



## **Undergraduate Portfolio**

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Benjamin Boswick  
Environmental Design Landscape + Urbanism  
Selected Works

## Contents

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01_	Design Precinct	01
02_	Operational Strategy	09
03_	Reconcile	15
04_	Revera Garden Revival	25
05_	Snow Garden	31
06_	Hidden Communities	37
07_	Miscellaneous Work	41

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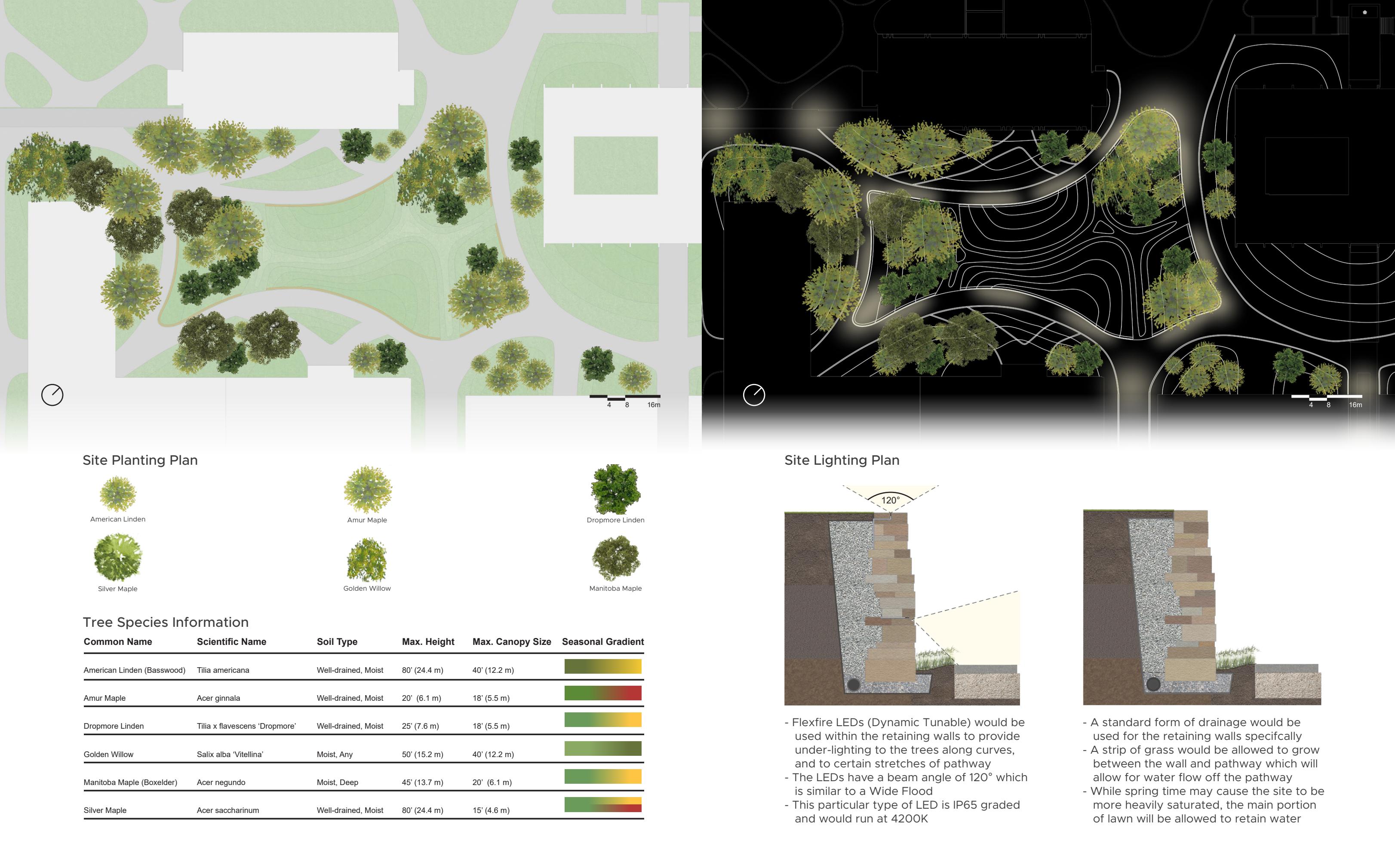
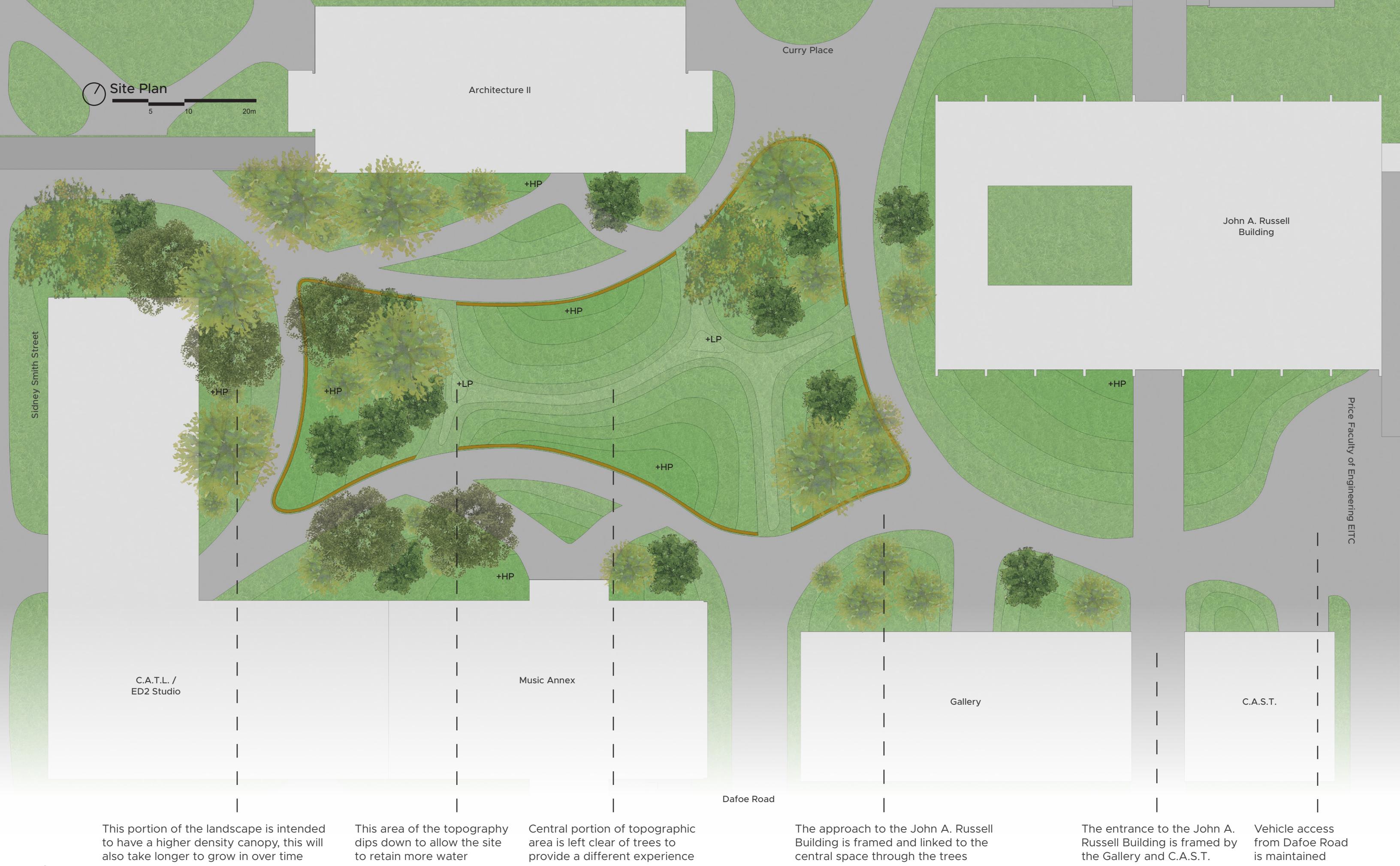
## **Design Precinct**

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**Term** Winter 2020 **Class** EVLU 3008 Studio 4  
**Instructor(s)** Brenda Brown **Duration** 6 Weeks  
**Programs** Modelling, Photoshop, Illustrator + Rhino3D

The premise of this project was to design a new “precinct” for the Faculty of Architecture at the University of Manitoba, with input provided from members of the faculty, staff, and students. With this data in mind, sketch models were created to explore the space further. This particular layout was inspired by a plasticine and cardboard model, with the final model being constructed out of Architectural Butter Board and Preserved Reindeer Moss.

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### Sectional Perspectives

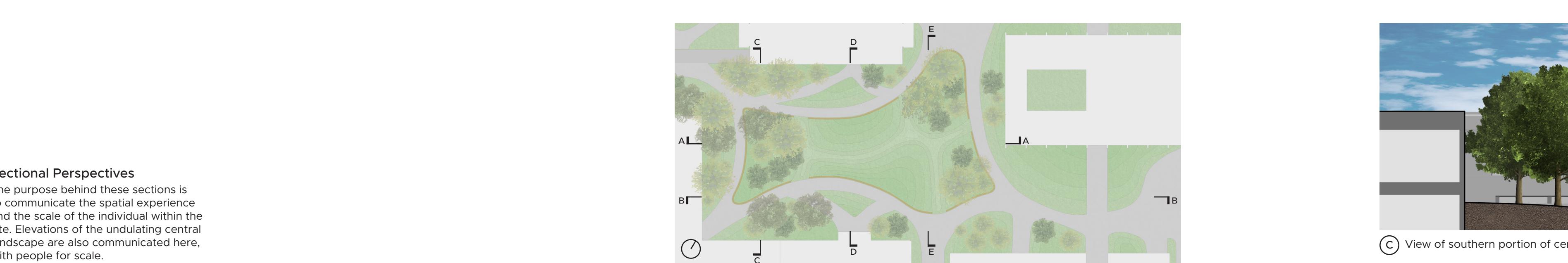
The purpose behind these sections is to communicate the spatial experience and the scale of the individual within the site. Elevations of the undulating central landscape are also communicated here, with people for scale.



(A) View facing north-west through site



(B) View facing south-east through site



(C) View of southern portion of central topography space



(D) View of central topography space with retaining walls



(E) View of northern portion of central topography space



Perspective facing North



Perspective facing Northeast



Perspective facing South



Perspective facing Southwest

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## Operational Strategy

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**Term** Fall 2019 **Class** EVLU 3006 Studio 3

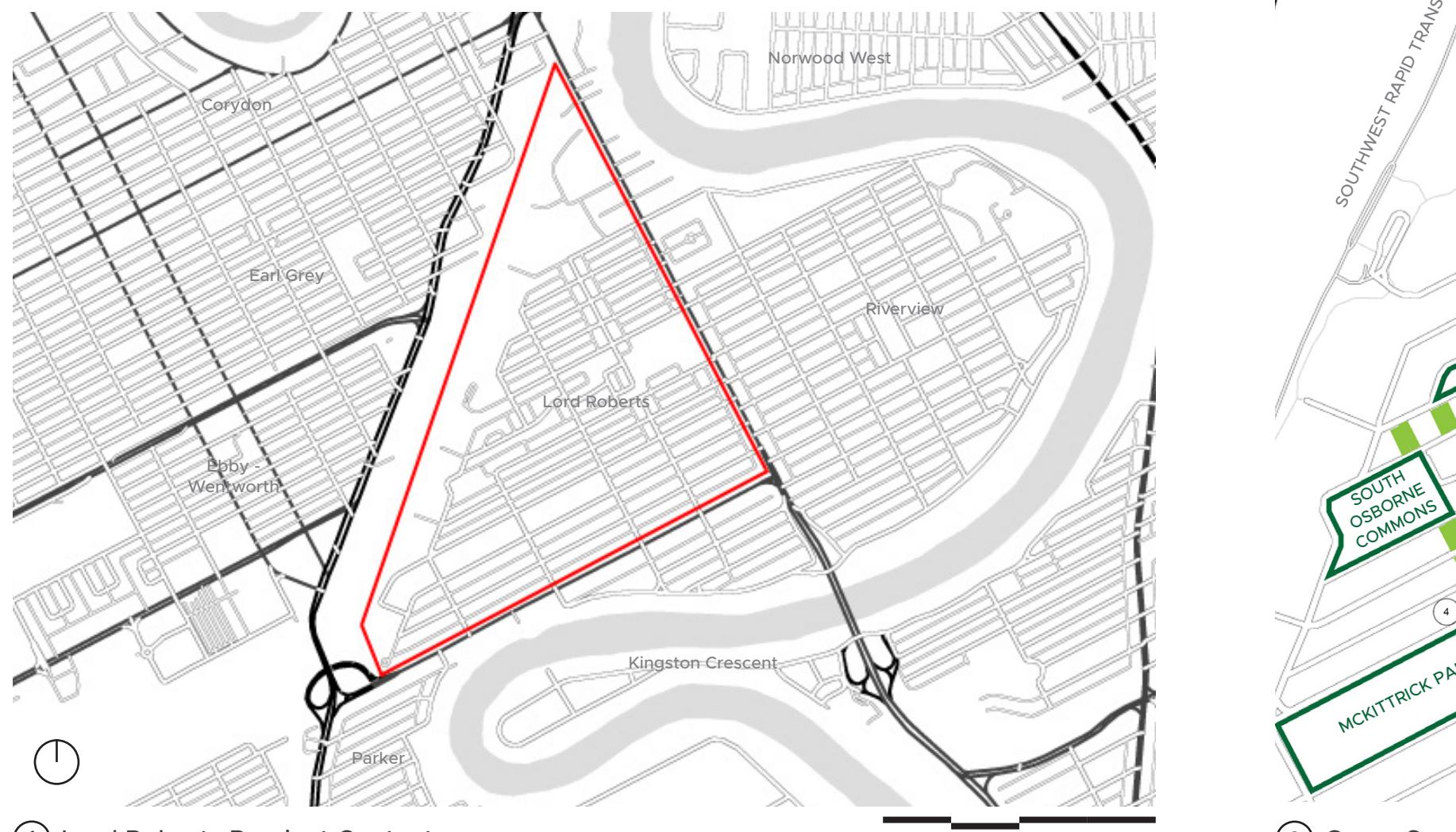
**Instructor(s)** Leanne Muir + Dr. Richard Perron

**Duration** 3 Weeks **Programs** Photoshop + Illustrator

This section is an amalgamation of two consecutive projects which involved exploring different environmental strategies and applying them to an urban context. The first portion involves the idea of conserving green space within the precinct. The focus was put on the preservation of green space 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. The second portion involves a similar idea but applied to a whole block within the precinct. The site for this part of the project was Berwick Place, which had a unique street shape, unlike the surrounding gridded streets. In this case, the street was turned into a large apple orchard, which was meant to bring out community involvement and strengthen Winnipeg's urban forest.

