Jingyi P. Zhu

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Table of Contents

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Visualization

3DS MAX
Unity
Photoshop
Illustrator
InDesign
AfterEffects
AutoCAD
Revit
MicroStation
Rhinoceros
Grasshopper

Computing

Python
C#

Fabrication

Laser Cutting
CNC Machining
3D Printing
Wood Working

Course work

Responsive Mobile Environments

Real Estate Design & Development

Themed Entertain-ment Design

Human Factors

Information Design

Generative Modeling

Paggy Zhu

Education

B.A. in Architecture, minor in Media Design, and Architectural Visualization

Spring 2019, Carnegie Mellon University

Experience

Architecture Intern, McKean Architecture

Summer 2017, New York City
Created design proposals, drafts, and graphic representation for city planning inspection, conducted on-site surveys and communication with contractors

Teaching Assistant, 62-225 Generative Modeling

Fall 2016, Carnegie Mellon University
Held weekly recitations and help sessions on programmatic thinking in 3D modeling and basic Python with rhinoscript library

Projects

Love's Labors Interactive Experience

Fall 2017, 12 weeks, Pittsburgh PA
Complementary interactive exhibition for a play focusing on WWI history, from conception to realization. Visual designer and structural consultant in an interdisciplinary team of 8.

Objects of Memory: Texture

Fall 2018, Pittsburgh
Speculative design that utilizes an Arduino Uno prototype in C to simulate tactile experience sharing.

AquaPavilion

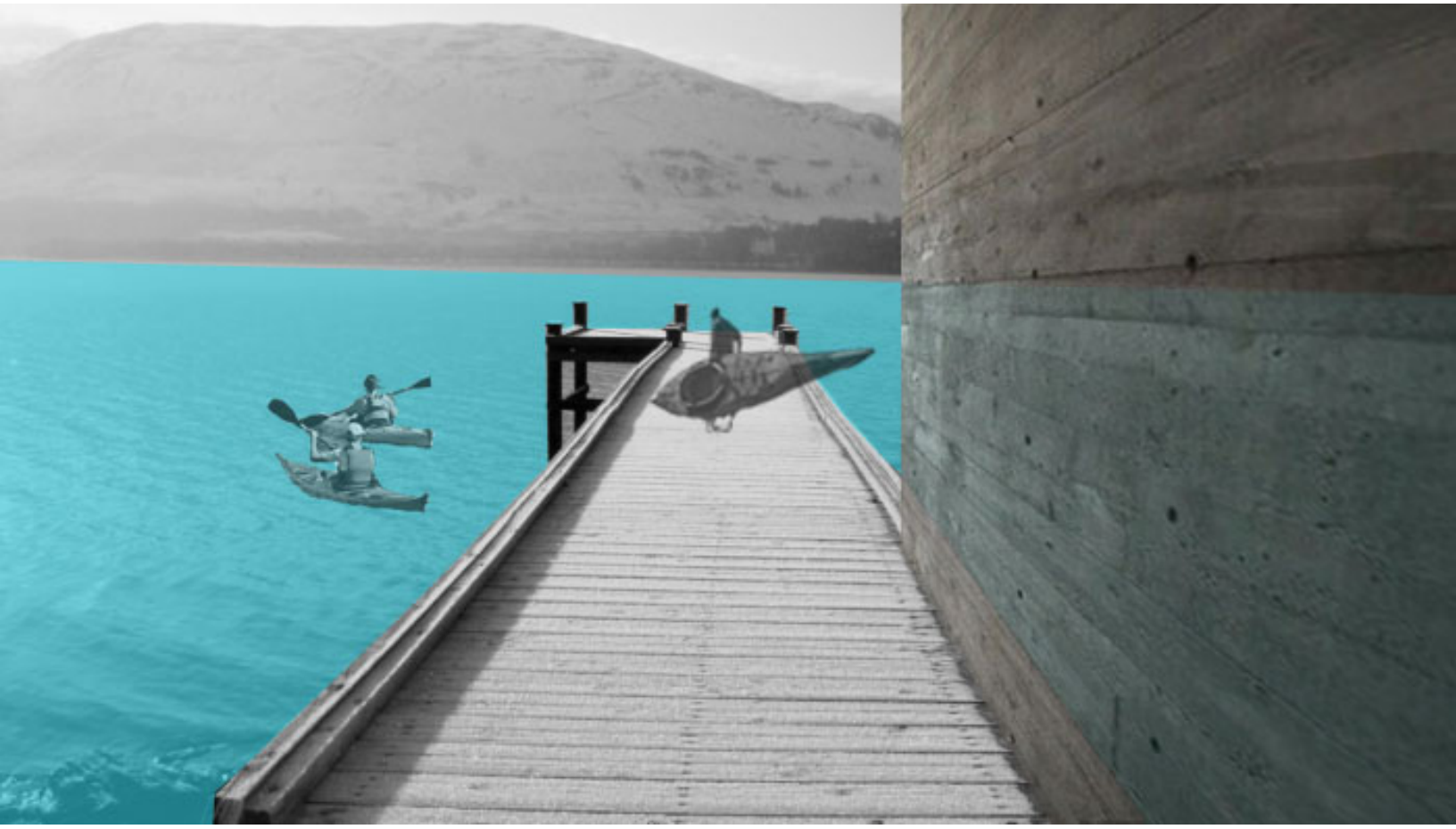
2016-2017, MLK Community Garden by Grow Pittsburgh, Pittsburgh PA
Schematic design, construction documents preparation and custom fabrication
In collaboration with a team of twelve students and one professor

Extracurriculars

Member, AIAS, 2014-2017

Media Manager, CMU Ballroom Dance Club, 2015-2017

Carnegie Mellon University
Design and manage club website, digital media curation and archive, videographer andphotographer



Saco Lake Wellness Center

[Jan - Feb 2016] 2 months, proposal

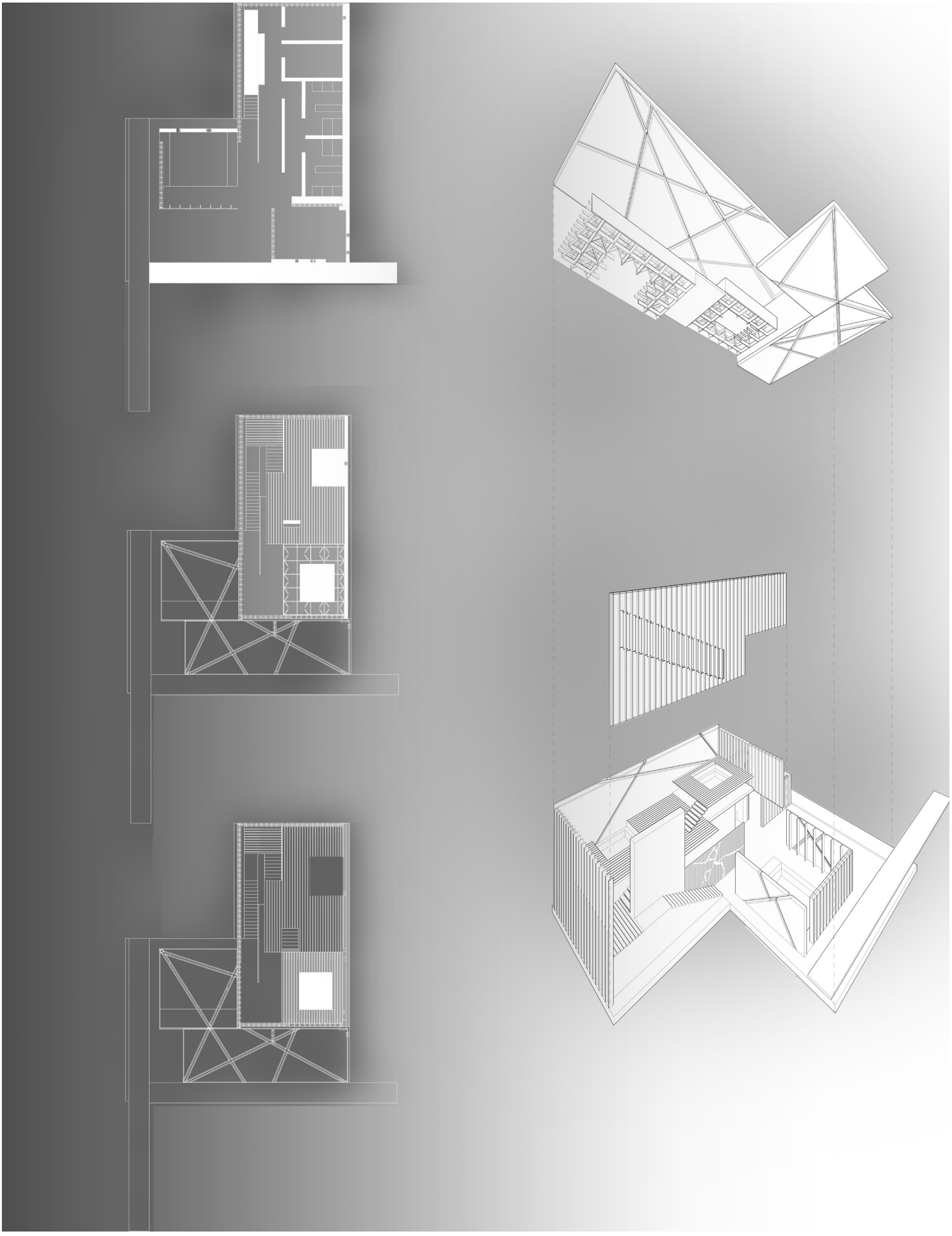
The wellness center is to be located adjacent to Saco Lake and compliment the existing, four-season, Appalachian Mountain Club Highland Center Lodge on route 302 in Crawford Notch New Hampshire. The center will serve as a year round destination and will supplement the various activities found throughout the region. The primary materials associated with the project are predefined and limited to wood and site cast concrete.

