

Winter Cities



Photo Credit: Ice Castles

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**Winter
conditions can
be hazardous
regardless
of our age.
Pedestrian safety
is important.**

Living in winter cities pose additional challenges and opportunities for residents and planners. The topics that will be discussed below are safety, building and urban design characteristics, enticing outdoor physical activity and fostering Nordic pride & sense of place. Winter can be a great time of year for outdoor activities and the change of season is both beautiful and humbling. In our built urban environments, there are challenges for mobility during icy conditions and cold temperatures limit some activities for residents. **The design and location of buildings and streets have a significant impact on the experience of pedestrians.** It is important to consider the ramifications of these design components. Especially when we are planning for age-friendly cities. As we have evolved into more sedentary lifestyles, daily activity has become an increasingly important aspect of urban lives. **Creating pedestrian friendly environments encourages daily activity** like walking to the store, work or to a restaurant. During winter, weather conditions have an impact on the desire of residents to face the elements. The effect can be exacerbated depending on your need and physical ability. Even able bodied people regardless of age risk injury during icy conditions. It is imperative that we account these comfort and safety aspects when considering building orientation, street layout and egress into buildings. Many of these features have the additional benefit of reducing heating costs. Remember, if we build cities with our most beloved, respected and admired parts of the population, children and older adults, we build an accessible and inviting city for everyone.

Safety

Winter makes getting around difficult for all urban dwellers. The difficulty is exacerbated by age and/or mobility issues. **Common snow clearance practices in Canada prioritize motor vehicular traffic over pedestrians which leaves specific parts of the population at a disadvantage.** Prioritizing pedestrian pathways, like is the common practice in countries like Norway and Denmark, will ensure fair access to daily activities and safe physical conditions¹. Additional consideration should be made for access issues like slopes of driveways, access paths, or sidewalks and the provision for sufficient time for pedestrians to move through slippery intersections.⁵ Making it easier for people to get around during winter will entice more people to walk and enjoy the outdoors.



Photo Credit: Ventrac

Figure 1: Proper snow clearance on pedestrian pathways to ensure mobility and safety.

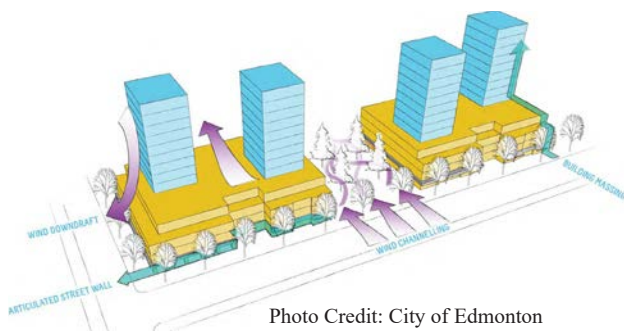


Photo Credit: City of Edmonton

Figure 2: Building heights, location and orientation effect wind direction and velocity which impacts the pedestrian experience.

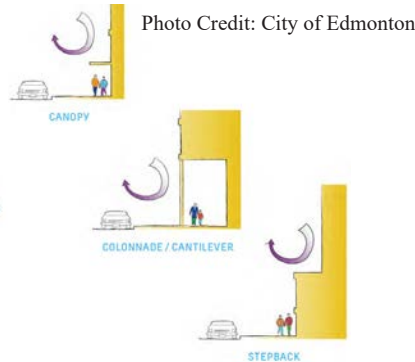


Figure 3: Building design can provide cover for pedestrians in entrances and along sidewalks.

Building Design Characteristics

Building orientation is one of the most important aspects of design for winter conditions. Maximizing solar light and minimizing wind exposure has an incredible impact on the urban environment and can also reduce energy bills.¹ Several building design features and techniques can be employed to improve the experience of pedestrians at the local scale. Wind intensity can be reduced through building design features such as softened corners, porous materials, openings, irregularities, stepped facades & balconies.³ Considerations such as **covered ramps, handrails and roof design aid in reducing harmful effects of slippery, snowy, and/or icy conditions.**³

Edmonton has developed a policy called Winter City Guidelines that outlines effective ways to reduce the negative impact of cold prevailing winds while creating microclimates through solar maximization and wind reduction. They have emphasized a preference for stepped high rise construction with slim towers to reduce the downdraft effect and allow wind to pass through.

