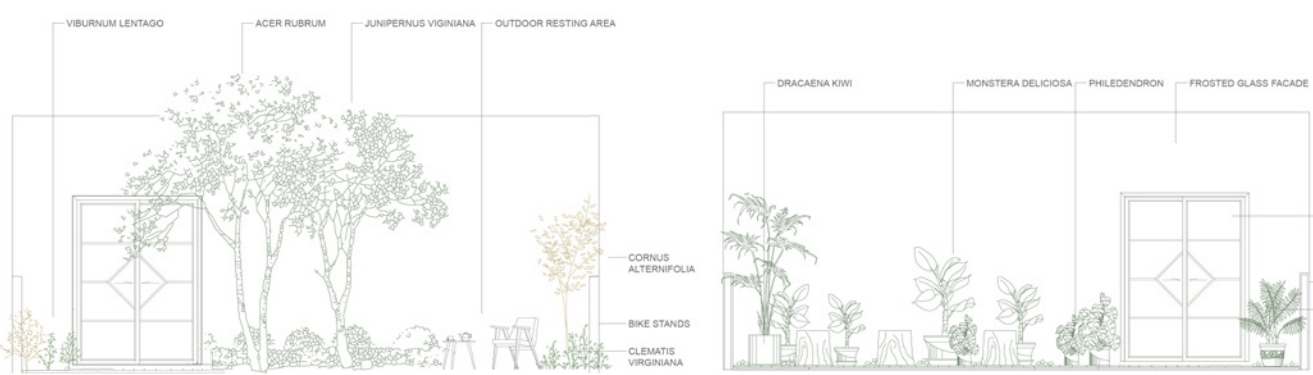


FULL GARDEN SPACE 1/4" = 1' - 0"

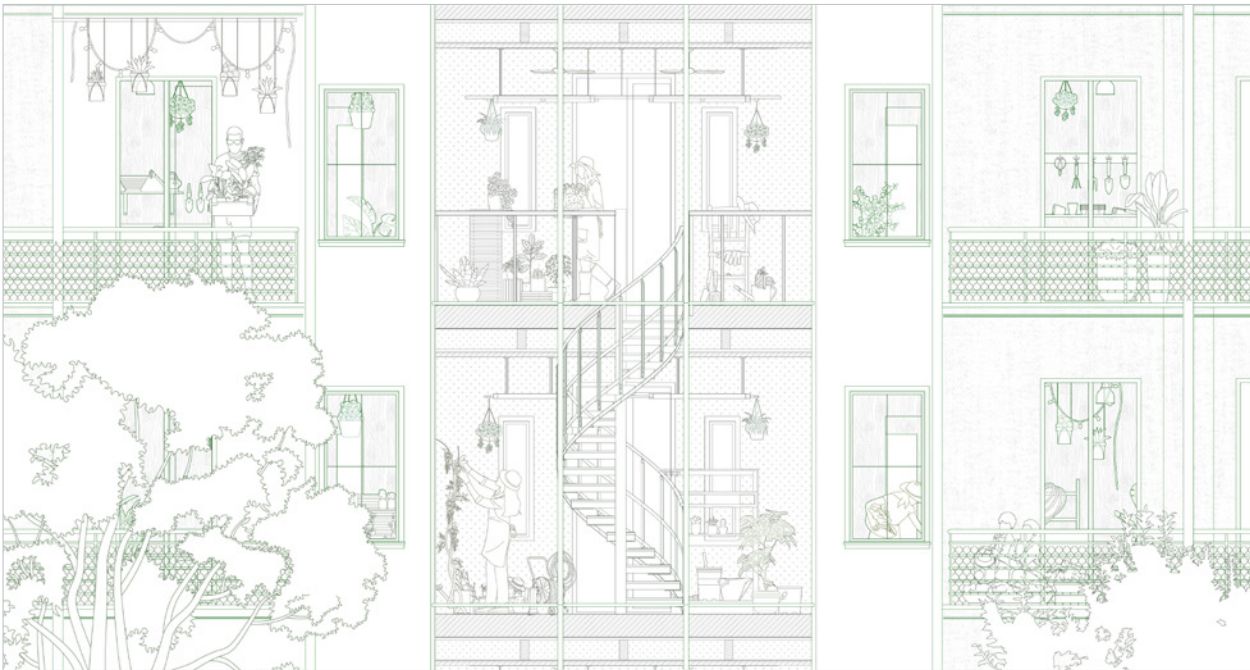


Inside - Out Elevation

Distinct activities for residents, the hanging ceiling systems in residential areas foster dynamic, plant-filled environments, enhancing the living experience with natural elements



RESIDENTIAL INTERIOR 1/4" = 1' - 0"



Outside - In Elevation

Activities available on the balconies, set against a dynamic backdrop of tree canopies and plant shades, enhancing both visual appeal and resident engagement with nature



GROUND FLOOR INTERIOR DETAIL 1/4" = 1' - 0"



NIGHT TIME FACADE MODEL 1/4" = 1' - 0"



NIGHT TIME RENDERING CONVENT AVE



NIGHT TIME GARDEN SPACE



THE KNOWLEDGE VESSEL

Location
Sewoon Sangga, South Korea

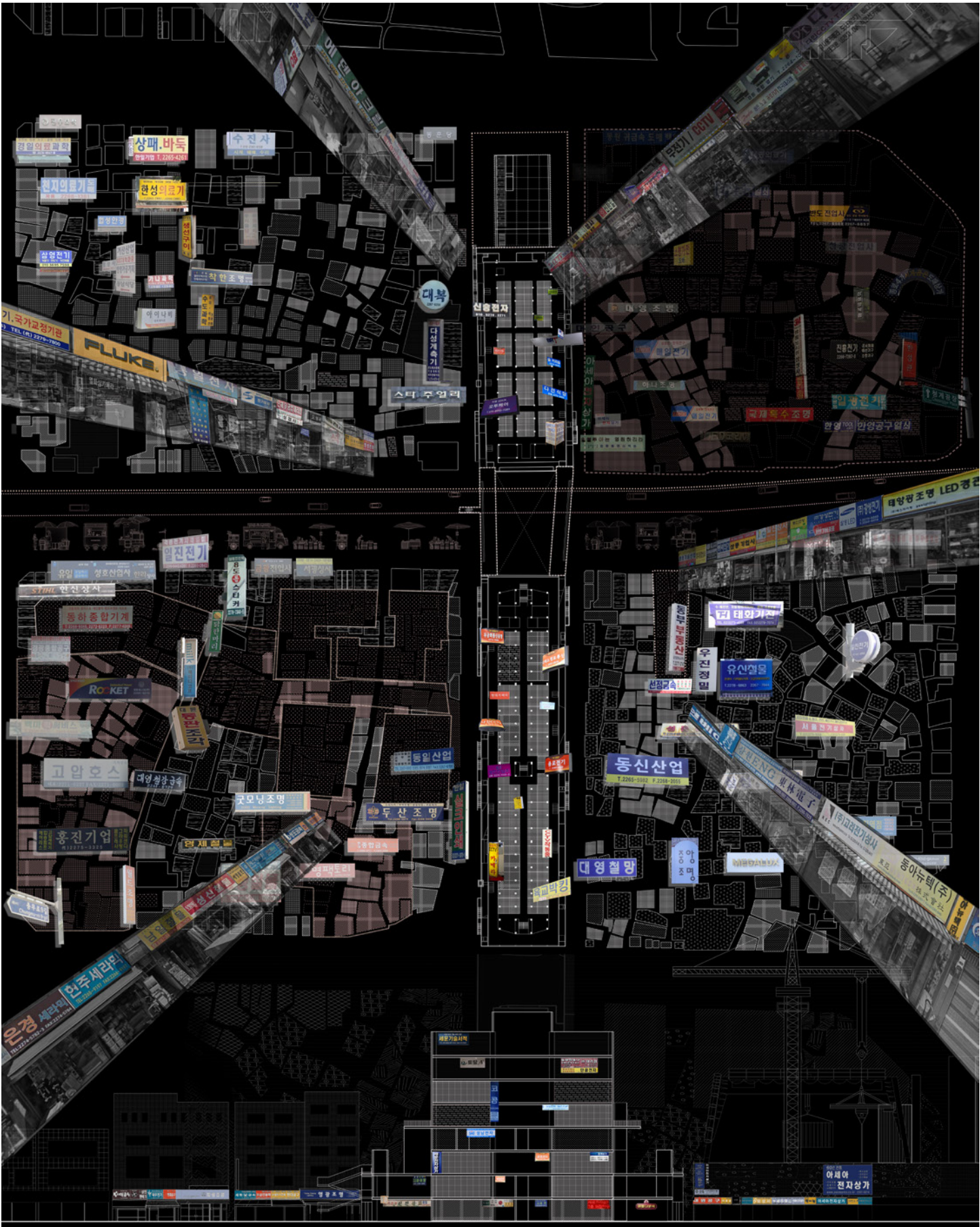
Partner
Yake Wang

Instructor / Coordinator
Nahyun Hwang

Course
Advanced VI Studio

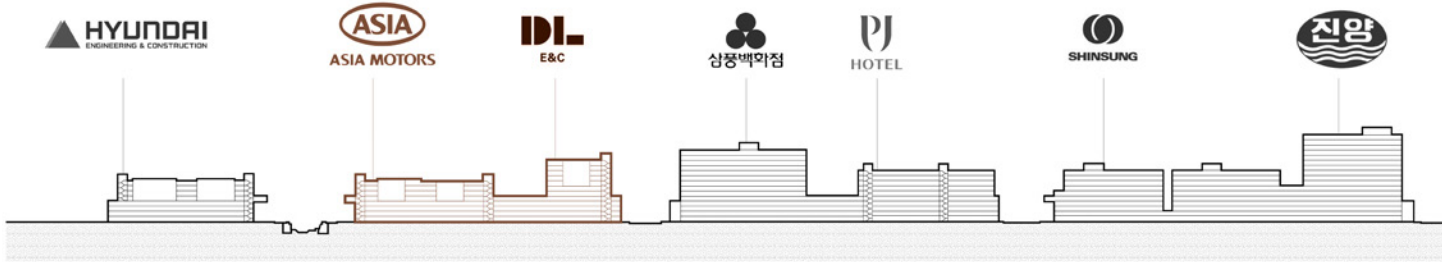
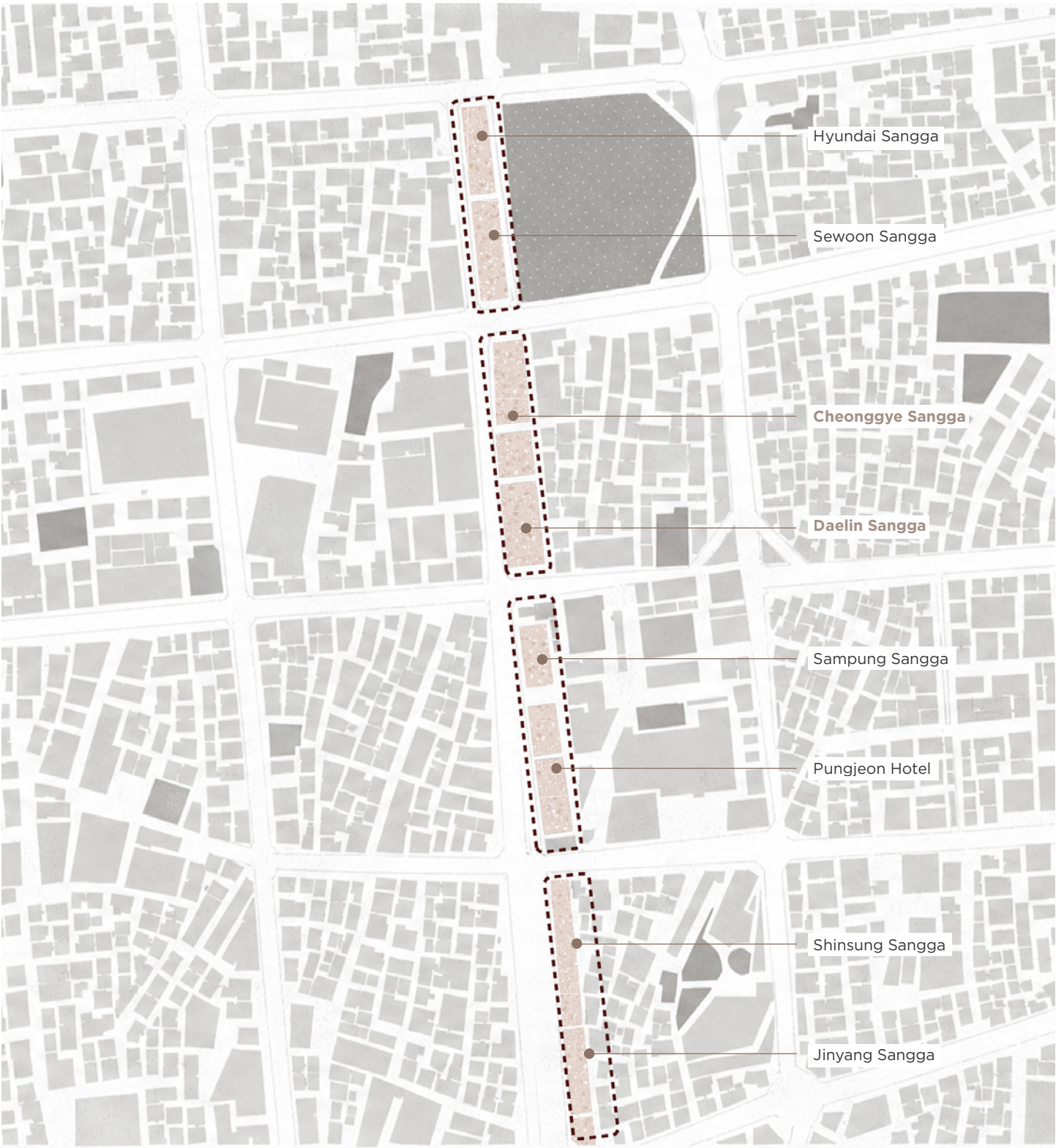
PERSERVING TACIT KNOWLEDGE IN SEWOON SANGGA

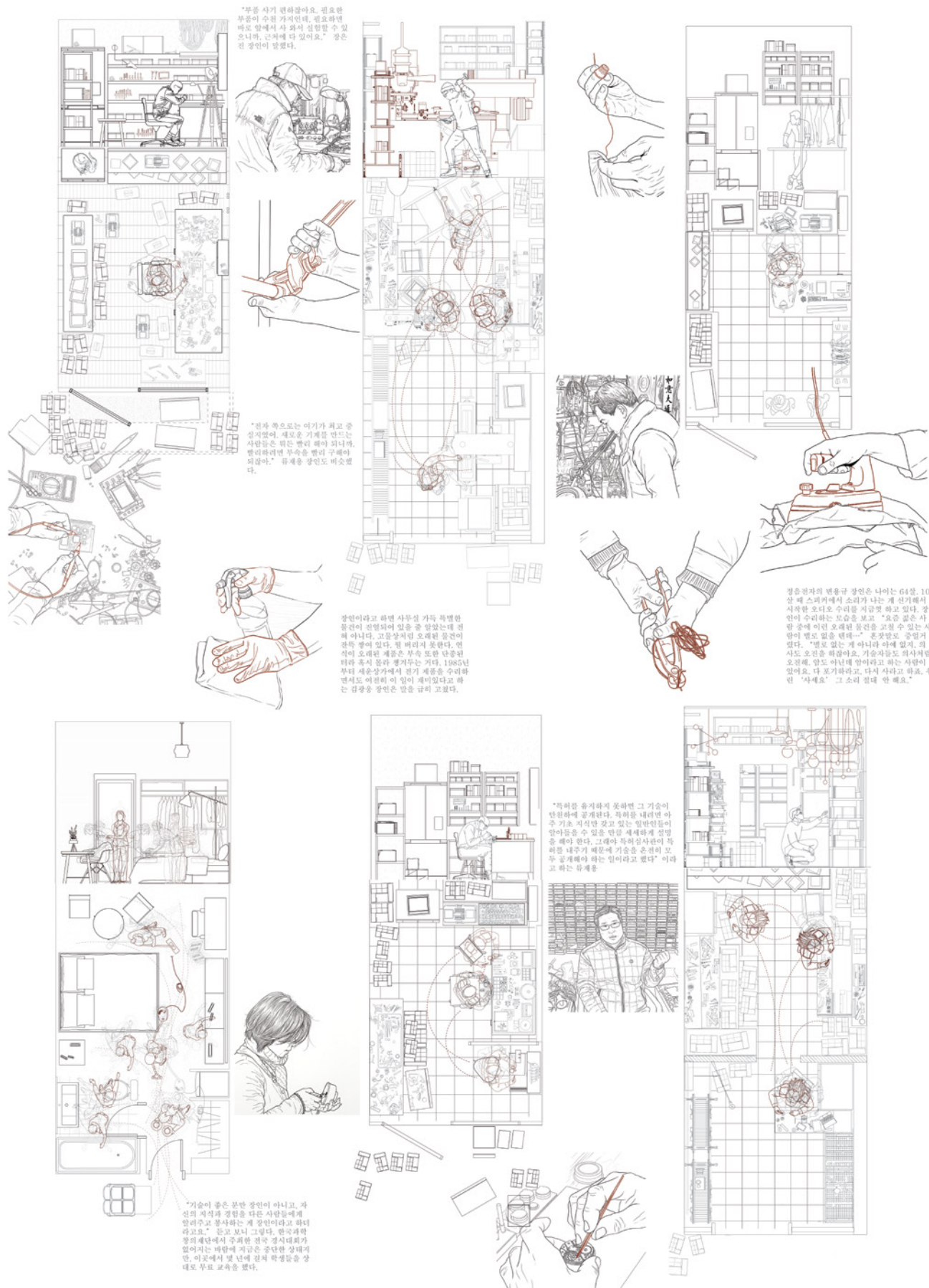
This project reconsiders Sewoon Sangga not as an isolated megastructure, but as part of a larger network of small-scale production and exchange embedded within its surrounding urban fabric. As redevelopment erodes these interconnected systems, the project identifies the loss of tacit knowledge—informal, experience-based knowledge transmitted through making—as the critical issue. Rather than proposing a fixed architectural solution, the design introduces an open spatial framework that supports adaptability and user participation. Inspired by the spatial logic of Sokgolmok alley networks, existing horizontal relationships are translated into a vertical system of circulation and interaction. Minimal spatial units, defined by human-tool relationships, enable flexible occupation and continuous reconfiguration.



