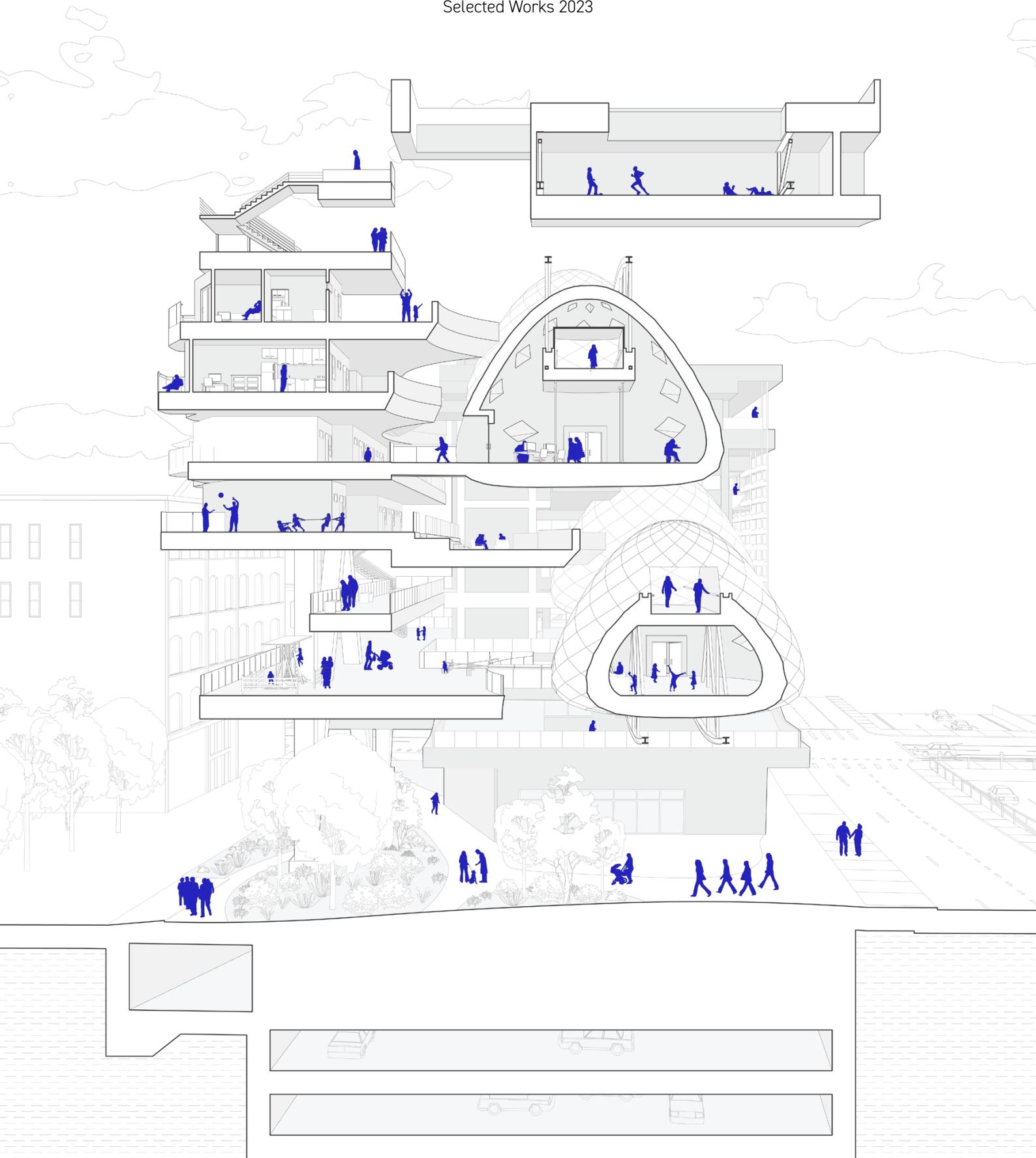


# rach arch

Selected Works 2023





**Rachel Leong**

*California Polytechnic University, San Luis Obispo  
Graduating Spring 2024*

Fifth-Year Architecture Major &  
Sustainable Environments Minor

**1 Staging Realities**

Fall 2023 | *Ongoing Thesis*

**2 Grow Til Tall**

Winter + Spring 2022 | *Collaboration with Bryan Suzuki*

**3 Deconstrukted Mekka**

Spring 2023

**4 Microplastic Suspension**

Fall 2021 | *Collaboration with Adam Simpson, Lydia Rosenthal, Ben Foreit*

**5 Interlace**

Fall 2021

**6 Slatt Stool**

Fall 2022

**7 Nest Coffee Table**

Fall 2023

**8 Vega**

Spring 2023

**9 Digital Seduction**

Spring 2022 | *Spring Fashion Show*

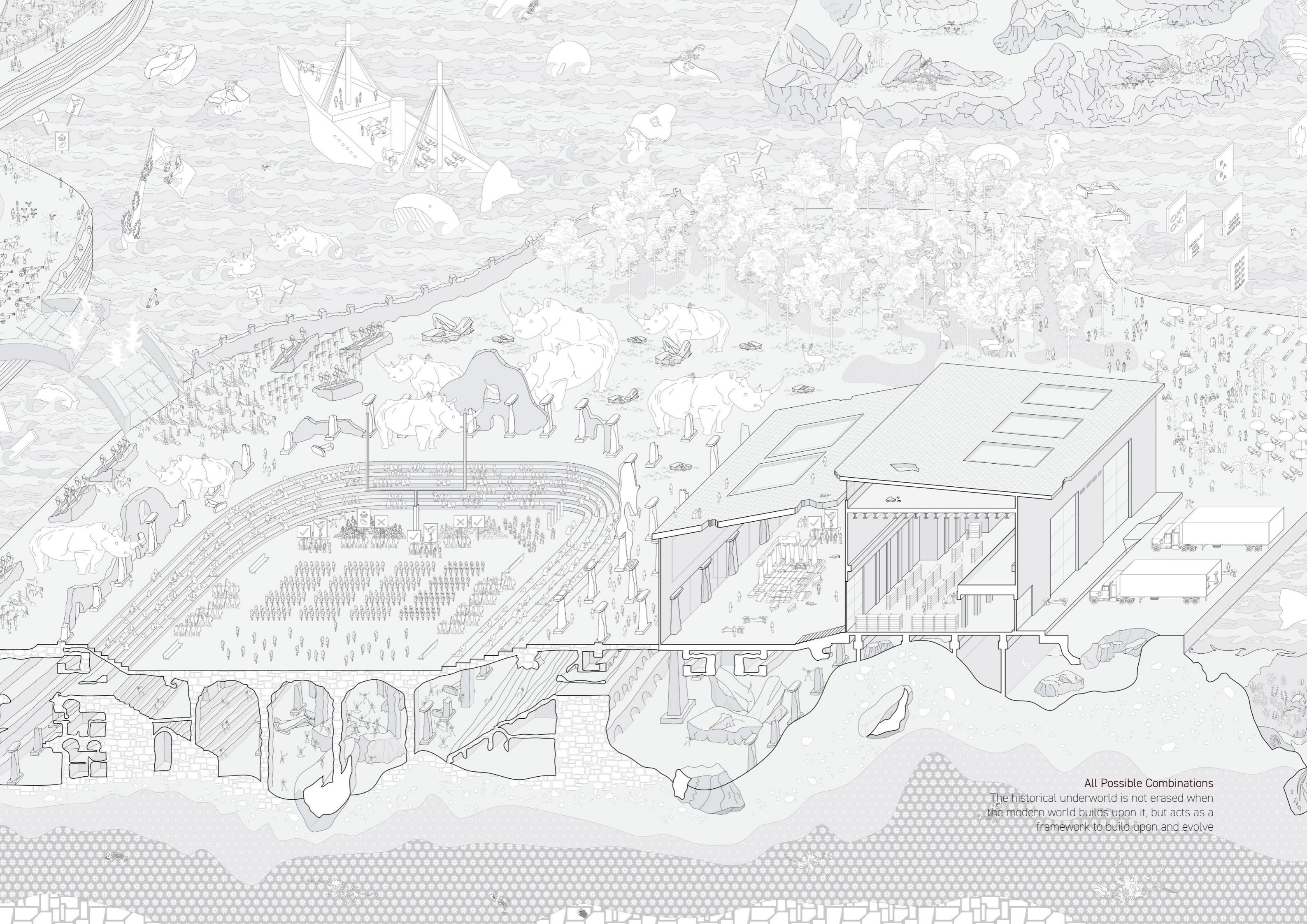
# Staging Realities

Ongoing Thesis | In and Below San Francisco Chinatown, CA  
Fall 2023 | ARCH481 + 492 | Emily White

Cultural enclaves utilize distinct physical attributes to provide protection and differentiation, but this can result in ethnic "othering" or discrimination. To embrace the dissonance in and adjacent to a culture, the urban realm must layer architectural object, event, and movement. Set design can be used as a tool by urban designers to critique, romanticize or fantasize our social, political, or economic realities by treating the built environment as a stage to facilitate relationships between actors.

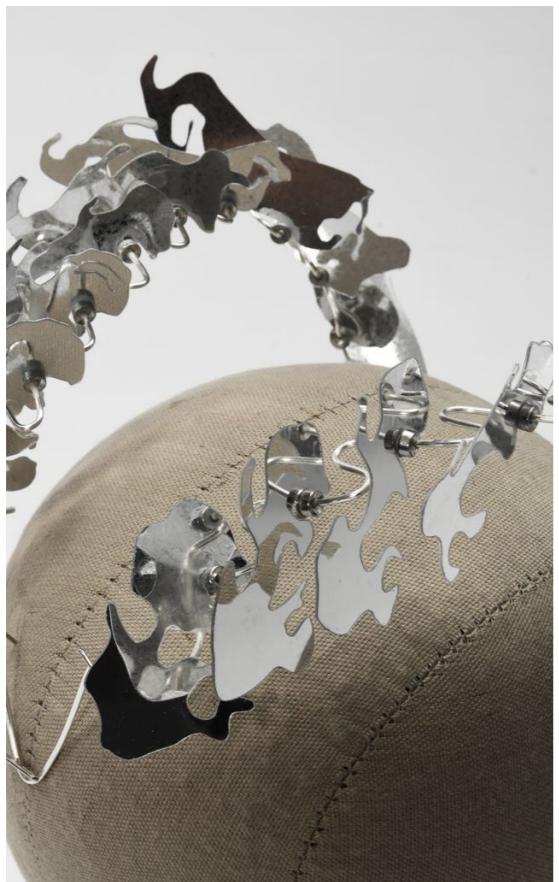
*Software Used: Rhino, Photoshop*





### All Possible Combinations

The historical underworld is not erased when the modern world builds upon it, but acts as a framework to build upon and evolve