## Growing, Growing, Gone!

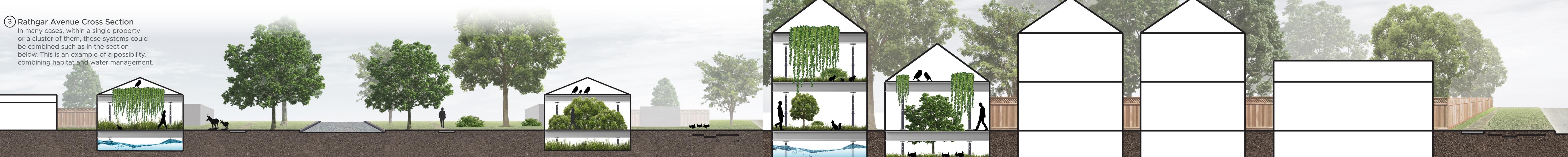
Lord Roberts Green Space Synthesis



① Lord Roberts Precinct Context

### ③ Rathgar Avenue Cross Section

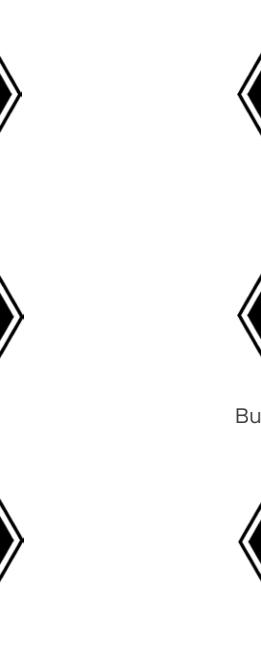
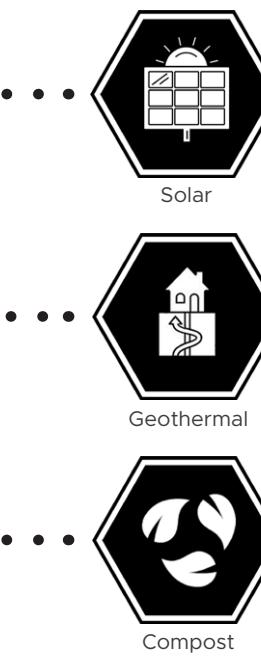
In many cases, within a single property or a cluster of them, these systems could be combined such as in the section below. This is an example of a possibility, combining habitat and water management.



② Green Space Locations



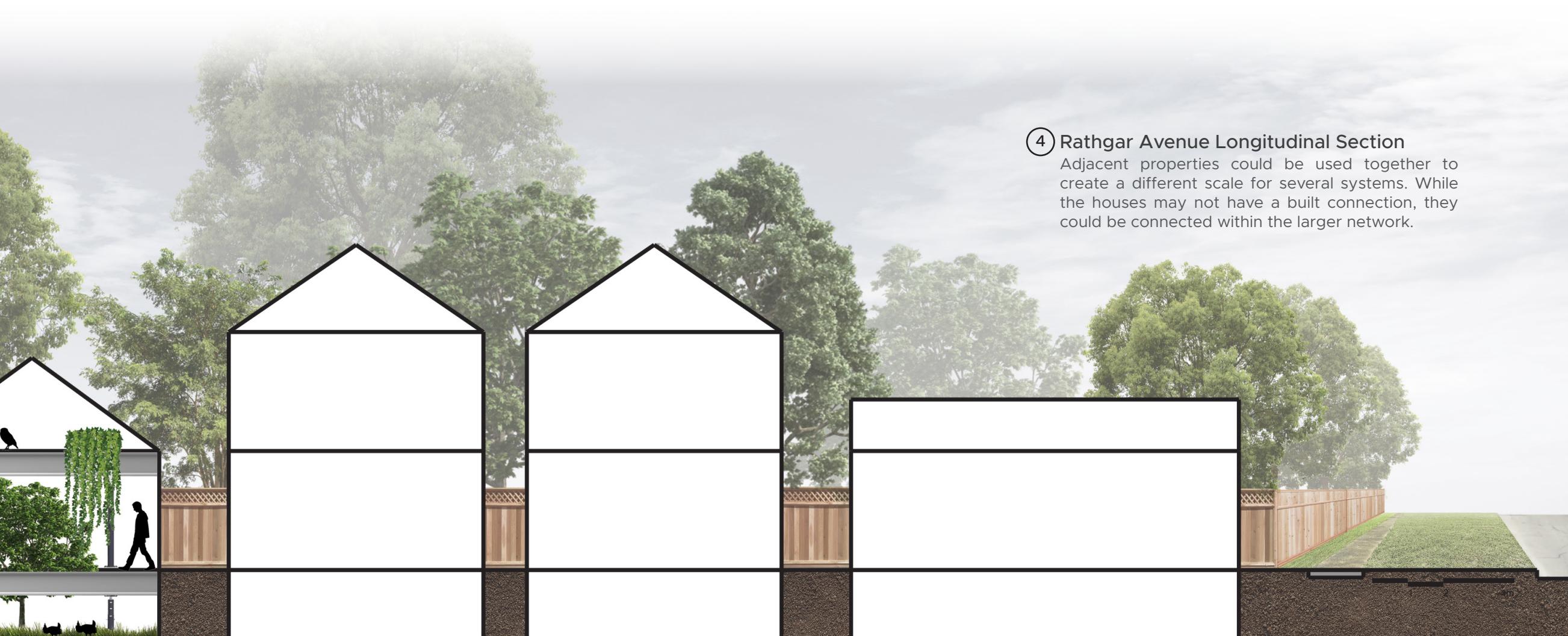
Several opportunities are opened up if the house is removed from the lot. Some options may include a community composting site, a solar garden or geothermal field, or a new neighbourhood playground.



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 Rathgar Avenue Longitudinal Section

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.



## Urban Orchard

Berwick Place Orchard Integration



### 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.

### 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.



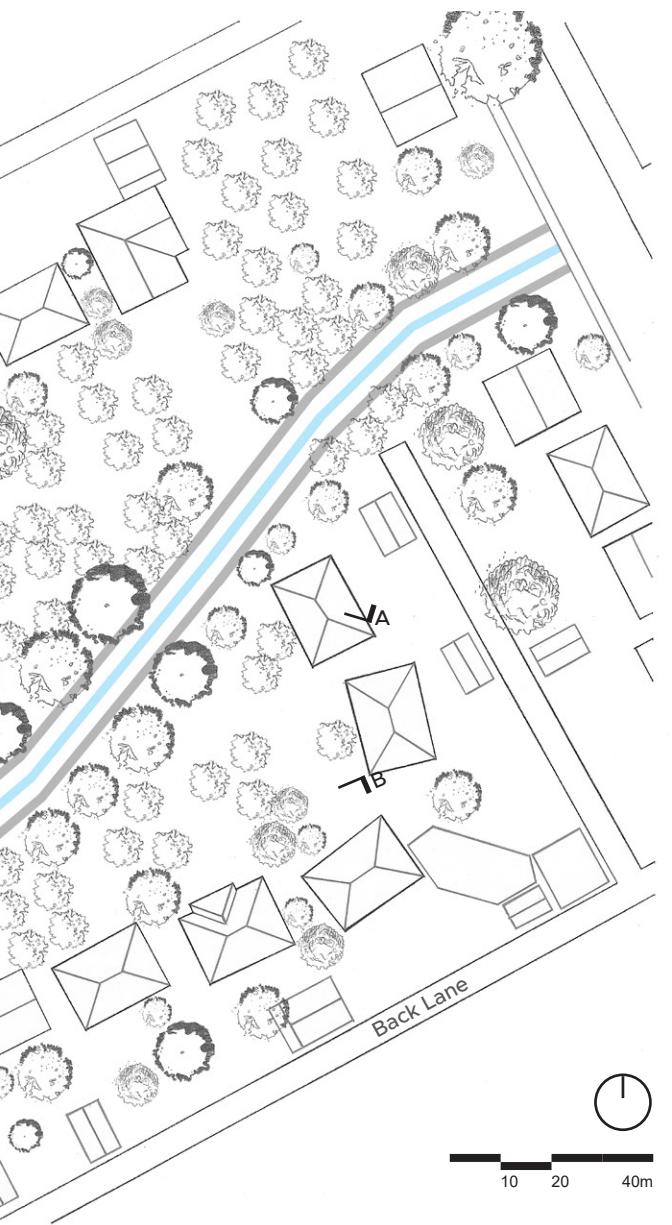
### Site Context Parti Diagram

This parti diagram shows the sight-lines from the houses to the central circulation space. Public and private boundaries are created by the houses and yard fences.

Legend:

- Private Space: Homes and backyards, adjacent public space
- Public Space: Existing trees and proposed orchard trees
- Central Circulation: Infiltration channel and circulation paths

## Berwick Place Site Plan



### Cross-Path Section

1 2 4m

(A)



