

Revisiting the **FREEZEWAY SKATING TRAIL** pilot project in Edmonton, Alberta

ABSTRACT

Ice skating is a common leisure activity among winter cities. In 2013, a Freezeway skating trail idea was brought to light by University of British Columbia Graduate Student Matt Gibbs at the same time the City of Edmonton had undertaken an iceway skating trail pilot project at Victoria Park. Although the ice skating trail at Victoria Park did not live up to the Freezeway vision, there are several lessons to be learned and questions to revisit about the planning and design of ice skating trails in cities. This case-in-point article revisits the obstacles to planning for a commuter ice skating trail, while drawing on lessons learned from subsequent ice skating trail projects in Edmonton, Alberta. Fluctuating temperatures, the lack of infrastructure, and street-crossings pose the greatest challenge to planning for ice skating trails as an active form of winter transportation.

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1.0

INTRODUCTION

Canadian prairie cities hold a unique opportunity to invest in active transportation in a way many other cities in North America do not. On any given year, Canadian cities and towns in the prairies can experience up to five months of below zero temperature, with a typical-modest winter being around three-four months (McLean, 2019). There is a conventional thought of winter as a force working against walking, cycling, and other forms of active transportation. However, contrary to this belief, emerging research tells us Canadians continue to cycle, walk or use other forms of active transportation in the winter because of safety rather than temperature (Erlanger, 2019; Nahal & Mitra, 2018).

In 2013, Graduate Student Matt Gibbs from the University of British Columbia received international recognition for a forward-thinking design on building winter city identity through active transportation. The logistics behind the 11-kilometre skating trail intend to connect a number of neighborhood centres (or character areas referred to by Gibbs) by re-surfacing abandoned railways and multi-use trails in the winter. Like the typical North American city, prairie cities tend to offer favourable urban design conducive to private automobiles. The vision for the freeway ice skating trail is driven in part by shifting transportation modes and urban design away from private automobile use and towards multiple modes (Sorenson, 2016).

"[the objectives of the Freeway] are to promote winter programming, active lifestyles, sustainable transportation, social activity, and an iconic identity for a city looking to differentiate itself."

—Matt Gibbs, Landscape Architecture Student, University of British Columbia



FIGURE 1 | Freeway rendering by Landscape Architect Matt Gibbs (2013)

Active transportation has been shown to reduce traffic fatalities, traffic congestion, road infrastructure and maintenance costs, need for parking, and pollution (Marshall and Ferenchak, 2019). Although the freeway idea was well-received locally and internationally by academics and planning practitioners, the core concept had core challenges which were considered too steep by planners, park managers, and City Councillors in Edmonton. The City instead opted for a skating trail pilot project at Victoria Park on the north bank of the North Saskatchewan River. This case-in-point article draws on the lessons learned from the pilot project at Victoria Park, while re-visiting the challenges of expanding the trails into a larger commuter network, similar to the Freeway concept brought to light originally by Matt Gibbs.

2.0 / BACKGROUND

The fundamental goal behind the Freezeway skating trail is to embrace winter and encourage healthy living during winter months. The health benefits of active transportation infrastructure are well-documented, however research is now emerging to support the idea of active transportation as an investment into road safety, in addition to public health. Marshall and Ferenchak (2019) conclude a study analyzing 13-years of data from twelve large U.S. cities on active transportation corridors, and find safety benefits to all road users with the mere presence of protected bike lanes and corridors. A similar study from Ryerson University by Nahal and Mitra (2018) suggest a strong positive correlation between public investment into protected cycling lanes and the number of cyclists, with a noticeable increase during winter months. The results from these studies indicate that the use of pedestrian corridors in winter, such as cycling lanes or perhaps skating trails, is likely tied to the quality of infrastructure which ensure pedestrian safety.

Elise Stolte (2016) of the Edmonton Journal describes the pilot project at Victoria Park as a practical implementation of

"Our study finds protected/separated bike [lanes] are significantly associated with better safety for all road users, so such infrastructure may have a traffic calming effect and facilitate safer speeds."

—Wesley Marshalla & Nicholas Ferenchak,
University of Colorado-Denver, Department of
Civil Engineering

Matt Gibbs' Freezeway concept. The hype and recognition around the Freezeway initiative leading up to the pilot project at Victoria Park led some to critique the City of Edmonton for misrepresenting the core principles behind the freeze-way. The practical concerns with implementing a commuter skating trail, particularly competing use of infrastructure, has limited the IceWay skating trails in Edmonton to leisure purposes. With that being said, the examples of ice skating trails across Canada show overwhelming levels of popularity. If cold temperature is indeed not a deterrent for people to use active forms of transportation, the question for city planners then becomes one on how to adapt existing infrastructure and open space to withstand increasingly fluctuating climate conditions.

