

**Urban Sanctuary:  
Therapeutic Spaces for The House Of Peace**

by

**Marie Seno**

**A Practicum submitted to the Faculty of Graduate and  
Postdoctoral Studies of the University of Manitoba in  
partial fulfilment of the requirements of the degree of  
Master of Landscape Architecture**

**Department of Landscape Architecture  
University of Manitoba  
Winnipeg**

**Copyright © 2026 by Marie Seno**

*This document is best viewed in  
'Two Page View' and 'Show Cover Page in Two Page View'  
under the page display settings.*

# URBAN SANCTUARY

*Therapeutic Spaces for The House of Peace*

by Marie Seno

A practicum submitted to the Faculty of Graduate and Postdoctoral Studies of the University of Manitoba  
In partial fulfillment of the requirements of the degree of  
Master of Landscape Architecture  
Department of Landscape Architecture  
Faculty of Architecture  
University of Manitoba  
Copyright ©2026 by Marie Seno

## **abstract**

Urban environments often lack accessible green spaces that foster well-being, connection, and a sense of belonging. Research has shown that integrating nature into urban spaces enhances mental well-being and social cohesion. Additionally, urban green spaces provide essential ecological benefits, such as mitigating urban heat island effects, improving air quality, and managing stormwater runoff.

Through this practicum, I explore the design of private green spaces for the rooftop and yard of the House of Peace, a transitional residence for refugee women from around the globe fleeing violence, in downtown Winnipeg. The project considers how small-scale urban green spaces can serve as sanctuaries, offering respite from the stresses of daily life while fostering community, cultural identity, and engagement with nature. The study also advocates for a broader framework that integrates rooftop and small-scale gardens into Winnipeg's urban fabric, that can serve its diverse communities, especially newcomers to Canada. Through research and site-specific interventions, I aim to transform the House of Peace's roof and yard into nurturing spaces where the *neighbours* (residents) can experience a sense of refuge, belonging, and personal agency.

*All images by the author unless otherwise noted.*

*Downtown Winnipeg is located on the traditional lands  
of Anishinaabeg, Cree, Oji-Cree, Dakota, and Dene  
Peoples, and on the homeland of the Métis Nation.*

## **acknowledgments**

Firstly, I would like to express my sincere gratitude to the House of Peace for welcoming me and allowing their community to be the focus of my practicum. The love, generosity, and hope shared within this community have been deeply felt, and I am grateful for the warmth with which I was received.

I am profoundly thankful to my advisor, Brenda Brown, for her patient guidance throughout my education and for providing the faith I needed to see this project through to completion.

To Monica Giesbrecht, thank you for the light you offered to guide me through this process. Your extensive knowledge, paired with a genuine care for community and a belief in the positive impact of design, is a great inspiration to me. You are someone I truly aspire to emulate.

I also wish to thank Anna Thurmayr for her practical advice and for the sincere care she showed regarding the successful conclusion of my studies.

Finally, to the roots of who I am: I express my deepest gratitude to my loved ones. To my parents, thank you for your unconditional love and for the sacrifices you made to allow me to fulfill this education. To my partner, Josh, thank you for being by my side every step of the way, for encouraging me and believing in my work even when I struggled to believe in it myself.

# table of contents

ABSTRACT	i	CHAPTER THREE	
ACKNOWLEDGMENTS	iv	<b>Urban Green Space</b>	46
TABLE OF CONTENTS	v	importance	48-51
		historical examples	52-53
PREFACE	vii	<i>case studies</i>	54
DEFINITIONS AND KEY TERMS	ix-xi	Spirit Park	56-57
PLANT A GARDEN	xiii-xiv	Millenium Library Park	58-59
		MET Gardens	60-61
CHAPTER ONE		Willow Street	62-63
<b>House of Peace</b>	18		
introduction	20-21	CHAPTER FOUR	
neighbours	22-23	<b>Green Roofs</b>	64
countries of origin	24-25	benefits	66-67
plants	26-27	expanding the framework	68-71
a desire for green space	28-29	history	72-73
location	30-31	<i>case studies</i>	
incremental change	32-33	Winnipeg Art Gallery	74-75
CHAPTER TWO		UMSU	76-77
<b>Design Objectives</b>	34	ASLA	78-79
nature as guide	36-37	Tabaret and Waller Street	80-81
framed views	38-39	Vasconcelos Library	82-83
beyond seeing	40-41		
meaning of gardens	42-43		
design objectives	44-45		

CHAPTER FIVE

<b>Site Analysis</b>	84
city scale	86-87
neighbourhood scale	88-89
climate and weather	90-91
sun study	92-93
site images	94-95
spatial constraints & considerations	96-103
loading	104-105

CHAPTER SIX

<b>Design</b>	106
process & explorations	107-111
ideation	112-113

<b><i>green escape</i></b>	114
initial ideas	116-117
privacy and security	118-119
dimensions and material	120-121
sections	122-125
meadowview	126-127
green roof method & application	128-129
planting	130-131
woodland lounge	132-133

<b><i>outdoor living room</i></b>	134
initial ideas	136-137
community space	138-139
configurations	
dimensions and material	140-141
lounge talks & framed views	142-143
elevation perspectives	144-145
planting	146-147
in the seasons	148-149
lighting	150-151
furniture detail	152-153
silvacell detail	154-155

CHAPTER SEVEN

<b>Conclusion</b>	156
design objectives	158-159
reflections	160-161
appendix A	162-179
endnotes	180-183
references	184-187
footnotes	188-191

## **preface**

In this practicum, you will find quotes and reflections drawn from books that have inspired me, particularly those on ethnobotany, culture, and community. These works, along with intensive research into scientific literature and peer-reviewed articles, have deeply informed this project. However, the lens through which I approached the work was also shaped by personal experiences—my own journey as an immigrant woman navigating the city of Winnipeg, seeking familiarity, comfort, and belonging in new and unfamiliar spaces. I realize that no matter where I am, nature in its multitude of forms helps to create this sense of home.

At the outset of this practicum, I was deeply interested in the role of ethnobotany and the idea that plants could carry meanings of home, memory, and identity. I wanted to explore how connections to nature, even in highly urban contexts, could support a sense of belonging. I knew I would be working in a dense downtown environment, as that is where I live, and I carried with me the belief, rooted in my upbringing and lived experience, that nature has the power to heal.

The selection of the House of Peace as a site came naturally. It is an organization I have long respected, and I admire the way its values are reflected in the care and support it offers to women in transition. The opportunity to design a space for this community felt both aligned and meaningful.

As the project progressed, my process evolved. I began to understand more deeply that I could not simply apply a topic of personal interest onto a chosen site. Through research, site visits, and informal conversations with staff and residents, I came to see the specific needs, constraints, and rhythms of the House of Peace. This learning shifted the direction of the design. While the spirit of ethnobotanical thinking remains present, the final proposal is shaped foremost by the scale of the space, the lived experiences of its users, and the importance of creating a sense of sanctuary amongst the concrete downtown.



## definitions and key terms

### *neighbours*

The women who live in the home are referred to as neighbours. The term reflects the idea that the House is more than just a residence, but a community where individuals support and care for one another.

### *intercultural refuge*

An intercultural refuge can be understood as a sanctuary or safe haven that supports and nurtures the exchange of diverse cultural practices, values, and identities. Such a space is intended not only for physical shelter but also for symbolic protection and community resilience in multicultural contexts. It fosters intercultural dialogue and provides an environment in which individuals from various backgrounds can collectively seek support, social integration, and creative expression. The concept resonates with the goals of therapeutic landscapes that actively weave culture and health through spatial design, fostering a space where divergent cultural narratives coexist in a supportive atmosphere.<sup>1</sup>

### *agency*

Agency is a multifaceted concept, that in the broadest sense, denotes the capacity of an actor. In the human individual, agency involves the ability to make choices, exercise self-determination, and actively engage in processes that shape one's social and physical surroundings. Equally important is the extension of the agency concept beyond the human realm. The idea of botanical agency recognizes that elements of the natural environment – such as plants in gardens – possess inherent capacities to interact with and shape their surroundings. Empowering both notions of human and botanical agency is important in this practicum as both work with each other in influencing a healing space.<sup>2</sup>

## *communal space*

Communal space refers to an area intentionally designed for collective use by the community members. These spaces serve as settings for social encounters, shared activities, and community bonding and are integral to therapeutic urban design, transforming everyday environments into settings for emotional and mental restoration.<sup>3</sup>

## *urban green space*

Urban green space (UGS) is broadly defined as any land in urban areas partially or fully covered with vegetation, encompassing elements such as parks, community gardens, urban forests, green roofs, and street trees. Beyond aesthetic enhancement, the significance of UGS is integral to urban sustainability and the well-being of city inhabitants. For the purpose of this practicum, UGS specifically refers to intentionally designed and curated green areas within the urban fabric, shaped with vegetation and other natural elements to achieve specific functional, aesthetic, and therapeutic outcomes for users, without necessarily requiring their active cultivation.

## *garden*

The outdoor spaces of The House of Peace are defined here as ‘gardens’, a subset of urban green space that captures the scale and intimacy of the site. This terminology is purposeful because a garden, as a type of intentional green space, encompasses a wide spectrum of environments, as it can be both formal and informal, and deeply personal to an individual or community. The specific meaning and function of a garden are inherently dependent on the perspective of its users. This ambiguity, which reflects an infinite array of possibilities for a small green space, is explored further in Appendix A, inspired by *The Meaning of Gardens* by Mark Francis and Randy Hester. Furthermore, since the residents and staff themselves refer to this project as the ‘garden’ project, using this term aligns the design language with the community’s own perception.

## *healing space*

Healing space refers to a built or natural environment with the primary purpose to foster holistic recovery and restoration of physical, emotional, and cognitive well-being. Such spaces are designed with the intention to reduce stress, facilitate social support, and offer meaningful connections with nature, thereby aiding individuals in recovering from trauma, mitigating adverse effects of stress and isolation, and cultivating a sense of personal wholeness and belonging. While often embedded within healthcare facilities, healing spaces are increasingly recognized as vital components of urban environments and community residences.<sup>4</sup>

## *therapeutic space\**

Therapeutic space or garden denotes a designed environment that leverages natural elements to promote specific physical, psychological, cognitive, and social benefits. It integrates landscape design principles with health-oriented goals, creating settings that actively contribute to stress reduction, recovery, and an enhanced sense of well-being. While a healing space represents the overarching desired outcome, a therapeutic garden is a specific type of intervention or environment designed with therapeutic qualities intended to facilitate that broader healing process. This concept builds on a long tradition of acknowledging the beneficial properties of nature, refined by modern design guidelines to optimize user experience.<sup>5</sup>

*\*While both therapeutic and healing gardens contribute positively to health outcomes through nature exposure, therapeutic gardens focus on structural elements designed for rehabilitation and well-being enhancement, whereas healing gardens prioritize emotional and psychological recovery. This nuanced differentiation informs their respective design considerations and applications in facilities like hospitals, or other restorative destinations.*





“*People always ask me what one thing I would recommend to restore relationship between land and people. My answer is almost always “Plant a garden.” It’s good for the health of the earth and it’s good for the health of the people. A garden is a nursery for nurturing connection, the soil for cultivation of practical reverence. And its power goes beyond the garden gate—once you develop a relationship with a little patch of the earth, it becomes a seed itself.*”

*Robin Wall Kimmerer, Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and The Teachings of Plants (Minneapolis: Milkweed Editions, 2013) 126.*

**figure 1**

(left) Image of a young highbush cranberry plant in Downtown Winnipeg

## CHAPTER 1

# THE HOUSE OF PEACE

*This chapter introduces the House of Peace as the central site for the practicum. By outlining its mission, residents (“neighbours”), cultural diversity, and current relationship with plants and outdoor space, it establishes the lived realities that guide the design.*



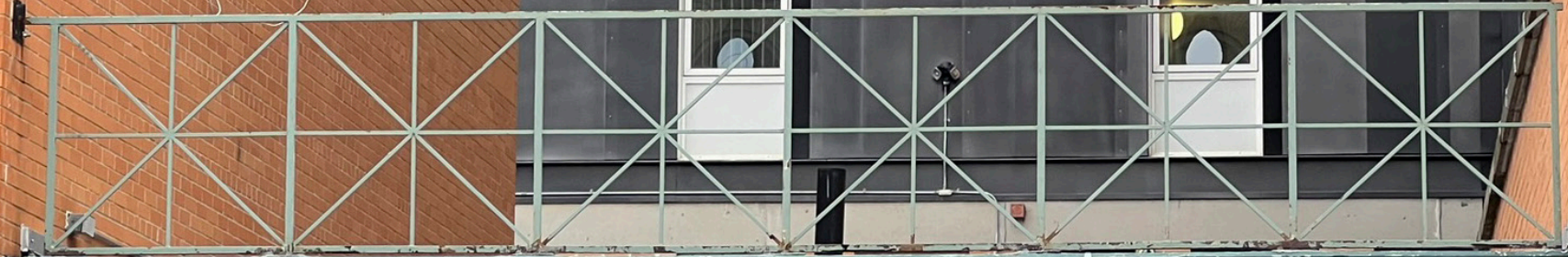
*figure 2*  
*The House of Peace logo*

## *introduction*

The House of Peace, located in the heart of Winnipeg, operates as a refuge and an intercultural, life-affirming community with a mission to empower newcomer women to begin life anew.<sup>6</sup> This organization upholds a vision centered on justice, tenderness, and communion, extending its welcome to all individuals seeking support. Its 40-suite residence, 'Marie Rose Place', is home to women and their children from various cultural backgrounds who apply for tenancy.<sup>7</sup> It serves as a hub for programs aimed at promoting justice, peace, and understanding.<sup>8</sup> At the core of the House of Peace is the "Neighbours" program, a residential initiative that provides a home for up to two years for 19 newcomer women who have endured immense suffering due to poverty, war, violence, and abuse. Since its establishment as a registered charity in 2004, the House of Peace has supported numerous women from diverse cultural and religious backgrounds, offering them a safe and loving environment to heal from past trauma, set new goals, and move forward with dignity and hope. The organization is deeply committed to empowering these women, as well as survivors of domestic violence and individuals facing mental health challenges, to rebuild their lives.

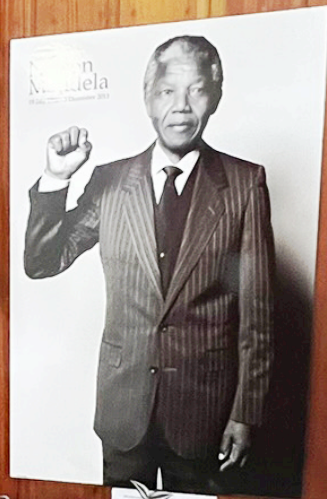
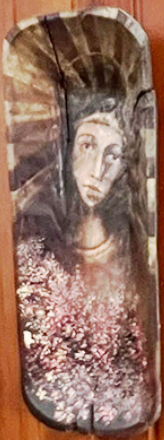
*figure 3*  
*(right) Entrance*  
*view ofThe*  
*House of Peace*

 HOLY NAMES  
HOUSE OF PEACE  
211 EDMONTON STREET, WINNIPEG



211 HOLY NAMES · HOUSE of PEACE

21



## *neighbours*

The mission and activities of the House of Peace strongly align with the concept of a healing space, particularly for vulnerable populations. By prioritizing newcomer women, survivors of trauma, and those with mental health challenges, the organization demonstrates a clear intention to provide a supportive and restorative environment. The wide array of programs offered addresses various dimensions of well-being, including emotional, social, and practical needs, suggesting a holistic approach to healing.<sup>9</sup> The emphasis on community, intercultural connection, and fostering a sense of belonging, as exemplified by the term *neighbours* underscores the critical role of social support in the healing journey. Moreover, the provision of a safe and loving home with 24/7 support creates a stable and secure foundation that is essential for individuals recovering from traumatic experiences. The House of Peace serves as a significant example of an organization in Winnipeg dedicated to providing a healing environment for those in need.

**figure 4**  
(left) Interior foyer space  
at The House of Peace

## **countries of origin** *at the House of Peace*



**figure 5**  
*(right) map of all the pins showing  
where residents and staff at HOP  
are from*





*figure 6*  
*House of Peace community*  
*in their yard*

## plants of the world *what else lives in the House of Peace*



The House of Peace is also home to plants that inhabit hallways, windowsills, and common spaces. The presence of these plants shows a desire for green life, softening the building and offering comfort in daily routines, however subconsciously. They reflect the diversity of the community that resides in the building and carry memories of home.

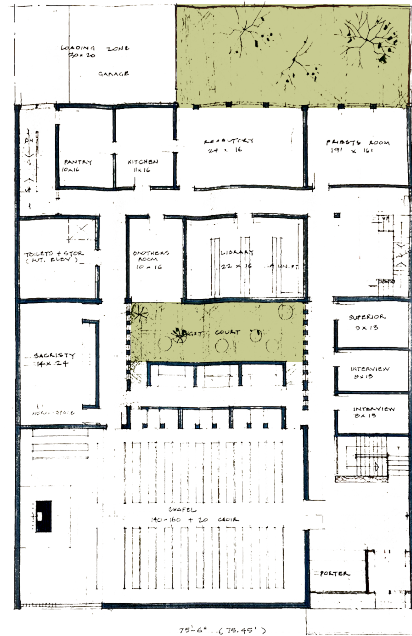
From the thriving indoor plants and kitchen herbs to the diverse vegetation in the small yard, the greenery demonstrates the site's substantial level of stewardship. The success in the plant growth and maintenance demonstrates an opportunity to welcome more intentional green space and interventions into the House of Peace.

In the past, the yard featured a large tree (illustrated in the left image on page 21 & page 20) that provided a beautiful, natural canopy for the community over many years. Its unavoidable removal due to its poor health resulted in the loss of that essential shade and greenery it created, establishing a need for reintroducing substantial natural elements to the yard.

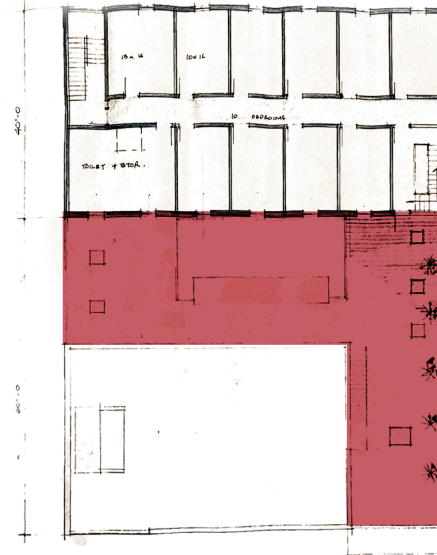
*figure 7* Various Plants at the House of Peace

## desire for green space...

These drawings from the 1960s imagined trees in the courtyard and plants on the rooftop of the House of Peace. Although the courtyard no longer exists today, these plans show an early desire for green space as part of the building.



1st floor plan from 1963.



2nd floor plan from 1963.

- Greenspace
- Rooftop

*figure 8* (above) drawings from Green Blankstein Russell Associates (GBRA, 1963)

*figure 9* (right) A mature tree in the yard before it was taken down in 2022 (House of Peace)



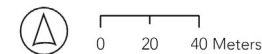
# location *among the concrete*



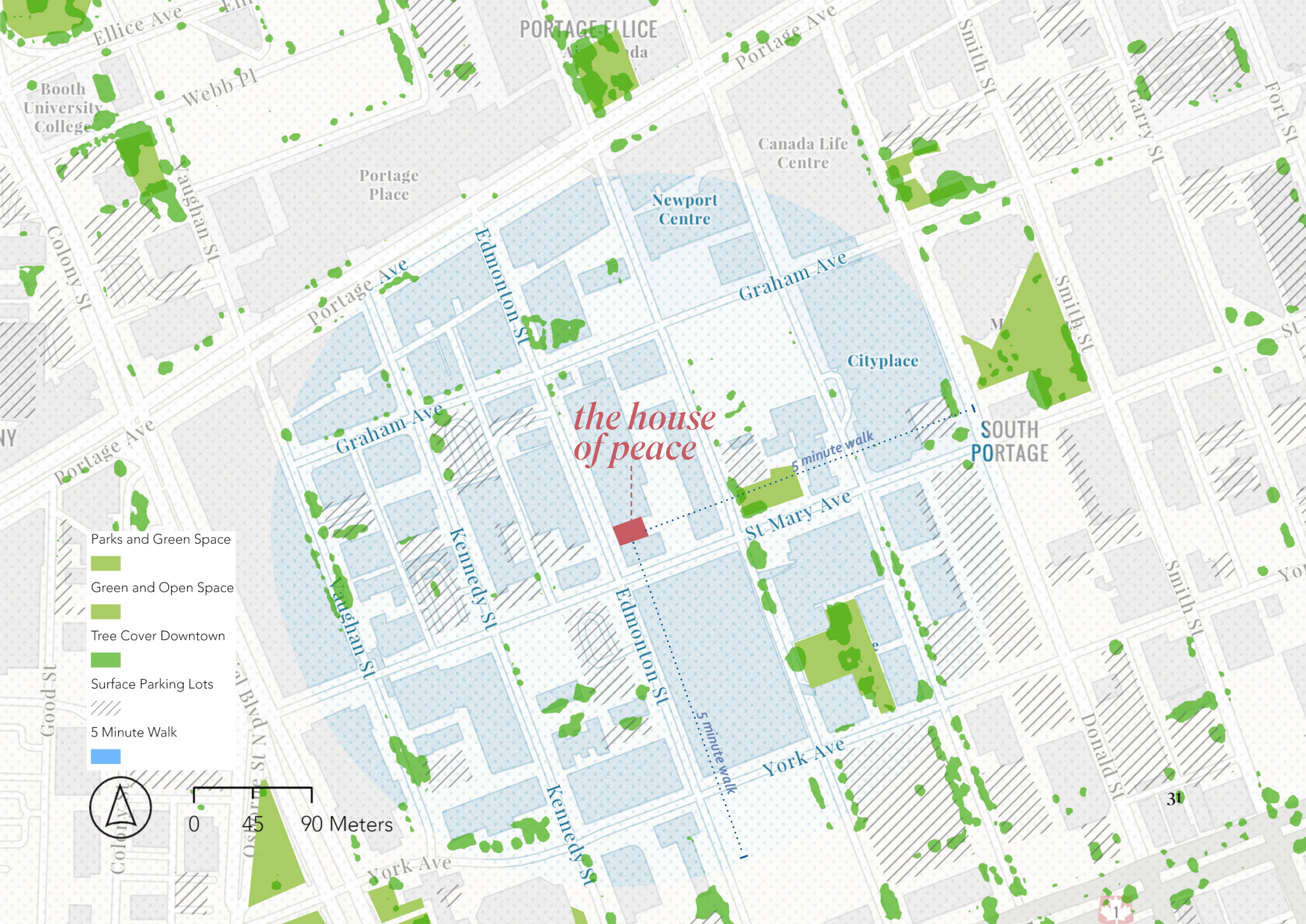
*figure 10*  
Site Plan (City of Winnipeg)

There is a growing body of evidence indicating that environmental stressors (such as crowding, community noise, and air pollution) can elicit substantial stress in large groups of people.<sup>10</sup> Given that The House of Peace primarily supports women from diverse geographical and traumatic backgrounds, it is reasonable to assume that the negative effects of these environmental stressors are heightened for these newcomers.

Furthermore, many studies reflect an increasing emphasis on how the physical properties of environments—specifically those with high stimulation levels—increase demands on an individual’s coping resources.<sup>11</sup> Situated amidst concrete and urban density, the immediate surroundings of The House of Peace may exacerbate existing vulnerabilities, making the provision of nearby green space crucial for restorative relief.



*figure 11 (right)*  
Site Plan (ArcGIS)



Booth University College

PORTAGE PLACE

Canada Life Centre

Newport Centre

Cityplace

SOUTH PORTAGE

*the house of peace*

5 minute walk

5 minute walk

- Parks and Green Space
- Green and Open Space
- Tree Cover Downtown
- Surface Parking Lots
- 5 Minute Walk



0 45 90 Meters

31



# small incremental efforts ...

This image collage combines a large leaf superimposed on an abstract map of Winnipeg. This composition serves as a metaphor: just as a single leaf contributes to the fullness of an entire canopy, one small intervention can impact the whole urban system. My hope is that this design, despite its limited footprint in the context of urban planning, will successfully initiate a broader dialogue on the imperative of bringing restorative green spaces to our city, starting with incremental transformation, one yard at a time.



*figure 12* graphic of leaf over a map of the city of winnipeg

## CHAPTER 2

# DESIGN OBJECTIVES

*This chapter outlines the main goals and concepts informing the design. These concepts directly informed my design approach, specifically:*

**framed views**

**nature beyond seeing**

**meaning of gardens**

*The reference text, *The Meaning of Gardens* by Francis and Hester was deeply impactful to my thinking as a designer. While the detailed discussion is now located in Appendix A, its influence is fundamental to the design's core ideas.*



*figure 13 birch trees in the exchange district in Winnipeg*



## *nature as a guide*

Design decisions for the House of Peace are informed by the inherent logic and restorative patterns found in natural ecosystems. Rather than merely placing greenery, this approach mimics the biological resilience and sensory richness of the natural world to foster healing. By observing how nature provides both “prospect” (wide views for safety) and “refuge” (enclosed spaces for comfort), the design creates a sanctuary that feels intuitive and protective, ensuring the built environment works in harmony with human physiological needs for tranquility.

### RESTORATIVE POWER OF NATURE

Throughout this practicum, I draw upon various texts and theories to envision the potential of the House of Peace’s outdoor spaces. *The Meaning of Gardens* by Mark Francis and Randolph T. Hester, provided a philosophical framework for understanding how gardens are experienced and interpreted through both individual and communal lenses. While many of its concepts are theoretical, the book’s rich imagery and real-world examples helped solidify the core “muses” that helped to guide this project.

Additionally, Roger Ulrich’s research provides scientific evidence for nature as a critical coping resource. While his ‘framed view theory demonstrates that simply observing nature through a window triggers stress recovery, his broader work suggests that physical immersion deepens these effects by engaging all the senses. Consequently, the House of Peace design prioritizes a “nested” experience, balancing key sight lines for indoor relief with tactile pockets of vegetation for an immersive, therapeutic outdoor experience that goes beyond just seeing nature.



*figure 15*  
*Framed Views collage within the living room*

Beyond physical access, the visual connection to a space plays a critical role in healing. This principle is seen historically in the tranquil ‘framed views’ of Japanese Gardens and is reinforced by Roger Ulrich’s research<sup>12</sup> which proved that viewing nature positively impacts both physical and mental health recovery after trauma.

# framed views



**figure 16**  
*Framed Views within Portland Japanese Gardens creating a sense of calm and tranquility*



**figure 17**  
*Living Room at The House of Peace where towering buildings dominate the view from the windows*

# nature beyond seeing

In his paper<sup>13</sup>, Ulrich's findings reinforce the restorative power of nature, framing it as a vital coping resource against the psychological demands of urban life.

1. **Faster Recovery:** Stress recovery was consistently faster and more complete in participants who viewed natural environments compared to those viewing urban settings.
2. **Physiological Response:** Physiological data indicated a parasympathetic nervous system response (associated with calmness and restoration) during exposure to nature scenes, a reaction that was absent during urban exposure.
3. **Emotional Impact:** Natural scenes induced more positive emotions (such as calmness, interest, and pleasantness), whereas urban scenes tended to sustain or even increase stress indicators.
4. **Engaged Attention:** While natural scenes captured attention, this effect was not purely reliant on effortless "soft fascination." Instead, nature appeared to engage attention in a manner that was both focused and emotionally positive, suggesting a deeper restorative mechanism.
5. **Decisive Content:** The primary factor driving recovery appeared to be content differences, specifically the presence of unthreatening, natural features versus built, human-made elements.

**figure 18**

*Looking up at the trees on a walk in Winnipeg*



# meaning of gardens



*order of importance in what a garden means for the  
House of Peace*

In *The Meaning of Gardens*<sup>14</sup> by Mark Francis and Randolph T. Hester, the authors explore the various symbolic and functional meanings that designed natural environments can hold for people, using the metaphor of ‘gardens’ to reflect deep human-nature connections. While my practicum focuses on urban green spaces that do not primarily involve active cultivation by users, I draw on Hester and Francis’s six muses: Faith, Power, Ordering, Cultural Expression, Personal Expression, and Healing; as a conceptual framework. These muses provide a powerful lens for understanding the potential of even passively experienced green spaces to shape human experience, identity, and social dynamics. In designing the spaces for the rooftop and yard of the House of Peace, these muses helped me to understand the space’s potential to offer more than just visual value. Each muse provides a lens through which to view the garden as a space of deeper meaning, capable of reflecting the values, needs, and aspirations of its community.

## DESIGN OBJECTIVES



### *integrate therapeutic value in a high-density context*

To create a restorative environment within a limited urban space that prioritizes immediate access to nature for reducing sensory overload and enhancing therapeutic experience.



### *foster individual and social wellbeing*

To design spaces that balance private areas for personal reflection with inclusive communal spaces that encourage meaningful human connection and a sense of belonging within and beyond the community of the House of Peace.



### *re-establish an ecological presence*

To restore local biodiversity through sustainable infrastructure such as green roof and planter benches that reconnect the built environment with the natural ecosystem.



### *cultivate empowerment and cultural ownership*

To integrate and prioritize the community needs in the design process to ensure that the space reflects their unique daily functions.

To allow flexibility within the spaces for the community's evolving use and providing spaces for the community's choice of plants.



A close-up photograph of a tree's foliage, showing numerous bright green leaves with prominent veins and serrated edges. The leaves are densely packed, creating a lush, textured appearance. The lighting is bright, highlighting the natural colors and details of the leaves.

### CHAPTER 3

## URBAN GREEN SPACE

*This chapter examines urban green space as a broad concept that encompasses both private and public realms, and projects ranging from large-scale interventions to small, localized efforts. The intention is to explore the established role of green spaces in supporting the environment and enriching the cultural life of the cities where they are situated. These precedents serve to highlight why the integration of greenery and nature holds such critical importance in contemporary urban landscapes.*

*figure 20* Closeup Image of a tree in Downtown Winnipeg

## *about*

Urban gardens, including parks, community gardens and other natural settings, provide relief from the sensory demands of modern, digitally driven life. They offer restorative environments that promote both mental and physical well-being, while also fostering opportunities for social connection and community well-being. While this practicum focuses on a private rather than public green space, the benefits remain consistent, though experienced on a more intimate scale. In smaller, immediately accessible spaces, the relationship between the individual and the environment and between individuals themselves, becomes more direct. Because such spaces are more likely to be used frequently, even a modest green area can amplify the positive effects of nature, strengthening personal well-being.



*green space to counter...*

## **the hard urban environment**

Hardscapes, such as concrete and asphalt surfaces, have become a defining characteristic of modern urban design globally.<sup>15</sup> This dominance has consequences. The proliferation of such impervious surfaces contributes to significant environmental and public health challenges. Research indicates correlation between the increased prevalence of these built environments and a rise in non-communicable diseases including cardiovascular diseases, obesity, and mental health conditions like depression.<sup>16</sup> Conversely, the integration of soft landscape interventions, or green spaces, has been demonstrated to mitigate or prevent the onset of these conditions by promoting physical activity, reducing stress, and improving air quality.<sup>17</sup> Beyond these health impacts, environments dominated by hard surfaces contribute to urban heat island effects, poor stormwater management, and reduced biodiversity, underscoring the critical role of green spaces in fostering more resilient and healthful urban ecosystems.

## **digital age**

Contemporary life is increasingly characterized as a ‘digital age’, where individuals are constantly exposed to vast amounts of data and sensory input, often disconnected from their immediate physical surroundings. This pervasive digital engagement can lead to a decline in direct interaction with nature, resulting in increased stress levels and diminished well-being.<sup>18</sup> A growing body of research establishes a clear and significant link between time spent in nature or proximity to green spaces and improved quality of life. Engagement with natural environments is consistently shown to reduce physiological stress markers, enhance mood, and foster a greater sense of overall well-being and life satisfaction.<sup>19</sup> Thus, urban green spaces serve as crucial antidotes to the demands of the digital age, offering restorative environments that encourage sensory recalibration and reconnection with the natural world.

*figure 21*  
*(left) a view of*  
*Edmonton Street*



*figure 22*  
a clay plaque at The House of  
Peace

### *green space as a tool...*

Studies have shown that exposure to natural environments can foster a more profound sense of connectedness among residents in communities.<sup>20</sup> Enßle-Reinhardt and Kabisch highlight that urban green spaces provide platforms for social engagement, significantly contributing to the overall health and well-being of community members, particularly among older adults.<sup>21</sup> The correlation between social participation and improved mental health further suggests that green spaces act as facilitators for community engagement, enhancing the overall mental health of urban neighborhoods.<sup>22</sup>

## **social value**

The social value of urban green spaces (UGS) lies in their capacity to foster community identity, facilitate social cohesion, provide venues for cultural expression, and connect urban dwellers with nature in meaningful ways. Within a private, communal context like the House of Peace, these spaces can serve as vital settings where residents can gather, interact, and build social capital, strengthening bonds within their immediate community.

