

City of Mississauga
Corporate Report



Date: 2019/06/21

To: Chair and Members of Budget Committee

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

Originator's files:

Meeting date:
 2019/06/26

Subject

Winter Maintenance Service Level Improvements

Recommendation

1. That Budget Committee provide direction on increased winter maintenance service level changes for the 2019/2020 winter season, effective November 1, 2019, as outlined in the report from the Commissioner of Transportation and Works dated June 21, 2019 related to:
 - a) pedestrian accessibility at bus stops and on priority sidewalks; and
 - b) winter maintenance of bike lanes on the roadway.

2. That should Budget Committee approve increased winter maintenance service levels for pedestrian accessibility at bus stops and on priority sidewalks, that:
 - a) the gross budget for cost centre Bus Stop Clearing and Sanding (#24270) be increased by \$900,000, funded from the Winter Maintenance Reserve (#30120), with a net budget impact of \$0 for 2019;
 - b) this service level improvement be incorporated into the Transportation and Works Department 2020 Business Plan and Budget;
 - c) the Purchasing Agent be authorized to increase the existing contracts for Winter Maintenance (issued pursuant to Procurement No. FA.49.324-14); and,
 - d) that all necessary by-laws be enacted.

3. That should Budget Committee approve increased winter maintenance service levels for winter maintenance of bike lanes on the roadway, that:
 - a) the gross budget for cost centre Bus Stop Clearing and Sanding (#24230) be increased by \$2,100,000, funded from the Winter Maintenance Reserve (#30120), with a net budget impact of \$0 for 2019;
 - b) this service level improvement be incorporated in the Transportation and Works Department 2020 Business Plan and Budget;
 - c) the Purchasing Agent be authorized to increase the existing contracts for Winter Maintenance (issued pursuant to Procurement No. FA.49.324-14);

- d) that staff report back to General Committee in September 2019 with additional capital cost information related to increased snow storage requirements; and,
e) that all necessary by-laws be enacted.
4. That staff report back to General Committee on the results of the procurement for the new Winter Maintenance contract, including recommendations regarding winter maintenance service levels over the duration of the new contract, as outlined in the report from the Commissioner of Transportation and Works, dated June 21, 2019 and entitled "*Winter Maintenance Service Level Improvements*".

Report Highlights

- Staff were requested to provide further information on service level increases to the following winter maintenance items:
 - pedestrian accessibility at bus stops and on priority sidewalks;
 - clearing of secondary sidewalks;
 - winter maintenance of bike lanes on the roadway; and,
 - clearing of windrows on secondary roads.
- The City's existing Winter Maintenance Contract has completed the fifth of seven years and expires in April of 2021. Staff have commenced work on the new contract. The new contract is targeted to be awarded in the summer of 2020 and would commence in the fall of 2021 for the 2021/2022 winter season.
- Increased service levels to improve winter maintenance for pedestrian accessibility at bus stops and on priority sidewalks can be implemented for November 1, 2019, subject to the necessary operating funding being approved. The operating cost increase for this service level improvement is \$2.2M annually. In 2019 the operating cost would be \$0.9M funded from the Winter Maintenance Reserve with a net budget impact of \$0 for 2019.
- Increased service levels for enhanced winter maintenance on bike lanes in the roadway can be implemented for November 1, 2019, subject to the necessary operating funding being approved. The operating cost increase for this service level improvement is \$5.2M annually. In 2019 the operating cost would be \$2.1M funded from the Winter Maintenance Reserve with a net budget impact of \$0 for 2019. Additional snow storage space is required and staff will report back in September 2019 with additional capital cost information to provide this additional capacity.
- Based on further assessment, it is not feasible to implement new winter maintenance service levels on secondary sidewalks and clearing of windrows on secondary roads for November 1, 2019.

Background

At its meeting of June 19, 2019 Council approved the following recommendations:

“GC-0359-2019

That the deputation by Mickey Frost, Director, Works Operations and Maintenance, on Revisions to Minimum Maintenance Standards for Highways and Winter Maintenance Pressures be received.

GC-0361-2019

That the report from the Commissioner of Transportation and Works, dated May 27, 2019 and entitled “Revisions to Minimum Maintenance Standards for Highways (Ontario Regulation 239/02)”, be received for information.

GC-0362-2019

That the report from the Commissioner of Transportation and Works, dated May 29, 2019 and entitled “Winter Maintenance Pressures” be received and referred to staff to report back to Budget Committee on:

- a) Secondary Sidewalk Program*
- b) Enhanced Bus Stop and Sidewalk Program*
- c) City-Wide Windrow Program*
- d) Priority bike routes”*

The purpose of this report is to respond to GC-0362-2019. Attached to this report as Appendices 1 and 2, respectively, are copies of the reports from the Commissioner of Transportation and Works entitled “Revisions to Minimum Maintenance Standards for Highways (Ontario Regulation 239/02)” and “Winter Maintenance Pressures”.

Comments

This report provides further information on increasing the following winter maintenance service levels in terms of operating and capital costs, feasibility to implement in advance of the expiry of the City’s existing Winter Maintenance Contract and next steps:

- Pedestrian Accessibility at bus stops and on priority sidewalks
- Winter maintenance of bike lanes on the roadway
- Winter Maintenance of secondary (residential sidewalks)
- Clearing of windrows on secondary (residential) roads

The City’s existing Winter Maintenance Contract has completed the fifth of seven years and expires in April of 2021. Staff have commenced work on the terms of reference for the new contract. The new contract is targeted to be awarded in the summer of 2020 and would commence in the fall of 2021 for the 2021/2022 winter season.

Pedestrian Accessibility at Bus Stops and on Priority Sidewalks:

Existing service levels have bus stops and sidewalks on priority roads cleared after winter maintenance activities on priority roads. All bus stops are located on priority roads.

This service level increase would provide for winter maintenance activities on bus stops and sidewalks on priority roads earlier and in concert with priority roads. This would enhance access for transit and sidewalk use.

The operating cost increase for this service level increase is \$2.2M annually. In 2019, the operating cost would be \$0.9M funded from the Winter Maintenance Reserve with a net budget impact of \$0 for 2019.

The additional funding for this service level enhancement is for increased use of existing city staff and contractor resources, as well as material (salt, pretreated salt and brine), to perform additional passes during a winter event to clear bus stops and priority sidewalks quicker. No additional equipment or snow storage capacity is required to implement this service improvement.

Winter Maintenance of Bike Lanes on the Roadway:

Bike lanes are salted and cleared of snow and ice as part of winter maintenance activities on priority roads. However, snow and ice tends to re-accumulate in bike lanes as a result of a lack of available snow storage space and freeze/thaw cycles. Enhanced service levels can be provided with snow removal from bike lanes.

The operating cost increase for this service level increase is \$5.2M annually. In 2019 the operating cost would be \$2.1M funded from the Winter Maintenance Reserve with a net budget impact of \$0 for 2019.

This service can be provided using existing city and contractor equipment for snow removal. The additional cost is for increased use of existing city staff and contractor resources to perform this additional work. However, additional snow storage space is required.

There are four snow storage facilities located in the City of Mississauga: West Credit Avenue, Mississauga Valley Community Centre, Dunton Athletic Fields parking lots and Clarkson yard. Snow removal is performed when snow can no longer be stored on walkways, at curbside, in Business Improvement Areas, on bridge decks and at major intersections.

Should Budget Committee provide direction to implement this service level increase for November 1, 2019, staff will report to General Committee in September 2019 on where additional snow storage space will be provided and capital cost implications.

Winter Maintenance of Secondary Sidewalks:

The City of Mississauga does not perform winter maintenance on secondary sidewalks. Secondary sidewalks account for 700 kilometers (approximately 400 miles) of the City's existing sidewalk network of 2,400 kilometers (approximately 1,500 miles).

In order to add the remaining 700 kilometers (approximately 400 miles) of sidewalks into the winter maintenance program, an additional 92 pieces of equipment would be required. Since the General Committee meeting of June 12, 2019, staff have consulted with the existing winter maintenance contractors and have confirmed that they cannot source and supply the required equipment for a November 1, 2019 implementation date. Further, the contractors have indicated that even if the required equipment could be sourced, it is not financially viable for them to acquire equipment and use it for the remaining two years of the existing Winter Maintenance Contract.

Issuing a new request for tender (RFT) for the winter maintenance of secondary sidewalks now, in advance of the expiry of the current winter maintenance contract, is not recommended as staff anticipate price escalation when not part of a larger RFT for winter maintenance and for a shorter term. Further, this is a complex procurement that could not be successfully completed by staff for a November 1, 2019 service implementation date.

Temporary land costs for a location to store the additional equipment would be required until additional yard capacity is available. A 0.81 hectare (approximately two acres) site is estimated with a potential acquisition cost of \$2.8M if purchased (or \$250K annually if leased).

Staff from Works Operations and Maintenance have partnered with staff from Realty Services, and Parks, Forestry and Environment to source appropriate additional space for vehicle and equipment storage. Realty Services staff have confirmed that the process for the City to lease or purchase property takes approximately 12 to 24 months. This timeline does not align with implementing a November 1, 2019 start date for secondary sidewalk snow clearing. Staff are working to determine if equipment storage for secondary sidewalk snow clearing can be accommodated on existing City-owned property. This review is ongoing. Any potential site may also need to be lighted, fenced and paved at an estimated capital cost of \$500K.

This service level increase also requires additional staffing (one assistant supervisor in each of the four yards to manage service delivery and inspection of the operations, as well as to address higher service request volumes).

The increased annual operating cost to provide secondary sidewalk snow clearing is approximately \$2.7M annually. Given the above information, staff recommend that the new winter maintenance contract include provisional items for winter maintenance on secondary sidewalks. In the meantime, staff will continue to source appropriate space should this service be provided in the future.

Clearing of Windrows on Secondary Roads:

Since the General Committee meeting of June 12, 2019, staff have further consulted with our municipal counterparts at the cities of Toronto and Vaughan to discuss the type of vehicles and equipment utilized for residential windrow clearing. Staff have confirmed that the specialized equipment required for windrow clearing is not provided by any of the contractors in the current winter maintenance contract. As a result, staff are required to issue a RFT to provide this service. Given the complexity of this new RFT, as well as the complexity of planning this service, it is not feasible to meet a November 1, 2019 implementation date.

Temporary land costs for a location to store the new equipment would be required until additional yard capacity is available. A 0.81 hectare (approximately two acres) site is estimated with a potential acquisition cost of \$2.8M if purchased (or \$250K annually if leased). The temporary land may also need to be lighted, fenced and paved at an estimated capital cost of \$0.5M.

This service level increase also requires additional staffing (one assistant supervisor in each of the four yards to manage service delivery and inspection of the operations, as well as to address higher service request volume due to expansion).

Further, windrows on all of the driveways on secondary roads would not be feasible to clear, given the close proximity of some of the driveways to each other on secondary roads and the lack of space to store snow between driveways on the road. In particular, this is common for townhouses that front directly onto secondary roads. The inability of the City to clear windrows on driveways located on secondary roads that are in close proximity to each other is similar to the experience of other municipalities who clear windrows on secondary roads.

The increased annual operating cost to provide windrow removal is approximately \$5.6M annually. Given the above information, staff recommend that the new winter maintenance contract include provisional items for residential windrow clearing. In the meantime, staff will continue to source appropriate space should this service be provided in the future.

Financial Impact

This report is requesting Budget Committee provide direction on implementing enhanced winter maintenance service levels starting November 1, 2019 on:

- pedestrian accessibility at bus stops and on priority sidewalks; and,
- winter maintenance of bike lanes on the roadway.

Improved winter maintenance for pedestrian accessibility at bus stops and on priority sidewalks would result in an operating cost of \$2.2M annually. In 2019, the operating cost would be \$0.9M funded from the Winter Maintenance Reserve (#30120) with a net budget impact of \$0 for 2019. This Reserve has a current balance of \$12.1M and a target balance of \$7.3M and thus can accommodate a drawdown to fund the 2019 cost of this option. The annualized impact of this service level change (\$2.2M), if approved, would be included in the Transportation and Works Department 2020 Business Plan and Budget. This represents a pressure of 0.4% on the annual budget, or \$7.40 on the average annual residential property assessed at \$645,000.

Improved winter maintenance on bike lanes on the roadway would result in an operating cost of \$5.2M annually. In 2019, the operating cost would be \$2.1M funded from the Winter Maintenance Reserve (#30120) with a net budget impact of \$0 for 2019. This Reserve has a current balance of \$12.1M and a target balance of \$7.3M and thus can accommodate a drawdown to fund the 2019 cost of this option. The annualized impact of this service level change (\$5.2M), if approved, would be included in the Transportation and Works Department 2020 Business Plan and Budget. This represents a pressure of 1.0% on the annual budget, or \$18.50 on the average annual residential property assessed at \$645,000. As described in the Comments section, additional snow storage space is required and staff will report to General Committee in September 2019 on where additional snow storage space will be provided and capital costs implications.

The other two options (secondary sidewalks and windrow removal) are not feasible for a November 1, 2019 start and are recommended to be included in the new winter maintenance contract as provisional items for a potential November 1, 2021 start.

Improved winter maintenance for secondary sidewalks has an estimated annualized operating cost of \$2.7M with four additional FTE's required. This represents a pressure of 0.5% on the annual budget or \$9.25 on a similar average residential property. Temporary land costs would also be required until additional yard capacity is available and would be requested through the tax-capital Reserve Fund.

Improved winter maintenance for clearing windrows on secondary roads has an estimated annualized operating cost of \$5.6M with four additional FTE's required. This represents a pressure of 1.1% on the annual budget or \$20.35 on a similar average residential property. Temporary land costs would also be required until additional yard capacity is available and would be requested through the tax-capital Reserve Fund.

The Winter Maintenance Reserve has a target of 33 per cent of the last five-year average of winter maintenance expenditures. The target is \$7.3M compared to the actual balance of \$12.1M. The budget is established based upon an average winter utilizing contract rates in effect for that season. As can be seen in Appendix 3, the reserve fund has not been used in the past five years as the Winter Maintenance program has achieved surpluses ranging from \$302,514 in 2016 to \$3.3M in 2015. 2019 year-to-date saw significant winter weather events, which is resulting in a potential year-to-date deficit of \$1.4M. The excess in the reserve, with Council approval, could also be used to provide for other significant weather events such as flooding and windstorms.

Conclusion

This report to Budget Committee is in response to General Committee's direction to staff to provide further information on service level increases for the following winter maintenance items:

- pedestrian accessibility at bus stops and on priority sidewalks;
- winter maintenance of bike lanes on the roadway;
- winter maintenance of secondary sidewalks; and,
- clearing of windrows on secondary roads.

