



MICHAEL THUT

INTRO

My name is Michael Thut and I recently graduated from a 3-year M.Arch program at the University of Michigan.

Prior to my time at Michigan, I studied both Math and Studio Art at Swarthmore College. These have become foundational to my architecture education and my creative practice. While this book is intended to be presentation of my creative work to this date, it is also a manifestation of me and my interests. I believe the logic, systemization, craft, and attention to detail that are a part of my personality are on display in this body of work. I hope you enjoy my practice.



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TRUNG NGUYEN KINDERGARTEN

Location: Buôn Ma Thuột, Vietnam

Professional Work: MASS Design Group

Skills Used: Revit, Google Slides, Lumion, Adobe Suite (Illustrator, Photoshop)

Architecture Team Members: David Saladik, Jean Paul Sebhayyi Uwase, Theophile Uwayezu, Divine Mutsinzi, Emery Karenzi, and Carolyne Chelimo Bor

My role in this project was to help progress a pre-existing concept design from 2018 through the schematic design phase. I was a part of a five person, architecture design team. Due to the client's desire for a sustainable building (both materially and systematically), the structure team designed a cross-laminated bamboo and steel truss that necessitated a strict adherence to grids. This required revising the upper level form since it was designed to connect clusters of classroom blocks on the ground. My work involved the development of the second floor plan. This included the layout, organization, and refinement of the architectural program in-tandem with the in-house engineering teams. Additionally, I presented and ran most of our in-house meetings since I was the only native-english speaker on the Rwandan architecture team.



DRAWINGS (CONCEPT)

These drawings of children playing shows how the concept design prioritized children learning through various types of play.

IMAGE (SCHEMATIC)

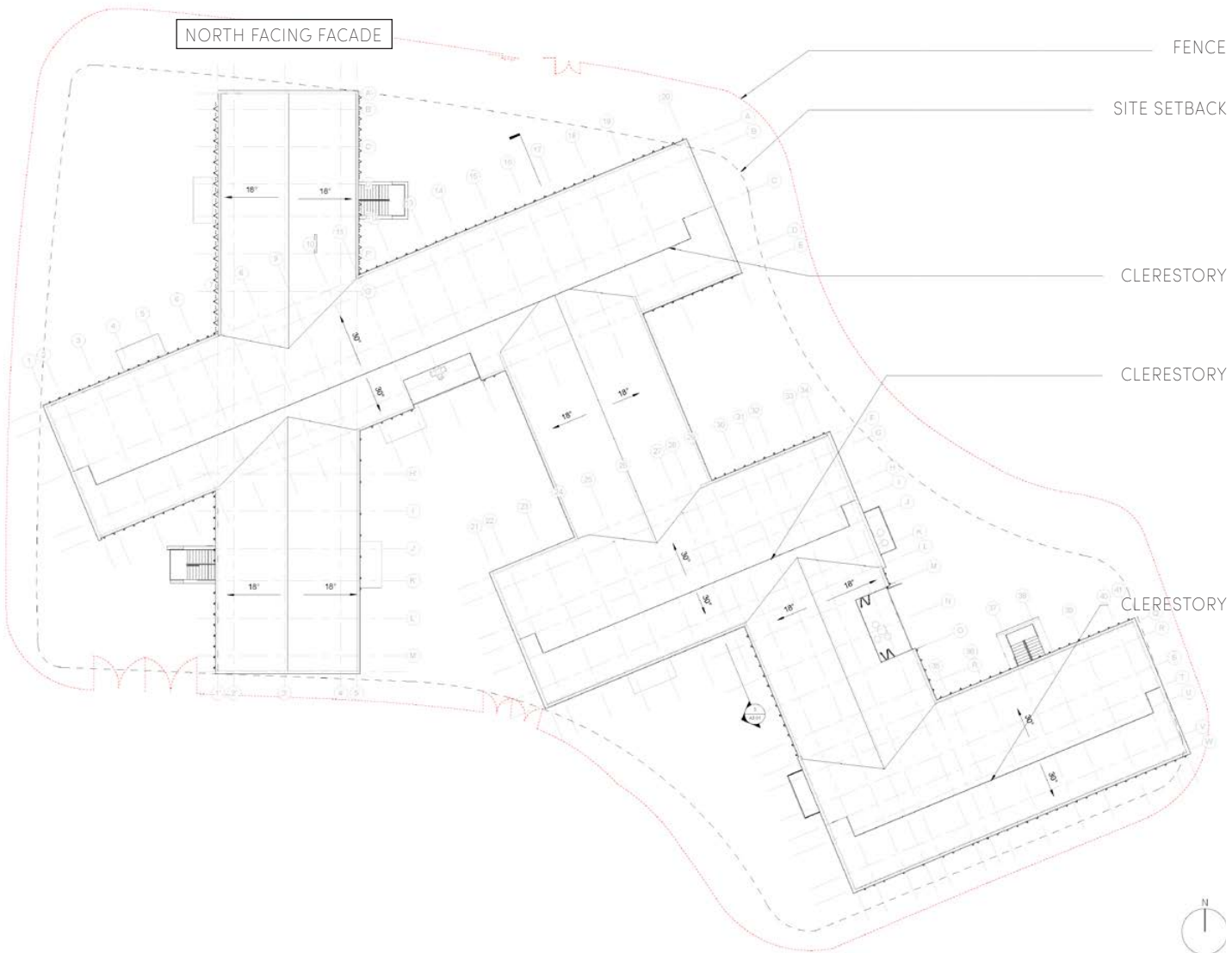
To the right is a render of the library space on the second floor. The balcony cutout, roof truss system, and clerestory window are all on display in this image.





- | | | |
|---------------|---|--|
| ADMIN & STAFF | | DRAWINGS (CONCEPT) |
| PUBLIC | | To the left are the original concept design floor plans for the school. These were done by a team at MASS back in 2018. |
| EDUCATION | | DRAWINGS (SCHEMATIC) |
| BACK OF HOUSE | | On the right are the plans for the schematic design phase. As a new team, we had to develop the design while maintaining its architecture integrity. I was responsible for the 2nd floor plan. |
| TERRACES | | |





DRAWINGS (SCHEMATIC)

The drawings to the left shows the passive roof design that we chose. Architecturally, we sharpened the intentionality of the gable with respect to structure and program.

IMAGES (SCHEMATIC)

The renderings above highlight the branching form of the building across the site. This clusters classrooms by age with the purpose of creating a shared, interconnected, playground.

RURAL BRIDGE HOUSE

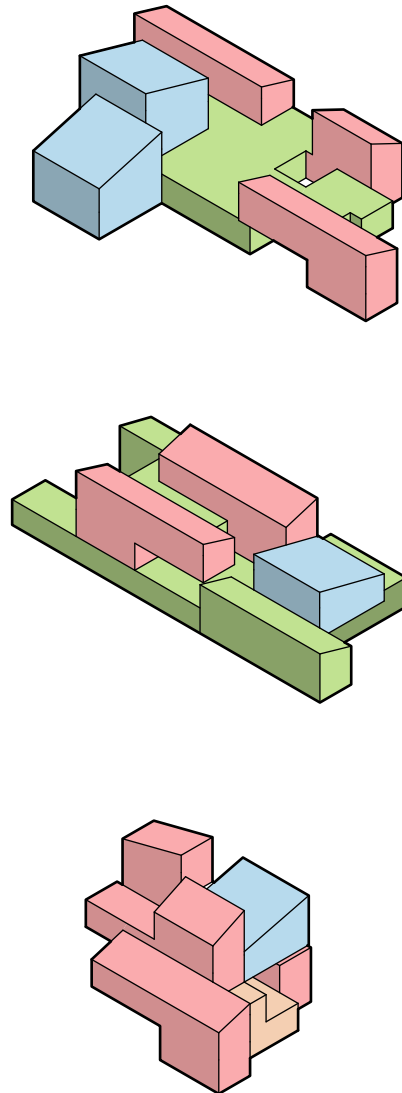
Location: Port Austin, MI

Class: ARCH 562: Countryside Collectives - Jonathan Rule & Kathy Velikov

Skills Used: Rhino 7, Revit, Adobe Suite (Illustrator, Photoshop)

Team Members: Michael Thut, Tim Jockers, Qilmeg Doudatz

This project was a three-person group project in Michigan's comprehensive graduate studio. Our team was prompted to design a publicly engaged, collective living complex in the rural town of Port Austin, Michigan. With a projected northern migration to Michigan in the near future due to the growing climate crisis, our professors tasked us with envisioning the potential growth for smaller towns in the state. Our proposal was a low-lying, linear construction punctuated by striations of public and private programming. The design uplifts a communal living and working environment through the use of alternative education models that teach the youth important life skills like farming, working with one's hands, and respecting nature.

