Agenda – Council – July 21, 2022

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 5, 2022

Item No. 4 Reporting on the Snow Clearing and Ice Control Policy

STANDING COMMITTEE RECOMMENDATION:

On July 13, 2022, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works, as amended, and submitted the following to Council:

1. That the consolidated Snow Clearing and Ice Control Policy, attached as Appendix B to this report, be approved.

2. That, subject to approval of Recommendation 1, amendments to the Snow Clearing and Ice Control Policy, attached as Appendix C to this report, be approved.

3. That $3,017,400 in additional 2022 capital budget be approved in the Winnipeg Fleet Management Agency and approved debt limit for the agency be increased by the same amount in order to the purchase of 15 additional sidewalk machines and lease them to the Public Works Department.

4. That Council approve new capital external borrowing authority of $3,017,400 for Winnipeg Fleet Management Agency for 2022.

5. That in order to fund the additional operating costs associated with the lease of 15 sidewalk machines, the snow fence setup and the modification to the Snow Route signs, the 2022 operating budget of the Public Works department be increased by $292,500 and the 2023 through 2026 operating budget forecasts be increased by the amounts identified in Appendix A of this report.

6. That $87,334 in operating funds be referred to the 2023 budget process to fund one FTE Garage Mechanic position in accordance with the CUPE Collective Agreement.

7. That the draft by-law to amend the Winter Parking Ban By-law No. 76/2011 and make consequential amendments to other by-laws, attached as Appendix D to this report, be approved.

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 5, 2022

STANDING COMMITTEE RECOMMENDATION (continued):

8. That the Winnipeg Public Service be directed to negotiate one-year contract extensions for sidewalk snow clearing for services beginning October 2022 through April 2023, specifically for the approximate additional 200 km of sidewalk referred to in the report, and that these negotiated contracts be subject to the approval of Council.

9. That the Winnipeg Public Service be directed to provide a verbal report to the Standing Policy Committee in September 2022, after meeting with CUPE representatives, comparing the snow clearing of sidewalks by contractors and the services being delivered by City workers with options to deliver the level of service identified in this report in time for the 2022 snow clearing season.

10. That the Winnipeg Public Service be further directed to provide a verbal report to the Standing Policy Committee in September 2022 with options for public sector delivery of approximately 200 km of sidewalk snow clearing for the 2022 snow clearing season, and that the report explore options including but not limited to the single source purchase of equipment and the hiring of necessary staff in order to deliver the 200 km of sidewalk clearing which has traditionally been provided by the Public Service."

11. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 5, 2022

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On July 13, 2022, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works, with the following amendment:

- That the following new Recommendations 8, 9 and 10 be added and the remaining recommendation be renumbered accordingly:

    "8. That the Winnipeg Public Service be directed to negotiate one-year contract extensions for sidewalk snow clearing for services beginning October 2022 through April 2023, specifically for the approximate additional 200 km of sidewalk referred to in the report, and that these negotiated contracts be subject to the approval of Council.

    9. That the Winnipeg Public Service be directed to provide a verbal report to the Standing Policy Committee in September 2022, after meeting with CUPE representatives, comparing the snow clearing of sidewalks by contractors and the services being delivered by City workers with options to deliver the level of service identified in this report in time for the 2022 snow clearing season.

    10. That the Winnipeg Public Service be further directed to provide a verbal report to the Standing Policy Committee in September 2022 with options for public sector delivery of approximately 200 km of sidewalk snow clearing for the 2022 snow clearing season, and that the report explore options including but not limited to the single source purchase of equipment and the hiring of necessary staff in order to deliver the 200 km of sidewalk clearing which has traditionally been provided by the Public Service."

and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On July 5, 2022, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 5, 2022

DECISION MAKING HISTORY (continued):

COUNCIL DECISION:

On January 13, 2022, Council concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works and adopted the following:

1. That the previous directions of the Standing Policy Committee on Infrastructure Renewal and Public Works on June 10, October 12 and December 1, 2021, together with the Council direction of October 28, 2021, be amended, and the Winnipeg Public Service be directed to report back to the Standing Committee at its July 5, 2022 meeting on the following:

    A. An annual report on process and service improvements to the snow clearing and ice control and spring cleanup programs.

    B. Improvements to current services, including but not limited to:

        i. Improving timelines for when residential snow clearing will occur based on severe snow events through a delegated authority instrument.
        ii. Consideration of delegation of authority outside of the Annual Snow Route Parking Bans.
        iii. Efficacy and costs of plowing sidewalks to the concrete as opposed to snow packed levels.
        iv. Alignment with city policy of plowing sidewalks at the same time as roads on P1s, P2s and the enhanced snow clearing around schools.
        v. Options regarding sanding and salting and sidewalks to enhance walking conditions, ways to improve completion timeframes, as well as treatments made to sidewalks based on complaints.
        vi. Enhanced plowing operations in residential neighbourhoods without sidewalks.

    C. The impact of salt products used for snow and ice control on Winnipeg roads and sidewalks in relation to:

        i. The survival of newly planted trees;
        ii. The health of existing, mature trees.
        iii. Alternative products available for ice control which can replace the use of salt.

