

EVERYLINE IS A M  
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2020-21  
2022-23  
Gottlieb  
GSTARPP  
Thanaporn  
Wongsanguan

# A collection of stories about

**People**

**Ecology**

**Architecture**

**Chapters**

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Common Currents

ENY Community Ago-puncture

Interlocking Tectonics

Weaving Edges

Bushwick Inlet Sponge City

Co-living in the age of Covid-19

Melrose Community Center

Lines, those ephemeral traces that demarcate territories, have the enigmatic ability to transform conflict zones and redefine the spaces they occupy. Each line, imbued with its own narrative, illuminates the delicate interplay between human and non-human actors as they engage with the ever-shifting landscape of nature.

Time's manifold experiences, from the cyclical rhythms of the natural world to the processes of regeneration and restoration, occupy varying spatial and temporal dimensions. The profound question arises: how do these projects influence their immediate surroundings while also mediating expansive communities, bridging human and non-human species, and nurturing the ecological environment?

Every Line Is A Material is an anthology that highlights the power of drawing lines as architectural mediators between two realms: a bridge to ecological balance and coexistence, architectural devices that nourish and connect communities. a corridor that connects fragmented ecosystems, a boundary that connects people and water, and a novel living space that allows us to experience solitude in company. In our disruptive times, these stories illustrate numerous ways to embrace change and adapt to future uncertainties.

GRASSROOTS ENGINEERING

LOW-TECH TECHNIQUES

ENVIRONMENTAL STEWARDSHIP

COMMUNITY-DRIVEN

MEKONG RIVER

HYDROPOWER DAMS

TRANSBOUNDARY COLLABORATION

ECOLOGICAL BALANCE

INDIGENOUS KNOWLEDGE

SUSTAINABLE ENERGY

AQUACULTURE

COEXISTENCE INFRASTRUCTURE

# Common Currents

## Capitalocene Energetic Landscapes

Architecture, Environmental Ethics, and the Myths of Renewable Energy

By addressing the environmental, social, and ethical implications of hydropower dams, Common Currents challenges the narrative of hydropower dams as a clean, renewable energy source. The project emphasizes the significance of repairing existing landscapes and natural ecosystems while also encouraging environmental stewardship, sustainability, and ecological interdependence.

Site: Lower Mekong river

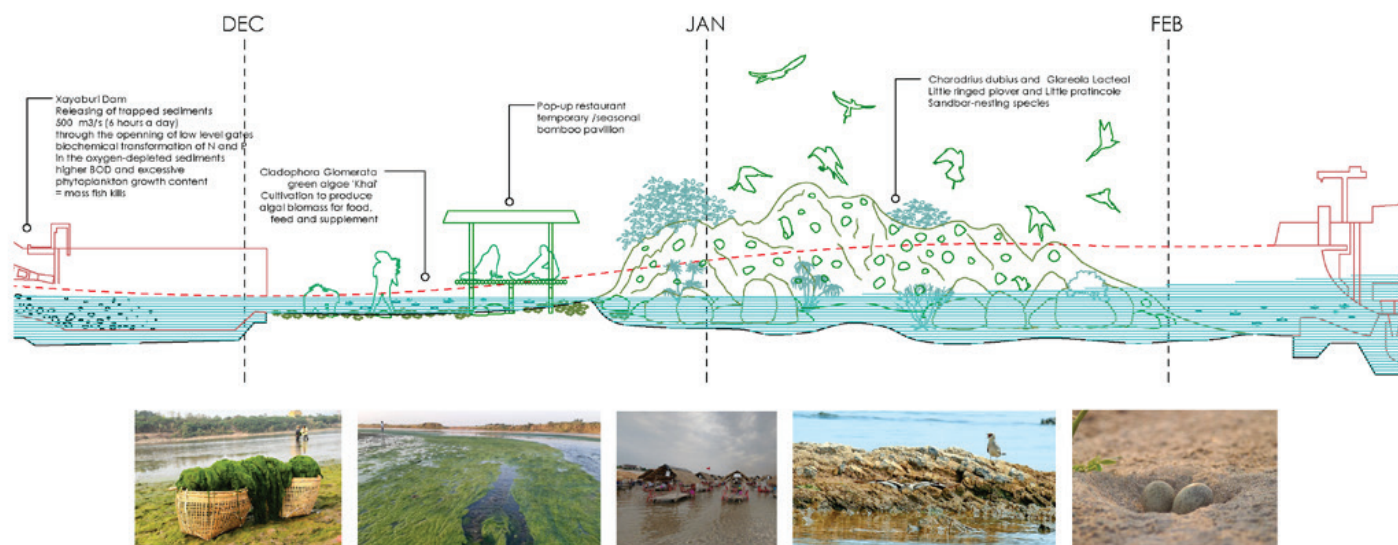
Studio: ADV VI Studio

Critic: Luzarraga+Muino

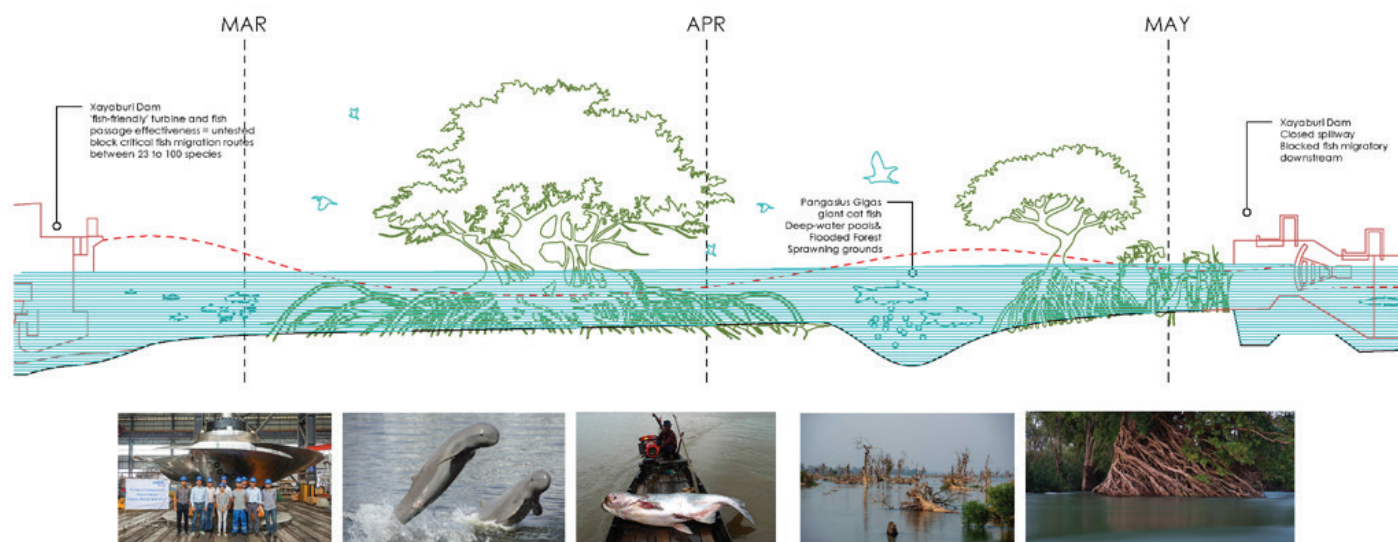
Date: Spring, 2023



**Dry season**

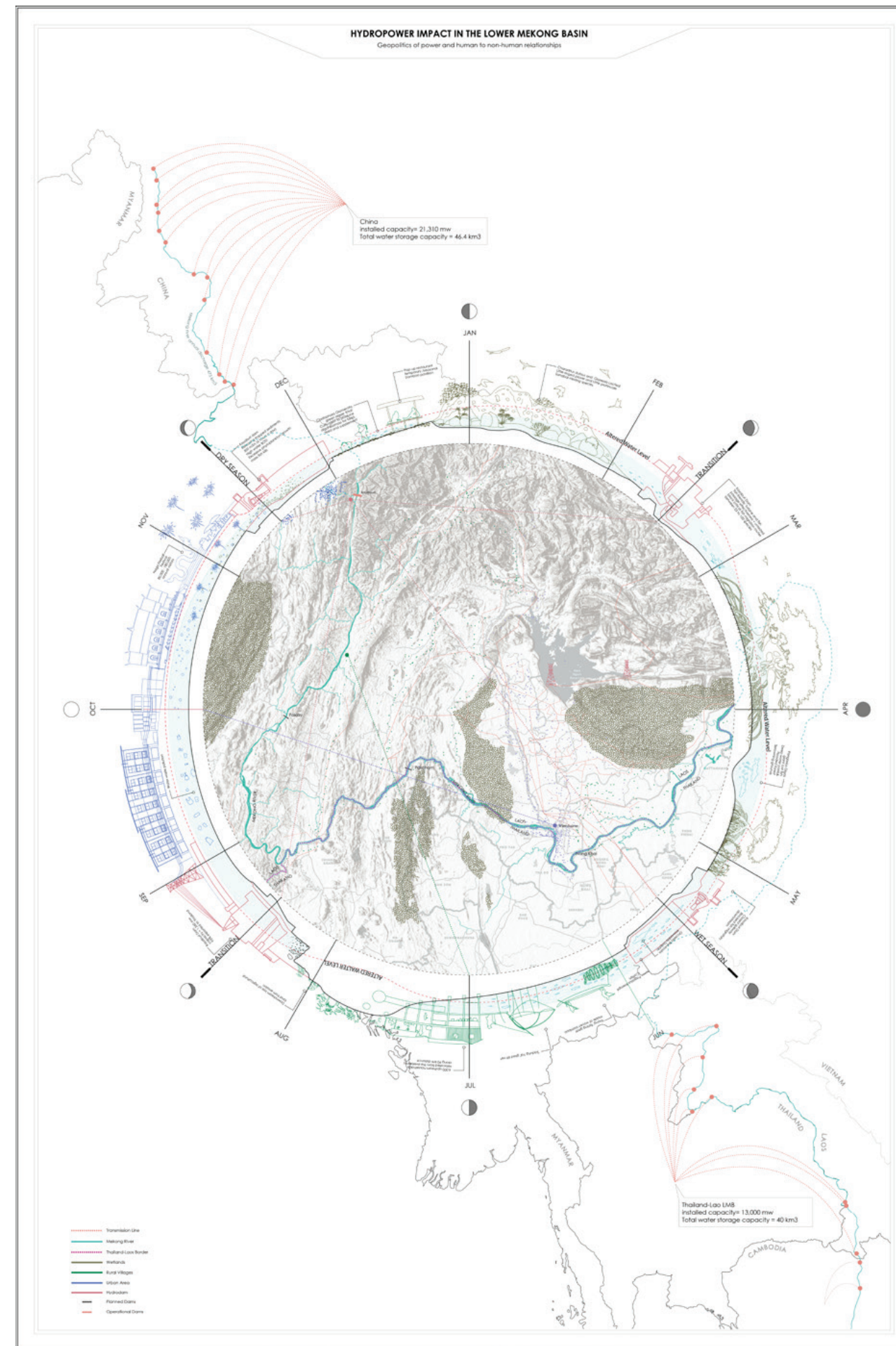


**Transition into Wetseason**

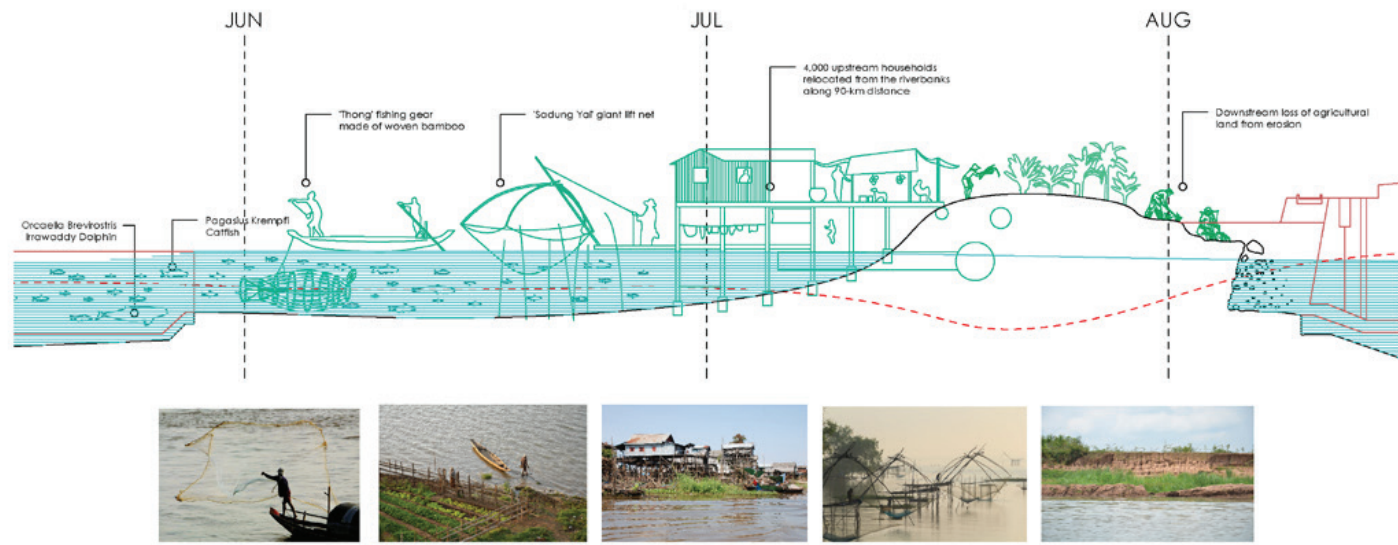


**Disrupted Cycles**

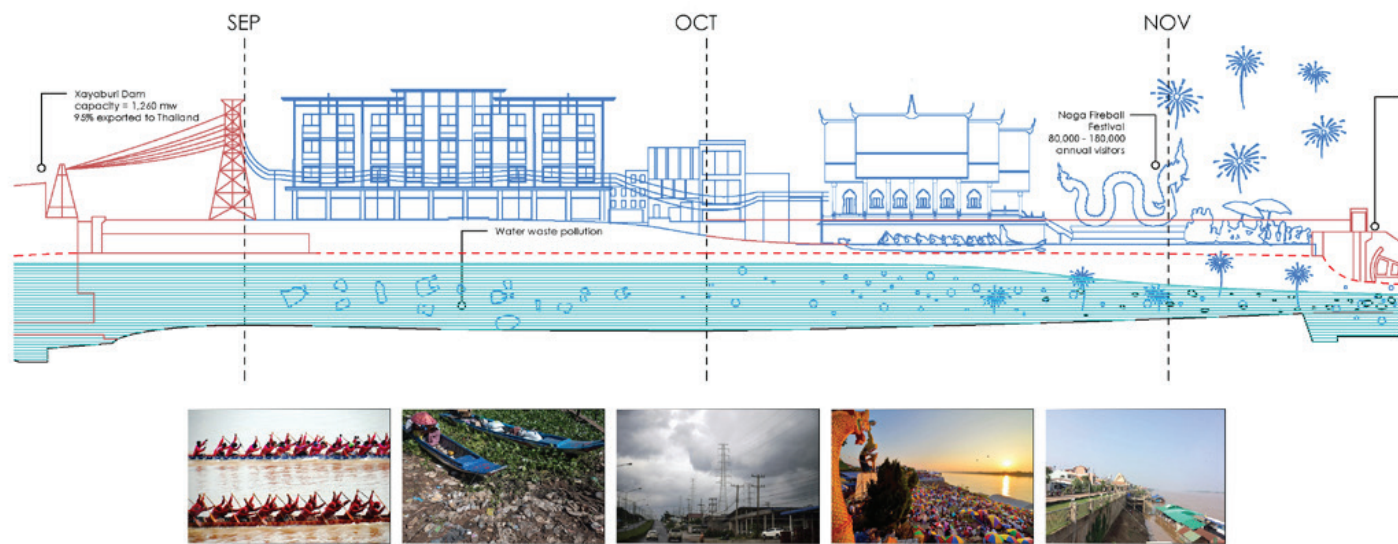
The ecosystem of the lower Mekong River is dependent on the natural rise and fall of water levels during the wet and dry seasons. During the dry season, low tides and slow water flow encourage the growth of Cladophora algae (gai) and smaller fish, which provide food for humans, predator fish, and other species. Plant reproduction is also aided by the dry season. Water croton with willow leaves (Homonoia riparia Lour) with flower petals and fruits that provide food and shelter for aquatic life. Small pratincoles (Glareola lactea) and little ringed plover (Charadrius dubius) nest on sandbars and islands formed during low tide and play an important role in controlling insect populations, pollinating plants, and dispersing seeds. Dams disrupt the natural water cycle, resulting in abnormal water level fluctuations and flooding (the red line), endangering bird nests and eggs.



**Wetseason**

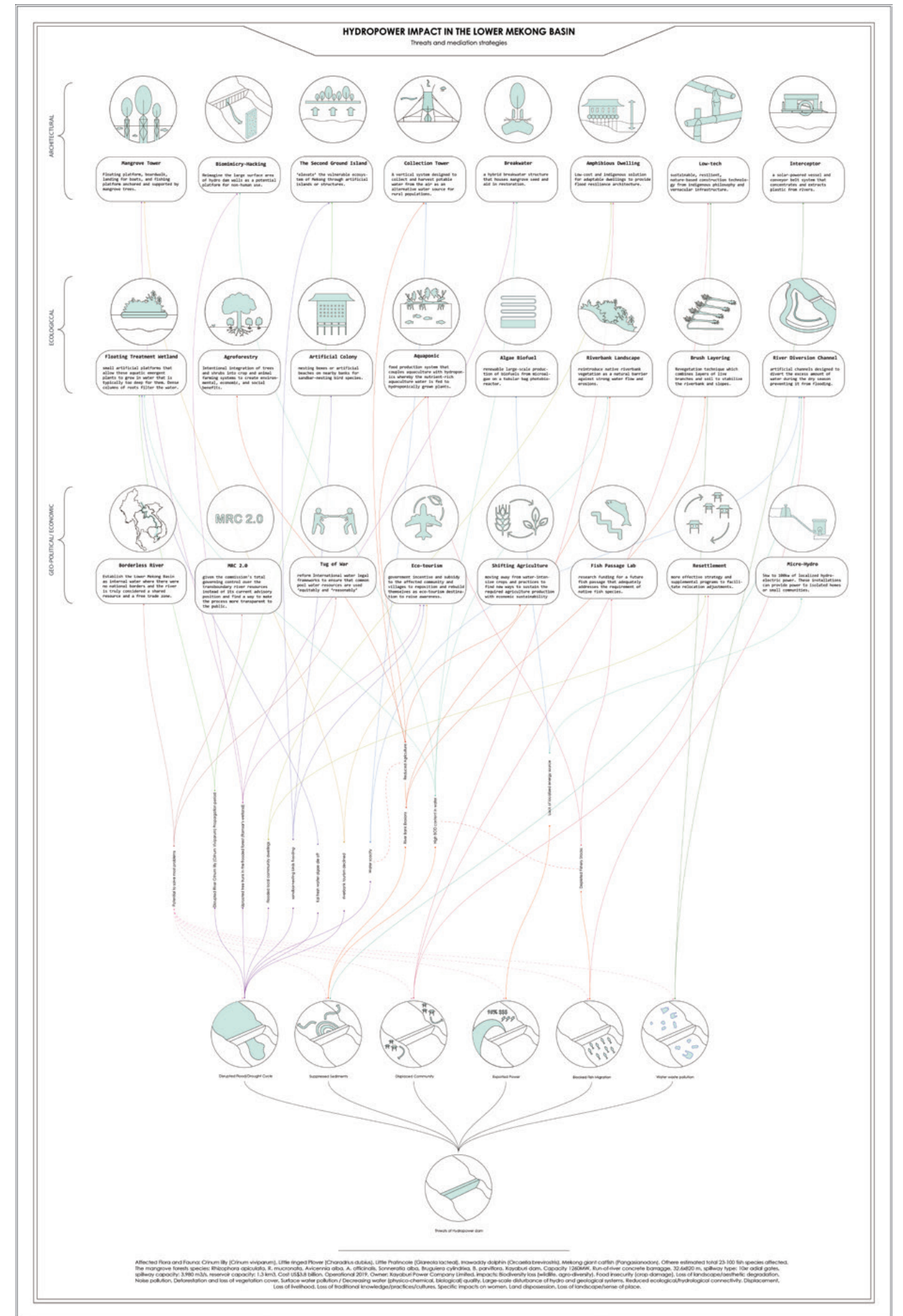


**EOY Transition back to dry season**



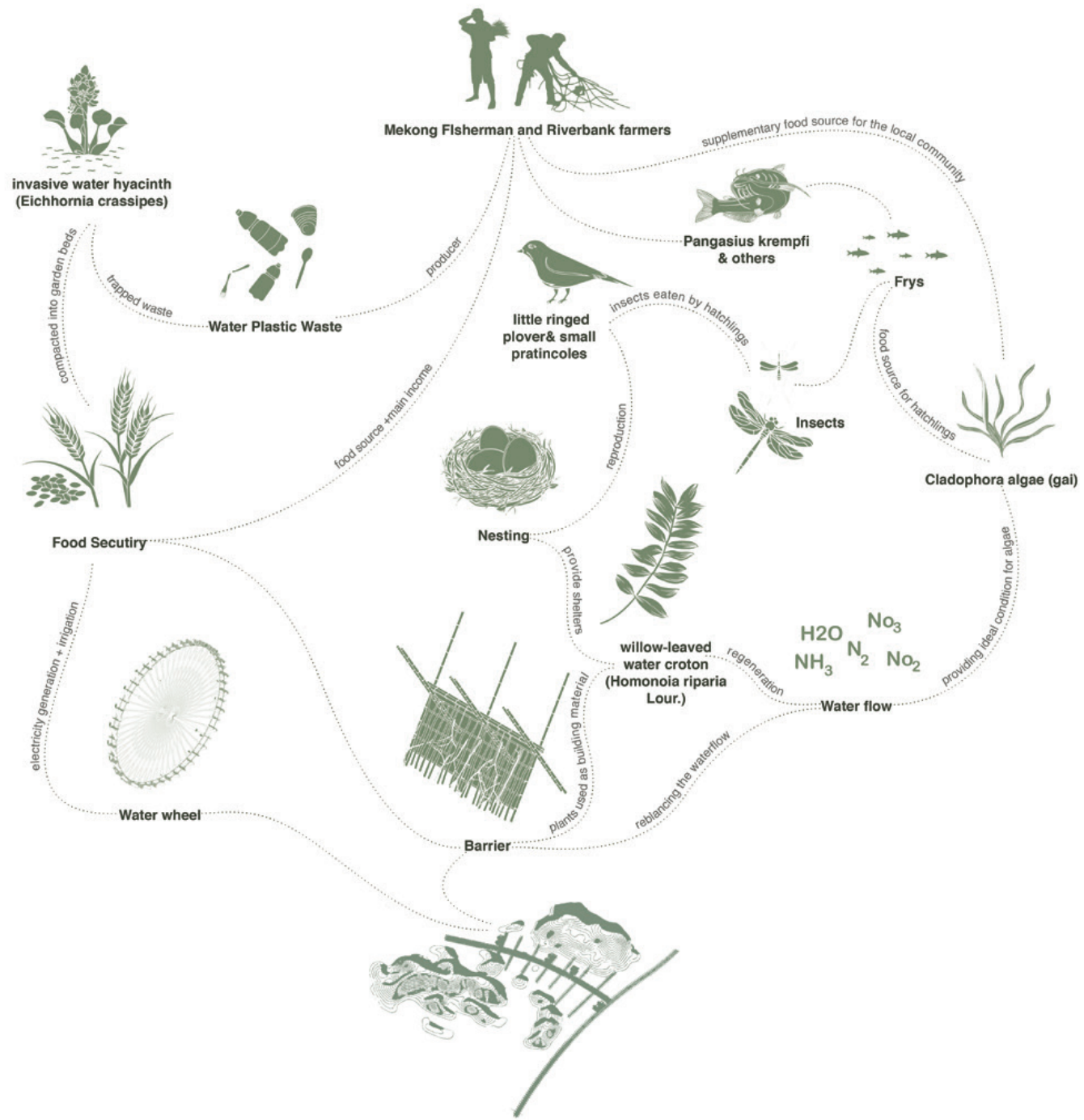
**Theats of hydropower**

The wet season floods forests and fields in the lower Mekong River ecosystem. The expanded habitats provide shelter and food for fish, so they migrate and breed. Fish spawning routes and fry and hatchling migration downstream are blocked when the dam closes its gate to store water. Fishing is best during this season due to fish abundance and accessibility. Local river-dependent communities benefit from this period. Sediments enrich riverbank soil. Rice and vegetables, which require seasonal flooding, are grown in the nutrient-rich soil. This time of year, dams trap sediments, causing soil erosion and riverbank agriculture to decline. The city center also increases peak electricity and water waste pollution.



