

ANNEX “A”
LASALLE CAUSEWAY – MAINTENANCE WORK
STATEMENT OF WORK

1. REQUIREMENT

- 1.1. **Provide all necessary labour, tools, equipment, materials, safety devices, and supervision required to provide regular maintenance services such that the LaSalle Causeway will be safe, reliable, and meet operational requirements.**

2. BACKGROUND

- 2.1. **In the interest of public safety and preservation of the assets, all bridges under the custodianship of PSPC are to be maintained to a level of service consistent with accepted industry practices, codes and standards. As such, regular and maintenance patrols are scheduled and undertaken by competent and qualified personnel.**
- 2.2.

3. LOCATION

3.1. **LaSalle Causeway**

- 3.1.1.Location.— The LaSalle Causeway is part of Frontenac County Road 2. It connects downtown Kingston to the west with Barriefield and the Royal Military College/Canadian Forces Base Kingston to the east. The crossing spans the Cataraqui River, whose nearby outlet to the south flows into the St. Laurence River.
- 3.1.2.Description.— The LaSalle Causeway is composed of 5 structures: 3 bridges; the East Bridge, the West Bridge, and the center Bascule Bridge; as well as 2 Causeways; the East Wharf, and the West Wharf. The crossing supports 2 lanes of traffic, each with a varying width of 3.5m to 4.5m, and one pedestrian sidewalk of with a varying width of 1.2m to 2.5m along the south side. The total length of the crossing is approximately 450m.
- 3.1.3.Parking. — Main Building Area
- 3.1.4.See drawing LC-R101 for site layout and limits of work.

4. BRIDGE MAINTENANCE CREW FOR A VISIT

- 4.1. **Departmental Representative (DR) will notify Contractor of requirement for the onsite visit by telephone and by E-mail.**
- 4.1.1.Contractor to provide two (2) 24 hour phone numbers to DR, one primary number and one backup.
- 4.1.2.Personnel monitoring 24 hour phone number to be able to organize and mobilize workers quickly upon notification.
- 4.2. **Contractor to perform Bridge Maintenance Patrol within 24 hours of notification.**
- 4.2.1.DR may request Bridge Maintenance Patrol be performed sooner in the event of an imminent public health and safety issue is encountered.
- 4.2.2.DR will provide list of known work for Contractor to perform during maintenance patrol.
- 4.3. **Perform the bridge maintenance work, as described in this Statement of Work, during the Bridge Maintenance Visit**
- 4.3.1.Notify Department Representative upon discovery of work items not covered in this Statement of Work.

4.4. **Crew Size**

- 4.4.1. Standard Bridge Maintenance Crew for a Visit will consist of a minimum of 2 general labourers physically capable of performing the work as outlined in this Statement of Work.
- 4.4.2. Provide specialized trades person, professional or laborer (such as, but not limited to. Welder, Carpenter plumber)) when required as outlined in this Statement of Work.
- 4.4.3. DR will verify certificates of qualification, licenses and other applicable documents as required prior to start of work.
- 4.4.4. Contractor must ensure sufficient staff is available to safely, effectively, and efficiently perform the Work.
- 4.4.5. Site supervisor must be on site when the Work is being performed.

4.5. **Maintenance Visit Report**

- 4.5.1. Within 1 working day of completion of bridge maintenance visit, submit a Maintenance Visit Report to the DR via email as a PDF file.
- 4.5.2. Provide a separate Maintenance Visit Report for each Maintenance Visit, clearly identifying what work was done and where the work was done.
- 4.5.3. Contents
 - 4.5.3.1. Maintenance Visit Report must include the date and time of patrol, the temperature and weather, the time spent on site, description of work done, and a list of materials used.
 - 4.5.3.2. Maintenance Visit Report must use clear and consistent terminology to describe where work is being done. Use bridge components (abutment, pier, truss, etc.) and approximate distance from abutments and/or compass directions (North, South, East or West) to describe where work was done.
 - 4.5.3.3. Maintenance Visit Report must include work specific items as outlined in this Statement of Work.
 - 4.5.3.4. If multiple trades are involved in a repair, include a breakdown by trade in the Maintenance Visit Report.
 - 4.5.3.5. Include before and after pictures of work performed during Maintenance Visit. Provide size reference in all photos, such as a scale, measuring tape, or other appropriate reference.
- 4.5.4. Write Maintenance Visit Report in a professional and accurate manner, either typed or written neatly in ink. Employee responsible for the work must print and sign their name and date of the Maintenance Visit Report.

5. **CLEANING**

Scheduling— Schedule work when notified by DR

5.1. **SCOPE OF WORK**

5.2. **Cleanup**

- 5.2.1. Definition— Removal of garbage, vegetation, dirt, debris and litter on and around bridges that may be harmful to the public (tripping hazard, slipping hazard, safety hazard) or be unsightly to the

general appearance of the bridges.

5.2.2. Description— Work taking place near public must provide a safe avenue of travel for pedestrians. No garbage, vegetation, dirt, debris or litter is to be disposed of in the watercourse. Any hazardous materials encountered (including but not limited to drug paraphernalia, blood, human and animal waste) are to be handled by properly trained and equipped individuals brought to site as required.

5.2.3. Scope

5.2.3.1. Crew Size – Standard Maintenance Crew for a visit.

5.2.3.2. Materials and Equipment

5.2.3.2.1. Garbage bags

5.2.3.2.2. Brooms

5.2.4. Procedure

5.2.4.1. Collect and remove all garbage and debris, trim vegetation from bridge structure, below bridge structure and within 3 metres of bridge shadow.

5.2.4.2. Sweep, collect, and remove sand, salt, dirt and debris from pedestrian walkways.

5.2.5. Scheduling— Schedule work when notified by DR.

5.2.6. Reporting— Contractor to notify DR upon finding any hazardous materials (including but not limited to drug paraphernalia, blood, human and animal waste) and record the location it was found.

