
APPENDIX B

ADMINISTRATIVE SERVICES AND PROPERTY MANAGEMENT BRANCH NATIONAL RESEARCH COUNCIL CANADA SAGUENAY SITE

501 Boulevard de l'Université Est, Chicoutimi, Quebec G7H 8C3

Project Specifications

GROUNDS MAINTENANCE (SNOW REMOVAL, GRASS CUTTING, LANDSCAPING, AND FLOWER BEDS)

OCTOBER 2018

1. GENERAL REQUIREMENTS

1.1. Documents

Enclosed documents include:

- Project specifications
- A site map
- A list of surfaces and doorways to be plowed or cleared

1.2. Work Description

These specifications include but are not limited to labour, material, tools, transportation, supervision, and equipment for the following operations:

- Snow clearing and application of sand or melters
- Grass cutting
- Weeding, mulching, and trimming of flower bed shrubs
- Tree cutting and pruning

1.3. Site Visit

Before preparing a bid, the contractor must visit the site to assess work conditions, the state of and any issues with the grounds, and other pros or cons that may affect work costs.

The site visit helps obtain information to prepare the bid, as ignorance of local conditions is never a valid reason to claim extra costs.

1.4. Legislation and Permits

The contractor must obey all federal, provincial, or municipal laws, orders in council, ordinances, and by-laws for any work it performs. It must also provide all required permits and certificates at its own expense.

1.5. Contractor's Authorized Representative

The contractor must appoint a representative who can be reached by phone 24/7 without fail.

If the contractor's work fails to meet project specifications or requirements and the Department official or his or her delegate cannot reach the contractor representative, the Department official may, without prior notice, take steps to remedy said shortcoming at the contractor's expense.

1.6. Daily and Weekly Patrols

In winter, the site must be patrolled at least once a day to keep it safe for pedestrians and vehicles.

In summer, a supervisor must check on the site at least once a week and, if problems are found, determine how to address them.

On each visit, the person doing the patrol must sign in at reception to show that the contractor was on site.

1.7. Storage Space

The contractor will not be given storage for soil, sand, melters, and other compounds, materials, supplies, or equipment. However, if needed, the Department representative will assign an outdoor space for a spare bin provided it is used only at ATC.

1.8. Protecting Urban Fixtures and Curbs

The contractor is liable for property damage caused while executing the contract and must instruct its staff to ensure curbs, sidewalks, and urban fixtures such as signs, street lights, hydrants, etc. are not damaged during operations.

1.9. Failure to Perform

If the contractor fails to perform its work or to meet project specifications or contract requirements, the Department representative reserves the right to:

- Withhold payment until corrective action is taken
- Lease or engage the tools and labour needed to fix the problem while deducting all related costs from the contract price

2. **SNOW REMOVAL**

2.1. Basic Package and Additional Funding for Snow Removal

The flat fee for the contract's snow removal portion will be paid in full for an annual snowfall of up to 300 cm (centimetres) as measured at CFB Bagotville weather station.

Using data compiled by Environment Canada at CFB Bagotville weather station, the 300 cm limit was calculated based on average annual snowfall between 1981 and 2010. (The exact average is 321.7 cm a year.)

A further 0.3% of the annual flat fee will be paid for each centimetre of snowfall over the 300 cm limit observed at CFB Bagotville weather station.

For example: For 331 cm in annual precipitation, total yearly payment for snow removal would be as follows:

$$\text{Total Payment} = \text{Lump Sum} + (\text{Lump Sum} * [331 - 300] / 300)$$

Example:

$$\$25,583.33 = \$25,000.00 + (\$25,000.00 * 0.103333 = \underline{\$2,583.33})$$

2.2. Protecting Urban Fixtures and Curbs

The contractor is liable for property damage caused while executing the contract and must instruct its staff to ensure curbs, sidewalks, and urban fixtures such as signs, street lights, hydrants, etc. are not damaged during snow-clearing operations.

By October 15 of each year, the contractor must provide and install visual markers to show where urban fixtures or obstacles are hidden by snow. Small wire and plastic flags may be used for this and must be replaced when broken or missing.

- 1 Markers must be placed in the ground or the grass as close to the curb as possible.
- 2 Markers must be placed wherever the curb changes direction. If a curb is curved, a marker is placed every eight (8) metres.
- 3 In parking lots, two markers must be placed at each end of the median.
- 4 Markers must be placed around urban fixture elements.
- 5 Poles must be installed wherever the contractor feels they are needed to keep fixtures from breaking.
- 6 Poles must be removed by May 1.

At the end of each season, conduct a site tour with the Department representative to check the condition of curbs, sidewalks, and urban fixtures, and if repairs are needed, complete them within three (3) months.

