



PORTFOLIO\_69

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**ARCH 1001** - STUDIO I

3 - 9



**ARCH 1002** - STUDIO II

10 - 21



**ARCH 1241** - DECOM I

22 - 25



**ARCH 2003** - STUDIO III

26 - 39



**ARCH 2242** - DECOM II

40 - 43



**ARCH 2311** - ETECH I

44 - 47



**ARCH 2004** - STUDIO IV

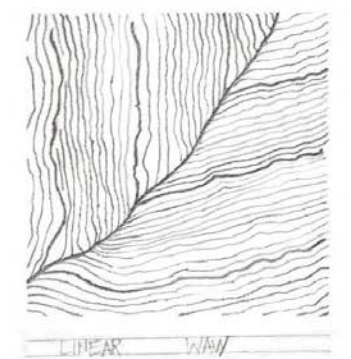
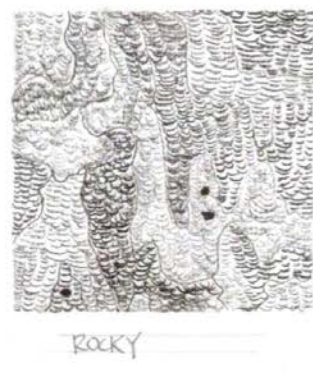
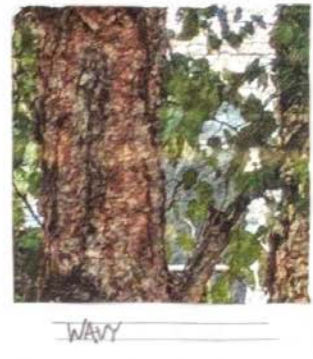
48 - 59



# CONTENTS

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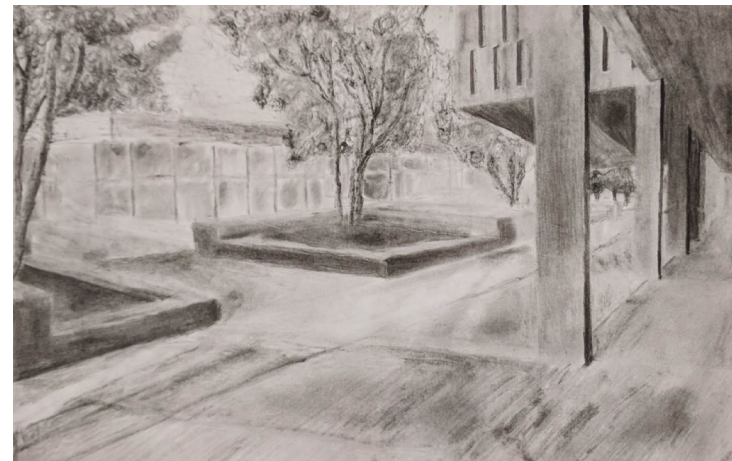
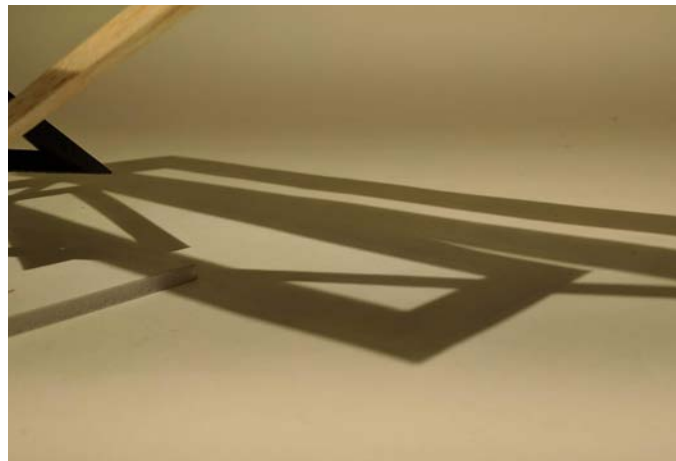
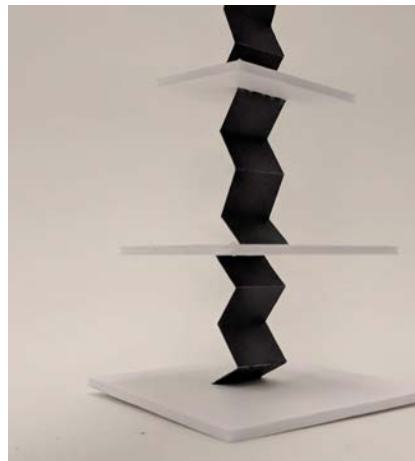
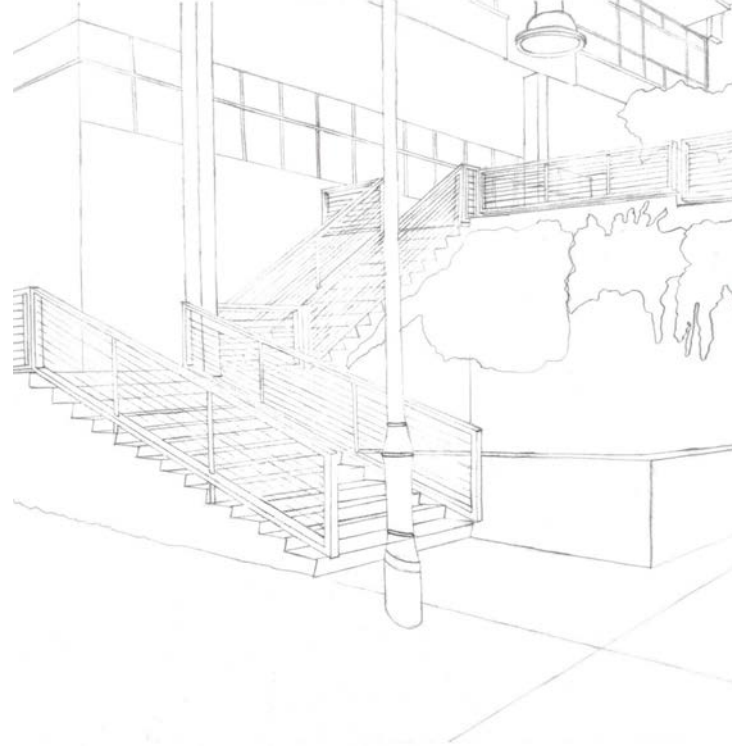
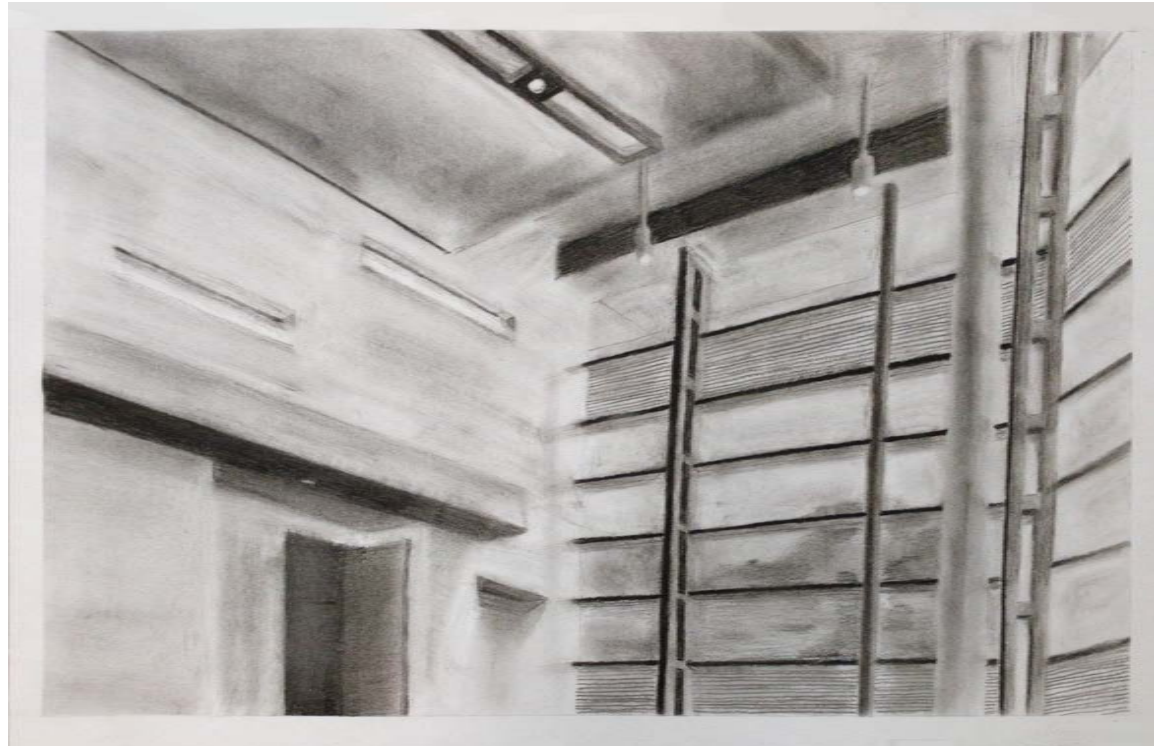
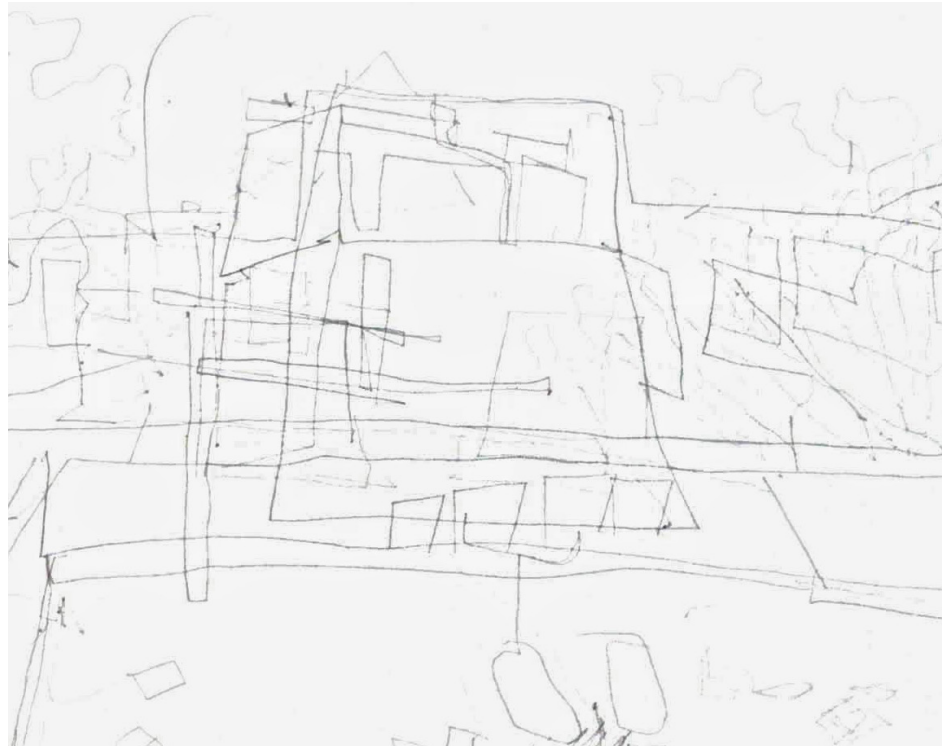


In Studio 1, we learned to change our perceptions about the world around us by exploring shape, movement, light/shadow, perspective, details, texture, and space.

# ARCH 1001

STUDIO 1 - FALL 2018





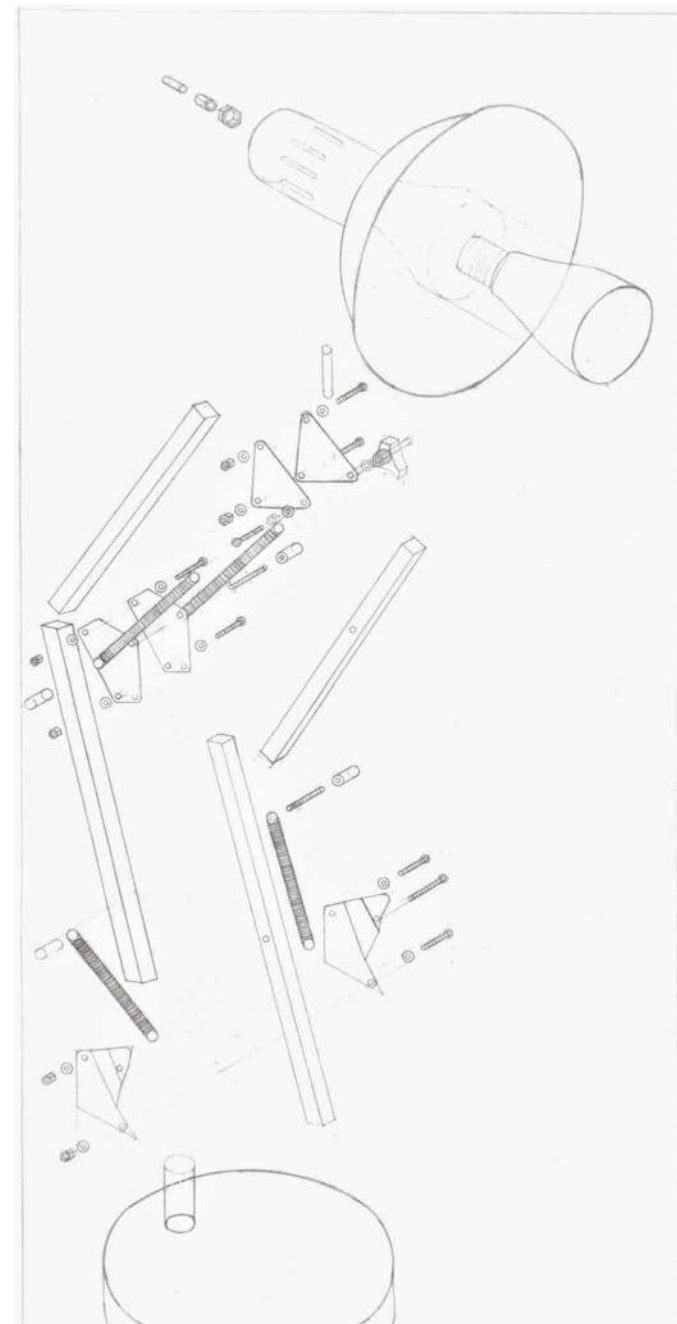
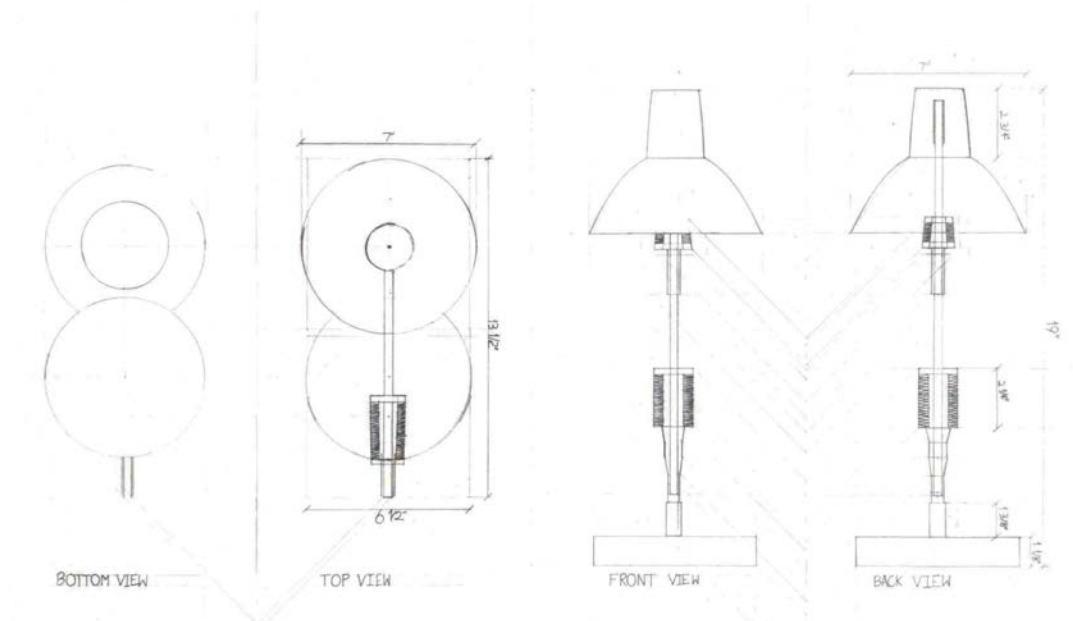
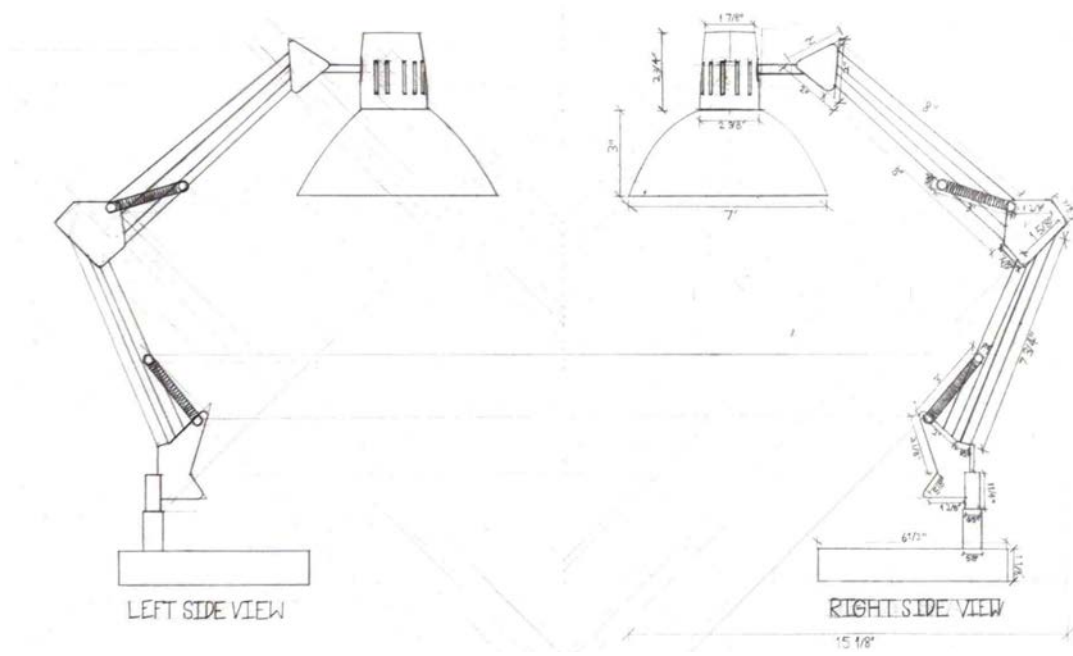
SHAPE - CONTOUR