### ORCHARD

ORCHARD

### EXISTING CANOPY

EXISTING CANOPY

### INFILTRATION CHANNEL

INFILTRATION CHANNEL

### PEDESTRIAN/CYCLIST PATH

PEDESTRIAN/CYCLIST PATH

## 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



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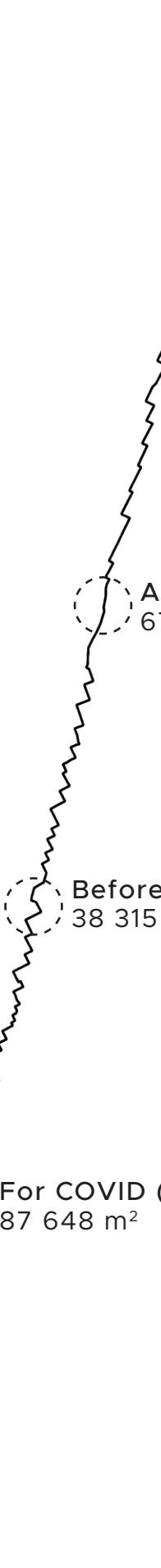
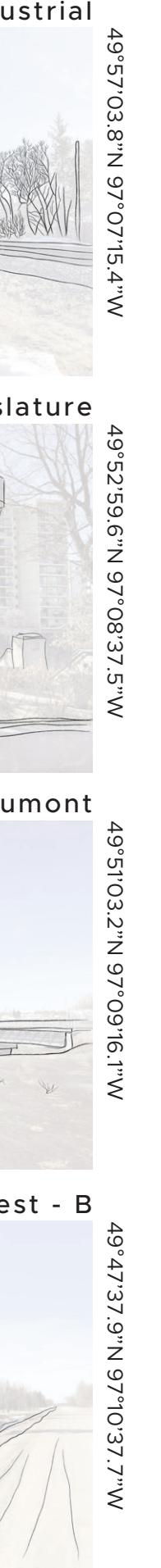
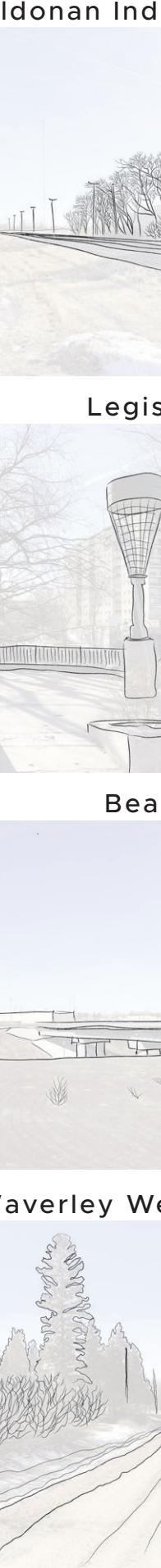
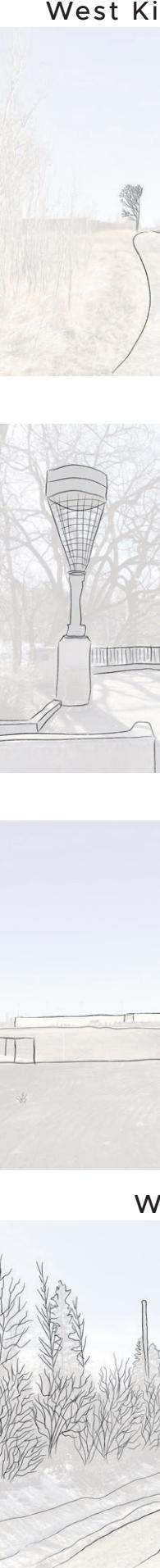
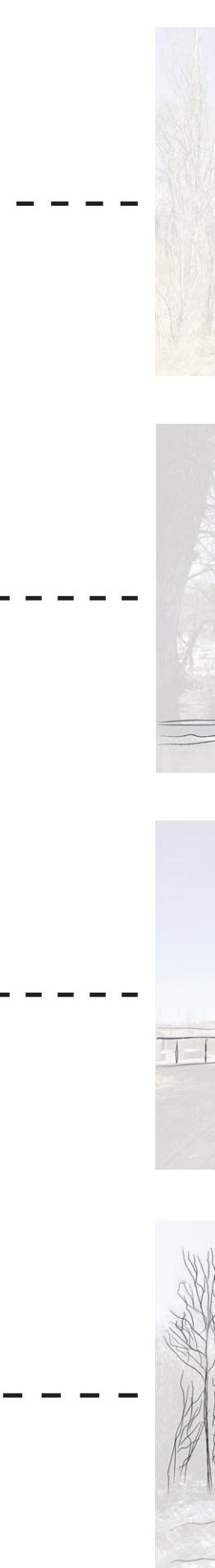
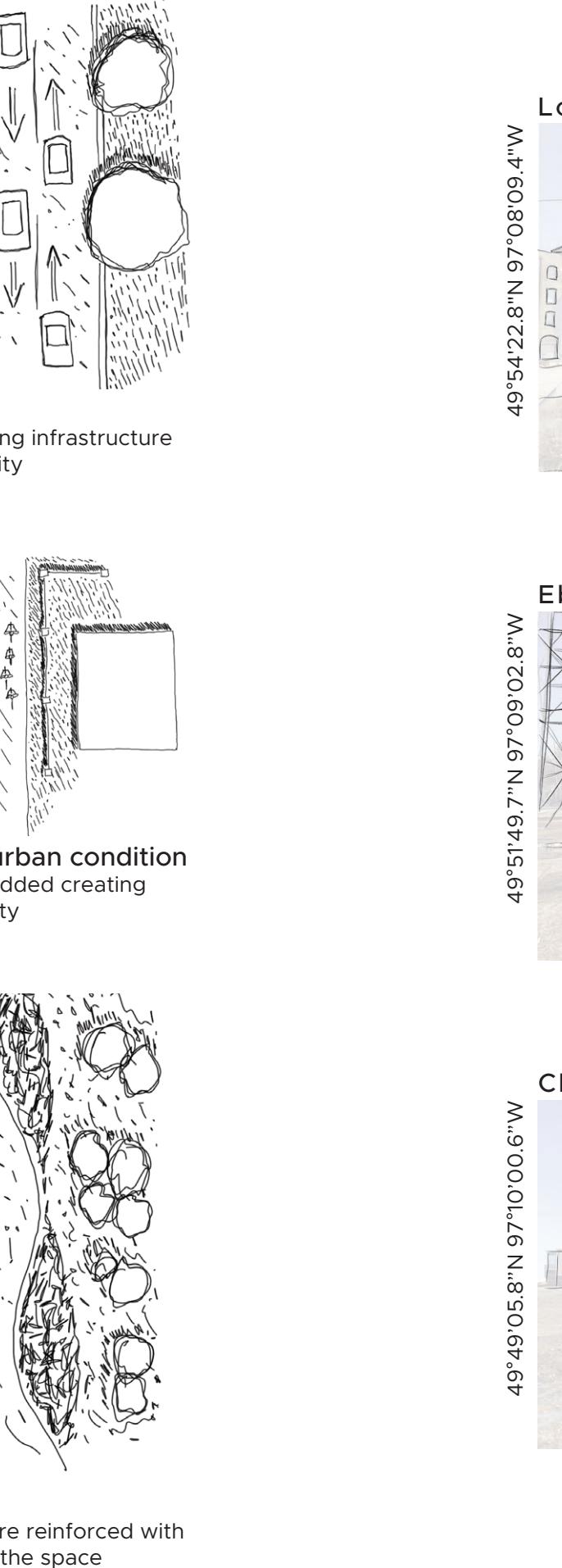
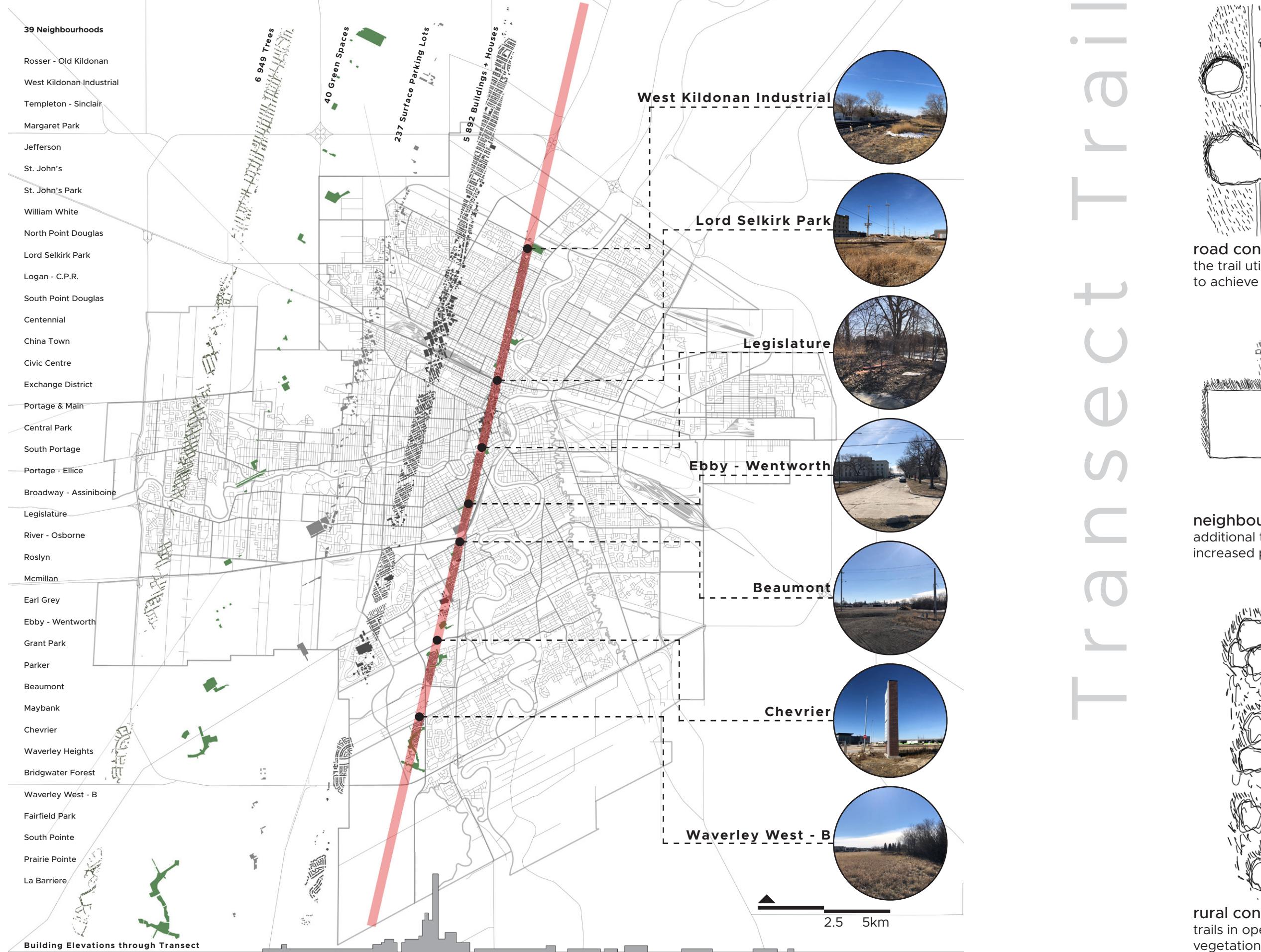
## Reconcile

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**Term** Winter 2021 **Class** EVLU 4014 Studio 6  
**Instructor(s)** Marcella Eaton **Duration** 5 Weeks  
**Programs** QGIS, Rhino3D, TwinMotion, Photoshop + Illustrator

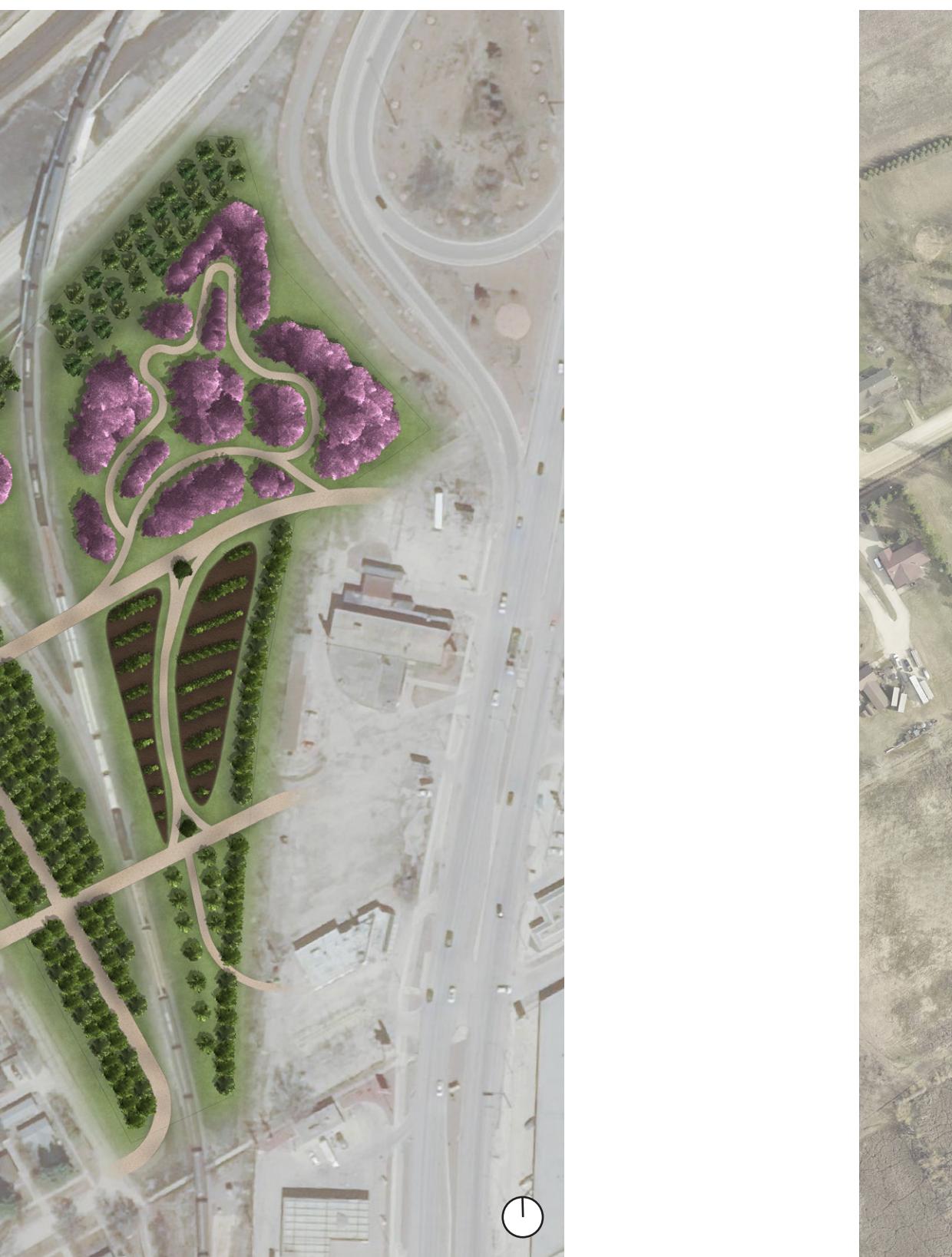
Early on in this project a transect through Winnipeg was selected to capture the variety of the environments encountered within Winnipeg. Through this transect, a path is created that will vary in condition based on the environment that it is in. Additionally, three Paradise Gardens were designed in chosen places that address the feelings of a time before, during and after COVID-19. A focus was placed on the design of the after covid (a.c.) garden, located downtown, adjacent to the Logan-C.P.R. railway to the south and Main Street to the East. The design of the garden imagines life after COVID, where people continue to spend their time outside, within a space that affords many uses. The garden is divided naturally with rows of trees that create secluded spaces. Educational and physical activity are characteristics that are encouraged within the proposed programming of the space. With reconciliation in mind, some of these design characteristics are just potential possibilities.

