

City of Mississauga
Corporate Report



<p>Date: April 20, 2023</p> <p>To: Chair and Members of Budget Committee</p>	<p>Originator's files:</p>
<p>From: Geoff Wright, P.Eng, MBA, Commissioner of Transportation and Works</p>	<p>Meeting date: May 3, 2023</p>

Subject

Winter Maintenance Program – Additional Service Options

Recommendation

1. That Council provide direction on whether to implement any of the three additional winter maintenance service options:
 - (i) a city-wide residential driveway windrow clearing program;
 - (ii) clearing of secondary sidewalks, and;
 - (iii) enhanced snow removal from bike lanes;
 as outlined in the report dated April 20, 2023 from the Commissioner of Transportation and Works, entitled “Winter Maintenance Program – Additional Service Options” beginning in the 2024/2025 winter season.
2. That Council provide direction on whether to proceed with an expansion to the City’s existing Driveway Windrow Program for either (i) the 2023/2024 winter season only; or (ii) on a permanent basis, as outlined in the report dated April 20, 2023 from the Commissioner of Transportation and Works, entitled “Winter Maintenance Program – Additional Service Options”.
3. That if Council provides direction to proceed with Recommendation #1, in whole or in part as outlined above:
 - (i) that Council approves the associated Operating and Capital Budget increases for 2024;
 - (ii) that Council authorizes Procurement Services to enact Procurement By-law # 0013-2022 to award PRC003735 accordingly, and;
 - (iii) if Council adds the city-wide residential driveway windrow clearing program, staff be directed to report back with suggested revisions to the Parking By-law.

Executive Summary

- In 2020, during consideration of the award of the current winter maintenance contract, Council directed staff to report back in 2023 with updated costs for providing city-wide residential windrow clearing; secondary sidewalk clearing; and enhanced snow removal for bike lanes.
- A Request for Tender for these additional service options has now been completed and the cost to provide all three services is \$16.1M in Operating costs annually, in addition to one-time property acquisition costs of \$16M in the first year.

- The breakdown of these Operating costs on an annual basis is as follows:

Additional Service Option	Annual Operating Cost
City-wide windrow removal	\$11.6 M
Secondary sidewalk clearing	\$3.7 M
Enhanced snow removal for bike lanes	\$0.8 M

- The breakdown of the one-time property acquisition costs is as follows:

Property for Additional Service Option	One-time Property Acquisition Cost
City-wide windrow removal	\$8.0 M
Secondary sidewalk clearing	\$8.0 M

- The City’s current Driveway Windrow Snow Clearing Program had 349 residents enrolled for the 2022/2023 winter season. This Program could be expanded to 750 residents at an annual Operating cost of \$150,000. Expansion of this program is an option for the 2023/2024 season should Council wish to proceed with a City-wide windrow clearing program for the 2024/2025 season; and is also an option for a more permanent program should Council not wish to proceed with a City-wide windrow clearing program.
- Council’s direction is required on which additional winter maintenance service options are to be implemented.

Background

On July 22, 2020, Council considered two reports regarding the City’s winter maintenance contract, the first entitled [“2021 through 2029 Winter Maintenance Contract”](#) dated May 28, 2020, and the second entitled [“Additional Information – 2021 to 2029 Winter Maintenance Contract”](#) dated July 3, 2020, both from the Commissioner of Transportation and Works. Copies of both reports can be found at the links provided.

The first report provided an estimate of the cost to provide winter maintenance for residential sidewalks and windrows on residential roads as \$2.4M and \$10.4M respectively. At that time, Council decided to not proceed with these two additional services, however, did approve the current winter maintenance contract that has just completed its second year of an eight-year term. Council also directed staff to report back in 2023 on (i) residential windrow clearing; (ii) city-wide sidewalk clearing; and (iii) enhanced snow removal for bike lanes.

More recently, at the March 8, 2023 General Committee meeting during the Councillor Enquiries item, questions came up regarding various aspects of the City's winter maintenance program, including introducing a city-wide windrow removal program, and improved services for the 2023/24 winter season.

The purpose of this report is to respond to both the 2020 request for updated costing for providing the noted additional services, as well as provide information in response to the questions that were put forward at the March 8, 2023 General Committee meeting.

