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## **1 CENTRAL CARIBOO**

### **1.01 Definitions**

In these Local Area Specifications, capitalized terms will have the corresponding meanings as set out in Article 1 of this Agreement and Section 1 of this Schedule 1 (“Specifications”), and as set forth below:

**“Invasive Plants”** means any invasive alien plant species that has the potential to pose undesirable or detrimental impacts on humans, animals or ecosystems.

**“Salt Containment Infrastructure”** means a storage facility, including all of its components that is used for the storage and loading/unloading of salt for winter maintenance operations including, but not limited to the salt shed, fabric/steel roofing, pit floor, evapotranspiration liner, containment pad, and skirt.

## 1.02 By-Pass Pond System Maintenance

### 1.02.1 Outcome

To provide a fully functional by-pass pond system.

### 1.01.2 Routine Maintenance Services

- PM1.01.1-1** Repair or replace immediately, damaged or deteriorated by-pass pond system components.
- PM1.01.2-2** Remove sediment immediately from the by-pass pond to ensure it functions as designed.
- PM1.01.2-3** Clean immediately by-pass pond system components to ensure they function as designed.
- PM1.01.2-4** Maintain the water level in the by-pass pond to prevent overflowing, ensuring that it functions as designed.
- PM1.01.2-5** Drain the by-pass pond following a rainfall event of 25 millimetres or more rain within 24 hours.
- PM1.01.2-6** Place straw bales annually downstream of the overflow outlets, prior to the spring freshet.
- PM1.01.2-7** Inspect and document annually the condition of the manual outlet pipe and overflow pipe.

#### Notes:

- 1) The by-pass pond is located in the Right-of-Way, approximately 100 metres east of the junction of Highway 20 and MacKenzie Avenue South in Williams Lake, as identified in the by-pass pond location plan in Appendix A

### 1.01.3 Materials and/or Procedures

Additional materials and/or procedures requirements are as follows:

- a) Drainage of the by-pass pond is not permitted during rain events;
- b) Drainage of the by-pass pond is not permitted when the turbidity levels exceed the following conditions:

Condition	Maximum Nephelometric Turbidity Units (NTU's)
a) Less than 25 millimetres of rain in the 24 hours prior to the measurements being recorded	25
b) Greater than 25 millimetres of rain in the 24 hours prior to the	100

measurements being recorded	
c) Greater than 10 millimetres of rainfall per hour	100

- c) Drain the by-pass pond by opening the manual outlet pipe valve and closing it when completed;
- a) Measure the water turbidity after the manual outlet pipe has been fully opened for 3 minutes, complete a minimum of 3 tests and calculate the average measurement;
- b) Ensure the manual outlet pipe valve is maintained one-quarter opened when the by-pass pond is frozen and water is not free flowing;
- c) Remove and dispose of straw bales following the spring freshet;
- d) Use components of the same type and quality as existing or as approved by the Province; and
- e) Document the date and time of the opening / closing of the outlet pipe valve, turbidity measurements and completion of the annual inspection, as directed by the Province.

#### **1.01.4 Routine Maintenance Services Cap**

\$5,000 – for each occurrence, the cost to repair or replace by-pass pond components.

\$5,000 – for each occurrence, the cost to clean the by-pass pond.

### **1.03 Highway Crossing Infrastructure**

#### **1.03.1 Outcome**

To provide safe passage of pedestrians and animals underneath or beside a Highway.

#### **1.03.2 Routine Maintenance Services**

- PM1.03.2-1** Respond immediately to restrict all access to Highway Crossing Infrastructure, as directed by the Province.
- PM1.03.2-2** Repair or replace immediately, as directed by the Province, any damaged or deteriorated Highway Crossing Infrastructure that has been structurally compromised, as determined by the Province.
- PM1.03.2-3** Repair or replace within 3 months, any damaged or deteriorated Highway Crossing Infrastructure that has not been structurally compromised, as determined by the Province.
- PM1.03.2-4** Remove Debris immediately from the surfaces of floors, pedestrian paths or stairways.
- PM1.03.2-5** Remove Accumulations, surface contaminants and chemicals by June 30 of each calendar year from all surfaces.
- PM1.03.2-6** Remove Debris within 1 month that impedes the passage of animals in animal accessed Highway Crossing Infrastructure.

