

Statement of Work

FEDERAL BUILDING

Residence of the Governor General of Canada (QC-28)

South Wing of the former Officers' Barracks (QC-18)

1 Côte de la Citadelle, Québec City, QC

G1R 3R2

And

Québec Base

101 Champlain Blvd.

Quebec City, Quebec

G1K 4H9

And

1001 St-Laurent Ouest,

Longueuil, Québec

J4K 1C7

**ROOF INSPECTION OF SLOPING FALL PROTECTION SYSTEMS, HORIZONTAL
LIFELINES, CHIMNEY LIFELINES AND POSITIONING ANCHORAGE SYSTEMS**



Version 1.0

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PART 1 – GENERAL

1.1 SERVICE DELIVERY POINT

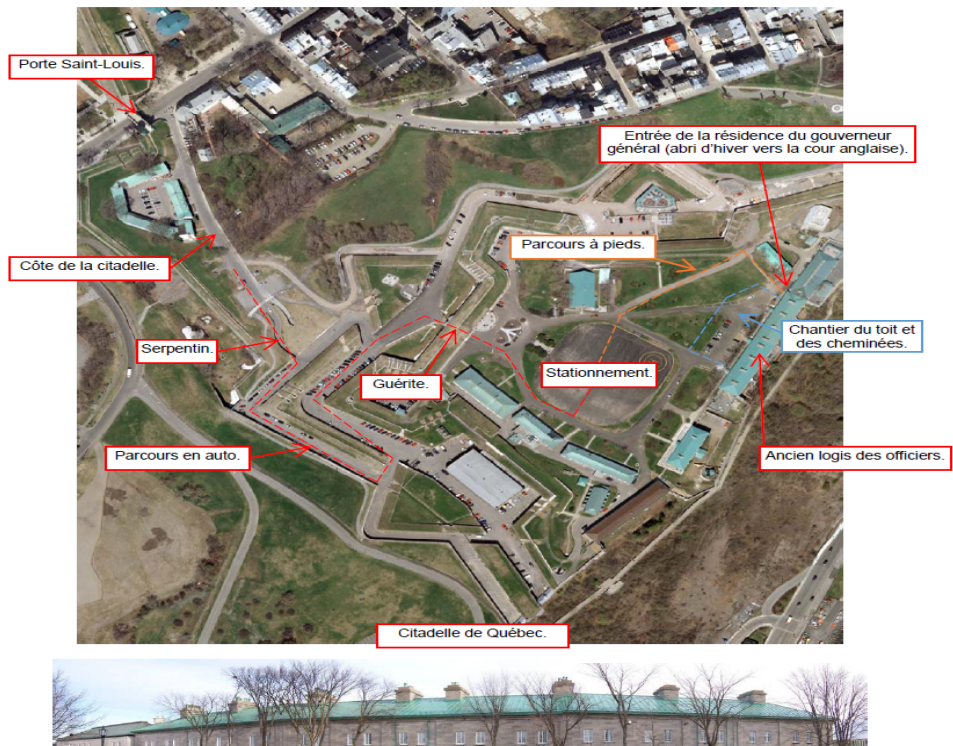
- 1.1.1** Perform inspections of the fall protection systems installed on the roof and around the chimneys of the south wing of the former Officers' Barracks (Buildings 18 and 28) of the Governor General's Residence, located at the Québec Citadel National Historic Site of Canada.

Perform inspections of the fall protection systems installed on the roofs of Buildings 100, 200 and 400 at the Quebec Base, 101 Champlain Boulevard (Quebec).

Perform inspections of the fall protection systems installed on the roofs of Building 1001 rue Saint-Laurent west Longueuil,

1.2 GENERAL WORK INFORMATION

- 1.2.1** The Contractor shall provide the specialized labour, materials, tools and equipment required to perform the annual inspections and certification of the fall protection systems indicated in these specifications in order to keep them operating properly and ensure compliance with current standards must be done in September. See Part 2 Execution for details of the work. The Contractor shall be capable of handling all aspects of the following:
- .1 Inspection of the fall protection systems
 - .2 Certification of the fall protection systems
 - .3 Obtaining PSPC internal work permits
 - .4 Use of fall protection equipment
 - .5 Knowledge of pre-established, compliant life-saving procedures
 - .6 Where required and upon request, maintenance, repair, replacement, equipment addition and upgrading of fall protection systems
- 1.2.2** The specifications shall be considered a minimum standard under which the Contractor shall work and in no way represents the full extent of the Contractor's responsibilities and obligations.
- 1.2.3** The Contractor shall carry out the work in a manner that causes the least possible disruption to building occupants and the public and the building's normal use and operations.
- 1.2.4** The terms and conditions of access to the site are as follows and may be specified by the Departmental Representative. See the particulars for the Citadelle, none for 101 Champlain Boulevard. No particular specifications for 1001 Saint-Laurent.



According to the site map above, access to the Governor General's Residence is initially through the winding passage (the "serpentin") by vehicle. This narrow lane turns 90° to the right and can accommodate a maximum of one 10-wheel dump truck. However, an aerial platform hoist, for example, will have to use the fire service access. Further on, the plan shows the location of the guard house, which is a very narrow, covered tunnel track that can accommodate no more than one truck (like an F-150 pick-up) at a time.

- 1.2.5 The Contractor shall keep the number of vehicles parked on site to a minimum, and the vehicles must be identified as the Contractor's vehicles.
- 1.2.6 Building access will be governed by current regulations and will be on a building-by-building basis. ID cards must be worn.
- 1.2.7 All employees must wear clothing bearing the company name or logo.

1.3 STANDARDS

- 1.3.1 All work must be performed at a minimum in accordance with the *Canada Labour Code* (R.S.C. 1985, c. L-2) PART II, Occupational Health and Safety, Duties of Employers, Specific duties, section 125 (1), particularly paragraphs (b) and (q) to (w), and the most recent version of the *Canada Occupational Health and Safety Regulations* (SOR/86-304) PART XII, Protection Equipment and Other Preventive Measures.
- 1.3.2 In addition, all work shall be performed in accordance with the latest edition of CSA Z259.16-F15 - Design of Active Fall Protection Systems and with the latest editions of related CSA Z259.xx standards, where applicable. Users wishing to work on ropes must have rope access certification (rope access technician) issued by recognized organizations such as the Society of Professional Rope Access Technicians (SPRAT) or the Industrial Rope Access Trade Association (IRATA).

1.4 CONTRACTOR RESPONSIBILITIES

- 1.4.1 During inspections and tests, the Contractor shall conduct ongoing visual monitoring of fall protection systems, the associated equipment and the people using them.

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- 1.4.2** The Contractor shall report any unrectified irregularities. The Contractor shall review any irregularities with the Departmental Representative and note and discuss possible changes. Check and, if necessary, correct the equipment list (inventory) with model and serial numbers. Check the labels on the inventoried equipment; affix a label to any unlabelled fall protection system components. After each inspection, make sure that the systems are turned back on and that the building zones they are intended to protect are properly protected.
 - 1.4.3** The Contractor shall perform, use or supply and pay for all labour and, if necessary, plant, materials, tools, machinery and equipment, water, heat, light, power, transportation and other facilities and services necessary for the performance of the work.
 - 1.4.4** The Contractor shall at all times carry out the work competently, diligently and expeditiously in accordance with inspection and certification standards and the annual recurring inspection schedule.
 - 1.4.5** When requested in writing by Canada, the Contractor shall make appropriate alterations in the method, plant or workforce any time Canada considers the Contractor's actions to be unsafe or damaging to the work, existing facilities, persons at the work site, or the environment.
 - 1.4.6** The Contractor shall have sole responsibility for the design, erection, operation, maintenance and removal of temporary structures and other temporary facilities and for the construction methods used in their erection, operation, maintenance and removal. The Contractor shall engage and pay for registered professional engineering personnel, skilled in the appropriate discipline to perform these functions, and in all cases when such temporary facilities and their methods of construction are of such a nature that professional engineering skill is required to produce safe and satisfactory results.
 - 1.4.7** The Contractor shall keep at least one copy of current contract documents, submissions, reports, and records of meetings at the work site, in good order and available to Canada.
 - 1.4.8** Except for any part of the work that is necessarily performed away from or off the work site, the Contractor shall confine plant, storage of materials, and operations of employees to limits set by laws, ordinances, permits or the contract documents.

1.5 PLANNING

- 1.5.1** The Contractor shall coordinate the work of their specialty to ensure that fall protection systems are maintained in accordance with the frequencies and requirements of standards and manufacturers.
- 1.5.2** In addition, whenever maintenance is to be performed, the Contractor shall notify the Departmental Representative, at least 48 hours in advance, that the fall protection systems have to be inspected, tested, checked, repaired or otherwise worked on.
- 1.5.3** During the building's business hours, the Contractor shall not perform any maintenance or testing that could interfere with the client's operations without written authorization from the Departmental Representative.

1.6 PROTECTION AND PREVENTION

- 1.6.1** Work shall be performed according to a schedule that causes the least possible disruption to building occupants and users and in a manner that does not hinder the normal activities of building users.
- 1.6.2** In accordance with the safety standards of the Ministère du Travail, de l'Emploi et de la Solidarité sociale du Québec, the Contractor shall take all safety measures and precautions necessary to protect persons and property from accidents and damage while maintenance or repair services are being carried out.