**Ego Headpiece**

A reflection, distortion, and fragmentation  
of one's surroundings

Mirrored acetate, silver wire, silver beads

Above Photography by Rachel Dyer

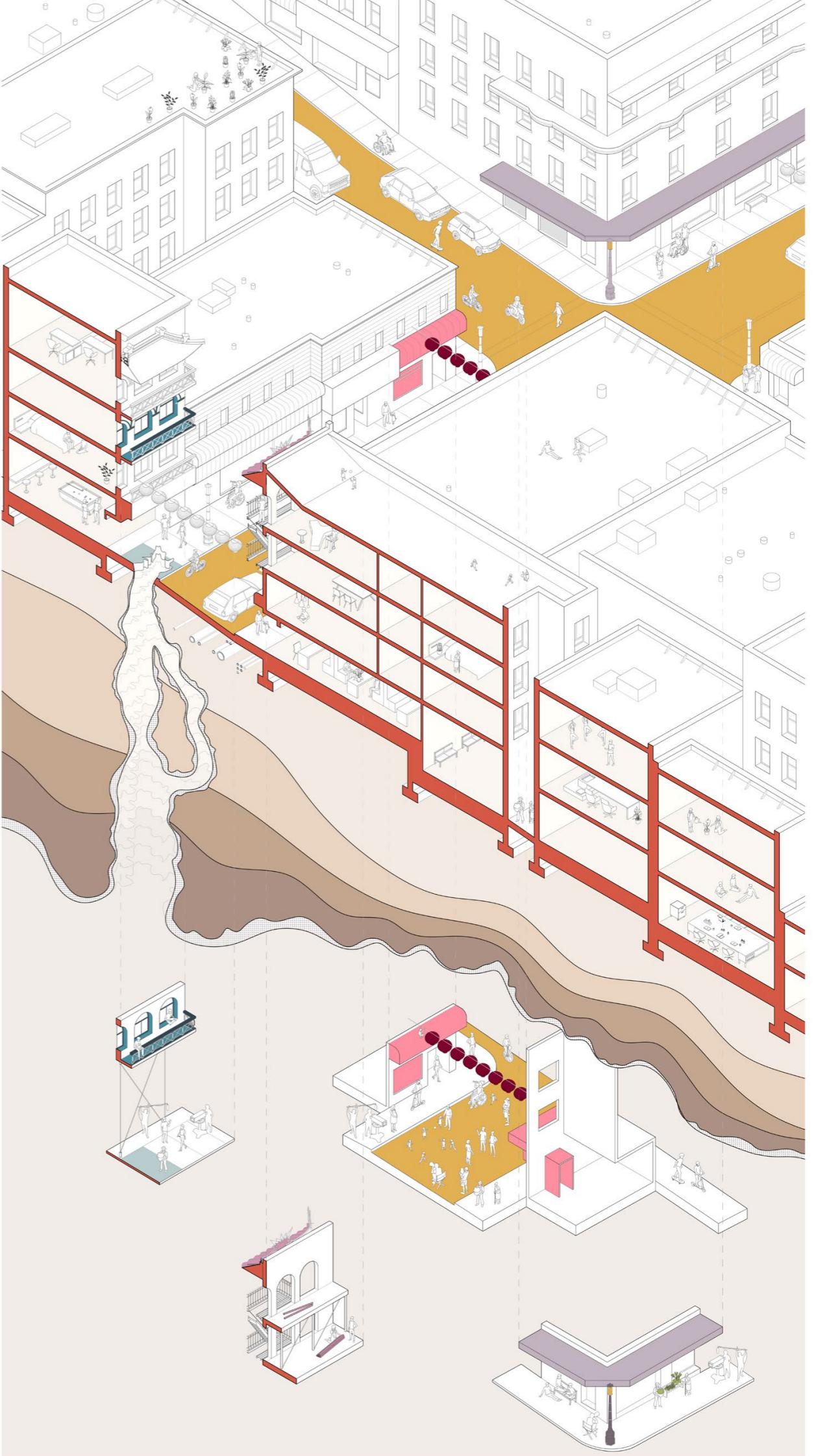
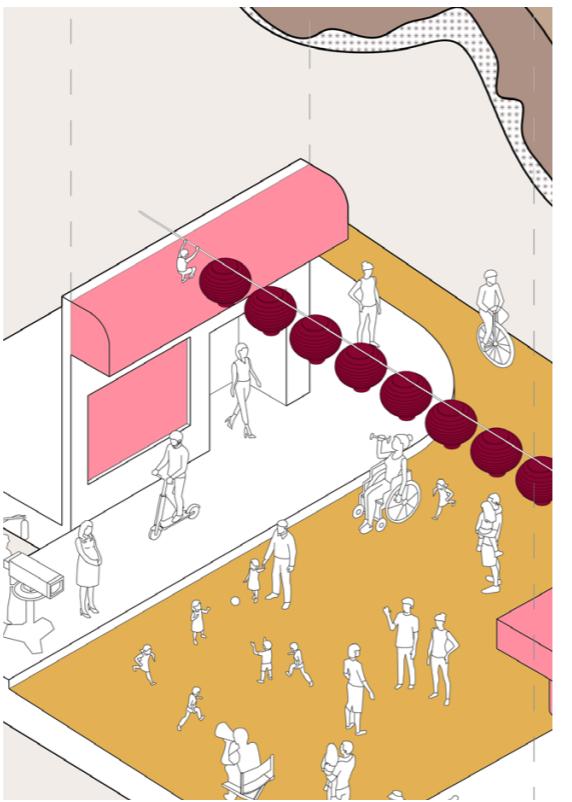
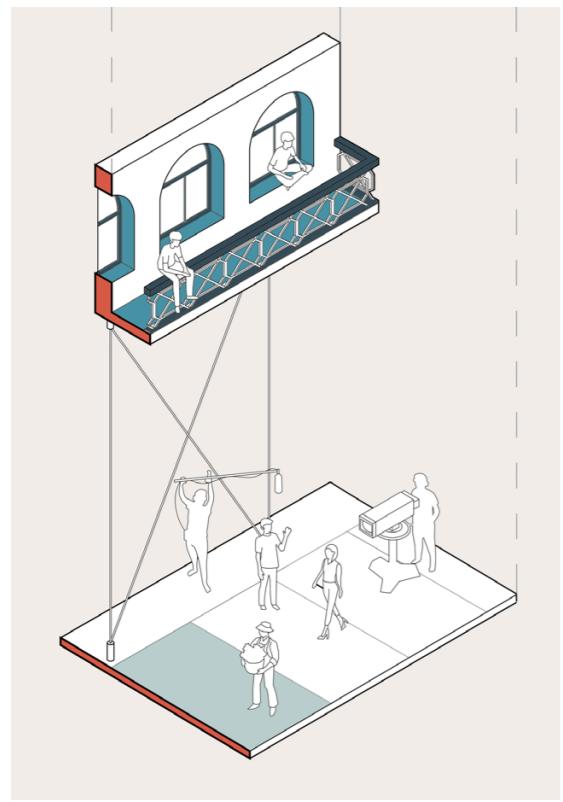
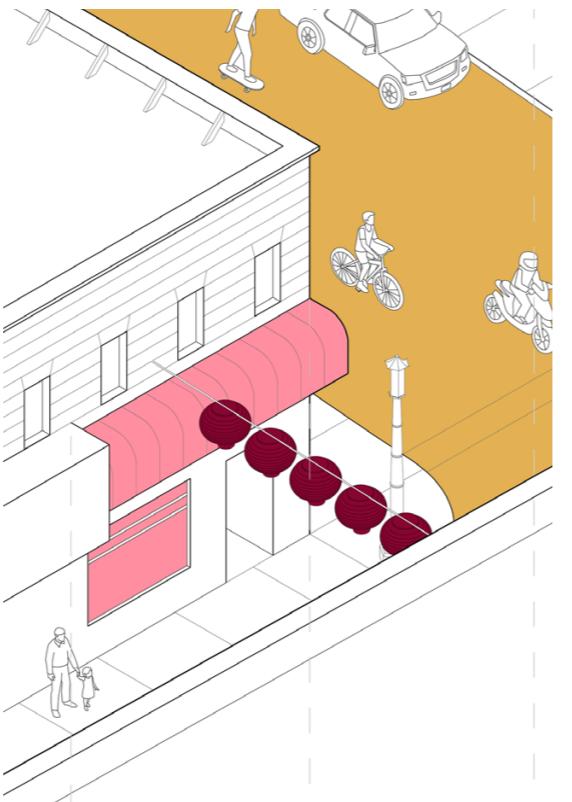
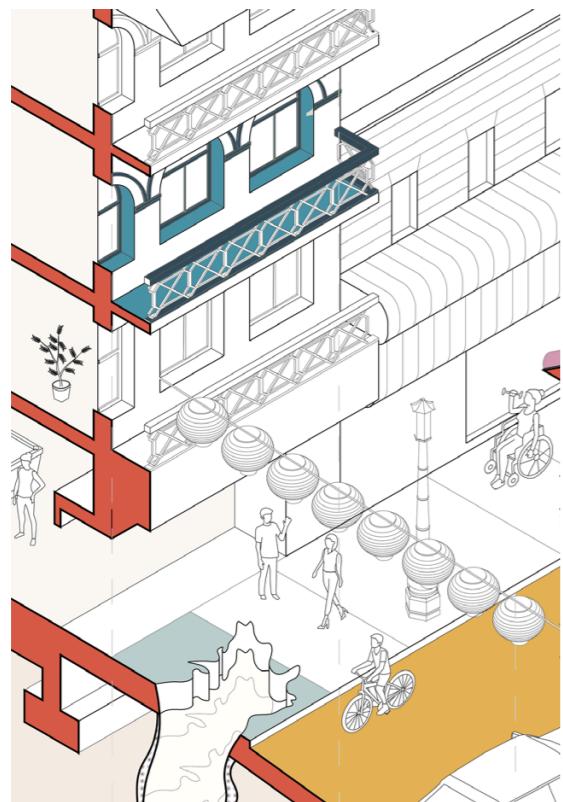
@rachel\_danielle\_photography



**TempurPagoda™**

Chinatown's misinformed roof typologies are further skewed and by utilizing American fabrics and "incorrect" building techniques (sewing)





### Visionaria and her Uglier Sister, Pastland

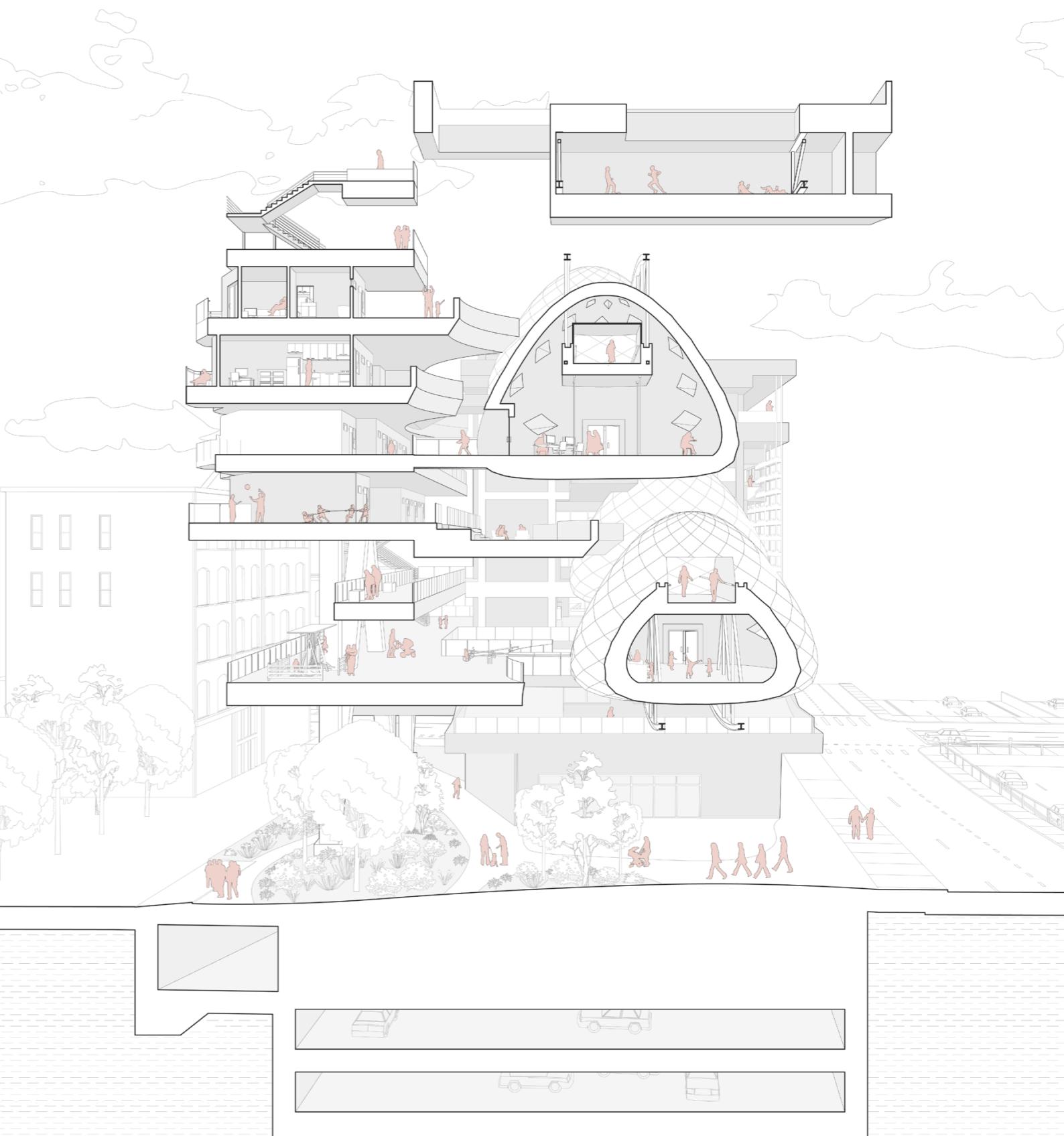
Located in and below Chinatown San Francisco, Pastland and Visionaria form a feedback loop in which Pastland's political, economic, and social reality spur change that Visionaria's directors, actors, and set designers conduct

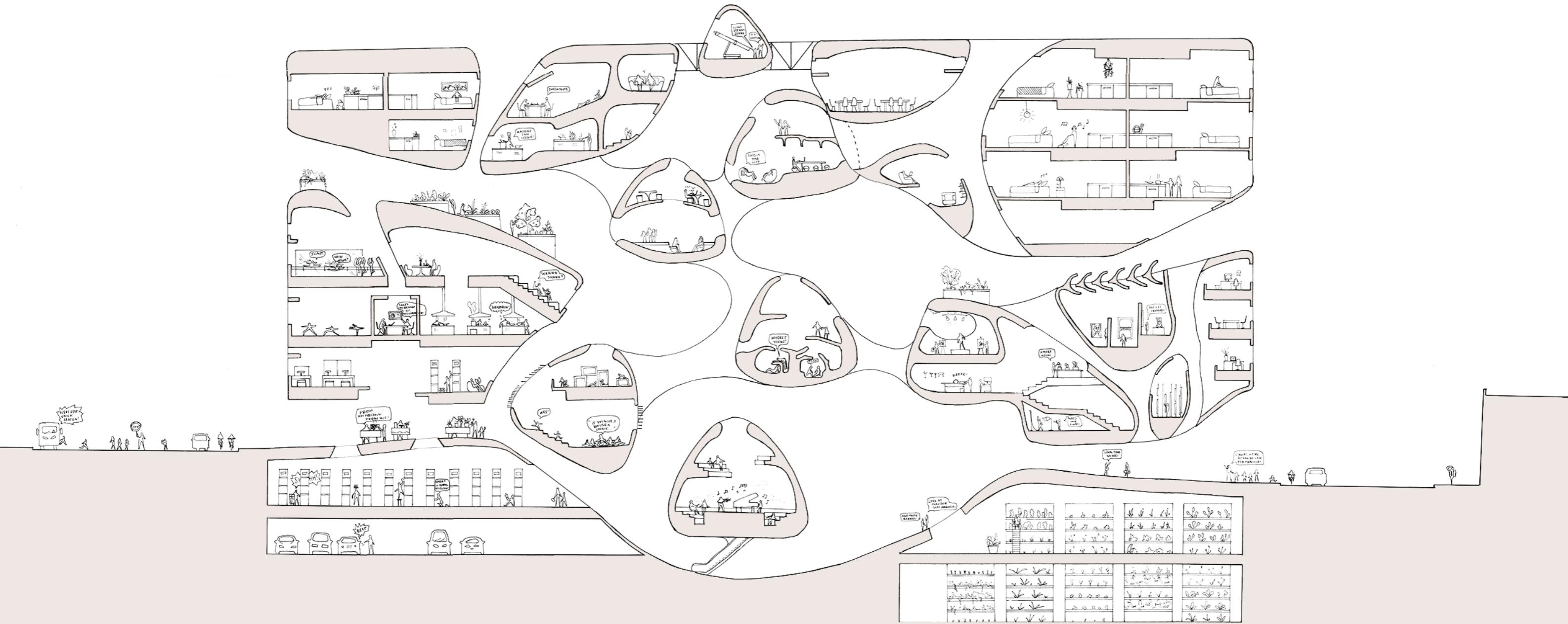
# Grow Til Tall

Public Un-Library | Downtown Los Angeles, California  
Winter + Spring 2022 | ARCH252 + 253 | Jeff Ponitz  
Collaboration with Bryan Suzuki

A Public unLibrary exists to rethink and redefine 21st century democratic public space. Traditionally, a library provides books and knowledge to the public. The unLibrary serves the community differently: it is a place which connects and nurtures its surrounding community through growth. The idea of growing plants and good humans drives the unLibrary to be a kindergarten for all that is whimsical, boundary-breaking, and exploratory.

**Software Used:** Rhino, Grasshopper, Illustrator, Photoshop  
**Fabrication:** Woodworking, 3D printing, model-making, resin-casting  
**Awards Received:** Best of Show 2022, Launchpad 2022





Initial Section Sketch



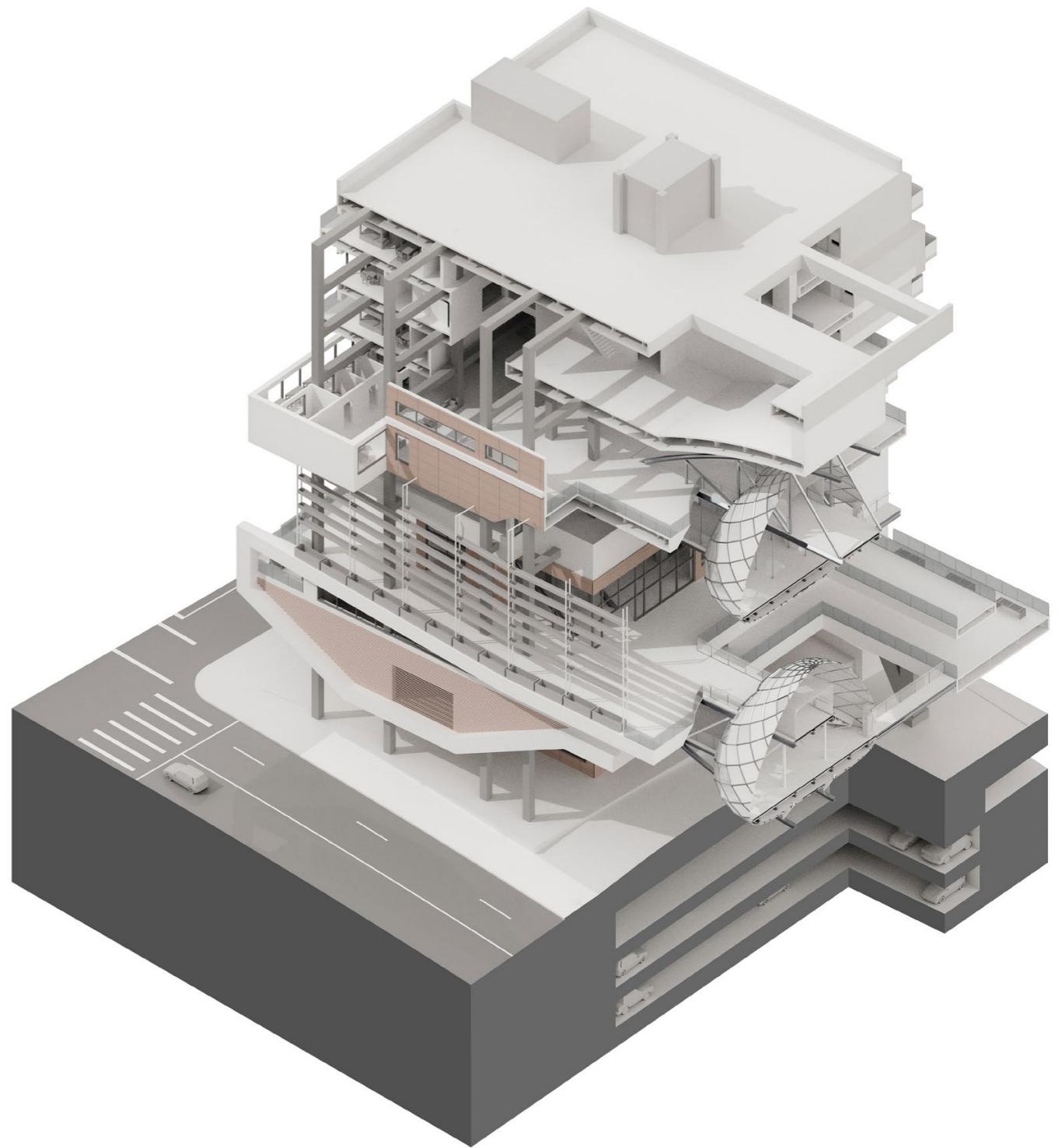
Material Model: Reclaimed wood, seeds and thyme preserved in resin





