



VISHAL BENJAMIN PANICKER
PORTFOLIO

Columbia University - Graduate School of Architecture Planning and Preservation
AAD 2022-23

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01.

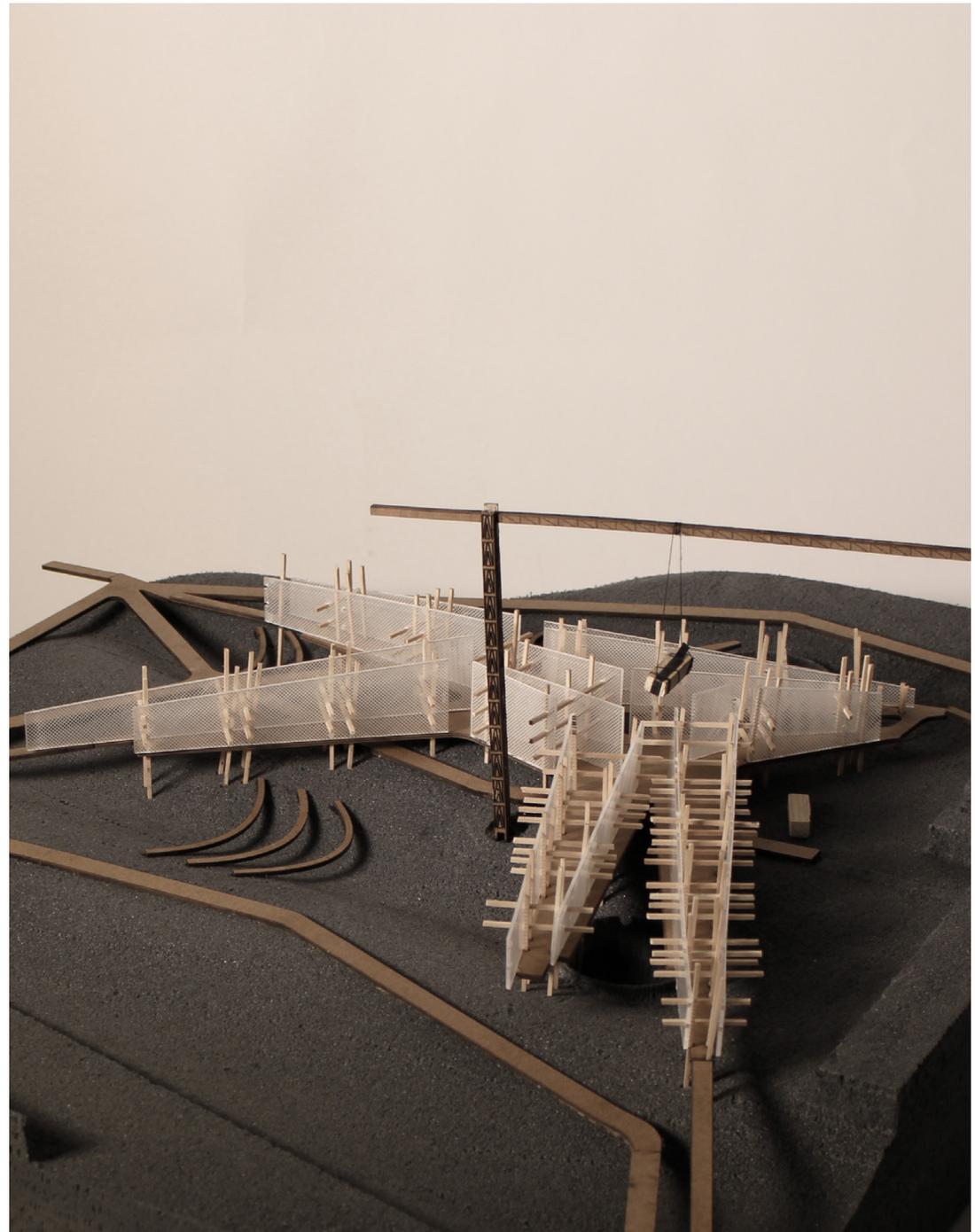
OVER & UNDER

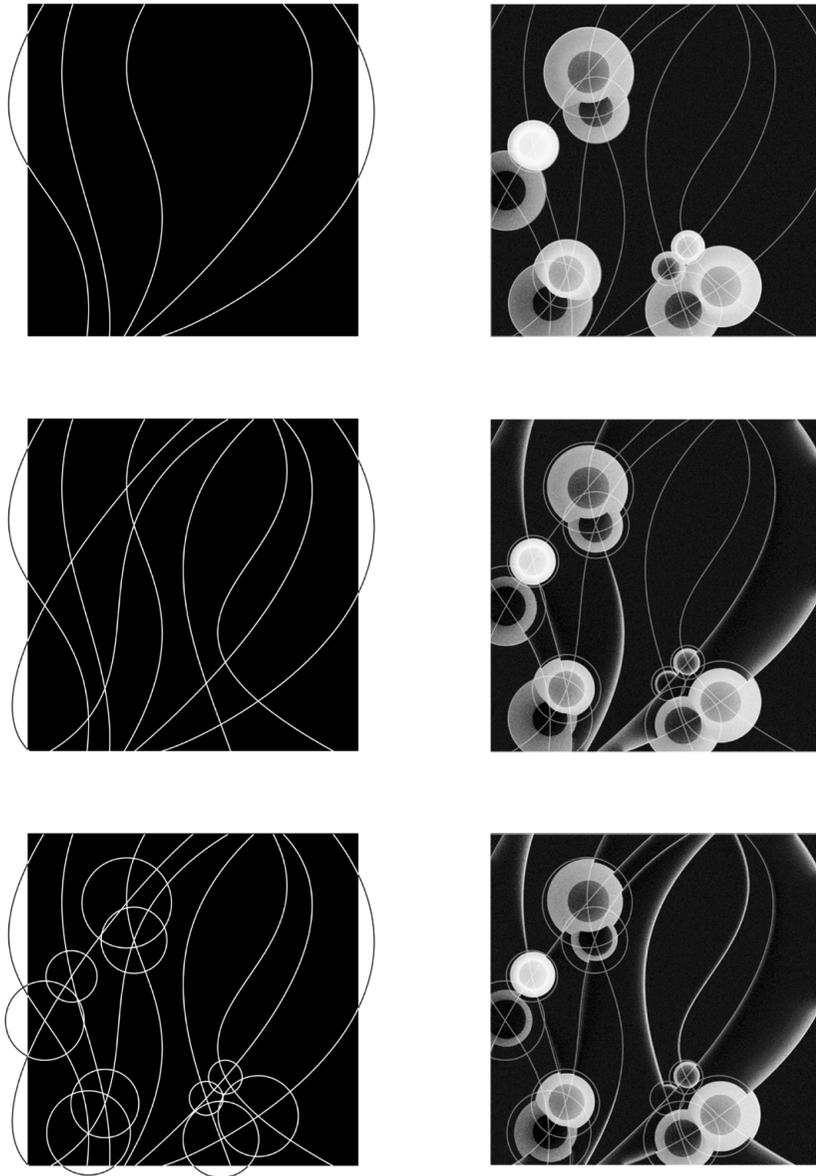
Floating New York: Expanding an Over-expanded City

*Laurie Hawkinson Studio
Individual Project - Advanced Studio VI
Spring 2023*

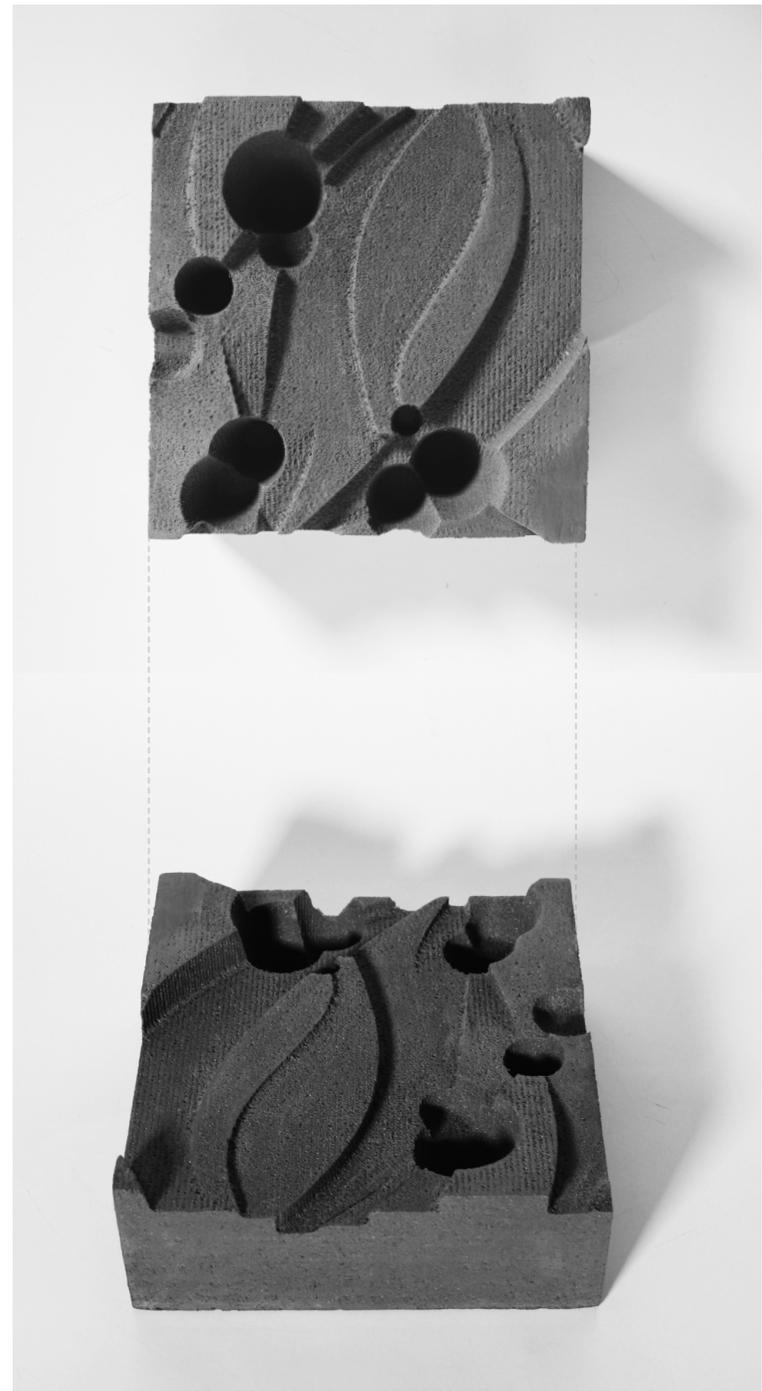
The threat of higher sea levels and coastal flooding presents a growing challenge to the significant population and valuable economic assets located along the shoreline of New York City. With this project, we aim to address the environmental and contextual situation of the Long Island City coast, specifically the Anable Basin, by introducing a strategy that acknowledges and adapts to rising water levels. The proposed approach enables the community to take advantage of the water entering the site while mitigating flood levels to a manageable extent.

