

Selected Works

Jacob Swanson

Pixelatrium

***Winner, Undergraduate
Advanced Studio Design Award
New Jersey School of Architecture***

*New York City, New York
Hotel and Craft Guild*

Located between the High Line and Hudson River Park at the edge of Chelsea, Pixelatrium connects these two iconic greenspaces. Formally a set of shifting pixelated modules that breaks down the distinction between interior and exterior, the project embraces the energy of the city with a structure-spanning central green atrium that welcomes visitors to explore its interior.

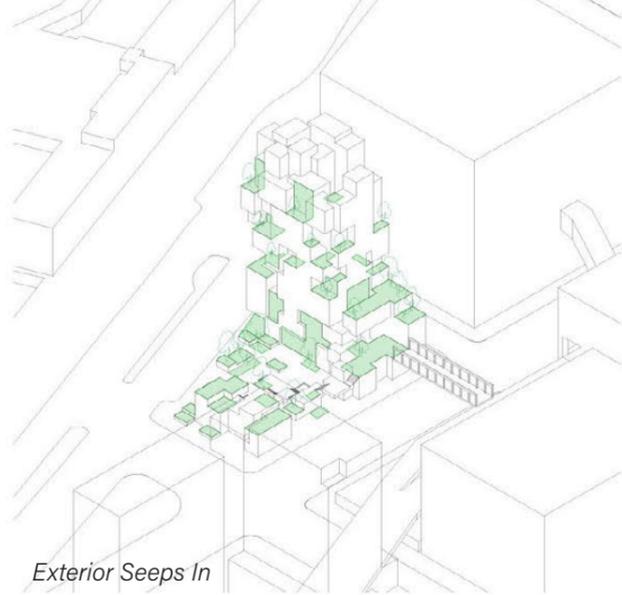
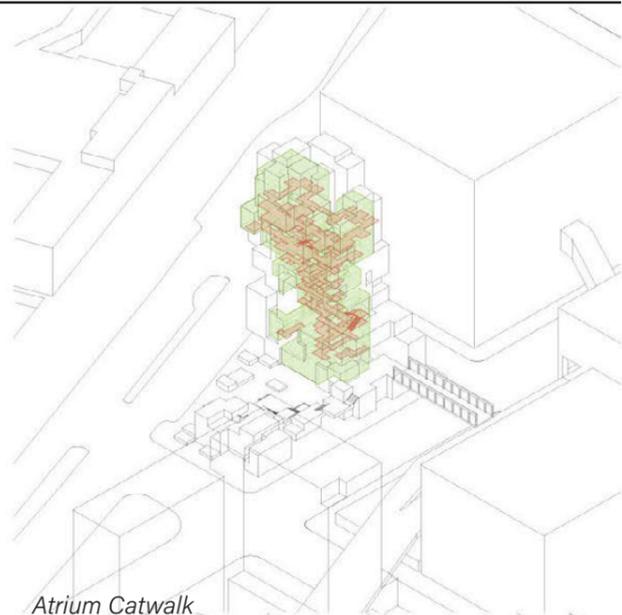
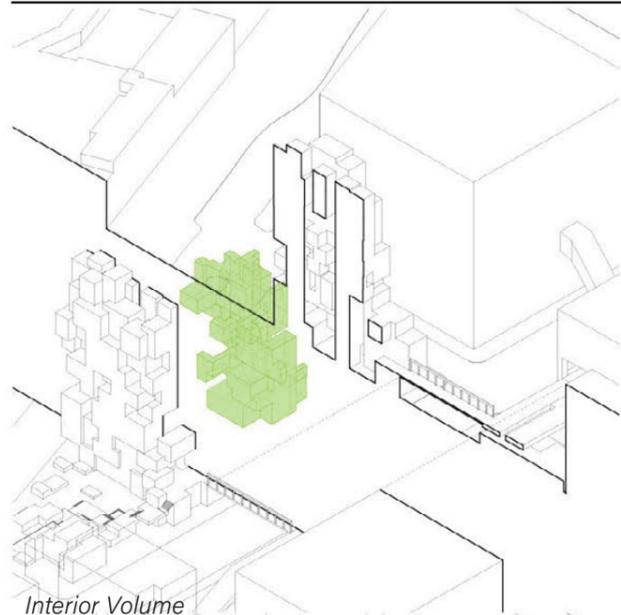
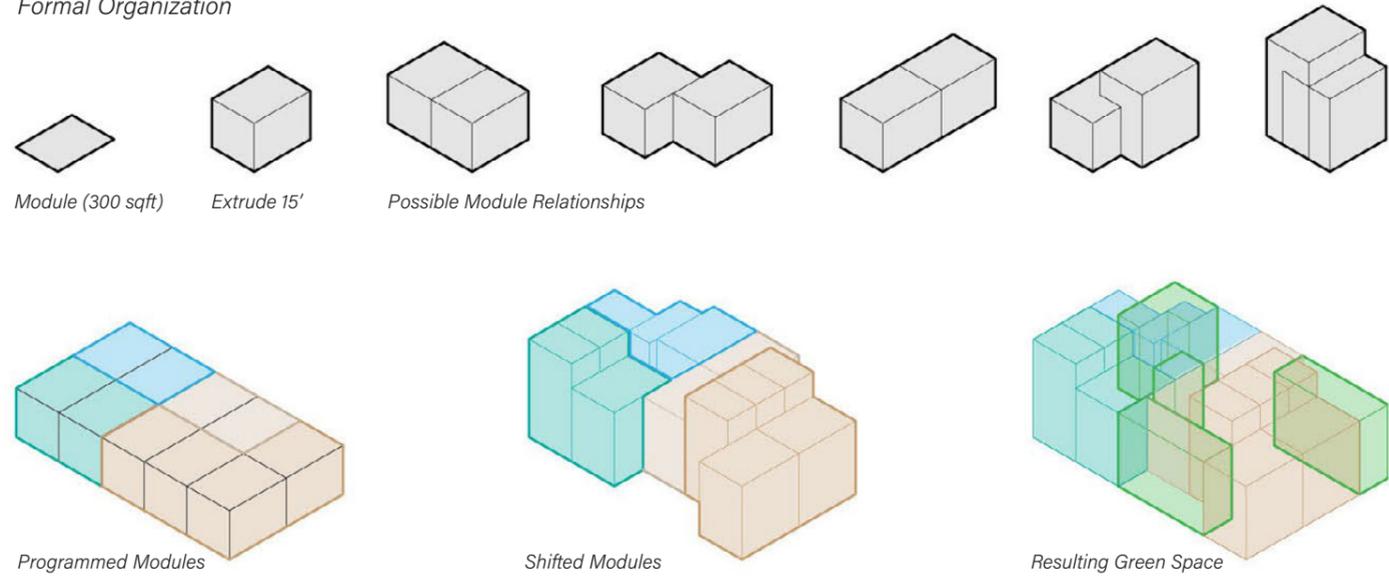
The massing seeks to preserve the High Line's existing relationship with the Hudson River – the nearby section is called the Hudson River Overlook – while activating the site as a gathering place, re-establishing the street wall along 14th St, 15th St, and 10th Ave.

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Formal Organization

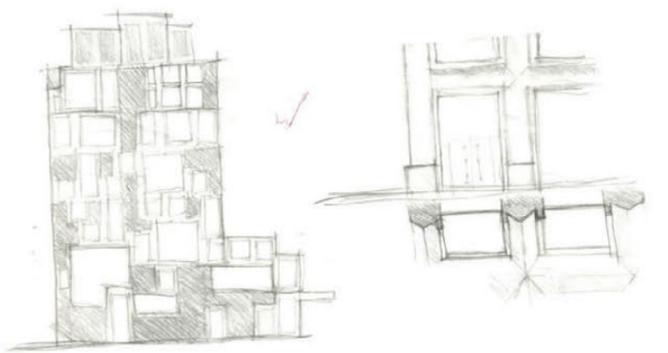
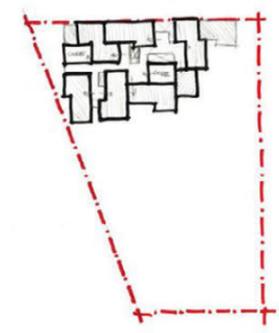


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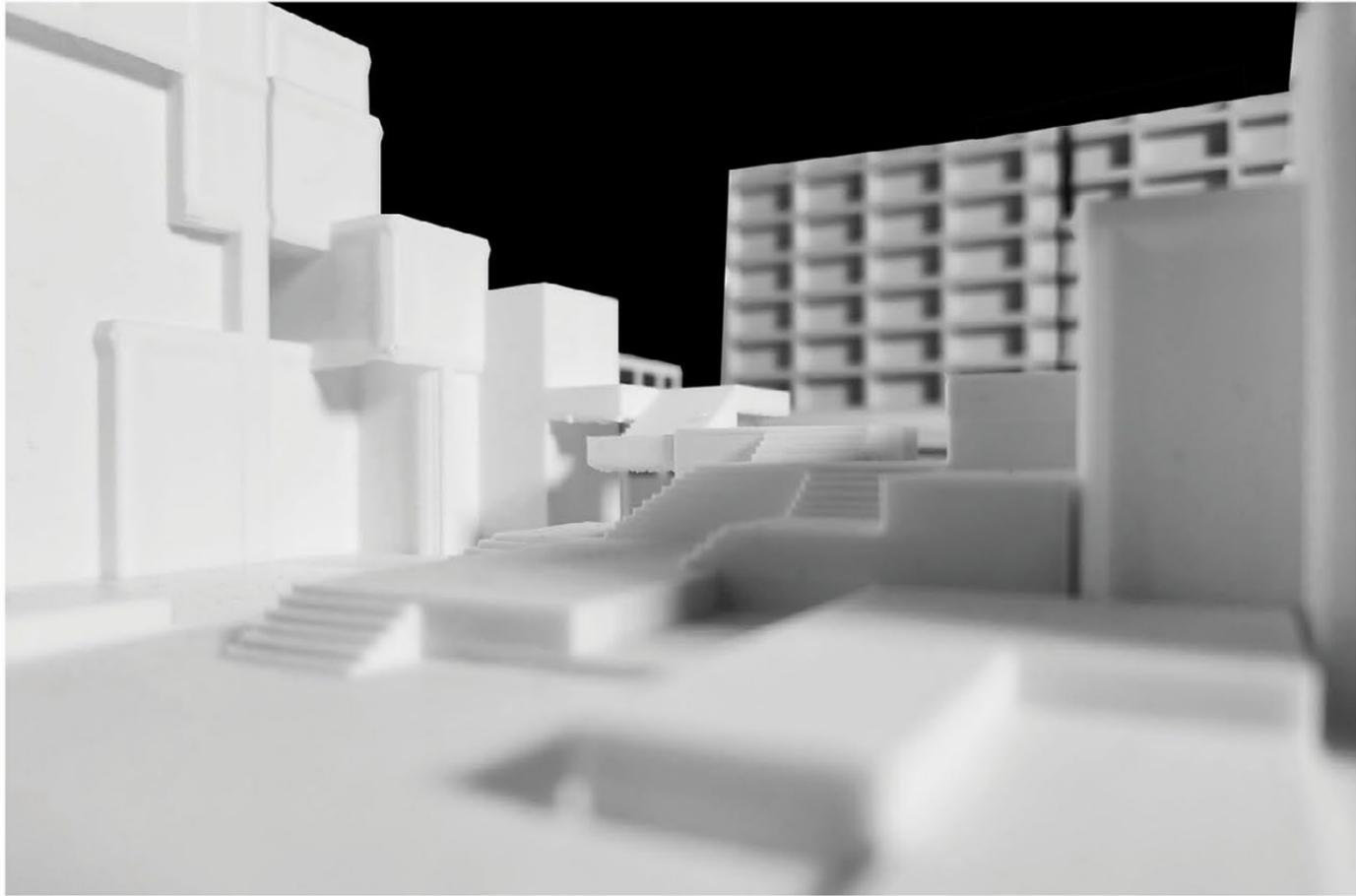