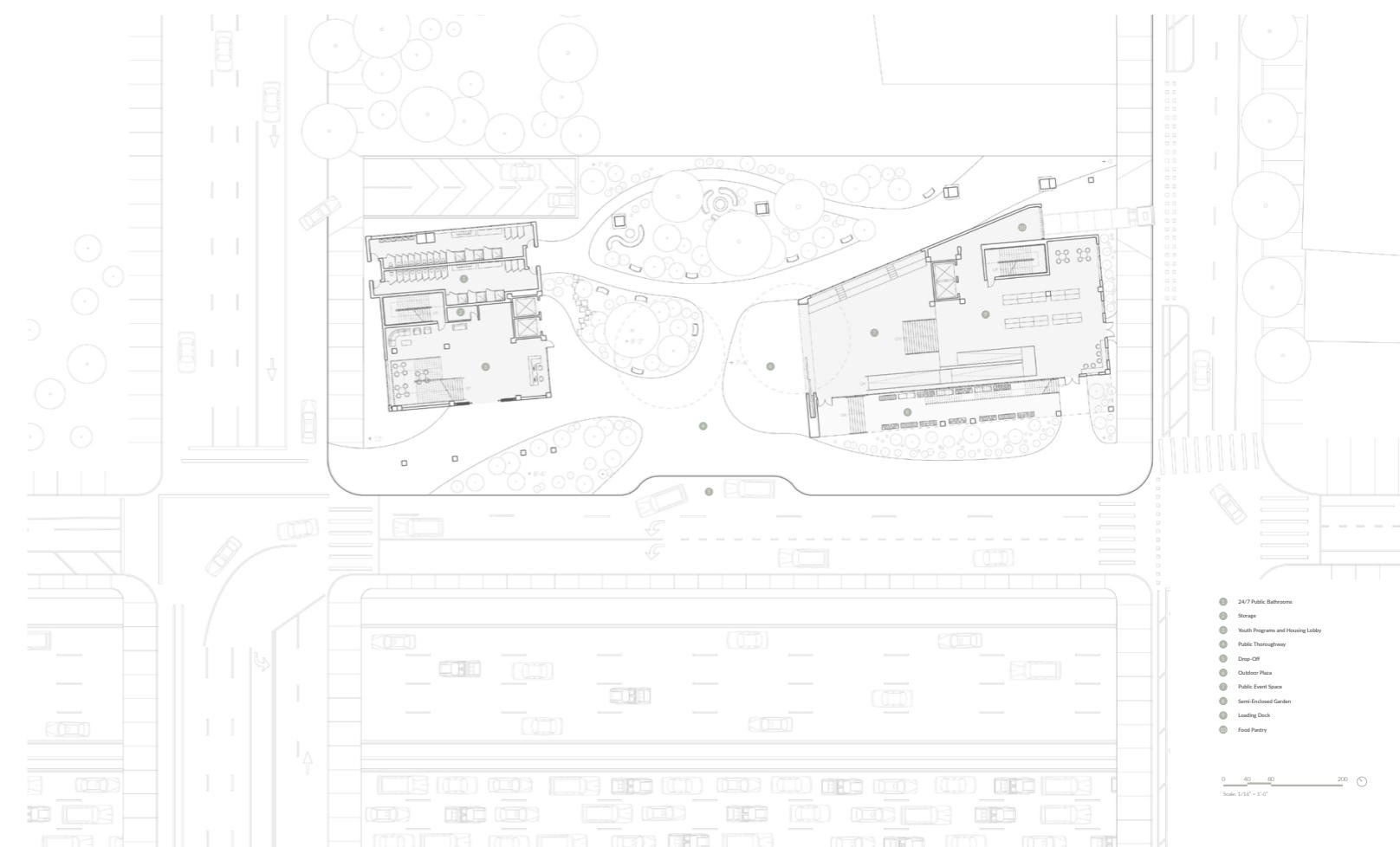
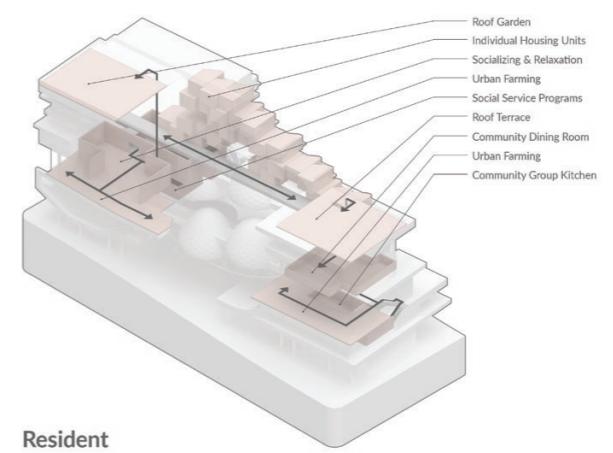
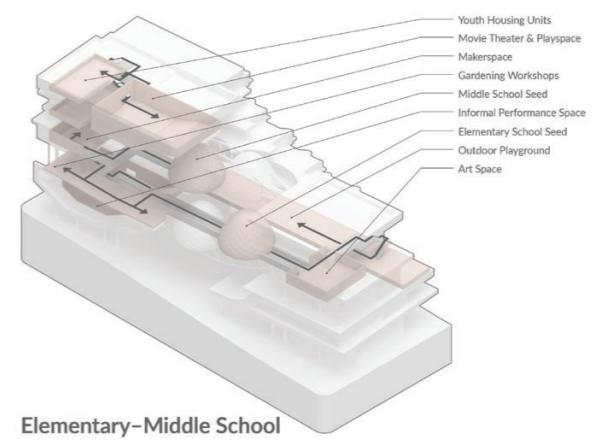
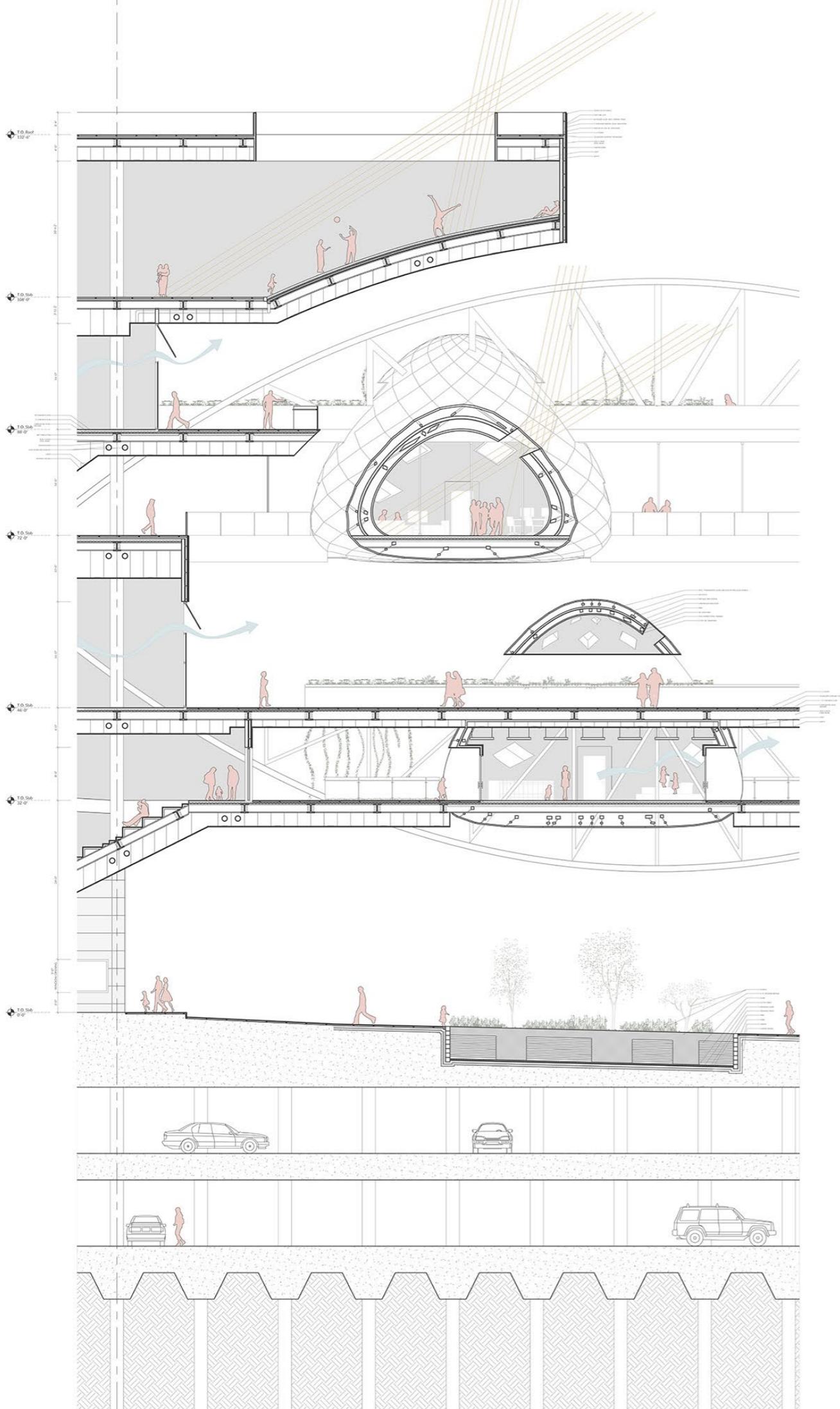
First Iteration of Physical Model

17



3D Section Render

18





Final Physical Model

21



22

# Deconstrukted Mekka

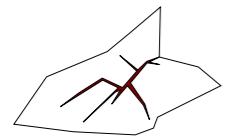
Youth Engagement Space | Copenhagen, Denmark  
Spring 2023 | DIS Architecture Design Studio | Marie-Louise Holst

The Deconstrukted Mekka strives to honor Fredenspark's history as a battlefield for public space and a people-centric environment during the Søringen 12-lane highway proposal and its current status as one of the last public park along the lakes. The Mekka create engaging and multi-functional spaces for 12-18 year olds through arts, social activities, and sports that encourages community between the three disciplines, maintain the energy and movement flowing through the site, as seen in the desire lines running diagonally through the park and across the busy street, and connect to the existing Fredenspark and Parc d'Amour and the surrounding buildings.

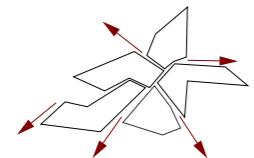
**Software Used:** Rhino, Illustrator, Photoshop, InDesign



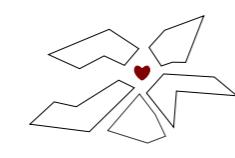
Exterior Render of Entrance



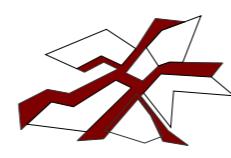
**CRACK**  
one mass begins to fracture from stress



**DECONSTRUCT**  
multiple masses form their own identity

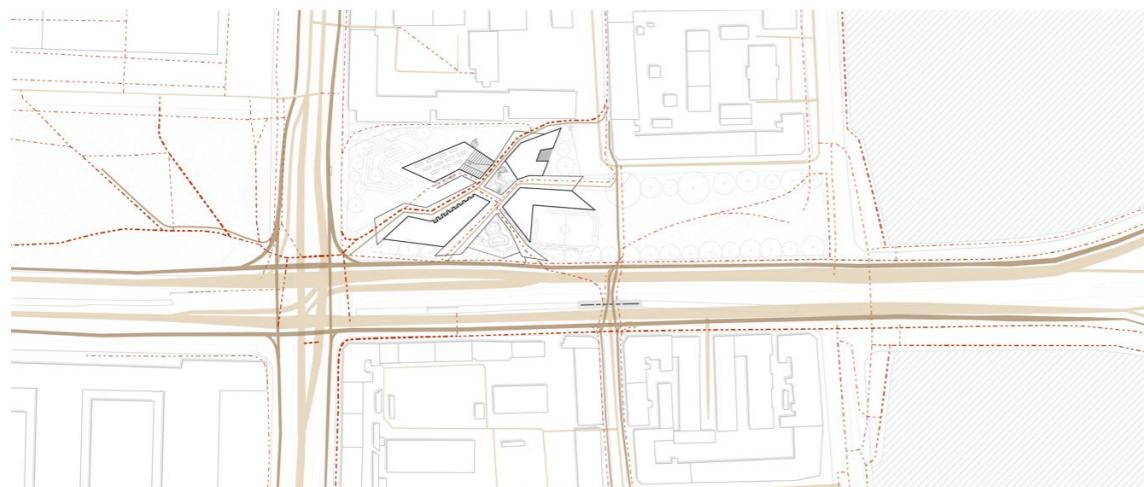


**CENTRALIZE**  
masses pull apart to reveal a communal center

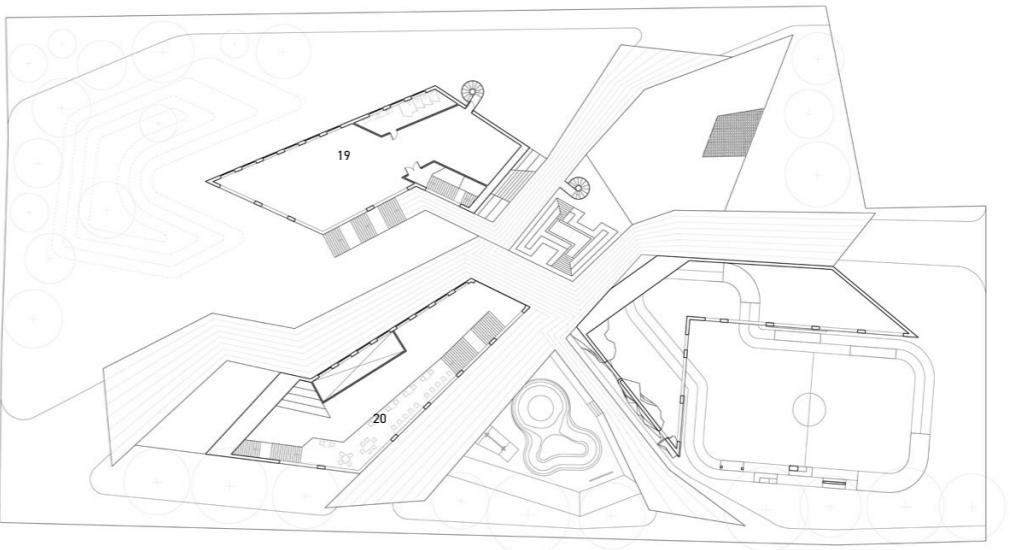


**ENERGIZE**  
circulation paths are maintained and created

1	wood & metal shop	6	central garden	11	music practice	16	skate park
2	art studio	7	bar	12	recording studio	17	track/parkour
3	stairs to occup. roof	8	flex space	13	weightlifting	18	outdoor concert
4	sculpture garden	9	cafe	14	hardscape court	19	dance studio
5	pergola	10	study room	15	rock climbing	20	upper cafe seating



