

# **TERMS OF REFERENCE**

## **OWNER'S ENGINEER**

Engineering and Advisory Services

**For the  
NEW BRIDGE FOR THE ST. LAWRENCE CORRIDOR  
PROJECT**

**PROJECT N° 7014**

**October 20<sup>th</sup> 2014**



**Infrastructure  
Canada**

## TABLE OF CONTENTS

TABLE OF CONTENTS .....	2
1 DEFINITIONS/ ABBREVIATIONS .....	3
2 REQUIREMENTS .....	4
3 BACKGROUND .....	5
4 EARLY WORKS .....	8
5 ROLE OF THE OWNER'S ENGINEER .....	8
6 SCOPE OF WORK .....	9
7 LIST OF PROJECT SUBMITTALS & RELATED TASKS .....	14
8 LIST OF REFERENCE DOCUMENTS AVAILABLE FOR CONSULTATION .....	14
9 NBSLC PROJECT SCHEDULE .....	<b>Erreur ! Signet non défini.</b>
10 RESOURCES REQUIRED .....	15
11 METHOD OF REMUNERATION .....	22
12 DESCRIPTION OF PAYMENT ITEMS .....	24
 Appendix A	<b>General Project Information about Highway Network and Project area</b>
Appendix B	<b>Schedule of PP Review Submittals Related to Owner's Engineer Services</b>
Appendix C	<b>List of Reference Documents Available For Consultation</b>
Appendix D	<b>Sample- Progress Claim and Progress Estimate Report of Costs Incurred and Expenditures</b>

## 1 DEFINITIONS/ ABBREVIATIONS

In these Terms of Reference, the terms or abbreviations below have the following meaning:

Authority or Canada:	Her Majesty the Queen in Right of Canada, as represented by either the Minister of Infrastructure, Communities and Intergovernmental Affairs, or the Minister of Public Works and Government Services Canada
A10:	The federal portion of Highway 10 at the site
A15:	The federal portion of Highway 15 at the site
A20:	The federal portion of Highway 20 at the site
Commencement Date:	The date of the PPP Financial Close
Consultant:	The OE
DB:	Design-Build
DBT Infrastructure:	Design-Build-Transfer Infrastructure: all infrastructure built or modified by the PP that is handed back to the Authority at Total DB Final Completion Date
DB Period:	The PPP DB Period: the period commencing on the Commencement Date and ending on the Total DB Final Completion Date
Early Work Agreement:	The agreement entered into between Private Partner and the Authority with respect to the work carried out prior to the Commencement Date
Financial Close:	The date of formal PPP contract award
IdS:	<i>Île des Sœurs</i> (Nuns' Island)
IE:	The Independent Engineer
INFC:	Infrastructure Canada or any other department called upon to perform functions similar to those currently performed by it
Independent Engineer:	The person appointed as Independent Engineer to carry out the duties described in the Independent Engineer Agreement and the NBSLC Project Agreement
ITS:	Intelligent Transportation Systems: systems involving electronics, communications and/or information processing, used singly or integrated to improve the efficiency and safety of surface transportation
JCCBI:	The Jacques Cartier and Champlain Bridges Incorporated
MTQ:	The <i>Ministère des Transports du Québec</i> or any other Ministry or government controlled entity called upon to perform duties similar to those performed by such Ministry
NBSL:	The New Bridge for the St. Lawrence, meaning the new bridge across the St. Lawrence that will be designed and constructed by the Private Partner to replace the Champlain bridge

NBLSC Chief Engineer:	Representative of Canada's Technical authority on the NBSLC Project, lead of the technical authority on the project reporting to the director.
NBSLC:	The New Bridge for the St. Lawrence Corridor
NBLSC Project Director:	Representative of Canada's Project authority and the Project lead responsible for the planning and delivery of the project, supported by the NBSLC Chief Engineer.
NBSLC Project Office:	The administrative body established by the Authority for specific periods of the NBSLC Project
OE:	The Owner's Engineer
PP:	The Private Partner (can also refer to the Preferred Proponent if prior to contract award for the PPP)
PPP:	Public-Private Partnership
Project:	The NBSLC Project
Project Agreement:	The PPP contract
PWGSC:	Public Works and Government Services Canada or any other department called upon to perform functions similar to those currently performed by it
OMR:	Operation, Maintenance and Rehabilitation
OMR Period:	The PPP OMR Period: the period commencing at Total DB Substantial Completion Date and ending at PPP Contract termination date
RFP:	Request for Proposals
Review Submittal:	Any and all items, documents and matters required to be submitted by the PP for review by the IE, the Authority, and the OE
SLS:	The St. Lawrence Seaway
SLSMC:	The St. Lawrence Seaway Management Corporation
Total DB Final Completion Date:	The date on which the DB Period formally ends

## 2 REQUIREMENTS

On October 5, 2011, the Government of Canada announced that it will proceed with the construction of a new crossing to replace the Champlain Bridge and associated highway infrastructure. The New Bridge for the St. Lawrence Corridor (NBSLC) Project is a corridor-wide project located between the Island of Montreal and the City of Brossard.

In addition to the main bridge namely the New Bridge for the St. Lawrence (NBSL), the NBSLC will include work on the South Shore, the Island of Montreal, Nuns' Island (*Île des Sœurs*) and the demolition and reconstruction of the *Île des Sœurs* Bridge.

The NBSLC Project includes the design, construction, financing, maintenance and operation (including life cycle refurbishment and toll installation and collection) of the New Bridge for the St. Lawrence (NBSLC) including the IdS Bridge and all related works in the corridor. The NBSLC Project covers approximately 8 km of highway. At its western extent, it begins near Pitt Street between the *De la Vérendrye* and Atwater Interchanges on the Island of Montréal. The NBSLC Project follows the existing A15 across the *Île des Sœurs* Bridge, passes through the northern part of IdS, and then crosses the St. Lawrence River just downstream of the existing Champlain Bridge to end, at its eastern extent, near Boulevard Pelletier in the City of Brossard.

The NBSLC Project will be delivered through a public-private partnership (PPP) to design, build, maintain and operate the new crossing over the St. Lawrence River.

The Authority requires the services of a consulting firm to assist Infrastructure Canada (INFC) in meeting its responsibilities to bring the NBSLC Project through the detailed design and construction periods and the first year of the Operations, Maintenance and Rehabilitation (OMR) Period which will commence after the total design-build (DB) Period has been completed. The NBSLC Project's management and procurement is under the direction of a project office comprising officials from Infrastructure Canada (INFC) and Public Works and Government Services Canada (PWGSC), hereinafter referred to as "Authority" or "Canada". INFC has the technical authority on the NBSLC Project whereas PWGSC has the contractual authority. Assistance to the Authority is also provided by PPP Canada.

The successful bidder, hereinafter referred to as "OE", will assist INFC with technical advisory services to oversee the design, construction of the work (scheduled to be carried out until late 2020) as well as the Operation, Maintenance and Rehabilitation (OMR) of the facilities for the first year, including project management support, technical engineering support, coordination assistance with other neighbouring projects and other tasks as may be needed and determined by the Authority.

### 3 BACKGROUND

#### 3.1 General

Situated in the *Communauté Métropolitaine de Montréal* which is located in the southwest of the province of Québec, Canada, the NBSLC will serve as a link between the administrative regions of Montreal and the *Montérégie* and as one of the major Canada/United-States trade corridors.

