

Sidewalk Priority Index

Resolutions:

THAT the City of Greater Sudbury adopts the Sidewalk Priority Index and guidelines as described in the report entitled "Sidewalk Priority Index" for the delivery of the 2018 capital budget, from the General Manager of Growth and Infrastructure, dated August 2, 2017.

AND THAT the City of Greater Sudbury continues to refine the Sidewalk Priority Index and bring forward a report to the Operations Committee, when and if required, outlining any necessary refinements.

Relationship to the Strategic Plan:

This report refers to "Providing quality multimodal transportation alternatives for roads, transit, trails, paths and sidewalks, and connecting neighbourhoods and communities within Greater Sudbury" which is identified in the Strategic Plan under Sustainable Infrastructure.

Report Summary:

This report introduces the Sidewalk Priority Index and provides an overview of how it has been developed. This report also seeks approval to adopt move forward with using the draft Sidewalk Priority Index for the 2018 capital budget and to continue refining the tool.

Financial Implications:

The Sidewalk Priority Index is being developed within existing approved budget and staff complement. Any funding required to install pedestrian facilities over and above what is currently provided for through the Curb/Sidewalk budget or as part of planned capital projects will require supplemental approval from Council within the framework of Council approved Capital Budget Policy.

Background:

The recently updated Transportation Master Plan, adopted by City Council in November 2016, recommends that the City develop a Sidewalk Priority Index (SPI), and provides a series of factors to consider in the creation of this tool. These recommended factors have been taken into consideration in the development of the scoring criteria for the SPI.

Furthermore, in 2010, City Council received the Sustainable Mobility Plan for the City of Greater Sudbury, which was prepared and presented by Rainbow Routes Association in partnership with the City of Greater Sudbury Healthy Community Cabinet. A recommendation of that plan was for the City to move forward with developing a sidewalk priority index to guide new sidewalk construction and the development of a comprehensive pedestrian network in Greater Sudbury.

At this time, a draft version of the SPI is being presented as a supplement to the "Enhanced Sidewalk Winter Maintenance Plan" report on the Operations Committee meeting agenda for August 21, 2017. As will be discussed further in this report, staff recommend that the SPI be used for the delivery of the 2018 capital budget and that a future report be brought forward with staff's final recommendations on the SPI.

Methodology:

The Sidewalk Priority Index has been developed as a result of reviewing best practices and considering the needs of the City's most vulnerable road users - pedestrians. The goal of the SPI is to look at the City's road network as a whole to determine where pedestrians are travelling and where there are gaps in the pedestrian infrastructure to get them to their destinations safely. The SPI tool scores the road network against the warrant with the highest priority locations receiving the highest score.

A review of industry best practices was undertaken to determine how other cities, such as, the City of North Vancouver, City of Victoria and City of Portland developed their own sidewalk selection guidelines.

The Institute of Transportation Engineers (ITE) published a report in 2015 titled "Survey of Guidelines Used to Select Sidewalk Locations" which summarized survey results it collected from its members' current sidewalk policies and warrants, as well as current literature regarding sidewalk warrants. Highlights from this report and other best practices focus on the following areas:

Roadway Characteristics – Roadway characteristics are an important component of determining the highest priority locations for new pedestrian facility installation. Higher scores are given for roads which have greater vehicle volumes, have a higher order planning classification (ie. Local vs. Arterial), have a larger percentage of residential or commercial adjacent land uses and have a higher posted speed limit.

Road User – Enabling pedestrians to walk to their desired location is the basis of the SPI. The safety of pedestrians and specifically the safety of the most vulnerable pedestrians are of high importance. For this reason, roads within a close proximity of elementary/secondary/post secondary schools receive a higher score as well as an additional score for multiple schools within proximity of the road segment under review. Roadways with a history of pedestrian collisions also receive a higher score. Additional points are awarded for roads within proximity of transit routes or transit stops.

Pedestrian Generators – Pedestrian generators are destinations that attract people. Schools, public parks and playgrounds, other sidewalks/walkways/trails and transit stops are all examples of a destination residents may walk to. Again, additional scores are given for areas within proximity to these destinations. For consistency, proximity to schools is scored based on the Sudbury Student Services Consortium's Transportation Eligibility policy.

The proposed SPI warrant is presented in Table 1, below.