5.3. **Disposal – Contractor to supply DR with proof of disposal at appropriate site as required.**

5.4. **OFFICE CLEANING**

5.4.1. Definition— Any cleaning within the main office building.

5.4.2. Scope

5.4.2.1. Crew Size – Standard Maintenance Crew for a visit.

5.4.2.2. Special materials, equipment and cleaning agents/detergent to be submitted to DR for approval

5.4.2.2.1. Garbage bags and cleaning rugs

5.4.2.2.2. Broom and mop

5.4.3. Procedure

5.4.3.1. Cleaning of staff offices, 3 in total and boardroom should be done every two weeks. Cleaning should comprise of sweeping/mopping of floors in all offices, dusting of office/boardroom area, cleaning of windows and doorways, at the same time main stairs should be swept and mopped, empty garbage cans from office and bathroom areas.

5.4.3.2. Clean fridge and microwave monthly.

5.4.3.3. Clean office chairs annually.

5.4.3.4. Cleaning of the control room should include sweeping/mopping of floors and cleaning of windows. Control room needs to be cleaned from April 1 to October 31.

5.4.4. Scheduling—Office cleaning schedule is outline above.

5.4.5. Reporting— Contractor to notify DR upon finding any hazardous materials (including but not limited to drug paraphernalia, blood, human and animal waste) and record the location it was found.

5.5. **Disposal – Contractor to supply DR with proof of disposal at appropriate site as required.**

5.6. **GRAFFITI**

5.6.1. Definition.— Any paint/sticker/marking applied to bridge components (including but not limited to railings, sidewalks, barrier walls, lampposts, signs and trusses) without the written authorization of PSPC. This graffiti is removed to maintain a presentable appearance of the Asset. Graffiti greater in size than 0.25m² would be addressed under the “as and when” required portion of the contract.

5.6.2. Description.— Only remove graffiti on PSPC owned property and assets. Paint over graffiti only if ambient air temperature is above 5° C. Do not paint over graffiti on concrete. Notify DR of graffiti larger than 0.25m² or graffiti requiring specialized access equipment for removal, such as an elevated work platform or a boat. Send any product specifications to the DR for approval prior to utilisation.

5.6.3. Scope

- 5.6.3.1. Crew Size – Standard Maintenance Crew for a visit.
- 5.6.3.2. Materials and Equipment
 - 5.6.3.2.1. Pressure washer with minimum strength of 2500 psi with nozzle kept 30 cm from surface.
 - 5.6.3.2.2. Environmentally safe graffiti removal products that will not damage bridge coating system.
 - 5.6.3.2.3. Biodegradable phosphate free soap.
 - 5.6.3.2.4. Single component, moisture curing aliphatic urethane paint, colour matched to existing bridge surface.
 - 5.6.3.2.5. Clean potable water.
 - 5.6.3.2.6. Water tank with sufficient supply of potable water to complete work.
- 5.6.3.3. Procedure – Paint
 - 5.6.3.3.1. Apply graffiti removal product. Let stand as per manufacturer’s recommendations.
 - 5.6.3.3.2. Rinse surface with water, using scrubbers, sponges, rags, or pressure washer to remove any residue.
 - 5.6.3.3.3. Allow surface to dry.
 - 5.6.3.3.4. If shadowing occurs, repeat chemical removal process.
 - 5.6.3.3.5. Only paint over on steel and only if repeated chemical wash treatments deemed ineffective. Do not paint over graffiti on concrete.
 - 5.6.3.3.6. Extend paint 10mm beyond affected area.
 - 5.6.3.3.7. If shadowing occurs, apply second coat of paint.
- 5.6.3.4. Procedure – Stickers
 - 5.6.3.4.1. Dampen sticker with soapy water.
 - 5.6.3.4.2. Scrape away sticker without damaging existing coating system.
 - 5.6.3.4.3. Wash away excessive sticker adhesive.
- 5.6.3.5. Scheduling – Schedule work when notified by DR
- 5.6.3.6. Reporting— Contractor to record size and location of all graffiti removed. Provide before and after photos of removed graffiti. Scale all photos by placing a measuring tape next to the graffiti tag in the photo. Report on areas frequently vandalized so preventive measures can be considered.

5.7. **Potholes**

5.7.1. Definition— Any depression or cavity formed in the wearing surfaces (concrete or asphalt) of the bridge. Potholes are to be filled with quality cold mix asphalt, as they represent a tripping hazard on sidewalks and a driving hazard to vehicles on the road. Send cold mix asphalt specifications to the DR for approval prior to utilisation.

5.7.2. Description— Only potholes shallower than 15 cm are to be filled using cold mix asphalt. Potholes deeper than 15 cm will require specific instruction form DR. Work is to be undertaken only when air temperature on-site is between -20° C and 35° C and there has been no heavy rain during the previous six hours. Provide before and after photos of pot hole. Scale all photos by placing a measuring tape next to the pot hole tag in the photo.

