

ARCHITECTURE PORTFOLIO

VOLUME ONE 2017

JULIE NIU

HELLO,



My name is Julie and I am currently a second year student at the University of Waterloo School of Architecture.

My goal as an architecture student is to study and create immersive narrative spaces that highlight human moments, recall memories, and compel physical movement. Throughout my academic and professional career, I intend to explore how the built environment and the tangible experiences it creates can influence, and perhaps alter, our perception of the world.

This is a portfolio of my selected works from my last two academic terms. Please enjoy.

JULIE NIU

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+ Vancouver, B.C

EDUCATION

- [2016 - 21] **University of Waterloo**
 - + Candidate for Bachelor of Architectural Studies
 - + Merit Entrance Scholarship
- [2011 - 16] **Fraser Heights Secondary School**
 - + President's Honour Roll
 - + Community Leadership and Involvement Award

VOLUNTEER

- [2017] **Waterloo Orientation, Media Co-ordinator**
 - + Utilized graphical and video editing software to produce media
 - + Photographed and documented the five-day event
- [2015 - 16] **Kindlers' Society, Regional Manager**
 - + Oversaw seven schools within the City of Surrey
 - + Devoted 10+ hours per week to the non-profit and coordinated weekly meetings
 - + Selected and recruited 15+ people from a qualified pool of candidates in an application based process for executive positions within the district
 - + Contacted and networked with businesses on behalf of the NGO
 - + Collaborated with internal and external executive members to plan large and small scale fundraisers
 - + Organized a benefit concert with a profit of \$1000+
 - + Distributed and forwarded volunteer certification letters to various schools for student volunteers
- [2013 - 16] **Hip Hop, Team captain**
 - + Coached the Fraser Heights Dance Team
 - + Trained competitive students in various styles of urban dance
 - + Accompanied the team to competitions around the lower mainland area
- [2016] **FHMUN, Under Secretary General of Marketing**
 - + Advised and oversaw the final website and logo design
 - + Assisted in rebranding the 2016 conference
 - + Proposed and implemented new marketing strategies, such as friend referrals and a reward system
 - + Monitored social media accounts, ex. Facebook, Twitter
- [2016] **Wish Youth Network Society, District Finance Manager**
 - + Managed all organization funds within the district
 - + Documented budgets and monetary traffic
 - + Assisted in organizing district events

WORK EXPERIENCE

[06 - 08, 2017]

Nine West, Sales Associate/Cashier

- + Assisted in designing floor sets and changing the store layout
- + Established as the highest selling associate
- + Regularly achieved and exceeded SPH goals

[06 - 08, 2016]

Garage Clothing, Sales Associate

- + 100% customer satisfaction
- + Employee of the month for two months in a row
- + Assisted customers in fitting rooms and provided style recommendations

[08 - 09, 2015]

Bouthouse Architectural Firm, Internship

- + Compiled spreadsheets and lists
- + Attended client and consultation meetings
- + Translated documents

[05 - 08, 2016]

Shoes Warehouse, Sales Associate/Cashier

- + Organized and restocked inventory
- + Worked with a variety of customers

[08 - 02, 2015/16]

Aldo Shoes, Sales Associate/Cashier

- + Provided Mandarin/English translation for customers and other employees
- + Trained and mentored new hires
- + Responsible for counting, closing, and depositing store registers

SKILLS

Rhinoceros 3D



Revit

[LEARNING]

AutoCAD

[LEARNING]

Manual Rendering



3D Maxwell



Physical modeling



Adobe Photoshop



Microsoft Office



Adobe Illustrator



Laser Cutting



Adobe InDesign



Hand Drafting



Sketch Up



Grasshopper

[LEARNING]

[8-17] STUDENT HOUSING

[18-27] MICRO-INSTITUTION

[28-33] STEEL ASSEMBLAGE

[34-39] OASIS

[40-45] ARTIST'S RESIDENCE

[46-47] PERSONAL WORK

.....

Location: Cambridge, ON
Type: Collaborative Academic Work
Term: 1B
Supervisor: Donald Mckay

.....

Location: Toronto, ON
Type: Individual Academic Work
Term: 1B
Supervisor: Donald Mckay

.....

Location: New York, NY
Type: Collaborative Academic Work, competition
Term: 1B
Supervisor: Terri Boake

.....

Location: Reykjavik, Iceland
Type: Collaborative Academic Work
Term: 1B
Supervisor: Terri Boake

.....

Location: Cambridge, ON
Type: Individual Academic Work
Term: 1A
Supervisor: Rick Andreghetti

.....

Location: N/A
Type: Individual Work
Term: On going
Supervisor: N/A

STUDENT HOUSING

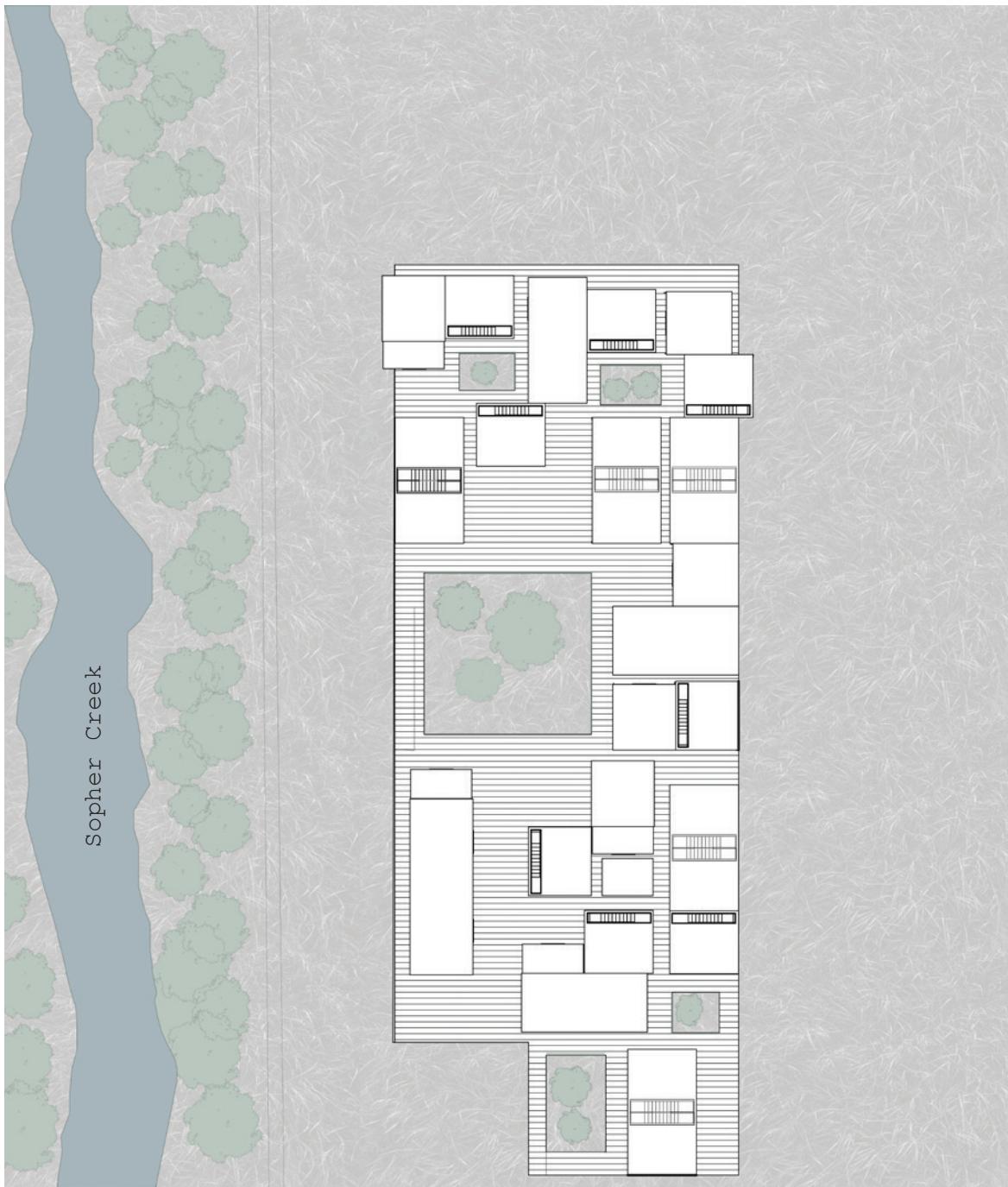
The Modern Village



The project revitalizes and repurposes an abandoned parking lot into a student housing complex. The design strategically places the buildings in a way that ensures the view towards the stream and the park is neither obstructed nor compromised, the porous scheme allows for a constant flow of circulation throughout the entire site. To create a more intimate set of spaces, the buildings are arranged into clusters composing of living units, small courtyards, and common rooms. The project becomes an accumulation of the juxtaposition between private and public spaces and how a sense of community is formed by engaging both former and latter.

In collaboration with Nateja Mohammed, Leela Keshav, and Sophie Fan.

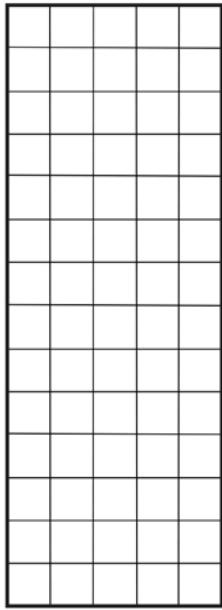




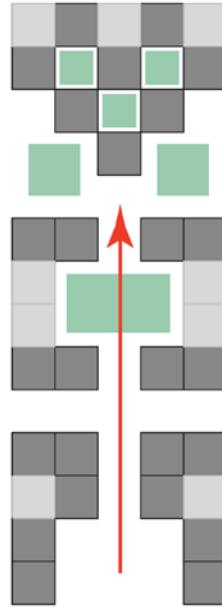
Kerr St.



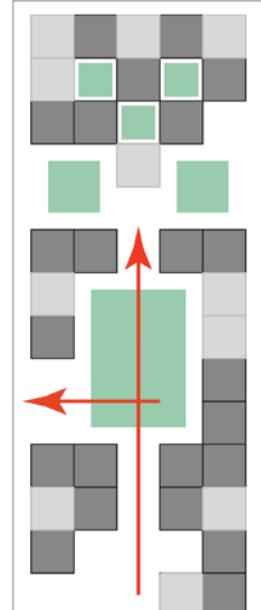
Site Plan



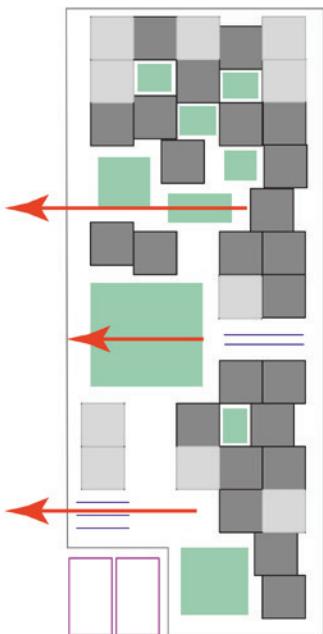
Establish a grid



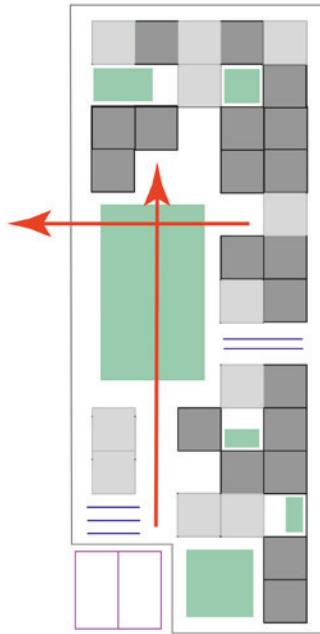
Establish a layout of units and common rooms to create sightlines and courtyard spaces



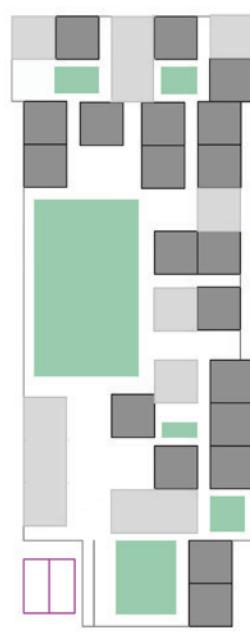
Address sight issues, lower density towards Sopher Creek