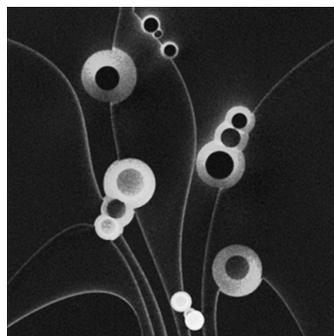
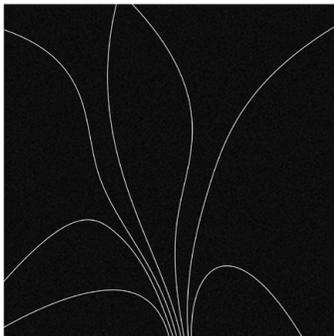
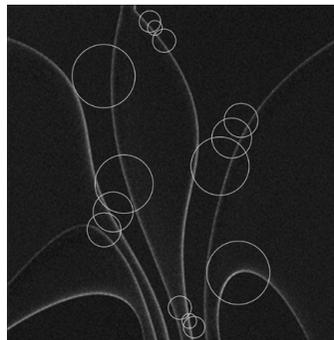
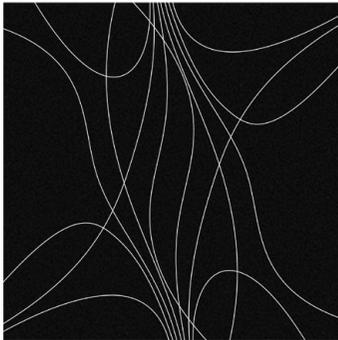
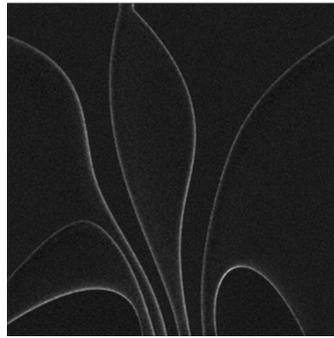
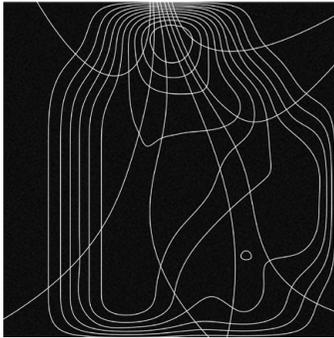
This strategy can be a model for the entire coast of New York City, enabling residents to live with and adapt to this environmental challenge. By implementing this approach, we can ensure the long-term viability and resilience of the city's shoreline communities. The project also emphasizes research and education, with a focus on increasing awareness and preparedness for future flood events. It aims to foster a sense of adaptability in the face of a changing environment.



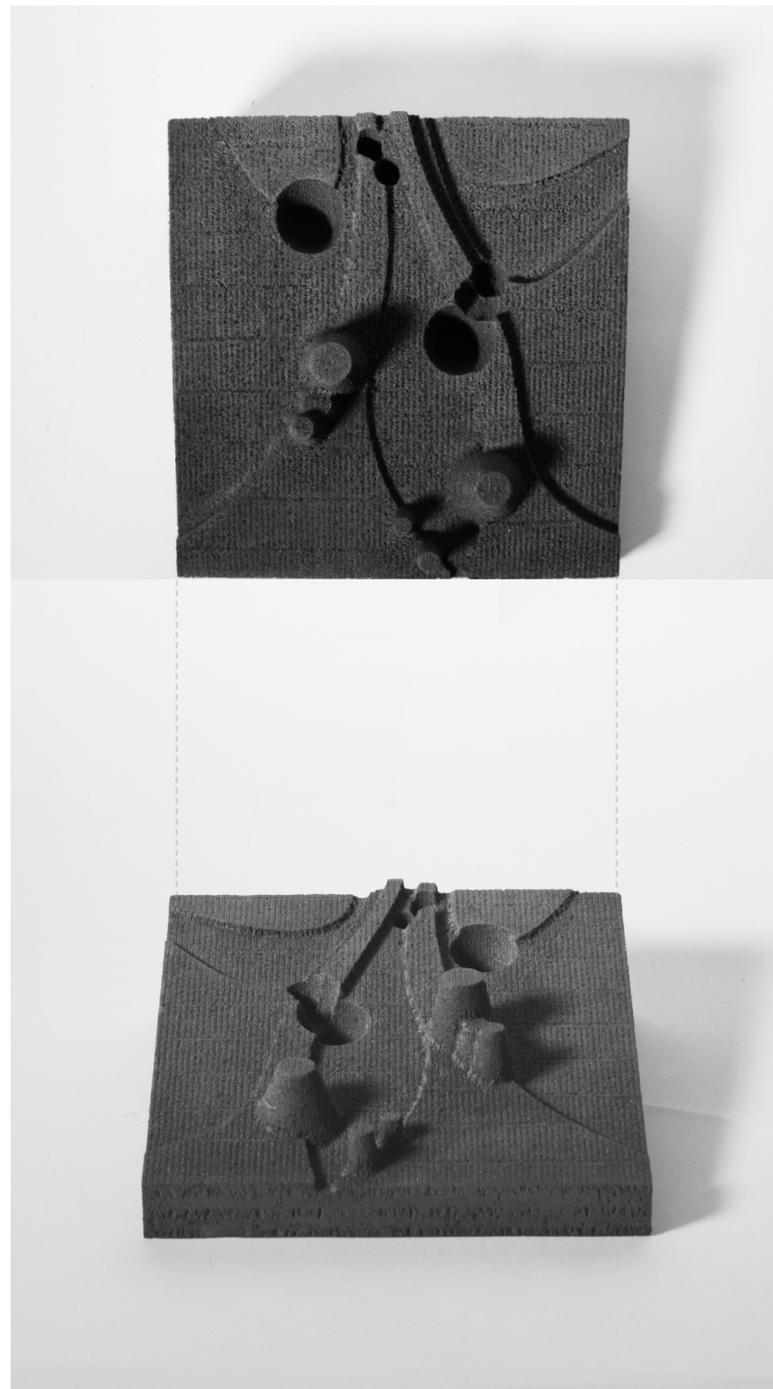


A conceptual study that explores the idea of subtracting from a solid mass to create voids. By intersecting path lines, points of intersection are used as a basis for removing sections from the mass, resulting in a dynamic composition of voids and solid volumes. The path curves used for subtraction vary in depth, adding an element of depth and complexity to the overall design.

