



Appendix B

Municipal Scan

City of Hamilton Public Works Department
Transportation, Operations & Maintenance Division

November 4, 2020

Municipal Scan

Municipality/Scan Category	Findings
Brampton	
Overview	<p>City-cleared sidewalks include those:</p> <ul style="list-style-type: none"> • On roads like Main Street and Bramalea Road (arterial roads) • In front of City parks and recreation facilities • Curb-faced (example: no grass boulevard) • Behind a property (reverse frontage) • On a road with Brampton Transit/Züm bus stop locations with permanent transit service
Amount to Initiate Plowing	N/A
Completion Time	N/A
Finish Surface Condition	N/A
Seniors/ People with Disabilities	<ul style="list-style-type: none"> • The City provides a Snow Removal Financial Assistance Program to assist senior citizens and physically challenged homeowners with costs incurred from hiring a contractor to remove snow from their sidewalks and driveways
Comments	N/A
Links	https://www.brampton.ca/en/residents/Roads/snow-removal/Pages/snow-removal-faqs.aspx
Burlington	
Overview	<ul style="list-style-type: none"> • Provides snow removal services throughout the City • Maintain 850 km of sidewalks
Amount to Initiate Plowing	Begins after snow accumulates in excess of 5 cm
Completion Time	<ul style="list-style-type: none"> • After roads are cleared • Generally, within 48 hours after the snow has stopped falling • Sidewalks on primary and secondary roads are plowed first, followed by residential
Finish Surface Condition	Plowed to a snow packed service level
Seniors/ People with Disabilities	N/A
Comments	Windrow clearing program for persons with disabilities (for snow left at the bottom of driveways by roadway plows)
Links	https://www.burlington.ca/en/services-for-you/snow-removal.asp
Calgary	
Overview	<ul style="list-style-type: none"> • The City is required to clear sidewalks bordering and on City property • Property owners/occupants responsible for clearing snow and ice from the sidewalks bordering their property
Amount to Initiate Plowing	N/A
Completion Time	Within 24 hours of a snowfall ending
Finish Surface Condition	N/A
Seniors/ People with Disabilities	N/A

Comments	N/A
Links	https://www.calgary.ca/CSPS/ABS/Pages/Bylaws-by-topic/Snow-Shovelling.aspx
Guelph	
Overview	<ul style="list-style-type: none"> • Clear snow from 701 km of sidewalk, 180 crosswalks, crossings, steps, walkways, and 590 bus stops throughout the city • Sidewalks are prioritized based on pedestrian traffic volume and proximity to high use facilities, such as schools, hospitals, and public buildings.
Amount to Initiate Plowing	<ul style="list-style-type: none"> • In Guelph, there are eleven zones for snow plowing and sanding, including multi-use pathways, which are prioritized into two classifications: <ul style="list-style-type: none"> ○ High priority sidewalks: serviced first after 4 cm of snow accumulates. ○ Residential sidewalks: serviced after 8 cm of snow
Completion Time	Within 24 hours of a snowfall ending
Finish Surface Condition	N/A
Seniors/ People with Disabilities	N/A
Comments	N/A
Links	https://guelph.ca/living/getting-around/snow-removal/sidewalk-snow-removal/
Kitchener	
Overview	Clears snow on sidewalks around City-owned facilities, walkways and parks
Amount to Initiate Plowing	N/A
Completion Time	N/A
Finish Surface Condition	N/A
Seniors/ People with Disabilities	Snow Angel program
Comments	<ul style="list-style-type: none"> • New winter 2019/2020 pilot projects: <ul style="list-style-type: none"> ○ Snow event pilot (40 km by contractor) ○ Full-service pilot (40 km by City staff) ○ Proactive bylaw pilot ○ Assisted sidewalk and windrow clearing services to eligible seniors and persons with a disability
Links	https://www.kitchener.ca/en/in-your-neighbourhood/snow-removal.aspx http://www.tritag.ca/static/uploads/TriTAG-Winter-sidewalk-report.pdf
London	
Overview	<ul style="list-style-type: none"> • Provides a sidewalk snow removal service (arterials, collectors and residential roads?) • 1,500 km of sidewalk
Amount to Initiate Plowing	Plowing starts at 8 cm accumulation
Completion Time	Cleared within 48 hours