Report – Standing Policy Committee on Infrastructure Renewal and Public Works – July 5, 2022

DECISION MAKING HISTORY (continued):

COUNCIL DECISION (continued):

D. A fully revised and updated Snow Clearing and Ice Control Policy which will include all the policy amendments that were approved by Council in the past several years.

2. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

ADMINISTRATIVE REPORT

Title: Reporting on Snow Clearing and Ice Control Policy

Critical Path: Standing Policy Committee on Infrastructure Renewal and Public Works – Executive Policy Committee – Council

AUTHORIZATION

Author	Department Head	CFO	CAO
M. Cantor	J. Berezowsky	C. Kloepfer	M. Jack

EXECUTIVE SUMMARY

In early 2022, the Standing Policy Committee on Infrastructure Renewal and Public Works directed the Public Service to provide a report on a variety of topics as they relate to snow clearing and ice control operations, process and potential service level improvements, as well as an updated Snow Clearing and Ice Control Policy.

To respond to this direction, the Public Service investigated improvements to 10 primary topics (including but not limited to those which it was disposed to report back). A brief summary of each and any associated recommendations contained within this report is outlined below.

1. **Improving residential snow clearing timelines** - details of ongoing service improvements (including adding stiffer financial penalties for contractor non-compliance with timelines, balancing the number of kilometers between each contract snow zones and adding scheduled snow zones) are being presented for information; no recommendation relates to this topic.

2. **Improving sidewalk clearing timelines** - the Public Service is recommending budget be allocated for the purchase of 15 additional snow clearing machines to help meet policy-determined service level targets; additional information on ongoing service improvements such as increasing the proportion of sidewalks cleared by contractor forces is included as information.

3. **Clearing P1/P2 sidewalks at the same time as adjacent roads /enhanced snow clearing around schools** - the Public Service is not recommending any policy changes on this topic; information on and rationale for the current process is included for discussion and information.

4. **Mitigating the impact of snow clearing operations on trees** - the Public Service already employs a number of mitigation strategies and is also planning a trial of an alternative deicer in Fall 2022; no recommendations relate to this topic.

5. **Improving the annual snow fencing program** - the Public Service is developing two plans to support more effective snow fencing operations: a staffing plan to ensure resources are more readily available for installing snow fences by delaying layoffs of employees from other divisions; and, investigating whether it would be warranted to

develop an investment plan to support installation of permanent structures or vegetation rather than temporary snow fences where appropriate. Such an investment plan would be brought forward to Council consideration if it is warranted; no recommendations in this report relate to this topic.

6. **Plowing sidewalks to a concrete surface, rather than the current standard of plowing to a compact surface** – the Public Service is not recommending any policy changes on this topic; information on and rationale for the current process is included for discussion and information.

7. **Clearing sidewalks with plow attachments versus blower attachments** – the Public Service is not recommending any policy changes on this topic; information on and rationale for the current process is included for discussion and information.

8. **Clearing residential streets where no adjacent sidewalk is present to a higher standard than other residential/P3 streets** – the Public Service is not recommending any policy changes on this topic; information on and rationale for the current process is included for discussion and information.

9. **Revising the timeframe and declaration of the Annual Snow Route Parking Ban** – the Public Service is recommending amendments to the bylaw governing the Annual Snow Route Parking Ban that would allow the declaration beginning and ending it to be made at any point from November through April to appropriately adapt to weather conditions.

10. **Adjusting terminology of routes prescribed in the Annual Snow Route Parking Ban** – the Public Service is recommending a change to the bylaw governing the Annual Snow Route Parking Ban that would allow "snow routes" to be referred to as "winter routes" to alleviate confusion over the scope of the ban and its associated operations.

11. **Updating and amending the Snow Clearing and Ice Control Policy** – the Public Service is recommending an update to the Snow Clearing and Ice Control Policy to consolidate older versions, modernize terminology, and align with current operational practice.

RECOMMENDATIONS

1. That the consolidated Snow Clearing and Ice Control Policy, attached as Appendix B to this report, be approved.

2. That, subject to approval of Recommendation 1, amendments to the Snow Clearing and Ice Control Policy, attached as Appendix C to this report, be approved.

3. That $3,017,400 in additional 2022 capital budget be approved in the Winnipeg Fleet Management Agency and approved debt limit for the agency be increased by the same amount in order to the purchase of 15 additional sidewalk machines and lease them to the Public Works Department.

4. That Council approve new capital external borrowing authority of $3,017,400 for Winnipeg Fleet Management Agency for 2022.

5. That in order to fund the additional operating costs associated with the lease of 15 sidewalk machines, the snow fence setup and the modification to the Snow Route signs, the 2022 operating budget of the Public Works department be increased by $292,500 and the 2023 through 2026 operating budget forecasts be increased by the amounts identified in Appendix A of this report.

6. That $87,334 in operating funds be referred to the 2023 budget process to fund one FTE Garage Mechanic position in accordance with the CUPE Collective Agreement.