For the neighbours, green spaces may become sites of shared memory and collective identity, embodying a unique sense of place. They strengthen a collective sense of home and belonging among individuals undergoing transition. Such landscapes support informal learning, intergenerational interactions, and spaces for artistic expression, performance, and contemplation.<sup>23</sup> By providing settings for shared experiences, from communal celebrations to quiet reflection, urban green spaces are not just ecological assets but essential components of a vibrant, inclusive, and culturally rich communal life. For diverse urban populations, UGS can act as significant cultural touchstones. They offer opportunities for intercultural exchange, allowing various communities to share traditions, celebrate heritage, and find familiarity in shared natural settings. This is particularly salient for immigrant and refugee communities, for whom culturally resonant plantings and accessible green areas can evoke memories of home, facilitate adaptation, and aid in the complex process of forging a new sense of belonging.<sup>24</sup>

## early forms of green spaces *private miniature paradises*

Early forms of intentional green spaces within built environments often had spiritual or contemplative functions. Cloister gardens (see pages 62 & 63), prominent in medieval monasteries, exemplify this. These enclosed quadrangular spaces, typically surrounded by arcades, were designed for meditation, prayer, and the cultivation of medicinal and symbolic plants.<sup>25</sup> They served as miniature paradises, offering sensory delight and a peaceful retreat from the outside world. The strict geometric order, central fountain, and symbolic plantings (e.g., roses for purity, lilies for resurrection) created a profound sense of sanctuary and divine order.<sup>26</sup> As historically private and secluded spaces dedicated to specific communities, cloister gardens provide a historical parallel for the intentional design of private, healing green spaces within structured residential environments, prioritizing introspection and communal well-being.

Another example of an enclosed garden in history is the Persian garden (figure 21), a landscape style characterized by a geometric layout, the sophisticated use of water, and high enclosing walls, designed to symbolize an earthly “Paradise”.<sup>27</sup> Throughout its evolution, the Persian garden has had a role in various cultural and social aspects of society, becoming a central feature in private residences, palaces, and public buildings, as well as in ensembles associated with benevolent or religious institutions, such as tombs, parks, and palace gardens.<sup>28</sup>



**figure 23**  
*A Ruler in a Garden Pavilion Surrounded by Courtiers  
and Attendants (Collection of Freer and Sackler  
Galleries)*

## **community and civic spaces** *public benefit*

The notion of green spaces for broader public benefit gained prominence in the Renaissance, when grand aristocratic gardens opened to select citizens. It later exploded during the Industrial Revolution as a response to increasingly dense, polluted, and unhealthy cities. The parks movement of the 19th century, epitomized by designers such as Frederick Law Olmsted, led to the creation of large-scale public parks (e.g., Central Park in New York, Golden Gate Park in San Francisco) aimed at providing fresh air, recreation, and moral uplift for all citizens. While these large civic parks served a public purpose, they established the fundamental principle that carefully designed green infrastructure is essential for urban health and well-being.

The 20th century saw the emergence of community gardens, often grassroots initiatives driven by food insecurity or a desire for local greening and social engagement.<sup>29</sup> These gardens, typically managed by local residents, fostered a strong sense of community ownership, provided access to fresh produce, and served as vital hubs for social interaction, skill-sharing, and cultural continuity, particularly in marginalized neighborhoods. Community gardens can demonstrate how intentionally shared green spaces, often focused on cultivation, can powerfully build cohesion, foster interaction, and provide a sense of agency for communities.



**figure 24**  
*Rainbow Community Garden - Woman Tilling (Knox  
Winnipeg)*

## CASE STUDIES

*While large-scale parks are vital for urban resilience, increasing density means many residents lack daily access to major green spaces. This practicum focuses on micro-scale interventions as essential supplements that bridge gaps in the urban network, bringing restorative nature directly into daily life. To establish a robust set of precedents, the following case studies examine a range of scales, from expansive public parks to intimate community gardens. Each study is organized by Key Features to identify design strengths and an Application section that translates these findings into potential actionable strategies for the House of Peace rooftop and yard.*



## case study 1

### SPIRIT PARK

West Broadway, Winnipeg, Canada

DESIGNER: Unknown

DESCRIPTION: Spirit Park is a grassroots community garden shaped by partnerships with local organizations such as The West Broadway Community Organization and Art City. It features raised beds, gathering areas, and seasonal educational programming led by Traditional Knowledge Keepers.<sup>30</sup>

APPLICATION: I chose Spirit Park as I thought it was most involved in community. The project emphasizes resident participation, flexible space use, and healing through informal stewardship. At The House of Peace, raised beds, multipurpose gathering space, and opportunities for land-based cultural practices will be integrated in both the rooftop and yard designs.





*KEY FEATURES:*  
communal raised planting beds, communal gathering spaces, seating, storage for tools and water supply, compost area

*figure 25*  
Collage of Spirit Park  
(Seno, 2025)

## case study 2

### MILLENNIUM PARK Downtown Winnipeg, Canada

DESIGNER: HTFC Planning and Design

DESCRIPTION: Millennium Library Park is a redesigned civic park adjacent to the Millennium Library, transformed from a previously underused space into a welcoming and active green oasis in the midst of a dense urban environment. The park features native plantings reflecting key ecoregions and ecosystems of southern Manitoba, including prairie and aspen parkland landscapes, boreal forest elements, and wetland habitats as well as stormwater channels, public seating, and artistic sculptural elements.

APPLICATION: This project demonstrates how design can revitalize downtown spaces for public wellbeing. Its use of native plants, layered spaces, and sculptural interventions offers inspiration for how this practicum's design can serve as a multifunctional environment. I aim to similarly balance aesthetic simplicity, ecological intent, and social usability in a compact urban context.

#### *KEY FEATURES:*

seating/ open public space/ trees and vegetation/  
variety of space/ green roof on top of a parkade



*figure 26*  
Millenium Library Park in  
Downtown Winnipeg (HTFC)



## case study 3

### MET (Metropolitan Museum of Art) CLOISTER GARDENS NY, USA

**DESIGNER:** Caleb Leech (Current Horticulturist), Charles Collens (architect)

**DESCRIPTION:** Opened in 1938 in Fort Tyron Park, the Met Cloisters integrate medieval architecture with three distinct gardens - Bonnefront (teaching garden of useful plants), Trie (fantasy garden of allegory), and Cuxa (paradise garden with fountain) - each offering a different atmosphere. <sup>31</sup>The gardens integrate surrounding medieval architectural forms with plantings that emphasize order, symbolism, and sensory immersion, creating inward - focused green spaces that feel removed from the city.

**APPLICATION:** The cloisters demonstrate how enclosed gardens can provide refuge and healing within an urban setting. Their emphasis on enclosure, symmetry, and layered sensory experience translates well to how the outdoor spaces at the House of Peace could be designed as sanctuaries for rest and reflection, and social connection.

#### *KEY FEATURES:*

enclosed safe and private green oasis, medicinal herbs, trees and vegetation, shade and sunny areas, informal seating

*figure 27*  
(left) MET Cloister Gardens in  
New York

## case study 4

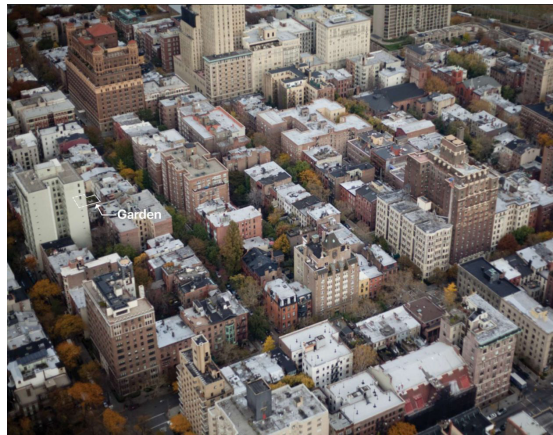
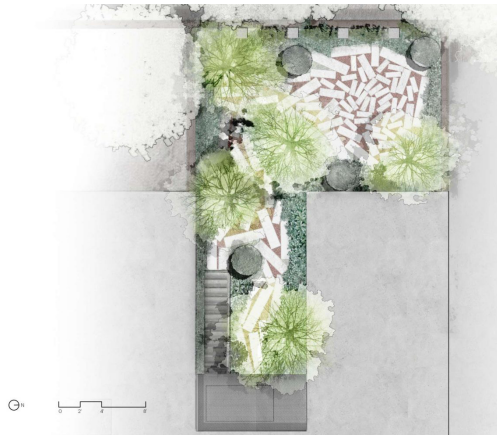
### WILLOW STREET GARDEN

#### Brooklyn, NY, USA

DESIGNER: Michael Van Valkenburgh

DESCRIPTION: Approximately 1200 sq ft., This private residential garden has a dense canopy, layered vegetation (including vines, grasses, blackberries, solanum), and irregular paving; these cultivate an immersive sensory experience.<sup>32</sup> Ivy clad walls blur boundaries, while a restored 19th century cistern supports passive stormwater reuse.<sup>33</sup>

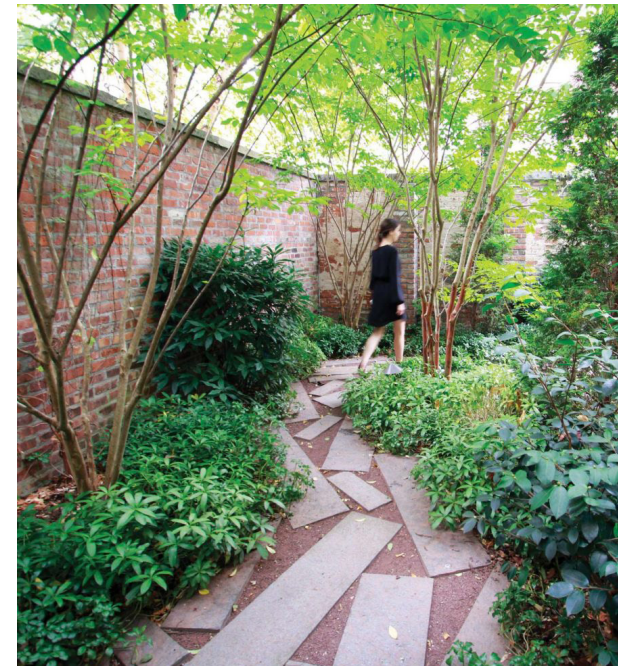
APPLICATION: Willow Street Garden shows how a small urban green space can serve as a therapeutic refuge. Its spatial and sensory strategies- such as layered plantings, diffuse boundaries through vertical greener, naturalistic pathways, and microclimatic warmth- can be adapted to create peaceful, immersive spaces within confined yards or rooftops.



*figure 28*  
Willow Street  
Garden (MVVA)

#### **KEY FEATURES:**

brick wall for visual and sound privacy in a busy urban environment, trees & vegetation, seating, textures, interesting pavement, vertical vegetation (vines and climbers)





CHAPTER 4

## URBAN GREEN SPACE: green roofs

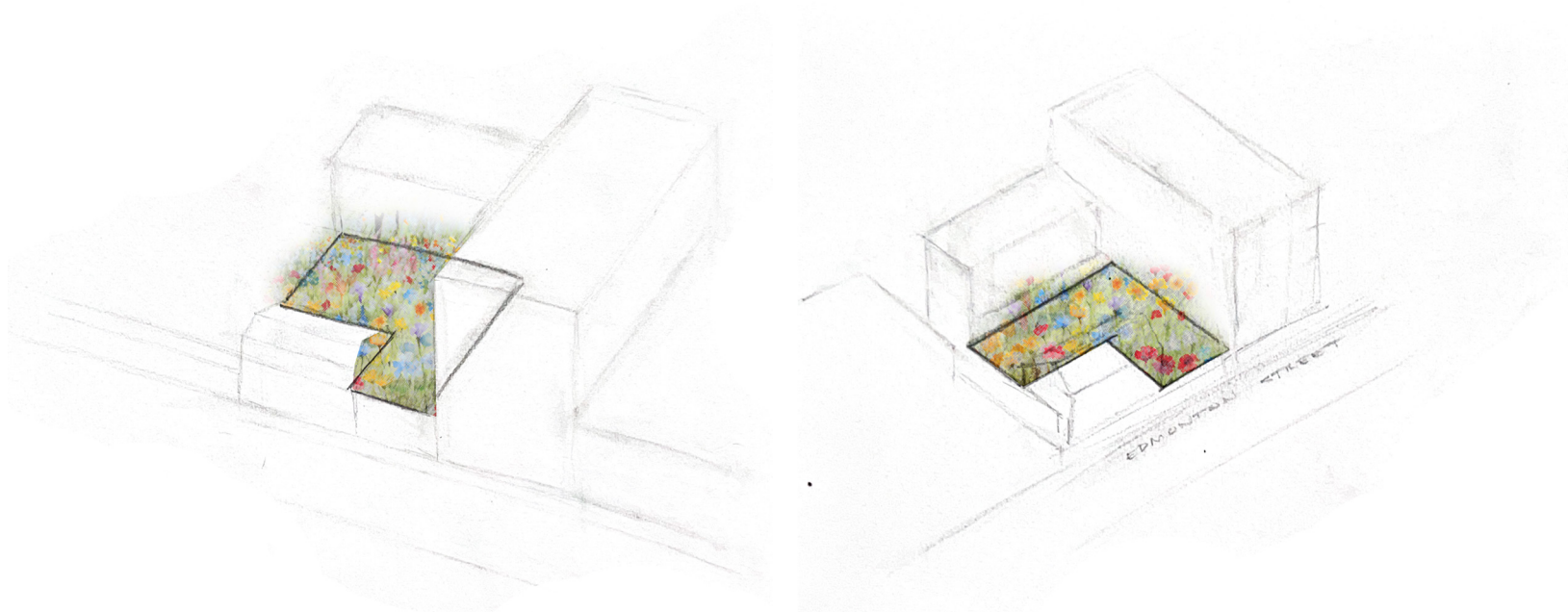
*This chapter turns upward as I explore the unique role of rooftop gardens in the urban fabric. From their historical beginnings to today's ecological and cultural applications, these elevated spaces show how cities can reclaim hard surfaces for beauty, refuge, and community. Rooftops can move beyond being overlooked in-between places to become vital pockets of restoration and tranquility, especially in the dense core of downtown environments.*



*figure 29*  
*Green rooftop in Downtown*  
*Winnipeg*

## what is a green roof?

Green roofs, also known as living roofs, are systems that incorporate vegetation on rooftops, wherein plants grow in soil or a growing medium atop a waterproof layer. They can be classified into two primary types: extensive or intensive. Extensive green roofs typically have a substrate depth of less than six inches and prioritize low-maintenance, drought-resistant plants. These roofs are generally utilized for environmental benefits rather than human access or aesthetic purposes. In contrast, intensive green roofs support a deeper soil layer and a wider range of plant species, including shrubs and small trees, while also accommodating human activities such as recreation and gardening.<sup>34</sup>



*figure 30*  
Early collage drawing of greenroof on the site (Seno, 2025)

## *environmental*

Green roofs provide numerous environmental advantages, including enhanced biodiversity, improved air quality, efficient stormwater management, and microclimate regulation. Studies indicate that green roofs can create viable habitats for various species, fostering urban biodiversity by supporting native flora and fauna.<sup>39</sup> They can also effectively mitigate habitat loss in urban settings, functioning as ecological “stepping stones” that enhance connectivity among fragmented habitats. Furthermore, green roofs contribute to better air quality by filtering pollutants and can significantly reduce urban heat island effects through evaporative cooling and shading.<sup>40</sup>

The presence of biodiverse habitats on rooftops can also promote awareness and appreciation of biodiversity within urban applications, creating a deeper environmental consciousness among city dwellers.<sup>38</sup>

## *psychological*

Beyond their environmental benefits, green roofs offer substantial psychological and social advantages. As previously mentioned, access to green spaces has been consistently correlated with improved mental health, reduced stress, and greater overall well-being.<sup>35</sup> The aesthetic appeal of greenery in urban settings can enhance the quality of life for residents, providing visual relief from dense concrete structures. Green roofs serve as an oasis within urban chaos, fostering a sense of connection to nature which is often missing in metropolitan landscapes.<sup>36</sup> The presence of natural elements in built environments has been shown to restore attention and reduce mental fatigue.<sup>37</sup>

**figure 31**  
(right) Residential Green Roof of Greg Klassen in Winnipeg (Mike Peters, Winnipeg Free Press, Colleen Zacharias)



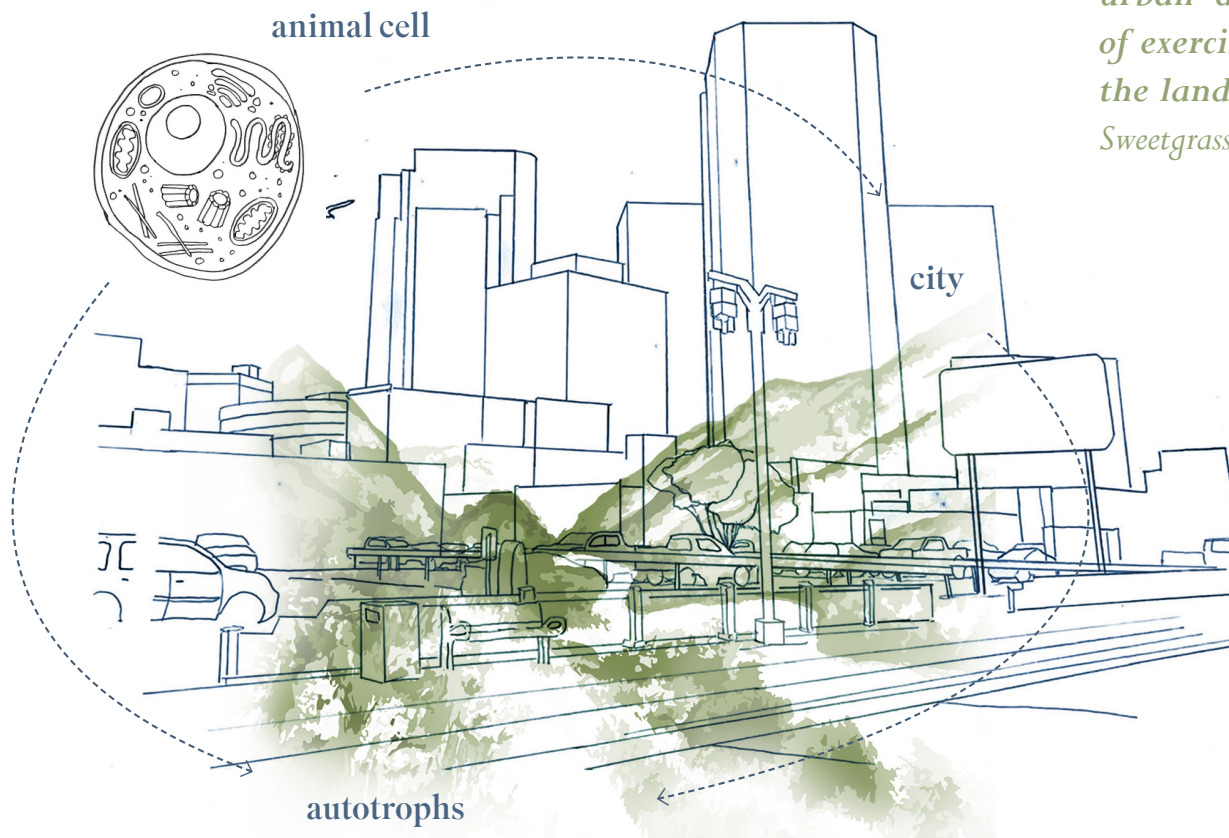
*Residential Green Roof in Winnipeg. Image Source: Greg Klassen, Winnipeg Free Press, Colleen Zacharias*



67



**figure 32**  
site among existing hardscape



“  
Cities are like mitochondria in our animal cells- they are consumers, fed by the autotrophs, the photosynthesis of a distant green landscape. We could lament that urban dwellers have little means of exercising direct reciprocity with the land. (Robin Kimmerer, *Braiding Sweetgrass*. 2013, 195)

**figure 33**  
Collage drawing of city as mitochondria (Seno, 2025)

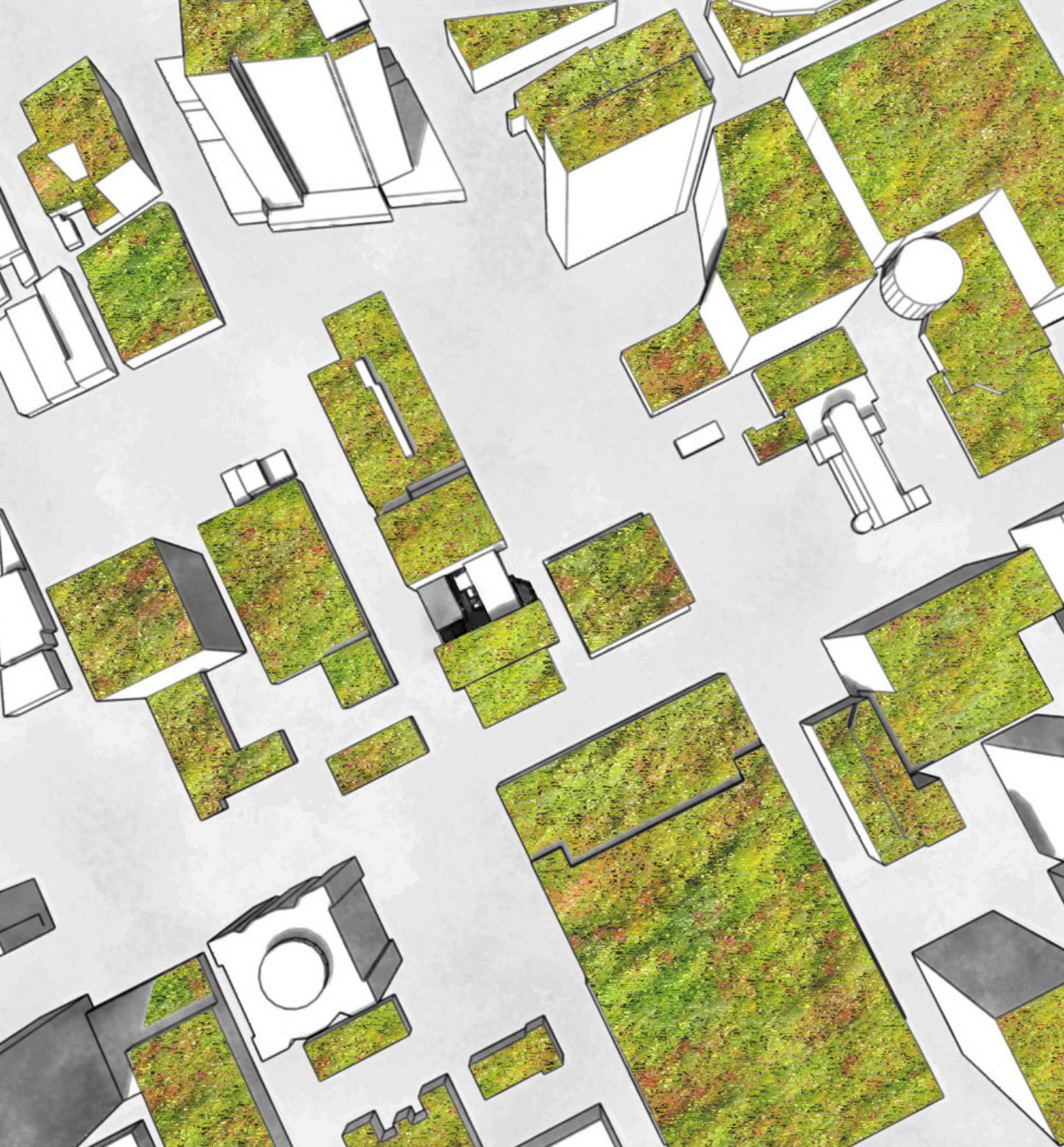
## **expanding green roofs in winnipeg's urban core** *learning from Toronto's green roof bylaw*

The House of Peace rooftop garden is part of my broader vision for integrating green roofs into existing buildings in Winnipeg. Green infrastructure initiatives have been growing in Canadian cities. Winnipeg can take inspiration from other urban centers such as Toronto, which mandates green roofs for new developments through its Green Roof Bylaw.<sup>41</sup>

Toronto's policy requires new commercial, institutional, and residential buildings of a certain size to dedicate a portion of their rooftops to green spaces.<sup>42</sup> This regulation aims to:

- Reduce the urban heat island effect
- Enhance biodiversity and stormwater management
- Improve energy efficiency and insulation
- Expand public access to nature in highly urban areas

Although Winnipeg and Toronto have different climates, Toronto's policy can inspire Winnipeg to do something similar. In particular, it may be applied to new commercial and large residential construction in the downtown core, as well as offering incentives for retrofitting older buildings to integrate more green space on the roof.



This image collage suggests what might happen if Downtown Winnipeg was overlaid with extensive green roofs. This visualization suggests what might happen if the city can implement a Green Roof Policy, even if applied selectively, to transform a significant portion of our unused rooftop footprint.

**figure 34**  
*Collage drawing of green roofs everywhere in Winnipeg (Seno, 2025)*

## rooftop gardens in history *inhabiting rooftops*

While green roofs and rooftop gardens are often seen as a modern innovation, particularly for environmental benefits, historical precedents included significant cultural functions. Ancient civilizations, such as the Mesopotamians with their Hanging Gardens of Babylon, demonstrated early attempts at integrating vegetation at height for aesthetic and perhaps symbolic purposes.<sup>43</sup> Roman villas also featured elevated terraces with plants, offering private retreats and panoramic views.

In more recent history, particularly in the late 19th and early 20th centuries, rooftop gardens in major North American cities like New York emerged as fashionable social and entertainment venues. These spaces, often atop theaters, hotels, and department stores, offered a temporary escape from the summer heat and the crowded streets below.<sup>44</sup> They hosted concerts, vaudeville performances, open-air dining, and social gatherings, providing a glamorous and novel setting for urban leisure. Notably, these rooftop gardens were accessible to a broad demographic, including many of the city's immigrant and working-class residents, offering them an affordable opportunity for cosmopolitan entertainment and respite from the density of tenement living.<sup>45</sup> These examples highlight how elevated green areas have been seen not just as ecological features, but as valuable sites for social interaction, and urban spectacle.



**figure 35** *Cherry Blossom Grove at the Olympia Theatre Roof Garden in New York, Built in 1895. (IBDB, 1895)*



**figure 36** *Ellis Island Roof Garden: Children of immigrants playing on the roof garden at New York City. (Jacob Riis, c1900)*



**figure 37** *Roof Terrace at the Hotel Astor in New York, 1905 (Museum of the City of New York)*



## case study 5

### WINNIPEG ART GALLERY ROOFTOP GARDEN

#### Downtown Winnipeg, Canada

DESIGNER: HTFC Planning and Design

DESCRIPTION: The Winnipeg Art Gallery's rooftop garden, restored in 2009, covers roughly 15,000 square feet and functions as an outdoor exhibition and event space.<sup>46</sup> It features bronze and stone sculptures, a reflecting pool with fountains, terraces, and a row of paper birch trees that frames views of the city skyline.<sup>47</sup> Beyond housing art, the rooftop doubles as a venue for concerts, receptions, and community gathering, creating a cultural and contemplative destination in downtown Winnipeg.

APPLICATION: The WAG rooftop shows how a rooftop can serve as a cultural and restorative setting through careful use of planting, art, and durable materials. The key takeaway is how this space is multifunctional and allows different events and programming to take place such as group yoga, workshops, outdoor lectures, and exhibitions.

#### *KEY FEATURES:*

art and sculptural pieces, rooftop space with flexibility for multiple activities and programs (e.g., weddings, concerts, or a quiet lunch time escape)



*figure 38*  
(left) Winnipeg Art  
Gallery

## case study 6

### UMSU (University of Manitoba Students' Union) ROOF DECK Winnipeg, Canada

DESIGNER: Renovated by HTFC in 2000, further enhanced by UMSU students 2017-2018

DESCRIPTION: The UMSU Roof Deck at the University of Manitoba functions as a student amenity with lots of seating and tables for gathering and different programming surrounded by trees and vegetation that also frames the views the administrative building of the university. By installing an intensive green roof system, the project improves environmental performance through stormwater detention and providing shade for its users.

APPLICATION: This roof deck, despite it feeling 'at grade' as it is not so high up, is a good demonstration of a social intensive space. This is also emphasized through the numerous seating options that support the changing patterns of use. The use of trees and dense vegetation can provide shade and a sense of being "enveloped in nature," offering a peaceful escape to their day.

#### *KEY FEATURES:*

community gardening space, outdoor education space, communal activist spaces, seating areas and communal tables, wind protection and partial shading structures

*figure 39*  
*UMSU Roof Deck*  
*(HTFC)*







## case study 7

### ASLA GREEN ROOF

#### Washington, D.C., USA

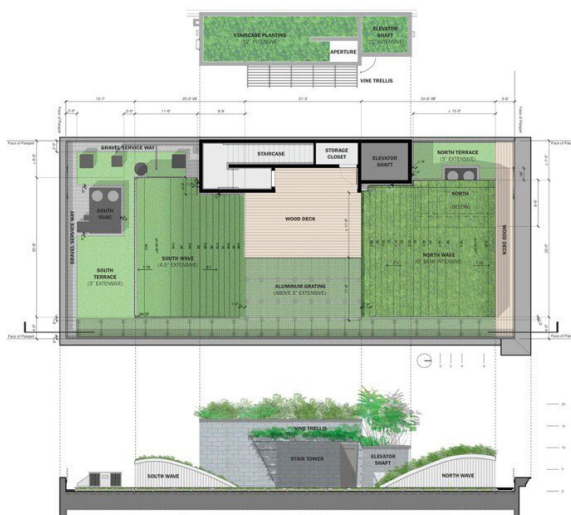
DESIGNER: Michael Van Valkenburgh Associates (MVVA) with the American Society of Landscape Architects

DESCRIPTION: Completed in 2006, this approximately 3,000 sq ft. green roof features two sculptural 'waves' sloped vegetated forms that create intimate spaces while concealing HVAC equipment.<sup>48</sup> It integrates varied planting depths (3-21 inches), an aluminum-grated walkway over sedums, and accessible gathering areas. The design achieved notable environmental impacts such as retaining around 27,500 gallons of stormwater in its first year, reducing roof temperatures, and lowering winter energy use by 10%.<sup>49</sup>

APPLICATION: The ASLA green roof demonstrates how modest urban rooftops can transcend mere green coverage to become educational, experiential and restorative spaces. This project uses reinforcements that uses extensive, lightweight assemblies where structural load is limited. It also demonstrates the importance of plant selection for rooftop microclimates.

#### KEY FEATURES:

plant zones (prairie, meadow, sedum ecologies), walkable grating and integrated signage, stormwater monitoring systems, shaded seating and educational circulation paths.



*figure 40*  
ASLA Green Roof  
(ASLA)

## case study 8

### TABARET AND WALLER STREET TERRACE

Ottawa, Canada

DESIGNER: University of Ottawa Facilities and Planning

DESCRIPTION: The project revitalized two exterior terraces and now feature a continuous green roof planted with hardy native plants that support pollinators, accessible paths, shaded seating beneath wooden structures, and softly cascading terrain that encourages movement and social interaction.<sup>50</sup>

APPLICATION: The project is a good example of a building retrofit that reconciles heritage architecture, circulation, microclimate, and student programming. The flexible seating and circulation, along with incremental activation (pop-up events), and material choices that work for extreme seasons, are relevant for this practicum's design. This project also show how relatively small design interventions can dramatically shift campus social patterns and promote outdoor 'third spaces' for study and informal gathering.

#### KEY FEATURES:

Outdoor seating terraces for study and informal gathering, 4-inch soil beds with hardy perennials, heritage-building interface with new landscape elements, seasonal programming and student use.



**figure 41**  
Tabaret and Waller  
Street Terrace in  
Ottawa





**figure 42**  
Vasconcelos  
Library in Mexico  
City

## case study 9

### VASCONCELOS LIBRARY

#### Mexico City

DESIGNER:Alberto Kalach and Juan Palomar

DESCRIPTION:The project integrates the public library with a large botanical garden, creating a 250-meter-long steel, concrete, and glass structure surrounded by dense greenery. Located in one of the world's largest and most polluted urban environments, the library transformed a barren landscape into a lush garden that displays a comprehensive array of Mexico's endemic flora. The design prioritizes a direct connection between the visitor and the natural world by incorporating specialized reading areas that offer users the opportunity for immediate, sensory contact with nature. These spaces, along with the entire library interior, benefit from integrated natural lighting and ventilation, fostering a unity between the built environment and the botanical surroundings.

