

Improving Accessibility and Reducing Injuries through Snow and Ice Control

EXECUTIVE SUMMARY

Snow and ice control (SNIC) on sidewalks and pathways ensures that Calgarians have options for how they choose to travel during the winter, particularly those citizens who have limited or restricted mobility.

Of the \$39.2 million SNIC budget for the road right-of-way, \$3.4 million – or about 8.6% – is allocated specifically for clearing snow and ice from sidewalk spaces, including those adjacent to parks. This is a much lower level of investment compared to other Canadian cities. This is not unexpected, as the SNIC responsibilities for 90% of the public sidewalks in Calgary fall to residents and business owners.

The City of Calgary's Pedestrian Strategy that was approved by Council in 2016 stated that better winter conditions for walking must be achieved, as snow and ice clearing was identified as a significant barrier to Calgarians. Ice or snow that builds up on sidewalks and pathways creates more than an inconvenience; it can contribute to slips or falls that result in injury. In 2017, Alberta Health Services reported that 303 people in Calgary had been treated for injuries that came from slipping or falling on public sidewalks or streets.

With these concerns and opportunities in mind, Council directed Administration to review the walking-focused snow and ice control policies to improve the safety, accessibility and equity of Calgary's walking network. They specified ten areas of focus for this review.

Administration has developed a 'menu' of options on how to improve, enhance or expand the snow and ice control services for Calgarians going forward. While some of these options focus on improvements through efficiencies, collaboration and partnerships, any adjustments that would expand or accelerate the delivery of SNIC services would require additional investment in both operating and capital dollars.

Administration does not have a specific recommendation for Council on which option or package of options would be best suited for the Calgary area. The cost range of options include:

Level of Service	Operating Costs (Annual)
To clear all sidewalks next to City property within 24 hours	\$3-5 million
To achieve the winter Action Items from the Pedestrian Strategy	\$12-21 million
To provide SNIC for all sidewalks and pathways (Ottawa model)	\$30-40 million

Through One Calgary, Council will have the opportunity to discuss and provide direction around funding emphasis areas ahead of November 2018 budget deliberations at the July and September Strategic Council Meetings. It is expected that after review and deliberation by Council, a decision would be made regarding the selection of options and SNIC service packages to be adopted that would improve pedestrian accessibility during the winter season. Administration recommends this approach and will propose a budget commitment (if identified), for the 2018-2019 SNIC season (and through 2019-2022) to be made at the September Strategic Council meeting.

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ADMINISTRATION RECOMMENDATION:

That the SPC on Transportation and Transit recommends that Council direct Administration to propose a budget commitment through the One Calgary process for the 2018-2019 SNIC season (and through 2019-2022) to be made at the September 2018 Strategic Council meeting.

PREVIOUS COUNCIL DIRECTION / POLICY

On 2018 January 29, Council endorsed a Notice of Motion (C2018-0107) on Improving Accessibility and Reducing Injuries through Snow and Ice Control. Administration was directed to review walking-focused SNIC policies to improve the accessibility, safety and equity of Calgary's walking network, with particular consideration to ten areas of focus (Attachment 1).

Administration's report to Council would contain options to improve walking-focused snow and ice control, including One Calgary budget impacts, returning through the Standing Policy Committee on Transportation and Transit by the end of Q2 2018.

BACKGROUND

In 2016 January, Council approved a pedestrian strategy called **Step Forward** that envisions a safer, more inviting and better maintained realm for pedestrians. This plan set out 49 actions for Administration to take to achieve this goal, to encourage walking more often as a transportation option. Four of these actions are directly related to SNIC on pedestrian facilities:

- Action 30 – Enhance the existing snow and ice control operations to reduce obstructions at transit stops and road crossings in high pedestrian activity areas. Investigate and trial alternative materials and equipment.
- Action 31 – Undertake an assessment of engineered walkways, develop a management plan, amend the bylaw to address public concerns, and identify funding requirements to upgrade and maintain the walkways city wide.
- Action 36 – Increase the snow clearing response time to P1 (within 24 hours of a snow event) on City managed sidewalks in high pedestrian activity areas.
- Action 49 – Investigate ways to encourage property owners to undertake prompt snow and ice clearing from sidewalks, support those not able to carry out snow clearing, and improve bylaw enforcement on non-compliance.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

The alternatives and analysis of the ten areas of focus from the Notice of Motion to improve accessibility and reduce injuries through snow and ice control is contained in the main report (Attachment 2). The following is a summary of the answers to those ten points.