KINETICS - GESTURE

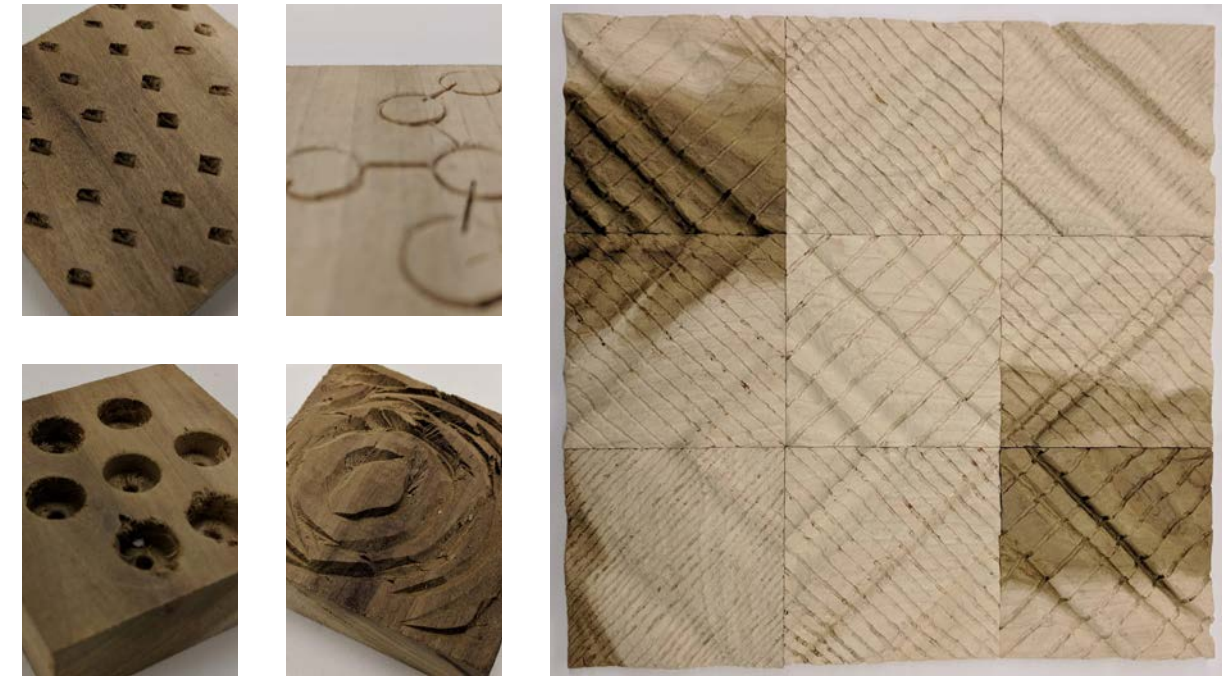
LIGHT/SHADOW - TONAL

DEPTH OF FIELD - PERSPECTIVE





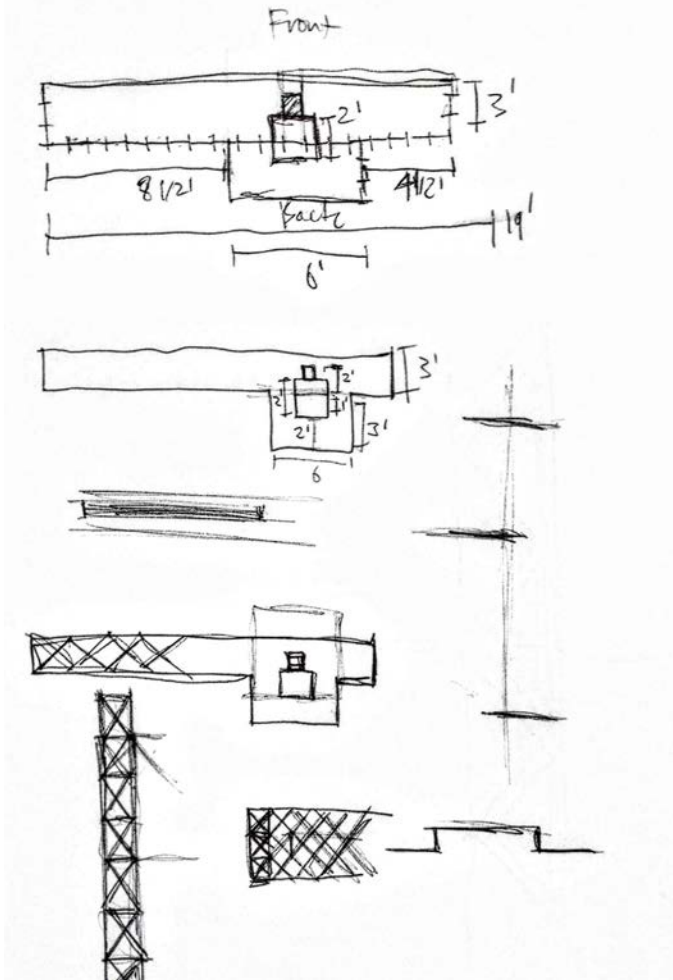
**DETAILS - ORTHOGRAPHICS**



Designed to resemble a pattern found on my shoes, this texture study creates unique ridges and valleys.

**TEXTURE - WOOD TILE PROJECT**

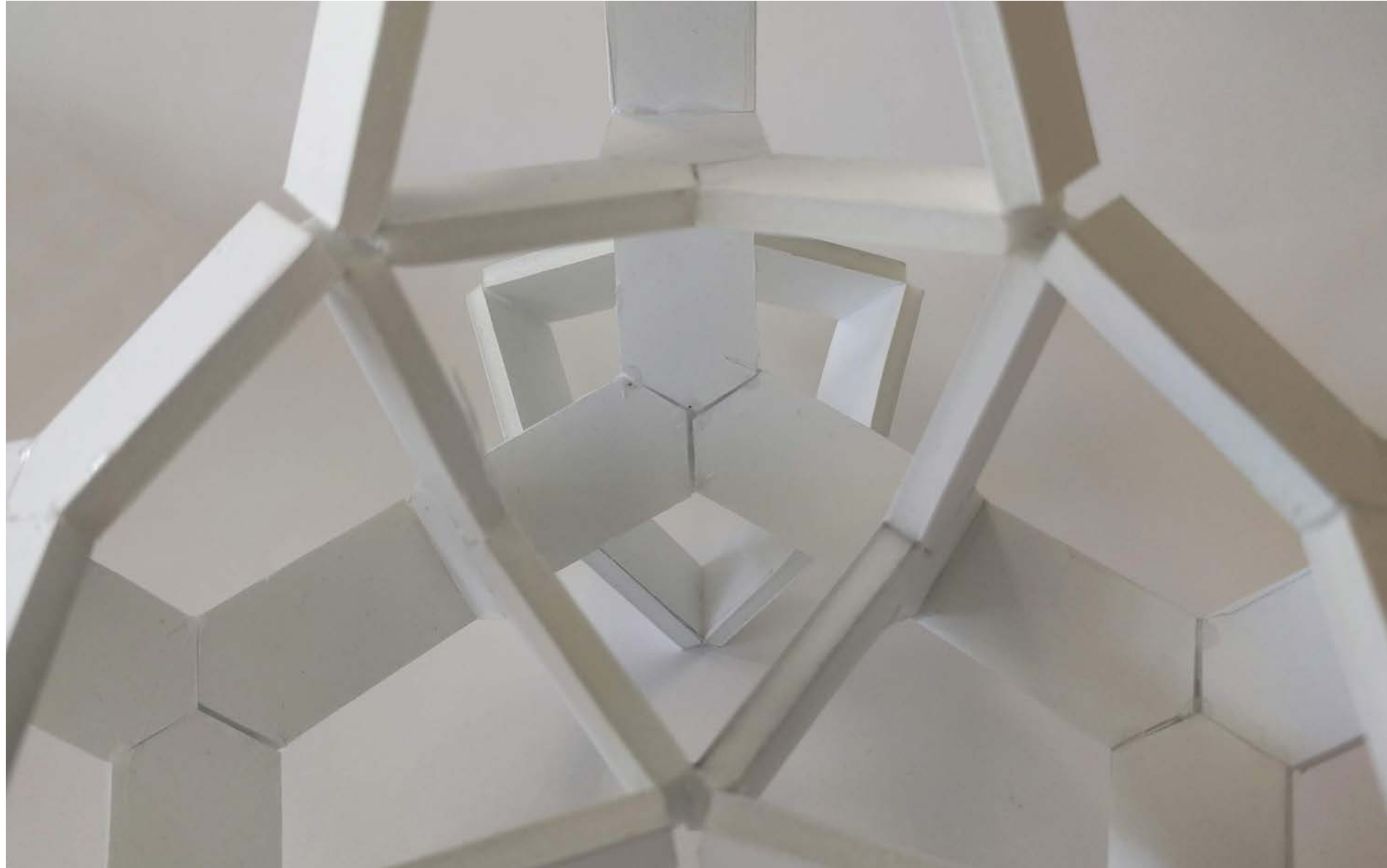




As a unique space within the trees, my personal haven allows me to experience all that nature has to offer.

## SPACE - PERSONAL HAVEN





Studio 2 was where we worked with the ideas of building scale and human dimension, along with the beginnings of structural thinking.

# ARCH 1002

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STUDIO 2 - SPRING 2019

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### A monument to intricate connections

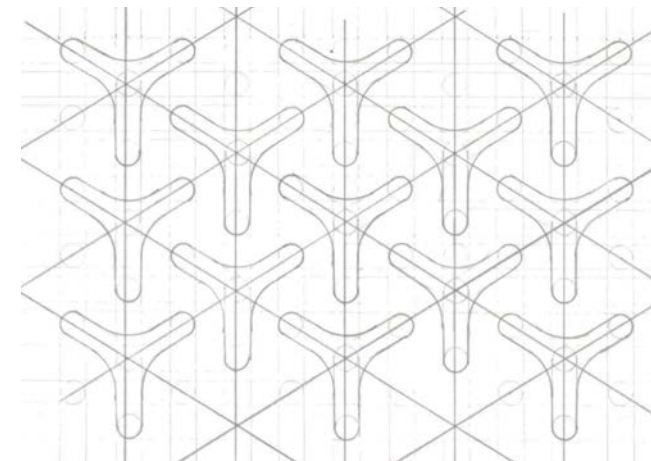
Monolith is a celebration of how structure can be formed from geometric relationships.

The entire structure is based on radial symmetry, with 4 sets of Y-modules creating the structure.

Once inside, you are greeted with a unique environment where you can see and feel the fabrication as well as the effect of light within.

## MONOLITH | WOOD JOINERY

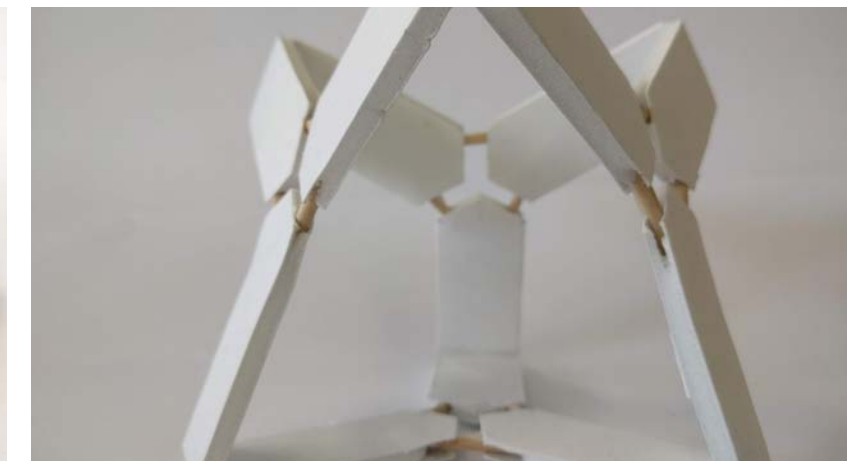
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- Study of Y-shape found on a rolling chair. The modules align neatly to form equilateral triangles.



- Four Y-modules creating a pyramid



- Edges of modules connect perfectly in 3D space

## INITIAL STUDIES

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- Connecting using spline joint



- Connection study with a triangular joint

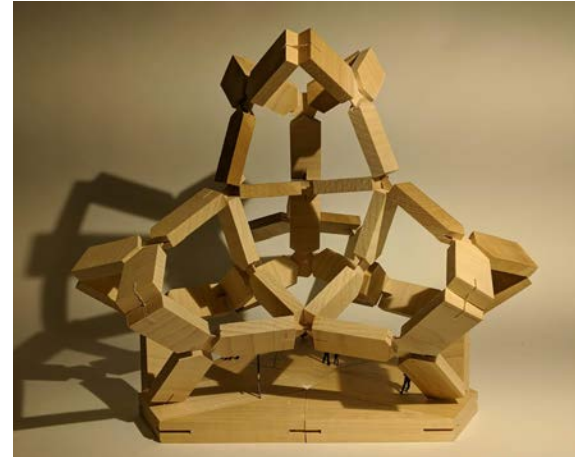


- Repetition of 4 of the modules to create a unique structure

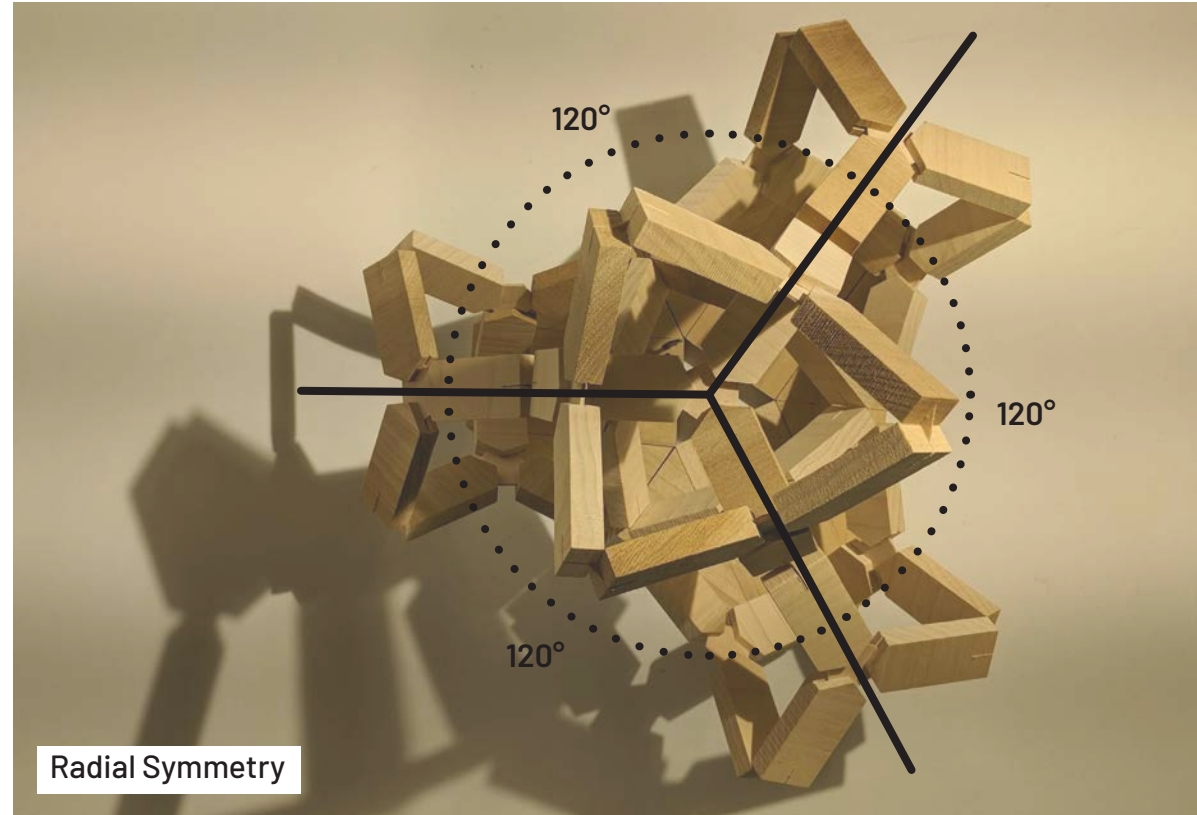


- Symmetry from above

## DEVELOPMENT



Effect of Light



Radial Symmetry



Structure and Joinery

## FINAL STRUCTURE





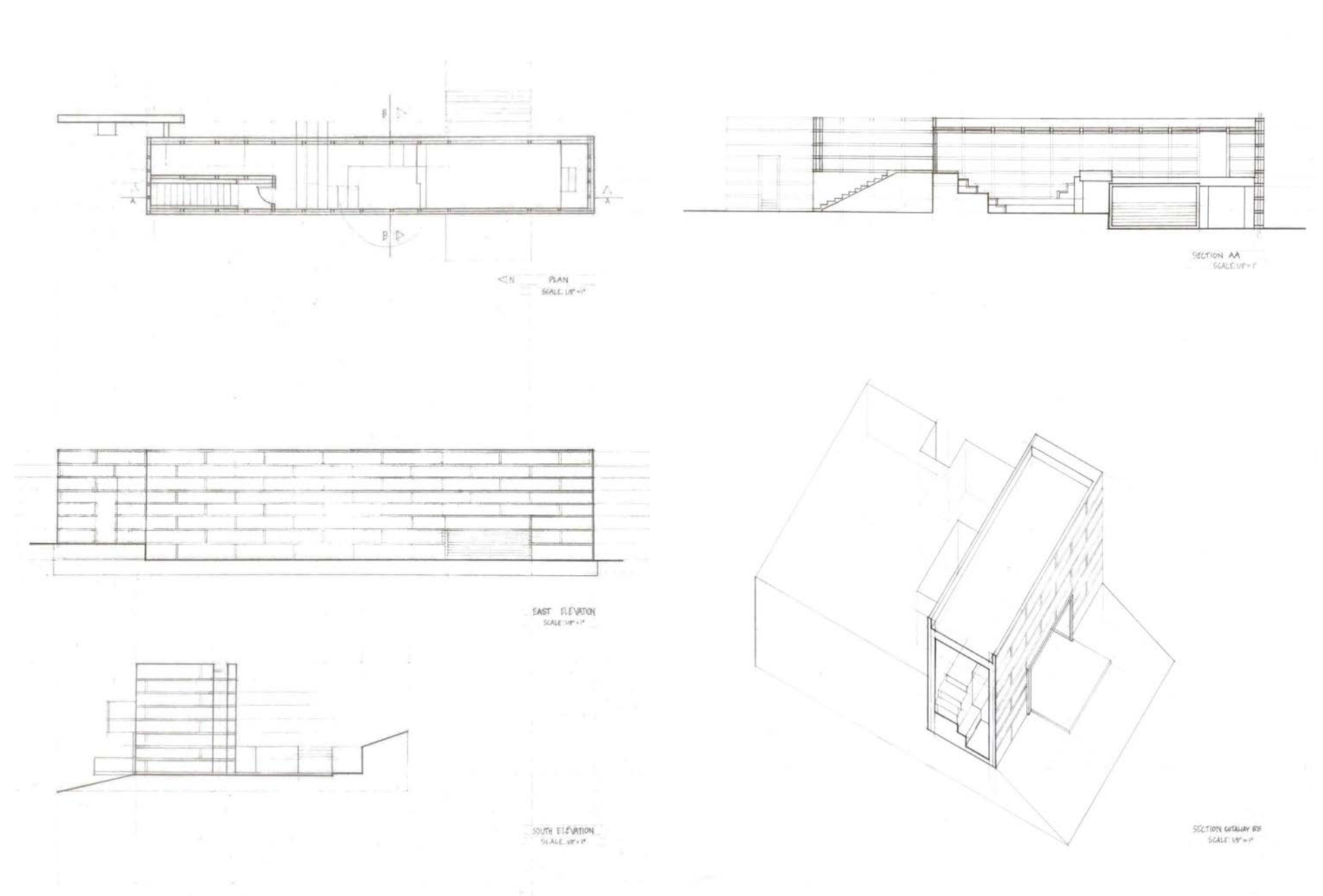
### A tranquil space defined by the use of natural materials