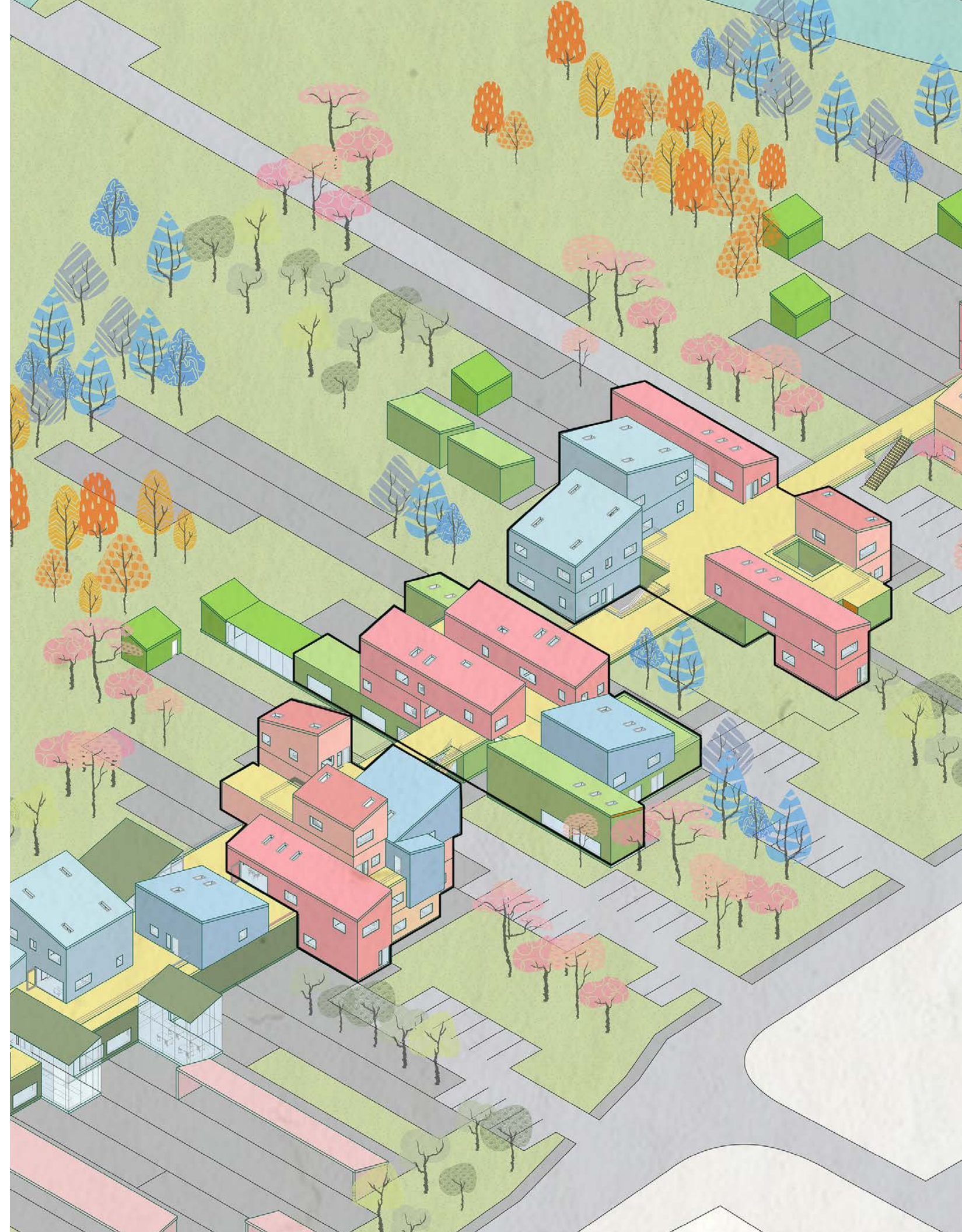


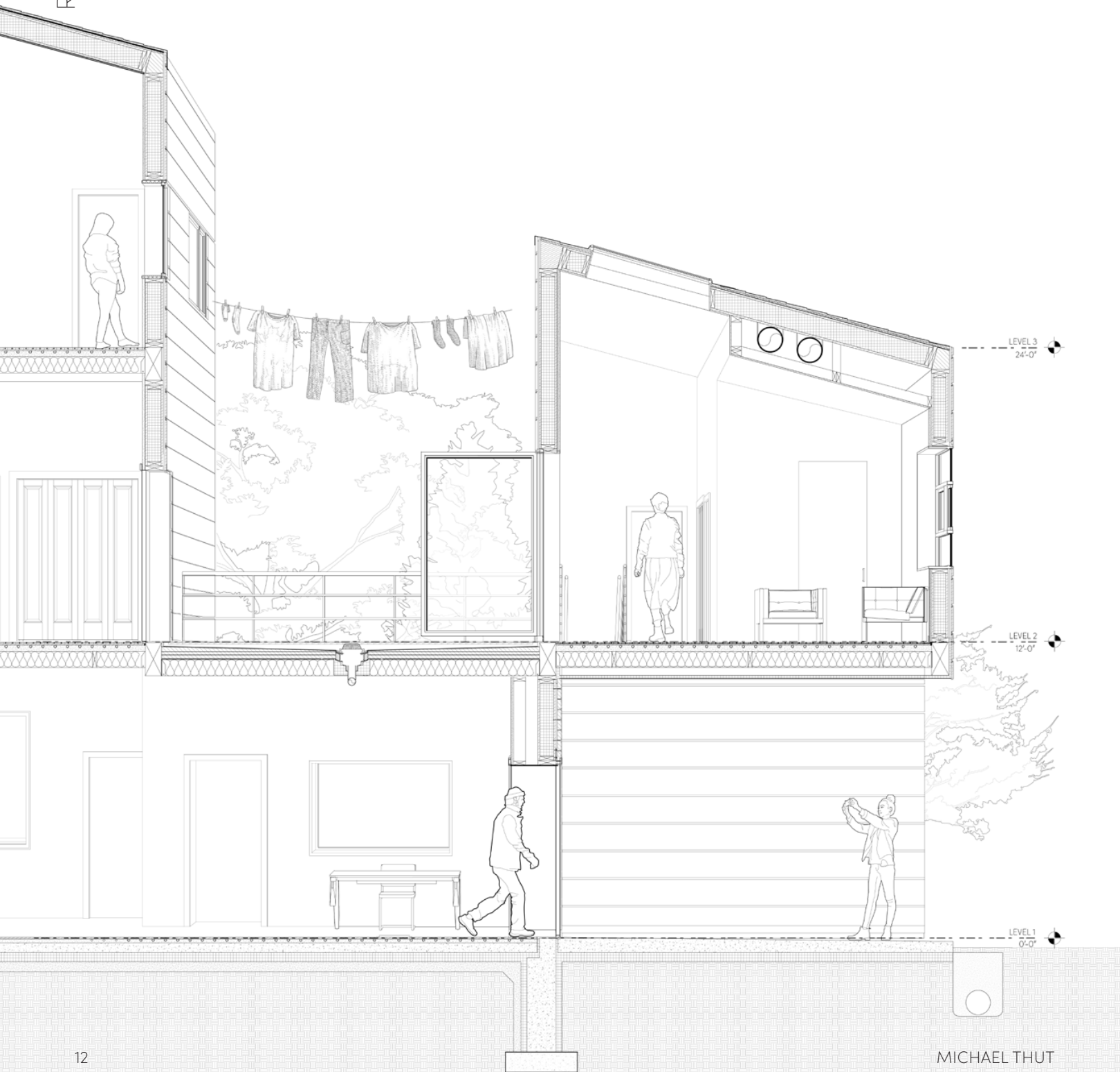
DIAGRAM

Above is a diagram that shows how Tim and I pieced together simplified blocks of typical developer apartment models to construct the formal logics of our project.

ISOMETRIC

To the right is an image rendered by Qilmeg that highlights the way we clustered differing unit types with and the various public programming across the site.





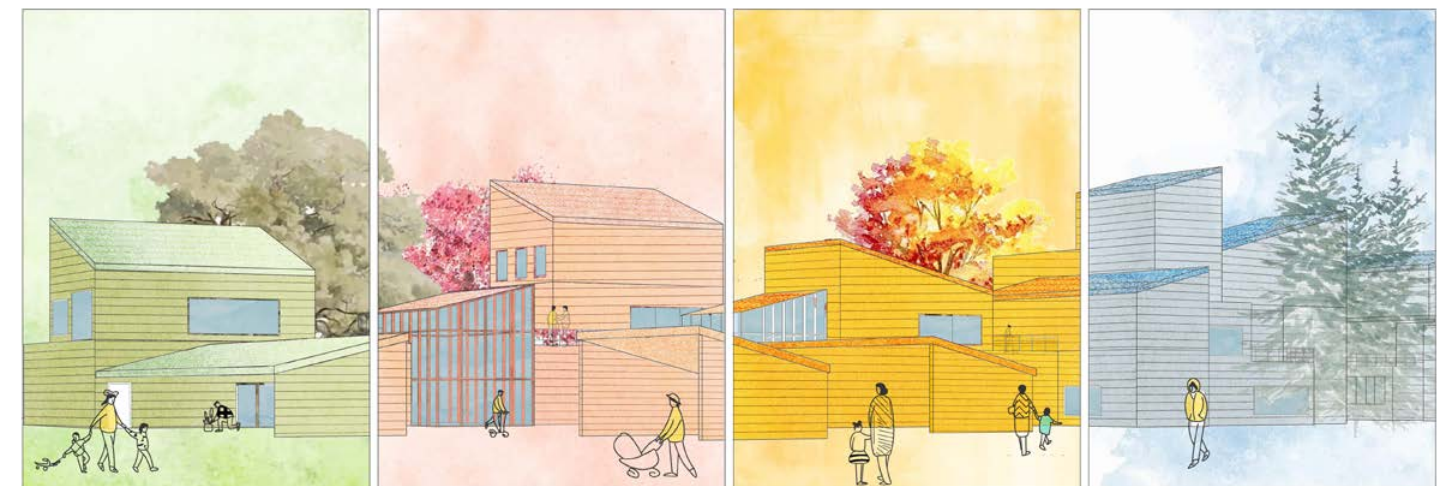
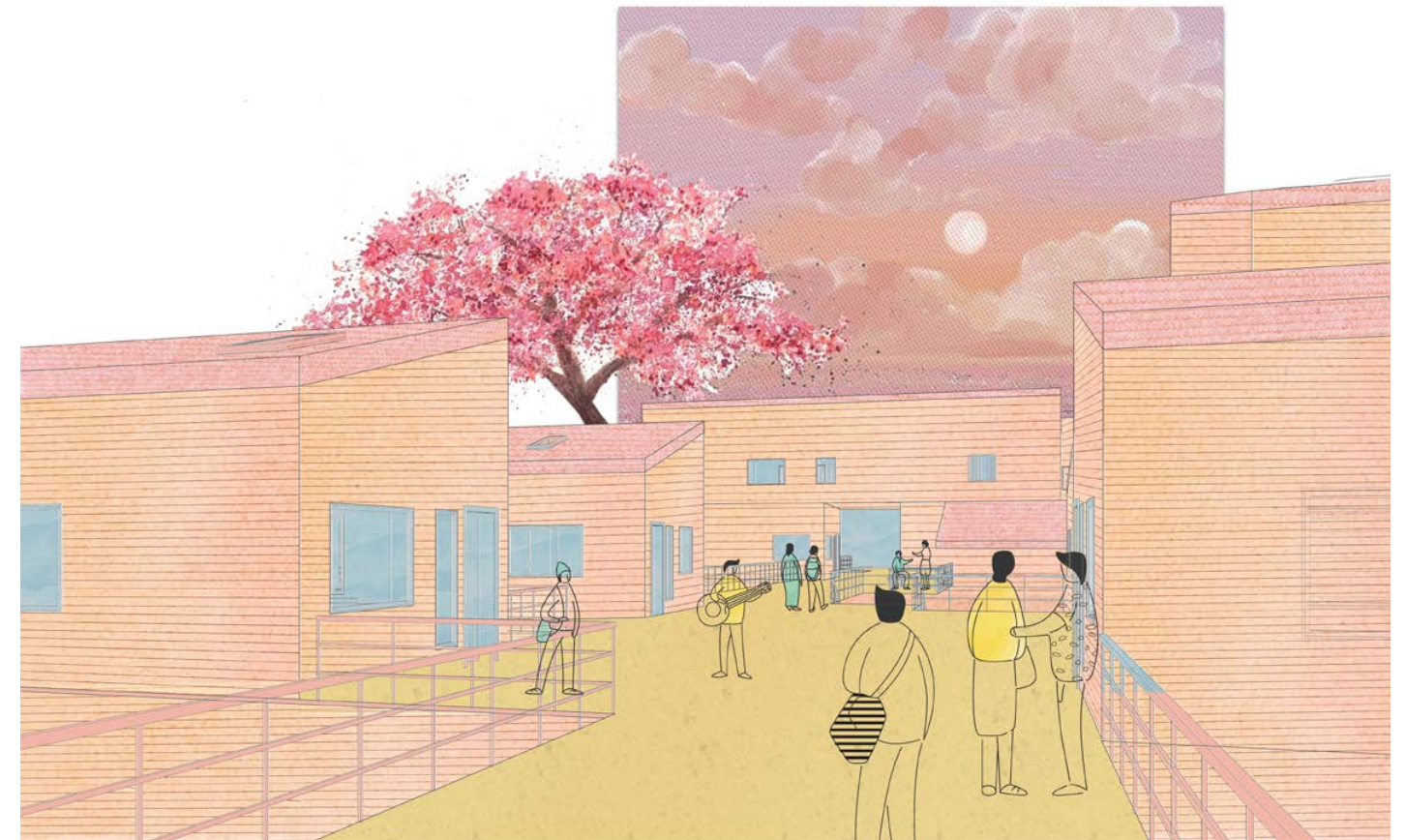
MICHAEL THUT

WALL SECTION

To the left is a wall section drawn by Tim and I detailing our construction decisions. We were economic and sustainable through the choice of wood siding, Structurally Insulated Panels, and radiant heating.

DRAWINGS

Below is a series of drawings by Qilmeg that give life to the elevated walkway and the building's public programming. We included alternative education components for each season to provide support to the town year round.



ELEVATION

The top drawing is the west facing facade elevation. The height variation coupled with the low-lying separated clusters of program help to break down the large structure for the small town.

