



# ***Celebrating Winter in the Public Realm***

A case study of four winter design  
interventions in Canadian cities

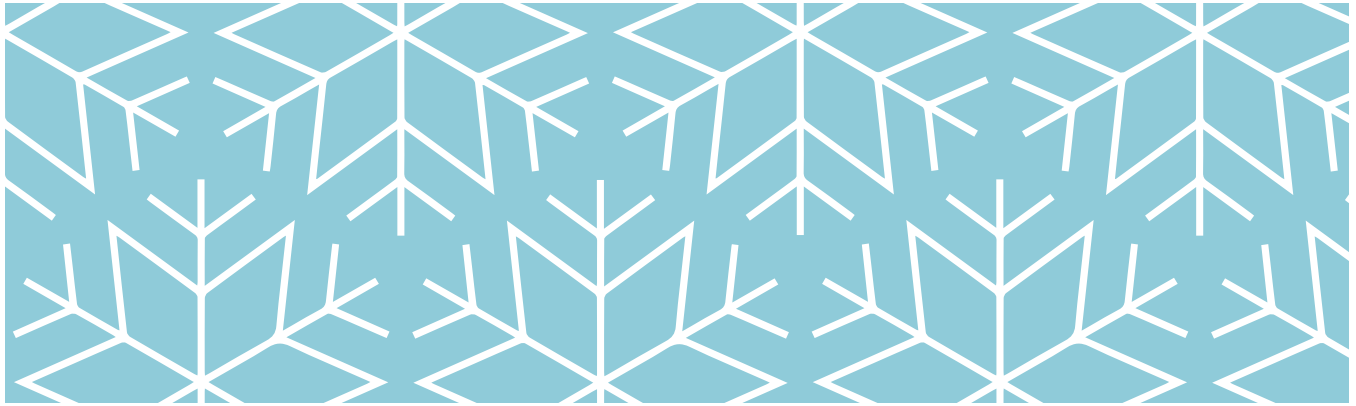
By Josh Paull  
Master of City Planning  
Capstone Report

Department of City Planning  
Faculty of Architecture  
University of Manitoba

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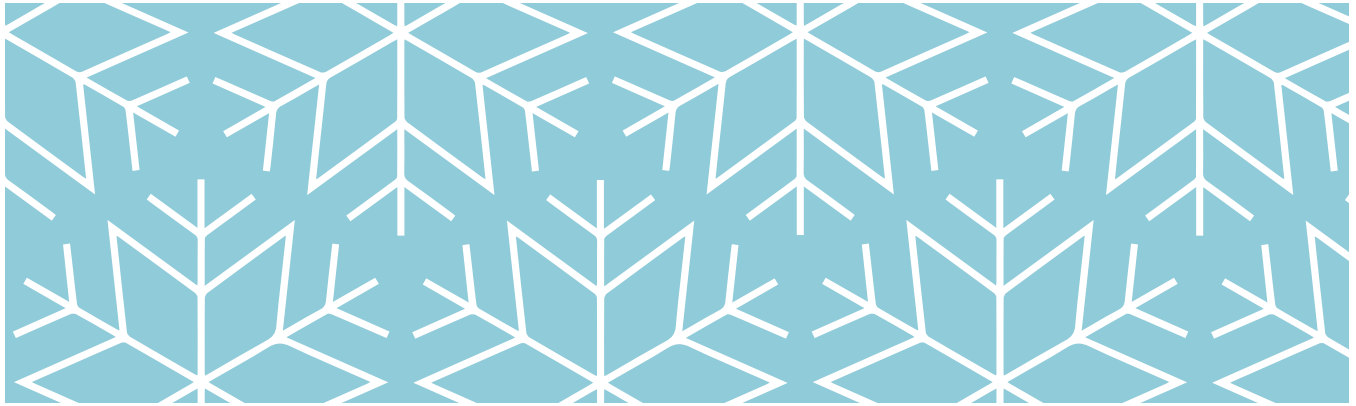
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## Abstract

Humans tend to escape winter by spending more time indoors. Not only does hibernating during the winter impact our health and well-being but it also affects the local economy. That is why the climate-appropriate urban design of public spaces is important for changing our seasonally dormant behaviour. This study examines how cities create more liveable and sustainable public spaces using winter design interventions. A literature review was completed on winter planning and urban design. From this information, eligibility criteria for winter design interventions were developed. A media scan established the precedents to research in depth. Next, qualitative research was completed over six semi-structured interviews with professionals working in the private and non-profit sectors involved in four winter design interventions. Projects in Saskatoon, Winnipeg, Calgary, and Toronto were explored in detail. The project's objectives, key actors involved, challenges, and other supports were explored for all four winter design interventions and supplemented with the local surrounding context. The precedents were reviewed to find common themes. The research found more thoughtful consideration of marginalized social groups is required from winter planning and design; winter interventions can make for great pilot projects; the capacity of an organization often limits the implementation of winter design interventions; and a direct line of communication with the local government allows for straightforward planning. The findings from the common themes were then synthesized into lessons. The outcome of this research includes a list of lessons learned about winter design interventions intended for local governments and organizations interested in improving public spaces during the winter.

Keywords: Winter cities, winter design, winter placemaking, planning, urban design, precedent study



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# 1. *Introduction*

## 1.1. Report Background and Scope

Canadian cities are getting smarter; municipalities and local communities are becoming conscious of the relationship between planning and climate. Cities like Edmonton, Calgary, Beaumont, Saskatoon, and Regina are thinking about climate-oriented policy and design. These municipalities have created documents outlining policies directed toward improving winter living conditions. In contrast, other municipalities such as Winnipeg and Toronto rely on large festivals, events, and winter recreational activities to liven up the cold, dark season. There are various ways to transform a city that only endures winter into a vibrant all-season city. It depends on the climate, the values, and the resources available. The cities mentioned above have one thing in common; they are changing their attitude toward winter by celebrating the colder months of the year.

This occurs when a city embraces itself with a unique winter identity. Intertwining existing winter assets, local history, and community input are ways to achieve this. Areas that are underused for a number of reasons in the public realm are also being activated through placemaking initiatives. Placemaking can be a powerful tool (Dobrota & Armour, 2020) that “facilitates the connection and relationship between people and a place, and strengthens the identity, of a street, neighbourhood, or a city quarter” (Marko & Lisa, 2022, p. 17). Specifically, placemaking “capitalizes on a local community’s assets, inspiration, and potential, and it results in the creation of quality public spaces that contribute to people’s health, happiness, and well-being” (Project for Public Spaces, n.d.). Winter planning and design capitalize on the same philosophy. Winter is seen as the “season of introversion” (Legault, 2023). Therefore, it is important to have spaces and interventions that encourage and support “people’s [outdoor] movements and activities” (Marko & Lisa, 2022, p. 19). Specifically, temporary design is effective at increasing social and physical activities (Paukaeva et al., 2021).

The well-known architect, Jan Gehl, applied a human-centred approach to urban design. He



stated, “[l]ife between buildings comprises the entire spectrum of activities, which combine to make communal spaces in cities and residential areas meaningful and attractive (Gehl, 2011, p. 14). Gehl (2011) argued that outdoor activity is an indicator of the quality of public spaces. People spend more time in high-quality spaces. Furthermore, the activities are influenced by the exterior conditions. This means weather impacts the level of outdoor activities, especially here in Canada. Gehl (2011) confirmed urban design requires climate-sensitive considerations (Davies, 2015; Pressman, 1995; Stout et al., 2018). Therefore, it is advantageous for urban design to consider climate conditions because it creates spaces people want to work, live, and play in (WinterCity Edmonton, n.d.).

## 1.2. Purpose of Research

I attended the 2023 Winter Cities – Shake-Up in Winnipeg, Manitoba. During the conference, I attended a lecture on Montreal’s Winter Stations presented by Olivier Legault. A project planned by the City of Montreal during the 2021 winter. Legault said one resident of Montreal questioned how the sculptures and art installations would help them run errands or go to the grocery store during a blizzard. This was a good point. How could a four-sided fluorescent spikey sculpture be useful during cold temperatures or snowy conditions? After much thought and research, I concluded there is a difference between winter urban design and winter design interventions. The latter includes urban design practices that are applied to the built form and infrastructure of cities and exist 365 days a year. And winter design interventions can be any project that adds meaning and function to an under-utilized space in an urban area and increases an individual’s time spent outdoors during the winter months. Winter design interventions are a wide range of temporary applications while winter urban design is usually permanent and exists all year long.

Previous research by Steve Nuttall (2022) studied multiple winter city strategies and suggested steps Winnipeg can take to create a winter city strategy. My research was inspired by Steve’s work and my curiosity about winter planning and design. My fascination for winter started once I moved to Winnipeg, Manitoba. Furthermore, the COVID-19 pandemic revealed the importance of outdoor public spaces and recreational spaces during the winter (Blonder, 2022). It is clear there are health, social, and economic benefits to good winter planning and design (Dialog, 2022; WinterCity Edmonton, 2012). Maybe this capstone will snowball popularizing winter planning and design as a more common research topic.

The purpose of this research is to examine physical projects that address the challenges of winter through creative solutions. This capstone examines the connection between winter city planning theory and winter design interventions across multiple Canadian cities. The focus of this study is to understand more about the objectives of these projects; the key actors involved; some challenges faced; and the support required to make them a reality.

# 1.3. Canadian Winter City Planning Approaches

This research has identified three types of winter planning Canadian cities carry out: a winter city strategy, large one-off events such as festivals and Christmas markets, and outdoor winter activities. The first type of winter planning is creating a winter city strategy. In general, the goal of these plans is to make people fall in love with winter. Most of these documents include language such as “love”, “embrace”, and “celebrate”. Winter city strategies typically consist of pillars or principles followed by objectives and actions. Common pillars include winter economy, winter urban design, winter culture, and winter life. These strategies can take from three to five years to create because of their collaborative and detailed approach involving engagement with City officials and workers, residents, community organizations, cultural organizations, and businesses. A comprehensive document promoting a city’s unique winter identity and direction to tackle the adverse effects of winter is created. Cities with winter strategies leverage their climate as an asset to create social and economic benefits while defining their overall identity. Canadian cities will also plan large one-off events designed to “celebrate the season” (Davies, 2015, p. 302). Examples of these include Toronto’s Christmas market, Winterlude in Ottawa, Montreal en Lumiere, and Festival du Voyageur in Winnipeg. The final type of planning in winter cities is recreational activities. Activities can include cross-country skiing, snowshoeing, tobogganing, ice skating routes, winter walking paths, parks, and fire pits. Constant and proper maintenance is necessary for these activities. They also tend to be city-wide and accessible to many. The cities discussed in this research vary in winter planning approaches. A winter city strategy should support the balance of large independent events with smaller, regularly planned activities (Dialog, 2022). Ultimately, consistent winter planning and programming have proven to increase engagement during the winter (WinterCity Edmonton, 2012). Figure 1 describes the three levels of winter planning Canadian cities have. Theoretically, the more levels a city has, the more comprehensive its winter planning is.

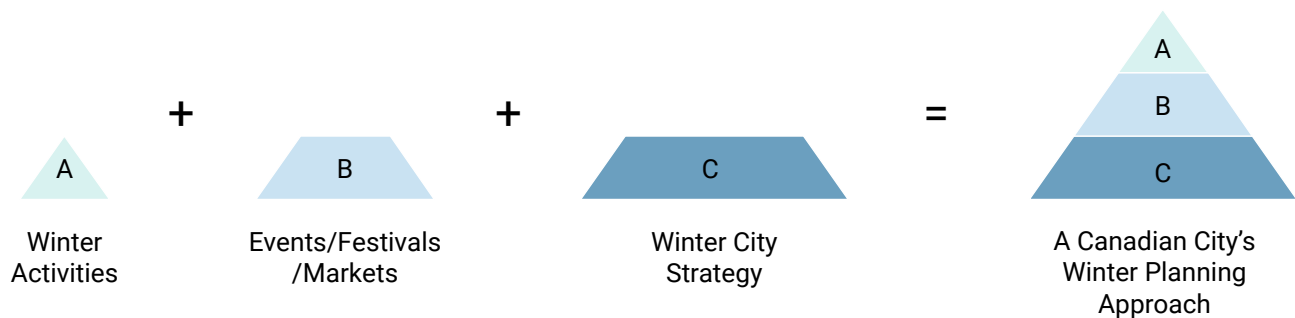


Figure 1: Canadian cities winter planning approach

## 1.4. Primary Research Questions

This research seeks to answer three questions:

1. What winter design interventions have cities implemented in downtown areas?
2. Have policies, regulations, pilot projects, or initiatives supported the creation of these winter design interventions?
3. What are some lessons learned from how cities have carried out winter design interventions?

## 1.5. Limitations and Biases

At the time of writing this report, it will be my second winter in Winnipeg, Manitoba. I grew up experiencing the wet, milder winters of southern Ontario where the snow turns grey soon after it falls. What I experienced in Manitoba was the opposite. It snows in November and remains dry and frigid until April. Not to mention, my first winter in Winnipeg was not a normal one.

During the 2021-2022 winter, Winnipeg's winter recreational programming was still affected by COVID-19. Activities and programs that usually ran during the winter were postponed. Two popular attractions at the Forks, RAW:almond and Corkicurl were absent from the outdoor programming in 2021-2022. The absence of attractions was perceived as a lack of winter activities. On top of that, Winnipeg got 215 centimetres of snowfall between November 2021 and April 2022, which is apparently an unprecedented amount of snow. Fortunately, those two factors did not dull my attitude toward winter. My enthusiasm for winter is still juvenile but I am hopeful it will not melt away in time.

This research focused on projects in cities located from Ontario to Alberta because I do not speak French. This was a shortfall as cities like Montreal and Quebec City are known for their severe winters and creative winter strategies.

Interviewing more than one key actor from each project and conducting follow-up interviews would have helped flesh out more information. Even though the research questions did not focus on evaluating the success of each intervention, this would have been invaluable. There were a few variables that limited this. One reason was because it took longer than expected to find, contact, and set up interviews. Another reason was when the interventions were implemented. One project was created the previous year while others were just being implemented around the time of the interviews. Finally, multiple deadlines and participants' schedules played a role in the timeline of the research and ultimately limited my ability to complete follow-up interviews on the projects' success.

## 1.6. Report Overview

This report contains six chapters. The first chapter is the introduction. The second is the literature review which synthesizes the existing research on winter planning and urban design. The third chapter discusses the research methods selected to answer the three questions listed above and how the research was executed. The fourth chapter describes the findings. This chapter is organized by intervention. The findings from each intervention are presented individually as precedents. The fifth chapter discusses new findings and connections to the literature. Finally, the sixth chapter summarizes the major findings, lessons learned, and areas of future research.



## ***2. Literature Review***

*It would appear most appropriate that we consider managing and designing landscapes, buildings and the open spaces between them, in a way which emphasizes rather than minimizes the variation of seasons, in order to create multi-season cities – which accommodate and celebrate life in all seasons. (Pressman, 1995, p. 73)*

There is extensive knowledge about design theory and practice in warm climates and very little in colder regions that endure three to four seasons. Fortunately, cities are finally taking their climates seriously and implementing interventions, strategies, and policies to promote liveability and sustainability during the winter. Understanding human behaviour and design principles are both imperative when creating liveable and sustainable cities. However, these behaviours and principles are different depending on the season and more research is required. This chapter examines the existing research on winter's impact on humans and winter urban design theory literature to date.

The chapter is divided into five parts. The first section discusses human well-being during winter. It highlights our behaviour and winter's effects on human health. The second section introduces the Winter City movement. This provides context on past climate-related planning and the origins of the movement. The third section examines the foundational ideas of the Winter City movement. These winter design principles are grouped into theoretical and contemporary principles. The fourth section discusses the relationship between winter design and winter city design strategies. The fifth section highlights gaps and future considerations.

### **2.1. Well-Being during Winter**

During the winter, individuals living in Canadian cities experience a change in behaviour. These changes can impact our quality of life and well-being. Physical and mental health play a role in determining our well-being during the winter. Collymore (1982), Pressman et al. (1998), and Davies (2015) agreed that humans are more likely to isolate themselves from one another during colder conditions and this can have negative effects on mental health. Chapman et al. (2019), Chapman &



Larsson (2021), Finlay (2018), and Garvin et al. (2012) stated that climactic conditions may impact our physical health during winter. While the winter city publications all agree climate affects our well-being, others suggest otherwise.

## 2.1.1. Mental Health

Several social science and psychology journals have published articles expressing the different influences weather conditions have on our health. In general, the perception that weather affects our well-being is still up for debate. Beecher et al. (2016) stated weather influences our mental well-being. Another study revealed people are differently impacted by the weather (Denissen et al., 2008). Thus, some people are more sensitive to changing weather conditions. However, a study in Tromsø, Norway claimed people do not suffer more mental distress during the winter than they do in the summer (Johnsen et al., 2012).