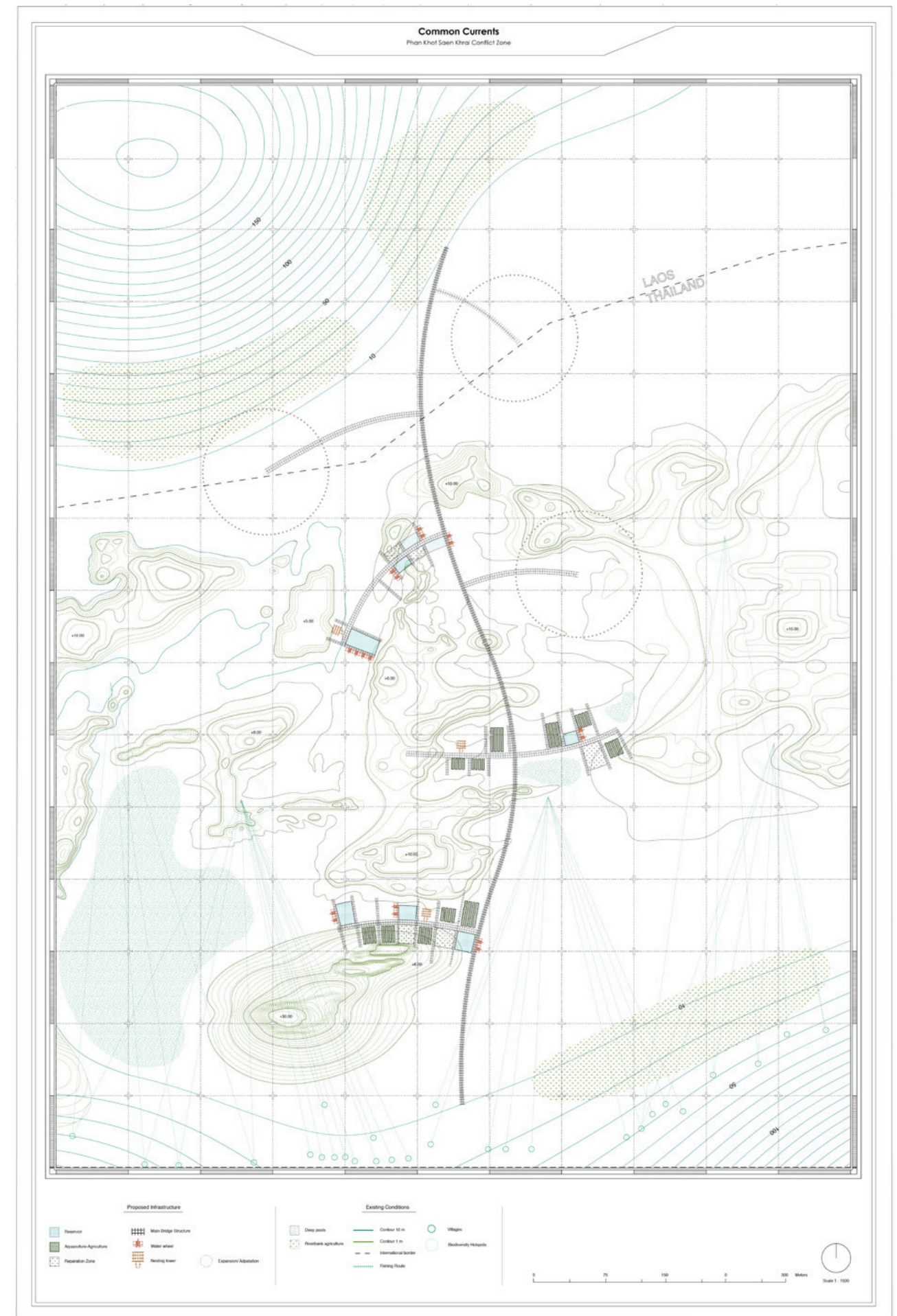


The Lower Mekong River, spanning 4,350 km, is vital to Southeast Asia's food security, supporting a diverse \$11 billion freshwater fisheries industry and providing food security to over 60 million people. Flowing through Laos, Cambodia, Thailand, and Vietnam, the river hosts immense biodiversity only second to the Amazon.

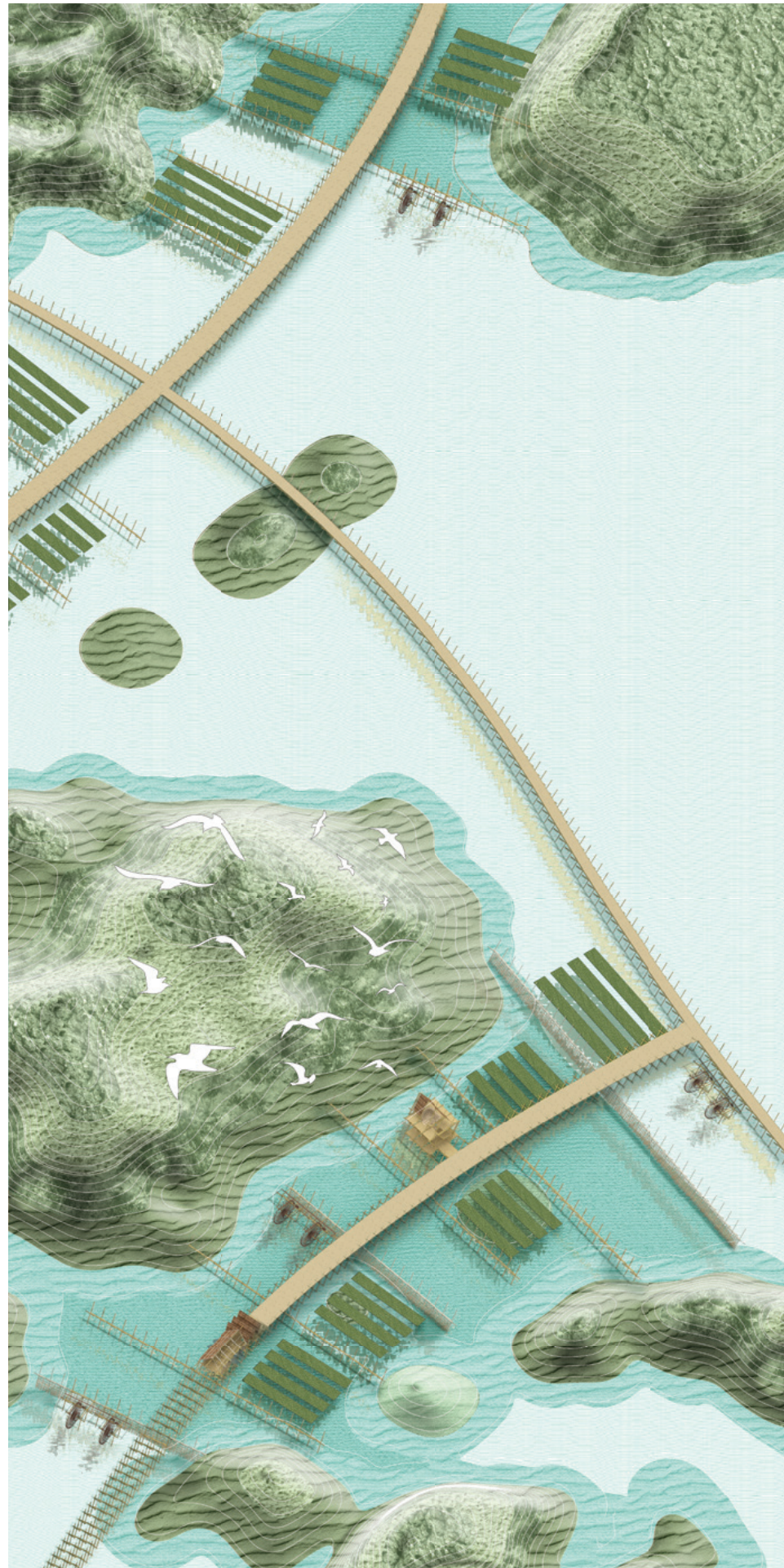


### Fluid Territories

The “Land of Thousand Rocks and Thousand Leaves”—Ban Muang Sub-district—borders northeastern Thailand and central Laos. The willow-leaved water croton (*Homonoia riparia* Lour.) supports fish habitats and nutrient cycling in the sub-Mekong ecosystem. Villagers fish rocks in the Mekong River without government permission in a biodiversity hotspot. Transboundary rivers often cause conflict between neighboring countries, but building bridges between communities can turn them into collaboration zones. Promoting culture, communication, and security. Open-ended, context-specific strategies can create interconnected communities that cooperatively manage and protect their shared river systems, turning international boundaries into collaboration bridges.

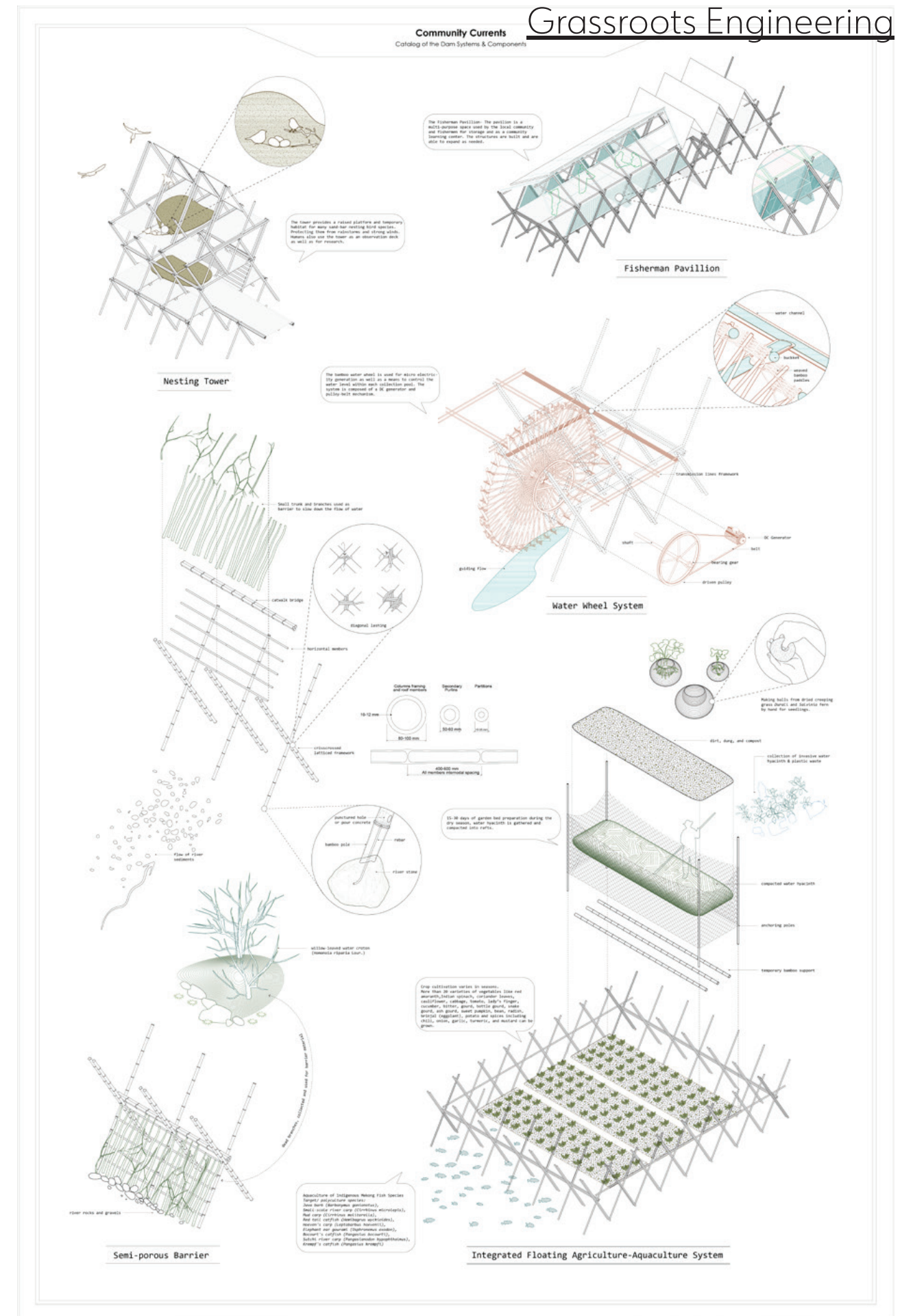


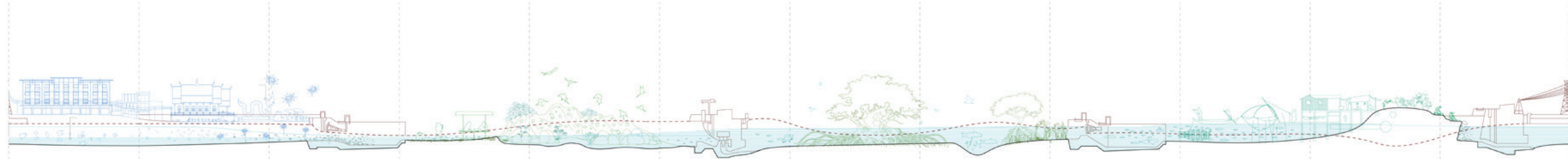
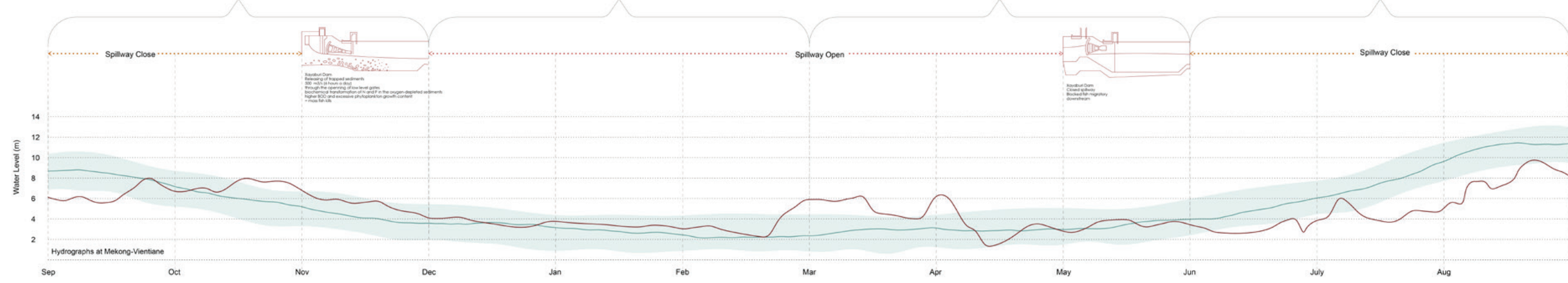
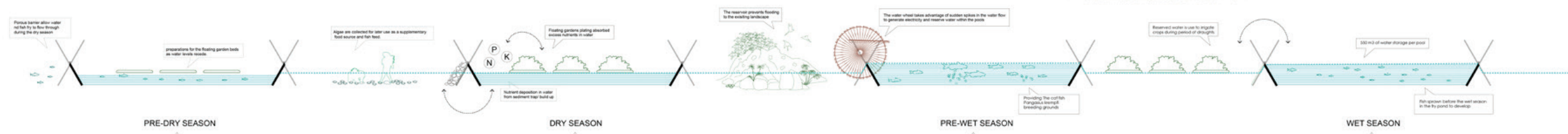
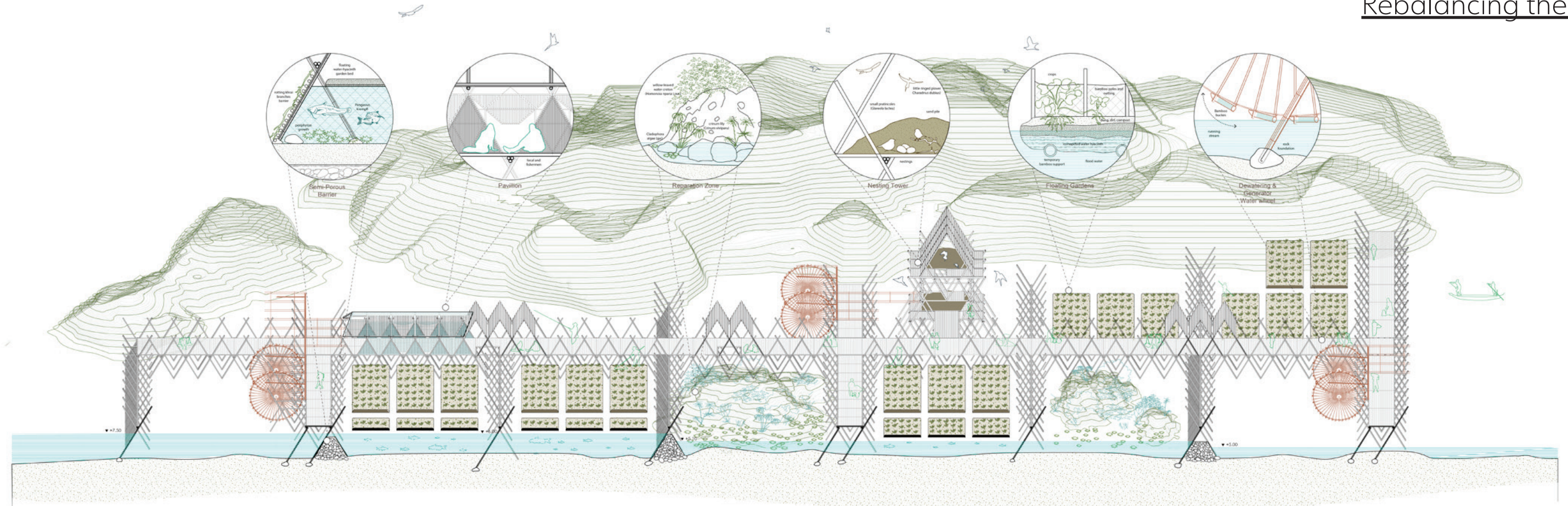




### Rebalancing the flow of water>

The system operates in synchronization with the disrupted and altered water flow resulting from the mainstream dams. Instead of attempting to resolve the issue by adjusting the water levels of the main bodies of water, the project aims to speculate on mitigating the effects in specific areas. This approach allows for the coexistence of both human and non-human species impacted by this potent force.





EAST NEW YORK

AGRO-PUNCTURE

URBAN REVITALIZATION

ACCESSIBILITY INDEX

CULTURE PUBLIC SERVICES

NATURE

FRESH LOCAL FOOD

COMMUNITY ENGAGEMENT

RESIDENTIAL INDUSTRIAL ZONES

ARCHITECTURE PROTOTYPE

FOOD PRODUCTION

CELEBRATION CONSUMPTION

# East New York Community Agro-puncture

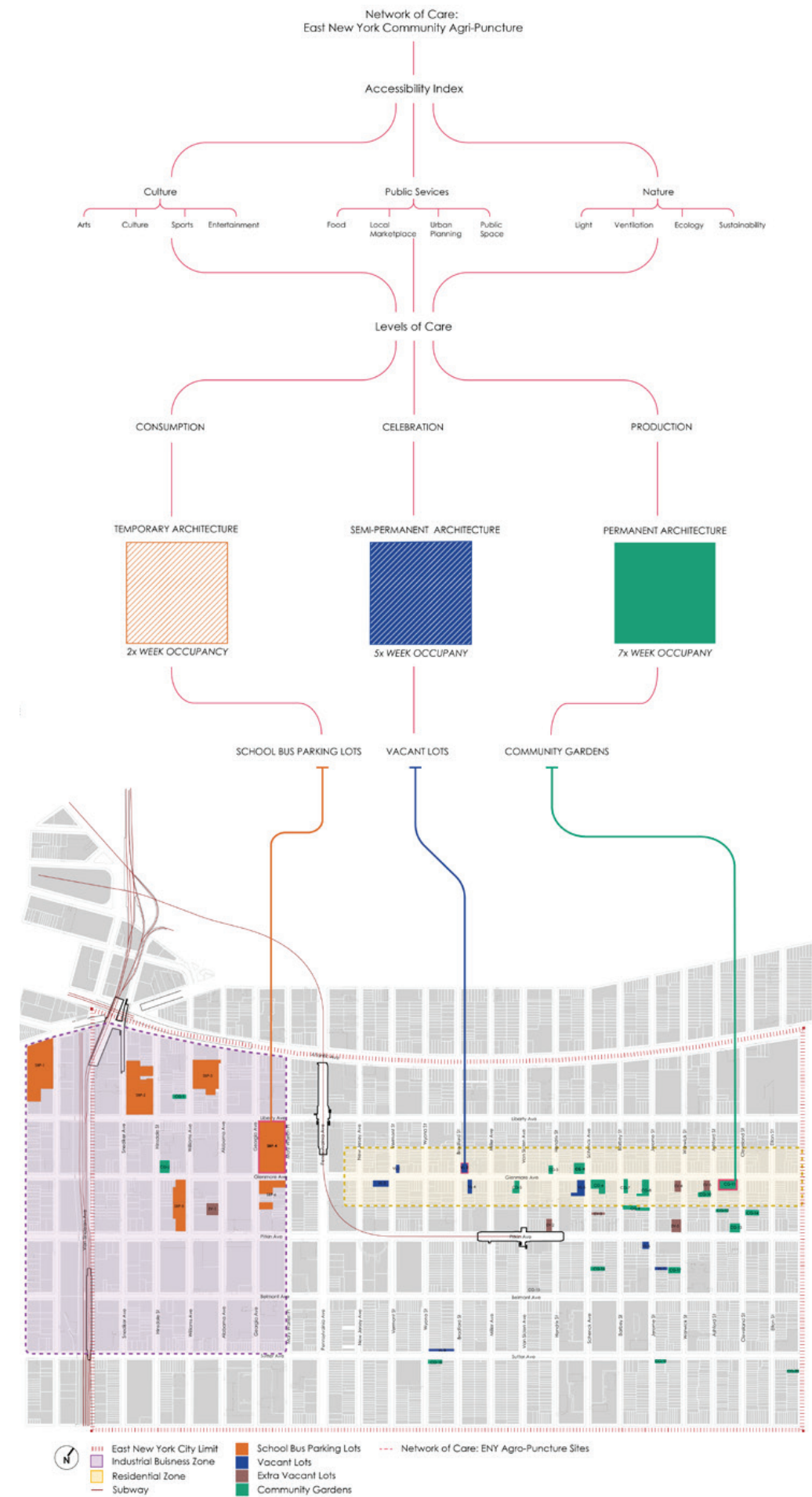


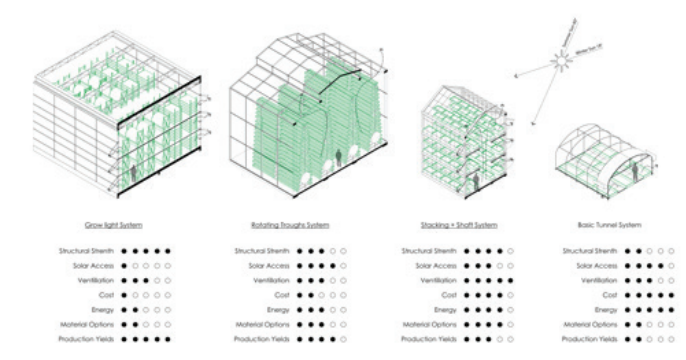
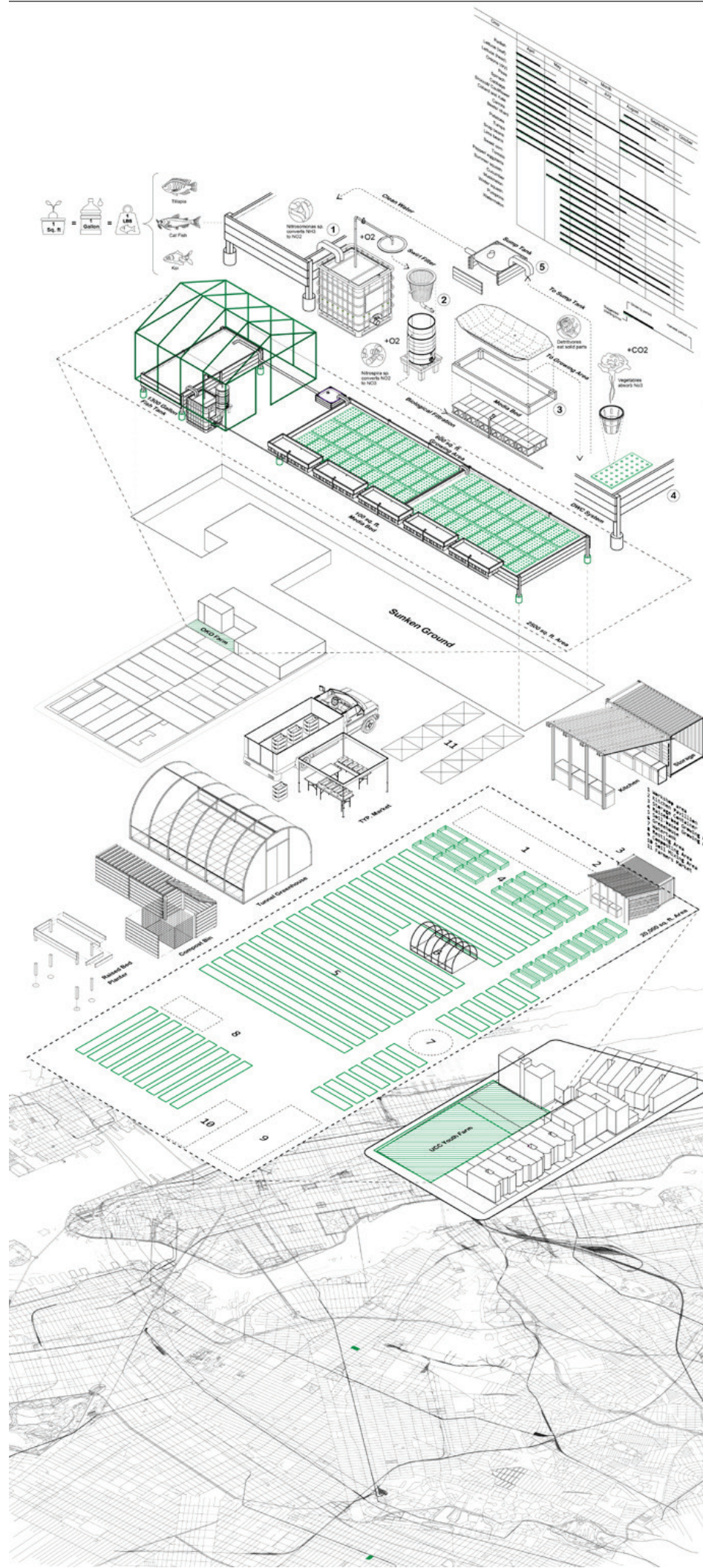
## **Accessibility?**

The project addresses the urban urgency of Food Insecurity by creating a community beacon as a foodscape network that provides access to affordable and nutritious food and actively reengages the neighborhood of East New York. Food has the power to connect us to the cultures of our past and present, to our neighbors, our communities, and our earth. Education acts as a catalyst to stimulate a trajectory of healthy living, environmental awareness, food equity, and communal identity by reinventing programs and spaces to reflect a particular community's culture and diversity in its time and place.