7. That the draft by-law to amend the Winter Parking Ban By-law No. 76/2011 and make consequential amendments to other by-laws, attached as Appendix D to this report, be approved.

8. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

On January 13, 2022, the Standing Policy Committee on Infrastructure Renewal and Public Works recommended to Council:

1. That the previous directions of the Standing Policy Committee on Infrastructure Renewal and Public Works on June 10, October 12 and December 1, 2021, together with the Council direction of October 28, 2021, be amended, and the Winnipeg Public Service be directed to report back to the Standing Committee at its July 5, 2022 meeting on the following:

    A. An annual report on process and service improvements to the snow clearing and ice control and spring cleanup programs.

    B. Improvements to current services, including but not limited to:

        i. Improving timelines for when residential snow clearing will occur based on severe snow events through a delegated authority instrument.

        ii. Consideration of delegation of authority outside of the Annual Snow Route Parking Bans.

        iii. Efficacy and costs of plowing sidewalks to the concrete as opposed to snow packed levels.

        iv. Alignment with city policy of plowing sidewalks at the same time as roads on P1s, P2s and the enhanced snow clearing around schools.

        v. Options regarding sanding and salting and sidewalks to enhance walking conditions, ways to improve completion timeframes, as well as treatments made to sidewalks based on complaints.

vi. Enhanced plowing operations in residential neighbourhoods without sidewalks.

C. The impact of salt products used for snow and ice control on Winnipeg roads and sidewalks in relation to:

i. The survival of newly planted trees;

ii. The health of existing, mature trees;

iii. Alternative products available for ice control which can replace the use of salt.

D. A fully revised and updated Snow Clearing and Ice Control policy which will include all the policy amendments that were approved by Council in the past several years.

Additionally, Council approval is required to enact a City policy, amend a bylaw, and increase or reallocate budgets and associated debt.

IMPLICATIONS OF THE RECOMMENDATIONS

The implications of recommendations contained within this report are threefold: financial, operational, and as they relate to required communications.

Financially, additional capital and operating budgets will need to be approved in 2022 in order to purchase the 15 sidewalk machines and implement the other initiatives in this report. Once the machines have been purchased, the Public Works Department would be responsible for the on-going leasing costs associated with these machines. As this is an on-going commitment, the 2023 through 2026 operating budget forecasts will require amendment. More detailed information as to the timing and amount of costs is presented in Appendix A of this report.

Operationally, implementing the recommendations would allow the Public Service to better serve its customers and deliver services to a level more closely aligned with policy-directed levels of service.

Communications support would be required to support any operational changes as a result of the recommendations, with work including but not limited to updating annual communications strategies, adding or amending web content, and adjusting public messaging to ensure clarity of bylaw and policy changes.

Approval of “Winter Routes” would assist with clarifying City’s public facing messaging related to the scope of work performed by the Public Works Department related to the Annual and Extended Snow Route parking ban declarations. In addition, it will help reduce public frustration, improve compliance and will better support the rationale for the ban’s start and end dates, as it will be more weather-dependent.

HISTORY/DISCUSSION

To respond to this direction, the Public Service investigated action on 10 primary topics:

1. Improving residential snow clearing timelines;
2. Improving sidewalk clearing timelines;
3. Clearing P1/P2 sidewalks at the same time as adjacent roads /enhanced snow clearing around schools Mitigating the impact of snow clearing operations on trees;
4. Improving the annual snow fencing program;
5. Plowing sidewalks to a concrete surface, rather than the current standard of plowing to a compact surface;
6. Clearing sidewalks with plow attachments versus blower attachments;
7. Clearing residential streets where no adjacent sidewalk is present to a higher standard than other residential/P3 streets;
8. Revising the timeframe and declaration of the Annual Snow Route Parking Ban;
9. Adjusting terminology of routes prescribed in the Annual Snow Route Parking Ban; and
10. Updating and amending the Snow Clearing and Ice Control Policy.

For clarity, the results of these investigations are presented under three headings: service improvements; bylaw amendments; and policy changes.

Service improvements

Improving residential snow clearing timelines

The Public Works Department is in the process of extending 10 contracts for snow clearing services of streets, back lanes, sidewalks and pathways for one mutually agreed-upon one-year extension, as permitted in the conditions of the contract. The contract extensions will provide services beginning in October 2022 and ending in April 2023.

As part of the extension process, the Public Service is looking at amending the extension to have monetary penalties apply to local snow removal work once a contractor does not complete the work within twelve (12) hours of scheduled snow zone. Currently, the monetary penalties apply if the local snow removal work in all scheduled snow zones is not completed within thirty-six (36) hours, from the time of commencement. This change will align penalties to the expected level of service.

Another amendment will balance the number of kilometers between each contract snow zones and add scheduled snow zones in some contract areas in order to reduce the number of kilometers that need to be completed within a 12-hour period. These changes are expected to allow contractors to be more successful in meeting their timelines.

The amendments to the one-year extension will provide the Public Works Department with the opportunity to assess if the changes to the snow zones and more narrow penalties will improve timelines for when residential snow clearing operations are undertaken. The benefit derived by the Department will be incorporated into the terms of future contracts when tendered in 2023.