Finish Surface Condition	Plowed to a snow packed service level
Seniors/ People with Disabilities	Snow Angels
Comments	Downtown merchants and/or property owners are required to clear the sidewalk front their businesses.
Links	http://www.london.ca/residents/Roads-Transportation/Road-Maintenance/Pages/WinterFAQs.aspx
Mississauga	
Overview	<ul style="list-style-type: none"> • Priority sidewalks on major priority roads, bus stops, pedestrian crossings, multi-use trails • The City clears about 1,600 km of priority sidewalks which represents approximately 55% of the total length of sidewalks in the City
Amount to Initiate Plowing	(a) Less than 8 cm: salting only (b) 8 to 15 cm: plowing and salting (c) 15 to 30 cm: plowing and salting (d) 30 cm or back to back storms: plowing and salting
Completion Time	(a) Within 12 hours after the end of a snowfall (b) Cleared within 12 hours after the end of a snowfall (c) Cleared within 24 hours after the end of a snowfall (d) More than 24 hours after the end of a snowfall
Finish Surface Condition	N/A
Seniors/ People with Disabilities	N/A
Comments	N/A
Links	http://www.mississauga.ca/portal/residents/levelsofservice
Montreal	
Overview	N/A
Amount to Initiate Plowing	<ul style="list-style-type: none"> • Salt and gravel spreading as soon as the roads and sidewalks become slippery • Plowing as soon as there is 2.5 cm on the ground • Loading as soon as there is 10 to 15 cm of snow on the ground
Completion Time	Operations carried out continuously until the streets and sidewalks are cleared and safe
Finish Surface Condition	N/A
Seniors/ People with Disabilities	N/A
Comments	Operations carried out continuously until the streets and sidewalks are cleared and safe
Links	https://montreal.ca/en/topics/snow-removal-sidewalks-and-streets

Newmarket	
Overview	<ul style="list-style-type: none"> • Newmarket Council approved a phased-in sidewalk snow-clearing program that will clear 100 per cent of all sidewalks, walkways and paved trails in Newmarket (pending budget approval each year) • Sidewalks constructed after 2013 are considered growth and will be added to the sidewalks snow-clearing list separately. This is because most sidewalks within new subdivisions have not be assumed by the Town
Amount to Initiate Plowing	After accumulation of 5 cm
Completion Time	Arterial Roads, Primary and Minor Collectors as well as Local roads will be cleared of snow within 24 hours after any new fallen or windblown snow has accumulated
Finish Surface Condition	N/A
Seniors/ People with Disabilities	N/A
Comments	Property owners are encouraged to edge their sod and ensure that all landscape features are not hanging over the sidewalk. Doing so will help prevent damage to their lawn/boulevard/landscape feature in the winter, when sidewalk snowplowing operations are in effect.
Links	https://www.newmarket.ca/sidewalksnowclearing
Oakville	
Overview	Sidewalks on primary and secondary roads
Amount to Initiate Plowing	<ul style="list-style-type: none"> • Primary and secondary roads: After snow accumulates 5cm and only after roads are cleared • Residential: cleared after 8 cm of snow accumulates • Sidewalk salting and sanding is done only on primary and secondary sidewalks when slippery conditions exist
Completion Time	N/A
Finish Surface Condition	N/A
Seniors/ People with Disabilities	N/A
Comments	N/A
Links	https://www.oakville.ca/residents/snow-clearing.html
Ottawa	
Overview	Most sidewalks
Amount to Initiate Plowing	<p>Minimum depth of snow before deployment:</p> <ul style="list-style-type: none"> • Level 1: 2.5 cm in downtown business district, Byward Market, large employment centres, special tourism areas • Level 2: 5 cm in downtown/urban residential neighbourhoods where sidewalks are the only safe place to work, sidewalks in Villages, sidewalks along roads with transit service, emergency facilities, public facilities or retail/commercial frontages • Level 3: 5 cm for sidewalks along rural and suburban collector and residential roads