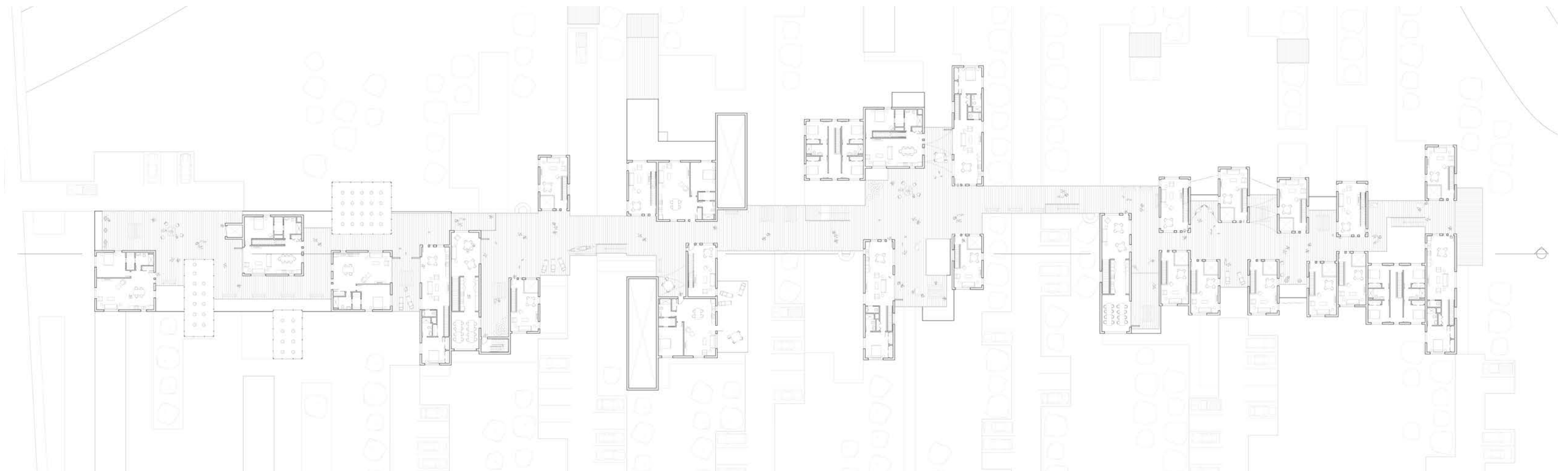
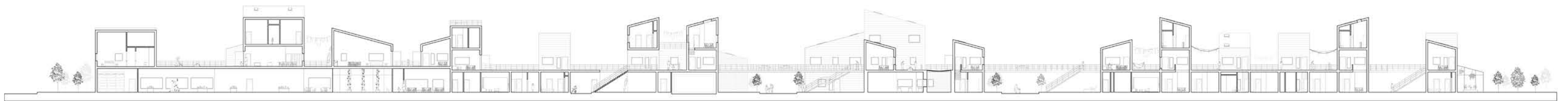
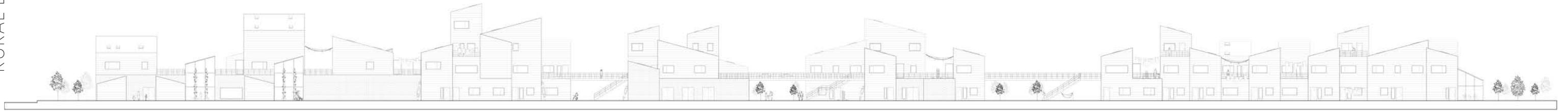
SECTION

In the middle is a section cut through the length of the building. It shows how one and two-story apartments connected to the deck and the public programming.

PLAN (2ND FLOOR)

At the bottom of the page is the 2nd floor plan. It highlights the deck as an elevated walkway that connects every part of our project together to form a large, public, exterior space.

All drawings produced by Tim and I.

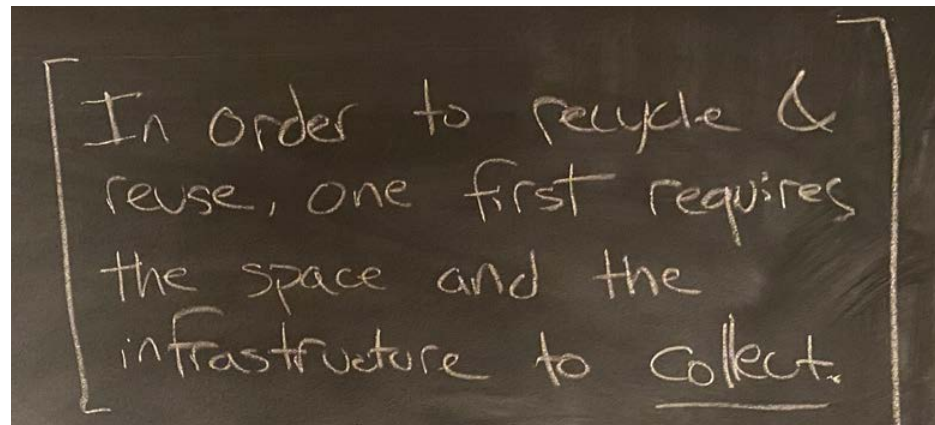




PAWNED PLAYGROUND

Location: Ann Arbor
Class: ARCH 422: Situations - Catherine Griffiths
Skills Used: Rhino 7, V-Ray, Adobe Suite (Illustrator, Photoshop)

This project encouraged students to reconsider the collection and arrangement of materials as architectural space. My material for the semester was plastic and I dove into the idea of recycling and reusing leftover material that has already served its intended purpose. We had to envision a temporary space on an abandoned site in Ann Arbor, so I constructed a sorting facility for plastic waste that provided open space for children to recycle by repurposing old materials into toys. The end result reminds me of brutalist and adventure playgrounds where children learn through experience by taking calculated risks.