Enhanced winter maintenance service levels to improve pedestrian accessibility at bus stops and on priority sidewalks, as well as enhanced winter maintenance of bike lanes on the roadway, can be implemented for November 1, 2019, subject to the necessary operating budget funding being approved.

Additional snow storage space will be required for enhanced winter maintenance on bike lanes on the roadway and if Budget Committee provides direction to increase this service level, staff will report back to General Committee in September 2019 on where additional snow storage space will be provided and capital cost implications.

It is not feasible to implement winter maintenance on secondary sidewalks and clearing of windrows on secondary roads for November 1, 2019. As a result, staff recommend that the new winter maintenance contract include provisional items for both of these service level improvements for future consideration by Council.

Attachments

- Appendix 1: Copy of the report from the Commissioner of Transportation and Works, dated May 27, 2019 entitled "Revisions to Minimum Maintenance Standards for Highways (Ontario Regulation 23902)"
- Appendix 2: Copy of the report from the Commissioner of Transportation and Works, dated May 29, 2019 entitled "Winter Maintenance Pressures"
- Appendix 3: Winter Maintenance Program Costs (2015-2019)



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

Prepared by: Mickey Frost, HBA, CPA, CGA, MPA, Director of Works Operations and Maintenance

City of Mississauga
Corporate Report



Date: 2019/05/27

To: Chair and Members of General Committee

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

Originator's files:

Meeting date:
2019/06/12

Subject

Revisions to Minimum Maintenance Standards for Highways (Ontario Regulation 239/02)

Recommendation

That the report from the Commissioner of Transportation and Works, dated May 27, 2019 and entitled "Revisions to Minimum Maintenance Standards for Highways (Ontario Regulation 239/02)", be received for information.

Report Highlights

- The City's levels of service have traditionally met or exceeded many of the standards set out in the Minimum Maintenance Standards for Municipal Highways (Ontario Regulation 239/02) (MMS).
- On May 2, 2018 the Government of Ontario approved changes to the MMS in a number of key areas, namely winter maintenance of all sidewalks, greater inspection standards for sidewalks, winter maintenance of bicycle lanes and a new significant weather event declaration protocol.
- These changes were made effective on May 3, 2018.
- The City has a duty to maintain municipal roadways, including sidewalks in accordance with the *Municipal Act, 2001*. Due to recent amendments, the MMS now specifies sidewalk service levels, particularly in the area of winter maintenance, which the City is not presently meeting.

Background

On May 2, 2018 the Government of Ontario approved changes to the MMS in a number of key areas, namely:

- winter maintenance of sidewalks;
- inspection standards for sidewalks;
- winter maintenance of bicycle lanes; and,
- declaration of a significant weather event.

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These changes were made effective on May 3, 2018.

The MMS are reviewed by the Province every five years by a group led by the Ontario Good Roads Association (OGRA). Staff from a number of Ontario municipalities, the Ministry of Transportation, insurance carriers and lawyers were involved in the consultation process between the spring of 2015 and the fall of 2017.

Based on information shared by the Province during the consultation process, municipalities were expecting a “grace period” to plan and marshal resources in advance of the revisions taking effect; however, this was not the case due to the timing of the 2018 provincial election. It should be noted that one of the municipal representatives involved in the review is now employed with the City, and continues to provide support to the Department regarding the MMS changes and other road maintenance related matters.

The MMS are not mandatory, but they do provide the standard of care which, when met, satisfies a municipality’s duty to maintain a highway in a “state of repair” and provides a defense for municipalities against law suits and risk management claims. The City’s levels of service have traditionally met or exceeded many of the standards set out in the MMS.

Comments

Summary of Changes

The following summarizes the changes to the MMS:

- *New Winter Maintenance Standards for Sidewalks*

The MMS now includes a standard for sidewalk winter maintenance. The regulation states that:

“The standard for addressing snow accumulation on a sidewalk after the snow accumulation has ended is:

a) To reduce the snow to a depth less than or equal to eight centimetres within 48 hours; and

b) To provide a minimum sidewalk width of 1 metre. O. Reg. 366/18, s.15.”

Municipalities are under a duty to maintain all highways, including all sidewalks, in a “state of repair” pursuant to s. 44(1) of the *Municipal Act, 2001*. Currently, the City maintains priority sidewalks only. This accounts for approximately 1,700 kilometres (1,100 miles) out of a total of 2,400 kilometres (1,500 miles) of sidewalk. The remaining 700 kilometres (400 miles) of secondary sidewalks currently do not receive winter maintenance.

Staff are providing updated information on the cost to perform winter maintenance on secondary sidewalks in a separate report to General Committee, also being considered at its meeting of June 12, 2019.

- *New Inspection Standards for the Area Adjacent to the Sidewalk*

As outlined in Section 16.2 of the MMS, the area 45 centimetres (17.8 inches) on either side of the sidewalk should be inspected for encroachments once per calendar year. If the municipality identifies an encroachment that is highly unusual given its character and location, or constitutes a significant hazard to pedestrians, it must be treated within 28 days of making this determination to be considered in a state of repair. This is a new inspection standard for the MMS.

The City's sidewalk inspections are undertaken on an annual basis by the Works Operations and Maintenance Division's Technical Services section. The City's current sidewalk inspection program does not include the area immediately adjacent to the sidewalk.

The new standard may be incorporated into the current sidewalk inspection program without impacting staffing levels. However, there may be administrative and operational impacts related to addressing hazards given the various boulevard users (i.e. utilities, Region of Peel, City and residential/commercial/industrial encroachments).

- *New Winter Maintenance Standards for Bicycle Lanes*

Prior to the changes to the MMS, there were no MMS standards for winter maintenance of bicycle lanes. The City has cleared on-street bicycle lanes on priority roads as those roads are cleared. The new MMS provides a definition of "bicycle lane" and section 4.2 of the regulation outlines specific winter maintenance standards.

Under the MMS, a "bicycle lane" is defined as:

***"(a) a portion of a roadway that has been designated by pavement markings or signage for the preferential or exclusive use of cyclists, or
(b) a portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer."***

Further, multi-use trails and bike paths are not considered bicycle lanes for the purposes of the MMS.

As a result, the City's Council-approved level of service for major/priority roads meets the new requirements for winter maintenance on bike lanes in the new MMS.

- *Significant Weather Event*

The new MMS includes a standard that allows municipalities to declare a “Significant Weather Event”. This allows municipalities to deploy in a timely manner during severe winter events and provides a level of reasonable protection against legal claims for the duration of the declaration. Roads and sidewalks are considered to be in “a state of repair” during the declaration and municipal and/or MMS service levels are deferred until after the end of both the event and declaration and resource deployment.

This change allows municipalities to effectively marshal resources to respond to significant winter weather events.

Standards for declaring a significant weather event have also been added to the MMS.

For instance, Section 16.4 of the regulation states:

“(1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on sidewalks until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and***
- (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on sidewalks starting from the time that the municipality deems appropriate to do so.”***

The regulation also outlines a requirement to communicate the declaration of a significant weather event to the public. The City has developed a protocol for the declaration and communication of a significant weather event this past winter season, which includes advising the Mayor and Members of Council when a significant weather event has been declared and advising the public through social media.

Key Considerations

The City has a duty to maintain municipal roadways, including sidewalks in accordance with the *Municipal Act, 2001*. Due to recent amendments, the MMS now specifies sidewalk service levels, particularly in the area of winter maintenance, which the City is not presently meeting.

The MMS are not mandatory, but they do provide a standard of care that must be met to satisfy a municipality’s duty to maintain a highway in a “state of repair”. When the MMS are met, they provide a possible defense for municipalities against law suits and risk management claims. However, municipalities can have service levels that differ from the MMS. A copy of the MMS has been attached as Appendix 1.

The City continues to be at risk for claims on sidewalks that do not receive winter maintenance.

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However, this level of risk appears to be consistent with the risk assumed on these sidewalks prior to the new MMS being enacted. For example, for the five-year period from 2013 to 2018, the City received 156 claims related to sidewalks during the winter months. Of these 156, 23 or 14.7%, were related to the City’s non-priority sidewalks and had a total claims value of \$370,000.

Enforcement staff have been investigating the feasibility of implementing a by-law requiring residents to clear their sidewalks not currently cleared by the City under the current service level, and are reporting to General Committee on this matter in a separate report also being considered at its meeting of June 12, 2019.

Actions of other Municipalities

Staff consulted with other local municipalities to determine how they were responding to the requirements of the new MMS given the lack of a grace period for implementation. In particular, staff contacted the following municipalities: Brampton, Burlington, Hamilton, Niagara Falls, Oakville, Richmond Hill, St. Catharines, Toronto, and Vaughan.

A chart showing staff’s findings is shown below:

Sidewalk Snow Clearing Municipal Scan			
Municipality	Are all sidewalks cleared now?	Are changes proposed to sidewalk winter maintenance?	Do you have an existing by-law for sidewalk clearing?
Brampton	No	No	Yes
Burlington	Yes, clear residential sidewalks once accumulation reaches two inches or greater.	No	No
Hamilton	No	No	Yes
Niagara Falls	No	No	Yes
Oakville	Yes after 5cm on Priority 8cm Residential	No	No
Richmond Hill	Yes	No	No
St. Catharines	No	No	Yes

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Toronto	No	No	Yes
Vaughan	Yes	No	No

Financial Impact

There are no financial impacts associated with this report as it is being presented for information. Should Council change service levels on sidewalk winter maintenance to align with the new MMS standards, additional resources would be required. The details of this impact are presented in a separate report to General Committee at its meeting of June 12, 2019.

Conclusion

This report summarizes Provincial changes to the MMS in a number of key areas, namely winter maintenance of sidewalks, greater inspection standards for sidewalks, winter maintenance of bicycle lanes and a new significant weather event declaration protocol.

There was no “grace period” provided between the announcement of the new MMS requirements by the Province and the date the new amendments came into effect. The MMS are not mandatory, but they do provide the standard of care which, when met, satisfies a municipality’s duty to maintain a highway in a “state of repair”.

Attachments

Appendix 1: Minimum Maintenance Standards for Highways (Ontario Regulation 239/02)



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

Prepared by: Scott Holmes, Senior Manager, Works Administration, Operations and Maintenance

Appendix 1

ONTARIO REGULATION 366/18

made under the

MUNICIPAL ACT, 2001

Made: May 2, 2018

Filed: May 3, 2018

Published on e-Laws: May 3, 2018

Printed in *The Ontario Gazette*: May 19, 2018

Amending O. Reg. 239/02

(MINIMUM MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS)

1. (1) The definition of “surface” in subsection 1 (1) of Ontario Regulation 239/02 is amended by striking out “roadway or shoulder” and substituting “sidewalk, roadway or shoulder”.

(2) Subsection 1 (1) of the Regulation is amended by adding the following definitions:

“bicycle facility” means the on-road and in-boulevard cycling facilities listed in Book 18 of the Ontario Traffic Manual;

“bicycle lane” means,

- (a) a portion of a roadway that has been designated by pavement markings or signage for the preferential or exclusive use of cyclists, or
- (b) a portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer;

“encroachment” means anything that is placed, installed, constructed or planted within the highway that was not placed, installed, constructed or planted by the municipality;

“pothole” means a hole in the surface of a roadway caused by any means, including wear or subsidence of the road surface or subsurface;

“sidewalk” means the part of the highway specifically set aside or commonly understood to be for pedestrian use, typically consisting of a paved surface but does not include crosswalks, medians, boulevards, shoulders or any part of the sidewalk where cleared snow has been deposited;

“significant weather event” means an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within a municipality;

“utility” includes any air, gas, water, electricity, cable, fiber-optic, telecommunication or traffic control system or subsystem, fire hydrants, sanitary sewers, storm sewers, property bars and survey monuments;

“utility appurtenance” includes maintenance holes and hole covers, water shut-off covers and boxes, valves, fittings, vaults, braces, pipes, pedestals, and any other structures or items that form part of or are an accessory part of any utility;

“weather hazard” means the weather hazards determined by Environment Canada as meeting the criteria for the issuance of an alert under its Public Weather Alerting Program.

(3) Subsections 1 (2) and (3) of the Regulation are amended by striking out “annual” wherever it appears.

(4) Subsection 1 (4) of the Regulation is revoked and the following substituted:

(4) For the purposes of this Regulation, unless otherwise indicated in a provision of this Regulation, a municipality is deemed to be aware of a fact if, in the absence of actual knowledge of the fact, circumstances are such that the municipality ought reasonably to be aware of the fact.

(5) The Table to section 1 of the Regulation is revoked and the following substituted:

TABLE
CLASSIFICATION OF HIGHWAYS

Column 1 Average Daily Traffic (number of motor vehicles)	Column 2 91 - 100 km/h speed limit	Column 3 81 - 90 km/h speed limit	Column 4 71 - 80 km/h speed limit	Column 5 61 - 70 km/h speed limit	Column 6 51 - 60 km/h speed limit	Column 7 41 - 50 km/h speed limit	Column 8 1 - 40 km/h speed limit
53,000 or more	1	1	1	1	1	1	1

23,000 - 52,999	1	1	1	2	2	2	2
15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
1,000 - 1,999	1	3	3	3	4	5	5
500 - 999	1	3	4	4	4	5	5
200 - 499	1	3	4	4	5	5	6
50 - 199	1	3	4	5	5	6	6
0 - 49	1	3	6	6	6	6	6

2. The Regulation is amended by adding the following section:

Purpose

2.1 The purpose of this Regulation is to clarify the scope of the statutory defence available to a municipality under clause 44 (3) (c) of the Act by establishing maintenance standards which are non-prescriptive as to the methods or materials to be used in complying with the standards but instead describe a desired outcome.

3. (1) The heading before section 3 of the Regulation is amended by striking out “MINIMUM” and substituting “MAINTENANCE”

(2) Subsections 3 (1) and (2) of the Regulation are amended by striking out “minimum” wherever it appears.

(3) Subsection 3 (4) of the Regulation is amended by striking out “section 16.1” and substituting “section 16.1, 16.2, 16.3 or 16.4”.

4. Subsections 3.1 (1) and (2) of the Regulation are amended by striking out “minimum” wherever it appears.

5. (1) Subsection 4 (1) of the Regulation is amended by striking out the portion before clause (a) and substituting the following:

Snow accumulation, roadways

(1) Subject to section 4.1, the standard for addressing snow accumulation on roadways is,

(2) Subsection 4 (3) of the Regulation is amended by adding “and, if applicable, lane width under clause (1) (b),” after “roadway” in the portion before paragraph 1.