Looking North-West from the High Line

Process



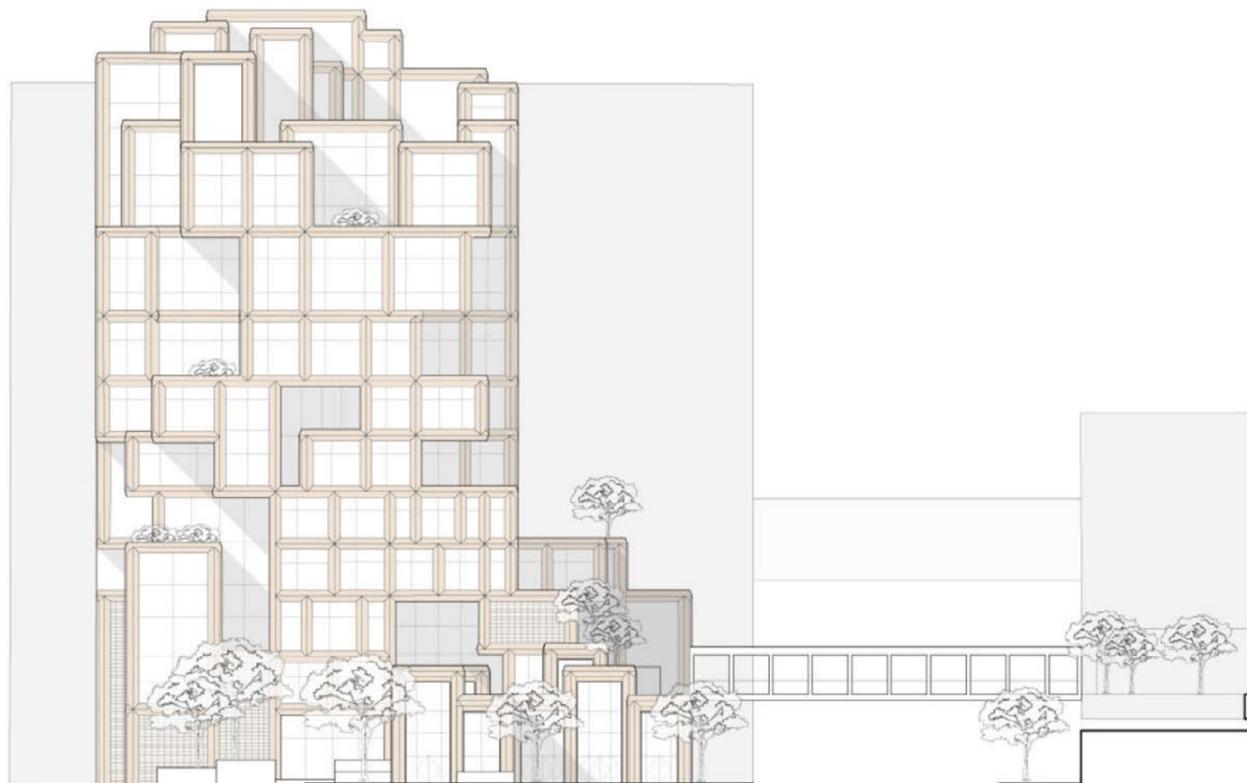
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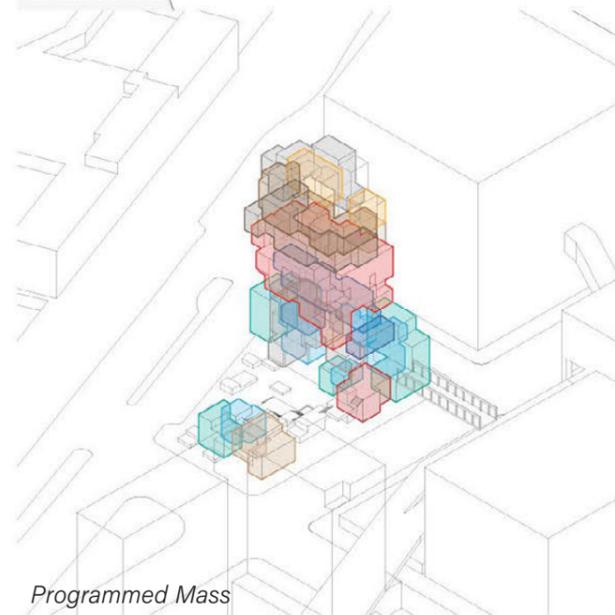
Plaza
14th Street Elevation