2.3. Sequence of Snow Clearing Operations

Snow must be cleared from all areas identified below and shown on the snow removal map, and the contractor must follow guidelines to meet the Department representative's snow removal priorities.

Priority segments to complete by 7 a.m.:

- 1 Key access route including section of sidewalk up to Door 1
- 2 Visitor parking
- 3 Service route

Further segments to complete by 8:30 a.m.:

- 4 All other listed surfaces and doors

2.4. Qualitative Standards

- 1 All asphalt surfaces must be de-iced.
- 2 Streets, roadways, gutters, and catch basins must be free of snow and ice at all times, and plow ridges may not be left on the surfaces listed in these specifications.

- 3 The contract also includes plow ridges from City snow removal work near ATC's two main entrances.
- 4 The contractor must use all necessary equipment to clear key traffic routes and ensure the free flow of vehicles.
- 5 Snow piled at the edges of traffic routes must be blown onto the ground or taken to a disposal site that meets environmental standards. No person may push snow onto the lawn or drive on the lawn with machinery. Snow may be collected in the paved parking area furthest from the building, and on a strip two (2) metres wide along the right side of the service route, for a period of no more than eight (8) hours after snow clearing has begun.
- 6 To avoid blocking access, snow must not be blown or collected near fire safety equipment or sidewalk entrances.
- 7 Snow must not be blown or piled up around trees, shrubs, or other decorative plants.
- 8 Snow may not be piled up on land adjacent to ATC. This includes public roadways, municipal lands, university campus grounds, and the property of other landowners.

2.5. Required Equipment

- 1 The contractor must have all the equipment it needs to execute the contract to specifications and complete its work within specified timeframes.
- 2 The contractor must have liability insurance and a provincial permit for all equipment it owns or leases.
- 3 The contractor's bid must include a list of equipment it owns or a copy of a lease agreement stating that the equipment listed in the contract is available to the contractor when needed.
- 4 Minimum required equipment:
 - a) Tractor-mounted snowblower
 - b) Sidewalk snowblower (minimum 30" wide, 10 hp)
 - c) Front-end loader (Payloader)

2.6. Snow Removal Operations

Snow removal involves the clearing, transport, and blowing of snow at designated locations under the terms of these specifications.

2.6.1 Operations During a Snowfall and/or Snowstorm
a) Ensure the free flow of vehicles and pedestrians by clearing snow from key access routes, walkways, parking and communal areas, and other sectors shown in the drawing.
b) Start clearing snow when it reaches a depth of five (5) centimetres.
c) Finish clearing or blowing away all accumulated snow once a snowfall or snowstorm has ended.

2.6.2 Day-to-Day Operations

- a) Throughout the week, including Saturday, Sunday, and holidays, the contractor must use all required workers and tools to clear specified areas once accumulation from one or more snowfalls reaches a depth of five (5) centimetres, or no more than one hour after receiving a call from the Department representative or his or her authorized agent.
- b) The contractor must promptly clear all accumulated snow whenever there is a snowfall or snowstorm.
- c) For snow-clearing operations, the contractor must follow instructions and verbal or written orders by the Department representative or his or her authorized agent regarding the priority (shown in the drawing) and location of areas to be cleared and the times when the work must be done.
- d) When drifting snow reaches a depth of five (5) centimetres, even when there is no precipitation, the contractor must clear all service routes, sidewalks, parking areas, and other surfaces listed in the specifications so vehicles and pedestrians can move freely. The contractor will receive no extra pay for clearing snow build-up caused by wind.

2.7. Work Procedures

Snow Clearing Operations — Snow must be cleared as follows:

2.7.1 During a Snowfall

- a) Clear streets, sidewalks, and parking lots so vehicles and pedestrians can move freely at all times.
- b) The contractor must make prompt use of all equipment needed to perform its work under the terms of these specifications.
- c) This equipment must be distributed and used over the widest possible area during a snowfall. However, the contractor must use whatever equipment it needs to promptly and adequately clear major roadways for traffic while not neglecting other areas specified in the contract.

2.7.2 Immediately After a Snowfall

- a) Finish clearing snow from streets, intersections, entrances, common areas, and parking lot medians so traffic can flow freely.
- b) Finish cleaning parking lots to ensure maximum space. This must be done between 4:30 and 7 p.m. so that staff parking is not affected.
- c) Provide and spread sand all over the key access route, service route, and staff parking areas after snow is cleared and before 7 a.m.
- d) The contractor may blow snow onto vacant lots if it does not create large banks.
- e) Snow must be no higher than 90 cm along service routes and especially at intersections and in parking lots.