Improving sidewalk clearing operations

The City delivers snow removal services on approximately 3,001 km of sidewalks, active

transportation pathways and park pathways; approximately 2,490 is delivered by City crews and supplemented by hired hourly equipment and the remaining 511 kilometers being delivered through contracted services.

Throughout the 2021/22 season, the Public Service tracked the time it took to complete each Priority 1, 2 and 3 sidewalk and pathway snow removal operation. This past winter season was a benchmark due to having one of the highest snow accumulations on record, and a total of 14 P1, 14 P2, and nine P3 sidewalk snow removal operations were called. These took an average of 98, 156, and 218 hours to complete respectively (Figure 1).

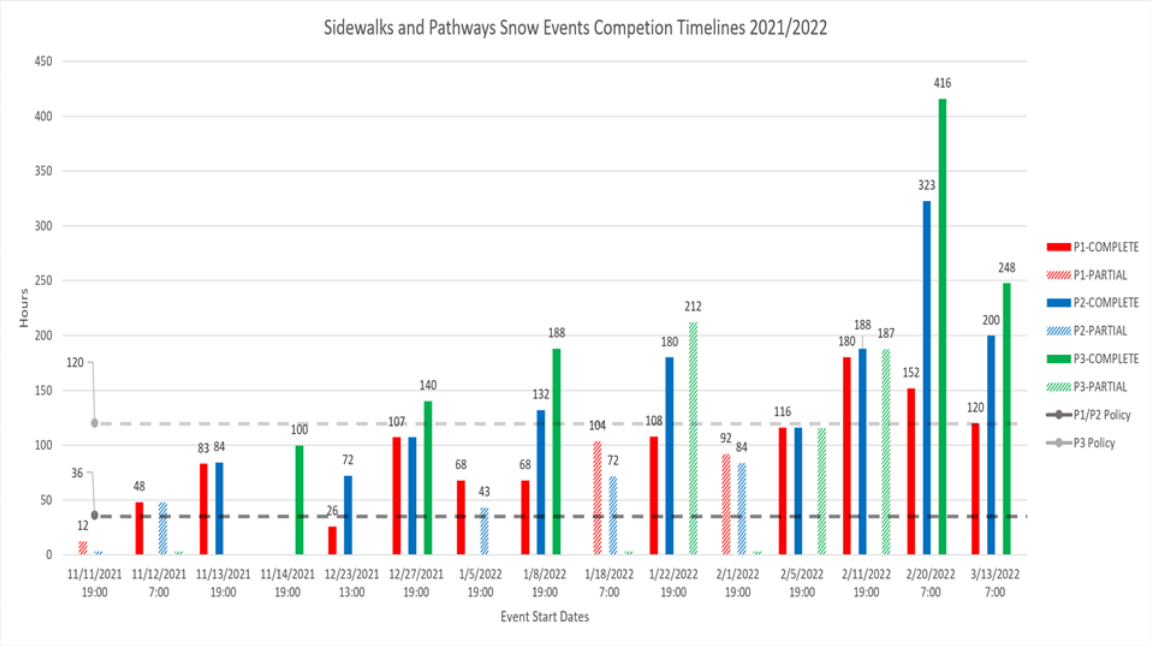


Figure 1: Sidewalk and Pathway Event Completion Timelines

According to the City's Snow Clearing and Ice Control Policy:

- Sidewalks on Priority 1 and 2 streets are to be completed within thirty-six (36) hours following the end of an average storm; and

- sidewalks on Priority III streets are normally completed within five (5) working days following the commencement of work.

According to 2021/22 data, none of the priority level sidewalks or pathways were completed according to the standard set out by the policy. This is due to a combination of factors including the frequency and duration of snow events, internal equipment downtime, and availability of external equipment.

Internally, the Public Service has an inventory of 31 sidewalk snow clearing machines equipped with a blower or plow attachment; these sidewalk machines are also used to tow sanders that spread abrasives on the sidewalks.

The City also relies on a hired hourly equipment tender that provides external services for sidewalk snow clearing machines. Historically, the City has been able to rely on approximately

eight plowing and four sanding machines, hired on an hourly basis, to complement City machines.

Prior to each winter season, all sidewalk machines and attachments undergo a comprehensive inspection to identify required repairs. This preventative service ensures that sidewalk machines are ready to deliver snow clearing service when required operationally.

While performing snow clearing, these machines and the attachments can experience mechanical failures contributing to downtime or the machine becoming unavailable to operate. This downtime can be caused by many factors including: consumable part wear (blades); component failure; warranty recalls; damages caused by snow conditions, sidewalk infrastructure conditions, overhanging trees or other obstacles; and operator error, among others. In addition, attachment downtime directly impacts machine downtime as the attachments are equal to the number of sidewalk machines.

The Public Service is committed to collecting and analyzing detailed data related to downtime and exploring any and all options available to increase productivity and reduce downtime.

The average historical downtime is estimated at approximately 32 percent. This figure was actually 32 percent, 33 percent, and 44 percent in the 2019/20, 2020/21, and 2021/22 seasons, respectively. This fluctuation results in snow clearing timelines being beyond what is mandated by the Council Snow Clearing & Ice Control policy.