"Agro-Puncture works to blend the residential and industrial zones through a localized network of 40 lots throughout East New York." This approach rethinks and revitalizes the neighborhood's industrial identity by integrating its diverse culture and strong civic pride.





<These sites include community gardens, vacant lots, and school bus parking lots. The different nature of these sites is an opportunity to implement dynamic architecture that responds to each site zone with a different level of care.

>Despite having many existing local community gardens in the area, the community still lacks access to affordable healthy food options and fresh grocery stores. We'd like to bridge that gap by bringing farming, food production, distribution, and consumption under one roof to subsidize community access to fresh, healthy food and bring people together.



UCC Youth Farm (largest soil-based urban farm in East New York)



Oko Farm (East New York's largest aquaponic farm)



^a series of permanent, semi-permanent, and temporary architectural prototypes. It's a network of food production, celebration, and consumption where urban agriculture and public space intersect.



**Permanent**

reinvent existing community gardens; vertical growing facilities of passive and low-tech aquaponic systems that produce food year-round.

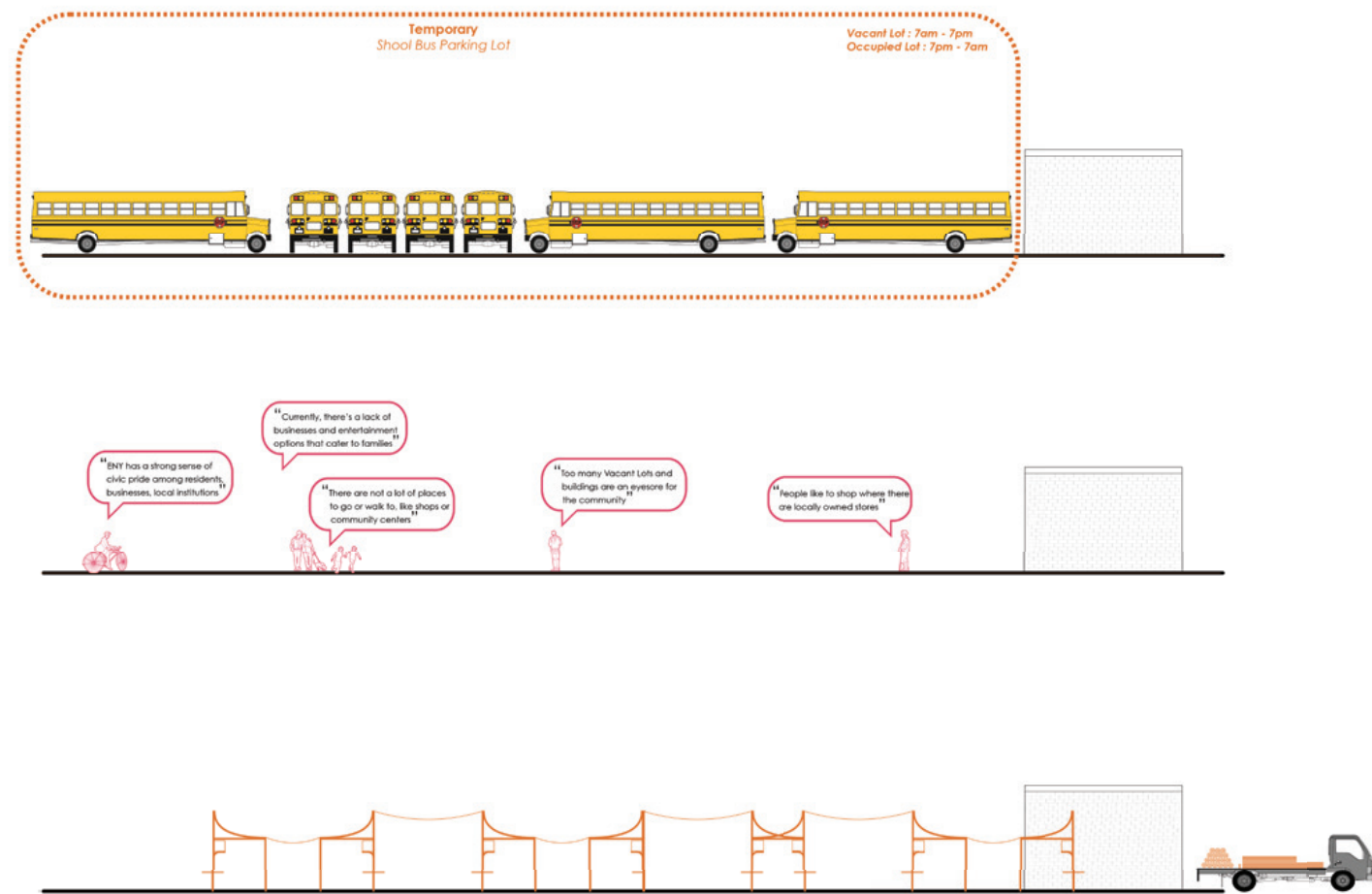






### Semi-Permanent

redevelop existing vacant lots; cultural spaces, entertainment, and seed banks to improve the streetscape and community relationships

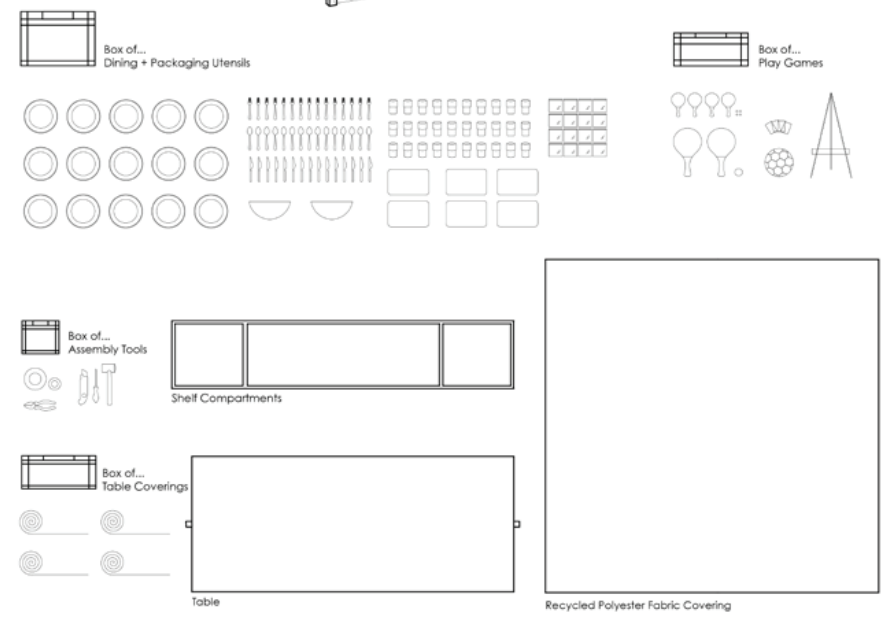
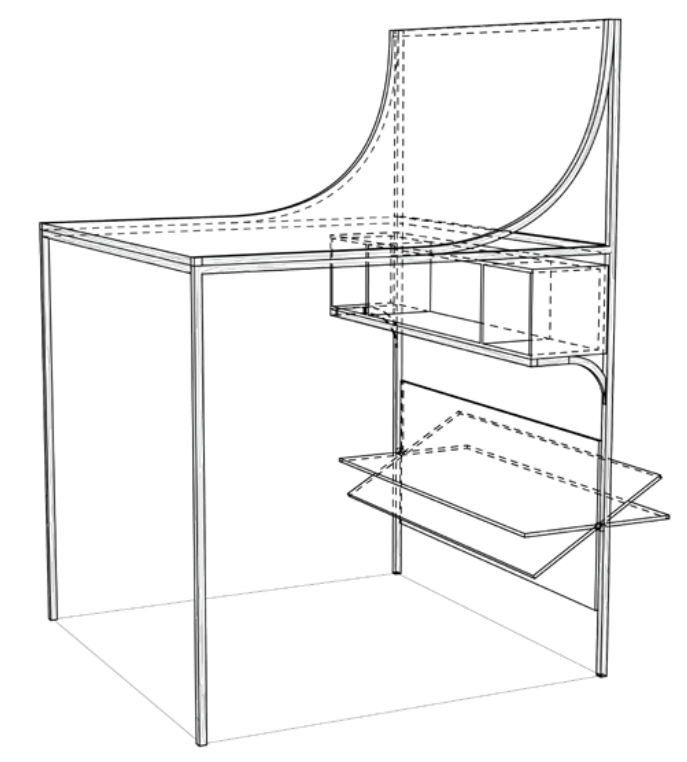
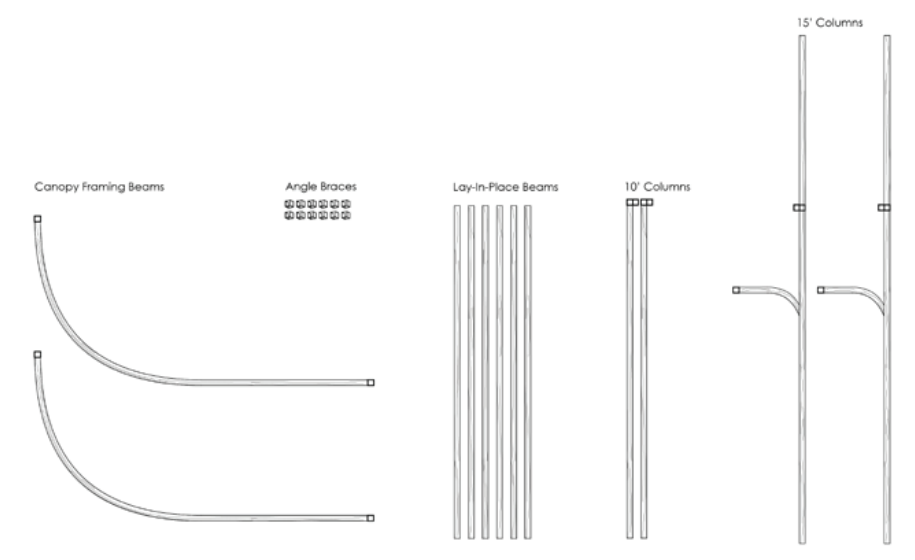
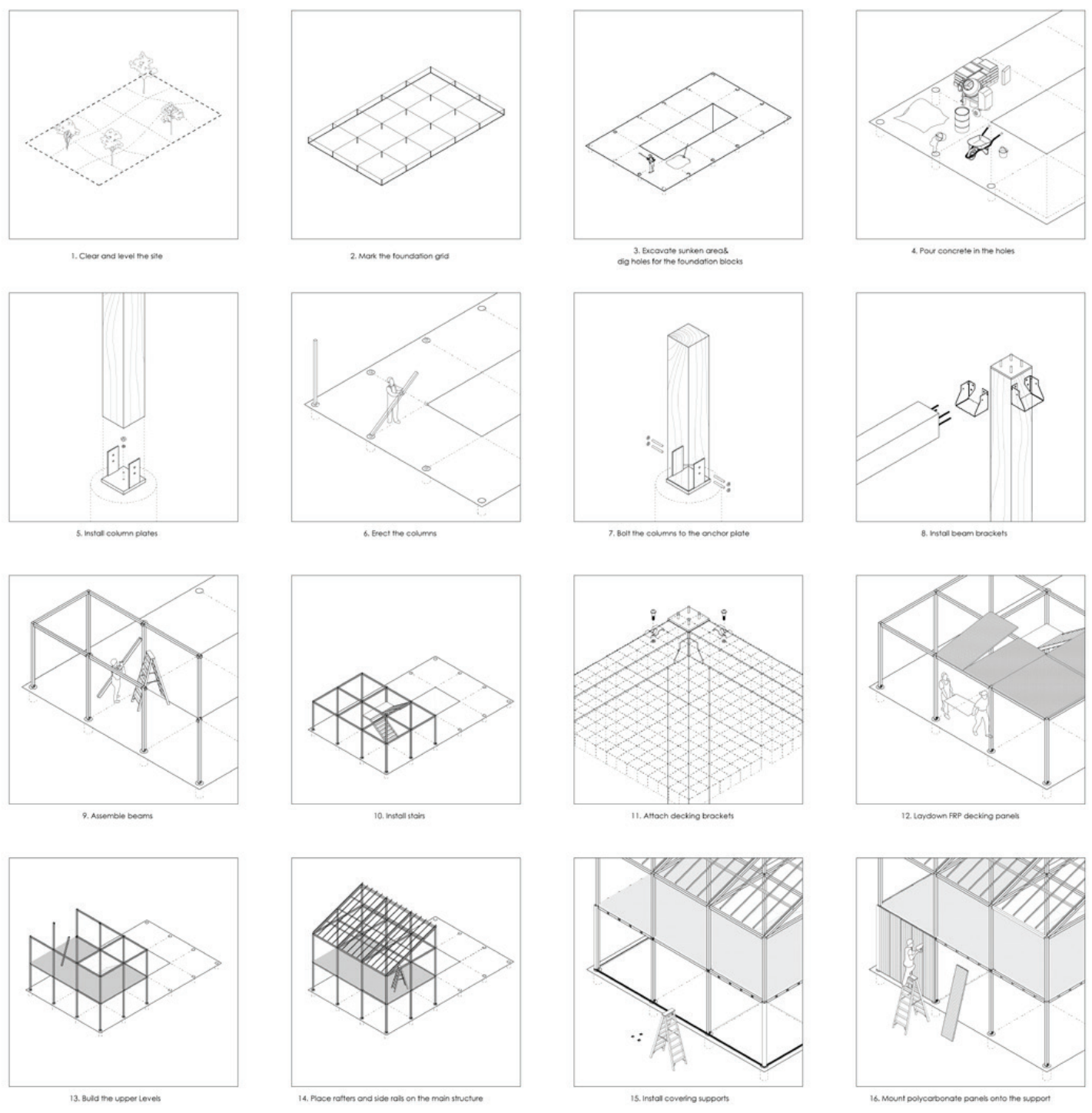


## Temporary

recondition large vacant school bus parking lots during the day; twice a week market to improve local fresh food options for the industrial zone workers and incentivize local economy.



# Assembly System



^ The issue with the existing vertical farming system is that they can be quite expensive and complicated to set up, so we're trying to push for a low-tech system that the community can assemble and manage in the long run. We imagine an aquaponic raft system made using reclaimed building material like insulation boards, tarpaulin, and standard lumber.

INTERLOCKING TECTONICS

TILING PRINCIPLES

FRAME CONFIGURATIONS

NODES

TILE ROTATION

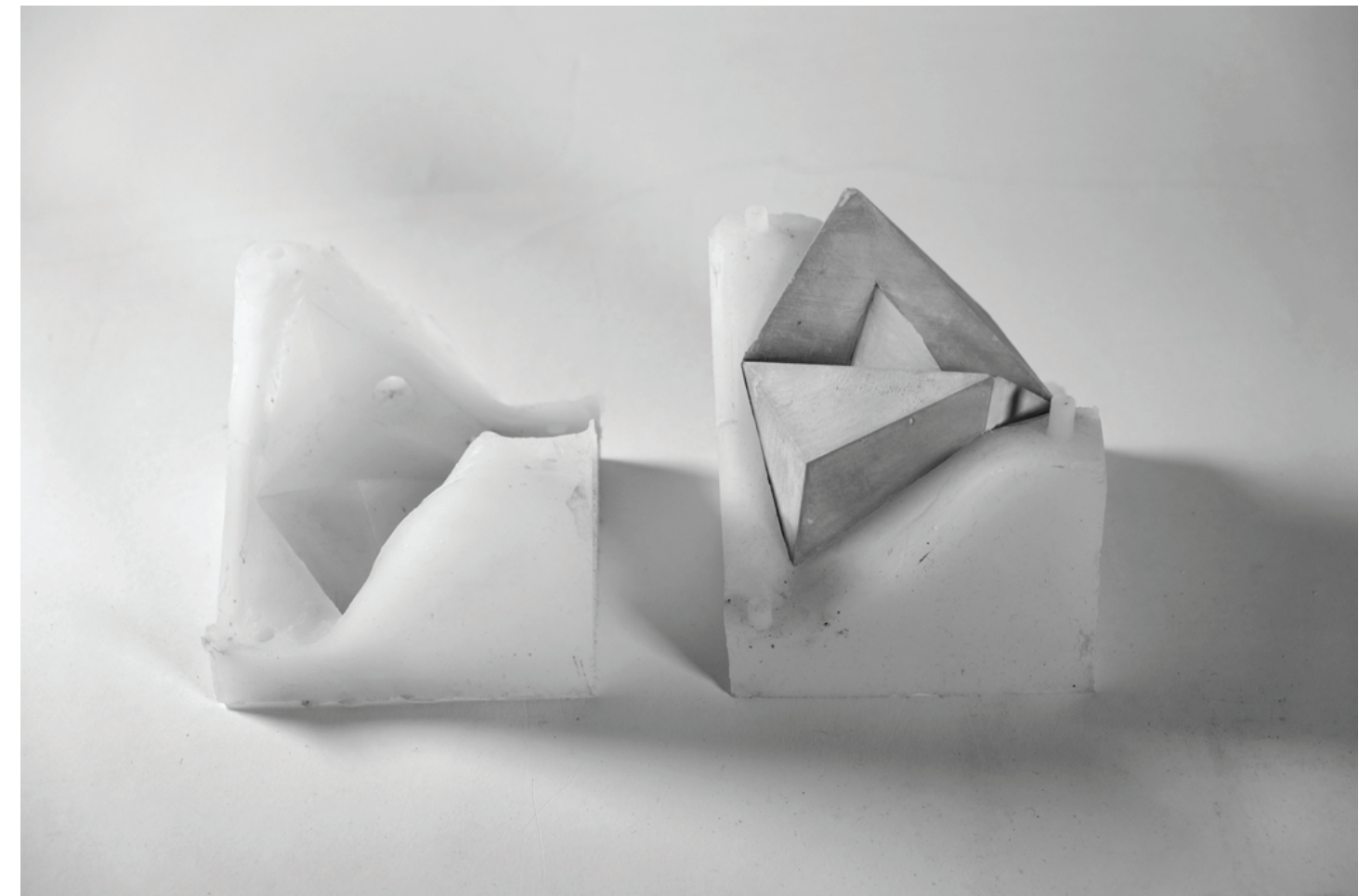
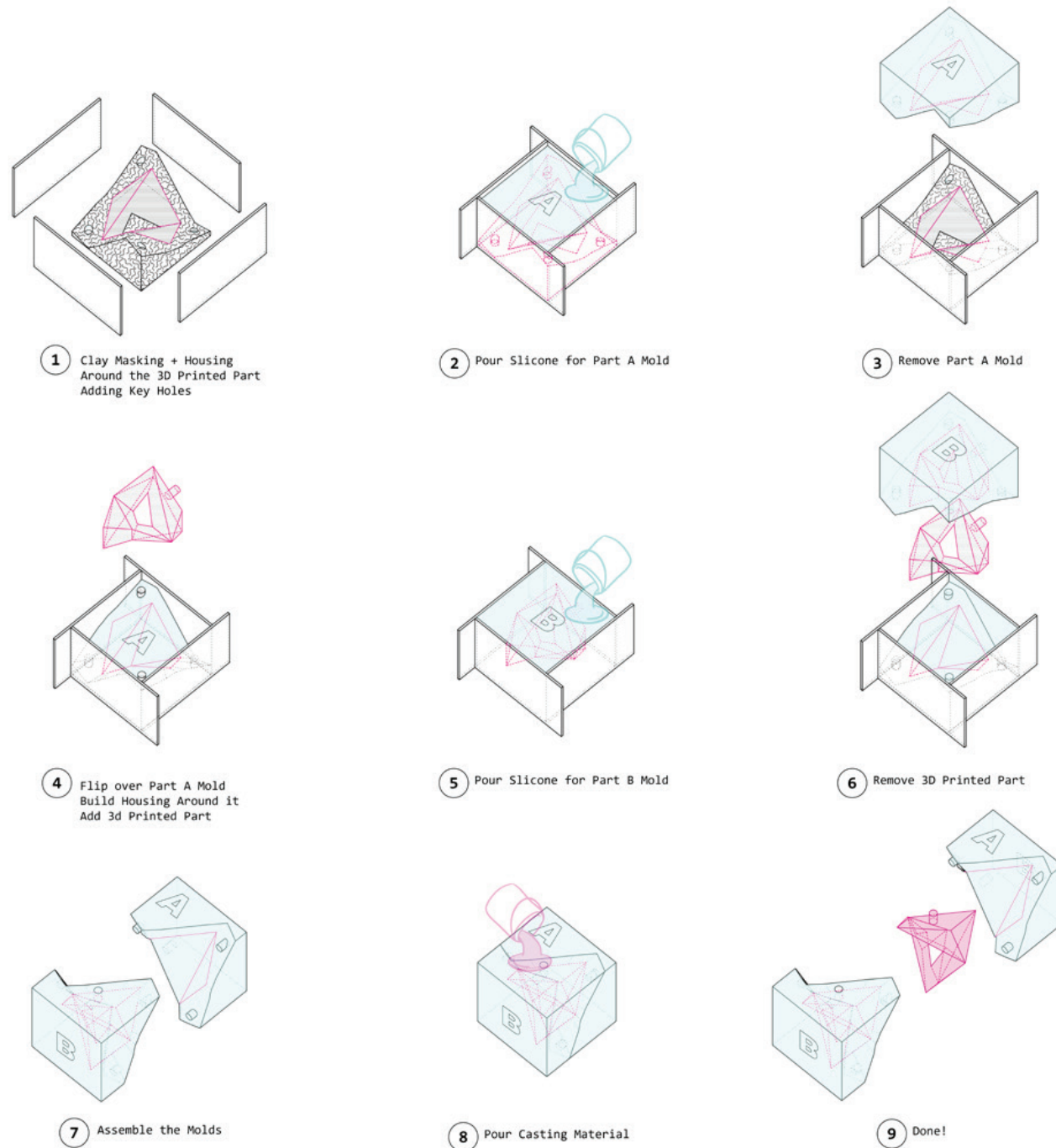
RANDOM PATTERN

CONCRETE CASTING

MOLD-MAKING

BOUNDARY EXPLORATION

# Transitional Geometry



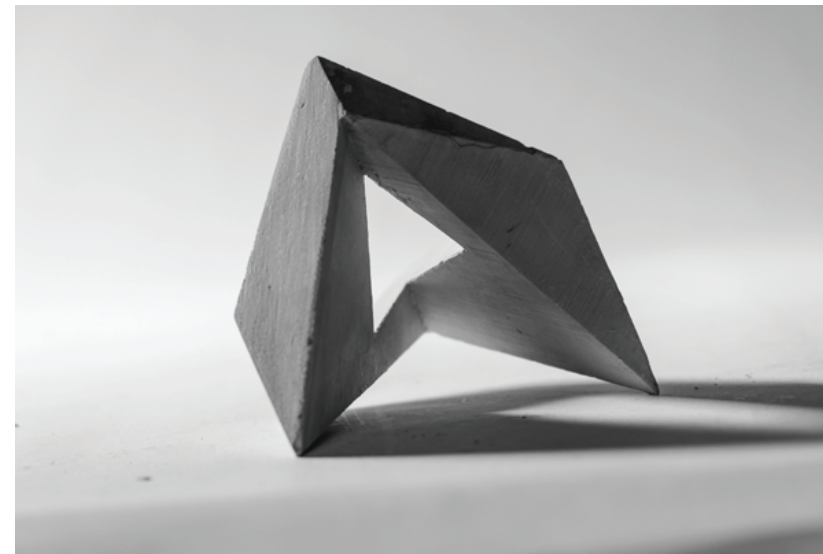
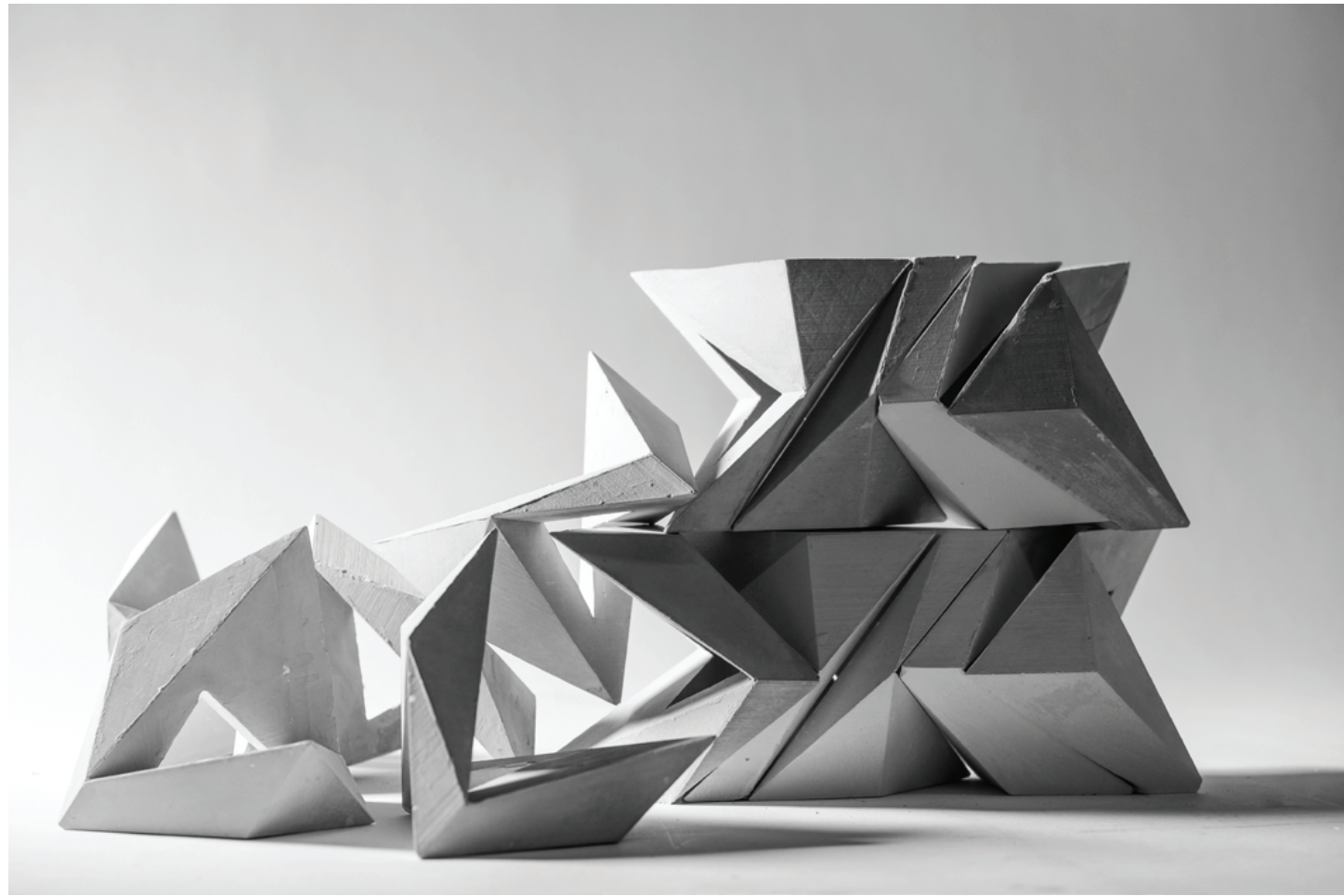
## Interlocking Tectonics

The study concentrated on tiling principles, investigating various tileable 'frame' configurations. Tiles could be flipped and rotated by strategically placing nodes on these frames, allowing adjacent nodes to establish new connections. As a result, a single tile could produce an apparently random pattern across a large surface. Concrete casting and mold-making techniques were used to create successive iterations and testing, which in itself evolved into an experiment aimed at pushing boundaries into the unknown.