Table 1: Sidewalk Priority Index Warrant

Factor	Description	Rating	Weight	Max Score
Traffic Volume (AADT)	< 1000 vpd	0	2.5	10
	1000 - 4999 vpd	2		
	5000 - 7999 vpd	3		
	> 8000 vpd	4		
Planning Classification	Local	0	3.25	13
	Collector/Tertiary Arterial	3		
	Primary/Secondary Arterial	4		
	Provincial Highway	4		
Adjacent Land Uses	Residential/Commercial - 0%	0	1.5	6
	Residential/Commercial - 1-24%	1		
	Residential/Commercial - 25-49%	2		
	Residential/Commercial - 50-74%	3		
	Residential/Commercial - 75-100%	4		
Posted Speed Limit (km/h)	40 km/h or less	0	2	8
	50 km/h	1		
	60 km/h	2		
	70 km/h	3		
	80 km/h	4		
Proximity to Elementary School*	>3.0 km	0	4	16
	2.2 - 3.0 km	1		
	1.6 - 2.2 km	2		
	1.0 - 1.6 km	3		
	≤1.0 km	4		
Proximity to Secondary School/Post Secondary School*	>4.0 km	0	3.5	14
	3.0 - 4.0 km	1		
	2.5 - 3.0 km	2		
	1.7 - 2.5 km	3		
	≤1.6 km	4		
Number of schools within 3.0 km radius	0	0	2	8
	1	1		
	2	2		
	3+	4		
Proximity to Sidewalk/Walkway/Trail System	>3.0 km	0	1	4
	2.0 - 3.0 km	1		
	1.0 - 2.0 km	2		
	0.25 - 1.0 km	3		
	<0.25 km	4		
Proximity to Developed Parks/Public Areas/Playground*	>1.0 km	0	1.25	5
	0.75 - 1.0 km	1		
	0.50 - 0.75 km	2		
	0.25 - 0.50 km	3		
	<0.25 km	4		
Pedestrian Collisions (last 5 years)	No collisions	0	2	8
	1+ collisions	4		
Transit Routes	Not on Transit Route	0	3.5	14
	Segment on transit route	2		
	Segment has 1 or more transit stops	4		

*If segment is within a residential area

Staff applied the SPI to all roadways which the policies of the Official Plan would require a sidewalk to be installed. A sensitivity analysis was then completed for a variety of roadways and scores. In general, staff find that the proposed SPI scores and ranks road segments appropriately.

To complement the warrant, staff recommends the following guidelines:

- Sidewalk construction will be limited to the following Land Use designations, as defined in the Official Plan:
 - Living Area 1
 - Living Area 2
 - Downtown
 - Regional Centre
 - Town Centre
 - Mixed Use Commercial
 - Institutional
 - General Industrial
- Roadways identified in the SPI will have pedestrian facilities constructed, starting with the highest priority locations, under the Curb/Sidewalk capital budget. The 2018 budget outlook has allocated \$500,000 to curb and sidewalk construction. This allocation is used for both new sidewalk as well as sidewalk rehabilitation.
- The ranked list shall be refreshed annually to capture newly constructed sidewalks and new traffic data collected to keep the list up to date.
- Professional judgment shall be used to review the locations identified, or areas not identified, in which special circumstances may or may not warrant a pedestrian facility. For example, constructing sidewalk along roadways with rock cuts may be deemed financially unreasonable if removal of the rock cut is required.

Complementary Initiatives:

Complete Streets

Staff are currently developing a Complete Streets Policy for Greater Sudbury, to be presented to Operations Committee in 2018, which will complement the SPI and provide guidance for determining appropriate pedestrian facilities in all areas of the City, including in both rural and urban settings. When applying the Sidewalk Priority Index, staff will exercise professional judgment and apply a “complete streets” lens to determine the most appropriate pedestrian facility for a given area.

Developmental Review

The private sector also has a role in the construction of new sidewalks. Typically, this is addressed as part of the approval of new draft plans of subdivisions and site plans. Such approvals conform to the policies of the Official Plan, which requires new sidewalks on at least

one side of all local roads and both sides of collector and arterial roads (adjacent to developed lands). At this time, it is recommended that the SPI not be applied to Planning Act approvals. Any updates to the Official Plan's transportation policies will be considered as part of the second phase of the Official Plan Review Process, which is expected to commence later this year.

Refinement and Next Steps:

In scoring the priority of pedestrian facilities, the SPI ranks all road segments in the City where there are currently none and as a result, the SPI has ranked over 4,400 road segments. Staff will continue to refine the SPI to determine an appropriate cut-off score in the ranking at which point any road segment falling below this score will not be considered high priority for dedicated pedestrian facilities.

The SPI provides a prioritized ranking of road segments where a pedestrian facility does not currently exist. While this new tool is called the “sidewalk” priority index, a curb-separated, concrete sidewalk may not always be the most appropriate or feasible infrastructure option to deliver safe pedestrian facilities. In some areas of the community, a paved shoulder, side path or trail may be a more suitable option.

To ensure the long-term success and functionality of the SPI, staff recommends using the SPI for all new capital roads construction. As staff continue to refine the Sidewalk Priority Index, a report will be brought forward to Operations Committee, when and if required, outlining any necessary refinements.

Resources Cited:

City of Greater Sudbury, *Official Plan 2006*,

Accessed online: <https://www.greatersudbury.ca/city-hall/reports-studies-policies-and-plans/official-plan/the-current-op/>

City of Greater Sudbury, *Transportation Master Plan 2016*,

Accessed online: <http://www.greatersudbury.ca/living/roads/draft-transportation-master-plan1/>

City of Portland (Oregon), *Pedestrian Master Plan*, June 1998

City of Victoria (BC), *Pedestrian Master Plan*, July 2008

Institute of Transportation Engineers, *Survey of Guidelines Used to Select Sidewalk Locations*, March 2015

Patterson, Brian (Urban Systems) and Dragana Mitic (City of North Vancouver, BC), *Pedestrian Priority Index: Objectively Assessing Investments in Pedestrian Infrastructure in North Vancouver*, October 2009

Rainbow Routes Association for the City of Greater Sudbury Healthy Community Cabinet, *Sustainable Mobility Plan for the City of Greater Sudbury*, June 2010

Sudbury Student Services Consortium, *Transportation – Eligibility*, June 2010