1. Fines for failing to clear snow and ice from sidewalks

The Street Bylaw 20M88 does not currently have a fine associated with failure to remove snow and ice from a sidewalk or pathway. Instead, when a warning notice has been not complied with, the costs of clearing the sidewalk are billed to the adjacent property owner. The minimum charge for corrective action by a City-approved vendor back to a property owner is \$170.00 plus GST. If the property owner fails to pay the invoice, these costs are added to their annual property tax bill.

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Having an option to also issue a ticket with a specified penalty may encourage better compliance in the future, particularly for those properties that repeatedly fail to make the sidewalks safe for others to travel on. Adding a specified penalty of \$250, and an escalating penalty for continued non-compliance, will require an amendment to the bylaw. Issuance of fines will have operational implications for Community Standards enforcement staff. To have these changes in place for the 2018/19 winter season, these amendments would need to come to Council in Q4 2018.

2. Updating SNIC policies and response to be consistent with the Pedestrian Strategy

Guided by the pedestrian strategy and a new “High Priority Areas” map, a menu of options was developed on how to enhance SNIC services, and what the associated cost ranges could be. As final decisions regarding budgets will not occur until Q4 2018, many of these options would have to be phased in over time, leading up to the 2019 or 2020 winter seasons. Full implementation would be dependent upon capacity of labour pool, equipment and external contractors. Capital budget investments, including acquisition of snow clearing units and space to store the new equipment, would not be required for those services that are delivered through external contractors.

Options Presented	Cost Range
A) The City performs SNIC services for all sidewalks, pathways and engineered walkways	\$30-40 million (annual) \$40-50 million (capital)
B.1) The City provides SNIC services for all sidewalks within a High Priority Network	\$25-30 million (annual) \$28-38 million (capital)
B.2) The City provides SNIC services for all sidewalks within the High Pedestrian Use Areas	\$9-14 million (annual) \$12-17 million (capital)
C) Expand inventory of sidewalks and pathways that City clears	\$4-6 million (annual) \$6-8 million (capital)
D) Expand inventory of City-managed sidewalks and pathways within High Priority Network	\$2.5-3.5 million (annual) \$4.5-6.5 million (capital)
E) Provide SNIC services to additional 100 km of pathway only	\$0.5-1 million (annual)
F) Complete all Bus Zones within 24 hours	\$4.5-6.5 million (annual) \$5-7 million (capital)

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3. Identify a High Priority Network for improved City clearing activities

The **Step Forward** strategy included a “High Priority Areas” map which provided a conceptual level identification of areas of the city that are strategically important for creating areas that promote walking. To support the discussion about SNIC service levels, investment levels and a walking-focused policy, two new maps of priority areas were developed, with a specific focus on areas where snow and ice control represents a significant barrier to accessibility (Attachment 3).

Map A in Attachment 2 illustrates the High Use Areas for pedestrians, and includes the Central Business District, Main Streets, Light Rail Train (LRT) stations, Transitways, Bus Rapid Transit (BRT) stations and high-use Bus stops outside of the Central Business District.

Map B in Attachment 2 illustrates the High Priority Areas for pedestrians based on policy and the pedestrian strategy. These areas include Major Activity Centres, Major Institutions (universities, hospitals), senior facilities, and school sites.

4. Increased coordination of snow and ice control between Roads, Transit, Parks and other relevant City departments

Roads, Transit and Parks regularly coordinate work to provide the most efficient SNIC service to the highest priority areas of the city. Since 2012, Parks and Roads have traded SNIC responsibilities on various pathways and sidewalks based on proximity to other assets. This reduces travel time and increases the efficiency of service delivery. Roads also clears 700 priority bus zones, and more than five kilometres of sidewalk at locations identified in consultation with Calgary Neighbourhoods, which improve travel conditions for persons with reduced mobility. This includes certain community hubs, retail centres and senior centres.