Shift units to allow for unobstructed sights into Sopher Creek

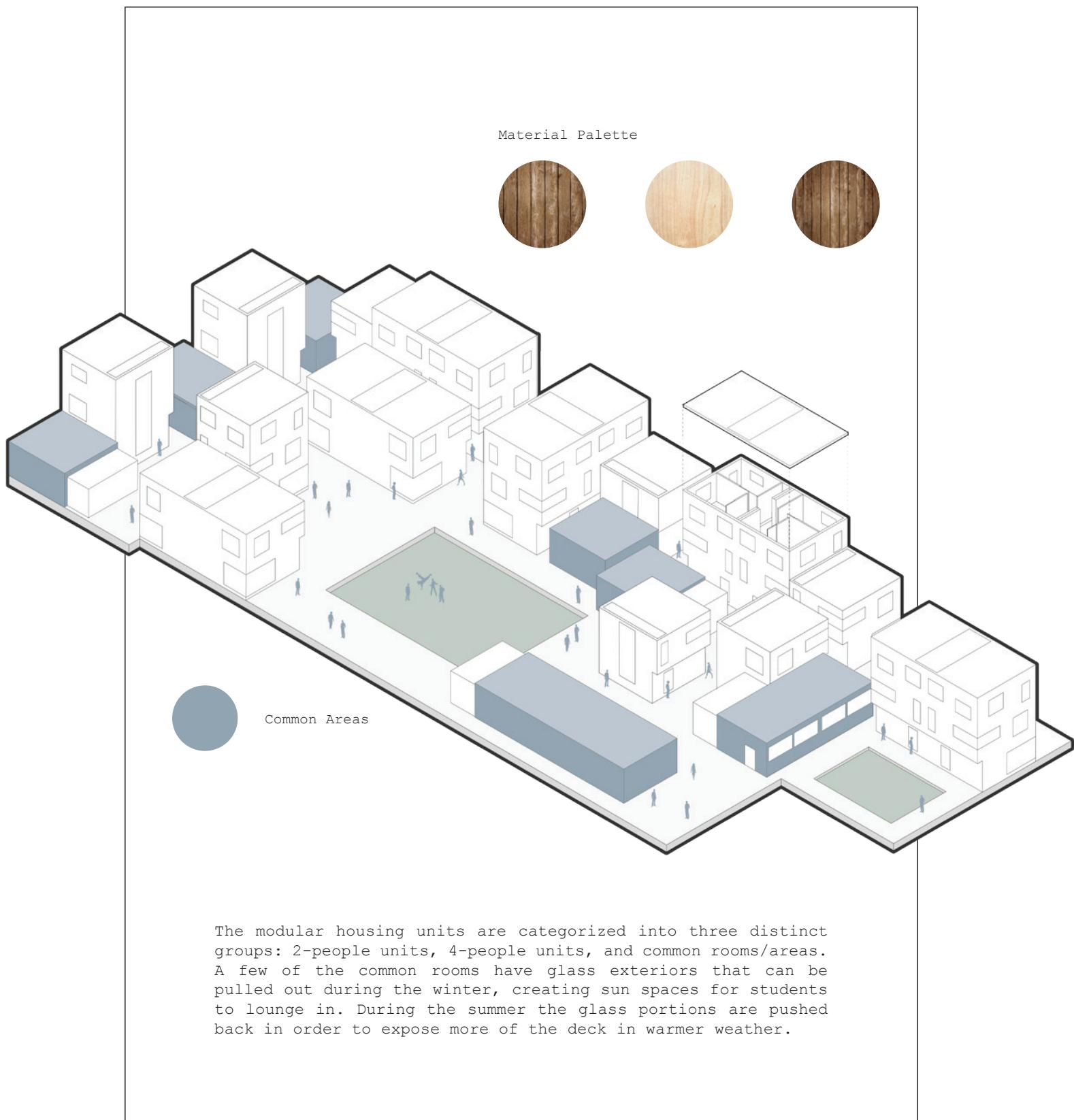


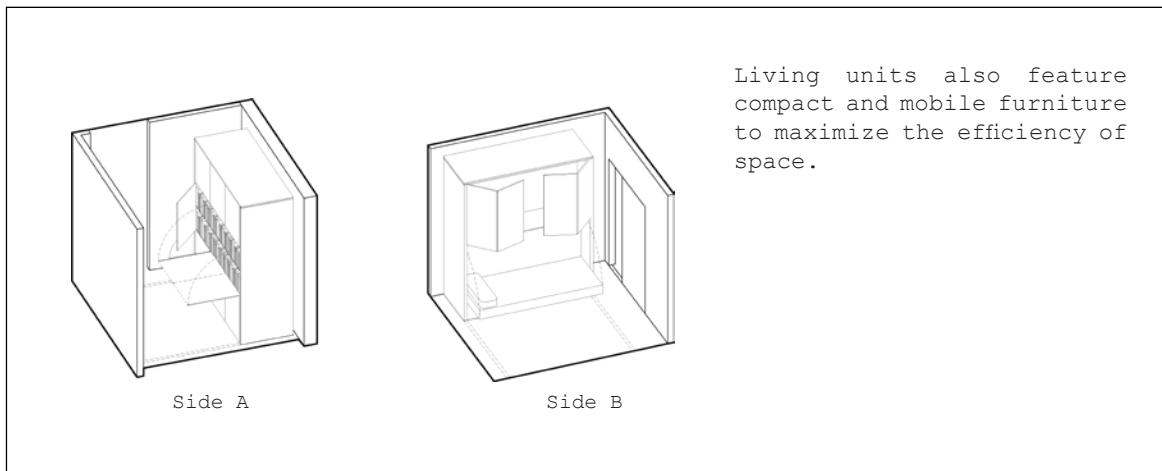
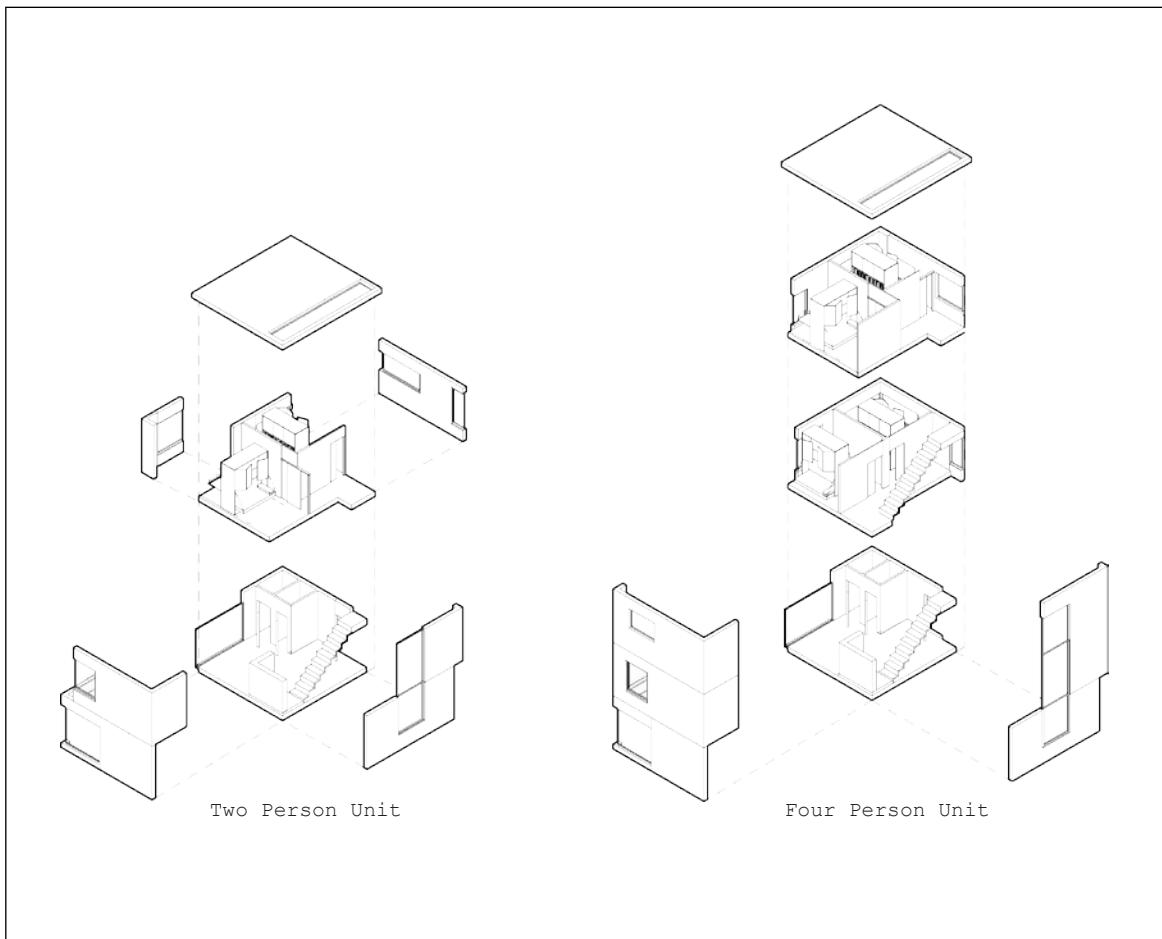
Increase common areas, decrease living units, adjust courtyard sizes for expanding common rooms