Production Network Site Plan

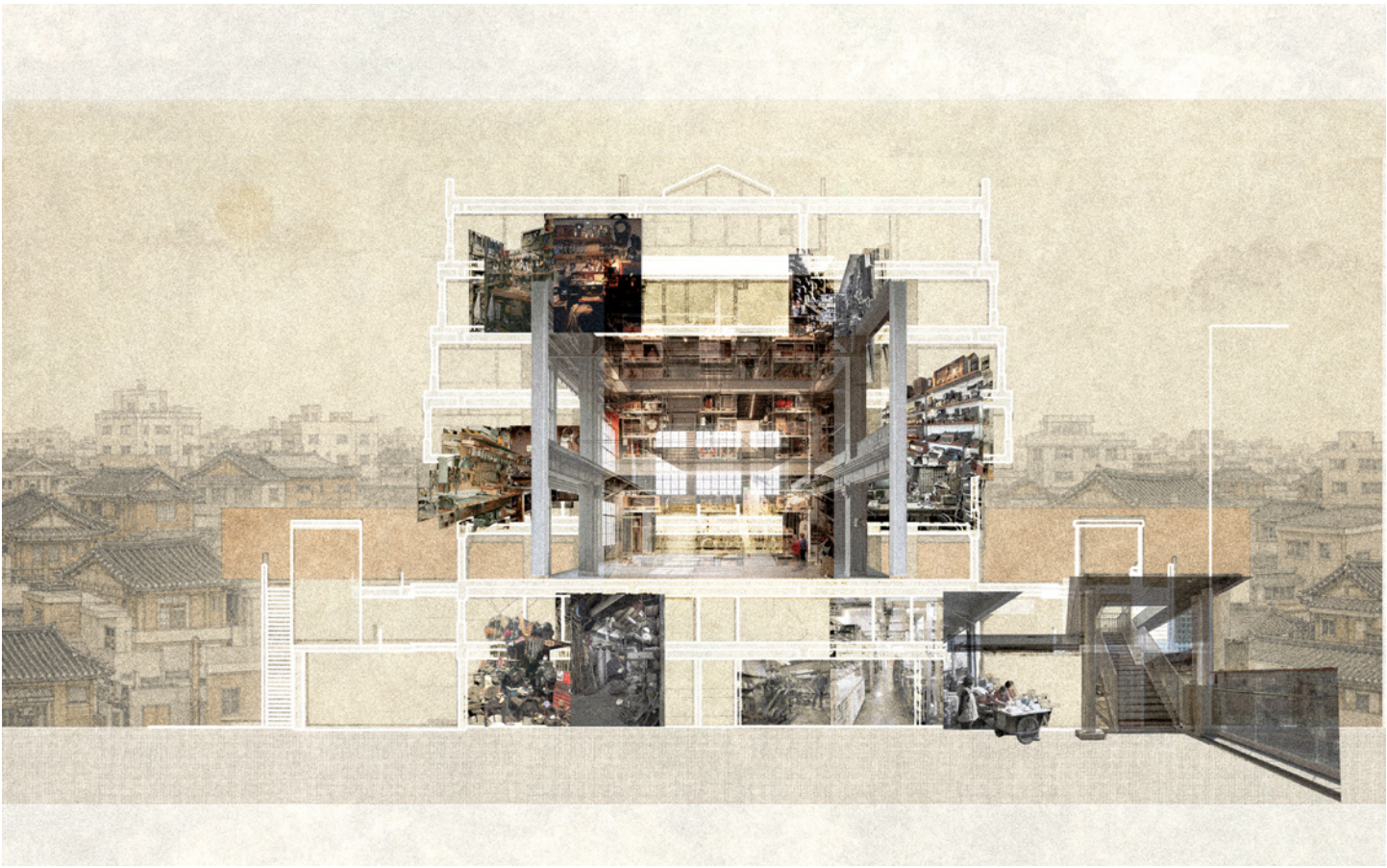
Sewoon Sangga not as an isolated megastructure, but as the remaining vessel of a fragile production network once sustained by interconnected workshops, supply stores, and micro-specialized labor across the surrounding urban block





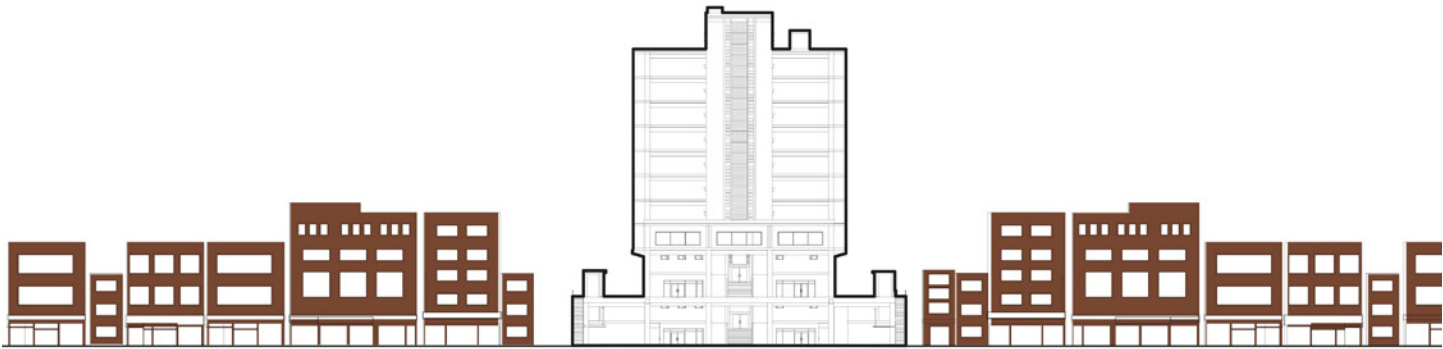
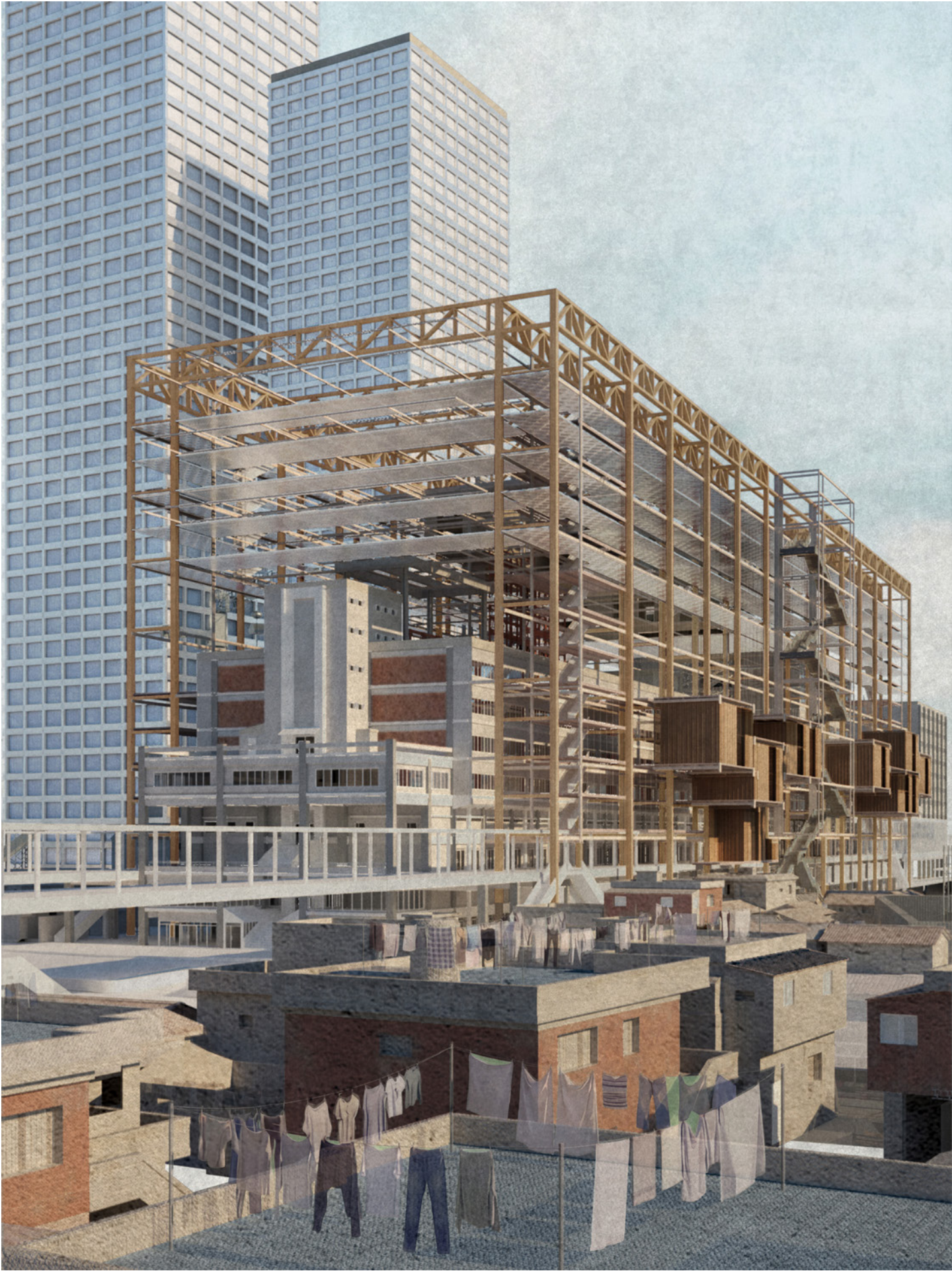
Sewoon Sangga Workshop Typologies

Sewoon Sangga's small workshop interiors as dense sites of tools, memory, storage, and social exchange, where tacit craft knowledge is preserved and transmitted through hands-on practice rather than formal documentation



Embedding Tacit Knowledge into Architectural Form

Design collage translates Sewoon Sangga's tacit knowledge into design thinking by studying tools, machinery, storage, and workshop interiors as foundations for new spatial organization and architectural intervention.



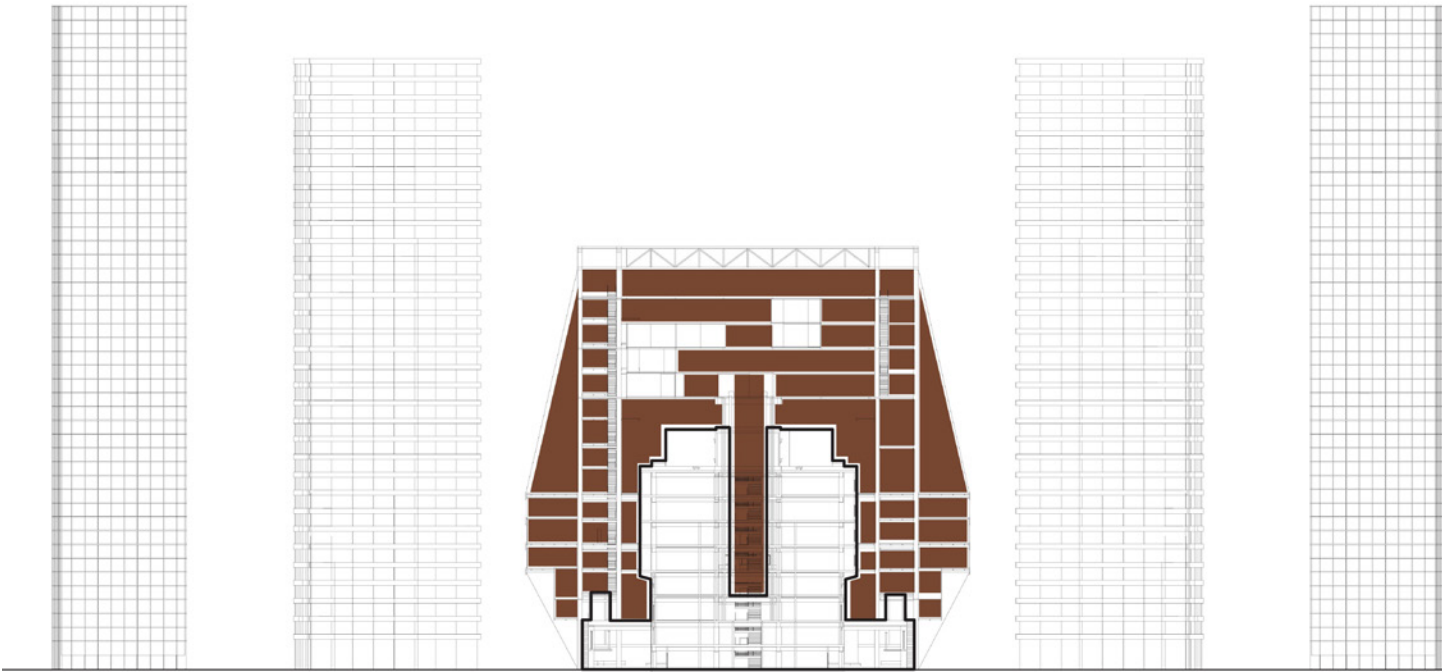
Present

Sewoon Sangga remains connected to surrounding low-rise workshop buildings, forming a distributed network of small-scale production and repair



Future Scenrio Phase One

Workshops from the surrounding districts are gradually relocated into Sewoon Sangga through new inserted structures and vertical production spaces



Future Scenrio Phase Two

As nearby workshops are replaced by apartments and office towers, Sewoon Sangga becomes the remaining vertical vessel for local craft, repair, and tacit knowledge



Industrial Elevator Atrium

Industrial elevator atrium for moving machinery, tools, and materials vertically within Cheonggye Sangga



Bridge-Level Infrastructure

Bridge-level connection between the existing Sangga and the newly proposed structural infrastructure



Technician Workshop Interior

Inserted technician workshop box supporting machinery, repair work, and hands-on production



Rooftop Production Area

Rooftop production atrium organized with elevators, machinery, parts, and storage

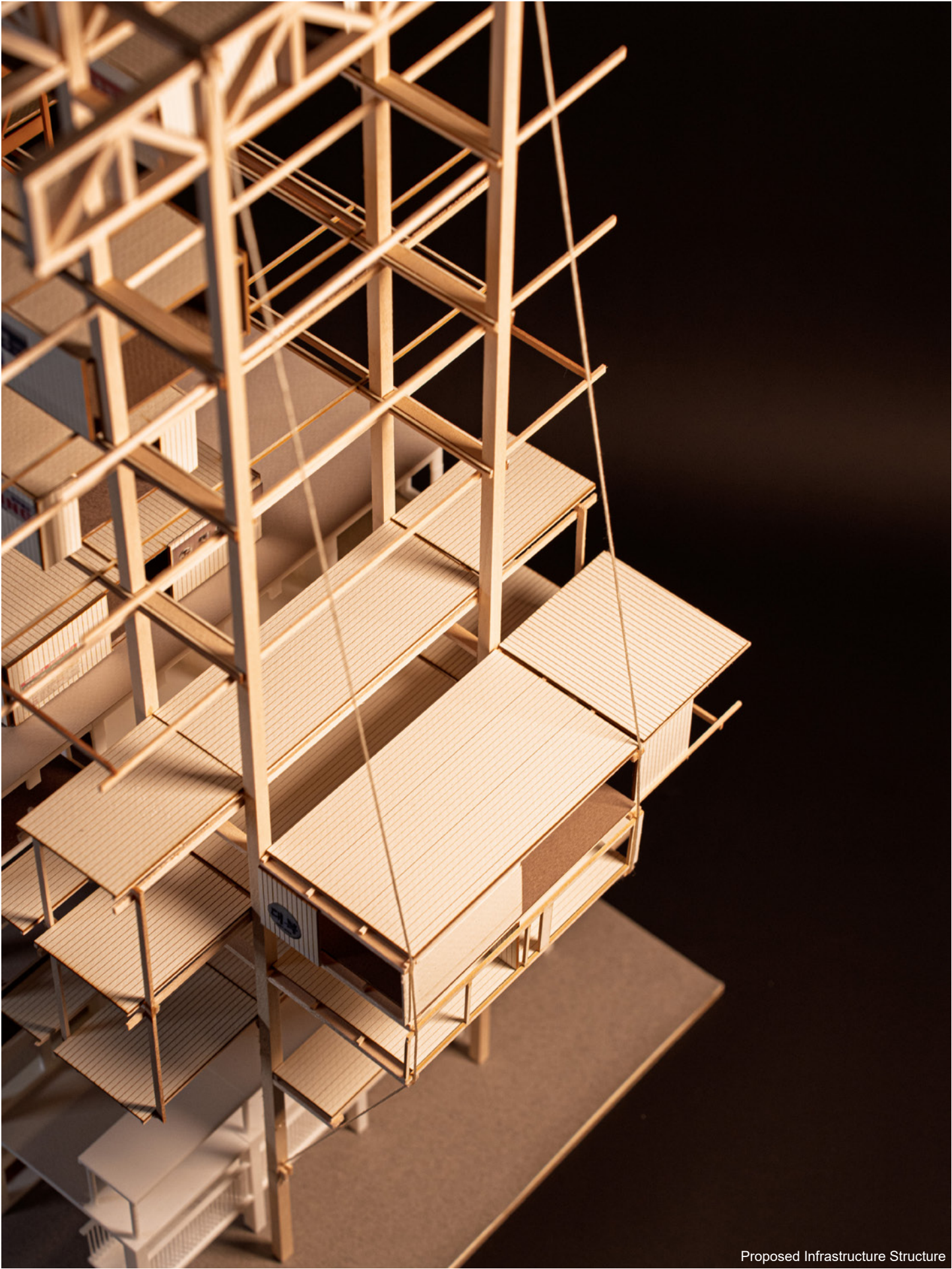


Past, Present, Future - Sewoon Sangga as an Open Structural Framework

As the project transforms the existing megastructure into an open structural framework. Built above and within public spaces, the framework provides flexible workshops for local technicians while allowing production, community, and spatial relationships to grow over time