Nevertheless, much of the winter city literature agreed people living in four-season cities are prone to mental health issues. Individuals can suffer from stress and isolation because extreme temperatures and precipitation force them to stay inside (Davies, 2015; Finlay, 2018; Pressman, 1995). Persinger (as cited in Pressman, 1995) stated humans also are subject to psychological stress due to the lack of positive stimuli in surrounding environments. The most well-known condition that occurs during the winter is Seasonal Affective Disorder (SAD). SAD is “a type of depression that occurs during the same season each year” and is caused by the reduction of exposure to sunlight during the winter (Seasonal Affective Disorder SAD, n.d.).

Recently, a study suggested that our psychological health is more important than we thought. Leibowitz and Vittersø (2020) inferred that mindset plays a role in seasonal well-being when they concluded, “one’s psychological interpretation of the weather” may influence wintertime well-being and life satisfaction (p. 37). The study also found that people living in northern Norway who experience longer periods of darkness, still have a positive mindset about winter. The authors are aware that geography and culture may play a role in the outcome of this study and societal differences between winter cities could produce different results (Leibowitz & Vittersø, 2020). This is the first research that explores the relationship between our mindset and attitudes to the winter climate, so more research is required. The result of this study proves that winter well-being may be more complex than we thought.

## 2.1.2. Physical Health

The literature also reported that an individual’s well-being is altered by the decline in physical activity during the winter months. Winter conditions such as uneven surfaces covered with snow, ice, or slush reduce usability. Older adults (Clarke et al., 2015; Hjorthol, 2013) and individuals with mobility-related disabilities (Lindsay & Yantzi, 2014) are some of the most vulnerable and most susceptible to reduced physical activity in the winter. Furthermore, cities struggle to clear

sidewalks and bike lanes to the same level of accessibility as in summer conditions (Chapman et al., 2019; Chapman & Larsson, 2021; Finlay, 2018; Garvin et al., 2012). Proper snow management is an example of how cities can counter negative physical health effects faced by all during winter.

Winter well-being and quality of life are affected by our physical and mental health. These are often linked to one another; a lack of physical or social activities can lead to social isolation (Lindsay & Yantzi, 2014). Pressman & Zepic (1986) stated planners and designers can create healthier winter cities by fusing disciplines such as behavioural science, psychology, climatology, and urban planning. Interdisciplinary studies can guide policies to build cities with higher density in proximity to a mix of uses. As well, proper snow management can support social interactions, boosting mental and physical health. Thus, fostering characteristics that promote liveability in any season.

## 2.2. The Winter City Movement

The Winter City movement became a trend in the late 1980s to repair the existing conditions the planning and urban design practices of the mid-20th century created in multi-season settlements (Davies, 2015). The literature stated two main causes for this movement: suburbanization (Davies, 2015; Pressman, 1995; Pressman & Zepic, 1986; Stout et al., 2018) and access to cheap fossil fuels (Davies, 2015; Dunin-Woyseth, 1990; Pihlak, 1994). The first reason was land use segregation, a product of suburbanization which encouraged private vehicles and made modes of active transportation unappealing and difficult. The second reason for this movement was because the access to temperature-controlled interior environments allowed people to be indoors all winter. As more people isolated indoors, the outdoor environments around them started to degrade (Pihlak, 1994). Pihlak also argued that suburbanization and the reliance on private vehicles weakened “people-oriented outdoor spaces” (Pihlak, 1994, p. 83). More focus went into vehicle-oriented designs while pedestrian-friendly spaces were ignored. Pressman (1988) observed the urban planning of cities did not consider the harsh climactic conditions. This resulted in people “avoid[ing]...rather than mak[ing] the best use” of winter’s unique characteristics (p. 23). Davies (2015) agreed with Pressman (1988) and stated that the built environments of multi-season cities were “less sustainable and more placeless” (p. 278). One of the main goals of the Winter City movement was to improve the quality of life and well-being of inhabitants during the winter season by improving the urban conditions and designs.

### 2.2.1. Winter City vs. winter city

The distinction between a Winter City and a winter city has been clarified in the literature. Davies (2015) and Stout et al. (2018) have differentiated between these two terms. Both papers credited Norman Pressman for creating a foundational definition of a winter city. Pressman said,

"[a] winter city is one in which the average maximum daytime temperature is equal to or less than 32 degrees F. (zero Celsius) for a period of at least two months or longer" (Pressman, 1988, p. 3). More recently, Davies (2015) argued some southern cities that encounter rainy winters could experience similar difficulties such as constant cloud cover. Stout et al. (2018, p.3) simplified the definition to any urban centre that experiences climactic variation including "long, cold, snowy, and/or dark periods". After studying the literature, there is consensus about the definition of a Winter City (Davies, 2015; Pressman, 1995; Stout et al., 2018). As stated by Davies (2015),

*[T]he Winter City approach attempts to reduce winter's negative consequences and to emphasize its positive features and opportunities, so as to create more sustainable and liveable settlements in both the structures and the life of the people living in these centres. (p. 278)*

The level of sustainability and liveability in a city is based on climate-sensitive urban design principles (Stout et al., 2018) and the lifestyle of its inhabitants (Davies, 2015). These two elements should consider the specific climate conditions of the geographical location. This echoed what Pressman advocated for (Pressman, 1995, 1996; Pressman et al., 1988; Pressman & Zepic, 1986). Stout et al. (2018) simplified the definition of a Winter City to any city that sets out to create more liveable winters. But both of these interpretations do not define the term "liveable" or explain the target audience.

Winter urban design is often referred to as climate-sensitive design in literature. Winter urban design is more commonly used in municipal plans and strategies while climate-sensitive design can consider cold or hot extremes. Stout et al. (2018) defined the latter as design that "considers the impacts of the building form and leverages design to create welcoming microclimates" (p. 5). It can be used in the context of both extreme climate environments.

## 2.3. Principles of Winter Design

### 2.3.1. Theoretical Winter Design Principles

*"Northern cities which must contend with lengthy winters have to seek out solutions and development strategies based on their own intrinsic values and expressions of collective existence" (Pressman, 1995)*

The existing literature credited two main objectives for creating liveable and sustainable settlements: creating comfort for inhabitants and reinforcing an identity of a city. Erskine (as cited in Collymore, 1982) and Pressman (1996) both developed foundational principles in the winter planning literature related to winter comfort and identity.

Erskine (as cited in Collymore, 1982), Pressman (1996), and most recently, Davies (2015) all developed principles and considerations that respond to the winter climate. Their principles all propose environmental, social, and physical factors that could create more comfortable cities in

the winter. Table 1 compares the three authors' suggestions. Erskine's Grammar of High Latitudes drew inspiration from work in Arctic and sub-Arctic regions. His grammar not only considered how architectural features could solve the problems of the harsh, winter climate but also issues of the warmer, summer months. In 1996, Pressman produced his Winter Grammar. His list provided a North American planning lens to winter design. Pressman's list included compact urban form, the strategic orientation of footpaths, streets, and dwellings, and enclosed residential courtyards (Pressman, 1996, p. 523). Some of Pressman's grammar became foundational and repeated in later works on this topic. Many of his ideas are used in contemporary literature because of practicality and common sense, while ideas regarding skywalks or underground tunnels have been disregarded. Some have rejected protected walkways because of the negative consequence they can create (Byers, 1998; Davies, 2015). More recently, Davies (2015) offered a new set of winter city design considerations at the settlement and building scale. Table 1 shows the similarities between Erskine (as cited in Collymore, 1982), Pressman (1996), and Davies (2015).

**Table 1:** Three different winter grammars

<b>Grammar of High Latitudes Erskine (as cited in Collymore, 1982)</b>	<b>Winter Grammar Pressman (1996)</b>	<b>Winter City Designs - Settlement Scale Davies (2015)</b>
The cold	Compact urban form	Compactness and density
Warming periods	Strategic orientation of footpaths, streets, and dwellings	Improving and maintaining circulation patterns (pedestrian and vehicle)
Snow	Enclosed residential courtyards	Enclosed residential courtyards
Ground frost	Use of climate simulation modelling	Windbreaks and wind tunnel effect
Light	Practice of energy-efficient principles	Multi-functional buildings
Wind	Providing a range of community services (indoor and outdoor)	Addition and redesign of public spaces and adjusting the natural environment
Air drainage	Plan for total or partial climate protection	Covered areas and interconnected buildings at another grade (skywalk or underground path systems)
Sun and heat radiation	Understand the social determinants of design	Encouraging public transit
Fauna	Develop "Aesthetic of the North"	Heated pavements and road design
Vegetation	Test innovative ideas	Reduce cold severity and snow accumulation
Isolation		

Davies and Pressman's lists are very similar, but Davies (2015) goes into detail as he lists design elements such as heated pavements and winter road design. But one element Pressman suggested that Davies did not include was understanding social determinants of design. Understanding community goals and social networks produce context-specific, user-responsive designs (Pressman, 1996). Much of the literature on winter city design is from either Erskine or Pressman and the late 20th century. Until recently, there has been a revival of interest in this topic and a second wave of research regarding winter cities is currently happening.

### 2.3.2. Contemporary Winter Design Principles

Contemporary literature on winter cities explores how climactic conditions and urban design in public spaces affect human behaviour. The themes identified in the literature that affected public spaces were usability, perception of a spatial area, sunlight exposure, and wind speeds. David Chapman (2018), an architect who has researched winter soft mobility in Sweden and Canada stated that "changes in the urban grain, the public realm and different climactic conditions alter how a space is understood and used" (p. 56-57). Barriers that affect our perceptions of the public realm are surfaces covered with snow, ice, or slush (Chapman et al., 2019; Larsson & Chapman, 2020). Li and Fernie (2010) stated that pedestrian safety is more at risk during the winter. This study, which looked at pedestrian walking behaviour at a two-stage road crossing in Toronto, Ontario, found pedestrians were more at risk when they ignored traffic signals during unpleasant weather conditions. Kusaka et al. (2018) studied the sitting behaviour of individuals in six public spaces throughout Sapporo. They determined three barriers to using public space in the winter are a drop in temperature, lack of sunlight, and high wind speeds. Most recently, Paukaeva et al. (2021) claimed that temporary urban design in Khabarovsk, Russia encouraged more people to socialize with strangers and engage in the public space. They claimed that by considering both permanent and temporary interventions, urban design can "accommodate seasonal uses in cities with harsh climates" (Paukaeva et al., 2021, p. 11). These studies have led to modern winter design principles that are applied to winter cities all over the world.

The contemporary principles of winter planning and design refer to the objective of the Winter City movement and focus on improving the quality of life of humans. Contemporary principles discussed in the following sections prioritize activating spaces in the public realm. Before examining current winter design principles, Pressman's interventions of northern urban design strategies must be considered. Table 2 presents his list from 1993, which had five categories for interventions in northern urban design strategies (as cited in Pressman, 1995).

Davies would later separate these winter design principles into two categories: design changes to improve the quality of life and more opportunities for social activities (Davies, 2015).



**Table 2:** Pressman's interventions in northern urban design strategies

Visual Environment	Human Comfort	Protective Urban Devices	Recreation and Leisure	Transportation
Ice as art	Micro-climactic studies more frequently	Above-grade protection	Parks, open space systems and waterfronts	Reducing the necessity to walk
Use of bold colours	Improved ergonomic design	Below-grade protection	Winter safari and wildlife areas	Emphasis on snow removal
Illumination for the 'dark' periods	Landscaping concepts to reduce discomfort	At-grade protection	Ski-trail networks	Improved public transit
Urban furniture	Ecochart use will increase	Sidewalk heating	Winter-oriented outdoor amenities	
Civic embellishment		Multi-use buildings	Carnivals and festivals	
		Retractable roofs	Winter-indoor gardens	
		Pedestrian/vehicle-free zones		

## 2.4. Contemporary Winter Urban Design Strategies

### 2.4.1. Design Changes to Improve the Quality of Life

Contributors to the literature have discussed principles that improve environmental comfort at different city scales to enhance the quality of life. Three principles for improving human comfort in public spaces during the winter are maximizing solar access, reducing wind, and snow management (Chapman, 2018; Ebrahimabadi, 2015; Kusaka et al., 2018; Pihlak, 1994; Pressman, 1995). These are directly related to Pressman's second category, Human Comfort and can be applied at multiple scales and emphasized by policies and guidelines. Maximizing solar access, reducing winds, and snow management are all crucial to the built form of winter cities and are usually included in winter urban design guidelines. Additionally, the use of bright colours and creative lighting are two common principles outlined in winter city strategies (City of Calgary, 2022; City of Regina, 2021; City of Saskatoon, 2020; Dialog, 2022; WinterCity Edmonton, n.d.).

### 2.4.2. More Opportunities for Social Activities

The other category of Davies (2015) was to create more opportunities for social interactions. Contemporary winter urban design examples include ceremonies, festivals, and markets inspired by the winter season. Spaces in cities can have positive impressions and spirits when unique qualities of nature and winter are incorporated. Ceremonies based on local traditions, general

winter festivals that celebrated the season, outdoor markets, winter recreational activities, and competitive games take advantage of the unique local characteristics and climate of a city (Davies, 2015). These activities have the potential to encourage socialization between strangers and stimulate local economies.

The principles and strategies listed above require planners, designers, policymakers, and residents to acknowledge the differences between summer and winter. They require separate policies, design, and management practices. (Chapman et al., 2019; Chapman & Larsson, 2021; Pressman & Zepic, 1986). The good news is cities are beginning to embrace their climates and create strategies to overcome the negative effects of winter. The last section will discuss the limitations and future considerations of winter city literature.

## 2.5. Limitations and Future Considerations

The gaps and limitations in the literature regarding winter cities are not surprising. Winter is only experienced by some countries, and these can range in climatic conditions. So, winter is not a concern for all cities. Not only is climactic variation not universal but individuals living in the same city may experience winter differently.

### 2.5.1. Exclusivity

Contrary to the overall goal of the Winter City movement, strategies and interventions have a degree of exclusivity. Stout et al. (2018) expressed that, “not all urban residents are equally well placed to enjoy winter” (p. 8). The connection between gender, class, ethnicity, sexual orientation, race, and winter leaves a large gap in the literature. The existing winter literature does not consider how different social groups experience winter. Interestingly, Erskine (as cited in Collymore, 1982) was the first author who made a statement of “racial, cultural, and class barriers” that can arise from a lack of diverse social groups (p. 30). When thinking about the audience of most winter design interventions, it can be clear that they favour some and are impractical to others. In the book *Warming Huts: a decade + of art and architecture of ice*, Niigaan Sinclair argued that the warming huts in Winnipeg are not for every when he stated they “celebrate the haves and leave the have-nots out in the cold” (“Welcome to Nistawayak,” 2021, p. 12). The group Women in Urbanism also stated that snow clearance is not gender-neutral and prioritizes men over women. The winter planning and design literature is not focused on marginalized and at-risk groups who struggle for basic needs during extreme conditions. This omission from the literature is not a surprise given the limited number of published works and lack of diverse authors. Most of the core contributors to the literature on winter cities have been white men in academia.

## 2.5.2. Lack of Evaluation of Outcomes

Stout et al. (2018) is also critical of the published material stating it is “poorly connected, with a lack of clear, agreed-upon understandings of key concepts, including the Winter City movement itself” (p. 9). While there is evidence that the literature is poorly connected, there seems to be a shared understanding of the Winter City movement since 2018. Moreover, there is a poor connection between theory and practice. The literature is rich with examples of winter urban design (Chapman et al., 2018; Chapman & Larsson, 2021; Collymore, 1982; Davies, 2015; Kusaka et al., 2018; McDonald-Yale & Birchall, 2021; Paukaeva et al., 2021; Pihlak, 1994; Pressman, 1995, 1996; Pressman et al., 1988), but there is minimal evaluation of the outcomes for winter projects or policies.

## 2.5.3. Climate Change

The foundational literature was written during a period when climate change was not a threat. There was little concern about climate change resulting in an omission throughout the literature. Only recently has climate change been included in winter city research. Four sources mention climate change all to varying degrees. Chapman et al. (2018) and Larsson and Chapman (2020) suggested that current winter urban design guidelines should also account for rainy conditions and slush. As winter temperatures are increasing, constant freezing periods are less frequent. Chapman et al. (2018) stated that slushy conditions could be a barrier to outdoor activities. Nuttall (2022) stressed the need to diversify Winnipeg’s winter recreation strategy due to the overreliance on the river trail. Unreliable freezing patterns will affect the major winter attractions and amenities in the prairie city. Planners and designers need to consider the effects climate change has on our cities and readjust their strategies and interventions.