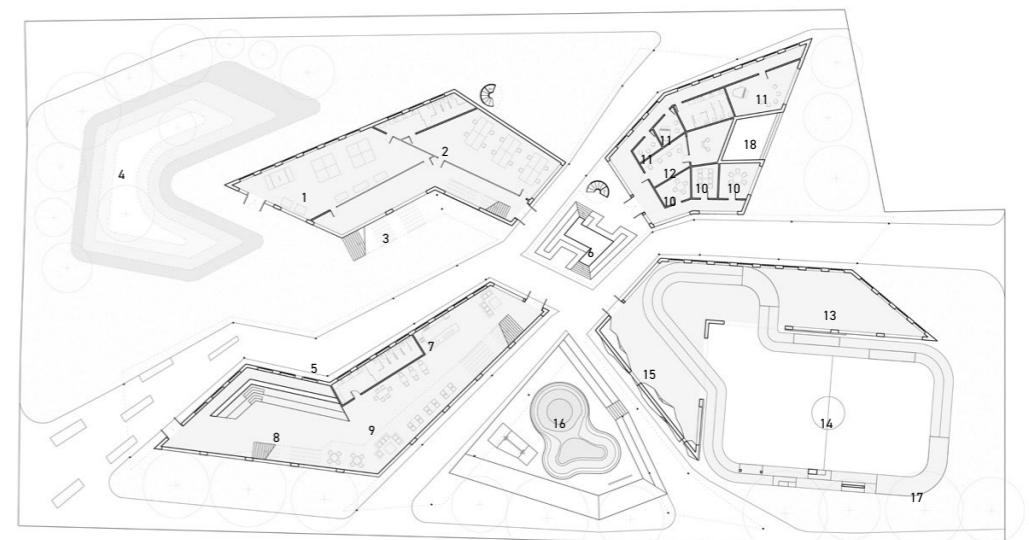
Site and Roof Plan



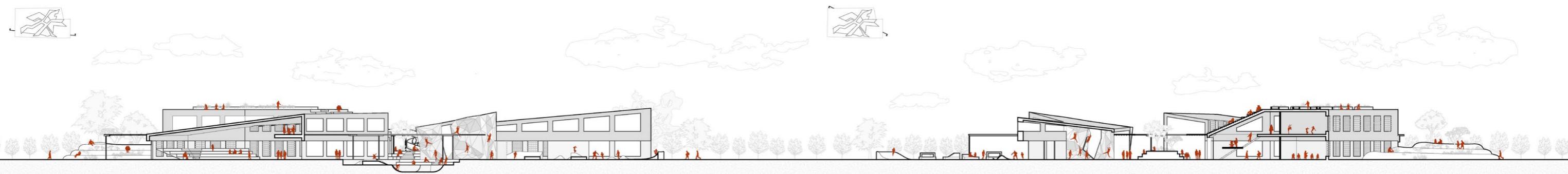
First Floor Plan



Interior Render

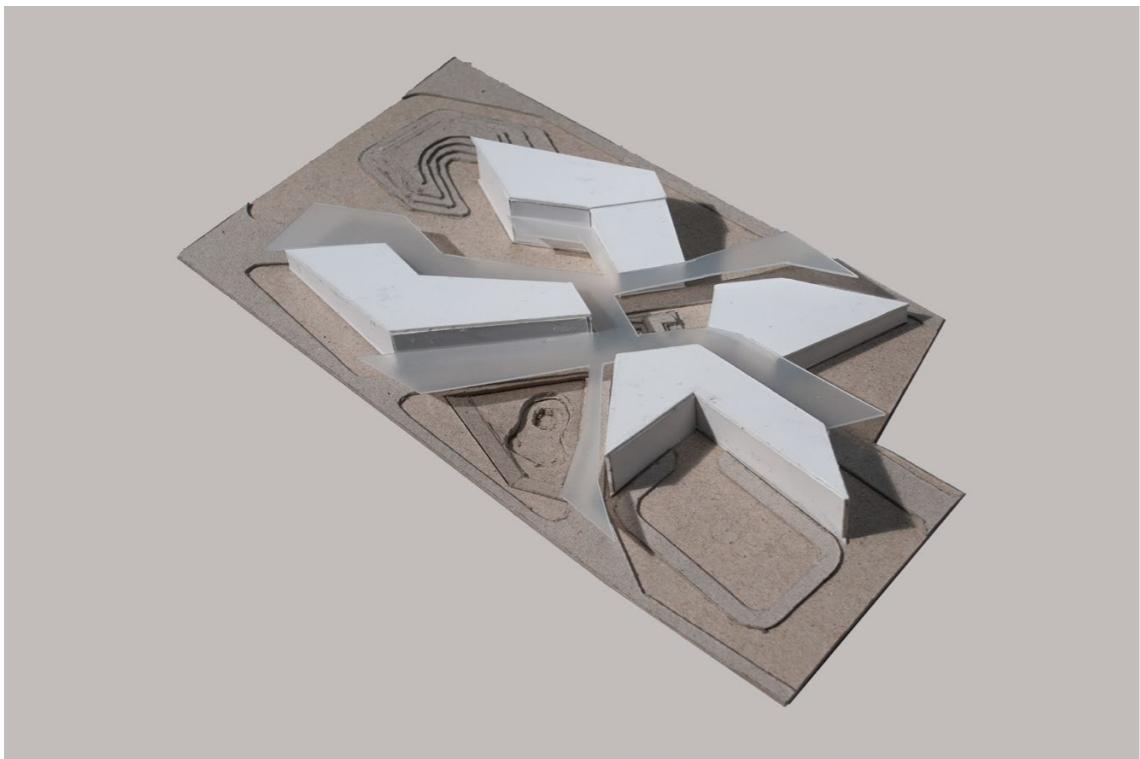


Ground Floor Plan



Section AA

Section BB



1:500 Massing Model



1:100 Section Model

# Microplastic Suspension

Kinetic Machine

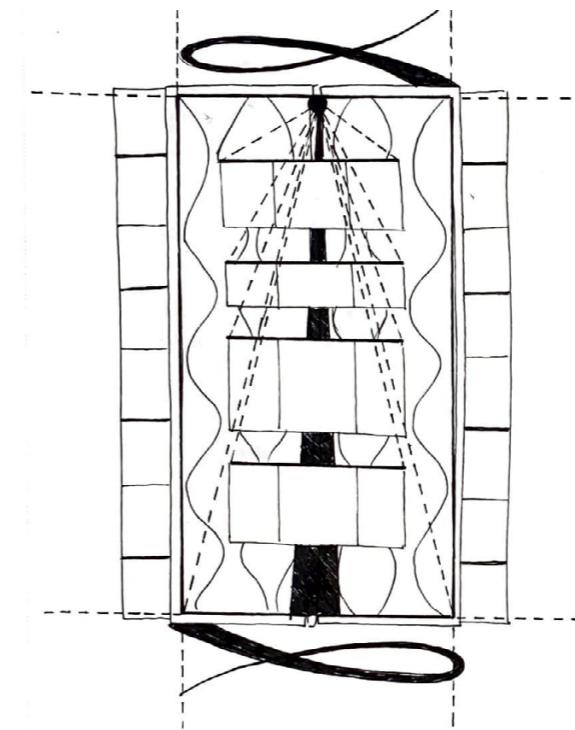
Fall 2021 | Warm-Up Project | ARCH251 | Tom Fowler

*Collaboration with Lydia Rosenthal, Adam Simpson, and Ben Foreit*

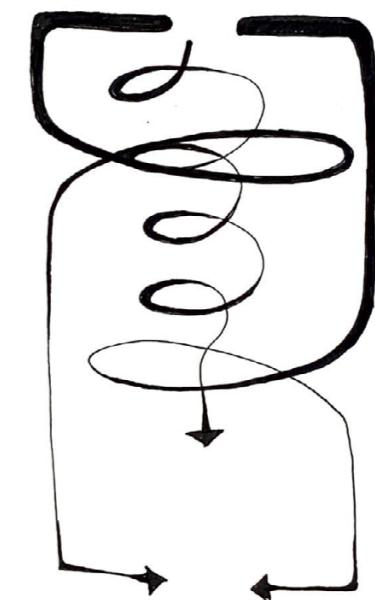
Microplastic Suspension has three components: a core (the teeming dispense of plastics) represented by refracted light; a middle layer of negative space, representing what the human eye visually notices; and an outer skin, (reflective), to represent the infinite expanse of the problem and moveable in a breathing-motion to suggest a filter inhaling the plastics [light] as they pass through. The kinetics of the machine comes from the spin of each layer-- the reflective properties combined with the light source try to emphasize the infinite expanse and mystery of our oceans.

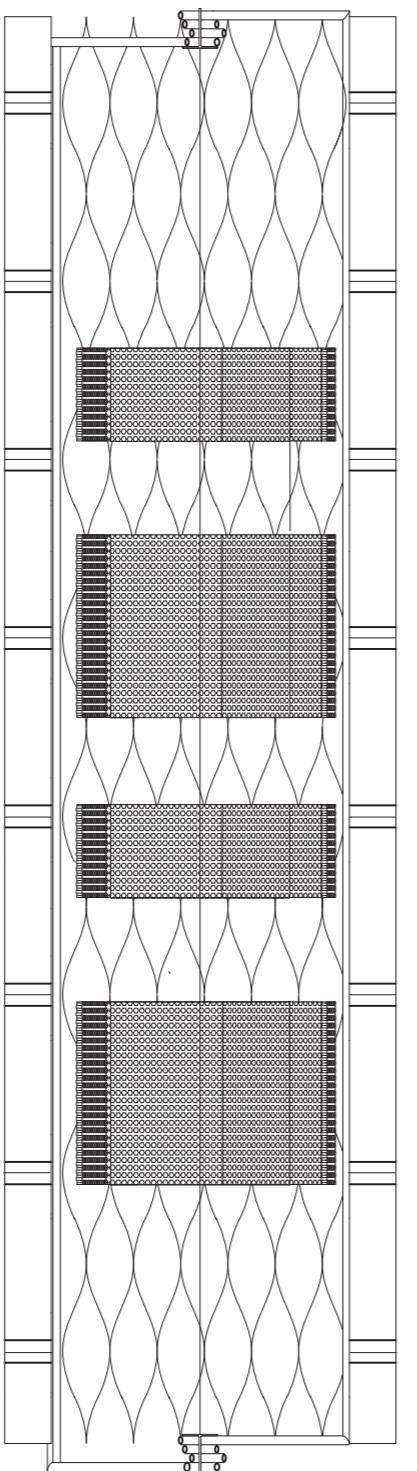
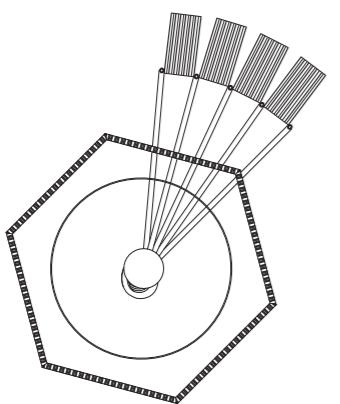
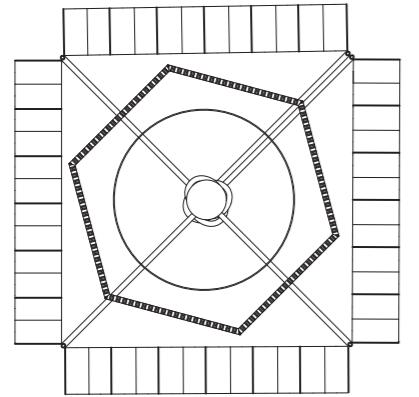
**Software Used:** Rhino, Illustrator

**Fabrication:** Woodworking and modeling with various found objects



Gestural Sketches of Internal Tension





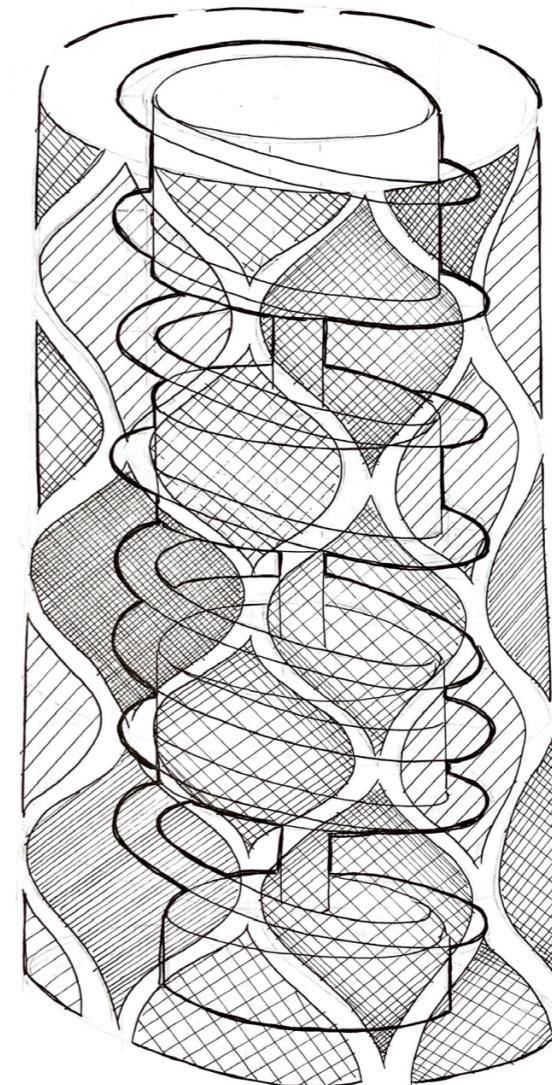
Expanded and Contracted Plan and Section

