

Parks Canada Agency
Refection of Gauron and Lafleur Bridges on Lachine
Canal

Project N° CLAC-1524
Addendum n° 04

THIS ADDENDUM COMPLETES, MODIFIES OR ELIMINATES CERTAIN ELEMENTS OF THE TENDER DOCUMENTS, WHICH THE ADDENDUM REFERS TO. IT IS AN INTEGRAL PART OF THE TENDER DOCUMENTS.

MODIFICATIONS ON PLANS AND SPECIFICATIONS

The current precisions are provided, following questions received from contractors during the site visit, and other written questions received.

1. TENDER FORM

1.1 Replacement of bilingual tender form:

The bilingual tender form revision No 02 is cancelled and replaced by the bilingual submission tender form revision No 03.

2. SPECIFICATIONS

2.1 Replacement of section 01 29 00 Payment procedures:

The section **01 29 00 Payment procedures revision 00** is cancelled and replace by the section **01 29 00 Payment procedures revision 01**. See the section appended to this addendum.

2.2 Replacement of section 09 91 13.23 Exterior painting of structural steel :

The section **09 91 13.23 Exterior painting of structural steel revision 00** is cancelled and replace by the section **09 91 13.23 Exterior painting of structural steel revision 01**. See the section appended to this addendum.

3. PRECISIONS

3.1 Cleaning and Painting - Steel Surfaces - On Site

For estimation, the area to be painted at Gauron Bridge
Lower part up to 3m above the deck surface is $\pm 3,000 \text{ m}^2$.
3m and more above the deck surface is $\pm 1,700 \text{ m}^2$.

Explanation of the prices quoted on the Bid Form

Part 1 Item 1. - I - Site Office, Environment and General Items

1.1 Item 1.1 – Construction Facilities

- .1 The price at payment item 1.1 of the Bid Form is a lump sum overall price to offset all costs incurred for the facilities required to perform the Work as well as costs that are not part of other payment items. Bid Form, in accordance with the prescriptions of drawings and specifications.
- .2 The price includes everything described in Section 01 52 00 - *Site Facilities* and the following, but not limited to:
 - .1 Electrical energy, water, site lighting and snow clearing of construction areas and accesses;
 - .2 Site offices, furniture, telephone and related services (internet, fax machines, photocopiers, color scanners, etc.), microwave oven, small refrigerator (9 cubic feet minimum), cold and hot water dispenser, including the supply of drinking water, heating and air conditioning of construction offices;
 - .3 .3 Access roads, platforms, walkways, barges, scaffolding, construction signs, moving, storage and repositioning of street furniture (tables, benches, garbage cans, etc.); sanitary installations, rigid construction site fences (minimum height of 2440 mm and all the displacements required according to the scheduling of works, working methods, detours, deviations, etc.) and surround the total mobilization zone during the whole duration of the works , in accordance with the requirements of the specifications and as directed by the Government Representative. In addition, all requirements related to the protection of cycle or multi-use trails during work in areas where the trails are open to the public, including temporary construction site fencing at the locations indicated on the drawings and signers (at all times) for all crossing and entrances;
 - .4 Maintaining traffic and temporary signage, including but not limited to:
 - .1 The mobilization of access to work areas, their maintenance and dismantling;
 - .2 Construction panels and their maintenance;
 - .3 Maintenance of access to properties;
 - .4 Provide signalman for site access and crossings of cycle or multipurpose track opened during the works;
 - .5 Maintenance of signs and circulation lanes including requested inspections;
 - .6 Modification of existing signage and site restoration at the end of the work;
 - .7 Bilingualism of temporary signs;
 - .8 Other costs related to special requirements for traffic maintenance and **encroachment in the navigation corridor.**

- .5 Maintenance of the site and its access.
- .6 The required coordination with the City of Montreal and other interferant, including the obtaining of all permits required for carrying out the work.
- .7 All that is required in the following sections and which is not charged directly or in a related manner to any of the following items on the Bid Form:
 - Section 01 11 00 Summary of Work
 - Section 01 31 19 Project Meetings
 - Section 01 32 16.19 Work Scheduling-Bar Chart (Gantt)
 - Section 01 33 00 Submittal Procedures
 - Section 01 35 29.06 Health and Safety
 - Section 01 52 00 Construction Site Facilities
 - Section 01 56 00 Temporary access and protection works
 - Section 01 73 00 Execution of work
 - Section 01 74 00 Cleaning
 - Section 01 74 19 Waste Management and Disposal
 - Section 01 77 00 Completion of Work
 - Section 01 78 00 Documents / Submittals Upon Completion
- .8 Surveying, picketing and survey fees that are not charged to any of the other items in the price schedule.
- .9 Site guarding costs for the entire site.
- .10 The cost of renting land and / or space for the storage of materials.
- .11 The protection of existing public utilities on bridges during construction. If the Contractor damages these installations during his work, he must replace them at his own expense;
- .12 All costs related to the supply of water and electricity throughout the duration of the work;
- .13 Protective measures and means to prevent damage to the earthwork, paving, etc.;
- .14 Restoration of the site:
 - .1 All work to restore in their natural state the temporary sites used (access road, storage area, etc.);
 - .2 All work to restore the elements of street furniture (benches, tables, garbage cans, etc.);
 - .3 All work allowing the restoration of vegetation by sodding sites damaged by the work;
 - .4 All work allowing the repair of all other damages and damage that the Contractor has caused on the work site, to the public or private property affected by its work;
- .15 The Contractor shall repair all damage caused during the performance of his work, to the satisfaction of the owners concerned and that of the Government

Representative. The work site must be returned in a state equivalent or better than the one existing before the start of the work;

- .16 The Contractor must prepare a photo and video survey at the beginning of the project and send a PDF report of these statements with notes and comments on the state of the site.
- .17 The Contractor shall provide the list of shop drawings required in the drawings and specifications and update it.
- .3 The bid price is paid as follows:
 - .1 A sum corresponding to 20% of the total amount tendered for this position will be paid with the first progress report, provided the work is started; except for the works included in the special mobilization / before works. No payment of this post will be made before the official and permanent mobilization of the works.
 - .2 Other progress payments under this item will be paid on each count at a percentage consistent with that of the overall progress of work for this count, except for the last installment to be paid up to 85% of progress of general works.
 - .3 The final 15% will be paid with the payment issued upon the issuance of the "Substantial (Interim) Completion Certificate".

1.2 Item 1.2 - Environmental Protection Measures

- .1 The price at payment item 1.2 of the Bid Form is a lump sum overall price to offset all costs incurred for environmental protection measures in accordance with the specifications of the drawings and specifications.
- .2 The price includes, but is not limited to, the following:
 - .1 All that is described in Section 01 35 43 - *Environmental Procedures* such as the preparation, presentation and implementation of the Environmental Protection Plan;
 - .2 Preparation, presentation and implementation:
 - .1 Environmental Protection Plan (EPP);
 - .2 Spill contingency plan;
 - .3 Location plan of various site facilities;
 - .4 Work area plans (Gauron and Lafleur bridges);
 - .5 Plan for the prevention of air pollution;
 - .6 Contamination Prevention Plan;
 - .7 Wastewater management plan;
 - .8 Plan for the designation and protection of wetlands and historic, archaeological, cultural and biological resources;
 - .9 A protection plan for the historical and heritage character of the site.
 - .3 Protective measures and means to prevent damage to trees, shrubs, plants, stream bed and its banks, etc.;
 - .4 Temporary facilities to prevent pollution;

- .5 Incidental expenses and coordination.
- .3 The bid price is paid as follows:
 - .1 A sum corresponding to 20% of the total amount tendered for this position will be paid with the first progress report, provided the work is started; except for the works included in the special mobilization / before works. No payment of this post will be made before the official and permanent mobilization of the works.
 - .2 Other progress payments under this item will be paid on each count at a percentage consistent with that of the overall progress of work for this count, except for the last installment to be paid up to 85% of progress of general works.
 - .3 The final 15% will be paid with the payment issued upon the issuance of the "Substantial (Interim) Completion Certificate".

1.3 Item 1.3 – Cleaning of Surfaces on the Work Site (Droppings)

- .1 The price at payment item 1.3 of the Bid Schedule is a lump sum overall price to offset all costs incurred for the cleaning of soiled areas in the work area, using a water jet under pressure, in accordance with the provisions of the drawings and specifications.
- .2 The purpose of the clean-up operation is to remove pigeon droppings and other contaminants that pose a threat to the health and safety of workers in the work areas in accordance with Section 01 35 29.06 - *Health and Safety requirements*.
- .3 This task requires a lot of care not to spread the waste into the environment and cause public health problems. The cleaning must be done by an experienced health team.
- .4 Work areas include:
 - .1 Gauron Bridge (7): support surfaces (abutments), deck steel surfaces and main trusses.
 - .2 Lafleur Bridge (7A): the surfaces of the supports (abutments and pier).
- .5 The Contractor must clean the areas mentioned before starting any other work on the bridges.
- .6 The price includes, but is not limited to, the following:
 - .1 Preparation, presentation and correction of the Work Plan;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Supply, transportation, handling, maintenance and removal of access required for cleaning;
 - .4 Supply, transportation, handling, maintenance and removal of enclosures required for cleaning;
 - .5 Cleaning surfaces with a pressurized water jet;
 - .6 The loading, transportation and disposal of waste materials from off-site cleaning at a site in compliance with the regulations in effect in the territory of the City of Montreal;
 - .7 The cleaning of the premises at the end of the work;
 - .8 Incidental expenses and coordination.

1.4 Item 1.4 - Platforms and Access System

- .1 Prices at payment items 1.4.1 and 1.4.2 of the Bid Form are a lump sum aggregate price to offset all costs of providing, installing and dismantling platforms and any temporary access devices, in accordance with the provisions of the drawings and specifications.
- .2 The access devices are required for the execution of all the work planned on the Lafleur bridge as well as the Gauron bridge including the access devices for the counterweight structure of each bridge.
 - .1 The price includes the following, but is not limited to:
 - .1 Preparation, presentation and correction, shop drawings and design calculations;
 - .2 The supply, transportation and handling of all materials required for the manufacture of temporary access;
 - .3 Mobilization of labor, tools and equipment required for the execution of the work;
 - .4 Maintenance and repair of temporary access during the duration of the work;
 - .5 The mobilization of labor, tools and equipment required for the dismantling of temporary access;
 - .6 The dismantling of temporary access devices;
 - .7 Handling and transportation, out of the site, of materials constituting temporary access;
 - .8 Incidental expenses and coordination.
 - .2 The bid price is paid as follows for each item:
 - .1 A sum corresponding to 75% of the total amount tendered for this position will be paid with the progressive settlement, following the completion of temporary access installation work, provided that the work is completed.
 - .2 The balance of the total amount tendered to this item will be paid with the progressive settlement, after the evacuation of the materials used for the construction of the temporary accesses, on the condition that the evacuation of these materials be completed to the full satisfaction of the Government Representative.

1.5 Item 1.5 - Containment Enclosure for Gauron Bridge (7)

- .1 The price at payment item 1.5 of the Bid Form is a lump sum overall price to offset all costs incurred for the supply, installation, maintenance and dismantling of a containment for cleaning and the painting of steel surfaces on site, in accordance with the specifications of the drawings and specifications.
- .2 The containment is required for the cleaning and painting of steel surfaces of the superstructure, including the structure of the counterweight.
- .3 The containment system must be designed to allow the lowering of the access platform while remaining waterproof.

- .4 The price includes, but is not limited to, the following:
 - .1 The preparation, presentation and correction of shop drawings signed and sealed by an engineer in good standing of the Ordre des ingénieurs du Québec (OIQ);
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, transportation, handling, storage and placement of all materials required for the containment construction;
 - .4 The inspection, maintenance, servicing and repair of the containment during the duration of the work;
 - .5 The recovery, transportation and disposal of residues in accordance with Section 01 74 19 – *Waste Management and Disposal*;
 - .6 Decommissioning and off-site transportation of containment component materials;
 - .7 Incidental expenses and coordination.
- .5 The bid price is paid as follows
- .6 A sum corresponding to 75% of the total amount tendered for this position will be paid after the completion of the installation of the containment, provided that the work is completed.
- .7 The balance of the total amount tendered for this position will be paid at the progressive count following the evacuation of the materials used for the construction of the containment, provided that the evacuation of these materials is completed at full satisfaction of the Government Representative.

1.6 **Item 1.6 - Traffic management by police services**

- .1 The price at payment item 1.6 of the Tender Form is an increased cost price, per hour of traffic management by police services.
- .2 traffic management by police services is payable only if required in writing by the Departmental Representative and the amount may be used in whole or in part.
- .3 The increased cost price is used for traffic management by police services because these works are of such a nature that the costs cannot be estimated exactly.
- .4 At the end of each day, the Government Representative and the Contractor compare their respective registers of time payable in order to agree on a single document, which is signed in two (2) copies by each of the parties. One copy goes to the Departmental Representative and the other to the Contractor.
- .5 When the “cost-plus” modality is applied, the work is done under management, and the calculation of the payments to be made corresponds to the actual costs for the rental of police services in circulation and required vehicle, including tax on goods and services (GST) and the Quebec sales tax (QST).
- .6 Costs .
 - .1 Labor costs .
 - .1 The cost of labor is made up of:

- .1 Salaries paid to police officers according to the SPVM's current rates for the hiring of police services in circulation;
- .2 Excluded, overhead, administration and profit.

.2 Increase

- .1 The increase includes general costs, administration costs and profits as defined by the Parks Canada Agency (CPA) in the clauses of this Contract.

Part 2 Item 2. - II - GAURON BRIDGE (N ° 7)

2.1 Item 2.1 - Work on North Abutment

.1 Item 2.1.1 - North Abutment Foundations with Oversized Repair

- .1 The price at payment item 2.2.1 of the Bid Form is a price per square meter (m²) of new concrete in contact with the formwork, in accordance with the requirements of the drawings and specifications.
- .2 It should be noted that the repair with thickening of the foundation included the demolition of the concrete, the supply of materials (anchors, etc.) as well as the implementation.
- .3 The price includes, but is not limited to, the following:

DEMOLITION

- .1 The preparation, presentation and correction of the Work Plan for the demolition of the North abutment foundation;
- .2 The mobilization of labor, tools and equipment required for carrying out the demolition work;
- .3 Saw cuts required;
- .4 Demolition of defective and sound concrete as indicated on the drawings and directives of the Government Representative;
- .5 Removal of steel elements embedded in the concrete, if required;
- .6 The collection of demolition materials, their disposal off-site and their treatment as prescribed in Section 01 74 19 - *Waste Management and Disposal*;

ANCHORS 15M

- .7 The preparation, presentation and correction of shop drawings and the anchor chemical data sheet;
- .8 The mobilization of labor, tools and equipment required for the execution of the work;
- .9 Drilling and cleaning of holes for installation of anchors;
- .10 Supply, handling, transportation and installation of the anchor chemical;
- .11 Supply, shaping, handling, transportation and installation of steel anchor rods;

- .12 Performing control anchor tests in accordance with Section 03 30 03 - *Concrete Repairs*;
- .13 The anchor bar installation confirmation table and a revision of the installation slip;
- .14 Incidental expenses and coordination.
- .4 The following elements are excluded from this item:
 - .1 Anchors, used in place of formwork tie rods, used to hold formwork in place and which are required for the placement of concrete on existing concrete, these anchorages are not the subject of any article in the Bid Form and all costs incurred by the Contractor for the realization of these works are included in the price of formwork.
- .2 Item 2.1.2 - Galvanized Welded Wire Mesh 51x51 MW9,1xMW9,1
 - .1 The price at payment item 2.1.2 of the Bid Form is a price per square meter (m²) of wire mesh, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but not limited to:
 - .1 Preparation, presentation and correction of the Work Plan, shop drawings concerning the installation of the mesh;
 - .2 Mobilization of the workforce, tools and equipment required to carry out the work;
 - .3 The supply of the mesh in the form of flat sheets only as well as the shaping of these in accordance with section 03 20 00 – *Concrete Reinforcing*;
 - .4 Installation of the mesh including the required overlaps;
 - .5 Steel wire used to tie the mesh;
 - .6 Incidental expenses and coordination.
- .3 Item 2.1.3 – Injection Placed type XIV-R Concrete
 - .1 The price at payment item 2.1.3 of the Bid Form is a per cubic meter (m³) price of type XIV-R concrete, the quantities are calculated according to the actual quantities put in place, in accordance with the specifications of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan relating to shop drawings, the concreting procedure, the specification sheets of the mixtures and the required data sheets;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Substrate treatment before concreting;
 - .4 The supply, installation and dismantling of formwork and formwork tie rods;
 - .5 Supply and application of formwork release agent;

- .6 The supply and application of repair mortar at the location of formwork tie rods;
 - .7 The supply and application of repair mortar for existing formwork tie-in holes in the north abutment face wall concrete;
 - .8 Supply, installation, finishing, wet curing of concrete;
 - .9 The cleaning of surfaces adjacent to the concreting area;
 - .10 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .11 Concrete finishing, tests and records;
 - .12 Treatment of surplus materials in accordance with the requirements of Section 01 74 19 – *Waste Management and Disposal*;
 - .13 Incidental expenses and coordination.
- .4 Item 2.1.4 – Reparation of Cracks by Injection
- .1 The price at payment item 2.1.4 of the Bid Form is a per linear meter price (lin. m.) For all costs incurred for the repair of cracks by injection. The length of the cracks is measured from the first injector to the last injector; an additional length corresponding to the average spacing between two (2) injectors is added for payment purposes.
 - .2 Each crack to be injected has at any point along its length an opening of at least 0.8 mm.
 - .3 Injectors must be "surface" type. The clogging product must be an epoxy modified mortar; it must have sufficient strength to withstand the pressure generated during the injection. The viscosity of the injection product, after addition of the hardener, should be less than 250 cps at about 22 ° C. The date of manufacture of the injection product must be indicated on the containers and must be after March 1st of the year of use. Addition of solvent, thinner or other material to the injection product is prohibited. All products are delivered to the site in their original containers and sealed.
 - .4 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for crack injection work and product data sheets;
 - .2 The mobilization and demobilization of the workforce, tools and equipment required for carrying out the demolition work;
 - .3 Supply, transportation, handling, maintenance and removal of access required for crack injection;
 - .4 Supply, transportation, handling of all products required for implementation;
 - .5 Clogging product and injectors;
 - .6 The cleaning adjacent surfaces with a pressurized water jet;
 - .7 The cleaning of the premises at the end of the work;
 - .8 Incidental expenses and coordination.

2.2 Item 2.2 - Work on South Abutment

.1 Item 2.2.1 - South Abutment Backwall Repair

.1 The price at payment item 2.2.1 of the Bid Form is a price per square meter (m²) of new concrete in contact with the formwork, in accordance with the requirements of the drawings and specifications.

.2 It should be noted that the repair of the backwall of the southern abutment includes the demolition of the concrete, the supply of materials (Anchors, etc.) and the implementation.

