



Hamilton

# **WINTER MAINTENANCE LEVELS OF SERVICE AND ENHANCEMENTS**

December 4, 2023

**PUBLIC WORKS  
TRANSPORTATION DIVISION**

# Current Winter Services

- Roadway Patrol
- Anti-icing
- Snow plowing – Roadway & Cycling Facilities
- Sidewalk & Transit Stop Clearing
  - Along Priority 1 & 2A Roadways where Transit Operates
- Multiuse Pathway Clearing
  - Road-to-road Connections
- Snow Removal & Haulage

\*combination of Minimum Maintenance Standards and Enhanced Levels of Service approved by Council



# Winter Maintenance Statistics

- 24/7 Winter Response from November to Mid-April
- 500+ Total Pieces of Winter Equipment - City & Contracted
- Winter Maintenance Maintains the City's Approximate:
  - Lane km of Road: 6,478
  - Km of sidewalk: 882 of 2,445 (total sidewalks)
  - Cul-de-sacs: 1,100
  - Bus stops: 2,300
- Winter Events
  - Average 28-35 winter events each winter season
  - On average, Transportation receives over 24,000 calls throughout the year generating over 15,000 service requests requiring action

# Minimum Maintenance Standards

## Ontario Regulation 239/02

- Ontario Regulation 239/02
  - Minimum Maintenance Standards were implemented by the Province to assist Municipalities in managing the maintenance of different road classifications
  - The Regulation outlines minimum standards for Municipal highways in Ontario
- Compliance is voluntary
- In addition, the City operates an Enhanced Level-of-Service Higher than the Minimum Maintenance Standards
  - Approved in 2013 (PW13022)

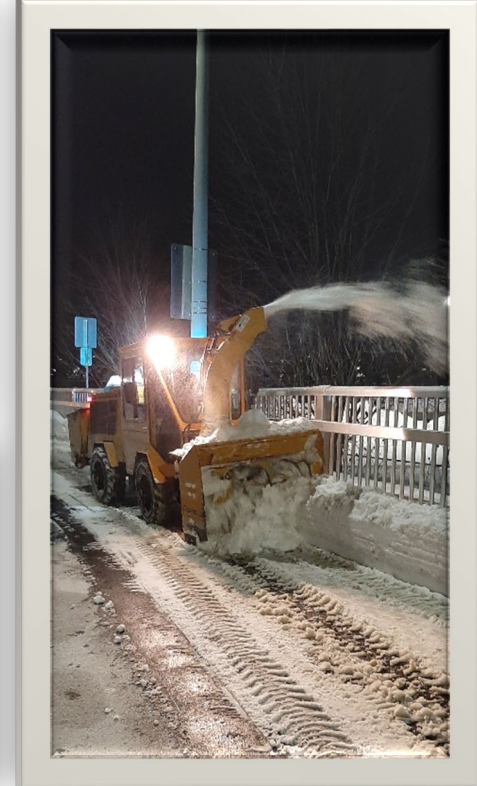
# Roadways – City Enhanced Levels of Service versus Minimum Maintenance Standards

ROAD CLASSIFICATION HAMILTON/PROVINCIAL			CITY ENHANCED LEVEL OF SERVICE			PROVINCIAL MMS (O.Reg. 239/02)	
TYPE	PRIORITY RATING	PROVINCIAL CLASS	TARGET SURFACE CONDITION	REASONABLE RESPONSE TIME	TARGET COMPLETION TIME	TARGET SURFACE CONDITION	TARGET COMPLETION TIME
Linc/ Arterials	1	1	Bare	Immediate	4 hrs	2.5 cm	4 hrs
Escarpment Crossings	1	1 – 5	Bare	Immediate	4 hrs	5 cm	6 hrs
Collectors Primary	2A	2-3	Bare	4hrs (Or activate at 8cm, whichever comes first)	8 hrs	5-8 cm	6-12 hrs
Collectors Secondary	2B	2-3	Centre bare	4hrs (Or activate at 8cm, whichever comes first)	8 hrs	5-8 cm	6-12 hrs
Rural Roads Hard Surface	3	4-6	Centre bare	8hrs (Or activate at 10cm, whichever comes first)	24 hrs	8-10 cm	12-24 hrs
Residential	3	5	Bare	8hrs (Or, activate at 10cm, whichever comes first)	24 hrs	10 cm	24 hrs

\*Target completion time is after the completion of the winter event which includes, but is not limited to, the cessation of snowing, drifting, blowing snow, freezing rain.