#### **1.03.3 Quantified Maintenance Services**

- PM1.03.3-1** Repair within 24 hours damaged or deteriorated surfaces on underpass floors, pedestrian paths or stairways.
- PM1.03.3-2** Repair within 6 months other damaged or deteriorated surfaces.

##### **Specific Requirements:**

- a) Maintain Highway Crossing Infrastructure within Rest Areas in accordance with the response of the adjacent Highway Classification.

#### **1.03.4 Materials and/or Procedures**

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional material and/or procedures requirements are as follows:

- a) Use materials in accordance with the same type and quality on the existing Highway Crossing Structure.

**1.03.5 Routine Maintenance Services Cap**

\$50,000 – for each occurrence, the cost to repair or replace Highway Crossing Infrastructure.

**1.03.6 Warranty**

Refer to Section 3 of this Schedule 1 (“Specifications”).

## 1.04 Invasive Plants Management

### 1.04.1 Outcome

To minimize the introduction and spread of Invasive Plants on Highways and Gravel Pits.

### 1.04.2 Routine Maintenance Services

**PM1.04.2-1** Meet annually, with the agency conducting Invasive Plant management for the Province, during development of the Quantified Maintenance Services to coordinate planned activities.

**PM1.04.2-2** Inspect all Gravel Pits and material sources annually to ensure they are free of Invasive Plants.

**PM1.04.2-3** Report Invasive Plant conditions to the agency conducting Invasive Plant management for the Province, as follows:

Performance Criteria	Response
a) Prior to the disturbance of knotweed species that restricts Sight Distance or creates a condition that is unsafe or has the potential to become unsafe	immediately
b) Any Invasive Plant infestations on Highways and Gravel Pits	2 d

**Notes:**

- 1) Only the exposed, active areas of the Gravel Pits are to be considered.

### 1.04.3 Quantified Maintenance Services

**PM1.04.3-1** Seed specific areas of exposed soils exceeding 1 metre up the Shoulder sideslope and the backslope due to ditch maintenance.

**Notes:**

- 1) The Standard Specifications for Highway Construction describes the revegetation requirements including, but not limited to blending, seed analysis and application timing.

### 1.04.4 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Comply with the Best Practices for Managing Invasive Plants on Roadsides;

- b) Incorporate Invasive Plant management when planning and performing Quantified Maintenance Services;
- c) Seed side-cast ditch materials;
- d) Seek approval from the Province if disturbance of knotweed species is required;
- e) The Contractor may submit a plan for approval by the Province for the use of herbicides, as a control measure for knotweed or other Invasive Plants;
- f) Herbicides are to be applied by a certified pesticide applicator;
- g) Do not use gravel materials contaminated with Invasive Plants, unless a rectification process is submitted and approved by the Province; and
- h) Report Invasive Plants to the agency conducting Invasive Plant management for the Province online or using the Province's smartphone application or the provincial toll-free service.

#### **1.04.5 Warranty**

Refer to Section 3 of this Schedule 1 ("Specifications").



## **1.05 Retention Pond Drainage System Maintenance – Highway 97 Williams Lake**

### **1.05.1 Outcome**

To provide a fully functional retention pond drainage system that protects Highway Users and Highway infrastructure.