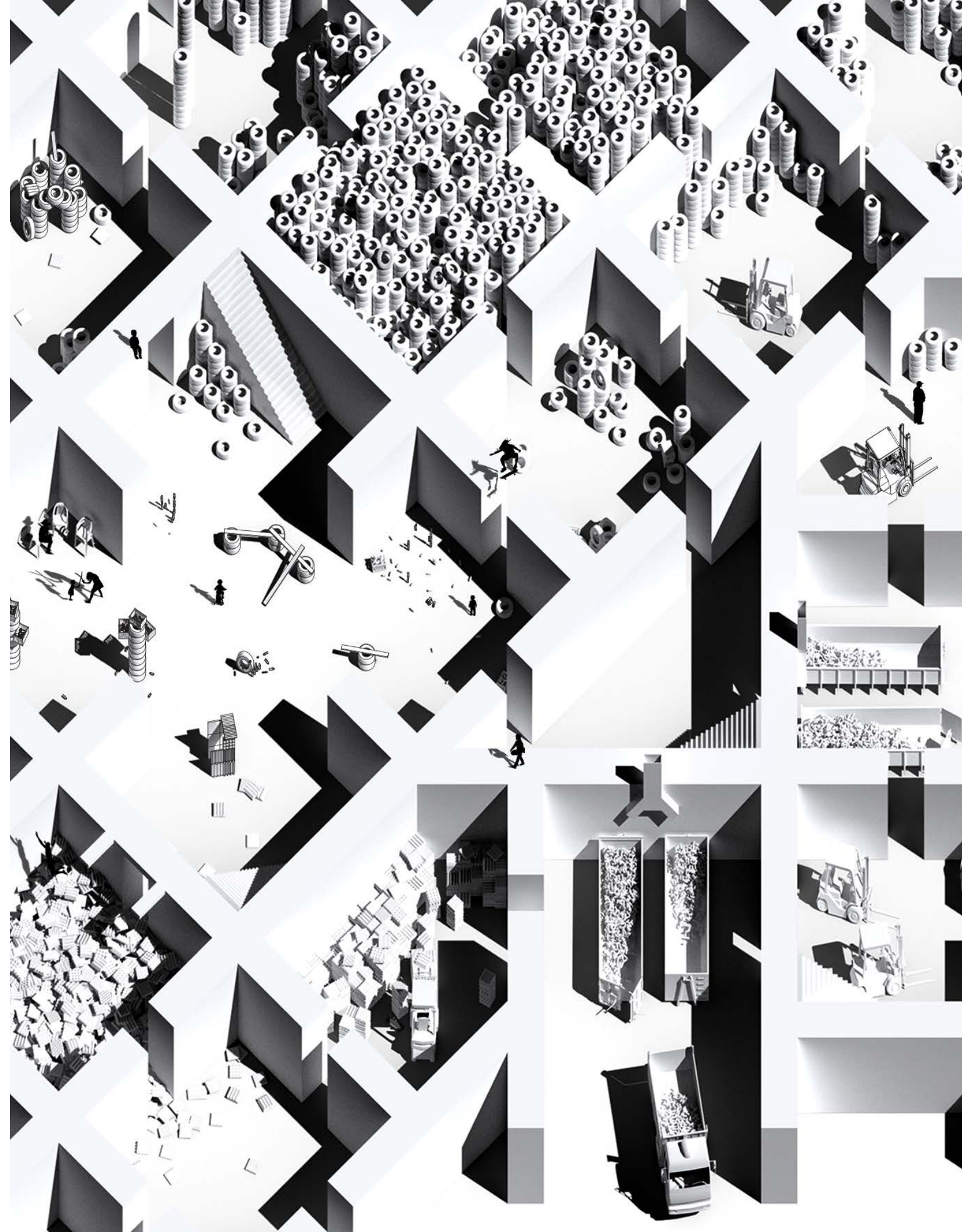


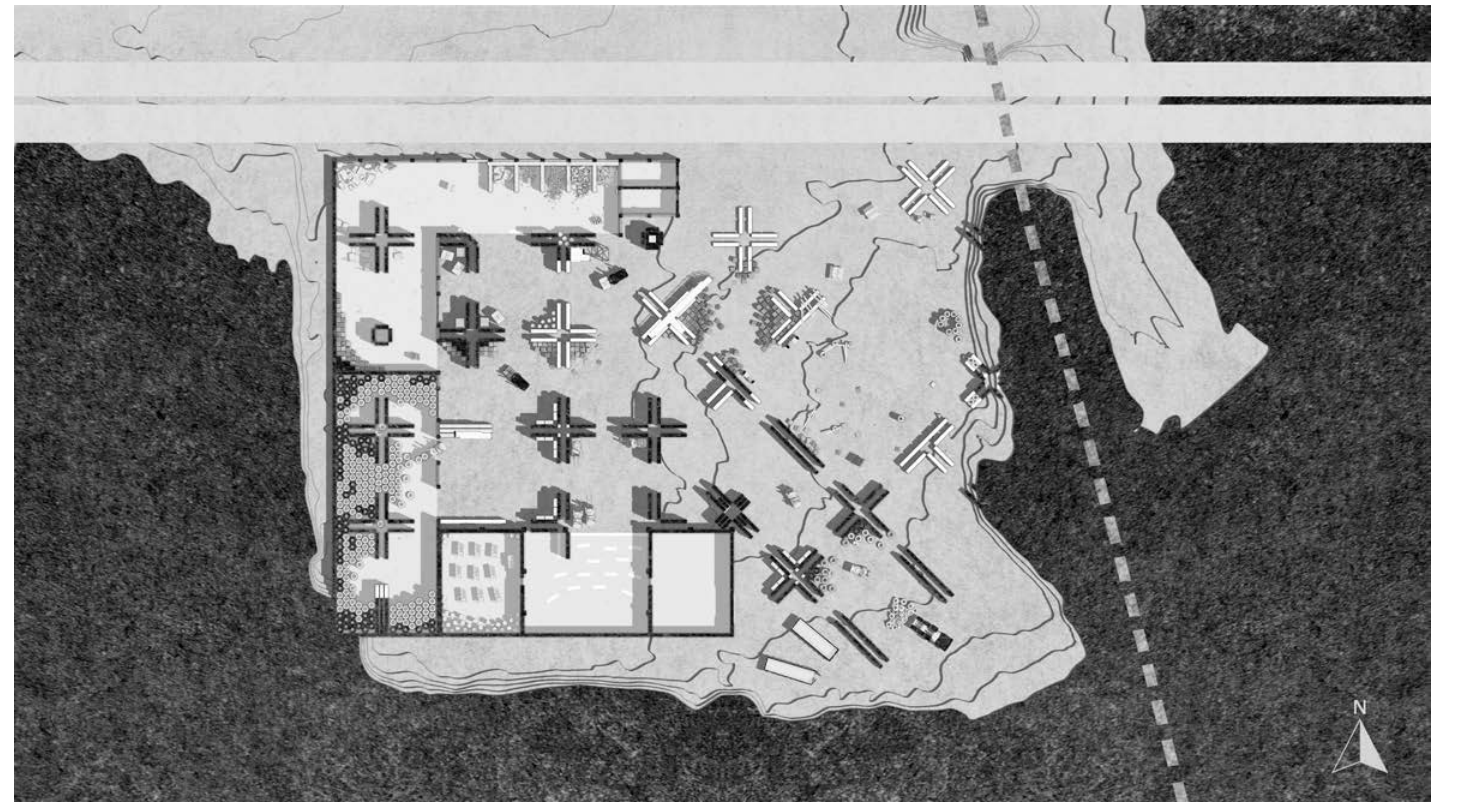
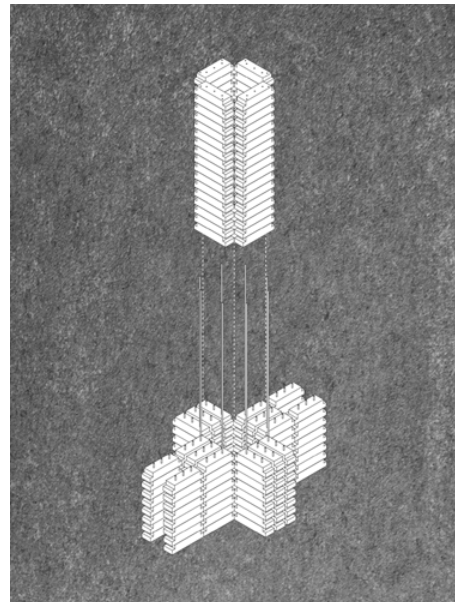
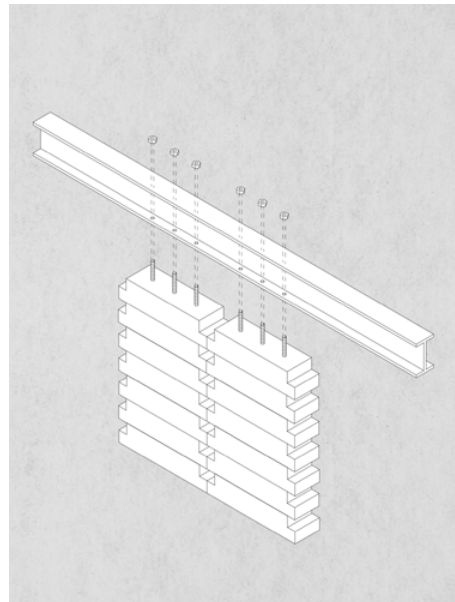
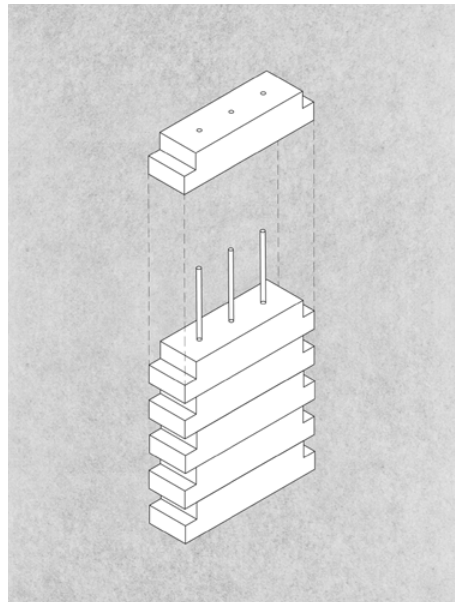
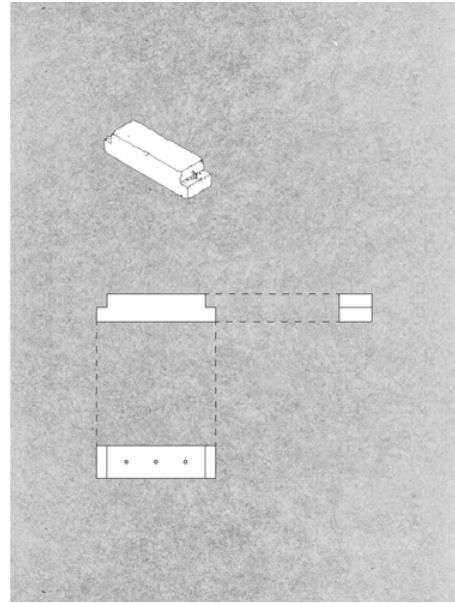
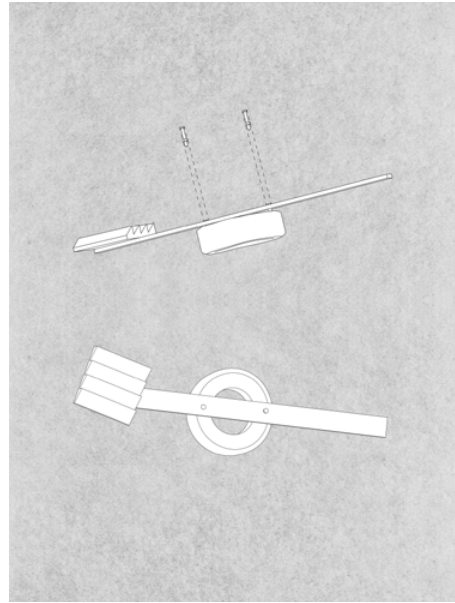
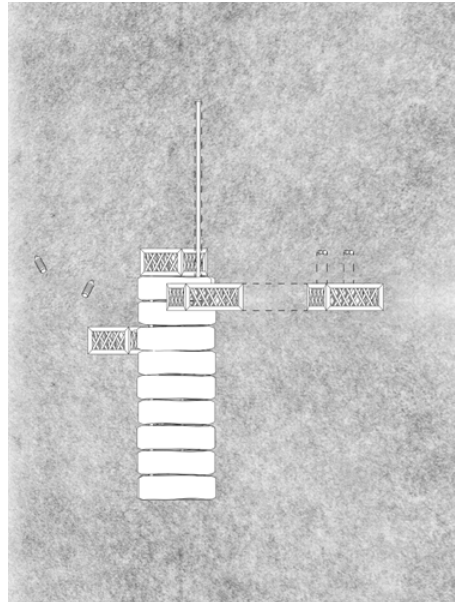
QUOTE

To the left is a personal quote that captures the main theme of the project; that is the storage and management of materials for recycle and reuse.

DRAWING

The image on the right shows an infinite space of plastic collection and storage that provides open areas of space for engagement with the material in a playful manner.





TRADING CARDS

To the left are a series of drawings that show some assemblies throughout the project; they form playground equipment, structural support and architectural structures themselves.

PLANS

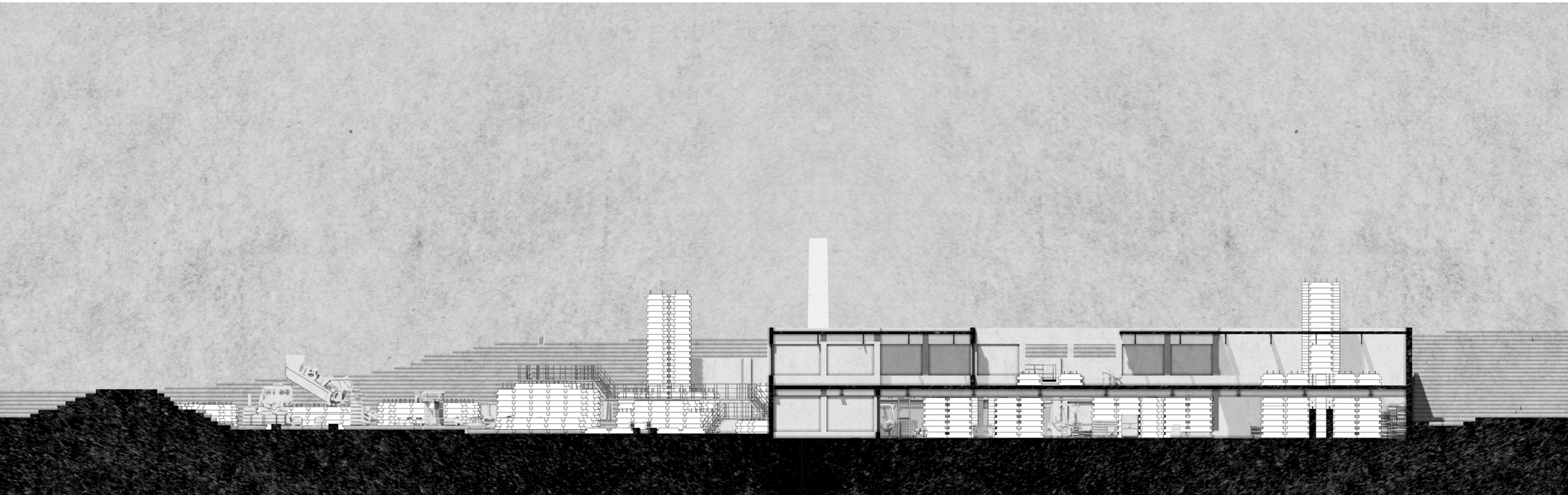
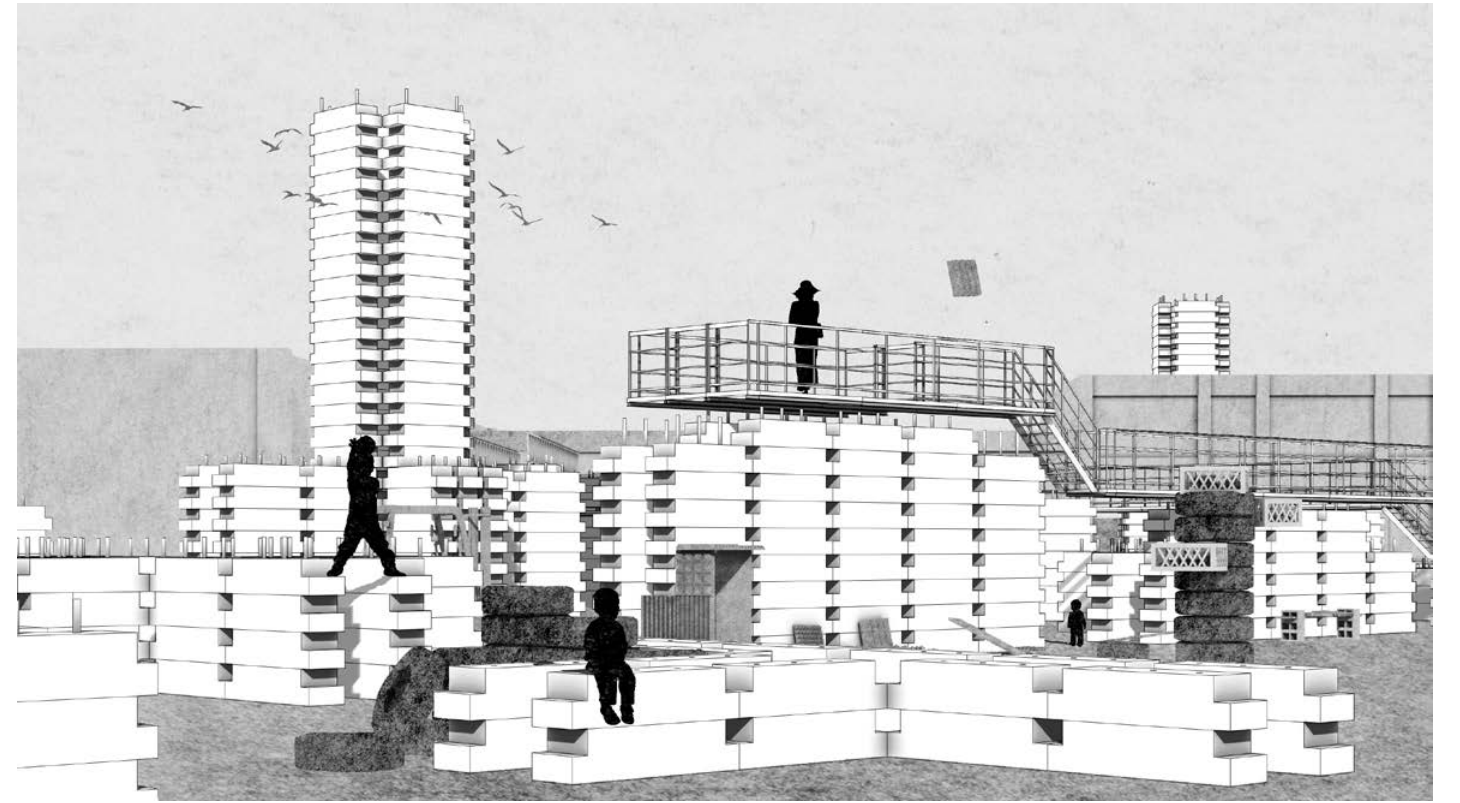
Above is a set of plan drawings. They help to show the overall organization across the site in conjunction with the height variation of the concrete block and the ground.