Detail Model | Scale 1:100



Proposed Infrastructure Structure



WILD | WILLED : CHILDREN LEARNING THROUGH RISK AND PLAY

Location
Liberty State Park Trainshed, NJ

Partner
Yake Wang

Instructor / Coordinator
Mimi Hoang

Course
Advanced IV Studio

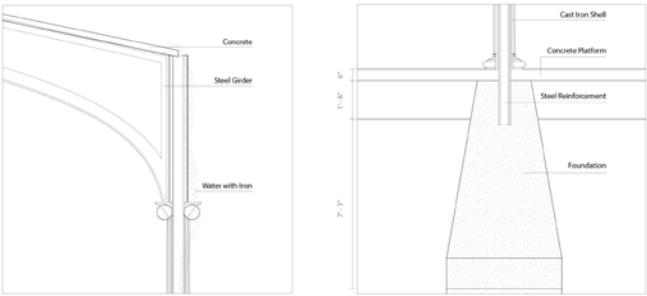
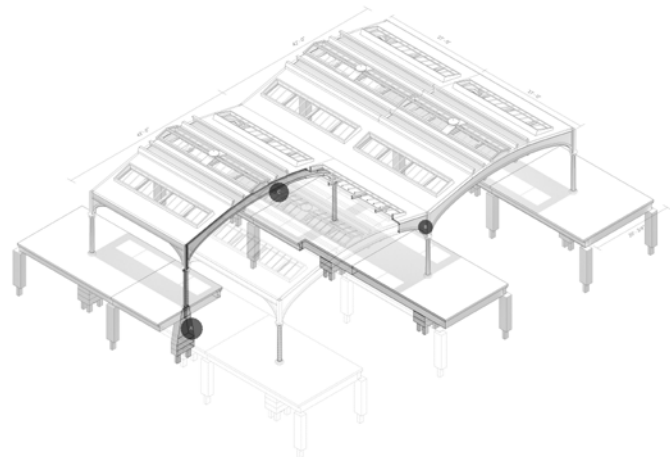
CHILDREN, RISK, PLAY

Our project reimagines early childhood education through an architecture that embraces risk, nature, and the idea of play. Situated in the dynamic wetlands of Liberty State Park, the design centers around a phased construction process using modular gabion walls filled with sand, rock, and concrete—materials that reflect Friedrich Froebel’s notion of “gifts” and encourage tactile learning. By dismantling parts of existing train shed and layering programmatic zones, the architecture invites children to navigate a landscape of increasing ecological exposure, fostering curiosity and spatial awareness.



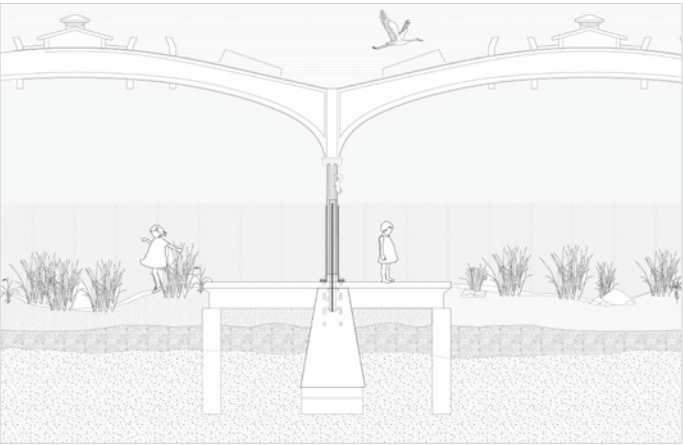
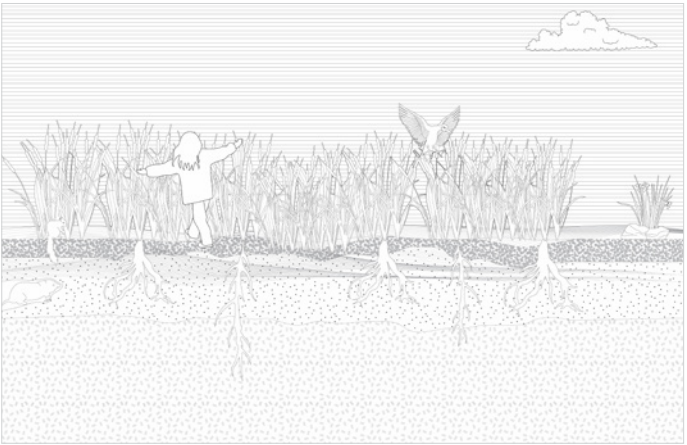
Design Research - Existing Trainshed

The on-site train shed combines cast-iron columns, cantilevered steel girders, and concrete platforms



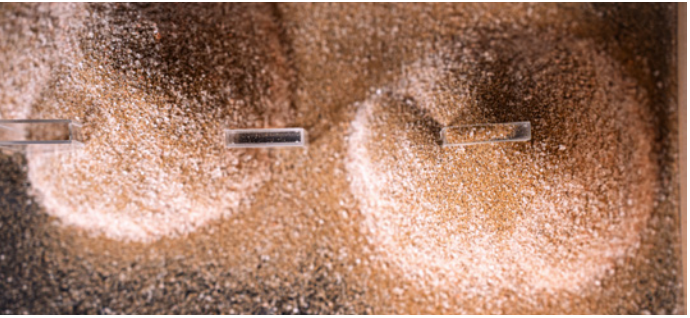
water movement, and calcium deposits actively interact with the structure—accelerating oxidation and material wear

Environmental and physical risks embedded in Liberty State Park and the train shed are identified and translated into spatial drivers



Material Nature Model

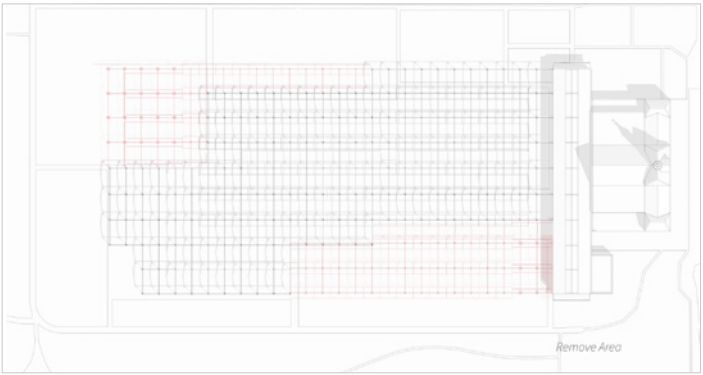
Using sand as a yielding material, the model reveals how territory is formed through pressure, movement, and topography



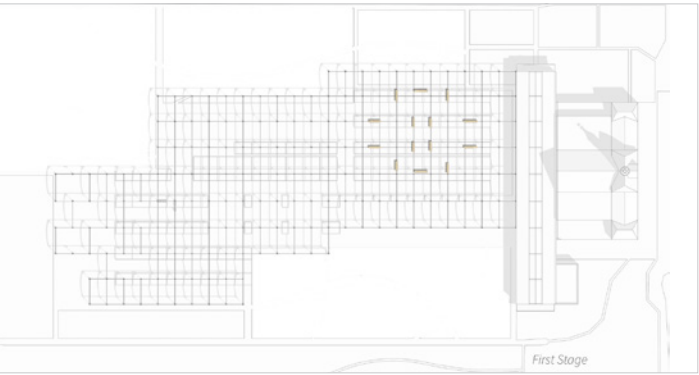


Ground Floor Plan - Enclosed vs Open

A spatial gradient guides children from protected interiors through semi-open zones toward unpredictable open wetland environments



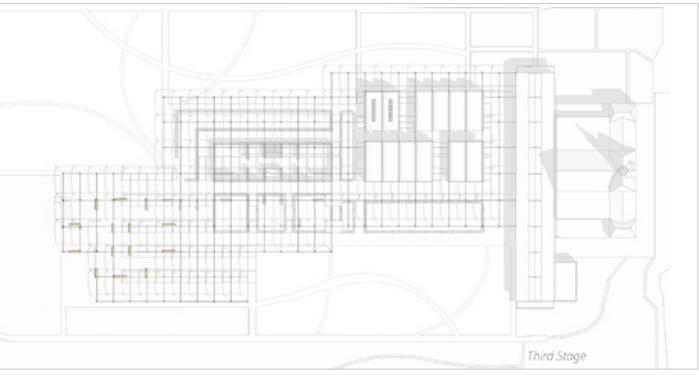
Removed Area



Stage One



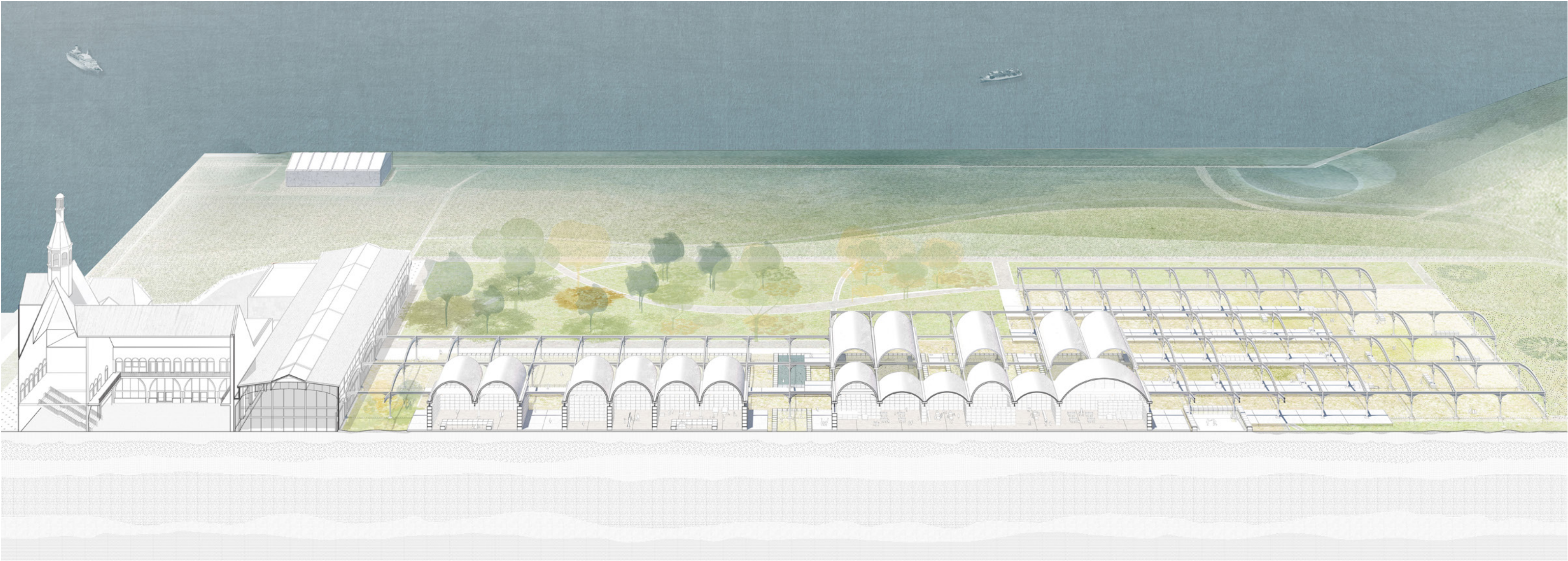
Stage Two



Stage Three

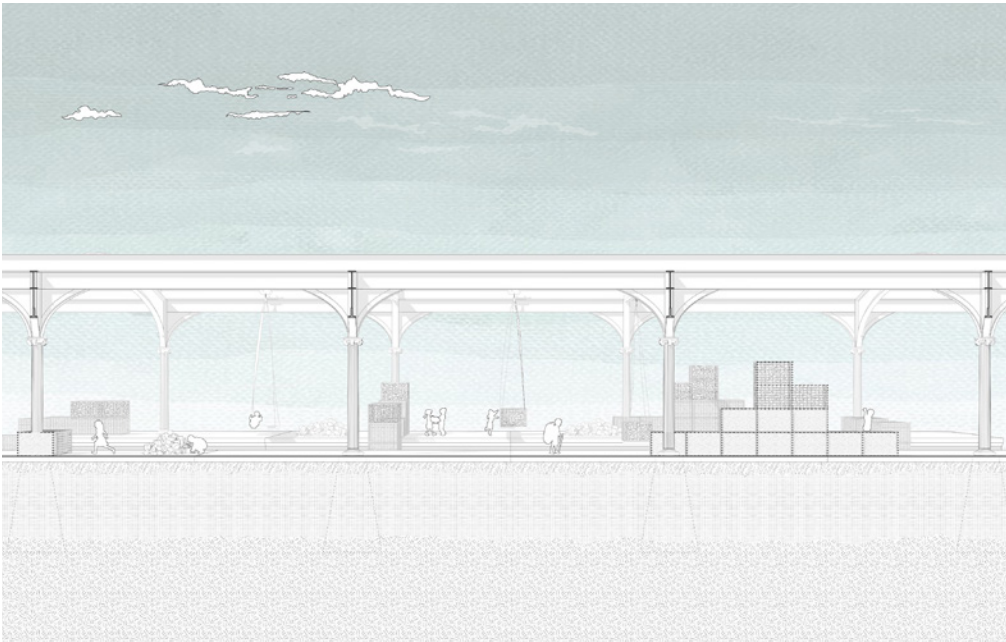
Design - Construction Process

Inspired by Friedrich Froebel's theory of play, beginning with simple geometric patterns that guide incremental architectural formation

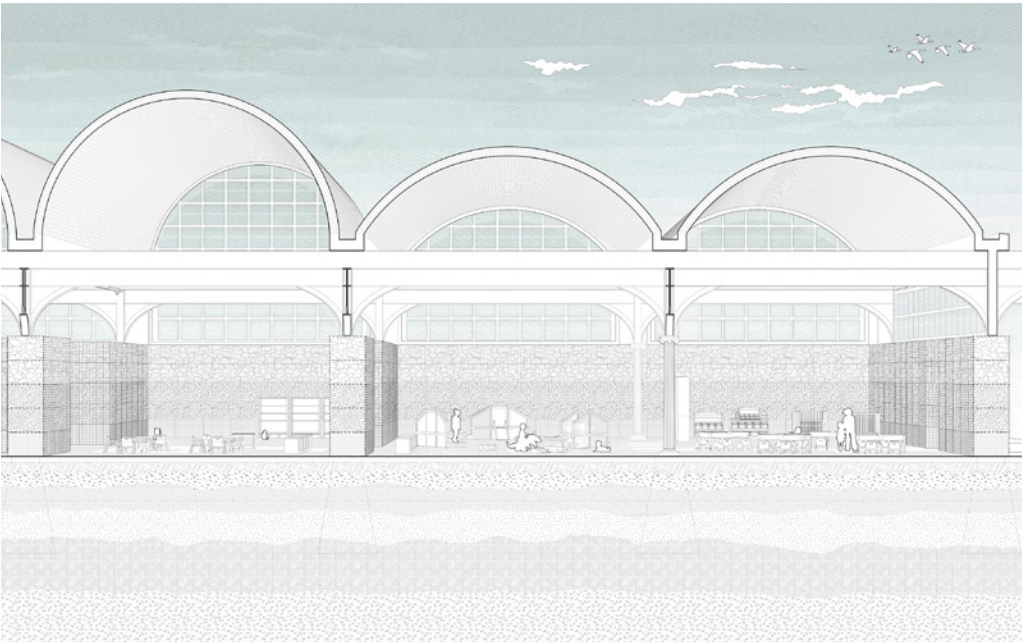


Sectional Aerial - Above and Under

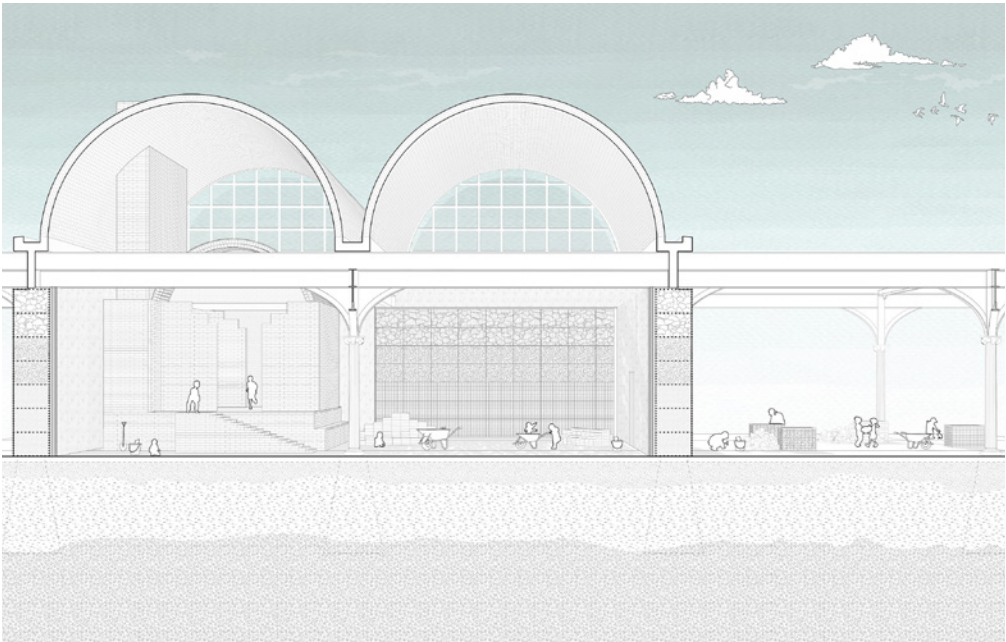
The drawing reveals the relationship between the landscape of what is above, and the layered soil conditions beneath the site



Construction Stage One



Construction Stage Two



Construction Stage Three



Construction Stage One - Gabian Assembly

Establishes the primary modular framework through gabion assembly, defining initial territories