## 2.6. Summary

A comprehensive understanding of our experience in winter is required. This means more research, specifically, interdisciplinary research. The inclusion of different social groups and an adjustment in winter attitude will create a holistic understanding and allow cities to easily apply theory in their plans and strategies. Only then will we achieve liveable and sustainable Winter Cities.



## ***3. Research Methods***

Qualitative research methods were used to collect data and answer the research questions. This chapter articulates the research process. Collecting different perspectives was important to gain a better understanding of how winter design interventions are developed and implemented. A precedent study was selected to gather data on multiple winter design interventions across Canada.

### **3.1. Precedent Study Approach**

Multiple precedents were studied and considered to answer the research questions. Arab & Mullion (2022) define precedents as examples or best practices that “designate items of knowledge associated with previous achievements” (p.22). The lack of measurable outcomes of the precedents selected in this capstone meant there was unique knowledge worth researching. Arab & Mullion (2022) also stated precedent studies pay close attention to the context in which the intervention happened which is significant given each of the four cities has a different winter planning approach. The contexts of each project were taken into consideration. Multiple precedents studied can discover related and more convincing findings (Gustafsson, 2017; Yin, 2014). The multiple precedents were studied to collect open-ended findings that did not present a hard solution. This decision was intentional and focused on learning about the process of creating winter design interventions. Qualitative data gathered by semi-structured interviews are discussed in the following chapters.

## 3.2. Precedent Selection and Process

### 3.2.1. Eligibility Criteria for Winter Urban Design Intervention

Based on the literature review, I developed eligibility criteria to determine appropriate projects. Table 3 shows the four-criterion used. The first criterion was the project must encourage outdoor activity. One of the main concerns that led to the Winter City movement was isolation and hibernation during the cold months. The ideal interventions should give people a reason to leave the comfort of indoors and explore the outdoors . This criterion assumed that people have the privilege to move from indoors to outdoors and back to indoors after. The next criterion required the project to be a physical project or infrastructure. Learning lessons about physical projects across Canada offered a different perspective on winter city planning compared to Nuttall's (2022) research. Furthermore, the projects explored must be temporary in design. This means the winter programming of the space is different during the summer or non-existent. Adams (2015) suggests that temporary design is an effective strategy for creating engaging and social public spaces. This is especially important when winter cities have multiple climactic characteristics during the year such as Calgary. The use of temporary projects in cities has also been associated with urban redevelopment and revitalization strategies (de Smet, 2013; Mariko, 2018). The final criterion is all projects must be in urban cores. The compact form and the proximity to a variety of land uses offer more individuals to benefit from the interventions.

### 3.2.2. Media Scan

Before each project was evaluated, they first had to be selected. Electronic publications of design magazines were scanned using BrowZine Library. Access was provided by the University of Manitoba through the portal on the library website. The publications were Landscapes | Paysage Magazine, Places Journal, Landscape and Urban Planning, Metropolis, Buildings & Landscapes, and Canadian Architect. The publications' topics ranged from urban planning, landscape architecture, architecture, and urban design. They were selected because the articles published showcase a level of design excellence and problem-solving of contemporary challenges at various scales of a city.

Once an exhaustive search of the publications was done, a broader search was completed. To do this, I used Google to find articles on recently completed winter design projects. Key terms included "public spaces", "temporary spaces", "urban design", "projects urban design", "city design", "landscape architecture", and "architecture". The word "winter" was paired with each search term making sure that the results included a winter context. The names of Canadian cities were also included in the Google search to gather local information regarding the specific city. Table 3 lists the nine winter design interventions I found and reached out to. The projects highlighted were the

only ones I got a response from and agreed to participate.

**Table 3:** Projects requested for interview

Criteria	Outdoor Activity	Physical Project or Infrastructure	Temporary Design	Located in Urban Core
<b>Project 1: High Park YYC (Calgary, Alberta)</b>	Public space, fire pits	Park on top of parkade	Winter booking from November 1st - March 31st	Downtown Calgary
<b>Project 2: Eh Frame (Saskatoon, Saskatchewan)</b>	Outdoor community social space	Wood structure with chairs and tables	Installed February 4th, 2022 - lasted only one season	Located in the Riversdale neighbourhood
<b>Project 3: The Bentway (Toronto, Ontario)</b>	Skating Loop and Winter Programming	220-metre figure-eight skate trail	Skating trail is open from December 17, 2022 – February 20, 2023	Located in downtown Toronto
<b>Project 4: ChairATable (Edmonton, Alberta)</b>	Outdoor chair and table	Seating area for socialization	Temporary during the day, removed at night	Outside Old Strathcona Farmer's Market
<b>Project 5: Winter Wanderland (Winnipeg, Manitoba)</b>	Outdoor linear sculpture trail, fat tire biking	Ice sculptures	February 11, 2023 – February 20, 2023 (official programming)	Located in downtown Winnipeg
<b>Project 6: Chinook-ery (Calgary, Alberta)</b>	Outdoor gathering space	Modular structures for seating, gathering, and playing	February 1, 2023 – February 26, 2023	Located in the Beltline neighbourhood
<b>Project 7: Evergreen Brick Works Skating Rink (Toronto, Ontario)</b>	Outdoor Skating	Skating rink	Only open during winter season (December to March)	Don Valley River in Toronto
<b>Project 8: Helix Path at Hugo Docks (Winnipeg, Manitoba)</b>	Outdoor living room and activity space	Lanterns and movable chairs, donated art	Unknown	Located on Assiniboine River
<b>Project 9: Wolseley Winter Wonderland (Winnipeg, Manitoba)</b>	Skating and social activity areas	Skating rink, river trail, seating, and pop-up installations	Unknown	Located on Assiniboine River

## 3.3. Data Collection

### 3.3.1. Semi-Structured Interviews

Once the interventions were identified, key informant interviews were selected to gather first-hand knowledge from individuals who had experience implementing winter design interventions. Specifically, semi-structured interviews were used. This method was selected because of its ability to collect valuable information using a mix of open, closed-ended, and probing questions (Adams, 2015). These interviews were casual in nature. Having a conversation with individual participants led to a more comfortable conversation. It was also feasible with a smaller sample size because transcribing and coding each interview is time-consuming (Adams, 2015). A total of six individuals were interviewed. The backgrounds of the participants included planning, architecture, landscape architecture, and representatives from community organizations. The participants were recruited using publicly available emails. When a direct email could not be found, I would call the publicly available number of their organization to receive their contact information. Before each interview, I would familiarize myself with the related project. This was done so I could tailor my questions and have a better understanding of the local context. The interviews were conducted over Zoom and lasted from 30-45 minutes. See Appendix A for a copy of the interview questions. During the interviews, only audio was recorded. I relied on Zoom to create an audio transcription used for the analysis section of this project.

## 3.4. Findings and Analysis

As mentioned in the limitations section, this study examined the process of how four winter design interventions were created, as opposed to evaluating each project. The data was qualitative and so I used a qualitative approach to analyzing the data. I used a mixture of deductive and inductive approaches with thematic analysis to explore the codes that were related to the data (Alhojailan, 2012). This method allowed for each interview to be interpreted into predetermined codes.

My interview questions were grouped into four codes: objectives, partnerships, challenges, and policies, initiative, and other supports. The transcripts from each interview were then uploaded to the qualitative analysis software, Quirkos. Each interview was then coded based on the four overarching initial themes. Following this, each theme was then categorized into sub-codes from the findings across all four projects. These sub-codes were used to identify commonalities which could be lessons learned for future winter design interventions. The main themes and sub-codes can be found in the summary of findings section of Chapter 4.

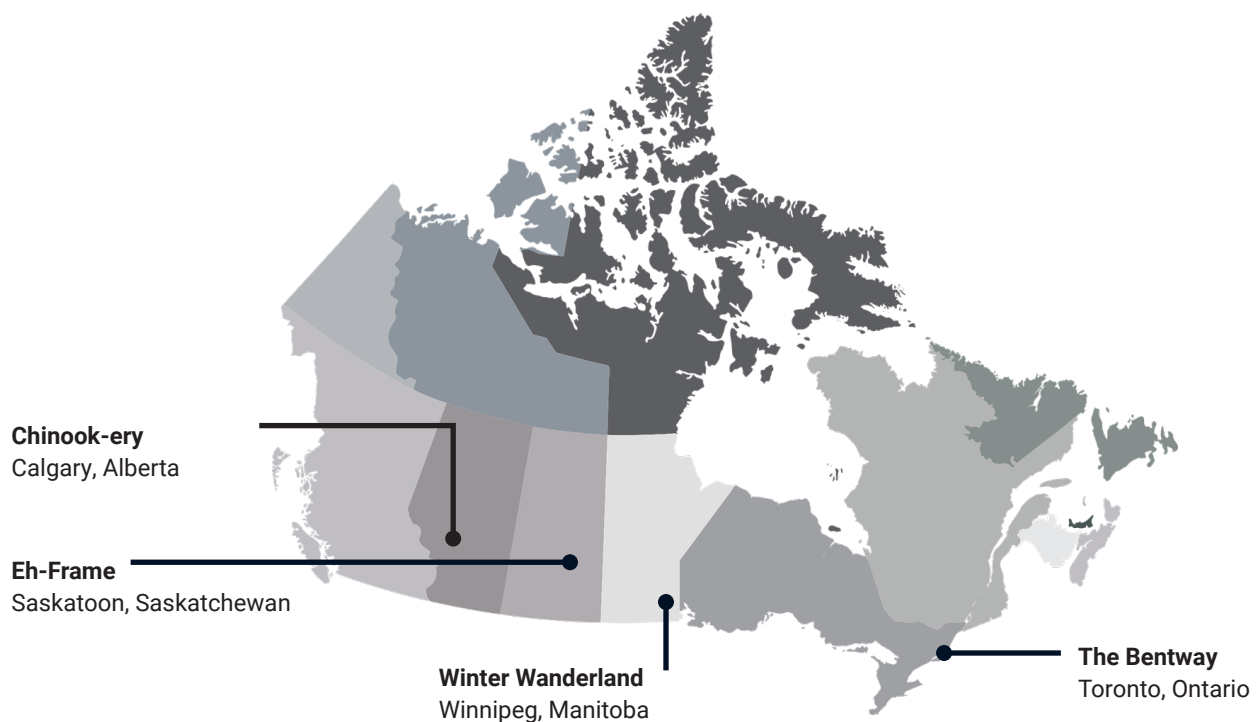
## 3.5. Limitations

It was discovered that winter projects and designs were rarely included in these journals. Most noticeably, it was surprising to find very little in a magazine such as Landscapes | Paysages Magazine. One would think that a publication about Canadian design would include projects that represent our multi-seasonal charm. This may also be due to the lack of multi-season design and planning happening in the profession today.



## 4. *Intervention Findings*

The next chapter looks at the findings from the semi-structured interviews of four winter design interventions. 11 projects were selected, and individuals were contacted by email or telephone. Out of the 11 projects selected, only four were able to be researched more with interviews. The four precedents are reviewed individually, and the findings are presented through quotes. The surrounding context for each project is provided before discussing the findings from the key informant interviews. While writing the context section of each project, I noticed many of the census tracts and neighbourhood boundaries often did not align. For this research, the census tracts containing the interventions were used to collect data. The findings are broken down into four sections: objectives, partnerships, challenges, and supports. A summary of the findings can be found at the end of this chapter.



# *Eh Frame*

Saskatoon,  
Saskatchewan

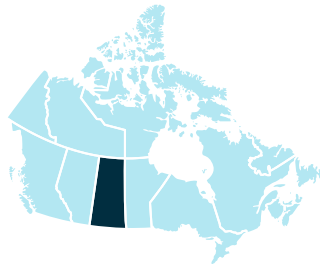


Figure 2 - Source: Eh-Frame and Oxbow Architecture, 2022

## Key Actors

**Oxbow Architecture:** This multi-disciplinary design studio in Saskatoon, Saskatchewan was the lead actor on the project. This organization provided additional funding and a physical site for the installation. An architect from this organization was interviewed (Participant 1).

**Core Neighbourhood Youth Coop:** This community organization works with at-risk youths in Saskatoon. They provide skill-building and alternative education programs for youths 16 to 19 years old. This organization shared its woodshop to build the installation.

**3Twenty Modular:** This company works on permanent and semi-permanent prefab buildings. They provided support during the fabrication and installation of the project.

**City of Saskatoon:** The City has a WintercityYXE Micro-Grant Program available to groups creating winter initiatives. The City of Saskatoon provided Oxbow Architecture with a grant for the winter design project.



# 4.1. Context

Eh Frame was built in the Riversdale neighbourhood in Saskatoon. The Louis Riel Trail (Highway 11) separates downtown and the Riversdale neighbourhood. 20th Street West runs from the west into downtown Saskatoon. This street is considered a main street with low-density stores and amenities. The site is approximately a 6-minute walk to the South Saskatchewan River and a 15-minute walk to the Central Business District. Much like older inner-city neighbourhoods, Riversdale has good qualities of urban design such as mature tree canopies, access to multiple parks, and narrow local streets. Most of the neighbourhood consists of single detached housing. However, Riversdale is considered a low-income neighbourhood in Saskatoon (Participant 1).

According to the 2021 Census, the population of Riversdale is 1,656 and has a population density of 1,902.1 km<sup>2</sup>. 21% of the Riversdale population is considered low-income which is higher than the rest of Saskatoon. The tenure in this neighbourhood is mixed between owners and renters. Table 5 shows that 43% of residents own while 57% rent. There appears to be slow growth in the housing stock as 48% of the private dwellings in Riversdale were constructed in 1960 or before (Statistics Canada, 2021 Census of Population). This also means the conditions and construction of the housing may be poorer compared to newer buildings. The average value (\$322,000) of a dwelling is also lower than the city’s average (\$393,600) (Statistics Canada, 2021 Census of Population). The representative from Oxbow Architecture described the neighbourhood as being on the fringe of a gentrification zone. On one side of the neighbourhood are shops, cafes, and other amenities and on the other side are “major shelters and outreach programs” (Participant 1).

**Table 4:** Neighbourhood characteristics of Riversdale in Saskatoon, Saskatchewan. Source: Statistics Canada, 2021 Census of Population.

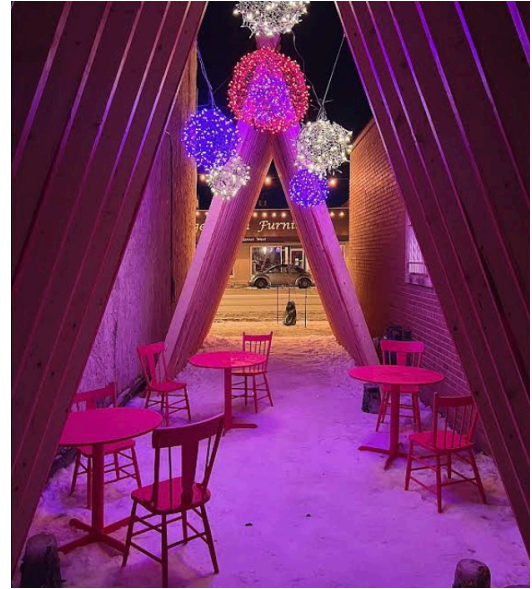
Characteristics	Riversdale Neighbourhood (7250007.00 Census tract)	City of Saskatoon (Census subdivision)
<b>Population and dwellings</b>		
Population	1,656	266,141
Population density per square kilometre	1,902.1	1,174.7
<b>Income of individuals 2020</b>		
Median after-tax income	\$31,000	\$38,000
Low-income measure, after tax (LIM-AT)	21.1%	11.8%
<b>Private households by tenure (25% sample data)</b>		
Owner (25% sample data)	43%	65%
Renter (25% sample data)	57%	35%
Occupied private dwellings by period of construction (25% sample data) – <b>1960 or before</b>	48%	16%
Average value of dwelling	322,000	393,600



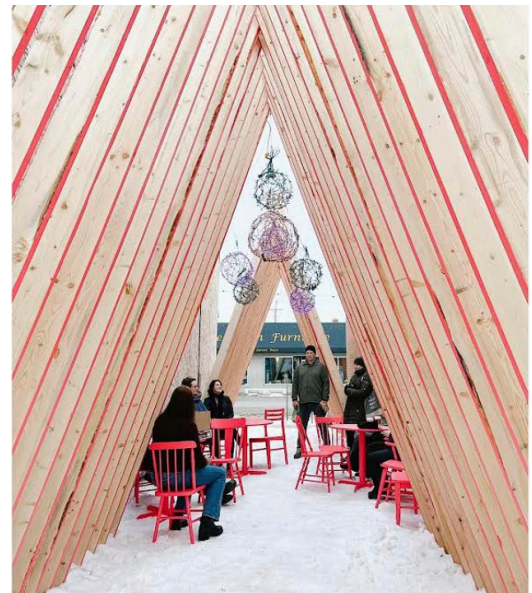
## 4.2. The Intervention

Eh Frame was a design-build installation led by Oxbow Architecture in partnership with Core Neighbourhood Youth Co-op (CNYC). This winter intervention was built in February 2022 during the coronavirus Omicron variant outbreak. The design of this installation was intended to create an outdoor social space which was built by the community (Beya, 2022). Funding for this project came from the City of Saskatoon's WintercityYXE Micro-Grant program. The temporary structure was constructed using the CNYC woodshop and installed in the empty alley beside Oxbow Architecture. The project was also intended to spark conversation about winter design and infrastructure in Saskatoon.

