

W6844-18-M001
APPENDIX A – STATEMENT OF WORK
SNOW CLEARING, SNOW REMOVAL AND DE-ICING
NORTH SECTION – MONTREAL GARRISON

PART 1 - GENERAL INSTRUCTIONS

1.1 Introduction

The Real Estate Operations Section of Montreal (REOSM) of the Department of National Defense (DND) requires the services of a Contractor for the clearing, removal, ice control and disposal of snow from parking lots and other traffic areas of the Montreal Garrison.

1.2 Context

REOSM's mandate is to make the entire road network of the garrison safe in winter.

1.3 Objective

To keep the traffic areas of the garrison, shown on map L-L135-9314-101 appended, free of ice and snow for the duration of the winter period.

1.4 Scope

The Contractor shall provide the services necessary to execute the work of snow removal, collection and disposal as well as de-icing at the above-mentioned DND site as illustrated on map L-L135-9314-101, in accordance with the contractual documents of Public Works and Government Services Canada (PWGSC).

1.4.1 Duration

The service period begins in the 2018-2019 winter season, that is, from November 1, 2018, to April 30, 2019 with the possibility of two (2) options of one (1) winter period each.

1.5 Tasks/needs

The Contractor shall provide all labour, tools, equipment, parts, products, machinery, transportation, fuel, supervision and all that is required to perform the following tasks, without limitation:

1.5.1 The clearing and the complete de-icing of all parking areas, roads, sidewalks and other infrastructure shown on map L135- L-9314-101.

1.5.2 Snow collection and disposal at a site authorized by National Defence, as shown on map L-L135-9314-101.

1.5.3 The performance of additional on-demand work.

1.6 Constraints

1.6.1 Laws and by-laws

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The Contractor must know and comply with federal, provincial and municipal laws and by-laws. The Contractor must hold all permits and registrations that are required by provincial laws at its expense. The Contractor must provide, along with the list of its employees, a copy of their driver's licences and proof of registration of all its vehicles after the contract is awarded.

1.6.2 Urban furniture and trees

The Contractor is responsible for any damage to DND property caused by the actions of his personnel (eg, breakage of fence, concrete curb, buildings, lawn, signs and other sign posts, trees, street lights, fire hydrant, etc.) and must, at his expense, perform all repairs to breakages caused during the term of office. At the end of the season, a list of repairs and adjustments will be issued by the DND representative to facilitate the work of the contractor.

1.6.3 Marker posts

The Contractor is responsible for providing and installing marker posts to delineate streets, sidewalks and street corners at the start of the season so as to clearly mark areas to be cleared. These posts will have to be removed by the Contractor at the end of the season.

1.6.4 Instruction and information

The Contractor must work with the DND representative and provide him with oral information and requested documents to ensure effective control and execution of the work.

1.6.5 Contractor's authorized representatives

The Contractor must designate two (2) representatives and ensure that one of them can be reached at any time by telephone twenty-four (24) hours a day, seven (7) days a week, without exception. These persons must have the necessary authority to make corrections that are required for the proper execution of the work.

1.6.6 Width and configuration of sidewalks

On the site of the Montreal Garrison, there are different sidewalk widths and configurations, ranging from two (2) to nine (9) feet wide.

The configuration of the sidewalk behind building L-109 is special. The free space between the building and the fence is only seven (7) feet wide. This particular condition is indicated in map L- L135-9314-101 in the appendix.

1.6.7 Spill Procedure for Hydrocarbons, Hazardous Materials or Other Contaminants

In the event of a spill, spill response and clean-up operations must be provided by the contractor as follows:

- a. Ensure the safety of people;
- b. Recover the spill immediately;

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- c. If the Contractor is unable to contain or recover the spill immediately or if the spill occurs in water, a sensitive environment, or a storm or sanitary look, the Contractor must contact 911 directly and ensure that the DND representative is notified;
- d. The Contractor must subsequently report the spill, regardless of quantity, to the DND representative;
- e. The Contractor is responsible for any spills of products deemed environmentally harmful and, where applicable, must immediately, at its expense, take corrective action as prescribed by the DND Representative.