# Interlace

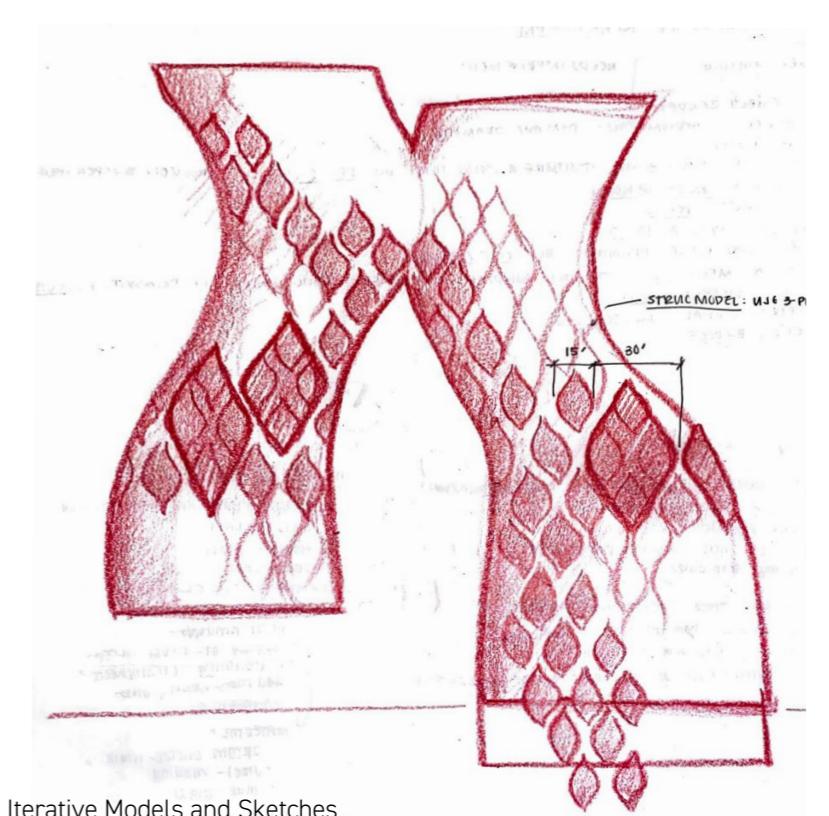
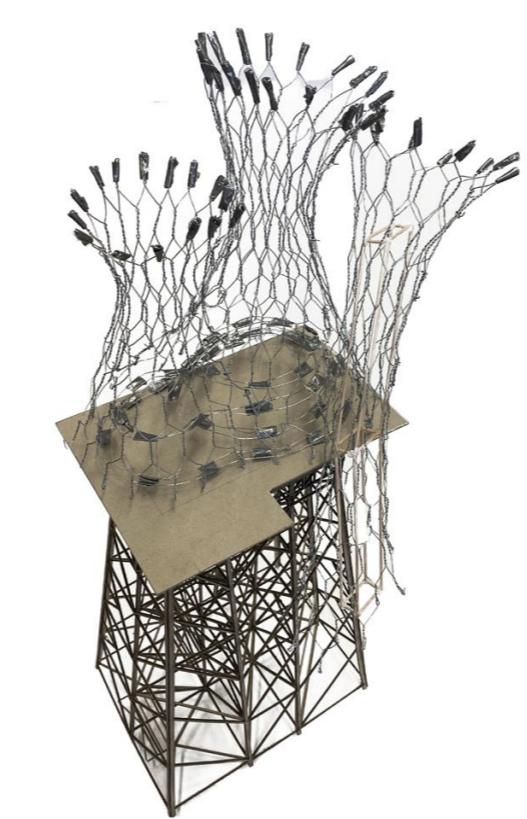
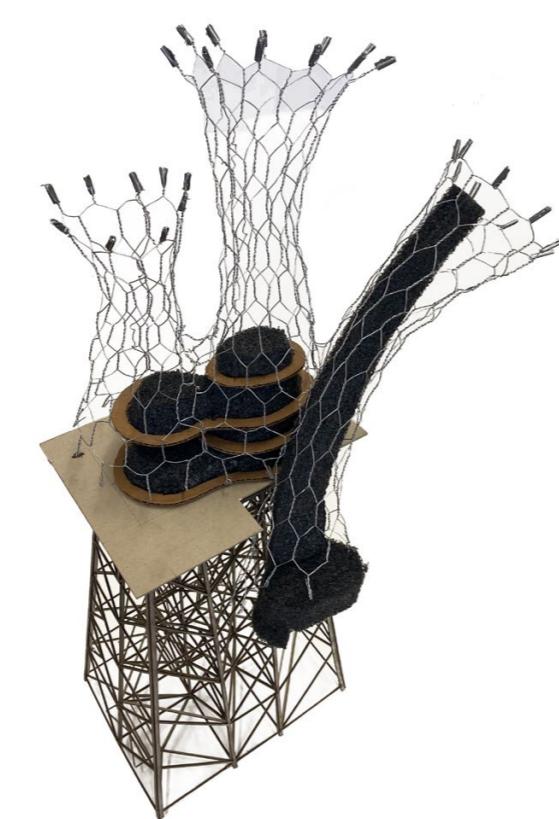
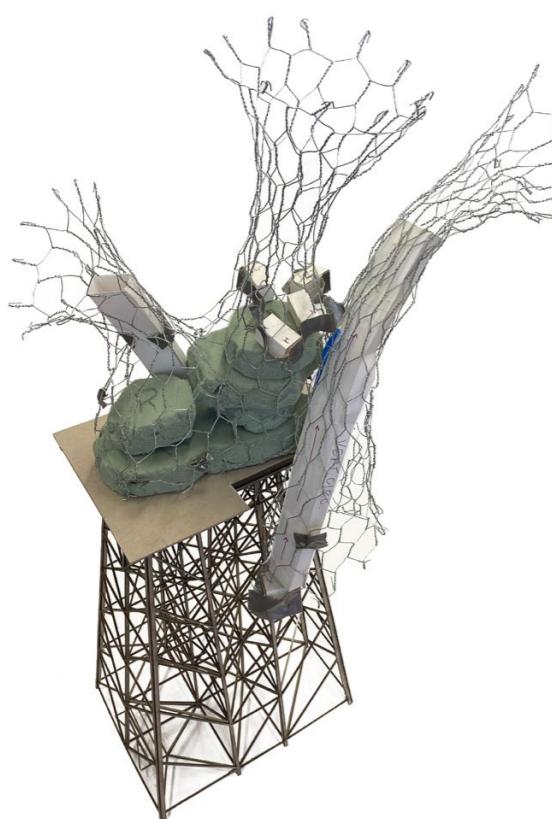
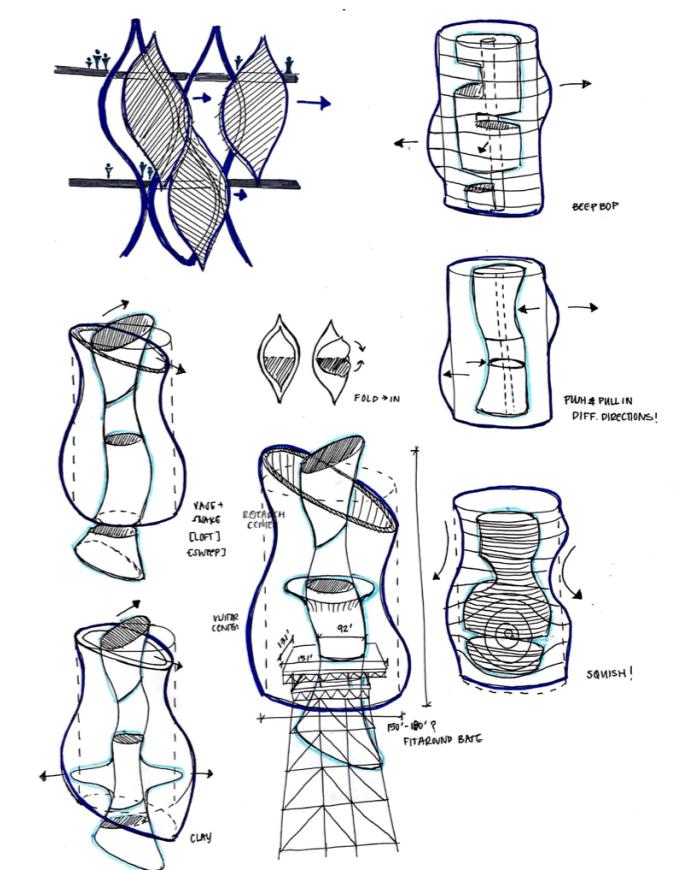
Research Center | Platorm Holly, Santa Barbara, California  
Fall 2021 | ARCH251 | Tom Fowler

Human action is interlaced with nature. This marine research center aims to raise awareness of our harmful impact while delicately interacting with the site. Interlace is exemplified through the cylindrical truss structure, program that extrudes from the negative space, and west-facing cladding that is offset from the module face. The site is Platform Holly, which is an abandoned oil rig 2 miles off the coast of Santa Barbara. Oil rigs act as an artificial reef for rockfish and several other species of fish. Removing the oil rig structure would destroy thousands of fish that live under Platform Holly.

**Software Used:** Rhino, Grasshopper, Illustrator, Photoshop, InDesign  
**Fabrication:** Laser cutting, pulp board molding, chicken wire sculpting



Initial Sketch



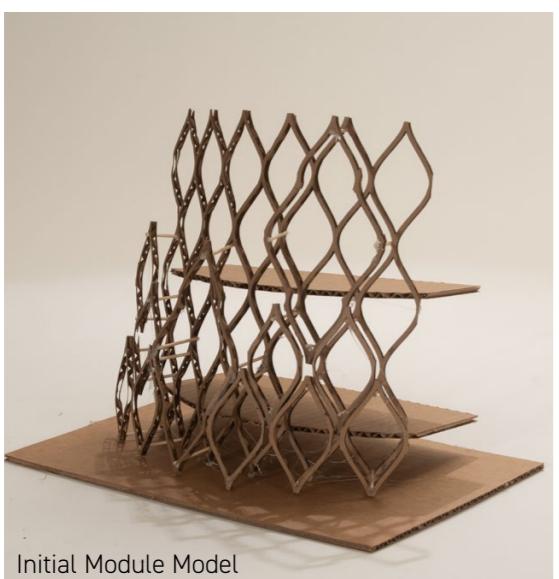
Iterative Models and Sketches



Initial Facade and Shading Model



Initial Shading Model



Initial Module Model



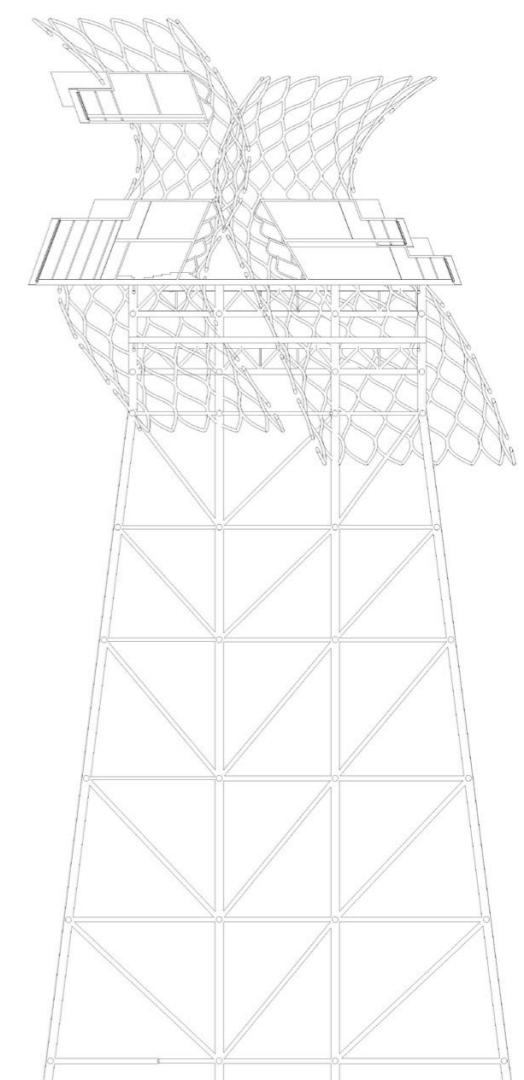
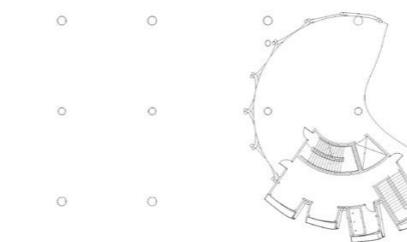
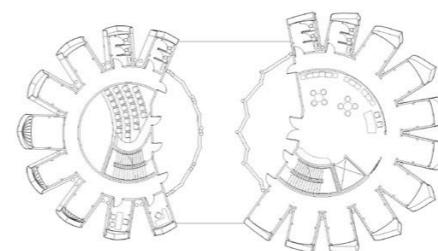
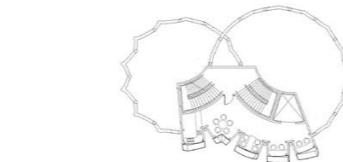
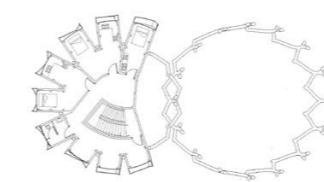
Final Module Model