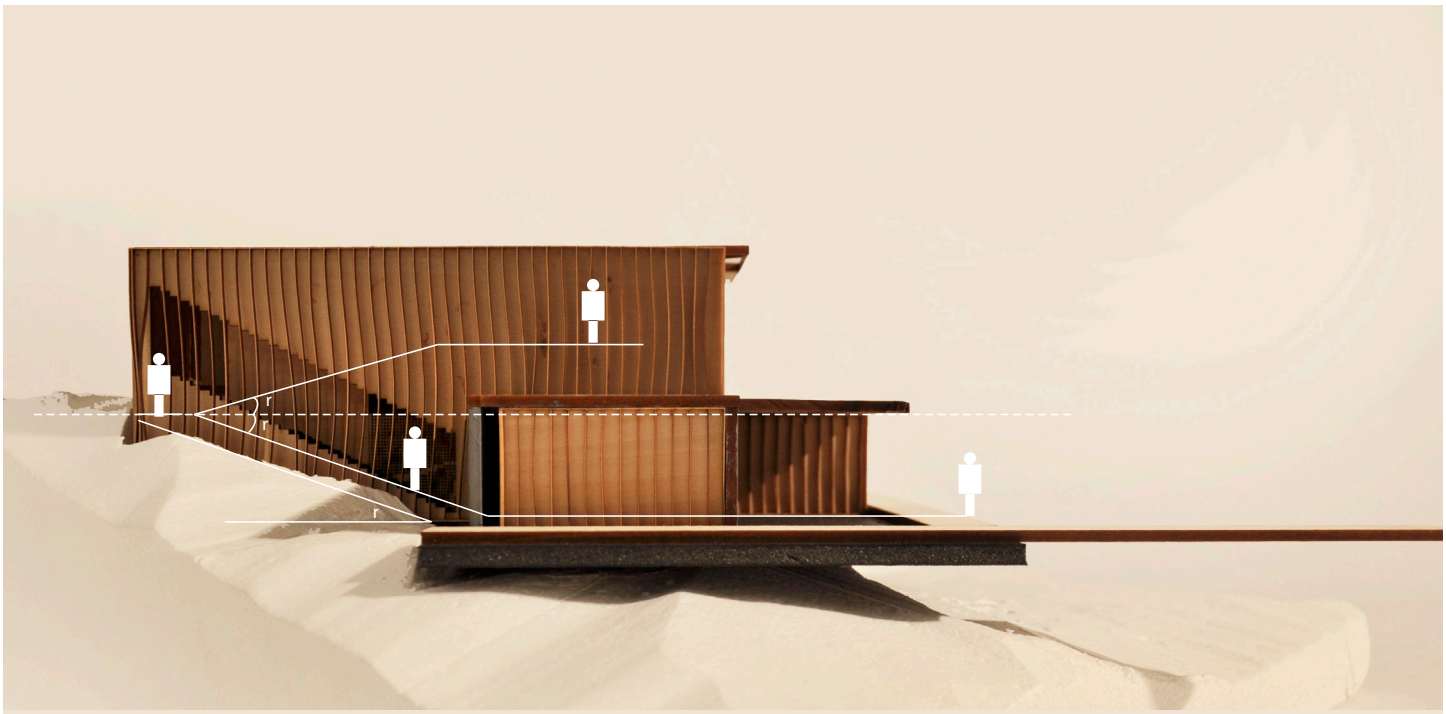
In the design solution, concrete was used to represent solid, relatively cold spaces, whereas wood was used to represent porous, warm and generally more welcoming and open spaces. In developing the gradient from dense bathing activity to scattered paths in nature, the spaces were also organized along an axis that represents the slope of the original site slope.

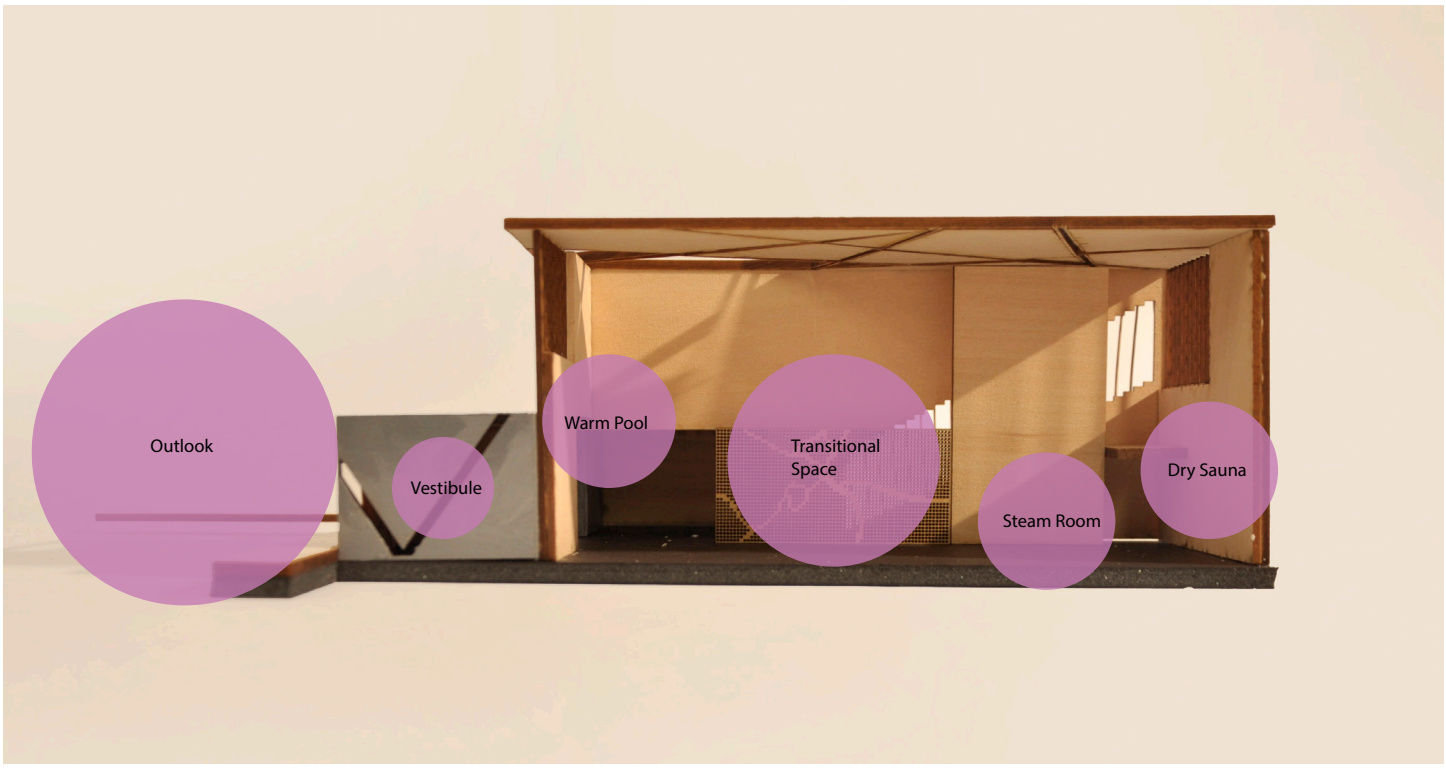
Human experience within the space was used to generate diagrams that aided the spatial organization. The spatial organization of the center focuses on the duration of each activity, contrast between zones and the human perspective from each zone.