### **1.05.2 Routine Maintenance Services**

- PM1.05.2-1** Flush Drainage Appliances and drainage channels immediately if water flow is restricted, to ensure the retention pond functions as designed.
- PM1.05.2-2** Temporarily repair to restore functionality to damaged or deteriorated fences immediately that are unsafe or have the potential to become unsafe.
- PM1.05.2-3** Permanently repair fences within 7 days.
- PM1.05.2-4** Repair or replace within 1 month, damaged or deteriorated retention pond drainage system components.
- PM1.05.2-5** Cut vegetation that exceeds 20 centimetres in height at Drainage Appliance inlets and outlets to ensure they function as designed.
- PM1.05.2-6** Remove sediment from the retention pond if the surface elevation of the retention pond is within 50 centimetres of the adjacent ground elevation.
- PM1.05.2-7** Inspect and document the condition of the retention pond drainage system annually.

#### **Specific Requirements:**

- a) Maintain access to the retention pond and Drainage Appliances for inspections.

#### **Notes:**

- 1) The retention ponds are located in the Right-of-Way of Highway 97 at Williams Lake adjacent Toop Road and Carson Drive; and
- 2) The response for permanent repairs begins when the Contractor detected or was made aware of the requirement for the temporary repair.

### **1.05.3 Materials and/or Procedures**

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Permanent repairs are to be completed with the same type of fence material.

## **1.06 Small Airport Winter Maintenance – Anahim Lake**

### **1.06.1 Outcome**

To provide winter maintenance on runways, taxiways and aprons to facilitate the safe operations of small airports.

### **1.06.2 Routine Maintenance Services**

- PM1.06.2-1** Respond to medivac flights or other emergency flights immediately, as directed by the airport operator, emergency responders, police authorities, or the Province.
- PM1.06.2-2** Remove edge markers by April 30<sup>th</sup> of each calendar year.
- PM1.06.2-3** Install edge markers by September 30<sup>th</sup> of each calendar year.
- PM1.06.2-4** Remove Winter Accumulations and Compact in advance of the arrival and departure of commercial flights from runways, taxiways, aprons and other paved areas to bare surface.
- PM1.06.2-5** Remove sand from all surfaces immediately in advance of the arrival and departure of commercial flights, that would affect the safe operation of aircraft while landing, departing or taxiing.
- PM1.06.2-6** Restore traction in advance of the arrival and departure of commercial flights on runways, taxiways and aprons to ensure sufficient friction and low rolling resistance for aircrafts.
- PM1.06.2-7** Remove Winter Accumulations to ensure all lights and visual navigational aids, including but not limited to approach lights, Runway Intersection Lights (RILS) and Visual Approach Slope Indicator Systems (VASIS) are clear, visible, and legible and function as designed.
- PM1.06.2-8** After the Weather Event, remove Winter Accumulations from runways, taxiways, aprons, pre-threshold and other paved areas in accordance with Transport Canada regulations.
- PM1.06.2-9** Remove snow drifts, snow piles or snow windrows to a location outside the airport boundary, as directed by the airport operator and the Province.

#### **Notes:**

- 1) The Anahim Lake airport is a year-round airport with a 1200 metre by 23 metre asphalt surfaced runway that is operated by the Cariboo Regional District;
- 2) The location of the edge markers is determined by the Cariboo Regional District;
- 3) A runway sweeper is available for use by the Contractor if they wish to pursue an agreement with the Cariboo Regional District; and

- 4) Refer to Schedule 18 ("Insurance Requirements") for insurance coverage requirements for the small airport winter maintenance.