Trim excess boardwalk

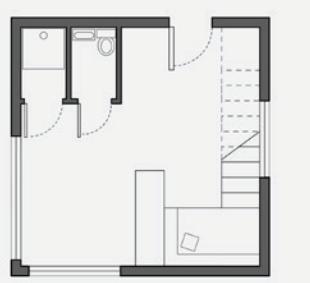
Diagram courtesy of Leela Keshav



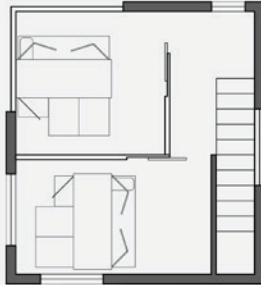




Two Person Unit



First



Second

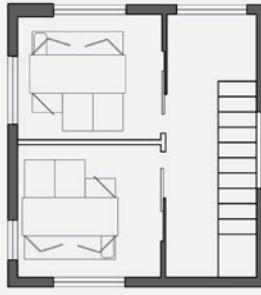


Roof

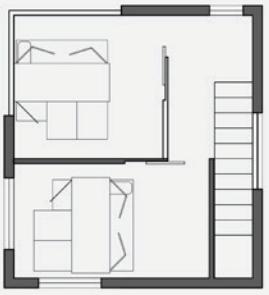
Four Person Unit



First



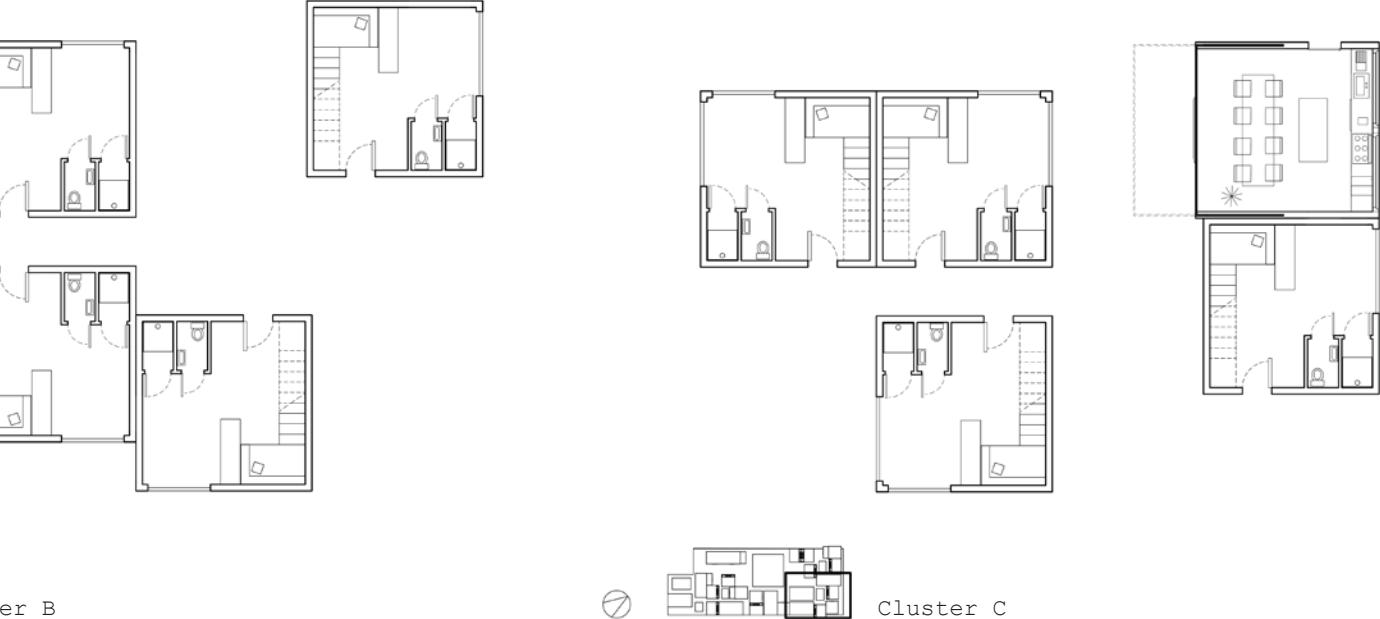
Second



Third



Roof

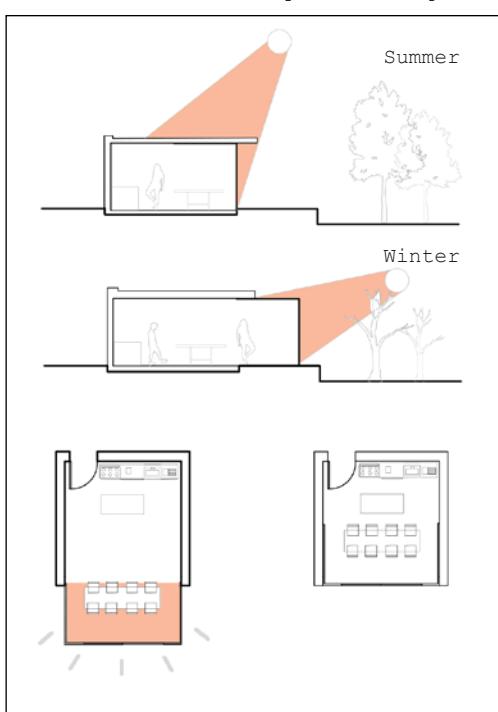


Cluster B

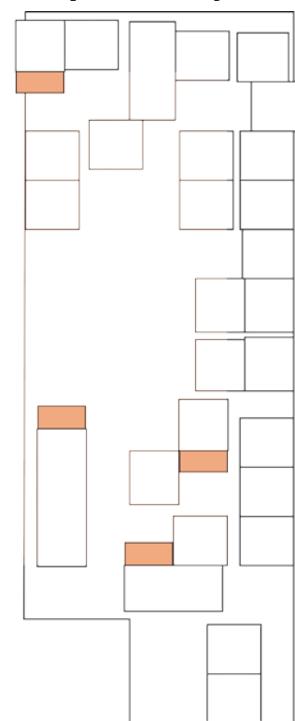
Common Area Units



Summer and Winter Expansion Diagram



Expansion Diagram



● Common Room Expansions



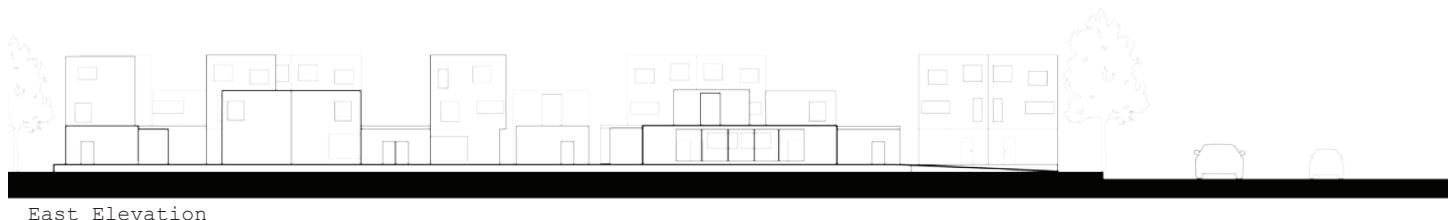
Image courtesy of Sophie Fan



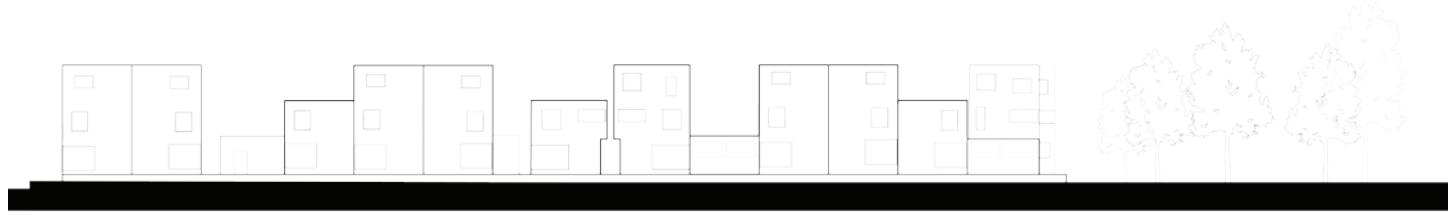
Common Unit

2 Person Unit

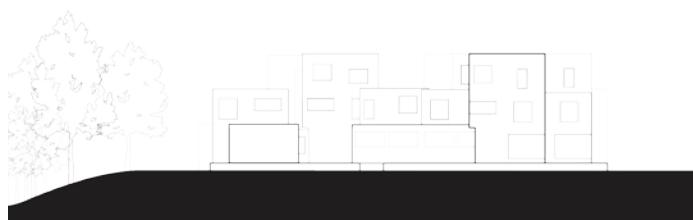
4 Person Unit



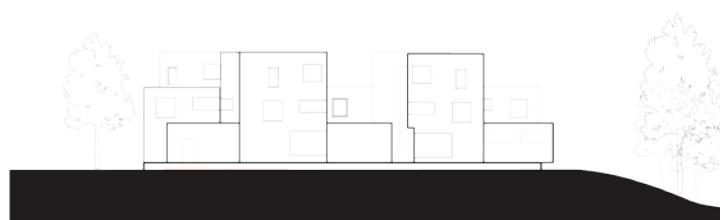
East Elevation



West Elevation



South Elevation



North Elevation

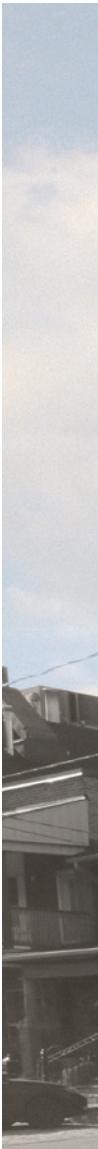
Image courtesy of Leela Keshav

MICRO-INSTITUTION

The Urban Library

The urban fabric of St. Claire St. is primarily composed of a large residential neighborhood and very few fully accessible public institutions. In response, The Urban Library aims to address and create a space that is entirely welcoming and accessible to all.

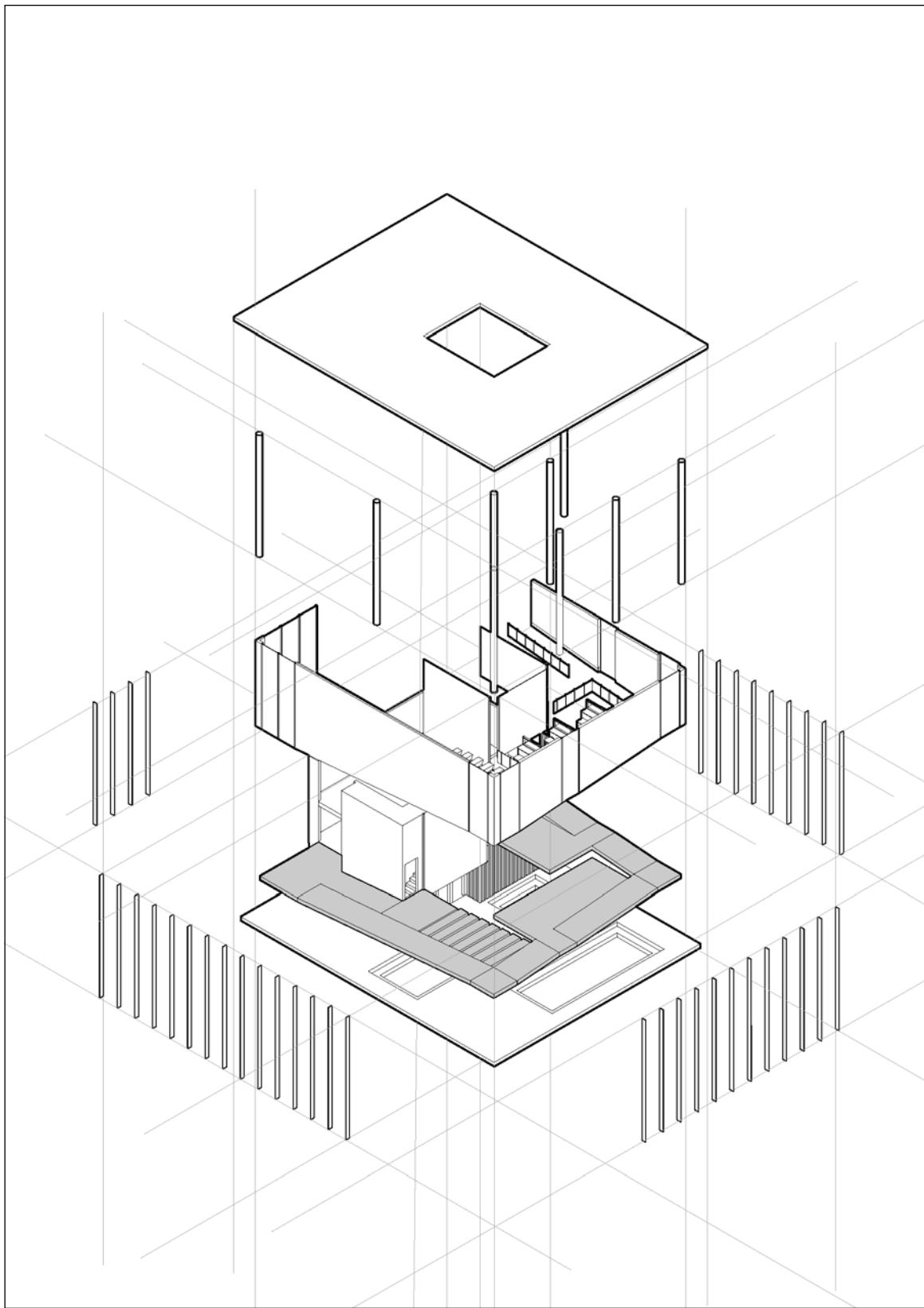
The proposed project challenges and renounces the traditional aspects and programs of a library and interrogates what modern community spaces should feel and materialize as. It re-imagines a library as a structure built for people rather than for books, and instead, the books are stored out of sight and the building is opened up and emphasized to become the exchanging platform for human activity.