- f) Access routes, parking lots, vehicle and pedestrian traffic areas, gutters, and catch basins must be free of snow and ice at all times.
- g) Blown or piled snow must not block access to fire hydrants, sidewalks, or building entrances.

2.7.3 Clearing Sidewalks

- a) The contractor must clear all snow from sidewalks A to F (shown in the drawing) when at least 5 cm has accumulated from one or more successive snowfalls or from blowing and drifting.
- b) Ensure all sidewalks are cleared by 9 a.m.
- c) Sidewalks will be cleared with maximum 12 hp snowblowers or with shovels, at the contractor's discretion. Tractors may not be used.
- d) The ATC security guard will shovel the area outside Door 1 until 9 a.m., keeping it clear of snow for a two-metre radius. After 9 a.m., the contractor must perform this task for the rest of the day.
- e) The sidewalk in front of Door 1, which is part of the key access route on the map, must be cleared by 7 a.m. A loader may be used for this section of sidewalk only.
- f) Clear snow to the concrete or asphalt surface and across the full width of walkways.

2.7.4 Clearing Around Hydrants and the PIV Valve

- a) Clear snow for one (1) metre around hydrants and PIVs and provide a one (1) metre-wide path from hydrants to the nearest cleared area. Leave about 5 cm of snow on the grass (give or take 1 cm).
- b) In spring, the contractor must replace frost-damaged grass at its own expense.

2.7.5 Snow Removal

- a) When snow is cleared and put into piles in the parking lots, the contractor must mechanically load it into dump trucks and haul it to the snow dump or blow it onto ATC grounds.
- b) Snow may be piled in banks along service routes if it is blown far enough not to exceed the 90 cm height limit.
- c) Snow must at no time be blown or piled in a way that prevents access to fire hydrants or blocks the field of view.
- d) The contractor is liable for any and all damage caused by snow clearing under the contract and must repair lawns, curbs, or asphalt after the snow melts in April.

2.7.6 Applying Abrasives

- a) The contractor may use sand as an abrasive at any time during the contract period.
- b) The contractor will spread sand to improve traction on sidewalks, key traffic routes, and parking lots.
- c) Spreading operations will be completed before 8 a.m. and immediately after a snowstorm or several precipitation events.
- d) At ATC, sand is the preferred way to improve traction on sidewalks and traffic routes once they are clear of snow. Traffic, sunlight, and the sand's dark colour should be enough to melt ice in high-movement areas. Since traffic at CTA is fairly low, the contractor must use large amounts of sand and watch that ice does not build up on surfaces.
- e) Sand on major roadways must be applied in a visible and continuous strip.

2.7.7 Melting Compounds

- a) Bare ice may form in low-traffic areas after snow is cleared, even if sand is used.
- b) The contractor may use ice melt compounds at any time during the contract period.
- c) Snow melt compounds may only be used on asphalt. No compound with conventional salt or calcium may be used on concrete.
- d) The contractor must use melters to keep key traffic and parking areas free of bare ice.
- e) Ice melt compounds will be used on traffic routes and other areas as needed and upon request, at no extra charge.
- f) This work must start within two (2) hours after a request.

2.7.8 Melting Compounds for Walkways

- a) The contractor will supply, at its own expense, two lidded plastic bins (at least 40-litre capacity) containing a special melter for concrete walkways.
- b) One of these bins will be placed near Door 1 while the other will be at the foot of the steps near Door 4 to serve galleries 4 and 5.
- c) Bins must be designed to protect melt compounds from weather and keep them from freezing. Frozen contents must be replaced immediately.
- d) Each bin must contain a small shovel for spreading the melt compounds.
- e) The contractor must check bin levels on each visit and, when needed, fill them at its own expense.

- f) Sidewalk melters should not harm concrete and be safe for workers and the environment. A Material Safety Data Sheet (MSDS) must be provided before the start of the contract and approved by the Department representative. Melt compounds may not be changed during the contract period.

2.8. Operation Timeframes

2.8.1 The following timeframes must be met for each snow clearing phase:

- a) At the first sign of flurries or the start of a snowfall, a person should visit and patrol the site to check its conditions. On each such visits, this person and the snow removal staff must sign in at the security desk. The log sheet keeps a record of arrival and departure times and the contractor's presence on site.
- b) The key access route, the service route, and all staff parking areas must be cleared within three (3) hours after the storm.
- c) All other routes and areas must be cleared within six (6) hours after the storm.
- d) Snow banks higher than 90 cm must be cleared with a snowblower within seventy-two (72) hours after the storm.
- e) Spring cleaning:
- i. Using street sweepers and washers, the contractor must clean leftover sand or aggregate from all asphalt and concrete surfaces as soon as the snow melts and no later than April 21.
 - ii. Once sand is cleared from walkways and parking areas, the contractor must clean the parking lot and access route catch basins to prevent storm drains from backing up.