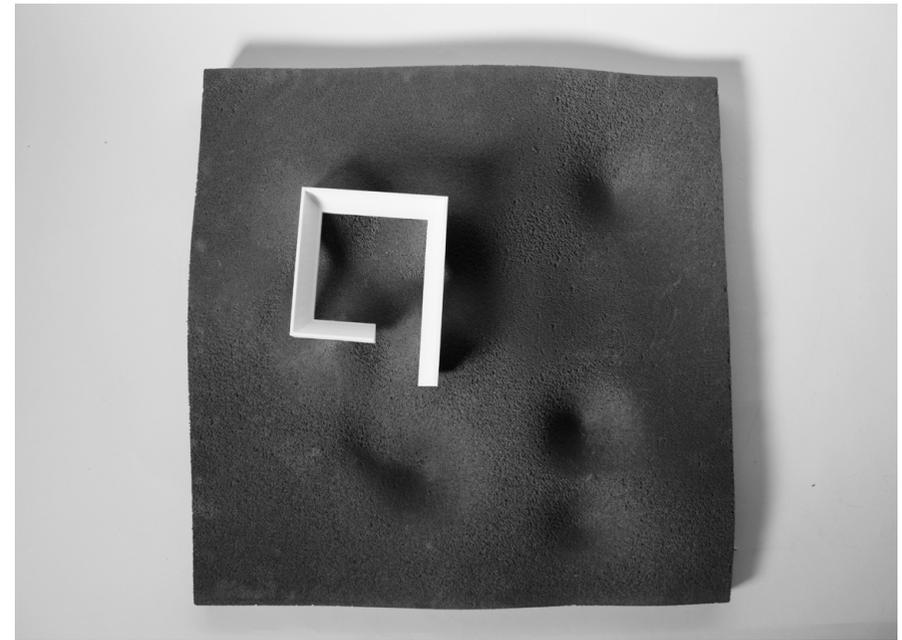


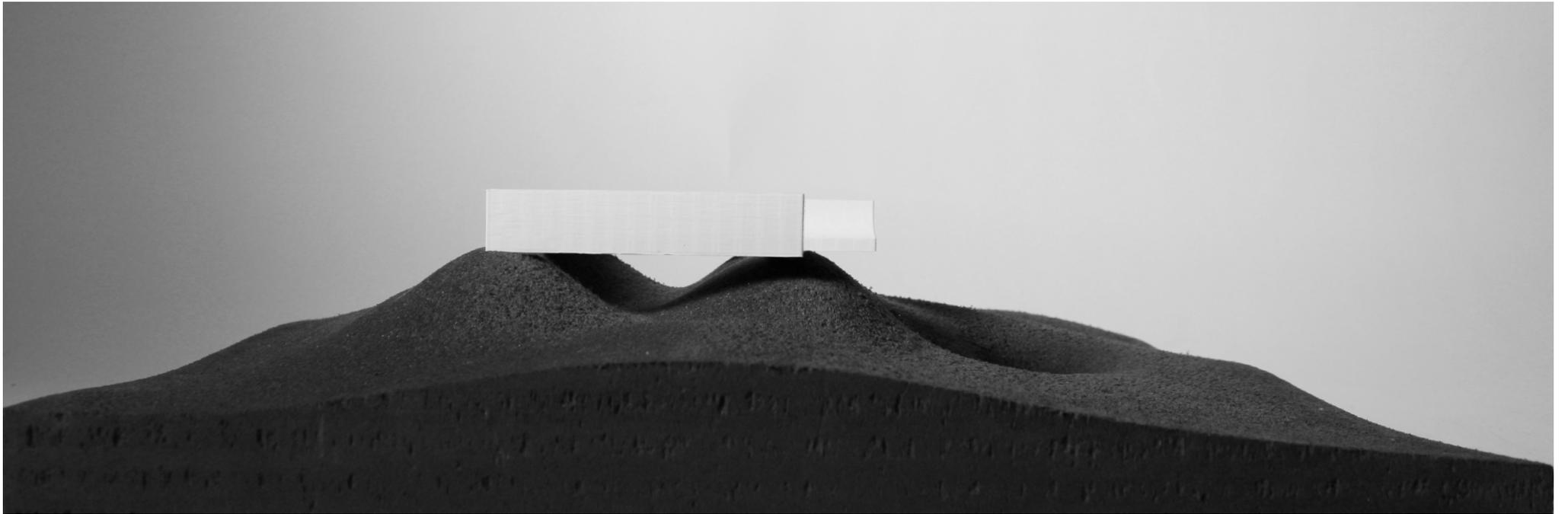


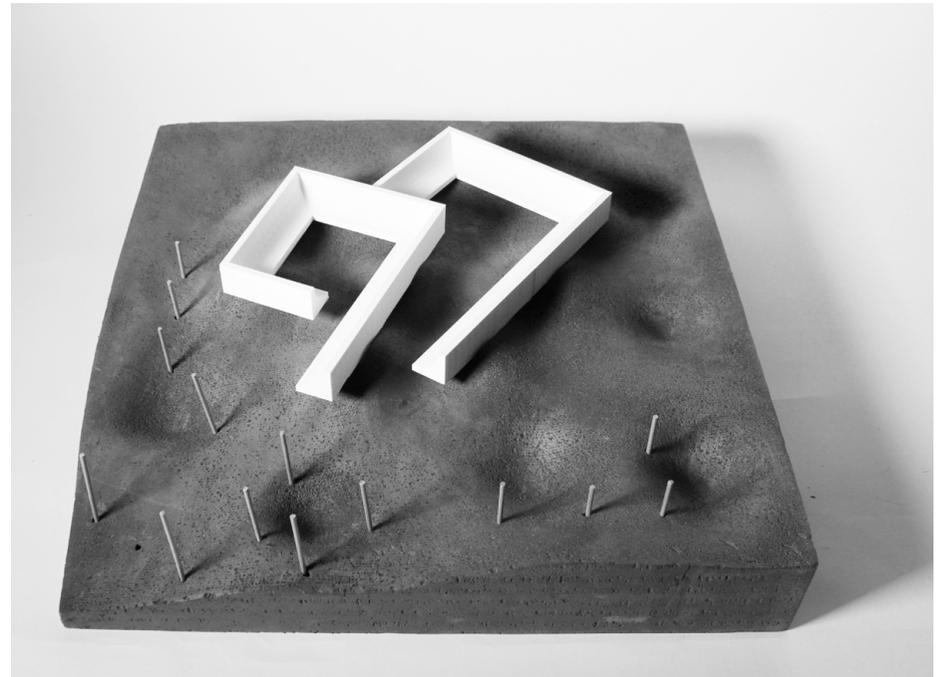
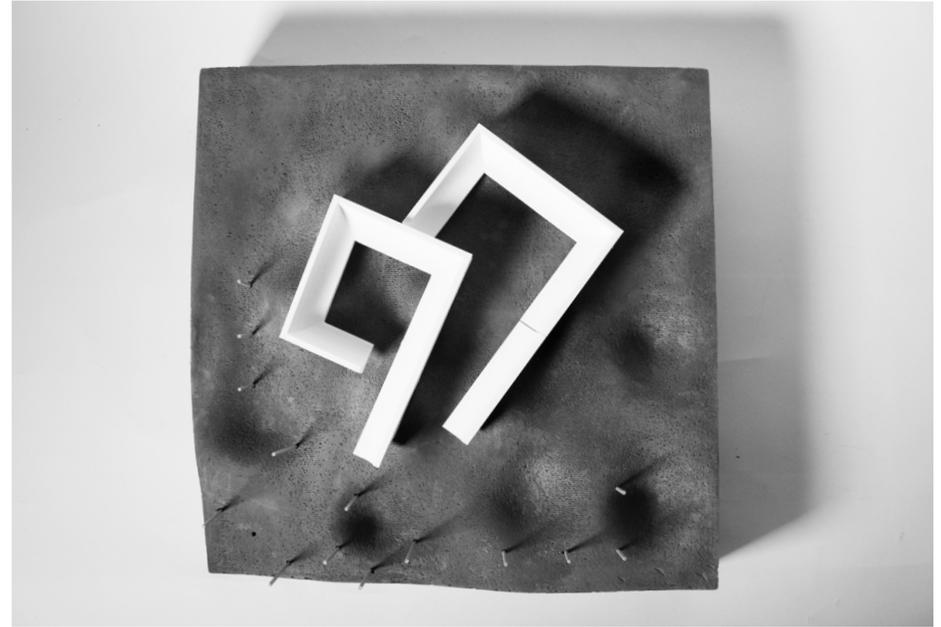
Continuing the conceptual study where in the idea of subtraction and addition is explored with the same design principles.



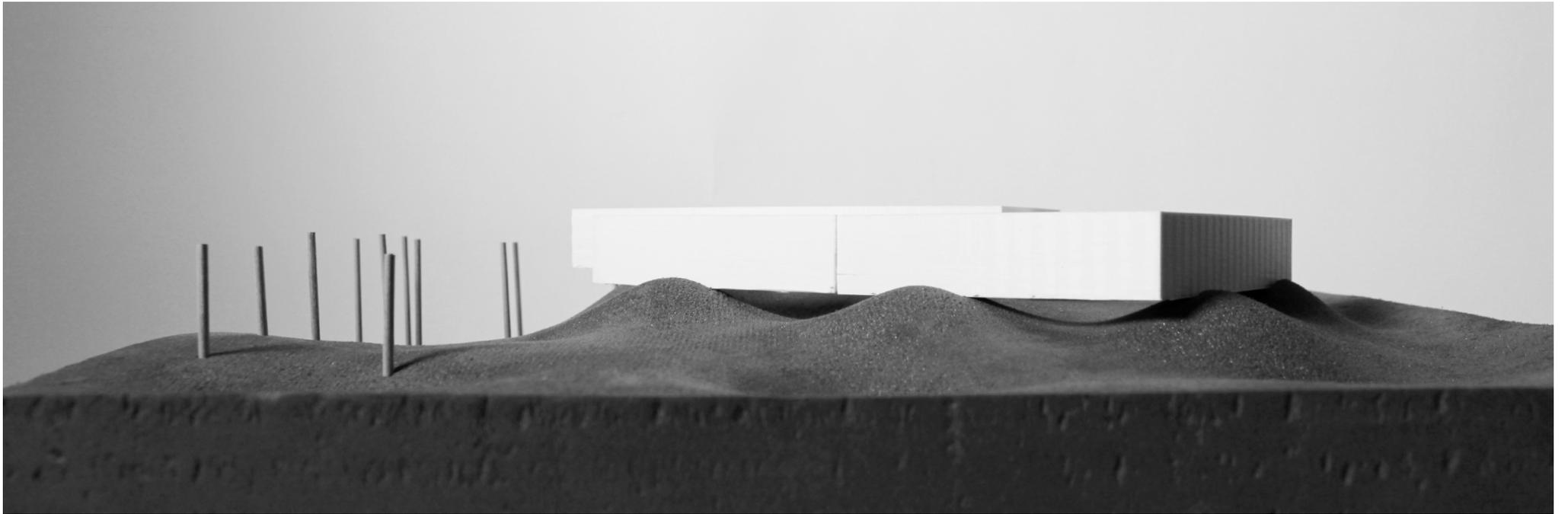
The design rules and principles are applied to the site at Anable Basin, Long Island City in response to its unique environmental conditions. The cut and fill technique is employed to sculpt the terrain and create a more harmonious relationship between the site and built elements.

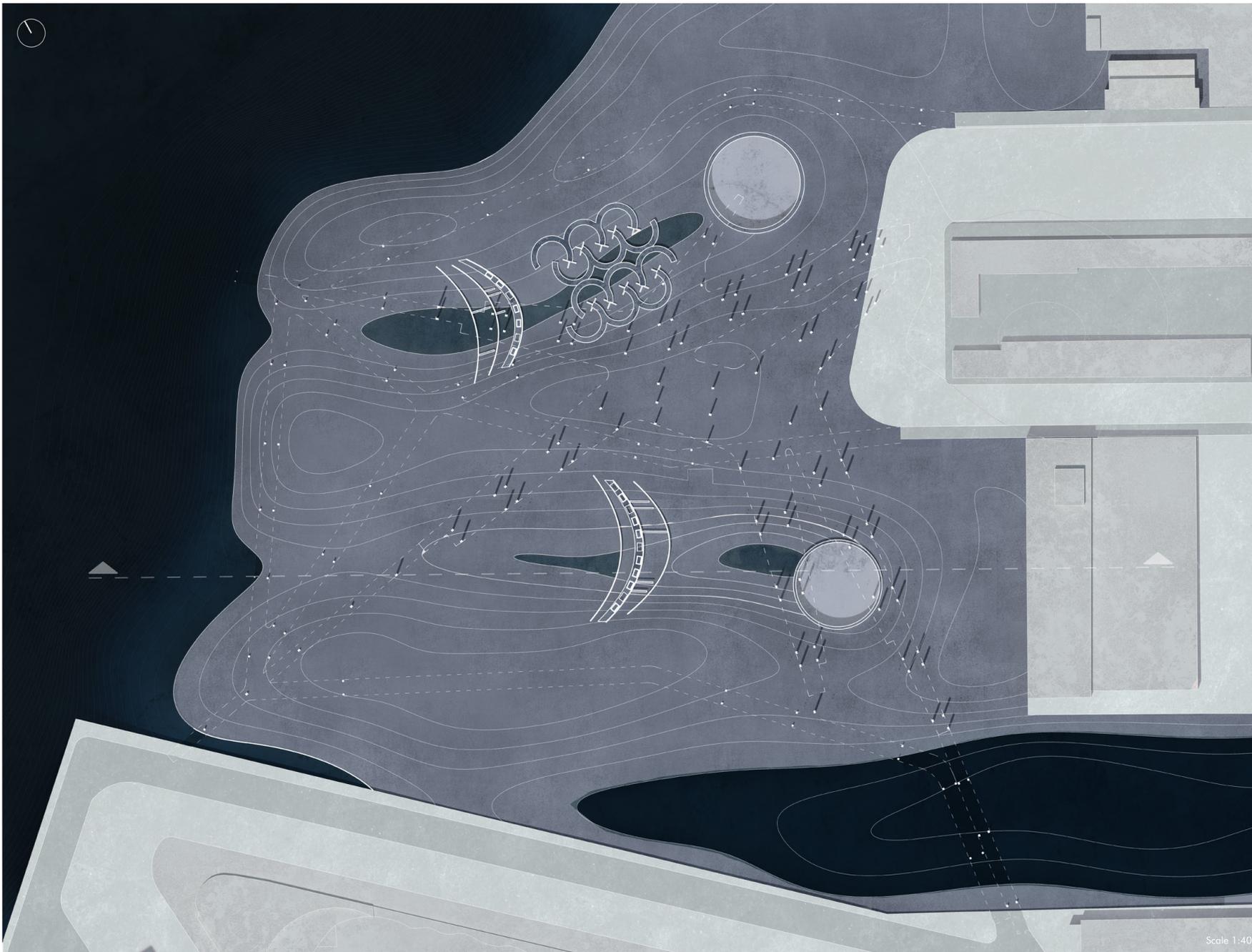






After establishing the initial strategy, the design development process begins with the integration of specific programs and drivers. This phase involves further refinement and exploration of the design elements and spatial relationships.