The Public Service has identified two changes required to meet the policy-directed level of service: transferring up to 506 km of Priority 1 and 2 sidewalks cleared by City crews to contracted services and purchasing 15 additional sidewalk machines.

The 506 km of Priority 1 and 2 sidewalks selected to be transferred are located on Priority 1 and 2 streets already serviced by contracted services. Having contracted services clear the streets and adjacent sidewalks will improve coordination of snow removal which should lead to an improved level of service.

Out of the 506 km selected to be transferred, to date, the Public Service has agreements in principle with contract service providers to add 217 km of Priority 1 and 2 sidewalks to five contracted areas. The additional 289 km will be included for transfer when the contracts expire and put out for tender.

Transferring 217 km of Priority 1 and 2 sidewalks will be included as part of the process of extending five contracts for snow clearing services of streets, back lanes, sidewalks and pathways for one mutually agreed-upon one-year extension, as permitted in the conditions of the contract.

The additional equipment is required as, despite transferring this portion of Priority 1 and 2 sidewalks and pathways currently cleared by City crews to snow removal contracts, the Public Service still remains without enough equipment to meet Policy timelines.

The additional annual operating costs for the required machines and attachments is set out in Appendix A, which includes an incremental capital lease, operating lease, repairs and maintenance charges to be drawn from the Public Works Operating Budget; and $3,017,400 of additional capital funding (and associated debt) for Winnipeg Fleet Management Agency. The cost of the additional 1.0 FTE mechanic in the Fleet Management Agency to ensure timely

servicing of sidewalk machines and attachments is being recovered from the Public Works department and is included in the annual leasing charges. See Appendix A for cost breakdown.

This purchase would require a total delivery time of approximately 12-13 months. This timeline is dependent on WFMA's internal procurement processes and the increased supply chain delays due to the COVID-19 pandemic. Below is a detailed breakdown of the estimated completion of each stage in the procurement process: (It should be noted that WFMA has a Standing Order Contract 206-2021 for the Supply & Delivery Industrial Side Walk Machines and therefore WFMA is not required to go through the tendering process).

- Award report approvals: 2 weeks
- Factory order: 8-10 months
- Inspection and identification of possible deficiencies: 1-2 weeks

By increasing Priority 1 and 2 sidewalk snow removal by contracted services and the purchase of 15 additional sidewalk machines and attachments, the Public Service will be able to achieve its snow mandate as per the Snow Clearing and Ice Control policy. It is also expected that the proposed changes above could reduce plowing timelines on Priority 3 by as much as 50 percent (from 5 days to 2.5 days).

Although it is expected that some improvements in timelines would be noticed during the 2022/23 winter season due to the transfer of 217 kilometers of Priority 1 and 2 sidewalks and pathways to contractors, the full effect of the proposed changes would not be expected until 2024 when the additional machines are in service.

Clearing P1/P2 sidewalks at the same time as adjacent roads /enhanced snow clearing around schools

The City's Snow Clearing and Ice Control Policy indicates snow removal on sidewalks adjacent to Priority 1 and 2 streets be completed to the same level of service as it relates to timeliness of completion; this means each P1 and P2 street and sidewalk should be completed within 36 hours of an event. While the Public Service strives to deliver services on this timeline, sidewalk machines operate at a slower speed than street machines and therefore it is not feasible to plow the sidewalk at literally the same time as the street. The expectation is that the streets and sidewalks at each P1 and P2 location be plowed within the same 36 hour period (wherever possible), but not necessarily alongside each other in tandem.

As per the policy, select portions of sidewalk adjacent to Priority 3 streets that service a designated route or school are cleared at the same service level as Priority 1 or 2 streets. Again, the expectation is not necessarily that the sidewalks are plowed at the same time as streets; rather that they are plowed within the same (ideally) 36-hour period.

Mitigating the impact of snow clearing operations on trees

Notwithstanding the benefits of chloride-based deicers (such as sodium, magnesium, or calcium chlorides) to driver and pedestrian safety, their extensive use can cause widespread damage to trees and soil conditions along Winnipeg right-of-ways. The chloride component of these deicing salts is highly mobile and can impact the soil, vegetation, groundwater, surface water, and air.

Overall, the direct and indirect effects of salt accumulation on tree health, structure, physiology, and on soil structure contribute to increased pruning and maintenance activities, and ultimately, more frequent tree removal and replacement.

The Public Service already employs a number of strategies and considerations when mitigating the effects of deicing salts on the urban forest including:

- Planting hardy and more urban stress-tolerant tree species on sites known to have higher traffic volumes and deicing salt applications;
- Planting according to the *right tree, right place* principle and considering setback distances for trees;
- Utilizing enhanced planting technologies; and
- Undertaking tree washing and supplemental watering.

Salt Alternative Deicers

The Public Service has partnered with suppliers that have salt-alternative deicers to trial the products and evaluate how they measure up to salt for ice removal. Due to frequent snow events and cold conditions this past winter, the trial use of salt alternative deicers was not performed but is schedule to be initiated in the Fall 2022.

