



# City of Moose Jaw

## LETTER OF COMMUNICATION

TITLE: Snow and Winter Maintenance Policy Update

TO: Executive Committee

FROM: Department of Engineering Services

DATE: November 21, 2018

PUBLIC: This is a Public Document.

IN-CAMERA: Not applicable to this document.

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### RECOMMENDATION

THAT an increase in the winter maintenance budget of \$132,000 for staffing to allow for multiple shifts and completion of priority routes within 96 hours be referred to Budget Committee.

### JUSTIFICATION FOR IN-CAMERA

Not applicable to this report.

### TOPIC AND PURPOSE

The purpose of this report is to respond to Council's motion by providing an overview of winter maintenance practices and provide a recommendation for an enhanced service. The current policy and maps are Attachments i and ii.

### BACKGROUND

At the City Council meeting held July 9, 2018, City Council adopted the following motion:

*"THAT City Administration prepare a report providing options to implement an enhanced Winter Maintenance Policy; and*

*THAT options be based on research of best practices and industry standards; and*

THAT the Policy includes options and financial implications regarding, but not limited to:

1. Prioritization of roads, including a Priority Map;
2. Use of snow routes where necessary;
3. Environmental conditions and accumulations that trigger Winter Maintenance activities;
4. Snow plowing on Roads;
5. Snow plowing on sidewalks;
6. Snow plowing in alleys;
7. Ice control on roads;
8. Snow removal on roads;
9. Snow removal at schools;
10. Timelines for activity completion;
11. End conditions of activities;
12. Flood mitigation measures during melting periods."

A review of snow policies, practices and budgets across Saskatchewan was undertaken to establish best practice (Attachment iii). The cities included Regina, Saskatoon, Prince Albert, Yorkton, North Battleford and Weyburn. Several common themes emerged from this review:

- All cities, except for one, used a snow accumulation to trigger a response.
- All cities use a priority road system.
- 4 of the 6 cities have extended clearing activities (more than one shift).

The budget comparison for the other cities are as follow:

	Population (2016)	Snow Maintenance	Snow Maintenance per capita	Ice Control	Ice Control per capita	Total \$	Total \$ per capita
Moose Jaw	33,890	\$742,811	\$21.92	\$249,401	\$7.36	\$992,212	\$29.28
Weyburn	10,870	\$348,100	\$32.02	\$80,000	\$7.36	\$428,100	\$39.38
Yorkton*	16,343	\$471,017	\$28.82	\$106,265	\$6.50	\$577,282	\$35.32
North Battleford	14,315	\$284,700	\$19.89	\$130,000	\$9.08	\$414,700	\$28.97
Prince Albert**	35,926	\$1,110,000	\$30.90	\$0	\$0.00	\$1,110,000	\$30.90
Regina	215,106	\$6,191,300	\$28.78	\$2,300,000	\$10.69	\$8,491,300	\$39.47
Saskatoon	246,376	\$10,000,000	\$40.59	\$3,150,000	\$12.79	\$13,150,000	\$53.37

\* 2017 budget figures

\*\*Finance dept could not separate ice control

Snow operations are a function of lane kilometres to be cleared, amount of snow received, ability to store snow or requirements to haul, and the complexity and obstructions on the street. Winter maintenance is a response to weather, so it is highly variable. Every event is different, and every year is different. Budgeting should be based on long term averages.

## DISCUSSION

The current policy contains most of the elements required in a comprehensive winter maintenance policy. A review of the delivery of the policy identified that typically the focus has been on ice control, and, snow clearing and hauling operations on streets. The other aspects of the current policy have been completed on an as-needed basis.

There were also clauses in the policy that could create confusion. Hauling was not triggered until an accumulation of 10cm with a priority plow triggered at 5cm; this could create service issues in the haul areas (i.e. delayed plow downtown). There are also areas where a snow haul was routinely carried out for safety issues (i.e. 9<sup>th</sup> Ave. NW).

The largest issue identified in the policy review was the length of priority streets. Moose Jaw has a very high number of priority streets (urban). These were the Priority 1 and 1A roads. Operations is not able to achieve completion of Priority 1 and 1A within the first 3 days after a snowfall. The review of other cities' policies identified that Moose Jaw is now in the minority of cities in that we do not have a '24-hour' or multiple shift response. These two items, length of Priority streets and lack of '24-hour' response, lead to the focus of the changes and enhancement to winter maintenance.

A review of the Priority streets was undertaken, and the revised priority scheme is presented in Attachments iv and v.

The main recommendation is to move to a '24-hour' or multiple shift response. (Note at this time, it is estimated the operation would be conducted 21 hours/day). This will result in more road being completed in a shorter time immediately after an event. This would enhance the response time and clearing operations.

City	Length of Road km	km of Priority Roads Per Capita
	In First 24 Hours of Operations	
Regina	274	0.0013
Saskatoon	592	0.0024
North Battleford	25.85	0.0018
Weyburn	19.5	0.0018
Prince Albert	35.9	0.0010
Yorkton	62	0.0038
Moose Jaw (current)	48-95	.0014-.0028
<b>Proposed*</b>	<b>48</b>	<b>0.0014</b>

\* Note that under the current practice, it would be 3 days from the end of the snow event until the streets were complete. Under the proposed model, the Priority 1 streets would be complete within 1 day.

The cost to move to a multiple shift or '24-hour' response is estimated at about \$132,000/year. This would move 3 temporary staff to full time to ensure that the second shift could be staffed.

Contracted graders are used to assist the response to a snow event. The tender and contract will be updated to enhance the response timeline; contractors will be required to be available immediately after a snow event. The contract cost implications are not known.

Snow storage and hauling areas have been reviewed. Snow removal and hauling operations will commence 24 hours after clearing operations. Snow may be stored in some of these areas for 3 to 5 days as hauling operations are completed.

Further changes and enhancements to the policy include:

- Monitor and follow response trigger and priority routes;
- Utilize a response-based budget based on 5 snow events per year and routine maintenance;
- Develop a winter maintenance reserve policy, with max./min amounts and contribution/withdrawal (the current reserve balance is ~\$900,000).

Further improvements to communication with the public is recommended. Attached is a draft response graph and map that can be distributed to the public, to help clarify expectations and what will happen and when. Further feedback through consultation and surveys on the service would also be undertaken.

Training grader operators to support and enhance the response will take time. Therefore, the policy may not be fully implemented this year.

Two trained grader operators have recently left the City, leaving only 4. Losing a grader operator or a piece of equipment can have a significant impact on operations.

The proposed “24-hour” response is a new approach, the budget numbers presented are a best estimate. This response will need to be tested, measured and managed to verify costs (and modify if necessary). If adopted, the new policy will be communicated to the public.

#### OPTIONS TO RECOMMENDATION

1. That the increase in the winter maintenance budget of \$132,000 for staffing to allow for multiple shifts and completion of all Priority routes within 96 hours be implemented immediately.
2. That public consultation on the budget increase and enhanced snow response be undertaken and on the winter maintenance policy broadly.
3. That no changes are made to the policy and the level of service remains the same. Receive and file.
4. That the Priority routes and snow storage remain the same and a multiple shift response be added, and the policy be updated to reflect this.

## PUBLIC AND/OR STAKEHOLDER INVOLVEMENT

Communication Department will implement a public consultation strategy upon approval.

## COMMUNICATION PLAN

Communication Department will implement a public consultation strategy upon approval.

## STRATEGIC PLAN

Not applicable to this report.

## OFFICIAL COMMUNITY PLAN

Not applicable to this report.

## BYLAW OR POLICY IMPLICATIONS

Not applicable to this report.

## FINANCIAL IMPLICATIONS

If fully implemented, staffing enhancement to facilitate multiple shifts would require a budget increase of \$132,000.

## PRIVACY IMPLICATIONS

Not applicable to this report.

## OTHER CONSIDERATIONS/IMPLICATIONS

Not applicable to this report.

## PUBLIC NOTICE

Not applicable to this report.

