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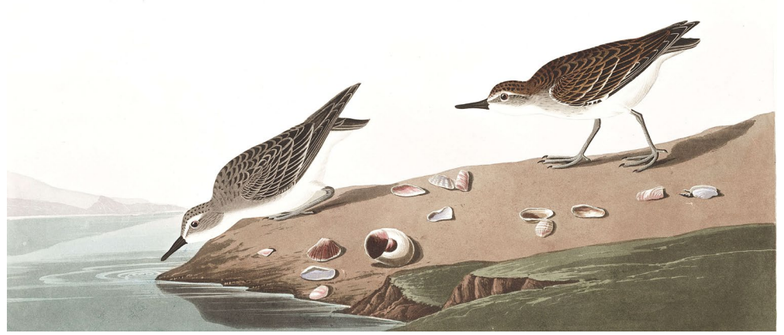
Works completed at the Cornell University Department of Architecture.

A render of three “birdhouse” accomodations for birdwatchers.

TRIBES HILL BIRD SANCTUARY

A Birdwatcher’s Lodge and Sanctuary Grounds
in Fort Hunter, NY.

Completed with Professor Val K. Warke
in the Spring of 2025 for ARCH 3102.



Semipalmated Sandpiper (plate 81), print by John James Audobon.

Named in honor of the nearby Lower Castle Canajoharie site, the hamlet of Tribes Hill, NY is a quintessential Mohawk River Valley town. Located on the triangular plot of land on the opposing bank of the Schoharie River is the village of Fort Hunter, NY. The original Erie Canal, the enlarged 1862 Canal, and the current New York State Barge Canal weave through this small area.

The Mohawk River Valley, stretching across central New York (miles upriver from John James Audobon’s Hudson River Estate), is a haven for bird enthusiasts and ornithologists alike. This rich and diverse ecosystem—comprising wetlands, riparian forests, and open fields—supports a wide variety of bird species throughout the year.

In spring and summer, migratory songbirds such as the American Redstart, Cerulean Warbler, and Warbling Vireo arrive to breed, filling the air with vibrant color and sound. The river itself attracts waterfowl including loons, egrets, and kingfishers, while nearby fields host grassland species like Eastern Meadowlarks and Bobolinks.

Raptors are a common sight, with Peregrine Falcons, Osprey, and Bald Eagles frequently seen soaring above the valley. During fall migration, the region becomes a vital stopover for flocks of geese and shorebirds heading south. Even winter brings activity, as hardy species like the Black-capped Chickadee and Downy Woodpecker remain, joined by occasional visitors such as Snowy Owls.

The Mohawk River Valley’s diverse habitats and seasonal changes create a dynamic birding landscape, offering year-round opportunities for observation and study. Its avian diversity reflects both its ecological richness and its role as a vital corridor within the greater Atlantic Flyway.

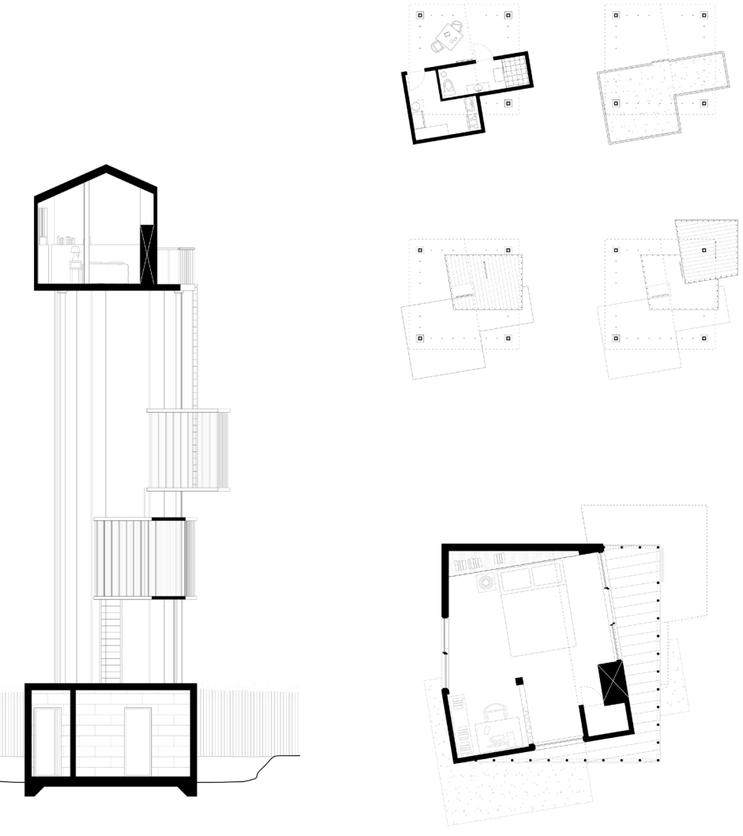
There are 12 accomodation units that come in 3 variants: 4 shoreline units, 4 canal units, and 4 birdhouse units. Each unit is design to gift a unique and intense birdwatching experience for visitors. Additionally, there are 3 learning centers, a full-service bistro, and multiple bike rental stations.

There are over 5 miles of maintaned trailhead on premise, which meanders through forests, marshes, fields, and the shorelines.

Nearby attractions include kayak rentals and tours, historical landmarks such as the original Fort Hunter archaeological site, and the Cushing Stone Company and Cranesville Quarry, where all the limestone for the architecture (and canal constructed) is sourced.

A site plan of Tribes Hill, NY at 1:2000 scale. The town sits at the confluence of the Mohawk and Schoharie Rivers.

Plans and section of the “birdhouse” units.



A plan of the Riparian Learning Center at 1/16” : 1’-0” scale.

An interior render of the Riparian Learning Center's principal space.

A plan of the Woodland Learning Center at 1/8" : 1'-0" scale.

Two unrolled site elevations at 1/16” : 1’-0” scale.

The “Light-Filled Stair Hall”, with light diffusing through the structure and hanging staircase as its name suggests.

STRUCTURAL MODEL

A Structural Systems Model of “A House for a Family of Four” by KIRI Architects in Nishtokyo, Tokyo, Japan.

Completed with Torben Karl, Robert Gateno, and Professor Mark R. Cruvellier in the Fall of 2023 for ARCH 2613.