# transect trail

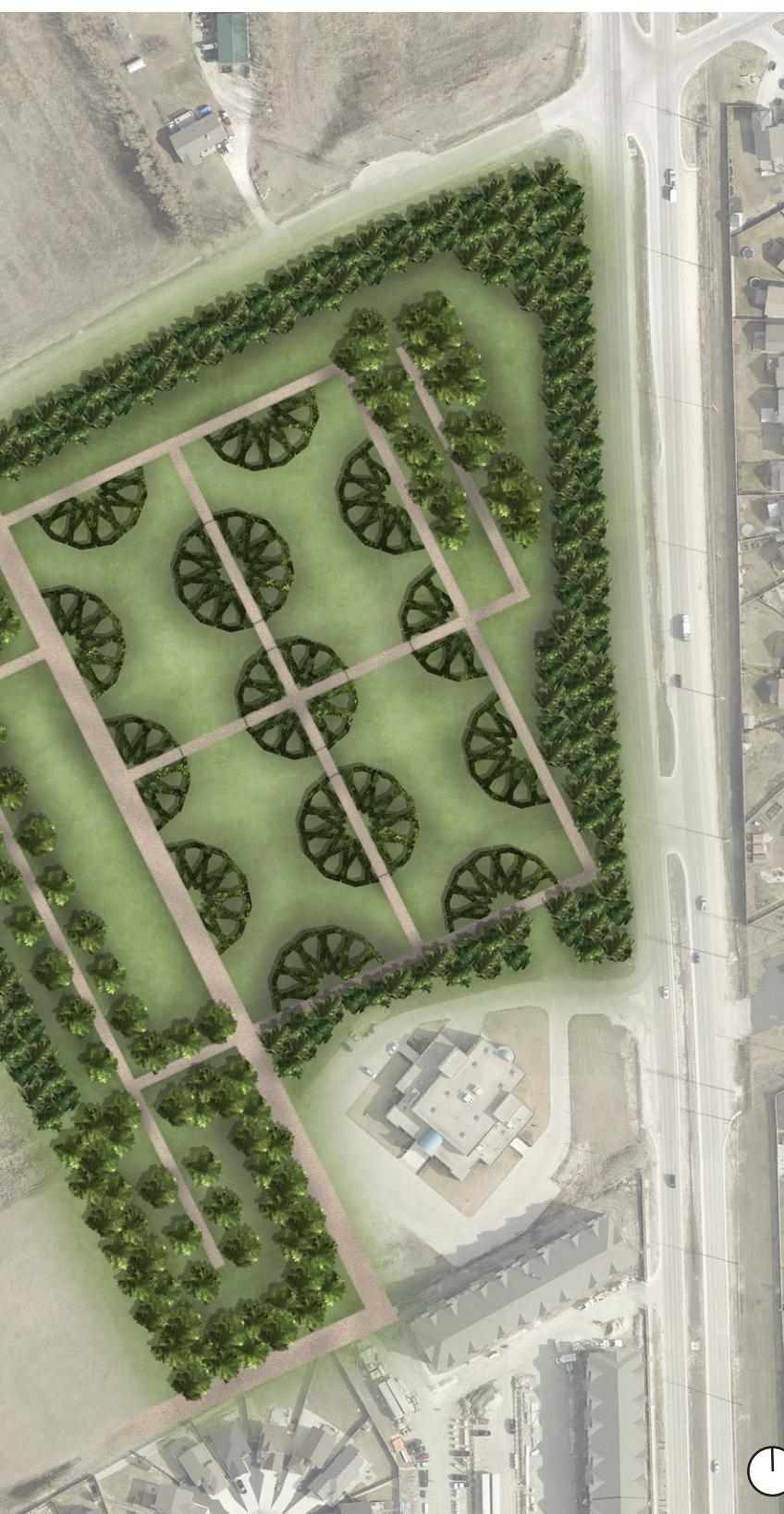




# For COVID (F.C.)



**For COV**



**Plan**

0 25 50 100



After COVID (A.C.) Site Plan

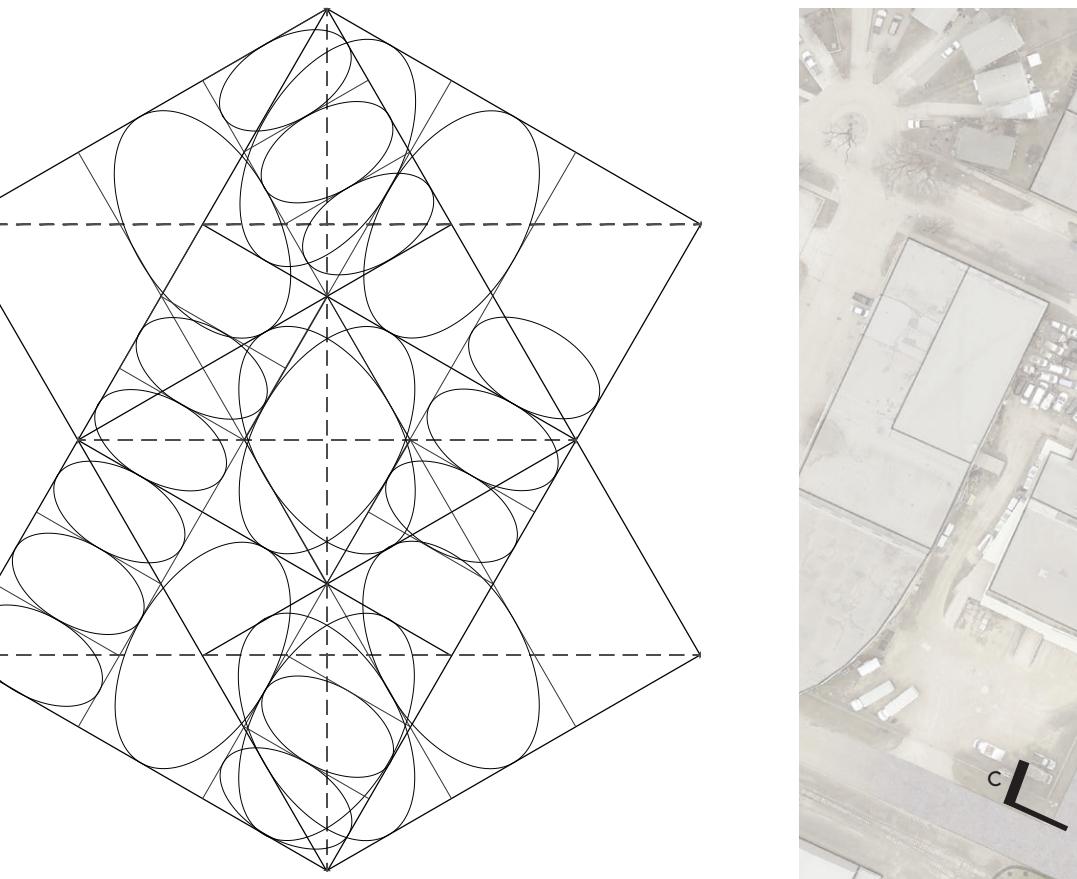
### Geometry of the Design

The layout of the garden is based on two overlapping Root Three Rectangles that contain inset Golden Ellipses. These ellipses were used to inform the position of vegetation and spaces within the garden.

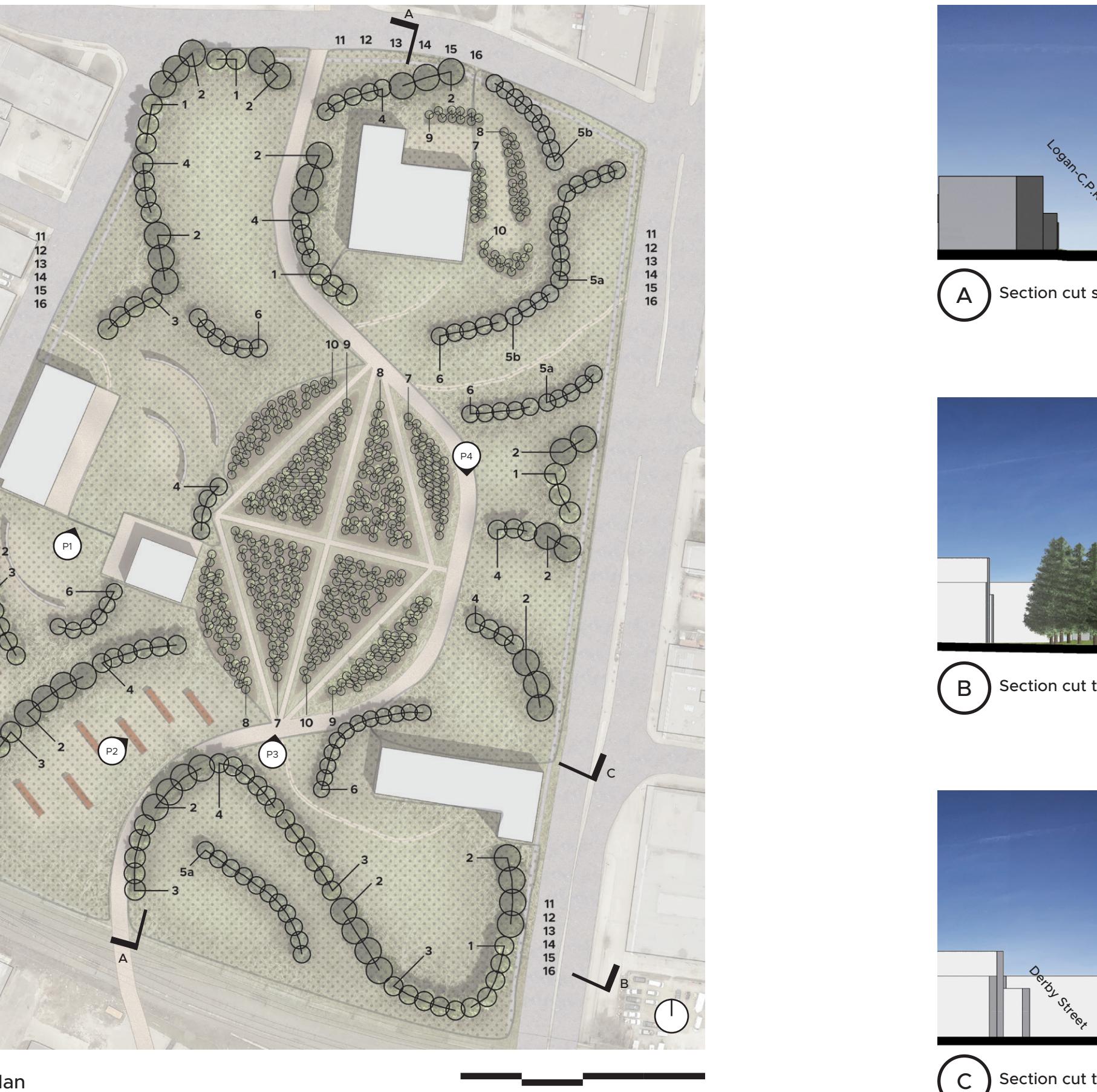
The design of the healing garden at the centre of the paradise garden is based on the medicine wheel with equal parts and traditional plantings.

Additional spaces throughout the paradise garden look to educate individuals who may occupy the garden, as well as provide space for recreational activities for all ages.

Deciduous Trees	Scientific Name	Code	Quantity	Sun	Soil	Spread @ Maturity	Height @ Maturity	Spacing
American Linden	<i>Tilia americana</i>	1	16	☀️	💧	12m	25m	As Shown
Bur Oak	<i>Quercus macrocarpa</i>	2	42	☀️	💧	20m	25m	As Shown
Manitoba Maple	<i>Acer negundo</i>	3	31	☀️	💧	12m	15m	As Shown
Trembling Aspen	<i>Populus tremuloides</i>	4	36	☀️	💧	8m	20m	As Shown
Coniferous Trees	Scientific Name	Code	Quantity	Sun	Soil	Spread @ Maturity	Height @ Maturity	Spacing
Colorado Spruce	<i>Picea pungens</i>	5a	44	☀️	💧	8m	20m	As Shown
Eastern White Pine	<i>Pinus strobus</i>	6	34	☀️	💧	12m	25m	As Shown
White Spruce	<i>Picea glauca</i>	5b	13	☀️	💧	6m	20m	As Shown
Deciduous Shrubs	Scientific Name	Code	Quantity	Sun	Soil	Spread @ Maturity	Height @ Maturity	Spacing
Diamond Willow	<i>Salix bebbiana</i>	7	118	☀️	💧	1.5m	4m	As Shown
Coniferous Shrubs	Scientific Name	Code	Quantity	Sun	Soil	Spread @ Maturity	Height @ Maturity	Spacing
Common Sage	<i>Salvia officinalis</i>	8	123	☀️	💧	1m	0.5m	As Shown
Juniper	<i>Juniperus communis</i>	9	122	☀️	💧	4m	2m	As Shown
Perennials	Scientific Name	Code	Quantity	Sun	Soil	Spread @ Maturity	Height @ Maturity	Spacing
Canadian Mint	<i>Mentha canadensis</i>	10	112	☀️	💧	1m	1m	As Shown
Prairie Grasses	Scientific Name	Code	Quantity	Sun	Soil	Spread @ Maturity	Height @ Maturity	Spacing
Indian Grass	<i>Sorghastrum nutans</i>	11	Natural Occurrence	☀️	💧	As Shown	1m	As Shown
Little Bluestem	<i>Schizachyrium scoparium</i>	12	Natural Occurrence	☀️	💧	As Shown	0.6m	As Shown
Prairie Dropseed	<i>Sporobolus heterolepis</i>	13	Natural Occurrence	☀️	💧	As Shown	0.6m	As Shown
Side Oats Grama	<i>Bouteloua curtipendula</i>	14	Natural Occurrence	☀️	💧	As Shown	0.7m	As Shown
Sweetgrass	<i>Hierochloe odorata</i>	15	Natural Occurrence	☀️	💧	As Shown	0.6m	As Shown
Switch Grass	<i>Panicum virgatum</i>	16	Natural Occurrence	☀️	💧	As Shown	1m	As Shown