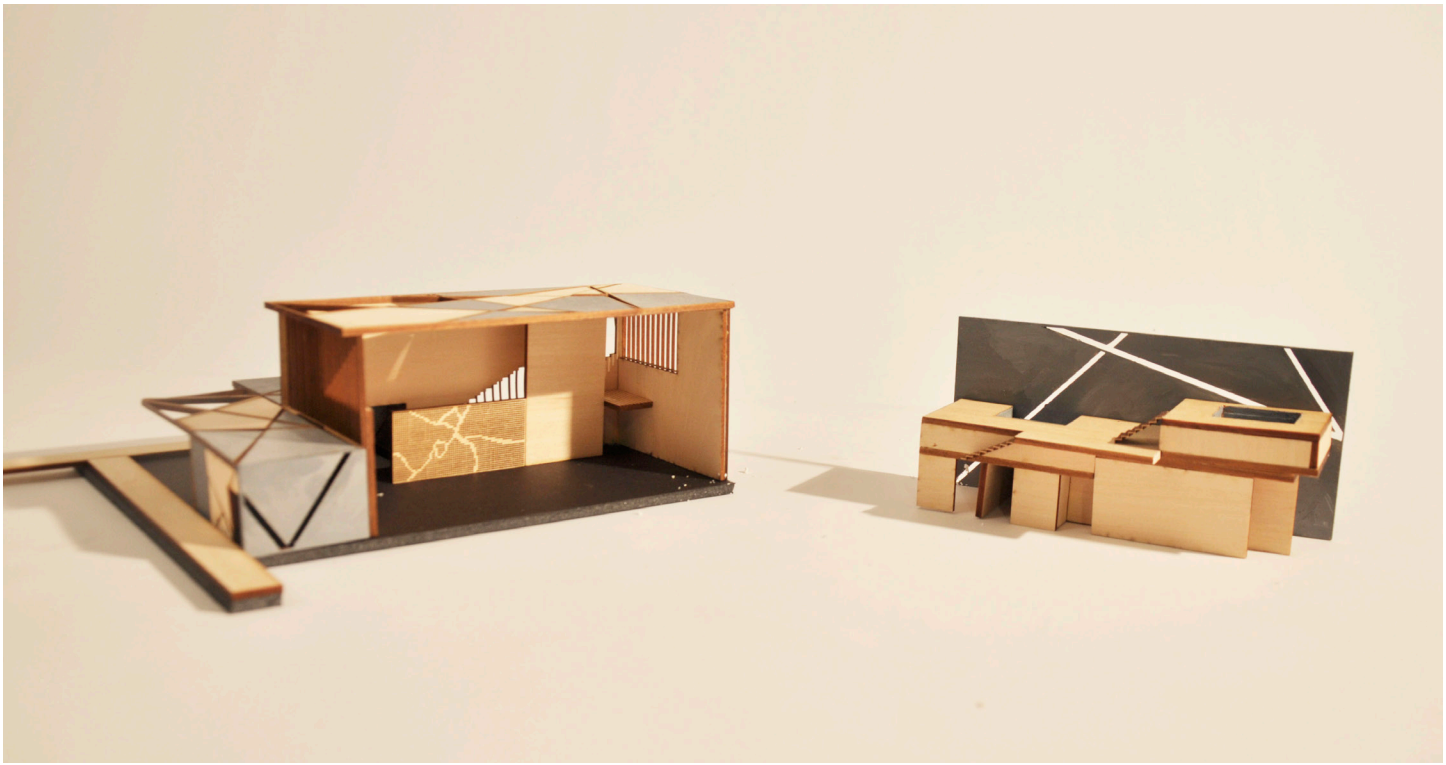
Relationship between concrete and wood was considered crucial to the expression of density. Using a pattern developed according to the program organization, the roof transitions from concrete panels to wood lanels and eventually to wooden lattices.

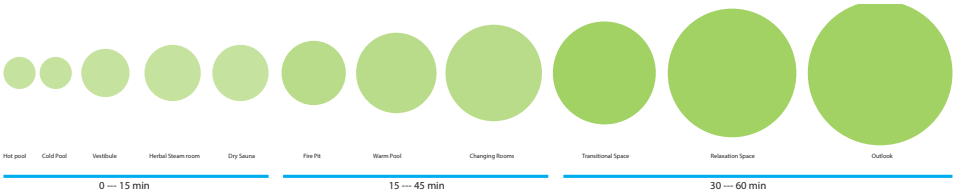
The northwest facade faces the main road and the lodging area; the dominance of wood speaks of warmth and openness. The southeast side faces woods, the lakeside, and provides entrance from the Saco Lake trail; the dominance of concrete provides not only retention of earth, but boundary of the wellness center and hints of spaces behind.

