



Council Policy

Policy Title: Winter Maintenance Policy
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Policy Owner: Mobility Maintenance / Public Space & Mobility Policy

1. POLICY STATEMENT

- 1.1 In accordance with the Council-approved policy and priority system, The City of Calgary (The City) will effectively plan and equitably deliver city-wide Winter Maintenance to support safe, reliable, accessible and well-connected winter travel for those walking, wheeling, using transit and driving.
- 1.2 The City will conduct Winter Maintenance to reduce the hazards of winter travel, provide reasonable conditions for those adequately equipped for winter travel, minimize economic loss to society from delays and collisions, support goods movement and facilitate Emergency Services operations.
- 1.3 The City will conduct Winter Maintenance in a comprehensive manner that recognizes how walking, wheeling, transit and driving facilities work together to provide Calgarians with access to their city.
- 1.4 The City will support climate change mitigation through innovation in Winter Maintenance and by facilitating the use of more sustainable travel options in all seasons. The City will also adapt to a changing climate by adjusting winter maintenance operations to respond to increasingly severe and variable winter conditions.
- 1.5 The City will set public expectations for when Winter Maintenance will be completed following a typical Winter Weather Event. The City will also communicate when Severe Winter Weather Conditions exceed The City's ability to provide Winter Maintenance with typical resources and within timelines established by the policy.

2. PURPOSE

- 2.1 The purpose of the Winter Maintenance Policy is to:
 - 2.1.1 Support safe movement for Calgarians, visitors, goods and Emergency Services in accordance with the objectives of the Municipal Development Plan and Calgary Transportation Plan.
 - 2.1.2 Define The City of Calgary's Winter Maintenance operations by establishing priorities, service levels and guidelines for Winter Maintenance on streets, roads, sidewalks, pathways and transit facilities.
 - 2.1.3 Outline public responsibilities for Winter Maintenance of public spaces abutting private properties.



3. **DEFINITIONS**

3.1 The following definitions apply:

3.1.1 Abrasive Material

A material used to improve surface traction, usually gravel or sand.

3.1.2 Bare Pavement Standard

Conditions where snow and ice are eliminated from a surface through plowing or application of de-icer.

3.1.3 Curb cuts

Part of a Sidewalk, Walkway, Pathway or Wheeling Lane where a raised surface drops to carriageway level to enable barrier free crossings.

3.1.4 De-Icer

A chemical material used to reduce ice accumulation.

3.1.5 Emergency Services

The response to emergencies as provided by the Calgary Fire Department, Alberta Health Services, the Calgary Police Service and others.

3.1.6 Greater Downtown

The area covering the communities of the Downtown Commercial Core, Downtown West End, Eau Claire, Chinatown, Downtown East Village and Beltline.

3.1.7 Hard Pack Standard

Conditions where snow is allowed to accumulate on a surface and is then compacted by general travel and Winter Maintenance.

3.1.8 Laneway

A small-scale street, also known as a back alley, with very low motor vehicle speeds and volumes that serves to provide rear access to properties.

3.1.9 Pathway

A typically asphalt surface used by those walking and wheeling. Pathways may be immediately alongside travel or parking lanes, separated from them by a boulevard, or located within park spaces. Pathways may include stairs, ramps and bridges.



3.1.10 Priority 1

Surfaces cleared within 24 hours following a Winter Weather Event. Priority 1 Routes may have subsets of service delivery timeframes.

3.1.11 Priority 2

Surfaces cleared within 36 hours following a Winter Weather Event.

3.1.12 Priority 3

Surfaces cleared between 36 hours and 7 days following a Winter Weather Event.

3.1.13 Residential Street

A small-scale street with low motor vehicle speeds and volumes that serves to provide front access to primarily residential properties.

3.1.14 Severe Winter Conditions

High volumes of snow and/or ice that significantly interfere with travel, leading to delays and higher costs for Winter Maintenance.