1.7 REPORTS AND CERTIFICATIONS

- 1.7.1** A sample report shall be submitted prior to contract execution for acceptance by the Departmental Representative. The Departmental Representative reserves the right to request additions and/or modifications to be applied to subsequent reports.

- 1.7.2 All inspections and tests required by the standard and these specifications shall be documented in a report submitted within one month of the inspection to the Departmental Representative. Reports shall be signed and dated, and the name of the organization and persons responsible for the inspection shall be indicated.
- 1.7.3 At the conclusion of each periodic fall protection system inspection and testing visit, the Contractor shall submit to the Departmental Representative a complete report of the checks, inspections and tests, including a list of equipment with notes indicating that it is working properly.
- 1.7.4 When the individual tests and inspections required by this standard have been completed, records of deficiencies, recommendations and comments shall be included in a report agreed in advance with the Departmental Representative. The report shall be emailed to QUEGII.QUEPFM@TPSGC-PWGSC.GC.CA after each inspection.
- 1.7.5 Each report shall be verified and countersigned by the building's Departmental Representative or alternate. A copy of this report and the certificate shall be posted near the access to the fall protection systems.

1.8 INSPECTION LOG

- 1.8.1 The Contractor shall create a log of all fall protection system inspections and tests that includes the annual inspection and the five (5) year inspection and test sheets required by CSA Standard Z259.16-F15 - Design of Active Fall Protection Systems and shall ensure that the sheets are retained for consultation by the competent authority for the required time between any two inspections, maintenance jobs or tests, but not less than two years.
- 1.8.2 The date on which the inspection was conducted and the initials of the person conducting the inspection shall be recorded in the log every year.
- 1.8.3 The annual inspection and test sheets shall be similar in content and appearance to those recommended in CSA Standard Z259.16-F15 or to the report agreed upon in advance with the Departmental Representative.

1.9 WORKER QUALIFICATIONS

- 1.9.1 The work in these specifications shall be performed by direct permanent employees of the company.
- 1.9.2 Every person who is required to handle hazardous materials must be aware of the WHMIS requirements relating to the materials used (see Part 3).
- 1.9.3 The Contractor shall pay all expenses relating to training, qualification, certification and exemption.
- 1.9.4 Any person performing repairs or maintenance must hold a valid qualification card issued by the CCQ or Emploi Québec (formerly the Société québécoise de développement de la main-d'œuvre). The qualification required depends on the statement of requirements.

1.10 EQUIPMENT

- 1.10.1 The Contractor shall use one or more service trucks that it owns to carry out the work. The trucks must contain **tools and service equipment required to perform the work**.
- 1.10.2 The Contractor must have in its possession all the equipment, such as **ladders, stepladders, lifting equipment, products and materials**, that will be used to carry out the work.
- 1.10.3 At no time shall the Contractor use material, equipment, products or tools owned by the Government of Canada.
- 1.10.4 The Contractor shall perform the work without the assistance of Canadian Government employee.
- 1.10.5 The Contractor shall ensure that all equipment used is in good working order. The Departmental Representative reserves the right to assess the condition of the equipment and have any equipment

judged to be defective or unsuitable taken out of service. The Contractor shall properly replace defective equipment within 24 working hours of a written notice from the Departmental Representative.

1.11 WORK PREPARATIONS

- 1.11.1 If a roadway needs to be closed, make sure it is reopened to traffic as quickly as possible.
- 1.11.2 Supply and install the necessary guardrails and signage to ensure public safety and the protection of structures.
- 1.11.3 Install scaffolding that is safe, sturdy, independent of walls, and compliant with standards. Use cranes and aerial work platforms as appropriate, following the safety rules for the use of such equipment.
- 1.11.4 Take all necessary precautions to prevent the spread of odours in the building.
- 1.11.5 On the date the work is scheduled to start, be present at the work site with all the tools, equipment, material and parts needed to start and continue the work without interruption.
- 1.11.6 No technical rooms will be accessible without the presence of the Departmental Representative.

1.12 BY-LAWS AND PERMITS

- 1.12.1 The Contractor shall execute this mandate in accordance with the federal, provincial and municipal regulations and codes that govern the various stages of the work.
- 1.12.2 The Contractor shall possess the licences and permits in the various specialties that are required to be qualified to carry out the mandate.
- 1.12.3 All charges relating to permit applications and the issuing and administration of permits shall be assumed by the Contractor.

1.13 WORKMANSHIP

- 1.13.1 The work shall be performed in accordance with recognized best practices. If the Departmental Representative observes any non-compliance during an inspection, the work must be redone at the Contractor's expense.
- 1.13.2 The Contractor must have all the specialized equipment and qualified employees needed to complete the work.

1.14 ENVIRONMENT

- 1.14.1 Comply with current environmental regulations.

1.15 AVAILABILITY AND TIME FRAMES

Communication

- 1.15.1 The Contractor must be reachable by telephone and email without delay during normal working hours between 7:00 a.m. and 5:00 p.m., Monday to Friday, and outside normal working hours in the evening and on weekends and statutory holidays.

Response time for urgent requests

- 1.15.2 For the Quebec City area, the Contractor must be able to report to the site within two (2) hours of receiving an emergency notice. Following an emergency service call, the Contractor must confirm the completion of work and provide a detailed service report to the Departmental Representative.
- 1.15.3 For any other site that may be outside Quebec City, the Contractor must be able to report within four (4) hours, plus travel time.

Hours of work

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- 1.15.4** Unless otherwise indicated, the Contractor shall perform the work between 7:00 a.m. and 4:00 p.m. Monday to Friday.

1.16 CLEAN-UP

- 1.16.1** While work is in progress, the inspection site shall be kept clean and free of debris and waste materials. Store volatile waste in covered metal containers and dispose of it.
- 1.16.2** On completion of the work, leave the site clean and free of waste, debris, materials, tools and equipment. Clean up the site to the satisfaction of the Departmental Representative.
- 1.16.3** Dispose of waste materials off Government of Canada property in accordance with federal, provincial and municipal environmental protection regulations. Waste materials also include demolition materials not kept by the Government of Canada. For toxic products and water containing suspended solids, have each load approved by the Departmental Representative.
- 1.16.4** For the disposal of waste materials, the Contractor is responsible for finding a site where dumping is authorized and for paying the fees charged by the dump site's owner. No unauthorized dumping will be permitted.

PART 2 – EXECUTION

2.1 GENERAL

- 2.1.1** The Contractor shall provide the specialized labour, materials, tools and equipment required to carry out the annual inspection work and certification defined in these specifications in order to maintain the proper operation and ensure compliance with current standards of the fall protection systems for which engineering plans already exist as of November 2017. The present fall protection systems installed on the roof and chimneys of the former Officers' Barracks (Buildings 18 and 28) can be certified, since the plans, in accordance with CSA Standard Z258.16, are available (engineering drawings referenced 132/12/PRI-007) and representative of the present facilities. The Contractor shall ensure that the integrity of the fall protection system has been maintained since the last inspection and every 12 months, and that it complies with current standards. The Contractor may also, upon request, carry out ad hoc maintenance, repair, replacement, equipment addition and upgrading of the fall protection systems (see section 2.2.8).
- 2.1.2** Upon request, the Contractor shall provide a list of all products used during recurring inspections. The Contractor shall have at its disposal the parts and materials required for the inspection work described in these specifications. The Contractor shall use new, defect-free devices, parts and materials. The Contractor shall have, in inventory or in its service trucks, the basic materials needed to perform most of the work described in these specifications.
- 2.1.3** The following is a history of past fall protection system installation projects for the residence of the Governor General :

Previous projects submitted some years ago, involving fall protection systems produced and installed by a contractor whose contact information is no longer available to us. The projects involved the installation of two (2) D-ring sloping systems (labelled) and two (2) handrail systems (not labelled) on the roofs of the Salon Frontenac and Salon Saint-Laurent attached to Building QC-28 (see the location plan below and section 2.2.9, List of equipment and inspection frequencies).

Previous projects submitted more recently, involving fall protection systems produced and installed by a contractor whose contact information is no longer available to us. The projects involved the installation of one (1) rail system with slides (labelled) anchored to the soffits of the three windowed areas on the south side of the Salon Saint-Laurent and three (3) D-ring anchors (labelled) used to wash the guardrail on the terrace east of Building QC-28 (see the location plan below and section 2.2.9, List of equipment and inspection frequencies).

addition, all users who have to use the fall protection systems are required to consult drawings 132/12/PRI-007 and Operating Procedure 16-2002 mentioned in section 2.1.3.

- 2.1.5** The fall protection systems are designed exclusively to secure access to the roof of the Québec Citadel National Historic Site of Canada. The fall protection systems are fall arrest systems that comply with CSA Standard Z259.16-F15 and are designed for a maximum of two (2) users per lifeline at the chimney perimeter, one (1) user per sloping system and one (1) user per point anchorage system (D ring).

Before using the fall protection system, users must have completed the specific training given to staff members who use the system; have read and understood Operating Procedure 16-2002; have the equipment mentioned in Section 4 of the Procedure (list of equipment needed to use the system); and inspect the fall protection system as specified in Section 2 of the Procedure.