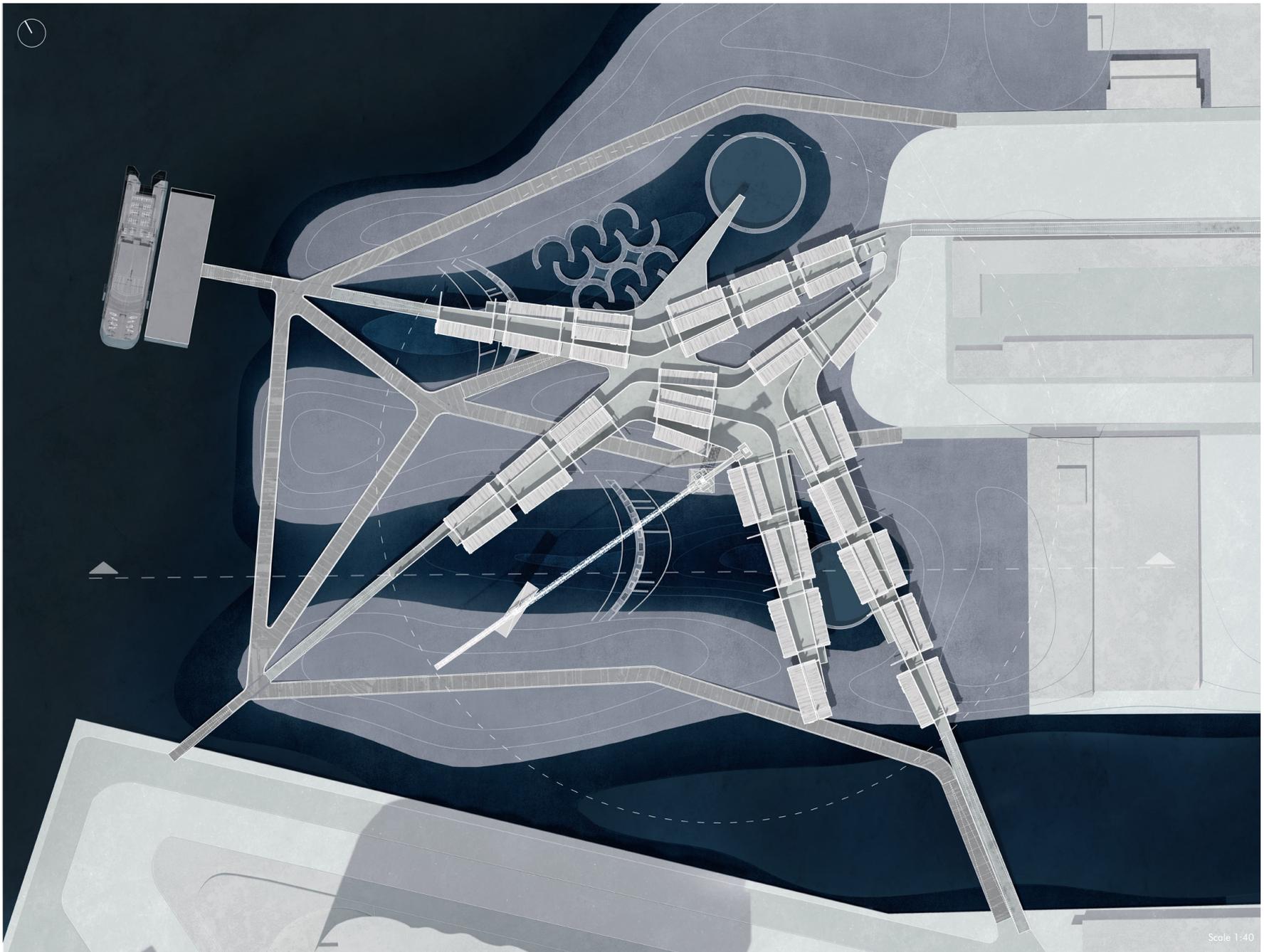




Constructing a Topography that plays with the Tide levels of the East River.

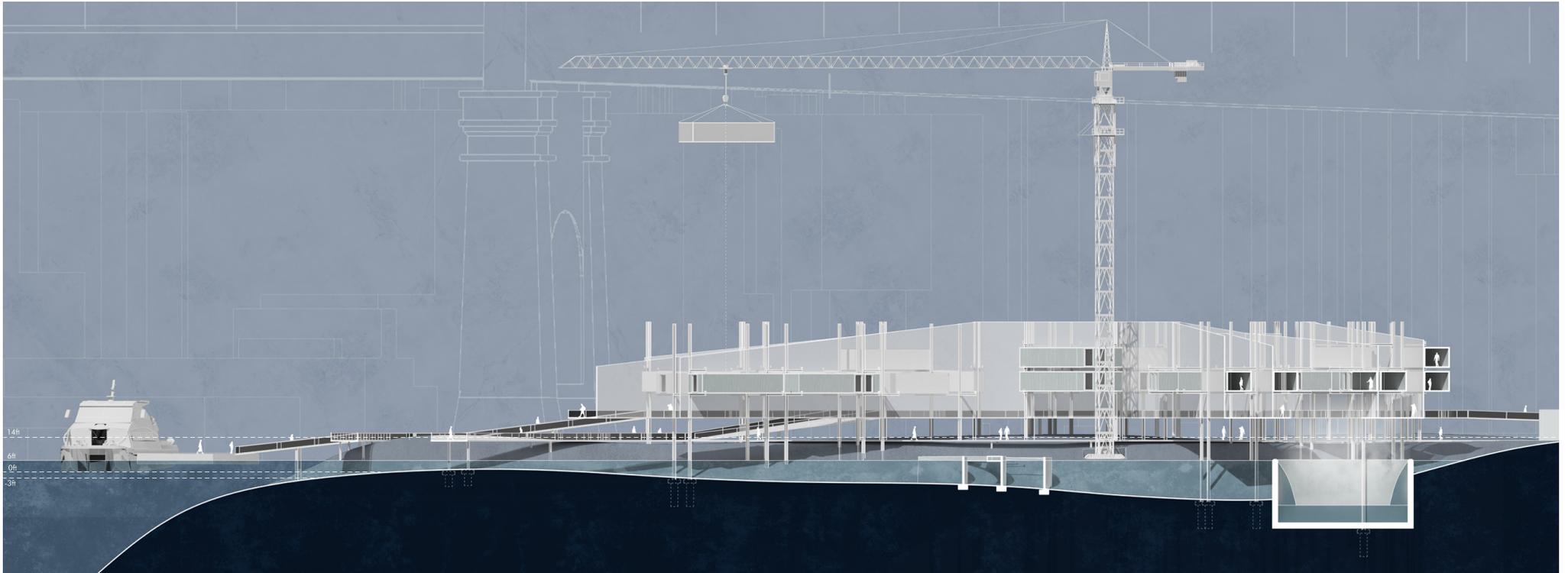
Hydrologic Park, where water flows through Filtration; Energy and production and Spillway (Cooling System)

Scale 1:40

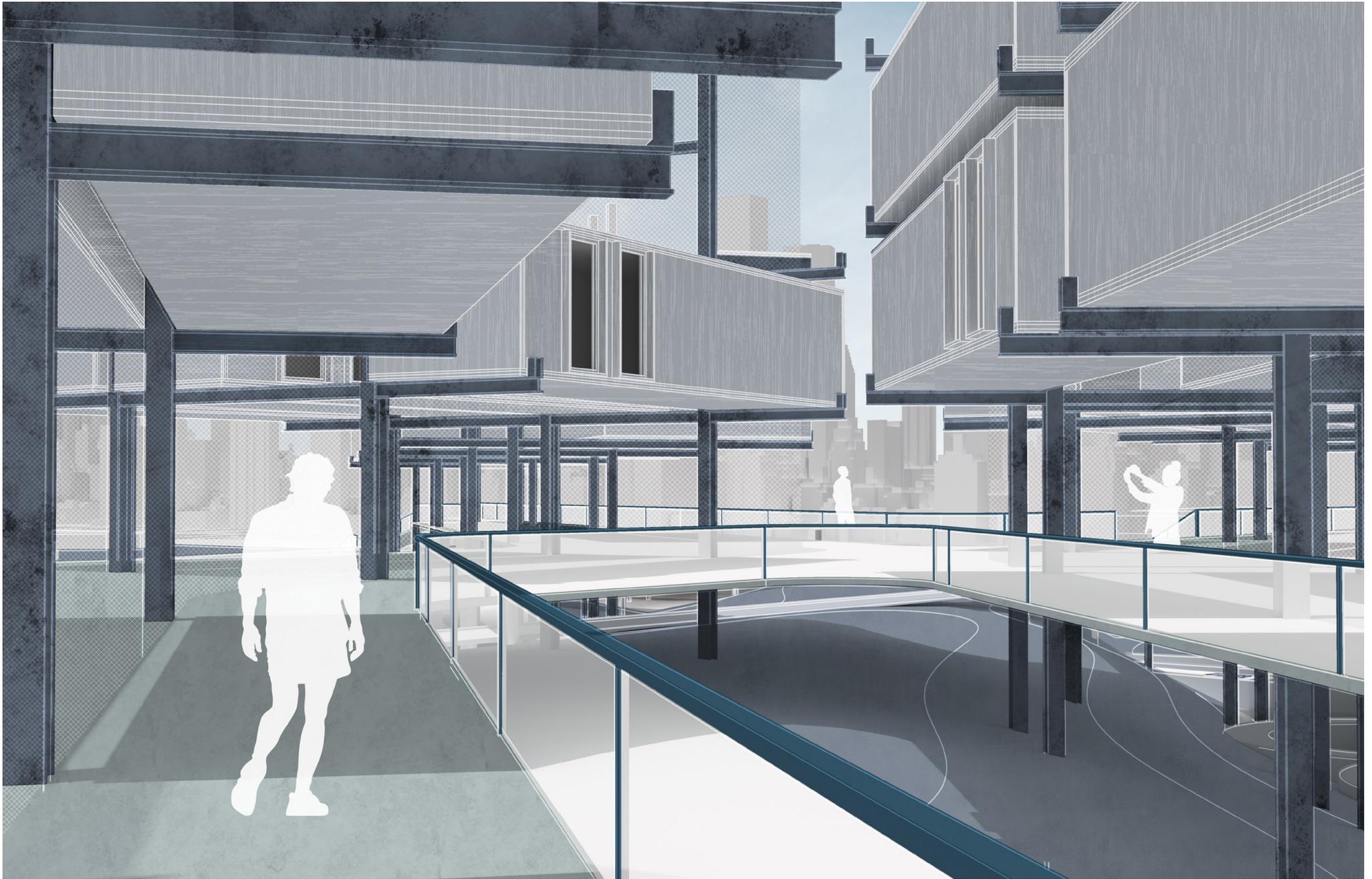


The Structure includes public spaces for leisure and interconnecting the site with the Urban Network