The NBSLC Project limit covers approximately 8 km of roads and bridges. Three major highways use this corridor, identified as A15, A10 and A20.

The western part of the NBSLC Project begins at the junction of the MTQ property limit, located between De La Vérendrye and Atwater Interchanges, and finishes on IdS near the west end of the Champlain Bridge.

This portion of the highway is approximately 3.6 km in length and currently offers two lanes of traffic in each direction on Montréal Island and three lanes in each direction on IdS and the existing IdS Bridge. The existing Champlain Bridge, which links Brossard to IdS and Montréal, is approximately 3.4 km in length and carries 6 lanes of traffic separated by a median.

At its eastern end, the connection between Champlain Bridge and Brossard, which lies on federal territory, is approximately 1 km in length and has 3 lanes in each direction.

The NBSLC Project includes the following main components, illustrated in Appendix A:

- Construction of the new bridge over the St. Lawrence
- Construction of new approaches in Brossard
- Deconstruction of the current IdS Bridge
- Construction of a new IdS Bridge and highway on *Île des Sœurs*
- Installation of tolling equipment and facilities
- Reconstruction and widening of the federal portion of A15
- Operation and maintenance of A15 from the start of the PPP contract
- Operation, maintenance and rehabilitation of constructed infrastructure

## 3.2 NBSLC Components

The above components are under Private Partner (PP) responsibility. More details are provided below:

### 3.2.1 New Bridge for the St. Lawrence (NBSL)

Design, build, finance, operate and maintain an approximately 3.4 km long new bridge across the St. Lawrence River (NBSL) to replace the existing Champlain Bridge. The new bridge will span the St. Lawrence River from IdS to Brossard, immediately downstream from the existing Champlain Bridge. The new bridge will include a three-corridor design, including two three-lane corridors for vehicular traffic and a two-lane transit corridor capable of accommodating a planned light rail transit system. The new bridge will also include a multiple-use path for pedestrians and cyclists. This bridge is required to have a 125-year design life. This component must be operational by the end of 2018. Full deconstruction of the existing Champlain Bridge is not included in the PPP contract.

### 3.2.2 New IdS Bridge

Design, build, finance, operate and maintain an approximately 470 m long new bridge linking IdS to the Verdun borough to replace the existing IdS Bridge. It is expected that the new bridge will be built in the current alignment of the existing bridge. The new bridge will include two three-lane corridors for vehicular traffic as well as a multi-use path. Integration of a transit corridor linking IdS to the Verdun borough is also under consideration, pending a decision from the Government du Québec on its preferred transit concept. Demolition of the existing IdS Bridge is included in the Project. The new bridge is expected to have a 125-year design life. This component must be operational by the end of 2020.

### 3.2.3 Reconstruction and Widening of A15 on Montréal Island

Design, build, finance, operate and maintain an approximately 3 km long highway linking the IdS Bridge to the Québec-owned section of A15. This component will include the reconstruction of the existing A15 and its widening from two to three lanes. This component will not include a transit corridor, but will include the reconstruction of 7 existing overpasses on the Island of Montréal. The overpasses and other major structures forming this component are expected to have a 75-year design life and must be operational by the end of 2020.

### 3.2.4 Reconstruction of A15 on IdS

Design, build, finance, operate and maintain an approximately 1 km long highway linking the New Bridge for the St. Lawrence to the IdS Bridge. This component will include two three-lane corridors for vehicular traffic and a two-lane transit corridor capable of accommodating either a planned light rail transit system or a bus transit system and will include a multi-use path, and is expected to have a 75-year design life and must be operational by the end of 2020.

### 3.2.5 Related Minor Components

Design, build, finance, operate and maintain (or some components thereof) connecting interchanges, overpasses and other works.

### 3.2.6 Tolling Infrastructure and Intelligent Transportation Systems

Design, build, finance, operate and maintain an open road tolling system including signage, signaling and communications. This component is expected to be staged in once the other components become operational.

### 3.2.7 Interim Operation and Maintenance

Operation and maintenance of portions of A15 on IdS and Montreal Island will begin shortly after the Commencement Date. Accordingly, this will imply maintenance and operation of existing infrastructure. However, JCCBI will continue to operate and maintain the existing Champlain Bridge.

## 3.3 Independent Engineer

Concurrently, the services of an Independent Engineer (IE) are required to support the NBSLC Project. The IE reports both to the Private Partner (PP) and the Authority within a formal tripartite agreement. The IE is independent in that it does not represent any one party under the contract but is required to act independently and fairly to all parties within the bounds of the contract. The role is to attest to the compliance of mutual PPP contract obligations by the PP and the Authority. The IE has multiple roles that, without limitation, include the following:

- Review and comment on the design for compliance with the NBSLC Project Agreement.
- Review the quality assurance and the quality control of Project work during design & construction and the first 5 years of operation of the infrastructure and related facilities.
- Monitor construction progress.

### 3.4 NBSLC Project Office

To ensure the successful implementation of the NBSLC Project, the Authority has created an NBSLC Project Office. The NBSLC Project Office is composed of resources responsible for managing the technical, environmental and logistical aspects of the NBSLC Project led by the NBSLC Project Director and supported by the NBSLC Chief Engineer to direct and lead the engineering related activities and ensure the NBSLC Project is carried out within established quality, time and cost parameters. In this sense, the Project Office is responsible for executing all Project activities in all periods until such time as the NBSL and the entire corridor are operational.

## 4 EARLY WORKS

The Authority will offer the PP, to execute, and carry out where applicable, some DB work prior to the Commencement Date (financial close date). The following is a non-exhaustive list of early works activities that could be considered for Early Work period:

- Advancement the design of NBSLC components (e.g. foundations)
- Undertaking of additional ground investigations
- Planning, procurement and conducting test piles
- Initiation of mobilization for OM Work for the DB Period, addressing the existing infrastructure and winter maintenance plans, with the aim of taking responsibility for OM work at Commencement Date
- Design/construction of laydown areas, site facilities, electricity supply on site, concrete plant, etc.
- Design/construction preparation for construction of berms and berthing points in the river (taking advantage of window of opportunity to minimize seasonal fish impact after in-water works restriction periods)
- Finalization of the design, and the construction of noise barriers on the south shore.
- Procurement of material and equipment
- Development of the Project schedule (incl. the Review Submission schedule)
- Development of the Quality Management System
- Development of the Environmental Management System and Environmental Management Plan
- Liaison with stakeholders (municipalities, utilities, Fisheries and Ocean's Canada, JCCBI, etc.), to ease the permitting process and ensure compliance with the coordination requirements
- Initiation of the ice and hydraulic flow study

## 5 ROLE OF THE OWNER'S ENGINEER

It is important that throughout the life of the NBSLC Project the interests and objectives of the Authority are taken into consideration. Contrary to the IE, the OE reports strictly to the Authority. The OE has various roles that aim to protect the interests of the Authority as they relate to the NBSLC Project. Its role is that of a technical advisor to the Authority, assisting the Authority in its contractual duties with the PP and the IE, and other parties. The OE acts for the Authority by providing technical advice throughout the DB Period of the NBSLC Project and doing additional tasks as requested during the OMR Period. The core of the OE mandate is to provide technical, management, and coordination assistance on the NBSLC Project. Detailed tasks are described in Section 6 – *SCOPE OF WORK*, whereas Section 10 – *RESOURCES REQUIRED*, describes the qualifications of certain OE resources that will be required to carry out its duties.



