# Snow Clearing Best Practices and Jurisdictional Review for Bicycle Facilities

## Definitions of Cycling Facilities

Protected bike lanes are physically separated from the motor vehicle travel lane by a physical barrier or a painted line and are designated exclusively for bikes. Protected bike lanes are typically located at street level.

Cycle tracks are physically separated from the motor vehicle travel lane by a physical barrier or a painted line and are designated exclusively for bikes. Cycle tracks are typically located at sidewalk level.

Multi-use pathways (also known as shared-use paths) can be a sidewalk, trail or other path that is physically separated from motor vehicle traffic by an open space or barrier and shared by pedestrians and bicycles.

Bike boulevards (also known as Neighbourhood Bikeways) are streets with low traffic volumes and speeds where it is suitable for cyclists of all ages and abilities to share the travel lane with vehicles.

### Locations of Cycling Facilities

23<sup>rd</sup> Street, between Idylwyld Drive and Spadina Crescent, is Saskatoon's only protected bike lane. A protected bike lane along Victoria Avenue, between 8<sup>th</sup> Street and Taylor Street, has been approved in principle by City Council.

The majority of cycle tracks are adjacent to arterial and collector roadways, such as along Victoria Avenue, Central Avenue, Fedoruk Drive, and McOrmond Drive.

Multi-use pathways can be found in many locations throughout Saskatoon, including along the riverbank or within the right-of-way. Examples include pathways adjacent to arterial roadways, such as along Warman Road, or collector roadways such as 14<sup>th</sup> Street, or even local roads, such as the multi-use pathway adjacent to Dawes Avenue.

The only designated bike boulevard in Saskatoon is 23<sup>rd</sup> Street West. Bike boulevards along 14<sup>th</sup> Street, Dudley Street, and 31<sup>st</sup> Street have been approved in principle, and, as Saskatoon's AAA cycling network expands, more streets may be designated as bike boulevards.

As Saskatoon's AAA cycling network expands, additional arterial and collector streets may be retrofitted to include cycle tracks and/or protected bike lanes.

### **Existing Guidance**

Lack of snow clearing on cycling facilities is one of the main reasons why people choose not to ride their bike in the winter. Research has found that winter cyclists tend to be dedicated and confident. Through the development of the AT Plan, Saskatoon residents indicated that ensuring on-street bicycle routes and multi-use pathways are cleared in the winter would promote more cycling. Targeted surveys in winter cities have found that a lack of winter maintenance is the biggest deterrent to people choosing to ride their bike in the winter, rather than temperature or weather. (Cycling though Winter, 2014)

Bicycles have different winter needs than motor vehicles. They have smaller tires and weigh less, which make them more sensitive to snow and ice. Winter maintenance programs should consider the specific needs of people riding bikes. Salt and sand on roadways also pose a risk for cyclists once the threat of winter has passed. Once the threat of winter precipitation has passed, bike boulevards should be cleared of sand as quickly as possible. (Winter Bike Lane Maintenance, 2014)

Equitable transportation planning recognizes that all users should have access to a transportation system 24 hours a day, 7 days a week, 365 days a year. Establishing prioritized routes with predictable snow clearing times leads to higher rates of winter cyclists. (Cycling though Winter, 2014)

Providing responsive service to snow events for cycling facilities will ensure that people wanting to ride their bikes in the winter months can rely on available infrastructure to do so safely. It will also reduce key barriers to choosing cycling in the winter, such as snow filled streets, and provide more options for getting around Saskatoon. This will encourage people to continue to ride their bike year-round, rather than choosing other modes of travel.

#### **Jurisdictional Scan**

The following table summarizes information from municipalities that have publicly available service levels for snow clearing for cycling facilities.

Jurisdiction	Facility Type	Requirements for Clearing	Response Time	Updates to Service Level Revisions
City of Minneapolis	Shared-use Pathways and Protected Bike Lanes	Snow event is declared	24 hours after the end of the snow event	Currently working on designating a winter cycling network and determining a standard level of service for their winter network.
	Bike boulevard	Streets are cleared following a snow emergency. Bike boulevards are cleared with the same level of service as the residential street they are located on.	Response time varies based on street	

City of Winnipeg	High Priority Pathways	5 cm of snow has fallen or accumulated	Cleared within 36 hours	
	Low Priority Pathways	8 cm of snow has fallen or accumulated	Low priority routes are cleared after high priority routes, and take approximately 5 day to complete	Unknown
City of Ottawa	Subset of the cycling network is identified as the "winter maintained cycling network", and includes on- street bike lanes, raised cycle tracks, and multi- use pathways	2.5 cm of snow	Maintenance begins at 2.5 cm of accumulated snow and continues through the snow event. Bare pavement achieved within 12 hours of the end of the snow event.	Winter maintenance quality standards currently under review.
City of Calgary	Downtown bike lanes	Any snow event	24 hours after the snow event	
	All on-street bike lanes	Any snow event	48 hours after the snow event	
	Residential streets	Any snow event. Residential streets are levelled and packed but not cleared to bare pavement.	4-7 days after the snow event	Unknown