Studio: Transitional Geometries

Critic: Joshua Jordam

Date: Fall, 2022



WEAVING EDGES

MICRO ECOLOGICAL CORRIDORS

BIODIVERSITY

WATER QUALITY

SCHAGHTICOKE CONSERVATION

CULTURAL CENTER

INDIGENOUS PEOPLES

HUDSON VALLEY

CLIMATE CHANGE

SUSTAINABLE AGRO-FOOD-FORESTRY

TRADITIONAL KNOWLEDGE

# Weaving Edges

## Indigenous Futurism

The Schaghticoke Conservation and Cultural Center seeks to restore the physical and spiritual connection of the Indigenous Schaghticoke Peoples in the Hudson Valley to conserve land for future generations, repair the damaged ecosystem, increase biodiversity, contribute to the mitigation of climate change, and promote sustainable agro-food-forestry using Indigenous traditional knowledge

Site: Columbia County, NY

Studio: ADV IV Studio

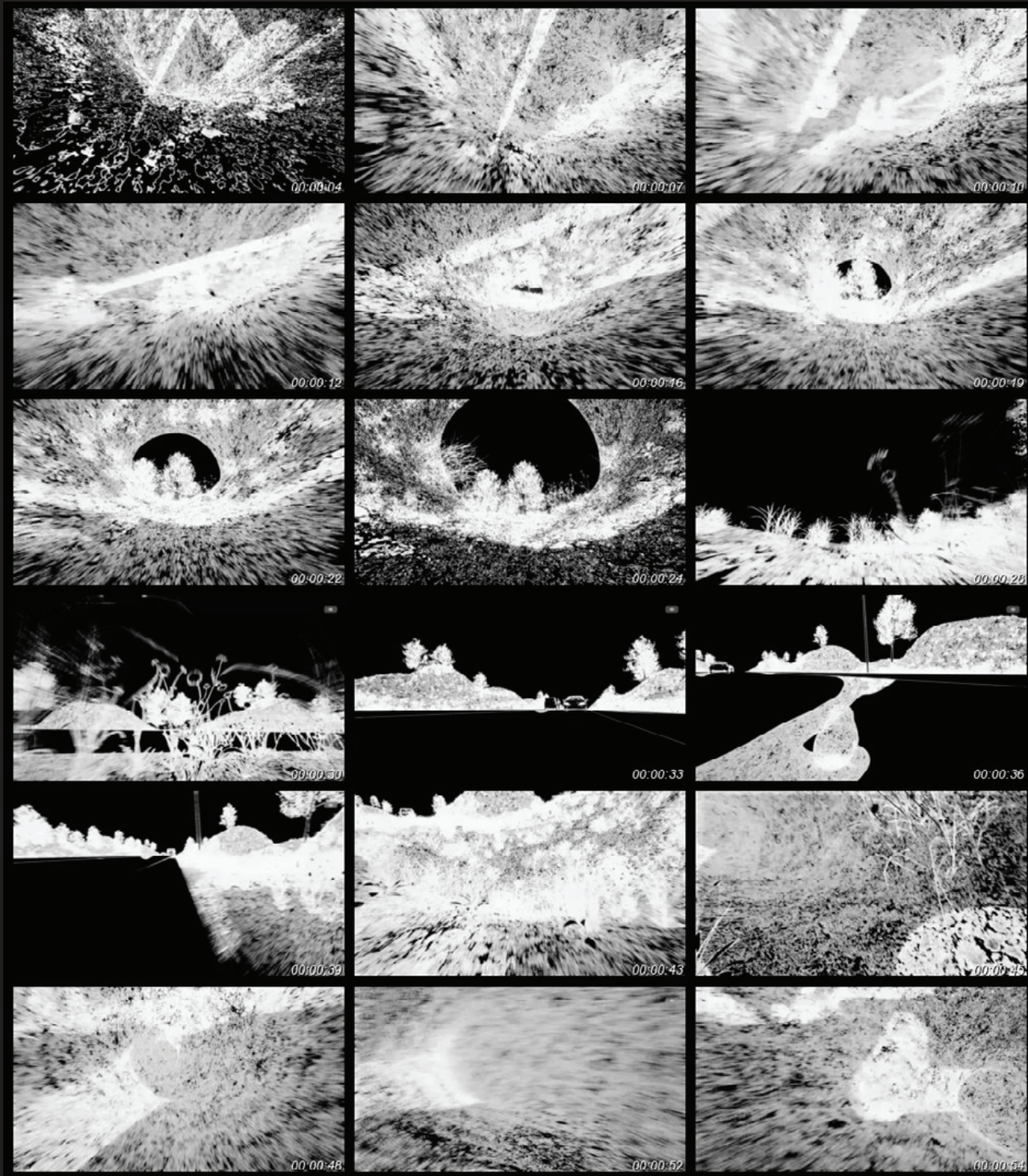
Critic: Vanessa Keith

Team: Johane Clermont

Date: Spring, 2021





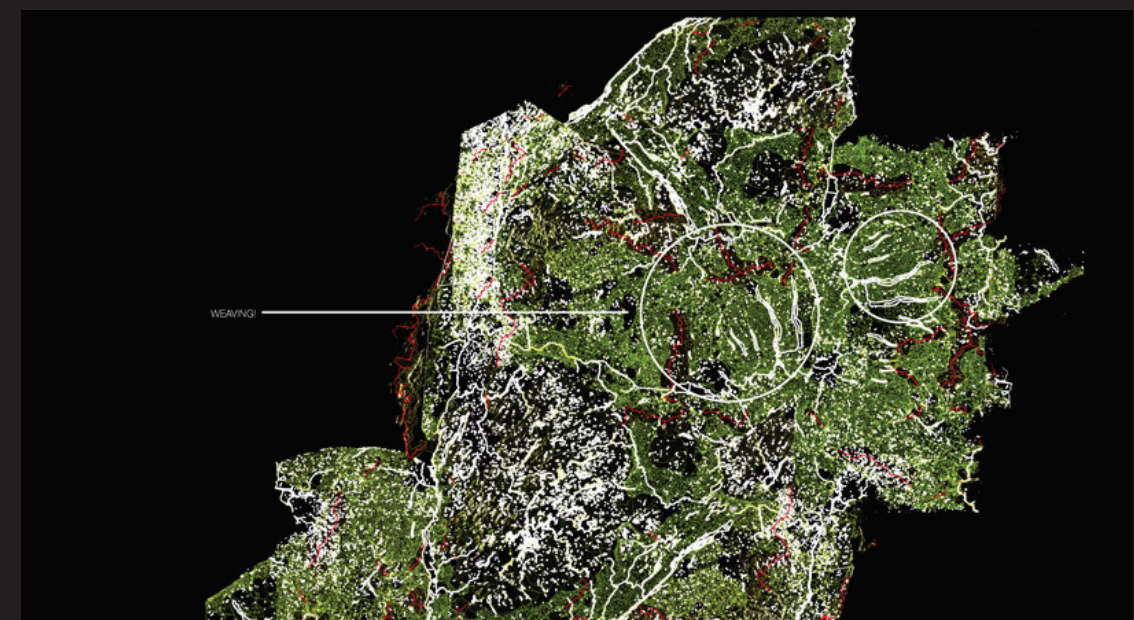
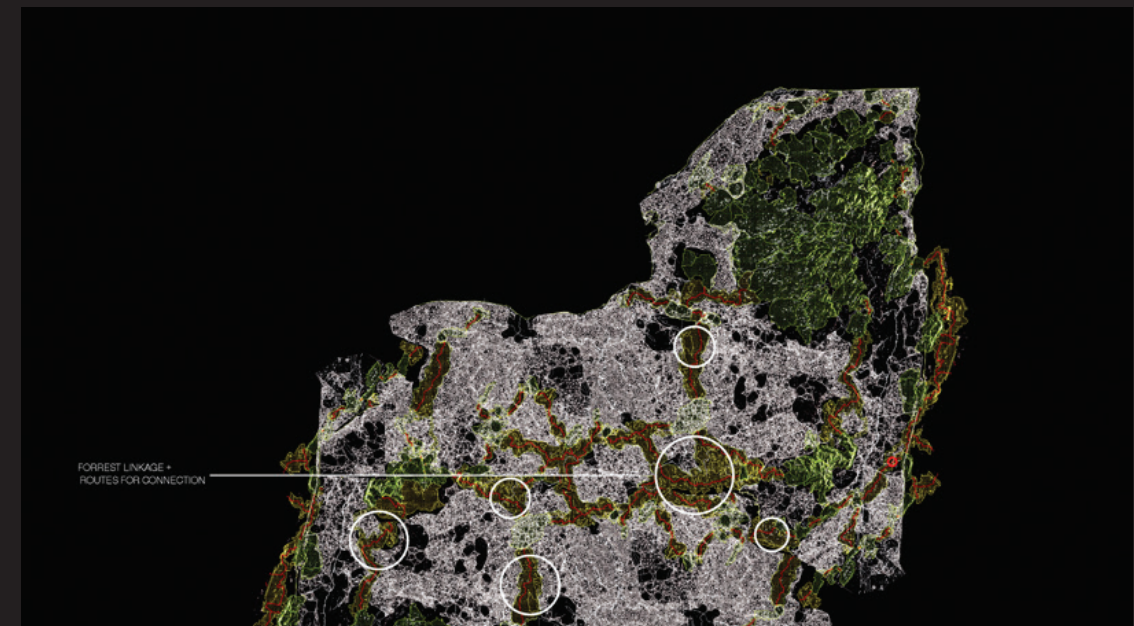
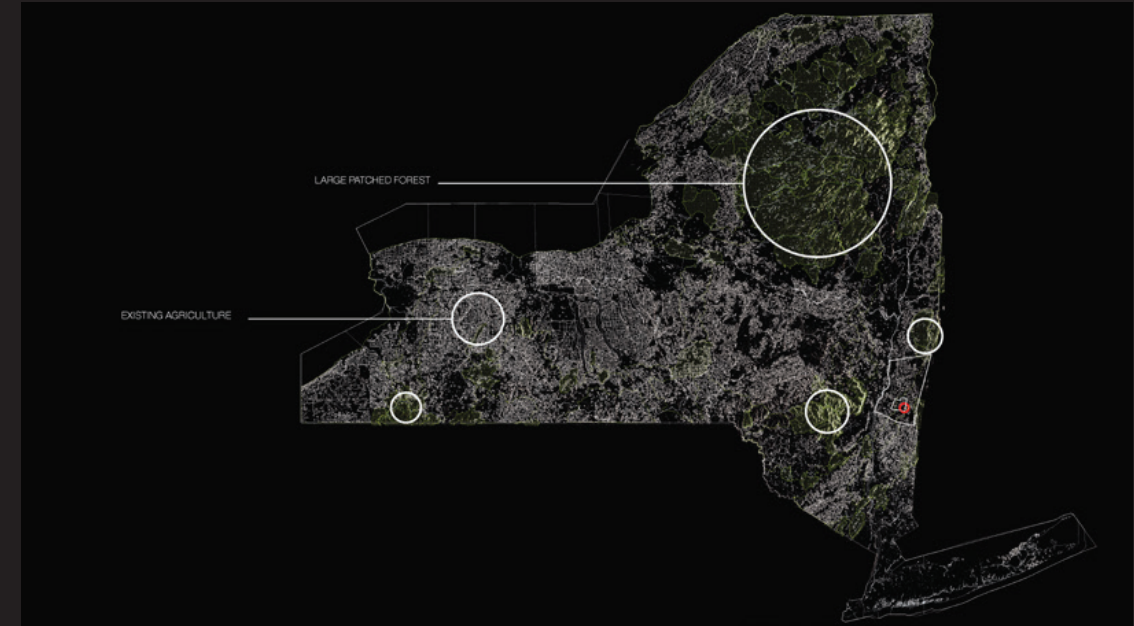


VR Perspective of a Groundhog

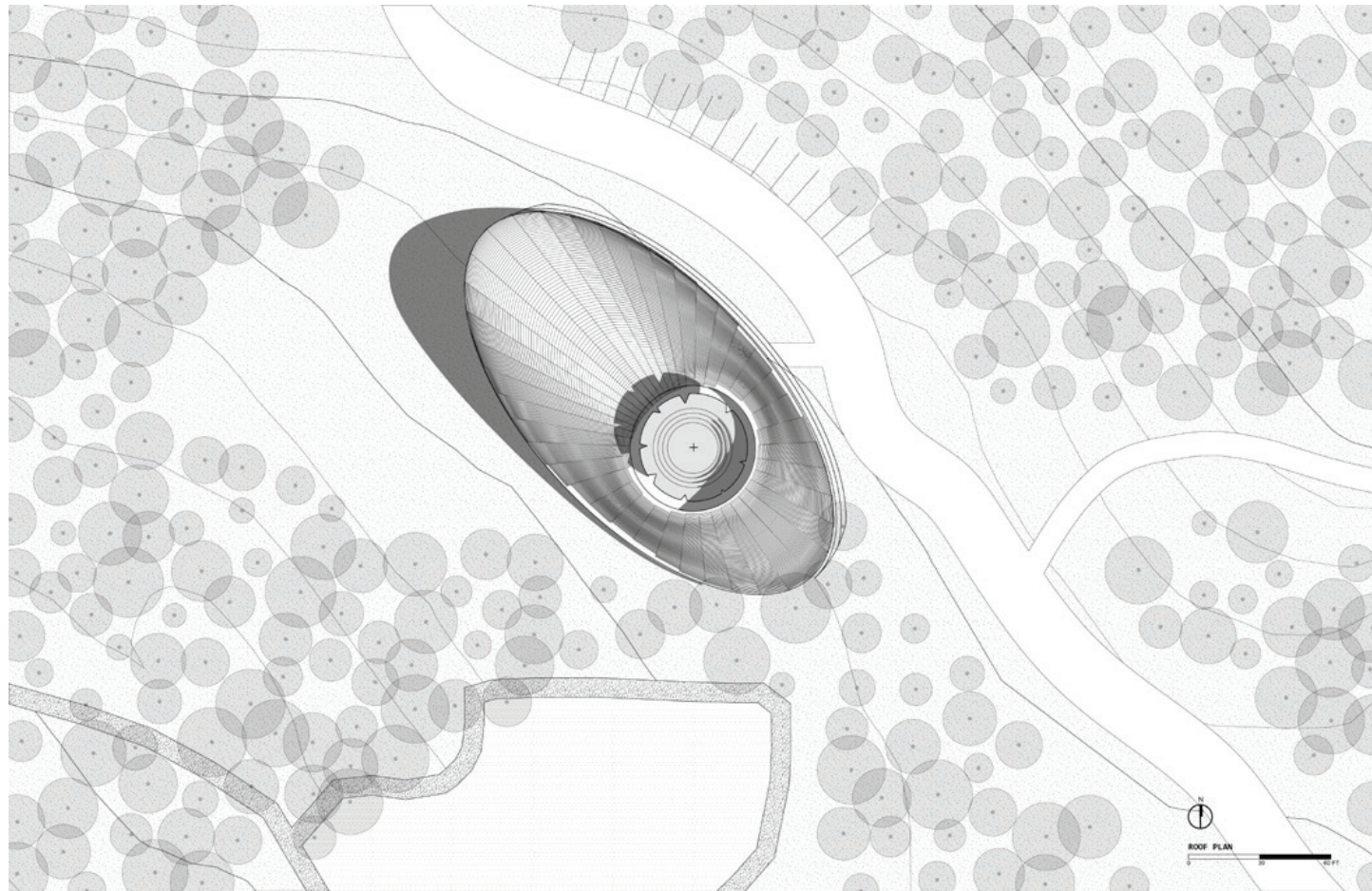


link

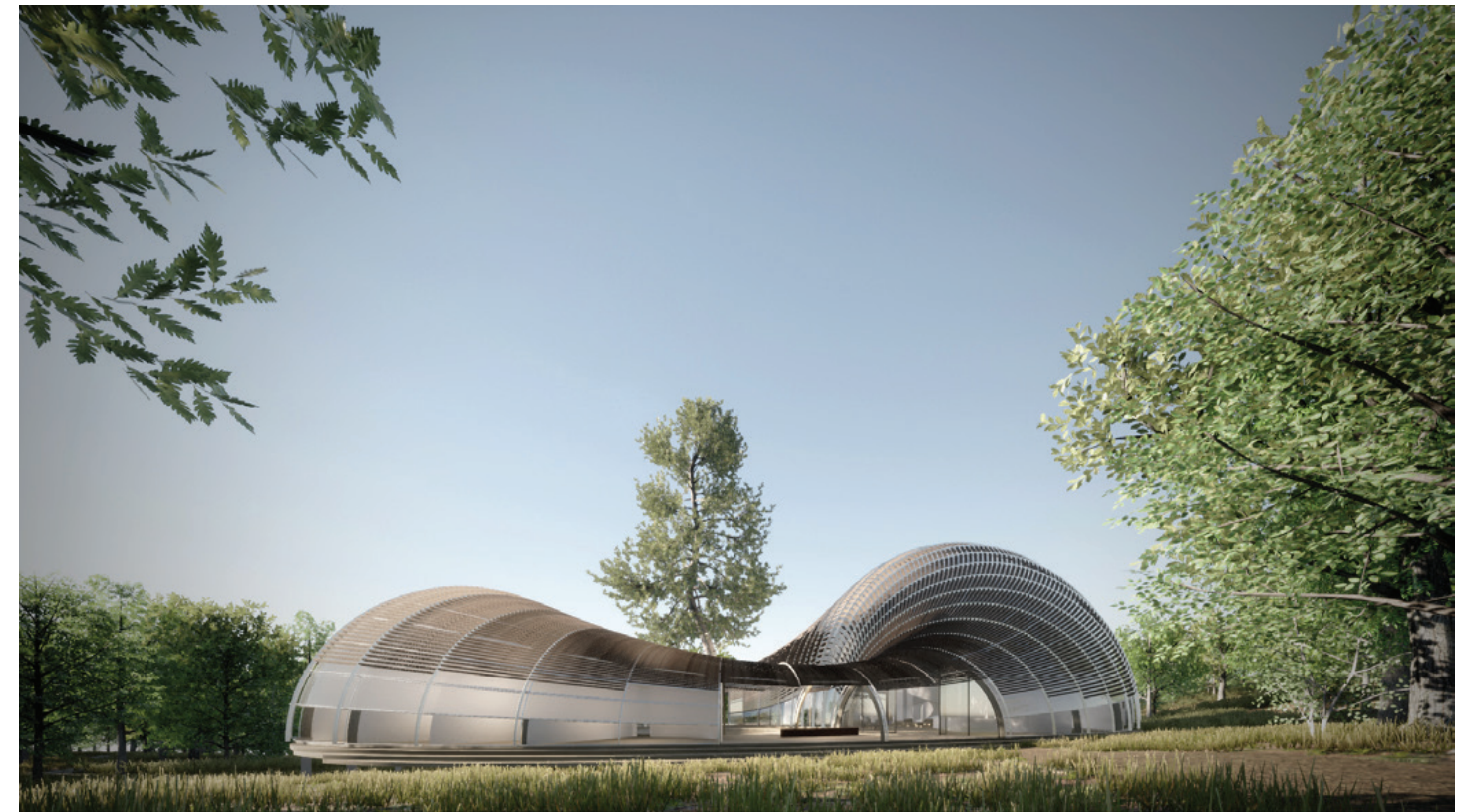
Expanding beyond the boundaries of the site, "Weaving Edges" is a mechanism that capitalizes on micro ecological corridors to weave together formerly fragmented ecosystems. It encourages diverse ecological itineraries with different characters and qualities, thus supporting biodiversity and the healthy ecosystem.



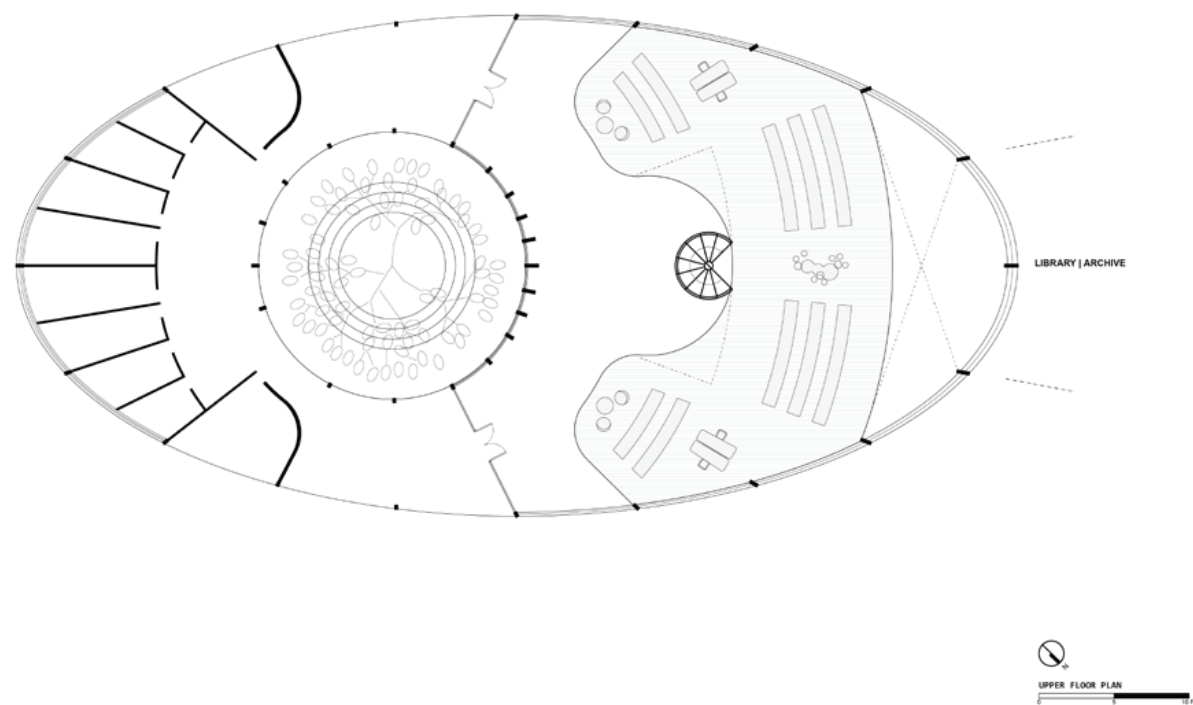
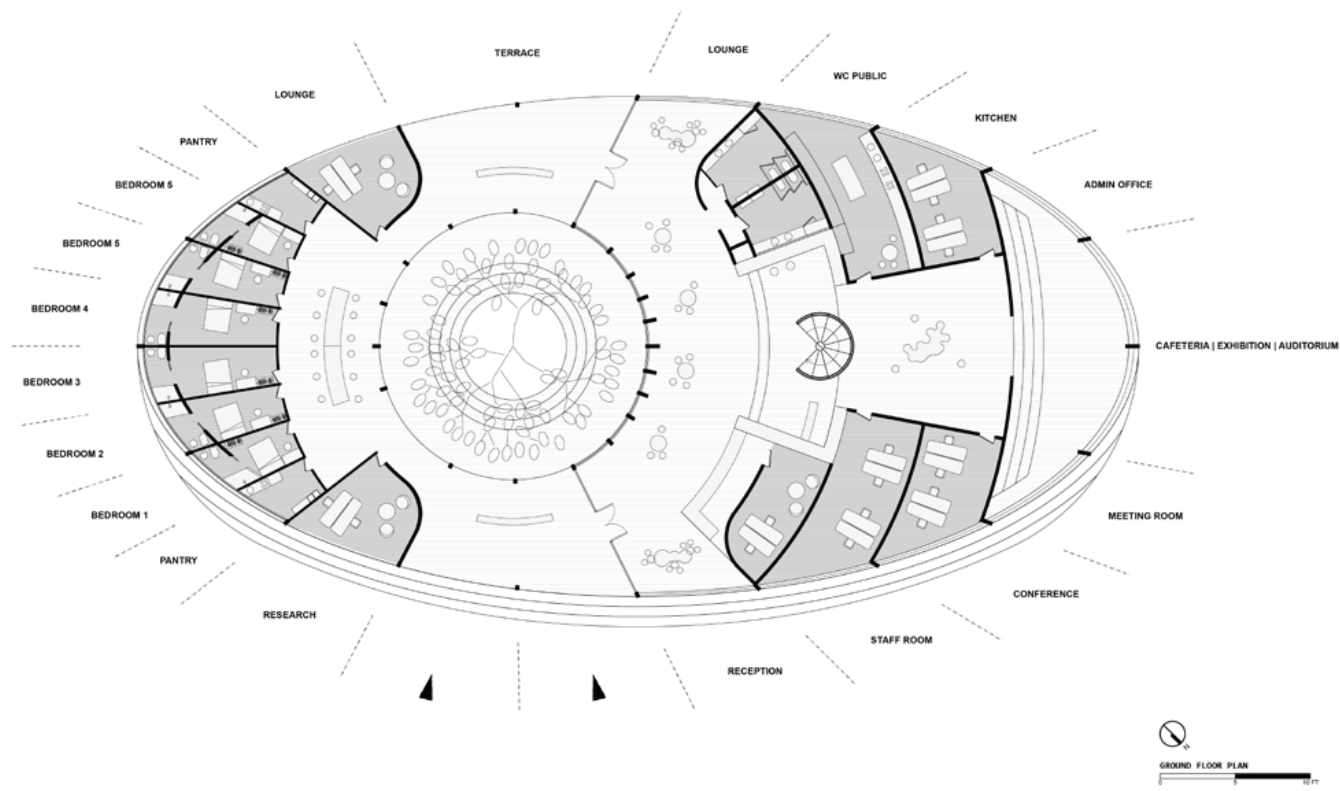
Main Pavillion &  
Guest House