### **1.06.3 Materials and/or Procedures**

Refer to Section 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Comply with the Anahim Lake Airport Operations Manual, Anahim Lake Winter Maintenance Plan, Transport Canada Aeronautical Information Manual, Transport Canada Aerodrome Standards and Recommended Practices – Land Aerodromes 5<sup>th</sup> Edition, Transport Canada Airport Winter Maintenance and Planning Advisory Circular AC 302-013 and other Transport Canada Advisory Circulars;
- b) Be informed of current commercial flight schedules for airlines that service the airport;
- c) Use the current commercial airline schedules and actual flight arrival / departure times to determine when to remove Winter Accumulations and apply Anti-icing;
- d) Remove Winter Accumulations from the 60 metre pre-threshold area on each end of the runway and 8 metres beyond each side of the runway, where the terrain permits;
- e) Deposit Winter Accumulations 8 metres beyond the edge of the runway, pre-threshold areas, taxiway and apron, where the terrain permits in accordance with Transport Canada requirements;
- f) Apply chemicals at a minimum width of 20 metres along the runway to restore traction where required and as directed by the airport operator for the taxiway and apron;
- g) Vehicles accessing the runways are to be equipped with required warning lights, able to communicate with the airport operator and able to monitor the Aerodrome Traffic Frequency (ATF) at all times; and
- h) Repair airport infrastructure, aircraft and property that is damaged by the Contractor.

### **1.06.4 Routine Maintenance Service Cap**

\$0 – for each occurrence, the cost to respond to medivac flights or other emergency flights.

**1.07 Snow Avalanche Patrol – Bella Coola Hill****1.07.1 Outcome**

To provide an enhanced snow avalanche response exceeding the performance measures in General Specification 3.04 of this Schedule 1 (“Specifications”) to facilitate the safe and orderly flow of traffic.

**1.07.2 Routine Maintenance Services**

**PM1.07.2-1** Conduct avalanche patrols and provide avalanche occurrence observations to the Province every 4 hours, when the avalanche hazard forecast level is moderate.

**PM1.07.2-2** Provide one personnel continuously 24 hours per day, to patrol and provide avalanche occurrence observations to the Province, when the avalanche hazard forecast level is higher than moderate.

**Specific Requirements:**

- a) Patrol vehicles are to be appropriately equipped to respond to conditions that are unsafe, or have the potential to become unsafe.

**Notes:**

- 1) The Bella Coola Hill is located between the avalanche gates on each side of the Heckman Pass on Highway 20, extending for approximately 18.7 kilometres.

**1.07.3 Materials and/or Procedures**

- a) Comply with the Snow Avalanche Safety Measures for Highways Manual.

## 1.08 Salt Containment Infrastructure Maintenance

### 1.08.1 Outcome

To provide for the safe handling and storage of salt and Winter Abrasives on provincial land and monitor, maintain, repair and replace provincially owned Salt Containment Infrastructure.

### 1.08.2 Routine Maintenance Services

- PM1.08.2-1** Off-load salt onto an evapotranspiration liner or containment pad, if available and/or store immediately within the salt shed.
- PM1.08.2-2** Retrieve and return to the salt shed immediately, any salt spillage over the top of skirt that lines the inside of the salt shed.
- PM1.08.2-3** Remove immediately, any salt or salt contaminated material on the pit floor to a depth of 40 centimetres for use with Winter Abrasives when processing.
- PM1.08.2-4** Notify the Province immediately of any damage to the containment pond, including but not limited to the liner, berm or fencing.
- PM1.08.2-5** Temporarily repair damaged or deteriorated salt shed components immediately, that permits water infiltration.
- PM1.08.2-6** Permanently repair within 8 weeks, any temporarily repaired steel/fabric salt shed components that permits water infiltration.
- PM1.08.2-7** Permanently repair within 2 weeks, any temporarily repaired wooden salt shed components that permits water infiltration.
- PM1.08.2-8** Inspect and document the condition of Salt Containment Infrastructure as follows:

Performance Criteria	Response
a) Evapotranspiration water/brine levels	daily or more often when required
b) Water in the containment pond to prevent over-flowing	daily or more often when required
c) Steel/fabric salt sheds including, but not limited to, the steel structural components including base plates, wire cross-bracing, fabric roof, fabric lashing, winches and vents, lock-blocks and protective skirt	bi-annually in the spring and fall or in accordance with the manufacturer's specifications and recommendations, whichever is more frequent
d) Wooden salt shed including but not limited to structural condition and weatherproof exterior	annually
e) Salt shed apron and containment pad surfaces	annually
f) Evapotranspiration liner surface absorption	daily or more often when required