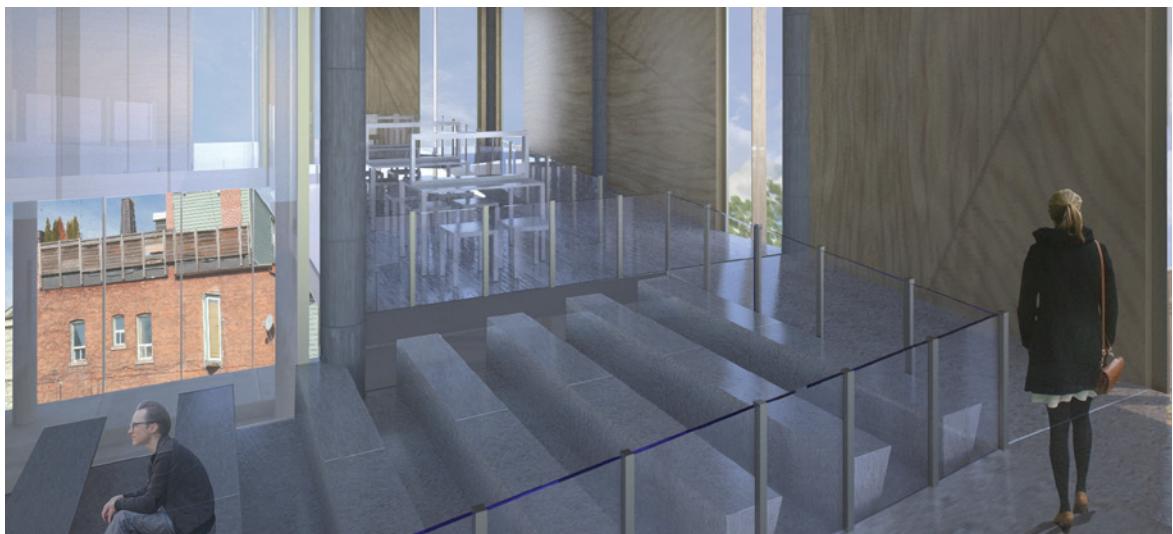


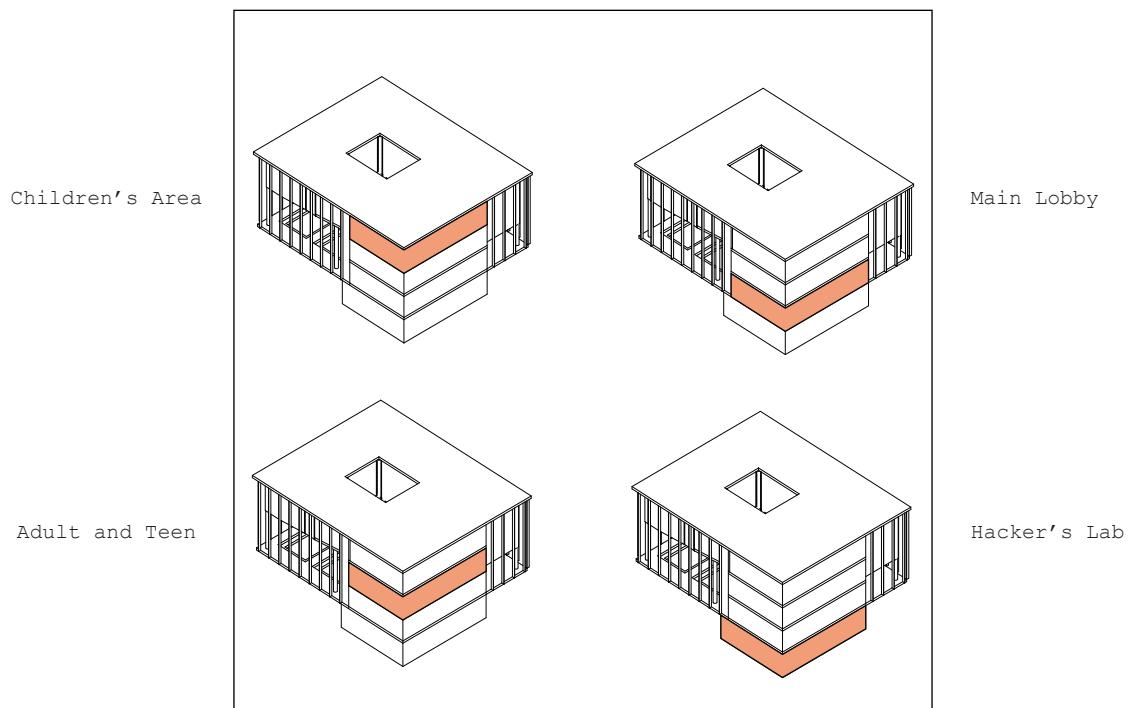


The dug-in courtyards on the ground floor provide spaces for interaction and repose while the underside of the ramp above-head casts a pavilion-like experience. The open ground floor is intended for people to meet, collaborate, exchange, dance, and share.



Site Analysis



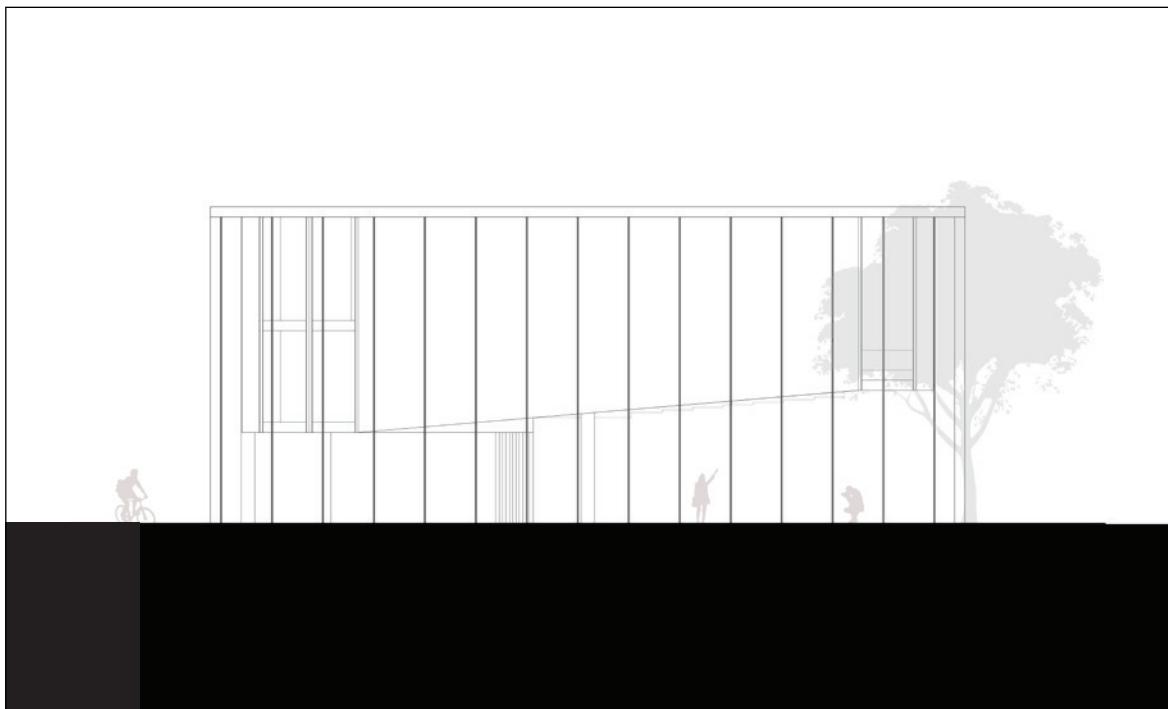


Four volumetric boxes are pushed and stacked into the corner where the books, administration, and a hacker's lab is stored. A dynamic ramp stretches from the second floor to the third where certain parts are cut leveled to become purposeful spaces such as an auditorium, study area, and computer lab.

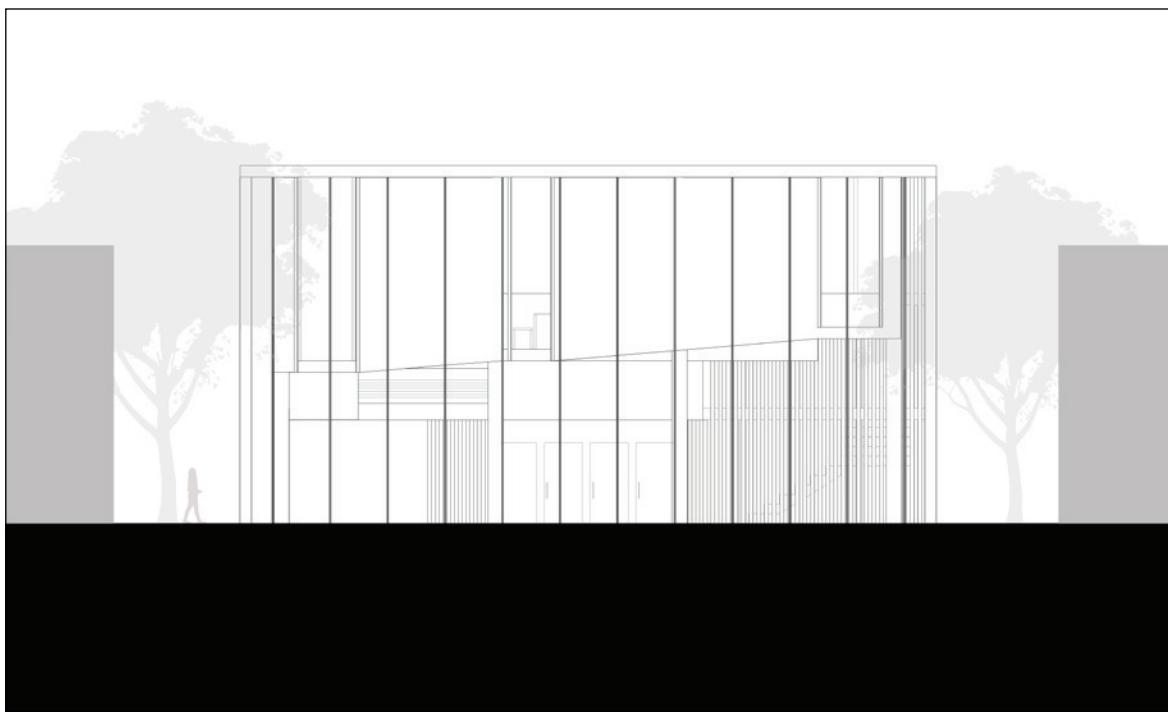
Books are stored in stacked and movable bookshelves to minimize storage and maximize human occupancy.