FIGURE 2 | Rundle Park IceWay in Edmonton, Alberta



3.0

FACTS OF THE CASE

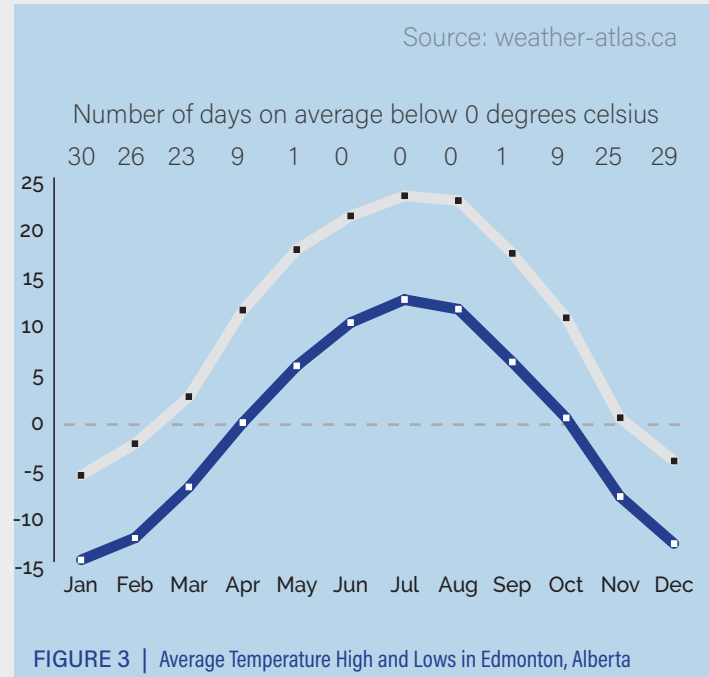
There are many unknowns when it comes to using ice skating as a mode of transportation amongst vehicle traffic. How does a skating trail work in practice? What are the components needed to ensure a skating trail functions well in Edmonton's winter? The three primary concerns with converting pedestrian corridors into freeze-ways are: (1) climate conditions, (2) street crossings, and (3) lack of existing infrastructure networks.

Climate Conditions

The first hurdle is to think through how an unrefrigerated skating trail would look on the ground in the context of Edmonton's climate and urban environment. Freeze-thaws throughout the winter can be common. Designing an ice trail network to work with nature, as opposed to against, is a difficult obstacle to overcome which requires shade from trees, buildings or structures. Figure 3 shows the average high and low temperature for each month in Edmonton, in addition to the average number of days below zero per month. The number of days below zero are representative of years 1981 through 2010, whereas the temperature ranges represent current figures. Edmonton's climate is changing, which creates new challenges in keeping the IceWays consistently frozen all winter. Over recent years, both Victoria and Rundle Parks IceWays have had to be closed on several occasions due to warm weather.

Street Crossings & Infrastructure

Converting multi-use trails to ice in the winter, as one might expect, is difficult for many reasons. The Freezeway project plan struggles to address the frequency of street crossings. Intersections with vehicle traffic not only interrupt a smooth skating stride, but also attract dirt and sand on ice creating additional safety and maintenance concerns. A commuting ice skating trail requires planning for street crossings and dedicated infrastructure to ensure public health and safety benefits are realized. The challenge is to find long corridor stretches to resurface in the winter with minimal intersections and without compromising dedicated spaces for pedestrians and cyclists.



Attitudes toward active transportation in the winter are more about safety than about climate. For winter pedestrians and cyclists, separated and protected lanes help make people feel safe among vehicles. In Ottawa and Winnipeg where ice skating trails have been popular, people commute on ice over long stretches of the Rideau Canal and Red River where there are no physical barriers or threats of traffic. Like Ottawa and Winnipeg, Edmonton has had success with leisure ice skating trails and, at the same time, is experiencing a rise in winter cycling popularity. Together, this suggests an opportunity to re-think how we adapt infrastructure during winter and embrace a vision where people can safely and conveniently skate to work, to dinner, or for exercise.



FIGURE 4 | Rundle Park IceWay in Edmonton, Alberta

4.0 LESSONS LEARNED

From the original freeway concept to several ice skating trails, winter-oriented active transportation is gaining stride in Edmonton. The IceWay at Victoria Park and Rundle Park have catalyzed smaller community-based ice skating trails, which point to a general public interest to get out for a skate in the winter. Besides Victoria Park and Rundle Park, these smaller ice trails are fully operated through Edmonton Community League Partners. This begs the question of whether or not the popularity for ice skating is replicable in cities with similar or cooler climate. Although major barriers remain over the implementation of commuter ice skating trails, practical lessons can be drawn from the leisure IceWay established at Victoria Park.

From a safety point of view, there are concerns with the ice surface quality to prevent falling. Bumps and cracks in the ice are to be expected, especially on turf where the soil is more adept to shifting. Another key risk factor for safety besides bumps and cracks is lighting. Transitioning between light intensities can lead to visual discomfort, which combined with bumps and cracks, may result in injuries. Lighting consistency throughout the Victoria Park trail and ice grading were both found to be common challenges year-to-year.



FIGURE 5 | Manitoba 150 River Trail in Winnipeg, Manitoba

Two general trends with winter active transportation are evident after revisiting the Freeway skating trail in the context of Edmonton and recent peer-reviewed literature on winter active transportation. First, is the increase in cycling and the use of cycling infrastructure during winter months. The conventional thought of cold weather as a dominant force against active transportation is far too simplistic. The force against the freeway is rather warm weather and the risk of injury from close proximity to vehicles. Second, is the rise of ice skating as a common leisure activity when given the opportunity. Many other Canadian cities like Winnipeg and Ottawa also take advantage of their cold climate and unique characteristics for ice trails.

FIGURE 6 | Victoria Park IceWay in Edmonton, Alberta



No Canadian city has taken the attempt at flooding a true commuter skating trail. Although the outcome of the skating trail at Victoria Park fell short of Matt Gibbs' Freezeway vision, the pilot project drew a lot of favourable attention among Edmontonians and tourists. The few studies highlighted in this article tell us that the use of an all-purpose ice corridor, in a relatively central location with nearby amenities, is likely to be driven more so by safety concerns as opposed to cold weather conditions. However, these concerns do not dismiss the core challenge of protecting recreational ice surfaces from warm winter temperatures. Trees and shading devices may alleviate the slightly warmer sunny days, but the issue of traffic safety remains paramount for the Freezeway-like commuter trail. Much like winter cycling, if urban planners are able to solve the safety and infrastructure issue for commuter ice skating trails, we would likely see people skating to school and to work.

Image Sources

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