Construction Stage Three - Exterior Garden

Integrated landscape, where architecture recedes and planting, soil, and water shape a dynamic environment for play and learning



Detail Model - 1/2" = 1' - 0"

Gabion blocks filled with sand and stone are tested as tactile, modular elements that define territory and mediate landscape conditions



Detail Model - 1/2" = 1' - 0"

The physical and material connection between the existing structure and the new gabion intervention



THE POTATO FACADE

Location
Facade Application

Type
Individual Work

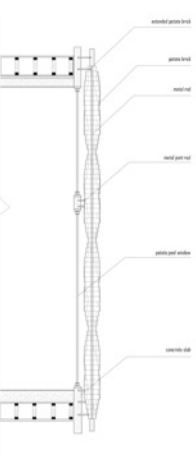
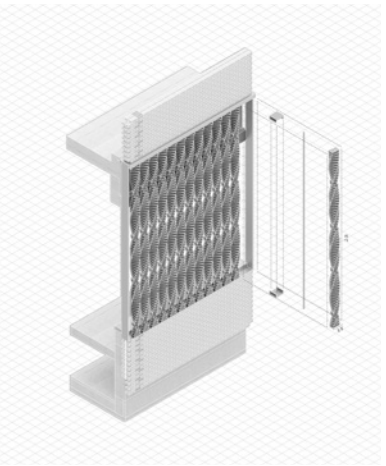
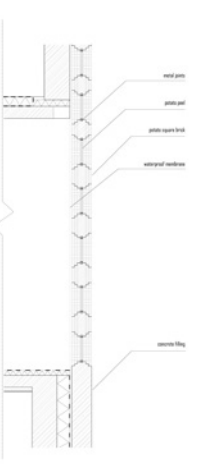
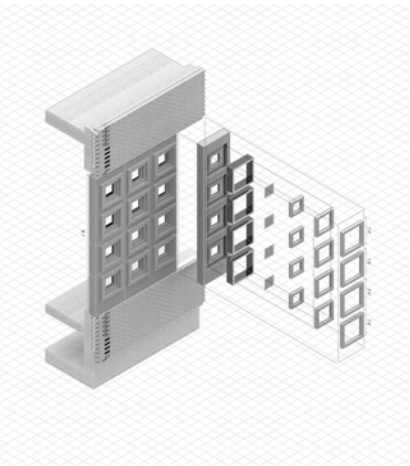
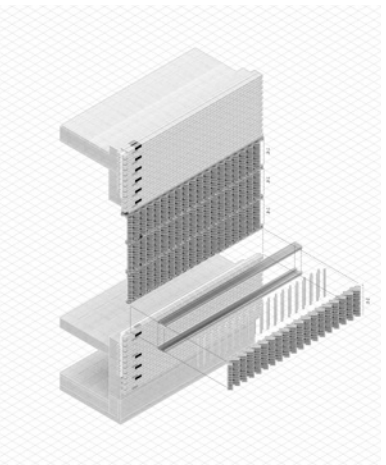
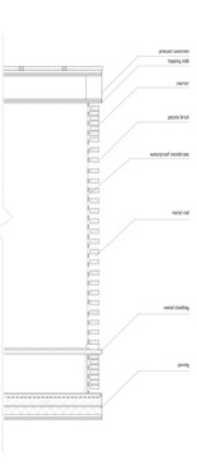
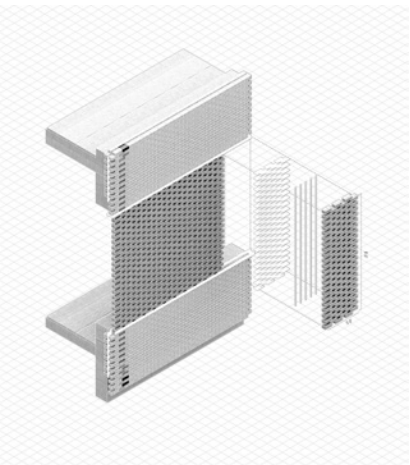
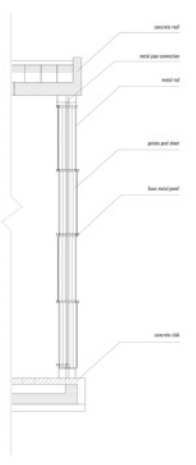
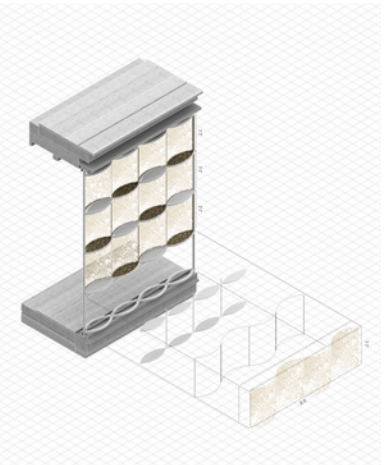
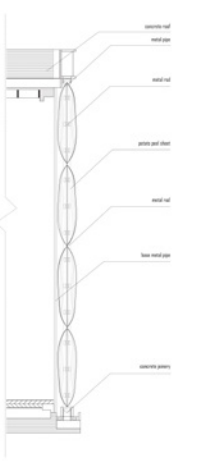
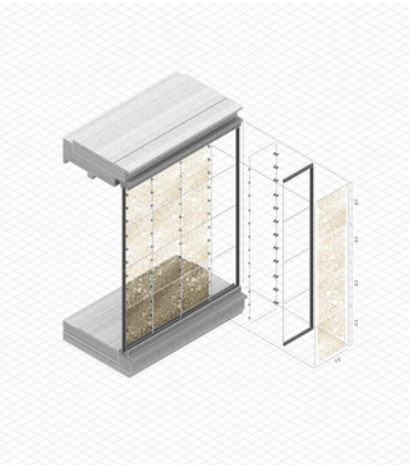
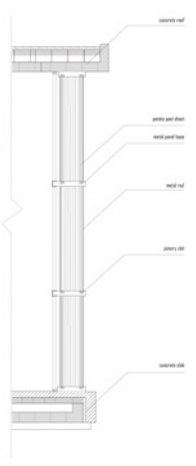
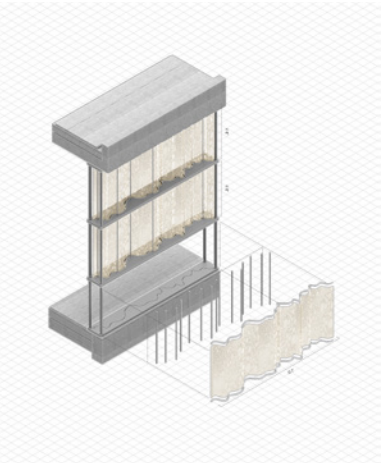
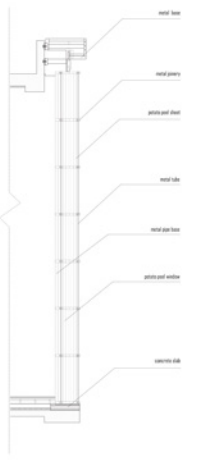
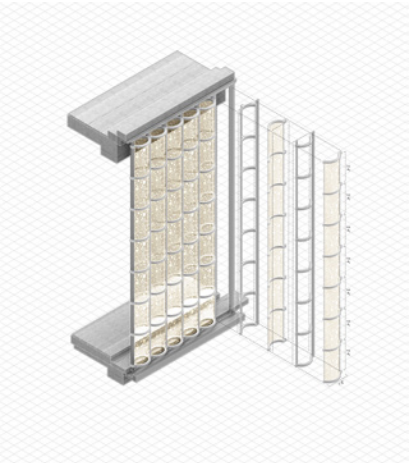
Instructor
Regina Teng

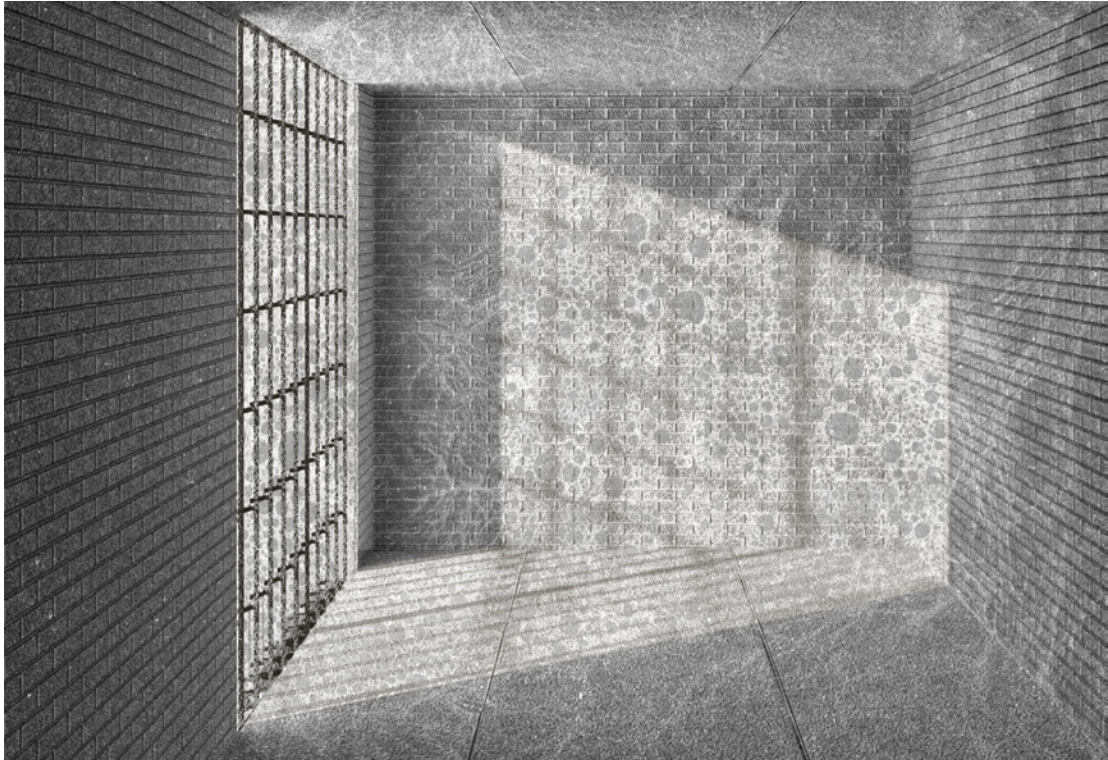
Course
Core Studio II

INNOVATIVE FACADE STUDY

This project investigates the impact of food waste potato, focusing on their potential applications in architecture. Initial research explores the material properties of potatoes in various states, emphasizing their starch content to yield two distinct outcomes: toughness and transparency. These efforts result in the development of potato bricks and bioplastic potato sheets. The project further examines the architectural opportunities presented by these materials, specifically in the construction of facades incorporating bricks and window elements. By studying traditional facade designs and adapting them to incorporate potato-based materials, the research highlights the potential for sustainable innovation in building practices.

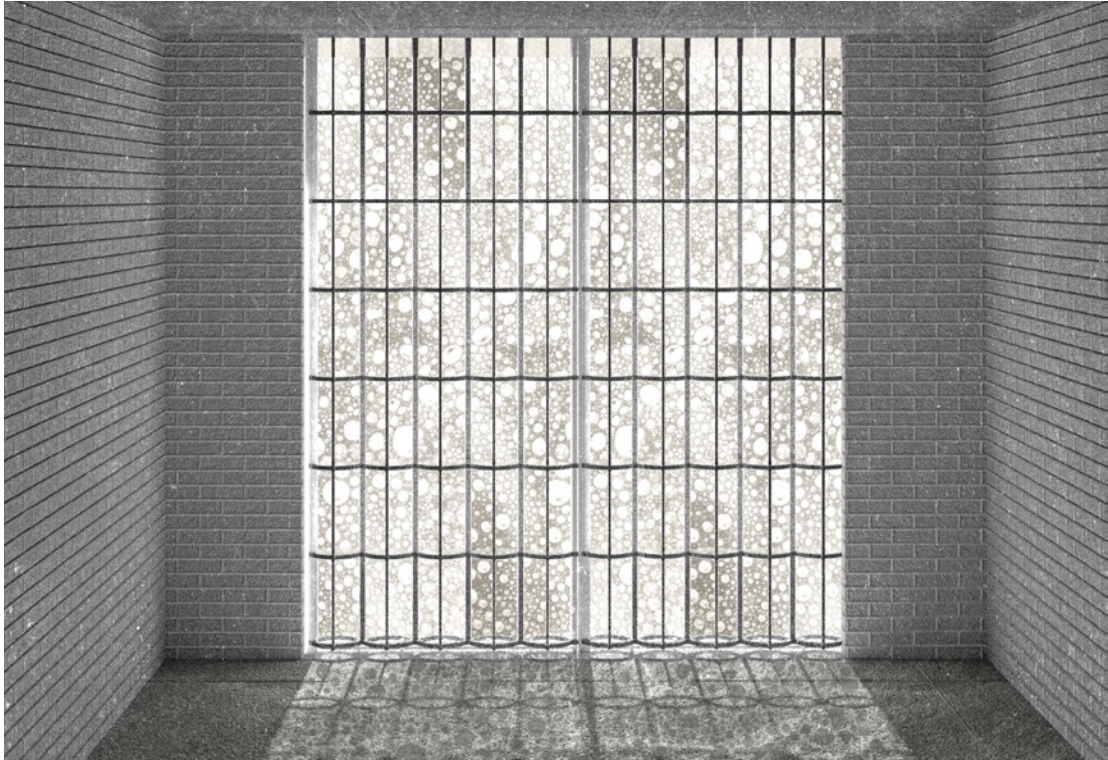
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	Starch 100% Peel 30% Fiber 0%		Starch 2 Soil 4 Water 4		Starch 1 Peel 1/2 Water 2		Starch 1.5 Vinegar 1.5 Water 10	
	Starch 10% Peel 30% Fiber 0%		Starch 3 Soil 4 Water 4		Starch 1 Peel 0 Water 4		Starch 1.5 Vinegar 2 Water 10	
	Starch 0.1 Peel 1 Fiber 1		Starch 4 Soil 4 Water 4		Starch 3 Peel 0 Water 1		Starch 1.5 Vinegar 1 Water 10 Honey 0.5	
	Starch 0.4 Peel 0.3 Fiber 0.7		Starch 5 Soil 4 Water 4		Starch 1 Peel 1/2 Water 3		Starch 1.5 Vinegar 1 Water 10 Honey 1	
	Starch 0.6 Peel 0.4 Fiber 0.6		Starch 6 Soil 4 Water 4		Starch 1 Peel 1 Water 1		Starch 1.5 Vinegar 1 Water 10 Honey 1.5	
	Starch 0.7 Peel 0.7 Fiber 0.2		Starch 7 Soil 4 Water 4		Starch 1 Peel 1/2 Water 3		Starch 1.5 Vinegar 1 Water 10 Honey 2	
	Starch 1 Peel 0.5 Fiber 0.2		Starch 8 Soil 4 Water 4		Starch 1 Peel 2 Water 3		Starch 1.5 Vinegar 1 Water 10 Honey 2.5	
	Starch 1 Peel 0.5 Fiber 0.1		Starch 9 Soil 4 Water 4		Starch 1 Peel 1/2 Water 2		Starch 1.5 Vinegar 1 Water 10 Honey 3	
	Starch 1 Peel 1 Fiber 1 Soil 1		Starch 10 Soil 4 Water 4		Starch 1 Peel 2 Water 3		Starch 1.5 Vinegar 1 Water 10 Honey 3 Peel 0.5	
	Starch 1 Peel 2 Fiber 1 Soil 0.5		Starch 11 Soil 4 Water 4		Starch 2 Peel 3 Water 1		Starch 1.5 Vinegar 1 Water 10 Honey 3 Peel 1	
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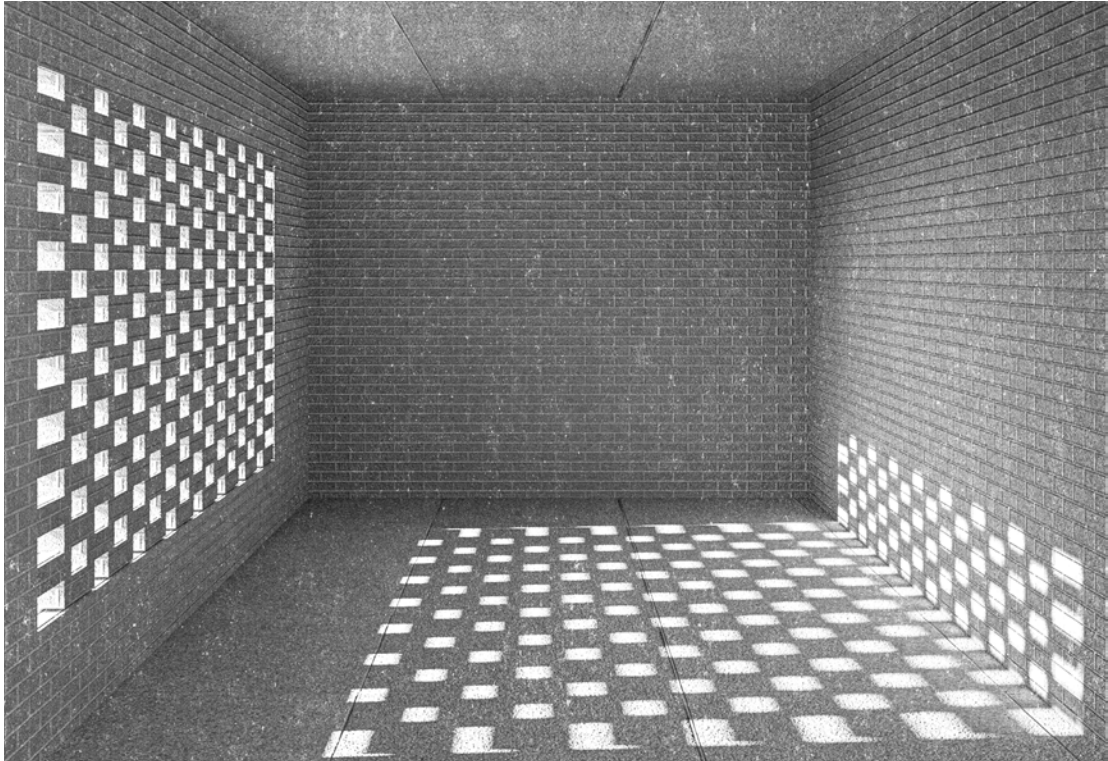
Ground Floor Plan - Enclosed vs Open