3.1.15 Sidewalk

A typically concrete surface primarily used by those walking. Sidewalks may be immediately alongside travel or parking lanes or separated from them by a boulevard. Sidewalks may include stairs, ramps and bridges.

3.1.16 Snow Drifting

The deposit of windblown snow on a surface.

3.1.17 Snow Emergency

When Severe Winter Weather Conditions exceed The City's ability to perform Winter Maintenance to established standards with typical amounts of equipment and personnel for a typical event.

3.1.18 Snow Plowing

Pushing accumulated snow to the side of a surface.

3.1.19 Snow Removal

Removal of snow from a surface to a separate location such as a snow storage site.



3.1.20 Snow Route Parking Ban

A temporary parking restriction declared by The City on designated streets and roads to support Winter Maintenance. A Snow Route Parking Ban allows for surfaces to be maintained in a more timely, effective and efficient manner during a Winter Weather Event.

3.1.21 Trouble Spots

Identified areas such as hills and curves which may pose a safety issue or significantly contribute to travel congestion if Winter Maintenance is not prioritized.

3.1.22 Wheeling Lane

A typically asphalt surface used by those with bicycles, scooters, skateboards, or other small-scale wheeled vehicles. Wheeling lanes may be immediately alongside travel or parking lanes or separated from them by a boulevard. A wheeling lane may be delineated by paint and physical barriers such as posts, curbs or planters. Wheeling lanes may include turn boxes, turn bays and protected intersections.

3.1.23 Walkway

Also known as engineered walkways, Walkways typically serve as a connection between two streets which are located between two properties.

3.1.24 Windrow

A pile of snow that is caused by general travel or Winter Maintenance.

3.1.25 Winter Maintenance

Operations that seek to control the amount of snow and ice on a surface, as well as improve surface traction. Practices may include the plowing or removal of snow and ice, the use of de-icers and the use of Abrasive Materials such as gravel or sand.

3.1.26 Winter Maintenance Reserve

A dedicated operating reserve fund established for Winter Maintenance operations. Formerly referred to as the Snow and Ice Control Reserve.

3.1.27 Winter Weather Event

When snowfall or other winter related weather conditions affect the usability of Calgary's mobility networks.



4. APPLICABILITY

- 4.1 This policy applies to all City departments, business units, services, authorized contractors and the public.

5. LEGISLATED AUTHORITY

- 5.1 The City will conduct Winter Maintenance on City infrastructure in accordance with the Council-approved policy and priority system, relevant City Bylaws and the Municipal Government Act.

6. PROCEDURE

The City's Approach to Winter Maintenance

- 6.1 Winter Maintenance operations are done for any Winter Weather Event where snow and ice conditions pose safety or accessibility concerns. Operations may occur before, during and after snow and ice are deposited on a surface.
- 6.2 How, when and where The City undertakes Winter Maintenance is based on a Council-approved priority system and factors such as:
- a. Temperatures before, during and after a Winter Weather Event
 - b. The duration of a Winter Weather Event
 - c. Wind speed and direction
 - d. Current surface conditions, including surface temperatures and the amount of accumulated snow and ice
 - e. The weather forecast for the following days
 - f. The economic and/or social significance of surrounding land uses
 - g. Topography of adjacent land



Priority System

6.3 Calgary’s mobility networks are assigned priority classifications to make effective use of resources. Progression of operations is generally in order of classification priority, though may be changed to address safety and accessibility concerns. Winter maintenance activities occur when accumulations resulting from a Winter Weather Event are expected. Response timeframes are measured from the time snowfall has stopped.