A House for a Family of Four / Light-Filled Stair Hall, photo by Anna Nagai

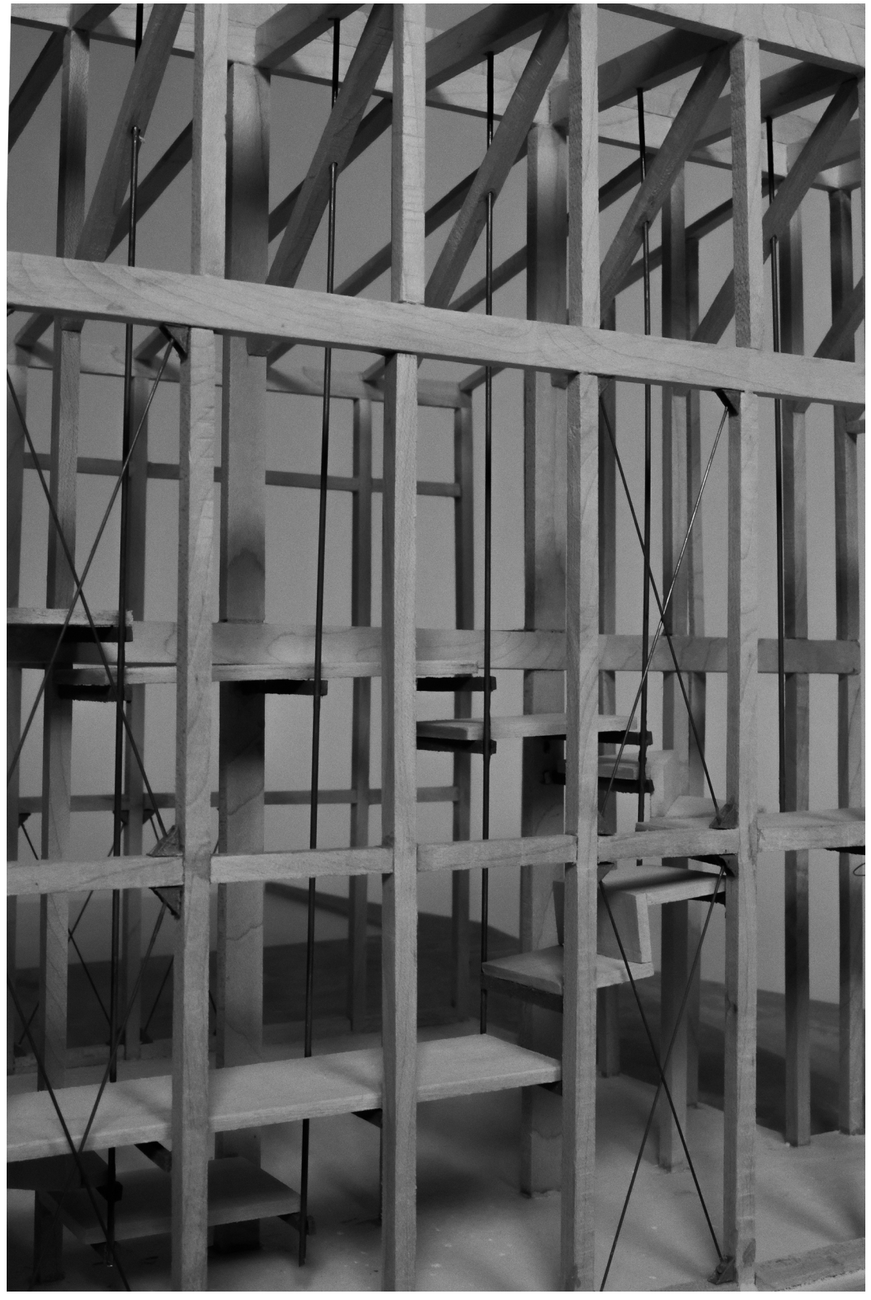
“A House for a Family of Four” is a modest residential project located in the quiet Tokyo suburb of Nishitokyo. In order to maximize sunlight amid the densely packed built landscape, KIRI Architects employs a unique structural system of columns and trusses that create dynamic lighting conditions throughout the day.

The primary space in the house is a brightly lit stair hall, which can house a multitude of programs from storage to entertainment. The structural members present in this stair hall primarily consist of white maple beams supported by steel bracing and hangers.

In order to create the model, the entire structural system was modeled, and the scaled parts were cut, jointed, and prepared. Each component is faithful to the original in terms of materiality, including the in-situ casting of concrete and rebar reinforcements. In order to showcase the urban context (and better illuminate the model), the concrete site features recessed lights that further exemplify the interplay of light, wood, and concrete in the project.

Process photos documenting the fabrication of the poured reinforced concrete base.

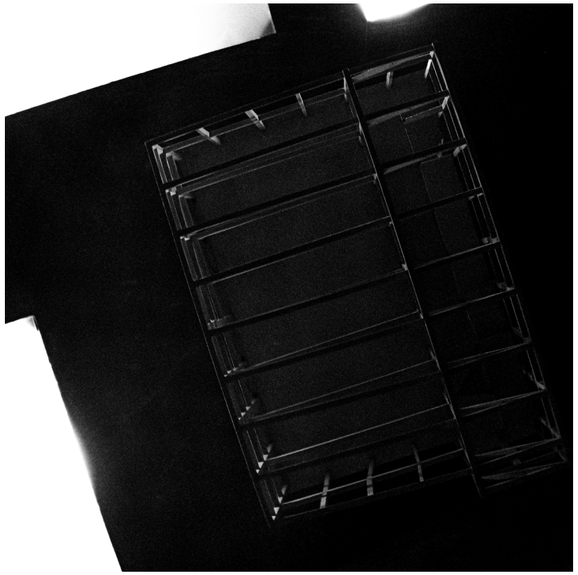
A close-up shot of the “stair hall” composed of wooden columns, beams, and girders with steel cable cross-bracing.

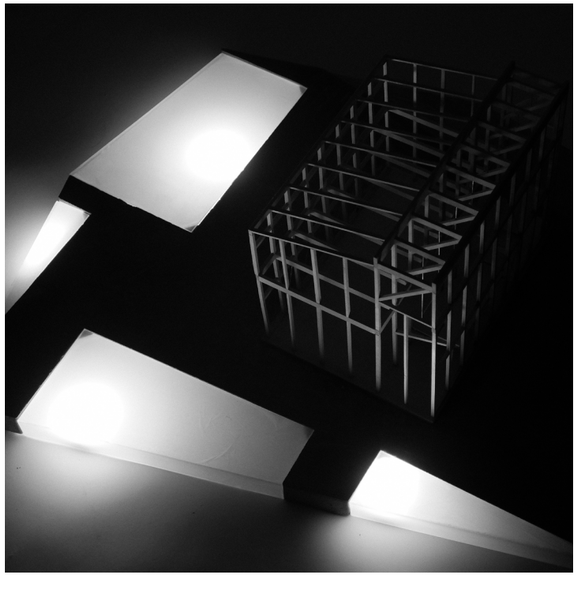


A head-on shot of the wooden columns, beams, and girders with steel cable cross-bracing.

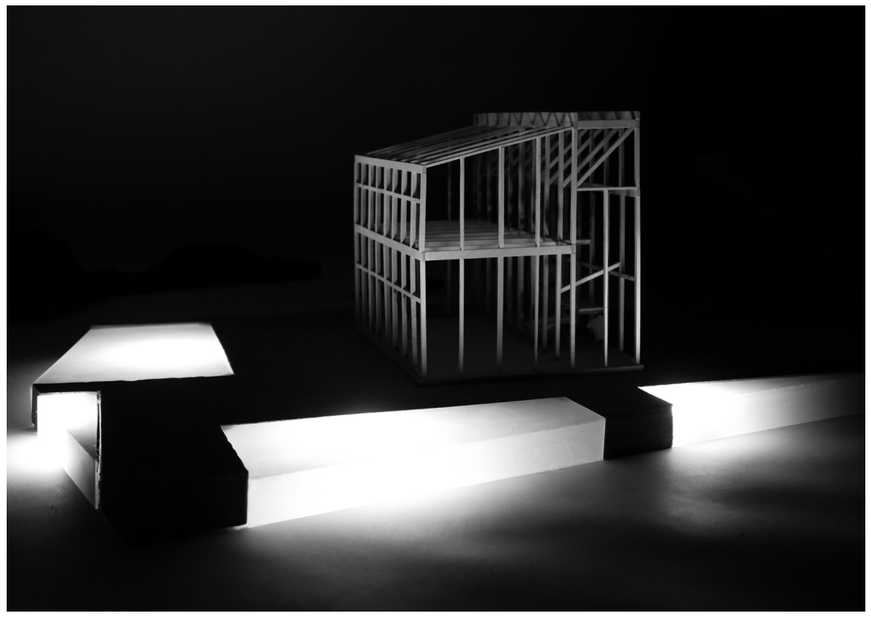
More detail photos of the stair hall.

The final model. The footprints of the surrounding buildings are represented through glowing “light boxes”.