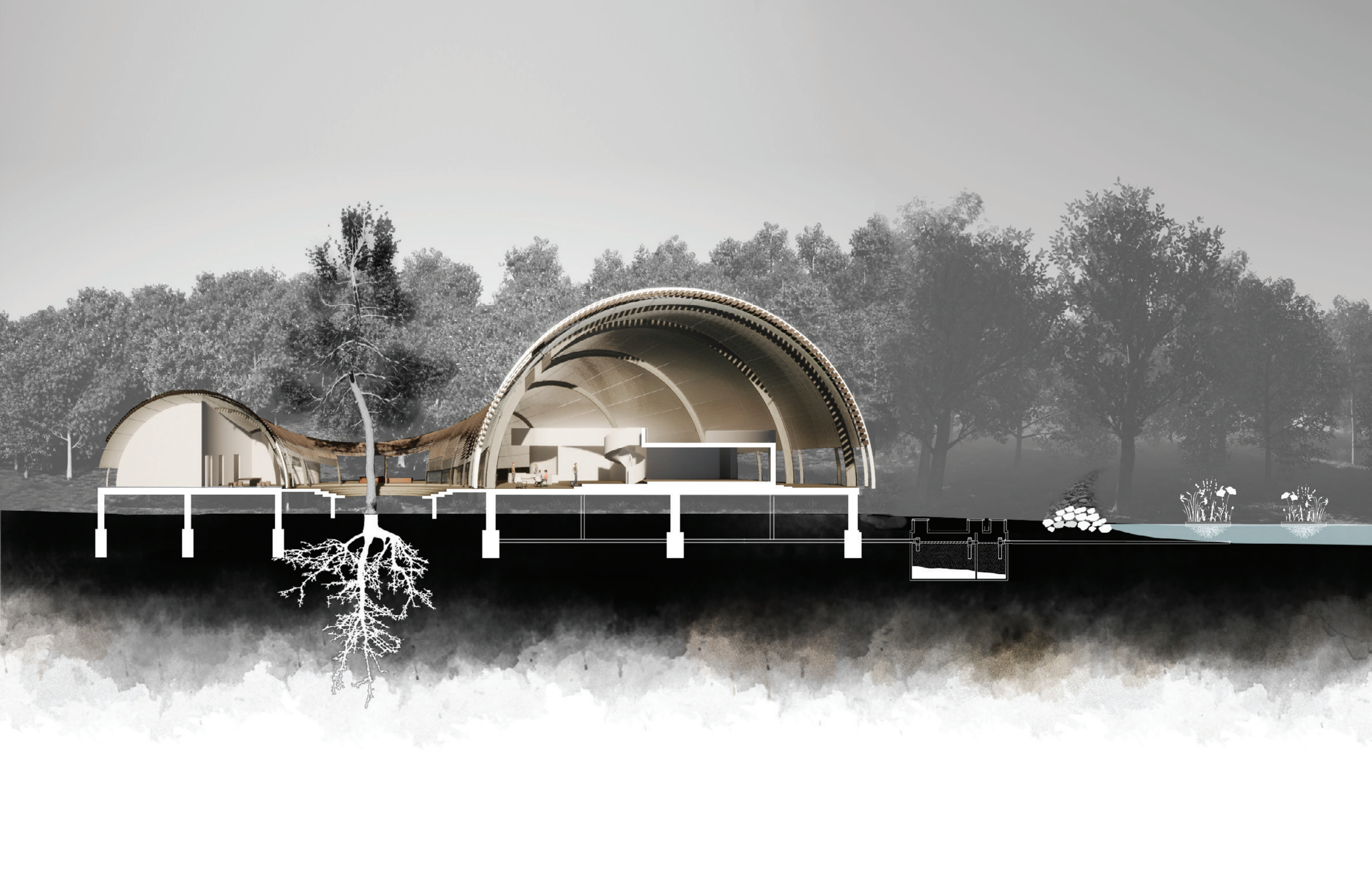


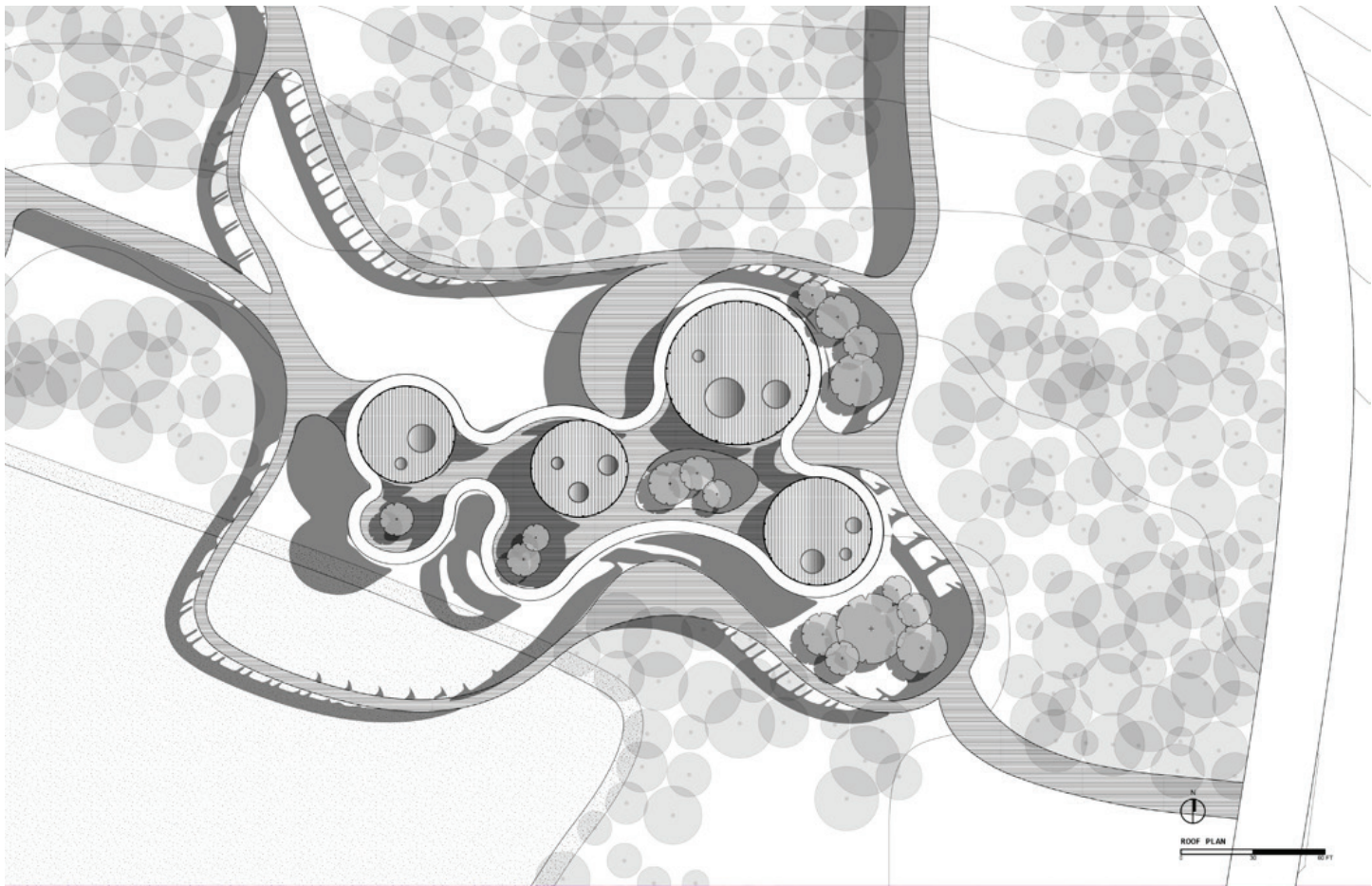
Main House: This building will serve as an Embassy for the Schaghticoke people. The building will also include a conference room, 6 guest rooms, mini-museum/ exhibition space, library, and archive for historic information on the Indigenous peoples in the region.



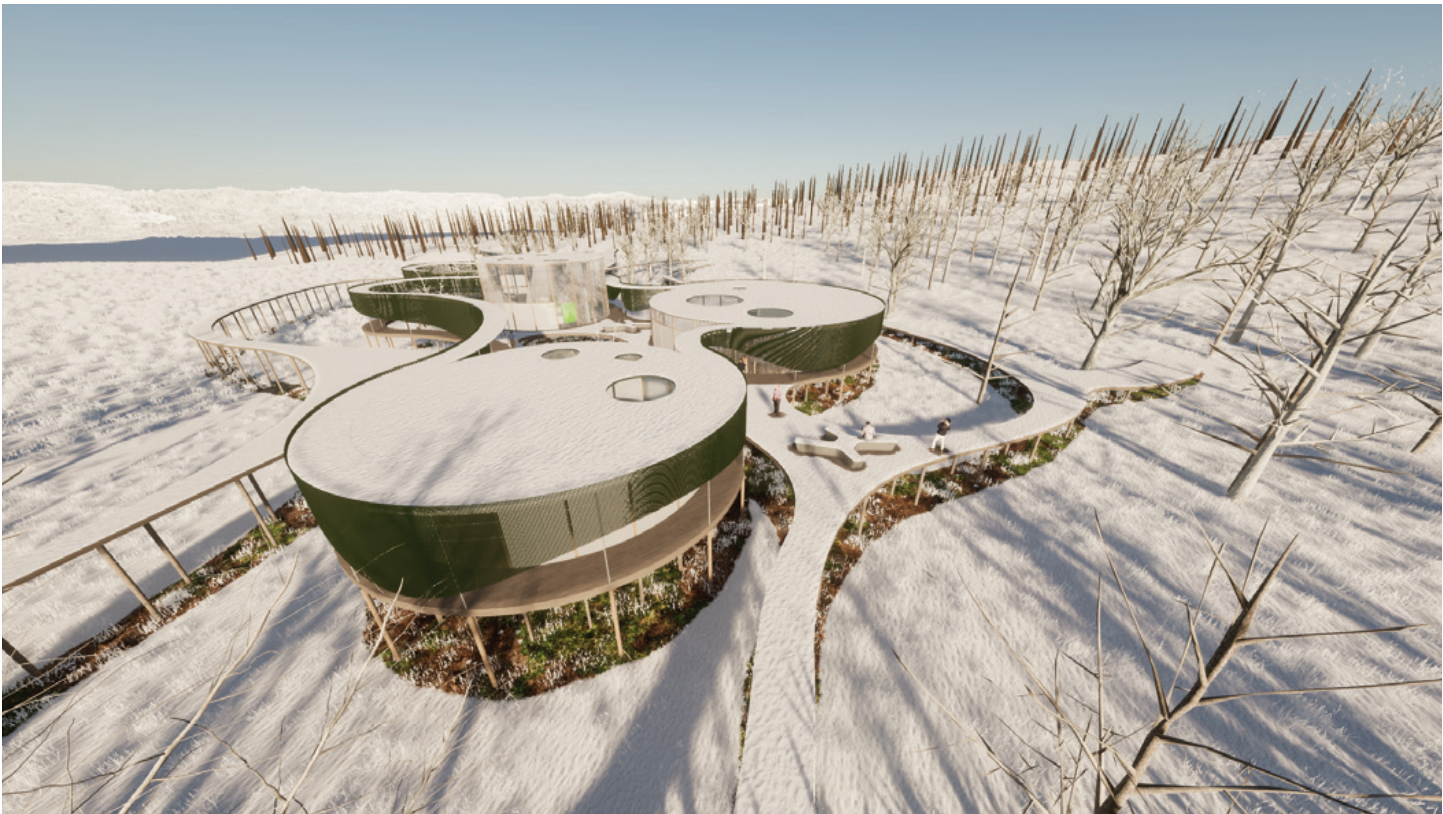
# Main Pavillion & Guest House

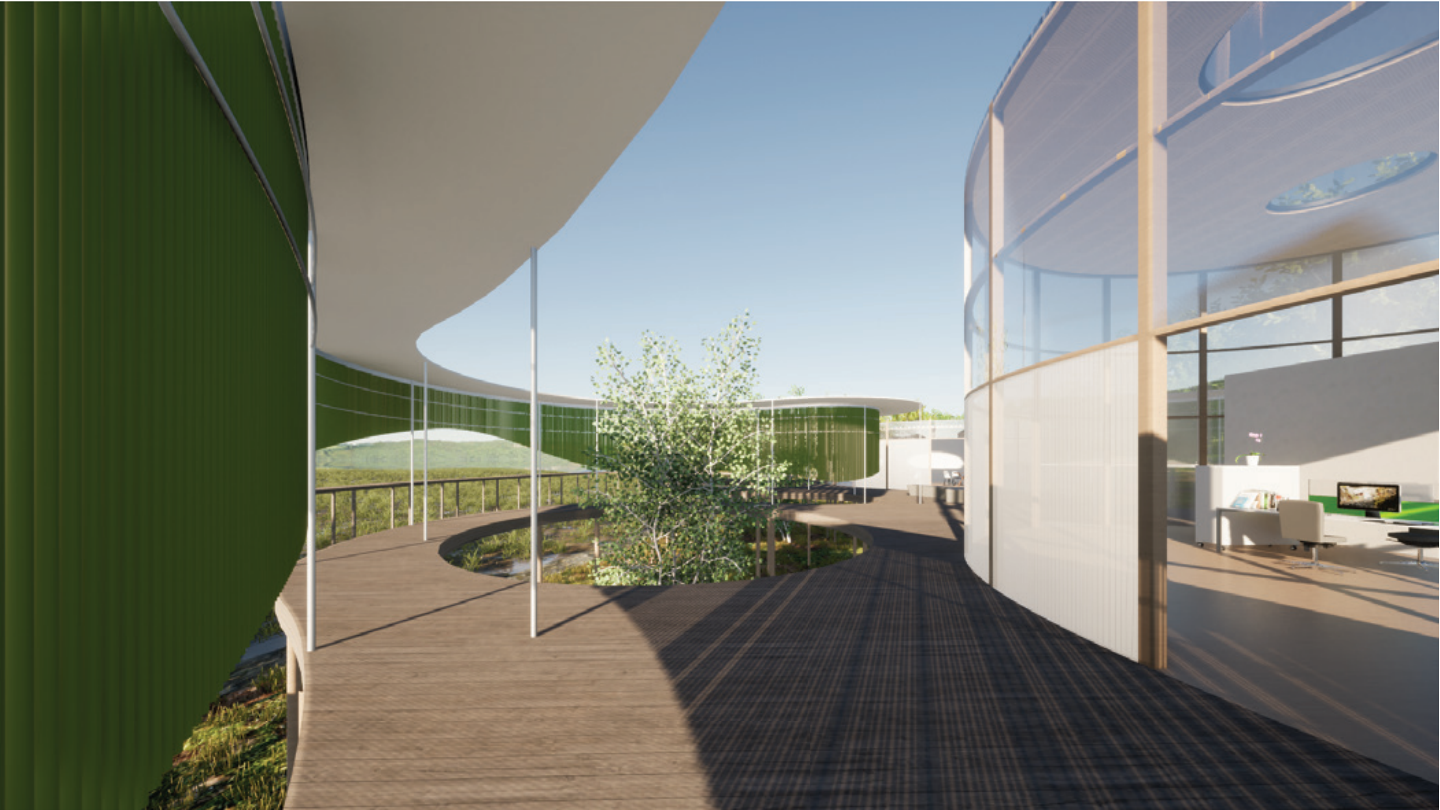
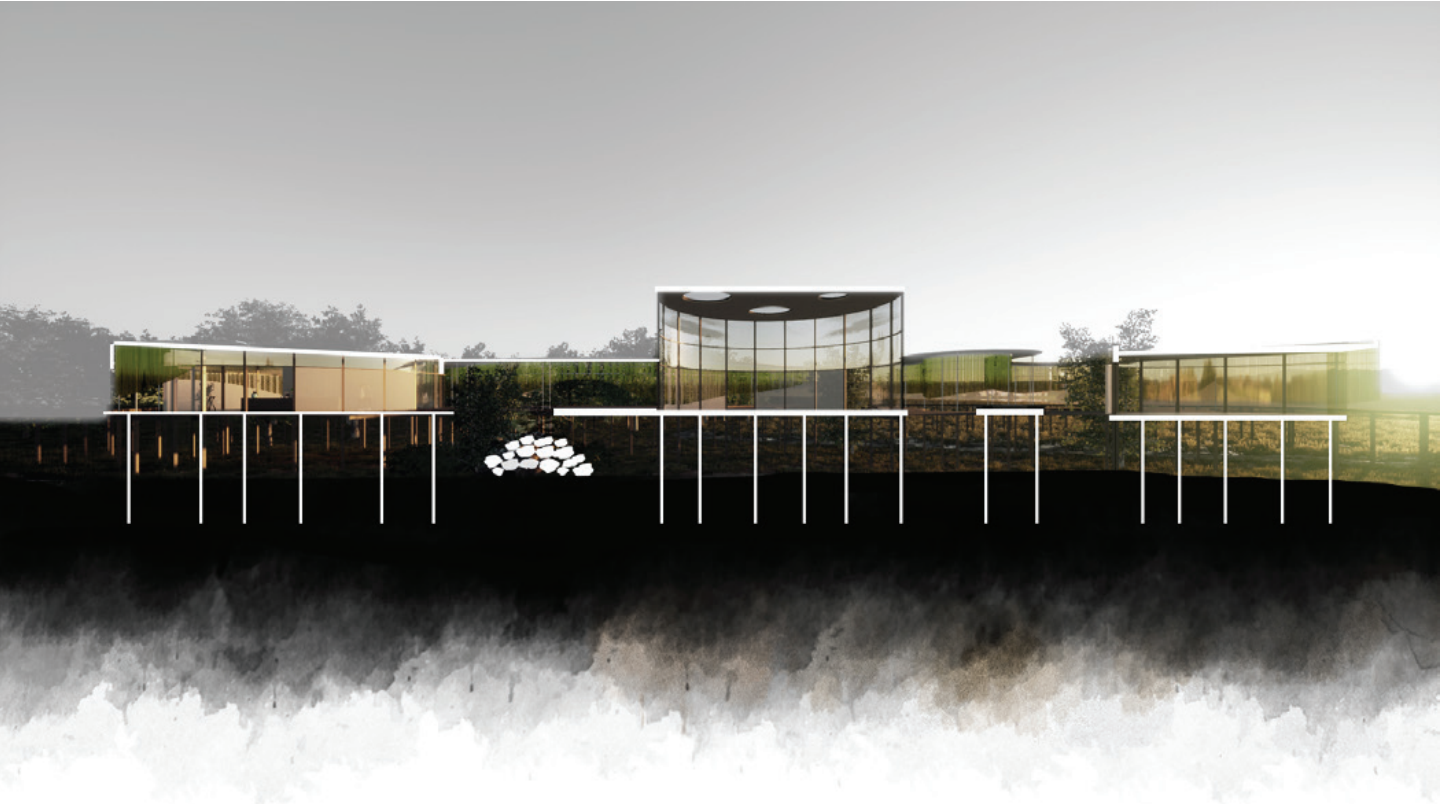






Gateway House: Welcome center to include event space, a conference hall and educational spaces for classes and workshops as well as gardens, greenhouses, and other points of interest.





WATER RESILIENCE  
MIXED-USE DISTRICT  
FLOOD PROTECTION  
WATER MANAGEMENT  
LEISURE PROGRAMS  
GREYWATER REUSE  
RAINWATER COLLECTION  
WATER-CITY INTERFACE

# Bushwick Inlet Sponge City

## Urban System & Integration

The park development aims to create a water resilient community through a mixed-used district proposal that integrates flood protection, water and leisure programs.

The project addresses potential solutions to future threats on the water resilience, water treatment as well as reuse of grey water and rainwater collection.

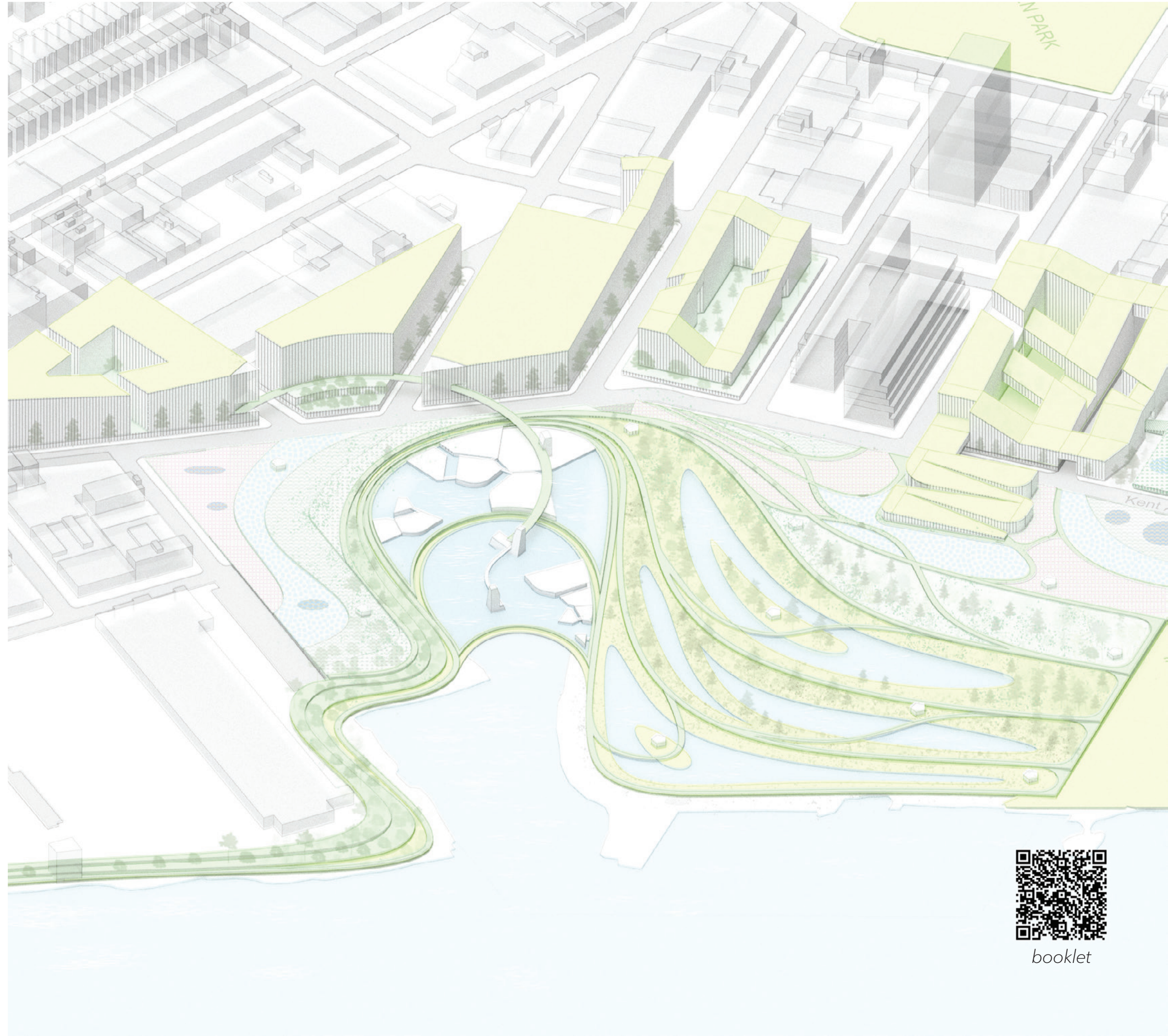
Site: Melrose, Bronx

Studio: AT IV Urban System

Critic: Lola Ben-Alon, Emily Bauer, Tom Jost, Tom Slater, Margaret Hopkins

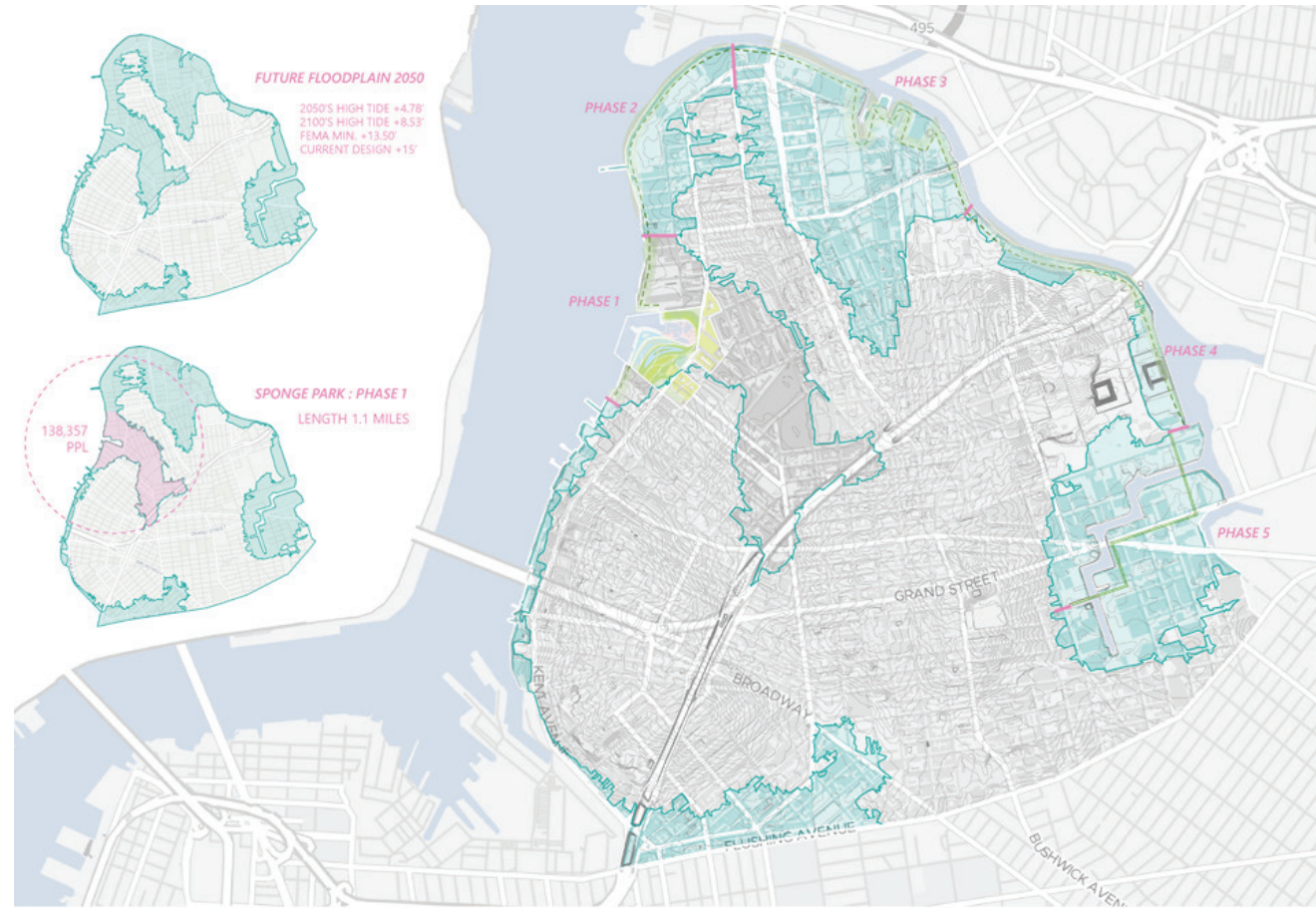
Team: Xiucong Han, Muyu Wu, Jiafeng Li, Alexis Zheng