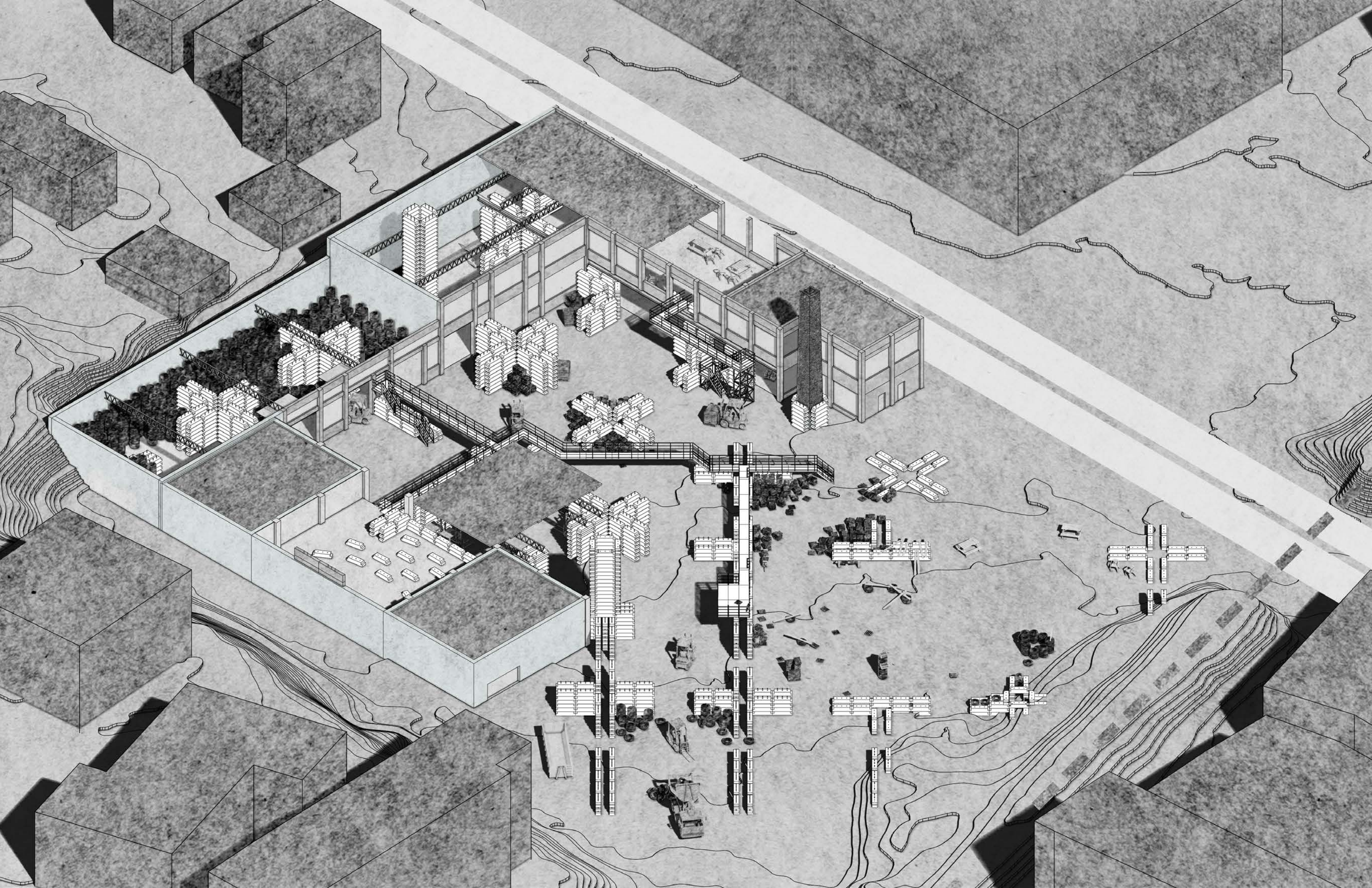
DRAWING

The image to the right is a perspective of the large communal play area. It shows how the concrete blocks help delineate space for sorting and storage, while also becoming play structures themselves.

SECTION

The section below details a cut through the pre-existing building. It showcases how the concrete blocks are dispersed across the open courtyard and throughout the building.

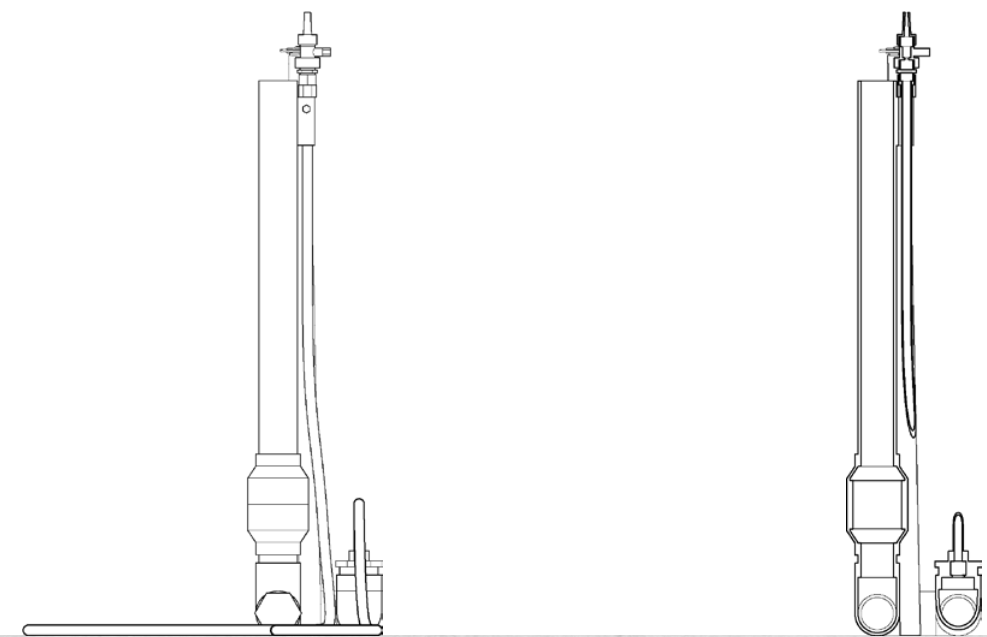
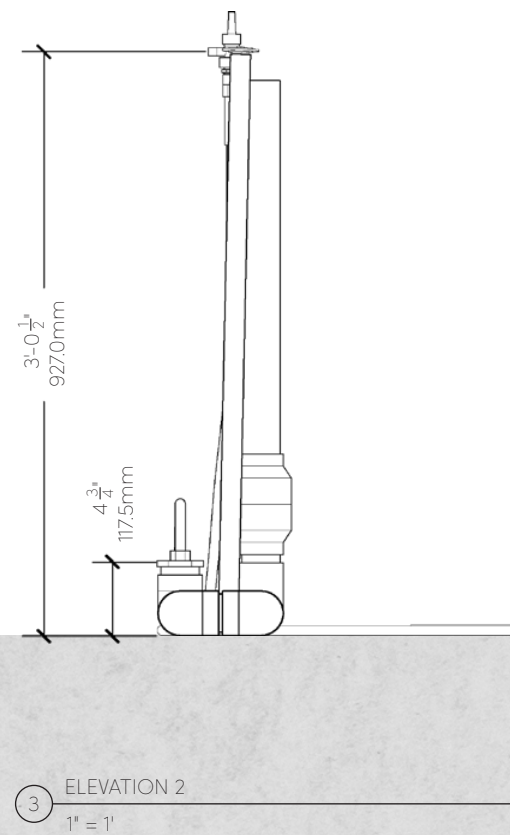
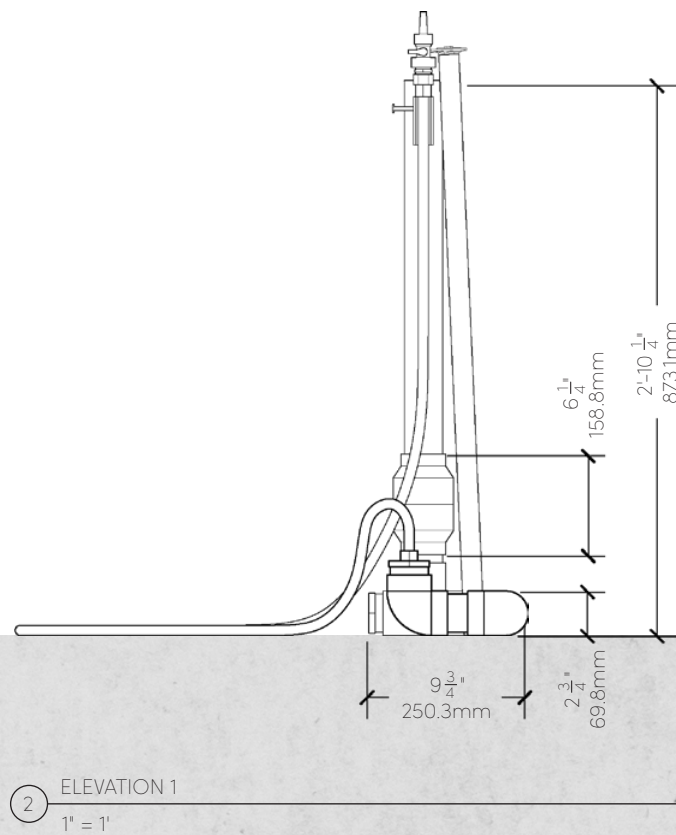
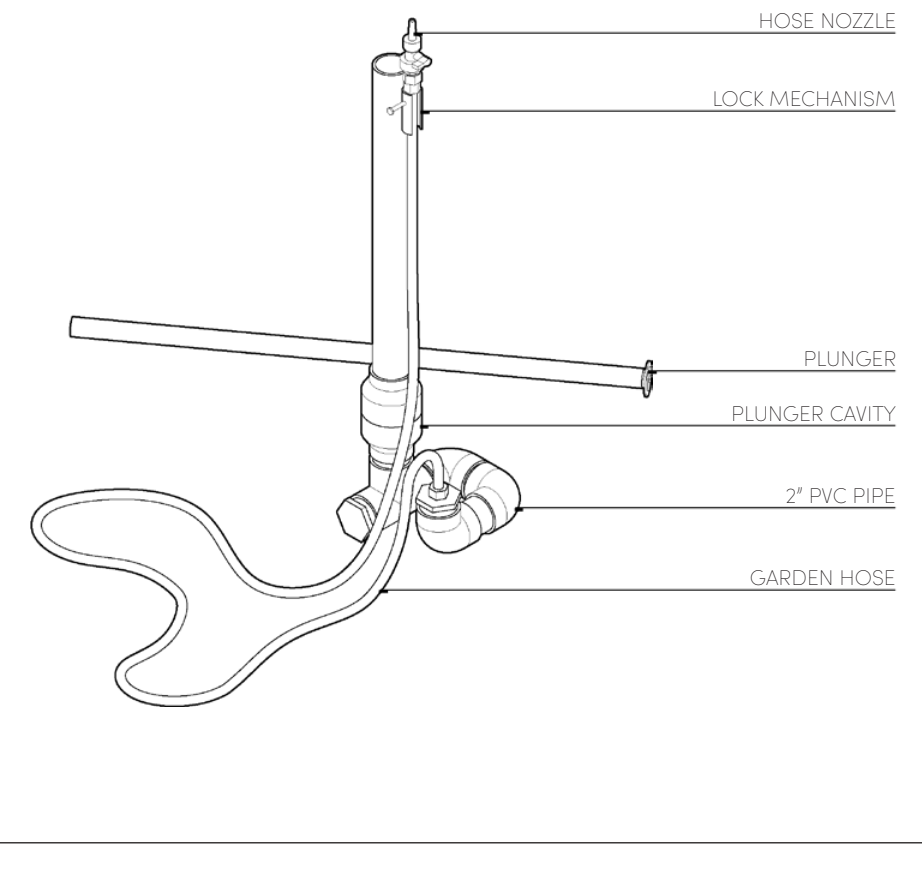
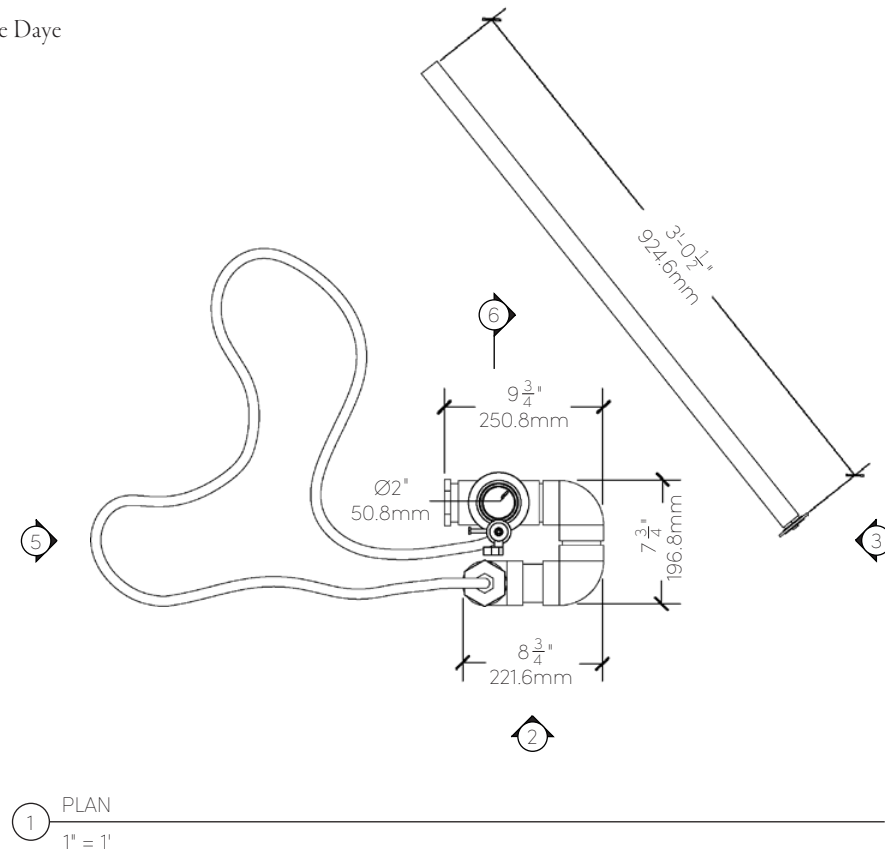