Completion Time	End of snowfall time needed to clear snow: <ul style="list-style-type: none"> • Level 1 within 4 hours (bare surface) • Level 2: within 12 hours (bare surface where directly adjacent to arterial roads) • Level 3: within 16 hours (bare surface where directly adjacent to arterial roads)
Finish Surface Condition	N/A
Seniors/ People with Disabilities	N/A
Comments	Some initiatives are underway to keep sidewalks clear: <ul style="list-style-type: none"> • A pilot project that uses a “crosshatch blade” on some sidewalk-clearing vehicles to break up ice more easily • More ice-breaking machines • Pre-treating certain sidewalks with a calcium solution • Changing the snow clearing work schedule to city crews can tackle sidewalks 24 hours a day, seven days a week • Two reviews of its snow clearing practices and standards
Links	<p>Initiatives</p> <ul style="list-style-type: none"> • https://ottawacitizen.com/news/local-news/city-to-make-clearing-sidewalks-a-priority-this-winter <p>Maintenance Quality Standards</p> <ul style="list-style-type: none"> • https://app06.ottawa.ca/calendar/ottawa/citycouncil/ttc/2003/05-21/Annex%20B(TUP-SOP-0004)%20-%20Roads%20and%20Sidewalks.htm <p>Overview</p> <ul style="list-style-type: none"> • https://ottawa.ca/en/parking-roads-and-travel/road-and-sidewalk-maintenance/winter-maintenance
St. Catharines	
Overview	Private property owners are responsible for clearing the full width of sidewalks in front of, beside of and/or at the rear of their property.
Amount to Initiate Plowing	N/A
Completion Time	Bare concrete within 24 hours
Finish Surface Condition	N/A
Seniors/ People with Disabilities	The City offers snow removal services for qualified seniors and individuals with physical disabilities to assist with the removal of snow/ice from City sidewalks.
Comments	N/A
Links	https://www.stcatharines.ca/en/livein/Snow-Removal-Sidewalks.asp

Toronto	
Overview	<ul style="list-style-type: none"> • Sidewalk plows clear about 6,400 km of Toronto’s 7,900 km of sidewalk • In older parts of Toronto, narrow sidewalks, obstructions and obstacles prevent plows from working safely • Approximately 1,400 km (17.7%), are not mechanically cleared of snow and ice by the City
Amount to Initiate Plowing	<ul style="list-style-type: none"> • Plowing starts at 2 cm accumulation on high volume sidewalks i.e. arterials, bus routes • 8 cm on low volume sidewalks
Completion Time	<ul style="list-style-type: none"> • Approximately 13 hours to clear high and low pedestrian volume sidewalks after a snowfall • The service can take up to 72 hours after the snow has stopped
Finish Surface Condition	N/A
Seniors/ People with Disabilities	The City offers a sidewalk clearing service for seniors and people with a disability who live in any area where sidewalks cannot be plowed.
Comments	The City is conducting a trial program on 250 km of sidewalks that aren't being cleared right now, using new technology and smaller plows, to test the feasibility and effectiveness of using new equipment to clear narrower sidewalks.
Links	https://www.toronto.ca/services-payments/streets-parking-transportation/road-maintenance/winter-maintenance/clearing-snow-and-ice-from-your-property/
Windsor	
Overview	<ul style="list-style-type: none"> • Owners and tenants are required to remove snow or ice in front of their property within 12 hours • Owners or tenants of commercial properties have 4 hours following the snowfall or formation of ice • The abutting property owner is responsible to clean the wheelchair ramp up to the edge of the pavement • Presently there is no formal policy to clear bus stops, in snowfall events in excess of 15 cm accumulation, Transit Windsor priority 1 & 2 bus stops will be cleared
Amount to Initiate Plowing	N/A
Completion Time	N/A
Finish Surface Condition	N/A
Seniors/ People with Disabilities	The City coordinates a Snow Angels program for seniors and persons with disabilities.
Comments	N/A
Links	https://www.citywindsor.ca/residents/maintenanceandfieldservices/Snow-Removal/Pages/Snow-Removal.aspx

