

Portfolio

Benjamin J. Boswick
7815559

Environmental Design Undergrad
Landscape + Urbanism

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01_Personal Work

02_Operational Strategy

03_Recovering the Road

04_Share

05_Snow Garden

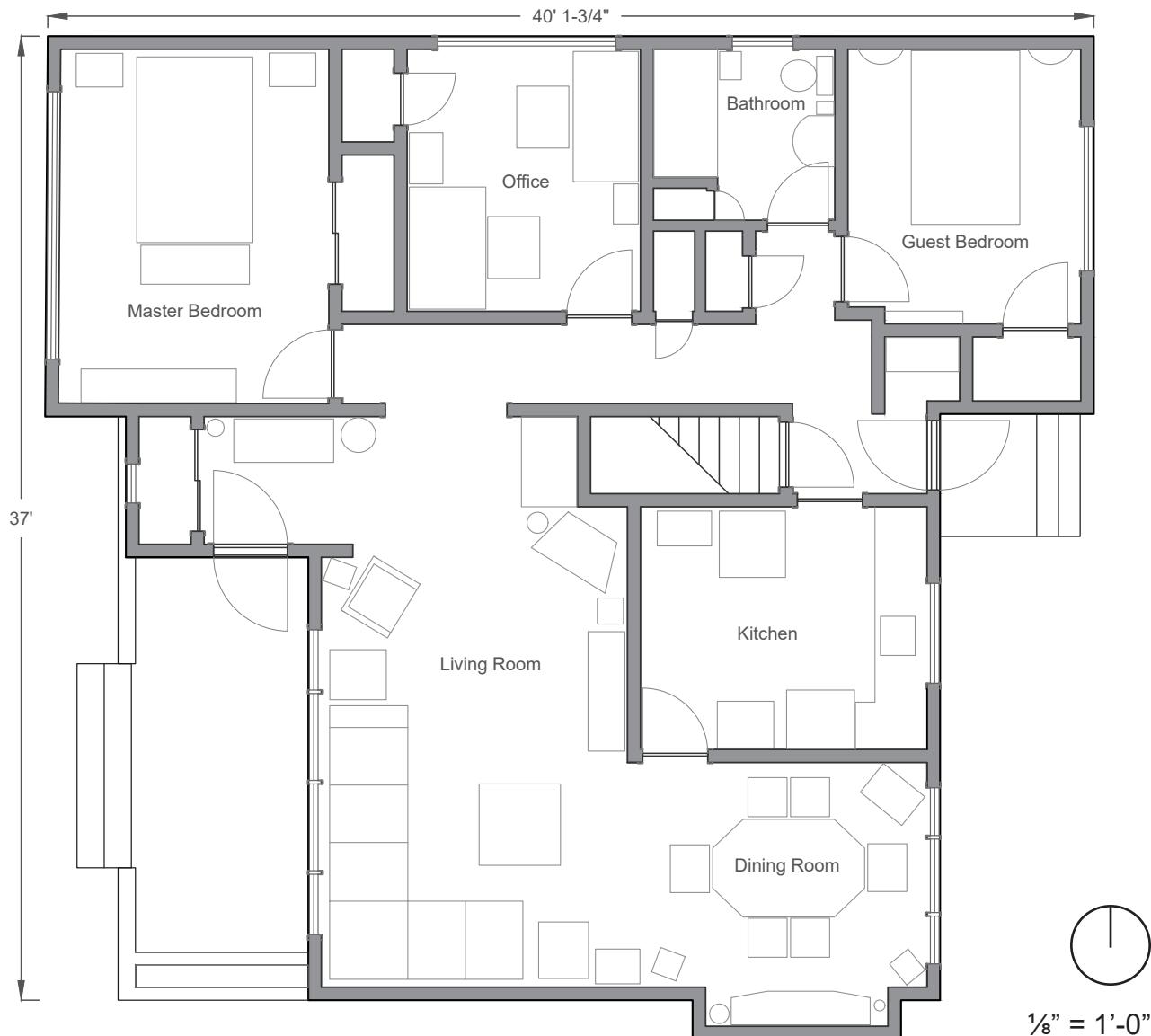
06_Design Precinct

01_Personal Work

Summer 2019 + Summer 2020

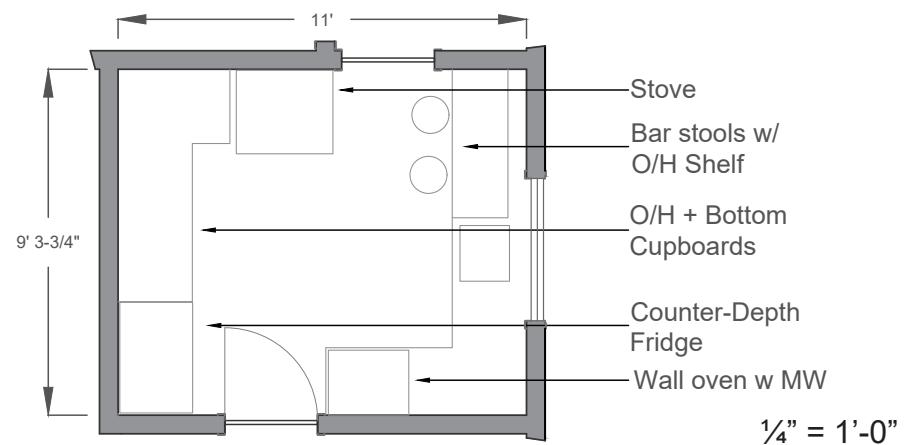
Photoshop | AutoCAD | Rhino3D

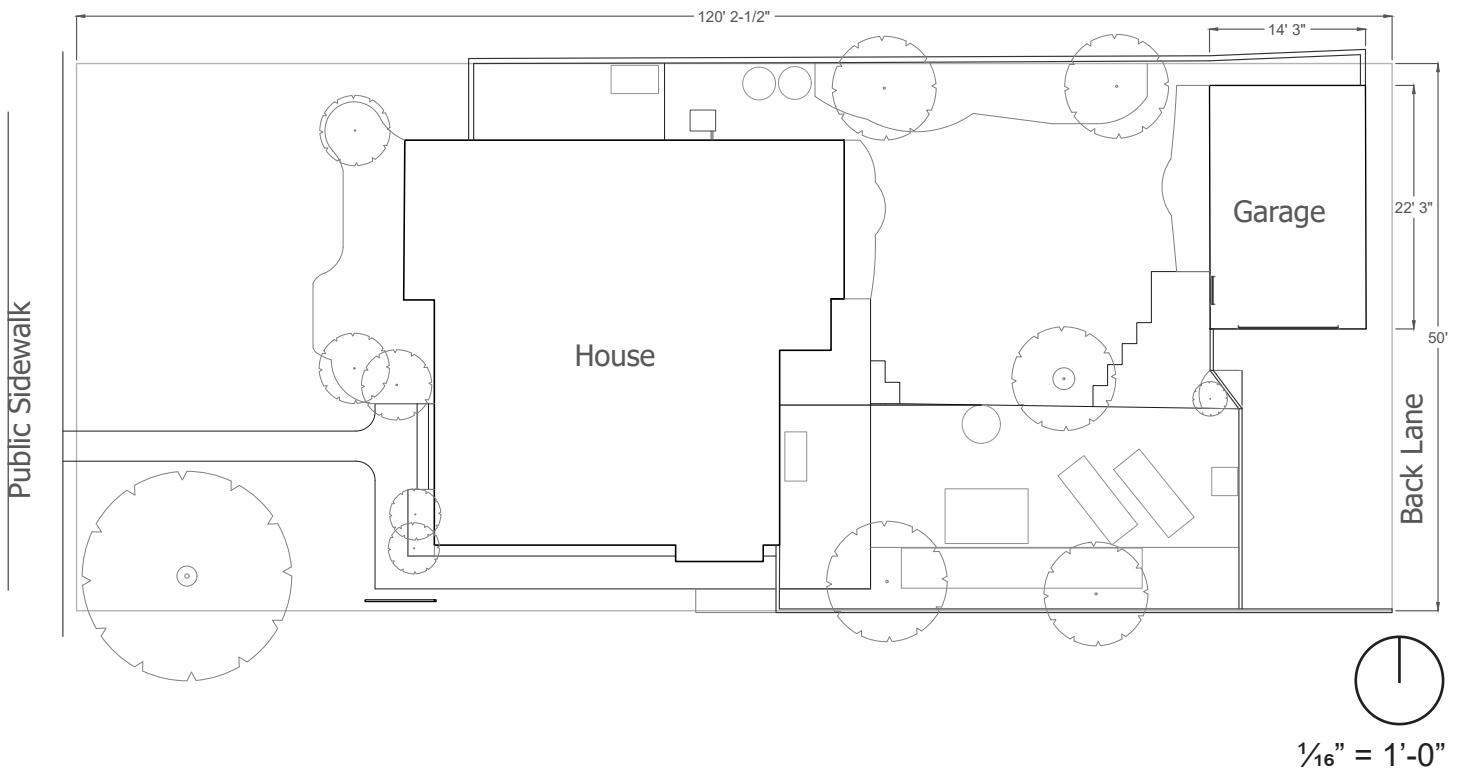
My personal work focuses on the translation and reimagining of my direct physical environments. This has allowed me to experiment with methods of representation, as well as contribute directly to the design process for several current projects within or adjacent to these environments.



Kitchen Renovation

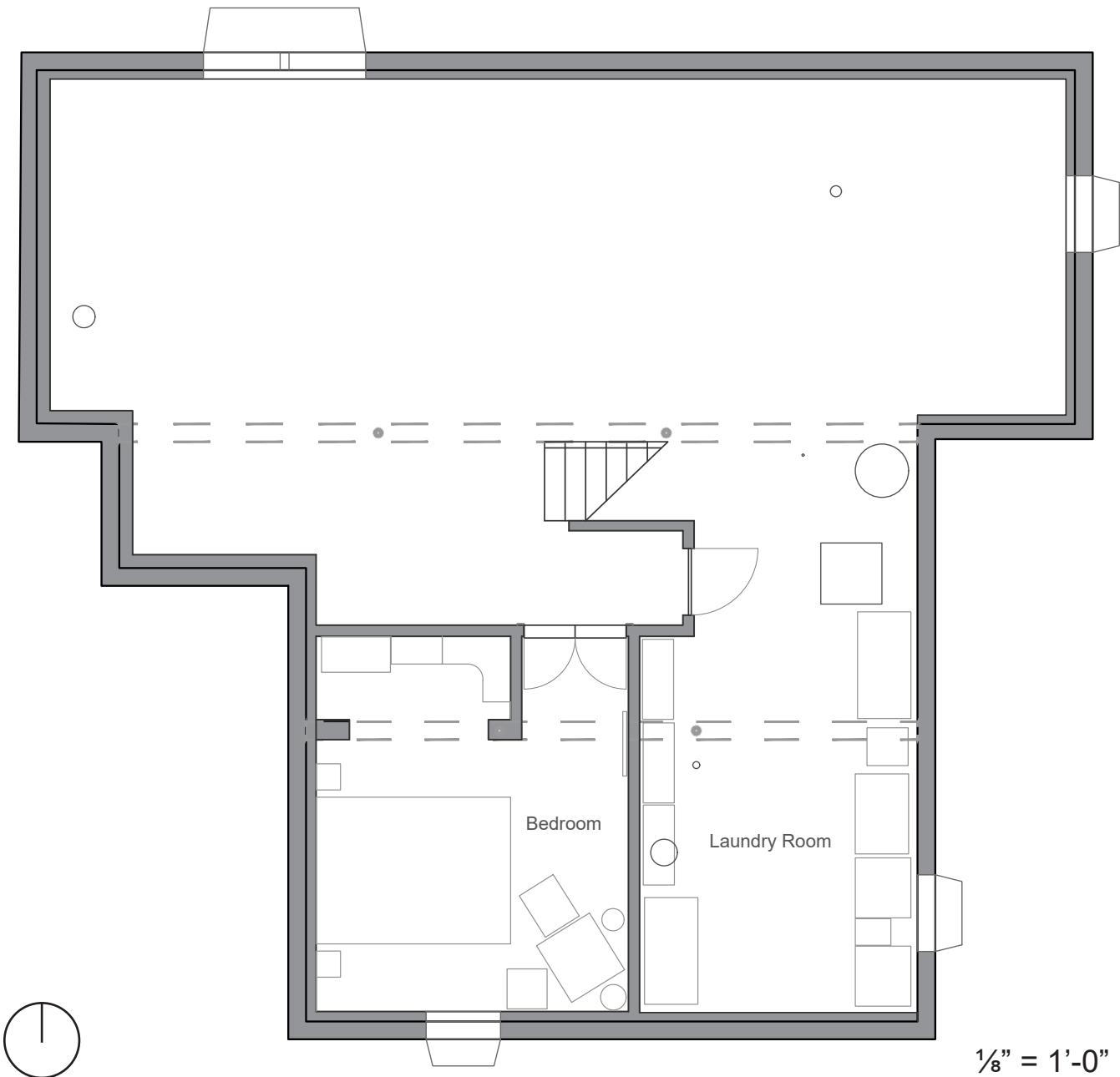
This was a small planning project that was done to test out possible layouts for a kitchen renovation within a house, based on actual measurements and client requests. Floor plan measured within 1/8" accuracy.