5.7.3. Scope

5.7.3.1. Crew Size – Standard Maintenance Crew for a visit.

5.7.3.2. Materials and Equipment

5.7.3.2.1. Tamping irons: mass not less than 12 kg, bearing area not exceeding 310 cm².

5.7.3.2.2. Air compressor: oil free, pressure not less than 600 kPa.

5.7.3.2.3. Cold mix asphalt: not containing diesel or kerosene, ASTM D1559 stability of 889 N or greater

5.7.3.2.4. Sand: clean, fine-grained.

5.7.3.3. Procedure

5.7.3.3.1. Remove from pothole any loose surface, unstable base material, water, snow and foreign materials.

5.7.3.3.2. Compact base using hand tamper to achieve firm foundation.

5.7.3.3.3. Apply and compact cold mix asphalt in maximum 50 mm thick lifts.

5.7.3.3.4. Leave 25 mm crown on roadways surface to allow for secondary compaction.

5.7.3.3.5. Leave 13 mm crown on sidewalks to allow for secondary compaction.

5.7.3.3.6. Apply light, well distributed sand coating to surface of fresh cold mix asphalt.

5.7.3.4. Scheduling

5.7.3.4.1. Schedule work when notified by DR

5.7.3.4.2. Work on sidewalks to be carried out during Bridge Maintenance Patrol.

5.7.3.4.3. Work on roadway to be carried out when notified by DR. Notify Department Representative of potholes requiring lane reductions or closures to complete repair work. Any work that may impede the flow of traffic is not to be undertaken until instructed by DR.

5.7.4. Reporting

5.7.4.1. Contractor to record size and location of all potholes filled. Provide before and after photos. Scale all photos by placing a measuring tape next to the potholes in the photo. Report on areas of excessive wear/damage so preventive measures can be considered.

6. Grass Cutting

6.1. **Definition — This work consists of cutting the grass on PSPC property surrounding the bridge.**

6.2. **Description — Cut grass only on PSPC property, as identified in contract documents.**

6.3. Scope

6.3.1. Crew Size – Standard Maintenance Crew for a visit.

6.3.2. Materials and Equipment

6.3.2.1. Lawn Mower

6.3.2.2. Grass Trimmer

6.3.2.3. Hedge clippers, pruners and other cutting equipment as required

6.3.3. Procedure – Cut grass and other vegetation on PSPC property; around East Wharf, around West Wharf, and along south side of sidewalk within the limits of work. Ensure no vegetation will grow onto traveled way (sidewalk, roadway, or parking lot). See areas indicated on drawing LC-R101.

6.3.4. **Scheduling** —cut the grass when it reaches 11 cm (+/- 1 cm) in height to:

5 cm from the first of June to August 30th.

3.5 cm in May, September, October and November

Perform Grass Cutting when grass is dry and no rain is forecasted during the work.

Notify DR if this condition cannot be met within the timeframe outlined in this

Statement of Work.

6.3.5. Monitoring — The Contractor is responsible to monitor the site to know when to proceed with the grass cutting within the tolerance indicated in 6.3.4.

6.3.6. Reporting.— Report any areas where vegetation could not be cut.

7. Removal of Dangerous Substances

7.1. **Definition.— The location and removal of drug paraphernalia, human and animal waste in and around the bridge structures.**

7.2. **Description.— Drug paraphernalia are only to be handled, transported, and disposed of by properly trained and equipped individuals.**

7.3. Scope

7.3.1. Crew Size

7.3.1.1. Provide workers with appropriate safety equipment and ensure they are properly trained to handle drug paraphernalia. Equipment to address hazards inherent to the task.

7.3.2. Procedure

7.3.2.1. Individuals taking part in regular patrols are to pay special attention for the presence of drug paraphernalia. A removal crew is to be sent to the site when drug paraphernalia are encountered. All drug paraphernalia items located are to be secured and transported safely in an appropriate container to an approved disposal site.

7.3.2.2. Handle and dispose of drug paraphernalia in accordance with Canadian Environmental Protection Act, Transportation of Dangerous Goods Act, and regional and municipal regulations.

7.3.2.3. Contractor to specify proposed method and disposal site at bid submission. Any proposed change to the disposal method must be discussed with DR and confirmed in

writing.

7.3.3.Scheduling— Schedule work when notified by DR . Notify DR of any Drug Paraphernalia found on-site. Proceed with removal upon receipt of written notification from DR.

7.3.4.Reporting— Contractor to notify DR upon finding any hazardous materials (including but not limited to drug paraphernalia, blood, human and animal waste) and record the location it was found. Record disposal method and supply proof of disposal as required.

7.4. **Disposal – Contractor to supply DR with proof of disposal at appropriate site as required.**

8. **Pressure Washing**

8.1. **Definition.— Wash bridge components with high pressure water to remove dirt, sand, salt residue and bird waste.**

8.2. **Description.— DR to provide limits and scope of work. Pressure washing to be limited to property owned by PSPC.**

8.3. **Scope**

8.3.1.Crew Size – Provide sufficient labourers so as to complete work in a timely manner.

8.3.2.Sweep, collect, and remove sand, salt, dirt and debris on horizontal surfaces of bridge and dispose into an approved landfill site and not disposed of in the watercourse.

8.3.3.Pressure wash bridge components within limits of work as directed by Departmental Representative to remove sand, salt, and animal and bird waste:

8.3.3.1. Water for pressure washing is not to be taken from the watercourse.

8.3.3.2. Pressure washer with strength between 2800 and 3200 psi.

8.3.4.Scheduling -

8.3.4.1. Schedule work when notified by DR

8.3.5. Submit proposed schedule of work to DR a minimum of 10 days prior to start of work for approval and to facilitate coordination with other PSPC projects and all publication of public notices.

8.3.6.Reporting.— Include summary of Pressure Washing on Maintenance Visit Report.

9. **Crack Sealing**

9.1. **Definition – Fill cracks ranging in size from 5mm to 20mm with hot pavement crack sealer. Send crack sealer specifications to the DR for approval prior to utilisation.**

9.2. **Description – DR will provide limits and estimated total length of cracks to seal. Crack sealing to be limited to roadway within limits of work.**

9.3. **Scope**

9.3.1.Crew Size – Provide sufficient labourers so as to complete work in a timely manner.

9.3.2.Materials and Equipment

9.3.2.1. Asphalt Crack Sealer: Hot pour bitumous pavement crack sealant

9.3.2.2. High Pressure Air Compressor: High pressure air to be free of moisture and oil

9.3.3.Procedure

9.3.3.1. Collect and remove sand, dirt, loose materials, and other debris from road surface

adjacent to cracks.