Improving the annual snow fencing program

The Public Service's annual snow fencing program reduces the need to clear blown-in snow on streets, back lanes, sidewalks and pathways at strategic locations.

Operational considerations

In order to benefit from snow fencing, proper design and placement must be considered. The design of the fence considers the capacity of snow that must be held over the winter season, while the placement of the fence must be a minimum distance from the street, sidewalk or pathway so that drifting snow is prevented from encroaching. A snow fence design considers: the fetch area upwind of the street, sidewalk or pathway; average annual snowfall; and amount of relocated precipitation to determine the proper fence height. Just as important to design is the placement of the snow fence. Depending on the wind direction and speed, a snow fence is typically placed 20 to 35 times the height of the fence from the area you are trying to prevent the buildup of snow.

Currently, the Public Service uses 1.2-meter (4-foot) high mesh fences that need to be placed 24-42 meters away from a sidewalk, pathway, street or another area in order to benefit from reducing buildup of snow.

The installation of the snow fences typically starts in early November and takes approximately five weeks to complete. If snow clearing activities are required during installation, resources are diverted from snow fencing.

Process improvements

Following the diversion of crews early in the 2021/22 season due to an early snow event, the Public Service is developing two plans to support more effective operations: a staffing plan to

ensure resources are more readily available for installing snow fences by delaying layoffs of employees from within divisions other than streets maintenance and reviewing locations that could potentially benefit from permanent vegetation, permanent structural or ridge snow fencing. As part of this review, the Public Service will also take into consideration for placement of snow fences where none have historically been provided.

If this investigation indicates locations that could benefit from such structures, the Public Service would then develop a proposed investment plan to support installation of permanent structures or vegetation rather than temporary snow fences where appropriate.

As well, the Public Service will include increasing public awareness of snow fence locations in its annual snow communications planning.

Clearing sidewalks with plow attachments versus blower attachments

A recent review of work accomplished using each a blower attachment and plow attachment indicates that removing snow on sidewalks using a blower requires 60 percent more time. The Public Service will consider whether a future proposed change to the Snow Clearing and Ice Control Policy establishing separate time requirements for plowing and blowing operations is recommended and, if so, present to Council for approval under a separate report.

Plowing sidewalks to a concrete surface, rather than the current standard of plowing to a compact surface

The current Snow Clearing and Ice Control Policy prescribes that all City sidewalks be maintained to a compacted snow surface with one exception; Priority 1 and 2 sidewalks in the Downtown area are maintained to a paved surface whenever conditions allow.

Ice and other hard or dense snow buildup on sidewalks makes plowing to the paved surface nearly impossible using conventional machines; the extreme downward pressure leads to infrastructure and equipment damage. On the contrary, keeping a levelled and compact surface is generally very possible using the City's limited sidewalk machines without causing excessive damage and equipment in ideal conditions.

Clearing residential streets where no adjacent sidewalk is present to a higher standard than other residential/P3 streets

Approximately 50 percent of Winnipeg's residential streets are without sidewalks; on many of these streets, pedestrians, mobility aid users, and cyclists who would otherwise travel (illegally) on the sidewalk use the roadway during the winter months.

In the 2021/22 winter season, the City started receiving "non-vehicular" requests for sanding by pedestrians, mobility aid users and cyclist users. A total of 914 requests were received, of these, 400 were on Priority 3 streets, sidewalks, and pathways. Of the 400, 214 were from pedestrians reporting slippery conditions on residential street roadways.

The total non-vehicular sanding service requests on residential streets reported are listed below.

Priority 3	Pedestrian	Bicycle	Wheelchair
Street	214	3	2
Sidewalk/ Pathways	175	1	5
Total	389	4	7

This data does not indicate a substantial difference in requests for service on streets without sidewalks versus those with sidewalks therefore no additional action is warranted at this time. The Public Service will continue to monitor service requests relating to slippery conditions on streets and sidewalks for significant changes or trends.

Proposed bylaw amendments

Discussed below are two proposed amendments to the Winter Parking Ban By-law. These changes are included in the attached Appendix D – Draft By-law.

Revising the timeframe and declaration of the Annual Snow Route Parking Ban

While the Annual Snow Route Parking Ban facilitates effective snow clearing and ice control, its current term (December 1 to February 28) does not account for everchanging and sometimes unseasonal weather patterns.

The Public Service is recommending the bylaw governing the ban be changed to allow the declaration beginning and ending to be made at any point between November 1 and April 30; this will ensure the ban is called into effect when it is operationally required by weather conditions. It is also recommended the bylaw be adjusted to require a seven-day notification period from the time the ban is declared to when it comes into effect; this would provide sufficient time for more robust communications to the public.

The latter would help reduce public frustration, improve compliance and will better support the rationale for the ban start and end dates, as it will be more weather-dependent. Operationalizing this change would require adjustments to the snow clearing and ice control communication strategy; this has already been discussed with communications staff.