(3) Subsection 4 (4) of the Regulation is amended by adding “and lane width” after “roadway” in the portion before clause (a).

(4) Subsections 4 (5) and (6) of the Regulation are revoked and the following substituted:

(5) For the purposes of this section, addressing snow accumulation on a roadway includes,

- (a) plowing the roadway;
- (b) salting the roadway;
- (c) applying abrasive materials to the roadway;
- (d) applying other chemical or organic agents to the roadway;
- (e) any combination of the methods described in clauses (a) to (d);
- (6) This section does not apply to that portion of the roadway,

- (a) designated for parking;
- (b) consisting of a bicycle lane or other bicycle facility; or
- (d) used by a municipality for snow storage;

(5) The heading of the Table to section 4 of the Regulation is revoked and the following substituted:

SNOW ACCUMULATION - ROADWAYS

7. The Regulation is amended by adding the following sections:

Snow accumulation on roadways, significant weather event

4.1 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on roadways until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
- (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on roadways, starting from the time that the municipality deems appropriate to do so.

(2) If the municipality complies with subsection (1), all roadways within the municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table to section 4 expires following the declaration of the end of the significant weather event by the municipality.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) address snow accumulation on roadways in accordance with section 4.

Snow accumulation, bicycle lanes

4.2 (1) Subject to section 4.3, the standard for addressing snow accumulation on bicycle lanes is,

- (a) after becoming aware of the fact that the snow accumulation on a bicycle lane is greater than the depth set out in the Table to this section, to deploy resources as soon as practicable to address the snow accumulation; and
- (b) after the snow accumulation has ended, to address the snow accumulation so as to reduce the snow to a depth less than or equal to the depth set out in the Table to this section to provide a minimum bicycle lane width of the lesser of 1 metre or the actual bicycle lane width.

(2) If the depth of snow accumulation on a bicycle lane is less than or equal to the depth set out in the Table to this section, the bicycle lane is deemed to be in a state of repair in respect of snow accumulation.

(3) For the purposes of this section, the depth of snow accumulation on a bicycle lane and, if applicable, lane width under clause (1) (b), may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3), with necessary modifications.

(4) For the purposes of this section, addressing snow accumulation on a bicycle lane includes,

- (a) plowing the bicycle lane;
- (b) salting the bicycle lane;
- (c) applying abrasive materials to the bicycle lane;
- (d) applying other chemical or organic agents to the bicycle lane;
- (e) sweeping the bicycle lane; or
- (f) any combination of the methods described in clauses (a) to (e).

TABLE

SNOW ACCUMULATION – BICYCLE LANES

Column 1 Class of Highway or Adjacent Highway	Column 2 Depth	Column 3 Time
1	2.5 cm	8 hours
2	5 cm	12 hours
3	8 cm	24 hours
4	8 cm	24 hours
5	10 cm	24 hours

Snow accumulation on bicycle lanes, significant weather event

4.3 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on bicycle lanes until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
 - (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on bicycle lanes, starting from the time that the municipality deems appropriate to do so.
- (2) If the municipality complies with subsection (1), all bicycle lanes within the municipality are deemed to be in a state of repair with respect to snow accumulation until the applicable time in the Table to section 4.2 expires following the declaration of the end of the significant weather event by the municipality.
- (3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,
- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
 - (b) address snow accumulation on bicycle lanes in accordance with section 4.2.

8. Section 5 of the Regulation is revoked and the following substituted:

Ice formation on roadways and icy roadways

5. (1) The standard for the prevention of ice formation on roadways is doing the following in the 24-hour period preceding an alleged formation of ice on a roadway:

- 1. Monitor the weather in accordance with section 3.1.
- 2. Patrol in accordance with section 3.
- 3. If the municipality determines, as a result of its activities under paragraph 1 or 2, that there is a substantial probability of ice forming on a roadway, treat the roadway, if practicable, to prevent ice formation within the time set out in Table 1 to this section, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose.

(2) If the municipality meets the standard set out in subsection (1) and, despite such compliance, ice forms on a roadway, the roadway is deemed to be in a state of repair until the applicable time set out in Table 2 to this section expires after the municipality becomes aware of the fact that the roadway is icy.

(3) Subject to section 5.1, the standard for treating icy roadways is to treat the icy roadway within the time set out in Table 2 to this section, and an icy roadway is deemed to be in a state of repair until the applicable time set out in Table 2 to this section expires after the municipality becomes aware of the fact that a roadway is icy.

(4) For the purposes of this section, treating a roadway means applying material to the roadway, including but not limited to, salt, sand or any combination of salt and sand.

(5) For greater certainty, this section applies in respect of ice formation on bicycle lanes on a roadway, but does not apply to other types of bicycle facilities.

TABLE 1
ICE FORMATION PREVENTION

Class of Highway	Time
1	6 hours
2	8 hours
3	16 hours
4	24 hours
5	24 hours

TABLE 2
TREATMENT OF ICY ROADWAYS

Class of Highway	Time
1	3 hours
2	4 hours
3	8 hours
4	12 hours
5	16 hours

Icy roadways, significant weather event

5.1 (1) If a municipality declares a significant weather event relating to ice, the standard for treating icy roadways until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to treat icy roadways, starting from the time that the municipality deems appropriate to do so.

(2) If the municipality complies with subsection (1), all roadways within the municipality are deemed to be in a state of repair with respect to any ice which forms or may be present until the applicable time in Table 2 to section 5 expires after the declaration of the end of the significant weather event by the municipality.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) treat icy roadways in accordance with section 5.

8. (1) Subsection 6 (1) of the Regulation is amended by striking out “minimum”.

(2) Section 6 of the Regulation is amended by adding the following subsections:

(1.1) For the purposes of this section, the surface area and depth of a pothole may be determined in accordance with subsections (1.2) and (1.3), as applicable, by a municipal employee, agent or contractor whose duties or responsibilities include one or more of the following:

- 1. Patrolling highways.
- 2. Performing highway maintenance activities.
- 3. Supervising staff who perform activities described in paragraph 1 or 2.

(1.2) The depth and surface area of a pothole may be determined by,

- (a) performing an actual measurement; or
- (b) performing a visual estimate.

(1.3) For the purposes of this section, the surface area of a pothole does not include any area that is merely depressed and not yet broken fully through the surface of the roadway.

9. (1) Subsections 7 (1) and (2) of the Regulation are revoked and the following substituted:

Shoulder drop-offs

(1) If a shoulder drop-off is deeper than 8 cm, for a continuous distance of 20 metres or more, the standard is to repair the shoulder drop-off within the time set out in the Table to this section after becoming aware of the fact.

(2) A shoulder drop-off is deemed to be in a state of repair if its depth is less than 8 cm.

(2) The Table to section 7 of the Regulation is revoked and the following substituted:

TABLE
SHOULDER DROP-OFFS

Class of Highway	Time
1	4 days
2	4 days
3	7 days
4	14 days
5	30 days

10. (1) Subsections 8 (1) and (2) of the Regulation are revoked and the following substituted:

Cracks

(1) If a crack on the paved surface of a roadway is greater than 5 cm wide and 5 cm deep for a continuous distance of three metres or more, the standard is to repair the crack within the time set out in the Table to this section after becoming aware of the fact.

(2) A crack is deemed to be in a state of repair if its width or depth is less than or equal to 5 cm.

(2) The Table to section 8 of the Regulation is revoked and the following substituted:

TABLE
CRACKS

Column 1 Class of Highway	Column 2 Time
---------------------------------	------------------

1	30 days
2	30 days
3	60 days
4	180 days
5	180 days

11. Subsection 9 (1) of the Regulation is amended by striking out “minimum”.

12. Subsections 10 (0.1), (1), (2), (3), (4), (5) and (6) of the Regulation are revoked and the following substituted:

Luminaires

(1) The standard for the frequency of inspecting all luminaires to check to see that they are functioning is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection.

(2) For conventional illumination, if three or more consecutive luminaires on the same side of a highway are not functioning, the standard is to repair the luminaires within the time set out in the Table to this section after becoming aware of the fact.

(3) For conventional illumination and high mast illumination, if 30 per cent or more of the luminaires on any kilometre of highway are not functioning, the standard is to repair the luminaires within the time set out in the Table to this section after becoming aware of the fact.

(4) Despite subsection (2), for high mast illumination, if all of the luminaires on consecutive poles on the same side of a highway are not functioning, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the luminaires.

(5) Despite subsections (1), (2) and (3), for conventional illumination and high mast illumination, if more than 50 per cent of the luminaires on any kilometre of a Class 1 highway with a speed limit of 90 kilometres per hour or more are not functioning, the standard is to deploy resources as soon as practicable after becoming aware of the fact to repair the luminaires.

(6) Luminaires are deemed to be in a state of repair,

- (a) for the purpose of subsection (2), if the number of non-functioning consecutive luminaires on the same side of a highway does not exceed two;
- (b) for the purpose of subsection (3), if more than 70 per cent of luminaires on any kilometre of highway are functioning;
- (c) for the purpose of subsection (4), if one or more of the luminaires on consecutive poles on the same side of a highway are functioning;
- (d) for the purpose of subsection (5), if more than 50 per cent of luminaires on any kilometre of highway are functioning.

13. The Regulation is amended by striking out “minimum” wherever it appears in the following provisions:

1. Sections 11 to 16.

2. Subsection 16.1 (1).

14. Subsections 16.1 (2), (2.1), (3) and (4) of the Regulation are revoked and the following substituted:

(2) If a surface discontinuity on or within a sidewalk exceeds two centimetres, the standard is to treat the surface discontinuity within 14 days after acquiring actual knowledge of the fact.

(3) A surface discontinuity on or within a sidewalk is deemed to be in a state of repair if it is less than or equal to two centimetres.

(4) For the purpose of subsection (2), treating a surface discontinuity on or within a sidewalk means taking reasonable measures to protect users of the sidewalk from the discontinuity, including making permanent or temporary repairs, alerting users' attention to the discontinuity or preventing access to the area of discontinuity.

(5) In this section,

“surface discontinuity” means a vertical discontinuity creating a step formation at any joint or crack in the surface of the sidewalk or any vertical height difference between a utility appurtenance found on or within the sidewalk and the surface of the sidewalk.

15. The Regulation is amended by adding the following sections.

Encroachments, area adjacent to sidewalk

16.2 (1) The standard for the frequency of inspecting an area adjacent to a sidewalk to check for encroachments is once per calendar year, with each inspection taking place not more than 16 months from the previous inspection.

(2) The area adjacent to a sidewalk that has been inspected in accordance with subsection (1) is deemed to be in a state of repair in respect of any encroachment present.

(3) For greater certainty, the area adjacent to a sidewalk begins at the outer edges of a sidewalk and ends at the lesser of the limit of the highway, the back edge of a curb if there is a curb and a maximum of 45 cm.

(4) The area adjacent to a sidewalk is deemed to be in a state of repair in respect of any encroachment present unless the encroachment is determined by a municipality to be highly unusual given its character and location or to constitute a significant hazard to pedestrians.

(5) If a municipality determines that an encroachment is highly unusual given its character and location or constitutes a significant hazard to pedestrians, the standard is to treat the encroachment within 28 days after making such a determination, and the encroachment is deemed in a state of repair for 28 days from the time of the determination by the municipality.

(6) For the purpose of subsection (4), treating an encroachment means taking reasonable measures to protect users, including making permanent or temporary repairs, alerting users' attention to the encroachment or preventing access to the area of the encroachment.

Snow accumulation on sidewalks

16.3 (1) Subject to section 16.4, the standard for addressing snow accumulation on a sidewalk after the snow accumulation has ended is,

- a) to reduce the snow to a depth less than or equal to 8 centimetres within 48 hours; and
- b) to provide a minimum sidewalk width of 1 metre.

(2) If the depth of snow accumulation on a sidewalk is less than or equal to 8 centimetres, the sidewalk is deemed to be in a state of repair in respect of snow accumulation.

(3) If the depth of snow accumulation on a sidewalk exceeds 8 centimetres while the snow continues to accumulate, the sidewalk is deemed to be in a state of repair with respect to snow accumulation, until 48 hours after the snow accumulation ends.

(4) For the purposes of this section, the depth of snow accumulation on a sidewalk may be determined in the same manner as set out in subsection 4 (4) and by the persons mentioned in subsection 4 (3) with necessary modifications.

(5) For the purposes of this section, addressing snow accumulation on a sidewalk includes,

- (a) plowing the sidewalk;
- (b) salting the sidewalk;
- (c) applying abrasive materials to the sidewalk;
- (d) applying other chemical or organic agents to the sidewalk; or
- (e) any combination of the methods described in clauses (a) to (d).

Snow accumulation on sidewalks, significant weather event

16.4 (1) If a municipality declares a significant weather event relating to snow accumulation, the standard for addressing snow accumulation on sidewalks until the declaration of the end of the significant weather event is,

- (a) to monitor the weather in accordance with section 3.1; and
- (b) if deemed practicable by the municipality, to deploy resources to address snow accumulation on sidewalks starting from the time that the municipality deems appropriate to do so.

(2) If the municipality complies with subsection (1), all sidewalks within the municipality are deemed to be in a state of repair with respect to any snow present until 48 hours following the declaration of the end of the significant weather event by the municipality.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

- (a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and
- (b) address snow accumulation on sidewalks in accordance with section 16.3.

Ice formation on sidewalks and icy sidewalks

16.5 (1) Subject to section 16.6, the standard for the prevention of ice formation on sidewalks is to,

- (a) monitor the weather in accordance with section 3.1 in the 24-hour period preceding an alleged formation of ice on a sidewalk; and

(b) treat the sidewalk if practicable to prevent ice formation or improve traction within 48 hours if the municipality determines that there is a substantial probability of ice forming on a sidewalk, starting from the time that the municipality determines is the appropriate time to deploy resources for that purpose.

(2) If ice forms on a sidewalk even though the municipality meets the standard set out in subsection (1), the sidewalk is deemed to be in a state of repair in respect of ice until 48 hours after the municipality first becomes aware of the fact that the sidewalk is icy.

(3) The standard for treating icy sidewalks after the municipality becomes aware of the fact that a sidewalk is icy is to treat the icy sidewalk within 48 hours, and an icy sidewalk is deemed to be in a state of repair for 48 hours after it has been treated.

(4) For the purposes of this section, treating a sidewalk means applying materials including salt, sand or any combination of salt and sand to the sidewalk.