## 6 SCOPE OF WORK

The OE is expected to work closely with the Authority through the duration of design and construction (DB Period of approximately five years), and the first year ( $\pm$  twelve month period following total completion of all design-build works) of the OMR Period. This includes providing oversight on PP work (liaising with other authorities' partners and stakeholders, detailed design, mobilization, early works, prefabrication, construction, commissioning, testing, quality assurance and quality control) and other NBSLC Project activities. It also includes providing review of the IE's work, including compliance, quality and impartiality of the IE's work. The OE will also be called upon to assist INFC and provide technical advice on issues related to the project but outside the PPP and IE contracts, such as third party issues, utilities, coordination with other construction works on or in the vicinity of the site, other government bodies, etc. Some of these services will be rendered on demand, when required by the Authority.

The mandate includes a number of specific technical advisory and review tasks, in addition to general verification and inspection tasks, as required for successful delivery of an infrastructure project of this size and complexity. The specific technical activities include, but are not limited to the following:

- Review all relevant documentation concerning the PP and IE contracts, including contract documents and supporting background documentation, guaranteed engineering data and the PP technical proposal submitted in response to the PPP bid solicitation.
- Review all specified PP design submissions and IE reports listed in part in appendix B of these terms of reference, to ensure that the Authority's obligations and objectives are met.
- Undertake site audits of construction activities to ensure that the Authority's interests are protected.
- Review IE and PP suggestions for improvements to the technical requirements to help the Authority assess whether they should be integrated or not in the project.
- Assist (if required) with public consultations and attend meetings and town halls on behalf of Authority.
- Assist (if required) with the facilitation and moderation of discussions with the public and third parties aimed at resolving issues of a technical nature.
- Assist Authority and the Private Partner with stakeholder engagement where appropriate, and attend meetings on behalf of Authority.
- In conjunction with IE, verify and review implementation of all plans, manuals and programs required by the PPP contract to assure compliance by the PP.
- Review changes proposed by the Private Partner to assess whether they should be adopted by Authority for the NBSLC Project.
- In conjunction with IE, check and challenge aspects of the works that do not meet, or appear to deviate from the technical requirements, final design, PP proposal, good industry practice and/or health and safety requirements, and/or other applicable laws or regulations (including protection of the environment).
- Report results of OE reviews to INFC in a timely manner, at least once every two weeks, throughout the duration of the OE contract and, more frequently, if significant deviations from INFC's requirements are encountered.

## 6.1 Tasks

The schedules of activities as they relate to the services to be rendered by the OE under this contract (in parallel of the services to be rendered by the IE under in a separate agreement) are summarized below:

### 6.1.1 Tasks during Design period

- a) Review contract documents (early works package, preliminary design & specifications package).
- b) Review and report on design of main early works.
- c) Review and comment all IE reports by:
  - Concurring with the findings of the IE.
  - Concurring with the finding of the IE findings while providing additional observations where deemed necessary.
  - Disagreeing with some or all of the findings, and in the case of the latter, clearly identifying the sections of disagreement.
- d) Review and report on invoicing of IE fees.
- e) Represent or assist the Authority at meetings with the PP and/or the IE.
- f) Represent or assist the Authority at selected third party meetings with private, municipal, provincial and federal organizations.
- g) Participate or assist with planned weekly meetings of both the Traffic Management Panel and the Mobilité Montréal NBSL-Turcot Sub-Committee.
- h) Oversee the implementation of changes to the scope of PP Design work that has been authorized by the Authority.
- i) Inform the Authority and provide technical advice and overall assessment of proposed equivalent.
- j) Provide technical input, technical advice and overall assessment on PP requests for modifications to the technical requirements of the PP contract.
- k) Provide other technical advice and assistance on demand.
- l) More specifically, the professional services of the OE shall include, without limitation:
  - Review conceptual design stage review submittal, equivalent to 30% design drawings submitted by the PP.
  - Review interim design stage review submittal, equivalent to 60% - 90% design drawings submitted by the PP.
  - Review final design stage review submittal submitted by the PP.
  - Review final design reports submitted.
  - Review of reports, observations, opinions and suggestions by the Independent Engineer on each of the aforementioned report and drawing submittals.
  - Provide technical assessment relating to the suitability of the reports, in consideration of the comments, observations and recommendations stemming from the IE review.
  - In conjunction with the IE; review documents relating to quality assurance and quality control processes to determine whether the proposed system of quality assurance and quality control and its application by the PP, complies with the requirements of the contract and the needs of the NBSLC Project.

- At the request of the Authority, provide expert services in matters related to design of bridges, highways, electrical and lighting systems, as well as Intelligent Transportation Systems (ITS) including tolling.
- At the request of the Authority, participate in on-site meetings, design-construction management or special technical meetings, or pre-established audit schedules, always however in keeping with the specific roles and responsibilities of the respective parties. The OE may however attend certain meetings by telephone or video conference.
- At the request of the Authority, or per pre-established audit schedules, visit the work site so as to see that the project design developed or being developed is compatible with the site conditions, and if it is not, to comprehend the proposed design adjustments that will be needed to suite field conditions without compromising the quality of the work.
- Act as advisor for the Authority for matters related to the design portion of DB work.

#### 6.1.2 Tasks during Construction period

- a) Assist the Authority to oversee and follow-up on the IE contract.
- b) Review and comment all IE reports.
- c) Review and comment all IE certifications and attestations (Payment Certificates, Completion Certificates, etc.).
- d) Review and report on invoicing of IE fees.
- e) Represent or assist the Authority at meetings with the PP and/or the IE.
- f) Represent or assist the Authority at selected third party meetings with private, municipal, provincial and federal organizations.
- g) Assist in the evaluation and integration of change requests from other stakeholders (if applicable).
- h) Oversee the implementation of additional work outside the scope of the PPP contract.
- i) Oversee the implementation of changes to the scope of PP construction work that has been authorized by the Authority.
- j) Assist the Authority and participate, on demand, in dispute resolution sessions involving the Authority, the PP and the IE.
- k) Perform occasional spot checks audits on site, the frequency and extent of the audits to be adjusted as a function of observations and the noted deficiencies.
- l) Assist the Project's Authority in the application of the payment deduction mechanism as applicable.
- m) Perform occasional audits at plants or prefabrication sites.
- n) Provide other technical advice on demand.

#### 6.1.3 Tasks during Operation, Maintenance and Rehabilitation (OMR) Period

- a) Assist the Authority in the implementation of the OMR audits regime and the detection of deficiency and the application of the payment deduction mechanism.
- b) Review and comment IE reports related to OMR.
- c) Review and comment IE certifications and attestations (payment certificates, completion certificates, etc.) related to OMR.
- d) Review and report on invoicing of IE fees.
- e) Represent or assist the Authority at meetings with the PP and/or the IE.
- f) Assist the Authority in assembling a copy of all «As-Built Records» / «As Executed Records» for independent archiving purposes.
- g) Assist Authority in the assessment of the asset after eleven (11) months of operations.
- h) Assist Authority in the handover of Design-Build-Transfer Infrastructure to other relevant authorities such as JCCBI, Ville de Montréal (VdM), and MTQ.