APPLICATION:The Vasconcelos Library serves as a definitive precedent for establishing an immersive botanical sanctuary within a harsh urban environment. It demonstrates how a structural framework can integrate dense greenery to provide psychological relief from external stressors. Providing opportunities for direct, sensory contact with nature is a core objective of this practicum's design, and this project also illustrates how such interactions can be synthesized to foster a deep cultural connection. Ultimately, this case study proves that intentional design can create a tangible sense of "paradise" for the House of Peace community.

*KEY FEATURES:*  
Planted roofscapes and shaded paths, gathering spaces and plazas, gardens surrounding and within the building.



The House of Peace rooftop and yard space provide the central focus on this practicum. As transitional housing, the site supports a vulnerable population in the core of Winnipeg's downtown. This context, alongside physical site conditions, reveals both opportunities and challenges for the design of therapeutic green spaces.





## CHAPTER 5 SITE ANALYSIS

Here I return to The House of Peace with a detailed look at the site conditions that will influence the design of at grade and rooftop healing green spaces on this property. Climate, sun and shadow patterns, privacy concerns, and resident experiences are analyzed to reveal both challenges and opportunities. This groundwork ensures the design responds realistically to place while staying true to its healing and communal goals.

*figure 43*  
*Drawing of the House of Peace*  
*entrance*

# city scale

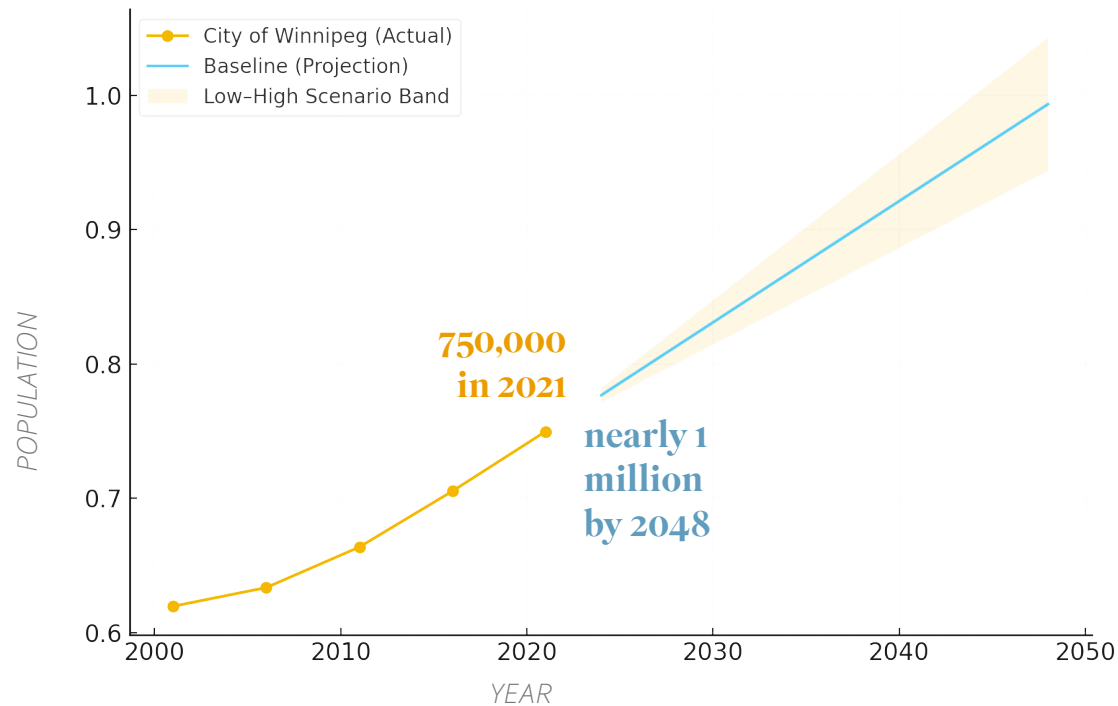
- Green and Open Space
- Downtown Buildings
- Downtown Buildings
- Tree Cover Downtown
- Surface Parking Lots
- Tree Inventory



0 0.13 0.25 Kilometers



## Winnipeg Population: History (2001-2021) and 2024 Projections to 2048



**750,000  
in 2021**

**nearly 1  
million  
by 2048**

*\*represents millions of people. for example: 0.6 = 600,000 people.*

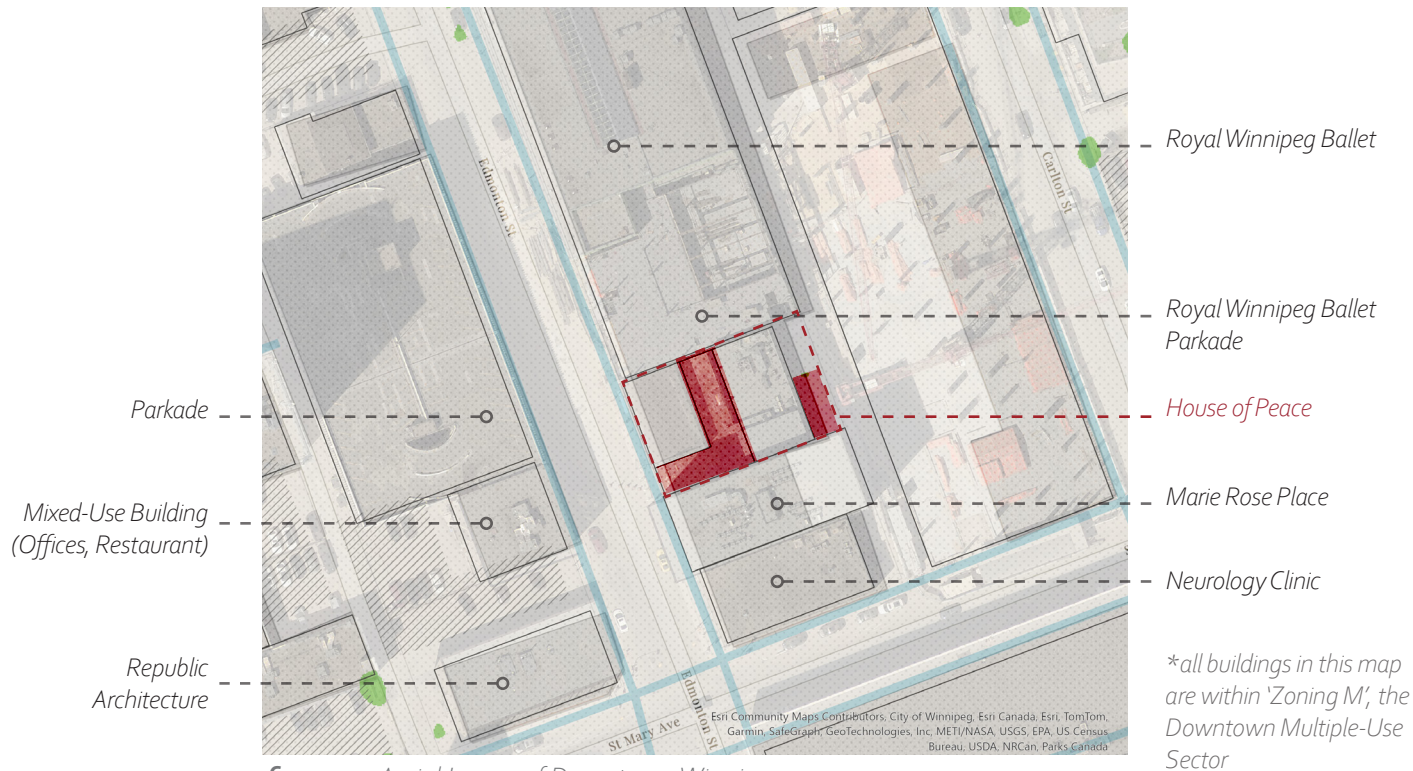
*Source: Statistics Canada*

As Winnipeg's population continues to grow, the city's housing, infrastructure, and public amenities will face increasing pressure, intensifying the demand for green spaces, both private and public. Over the past five years alone, Winnipeg's population has grown by roughly 10%, with a significant portion of this increase driven by immigration. Many newcomers arrive from regions experiencing political conflict, cultural disruption, and economic instability, contributing to the continued diversification of Winnipeg's population. This growth closely ties to Winnipeg's strong multicultural identity, shaped by long-standing cultural communities and the steady arrival of newcomers each year. Many of the women supported by the House of Peace are part of these immigrant and refugee communities, often navigating resettlement, language barriers, and social isolation while establishing new lives in the city.

**figure 44**  
City-scale map of  
Downtown Winnipeg

# site context the neighbours in the neighbourhood

## 1:500 plan of neighbourhood

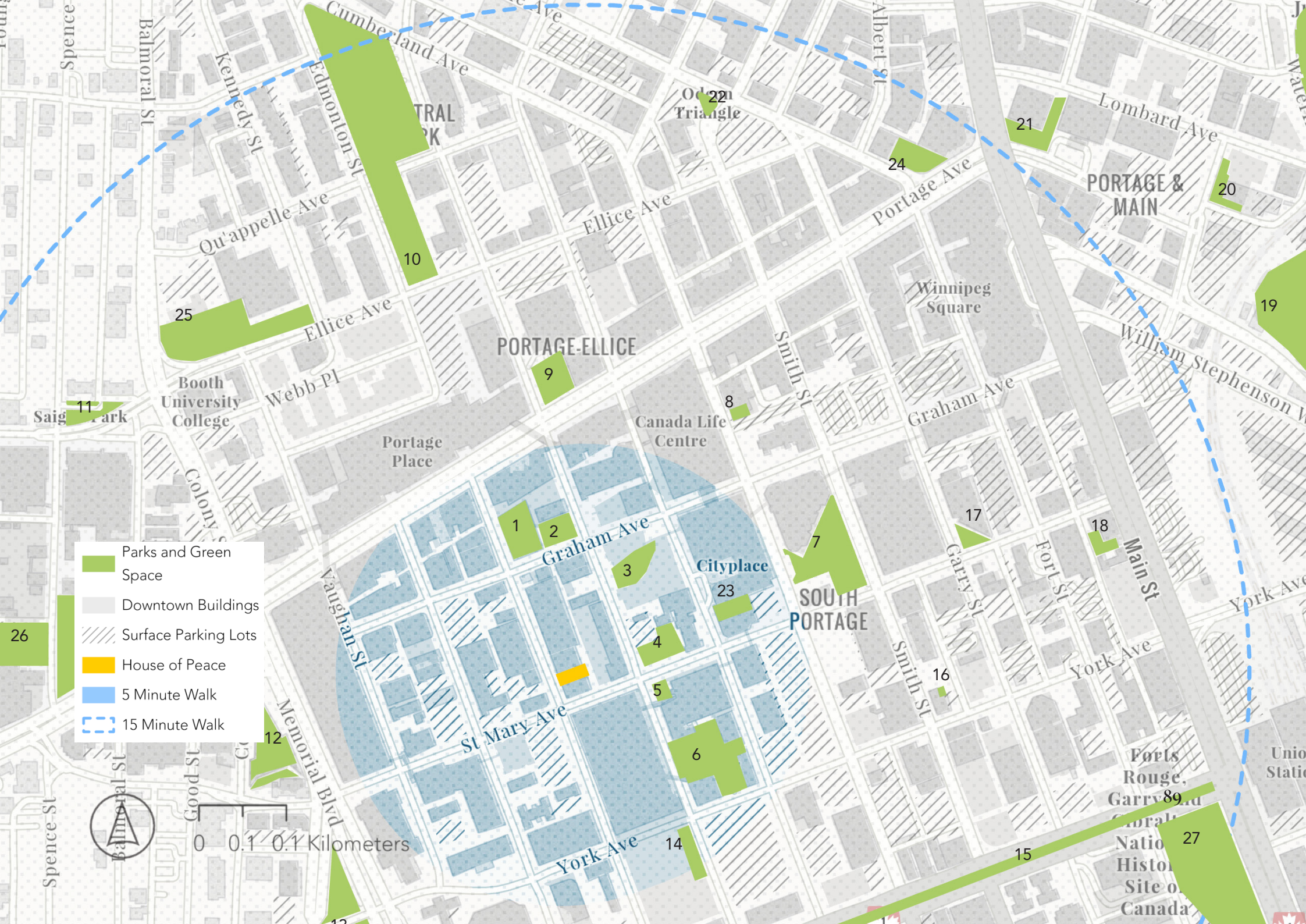


**figure 45** Aerial Image of Downtown Winnipeg

The site is located along Edmonton Street, a medium-traffic road in downtown Winnipeg. The surrounding area consists of mixed-use development, including residential, commercial, and institutional buildings. This condition suggests the need for outdoor spaces that are safe, restorative, and sensitive to residents' privacy while also fostering opportunities for communal life.

1. Manitoba Hydro Greenroofs
2. Manitoba Hydro Greenspace
3. True North Plaza
4. St. Mary's Cathedral Grounds
5. St. Mary's Avenue and Carlton Street Small Park
6. Japanese Gardens
7. Millennium Library Park
8. MET Green Roof
9. Air Canada Window Park
10. Central Park
11. Saigon Park
12. Winnipeg Art Gallery Rooftop
13. Memorial Park
14. RBC Plaza
15. Broadway Street Median
16. La Rocca Patio
17. St. Mary's Avenue and Garry Street Small Park
18. High and Lonesome Park Patio
19. Ballpark Plaza and Field
20. Richardson Innovation Greenspace
21. Richardson Building
22. Odeon Triangle
23. City Place Roof Patio
24. 201 Portage Plaza
25. NRCan Grounds
26. University of Winnipeg Grounds
27. Upper Fort Garry Park

**figure 46**  
Green Public Spaces in  
Downtown Winnipeg



- Parks and Green Space
- Downtown Buildings
- Surface Parking Lots
- House of Peace
- 5 Minute Walk
- 15 Minute Walk

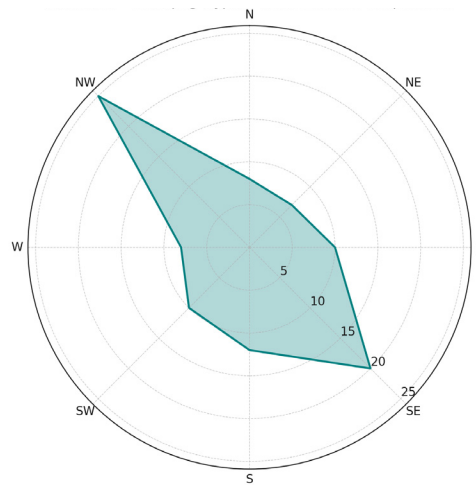


0 0.1 0.1 Kilometers

# Winnipeg, Manitoba climate and weather

Weather in Winnipeg is extreme. It can get as cold as  $-36^{\circ}\text{C}$  in the winter, and it can get up to  $+39.5^{\circ}\text{C}$  in the summer.<sup>51</sup>

The city receives an average annual precipitation of approximately 521 mm, consisting of 416 mm of rain and 115 cm of snow.<sup>52</sup>



## WIND (yearly average)

Mean Annual Wind Speed  
*17.5 km/hr*

### Prevailing Winds

*Winter: NW  
Summer: SE*

## TEMPERATURE

Coldest Month- January

*Mean Temperature:  $-16.4^{\circ}\text{C}$   
Mean Daily Low:  $-21.7^{\circ}\text{C}$*

Warmest Month- July

*Mean Temperature:  $19.7^{\circ}\text{C}$   
Mean Daily High:  $26.3^{\circ}\text{C}$*

## PRECIPITATION

Wettest Month- June & July

*Average Rainfall: 90mm*

Driest Month- February & March

*Average Snowfall: 20cm*

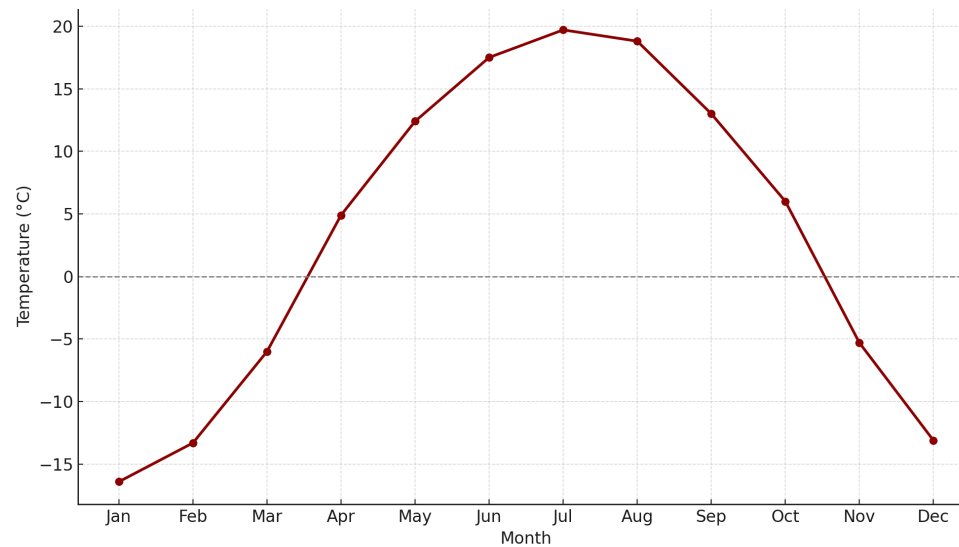


figure 47 Average Monthly Temperature Chart & Wind Rose

## FUTURE PROJECTIONS

Projections from the Climate Atlas of Canada indicate that the city of Winnipeg will experience profound climatic shifts:<sup>53</sup>

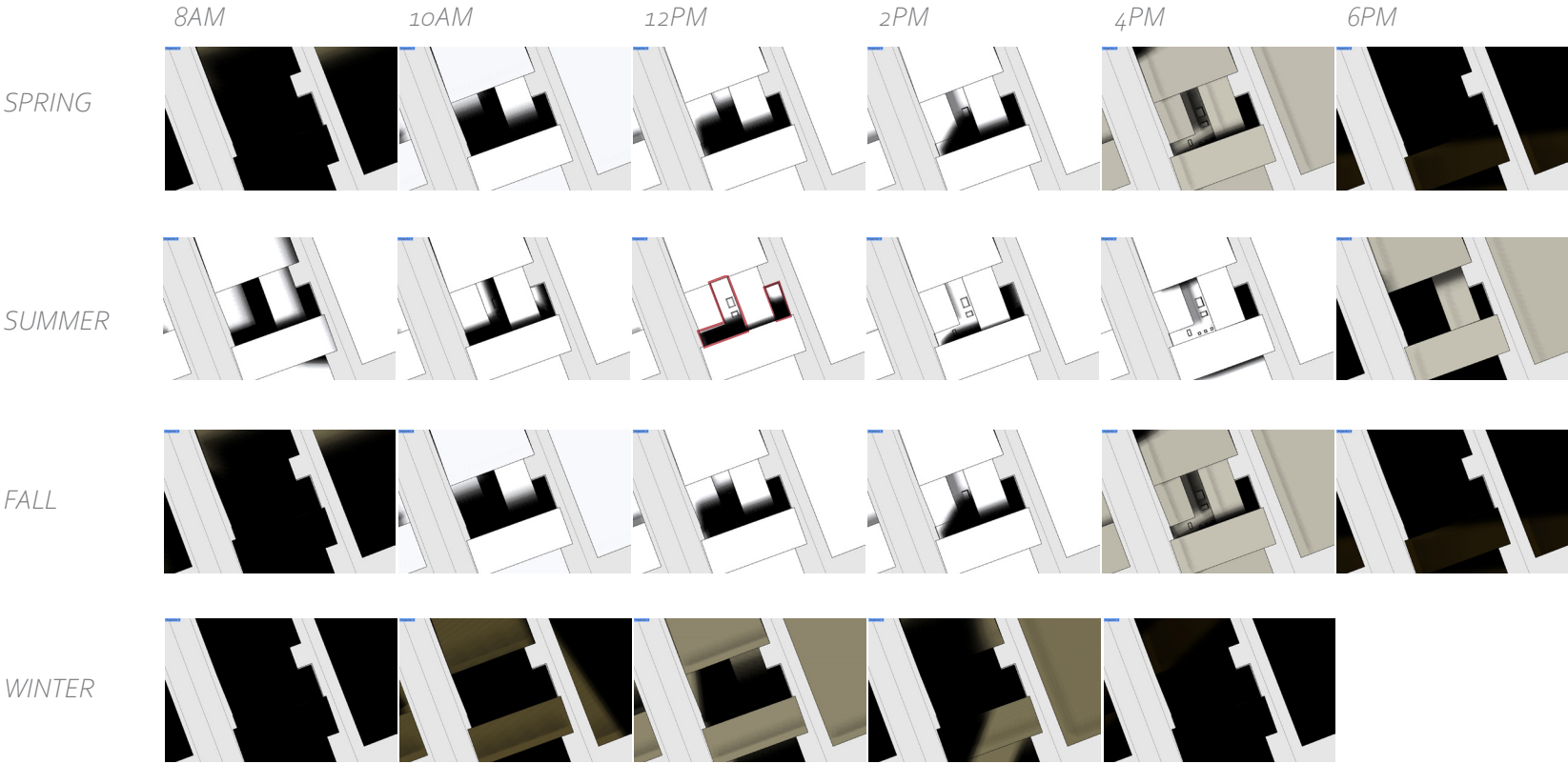
- Substantially warmer summers, with the numbers of days exceeding 30°C projected to quadruple by the 2050s.
- Milder winters with far fewer extremely cold days.
- Increased annual precipitation, including a higher likelihood of intense rainfall events.

What This Means for Winnipeg:

1. Extreme Heat Risk: More residents will face higher summer heat and more frequent, longer heatwaves, making urban tree canopy and cooling spaces essential for health.
2. Housing Density & Demand: Denser housing and population growth will significantly increase the demand for high-quality, shared outdoor and public amenity spaces.
3. Stormwater Management Necessity: More intense rainfall events demand improved stormwater management systems, particularly multifunctional green infrastructure such as raingardens or bioswales.

Having a network or a larger system of green space, even made up of small underutilized spaces like the ones looked at in this practicum, can serve as a climate adaptation tool. It could help to offset the associated issues as outlined above from Climate Atlas Canada, such as mitigating urban heat island effect, reduce stormwater runoff risk, support biodiversity, and promote mental and physical wellbeing.

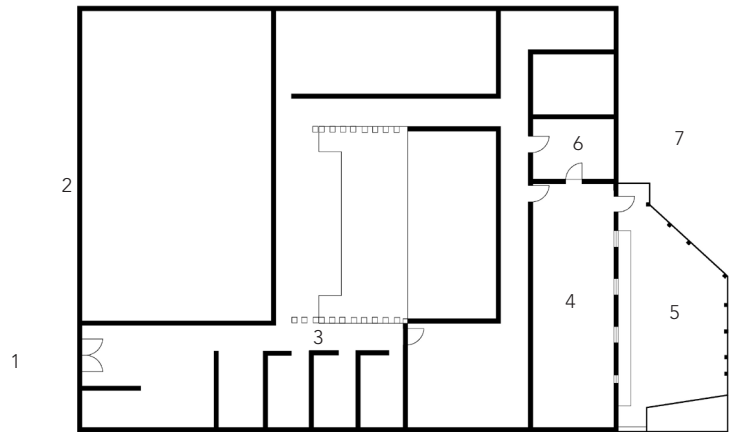
# sun and shadow



These sun studies identify the specific movement of light and shade across the House of Peace over the course of the day and year. The analysis indicates that the northern section of the rooftop and a localized portion of the outdoor yard receive the most consistent sun exposure. Seasonally, late spring, summer, and early fall represent the peak periods for sun access within these spaces. Conversely, the studies reveal consistent shade patterns in the southern areas and during the winter months, establishing a clear map of the site's microclimatic variations.

figure 48 Sun and Shadow Study

## site context building



### 1ST FLOOR

- 1- controlled entrance
- 2- chapel
- 3- hall/staircase
- 4- living room
- 5- outdoor yard
- 6- kitchen
- 7- parking\*

*\* The outdoor yard is defined by a fixed, angled fence line that cannot be reconfigured. This specific geometry is necessitated by the narrow back lane, which must maintain sufficient clearance for parking and refuse pick-up. These boundaries dictate the yard's footprint, requiring the design to work within this non-negotiable angled perimeter to ensure continued functional access for city services.*



### 2ND FLOOR

- 1- resident rooms
- 2- rooftop
- 3- upper chapel (open to below)

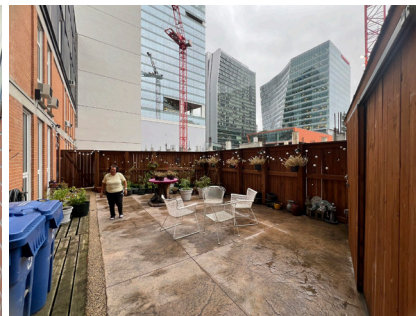
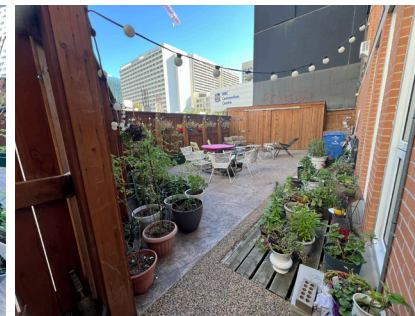
**figure 49** Interior Building Plan  
(Traced from GBRA drawings, 1963)

*site context*  
**moving through the house**



HALLWAY

LIVING ROOM



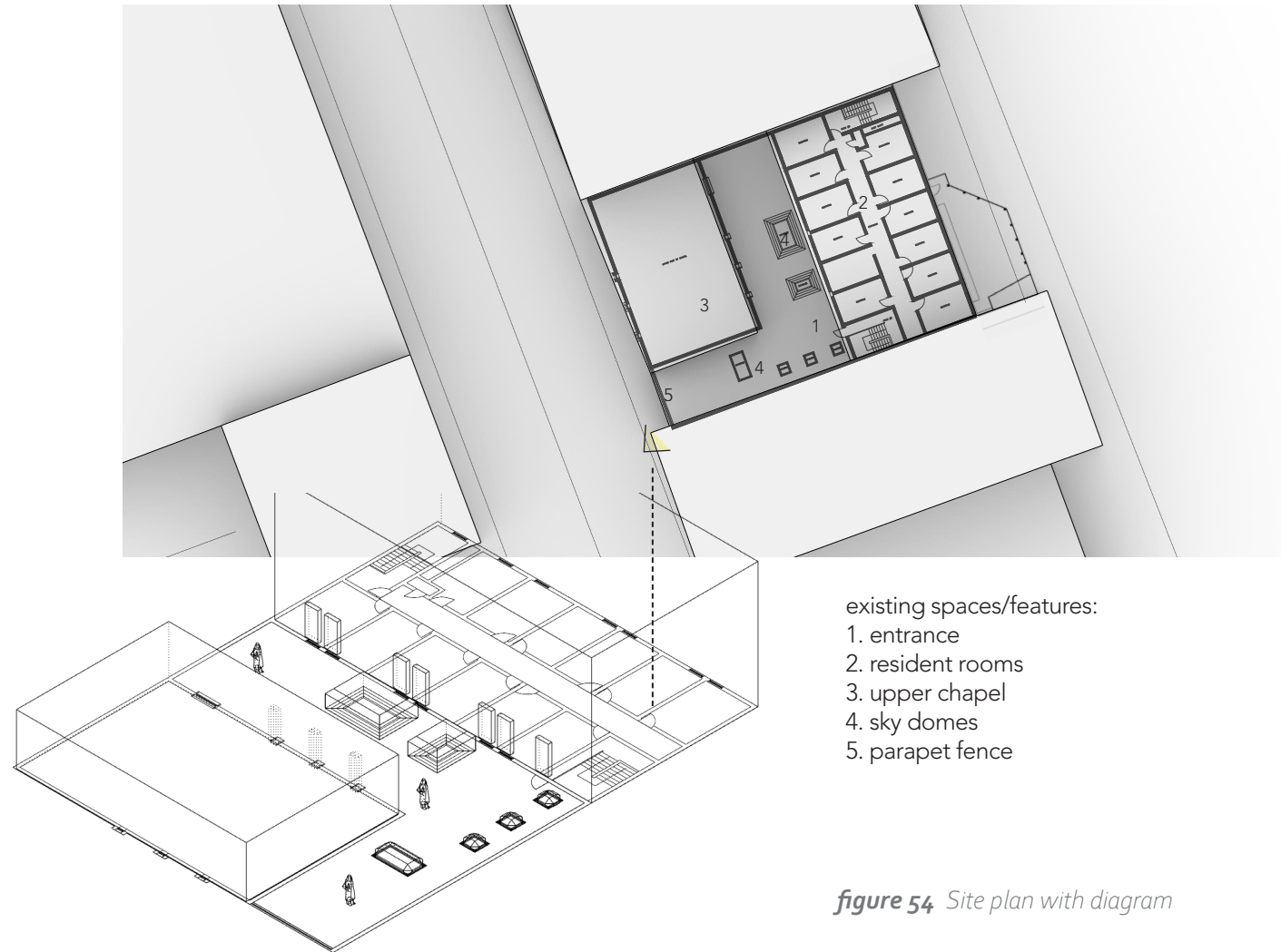
EXTERIOR ENTRY

OUTDOOR YARD



*figure 50* Interior and Exterior spaces at the House of Peace

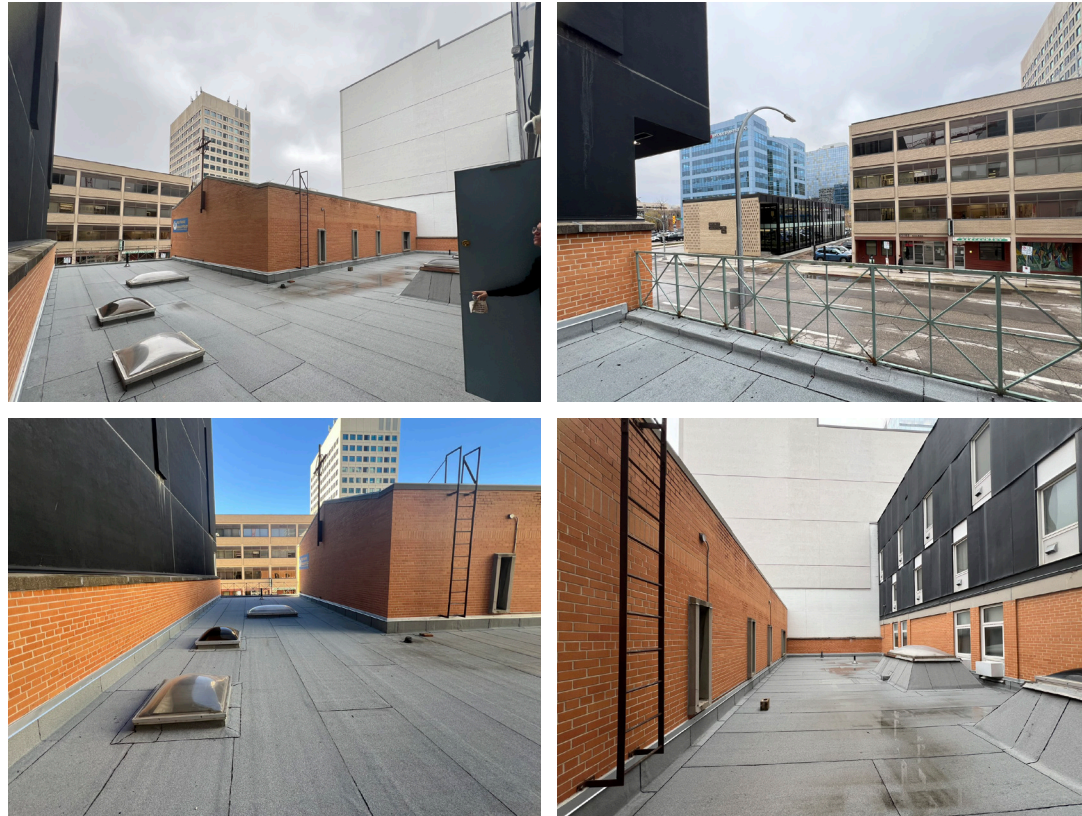
## *2nd floor rooftop* **spatial opportunities and concerns**



*figure 54* Site plan with diagram

The rooftop is situated in a visually exposed position. Across Edmonton Street, adjacent office buildings with overlooking windows create challenges for resident privacy. A metal safety railing facing Edmonton Street reinforces the sense of exposure, flagging both safety and visual vulnerability.

The most pressing concern is the relationship between the rooftop space and the residents' windows. Because there are living quarters on the same level as the rooftop with windows facing the rooftop space, there is a risk of compromised privacy and safety. Other rooftop considerations include shade from nearby buildings and structural load limits.