.3 The price includes the following, but is not limited to:

DEMOLITION

.1 The preparation, presentation and correction of the Work Plan for the partial demolition of the south abutment backwall;

.2 The mobilization of labor, tools and equipment required for carrying out the demolition work;

.3 Saw cuts required;

.4 Demolition of defective and sound concrete as indicated on the drawings and directives of the Government Representative;

.5 Removal of steel elements embedded in the concrete, if required;

.6 Excavation of granular materials required for demolition;

.7 The collection of demolition materials, their disposal off site and their treatment in accordance with the provisions of section 01 74 19 – *Waste Management and Disposal*;

ANCHORS 15M

.8 The preparation, presentation and correction of shop drawings and the anchor chemical data sheet;

.9 The mobilization of labor, tools and equipment required for the execution of the work;

.10 Drilling and cleaning of holes for installation of anchors;

.11 Supply, handling, transportation and installation of the anchor chemical;

.12 Supply, shaping, handling, transportation and installation of steel anchor rods;

.13 Performing control anchor tests in accordance with Section 03 30 03 - *Concrete Repairs*;

.14 The anchor bar installation confirmation table and a revision of the installation slip;

.15 Incidental expenses and coordination.

.4 The following elements are excluded from this item:

.1 Anchors, used in place of formwork tie rods, used to hold formwork in place and which are required for placing concrete on existing concrete, these anchors are not subject to any item in the Bid Form and all costs

incurred by the Contractor for the realization of these works are included in the price of formwork.

- .2 Item 2.2.2 - Galvanized Reinforcing
 - .1 The price at payment item 2.2.2 of the Bid Form is a price per kilogram (kg) of steel according to the quantities placed in the formwork, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but not limited to:
 - .1 The preparation, presentation and correction of the Work Plan, shop drawings and the slip concerning the installation of steel bars;
 - .2 Mobilization of the workforce, tools and equipment required to carry out the work;
 - .3 The supply of rebar as well as the shaping of these,
 - .4 Galvanization when stipulated in plans and specifications;
 - .5 Site coordination;
 - .6 Site cuts and adjustments, including painting of cut ends with zinc-rich paint, approved by the Government representative;
 - .7 The installation of the required reinforcing steels, fixed by means of ties of galvanized steel wires to avoid any displacement during the placing of the concrete;
 - .8 The rebar installation confirmation table and a revision of the installation slip;
 - .9 Incidental expenses and coordination.
- .3 Item 2.2.3 – Cast-in-place Type V-S Concrete (Backwall)
 - .1 The price at payment item 2.2.3 of the Bid Form is a per cubic meter price (m³) of backwall concrete, quantities are calculated according to the theoretical dimensions, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan relating to shop drawings, the concreting procedure, the specification sheets of the mixtures and the required data sheets;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Supply, installation and dismantling of formwork and formwork tie rods;
 - .4 Supply and installation of chamfers;
 - .5 Supply and application of formwork release agent;
 - .6 The supply and application of repair mortar at the location of formwork tie rods;
 - .7 Anchors, used in place of formwork tie rods, to hold formwork in place and required for placement of concrete on existing concrete;

- .8 Two (2) self-adhesive strips on the construction joint behind the strike-guard wall as indicated on the drawings;
 - .9 Substrate treatment before concreting;
 - .10 Supply, implementation, vibration, finishing, wet curing of type V-S concrete;
 - .11 Cleaning of surfaces adjacent to the concrete zone;
 - .12 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .13 Concrete finishing, tests and records;
 - .14 Treatment of surplus materials in accordance with the requirements of Section 01 74 19 – *Waste Management and Disposal*;
 - .15 Incidental expenses and coordination.
- .4 Item 2.2.4 - South Abutment Foundation with Oversize Repair
- .1 The price at payment item 2.2.4 of the Bid Form is a price per square meter (m²) of new concrete in contact with the formwork, in accordance with the requirements of the drawings and specifications.
 - .2 It should be noted that the overhung repair of the foundation included the demolition of the concrete, the supply of materials (anchors, etc.) as well as the implementation.
 - .3 The price includes the following, but is not limited to:
 - DEMOLITION
 - .1 The preparation, presentation and correction of the Work Plan for the demolition of the North abutment foundation;
 - .2 The mobilization of labor, tools and equipment required for carrying out the demolition work;
 - .3 Saw cuts required;
 - .4 Demolition of defective and sound concrete as indicated on the drawings and directives of the Government Representative;
 - .5 Removal of steel elements embedded in the concrete, if required;
 - .6 The collection of demolition materials, their disposal off-site and their treatment as prescribed in Section 01 74 19 - *Waste Management and Disposal*;
 - ANCHORS 15M
 - .7 The preparation, presentation and correction of shop drawings and the anchor chemical data sheet;
 - .8 The mobilization of labor, tools and equipment required for the execution of the work;
 - .9 Drilling and cleaning of holes for installation of anchors;
 - .10 Supply, handling, transportation and installation of the anchor chemical;

- .11 Supply, shaping, handling, transportation and installation of steel anchor rods;
- .12 Performing control anchor tests in accordance with Section 03 30 03 - *Concrete Repairs*;
- .13 The anchor bar installation confirmation table and a revision of the installation slip;
- .14 Incidental expenses and coordination.
- .4 The following elements are excluded from this item:
 - .1 Anchors, used in place of formwork tie rods, used to hold formwork in place and which are required for placing concrete on existing concrete, these anchors are not subject to any item in the Bid Form and all costs incurred by the Contractor for the realization of these works are included in the price of formwork.
- .5 Item 2.2.5 - Galvanized Welded Wire Mesh 51x51 MW9,1xMW9,1
 - .1 The price at payment item 2.2.5 of the Bid Form is a price per square meter (m²) of mesh, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but not limited to:
 - .1 Preparation, presentation and correction of the Work Plan, shop drawings concerning the installation of the mesh;
 - .2 Mobilization of the workforce, tools and equipment required to carry out the work;
 - .3 The supply of the mesh in the form of flat sheets only as well as the shaping of these in accordance with section 03 20 00 – *Concrete Reinforcing*;
 - .4 Installation of the mesh including the required overlaps;
 - .5 Steel wire used to tie the mesh;
 - .6 Incidental expenses and coordination.
- .6 Item 2.2.6 – Injection Placed Type XIV-R Concrete
 - .1 The price at payment item 2.2.6 of the Bid Form is a price per cubic meter (m³) of type XIV-R concrete, the quantities are calculated according to the actual quantities put in place, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan relating to shop drawings, the concreting procedure, the specification sheets of the mixtures and the required data sheets;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Substrate treatment before concreting;
 - .4 The supply, installation and dismantling of formwork and formwork tie rods;

- .5 Supply and application of formwork release agent;
 - .6 The supply and application of repair mortar at the location of formwork tie rods;
 - .7 Supply, installation, finishing, wet curing of type XIV-R concrete;
 - .8 The cleaning of surfaces adjacent to the concreting area;
 - .9 At the end of the work, off-site disposal of the materials forming the formwork;
 - .10 The treatment of surplus materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .11 Incidental expenses and coordination.
- .7 Item 2.2.7 - Borrow Material MG-112
- .1 The price at payment item 2.2.7 of the Bid Form is a price per ton (t) of MG-112 for the void behind the backwall, in accordance with the requirements of the drawings and specifications.
 - .2 This item relates to materials that replace excavated materials. No reuse of materials is planned.
 - .3 The price includes the following, but is not limited to:
 - .1 Transportation of borrowed materials to site;
 - .2 The provision and installation of borrowing materials according to the drawings, specifications and directives of the Government Representative;
 - .3 Supply, transportation, handling;
 - .4 Compaction, tests and registers;
 - .5 Cleaning the premises;
 - .6 The collection of demolition materials, their disposal off-site and their treatment as prescribed in Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.
- .8 Item 2.2.8 - Wall Concrete Repair
- .1 The price at payment item 2.2.8 of the Bid Form is a per square meter (m²) price of new concrete in contact with the formwork, in accordance with the requirements of the drawings and specifications.
 - .2 It should be noted that the concrete repair of the wall included the demolition of the concrete, the supply of materials (anchors, etc.) as well as the implementation.
 - .3 The price includes the following, but is not limited to:
 - DEMOLITION
 - .1 The preparation, presentation and correction of the Work Plan for the demolition of the North abutment wall;
 - .2 The mobilization of labor, tools and equipment required for carrying out the demolition work;
 - .3 Saw cuts required;

- .4 Demolition of defective and sound concrete as indicated on the drawings and directives of the Government Representative;
- .5 Removal of steel elements embedded in the concrete, if required;
- .6 The collection of demolition materials, their disposal off-site and their treatment as prescribed in Section 01 74 19 - *Waste Management and Disposal*;
- ANCHORS 15M
- .7 The preparation, presentation and correction of shop drawings and the anchor chemical data sheet;
- .8 The mobilization of labor, tools and equipment required for the execution of the work;
- .9 Drilling and cleaning of holes for installation of anchors;
- .10 Supply, handling, transportation and installation of the anchor chemical;
- .11 Supply, shaping, handling, transportation and installation of steel anchor rods;
- .12 Performing control anchor tests in accordance with Section 03 30 03 - *Concrete Repairs*;
- .13 The anchor bar installation confirmation table and a revision of the installation slip;
- .14 Incidental expenses and coordination.
- .4 The following items are excluded from this item:
 - .1 Anchors, used in place of formwork tie rods, used to hold formwork in place and which are required for placing concrete on existing concrete, these anchors are not subject to any item in the Bid Form and all costs incurred by the Contractor for the realization of these works are included in the price of formwork.
- .9 Item 2.2.9 - Galvanized Welded Wire Mesh 51x51 MW9,1xMW9,1
 - .1 The price at payment item 2.2.9 of the Bid Form is a price per square meter (m²) of mesh, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but not limited to:
 - .1 Preparation, presentation and correction of the Work Plan, shop drawings concerning the installation of the mesh;
 - .2 Mobilization of the workforce, tools and equipment required to carry out the work;
 - .3 The supply of the mesh in the form of flat sheets only as well as the shaping of these in accordance with section 03 20 00 – *Concrete Reinforcing*;
 - .4 Installation of the mesh including the required overlaps;
 - .5 Steel wire used to tie the mesh;
 - .6 Incidental expenses and coordination.
- .10 Item 2.2.10 – Cast-in-place Type V-S Concrete (wall)

- .1 The price at payment item 2.2.10 of the Bid Form is a price per cubic meter (m³) of concrete wall, quantities are calculated according to the theoretical dimensions, in accordance with the requirements of drawings and specifications.
- .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan relating to shop drawings, the concreting procedure, the specification sheets of the mixtures and the required data sheets;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Supply, installation and dismantling of formwork and formwork tie rods;
 - .4 Supply and installation of chamfers;
 - .5 Supply and application of formwork release agent;
 - .6 The supply and application of repair mortar at the location of formwork tie rods;
 - .7 Anchors, used in place of formwork tie rods, to hold formwork in place and required for placement of concrete on existing concrete;
 - .8 Substrate treatment before concreting;
 - .9 Supply, implementation, vibration, finishing, wet curing of type XIV-R concrete;
 - .10 The cleaning of surfaces adjacent to the concreting area;
 - .11 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .12 Concrete finishing, tests and registers;
 - .13 Treatment of surplus materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .14 Incidental expenses and coordination.

2.3 Item 2.3 - Deck Joints Replacement

- .1 Item 2.3.1 - Replacement of North Abutment Joint with a Single Elastomeric Seal Joint with Gutter
 - .1 The price at payment item 2.3.1 of the Bid Form is a per linear meter price (lin. m.) for the replacement of the deck joint by an elastomer seal with gutter at north abutment in accordance with the requirements of drawings and specifications.
 - .2 The deck joints of a supplier must be approved by the government representative.
 - .3 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the demolition procedure and Work Plan for the deck joint and the descriptive sheets of the equipment used;
 - .2 Mobilization of labor, tools and equipment required for demolition work;
 - .3 Saw cuts required.
 - .4 Concrete demolition and removal of existing joint;

- .5 Stripping of surfaces adjacent to the joint;
 - .6 The cleaning of reinforcing steel to be preserved;
 - .7 Cleaning of concrete substrate and disposal of debris;
 - .8 Two (2) self-adhesive strips on the construction joint behind the backwall as indicated on the drawings;
 - .9 The collection of demolition materials, their disposal off-site and their treatment in accordance with the provisions of Section 01 74 19 - *Waste Management and Disposal*;
 - .10 The preparation, presentation and correction of the Work Plan and Shop Drawings of the new deck joint with an elastomer seal and gutter, including the slip relating to the installation of steel bars and anchor as well as the concreting procedure, the descriptive sheets of the mixtures and the required technical data sheets;
 - .11 Mobilization of labor, tools and equipment required to complete the work of the new deck joint;
 - .12 The supply, handling, transportation and installation of the new deck gasket, including field welds and their control;
 - .13 Rebar supply and shaping, galvanizing when specified in drawings and specifications, rebar installation confirmation table, and installation slip review. the cuts and adjustments in the building site, the laying of reinforcing steel required;
 - .14 Supply, handling, transportation and placement of steel anchor rods and chemical anchor; drilling and cleaning holes for the installation of chemical anchors; performing control anchor tests in accordance with Section 03 30 03 - *Concrete Repairs*; the rebar installation confirmation table and a revision of the installation slip;
 - .15 Supply, installation and dismantling of formwork;
 - .16 Supply, installation, vibration, finishing, wet curing of concrete, finishing of concrete, tests and registers;
 - .17 Treatment of surplus materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .18 Deck joint leak test;
 - .19 Incidental expenses and coordination.
- .2 Item 2.3.2 - Borrow Material MG-20
- .1 The price at payment item 2.3.2 of the Bid Form is a price per ton (t) for borrow material as specified in the drawings and specifications.
 - .2 This item concerns materials that replace excavated material for the replacement of the deck joint with an elastomeric seal with gutter at the north abutment. No reuse of materials is planned.
 - .3 The price includes the following, but is not limited to:
 - .1 Excavation required for joint replacement;

- .2 The transportation of borrowed materials to the site;
 - .3 The provision and installation of borrowing materials according to the drawings, specifications and directives of the Government Representative;
 - .4 Supply, transportation and handling.
 - .5 Compaction, tests and records;
 - .6 Cleaning the premises;
 - .7 The collection of demolition materials, their disposal off site and their treatment in accordance with the provisions of section 01 74 19 - *Waste Management and Disposal*;
 - .8 Incidental expenses and coordination.
- .3 Item 2.3.3 - Replacement of South Abutment Joint with a Single Elastomeric Seal Joint with Gutter
- .1 The price at payment item 2.3.3 of the Bid Form is a price per linear meter (lin. m.) for the replacement of the deck joint with by an elastomeric seal with gutter at the south abutment, in accordance with the requirements of the drawings and specifications.
 - .2 Item 2.3.3 includes the W410 cut, if required, to allow installation of the deck gasket. Cut steel is to grind and protect with zinc-rich paint.
 - .3 The deck joints of a supplier must be approved by the government representative.
 - .4
 - .5 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the demolition procedure and Work Plan for the deck joint and the descriptive sheets of the equipment used;
 - .2 Mobilization of labor, tools and equipment required for demolition work;
 - .3 Saw cuts required.
 - .4 Concrete demolition and removal of existing joint;
 - .5 Stripping of surfaces adjacent to the joint;
 - .6 The cleaning of reinforcing steel to be preserved;
 - .7 Cleaning of concrete substrate and disposal of debris;
 - .8 The collection of demolition materials, their disposal off-site and their treatment in accordance with the provisions of section 01 74 19 - *Waste Management and Disposal*;
 - .9 The preparation, presentation and correction of the Work Plan and Shop Drawings of the new deck joint by an elastomer seal with gutter, including the slip relating to the installation of steel bars and anchor as well as the concreting procedure, the descriptive sheets of the mixtures and the required technical data sheets;
 - .10 The mobilization of labor, tools and equipment required to complete the work of the new deck joint;

- .11 The supply, handling, transportation and placement of the new deck joint, including field welds and their control;
- .12 The supply of reinforcement bars and shaping, the galvanizing when stipulated in the drawings and specifications, the reinforcement installation confirmation table and a revision of the installation slip, the cuts and adjustments in the building site, the laying of reinforcing steel required;
- .13 Supply, handling, transportation and placement of steel anchor rods and chemical anchor; drilling and cleaning holes for the installation of chemical anchors; performing control anchor tests in accordance with Section 03 30 03 - *Concrete Repairs*; the rebar installation confirmation table and a revision of the installation slip;
- .14 Supply, installation and dismantling of formwork;
- .15 Supply, installation, vibration, finishing, wet curing of concrete, concrete finishing, tests and registers;
- .16 Treatment of surplus materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
- .17 Deck joint leak test;
- .18 Incidental expenses and coordination.

2.4 **Item 2.4 - Cleaning of Access Shafts**

- .1 The price at payment item 2.4 of the Bid Form is a lump sum overall price to offset all costs incurred for the cleaning of access pits, in accordance with the requirements of drawings and specifications.
- .2 The price includes the following, but is not limited to:
 - .1 Preparation, presentation and correction of the Work Plan;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The cleaning of access pits according to the method approved by the Government Representative;
 - .4 The recovery and disposal of residues from the cleaning operation to a site compliant with applicable regulations;
 - .5 Cleaning of manholes to the satisfaction of the Government Representative;
 - .6 The cleaning of the premises at the end of the work;
 - .7 Incidental expenses and coordination.

2.5 **Item 2.5 - Cleaning and Painting - South Abutment Bearing on Site**

- .1 The price at payment item 2.5 of the Bid Form is a lump sum overall price to offset all costs of cleaning and painting the steel surfaces of the South abutment bearings, in accordance with the requirements of drawings and specifications.
- .2 **Note that the existing paint on the bearings contains lead.** The Contractor must adjust its price to consider CNESST's requirements for lead exposure during stripping.
- .3 The price includes the following, but is not limited to:

- .1 Preparation, presentation and correction of the Work Plan;
- .2 Mobilization of labor, tools and equipment required for the execution of the work;
- .3 The cleaning of steel surfaces according to the method approved by the Government Representative;
- .4 The recovery and disposal of the residues of the cleaning operation to a site in compliance with applicable regulations;
- .5 The painting of steel surfaces in the field of support equipment when the cleaning is completed to the satisfaction of the Government Representative;
- .6 The cleaning of the premises at the end of the work;
- .7 Incidental expenses and coordination.

2.6 Item 2.6 – Steel Structure Reinforcement

Note that the existing paint of the steel structure contains lead.

The Contractor must adjust its price to consider CNESST's requirements for lead exposure.