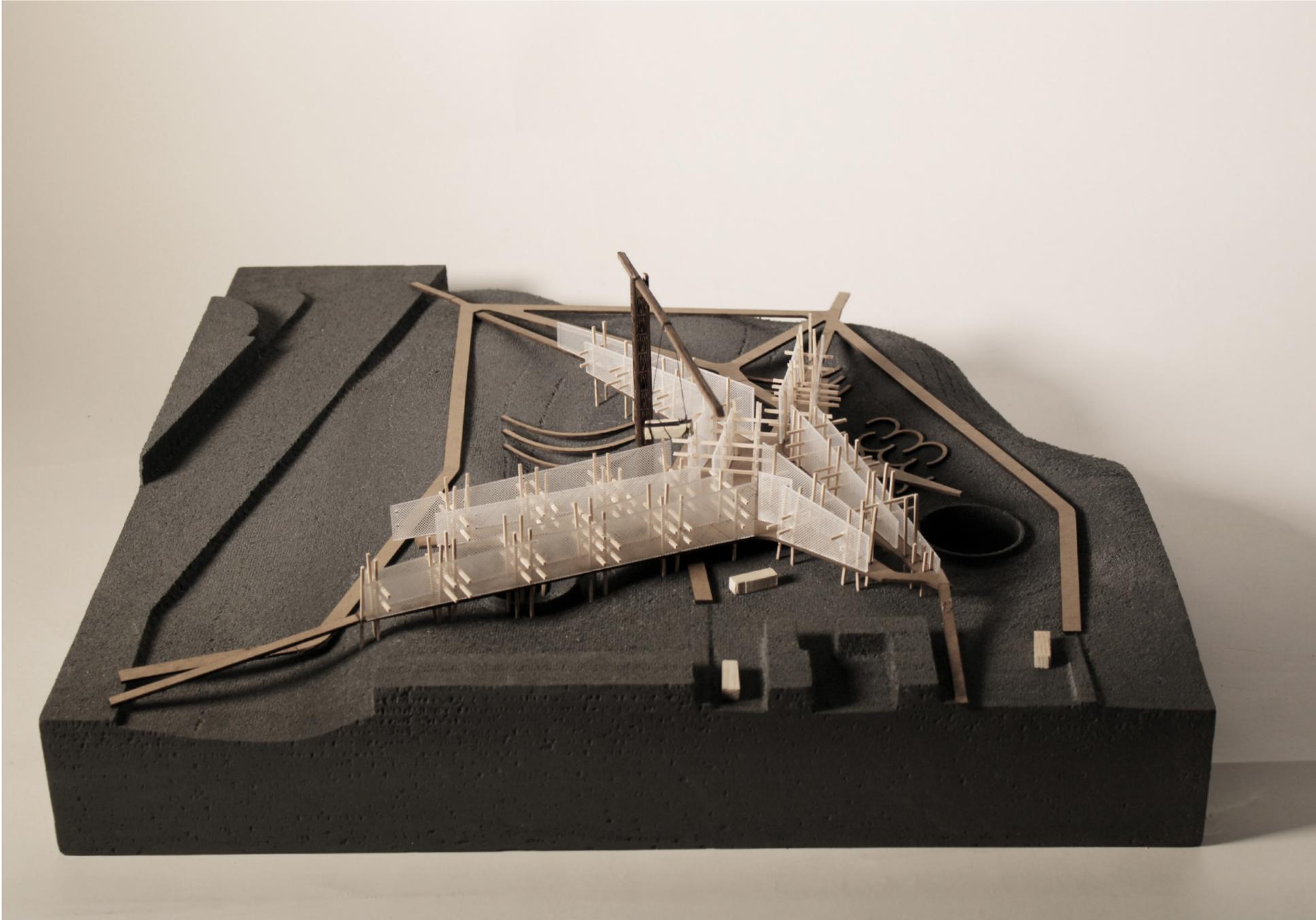
Also an Innovation Hub where prefabricated CLT modules are used to create research and study spaces.



On the construction site, the tower crane stands as a permanent fixture to facilitate the placement of CLT modules into the steel framework. The tower crane acts as a visual representation of the seamless integration of materials and construction techniques in the realization of the project

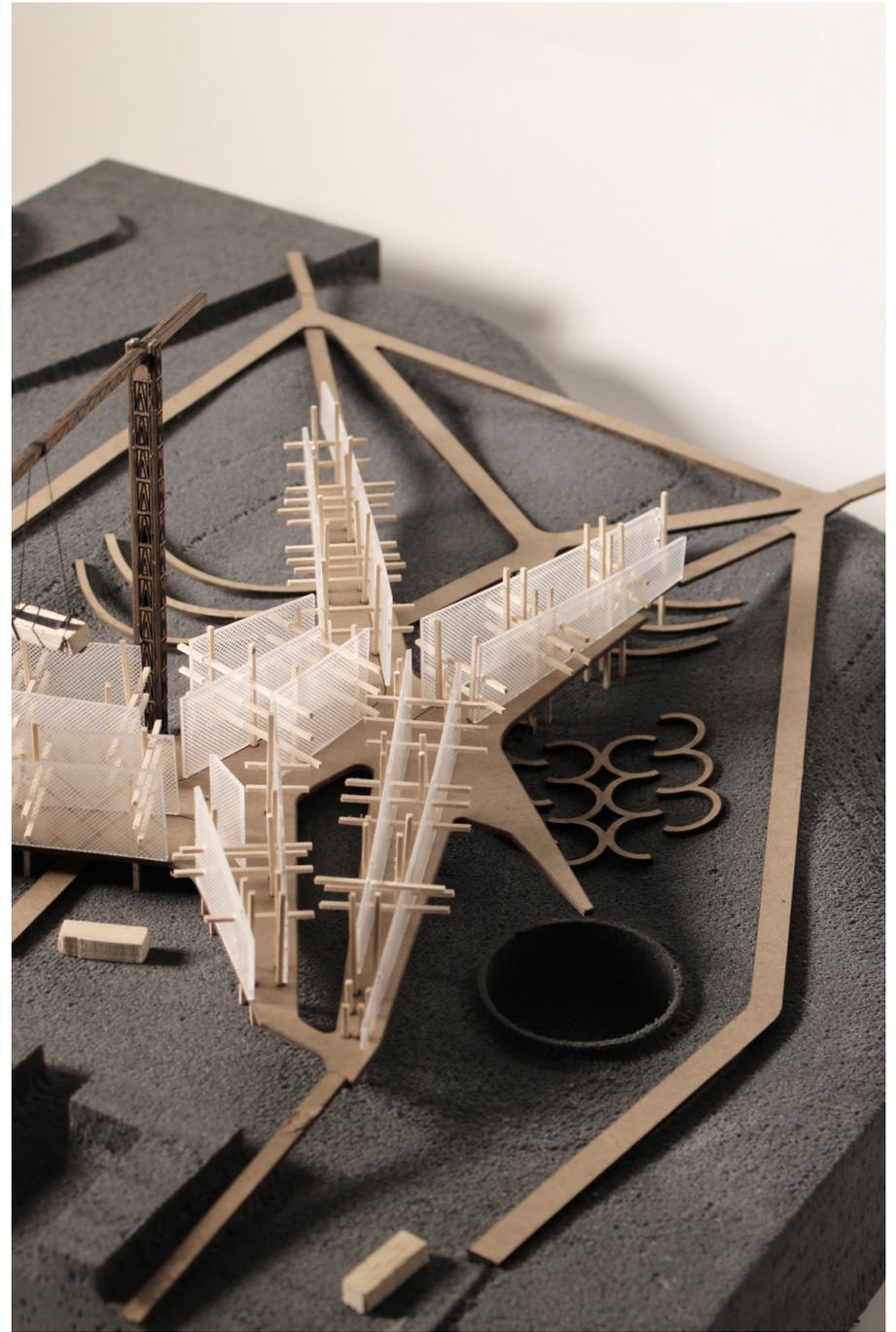


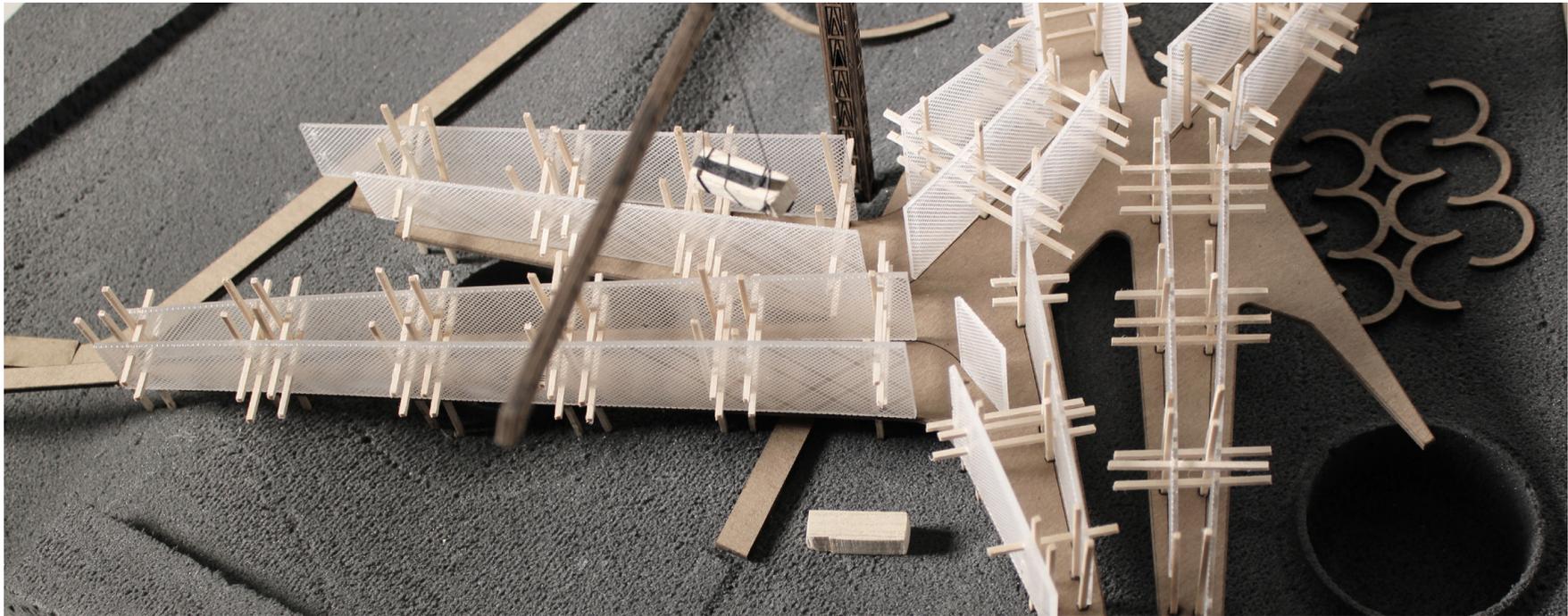
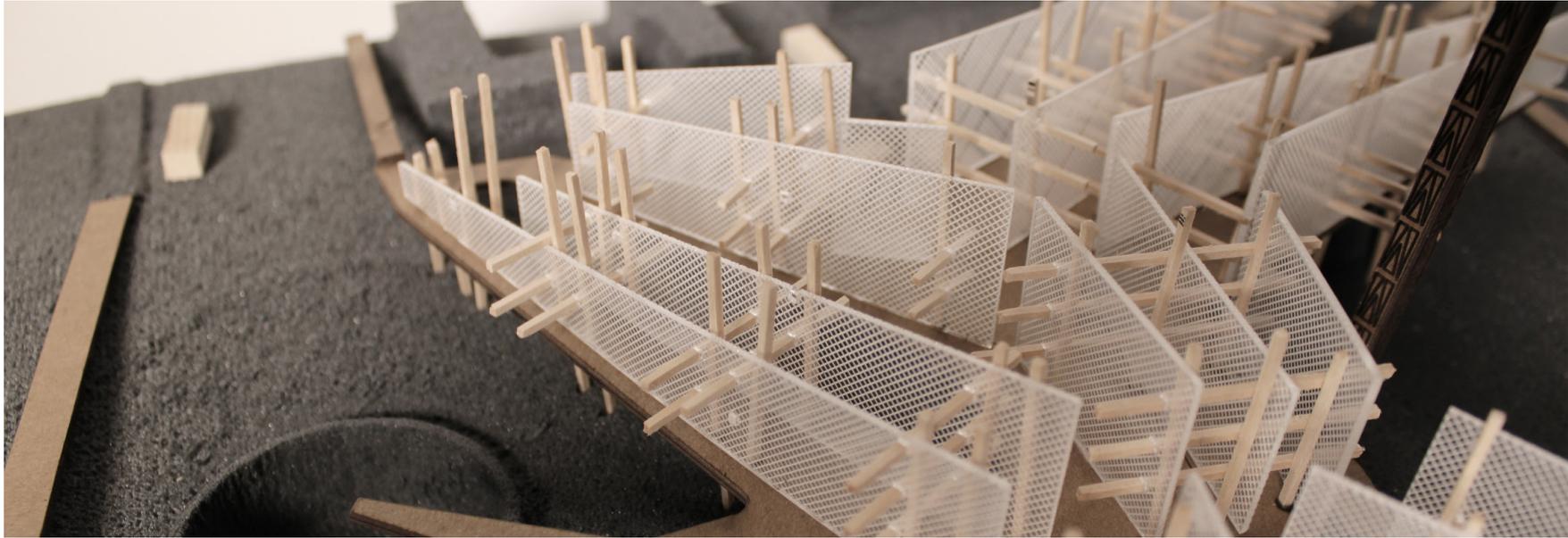
A sense of Transparency achieved through Materiality and Structural framework