The Liyuan Library in Beijing, China is a unique space dedicated to reading in its most intimate form.

Its structure is defined by a wooden system, along with layers of bamboo giving an earthy feel to the exterior and interior.

Architects: Li Xiaodong Atelier

## LIYUAN LIBRARY | PRECEDENT STUDY



### ORTHOGRAPHIC DRAWINGS



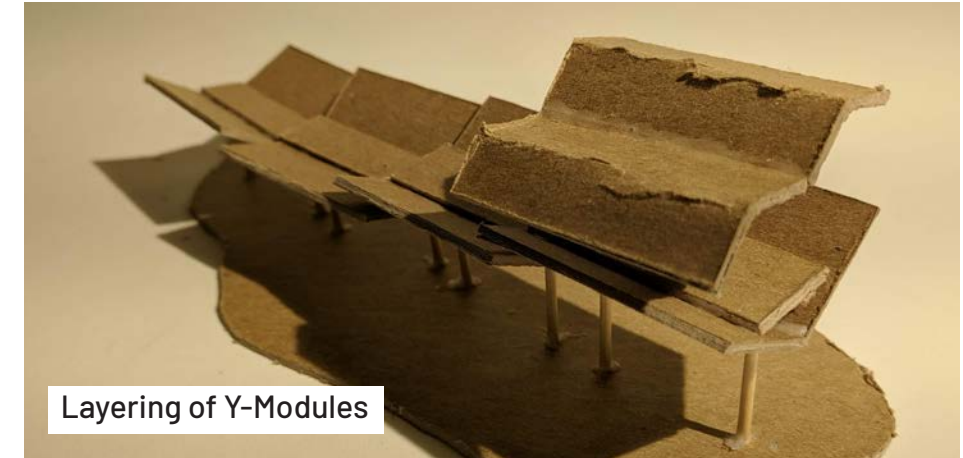
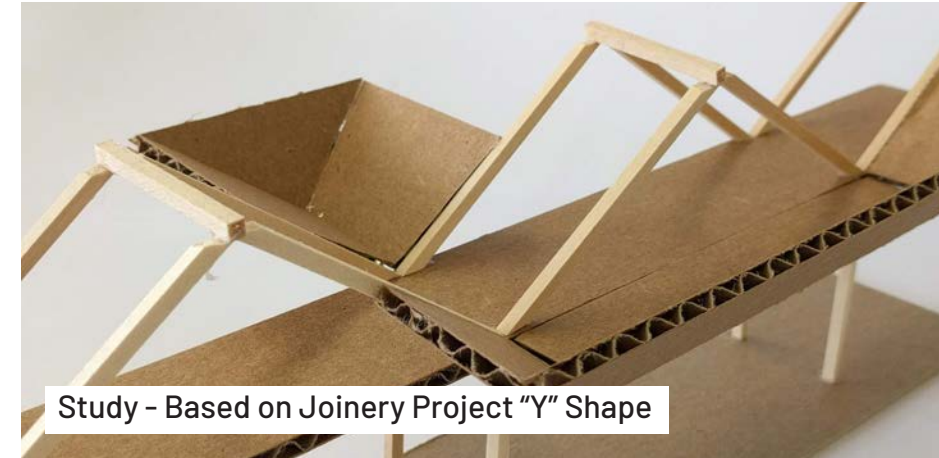


**An elevated walkway for students to forge their own path**

Outdoor environments are soothing. Studying in a cramped dorm can be the opposite of that. This project brings the act of study to an outdoor pathway, sitting up within the trees.

It sits along the current path, which will still be used for walking/skateboarding/etc. so those users aren't a distraction. Not only that, it enhances the path by creating a unique effect of light along it.

**BRIDGE TO THE SKIES | STUDY SPACE**



**BRIDGE STUDIES**





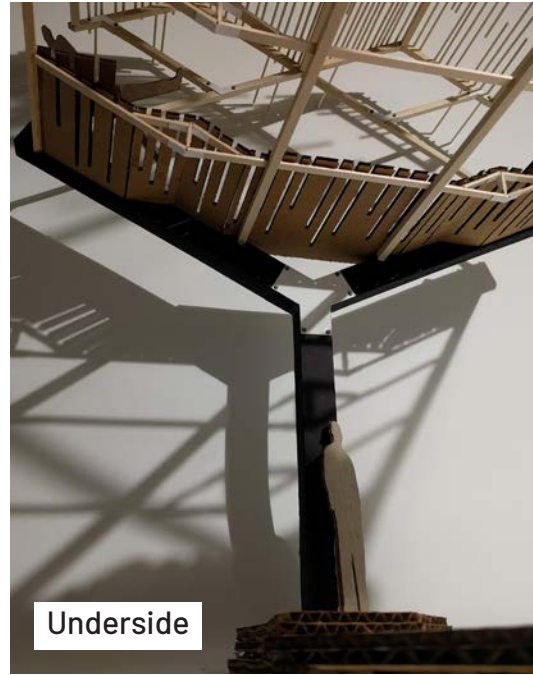
Y-Shape as a Support Structure



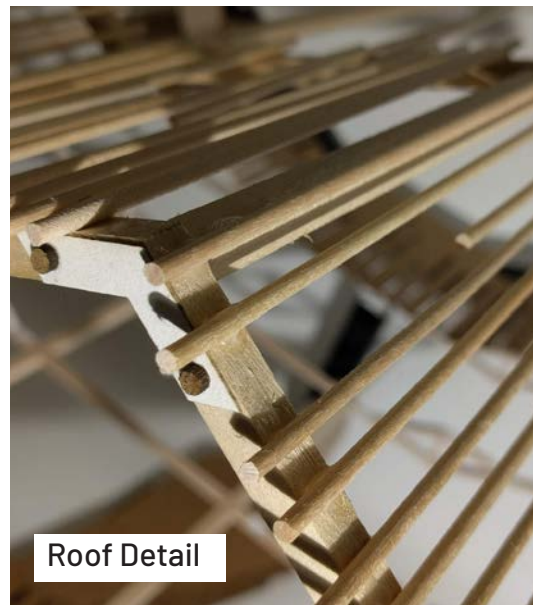
Lattice Roof



Model Reveals Structure Underneath Floor



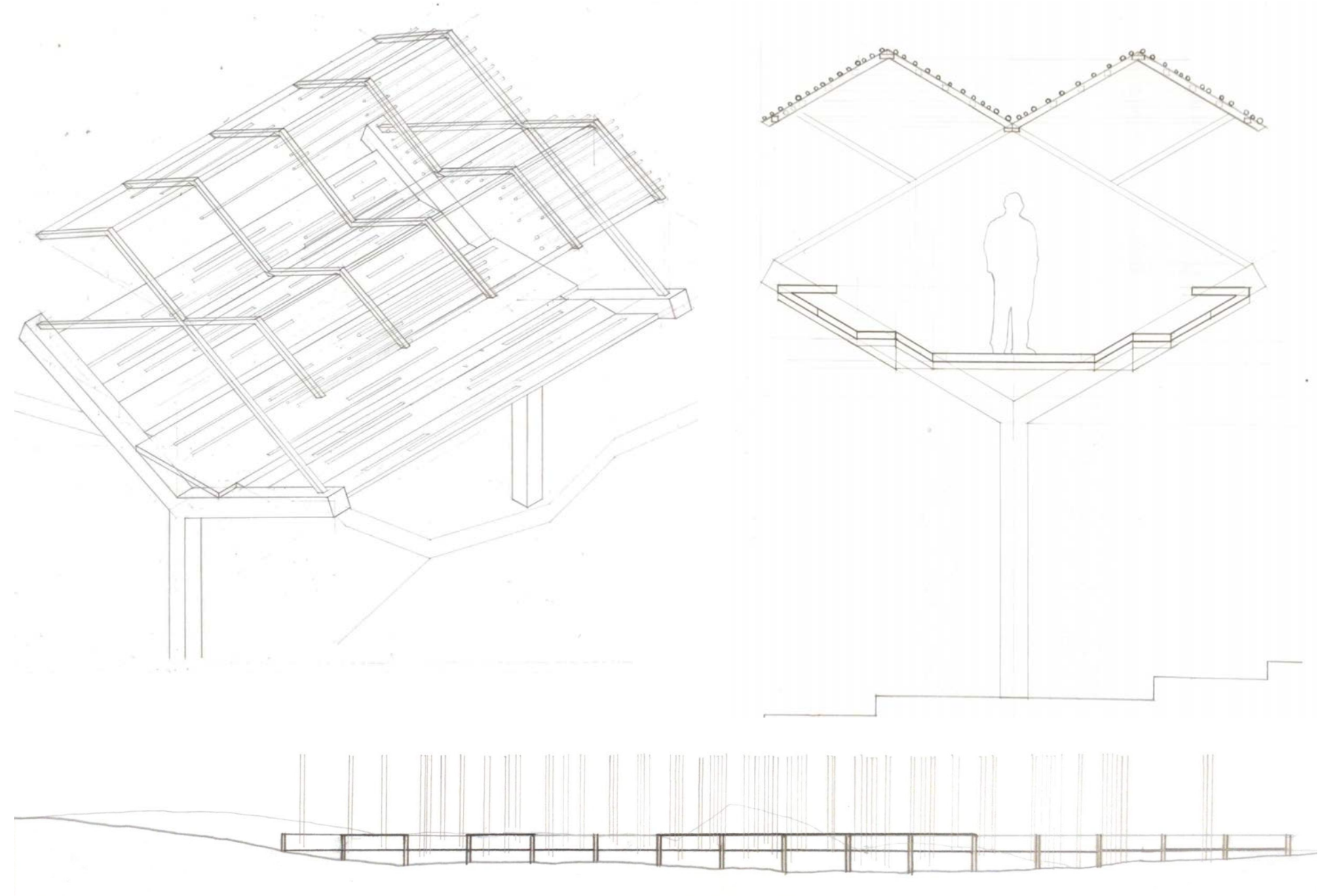
Underside



Roof Detail

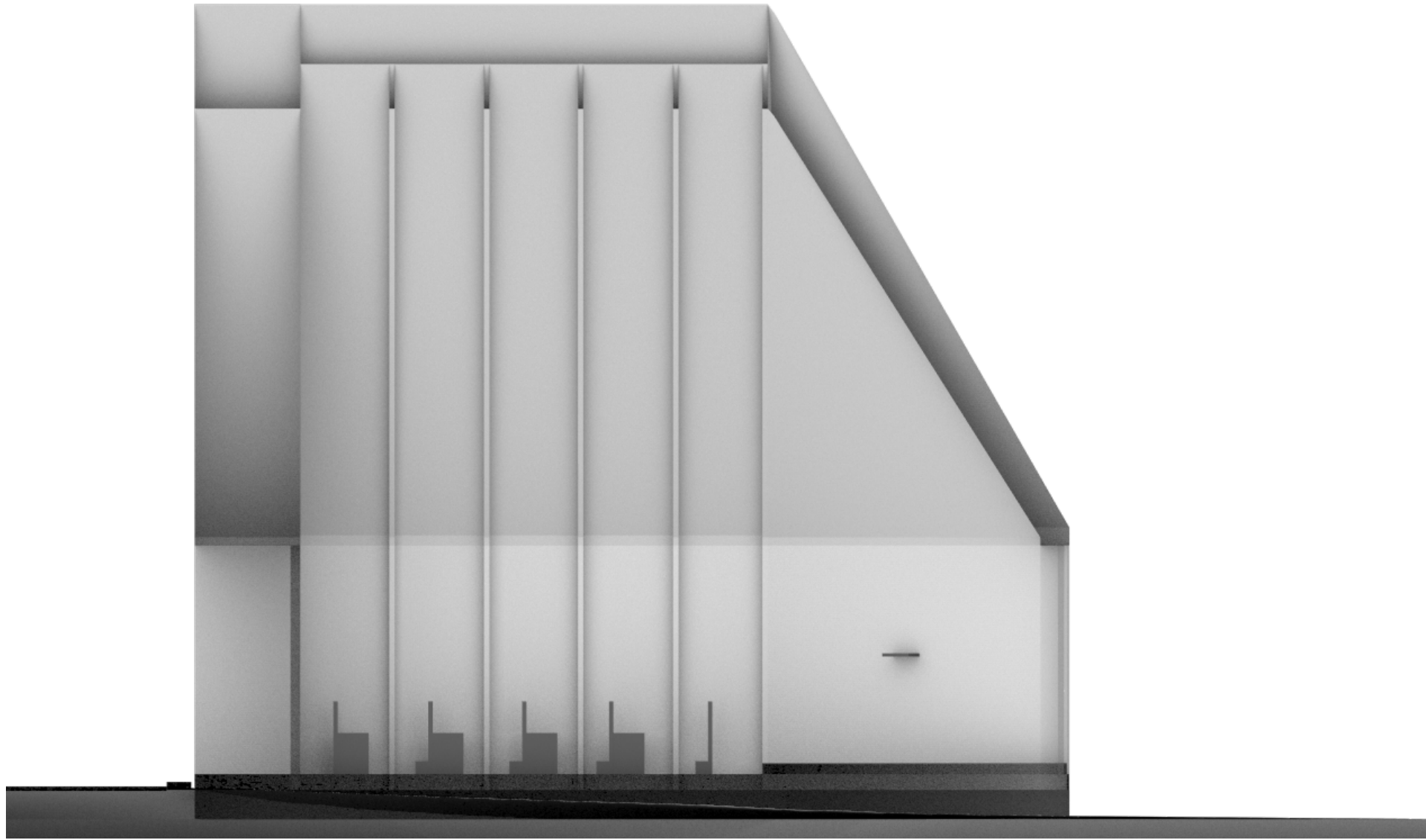
## DESIGN STUDY

## FINAL ITERATION



## ORTHOGRAPHIC DRAWINGS





In Decom I, we learned how to represent our chapel case studies in 3D software.  
Case Study: [Kapelle Salgenreute](#) Architect: [Bernardo Bader Architekten](#)

ARCH 1241

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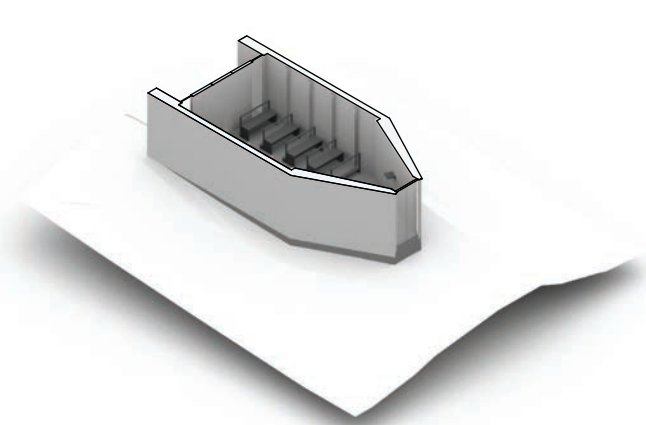
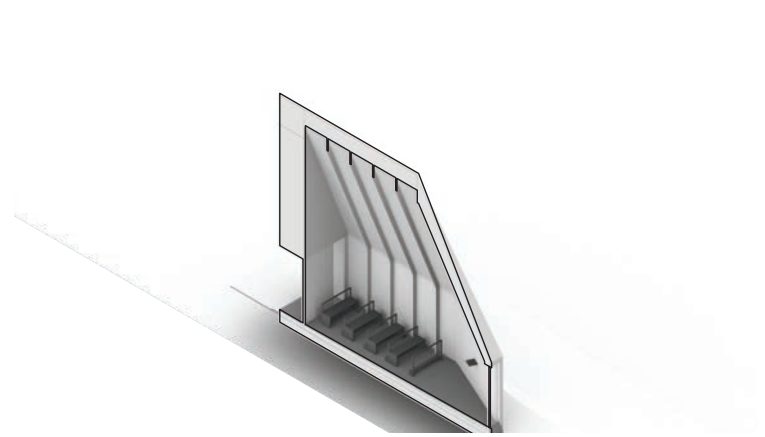
DECOM I - SPRING 2019