*figure 55* Rooftop Space at the House of Peace



1. Resident Privacy (Window Adjacency): There is a direct line of sight between the rooftop amenity space and the 2nd floor residential windows. This creates a privacy conflict where rooftop users may inadvertently look into private living quarters.
2. Safety and Privacy (Existing Metal Parapet): The current perimeter barrier may be insufficient in height or opacity. This raises concerns about the physical safety of users at the roof edge and the visual exposure of the rooftop activities to the street level.
3. Visual Adjacency with Office Windows: Similar to the residential concern, the rooftop is overlooked by nearby office windows.
4. Street Traffic Impact: The proximity to Edmonton Street introduces noise pollution and air quality issues from medium-level vehicle traffic, which may detract from the “oasis” feel of the rooftop garden.
5. Existing Skylights: While not a primary site concern, several existing skylights are situated across the roof surface. Because the interior spaces below are now fully illuminated by integrated electrical lighting systems, these skylights have become redundant for their original daylighting purpose. Rather than serving as essential light sources, these features now function as physical obstructions that fragment the roof plane and limit the usable floor area.

## *what can be built on an existing roof?* **loading**

Given the structural limitations of the existing building, the proposed rooftop design incorporates minimal and lightweight planting. The roof does not appear to have sufficient load-bearing capacity to support deep volumes of soil for large vegetation such as trees.

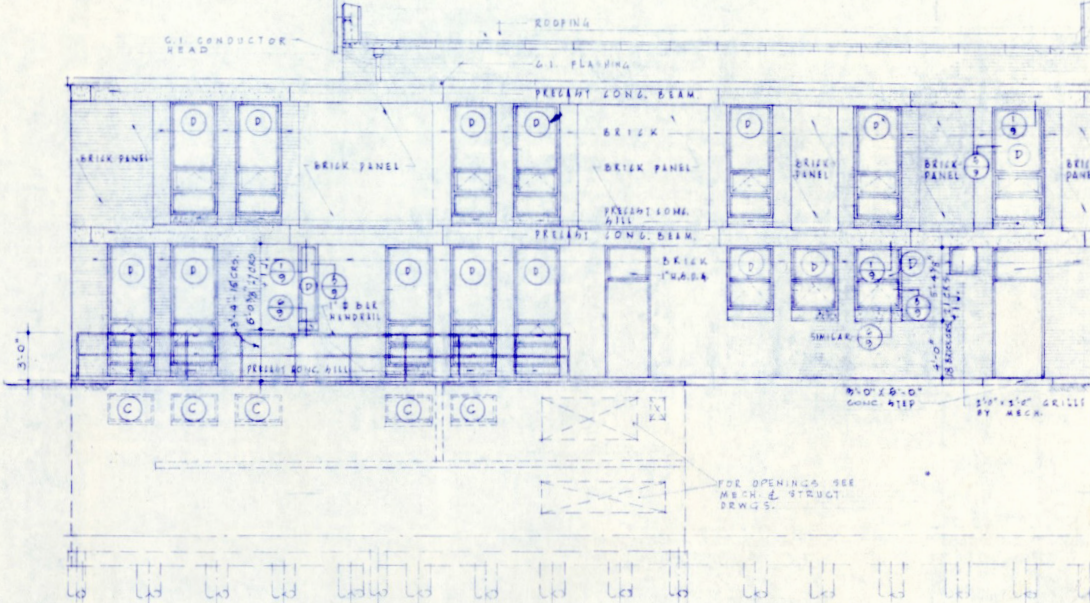
The available loading, based on the original drawings, suggests that only shallow planting assemblies, such as those used in extensive or carefully constrained semi-intensive green roofs can be accommodated without significant structural reinforcement. The planting strategy prioritizes low maintenance species and avoids heavy soil volumes that would exceed the roof's allowable loads.

Moreover, some zones and design integrations have been located based on existing structural support to reinforce some of the added load.

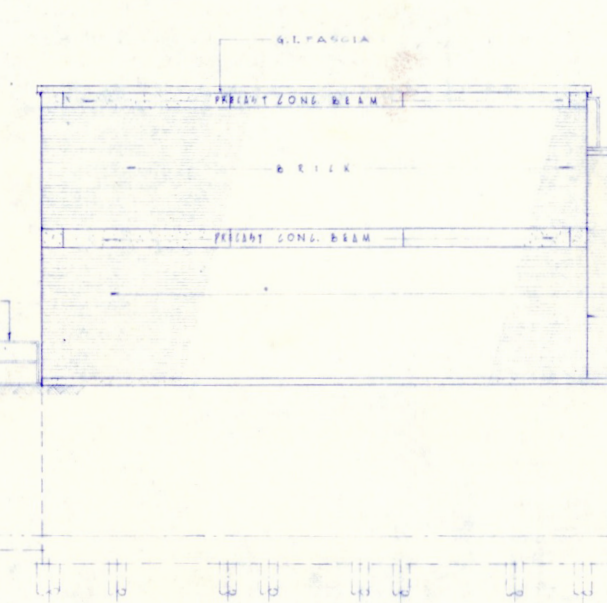
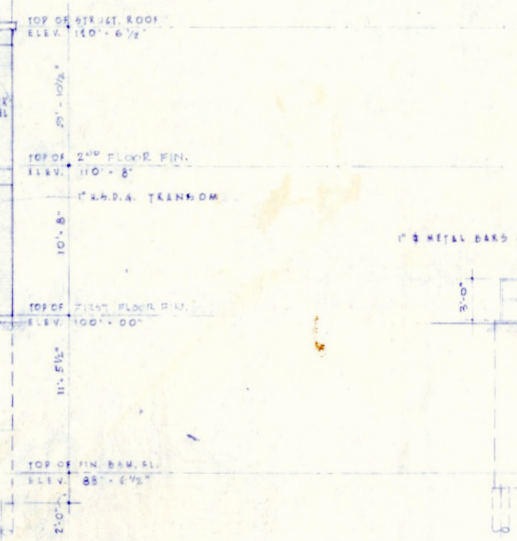
Nevertheless, a structural engineer would be consulted before proceeding to confirm that the roof can safely handle the added weight.

Rooftop Future Floor:  
L.L (live load) = 50 psf  
1'/'2" Future Finish = 20 psf  
Total Superimposed Load = 70 psf

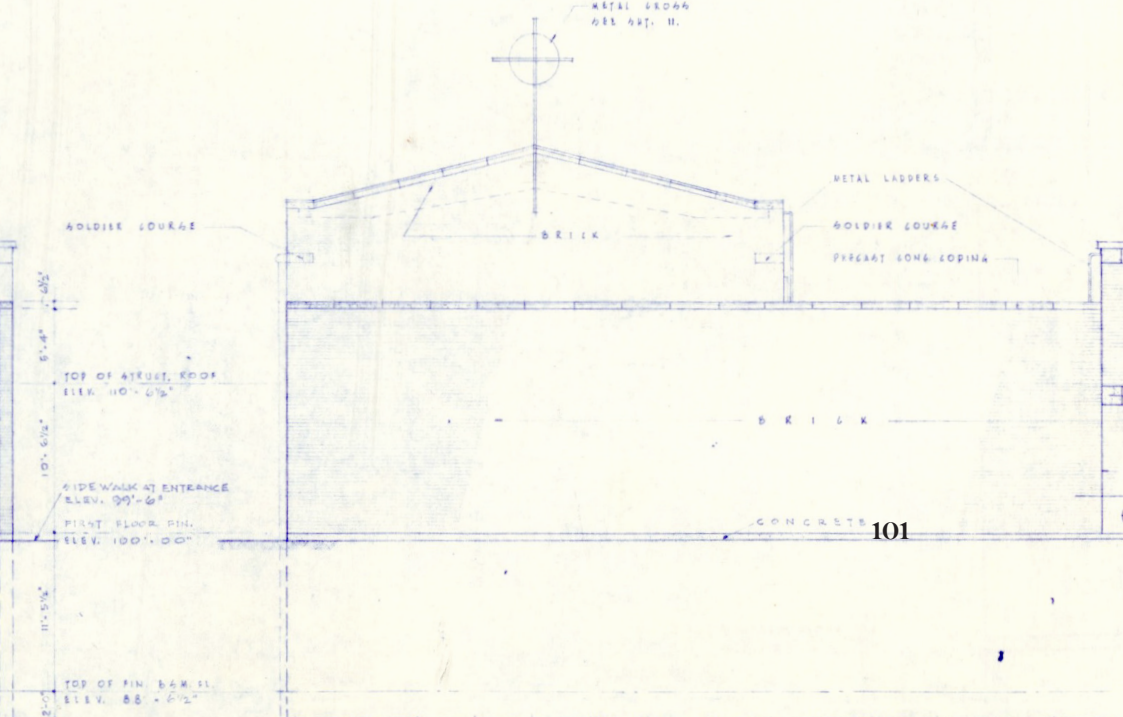
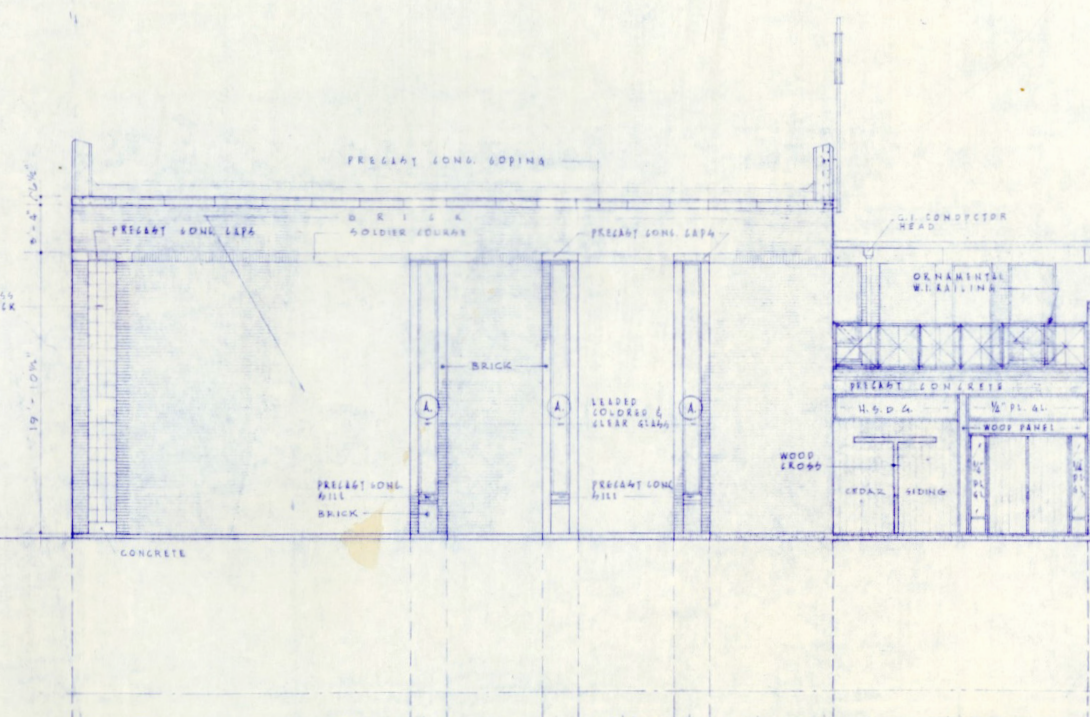
*Note: All measurements are provided in psf (pounds per square foot), which defines the live load capacity that can be added on top of the existing roof.*



EAST ELEVATION  
SCALE: 1/8" = 1'-0"



NORTH ELEVATION  
SCALE: 1/8" = 1'-0"



# 1st floor outdoor yard space spatial opportunities and concerns

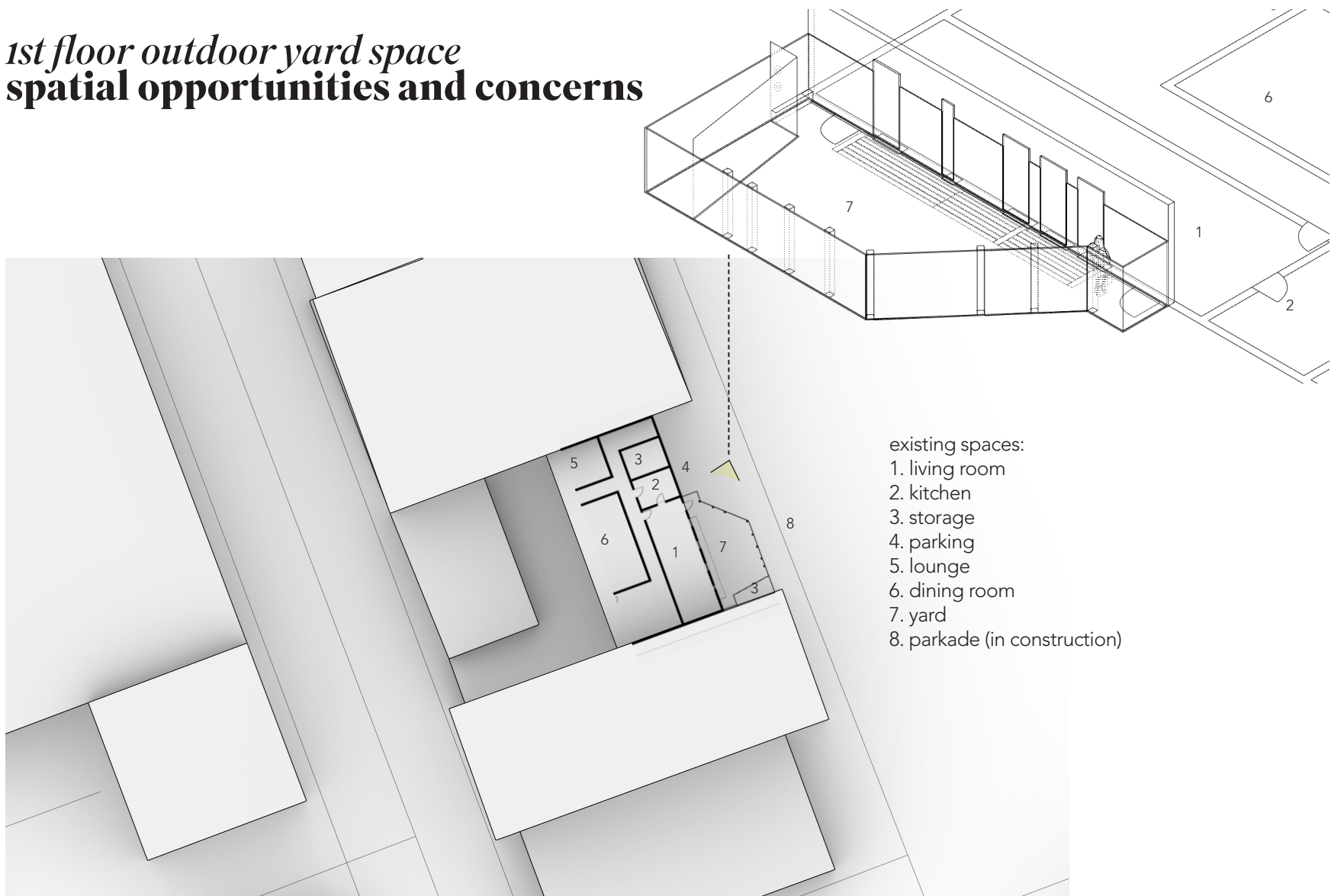


figure 51 Site plan with diagram

The yard is a small, fenced space of approximately 700 square feet. Its entrance is directly connected to the building's living room, with proximity to the communal kitchen. This adjacency offers the opportunity to extend the indoor communal life outdoors.

The primary challenge of the yard is safety. The yard borders an active construction site where a new hotel and parkade are being built. The new development will bring eyes on the space from above and additional traffic to the lane. More significantly, the six-foot wooden fence has proven insufficient as people have attempted to climb over it in the past. This creates a sense of vulnerability for residents and raises the need for deterrent yet welcoming design strategies that discourage intrusion while maintaining the yard's restorative character.



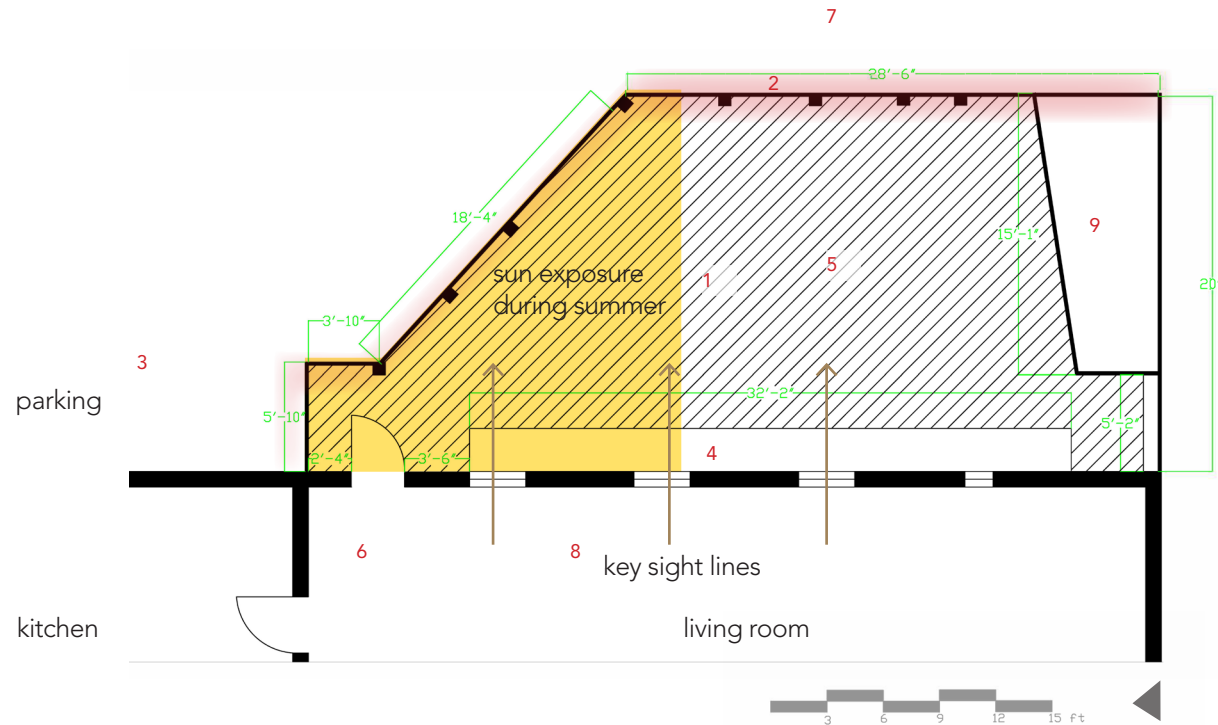
*figure 52* Images from within the yard

## *1st floor outdoor yard space* **concerns noted**

1. **Loss of The Yard Tree:** A large, mature tree was removed after becoming unhealthy due to concrete being poured around its base during a previous yard renovation. Long-term staff have expressed a sense of loss, reminiscing about the tree's expansive canopy and seasonal colour changes. It was a space described as 'beautiful'.
2. **Security Concerns:** The yard has experienced security breaches in the past. Individuals climbed over the fence and slept in the space, causing distress to both residents and staff.
3. **Fence and Parking Layout:** The existing fence is angled to accommodate adjacent parking. While parking access is currently blocked due to construction, it will resume when construction is completed, making the angled layout necessary.
4. **Drainage and Vent System:** A below-grade drainage trench and air-exchange vent runs along the building near the windows and is approximately 2 meters deep from ground level. This system functions as both a stormwater collection channel and a vent well for the building, where the surface water also currently drains into.
5. **Current and Future Use of Yard:** In warmer months, the yard is regularly used for barbeques, with a casual 'come-and-go' dining setup using tables and chairs. The space hosts occasional sit-down dinners, birthday celebrations, and small events. In the past, the yard has been also used for summer bonfires, seasonal arts and crafts, as well as gardening. There is growing interest in using the yard for future charity garden parties and other intimate gatherings.
6. **Maintenance and Staffing:** Yard maintenance and plant care are largely overseen by a single staff member, who is passionate about gardening and grew up on a farm in the Philippines. She is responsible for nearly all plant care both indoors and outdoors during the summer months, so low-maintenance strategies are essential.
7. **Adjacent Construction and Visibility:** An 8-storey building is currently under construction north of the yard (closer to Wawanesa), but the structure directly in front of the yard will be only 2–4 storeys tall (a parkade).

1. loss of yard tree
2. security concerns
3. fence and parking lot layout
4. drainage and vent system
5. current and future use of yard
6. maintenance and staffing
7. adjacent construction and visibility
8. views from the living room
9. storage shed\*

\* The storage shed is a critical functional element of the site that must remain in its current location. This structure provides essential on-site storage for maintenance equipment and residents' belongings, and its position is dictated by existing concrete footings and proximity to the building's utility access.



**figure 53**  
Site Plan of Yard

## CHAPTER 6

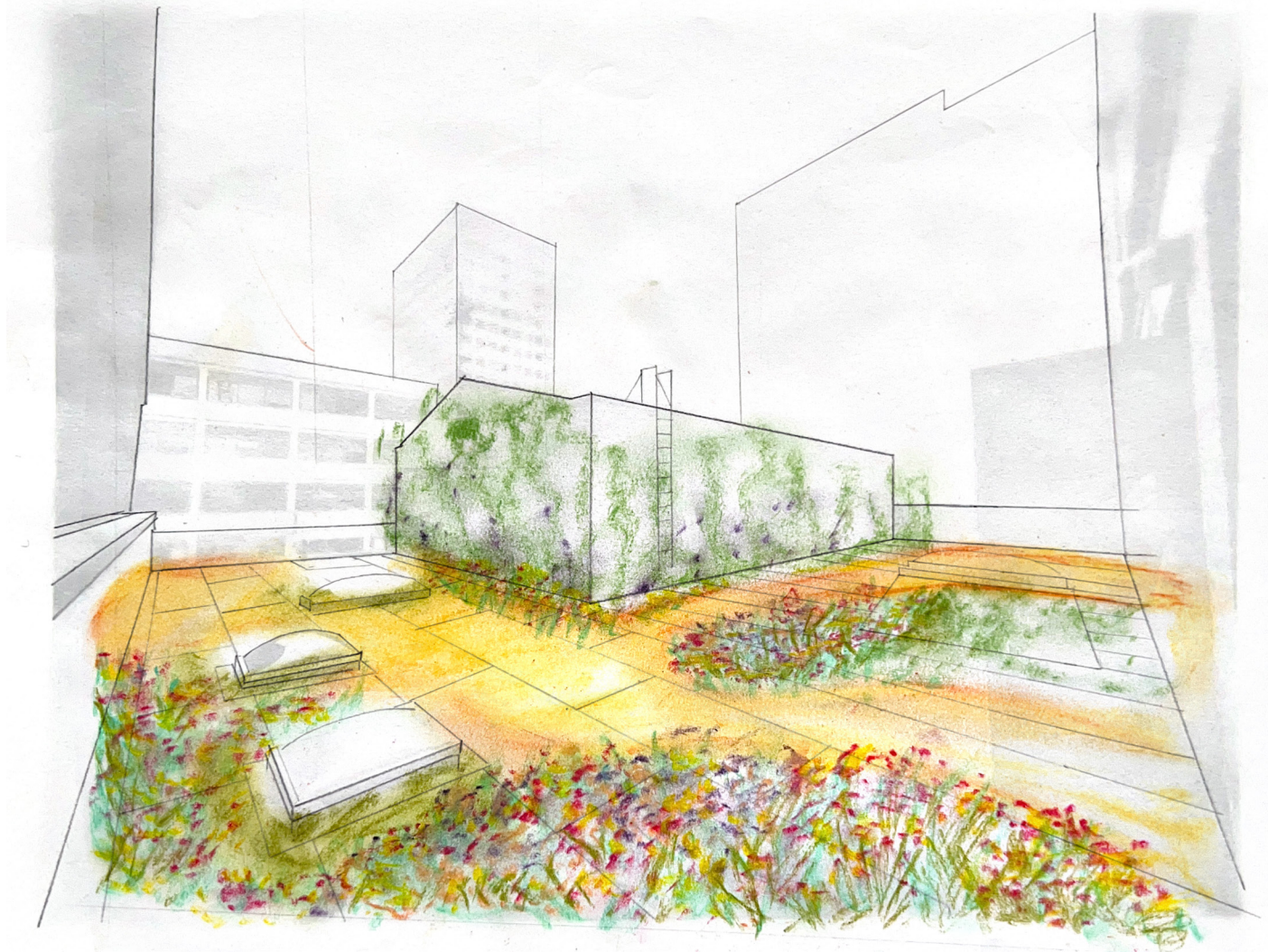
# DESIGN

*This chapter presents the final design, which is the outcome of synthesizing multiple layers of research and site context with the following objectives as cited in Chapter 2:*

1. Integrate Therapeutic Value in a Highly Urban Context
2. Foster Individual and Social Wellbeing
3. Re-Establish an Ecological Presence
4. Cultivate Empowerment and Cultural Ownership

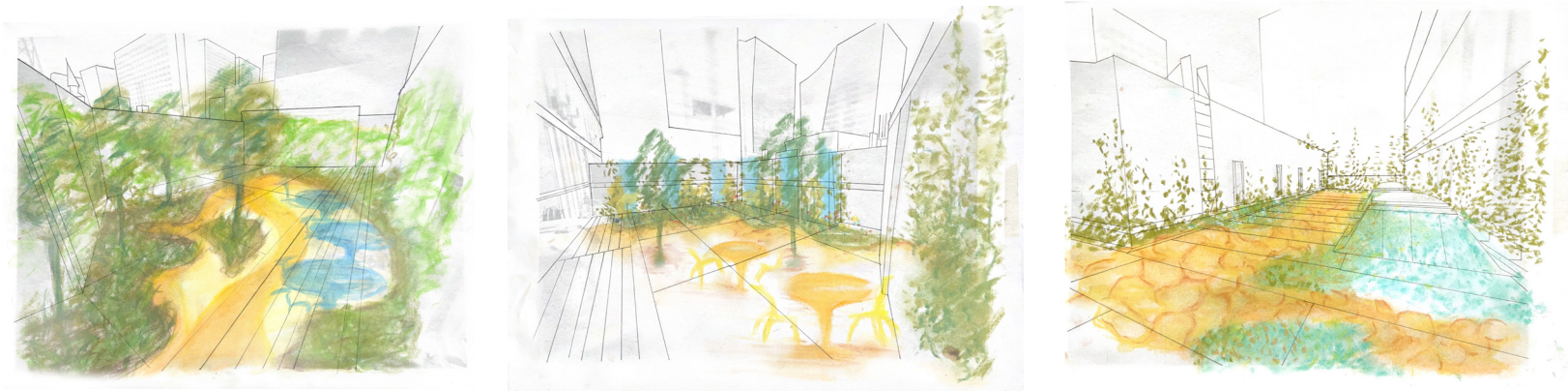


The rooftop and the yard work in synergy to provide a comprehensive spectrum of therapeutic outdoor experiences.



## design process and explorations

Using soft pastels on existing images of the site, I quickly coloured ideas of what I thought the spaces could be initially. Most of these ideas evoked integrating lots of vegetation and warm toned materials as well as different types of furnishings.



*figure 58* Soft pastel design drawings

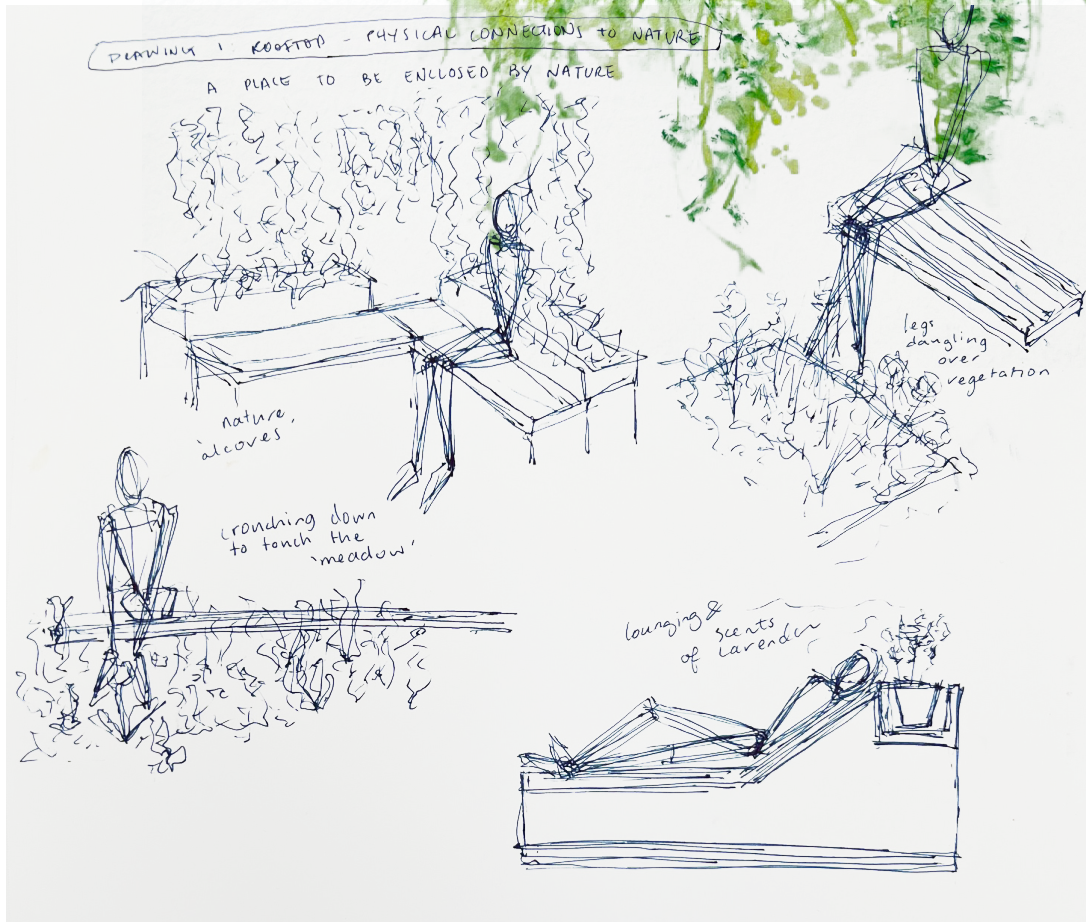
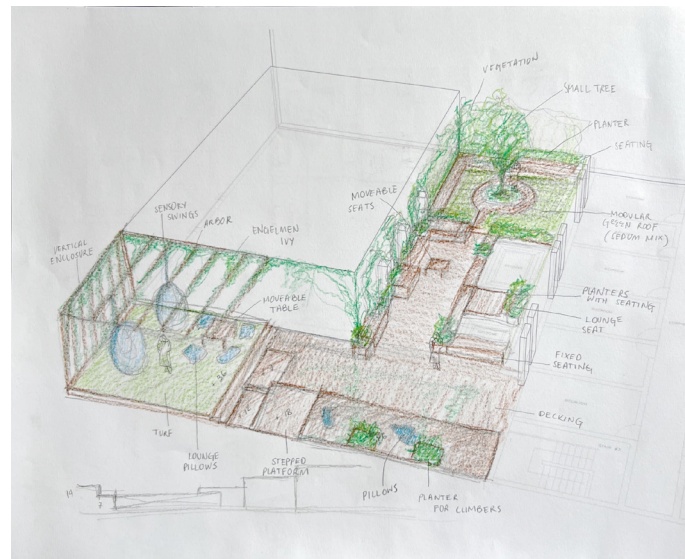


figure 59  
Design Sketches

## *ideation*

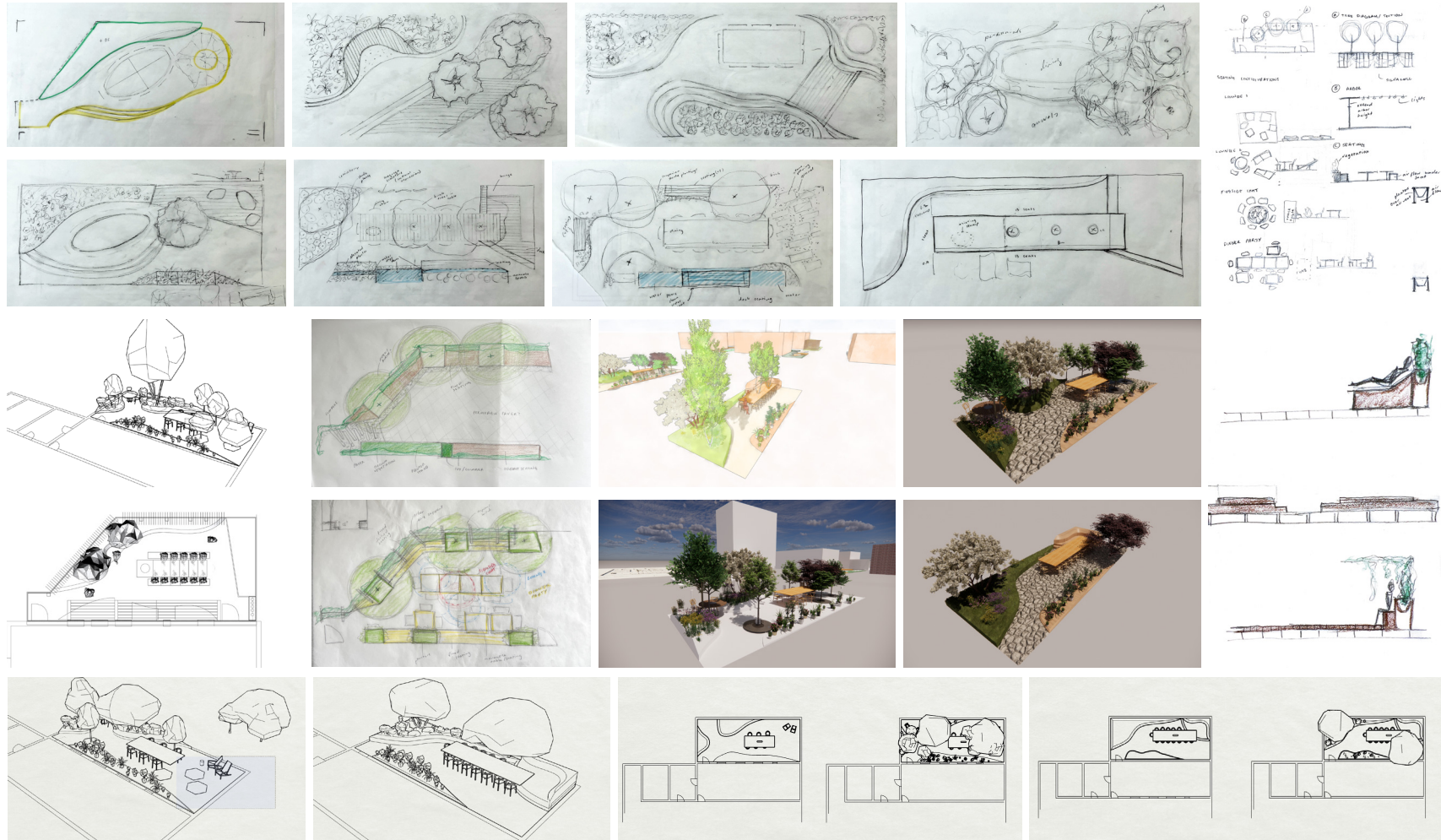
An extensive green roof precludes large trees and deep soil, therefore the challenge was to create a sense of being enveloped in lush greenery without significant structural loading. This led to the concept of vertical planting, integrating nature 'alcoves' through the use of vines and climbing plants. By introducing trellises and supportive structures for climbers, the design can transform the open, exposed areas into biophilic retreats.