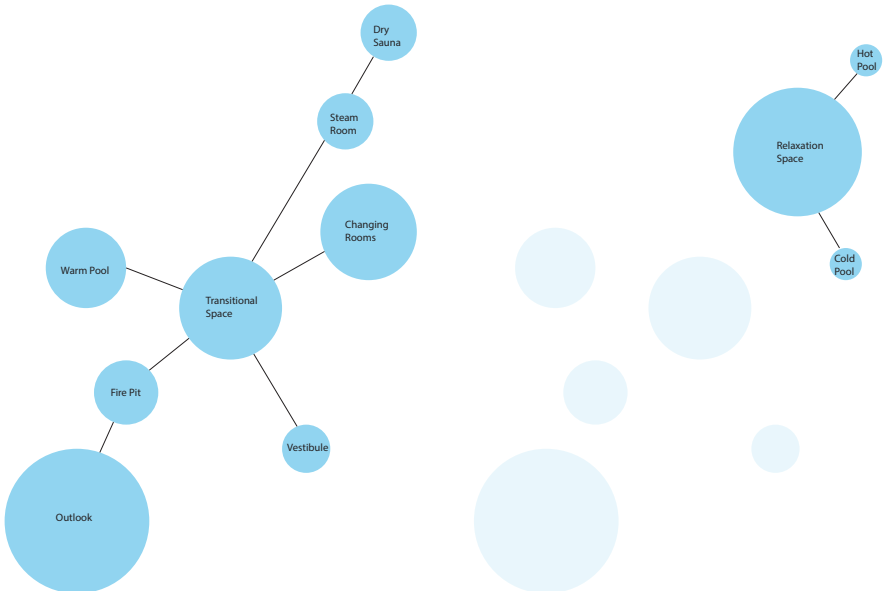


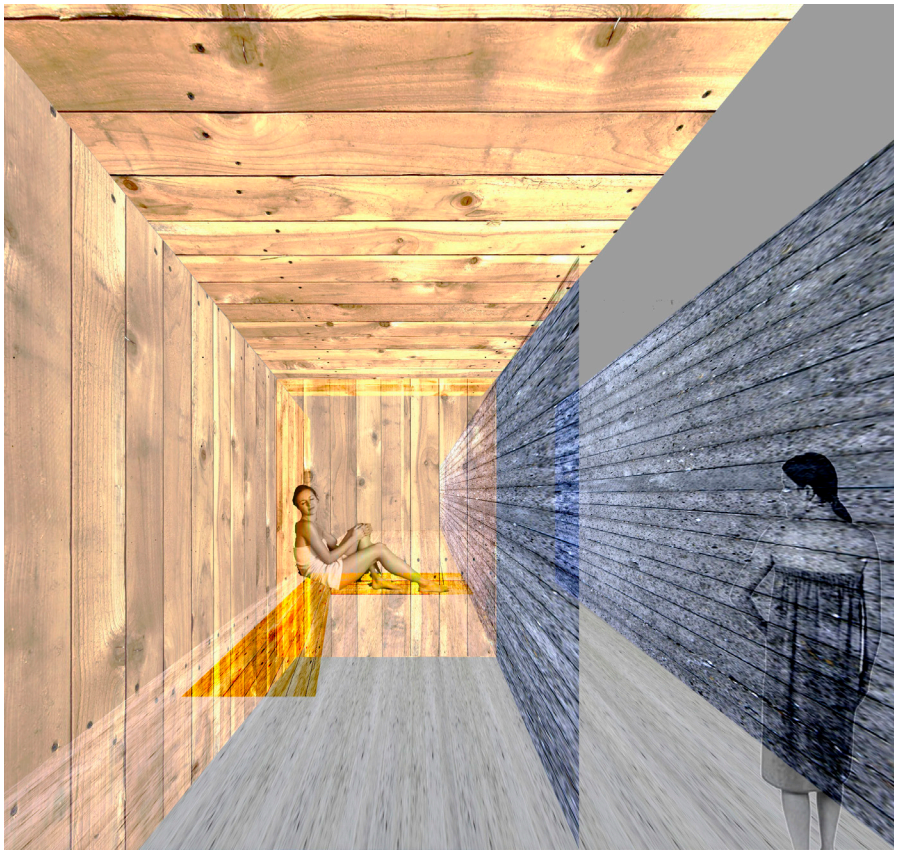



Outlook
Vestibule
Warm Pool
Transitional Space
Steam Room
Dry Sauna



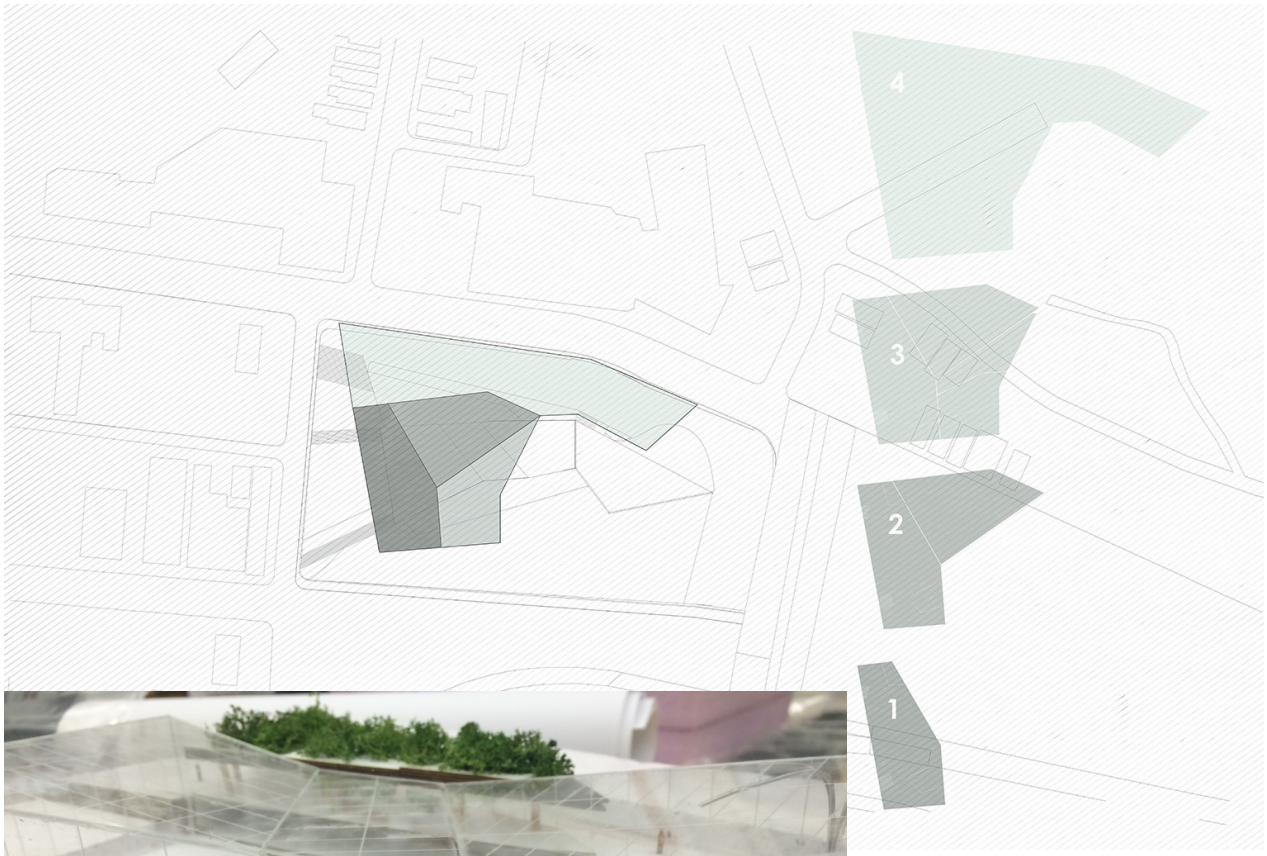

Hot pool
Cold Pool
Vestibule
Herbal Steam room
Dry Sauna
Fire Pit
Warm Pool
Changing Rooms
Transitional Space
Relaxation Space
Outlook
0 --- 15 min
15 --- 45 min
30 --- 60 min

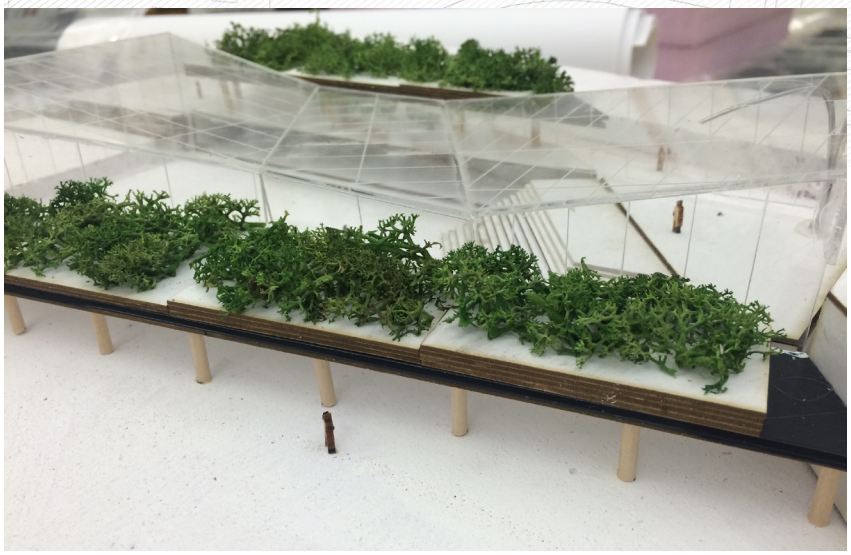

Dry Sauna
Steam Room
Changing Rooms
Warm Pool
Transitional Space
Fire Pit
Vestibule
Outlook
Hot Pool
Relaxation Space
Cold Pool