The model as displayed in Bibliowicz Family Gallery at Milstein Hall, Cornell University.



An isometric drawing of the housing community. Moments of potential future development are highlighted in color.

SERIOUSLY PLAYFUL

An Affordable Housing Framework for Ithaca Neighborhood Housing Services in Trumansburg, NY.

Completed with Amina Lahham and Visiting Critic Mustafa Faruki in the Fall of 2024 for ARCH 3101.

An exterior render of the housing development, with communal polycarbonate “sheds”.

The site is bordered by Compass Manufactured Home Community (another INHS development) and a nature preserve. Most of the land parcel is covered in wildflower meadows and abandoned cornfields.

Trumansburg is a small town of around 1700 residents, but people are steadily leaving. Furthermore, a longstanding desire to maintain the “town image” has lead to zoning models that stunt development. These issues combine to present Trumansburg as unappealing to a young professional class.

‘Seriously Playful’ leverages these various social and user contexts to its advantage. We found the best way to satisfy our target demographic’s desire for a community-oriented blend of work and play is through a co-living housing model; the project seeks to emulate the experiential dynamics of a city, albeit within the physical, social, and economic landscape of a small Finger Lakes town.

To us, working is not limited to professional (capital-generating) activity. Rather, all aspects of life that relate to stewardship and responsibility (domestic chores, self-care and development, social service) are ‘work’. In contrast, we believe play to be a fallow ritual. ‘Play’ inherently does not stricly adhere to guidelines or structure the way that ‘work’ does; play happens in the ‘in-betweens’. Play does not have a final destination or result in mind, and is rather focused on the journey.

Play and recreation (from the Latin verb ‘recreare’, meaning “to renew or create again”) are facilitated through the pursuit of honest passions and interests. Within our housing model, play becomes an important mode of community building by becoming the means of utilizing shared spaces. In contrast, work promotes the continued development and care of these spaces.

This bridging between work and play is physically manifested in the site arrangements through a constrasting set of orientation logics. The orthogonal relations between the housing units ensures effeciency in terms of quality of life (daylighting and fenestration, road access, undisturbed views). The ‘play’ areas find themselves nestled in the empty spaces between the built structures.

A site plan of the housing community as well as a “Catalogue of Bridges” that exist on the site. The “bridges” are highlighted in red.

Crosswalk
Ulysses and Trumansburg
42.547335, -76.674607

Crosswalk
Compass MHC and ‘Seriously Playful’
42.546466, -76.675314

Crosswalk
Habitat Nature Preseve Trail and Park
42.545698, -76.675130

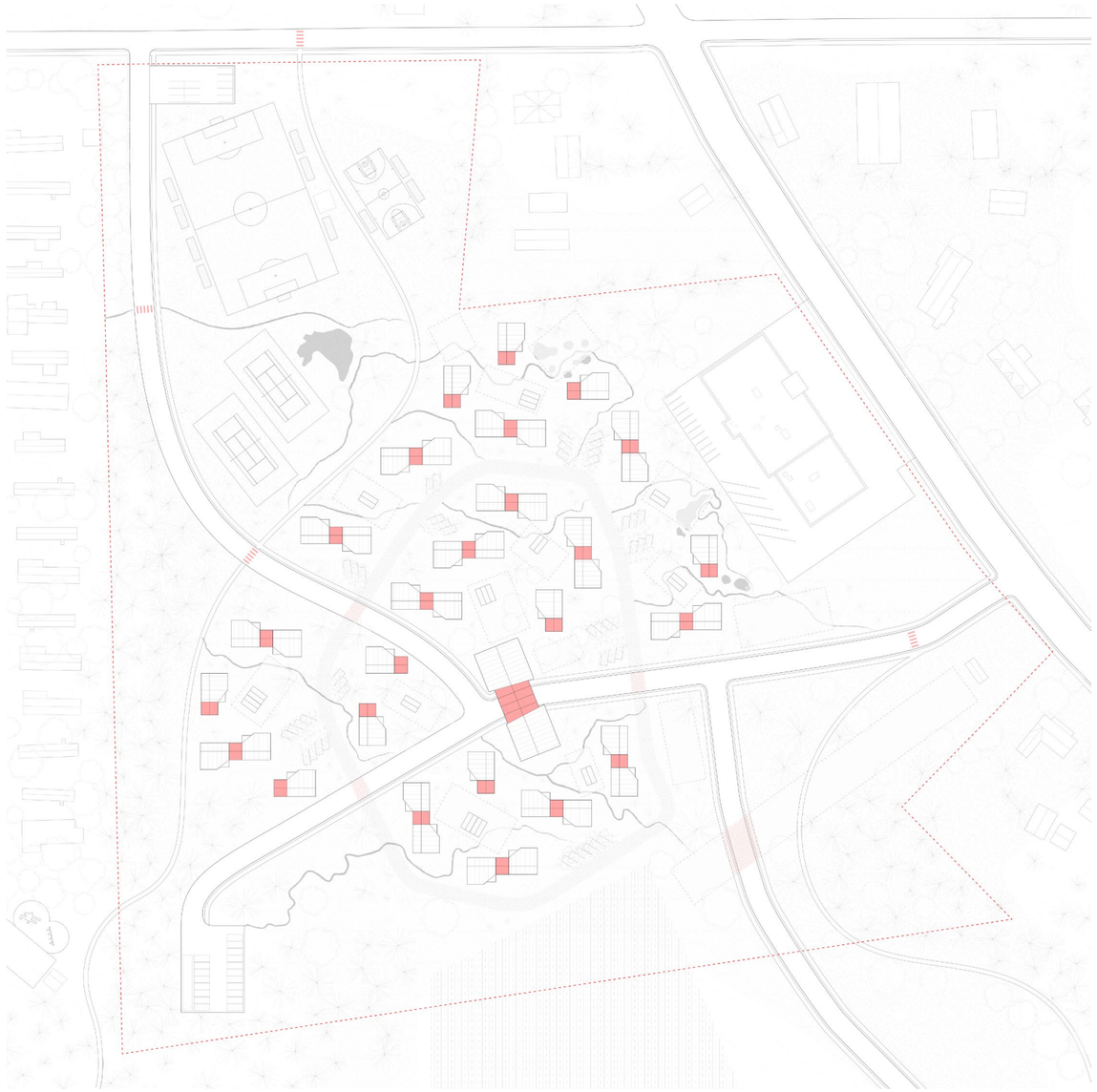
Crosswalk
Trumansburg Country Estates Assisted Living Community and ‘Seriously Playful’
42.545471, -76.672015

Landscaped Lawn and Garden
Trumansburg Country Estates Assisted Living Community and ‘Seriously Playful’
42.544933, -76.672624