- .1 Item 2.6.1 - Reinforcement Diagonal 0-1 (South Side) - Truss P1 and P2
 - .1 The price at payment item 2.6.1 of the Bid Form is a unit price that covers all costs for reinforcement work on a diagonal of a triangulated bridge truss, in accordance with the requirements of the drawings and specifications.
 - .2 Reinforcements must be installed at existing diagonals located between points 0 and 1, triangulated bridge truss, East and West.
 - .3 The price includes the following, but is not limited to:
 - .1 Preparation, presentation and correction of Shop Drawings and Work Plan for installation of plates, reinforcing and splicing plates;
 - .2 Shop supply, shaping, cleaning and painting of plates, reinforcing and splicing plates;
 - .3 Handling, transportation and storage of plates, reinforcing and splicing plates on site;
 - .4 The mobilization of labor, tools and equipment required for the execution of the work;
 - .5 Removal of existing parts as shown on drawings and disposal of materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .6 Measurement, marking and drilling of holes in existing chords for installation of plates, reinforcing and splicing plates;
 - .7 Provision of bolts and washers required for bolting plates, reinforcing and splicing plates;
 - .8 Installation and bolting of plates, reinforcement and splice plates;
 - .9 Painting retouching;
 - .10 Incidental expenses and coordination.
- .2 Item 2.6.2 to 2.6.18 – Reinforcement of Bridge Assemblies

- .1 The price at payment items 2.6.2 to 2.6.18 of the Bid Form are unit prices that cover all costs for reinforcement work on each of the bridge assemblies, in accordance with the requirements of the drawings and specifications.
- .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of shop drawings and the Work Plan for the installation of reinforcement plates;
 - .2 The supply, shaping, cleaning and painting of reinforcement plates in the workshop;
 - .3 Handling, transportation and storage of reinforcing plates on site;
 - .4 The mobilization of labor, tools and equipment required for the execution of the work;
 - .5 Removal of existing parts as shown on drawings and disposal of materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .6 Measurement, marking and drilling of holes in existing chords for installation of reinforcement plates;
 - .7 Supply of bolts and washers required for bolting reinforcement plates;
 - .8 Installation and bolting of reinforcement plates;
 - .9 Painting retouching;
 - .10 Incidental expenses and coordination.
- .3 Item 2.6.19 - Supply and Installation of Batten Plates / Laces
 - .1 The price at payment item 2.6.19 of the Bid Form is a unit price that covers all costs for bridge batten plate / lacing replacement works in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, layout and correction, if required, of shop drawings and Work Plan for the installation of batten plates / laces;
 - .2 The supply, shaping, cleaning and painting in the workshop of batten plates / laces;
 - .3 Handling, transportation and storage of batten plates / lacing on site;
 - .4 The mobilization of labor, tools and equipment required for the execution of the work;
 - .5 Measurement, marking and drilling holes in existing chords for the installation of batten plates / laces;
 - .6 The supply of bolts and washers required for the bolting of batten plates / laces;
 - .7 Installation and bolting of batten plates / laces;
 - .8 Painting retouching;
 - .9 Incidental expenses and coordination.

- .4 Item 2.6.20 Steel Surfaces On Site- Lower part up to 3m above the deck surface
- .1 The price at payment item 2.6.20 is a lump sum overall price to offset all costs of cleaning and painting the steel surfaces of the entire superstructure, including the structure counterweight, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan, the painting procedure, samples and data sheets required;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The cleaning of steel surfaces according to the method approved by the Government Representative;
 - .4 The recovery and disposal of residues from the cleaning operation to a site that complies with the applicable regulations;
 - .5 The supply, handling, transportation and implementation of the painting;
 - .6 All work shall be performed in accordance with sections 05 12 33 - *Structural steel for bridges* and 09 91 13.23 - *Exterior painting of structural steel*;
 - .7 The painting of the steel surfaces in the construction of the existing superstructure, including the structure of the counterweight, assembly, the rails and railings including those of the South approach and retouching, when the cleaning is completed to the satisfaction of the Government Representative;
 - .8 In the event of damage, immediately repair the affected items at the expense of the Contractor;
 - .9 Treatment of surplus materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .10 The cleaning of the premises at the end of the work;
 - .11 Incidental expenses and coordination.
 - .3 This item excluded:
 - .1 The painting of steel surfaces in the factory. All costs incurred by the contractor to perform work on factory painted parts, including the cost of supply, materials and equipment, transportation and implementation, are included in the price of the works which require the application of paint.
- .5 Item 2.6.21 Cleaning and Painting - Steel Surfaces On Site- 3m and more above the deck surface
- .1 The price at payment item 2.6.21 is a lump sum overall price to offset all costs of cleaning and painting the steel surfaces of the upper part (3m and more above the deck surface) the entire superstructure, including the structure counterweight, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:

- .1 The preparation, presentation and correction of the Work Plan, the painting procedure, samples and data sheets required;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The cleaning of steel surfaces according to the method approved by the Government Representative;
 - .4 The recovery and disposal of residues from the cleaning operation to a site that complies with the applicable regulations;
 - .5 The supply, handling, transportation and implementation of the painting;
 - .6 All work shall be performed in accordance with sections 05 12 33 - *Structural steel for bridges* and 09 91 13.23 - *Exterior painting of structural steel*;
 - .7 The painting of the steel surfaces in the construction of the existing superstructure, including the structure of the counterweight, assembly, the rails and railings including those of the South approach and retouching, when the cleaning is completed to the satisfaction of the Government Representative;
 - .8 In the event of damage, immediately repair the affected items at the expense of the Contractor;
 - .9 Treatment of surplus materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .10 The cleaning of the premises at the end of the work;
 - .11 Incidental expenses and coordination.
- .3 This item excluded:
- .1 The painting of steel surfaces in the factory. All costs incurred by the contractor to perform work on factory painted parts, including the cost of supply, materials and equipment, transportation and implementation, are included in the price of the works which require the application of paint.

2.7 Item 2.7 - Replacement of Rolling Surface - Bridge and Approach Tunnel

- .1 Item 2.7.1 Stripping Bridge and Approach Tunnel Slabs
 - .1 The price at payment item 2.7.1 of the Bid Form is the price per square meter (m²) for the removal of the existing bituminous mix and waterproofing membrane on the slab of the bridge and tunnel located on the above the bike path, in accordance with the requirements of the drawings and specifications.
 - .2 The stripping is carried out by means of a material which must not damage the slab nor the other elements of the structure and whose mass does not have to exceed the displayed capacity of the bridge.
 - .3 Any damage caused to the slab or other deck elements by stripping must be repaired at the expense of the contractor.
 - .4 The price includes the following, but is not limited to:

- .1 The preparation, presentation and correction of the Work Plan for asphalt removal work, including the description of the equipment used for the stripping;
 - .2 The saw cuts required to delineate the area of removal of bituminous mix;
 - .3 Removal of bituminous mix and waterproofing membrane;
 - .4 Cleaning after removal;
 - .5 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .6 Collection of cleaning materials and their treatment as prescribed in Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.
- .2 Item 2.7.2 Surface Repairs of Slab (<100 mm)
- .1 The price at payment item 2.7.2 of the Bid Form is a price per square meter (m²) which covers all costs for surface repairs to the slab, in accordance with the requirements of the drawings and specifications as well as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the surface repair of the slab;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Preparation, presentation and correction of the Demolition Work Plan;
 - .4 Saw cuts required;
 - .5 The demolition of unsound concrete to sound concrete as per the drawings and instructions of the Departmental Representative;
 - .6 The protection of the reinforcement to be preserved;
 - .7 The collection of demolition materials, their disposal off site and their treatment in accordance with the provisions of section 01 74 19 - *Waste Management and Disposal*;
 - .8 Preparation, presentation and correction of Work Plan for shop drawings, concreting procedure, specification sheets of blends and data sheets required;
 - .9 The treatment of the substrate before concreting;
 - .10 Supply, installation, vibration, finishing, wet cure of type XIV-R or XIV-C concrete;
 - .11 The cleaning of surfaces adjacent to the concreting area;
 - .12 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .13 Concrete finishing, tests and records;
 - .14 The treatment of surplus materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;

- .15 Incidental expenses and coordination.
- .3 Item 2.7.3 Deep Repairs of Slab (> 100 mm)
 - .1 The price at payment item 2.7.3 of the Bid Form is a price per square meter (m²) which covers all costs for the repair work at depth of the slab, including the first 100 mm, in accordance with requirements of drawings and specifications and as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the surface repair of the slab;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Preparation, presentation and correction of the Demolition Work Plan;
 - .4 Saw cuts required;
 - .5 The demolition of unsound concrete to sound concrete as well as to the indications in the drawings and the instructions of the Government Representative;
 - .6 The protection of the reinforcement to be preserved;
 - .7 The collection of demolition materials, their disposal off site and their treatment in accordance with the provisions of section 01 74 19 - *Waste Management and Disposal*;
 - .8 Preparation, presentation and correction of Work Plan for shop drawings, concreting procedure, specification sheets of blends and data sheets required;
 - .9 The treatment of the substrate before concreting;
 - .10 Supply, installation and dismantling of formwork;
 - .11 The supply, the implementation, the vibration, the finish, the wet cure of concrete type V-S with coarse aggregate 5-14 mm;
 - .12 Cleaning of surfaces adjacent to the concrete zone;
 - .13 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .14 Concrete finishing, tests and records;
 - .15 The treatment of surplus materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .16 Incidental expenses and coordination.
- .4 Item 2.7.4 - Galvanized Reinforcing
 - .1 The price at payment item 2.7.4 of the Bid Form is a price per kilogram (kg) of steel according to the quantities placed in the formwork, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but not limited to:

- .1 The preparation, presentation and correction of the Work Plan, shop drawings and the slip concerning the installation of steel bars;
 - .2 Mobilization of the workforce, tools and equipment required to carry out the work;
 - .3 The supply of rebar as well as the shaping of these,
 - .4 Galvanization when stipulated in plans and specifications;
 - .5 Site coordination;
 - .6 Site cuts and adjustments, including painting of cut ends with zinc-rich paint, approved by the Government representative;
 - .7 The installation of the required reinforcing steels, fixed by means of ties of galvanized steel wires to avoid any displacement during the placing of the concrete;
 - .8 The rebar installation confirmation table and a revision of the installation slip;
 - .9 Incidental expenses and coordination.
- .5 Item 2.7.5 Cleaning of Deck Surfaces
- .1 The price at payment item 2.7.5 of the Bid Form is a per square meter (m²) price of cleaned slab surface in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The supply and transportation of all materials required for the cleaning of the slab;
 - .2 The mobilization of labor, tools and equipment required for the completion of all stages of cleaning slab surfaces;
 - .3 The implementation of cleaning;
 - .4 The cleaning of the premises at the end of the work;
 - .5 Treatment of materials resulting from the cleaning in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .6 Incidental expenses and coordination.
- .6 Item 2.7.6 Correction of Deck Surfaces
- .1 The price at payment item 2.7.6 of the Bid Form is a price per square meter (m²) for the correction of deck and tunnel slab surfaces, in accordance with the requirements of the drawings and specifications.
 - .2 The relief at all points of the slab surfaces is evaluated by the Government Representative using the volumetric method described in ASTM E965 Standard Test Method for Measuring Pavement Macrotexture Depth Using a Volumetric Technique. The volume of sand or glass beads used for the test is 25 cm³. The minimum average patch diameter of each measurement must be greater than 165 mm.
 - .3 Non-conforming surfaces must be corrected by filling the cavities with a bagged cement mortar or grinding the asperities. The Contractor must indicate to the

Government Representative the surfaces to be grinded and wait for authorization before grinding.

- .4 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the correction of slab surfaces and the specifications of the cement mortar mix;
 - .2 The supply and transportation of all materials required for the correction of cementitious mortar surfaces;
 - .3 Mobilization of labor, tools and equipment required for the execution of the work;
 - .4 Implementation;
 - .5 Cleaning surfaces to correct;
 - .6 The cleaning of the premises at the end of the work;
 - .7 Treatment of materials resulting from cleaning in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .8 Incidental expenses and coordination.

- .7 Item 2.7.7 Placement of Waterproofing Membrane
 - .1 The price at payment item 2.7.7 of the Bid Form is a price per square meter (m²) for laying the waterproofing membrane on the deck and tunnel slab, depending on the actual surface covered, without the addition of overlaps and flashings in accordance with the requirements of the drawings and specifications.
 - .2 A bonding coat must be applied at the rate of 0.15 l / m² on the surfaces to be covered with a waterproofing membrane; this rate is calculated before evaporation of the solvent or water. The bonding layer must be that specified by the manufacturer of the waterproofing membrane;
 - .3 The Contractor shall protect against splash, sidewalks, bike paths, curbs, guardrails, railings, deck joints, etc., using canvas or other suitable material; the bonding layer shall be rolled along these elements over a minimum width of 600 mm.
 - .4 The implementation of the waterproofing membrane must be carried out after a minimum delay of 12 hours after the installation of the bonding layer, without exceeding 24 hours, on dry and clean surfaces.
 - .5 The installation of the waterproofing membrane must be carried out from the low points of the surfaces to be covered towards the high point of the transverse profile. The transverse joints must be staggered so as not to superimpose more than 3 membrane thicknesses at the same point. The overlap width of the joints is 75 mm for the longitudinal joints and 150 mm for the transverse joints. The membrane should be placed as close as possible to curbs, sidewalks, bike lanes, guardrails, drains and deck joints, without exceeding 15 mm.
 - .6 After laying each membrane strip, the poorly welded overlapping joints must be welded again. Once the installation is complete, the membrane is carefully inspected; the air pockets and the folds must be pierced and covered with a piece

of membrane exceeding at least 100 mm around the membrane area to be repaired.

- .7 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the work plan for the installation of the waterproofing membrane and the descriptive sheets of the materials;
 - .2 The supply and transportation of all materials required for the installation of the waterproofing membrane;
 - .3 Mobilization of labor, tools and equipment required for the execution of the work;
 - .4 The supply, loading, transportation and application of the bonding binder for the waterproofing membrane;
 - .5 The installation of the waterproofing membrane;
 - .6 The cleaning of the premises at the end of the work;
 - .7 Treatment of materials resulting from cleaning in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .8 Incidental expenses and coordination.

.8 Item 2.7.8 Placement of Bituminous Mix

- .1 The price at payment item 2.7.8 of the Bid Form is a price per square meter (m²) of bituminous mix placed on the bridge and the tunnel, in accordance with the requirements of the drawings and specifications.
- .2 The installation of the asphalt is carried out within a maximum of three (3) days after the installation of the waterproofing membrane. The days where the weather conditions are unfavorable in the sense of the requirements of implementation of the prepared mix and put in heat are excluded from the calculation of this time of execution.
- .3 All traffic is prohibited on the newly installed asphalt until the surface temperature of the asphalt is below 85 ° C.
- .4 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for bituminous mix works, including the description of the material used for the installation and the data sheets for the bituminous mix and binder;
 - .2 The supply and transportation of all materials required for the manufacture of asphalt;
 - .3 Mobilization of labor, tools and equipment required for the execution of the work;
 - .4 The supply, loading, transportation and application of the bonding binder;
 - .5 Supply, loading, application and compaction of asphalt;
 - .6 The cleaning of the premises at the end of the work;
 - .7 Treatment of materials resulting from cleaning in accordance with Section 01 74 19 - *Waste Management and Disposal*;

- .8 Incidental expenses and coordination.
- .9 Item 2.7.9 Surface Concrete Repairs of Sidewalk
 - .1 The price at payment item 2.7.9 of the Bid Form is a price per square meter (m²) which covers all costs for pavement surface repairs, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 Preparation, layout and correction, if required, of the Work Plan and concrete mix specifications for the sidewalk repair;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Saw cuts required;
 - .4 Substrate treatment before concreting;
 - .5 Supply, implementation, vibration, finishing, wet curing of concrete;
 - .6 Supply, shaping, handling, transportation and installation of reinforcement if required;
 - .7 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*.
 - .8 Incidental expenses and coordination.

2.8 Item 2.8 – Replacement of Rolling Surface - Approach

- .1 Item 2.8.1 Removal of Bituminous Pavement
 - .1 .1 The price at payment item 2.8.1 of the Bid Form is the price per square meter (m²) of bituminous mix removed at the approaches and disposed off the job site in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for asphalt removal work, including the description of the equipment used for the stripping;
 - .2 The saw cuts required to delineate the area of removal of bituminous mix;
 - .3 Bituminous mix removal;
 - .4 Cleaning after removal;
 - .5 Collection of cleaning materials and their treatment as specified in Section 01 74 19 - *Waste Management and Disposal*;
 - .6 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.
- .2 Item 2.8.2 Removal of W-Beam Guide Rail Profile on Wooden Posts at North Approach
 - .1 The price at payment item 2.8.2 of the Bid Form is a per linear meter price (lin. m.) for the removal and disposal of W-Beam guide rail at the North approach,

- including steel rails and wooden posts and all related items in accordance with the requirements of the drawings and specifications.
- .2 The price includes the following, but is not limited to:
 - .1 The mobilization of labor, tools and equipment and hardware required for the execution of the work;
 - .2 Disposal of materials in accordance with Section 07 74 19 - *Waste Management and Disposal*;
 - .3 Incidental expenses and coordination.
 - .3 Item 2.8.3 Supply and Installation of New W-Beam Guide Rail on Wooden Posts at North Approach
 - .1 The price at payment item 2.8.3 of the Bid Form is a per linear meter price (lin. m.) for the supply and installation of new W-Beam guide rail to the North approach, in accordance with the requirements of drawings and specifications. The W-Beam guide rail is measured on the central axis of the guardrail from the center of the first post to the center of the last post.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of shop drawings of W-Beam guide rail on wooden posts of the North approach;
 - .2 The supply and transportation of posts, spacers, double-corrugated steel sections, accessories, all bolts and other materials required for the performance of the work;
 - .3 Mobilization of labor, tools and equipment required for the execution of the work;
 - .4 The implementation of W-Beam guide rail on wooden posts at North approach;
 - .5 The cleaning of the premises at the end of the work;
 - .6 Treatment of materials resulting from cleaning in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.
 - .4 Item 2.8.4 Removal of W-Beam Guide Rail at South Approach
 - .1 The price at payment item 2.8.4 of the Bid Form is a per linear meter price (lin. m.) for the removal and disposal of W-Beam guide rail at the South approach, including steel rails and all related items in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The mobilization of labor, tools and equipment and hardware required for the execution of the work;
 - .2 Disposal of materials in accordance with Section 07 74 19 - *Waste Management and Disposal*;
 - .3 Incidental expenses and coordination.