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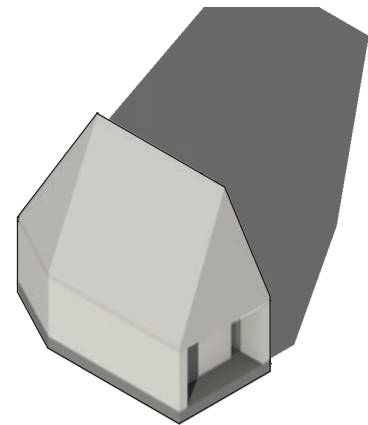
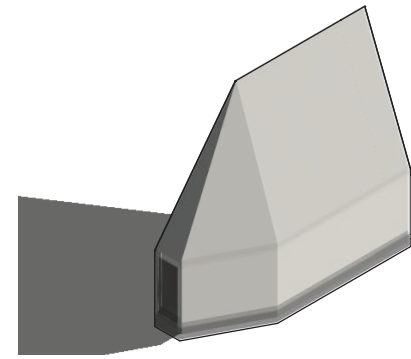




SECTION-CUT MODEL



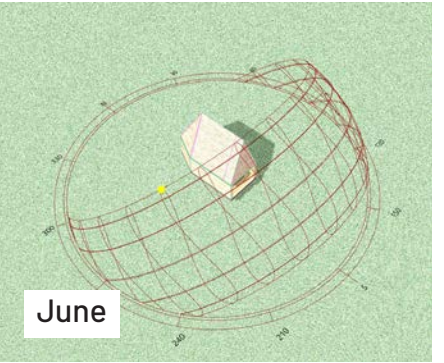
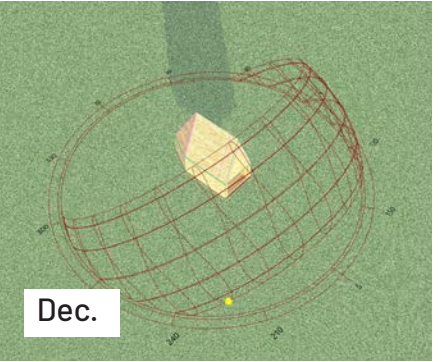
CUTAWAYS



ISOMETRICS



RENDERINGS + SUN PATHS







In Studio 3, we learned to work with different building scales, from pop-ups to residential homes, while analyzing spatial needs.

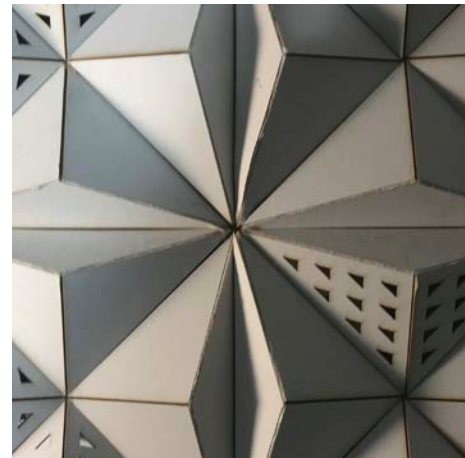
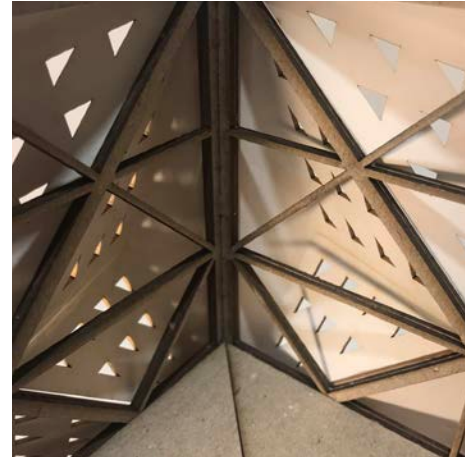
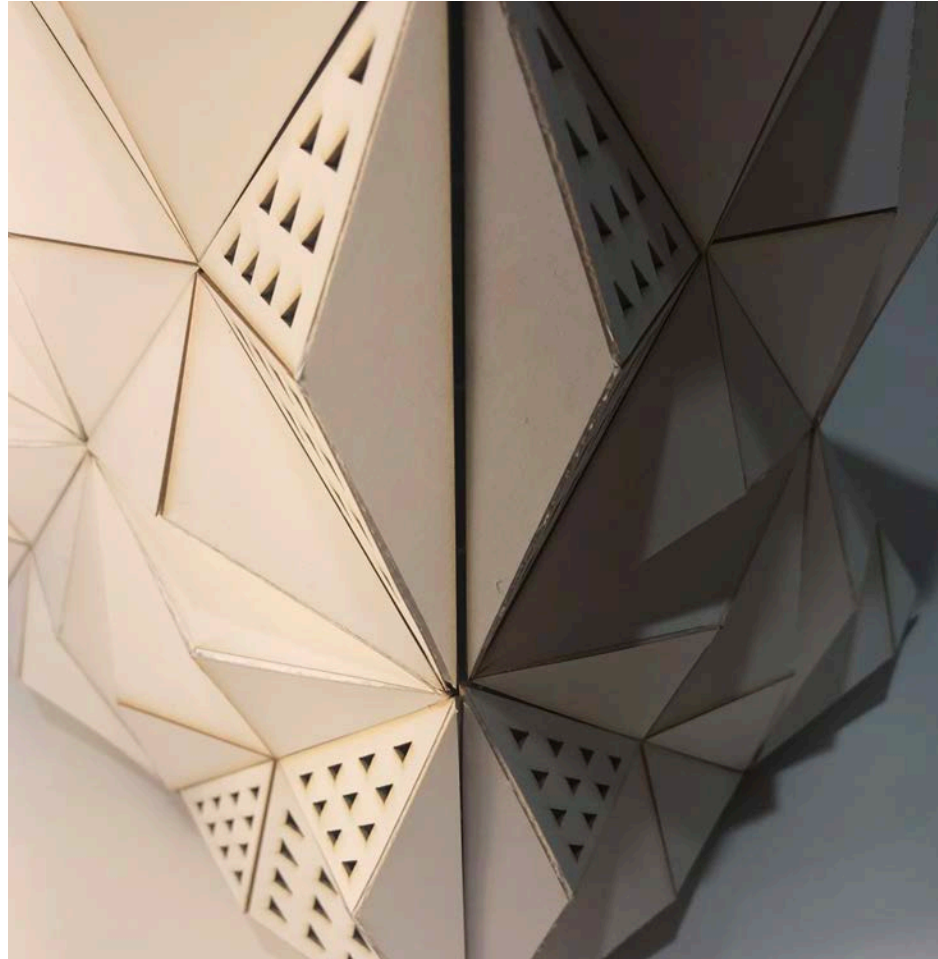
# ARCH 2003

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STUDIO 3 - FALL 2019

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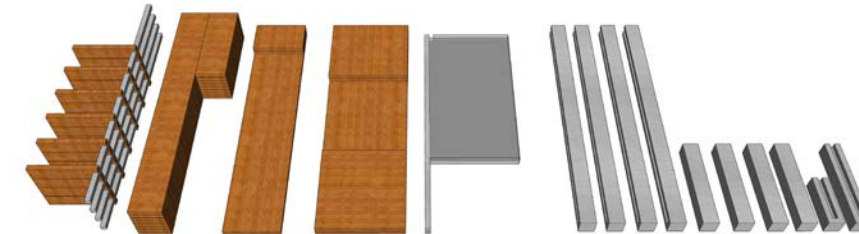


**Most people have heard of 3D Printing, but don't know much about it. What exactly is it? What can I make with it? How expensive is it?**

All of these questions and more will be answered at the Printing Press. It is a transportable space that demonstrates both the power and affordability of 3D Printing to the general public. It is designed to demonstrate how these machines work, the variety of designs they can make, and what one can accomplish with a low budget.

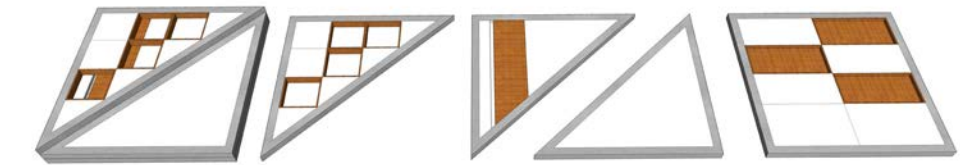
Not only that, but it is meant to inspire people to be more creative in their daily lives. Those who visit will be able to watch these printers in action, purchase intricate models made by them, and simply geek out about this cool technology.

## PRINTING PRESS | MOVABLE ARCHITECTURE



- Based on the X, Y and Z axis which is critical to 3D printing and 3D design
- Completely covered from the elements
- Intricate assemblage
- Breaks down into smaller, more manageable parts

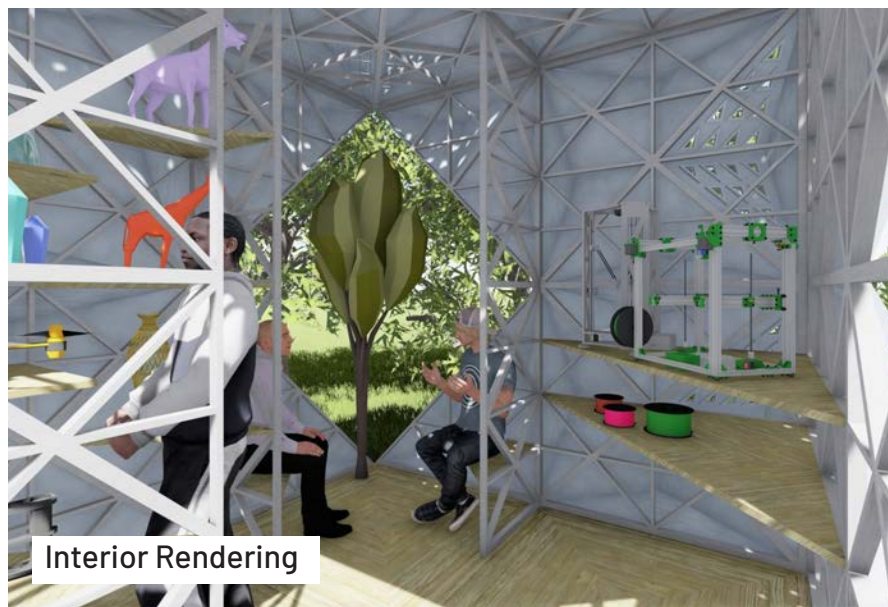
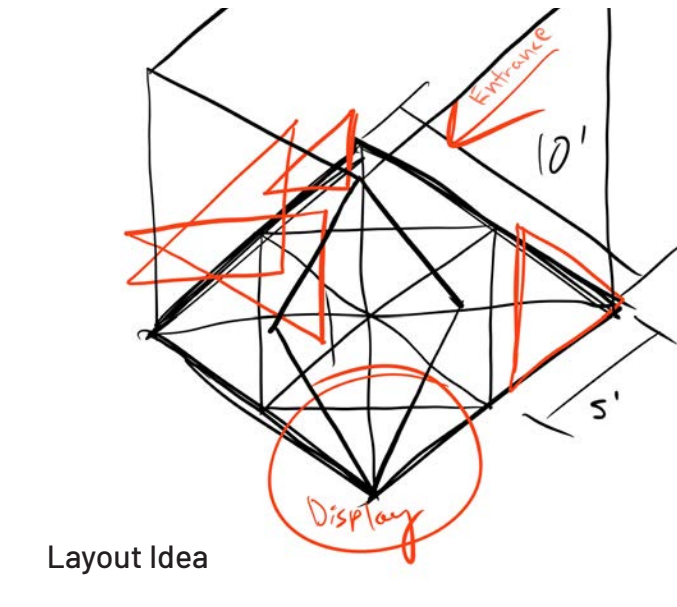
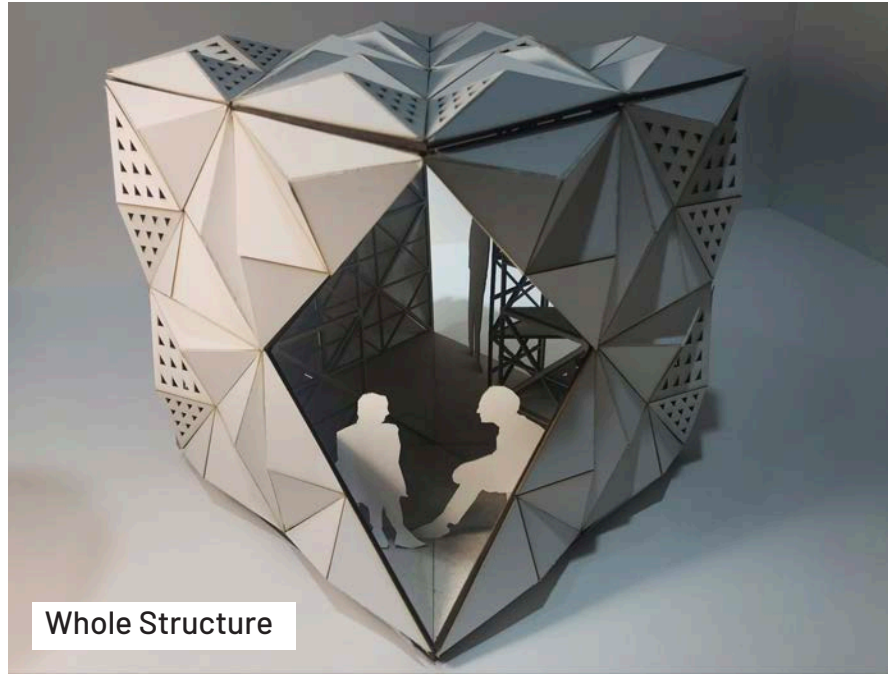
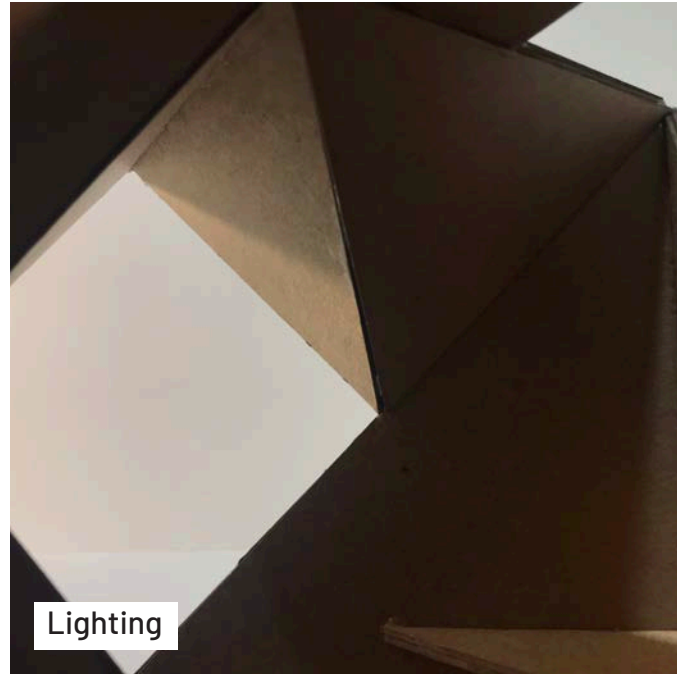
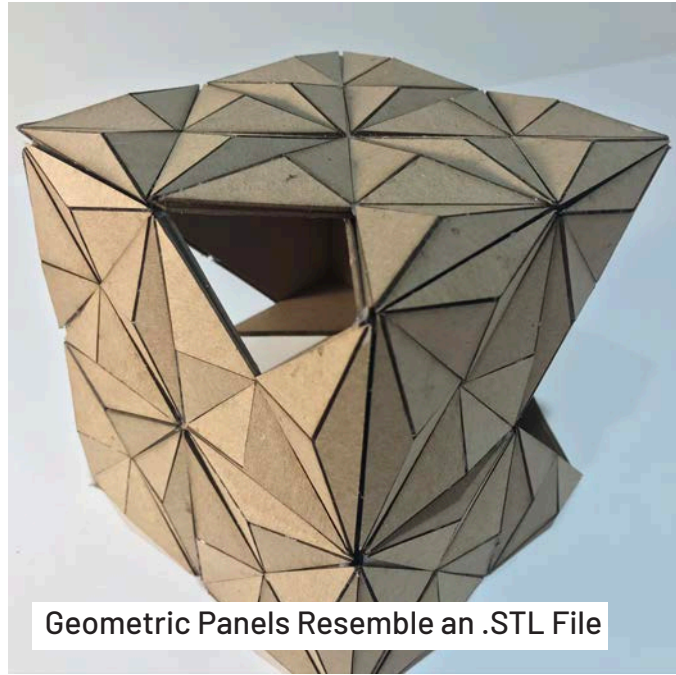
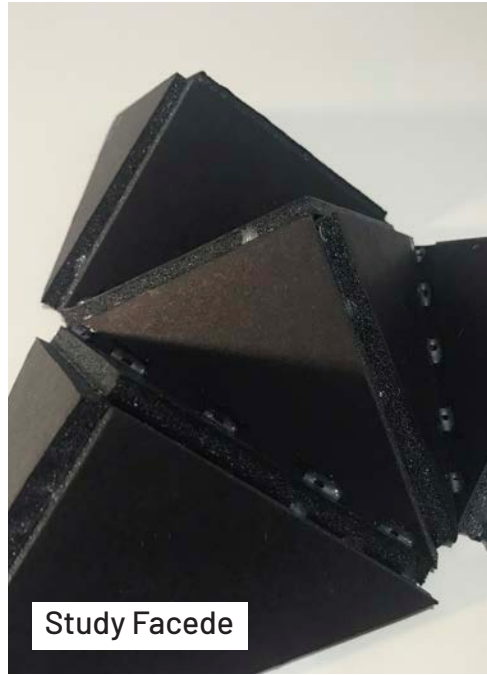
### DESIGN STUDY 1 - THE AXIS



- Folding Design made up of 4 large panels
- Easier to shrink down
- Takes up more space
- Heavier to move
- Unique, eye-catching design

### DESIGN STUDY 2 - FOLDING FORTRESS





DESIGN CONCEPT - COMBINING THE TWO IDEAS

FINAL ITERATION



**The Entry:**

- The Entrance is designed to create a large opening that frames the 3D printers in action.
- Gradient formed from the open space flowing to the framing and then on to the perforated panels

**The Model Space:**

- View and purchase 3D printed creations
- Some will even be functional, such as a quadcopter.