## PRESENTATION

VERBAL: X

AUDIO/VISUAL:

NONE:

## ATTACHMENTS

- i. Current policy
- ii. Current snow routes and maps
- iii. Comparison of cities winter maintenance policies
- iv. Proposed snow routes
- v. Proposed response graph

Respectfully Submitted By,

*Joshua Mickleborough*

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Joshua Mickleborough, Director Engineering Services

JM/bh

APPROVAL OF REPORT RECEIVED

COMMENTS RECEIVED

*Jim Puffalt*

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Jim Puffalt, City Manager

*Fraser Tolmie*

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Fraser Tolmie, Mayor

*To be completed by the Clerk's Department only.*

Presented to Regular Council or Executive Committee on \_\_\_\_\_.

No. \_\_\_\_\_ Resolution No. \_\_\_\_\_

## CITY OF MOOSE JAW

DATE: February 7, 2013

File No. 1712-7

TO: Budget Committee

FROM: Engineering Department

SUBJECT: Systematic Parking Ban during Snow EventsPURPOSE:

The purpose of this report is to provide City Council with options in respect of Systematic Parking Bans during Snow Events.

BACKGROUND:

At the regular meeting of City Council held on March 19, 2012, Councillor Luhning presented the following Notice of Motion:

*"THAT Administration be directed to provide a report to Executive Committee or Committee of the Whole to discuss the options of a systematic parking ban during snow events in order that City streets can be plowed with more efficiency."*

Be referred to the 2013 Operating Budget discussions.

Attached to this report, please find a copy of a report dated March 13, 2012 from the Engineering Department with background information regarding the above.

DISCUSSION:Present Program:

There are 217 km. of roadways within the City of Moose Jaw. For the purpose of snow operations, the roadways can be differentiated into 3 priorities: Priority #1 - Arterials - 39 km.; Priority #2 - Collectors (and Bus Routes) - 51 km.; and Priority #3 - Residential - 127 km.

The Winter Road Maintenance Manual (WRMM), adopted by City Council, provides guidelines to the Engineering Department for the overall snow operations. Attached to this report is a copy of the WRMM. The street plowing schedule for the City of Moose follows the following guidelines:

1. Priority #1 Streets completed within 3 days of commencing.
2. Priority #2 Streets completed within 4 ½ days of completion of Priority #1 completion.
3. Priority #3 Streets to be scheduled based upon an approximate rutting of 10 cm. (4").



Based on average snowfalls of 5 to 15 cm., snow plowing for priority streets are accomplished within the guidelines. In snow events of 15 to 30 cm., it will take a pro-rated extended schedule to complete operations.

Presently, the City of Moose Jaw posts temporary "No Parking" signs when snow operations are on the narrow streets in the city, (e.g., Clifton Avenue, Chestnut Avenue, and 6<sup>th</sup> Avenue NW). These narrow roadways are residential streets. On all other streets within the city during snow operations, city crews will maneuver around a parked vehicle. The metered areas downtown are cleared (i.e. plowed and snow removed) during a night shift.

#### Survey of Other Cities

In speaking with the cities of Saskatoon and Prince Albert, (Regina does not have a Snow Route Parking Ban), it was stated that their Snow Route Parking Ban for snow operations only applies to Priority streets and not residential streets. A Snow Route Parking Ban on streets during snow operations would require:

1. Permanently, posting of signs on both sides of the street restricting parking during snow operations.
2. Additional staff to enforce the non-compliance.
3. Towing must proceed with fines to be levied.
4. Media Release Updates (i.e. Website, radio, etc.)

In addition, a comprehensive communication plan would need to be developed and implemented to ensure the community understands the new "No Parking/Snow Route Program".

#### ALTERNATIVES:

1. Status quo operations.
2. Install permanent signage on the streets designated for snow plowing operations. An additional employee would be required for parking violations. Comprehensive media coverage would be required.
3. Post placards, on a daily basis, for Priority #1 and #2 streets scheduled for snow plowing operations. A letter would be submitted to the residents advising of the dates of the snow operation on their street. An additional crew of 8 employees would be required to place the placards, remove the placards and deliver letters to residents. Over the 7.5 days of plowing, placards would be posted and letters delivered 24/48 hours in advance. There would be no enforcement of "No Parking" for snow operations.



In addition to the above labour component, placards and media coverage would be required.

ATTACHMENTS:

1. A copy of a report dated March 13, 2012 from the Engineering Department.
2. A copy of the Winter Road Maintenance Manual.

FINANCIAL IMPLICATIONS:

1. Status Quo.

The City to continue snow operations with no provisions for a Snow Route Parking Ban.

2. Implement a No Parking Ban on Priority #1 and #2 streets while snow operations are in effect.

The City of Moose Jaw would be required to install approximately One Thousand and Fifty (1,050) "No Parking" signs for Snow Operations on these city streets. The cost to install one typical sign is estimated at \$100.00. Therefore, the total installation would be approximately \$105,000.00.

It takes 7.5 days to complete a full plow on Priority #1 and #2 streets. No Parking restrictions would be required for this period of time and additional by law enforcement staff would be required to monitor parking non-compliance. The cost for the enforcement of the no parking would be an additional \$1,000.00 per snow event. A comprehensive media coverage is estimated at \$5,000.00.

3. Utilize placards/media coverage to accomplish a more efficient snow operation.

The City of Moose would be required to post placards on Priority #1 and #2 streets during snow plowing operations. It takes approximately 7.5 days to complete a full plow on Priority #1 and #2 streets. No Parking placards would be posted prior to snow operations. The additional staff required for this posting would be \$12,600.00 per snow event.

It is estimated that media coverage and purchasing of placards would be \$2,500.00.

SUMMARY:

To implement a more efficient snow plowing operation key requirements are required.

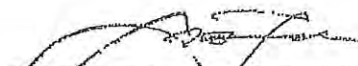
Installation of permanent signage, enforcement of a No Parking ban, and updates for media releases are crucial elements regarding establishment of a "No Parking/Snow Route Program".

The cost of permanent signage and enforcement may not offset the benefits of converting from temporary signage to permanent signage. The cost savings attributed to a No Parking restriction is estimated at \$12,500.00 per major snowfall.

RECOMMENDATION:


THAT the report dated February 7, 2013 from Engineering Department be received and filed.

Respectfully submitted,

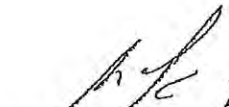
  
Mahabub Zaman, M. Eng., P. Eng.  
A/Director of Engineering Services

DWG/bh

Encl.

  
Duane W. Grado, A.Sc.T.  
Public Works Manager

CITY MANAGER'S COMMENTS:

  
\_\_\_\_\_  
City Manager

MAYOR'S COMMENTS:

  
\_\_\_\_\_  
Mayor

## CITY OF MOOSE JAW

DATE: March 13, 2012 COMMUNICATION # 20  
TO: Members of City Council File No. 1712-7  
FROM: Engineering Department  
SUBJECT: Background Information -- Notice of Motion  
- Parking Ban During Snow Events

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### PURPOSE:

The purpose of this report is to provide City Council with background information in respect of Parking Bans during Snow Events.

### BACKGROUND:

At the regular meeting of City Council held on March 5, 2012, Councillor Luhning presented the following Notice of Motion:

*"THAT Administration be directed to provide a report to Executive Committee or Committee of the Whole to discuss the options of a systematic parking ban during snow events in order that City streets can be plowed with more efficiency."*

### DISCUSSION:

#### Present Program

There are 216 km. of roadways within the City of Moose Jaw. For the purpose of snow operations the roadways can be differentiated into 3 priorities: Priority #1 Arterials 39 km., Priority #2 Collectors (and Bus Routes) 51 km., and Priority #3 Residential 126 km.

Presently, the City of Moose Jaw posts temporary "No Parking" signs when snow operations are on the narrow streets in the city (eg., Clifton Avenue, Chesnut Avenue, and 6<sup>th</sup> Avenue NW). On all other streets within the city during snow operations, city crews will maneuver around a parked vehicle. The metered areas downtown are cleared overnight.

#### Survey of Other Cities

A survey of five cities was conducted in Saskatchewan, Alberta and Manitoba relating to snow route parking bans. From the survey it was determined that in Saskatchewan, Saskatoon and Prince Albert have limited parking restrictions on their snow routes. The City of Regina does not



During the survey it was noted that provisions must be made for the following items to make the parking ban a viable enforcement:

- 1) Permanently posting of signs on both sides of the street restricting parking during snow operations.
- 2) Additional staff to enforce the non-compliance.
- 3) Towing must proceed with fines to be levied.
- 4) Media Release Updates (i.e. Website, radio, etc.)