Single Tube Iteration



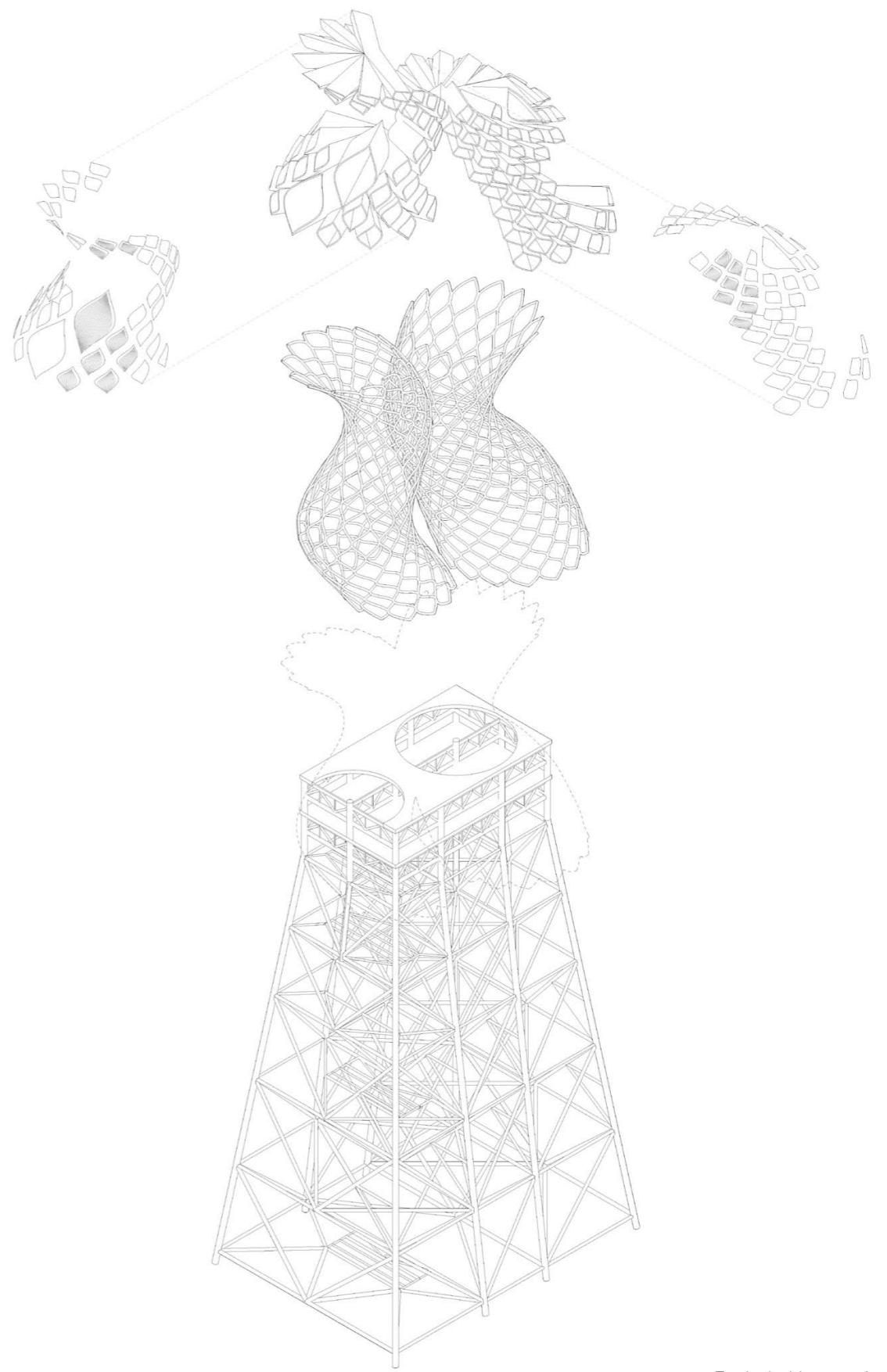
Program Model



Plan and Section



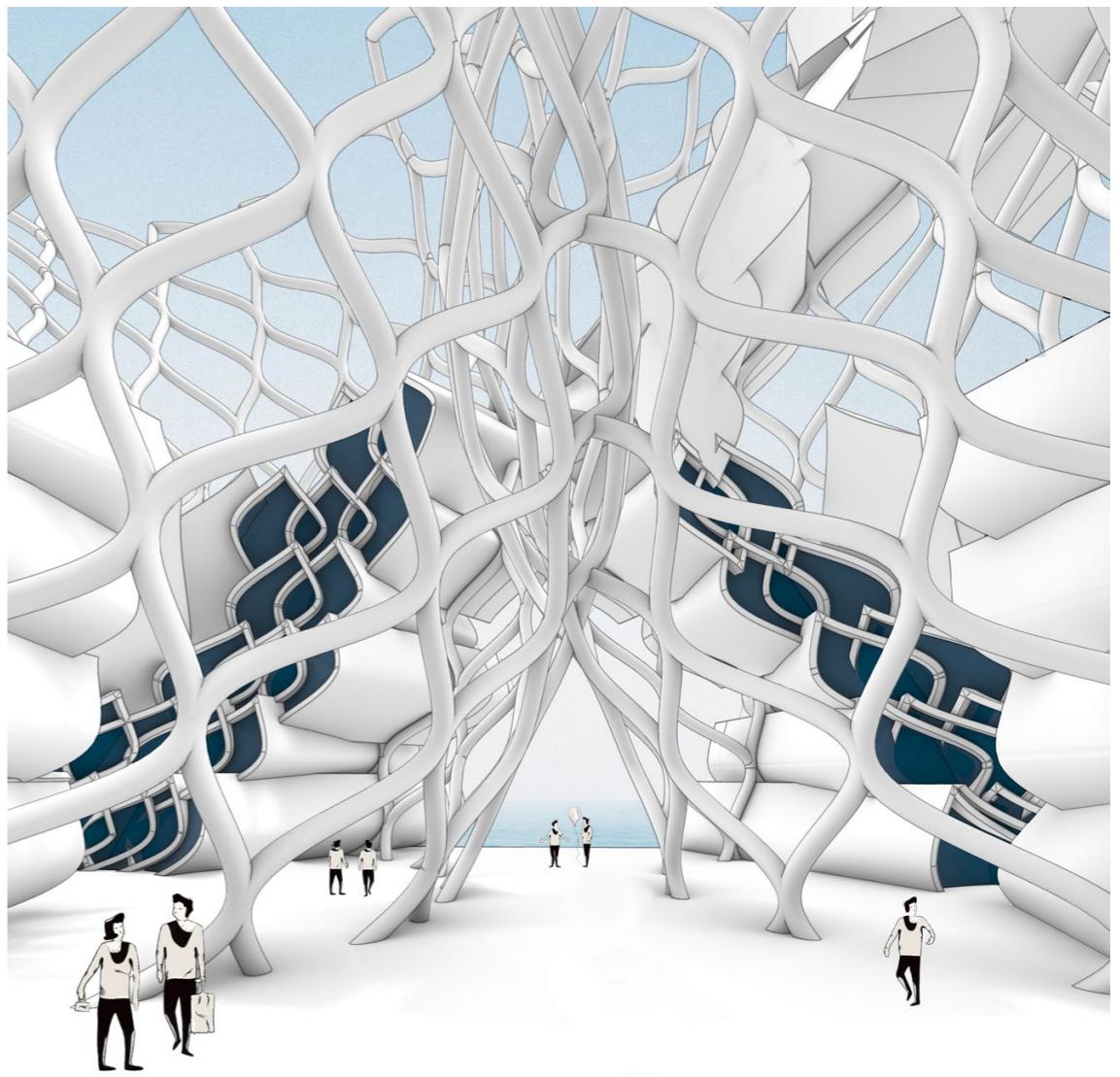
Final Structural Model



Exploded Isometric



Exterior Perspective Render



Experiential Perspective

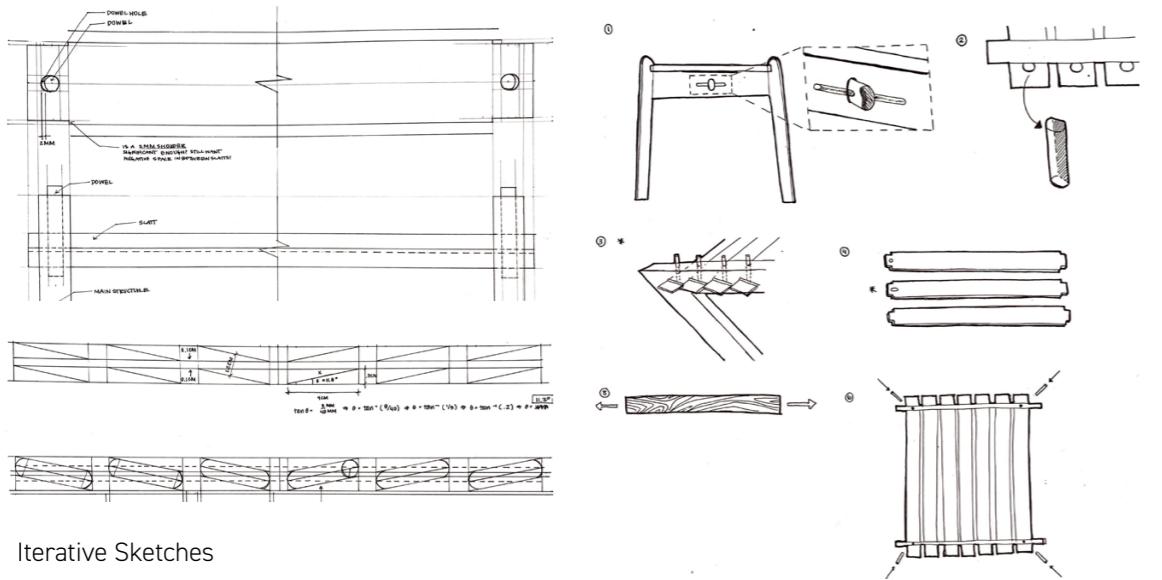
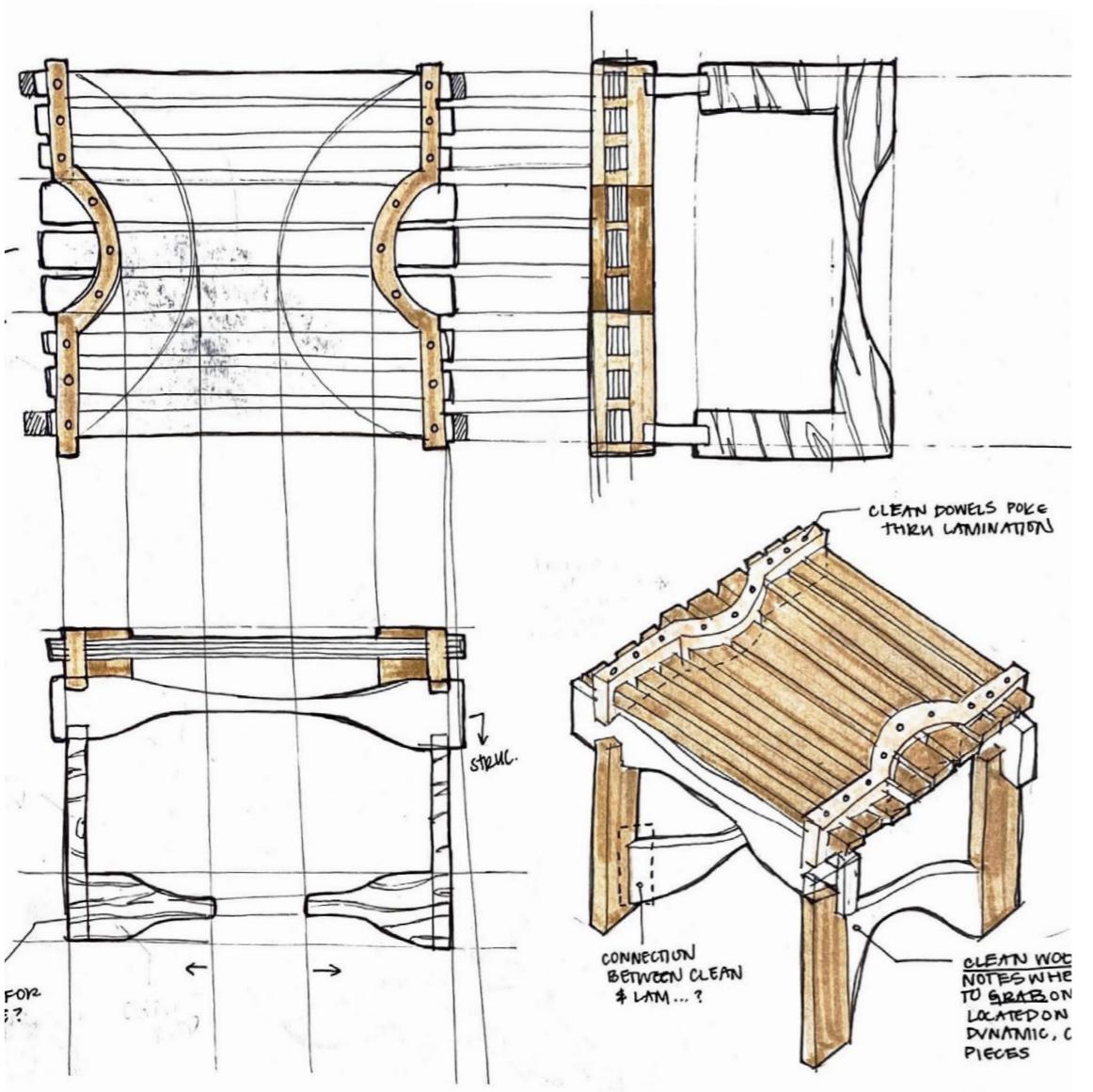
# Slatt Stool

Fall 2022 | DIS Furniture Design Studio  
Erling Christoffersen + Peter Johanssen

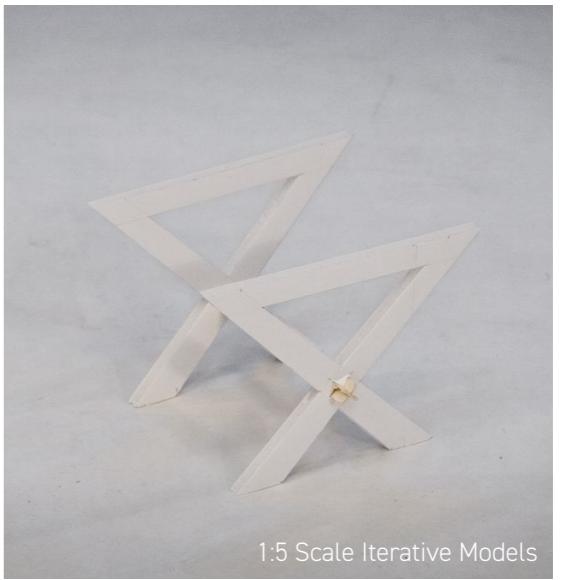
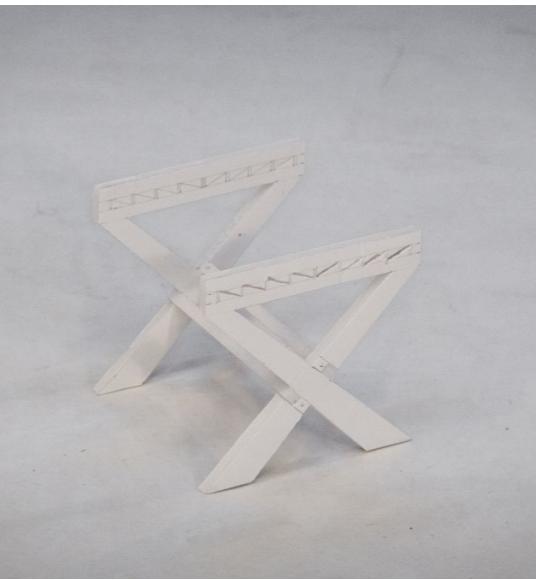
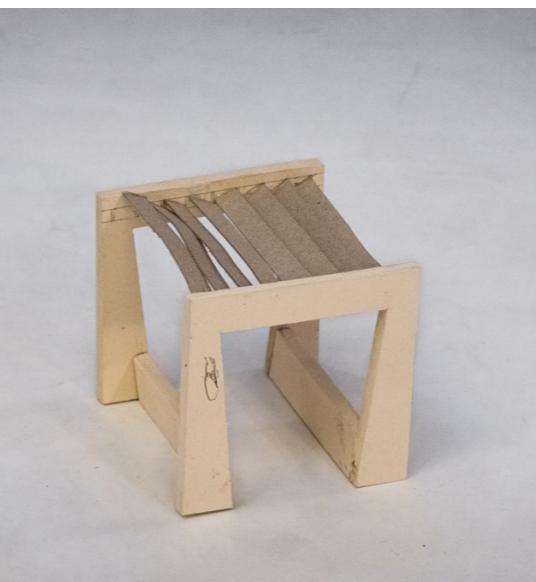
The Slatt Stool incorporates transparency, balance, and angularity in this Danish Design-inspired piece. The thin, slanted slats guide the body towards the center and allow for a slight bounce. When seen from a few meters away, the slats' negative space becomes more apparent. It is crafted from humble plywood and bamboo materials and can be disassembled and reassembled for flat-pack. The X-shaped stretcher is secured with a pin that reinforces the lateral support.