*figure 6o* Rhino design and drawing explorations

# exploration

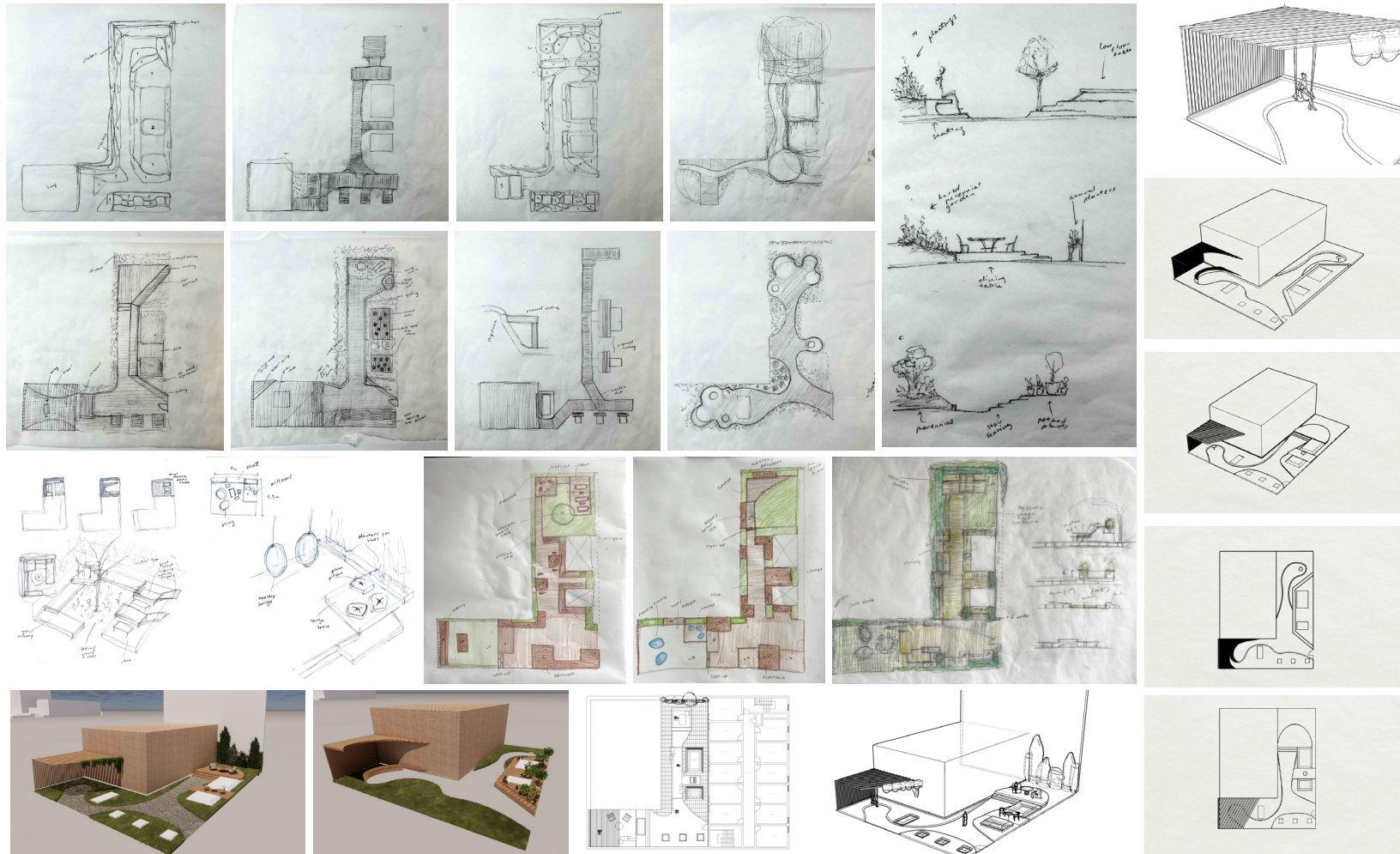
Yard



*These images show some of the process of designing and the experimentation that took place to test different features:*

VEGETATION    CANOPY    SUNKEN/ RAISED AREAS    TEXTURE    FLEXIBILITY    VARIETY    BALANCE

Rooftop



FLOW SPACE DIVISIONS ORGANIC/ LINEAR PATHS LIGHT ENCLOSURE ORDER SPATIALORGANIZATION ATMOSPHERE PRACTICALITY

figure 61 Design explorations

ROOFTOP

# green escape

*from sunny meadows to the shady woods*

The rooftop in the final design functions as a sanctuary, an on-site “green escape”, for the staff and residents of The House of Peace during warmer seasons. It provides a dedicated space for rest and relaxation without having to leave the property.

This immediate access to nature is especially important for residents who may find navigating a new environment challenging or feel overwhelmed by the process of accessing of accessing the lower communal yard space and the public city green spaces beyond.

This green escape meets the House of Peace community’s need for a very private, safe and direct contact with nature and a feeling of immersion in a garden setting. Recognizing the roof site’s weight restrictions, large, heavy trees are avoided. Instead, this feeling is achieved through the strategic use of climbing plants, modular planters, and potted plants chosen by residents. This participatory approach aligns with and strengthens the community’s existing practice of moving their indoor plants outside.

The rooftop is distinguished from the downstairs yard by its larger size and varied microclimates. Whether a resident seeks the bright openness of the “sunny meadows” zone or the calm, intimate setting of the “shady woods” zone , the design caters to a spectrum of social interactions and uses ranging from quiet and solitary use to small group events.

Rooftop Garden Program Spaces  
2nd floor

**Welcoming Entry:**

this space surrounds the rooftop access door, emphasizing the user's crucial "first look" experience. The proposed design softens the view with lush vertical vegetation, and mosaic floor art adds a cultural storytelling piece that invites the user in.

**Meadowview:**


this sunniest location on the rooftop is logically designated this area for users seeking sun exposure. The space accommodates lounging and features plantings whose colours and textures imitate a sunny, open meadow landscape.

**Woodland Rest:**

this area is consistently most shaded during the summer, as shown in the sun studies. This area presents a security and privacy challenge due to its minimal existing metal parapet bordering the space with the adjacent urban environment (Edmonton Street, nearby offices). To address this, wooden vertical beams to introduce a permeable wall that enhances privacy and provides a sense of enclosure and safety without making users feel trapped.

**Herbaceous Laze:**

This space is designed to encourage users to move slower which is achieved by incorporating plants and herbs chosen to awaken the senses, primarily through touch and smell.

 sunny area  
(summer, 12pm)

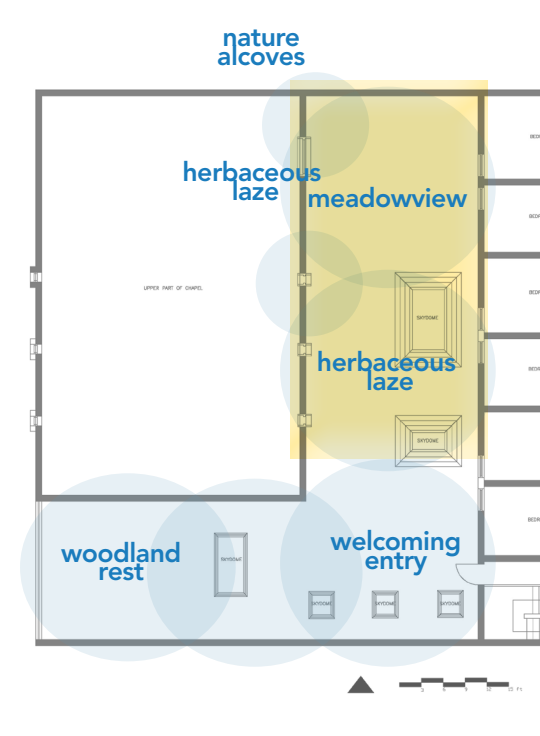


figure 62 Rooftop Program

# initial ideas rooftop plan

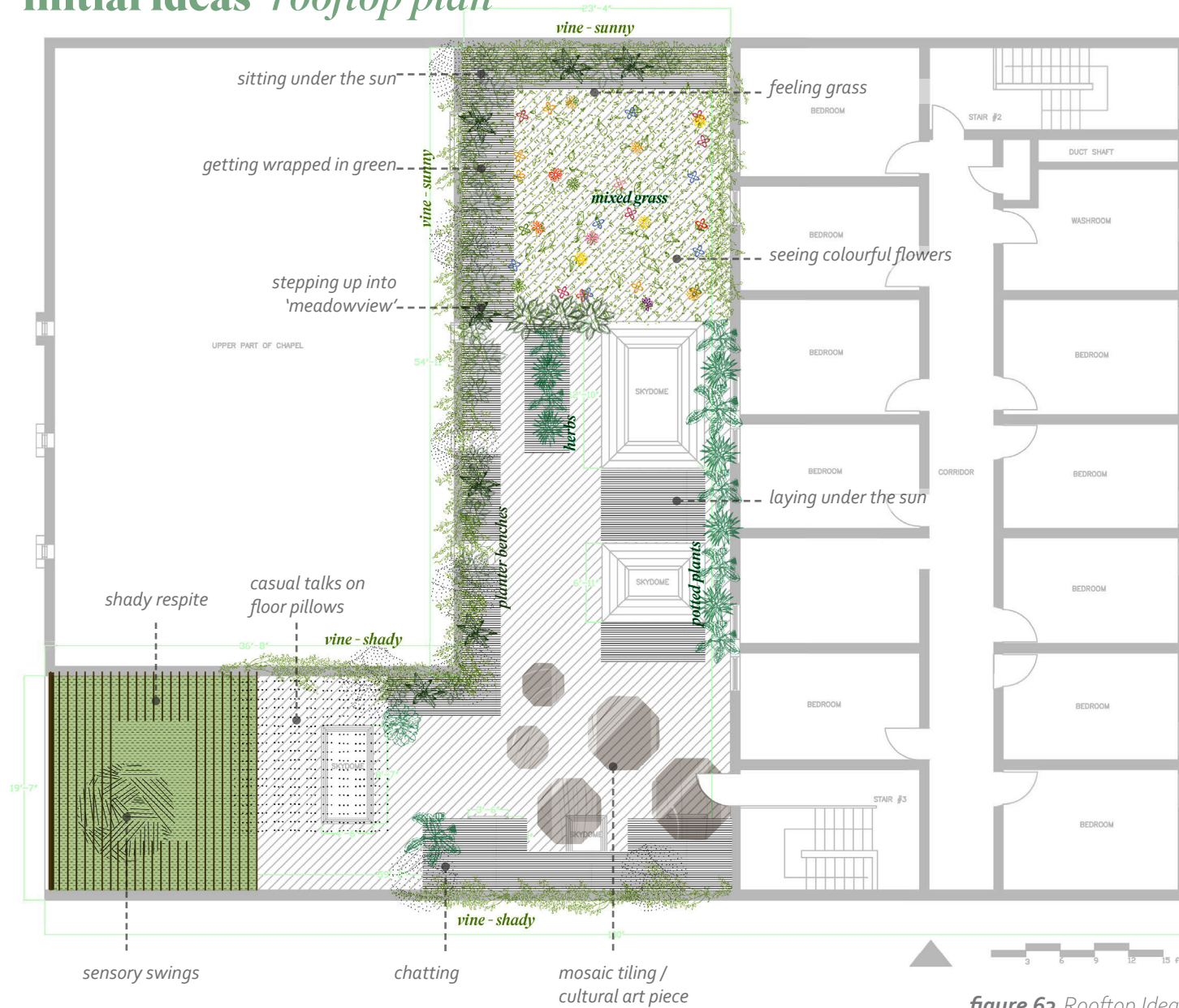


figure 63 Rooftop Ideation

# privacy and safety rooftop plan



figure 64 Rooftop Privacy and Safety

#### VISUAL PRIVACY & LIGHT CONTROL

1. One-Way Window Film: Applying a reflective or perforated film allows residents to maintain their “key sight lines” to the flowers and sun while preventing outsiders from seeing into the private bedrooms.
2. Framed Views (Ulrich’s Theory): By using specific plantings or structural “getting wrapped in green” elements, the view is curated. This “framing” provides a sense of enclosure and safety for the resident, making the garden feel like a restorative painting rather than an exposed corridor.
3. Interior Blinds/Sheers: Providing high-quality, operable window treatments allows residents to manually toggle between “seeing colourful flowers” and total privacy.

#### BUFFER AREA

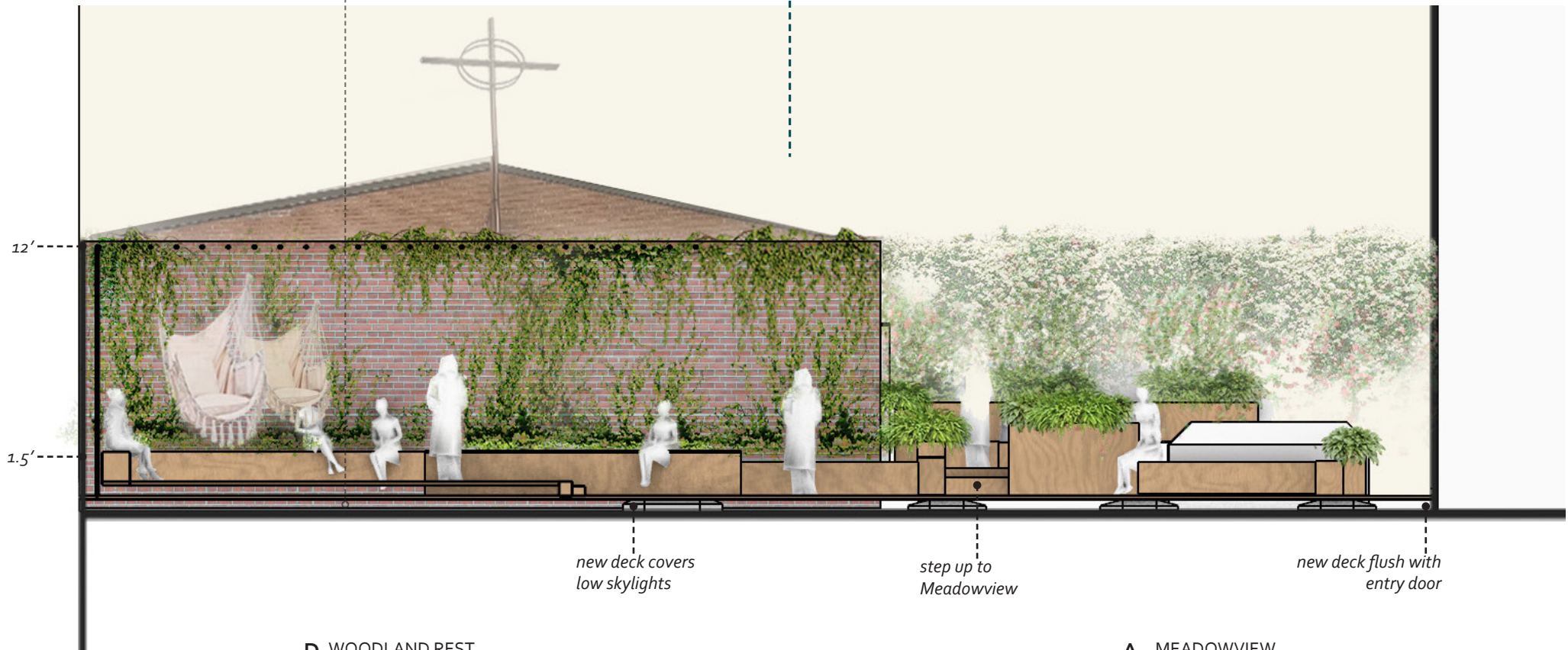
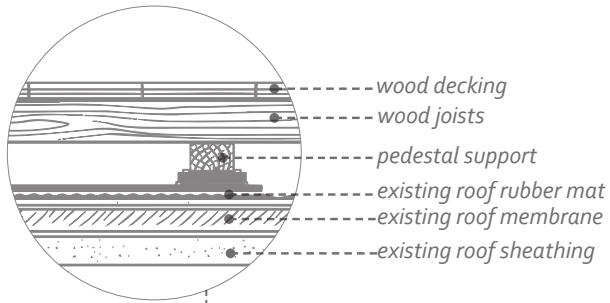
1. Layered Vegetation: Potted plants placed immediately outside the windows act as a soft barrier that maintains the sightline while physically separating the private and public realms.
2. Signage & Social Cues: Strategically placed “Quiet Please” signs, mounted on nearby walls or discreetly integrated onto seating elements, remind those chatting or having casual conversations to remain mindful of the adjacent resident living quarters.

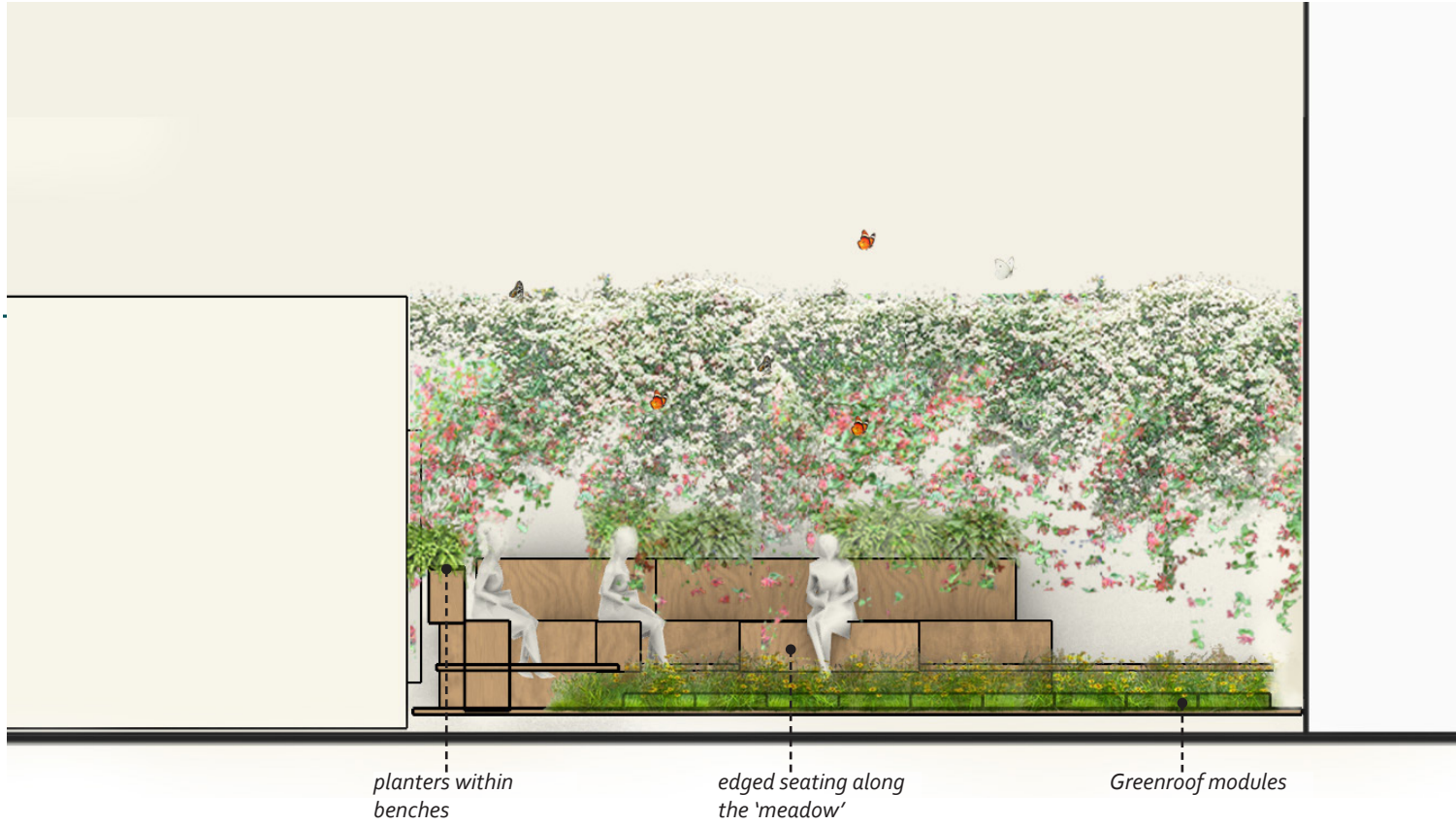
#### ENCLOSURE (from Edmonton Street)

A vertical beam enclosure has replaced the original short, open metal parapet along the edge overlooking Edmonton Street. These tall, new beams create a significant physical boundary, providing a sense of security and containment while shielding the residents from the adjacent buildings looking in.

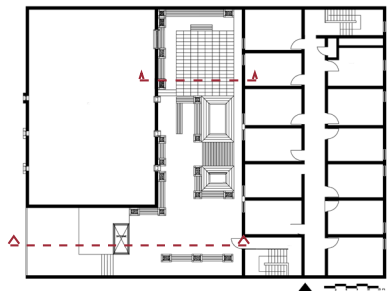








**A2** GREENROOF 'MEADOW'

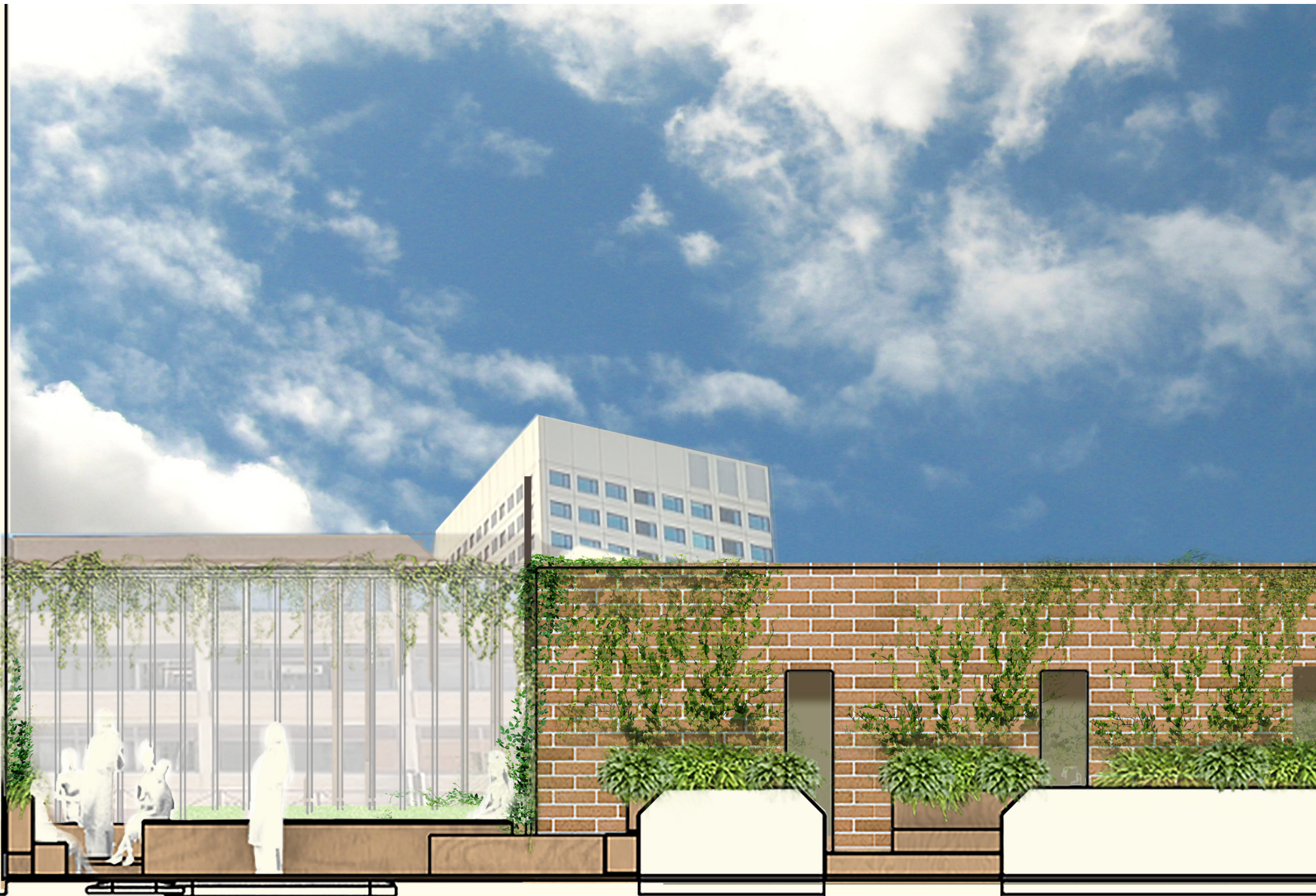


section view of rooftop space



*figure 67* Rooftop Sections

*abutting 4  
storey wall  
of the Marie  
Rose Building*



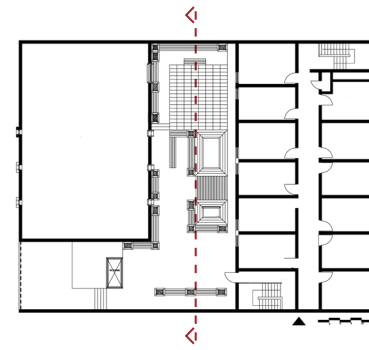
**D** WOODLAND REST

**B** HERBACEOUS LAZE



abutting adjacent parkade building wall extending 4 storeys above rooftop.

A MEADOWVIEW



section view of rooftop space

#### Nature Alcoves

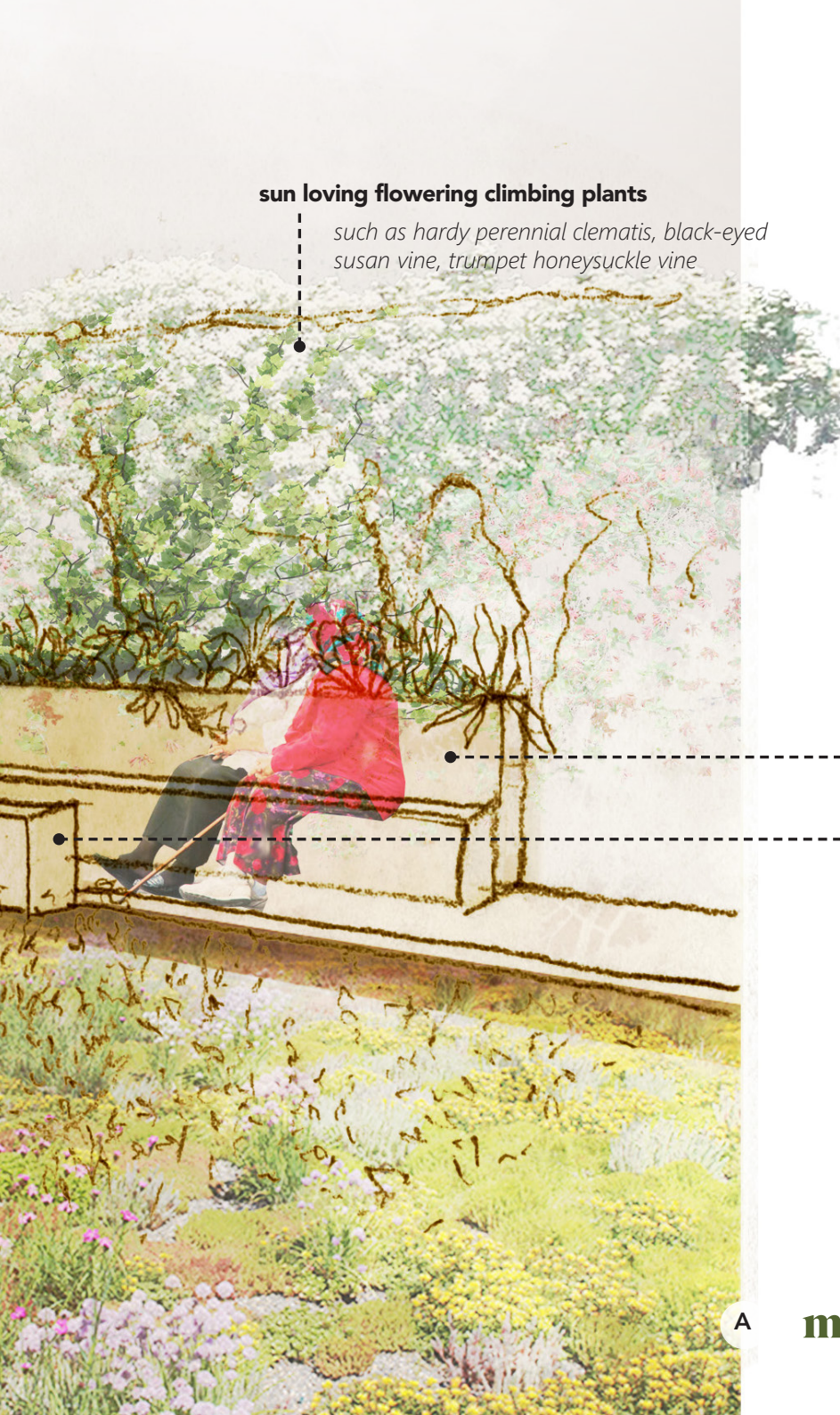
Across the rooftop, especially in *Herbaceous Laze* and *Meadowview*, small alcoves are woven into the design to provide tranquil mini-retreats. These pockets of greenery and seating allow residents to tuck themselves away, fostering moments of solitude, mindfulness, and personal connection with nature.



figure 68 Rooftop Section

**potted plants can be placed  
within the larger container  
created by the back of the  
bench**





**sun loving flowering climbing plants**

such as hardy perennial clematis, black-eyed susan vine, trumpet honeysuckle vine

planters that act as back support along the seating

seating along the 'meadow' vegetation as opportunity to touch or feel more immersed in the grass.