To establish a "snow route" will require permanent signage in which costs are not insignificant. In addition, a comprehensive communication plan would need to be developed and implemented to ensure the community understands the new "No Parking/Snow Route Program".

#### ATTACHMENTS:

1. A survey of five cities in Western Canada relating to Snow Route Parking Ban.

#### ALTERNATIVES:

- 1) Remain status quo.
- 2) Implement a No Parking ban on Priority #1 streets while snow operations are in effect.
- 3) Implement a No Parking ban on Priority #1 and #2 streets while snow operations are in effect.

#### FINANCIAL IMPLICATIONS:

- 1) Status Quo.

The city to continue snow operations with no provisions for a snow route parking ban.

- 2) Implement a No Parking ban on Priority #1 streets while snow operations are in effect.

The City of Moose would be required to install approximately 450 "No Parking" signs for snow operations on these city streets. The cost to install one typical sign is estimated at \$100. Therefore, the total installation would be approximately \$45,000.

It takes three days to complete a full plow on Priority #1 streets. No Parking restrictions would be required for this time period and additional staff would be required to monitor parking non-compliance.

- 3) Implement a No Parking ban on Priority #1 and #2 streets while snow operations are in effect.

The City of Moose would be required to install approximately 1050 "No Parking" signs for Snow Operations on these city streets. The cost to install one typical sign is estimated at \$100. Therefore, the total installation would be approximately \$105,000.

It takes 7.5 days to complete a full plow on Priority #1 and #2 streets. No Parking restrictions would be required for this period of time and additional staff would be required to monitor parking non-compliance.

SUMMARY:

A survey of three Saskatchewan cities along with Calgary and Winnipeg has illustrated various views on snow route parking restrictions. It was noted during survey discussions that key requirements are required in order to ascertain the policy of a No Parking Ban.

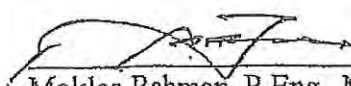
Installation of permanent signage, enforcement of a No Parking ban, and updates for media releases are crucial elements regarding establishment of a "No Parking/Snow Route" program.

The cost of permanent signage and enforcement do not offset the benefits of converting from temporary signage to permanent signage.

RECOMMENDATION:

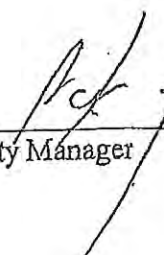
THAT the report (Communication # 20) dated March 13, 2012 from Engineering Department be received and filed.

Respectfully submitted,

  
Mokles Rahman, P.Eng., MBA  
Director of Engineering Services

DWG/mh  
Encl.

CITY MANAGER'S COMMENTS:

  
\_\_\_\_\_  
City Manager

MAYOR'S COMMENTS:

  
\_\_\_\_\_  
Mayor

## 2012 Snow Parking Ban Survey

City	Do you have a Snow Route Parking Ban Policy?	What is the policy?
City of Saskatoon	Yes	Snow maintenance performed on a priority basis (arterial/collectors, bus routes, etc.). Snow routes are within priority areas and are designated by permanent signage. Offenders are ticketed and towed from the area.
City of Regina	No	No Policy
City of Prince Albert	Yes	Snow maintenance performed on a priority basis (arterial/collectors, bus routes, etc.). Some arterial (priority) streets extend into residential areas. These areas have permanent signage delineating them as snow routes. Advance notice (48 hrs) of snow events provided via local media.
City of Calgary	Yes	Snow maintenance performed on a priority basis (arterial/collectors, bus routes, etc.). Snow routes delineated by permanent signage as well as on the City website. Notice of snowfall event provided by local media. Residents can use City parking facilities during snow plowing. Business areas are plowed between 9pm and 6am. Parking bans last for 72 hours or until City declares they have been lifted.
City of Winnipeg	Yes	Snow maintenance performed on a priority basis (arterial/collectors, bus routes, etc.). 2-3 times annually a residential parking ban is called. Residential areas are divided into snow zones which are plowed in 12 hr shifts. City announces when the residential snow zone schedule is available prior to snow clearing. Annual snow routes are permanently delineated by signage. Annual snow route parking ban is from Dec. 1 to March 1 each year (from 2am to 7am). Declared snow routes require additional plowing and prohibit parking from midnight to 7am. Snow emergencies as declared by the Mayor also prohibit parking on snow routes. The local media advises the public on expected snowfall events, snow zone scheduling and other snow management operations. Offenders parking in banned areas are ticketed and/or towed.

**NOTE:** Refer to attachments regarding Calgary and Winnipeg's Snow Route Parking Policies



## CITY OF MOOSE JAW CITY COUNCIL - ENQUIRIES

"Section 30 of the City of Moose Jaw's Procedure Bylaw, reads as follows:

"30(1) Under the Order of Business entitled 'Enquiries', members of City Council may:

- (a) ask questions of City Administration respecting the affairs of the City of Moose Jaw, provided that such questions may be answered directly, without research; or
  - (b) submit questions, in writing, respecting the affairs of the City of Moose Jaw.
- (2) All enquires submitted pursuant to subsection (1) shall be read by the member without debate, argument or unnecessary facts.
- (3) The City Manager shall promptly prepare, or cause the preparation of, an answer to all enquires submitted pursuant to clause (1) (b), which information shall be provided by the City Clerk to members of City Council."

Date: 5 March 2012

Nature of Enquiry: Parking Ban during Snow Events

That Administration be directed to provide  
a report to Executive Committee or Committee of  
the whole to discuss the options of a <sup>systematic</sup> parking ban  
during snow events in order that city street can  
be plowed with more efficiency. ~~That the~~  
~~City Council be directed to~~  
~~consider the~~

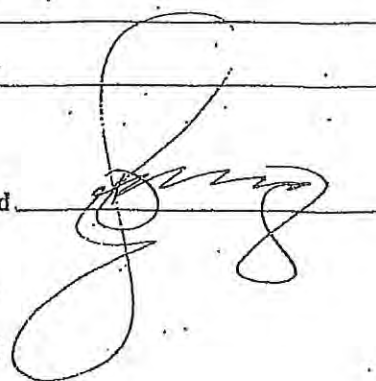
TO BE COMPLETED BY THE CITY CLERK

Enquiry No. ( )

Referred to \_\_\_\_\_ Department  
for a reply to City Council.

CITY CLERK

Signed \_\_\_\_\_



**ENGINEERING DEPARTMENT**  
**PUBLIC WORKS BRANCH**  
**WINTER ROAD MAINTENANCE MANUAL**

**October 11, 2011**

## INDEX TO WINTER MAINTENANCE MANUAL

Section	1.	General Policy
	2.	Emergency Snow Plowing Plan (Includes Passable Plow)
	3.	Opening Blocked Streets
	4.	Street Plowing Priorities
	5.	Street Sanding Procedure
	6.	Snow Removal and Hauling
	7.	Back Lane Plowing
	8.	Sidewalk Snow Plowing
	9.	Sidewalk Sanding
	10.	Ice Control
	11.	Opening Catchbasins and Drains
	12.	Rutting
	13.	Parking Lane/Stall
	14.	Snow Storage
	15.	Bus Stops
	16.	Schools

## **1. GENERAL POLICY**

### **1.1 Responsibility**

The General Foreman of Engineering shall act as the overall co-ordinator of all winter maintenance operations and shall be responsible for the day to day operation and co-ordination of the roadways winter maintenance program.

### **1.2 Public Relations**

All complaints and enquiries will be handled by the Engineering Department personnel at 694-4448 during office hours and by the Fire Department for afterhours calls at 692-2794.

All complaints and enquiries shall be recorded as they are received on the appropriate forms.

Complaints of an emergency nature are to be transmitted immediately to the General Foreman of Engineering for investigation.

Complaints of a routine nature will be transmitted to appropriate field personnel for response. Records will identify outside personnel dealing with the complaint.

On a daily basis, the Engineering Department's Staff shall ensure that the news media, as well as the Ambulance Services, Police, Fire and Transit Departments are aware of intended road restrictions and closures for the following day.

On a daily basis, throughout the winter, the General Foreman of Engineering shall advise the Engineering Department Staff of any intended operations to be carried out in the evenings and/or during the weekends.