*Software Used:* Rhino, Illustrator, Photoshop  
*Fabrication:* Woodworking, photography

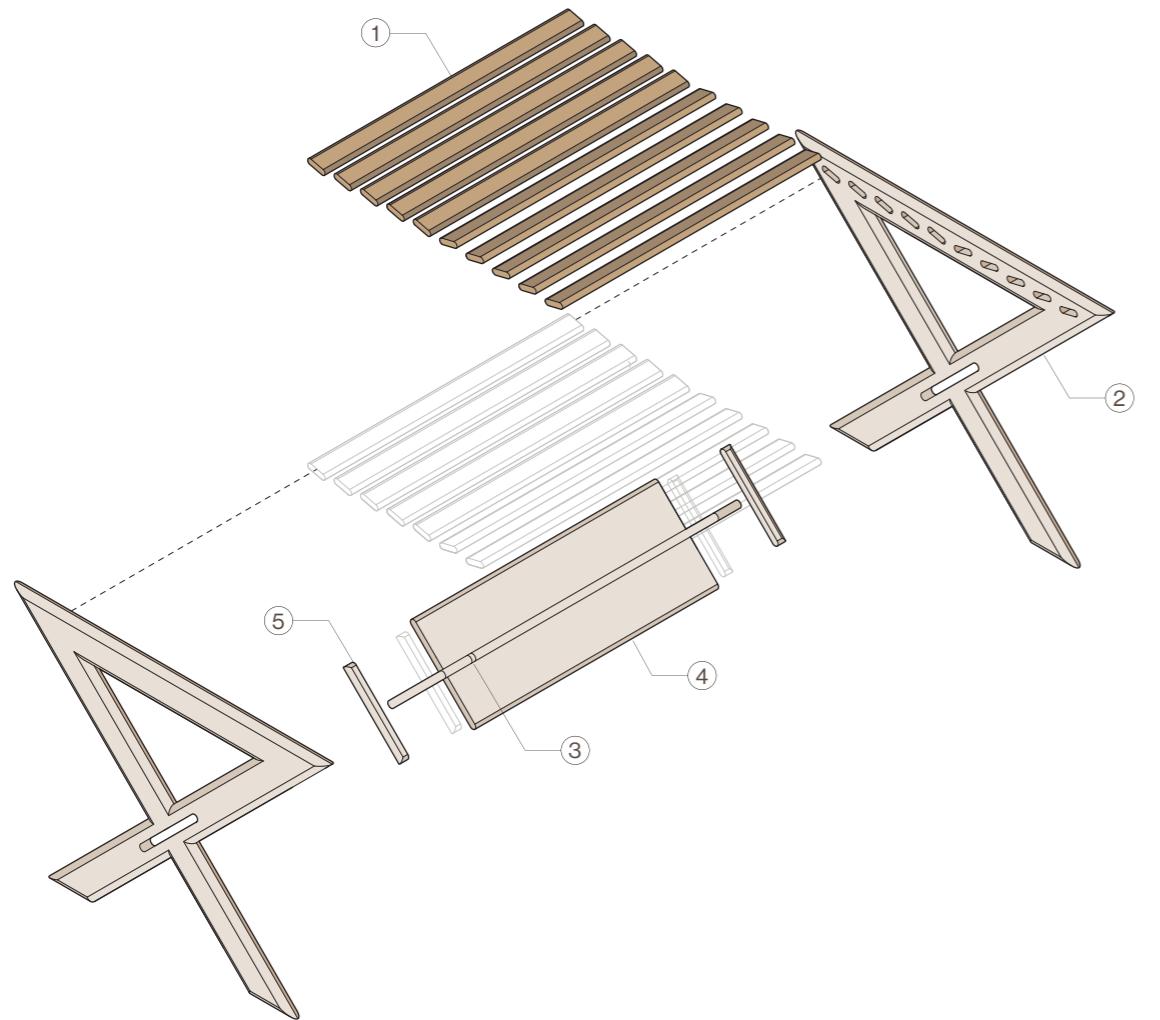




Iterative Sketches



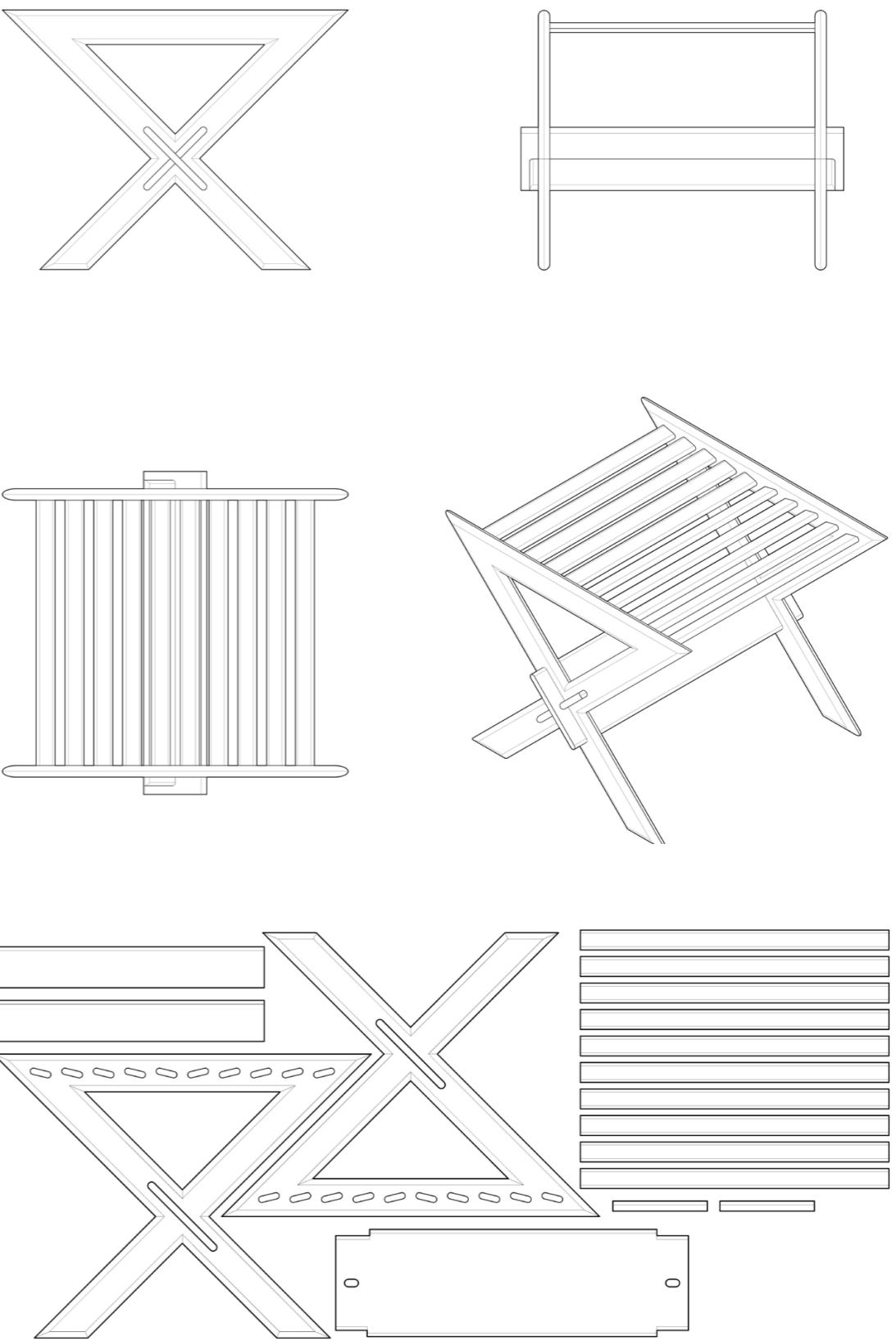
1:5 Scale Iterative Models



Item Number	Part Number	Material	Quantity
1	Seat Slatt	Bamboo	10
2	Legs	Plywood	2
3	Stretcher Primary	Plywood	1
4	Stretcher Secondary	Plywood	2
5	Wedge	Plywood	2

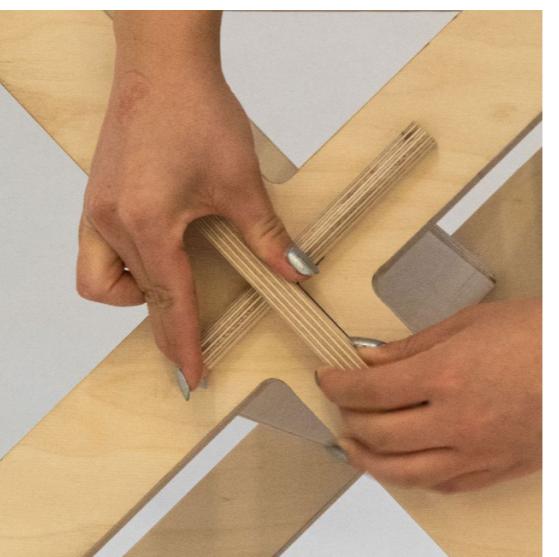
Exploded Isometric and Inventory

47



Orthographic Projection and Flatpack

48



Final Stool

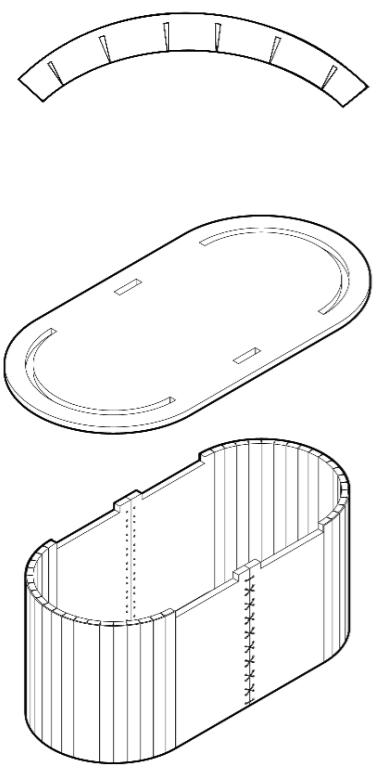
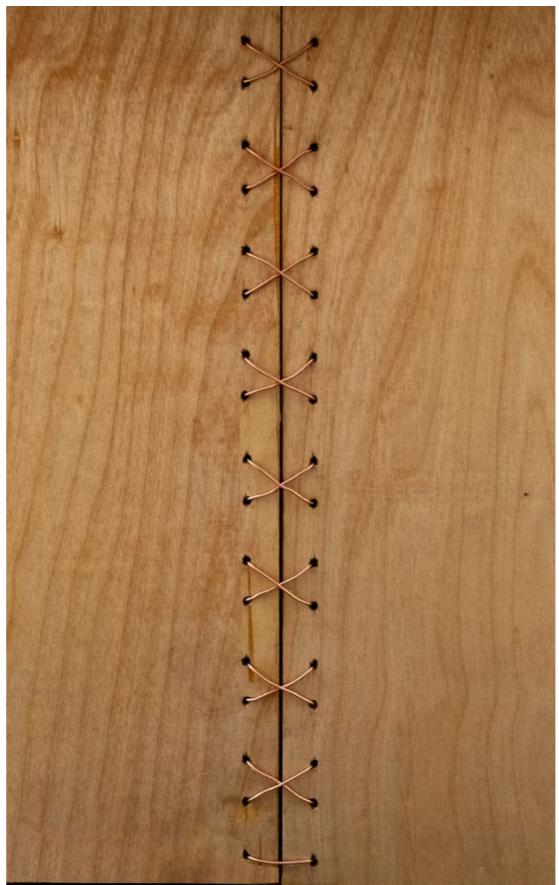
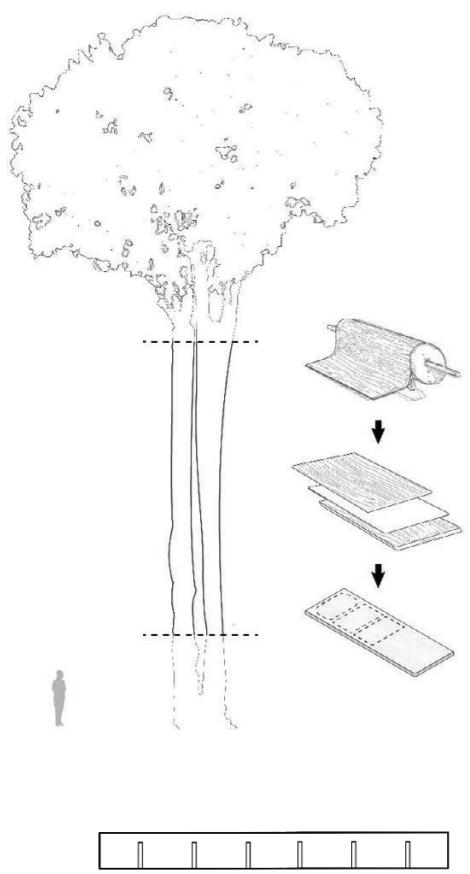
# Nest Coffee Table

Fall 2023 | Vellum Furniture Competition

The Nest builds home and comfort through communal eating and drinking with one's flock. Kerf cuts curve the birch plywood base and the two halves are stitched together by a copper wire, satisfying human's need for connection.

*Software Used:* Rhino, Illustrator, Photoshop  
*Fabrication:* Woodworking, photography





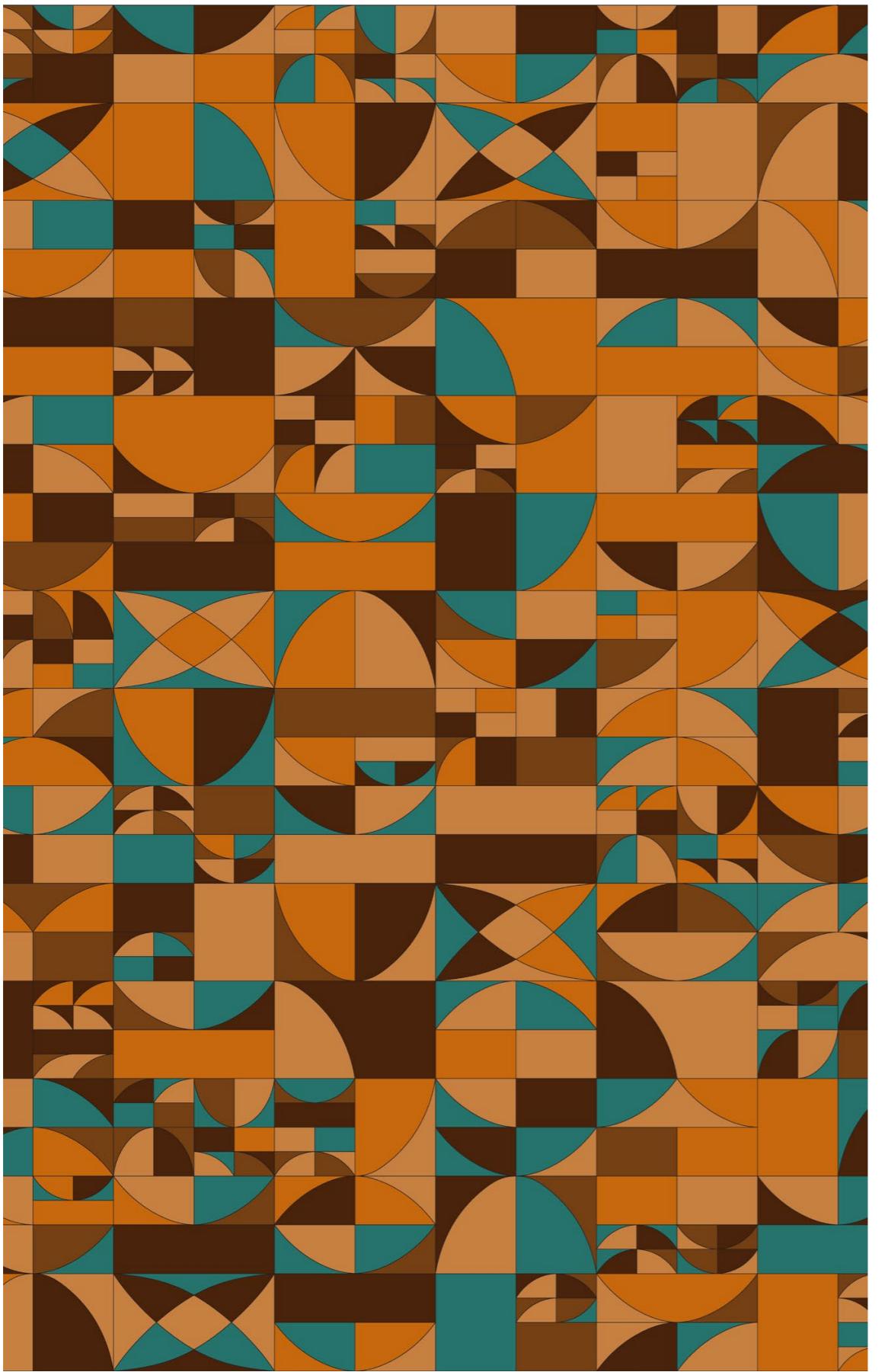
# VEGA

Wallpaper and Textile Design | Vesterbro, Copenhagen  
Spring 2023 | DIS Textile Design in Scandinavia  
Malene Kristiansen & Helle Vibeke Jensen

VEGA was originally designed by Vilhelm Lauritzen in 1956 as the People's House during the Labor Movement. The Functionalist building carries motifs such as wood, triangle patterns, linearity, and warm tones throughout. It functioned as a meeting spot for politicians, musicians, and artists until it closed in the 1990's. Today, it is a concert venue with three halls: Ideal Bar, Lille Vega, and Stor Vega. Ideal Bar was renovated before Vega became a protected building, and it consequently lost some charm. The wallpaper and textile are intended to connect the Ideal Bar back to the original style while telling the concert venue's contemporary story of music celebration.