# Cycling Lanes

- Unprotected
  - Completed with a Roadway Plow Simultaneously as the Roadway
- Protected
  - Equipment Activated Simultaneously with Roadway Plows
  - Completed following Roadways due to Slower Speed of the Equipment



# Cycling Lanes – City Enhanced Levels of Service versus Minimum Maintenance Standards

ROAD CLASSIFICATION HAMILTON/PROVINCIAL			CITY ENHANCED LEVEL OF SERVICE			PROVINCIAL MMS (O.Reg. 239/02)	
TYPE	PRIORITY RATING	PROVINCIAL CLASS	TARGET SURFACE CONDITION	REASONABLE RESPONSE TIME	TARGET COMPLETION TIME	TARGET SURFACE CONDITION	TARGET COMPLETION TIME
Cycling Lanes Arterials	1	1	Bare	Immediate	4 hrs	2.5 cm	8 hrs
Cycling Lanes Collector Primary	2A	2-3	Bare	4hrs	8 hrs	5-8 cm	12-24 hrs
Cycling Lanes Secondary	2B	2-3	Centre Bare	4hrs	8 hrs	5-8 cm	12-24 hrs
Cycling Lanes Rural Hard Surface	3	4-6	Centre Bare	8hrs	24 hrs	8 cm	24 hrs
Cycling Lanes Residential	3	5	Bare	8hrs	24 hrs	10 cm	24 hrs

\*Target completion time is after the completion of the winter event which includes, but is not limited to, the cessation of snowing, drifting, blowing snow, freezing rain.

# Sidewalk Clearing

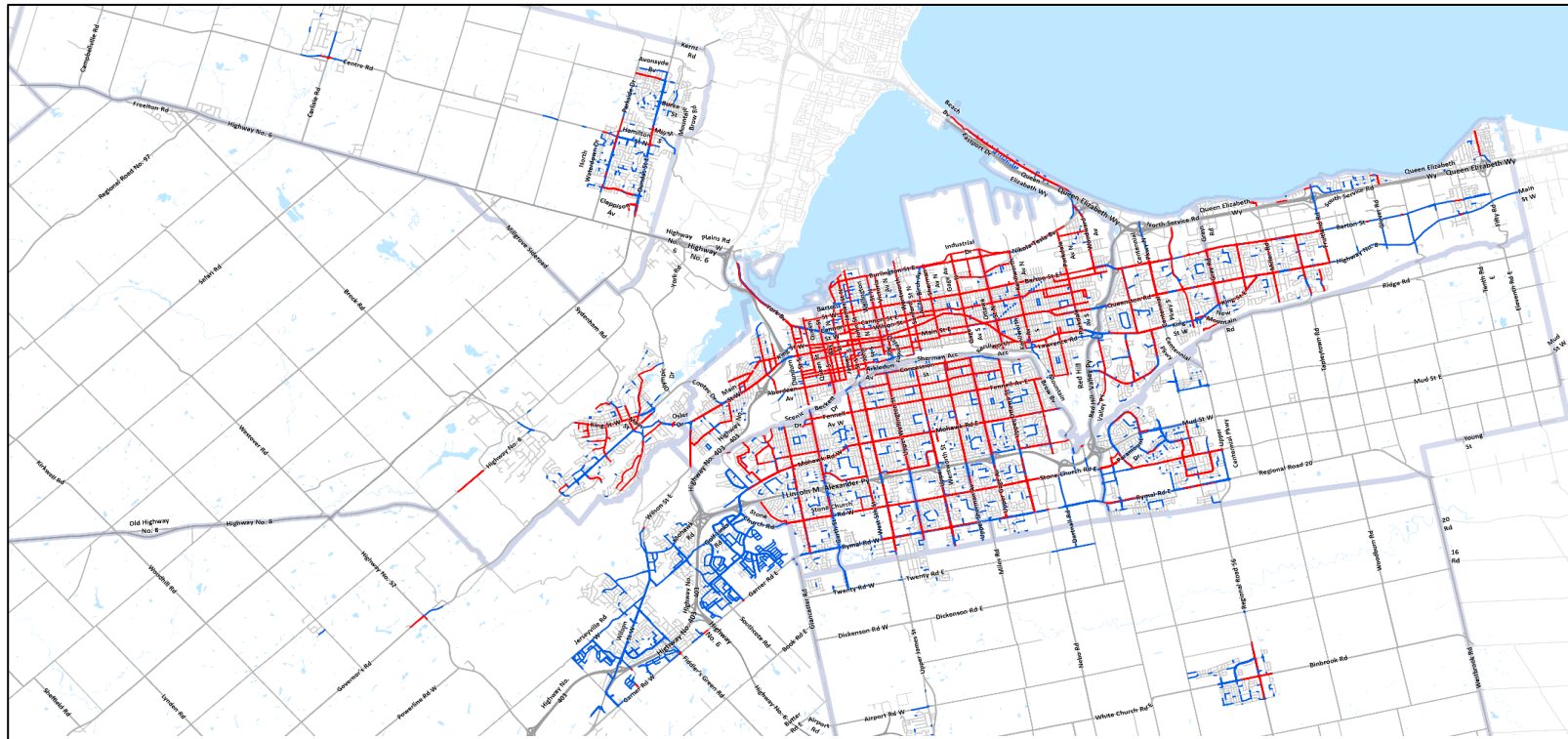
- The City provides Snow Clearing of 882km (36%) of the approximate 2,445 km of Sidewalks across Hamilton, including:
  - Municipal Property
  - Along Reverse Frontage Lots
  - Ward 12
  - Sidewalks Adjacent to School Property
  - Transit Stops
  - Multiuse Paths – Roadway-to-Roadway
- Snow and Ice By-law No. 03-296 – Property Owner Specific