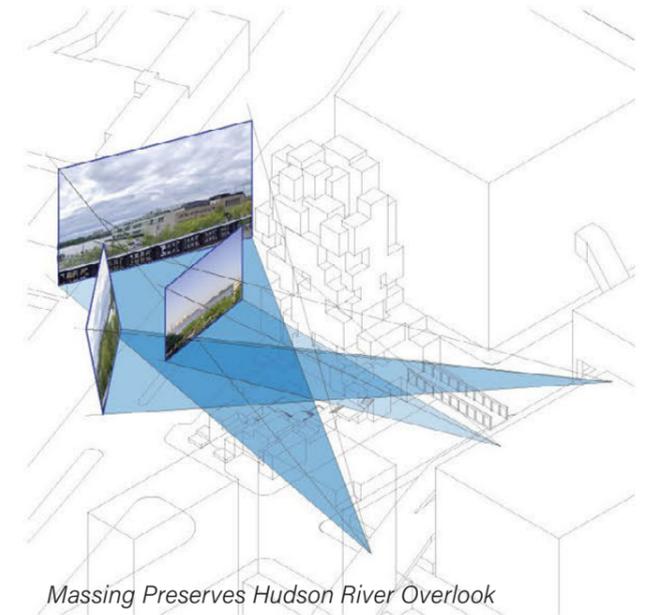
Ground Floor



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Programmed Mass



Massing Preserves Hudson River Overlook

Selected Works

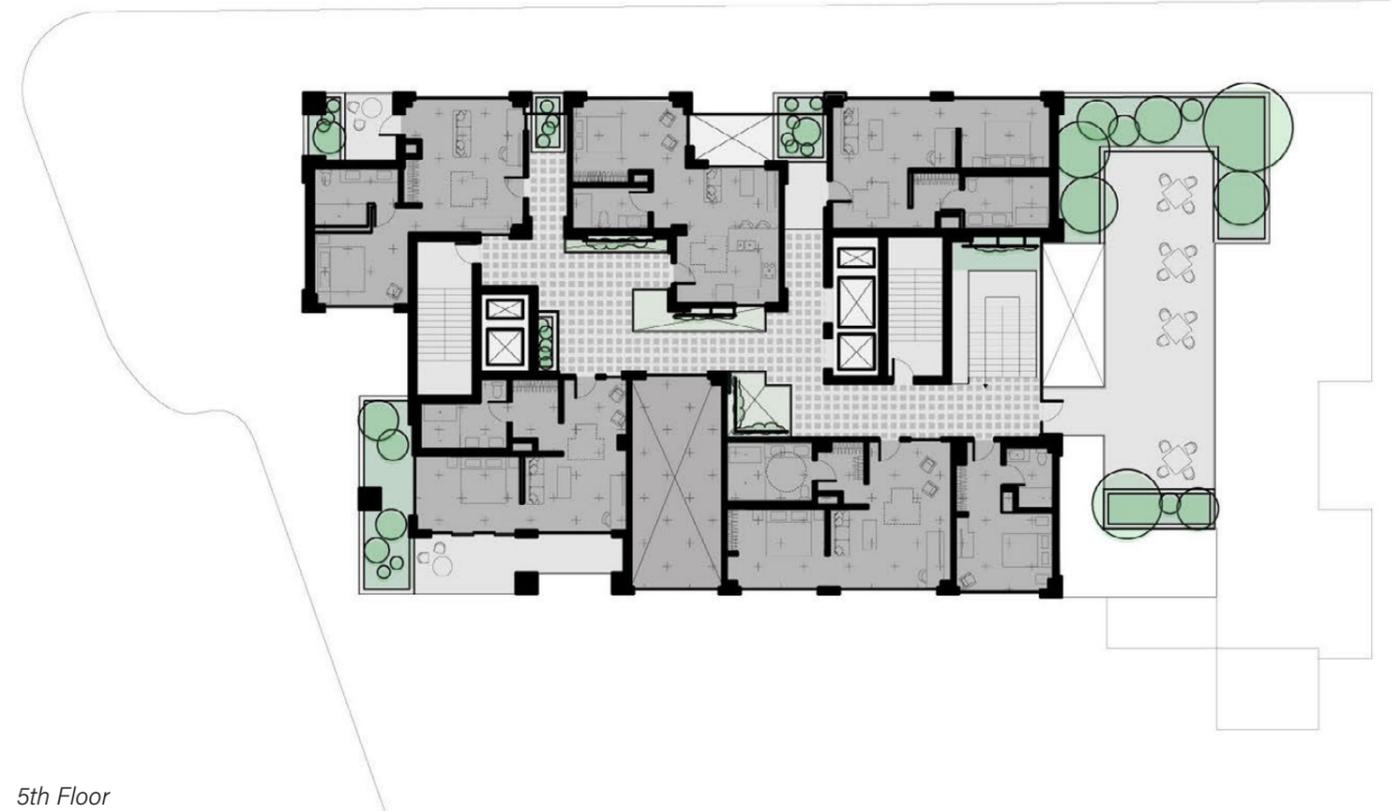


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6th Floor



5th Floor



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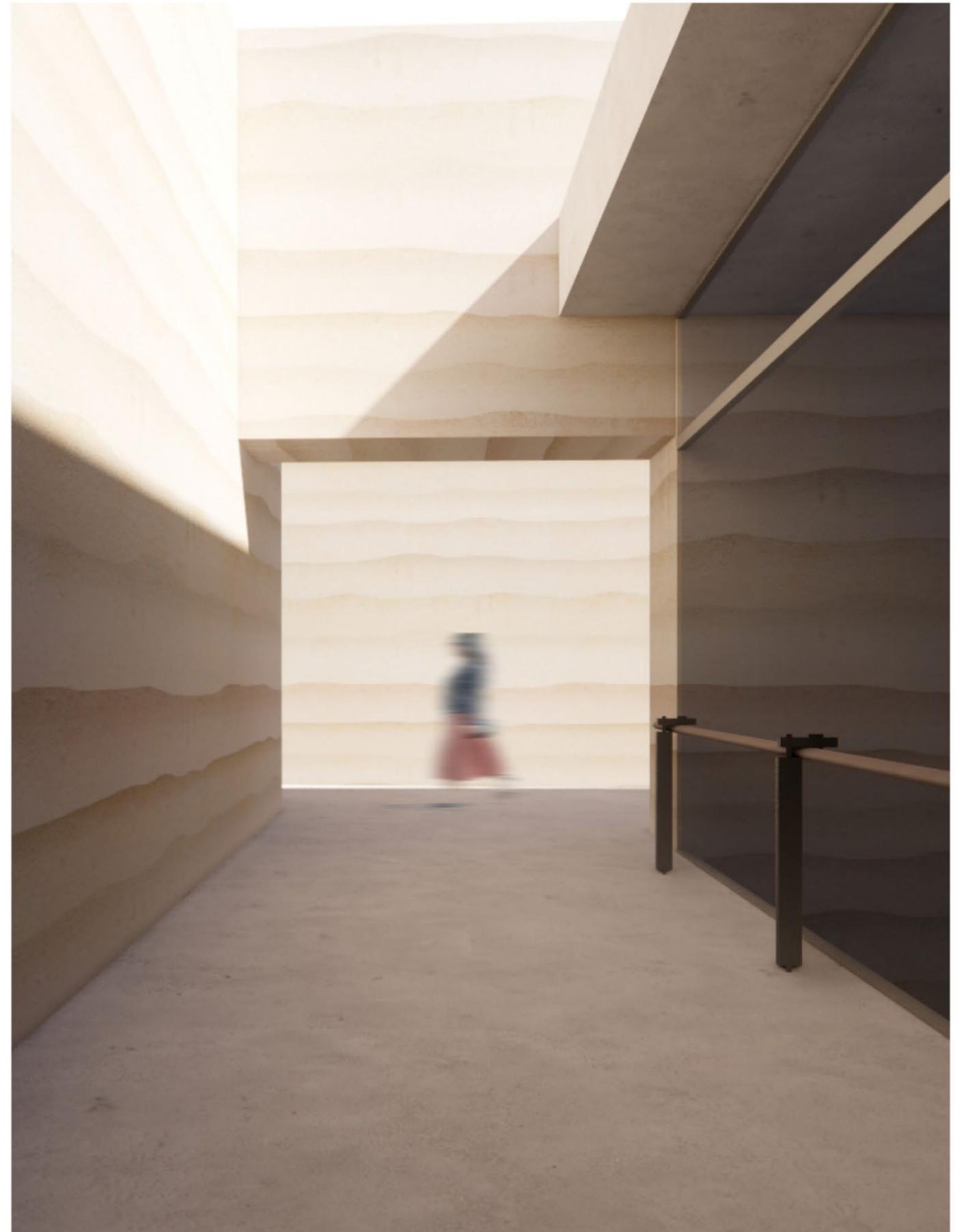
Venetian Vitrification

*Venice, Italy
Glass Art Complex*

Located in a current gap in the continuous boundary of Venice, Venetian Vitrification takes inspiration from the winding streets of the city and the physical transformation of silica sand to glass. The project expresses as series of linear volumes that slide into the lagoon, creating a singular landmark that recalls surrounding urban compression-expansion patterns.

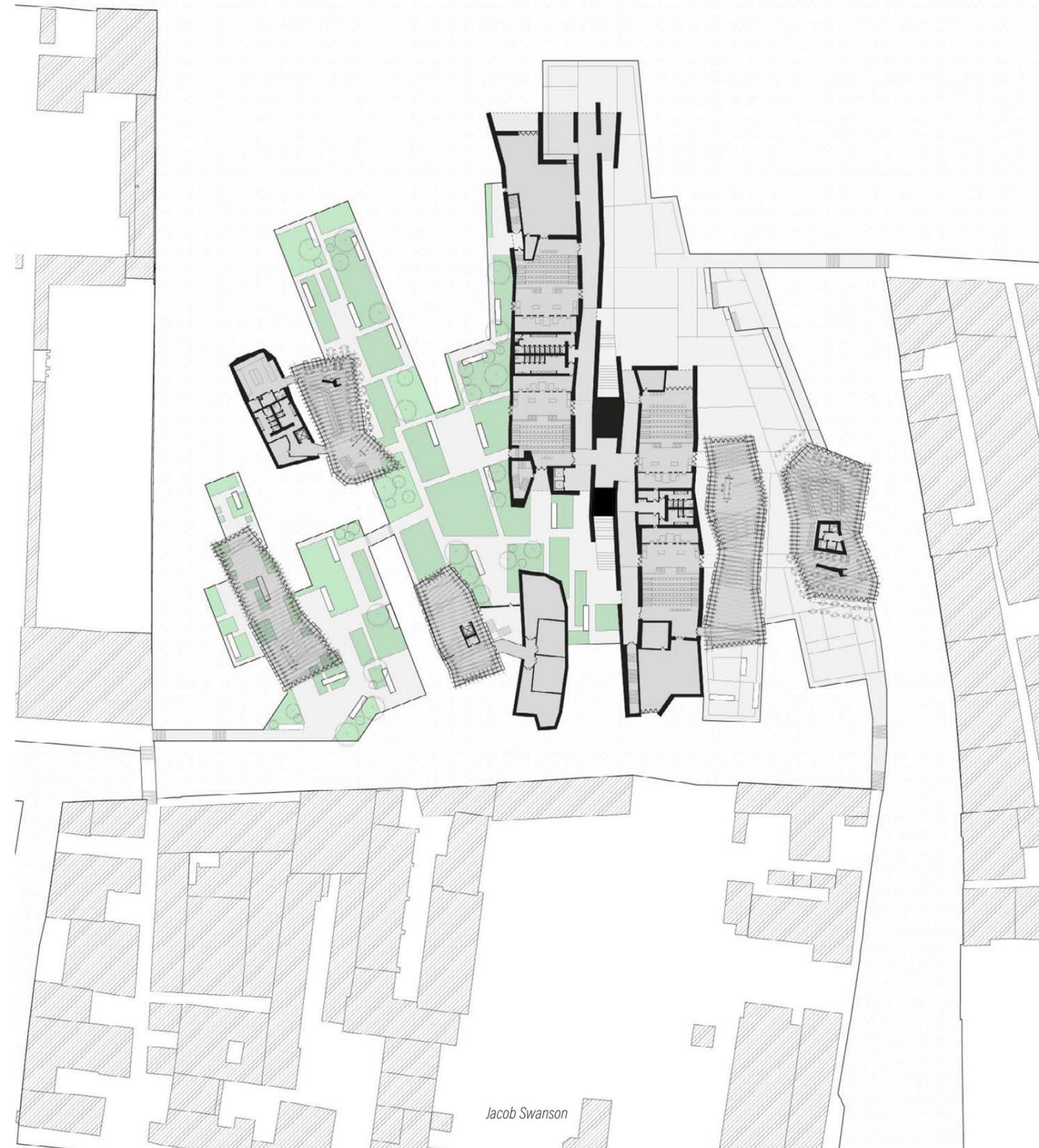
The glass production programs (the glass blowing studios and their supporting spaces) are expressed as heavy, enclosed volumes that divide the site into an urban *campo* to the east and gardens to the west. The social and display programs (*trattoria*, restaurant, and galleries), meanwhile, are light, airy, double-skinned wooden pavilions. The mass of the wall has been hollowed out with an eccentric roof enclosure mimicking the physical structure characteristic of glass, an amorphous solid that does not maintain a regular crystalline structure.

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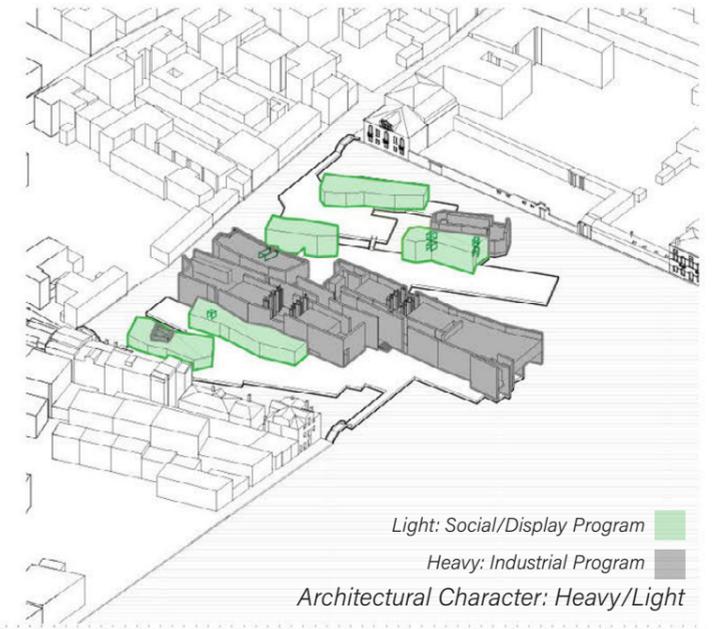
Site Plan 



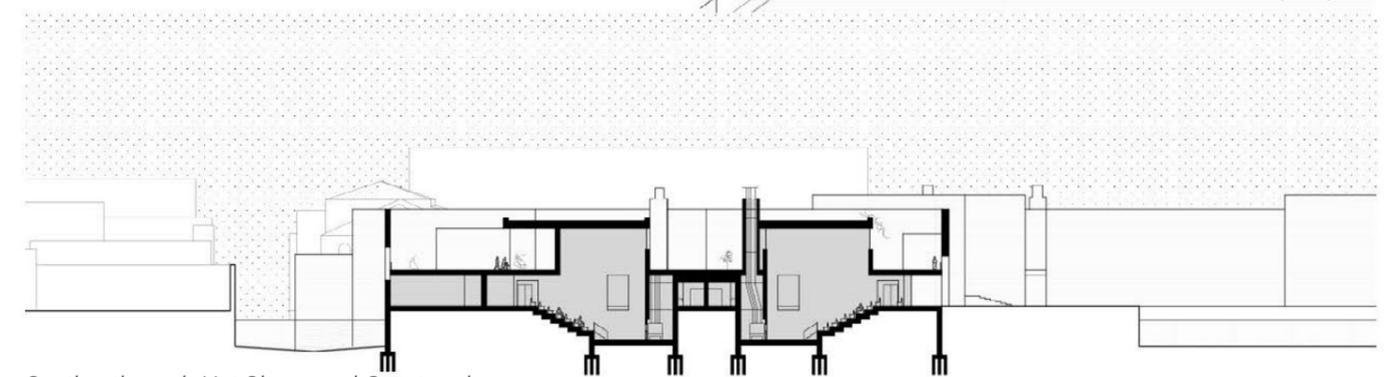
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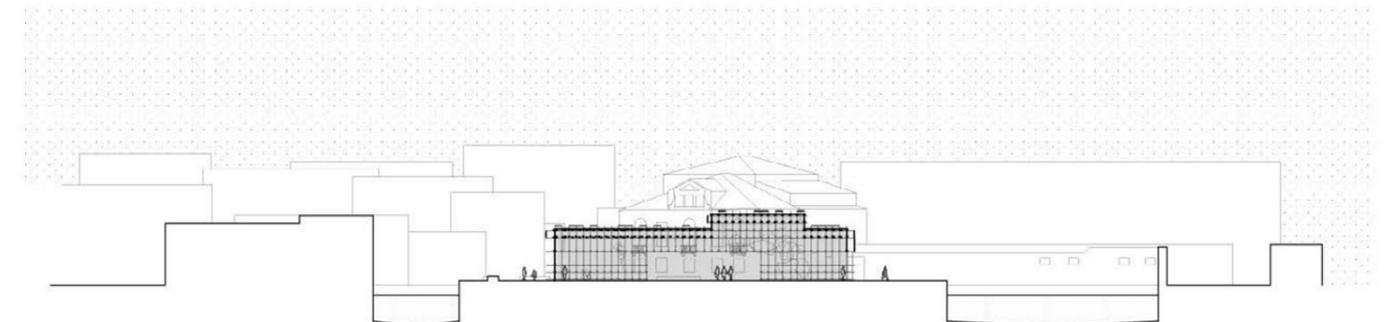
Transformations: Vitrification