Date: Spring, 2021



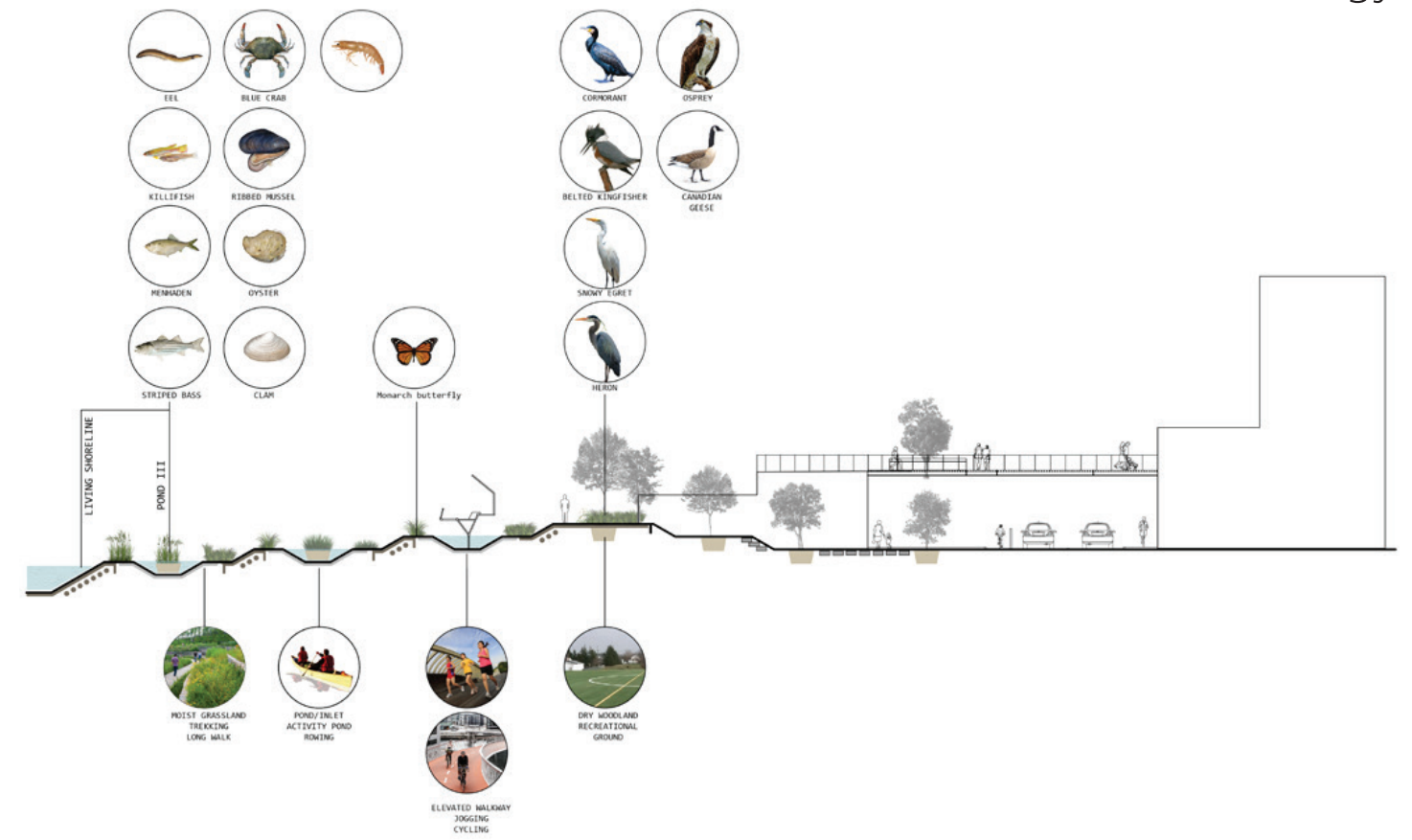
*booklet*



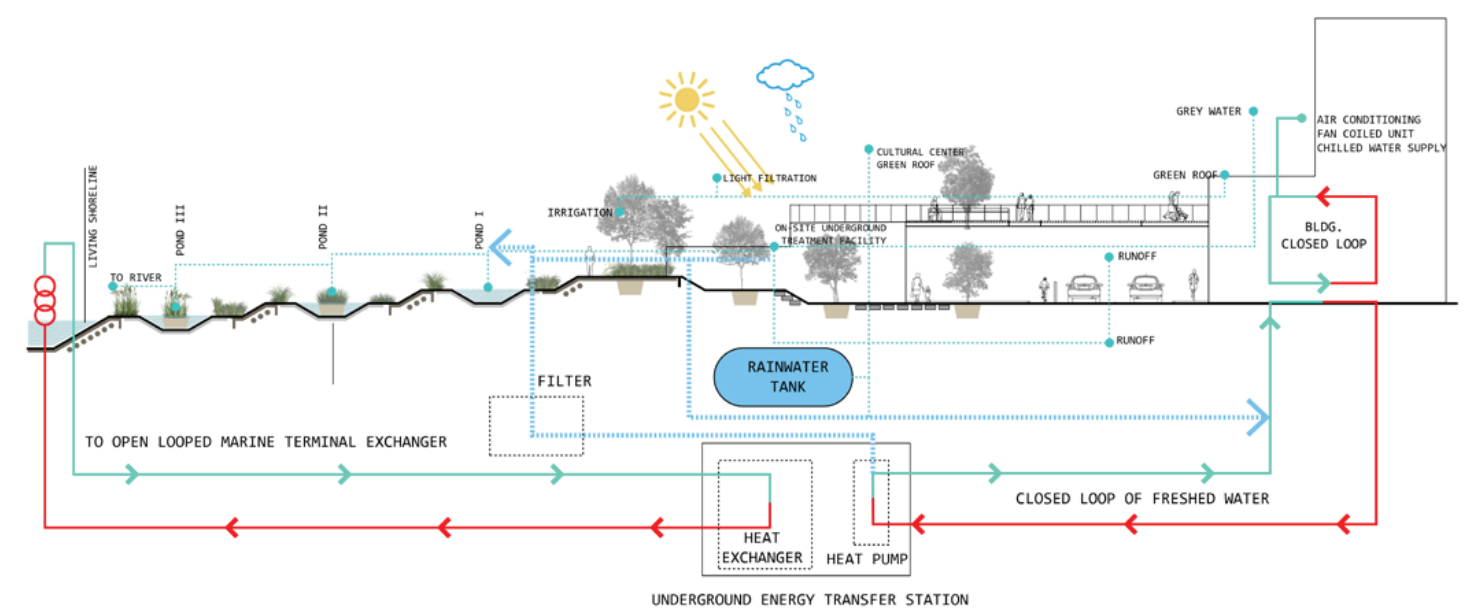
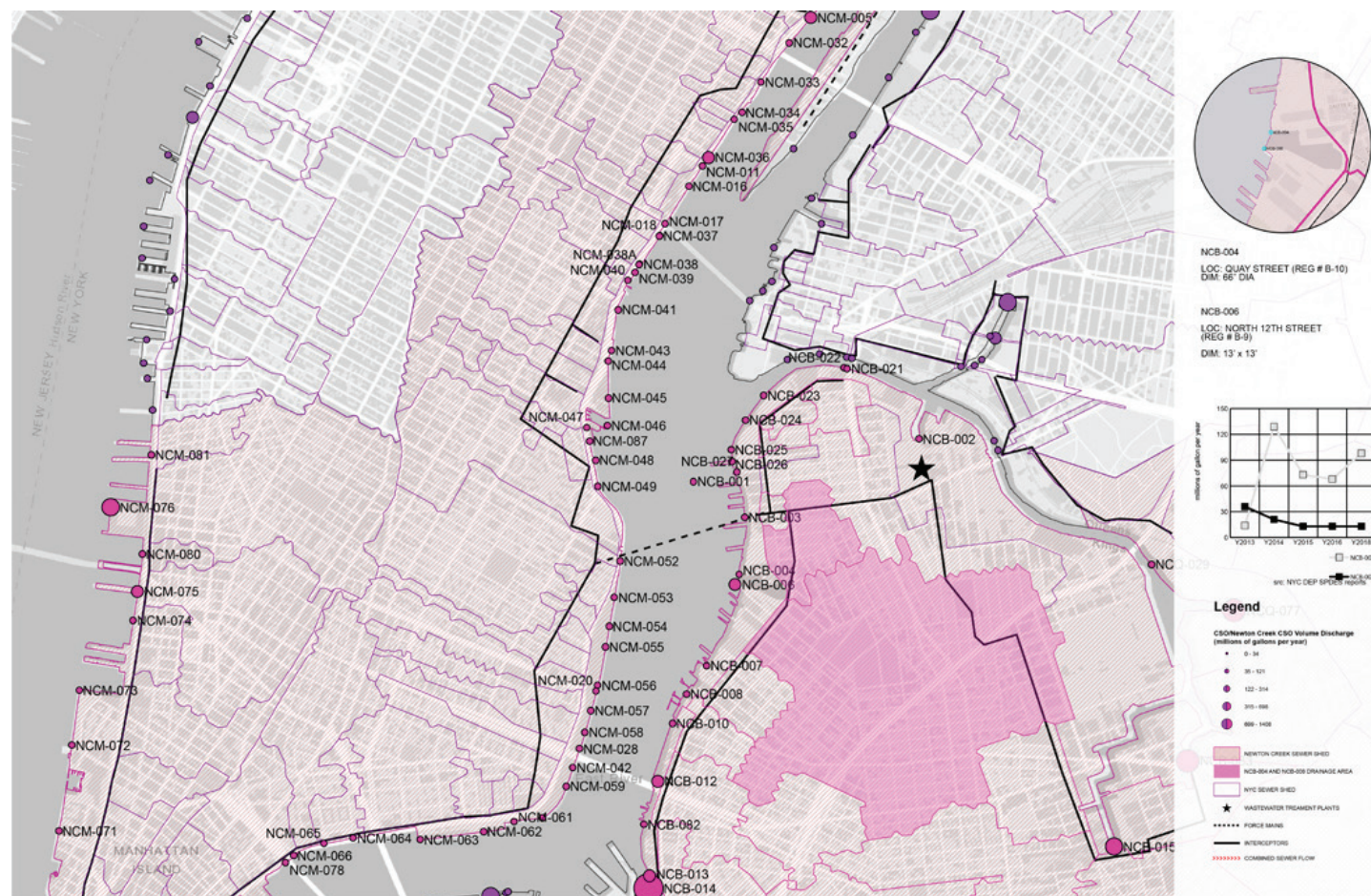


^The site was previously undeveloped and impacted by industry, truck traffic, lack of pedestrian areas, and flooding. To address this, the project proposes a sponge park at the water's edge to protect the site from floods, as well as an elevated park and an extension of the green zone up to the roof. To improve pedestrian safety, pedestrian flows are redirected from different levels while maintaining the liveliness of the busy Kent Ave street.

# Water Strategy



## Interspecies Landscape Bioswale



## Water Management System

OPEN SYSTEM

COMMUNITY

FLEXIBILITY

PRIVACY

TOGETHERNESS

ADAPTABILITY

RESILIENCE

SHARED PLATFORM

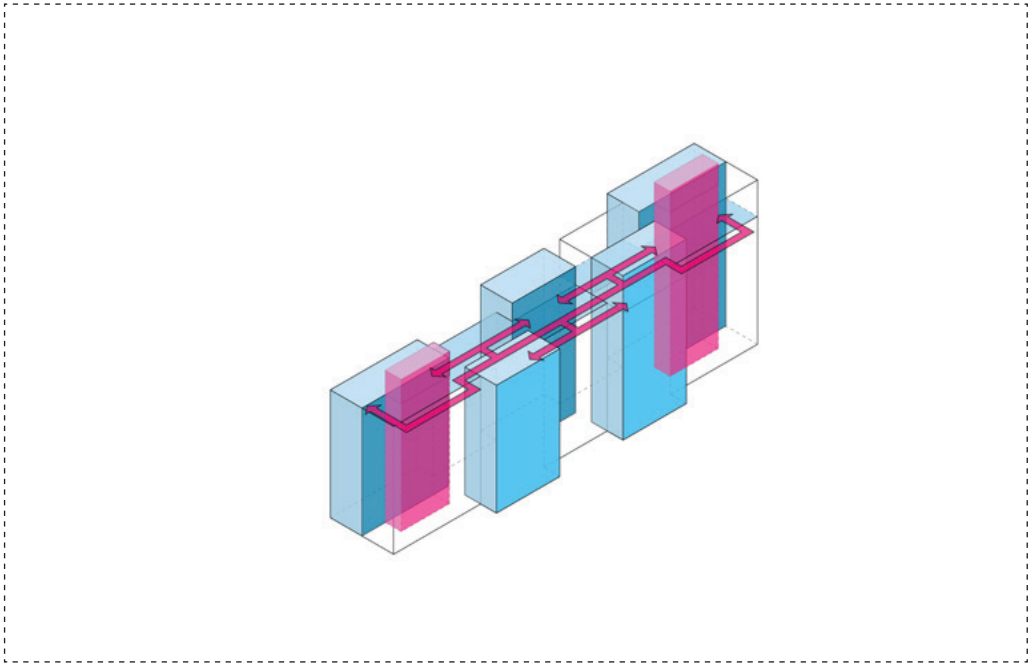
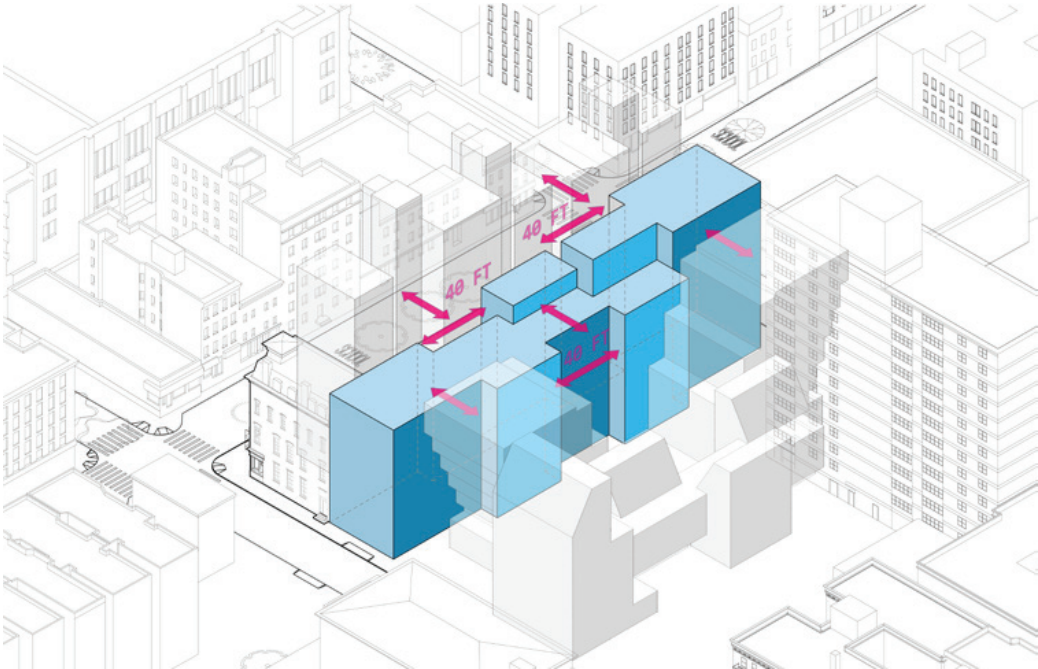
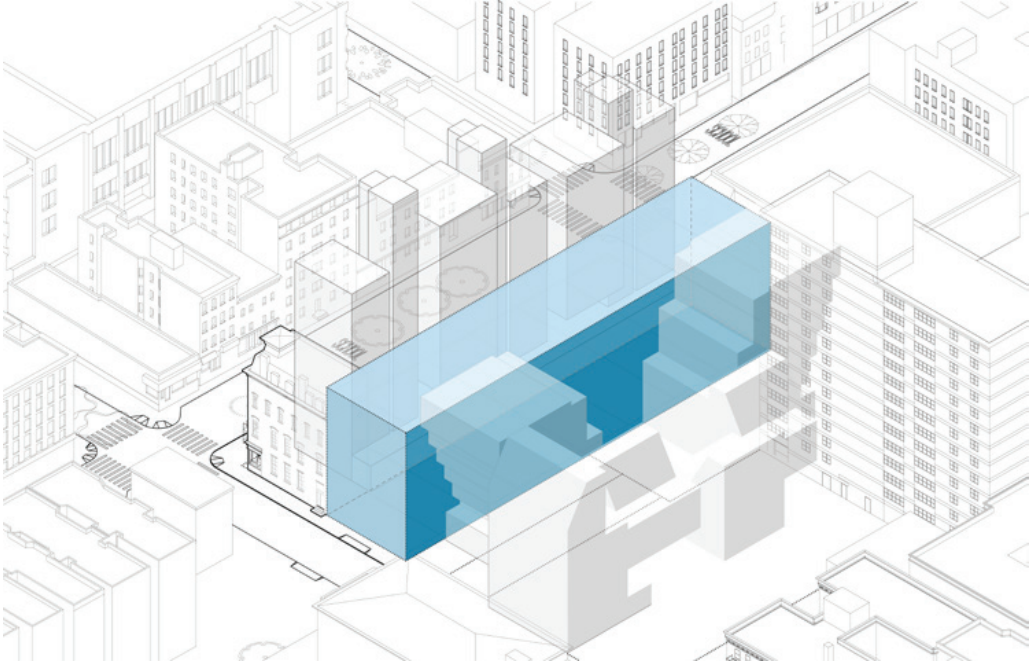
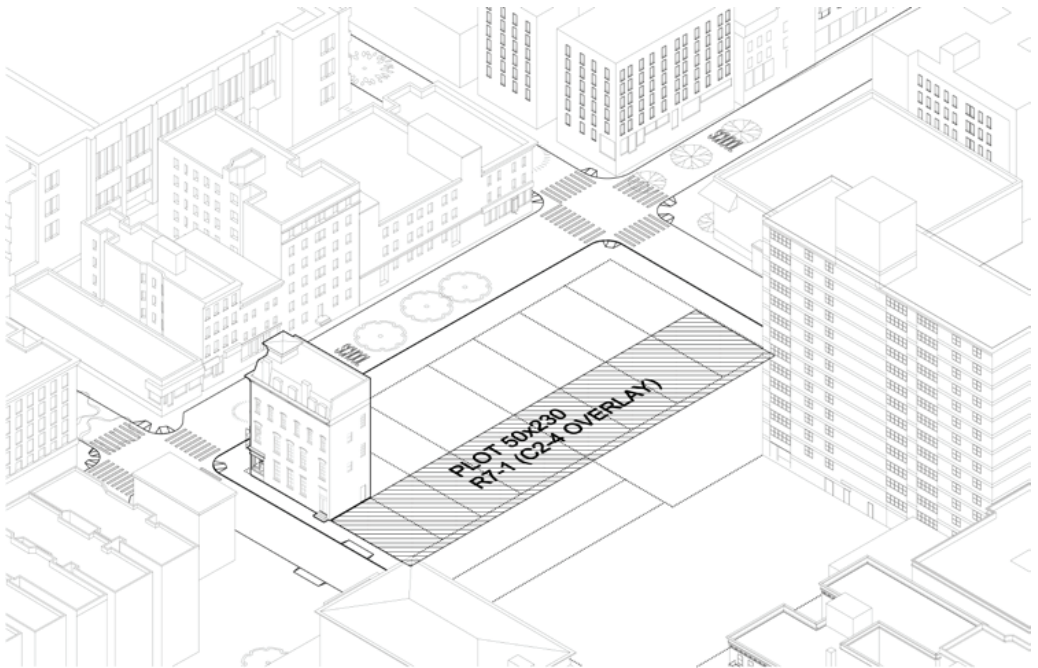
FUTURE-PROOFING

INNOVATIVE

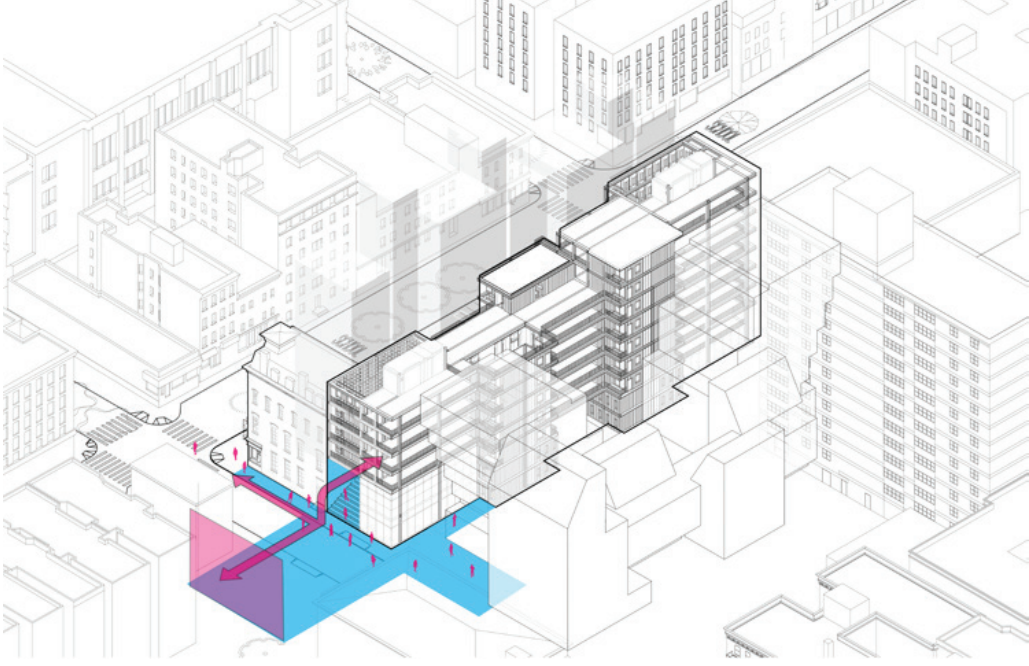
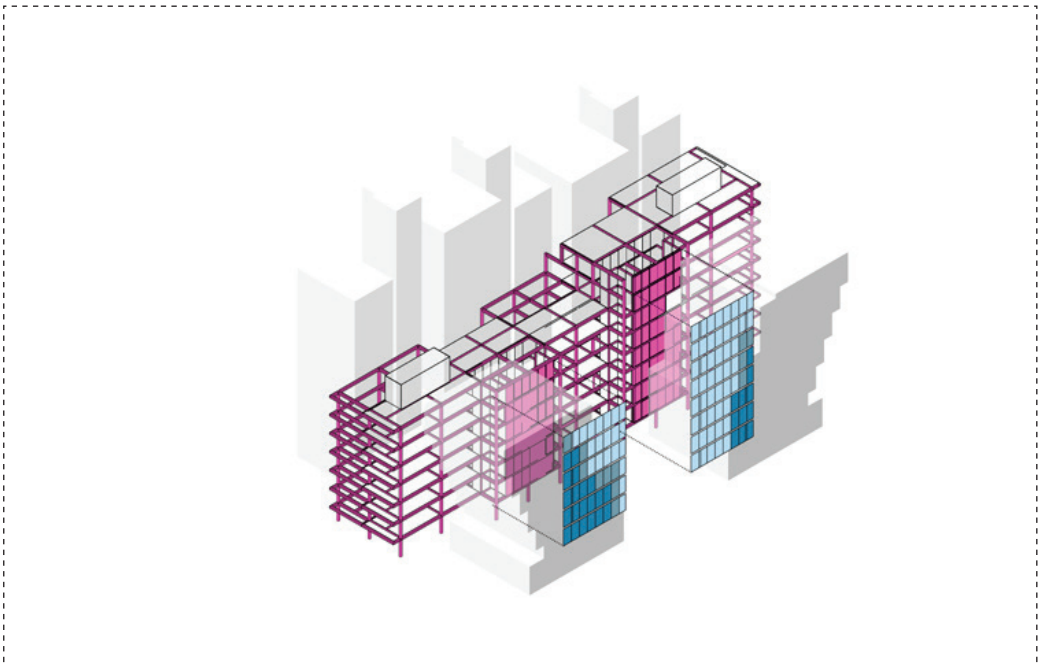
# Co-living in the age of Covid-19