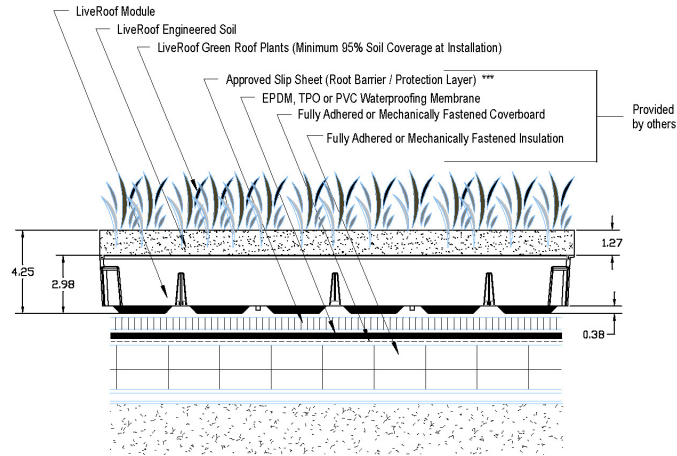
*Meadowview includes sun-tolerant plantings that thrive in both partial and full light. Flowering climbers introduce seasonal colour and softness to the structure, while the green roof modules blend sedums with perennials to create a textured, layered composition that has interest throughout the three active seasons on the roof.*

**figure 69** Rooftop Meadowview



**RED RIVER  
COLLEGE**

green roof module example



**figure 70** Section of a 'Liveroof' Standard Module (not to scale)



**figure 71** 'Liveroof' Standard Modules (above) used in Red River College green roof in Winnipeg (left)

**figure 72 (left)** Greenroof at Red River College

## method and application

The LiveRoof Standard system is a modular, extensive green roof technology designed to combine the ease of tray-based installation with the ecological performance of a field-built green roof. Each module contains a lightweight engineered growing medium at a depth of approximately 4.25 inches. This supports a wide palette of low-growing, hardy, and drought-tolerant plant species while remaining structurally compatible with typical commercial and institutional rooftops. The substrate has a high volumetric water-holding capacity ( $\approx 40\text{--}45$  mm of rainfall), which means that the system can reliably capture and delay stormwater during small to medium precipitation events.<sup>54</sup> Beyond water retention, evapotranspiration by the vegetation further reduces runoff volumes and contributes to local cooling.<sup>55</sup> The modules are pre-grown off-site in controlled nursery conditions and delivered to the project fully vegetated.<sup>56</sup> This ensures instant green coverage at the time of installation, reducing erosion and plant-establishment risks common to seeded or plug-planted roofs. The modular format also makes installation relatively quick, minimizes disruption to building operations, and allows for selective replacement or access if future maintenance is required.

*meadowview*  
climbing plants



Late Large-Flowered Clematis  
*Clematis 'Jackmanii'*



Early Large-Flowered Clematis 'Nelly Moser'  
*Clematis 'Nelly Moser'*



Trumpet Honeysuckle Vine  
*Lonicera x brownii Dropmore Scarlet*



Black-eyed Susan Vine  
*Thunbergia alata*

partial sun				
full sun				
low maintenance				
water needs				
soil:	chalk, clay, loam, sand, moist but well-drained	chalk, clay, loam, sand, moist but well-drained	chalk, clay, loam, sand, moist but well-drained	chalk, loam, sand, moist but well-drained.
attracts songbirds				
attracts hummingbirds				
attracts butterflies				
fragrant				
long blooming				
season of interest: spring, summer, fall, winter		 	 	 

## greenroof module mix



- |                                                  |                                                |
|--------------------------------------------------|------------------------------------------------|
| 1. Kamchatka Stonecrop                           | <i>Sedum kamschaticum</i>                      |
| 2. Takeshima Stonecrop (Gold Carpet variety)     | <i>Sedum takesimensense</i> 'Gold Carpet'      |
| 3. Takeshima Stonecrop (Bronze Carpet variety)   | <i>Sedum takesimensense</i> 'Bronze Carpet'    |
| 4. Woodland Stonecrop                            | <i>Sedum Ternatum</i>                          |
| 5. Two-row Stonecrop (Royal Pink variety)        | <i>Sedum spurium</i> 'Royal Pink'              |
| 6. Two-row Stonecrop (Promise variety)           | <i>Sedum spurium</i> 'Promise'                 |
| 7. Two-row Stonecrop (Fuldagut variety)          | <i>Sedum spurium</i> 'Fuldagut'                |
| 8. Reflexed Stonecrop (Jenny's Stonecrop)        | <i>Sedum reflexum</i>                          |
| 9. Blue Spruce Stonecrop (Blue Moon variety)     | <i>Sedum reflexum</i> Blue Moon TM 'Nonic'     |
| 10. Blue Spruce Stonecrop (Blue Shimmer variety) | <i>Sedum reflexum</i> Blue Shimmer ('Nonremm') |
| 11. Millenium Ornamental Onion                   | <i>Allium Millenium</i>                        |
| 12. German Garlic (Blue Eddy Ornamental Onion)   | <i>Allium senescens</i> 'Blue Eddy'            |
| 13. English Lavender                             | <i>Lavender angustifolia</i>                   |
| 14. Creeping Thyme                               | <i>Thymus serpyllum</i>                        |

Some of these plants are chosen due to their therapeutic benefits, particularly within aromatherapeutic contexts. The Lavender serves as a primary anxiolytic, that is shown to reduce cortisol levels and improve sleep quality.<sup>57</sup> The Creeping Thyme is valued for its high thymol content, which acts as an antiseptic when inhaled and helps alleviate respiratory congestion and inhibit microbial growth.<sup>58</sup> Moreover, Ornamental Onions function primarily through systemic support, providing organosulfur compounds that offer documented cardiovascular and antimicrobial advantages.<sup>59</sup>

figure 74 Greenroof Module Mix



wood shade arbour

wood vertical screen,  
green screen from street

Virginia Creeper  
growing from SE  
planters

seating/lounging edge

elevated artificial turf\*

wood decking



Virginia Creeper  
*Parthenocissus quinquefolia*

-  full shade
-  partial sun
-  full sun
-  low maintenance
-  low- average water needs
-  soil:  
chalk, clay, loam, sand  
moist but well-drained
-  attracts songbirds
-  season of interest:
-  spring (mid, late), summer
-  (early, mid, late) fall

*figure 75* Woodland Rest

*\*the selected artificial turf is a specific product<sup>60</sup> that is made with cork and coconut infill which is a recyclable and highly permeable material. It's been used for children's playgrounds as it is designed for comfort and safety.*

*Woodland Rest is intentionally simple in its planting palette, focusing on species that thrive in full shade. Virginia creeper serves as the dominant climber, providing rich green coverage through summer and transforming into a vivid red in the fall, bringing warmth and seasonal contrast to the shaded space*

YARD (GROUND LEVEL)

# outdoor living room

*outdoor community dining & gathering*

The yard in the final design functions as an extension of the indoor living space. It is intended to be a highly active outdoor area where the community can continue existing programming, host group activities, and enjoy communal meals. The integration of a flexible multi-purpose space encourages residents to use the outdoors as readily as they use interior gathering rooms.

Given the yard's limited size and the community's diverse programming needs, the space must be flexible. This is achieved by keeping the central area open and adaptable for various day-to-day functions. The edges of the yard, however, are made lush with climbers and shade-tolerant plants (as the area is predominantly shaded). This dense perimeter creates an enveloping feeling of nature immediately when one steps outside, providing a sense of sanctuary from the surrounding urban environment.

The yard like the rooftop, uses climbing plants to achieve a lush, green atmosphere, its distinguishing feature is the integration of three new birch trees. The previous mature tree was removed due to its poor health, eliminating the canopy that once defined the space. These new birch trees reintroduce a vertical element that disrupts the views of the concrete surroundings while adding dappled shade and grounding the yard. They offer shade and beauty that the rooftop, due to weight restrictions, cannot fully provide.

# initial ideas *yard space plan*

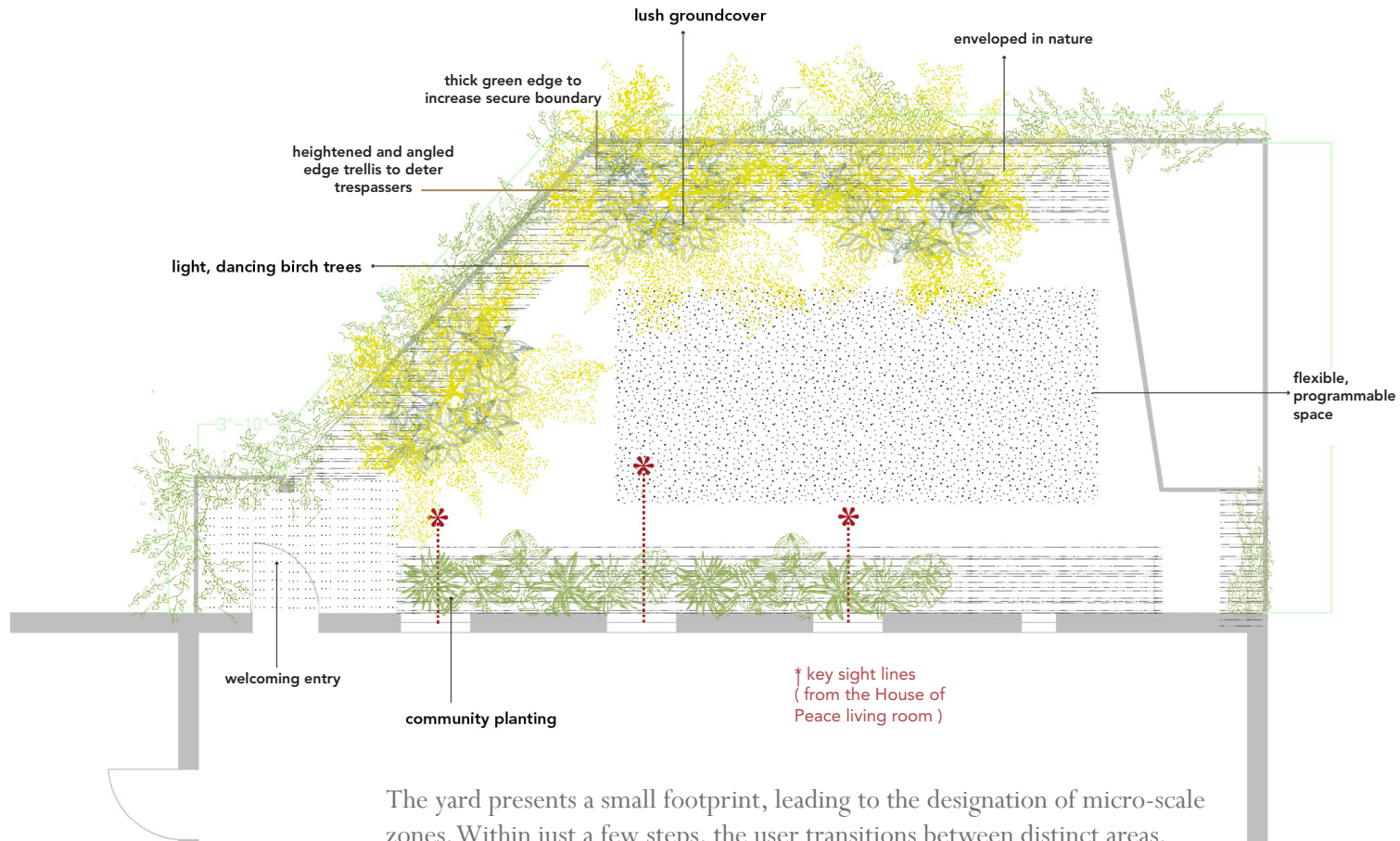
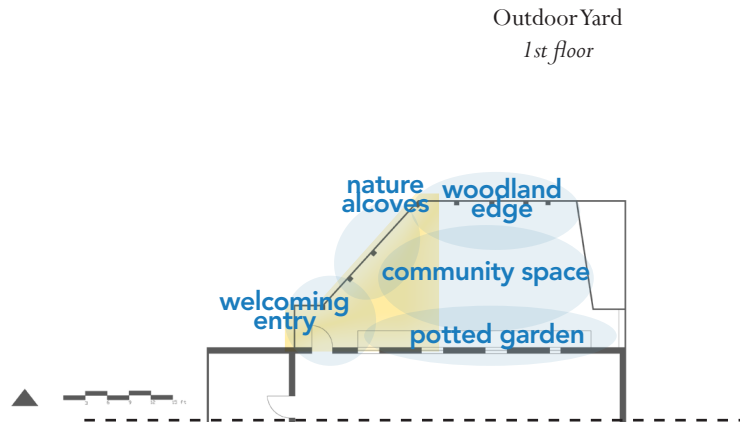


figure 76 *Yard Concept Plan*

The yard presents a small footprint, leading to the designation of micro-scale zones. Within just a few steps, the user transitions between distinct areas. While each zone is proposed with a primary function, these functions are not restrictive; they merely denote the primary allocation of the space. The design is ordered for optimal function yet remain highly flexible to change and morph according to the community's evolving needs.

semi- sunny area  
(summer, 12pm)



*figure 77* Yard Program

***Welcoming Entry:***

The main entry is the sunniest area of the yard. The design uses this warmth to feature a strong sense of welcome, characterized by a colourful wall of vertical vegetation, primarily using sun-loving climbing plants.

***Woodland Edge:***

This idea of lush perimeter planting continues along the entire yard wall. The ‘nature alcoves’ and ‘woodland’ zones integrate dense vegetation, using plants that are shade-tolerant due to the adjacent building conditions.

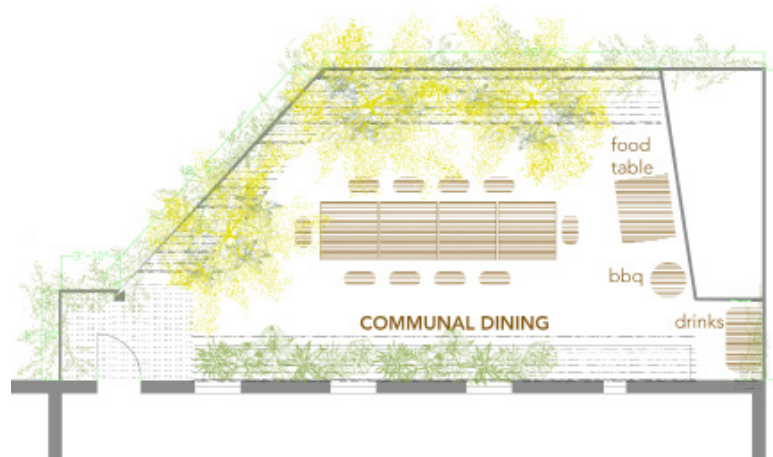
***Potted Garden Nook:***

Located along the living room windows, this area is dedicated to the potted plants for The House of Peace Community. This design directly reflects the existing community use, which previously included a variety of potted tropical species, vegetables, and herbs. This zone accommodates this function simply by providing the open space without requiring any specific fixed structures.

***Community Space:*** (see next page)

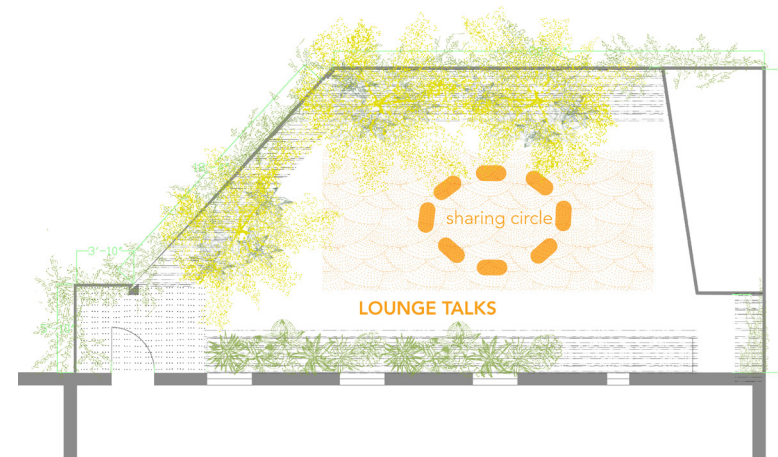
## community space configurations

The central space is designated as the most flexible area. After extensive design iterations, which included exploring fixed elements like singular or multiple trees or permanent furniture, leaving this space as an open area made the most sense. This flexibility supports the community's current needs for large gatherings and changing activities.



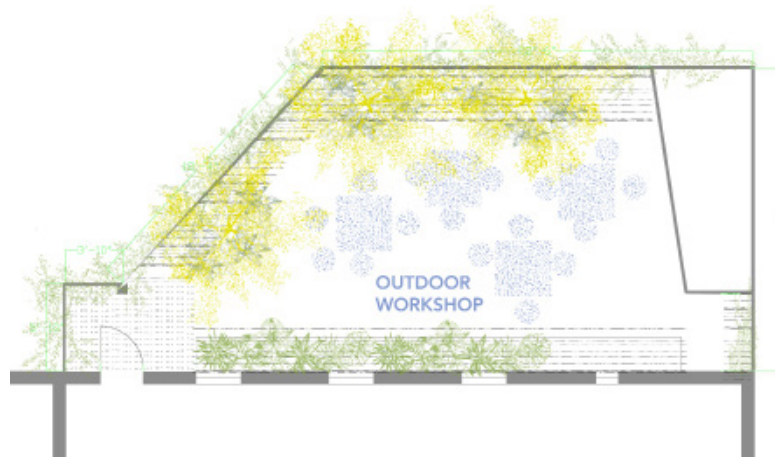
### 1: COMMUNAL DINING

extends the existing uses of the adjacent living and dining rooms inside.



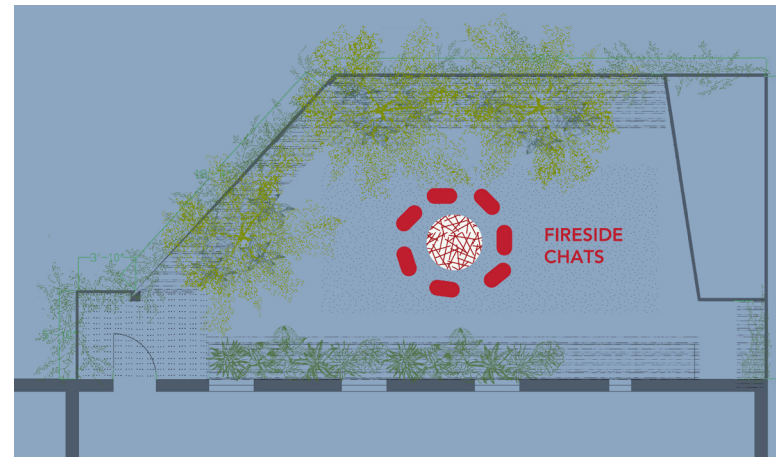
### 2: LOUNGE TALKS

mirrors the comfort of an interior lounge but with an open-air feel, surrounded by vegetation.



**3: WORKSHOPS/ CLASSES**

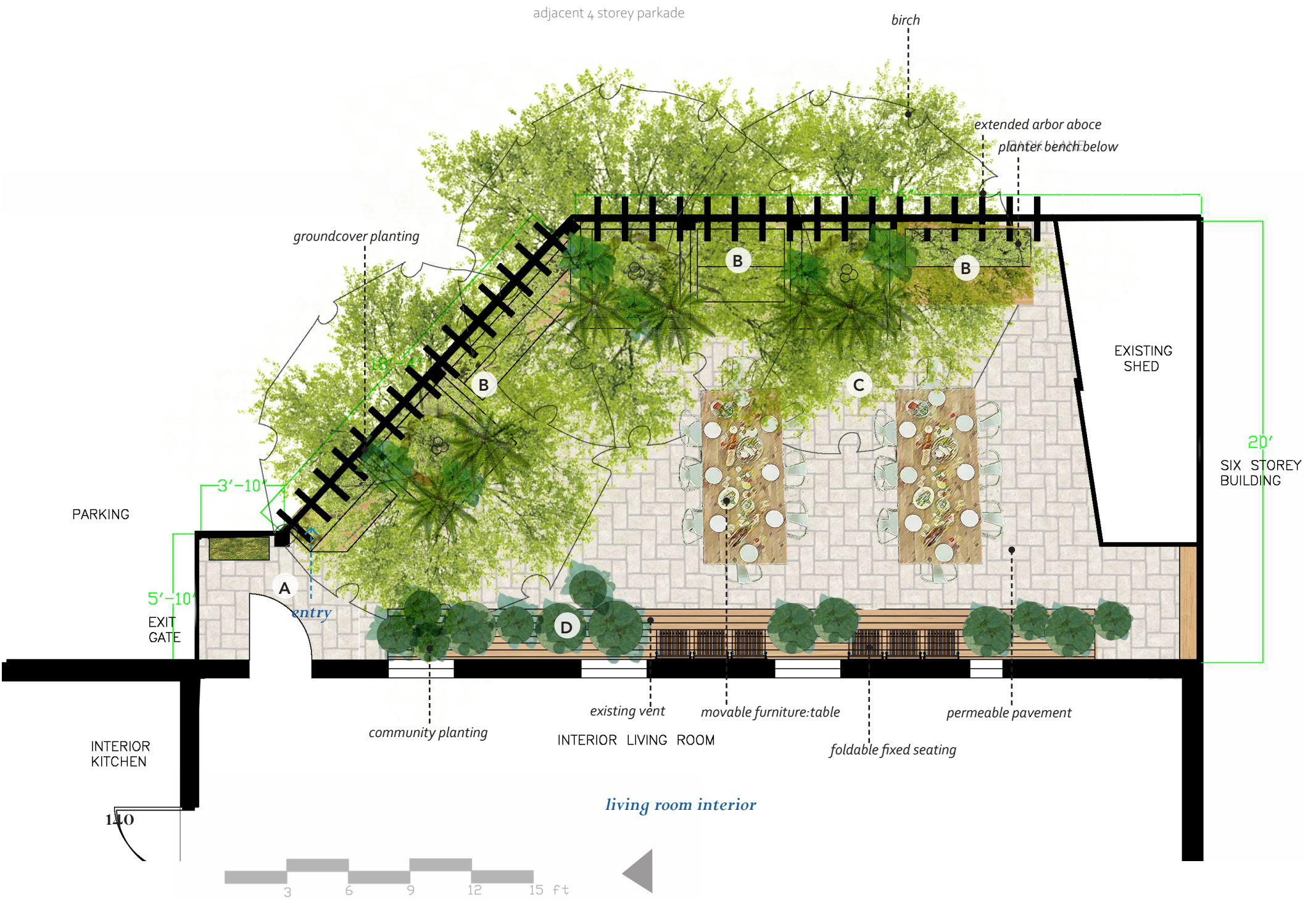
Transforms the area into a functional educational environment, providing a casual space for skills-sharing or other programming.



**4: FIRESIDE CHATS**

encourages social interaction and storytelling in a cozy atmosphere.

*figure 78* Yard Community Configurations



adjacent 4 storey parkade

birch

extended arbor above  
planter bench below

groundcover planting

18'-4"

3'-10"

PARKING

5'-10"  
EXIT GATE

A

entry

B

B

B

C

D

EXISTING SHED

20'

SIX STOREY BUILDING

community planting

existing vent

movable furniture: table

permeable pavement

foldable fixed seating

INTERIOR KITCHEN

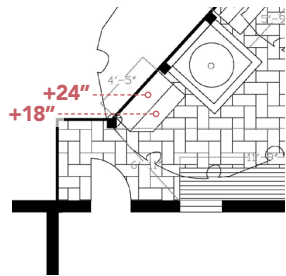
INTERIOR LIVING ROOM

living room interior

110

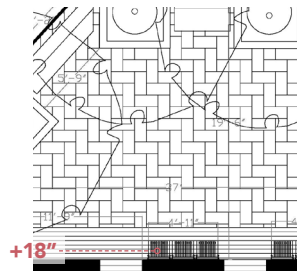


### A: WELCOMING ENTRY



A welcoming entry guides the neighbours and visitors into the yard, and sets the tone for the experience ahead. There is also space dedicated for planters and other welcoming elements.

### C: COMMUNITY SPACE



This open zone is designed for adaptive programming, such as dining, fireside chats, casual lounging, seating, or community events.

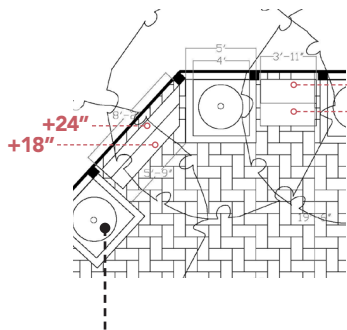
1: COMMUNAL DINING

2: LOUNGE TALKS

3: FIRESIDE CHATS

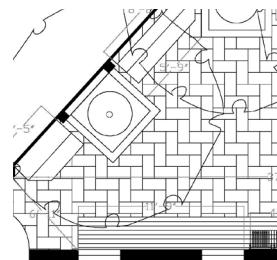
4: WORKSHOPS/ CLASSES

### B: WOODLAND SEATING NOOKS



Nestled by the birch tree and surrounded by lush vegetation, a cool and shaded retreat is created with intimate seating for relaxing or quiet conversations.

### D: POTTED GARDEN NOOK



Along the windows, this zone creates a strong sight line of greenery from the interior, softening the view out. It also accommodates seating tucked along the wall, providing an activated area slightly removed from the main activity.

### GROUNDCOVER PLANTING CLOSE-UP



companion  
groundcover  
planting around  
multi-stem birch

\*spot elevations

figure 79 (left) Yard Material Plan

figure 80 (above) Yard Dimensions

# *lounge talks*



figure 81 Lounge Talks

windows: views from  
the living room



*\*To ensure the safety of the House of Peace residents, the design specifies a 7-foot fence. This height extension is a security measure to mitigate documented trespassing incidents and provide an essential privacy buffer for a vulnerable population.*

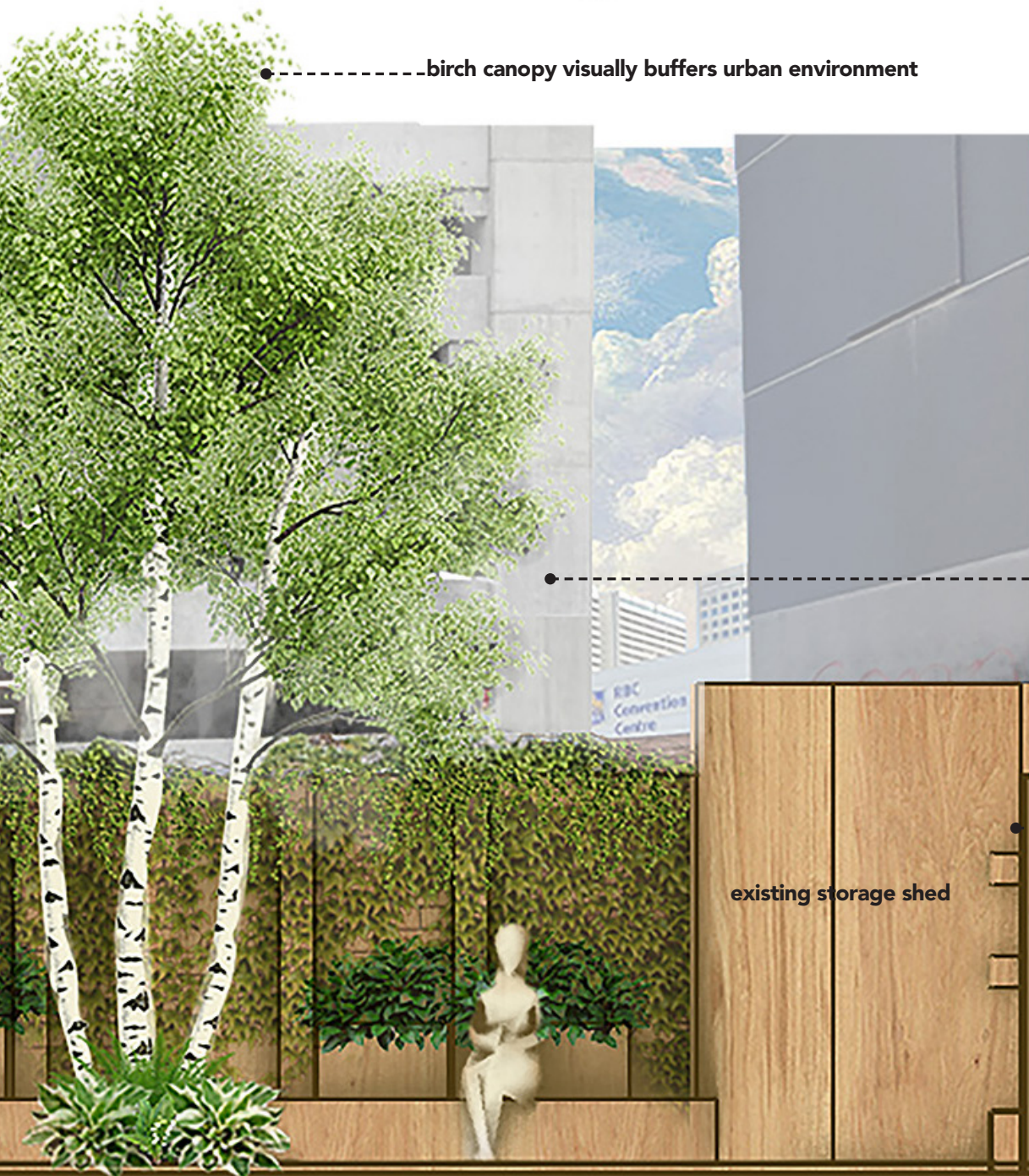
The windows in the living room are more than just glass; they are essential portals to the garden. It is critical to maintain clear sight lines from these interior spaces to the yard so that the landscape can be experienced as a “borrowed view”. This is especially important during Winnipeg’s long winters when being physically outside isn’t always possible. By prioritizing these views, the design follows Roger Ulrich’s research, ensuring that even just looking at the garden from the warmth of the living room provides a sense of calm and restoration for the residents.

**figure 82** Views from the Living Room



clematis  
plantings  
along fence

seating  
within  
vegetation



●-----birch canopy visually buffers urban environment

●-----visualized future parkade

existing storage shed

●-----additional storage across fence

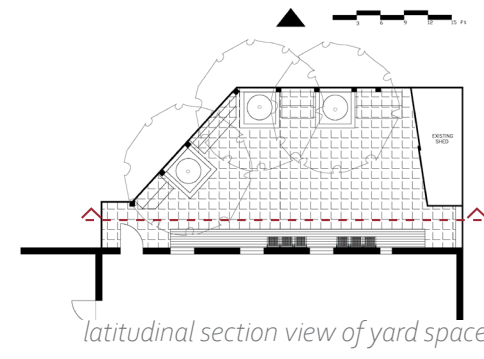


figure 83 Perspective elevation

# urban oasis *yard space*

*yard plantings*  
**birch & companions**

*Three birch trees define the yard space, their light canopy filtering sunlight and creating a gentle contrast against the urban backdrop. Beneath them, a planting palette of hostas, ferns, wild ginger, and meadow anemone forms a dense, low-growing layer. These woodland groundcovers, well adapted to shade, complement the birches and bring a sense of natural harmony and softness to the space.*





Ostrich Fern  
*Matteuccia struthiopteris*



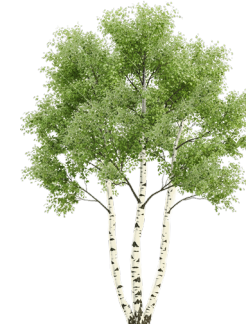
Plantain Lily  
*Hosta 'Patriot'*



Meadow Anemone  
*Anemone canadensis*



Wild Ginger  
*Asarum europaeum*



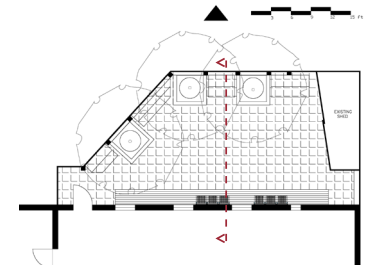
Paper Birch  
*Betula papyrifera*

partial sun					
full shade					
low maintenance					
average water needs					
soil:	clay, loam, sand, moist but well-drained, moisture retentive	clay, loam, sand, moist but well-drained	clay, loam, sand, chalk, moist but well-drained, moisture retentive	loam, sand, moist but well-drained.	clay, loam, sand, chalk, moist but well-drained
attracts songbirds					
attracts butterflies					
pollinators	yes	yes	yes	yes	
soil dwellers	yes	yes	yes	yes	
season of interest: spring, summer, fall, winter					
therapeutic/ medicinal use	Topical (poultice), edible fiddleheads (boiled), antiviral	Analgesic (pain relief), anti-inflammatory, treats sore throats	Anxiolytic (anxiety relief), antiseptic wash, treats skin abrasions	Digestive stimulant, respiratory expectorant, antimicrobial	Antiseptic bark, diuretic tea, anti-inflammatory (betulinic acid)



season of interest:  
spring, summer, fall, winter

figure 84 Yard Planting Palette



●----- utility well below-grade

The existing vent is preserved to maintain essential airflow, but its water load is significantly reduced by the new design. The addition of birch trees and increased vegetation provide natural absorption, while permeable paving promotes site-wide infiltration. These features intercept runoff and provide natural absorption, complementing the existing vent's drainage system while creating a more sustainable site design.