Urban Agriculture Center

[Nov - Dec 2015] 1 month, proposal
Client: Grow Pittsburgh

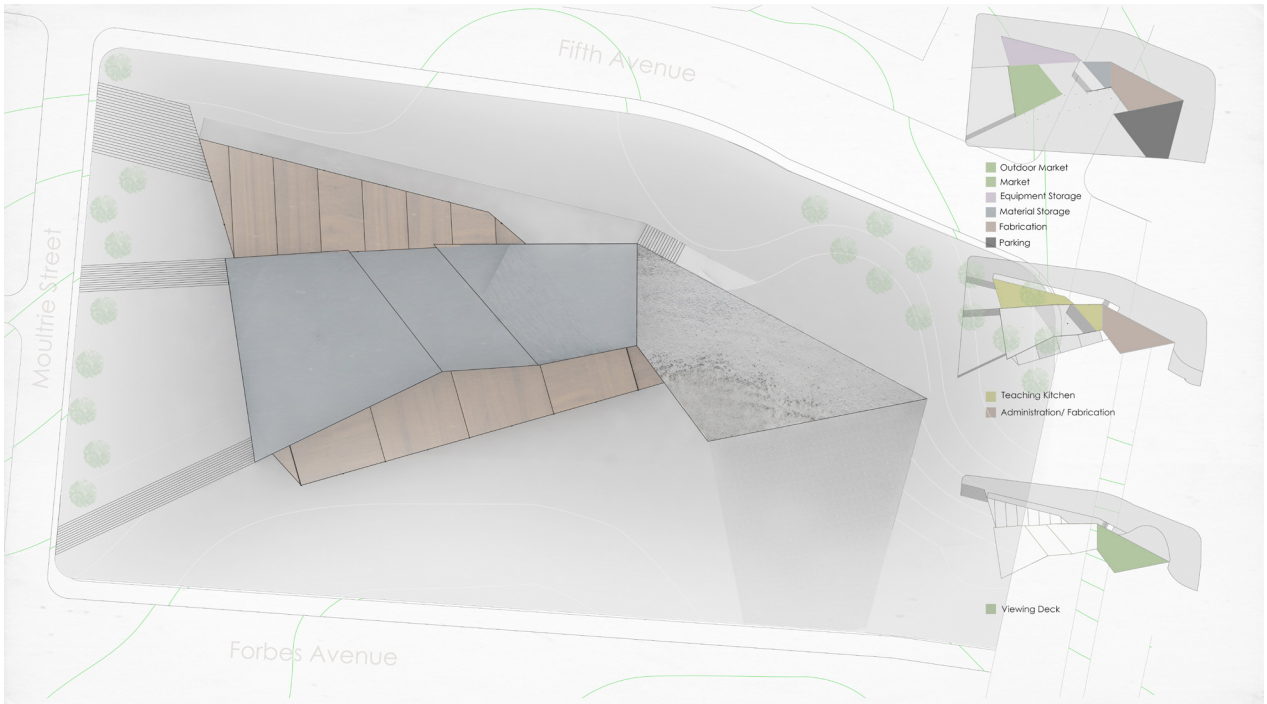


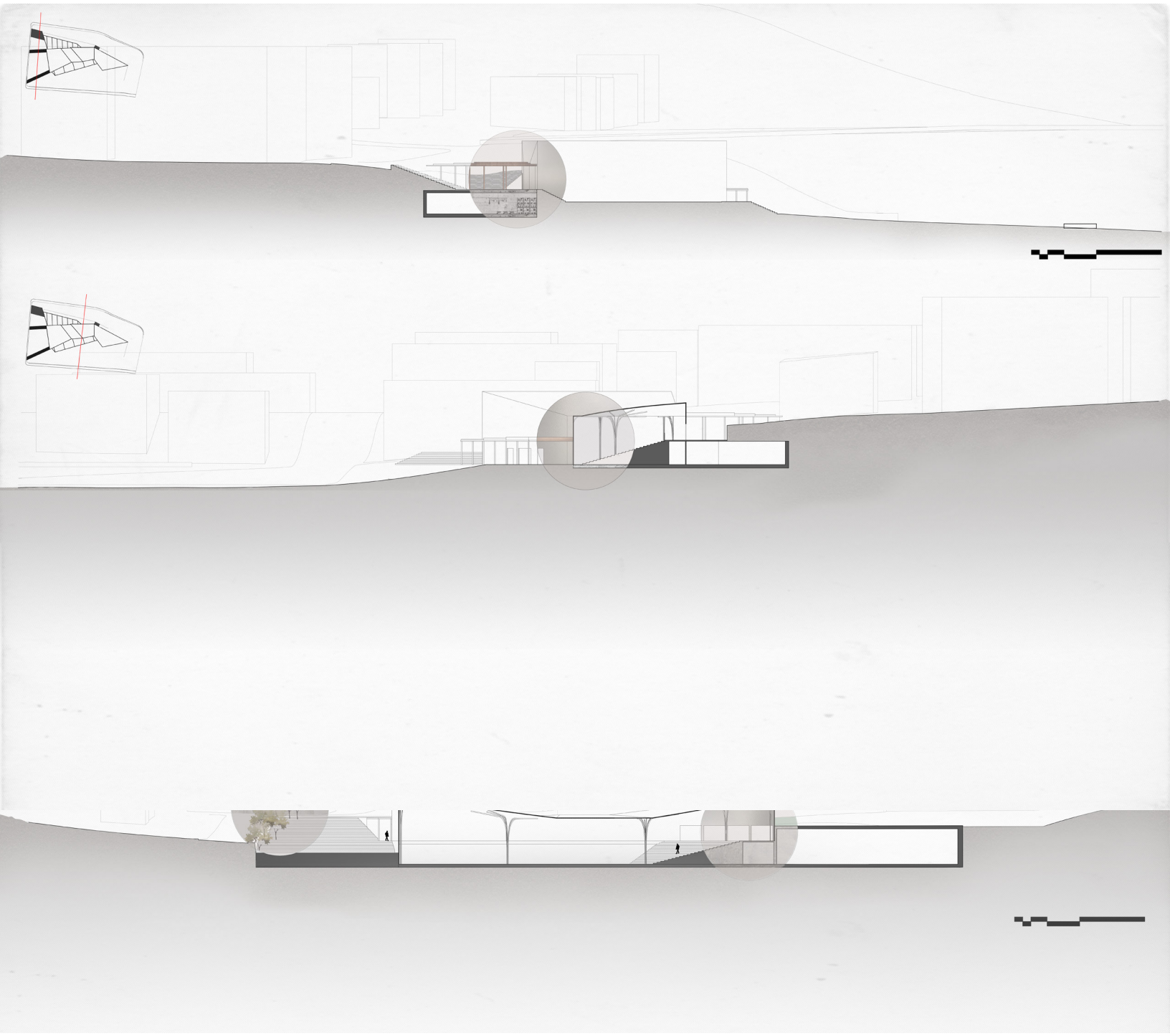


The center is to serve as a hub supporting urban gardening and farming activity in Pittsburgh. The project strives to be equal parts outreach center for education and community engagement; urban barn for supporting large scale, dispersed agricultural practices in the city; and urban agriculture factory for manufacturing modular gardening components to be deployed in gardens throughout the region.

The triangular form generated from connections between Grow Pittsburgh and West Pennsylvania Consevancy community gardens nearby, Pittsburgh greenspace development and current greenspace evokes a sense of expansion in multiple directions. In reflection of this language, the structural elements for the central glass house also imitates growing trees.

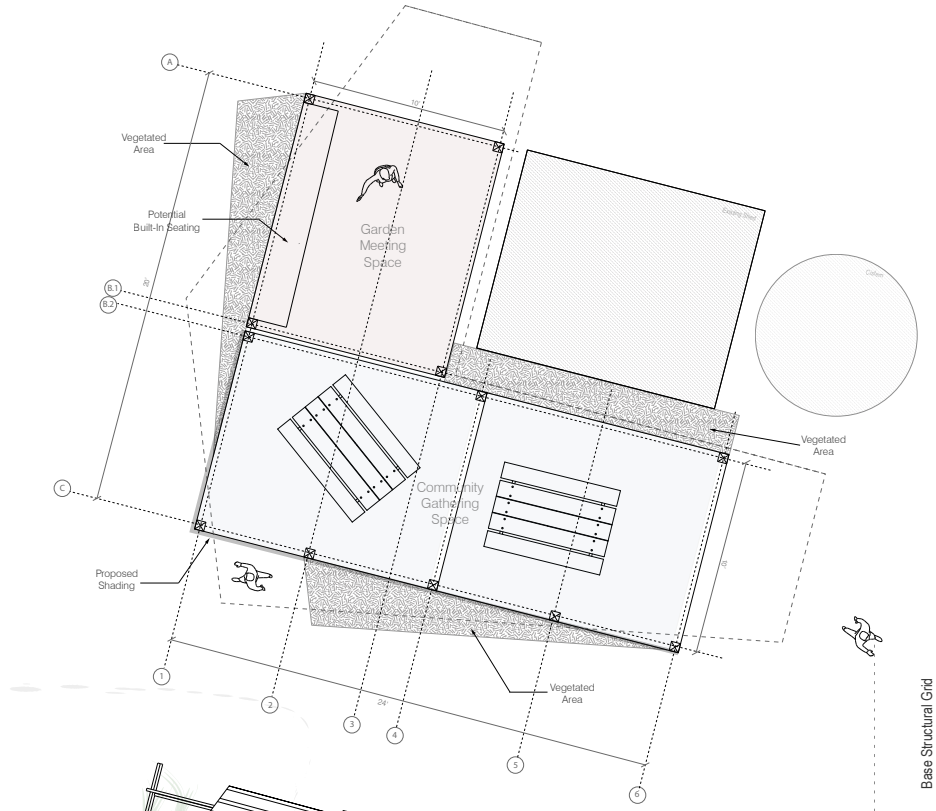
The proposal features different levels of maintenance and flexibility of program. In different seasons, based on growing activities and number of visitors, the structure can be open or closed partially, maintaining proper circulation. By allowing indoor green house growing and the outdoor market to flow inside,visitors are guided through programs without visual boundaries. Other growing areas include a raised bed garden behind the structure and two green roof flanking the central structure.

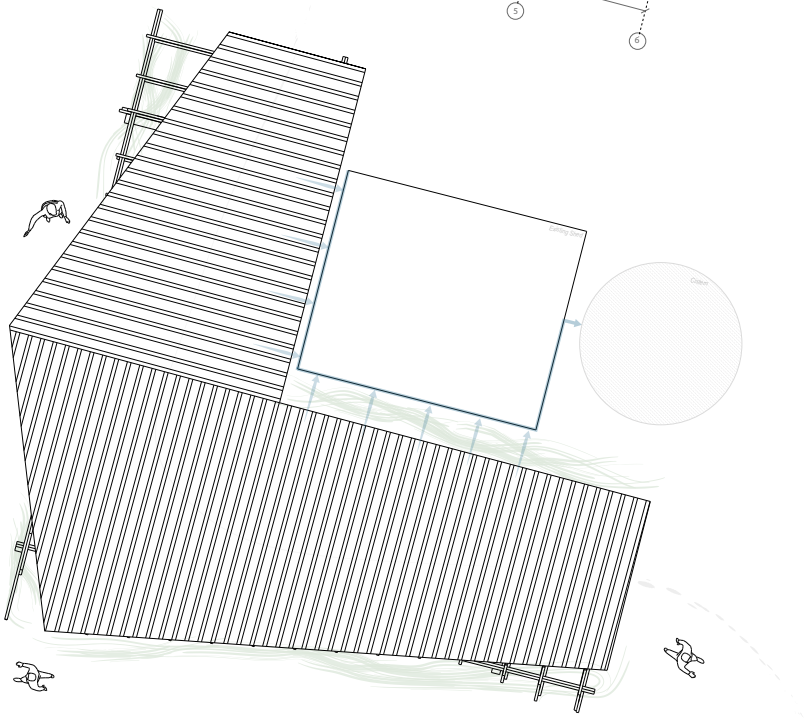




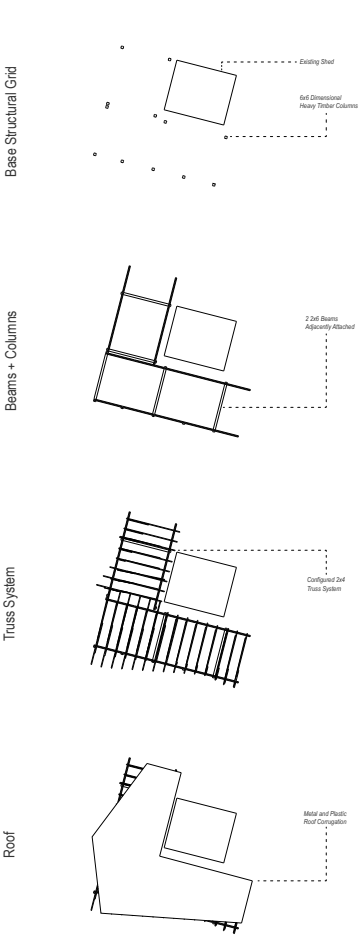
Aqua Pavilion: Watershed for a Community Garden

[Oct. 2016] 2.5 months (Construction in progress)
In collaboration with Brandon D., Zain I., Mounica G., Yang G., Lexi Y., Caitlin D., Jack F., Veronica W., Zane B., Anirudh A., Timothy K., Gargi L., Nitesh S., Gunn C., Matthew R.
Client: Grow Pittsburgh