The weight of a user, including tools and accessories, cannot exceed 115 kg (254 lbs.). The weight of a user may not be less than 45 kg (100 lbs.) or as indicated in the connecting element's specifications. There must be sufficient clearance of 20 feet (6 metres) below the user to ensure that there are no obstructions in the fall path.

This procedure shall be checked point by point on site to ensure that it works properly and is compatible with all stages of the work to be carried out. If the procedure needs to be updated or if the work requires use of the system outside the scope of the procedure, the Departmental Representative must be informed so that it can evaluate the applicable changes.

2.2 INSPECTIONS

- 2.2.1** The fall protection systems shall be inspected and certified by a qualified person who is an engineer. The inspection and certification may require the work of two specialized inspectors, accompanied by an employee at all times.

The annual inspection for certification :

- Ensures that each system is consistent with the engineering drawings;
- Ensures that wear and tear is not compromising component integrity and structural capacity;
- Ensures that during the inspection period, no system failures due to system misuse are found. Inspection chips must be installed;
- Ensures that the integrity of the fall protection system has been maintained since the last inspection and that it complies with current standards. Removed items must be photographed;
- Ensures data reconciliation following the inspection and the preparation of a final inspection report to be submitted to the Departmental Representative.

- 2.2.2** The checklists below were based in part on the inspections and testing requirements set out in CSA Standard Z259.16-F15 - Design of Active Fall Protection Systems. In the event of a discrepancy between the checklists below and the standard, the requirements in the standard shall prevail.

- 2.2.3** The periodic inspection and test sheets shall be similar in content and appearance to those recommended in CSA Standard Z259.16-15 - Design of Active Fall Protection Systems, must be submitted 1 month after the inspection.

- 2.2.4** If an inspection point is non-compliant or ambiguous, the system must be temporarily removed from service, and the company that produced the plans. It is recommended that inspection data be kept in a log. In the event of a fall, the fall protection system and all of its components must be taken out of service, and the system and all of its components must be thoroughly inspected by a qualified person or under the supervision of a qualified person.

The five-year inspection of the Governor General's Residence is scheduled for 2024. The five-year inspection of the Quebec Base is scheduled for 2022. For the 1001, Saint-Laurent, it should be confirmed. The five-year inspection includes tensile tests.

- 2.2.5** Fall protection system
To verify system compliance, the user and the person qualified to inspect and certify the system must perform a cursory visual and tactile inspection of the various system components.

This requires careful handling of the various system components in order to extend the system's useful life and contribute to the performance of vital safety features.
All assemblies must be inspected visually before each use, and a detailed inspection must be performed at least once a year by the contractor other than the user.

The visual inspection consists of a complete inspection of all parts of the system, and the person performing the inspection must ensure that all components are in good working order and that all parts are present.

Sloping system portion, all buildings :

Component inspection: Inspect the post anchor bracket, post, anchors, connector, cable rings, cable ring stop, etc.

Cable inspection: Inspect the cable for wear, degradation of the cable strands, straightness of the cable, proper alignment of the cable (shell), etc.

Horizontal lifeline system portion, Residence of the Governor General :

Component inspection: Inspect the anchor brackets, anchors, shock absorber, slip indicator, connector, screw take-up, etc.

Cable inspection: Inspect the cable for wear, degradation of the cable strands, straightness of the cable, proper alignment of the cable (shell), etc.

Chimney perimeter lifeline system portion, Residence of the Governor General :

Component inspection: Inspect anchor brackets, anchors, corner anchors, connector, screw take-up, etc.

Cable inspection: Inspect the cable for wear, degradation of the cable strands, straightness of the cable, proper alignment of the cable (shell), etc.

Anchorage system portion, all buildings :

Anchoring brackets: Note anything that looks or feels deformed or cracked

Anchorage: Note anything that looks or feels deformed or cracked

Bolts and nuts: Note anything that looks loose

General proper functioning: Check that the systems are operating properly

2.2.6 Personal protective equipment (PPE)

Both the user and the contractor and certify the system must visually check that the PPE is in good condition (all equipment such as the slider, double-legged lanyard, harness, vertical lifelines), in accordance with the manufacturer's recommendations and the instructions given during training. The harness is Type A compliant with CSA Standard Z259.10. The double-legged lanyard has a maximum length of 1.2 metres (4 feet) and a Type E4 shock absorber, in accordance with CSA Standard Z259.11. Equipment for rope access work is the responsibility of certified rope access technicians. It is strongly recommended that rope access workers have rope access certification provided by a recognized organization (e.g., SPRAT or IRATA).

The full body harness must be inspected to determine if it is in good working order. The user must inspect the harness before each use. The harness straps must be checked for excessive wear, cuts, burns, frayed edges, abrasion and other types of damage. The seams must be examined for any pulled, loose or torn stitches. Special attention should be paid to the D-ring bar. The harness must be inspected at least annually by a competent person other than the user. If the harness has been used to restrain a fall, it must be removed immediately from service and marked unusable until it is destroyed.

Before using the lanyard, both the user and the person qualified to inspect and certify the system must inspect the straps and metal parts in the same manner as for the harness. In addition, the built-in shock absorber and the impact indicator must be inspected to ensure that the equipment has not sustained any impacts and has not been used to stop a fall.

2.2.7 Rating plate

The rating plate must be placed close to the active fall protection system. The rating plate must be legible and updated by the person qualified to inspect and certify the system during the active fall protection system's annual inspection.

A rating plate is required for each of the active fall protection system's locations: one for the sloping system, one for the horizontal lifeline, one for the chimney perimeter lifeline, and one for the D rings.

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- 2.2.8** Maintenance, repair, replacement, equipment addition and upgrading of fall protection systems, if required and requested, shall be carried out each year of the contract following the inspection and testing prescribed in CSA Standard Z259.16-15 - Design of Active Fall Protection Systems.

2.2.9 List of equipment and inspection frequencies

Governor General's Residence, 1 Côte de la Citadelle

Two (2) sloping systems on the roof of Building QC-18

Description (Latchway code)	Detail no. (in the drawing)	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
Post	10 (C05)	Yes	Yes	n/a
D-ring (85030)	10 (C05)	Yes	Yes	n/a
Steel cable ø ¼ ", 7 x 9, SS	None	Yes	Yes	n/a
Provertical ring	None	Yes	Yes	n/a

Seven (7) horizontal lifeline systems on the roof of Building QC-18

Description (Latchway code)	Detail no. (in the drawing)	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test (frequency)
Shock absorber (85540)	5 (C03)	Yes	Yes	n/a
Slip Indicator (85025)	5 (C03)	Yes	Yes	n/a
Steel cable ø 5/16 ", 1 x 19, SS	5 (C03)	Yes	Yes	n/a
Concrete anchor rod	5 (C03)	Yes	Yes	n/a
Screw take-up (85050/60/62)	5 (C03)	Yes	Yes	n/a
Tensioner (85510)	5 (C03)	Yes	Yes	n/a
D ring (85016)	5 (C03)	Yes	Yes	n/a
Lifeline anchorage	6 (C04)	Yes	Yes	n/a

Eight (8) chimney lifeline systems on the roof of Building QC-18

Description (Latchway code)	Detail no. (in the drawing)	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test (frequency)
Corner anchor (85061)	7 (C04)	Yes	Yes	n/a
Steel cable ø 5/16 ", 1 x 19, SS	None	Yes	Yes	n/a
Threaded rod ø 10 mm anchors	None	Yes	Yes	Yes
Suspension line (85041)	None	Yes	Yes	n/a
Screw take-up (85050/60/62)	5 (C03)	Yes	Yes	n/a
Positioning anchorage	6 (C04)	Yes	Yes	n/a
Handle on the east side of the chimney	9 (C04)	Yes	Yes	n/a

Two (2) sloping systems on the roofs of the Building QC-28 salons				
Description (Latchway code)	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
D ring (southern sloping roof - Salon Frontenac)	1	Yes	Yes	n/a
D ring (eastern sloping roof - Salon Saint-Laurent)	1	Yes	Yes	n/a

Two (2) handrail systems on the roofs of the Building QC-28 salons				
Description (Latchway code)	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
Horizontal handrail (southern roof - Salon Frontenac)	1	Yes	Yes	n/a
Vertical handrail (central sloping roof - Salon Saint-Laurent)	1	Yes	Yes	n/a

One (1) lifeline system around the chimneys on the roof of the Building QC-28				
Description (Latchway code)	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
Pitched roof system, horizontal lifeline	1	Yes	Yes	n/a

One (1) rail system with sliders in the soffit of a Building QC-28 salon				
Description (Latchway code)	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
Rail system (in the soffits of the three windowed sections on the south side - Salon Saint-Laurent)	1	Yes	Yes	n/a

Three (3) anchorages for washing guardrails on terrace east of Building QC-28				
Description (Latchway code)	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
D ring (at the foot of the facade of the wall of the "S" path for people with reduced mobility)	3	Yes	Yes	n/a

n/a = not applicable

Quebec Base, 101 Champlain Boulevard

Building 100

Safety anchor inventory for Building 100, 101 Champlain boulevard, Quebec Base				
Description	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
Anchors consisting of a hot-dip galvanized steel ring that can rotate 180 degrees. One worker lifeline or safety sling can be attached to each anchor	22	Yes	Yes	n/a