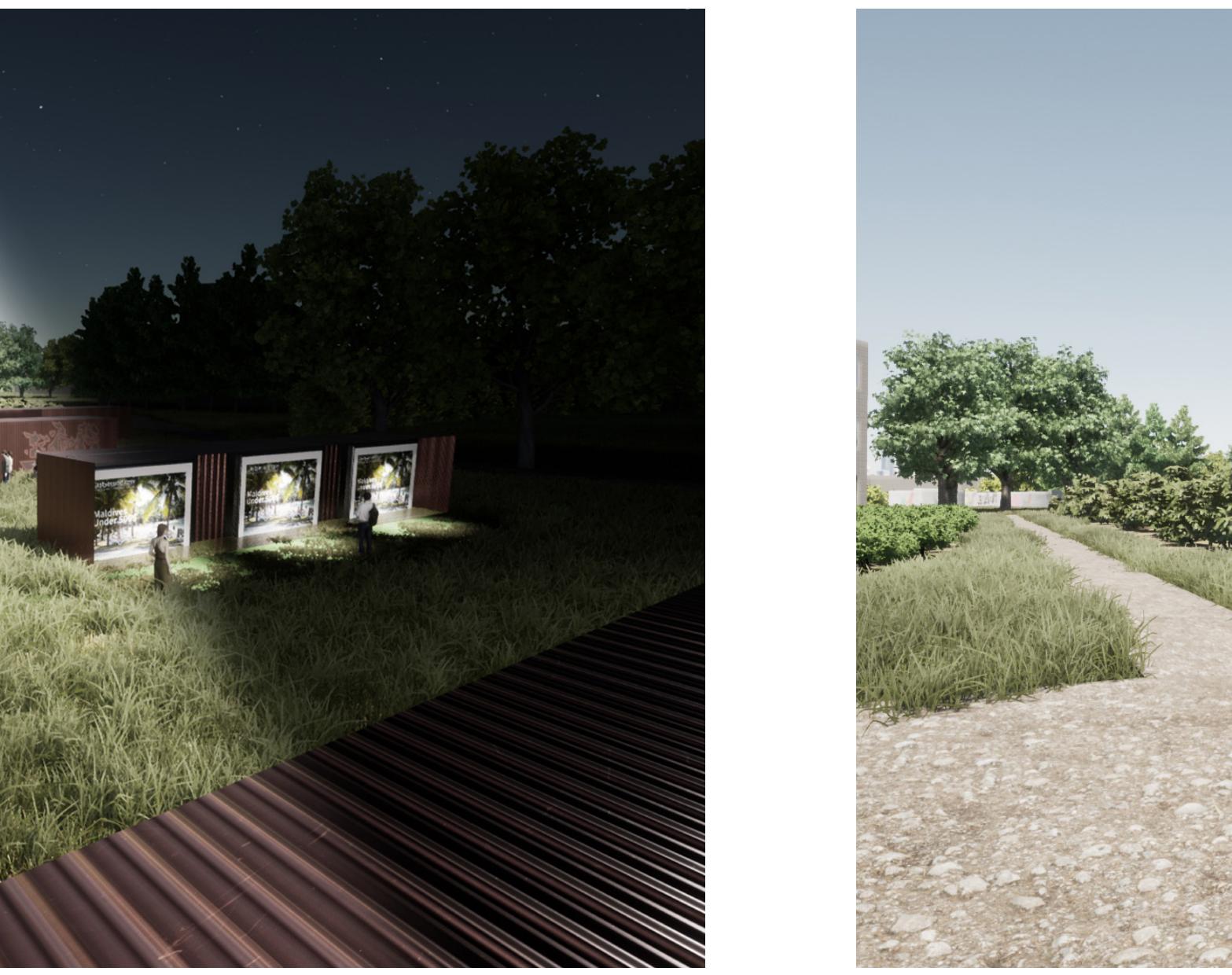


Planting Plan and Key Plan





P1 View of clearing between two remaining buildings



P2 View of space around reclaimed shipping containers



P3 View of healing garden facing north



P4 View of transect path facing south through site

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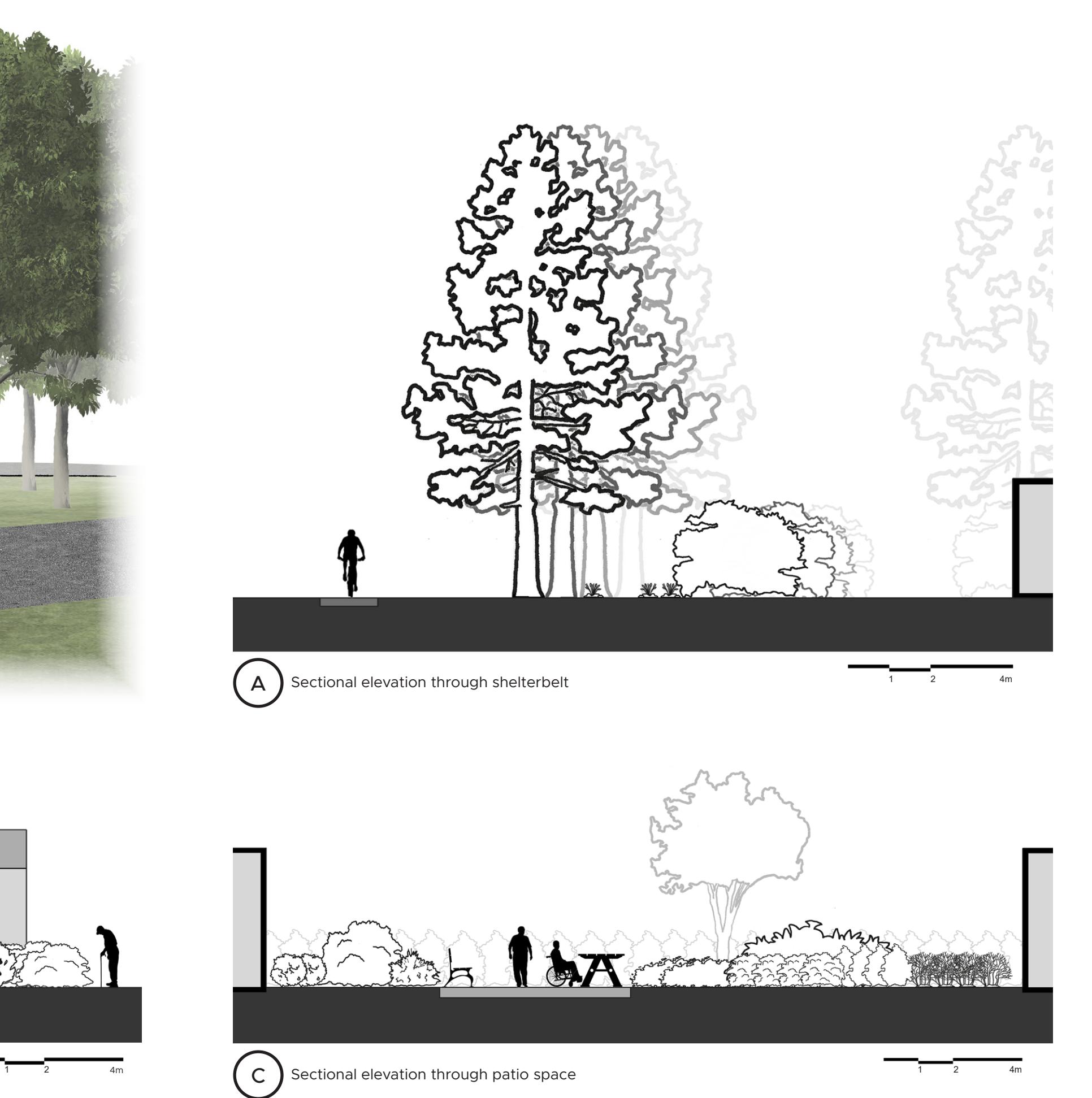
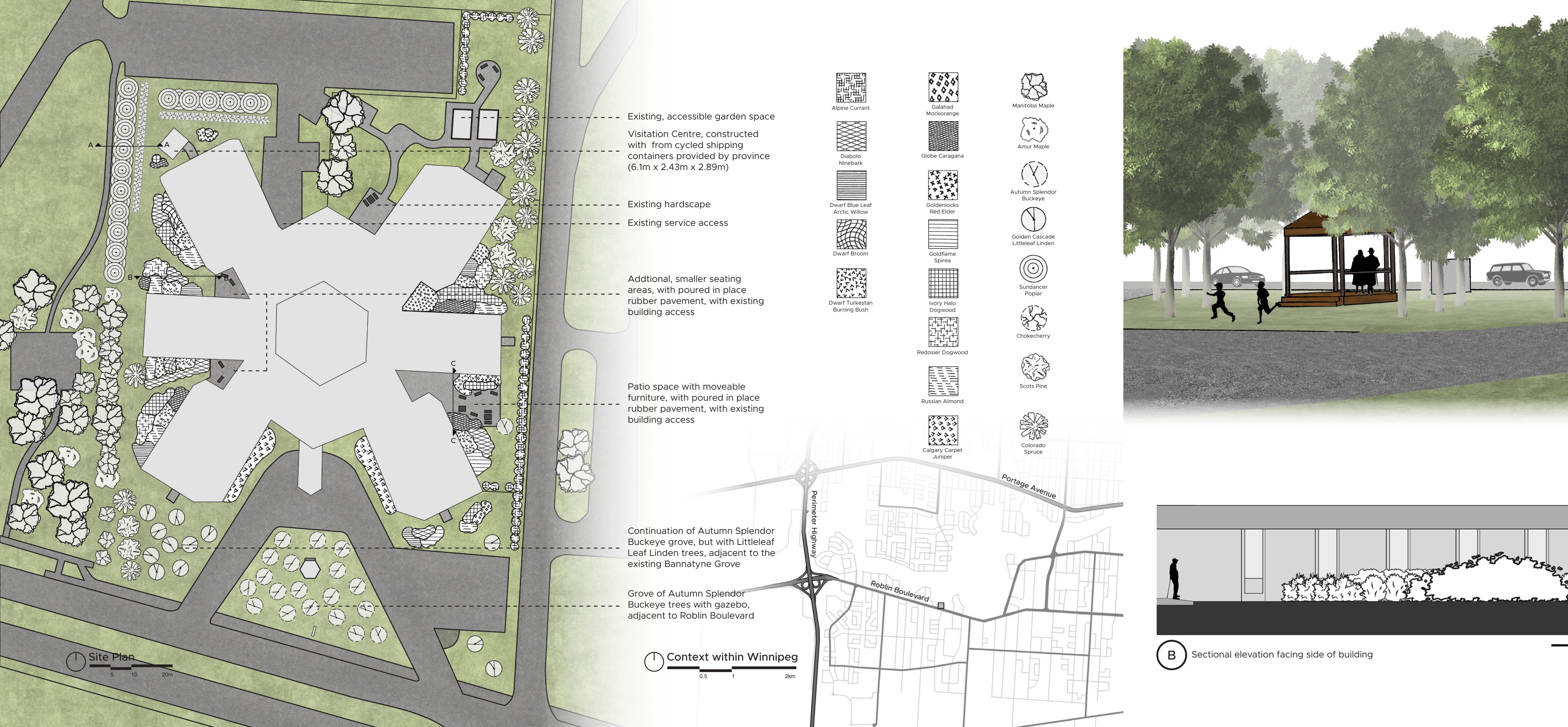
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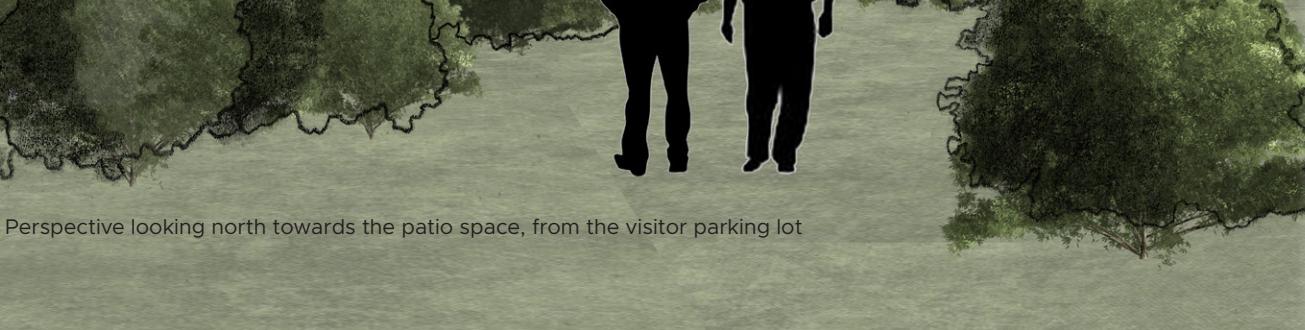
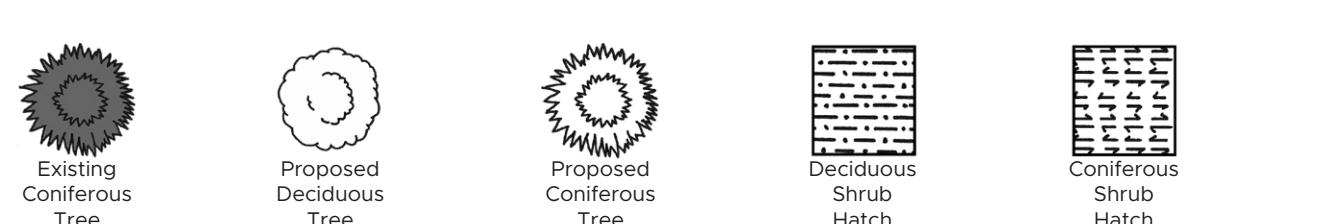
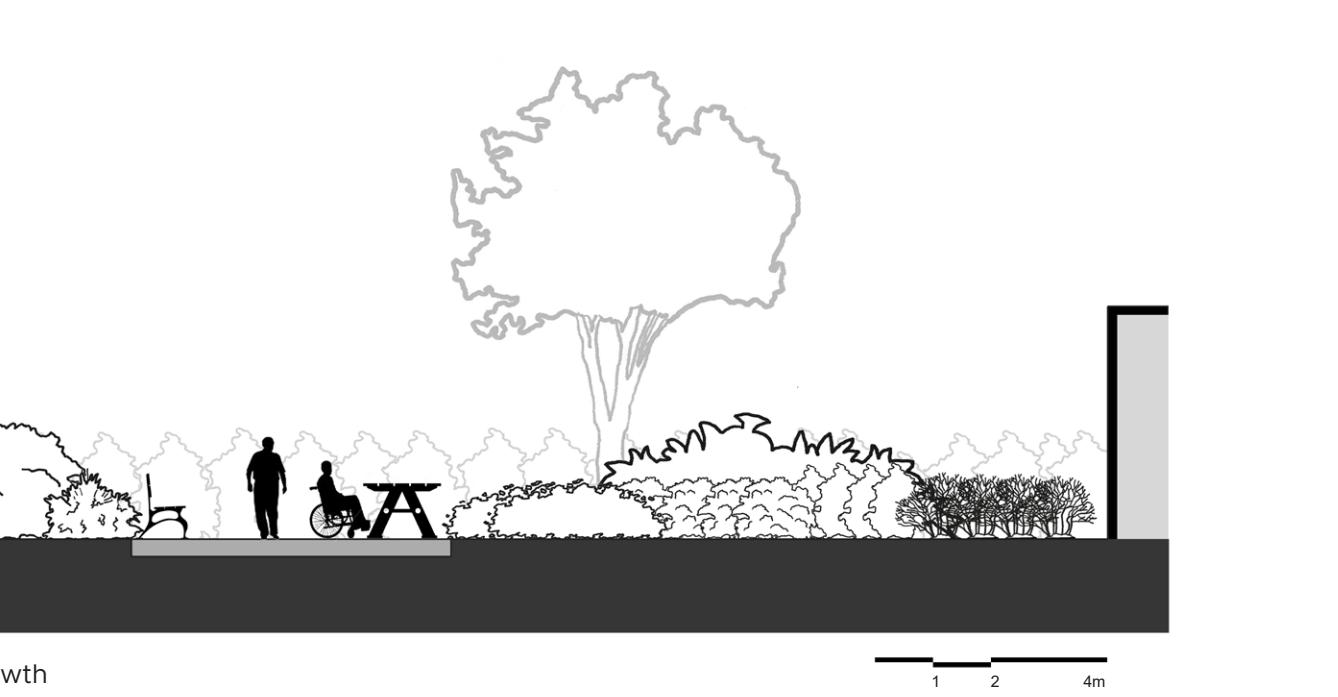
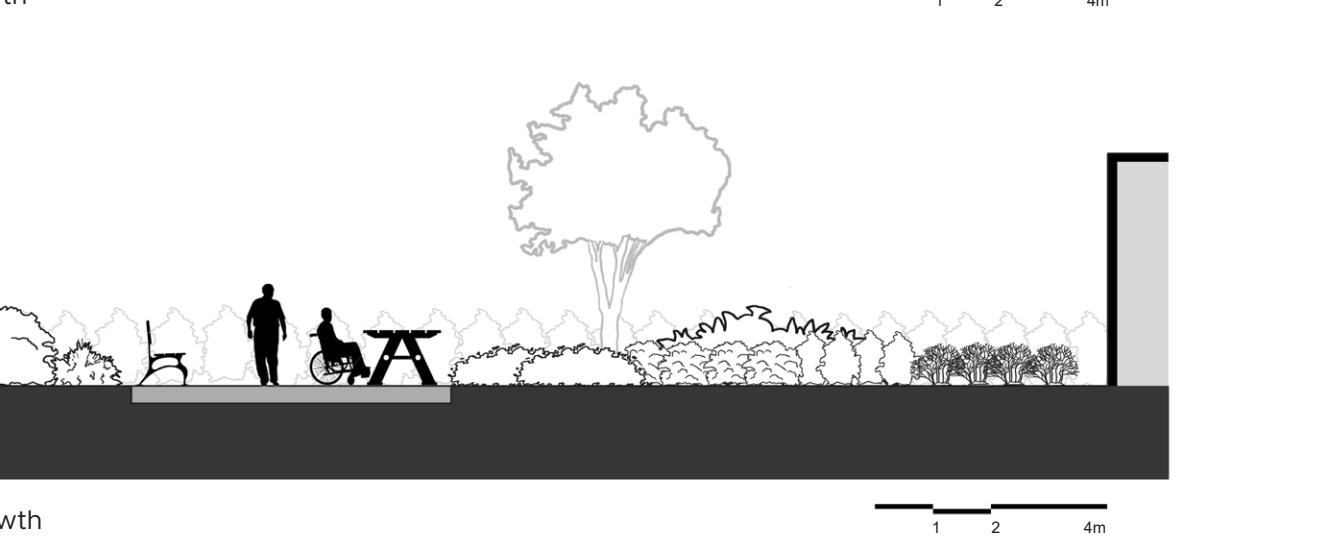
## **Revera Garden Revival**