Icy sidewalks, significant weather event

16.6 (1) If a municipality declares a significant weather event relating to ice, the standard for addressing ice formation or ice on sidewalks until the declaration of the end of the significant weather event is,

(a) to monitor the weather in accordance with section 3.1; and

(b) if deemed practicable by the municipality, to deploy resources to treat the sidewalks to prevent ice formation or improve traction, or treat the icy sidewalks, starting from the time that the municipality deems appropriate to do so.

(2) If the municipality complies with subsection (1), all sidewalks within the municipality are deemed to be in a state of repair with respect to any ice which forms or is present until 48 hours after the declaration of the end of the significant weather event by the municipality.

(3) Following the end of the weather hazard in respect of which a significant weather event was declared by a municipality under subsection (1), the municipality shall,

(a) declare the end of the significant weather event when the municipality determines it is appropriate to do so; and

(b) address the prevention of ice formation on sidewalks or treat icy sidewalks in accordance with section 16.5.

Winter sidewalk patrol

16.7 (1) If it is determined by the municipality that the weather monitoring referred to in section 3.1 indicates that there is a substantial probability of snow accumulation on sidewalks in excess of 8 cm, ice formation on sidewalks or icy sidewalks, the standard for patrolling sidewalks is to patrol sidewalks that the municipality selects as representative of its sidewalks at intervals deemed necessary by the municipality.

(2) Patrolling a sidewalk consists of visually observing the sidewalk, either by driving by the sidewalk on the adjacent roadway or by driving or walking on the sidewalk or by electronically monitoring the sidewalk, and may be performed by persons responsible for patrolling roadways or sidewalks or by persons responsible for or performing roadway or sidewalk maintenance activities.

Closure of a highway

16.8 (1) When a municipality closes a highway or part of a highway pursuant to its powers under the Act, the highway is deemed to be in a state of repair in respect of all conditions described in this Regulation from the time of the closure until the highway is re-opened by the municipality.

(2) For the purposes of subsection (1), a highway or part of a highway is closed on the earlier of,

(a) when a municipality passes a by-law to close the highway or part of the highway; and

(b) when a municipality has taken such steps as it determines necessary to temporarily close the highway or part of a highway.

Declaration of significant weather event

16.9. A municipality declaring the beginning of a significant weather event or declaring the end of a significant weather event under this Regulation shall do so in one or more of the following ways:

1. By posting a notice on the municipality's website.

2. By making an announcement on a social media platform, such as Facebook or Twitter.

3. By sending a press release or similar communication to internet, newspaper, radio or television media.

4. By notification through the municipality's police service.

5. By any other notification method required in a by-law of the municipality.

Commencement

16. This Regulation comes into force on the day it is filed.

Made by:

KATHRYN MCGARRY
Minister of Transportation

Date made: May 2, 2018

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City of Mississauga
Corporate Report



Date: 2019/05/29

To: Chair and Members of General Committee

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

Originator's files:

Meeting date:
2019/06/12

Subject

Winter Maintenance Pressures

Recommendation

1. That the request for proposal for the new winter maintenance contract include provisional items for secondary sidewalk winter maintenance; residential windrow clearing; timing of winter maintenance on bus stops and priority sidewalks; clearing of secondary roads to bare pavement; physically removing snow from designated priority bike lanes; and, Hurontario LRT winter maintenance, as outlined in the report from the Commissioner of Transportation and Works, dated May 29, 2019 and entitled "Winter Maintenance Pressures".
2. That staff report back to General Committee on the results of the request for proposal on the new winter maintenance contract, including recommendations regarding winter maintenance service levels over the duration of the new contract, as outlined in the report from the Commissioner of Transportation and Works, dated May 29, 2019 and entitled "Winter Maintenance Pressures".

Report Highlights

- Currently, the City of Mississauga clears 5,600 lane kilometres (3,360 lane miles) of roads. Of that, approximately 4,000 kilometres (2,400 lane miles) are priority roads and approximately 1,600 kilometres (960 lane miles) are secondary roads.
- The City of Mississauga currently has 2,400 kilometres (1,500 miles) of sidewalks, 1,700 kilometres (1,100 miles) of which are included in the City's winter maintenance program.
- 174 residents were enrolled in the 2018/2019 Driveway Windrow Snow Clearing program. This program continues to be an option for seniors and people with physical disabilities who would like assistance with clearing their windrows. With the exception of residents enrolled in this program, the City does not clear windrows caused by winter maintenance activities.
- Winter maintenance on the Hurontario LRT (HLRT) will require additional resources and

equipment to maintain this new infrastructure. This could impact winter maintenance activities as early as late 2019 when construction is targeted to commence on the HLRT, and during the course of the next winter maintenance contract.

- The City's existing Winter Maintenance contract has completed the fifth of seven years expiring in April of 2021. Staff will bring a report to General Committee in the spring of 2020, which will outline the results of the tender and make recommendations on related winter maintenance services levels.
- The contract review period presents an opportunity to evaluate possible changes to winter maintenance operations and identify related costs. A preliminary estimate of the cost of these options is \$31.2M (including \$5.4M for land purchase) the first year and \$25.7M annually thereafter.

Background

In response to questions raised by Councillors Ras and Parrish at the General Committee meeting of February 13, 2019, the Commissioner, Transportation and Works, indicated that staff would report on the feasibility of clearing sidewalks and windrows on secondary (residential) roads. The purpose of this report is to provide updated information on sidewalk and windrow snow clearing on secondary roads. This report also provides information on other re-occurring winter maintenance issues.

At its meeting of June 25, 2014, the Budget Committee approved a report from the Commissioner of Transportation and Works dated June 6, 2014 and entitled "Winter Maintenance Operations". This report indicated that in 2014, the cost to perform winter maintenance on residential sidewalks would be approximately \$3M annually, including the cost for additional leased space to store the additional vehicles and equipment to perform this additional service. A copy of this report is attached as Appendix 1.

Council-approved Winter Maintenance Levels of Service

Winter maintenance is performed through the use of City staff and contractors. Currently, 10% of the equipment used for winter maintenance is City-owned. Contractors provide the remaining 340 pieces of equipment through the City's winter maintenance contract. This number has consistently increased over the past two 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.

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 and snow removal in Business Improvement Areas (BIA's). The levels of service are provided in Appendix 2 and key information is summarized below:

- 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.
- Secondary roads, priority sidewalks, bus stops and pedestrian crossings are addressed after service levels have been met for priority roads.
- 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.

Currently, the City performs winter maintenance on 5,600 lane kilometres (3,360 lane miles) of road. Of that, approximately 4,000 kilometres (2,400 lane miles) are priority roads and approximately 1,600 kilometres (960 lane miles) are secondary roads.

Comments

Secondary Sidewalk Winter Maintenance

The City of Mississauga has 2,400 kilometres (1,500 miles) of sidewalks. Of that, 1,700 kilometres (1,100 miles) are designated as priority sidewalks and are included in the City's winter maintenance program.

In order to add the remaining 700 kilometres (400 miles) of sidewalk into the winter maintenance program an additional 92 pieces of equipment would be required.

The addition of these units could be implemented as early as the 2019/2020 winter season. To do this, staff from Works Operations and Maintenance (WOM) and Revenue and Materiel Management would source the necessary equipment from contractors through the City's existing winter maintenance contract.

As outlined in the report from the Commissioner of Transportation and Works, dated June 6, 2014 and entitled "*Winter Maintenance Operations*", a location to store this additional equipment would also have to be sourced since the City's Works yards do not have room to safely store additional vehicles and equipment. The report is attached as Appendix 1, as previously mentioned.

The cost of additional storage could be mitigated somewhat by using existing City-owned land, such as recreation centres and community centres. However, suitable locations would have to be available and adequate security fencing, power and lighting would need to be installed.

The cost to provide winter maintenance on secondary sidewalks has been estimated based on the costs in the City's existing winter maintenance contract. It should be noted that when staff requested secondary sidewalk winter maintenance as a provisional item in the last contract, prices were higher than the cost to perform priority sidewalk winter maintenance. This is because sidewalk clearing in densely populated areas is a complex operation. Residential areas often have more obstacles such as encroachments, which can cause operators to drive more slowly and may increase the risk of damage to equipment.

Staff forecast the following costs to perform winter maintenance on secondary sidewalks:

- Operational and standby costs for the additional units of \$1.85M;
- Additional salt costs of \$370,000;
- Additional staffing costs of \$520,000 (one assistant supervisor in each of the four yards to manage service delivery and inspection of the operation, as well address higher service request volume due to service expansion); and,
- Temporary land costs for equipment storage until additional yard capacity is available. Staff continue to evaluate options that could include purchasing property (\$2.7M for a .81 hectare (2.0 acre) site) or leasing land at an estimated annual cost of \$250,000. Alternatively, contractors could be required to source their own storage locations as a condition of the contract. The latter could present operational concerns and may result in higher costs as the contractors would likely pass along the expense with a built in overhead fee to the City.

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;
- 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.

In summary, the inclusion of all sidewalks could be accommodated for the 2019/2020 winter season, as outlined above, at an increased annual operating cost of \$2.7M. It is recommended, however, that staff include this new service level as a provisional item in the new winter maintenance contract for future consideration. Staff will continue to assess options for temporary land for equipment storage which would add additional costs as reference above.

City-wide Windrow Clearing

The Driveway Windrow Snow Clearing Program had 174 residents enrolled during the 2018/2019 winter season. For the past five seasons, the numbers have fluctuated slightly with an average enrollment of 164. This program continues to be an option for seniors and people with physical disabilities who would like assistance with clearing their windrows. Those who are income qualified are able to receive this service free of charge whereas those that are not, pay a fee of \$200. The program has a maximum capacity of 300 residents.

With the exception of the residents enrolled in the Driveway Windrow Snow Clearing Program, the City does not clear windrows.

Windrow Clearing Programs in Other Municipalities

Staff consulted with the following municipalities regarding their windrow clearing winter maintenance activities: Brampton, Burlington, Hamilton, London, Markham,

Newmarket, Niagara Falls, Oakville, Ottawa, Richmond Hill, Toronto, and Vaughan. A summary of the benchmarking exercise conducted by staff is attached as Appendix 3.

Of the 12 nearby municipalities that were consulted, 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, London, Newmarket, Niagara Falls and Ottawa do not offer any type of windrow program; Brampton, Burlington, Hamilton, Markham, Oakville and Richmond Hill offer a program for eligible residents only.

It should be noted that in speaking with the City of Toronto regarding their windrow program, complaints related to this program increased by 50% once it was implemented. Staff would expect something similar to this increase if implemented here due to resident expectations for this service.

Based on information received from the municipalities that are currently clearing windrows, staff forecast the following costs for the addition of a city-wide windrow program in our winter maintenance program:

- Operational and standby costs for the additional units of \$5.1M;
- Additional staffing costs of \$520,000 (one assistant supervisor staff in each of the four yards to manage execution and inspection of the operation, as well address service

request volume, which is anticipated to be higher given the experience of other municipalities); and,

- Similar to the sidewalk clearing, temporary land costs for equipment storage would be required until additional yard capacity is available. These costs would be similar and include options such as purchasing property (\$2.7M for a .81 hectare (2.0 acre) site) or leasing land at an estimated annual cost of \$250,000. Alternatively, contractors could be required to source their own storage locations as a condition of the contract.

In summary, the inclusion of a city-wide windrow program could be accommodated for the 2019/2020 winter season, as outlined above, at an increased annual operating cost of \$5.6M. It is recommended, however, that staff include this new service level as a provisional item in the new winter maintenance contract for future consideration. Staff will continue to assess options for temporary land for equipment storage which would add additional costs as reference above.

Other Winter Maintenance Service Level Considerations

Re-occurring Winter Maintenance Issues

In addition to the performance of winter maintenance activities on secondary sidewalks and the clearing of windrows on secondary roads, staff have observed other re-occurring issues with winter maintenance service levels. These are noted below and may present opportunities to review winter maintenance service levels in the future:

3. The timing of winter maintenance on bus stops and sidewalks on priority roads: Existing service levels have bus stops and sidewalks on priority roads addressed after winter maintenance activities are completed on priority roads. A consideration for the future may be to perform winter maintenance activities of bus stops and sidewalks on priority roads at the same time as plowing and/or salting of priority roads. This would provide quicker access for transit and sidewalk use. The cost to increase the level of service for this operation is estimated at \$2.2M annually.
4. Clearing secondary roads to bare pavement: Existing service levels require secondary roads to be made safe and passable and not cleared to bare pavement. The cost to increase the level of service for this operation is estimated at \$7.0M annually.
5. Winter maintenance on bike lanes: Bike lanes are salted and cleared of snow and ice as part of winter maintenance activities on priority roads. However, snow and ice tends to re-accumulate in bike lanes as a result of a lack of available snow storage space and freeze/thaw cycles. In the future, designating some bike lanes as priority bike lanes and physically removing snow and ice from them may be a more effective practice. The City's Active Transportation office, in consultation with the Mississauga Cycling Advisory Committee could designate the priority bike lanes for winter maintenance, subject to Council approval. The cost to perform enhanced snow removal from priority bike routes would be approximately \$5.2M annually.

Hurontario LRT Project

Winter maintenance on the HuLRT will require additional resources and equipment to maintain this new infrastructure. This could impact winter maintenance activities as early as late 2019 when construction is targeted to commence on the HLRT and during the course of the next winter maintenance contract.

The construction of the HuLRT will present winter maintenance challenges given the lack of space to store snow on the road. This will require additional, specialized equipment to remove snow from the road allowance and transport it to snow storage sites and will increase the City's snow storage requirements. WOM's existing snow storage sites are at capacity and new snow storage locations will need to be identified. The cost to perform snow removal from the HRLT would be approximately \$3.0M annually.

Snow storage capacity will continue to be a consideration upon completion of HuRLT construction. Storage space in the boulevard will be limited and clearing of boulevard infrastructure such as sidewalk, cyclepath and a possible multi-use trail will add to snow volume. This will mean an increase in snow removal activities after every plowing event.

Winter Maintenance Contract

The City's existing Winter Maintenance contract has completed the fifth of seven years and expires in April of 2021. Staff have commenced work on the new contract. The new contract is targeted to be awarded in summer of 2020 and would commence in the fall of 2021 for the 2021/2022 winter season. It is recommended that the new contract include provisional items for the following:

- secondary sidewalk winter maintenance;
- residential windrow clearing;
- changes to winter maintenance on bus stops and priority sidewalks;
- clearing of secondary roads to bare pavement;
- snow removal from priority bike lanes; and,
- HLRT winter maintenance.

Including these items in the request for proposal as provisional items will assist staff in determining the actual cost of these items and identify any related winter maintenance service level changes for Council's consideration.