## **2. EMERGENCY SNOW PLOWING PLAN**

An Emergency Snow Plowing Plan will be in effect following one snowfall event exceeding approximately 15 centimeters.

All City winter equipment will be used for this operation in conjunction with other departments.

During the Emergency Snow Plowing Plan, a Passable Plow (no lifting of blades) on the Bus Routes will be implemented initially.

The operating personnel to be used for this plan will be from the Engineering Department. Both Streets & Roads Staff and Sewer & Water Staff will be

utilized. Engineering Staff in each Division will be trained in all aspects of the operation and reviewed each season.

During this operation, crews will be scheduled to 12 hour shifts until road conditions are deemed acceptable.

The co-ordination and contact for all City Personnel will be conducted by the General Foreman of Engineering.

### **3. OPENING BLOCKED STREETS**

Following a major storm, all blocked roadways shall be made passable prior to implementing the priority street plowing program.

If, following a major storm, insufficient personnel and equipment are available in the Public Works Division, personnel and equipment from other City Departments will be shifted to lend assistance. For storms of 15 centimetres or greater in snowfall or as may otherwise be directed by the Director of Engineering Services, rented equipment shall be engaged to supplement City Forces.

As required, the transfer of manpower and equipment between Departments shall be coordinated by the General Foreman of Engineering.

Following snow storms, emphasis for plowing operations shall be placed on ensuring that there are no blocked roadways in the City and that the major arterials within the City are returned to a smooth state as soon as possible after the storm. The requirement of plowing operations on residential roadways after a storm shall be co-ordinated by the General Foreman of Engineering.

### **4. STREET PLOWING PRIORITIES**

#### **4.1 Policy**

In order to provide a reasonable level of safety to motorists and the general public, snow plowing operations shall be implemented, as required, throughout the winter season.

Snow plowing operations shall follow the established priority street program unless otherwise directed by the Director of Engineering Services.

On an annual basis, prior to October 31<sup>st</sup>, streets included in each of the priorities shall be reassessed as to whether or not they should be noted in a higher priority classification. Emphasis shall be given to those areas of high vehicle traffic flow, main arterials, collector routes, emergency routes, and bus routes.

Upon completion of the street classification review, a map outlining the various priorities as well as lists outlining the same priorities which are broken down into individual roadway districts will be prepared.

#### 4.2 **Priority #1 Street Plowing**

The level of service for plowing Priority #1 streets will be based on 5 cm of total snow accumulation. The plowing will provide a partial bare pavement result and will be completed within 3 days of commencing.

Plowing on Priority #1 streets, following a storm, shall be done during the night shift as much as possible in order to minimize the problems associated with traffic and parked vehicles.

The high speed truck mounted plow shall be utilized to remove snow on rural type roads such as Thatcher Drive and the Manitoba Street Expressway.

Bus Routes will be plowed directly following the completion of Priority #1 Plowing.

Because of vehicle parking patterns within the City, certain Priority #2 streets may also be plowed during the night shift after a major storm. The remaining Priority #2 streets will be plowed during the day shift.

#### 4.3 **Priority #2 Street Plowing**

The level of service for plowing Priority #2 streets will be based on 5 cm of total snow accumulation. The plowing will provide a partial bare pavement result and will be completed within 4½ days following the completion of Priority #1 plowing.

In situations when it has been concluded that traffic flow has not been significantly hampered as a result of the effects of a storm or snow accumulation, plowing operations on certain or all streets in this priority classification may not be carried out. In most cases, the snow pack will be allowed to accumulate on the basis that vehicles can be operated on the hard snow pack surface.

When windrowing snow along roadways other than back lanes, the operators of graders equipped with snow-rid blades shall clear the front driveways along the roadway of the windrowed snow. The Department **shall not** be responsible for the clearing of minor amounts of snow (**20 centimetres**) left on the driveways as a result of the effort. We shall return to clear a front driveway which may have inadvertently been missed or where the grader which windrowed the roadways was not equipped with a snow-rid blade.



Following the street plowing operation after a storm, crews shall respond to justified public complaints and requests. During this final "clean up" phase of the operation, every attempt shall be made to restore acceptable sight lines at major intersections.

#### 4.4 **Priority #3 Street Plowing**

The level of service for plowing Priority #3 streets will be based on an approximate rutting condition of 10 centimetres (4"). The plowing will provide a relatively smooth driving surface.

Priority #3 streets include all streets that are neither Priority #1 nor #2 streets and includes most residential streets. Priority #3 streets may be plowed following completion of the Priority #1 and #2 streets. Blockages and safety concerns will be checked immediately.

In situations when it has been concluded that traffic flow has not been significantly hampered as a result of the effects of the storm, plowing operations on certain or all streets in this priority classification may not be carried out. In most cases, the snow pack will be allowed to accumulate on the basis that vehicles can be operated on the hard snow pack surface. The advent of warm weather in the Spring resulting in softening of the snow pack and subsequent difficulty in vehicle operations, may necessitate additional plowing to minimize the problem.

When windrowing snow along roadways other than back lanes, the operators of graders equipped with snow-rid blades shall clear the front driveways along the roadway of the windrowed snow. The Department shall not be responsible for the clearing of minor amounts of snow (20 centimetres) left on the driveways as a result of the effort. The Department shall return to clear a front driveway which may have inadvertently been missed or where the grader which windrowed the roadways was not equipped with a snow-rid blade.

Following the street plowing operation after a storm, crews shall respond to justified public complaints and requests. During this final "clean up" phase of the operation, every attempt shall be made to restore acceptable sight lines at major intersections.



**5. STREET SANDING PROGRAM IN CONJUNCTION WITH SNOW PLOWS**

Sanding priorities within each district shall be in accordance with the street classifications designated for snow plowing (priorities #1 and #2). Within these priority routes, emphasis shall be given to the following:

- I Bridges, Subways, Ramps and Street Inclines
- II Street Signalized Intersections
- III Bus Lanes
- IV Stop Signs
- V Turning Bays
- VI Railroad Crossings
- VII Street Construction Areas
- VIII Street Crosswalks

Ice control operations shall follow the designated priorities unless otherwise directed.

**6. SNOW REMOVAL AND HAUL**

Main St. North, 1<sup>st</sup> Ave. N.W., 1<sup>st</sup> Ave. N.E. and all metered areas shall be plowed and hauled concurrently with Priority #1 within 72 hours, at an accumulation of 10 cm.

Roadways adjacent to school entrances shall be plowed and hauled at an accumulation of 10 cm.

Due to limited storage space, an accumulated snowfall of 20 centimeters is used as a guideline to warrant snow removal and hauling. However, if in the opinion of the General Foreman of Engineering, the windrow on Priority #1 or #2 streets is encroaching into the driving lane, which causes a safety concern, this will be removed regardless of snow accumulation. This will commence as soon as possible, but at the very latest, it will commence once the Priority #1 and #2 streets have been plowed.

“No Parking” signs shall be posted along certain priority streets where necessary to ensure an efficient total snow removal operation. A twenty-four (24) hour notice period must pass before the signs become legal and enforceable. Moose Jaw Police Services are then temporarily deployed to enforce the bylaw by ticketing and towing offending vehicles at the initiation of the snow removal operation.

Priority #2 streets – under normal circumstances, snow removal will only be undertaken for reasons of safety, at the discretion of the General Foreman of Engineering.

In order to not unduly impede traffic flow and for the reason of safety, snow removal operations will generally be carried out on Priority #1 streets between the hours of 9:00 p.m. and 6:00 a.m. unless an emergency situation arises.

Loading and hauling will be undertaken at specific locations for various reasons. Periodic windrow removal shall be undertaken at schools and bus stops where safety considerations warrant, and at the discretion of the General Foreman of Engineering. Snow blowing and/or loading and hauling shall not be undertaken near schools between the hours of 8:00 a.m. and 9:00 a.m., 11:30 a.m. and 1:30 p.m., and 3:00 p.m. and 4:30 p.m.

Snow removal shall take place at principle intersections for reasons of safety as specified by the General Foreman of Engineering.

#### 6.1 **Snow Dump Sites**

Early each Fall, the General Foreman of Engineering shall confirm proposed snow dump sites with private owners and other City Departments.

Commercial haulers and the general public will only be allowed in those sites specifically designated for their use. Commercial haulers or members of the public found utilizing snow dump sites other than the ones specified may be subjected to a fine.