Roof Plan

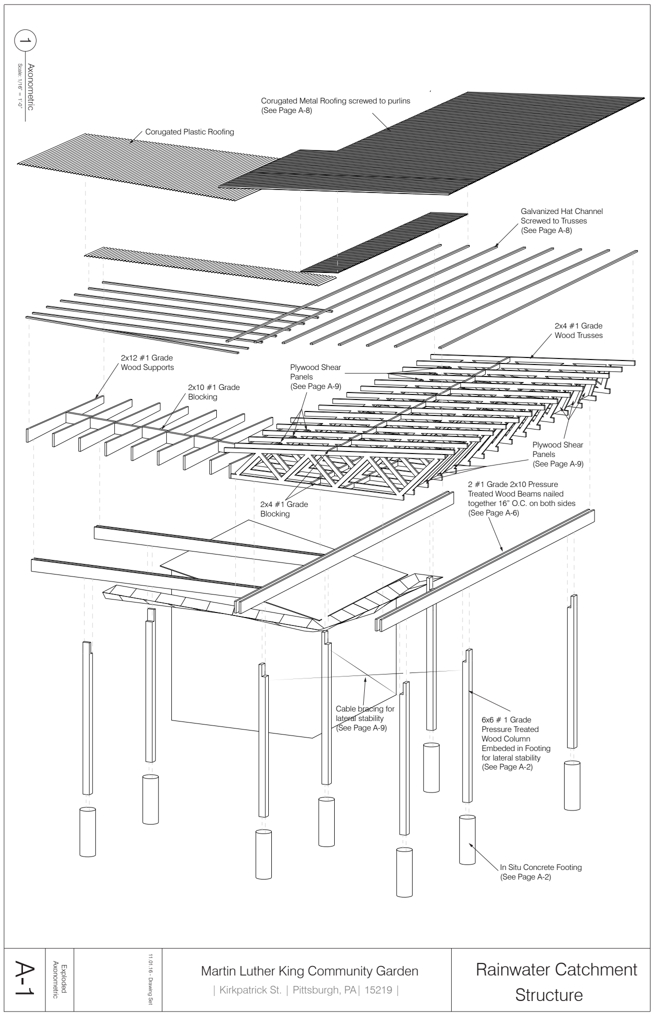


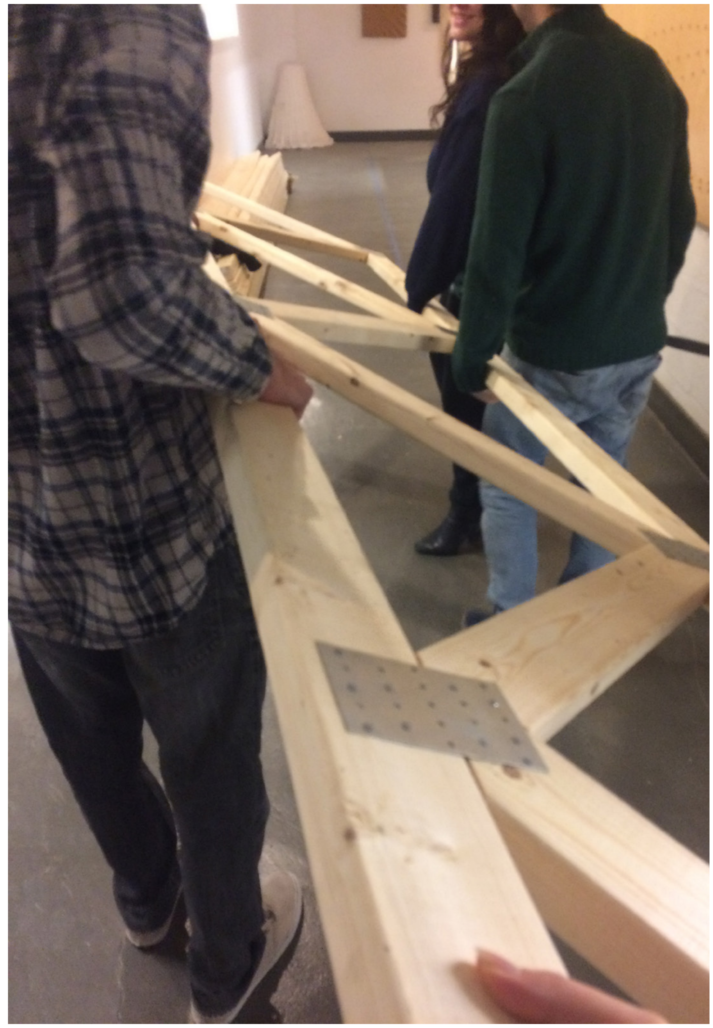
Layering Diagram

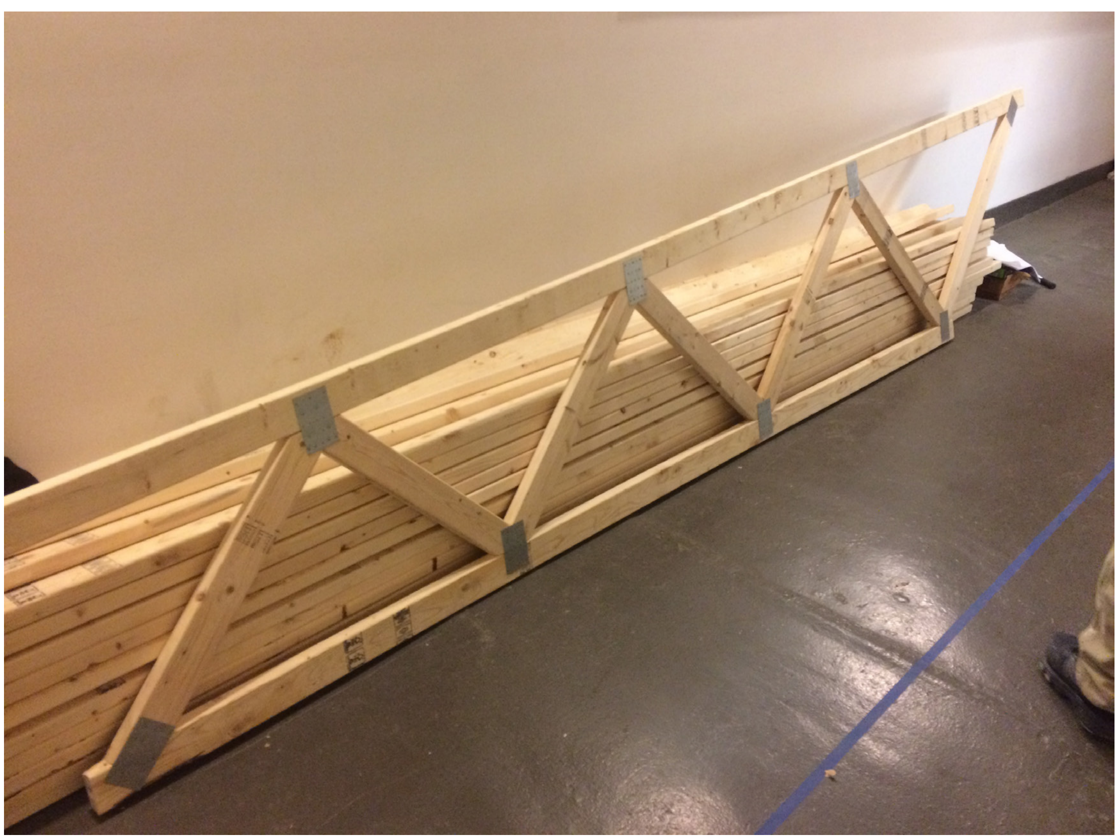
This is the final design from a competition for a water catchment pavilion in MLK Community Garden, Pittsburgh. The pavilion is required to provide shading and harvest / store rainwater for use in the garden. In addition to being a functional piece of infrastructure, the pavilion is to encourage play and learning.

The design balances the need for site specificity and extendability by employing modular structural bays. The design could be replicated in other ballpark gardens in the region with different orientation and/or length of truss system.

This project was presented to the City of Pittburgh Arts Commission Committee with construction drawings stamped by registered architect Jennifer Lucchino. The construction is done by Grow Pittsburgh contractors; student-fabricated truss pieces and the custom gutter is delivered to Grow Pittsburgh for installation.