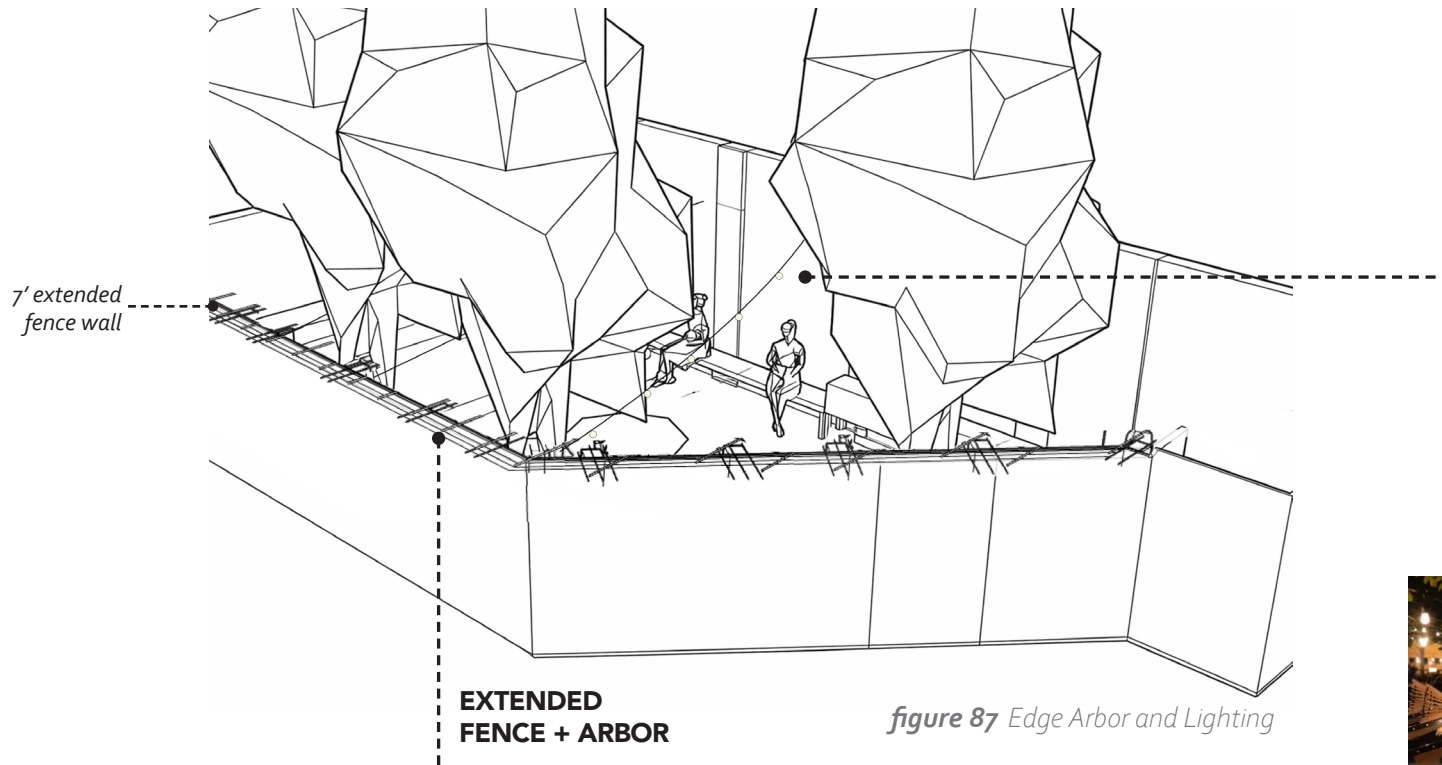


- extended arbor
- string lights across the yard
- lush vegetation along the arbor and fence
- seating nooks within vegetation



*figure 85 (left)* Perspective elevation visualizing Fall

*figure 86 (right)* Yard in the Winter and Summer



**EXTENDED FENCE + ARBOR**

An edge arbor along the yard fence supports vines and climbing plants, enhancing the vertical greenery and creating a more immersive natural experience. The arbor also acts as a subtle security barrier, helping to deter trespassing while maintaining an inviting and garden-edged edge.

*figure 87* Edge Arbor and Lighting

**NIGHT STRING LIGHTING**

String lighting throughout the yard provides soft, warm illumination in the evening. This creates a cozy and inviting atmosphere, extending the usability of the space after dark and enhancing the overall ambiance.

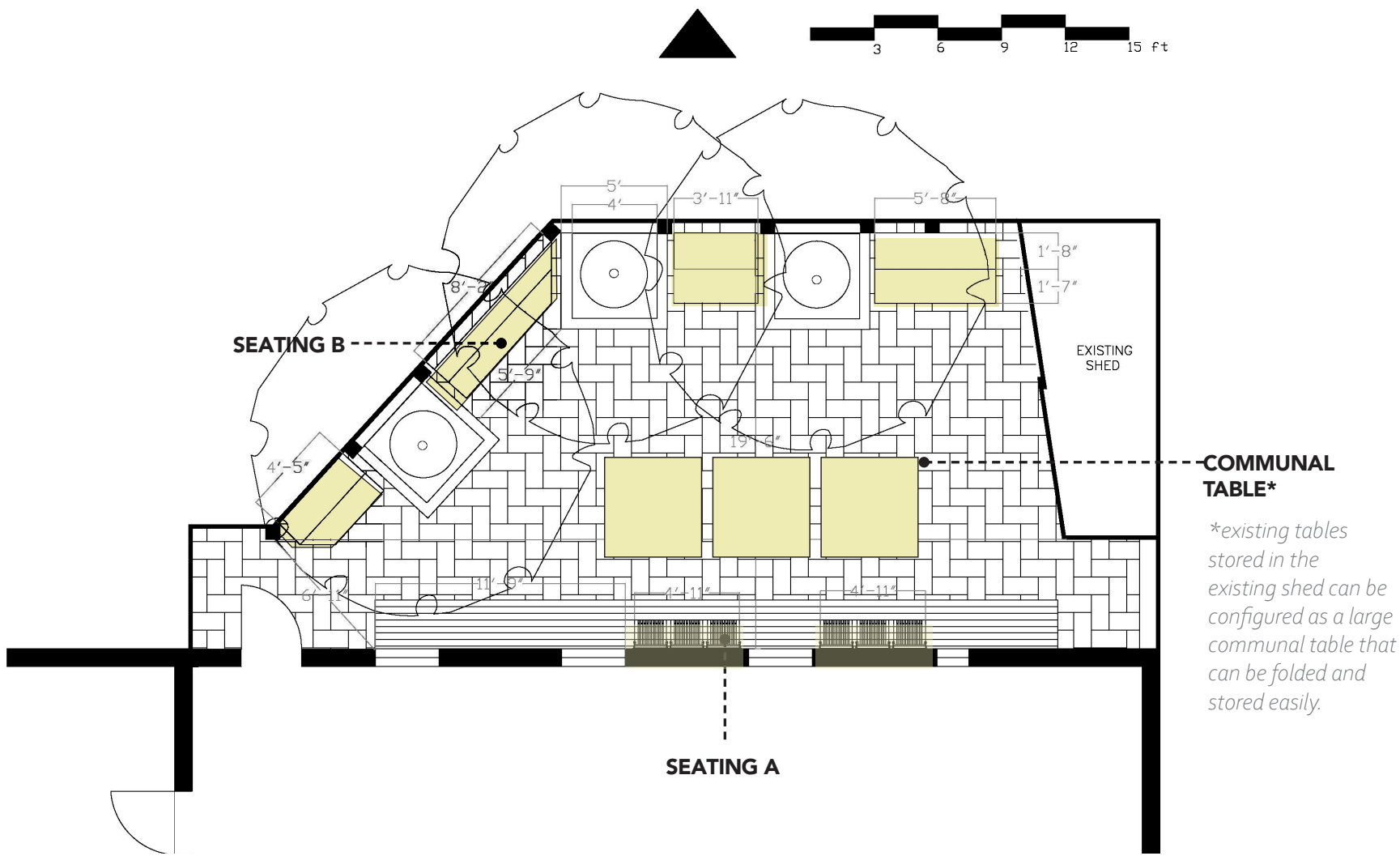


*figure 88*  
evening lighting at The Forks  
providing a warm ambience



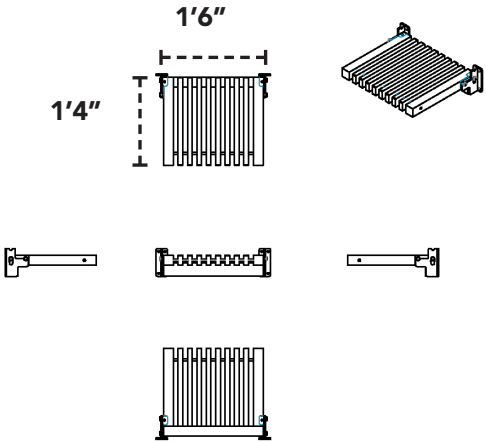
*figure 89*  
Yard Evening Dinners

EVENING DINING

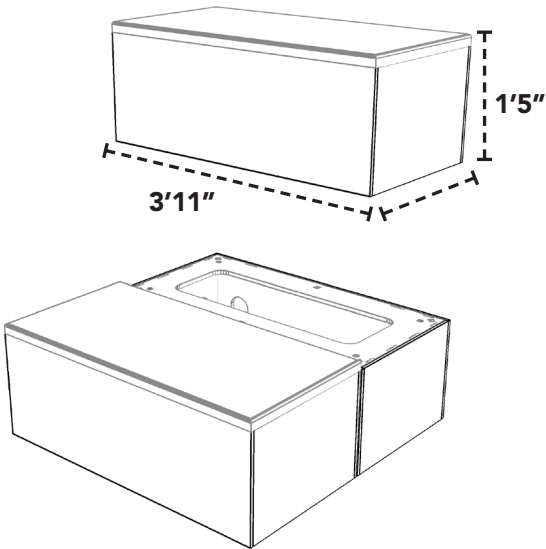


**furniture**

**SEATING A**  
*foldable*

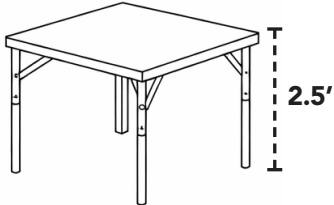


**SEATING B**  
*modular*

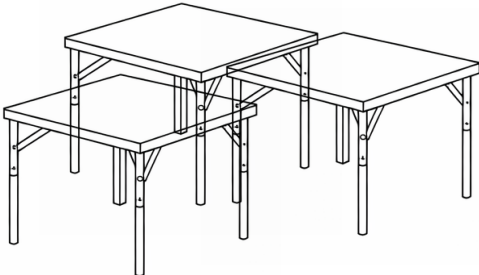


**TABLES**  
*foldable*

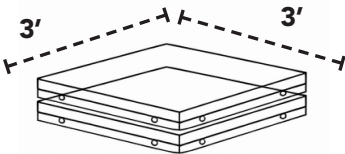
SINGULAR



GROUP

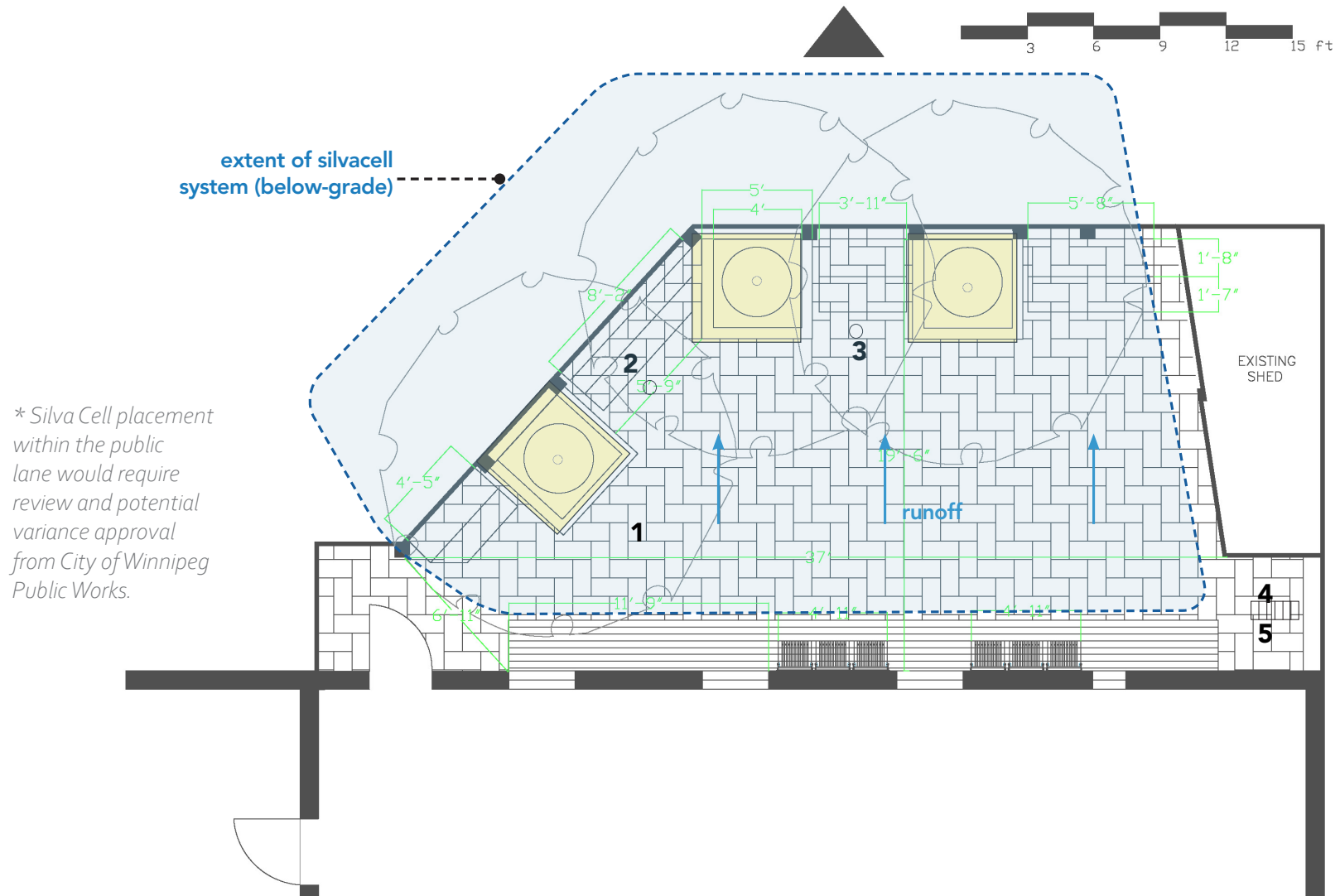


FOLDED  
FOR EASY  
STORAGE



 material: wood

figure 91 Seating Dimensions in the Yard

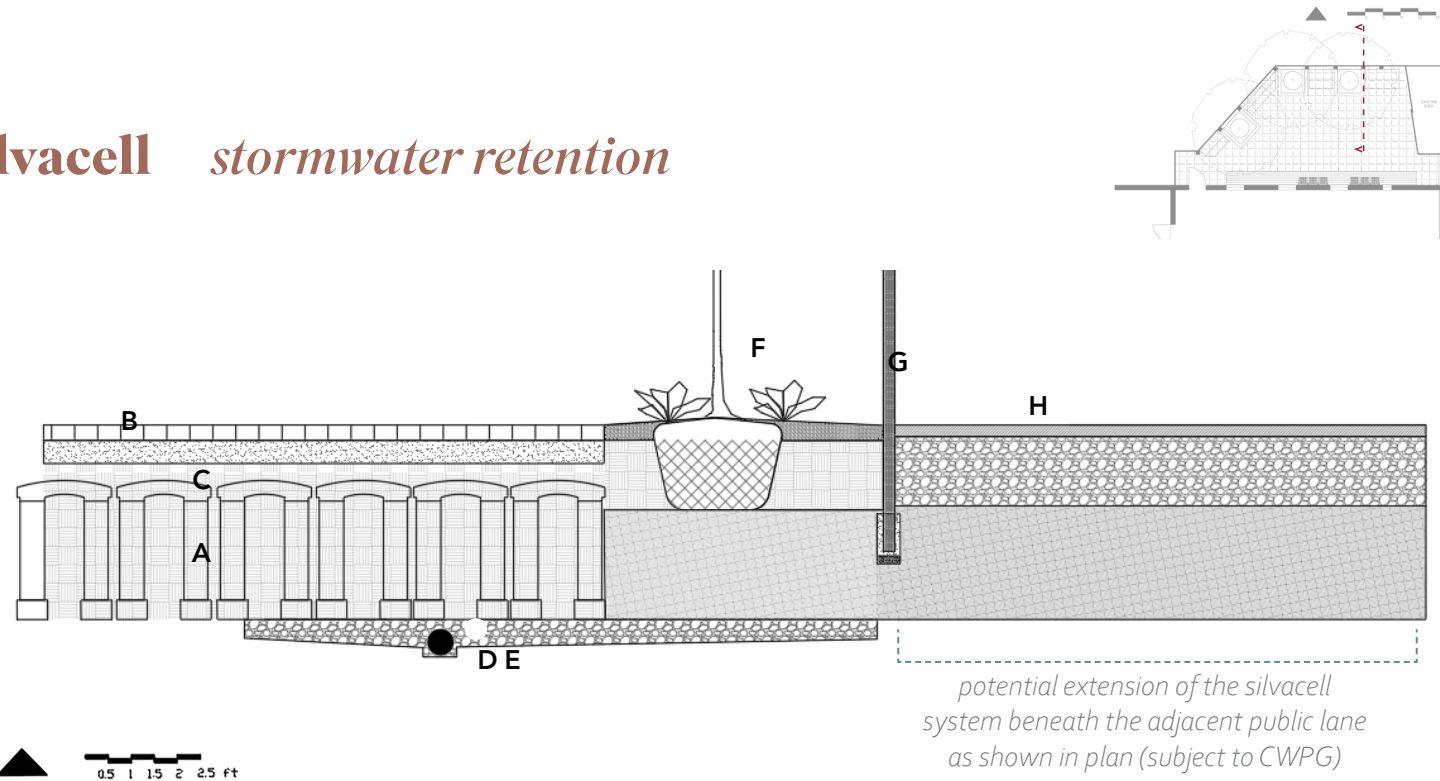


\* Silva Cell placement within the public lane would require review and potential variance approval from City of Winnipeg Public Works.

- 1 Stormwater enters the silva cell system through a permeable pavement system
- 2 water moves through the planting soil housed within the silva cell system
- 3 excess water is collected in a perforated drain pipe and is directed toward a downstream catch basin
- 4 cleanout
- 5 water collected in the collection pipe is directed to the municipal storm system

figure 93 Silvacell System in the Yard

## silvacell *stormwater retention*



*figure 93* Silvacell System in the Yard

- A** Silva Cell System (Deck, Base, and Posts)
- B** Permeable Pavement\*
- C** Aggregate Storage Layer
- D** Collection Pipe
- E** Connection to Municipal Storm System
- F** Birch and Companion Plantings
- G** Fence
- H** Outside of Yard: Asphalt

*\* Permeable paving is chosen as it acts as stormwater strategy that can be engineered for Winnipeg's specific climate. By facilitating in-situ infiltration through an open-graded aggregate base, these systems reduce runoff and provide natural filtration for the Red River watershed. The modular design offers a resilience against the movement of clay soils, while the high drainage capacity suppresses surface ice formation during frequent freeze-thaw cycles.*

## CHAPTER 7

# CONCLUSION

*This concluding chapter revisits the design objectives outlined at the beginning of the document and reflects on the development and outcomes of the practicum as a whole.*



# design objectives

*revisited...*



**figure 94**  
*Aerial Images of the proposed  
design of the Rooftop and Yard  
space at the House of Peace*



## **integrate therapeutic value in a high density context**

*This is achieved by creating spaces that encourage calm, sensory engagement, and a connection to nature.*

## **foster individual and social wellbeing**

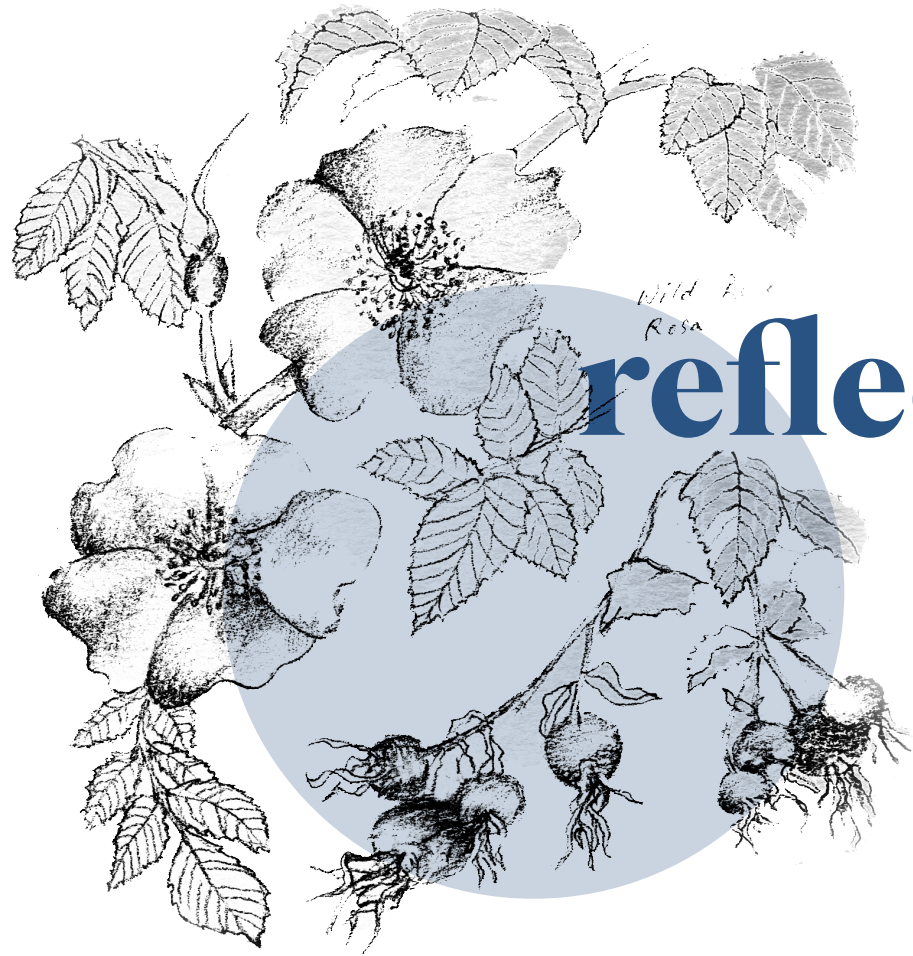
*This is reflected in the varied layout of the space, with opportunities for both quiet nooks and lounges for solitude or the spaces that support gatherings and shared meals.*

## **re-establish an ecological presence**

*Approached through layered planting, vertical greenery, and trees that reintroduce life, colour and biodiversity into the space.*

## **cultivate empowerment and cultural ownership**

*This is encouraged through integrated planters in benches for potted plants, and adaptable layouts that shape how the space is used over time.*



*Wild Rose  
Rosa*

# reflection

Designing for this space, despite its scale, proved genuinely challenging. I had been accustomed to working at the regional, city, and park scales, and the necessary shift to this intimate, finite site required a significant mental adjustment.

The process was defined by numerous difficulties and setbacks that emerged during site analysis. Practical limitations including strict rules concerning weight, size, climate dynamics (sun and shade), and the pressures of urban adjacencies constantly threatened the idealized “paradise” I had envisioned.

What ultimately guided and sustained the design was the presence of the House of Peace community. I strongly believe in the good work the organization does, and even as these are concepts explored within a practicum, they are driven by the belief that these women deserve access to beautiful, enriching spaces. Moving forward, I am committed to supporting the House of Peace in seeking the partnerships and funding necessary to bridge the gap between this vision and a physical reality.

For those navigating a new and perhaps overwhelming environment where city exploration is out of reach, a nearby green space is important. The goal is to offer moments of genuine respite: a chance to connect with nature’s presence amidst the surrounding concrete; to enjoy lunch in the sun and fresh air, or to find a cozy, shaded retreat on the rooftop. These simple, readily available experiences are designed to bring comfort and delight to their day.

## **appendix A**





## MEANING IN GREEN

*faith*

*power*

*ordering*

*cultural expression*

*personal expression*

*healing*

In ‘The Meaning of Gardens’ by Randolph T. Hester and Mark Francis, the authors explore the various symbolic and functional meanings that designed natural environments can hold for people, using the metaphor of ‘gardens’ to reflect deep human-nature connections. While my practicum focuses on urban green spaces that do not primarily involve active cultivation by users, I draw on Hester and Francis’s six muses—Faith, Power, Ordering, Cultural Expression, Personal Expression, and Healing—as a conceptual framework. These muses provide a powerful lens for understanding the potential of even passively experienced green spaces to shape human experience, identity, and social dynamics. In designing the spaces for the rooftop and yard of the House of Peace, I draw on these muses as a conceptual framework to understand the space’s potential to offer more than just visual value. Each muse provides a lens through which to view the garden as a space of deeper meaning—capable of reflecting the values, needs, and aspirations of its community.



*order of importance in what a garden means for the House of Peace*

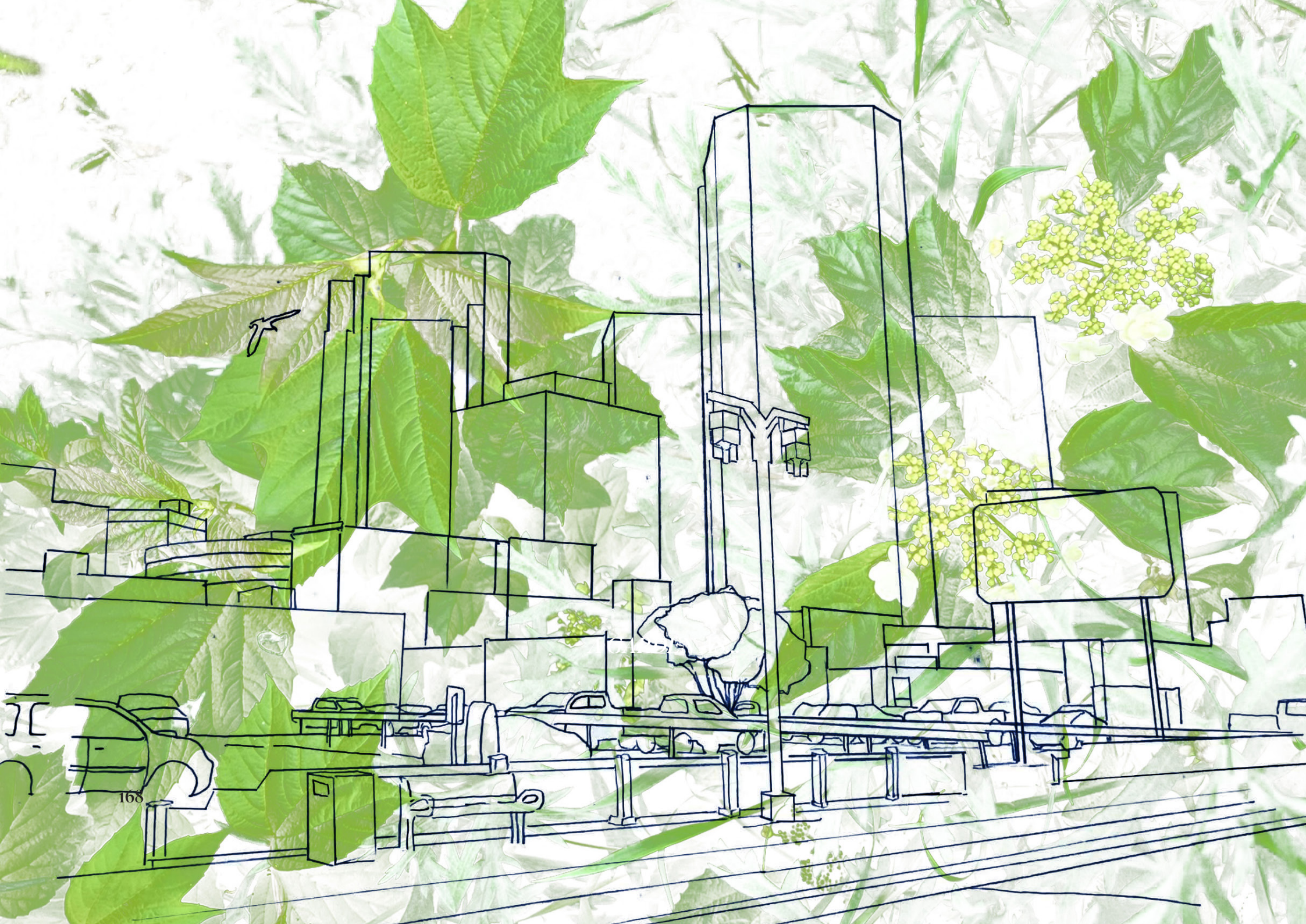
*(left) a large, mature tree used to reside in the yard offering shade and beauty before it got removed in 2023 due to health reasons*



Gardens have long been places of contemplation, devotion, and spiritual connection.<sup>61</sup> As the residents at the House of Peace are in transition, the garden can serve as a sanctuary that offer a quiet space for reflection and renewal.<sup>62</sup> Whether the presence of plants with cultural or spiritual significance, the integration of natural elements to look at or with the act of tending to a garden, the space can provide moments of solace and grounding. For many immigrant and refugee residents, connection to nature may evoke memories of home or spiritual traditions, reinforcing a sense of faith in the healing process of both personal and communal transitions. The concept of faith could also manifest as a space they could feel safe in, that they could trust - as much of the country and the city is new and unfamiliar- having a place to feel peace in will propagate this faith.



*Community religions painting at the House of Peace*



*A GARDEN AS...*

# power

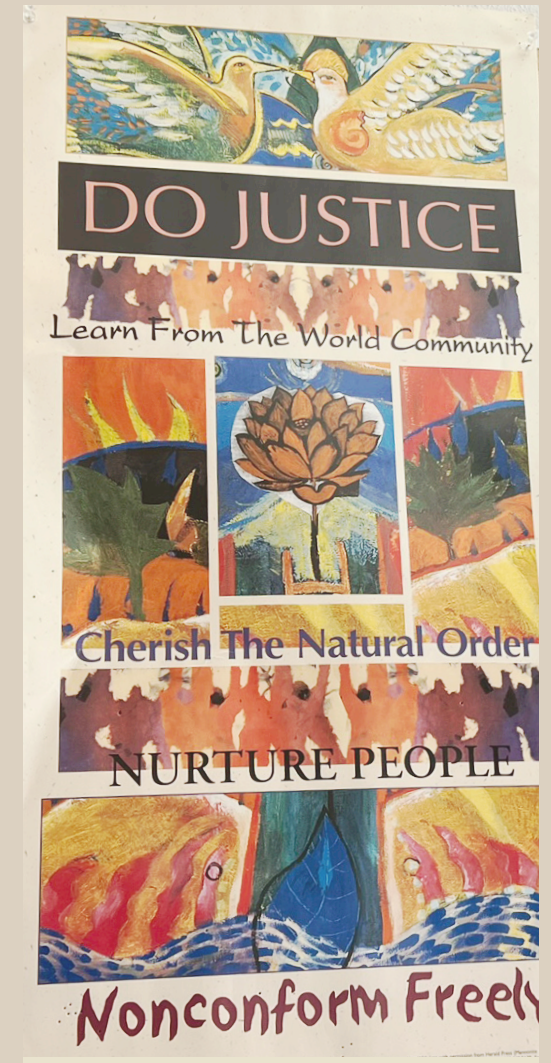
Power in gardens is often expressed through control over land, access to resources, and the ability to shape one's environment.<sup>63</sup> In an urban setting where green space is often scarce, particularly for marginalized communities, the rooftop and the garden reclaims the hard urban environment for nature and human connection.<sup>64</sup> The garden challenges the dominance of hardscapes urban environments, asserting the importance of green space in the city's-built fabric.<sup>65</sup> From the small-scale outdoor spaces of the House of Peace to the potential of a larger framework for Winnipeg, utilizing the spaces that we already have can create significance in both personal and communal well-being. Moreover, by allowing residents to participate in the selection of plants and even in shaping the aesthetic of the green space, the design fosters agency - empowering them to create a space that reflects their identities and needs.



*A forest painting at the House of Peace*

*A poster hung at a  
common room at the  
House of Peace*

Gardens are often places where natural elements are shaped through human intention, whether in geometric arrangements or ecological balance.<sup>66</sup> In this project, the limited square footage requires a spatial organization that maximizes function, beauty and sustainability. The notion of an ordered space requires areas within to have specific functions so users and their experiences can flow well.<sup>67</sup> In translating to the design of this practicum, multi-functionality is encouraged, because space is at a premium. Moreover, creating a spatial order that fits the needs and wants of the residents allows different experiences to happen despite the limited space.