The General Foreman of Engineering shall ensure that the snow dump sites which are only to be used by City equipment are properly signed in this regard. Personnel observing an unlawful dumping by a commercial hauler shall gather information such as license number of the vehicle and the name of the organization the vehicle belongs to. This information shall then be forwarded to the Public Works Manager, for further action.

From time to time, the General Foreman of Engineering will dispatch applicable equipment to the snow dump sites in order to arrange the snow in such a manner that congestion of snow hauling vehicles does not occur.

The General Foreman of Engineering shall arrange to clear the snow dump sites of accumulated debris as soon as possible following the melt of the accumulated hauled snow in order to ensure that sites are returned to their original condition.

**7. LANE PLOWING PROGRAM**

After major storms, all lanes are systematically plowed preceding waste collection schedules in order to minimize disruption to the active garbage pickup routes.

The requirements for lane plowing after minor snow events shall generally be determined by the General Foreman of Engineering.

**8. SIDEWALK SNOW PLOWING PROGRAM**

City forces will be used to prevent or reduce hazardous sidewalk conditions on sidewalks adjacent to City-owned properties, bridges, subways and at accessible ramps at intersections in the downtown area in accordance with the Snow Bylaw. Public walkways shall be cleared in residential areas.

Sidewalk clearing operations shall be implemented in accordance with established policy immediately following all major storms.

After minor or localized snow storms, sidewalk clearing operations shall be implemented at the discretion of the General Foreman of Engineering.

The sidewalk plowing program shall be reviewed on an annual basis with revisions made as necessary.

**9. SIDEWALK SANDING**

Ice control on sidewalks will be provided at accessible ramps and adjacent to City-owned properties.

The General Foreman of Engineering shall arrange for sidewalk sanding, as may be required.

Dry sand shall be used for sidewalks, unless a severe icing condition occurs at which time an alternate method may be considered, if necessary.

**10. ICE CONTROL**

Sanding of streets shall be undertaken in order to ensure a reasonable level of safety to motorists and pedestrians as local conditions dictate.

Sanding operations shall be initiated by the General Foreman of Engineering and shall be continued at his/her discretion until a reasonable level of safety has been attained.



The General Foreman of Engineering shall prepare an ice control shift schedule which rotates the personnel on a seven day per week basis. This schedule shall be implemented as early in the Fall as conditions may dictate. Normally, the schedule shall provide for at least one sander unit per shift. The complement of sander units used during any given shift may be varied to meet the existing conditions. Although ice control operations shall be carried out as required throughout the winter season, special emphasis shall be made in providing protection to the public during the early Spring and Fall.

Lanes in the downtown core shall generally be sanded at street intersections. Sanding in back lanes shall only be done after an inspection confirms the need for services.

Materials for ice control operations shall be stockpiled at the Public Works Yard on High St. West. In regular roadway sanding operations, a treated mixture of 95% sand and 5% salt shall be used. This mixture will vary pending on weather conditions.

Lengths of areas to be sanded and/or salted are based on calculating stopping distance requirements assuming vehicles are equipped with highway tread tires, a sanded ice surface and a temperature of - 1 degree C (31 degrees F) as follows:

Posted Speed Limits (Velocity)	Length to be Sanded at Intersections
50 kph (30 mph)	60 m (200')
80 kph (50 mph)	240 m (800')

The above table shall apply to the sanding of priority #1 and #2 streets. In addition to the above, should the condition of a major arterial roadway be such that icing is extensive, the whole street shall be sanded.

Unless otherwise directed by the Public Works Manager, residential roadways (Priority #3) shall generally be sanded at street intersections for a length of 15 metres (50 feet) back from the intersection.

Water breaks and other emergencies shall be sanded in accordance with instructions issued by the General Foreman of Engineering.

Sander operators shall maintain accurate daily records of those areas sanded.

## **11. OPENING CATCHBASINS AND DRAINS**

The necessary procedures required to rectify drainage problems shall be implemented to ensure a reasonable level of protection to the general public and the properties within the City which may be subjected to drainage problems.

The General Foreman of Engineering shall be responsible for opening the top of catchbasins. Unless otherwise directed, the General Foreman of Engineering shall also be responsible for assessing the problems and prioritizing the implementation of the required procedures.

The utilization of pumps to assist in rectifying drainage problems through the City shall be on an emergency basis at the discretion of the Public Works Manager.

Accumulated snow and ice on catchbasins in the City shall be removed by manual and/or mechanical means in order to achieve better drainage. The opening of the catchbasins in the City shall be carried out in accordance with the priority street classification system. In order to minimize the risk of having to redo this work, this process shall normally not begin until after March 1<sup>st</sup>. During years of abnormally early Spring breakup, this process will be initiated prior to March 1<sup>st</sup>.

Where necessary, graders and/or other appropriate equipment which may be available will be used to trench the snow and ice along the curb in order to achieve better drainage to the catchbasins.

Steamers will be utilized to thaw open catchbasins in streets and lanes and shall be the responsibility of the General Foreman of Engineering.

## **12. RUTTING**

During the accumulation of snow and in particular in the advent of warmer temperatures, higher volume streets may obtain rutting.

Upon notification, City crews will investigate. In conditions where rutting exceeds 10 cm. (4"), City forces will plow streets. The 10 cm. (4") measurement will be used as a guideline only and City crews will investigate each problem area individually.

### **13. PARKING**

When practical, based on an average 50 foot lot, the City will plow 1 parking space to accommodate parking for property owners.

### **14. SNOW STORAGE**

City medians and boulevards, when practical, will be utilized to accommodate snow storage.

Snow storage on medians is not to exceed 3 feet in height and shall be located at a distance of 50 feet back of an intersection for traffic visibility purposes.

### **15. BUS STOPS**

The bus turn-in and passenger entrance adjacent to City Bus shelters/stops will be cleared as required. The monitoring of these areas will be coordinated between the Transit Manager and the General Foreman of Engineering.