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**Term** Fall 2020 **Class** EVLU 4012 Studio 5  
**Instructor(s)** Brenda Brown **Duration** 4 Weeks  
**Programs** Hand Drawing, Rhino3D, Photoshop + Illustrator

For this project, a list of select care homes in Winnipeg was provided and it was expected that one would be chosen to be analyzed. Charleswood Revera Care Home on Roblin Boulevard was chosen and a design was developed in response to the landscape around the site. The design intends to enhance the surrounding landscape of Revera Charleswood. An existing park, specifically Bannatyne Grove to the west, was used as inspiration for site development since it was clear that individuals whose windows had a view of the grove tended to open their curtains and take in the views. This is compared to other areas on-site where there was little or no vegetation, where nearly all curtains were closed. Various shrub species are introduced to the site to add visual interest and provide some degree of separation from the adjacent roadways. A new patio space, in addition to the existing northeast recreational area, is also specified. This space allows residents, staff, and potential visitors to experience the landscape up close.





Alpine Currant hedge creates a visual barrier between patio space and side road

Planted shrub bed provides visual interest to interior and exterior space

Shrubs fill the bed and flow over the paved edge of the patio

Poured in place rubber pavement

Light, moveable patio furniture

Autumn Splendor Buckeye provides shade in the late morning/early afternoon

#### Section of Rubber Pavement Edge

1. Compact Stone Base (15.24 cm)

2.

Geotextile Fabric (1 cm)

3.

Styrene-Butadiene Rubber (SBR) Buffing Impact Layer (6.35 cm)

4.

Ethylene Propylene Diene Monomer (EPDM) Rubber Top Layer (1.27 cm)

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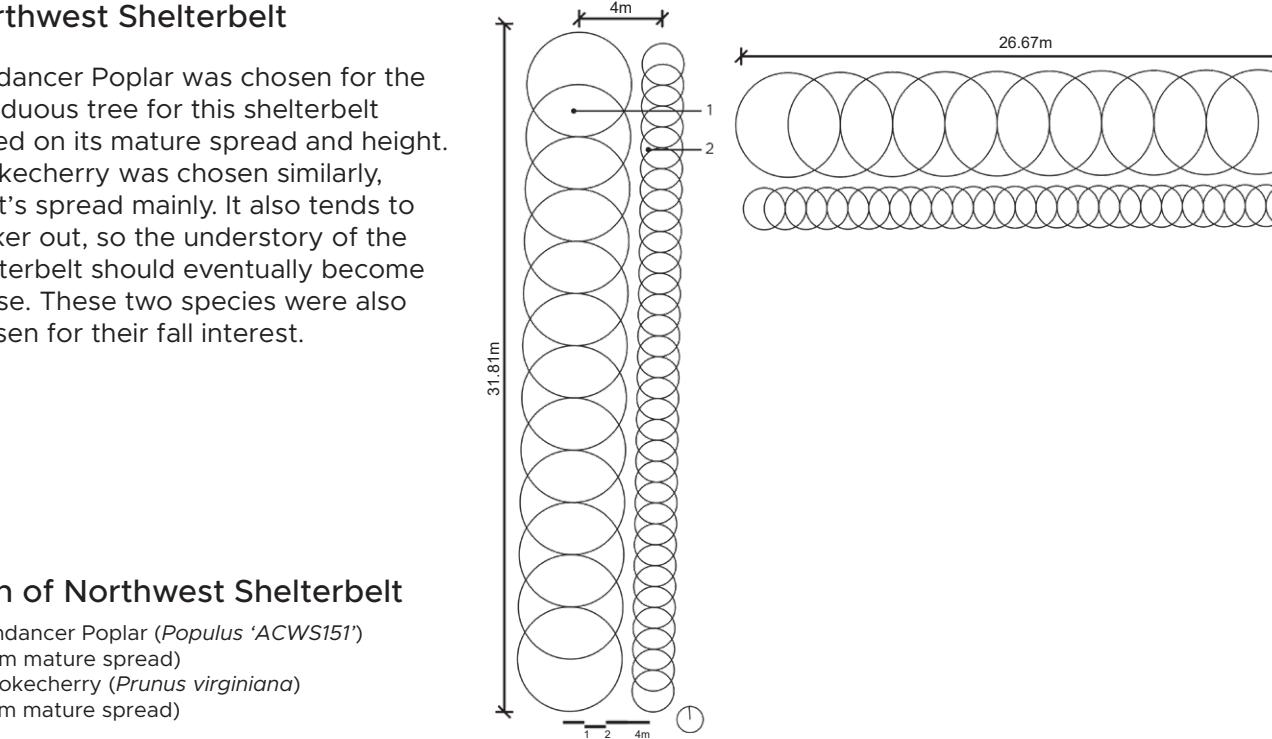
Compacted Top Soil

6.

Compacted Soil

#### Northwest Shelterbelt

Sundancer Poplar was chosen for the deciduous tree for this shelterbelt based on its mature spread and height. Chokecherry was chosen similarly, for it's spread mainly. It also tends to sucker out, so the understory of the shelterbelt should eventually become dense. These two species were also chosen for their fall interest.



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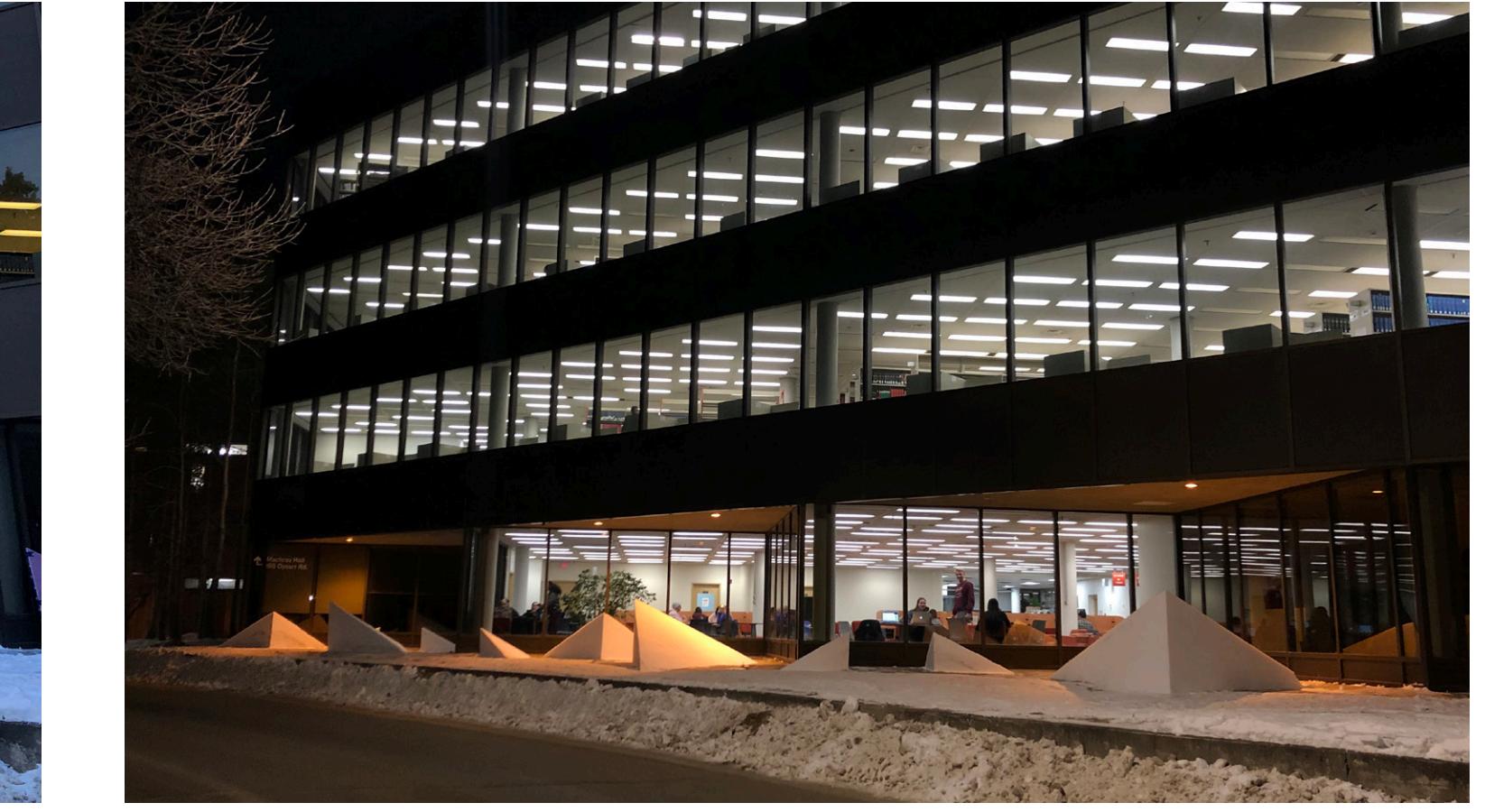
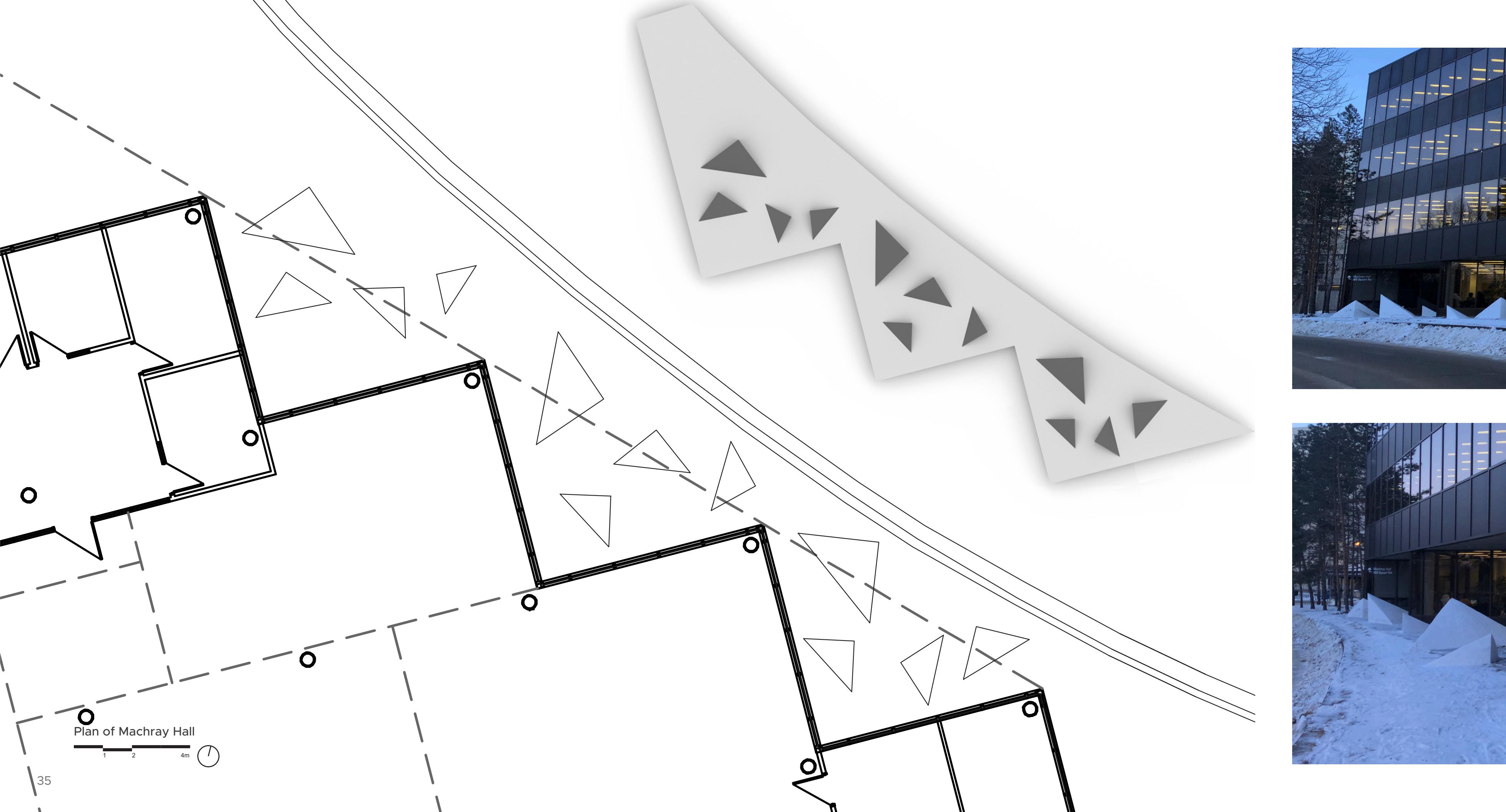
## Snow Garden

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**Term** Winter 2020 **Class** EVLU 3008 Studio 4  
**Instructor(s)** Brenda Brown **Duration** 4 Weeks  
**Programs** Modelling, Photoshop, Illustrator, AutoCAD + Rhino3D

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. This team consisted of Bryce Stovin, Matthew Glowacki, and myself. The shapes were constructed by packing snow into a form that was made using Polystyrene Rigid Insulation. Once the forms were removed the shape was touched up slightly.