A spatial gradient guides children from protected interiors through semi-open zones toward



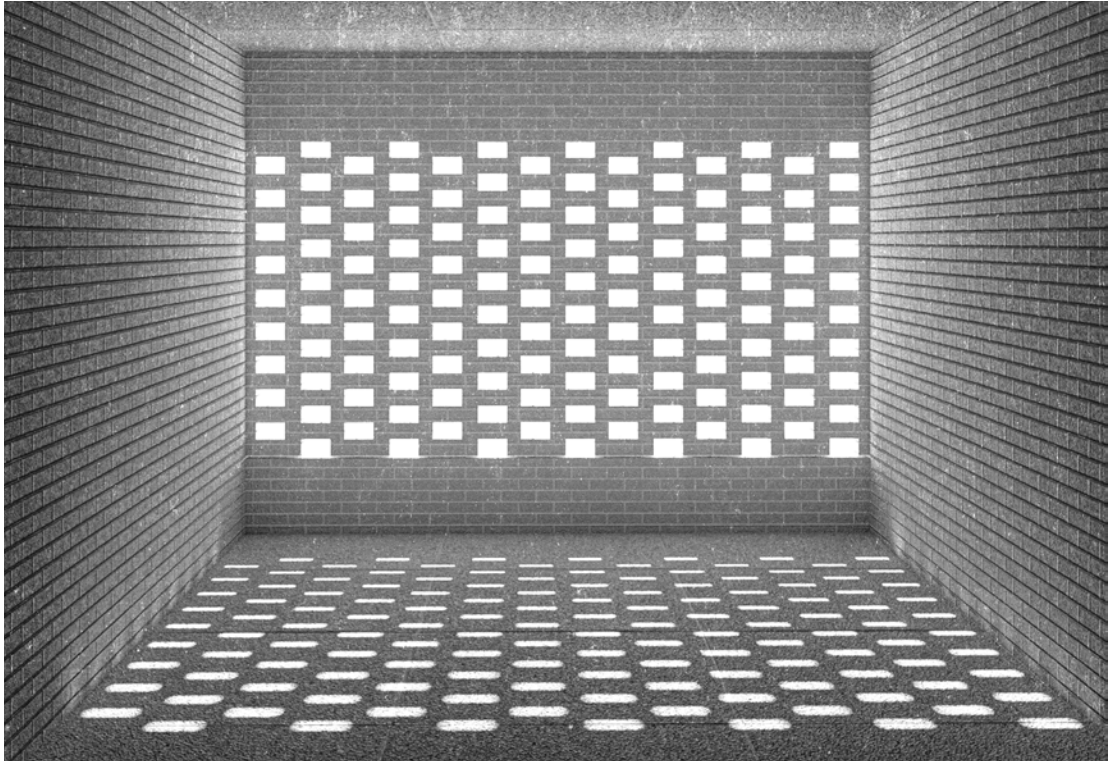
Ground Floor Plan - Enclosed vs Open

A spatial gradient guides children from protected interiors through semi-open zones toward



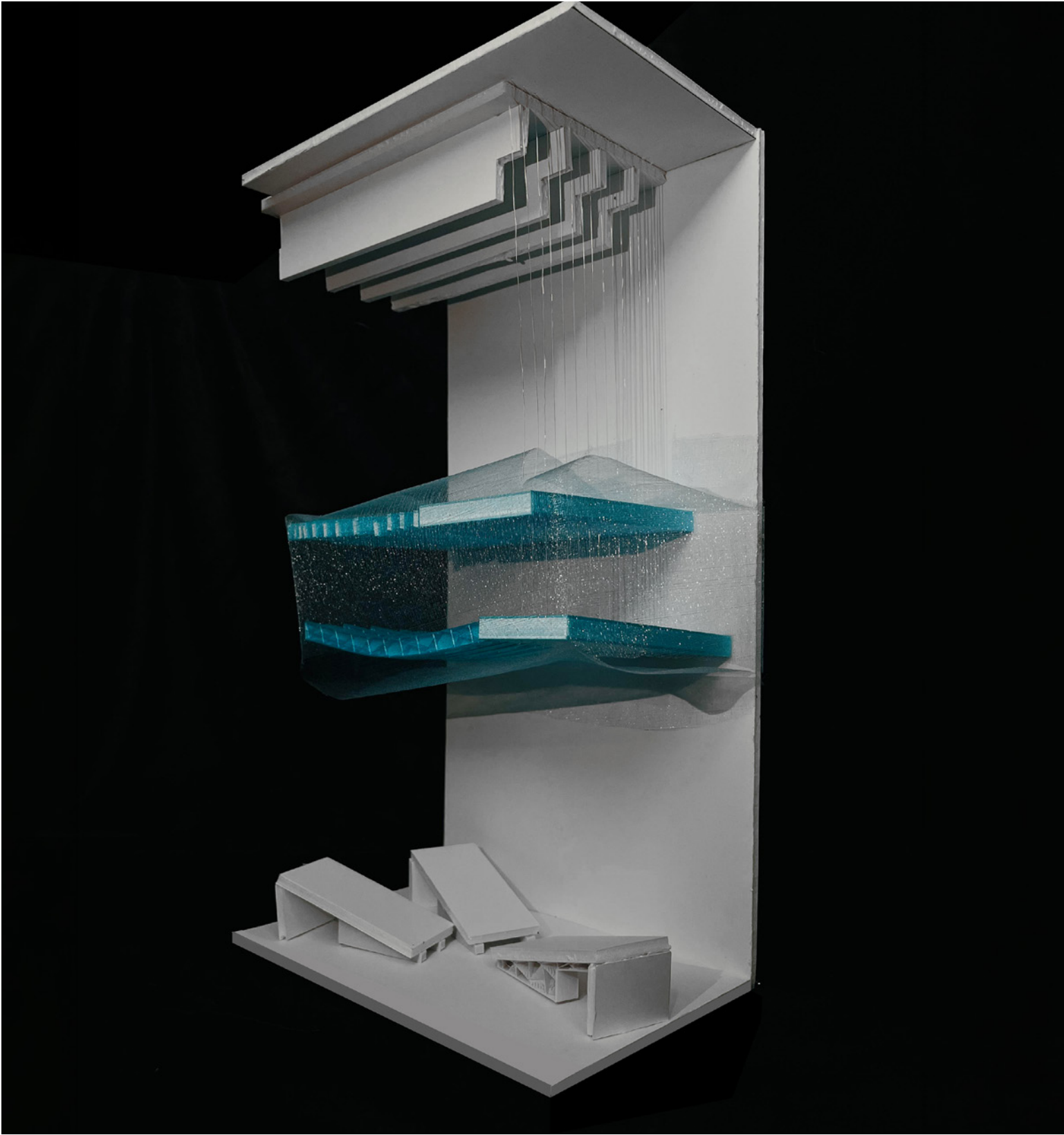
Ground Floor Plan - Enclosed vs Open

A spatial gradient guides children from protected interiors through semi-open zones toward



Ground Floor Plan - Enclosed vs Open

A spatial gradient guides children from protected interiors through semi-open zones toward



RETHINK SKATEPARK

Location
Les Coleman Skateboard Park, New York

Type
Individual Work

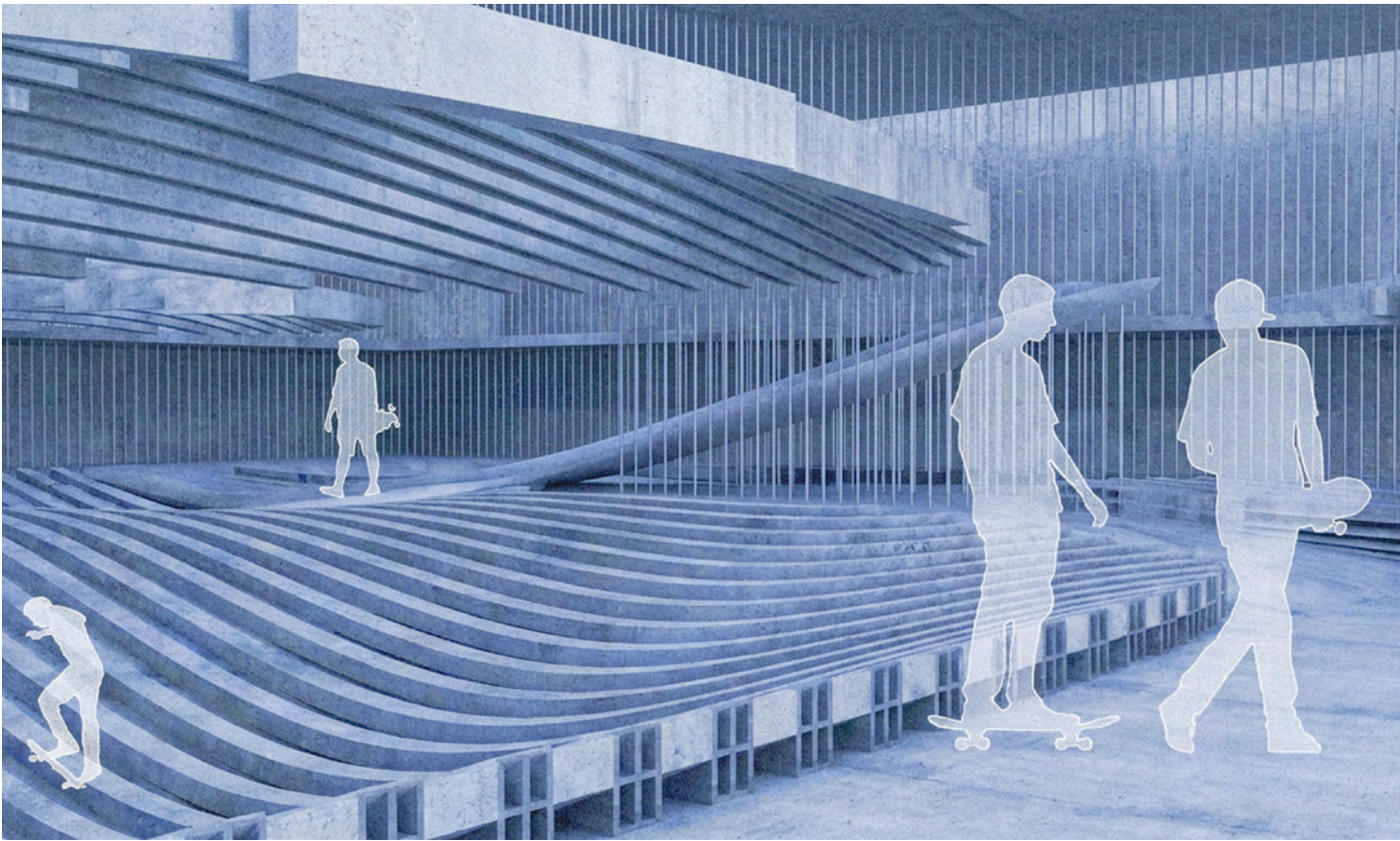
Instructor / Coordinator
Gregory Melitonov

Course
Core Studio I



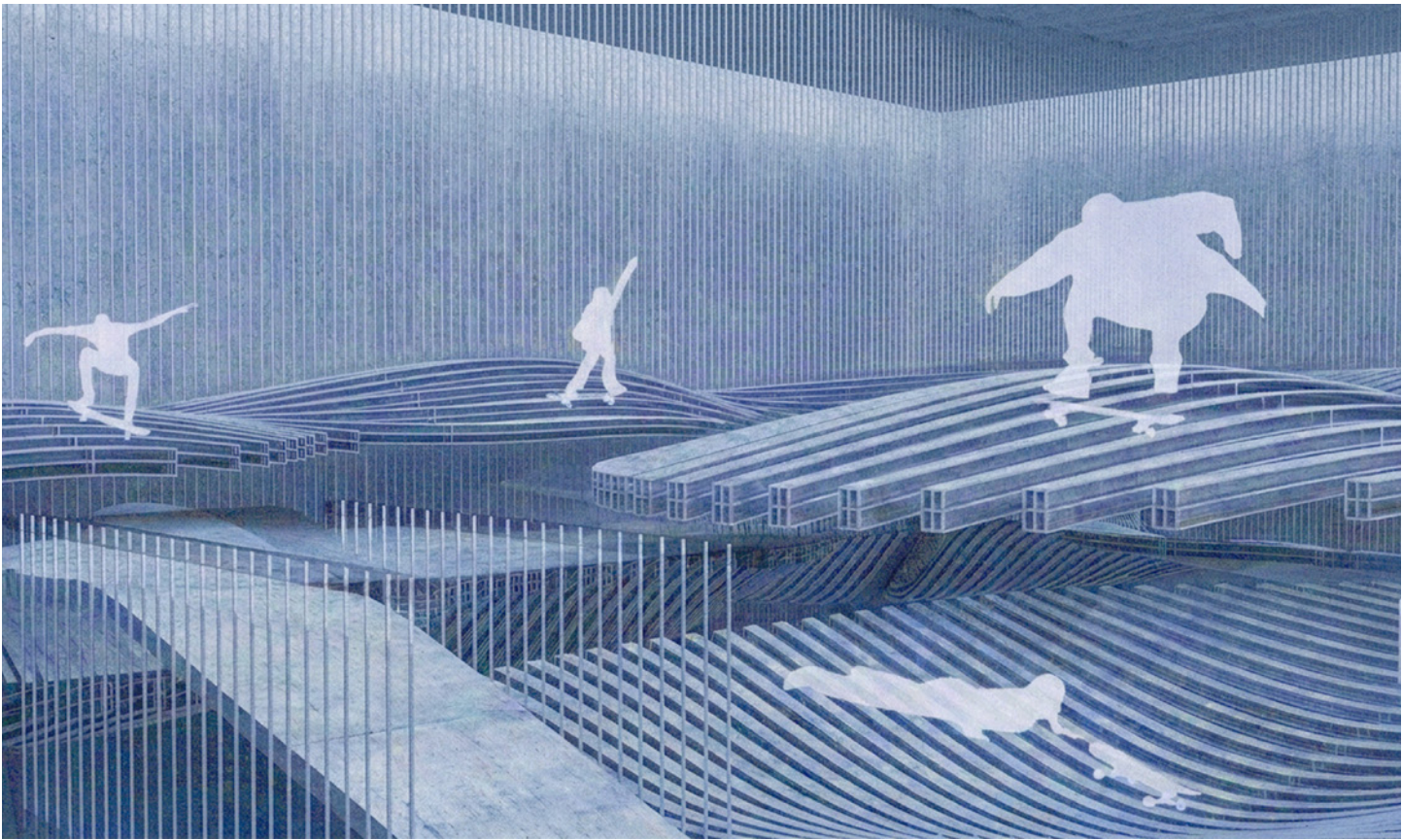
INSTALLATION, PARAMETRIC, EXPERIMENTAL

Rethink Skatepark reimagines the existing skatepark as a layered community space for skateboarders. By adding an elevated sky skating park and social gathering areas above the existing ground-level skatepark, the project expands opportunities for movement, rest, viewing, and interaction without replacing the original site. Through experimental structural materials and a self-supporting framework, the design creates a new architectural landmark that attracts both existing skateboarders and new users, making the skatepark more diverse, social, and spatially exciting. In this way, the project strengthens the identity of the skateboarding community while opening the space to broader public engagement.