Present Status

Council Approved Winter Maintenance Levels of Service

Council has approved levels of service for winter maintenance of priority roads, secondary roads, dead ends, bends, cul-de-sacs, sidewalks, bus stops, pedestrian crossings, park trails, various City facilities such as community centres, as well as snow removal in Business Improvement Areas. The levels of service are provided in **Table 1**:

Table 1: Existing Council Approved Levels of Service for Winter Maintenance

Type of Road	Less than 5 cm of snow	5 to 15 cm of snow	15 to 30 cm of snow	More than 30 cm of snow or back-to-back storms
Major and priority roads, priority sidewalks, bus stops, pedestrian crossings, specific trails	Salted within 12 hours after the end of a snow fall	Plowed and salted within 12 hours after the end of a snow fall	Plowed and salted within 24 hours after the end of a snow fall	Plowed and salted more than 24 hours after the end of a snowfall
Residential and secondary roads	Salted within 24 hours after the end of a snow fall	Plowed and salted within 24 hours after the end of a snow fall	Plowed and salted within 36 hours after the end of a snow fall	Plowed and salted more than 36 hours after the end of a snowfall

Additional key details regarding service levels are as follows:

- Priority roads are cleared to bare pavement. Priority roads consist of major roads and collector routes and are addressed first to ensure that emergency services and the public can safely travel to hospitals, schools and access public transportation systems and work immediately after a winter event.
- Secondary roads are cleared once priority routes have been completed and are cleared to be safe and passable; bare pavement may not be achievable.
- Winter maintenance activities are performed on sidewalks that have been declared a 'priority' sidewalk. Priority sidewalks are located on arterial, residential and industrial collector roads, transit routes; and, on roadways having school, nursing home and hospital frontage.
- Priority sidewalks, bus stops and pedestrian crossings have the same timelines for completion as the priority roads receive.
- Winter maintenance activities are not performed on non-priority (secondary) sidewalks. Residents and businesses are encouraged to clear sidewalks in front of, or adjacent to, their property.
- With the exception of those residents enrolled in the Driveway Windrow Snow Clearing Program, windrows are not cleared.

The winter maintenance program delivered by the Works Operations and Maintenance Division is performed through the use of City staff and contractors. Currently, 7% of the equipment used for winter maintenance is City-owned. Contractors provide 490 pieces of equipment through the City's winter maintenance contract. This number has consistently increased over the past three contracts, as it is not economically efficient for the City to purchase this type of single-use winter equipment as the program grows. This model is consistent with other large municipalities in the Greater Toronto Area.

In summary, the City performs winter maintenance on 5,700 lane kilometres (3,420 lane miles) of road. Of that, approximately 4,100 kilometres (2,460 lane miles) are priority roads and approximately 1,700 kilometres (1,020 lane miles) are secondary roads. The City performs winter maintenance on 1,700 lane kilometres of priority sidewalks, 3,300 MiWay transit stops and 105 kilometres of multi-use trails within the road allowance.

Comments

A Request for Tender was prepared and issued in early 2023 for the provision of additional winter maintenance services – city-wide residential windrow clearing, secondary sidewalk clearing and enhanced snow removal from bike lanes. The results of this tender call, findings of benchmarking with other municipalities and details regarding each service are summarized below.

Staff have completed a comprehensive scan of the following municipalities regarding their windrow and sidewalk clearing winter maintenance activities and related Parking By-laws: Barrie, Brampton, Burlington, Hamilton, London, Markham, Milton, Oakville, Oshawa, Ottawa, Richmond Hill, Toronto, and Vaughan. A summary of this benchmarking exercise is attached as Appendix 1.

Residential Windrow Clearing Program

Current Program

The City's current Driveway Windrow Snow Clearing Program had 349 residents enrolled during the 2022/2023 winter season. For the past five seasons, the numbers have fluctuated slightly with an average enrollment of 271. This program continues to be an option for seniors and people with physical disabilities who would like assistance with clearing their windrows. Those who meet Statistics Canada's low-income criteria are able to receive this service free of charge, whereas those who do not qualify, pay a fee of \$200 per winter season. The [program website](#) indicates a maximum capacity of 300 residents, however, staff have expanded this service during the past few seasons on condition that existing levels of service can be met.

