MMS – Sidewalks, Bicycle Lanes, and Multi-user Trails
Maintenance, Equipment, Challenges

It’s Not Just for Cars Anymore!
• MMS revisions are here
• Customer base is changing
  • efforts are needed on the entire road allowance
• Pedestrians & cyclists must be treated with equal consideration as cars
  • a minimum accessible pathway must be provided
AODA Legislation

• Accessibility for Ontarians with Disabilities Act (AODA)
  • municipalities must have multi-year accessibility plans for public spaces such as sidewalks
    • tactile domes
    • metal plates
    • concrete pavers

AODA Compliance

• Requires prompt clearing of snow along accessible routes intended for winter use – sidewalks, pathways, and trails
• Does not require municipalities to clear all sidewalks & does not state a minimum width
• Requires new sidewalks to be 1.5 m wide
• Requires that we each have a plan
Plan components

- Approved LOS
- Threshold for sidewalk clearing
- Which sidewalks are cleared
- Seniors program
- By-law enforcement

Sidewalk Inspection

Conduct your inspection in such a way that you do not exceed your ability to treat the discontinuity.

If a surface discontinuity exceeds 2cm then you must repair within 14 days.
Sidewalk Clearing

Transportation Services clears snow from sidewalks in most areas of the City, but only where a mechanical snow plow is able to physically clear snow (inner area local streets excluded).
Service Considerations

- No monolithic sidewalk in combination with on-street parking
- Street must be greater than 8m in width (to allow for on-street snow storage)
- Sidewalk must be equal or greater than 1.5m in width
- Consideration to be given to whether the mechanical clearing could be done in a contiguous area
- No obstructions such as utility poles, planters, retaining walls immediately adjacent to or within the sidewalk
  - creates significant potential for damage
  - operating safety concern for the equipment operator and/or the public

Sidewalk Clearing Standards

- No commonly accepted best practices for maintenance of sidewalks
- Residents’ and property owners’ responsibilities to clear snow adjacent to their property
- General trend toward the municipal provision of snow clearing on arterial or high volume routes only
- Time to complete plowing ranges from four hours to four or five days. If your municipality adopts the MMS see Section 16.5 (1)
By-Law Enforcement

- **City of Toronto** Municipal Code Chapter 719, Snow & Ice Removal
- Responsibility of every owner or occupant to clear sidewalk abutting the property within 12 hrs after any snowfall wherever the City does not do so mechanically
- Notice of Inspection
- Notice of Infraction
- Prohibits the clearing of snow from private property and depositing onto the public roadway, sidewalk, or lane
- City has the authority to clear the sidewalks and to add the resulting costs of the work to the tax bill
- Residents can be fined and billed for the cost of the work

Sidewalk Clearing Operations

- Typically, it takes up 13 - 15 hours to clear all sidewalks.
- Plows often clear sidewalks on the first day and return to apply a sand/salt mix on the second day (or thereafter, if icy).
- Cleanup operations
Steps and Pinch Points

- Hand crews are used to clear steps and priority locations
- Areas too narrow for a sidewalk machine to get through:
  - pedestrian bridges over rail lines
  - Walkways
  - street furniture obstructions
  - etc.
**Bus Stop Clearing**

- Bus/transit pads need to be cleared as part of the plowing operation.
- Bus stop clearing generally begins following the final round of roadway plowing.
- Needs to be coordinated with plowing
- Crosswalks can also be opened with this equipment
- Catchbasins

**Seniors Snow Clearing**

- Where it is not possible to deliver a mechanical service a manual service may be provided
  - residents of single or two-family dwelling
  - 65 years of age and/or physically challenged
  - application form and/or annual renewal required
- Locations will grow in numbers after each snow event
Monolithic Sidewalk

- No boulevard space between curb and sidewalk for snow storage
- Road plows push snow onto the sidewalk and sidewalk plows push snow onto the road
- Road plows instructed to leave snow on road wherever there is monolithic sidewalk
- Snow is removed from the road as part of a snow removal operation

Challenges
Street Furniture Damage

Encroachments

- Encroachment by-law prohibits adjacent property owners from installing fences, hedges, retaining walls, etc. close to the sidewalk.
- Many encroachments have been in place for so long that it is impossible to have owners remove them.
- If damaged by sidewalk plows, we will reinstate the structure, but in accordance with the by-law.
Encroachments & On-street Parking

Encroachment Damage
Equipment

• Wide range of equipment depending on the application
• Estimated travel speed of approx 1.5mph x 13hrs = 20 mile routes
• Smaller machines for narrower sidewalk (Kubota, John Deere)
• High hp equipment (Holders, Trackless) for carrying snow blowers
• Skidsteers (Cat, Bobcat) for relocating snow, bus stops, opening catchbasins, etc.

Equipment

• Specifications:
  • 25 – 65hp
  • Approx 55” wide
  • Blade Width
  • Age
• Attachments:
  • Straight Blade (notch)
  • V Blade
  • Sander
  • Snow Blower
  • Liquids
Winter Bike Lane Mtce

• MMS new for 2018/19
• As the facilities expand there is an emerging need to perform year-round maintenance
• Interest in winter cycling is growing
• Bicycles have different winter needs

Cycling Infrastructure

• Characteristics; evolving, unique, challenging
• Types; bike lanes, cycle tracks, contra-flow, sharrows, multi-use trails, shared roadways
• Traditional equipment does not always fit

• Multi-modal
• Develop a formal level of service as you do for roads (and sidewalks)
• Establish a plan
Cycling Levels of Service

- Recognize that there is a range of cycling infrastructure
- Some routes may be ‘high volume’ during winter months so may receive higher los
- Toronto has adopted a ‘bare pavement’ policy – multiple rounds of salt required
- 5cm snow required to initiate plowing
- Time to complete varies by storm severity
- Removal on priority lanes
Maintenance Approaches

• Bike lanes are unique – one maintenance approach does not suit all types
• Anti-icing, de-icing, plowing & snow removal may all be required
• Identify the option that works best

Maintenance Approaches

• Identify a desired pavement condition to provide staff with a direction
• Repeated salt applications at higher rates
• Use of slusher blade to break bond
• Removal when accumulations exceed 8cm and windrows encroach into the lane
• Use of pilot projects; alternative de-icers, smaller plows, parking prohibitions
Multi-Use Trails

- Off road trails and paths are used by walkers, joggers, & cyclists during the winter months
- Surface conditions can range from hard packed in cold climates to bare pavement where temperatures fluctuate and salt can be effective
Cycle Track – Snow Removal

- Segregated cycling areas
- Snow removal is often required when severe storms reduce the width of the lane

Can’t use the bike lane for snow storage
Challenges

Challenges