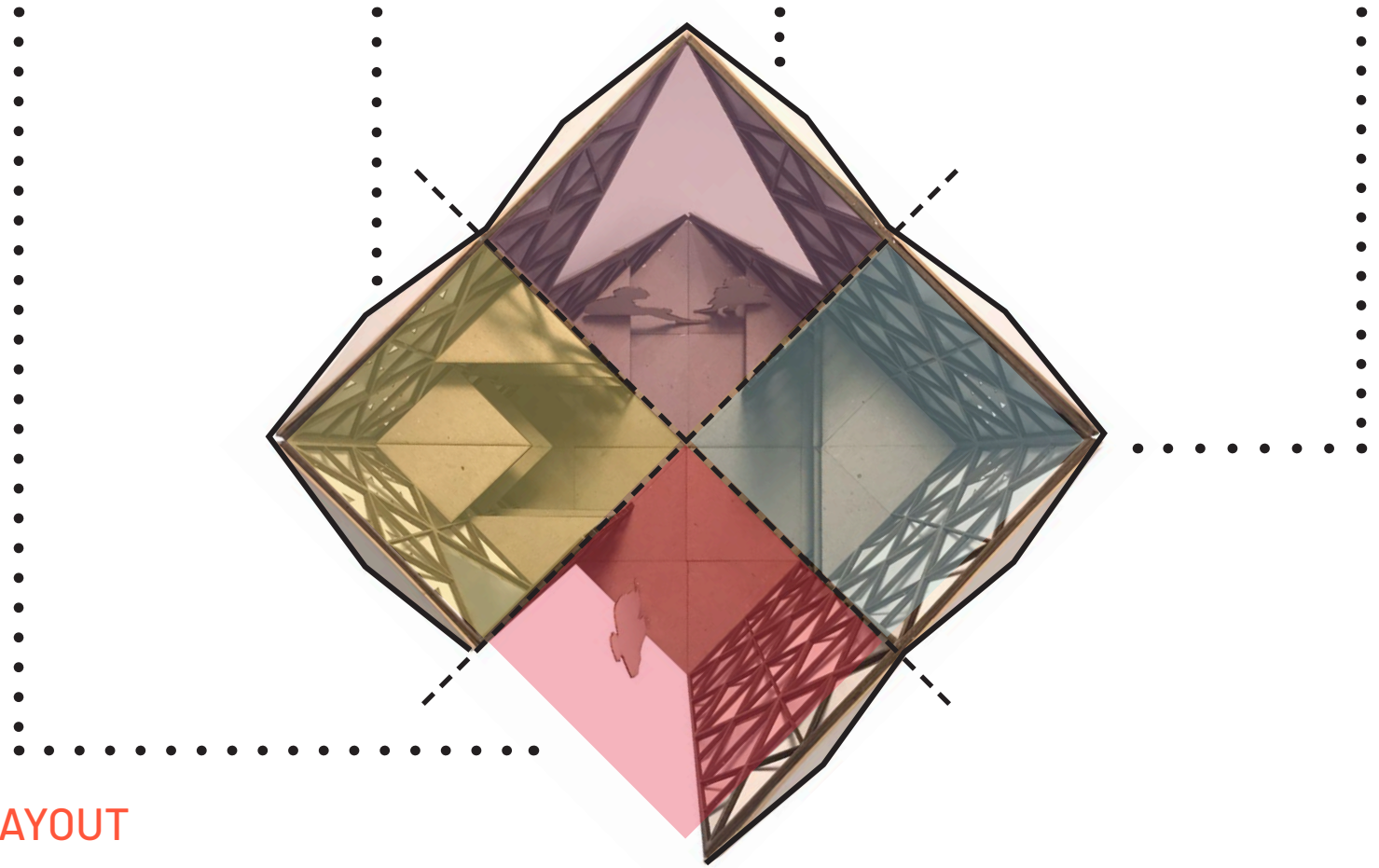
**Display/Interaction Space:**

- This area is all about interaction. A large 3D printed model of human scale will be on display here.
- Attracts visitors from afar

**The 3D Printing Space:**

- All of the magic happens here. The printers will be constantly printing for guests to observe
- The perforated panels let the light in and the sound out in a controlled manner

SPATIAL LAYOUT



< Outer Panels

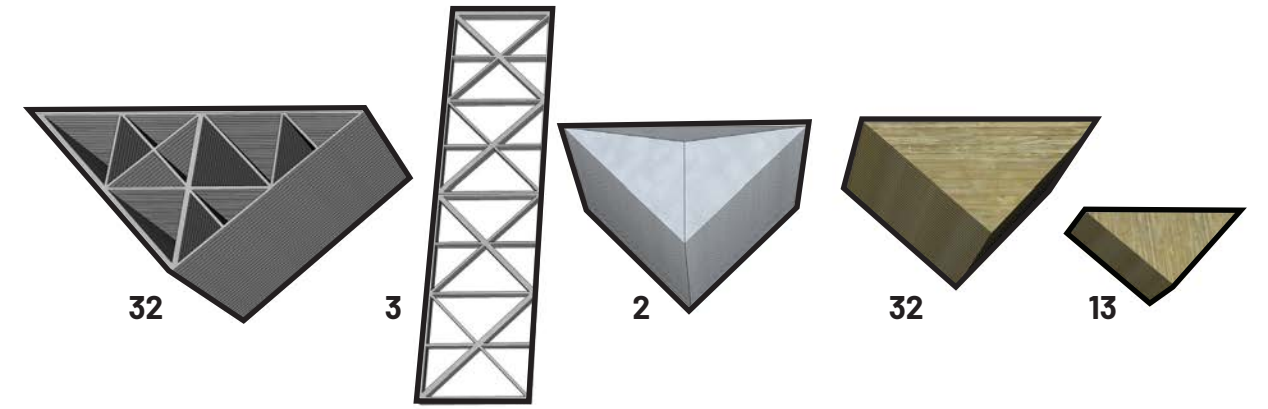
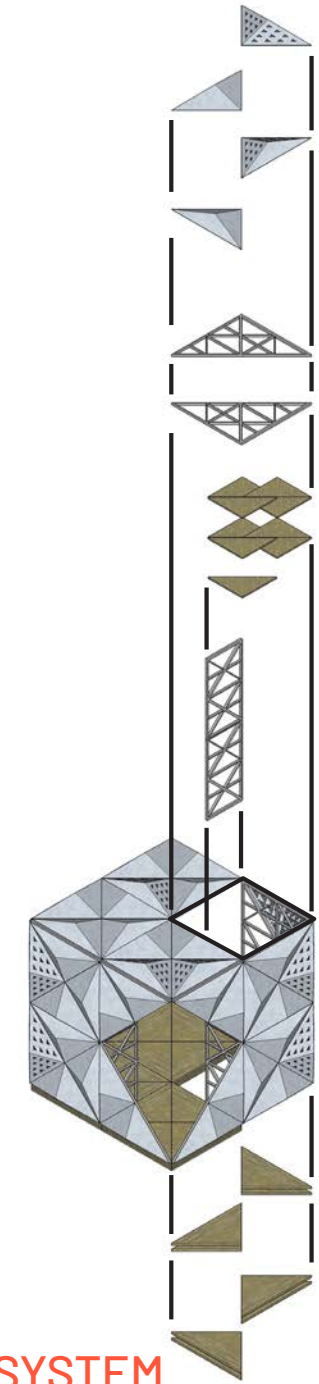
< Outer Framing

< Shelves/Seating

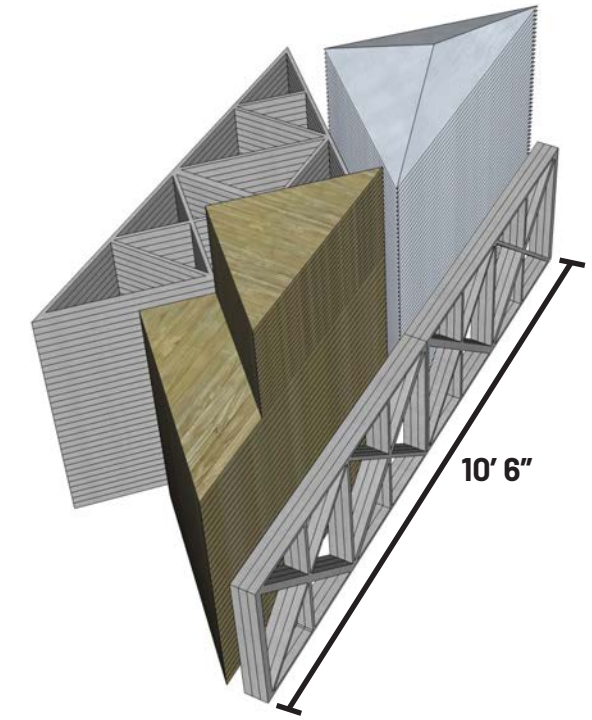
< Inner Partitions

< Floor/Storage Panels

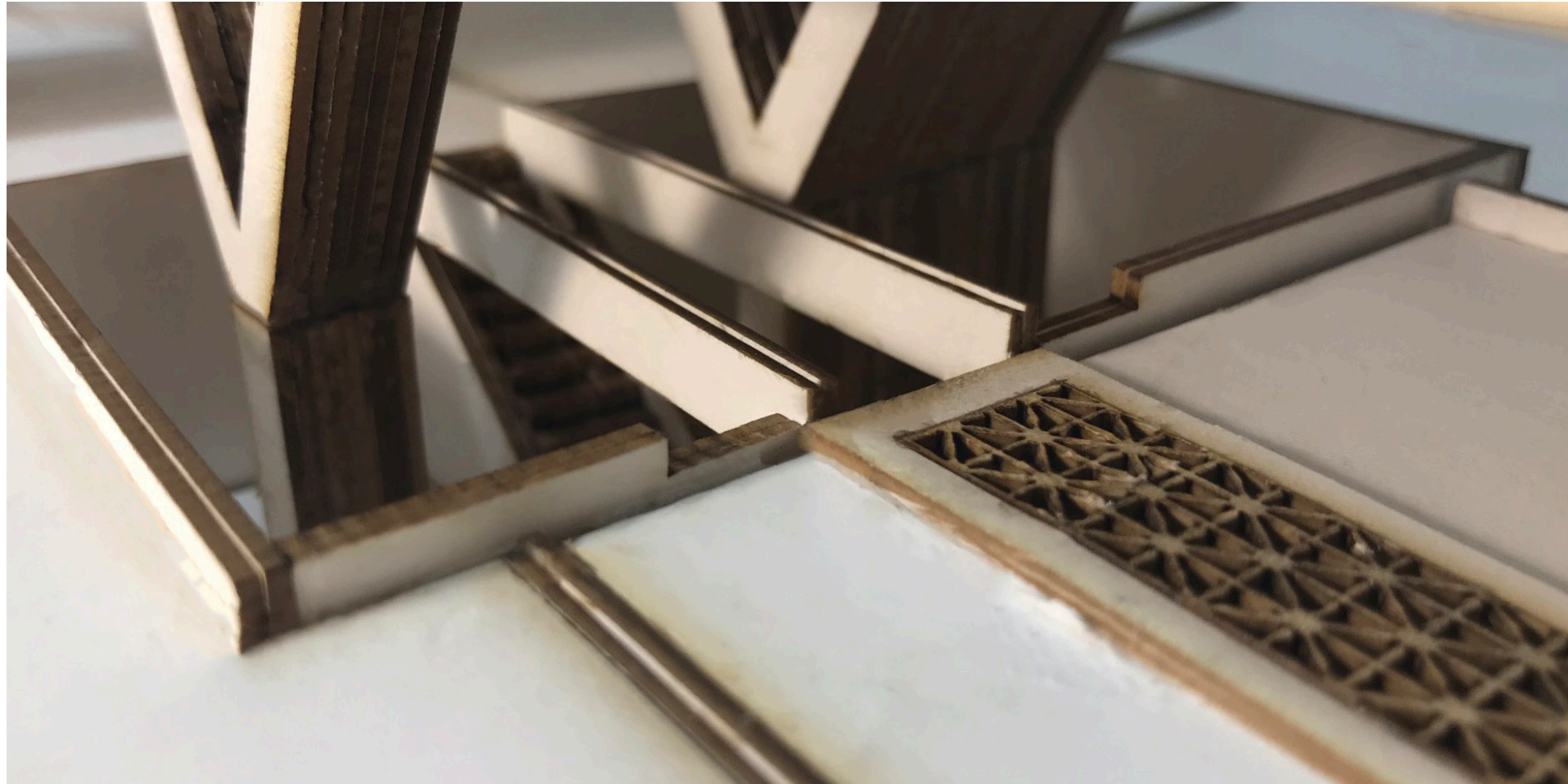
SYSTEM



COMPACTED VERSION





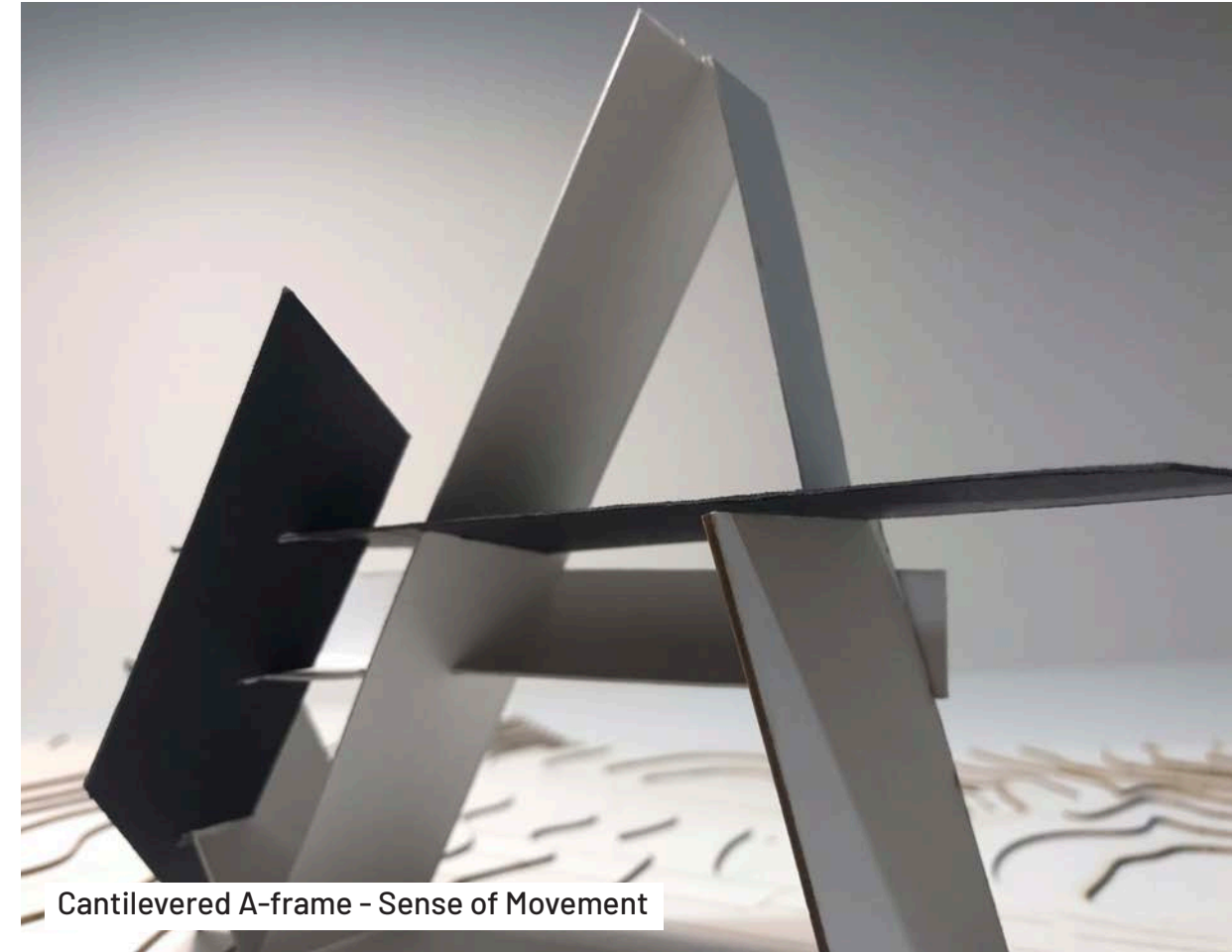


**Designed to free the ground beneath, 1143 Terrel Mill Road sits elevated in the air.**

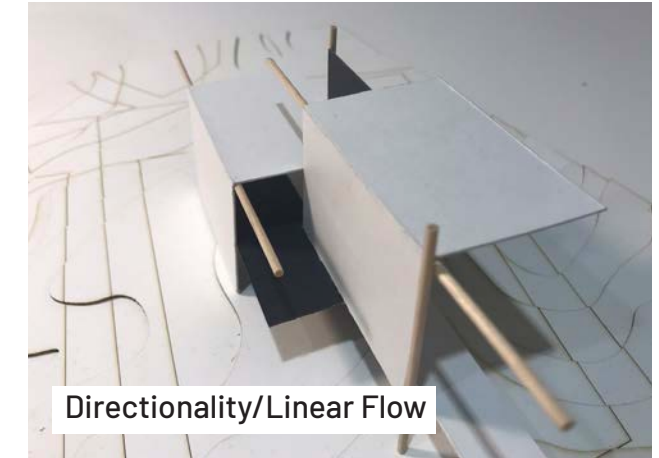
A simple A-frame lifts the main structure with minimal contact to the ground. Music is our family's passion, and the design of the home accentuates this. The main diagonal shape of the structure is based on that of a sine wave, which represents how music carries the family. Also, the A-frame itself creates a double-height space where music begins and then funnels down the hallways to all rooms. The home features 5 bedrooms and 4.5 baths, 2 of the bedrooms are found in the guest house, which lies inset into the ground. This space allows family to come and visit, while also serving as a space to rent for most of the year. A rooftop garden sits on the south side of the home, feeding off the immense sunlight.