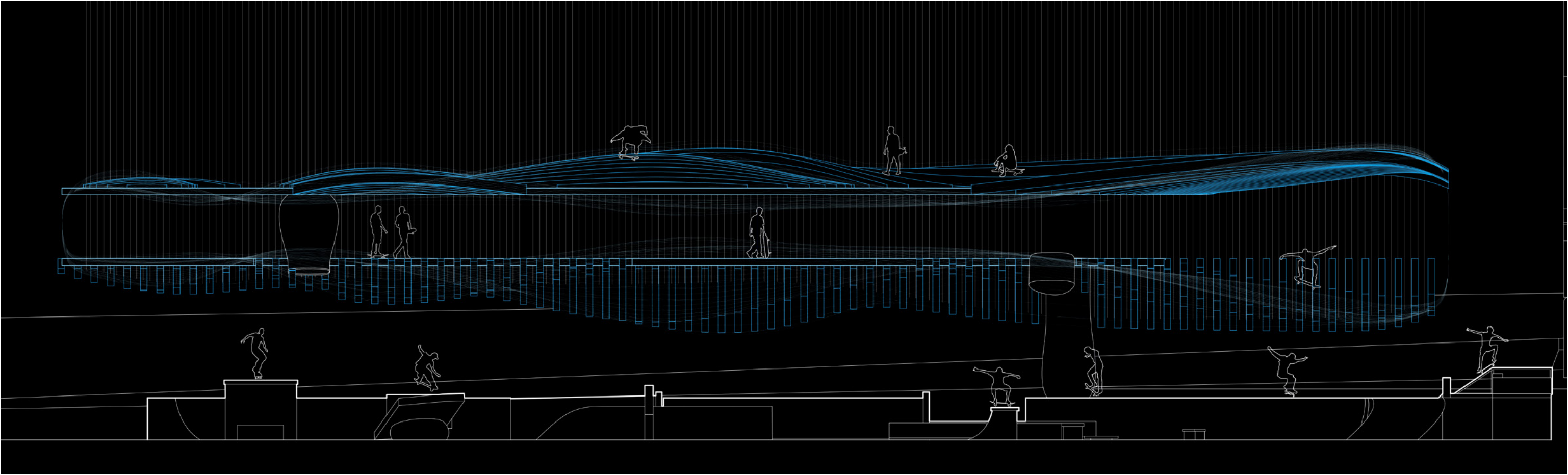
Level Two Experiential Space

A transitional social platform where skaters move, pause, and gather within the elevated framework

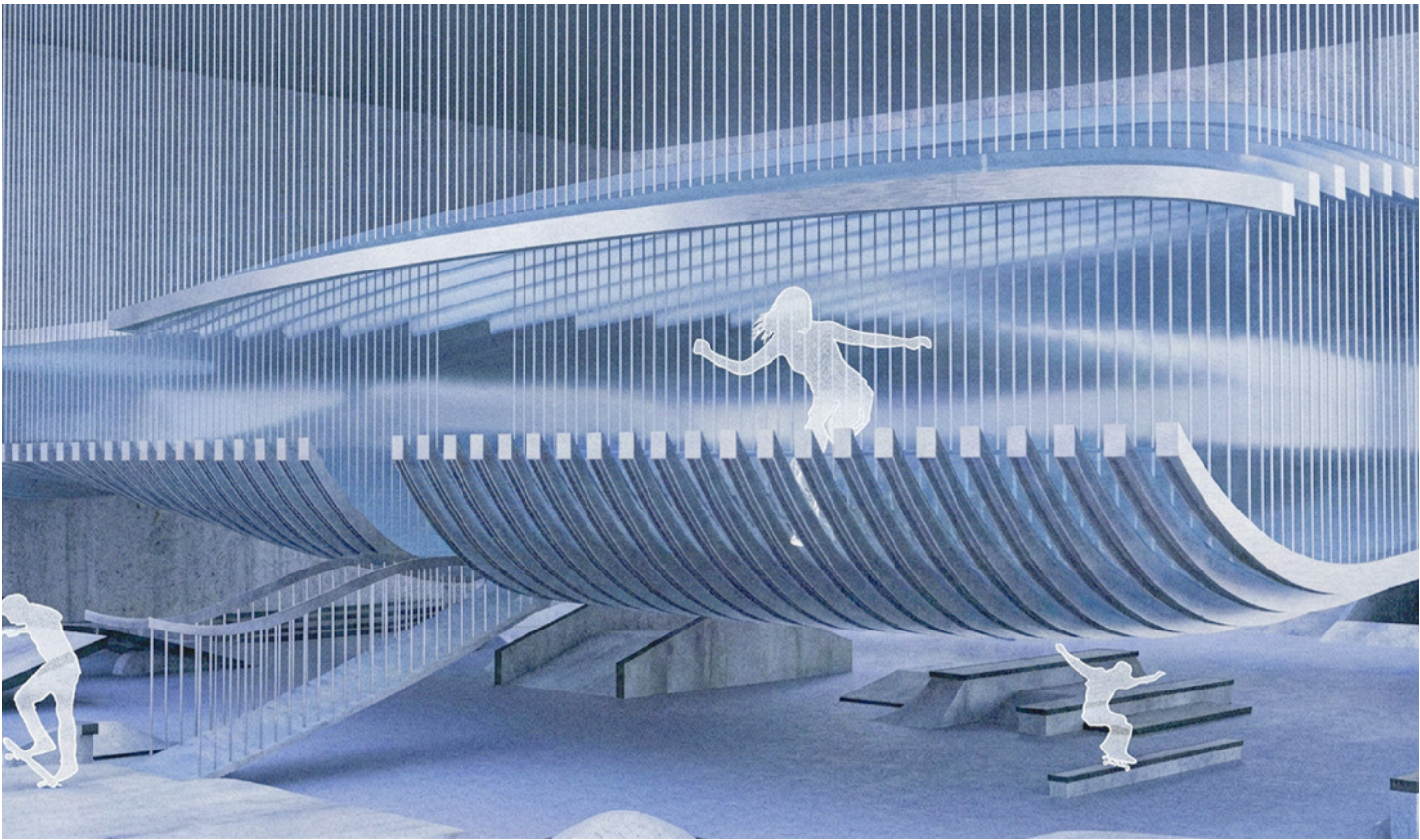


Level Three Skating Area

An upper-level skating landscape creating new routes, ramps, and performance moments in the sky

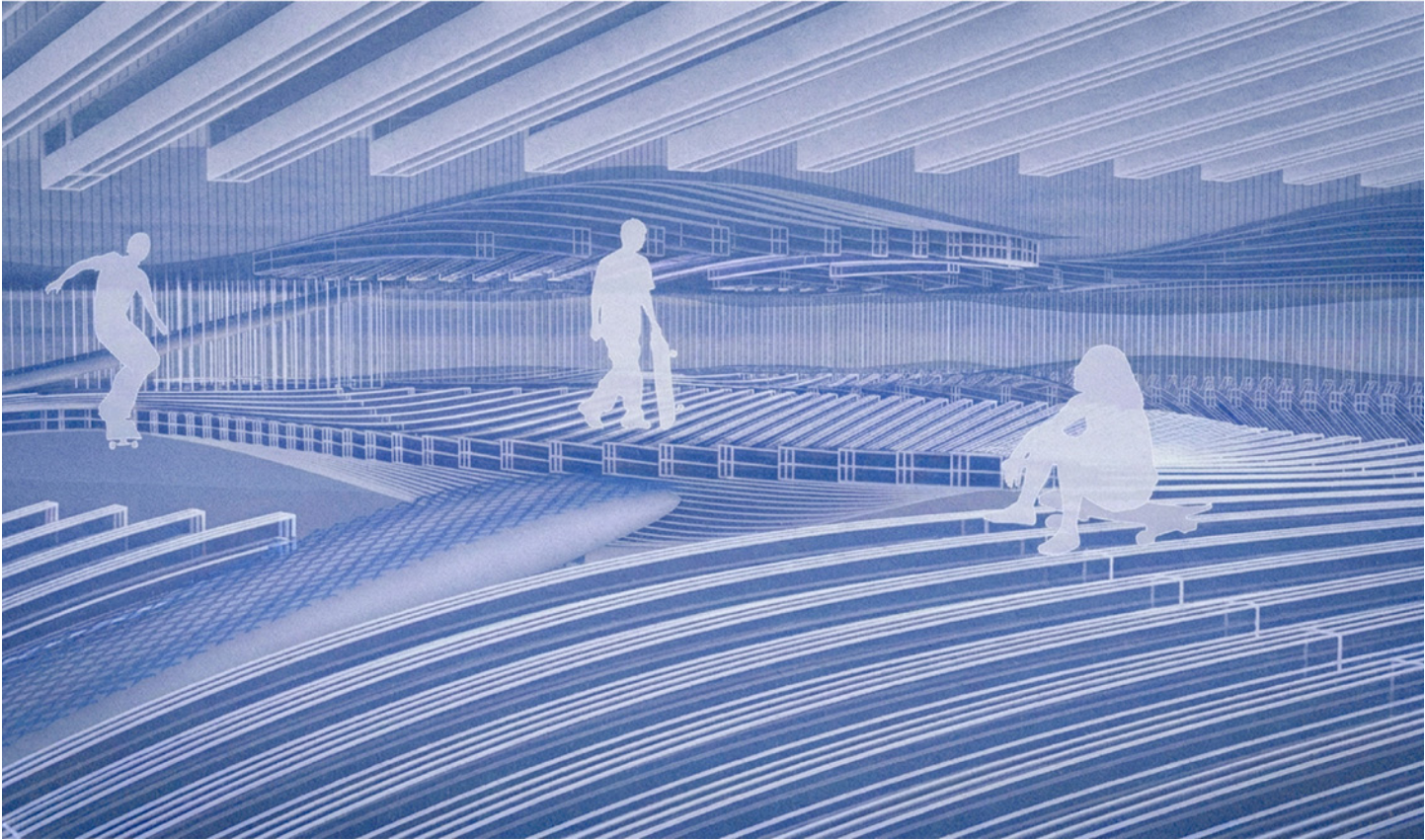


Design Installation Section - In-Between and Above



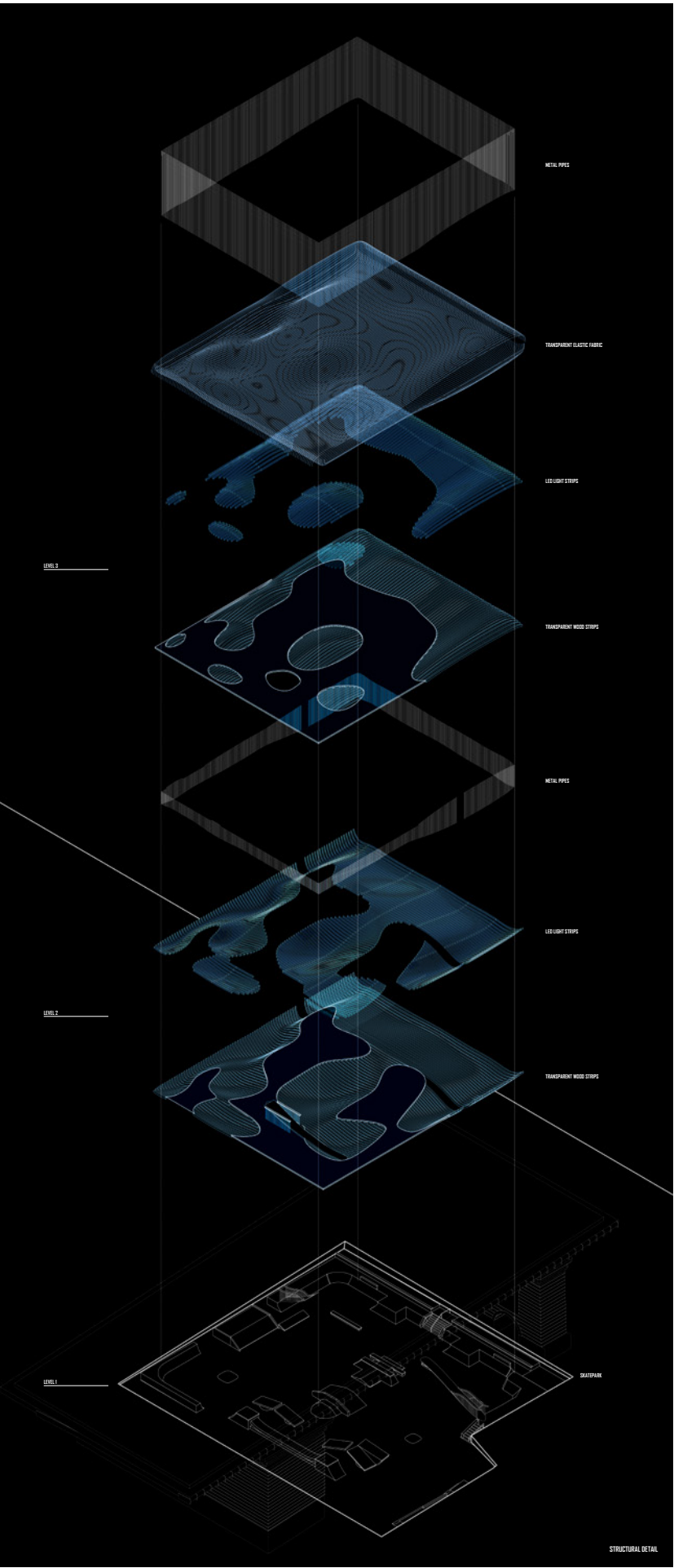
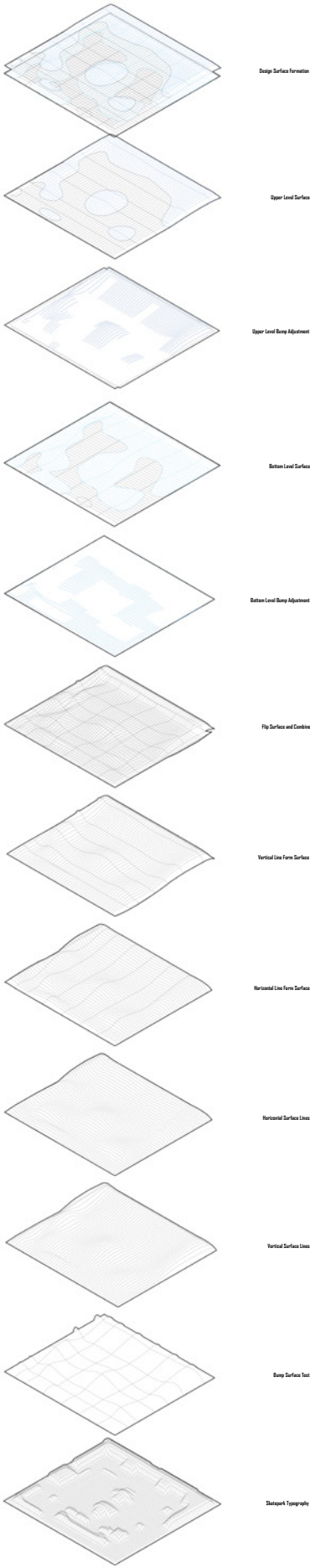
Ground Level Perspective

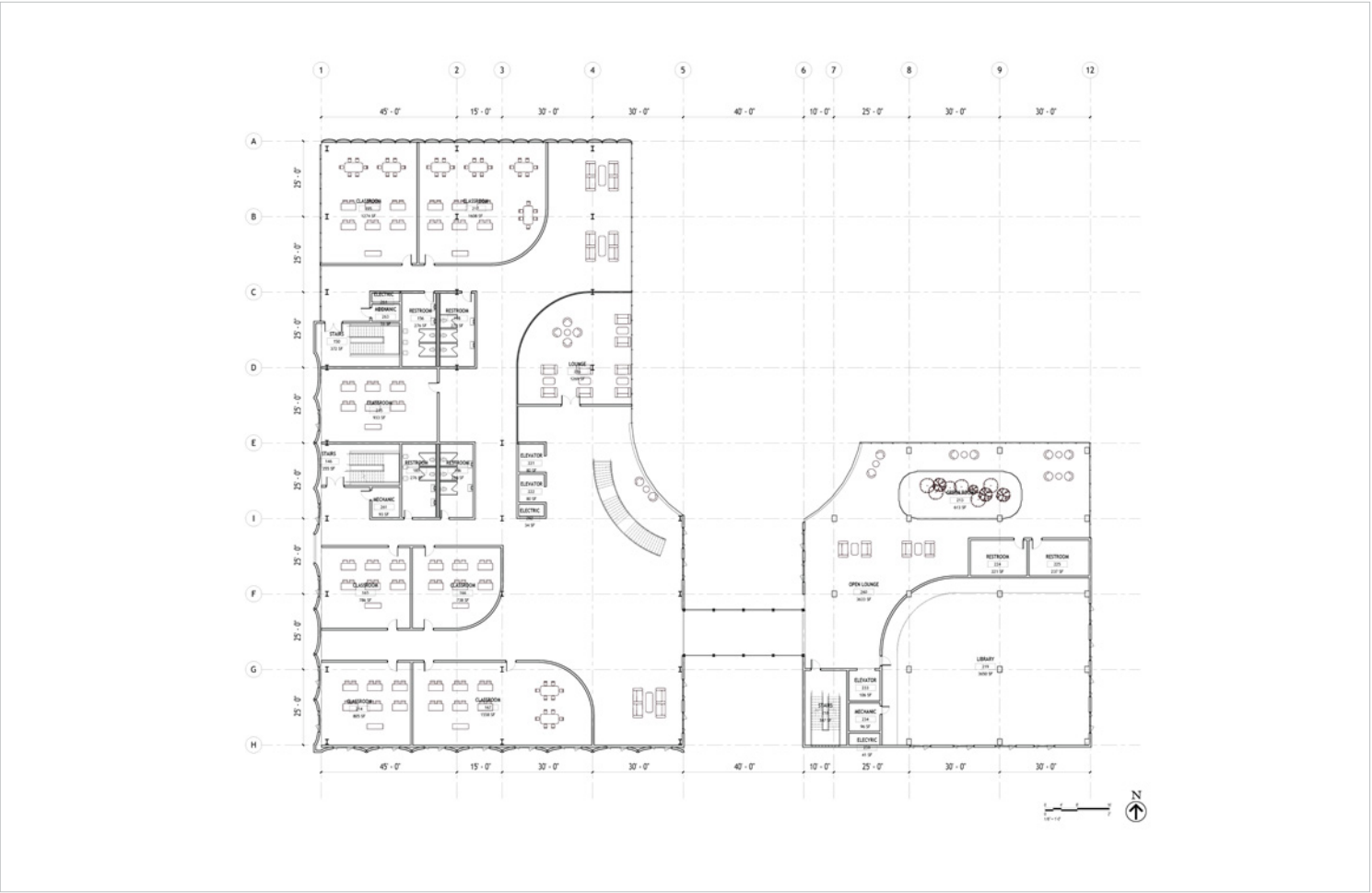
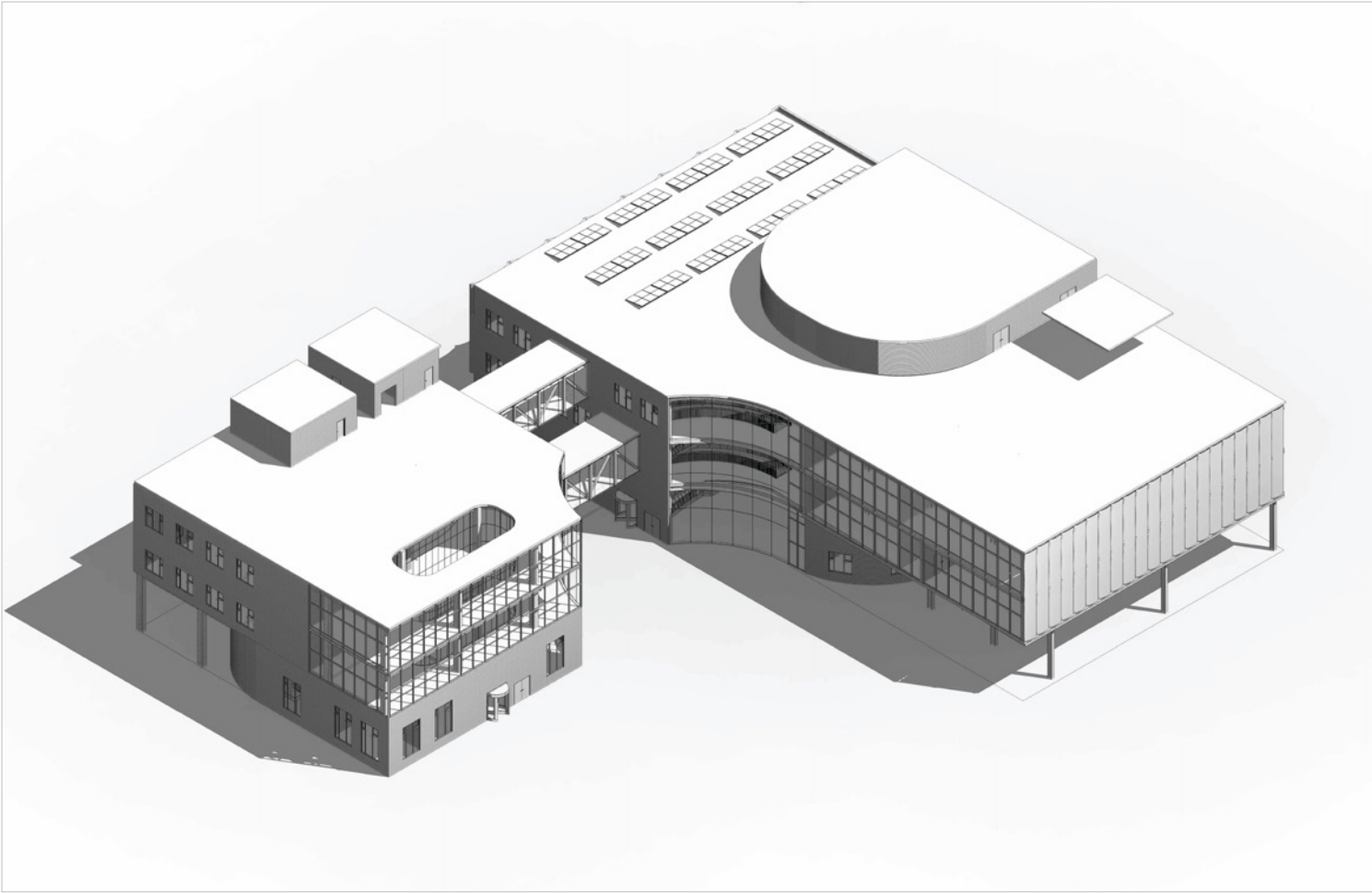
New skating surfaces and circulation to hover above the original ground-level activity