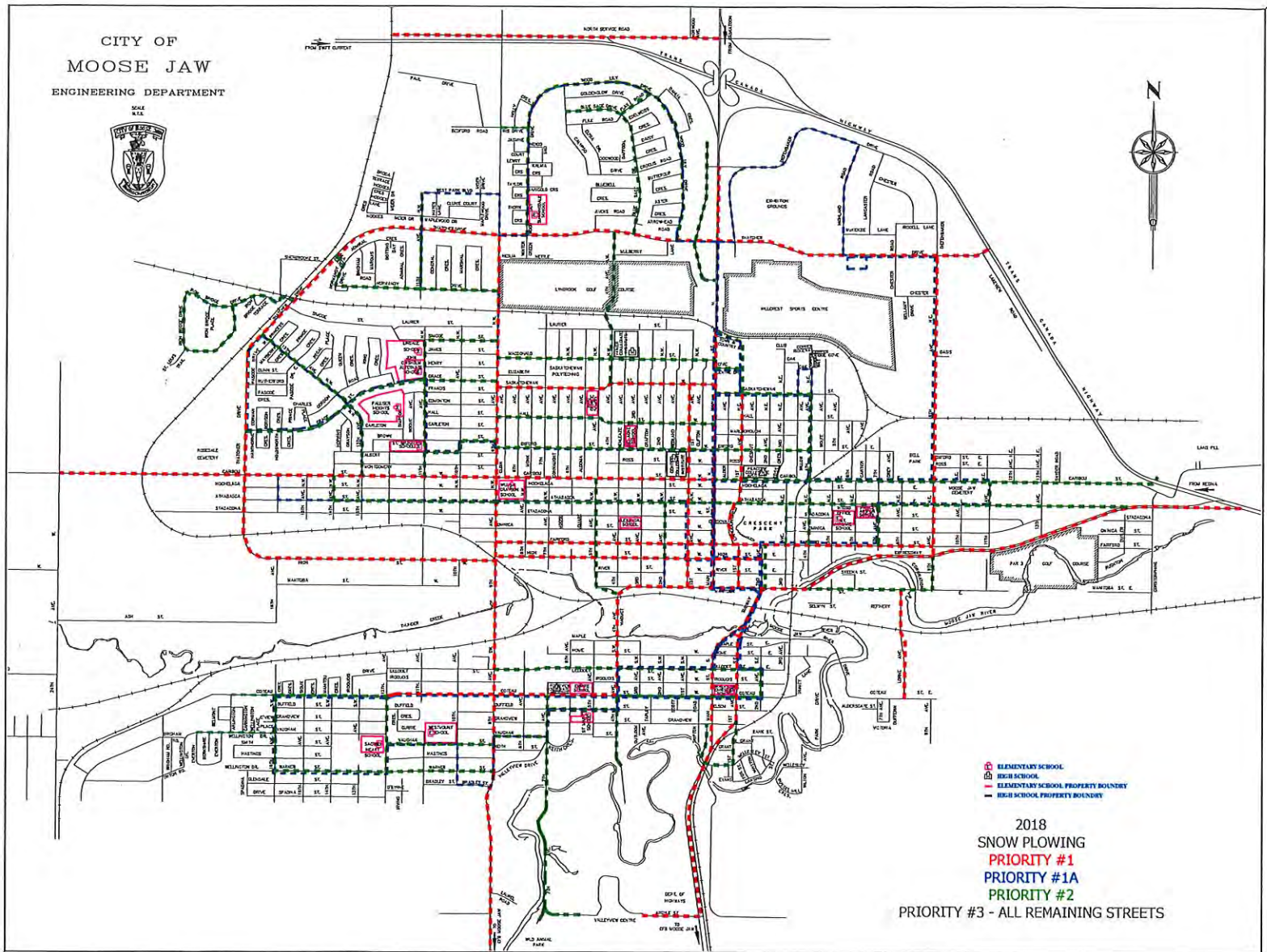
### **16. SCHOOLS**

All snow plowed windrows adjacent to elementary schools will be maintained at a height not to exceed 3 feet.

Windrows will be placed on the opposite side of the roadway of the schools or blown into school yards.

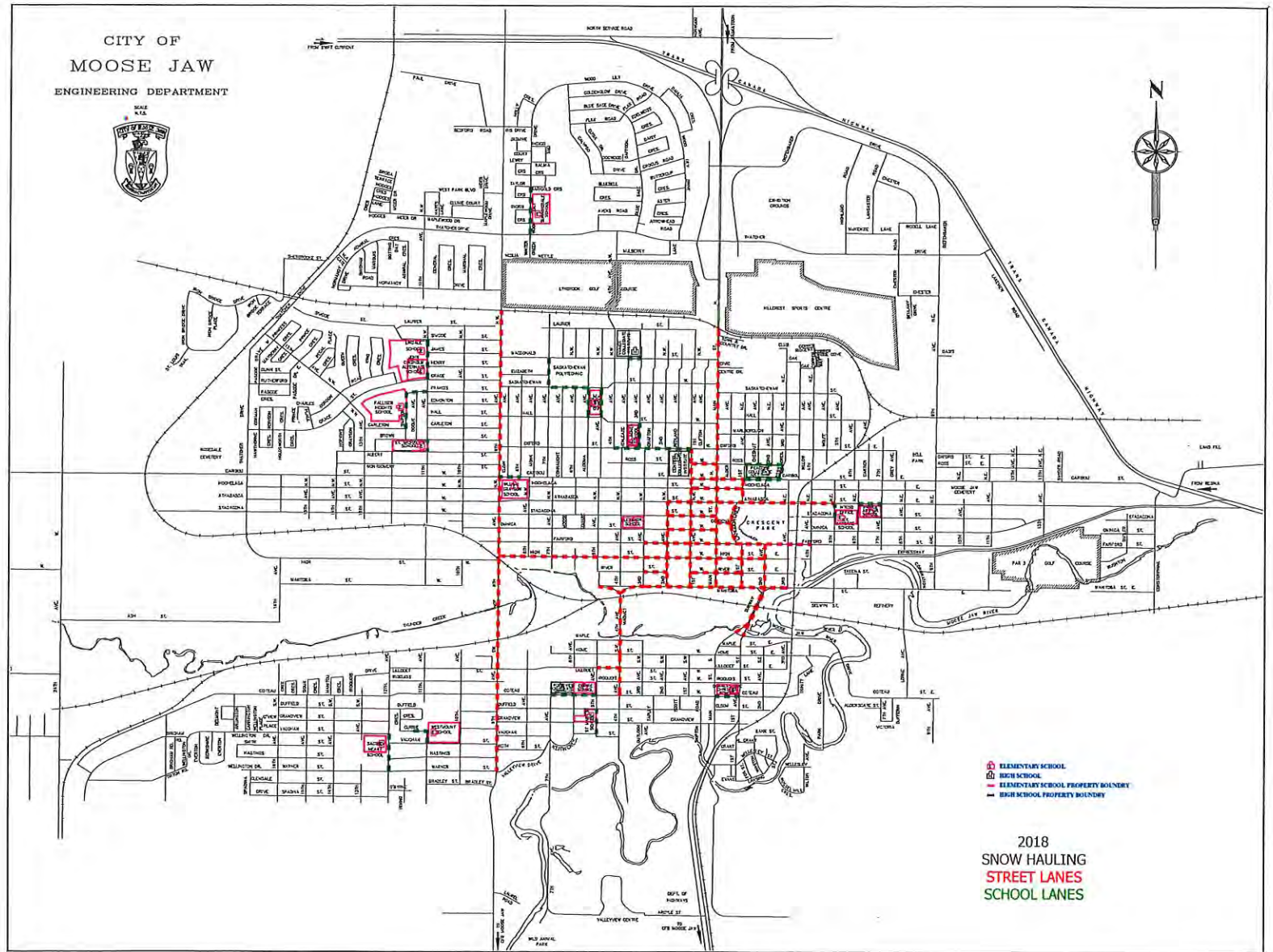
Roadways adjacent to all main pedestrian entrances to schools will be plowed and hauled at an accumulation of 10 cm. of snow.