## AMBIENT ALTITUDE | SINGLE FAMILY RESIDENCE

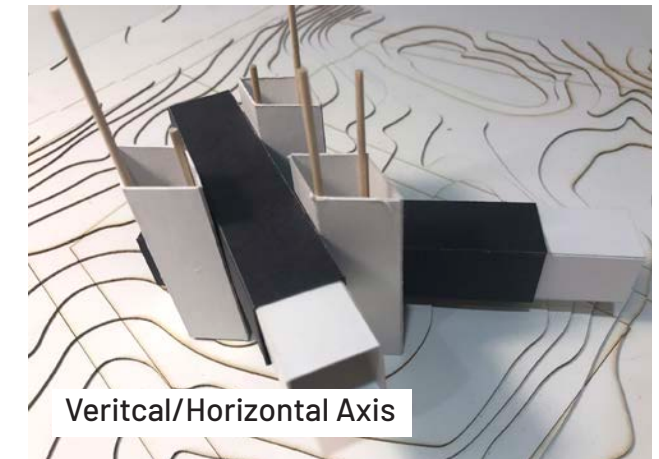
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Cantilevered A-frame - Sense of Movement



Directionality/Linear Flow



Vertical/Horizontal Axis

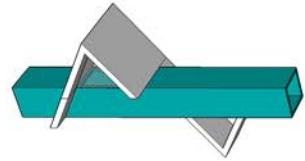
## MASSING STUDIES

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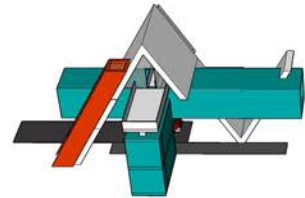




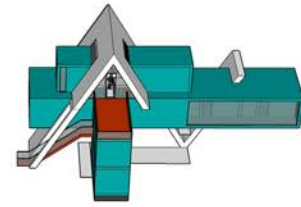
Initial Concept



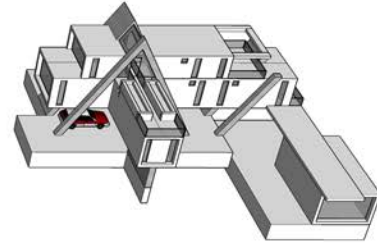
Study 1. Tube intersected by A-frame



Study 2. Intersecting tubes, outdoor deck space



Study 3. Double height space created by the 2 levels, stair entry added



Study 4. Increased floor space. Guest home added



Rear 3/4 View of the Home

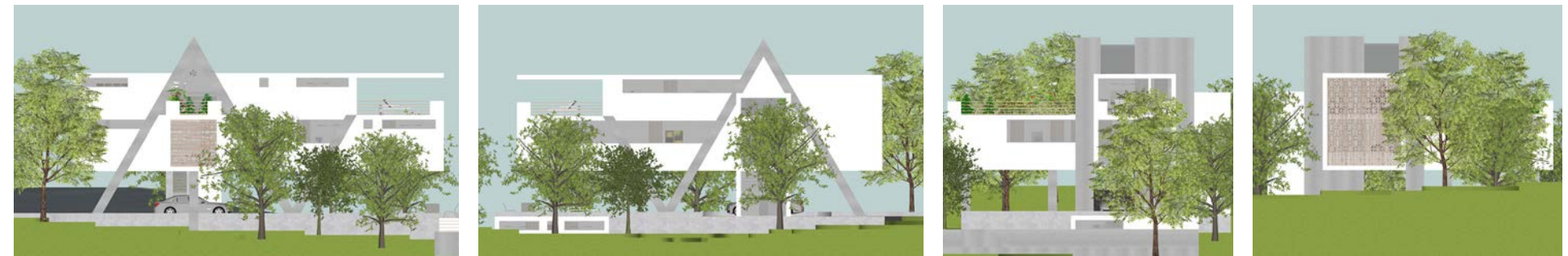
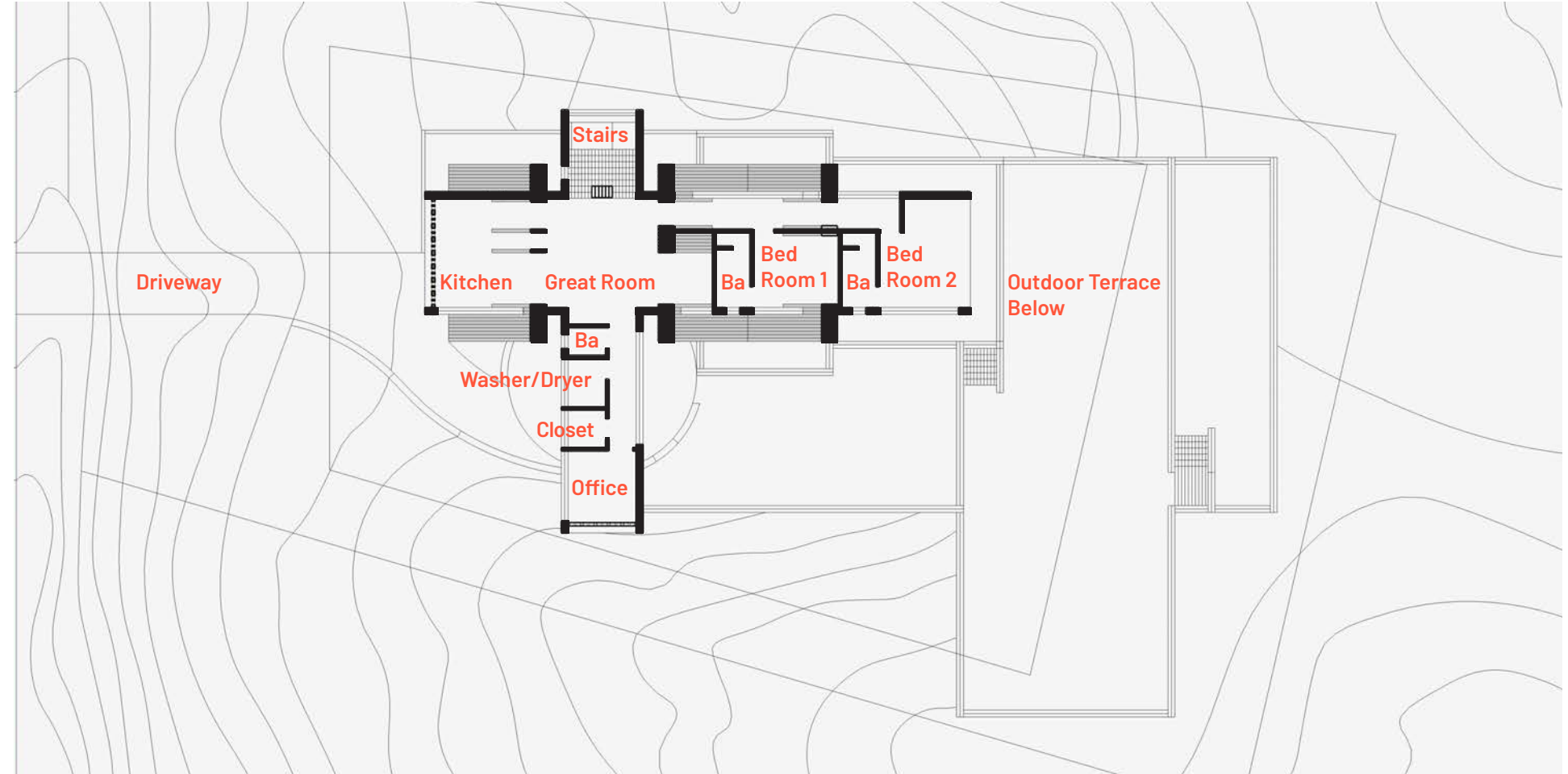
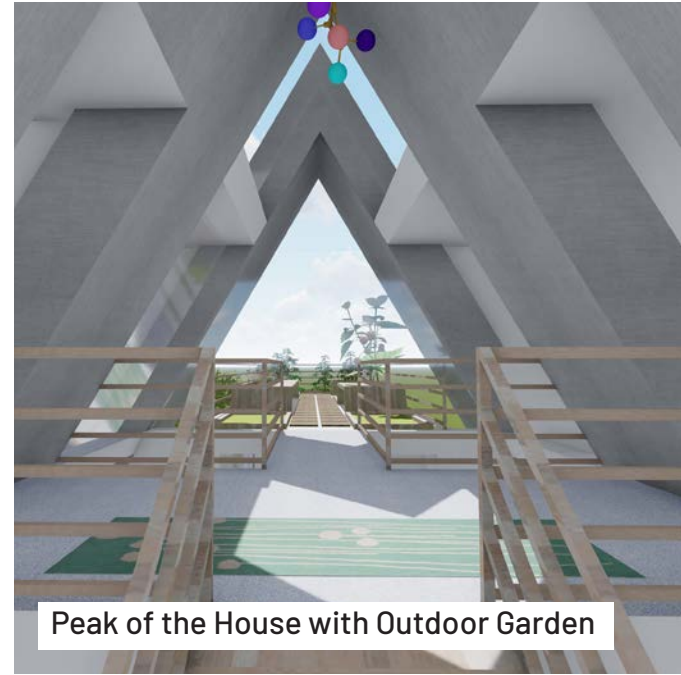
## PROCESS

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## FINAL ITERATION

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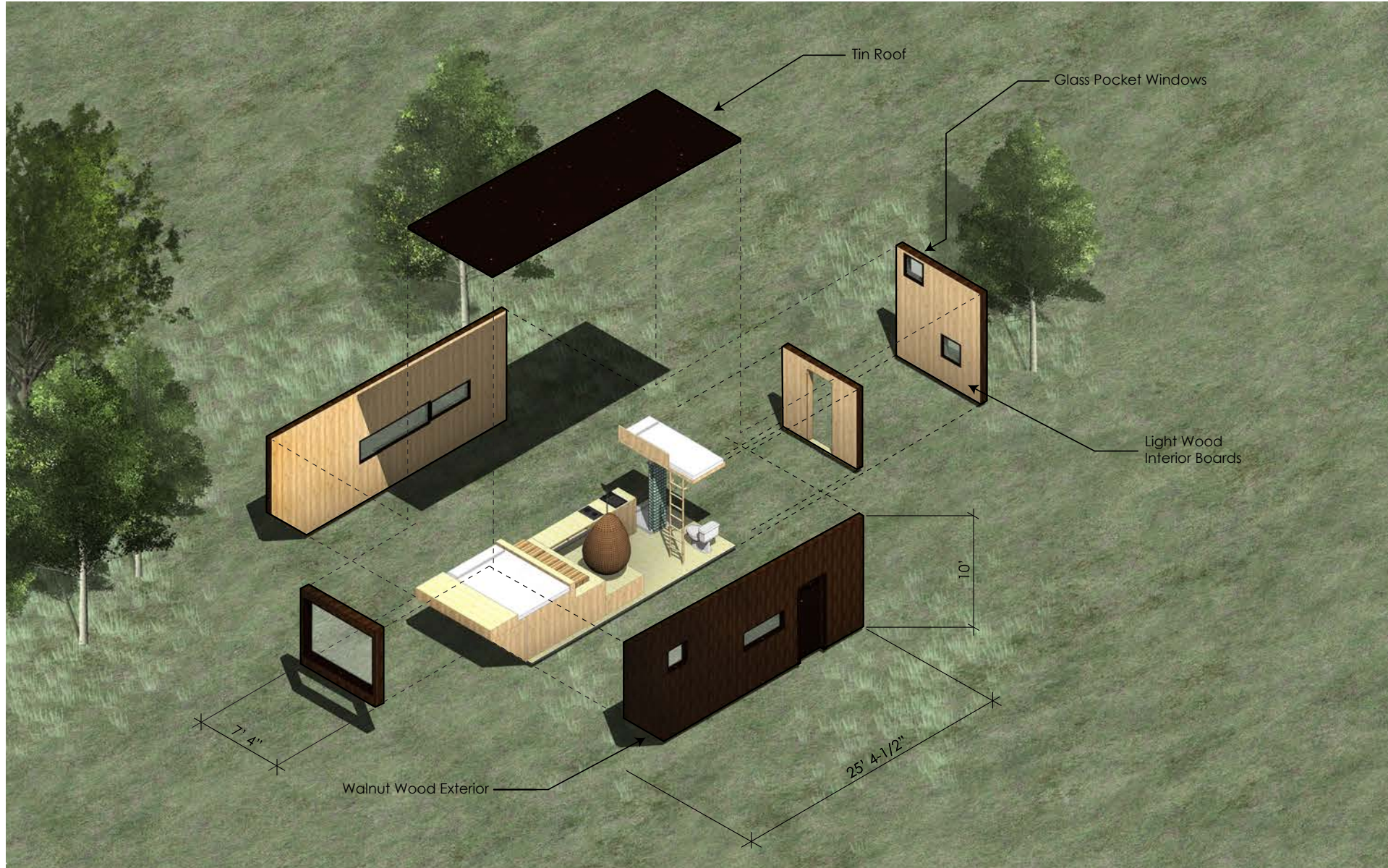




## VIEWS

## FLOOR PLAN - MAIN LEVEL + ELEVATIONS



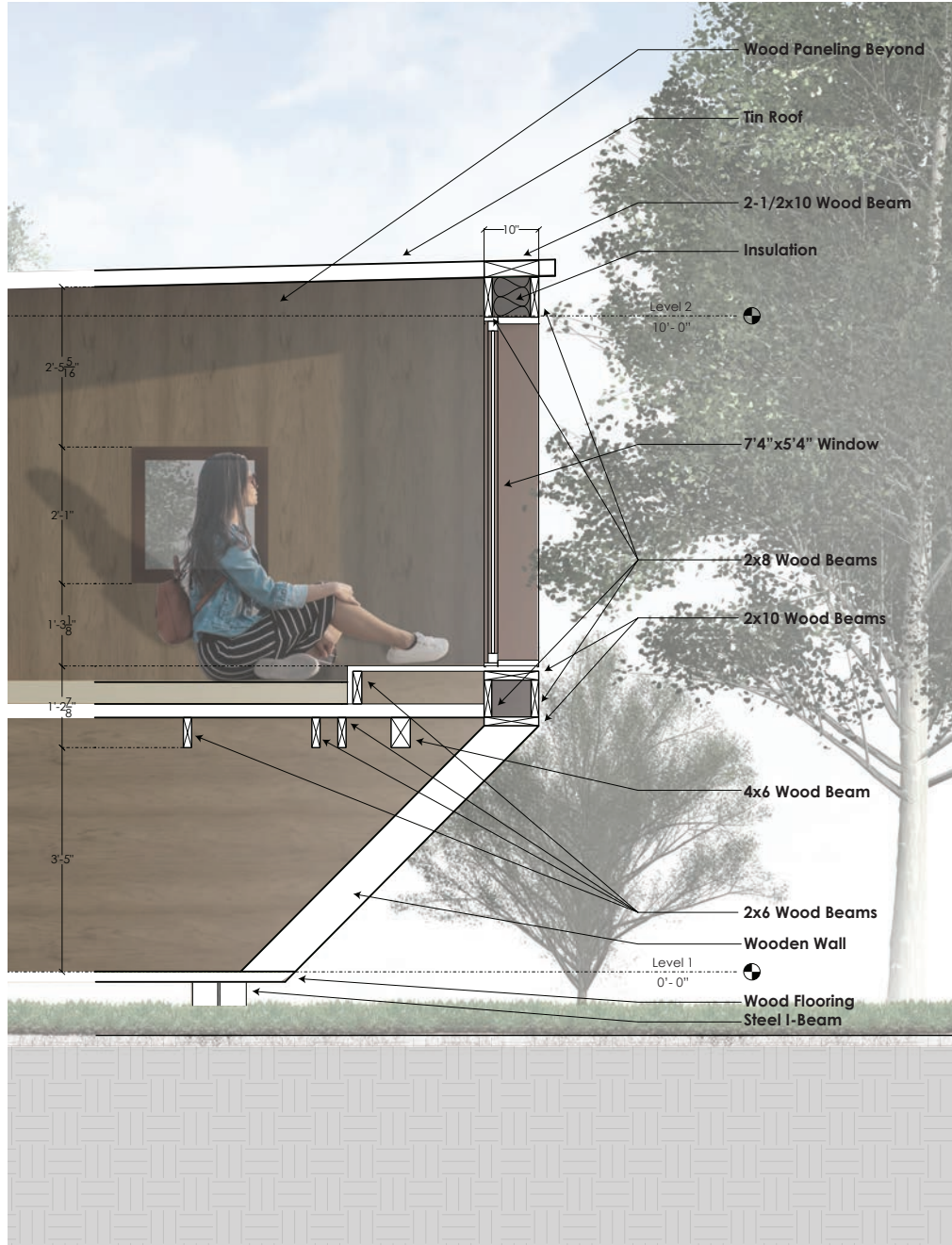


In Decom II, we became proficient at Revit, along with furthering our rendering skills.  
Case Study: [Getaway Cabin No. 3](#) Design By: [Wyatt Komarin](#), [Addison Godine](#), [Rachel Moranis](#)