## 6.1.4 Additional specified tasks on the Authority's demand

## a) Environmental:

- Oversee the Envision Certification process.
- Monitor and audit the PP's Environmental performance and produce related reports for all activities including but not limited to:
  - Noise monitoring.
  - Vibration monitoring.
  - Air quality monitoring.
  - Surface water quality monitoring.
- Management and/or treatment of water evacuated from construction works such as excavations or cofferdams
- Protection of shorelines and wetlands
- Protection of fish and fish habitat including flow velocity, suspended solids and other parameters, preservation of migration corridors, and compliance with any additional requirements identified in the permit from Fisheries and Oceans Canada.
- Calculating and monitoring areas of temporary impacts and permanent fish habitat loss by habitat type.
- Calculating and monitoring areas of temporary impacts and permanent wetland loss.
- Calculating and monitoring areas of temporary impacts on the Couvée Islands (*Îles de la Couvée*) Migratory Bird Refuge.
- Relocation of brown snakes prior to construction works.
- Protection of migratory birds nesting on the IDS bridge, Champlain bridge, the Couvée Islands Migratory Bird Refuge, or other nearby sites affected by construction
- Segregation, movement and stockpiling of contaminated soil and waste material on or off site, including material characterization and reporting on material stockpiles or offsite disposal.
- Protection of migrating birds: on Couvée Islands and interaction of migrating birds with stays of the new cable stayed bridge.
- Recovering of contaminated soils and waste, in particular any volumes of contaminated soils or waste which exceed established threshold values/caps (if any) resulting in the application of cost sharing mechanisms for excess volumes of contaminated soils
- Assist the Project's Authority in the treatment of complaints received from residents and third parties related to the environment.
- Monitor greenhouse gas emissions (GHG) tracking and reporting by the PP throughout the Construction Period.
- Produce a comprehensive report detailing the impact of the PP's work on JCCBI's proposed hydraulic wall and contaminated groundwater treatment facility.

Note to Consultant: Although the PP is required to carry out its own comprehensive environmental monitoring that is to be reviewed, examined and reported upon by the IE, the Authority expects that it may need to carry out its own audits in order to ensure that the environment is adequately protected and to satisfy the expectations of the community.

## b) Geotechnical:

- Produce various reports that can serve to:
  - Document the extent to which geotechnical investigation carried out by Authority and provided to PP as "Guaranteed Engineering Data" is similar, or different, to the observed geotechnical site conditions or to geotechnical investigation carried out by the PP's testing laboratory.

- Document real or potential movements / settlement of existing major infrastructure (foundations of the existing Champlain Bridge, St Pierre Collector, HQ infrastructure, STM, etc.).
- Document ground water levels and flows.

c) St. Lawrence Seaway:

- Produce various reports on how the NBSLC Project affects the St. Lawrence Seaway (SLS), including:
  - A comprehensive assessment of the impact (if any) of the PP's construction work on Seaway operations.
  - A comprehensive assessment of the impact (if any) of the PP's construction work on Seaway facilities, including how it may affect the structural integrity of the Seaway dike during construction of the NPSL, and on the long term performance of this earth structure with is equipped with a clay core.
  - Recommendations as to what additional surveillance measures should be implemented during construction of the NPSL for work around and above the Seaway.

d) JCCBI infrastructure:

- Produce various reports on how the PPP project affects the normal operations of the existing Champlain Bridge and Causeway Bridge which will continue to be operated by JCCBI.
- Assessment of the impact of the PP's construction work on traffic flow along the existing main bridge, which includes the steel section and the post-tensioned concrete approach spans (i.e. JCCBI bridge sections 5, 6 and 7).
- Assessment of the impact of the PP's construction work on traffic flow (Mass transit buses or travelers on the causeway bridge).
- Assessment of the impact of the PP's construction work on JCCBI's major maintenance work that will be going on the existing Bridge.

e) Evaluation committees:

- The OE may be called upon to participate in the various evaluation committees constituted by the Authority to evaluate technical proposals received by the three PPP proponents. One or more persons in different fields of specializations (bridge design, highway design, environment, electrical, lighting, ITS, tolling or utilities infrastructures) may be called up. This process includes:
  - Review of RFP documentation prior to reception of PPP technical proposals.
  - Individual review and assessment of technical proposals.
  - Consensus review with other committee members.
  - Establishment of a detailed list of technical irregularities for the PPP proponents, only one of which will be designated as the "Preferred Proponent".

## f) Dispute resolutions:

- Represent the Authority's technical interests in any dispute resolution procedures as per the Project Agreement, including:
  - Review of pertinent documentation.
  - Attend pertinent meetings.
  - Facilitate discussions with relevant parties.
  - Carry out cost analysis, on request.

## 7 LIST OF PROJECT SUBMITTALS & RELATED TASKS

List of submittals to be reviewed and related tasks are detailed in Appendix B - SCHEDULE OF SUBMITTALS AND TASKS RELATED TO OWNER'S ENGINEER SERVICES

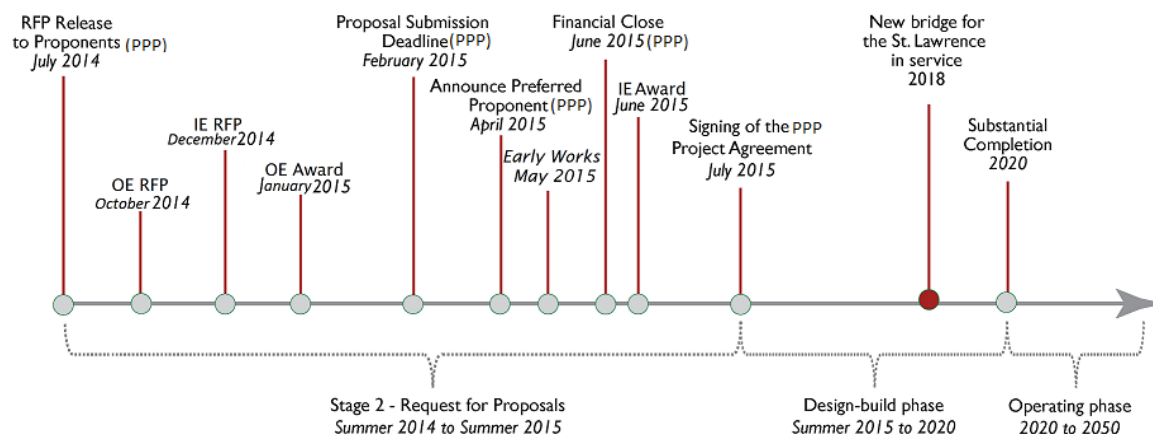
The aforementioned list is preliminary, and accordingly the complete list of services that the OE may be called to execute during the course of the Project.

## 8 LIST OF REFERENCE DOCUMENTS AVAILABLE FOR CONSULTATION

Lists of reference information and reports related to the project are provided in Appendix C - LIST OF REFERENCE DOCUMENTS AVAILABLE FOR CONSULTATION

## 9 NBSLC PROJECT SCHEDULE

The NBSLC Project's master schedule starting from the date of release of the PPP Request for Proposals (RFP) is illustrated below:



Project milestones: the milestones for the NBSLC Project are summarized below:

Milestone	Approximate Date**
Commencement of Early Works Agreement	May 2015
Early Works by Private Partner	May 2015 to June 2015
Commencement Date of Project Agreement	July 2015
NBSL Bridge	August 2015 to December 2018
A15 and IdS Bridge	August 2015 to December 2020

Engineering contract milestones: the milestones of the respective engineering contracts (OE and IE) are summarized below:

Milestone	Approximate Date**
OE RFP publication	October 2014
OE Contract Award	January 2015
IE RFP publication	December 2014
IE Contract Award	June 2015
End of OE Contract	December 2021
End of IE Contract	December 2025

\*\*These dates are approximate and hence subject to change.