*Software Utilized:* Rhino, Photoshop, Illustrator  
*Fabrication:* Fabric heat press



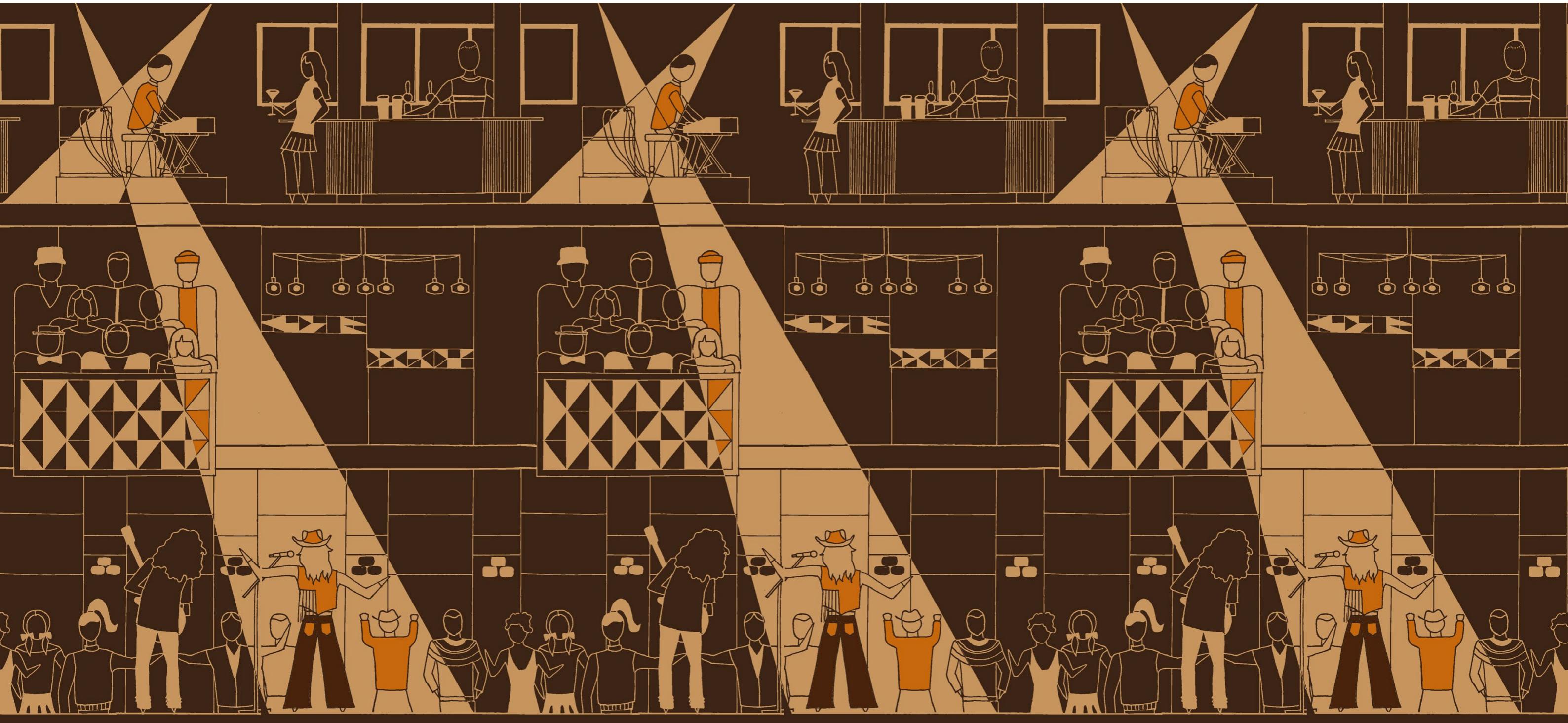


Textile Pattern

57



Placement on Vega Chairs



Repeat Wallpaper Pattern

# Digital Seduction

Spring 2022 | Spring Fashion Show

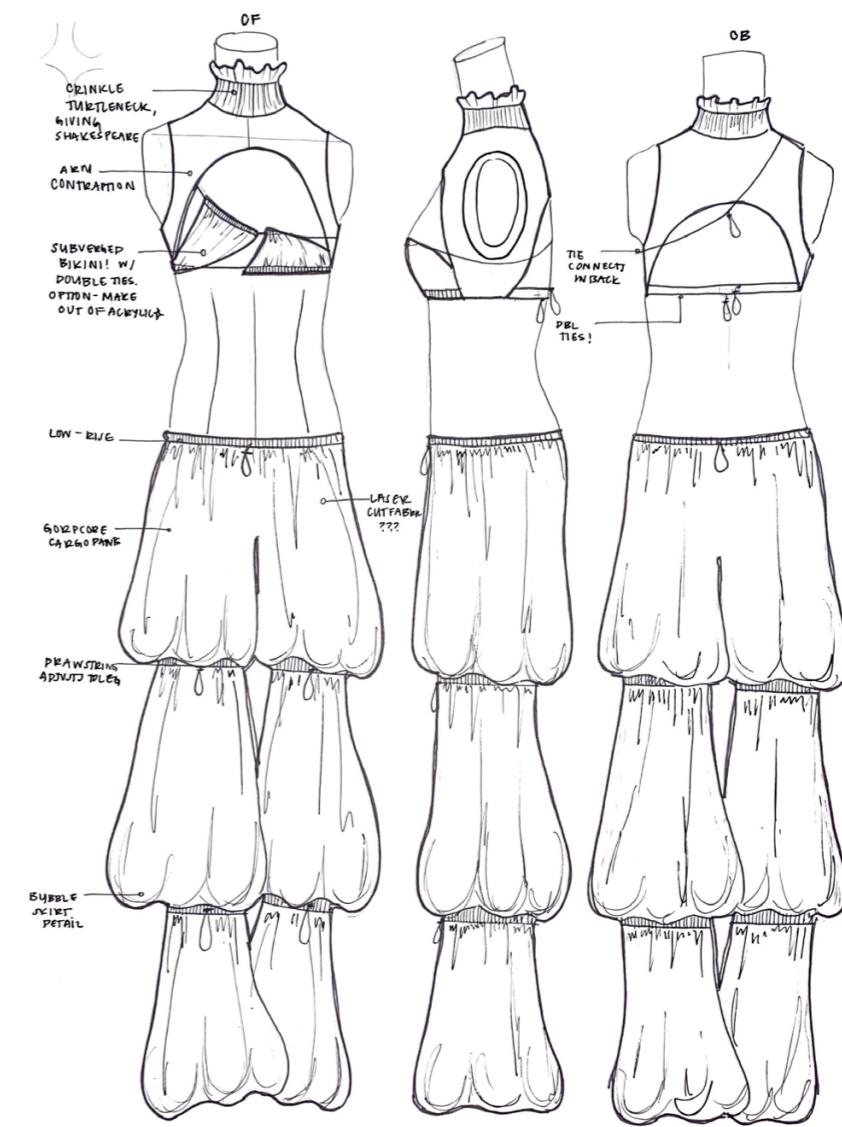
"Digital Seduction" reflects the ideal self that is displayed on the internet- the more confident, cool, and effortless beauty that is chased in vain. In an effort to prove herself to a passive audience, the digital seductress falls into a vicious cycle of pride and destruction. She only exists on your screen.

This collection debuted at the Spring Fashion Show presented by the Fashion and Student Trends Club and Sustainable Fashion Club. Over the course of 6 weeks, each look was sketched, pattern-made, iterated, and sewed specifically for its muse.

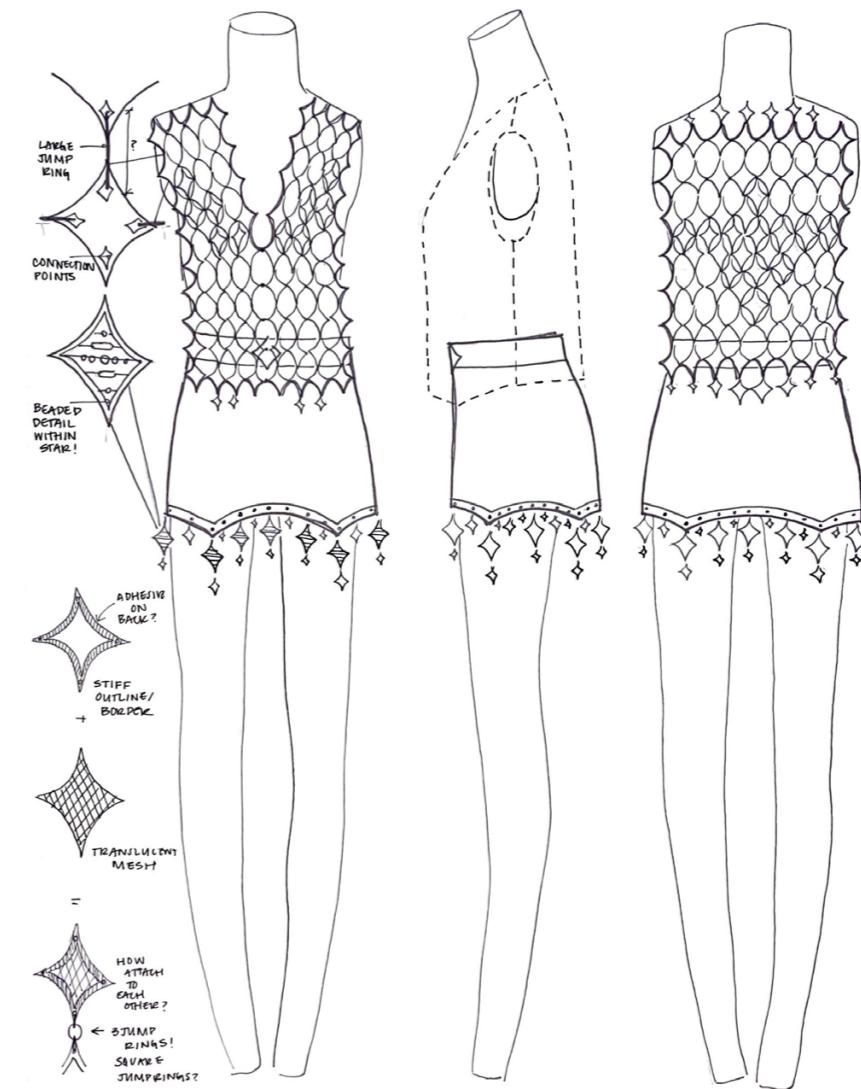
*Fabrication: Drafting, Pattern-Making, Sewing, Creative Direction*



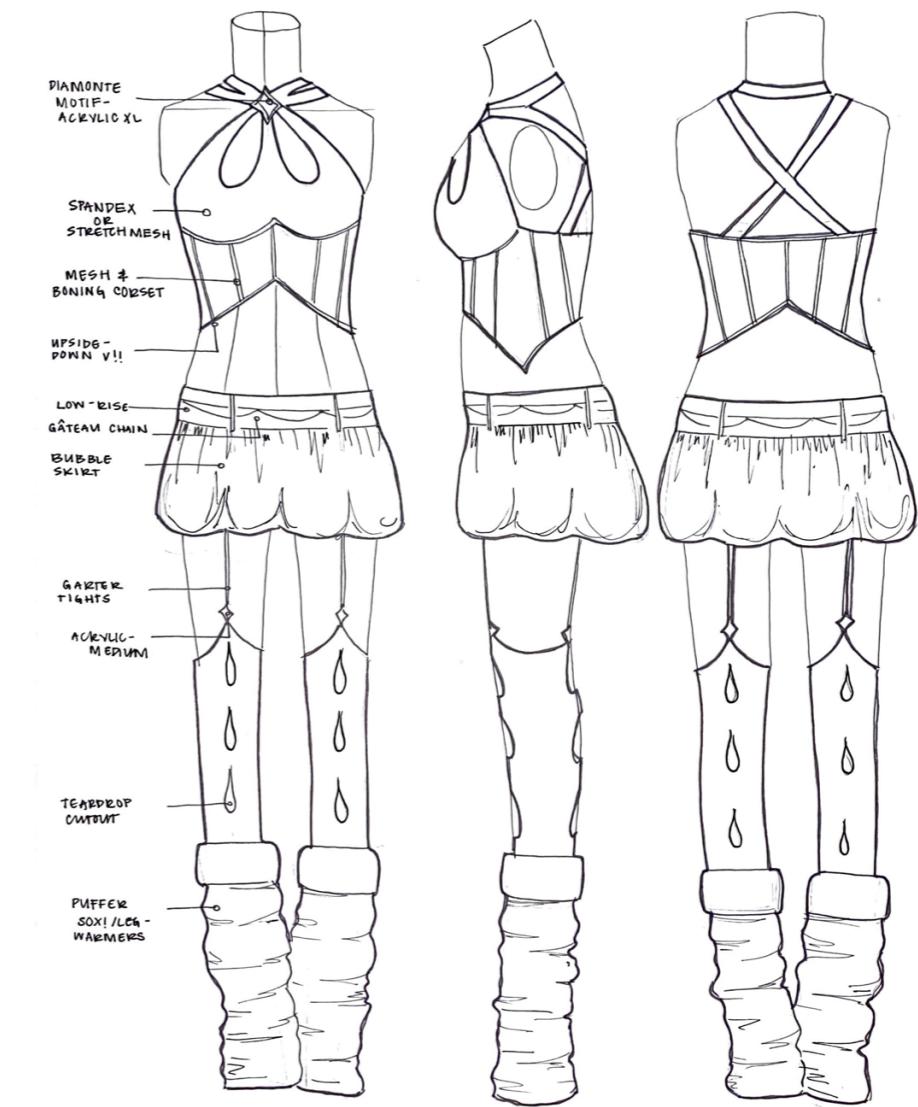
Initial Sketch



Initial Flat Lay Sketch



Initial Flat Lay Sketch



Initial Flat Lay Sketch

the  
end