1.7 Security requirements

- 1.7.1 The Contractor is not subject to DND industrial security as the work will take place outside the areas of operation. However, access to the various DND sites may be subject to restrictions without notice by the DND representative.

1.8 Travel requirements

- 1.8.1 Unless otherwise advised by the DND representative, the Contractor must be onsite, ready to perform the work within two (2) hours of receiving a service call.

1.9 Workplace

The work covered by this Statement of Work is performed at the site of the Montreal Garrison, northern sector, accessible by 6563 Hochelaga Street, Montreal.

1.10 Terminology

As required by the context, the words that appear below that are encountered throughout this document will have the following meaning:

High traffic period: Every day of the week, between 5:00 a.m. and 6:30 p.m.

Low traffic period: Every day of the week, between 6:30 p.m. and 5:00 a.m., Saturdays, Sundays and public holidays.

Snowfall: Period of time during which one or more snowfalls occur.

Snow accumulation: Snow depth measured in cm, freshly fallen on the areas included in the contract. **May be caused by one or more precipitations or winds that may not necessarily be accompanied by snowfall.**

End of a snowfall: Time from which time the snowfall stops completely for a period of at least eight (8) hours depending on weather forecasts.

Clearing: Action of removing snow by scraping the surfaces right to the ground and pushing the snow to the sides.

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Snow removal: All work by which the Contractor removes snow accumulated on the roadway using appropriate equipment. Snow removal may also include removing snow and disposing of it at a site authorized by the DND representative.

PART 2 – MACHINERY / DE-ICING PRODUCTS

2.1 Machinery

2.1.1 The Contractor may use the storage site designated by the DND representative on the garrison during the service period, to park a maximum of three (3) functional and operational vehicles. A list of vehicles stored onsite has to be provided at the beginning of the season. Electricity is provided (four 20-amp outlets).

2.1.2 Subject to sections 2.1.1, the operating capacity of the machinery (power, box dimensions, snowplough and buckets) and the number of vehicles required must be determined by the Contractor on the basis of the scope of work, specific constraints (widths of sidewalks and space), location of operations and climatic conditions so that the requirements concerning work quality and performance deadlines are met.

2.1.3 DND assumes no responsibility for breakdown of machinery resulting from the quality of surfaces to be maintained. The Contractor remains responsible for its equipment.

2.1.4 All vehicles must be equipped with a spill kit appropriate to the type of vehicle used.

2.2 De-icing products

Unless advised otherwise, de-icing products should be chosen based on weather conditions.

2.2.1 De-icing chemical - salt (sodium chloride)

2.2.2 Abrasive –1/8 inch (abrasive) clean stone

2.2.3 Application of de-icers based on outside temperatures:

Up to -10°C	apply salt only.
From -11°C to -15°C,	apply a mixture of 50% salt and 50% abrasive.
Of - 16°C to -24°C,	apply a mixture of 25% salt and 75% abrasive.
And – 25°C and below	apply abrasive only.

PART 3 - EXECUTION

3.1 Snow clearing and removal

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3.1.1 Overview

- a) The operator has to clear and plough the surfaces covered by this service, in the order of priority shown on map L-9314-101 L135- by colour code. The chronology of snow clearing and removal operations is mentioned for each priority. The Contractor must respect this chronology.
- b) **During a snowfall / an accumulation of more than five (5) cm, the Contractor must ensure that all identified areas on the map are free of snow and ice before the start of the high traffic period (5:00 a.m.) as indicated in point 3.1.2.**
- c) Note that snow accumulations caused by wind, whether during a snowfall or not, should be considered as if they were caused by a snowfall.
- d) **The Contractor is responsible for inspecting the condition of the surfaces daily to ensure that contract requirements are met at all times. The Contractor should not wait for the DND representative to call before putting its staff to work.**
- e) The Contractor has to plan its work so as to provide all required staff based on various circumstances and contract requirements.
- f) Snow clearing and removal following a snowfall must be done regardless the thickness of the accumulation.
- g) **During snow clearing / removal, the snow must be scraped right to the surface of the ground (e.g.: asphalt, concrete).**
- h) Unless otherwise specified by the DND representative, snow piles may be tolerated along the sides of the roads such that the accumulation does not exceed 120 cm. Snow in parking lots and storage areas must be collected after each accumulation and transported to the snow depot. Snow should never be piled so as to prevent access to fire hydrants, within three (3) meters of fences, to obstruct the field of view of the security patrol and/or to facilitate the illegal crossing of fences.