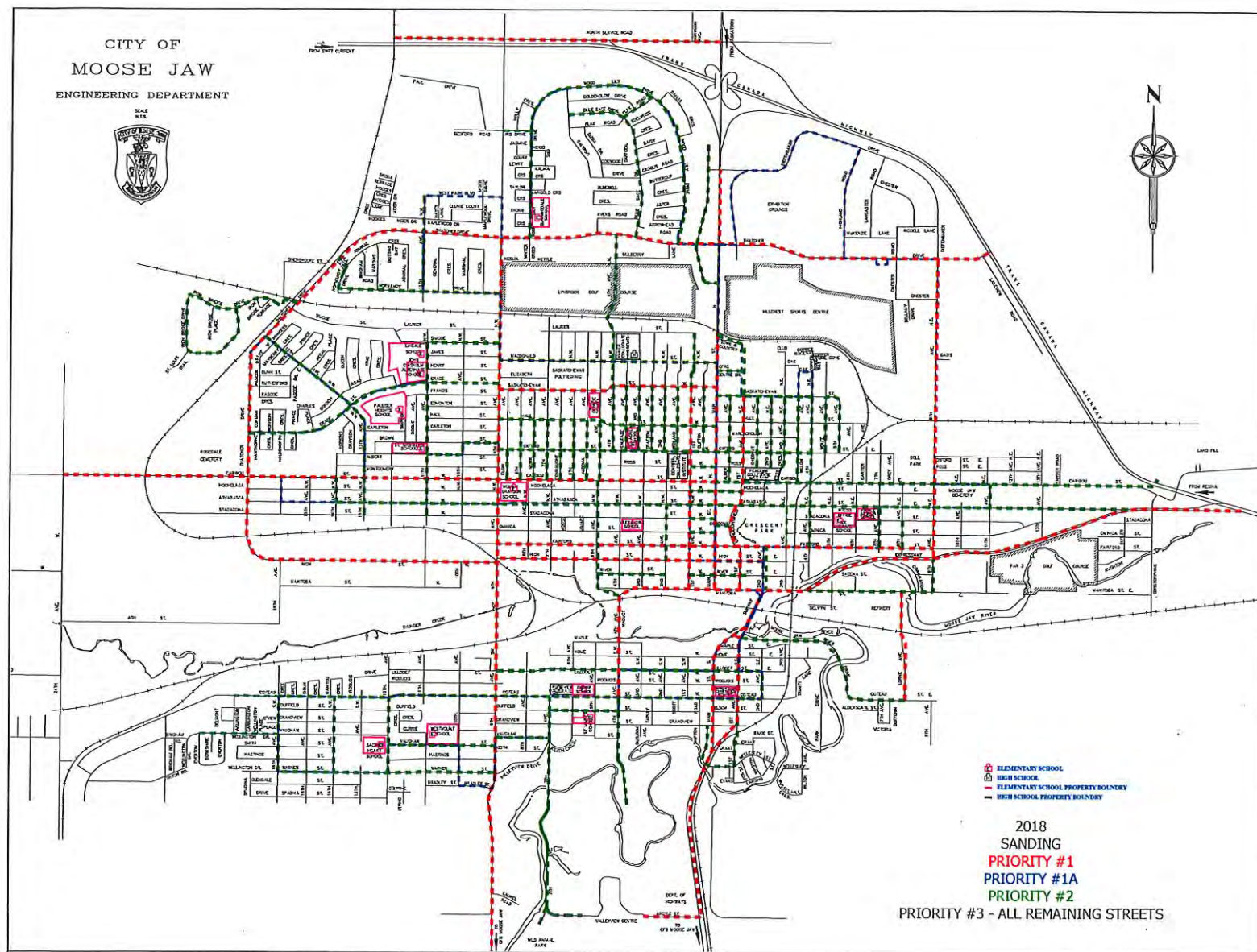






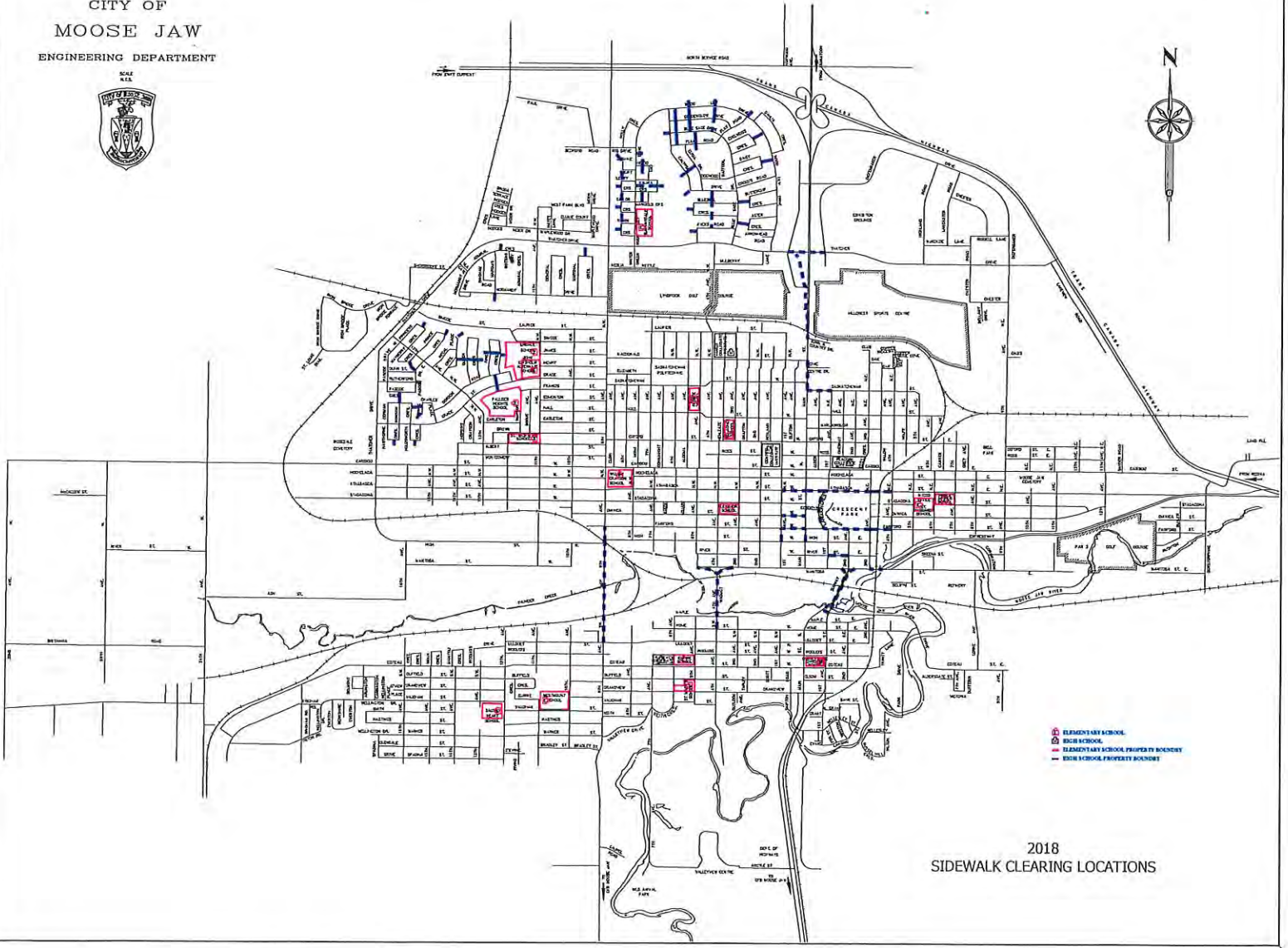
CITY OF  
MOOSE JAW  
ENGINEERING DEPARTMENT