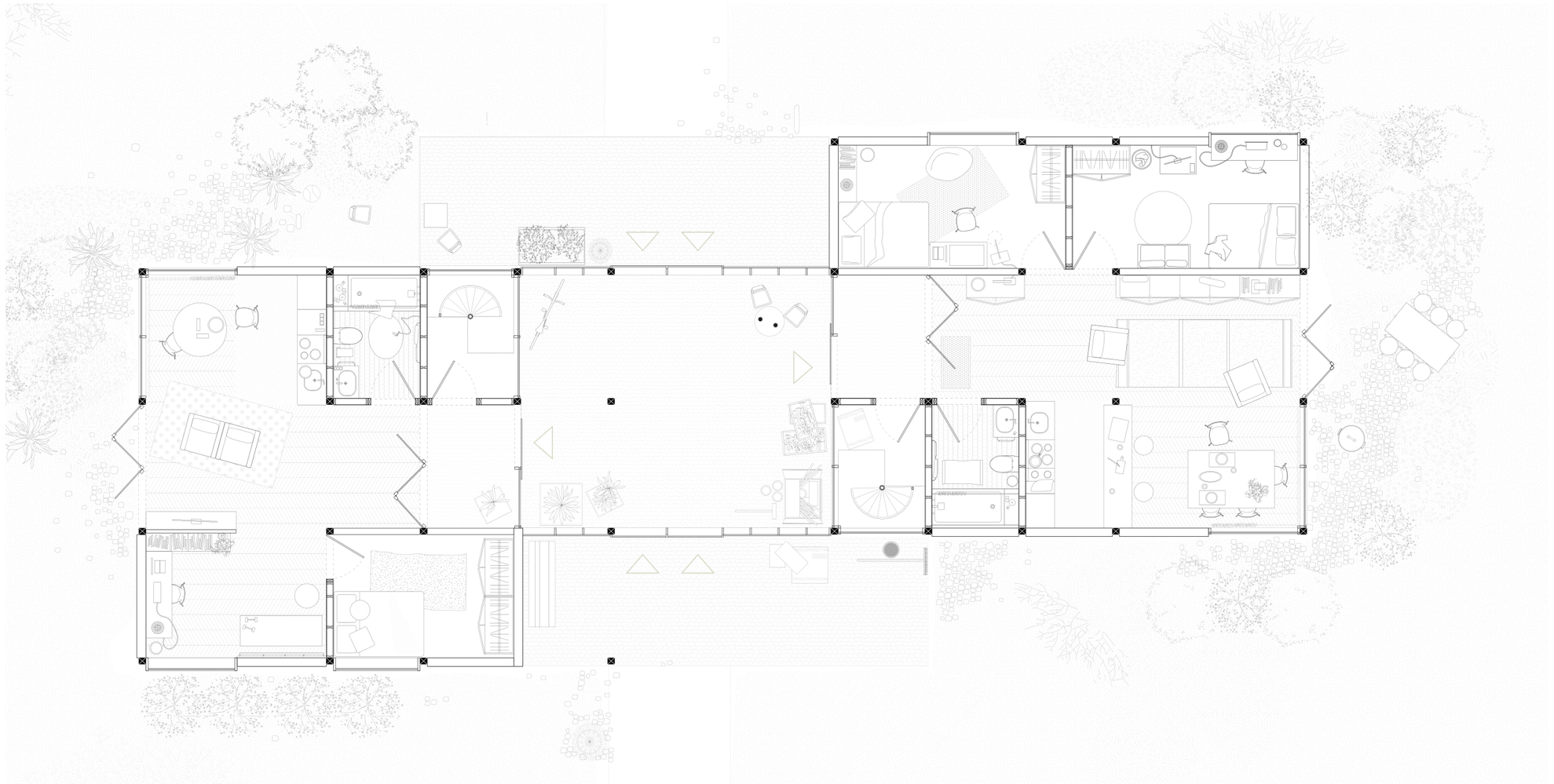
Glass Skybridge
Across Meadowview Dr.
42.545297, -76.673537

Polycarbonate ‘Outer Skin’ Shared Porch
Between neighboring duplex units
42.546237, -76.673806
42.546086, -76.674138
42.546185, -76.673162
42.546006, -76.673570
42.545828, -76.673755
42.545837, -76.674355
42.545616, -76.673902
42.545800, -76.673245
42.545579, -76.672875

A site plan of the housing community in its second phase of development (2040) at 1:500 scale.

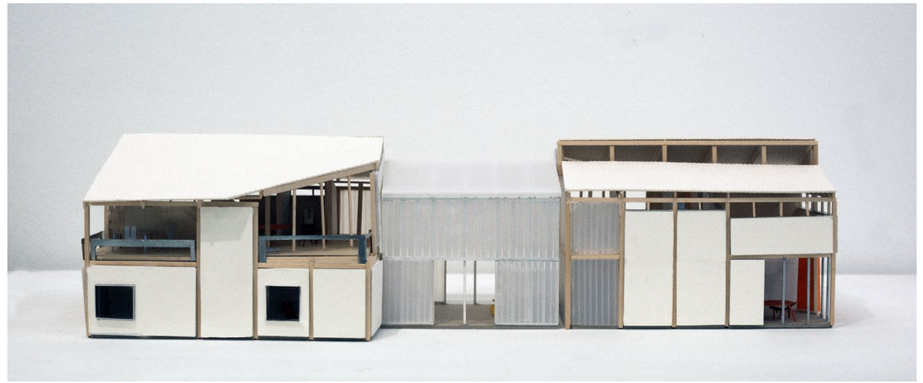


A first-floor plan of a typical housing unit at 1/4” : 1’ - 0” scale.



A model of a typical housing unit at 1/4” : 1’ - 0” scale, viewed without a roof from plan view.

The three principal “modules” of a typical housing unit.



A speculative collage of a principal double-height space within Building A of the Brooklyn Army Terminal.

ONE HUNDRED YEARS OF REUSE

An Adaptive Reuse and Masterplanning Proposal for the Brooklyn Army Terminal in Brooklyn, NY.

Completed with Jacob Gibbons and Visiting Critic Laura Gonzalez Fierro in the Fall of 2025 for ARCH 4101.

While originally built as the largest military facility of its kind, the Brooklyn Army Terminal has become an integral part of New York City's history, solidifying its status as a community asset for the people of South Brooklyn. Due to its immense logistical capabilities, the Terminal has served the community in times of need for the past 100 years; this proposal aims to preserve the Brooklyn Army Terminal as such a place of refuge for the next 100 years as well.

The site, which belonged to US Army Major William Henry Langley, was bought by the US government for 3.4 million dollars. Before construction began, the site was coastal marshland covered by reeds, sawgrass, and oyster beds. Construction began in May 1918, around one year after America's entrance into WWI in April 1917. However, construction finished in September 1919, 10 months after the signing of the armistice in November 1918.

Despite this, the Brooklyn Army Terminal was not rendered obsolete. The immense logistical capabilities of this gargantuan building meant the building could always be used in some way, somehow. Throughout the 20th century, the Terminal was used as the headquarters for a child-actor-funded food drive to Armenia and the Near East, a government supply station for hurricane relief efforts in Puerto Rico, and a refugee processing facility during the Hungarian Revolution and the collapse of the Eastern Bloc. In the last decade, the Terminal was used as a vaccine storage and PPE manufacturing facility during the COVID-19 Pandemic, an emergency logistics and supply center during Hurricane Sandy, and the primary staging ground for the September 11th boatlift efforts.

Even in recent memory, the clever adaptive reuse of the Brooklyn Army Terminal site has allowed it to continue serving as a place of refuge. For this reason, the project seeks to understand the Brooklyn Army Terminal as a space that can provide 100 more years of refuge through thoughtful adaptive reuse interventions.

Everything starts with a renewed masterplanning effort for the Terminal site. The proposal creates continuous pedestrian access along the Brooklyn Waterfront, which is accompanied by green spaces. The linear extension of this path continues a similar condition in Bay Ridge to the South and the Leif Erikson Park in Sunset Park, which is organized along an abandoned light rail corridor.

Programming within the Building A complex is separated into 4 principal chunks: a double-height open public space on the ground floor, a SESC-style community service block, a block for existing light manufacturing, and a new trade school block. These programs address needs for the Sunset Park and South Brooklyn Communities. Several tectonic strategies are used in the adaptive reuse of the Terminal; Columns and sections of the floor plate are removed to create room for new programs and double-height spaces, while new methods of circulation are added. These strategies allow further subdividision of the SESC-style community service block into a sports block highlighted by double-height spaces, a health block, and an education block.