Advanced Studio VI





02.

ARCHITECTURE IN MID AIR

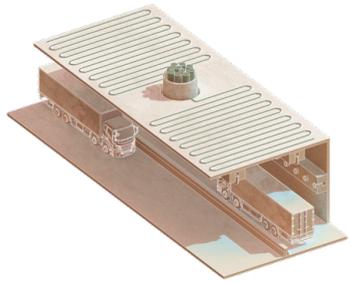
Capping the Cross Bronx Expressway

*Michael Bell Studio
Individual Project - Advanced Studio V
Fall 2022*

In preparation for the NYC interstate expressway potentially being enclosed or “capped,” this project investigates, designs, and offers methods to span the Cross-Bronx Expressway (CBE). The proposal includes a massive structure consisting of an algae farm capable of carbon sequestration in order to combat the air and noise pollution brought on by vehicle movement along the expressway and mend the scar the CBE left in the Bronx. It is a composite structure that automatically inhales pollutants while expelling clean air.

The building’s innovative use of materials—clay plastered fabric and a glulam beam wood structure—maintains a minimal environmental impact. When the pollution stops in the future, a portion of the structure can be disassembled because it is transitory.





Algae Farms - Carbon Sequestration
Polluted Air pumped into Algae Bio Reactor



Algae Farms - Separation Process
Biofuel Production + Clean Air



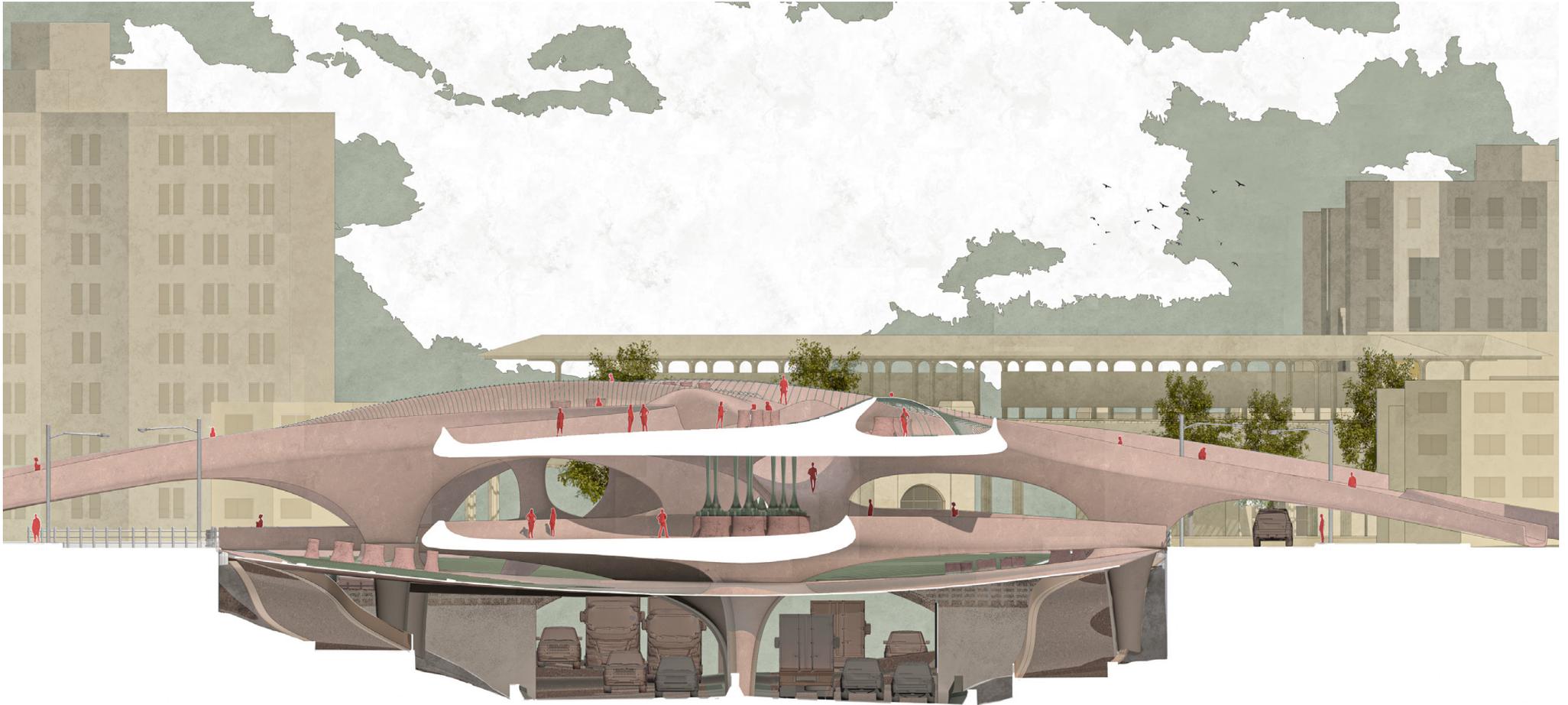
Glulam Beam Timber Structures ;
Clay Plastered Tensile fabric wrapped around it



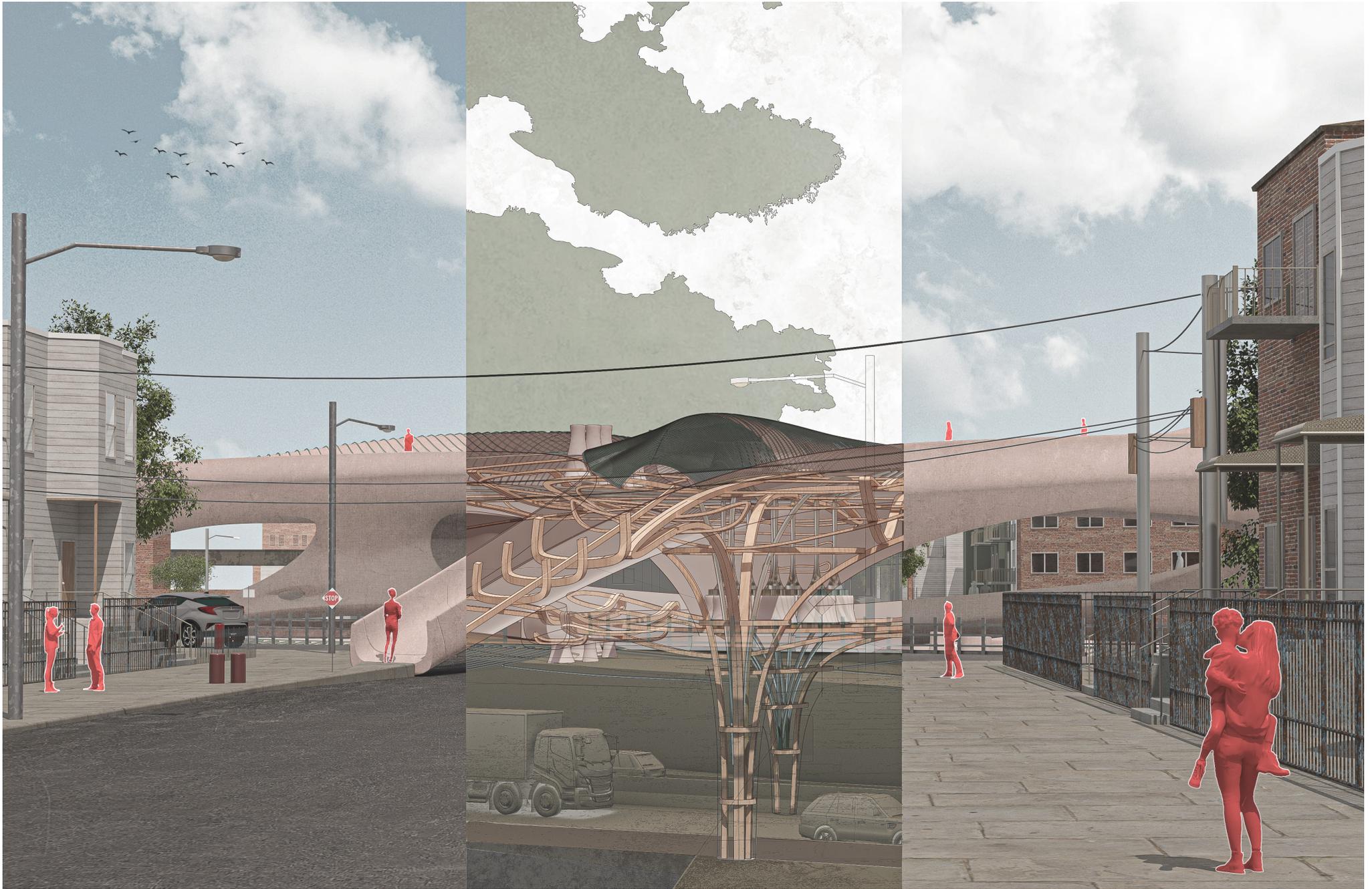
Composite Structure - Form Development Process



Relinking the Bronx
Site: Parkchester, NY



The design takes into account the varying elevations of the surrounding context, resulting in a dynamic and multi-layered structure.



Multiple Layers within and around the Structure - Street level

03.