9.3.3.2. Use high pressure air to remove remaining sand, dirt, loose materials, and other debris from within cracks.

9.3.3.3. Apply crack sealer to manufacturer's written instructions.

9.3.3.3.1. Remove excess crack sealer before setting

9.3.4. Scheduling – Schedule work when notified by DR. Perform crack sealing in dry conditions when temperature is above 0°C and forecast does not call for rain or temperatures below 0°C for 24 hours. Notify DR if these conditions cannot be met within the timeframe outlined in this Statement of Work.

9.3.5. Reporting – Report total length of cracks sealed.

10. Touch-up Coating

10.1. **Definition – This work consists of coating touch up repairs on steel pipe curbs, handrails and members of the bridge structure in the immediate splash zone. Send any product specifications to the DR for approval prior to utilisation.**

10.2. **Description – Areas of the steel pipe curbs, handrails, and bridge members in the immediate splash zone to be painted over with one primer coat, and one top coat to a minimum thickness of 75 microns per coat where existing coating has failed.**

10.3. Scope

10.3.1. Crew Size – Provide sufficient labourers so as to complete work in a timely manner.

10.3.2. Materials and Equipment.

10.3.2.1. Power and hand tools for cleaning.

10.3.2.2. Portable, industrial wet/dry vacuum.

10.3.2.3. Natural bristle paint brushes and medium nap phenolic core paint rollers.

10.3.2.4. Power drill and mixing attachment to use for paint mixing.

10.3.2.5. Clean potable water

10.3.2.6. Generator for all relevant tools.

10.3.2.7. Primer Coat: self-priming modified aluminum epoxy mastic. Tint to differ sufficiently from existing top coat of existing coating system and from wet colour of new coat.

10.3.2.8. Top Coat: Aliphatic Acrylic-Polyester Polyurethane. To be colour-matched to the existing top coat.

10.3.2.9. Zinc-rich primer for galvanization touch-up in accordance with ASTM 780.

10.3.3. Procedure

10.3.3.1. Remove loose, cracked, brittle, or non-adherent paint, rust, mill scale, welding slag, dirt, oil, and other foreign substances in accordance with SSPC-SP1, SSPC-SP2, and SSPC-SP3. Collect debris using vacuum attachment on tools.

10.3.3.2. Wipe down surfaces with a damp rag cleaning any salt, sand, bird waste, or debris.

10.3.3.3. Scrape edges of old paint back to sound material where the remaining paint is thick and sound.

10.3.3.4. Feather 10 mm around exposed edges.

10.3.3.5. Wipe surfaces with clean dry cotton rag to remove any small debris left behind from power or hand tools.

10.3.3.6. Mix ingredients in container before and during use and ensure breaking up of lumps, complete dispersion of settled pigment, and uniform composition.

10.3.3.7. Extend top coat 10 mm beyond prepared surface unless specified otherwise.

- 10.3.3.8. Apply each coat of paint as a continuous film of uniform thickness.
- 10.3.3.9. Repaint thin spots or bare areas before next coat of paint is applied.
- 10.3.3.10. Where painting does not meet the specifications, and when so directed by Departmental Representative, remove defective paint, thoroughly clean affected surfaces, and repaint in accordance with these specifications.
- 10.3.3.11. Roller application is preferable to brush application. Use brushes for cracks, crevices, corners, and other areas inaccessible by a roller.
- 10.3.3.12. Clean and re-paint surfaces exposed to freezing, excess humidity, rain, snow, or condensation during the curing period.

10.3.4. Scheduling

- 10.3.4.1. Work to be carried out when notified by DR.
- 10.3.4.2. Do not paint when:
 - 10.3.4.2.1. Air temperature is below 10°C or when temperature is expected to drop to 0°C before paint has dried.
 - 10.3.4.2.2. Temperature of surface is over 50°C unless paint is specifically formulated for application at high temperatures.
 - 10.3.4.2.3. Fog or mist occurs at the site; it is raining or snowing; there is danger of rain or snow; relative humidity is above 85%
 - 10.3.4.2.4. Surface to be painted is wet or frosted.
 - 10.3.4.2.5. Previous coat has not yet received enough time to recoat.

11. SNOW PLOUGHING

- 11.1. **Definition.— This work consists of the removal of snow and ice from PSPC property, and the spreading of de-icing agents on PSPC property.**
- 11.2. **Description.— Remove snow and ice, and spread de-icing agents only on PSPC property as outlined within this Statement of Work and as indicated on contract drawings. Special attention has to be taken for the bridge sidewalks**
- 11.3. **Scope. — Clear snow and ice from building entrances, roads, sidewalks and parking lots.**
- 11.4. **Building entrances, emergency exits, doorways and parking must be free of snow and ice to bare pavement to their full width by 07:00 A.M., seven (7) days a week. If snow accumulation occurs after this time, clearing of these zones will commence once there is an accumulation of four (4) cm. During ice forming conditions, ice-control agents will be applied to these zones as needed. Emergency vehicle routes will be clear of snow and ice, and the filling station for the generator must be At all time**
- 11.5. **Safety. — The Contractor is responsible to treat the parking lots to ensure that they are safe for vehicle and pedestrian traffic. The Contractor must also ensure that vehicle access to and from the property and municipal roads is free of hazards that may interfere with safe flow of traffic. The Contractor is obliged to monitor the site according to the weather in the vicinity and apply ice melting or abrasive products as appropriate. In determining whether or not to apply these products in any particular circumstance, the Contractor must act reasonably, and apply the standards of the custom of the snow and ice maintenance industry.**
- 11.6. **Ice-control agents.— The Contractor must submit a Salt Management Plan. The Salt Management Plan must be submitted at the pre-commencement meeting. This plan will be reviewed by the Site Authority and Technical Authority and the Contractor will make any necessary adjustments to meet the operational requirements of the site and the required services as outlined in the Statement of**

Work. The Salt Management Plan must outline under the Best Practices section what products will be used and under what conditions.