Existing Basement Plan

This plan drawing of the basement of the same property was created for testing layouts for future renovations.

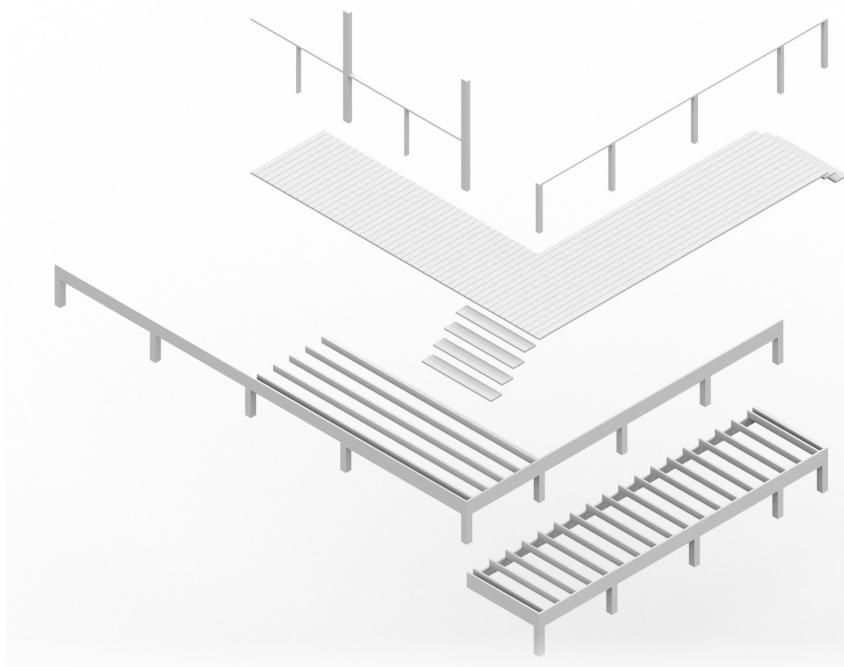


Basement Renovation Plan

This is just one example of a potential layout for the new entertainment space and bathroom.



Cottage Deck Extension



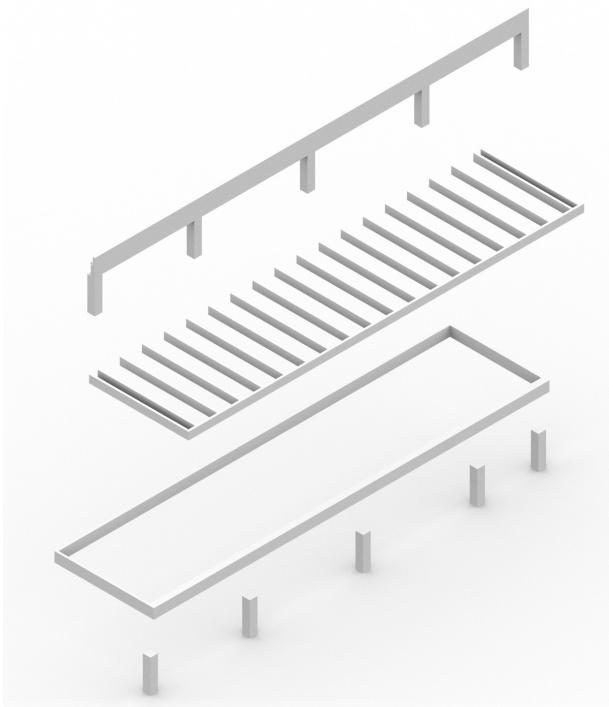
Located in the cottage area of Grand Beach Provincial Park, the original cottage was constructed in the 1970s. Two previous additions had been constructed in 1990 - 91 to the west and south sides of the cottage.

Prior to the construction of the original structure in the 1970s, another cottage known as the 'Nifty Inn' had existed in southeast corner of the lot, roughly where the existing shed is located.

This extension of the deck would add approximately 144 sq ft. of deck surface to the south side of the cottage. In addition to the extension, the existing deck area would be screened in.

Existing Conditions





Material Estimation

Beams

2 x 6 x 12' (2)
2 x 8 x 8' (4)
2 x 8 x 16' (4)

Posts and Footings

6 x 6 x 8' Treated Post (1)
18 x 18 x 4 Footing Pad (5)

Joists

2 x 6 x 12' (11)

Fasteners

2 x 6 Joist Hangers (19)
2 x 6 - 2 Joist Hangers (1)
 $\frac{1}{2}$ " x 5" Galv. Lag Screws (18)
 $\frac{1}{2}$ " Galv. Flat Washers (18)
2- $\frac{1}{2}$ " Deck Screws (± 1500)

Ledger

2 x 8 x 12' (1)
2 x 8 x 16' (1)

Railing

2 x 4 x 12' (4)

* Front Stairs
are pre-built

Back Stairs

2 Step Metal Stringer (3)
2 x 6 x 12' (2)
 $\frac{3}{8}$ " x 2- $\frac{1}{4}$ " Carridge Bolts (24)
 $\frac{3}{8}$ " Flat Washer (24)
 $\frac{3}{8}$ " Hex Nut (24)

Proposed Conditions



01_Personal Work

02_Operational Strategy

03_Recovering the Road

04_Share

05_Snow Garden

06_Design Precinct

02_Operational Strategy

Fall 2019 | EVLU3006 Studio 3

Individual Work | 3 Weeks

Leanne Muir + Dr. Richard Perron

Photoshop | Illustrator

Relating to the preceeding project, An Operational Metaphor, as well as our site from Dwelling In On The Road, we were required to apply our metaphor to our precinct. In this case my focus was on Conserving green space, Seeding existing properties to create green space, and Connecting them through potential green corridors within the neighbourhood.

Maintain

Within this collage, controlled forest fires are used as an example of maintenance, as these controlled fires help maintain the forest. The ideal, healthy forest is separate from the controlled forest fire. Within the metaphorical jar, while the controlled fire burns on the outside.



Protect

Ocean pollution is a major issue in today's world, but countless efforts have been made by both individuals and companies to clean up the ocean. This collage depicts the containment of several species so that their habitat may be thoroughly cleaned to protect it.





Save

The collage shows sustainability by selectively choosing to light certain buildings over others. This effort is made to save electricity so that it may be collected and efficiently dispersed when required. The electricity is collected via solar panels, shown within the medium of the jar.



Preserve

The melting of ice shelves is one of the most frequently aired segments on a news broadcast, which is what inspired this collage. This collage shows an environment which is slowly increasing in temperature, this process is what leads to the collapse of ice shelves, however, an ideal condition is separated, preserved within the jar.

Growing, Growing, Gone!

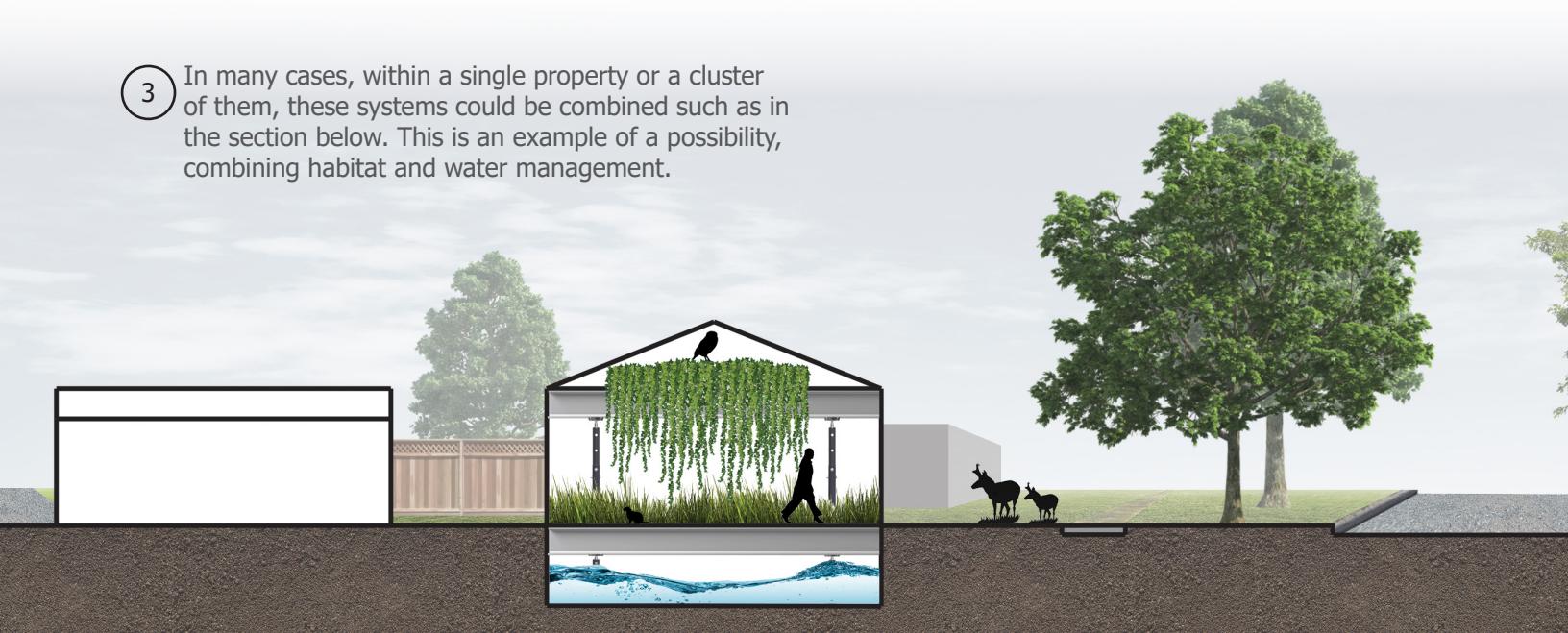
Lord Roberts Green Space Synthesis

The Concept

The idea of conserving green space within the precinct came from the application of an operational metaphor. The focus was put on green space during a study when it was realized that Lord Roberts has a lack of green space based on the overall area of the precinct. The goal is to increase the amount of green space by preserving it on existing lots that will thread through the precinct to connect the existing spaces.