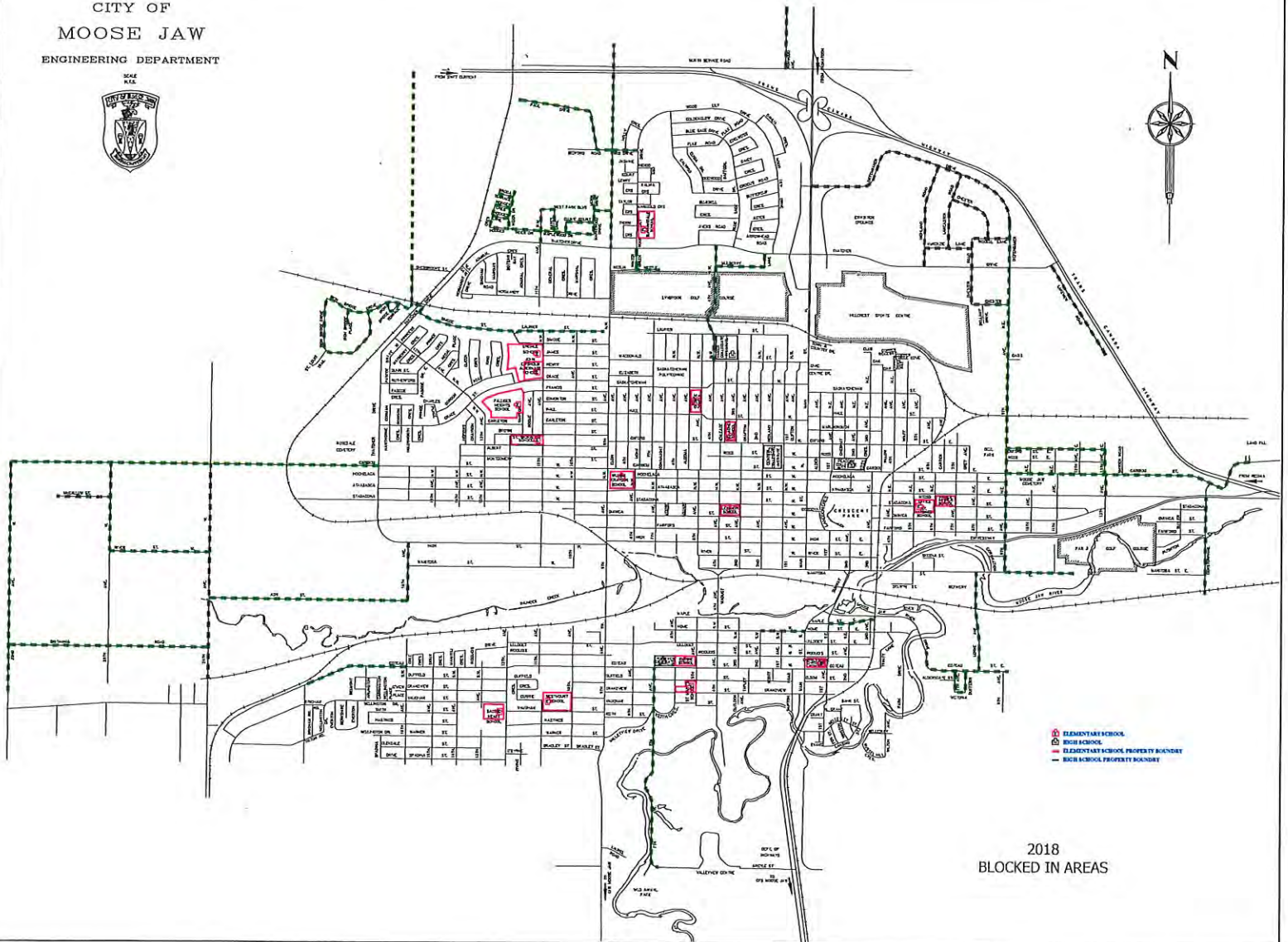


CITY OF  
MOOSE JAW  
ENGINEERING DEPARTMENT



2018  
SIDEWALK CLEARING LOCATIONS

CITY OF  
MOOSE JAW  
ENGINEERING DEPARTMENT



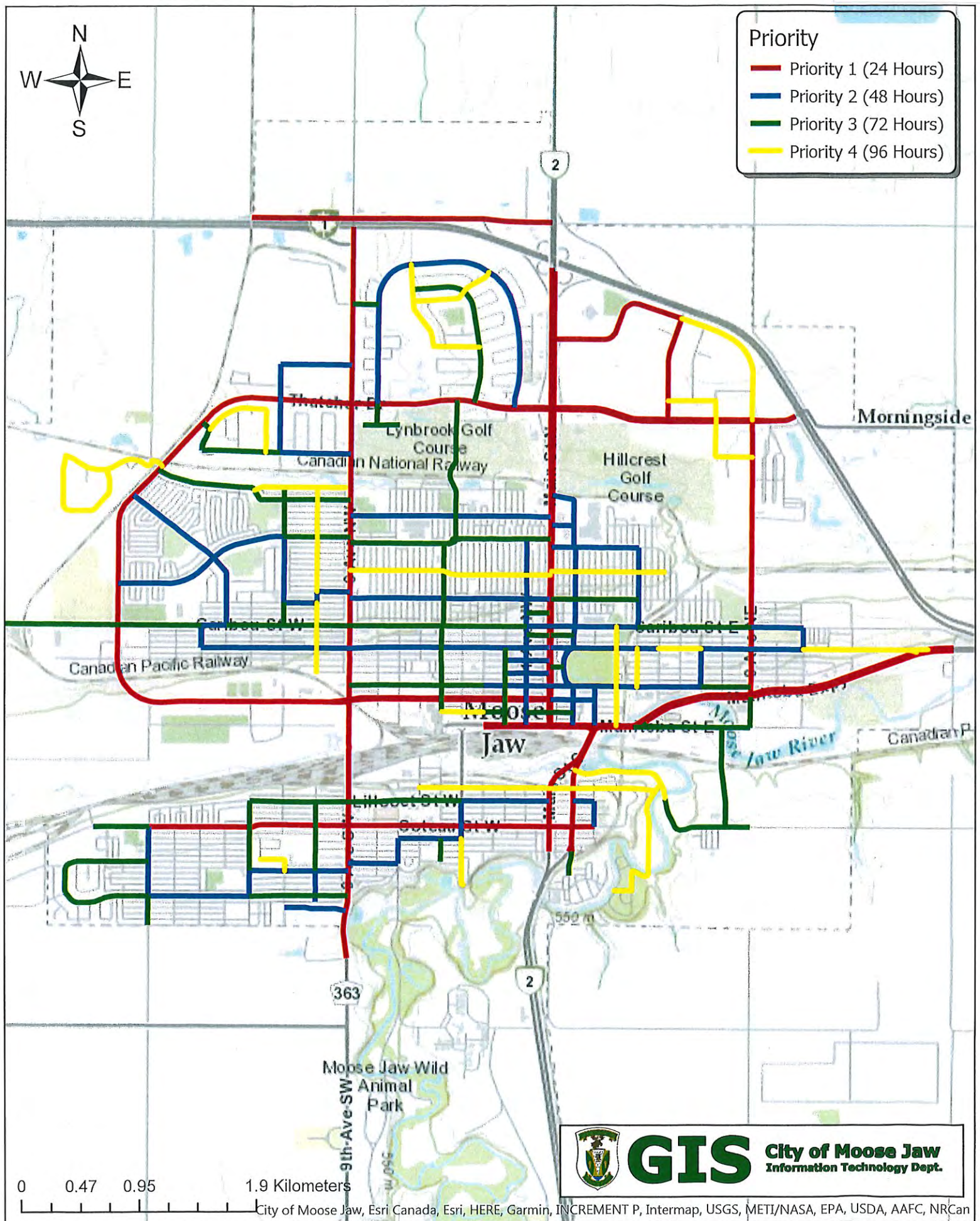


## SASKATCHEWAN CITIES SNOW MAINTENANCE POLICIES

<u>City</u>	<u>Policy</u>	<u>Equipment</u>
Moose Jaw	5 cm = street plowing 15 cm - emergency plow and haul Done on priority street basis	3 x graders, 1 reserve grader 2 x loaders contracted equipment as warranted
Prince Albert	10 cm snowfall = parking ban Done on priority street basis Priority 1 streets - opened within 24 hours Priority 2 streets - opened within 48 hours Priority 3 streets - opened as warranted Priority 4 streets - passable plow if warranted Operates on one shift	3 x graders 4 x loaders contracted equipment as warranted
Weyburn	No specific trigger re: snowfall amount Done on priority street basis Priority Routes - cleared within 8 hours Secondary Routes - cleared within 18 hours Residential Routes - cleared within 60 hours City Centre - cleared at night after event cessation Airport, Recreation Venues, City Facilities - done according to resource availability; facilities may require the use of private contractors Sidewalks - sidewalk removal route cleared after event cessation Lanes - with exception of City Centre, no lanes are cleared Public notification via Everbridge Alert Notification System Snow clearing 18 - 20 hrs/day During storm event operations are limited to passable plows for emergency vehicles; if limited or zero visibility all snow maintenance operations cease	3 x graders 4 x loaders contracted equipment as warranted
Yorkton	5 cm of snowfall = priority plow Done on priority street basis First Priority (highways, arterials) - cleared within 36 hours Second Priority (collectors) - cleared within 72 hours Residential - triggered after 10 cm snowfall, cleared within 108 hours Lanes cleared after 150 mm (10 inches) snow accumulation Windrows less than 12 inches responsibility of homeowner Snow clearing 22 hours/day	2 x graders 4 x loaders 6 x tandems contracted equipment as warranted
North Battleford	Snow plowing after 4 - 8 inches snowfall Lanes plowed after 12 inches accumulation Done on priority street basis Priority 1 - cleared within 3 days Priority 2 - cleared within 7 days Priority 3 - cleared following Priority 1 & 2 streets Lanes cleared after 12 inches accumulation Windrows less than 12 inches responsibility of homeowner If a windrow covers more than 50% of sidewalk City will clear; if it covers less than 50% homeowner is responsible	
Saskatoon	5 cm of snowfall = priority plow Priority 1 (high traffic streets) - cleared within 12 hours Priority 2 (bus routes, busy streets) - cleared within 36 hours Priority 3 (main streets, schools, residential pathways) - cleared within 72 hours Residential grading after 15 cm accumulation Snow Route Parking bans in place during plowing	
Regina	5 cm of snowfall for P1 and 2, 10 cm for P3 and 4 Priority 1 - in 24 hours Priority 2 - in 36 hours Priority 3 - in 48 hours Priority 4,5,6 - in 60 hours Residential grading after 25 cm weather and time permitting Snow Route Parking bans in a pilot program	



# Snow Clearing Priority Routes Attachment iv







**Snow**

**Happens**

and when it does,  
here is what you can expect  
from the City of Moose Jaw...

Salt/Sand as required, based on condition

**SNOW**

**DAY 1 DAY 2 DAY 3 DAY 4 DAY 5 DAY 6 DAY 7**

Priority 1 Priority 2/  
Bus Priority 3 Priority 4

Snow  
Cleaning &  
Removal

City-owned  
Sidewalks

City-owned  
Walkways

Removal within 48 hours

Cleared as required, following sidewalks

**Snow Haul Days**