Ice melter such as Landscaper’s Choice, Geomelt or Ecosalt is to be used on steps, doorways, ramps, and walkways. Products such as sand, white salt, treated salt such as Thawrox, and liquids such as Caliber M1000 and M2000 to be added to the treated salt are to be used in the parking lot and roads as per the approved Salt Management Plan.

11.7. Clear snow from garbage and recycling dumpsters. — Keep access to garbage and recycling dumpsters clear of snow and ice at all times.

11.7.1. Snow piles. — Blown, plowed or piled snow is to be kept away from obstacles, including but not limited to, trees, shrubs, flower beds, planters, fences and walls of buildings.

Snow piled temporarily, with the written approval of the Technical Authority, will be removed within 24 hours after storm. Temporary snow piles must not obscure or impede visibility for vehicular or pedestrian traffic.

11.8. Snow coverage on grass. — A minimum of fifteen (15) cm of snow must be left on the grass where snow is removed or pushed.

11.9. Catch Basins and Culverts. — Keep catch basins and culverts free of snow and debris and anything that interferes with the free flow of run-off water at all times.

11.10. Repairs. — Repairs to signs damaged by winter snow clearing will be completed to satisfaction of the Technical Authority by May 15th. Repairs to curbs damaged by winter snow clearing will be completed to satisfaction of the Technical Authority by May 15th. Repairs to buildings, walkways, turf zones, removal of ice-control agents, replacement of damaged shrubs and trees due to snow removal damage will be completed by May 15th.

12. CLEANING

12.1. Definition. — The work consists of cleaning the bridge after the final melt of snow and ice from the bridge structure and surrounding areas.

12.2. Description.— Remove abrasive, waste, mud, organic waste, graffiti, sand and salt on the LaSalle Causeway as outlined within this Statement of Work.

12.3. Materials and equipment to adhere to the following requirement:

- 12.3.1. Clean, potable water from water tank;
- 12.3.2. Pressure washer with minimum capacity of 2500 psi;
- 12.3.3. Telescoping wands;
- 12.3.4. Gutter cleaner wands.

12.4. Work to adhere to the following requirement:

- 12.4.1. Contractor to provide all staff, materials, power source and equipment required to do the work;
- 12.4.2. Work to be limited to property owned by PSPC;
- 12.4.3. Departmental Representative will provide all required keys to access work area.

12.5. Put in place appropriate measures to ensure garbage, sand, debris or any other products of cleaning process do not enter the river.

12.6. Contractor to submit the following a minimum of 10 days prior to start of work:

- 12.6.1. Proposed work schedule;
- 12.6.2. Traffic control and management plan;

12.6.3. All health and safety documentation, including Site Specific Health and Safety Plan, employees fall arrest protection certificates and worker qualification certificates.

- 12.7. **Provide vehicles, cyclists and pedestrians with safe passage through work zone.**
- 12.7.1. Follow MTO Book 7 for traffic control procedures
- 12.7.2. Lane closure permitted during off-peak hours:
- 12.7.2.1. Daytime Monday to Friday between 9:00 am and 3:00 pm;
 - 12.7.2.2. Nighttime Monday to Friday between 7:00 pm and 5:00 am;
 - 12.7.2.3. Weekend Friday 8:00 pm to Monday morning 5:00 am.
- 12.8. **Do not close lanes of roadway or re-route traffic without approval of Departmental Representative.**
- 12.9. **Maintain at least one pedestrian access across the bridge at all time. Cyclist can be required to dismount and walk their bike if required.**
- 12.10. **Complete work in order from top to bottom of bridge to avoid sending salt, sand, bird waste or debris onto previously cleaned areas.**
- 12.11. **Sweep and collect any garbage, dirt, sand and salt from the two concrete abutment areas under the steel bridge at the toe and heel of the steel bridge barriers and from any other horizontal surfaces within reach from the ground.**
- 12.12. **Collect and remove all garbage and debris from the bridge structure and trim vegetation, below the bridge structure and within 3 metres of the bridge shadow.**
- 12.13. **Pressure wash bridge components to remove dirt, sand, salt residue, debris and animal waste. Begin pressure washing at the east side of the west bridge. Pressure wash the following :**
- 12.13.1. Railings and guardrails;
 - 12.13.2. Centre median;
 - 12.13.3. Sidewalks;
 - 12.13.4. Guardrails;
 - 12.13.5. Structural steel, lamp posts and traffic signs to a height of 2.5 meters above bridge deck;
 - 12.13.6. Expansion joints;
 - 12.13.7. Barrier walls;
 - 12.13.8. Deck drains (except for Des Joachims Bridge)
 - 12.13.8.1. Unblock and pressure wash deck drains only after pressure washing all other above-deck components;
 - 12.13.8.2. Deck drains should be vacuumed to remove any debris;
 - 12.13.8.3. Notify Departmental Representative of any drains that cannot flow freely.
- 12.14. **Water for pressure washing not to be taken from the watercourse.**
- 12.15. **Use telescoping wands for hard to reach components.**
- 12.16. **Clean and clear worksite of all construction material, equipment and debris after each day of work.**
- 12.16.1. Do not store materials or equipment on-site;
 - 12.16.2. All garbage, sand, dirt and debris is to be removed to an approved landfill site and not disposed of in the watercourse.
- 12.17. **Scheduling : Spring cleaning have to be done each year by the 15 of May.**

13. GENERAL INSTRUCTIONS

13.1. **Regulatory Requirements**

13.1.1. References and Codes:

13.1.1.1. Materials must be new and work must conform to minimum applicable standards of “References” indicated in other sections, the National Building Code of Canada 2015 (NBC) and all applicable Provincial and Municipal codes. In case of conflict or discrepancy most stringent requirement will apply.

