
Sidewalk Treatment Selection Process

Recommendation

That the report of the General Manager, Transportation & Utilities Department dated June 11, 2018, be received as information.

Topic and Purpose

This report is to provide information on the selection process for sidewalk treatments within the sidewalk preservation program.

Report Highlights

1. Since inception of the Building Better Roads (BBR) initiative, the Administration redeveloped the management and distress rating of the entire sidewalk network in order to better understand sidewalk conditions and allow for effective planning of sidewalk preservation work.
2. It was determined from the sidewalk condition data and treatment triggers that the City of Saskatoon's network has approximately an \$80M backlog of sidewalk preservation work.
3. Administration employs various treatment types following a strategy to make sidewalks safe through maintenance, preservation, and rehabilitation tactics. A guideline is in place to ensure the proper treatment is selected based on the distresses present.
4. Utilizing a methodology that uses triggers for various sidewalk maintenance and replacement treatments allows for a consistent and sustainable approach to sidewalk preservation.

Strategic Goals

This report supports the Strategic Goal of Asset and Financial Sustainability as it was designed with a goal to utilize cost effective means to optimize the life cycle of sidewalk assets. It also supports the Strategic Goal of Moving Around by ensuring safe, maintained, and preserved sidewalks and by improving accessibility and mobility throughout Saskatoon.

Background

In Saskatoon, there are currently two maintenance and repair programs associated with City sidewalks:

1. The Sidewalk Preservation program is prioritized from condition data collected on sidewalks and is planned adjacent to the roadway surfacing program to ensure the entire corridor is preserved where road treatments occur. It also prioritizes the worst location sidewalks in the highest pedestrian potential locations. This planned program will move to lower pedestrian potential locations as the program proceeds. This program covers approximately 6% of the sidewalk network per year since 2015.

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2. The Sidewalk Safety Maintenance program is prioritized through hazard severity inspections of all citizen complaints. This program addresses the entire sidewalk network for safety but does not generally complete work in areas scheduled for rehabilitation within the next 12 months.

This report will focus on the Sidewalk Preservation program to provide a clear understanding of treatment selection criteria that has been developed for the program.

Report

Since inception of the BBR initiative, the Administration redeveloped the management and distress rating of the entire sidewalk network in order to better understand sidewalk conditions and allow for effective planning of sidewalk preservation work. After the updated condition data was collected, treatment triggers were developed for various sidewalk preservation strategies. It was determined from the sidewalk condition data and treatment triggers that the City's network has approximately an \$80M backlog of sidewalk preservation work. This has allowed the City to update funding levels from as low as \$300K in 2011 up to \$5.1M in 2017. The Administration was also able to perform additional sidewalk preservation work outside of the Roadway Surfacing program in the highest pedestrian potential locations. It is estimated that it will take 18 to 20 years to address the sidewalk backlog at current funding levels with current treatment triggers.

The purpose of the Sidewalk Preservation program is to restore and preserve sidewalks in a safe and functional condition for citizens. The City follows a set program and criteria in order to establish panels receiving replacement versus panels receiving maintenance or repair treatment. Since 2014, the Administration has performed minor adjustments to the criteria document each year to continuously improve the consistency of treatment selections. The treatment guideline criteria that has been developed can be seen in Attachment 1.

As shown in the criteria document, various treatments are available and selected depending on the distresses identified on the panel. It would not be sustainable to replace every panel that has a defect; therefore, maintenance, preservation, and rehabilitation strategies all play a role to ensure a functional sidewalk network is maintained. The attached criteria explains how a panel qualifies for a specific treatment depending on the distress present.

The treatments Administration currently employs are identified in the following table:

Strategy	Treatment	Cost
Maintenance/ Make Safe	Trip Ledge Grinding	\$35 to \$40 per panel
	MG-Krete Patching	\$30 to \$35 per panel
Preservation	Crack Sealing	\$30 to \$45 per panel
	Trip Ledge Cutting	\$40 to \$60 per panel
	MG-Krete Overlay	\$225 to \$250 per panel
Rehabilitation	Replacement	\$750 to \$800 per panel

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As shown in the table above, crack filling a panel costs up to \$45 and replacing a panel can cost upwards of \$800. If the City were to adopt an approach to replace all defects on sidewalk panels, there would be an estimated backlog of \$250M. Assuming a defect growth of 2% per year and the same 18 to 20 year timeframe to address the defect backlog, this would require an additional \$13.5M per year for sidewalk preservation. This shows that utilizing a methodology that includes triggers for various sidewalk maintenance and replacement treatments allows for a sustainable approach to sidewalk preservation.

Options to the Recommendation

An option would be to modify treatment triggers or replace all the panels that have a defect. If treatment triggers are modified, an updated backlog value would be calculated and annual sidewalk funding would need to be adjusted to ensure the City can continue to address the entire corridor by treating all sidewalks adjacent to the Roadway Preservation program.

It is not recommended to replace all panels with a defect as funds would not be sufficient to ensure all distressed panels within the road preservation program are addressed, and the backlog and timeframe to eliminate it would both increase considerably.

Other Considerations/Implications

There are no options, public and/or stakeholder involvement, communications, policy, financial, privacy, or CPTED implications or considerations.

Due Date for Follow-up and/or Project Completion

No follow-up required.

Public Notice

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

Attachment

1. 2017 Sidewalk Preservation Repair/Replacement Criteria

Report Approval

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Approved by: Angela Gardiner, Acting General Manager, Transportation & Utilities Department

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