- .5 Item 2.8.5 Supply and Installation of W-Beam Guide Rail at South Approach
- .1 The price at payment item 2.8.5 of the Bid Form is a per linear meter price (lin. m.) for the supply and installation of new W-Beam guide rail to the South approach, in accordance with the requirements of drawings and specifications. The W-Beam guide rail is measured on the central axis of the guardrail from the center of the first post to the center of the last post.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of shop drawings of W-Beam guide rail of the South approach;
 - .2 The supply and transportation spacers, double-corrugated steel sections, accessories, all bolts and other materials required for the performance of the work;
 - .3 Mobilization of labor, tools and equipment required for the execution of the work;
 - .4 The implementation of W-Beam guide rail at South approach;
 - .5 The cleaning of the premises at the end of the work;
 - .6 Treatment of materials resulting from cleaning in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.
- .6 Item 2.8.6 Replacement of Guardrail Post Anchorages
- .1 The price at payment item 2.8.6 of the Bid Form is a unit price for the guardrail post for which the anchorages are to be replaced in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 Preparation, presentation and correction of work plan and shop drawings necessary to replace anchorages;
 - .2 Data sheets for concrete curbs;
 - .3 The local demolition and rebuilding of concrete curbs, including steel cover plates;
 - .4 Supply and transportation of all required materials;
 - .5 The supply, installation and dismantling of the required formwork;
 - .6 Supply, implementation, vibration, finishing, wet curing of concrete;
 - .7 The mobilization of labor, tools and equipment required for the execution of the work;
 - .8 Removal of anchorages and anchor plates and their off-site disposal in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .9 The supply, transport and installation of new anchorages with nuts and plates;
 - .10 The cleaning of the premises at the end of the work;

- .11 Treatment of cleaning materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .12 Incidental expenses and coordination.
- .7 Item 2.8.7 Placement of Bituminous Mix
- .1 .1 The price at payment item 2.8.7 of the Bid Form is a price per square meter (m²) of bituminous mix placed at the approaches, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 Mobilization of labor, tools and equipment required for the execution of the work;
 - .2 The supply and transportation of all materials required for the work; the supply, loading, transport and application of the binder;
 - .3 The supply, loading, transportation, implementation and compaction of bituminous mix;
 - .4 The implementation of the pavement joint with the existing;
 - .5 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*.
 - .6 The cleaning of the premises at the end of the work;
 - .7 Treatment of materials resulting from cleaning in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .8 Incidental expenses and coordination.

2.9 Item 2.9 - Work on Counterweight System

- .1 Item 2.9.1 Supply, Installation, Maintenance and Dismantling of Protection System
 - .1 The price at payment item 2.9.1 of the Bid Form is a lump sum overall price to offset all costs for the supply, installation, maintenance and installation of the counterweight protection system, in accordance with the requirements of the drawings and specifications.
 - .2 This protection system is required to protect the users of the Gauron Bridge, the bike path and the recreational areas along the canal against falling or throwing of materials or tools during the concrete demolition, the operation cleaning of the concrete and reinforcement and the application, on the demolition surfaces, of anticorrosive coating.
 - .3 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the work plan and shop drawings for the protection system;
 - .2 The supply, transportation and handling of all materials required for the manufacture and installation of the protection system;
 - .3 The mobilization of labor, tools and equipment required for the implementation of the protection system;

- .4 The maintenance and repair of the protective system throughout the duration of the work;
 - .5 The mobilization of labor, tools and equipment required for the removal of the protection system;
 - .6 The dismantling of the protection system at the end of the work;
 - .7 Off-site transportation of protective system materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .8 The cleaning of the premises at the end of the work;
 - .9 Incidental expenses and coordination.
- .4 The bid price is paid as follows:
- .5 A sum corresponding to 75% of the total amount tendered for this position will be paid with the progress report, following the completion of the installation of the protection system provided that the work is completed and to the satisfaction of the Government Representative.
 - .6 The balance of the total amount tendered to this item will be paid with the progressive count, after the evacuation of the materials used for the construction of the protection system, provided that the evacuation is completed and to the satisfaction of the Government Representative.
- .2 Item 2.9.2 Removal of Loose Concrete from Surfaces
- .1 The price at payment item 2.9.2 of the Bid Form is a per square meter (m²) price of loose concrete demolished on the counterweight surface in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the demolition of loose concrete on counterweight surfaces;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The demolition of loose concrete surfaces;
 - .4 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .5 Incidental expenses and coordination.
- .3 Item 2.9.3 Without Oversize Concrete Repair of Counterweights
- .1 The price at payment item 2.9.3 of the Bid Form is a price per square meter (m²) of repaired concrete surface, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the partial demolition of counterweight concrete;
 - .2 The mobilization of labor, tools and equipment required for the execution of the work;

- .3 Saw cuts required;
 - .4 Demolition of unsound concrete to healthy concrete as per the indications on the drawings and the directives of the Government Representative;
 - .5 Protection of the reinforcement to be preserved;
 - .6 Collection of demolition materials, their disposal off site and their treatment according to the prescriptions of section 01 74 19 - *Waste Management and Disposal*;
 - .7 Preparation, presentation and correction of shop drawings and chemical data sheet of anchor;
 - .8 Supply, installation and dismantling of required formwork;
 - .9 Supply and installation of formwork tie rods;
 - .10 Supply and application of formwork release agent;
 - .11 Supply and installation of steel ligature wire;
 - .12 Drilling and cleaning of holes for the installation of chemical anchors;
 - .13 The supply, handling, transportation and placement of the chemical anchor;
 - .14 The supply, shaping, handling, transportation and installation of steel anchor rods;
 - .15 The preparation, presentation and correction of the Work Plan concerning the shop drawings, the concreting procedure, description sheets of the mix and technical sheets required;
 - .16 Substrate treatment before concreting;
 - .17 Supply, installation, vibration, finishing, wet curing of type XIV-R or XIV-C concrete;
 - .18 The cleaning of concrete surfaces adjacent to the concreting area;
 - .19 The supply and application of repair mortar at formwork tie rods;
 - .20 At the end of the work, the off-site disposal of the materials making up the formwork and the correction of defective repairs;
 - .21 Concrete finishing, tests and registers;
 - .22 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*.
 - .23 Incidental expenses and coordination.
- .4 Item 2.9.4 - Galvanized Welded Wire Mesh 51x51 MW9,1xMW9,1
- .1 The price at payment item 2.2.9 of the Bid Form is a price per square meter (m²) of mesh, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but not limited to:
 - .1 Preparation, presentation and correction of the Work Plan, shop drawings concerning the installation of the mesh;
 - .2 Mobilization of the workforce, tools and equipment required to carry out the work;

- .3 The supply of the mesh in the form of flat sheets only as well as the shaping of these in accordance with section 03 20 00 – *Concrete Reinforcing*;
 - .4 Installation of the mesh including the required overlaps;
 - .5 Steel wire used to tie the mesh;
 - .6 Incidental expenses and coordination.
- .5 Item 2.9.5 Counterweight Concrete Waterproofing
- .1 The price at payment item 2.9.5 of the Bid Form is a price per square meter (m²) of waterproofed area, to offset all costs of cleaning and waterproofing the concrete surfaces of the counterweights, in accordance with the requirements of the drawings and specifications.
 - .2 The treated surfaces must be protected from rain and splashing for a period of six (6) hours following the application of the waterproofing.
 - .3 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the work plan and data sheets of the waterproofing product;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The cleaning of concrete surfaces according to the method approved by the Government Representative;
 - .4 The recovery and disposal of the residues of the cleaning operation to a site in compliance with the applicable regulations;
 - .5 The application of the waterproofing agent to the concrete surfaces of the counterweight system, in the field, when the cleaning is completed to the satisfaction of the Government Representative;
 - .6 The cleaning of the premises at the end of the work;
 - .7 Incidental expenses and coordination.
- .6 Item 2.9.6 Partial Dismantling of Catwalk and Railings of Counterweight Structure
- .1 The price at payment item 2.9.6 of the Bid Form is a lump sum overall price for the partial dismantling and removal of the catwalks and railing of the counterweight, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the partial dismantling of catwalk and balustrades of the counterweight;
 - .2 The mobilization of labor, tools and equipment required for the dismantling of catwalk and railings;
 - .3 Off-site transportation of protective system materials;
 - .4 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .5 Incidental expenses and coordination.

.7 Item 2.9.7 Counterweights Plywood Replacement

- .1 The price at Payment item 2.9.7 of the Bid Form is a price per square meter (m²) of plywood surface replaced at the counterweight, in accordance with the requirements of the drawings and specifications.
- .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the replacement of plywood of the counterweight;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The dismantling of existing plywood to be replaced, including connecting pieces and any other related items;
 - .4 The recovery and disposal of the residues of the cleaning operation to a site in compliance with the applicable regulations;
 - .5 The supply, installation and finishing of wood plywood panels, connecting pieces and all related items required for the execution of the work as specified in specifications and drawings;
 - .6 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .7 The cleaning of the premises at the end of the work;
 - .8 Incidental expenses and coordination.

2.10 Item 2.10 - Supply and Installation of Height Limitation Signs

- .1 The price at Payment item 2.10 of the Bid Schedule is a per square meter (m²) price of signage area, in accordance with the requirements of the drawings and specifications.
 - .1 The price includes the following, but is not limited to:
 - .1 Preparation, presentation and correction of shop drawings;
 - .2 The mobilization of labor, tools and equipment required for the dismantling of existing panels to be removed;
 - .3 Decommissioning and off-site disposition of existing signage;
 - .4 The mobilization of labor, tools and equipment required for the execution of the work;
 - .5 The supply, transportation and handling of all materials required for the manufacture and installation of height limitation signs, including hardware;
 - .6 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.

Part 3 Item 3. - III - LAFLEUR BRIDGE (N ° 7A)

3.1 Item 3.1 - Repair Work on Wall Between Southern Abutments

- .1 Item 3.1.1 Without Oversize Concrete Repair of Wall
 - .1 The price at payment item 3.1.1 of the Bid Form is a per square meter (m²) price repaired, in accordance with the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the partial demolition of the wall;
 - .2 The mobilization of labor, tools and equipment required for carrying out concrete demolition work as indicated on the drawings;
 - .3 Saw cuts required;
 - .4 Demolition of unsound concrete to healthy concrete as per the indications on the drawings and the directives of the Government Representative;
 - .5 Protection of the reinforcement to be preserved;
 - .6 Collection of demolition materials, their disposal off site and their treatment according to the prescriptions of section 01 74 19 - *Waste Management and Disposal*;
 - .7 The preparation, presentation and correction, if required, of the shop drawings and the technical data sheet of the chemical anchors;
 - .8 Supply, installation and dismantling of required formwork;
 - .9 Supply and installation of formwork tie rods;
 - .10 Supply and application of formwork release agent;
 - .11 Supply and installation of steel ligature wire;
 - .12 Drilling and cleaning of holes for anchor installation;
 - .13 The supply, handling, transportation and placement of the chemical anchor;
 - .14 The supply, shaping, handling, transportation and installation of steel anchor rods;
 - .15 Preparation, presentation and correction of the work plan for the shop drawings, the concreting procedure, description sheets of the mix and technical sheets required;
 - .16 Substrate treatment before concreting;
 - .17 The supply, installation, vibration, finishing, wet curing of type XIV-R or XIV-C concrete;
 - .18 Cleaning of surfaces adjacent to the concreting area;
 - .19 The supply and application of repair mortar at the location of formwork tie rods;
 - .20 At the end of the work, the off-site disposal of the materials making up the formwork and the correction of defective repairs;

- .21 Concrete finishing, tests and registers;
 - .22 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*.
 - .23 Incidental expenses and coordination.
- .2 Item 3.1.2 - Galvanized Welded Wire Mesh 51x51 MW9,1xMW9,1
- .1 The price at payment item 3.1.2 of the Bid Form is a price per square meter (m²) of mesh, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but not limited to:
 - .1 Preparation, presentation and correction of the Work Plan, shop drawings concerning the installation of the mesh;
 - .2 Mobilization of the workforce, tools and equipment required to carry out the work;
 - .3 The supply of the mesh in the form of flat sheets only as well as the shaping of these in accordance with section 03 20 00 – *Concrete Reinforcing*;
 - .4 Installation of the mesh including the required overlaps;
 - .5 Steel wire used to tie the mesh;
 - .6 Incidental expenses and coordination.
- .3 Item 3.1.3 Supply and Installation of Rung
- .1 The price at payment item 3.1.3 of the Bid Form is a unit price for the supply and serial installation of rungs, in accordance with the requirements of the drawings and specifications.
 - .2 The existing serial consists of eight rows of rungs on the face and one on the top. In case of variation, the rungs will be paid proportionally.
 - .3 The price includes the following, but is not limited to:
 - .1 Georeferenced survey, preparation, presentation and correction, shop drawings, samples and data sheets required. Provide a DWG, PDF and EXCEL spreadsheet with identification, location and any other relevant information about the height of the rows, numbers, spaces between them, type, shape and identification section;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, transportation, handling and installation of rungs, such as the plan;
 - .4 Incidental expenses and coordination.
- 3.2 Item 3.2 - Work at Deck Joints**
- .1 Item 3.2.1 Replacement of South Abutment Joint with a Single Elastomeric Seal Joint with Gutter

- .1 The price at payment item 3.3.1 of the Bid Form is a per linear meter price (lin. m.) for the replacement of the deck joint by an elastomer seal with gutter at South abutment in accordance with the requirements of drawings and specifications.
- .2 The deck joints of a supplier must be approved by the government representative.
- .3 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the demolition procedure and Work Plan for the deck joint and the descriptive sheets of the equipment used;
 - .2 Mobilization of labor, tools and equipment required for demolition work;
 - .3 Saw cuts required.
 - .4 Concrete demolition and removal of existing joint;
 - .5 Stripping of surfaces adjacent to the joint;
 - .6 The cleaning of reinforcing steel to be preserved;
 - .7 Cleaning of concrete substrate and disposal of debris;
 - .8 The collection of demolition materials, their disposal off-site and their treatment in accordance with the provisions of Section 01 74 19 - *Waste Management and Disposal*;
 - .9 The preparation, presentation and correction of the Work Plan and Shop Drawings of the new deck joint with an elastomer seal and gutter, including the slip relating to the installation of steel bars and anchor as well as the concreting procedure, the descriptive sheets of the mixtures and the required technical data sheets;
 - .10 Mobilization of labor, tools and equipment required to complete the work of the new deck joint;
 - .11 The supply, handling, transportation and installation of the new deck gasket, including field welds and their control;
 - .12 Rebar supply and shaping, galvanizing when specified in drawings and specifications, rebar installation confirmation table, and installation slip review. the cuts and adjustments in the building site, the laying of reinforcing steel required;
 - .13 Supply, handling, transportation and placement of steel anchor rods and chemical anchor; drilling and cleaning holes for the installation of chemical anchors; performing control anchor tests in accordance with Section 03 30 03 - *Concrete Repairs*; the rebar installation confirmation table and a revision of the installation slip;
 - .14 Supply, installation and dismantling of formwork;
 - .15 Supply, installation, vibration, finishing, wet curing of concrete, finishing of concrete, tests and registers;
 - .16 Treatment of surplus materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .17 Deck joint leak test;
 - .18 Incidental expenses and coordination.

- .2 Items 3.2.2 and 3.2.3 Replacement of Deck Joint Seal at Pier and at North Abutment
 - .1 The price at payment items 3.2.2 and 3.2.3 of the Bid Form is a per linear meter price (m. lin.) for the replacement of deck joint seal at the central pier and North abutment of the bridge, in accordance with the requirements of the drawings and specifications.
 - .2 The deck joints of a supplier must be approved by the government representative.
 - .3 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the removal of the seal seal and the required data sheets;
 - .2 The mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Removal, storage and reinstallation of bolts and joint cover plate;
 - .4 Supply, handling, transportation and placement of new deck joint seal seal;
 - .5 In the event of damage, immediately restore the affected items and at the expense of the Contractor;
 - .6 Deck joint leak test;
 - .7 Incidental expenses and coordination

3.3 Item 3.3 - Replacement of Rolling Surface - Span 1

- .1 Item 3.3.1 Removal of Bituminous Pavement
 - .1 The price at payment item 3.3.1 of the Bid Form is the price per square meter (m²) of bituminous mix removed and disposed off the job site in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for asphalt removal work, including the description of the equipment used for the stripping;
 - .2 The saw cuts required to delineate the area of removal of bituminous mix;
 - .3 Bituminous mix removal;
 - .4 Cleaning after removal;
 - .5 Collection of cleaning materials and their treatment as specified in Section 01 74 19 - *Waste Management and Disposal*;
 - .6 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.
- .2 Item 3.3.2 Surface Repairs of Slab (<100 mm)
 - .1 The price at payment item 3.3.2 of the Bid Form is a price per square meter (m²) which covers all costs for surface repairs to the slab, in accordance with the requirements of the drawings and specifications as well as directed by the Government Representative.

- .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the surface repair of the slab;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Preparation, presentation and correction of the Demolition Work Plan;
 - .4 Saw cuts required;
 - .5 The demolition of unsound concrete to sound concrete as per the drawings and instructions of the Departmental Representative;
 - .6 The protection of the reinforcement to be preserved;
 - .7 The collection of demolition materials, their disposal off site and their treatment in accordance with the provisions of section 01 74 19 - *Waste Management and Disposal*;
 - .8 Supply, shaping, handling, transportation and installation of reinforcement if required;
 - .9 Preparation, presentation and correction of Work Plan for shop drawings, concreting procedure, specification sheets of blends and data sheets required;
 - .10 The treatment of the substrate before concreting;
 - .11 Supply, installation, vibration, finishing, wet cure of type V-S concrete with coarse aggregates 5-14 mm;
 - .12 The cleaning of surfaces adjacent to the concreting area;
 - .13 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .14 Concrete finishing, tests and records;
 - .15 The treatment of surplus materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .16 Incidental expenses and coordination.
- .3 Item 3.3.3 Deep Repairs of Slab (> 100 mm)
 - .1 The price at payment item 3.3.3 of the Bid Form is a price per square meter (m²) which covers all costs for the repair work at depth of the slab, including the first 100 mm, in accordance with requirements of drawings and specifications and as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the surface repair of the slab;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Preparation, presentation and correction of the Demolition Work Plan;
 - .4 Saw cuts required;

- .5 The demolition of unsound concrete to sound concrete as well as to the indications in the drawings and the instructions of the Government Representative;
 - .6 The protection of the reinforcement to be preserved;
 - .7 The collection of demolition materials, their disposal off site and their treatment in accordance with the provisions of section 01 74 19 - *Waste Management and Disposal*;
 - .8 Supply, shaping, handling, transportation and installation of reinforcement if required;
 - .9 Preparation, presentation and correction of Work Plan for shop drawings, concreting procedure, specification sheets of blends and data sheets required;
 - .10 The treatment of the substrate before concreting;
 - .11 Supply, installation and dismantling of formwork;
 - .12 The supply, the implementation, the vibration, the finish, the wet cure of concrete type V-S with coarse aggregate 5-14 mm;
 - .13 Cleaning of surfaces adjacent to the concrete zone;
 - .14 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .15 Concrete finishing, tests and records;
 - .16 The treatment of surplus materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .17 Incidental expenses and coordination.
- .4 Item 3.3.4 Installation of a Rolling Screed
- .1 The price at Payment Item 3.3.4 of the Bid Form is a price per square meter (m²) which covers all costs for the construction of a concrete screed on the deck slab, in accordance with the requirements of drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the construction of a concrete screed and the specifications of the concrete mix;
 - .2 The mobilization of labor, tools and equipment required for carrying out the work in accordance with the drawings and specifications;
 - .3 Cleaning the surface to be covered;
 - .4 Installation and removal of formwork, if required;
 - .5 Saw cuts required;
 - .6 Substrate treatment prior to concreting, including hydrodemolition, cleaning and application of adhesion grout;
 - .7 Supply, implementation, vibration, finishing, wet curing of type XVI-15 concrete;
 - .8 Carry out the transverse grooving;

- .9 Protection of concrete screed;
- .10 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*.
- .11 Incidental expenses and coordination.