Urban Design Characteristics

Compact mixed use has been identified as the best urban form for cold climates as there are more opportunities for daily activities within close proximity. The reduction in street size and large open spaces between buildings also mitigates cold effects of prevailing winter winds. If possible, consider **situating new pathways in sunny locations blocked from the wind.**¹ Art installations are a beautiful way to mitigate the effects of prevailing winds while also providing wind mitigation through diffusive techniques. In downtown Calgary, the city has installed wind diffusers that mitigate the cold westerlies that come from the Rocky Mountains which are also attractive art pieces.³ **Utilizing vegetation to mitigate prevailing cold winds can be an affordable way to create a more pleasant outdoor pedestrian environment.**⁸ Specifically in Manitoba, coniferous trees planted along the Northern sides of parks, greenways, or parking lots would be a location specific solution. In locations where people are waiting, such as bus stops, **heated shelters can offer reprieve from the elements or weather appropriate.** Outdoor furniture can offer a comfortable place to rest for aging adults or people with mobility issues.⁹ Colourful buildings are an exciting way to add vibrancy to the winter environment. This has become

Protecting pedestrians from the wind and optimizing solar exposure creates a pleasant pedestrian environment

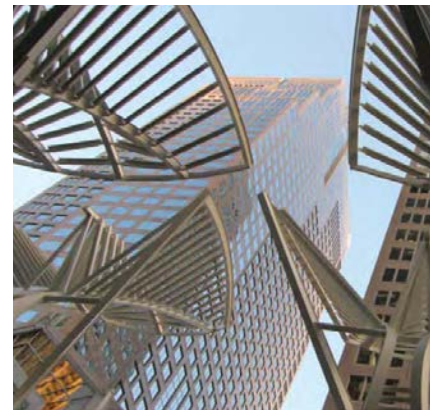


Photo Credit: City of Edmonton

Figure 4: Example of art installations that also mitigate wind velocity along Stephen Avenue in Calgary, AB



Photo Credit: City of Edmonton

Figure 5: Example of protective vegetation cover in a small park

Figure 6: Use of colourful materials and paint add intrigue to heritage buildings and contrast to the winter environment



Photo Credit: City of Edmonton



Figure 7: Quebec City lights up the cold during their winter City Lights Festival

Photo Credit: Quebec Region

Colour and lights are a great way to provide contrast to the winter environment

Enticing Outdoor Activity

common practice in Scandinavia and has been adopted in Edmonton's Winter City Guidelines.³ Lighting is also another creative way to leave a lasting artistic impression on the community.¹⁰ Quebec City displays an impressive array of lighting installations during their City Lights Festival and Winter Carnival.³

Lighting also encourages outdoor winter activities and engages pedestrians with their local environment. Converting active transportation to multi-use winter modes of transport (snow shoe, cross-country ski) can encourage people to enjoy the outdoors.⁸ You can **take advantage of natural features** like Winnipeg who has transformed their rivers into winter pedestrian transport corridors. Nearly as many people attended the Forks for outdoor activity in February as in June.² Winnipeg competes with Ottawa every year for the longest skating trail in the world. Skating along the Rideau Canal is famous around Canada and attracts many visitors to the city in winter. Edmonton has taken skating to the urban level and created the "Feezeway" which is a skating trail that connects greenways to the city center.¹¹ If skating isn't your thing, try Crokinole. At the Forks in Winnipeg, outdoor games are set up to provide opportunities to play outdoors and socialize with the community. These are some examples of small scale outdoor projects replicable almost anywhere that enjoys winter.



Photo Credit: Westjet

Figure 8: Example of outdoor games at the Forks in Winnipeg. Active winter lifestyles can foster a sense of Nordic pride.



Photo Credit: Ottawa Tourism

Figure 9: Example of outdoor winter activities along the Rideau Canal in Ottawa. Embracing winter with others is a great social activity that creates a sense of place and community

The behaviour attitudes of winter need to change to better encourage people to embrace their climate. Social marketing and media with support of winter travel initiatives can aid in changing the mindsets of residents in winter cities. **Marketing the health benefits of active winter transportation with community based organizations** can aid in this respect.⁷

Fostering Nordic Pride & Sense of Place

People are attracted to vibrant local culture and creating civic pride will encourage current and future residents to invest in their community.¹⁰ To inspire residents to engage with their outdoor environments Norman Pressman suggests developing an "aesthetic for the north" as part of a way to create character.⁹ Nancy MacDonald suggests we change our view of winter and see

it as an asset.⁶ An interesting **aesthetic elements of winter includes ice as art.**⁹ Winnipeg has combined culture, history, art and activity during Festival du Voyageur. The festival incorporates celebrations of French Voyageurs and Metis history and culture with an ice sculpture competition and other festive events like music, tobogganing, pancake breakfast and tire d'erable. The city has also created a warming hut competition along the Red River Mutual trail.⁴ Locally inspired markets and festivals that contain multiple activities can encourage winter participation and create a sense of local pride.¹⁰

Final Thoughts

Like anything in life, winter is what you make of it. When designing our communities we need to embrace our climate; all four seasons. If designed properly, our cities can be vibrant wonderful winter wonderlands.

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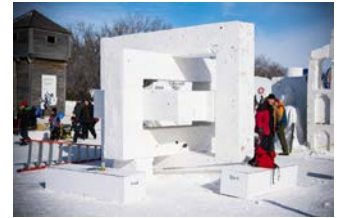


Photo Credit: Festival du Voyageur
Figure 10: Ice sculpture at Festival du Voyageur in Winnipeg



Figure 11: Warming hut along Red River Mutual Trail in Winnipeg
Photo Credit: City of Edmonton