# Sidewalk Clearing – City Enhanced Levels of Service versus Minimum Maintenance Standards

ROAD CLASSIFICATION HAMILTON/PROVINCIAL			CITY ENHANCED LEVEL OF SERVICE			PROVINCIAL MMS (O.Reg. 239/02)	
TYPE	PRIORITY RATING	PROVINCIAL CLASS	TARGET SURFACE CONDITION	REASONABLE RESPONSE TIME	TARGET COMPLETION TIME	TARGET SURFACE CONDITION	TARGET COMPLETION TIME
Sidewalks	N/A	N/A	Snow packed	Activate at 5cm	24 hrs	8 cm	48 hrs

\*Target completion time is after the completion of the winter event which includes, but is not limited to, the cessation of snowing, drifting, blowing snow, freezing rain.

# Sidewalk Clearing – Location Map



# Sidewalk Clearing - Schools

- Hamilton-Wentworth District School Boards (Public & Catholic)
- 155 Schools
- 48km of Sidewalk Cleared around Schools



\*Westdale Secondary School, Ward 1

# Windrows

- Definition
  - The snow accumulation left behind by a plow; typically at the end of driveways and intersections
- Natural Result of Routine Winter Maintenance
- To-date Removal has Not Been an Approved Level of Service



# Significant Weather Event

- As per the Ontario Municipal Act, a municipality may declare a significant weather event when a weather hazard, either forecasted or occurring, has the potential to pose a significant danger to road users on roads maintained by the City of Hamilton.
- Completion times are suspended and restarted once the declaration is declared over



City of Hamilton ✓

@cityofhamilton

The City has declared the end of the Significant Weather Event. We will continue to work on cleanup over the next few days. We thank residents for their patience as crews continue to work diligently to respond to this storm. [#HamOnt](#) [#HamOntSnow](#)

8:01 PM · Jan 19, 2022 · Brandwatch

# Council Direction: March 20, 2023

- a) That staff undertake a review of the City of Hamilton's current level of service for winter control and provide options on how operations could be adapted to enhance accessibility and safety in alignment with the principles of Vision Zero, thereby protecting the interests of vulnerable road users;
- b) That staff report back to the Public Works Committee with the results of the review of the City of Hamilton's current level of service for winter control in advance of August 31, 2023, with possible level of service revisions and best practices including any cost and resourcing implications; and
- c) That staff ensure the following areas of focus are included in the review of the City of Hamilton's current level of service for winter control;
  - i. HSR transit stops including boarding access;
  - ii. Controlled crosswalks, crosswalks with stationed crossing guards, school crossings, sidewalks with sloped access, neighbourhood pedestrian and multimodal pathways; and
  - iii. School zones
- d) That staff consult with the Advisory Committee for Persons with Disabilities and the Seniors Advisory Committee when reviewing snow clearing needs of the community; and
- e) That staff report back in full the comments and opinions of the disability and senior's communities including the Committee for Persons with Disabilities and the Seniors Advisory Committee.

# Proposed Enhancement Options

Option	Implementation Timing	Cost (Million)
Option 1 – Additional Sidewalk Clearing with Support Equipment	2024/2025	\$5.46
Option 2 – School Zone Levels of Service Increase	2025/2026	\$12-\$13
Option 3 – Clearing All City Sidewalks (Additional 65%)	2027/2028	\$11.7
Option 4 – Municipal Law Enforcement	2024 onwards	TBD
Option 5 – Residential Driveway Windrow Snow Clearing	2026/2027	\$24-\$27