Eh Frame was inspired by the classic a-frame cabin design. The red outdoor furniture against the white snow backdrop added more colour and life to the colourless space. Round lights were hung in the middle to illuminate the space as shown in Figure 3. Figure 4 shows people using the space. It is unknown how long the lights were on during the evenings. The east and west sides of the site are protected by existing buildings which reduced exposure to winter winds as shown in Figure 5. Chairs and tables painted bright red were placed inside the structure. The intimate space was comfortable for socializing and conversations but the lack of view into the site could have encouraged undesirable activities.



**Figure 3** - Lighting of the space at night. Source: Eh Frame and Oxbow Architecture, 2022



**Figure 4** - People using the space. Source: Eh Frame, 2022



**Figure 5** - Placement of Eh Frame in an empty laneway between two buildings. Source: Eh Frame and Oxbow Architecture, 2022

## 4.3. Project Objectives

The objectives for Eh Frame were threefold. The first objective was to offer relief to individuals during the third wave of the coronavirus.

*[W]e emphasized the social side of it. When everyone's feeling a bit of isolation, and as we moved into winter, that only gets harder to get out and make social connections. Also, we're expected, especially during times like COVID, specifically to make those connections outdoors. (Participant 1)*

During the winter of 2021-2022, it was challenging to socialize with people outside our households because Omicron was highly contagious. On top of that, the winter in Saskatoon would isolate its residents even more. It was necessary that individuals could access safe, comfortable, and enjoyable spaces that limited the spread of the virus. The second objective of Eh Frame was to fill a need in the neighbourhood identified by the lead actor:

*It's sort of [about] identifying what the neighbourhood needed. And in this case, it was related to the question of where you would stop and sit and have a hot drink outside. There wasn't really that space within a few blocks. It was responding to the specific question of what we identified as a need in the neighbourhood. (Participant 1)*

According to the participant, Saskatoon lacked an outdoor “resting and socialization culture” that other winter cities embraced (Participant 1). The interviewee acknowledged Saskatoon’s great active outdoor activities culture such as winter biking, running, and skiing but said there were only a few cafes that would keep patios open with tables during the winter. Those that stay open required a purchase to use the space which added a barrier for some individuals (Participant 1). The third objective was for research purposes. The purpose was to “research a project for us to see, what does it get used for? How does it get used? What do people like about it? What do people think is missing?” (Participant 1). The importance of Eh Frame was to test an initial idea and get real-time feedback on winter solutions.

Eh Frame offered a free public space for socialization by providing seating and refuge from the winter elements. The free space removed monetary barriers that some winter interventions may have. This is significant because Eh Frame was constructed in a low-income neighbourhood where residents may not have the luxury of buying a 7-dollar coffee. After observing the project over its lifespan, the interviewee stated,

*[I]t's not overwhelmingly hipsters from the coffee shop using this site. But it was real members of the community, not people that are coming to work at the co-working place across the street. It was people who live here. I've spent a lot of time outside already and they need a space where they feel welcomed.*

Although Eh Frame was created for “everyone”, it was used by the local community. Even

though the individuals using the site were not the ones originally planned, it still provided a benefit. This project also provided youths in the Riversdale area with technical skills (Participant 1). Eh Frame was created by the community with the goal to be used by the community.

## 4.4. Partnerships

This small winter installation of only 560 square feet was created in collaboration with four partners. The first partner and the lead actor was Oxbow Architecture. Oxbow Architecture worked with youths from CYNOC. Participant 1 stated that a relationship between CYNOC and Oxbow Architecture was established from past collaborative work. This collaboration provided benefits to both parties.

*At the same time as they're getting this flexible education, they're getting exposed to designing, making things, and introduction to the trades. It's a practical and valuable program in our neighbourhood. It's an opportunity to teach at the same time. Teach them the skills of making, as well as the mindset of contributing something positive to your neighbourhood. (Participant 1)*

Oxbow Architecture provided youths with experience with carpentry while CYNOC shared their workshop with the firm. The architecture firm was in symbiosis with the youth co-op. The existing relationship and the proximity to one another played a role in the outcome. The result was an intervention built by youths in their own neighbourhood. A modular building company, 3Twenty Modular was another partner in this project. Their role during this project was to support the fabrication and installation of Eh Frame (Participant 1). According to Participant 1, the City of Saskatoon was also considered a partner. The City of Saskatoon provides grants of up to \$2,000 for businesses, non-profit organizations, or ad hoc groups for projects that support the WintercityYXE goals and objectives each year.

## 4.5. Challenges

Participant 1 stated limited funding was a challenge for Eh Frame. In previous years, the City of Saskatoon had offered two types of grants: the WintercityYXE Micro-Grant and the Take It Outside Grant. They have both been offered as regular and micro-grants. The WintercityYXE Micro-Grant has ranged from \$3,000 to \$14,000 (WintercityYXE Grants | Saskatoon.Ca, n.d.). The Take it Outside Grant was offered by the City during the pandemic. Over the last two seasons, this has also been a smaller sum. Oxbow was awarded the maximum amount of funding (\$2,000) for the WintercityYXE Micro-Grant. But this amount affected their design. Participant 1 argued that the micro-grant is,

*[T]oo small. I think it could be a range like in past years. They've done \$10,000 which allows someone to do a larger project. Our project would have been in that bracket. We subsidized Eh Frame out of pocket. (Participant 1)*

Participant 1 stated it was a struggle to create a project that was successful at supporting the WintercityYXE goals and objectives. The amount of funding available for projects can impact the size and success of winter design interventions. Proper funding for time and labour can impact future interventions or installations. When asked what Participant 1 would do differently next time, they stated:

*There was a lot of effort put in for a six-week deployment period on something of a very small scale. The returns or the impact wasn't as great as it could have been. I think we would look to make more impact, and I think that's critical in winter cities strategies, or winter city urban design initiatives to do it on a scale that's impactful and make the most use of the money that you have. (Participant 1)*

Participant 1 stressed there needs to be a balance of large and small winter projects happening throughout the city to be effective.

Another challenge identified by Participant 1 was the volatile conditions of winter. Extreme temperatures impact the construction and usability of spaces. Certain materials are not suitable for frigid temperatures and break once they become brittle. Ironically, using snow as a material was a challenge (Participant 1). Snow was planned to be on the ground of the site as a "sort of hard-packed snow surface. First it got icy and then eventually it got muddy because we were just losing too much snow. So, we ended up pushing some new snow in there" (Participant 1). The ephemeral characteristic of snow and ice can be both an asset and a challenge when creating winter design interventions and planning.

Because the installation had site furnishings such as chairs and tables available to the public, vandalism and theft were considered risks. Two ways to prevent this were by either bringing the furniture inside at night or securing them with steel cables. Participant 1 felt like this was contradicting the objective of the intervention. The creators "decided it's a little sinister, to say you're going to offer something to the neighbourhood, and then tie it all down for security" (Participant 1). For this reason, Oxbow Architecture included the risk in their designs.

*We painted about 15 chairs, and we put out 6 or 8 of them at the start. We had chairs taken over the course of the project. We went through all the chairs in the end. Which was fine, and it was expected... You know there wasn't a real serious act of vandalism...and they're good chairs, you know honestly in a neighbourhood where people are in need, they're going to take them. (Participant 1)*



The final issue that Participant 1 brought up when asked about the challenges of Eh Frame was the daily maintenance required for the space. Participant 1 was honest about this challenge and mentioned it was not a factor they considered. They mentioned individuals would use the tables and chairs after picking up food from local restaurants or the homeless meal program. The litter was a sign that the installation was being used but the absence of clean-up led to bigger issues. More seriously, drug paraphernalia was left at the site (Participant 1).

## 4.6. Policies, Initiatives, and Other Supports

As mentioned previously, this project was supported by the WintercityYXE Micro-Grant program. Eh Frame was eligible for the micro-grant offered by the City of Saskatoon because it provided comfort and accessibility in the winter. This amount of funding was criticized by Participant 1 who recommended “implementing a Winter City Strategy range of funding opportunities... so that you see the large projects happening, but also all these tiny little micro-projects that fill in the gaps and have things firing on all cylinders.”

It was revealed Eh Frame also received support in the form of municipal services. Specifically, a needle pick-up program. If discarded hypodermic needles were found on the site, the interviewee stated, “we [would] just call the fire department, and they do a really great job of responding to calls. They come right away. They collect it and dispose of it safely.”

When asked about other supports that helped create Eh Frame, Participant 1 did not specifically mention any of the City of Saskatoon’s Winter City Strategy policies. Instead said they mentioned the grant process gave them a point of contact with the City:

*The city is an intimidating entity to work with sometimes because you don’t know who to call or how to get the information that you need. The WintercityYXE Micro-Grant program application gave us direct contact with a person that could help us with our questions. Things like, are there any permits required for something like this project? If you’re planning on having an open fire, what’s the regulation process? The Winter City strategy gave us a single point of contact for advice on all those questions, so in addition to the funding that was valuable. (Participant 1)*

The City of Saskatoon also promoted the project on their social media platforms and increased the project’s exposure. A simple point of contact made implementing winter projects more desirable. This could lead to more winter interventions in the future.

# Winter Wonderland

Winnipeg,  
Manitoba

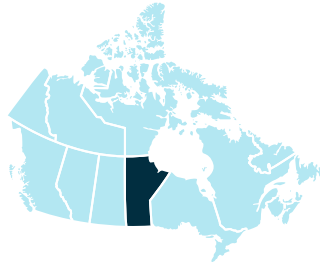


Figure 6 Source: Downtown Winnipeg BIZ, 2023

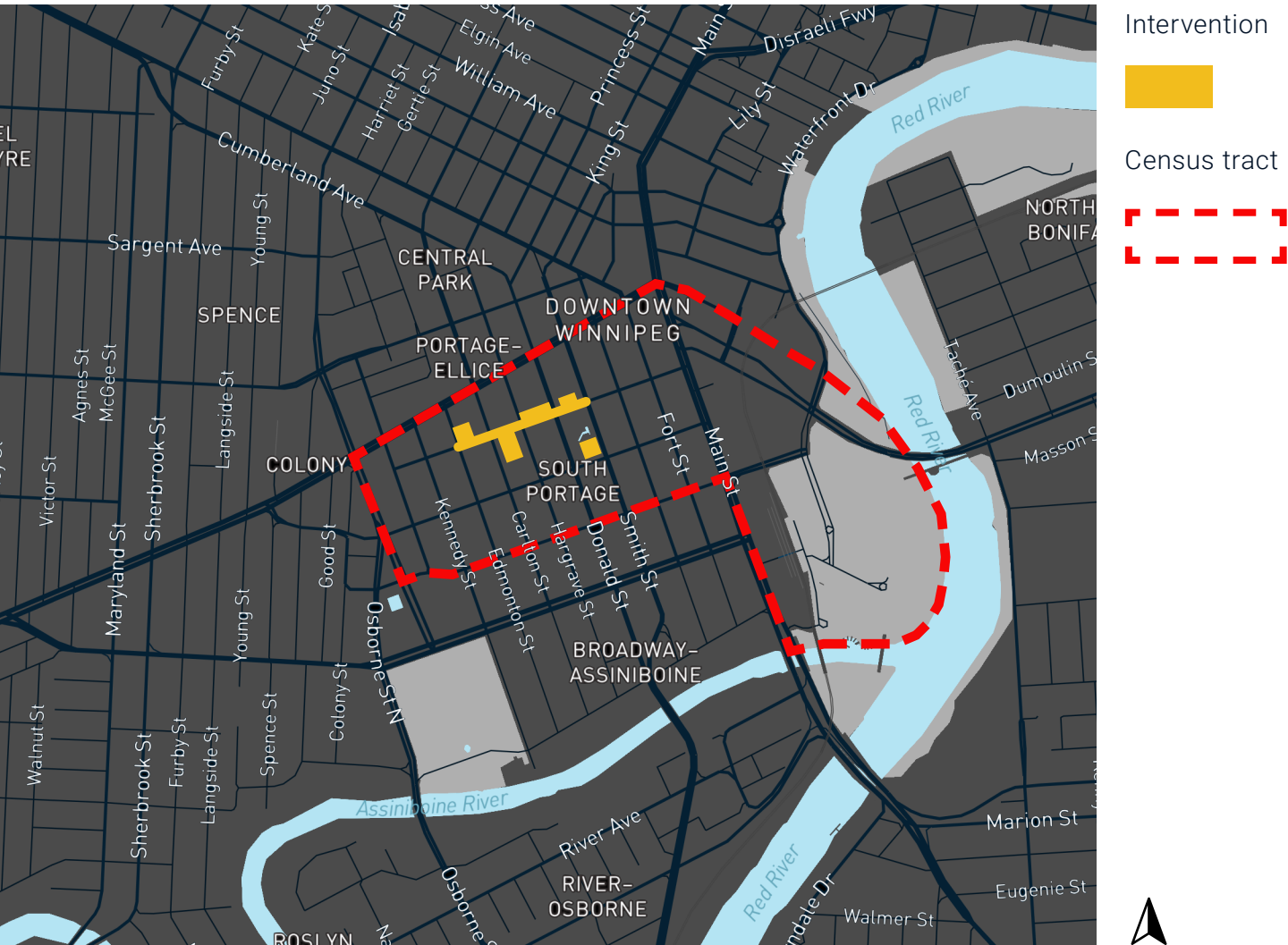


## Key Actors

**Downtown Winnipeg Business Improvement Zone (DWBIZ):** The DWBIZ was the lead actor on Winter Wonderland. They funded the project, oversaw planning events, and received permits from the City. Two representatives from the Public Realm department were interviewed for this study. The findings are based on the DWBIZ perspective (Participant 2 and Participant 3).

**Sputnik Architecture:** This multi-disciplinary firm from Winnipeg, Manitoba has developed a reputation of being a leader in winter art and architecture. This organization worked in partnership with the DWBIZ by providing ice for the sculptures.

**Kendrick’s Outdoor Adventures:** This organization is a member of the DWBIZ and provided a range of fat bikes, and e-bikes for downtown tours.



## 4.7. Context

*Winter Wonderland* was in the South Portage and The Forks neighbourhood of Downtown Winnipeg. Two major boundaries of the neighbourhood are Portage Avenue to the north and York Avenue to the south. However, Downtown Winnipeg has historically been regarded as a business district. A revitalization strategy was created to transform part of downtown into an urban mixed-use district focusing on cultural and entertainment amenities. This is called the Sports, Hospitality, and Entertainment District (SHED). South Portage and The Forks neighbourhood is within the Sports, Hospitality, and Entertainment District (SHED) boundaries. The SHED's main goal is to draw people to Downtown Winnipeg. Another significant element in South Portage and The Forks neighbourhood is the Graham Avenue Transit Way which connects riders with 20 bus routes. Unfortunately, the pandemic has taken a toll on Downtown Winnipeg and people are advocating for more public services such as rapid transit, affordable housing, and access to addiction support (Bergen, 2022). The neighbourhood has a higher percentage of renters (97%) compared to the city average (37%). 40% of the private dwelling stock consists of housing built between 1961 and 1980. Finally, dwellings are valued at \$100,000 less than the rest of the City of Winnipeg. The high percentage of renters, older housing stock, and lower average dwelling values demonstrate the neighbourhood is a low-income neighbourhood (23.1%). Therefore, numerous stakeholders in the South Portage & The Forks neighbourhood can be a challenge when planning projects are implemented.

**Table 5:** Neighbourhood characteristics of South Portage & the Forks Neighbourhood in Winnipeg, Manitoba. Source: Statistics Canada, 2021 Census of Population.