Through the One Calgary strategic plan for the 2019-2022 budget, the provision of SNIC services on sidewalks and pathways by Parks, Transit and Roads will be included in the Sidewalks and Pathways service line. This will lead to the establishment of a working group to confirm priority routes and locations, and the development of a single, efficient work plan for delivering SNIC services for pedestrians.

5. Improved timelines for clearing sidewalks and pathways abutting City property that would bring them more in line with expectations on private property owners

The City’s business units (BUs) that have sidewalks outside of residential properties, office buildings or public facilities are most likely to achieve 24-hour timelines, as the snow clearing falls under their facility management contracts. However, the two BUs that are responsible for largest, least occupied parcels currently have a planned SNIC response that is slower – Parks has a 72-hour response rate for their 300 km of sidewalk, and Roads completes all sidewalks in their inventory within seven days.

Option Presented	Cost Range
Clear all sidewalks and pathways adjacent to City property within 24 hours	\$3-5 million (annual)

6. Identification of options to provide winter maintenance for Engineered Walkways

Engineered walkways are thoroughfares that run between private properties to provide pedestrian mobility through neighbourhoods and connect to transit, schools, recreation and shopping centres. However, during the winter season, most of these walkways remain un-shovelled as the

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adjacent property owners are not responsible for these spaces under the Street Bylaw, and these walkways are not currently in The City's SNIC inventory list either. These walkways are important for winter travel at the community level, and a decision is required to ensure SNIC responsibilities for the future are understood and carried out. Three options were developed for consideration.

Options Presented	Cost Range
Assign responsibility to the adjacent Property Owner(s)	Will impact costs to investigate and enforce.
City provide SNIC service for high-priority walkways within 24 hours. Remaining walkways would be assigned to adjacent Property Owners.	\$3-4 million (annual) \$2.5-3.5 million (capital)
City provide SNIC service for all engineered walkways within 24 hours	\$6-8 million (annual) \$5-7 million (capital)

7. Guidelines or rules for the clearing of wheelchair ramps, curb cuts and sidewalk crossings of laneways

There are more than 38,000 wheelchair ramps in the city, and like driveway curb cuts, they are built as part of the sidewalk to make access easier. The responsibility to remove snow and ice from these slopes lies with the adjacent property owner. However, adjacent property owners are not currently responsible for SNIC where the sidewalk crosses a lane or alley. There are over 12,700 laneway crossings city-wide. These sidewalk sections are important for winter travel at the community level, and a decision is required to ensure SNIC responsibilities for the future are understood and carried out. Two options were developed for consideration.

Options Presented	Cost Range
Assign responsibility to the adjacent Property Owner(s)	Will impact impact costs to investigate and enforce.
City to clear laneway crossings within seven days based on a priority system. Property Owner(s) still responsible for wheelchair ramps and curb cuts.	\$12-15 million (annual)

Windrows were also considered in the discussion regarding wheelchair ramps. Windrows are the continuous trails of snow that are left behind by snow plows on the road that can create a barrier to pedestrians, seniors and people with mobility challenges that use these ramps. While it is the adjacent property owner's responsibility to clear the sidewalk of snow and ice, they are not required to clear away snow on the street. Two options to improve accessibility were developed.

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Options Presented	Cost Range
Plow windrows away from high priority wheelchair ramp locations.	\$2-3 million (annual)
Plow windrows away from all wheelchair ramps.	\$13-16 million (annual)

8. Improved 3-1-1 phone, website, and mobile app reporting options

Roads and 3-1-1 Citizen Services have recently updated the *Roads Snow and Ice Control* service request (SR) to improve customer service and employee response. This project was completed in June 2017. Many of the improvements were to address pedestrian-related concerns regarding SNIC, including sidewalks, stairs, overpasses and bridges. 3-1-1 is also working on two projects to further improve citizen's access to SR information: Live Maps to provide real-time information for select request types, and a Worker App to enable updates directly from the field crews who are helping to address the citizen concerns.