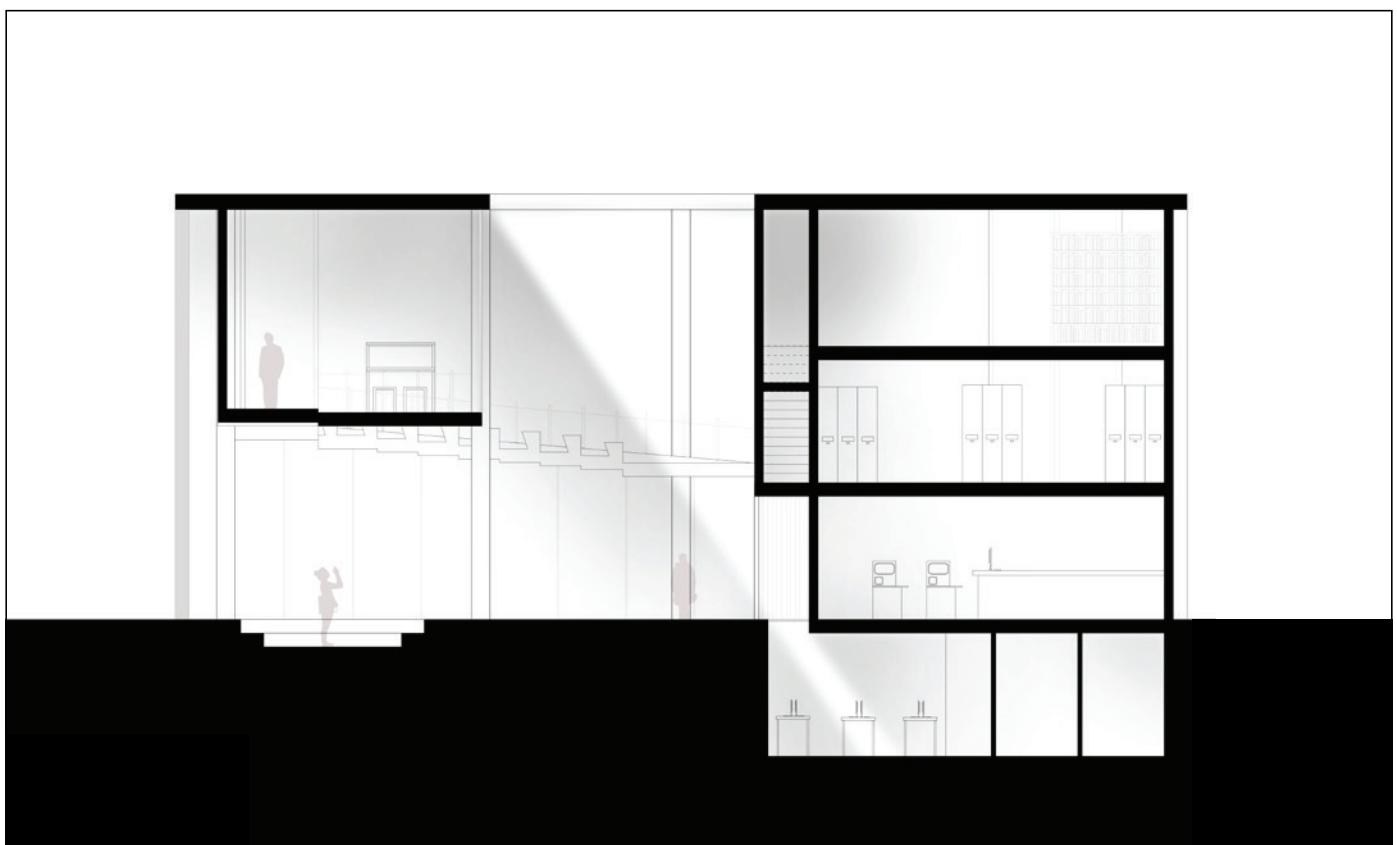
East Elevation



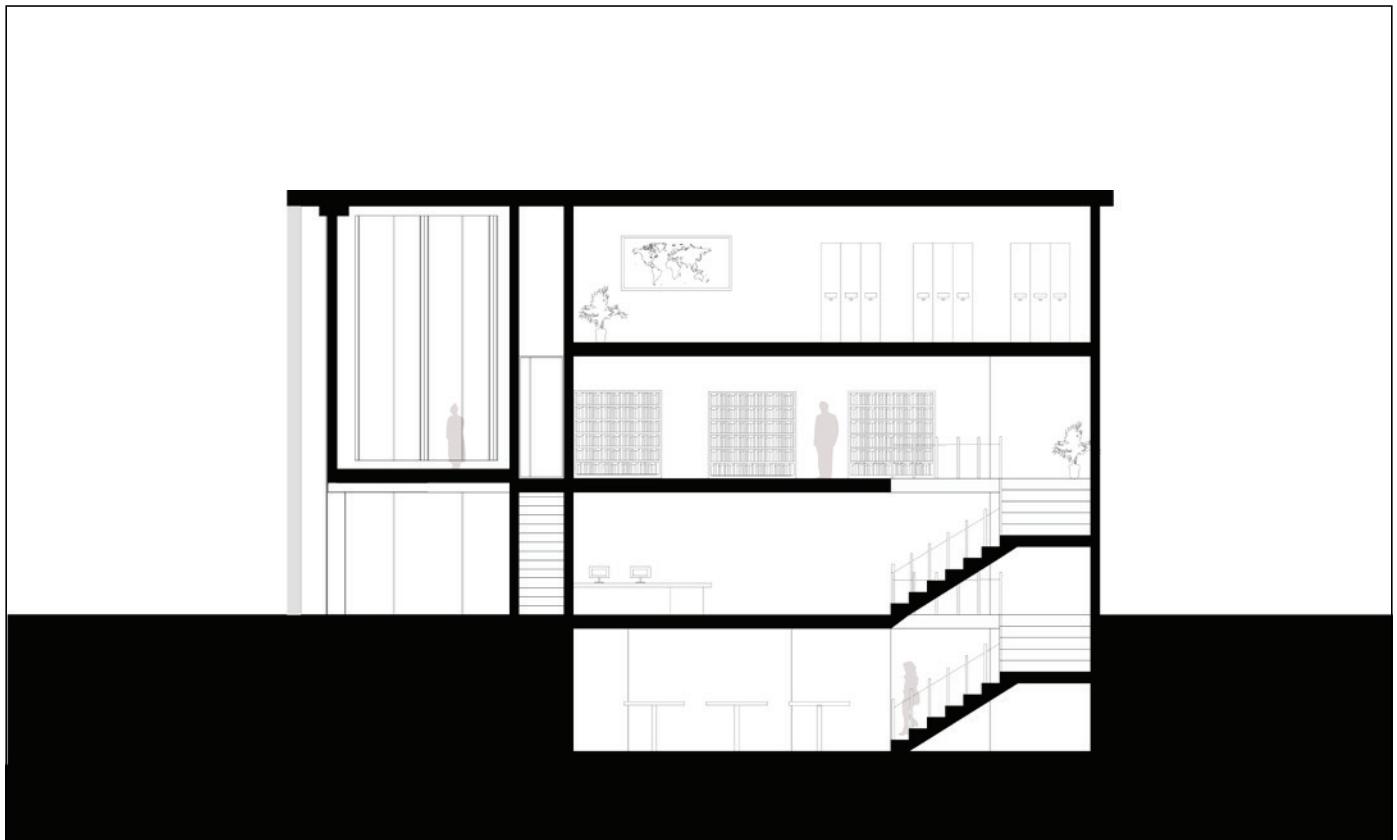
North Elevation



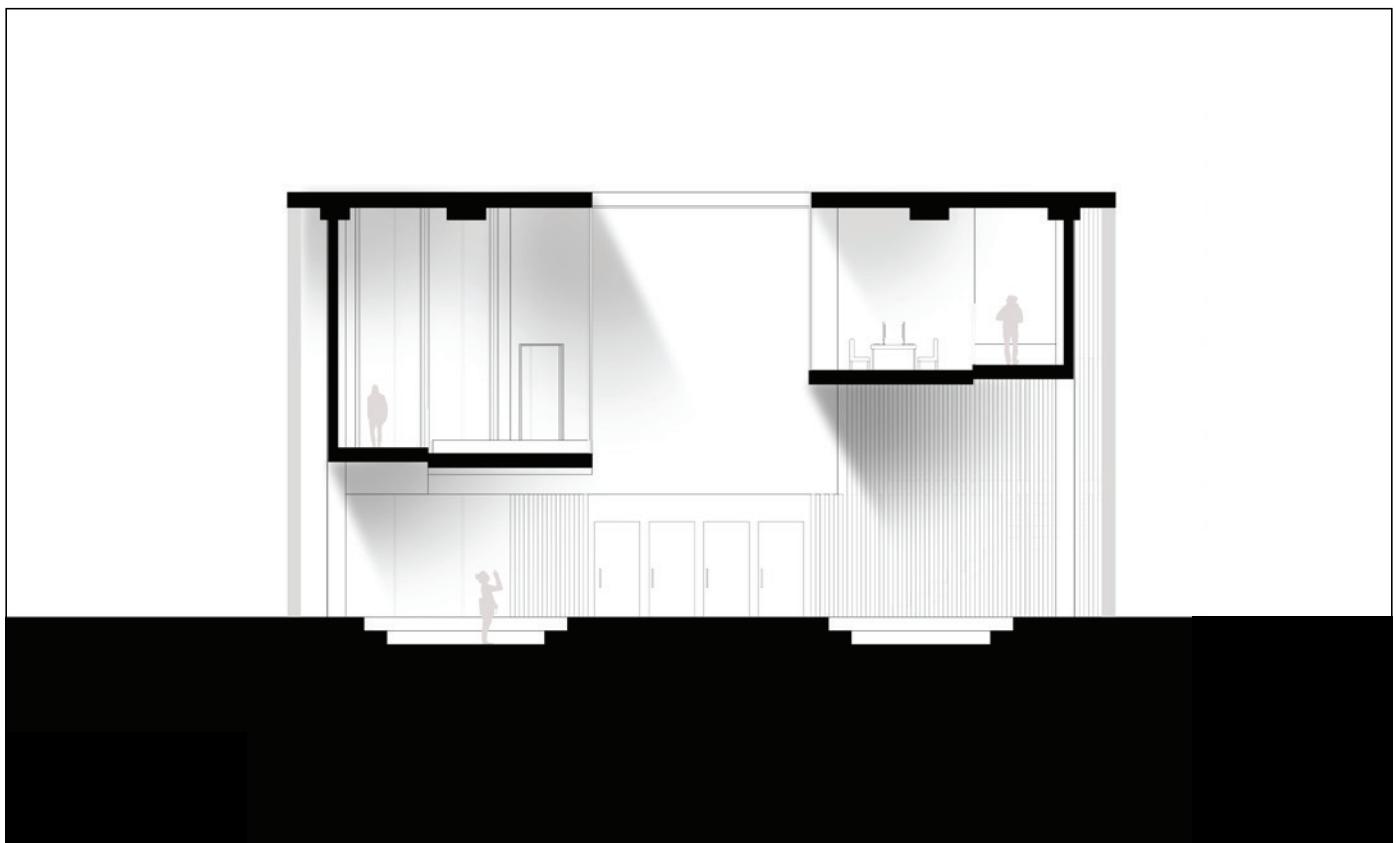
Section A



Section D



Section B



Section C

STEEL ASSEMBLAGE

The Wishing Tree

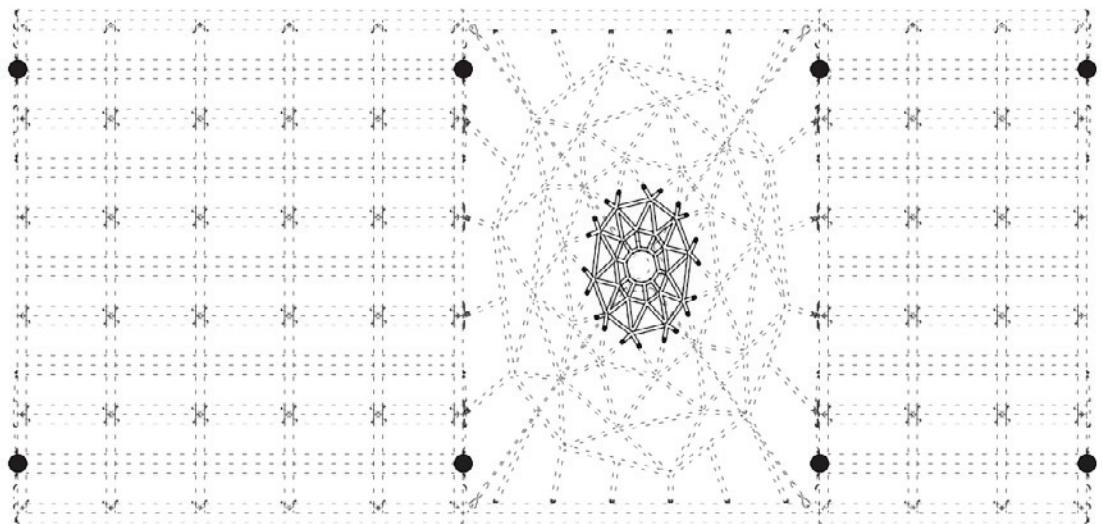
Modern life in New York City demands for the ordinary individual to be incessantly on the move. In juxtaposition, this structure invites people to pause and reflect, amalgamating their thoughts and materializing them on an artificial wishing tree. Inspired by the ancient Asian tradition of writing down wishes and tying them to a tree, we intend to implement a modern, steel version that would act as a catalyst for cultural assemblage in Central Park, New York.

By gathering the collective thoughts of the citizens of New York, the proposed installation becomes a monument of cultural diversity. However, not only is the structure a place of universal exchange and connection, but also a halcyon refuge, reintroducing interior peace and silence back into inhabitant's busy lives.

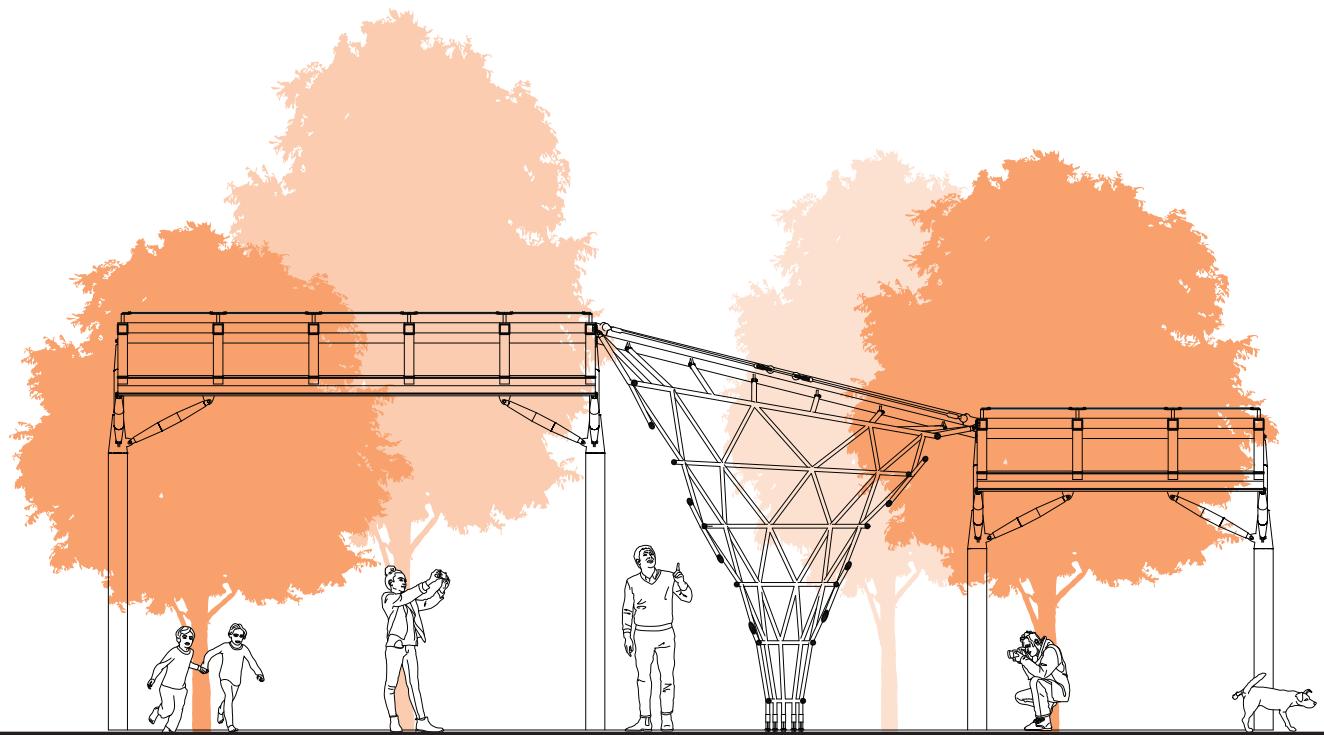
In collaboration with Justin Park.