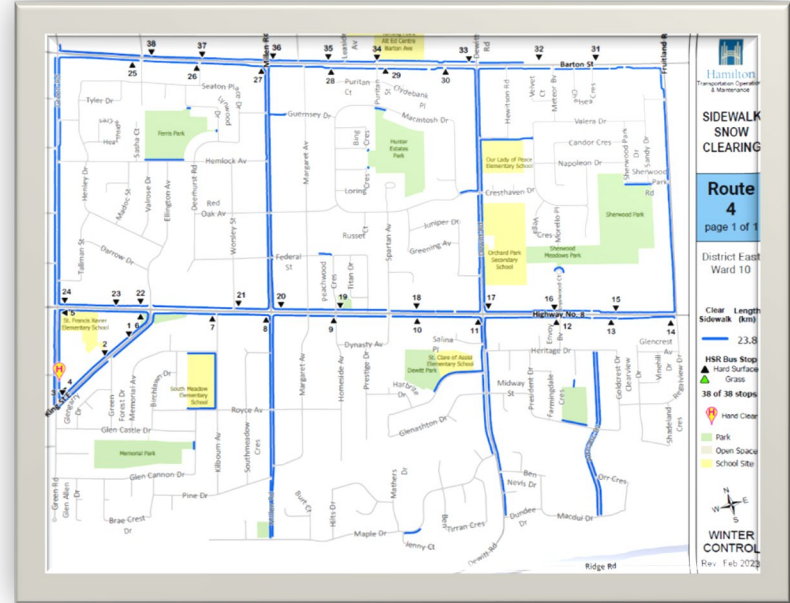
# Option 1 – Additional Sidewalk with Support Equipment

- Purpose
  - Additional Sidewalk and Transit Stop Support Equipment
  - Activate Earlier and More Frequently
- Cost
  - \$5.46M
- Commencement
  - 2024/2025
- Sidewalk Clearing Equipment Requirements
  - Increase sidewalk plows from 34 to 42
  - Increase filler trucks from 21 to 29
  - Increase supporting equipment from 28 to 58
- Staffing Requirements
  - Four (4) Permanent Roadway Maintenance Supervisors



# Option 1 – Additional Sidewalk with Support Equipment

- Benefits
  - Reduce Average Route Length from 22km to 17km
  - Enhance Operational Efficiencies
  - Activate Earlier and More Frequently During Winter Events
  - Increased Ability to Manage Heavier Winter Events
  - Support Equipment (skid steers) activated in coordination with sidewalk plows
  - Expediate clean-up of snow piles at intersections



# Option 2 – School Zone Levels of Service Increase

- Purpose
  - Create priority snow clearing at 155 school zones
  - Clear roadways and sidewalks prior to/after school bell times
  - Remove and haul snow away from school zones
- Cost
  - \$12M to \$13M
- Commencement
  - 2025/2026
- Staffing Requirements
  - Eight (8) Permanent Roadway Maintenance Supervisors



# Option 3 – Clearing All City Sidewalks (Additional 65%)

- Purpose
  - Clear all 2,445km of sidewalks across the City
- Cost
  - \$11.7M
- Commencement
  - 2027/2028
- Sidewalk Clearing Equipment Requirements
  - Increase sidewalk plows from 34 to 122
  - Increase filler trucks from 21 to 60
  - Increase skid steers from 28 to 58
- Staffing Requirements
  - Twelve (12) Permanent Roadway Maintenance Supervisors
  - Two (2) Permanent Roadway Maintenance Investigators
  - One (1) Permanent Project Manager

## Option 4 – Municipal Law Enforcement

- Purpose
  - Enhance enforcement under By-Law 03-296
  - MLE and Transportation to Develop Enforcement Strategy in 2024
- Cost
  - TBD
- Commencement
  - Initiate Discussion in 2024

# Option 5 – Residential Driveway Windrow Clearing

- Purpose
  - Remove residential driveway windrows 12 hours after the roadway has been plowed
- Cost
  - \$24M to \$27M
- Commencement
  - 2026/2027
- Staffing Requirements
  - Four (4) Permanent Roadway Maintenance Supervisors
  - One (1) Permanent Project Manager
  - Four (4) Permanent Roadway Maintenance Inspectors
  - One (1) Permanent Roadway Maintenance Investigator
  - Two (2) Permanent Operational Support Coordinators
  - One (1) Permanent Supervisor Claims Administration



# Option 5 – Residential Driveway Windrow Clearing

- Notes
  - Service approximately 165,000 residential homes
  - Provide 3m wide opening
  - Activate at 5cm or more snowfall
- Challenges
  - On-street parking will impact service
  - Limited snow storage around townhomes and cul-de-sacs
  - Property damage may occur with an increase in number of claims
  - Delay in service due to slow moving machines
  - Windrows will reoccur due to continuous plowing



# THANK YOU