3.4 Item 3.4 - Replacement of Rolling Surface - South Approach

- .1 Item 3.4.1 Removal of Bituminous Pavement
 - .1 The price at payment item 3.4.1 of the Bid Form is the price per square meter (m²) of bituminous mix removed and disposed off the job site in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for asphalt removal work, including the description of the equipment used for the stripping;
 - .2 The saw cuts required to delineate the area of removal of bituminous mix;
 - .3 Bituminous mix removal;
 - .4 Cleaning after removal;
 - .5 Collection of cleaning materials and their treatment as specified in Section 01 74 19 - *Waste Management and Disposal*;
 - .6 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.
- .2 Item 3.4.2 Removal of Galvanized W-Beam Guide Rail
 - .1 The price at payment item 3.4.2 of the Bid Form is a per linear meter price (lin. m.) for the removal and disposal of galvanized W-Beam guide rail at the South approach, including the connecting parts as well as all related items, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The mobilization of labor, tools and equipment and hardware required for the execution of the work;
 - .2 Disposal of materials in accordance with Section 07 74 19 - *Waste Management and Disposal*.
 - .3 Incidental expenses and coordination.
- .3 Item 3.4.3 Demolition of Curb at Southeast Approach
 - .1 The price at payment item 3.4.3 of the Bid Form is a linear meter price (lin. m.) for the removal and disposal of Southeast approach concrete curbs, including the steel cover plate, in accordance with the following: specifications and drawings and as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:

- .1 Preparation, presentation and correction, if required, of the Demolition Work Plan;
 - .2 Saw cuts required;
 - .3 Cleaning after demolition;
 - .4 Collection and treatment of demolition and cleaning materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .5 Any incidental expenses.
- .4 Item 3.4.4 Surface Repairs of Tunnel Slab (<100 mm)
- .1 The price at payment item 3.4.4 of the Bid Form is a price per square meter (m²) which covers all costs for surface repairs to the slab, in accordance with the requirements of the drawings and specifications as well as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the surface repair of the slab;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Preparation, presentation and correction of the Demolition Work Plan;
 - .4 Saw cuts required;
 - .5 The demolition of unsound concrete to sound concrete as per the drawings and instructions of the Government Representative;
 - .6 The protection of the reinforcement to be preserved;
 - .7 The collection of demolition materials, their disposal off site and their treatment in accordance with the provisions of section 01 74 19 - *Waste Management and Disposal*;
 - .8 Supply, shaping, handling, transportation and installation of reinforcement if required;
 - .9 Preparation, presentation and correction of Work Plan for shop drawings, concreting procedure, specification sheets of blends and data sheets required;
 - .10 The treatment of the substrate before concreting;
 - .11 Supply, installation, vibration, finishing, wet cure of type V-S concrete with coarse aggregates 5-14 mm;
 - .12 The cleaning of surfaces adjacent to the concreting area;
 - .13 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .14 Concrete finishing, tests and records;
 - .15 The treatment of surplus materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .16 Incidental expenses and coordination.

- .5 Item 3.4.5 Deep Repairs of Tunnel Slab (>100 mm)
- .1 The price at payment item 3.4.5 of the Bid Form is a price per square meter (m²) which covers all costs for the repair work at depth of the slab, including the first 100 mm, in accordance with requirements of drawings and specifications and as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the surface repair of the slab;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Preparation, presentation and correction of the Demolition Work Plan;
 - .4 Saw cuts required;
 - .5 The demolition of unsound concrete to sound concrete as well as to the indications in the drawings and the instructions of the Government Representative;
 - .6 The protection of the reinforcement to be preserved;
 - .7 The collection of demolition materials, their disposal off site and their treatment in accordance with the provisions of section 01 74 19 - *Waste Management and Disposal*;
 - .8 Supply, shaping, handling, transportation and installation of reinforcement if required;
 - .9 Preparation, presentation and correction of Work Plan for shop drawings, concreting procedure, specification sheets of blends and data sheets required;
 - .10 The treatment of the substrate before concreting;
 - .11 Supply, installation and dismantling of formwork;
 - .12 The supply, the implementation, the vibration, the finish, the wet cure of concrete type V-S with coarse aggregate 5-14 mm;
 - .13 Cleaning of surfaces adjacent to the concrete zone;
 - .14 At the end of the work, the off-site removal of the materials forming the formwork and the correction of the faulty repairs;
 - .15 Concrete finishing, tests and records;
 - .16 The treatment of surplus materials in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .17 Incidental expenses and coordination.
- .6 Item 3.4.6 Reconstruction of Curb at Southeast Approach
- .1 The price at payment item 3.4.6 of the Bid Form is a linear meter price (lin. m.) for the rebuilding of the South East approach curb, in accordance with specifications and drawings as well as with the instructions of the Government representative.
 - .2 The price includes the following, but is not limited to:

- .1 Preparation, presentation and correction, if required, of shop drawings and reinforcement slip;
 - .2 The preparation, presentation and correction, if required, of the Work Plan and specification sheets of the concrete mix;
 - .3 Mobilization of labor, tools and equipment required for the execution of the work;
 - .4 Supply, installation and dismantling of required forms;
 - .5 Substrate treatment before concreting;
 - .6 Supply, shaping, handling, transportation and installation of reinforcement;
 - .7 Supply and installation of steel ligature wire;
 - .8 At the end of the work, the off-site evacuation of the materials forming the formwork;
 - .9 Supply, implementation, vibration, finishing, wet curing of concrete;
 - .10 Supply, implementation and compaction of granular foundation material, as indicated in specifications and drawings;
 - .11 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*;
 - .12 Any incidental expenses.
- .7 Item 3.4.7 Supply and Installation of New Galvanized W-Beam Guide Rail
- .1 The price at payment item 3.4.7 of the Bid Form is a price per linear meter (lin. m.) for the supply and installation of new galvanized W-Beam guide rail at the South Approach, in accordance with the requirements of drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of shop drawings for double corrugated steel sections, including assembly elements;
 - .2 Supply and transportation of all required materials;
 - .3 Mobilization of labor, tools and equipment required for the execution of the work;
 - .4 Implementation of galvanized W-Beam guide rail at the South approach;
 - .5 The cleaning of the premises at the end of the work;
 - .6 Treatment of materials resulting from cleaning in accordance with the requirements of Section 01 74 19 - *Waste Management and Disposal*;
 - .7 Incidental expenses and coordination.
- .8 Item 3.4.8 Repair of Steel Guardrail at Southeast Approach
- .1 The price at payment item 3.4.8 of the Bid Form is a repaired price per kilogram of steel (kg) that covers all costs for the repair of the steel guardrail on Southeast approach, in accordance with specifications and drawings as well as according to the instructions of the Government Representative.

- .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction, if required, of the shop drawings and the Work Plan for the repair of the steel slide;
 - .2 The supply, shaping, cleaning and painting in the workshop of the steel elements of the slide;
 - .3 Handling, transportation and storage of steel components on site;
 - .4 The mobilization of labor, tools and equipment required for the execution of the work;
 - .5 Measurement, marking and drilling holes in existing chords if required;
 - .6 Supply of bolts and washers required for bolting;
 - .7 Installation and bolting of new steel slider elements;
 - .8 Painting retouching;
 - .9 Any incidental expenses.
- .9 Item 3.4.9 Installation of a Rolling Screed
 - .1 The price at Payment Item 3.4.9 of the Bid Form is a price per square meter (m²) which covers all costs for the construction of a concrete screed on the tunnel slab, in accordance with the requirements of drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the construction of a concrete screed and the specifications of the concrete mix;
 - .2 The mobilization of labor, tools and equipment required for carrying out the work in accordance with the drawings and specifications;
 - .3 Saw cuts required;
 - .4 Substrate treatment prior to concreting, including hydrodemolition, cleaning and application of adhesion grout;
 - .5 Supply, implementation, vibration, finishing, wet curing of type XVI-15 concrete;
 - .6 Carry out the transverse grooving;
 - .7 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*;
 - .8 Incidental expenses and coordination.
- .10 Item 3.4.10 Placement of Bituminous Mix
 - .1 The price at payment item 3.4.10 of the Bid Form is a price per square meter (m²) of bituminous mix placed at the approach, in accordance with the requirements of the drawings and specifications.
 - .2 The installation of the asphalt is carried out within a maximum of three (3) days after the installation of the waterproofing membrane. The days where the weather conditions are unfavorable in the sense of the requirements of implementation of

the prepared mix and put in heat are excluded from the calculation of this time of execution.

- .3 All traffic is prohibited on the newly installed asphalt until the surface temperature of the asphalt is below 85 ° C.
- .4 The price includes the following, but is not limited to:
 - .1 Mobilization of labor, tools and equipment required for the execution of the work;
 - .2 The supply and transportation of all materials required for the manufacture of asphalt;
 - .3 The supply, loading, transportation and application of the bonding binder;
 - .4 The supply, loading, transportation, implementation and compaction of bituminous mix;
 - .5 The implementation of the pavement joint with the existing;
 - .6 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*;
 - .7 The cleaning of the premises at the end of the work;
 - .8 Treatment of materials resulting from cleaning in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .9 Incidental expenses and coordination.

3.5 Item 3.5 - Work on Counterweight Structure

- .1 Item 3.5.1 Supply, Installation, Maintenance and Dismantling of Protection System
 - .1 The price at payment item 3.5.1 of the Bid Form is an aggregate lump sum price for the supply, installation, maintenance and implementation of the counterweight protection system, in accordance with the requirements of the drawings and specifications.
 - .2 This protection system is required to protect the users of the Lafleur Bridge, the bike path and the recreational areas along the canal against the falling or throwing of materials or tools during the demolition of the concrete, the operation cleaning of the concrete and reinforcement and the application, on the demolition surfaces, of anticorrosive coating.
 - .3 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the work plan and shop drawings for the protection system;
 - .2 The supply, transportation and handling of all materials required for the manufacture and installation of the protection system;
 - .3 The mobilization of labor, tools and equipment required for the implementation of the protection system;
 - .4 The maintenance and repair of the protective system throughout the duration of the work;

- .5 The mobilization of labor, tools and equipment required for the removal of the protection system;
- .6 The dismantling of the protection system at the end of the work;
- .7 Off-site transportation of protective system materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
- .8 The cleaning of the premises at the end of the work;
- .9 Incidental expenses and coordination.
- .4 The bid price is paid as follows:
 - .1 A sum corresponding to 75% of the total amount tendered for this position will be paid with the progress report, following the completion of the installation of the protection system provided that the work is completed and to the satisfaction of the Government Representative.
 - .2 The balance of the total amount tendered to this item will be paid with the progressive report, after the evacuation of the materials used for the construction of the protection system, provided that the evacuation is completed and to the satisfaction of the Representative. of the government.
- .2 Item 3.5.2 Removal of Loose Concrete from Surfaces
 - .1 The price at payment item 3.5.2 of the Bid Form is a per square meter (m²) price of loose concrete demolished on the counterweight surface in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the demolition of loose concrete on counterweight surfaces;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The demolition of loose concrete surfaces;
 - .4 Collection and treatment of demolition materials in accordance with Section 01 74 19 - *Waste Management and Disposal*;
 - .5 Incidental expenses and coordination.
- .3 Item 3.5.3 Counterweight Concrete Waterproofing
 - .1 The price at payment item 3.5.3 of the Bid Form is a price per square meter (m²) of waterproofed area, to offset all costs of cleaning and waterproofing the concrete surfaces of the counterweight, in accordance with the requirements of the drawings and specifications.
 - .2 The treated surfaces must be protected from rain and splashing for a period of six (6) hours following the application of the waterproofing.
 - .3 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the work plan and data sheets of the waterproofing product;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;

- .3 The cleaning of concrete surfaces according to the method approved by the Government Representative;
 - .4 The recovery and disposal of the residues of the cleaning operation to a site in compliance with the applicable regulations;
 - .5 The application of the waterproofing agent to the concrete surfaces of the counterweight system, in the field, when the cleaning is completed to the satisfaction of the Government Representative;
 - .6 The cleaning of the premises at the end of the work;
 - .7 Incidental expenses and coordination.
- .4 Item 3.5.4 – Without Oversize Concrete Repair of Counterweight
- .1 The price at payment item 3.5.4 of the Bid Form is a price per square meter (m²) of repaired concrete surface, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the Work Plan for the partial demolition of counterweight concrete;
 - .2 The mobilization of labor, tools and equipment required for the execution of the work;
 - .3 Saw cuts required;
 - .4 Demolition of unsound concrete to healthy concrete as per the indications on the drawings and the directives of the Government Representative;
 - .5 Protection of the reinforcement to be preserved;
 - .6 Collection of demolition materials, their disposal off site and their treatment according to the prescriptions of section 01 74 19 - *Waste Management and Disposal*;
 - .7 The preparation, presentation and correction of shop drawings and the list of welded reinforcements;
 - .8 Supply, installation and dismantling of required formwork;
 - .9 Supply and installation of formwork tie rods;
 - .10 Supply and application of formwork release agent;
 - .11 Supply and installation of steel ligature wire;
 - .12 Drilling and cleaning of holes for the installation of chemical anchors;
 - .13 The supply, handling, transportation and placement of the chemical anchor;
 - .14 The supply, shaping, handling, transportation and installation of steel anchor rods;
 - .15 The preparation, presentation and correction of the Work Plan concerning the shop drawings, the concreting procedure, description sheets of the mix and technical sheets required;
 - .16 Substrate treatment before concreting;

- .17 Supply, installation, vibration, finishing, wet curing of type XIV-R or XIV-C concrete;
 - .18 The cleaning of concrete surfaces adjacent to the concreting area;
 - .19 The supply and application of repair mortar at formwork tie rods;
 - .20 At the end of the work, the off-site disposal of the materials making up the formwork and the correction of defective repairs;
 - .21 Concrete finishing, tests and registers;
 - .22 Treatment of surplus materials in accordance with Section 07 74 19 - *Waste Management and Disposal*.
 - .23 Incidental expenses and coordination.
- .5 Item 3.5.5 - Galvanized Welded Wire Mesh 51x51 MW9,1xMW9,1
- .1 The price at payment item 3.5.5 of the Bid Form is a price per square meter (m²) of mesh, in accordance with the requirements of the drawings and specifications.
 - .2 The price includes the following, but not limited to:
 - .1 Preparation, presentation and correction of the Work Plan, shop drawings concerning the installation of the mesh;
 - .2 Mobilization of the workforce, tools and equipment required to carry out the work;
 - .3 The supply of the mesh in the form of flat sheets only as well as the shaping of these in accordance with section 03 20 00 – *Concrete Reinforcing*;
 - .4 Installation of the mesh including the required overlaps;
 - .5 Steel wire used to tie the mesh;
 - .6 Incidental expenses and coordination.

3.6 Item 3.6 - Manhole to be Cleaned

- .1 The price at payment item 3.6 of the Bid Form is a lump sum overall price to compensate for all the costs incurred for cleaning the manhole, in accordance with the drawings and specifications.
- .2 The price includes the following, but not limited to:
 - .1 Preparation, presentation and correction of the Work Plan;
 - .2 Mobilization of labor, tools and equipment required for the completion of the work;
 - .3 Manhole cleaning according to the method approved by the Government Representative;
 - .4 The recovery and evacuation of residues from the cleaning operation to a site in accordance with the regulations in force;
 - .5 Manhole cleaning until the Government Representative is satisfied;
 - .6 Cleaning of the premises at the end of the work;
 - .7 Incidental expenses and coordination.

Part 4 Item 4 - IV - WINTER CONDITIONS

4.1 Item 4.1 - Cold Weather Concreting

.1 Item 4.1.1 - Temporary Shelter and Heating Included for Concrete Work

- .1 The price at payment item 4.1.1 of the Bid Form is a price per square meter (m²) related to the protection and heating of new concrete during concreting in cold weather to offset all costs incurred for the temporary shelter for all pre-concreting work and all concrete work, in accordance with the requirements of drawings and specifications.
- .2 Temporary shelter is payable only if required in writing by the Government Representative.
- .3 The price includes the following, but is not limited to:
 - .1 Preparation, presentation and correction, shop drawings and description of the shelter;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, handling and transportation of materials required to build the shelter;
 - .4 Installation, maintenance during the work and dismantling at the end of the work of the temporary shelter;
 - .5 The heating of the temporary shelter during the execution of the works;
 - .6 Off-site transportation of materials;
 - .7 Incidental expenses and coordination.
- .4 Protection after the cure period:
 - .1 The heating of cast-in place concrete after the curing period is at the Contractor's expense, except for post-tensioned concrete where these charges are paid per square meter per day at a sum equal to 2% of the price established for the " Temporary shelter and heating included for concrete work " for a maximal additional period of 10 days following grouting.
 - .2 Concrete heating in place after this additional period, necessary to complete the protection period following grouting, is at the Contractor's expense.
- .5 The bid price is paid as follows:
 - .1 A sum corresponding to 60% of the amount after installation of the shelter to the satisfaction of the Government Representative;
 - .2 A sum corresponding to 40% of the amount after the evacuation of the materials that made up the shelter, outside the site to the satisfaction of the Government Representative.

.2 Item 4.1.2 - Insulation (RSI 0.40 per layer)

- .1 The price at payment item 4.1.2 of the Bid Form is a per square meter (m²) price of new uncovered concrete surface covered with insulation, in accordance with the requirements of the drawings and specifications.
- .2 The costs related to the concrete insulation protection required as a result of the correction of defective work are the responsibility of the Contractor.
- .3 Insulation layers are payable only if required in writing by the Government Representative.
- .4 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction of the description of the composition of the insulation layer;
 - .2 Mobilization of labor, tools and equipment required for the execution of the work;
 - .3 The supply, handling, transportation, installation, maintenance during the works and the evacuation at the end of the work of the insulation layers;
 - .4 Incidental expenses and coordination.
- .5 The bid price is paid as follows:
 - .1 A sum corresponding to 60% of the amount after installation of the insulation layers requested to the satisfaction of the Government Representative;
 - .2 A sum corresponding to 40% of the amount after the evacuation of insulating materials, off site to the satisfaction of the Government Representative.
- .3 Item 4.1.3 - Heating of Concrete Constituents or Masonry Mortar
 - .1 The price at payment item 4.1.3 of the Bid Form is a per cubic meter (m³) price of concrete or cementitious grout set up whose constituents are heated in accordance with the requirements of the drawings and specifications.
 - .2 The costs of heating concrete components or non-shrink grout required as a result of the correction of defective work are the responsibility of the contractor.
 - .3 The price includes the following, but is not limited to:
 - .1 Heating the mixing water (between 40 ° C and 80 ° C) used for the manufacture of concrete;
 - .2 Heating aggregates to remove frozen pieces, snow and ice;
 - .3 Incidental expenses and coordination.
- .4 Item 4.1.4 - Additional Heating
 - .1 The price at payment item 4.1.4 of the Submission Slip is an increased cost per additional day of heating.
 - .2 The additional heating of the temporary shelter is payable only if it is required in writing by the Government Representative.
 - .3 The cost plus is used for heating because these works are of such nature that the costs can not be estimated exactly.