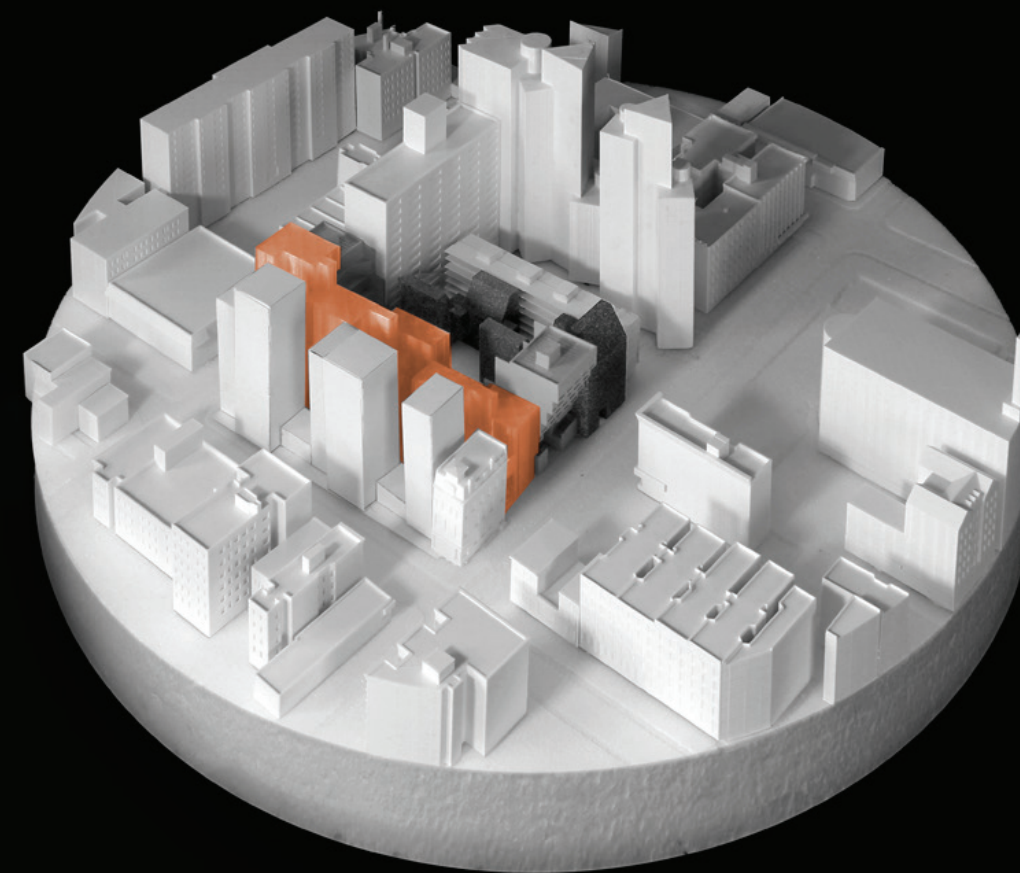
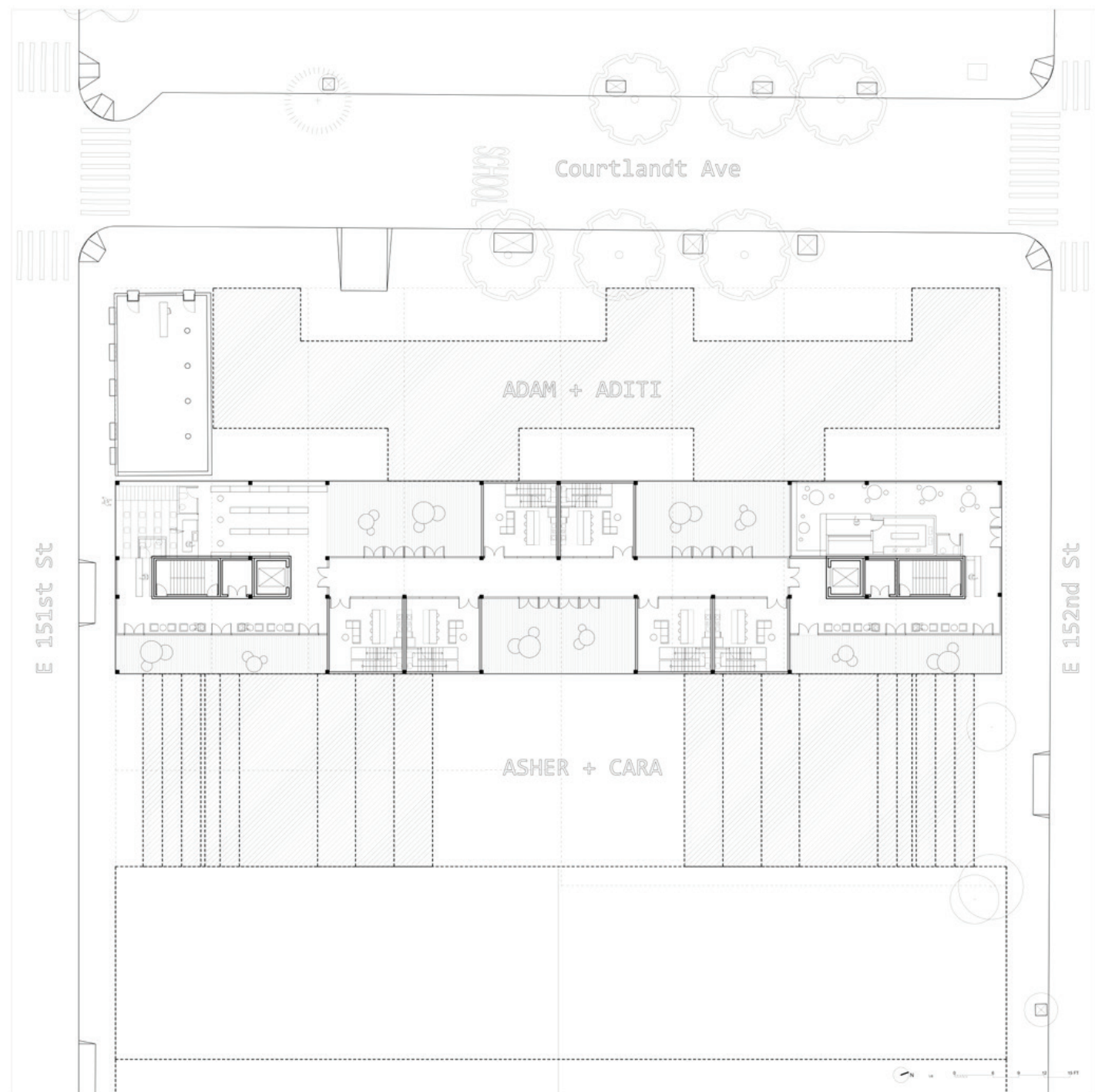
## Housing, Complete and Incomplete

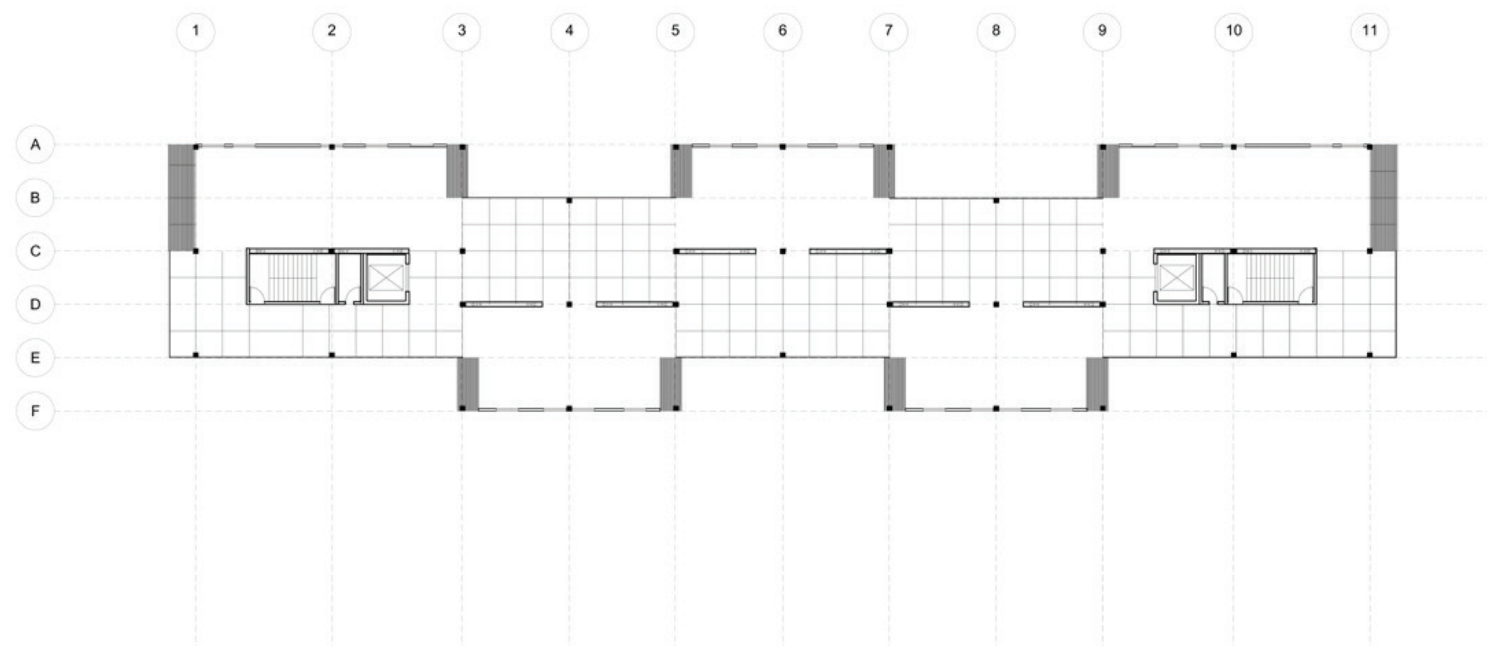
This project explores the building as an open system that allows different modes of living to be converged, for example, switching between the extreme under-pandemic and post-pandemic version, and allowing residents to reach beyond their confined living quarters to create a sense of togetherness.



Site: Melrose Bronx, NY  
Studio: Core III Studio  
Critic: Adam Frampton  
Team: Yiheng Lin  
Date: Fall, 2020

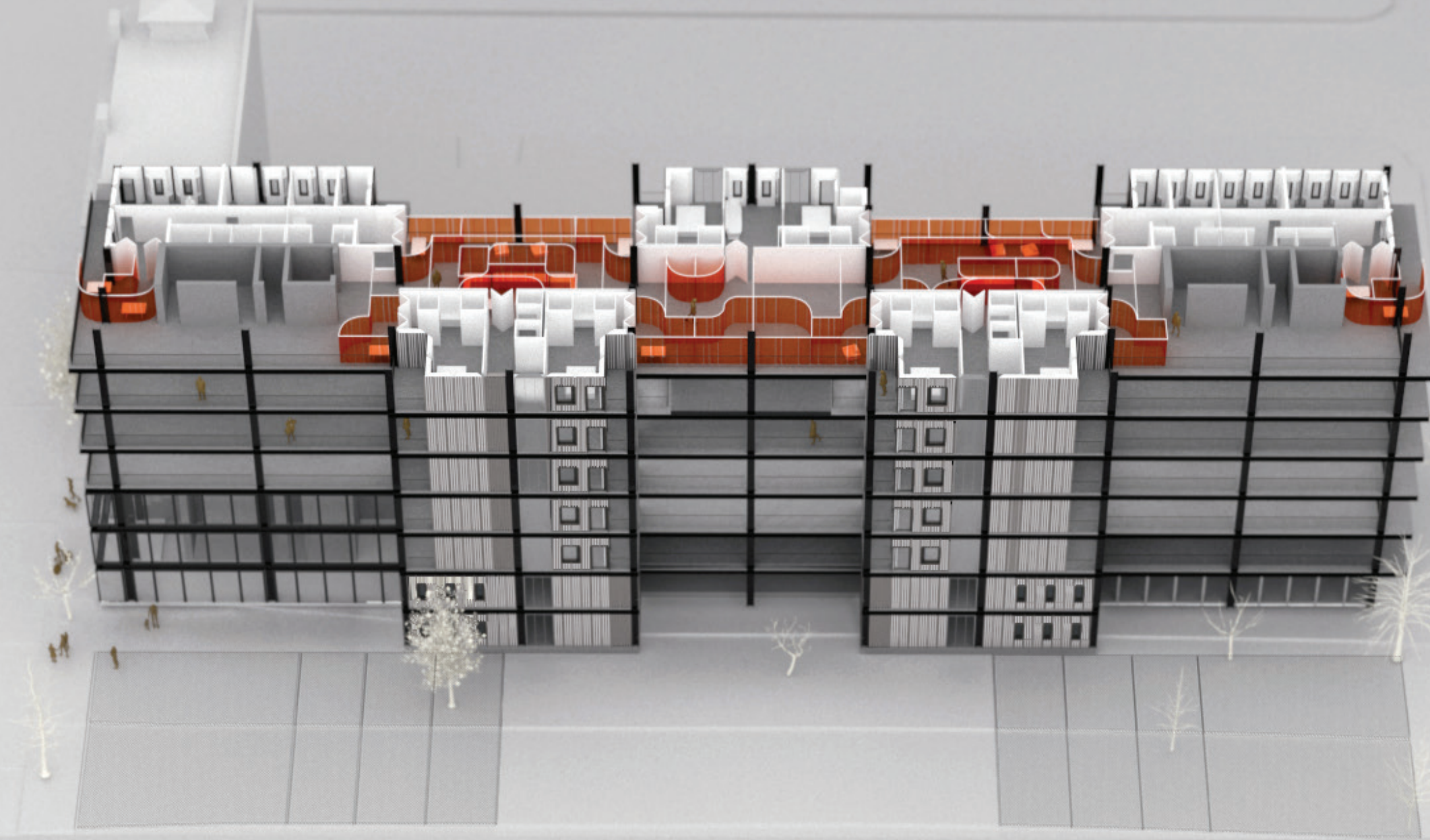
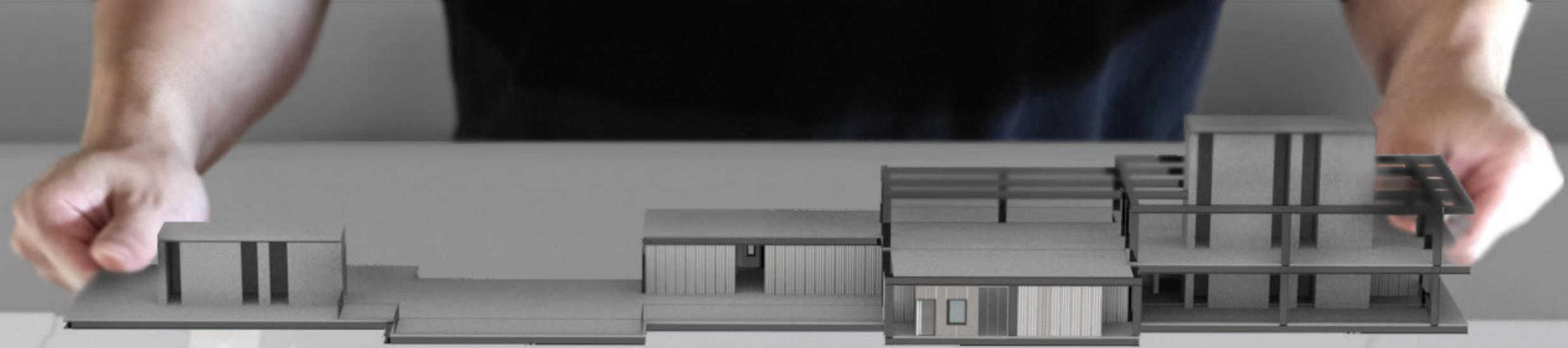






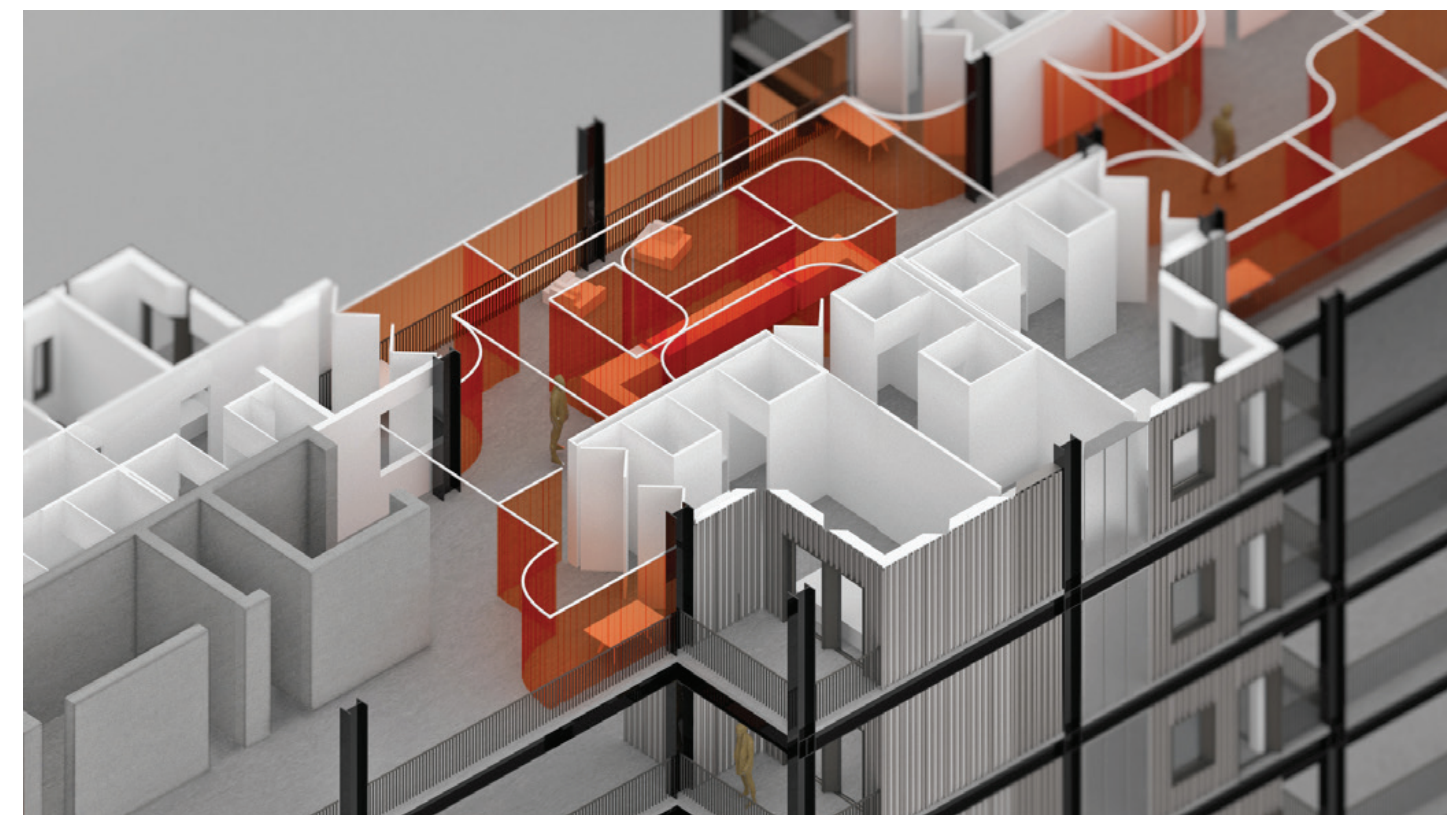
### The Structure

is a hybrid system with varying degrees of completion and participation. The planner and professionals will determine a fixed naked framework with the initial pre-allocated structure core and collective platform to ensure plot coverage and legal windows distance meet zoning requirements, while the more open-ended private plug-in living module will allow residents more freedom to reconfigure their own living spaces.



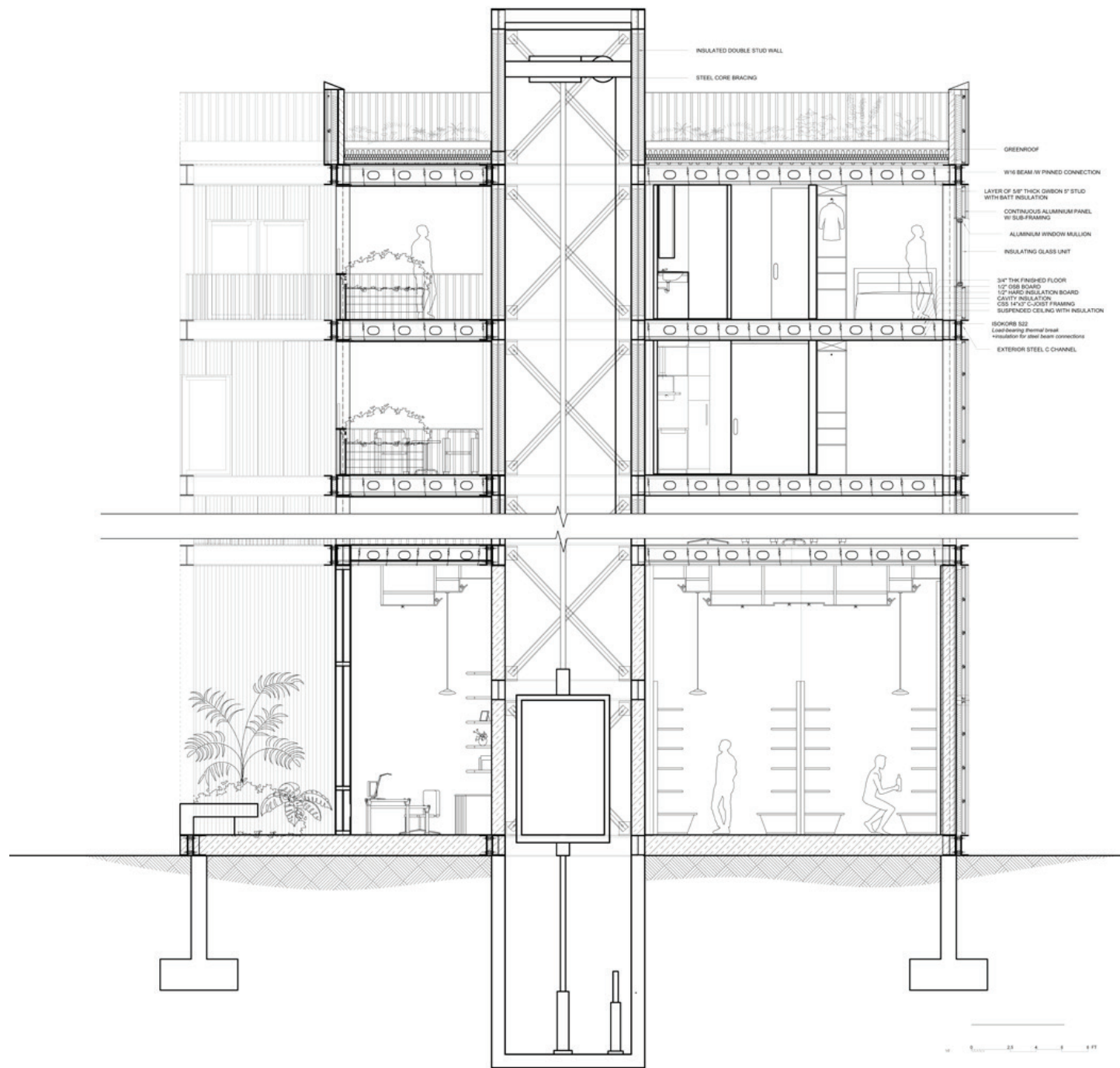


*variations of flexible interior arrangements*



An open and shared framework encourages residents to engage outside of their private modules, fostering a sense of community while maintaining individual privacy. Architectural systems that can adapt to future programmatic changes and accept uncertainty.