St. John’s*	
Overview	<ul style="list-style-type: none"> • Sidewalk snow clearing begins at 4 a.m. each morning • School areas are completed first then staff move to the priority 1 sidewalks • The City has designated 161 km of sidewalk to be cleared on a regular basis during the winter season
Amount to Initiate Plowing	Plowing initiated at 3 cm
Completion Time	Clearing time estimated at 4-7 days
Finish Surface Condition	Bare
Seniors/ People with Disabilities	N/A
Comments	N/A
Links	http://www.stjohns.ca/living-st-johns/city-services/snow-clearing/service-and-priority
Quebec City*	
Overview	N/A
Amount to Initiate Plowing	<ul style="list-style-type: none"> • High traffic and gradients >8%: 5cm • School zones, gradients>5%, or presence of either old age home, blind individual, or person with reduced mobility: 5cm • Other: 5cm
Completion Time	Total snowfall dependent: <ul style="list-style-type: none"> • Class 1 and 2 sidewalks must be done on a priority basis
Finish Surface Condition	<ul style="list-style-type: none"> • High traffic and gradients >8%: Bare • School zones, gradients>5%, or presence of either old age home, blind individual, or person with reduced mobility: Bare or with sand/salt for traction • Other: Abrasives for traction and salt on iced surfaces as
Seniors/ People with Disabilities	N/A
Comments	N/A
Links	N/A
Winnipeg*	
Overview	N/A
Amount to Initiate Plowing	Plowing shall commence when an inspection, following a 5 cm snowfall accumulation or equivalent local drifting conditions, indicates a necessity for a clearing operation <ul style="list-style-type: none"> • Priority 3 streets: 8 cm • Near Senior Citizen Complexes: 5 cm
Completion Time	<ul style="list-style-type: none"> • The snow clearing operations shall be completed within thirty-six hours following the end of an average storm • Priority 3 streets: within 5 working days (sidewalks in the immediate vicinity of elementary schools shall be prioritized) • Near Senior Citizen Complexes: within thirty-six hours

Finish Surface Condition	<ul style="list-style-type: none"> • Sidewalks on Priority 1 and 2 streets shall normally be maintained to a compacted snow surface • Sidewalks on Priority 1 and 2 streets within the downtown shall generally be plowed to a paved surface whenever conditions allow • Priority 3: compacted snow surface
Seniors/ People with Disabilities	N/A
Comments	N/A
Links	https://winnipeg.ca/publicworks/snow/snow-clearing-policy.stm#Sidewalks
Halifax*	
Overview	<ul style="list-style-type: none"> • City crews clear about 1,000 km of sidewalks and approximately 2,300 bus stops across the Halifax region • The municipal service standards identify priority levels and timelines for clearing streets and sidewalks
Amount to Initiate Plowing	<ul style="list-style-type: none"> • Capital Districts: 5 cm • Main Arterials: 15 cm • Transit Routes: 15 cm • School Routes: 15 cm • Residential Streets: after end of snowfall
Completion Time	<ul style="list-style-type: none"> • Capital Districts: 12 hours • Main Arterials: 12 hours • Transit Routes: 18 hours • School Routes: 18 hours • Residential Streets: 36 hours
Finish Surface Condition	<ul style="list-style-type: none"> • Capital Districts: Bare • Main Arterials: Bare or with sand/salt for traction • Transit Routes: Bare or with sand/salt for traction • School Routes: Bare or with sand/salt for traction • Residential Streets: Bare or with sand/salt for traction
Seniors/ People with Disabilities	N/A
Comments	N/A
Links	https://www.halifax.ca/transportation/winter-operations/service-updates#SidewalkTimelines
Vancouver	
Overview	<ul style="list-style-type: none"> • All property owners must clear snow and ice from sidewalks around their property by 10:00am every day.
Amount to Initiate Plowing	N/A
Completion Time	N/A
Finish Surface Condition	N/A
Seniors/ People with Disabilities	Snow Angel program
Comments	N/A
Links	https://vancouver.ca/streets-transportation/snow-removal-from-city-streets.aspx

Regina	
Overview	<ul style="list-style-type: none"> • Snow and ice on residential sidewalks is the responsibility of the property owner/resident. • All properties in Regina's downtown must clear ice and snow from the sidewalk adjacent to their property with 24 hours of a storm • Businesses, apartments and vacant lots outside of downtown
Amount to Initiate Plowing	N/A
Completion Time	N/A
Finish Surface Condition	N/A
Seniors/ People with Disabilities	N/A
Comments	N/A
Links	https://www.regina.ca/transportation-roads-parking/seasonal-maintenance/snow-ice-control/

*Information taken from KPMG Study – Winter Maintenance Leading Practice Survey