Building 200

Safety anchor inventory for Building 200, 101 Champlain boulevard, Quebec Base				
Description	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
Anchors installed on the pitched roof	17	Yes	Yes	n/a
Anchors installed on the flat roof	4	Yes	Yes	n/a

One (1) lifeline system to building 200, 101 Champlain boulevard, Quebec Base				
Description	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
Lifeline	1	Yes	Yes	n/a

Building 400

Safety anchor inventory for Building 400, 101 Champlain boulevard, Quebec Base				
Description	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
Horizontal anchors and cables	33	Yes	Yes	n/a

1001 St-Laurent

Simple (1) safety ring inventory to 1001 St-Laurent West, Longueuil				
Description	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
«U» ring Roof on the north side (parking)	6	Yes	Yes	n/a
«U» ring Roof on the east side (Main entrance)	2	Yes	Yes	n/a
«U» ring Roof south side (St-Laurent)	3	Yes	Yes	n/a
«U» ring Roof west side (Charles-Le-Moyne)	0	Yes	Yes	n/a

Double (2) safety ring inventory to 1001 St-Laurent West, Longueuil				
Description	Quantity	Visual inspection before use (yes, no)	Annual inspection (yes, no)	Tensile test every 5 years (yes, no)
«U» ring Roof on the north side (parking)	3	Yes	Yes	n/a
«U» ring Roof on the east side (Main entrance)	0	Yes	Yes	n/a
«U» ring Roof south side (St-Laurent)	4	Yes	Yes	n/a
«U» ring Roof west side (Charles-Le-Moyne)	2	Yes	Yes	n/a

PART 3 – PRODUCTS

3.1 GENERAL

- 3.1.1** Upon request, provide a list of all products at the time of a fall protection system inspection, maintenance, repair, replacement, equipment addition or upgrade.
- 3.1.2** Have at its disposal the parts and materials needed for the work that will be required.
- 3.1.3** Have in inventory or in service trucks the basic materials needed to perform most of the work.
- 3.1.4** Use new, defect-free devices, parts and materials.
- 3.1.5** For new installations, use devices, parts and materials specified by the Departmental Representative.

3.2 DATA SHEETS (WHMIS)

- 3.2.1** Transport hazardous materials to the work site in their original containers. Each container must be labelled in accordance with the requirements of the Workplace Hazardous Materials Information System (WHMIS). Storage of pesticide products will not be permitted in facilities owned or managed by Public Services and Procurement Canada.
- 3.2.2** All chemicals, such as cleaning products, varnishes, paints, solvents, coatings, gases and any other toxic products, shall be considered hazardous products.
- 3.2.3** Before starting work, submit all hazardous product data sheets for approval by the Departmental Representative. The data sheets must meet the requirements of the Workplace Hazardous Materials Information System (WHMIS) and include the following information:
 - 1. Product identification
 - 2. Ingredients
 - 3. Physical data
 - 4. Flammability and explosibility
 - 5. Reactivity
 - 6. Toxicological properties
 - 7. Preventive measures
 - 8. First aid measures
 - 9. Preparation information

3.3 PRODUCT DATA

- 3.3.1** At the request of the Departmental Representative, be able to supply data sheets for all products used.

3.4 SHOP DRAWINGS

- 3.4.1** At the request of the Departmental Representative, be able to supply shop drawings. Depending on the type of work, the Departmental Representative may require shop drawings to be signed and sealed by an engineer who is a member of the Ordre des ingénieurs du Québec (OIQ).

PART 4 – HEALTH AND SAFETY

4.1 GENERAL CLAUSES

- 4.1.1** The Contractor agrees to assume all responsibilities normally incumbent on a principal contractor and employer under Quebec's *Act respecting occupational health and safety* and to act as supervisor of the work.
- 4.1.2** The Contractor shall manage operations so that the health and safety of the Contractor's employees, building/facility occupants and the public and protection of the environment always take precedence over cost and scheduling considerations. In addition, the Contractor shall comply with all of the requirements in these specifications, including the following:
- 4.1.3** The Contractor shall comply at all times with the provisions of Quebec's *Act respecting occupational health and safety*, the *Safety Code for the construction industry* and the *Regulation respecting occupational health and safety*, where they apply.
- 4.1.4** The Contractor shall submit to the Departmental Representative a prevention program specific to all activities the Contractor is likely to carry out in the building at least ten (10) days before the start of work. The Contractor shall subsequently update its prevention program if the work proceeds differently from the original plan. The Departmental Representative may, after receiving the program and at any time during the contract, require that the program be modified or supplemented in order to better reflect workplace conditions. The Contractor shall make any such required corrections before starting work.

The prevention program must be based on risk identification and must take into account the information and requirements set out in these specifications. The program must remain in force throughout the term of the contract and must meet the following requirements:

- identify the risks specific to each category of task to be performed in execution of the contract and the corresponding preventive measures, based on regulatory requirements;
- identify the person responsible for implementing preventive measures;
- take account of risks that may affect the health and safety of workers, building/facility occupants and the public;
- include a procedure in case of accident;
- include a worksite inspection checklist based on the content of the risk identification;
- include any repair tasks that may be assigned under this contract;
- include a written undertaking from all stakeholders to comply with the prevention program.

4.2 SPECIFIC CLAUSES

4.2.1 POWDER-ACTUATED DEVICES

- 4.2.1.1** Use powder-actuated devices only by written permission of the Departmental Representative.
- 4.2.1.2** Any person using an explosive-actuated tool shall have a training certificate and meet all the requirements set out in section 7 of the *Safety Code for the construction industry* (S-2.1, r. 4).
- 4.2.1.3** Any other explosive-actuated device shall be used in accordance with the manufacturer's directions and applicable standards and regulations.

4.2.2 USE OF PUBLIC ROADS

- 4.2.2.1** Where it is necessary to encroach on a public road for operational reasons or to ensure the safety of workers, occupants or the public (e.g., the use of scaffolding or cranes, excavation work), the Contractor shall obtain at its own expense any authorizations and permits required by the competent authority.

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- 4.2.2.2 The Contractor shall install at its own expense any signage, barricades or other devices required by regulations to ensure the safety and security of the public and the Contractor's own facilities.

4.2.3 LOCK-OUT/TAG-OUT

- 4.2.3.1 Whenever work is being done on equipment powered by electricity or any other energy source, the Contractor shall submit a lock-out/tag-out procedure to the Departmental Representative and implement it.
- 4.2.3.2 Supervisory staff and all workers involved in or affected by the work for which the lock-out/tag-out is required must have received lock-out/tag-out training provided by a recognized organization; the Contractor shall submit the training certificates to the Departmental Representative.
- 4.2.3.3 Before starting the lock-out/tag-out procedure for a piece of equipment on an occupied site, the Contractor shall coordinate its work with the Departmental Representative if the power interruption might affect site operations or the occupants.
- 4.2.3.4 The Contractor shall designate a qualified person as responsible for the lock-out/tag-out and shall ensure that that person prepares a lock-out/tag-out data sheet for each piece of equipment involved. The lock-out/tag-out data sheet must be submitted to the Departmental Representative at least 48 hours prior to the start of work; the data sheet must be checked by the Departmental Representative if the work is being performed in an existing building. The lock-out/tag-out data sheet must include, at a minimum, the following information:
1. a description of the work to be performed;
 2. identification, description and location of the circuit and/or equipment involved;
 3. identification of energy sources powering the equipment;
 4. identification of each cut-off point;
 5. lock-out/tag-out and residual energy release sequence and unlocking sequence;
 6. list of required lock-out/tag-out materials;
 7. verification method for the zero-energy procedure;
 8. Name and signature of the person who prepared the data sheet.
- At the request of the Departmental Representative, the Contractor shall record all this information on the site representative's form.
- 4.2.3.5 At the time of lock-out/tag-out, the person responsible shall date the data sheet and ensure that all workers involved in work on the circuit/equipment involved add their names to the data sheet and sign it.

4.2.4 ELECTRICAL WORK

- 4.2.4.1 The Contractor shall ensure that all electrical work is performed by employees who are qualified under provincial regulations on vocational training and qualification.
- 4.2.4.2 The Contractor shall comply with CSA Standard Z462 - Workplace Electrical Safety.
- 4.2.4.3 Any work on electrical equipment must be done with the power turned off, unless it is not possible to completely disconnect the equipment.
- 4.2.4.4 The Contractor shall comply with all the requirements in the "Lock-out/tag-out" part of this section.

4.2.4.5 The Contractor shall notify the Departmental Representative in writing regarding any work that cannot be performed with the power turned off and obtain the Departmental Representative's approval. The Contractor must demonstrate to the Departmental Representative that the work cannot be done with the power turned off and supply all the information needed to complete and obtain a live-line work permit (method of work, assessment of the electrical arc level, arc flash boundary, protection equipment, etc.) before starting the work, except for cases specified in CSA Standard Z462 - Workplace Electrical Safety.

4.2.4.6 The live-line work permit must, at a minimum, contain the following:

- a. Description of the circuit, the equipment and location;
- b. Justification for the need to do live-line work;
- c. Description of the work safety practices to be used;
- d. Conclusions of the shock hazard analysis;
- e. Definition of the shock protection boundary;
- f. Conclusions of the flash hazard analysis;
- g. Description of the flash protection boundary;
- h. Description of the personal protection equipment required;
- i. Description of the methods to be used for restricting access to unqualified persons;
- j. Proof that an information session has been held;
- k. Approval signature for the live-line work (by a person in authority or the owner).