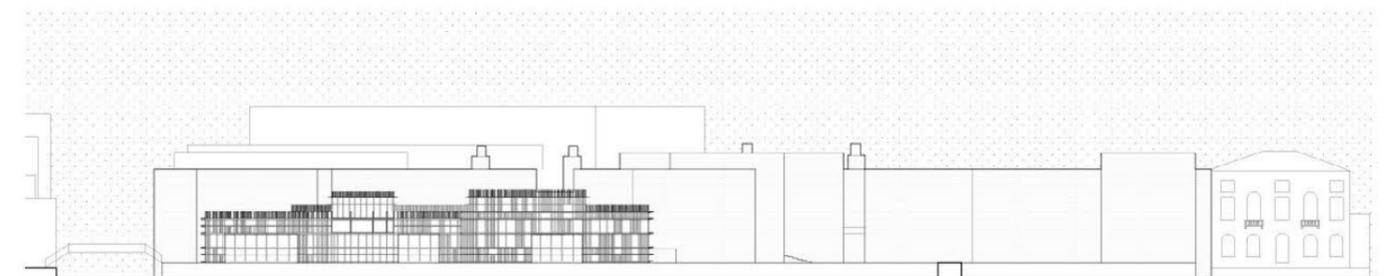
Light: Social/Display Program 
Heavy: Industrial Program 
Architectural Character: Heavy/Light



Section through Hot Shops and Courtyards

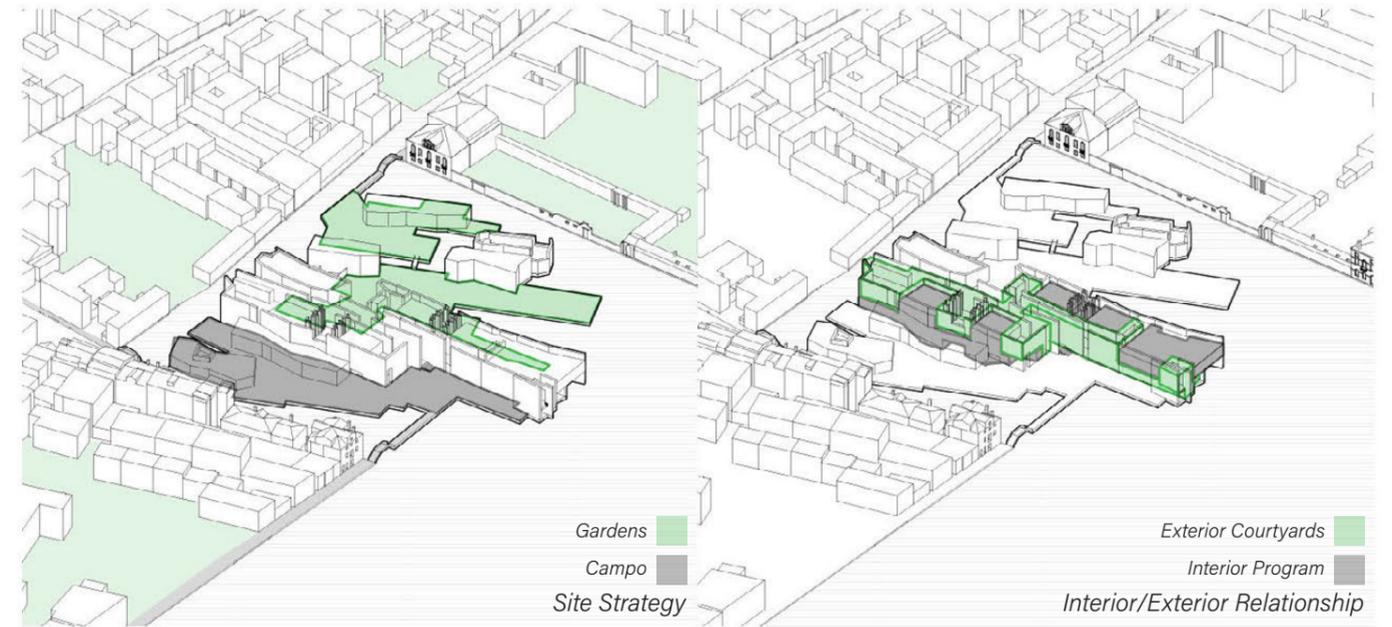


Section through Garden Gallery



East Elevation

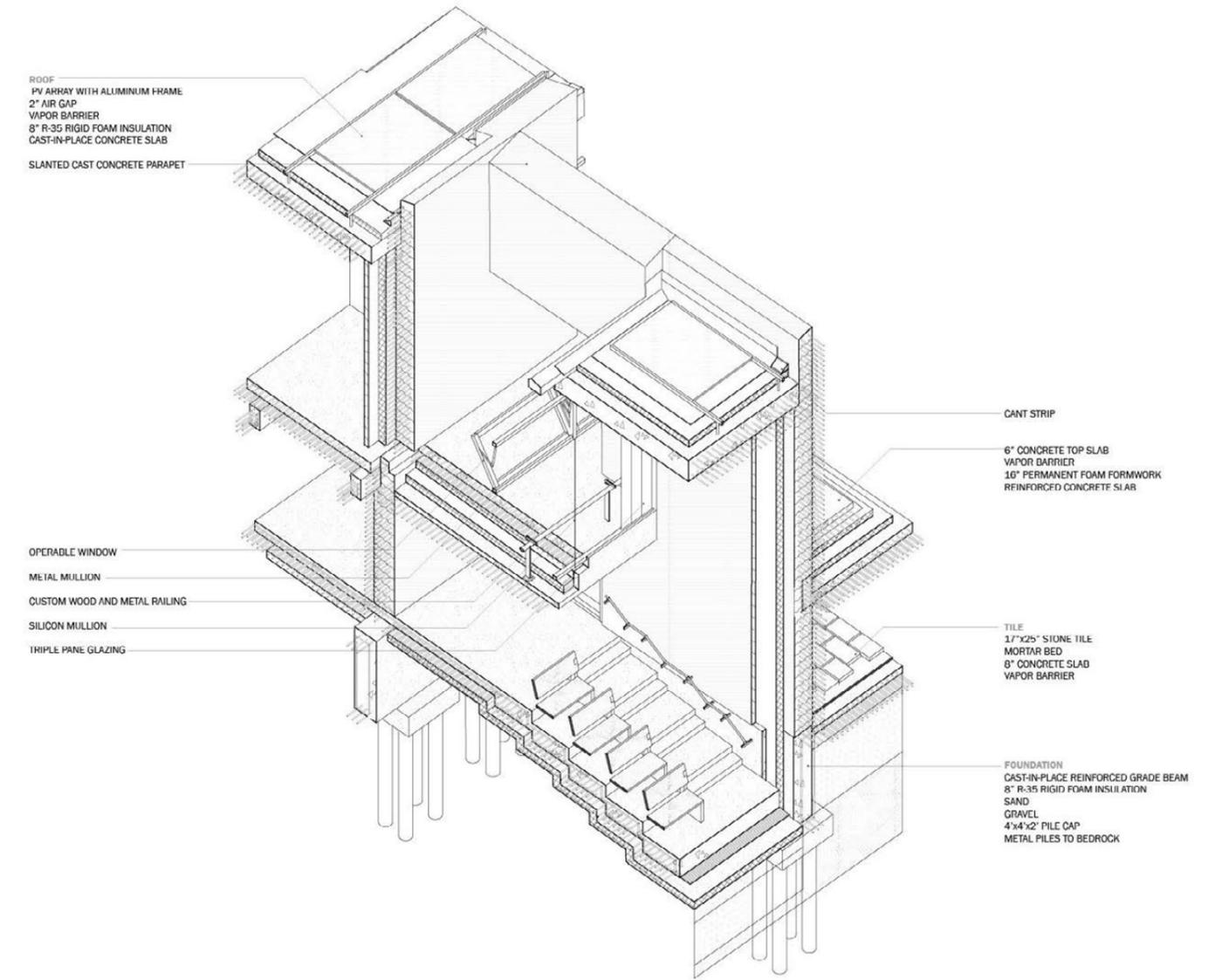
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Technical Axonometric



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Under the Power Lines

*Lyndhurst, New Jersey
Bird Sanctuary*

Under the Power Lines aims to complicate perceptions of the relationship between the human and non-human, moving past easy oppositional framings towards a more contingent and dialectical one.

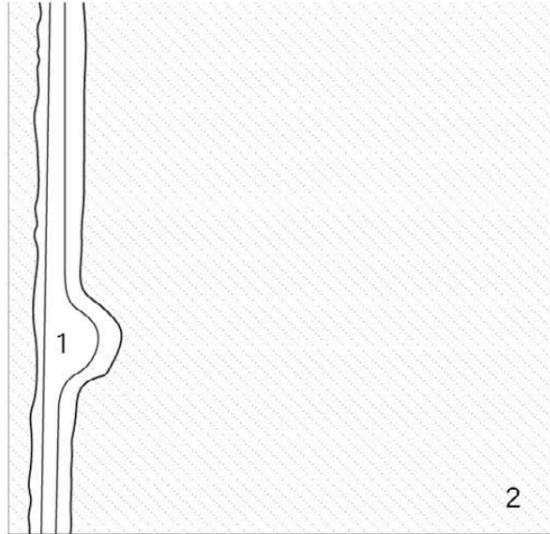
Appropriating the aesthetic language of the power lines, the veins that carry the lifeblood of contemporary life, with a tensegrity/gerberette structural system for a bird hospital, nesting structures, and boardwalk heightens the bizarre quality of the Meadowlands, undermines the perceived permanence of existing infrastructures, and asks whether structures for non-humans are infrastructural.

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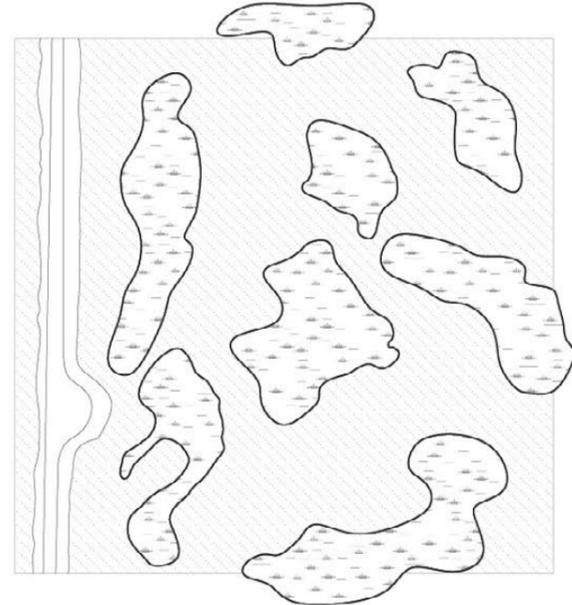


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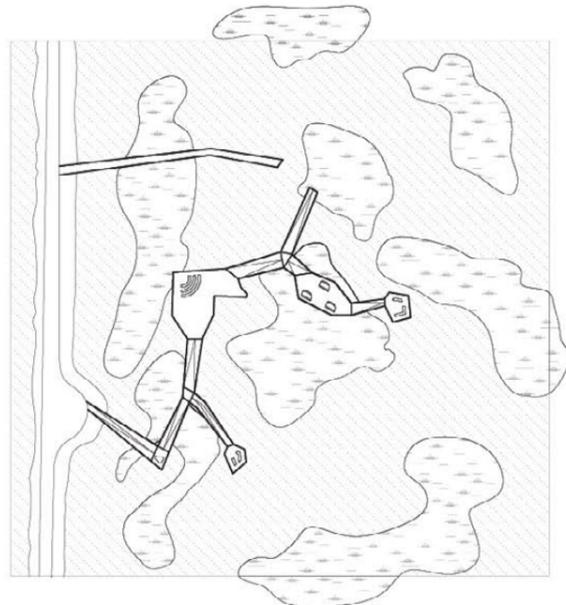
Site Development