Characteristics	South Portage & The Forks Neighbourhood (6020013.00 Census tract)	City of Winnipeg (Census subdivision)
<b>Population and dwellings</b>		
Population	2,326	749,607
Population density per square kilometre	2,352.8	1,623.3
<b>Income of individuals 2020</b>		
Median after-tax income	\$33,600	\$35,200
Low-income measure, after tax (LIM-AT)	23.1%	12.9%
<b>Private households by tenure (25% sample data)</b>		
Owner (25% sample data)	3%	63%
Renter (25% sample data)	97%	37%
Occupied private dwellings by period of construction (25% sample data) – <b>1961 to 1980</b>	40%	30%
Average value of dwelling	\$260,000	\$364,000





Figure 7 – Lighting of the space at night. Source: Downtown Winnipeg BIZ, 2023

## 4.8. The Intervention

Winter Wonderland was a linear ice sculpture path located on Graham Avenue in Downtown Winnipeg. The art displayed was sculpted by world-renowned ice carvers and distributed throughout the public realm (Winter Wonderland 2023 | Downtown Winnipeg BIZ, n.d.). The sculptures could be experienced any time, day, or night. The layout of the sculptures created a linear pathway that people could follow from one destination to another. The sculptures are scattered over 400 metres between Edmonton and Smith Street, which was changed from previous years. The shorter distance does not require much time for the ice sculptures to be experienced. The project is therefore manageable to view even in the coldest temperatures. Lights were used to illuminate the sculptures which added colour to the landscape at night. Winter programming such as fat bike tours, story walks, and an outdoor workout was scheduled between February 10th to 20th in 2023. A social media contest run by Kendrick’s Outdoor Adventures was also used to entice people to the downtown.



Figure 8 - A picture of the ice sculpture in front of the Holy Trinity Anglican Church. Source: Downtown Winnipeg BIZ, 2023



Figure 9 - One of the ice sculptures in Millennium Library Park. Source: Downtown Winnipeg BIZ, 2023

## 4.9. Project Objectives

When asked about the objectives of Winter Wonderland, both Participant 2 and Participant 3 said it was to enhance the public realm in Downtown Winnipeg by activating spaces along Graham Avenue post-pandemic. Active and passive placemaking initiatives were distributed along multiple blocks for a wide range of demographics (Participant 2).

*It's an enhancement for people just visiting downtown employees, or just on their commute, those kinds of things. But we also do programming and events that really engage with the people down there, and then it's not such a passive intervention. (Participant 3)*

The variety in programming serves different users and can increase foot traffic downtown; something that the downtown needs more of since the pandemic (Participant 2). Downtown Winnipeg does not have the vitality of other Canadian cities and has some negative perceptions. Participant 3 mentioned the role Winter Wonderland has on changing peoples' perceptions:

*It's about enhancing the downtown experience and the atmosphere in a positive way, countering some of the negative perceptions we experience downtown and being accessible to a wide variety of community members. Everybody from the vulnerable and unhoused population to the corporate community down here.*

Downtown Winnipeg has numerous stakeholders with different values and needs. The variation in needs can be difficult to navigate when planning a project because the programming may change depending on the audience. The two representatives from the DWBIZ were aware of this. This awareness directed the project's objectives to make Winter Wonderland accessible to everyone.

*I think about the social equity lens. We decided Millennium Library Park would also be a great hub. Because you have a lot of low-income families who access social services downtown. (Participant 2)*

It was clear the primary benefit of Winter Wonderland was to stimulate the local businesses downtown. Generating more foot traffic downtown would increase the chances of people interacting with local businesses. The secondary benefit was to offer engaging pieces of art that liven up the public realm downtown. Finally, this public realm project contributes to the shift in the public perspective of downtown leading to not only short-term but long-term effects.

## 4.10. Partnerships

Winter Wonderland was the product of coordination between multiple stakeholders. Most notably, existing partnerships were very important for the creation of the project. One



representative from the DWBIZ mentioned specifically,

*[H]aving established relationships is probably...the key to getting anything implemented. Building those relationships over a series of initiatives for a series of years is what makes a big difference. (Participant 3)*

Working on projects with the same partners continuously can strengthen working relationships and lead to successful interventions. The main partner working with the DWBIZ was Sputnik Architecture, who has been collaborating with the DWBIZ for multiple years. One representative from the DWBIZ confirmed the partnership with Sputnik; both key actors worked with other partners to make Winter Wonderland a reality. Both the DWBIZ and Sputnik worked together on an “integrated development process” (Participant 3).

Unfortunately, due to conflicting schedules, Sputnik Architecture could not be interviewed. The data collected is only from the DWBIZ perspective and the partnerships from their side of this project. Hydro Plaza, Holy Trinity Anglican Church, Millennium Library, Millennium Library Park, and True North Square were all stakeholders engaged during the implementation stage of the project. Existing relationships again played an important role when working with stakeholders of the DWBIZ such as the Millennium Library. The importance of these relationships was critical when trying to align the objectives and goals of two different projects:

*We are looking for partners in our zone and the city to build on their existing projects or align with their objectives. We want Winter Wonderland to be complimentary. This way we are not creating five different events around this. (Participant 3)*

When asked about partners, Participant 3 spoke about the alignment of the Millennium Library with Winter Wonderland:

*We reached out to them, and they were open to having the ice sculptures in the park. February, is I Love to Read month and they have family-friendly programming going on already, so they have a series of events. Now they're going to do a feature story wall and cater some of their books to go with the ice sculptures that are visible through all the windows and can be experienced outside or inside.*

Regarding programming, the DWBIZ worked with Kendrick’s Outdoor Adventures to provide fat bike rentals and promotional giveaways. The winter programming activated the space by offering new activities such as bike rentals and an incentive to visit downtown (Participant 2).

## 4.11. Challenges

Both representatives agreed the capacity of the DWBIZ posed a challenge. The DWBIZ has a limited number of staff working on multiple projects a year. As soon as one project finished,

the next one began. This meant if a project is falling behind, it eats up time that could be spent planning other events or programs (Participant 2).

The capacity of the DWBIZ is also limited in space they can host activation and installation projects. One representative identified the lack of authority in the public realm:

*One of the challenges we face as a BIZ is we do a lot of projects in the public realm, but we don't have any authority in the public realm. Whether it's the City of Winnipeg or private property owners, we need everybody on board, and to be supporting the vision behind the initiative. And so, building consensus and mediating different interests is critical to that. (Participant 3)*

Because the DWBIZ does not have any property to provide programs and projects like Winter Wanderland, they rely on varying interest groups and stakeholders that do have space. Fostering strong relationships with these groups can evolve into mutual partnerships that support winter designs like Winter Wanderland.

Like Eh Frame, winter conditions can be unpredictable. During a previous iteration of Winter Wanderland, the temperatures fluctuated drastically. Participant 3 mentioned the ice sculptures melted quickly but the ephemeral quality of the sculptures drew individuals to see the art before it melted. The partnership with Sputnik was integral because the architecture firm had other sources of ice to harvest (Participant 3). Coordinating snow maintenance and the implementation of ice sculptures with multiple partners was recognized as another challenge:

*Everybody has their snow-clearing contracts. When you do an intervention, how does that impact those things that are already set up, and what flexibility is there to accommodate them? The willingness of partners is huge. (Participant 3)*

Again, partnership and cooperation play a significant role in winter design interventions.

Both Participant 2 and Participant 3 noted the vulnerable population in Winnipeg's downtown. Participant 2, who has a background in community planning and social justice work, mentioned how different groups downtown can interact with the intervention:

*[Y]ou have a lot of unsheltered individuals who access this space, so we didn't want it to just be something that was enhanced for those visiting from outside of downtown and for those that have access or the privilege to be able to visit True North Square and the amenities that exist there. We wanted it to also be attached to a space where the local community members have access to the same spaces. And they would still have access to something to brighten their day and make them feel excited. (Participant 2)*

Participant 3 also highlighted this challenge when they mentioned:

*I think another challenge we face is the large, vulnerable population downtown. They have some basic needs that aren't being met. We want to do something to enhance the public realm and shift perceptions but how do we navigate interests around this topic? (Participant 3)*



When asked to describe how the DWBIZ overcame the challenges of Winter Wonderland, Participant 3 discussed how DWBIZ approached the vulnerable population downtown:

*[W]e can't fix all the problems downtown with our initiative. We try to focus on what we do hope to achieve and leave some of the other challenges to the groups that have more expertise in that. Framing a project like that can be a challenge because there are so many interests, there are so many needs. (Participant 3)*

The DWBIZ tried to make the project as accessible as possible so everyone could enjoy the downtown public realm. The vulnerable population, families who live downtown, and the people who only work downtown all require varying degrees of needs and services. It is very challenging to plan an intervention that includes everyone when you have limited capacity, a finite budget, and only so much space to use.

## 4.12. Policies, Initiatives, and Other Supports

When both representatives were asked about what policies, initiatives, and other supports contributed to the creation of this project, there was no mention of any City plans or winter policies. The one document the participants credited was the DWBIZ's Strategic Plan. One representative mentioned that communication with the City has been difficult in the past when getting permission for the project:

*It's even finding out what permissions you need. What permits do you need? Who has authority over this piece of property, or is there overlapping authority? We figured out some of these things required during this initiative, previous years, and other initiatives we've done. But I think a large component is being able to understand where the authority lies and what permissions are required. (Participant 3)*

Getting proper permission was important for this project because some ice sculptures were placed on the City property. A permit and approval were necessary for the project's design. Participant 2 mentioned luckily, "it was a seamless process. It was a very quick approval within 24 hours, and we know that it's often moved slowly in the city. It's impressive" (Participant 2).

Finally, pilot projects and past projects were credited as precedents that supported Winter Wonderland this year. It is a way to get support and community buy-in for winter projects. Participant 3 stated that pilot projects are so important in Winnipeg because,

*[H]ere I think it's just very informal, and I think a lot of individuals are taking things on themselves. Winnipeg has more grassroots interventions. Projects are being implemented from the ground up as opposed to the City playing a larger role. So at least the desire in the culture is here to support it. (Participant 3)*

Two projects that were noted as precedents were the Forks and Festival du Voyageur:

*Festival du Voyageur has done large ice sculptures on public property. They set a precedent that we can build off [and] The Forks is a major hub of winter activities, sort of the urban winter destination for the city. So then, to be able to build off that, and you know, leverage, that reputation is key.*

*(Participant 3)*

# Chinook-ery

Calgary, Alberta

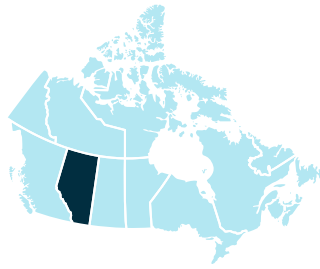


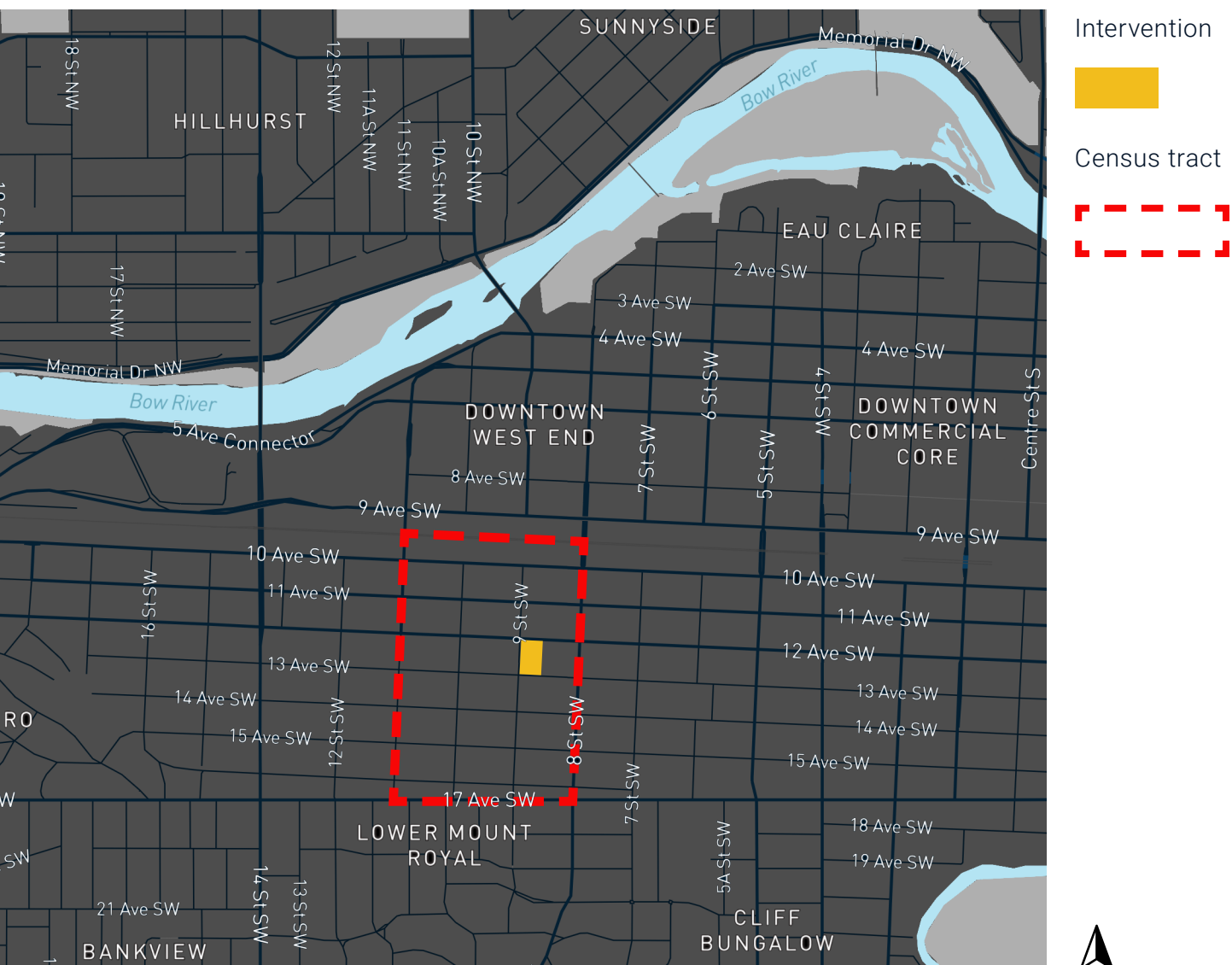
Figure 10 - Source: City of Calgary, 2023

## Key Actors

**Urban Systems:** This organization is an interdisciplinary consulting firm with offices all over western and central Canada. The project team submitted a proposal for the annual Calgary Winter City Design Competition. They developed the proposal, constructed, and installed the physical installation. A representative from this organization was interviewed (Participant 4).

**City of Calgary:** The municipality hosts a winter design competition for proposals that are installed in the downtown area during the month of February.

**Rockyview Play:** Two employees from this organization were part of the design team. Their role was to design and manufacture the site furnishing for the proposal.





## 4.13. Context

The Beltline community is directly south of Downtown Calgary. The community is divided into four neighbourhoods: West Connaught, Connaught Centre, Victoria Centre, and East Victoria. The winter design invention is in the West Connaught neighbourhood. However, the surrounding neighbourhoods in the Beltline district are densely populated with apartments, condominiums, and offices which house 15,912.4 people per square kilometre. This neighbourhood is also a trendy area with nightlife and culture which makes it desirable for entrepreneurs, young professionals, and artists (Beltline Neighbourhood Guide, n.d.). The median after-tax income for the neighbourhood is \$44,000 and interestingly the low-income percent is only 15.5%. According to Participant 6, the neighbourhood has fewer parks than other neighbourhoods. An interesting characteristic of The Beltline community is its walkability which is desirable for families (Arnusch, 2018). The tenure statistics from this neighbourhood seem like an anomaly because people starting families typically want to purchase a home before they settle down. This may be because individuals and couples are capitalizing on the average value of dwellings which is significantly lower than in the rest of Calgary. The 2021 Census also shows new developments are being built the neighbourhood as 22% of the private dwellings were constructed in the past five years.

**Table 6:** Neighbourhood characteristics of the Beltline in Calgary, Alberta. Source: Statistics Canada, 2021 Census of Population.