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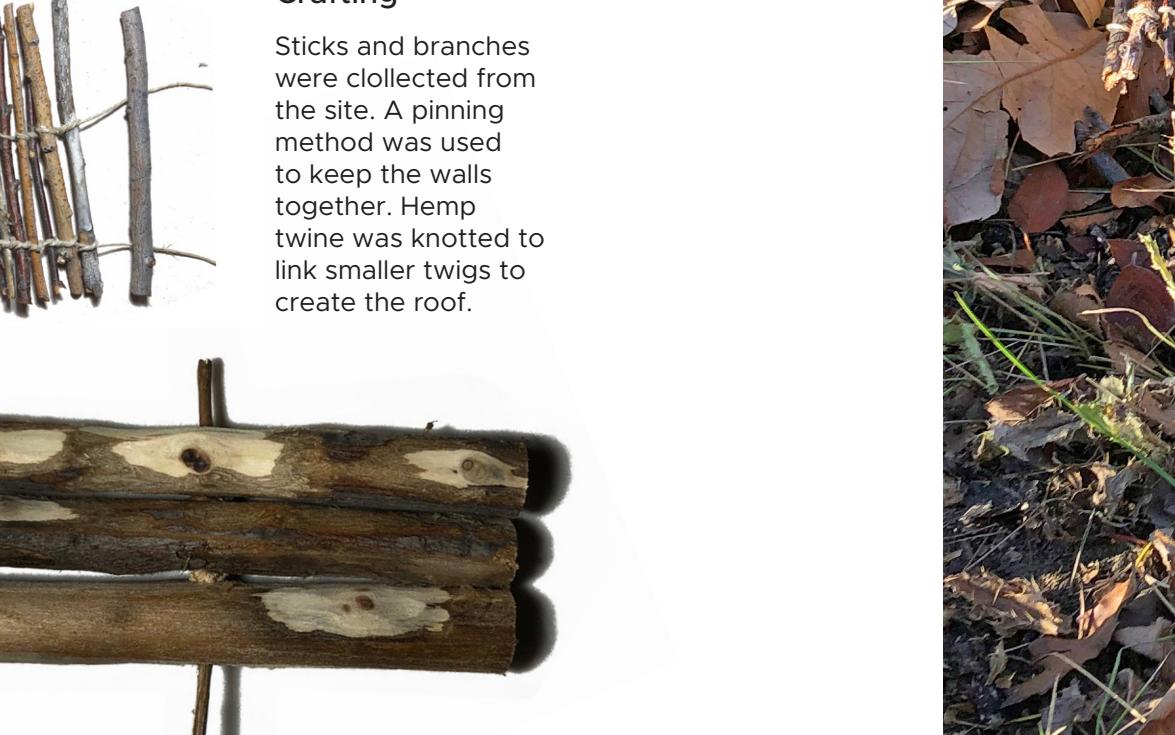
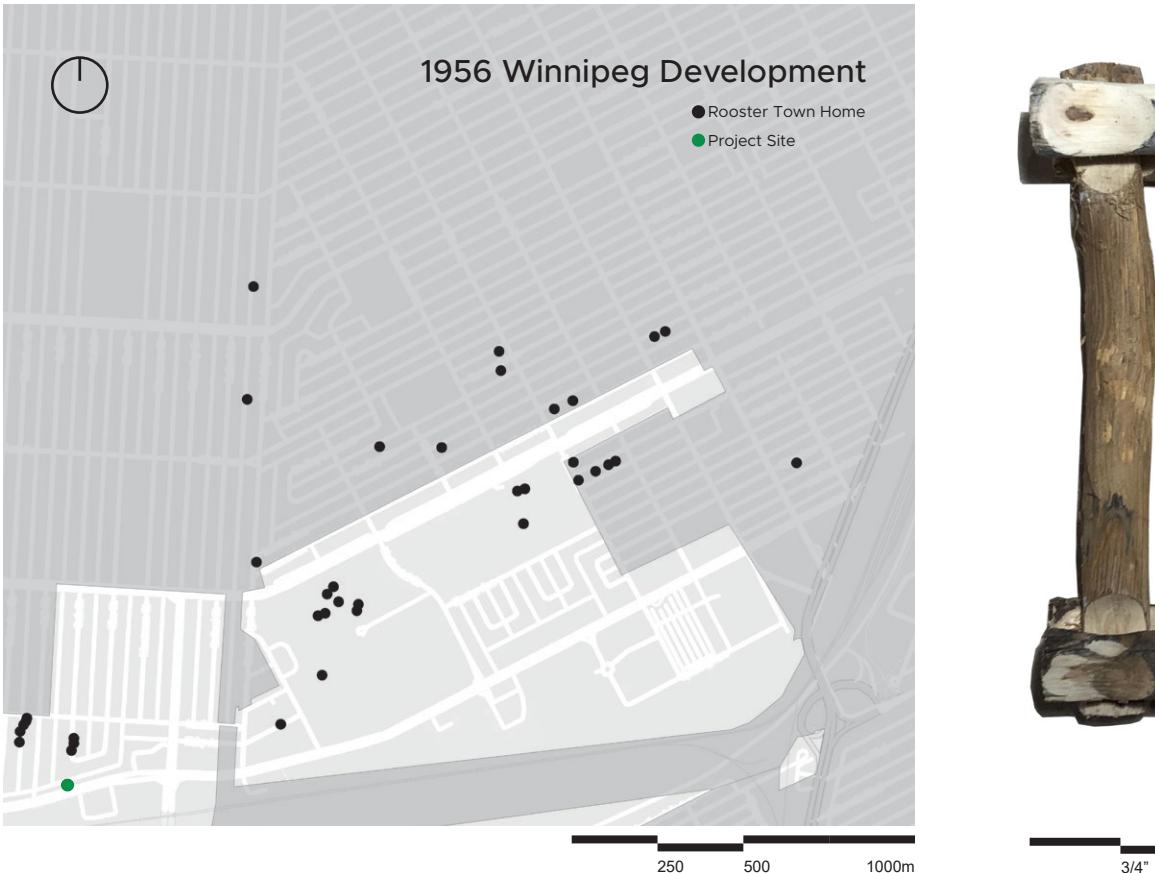
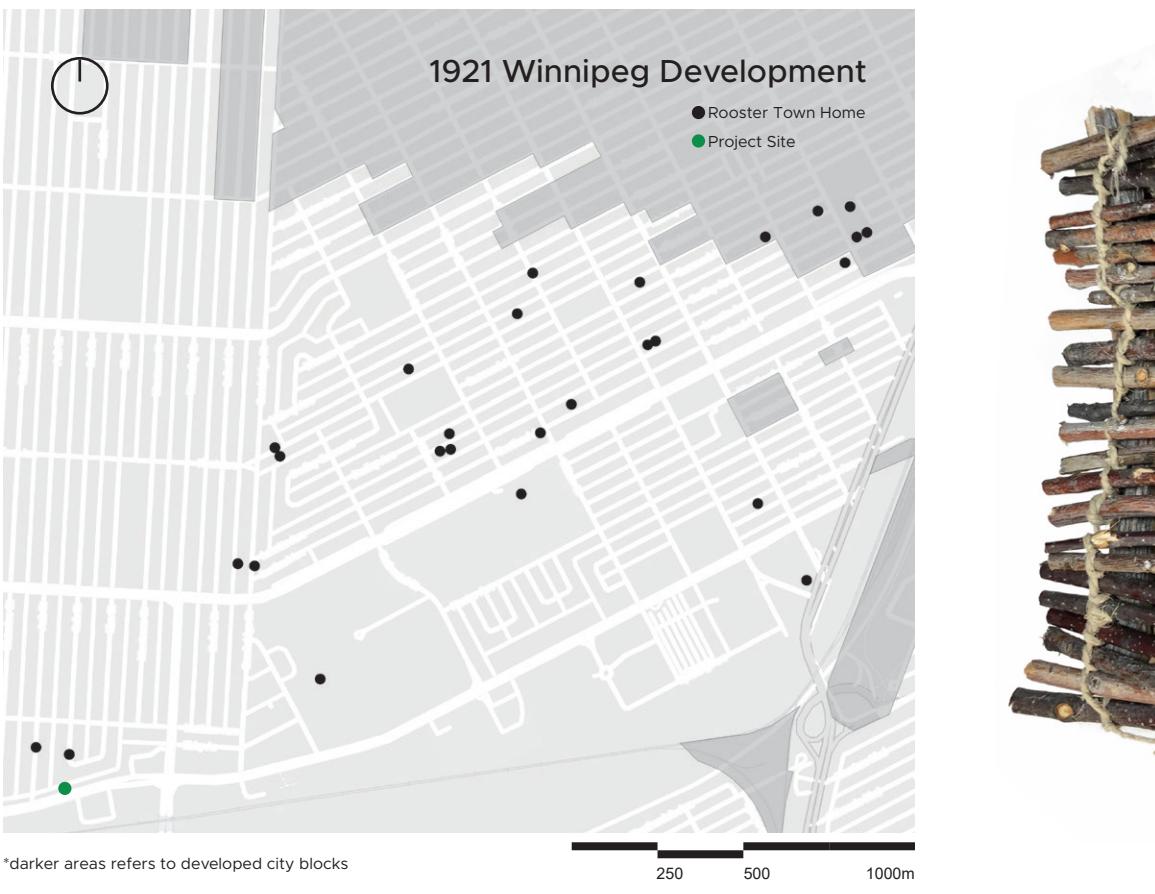
## Hidden Communities

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**Term** Fall 2020 **Class** EVLU 4012 Studio 5  
**Instructor(s)** Brenda Brown **Duration** 2 Weeks  
**Programs** Modelling + Illustrator

The premise for this project was to pick a site within the city, selecting an element from it to emphasize or enhance. The site that was selected was along a buffer boulevard on the north side of Taylor Avenue in South River Heights. This area of Winnipeg is where a previous community of primarily Métis people resided but were slowly pushed away as Winnipeg developed through the 1920s into the 1960s. Inspired by Charles Simonds *Dwellings*, this project is meant to raise a discussion. It is tucked away, somewhat hidden, and meant to create a discussion by those who find it, as to why it is there and what its story is.

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### Crafting

Sticks and branches were collected from the site. A pinning method was used to keep the walls together. Hemp twine was knotted to link smaller twigs to create the roof.



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## Miscellaneous Work

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Term Summer 2019, Summer 2020 + Summer 2021  
Programs Photoshop, AutoCAD, Rhino3D + TwinMotion

My miscellaneous work focuses on the translation and reimagination 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.