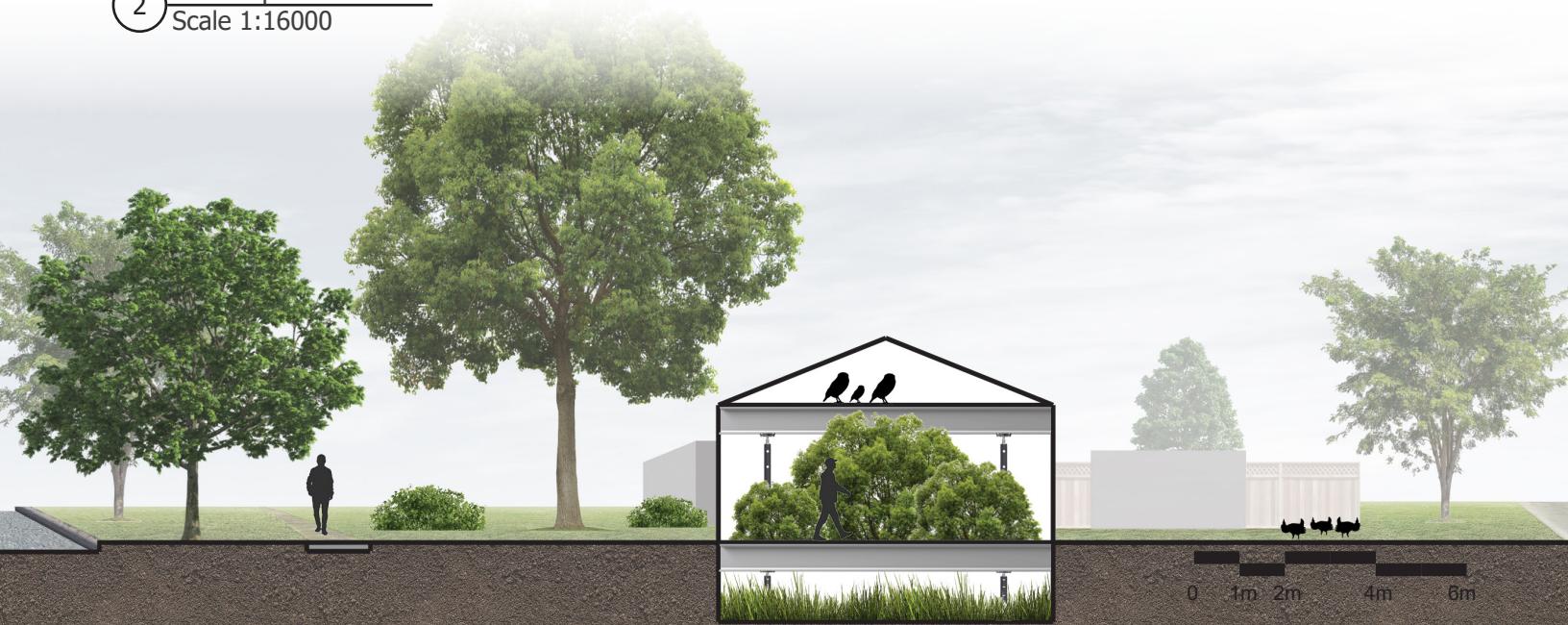


- 3 In many cases, within a single property or a cluster of them, these systems could be combined such as in the section below. This is an example of a possibility, combining habitat and water management.





2 Green Space Locations
Scale 1:16000





Solar



Geothermal



Compost

Several opportunities are opened up if the house is removed from the lot. Some options may include a community composting site, a solar garden or geothermal field, or a new neighbourhood playground.





Bike Repair



Butterfly Sanctuary

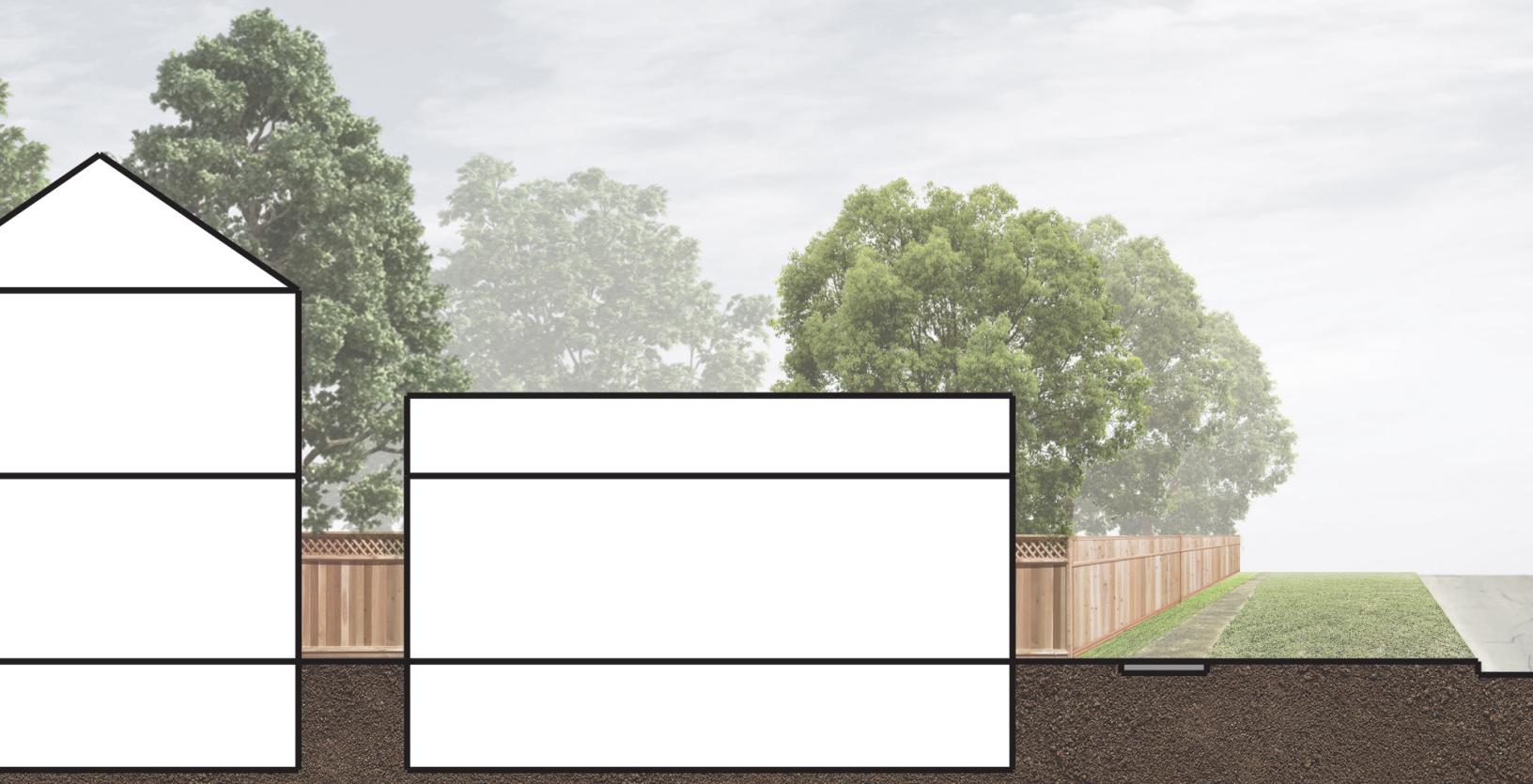


Arboretum



If the house is left on-site, the structure could be repurposed or left to be overgrown and reclaimed by nature. It could be turned into a butterfly sanctuary, a bike recycling and repair shop, or a plant museum showcase.

④ Adjacent properties could be used together to create a different scale for several systems. While the houses may not have a built connection, they could be connected within the larger network.



01_Personal Work

02_Operational Strategy

03_Recovering the Road

04_Share

05_Snow Garden

06_Design Precinct

03_Recovering the Road

Fall 2019 | EVLU3006 Studio 3

Individual Work | 2 Weeks

Leanne Muir + Dr. Richard Perron

Photoshop | Illustrator | Rhino3D

Recovering the Road builds off the preceeding project, An Operational Precinct Strategy, by applying the strategy that was explored in that project to our street site from Dwelling In On the Road. This project is a more specific application compared to the generalized application of a strategy from the preceeding project.

Urban Orchard

Berwick Place Orchard Integration



Precinct Context

① Ecological Context

These zones contain several different mediums and spaces which host several systems including; Habitats, Water Management, Active Transportation, and other Integrated Networks. In a few situations, there are green spaces that contain clusters, or groves, of these trees along with understory.

② Social Context

These zones combine ecological and community elements. Community Spaces are a major factor in these zones, but Active Transport and Integrated Networks are also present. In addition to the green space, these sites also include an actual structure or other infrastructure to support a variety of activities.



Site Context Parti Diagram

This parti diagram shows the sight-lines from the houses to the path and infiltration channel. The boundaries that are set by the houses and fences are shown here, which create a set public and private space condition.

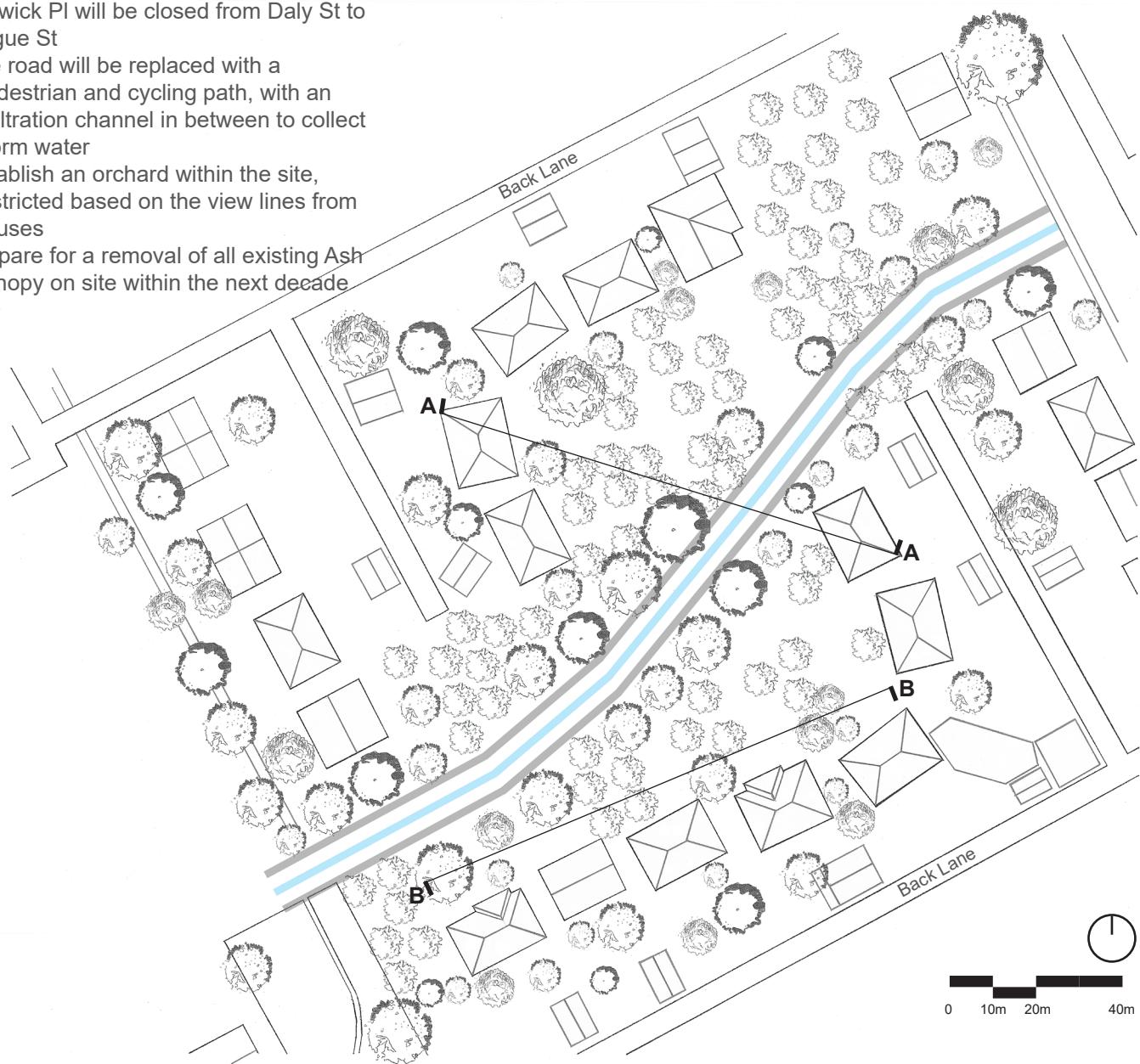
Spatial Context

- Private Space** - The space that contains people's homes and backyards, that is adjacent to the overall public space
- Public Space** - The space that contains both existing trees and trees from the orchard addition
- Central Circulation** - The space that contains the infiltration channel and paths where people circulate through the area