Changing the name of the Annual Snow Route Parking Ban

Both the Annual and Extended Snow Route Parking Bans impact parking on streets designated as snow routes to assist with efficient and effective snow clearing and ice control operations. Annual Snow Route Parking Bans are in place between 2:00 a.m. and 7:00 a.m. during the months of December, January and February each year. In addition, where necessary for snow clearing or ice control operations, the Director can declare an Extended Snow Route Parking Ban for these routes, which means that parking is prohibited between midnight and 7:00 a.m.

In referring to the streets affected by and included in the Annual and Extended Snow Route Parking Bans as *snow routes*, the City has created a public perception that these streets may only be “required” for snow clearing operations during an active snow event. This is not accurate; in fact, in addition to snow clearing activities, ice control operations which are critical to improving driving conditions also take place along these routes throughout the winter months.

The term *snow route* misconstrues the full scope of the City's operations (and the requirement of these streets) and often leads to cars remaining parked when the ban is in effect but no snow event is occurring or expected.

Replacing the term *snow route* with *winter route* could reduce public frustration and improve motorist compliance during periods where Annual and Extended Snow Route Parking Bans are in effect and snow clearing operations are not taking place.

If approved, the Public Service would both develop and implement a public communications strategy and work towards amending the current Snow Route signs, which are regulated by the Province of Manitoba in the Traffic Control Devices Regulation 13/2019 (TCDR). The TCDR includes approved traffic signs and control devices that can be used on roadways across Manitoba, including the City of Winnipeg.

The current Snow Route signs have both an English and French version (MR-92C and MR-92D, respectively), and are shown below:





Subject to Council approval of this Report, the Public Service would initiate discussions with Manitoba Infrastructure's Traffic Engineering Branch to seek approval for the proposed new Winter Route signs. It is noted that the TCDR has not yet been amended since its creation as a result of the Traffic and Transportation Modernization Act (TTMA) in 2019. Based on preliminary discovery discussions, Manitoba Infrastructure has indicated they would support revising the TCDR to match the wording in City's bylaws as recommended in this report if it were to be approved.

It is estimated that approximately 4,700 Snow Route signs would need to be updated with Winter Route designations. The cost to install stickers on existing signage is estimated at $45,000; installation of stickers could be completed before December 2022, subject to the timing of Provincial approval.

The proposed amendments also revise the Winter Parking Ban By-law to allow for ice control operations, in addition to snow removal, as the basis for designating winter routes and for declaring a winter route parking ban.

Updating and amending the Snow Clearing and Ice Control Policy

The City's Snow Clearing and Ice Control policy was originally adopted by Council in 1980 as part of the approval process of that year's Operating Budget. Since then, the Policy has been updated by Council on:

- June 21, 2018
- November 15, 2017
- September 24, 2014
- September 28, 2011
- June 20, 2007
- October 3, 2003
- April 29, 1998
- October 22, 1997
- September 22, 1993
- January 23, 1991
- May 30, 1990
- September 30, 1987

with such updates forming the basis of current practices by the Public Service.

Further to Council's decision on January 13, 2022, directing the Public Service to provide a fully revised and updated Snow Clearing and Ice Control policy, which will include all the policy amendments that were approved by Council in the past several years, the Snow Clearing and Ice Control Policy, attached as Appendix B to this report, provides an up-to-date consolidation of all previous Council decisions using the current City policy template.

In addition to the consolidation of Council decisions, the Public Service recommends that amendments to the Snow Clearing and Ice Control policy, attached as Appendix C to this report, be approved:

- includes the following language in Section 3.3(e)(ii) in response to the Council decision on June 21, 2018, directing the public service to amend the Policy to include the winter re-prioritization of roadways, sidewalks and active transportation pathways identified and approved by Council:

  (ii) *Streets, sidewalks and on-street Active Transportation facilities designated as Active Transportation Priority Routes (P1AT, P2AT, P3AT) in Appendix B will be snow cleared and sanded to the same service level as a Priority 1 street or sidewalk, as described in this Policy, with the following exceptions:*

  (a) Salt or de-icing chemicals will not be applied to streets designated as P2AT and P3AT; and

  (b) For P3AT streets, only the driving lane and sidewalks will be snow cleared in accordance with this section. The rest of the street will be cleared in accordance with its original Priority 3 designation.

- revises the width of snow removal at private crosswalks between the sidewalk and the curb described in Section 3.4(f) *Accessibility Access to Private Property* from 0.7 meters to 1.5 meters to reflect the current practice based on snow clearing equipment used for this service.

In addition, proposed amendments to the Policy update the following out-of-date language to reflect current City terminology since the original Council decisions:

- Reference to “alleys” in the definition of Priority III streets (Section 2.3) has been changed to “back lanes” in order to be consistent with the 2011 consolidation of the Policy and the City of Winnipeg Charter;

- Reference to the “Downtown Square” has been changed to “Downtown” (Section 3.3(a)) to reflect the expansion to the geographical area considered as Downtown as approved by Council June 20, 2007;

- Reference to “Active Transportation trails” has been changed to “Active Transportation pathways” (Section 3.3(e) and (g)) to reflect terminology adopted under the City’s Pedestrian and Cycling Strategies; and

- Reference to “Handi-Transit” has been changed to “Transit Plus” (Section 3.4(g)) to reflect the terminology used by Winnipeg Transit 2017 initiative to choose a more inclusive name.