Further, given the space limitations at the existing Works yards to store any additional vehicles and equipment required for winter maintenance, the request for proposal for the next winter maintenance contract will also seek costing options for contractors to provide local storage for winter maintenance vehicles and equipment.

Regarding existing operational yard capacity, staff in Community Services and Transportation and Works are currently:

- Assessing the capacity of the Parks, Forestry and Environment (PFE) Division and WOM Division's four shared yards, the PFE yard at 950 Burnhamthorpe and various PFE satellite yard locations.
- Assessing the capacity of the present WOM snow storage locations.
- Identifying the PFE and WOM Division's yard requirements in the short, medium and long-term.
- Justifying short, medium and long-term yard and snow storage requirements using industry best practices, benchmarking, measurable data and quantifiable outcomes.
- Developing a strategy and implementation plan to meet the PFE and WOM Division's short-term yard requirements, as well as the WOM Division's short-term snow storage requirements, considering industry best practices in service delivery, environmental sustainability and energy efficiency.
- Developing a strategy and implementation plan to meet the PFE and WOM Division's medium and long-term yard requirements, as well as the WOM Division's medium and long-term snow storage requirements, considering industry best practices in service delivery, environmental sustainability and energy efficiency.

The results of the above-mentioned review will be built into the 2021 Business Plan and form the basis of a Yards Master Plan.

Staff will provide a report to General Committee in the spring of 2020 to outline the results of the Winter Maintenance tender and make recommendations on related winter maintenance services levels.

Financial Impact

The City's current winter maintenance contract had a budget of \$15.6M for the 2018 winter season. Early estimates for potential changes to service levels based on requests and opportunities for improvement are as follows:

- | | |
|---|---|
| • Secondary Sidewalk Program | \$2.8M annually (plus temporary land costs) |
| • City-Wide Windrow Program | \$5.6M annually (plus temporary land costs) |
| • Enhance Bus Stop and Sidewalk Program | \$2.2M annually |
| • Secondary Routes to Bare Pavement | \$7.0M annually |
| • Snow Removal on Priority Bike Routes | \$5.2M annually |
| • HuLRT winter maintenance | \$3.0M annually |

It is recommended that these items be included in the upcoming request for tender for the new winter maintenance contract as provisional items. These will be reported back to Council in the Spring of 2020 for future direction.

Conclusion

The report provides updated information and estimated costs for six enhanced levels of service options for consideration in the winter maintenance program. It is recommended that these items be included in the upcoming tender for the new winter maintenance contract as provisional items. This will enable staff to present Council with the actual costs from a competitive procurement process for consideration and future direction.

Attachments

Appendix 1: Report from the Commissioner of Transportation and Works, dated June 6, 2014 and entitled "Winter Maintenance Operations"

Appendix 2: Existing Council-approved Levels of Service for Winter Maintenance

Appendix 3: Actions of Other Municipalities – Windrow Clearing Winter Maintenance Activities



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

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



Corporate Report

Clerk's Files

Originator's Files MG.23.REP



DATE: June 6, 2014

TO: Chair and Members of Budget Committee
Meeting Date: June 25, 2014

FROM: Martin Powell, P.Eng.
Commissioner, Transportation and Works

SUBJECT: Winter Maintenance Operations

- RECOMMENDATION:**
1. That the Purchasing Agent be authorized to award a seven-year contract for the 2014/2015, 2015/2016, 2016/2017, 2017/2018, 2018/2019, 2019/2020 and 2020/2021 winter seasons to the vendors as outlined in Appendix 2 of the Corporate Report dated June 6, 2014 from the Commissioner of Transportation and Works Department for the provision of winter maintenance services.
 2. That Council provide direction regarding the addition of Secondary Sidewalks Winter Maintenance as a new service level with an estimated annual cost of \$3.0 million which equates to a 0.8% tax rate increase in 2015.
 3. That subject to Council approval of the new service level for Secondary Sidewalks Winter Maintenance that the 2014 Sidewalk Snow Clearing budget be increased by \$1.1 million and be funded from the Reserve for Winter Maintenance.
 4. That subject to Council Approval of the new service level for Secondary Sidewalks Winter Maintenance that the City's 2014 full time equivalent be increased by two.

5. That the Purchasing Agent be authorized to renew the existing contract as a single source for a period of seven years to Webtech Wireless Inc. in the estimated amount of \$2.1 million for the provision of GPS/AVL and Software as a Service for the Fleet Management System.
6. That a new project for the (PN14192) West Credit Snow Storage site be established with a gross budget of \$480,000, recovery of \$24,000 and net budget of \$456,000.
7. That the West Credit Temporary Snow Storage Site project be funded from the Capital Reserve Fund (Account #33121) for \$456,000.

**REPORT
HIGHLIGHTS:**

- The 2013/14 winter season was the final year of the previously approved five year Winter Maintenance Contract.
- A new Winter Maintenance Contract was tendered with an increase in duration from five to seven years.
- A review of the City's winter maintenance operations was completed and several changes have been incorporated into the new tender that will improve efficiency and effectiveness of operations.
- A provisional item was included in Winter Maintenance Contract tender to identify the cost of adding Secondary Sidewalks Winter Maintenance as a new service level for the municipality.
- The annual cost to add a new level of service for Secondary Sidewalks Winter Maintenance is \$3.0 Million.
- The previous five-year GPS/AVL Fleet Management System contract expires in 2014 with Webtech Wireless Inc. The new contract is proposed as a single source award for seven years plus an optional three years to align with the timing and award of the new seven year Winter Maintenance Contract.
- A temporary snow storage facility is proposed to be established in the North West quadrant of the city by utilizing recently purchased city lands.

BACKGROUND:

The winter season of 2013/2014 was the final year of the five-year Winter Maintenance Contract (Procurement FA.49.133-09). A new Winter Maintenance Contract has now been tendered (Procurement FA.49.324-14). During the past few winter seasons, a number of operational issues had been identified with respect to the provided levels of service and quality of the snow clearing operations. In response to these issues, a review of winter maintenance operations was completed. The new Winter Maintenance Tender incorporated changes from the previous contract to address these issues. In an effort to secure competitive pricing, to acquire the appropriate winter maintenance vehicles and to meet evolving industry standards, a new seven-year contract period was chosen.

Requests were received by the Transportation & Works Department to evaluate an increased level of service for sidewalks so that all sidewalks in the municipality (Priority Sidewalks and Secondary Sidewalks) receive winter maintenance. Currently only Priority Sidewalks receive winter maintenance. The estimated budget for the addition of Secondary Sidewalks was presented at the February 19, 2014 Transportation Committee. In an effort to get an accurate costing for this service, a provisional item was included in the new Winter Maintenance Contract tender. A full updated costing to add this new service is included in this report.

The existing GPS/AVL Fleet Management System Contract (Procurement FA.49.121-09) expires in 2014. It is proposed that this contract be renewed (Procurement FA49.441-14) for a term of seven years to align with the timing and award of the new seven year Winter Maintenance Contract. This renewal contract will allow the City to transition from hardware ownership to a lease arrangement to take advantage of changing technology for future hardware upgrades.

Currently the City has very limited snow storage capacity. Depending on the amount of snowfall received, the facilities currently used can quickly reach capacity. Snow removal requirements also continue to grow with increased expectations in BIA's, Transit Stops including the Transitway, dead ends and the desire to maintain sight lines.

Long term permanent snow storage solutions have been identified and are incorporated into the Business Plan for future considerations. An opportunity currently exists to utilize recently purchased city owned land for snow storage capacity in the North West quadrant of the city. This will help bridge the gap until permanent solutions are available.

Based on the above, this report will cover the following items:

1. New Winter Maintenance Contract Tender
2. Secondary Sidewalks Winter Maintenance
3. GPS/AVL Fleet Management System - Contract Renewal
4. Snow Storage Requirements

COMMENTS:**New Winter Maintenance Contract Tender**

The new tender for winter maintenance included the provision of contracted equipment and crews to perform various snow and ice control activities throughout the City of Mississauga for a seven year period covering the 2014 through 2021 winter seasons. A seven year period was selected to take advantage of more competitive pricing that is expected for a longer contract.

In preparation for the tender, Transportation and Works staff reviewed winter maintenance operations with a focus to ensure operational efficiency and establish equipment levels to provide Council approved service levels for winter operations.

Material Management publicly advertised a call for 14 items including one provisional item for the winter maintenance of all secondary sidewalks throughout the City for tenders to supply of various winter equipment/crews, and vendors were invited to submit bids for one or more of the 14 items listed for the 2014/2015 winter season. Each item specified a minimum number of units to be bid and allowed unit price bids to be submitted for standby.

For the first 10 items and item 14 (provisional item for all Secondary Sidewalks), the tender established hourly operational rates for the specified equipment/crews. Items 11 and 12 in the tender invited vendors to submit unit price bids for the operation of snow removal/melting crews. Item 13 is specified as an operational rate only for anti-icing purposes.

The tender provides a price adjusting index per winter season over the duration of the contract to increase or decrease the standby and operational unit prices for the subsequent winter seasons (2015 through 2021). The price adjusting index will be based on the Consumers Price Index for Ontario (all items), as recorded by Statistics Canada, for the annual percentage change from September to September on each year.

A total of 83 vendors registered for this procurement where 48 bid submissions were received.

Appendix 1 outlines all bids received for the 2014/2015 winter season for all 14 tendered items.

Appendix 2 provides detailed bid costs for the recommended vendors and equipment/crews required for each of the 14 tendered items for the contract duration. The equipment/crews will allow Transportation and Works to meet the services levels approved by Council.

The Winter Maintenance Contract Tender was reviewed and analyzed by Transportation and Works staff. In addition, staff from Materiel Management and Financial Services also reviewed the bids and evaluation process.

The tenders were evaluated based on the lowest bids received from the number of equipment/crews identified for each of the items. In addition, tenders were evaluated as to the capabilities and experience of the vendors, including equipment suitability.

In this tender, there were items included to expand the City's anti-icing program. Presently, we use our own water trucks to place brine (a salt water solution) on our bridges and steep hills and curves to help minimize slippery conditions including the formation of black ice. We are now planning on providing this operation on all our arterial roads throughout the City as an enhanced winter service level. We will have dual purpose vehicles that have side saddle tanks as well as an item for water tankers to help with this operation

The anti-icing program has been expanded to allow the city to meet recent changes to the provincial Minimum Maintenance Standards

(MMS). This program reduces liability risk for the city by reducing or preventing the formation of black ice and also helps reduce the bonding of snow to the roadway which improves plowing efficiency. The anti-icing program places a brine solution on the roadway in key areas which will now include arterial roads. Anti-icing can be achieved prior to the snow event and can remain in place for several days.

Also included in this tender were some equipment changes. In an effort to reduce sod damage, sidewalk skid steer machines were removed and replaced with standard sidewalk tractor plows which allow for better steering capability. The number of street tractor plows were reduced and replaced with single axle dual purpose vehicles. This will allow the routes to be plowed and salted at the same time improving efficiency and providing cost savings. Similarly, graders used in the Malton District were replaced with dual purpose vehicles. A snow melting machine was removed from the tender resulting in a savings of \$100,000 per season in standby costs alone.

Based on the challenges faced in clearing sidewalks during larger snow events, snow blower attachments were included for the sidewalk machines. This will allow the sidewalks to be cleared with greater efficiency in large volume snow events reducing the number of required passes.

Sidewalk Winter Maintenance Level of Service

A Corporate Report was presented to Transportation Committee on February 19, 2014 where the cost to undertake sidewalk winter maintenance on all Secondary Sidewalks was presented. In an effort to refine the cost estimate, staff included provisional items for this work in the current tender. The level of service included in the tender is based on meeting the Provincial Minimum Maintenance Standards. The tender has closed and the updated cost estimate is presented in this report.

To clear Secondary Sidewalks, an additional 1,000 km (621 miles) of sidewalks need to be added. Based on the tender process it is calculated that the annual cost would be \$3.0 million for an average winter. This cost estimate includes standby and operational costs for

contracted equipment, additional costs for pretreated salt, additional staff resources, cost to repair sod and boulevard damages from encroachments and cost to lease land for equipment storage and dispatching. Leasing of land was considered a more economical approach to land purchase costs.

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

- Potential increase in claims due to boulevard damages to encroachments such as curbs, gardens and sprinklers;
- An expected increase in calls to the 311 call centre;
- Additional windrows placed onto driveways from sidewalk plows;
- Complaints regarding salt use and the impact to pets due to higher pet usage in these areas;
- Increase in sod damages and associated complaints; and
- Increase in pretreated salt usage (5,000 to 6,000 tonnes) and resultant negative environmental impacts to natural areas and watercourses

GPS/AVL Fleet Management System – Contract Renewal

The GPS/AVL Fleet Management System is a web based solution, Software as a Service (SAAS) that allows the city to monitor its winter operations, contractor vehicles as well as the city's mobile fleet assets. The system previously selected was competitively bid, and Webtech Wireless Inc. was the successful vendor for providing mobile telematics portfolio. The renewal contract allows the City to transition from hardware ownership to a lease arrangement from 2014 through 2021 to take advantage of changing technology for future hardware upgrades and aligning with the seven year Winter Maintenance Contracts starting form 2014/2014 winter season.

Transitioning from a hardware ownership to a lease arrangement is very advantageous to the City. Any issues that arise during the term of the contract are covered by a service plan. Any hardware failures will be replaced automatically at no cost to the City. The existing units purchased are up to five years old and will be replace and will be upgraded automatically to keep pace with technological advances.

Leasing of these GPS/AVL equipment's will provide flexibility and protection against technological obsolescence. The equipment will be upgraded automatically to keep pace with Technology. Additional equipment can be easily installed should the fleet be expanded. A service plan is part of the lease agreement that includes a turnkey solution covering any related hardware issues, installation and other services as required to maintain GPS/AVL equipment and SAAS Fleet Management System.

The GPS/AVL locator hardware units were designed and manufactured by Webtech Wireless Inc. and functions with their proprietary system. Webtech Wireless Inc. is the exclusive and unique sole source provider to all Webtech Wireless AVL hardware and software. Webtech products have copyrighted proprietary source code and intellectual property that is owned by Webtech Wireless. No other vendor or service provider has the rights or source code for this service offering.

The renewal contract includes additional services such as Route Compliance package, Public Information package to provide service to the Mobile Roads App, Sensors to be installed on all plows that will enable verification of plow up/plow down status, preseason service and "light up" to test functionality and reporting of all hardware locator units, training modules and a hardware maintenance package.