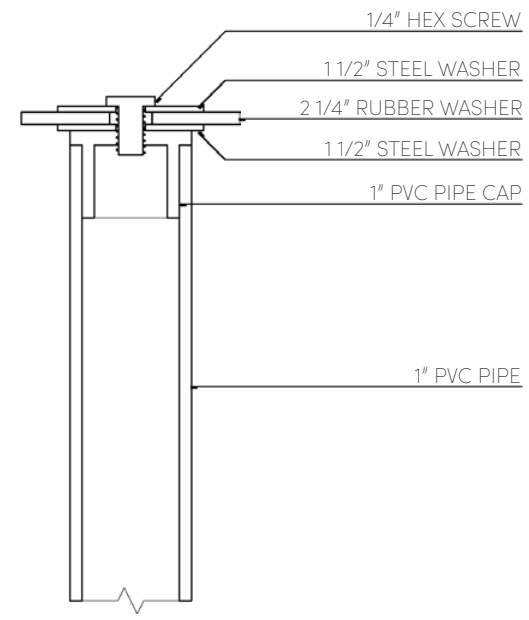


WATER HEARTH

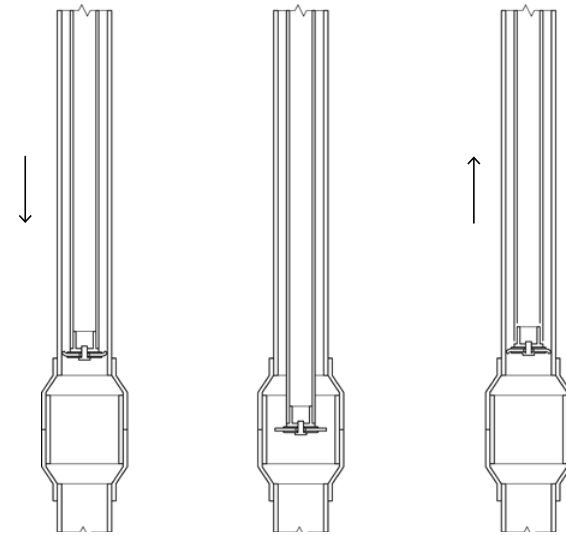
Location: Echo Park, Los Angeles 90026
 Class: ARCH 552: Institutions - Kevin Bernard Moultrie Day
 Skills Used: Rhino 7, Adobe Illustrator

This project sought to address homelessness by creating a collection of public services through the agglomeration of each student's individual project. This allowed us to focus in on one issue with specificity without having to grapple with everything that surrounds this crisis. We had to design two objects with similar tectonics, but at different scales. I focused in on pressurized water systems for washing and controlling one's body temperature. The small object to the right is a personal hose system constructed out of easily accessible, low-cost materials. This allows someone who is unhoused to construct the object on their own, ultimately reducing the cost. A plunger with an oversized rubber washer on the end creates a simple pneumatic system to pressurize the water by hand.

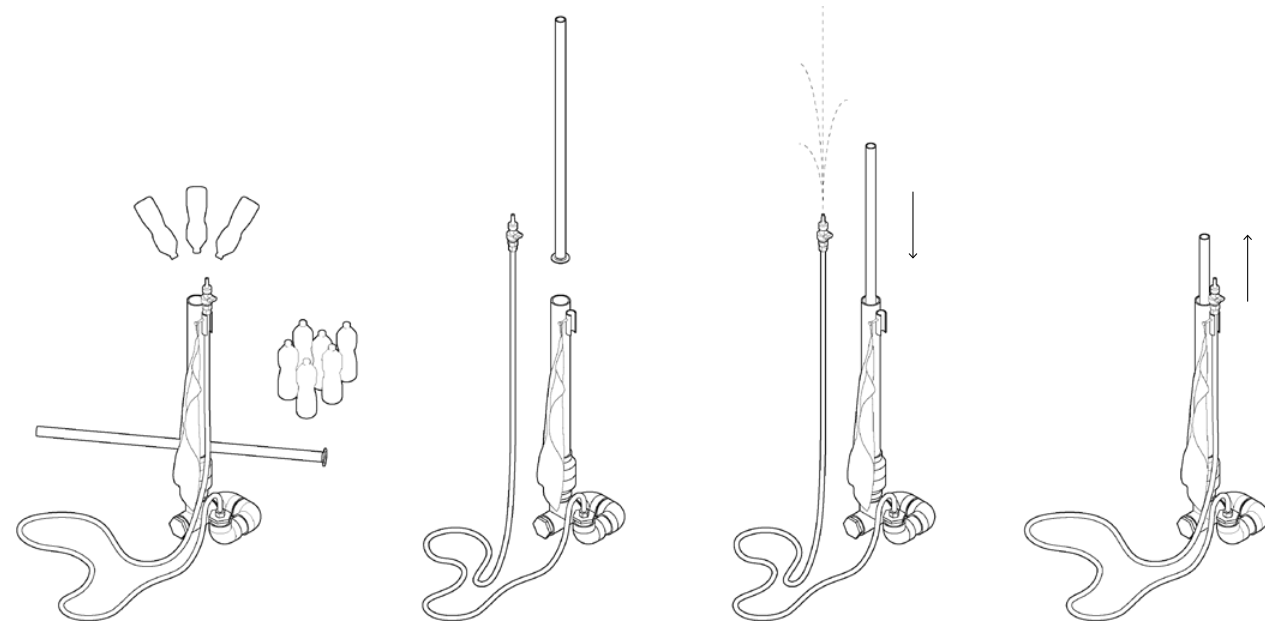




1 PLUNGER DETAIL
6" = 1"

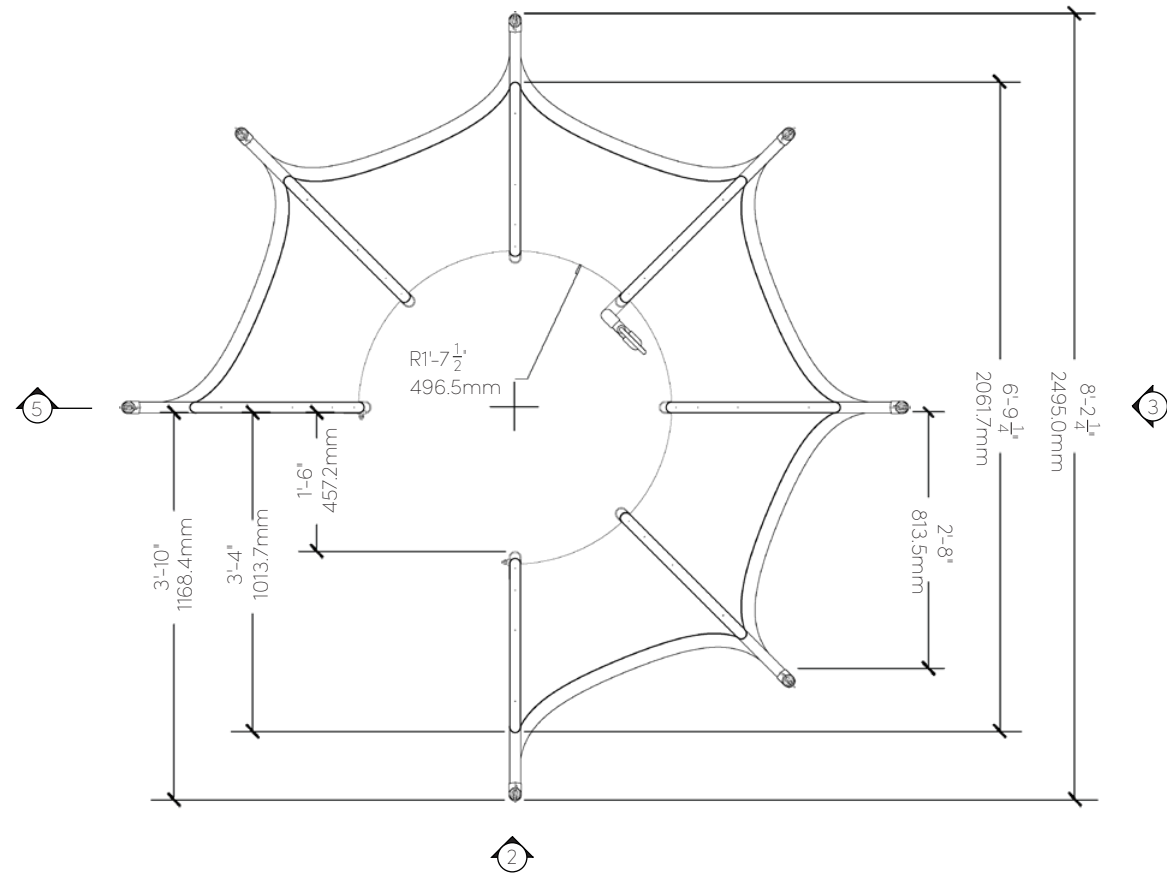


2 CAVITY DETAIL
1 1/2" = 1"



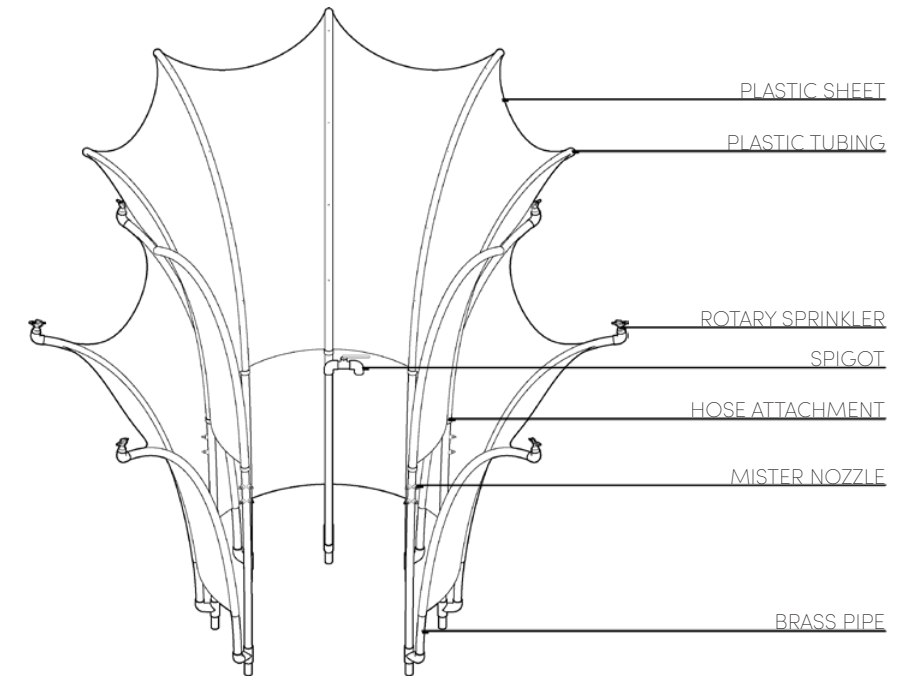
3 USAGE AXON
1 2" = 1"