The ramps and elevator cores create continuous, accessible, and, in the case of the ramps, semi-outdoor circulation to all parts of the building. These generous ramps seek to break the unrelenting sea of columns present inside the Terminal, while also creating open public spaces for new civic encounters and experiences.

A melange of historical artifacts and modern re-analysis from the Brooklyn Army Terminal's development as a place of refuge.

FIGURE 1.

U.S. Armed Forces Bulletin snippets from 1918.

FIGURE 2.

A map of the original William H. Langley Estate; the site of the Brooklyn Army Terminal. Future development highlighted in dotted red.

FIGURE 3.

A map of the Brooklyn Army Terminal following intial construction. Cass Gilbert's original construction highlighted in red.

FIGURE 4.

Brooklyn local paper snippets announcing the decommission process of the Brooklyn Army Terminal following the close of WWI.

FIGURE 5.

Photographs of Armenian children during the occupation of the Ottoman Empire.

FIGURE 6.

Prominent child actor Jackie Coogan poses with supplies at the Brooklyn Army Terminal for his Near East Relief Drive.

FIGURE 7.

A selective service order issued after the United States' entrance into WWII.

FIGURE 8.

Soldiers boarding transport ships from the Terminal piers.

FIGURE 9.

Hungarian refugees arrive to the United States at the Brooklyn Army Terminal.

FIGURE 10.

A Robert Moses diagram of the expressway and interchange system in Brooklyn, which inevitably created inequitable access to the waterfront.

FIGURE 11.

A map of the Brooklyn Army Terminal in its current state.

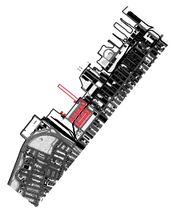


FIGURE 12.

The principal spaces of the current Brooklyn Army Terminal.

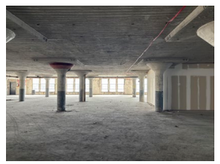


FIGURE 13.

The Brooklyn Army Terminal used as a emergency relief staging ground during the September 11th attacks in 2001.

FIGURE 14.

Gowanus, another Brooklyn waterfront neighborhood, in a flooded state during Hurricane Sandy.

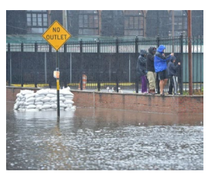
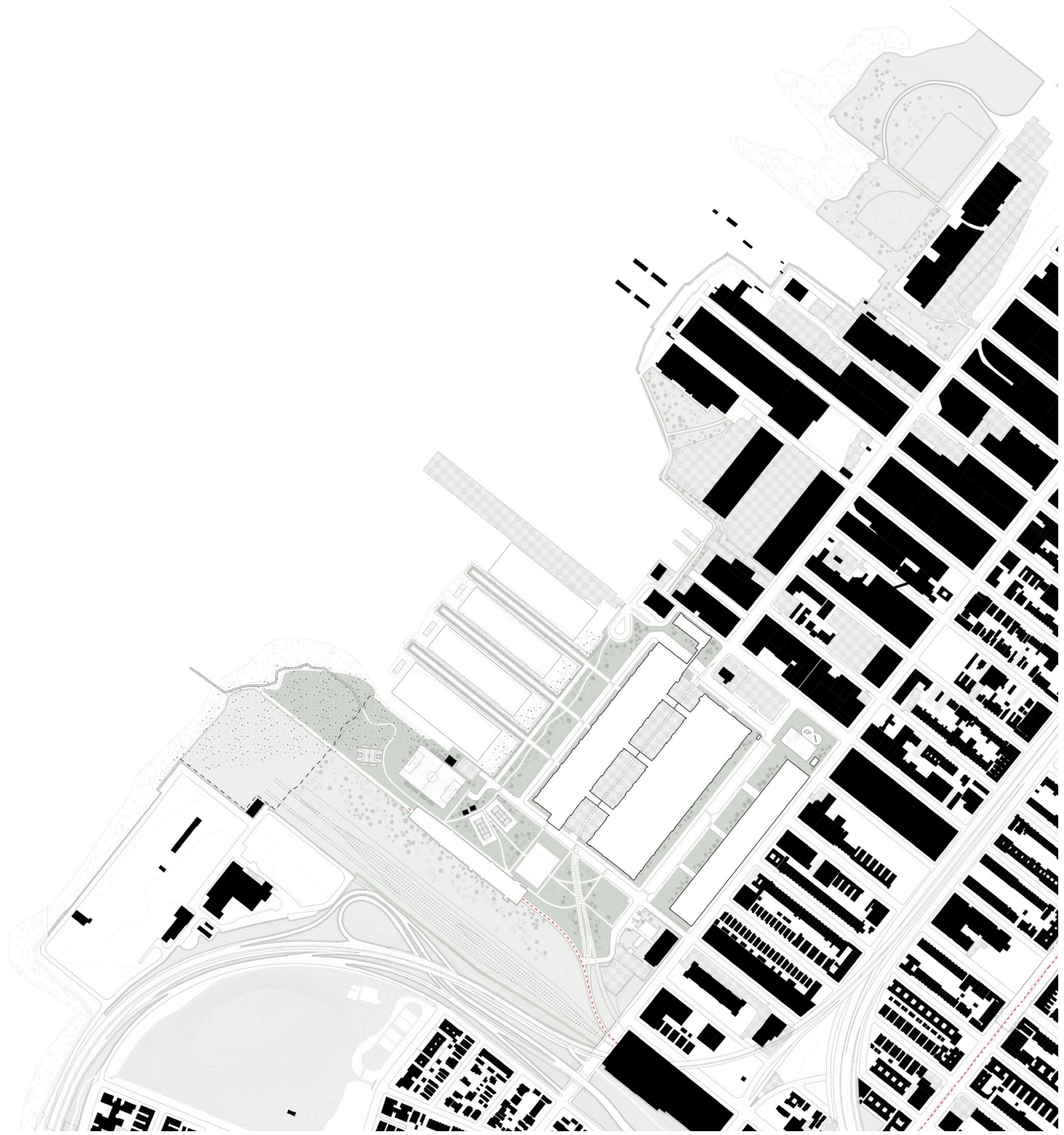


FIGURE 15.

CBS New York footage depicting the Brooklyn Army Terminal being used as both a PPE and vaccine storehouse and a vaccination site.

A masterplan of the last stage of development, which includes the extension of public waterfront access to the Bush Terminal Park complex.



A pair of speculative renderings depicting the double-height ground floor level as an everyday event space (above) and as a place of refuge (below)

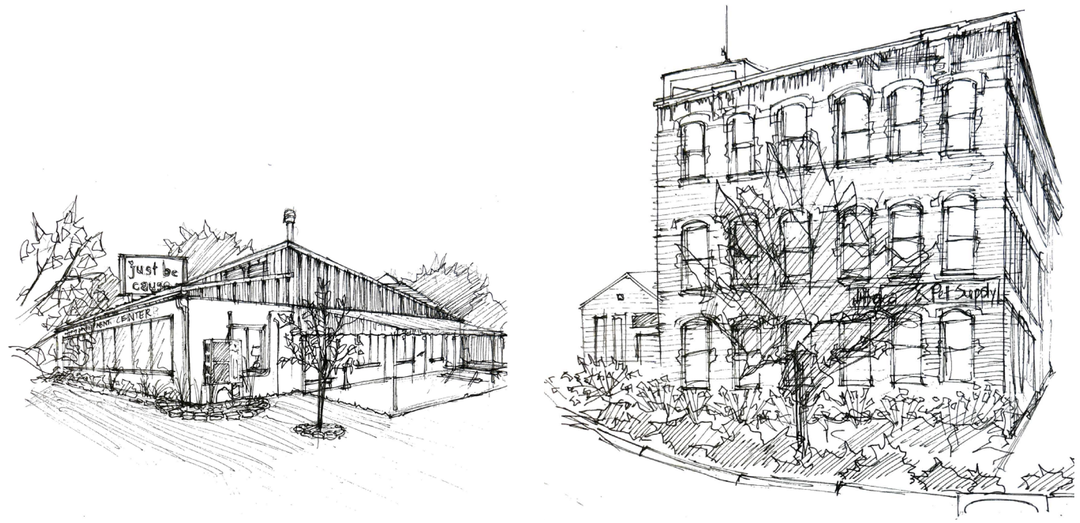
A speculative rendering depicting the view from within the library stacks.