3. **GRASS CUTTING**

3.1. Qualitative Standards

- a) At all sites where grass is present, grass must be cut all the way up to the curb as shown in the drawing.
- b) Streets, parking lots, pavement, ditches, lawns, and catch basins must be kept clean at all times.
- c) Grass-cutting tools must cut cleanly and be able to scoop up clippings, where required.
- d) The contractor must ensure grass cuttings are never sprayed toward the building, parked cars, or urban fixtures.

3.2. Work Plan

The contractor or its representatives must visit the site at least once a week to check on conditions and sign in at reception to show they were present.

3.3. Work Procedures

Outdoor maintenance at ATC mostly involves repairing the lawn, adding new soil, re-seeding these areas and all areas where grass has not taken hold, cutting grass to a length below 75 mm, and clearing debris from the lawn and pavement to keep the site clean and attractive.

3.3.1 Work Flow and Operations
a) In spring: The contractor must rake and repair damage to the lawn and roll up sod while it is wet and after it is fully thawed. Where grass has not grown, add new soil and reseed until the lawn is lush and weed-free. The contractor's bid must carefully review and assess the scope of this work.
b) At all times: The contractor must cut grass to a height of 38 mm to 75 mm and the mower must have mulching blades. When clippings start to pile up, the contractor must collect and dispose of them.
c) At all times: The contractor must cut grass along curbs, fences, buildings, walkways, and flower beds; around trees, hydrants, PIV valves, street lights, and urban fixtures; and up to the street and to the property edge.
d) Whenever grass is cut: The contractor must keep the lawn, flower beds, walkways, and the entire site free of debris, paper, and waste.
e) At all times: Using a street sweeper or any other chosen means, the contractor must keep parking lots and service routes free of debris, stones, and waste.
f) At all times: The contractor must repair damage to the lawn, add new soil to damaged areas, seed or sod them, and water the lawn until it takes permanent root.
g) At all times: The contractor must conduct proper weed control to keep sidewalks, curbs, and roadsides free of grass and weeds.
h) The contractor or its representatives must patrol the site at least once a week to check on conditions and, if problems are found, decide how to address them. The person doing the patrol must sign in at the reception desk to show that the contractor was on site.

3.4. Not Under Contract

The following are not part of the contract:

- a) Spraying and pest control (vermin, rodents, nuisance animals, etc.)
- b) Spraying and weed control
- c) Fertilizer application
- d) Soil dethatching and aeration

4. LANDSCAPING AND FLOWER BEDS

4.1. Quality Standards

- a) All flower beds must be hoed and kept free of weeds and invasive plants. An effective method is to cover them with a layer of cedar mulch. Where required, trim flower-bed edges to maintain their size.
- b) All trees, shrubs, and perennials must be trimmed to limit their growth, improve their appearance, and ensure optimal health.
- c) In winter, trees, shrubs, and perennials must be protected from snow and ice based on their fragility, maturity, exposure to weather, and other threats.

4.2. Work Procedures

Landscaping at ATC generally involves maintaining and caring for trees, shrubs, and perennials, adding new soil and cedar mulch, and hoeing and weeding to keep the site clean and attractive.

4.2.2 Work Flow and Operations
a) In spring: Remove protective covers from trees, shrubs, and perennials.
b) In spring: The contractor must assess the condition of trees, shrubs, and perennials and give the Department representative an intervention plan that includes items not covered by the contract (treatment and replacement of trees, shrubs, and perennials, etc.).
c) In spring: The contractor will pick up leaves, debris, and waste from in and around flower beds, trees, and shrubs.
d) In spring: Add fertilizer to the Centennial Tree.
e) Twice each summer: Major hoeing and weeding projects.
f) Every two weeks: Check flower beds, and hoe and weed where required.
g) Whenever weeding is done: The contractor must keep the lawn, walkways, and the entire site (including flower beds) free of debris, paper, and waste.
h) At all times: The contractor must care for and maintain trees and shrubs (remove dead branches, regrowths, branches that touch the building or parked vehicles, etc.).
i) Constantly monitor the health of the Centennial Tree.
j) During droughts: Using a tanker truck or other suitable means, the contractor must give flower beds, trees, and shrubs enough water to survive the drought.
k) In fall: The contractor must put protective covers on perennial plants, trees, and shrubs that need them.

4.3. Not Under Contract

The following are not part of the contract:

- Replacement of dead or damaged perennial plants, trees, and shrubs.