Proposed Site Condition

- Berwick Pl will be closed from Daly St to Argue St
- The road will be replaced with a pedestrian and cycling path, with an infiltration channel in between to collect storm water
- Establish an orchard within the site, restricted based on the view lines from houses
- Prepare for a removal of all existing Ash canopy on site within the next decade

Berwick Place Site Plan



A Cross-Path Section



ORCHARD





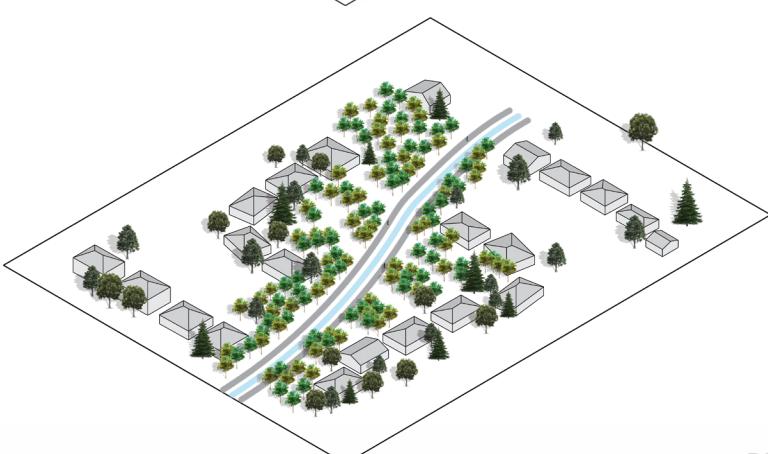
Existing Density Condition

- Existing canopy is made up of primarily of Green Ash, and some Black Ash
- The infestation of the Emerald Ash Borer is only a moderate concern, management programs are underway to try and prevent the spread



Approximately 10 Years After Planting Orchard

- The city has decided to remove Ash trees from the original canopy, new trees have been planted in the orchard
- The original canopy is now extremely sparse as the Emerald Ash Borer has decimated the population of ash trees within the urban canopy of Winnipeg



Approximately 25 Years After Planting Orchard

- The majority of Ash and Elm trees have been removed from the neighbourhood
- To maintain the density of the orchard, more fruit-bearing trees have been added to the site, some of the original trees have also been replaced

EXISTING CANOPY

INFILTRATION CHANNEL

PEDESTRIAN/CYCLIST PATH





Perspective from Path

Species within Orchard



Goodland Apple



Parkland Apple



Early Gold Pear

B Cross-View Section

0 1m 2m 4m 6m



FRAMED
SIGHT LINE

ORCHARD SECTION

FRAMED
SIGHT LINE

UTILITY
SUPPLY LINE



Perspective of Path and Infiltration Channel

Species at Risk on Site



Green Ash



Black Ash



White Elm



FRAMED
SIGHT LINE

ORCHARD SECTION

FRAMED
SIGHT LINE

EXISTING CANOPY

01_Personal Work

02_Operational Strategy

03_Recovering the Road

04_Share

05_Snow Garden

06_Design Precinct

04_Share

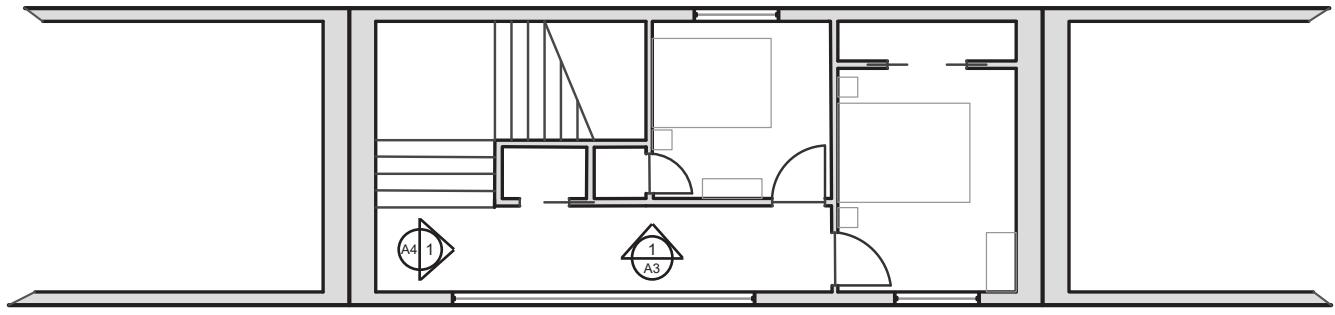
Winter 2019 | EVDS2900 Studio 2

Individual Work | 5 Weeks

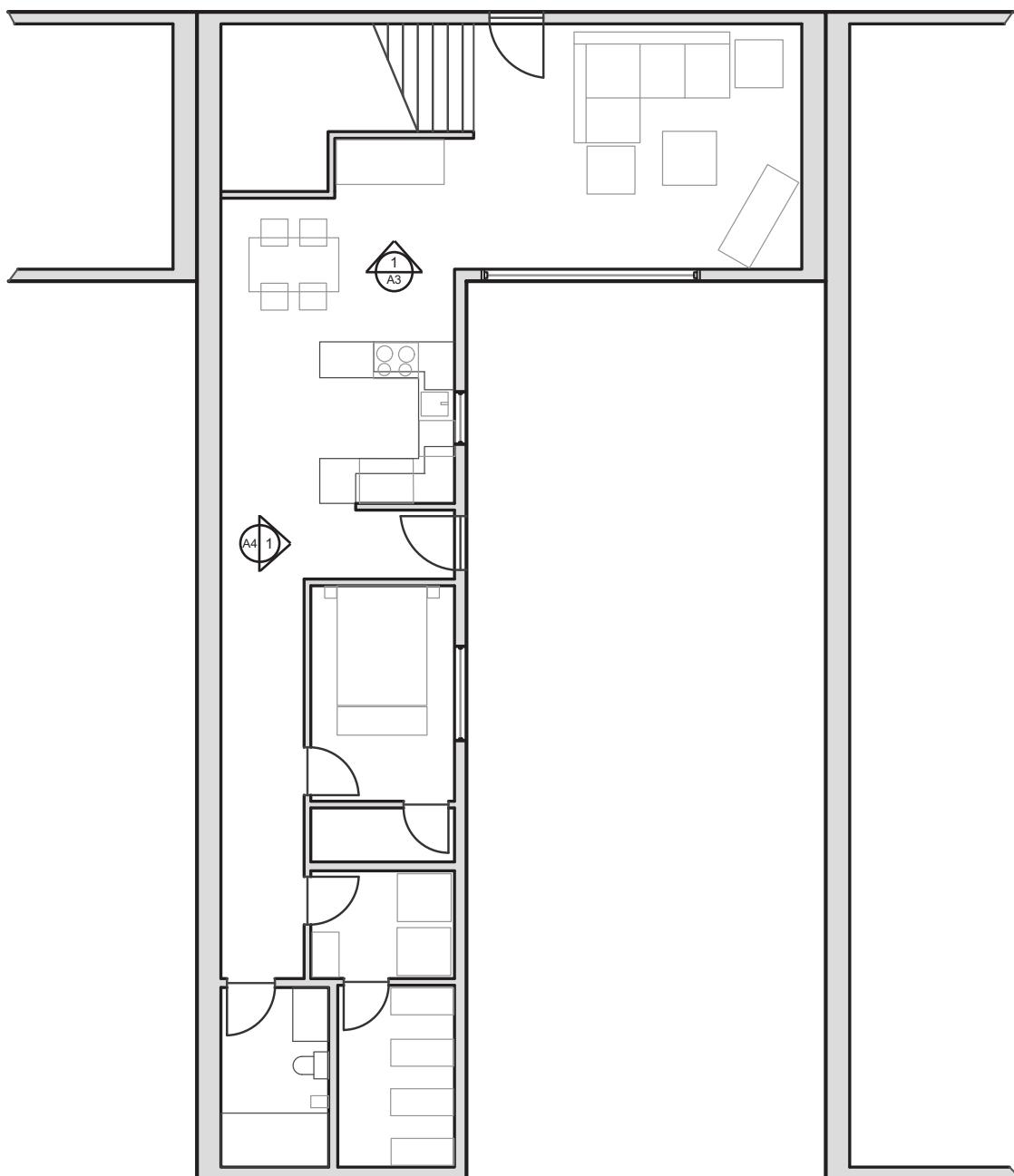
Prof. Mark Meagher

AutoCAD | Rhino3D

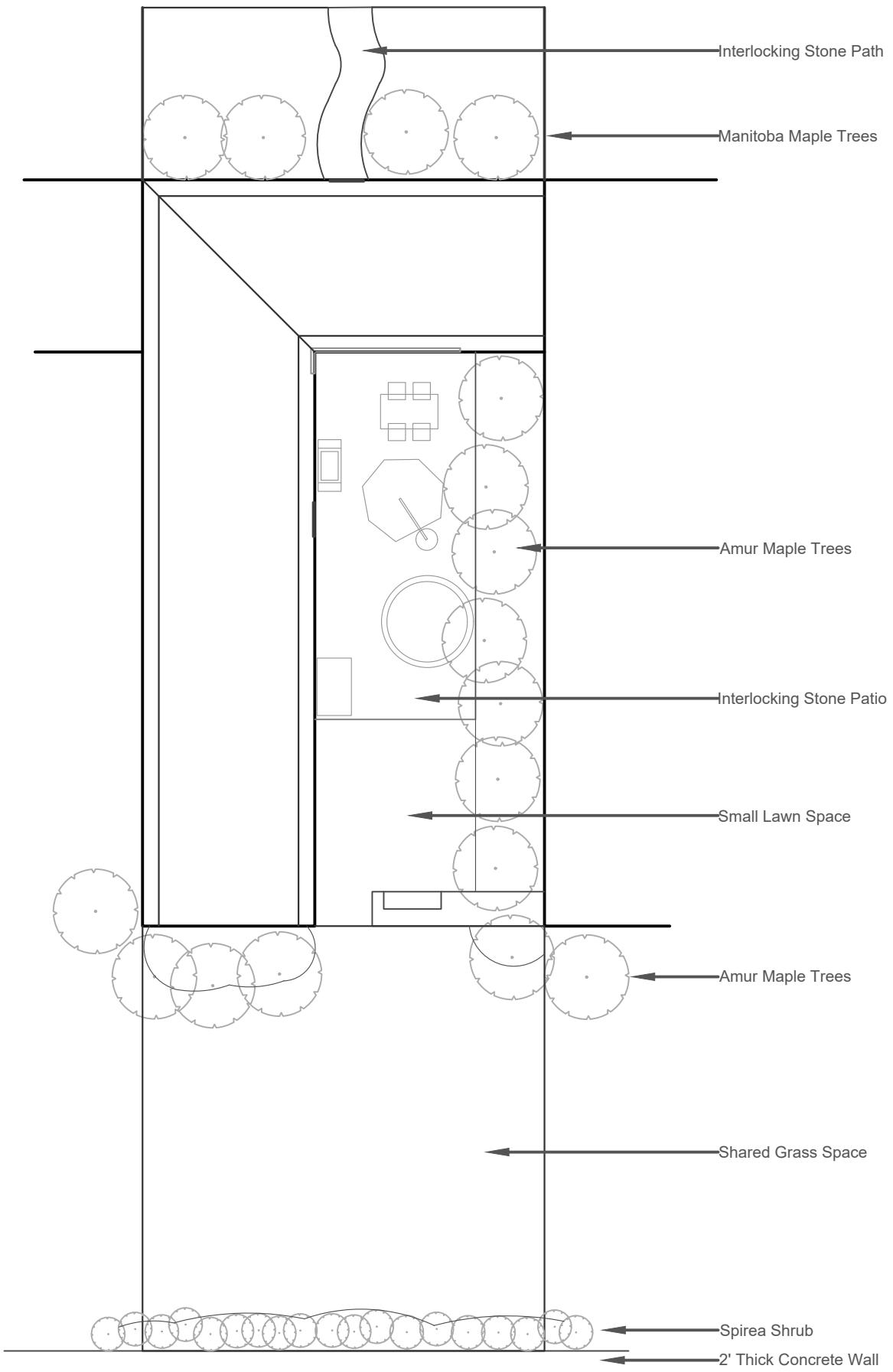
In our studio group, we started out with our character selection based on a movie of our choice. Once we established this, we were assigned a neighbourhood and picked a site within it. Finally, we were required to design a house based on a narrative that involved the characters previously mentioned.