Snow Storage Requirements

In early 2014, the City took ownership of a parcel of land located at 7300 West Credit Avenue. The property is identified for a future transit maintenance and storage facility. Until such time, it is proposed that the lands be available for use by Transportation & Works, Community Services and Enersource for the storage of materials.

In order to utilize a portion of the site for snow storage, an access driveway and asphalt pad will be required to accommodate vehicles and snow placement. Snow melt treatment structures will also be installed to meet environmental requirements.

The use of this parcel of land will have the positive impact of reducing the snow storage requirements at Dunton Park. The park is typically

scheduled for use by the first week of May and with excessive snow storage it is not possible to prepare the park for early season usage without mechanically removing the snow.

Additional future permanent snow storage requirements have been previously identified in the business plan for future consideration. These requirements will be addressed at three future permanent sites including the proposed Loreland South East Works Yard, and two additional locations to be determined in the North West and North Central zones. Further, the City is also currently working with the Region of Peel to find land in the South West quadrant of the city for a shared use facility. The addition of the temporary snow storage site at 7300 West Credit Avenue will alleviate pressure until permanent sites become available.

FINANCIAL IMPACT: Winter Maintenance Tender

Detailed winter contract bid costs by each vendor for each of the 14 items tendered are provided in Appendix 2.

An overall summary of winter contractor costs is provided in Appendix 3. The winter contract standby and operational project costs (excluding H.S.T.) for the first year (2014/15) are summarized as follows:

Standby Cost	Operational Cost	Total Cost
\$9,810,908.66	\$4,015,046.22	\$13,825,954.88

The contract project costs for the first winter season are established as per the tender, while the contract project costs for the subsequent six winter seasons are subject to a consumer price adjusting index (CPI) which may increase or decrease the seasonal contract project costs.

The unadjusted seven-year contract project cost is estimated to be valued at \$96,781,683.60 (excl. HST).

The 2015 Preliminary Budget included an expected inflation increase of approximately \$0.7 million. When added to the approved 2014 budget of \$14.5 million, the total 2015 preliminary budget was \$16.2

million.

If the tender is awarded as recommended in this report, the estimated 2015 Winter Maintenance Cost is \$15,176,000 as shown in Appendix 3. This results in a \$971k reduction in the 2015 estimated original budget.

Secondary Sidewalk Winter Maintenance Level of Service

To add a new service level of Secondary Sidewalk Winter Maintenance an annual budget of \$3.0 million which equates to a 0.8% tax rate increase in 2015 is required. These costs would be required to fund contract costs associated with the works as well as additional staff to supervise and inspect the work.

As the new service level will begin in the Fall of 2014, the 2014 sidewalk winter maintenance budget will need to be increased by \$1.1 million and funded from the Reserve for Winter Maintenance. Two new full time positions would need to be hired in 2014 which would require Council approval.

The 2014 costs will need to be recovered from the Reserve for Winter Maintenance. The balance in this Reserve is \$8.3 million but this may change at year end due to over expenditures as a result of the severe winter weather.

GPS/AVL Fleet Management System – Contract Renewal

A monthly leasing unit price including a service plan and GPS/AVL hardware installation on all vehicles has been obtained. The unit leasing price also includes all desired reporting, public information services, winter light up and professional services.

Annual Lease of Hardware	Annual Lease of Services (SAAS)	Extended Annual Cost
\$72,735.04	\$224,573.88	\$297,308.92

Snow Storage Requirements

In order to facilitate use of the 7300 West Credit Avenue site for snow storage purposes, the site will need to be upgraded. This will require the installation of an access road, earthworks, granular and asphalt, storm sewers and culvert installation, snow melt treatment structures and fencing for a total cost estimate of \$480,000. It is anticipated that a recovery cost share for the access road in the amount of \$24,000 can be obtained giving a net cost of \$456,000.

A new capital project (PN 14-192) for the West Credit Temporary Snow Storage Site will need to be created which will be funded from the Capital Reserve Fund (Account #33121).

CONCLUSION:

Winter Maintenance Tender

The Transportation and Works Department recommends that a seven year contract be awarded to the vendors as outlined in Appendix 2 of this report. A seven year contract period as well as process improvements identified in the tender have resulted in very competitive bid prices.

The equipment levels recommended incorporate the Council approved enhanced level of service for priority sidewalk and bus stop winter maintenance as per the October 16, 2008 Corporate Report from the Commissioner of Transportation and Works.

The funding for the recommended bid award for the Winter Maintenance Tender is within budget for the proposed budget amount for 2015.

Sidewalk Winter Maintenance Level of Service

In non-priority areas the City has adopted the practice of regularly

requesting residents to cooperate with the City by clearing sidewalks adjoining their property through advertisements, flyers and staff visits in response to complaints on non-priority sidewalks. This practice has worked well on non-priority sidewalks.

Adding this new service of winter maintenance on non-priority sidewalks, which generally has lower pedestrian and vehicular roadway counts, would have a substantial impact on the winter maintenance budget and require an additional \$3.0 million annually in funding. Original estimates included land purchase costs in order to store the required winter equipment. This has now been included as a land lease and it is anticipated that land will be available for lease in the required areas. It is expected that resident complaints will increase significantly due to windrows left behind from sidewalk plows, damages to sod and other encroachments, effect of salt on pets and the general increase of salt impacts to our watercourses and natural areas.

GPS/AVL Fleet Management System – Contract Renewal

The current contract for GPS/AVL Fleet Management System expires in 2014 with Webtech Wireless Inc. The new contract renewal is proposed as a single source award for seven years to align with the timing and award of the new seven year Winter Maintenance Contract. A monthly leasing unit price arrangement has been obtained which includes service plan and GPS/AVL hardware installation on all vehicles.

Snow Storage Requirements

Utilizing the property located at 7300 West Credit Avenue will provide a temporary snow storage facility. This will alleviate the issues from the snow storage at Dunton Park by reducing snow storage requirements at that location. This will allow Parks Department to bring early spring programs online reducing concern for potential program start delays.

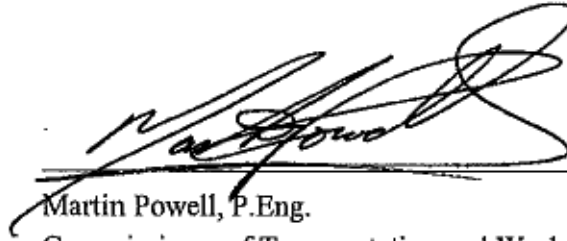
This temporary snow storage facility will provide temporary measures until such time as additional permanent snow storage sites becomes available through the development of the Loreland Works Yard, the proposed North-West and North Central sites as well as additional snow storage through a shared joint facility with the region of Peel which is currently under study.

ATTACHMENTS:

Appendix 1: Winter Maintenance Tender Bids Received

Appendix 2: 2014/15 Costs

Appendix 3: Winter Contractor Costs



Martin Powell, P.Eng.

Commissioner of Transportation and Works

Prepared By: Bob Levesque, P.Eng.

Manager, Works Maintenance and Operations

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

**ITEM 1: DUAL PURPOSE TANDEM AXLE SPREADER/PLOW TRUCK WITH OPERATOR
C/W PLOW AND WING, SPREADER BOX, DUAL SIDE OR REAR SPINNERS,
AND ELECTRONIC SPREADER CONTROL SYSTEM**

Winter Season
2014/2015 Winter Season

Operational Amount per Unit (excl. HST)
\$65.00 per hour x 200 hours = \$13,000.00

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. HST)	No. of Units Offered (Min. 15 Units)	Comments
1	PACIFIC PAVING 5845 Luke Road, Suite 204 Mississauga, ON L4W 2K5	\$59,835.00	19	19 units required
2	BONUM CONTRACTING INC. 11 Hugo Road Brampton, ON L6P 1W4	\$60,705.00	20	20 units required
3	MELROSE PAVING CO. LTD. 3540 Hawkestone Rd. Mississauga, ON L5C 2V2	\$67,238.70	25	10 of 25 units required
4	A & G THE ROAD CLEANERS LTD. 47 Simpson Road Bolton, ON L7E 2R6	\$67,375.00	21	Units not required
5	742731 ONTARIO INC. o/a HART LAKE INDUSTRIES 15276 Dixie Rd. Caledon, ON L7C 2M3	\$67,955.00	19	Units not required
6	RAFAT GENERAL CONTRACTOR INC. 8850 George Bolton PKWY Caledon, ON L7E 2Y4	\$71,000.00	19	Units not required
7	S&J GRERI TRUCKING LTD. 4111 Clevedon Drive Mississauga, ON L4Z 1J4	\$72,435.50	19	Units not required
8	STEED AND EVANS LIMITED 3000 Amenl Line St. Jacobs, ON N0B 2N0	\$85,500.00	19	Units not required

Total Units Available: 142

Total Units Required: 49

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

**ITEM 2: DUAL PURPOSE TANDEM AXLE SPREADER/PLOW TRUCK WITH OPERATOR
C/W PLOW AND WING, SPREADER BOX, DUAL SIDE OR REAR SPINNERS,
DIRECT LIQUID APPLICATION CAPABILITY AND ELECTRONIC SPREADER CONTROL SYSTEM**

Winter Season Standby Days Per Unit Operational Amount per Unit (excl. GST)
2014/2015 Winter Season 145 Days (\$65.00 per hour x 200 hours) = \$65.00 per hr x 35 hours) = \$15,275.00

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. HST)	No. of Units Offered (Min. 6 Units)	Comments
1	BONUM CONTRACTING INC. 11 Hugo Road Brampton, ON L6P 1W4	\$64,430.00	6	6 units required
2	A & G THE ROAD CLEANERS LTD. 47 Simpson Road Bolton, ON L7E 2R6	\$71,825.00	15	9 of 15 units required
3	RAFAT GENERAL CONTRACTOR INC. 8850 George Bolton PKWY Caledon, ON L7E 2Y4	\$75,415.67	6	Units not required
4	PAVE-TAR CONSTRUCTION LTD. 388 Watline Avenue Mississauga, ON L4Z 1X2	\$76,900.00	7	Units not required
6	2375072 OTARIO INC. 1230 Mid-way Blvd. Mississauga, ON L5T 2B8	\$77,190.00	10	Units not required
6	STEED AND EVANS LIMITED 3000 Ament Line St. Jacobs, ON N0B 2N0	\$89,355.00	6	Units not required

Total Units Available: 60

Total Units Required: 15

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

**ITEM 3: DUAL PURPOSE SINGLE AXLE SPREADER/PLOW TRUCK WITH OPERATOR
C/W PLOW AND WING, SPREADER BOX, DUAL SIDE OR REAR SPINNERS,
AND ELECTRONIC SPREADER CONTROL SYSTEM**

Winter Season Standby Days Per Unit Operational Amount per Unit (excl. GST)
2014/2015 Winter Season 145 Days \$60.00 per hour x 200 hours = \$12,000.00

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. HST)	No. of Units Offered (Min. 10 Units)	Comments
1	RAFAT GENERAL CONTRACTOR INC. 8850 George Bolton PKWY Caledon, ON L7E 2Y4	\$48,250.00	10	10 units required
2	PACIFIC PAVING 5845 Luke Road, Suite 204 Mississauga, ON L4W 2K5	\$58,110.00	10	10 units required
3	PAVE-TAR CONSTRUCTION LTD. 366 Watline Avenue Mississauga, ON L42 1X2	\$59,705.00	20	20 units required
4	742731 ONTARIO INC. o/a HART LAKE INDUSTRIES 15276 Dixie Rd. Caledon, ON L7C 2M3	\$62,460.00	10	3 of 10 units required
5	FERMAR PAVING LIMITED 1921 Albion Rd. Rexdale, ON M9W 6S9	\$65,625.25	20	Units not required
6	T. BOLTON SOD CO. LIMITED 9043 Country Road 1, R.R. #1 Palgrave, ON L0N 1P0	\$65,940.00	10	Units not required
7	STEED AND EVANS LIMITED 3000 Arment Line St. Jacobs, ON N0B 2N0	\$79,555.00	10	Units not required
8	DEFINA HAULAGE LTD. 42 Prince Adam Crt. King City, ON L7B 1M1	\$80,585.00	20	Units not required
9	ASHLAND PAVING LTD. 340 Bowes Rd. Concord, ON L4K 1K1	\$82,325.00	15	Units not required
10	2375072 OTARIO INC. 1230 Mid-way Blvd. Mississauga, ON L6T 2B8	\$83,920.00	10	Units not required
11	GAZZOLA PAVING LIMITED 529 Carlingview Drive Etobicoke, ON M9W 5H2	\$106,260.00	10	Units not required

Total Units Available: 135
Total Units Required: 43

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

ITEM 4: TANDEM AXLE TRUCK PLOW WITH OPERATOR C/W PLOW AND WING

Winter Season Standby Days Per Unit Operational Amount per Unit (excl. GST)
 2014/2015 Winter Season 103 Days \$65.00 per hour x 60 hours = \$3,260.00

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. HST)	No. of Units Offered (Min. 5 Units)	Comments
1	RAFAT GENERAL CONTRACTOR INC. 8850 George Bolton PKWY Caledon, ON L7E 2Y4	\$34,150.00	6	6 units required
2	CLEANSITE DISPOSAL INC. 118 Bloomsbury Ave. Brampton, ON L6P 2X1	\$35,592.00	6	6 units required
3	A & G THE ROAD CLEANERS LTD. 47 Simpson Road Bolton, ON L7E 2R6	\$36,725.00	6	6 units required
4	2375072 OTARIO INC. 1230 Mid-way Blvd. Mississauga, ON L6T 2B8	\$43,214.00	4	3 of 4 units required
5	STEED AND EVANS LIMITED 3000 Ament Line St. Jacobs, ON N0B 2N0	\$48,168.00	4	Units not required
6	JOHN EEK & SON LTD. 190 Artesian Parkway P.O. Box 149 Bradford, ON L3Z 2A7	\$57,428.00	6	Units not required

Total Units Available: 31

Total Units Required: 20

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

ITEM 5: ARTICUATED LOADER PLOW WITH OPERATORC/W PLOW AND BUCKET

Winter Season **Standby Days Per Unit** **Operational Amount per Unit (excl. GST)**
 2014/2015 Winter Season 103 Days \$65.00 per hour x 65 hours = \$4,225.00