### 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.

### Material Estimation

#### Beams

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

#### Deck Surface

- 2 x 3 x 8' (2)
- 2 x 6 x 8' (12)
- 2 x 6 x 12' (19)
- 2 x 6 x 16' (12)

#### 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

#### 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)
- 1/2" x 5" Galv. Lag Screws (18)

- 1/2" Galv. Flat Washers (18)
- 2-1/2" Deck Screws ( $\pm 1500$ )

#### Back Stairs

- 2 Step Metal Stringer (3)
- 2 x 6 x 12' (2)

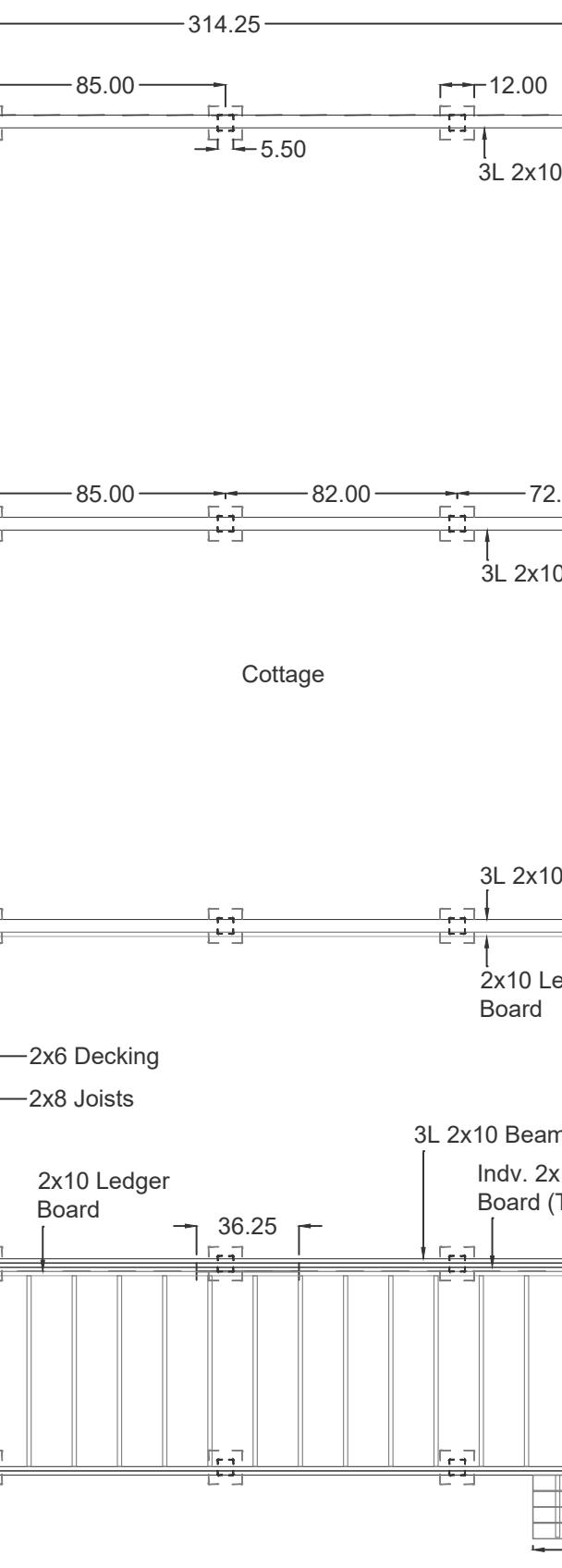
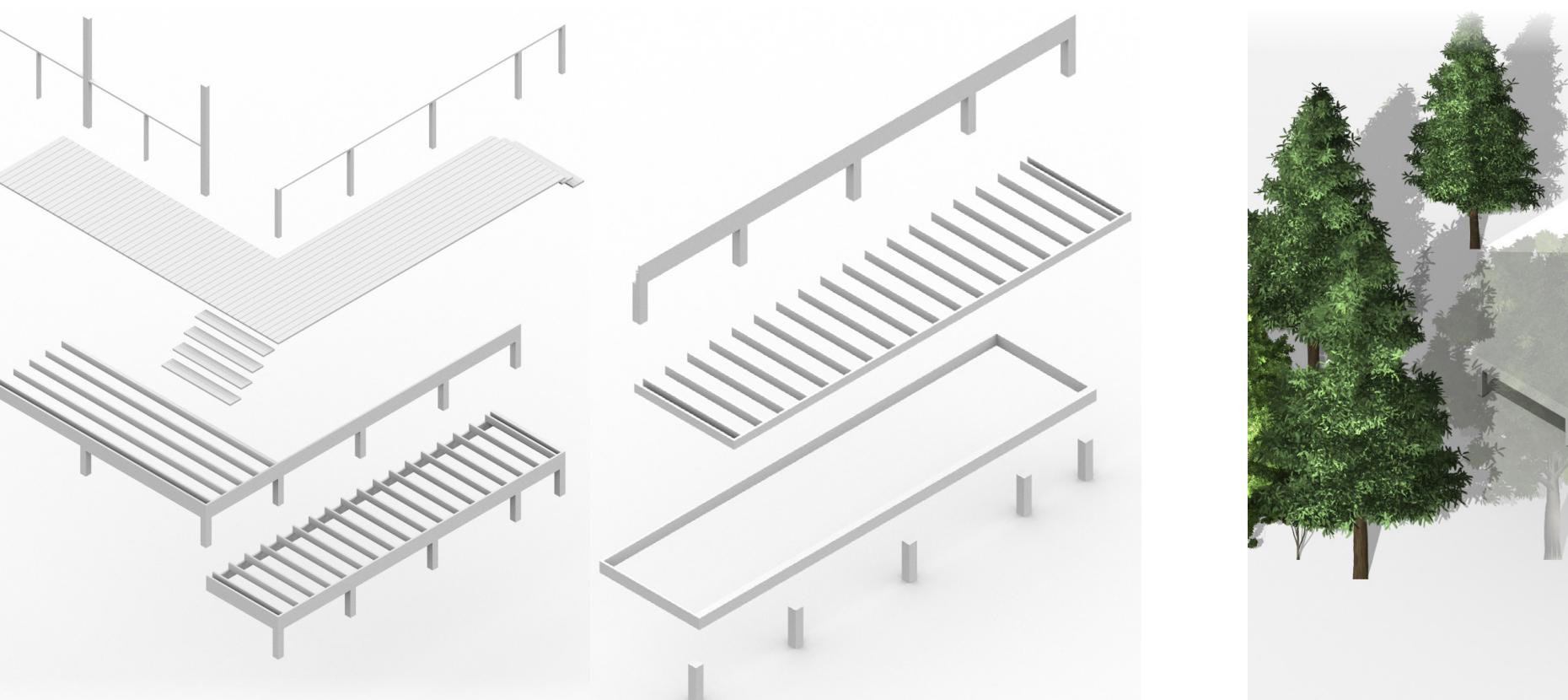
- 3/8" x 2-1/4" Carriage Bolts (24)
- 3/8" Flat Washer (24)
- 3/8" Hex Nut (24)



### Existing Conditions



### Proposed Conditions



Cottage Deck Extension Plan

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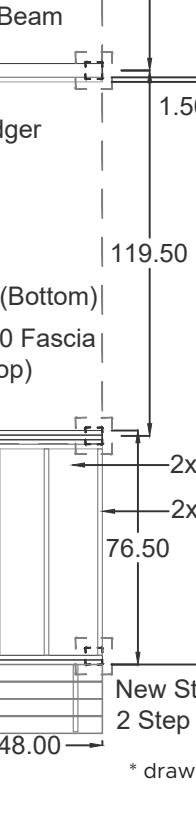
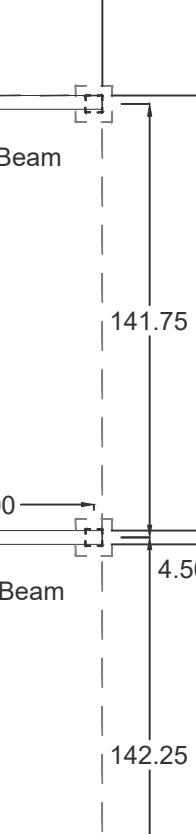
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2m

48.00

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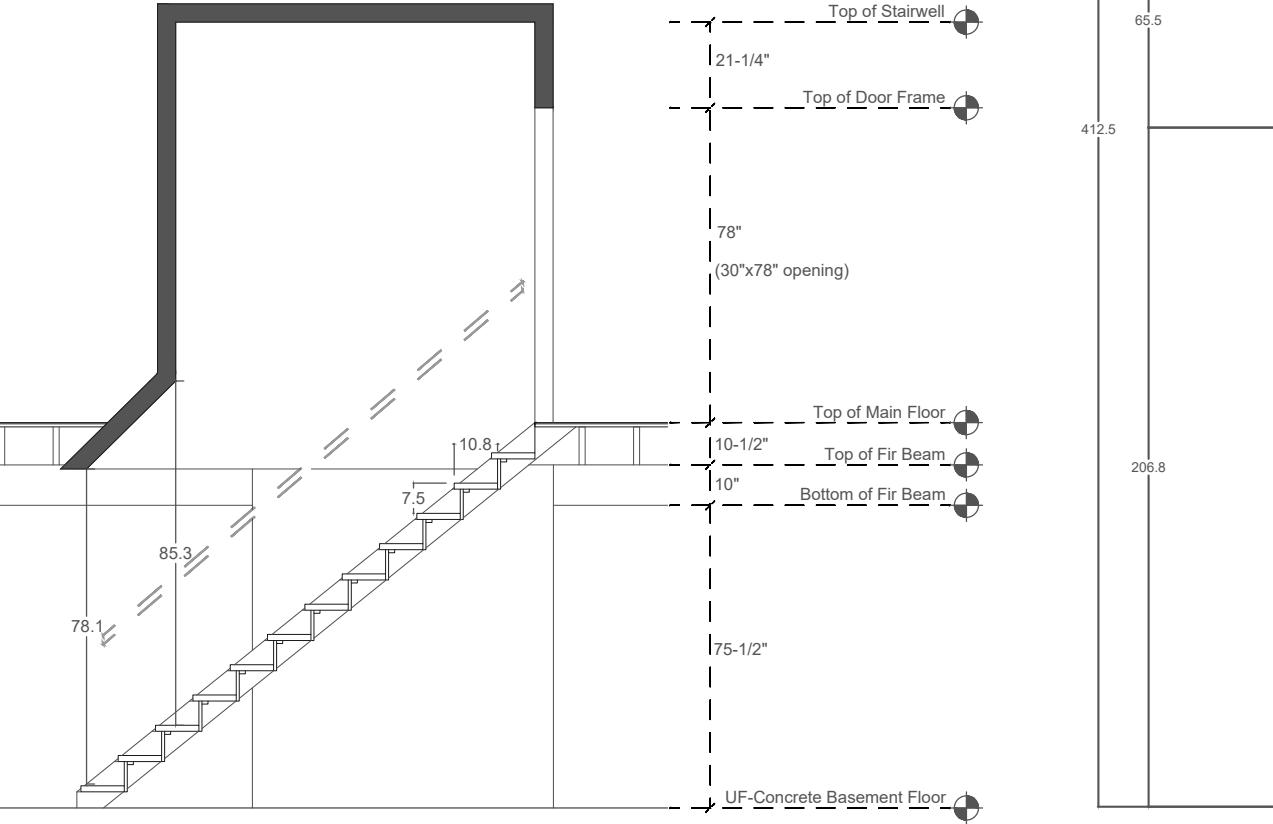
drawing units in Inches



### Basement Renovation Plan

A plan of the basement was created to submit for a permit to complete the bathroom. A section of the basement stairs had been requested to ensure adequate access.

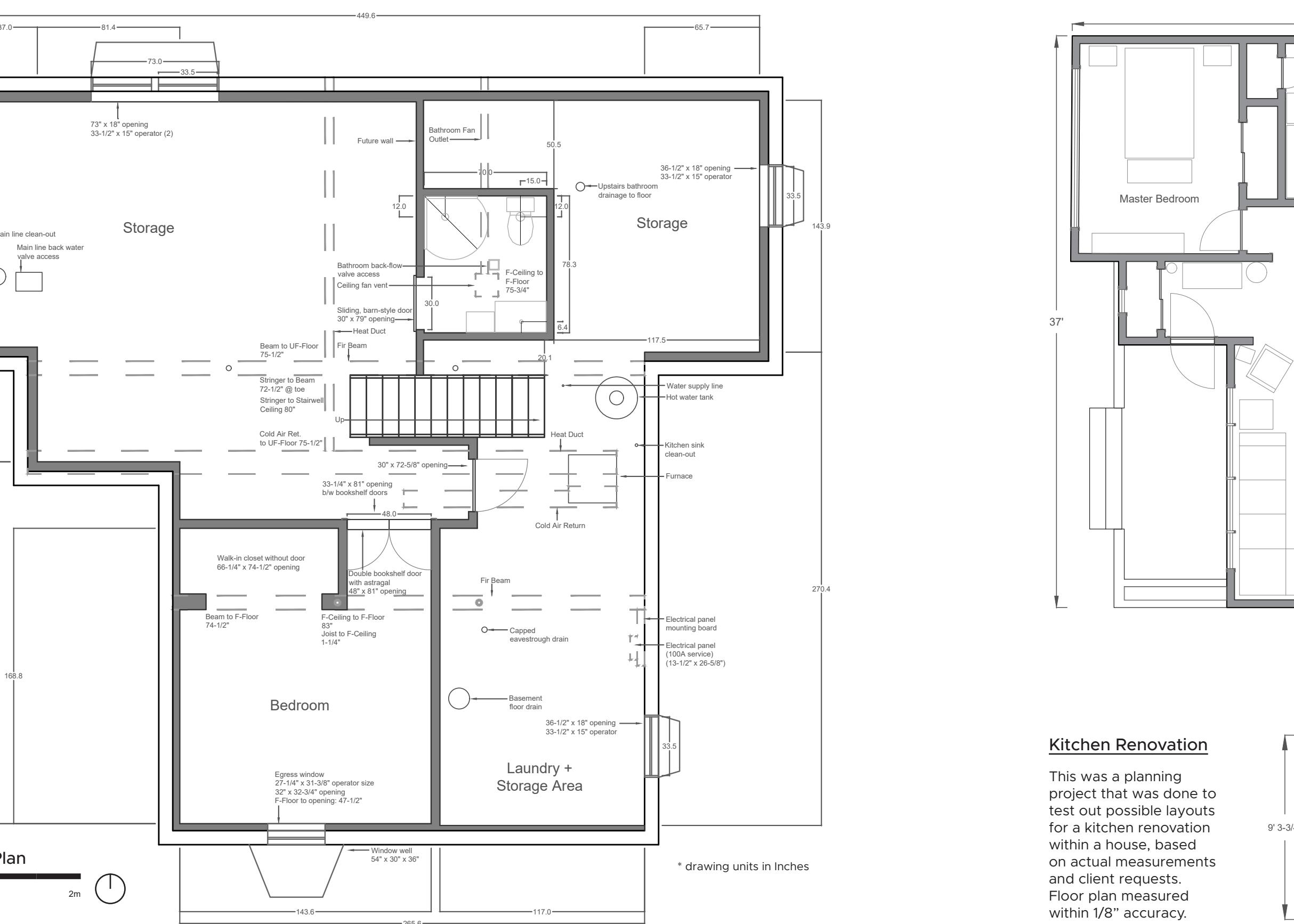
Additional modifications to the plan are going to be made in the future to indicate potential layouts of the entertainment space.



**Basement Stairs Section**

\* drawing units in Inches

0.5 1 2m



**Basement Plan**

0.5 1 2m

1"

\* drawing units in Inches

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