4.2.4.7 If for the operational requirements of the site occupants the Departmental Representative requires that the Contractor perform work in an energized condition, the Contractor shall obtain all the information required to request and obtain a live-line work permit (method of work, assessment of the electrical arc level, arc flash boundary, protection equipment, etc.) and have it signed by the site representative designated by the Departmental Representative before the beginning of the work.

4.2.5 ASBESTOS EXPOSURE

4.2.5.1 The work covered by this Standing Offer is not expected to require handling materials containing asbestos; however, if the Contractor or the Departmental Representative or a delegate thereof discovers materials that may contain asbestos, the Contractor shall immediately stop work and inform the Departmental Representative. If it is subsequently demonstrated that the materials contain asbestos, the Contractor shall comply with the following requirements.

Before starting work that is likely to generate asbestos dust, the Contractor shall

1. provide a written work procedure identifying the work's level of risk (low, moderate, high), as defined in section 3.23 of the *Safety Code for the construction industry* (S-2.1, r. 4), and taking into account all the requirements set out in that section;
2. submit certificates demonstrating that all employees involved in the work have received training in the hazards associated with asbestos and the procedure referred to above;
3. demonstrate that it has in hand all the materials and equipment needed to follow the procedure and safely perform the work.

4.2.6 FUNGAL CONTAMINATION

- 4.2.6.1 The work covered by this mandate is not expected to require handling materials contaminated by mould; however, if the Contractor or the Departmental Representative or a delegate thereof discovers materials that may be contaminated by mould, the Contractor shall immediately stop work and inform the Departmental Representative. If it is subsequently demonstrated that the materials are contaminated by mould, the Contractor shall comply with the following requirements.
- 4.2.6.2 Before starting work in which workers are likely to come into contact with materials contaminated by mould, the Contractor shall
1. provide a written work procedure that meets the requirements of the *Safety Code for the construction industry* (S-2.1, r.4) and the requirements outlined in the document entitled "Mould Guidelines for the Canadian Construction Industry," published by the Canadian Construction Association (<https://www.cca-acc.com/wp-content/uploads/2019/02/Mould-guidelines2018.pdf>);
 2. Demonstrate that it has in hand all the materials and equipment needed to follow the procedure and safely perform the work.

4.2.7 EXPOSURE TO SILICA

- 4.2.7.1 For any interior or exterior work generating silica dust, the Contractor shall comply with the requirements below, in addition to those of the *Safety Code for the construction industry* (S-2.1, r. 4).
1. Work in wet environments or use tools with a water supply to reduce dust, or collect dust at source and trap it in a high-efficiency filter to prevent dust from being released into the environment.
 2. Clean surfaces and tools with water, never compressed air.
 3. Sand and scour surfaces using an abrasive with less than 1% silica (also called amorphous silica).
 4. Install screens or partitions to prevent dust from spreading outside the work area, thereby protecting other workers and the public.
 5. Wear respiratory and eye protection during all operations that may generate silica dust in accordance with the requirements of the *Safety Code for the construction industry* (S-2.1, r. 4).
 6. Wear a protective suit to prevent contamination outside the site.
 7. Refrain from eating, drinking or smoking in a dusty area.
 8. Wash hands and face before drinking, eating or smoking.

4.2.8 SANDBLASTING

4.2.8.1 Before starting any sandblasting work, the Contractor shall

1. provide a written procedure that meets the requirements in section 3.23 of the *Safety Code for the construction industry* (S-2.1, r. 4);
2. demonstrate that it has in hand all the materials and equipment needed to follow the procedure and safely perform the work;
3. All sanding and sandblasting work shall be done using an abrasive containing less than 1% silica.

4.2.9 REMOVAL OF LEAD-BASED PAINT

4.2.9.1 Before starting any work in which workers are likely to handle materials containing lead-based paint or other substances containing lead, the Contractor shall

1. provide a written procedure that meets the requirements of the *Safety Code for the construction industry* (S-2.1, r. 4) and the requirements indicated in the document entitled "Guideline for Lead on Construction Projects" published by the Ontario Ministry of Labour (<https://www.labour.gov.on.ca/english/hs/pubs/lead/index.php>). In the event of a discrepancy between the Quebec regulations and the Ontario document, the more stringent requirement shall apply;
2. demonstrate that it has in hand all the materials and equipment needed to follow the procedure and safely perform the work.

4.2.10 EXPOSURE TO ANIMAL DROPPINGS

4.2.10.1 Before starting any work in which workers are likely to come into contact with materials contaminated by animal droppings, the Contractor shall

1. provide a written procedure that meets the requirements of the *Safety Code for the construction industry* (S-2.1, r. 4) and the requirements indicated in the document entitled "Des fientes de pigeons dans votre lieu de travail: méfiez-vous" [Pigeon droppings in your workplace: Beware], published by the CNESST (http://www.csst.qc.ca/publications/100/Documents/DC100_1331_1web2.pdf);
2. demonstrate that it has in hand all the materials and equipment needed to follow the procedure and safely perform the work.

4.2.11 RESPIRATORY PROTECTION

4.2.11.1 The Contractor shall ensure that all workers who must wear a respirator as part of their duties have received the associated training and fit testing of their respirator, in accordance with CSA Standard Z94.4, Selection, use and care of respirators. Submit the fit testing certificates to the Departmental Representative on request.

4.2.12 FALL RISK PREVENTION

- 4.2.12.1 Plan and organize work so as to help eliminate falling hazards at the source or foster collective protection and thus minimize the need to use personal protective equipment. Where personal fall protection is needed, workers shall use a safety harness conforming to the CAN-CSA-Z-259.10-M90 standard. Safety belts are not to be used as fall protection.
- 4.2.12.2 Anyone who uses a lift platform (scissor lift, or telescoping, articulated or rotating elevating platform, etc.) must have received the appropriate training.
- 4.2.12.3 Workers must always wear a safety harness when working on a telescoping, articulated or rotating lift platform.

4.2.12.4 A danger zone must be identified around any lift platform.

4.2.12.5 Any opening in a platform or in a roof must be surrounded by a guardrail or blocked with a cover attached to the platform that is strong enough to withstand the loads to which it will be subjected, regardless of the dimensions of this opening or the fall height involved.

4.2.12.6 Any person working within two metres of a location from which a fall of three or more metres could occur must use a safety harness, in accordance with regulatory requirements, unless there is a guardrail or other element providing an equivalent level of safety.

4.2.12.7 Notwithstanding regulatory requirements, the Departmental Representative may order the installation of guardrails or the use of safety harnesses for certain particular situations presenting the risk of a fall of less than three metres.

4.2.13 SCAFFOLDING

In addition to the requirements of the *Safety Code for the construction industry*, any Contractor who uses scaffolding must meet the following conditions:

4.2.13.1 Footings

1. Scaffolding must be placed on solid footings so as to prevent it from sliding or tipping.
2. If the Contractor wishes to place scaffolding on a roof, an eave, a canopy or a garret, the Contractor shall submit its load calculations and its plans, signed and sealed by an engineer, to the Departmental Representative and obtain the latter's authorization before beginning installation.

4.2.13.2 Assembly, bracing and anchoring

1. All scaffolding must be assembled, braced and anchored in accordance with the manufacturer's instructions and the provisions of the *Safety Code for the construction industry*.
2. In situations where it is necessary to remove some scaffolding components (e.g., cross pieces), the Contractor, before assembling the scaffold, shall submit to the Departmental Representative an assembly procedure, signed and sealed by an engineer, certifying that the scaffolding will allow work to be carried out safely, taking into account the loads that will be applied.
3. For any scaffolding structure where the span between two scaffolding supports is greater than three metres, the Contractor shall provide the Departmental Representative with an assembly plan signed and sealed by an engineer, before the scaffolding is assembled.

4.2.13.3 Fall protection during assembly

1. Throughout the assembly process, all workers shall be protected against falls if they are exposed to a risk of falling farther than three metres.

4.2.13.4 Platforms

1. Scaffold platforms shall be designed and installed in accordance with the provisions of the *Safety Code for the construction industry*.
2. If planks are used, they must be approved and stamped in accordance with section 3.9.8 of the *Safety Code for the construction industry*.
3. Scaffolding four sections (or six metres) high or higher shall have a full platform covering the entire surface of the putlogs every three metres or portion thereof, and at no time shall the components of such platforms be moved to create intermediate landings.

4.2.13.5 Guardrails

1. A guardrail must be installed on every landing.
2. Cross-bracing must not be considered guardrails.
3. If the platforms are not full ones, the guardrails must be installed just above the edge of the platform in such a way that there is no empty horizontal space between the platform and the guardrail.
4. On scaffolding four sections (or six metres) high or higher that require full platforms, the guardrails must be installed on every landing at the start of work and must remain in place until the work is finished.

4.2.13.6 Access

1. The Contractor shall ensure that access to scaffolding does not compromise worker safety.
2. Where the scaffolding platforms are made up of planks, ladders shall be installed so as to ensure that any planks that extend past the edge do not prevent the workers from moving up or down.
3. Notwithstanding the provisions of the *Safety Code for the construction industry*, stairs shall be installed on all scaffolding with six or more sets of uprights and six sections (or nine metres) high or higher.