*A GARDEN AS...*

*A gifted wooden statue to  
The House of Peace of a girl  
with her arms wide*

172

**cultural**

For immigrant and diverse communities, gardens can serve as cultural touchstones,<sup>68</sup> bridging past and present through familiar plantings, traditions, and shared knowledge. The House of Peace is home to individuals from varied backgrounds, and the opportunity for residents to choose plants reflects the importance of cultural agency in design. In this way, the garden evolves to a living archive of traditions, stories, and shared heritage that would encourage the present and future communities of the House of Peace. The expression of cultural identity within the urban fabric reinforces the idea that green spaces can be inclusive and representative of the people who use them.<sup>69</sup>



*A pinned map showing where everyone is from at the House of Peace*

# expression

*A GARDEN AS...*

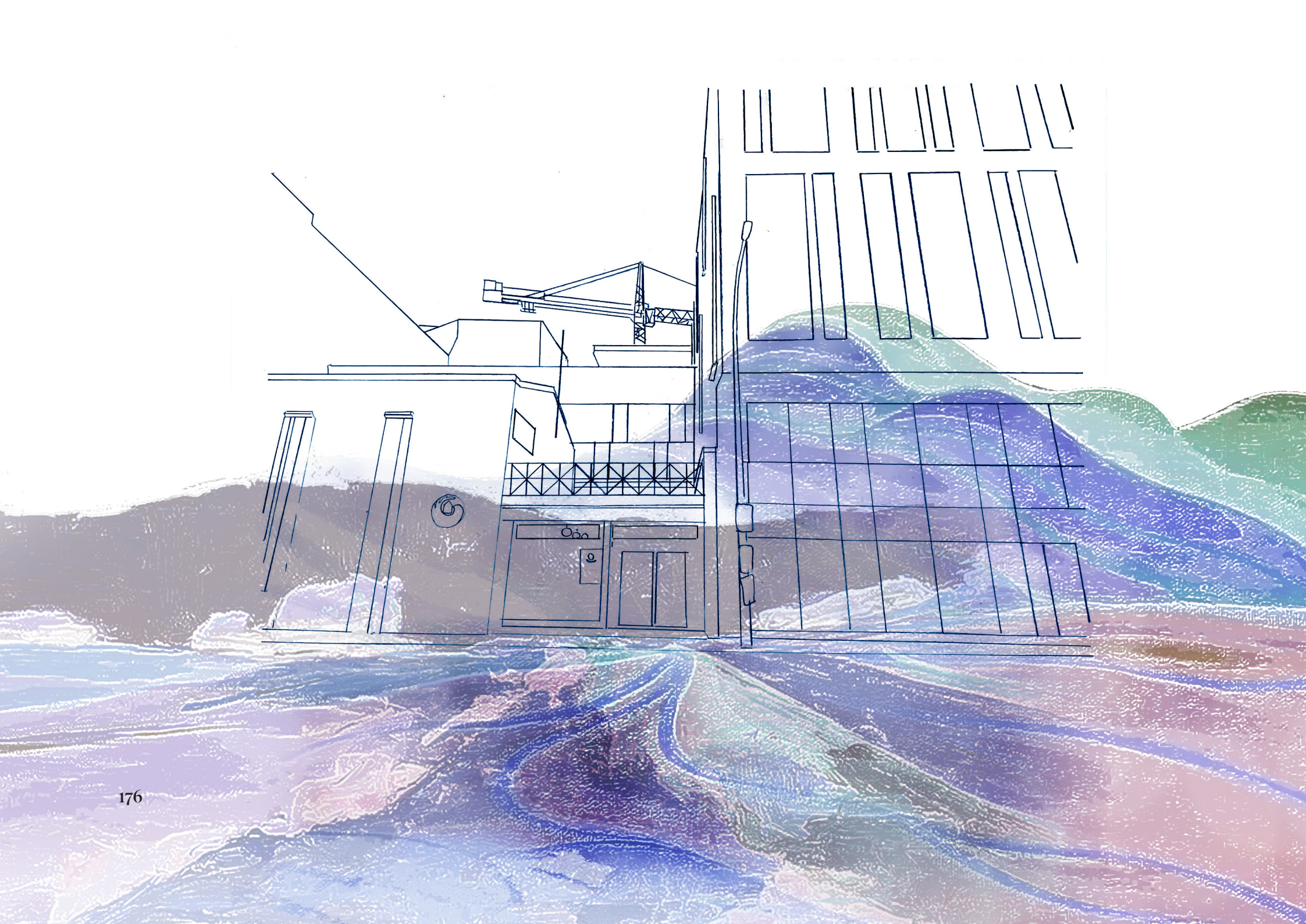
# personal expression

Beyond collective identity, gardens also serve as personal spaces of creativity and emotional connection.<sup>70</sup> In a transitional home like the House of Peace, where stability may be fleeting, the ability to nurture a plant or finding a personal connection through observation and engagement with the natural elements offers a small but meaningful sense of continuity and care. Whether through container gardening, selecting favourite flowers, or simply arranging seating for conversation, the garden provides opportunities for personal investment and expression. These small acts of participation can enhance feelings of belonging and purpose, even in a temporary living situation.



*a wooden plate frame at the House of Peace*





*A GARDEN AS...*

# healing

The garden is envisioned as an urban oasis - a place where residents can experience calm, connection, and renewal amidst the challenges of transition.<sup>71</sup> The selection of shade-tolerant, resilient plants ensures that the space remains lush and inviting, reinforcing the restorative qualities of greenery. The presence of both communal and private seating areas allows for social interaction as well as solitude, supporting different forms of healing.



Each of Francis and Hester's muses is deeply relevant to the design of the rooftop and yard garden at the House of Peace. The space is not merely a decorative addition but a meaningful, multifunctional environment that supports faith, empowerment, cultural and personal expression, the beauty of structure and chaos, and healing. In downtown Winnipeg, where inner-city green spaces are limited, this project can be a model for how gardens can serve as sites of refuge, agency, and renewal for diverse communities.

## endnotes

1. Marques, Bruno, Jacqueline McIntosh, and Hayley Webber, 2022. “Therapeutic landscapes: a natural weaving of culture, health and land”,. <https://doi.org/10.5772/intechopen.99272>
2. Sander-Regier, Renate, 2009. “Bare roots: exploring botanical agency in the personal garden”, *Topia Canadian Journal of Cultural Studies*, 21:63-84. <https://doi.org/10.3138/topia.21.63>
3. Pyykkönen, Siiri and Päivi Kymäläinen, 2024. “Urban landscapes as therapeutic landscapes: the transforming conceptions of care environments”, *Fennia - International Journal of Geography*. <https://doi.org/10.11143/fennia.128634>
4. Srivastav, Ambuj, 2022. “Elements of healing spaces in hospital”, *International Journal for Research in Applied Science and Engineering Technology* (3), 10:2097-2101. <https://doi.org/10.22214/ijraset.2022.41069>
5. Sillmann, Thaís Akemi, Paula Oliveira Marques, and Cláudia Fabrino Machado Mattiuz, 2024. “Therapeutic gardens: historical context, foundations, and landscaping”, *Ornamental Horticulture*, 30. <https://doi.org/10.1590/2447-536x.v30.e242740>
6. “House of Peace”, Our Mission, March 25, 2025, <https://www.houseofpeace.ca/our-mission>
7. Marie Rose Place, “Tenancy,” accessed March 25, 2025, <https://marieroseapartments.com/>
8. “Manitoba Association of Newcomer Service Organisations”, Holy Names House Of Peace, March 25, 2025, <https://mansomanitoba.silkstart.com/companies/holy-names-house-of-peace>
9. “House of Peace”, What We Do, March 25, 2025, <https://www.houseofpeace.ca/what-we-do>
10. Sheldon Cohen, Gary W. Evans, Daniel Stokols, and David S. Krantz, eds., *Behavior, Health, and Environmental Stress* (New York: Plenum Press, 1986).
11. Gary W. Evans and Sheldon Cohen, “Environmental Stress,” in *Handbook of Environmental Psychology*, ed. Daniel Stokols and Irwin Altman (New York: Wiley, 1987).
12. Ulrich, Roger S. “View through a Window May Influence Recovery from Surgery.” *Science* 224, no. 4647 (1984): 420–21.
13. Ulrich, Roger S., Robert F. Simons, Barbara D. Losito, Evelyn Fiorito, Mark A. Miles, and Michael Zelson. “Stress Recovery During Exposure to Natural and Urban Environments.” *Journal of Environmental Psychology* 11, no. 3 (1991): 201–30.
14. Mark Francis and Randolph T. Hester Jr. eds., *The Meaning of Gardens: Idea, Place, and Action* (Cambridge, MA : MIT Press, 1990)
15. Spirn, Anne Whiston. 1984. *The Granite Garden: Urban Nature and Human Design*. New York: Basic Books.
16. Giles-Corti, Billie, Terry S. Sallis, Adrian Bauman, Ben E. Saelens, Lawrence Frank, Paul Foster, David D. Chapman, et al. 2016. “Creating Healthy Cities: Research and Practice.” *Health & Place* 39: 111–17.
17. Stigsdotter, Ulrika K., Anne Dahl Fristrup, Anne Mette Jensen, Erik B. Søndergaard, and Henrik B. Sørensen. 2011. “Forest Design for People with Stress-related Illness: A Design Guide.” *Journal of Therapeutic Horticulture* 21: 17–29.
18. Seligman, Martin E. P. 2011. *Flourish: A Visionary New Understanding of Happiness and Well-being*. New York: Free Press.

19. White, Mathew P., Ian Alcock, James Grellier, Benedict W. Wheeler, Lesley E. Hurst, Jules Pretty, Howard O. Cooper, and Lora E. Fleming. 2020. "Spending at Least 120 Minutes a Week in Nature Is Associated with Good Health and Wellbeing." *Scientific Reports* 9, no. 1: 7730.
20. Enßle-Reinhardt, Friederike and Nadja Kabisch, 2020. "Urban green spaces for the social interaction, health and well-being of older people— an integrated view of urban ecosystem services and socio-environmental justice", *Environmental Science & Policy*, 109:36-44. <https://doi.org/10.1016/j.envsci.2020.04.008>
21. Enßle-Reinhardt and Kabisch, "Urban Green Spaces,"
22. Enßle-Reinhardt and Kabisch, "Urban Green Spaces,"
23. Kabisch, Nadja, Björn Strohbach, and Jennifer Stadler. 2017. "The Role of Urban Green Space for Social Interaction and Health: An Integrative Perspective." In *Urban Green Infrastructure: Connecting People and Nature for Sustainable Cities*, edited by Lars K. Müller, 99–119. New York: Routledge.
24. Chaudhury, Poushali, Karen Traore, Kelly Aggarwal, and Alison K. Smith. 2021. "Green Spaces and Immigrant Well-Being: A Scoping Review." *International Journal of Environmental Research and Public Health* 18, no. 14: 7667.
25. Harvey, John H. 1981. *Medieval Gardens*. London: Batsford.
26. Metropolitan Museum of Art. 2000. *The Cloisters: Medieval Art and Architecture*. New York: Metropolitan Museum of Art.
27. UNESCO World Heritage Centre, "The Persian Garden," accessed February 27, 2025, <https://whc.unesco.org/en/list/1372/>
28. UNESCO, "The Persian Garden."
29. Lawson, Laura J., and Patrick McNally. 1995. "The History of Community Gardens in the United States." In *Healing the Earth: A Handbook for Cultivating a Green Revolution*, edited by L. A. Francis and M. J. Francis, 137-150. New York: Council on the Environment of New York City.
30. Huebert, Susan. "Gardens as Community Renewal." Winnipeg Free Press, August 7, 2018. <https://www.winnipegfreepress.com/our-communities/correspondents/2018/08/07/gardens-as-community-renewal>.
31. The Metropolitan Museum of Art. "The Gardens of The Met Cloisters." Accessed March 15, 2025. <https://www.metmuseum.org/about-the-met/collection-areas/medieval-art-and-the-cloisters/met-cloisters-gardens>.
32. Michael Van Valkenburgh Associates Inc. "Willow Street Garden." Project page. MVVA. Accessed March 15, 2025. <https://www.mvvainc.com/projects/willow-street-garden>
33. Michael Van Valkenburgh Associates Inc. "Willow Street Garden."
34. Earth Pledge Foundation, *Green Roofs: Ecological Design and Construction* (Atglen, PA: Schiffer Publishing, 2005).
35. Velarde, M. D., Fry, G., & Tveit, M. (2007). Health effects of views of nature and green spaces: A systematic review of controlled and quasi-experimental studies. *Environmental Health Perspectives*, 115(7), 992-998.

36. Souter-Brown, Gayle. *Landscape and urban design for health and well-being: using healing, sensory and therapeutic gardens* (Routledge, 2014), 3
37. Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. Cambridge University Press.
38. Oberndorfer et al., "Green roofs as urban ecosystems: Ecological structures, functions, and services." *BioScience*, 57(10), 823-833.
39. Oberndorfer et al., "Green roofs as urban ecosystems: Ecological structures, functions, and services."
40. Susca, T., Gaffin, S., & Dell'Osso, G. R. (2011). A model for evaluating the environmental performance of green roofs. *Building and Environment*, 46(7), 1473-1481.
41. City of Toronto. (2009). Green Roof Bylaw. Chapter 411, Green Roofs. Retrieved from <https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/green-roofs/green-roof-bylaw/>
42. City of Toronto. (2009). Green Roof Bylaw. Chapter 411, Green Roofs. Retrieved from <https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/green-roofs/green-roof-bylaw/>
43. Dalley, Stephanie. 2013. *The Mystery of the Hanging Garden of Babylon: An Elusive World Wonder Traced*. Oxford: Oxford University Press.
44. Kropp, Laura. 2011. *The Evolution of the Rooftop Garden in America*. M.A. thesis, University of Arizona.
45. Carlson, Jen. 2014. "The Gilded Age Origins of New York City's Rooftop Gardens." *Curbed NY*, July 16, 2014. <https://ny.curbed.com/2014/7/16/10076106/the-gilded-age-origins-of-new-york-citys-rooftop-gardens>
46. Winnipeg Art Gallery. "Rooftop Sculpture Garden." Accessed March 15, 2025. <https://www.wag.ca/exhibitions/rooftop-sculpture-garden/>.
47. Winnipeg Art Gallery. "Rooftop Sculpture Garden."
48. American Society of Landscape Architects. *The ASLA Green Roof: An Experiment in Landscape Architecture*. Washington, DC: ASLA, 2006. *Designing Our Future: Sustainable Landscapes*. Washington, DC: ASLA, 2010.
49. American Society of Landscape Architects. The ASLA Green Roof.
50. University of Ottawa. "Transforming Our Campus: Tabaret & Waller Street Terrace." October 30, 2023. <https://www.uottawa.ca/about-us/news-all/transforming-our-campus-tabaret-waller-street-terrace>.
51. Environment and Climate Change Canada. "Winnipeg Richardson INT'L A, Manitoba: Canadian Climate Normals 1981-2010 Station Data." Accessed February 22, 2026. [https://climate.weather.gc.ca/climate\\_normals/results\\_1981\\_2010\\_e.html](https://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html).
52. Environment and Climate Change Canada, "Canadian Climate Normals."
53. Climate Atlas of Canada, 2022. City of Winnipeg Climate Report. *Prairie Climate Centre*. <https://climateatlas.ca/sites/default/files/cityreports/Winnipeg-EN.pdf>
54. LiveRoof, LiveRoof Standard Module Data Sheet (Spring Lake, MI: LiveRoof, LLC, 2020), 1.

55. LiveRoof, Stormwater Management with LiveRoof Standard Modules (Spring Lake, MI: LiveRoof, LLC, 2021), 2.
56. LiveRoof, LiveRoof Technical Guide: Green Roof Systems (Spring Lake, MI: LiveRoof, LLC, 2021), 4.
57. P. H. Koulivand et al., "Lavender and the Nervous System," *Evidence-Based Complementary and Alternative Medicine* (2013).
58. Bahare Salehi et al., "Thymus Species," *Biomolecules* (2018).
59. Jan Borlinghaus et al., "Allicin," *Molecules* (2014).
60. DesignTurf, "Fairlawn GreenPlay," <https://designturf.ca/our-services/fairlawn-greenplay/>
61. Hester, Randolph T. "Faith." In *The Meaning of Gardens: Idea, Place, and Action*, edited by Mark Francis and Randolph T. Hester, 113-124. Cambridge, MA: MIT Press, 1990.
62. Hester et al., "Faith" 113-124.
63. Hester, Randolph T. "Power." In *The Meaning of Gardens: Idea, Place, and Action*, edited by Mark Francis and Randolph T. Hester, 37-50. Cambridge, MA: MIT Press, 1990.
64. Hester et al., "Power" 37-50.
65. Hester et al., "Power" 37-50.
66. Hester, Randolph T. "Ordering." In *The Meaning of Gardens: Idea, Place, and Action*, edited by Mark Francis and Randolph T. Hester, 51-64. Cambridge, MA: MIT Press, 1990.
67. Hester et al., "Ordering" 51-64.
68. Hester, Randolph T. "Cultural Expression." In *The Meaning of Gardens: Idea, Place, and Action*, edited by Mark Francis and Randolph T. Hester, 65-76. Cambridge, MA: MIT Press, 1990.
69. Hester et al., "Cultural Expression" 65-76.
70. Hester, Randolph T. "Personal Expression." In *The Meaning of Gardens: Idea, Place, and Action*, edited by Mark Francis and Randolph T. Hester, 77-90. Cambridge, MA: MIT Press, 1990.
71. Hester, Randolph T. "Healing." In *The Meaning of Gardens: Idea, Place, and Action*, edited by Mark Francis and Randolph T. Hester, 91-104. Cambridge, MA: MIT Press, 1990.

## references

American Society of Landscape Architects. 2006. *The ASLA Green Roof*.

Borlinghaus, Jan, et al. 2014. "Allicin." *Molecules*.

Carlson, Jen. 2014. "The Gilded Age Origins of Rooftop Gardens." *Curbed NY*.

Chaudhury, Poushali, et al. 2021. "Green Spaces and Immigrant Well-Being." *International Journal of Environmental Research and Public Health* 18.

City of Toronto. 2009. "Green Roof Bylaw."

Dalley, Stephanie. 2013. *The Mystery of the Hanging Garden of Babylon*. Oxford.

Enßle-Reinhardt, Friederike, and Nadja Kabisch. 2020. "Urban Green Spaces for Social Interaction and Health." *Environmental Science & Policy* 109: 36–44.

*Environment and Climate Change Canada*. "Canadian Climate Normals."

Francis, Mark, and Randolph T. Hester Jr., eds. 1990. *The Meaning of Gardens: Idea, Place, and Action*. Cambridge, MA: MIT Press.

Giles-Corti, Billie, et al. 2016. "Creating Healthy Cities: Research and Practice." *Health & Place* 39: 111–17.

Harvey, John H. 1981. *Medieval Gardens*. London: Batsford.

House of Peace. "Our Mission." Accessed March 25, 2025. <https://www.houseofpeace.ca/our-mission>.

House of Peace. "What We Do." Accessed March 25, 2025. <https://www.houseofpeace.ca/what-we-do>.

- Huebert, Susan. 2018. "Gardens as Community Renewal." Winnipeg Free Press, August 7.
- Kabisch, Nadja, Björn Strohbach, and Jennifer Stadler. 2017. "Urban Green Space for Social Interaction and Health." In *Urban Green Infrastructure*, edited by Lars Müller. New York: Routledge.
- Kaplan, Rachel, and Stephen Kaplan. 1989. *The Experience of Nature*. Cambridge: Cambridge University Press.
- Koulivand, P. H., et al. 2013. "Lavender and the Nervous System." *Evidence-Based Complementary and Alternative Medicine*.
- Kropp, Laura. 2011. *The Evolution of the Rooftop Garden in America*.
- Lawson, Laura J. 1995. "The History of Community Gardens in the United States." In *Healing the Earth*, 137–50.
- LiveRoof. 2020–2021. *Technical Guides and Stormwater Data Sheets*.
- Manitoba Association of Newcomer Service Organisations. "Holy Names House of Peace." Accessed March 25, 2025. <https://mansomanitoba.silkstart.com/companies/holy-names-house-of-peace>.
- Marques, Bruno, Jacqueline McIntosh, and Hayley Webber. 2022. "Therapeutic Landscapes: A Natural Weaving of Culture, Health, and Land." *IntechOpen*. <https://doi.org/10.5772/intechopen.99272>.
- Metropolitan Museum of Art. "The Gardens of the Met Cloisters." Accessed March 15, 2025.
- Metropolitan Museum of Art. 2000. *The Cloisters: Medieval Art and Architecture*. New York: Metropolitan Museum of Art.
- Michael Van Valkenburgh Associates. "Willow Street Garden." Accessed March 15, 2025.

Oberndorfer, E., et al. 2007. "Green Roofs as Urban Ecosystems." *BioScience* 57 (10).

Prairie Climate Centre. 2022. *Climate Atlas of Canada*.

Pyykkönen, Siiri, and Päivi Kymäläinen. 2024. "Urban Landscapes as Therapeutic Landscapes: Transforming Conceptions of Care Environments." *Fennia – International Journal of Geography*. <https://doi.org/10.11143/fennia.128634>.

Salehi, Bahare, et al. 2018. "Thymus Species." *Biomolecules*.

Sander-Regier, Renate. 2009. "Bare Roots: Exploring Botanical Agency in the Personal Garden." *Topia: Canadian Journal of Cultural Studies* 21: 63–84. <https://doi.org/10.3138/topia.21.63>.

Seligman, Martin E. P. 2011. *Flourish*. New York: Free Press.

Sillmann, Thais Akemi, Paula Oliveira Marques, and Cláudia Fabrino Machado Mattiuz. 2024. "Therapeutic Gardens: Historical Context, Foundations, and Landscaping." *Ornamental Horticulture* 30. <https://doi.org/10.1590/2447-536x.v30.e242740>.

Souter-Brown, Gayle. 2014. *Landscape and Urban Design for Health and Well-Being*.

Spirn, Anne Whiston. 1984. *The Granite Garden: Urban Nature and Human Design*. New York: Basic Books.

Srivastav, Ambuj. 2022. "Elements of Healing Spaces in Hospitals." *International Journal for Research in Applied Science and Engineering Technology* 10 (3): 2097–2101. <https://doi.org/10.22214/ijraset.2022.41069>.

Stigsdotter, Ulrika K., et al. 2011. "Forest Design for People with Stress-Related Illness." *Journal of Therapeutic Horticulture* 21: 17–29.

- Susca, T., S. Gaffin, and G. Dell’Osso. 2011. “Environmental Performance of Green Roofs.” *Building and Environment*.
- Ulrich, Roger S. 1984. “View through a Window May Influence Recovery from Surgery.” *Science* 224 (4647): 420–21.
- Ulrich, Roger S., Robert F. Simons, Barbara D. Losito, Evelyn Fiorito, Mark A. Miles, and Michael Zelson. 1991. “Stress Recovery during Exposure to Natural and Urban Environments.” *Journal of Environmental Psychology* 11 (3): 201–30.
- University of Ottawa. 2023. “Tabaret & Waller Street Terrace.”
- Velarde, M. D., et al. 2007. “Health Effects of Views of Nature.” *Environmental Health Perspectives*.
- White, Mathew P., et al. 2020. “Spending at Least 120 Minutes a Week in Nature Is Associated with Good Health and Wellbeing.” *Scientific Reports* 9.
- Winnipeg Art Gallery. “Rooftop Sculpture Garden.”

# figure list

## Figure 1

Seno, Marie. 2025. Young Highbush Cranberry Plant in Downtown Winnipeg. Digital photograph.

## Figure 2

Seno, Marie. 2024. House of Peace Logo. Digital image. Source: House of Peace.

## Figure 3

Seno, Marie. 2024. Entrance View of the House of Peace, Winnipeg. Digital photograph.

## Figure 4

Seno, Marie. 2024. Interior Foyer Space at the House of Peace. Digital photograph.

## Figure 5

Seno, Marie. 2025. Countries of Origin of Residents and Staff at the House of Peace. Digital photograph.

## Figure 6

Seno, Marie. 2025. House of Peace Community at their yard. Digital photograph.

## Figure 7

Seno, Marie. 2025. Existing Plant Life within the House of Peace. Digital photograph.

## Figure 8

Seno, Marie. 2025. Archival Drawings of the House of Peace Building. Digital tracing based on original drawings by Green Blankstein Russell Associates, 1963.

## Figure 9

Seno, Marie. 2025. A Mature Tree in the Yard. Digital Photograph.

## Figure 10

Seno, Marie. 2025. Site Plan Situating the House of Peace within Downtown Winnipeg. GIS map. Base data: City of Winnipeg.

## Figure 11

Seno, Marie. 2025. Five-Minute Walking Proximity to Existing Green Spaces. GIS map generated in ArcGIS.

## Figure 12

Seno, Marie. 2025. Conceptual Graphic of Incremental Urban Greening in Winnipeg. Digital collage.

## Figure 13

Seno, Marie. 2025. Birch Trees in Exchange District. Digital photograph.

## Figure 14

Seno, Marie. 2025. Conceptual Design Collage. Digital collage.

## Figure 15

Seno, Marie. 2025. Framed Views within the House of Peace. Digital collage.

## Figure 16

Seno, Marie. 2025. Framed Views within Portland Japanese Garden. Digital collage.

## Figure 17

Seno, Marie. 2025. The House of Peace Living Room. Digital photograph.

## Figure 18

Seno, Marie. 2025. Urban Tree Canopy in Winnipeg. Digital photograph.

## Figure 19

Seno, Marie. 2025. Virginia Creeper as a Vertical Greening Strategy. Digital photograph.

## Figure 20

Seno, Marie. 2025. Urban Tree Foliage. Digital photograph.

## Figure 21

Seno, Marie. 2025. Edmonton Street. Digital photograph.

## Figure 22

Seno, Marie. 2025. Clay Plaque at the House of Peace. Digital photograph.

## Figure 23

Freer and Sackler Galleries. Persian Garden Illustration. Digital image.

## Figure 24

Knox Winnipeg. Rainbow Community Garden. Digital photograph.

## Figure 25

Seno, Marie. 2025. Spirit Park. Digital Image collage.

## Figure 26

HTFC Planning and Design. Millennium Library Park, Winnipeg. Digital image.

## Figure 27

Seno, Marie. 2025. The Cloisters Garden, New York. Digital photograph.

## Figure 28

Michael Van Valkenburgh Associates. Willow Street Garden. Digital image.

## Figure 29

Seno, Marie. 2025. Rooftop Tree Growth in Downtown Winnipeg. Digital photograph.

## Figure 30

Seno, Marie. 2025. Early Green Roof Conceptual Collage. Digital collage.

**Figure 31**

Winnipeg Free Press (Mike Peters, Colleen Zacharias). Residential Green Roof Precedent (Greg Klassen). Digital image.

**Figure 32**

Seno, Marie. 2025. Existing Site Hardscape Conditions. Trace Image.

**Figure 33**

Seno, Marie. 2025. Urban Systems and Ecological Processes Concept Diagram. Digital diagram.

**Figure 34**

Seno, Marie. 2025. Green Roof Vision for Downtown Winnipeg. Digital collage.

**Figure 35**

Olympia Theatre Archives. Rooftop Garden, New York. Historical photograph.

**Figure 36**

Jacob Riis. Ellis Island Rooftop Garden. Historical photograph.

**Figure 37**

Museum of the City of New York. Hotel Astor Rooftop Terrace. Historical photograph.

**Figure 38**

Winnipeg Art Gallery and HTFC. 2025. Winnipeg Art Gallery Rooftop Garden. Digital photographs.

**Figure 39**

HTFC. UMSU Roof Deck, University of Manitoba. Digital image.

**Figure 40**

Michael Van Valkenburgh Associates. ASLA Green Roof. Digital image.

**Figure 41**

Seno, Marie. 2025. Tabaret and Waller Street Terrace. Digital photograph.

**Figure 42**

Seno, Marie. 2025. Vasconcelos Library Botanical Integration. Digital photograph.

**Figure 43**

Seno, Marie. 2025. House of Peace Entrance Drawing. Hand drawing.

**Figure 44**

Seno, Marie. 2025. Downtown Winnipeg Context Diagram. Digital diagram.

**Figure 45**

Seno, Marie. 2025. Aerial Image of Downtown Winnipeg. GIS map.

**Figure 46**

Seno, Marie. 2025. Public Green Spaces in Downtown Winnipeg. GIS map.

**Figure 47**

Seno, Marie. 2025. Average Temperature Chart: Winnipeg and Wind Rose. Digital diagram. Canadian Climate Normals 1991–2020: Winnipeg, Manitoba Data

**Figure 48**

Seno, Marie. 2025. Sun and Shadow Study. Digital diagram.

**Figure 49**

Seno, Marie. 2024. Interior Spaces. Digital tracing based on original drawings by Green Blankstein Russell Associates, 1963.

**Figure 50**

Seno, Marie. 2024. Interior and Exterior Spaces at the House of Peace. Digital photographs.

**Figure 51**

Seno, Marie. 2025. Existing Yard Conditions. Digital diagram.

**Figure 52**

Seno, Marie. 2024. Existing Yard Conditions. Digital photographs.

**Figure 53**

Seno, Marie. 2025. Yard Site Analysis. Digital diagram.

**Figure 54**

Seno, Marie. 2024. Existing Rooftop Conditions. Digital diagram.

**Figure 55**

Seno, Marie. 2025. Existing Rooftop Conditions. Digital photographs.

**Figure 56**

Seno, Marie. 2025. Rooftop Site Analysis. Digital diagram.

**Figure 57**

Green Blankstein Russell Associates. Structural Load Diagrams. Archival drawing.

**Figure 58**

Seno, Marie. 2025. Soft Pastel Design Explorations. Hand drawing.

**Figure 59**

Seno, Marie. 2025. Design Iteration. Hand drawings.

**Figure 60**

Seno, Marie. 2025. Rhino Modelling and Spatial Exploration. Digital model and hand drawings.

**Figure 61**

Seno, Marie. 2025. Design Iteration. Hand drawings.

**Figure 62**

Seno, Marie. 2025. Rooftop Program Diagram. Digital diagram.

**Figure 63**

Seno, Marie. 2025. Rooftop Ideation Plan. Digital diagram.

**Figure 64**

Seno, Marie. 2025. Privacy and Safety Strategies. Digital diagram.

**Figure 65**

Seno, Marie. 2025. Rooftop Material Plan. Digital drawing.

**Figure 66**

Seno, Marie. 2025. Rooftop Dimensions Plan. Digital drawing.

**Figure 67**

Seno, Marie. 2025. Rooftop Section. Digital section.

**Figure 68**

Seno, Marie. 2025. Rooftop Section. Digital section.

**Figure 69**

Seno, Marie. 2025. Meadowview Perspective. Digital rendering.

**Figure 70**

LiveRoof. Section of Modular Green Roof System. Technical diagram.

**Figure 71**

LiveRoof. Modular Green Roof System. Digital Photograph.

**Figure 72**

LiveRoof. Modular Green Roof System in Red River College. Digital photograph.

**Figure 73**

Seno, Marie. 2025. Climbing Plant and Therapeutic Module Mix. Digital diagram.

**Figure 74**

Seno, Marie. 2025. Greenroof Module Mix. Digital diagram.

**Figure 75**

Seno, Marie. 2025. Woodland Rest Perspective. Digital rendering.

**Figure 76**

Seno, Marie. 2025. Yard Conceptual Plan. Digital diagram.

**Figure 77**

Seno, Marie. 2025. Yard Program. Digital diagram.

**Figure 78**

Seno, Marie. 2025. Community Configurations. Digital diagrams.

**Figure 79**

Seno, Marie. 2025. Yard Material Plan. Digital drawing.

**Figure 80**

Seno, Marie. 2025. Yard Dimensions. Digital drawing.

**Figure 81**

Seno, Marie. 2025. Lounge Talks Perspective. Digital rendering.

**Figure 82**

Seno, Marie. 2025. Framed Views from Interior. Digital collage.

**Figure 83**

Seno, Marie. 2025. Latitudinal Yard Section. Digital section.

**Figure 84**

Seno, Marie. 2025. Yard Planting Palette. Digital diagram.

**Figure 85**

Seno, Marie. 2025. Seasonal Fall Section. Digital section.

**Figure 86**

Seno, Marie. 2025. Seasonal Winter and Summer Visualization. Digital rendering.

**Figure 87**

Seno, Marie. 2025. Edge Arbor and Vertical Greening Strategy. Digital diagram.

**Figure 88**

Seno, Marie. 2025. Evening Lighting Strategy. Digital photograph.

**Figure 89**

Seno, Marie. 2025. Evening Dining Visualization. Digital rendering.

**Figure 90**

Seno, Marie. 2025. Seating and Table Dimensions. Digital drawing.

**Figure 91**

Seno, Marie. 2025. Modular Furniture Configurations. Digital diagram.

**Figure 92**

Seno, Marie. 2025. Stormwater Infiltration Diagram. Digital diagram.

**Figure 93**

LiveRoof. Silva Cell and Stormwater Retention System. Technical diagram.

**Figure 94**

Seno, Marie. 2025. Aerial Perspectives of the Proposed Rooftop and Yard. Digital rendering.