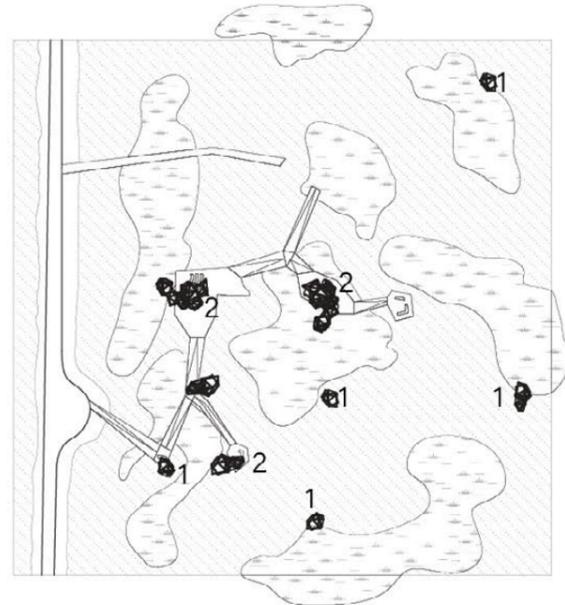
Current Condition
1 Access Road
2 Hackensack River



Restored Marshland

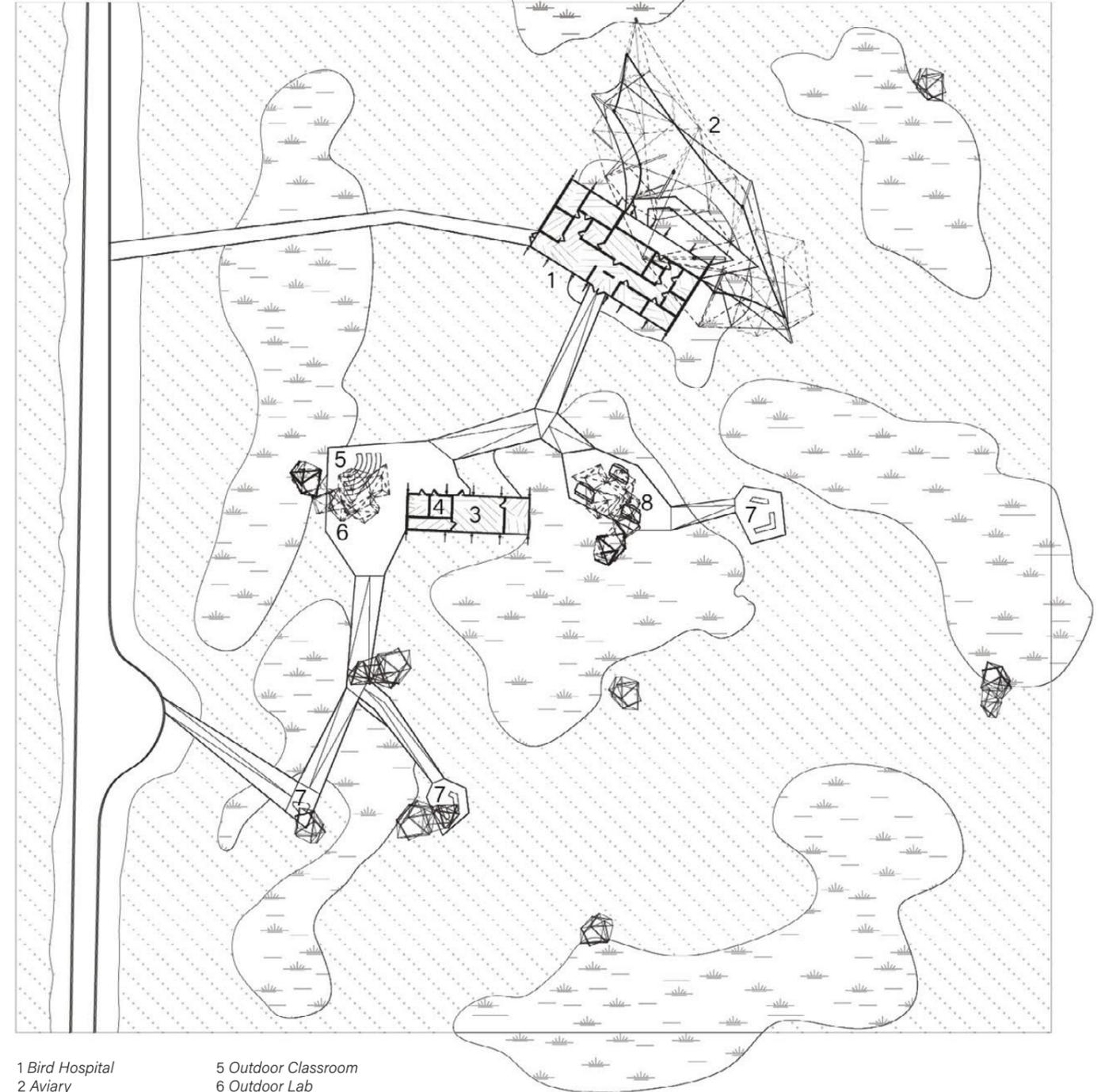


Boardwalk
Seating



1 Bird Nesting Structures
2 Shades Structures

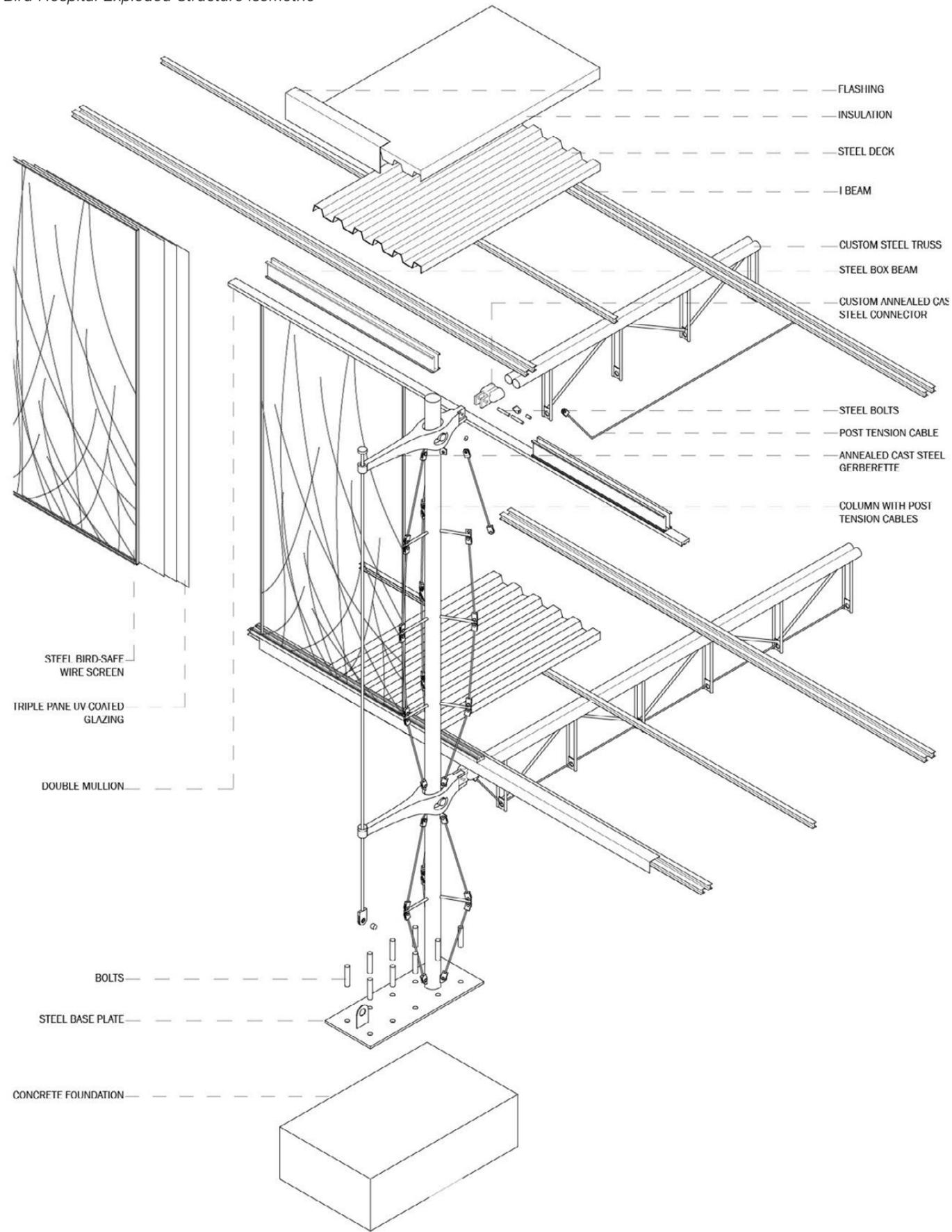
Site Plan 



1 Bird Hospital
2 Aviary
3 Offices
4 Bathrooms

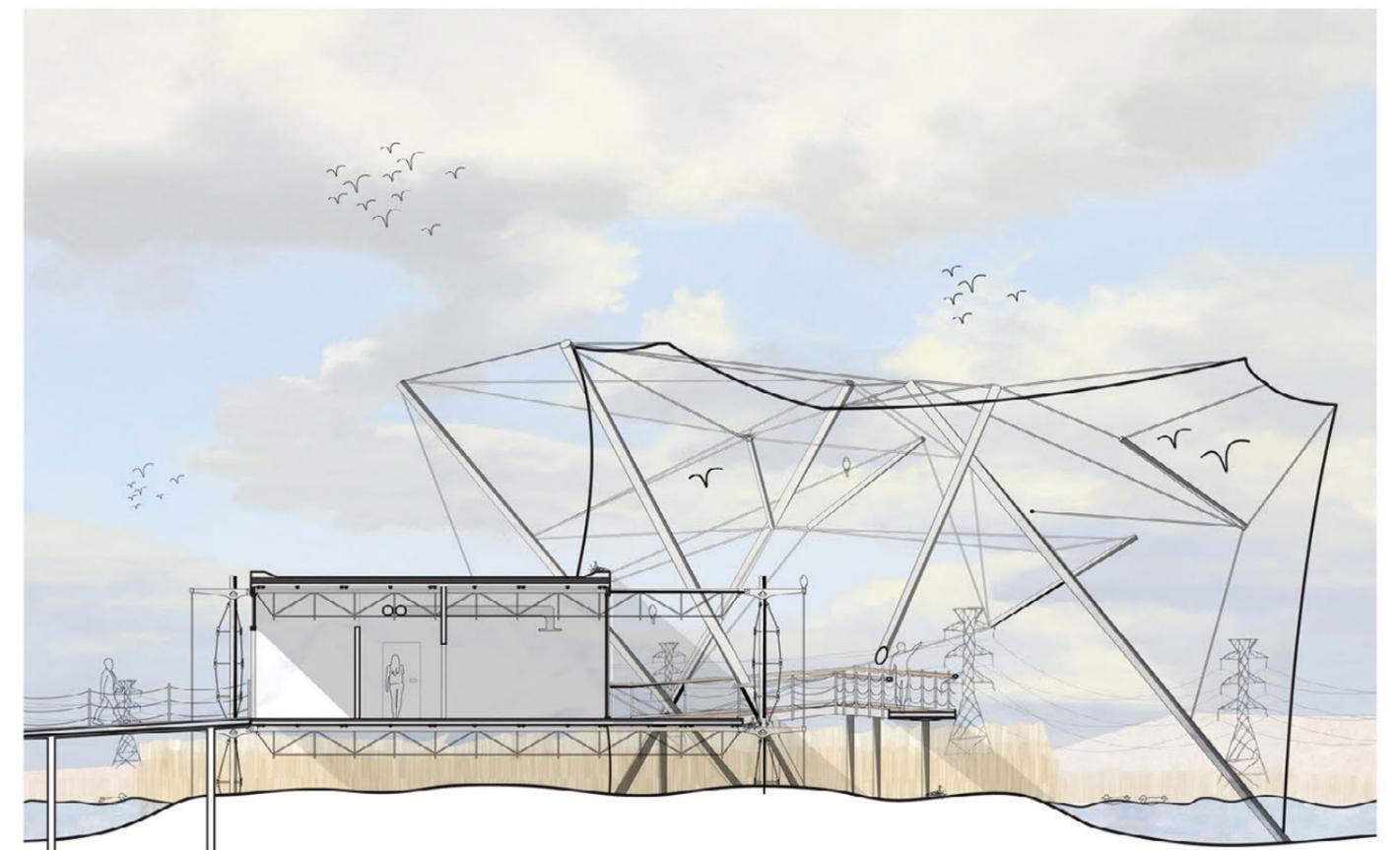
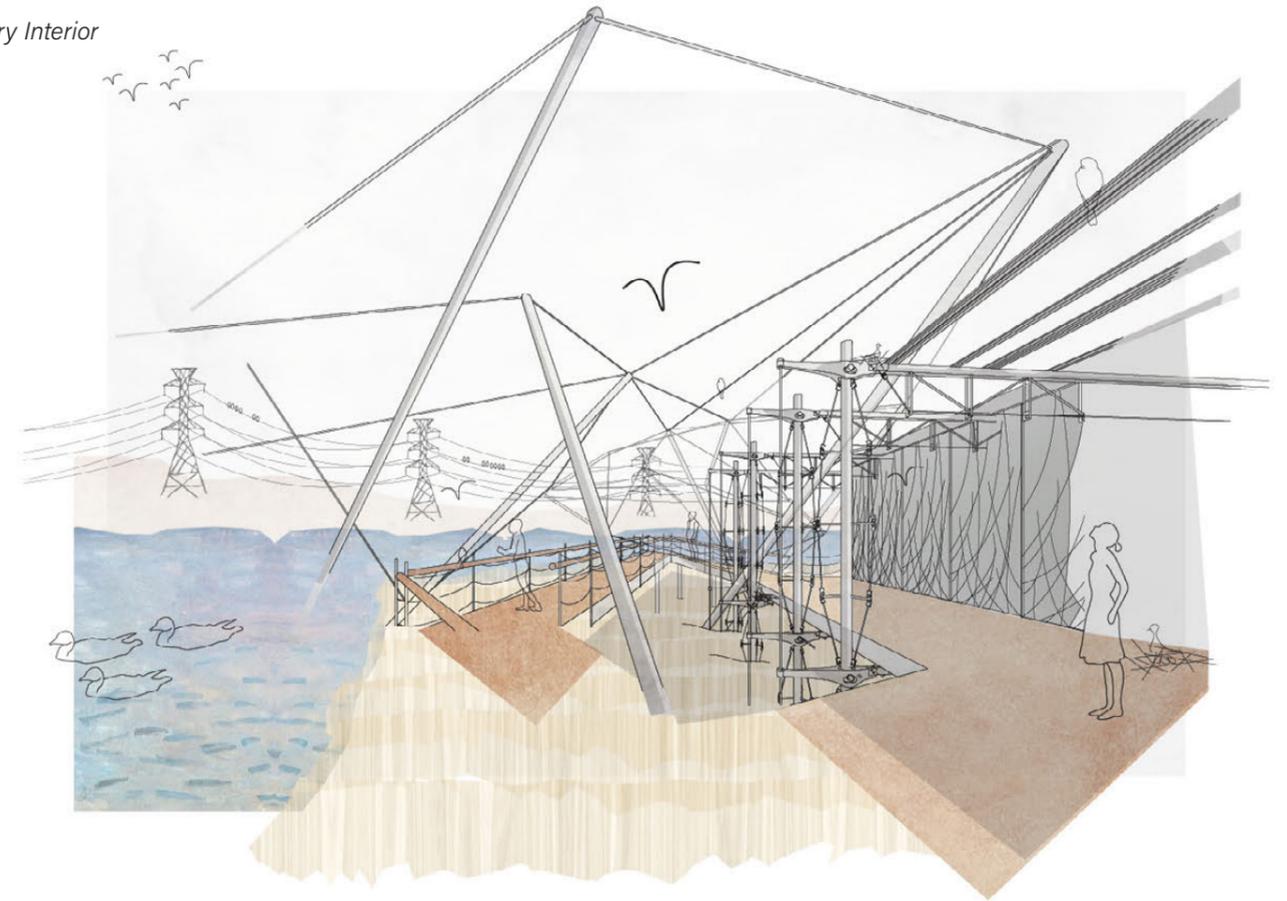
5 Outdoor Classroom
6 Outdoor Lab
7 Seating
8 Picnic Tables

Bird Hospital Exploded Structure Isometric



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Aviary Interior



Bird Hospital Section

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Frihamnen Master Plan

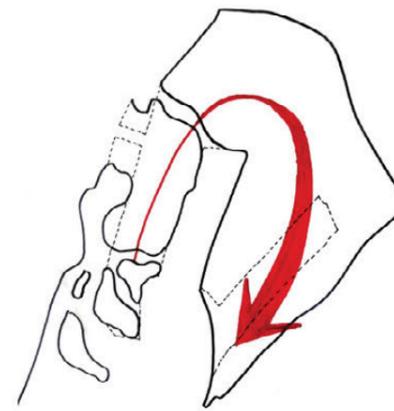
Gothenburg, Sweden
Master Plan