A render of the library study area at dusk.

WAREHOUSE FOR BOOKS

A Tompkins County Public Library
in Ithaca, NY.

Completed with Lecturer Marta H. Wisniewska
in the Spring of 2024 for ARCH 2102.



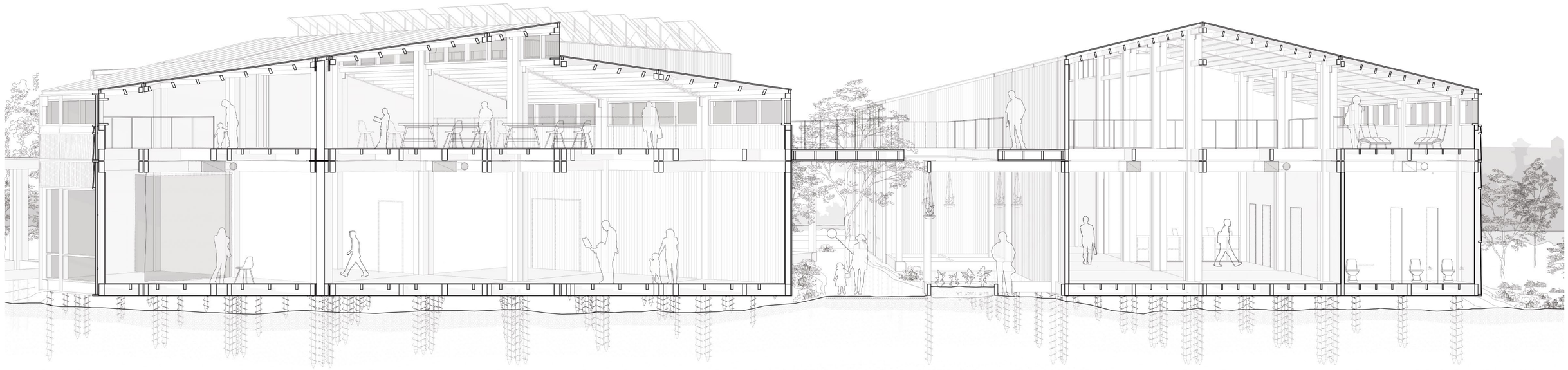
Pen sketches of two adjacent buildings: the Just Be Cause community center and the Ithaca Signworks Building, respectively.

In the current culture of public building, a library's own consistuent community is often solely responsible for construction funds. New constructions voted on by a small board are often expensive and not in tune with the community's needs. Their designs often feels out of place aesthetically, leaving a "scar" on both the built and natural environment.

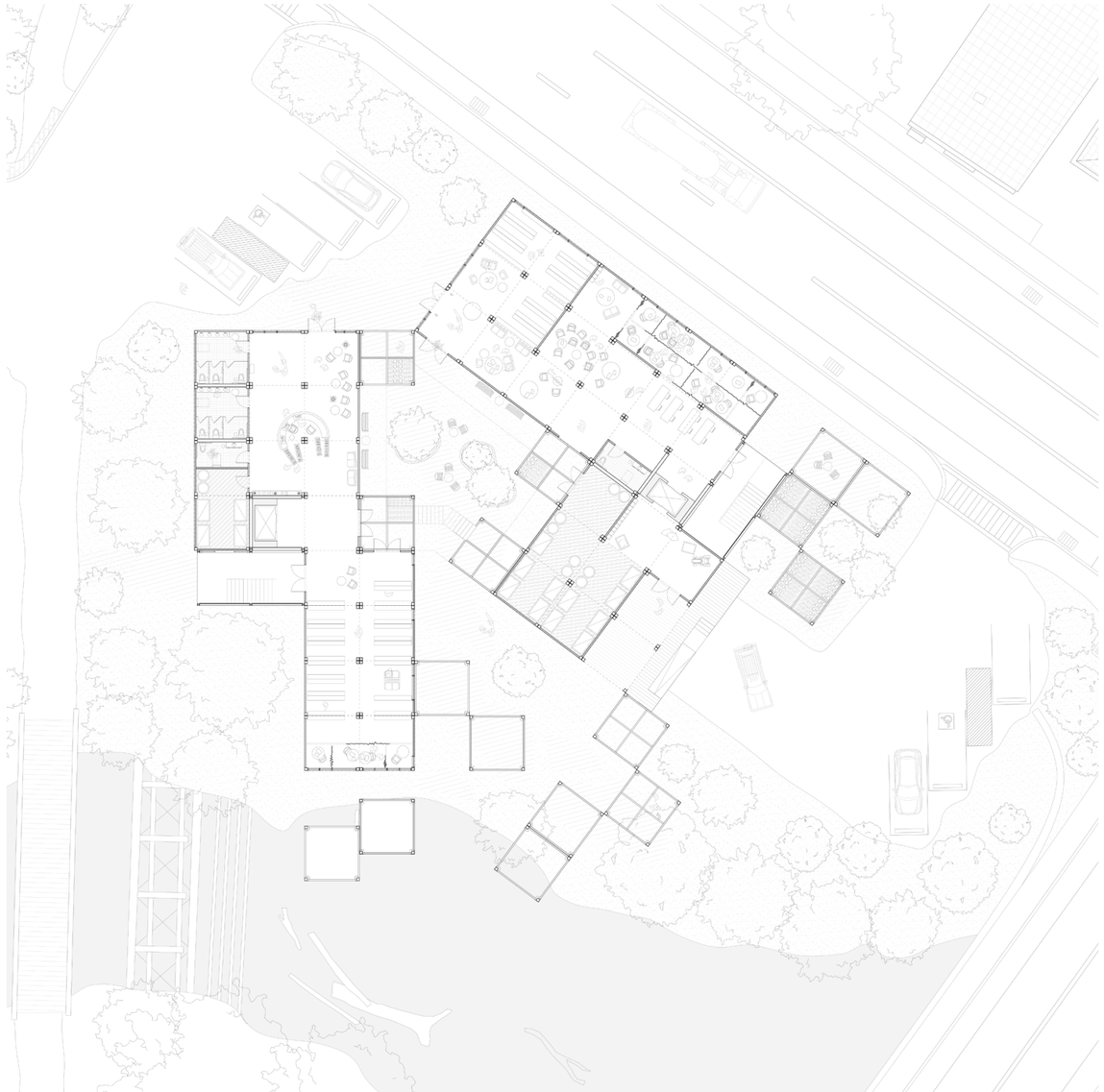
The goal of the project was to create a quickly and cheaply erected library that is in tune with the community's natural rhythm. In order to create a palimsest-esque sense of familiarity within the surrounding buildings, the sectional profiles and programmatic arrangement of the library are based off of four adjacent landmarks. (UA Local 81 Ithaca, 701 W State St. ; Lehigh Valley Railroad Ithaca Station, 806 W Buffalo St.; Signworks Building, 1001 W Seneca St.; Just Be Cause Not-For-Profit Development Center, 1013 W State St.)