- .4 At the end of each day, the Government Representative and the Contractor compare their respective records of the time payable and the materials used to agree on a single document, which is signed in two (2) copies by each Parties. One copy goes to the Government Representative and the other to the Contractor.
- .5 All statements of accounts of the Contractor must be detailed and accompanied by the required supporting documents. The Contractor must allow any authorized representative of the Government to inspect his books, pay slips, cost prices and any other document used as a basis for the preparation of his statements.
- .6 When the "cost-plus" method is applied, the work is done under controlled manner, and the calculation of the payments to be made corresponds to the actual costs of the Contractor and its subcontractors and must include taxes and other duties imposed by any competent authority on labor, materials, heavy machinery, miscellaneous equipment, small tools and other equipment required and to which the Contractor is subject, excluding goods and services tax (GST) and the Quebec Sales Tax (QST).
- .7 The calculation of payments to be made is based on the following data and must include any other cost of labor, materials, heavy machinery, small tools and any other required, unspecified equipment attributable to changes in the conditions of execution or the execution of unforeseen work.
- .8 Costs
 - .1 Labor Costs
 - .1 The cost of labor consists of:
 - .1 Salaries paid to the worker as well as to the foreman and, where applicable, to the Superintendent who supervises the employees on the work site, in accordance with the Collective Agreement or Decree of the Civil and Road Workers, plus the employee benefits. applicable to wages;
 - .2 Additional travel and accommodation costs for additional employees required;
 - .3 No direct payment is made to the Contractor's employees who generally work at headquarters, at a general office, at the site office, in a garage or warehouse;
 - .4 Excludes overheads, administration fees and profits.
 - .2 Material costs
 - .1 The cost of materials consists of the cost of all materials, products, supplies, in addition to the cost of transportation, storage and handling thereof, all corresponding to the lowest price awarded to the Contractor and subcontractors.
 - .2 Energy and heating costs are part of the materials of this Contract;
 - .3 Excludes overheads, administration fees and profits.

- .3 Cost of equipment, heating equipment, small tools and other equipment. The cost of various equipment, heating equipment, small tools and other equipment consists of:
 - .1 Cost of transportation and assembly when miscellaneous equipment, heating equipment, small tools and other required equipment are not already on site. The time spent on the repair is not payable.
 - .2 Cost of use miscellaneous equipment, heating equipment, small tools and other equipment calculated using the following rates:
 - .1 The internal rental rate, excluding administration and profits, when the equipment belongs to the Contractor;
 - .2 The internal rental rate, excluding administration and profits, when the equipment belongs to a subcontractor;
 - .3 The rate charged when the equipment belongs to the supplier.
 - .3 The internal rental rate and the invoiced rate are subject to verification and must be approved by the Government Representative.
 - .4 Equipment and small tools such as hammers, pliers and others are not payable.
 - .5 Equipment, heating equipment, small tools and other equipment must be in a state of operation as original.
 - .6 Excludes overheads, administration fees and profits.
- .4 Increase
 - .1 The increase includes overheads, administration fees and profits as defined by the Parks Canada Agency (PCA) in the clauses of this Contract.

4.2 **Item 4.2 - Cold Weather Painting**

- .1 Item 4.2.1 - Heating of Containment Enclosure
 - .1 The price at payment item 4.2.1 of the Bid Form is a cost-plus price per heating day.
 - .2 The heating of the containment is payable only if it is required in writing by the Government Representative.
 - .3 The cost plus is used for heating because these works are of such nature that the costs cannot be estimated exactly.
 - .4 At the end of each day, the Government Representative and the Contractor compare their respective records of the time payable and the materials used to

agree on a single document, which is signed in two (2) copies by each Parties. One copy goes to the Government Representative and the other to the Contractor.

- .5 All statements of accounts of the Contractor must be detailed and accompanied by the required supporting documents. The Contractor must allow any authorized representative of the Government to inspect his books, pay slips, cost prices and any other document used as a basis for the preparation of his statements.
- .6 When the "cost-plus" method is applied, the work is done under controlled manner, and the calculation of the payments to be made corresponds to the actual costs of the Contractor and its subcontractors and must include taxes and other duties imposed by any competent authority on labor, materials, heavy machinery, miscellaneous equipment, small tools and other equipment required and to which the Contractor is subject, excluding goods and services tax (GST) and the Quebec Sales Tax (QST).
- .7 The calculation of payments to be made is based on the following data and must include any other cost of labor, materials, heavy machinery, small tools and any other required, unspecified equipment attributable to changes in the conditions of execution or the execution of unforeseen work.
- .8 Costs
 - .1 Labor Costs
 - .1 The cost of labor consists of:
 - .1 Salaries paid to the worker as well as to the foreman and, where applicable, to the Superintendent who supervises the employees on the work site, in accordance with the Collective Agreement or Decree of the Civil and Road Workers, plus the employee benefits. applicable to wages;
 - .2 Additional travel and accommodation costs for additional employees required;
 - .3 No direct payment is made to the Contractor's employees who generally work at headquarters, at a general office, at the site office, in a garage or warehouse;
 - .4 Excludes overheads, administration fees and profits.
 - .2 Material costs
 - .1 The cost of materials consists of the cost of all materials, products, supplies, in addition to the cost of transportation, storage and handling thereof, all corresponding to the lowest price awarded to the Contractor and subcontractors.
 - .2 Energy and heating costs are part of the materials of this Contract;
 - .3 Excludes overheads, administration fees and profits.
 - .3 Cost of equipment, heating equipment, small tools and other equipment. The cost of various equipment, heating equipment, small tools and other equipment consists of:

- .1 Cost of transportation and assembly when miscellaneous equipment, heating equipment, small tools and other required equipment are not already on site. The time spent on the repair is not payable.
- .2 Cost of use miscellaneous equipment, heating equipment, small tools and other equipment calculated using the following rates:
 - .1 The internal rental rate, excluding administration and profits, when the equipment belongs to the Contractor;
 - .2 The internal rental rate, excluding administration and profits, when the equipment belongs to a subcontractor;
 - .3 The rate charged when the equipment belongs to the supplier.
- .3 The internal rental rate and the invoiced rate are subject to verification and must be approved by the Government Representative.
- .4 Equipment and small tools such as hammers, pliers and others are not payable.
- .5 Equipment, heating equipment, small tools and other equipment must be in a state of operation as original.
- .6 Excludes overheads, administration fees and profits.
- .4 Increase
 - .1 The increase includes overheads, administration fees and profits as defined by the Parks Canada Agency (PCA) in the clauses of this Contract.

Part 5 Item 5 - V – TRAFFIC MAINTENANCE AND TEMPORARY SIGNAGE

- .1 Items 5.1 to 5.4 - Partial Closure of Lafleur Bridge (one lane out of two) – Short Term (item 5.1), Partial Closure of Gauron Bridge (one lane out of two) – Short Term (item 5.2), Complete Closure of Lafleur Bridge – Short Term (item 5.3), Complete Closure of Gauron Bridge – Short Term (item 5.4)
 - .1 Prices at payment items 5.1 to 5.4, of the Bid Form are unit prices (day or night, depending on closure) for the maintenance of traffic and temporary signage, in accordance with requirements and drawings as well as according to the specifications. directives of the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 Maintenance of traffic and temporary signage;
 - .2 Preparation of all signaling drawings;
 - .3 Preparation of closing requests;

- .4 Provision of all signaling personnel, including signaling and site manager, and machinery and vehicles required for temporary signage;
 - .5 The mobilization of access to work areas, their maintenance and dismantling;
 - .6 Maintenance of access to properties;
 - .7 The maintenance of the closure when it is of long duration;
 - .8 The supply of a signaling manager;
 - .9 Supply, mobilization, maintenance, servicing, replacement in the event of breakage or vandalism, activation or deactivation, relocation and demobilization of temporary signage required to perform work on the entire site in accordance with the requirements of this document;
 - .10 Maintenance of signs and circulation lanes including requested inspections;
 - .11 Temporary signage, equipment and labor required for the complete performance of all work;
 - .12 Signage for cyclists and pedestrians;
 - .13 Modification and refurbishment of existing signage;
 - .14 As well as other charges relating to the special requirements for the maintenance of traffic, as defined in the articles of section 01353-4;
 - .15 Any incidental expenses.
- .2 Items 5.5 to 5.6 - Maintaining Partial Closure of Lafleur Bridge (one lane out of two) – Long Term (item 5.5), Maintaining Partial Closure of Gauron Bridge (one lane out of two) – Short Term (item 5.6)
- .1 Prices at payment items 5.5 to 5.6, of the Bid Form are unit prices (day or night, depending on closure) for the maintenance of traffic and temporary signage, in accordance with requirements and drawings as well as according to the specifications. directives of the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 Maintenance of traffic and temporary signage;
 - .2 Preparation of all signaling drawings;
 - .3 Preparation of closing requests;
 - .4 Provision of all signaling personnel, including signaling and site manager, and machinery and vehicles required for temporary signage;
 - .5 The mobilization of access to work areas, their maintenance and dismantling;
 - .6 Maintenance of access to properties;
 - .7 The maintenance of the closure when it is of long duration;
 - .8 The supply of a signaling manager;
 - .9 Supply, mobilization, maintenance, servicing, replacement in the event of breakage or vandalism, activation or deactivation, relocation and

- demobilization of temporary signage required to perform work on the entire site in accordance with the requirements of this document;
 - .10 Maintenance of signs and circulation lanes including requested inspections;
 - .11 Temporary signage, equipment and labor required for the complete performance of all work;
 - .12 Signage for cyclists and pedestrians;
 - .13 Modification and refurbishment of existing signage;
 - .14 As well as other charges relating to the special requirements for the maintenance of traffic, as defined in the articles of section 01353-4;
 - .15 Any incidental expenses.
- .3 Items 5.7 to 5.8 - Complete Weekend Closure of the Gauron Bridge - Contra-Flow Circulation on Lafleur Bridge (item 5.7) and Complete Weekend Closure of Lafleur Bridge - Contra-Flow Circulation on Gauron Bridge (item 5.8)
- .1 Prices at payment Items 5.5 and 5.6 of the Bid Form are a unit price for the weekend work for maintenance of traffic and temporary signage in accordance with specifications and drawings and as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 Maintenance of traffic and temporary signage for a weekend, from Friday evening to Monday morning;
 - .2 Preparation of all signaling drawings;
 - .3 Preparation of closing requests;
 - .4 Provision of all signaling personnel, including signaling and site manager, and machinery and vehicles required for temporary signage;
 - .5 The mobilization of access to work areas, their maintenance and dismantling;
 - .6 Maintenance of access to properties;
 - .7 Supply of five (5) flagmen or a sufficient number of flagmen to manage traffic at the intersection of Dollard Avenue and St-Patrick Street;
 - .8 The closure of the right-hand lanes from Dollard Avenue in a northerly direction to the south approach of the intersection of Dollard Avenue and St. Patrick Street.
 - .9 Maintain closure throughout the weekend;
 - .10 Supply, mobilization, maintenance, servicing, replacement in the event of breakage or vandalism, activation or deactivation, relocation and demobilization of temporary signage necessary for the execution of work on the entire site in accordance with the requirements of this document;
 - .11 Maintenance of signage and circulation lanes including requested inspections;

- .12 Temporary signage, equipment and labor required for the complete performance of all work;
 - .13 Signage for cyclists and pedestrians;
 - .14 Modification and refurbishment of existing signage;
 - .15 As well as other charges relating to the special requirements for the maintenance of traffic, as defined in the articles of section 01353-4;
 - .16 Any incidental expenses.
- .4 Items 5.9 to 5.11 – Supply of Front-End Restraint System (impact attenuator) TL-2 Type (item 5.9), Displacement of Front-End Impact Restraint System (impact attenuator) TL-2 Type (item 5.10), Maintenance of Front-End Restraint System (impact attenuator) TL-2 Type (item 5.11)
- .1 The price at the payment item 5.9 of the Bid Form is a unit price (unit-day) for the supply front-end restraint system (impact attenuator) TL-2 type as specified in the specifications and drawings as well as according to the instructions of the Government Representative.
 - .2 The price at the payment item 5.10 of the Bid Form is a unit price for the displacement of the front-end restraint system (impact attenuator) TL-2 type in accordance with specifications and drawings as well as in accordance with the instructions. of the Government Representative.
 - .3 The price at payment item 5.11 of the Bid Form is a unit price per day for the maintenance of the front-end restraint system (impact attenuator) TL-2 type in accordance with specifications and drawings as well as the instructions of the Government Representative.
 - .4 The price includes the following, but is not limited to:
 - .1 The provision of the front-end restraint system;
 - .2 Mobilization of the front-end restraint system;
 - .3 Maintaining the front-end restraint system;
 - .4 Refurbishment in the event of breakage or vandalism of the front-end restraint system;
 - .5 The application of a chevron beacon or danger on the front-end restraint system;
 - .6 Displacement of the front-end restraint system during phase change;
 - .7 Demobilization of the front-end restraint system;
 - .8 Temporary signage required during these operations.
 - .9 Written certification by an engineer member of the Ordre des ingénieurs du Québec that the construction front-end restraint system is installed in compliance with and according to the manufacturer's requirements.
 - .5 Front-end restraint system that may be required by the contractor for site access are at the Contractor's expense and are included in payment items 5.1 to 5.6.
- .5 Item 5.12 – Replacement of a Front-End Restraint System (impact attenuator) TL-2 Type for Work Site

- .1 The price at payment item 5.12 of the Bid Form is a unit price for the Replacement of Front-End restraint System (impact attenuator) TL-2 type, in accordance with specifications and drawings and as directed by the Government Representative.
- .2 The price includes the following, but is not limited to:
 - .1 Supply of all materials, labor and incidental expenses
 - .2 Temporary signage for full and correct replacement of the front-end restraint system.
 - .3 Written certification by an engineer member of the Ordre des ingénieurs du Québec that the front-end restraint system is installed in accordance with the manufacturer's requirements.
 - .4 This item is payable to the Contractor only when no full police report for the accident is available.

- .6 Items 5.13 to 5.15 – Rental of Concrete Traffic Barriers for Construction Site (item 5.13), Displacement of Concrete traffic Barriers for Construction Site (item 5.14), Maintenance of Concrete Traffic Barriers for Construction Sites (item 5.15)
 - .1 The price at payment item 5.13 of the Bid Form is a price per linear meter (lin. m.) for the supply of concrete traffic barriers for construction on site, in accordance with specifications and drawings and as directed by the Government Representative.
 - .2 The price at payment item 5.14 of the Bid Form is a price per linear meter (lin. m.) for the movement of concrete traffic barriers for construction site, in accordance with specifications and drawings and as directed by the Government Representative.
 - .3 The price at the payment item 5.15 of the Bid Form is a price per linear meter (lin. m.) per day for the maintenance of concrete traffic barriers for construction site, in accordance with specifications and drawings and as directed by the Government Representative.
 - .4 The price includes the following, but is not limited to:
 - .1 Mobilization of required concrete traffic barriers;
 - .2 Their maintenance for the duration of the work;
 - .3 Replacement of concrete traffic barriers in case of breakage or vandalism;
 - .4 The displacement of concrete traffic barriers during a change of closure;
 - .5 The demobilization of concrete traffic barriers at the end of the work;
 - .6 Temporary signage to perform all these operations;
 - .7 Any incidental expenses.
 - .5 The price tendered for item 5.13 also covers:
 - .1 Loading concrete traffic barriers;
 - .2 Transportation within the limits of the work site or at a storage site determined by the Contractor;
 - .3 Unloading concrete traffic barriers;

- .4 Installation of concrete traffic barriers;
- .5 Replacement or repair of deteriorate concrete traffic barriers.
- .6 Movement of concrete traffic barriers for purposes other than traffic management shall be at the expense of the Contractor.
- .7 The price quoted at item 5.14 is paid as follows:
 - .1 A sum corresponding to 60% of the amount after the initial mobilization of concrete site barriers;
 - .2 A sum corresponding to 40% of the amount after the final demobilization of concrete site barriers.
- .7 Item 5.16 - Special Signs
 - .1 The price at payment item 5.16 of the Bid Form is a per square meter (m²) price for special signs conforming and installed, in accordance with specifications and drawings and as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 The preparation, presentation and correction, if necessary, of shop drawings signed and sealed by a member engineer in good standing of the Ordre des ingénieurs du Québec;
 - .2 Obtaining all required certifications;
 - .3 The supply, shaping, transportation and handling of materials required for the implementation of special panels;
 - .4 The mobilization of labor, tools and equipment required for the execution of the work;
 - .5 The supply of accessories required for the installation of panels such as poles, braces, hardware;
 - .6 Implementation, maintenance, replacement in case of accident, breakage or vandalism of special panel;
 - .7 Special panel demobilization at the end of the work;
 - .8 Turning the sign on or off, as often as required;
 - .9 Temporary signage required during operations;
 - .10 Any incidental expenses.
- .8 Item 5.17- Securing Cycling and Pedestrian Link During Partial Closures or complete closure of Lafleur Bridge
 - .1 The price at payment item 5.17 of the Bid Form is a daily price for the securing of the cycling and pedestrian link during partial closures or complete closure of the Lafleur bridge, in accordance with the specifications and drawings as well as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:
 - .1 Signage of 2 meters wide bicycle and pedestrian crossings on the bridge (Lafleur), including all necessary safety measures to maintain a safe cycling and pedestrian connection;

- .2 Preparation of all signaling drawings;
 - .3 Preparation of obstruction requests;
 - .4 Provision of all signaling personnel, including signaling and site manager, and machinery and vehicles required for temporary signage;
 - .5 The mobilization of access to work areas, their maintenance and dismantling;
 - .6 The maintenance of the obstacle when it is of long duration;
 - .7 Supply, mobilization, maintenance, servicing, replacement in the event of breakage or vandalism, activation or deactivation, relocation and demobilization of temporary signage necessary for the execution of work on the entire site in accordance with the requirements of this document;
 - .8 Maintenance of signage and bicycle and pedestrian lanes including required inspections;
 - .9 Temporary signage, equipment and labor required for the complete performance of all work;
 - .10 Modification and refurbishment of existing signage;
 - .11 As well as other charges relating to the special requirements for the maintenance of traffic, as defined in the articles of section 01353-4;
 - .12 Any incidental expenses.
- .9 Items 5.18 to 5.20 - Variable Message Signs
- .1 The price at payment item 5.18 of the Bid Form is a unit price (sign/ day) for variable message signs, in accordance with the requirements of the specifications and drawings as well as directed by the Government Representative.
 - .2 The price at payment item 5.19 of the Bid Form is a unit price (sign/ week) for variable message signs, in accordance with the requirements of the specifications and drawings as well as directed by the Government Representative.
 - .3 The price at payment item 5.20 of the Bid form is a unit price (sign/ month) for variable message signs, in accordance with the requirements of the specifications and drawings as well as directed by the Government Representative.
 - .4 The price includes the following, but is not limited to:
 - .1 Supply, mobilization, programming, maintenance, servicing, any travel that may be required, replacement in case of breakage or vandalism, demobilization;
 - .2 Temporary signage for these operations and all the requirements of Parts 2 and 3 of Section 01353-5;
 - .3 Any incidental expenses.
- .10 Items 5.21 to 5.24 - Partial Closure of Lafleur Bridge (one lane out of two) - Short Term – Request of Government Representative (item 5.21), Partial Closure of Gauron Bridge (one lane out of two) - Short Term – Request of Government Representative (item 5.22), Complete Closure of Gauron Bridge – Short Term – Request of Government