3.1.2 Snow removal during a snowfall

Priority # 1 (main roads, parking lots and sidewalks are worked on simultaneously)

Main roads (indicated in red on the map) and sidewalks (shown in navy blue on the map)

- a) The required operation is snow clearing and removal. The Contractor must push the snow and pile it along the roadside.
- b) The thickness of the accumulation should never exceed five (5) centimeters at any given time.
- c) The Contractor shall not cause snow accumulation at road intersections, entrances to parking lots or accumulations that could hinder movements of vehicles parked next to buildings and vehicles accessing receiving and shipping bays.

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Main parking lot (shown in green on the map)

During the high traffic period (5 a.m. to 6:30 p.m.)

- a) The required operation is snow clearing and removal. The Contractor must push the snow and pile it on the sides of the parking lots, in accordance with guidelines provided by the DND representative.
- b) The paths between vehicles must be cleared. Parked vehicles must be skirted around, except during the low traffic period from 6:30 p.m. to 5:00 a.m.
- c) The Contractor must pile the snow so that it does not interfere with the movement of vehicles and pedestrians, until it is disposed of.
- d) The Contractor shall not create snow accumulations in the front and rear of parked vehicles.
- e) The thickness of the accumulation should not exceed five (5) centimeters at any given time.

Priority # 2

Secondary roads and adjacent areas (light blue)

- a) The Contractor must completely clear and remove snow from these areas simultaneously with the clearing and removal of snow from the main roads.
- b) If vehicles prevent the execution of the work, the Contractor must complete the clearing and snow removal at the next low traffic period.

Priority # 3

Parking for Recreational Vehicles (RV) (Yellow)

- a) The Contractor must plough the roadway in the recreational vehicle storage area during each snowfall.
- b) The thickness of the accumulation must not exceed five (5) centimeters at any given time.
- c) The RV parking lot has secure access with a padlock. The Contractor must pick up the key at the Commissionaires' guard post indicated on the attached plan. This guard post is open 24 hours a day.

3.2 Pickup and disposal

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- a) Unless otherwise noted by the DND representative, the Contractor must transport the snow piled along cleared areas to the designated disposal site. The distance between the disposal site and to be cleared is less than one (1) kilometer. Snow transport must be completed within 36 hours of the end of the snowfall.
- b) The Contractor must push/blow the snow so as to be able to accumulate as much snow as possible at the authorized DND disposal site. The Contractor is responsible, at its expense, for the layout and management of the snow disposal site.
- c) Only dump trucks, the blower and the spreader have access to the snow disposal site, as per the directives of the DND representative.

3.3 De-icing of surfaces

3.3.1 Overview

- a) The Contractor is responsible for costs related to the supply and application of de-icing chemicals and abrasives. These costs are included in the flat rate submitted by the Contractor for the entire period covered by the service.
- b) The Contractor must, at all times, based on the needs and the use of the sites, respect the material spreading chart in Appendix to this Statement of Work, in order to determine the right quantities of de-icing products to be spread, depending on the winter conditions, in order to meet the service requirements.
- c) The Contractor shall provide de-icing services in all areas that are covered by the snow clearing and removal service.
- d) **The Contractor is responsible for inspecting the areas to de-iced daily in order to ensure that all surfaces (roads, parking lots, sidewalks and adjacent areas) stipulated in the contract are free of hardened snow and ice.**
- e) The Contractor must apply appropriate de-icing products (*Section 2.2 – De-icing Products*) to surfaces that are covered by sleet and ice, and when these surfaces are frozen as a result of cold temperatures, whether there was rain or not.
- f) Where weather forecasts predict sleet or freezing rain, the Contractor must promptly apply preventive de-icing products (*Section 2.2 – De-icing products*) to prevent the formation of ice as required.
- g) Provide written recommendations from the manufacturers of de-icing products when requested by the DND representative.
- h) Failing the ability to melt ice or hardened snow or to prevent it from accumulating in cold temperatures, the Contractor must use abrasive products to make the surfaces slip-resistant in accordance with the operating temperatures. (*Section 2.2.2 – De-icing products*)