## 10 RESOURCES REQUIRED

### 10.1 General

As set out above, the NBSLC Project Office is led by the NBSLC Project Director, who is designated by the Authority.

As per Subsection 3.3, there will be an Independent Engineer (IE) team employed by the Authority and the PP. The manner in which the IE conducts its work will overlap, or otherwise, impact the role of the OE. The Authority wants to avoid unnecessary duplication of the work and therefore, the role of OE should allow some flexibility and permit some adjustment to occur in determining how the OE services are delivered to the Authority. As it relates to the supply of professional resources, the undertaking of the OE's functions should generally include, but not be limited to, the resource requirements identified hereinafter.

The Consultant's Project Manager shall at all times carry a cell phone so that the Authority can contact the Consultant at any time during the period when the work is under way. The Consultant's Project Manager shall return telephone call within four (4) hours.

It should be noted that the Project Agreement, including all related documents, is prepared in English only. Therefore, the Consultant's key resources should have adequate English reading, writing and speaking skills.

## 10.2 Consultant Staff

For required resources and positions to be filled, the OE shall refer to Subsections 10.3 – *Base Services* and 10.4 – *Other Technical or Administrative Resources* to learn of any additional qualifications that may be required.

The Authority considers the following positions to be part of the Base Services on the Consultant's Team for the Contract: Project Manager (PM), Deputy Project Manager (DPM), and Lead Engineering Coordinator (LEC). The LEC position can be filled by either of the engineering leads, the Lead Bridges & Structures Engineer or the Lead Civil and Highway Engineer, as best fits the needs of the Project, as per the experience outlined in Subsections 10.3 – *Base Services (Project management Team)* and 10.4 – *Other Technical or Administrative Resources* of the present Terms of reference. The OE shall designate a Base services team including: Project Manager and Team Leads, and support staff as necessary including Discipline Specialists, and the staff necessary to assist these positions:

## 10.3 Base Services – Project Management Team

### 10.3.1 Project Manager (PM)

The Project Manager (PM) shall be provided by the OE. Under the authority of the NBSLC Chief Engineer, the PM assists the Chief Engineer with tasks associated with the general management and coordination of technical activities. The Project Manager shall direct the work of the OE's Team Leaders. Tasks are to be considered evolving in nature and can be adjusted according to the progress of the project stages.

The Project Manager must be an engineer and should have a minimum of fifteen (15) years of relevant experience in engineering, project management or transportation project planning. The PM shall be able to bind the OE's Project team in human resources and financial matters and shall be the final authority for the OE in matters relating to amendments, extensions and other negotiations related to this Contract. In addition, the PM:

- Directs the OE's staff, represents the OE and is responsible for all administrative and technical aspects of the mandate;
- Ensures that members assigned to project management and that the resources he or she supervises incorporate the Authority's objectives, directions and concerns into their activities; where required, ensures that the activities of the NBSLC Project are carried out in accordance with established procedures, budget and schedule;
- Implements planning, monitoring and control systems (content, cost, time, quality, document management); provides front-line conflict resolution; produces management reports; executes all other related tasks.

### 10.3.2 Deputy Project Manager (DPM)

The Deputy Project Manager (DPM) must be an engineer and should have a minimum of ten (10) years of relevant experience in engineering and project management. This experience has been acquired on major engineering and/or construction projects in a leadership position.

The DPM shall specialize in the coordination and administration of major highway projects involving major engineering works, in the carrying out and monitoring of implementation plans, in



the development and monitoring of project databases, and in the management of information and documents. To that end, the DPM:

- Coordinates and integrates inputs and results from studies, preliminary designs, final designs and the general conduct of project activities;
- Assumes responsibility for managing information and documents for the entire NBSLC Project;
- Provides technical and administrative support to the Authority for administrative activities, including day-to-day liaison on routine matters;
- Ensures the integration of all specificities of the NBSLC Project (urban planning, water management, architecture, archaeology, heritage, contaminated soil, mitigation measures, environmental monitoring, traffic, civil, roads/highways, electrical, etc.);
- Reviews documents, plans and specifications for coordination and performs all other related tasks as required by the OE PM and the NBSLC Chief Engineer, including, subject to approval, requirements stated elsewhere in this Contract, acting as the Project Manager for short-term durations where deemed necessary.

### 10.3.3 Lead – Engineering Coordinator (LEC)

The Lead – Engineering Coordinator should have at least fifteen (15) years of relevant experience and a university degree in his or her specialty, or an equivalent combination of education and experience. He or she must be an engineer and a member in good standing or hold a license or temporary permit from the *Ordre des ingénieurs du Québec*. He or she has the knowledge and skills to be able to develop and coordinate work plans and engineering services to reach the project objectives in terms of cost, quality and schedule. He or she directly monitors other engineers or specialists in the OE team, and is able to assume responsibility for complex and difficult technical assignments in design, supervision and quality control of relevant engineering work.

The LEC shall have sufficient general knowledge of large scale transportation infrastructure projects, to plan and distribute the engineering tasks and coordinate the activities of the OE engineering leads and specialists with those of the NBSL project team and the other participants. In addition, the LEC:

- Identifies, defines, coordinates, plans and manages all complementary technical notes and reviews required by the OE, taking into account the work done by other specialty resources in the applicable engineering works;
- Ensures prior approval of the Work Plan for the organization of engineering tasks;
- Provides technical recommendations to the OE Project Manager and the NBSL team based on the findings of studies and analyses;
- Aligns working practices of the OE team to the Terms of Reference as per Section 5 – *ROLE OF THE OWNER'S ENGINEER*;
- Ensures timely formal communications with the PM/DPM;
- May be called upon to lead, coordinate and/or supervise value analysis sessions, dispute resolution sessions and propose follow-up actions/measures;
- Carries out all other related tasks upon request by the Authority.

### 10.3.4 Administrative Agent/Document Controller

Administrative Agent/Document Controller should have at least eight (8) years of relevant experience and a university degree in his or her specialty, or an equivalent combination of education and experience on projects of similar scope or size. He or she has the knowledge and

skills in the management, revision and storage of engineering-related documentation. He or she works closely with the NBSL internal project staff, PP staff and other Project suppliers in ensuring that all technical documents, reports, drawings, email or written correspondence is managed in an efficient and easily-retrievable manner.

## 10.4 Other Technical or Administrative Resources

The OE team shall have available an appropriate group of technical specialists and administrative resources to provide reviews and advise on various detailed components of the NBSLC Project. The Authority considers the following positions to be Support Services on the Consultant's Team for the Contract.

### 10.4.1 Lead – Bridges & Structures Engineer

The Lead – Bridges & Structures Engineer should have at least fifteen (15) years of relevant experience and a university degree in his or her specialty, or an equivalent combination of education and experience. He or she must be an engineer and a member in good standing or hold a license or temporary permit from the *Ordre des ingénieurs du Québec*. He or she has the knowledge and skills to be able to approve and coordinate work plans to reach objectives in terms of cost, quality and schedules. He or she directly monitors other highly-specialized structural engineers or specialists, and is able to assume responsibility for complex and difficult technical assignments.