1
A1 Second Story Floor Plan
Scale: $\frac{3}{32}$ " = 1'-0"



2
A1 First Story Floor Plan
Scale: $\frac{3}{32}$ " = 1'-0"



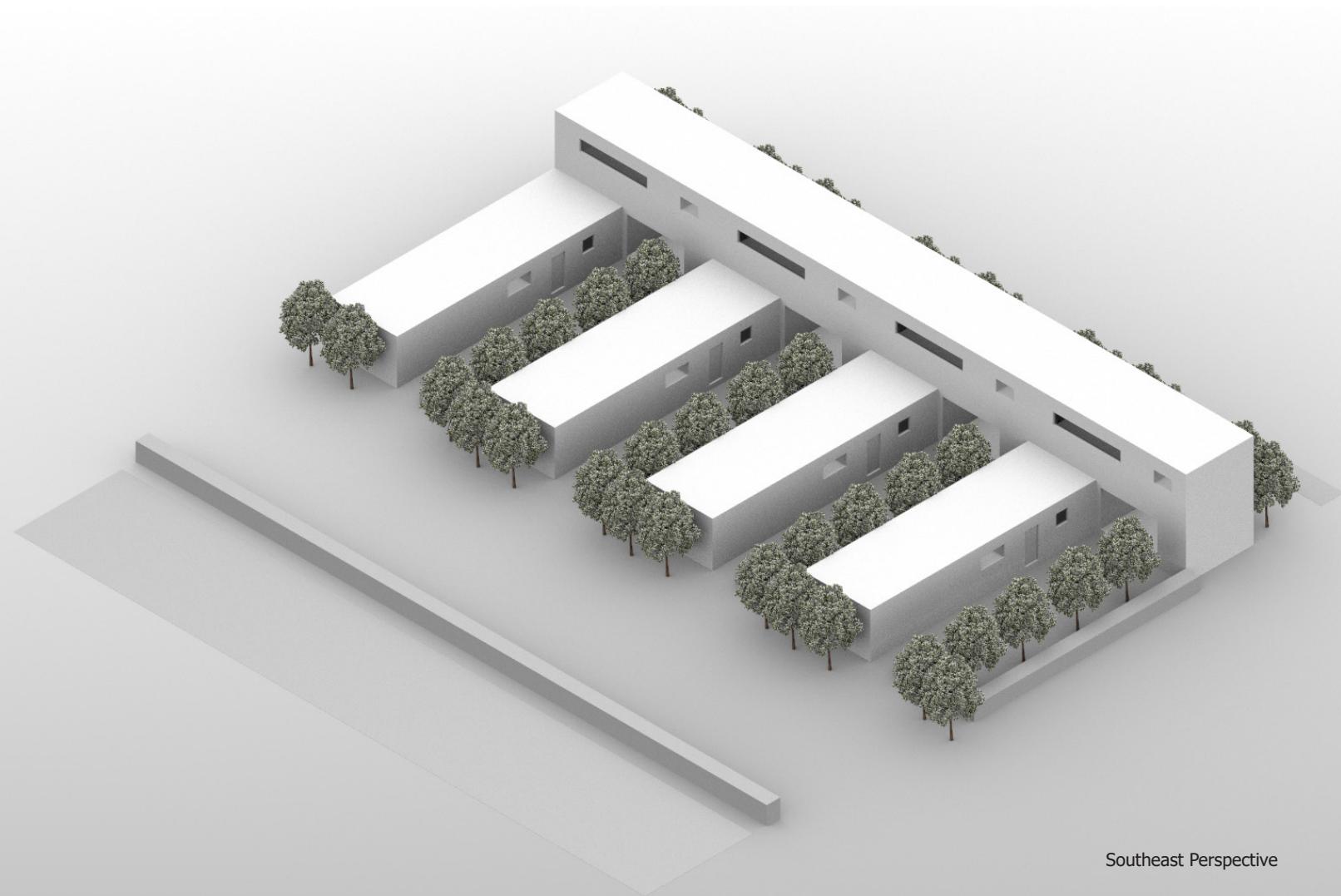
1
A2 Property Plan
Scale: $\frac{1}{8}$ " = 1'-0"



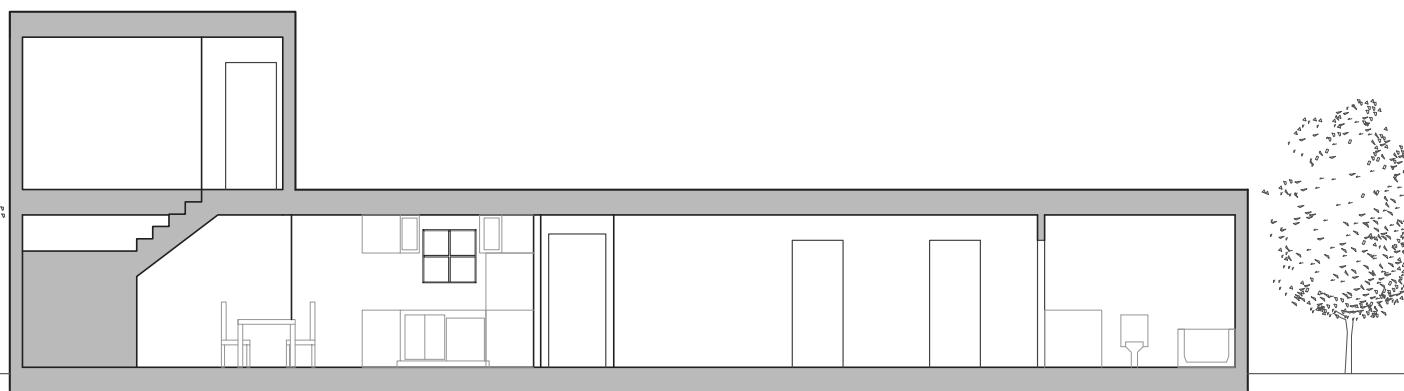
The clients for this project were based on a selection of characters from a movie. In this case, the clients were a three-member family, looking for an affordable single-family dwelling. With this in mind, a layout for the house that would be ideal for a family was created. The yard for the house was also made to have a private space and a shared space for the neighboring houses.



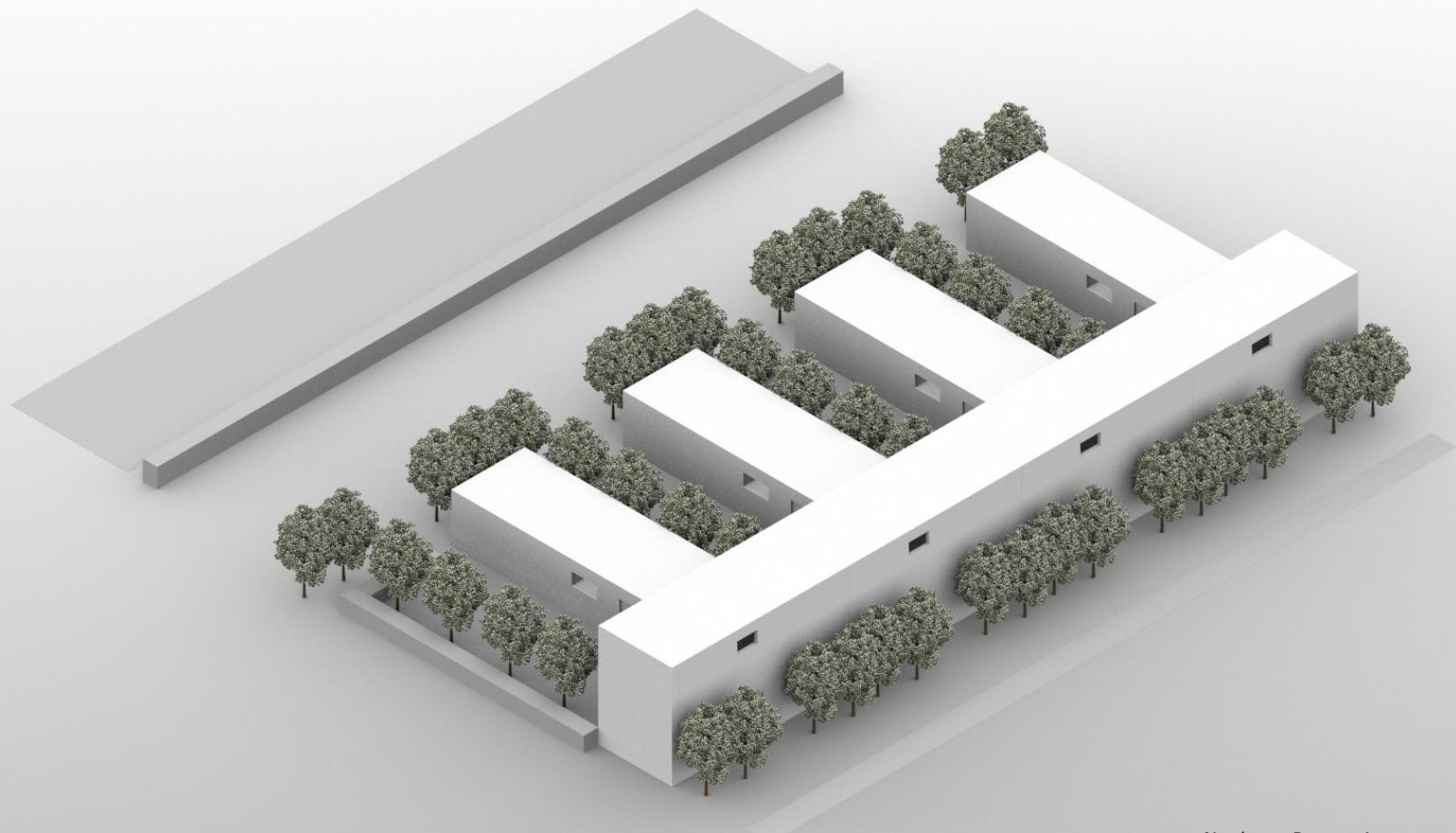
1 Northwest Section
A3 Scale: $\frac{3}{32}$ " = 1'-0"