ANTHROPOCENE MUSEUM

Re-inscribing New York City

*Kabage Karanje & Stella Mutegi Studio
Individual Project - Advanced Studio IV
Summer 2022*

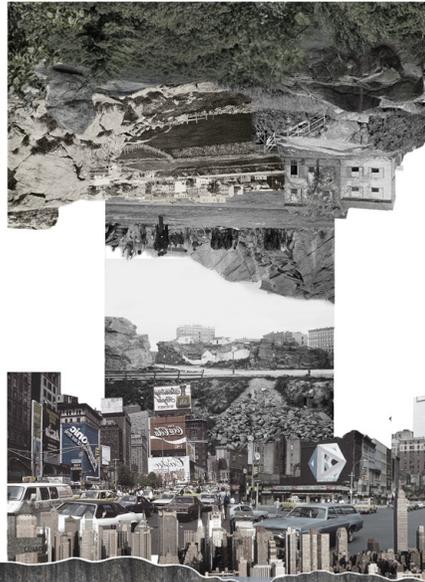
From an architectural and broader city re-inscribing standpoint, this studio extended its 'grammars of geology' to re-assess, re-evaluate, re-dress and re-imagine museum mapping and making in the age of the Anthropocentric. It cautiously harnessed and recalibrate these tools to address the museum from the perspective of present day evolving customary practices. That is, from the artifactual formations of new objects of meaning and transcendence.

The project re-assessed practices of 'museum' re-reading to factor in the nuances of human trauma, resistance, and healing on the multiple socio-geological and architectural scales necessary to shape what a museum and, by extension, the reading of civilization in this epoch could and probably should be.





Glacial Movement



Terrain Transformation



This project examines the geology and geography of New York historically, comprehending both its natural (Glacial Movement) and manmade alteration (Urbanization), further examines the results of these transitions and how we might benefit from them.

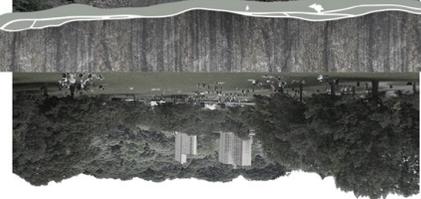
The only landscape that underwent natural change and endured human intervention is Inwood Hills in Upper Manhattan. Strong hints about the glacier track and how the Lenape people lived there were thus left behind.



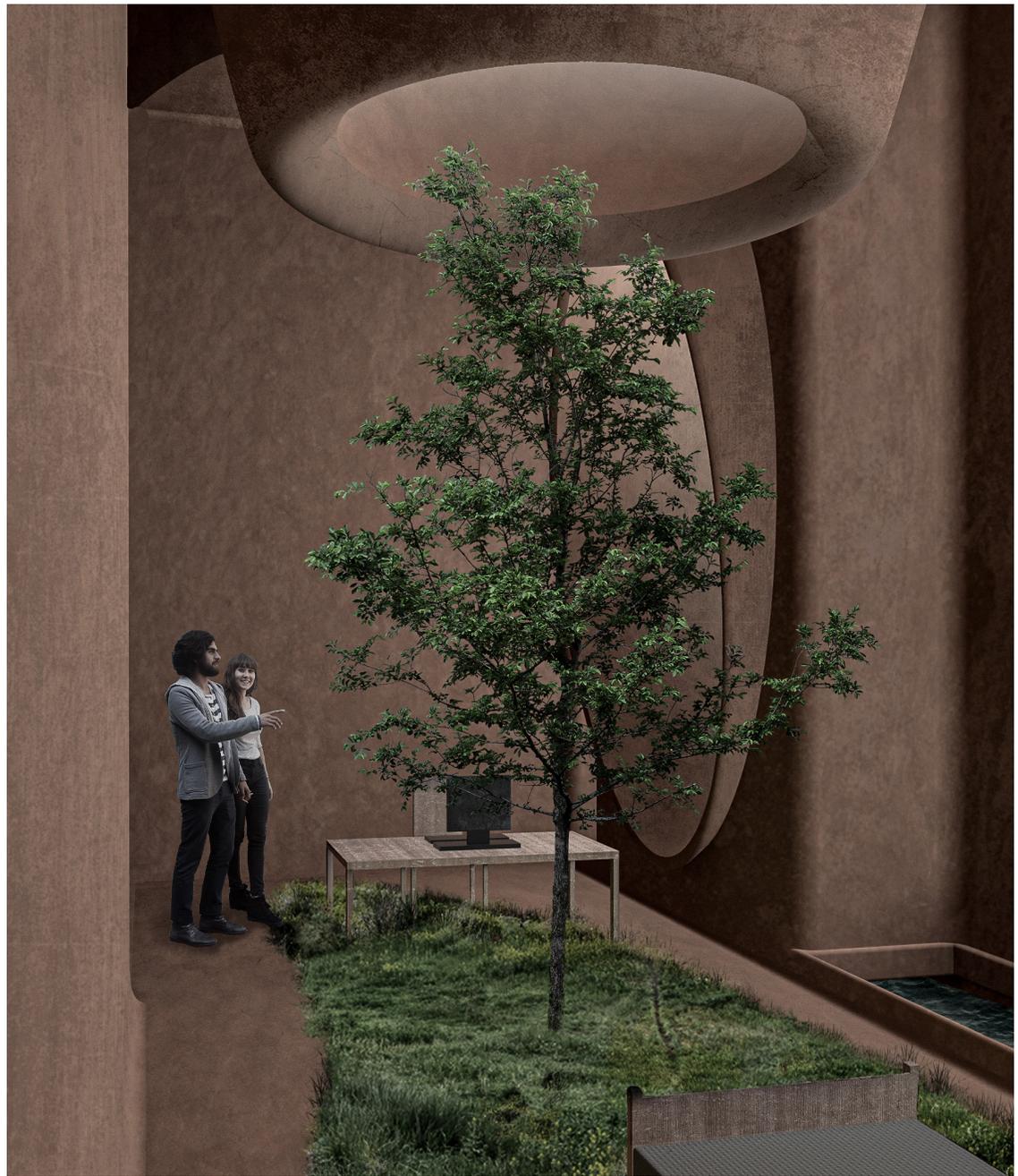
Anthropocene



Manmade - Caves



The Project transforms these narratives into a spatial experience that leads to a potentially urban-integrable anti-anthropocene solution. One of the many abandoned man-made caves in the City is Freedom Tunnel, where the Project is situated. Along the same avenue as Inwood Hills, this tunnel is located on the western edge of Manhattan, beneath Riverside Park.



Healing Space - New ways of Living

04.

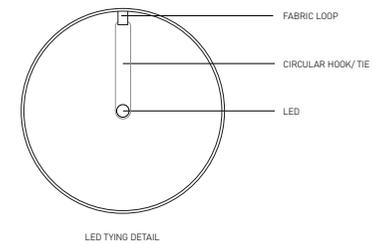
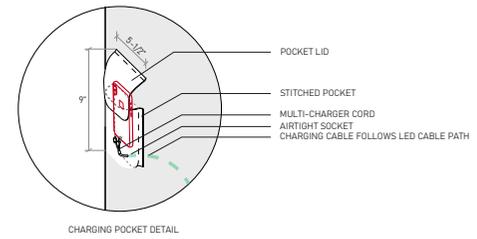
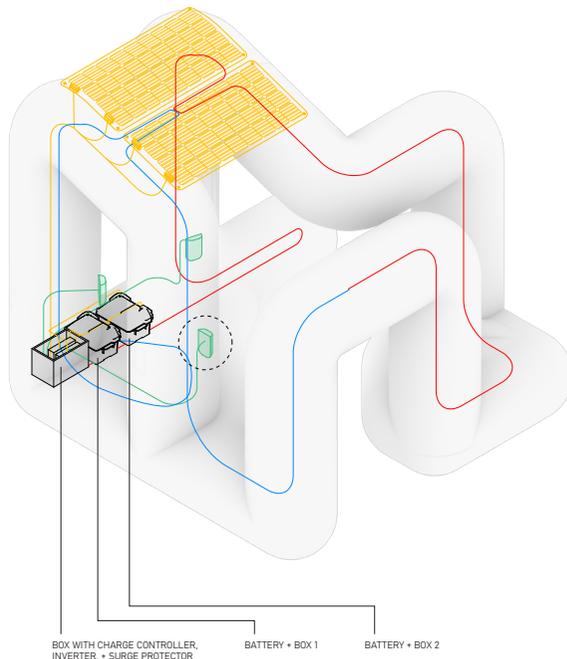
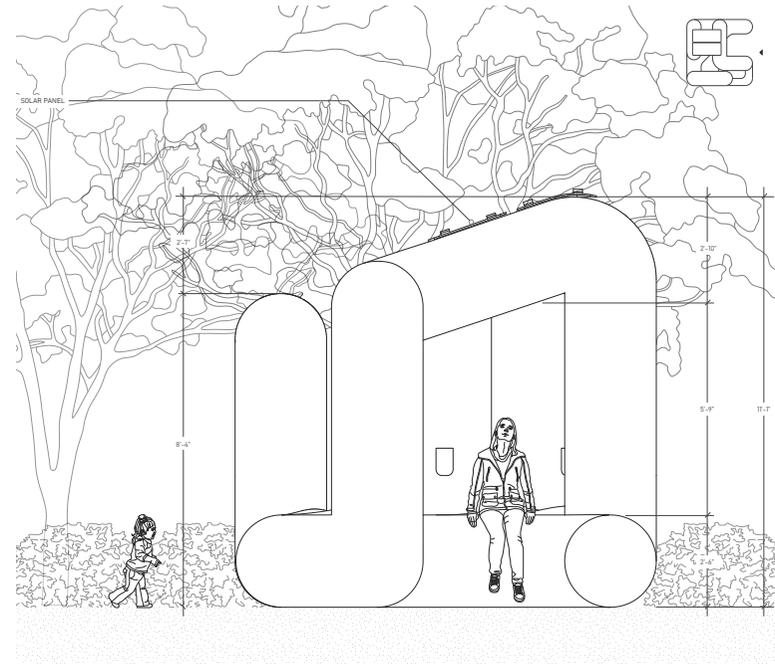
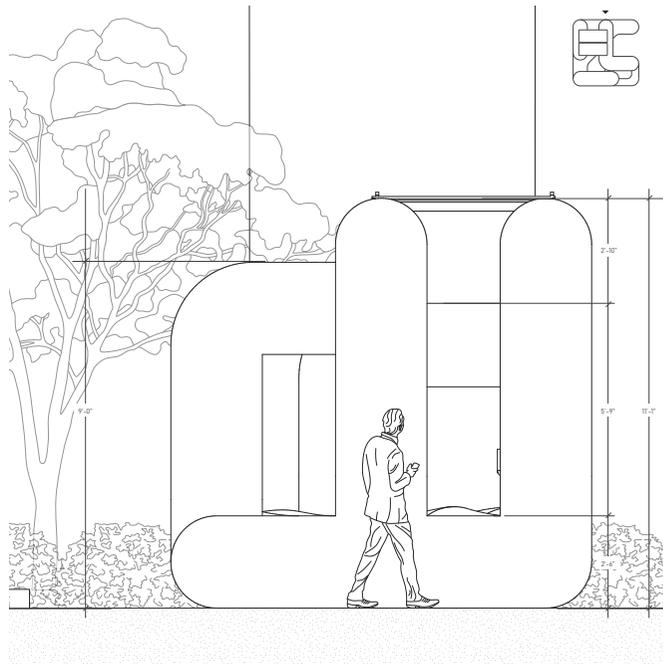
W O R M