Representative (item 5.23), Complete Closure of Lafleur Bridge – Short Term – Request of Government Representative (item 5.24)

- .1 The prices at payment items 5.21 to 5.24 of the Bid Form are per unit price (night) for the maintenance of traffic and temporary signage, in accordance with the requirements of the specifications and drawings as well as directed by the Government Representative.
- .2 The price includes the following, but is not limited to:
 - .1 Maintenance of traffic and temporary signage;
 - .2 Preparation of all signaling drawings;
 - .3 Preparation of closing requests;
 - .4 Provision of all signaling personnel, including signaling manager and site manager, and machinery and vehicles required for temporary signage;
 - .5 The mobilization of access to work areas, their maintenance and dismantling;
 - .6 Maintenance of access to properties;
 - .7 The maintenance of the closure when it is of long duration;
 - .8 The closure of the right-hand lanes of Dollard Avenue in northern direction at the South approach of the intersection of Dollard Avenue and St. Patrick Street.
 - .9 Supply, mobilization, maintenance, servicing, replacement in the event of breakage or vandalism, activation or deactivation, relocation and demobilization of temporary signage required to perform work on the entire site in accordance with the requirements of this document;
 - .10 Maintenance of signs and circulation lanes including requested inspections;
 - .11 Temporary signage, equipment and manpower required for the complete performance of all work;
 - .12 Signage for cyclists and pedestrians;
 - .13 Modification and refurbishment of existing signage;
 - .14 As well as other charges relating to the special requirements for the maintenance of traffic, as defined in the articles of Section 01353-4;
 - .15 Any incidental expenses.
- .11 Items 5.25 and 5.26 - Complete Weekend Closure of Lafleur Bridge – Contra Flow Circulation on Gauron Bridge – Short Term – Request of Government Representative (item 5.25) and Complete Weekend Closure of Gauron Bridge – Contra-Flow on Lafleur Bridge – Short Term – Request of Government Representative (item 5.26)
 - .1 The prices at payment items 5.25 and 5.26 of the Bid Form are a unit price for the weekend work for the maintenance of traffic and temporary signage, in accordance with specifications and drawings as well as directed by the Government Representative.
 - .2 The price includes the following, but is not limited to:

- .1 Maintenance of traffic and temporary signage;
- .2 Preparation of all signaling drawings;
- .3 Preparation of closing requests;
- .4 Provision of all signaling personnel, including signaling manager and site manager, and machinery and vehicles required for temporary signage;
- .5 Mobilization of access to work areas, maintenance and dismantling;
- .6 Maintenance of access to properties;
- .7 Supply of sufficient number of signalmen to manage traffic at the intersection of Dollard Avenue and St. Patrick Street;
- .8 The closure of the right-hand lanes from Dollard Avenue in a northerly direction to the south approach of the intersection of Dollard Avenue and St. Patrick Street.
- .9 Maintain closure throughout the weekend;
- .10 Supply, mobilization, maintenance, servicing, replacement in the event of breakage or vandalism, activation or deactivation, relocation and demobilization of temporary signage necessary to carry out work on the entire site in accordance with the requirements of this document;
- .11 Maintenance of signs and circulation lanes including requested inspections;
- .12 Temporary signage, equipment and labor required for the complete performance of all work;
- .13 Signage for cyclists and pedestrians;
- .14 Modification and refurbishment of existing signage;
- .15 As well as other charges relating to the special requirements for the maintenance of traffic, as defined in the articles of Section 01353-4;
- .16 Any incidental expenses.

Part 6 Item 6 - VI – ELECTRICITY

6.1 Item 6.1 - Work on Gauron Bridge (N°7)

- .1 Item 6.1.1 Type A Lighting Fixture
 - .1 The price at payment item 6.1.1 of the Bid Form is a unit price per lighting fixture which include supply and installation of materials, labor and equipment, fixture, tenon, wiring, fuse holder , fuses, connectors, console, nameplate, bolts, piercings, hardware, accessories, etc., as well as any inherent expenses necessary for a complete and functional installation, as described in the drawings and quote.
 - .2 The price also includes the junction box, conduit section and wiring for connection to the existing ducting and wiring network.
- .2 Item 6.1.2 Type B Lighting Fixture

- .1 The price at payment item 6.1.2 of the Bid Form is a unit price per lighting fixture which include supply and installation of materials, labor and equipment, fixture, tenon, wiring, fuse holder , fuses, connectors, console, nameplate, bolts, piercings, hardware, accessories, etc., as well as any inherent expenses necessary for a complete and functional installation, as described in the drawings and quote.
- .2 The price also includes the junction box, conduit section and wiring for connection to the existing ducting and wiring network.
- .3 Item 6.1.3 Modification to the Duct and Wiring Network
 - .1 The price at payment item 6.1.3 of the Bid Form is a lump sum overall price which include the supply and installation of ducts, elbows, junction boxes, unions, expansion joints, fasteners, supports, profiles, conductors, materials, pulling rope and equipment, accessories, hardware and all labor and incidental expenses for a complete and functional installation
 - .2 The price also includes the removal and reinstallation of the conductors in the conduits.
- .4 Item 6.1.4 Demolition
 - .1 The price at payment item 6.1.4 of the Bid Form is a lump sum overall price which include the supply of equipment labor as well as machinery, dismantling of lampposts, light fixtures, consoles, loading, transportation and unloading of drums, consoles and lighting at Parks Canada workshop's, the disposition of the materials, as well as any incidental expenses required for the execution of the work.
 - .2 The price also includes the removal of the lighting control and power cabinet, duct sections, expansion joints, earth continuity, boxes, conductors, brackets, fasteners, photocell, hardware and accessories as well as the protection of existing conductors.

6.2 Item 6.2 - Work on Lafleur Bridge (N°7A)

- .1 Item 6.2.1 Type C Lamp Post
 - .1 The price at payment item 6.2.1 of the Bid Form is a unit price per lamp post which include the supply and installation of materials, labor and equipment, the shaft, the console, the fixture, the post, the wiring, fuse holder, fuses, connectors, console, nameplate, bolts, holes, hardware, accessories, etc., as well as any inherent expenses necessary for a complete and functional installation , as described in drawings and specifications.
 - .2 Price also includes conduit section and wiring for connection to existing ducting and wiring network.
- .2 Item 6.2.2 Type D Lighting Fixture
 - .1 The price at payment item 6.2.2 of the Bid Form is a unit price per lighting fixture which include supply and installation of materials, labor and equipment, fixture, post, wiring, fuse holder , fuses, connectors, console, nameplate, bolts, piercings, hardware, accessories, etc., as well as any inherent expenses necessary for a

- complete and functional installation, as described in the drawing and specifications.
- .2 The price also includes the junction box, conduit section and wiring for connection to the existing ducting and wiring network.
- .3 Item 6.2.3 Type E Lighting Fixture
- .1 The price at payment item 6.2.3 of the Bid Form is a unit price per lighting fixture which include supply and installation of materials, labor and equipment, fixture, post, wiring, fuse holder , fuses, connectors, console, nameplate, bolts, piercings, hardware, accessories, etc., as well as any inherent expenses necessary for a complete and functional installation, as described in the drawing and specifications.
- .2 The price also includes the junction box, conduit section and wiring for connection to the existing ducting and wiring network.
- .4 Item 6.2.4 Type F Lighting Fixture
- .1 The price at payment item 6.2.4 of the Bid Form is a unit price per lighting fixture which include supply and installation of materials, labor and equipment, fixture, post, wiring, fuse holder , fuses, connectors, console, nameplate, bolts, piercings, hardware, accessories, etc., as well as any inherent expenses necessary for a complete and functional installation, as described in the drawing and specifications.
- .2 The price also includes the junction box, conduit section and wiring for connection to the existing ducting and wiring network.
- .5 Item 6.2.5 Modification to the Duct and Wiring Network
- .1 The price at payment item 6.2.5 of the Bid Form is a lump sum overall price which include the supply and installation of ducts, elbows, junction boxes, unions, expansion joints, fasteners, supports, profiles, conductors, materials, ropes draw and equipment, accessories, hardware and all labor and incidental expenses for a complete and functional installation
- .2 The price also includes the removal and reinstallation of the conductors in the conduits.
- .6 Item 6.2.6 Temporary Lighting
- .1 The price at payment item 6.2.6 of the Bid Form is a lump sum overall price which include the supply and installation of poles, fixtures, brackets, wiring, conduit, supply and distribution points, wiring, hardware, accessories, and all expenses incidentals for a complete and functional installation.
- .2 The price also includes any modifications to the existing system, relocations, conduit extensions, bypass for the power supply, etc.
- .7 Item 6.2.7 Power and Lighting Control Cabinet
- .1 The price at payment item 6.2.6 of the Bid Form is a lump sum overall price which include the supply and installation of lighting and power control cabinet, ducts and conductors, components, circuit breaker panel, circuit breakers, timer, contactor,

accessories , earth continuity, the hardware, the profiles for the support of the cabinet on the structure as well as all incidental expenses for a complete and functional installation.

- .8 Item 6.2.8 Demolition
 - .1 The price at payment item 6.2.6 of the Bid Form is a lump sum overall price which include the supply of equipment labor as well as machinery, dismantling of lampposts, light fixtures, consoles, loading, transportation and unloading of drums, consoles and lighting at Park Canada workshop's, the disposition of the materials, as well as any incidental expenses required for the execution of the work.
 - .2 The price also includes the removal of the lighting control and power cabinet, duct sections, expansion joints, earth continuity, boxes, conductors, brackets, fasteners, photocell, hardware and accessories as well as the protection of existing conductors.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 05 12 33 – *Structural steel for bridges*

1.2 PRICE AND PAYMENT PROCEDURES

- .1 Temporary accesses required to perform onsite cleaning and painting of steel elements on Gauron Bridge (7) are covered by Submission slip items;
- .2 Containment system required to perform onsite cleaning and painting of steel elements on Gauron Bridge (7) are covered by Submission slip items;
- .3 Cleaning and painting of steel surfaces of Gauron Bridge (7) superstructure and of new steel elements (except bolts, steel faced curb), are covered by Submission slip items;
- .4 Costs of heating containment enclosures for painting in cold weather are covered by specific payment items in the Submission slip.

1.3 REFERENCE STANDARDS

- .1 The Master Painters Institute (MPI)
 - .1 Exterior Structural Steel and Metal Fabrications.
 - .1 EXT 5.1D, Alkyd.
 - .2 EXT 5.1G, Polyurethane, Pigmented (over epoxy zinc rich primer and high build epoxy).
 - .2 Federal Standard (FS)
 - .1 FED-STD-595B, latest edition, *Colours Used in Government Procurement*.
 - .3 The Society for Protective Coatings (SSPC)
 - .1 SSPC-SP 1, latest edition, *Solvent Cleaning*.
 - .2 SSPC-SP 2, latest edition, *Hand Tool Cleaning*.
 - .3 SSPC-SP 3, latest edition, *Power Tool Cleaning*.
 - .4 SSPC-SP 6/NACE No. 3, latest edition, *Commercial Blast Cleaning*.
 - .5 SSPC-SP 7/NACE No. 4, latest edition, *Brush-off Blast Cleaning*.
 - .6 SSPC-Vis-1, latest edition, *Visual Standard for Abrasive Blast Cleaned Steel* (Standard Reference Photographs) Editorial Changes September 1, 2000 (Steel Structures Painting Manual, Chapter 2 - Surface Preparation Specs.).
 - .7 SSPC-SP 10/NACE No. 2, latest edition, *Near White Blast Cleaning*.
 - .8 SSPC-PA 2, latest edition, *Measurement of Dry Coat Thickness with Magnetic Gauges*.
 - .9 SSPC *Good Painting Practices*, Volume 1, 4th Edition.
 - .4 Ministère des Transports du Québec :

- .1 Cahier des charges et devis généraux – *Infrastructures routières – Construction et réparation*
- .2 Ouvrages routiers, Normes, Tome VII – Matériaux, norme 10104, *Systèmes de peintures pour structures d'acier.*
- .3 Direction des structures, *Guide peinturage des charpentes métalliques.*

1.4 PAINT ANALYSIS

- .1 Parks Canada Agency, owner of bridges Gauron (7) and Lafleur (7A) has carried out analyses of existing paint on these structures to determine lead content.
- .2 These analyses show lead content in paint varies between 0.72% et 1.88%.
- .3 The analysis report is attached to this section of the specifications in Appendix 1.
- .4 Existing steel surfaces are coated with a paint system containing lead.
- .5 Characterize liquid waste generated by surface preparation operations.
- .6 Consider solid residues generated by surface preparation work as hazardous materials.
- .7 Provide measures to manage waste generated during painting operations.

1.5 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide in accordance with Section 01 33 00 - *Submittal Procedures.*
- .2 Product Data:
 - .1 Provide manufacturer s instructions, printed product literature and data sheets for painting exterior metal surfaces and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two (2) copies of WHMIS SDS in accordance with Section 01 35 43 - *Environmental Procedures* and 01 35 29.06 - *Health and Safety Requirements.*
- .3 Samples:
 - .1 Submit samples for review and acceptance of each unit.
 - .2 Submit for review and acceptance colour samples of paint to be used on bridges to the Government Representative, at least fifteen (15) days before beginning of works. The paint colour samples will allow Parks Canada Agency representatives to choose which paint colour will be used to protect Bridge N° 7 (Gauron).
 - .3 Paint colour samples shall be similar to actual colour of paint covering steel structure of bridges.
 - .4 Incorporate approved colour sample into the topcoat colour of the chosen paint system.
 - .5 Choose paint systems as described in Part 2 of this section of the specifications.
 - .6 Enable Government Representative to take two (2) two (2) liter samples of each type of paint product delivered to the site; one (1) sample must be taken from the original containers and the other from the painters' cans.

- .4 Certificates:
 - .1 Submit documents signed by the manufacturer certifying that the products, materials and equipment comply with the physical characteristics and performance criteria.
 - .2 Ensure that certificates include the following information for each production lot:
 - .1 Name of manufacturer.
 - .2 Name of paint.
 - .3 Production lot number. A lot number corresponds to a batch number. For zinc powder, the production lot corresponds to the manufacturer's code.
- .5 Test Reports:
 - .1 Provide test reports showing compliance with specified performance characteristics and physical properties and in accordance with Section 01 45 00 - *Quality Control*.
 - .2 Ensure test reports include the following information:
 - .1 Title and date of the report.
 - .2 Non-volatile content (% by mass) according to ASTM D2369, *Standard Test Method for Volatile Content of Coating*.
 - .3 Pigment content (% by mass) according to ASTM D2371, *Standard Test Method for Pigment Content of Solvent Reducible Paints*.
 - .4 Density (kg/l) according to ASTM D1475, *Standard Test Method for Density of Liquid Coating, Inks and Related Products*.
 - .5 Consistency (K.U.) according to ASTM D572, *Standard Test Method for Consistency of Paints Measuring Krebs Units (KU) Viscosity Using a Stormer Type Viscometer*.
 - .3 Verify test results against approved values in paint systems product approval lists. A tolerance is associated with each value.
 - .4 If additional verification is required, provide Government Representative with infrared spectra of paint components according to ASTM D2621, *Standard Test Method for Infrared Identification of Vehicle Solids From Solvent Reducible Paints*.
 - .5 Submit management plan for construction waste in compliance with Section 01 74 19, *Waste Management and Disposal*.

1.6 QUALITY ASSURANCE

- .1 Certificates: Submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .2 Government Representative performs an acceptance inspection on paints. Sampling method:
 - .1 For single-component paints and thinners, two (2) samples of one (1) litre each.
 - .2 For two-component paints, two (2) samples of each component, unmixed and taken in proportions recommended by the manufacturer.

- .3 For paint systems consisting of moisture-curing polyurethane resin paints, for each batch the manufacturer submits to the Government Representative two (2) one (1) litre samples of each paint and thinner in the original unopened containers.
- .4 Place samples in hermetically sealed one (1) liter containers of high-density polyethylene or metal with enamelled interior.

1.7 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 – *Common Product Requirements* and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Materials and materials shall be stored in a container heated to the temperature recommended by the supplier, but not less than 10 ° C.
- .4 Packaging waste management: recover pallets, crates, protective padding, paint and thinner containers and other packaging waste for recycling/reuse following the guidelines of the waste management plan in accordance with Section, 01 74 19 – *Waste Management and Disposal*.

Part 2 Products

2.1 PAINT MATERIALS

- .1 New steel: apply a high-performance paint system complying with the MTQ Standard 10104.
- .2 Existing steel to be cleaned and repainted: apply maintenance paint system in accordance with MTQ Standard 10104 for the lower part up to 3m above the deck surface
- .3 Paint system is to be chosen from among those included in the « Systèmes de peintures à haute performance » et « Systèmes de peintures d'entretien » product approval lists found on the Ministère des Transport du Québec (MTQ) Internet site.
- .4 For existing steel to be cleaned and repainted, restore the existing paint coating by painting the steel surfaces of the upper part 3m and more above the deck surface by encapsulation. The surfaces must be covered with a system of paints made of a high concentration copolymer of crystalline calcium sulfonate type "Termarust" or an equivalent approved by Government Representative.
- .5 Consider that the topcoat will be the same colour as the paint sample approved by PCA Project Manager and Government Representative.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for painting exterior metal surfaces installation in accordance with manufacturer's written instructions.

- .1 Visually inspect substrate in presence of Government Representative.
- .2 Carry out tests to determine existence of lead base paint on existing exterior metal surfaces.
- .3 See analysis reports for existing paint attached in Appendix 1 of this section of the specifications.
- .4 Take all necessary measures in compliance with Section 02 83 12 - *Lead Base Paint Abatement – Maximum Precautions* and the federal, provincial and municipal regulations in effect in the territory of the City of Montreal for removal, recovery of existing paint removal materials and disposal of paint waste based on the results of the chemical analysis.
- .5 Begin painting only after removal, recovery and disposal of existing paint and following written approval from the Government Representative.

3.2 PREPARATION

- .1 Prior to repairing and / or replacing steel structural elements and inspection, remove existing paint, rust or non-adherent corrosion particles from metal surfaces according to the indications mentioned below.
- .2 New metal surfaces (in shop):
 - .1 Clean surfaces of new metal to be painted by removing rust, loose mill scale, welding slag, dirt, oil, grease and foreign substances in accordance with the following:
 - .1 Near White Blast Cleaning: to SSPC-SP 10/NACE No. 2.
 - .2 Use dry abrasive blasting, without crystalline silica, to strip steel surfaces in accordance with SSPC-SP 10.
 - .3 Assess rust grades on unpainted steel surfaces and preparation grades following abrasive blasting of steel surfaces corresponding to the rust grades shown in photographs presented in SSPC-VIS 1-02, *Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning*. Use these photographs as examples only to complement written descriptions of preparation grades, which are the only specifications to follow.
 - .4 Strip surfaces inaccessible to dry abrasive blasting to obtain the minimum preparation grade in SSPC-SP 11, - *Power Tool Cleaning to Bare Metal*.
- .3 Metal surfaces to be repainted (on site):
 - .1 Work areas for cleaning and painting existing steel surfaces include:
 - .1 All surfaces of existing steel elements composing the superstructure, including all main trusses, floor beams, stringers, bracings, guardrails, assemblies and other;
 - .2 All surfaces of existing steel elements composing the counterweight's superstructure including all main trusses, beams, stringers, bracings, assemblies and other.