**PM1.08.2-9** Maintain the superstructure of steel/fabric salt sheds as follows:

Performance Criteria	Response
a) Remove grime and encrusted salt off the salt shed's steel interior	annually
b) Lubricate winches	annually
c) Re-tension-web and fabric roof lashing	annually
d) Re-tighten fastening bolts	annually
e) Remove surface rust	annually

**PM1.08.2-10** Repair or replace Salt Containment Infrastructure as follows:

Performance Criteria	Response
a) Damaged or deteriorated containment pond components, including but not limited to the liner, berm or fencing	immediately
b) Loss of absorption for a compact surface where water is ponding on the evapotranspiration liner	immediately
c) Saturation or overflow of evapotranspiration water/brine	when required
d) Damaged or deteriorated wooden salt shed components	within 2 weeks of the bi-annual inspection or as noted in PM1.01.2-8
e) Damaged or deteriorated steel/fabric salt shed components	within 8 weeks of the bi-annual inspection or as noted in PM 1.01.2-8 if salt and/or Winter Abrasive with salt is present or prior to when the salt and/or Winter Abrasive with salt is scheduled to be stored
f) Cracked, chipped edges, pot holes, settling/ponding, or base failure of surfaces	General Specifications 1.01, 1.06 and 1.10 of this Schedule 1 ("Specifications") for a Class 4 Highway

**PM1.08.2-11** Replace annually, the top 10 centimetres of salt contaminated material on the evapotranspiration surface with free draining material and use the removed salt contaminated material for Winter Abrasives processing.**Notes:**

- 1) The Province inspection H-form is to be used for inspections of steel/fabric salt sheds; and
- 2) PM1.01.2-10 (f) includes possible Quantified Maintenance Services

**1.08.3 Materials and/or Procedures**

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Load salt and/or Winter Abrasive containing salt on a containment pad or the evapotranspiration liner surface;
- b) Store salt and/or Winter Abrasive containing salt at a height below the top 30 centimetres of the skirt within a steel/fabric salt shed and ensure the top of the lock block wall remains free of salt accumulation;
- c) Park heavy equipment used for loading salt or Winter Abrasive containing salt, on the containment pad, evapotranspiration liner or within the salt shed;
- d) Prevent spillage onto the pit floor when transporting salt;
- e) Store Winter Abrasive containing salt under cover or on a containment pad or on an evapotranspiration liner, if supplied;
- f) Use a spill proof apron for salt hoppers to contain salt and facilitate retrieval;
- g) Store salt contaminated material for future use with Winter Abrasives on a containment pad or evapotranspiration liner or in a salt shed;
- h) Prevent salt contaminated materials from being tracked from the containment pad or evapotranspiration liner and use a containment pond for disposal, if one exists on site;
- i) Maintain an open catchment area adjacent to the salt shed exterior walls to accommodate unobstructed snow shedding off the structure;
- j) Remove snow from the roof of steel/fabric salt shed and adjust the roof tension after the snow accumulation has been removed in accordance with the manufacturer's specifications and recommendations;
- k) Reseal exposed surfaces following the removal of surface rust with zinc-rich primer/paint;
- l) Maintain and repair damaged or deteriorated salt shed components in accordance with the manufacturer's specifications and recommendations;
- m) Use engineered designs for all repairs, modifications or replacement to steel/fabric salt shed structural components including, but not limited to the fabric roof, prepared by a Professional Engineer, retained by the Contractor; and
- n) Securely lock gates and post signage to prevent unauthorized access to fenced containment ponds.

#### **1.08.4 Routine Maintenance Services Cap**

\$50,000 – for each occurrence, the cost to repair or replace a salt shed.