4.2.13.7 Protection of public and occupants

1. Where the scaffolding is installed in an area accessible to the public, the Contractor shall take measures to prevent the public from accessing the scaffolding and, if need be, any work area or storage area located near the scaffolding.
2. The Contractor shall install covered walkways, nets or similar devices to protect workers, the public and occupants from falling objects. The protection measures used must be approved by the Departmental Representative.

4.2.13.8 Engineer's plans

1. In addition to those required by the *Safety Code for the construction industry*, the Departmental Representative reserves the right to demand engineer's plans for other scaffolding types or configurations.
2. A plan signed and sealed by an engineer is required for any scaffolding to which tarpaulins, canvases or other contrivances susceptible to wind uplift are attached.
3. A certificate of compliance must be signed by an engineer for all cases where an engineer's plan is required, before anyone uses the facility for which the plan was created. A copy of these documents must be available on the construction site at all times.

4.2.14 CONFINED SPACES

In addition to complying with provincial regulations respecting confined spaces, the Contractor shall comply with the requirements set out in the following paragraphs.

Depending on the nature of the hazards of the confined spaces, the work to be performed and/or the confined space skill level demonstrated by the Contractor, the Departmental Representative reserves the right to require that the Contractor use the services of a firm specializing in health and safety or confined spaces to analyze the confined space risks, complete the entry permit, monitor the work or perform any other task associated with confined space work.

4.2.14.1 Person responsible for confined space health and safety

1. The Contractor shall designate a person responsible for confined space health and safety. This person shall be qualified as specified in section 297 of the *Regulation respecting occupational health and safety* (S-2.1, r. 13). He or she shall be on site at all times during the performance of confined space work and shall ensure compliance with all regulatory requirements and the requirements set out in this section. This person shall also complete and issue the confined space entry permit.

4.2.14.2 Training

1. All persons with confined space access, as well as the person responsible and the confined space monitor, shall receive training on confined space entry.
2. All persons who have to use a self-contained breathing apparatus to enter confined spaces must have received training on how to use such an apparatus.
3. All persons identified as confined space rescue persons must have received training on confined space rescue.
4. Each of the training courses referred to in the above paragraphs shall be delivered by a firm specializing in health and safety or in confined spaces.
5. Training certificates for the persons referred to above must be submitted to the Departmental Representative before the confined space work begins.

4.2.14.3 Confined space hazard assessments

1. For each confined space where work is to be performed, the Contractor shall obtain the necessary information from the Departmental Representative and assess the hazards relating to the following:
 - a. the internal atmosphere, including the concentration of oxygen, flammable gases and vapours, combustible dust creating a fire or explosion hazard, and categories of contaminants typically present in or around the confined space;
 - b. insufficiency of natural or mechanical ventilation;
 - c. materials present that can cause workers to get stuck or buried or to drown, such as sand, grain or liquid;
 - d. interior configuration;
 - e. pipes and ducts entering the confined space;
 - f. energy such as electricity, moving mechanical parts, thermal stress, sound and hydraulic energy;
 - g. ignition sources such as open flames, lighting, welding and cutting, static electricity or sparks;
 - h. any other specific circumstances, such as the presence of vermin, rodents or insects.
2. These hazard assessments shall be performed by the person responsible for confined space health and safety. The assessments shall be submitted to the Departmental Representative for analysis at least 10 days before the confined space work is scheduled to begin and shall contain the following information:
 - a. the location of the confined space;
 - b. a description of the confined space;
 - c. the dimensions of the confined space;

- d. the number, location and dimensions of the openings;
 - e. the contents of the confined space (equipment, substances, etc.);
 - f. the date of the assessment; and
 - g. the name and signature of the person who performed the assessment and the name of his or her employer.
3. The Contractor shall perform the same exercise for each confined space it builds/installs over the course of the project.

4.2.14.4 Confined space entry permit

1. The Contractor shall submit a copy of each confined space entry permit for the spaces concerned to the Departmental Representative for analysis at least five days before the confined space work is scheduled to begin. The entry permits shall be completed by the person responsible for confined space health and safety and shall include, at the minimum, the following information:
- a. a description of the work to be performed and the work method, including the equipment and tools required to perform the work;
 - b. a description of the hazards and corresponding control measures based on the results of the previously completed confined space hazard assessment and based on the inherent hazards of the work to be performed;
 - c. the safety equipment to be used to control the confined space hazards (e.g., ventilator, gas detector, local exhaust ventilation, and personal protective equipment);
 - d. the rescue procedure consisting of the following, at a minimum:
 - i. a means of communication between the confined space monitor and the workers in the confined spaces;
 - ii. the rescue equipment specific to each confined space;
 - iii. confirmation that the municipal emergency response service has been made aware of the confined space work to be performed specifically on this site and that it can respond to carry out a confined space rescue; otherwise, the Contractor shall designate site workers who will act as rescuers in the event that rescuers are required in the confined space (mandatory rescue training);
 - iv. the location of the telephone and the telephone number of the municipal emergency response service (if applicable);
 - e. the date of the entry permit;
 - f. the name of the person who issued the permit and the name of his or her employer;
 - g. the name of the monitor and the name of his or her employer;
 - h. the names of the workers who will enter the confined space and the names of their employers.
2. In the event that the site representative requires the use of a confined space entry permit specific to its site, the Contractor shall comply with the requirements of that permit.

4.2.14.5 Medical surveillance

1. The Contractor shall submit to the Departmental Representative a medical certificate less than two years old for every person who is required to use a supplied-air respiratory protection device. The certificate must show that the person is fit to use this type of device.
2. It is recommended that persons who are required to work in sewage collection systems or similar systems be vaccinated against diphtheria, tetanus and hepatitis B.

4.2.14.6 Requirements during confined space work

1. Prior to any entry into a confined space, the person responsible shall take readings of the concentration of oxygen, flammable gases and any toxic gases likely to be present, and record the results of the readings on the above-mentioned entry permit.
2. No worker may access the confined space if the following requirements are not met:
 - a) the concentration of oxygen must be greater than or equal to 19.5% and less than or equal to 23%;
 - b) the concentration of flammable gases or vapours must be less than or equal to 10% of the lower explosion limit;
 - c) the concentration of other gases must not exceed the standards provided in Schedule I of the *Regulation respecting occupational health and safety* (S-2.1, r. 13).
3. If the measured concentrations of oxygen and gases meet the regulatory values, the person responsible shall ensure that all prevention measures described in the permit are in place and complete the entry permit (date, time, signatures, etc.) prior to issuing the permit and allowing access to the confined space.
4. An entry permit may cover only one work shift. The Contractor must issue a new permit for each additional work shift.
5. During the confined space work, the concentration of gases must be measured on an ongoing basis, and the detector must be installed in the workers' respiratory zone. If the conditions inside the confined space are such that the workers might not hear/see the detector alarm, the Contractor must find a way for the confined space monitor to track the concentration measurements while continuing to take readings in the workers' respiratory zone.
6. If the work is organized in such a way that the workers may be far apart from one another in a large confined space, the Contractor shall provide additional gas detectors.
7. The Contractor shall supply the gas detectors and keep them in good condition. The Contractor must be able to demonstrate that the gas detectors being used have been calibrated and adjusted by the person responsible or by a qualified person in accordance with the manufacturer's recommendations. The Departmental Representative may have the accuracy of the Contractor's devices checked at any time. If a detection device fails, work must be suspended immediately, and all workers must leave the confined space.
8. The manufacturer's manual for the gas detector must be available on site.
9. The Contractor shall provide a ventilation system to keep the concentration of contaminants below the regulatory limits.
10. If work generating contaminants is performed (welding, use of products, etc.), the Contractor must, if needed, install an aspiration system for the contaminants so that the regulatory air quality values can be maintained at all times.
11. If a detector alarm sounds, all workers must leave the confined space. The measured concentration levels must then be recorded on the entry permit. The Contractor shall then

find the source of contamination, neutralize it, ventilate the confined space to eliminate contaminant residues and authorize access to the confined space only when concentrations of oxygen and gas have returned to normal.

12. Compressed gas cylinders or welding equipment are not to be brought into confined spaces. Such equipment must remain outside and must not block entrances or exits; all cylinders must be properly secured.
13. Tools and electrical devices used in the confined space work must be grounded and, when necessary, designed to be explosion-proof. All equipment must be connected to a ground fault interrupter or step-down transformer. The Contractor must, at its own expense, have a qualified electrician modify any power outlets and/or circuit breakers it plans to use which do not meet these criteria.
14. If the confined space work requires hot work, the Contractor must obtain a hot work permit and meet the associated requirements.
15. The Contractor shall assign a competent person to assume the duties of confined space safety supervisor. The supervisor shall be assigned exclusively to these duties and must remain outside the confined space as long as there are workers inside. The supervisor shall also
 - a) ensure that the entry permit has been completed, signed and posted near the confined space;
 - b) be familiar with the work procedure specific to the confined space and ensure that it is followed;
 - c) maintain continuous communication with all the workers in the confined space and ensure that all the equipment required in case of emergency is present;
 - d) have sound knowledge of the backup ventilation systems and make sure that they are operating properly for the duration of the work;
 - e) prevent unauthorized persons from accessing the confined space;
 - f) make sure that the conditions around the confined space are not a health or safety risk for the workers inside the confined space;
 - g) initiate the emergency procedure if needed.
16. The same person may act as a confined space safety supervisor and as the person responsible for confined space health and safety, provided all requirements of both functions are met.