13.1.2. Site Smoking Environment – Smoking is not permitted inside bridge abutments or enclosed catwalk areas.

13.1.3. Hazardous Materials:

13.1.3.1. Hazardous Materials: product, substance, or organism that may cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into environment.

13.1.3.2. Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of Material Safety Data Sheets (MSDS).

13.1.3.3. Stop work immediately when material resembling spray or trowel-applied asbestos, Polychlorinated Biphenyl (PCB), mold or other hazardous materials is encountered during work.

13.1.3.3.1. Take preventative measure and promptly notify DR.

13.1.3.3.2. Do not proceed until written instructions have been received from DR.

13.2. **Fire Safety Requirements**

13.2.1. Comply with both National Building Code of Canada 2015 and National Fire Code of Canada 2015 for safety of persons in buildings in event of fire and protection of buildings from effects of fire, as follows;

13.2.1.1. National Building Code (NBC): for fire safety and fire protection features that are required to be incorporated in building during construction.

13.2.1.2. National Fire Code (NFC):

13.2.1.2.1. On-going maintenance and use of fire safety and fire protection features incorporated in buildings.

13.2.1.2.2. Conduct of activities that might cause fire hazards in and around buildings.

13.2.1.2.3. Limitations on hazardous contents in and around buildings.

13.2.1.2.4. Establishment of fire safety plans.

13.2.1.2.5. Fire safety at construction and demolition sites.

13.3. **Submittal Procedures**

13.3.1. Submit promptly to DR submittals listed for review, in orderly sequence to not cause delay in work.

13.3.2. Do not proceed with work affected by submittals until review is complete and approval received from DR and confirmed in writing.

13.3.3. Product Data:

13.3.3.1. Submit product data: Manufacturers catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.

13.3.3.2. Cross reference product data information to applicable portions of the Statement of Work.

13.4. **Site Supervisor**

13.4.1. Appoint one labourer in bridge maintenance crew to act as Site Supervisor.

13.4.2. Site Supervisor will be present and available at all times during bridge maintenance

patrols.

13.5. **Quality of Work**

13.5.1. Carry out work using qualified licensed workers or apprentices in accordance with Provincial Act respecting manpower vocational training and qualification.

13.5.2. Permit employees registered in Provincial apprenticeship program to perform specific tasks only if under direct supervision of qualified licensed workers.

13.5.3. Determine permitted activities and tasks by apprentices, based on level of training attained and demonstration of ability to perform specific duties.

13.5.4. Carry out work using subcontractor who holds valid license issued by Province in which work is being contracted.

13.6. **Use of Site**

13.6.1. Examine site and conditions likely to affect work and be familiar and conversant with existing conditions.

13.7. **Contractor responsible for making arrangements for sanitary facilities.**

13.8. **Contractor to provide portable power supply when electrical power is needed.**

13.9. **No site storage of materials or equipment will be permitted.**

13.10. **Unless otherwise specified, materials for removal become Contractor's property and must be removed from site.**

14. TRAFFIC CONTROL

14.1. **Summary**

14.1.1. This section covers the supply, installation and management of traffic control, when required, to do tasks undertaken in this contract.

14.2. **References**

14.2.1. MTO Traffic Manual, Book 7, 2014.

14.3. **Protection of Public Traffic**

14.3.1. Comply with requirements of Acts and By-Laws for regulation of traffic or use of roadways, sidewalks and pathways where work is to be carried out.

14.3.2. Provide and maintain traffic control in accordance with short-term lane closure requirements of MTO Traffic manual, Book 7.

14.3.3. When working on travelled way:

14.3.3.1. Place equipment in position to present minimum of interference and hazard to travelling public.

14.3.3.2. Keep equipment units as close together as working conditions permit and preferably on same side of travelled way.

14.3.3.3. Do not leave materials or equipment on travelled way overnight.

14.3.4. Do not close lanes of roadway without approval of DR.

14.3.5. Before re-routing traffic or starting Work erect suitable signs and devices in accordance with applicable standards.

14.3.6. Maintain travelled way to specified widths and required number of traffic lanes, as

indicated by Departmental Representative.

14.3.7. Provide vehicles, cyclists and pedestrians with safe passage through work zone.

14.4. **Information and Warning Devices**

14.4.1. Provide and maintain signs, flashing warning lights, delineators, barricades and other warning devices as required for a safe work zone.

14.4.2. All text on construction signs to be bilingual.

14.4.3. Continually maintain traffic control devices in use by:

14.4.3.1. Checking signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.

14.4.3.2. Removing signs which do not apply to conditions existing from day to day.

14.4.3.3. Taking action immediately to correct traffic control issues and notifying DR.

14.5. **Traffic Control and Management Plan**

14.5.1. Submit proposed Traffic Control and Management Plan (TCMP) to DR for review 10 days prior to commencement of work. TCMP to include:

14.5.1.1. Traffic control layout drawings.

14.5.1.2. List of signs and other devices required.

14.5.1.3. Installation and removal procedures.

14.5.1.4. Inspection and maintenance procedures.

14.5.1.5. Traffic control procedures for pedestrians and cyclists.

14.5.2. If situation on site requires change to traffic control and management plan, submit revised TCMP to DR.

14.6. **Operational Requirements**

14.6.1. Maintain traffic control throughout period required for work.

14.6.2. Traffic Control Devices to be completely removed from bridge after each day or when not required for current work.

