

11

58

<b>TO:</b>	<b>CHAIR AND MEMBERS ENVIRONMENT AND TRANSPORTATION COMMITTEE MEETING ON NOVEMBER 16, 2009</b>
<b>FROM:</b>	<b>DAVID A. LECKIE, P.ENG. DIRECTOR, ROADS &amp; TRANSPORTATION ENVIRONMENTAL &amp; ENGINEERING SERVICES</b>
<b>SUBJECT</b>	<b>SERVICE LEVEL – WINTER SIDEWALK MAINTENANCE</b>

<b>RECOMMENDATION</b>
-----------------------

That on the recommendation of the Director of Roads & Transportation, Environmental & Engineering Services:

- a) the following report **BE RECEIVED** for information; and
- b) the current level of service be confirmed for the winter of 2009/2010 noting that this has bases for the 2010 Operating Budget

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
--

ETC January 12, 2004 Service Level Cut - Winter Sidewalk Maintenance  
 ETC January 31 2005 Service Level – Winter Sidewalk Maintenance  
 ETC March 23, 2009 Winter Maintenance Budget Monitoring

<b>BACKGROUND</b>
-------------------

**Purpose:**

The purpose of this report is to provide an update from the Ontario Good Roads Association (OGRA) study group that was tasked with developing a best practice for winter sidewalk maintenance and to progress the dialogue on this subject.

**Context:**

The City of London's existing sidewalk snow clearing quality standard has been the subject of debate each winter season. The debate is prevalent in other cities and towns across the Province. The OGRA was asked to review and develop a provincial standard or best practice similar to the Provincial Minimum Maintenance Standards (MMS) that exist for roadways.

The task force that was seconded to review the MMS road standards commissioned a subgroup to develop a best practice for sidewalk winter maintenance. Members included Operations Managers from across the province.

Our existing level of service is defined in our winter sidewalk quality standard, a prefaced version of which is as follows.

*The sidewalk surface shall be maintained in a SNOW PACKED condition and the maximum allowable accumulation of fresh snow is 8cm. Continuous sanding shall not be completed except under conditions of freezing rain or generally slippery conditions. Sidewalks adjacent to major roads and bus routes are ploughed first and then followed by local streets. Ploughing shall be completed*

11

59

24 hours after the snow fall ends.

**Discussion:**

Unfortunately, the group concluded that there is no single standard to recommend, because climate and diversity of approaches across municipalities create too great a variation. In London's case, we do all sidewalk maintenance and have adopted our own standards for doing so. The only exception is our downtown area, where the shop owners are expected to do that maintenance.

Mechanical clearing of sidewalks is disadvantaged because of two factors, namely, the fact that equipment can seldom 'get ahead of pedestrian traffic' that compacts the snow and, secondly, the plow is set in a float position to ride on the sidewalk. This float position enables the plow to safely ride over expansion joints, minor vertically discontinuities or elevations changes and distortions on the sidewalk. This forms the basis for London's 'snowpacked' level of service standard.

In pondering the question of establishing a standard operating procedure for winter maintenance of sidewalks, the OGRA working group observed that the Municipal Act contains the following clause:

**"44.9 (9) Except in case of gross negligence, a municipality is not liable for a personal injury caused by snow or ice on a sidewalk."**

The working group concluded that such a reference is noteworthy, in that it excludes winter maintenance of sidewalks from its Minimum Maintenance Standards regulation – likely in consideration of the challenges that such a service would place on municipalities.

**Comparison**

Location	Shovel By-law	Machine	Salt	Deployment Criteria
London 1350 km	✓*	✓		8 cm *Downtown core only
Toronto 7900km	✓*	✓	✓	5cm –Jan&Feb 8cm * Old city only
Hamilton 2300km	✓			
Guelph 660km		✓		4cm – priorities 8cm- residential
K-W	✓			
St Thomas 160km		✓		10cm
Windsor 790km	✓			

The average cost to perform sidewalk winter maintenance in London is \$1,200,000 or about \$3 per capita. Our level of service will not produce bare sidewalks because we use mechanical equipment. Considerations for a by-law that would require property owners to scrape the sidewalks bare would not produce the best value because of enforcement issues and the city would still need to provide the same level of service in areas that are not fronted by residential owners. Examples include most

Equipment Comparison		
Location	Km's of sidewalk	Machine km's/ beat
London	1375	43
Toronto	7900	35
Brampton	550	21
Ottawa	1900	17



of Wonderland Road and Oxford Street west of Hyde Park Road. The School Boards would also be tasked with expanding their services.

If consideration is given to increase the level of service for this season the only practical use of funding, which would not require additional equipment, staff and contracted resources, would be to deploy resources before 8cm of freshly fallen snow has accumulated and use a high concentration of salt.