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. GST)	No. of Units Offered (Min. 6 Units)	Comments
1	2415188 ONTARIO INC. o/a JEFFERY BULLOCK R.R. #1 Faversham, ON MoC 1C0	\$29,161.00	12	12 units required
2	ROBERT B. MEISNER CONSTRUCTION INC. 125 Orenda Road Brampton, ON L6W 1W3	\$29,973.97	20	9 of 20 units required
3	614128 ONTARIO LTD. o/a TRISAN CONSTRUCTION 17250 HWY, 27 Schomberg, ON L0G 1T0	\$32,653.00	10	Units not required
4	PACIFIC PAVING 6845 Luke Road, Suite 204 Mississauga, ON L4W 2K5	\$38,165.00	10	Units not required
5	ALTON CENTURY FARMS LTD. 85565 Lucknow Line, R.R. # 2 Lucknow, ON N0G 2H0	\$38,970.00	10	Units not required
6	RAFAT GENERAL CONTRACTOR INC. 8850 George Bolton PKWY Caledon, ON L7E 2Y4	\$37,185.00	10	Units not required
7	LAKESIDE CONTRACTING COMPANY LIMITED 3513 Mavis Road Mississauga, ON L6C 1T7	\$40,275.00	10	Units not required
8	ISLINGTON NURSURIES LTD. 1000 Islington Avenue Toronto, ON M6Z 4P8	\$41,620.00	10	Units not required
9	VBN PAVING LIMITED 385 Enford Road, Unit 2 Richmond Hill, ON L4C 3G2	\$44,189.00	10	Units not required
10	SUPCO CONSTRUCTION LIMITED, Suite 381 18-13085 Yonge St. Richmond Hill, ON L4E 0K2	\$50,060.00	10	Units not required
11	MTM LANDSCAPING CONTRACTORS INC. 2034 Dixie Rd. Mississauga, ON L4Y 1Y8	\$210,225.00	10	Units not required

Total Units Available: 122

Total Units Required: 21

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

ITEM 6: TRACTOR PLOW WITH OPERATOR C/W PLOW AND BUCKET

Winter Season Standby Days Per Unit Operational Amount per Unit (excl. HST)
 2014/2016 Winter Season 103 Days \$65.00 per hour x 85 hours = \$5,525.00

Order	Vendor	2014/2016 Bid Amount Per Unit (Excl. HST)	No. of Units Offered (Min. 10 Units)	Comments
1	614128 ONTARIO LTD. o/a TRISAN CONSTRUCTION 17250 HWY. 27 Schomberg, ON L0G 1T0	\$22,507.00	10	10 units required
2	ROBERT B. MEISNER CONSTRUCTION INC. 125 Orenda Road Brampton, ON L6W 1W3	\$29,790.00	10	Units not required
3	CEDAR SPRINGS LANDSCAPE GROUP LIMITED 1328 Butler Road West Aricaster, ON L0G 3L1	\$32,305.00	10	Units not required
4	ALTON CENTURY FARMS LTD. 85565 Lucknow Line, R.R. # 2 Lucknow, ON N0G 2H0	\$34,671.00	10	Units not required
5	1336668 ONTARIO INC. o/a WINSOM LANDSCAPING 11 Veneto Drive Vaughan, ON L4L 8X4	\$34,777.00	10	Units not required
6	DONALDSON CUSTOM FARMING INC. P.O. Box 209, 2390 Haldibrook Rd. Binbrook, ON L0R 1C0	\$34,880.00	10	Units not required
7	RAFAT GENERAL CONTRACTOR INC. 8850 George Bolton PKWY Caledon, ON L7E 2Y4	\$36,425.00	10	Units not required

Total Units Available: 70

Total Units Required: 10

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

ITEM 7: SNOW CLEARING LOADER BACKHOE WITH OPERATOR C/W BUCKET

Winter Season Standby Days Per Unit Operational Amount per Unit (excl. HST)
2014/2015 Winter Season 103 Days \$60.00 per hour x 50 hours = \$1,500.00

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. GST)	No. of Units Offered (Min. 2 Units)	Comments
1	MAVIS GARDEN SUPPLIES CO. LTD. 3539 Mavis Road Mississauga, ON L5C 1T7	\$13,197.00	2	2 units required
2	R-CON CONTRACTING INC. 112 Summitcrest Drive Richmond Hill, ON L4S 1A8	\$16,184.00	12	8 of 12 units required
3	EXTREME LANDSCAPING & CONTRACTING LTD. 60 Bristol Road East Mississauga, ON L4Z 3K8	\$16,287.00	2	Units not required
4	MUNICIPAL MAINTENANCE INC. 52 Proctor Road Schomberg, ON L0G 1T0	\$18,450.00	2	Units not required
4	SUPCO CONSTRUCTION LIMITED, Suite 361 19-13085 Yonge St Richmond Hill, ON L4E 0K2	\$18,450.00	4	Units not required
6	DIAMOND EARTHWORKS CORPORATION 74 Meeley Rd. Bolton, ON L7E 6A7	\$19,401.00	2	Units not required
7	DI BROS INC. 23 Torkork Dr. Toronto, ON M9L 1X9	\$21,952.00	5	Units not required
8	LAKESIDE CONTRACTING COMPANY LIMITED 3513 Mavis Road Mississauga, ON L5C 1T7	\$23,085.00	2	Units not required
9	MADILL FARMS R.R. #3 (Fire #076676) Markdale, ON M0C 1H0	\$23,210.77	13	Units not required
10	RAFAT GENERAL CONTRACTOR INC. 8850 George Bolton PKWY Caledon, ON L7E 2Y4	\$23,600.00	2	Units not required
11	814128 ONTARIO LTD. o/a TRISAN CONSTRUCTION 17250 HWY 27 Schomberg, ON L0G 1T0	\$25,361.00	4	Units not required
12	DEFINA HAULAGE LTD. 42 Prince Adam Crt. King City, ON L7B 1M1	\$25,454.00	2	Units not required
13	1338588 ONTARIO INC. o/a WINSOM LANDSCAPING 11 Veneto Drive Vaughan, ON L4L 8X4	\$28,029.00	2	Units not required
14	IPAC PAVING LTD. 9251 Yonge Street, Suite B - 872 Richmond Hill, ON L4C 9T3	\$31,840.00	3	Units not required
15	2376072 OTARIO INC. 1230 Mid-way Blvd. Mississauga, ON L5T 2B8	\$33,282.00	2	Units not required

Total Units Available: 59

Total Units Required: 10

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

**ITEM 8: SIDEWALK PLOW/SPREADER WITH OPERATOR
C/W PLOW, BLOWER, SPREADER AND MATERIAL FEEDING**

Winter Season Standby Days Per Unit Operational Amount per Unit (excl. HST)
2014/2015 Winter Season 145 Days \$70.00 per hour x 200 hours + \$75.00 per hr x 50 hrs = \$17,750.00

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. HST)	No. of Units Offered (Min. 12 Units)	Comments
1	J. DI IORIO CONSTRUCTION LTD. 11 Julland Road Toronto, ON M8Z 2G6	\$30,085.00	14	14 units required
2	614128 ONTARIO LTD. o/a TRISAN CONSTRUCTION 17250 HWY. 27 Schomberg, ON L0G 1T0	\$32,550.00	36	36 units required
3	AQUATECH SOLUTIONS Box 276 Schomberg, ON L0G 1T0	\$33,710.00	24	22 of 24 units not required
4	MUNICIPAL MAINTENANCE INC. 52 Proctor Road Schomberg, ON L0G 1T0	\$35,450.00	12	Units not required
5	SALID INVESTMENTS LTD. 8314 Ninth Line Mississauga, ON L6N 0C1	\$35,491.67	12	Units not required
6	T. BOLTON SOD CO. LIMITED 9043 Country Road 1, R.R. #1 Palgrave, ON L0N 1P0	\$39,810.00	24	Units not required
7	1338568 ONTARIO INC. o/a WINSOM LANDSCAPING 11 Venajo Drive Vaughan, ON L4L 8X4	\$42,655.00	12	Units not required
8	LIMA'S GARDENS & CONSTRUCTION INC. 115 Toryork Drive Toronto, ON M9L 1X6	\$47,060.00	12	Units not required
9	MTM LANDSCAPING CONTRACTORS INC. 2034 Dixie Rd. Mississauga, ON L4Y 1Y8	\$53,576.00	24	Units not required

Total Units Available: 170

Total Units Required: 72

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

ITEM 9: SNOW CLEARING/SPREADING CREW FOR BUS STOPS AND CROSSINGS INCLUDING MATERIAL FEEDING & TRAFFIC PROTECTION C/W EQUIPMENT, OPERATORS AND LABOUR

Winter Season Standby Days Per Unit Operational Amount per Crew (excl. HST)
2014/2015 Winter Season 145 Days (\$55.00 per hour x 120 hours) + (\$115.00 per hour x 60 hours) = \$13,500.00

Order	Vendor	2014/2015 Bid Amount Per Crew (Excl. HST)	No. of Crews Offered (Min. 15 Crews)	Comments
1	MUNICIPAL MAINTENANCE INC. 52 Proctor Road Schomberg, ON L0G 1T0	\$32,350.00	45	45 crews required
2	DIAMOND EARTHWORKS CORPORATION 74 Mealey Rd. Bolton, ON L7E 5A7	\$34,561.25	15	15 crews required
3	614126 ONTARIO LTD. o/a TRISAN CONSTRUCTION 17250 HWY. 27 Schomberg, ON L0G 1T0	\$34,670.00	45	17 of 45 crews required
4	R-CON CONTRACTING INC. 112 Summitcrest Drive Richmond Hill, ON L4S 1A8	\$34,960.00	25	Crews not required
5	BONUM CONTRACTING INC. 11 Hugo Road Brampton, ON L6P 1W4	\$35,105.00	25	Crews not required
6	AQUATECH SOLUTIONS Box 276 Schomberg, ON L0G 1T0	\$35,505.00	15	Crews not required
7	ROCKLAND CONTRACTING INC. 2415 Poplar Cres. Mississauga, ON L5J 4H2	\$35,585.00	15	Crews not required
8	2128087 ONTARIO INC. o/a DOBROCON 14398 Gradview Rd. Chellenham, ON L7C 1N5	\$43,660.00	15	Crews not required
9	LIMA'S GARDENS & CONSTRUCTION INC. 116 Toryork Drive Toronto, ON M9L 1X6	\$50,188.00	15	Crews not required
10	CEDAR SPRINGS LANDSCAPE GROUP LIMITED 1326 Butler Road West Ancaster, ON L9G 3L1	\$54,100.00	15	Crews not required
11	VBN PAVING LIMITED 385 Enford Road, Unit 2 Richmond Hill, ON L4C 8Q2	\$62,220.00	16	Crews not required

Total Crews Available: 245

Total Crews Required: 77

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

**ITEM 10: SNOW BLOWER WITH OPERATOR (MINIMUM 1.8 M WIDTH)
C/W FRONT MOUNTED DUAL STAGE BLOWER**

Winter Season **Standby Days Per Unit** **Operational Amount per Unit (excl. HST)**
2014/2015 Winter Season 103 Days \$65.00 per hour x 30 hours = \$1,950.00

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. HST)	No. of Units Offered (Min. 4 Units)	Comments
1	MAVIS GARDEN SUPPLIES CO. LTD. 3539 Mavis Road Mississauga, ON L6C 1T7	\$22,035.00	4	4 units required
2	614128 ONTARIO LTD. o/a TRISAN CONSTRUCTION 17250 HWY. 27 Schomberg, ON L0G 1T0	\$23,680.00	4	1 of 4 units required
3	AQUATECH SOLUTIONS Box 276 Schomberg, ON L0G 1T0	\$24,713.00	4	Units not required
4	1938588 ONTARIO INC. o/a WINBOM LANDSCAPING 11 Veneto Drive Vaughan, ON L4L 8X4	\$29,142.00	6	Units not required
6	ALTON CENTURY FARMS LTD. 85665 Lucknow Line, R.R. #2 Lucknow, ON N0G 2H0	\$31,099.00	6	Units not required
8	DONALDSON CUSTOM FARMING INC. P.O. Box 209, 2380 Haldenbrook Rd. Binbrook, ON L0R 1C0	\$36,800.00	4	Units not required

Total Units Available: 28

Total Units Required: 6

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

**ITEM 11: SNOW REMOVAL SERVICES FOR THE TRELAWNY LANES AND TENTH LINE LANES
C/W EQUIPMENT, OPERATORS AND LABOUR**

Winter Season **Standby Days Per Unit** **Operational Amount per Unit (excl. HST)**
2014/2015 Winter Season 103 Days Varies per Snow Event

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. HST)	No. of Crews Offered (Min. 2 Crews)	Comments
1	614126 ONTARIO LTD. o/a TRISAN CONSTRUCTION 17260 HWY. 27 Schomberg, ON L0G 1T0	\$88,614.00	2	2 crews required
2	ROBERT B. MEISNER CONSTRUCTION INC. 126 Orenda Road Brampton, ON L6W 1W3	\$108,500.00	2	Crews not required
3	MACHINABILITY ROBOTICS 1616 Rebecca St. P.O. Box 60011 Oakville, ON L6L 6R4	\$115,850.00	2	Crews not required
4	MAVIS GARDEN SUPPLIES CO. LTD. 3530 Mavis Road Mississauga, ON L6C 1T7	\$128,295.00	2	Crews not required
5	WINTER WEATHER SPECIALISTS INC. P.O. Box 214 Oakville, ON L6K 0A4	\$213,944.50	2	Crews not required
6	LAKESIDE CONTRACTING COMPANY LIMITED 3513 Mavis Road Mississauga, ON L6C 1T7	\$275,018.00	2	Crews not required
7	782873 ONTARIO LIMITED o/a H&S EQUIPMENT 8171 Yonge St., Suite 303 Thornhill, ON L3T 2C6	\$535,000.00	2	Crews not required

Total Crews Available: 14

Total Crews Required: 2

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

ITEM 12: SNOW REMOVAL CREW FOR VARIOUS LOCATIONS CW EQUIPMENT, OPERATORS AND LABOUR

Winter Season Standby Days Per Unit Operational Amount per Crew (excl. HST)
2014/2015 Winter Season 103 Days Varies per Snow Event