The schematic design of the building emphasizes circularity and rapid assembly/disassembly through the use of pre-fabricated structural modules. The modules come in 3 variations (main structural module, roof module 1, roof module 2), which allow for the buildings 4 distinct sectional profiles.

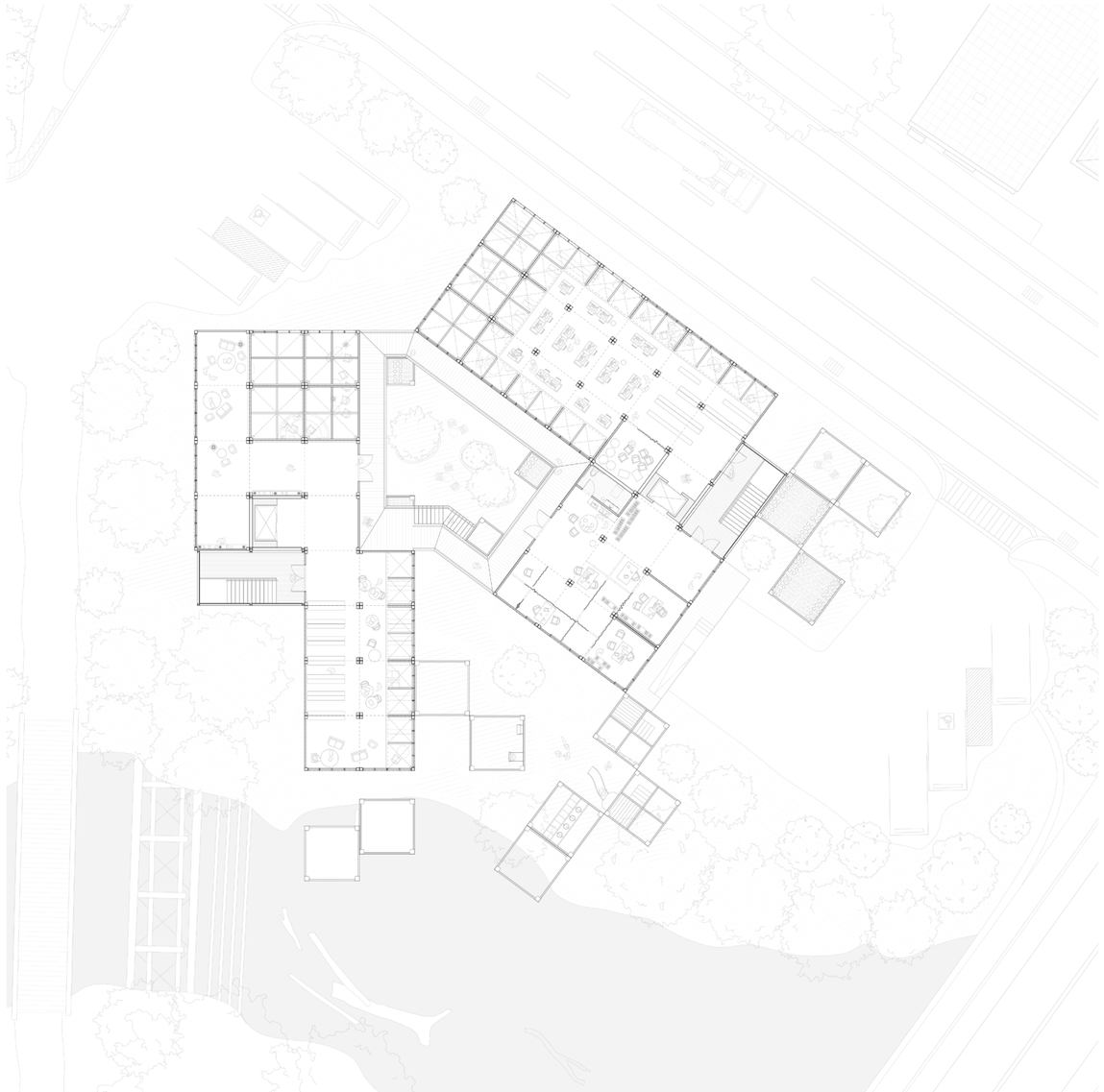
A perspectival section of the library at 3/16” : 1’-0” scale.



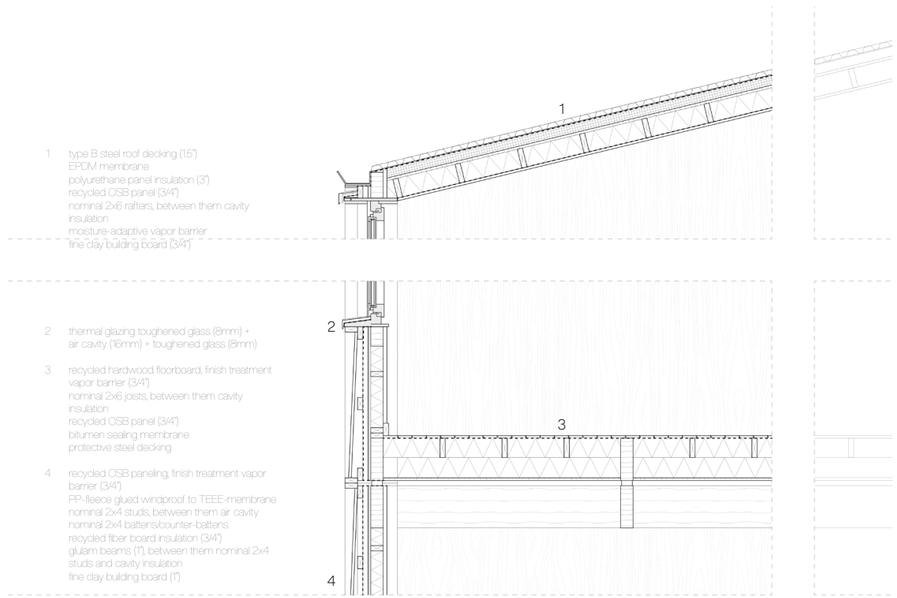
A first-floor plan of the library at 1/8” : 1'-0” scale.



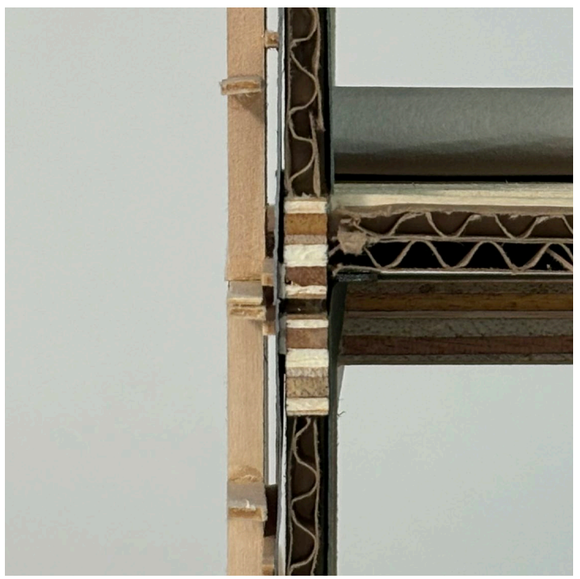
A second-floor plan of the library at 1/8” : 1'-0” scale.