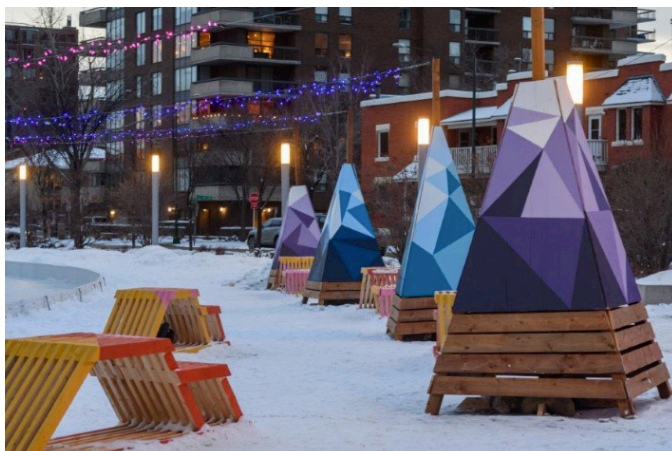
Characteristics	West Connaught Neighbourhood (8250045.02 Census tract)	City of Calgary (Census subdivision)
<b>Population and dwellings</b>		
Population	6,252	1,306,784
Population density per square kilometre	15,912.4	1,592.4
<b>Income of individuals 2020</b>		
Median after-tax income	\$44,400	\$40,000
Low-income measure, after tax (LIM-AT)	15.5%	9.0%
<b>Private households by tenure (25% sample data)</b>		
Owner (25% sample data)	27%	69%
Renter (25% sample data)	73%	31%
Occupied private dwellings by period of construction (25% sample data) – <b>2016-2021</b>	22%	9%
Average value of dwelling	\$352,000	\$519,500



**Figure 11** - Lighting of the space at night. Source: City of Calgary, 2023

## 4.14. Intervention

Chinook-ery is a winter installation located in Barb Scott Park. The intervention was designed for all ages to “play, gather, and rest” (Urban Systems, 2023). The design team was inspired by Alberta’s diverse natural landscapes of mountains, hills, and prairies. The moveable modular structures mimic the transitional landscapes of Alberta. Chinook-ery balances winter design principles that activate a space with construction techniques that work with and not against Calgary’s volatile winter conditions. The wooden structures are movable and function as multiple site furnishings such as seats, slides, tunnels, and windbreakers. The modular structures are slated for drainage. This construction style will reduce the water accumulation on seats during wet and mild conditions. Figure 11 shows the space at night with the string lights. Figure 12 and 13 shows the slated bench. Lights were hung from the wooden structures representing the Rocky Mountains to a pole in the middle of the skating rink. The lights are said to add warmth to the space and improve the safety of the park (Urban Systems, 2023).



**Figure 12** - Modular wooden seating and mountain structures. Source: Urban Systems, 2023



**Figure 13** - Lighting of the space at night. Source: Jenn Comrie, Urban Systems, 2023

## 4.15. Project Objectives

The installation's objectives were straightforward but thoughtful. During the interview, Participant 4 stated the purpose of the installation was to enhance the outdoor space by making it "more comfortable". Multiple winter design principles were included in the project such as wind-blocking structures, playful benches, and lights for warmth. Participant 4 mentioned the benefit of this project:

*I hope that families and neighbourhood residents will feel more comfortable, potentially being in that space that is lighter with more people there. Especially in the dark time of winter, being able to have light and colour in a public space is important. But better lighting is what people desire so they wouldn't be there in the dark.*

The participant shared the park where the winning submission was installed is one of the few open spaces in the neighbourhood. To remedy this during the COVID pandemic, the City of Calgary created a skating rink in the park to increase outdoor winter programming. The winter design competition was intended to activate the skating rink in the park (Participant 4). Chinook-ery also had a practical purpose to the design. Participant 4 explained:

*We found during a site visit the City [of Calgary], the benches are a bit farther away from the rink. It's a bit of a walk, and they are steel, so they're quite cold. And there isn't the protective rubber mat you can walk on from your bench to the rink. We imagined bringing those benches closer to the rink and providing the folks with closer seating.*

## 4.16. Partnerships

Chinook-ery consisted of three partnerships. The first partnership was internal. Seven out of nine team members were from Urban Systems. The disciplines included one urban designer, a planner, a visual communication specialist, two transportation engineers, and two civil engineers. The competition submission was seen as an opportunity for team building at Urban Systems (Participant 4).

The second partnership was with Rockyview Play. This organization specialized in designing and building high-quality playscapes, playgrounds, and outdoor classrooms. Two individuals from this organization were also on the project team to satisfy the competition criteria; at least one member of the team must be "credible in technical and construction skills" (Planning & Development, n.d.). According to Participant 4, Rockyview Play was influential in the design and construction of Chinook-ery.

*They were instrumental in helping us determine how best to put things together and come up with a guide for how to build the structures. Then, our team at Urban Systems could go out and build the things on-site. (Participant 4)*

It was mentioned Urban Systems had an existing relationship with Rockyview Play from a past project together. The partnership on this project may lead to future work between the two organizations. (Participant 4)

The project team was required to collaborate with the City of Calgary because the design competition was organized by the municipality. The budget was also covered by the City of Calgary and each winning submission was awarded \$14,000. When asked about the partnership between the City and Chinook-ery's design team, Participant 4 indicated they had a "collaborative working process". They emphasized the working relationship was developed by asking questions and creating an ongoing dialogue. As a result, the team was able to discuss an alternative site for the installation.

*[W]e shifted [the project site], and [the City] was open to that. We felt there was a better spot on-site to be placing the intervention. We asked given the conditions of the site and other considerations if it was possible to shift the location site for the intervention. Those conversations went well. They were flexible in their understanding of our intentions and design. (Participant 4)*

Good communication on both sides plays an important role when implementing these types of winter interventions.

## 4.17. Challenges

When asked about challenges faced while working on Chinook-ery, the participant stated the shortened timeline created a rushed schedule. The call for submission was released at the end of September 2022 and the deadline was November 10th, 2022. It can be challenging to design an installation that is functional, buildable, and creative in less than two months (Participant 4). The participant specified the concern the team had while creating Chinook-ery:

*How do we make this concept work and be safe? How can these structures that will be left in public space going to be helpful and not harmful? And how do we not only follow it and be true to our design, but also how do we make sure that it's safe, and people can use it without getting hurt? (Participant 4)*

The participant also mentioned the design team considered safety and liability because the project would be outside for an extended period.



## 4.18. Policies, Initiatives, and Other Supports

Policies and other supports the participant acknowledged to help the success of this project were existing plans and events located in downtown Calgary. When discussing supports such as policies and initiatives, Participant 4 mentioned the idea to activate the downtown comes from the Downtown Strategy and City Centre Plan.

Additionally, the Winter City Design Competition aligned with the winter festival Chinook Blast. The festival celebrates the winter season in Calgary by supporting existing cultural and sports activities. The goals of this festival were to energize the downtown core and show off the arts community in Calgary. Participant 4 said the City's design competition aligns with the winter festival. Finally, the participant expressed the importance of the media to promote the installations.

*There was quite a bit of news coverage on our design and the other winning submission, Illumine. I think the media coverage around the city, showing investment in opportunities for placemaking, especially in the winter months helps develop community pride and support. (Participant 4)*

# *The Bentway*

Toronto, Ontario

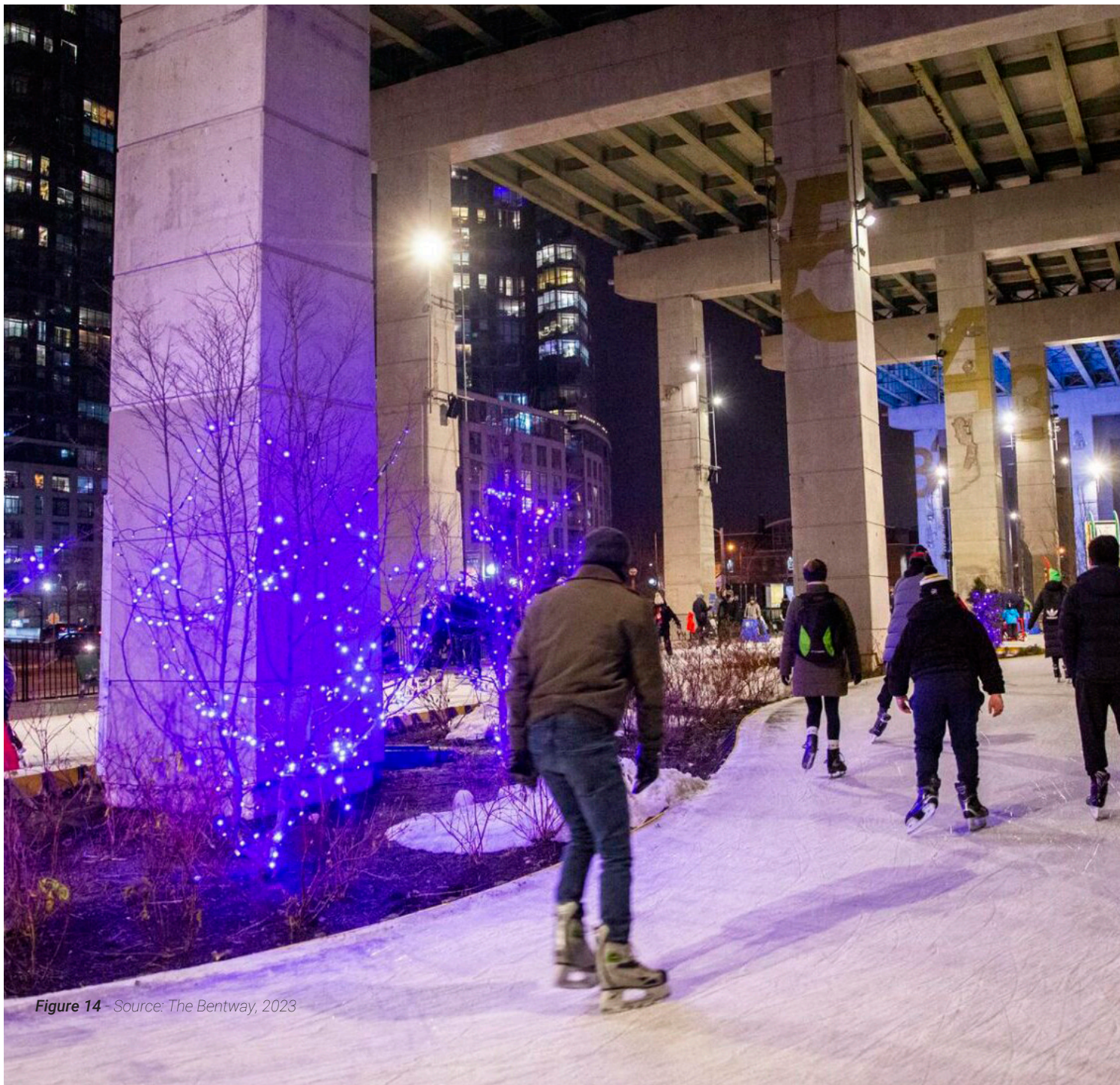


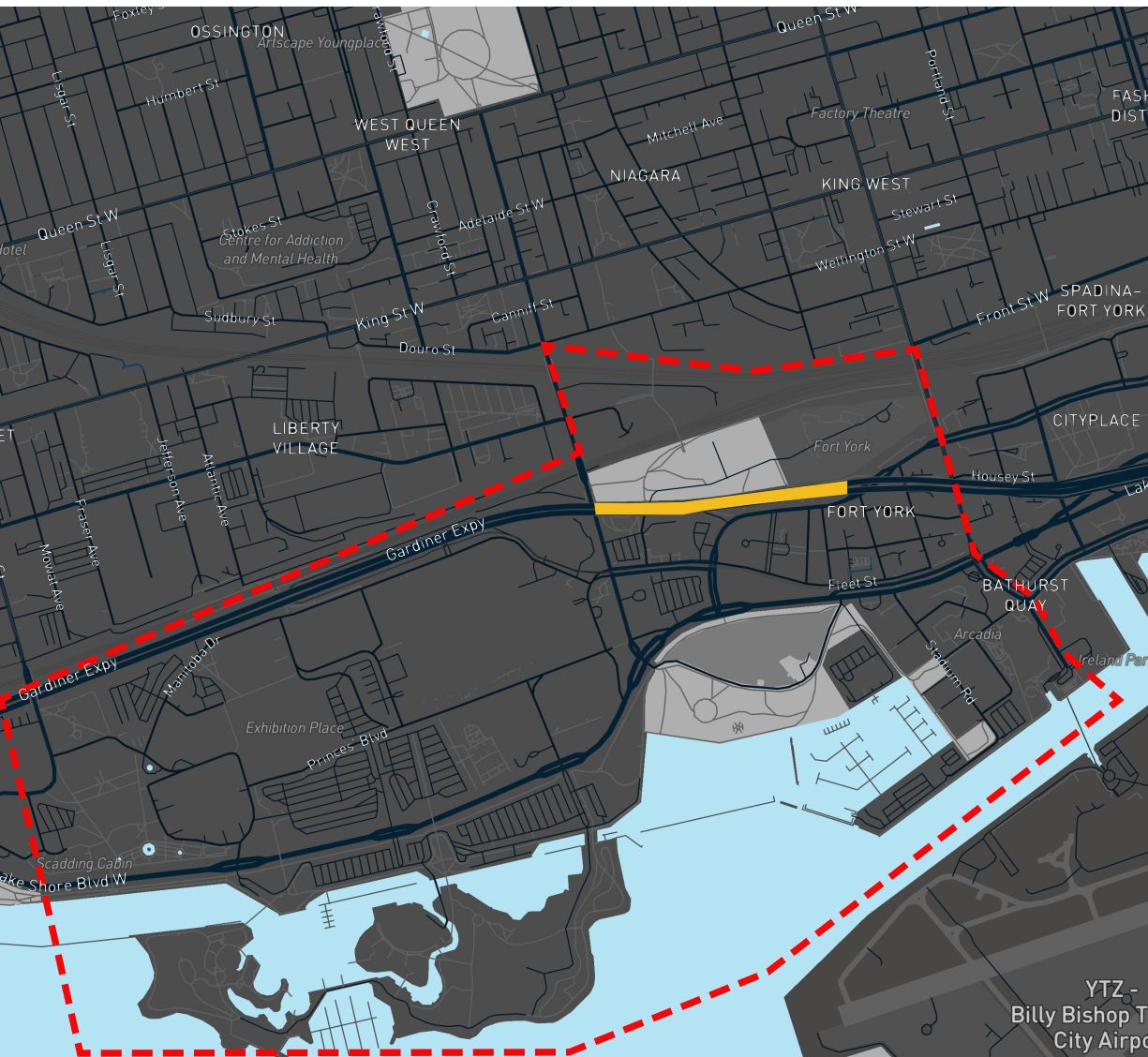
Figure 14 - Source: *The Bentway*, 2023



# Key Actors

**The Bentway Conservancy:** This organization is a public space and programming platform that changes landscapes through arts, culture, and recreation in downtown Toronto. This organization is the lead actor on the project and is responsible for the skate trail and winter programming. Two representatives were interviewed from this organization (Participant 5 and Participant 6).

**Shellie Zhang:** This Toronto artist was selected to create an installation for The Bentway Skate Trail during the 2022-2023 winter season.



Intervention



Census tract



## 4.19. Context

The Bentway was the first phase of a larger revitalization plan targeting vacant spaces underneath the Gardiner Expressway. This project was created by The Bentway Conservancy and gives credit to a long list of champions: the City of Toronto, John Tory, Waterfront Toronto, Ken Greenberg Public Work, Fort York National Historic Site, Artscape, and Judy and Wilmot Matthews (Welcome to The Bentway - The Bentway, n.d.). For the purposes of this paper, The Bentway Conservancy and a local artist are considered key actors. The site was designed by the landscape architecture and urban design firm Public Work. They continue to be the design lead on future Bentway projects. They were not interviewed in this project and were not considered a key actor. The amount of support and champions pushing for the creation of this project is considered. It should be noted The Bentway is different from the other winter intervention than the other three projects explored in this research. The physical size of The Bentway is drastically larger than Eh Frame, Winter Wonderland, and Chinook-ery. The initial project was funded by two local philanthropists who donated 25 million dollars (Taruc, 2017) making it entirely privately funded. This privately funded project is now a non-profit organization. The Bentway is in the Fort York neighbourhood and has the largest population of the four projects. It also has the lowest percentage of low-income residents and the highest median after-tax income. 30% of the dwellings were constructed between 2011 and 2015. The Fork York neighbourhood is the most expensive neighbourhood of all four neighbourhoods with dwellings averaging \$738,000 in 2020. Most

**Table 7:** Neighbourhood characteristics of the Fork York in Toronto, Ontario. Source: Statistics Canada, 2021 Census of Population.