4.2.15 EXCAVATION WORK

In addition to the requirements of the *Safety Code for the construction industry*, any Contractor digging trenches or performing excavation work must meet the following conditions:

1. complete the form below and submit it to the Departmental Representative before digging begins;
2. submit the following documents to the Departmental Representative, as appropriate:
 - a. plans and specifications, signed and sealed by an engineer, for the shoring required for the excavation work; or
 - b. an engineer's advice specifying the wall angles of the trench or excavation.



Directive de creusage

N° _____ de _____

Cette directive de creusage est fournie à titre d'exemple par la Commission de la santé et de la sécurité du travail (CSST). On y trouve les principales indications que l'employeur devrait donner à la personne responsable des travaux sur le terrain et à l'opérateur de l'engin de terrassement.

Nom de l'entreprise	
Nom du projet	N° du projet
Adresse du chantier	Date du début des travaux

Repérage

Chainage ou axes : de _____ à _____ Plan annexé ☐ N° du plan : _____

Méthode de travail à utiliser

Tout en s'assurant que les parois ne présentent aucun danger de glissement de terrain,

- ☐ creuser et étançonner selon les plans et devis d'un ingénieur;
- ☐ creuser et étançonner en utilisant une boîte de tranchée;
- ☐ creuser sans étançonner pourvu que l'une des conditions suivantes soit respectée :
 - ☐ le roc est sain;
 - ☐ aucun travailleur ne descend dans la tranchée ou l'excavation;
 - ☐ les parois sont creusées conformément à l'avis d'un ingénieur.

Dimensions du creusement (Creuser selon le profil suivant.)

	Minimale	Maximale
H Profondeur		
Lf Largeur au fond		
La Largeur en surface		

Mesures de sécurité

Déposer les matériaux à une distance d'au moins 1,2 mètre (4 pi) du sommet des parois.

Ne laisser aucun véhicule s'approcher à moins de 3 mètres (10 pi) du sommet des parois.

- ☐ Respecter le plan de l'ingénieur concernant les travaux à proximité d'une construction existante.
- ☐ Suivre le plan de localisation pour repérer les infrastructures souterraines.
- ☐ Installer le matériel de signalisation prévu par le plan de circulation (barrières, repères visuels, etc.).
- ☐ Affecter un ou des signaleurs au contrôle de la circulation.
- ☐ Respecter la méthode prévue pour le travail à proximité des lignes électriques.
- ☐ Mettre en place les dispositifs de protection des travailleurs, par exemple les glissières de sécurité en béton.

Nom	Fonction	
Signature	Date	N° de téléphone
Directive remise <input type="checkbox"/> au responsable des travaux sur le terrain <input type="checkbox"/> à l'opérateur de l'engin de terrassement		

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4.2.16 LIFTING LOADS WITH CRANE OR BOOM TRUCK

1. Unless otherwise specified, the Contractor shall prepare a hoisting plan and submit it to the Departmental Representative for all lifting operations performed with a crane or a boom truck at least five days before the operations begin. The hoisting plan must contain, at a minimum, the information listed at the end of this article.
2. The hoisting plan must be signed and sealed by an engineer for the following lifting operations:
 - a. lifting of concrete panels;
 - b. lifting mechanical/electrical equipment on a building's roof or floors;
 - c. lifting of loads encroaching on the public road;
 - d. lifting very large or very heavy loads;
 - e. any other lifting operation as required by the Departmental Representative.
3. In addition to the above requirements, the Contractor must plan the hoisting operations in a way as to ensure that the loads do not pass over the occupied zones on the site. When there is no alternative, the hoisting plan must be signed and sealed by an engineer and must guarantee the safety of the occupants in that zone; the plan must also be approved by the Departmental

Representative. The Departmental Representative can, if it is deemed necessary, require that the work be done at night or on weekends.

4. When the work begins on the site, the Contractor must submit a list of expected hoisting plans for the whole project to the Departmental Representative. The list must be updated as needed if changes are made during the work.
5. In addition to the mechanical inspection certificate, all cranes and boom trucks must have the annual inspection certificate and crane log in the cab.
6. The entire lifting area shall be marked off to keep unauthorized persons out.
7. The Contractor shall carefully inspect all slings and hoisting devices and ensure that any that are in poor condition are destroyed and disposed of.
8. Compressed-gas cylinders shall be lifted with a basket specially designed for that purpose.

MINIMUM CONTENT OF HOISTING PLAN

- A sketch showing, at a minimum, the location of the crane, the surrounding facilities, the area covered by the hoisting operations, the pedestrian pathways and vehicle routes, the security perimeter, etc.
- Weight of loads
- Dimensions of loads
- List of hoisting devices and weight of each one
- Total weight lifted
- Maximum height of obstacles to clear
- Load lift height relative to the surface of the roof (in the case of loads to be placed on roofs)
- Use of guide cables
- Type of crane used
- Crane capacity
- Boom length
- Boom angle
- Crane radius
- Deployment of stabilizers
- Percent usage of the crane's capacity
- Confirmation of inspection of hoisting equipment
- Identification of the crane operator and the person responsible for the hoisting operations, with date and signatures

4.2.17 HOT WORK

4.2.17.1 Hot work means any work that involves the use of an open flame or may produce heat or sparks, such as riveting, welding, cutting, grinding, milling, burning or heating.

1. At the start of each work shift and for each sector, the Contractor must obtain a hot work permit issued by the site representative.
2. A working fire extinguisher appropriate to the fire hazard must be available and readily accessible within five (5) metres of any flame, sparks or intense heat.
3. The Contractor shall designate a person to continuously monitor fire hazards for a minimum of one (1) hour after the end of any hot work. When the hour has passed, the person shall sign the designated section of the permit and submit it to the site representative.
4. When hot work is performed in areas where there are combustible materials or the walls, ceilings or floors are made of or covered with combustible materials, a final inspection of the work area must be scheduled four (4) hours after the work has finished. Unless otherwise specified by the Departmental Representative, the Contractor shall assign a person to carry out this inspection.

4.2.17.2 Welding and cutting

In addition to the conditions set out in the preceding paragraphs, the Contractor shall comply with the following requirements:

1. Welding and cutting must be performed in accordance with the requirements set out in the *Safety Code for the construction industry* (S-2.1, r. 4) and CSA Standard W117.2 - Safety in Welding, Cutting & Allied Processes.
2. Use an air extraction system with filters for all indoor welding and cutting work.
3. Suspend any activity that produces gases, vapours or flammable or combustible dust in the proximity of welding or cutting work.
4. Store compressed gas cylinders on a fireproof surface and ensure that the room is well ventilated.
5. Store oxygen cylinders at least six (6) metres away from cylinders containing flammable gas (e.g., acetylene) or combustible materials such as oil and grease unless they are separated by a wall made of non-combustible material as specified in section 3.13.4 of the *Safety Code for the construction industry* (S-2.1, r. 4).
6. Store cylinders away from all heat sources.
7. Do not store cylinders near stairs, exits, corridors or elevators.
8. To avoid the risk of explosion, do not allow acetylene to come into contact with metals such as silver, mercury, copper and brass alloys containing more than sixty-five percent (65%) copper.
9. Make sure that the electric arc welding equipment has the required voltage rating and is grounded.
10. Make sure that the lead wires of electric welding equipment are not damaged.
11. Place welding equipment on a flat surface protected from the weather.
12. Put fire-proof fabric in place when overhead welding is being done and there is a risk of falling sparks.
13. Remove or protect flammable or combustible materials located within 15 metres of the welding work.
14. Never weld or cut on closed containers.
15. Do not cut, weld or carry out open-flame work on a tank, pipe or other container that may contain a flammable or explosive substance or residue unless
 - a. the container has been cleaned and air samples show that the work can be done safely, and
 - b. measures have been taken to ensure worker safety.

4.2.18 ROOFING WORK

4.2.18.1 Fall protection

1. The installation of guardrails is mandatory at all times; however, the installation of a warning line is permitted to delineate work areas provided that all requirements in sections 2.9.4.0 and 2.9.4.1 of the *Safety Code for the construction industry* are met.

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2. The guardrails must remain in place until the end of the project. The Departmental Representative will authorize their removal after verifying that all work, inspections and corrections have been completed.
 3. Safety harnesses must be worn when installing guardrails.
 4. Safety harnesses must be worn when installing or modifying parapets or flashings if guardrails have to be moved temporarily.
 5. Safety harnesses must be worn when receiving materials and giving crane signals near the edge of a building.
 6. Safety harnesses must be worn when working beside an open edge where general protection does not provide adequate safety.
 7. The Contractor shall provide an anchoring method and lifeline system conforming to section 2.10.12 of the *Safety Code for the construction industry* (R.S.Q., c. S-2.1, r. 4) for every work area or sector.