Level Two Resting Area

A quieter elevated platform where skaters can pause, observe, and gather between moments of movement and performance





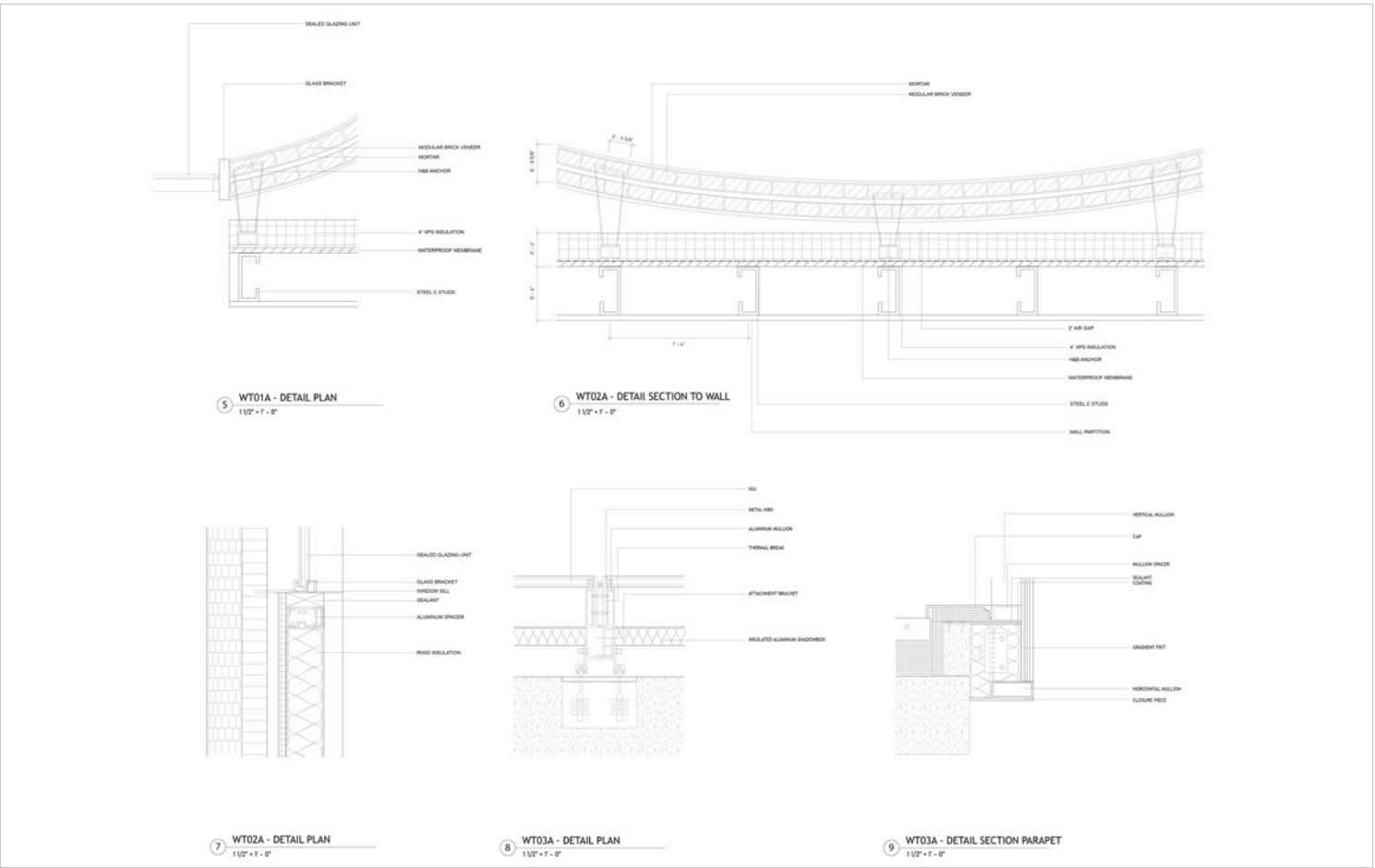
FORMALIZING THE IN-BETWEEN

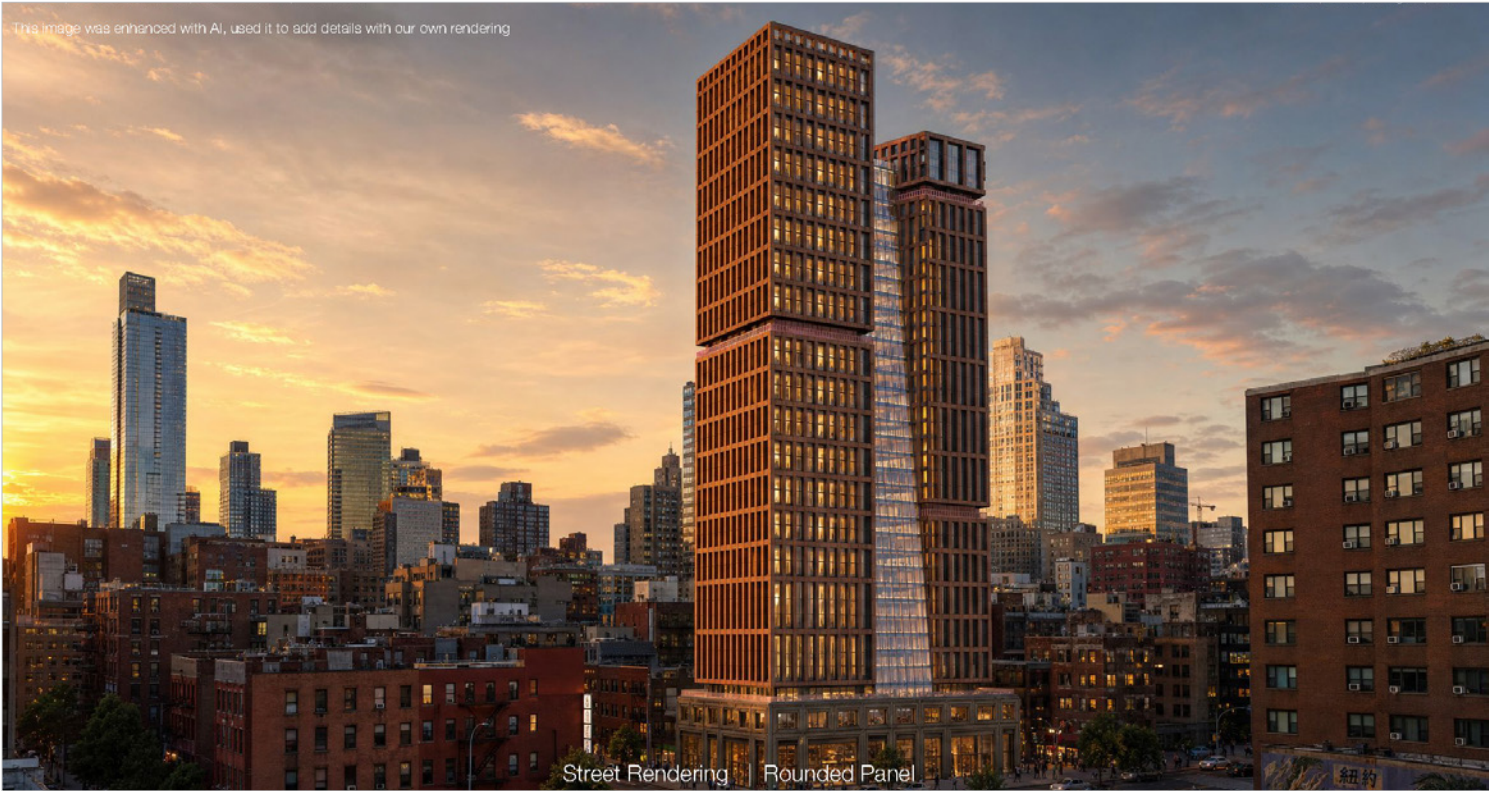
Location
124 Malvern St, Newark, NJ, 07105

Partner
Team Work

Instructor / Coordinator
Katherine Chan, Berardo Matalucci

Course
Tech III / Tech IV





Street Rendering | Rounded Panel



Concept Rendering

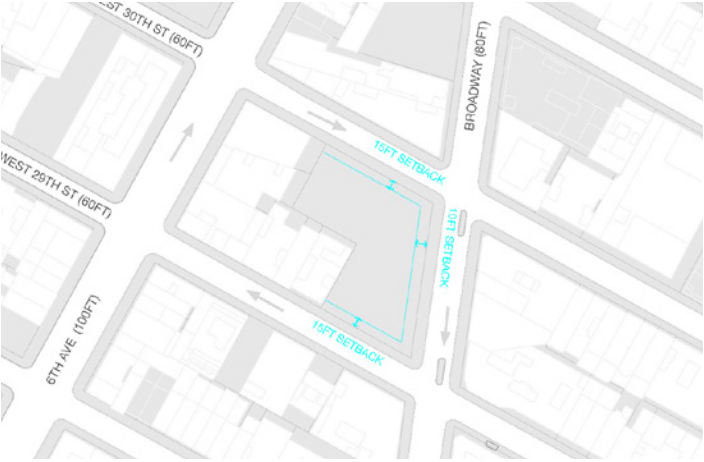
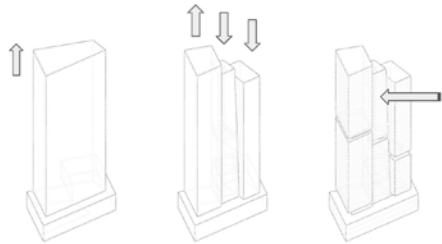
B2B URBAN STRATA

Location
1227 Broadway, NYC

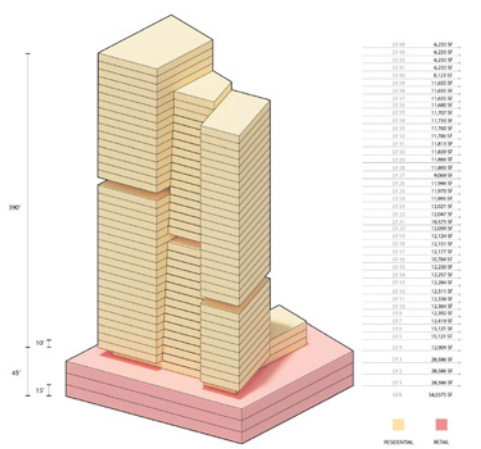
Partner
Danialle Min, Sumi Kim, Yake Wang