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- i) A shelter that is 35 feet wide by 17 feet deep by 13 feet high is available for the Contractor to store a certain volume of de-icing products. The Contractor is responsible for maintaining access to this shelter. The Contractor must also ensure the safety and protection of the premises. DND is not responsible for the contents of the shelter.
- j) **At the end of the season, the Contractor must clean all sidewalks included in this mandate of accumulated abrasive from the winter period.**

3.3.2 Spreading during a snowfall

Main roads (red)

During the high traffic period

- a) The Contractor must ensure at all times that all roads are free of ice and hard snow. The normal stopping distance at stops must be completely free of ice and snow.

During the low traffic period

- a) The Contractor must perform a preventive spreading operation on all areas covered by this contract before the start of the high traffic period.

Main parking lots (green)

During the high traffic period:

- a) The Contractor must make sure all paths between vehicles and entrances to parking lots are free of ice and hard snow.
- b) If necessary, the Contractor may first begin spreading during the low traffic period.

Sidewalks (navy blue)

- a) The Contractor must ensure at all times that sidewalks are free of ice and hard snow.
- b) The Contractor shall do preventive spreading on all the sidewalks before the start of the high traffic period.

Secondary roads and adjacent areas (light blue)

During the high traffic period

- a) The Contractor must ensure that areas are free of ice and hard snow.
- b) If necessary, the Contractor may first began spreading during the low traffic period.

3.3.3 Spreading after the end of a snowfall

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- a) For all areas, the Contractor must ensure that the application of de-icing products continues as needed, in accordance with the requirements of section 3.3 - *De-icing of surfaces* until the end of the snow clearing operation.

PART 4 - ADDITIONAL ON-DEMAND WORK

4.1 Overview

The Contractor must provide labour, tools, equipment, parts, products, machinery, supervision and all that is required for the full implementation of certain additional work requested by the DND representative but that is excluded from the flat rate tendered for this contract.

4.2 Scope of additional work

For your information, the additional work that is most likely to be requested is as follows:

- a) Construction of channels and unblocking of sumps to eliminate water accumulation;
- b) Performing some manual snow removal work.

NOTE: Rates for additional work will be negotiated at the kick-off meeting of this request for service between the contractor and the DND representative.

APPENDIX of the Statement of Work
Material Spreading Chart - Winter

Condition	Street type	Timing of application	Temperature (in °C)	Application rate (kg/km)	Materials
Snow and sleet	All streets, parking lots and sidewalks	Start of precipitation, during light snow (light = less than 5 cm) and at all times after precipitation	5°C to -10°C	120 to 160	Salt
			-11°C to -15°C	160 to 220	50% salt 50% abrasive stone
			-16°C to -24°C	220 to 300	25% salt 75% abrasive stone
		During precipitation	1°C to -10°C	120 to 160	50% salt 50% abrasive stones
			-11°C to -24°C	160 to 220	25% salt 75% abrasive stone
Freezing rain		At the start and during precipitation and in anticipation of possible precipitation	5°C to -5°C	between 250 and 500 (depending on intensity)	25% salt 75% abrasive stone
Temperature		At all times (and as needed afterwards)	5°C to -10°C	120 to 160	Salt
			-11°C to -15°C	160 to 220	50% salt 50% abrasive stone
			-16°C to -24°C	220 to 300	25% salt 75% abrasive stones
			-25°C and below	300 or more	Abrasive stone

This table does not replace judgment or experience. It must be interpreted based on the specific winter maintenance conditions.