With the exception of salt, this was the service level that was provided prior to the 2004 budget reduction of \$200,000. In order to return to that level of service we would need an estimated \$400,000 because the system has expanded by 105.2 km and contract costs have increased.

### Options

Option	Description	Cost
<b>A</b>	<p><b>Status Quo</b></p> <p>The existing practice allows us to plow uninterrupted with spot sanding or salting occurring day's later utilizing road plow staff to deliver material and fill sidewalk machines.</p>	<b>\$0</b>
<b>B</b>	<p><b>Status Quo + <u>continuous</u> salting during storms on full sidewalk network</b></p> <p>This option would require an additional 24 staff to fill the machines with salt. The existing material 'hopper' holds 0.75m<sup>2</sup>. The constant stopping to replenish the hopper with salt would increase ploughing duration. The high concentration of salt would reduce the 'snow packed' conditions</p>	<b>\$2.2 M</b>
<b>C</b>	<p><b>Shovel By-law</b></p> <p>This option would increase by-law enforcement services and reduce contracted services. It would still require the City to do extensive lengths of sidewalk where it is impractical for adjacent owners to be charged with such a responsibility. The bus stop clearing service that we provide to the LTC would be discontinued because the equipment used to complete this effort would no longer available. The City would continue to use its 14 mechanical ploughs and maintain a '<u>snow packed</u>' surface on those city maintained sidewalk.</p> <p>Enforcement for property owners would be passive and likely require an initial site visit to post a notice to comply with the by-law within a predetermine timeline. A follow-up inspection would be needed to ensure compliance. If the sidewalk is not cleared then the City would undertake work and invoice homeowner.</p> <p>Exceptions may be required for homeowners unable to manage the work and a subsidy program may need to be developed and funded. Therefore, this option would be cost neutral.</p>	<b>\$0</b>
<b>D</b>	<p><b>Shovel by-law + <u>continuous</u> salting during storms on portion of network that would be maintained by city forces (approximately 40%-50%)</b></p> <p>In addition to the above, salt would be applied to sidewalks that City forces continue to maintain. The high concentration of salt would reduce the 'snow packed' conditions.</p>	<b>\$1M</b>
<b>E</b>	<p><b>Rule change – Deploy resources before 8cm of accumulation</b></p> <p>If consideration is given to increase the level of service for this season the only practical use of funding, which would not require additional equipment, staff and contracted resources, would be to deploy resources before 8cm of freshly fallen snow has accumulated and use a high concentration of salt instead of sand while treating slippery conditions days later.</p>	<b>\$0.4M</b>

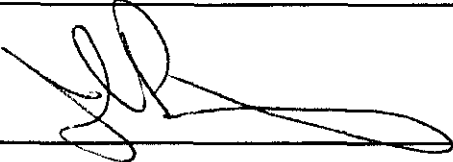
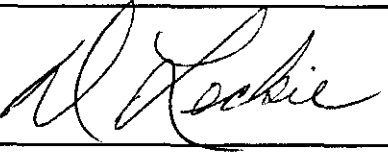


### Conclusions

1. Although it is unfortunate that a common standard could not be achieved, it does allow Municipalities the opportunity to define their own level of service for now.
2. For a given sidewalk, the best clearing can be achieved with a shovel if adjacent owners act early. This poses enforcement issues if it is required under by-law and still leaves a substantial inventory of sidewalk where the City is the logical agent to do the clearing.
3. The most practical way of striving for a clear sidewalk is to use significant amounts of salt, a practice that goes against Environment Canada's goals of reducing salt usage. Salt does have limitations as well, as it ceases to be effective at temperatures in the vicinity of -12 degrees Celsius.
4. This report addresses winter maintenance methods for clearing sidewalks and walkways. It should be noted that a future report on what pedestrian facilities should be maintained in winter is forthcoming, with winter pathway maintenance being the main focus.
5. The Accessibility for Ontarians with Disabilities Act, (AODA) has not developed guidelines for this service. Sidewalk plowing will likely bridge two standard Development Committees – the *Built Environment* and *Transportation*. It would be premature to make a substantive service level change until such time as the requirements are known.
6. Additional budget dollars have not been requested in the 2010 budget.

### Acknowledgements:

This report was prepared with some assistance from Don Purchase, Manager of Operations - Roadsides, Terry Masse, Manager of Operations -Transportation and Rob Burnard Operations Technologist.

<b>PREPARED BY:</b>	<b>RECOMMENDED BY:</b>
	
<b>JOHN PARSONS DIVISION MANAGER TRANSPORTATION &amp; ROADSIDE OPERATIONS</b>	<b>DAVID A. LECKIE, P.ENG. DIRECTOR, ROADS &amp; TRANSPORTATION</b>

November 2009  
cc: Pat McNally