Instructor / Coordinator
Joseph A. Brennan

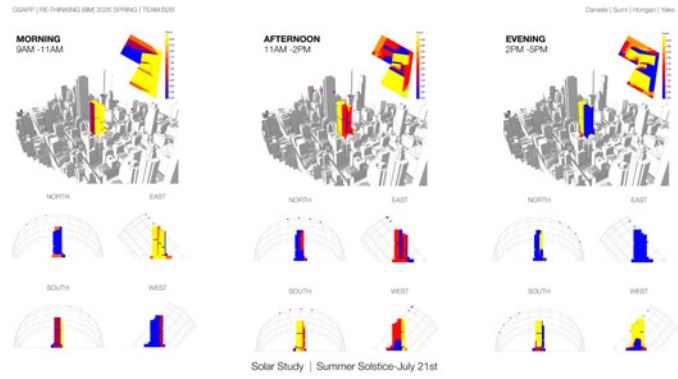
Course
Rethinking BIM



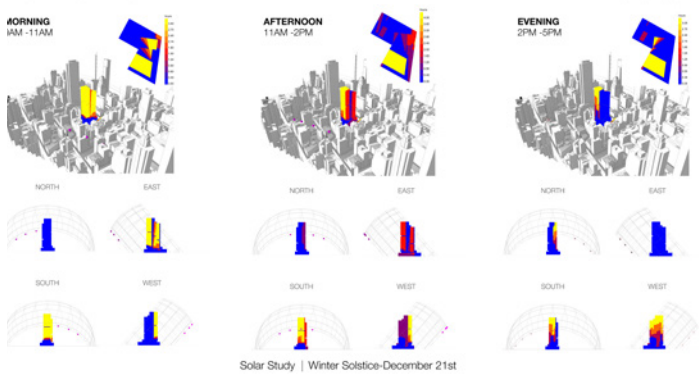
Site Overview



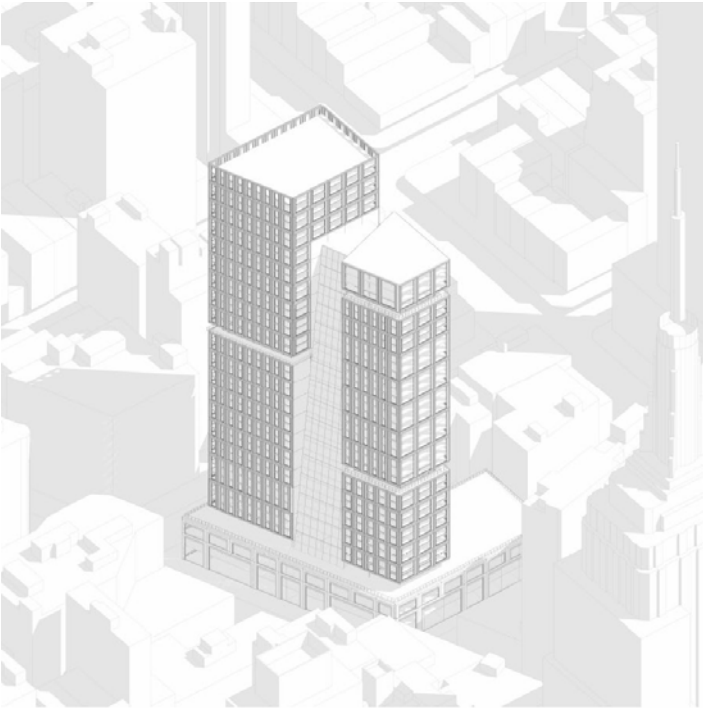
Stacking Diagram



Solar Study | Summer Solstice



Solar Study | Winter Solstice



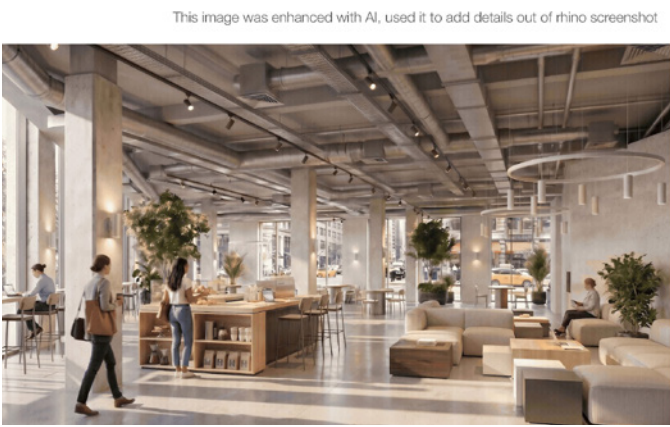
Facade Option One | Vertical Paneling



Facade Option One | Rounded Paneling



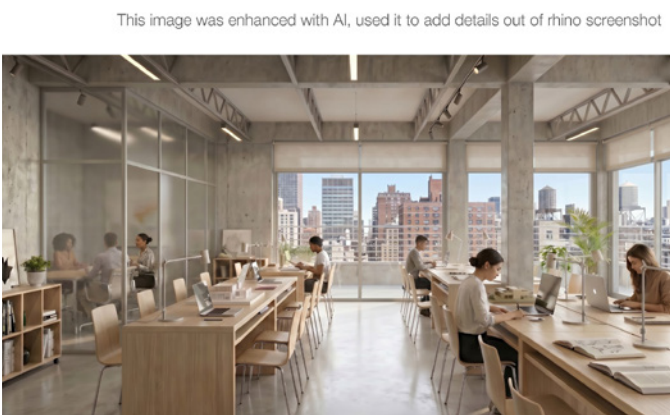
Ground Level



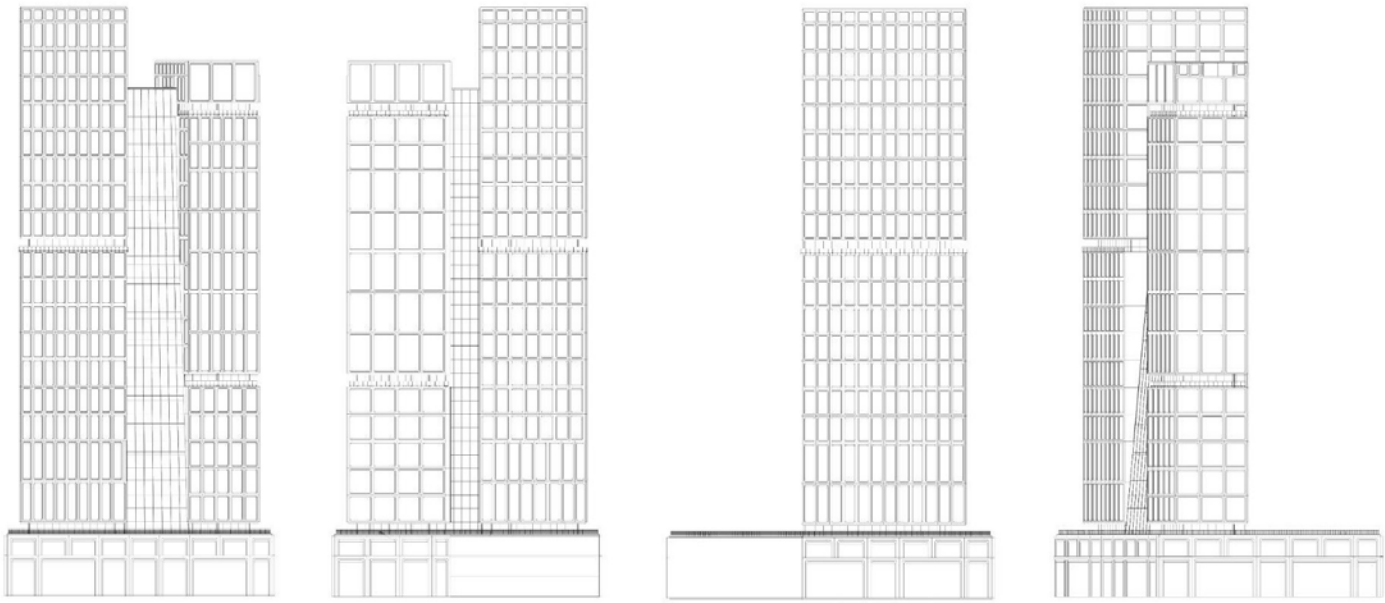
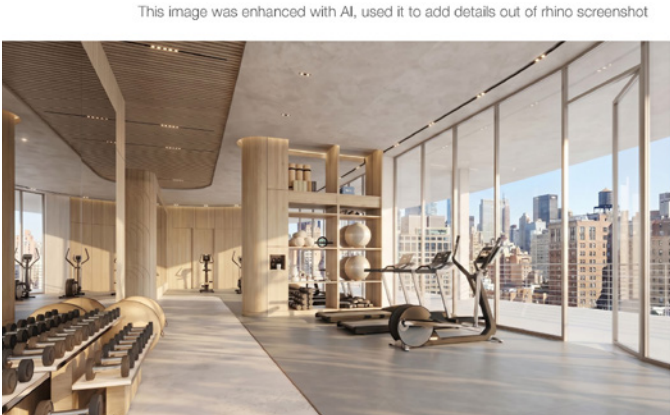
Typical Office Floor Second Level



Fifteenth Level Residential With Amenity



Twenty Fifth Level Residential With Amenity



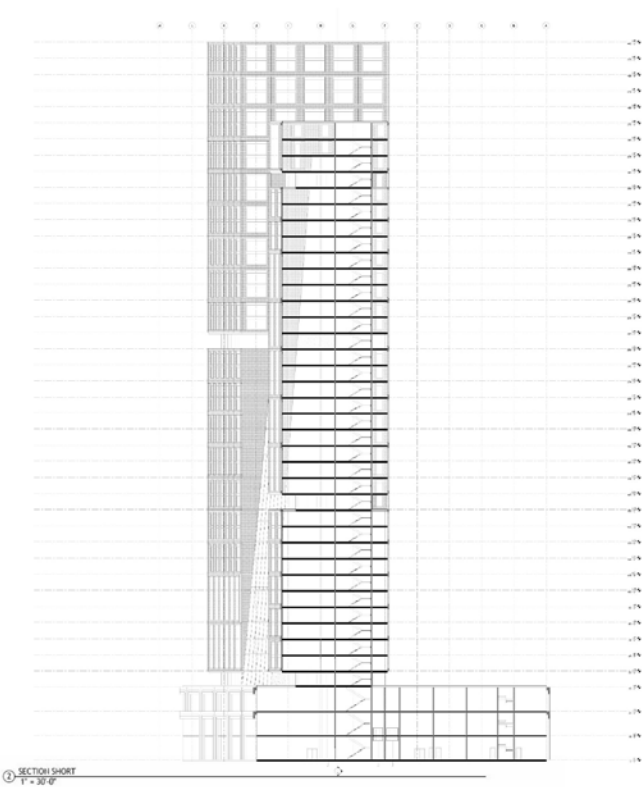
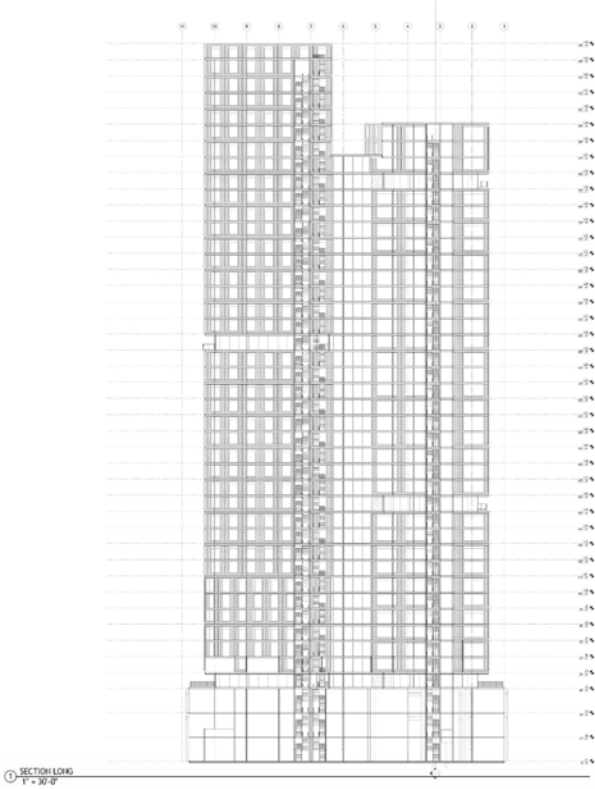
EAST

WEST

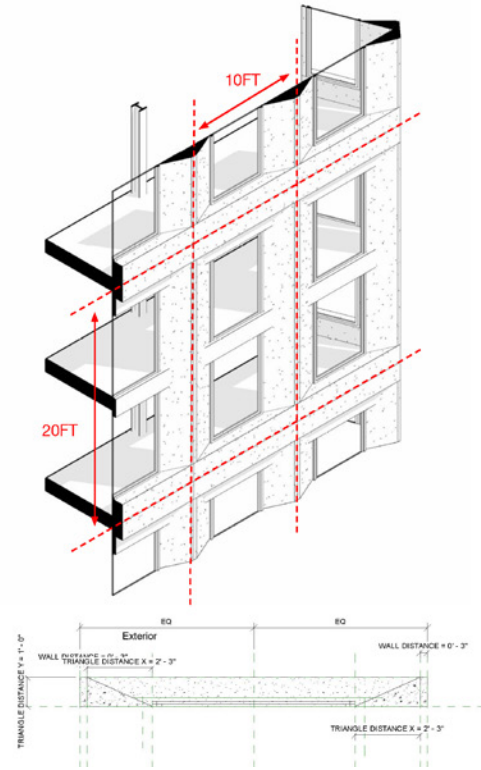
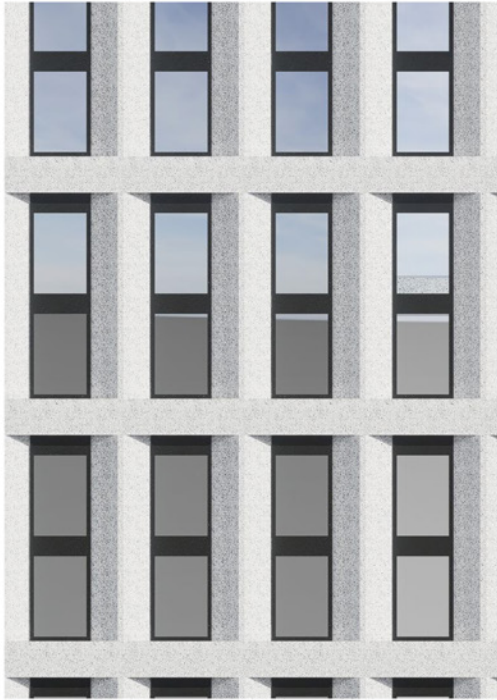
SOUTH

NORTH

Elevation Revit

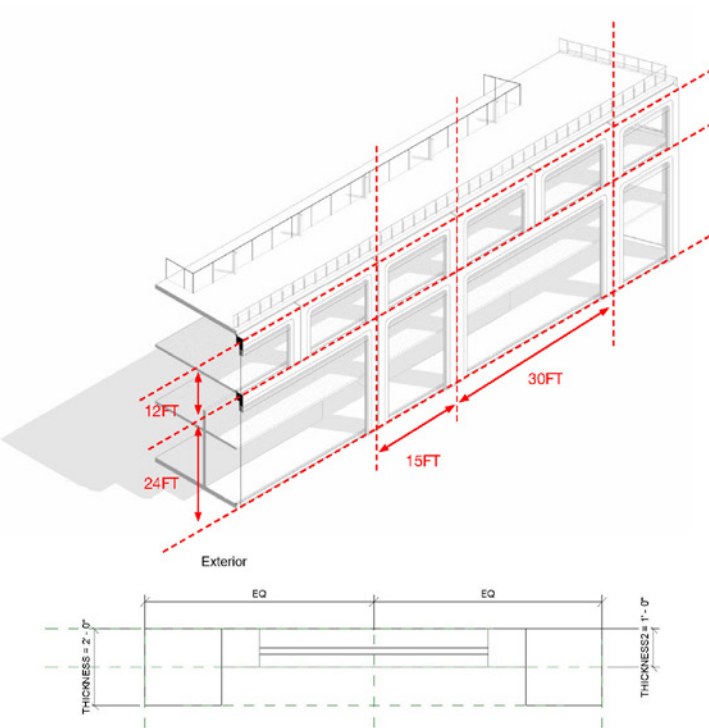
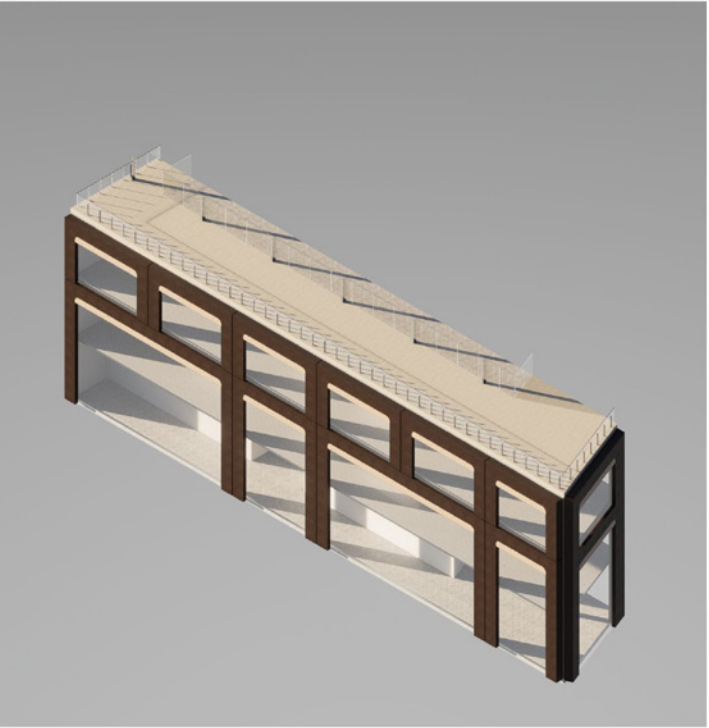


Section Revit



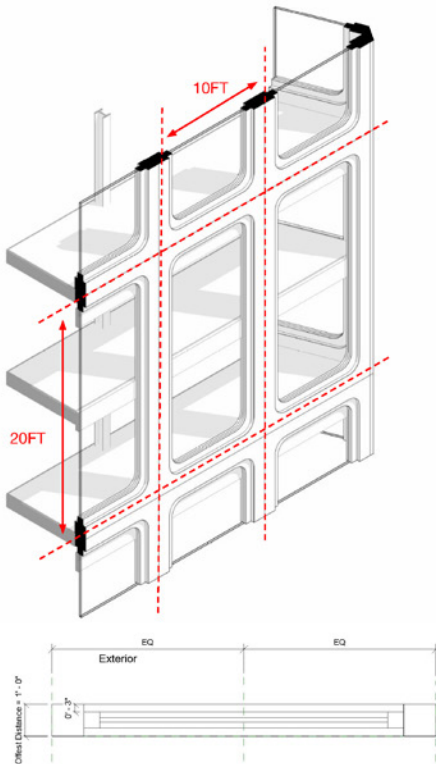
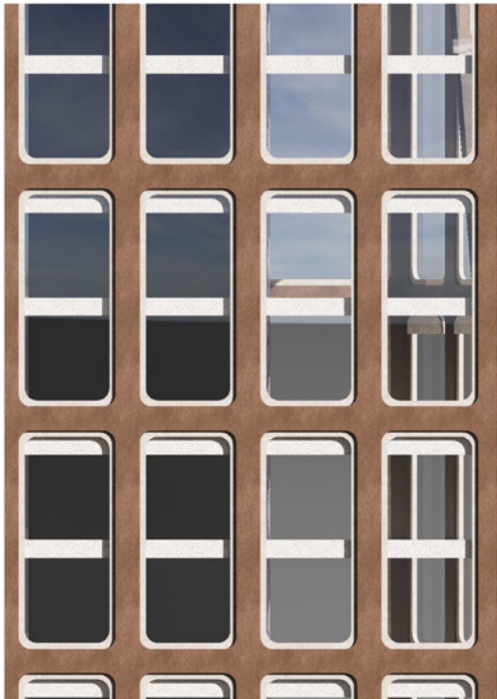
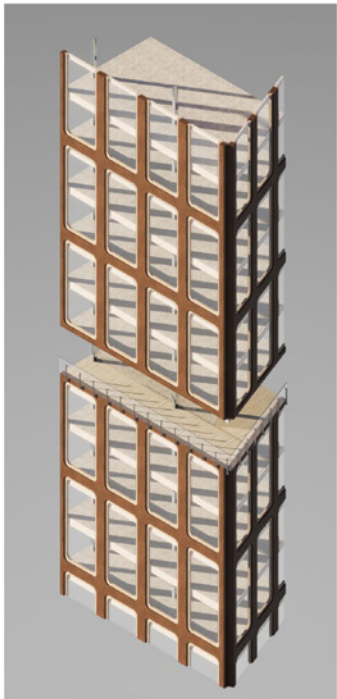
Option One | Vertical Terracotta Paneling

A solar-responsive terracotta facade with strong vertical depth, offering shading and rhythm but requiring more precise detailing and panel coordination



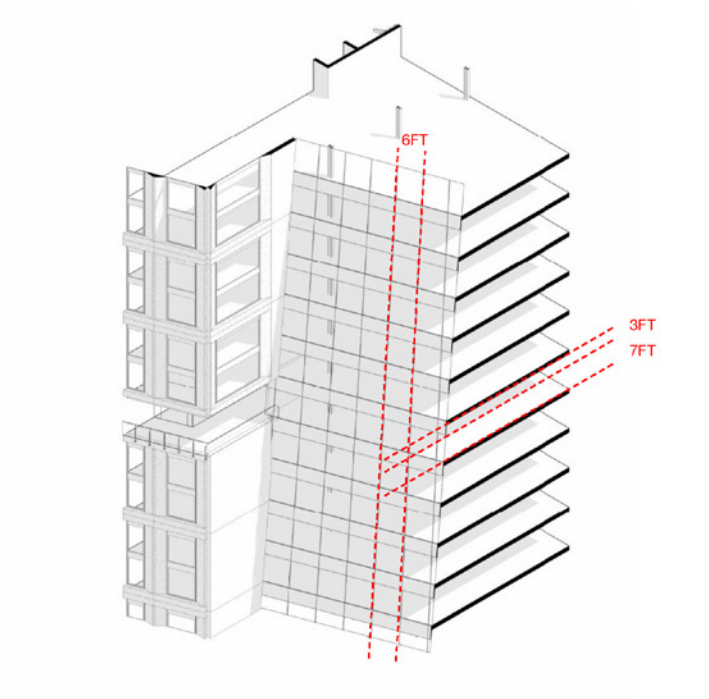
Podium Facade | Rounded Brick Paneling

A grounded brick podium facade that relates well to the street scale and surrounding context, but may feel visually heavier at the base



Option Two | Rounded Brick Paneling

A softer brick facade that creates a warmer and more tactile urban expression, though it may reduce the sharper vertical definition of the tower



Curtain Wall Facade

A lighter glass facade that maximizes daylight and views, but requires stronger solar control and may feel less materially grounded