Connecting Göteborg, Sweden's dense 17th century Centrum with the less dense, more contemporary Backaplan on the northern banks of the Göta älv, This proposal redevelops the old port of Frihamnen using a series of increasingly intense urban experiences that welcome the river into everyday life.

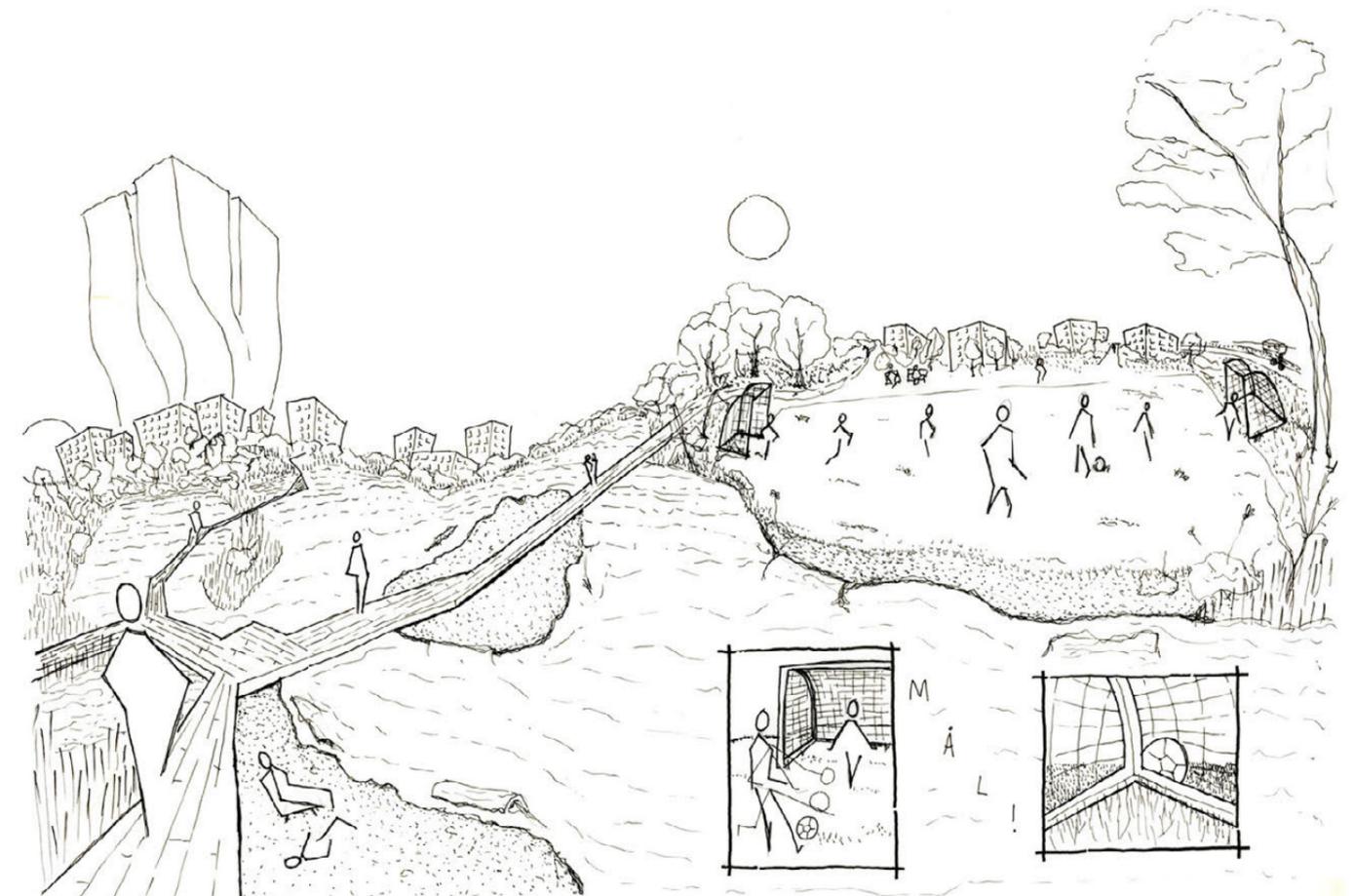
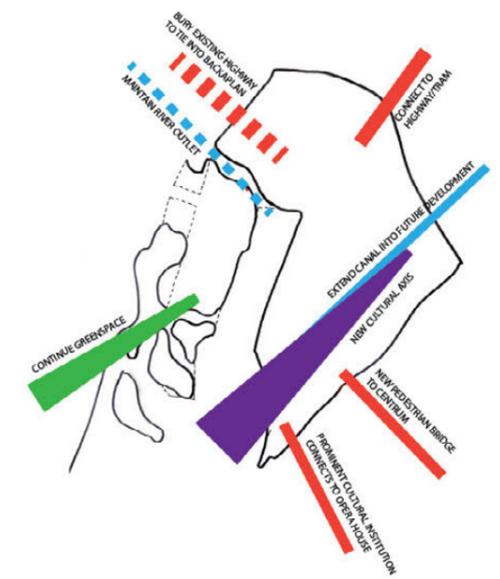
Moving from leisure greenspace on the western tip to 20-story high rises on the eastern tip, the new neighborhood creates a contemporary counterweight to the old city. The tip is surmounted by a Museum of Industrial History, a nod to the site's past that creates a dialog with the opera house across the river. Filling in one of the old docks allows for more active engagement with the water's edge and central greenspace in the densest section. A variety of urban conditions are created throughout, from informal to formal, land-based to water-based, and public to private.