Benchmarking of Windrow Clearing Programs in Other Municipalities

Of the 13 nearby municipalities that were scanned, two municipalities, Richmond Hill and Vaughan, offer a city-wide windrow clearing program; Toronto offers the program to the areas of Etobicoke, North York and Scarborough only; four municipalities namely, Barrie, Hamilton, London, and Ottawa do not offer any type of windrow program; Brampton, Burlington, Markham, Milton, Oakville and Oshawa offer a limited program for eligible residents only.

Of the municipalities that currently provide city-wide windrow clearing services, staff have been in contact with their counterparts in these municipalities to learn from their experience in administering this service. A consistent theme that became apparent was that the provision of this service commonly results in additional service requests and associated workload due to a misunderstanding of the service level and a variety of program characteristics further listed below. For the 2022/2023 winter season, the City of Toronto received a total of approximately 17,000 complaints related to winter maintenance; of those, approximately 3,000 or 18%, were related to windrow clearing concerns.

Considerations of Residential Windrow Clearing Programs

- On-street and lower boulevard parking may prevent the service from being completed;
- Townhomes and homes within cul-de-sacs cannot be serviced as there is no boulevard space available to move the windrow to;
- Waste pickup will hinder and prevent operations from occurring within service levels;
- The level of service will include provision for a minimum of 3.0 m wide opening to be cleared for a vehicle to enter and exit the driveway. With large quantities of snow, driveway openings will be reduced; and,
- Property damage may occur to driveway surfaces and encroachments within the City boulevard.

There is an industry-wide staffing challenge for experienced operators for winter operations. Providing qualified operators for the additional 223 pieces of equipment required for windrow clearing that may only be required to work six or seven times in a winter season, may pose a challenge for the successful contractors.

The City's lower boulevard parking policy that was implemented in 2019 will cause a major conflict in performing the windrow clearing program effectively. With cars parked in the boulevard portion of the driveway, this service may not be able to be provided. This will also increase calls to staff requesting the equipment to return once the car has been moved. The program is not set up to provide an "on call" service.

Updated Costs for City-wide Residential Windrow Clearing Program

Based on information received from the recently offered procurement, the costs for the addition of a city-wide driveway windrow clearing program are:

- Annual operational and standby costs for the additional units of \$11.0M;
- Telematics cost of \$80,000 in 2024 and \$10,000 annually thereafter;
- Additional staffing costs of \$590,000 annually, for four Assistant Supervisors to manage execution and inspection of the operation, as well as address higher service request volumes which are anticipated based on the experience of other municipalities;
- Additional staffing costs of \$392,000 annually, for five additional Parking Enforcement Officers to assist with the enforcement of the Parking By-law. However, it is anticipated that these costs will be offset by increased parking fine revenue, resulting in no net cost; and,
- The Realty Services team has confirmed the estimated cost to purchase additional land to store an estimated 223 pieces of equipment to perform the work is \$8.0M for a 0.81 hectare (2.0 acre) site for efficient equipment deployment.

The proposed level of service for residential windrow clearing is within 4 to 6 hours after the roadway has been plowed. The procurement has been designed to achieve this level of service, similar to the procurement carried out in 2020.

In summary, the inclusion of a city-wide windrow clearing program could be accommodated for in the 2024/2025 winter season, as outlined above, at an increased Operating Budget cost of approximately \$4.2M in 2024, plus a one-time property acquisition cost of \$8.0M; then starting in 2025, an annual Operating Budget cost of \$11.6M.

To put this into perspective, the City's winter maintenance program averages approximately seven plowing events per season. There were six plowing events for the 2022/2023 winter season. This means the cost per plowing event for this service is approximately \$1.9M. This would increase the City's existing winter maintenance contract from \$18.5M to \$22.7M in 2024 and then starting in 2025, \$30.1M operating annually.

Alternative to City-wide Windrow Clearing Program

Another option to assist residents requesting this service is to expand our existing driveway windrow clearing program. As noted above, there are currently 349 residents in the program. This program could be expanded to include up to 750 residents by adding additional equipment from the existing contract. This would require adding five additional contract 4x4 trucks at an annual cost of \$150,000. This alternative could be implemented in one of two ways: first, as a long-term solution to provide a modest increase in the City's current windrow clearing program; or as an interim solution for the 2023/24 winter season, should Council chose to proceed with a city-wide windrow clearing program that would start in the 2024/25 winter season. Implementation for the 2023/2024 winter season would be subject to the existing contractor's ability to provide these vehicles in the short time frame and their ability to adhere to all of the specifications within the existing contract.