14.6.3. Traffic Control Devices may only be moved temporarily to side of roadway or sidewalk upon approval of DR.

15. HEALTH AND SAFETY

15.1. **Summary - This section includes health and safety considerations required to ensure that PSPC shows due diligence towards health and safety on construction sites, and meets the requirements laid out in PSPC/RPB Departmental Policy DP 073 - Occupational Health and Safety - Construction.**

15.2. **Regulatory Requirements**

15.2.1. Abide by, all relevant Legislation, Regulations, Codes, and Standards of the province having jurisdiction and ensure that all work undertaken at bridge sites on behalf of PSPC is completed in a safe manner.

15.2.1.1. Ontario: Comply with “Occupational Health and Safety Act and Regulations for Construction Projects, R.S.O. 1990, C. 0.1, as amended” and “O. Reg. 213/91, as amended”

15.2.1.2. Comply with CAN/CSA Z462 (Current Edition) Workplace Electrical Safety Standard.

15.2.1.3. Comply with CAN/CSA Z460-05 (R2010) Control of Hazardous Energy.

- 15.2.1.4. Comply with National Building Code of Canada 2010 as amended.
- 15.2.1.5. Comply with National Fire code of Canada 2010 as amended.

15.2.2. Provide all necessary safety training and personal protective equipment as required to effect work while ensuring sub-contractors are equally compliant.

15.2.3. Personal Protective Equipment

- 15.2.3.1. Minimum required Personal Protective Equipment includes:
 - 15.2.3.1.1. CSA approved hard hat
 - 15.2.3.1.2. CSA approved work boots, with green triangle tag easily verifiable
 - 15.2.3.1.3. Reflective vest or other garment with appropriate reflective markings
 - 15.2.3.1.4. Long pants
 - 15.2.3.1.5. Other appropriate equipment needed to safely execute the work being performed.

15.3. **Safety Procedures**

15.3.1. When unforeseen or peculiar safety-related factors, hazards, or conditions occur during performance of Work, immediately stop work and advise DR verbally or in writing.

15.3.2. Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by DR and provide the appropriate party with written report of action taken.

- 15.3.2.1. DR may stop work if non-compliance of health and safety regulations is not corrected.

15.3.3. Give precedence to health and safety of public and site personnel and protection of environment over cost and schedule considerations for Work.

- 15.3.3.1. Take all precautions as stated in governing provincial regulations to ensure no person is exposed to undue risk.

15.3.4. Where applicable, work site is to be barred from the public according to governing provincial regulations and to approval of DR.

15.3.5. DR reserves the right to stop work for health and safety considerations.

15.3.6. Separate work site from other construction sites by means of time, space or physical barriers.

- 15.3.6.1. Coordinate work with DR to avoid working at same time as other contractors, or
- 15.3.6.2. Maintain distance between work site and other construction sites so that work activities on either site do not interfere with one another, or
- 15.3.6.3. Install and maintain physical barriers between work site and other construction sites so that work activities on either site do not interfere with one another.

15.3.7. Provide or obtain from DR, documents as follows and post on site (if applicable):

- 15.3.7.1. Safety Policy,
- 15.3.7.2. Health and Safety Representative,
- 15.3.7.3. Contractor's name,
- 15.3.7.4. Material Safety Data Sheets,
- 15.3.7.5. Designated Substance Report (DSR), and
- 15.3.7.6. All applicable legislative and regulatory requirements.

15.4. **Responsibility**

15.4.1. Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to the extent that they may be affected by

conduct of Work.

- 15.4.2. Comply with and enforce compliance by employees and subcontractors with safety requirements of Contract Documents, applicable federal, provincial and local statutes, regulations, and ordinances, and with Site Specific Health and Safety Plan.

15.5. **Health and Safety Submittals**

- 15.5.1. PSPC requires a variety of submittals proving Contractor compliance with legislated requirements. Include the following with your firm's bid:
- 15.5.1.1. Company information (submit for sub-contractors as well):
 - 15.5.1.2. Proof of liability insurance with a valid clearance certificate from the Workplace Safety Insurance Board (WSIB) (site specific, PSPC named as certificate holder).
- 15.5.2. PSPC requires a variety of submittals proving Contractor compliance with legislated requirements. Within 5 days of being awarded contract and prior to commencement of work, submit the following to the DR:
- 15.5.2.1. Site specific Health and Safety Plan, to include and be updated regularly:
 - 15.5.2.1.1. Site specific safety hazard assessment.
 - 15.5.2.1.2. Results of safety and health risk or hazard analysis for the site tasks and operation and procedure for managing hazards.
 - 15.5.2.1.3. All applicable MSDS Sheets.
 - 15.5.2.1.4. Communication Plan.
 - 15.5.2.1.5. Contact phone numbers.
 - 15.5.2.1.6. On-site Contingency and Emergency Response Plan addressing standard operating procedures to be implemented during emergency situations.
 - 15.5.2.1.7. Public Protection.
- 15.5.3. DR will review Contractor's Site Specific Health and Safety Plan to provide comments. Contractor is to revise the plan as appropriate and resubmit plan to DR within 24 hours after receipt of comments. Review should not be construed as approval and does not reduce Contractor's overall responsibility for construction Health and Safety.
- 15.5.4. Incident and accident reports.
- 15.5.4.1. When applicable: Contractor's Electrical Master's License (must have original on-site for verification), Contractor's Electrical Master's business license (must have original on-site for verification), Electrical Safety Authority permit or certificate.
 - 15.5.4.2. Names and contact information for all sub-contractors who will be working on-site.
- 15.5.5. Employee Information – Names of all persons who will be present on-site during the course of this Contract and copies of:
- 15.5.5.1. WHMIS card (ON) or ASP Construction Safety card (QC)
 - 15.5.5.2. Trade Certificates and if applicable Apprenticeship Certificates (must have original on-site for verification)
 - 15.5.5.3. Workers' Certificates of Qualification
 - 15.5.5.4. Fall Arrest Protection Certificates
 - 15.5.5.5. Job Protection Cards and Registration, if applicable
 - 15.5.5.6. CPR/1st aid training for safety watcher (appropriate to job to be undertaken)
 - 15.5.5.7. Other certificates where required for the performance of specific tasks (including but not limited to: confined space awareness or entry (job specific), man lift, asbestos, boater certification)

15.6. **Hazardous Materials**

- 15.6.1. Designated Substance Reports for all bridges are included with project documents.