ARCH 2242

DECOM II - FALL 2019





WALL SECTION DETAIL

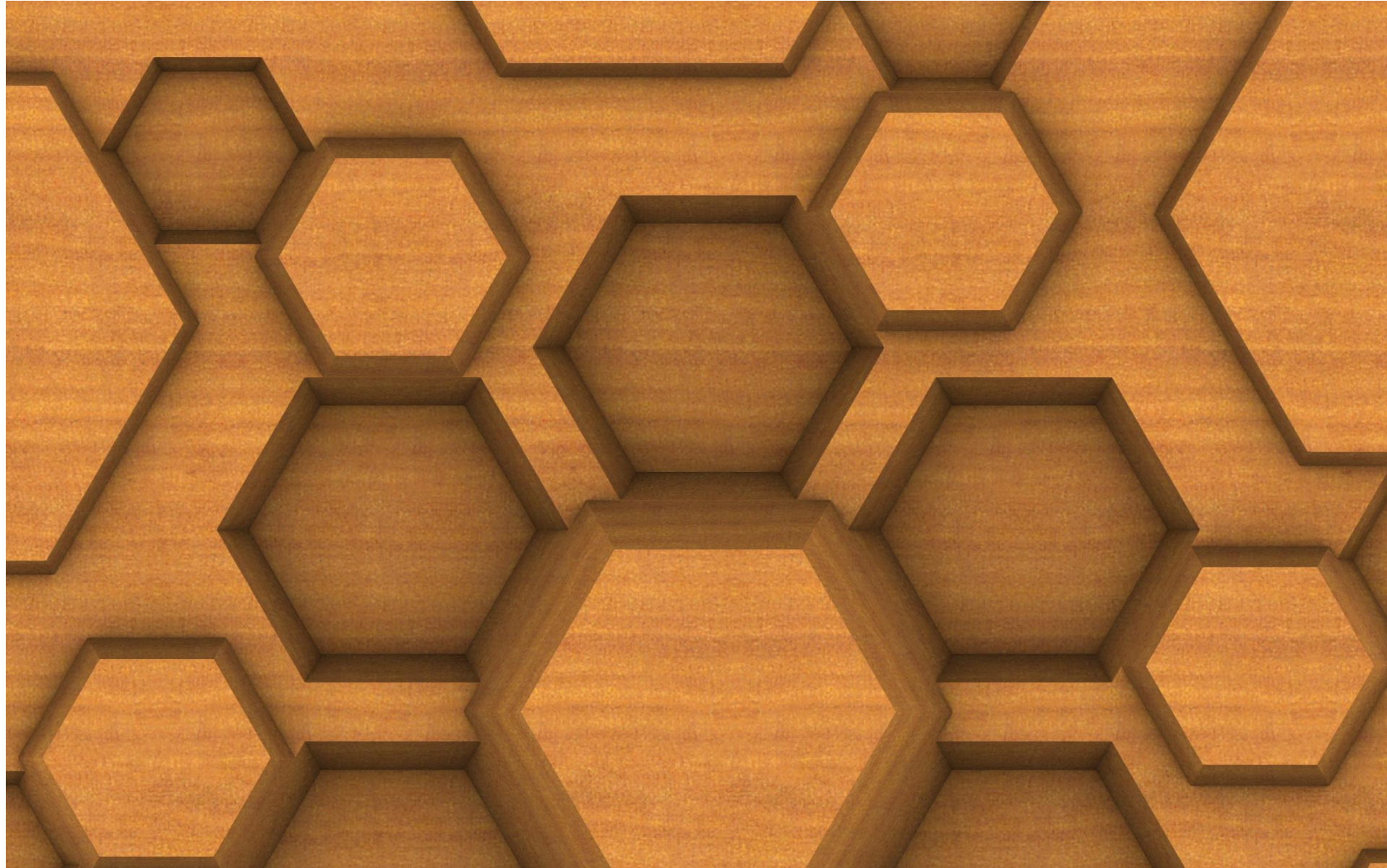


ORTHOGRAPHIC SET



PERSPECTIVE RENDER





Etech I was our first experience with material properties and environmental systems. We learned to use multiple methods to replicate the same tile.

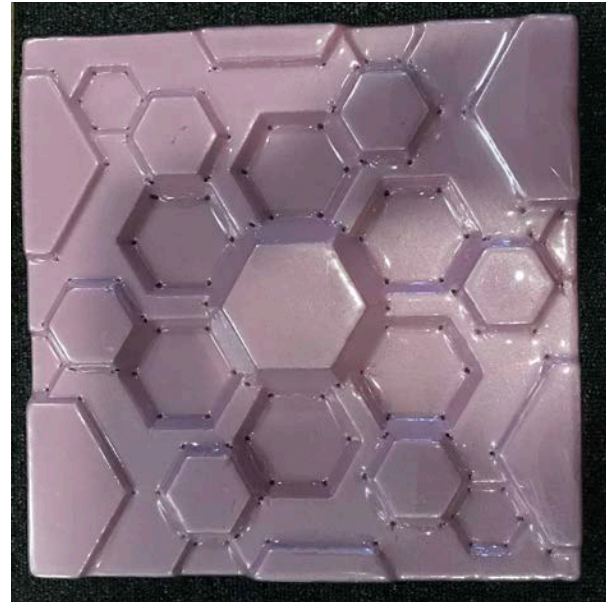
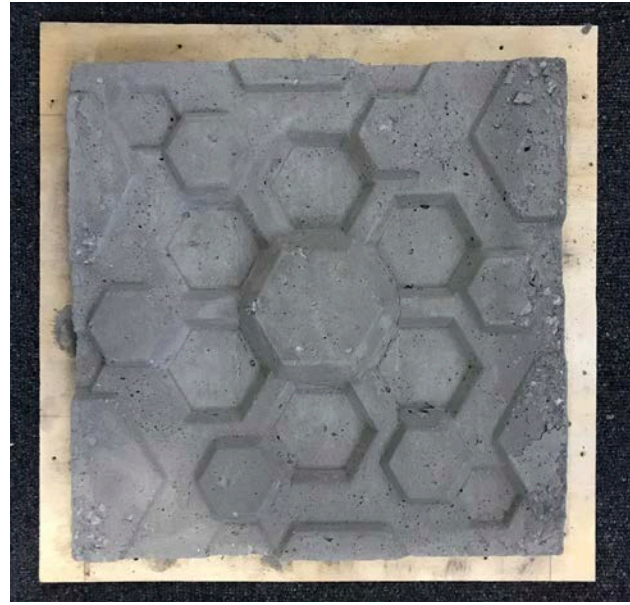
ARCH 2311

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ETECH I - FALL 2019

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Created with 3 other group members for Etech I

Combining our knowledge of Rhino gained from Decom with the idea of parametrics, we created a unique design, radiating like a snowflake.

We then reproduced it in many different materials, from wood to concrete to plastic.

## SNOWFLAKE | GROUP TILE PROJECT



### Creating the concrete tile:

1 - Lining up the 2x4s for the formwork



2 - Sanding down the wood



3 - The tile fits neatly



4 - Caulking added on the edges to seal off the formwork



5 - Mixing the concrete

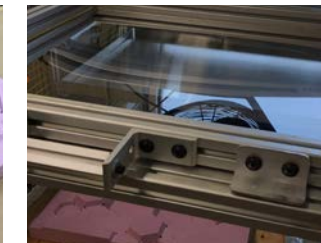


6 - Leaving it to harden

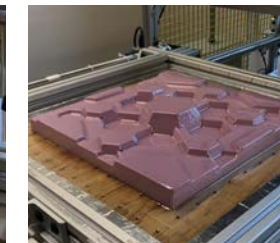


### Creating the plastic tile:

1 - Putting holes within the foam tile



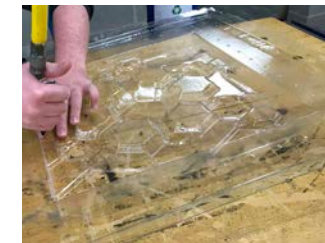
2 - Warming up the vacuum former



3 - The tile after forming



4 - Plastic molded onto the foam formwork



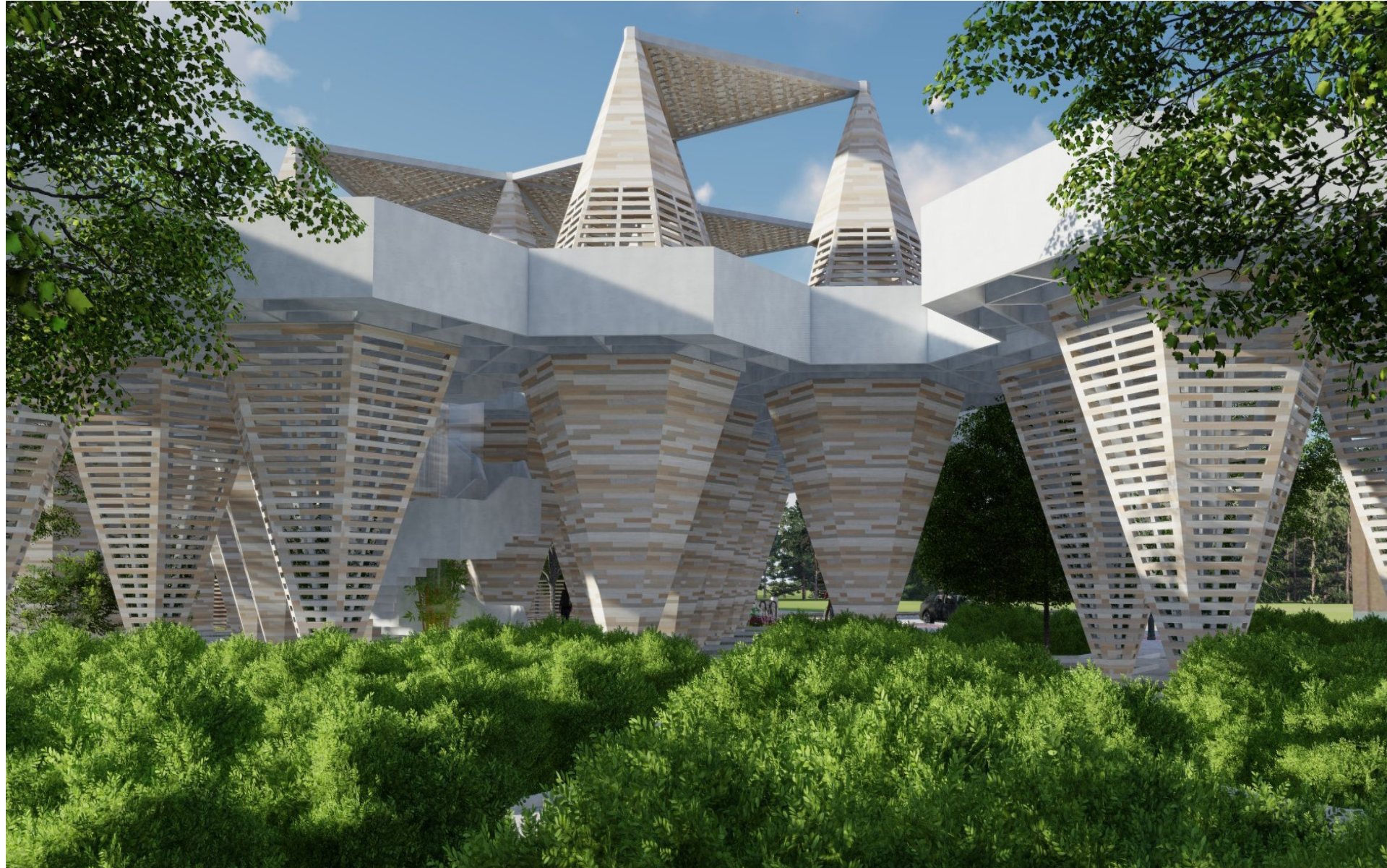
5 - Removing excess foam from grooves in the plastic



6 - Excess edge removed to make the final plastic tile

## PROCESS





In Studio 4, we furthered what we gathered in Studio 3, while working with site conditions. We also learned to assess building context and the surrounding environment.

ARCH 2004

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STUDIO 4 - SPRING 2020

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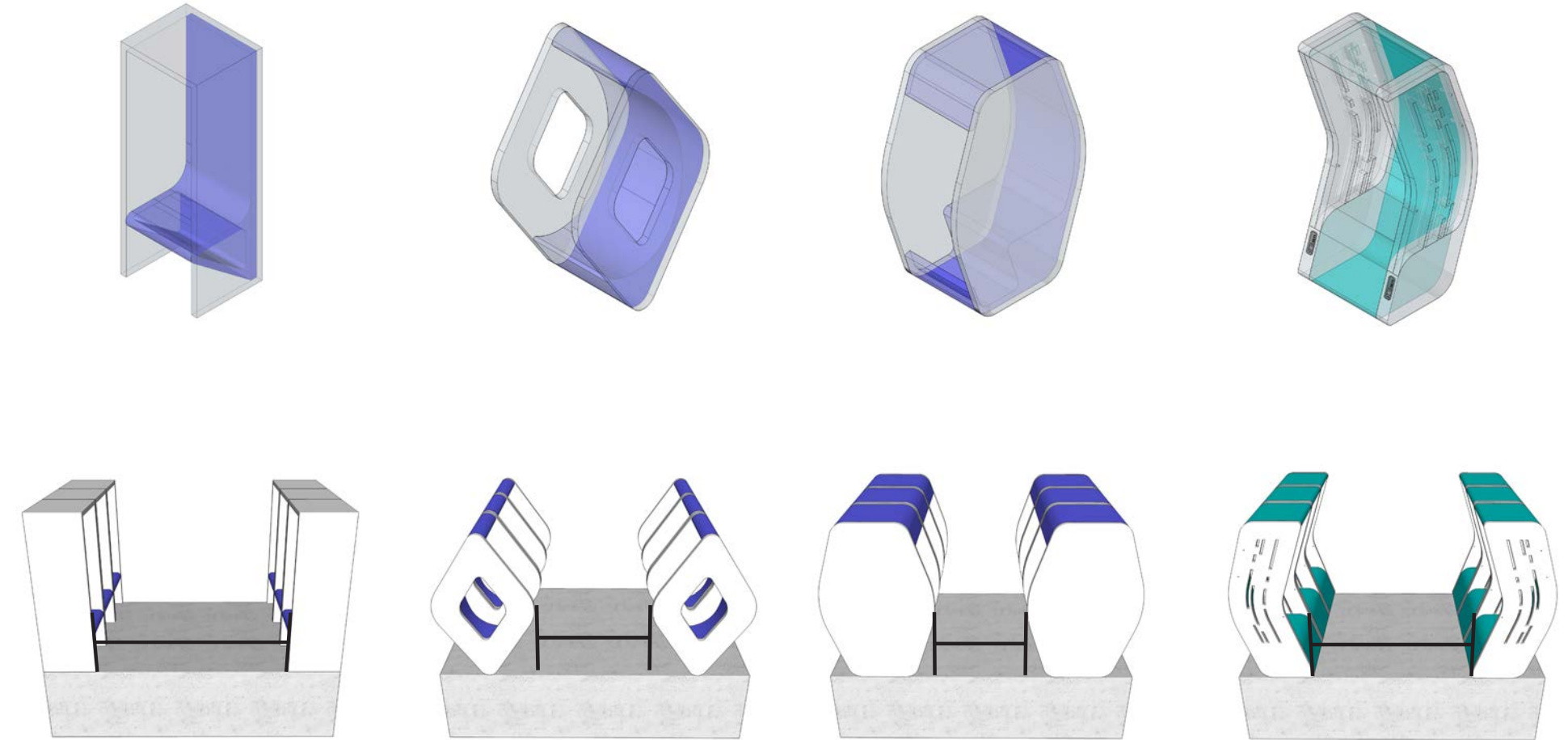




More than simply a bus shelter specific to 2520 Windy Hill Road, Modular Movement is a system.

Repetitive modules allow for individual space or group interaction. They can be arranged facing the street, or facing each other. This allows the most efficient use of space for every site. Modern conveniences along with luxurious seating make this a desirable place to relax, not just a place to wait for the bus. It is efficient and can be easily spread out across Atlanta.