Order	Vendor	2014/2015 Bid Amount Per Crew (Excl. HST)	No. of Crews Offered (Min. 1 Crew)	Comments
1	LAKESIDE CONTRACTING COMPANY LIMITED 3513 Mavis Road Mississauga, ON L5C 1T7	\$62,800.00	1	1 crew required
2	MAVIS GARDEN SUPPLIES CO. LTD. 3539 Mavis Road Mississauga, ON L5C 1T7	\$82,947.00	3	3 crews required
3	614128 ONTARIO LTD. o/a TRISAN CONSTRUCTION 17250 HWY. 27 Schomberg, ON L0G 1T0	\$79,494.00	5	3 of 5 crews required
4	SUPCO CONSTRUCTION LIMITED, Suite 361 19-13085 Yonge St. Richmond Hill, ON L4E 0K2	\$80,736.00	1	Crews not required
5	AQUATECH SOLUTIONS INC. Box 276 Schomberg, ON L0G 1T0	\$81,863.00	2	Crews not required
6	PAVE-TAR CONSTRUCTION LTD. 366 Watline Avenue Mississauga, ON L4Z 1X2	\$88,300.00	3	Crews not required
7	WINTER WEATHER SPECIALISTS INC. P.O. Box 214 Oakville, ON L8K 0A4	\$89,691.00	2	Crews not required
8	FUSILLO GROUP LTD. 3038 Frenze Drive Mississauga, ON L6A 2R7	\$89,627.00	3	Crews not required
9	PACIFIC PAVING 5945 Luke Road, Suite 204 Mississauga, ON L4W 2K5	\$90,497.00	2	Crews not required
10	792873 ONTARIO LIMITED o/a H&S EQUIPMENT 8171 Yonge St., Suite 303 Thornhill, ON L3T 2C6	\$122,400.00	4	Crews not required
11	2376072 OTARIO INC. 1230 Mid-way Blvd. Mississauga, ON L5T 2B8	\$169,986.00	1	Crews not required

Total Crews Available: 27

Total Crews Required: 7

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

ITEM 13: DIRECT LIQUID APPLICATION VEHICLES C/W EQUIPMENT, OPERATORS

Winter Season Standby Days Per Crew Operational Amount per Crew (excl. HST)
 2014/2015 Winter Season Dates Vary, 93 Days To Be Bid On

Order	Vendor	2014/2015 Bid Amount Per Unit (Excl. HST)	No. of Units Offered (Min. 2 Units)	Comments
1	A & G THE ROAD CLEANERS LTD. 47 Simpson Road Bolton, ON L7E 2R6	\$7,875.00	3	3 units required
2				
3				
4				

Total Crews Available: 3

Total Crews Required: 6

WINTER MAINTENANCE TENDER - PROCUREMENT FA.49.324-14

BIDS RECEIVED

**ITEM 14: PROVISIONAL ITEM
SIDEWALK PLOW/SPREADER WITH OPERATOR
C/W PLOW, BLOWER, SPREADER AND MATERIAL FEEDING**

Winter Season Standby Days Per Unit Operational Amount per Crew (excl. HST)
2014/2015 Winter Season 145 Days \$70.00 per hour x 200 hours + \$75.00 per hr x 50 hrs = \$17,750.00

Order	Vendor	2014/2015 Bid Amount Per Crew (Excl. HST)	No. of Crews Offered (Min. 12 Crews)	Comments
1	614128 ONTARIO LTD. c/a TRISAN CONSTRUCTION 17250 HWY. 27 Schomberg, ON L0G 1T0	\$37,561.52	23	23 crews required
2	AQUATECH SOLUTIONS INC. Box 276 Schomberg, ON L0G 1T0	\$35,885.00	12	12 crews required
3	T. BOLTON SOD CO. LIMITED 9043 County Road 1, R.R. # 1 Palgrave, ON L0N 1P0	\$40,235.00	12	12 crews required
4	GMS SERVICE CONTRACTING LIMITED 42 Montcalm Place Brampton, ON L6S 2X6	\$40,670.00	12	3 of 12 crews required
5	MUNICIPAL MAINTENANCE INC. 52 Proctor Road Schomberg, ON L0G 1T0	\$41,250.00	12	Crews not required

Total Crews Available: 71

Total Crews Required: 60

WINTER MAINTENANCE TENDER - PROCUREMENT FA 49.324-14
2014/2015 PROPOSED COSTS FOR NEW CONTRACT - Based on Actual Bid Costs

EQUIPMENT	2014/2015 STANDBY COSTS (Excl. Taxes)				2014/2015 STANDBY COSTS (Excl. Taxes)				2014/2015 STANDBY COSTS (Excl. Taxes)				TOTAL STANDBY AND OPERATIONAL COSTS (Excl. Taxes)
	NUMBERS OF UNITS	DAYS PER UNIT	AVERAGE STANDBY PER DAY RATE PER UNIT	AVERAGE STANDBY COST PER UNIT	STANDBY COST (Excl. Tax)	EST. HOURS PER UNIT	OPERATIONAL RATE PER UNIT	AVERAGE OPERATIONAL COST PER UNIT	OPERATIONAL COST (Excl. Tax)				
Dual Purpose Tandem Axle Spreader/Plows	49	145	\$342.00	\$49,590.00	\$2,429,910.00	200	\$65.00	\$13,000.00	\$637,000.00	\$3,066,910.00			
Dual Purpose Tandem Axle Spreader/Plows With Third Liquid Application	16	145	\$365.00	\$5,925.00	\$730,875.00	206	\$65.00	\$15,276.00	\$228,126.00	\$1,023,000.00			
Single Axle Dual Purpose Spreader/Plow	43	145	\$713.00	\$45,385.00	\$1,981,868.00	200	\$60.00	\$12,000.00	\$516,000.00	\$2,487,558.00			
Tandem Axle Truck Plows	20	103	\$322.00	\$6,440.00	\$6,832.00	35	\$65.00	\$2,275.00	\$45,500.00	\$708,820.00			
Articulated Loader Plows	21	103	\$246.00	\$5,166.00	\$532,098.00	65	\$45.00	\$4,225.00	\$68,725.00	\$600,823.00			
Tractor Plows	10	103	\$215.00	\$2,150.00	\$221,450.00	65	\$65.00	\$5,825.00	\$35,250.00	\$276,700.00			
Snow Clearing Loader/Bulldozer	10	103	\$114.00	\$1,140.00	\$117,400.00	50	\$60.00	\$3,000.00	\$30,000.00	\$147,400.00			
Sidewalk Plow/Spreader/Blower	72	145	\$122.00	\$8,724.00	\$1,169,280.00	210	\$73.00	\$15,330.00	\$1,103,760.00	\$2,273,040.00			
Bus Stop/Crossing Snow Clearing Crews	77	145	\$142.00	\$10,934.00	\$1,585,430.00	150	\$77.00	\$11,550.00	\$689,350.00	\$2,474,780.00			
1.8 m Wide Snow Blowers	5	103	\$303.00	\$3,030.00	\$7,045,410.00	30	\$66.00	\$1,980.00	\$9,760.00	\$114,206.00			
Snow Removal at Triclamy & Tenth Line	2	103	\$334.00	\$668.00	\$68,804.00	6 (5 Years)	\$9,000.00	\$54,000.00	\$108,000.00	\$176,804.00			
Snow Removal Crews	6	103	\$203.00	\$2,030.00	\$143,994.00	5,000 (Carb-Meters)	\$3.80	\$44,500.00	\$367,000.00	\$410,994.00			
Direct Liquid Application Trucks	3	0	\$0.00	\$0.00	\$0.00	3.5	\$208.00	\$7,280.00	\$23,025.00	\$23,025.00			
Sidewalk Plow/Spreader/Blower	50	145	\$157.50	\$7,875.00	\$1,138,250.00	210	\$73.00	\$15,330.00	\$768,500.00	\$1,904,780.00			
Total 2014/2015 Standby Amount (incl. Taxes):				\$10,919,001.00	\$10,919,001.00	Total 2014/2015 Operational Amount (incl. Taxes):				\$4,789,885.00			
13% HST:				\$1,419,470.13	\$1,419,470.13	13% HST:				\$620,046.65			
Sub-Total:				\$12,338,471.13	\$12,338,471.13	Sub-Total:				\$5,309,851.65			
Less Tax Rebate (11.24%):				\$1,227,400.24	\$1,227,400.24	Less Tax Rebate (11.24%):				(\$506,191.26)			
Total 2014/2015 Standby Cost:				\$11,111,070.89	\$11,111,070.89	Total 2014/2015 Operational Cost:				\$4,803,660.39			
Total 2014/2015 Standby Cost: Without additional sidewalk machines				\$9,810,668.66	\$9,810,668.66	Total 2014/2015 Operational Cost: Without additional sidewalk machines				\$4,015,646.23			

Focus on Contractor Costs

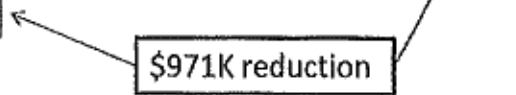
Estimated 2015 Costs

Description	Amount (\$000's)
AVL leasing	360
Contractor Costs	13,850
Secondary contracts	300
Winter Fencing	50
Weather Monitoring	16
Snow Melting Equipment Annual Allowance on demand	300
Subtotal	14,876
Contingency at 2%	300
Total	15,176

2015 Estimated Original Budget

Description	Amount (\$000's)
2014 Budget	15,470
Estimated 2015 Increase BAU	676.8
Estimated 2015 Budget Total	16,147

\$971K reduction



Appendix 2

Existing Council-approved Levels of Service for Winter Maintenance

Winter Maintenance Service Standards

Snowfall Accumulation of:	Less than 8 cm (3")	8 cm (3") to 15 cm (6")	15 cm to 30 cm (6"-12")	More than 30 cm (12") or Back to Back Storms
Major/Priority Road	Salting Only	Plowing and salting Cleared within 12 hrs after the end of a snowfall	Plowing and salting Cleared within 24 hrs after the end of a snowfall	Plowing and salting More than 24 hrs after the end of a snowfall
Residential/Secondary Roads Priority Sidewalks Bus Stops Pedestrian Crossings	Salting Only	Plowing and salting Cleared within 24 hrs after the end of a snowfall	Plowing and salting Cleared within 36 hrs after the end of a snowfall	

Appendix 3

Actions of other Municipalities – Windrow Clearing Winter Maintenance Activities	
Brampton, Ontario	City Council has authorized a Financial Assistance Program to help senior citizens and physically challenged homeowners with costs incurred from hiring a service provider to remove snow from their sidewalks and driveways. Qualifying applicants can receive a grant of up to \$200 for non-corner lot properties or up to \$300 for corner lot properties with sidewalks on two sides of the property and where both sidewalks are not cleared by City forces.
Burlington, Ontario	The City of Burlington offers a windrow clearing program for person with disabilities. Within 16 hours of the road being plowed, a contractor working on behalf of the city will plow the windrow at the bottom of driveway. Proof of disability must be shown at registration. A non-refundable fee of \$53.58 must be paid upon registration. The program is limited to the first 150 registrants and is only opened to residents living south of Dundas street and within the Alton community only.
Hamilton, Ontario	The City of Hamilton offers a support program called "Helping Hands" which provides home support to eligible low income seniors (65 and older) and the disabled. Snow shovelling is included in this program.
London, Ontario	Currently does not offer windrow program.
Markham, Ontario	The City of Markham provides windrow-clearing service for residents who meet the following criteria. Are 65 years of age or older, and or physically disabled. Crews will be dispatched to clear the centre portion of snow windrows (one car width only) on all roads following a 7.5 cm snow fall. Windrows will be cleared within 8 hours after crews plow the road. The City reserves the right to decide when snow windrow service will take place.
Mississauga, Ontario	Current in-house program includes approximately 170 homes for eligible residents who are 65 years of age and older and for residents with disabilities which prevent them from performing the task.
Newmarket, Ontario	Currently does not offer windrow program.
Niagara Falls, Ontario	Currently does not offer windrow program.
Oakville, Ontario	The Town of Oakville provides windrow-clearing service for residents who meet the following criteria. Are 65 years of age or older, and or physically disabled or have a medical condition. The service is provided after a snowfall exceeds 7.5cm and will only be complete after all roads have been plowed. It may take up to 36 hours for windrows to be cleared. The cost of this service is non-refundable \$102.
Ottawa, Ontario	Currently does not offer windrow program.
Richmond Hill, Ontario	Revised their program in 2019 to include a windrow clearing program for all residential driveways.
Toronto, Ontario	For Etobicoke, North York and Scarborough only, windrow clearing will commence on local roads at the same time as roadway ploughing only when a windrow height exceeds 25cms and is to be completed within 2 hours of roadway ploughing. Collector and arterial roads will commence at the final round of the roadway ploughing when windrow height exceeds 25 cm
Vaughan, Ontario	The City of Vaughan provides windrow-clearing service for all residential driveways. Windrow machines are designed to clear about 80 per cent of snow left by plows at the end of the driveway within four hours after the plow has passed. Due to the limited size and reach of the windrow clearing units, they can only clear a portion of the driveway entrance. The service does not clear windrows left by sidewalk plows, hardened snow, ice or the entire driveway.

Winter Maintenance Program - 2015-2019 YTD

	2019 Actual June YTD	2019 Budget June YTD	Variance Surplus (Deficit)	2018 Actual	2018 Budget	Variance Surplus (Deficit)	2017 Actual	2017 Budget	Variance Surplus (Deficit)	2016 Actual	2016 Budget	Variance Surplus (Deficit)	2015 Actual	2015 Budget	Variance Surplus (Deficit)
Total Costs	18,381,117	17,029,037	-1,352,080	22,579,081	23,012,743	433,662	20,583,066	23,208,633	2,625,567	22,808,113	23,236,974	428,861	19,496,091	22,731,625	3,235,534
Recoveries (Internal & External)	-413,507	-415,125	-1,618	-814,131	-703,500	110,631	-618,185	-703,500	-85,315	-517,153	-643,500	-126,347	-701,677	-613,500	88,177
Total Winter Program (Net)	17,967,610	16,613,912	-1,353,698	21,764,950	22,309,243	544,293	19,964,881	22,505,133	2,540,252	22,290,960	22,593,474	302,514	18,794,414	22,118,125	3,323,711
Transfer to Winter Reserve			0			544,293			0			0			0

Note 1 - Costs include labour; vehicle expenses; contractor costs; salt, brine and pretreated salt costs; and, other operating costs.

Note 2 - 2018 Was the first year that the Surplus from the Winter Program was transferred to the Winter Reserve. Prior year surplus was addressed through the year-end surplus by law.

Note 3 - 2018 Contractor Budget was reduced by \$200k as a result of historical trends.

Note 4 - Winter Reserve (#30120) Balance as of June, 2019 is \$12,157,217.

Note 5 - Recoveries External - Include Region Roads (Cawthra, Winston Churchill & Queensway); Toronto (Matheson & Eglington; Halton (Dundas St) for Salt Spreading, Plowing and Standby Charge.
Recoveries Internal - Transitway- Charge to Transit and then Transit recovers from Metrolinx; Parks & Forestry- For Salt Pickup for Community Centers and trails.