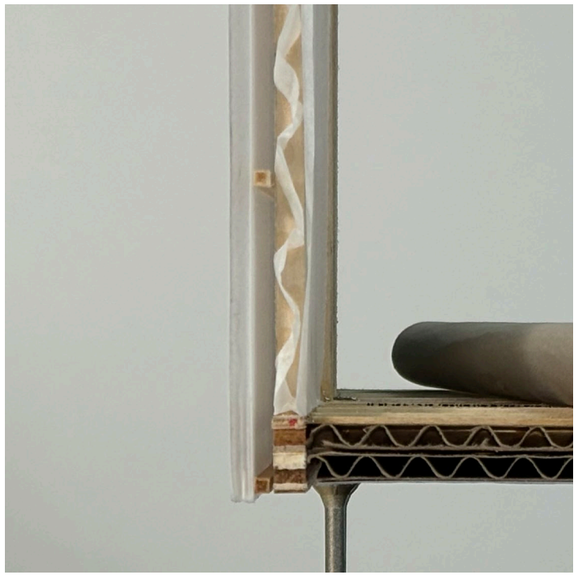


A detailed wall section of a typical polycarbonate and OSB paneling assembly at 1/4" : 1'-0" scale.



Close-up shots of the "chunk" model highlighting OSB and polycarbonate cladding connections, respectively.



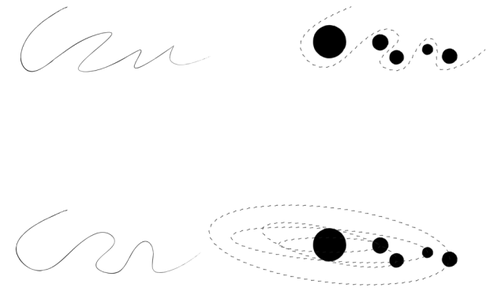


An exterior nighttime render of the house overlooking the Fall Creek Gorge.

A HOUSE IN ITHACA

A Single Family House
in Ithaca, NY.

Completed with Assistant Professor Martin Miller
in the Fall of 2023 for ARCH 2101.



Initial sketches highlighting the transformation of signature into concept.

The framework of this design studio started with an investigation of a personal signature. In addition to the literal written name, a signature communicates identity and meaning through form. Aesthetic elements such as proportion, stroke, and composition all contribute to the overall impression that a signature leaves.

The meandering curves within the signature “orbit” a set of implied masses. This notion of gravitation was further explored through the chair, which warps and orbits around the critical mass points of the body. Parametric operations through Grasshopper and Kangaroo deform the “fabric” of the seat surface. The seat surface was superimposed with a grid of circles, and the deformation of the surface would disturb the circles as well.

The studio finally cuminated in the design of a house.

The house is designed for an astronomer and his family. Located in Ithaca, New York’s “Gun Hill” site on the Fall Creek Gorge, it seemed natural to let the tale of Ithaca, Greece’s foremost warrior, sailor, and astronomer, Odysseus guide the narrative of the house.

“There was a house at the foot of the tower, close to the thunder of the waves breaking against the cliffs, where love was more intense because it seemed like a shipwreck.”
- Gabriel Garcia-Marquez, Love in the Time of Cholera

Just like Odyssues, the primary programs are guided by the stars; the constellations of Ithaca’s night sky offer their mythos as inspiration. The most notable program is a Stellarium pointed towards the unchanging North Star; a perfect space for an astronomer’s family to ground themselves among the swirling galaxies, stars, and cosmic dust.

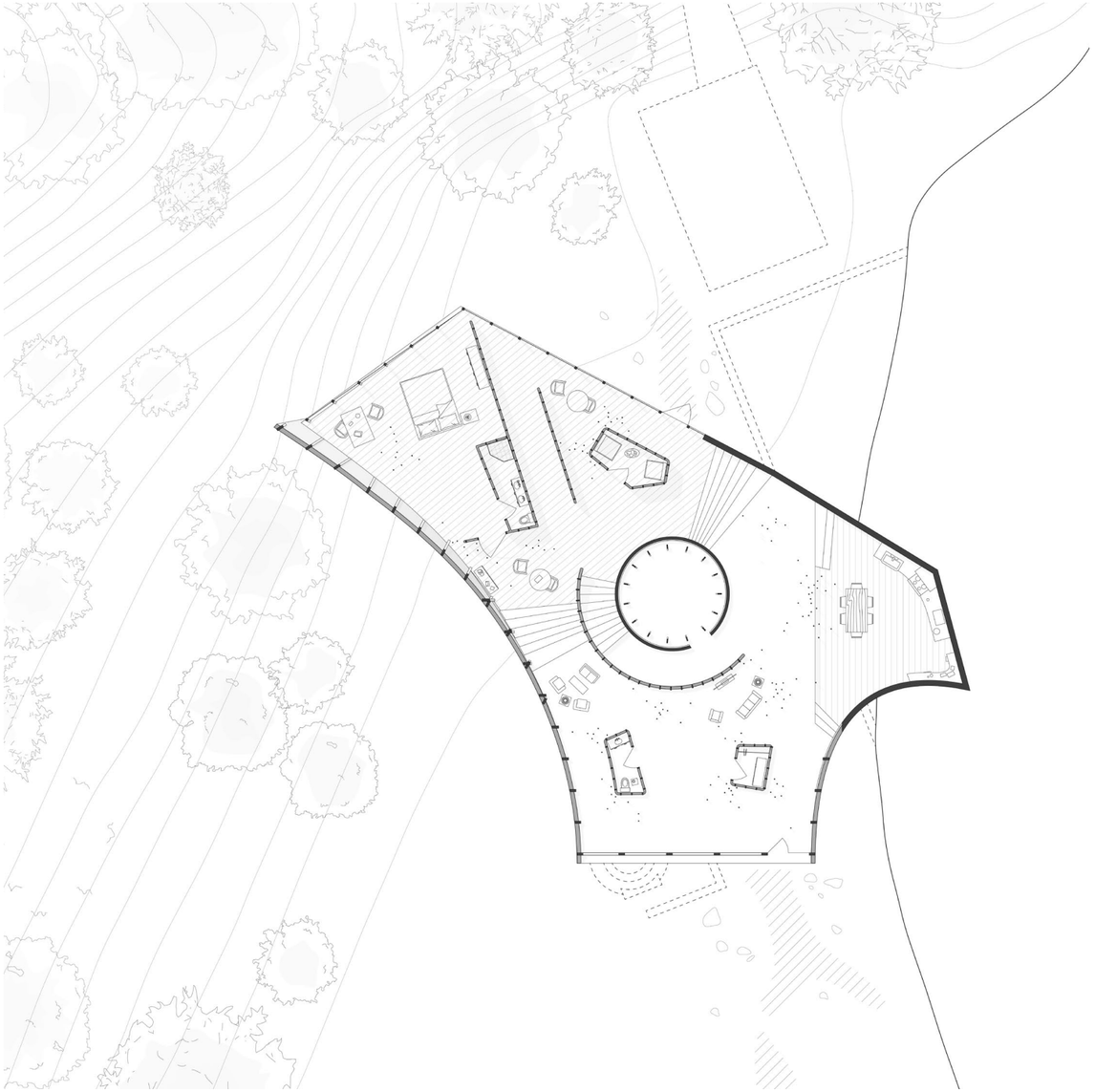
The overall form of the house borrows from classical shipbuilding. Inspired by both Odysseus’ nautical journey as well as the maritime connotation of space, the overall massing registers as a “hull” jutting over the gorge. Shiplap cladding and suspended lofts further emphasize the nautical-themed construction.

Scattered steel columns inside reflect the locations of notable star clusters. Their undulating densities naturally guide circulation; as movement is wholly influenced by the restricting star-columns and the constellation-programs weaving between them, the family walks a path laid out in the stars.

The winter solstice northern hemisphere night sky projected over the house. The arrangement of constellations informs the form and programming.

A site plan at 3/64" : 1' - 0"

A first-floor plan at 1/8” : 1’ - 0”



An interior render of the view overlooking Ithaca’s forested valleys and the Finger Lakes.