- 15.6.2. Should material resembling a hazardous material not previously identified or documented be encountered during the execution of Work, stop Work and notify DR. Do not proceed until written instructions have been received from DR.
- 15.6.3. Manage all products used in Work to requirements of the Workplace Hazardous Materials Information System (WHMIS) Regulations and Chemical Substances of the Occupational Health and Safety Act and Regulations.

15.7. **Qualifications of Personnel**

- 15.7.1. Carry out work using licensed workers; certified in the province of work, or apprentices; registered in a Québec or Ontario Provincial Apprenticeship Program, in accordance with the appropriate Provincial Act respecting manpower, vocational training and qualification.

16. ENVIRONMENTAL PROTECTION

16.1. **Summary**

- 16.1.1. This section covers the environmental procedures and protection measures to be followed during the Work. This includes instructions for proper disposal of waste, cleanliness, fires, plant protection, work adjacent to watercourse, pollution and dust control.

16.2. **Regulatory Requirements**

- 16.2.1. Comply with specified standards and regulations to ensure environment protected over course of work.

16.3. **Site Cleanliness**

- 16.3.1. Maintain bridge sites in tidy condition, free from accumulation of waste products and debris.
- 16.3.2. Remove waste materials from site at end of each working day.

16.4. **Work Adjacent to Watercourse**

- 16.4.1. Equipment to be operated on land only.
- 16.4.2. Do not dump waste material or debris into watercourse.
- 16.4.3. Do not allow waste water into watercourse, sewer or drainage systems.
- 16.4.4. Clean equipment so as to prevent wash water from entering watercourse.

16.5. **Plant Protection**

- 16.5.1. DR will inform Contractor of Species at Risk present on-site prior to beginning of work.
- 16.5.2. Protect trees and plants on site and adjacent properties.
- 16.5.3. Protect roots of trees to drip line during work. Avoid unnecessary traffic and storage of materials over root zones.
- 16.5.4. Minimize damage to areas with grass cover. Make good any damage to grass to the satisfaction of DR.

16.6. **Animal Protection**

- 16.6.1. DR will inform Contractor of Species at Risk present on-site prior to beginning of work.
- 16.6.2. Develop protection plan complying with requirements in Species at Risk Act (SARA), Fisheries Act and Migratory Birds Convention Act (MBCA). Submit protection plan for approval to DR.
- 16.6.3. Do work so as to not disturb habitat, including nesting and breeding grounds, of species identified in SARA, Fisheries Act and MBCA.

16.7. **Spill Protection**

- 16.7.1. Develop site specific spill response plan that will contain and clean up any leaks or spills

of hazardous materials. Submit to DR for approval 5 days prior to beginning of work.

- 16.7.1.1. Keep emergency spill kit and copy of spill response plan on-site to respond quickly to spills if spills occur. Provide list of contents of spill kit and all applicable Technical Data Sheets (TDS) to DR 5 days prior to beginning of work.
- 16.7.2. Maintain vehicles and equipment in good working condition to avoid leaks and spills of hazardous materials.
 - 16.7.2.1. Vehicles and equipment to arrive on-site in clean condition and maintained free of fluid leaks.
 - 16.7.2.2. Wash, refuel and service vehicles and equipment and store fuel away from water to prevent harmful substances from entering watercourse.
- 16.7.3. Contact DR and governing authority if spill occurs.
 - 16.7.3.1. Ontario: Ministry of Environment Spill Action Centre at 1-800-268-6060
 - 16.7.3.2. Québec: Environmental Protection Operations Directorate at 1-866-283-2333

16.8. **Pollution Control**

- 16.8.1. Control emissions from equipment and vehicles to local authorities' emission requirements.
- 16.8.2. Use vehicles and equipment fitted with emission control systems, mufflers, exhaust system baffles and/or engine covers.
- 16.8.3. Prevent debris and other extraneous materials from contaminating air beyond work area by providing the necessary control of dust and debris.
 - 16.8.3.1. Provide temporary enclosures to contain possible contaminants.
- 16.8.4. Cover or wet down dry materials and rubbish to prevent blowing dust and debris.
- 16.8.5. Restrict noise in accordance with local municipal regulations.

16.9. **Disposal of Wastes**

- 16.9.1. Remove and dispose of waste and debris to an approved landfill site adhering to all municipal, provincial and federal environmental and health regulations.
- 16.9.2. Do not bury waste or debris materials on site.
- 16.9.3. Do not dispose of waste or volatile materials into watercourse, storm or sanitary sewers, catch basins or deck drains.
- 16.9.4. No foreign materials including garbage, sand, debris, cleaning solvents or paint are to fall or be washed into watercourse or through deck drains.
- 16.9.5. Handle and dispose of hazardous or toxic materials in accordance with the Canadian Environmental Protection Act, Transportation of Dangerous Goods Act, Regional and Municipal regulations.

16.10. **Fires – Fires and burning of waste and debris is not permitted.**

16.11. **Notification**

- 16.11.1. DR will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations.
- 16.11.2. Contractor to inform DR of proposed corrective action and proceed only when written approval from DR is received.
- 16.11.3. DR may issue stop work order until satisfactory corrective action has been taken.
 - 16.11.3.1. No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.