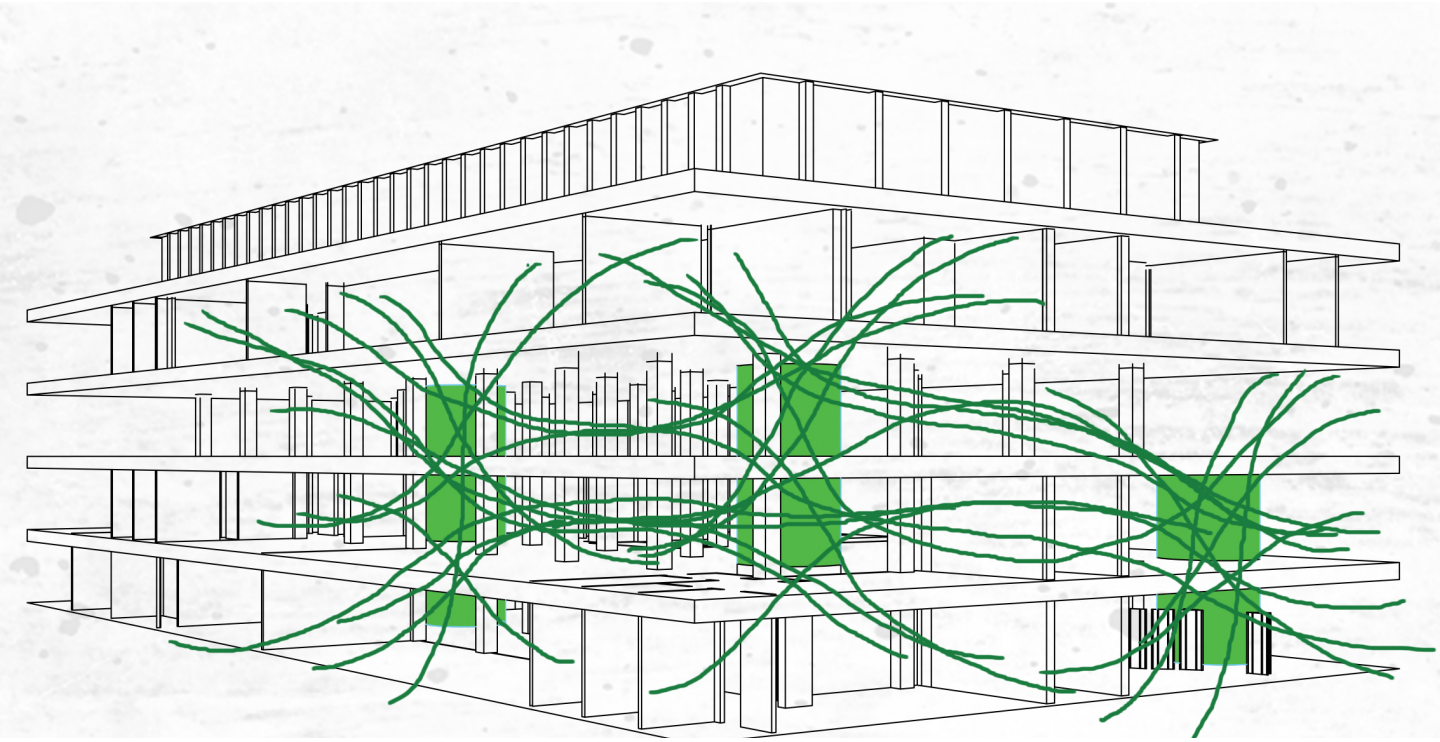

1
Axonometric
Corugated Metal Roofing screwed to purlins
(See Page A-8)
Corugated Plastic Roofing
Galvanized Hat Channel
Screwed to Trusses
(See Page A-8)
2x4 #1 Grade
Wood Trusses
2x12 #1 Grade
Wood Supports
2x10 #1 Grade
Blocking
Plywood Shear
Panels
(See Page A-9)
Plywood Shear
Panels
(See Page A-9)
2 #1 Grade 2x10 Pressure
Treated Wood Beams nailed
together 16" O.C. on both sides
(See Page A-6)
2x4 #1 Grade
Blocking
Cable bracing for
lateral stability
(See Page A-9)
6x6 # 1 Grade
Pressure Treated
Wood Column
Embeded in Footing
for lateral stability
(See Page A-2)
In Situ Concrete Footing
(See Page A-2)
A-1
Exploded
Axonometric
Martin Luther King Community Garden
| Kirkpatrick St. | Pittsburgh, PA| 15219 |
Rainwater Catchment
Structure

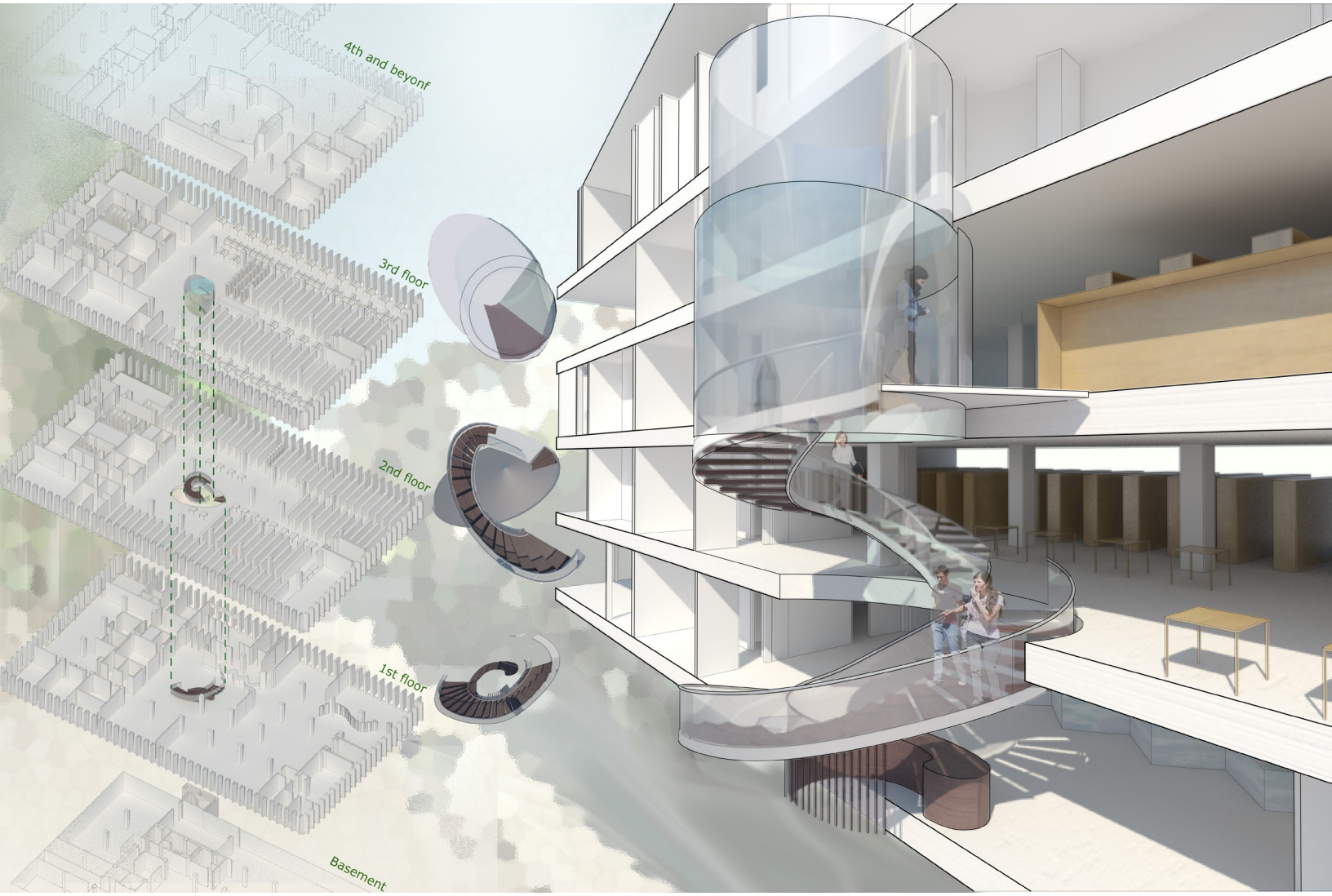




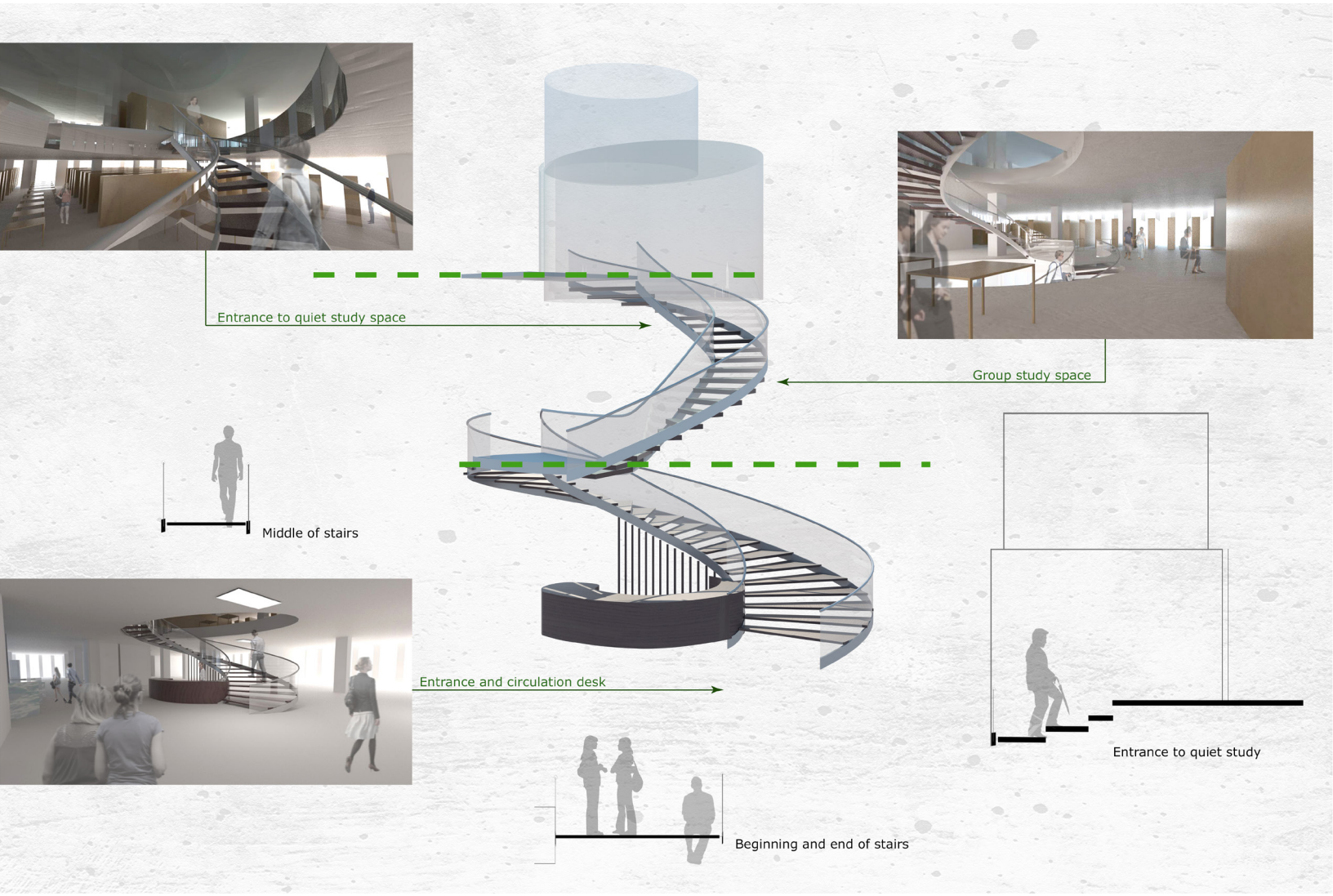
Building Addition:Hunt Library

[April - May 2015] 1 month, proposal





The project calls for a parasitic structure that addresses an existing problem of choice in Carnegie Mellon University's Hunt Library. The proposal generates multiple cores for the library, increasing the interactivity between the currently segregated floors and area of public gathering for a better circulation scheme.