Category	Response Timeframe	Surfaces Maintained	Maintenance Standard
Priority 1	Within 18 hours	<ul style="list-style-type: none"> • High priority streets and roads with high motor vehicle volumes/speeds (20,000 vehicles per day) including those on the Primary Transit Network • High priority streets and roads within the Greater Downtown • Wheeling Lanes on or adjacent to Priority 1 routes including turn boxes and protected intersections. 	Bare Pavement
	Within 24 hours	<ul style="list-style-type: none"> • Light rail transit stations • Priority bus stops • Priority pathways including stairs, ramps and bridges • Priority Curb Cuts, medians and traffic islands • Sidewalks adjacent to City owned infrastructure and land including stairs, ramps and bridges 	
Priority 2	Within 36 hours	<ul style="list-style-type: none"> • Streets that typically support transit operations (volumes typically over 5,000 vehicles per day) • Wheeling Lanes on or adjacent to Priority 2 routes including turn boxes and protected intersections. 	Bare Pavement
Priority 3	After 36 hours up to 72 hours	<ul style="list-style-type: none"> • Barriers of snow and/or ice at pedestrian crossings, major intersections, traffic islands and bus stops adjacent to Priority 1 and Priority 2 routes. • Playground zones 	Snow and/or ice buildup cleared as needed
	After 36 hours and up to 7 Days	<ul style="list-style-type: none"> • Residential Streets 	Hard Pack
		<ul style="list-style-type: none"> • Bus stops • Stop and yield sign areas at intersections 	Snow and/or ice buildup cleared as needed



Standard Winter Maintenance Operations

- 6.4 The most common form of Winter Maintenance is physically moving snow from a surface. Standard practices include:
- Vehicle-mounted plows, brushes and blowers push snow and ice to the side of a surface
 - Hand shoveling is used for surfaces that cannot be maintained by vehicles or equipment
 - Snow removal is done when plowing is insufficient to address safety and accessibility concerns. All snow removed will be transported to designated snow storage sites
 - Minimizing the creation of windrows caused by plowing or levelling of ruts
- 6.5 The application of materials to a surface supports safe travel. Standard practices include:
- Applying De-Icers to reduce the accumulation of snow and ice when surface temperatures are between 0 and -10C
 - Weather conditions and forecasts determine selection and application of materials between -10C and -15C
 - Applying Abrasive Materials to a surface to improve traction when surface temperatures are below -15C
- 6.6 Detailed practices necessary to implement this policy are contained in the Snow and Ice Control Program Plan and the Road Salt Management Plan.

Seasonal Winter Maintenance

- 6.7 Over the course of a winter season, targeted seasonal Winter Maintenance activities will include:
- Removal of snow at school pickup/drop off areas. This will occur during the December school holidays if snow accumulation warrants removal and as resources permit
 - Clearing prioritized catch basins to minimize ponding/flooding near the end of the winter season. This typically occurs in January and March
 - Sweeping up accumulated abrasive materials on roadways as required

Snow Emergency

- 6.8 A Snow Emergency may present more hazardous winter travel conditions and reduce the likelihood that Winter Maintenance standards are achieved on time. Winter Maintenance timelines may be suspended during a Snow Emergency along with changes to priority levels. Snow Emergencies may require activation of The City's Emergency Operations Centre and the approval of additional funding to address safety and accessibility concerns.
- 6.9 The following criteria may warrant a declaration:
- Public streets and roads become impassable, resulting in significant safety and accessibility concerns
 - City resources and contractors are unlikely to restore operations within a reasonable timeframe after full deployment



c. High levels of snow accumulation or other Severe Weather Conditions

6.10 Public service announcements will be issued during a Snow Emergency to provide information, encourage safe travel and communicate when local travel should be avoided.

Snow Route Parking Bans

6.11 When a Snow Route Parking Ban is in effect, temporary parking restrictions will be announced and will require owners to remove their motor vehicles from designated streets. These restrictions facilitate more timely and efficient Winter Maintenance.

6.12 Snow Route Parking Bans are in effect 24 hours a day. Motor vehicles left in a parking restricted area will be subject to enforcement. Snow Route Parking Bans may remain in effect for up to 72 hours following a declaration and may be extended by The City.

6.13 In addition to formal restrictions, advisories to not park vehicles on residential streets may be issued when additional space is required to conduct Winter Maintenance.

Equity Supporting Practices

6.14 In addition to the priority system, The City will consider the needs of equity-deserving groups in the timing and delivery of Winter Maintenance. This includes:

a. Prioritizing universal accessibility standards in all operations given that Calgarians with disabilities are often less able to overcome winter travel hazards.