Outside In Project

*Instructors: Laurie Hawkinson, Galia Solomnoff
Hubert Chang, Ray Panchari
Building Tech Elective - Spring 2023*

*Group Partners: Brennan Heyward, Samuel Bager, Kelly He
Daniel Li, Marina Guimaraes,
Nicholas Richards*









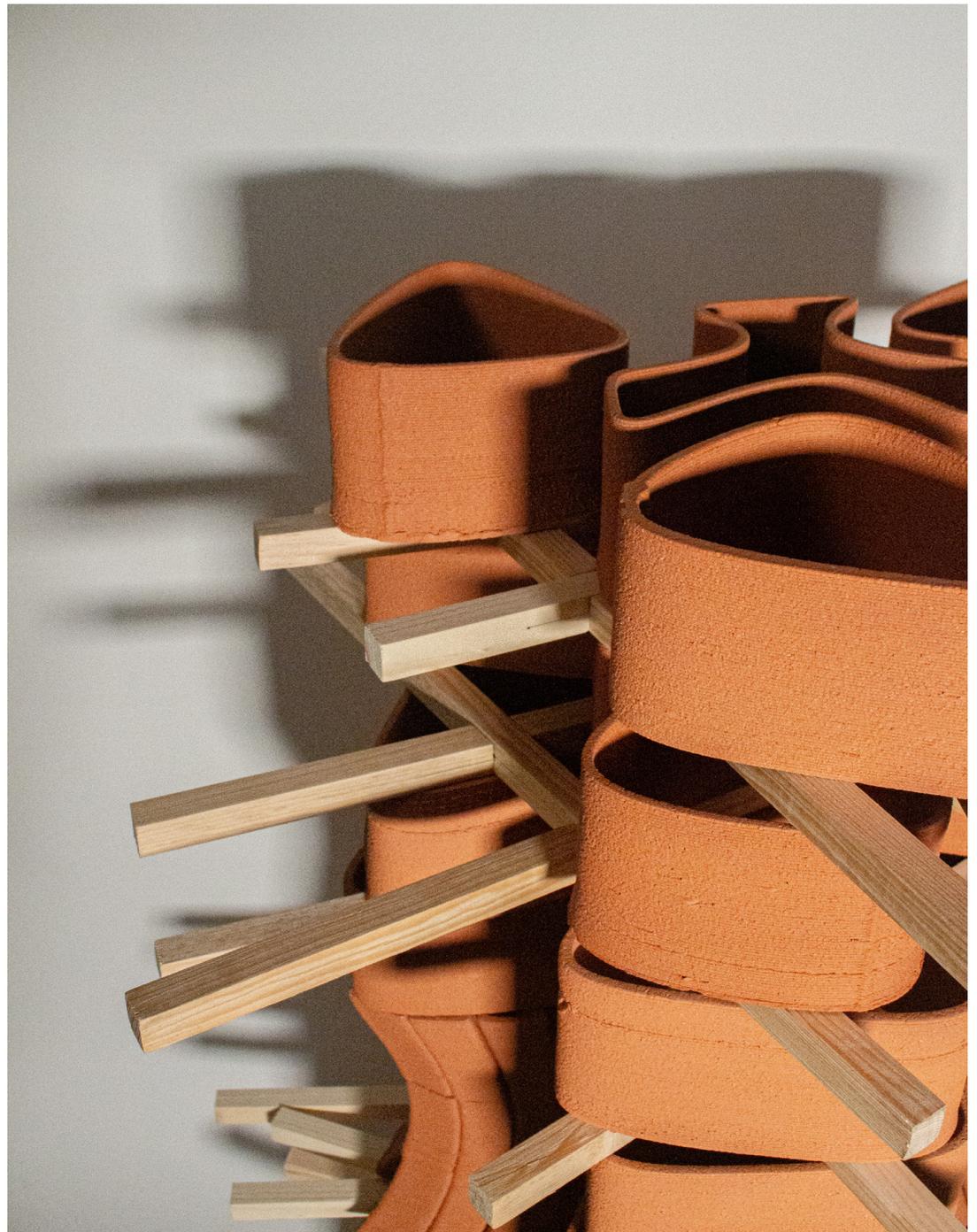
05.

CLAY COLUMN

1:1 Detailing and Fabrication

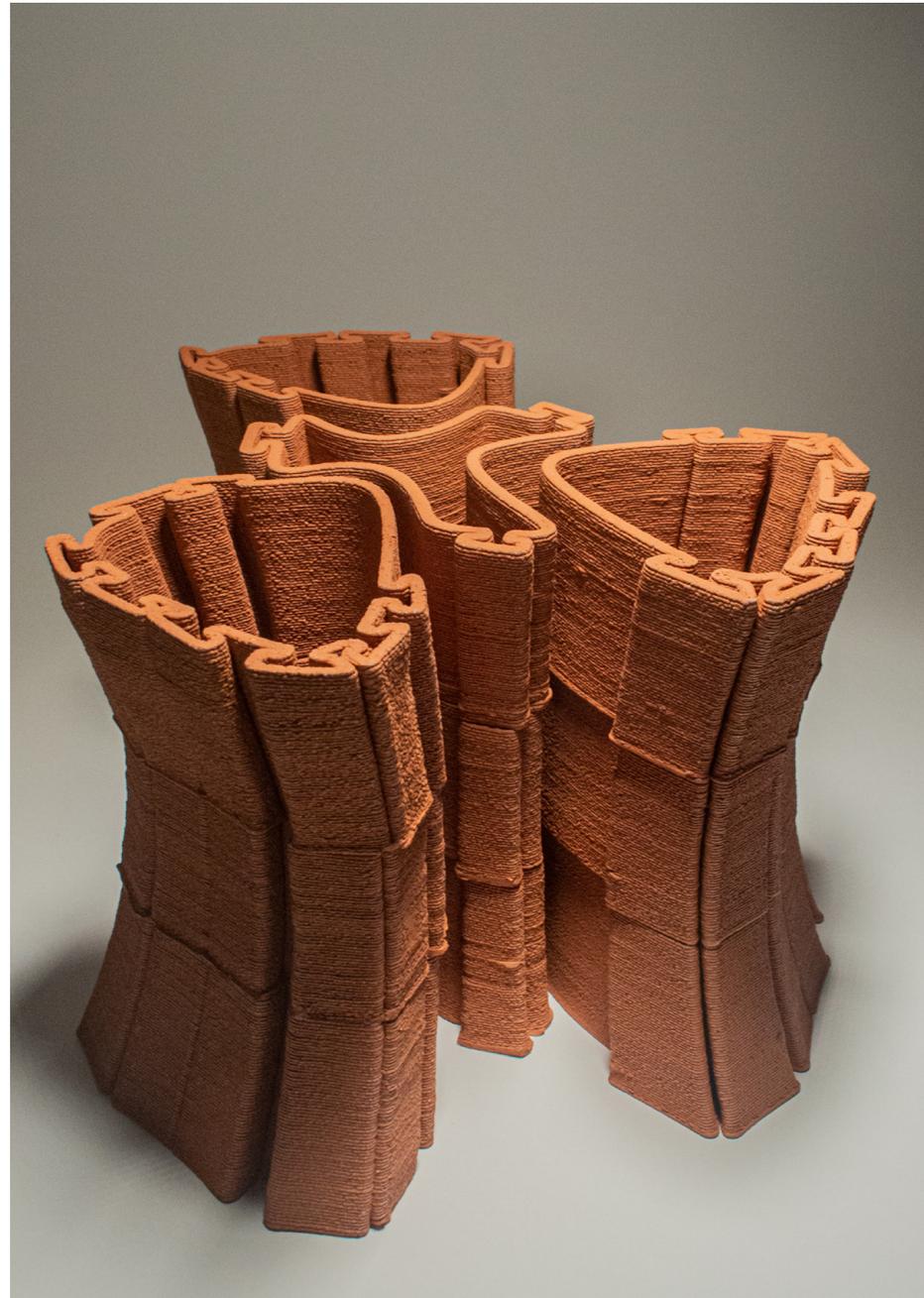
*Instructor: Zachary E. Mulitauaopele
Building Tech Elective - Fall 2022*

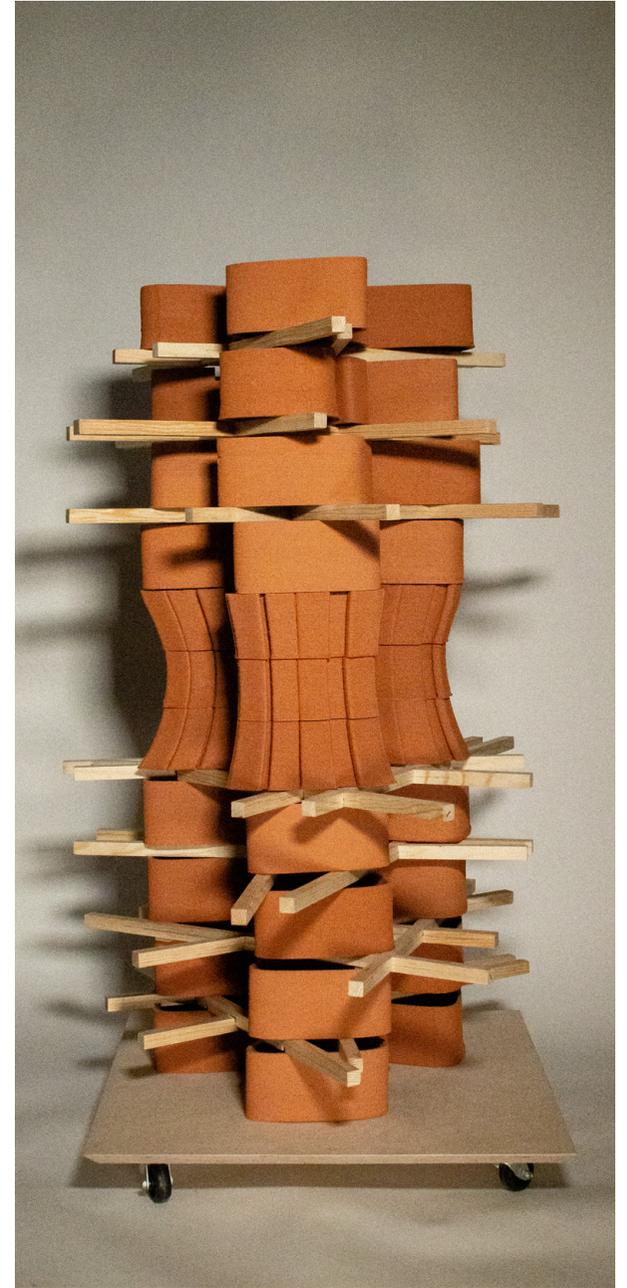
Group Partners: Chris Deegan





This project delves into innovative 3D printing techniques and aims to expand the boundaries of traditional manufacturing methods. Through experimentation and careful consideration of the structural properties of Wood and Clay, we hope to create a sustainable and visually compelling structure that challenges the conventional notions of building construction.







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