## MODULAR MOVEMENT | BUS STOP FOR MARTA



### Simple Box

- Open Spacing
- Easily Assembled
- Uncomfortable vertical backrest
- Lack of overhang
- Less sun protection

### Rhombus

- Unique, Modular shape
- No protection from elements
- Takes up twice as much depth
- Won't stand up on its own

### Hexagonal

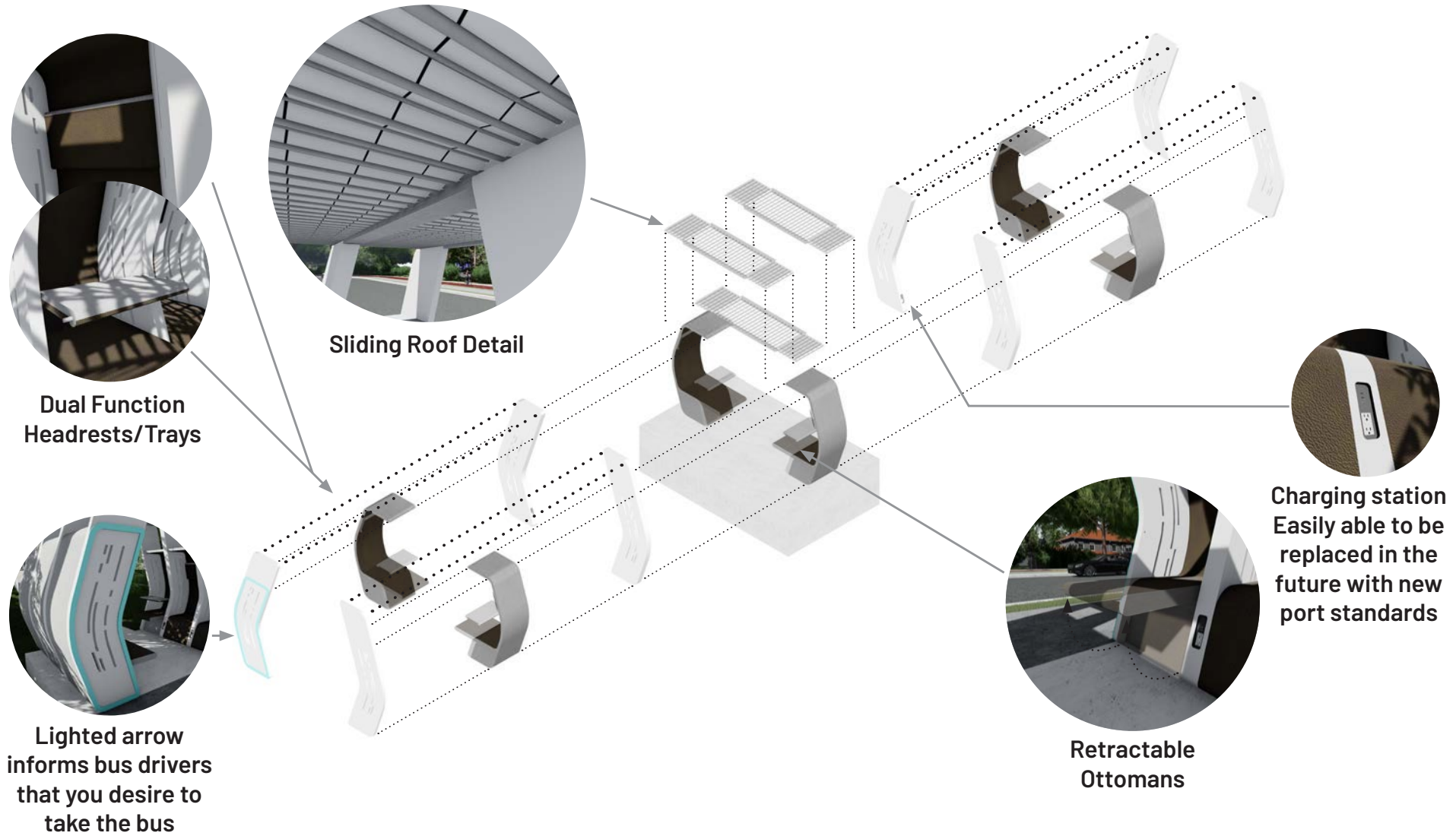
- Modular shape
- Protection from elements
- Immense personal space
- Takes up nearly three times as much depth

### Arrow Shape

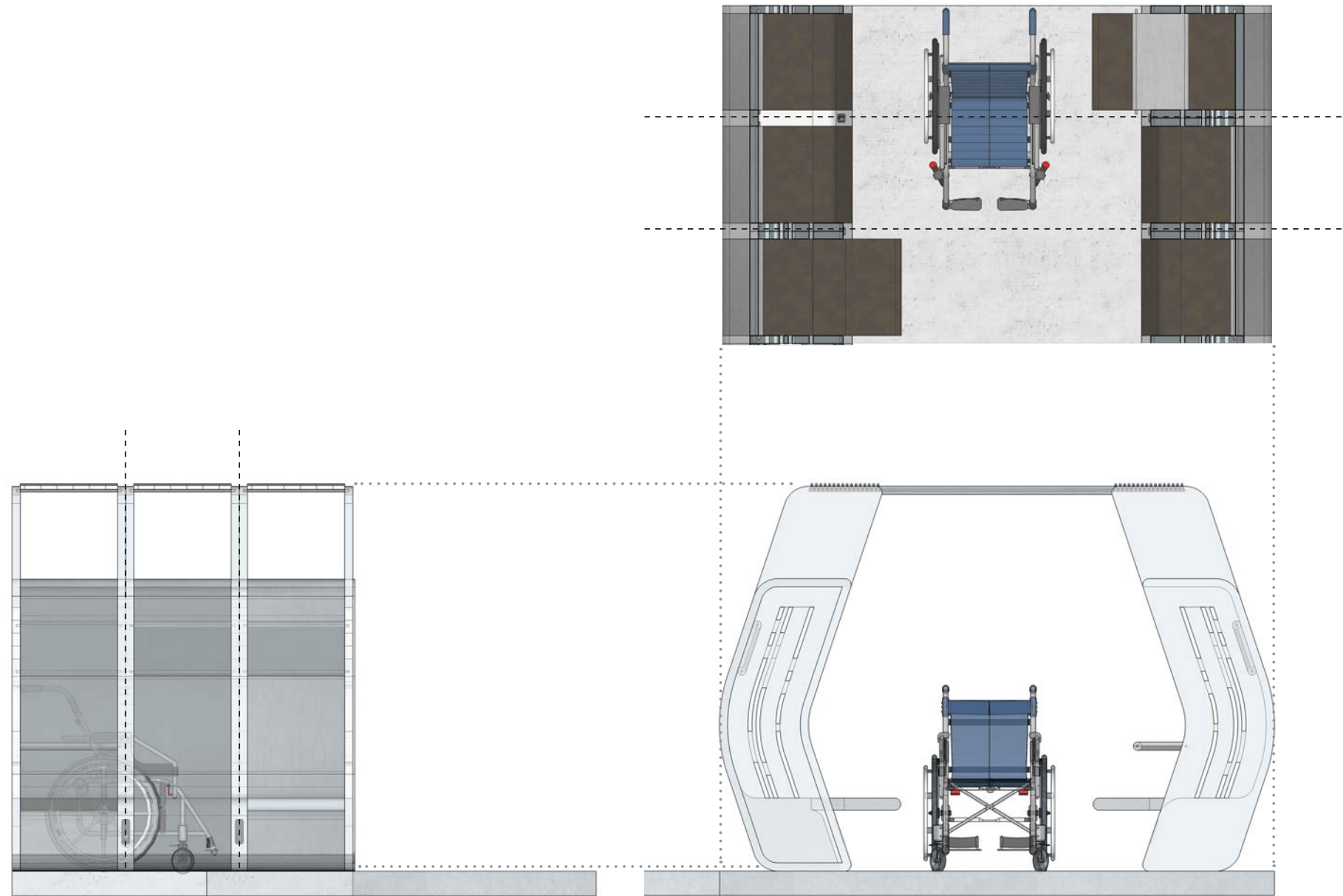
- Dynamic form conveys motion
- Protection from elements
- Personal space
- Shape provides natural overhang
- Space between modules

### WHY THE ARROW SHAPE?





SYSTEM



LAYOUT OF THE STOP



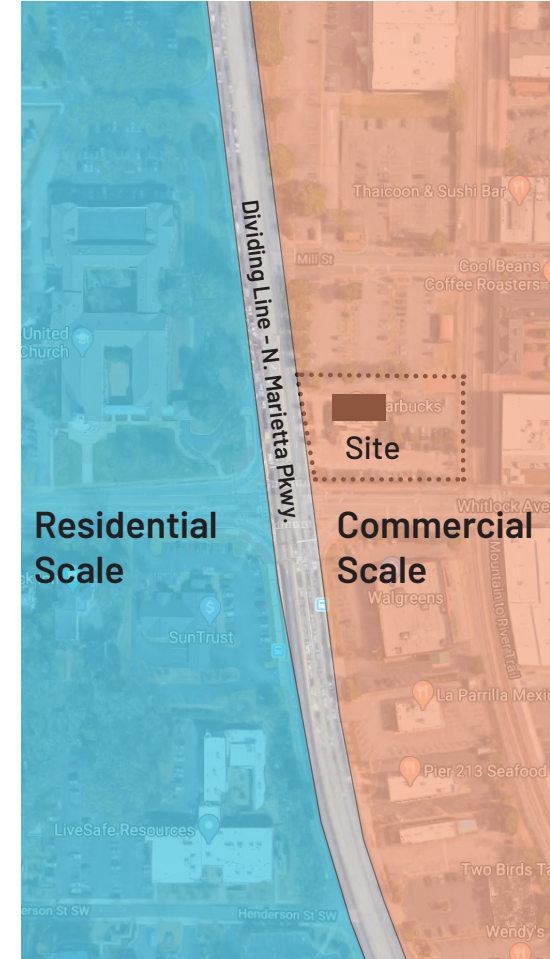


### A habitat for culinary education and a gift to the city

This is a common conundrum, you go out to a fine restaurant, enjoy an amazing meal, and then you keep coming back because you feel as though you could never cook the same.

This is the driving force behind Metamorphosis, it is a public space where chefs and patrons come together and break the notion that ordinary people can't make inspiring food.

## METAMORPHOSIS | RESTAURANT + PUBLIC CANOPY



2 Different Building Scales are Divided



Site Visibility

The purpose of Metamorphosis, and the reason it gets its name:

1. To provide a fluid transition from **residential** to **commercial** design scale

2. To create a rich **public space** on the ground level with unique phenomenological qualities

3. To be **multifaceted**:

By Night: A unique restaurant experience based on **learning**

By Day: An elevated **public gathering space**

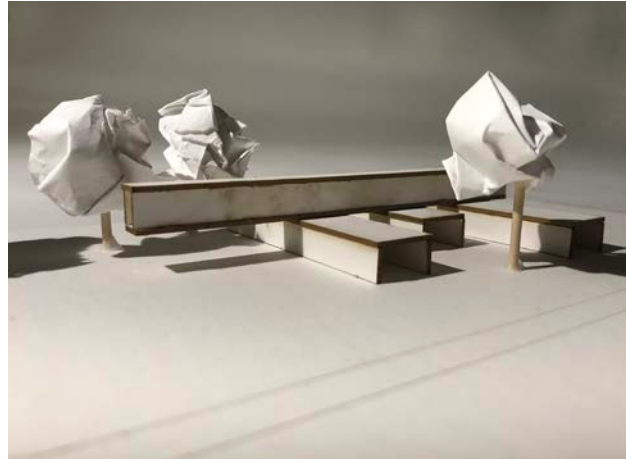
4. To be based on **pedestrian circulation**:

Few added vehicular parking spaces, more **biking/walking**

## KEY SITE ISSUES

## DESIGN CONCEPT





### I - Bisecting Pods

- Vehicles drive under the structure to access the public parking lot
- The rooftops act as viewing decks
- A thin, longitudinal space connects them



### II - Far out Views

- Points to three major viewpoints
  - Southeast to Downtown Atlanta
  - Southwest to the Intersection,
  - North to the mountains
- Elevated space cretes public area beneath



### III - Transitions

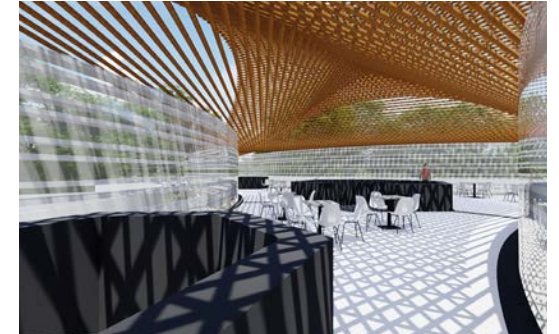
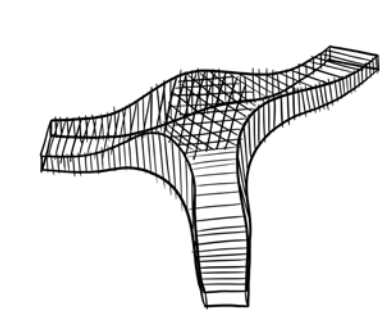
- Idea of breaking the divide from the residential and commercial areas of Marietta
- Vertical cores serve as structural elements and communal spaces
- Relationship between ground and lifted conditions



**Modular teepees create intimate spaces to go one-on-one with your chef and become a master of the culinary arts.**

- Modular, Replicable, Easy to set up
- Opportunity to create unique public space beneath
- Ability to act as a transition piece

### DESIGN CONCEPT I - MODULAR SYSTEM



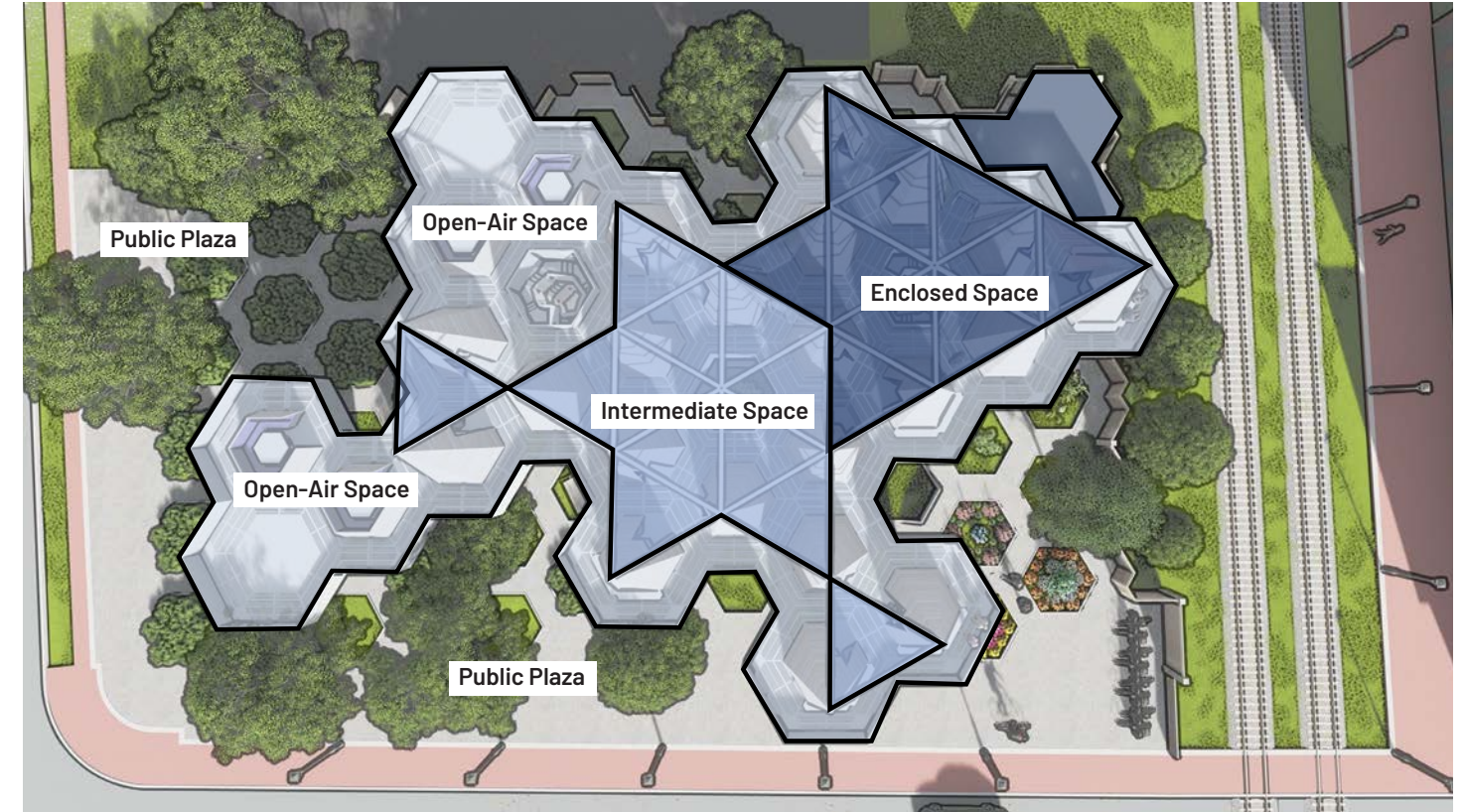
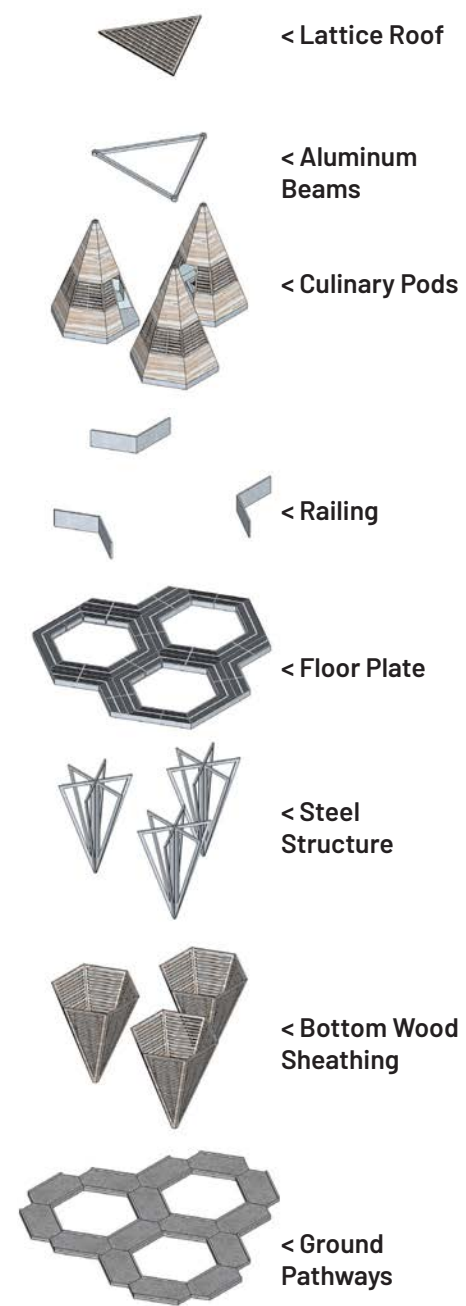
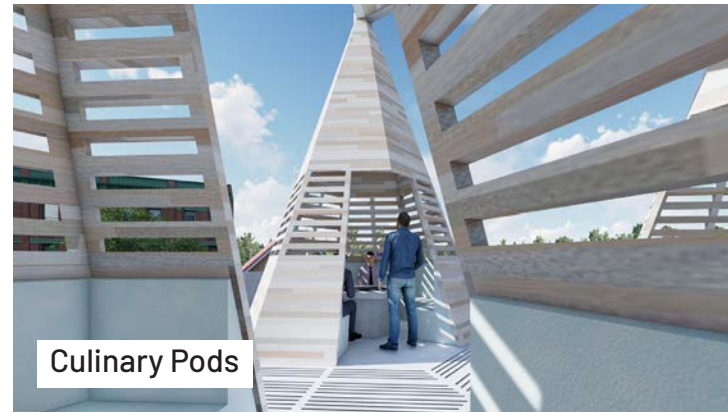
**This design prioritises open, airy space with its large, flowing windows and lattice roof providing light inside.**

- Open plan is reconfigurable: for different needs and events
- Intricate lattice roof creates unique lighting patterns inside
- Prioritizes views of surrounding landmarks and key site areas

### DESIGN CONCEPT II - OPEN PLAN

## CONCEPTUAL RESPONSES





FINAL VERSION

SYSTEM

RESIDENTIAL SCALE

>>>

COMMERCIAL SCALE





THANK YOU

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