This resource has the knowledge and skills concerning technically complex long multi-span bridges and is able to provide authoritative advice and opinions to the NBSL team (internal resources and other external highly-specialized resources) and identify, define, coordinate, plan and manage all complementary technical assessments and reviews required, taking into account the work done by other specialty resources in the field of complex, major long multi-span and/or long-span bridges.

### 10.4.2 Lead – Civil/Highway Engineer

The Lead – Civil/Highway Engineer should have at least fifteen (15) years of relevant experience and a university degree in his or her specialty, or an equivalent combination of education and experience. He or she must be an engineer and a member in good standing or hold a license or temporary permit from the *Ordre des ingénieurs du Québec*. He or she has the knowledge and skills to be able to develop approve and coordinate work plans to reach objectives in terms of cost, quality and schedules. He or she directly monitors other engineers or specialists, and is able to assume responsibility for complex and difficult technical assignments.

This resource has the knowledge and skills concerning short-span bridges, highways and roads to be able to complement the NBSLC project team, internal resources and other external highly-specialized resources, and identify, define, coordinate, plan and manage all complementary technical notes and reviews required, taking into account the work done by other specialty resources in the field of bridges, highways and engineering works. This resource:

- Ensures the prior approval of the Work Plan for the organisation of engineering tasks;
- Provides technical recommendations to the OE Project Manager and the Authority based on the findings of studies and analyses;

- May be called upon to lead, coordinate and/or supervise value engineering sessions; dispute resolution sessions;
- Proposes follow-up actions/measures; all other related tasks upon request by the Authority.

#### 10.4.3 Senior Electrical and Lighting Engineer

Senior Electrical and Lighting Engineer should have at least fifteen (15) years of relevant experience and a university degree in his or her specialty, or an equivalent combination of education and experience. He or she must be an engineer and a member in good standing or hold a license or temporary permit from the *Ordre des ingénieurs du Québec*. He or she has the knowledge and skills to be able to assist in review of the technical requirements for electrical and lighting systems prescribed in the Technical Requirements of the Project Agreement. More specifically, professional services include without limitation, upon the Authority's request:

- Review the design drawings submitted by PP for electrical and lighting systems component.
- Review reports, observations, opinions and recommendations issued by the IE on design reports submittals.
- Provide observations and technical views on the merits of the reports, comments, opinions and advice from the Independent Engineer.
- Review drawings issued by the PP of structures and facilities temporary electrical and lighting systems related to bridge and highway component.

#### 10.4.4 Senior Geotechnical Engineer

The Senior Geotechnical Engineer should have at least fifteen (15) years of relevant experience and a university degree in his or her specialty, or an equivalent combination of education and experience. He or she must be an engineer and a member in good standing or hold a license or temporary permit from the *Ordre des ingénieurs du Québec*. He or she has relevant experience in leading and coordinating geotechnical-related activities acquired on major highway/bridge projects involving major engineering works.

#### 10.4.5 Senior Municipal Engineer

The Senior Municipal Engineer should have at least fifteen (15) years of relevant experience and a university degree in his or her specialty, or an equivalent combination of education and experience. He or she must be an engineer and a member in good standing or hold a license from the *Ordre des ingénieurs du Québec*. His or her expertise will be in Municipal infrastructure that is relevant to the work to be conducted as part of the Project, which includes but is not limited to, construction of new infrastructure related to transportation, water supply networks (including collection, distribution and treatment), wastewater sewerage networks (including collection, conveyance and treatment), storm sewerage, etc. He or she has relevant experience in leading and coordinating municipal service systems-related activities acquired on major highway/bridge projects involving major engineering works.

#### 10.4.6 Senior Engineer – Transportation/Traffic

The Senior Engineer – Transportation/Traffic should have at least fifteen (15) years of relevant experience and a university degree in his or her specialty, or an equivalent combination of education and experience. He or she must be an engineer and a member in good standing or hold a license from the *Ordre des ingénieurs du Québec*. He or she has the knowledge and skills to be able to develop, approve and coordinate work plans to reach objectives in terms of cost, quality and schedules. His or her expertise is centered on traffic management, traffic signage design, highway signage and pavement marking layouts, facility performance analysis (i.e. level of service) and other matters related to traffic engineering. He or she directly monitors other engineers or specialists, and is able to assume responsibility for complex and difficult assignments.

#### 10.4.7 Environmental Specialist

The Environmental Specialist should have a minimum of fifteen (15) years of relevant experience coordinating environment-related activities acquired on major highway/bridge projects out of which ten (10) years would have been done in the context of provincial and federal environmental regulations in the Province of Quebec. He or she has knowledge and skills to be able to review and comment the Environmental Management System, Environmental Management Plans and related activities. This resource shall:

- Read and review in detail the Environmental Assessment reports prepared by the Authority under the Canadian Environmental Assessment Act (CEAA);
- Read and review in detail the documents on environmental protection prepared as part of The NBSLC Project reference documents
- Provide input and review of risk analysis (probability, value, statistical methods, risk consequences, etc.) for all aspects of the project (general and specific risks); including project interactions with regional projects that may affect resources available to this project;
- Review the Project risk management plan in relation to the supply plan, the insurance program(s) and the contingency reserve;
- Complete, update and implement ongoing improvement of the technical risk register;
- Ensure performance of all measures to mitigate impacts on the environment (traffic, noise, dust, light pollution, impact on fauna, flora, work in the river, heritage, contaminated soil, groundwater, etc.);
- Review all documentation produced for Envision Certification and may be called upon to assist the Projects' Authority in filling gaps identified by the PP in the Authority's documentation.

#### 10.4.8 Urban Planner

The Urban Planner should have has at least ten (10) years of relevant experience and should be a member in good standing of the *Ordre des urbanistes du Québec* at the time when the services are to be rendered. He or she has knowledge of the territory to be studied as well as experience with large-scale urban and shoreline redevelopment projects, integrating the reconfiguration of the public domain.

#### 10.4.9 Senior Engineer

The Senior Engineer should have at least fifteen (15) years of relevant experience and a university degree in his/her specialization or an equivalent combination of education and experience. He or she must be an engineer and a member in good standing or hold a temporary permit delivered by the *Ordre des ingénieurs du Québec*. He or she has the knowledge and skills required to prepare, approve and coordinate work plans so as to satisfy cost, quality and scheduling objectives. He or she exercises direct supervision over other engineers or specialists and is able to assume responsibility for complex and difficult assignments.

#### 10.4.10 Intermediate Engineer

The Intermediate Engineer should have at least seven (7) years of relevant experience, a university degree or equivalent combination of training and experience, must be an engineer and a member in good standing or hold a temporary permit delivered by the *Ordre des ingénieurs du Québec*. He or she has the knowledge and skills to perform various types of work in keeping with pre-determined procedures. He or she conducts independent studies to guide his decisions and must use the information available judiciously. He or she refers decisions of an unusual or complex nature to the Senior Engineer.

#### 10.4.11 Junior Engineer

The Junior Engineer should be a graduate of a recognized university and should be either a member in good standing or eligible for certification with the *Ordre des ingénieurs du Québec*. The experience required is minimal; he or she prepares drawings and calculations under close supervision so as to ensure that the tasks he performs comply with the prescribed procedures.