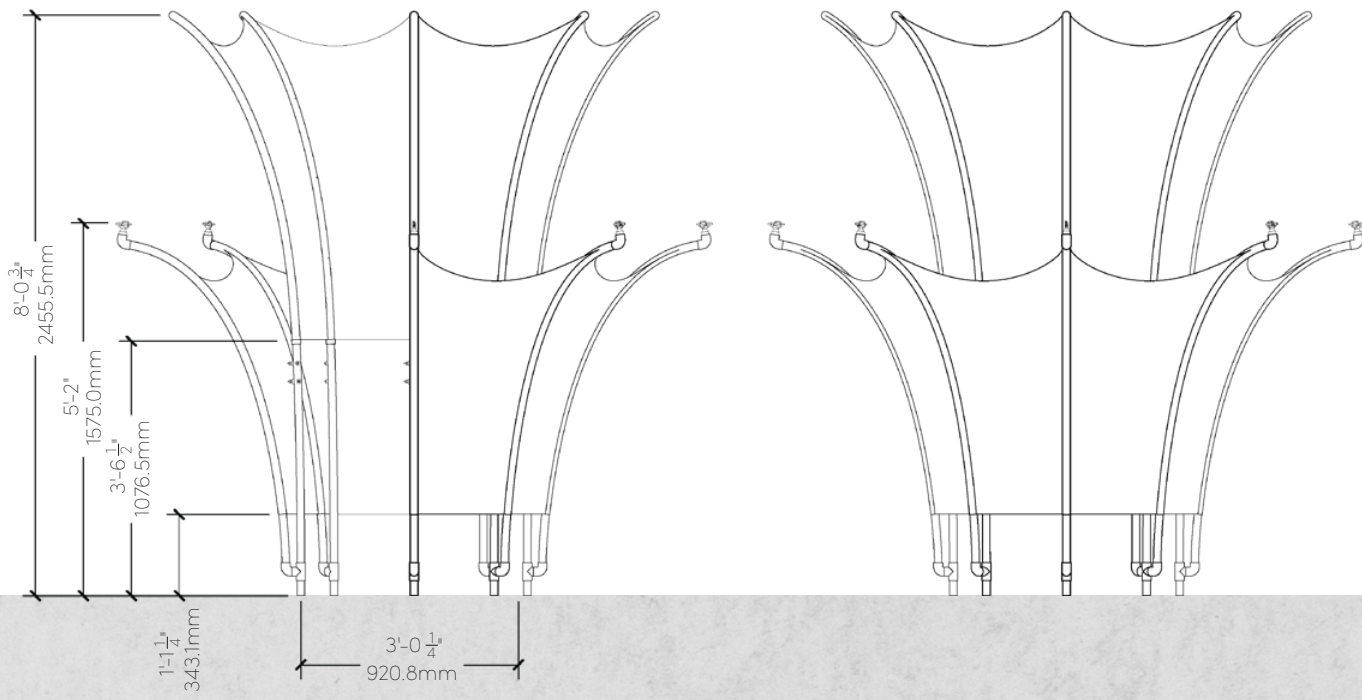


1 PLAN
3/8" = 1'

The large object is a product to be funded and implemented by the city. For this reason its function differs from the small object; it must merge the interests of the unhoused community with the client's. This led me to design a large, inflatable sprinkler that blooms every time the city is watering the grass. Water is dispersed through rotary sprinklers across the surrounding ground while misters provide a cloud of privacy and slip n slide like holes in the plastic bloom give individuals access to streamed water. This effectively turns the process of watering the park grass into a spectacle that encourages play for the general public while providing access to pressurized water for the unhoused.

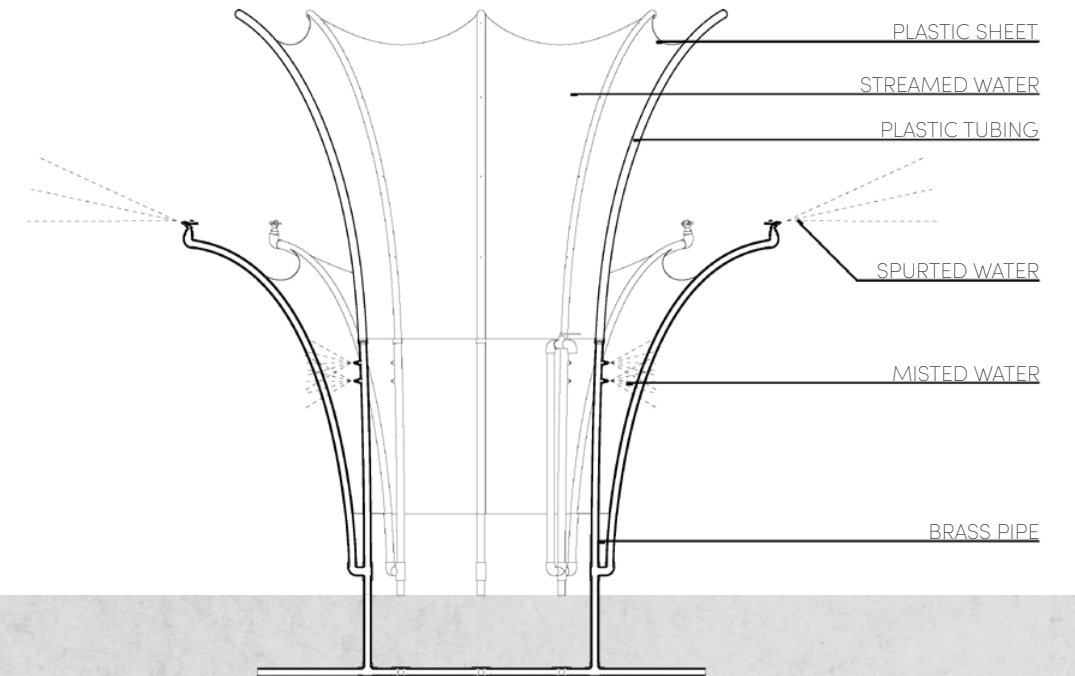


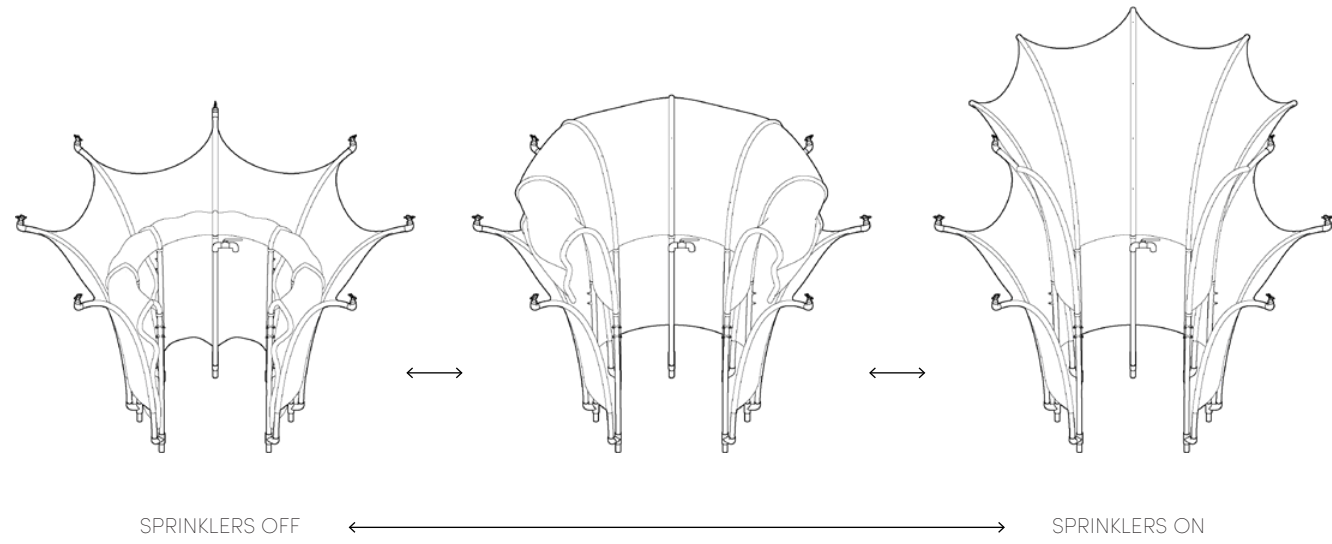
4 AXON
3/8" = 1'



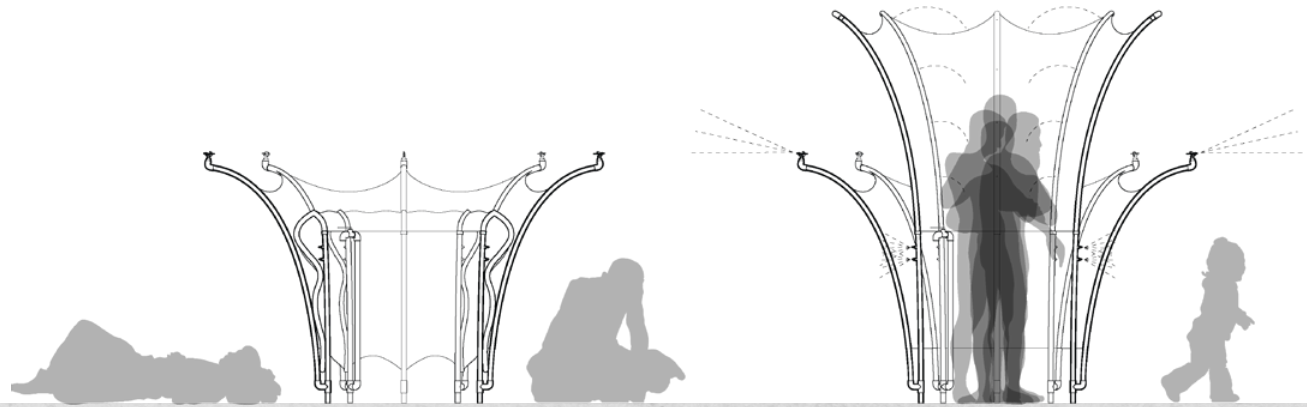
2 ELEVATION 1
3/8" = 1'

3 ELEVATION 2
3/8" = 1'

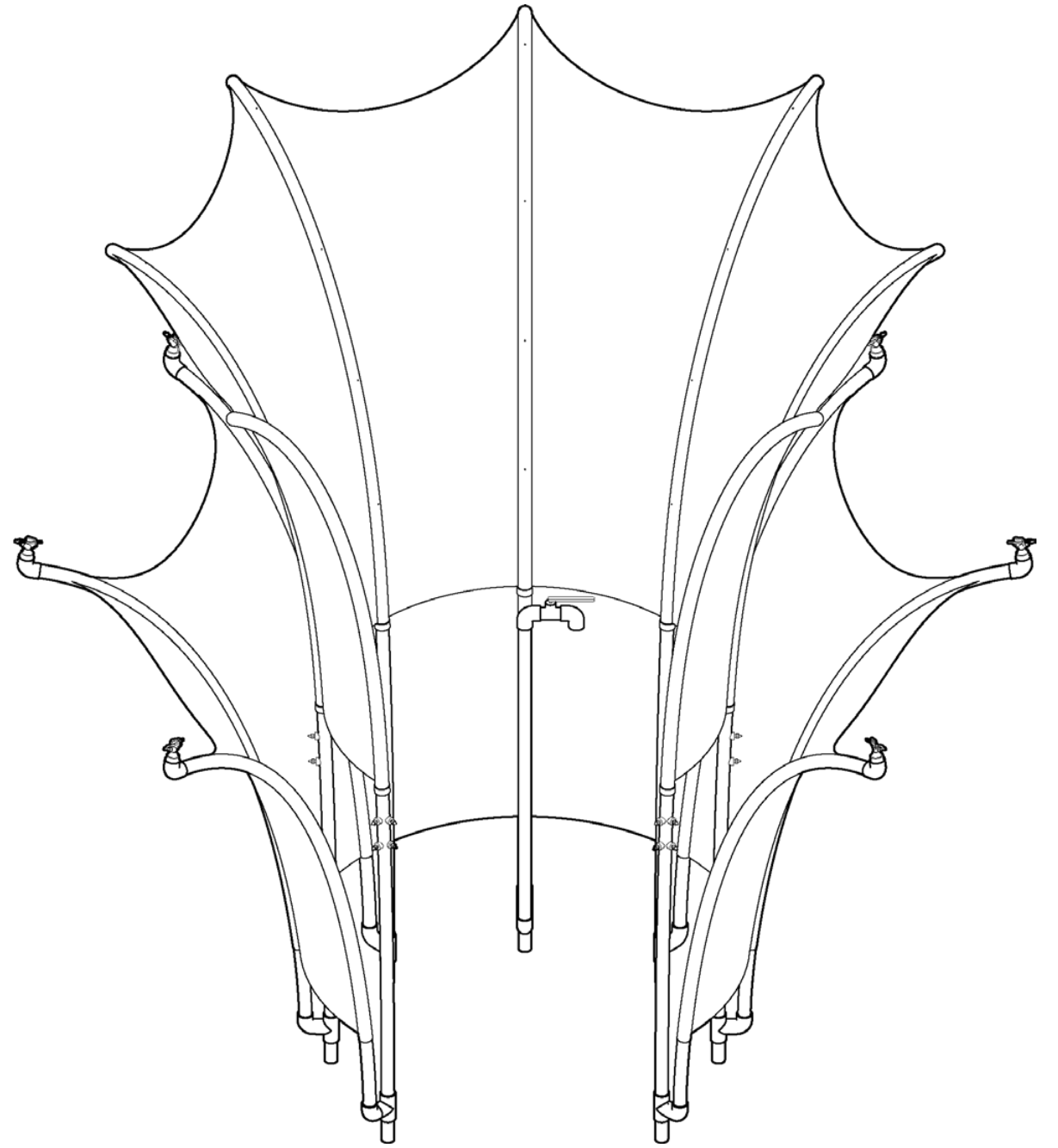




1 EXPANSION DIAGRAM
1/4" = 1'



2 HUMAN ENGAGEMENT DIAGRAM
1/4" = 1'



3 AXON
3/4" = 1'

CHAIR TRANSLATIONS

Location: Ann Arbor, MI

Research: Architecture Student Research Grant (ASRG)