Secondary Sidewalk Winter Maintenance Program

Current Program

The City of Mississauga has 2,400 kilometres (1,440 miles) of sidewalks. Of that, 1,700 kilometres (1,020 miles) are designated as priority sidewalks and are included in the City's current winter maintenance program. The remaining 700 km (440 miles) are not cleared by the City and the City depends on adjacent property owners to clear the snow and ice from these sidewalks. Unlike many of the comparator municipalities who do not service all sidewalks, the City of Mississauga does not have a by-law in place, which would require property owners to maintain the adjacent sidewalk in the winter.

The Minimum Maintenance Standards (MMS) Legislation, O. Reg 239/02, sets out the requirements for municipalities to perform maintenance on their assets. This includes setting requirements for winter maintenance and snow clearing of sidewalks. Sidewalks are to be cleared when accumulations reach 8cm of snow within 48 hours. As mentioned above, the existing winter maintenance program only clears priority sidewalks. As a result, the City is not meeting the full requirements of the MMS.

Benchmarking of Sidewalk Winter Maintenance with other Municipalities

Of the 14 nearby municipalities that were scanned, nine municipalities namely, Barrie, Burlington, London, Markham, Oakville, Ottawa, Richmond Hill, Toronto and Vaughan, currently clear all of their sidewalks; five municipalities namely, Brampton, Hamilton, Milton, Mississauga, Oshawa only clear priority sidewalks. This information has been provided in Appendix 1.

Considerations for Secondary Sidewalk Winter Maintenance Programs

The following should also be considered when evaluating the addition of this service:

- Potential increase in claims due to damages to encroachments such as curbs, landscaping and sprinklers;
- Increased call volumes to the Citizen Contact Centre;
- Additional windrows placed on driveways from the sidewalk plows;

- Increased salt use complaints and impact to pets due to new service on secondary sidewalks;
- Increased sod and driveway damage and associated complaints;
- Increased use of salt and pretreated salt (4,000 tonnes annually) and resultant negative environmental impacts to natural areas and watercourses, contrary to the City's Salt Management Plan;
- Purchased land may require rezoning to store equipment and/or material;
- Travel times may increase depending on the location of land used to house equipment; and,
- Requirements to sustain the program as new sidewalks are constructed.

Updated Costs for Secondary Sidewalk Winter Maintenance Program

The procurement completed earlier in 2023 included provision for winter maintenance of the remaining 700 kilometres (420 miles) of secondary sidewalks. Providing this additional service would require an additional 60 pieces of equipment and additional property to store the equipment, as the City's Works yards do not have capacity to safely store any additional vehicles and equipment.

Based on information received from the recently offered procurement, the costs for the clearing of secondary sidewalks are:

- Annual operational and standby costs for the additional units of \$3.0M;
- Additional annual salt costs of \$350,000;
- Telematics cost of \$15,000 in 2024 and \$3,000 annually;
- Additional staffing costs of \$295,000 annually (Two Assistant Supervisors to manage execution and inspection of the operation, as well address higher service request volume due to service expansion); and,
- Additional cost to purchase land for equipment storage of \$8.0M for a 0.81 hectare (2.0 acre) site.

It should be noted that the cost to provide secondary sidewalk winter maintenance is higher than the cost to perform priority sidewalk winter maintenance. This is because sidewalk clearing in densely populated areas can be a complex operation. Residential areas often have more obstacles such as encroachments, which can cause operators to drive slower and may increase the risk of damage to equipment and property.

The proposed level of service for secondary sidewalk clearing is the deployment of equipment near or at the end of the winter event and completion within 24 to 36 hours, depending on the amount of snow accumulation. The current procurement has been designed to achieve this level of service, similar to the procurement carried out in 2020.

In summary, the inclusion of all sidewalks could be accommodated for the 2024/2025 winter season, as outlined above, at an increased Operating Budget cost of approximately \$1.3M in 2024, plus a one-time property acquisition cost of \$8.0M; then starting in 2025, an annual Operating Budget cost of \$3.7M.

Enhanced Bike Lane Snow Removal

The existing winter maintenance contract services 110km of bike lanes located within a roadway. To ensure these lanes are kept clear during the winter season, staff have requested through the current procurement costing to provide equipment to remove snow from these lanes, especially separated bike lanes which are coming online currently and in the years ahead. To provide this service, the results of the procurement indicated the annual operating cost would be \$750,000.