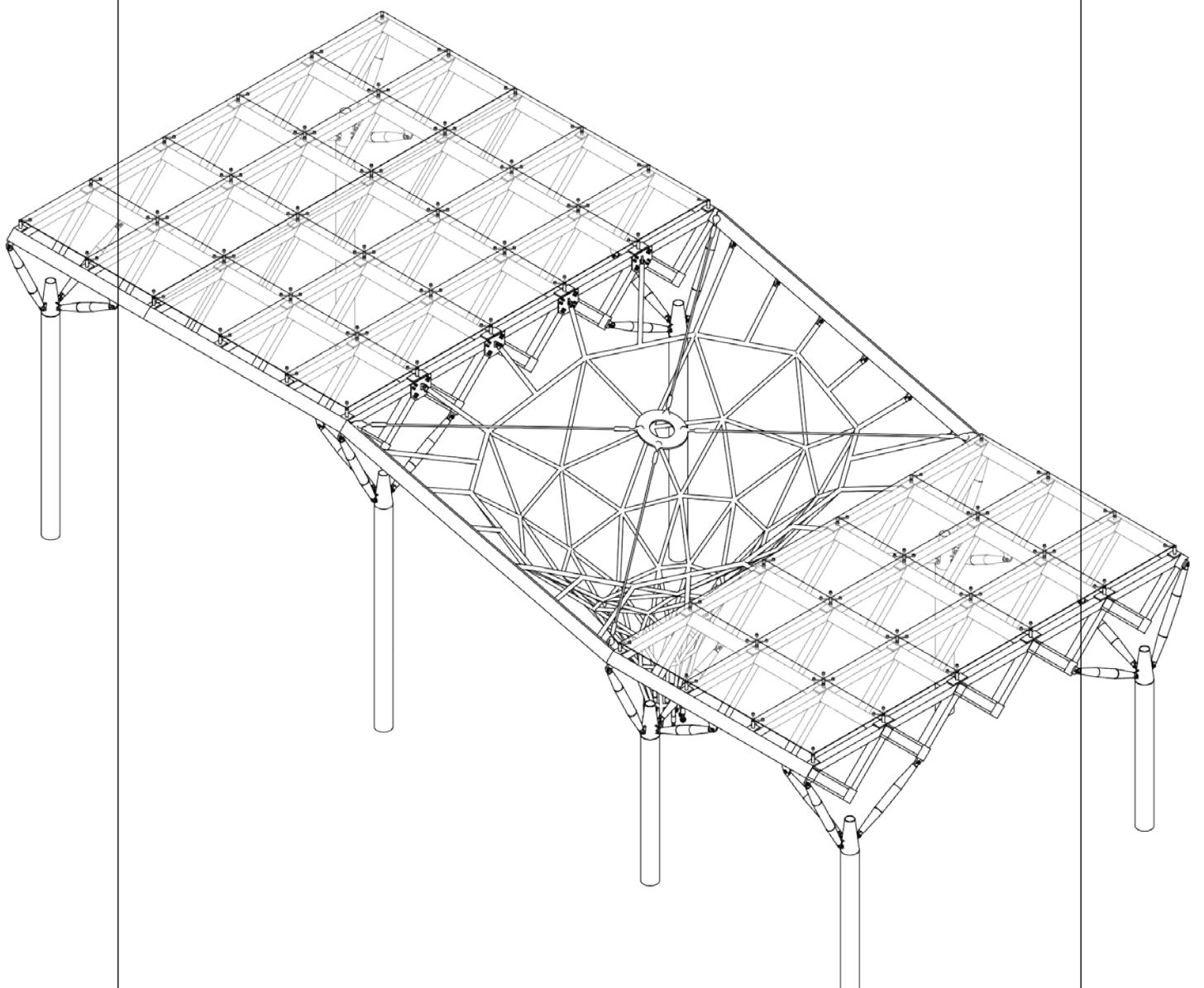


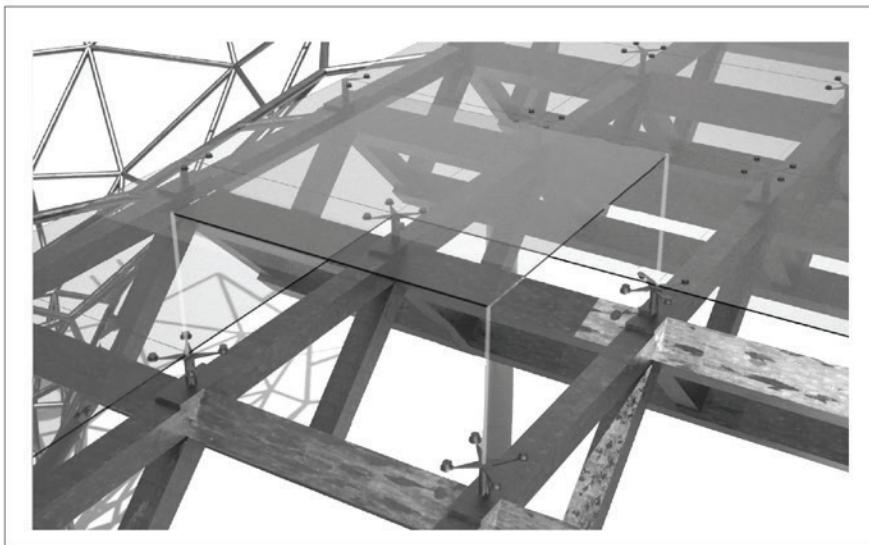


Floor Plan



Long Section

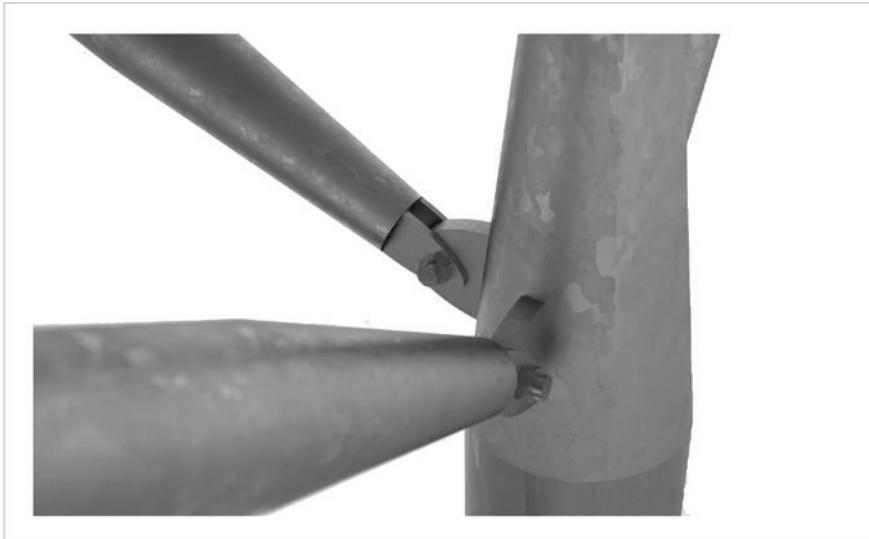




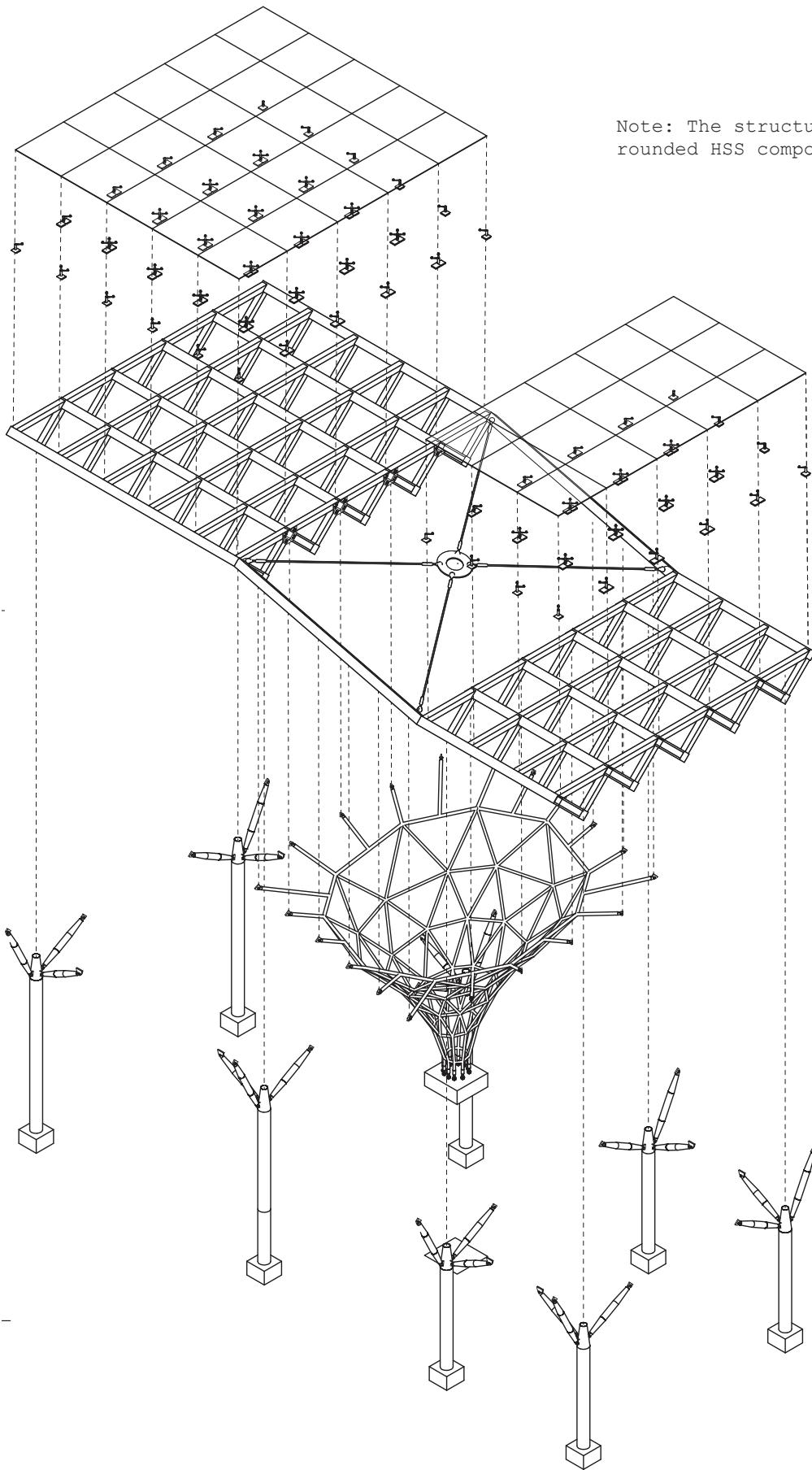
Glass panels are attached by spider connectors.



The two differing level parts of the pavilion are 'pulled' together with tension cords.



Structure is supported and attached through a series of pin connectors.



Note: The structure is almost entirely made of rounded HSS components.

Trusses are welded in a "V" formation (K-Gap) with horizontal members spanning across the top.

The frames of the tree are connected to the end plate on the trusses using pin connections, and the plates are bolted on.

The columns are bolted to a steel plate that is cast into a concrete block that is then buried into the ground.