Skills Used: LiDAR Scanning, Rhino 8, Woodworking, Adobe Suite (Illustrator, Photoshop)

Team Members: Evan Weinman

This project explores the role of cutting-edge design technologies through an iterative process combining digital tools and analog fabrication. The project utilized Gravity Sketch, a Virtual Reality CAD software, and 3D LiDAR scanning to uncover faults in the technology and capitalize on mistakes made in the translation process—digital mistranslations. Beginning with designs inspired by Finn Juhl's FJ48 and Marcel Breuer's Cesca Chair, the iterative process of design and fabrication resulted in the production of two series of chairs that are a direct product of the digital and physical tools used throughout the process. This allowed the makers to explore varying themes ranging from texture mapping and kitbashing to gestural motion and human proportion.



PRECEDENTS

We started with the precedents on the right to focus on translation processes as opposed to the initial chair design. Evan chose FJ48 and I chose a personal reinterpretation of the Cesca chair.

PROCESS DRAWING

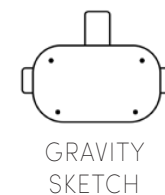
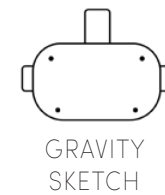
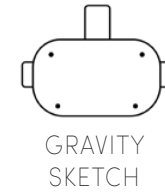
The drawing on the far right explains the translation process we designed for the project. The iterative process followed a trajectory that flowed from physical to digital and back again.



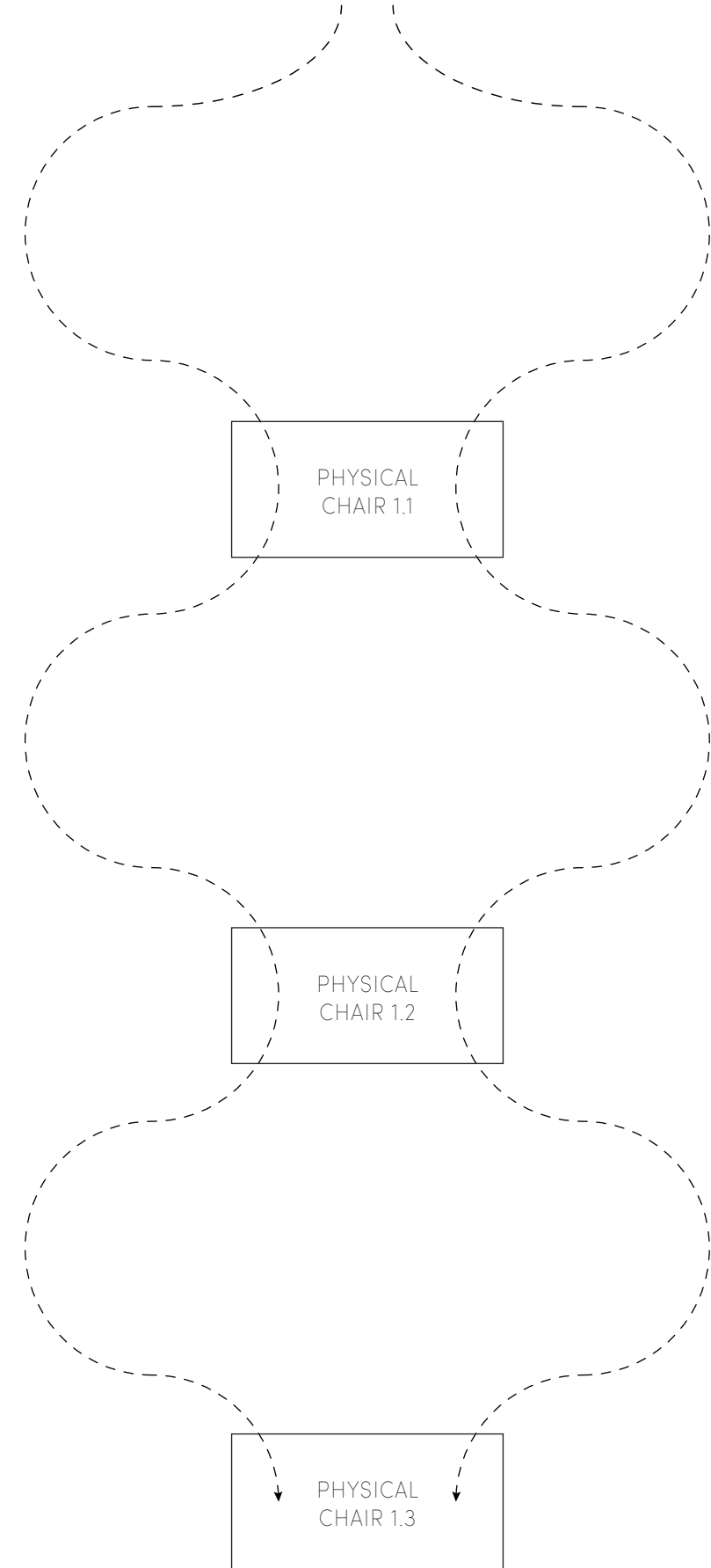
MT1.0



EVAN

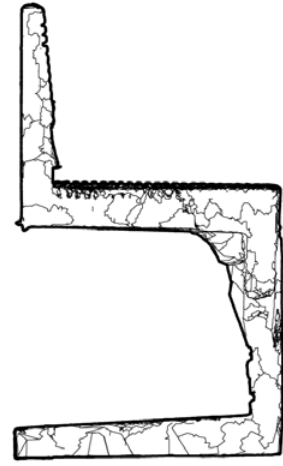
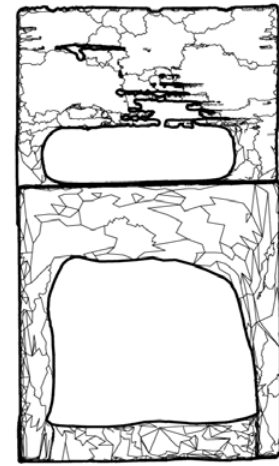


PRECEDENT CHAIRS

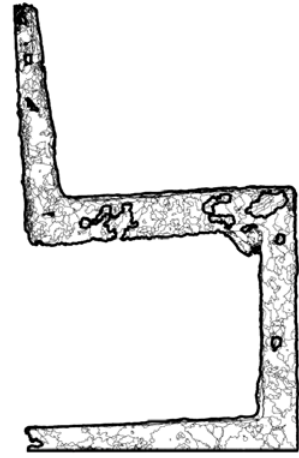
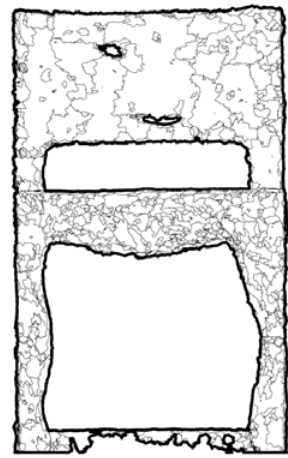
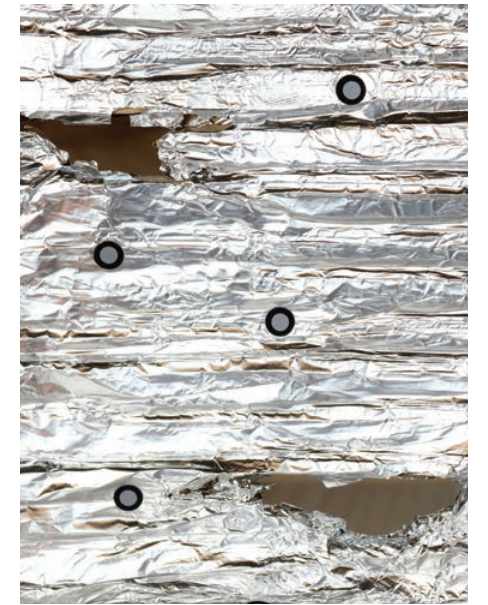


MICHAEL

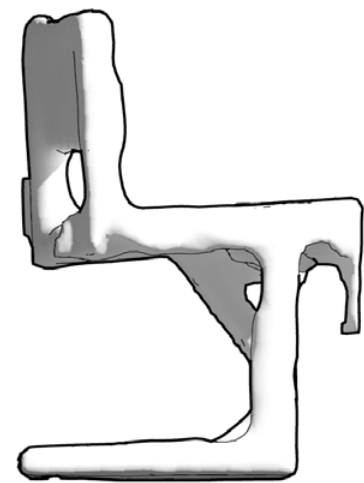
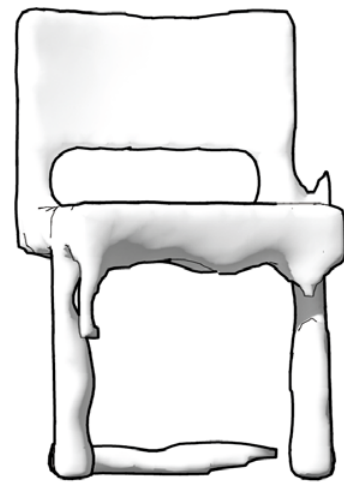
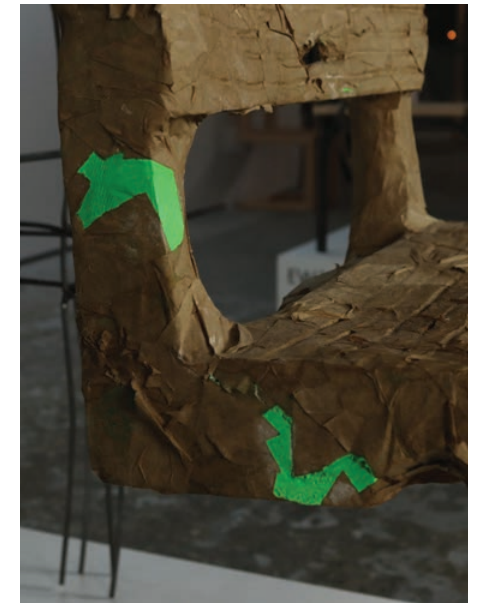




MT1.1



MT1.2



MT1.3



DRAWINGS

The drawings on the left are of the LiDAR scans I captured for each chair. They turned into the construction drawings for the next chair in the iterative, design process.

IMAGES

The images on the right are of the physical chairs Evan and I produced. LiDAR scanning and the process of physical making both had a significant impact on the design of the chair.



IMAGES

The three renderings on this spread show an interactive, digital environment comprised of the digital chair assets and scanned reinterpretations of spaces used throughout the project.

IMAGE ENGAGEMENT

At the exhibition, this environment was displayed on a computer with its contents projected onto a wall. We invited viewers to engage with, and explore, the space in their own way.



CHAIR TRANSLATIONS

FROM DIGITAL TO PHYSICAL AND BACK AGAIN