#### 10.4.12 Senior Technician

The Senior Technician should have at least ten (10) years of pertinent experience and a college studies diploma in his/her specialization or any combination of training and equivalent experience. He or she plans, organizes and coordinates a part of the project requiring the application of in-depth technical knowledge.

#### 10.4.13 Intermediate Technician

The Intermediate Technician should have at least five (5) years of pertinent experience and a college studies diploma in his/her specialization or any combination of training and equivalent experience. He or she plans, organizes and coordinates a part of the project requiring the application of general technical knowledge.

#### 10.4.14 Documentalist

The Documentalist should have a Bachelor's degree or equivalent experience in record-keeping, with experience working in Construction industry document control and management, such as for engineering drawings, inspection reports, confidentiality agreements, material specifications, etc. and experience in document archiving and document imaging. The Documentalist:

- Creates and maintains a filing system that supports efficient information management.
- Sends and receives documents from external organizations, prepares and edits paperwork for contract agreements, and ensures all records-management activities adhere to institutional policies and legal regulations.
- Ensures information on all records is accurate and up to date.

#### 10.4.15 Secretarial Officer

The Secretarial Officer should have a High school diploma and five (5) years' experience in clerical occupations. The Secretarial Officer:

- Provides project assistance accounting and management technology.
- Performs tasks related to collecting, recording, arranging, transmitting and processing of various project related data.

#### 10.4.16 Other Resources

The OE may be called upon to provide the services of other resources, or as may be proposed by the Consultant as it sees fit to better achieve the Project objectives, as the situation dictates in the future.

## 11 METHOD OF REMUNERATION

Unless otherwise stated, payment of the professional services provided by the Consultant may be remunerated on a fixed fee basis in the form of a lump sum, on a time based fee basis (for the number of hours actually worked) or on the basis of reimbursement of the actual cost. The Consultant shall refer to the Price Table (Annex B of the RFP) to determine the remuneration method that applies.

The amounts shown in Column 6 of the Price Table shall include without limitation all costs for labour, equipment, materials, report writing, material resources and incidental expenses, as well as costs for travel, meals and accommodation required to deliver all the services set out under the Items concerned in accordance with trade practices and with this Contract, unless a specific Item is provided for such costs.

Unless otherwise stated, any aspect of labour that constitutes a Payment Item or portion of a Payment Item shall include without limitation:

- the employee's base pay;
- any increases in base pay, if applicable;
- premiums, compensations, and allowances, including an increased rate of pay for overtime;
- social benefits;
- fringe benefits (or any benefits having a pecuniary value) including costs of group insurance and supplemental pension plans;
- lost or unproductive time, including travel time, waiting time, and time spent on failed tests;
- costs for supplying, operating and maintaining equipment, apparatuses, tools, instruments, accessories, clothing, safety devices and the like used by staff to deliver services;
- travel costs for staff. However some staff travel costs are reimbursed under a specific Payment item;

- insurance costs including insurance for general civil liability, motor vehicle liability, marine liability (if applicable), professional liability and work accidents;
- costs related to use by staff of computers and related equipment and software to deliver services;
- costs for administrative support, including the secretariat for preparing reports; costs for copying documents and communication costs;
- administrative costs;
- all other costs for delivery of the Contract services by the Consultant's staff, including worksite overhead;
- equipment, tools, clothing and materials needed by the Consultant's staff to deliver the Contract services;
- profit.

Unless otherwise stated, any aspect of equipment that constitutes a Payment Item or portion of a Payment Item shall include, without limitation:

- the costs of loading, unloading, transportation, installation, dismantling, cleaning etc., regardless of where such costs are incurred;
- any fuel (or other form of energy) or lubricant required to operate the equipment;
- calibration of equipment and specialized devices and obtaining certificates for these calibrations;
- any repairs that must be made to the equipment to keep it in good repair and working order;
- the cost of replacing broken or worn parts, including normal wear;
- the cost of providing operators for equipment;
- the cost of any loss of or damage to equipment;
- equipment insurance costs;
- all local, municipal, provincial and federal taxes, levies and duties on equipment during the period of use under the Contract;
- worksite overhead costs;
- administrative costs;
- profit.

Unless otherwise stated, any aspect of materials that constitutes a Payment Item or portion of a Payment Item shall include without limitation:

- the purchase price of the materials;
- all local, municipal, provincial and federal taxes, levies and duties on materials;
- the cost of loading, unloading, transporting, packing, etc.
- the cost of any loss of or damage to materials;
- insurance costs;
- worksite overhead costs;
- administrative costs;
- profit.

The Consultant shall submit to the Authority for approval the price of any new category of work not found on the Price Table before undertaking such new work. The Authority reserves the right to request proposals from other suppliers for any category of work not found on the Price Table, and to have such new work done by another supplier.

In the case of a remuneration method based on a fixed fee basis in the form of a lump sum, the price tendered must include, without limitation, the following:

- Any resources required to provide the professional services indicated in the Payment Item concerned, specifically including: salaries, fringe benefits, bonuses, insurance and social benefits;
- Costs for computer equipment, including the software applications required to provide the professional services;
- Communication costs (telephones, fax machines, email, cellular telephones, radios, etc.) including the cost of the equipment and user fees;

In the case of a means of remuneration on a time based fee for the number of hours actually worked, the following provisions apply:

- The amounts listed in the Column 6 of the Price Table for the Items payable on an time based fee basis (billable hourly rate) shall include, without limitation, all costs for labour, equipment, materials and report writing.
- The personnel provided by the Consultant to provide the professional services for said Items will be payable on the basis of a billable hourly rate for the number of hours worked, in accordance with the remuneration terms set out below.
- For the Consultant's resources, the basic billable hourly rate for the Items payable on an hourly basis shall correspond to the product of the employee's base hourly salary multiplied by the mark-up rate.
- The hours allocated by the Authority on the Price Table for any Item paid at the billable hourly rate may be used in whole or in part, or not used at all.

The billable hourly rate for the number of hours actually worked shall take the following expenses into consideration:

- Premiums, including overtime charges and charges for work done at night and on weekends;
- Fringe benefits and inflation;
- Insurance;
- Social benefits;
- Expenses for administration and the head office;
- Profit.

The billable hourly rate for the number of hours actually worked are valid and set for the entire term of the Contract.

In the case of a means of remuneration based on the actual cost plus a mark-up (this does not apply for disbursements – refer to clause SC7 of the RFP and Payment Item B3 of the Price Table), the following provisions apply:

- Unless otherwise indicated, the fees will be payable on the basis of the actual cost plus a mark-up for administration costs and profit.
- Actual costs plus a mark-up are subject to a limitation of expenditures.

The Consultant shall at all times be able to demonstrate to the Authority that any cost it has made is justified and that the price paid is fair and reasonable, by soliciting competitive quotes in an appropriate manner, taking into account the amount of the cost and the particular circumstances.

## 12 DESCRIPTION OF PAYMENT ITEMS

The professional services covered by the payment Items described below will be payable on a lump sum basis, on an hourly basis (billable hourly rate), and/or an allowance for additional services on



the basis of a unit cost or a net cost plus mark-up (allowance), as outlined in the Price Table (Annex B) of the RFP.