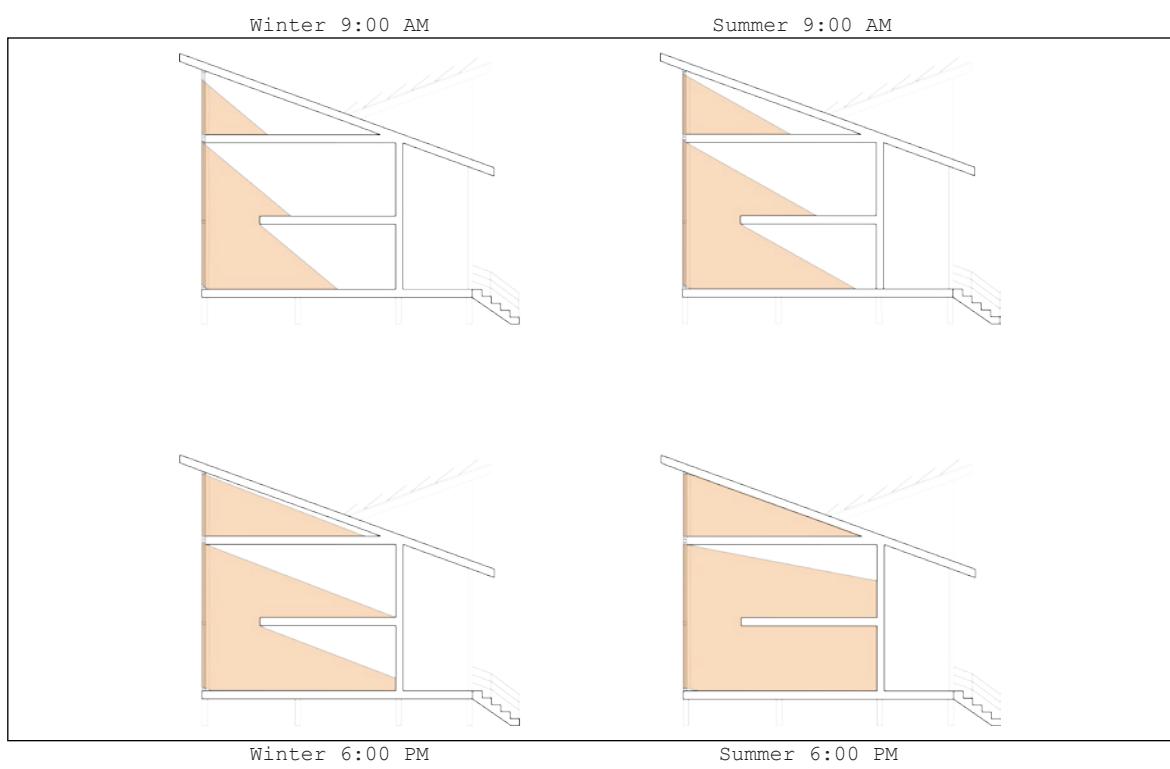
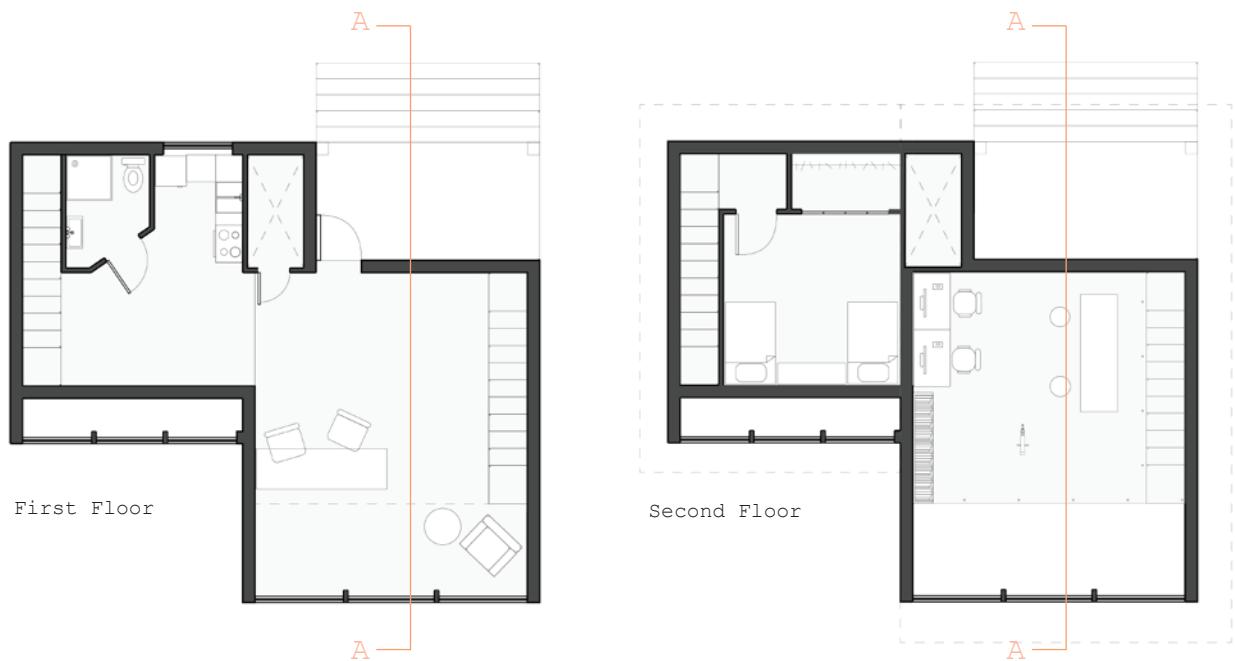
OASIS

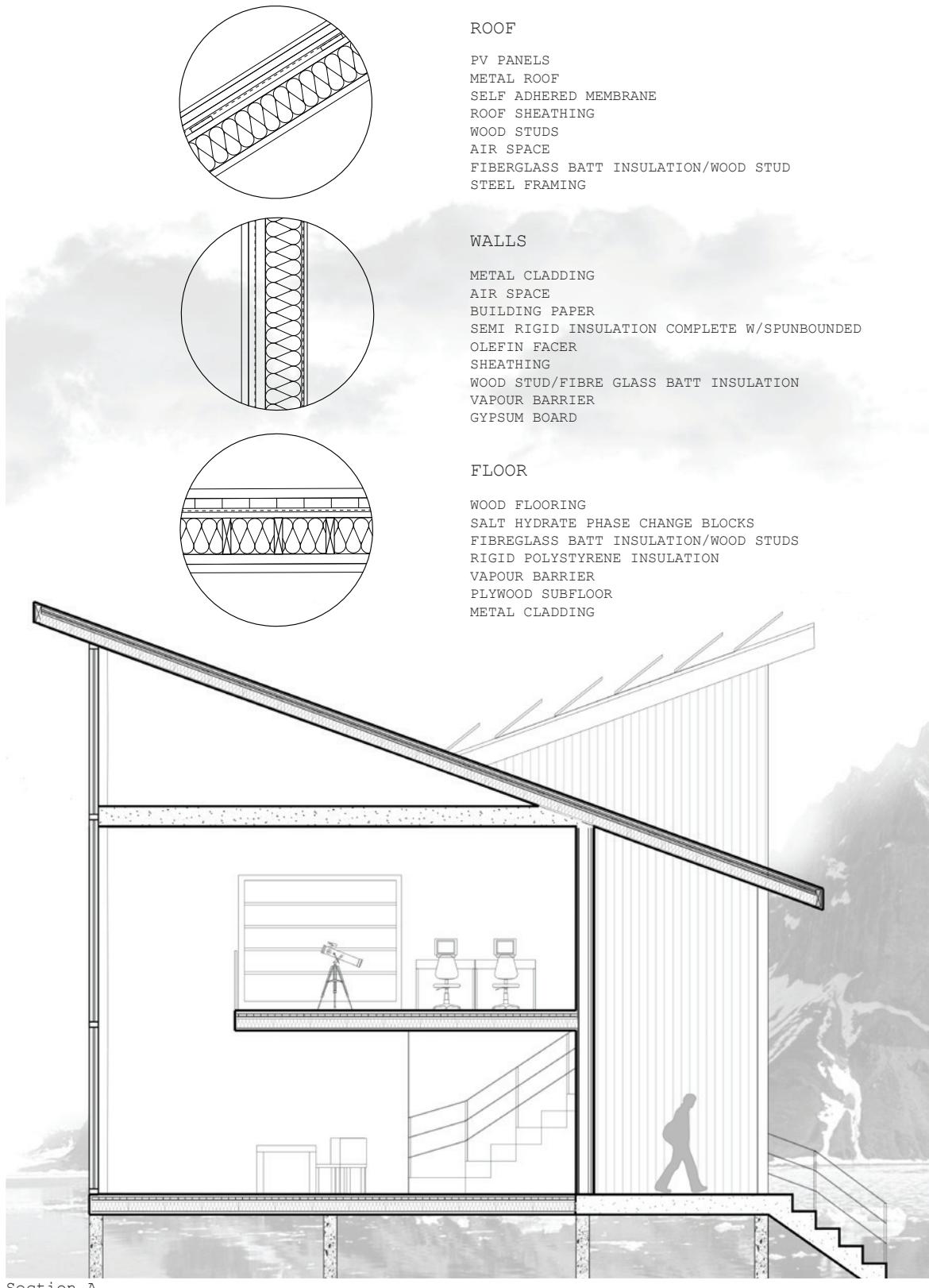
The Astronomer's House

Located in the scenic fields of Reykjavik, Iceland, the project aims to reach carbon neutrality by implementing various passive heating designs. Designed to house a pair of researchers, the building has two pitched roofs: one angled towards south for photovoltaics and the other north to maximize solar gain.

In collaboration with Yidan Wang.