Southeast Perspective



1
A4 Northeast Section
Scale: $\frac{3}{32}$ " = 1'-0"



Northeast Perspective

01_Personal Work

02_Operational Strategy

03_Recovering the Road

04_Share

05_Snow Garden

06_Design Precinct

05_Snow Garden

Winter 2020 | EVLU3008 Studio 4

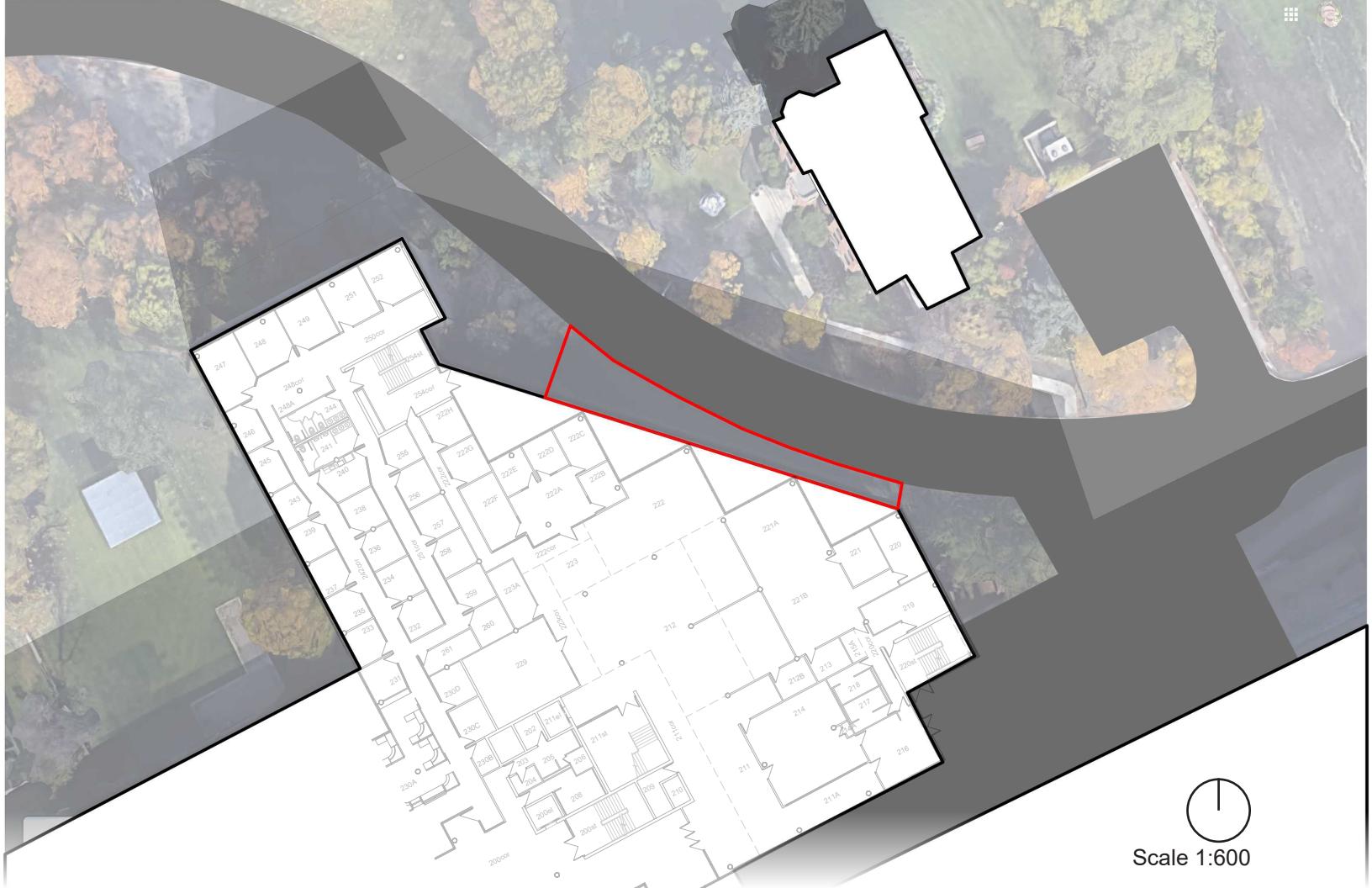
Collaborative Work | 4 Weeks

Prof. Brenda Brown

AutoCAD | Rhino3D | Illustrator

Photoshop | Modelling

This project began with a rigorous observation and analysis of the interior and exterior environments of our chosen site. Upon constructing a model of the interior portion of the site, a separate exterior portion was added to test layouts of our intervention. Following this, studio reviews were done and a vote was conducted to see which projects would be built. This project was chosen within the first round and was successfully constructed within sixteen hours by a team of three people including myself.



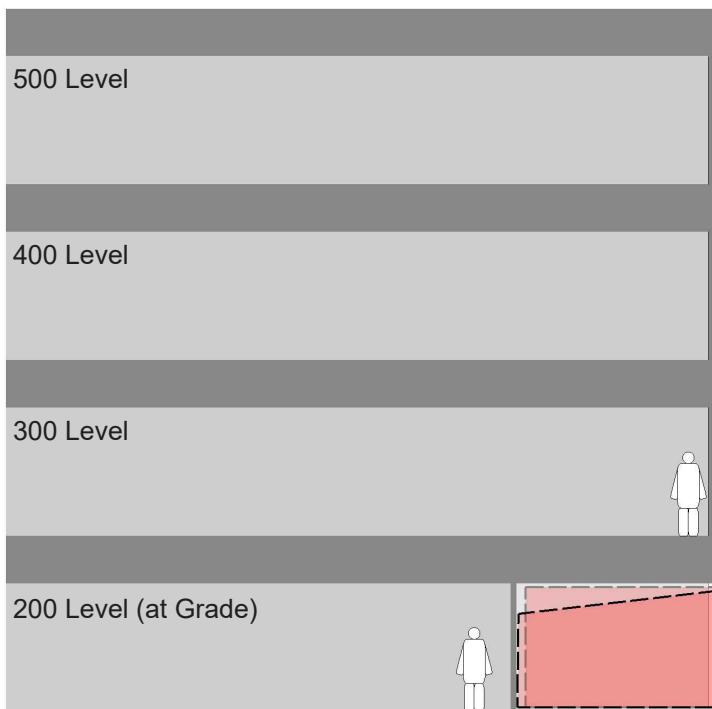
Scale 1:600

At Ground-Level:

- Desks are oriented parallel with the windows to allow for a view outside
- Ground level of library is fairly open
- Windows go from floor to ceiling for an unobstructed view

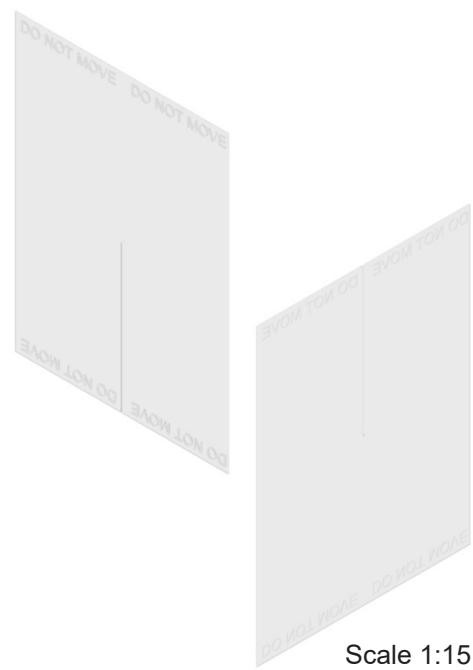
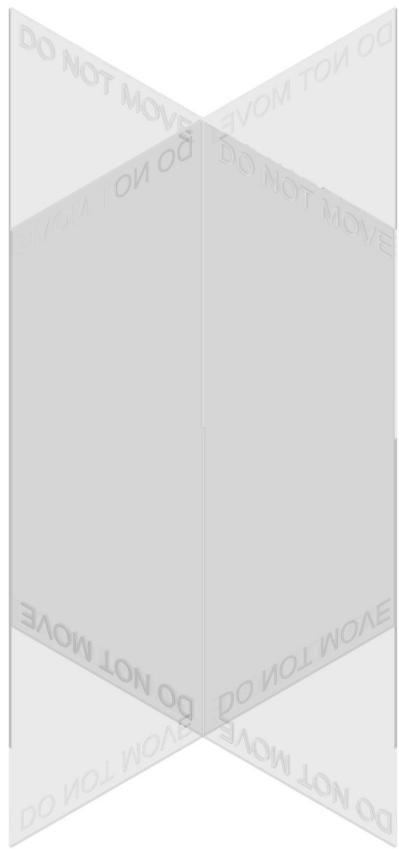
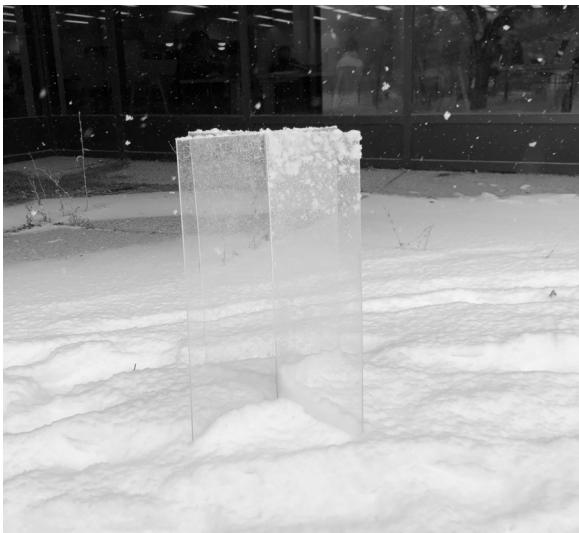
At Road-Level:

- The top of the curb lines up with the bottom of the passenger-side window
- When turning down the winding road, the site can also be viewed nearly head-on, instead of just from the side



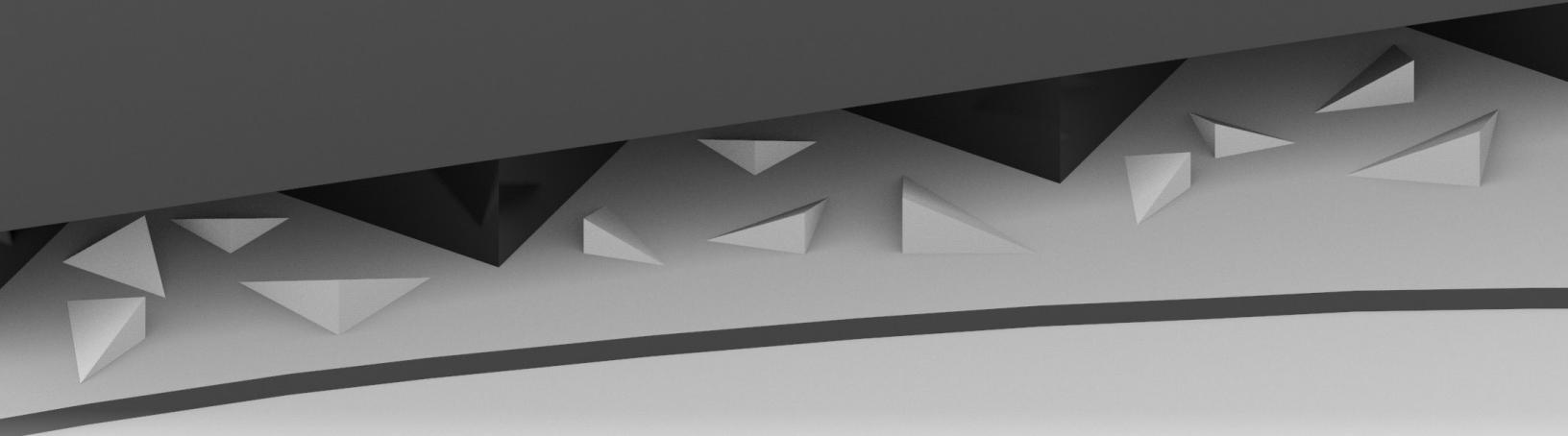
Machray Hall

Dysart Road

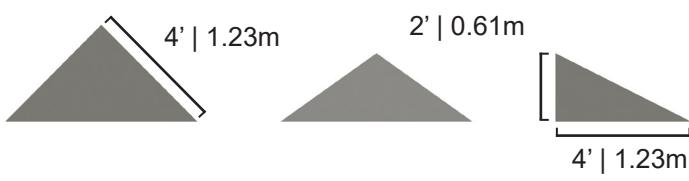


Scale 1:5

Scale 1:15



Measurements



Construction Plan

Timeline

Snow Gathering - 3 Hours (Total)
Mold Packing - 1 Hour (Individual)
Mold Setting - 1 Hour (Individual)