9. Identification of winter maintenance funding for relevant City departments whenever new capital and annual network growth projects are implemented

Over the last 15 years, an average of 100 kilometres of sidewalk and more than 30 kilometres of pathway has been added to the network per year. The City has also made significant investments in transit infrastructure over this time, including the West Light Rail Train (LRT) line, new LRT stations in the north-east and north-west, and the physical expansion of every LRT platform to accommodate four-car trains. Historically, the operating budgets of the business units responsible to deliver SNIC services have not factored in network growth. It is important that the operating costs for these assets, including SNIC, are identified at the planning stages for these capital projects, and documented for consideration in the annual budget review.

10. An updated strategy to assist Calgarians who are unable to clear abutting walking infrastructure themselves

Calgary Neighbourhoods (CN) works with Council's Advisory Committee on Accessibility (ACA) and the Age Friendly Steering Committee who advocate for improved snow and ice clearing for sidewalks, pathways and roadways. Improved snow clearing leads to better quality of life for people with disabilities or reduced mobility and helps all individuals to be able to participate in work, leisure and educational opportunities in Calgary, regardless of the season. CN leads two programs that support additional snow clearing assistance in the community. The volunteer-based Snow Angels campaign, which saw 1,152 people sign up for the 2017/18 season, encourages Calgarians to help their neighbours with sidewalk snow shovelling. In addition, the Seniors Home Maintenance Service supports eligible low-income seniors in 400 households with snow removal services. The program also provides eligible seniors with basic yard care, house cleaning, painting and minor repairs.

Next Steps

Administration has developed a 'menu' of options on how to improve, enhance or expand the snow and ice control services for Calgarians going forward. Administration does not have a specific recommendation for Council on which option or package of options would be best suited

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for the Calgary area. However, as the findings and actions contained within the 2016 Pedestrian Strategy were a key component in this review of Calgary's SNIC services, the table below links the specific service-level options that would achieve four of the Action Items from that strategy:

2016 Pedestrian Strategy – Action Items		Operating Costs
Action 30	Enhance the existing SNIC operations to reduce obstructions at transit stops and road crossings in high pedestrian activity areas.	\$4.5-6.5 million for all bus zones in 24 hrs \$2-3 million for clearing windrows from high-priority wheelchair ramp locations
Action 31	Undertake an assessment of engineered walkways and identify alternatives to maintain walkways city wide (bylaw or service).	\$3-4 million for walkways in high-priority areas in 24 hrs, OR; \$6-8 million for all engineered walkways
Action 36	Increase the snow clearing response time to P1 (within 24 hours of a snow event) on City-managed sidewalks in high pedestrian activity areas.	\$2.5-3.5 million for sidewalks and pathways in high-priority areas in 24 hrs
Action 49	Investigate ways to encourage property owners to undertake prompt snow and ice clearing from sidewalks.	No operating costs to amend bylaw and add a penalty of \$250 for non-compliance. May require additional resources for investigation and enforcement.
Total Cost Range		\$12 million to \$21 million

Administration recommends that The City's SNIC Policy be updated to ensure there would be a specific focus on pedestrian SNIC service levels, plans and measures, separate from those used to prioritize the SNIC response for roadways. The direction that Council may give around enhanced or expanded services for the pedestrian realm would inform these policy updates. Policy changes could be completed by Q3 2019.

Several potential amendments to City bylaws have been presented in this report, and the requirement to make any amendments will depend on Council's deliberations around pedestrian SNIC services. To have any changes in penalties or responsibilities come into force for the 2018/19 winter season, Administration would need to be directed to bring such amendments back to Council no later than Q4 2018.

Should there be changes proposed to bylaws, and/or citizen and City responsibility for SNIC for sidewalks, pathways or engineered walkways, detailed communication with all citizens would be a major priority entering the 2018-19 SNIC season. Communications would include, but not be limited to, mailouts to every resident, television and radio commercials, transit advertising, utilizing a campaign aimed at educating citizens about proposed (or approved) changes. This would also be a time sensitive campaign if its target is completion prior to the 2018/19 winter season.