Section A

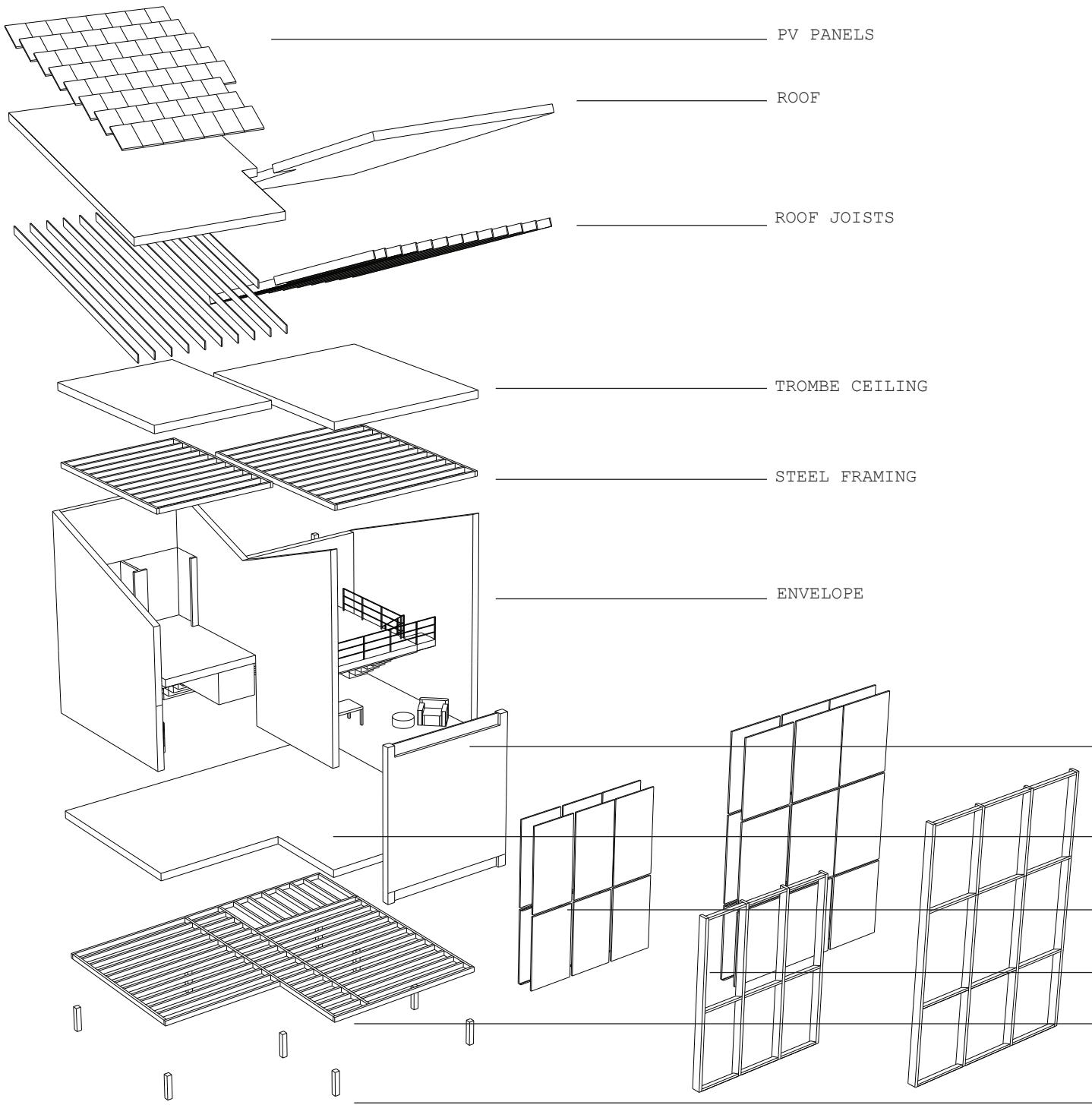


Image courtesy of Yidan Wang

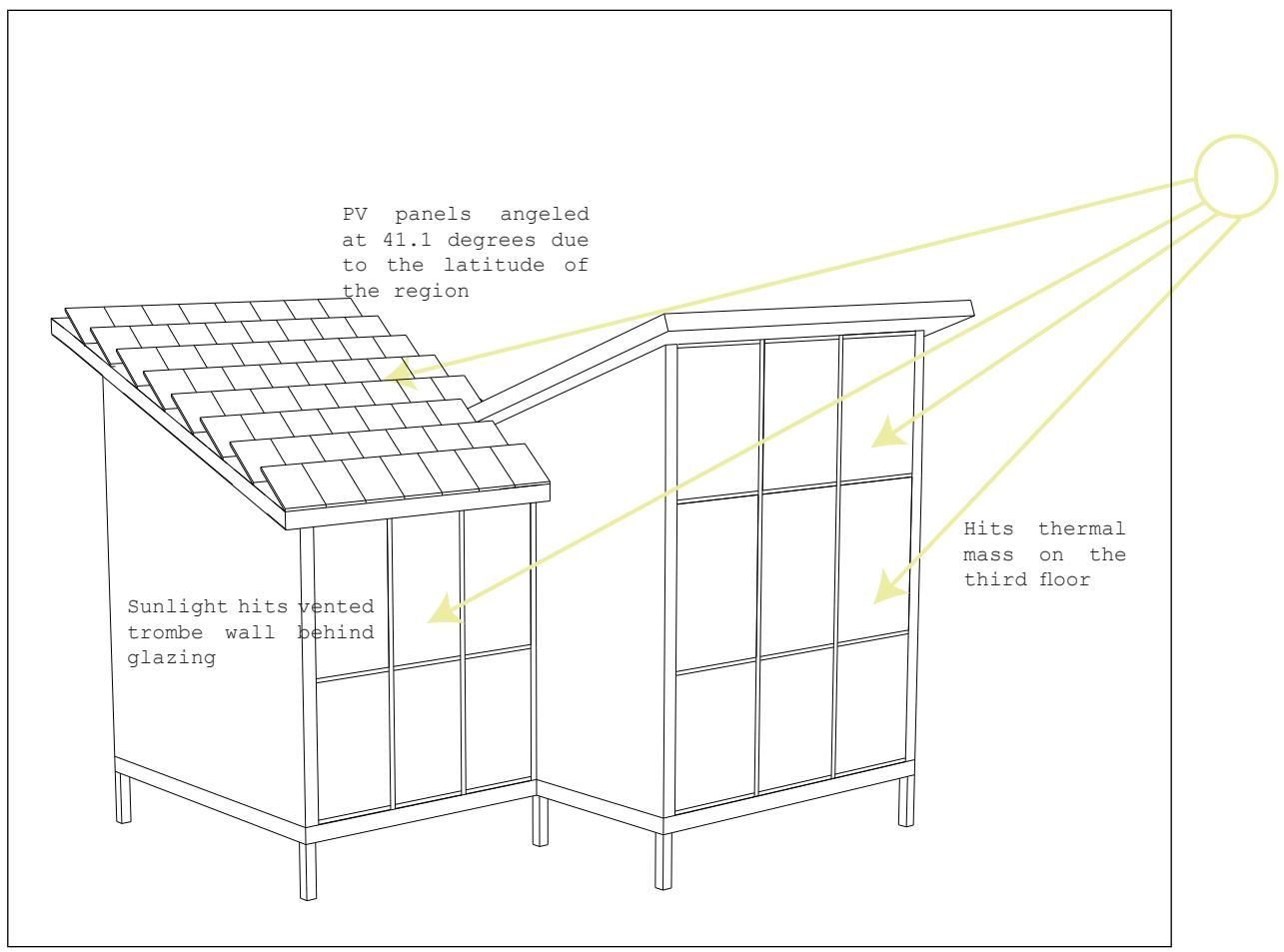


Image courtesy of Yidan Wang

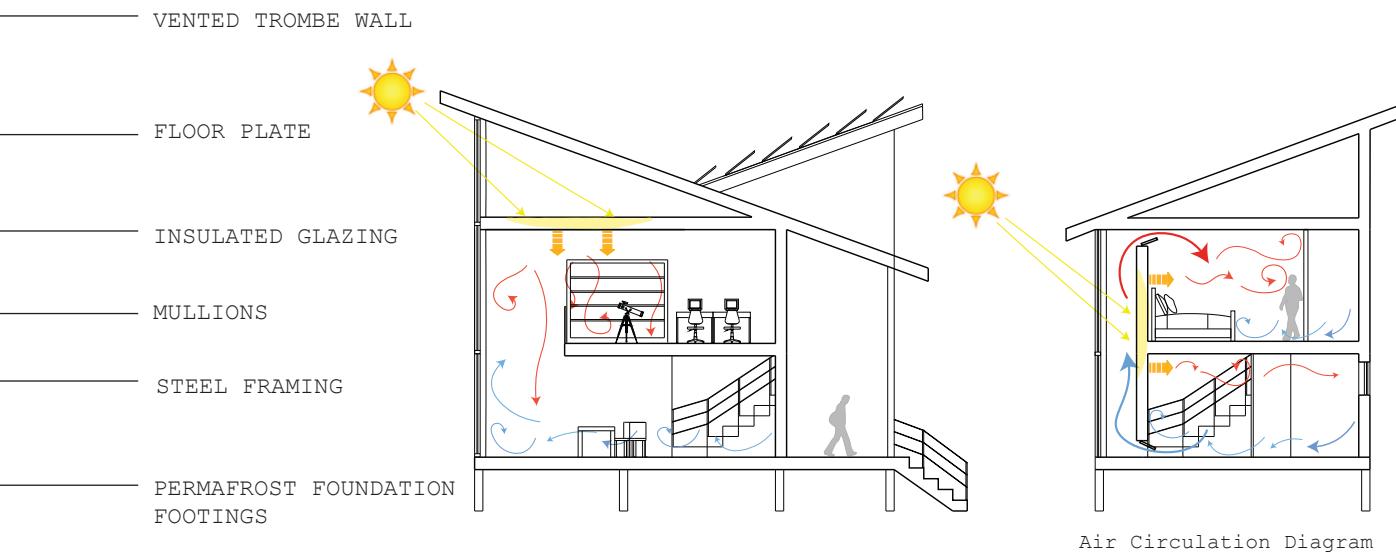


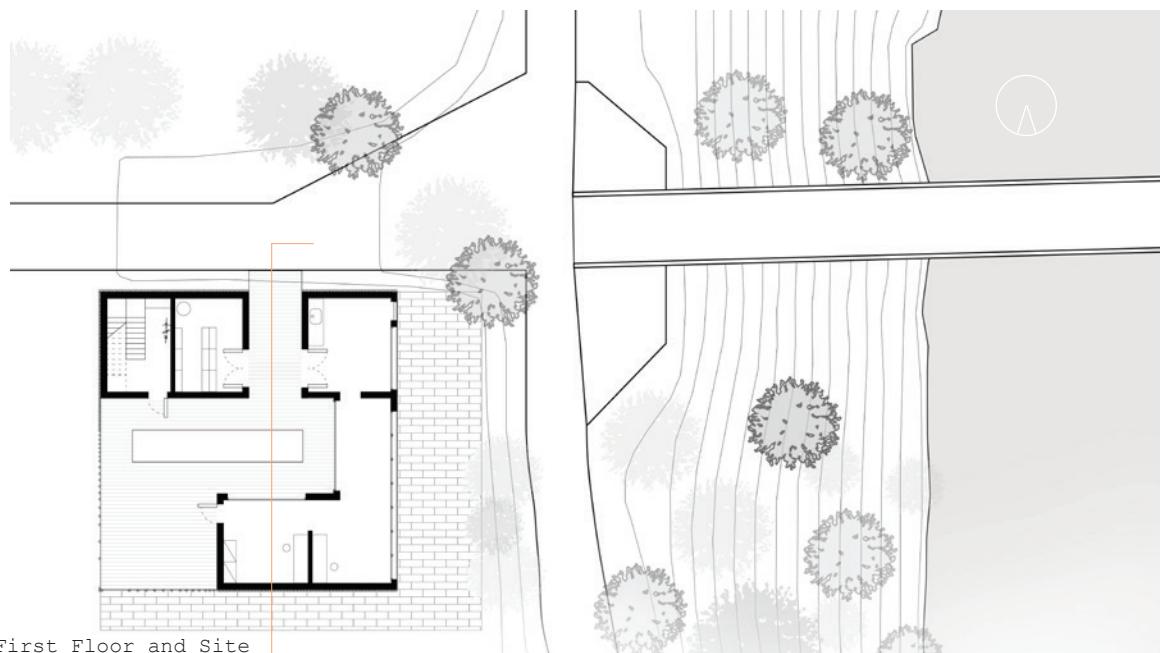
Image courtesy of Yidan Wang

ARTIST'S RESIDENCE

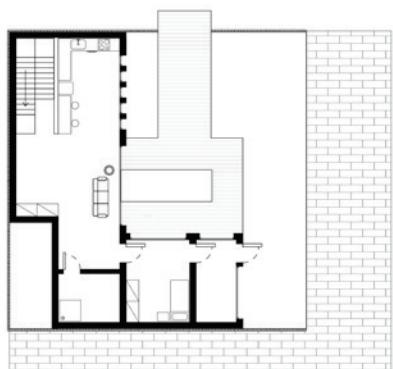
The Pottery Studio

Built for the acting purpose of a Pottery, the Artist's Residence is an introverted building that explores the existence of privacy within a largely accessible site. The project is tucked away in a sculpture garden off of the Grand River in Cambridge, ON. Recalling upon memories of peace and serenity, the building is constructed around a miniature Zen garden that is dug down from the wooden deck. The residence plays around the concept of intimacy between the fully accessible park, the semi-public deck, and the privacy of the building itself.

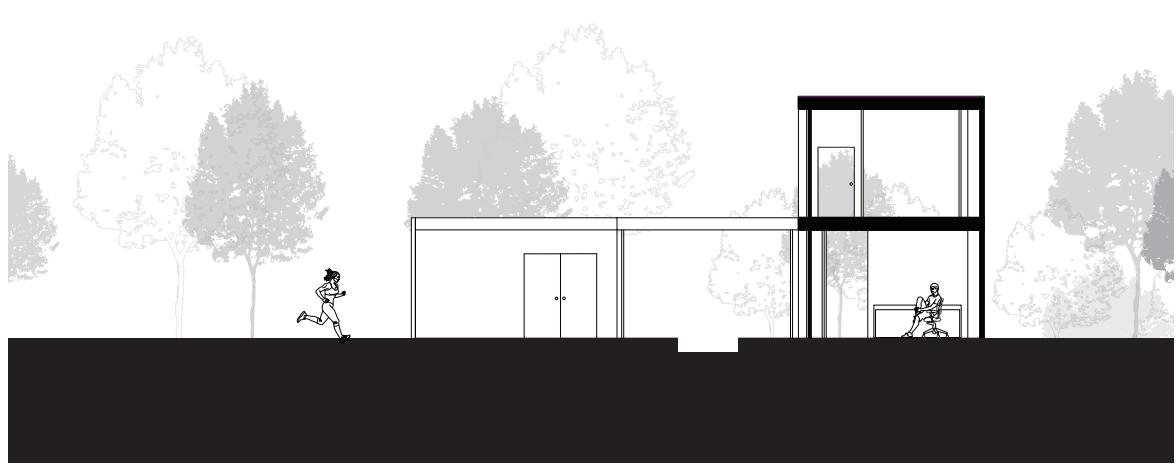


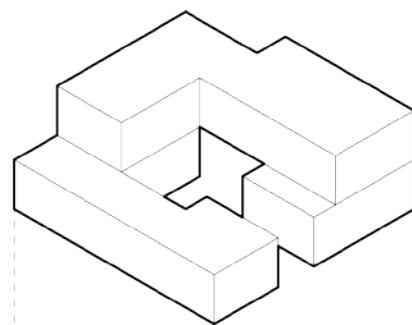


First Floor and Site

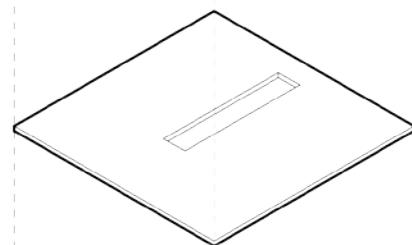


Second Floor

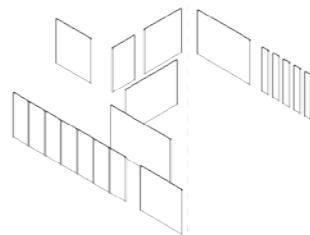




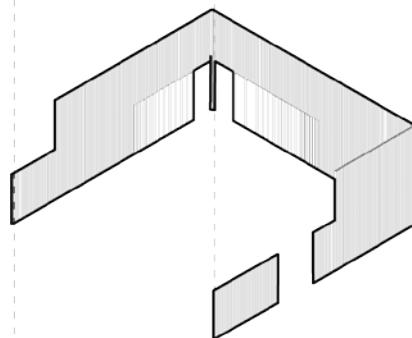
Establishing programs



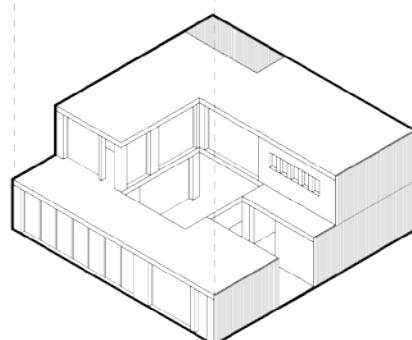
Cutting out a courtyard



Directing the views
into the courtyard with
inward fenestration



Blocking off views to
the south, east, and
west



Creating the Artists
Residence



East View



North West View



North East View

PERSONAL WORK

A Body in Space

I have been exposed to various styles of urban dance due to my five years of experience in competitive hip hop. After studying architecture, I believe that there is a common language between the two disciplines. Dance and architecture are both defined by the movement of a body through time and they share this inherent relationship of using space as the medium for conversation and dialogue. Akin to how technical drawings structure the spatial environment, choreography can also configure space through performance. I am particularly interested in the discourse between these two creative forms. The following are four images created with the intent of investigating how shape, light, shadow, and the surrounding environment can be amalgamated by dance.





THANK YOU

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