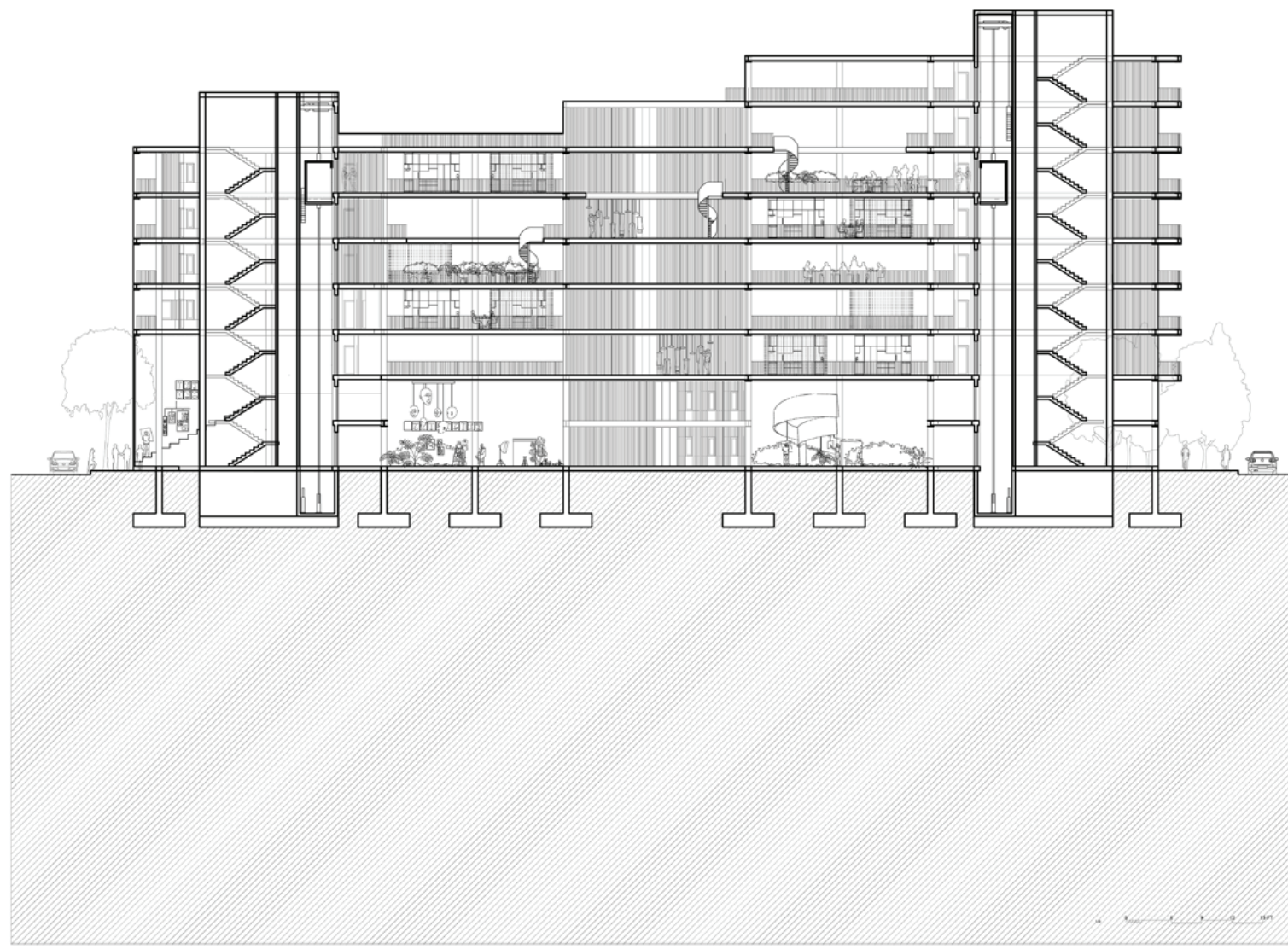




Studio Unit: Incomplete



Studio Unit: Complete



*The Common Corridor Kitchen*

COMMUNITY PROGRAMS

CHILDREN

YOUNG ADULTS

HEALTH

NUTRITION

EDUCATION

YOUTH DEVELOPMENT

ARTS

# Melrose Community Center

## Building System & Integration

The Melrose Community Center will provide community programs for children and young adults age 5-21, including health and nutrition; education; youth development and the arts. The programs aim to strengthen the social and academic outcomes of a generation of young people in Melrose.

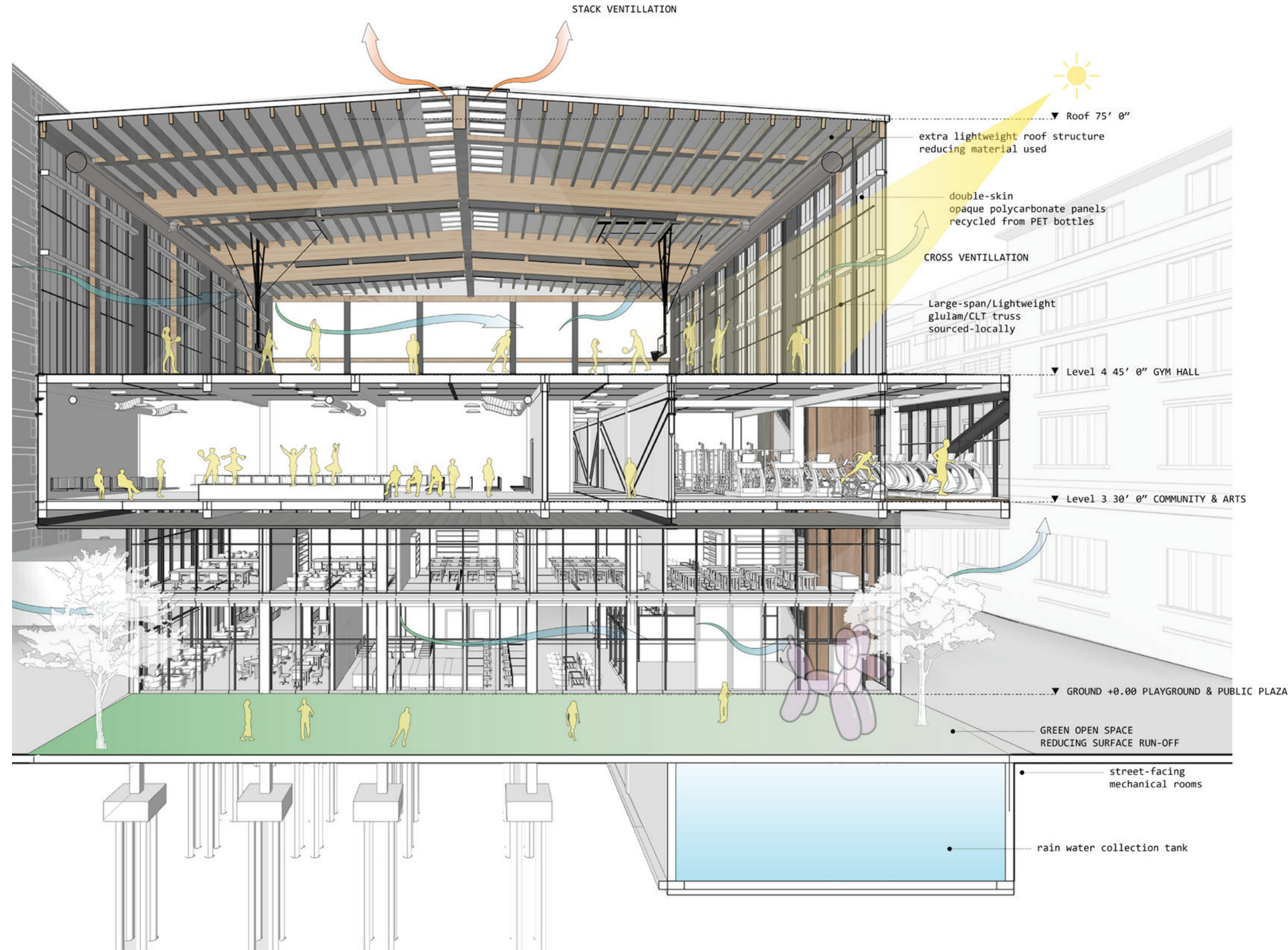
Site: Melrose, Bronx

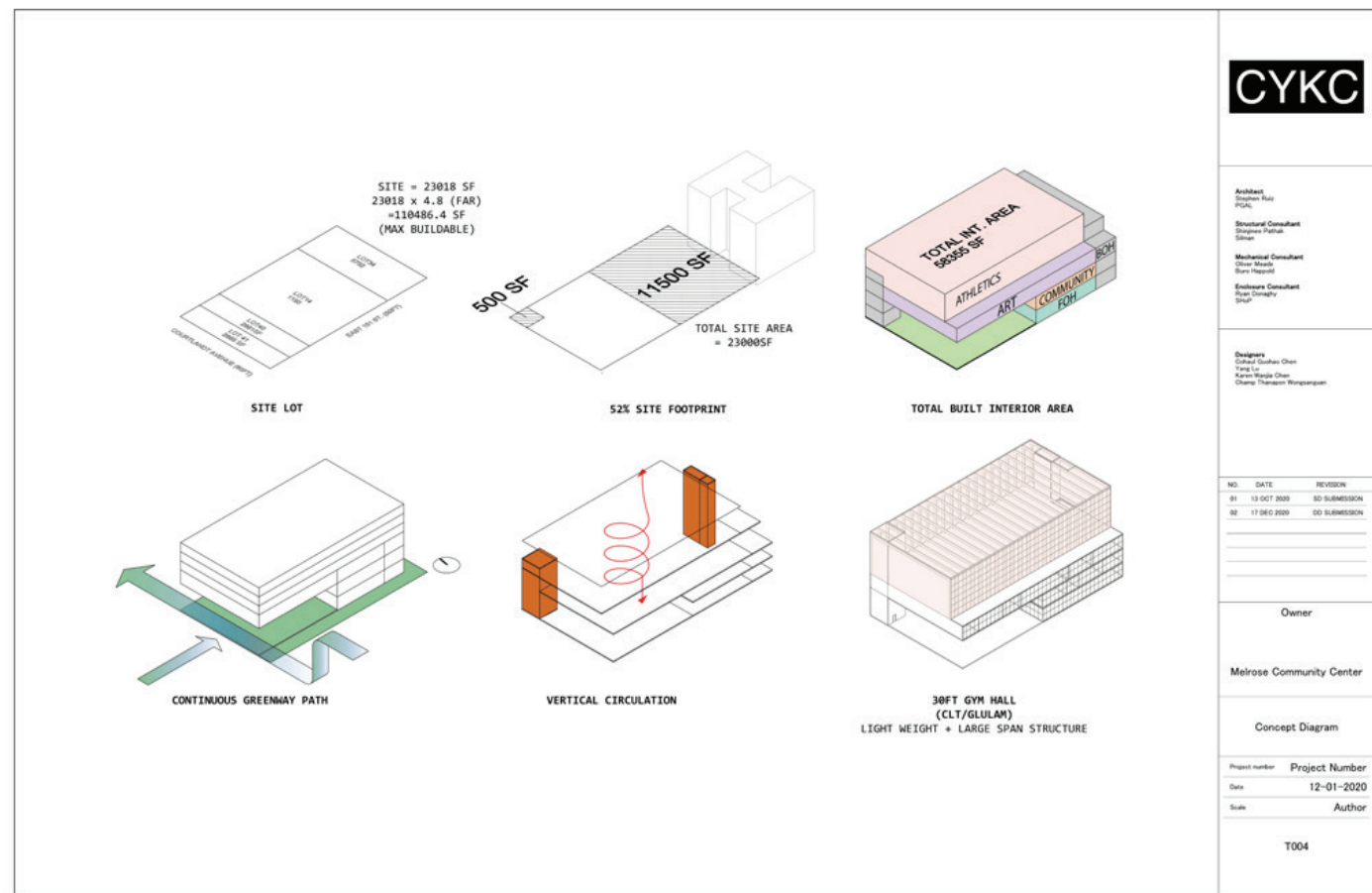
Studio: AT IV Building System

Critic: Sarah Kahn, Stephen Ruiz, Shinjinee Pathak, Oliver Meade, Ryan Donaghy

Team: Cohaul Guohao Chen, Yang Lu, Karen Wanjia Chen

Date: Fall, 2020





**CYKC**

Architect  
Stephen Ruo  
PKA

Structural Consultant  
Shingue Patauk  
Shin

Mechanical Consultant  
Over Woods  
Euris Heppert

Envelope Consultant  
Evan Ormsby  
Shin

Designers  
Gang Guo Chen  
Yang Lu  
Karin Wang Chen  
Chang Thompson Wangpan

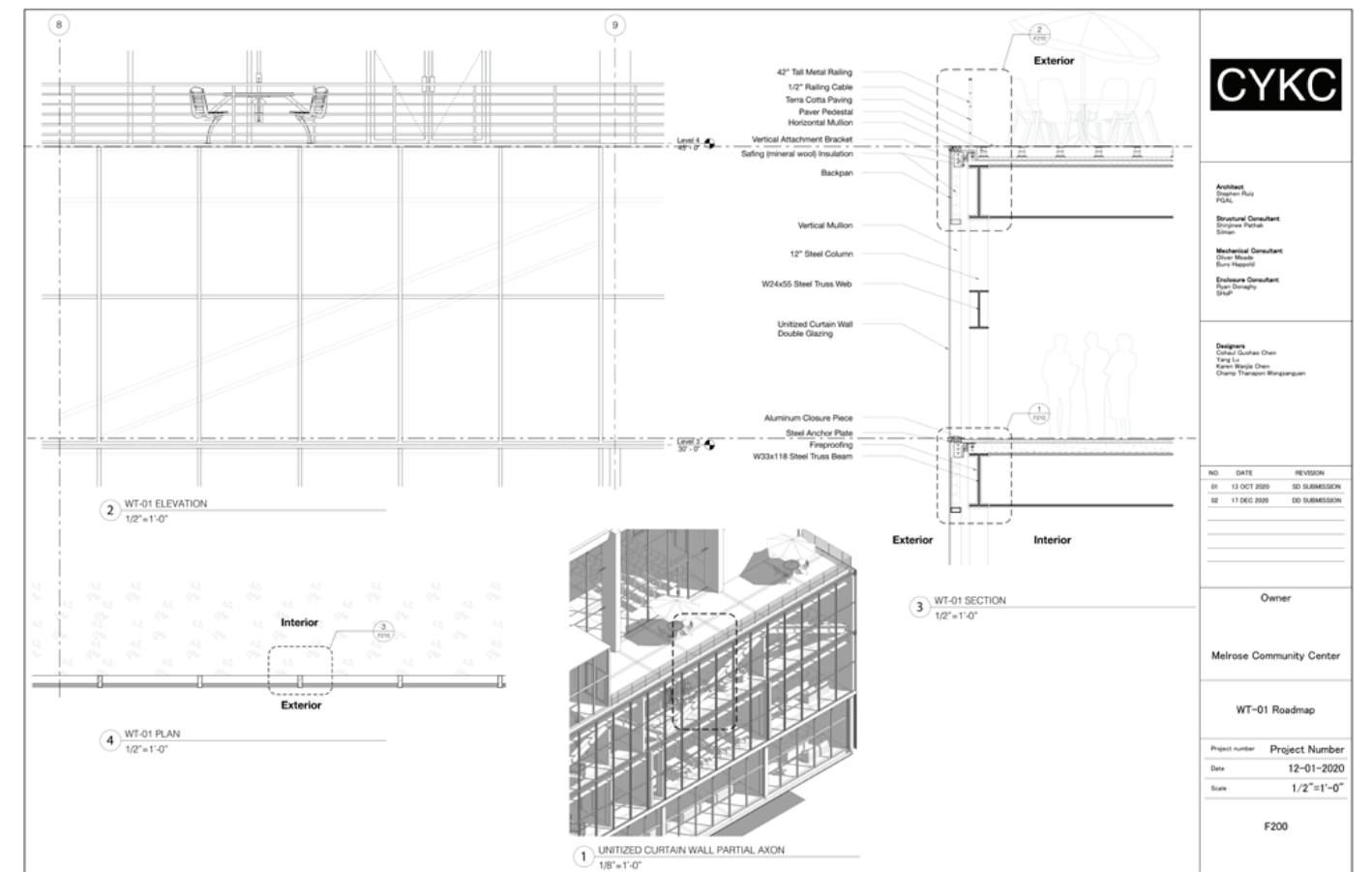
NO.	DATE	REVISION
01	13 OCT 2020	SD SUBMISSION
02	17 DEC 2020	DD SUBMISSION

Owner  
Melrose Community Center

Concept Diagram

Project number Project Number  
Date 12-01-2020  
Scale Author

T004



**CYKC**

Architect  
Stephen Ruo  
PKA

Structural Consultant  
Shingue Patauk  
Shin

Mechanical Consultant  
Over Woods  
Euris Heppert

Envelope Consultant  
Evan Ormsby  
Shin

Designers  
Gang Guo Chen  
Yang Lu  
Karin Wang Chen  
Chang Thompson Wangpan

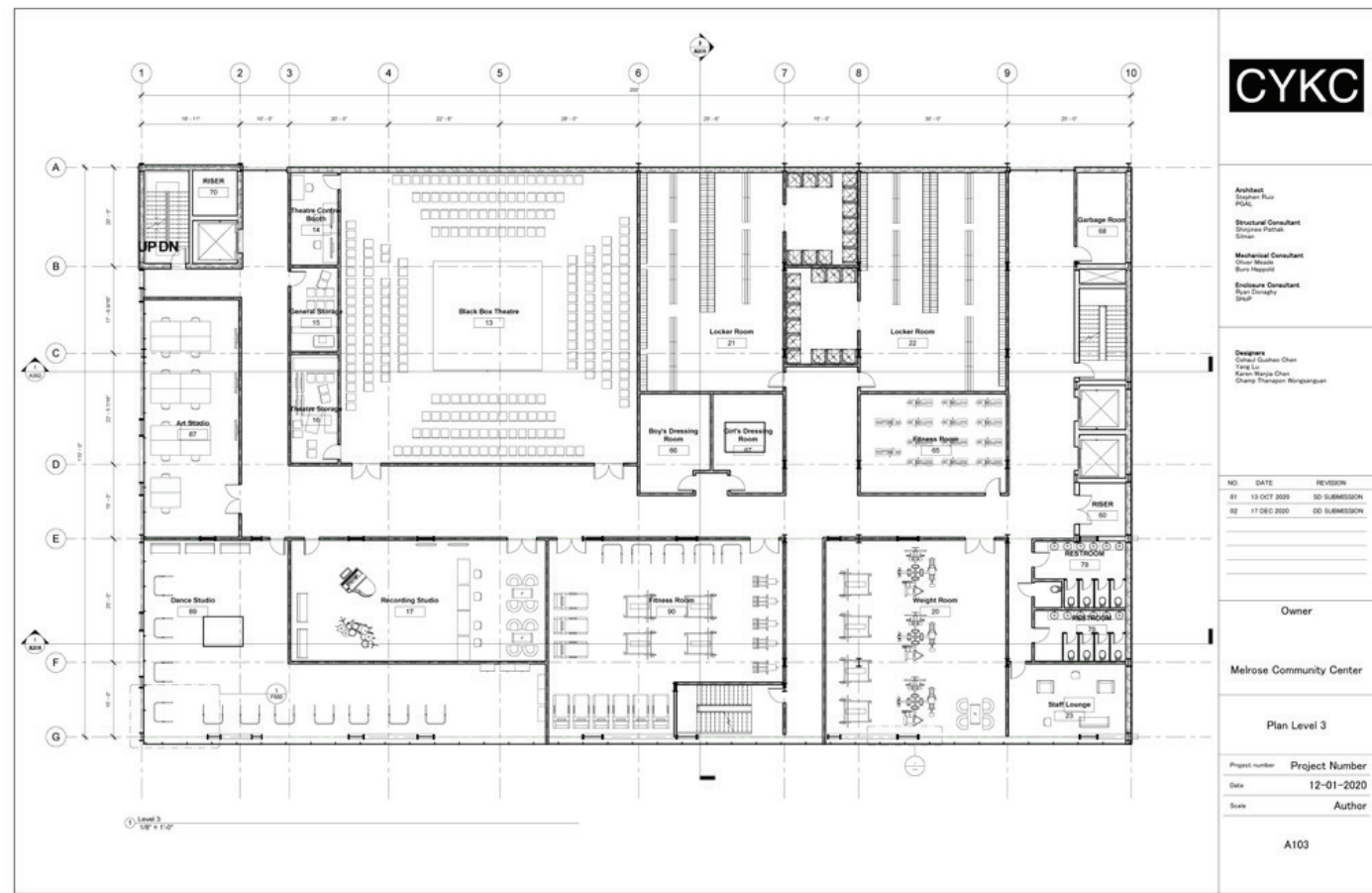
NO.	DATE	REVISION
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Owner  
Melrose Community Center

WT-01 Roadmap

Project number Project Number  
Date 12-01-2020  
Scale 1/2"=1'-0"

F200



**CYKC**

Architect  
Stephen Ruo  
PKA

Structural Consultant  
Shingue Patauk  
Shin

Mechanical Consultant  
Over Woods  
Euris Heppert

Envelope Consultant  
Evan Ormsby  
Shin

Designers  
Gang Guo Chen  
Yang Lu  
Karin Wang Chen  
Chang Thompson Wangpan

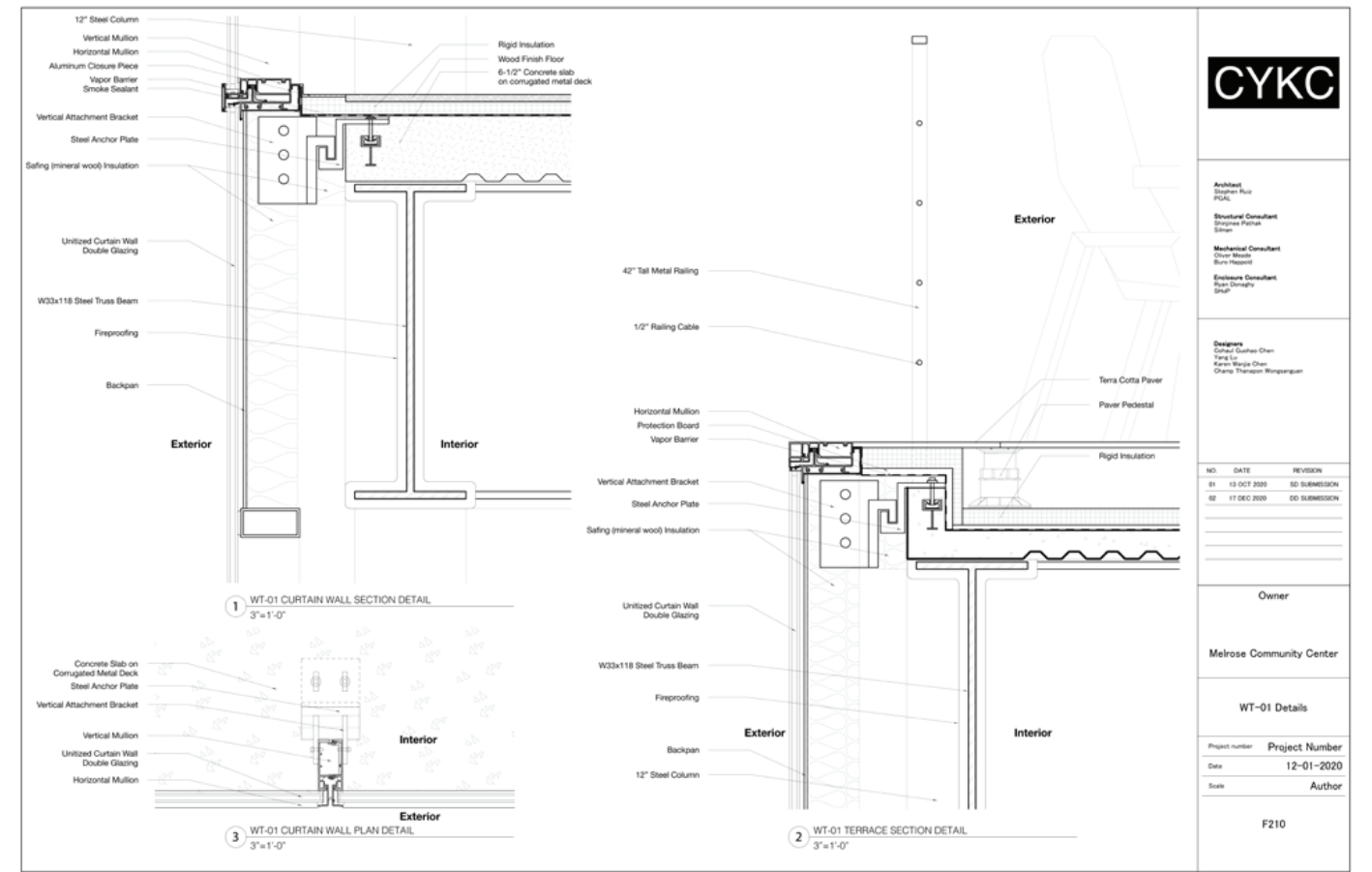
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Owner  
Melrose Community Center

Plan Level 3

Project number Project Number  
Date 12-01-2020  
Scale Author

A103



**CYKC**

Architect  
Stephen Ruo  
PKA

Structural Consultant  
Shingue Patauk  
Shin

Mechanical Consultant  
Over Woods  
Euris Heppert

Envelope Consultant  
Evan Ormsby  
Shin

Designers  
Gang Guo Chen  
Yang Lu  
Karin Wang Chen  
Chang Thompson Wangpan

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Melrose Community Center

WT-01 Details

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Scale Author

F210