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Concept

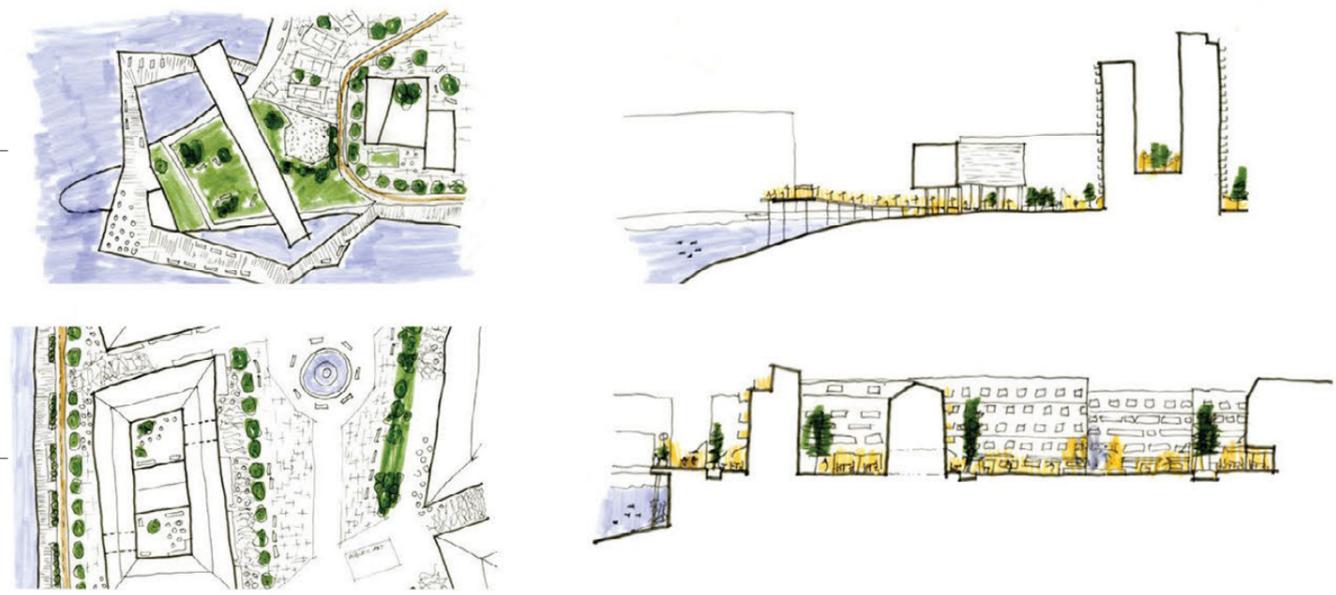


Contextual Influences

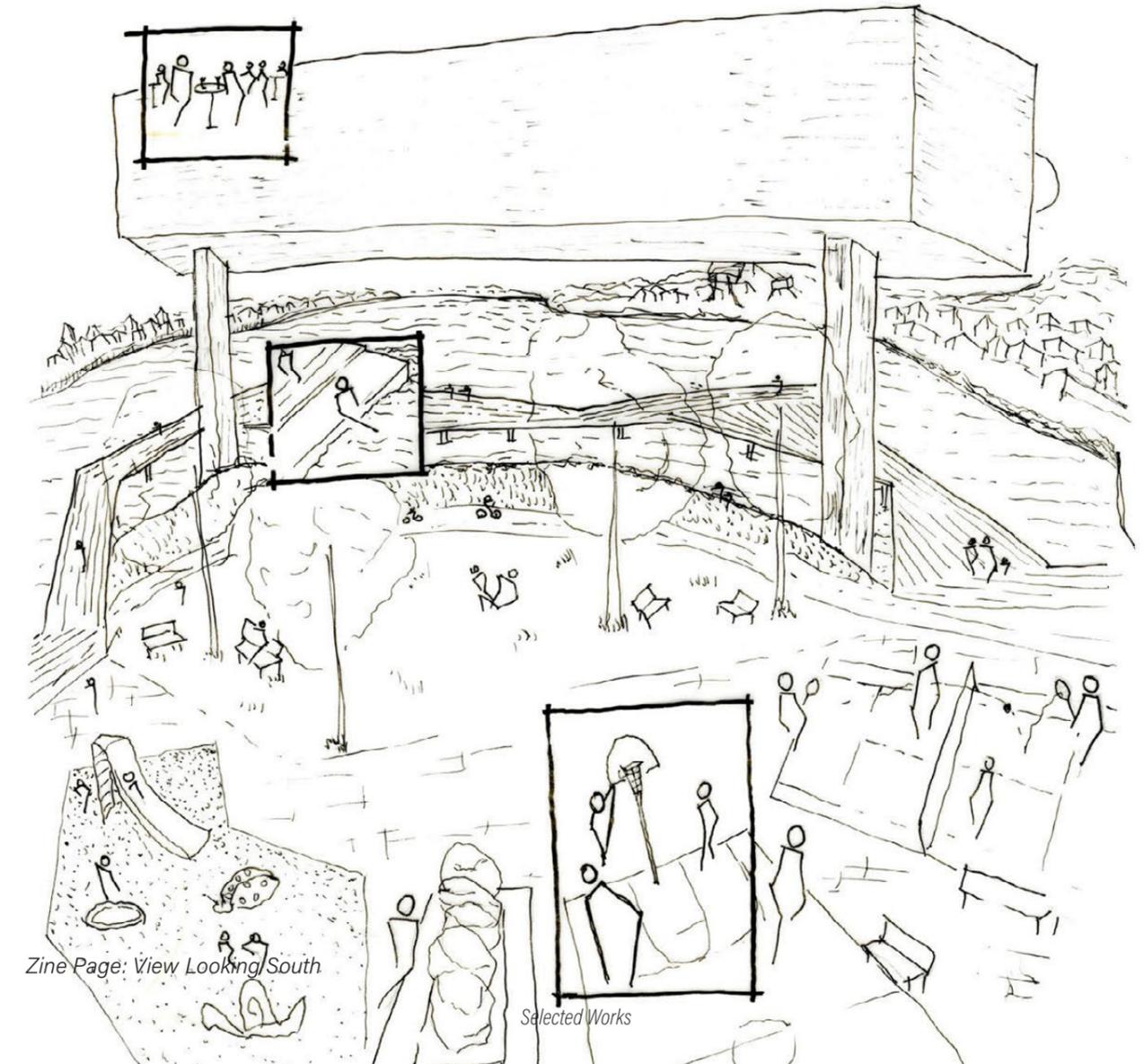


Zine Pages: View from Lindholmen Looking North

Selected Works



Detailed Plans and Sections



Living Platform

Life Cycle Housing

Newark, New Jersey
Multi-Family Residential

Living Platform explores Cradle-to-Grave Living in Newark, NJ. Employing a series of interchangeable modules, units are able to grow and shrink as a person's spatial requirements change over their life cycle. Thus, residents never need to move.

A large platform divides the building in two, providing flexibility to the ground floor. With utilities provided from above, commercial spaces are easily switched out, extended, or contracted based on the needs of the community above. Around the core, community modules provide common space and can be outfitted or switched out based on residents' needs. The name both refers to the physical platform bisecting the project and plays on the ubiquity of digital platforms that seek to prevent users from leaving their apps. The project thus proceeds both as a serious inquiry into spatial requirements and an ironic commentary on communal entanglements in the digital era, provoking questions about ownership, place, and urban living.

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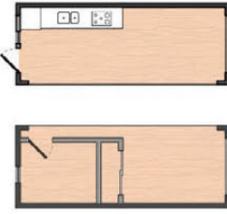


Raymond Boulevard Elevation Detail

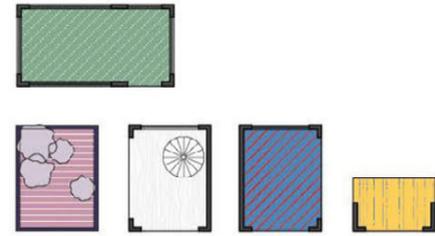
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Modules