Debt Strategy

On October 28, 2015, Council adopted a Debt Strategy for Tax Supported, Utilities and total City borrowing.

In addition to the debt implications from this report, this Debt Strategy section has been prepared considering two other reports having debt implications:

- Loan Guarantee for The Convention Centre Corporation
- Award of Contract for the Construction of the North District Police Station at 100 Sinclair St – Tender No. 441-2021B – Project No. 2017-108

Subject to approval of the recommendations of this report, additional borrowing authority of $3,017,400 is required.

$127 million of Tax Supported and $115 million of Utilities borrowing capacity will remain if Council approves the recommendations of all three reports (based on 2022 borrowing estimates).

The impact of this debt financing falls within the debt limits established in the Council Policy as outlined in the table below:

Tax Supported net debt as a percentage of revenue not to exceed	80%
Forecasted peak rate including proposed debt from this report	59.0%
Utilities net debt as a percentage of revenue not to exceed	220%
Forecasted peak rate including proposed debt from this report	105.4%
Total City net debt as a percentage of revenue not to exceed	90%
Forecasted peak rate including proposed debt from this report	77.5%

Tax Supported debt servicing as a percent of revenue not to exceed	10%
Forecasted peak rate including proposed debt from this report	5.4%
Utilities debt servicing as a percent of revenue not to exceed	20%
Forecasted peak rate including proposed debt from this report	9.8%
Total City debt servicing as a percent of revenue not to exceed	11%
Forecasted peak rate including proposed debt from this report	7.5%
Tax Supported Debt per Capita not to exceed	1,500
Forecasted peak rate including proposed debt from this report	1,132
Utilities Debt per Capita not to exceed	1,500
Forecasted peak rate including proposed debt from this report	1,168
Total City Debt per Capita not to exceed	2,800
Forecasted peak rate including proposed debt from this report	2,071

FINANCIAL IMPACT

Financial Impact Statement **Date:** June 13, 2022

Project Name: **First Year of Program** **2022**

Reporting on Snow Clearing and Ice Control Policy

	2022	2023	2024	2025	2026
Capital					
Capital Expenditures Required	$ 3,017,400	$ -	$ -	$ -	$ -
Less: Existing Budgeted Costs	-	-	-	-	-
Additional Capital Budget Required	$ 3,017,400	$ -	$ -	$ -	$ -
Funding Sources:					
Debt - Internal	$ 3,017,400	$ -	$ -	$ -	$ -
Debt - External	-	-	-	-	-
Grants (Enter Description Here)	-	-	-	-	-
Reserves, Equity, Surplus	-	-	-	-	-
Other - Enter Description Here	-	-	-	-	-
Total Funding	$ 3,017,400	$ -	$ -	$ -	$ -
Total Additional Capital Budget Required	$ 3,017,400				
Total Additional Debt Required	$ 3,017,400				
Current Expenditures/Revenues					
Direct Costs	$ 292,500	$ 886,640	$ 1,351,567	$ 1,369,612	$ 1,388,018
Less: Incremental Revenue/Recovery	-	-	-	-	-
Net Cost/(Benefit)	$ 292,500	$ 886,640	$ 1,351,567	$ 1,369,612	$ 1,388,018
Less: Existing Budget Amounts	-	-	-	-	-
Net Budget Adjustment Required	$ 292,500	$ 886,640	$ 1,351,567	$ 1,369,612	$ 1,388,018

Additional Comments: Further detail is provided in Appendix A of this report. The timing of operating expenses in the statement above is dependent on the acquisition date of the sidewalk machines. There is a one year lead time on the purchase of these machines. The above analysis assumes equipment is ordered in Summer 2022, delivered in Summer 2023 and placed into service for Fall 2023. Capital expenditures above will be incurred in the Winnipeg Fleet Management Agency SOA. Operating expenses above represent the impacts on the Public Works Operating budgets. Additional time spent on annual installation of winter snow fencing will add 1.0 FTE to the staff complement of the Public Works department.

J. Ruby, 2022-06-01

J. Ruby, CPA, CA
Manager of Finance and Administration

CONSULTATION

This report has been prepared in consultation with:

- Legal Services (as to legal issues)
- Winnipeg Parking Authority
- Winnipeg Fleet Management Agency
- Urban Forestry Branch

OURWINNIPEG POLICY ALIGNMENT

Sustainable Transportation – 05-2a – Maintenance and Asset Management

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

n/a

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

n/a

SUBMITTED BY

Department: Public Works
Division: Streets Maintenance
Prepared by: Jean-Luc Lambert, P.Eng.
Date: June 13, 2022

Attachments:

Appendix A – Impacts on the Public Works 2022 Operating Budget and Forecasts

Appendix B – Snow Clearing and Ice Control Policy

Appendix C– Amendment to Snow Clearing and Ice Control Policy

Appendix D – Draft By-law