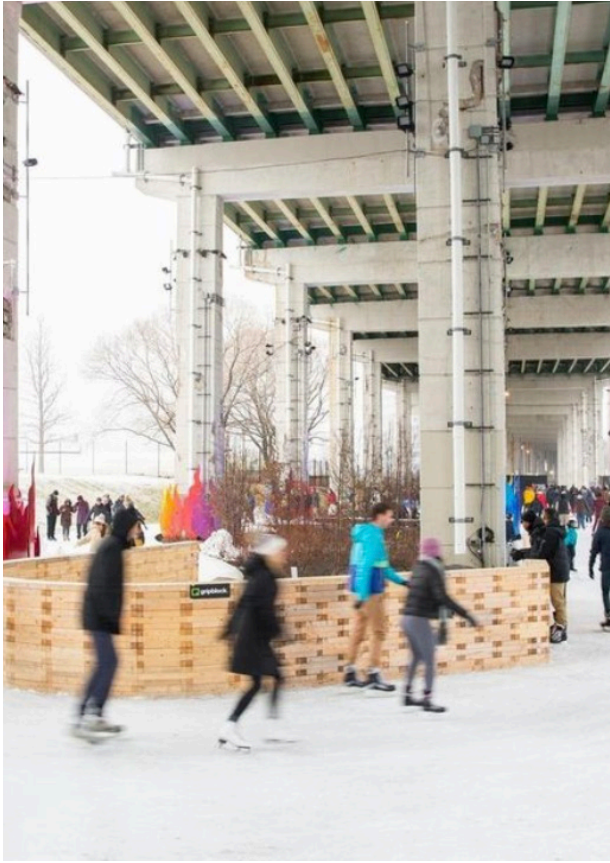
Characteristics	Fort York Neighbourhood (5350008.02 Census tract)	City of Toronto (Census subdivision)
<b>Population and dwellings</b>		
Population	11,591	2,749,356
Population density per square kilometre	6,052.4	4,427.8
<b>Income of individuals 2020</b>		
Median after-tax income	\$52,400	\$36,000
Low-income measure, after tax (LIM-AT)	11.5%	13.2%
<b>Private households by tenure (25% sample data)</b>		
Owner (25% sample data)	45%	52%
Renter (25% sample data)	55%	48%
Occupied private dwellings by period of construction (25% sample data) – <b>2011 to 2015</b>	30%	6%
Average value of dwelling	\$738,000	\$1,131,000

interesting is the City of Toronto does not have specific climate-sensitive policies or strategies like Edmonton or Saskatoon. The language used in Toronto's Official Plan is weak, vague and does not include climate-sensitive policies. The source of funding and limited winter-related policies made The Bentway an unique winter project to study.

## 4.20. The Intervention

The Bentway is public space underneath the Gardiner Expressway that offers all-year programming and activities. During the winter, the space is turned into a 220-metre figure-eight skating trail (Winter Skating at The Bentway, n.d.). During the winter a temporary concession stand, and a skate rental area are also operational. The design and scale of the site encourage passive, slower skating. Art installations and lighting are used to make the existing materials like concrete and steel more vibrant. This year, an art installation called Beacons by Shellie Zhang was displayed at the skating trail which "reflects on the interwoven layers of identity, the role of community and the power of memory and nostalgia rooted within their First Winter" (Beacons by Shellie Zhang, n.d.; The Bentway, 2022). Figures 15 to 17 show how colour, art, and lighting have all been included to enhance the feeling of the space. This project is unique compared to the other three because it "fuses public space design and programming" at a multi-seasonal level (PUBLIC WORK, n.d.). This year's winter programming was inspired by the many new residents of Toronto who experience winter for the first time. Creative workshops, performances, and recreational activities to connect newcomers and residents ran all winter long. The skating trail was open from December to the end of February and provided free winter programming like skating lessons for children and adults. The project is an example of good winter urban design because the site includes annual summer and winter programming.





**Figure 15** - A busy skating trail at The Bentway during the winter.  
Source: The Bentway, 2023



**Figure 16** - Individuals skating by Shellie Zhang's installation, Beacons. Source: Sneha Lohtia, 2023

**Figure 17** - People skating with Beacons art installation around the bents. Source: Sneha Lohtia, 2023



## 4.21. Project Objectives

The interviews were focused on learning more about the winter programming at The Bentway site. Since 2021, the main winter program is called Transform the Trail which is meant to work in support of the skating trail. The initiative activates the skating trail and surrounding site with temporary art installations. The goal of the initiative is to “build new and positive relationships with both The Bentway site and the winter season” ultimately making people fall in love with winter (“Call for Submissions,” 2023).

Both participants agreed the goal for the winter season is to activate the site and encourage people to use it. Participant 5 commented that “skating [is] more interesting by installing artworks or having other activations present”. The other participant added:

*We want to survive and give ourselves a reason to go out and be together. It doesn't get too cold if you're skating, or even just walking and having a good chat with friends, we must create better spaces to do that. I think it benefits the community. (Participant 6)*

Because Transform the Trail is annual, information for a call for expression of interest was examined. In the 2023-2024 call for submission, four primary objectives were listed (“Call for Submissions,” 2023):

### **Art and Recreation**

Explore new techniques for merging culture and recreation to broaden prospective audiences and augment familiar winter experiences.

### **Day to Night**

Embrace colour and light to enhance the trail and surrounding landscape equally by day and by night.

### **Uniquely Urban**

Develop strategies that celebrate The Bentway's architectural features and the unique qualities of an urban winter landscape.

### **Collaborate with Climate**

Address the weather conditions in winter and the natural materials within the winter landscape and find new ways to apply and engage with them.

Participant 6 also discussed engaging in conversations about how spaces can be better used:

*Positive dialogue during the spring, summer and winter programming seasons helps bring people to the site. To present a conversation as a discussion about public art or performance or a concert means that we're able to reach much wider and different audiences.*

The objectives stated by the two participants and the call for submission align with one another.

## 4.22. Partnerships

The Bentway partners with a new artist every year for Transform the Trail meaning it changes annually; it offers a unique environment each winter. This year, the main partnership was with Shellie Zhang. Participant 5 described the working relationship they had with the artist:

*I worked with Shellie. In the winter I find the wind values go up. The wind is a very huge force in The Bentway every time of year, but especially in the winter. We were working with her to try to figure out how to create a piece that could live on-site over the course of the winter with limited, maintenance work. That's how we ended up with aluminum beacon sculptures.*

The relationship between Participant 5 and Zhang was significant because it directed the design of the installation. Participant 5 shared “knowledge that [they] gathered about things that work, things that don't, the types of materials that work, and what becomes problematic.” This open line of communication led to sculptures made of aluminum because it does not rust (Participant 5).

The Bentway Conservancy planned public free programming from January to the end of February. They worked with several non-profit or community organizations to plan events and programs for newcomers in Toronto to celebrate their first winter (Participant 5). These programs and events included a Lunar New Year celebration with performances by Hong Luck Kung Fu Club and Happy Dancing Group; a creative workshop guided by Talking Treaties Collective teaching newcomers about the history of Toronto and the people who cared for it; a creative storytelling workshop organized by Department of Imaginary Affairs encouraging participants to share “first winter” experience; an intimate concert coordinated with Small World Music showcasing the talents of newcomer artists; and a communal dinner for the newcomer participants was hosted by The Bentway and Newcomer Kitchen, a social enterprise led by Syrian refugee women to end the winter season. These events and programs took place in proximity to The Bentway Skate Trail, and they were intended to draw people to the trail. Individuals had multiple opportunities to interact with The Bentway Conservancy.



## 4.23. Challenges

Again, the extreme temperature was a challenge when installing winter interventions. Participant 5 mentioned safety protocols are required because crews cannot be outside for too long. Having multiple crews switch off prevented exposure to the cold. But this required more capacity and workers. Another challenge Participant 5 revealed was knowledge being lost during staff turnover:

*Another challenge for organizations is if you can't hold on to your staff, then a lot of those learnings disappear with them. You end up rehashing projects that you've already done. That's an important thing to consider because winter is a very special season. There's salty water coming dripping from the expressway onto the ice-skating trail. I know where the drip line is, and I know where those pipes are broken, so I can tell you where not to put up artwork.*

Scheduling was also mentioned as a challenge. The Transform the Trail installation must go in before the skate trail is frozen (Participant 5). Everything for the winter season programming must be installed in November. Because The Bentway has all-year programming, multiple projects are being balanced at the same time. To limit this, Participant 5 mentioned their team is working on a long-term planning schedule:

*We must speed up, to slow down, and so that we can get to a place where we are planning 8-12 months in advance. But that means you know we are planning, executing, and striking sometimes all at the same time. It can be a lot.*

Participant 5 stated they find outside “producers” and partners to work with. It is a way for them to offload some of the executing and planning to subject matter experts freeing up staff capacity. The goal would be for organizations to begin planning a year ahead.

## 4.24. Policies, Initiatives, and Other Supports

As mentioned earlier, Toronto does not have any climate-sensitive policies. The two interviews reaffirmed this when both participants did not mention any municipal policies or plans. The interviewees discussed other supports of The Bentway. Participant 6 acknowledged the importance of the private donation:

*The fact the non-profit conservancy was created on the back of a major philanthropic donation absolutely doesn't hurt. There's a lot to be said about what you can do with 25 million dollars: set up a space, and not just for capital expenses, but then dedicate some of that for ongoing operational costs. That does a lot to build capacity and longevity in your organization.*

But Participant 6 also mentioned how important building a relationship with the local community was:

*[B]uilding relationships within the community is also important and significant... Whether it was one year, 5 years or 10, the growth in density and new residents in the neighbourhood, within a 5-minute or 10-minute block of The Bentway is mind-boggling. Some so many people living in this neighbourhood now who didn't live there before, and they all had a role to play.*

The awareness of the community to see how valuable the space under the Gardiner Expressway was considered another support (Participant 6). Finally, the high-quality landscape and urban design of The Bentway fostered community buy-in and supported the future revitalization projects in the Under Gardiner Public Realm Plan.

# Summary of Findings

Table 8: Project Objectives Findings

	Eh Frame	Winter Wonderland	Chinook-ery	The Bentway
<b>Activating Space for Winter Use</b>	To create a free area for socialization in the winter	To activate the public spaces along Graham St. and increase foot traffic downtown	To activate Barb Scott Park by making the public space more comfortable and useful during the winter	To activate the space under the Gardiner Expressway and encourage people to use the skating trail
<b>Shifting the Mindset of Winter</b>	To start a conversation about winter design and infrastructure in Saskatoon	To shift the negative perceptions of Downtown	-	To continue the conversation about public realm spaces
<b>Response to COVID-19</b>	To provide an outdoor relief space during the COVID-19 pandemic	-	-	-

Table 9: Partnership Findings

	Eh Frame	Winter Wonderland	Chinook-ery	The Bentway
<b>Partners Involved</b>	Private Sector  Community Organization  Government Agency	Private Sector  Non-Profit Organization	Private Sector  Government Agency	Non-Profit Organization  Other



**Table 10:** Challenges Findings

	<b>Eh Frame</b>	<b>Winter Wonderland</b>	<b>Chinook-ery</b>	<b>The Bentway</b>
<b>Limited Resources</b>	The small grant from the City of Saskatoon was not enough to support the full project and restricted what could be implemented	The project budget was smaller because was funded solely by the community organization	The short timeline to develop, design, and create the installation	Multiple crews were required during the installation  Staff turnover meant site-specific knowledge was lost
<b>Unpredictable Weather Conditions</b>	The snow on the site melted quickly because of warmer temperatures	The ice sculpture's lifespans are determined by fluctuating temperatures of each season	-	Extreme temperatures can make installation and maintenance a hazard
<b>Varying Interests/ Needs</b>	The low-income neighbourhood has different needs compared to the main street with cafes and boutiques	Creating an intervention that meets the needs of the vulnerable population, downtown businesses, and private property owners in the area	-	-
<b>Appropriate Design</b>	Preventing vandalism and theft  Making sure the site is regularly cleaned and maintained	-	Designing an installation that reduces harm	-



**Table 11:** Policies, Initiatives, and Other Supports Findings

	Eh Frame	Winter Wonderland	Chinook-ery	The Bentway
<b>Plans, Policies, and Strategies</b>	WintercityYXE Strategy	-	Downtown Plan City Centre Plan	-
<b>Financial Support</b>	WintercityYXE Micro-grant	-	The City of Calgary provided the funding to create the installations	A large private donation led to the creation of The Bentway Conservancy
<b>Direct Communication with the Local Government</b>	Having a point of contact with the City of Saskatoon for future projects	A straightforward process of obtaining permits and permission from the City of Winnipeg	Open communication with the City of Calgary staff about project details	-
<b>Precedent</b>	-	Using momentum from previous projects	Inspired by the Chinook Blast festival	-
<b>Other</b>	Public services such as hypodermic needle collection  Support from the media	-	Support from the media	High-quality design  Support from the local community







## 5. Discussion

The previous chapter examined winter design interventions from Saskatoon, Winnipeg, Calgary, and Toronto. Each precedent provided insight into how winter design interventions are planned from multiple perspectives. While most of the findings align with the existing literature, some are novel and require future investigation. This chapter will highlight notable discoveries of the research and will connect the existing literature with the findings.

### 5.1. Exclusionary Winter Design and Planning

A recent criticism of the Winter City movement is the lack of awareness of social inclusion. Stout et al. (2018) argued “there is a corresponding lack of focus on the need for shelter, on the costs of home heating in winter, or on the increased demands of home maintenance” (p.8). There was recognition by other authors like Pressman (1991), Lindsay & Yantzi (2014), and Davies (2015) but this did not translate over to the practical side of winter planning and urban design. Winter design principles accommodate individuals who can choose when to go inside as opposed to those who cannot (Stout et al., 2018).

The findings of the research shed light on issues from the literature review. When asked about challenges associated with their project, Participant 1, Participant 2, and Participant 3 all mentioned vulnerable groups or low-income communities who have unique needs. Participant 1 said this project was a wake-up call:

*We had to do a mindset shift and be confronted with who really lives in our community and to understand that we should be setting out to serve [local community] as much or more than this sort of idealized version of city dwellers that we have in our mind. (Participant 1)*

McCoy (2022) pointed out that the audience of winter design and planning gives priority to some while the needs of others are forgotten. Free winter activities, barrier-free mobility, and basic services such as warming shelters should all be considered when planning for winter. This

is important to consider, especially when inner-city neighbourhoods are often lower income. One way for vulnerable populations to benefit from the Winter City movement is by offering support to organizations and projects that already work with these social groups. This could be by providing winter culture and art in areas where community services exist like Winter Wanderland. Winter design interventions “must be designed with all members of the community in mind, not just people who are coming to a space for an activity” (McCoy, 2022, p. 74).

The findings of this research not only illustrate a gap in the Winter City movement but sheds light on larger, more complex issues. Issues like poverty and unstable housing occur 365 days a year. Winter for these vulnerable groups is hazardous because of Canada’s extreme winter temperatures. For this reason, social and financial supports at the government and community levels during the winter are necessary. It is time the Winter City movement starts talking about how to improve the quality of life for vulnerable and marginalized groups.

## 5.2. Pilot Projects

Pilot projects did not appear in the winter literature but were commonly mentioned during the interviews. Pilot projects work well in winter cities because the lifespan can align with the seasons; interventions can be tested for shorter periods. A smaller budget is needed due to the shorter duration, fewer materials, and less capacity. Because of the smaller grants winter cities are providing, pilot projects can be feasible and effective. One participant mentioned there are typically lower expectations to pilot projects and people perceive pilot projects as a low commitment because it is temporary (Participant 3). These types of projects are tested to see what is successful and what is not before implementing something permanently. Furthermore, research on temporary projects in Europe suggested that pilot projects can also be valuable alternatives for urban redevelopment projects and support healthy growth in cities (de Smet, 2013; Mariko, 2018). Testing ideas each season can improve our understanding of successful interventions since the evidence of the efficacy of winter design interventions is still limited.

## 5.3. Capacity

The ability and capacity of organizations required to implement winter projects was also a universal theme discussed during the interviews. How a project is planned and implemented is more related to project management rather than winter city planning. However, organizations may prioritize projects and programming for seasons like summer and fall due to fewer considerations (McCoy, 2023). This research included the perspective of a Business Improvement Zone, a mid-sized architecture firm, a non-profit organization, and a large interdisciplinary consulting firm and they all had the same response. A general challenge echoed over multiple interviews was limited

financial resources or staff constraints.

### 5.3.1. Non-Government Organizations

In Winnipeg, there is a grassroots movement for winter planning as the local government expects organizations to implement interventions themselves. This means non-profits, community organizations, and local individuals are critical players when it comes to Winnipeg's winter identity. It is proven a large monetary donation can go a long way, such as in the case of The Bentway in Toronto. The Bentway Conservancy is an example of how money can guide winter planning and design in a city that does not have any specific winter policies or strategies. But a problem with this approach is smaller non-government organizations are limited in their ability to offer meaningful winter opportunities.

### 5.3.2. Elected Bodies

In other cities, elected bodies have implemented winter interventions. Eh Frame and Chinook-ery were two precedents that were initiated by elected bodies. Funding was given to Eh Frame and Chinook-ery from their respective municipalities in the form of a grant and design competition. These two examples show that projects created by organizations at arms-length from local governments have advantages and disadvantages. Winter design interventions initiated by local governments can fund an initiative with limited financial resources because these types of projects are not profitable for private firms. However, these types of projects tend to be small in scale and may lack substance. Elected bodies may be effective at delivering small-scale winter design interventions but this only happens when the attitudes of policymakers are focused on creating Winter Cities. Another factor that contributes to municipal assistance is how much money the municipality has. Some municipalities cannot afford additional spending on new programs which is why they rely on grassroots projects instead. Smaller municipalities such as Fort St. John are more likely to deliver winter design interventions at a variety of scales compared to mid to large sized cities.