Base Modules



Community Module

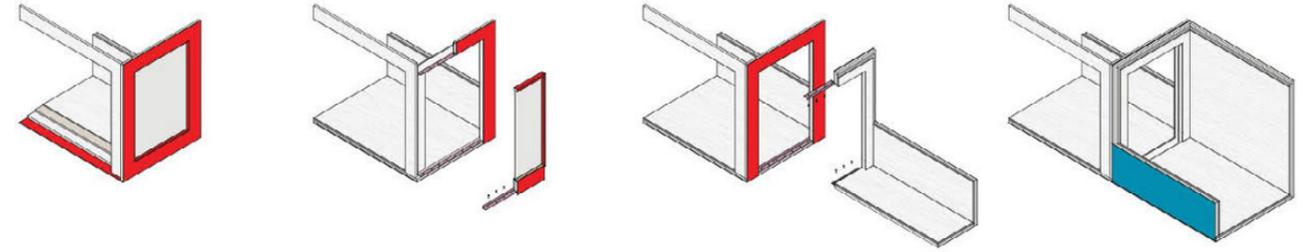


Additional Modules

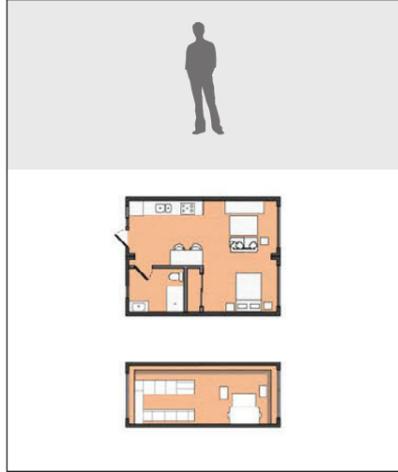
Organization



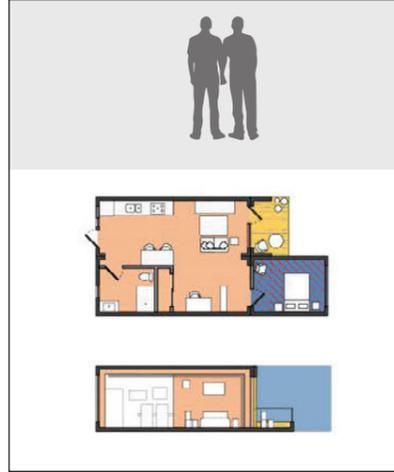
Module Construction and Addition



Units and Use Cases
Single Person: Studio



Couple: One Bedroom



Family with Young Children: Three Bedroom



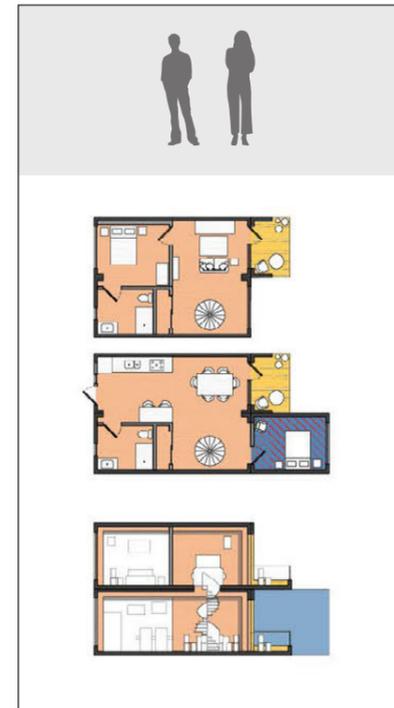
Section through Courtyard



Family with Grown Child: Side-by-Side Units



Roommates: Two Bedroom Duplex



Live-In Caregiver: Connected One Bedrooms



Typical Floor



ASHRAE Net-Zero Energy Design Competition

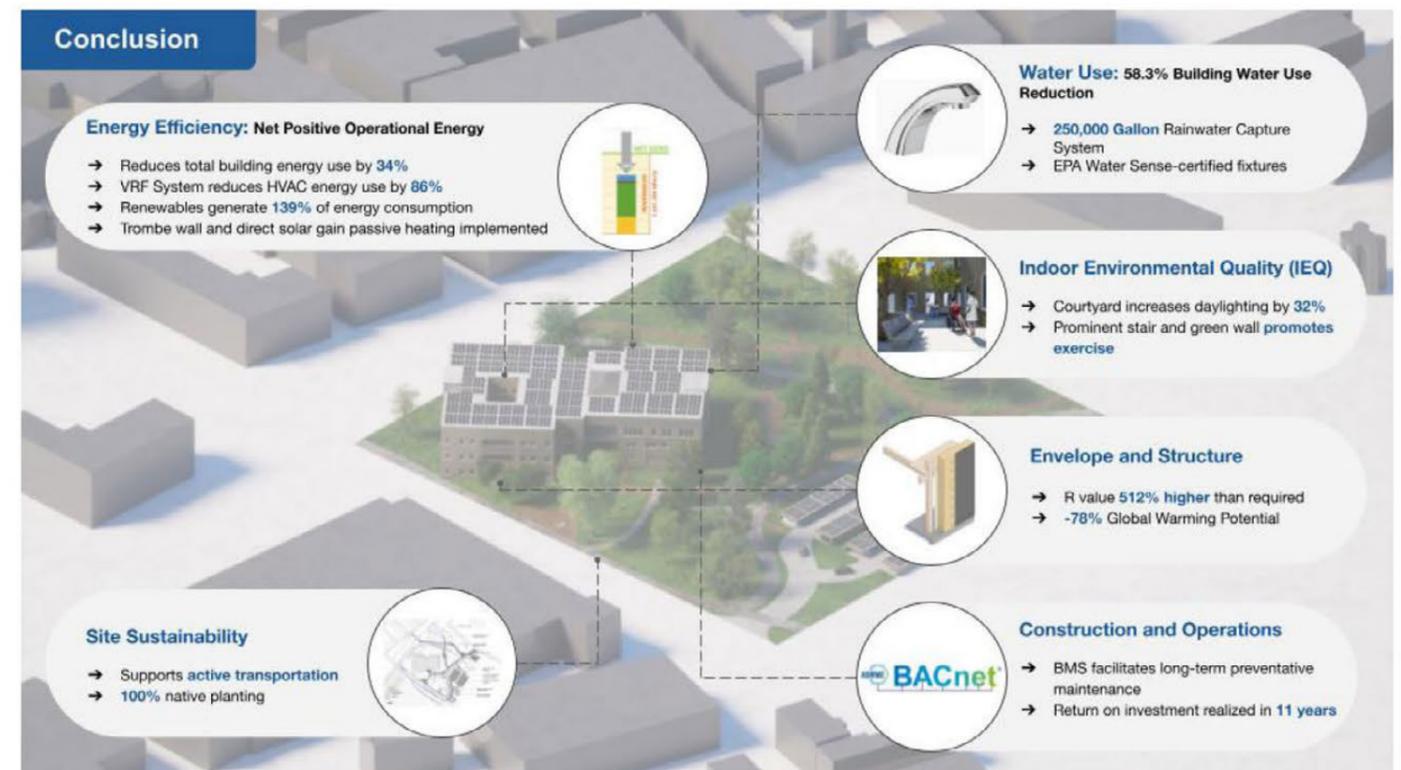
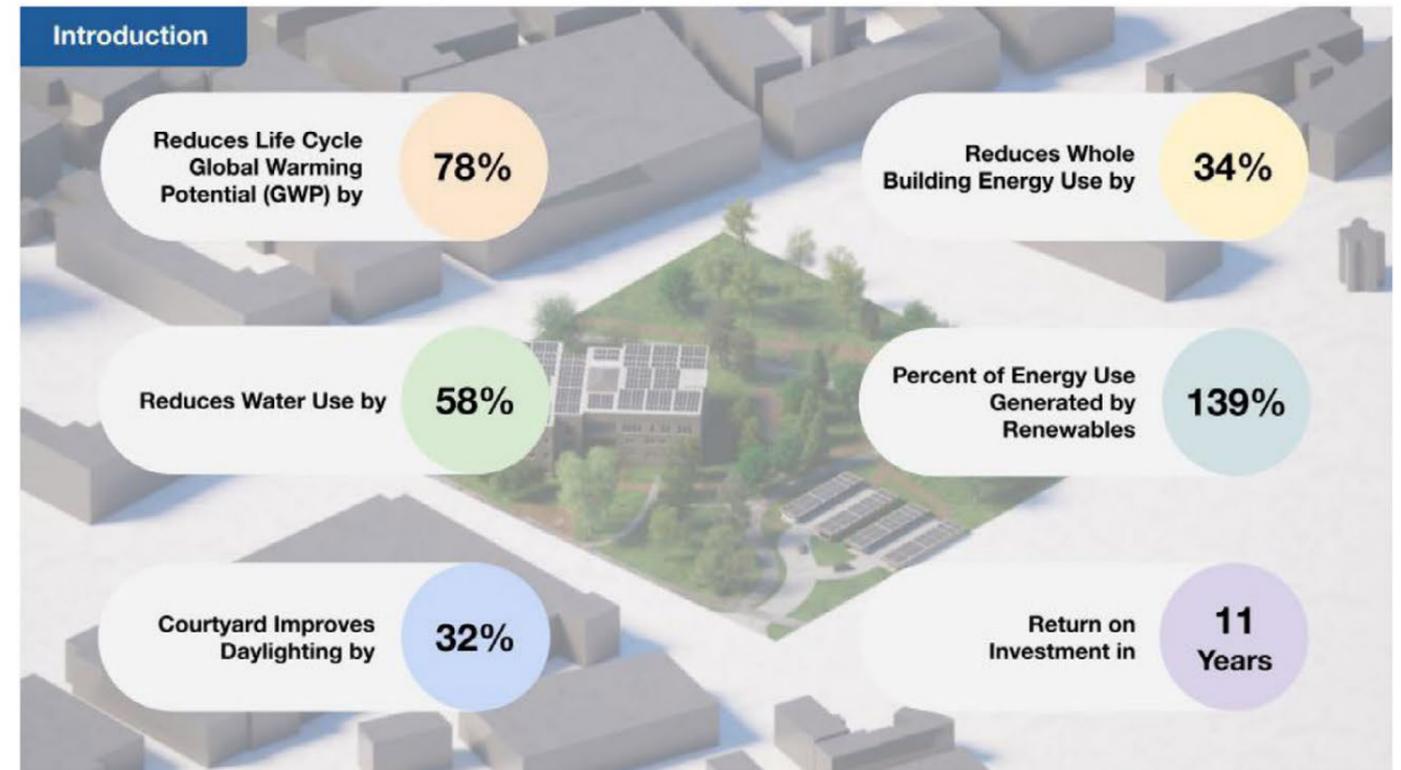
Manchester, England
 Optimization of Medical Office Building
 as Team Manager/Architectural Team

An entry to the 2025 ASHRAE Setty Family Foundation Net Zero Energy Student Design Competition, the NJIT team proposed modifications to an existing design to approach net zero energy use. We sought to design a high-performance building that addresses holistic notions of sustainability, including lifecycle impacts and occupant wellbeing.

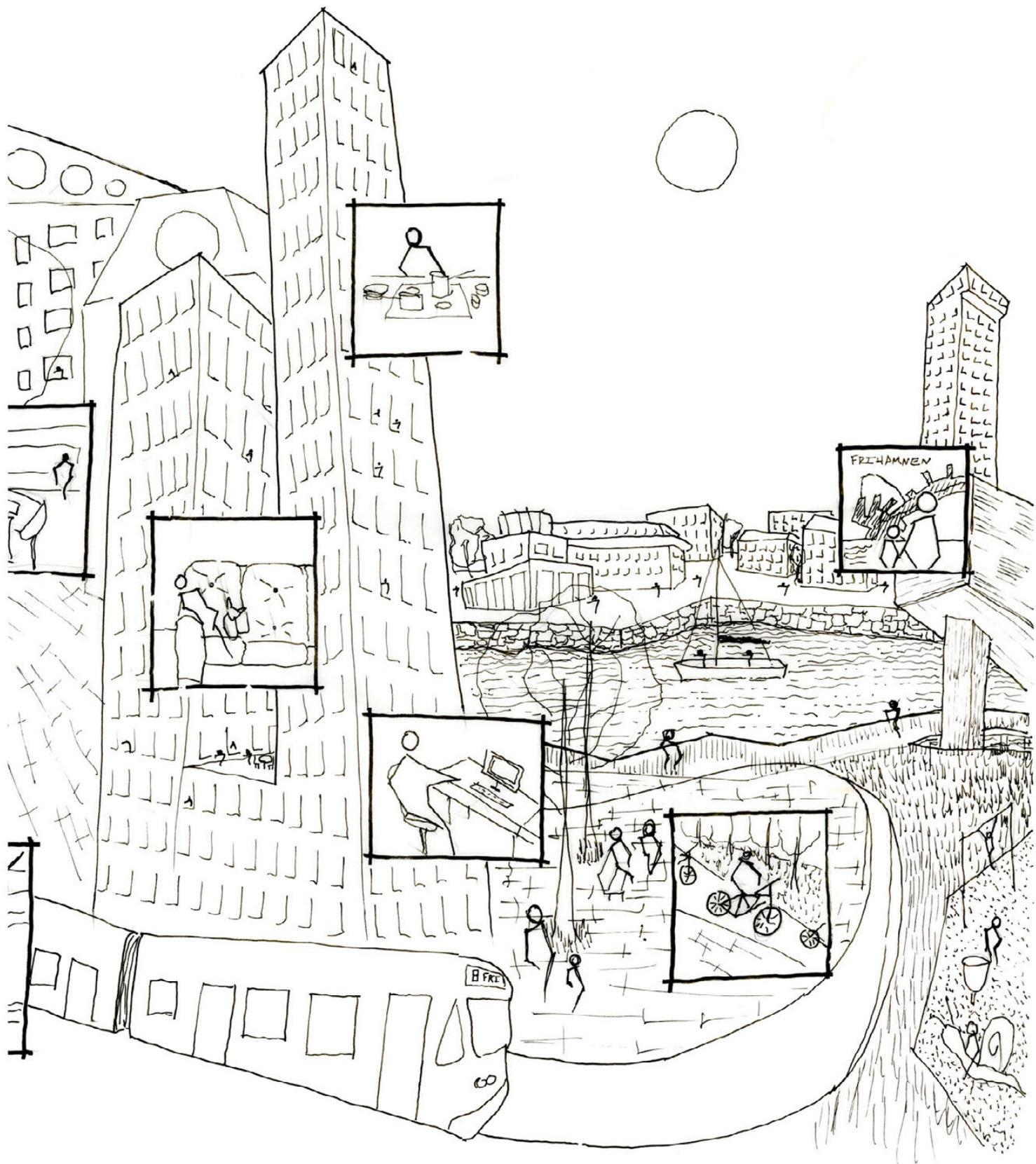
Utilizing an integrated design process in Revit and data-driven design decision-making, the team accomplished a net-positive operational energy building, meeting all prescriptive requirements of ASHRAE Standard 189.1-2020 (a LEED equivalent) and partially complies with the WELL Building Standard.

Project team: Minkyong Park, Jeongseo Lee, Austin Chen, and Mingzhe Li.
 Advisors: Hyojin Kim, PhD and Sara Wang.

Full competition report (52 pages) and video (15 minutes) are available at swansonjacob.com/net-zero/



Summary Slides from Recorded Presentation



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