4.2.18.2 Lifting of materials

1. For all winches, the Contractor shall submit to the Departmental Representative the installation procedure recommended by the manufacturer or, if that is not available, an installation procedure signed and sealed by an engineer. The installation procedure must take into account the allowable maximum loads; the number, weight and location of counterweights; and any other details that could affect the device's capacity and stability.
2. The Contractor shall carefully inspect all slings and hoisting devices and ensure that any that are in poor condition are destroyed and disposed of.
3. Compressed-gas cylinders shall be lifted with a basket specially designed for that purpose.
4. For any use of a crane or boom truck, the Contractor shall comply with the requirements of the paragraph entitled "Lifting loads with crane or boom truck" in this section.

4.2.18.3 Burn protection

1. Persons assigned to boilers shall wear long sleeves, safety goggles and a face screen when loading boilers.
2. Persons assigned to work that involves asphalt or other hot fluids shall wear gloves, long sleeves and safety goggles.

4.2.18.4 Fire protection

1. The storage and use of propane cylinders shall comply with CAN/CSAB149.2, Propane Storage and Handling Code. The cylinders shall be stored outdoors, in a safe place, away from any unauthorized handling, in a location where no vehicles are allowed unless the cylinders are protected by barriers or similar protection.
2. The number of propane cylinders on the roof shall not exceed the number required for a day's work, and the cylinders shall at all times be secured upright or held upright in a specifically designed cart.
3. All hot work (burning, heating, riveting, welding, cutting, grinding, etc.) must be carried out in accordance with the "Hot work" paragraph in this section.

4.2.18.5 Material and waste management

1. On the roof, light-weight materials and sheet materials shall be kept in containers or firmly secured. If this requirement is breached in any way, the Departmental Representative may prohibit any materials from being stored on the roof.
2. Waste shall be removed as it is generated via a waste chute or in appropriate containers; the Contractor shall provide the means to prevent waste from being blown away.
3. All waste shall be removed from the roof at the end of each shift.
4. Unless specially authorized by the Departmental Representative, dumpsters shall be placed at least three (3) metres from any structure or building.

4.2.18.6 Protection of occupants and the public

1. The Contractor shall install covered walkways, nets or similar devices to protect workers, the public and occupants from falling objects at building access points and exits. The protection measures used must be approved by the Departmental Representative.
2. A ground-level safety perimeter shall be established beneath the work area to protect workers, occupants and the public.
3. The ground-level work area, the materials handling area and the area where the boiler is located shall be clearly barricaded to prevent access by occupants and the public.
4. Before installing any device likely to emit gas or fumes, the Contractor shall obtain authorization from the site representative. The site representative will ensure that there is no risk of leakage into the building's ventilation systems.

4.2.19 STEEL STRUCTURE ERECTION OR DISMANTLING WORK

4.2.19.1 In addition to complying with section 3.24 of the *Safety Code for the construction industry* (S-2.1, r. 4), the Contractor shall comply with the requirements set out in the following paragraphs.

4.2.19.2 The Contractor shall submit the following documents to the Departmental Representative before the beginning of steel structure erection work:

1. erecting procedure as specified in section 3.24.10 of the *Safety Code for the construction industry* (S-2.1, r. 4);
2. rescue procedure for the release of a worker suspended in a safety harness within 15 minutes; the procedures must be specific to the construction site and compliant with section 3.24.4 of the *Safety Code*; the procedure must be accompanied by written confirmation that it has been tested;
3. certification from an engineer that the anchor rods were installed in accordance with the anchoring plan, as required in section 3.24.12 of the *Safety Code*;
4. hoisting procedure, if the lifting is performed in one of the ways specified in section 3.24.15 of the *Safety Code*;
5. name of the person identified as the rescuer and his/her rescue training certificate;
6. name of the person identified as the first-aid attendant and his/her first-aid training certificate.

4.2.19.3 The Contractor shall ensure that the following documents are available at all times on the site for review:

1. steel structure manufacturer's erection plan meeting the requirements of section 3.24.9 of the *Safety Code for the construction industry* (S-2.1, r. 4);
2. anchoring plan for post anchoring rods meeting the requirements of section 3.24.11 of the *Safety Code for the construction industry* (S-2.1, r. 4).

4.2.20 WORK NEAR BODIES OF WATER

4.2.20.1 For all work done near a body of water (work above water, work on a wharf, work on the edge of a watercourse, etc.), the Contractor must meet the requirements in the following paragraphs in addition to those in the *Safety Code for the construction industry*.

4.2.20.2 The Contractor must plan its work in such a way as to implement safety measures to prevent any worker from falling into the water. The use of such measures shall be preferable to wearing a life jacket.

4.2.20.3 Submit the following documents to the Departmental Representative before beginning the work:

1. description of the body of water;
2. description of the work being performed near this body of water;
3. water transportation plan tailored to the work and the characteristics of the body of water;
4. rescue plan tailored to the work and to the characteristics of the body of water.

Each of the above documents must contain, at a minimum, the information required in section 11 of the *Safety Code for the construction industry*.

If there is a possibility that all or part of the work will be done during the winter, the safety measures included in the above documents must be adjusted accordingly.

4.2.20.4 The Contractor shall submit to the Departmental Representative the training certificates required under section 11.2 of the *Safety Code for the construction industry* for the following individuals:

1. the person assigned to prepare the documents required in the preceding paragraph; and
2. each person responsible for transportation or rescue operations.

4.2.20.5 If the rescue plan specifies the use of a vessel, the Contractor shall submit the Transport Canada qualification cards or certificates of the rescuers for this project to the Departmental Representative.

4.2.20.6 The Contractor shall include in its weekly inspection checklist the devices required under sections 11.4 and 11.5 of the *Safety Code for the construction industry*.

4.2.20.7 Ensure that a rescue vessel moored in the water is available at every location where a worker could fall into the water. However, one vessel may serve more than one work location on the same site provided that the distance between the work location and the vessel is less than 30 metres.

4.2.20.8 Where the site is a wharf, a pier, a quay or any similar structure, a ladder with at least two (2) rungs below the surface of the water shall be installed on the front of the structure every 60 metres.

4.2.21 INDOOR USE OF INTERNAL COMBUSTION ENGINES

4.2.21.1 In addition to complying with section 3.10.17 of the *Safety Code for the construction industry* (S-2.1, r. 4), the Contractor shall comply with the requirements set out in the following paragraphs.

4.2.21.2 The use of gasoline-powered equipment inside a building is prohibited, even if the building is equipped with openings.

4.2.21.3 The use of other equipment powered by an internal combustion engine inside a building must be authorized by the Departmental Representative.

4.2.21.4 For any use of equipment powered by an internal combustion engine inside a building, even if the building is equipped with openings, the Contractor shall install a ventilation system to keep the concentrations of toxic gases below the regulatory values. Contaminated air must be exhausted outside the building.

1. Before using equipment powered by an internal combustion engine, the Contractor shall prepare a written plan showing the following:

2. number of fans to be installed;

3. fan power;

4 location of the fans;

5. dimensions of the openings that will be open during the work.

4.2.21.5 During the operation of equipment powered by an internal combustion engine, the Contractor must measure the concentrations of carbon monoxide and nitrogen oxides in the workers' respiratory zone in the work area; the concentration levels measured must be recorded every 30 minutes in a log available for review.

4.2.21.6 If the work is being performed in an occupied building, the Contractor must also measure the concentrations of carbon monoxide and nitrogen oxides in the rooms next to the work area every 30 minutes and record the readings in a log.

4.2.21.7 If the carbon monoxide or nitrogen oxide detector alarm sounds during the course of the work, the Contractor shall suspend the work and make the necessary corrections before resuming the work.

4.2.21.8 A portable fire extinguisher must be available at all times in the work area during the use of equipment powered by an internal combustion engine.

4.2.21.9 Equipment must be kept at a safe distance from all combustible materials.

4.2.21.10 The storage of fuel for equipment powered by an internal combustion engine is prohibited inside a building.

4.2.22 TEMPORARY HEATING

4.2.22.1 In addition to complying with section 3.11 of the *Safety Code for the construction industry* (S-2.1, r. 4), the Contractor shall comply with the requirements set out in the following paragraphs.

4.2.22.2 A portable fire extinguisher must be available at all times near the heating units, no matter what type of heating is used.

4.2.22.3 The heating units must always be used in accordance with the manufacturer's specifications.

4.2.22.4 Where applicable, canvases or tarpaulins used near the heating units must be firmly tied down so they cannot be blown onto the heating units, their pipes or any other heat source.

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- 4.2.22.5 Gas cylinders must be installed in such a way that they are protected from vehicle and other equipment traffic.
 - 4.2.22.6 When non-electric heating units are used, the Contractor shall install a carbon monoxide detector in the work area, near the appliances and/or workers, for the duration of the heating period. If the detector alarm sounds, the Contractor shall make the necessary corrections to the heating systems immediately.
 - 4.2.22.7 The Contractor shall provide minimum supervision of the heating equipment outside working hours (evenings and weekends). A monitoring plan must be submitted to the Departmental Representative before heating equipment is used.

4.2.23 WORK NEAR OVERHEAD POWER LINES

- 4.2.23.1 When there is an overhead power line in the work zone and the Contractor chooses to apply section 5.2.2 (b) of the *Safety Code for the construction industry* (S-2.1, r. 4), a copy of the agreement with the electric power company and the work plan required under section 5.2.2 (b) must be submitted to the Departmental Representative before the beginning of the work associated with those documents.

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