The proposal features the first of several open communicating stairs that improves the interactivity between floors. The non-uniform shape of the stairs avoid the sense of rigidity and promotes flexibility. In conjunction with the two other proposed future location, the system of stairs create an urban promenade within the library by providing more than one choice of circulation.

Hoop House: Shelter for Planter Bed

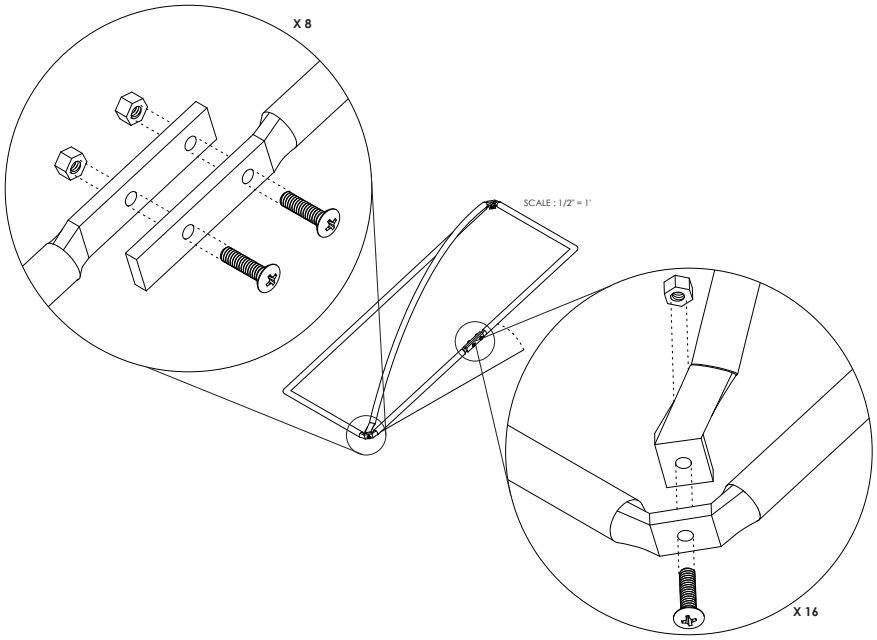
[Oct 2015] 1 month, built

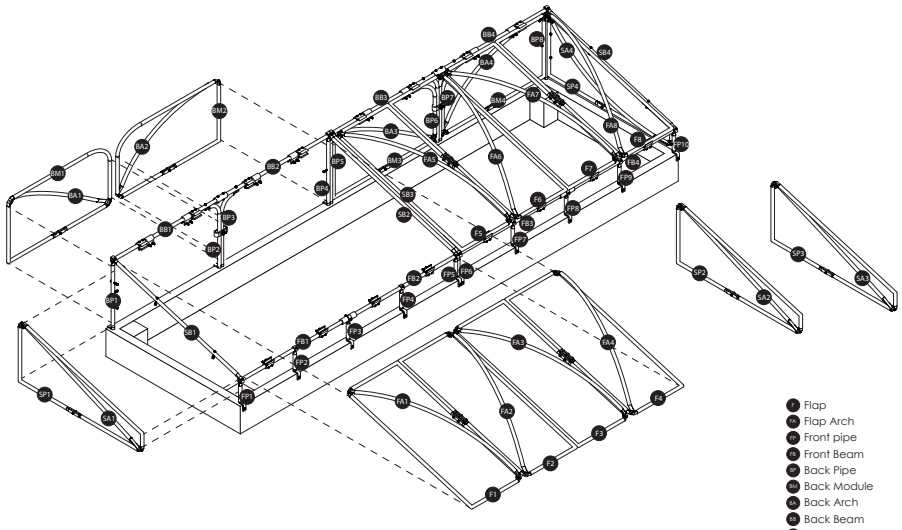
In collaboration with Gunn C, Isadora M, Sophie L, Dana K, and Ritchie J.

This projects requires the design and construction of a modular operable shelter for 3′ by 12′ planter beds using only metal conduit. The project is located in the Montessori Public School, Pittsburgh PA. The planter beds in the edible school yard are meant for planting and cooking classes and allows student access.

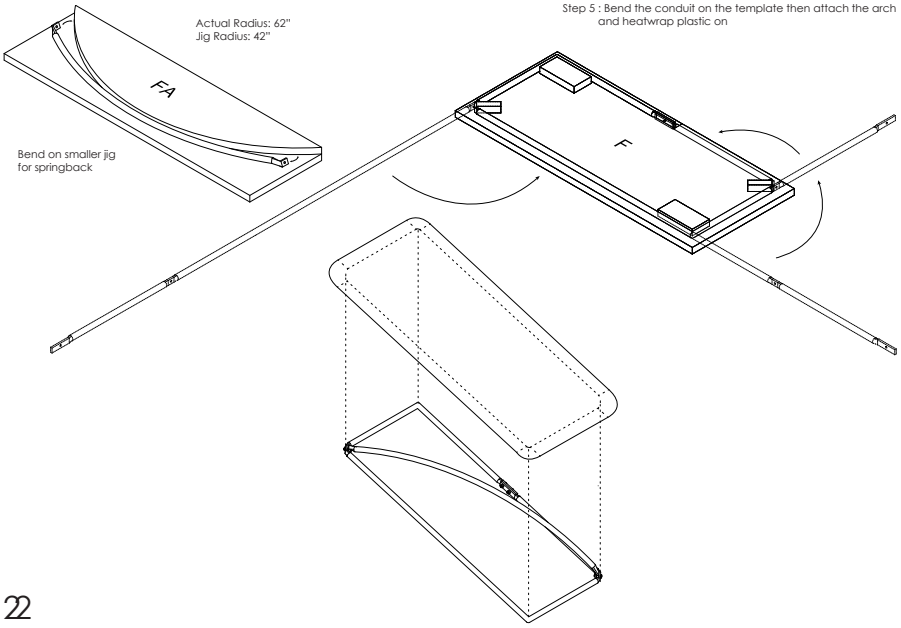
The design features two different ways of opening the shelter for ventilation while protecting from harsh weather. The open shelter encourages gathering of children for teaching purposes. All bend corners in this project are round in prevention of injury and serve as the main concept for this project.

The project includes schematic design, designing fabrication templates, creating construction drawings, budgeting, creating a schedule, fabricating and on-site installment.





- F Flap
- FA Flap Arch
- FP Front pipe
- FB Front Beam
- BP Back Pipe
- BM Back Module
- BA Back Arch
- BB Back Beam
- SP Side Panel
- SA Side Arch
- SB Side Beam
- TP Thick Pipe Joint
- MJ Metal Sheet Joint
- MC Metal Sheet Clip




KALE

Interactive Experience: Love's Labor's Won Companion Exhibit

[Sept 2017] 3 months, built
Design Lead, Fabrication and Structural Design

In collaboration with:
Brynn G. (Content & Playtesting),
Emily N. (Marketing),
Carina C. (Marketing),
Richard A. (Fabrication & Concept Art),
Jason M. (Tech),
and Olivia G. (Producing),
under Shirley Saldamarco, Ruth Comley, and John Dessler.

This interactive experience is designed to lay the groundwork for "Love's Labor's Won", a sequel to Shakespeare's "Love's Labor's Won" set in WWI by Scott Kaiser, Carnegie Mellon University School of Drama. We worked extensively with the play's dramatur, aiming to invoke shock and personal empathy in the audience before they step into the play. The team of 7 handled everything from budget/timeline creation to custom fabrication, with help from the executive producers.

The exhibit consists of three stations: The Home Front, The Trenches, and The Medical Tent. Together through the story of one soldier and his family, it tells the story of all those who suffered from warfare. Though small and contained, reenactions of the medical situations and life-size trench gives the sense of war, along with the personal letters and items shown in the abanodned Home Front.

Anecdotes handed out to the theatre-goers reflect the themes explored in the three stations, complete with expanded stories displayed in poster format. These cards describe the lives of real people during WWI, and shed light on their personal struggles during the war. Audiences were very receptive to both the anecdote cards and the team-composed letters at the Home Front station, often interacting with the content in their entirety.


EMERGENCY CALL
Clean up after use
Put tools back where you found


DIRECT