Total Time for Construction:
Approximately 13 Hours

Required Number of People

(2 Individuals + Myself)
1 Shoveler
1 Packer

Required Materials

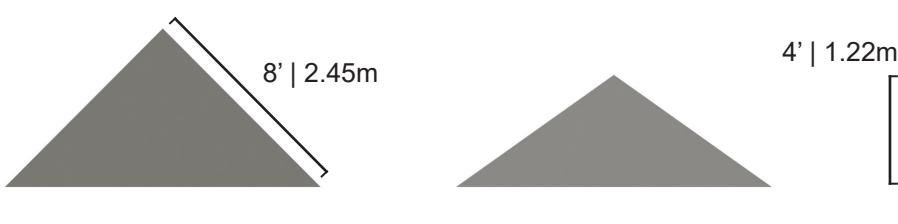
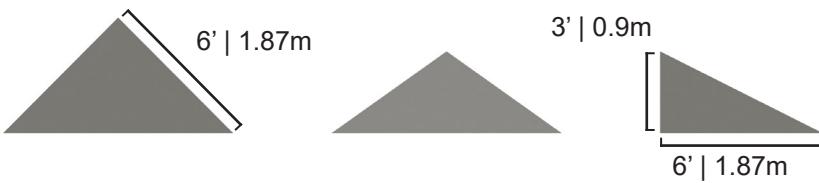
1-1/2 Rigid Insulation 4' x 8' Sheet (4)
1/2" Plywood, 1' x 1' Piece (2)
Constructed Packer (2)

2 Shovels

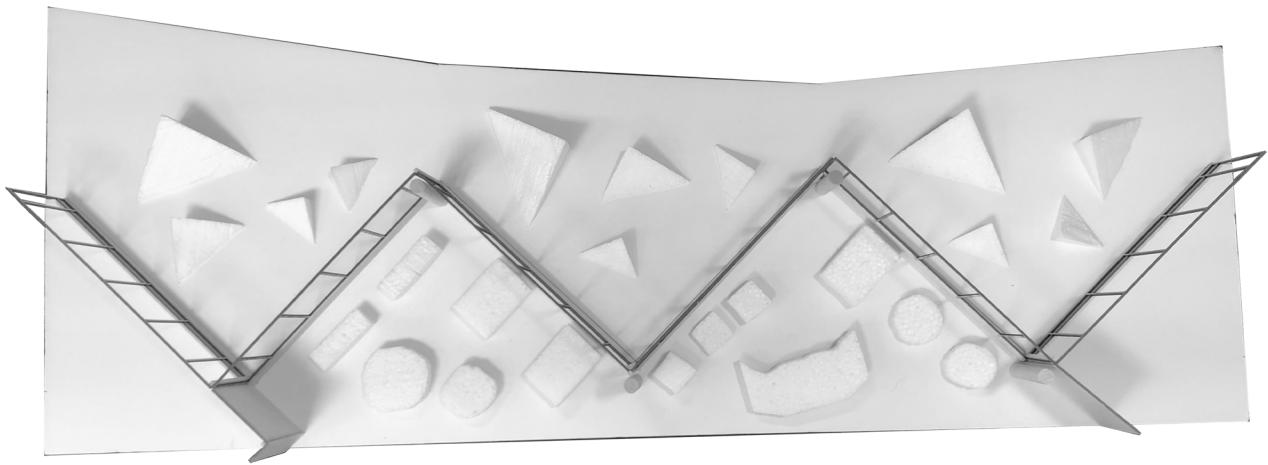
Arrangement

2' x 4' Shape (5.3 cu.ft)
3' x 6' Shape (18.0 cu.ft)
4' x 8' Shape (42.7 cu.ft)

Total Volume of Snow
Approximately 213.9 Cubic Ft



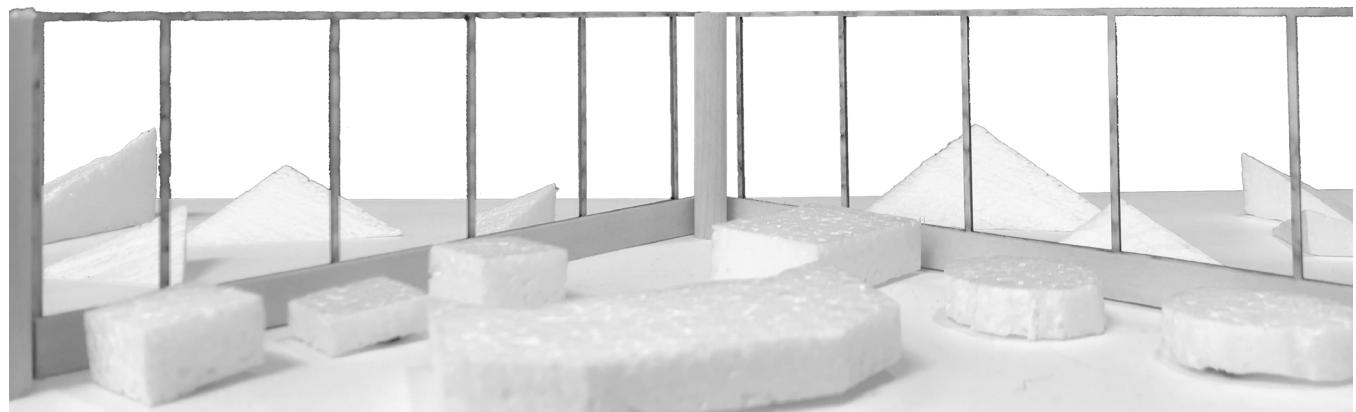
Foam Working Model - Final Layout



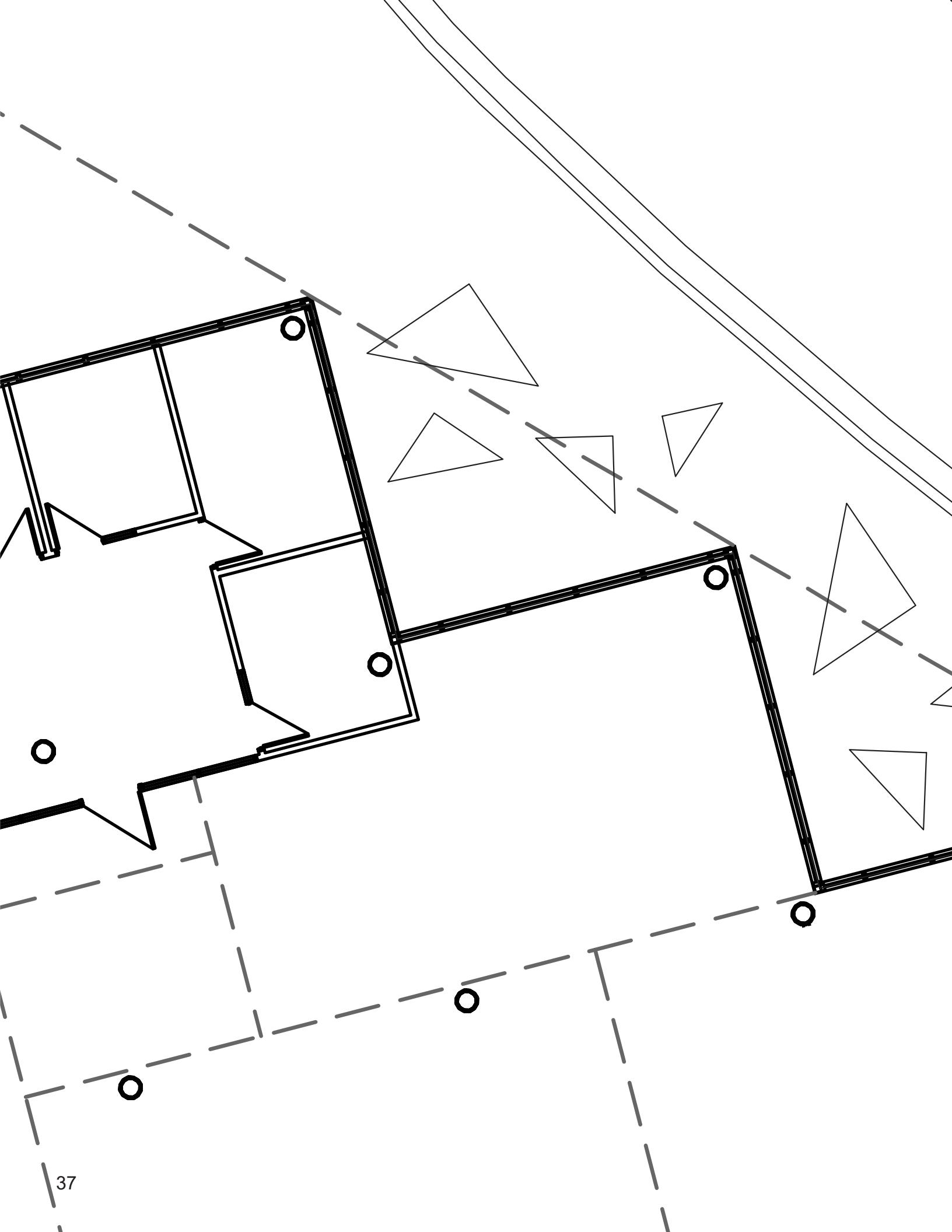
Plan view of foam model (1:40)

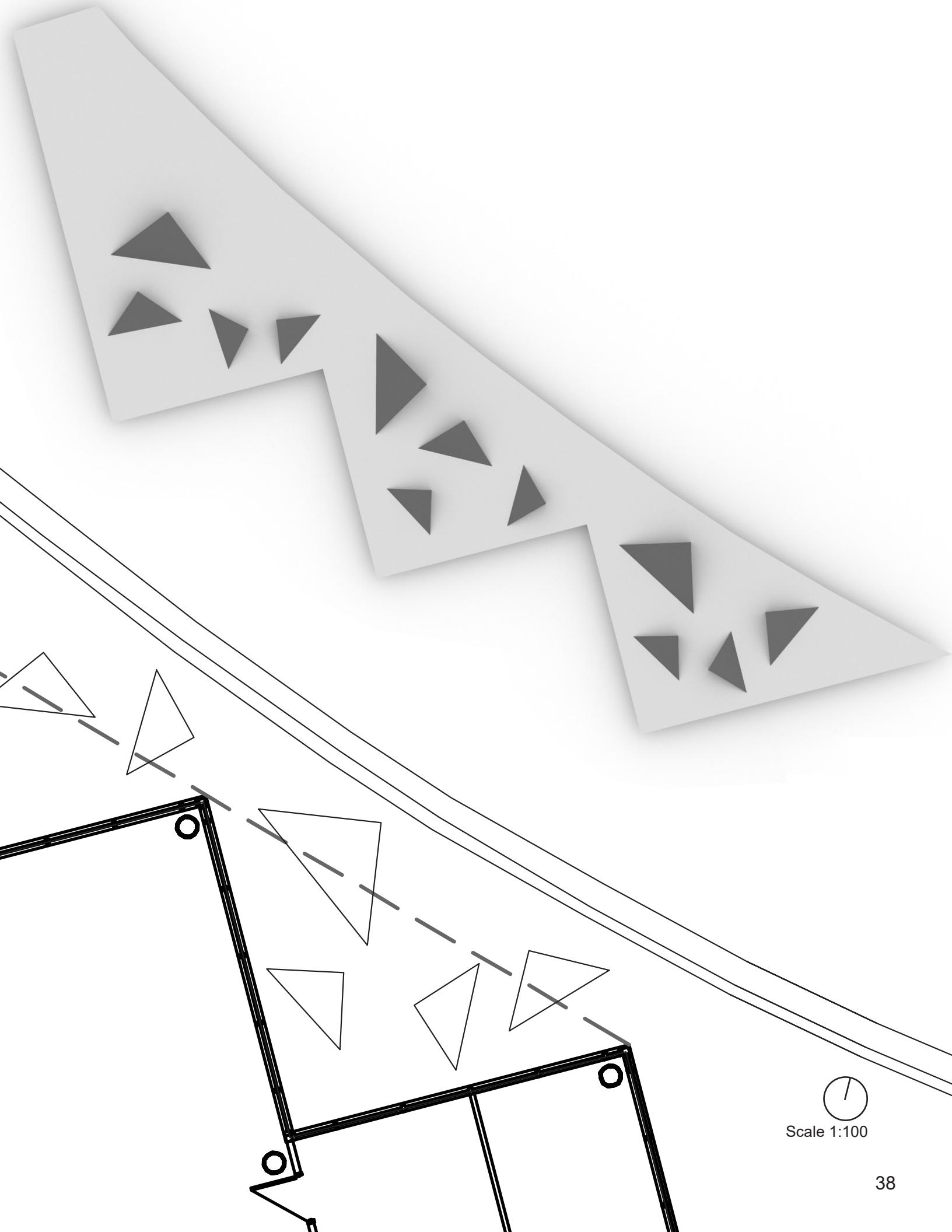


Interior view looking out (Left half)



Interior view looking out (Right half)





Scale 1:100





01_Personal Work

02_Operational Strategy

03_Recovering the Road

04_Share

05_Snow Garden

06_Design Precinct

06_Design Precinct

Winter 2020 | EVLU3008 Studio 4

Individual Work | 5 Weeks

Prof. Brenda Brown

Photoshop | Illustrator

Rhino3D | Modelling

The purpose of this project was to enhance various characteristics of the Faculty of Architecture including social, ecological and aesthetic functions, forms, changes and how to integrate them into the campus context.