Sustainability Practices

6.15 The City will support climate change mitigation through Winter Maintenance. This will primarily be achieved by facilitating the use of more sustainable travel options in all seasons through timely maintenance of walking, wheeling and transit facilities.

6.16 The City will pursue innovation in Winter Maintenance practices, including exploring the use of energy efficient maintenance vehicles and materials that minimize environmental impacts.

6.17 While continuing to prioritize safety, The City will minimize the use of De-Icers and Abrasive Materials that adversely affect wildlife, vegetation and water quality.

Residential Streets

6.18 Residential Streets will be monitored following each Winter Weather Event unless a subsequent Winter Weather Event requires resources to attend to other priority areas. Where required, Winter Maintenance will be conducted to reduce the likelihood of snow and ice ruts causing safety or accessibility concerns.



- 6.19 A Hard Pack standard will be pursued for Residential Streets given that achieving a Bare Pavement standard would displace snow and ice to the sides of streets, posing accessibility, safety and parking challenges.

Transit Facilities

- 6.20 The City will provide reasonable winter conditions for those accessing transit facilities and for the operation of transit vehicles. Light rail transit stations and the Primary Transit Network will receive a prioritized level of service, with bus stops prioritized based on the frequency of service, ridership levels and the needs of passengers with disabilities.

Wheeling Facilities

- 6.21 The City will provide reasonable winter walking and wheeling conditions on City-maintained Sidewalks, Pathways and Wheeling Lanes including features such as Curb Cuts, stairs, ramps, medians, traffic islands, bridges, turn boxes, turn bays, and protected intersections.
- 6.22 Walking and wheeling facilities will be maintained to the same standard as the streets and roads they are on or adjacent to.
- 6.23 Surfaces will be maintained in a coordinated manner to reduce the likelihood of connected facilities being maintained at different times and to different standards.

Responsibilities of Owners or Occupants of Private Properties

- 6.24 The clearing of snow and ice from public Sidewalks and Pathways abutting private properties, in accordance with Street Bylaw 20M88.
- 6.25 The clearing of Windrows in front of driveways and Curb Cuts, regardless of cause, is the responsibility of the abutting property owner.
- 6.26 Snow and ice may not be cleared from private property onto any public property in accordance with Street Bylaw 20M88.
- 6.27 Snow and ice may not be cleared from a public Sidewalk, Walkway or Pathway onto a Wheeling Lane in accordance with Street Bylaw 20M88.



7. RESPONSIBILITIES

Chief Administrative Officer or Delegate

- 7.1 Authorizing funding at the request of the Mobility Business Unit for unfunded situations such as a Snow Emergency and/or removal of rutting on Residential Streets.

General Manager of Operational Services

- 7.2 Authorizing practices necessary to implement this policy.
- 7.3 Directing Operational Services staff and resources during a Snow Emergency.
- 7.4 Acting as a liaison to Council on policy related matters.

Director of Mobility

- 7.5 Declaring a Snow Emergency.
- 7.6 Declaring a Snow Route Parking Ban.
- 7.7 Recommendations to restrict travel during Severe Weather Events.
- 7.8 Directing Mobility staff and resources during a Snow Emergency.
- 7.9 Authorizing expenditures from the Winter Maintenance Reserve.
- 7.10 Bringing forward proposed changes to this policy upon direction of Council and the General Manager of Operational Services, working in conjunction with the Director of City and Regional Planning.

Manager of Mobility Maintenance

- 7.11 Authorizing temporary changes to the Priority System during a Winter Weather Event.
- 7.12 Directing Mobility Maintenance staff and resources during routine Winter Maintenance.
- 7.13 Directing Mobility Maintenance staff and resources during a Snow Emergency.

8. AMENDMENT(S)

Date of Council Decision	Report/By-Law	Description

9. REVIEWS(S)

Date of Policy Owner's Review	Description