Payment Items are divided into the following components:

- Lot A – Lump sum component:
  - Monthly amount for the Base Services Project Management Team; services during the NBSLC Project periods beginning approximately from April 2015 to December 2021.
- Lot B – Time-based component: billable hourly rates for engineering and project coordination assistance that may be required by the Project Authority during the NBSLC Project periods, as follows:
  - Lot B1 – Engineering and Project Coordination Assistance (April 2015 - March 2018)
  - Lot B2 – Engineering and Project Coordination Assistance (April 2018 - December 2021)
  - Lot B3 – Disbursements allowance associated with time-based services.
- Lot C – Task Authorization allowance for additional technical assistance services:
  - On demand.

## 12.1 Project Management and Coordination Services

The services project management and coordination services covered under the following Payment Items, as outlined in the Price Table, are payable on a fixed fee basis in the form of a lump sum:

- Item A (A.1 to A.7): Base Services – Engineering and Project Coordination Assistance
- Item B1.1: Project Manager
- Item B1.2: Other Members of the Base Services – Project Management Team
- Item B2.1: Project Manager
- Item B2.2: Other Members of the Base Services – Project Management Team

The price for each of the above noted Items shall cover, without limitation, all of the labour, equipment, materials, supplies and resources required to deliver the general Base Services and tasks described in Clause 10.3.1 – *Project Manager (PM)*, Clause 10.3.2 – *Deputy Project Manager (DPM)*, Clause 10.3.3 – *Lead – Engineering Coordinator (LEC)*, and Clause 10.3.4 – *Administrative Agent/Document Controller* of these Terms of Reference.

The price tendered for these items does not cover any services to be rendered by the Base Services Team resulting from Task Authorizations. Any work resulting from a Task Authorizations will be payable under Payment Items C1 and C2 of the Price Table.

Given the level of complexity and the tight timelines of the NBSLC Project, the price tendered should take into account that some of the key resources part of the Base Services Team may be required to work more than the average 37.5 hours in a typical work week.

## 12.2 Other Technical or Administrative Services

The human resources required for the other technical and administrative services to be rendered, covered under the following Payment Items, as outlined in the Price Table, are payable are remunerated on a time based fee basis for the number of hours during which the human resources assigned to the Contract were actually working on the Contract according to the work plan approved by the Authority, or at the specific request of the Authority:

- Items B1.3, B2.3, C1.3 and C2.3: Other Technical or Administrative Resources
- Items C1.1 and C2.1: Project Manager
- Items C1.2 and C2.2: Coordinators/Team Leaders

A single billable hourly rate will apply to each human resource used within each of the sub-items identified under Items B1.3, B2.3, C1.1, C1.2, C1.3, C2.1, C2.2 and C2.3 of the Price Table.

For purposes of the proposal, the number of hours has been set by the Authority for all human resources positions identified under Items B1.3, B2.3, C1.1, C1.2, C1.3, C2.1, C2.2 and C2.3 in the Price Table. During the course of the Contract, the Authority reserves the right to decrease the total number of hours provided for the human resources in these Items of the Price Table or increase them without however increasing the value of the Contract.

The billable hourly rates tendered for all resource categories identified in Items B1.3, B2.3, C1.1, C1.2, C1.3, C2.1, C2.2 and C2.3 shall include everything (equipment, materials, etc.) which each of the assigned human resources needs to carry out their duties.

The price tendered for the services to be delivered by the Other Technical or Administrative Resources covered under Items B1.3 and B2.3 shall cover, without limitation, the services described in Subsection 6.1 – *Tasks* of these Terms of Reference.

The price for any work resulting from a Task Authorization will be payable under Payment Items C1 and C2 of the Price Table, at the request of the Authority only. Specific tasks to be delivered by the resources outlined in Price Table C1 and Price Table C2 will be agreed upon between the Consultant and the Authority, at the discretion of the Authority.

The Consultant shall, every four (4) weeks during this Contract, prepare and submit to the Authority work progress reports of the costs incurred and expenditures, based on the example provided in Appendix D: *SAMPLE – PROGRESS CLAIM AND PROGRESS ESTIMATE*. Progress reports shall include the following:

- A descriptive text about work progress, reporting on the status of all of the activities underway and those planned for the next two weeks;
- A report on the situation of the costs incurred and the estimates of the forecast costs, along with a detailed report for each Item on the Price Table;
- A progress claim and progress of work report, including a statement that the amounts and quantities for which payment is requested meet the requirements of the Contract and are accurate.

Additional invoicing instructions are outlined in Section SC6: *INVOICING INSTRUCTIONS* of the RFP.

## 13 Confidentiality

### 13.1 Signs

The Consultant shall not be permitted to post any sign, advertisement or poster on the NBSLC Project premises without the prior written authorization of the Authority.

### **13.2 Advertising**

All Consultant advertising associated with the NBSLC Project shall be submitted to the Authority for prior approval. Not to restrict the generality of the foregoing, this requirement applies to all advertising media, such as radio, television, Web, social networks, newspapers, magazines and other print media, on the work site or elsewhere. It also applies to NBSLC Project site visits and website presentations.

## **APPENDIX A**

### **GRAPHICAL REPRESENTATION OF THE PROJECT AREA FOR THIS CONTRACT**

(9 Drawings – Off-Pagination Document)

#### **PROJECT AREA HIGHWAY NETWORK**

## **APPENDIX B**

### **SCHEDULE OF PP REVIEW SUBMITTALS RELATED TO OWNER'S ENGINEER SERVICES**

(5 Pages – Off-Pagination Document)

## **APPENDIX C**

### **LIST OF REFERENCE DOCUMENTS AVAILABLE FOR CONSULTATION**

(1 PAGE)

<b>REFERENCE DOCUMENTATION</b>		
1.	NEW BRIDGE FOR THE ST. LAWRENCE - PRE-FEASIBILITY STUDY CONCERNING THE REPLACEMENT OF THE EXISTING CHAMPLAIN BRIDGE	Available On Project's Website <a href="http://www.infrastructure.gc.ca/nbsl-npsl/prestudy-etudepre-eng.html">http://www.infrastructure.gc.ca/nbsl-npsl/prestudy-etudepre-eng.html</a>
2.	NEW BRIDGE FOR THE ST. LAWRENCE – FEDERAL ENVIRONMENTAL ASSESSMENT	Available on Project's Website <a href="http://www.infrastructure.gc.ca/nbsl-npsl/env-eng.html">http://www.infrastructure.gc.ca/nbsl-npsl/env-eng.html</a>
3.	NEW BRIDGE FOR THE ST. LAWRENCE – REQUEST FOR QUALIFICATIONS	Available on Project's Website <a href="http://www.infrastructure.gc.ca/nbsl-npsl/rfq-pres-ddq-20140303-eng.html">http://www.infrastructure.gc.ca/nbsl-npsl/rfq-pres-ddq-20140303-eng.html</a>
4.	STRUCTURAL CONDITION OF THE CHAMPLAIN BRIDGE APPROACH SPANS, EDGE GIRDER CONDITION ASSESSMENT AND REHABILITATION REQUIREMENTS	Available on Project's Website <a href="http://picci.ca/wp-content/uploads/2012/07/BucklandTaylor-2013-Report-Champlain-Bridge.pdf">http://picci.ca/wp-content/uploads/2012/07/BucklandTaylor-2013-Report-Champlain-Bridge.pdf</a>

## END OF APPENDIX C

## **APPENDIX D**

### **SAMPLE**

#### **PROGRESS CLAIM AND PROGRESS ESTIMATE & MONTHLY PROGRESS INVOICING**

(2 Pages – Off-Pagination Document)