All the projects except for the winter design competition admitted the goal was to plan interventions and programs for the season ahead. Sufficient money and staff are required to achieve this goal. Also, the capacity of individual organizations may be too small to impact larger winter issues (Participant 2 and Participant 3). In that case, partnerships between non-government organizations and elected bodies can increase their resources and capacity for meaningful winter design interventions.

## 5.4. Direct Communication with Local Government

These projects required varying levels of interaction with municipalities. Participants

working on Eh Frame and Chinook-ery communicated with the respective municipalities to meet requirements and answer questions. Participant 2 commended the quick permit approval process for Winter Wonderland. Multiple projects mentioned knowing whom to contact in the local government regarding questions played a vital role in the planning process (Participant 1 and Participant 7). Communication between city staff and key actors develops strong relationships. Furthermore, an open line of contact with the municipality can encourage individuals and organizations with little planning experience to contribute to winter planning. A complicated approval process deters organizations from creating winter design interventions.

## 5.5. Health and Well-Being

As stated in the literature review, quality of life and well-being are influenced by winter. Most notably, our mental and physical health are impacted by periods of isolation and hazardous conditions preventing time spent outdoors (Clarke et al., 2015; Hjorthol, 2013). As a result, we suffer from limited access to social and recreational activities (Lindsay & Yantzi, 2014). Winter Cities are trying to improve residents' quality of life by preventing unhealthy conditions during the four to six months of the year. The findings from the four interventions researched align with the literature. There is in fact a common understanding of human behaviours and attitudes during winter. All four interventions attempt to improve users' quality of life by developing comfortable outdoor public spaces for socialization and/or physical activities.

The purpose of one intervention, Eh Frame, was to provide a space free of charge for people to gather and socialize. To get people outside, public spaces need to be designed to encourage passive socialization. The winter conditions require deliberate design interventions to improve human comfort. Because people are often sitting or standing, they do not generate the same level of body heat as someone moving. Conditions such as a drop in temperature, excessive wind speeds, and darkness must be mitigated so people will feel comfortable outside. Eh Frame was positioned between two buildings reducing the exposure to the wind. The atmosphere was also enhanced by using bold colours, illuminating the space with lights, and most importantly, including urban furniture (Pressman, 1995).

Winter Wonderland, Chinook-ery, and The Bentway all encouraged some level of physical activity and movement. Walking from sculpture to sculpture, fat tire biking, and ice skating promoted active movement in the winter. Activating public spaces by improving the quality of urban design could draw people to underused spaces. Thus, social interactions with one another are more likely to happen (Gehl, 2011). Some projects like Winter Wonderland and The Bentway had physical activities included in the programming. Others such as Chinook-ery promote existing winter physical activities. Therefore, the precedents studied show winter design interventions are connected to our mental and physical health.

# 5.6. Contemporary Winter Design Principles

Winter planning and design theory stated minimizing negative conditions makes winter more enjoyable. The literature identified the usefulness of public space, perception of a spatial area, sunlight exposure, wind speeds and snow management as barriers to public space usage in the winter (Chapman, 2018; Ebrahimabadi, 2015; Kusaka et al., 2018; Pihlak, 1994; Pressman, 1995). The literature, however, does not differentiate between the winter urban design (physical design of a city such as materials, building style, and any other elements that impact the built form) and winter design interventions (a project that adds meaning and function to an under-utilized space and increases an individual’s time spent outdoors during the winter months). Both are needed if we are to create more comfortable and liveable multi-seasonal cities. The projects explored in this research paper enhanced the public realm that would be underutilized during the winter. Using winter design principles from the literature, the projects attempted to mitigate conditions such as darkness, vacant public spaces, and freezing winds. Table 13 shows which winter design principles

*Table 12: Contemporary winter design principles applied to projects*

Principles		Eh Frame	Winter Wanderland	Chinook-ery	The Bentway
<b>Design changes to improve the experience of spaces</b>	Solar access	Red	Red	Red	Red
	Wind reduction	Green	Red	Green	Green
	Snow management	Green	Green	Red	Red
	Creative lighting	Green	Green	Green	Green
	Bright colours	Green	Green	Green	Green
<b>Opportunities for social activities</b>	Recreation and leisure activities	Green	Green	Green	Green

each project incorporated. Red means the principle was not present and green means it was included.

All four precedents use creative lighting and bright colours in the design to encourage usage at night. The literature stated lighting and colour can make a place more inviting and attractive (WinterCity Edmonton, n.d.). The findings aligned with the literature and the objectives of the projects: enhance the public realm by making it a comfortable and enjoyable experience. All four



provide unique opportunities for social activities with placemaking initiatives. More specifically, winter-themed programming, ice skating, and winterized site furnishings give individuals reasons to go outside during winter and use public spaces. Creating opportunities for more social activities is a common strategy in all winter cities and is the key objective for winter design interventions. As a result, these interventions only last the winter and are shaped by the public realm.

Three out of four projects attempted to reduce the wind by physical installations or deliberate site location. Two out of the four projects identified snow management during the interviews. It was seen as both a challenge and a design material (Participant 1 All four projects likely did consider snow because all four Canadian cities have climates that include snow. The Bentway Skate Trail is sheltered by the Gardiner Expressway and snow may not be a concern. The only design principle not applied to all four projects was increasing solar access and exposure.

It was discovered that solar access, wind reduction, and snow management are challenging principles to incorporate in winter design interventions because the existing built form impacts them. Permanent buildings and existing infrastructure are difficult to alter making it challenging to improve these conditions in urban areas. Reducing the wind may be easier because of other interventions such as strategic landscaping or extrinsic architectural elements. For that reason, these principles are most appropriate to consider when discussing winter urban design because they affect the built form of cities. For example, the literature on winter urban design stated the use of height and placement of buildings is a successful way to harvest the sun. Therefore, can be included in municipal urban design guidelines and development agreements which may impact the site placement and height of buildings.

## 5.7. Winter City Strategies

One area of interest was the different supports needed to create winter projects. I started this research with a theory that a Canadian city with a municipal winter city strategy would 1) be more equipped to plan winter design interventions and 2) have more successful projects compared to cities that do not have a formal winter city strategy. Saskatoon, Winnipeg, Calgary, and Toronto have varying winter conditions and planning contexts. Because of that, interviewing participants in cities with differing contexts provided insights into supports required to create these interventions.

Two out of the four projects explored are in cities with winter strategies. During the interviews, only one participant acknowledged the City's strategy. Participant 1 mentioned the City of Saskatoon's micro-grant program during the winter. Municipal grants for winter activation projects and initiatives were proven to be useful support. Cities with this type of strategy often had money available specifically for winter initiatives that support the goals laid out in their winter city strategy. This approach can be helpful to distribute money to community organizations across the city. Participant 1 also agreed grants and micro-grants are great tools for supporting numerous projects

across a city but have limitations. Interestingly, the Cities of Winnipeg and Toronto offered winter activation grants during the pandemic but did not continue in the following years. These two cities also lack firm winter planning and design policies.

Even though a winter city strategy was only mentioned once during the interviews, the success of this planning approach should not be ruled out yet. This formal document is relatively new to individuals and the overall impact requires more time and research. Many winter strategies have been created in the past 5 years. Since 2020/2021, three have been officially approved. It is still early to see the impacts of these strategies, but a past example from the City of Edmonton has been successful.

## 5.8. Summary

There is consensus regarding contemporary winter design principles and our well-being during the winter. But the impact winter city strategies have on a city are still largely unknown. Moreover, support from local governments is significant for organizations with limited staff capacity and financial resources. The support from municipalities for organizations to create more pilot projects can help build long-term community buy-in and lead to future revitalizing opportunities (Mariko, 2018). In addition, the iterative process of winter projects leads to higher-quality interventions and designs.



## 6. Conclusion

### 6.1. Summary of Major Findings

#### 1. What winter design interventions have cities implemented in downtown areas?

Four winter design interventions were researched in the following cities: Saskatoon, Winnipeg, Calgary, and Toronto. The variety of Canadian cities offered different approaches that had similar objectives, challenges and supports.

Eh Frame was an example of winter tactical urbanism designed and constructed in Saskatoon. The installation was a result of multiple partnerships. Local youths from the neighbourhood were part of the construction which taught them valuable skills. The outcome was a free temporary space where community members could gather and socialize during the COVID-19 pandemic and winter.

The second project was Winter Wanderland in Winnipeg. The Downtown Winnipeg BIZ and Sputnik Architecture were the two main partners. Ice sculptures were placed in public spaces along Graham Avenue, enhancing the downtown street. A local business from the DWBIZ provided winter bikes for additional programming. The goal of this project was to activate Graham Avenue and help shift the perspectives of downtown Winnipeg.

The third project, Chinook-ery, was one of two winning submissions from the City of Calgary's Winter City Design Competition. The objective of Chinook-ery was to activate space in a public park. The project was designed and constructed by a team of multi-disciplinary consultants.

The final project, The Bentway is a public space underneath the Gardiner Expressway with multi-seasonal programming. During the winter months, the space is turned into a skating trail. Additional free programming is offered on and around The Bentway activating the area which enhances the physical environment.

## **2. Have policies, regulations, pilot projects, or initiatives supported the creation of these winter design interventions?**

As reviewed in the summary of findings section, several supports were identified for each project. This research was interested about how cities plan and create winter design interventions. Are Canadian cities with winter city strategies also more capable of implementing these types of projects? This was not entirely true as it seems other factors played a role in creating winter design interventions. Winter city strategies did play a role in creating some of these interventions but other factors such as funding, pilot projects, and good communication with municipalities also were key. The findings show winter design interventions come in all shapes and sizes with many factors impacting the success of the projects. When it comes to individual winter installations or interventions, a policy document may not be needed.

## **3. What are some lessons learned from how cities have carried out winter design interventions?**

**Relationships are important:** Established and new relationships play an important role in the creation of winter design interventions. This research found that projects with multiple organizations collaborating can increase capacity and project outcomes.

**Continuously test ideas and interventions:** Winter design interventions should use an iterative approach lasting multiple seasons. Temporary winter projects are typically implemented for one season and then removed if not successful. Collecting data and feedback from the local community after each season can improve the project. Seeing a commitment to winter projects can shift peoples' attitudes toward winter in a positive way.

**Consider the local community's needs:** The Winter Cities movement tends to focus on making winters more liveable for certain groups. This narrow view perpetuates inequities during the season when certain groups are most vulnerable. This research highlighted two projects located in areas with vulnerable and marginalized groups. Winter design interventions struggle to balance the needs of varying demographics often favouring one. Therefore, the community's needs should be considered when creating winter design interventions. Context-specific winter design interventions are necessary if a city wants to meet the needs of all. One possibility is the scope of winter projects expand to projects such as 24/7 warming stations.

**Local government support is crucial:** It was indicated a good working relationship with the municipality goes a long way. Having a point of contact to ask questions means less confusion. Limited "red tape" created an unrestricted process and made it easier for organizations to develop winter design interventions. Grants and funding from municipalities

were also mentioned throughout the research. Hence, money should be equally distributed in the summer and winter months. A position solely for winter planning may be considered in each municipality.

**There are many ways to plan for winter:** There is no right way to create winter design interventions. Some cities have been successful thanks to private funding and a few community champions. While others have strategically shaped municipal policy, design guidelines, and winter plans to make sure residents are “active and engaged” in every season (Petryshyn, 2020, p. 20). But cities should be inspired by the success of fellow winter cities. Canada has no shortage of multi-season cities, and they all share a common goal. Communication and discussion between each are critical to achieving the goal of the Winter City movement.

## 6.2. Final Thoughts

Multi-seasonal planning can generate a unique identity for individual cities. There are different approaches for planning a liveable winter city such as winter city strategies, festivals and events, and winter activities. This research explored four winter design interventions. The findings to some extent align with the literature. Ways to enliven public spaces during the winter include creative lighting, bright colours, wind reduction, snow management, and generating more opportunities for social activities. But temporary installations do not increase solar access due to the existing urban condition of tall buildings. The findings reveal winter design interventions are more aesthetic rather than practical and reveal the Winter City movement does not include the needs of everyone. This means some groups experience winter differently. More research should explore the inequities of winter and how different social groups experience winter in Canadian cities. This can increase the quality of life and comfort for all individuals living in cities. Thus, a more human-centred approach to winter planning and design is necessary.

How to practice equitable winter design is still a challenge. Winter placemaking - such as the four interventions studied in this paper - is a common approach for making Canadian cities liveable during the winter. Moving forward, input from the local community is essential when developing these interventions. Two projects from this study were created with limited input from stakeholders and residents. That is why winter design interventions should be planned as “targeted solutions that meet the needs of specific groups” (McCoy, 2023a). However, the feedback can range, especially when projects are situated in neighbourhoods with multiple user demographics. Surveys with the surrounding community could be used to generate meaningful and appropriate ideas for interventions. Surveys with community members can also evaluate the outcomes of the intervention, a critique from the literature. For that reason, pilot projects are useful because the



data and feedback collected from the past winter can shape the next iteration of the project.

In the past, Canadian cities have been planned using models from temperate climates and ignoring the local characteristics and diverse range of needs. The built form of a well-planned city is a Winter City, but planning does not stop at the physical realm. More research is needed to understand how all social groups such as low-income communities and vulnerable populations experience winter. The issues that cannot be solved with winter urban design may require additional social planning practices. A winter city strategy can offer strategic alignment by incorporating the goals and principles into existing strategies, plans, and policies. We can create more liveable winter cities by designing cities that are more responsive to the needs of all the residents and more adaptable to winter conditions.

### 6.3. Future Areas of Research

Future research should examine how the quality of life for vulnerable populations changes during the winter. Stout et al. (2018) first commented on this gap in the literature and this research recognizes there is still much more work to be done. In-depth research into the needs of vulnerable populations during the cold season could guide municipal budgets to allocate money for more social services. As Nuttall (2022) mentioned, research should occur “across disciplines...working towards shared research goals” (p.63). Winter should be less stressful for all.

One area that could be explored in detail are ways to measure the success of winter design interventions. Currently, social media interactions and people counts are two ways these temporary interventions are being measured. Measuring the success of a pilot project at the end of the season is one way to learn if it was successful which could lead to future implementation.

Finally, the effectiveness of winter city strategies will need to be researched. Because many of them are new, it is too early to tell how effective they are. But in the future, research can be focused on their overall impact.

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# Appendix A

## Interview Questions

The next several questions deal with the local understanding of winter in [*specific city*].

For the purposes of this study, I define winter urban design interventions and strategies as *physical projects that have been designed and implemented to improve the social wellbeing and economic development at the neighbourhood or city-scale between December to March.*

Examples of these can be warming hut competitions, light festivals, or parklets that support local patios. I am interested in interventions that have been developed and currently being used during the winter season.

Broader context about the participant and their overall experience in the selected city.

1. How long have you lived in [*specific city*]?
2. As a resident of [*specific city*], what do you like most about the winters in [*specific city*]?
3. What do you dislike?

*Specific winter urban design intervention being questioned.*

The next several questions deal with the project you worked on.

4. What was the main idea(s) behind this project [*insert specific project name*]?
5. What did you hope this project would achieve?

### Probing Questions:

- What other partners/organization/groups worked with you on the project?
  - How closely did you work with them? Can you describe the communication process between all parties working on the project.
  - How long was the development stage of the project, and what is the lifespan of the project?
  - If you can disclose this information, what was the budget of this project?
6. Can you describe how the community was involved in the planning of this project? What stakeholders were engaged?
  7. How was the surrounding identity of the city included into the final design of the project?

*Challenges faced during implementation of the project.*

8. Were there any challenges you faced when working on this project? Please describe.

Probing Questions:

- Could you walk me through how you overcame them?
  - Was there a challenge that could not be overcome? How did you make these decisions and was there a compromise or trade-off?
9. Can you describe the kinds of support this project had? Supports could be policy, funding from initiatives, or community advocacy, etc.
  10. Are there any policies or initiatives that would have made this project easier to implement?

*Lessons learned and concluding questions.*

11. Do you think this project achieved the goal(s) you mentioned earlier?
12. Who do you think benefits from this project? Describe why?
13. How do you think this project improves the social wellbeing of individuals?
14. How do you think this project improves the local economy?
15. Thinking of your experience working on this project, is there anything you would change to improve the outcome of this project?
16. Do you have anything you would like to add before we conclude?
17. Are there any organizations, or projects, you would recommend I examine?

Thank you very much for taking the time to speak with me today! Do you have any questions for me or any general comments?