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.2 Execution:

.1 Lower part up to 3m above the deck surface

.1 Clean surfaces by removing loose, cracked, brittle or non-adherent paint, rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with following.

.1 Commercial blast cleaning: to SSPC-SP 6/NACE No. 3.

.2 The minimum degree of preparation of the steel surfaces depends on the chosen paint system.

.3 Commercial blast clean rusted and bare metal surfaces where existing paint have failed.

.2 the upper part 3m and more above the deck surface

.1 Scrape edges of old paint back to sound material where remaining paint is thick and sound, feather exposed edges.

.2 Perform cleaning using water pressurized to minimum 35 MPa with a rotating nozzle held perpendicular to the surface at approx. 100 mm from the surface. Minimum preparation grade to WJ-4, SSPC-SP12, *Surface Preparation and Cleaning of Steel and Other Hard Materials*.

.3 Smooth down edges of remaining paint over a minimum distance of 50 mm.

.4 Finish surface preparation with hand tools if necessary.

.5 Firmly adherent paint and rust is that which cannot be removed by scraping the surface with a blunt putty knife.

.3 Compressed air must be free of water and oil before exiting the nozzle.

.4 Strip existing surfaces to remove most of the chloride on the surface to be painted.

.5 Before painting, ensure that chloride content, following preparation, is below 7 ug/cm² (grade NV-2, SSPC-SP 12).

.6 Use quantitative testing to determine chloride quantities on surfaces with Chlor Test type sleeve or equivalent approved by Government Representative.

.7 If chloride content exceeds 7 ug/cm², clean surfaces using « Chlor-Rid » type extraction agent or equivalent approved by Government Representative.

.8 Use water in accordance with the following Table:

Parameter	Maximum concentration in water (mg/l)
Chloride	500
Sulphate (SO ₄)	3,000
Alkali (Na ₂ O + 0.658K ₂ O)	60
Total solids	50,000
pH	≥ 6

- .9 Blast joints and assemblies with compressed air to remove water or residual moisture before painting. For compressed air, use equipment fitted with a filter to trap oil; demonstrate filter effectiveness before using equipment.
- .10 Remove dust and other dirt from surfaces to be painted following stripping.
- .11 Remove from exterior metal surfaces any loose particles of paint, rust or corrosion.
- .12 Following stripping, remove dust and other dirt from floors, walls and joints of containment enclosures with compressed air or vacuum cleaner.
- .13 Do not apply paint before prepared surfaces have been inspected and approved by Government Representative
- .14 Before painting, ensure that the grade of surface cleanliness complies with SSPC-VIS 1.
- .15 Apply primer, paint or pre-treatment product after surface has been cleaned but before it begins to deteriorate.
- .16 Clean surfaces again if rust appears after preparation.
- .3 Mixing paint:
 - .1 Refer to the recommendations of the manufacturer of the chosen paint system.
 - .2 Do not dilute or thin paint for brush application.
 - .3 Mix ingredients in container before and during use and ensure breaking up of lumps, complete dispersion of settled pigment, and uniform composition.
 - .4 Do not mix or keep paint in suspension by means of air bubbling through paint.
 - .5 Thin paint for spraying according to manufacturer's written instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to the Government Representative.
- .4 Painting new metal surfaces
 - .1 Apply each shop coat of paint so that each coat produces a dry film in accordance with minimum thickness specified by the manufacturer during the product approval process.

3.3 APPLICATION

- .1 Manufacturer's Instructions:
 - .1 Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

- .2 Application times for first coats:
 - .1 Apply, over entire clean surface, a first coat of paint as soon as possible after preparation and before onset of surface rust, do not exceed eight (8) hours for zinc paint systems or high performance paint systems, respectively approved in accordance with MTQ Standard 10104 (Volume VII), or twenty-four 24 hours for organic paint systems or maintenance systems, respectively approved in accordance with MTQ Standard 10104 (Volume VII).
- .3 Application times for topcoat:
 - .1 Apply topcoat in accordance with manufacturer's specifications in data sheets, do not exceed seven-day maximum following application of first coat.
- .4 Before applying first two coats of paint system, use a brush to completely coat rivets, bolts, nuts, welds, assembly joints, corners and straight edges, to the satisfaction of Government Representative.
- .5 Spray paint each coat.
- .6 Stir paint during application when specified in manufacturer's data sheets.
- .7 Immediately brush out runs and other imperfections.
- .8 Where paint cannot be adequately applied with a spray gun, use a brush. Use daubers or sheepskins for difficult-to-reach areas.
- .9 Use dipping or roller coating method of application when specifically authorized by the Government Representative in writing.
- .10 Paint system application conditions:
 - .1 Apply paint to surfaces free of moisture and dust.
 - .2 Apply paint under the following conditions:
 - .1 Air and surface to be painted temperature is above 5°C.
 - .2 Temperature of surface to be painted is at least 3°C above dew point.
 - .3 Previous coat is dry.
- .11 Supply cover when paint must be applied in damp or cold weather. Supply, shelter, or heat surface and surrounding air to comply with temperature and humidity conditions specified. Protect until paint is dry or until weather conditions are suitable.
- .12 Remove paint from areas which have been exposed to freezing, excess humidity, rain, snow or condensation. Prepare surface again and repaint.
- .13 Apply each coat of paint as continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .14 Brush application:
 - .1 Work paint into cracks, crevices and corners and paint surfaces not accessible to brushes by spray, daubers or sheepskins.
 - .2 Brush out runs and sags.
 - .3 Remove runs, sags and brush marks from finished work and repaint.
- .15 Spray application:

- .1 Provide and maintain equipment that is suitable for intended purpose, capable of properly atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
 - .2 Provide collectors or separators to remove oil and water from compressed air and drain periodically during operations.
 - .3 Keep paint ingredients properly mixed in spray tank or containers during paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.
 - .4 Apply paint in uniform layer, with overlapping at edges of spray pattern.
 - .5 Brush out immediately runs and sags.
 - .6 Use brushes to work paint into cracks, crevices and places which are not adequately painted by spray. In areas not accessible to spray gun, use brushes, daubers or sheepskins.
 - .7 Remove runs, sags and brush marks from finished work and repaint.
- .16 Shop painting:
- .1 Do shop painting after fabrication and before damage to surface occurs from weather or other exposure.
 - .2 Spray only priming paint on contact surfaces of bolted joints, friction type, assembled on site. Avoid brushing over these surfaces after spraying.
 - .3 Do not paint metal surfaces which are to be embedded in concrete.
 - .4 Paint metal surfaces to be in contact with wood with either full paint coats specified or three (3) shop coats of specified primer.
 - .5 Do not paint metal within 50 mm of edge to be welded. Give unprotected steel one coat of approved primer after shop fabrication is completed.
 - .6 Remove weld spatter before painting. Remove weld slag and flux by methods as specified in paragraph 3.2.3 Metal Surfaces to be Repainted.
 - .7 Protect machine finished or similar surfaces that are not to be painted but that do require protection, with coating of rust inhibitive petroleum, molybdenum disulphide, or other coating approved by the Government Representative.
 - .8 Copy previous erection marks and weight marks on areas that have been shop painted.
- .17 Field painting:
- .1 Paint steel structures as soon as possible after installation.
 - .2 The contact surfaces of parts to be assembled by bolting must not be painted except for a distance of 5 mm around the edge of one of the parts to be assembled so that all visible steel surfaces of the assembly are coated. after assembly.
 - .3 Bolts connecting steel elements painted in the factory must be painted on site after being degreased; the paint system and the color of the finishing coat must be identical to those used at the factory for the parts to be assembled. However, a zinc paint and organic binder should be used if a zinc paint and inorganic binder is provided as the first coat. The first two layers of the paint system must be brushed.
 - .4 Touch up metal which has been shop coated with same type of paint and to same thickness as shop coat. This touch-up to include cleaning and painting of field

- connections, welds, rivets, nuts, washers, bolts, and damaged or defective paint and rusted areas.
- .5 Field paint surfaces (other than joint contact surfaces) which are accessible before erection, but which are not to be accessible after erection.
 - .6 Apply topcoat of paint after concrete work is completed or as directed by the Government Representative. If concreting or other operations damage paint, clean and repaint damaged area. Remove concrete spatter and droppings before paint is applied.
 - .7 Where painting does not meet with requirements of specifications, and when so directed by the Government Representative, remove defective paint, thoroughly clean affected surfaces and repaint in accordance with these specifications.
- .18 Painting in cold weather:
- .1 Heat containment enclosures to minimum temperatures specified in this section of the specifications for ambient air and metal surfaces to be painted.
 - .2 Extend heating period during curing period in accordance with manufacturer's written instructions.
 - .3 For reimbursement of heating costs see Section 01 29 00 – *Payment*.
- .19 Handling painted metal components:
- .1 Handle painted metal after paint has dried, or when necessary for handling for painting or stacking for drying.
 - .2 Scrape off and touch up paint which is damaged in handling, with same number of coats and kinds of paint as were previously applied to metal.

3.4 FIELD QUALITY CONTROL

- .1 Site Tests, Inspections:
- .1 Upon completion of the painting procedures test for dry film reading and evaluate the results as per SSPC-PA 2.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 00 - *Cleaning*.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 00 - *Cleaning*.
- .3 Waste Management: separate waste materials for reuse/ recycling in accordance with Section 01 74 19 - *Waste Management and Disposal*.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.6 PROTECTION

- .1 Protect painted surfaces from damage during construction.
- .2 Protection surfaces not to receive paint.

- .1 Prevent contamination of cleaned surfaces by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats of paint. Remove contaminants from surface and apply paint immediately.
- .2 Protect cleaned and freshly painted surfaces from dust to approval of the Government Representative.
- .3 Repair damage to adjacent materials caused by painting exterior metal surface application installation.

Part 4 Galvanization

4.1 SURFACES TO BE TREATED

- .1 Hardware must be galvanized.
- .2 Use hot dip galvanization for steel elements.

4.2 PRICE AND PAYMENT PROCEDURES

- .1 No payment item in Submission Slip for galvanizing hardware. Include price for galvanizing in *Structural Steel for Bridge* payment item.

4.3 QUALITY ASSURANCE

- .1 Certification of compliance
 - .1 For each delivery of galvanized steel elements, provide the Government Representative with a certificate of compliance including the following information:
 - .1 Name of galvanization company
 - .2 Date and location of galvanization
 - .3 Coating thickness
 - .4 Coating adherence
 - .5 Coating quality
 - .2 Acceptance inspection
 - .1 Parks Canada Agency acceptance inspection involves testing thickness, adhesion and quality of the coating in accordance with ASTM A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - .3 Implementation
 - .1 Preparation of surfaces
 - .1 Ensure that steel surfaces are clean and free of paint, grease, rust, etc.
 - .2 Use appropriate methods to remove loose mill scale, welding slag and thick deposits of paint and rust.
 - .3 Perform final cleaning by immersion of steel pieces in a bath of dilute sulfuric or hydrochloric acid.

- .4 Following final cleaning, immerse steel parts in an aqueous solution of zinc chloride and ammonium.
- .2 Galvanization process
 - .1 Perform galvanization in accordance with ASTM A123/A123M, *Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products*.
 - .2 Apply minimum galvanization thickness of 87 µm.
 - .3 Ensure galvanized steel parts supplied and installed are free of white rust.
- .3 Protection of galvanized components
 - .1 Protect galvanized components from damage during handling and storage.
 - .2 Protect components that come into contact with lifting equipment, such as cables and chains.
 - .3 Store galvanized components so that air circulates between components, water does not accumulate and runs off and there is no metal-to-metal contact of galvanized parts.
- .4 Repairs following galvanization
 - .1 Repair surfaces damaged of ten (10) cm² or less using a brush to apply two (2) coats of a zinc-rich coating in accordance with CAN/CGSB 1.181, *Ready Mixed Organic Zinc-Rich coating*.
 - .1 Clean damaged surfaces before treatment in accordance with SSPC-SP 5/NACE No. 1, *Power Tool Cleaning to Bare Metal*.
 - .2 Ensure minimum dry film thickness of 130 µm.
 - .2 Re-galvanize surfaces damaged over an area greater than ten (10) cm².
 - .1 Clean surfaces to be repaired in accordance with SSPC-SP 5/NACE No. 1, *White Metal Blast Cleaning*.

END OF SECTION

APPENDIX 1

Paint analysis of the Gauron (7) and Lafleur (7A) bridges



RAPPORT D'INTERVENTION

Dossier n° :	010-P-0002065-0-00-100-02-MC-0001-00	Date d'intervention :	Le 25 mars 2013
Client/Entrepreneur :	Agence Parcs Canada Unité de gestion de l'Ouest du Québec a/s M. René Bernard, ing. (rene.bernard@pc.gc.ca)	Lieu d'intervention :	Ponts 7 et 7A Ville Lasalle (Montréal)
Nom du projet :	Ponts Lafleur et Gauron, Ville Lasalle Prélèvement de peinture Analyse de la teneur en plomb		
Type d'intervention :	<input checked="" type="checkbox"/> validation <input type="checkbox"/> relance <input type="checkbox"/> rencontre <input type="checkbox"/> autres	Interlocuteur :	
<i>autres – spécifiez :</i>		Cellulaire :	

RÉSUMÉ : PRÉLÈVEMENT D'ÉCHANTILLONS DE PEINTURE SUR LA STRUCTURE DES PONTS LAFLEUR ET GAURON DANS L'ARRONDISSEMENT VILLE LASALLE À MONTRÉAL

Le 25 mars 2013, nous sommes intervenus aux ponts Lafleur et Gauron, dans l'arrondissement Ville Lasalle à Montréal, pour prélever des échantillons de peinture sur la structure d'acier dans le but de caractériser la teneur en plomb de la peinture.

Notre mandat consistait à prélever des échantillons de peinture pour vérifier si du plomb était présent dans les éléments de la charpente métallique et de déterminer si ces éléments doivent faire l'objet d'un traitement particulier lors du démantèlement et de la mise au rebut.



Ponts Lafleur et Gauron sur les avenues St-Pierre et Dollard



RAPPORT D'INTERVENTION

Méthode et emplacement des échantillons prélevés

Afin d'obtenir une vue d'ensemble de la peinture, nous avons prélevé nos échantillons à trois emplacements différents sur chacun des ponts. Un échantillon par pont a été prélevé. Chaque échantillon représente donc le cumulatif de trois emplacements différents sur chacun des ponts.

En somme, deux échantillons ont été prélevés :

1. Échantillon du pont ave. St-Pierre/ave. Dollard direction sud;
2. Échantillon du pont ave. St-Pierre/ave. Dollard direction nord

La méthode utilisée pour les prélèvements est la suivante :

Au décapant en pâte pour peinture de marque Circa 1850

Échantillonnage par voix humide.

Les échantillons ont été prélevés à partir de différents éléments de la charpente métallique, c'est-à-dire les colonnes, les diagonales et les plaques de renfort (voir photos).



Échantillon avant prélèvement (pont ave. St-Pierre/ave. Dollard direction sud) pris depuis les plaques de renfort



Échantillon avant prélèvement (pont ave. St-Pierre/ave. Dollard direction nord) pris depuis les plaques de renfort et une colonne



RAPPORT D'INTERVENTION

Aspect visuel de la peinture sur la structure d'acier

Nous avons observé que la peinture était de couleur turquoise sur la structure d'acier. Quelques marques de corrosion étaient présentes sur les éléments d'acier. La peinture était fortement liée à la structure. De ce fait, il nous a été impossible de prélever des échantillons secs.

Lors de nos prélèvements, une attention particulière a été apportée à prélever de la peinture jusqu'au métal sain, c'est-à-dire avec l'apprêt de la peinture. Notre méthode d'échantillonnage par voie humide (décapant) ne nous a pas révélé la présence d'un apprêt de peinture. Les photos suivantes démontrent les surfaces de peinture à la suite de nos prélèvements.



Échantillon après prélèvement (pont ave. St-Pierre/ave. Dollard direction sud) pris depuis les plaques de renfort



Échantillon après prélèvement (pont ave. St-Pierre/ave. Dollard direction nord) pris depuis les plaques de renfort et une poutre



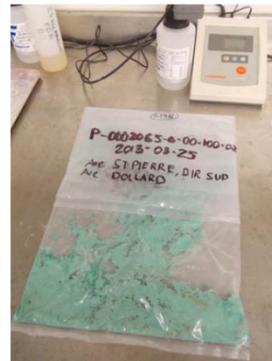
RAPPORT D'INTERVENTION

Résultat d'analyse

L'analyse de la teneur en plomb a été effectuée par spectrophotométrie à absorption atomique et les teneurs en plomb sont de l'ordre de 0.72 à 1.88%.



Échantillon de peinture
(pont ave. St-Pierre/ave. Dollard direction
nord)



Échantillon de peinture
(pont ave. St-Pierre/ave. Dollard direction
Sud)

Conclusion et recommandations

Normalement, les poutres recouvertes de peinture au plomb sont considérées comme des déchets dangereux et doivent être traitées avant la mise au rebut. Selon l'EPA (Environmental Protection Agency), on appelle une peinture au plomb, toute peinture présentant une concentration égale ou supérieure à $1,0 \text{ mg/cm}^2$ ou 0,5% par masse. À partir de ce moment, l'enlèvement du revêtement devrait suivre la procédure émise par l'OSHA (Occupational Safety and Health Administration).

Suivant ces résultats, un enlèvement du revêtement par jet d'abrasif, le cas échéant, entraînera un dépassement de la valeur maximale de la teneur en plomb établie par la Loi sur la santé et la sécurité du travail c. S-2.1, r.19.01. Par conséquent, les travaux doivent être réalisés conformément à la Loi sur la santé et la sécurité du travail (L.R.Q., c. S-2.1) et la Loi sur la qualité de l'environnement (L.R.Q., c. Q-2).

Les résidus liquides ou solides qui seront récupérés devront être traités suivant le règlement sur les matières dangereuses (Décret 1310-97, du 8 octobre 1997) (Québec) sans mesures particulières requises lors de la présence de plomb.



RAPPORT D'INTERVENTION

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Observations importantes : La teneur en plomb de la peinture prélevée sur les éléments de la charpente métallique des ponts Lafleur et Gauron est de l'ordre de <0,01%.	
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Vérifié par :  Bernard Perron, B. Ens. Certifié NACE Directeur de projets Superviseur CSA W178.2 niveau 3 n° 746	Date : Le 3 avril 2013
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