An initial site inventory was created by everyone in the studio, followed by several rounds of sketch model proposals with each individual choosing one to pursue in greater detail.

Architecture II



This portion of the landscape is intended to have a higher density canopy, this will also take longer to grow in over time

This area of the topography dips down to allow the site to retain more water

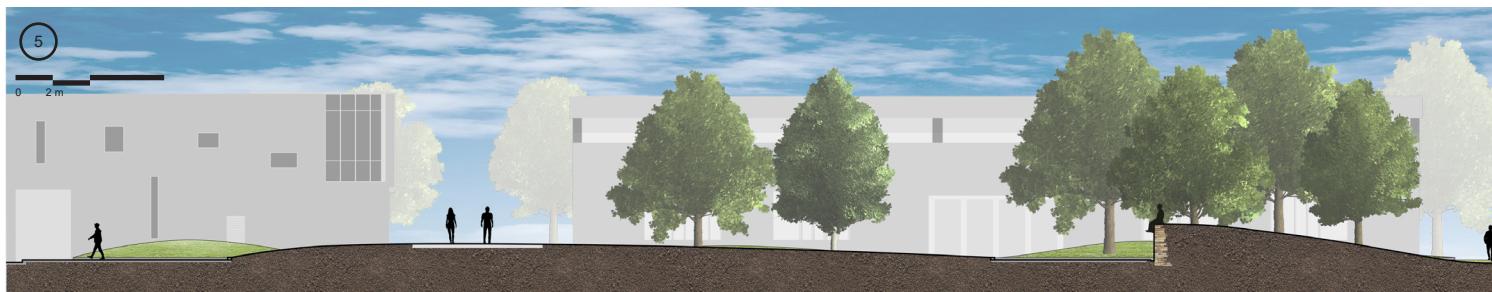
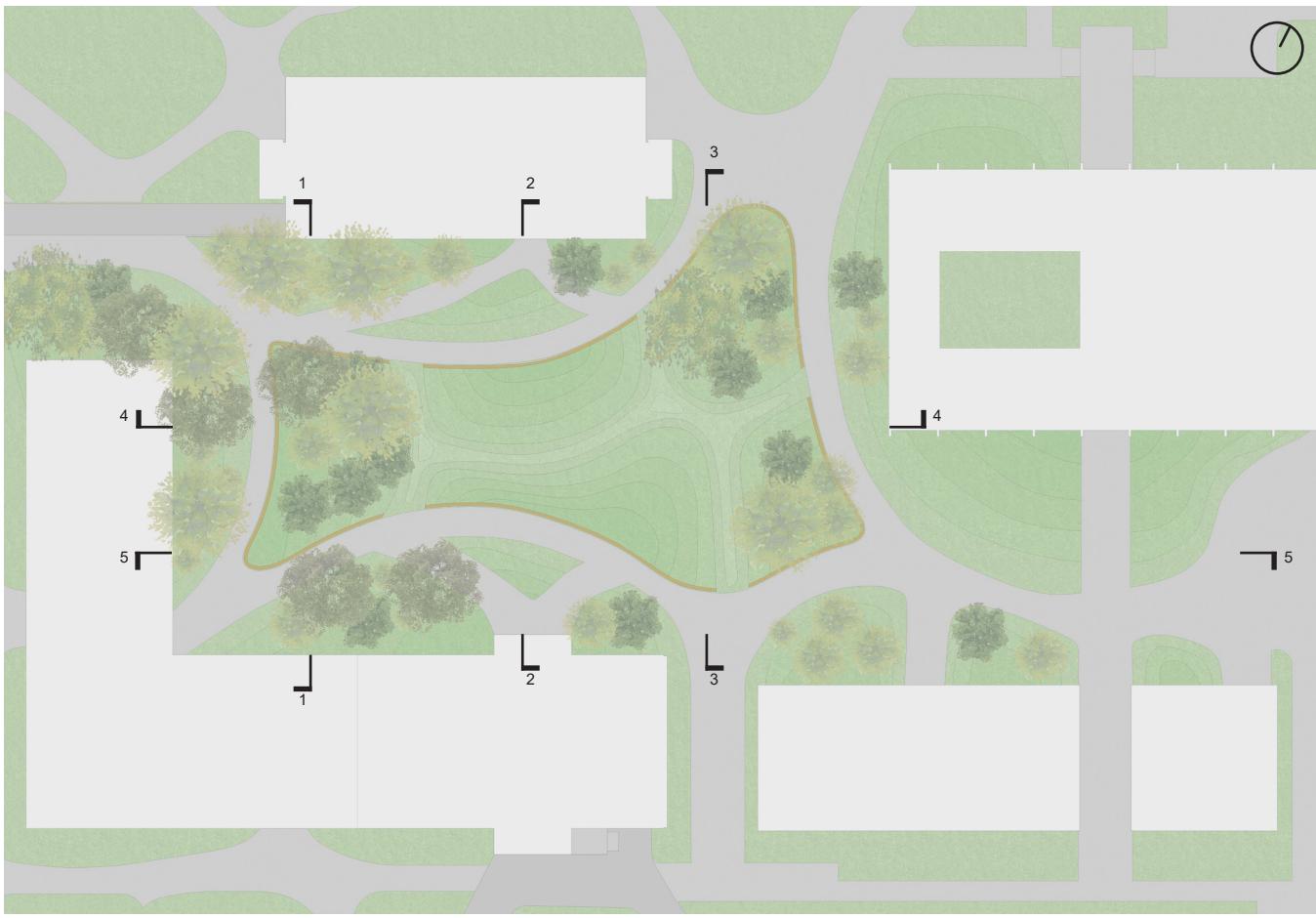
Central portion of topographic area is left clear of trees to provide a different experience



The approach to the John A. Russell Building is framed and linked to the central space through the trees

The entrance to the John A. Russell Building is framed by the Gallery and C.A.S.T.

Vehicle access from Dafoe Road is maintained

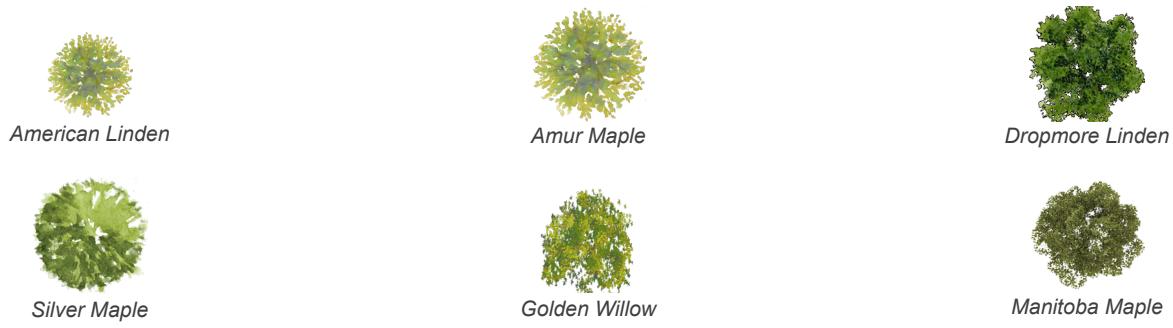




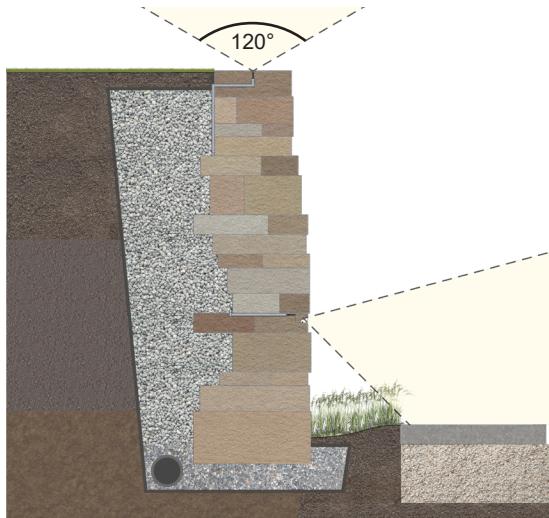
Tree Species Information

Common Name	Scientific Name	Soil Type	Max. Height	Max. Canopy Size	Seasonal Gradient
American Linden (Basswood)	<i>Tilia americana</i>	Well-drained, Moist	80' (24.4 m)	40' (12.2 m)	
Amur Maple	<i>Acer ginnala</i>	Well-drained, Moist	20' (6.1 m)	18' (5.5 m)	
Dropmore Linden	<i>Tilia x flavescens 'Dropmore'</i>	Well-drained, Moist	25' (7.6 m)	18' (5.5 m)	
Golden Willow	<i>Salix alba 'Vitellina'</i>	Moist, Any	50' (15.2 m)	40' (12.2 m)	
Manitoba Maple (Boxelder)	<i>Acer negundo</i>	Moist, Deep	45' (13.7 m)	20' (6.1 m)	
Silver Maple	<i>Acer saccharinum</i>	Well-drained, Moist	80' (24.4 m)	15' (4.6 m)	

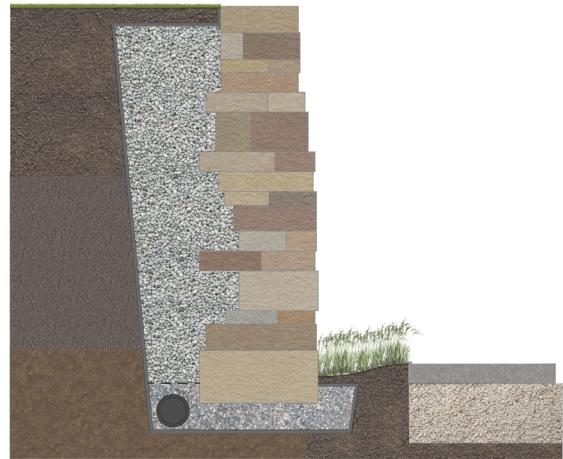
Site Planting Plan



Detail Diagrams



- Flexfire LEDs (Dynamic Tunable) would be used within the retaining walls to provide under-lighting to the trees along curves, and to certain stretches of pathway
- The LEDs have a beam angle of 120° which is similar to a Wide Flood
- This particular type of LED is IP65 graded and would run at 4200K



- A standard form of drainage would be used for the retaining walls specifically
- A strip of grass would be allowed to grow between the wall and pathway which will allow for water flow off the pathway
- While spring time may cause the site to be more heavily saturated, the main portion of lawn will be allowed to retain water

Site Lighting Plan





This space is intended to be a recreational and relaxation area for everyone within the faculty to occupy. The varying canopy conditions afford different possibilities for programming. It also offers a learning opportunity within the various topographic elements within the landscape stream.





Perspective facing North



Perspective facing South



Perspective facing Northeast



Perspective facing Southwest