The proposed level of service for enhanced bike lane clearing is a priority and is to be completed within 12 to 36 hours after a winter event, depending on the amount of snow accumulation.

Parking Enforcement Assistance during Winter Events

During every winter maintenance event, parked cars are always a challenge for equipment operators to complete their routes efficiently. The current Parking By-law prohibits parking of vehicles from 2:00 a.m. to 6:00 a.m. year round, however; residents can request a parking consideration to permit parking a car on the street during these times.

At this time, the impacts are only associated with our plowing operations. If Council decides to implement a city-wide residential Driveway Windrow Clearing Program, revisions to the existing Parking By-law will be required to further restrict on-street parking during the winter months, and a subsequent report will be prepared detailing these required changes. A summary of the Parking By-law restrictions related to winter in neighbouring municipalities is included in Appendix 1.

In consultation with our Parking Enforcement team in the Enforcement Division, if this program is added to the winter maintenance program, an additional five Parking Enforcement Officers will be required to facilitate the removal of any vehicles impeding the plowing operation. The annual cost for additional Parking Enforcement Officers is \$392,000, however, it is anticipated that this cost will be offset by the increased parking fine revenue stream, resulting in no net cost.

Financial Impact

The City's current Winter Maintenance contract had a budget of \$18.5M for the 2022/2023 winter season and this contract will end in April 2029. The procurement carried out earlier in 2023 for the three additional services would result in contracts starting in November 2024 and ending April 2029. The incremental Operating Budget costs for the additional winter maintenance services are detailed in **Table 2**:

Table 2: Operating Budget Impact of Additional Winter Maintenance Services

Additional Service Option	2024		2025	
	Increase in Operating Budget Cost compared to 2023	% Tax Increase in 2024 compared to 2023	Increase in Operating Budget Cost compared to 2024	% Tax Increase in 2025 compared to 2024
City-wide windrow removal	\$4.2 M	0.26%	\$7.4 M	0.47%
Secondary sidewalk clearing	\$1.3 M	0.08%	\$2.4 M	0.15%
Enhanced snow removal for bike lanes	\$0.3 M	0.02%	\$0.5 M	0.03%
TOTAL	\$5.8 M	0.36%	\$10.3 M	0.65%

In addition to the Operating Budget impacts outlined in Table 2, there are also property acquisition costs of \$8M for the city-wide driveway windrow clearing program, and \$8M for the secondary sidewalk clearing program. These are both one-time costs that would be incurred in 2024.

Consideration was given to a 'pay for service' funding model and although this model is possible, it is not recommended due to administrative challenges on both the operating division and the Revenue & Taxation Section. Of the municipalities in the GTHA who currently provide this service, none follow the 'pay for service' funding model and all are funded through the broader tax base. The recommendation to fund these programs, if implemented, is through the broader tax base.

The cost to expand the existing Windrow Clearing Program for eligible residents would be \$150,000 annually and could be implemented for the 2023/2024 winter season.

Upon Council direction on which additional winter maintenance services are to be implemented, the appropriate components of Procurement PRC003735 must be awarded to allow for acquisition of the necessary equipment. This will require that the necessary 2024 Operating and Capital budgets be pre-approved to allow for both the award of the contract and the acquisition of the required property. These budget impacts will then be incorporated through the 2024 Business Plan and Budgeting process and the incremental pressures to the tax rate will be highlighted.

Conclusion

As directed by Council at its meeting on July 22, 2020, staff have revisited the provision of additional winter maintenance services for city-wide residential windrow clearing, secondary sidewalk clearing and enhanced snow removal from bike lanes. Based on the results of a procurement completed earlier in 2023, the proposed cost of each service is summarized in this report. In addition to the contract costs, additional staff, equipment, material resources and yard capacity will be required to provide these additional winter maintenance services.

Staff are seeking Council direction on the implementation of the additional winter maintenance service options.

Attachments

Appendix 1: Municipal Scan of Winter Maintenance Programs



Geoff Wright, P.Eng, MBA, Commissioner of Transportation and Works

Prepared by: Scott Holmes, C.E.T., Senior Manager, Works Administration, Operations and Maintenance