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Stakeholder Engagement, Research and Communication

An online survey was conducted in 2018 February about SNIC for pathways and walkways. The survey used Citizens' View, The City's online panel that encourages citizens to sign up and participate in shaping City of Calgary programs and services through surveys, discussions and engagement activities. A total of 1,303 panelists completed the survey. 65 per cent of the panel travel on public sidewalks and pathways during icy or snowy conditions every day, or nearly every day. However, only 51 per cent of pedestrians, cyclists and other users of sidewalks and pathways believed The City does an adequate job at providing safe conditions. This rating plummeted to 27 per cent when those panellists with mobility challenges were asked.



Administration also met with community groups in Acadia, Forest Lawn, Manchester, East Village and Bridgeland, as well as the Disability Action Hall and Calgary Women's Centre. Questions were asked about their experiences with travelling on sidewalks, pathways and crossing streets during the winter. Community responses are contained in the main report (Attachment 2).

Strategic Alignment

In addition to Council's 2016 Pedestrian Strategy, efforts to improve winter walking conditions also align with the goals and objectives outlined in the Calgary Transportation Plan, Municipal Development Plan and the Council Priorities from Action Plan 2015-2018:

- A City that Moves. Responding to the need for a variety of affordable and efficient transportation choices.
- A Healthy and Green City. Responding to the need to encourage healthy and active lifestyles for all Calgarians.

Social, Environmental, Economic (External)

Improvements to snow and ice control in our pedestrian spaces will provide opportunities for Calgarians to be mobile during the winter season, regardless of age, gender, income or ability. Being mobile not only improves the health of individuals, it promotes independence and fosters social interaction and community awareness. It's also an affordable and inclusive way to travel. A well designed and maintained pedestrian realm promotes year-round access to employment, shopping and services, and adds value to public spaces and to the social fabric that keeps Calgary a competitive and international city built around strong neighborhoods.

Having more citizens walk is a key long-term strategy for improving air quality while reducing Calgary's per capita consumption of energy from fossil fuels, which is the dominant source of greenhouse gas emissions and air pollution at the local level.

Financial Capacity

Current and Future Operating Budget:

While this report does not contain specific recommendations to adjust the current operating budget, the decisions made by Council to expand or accelerate the delivery of SNIC services would require additional investment in operating budgets for the 2019-2022 business plan.

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A comprehensive communications campaign for the 2018/19 winter season would be expected should there be changes proposed to bylaws and/or responsibility for SNIC for sidewalks, pathways or engineered walkways.

Current and Future Capital Budget:

While this report does not contain specific recommendations to adjust the current capital budget, the decisions made by Council to expand or accelerate the delivery of SNIC services would require additional investment in capital budgets for the 2019-2022 business plan.

Risk Assessment

The Pedestrian Strategy contained an ambitious vision and a series of actions for Administration to take to deliver a safe, enjoyable and easy to use network for pedestrians by 2025. Additional investments are required to make improvements to the connectivity and accessibility of this network, particularly during winter conditions. The vision and key results will not be met within the 2025 time-frame without them.

Engineered walkways and laneway crossings are city property, and as such The City has a duty under the Municipal Government Act to consider and assign a standard for maintenance, including snow and ice control, for these locations. Currently, no such standard has been defined which increases the risk of liability to The City and would be the hardest position to defend. To mitigate this risk, Council must assign responsibility for SNIC and set the corresponding level of service. Maintaining the status quo is inadvisable.

REASON(S) FOR RECOMMENDATION(S):

A 'menu' of options on how to improve or expand the snow and ice control services for Calgarians has been developed for Council. The investment options that would be best suited for the Calgary area would need to be decided by Council and balanced against other municipal service priorities and available resources as part of the One Calgary business plan.

It is recommended that the SPC on Transportation and Transit bring this matter forward through One Calgary, as Council will have the opportunity to provide direction around funding emphasis areas.

ATTACHMENT(S)

1. Attachment 1 – Notice of Motion C2018-0107
2. Attachment 2 – Report on Improving Accessibility and Reducing Injuries through Snow and Ice Control
3. Attachment 3 – Maps of the High Priority Network for Pedestrians