

**REGISTRATION PURSUANT TO CHAPTER E-14.2
OF THE ENVIRONMENTAL PROTECTION ACT,
SNL 2002**

**ENVIRONMENTAL ASSESSMENT
FOR THE DEMOLITION OF THE EXISTING
BRIDGE AND CONSTRUCTION OF A NEW
BRIDGE ON
NORTH RIVER
ROUTE 70**

**SUBMITTED BY
DEPARTMENT OF TRANSPORTATION AND
INFRASTRUCTURE**

June 24, 2021

Table of Contents

Proponent	3
i. Name of Corporate Body.....	3
ii. Address.....	3
iii. Chief Executive Officer.....	3
iv. Approval for Environmental Assessment Submission.....	3
v. Principal Contacts for the Purpose of Environmental Assessment.....	4
The Undertaking	4
i. Name of the Undertaking.....	4
ii. Nature of the Undertaking.....	4
iii. Purpose/Rationale/Need for the Undertaking.....	4
Description of the Undertaking	5
i. Geographic Location.....	5
ii. Physical Features.....	5
Construction	6
i. Temporary Diversion.....	6
ii. Existing/Proposed Structure.....	7
Owner’s Policy	8
Protection of Vegetation and Wetlands	9
Storage and Handling of Fuels and other Material	9
Contractor Environmental Mitigation Plan	9
Prohibitions	10
Operation	11
Occupations	12
Project-related Documents	12
Approval of the Undertaking	12
i. Major Regulatory Approvals by Type and Agency.....	13
Schedule	13
Funding	13
Appendix A: General Project Details	

PROPONENT:

i. Name of Corporate Body

Department of Transportation and Infrastructure
Government of Newfoundland & Labrador

ii. Address

5th Floor, Confederation Building (West Block)
St. John's, NF
A1B 4J6

iii. Chief Executive Officer

Cory Grandy
Deputy Minister
729-3676

iv. Approval for Environmental Assessment Submission



Greg Clarke
Assistant Deputy Minister
Assistant Deputy Minister of Transportation and Infrastructure
729-3796

June 30, 2021

Date

v. Principal Contacts for the Purpose of Environmental Assessment

William Hillier
Director,
Highway Design and Construction
729-6610
WilliamHillier@gov.nl.ca

Ken Hannaford
Senior Environmental Planner
Highway Design and Construction
729-5540
hannafordk@gov.nl.ca

THE UNDERTAKING:

(i) Name of the Undertaking

North River Bridge Replacement. This submission is for the demolition of the current deteriorated bridge and construction of a new bridge, including a temporary bypass bridge for Route 70. It falls on North River, a scheduled salmon river in Clarke's Beach.

(ii) Nature of the Undertaking

The construction of a permanent bridge and temporary bridge crossing on North River on Route 70, km 16.0. The temporary bridge and bypass will be constructed and opened to traffic, the existing bridge will be closed and removed, the new bridge will be constructed, and the temporary bridge will be removed upon commissioning of the new bridge

(iii) Purpose / Rationale / Need for the Undertaking

The purpose of this project is to replace the aged and deteriorated bridge on North River which was constructed in 1966 and is 55 years old. The span will be wider to help accommodate potential flood issues.

Description of the Undertaking

Geographic Location

The project location is on Route 70 at the mouth of North River in the Town of Clarke's Beach on the north side. Conception Bay. The coordinates are Northing: 47.5500109206068 Easting: -53.2832633943586.

There are no additional routing alternatives to replacing the bridge. It is an essential link on Route 70 and any alternative would not be feasible.

Physical Features.

As North River is a Scheduled Salmon River, detailed design work and existing environmental conditions determine the type of structure which will be required and what modifications have to be incorporated into the structure to allow for the necessary fish passage and environmental protection. The existing bridge was built in 1966 with a 13.71m span. It is a pre-stressed concrete I-beam structure on concrete abutments and a HS-20 design load code. The structures overall condition is reported as poor requiring immediate repairs. The most recent inspection, along with the evident deterioration of the structure led to the decision of replacing the existing bridge with a new one. The bridge will be roughly 1.3m longer than the old bridge (from 13.71m to 15m) accommodating larger stream flows. It will be 12.66m wide (the old one is 9.9m wide) for safer traffic flow consisting of rigid frame structure. The rails will have better designs for longevity. The new structure is to be placed in a similar location as the existing. During the construction there will be a diversion located upstream from the existing bridge. Special attention will be given to erosion and scour protection at inlet and outlet control areas.

The water flow underneath the bridge is affected by the tides as it is located with the estuary immediately to the east of the structure and a pond to the west. There is a man-made gabion rock wall surrounding the estuary. There is no area needing to be cleared as it is within the existing Right Of Way and has been completely altered. The reach of the stream is a migration corridor (Beak Type 4) located at the estuary

mouth. The substrate consists of boulders, cobble, rubble, pebbles, gravel and sand. The banks are stable with gabion baskets.

The Department of Transportation and Infrastructure will consult with the Water Resources Division of the Department of Municipal Affairs and Environment to ensure that the best available data is utilized to design the bridge. The Water Resources Division's Environmental Guidelines for work around watercourses will be used during the design and construction phases.

The bridge will be designed and constructed in consultation with Fisheries and Oceans Canada (DFO). A qualitative assessment of Fish habitat along upstream and downstream areas adjacent to the crossing will be carried out. The bridge will be designed and constructed to have minimal impact on fish and fish habitat and in accordance with:

- DFO's Guidelines for Protection of Freshwater Fish Habitat in Newfoundland and Labrador (1998);
- DFO's Measures to avoid causing harm to fish and fish habitat (<http://www.dfo-mpo.gc.ca/pnw-ppc/measures-mesures/measures-mesures-eng.html>) and
- fish passage guidelines and other applicable guidelines and Fact Sheets

Construction

The project will encompass two parts:

1) Temporary Diversion:

A temporary diversion is proposed to be constructed parallel to and upstream of the existing bridge. The diversion shall have a 9 meter subgrade width and is to be constructed out of clean rock fill with 1.5:1.0 side slopes. Total length of the diversion is approximately 225m containing round culverts sized for required drainage. The finished elevation of the temporary structure will be comparable to the existing structure, providing ample hydraulic capacity. Upon completion of the permanent structure the temporary diversion shall be completely removed and any disturbed ground within the existing right of way will be rehabilitated.

2) Existing/Proposed Structure:

The existing structure was built in 1966 and is a simply supported, pre-stressed concrete I-beam structure with concrete abutments in the substructure and a HS-20 design load code. The width of the existing travel way is approximately 9.9m. The structure is located on Route 70 within the town of Clarke's Beach. The intent of this project is to replace the existing bridge on the same alignment. The horizontal alignment is to remain unchanged. The proposed replacement is comprised of a single 15m span x 12.25m (overall width) bridge constructed using post-tensioned concrete girders supported by concrete abutments and steel piles. The span has been lengthened by 1.3 m relative to the existing structure. Increasing the span will serve to reduce the impact of conditions from flooding spates.

The Contractor shall submit a demolition plan for the old bridge to the Resident Engineer/Senior Environmental Planner for review and approval prior to commencing demolition work. Demolition and removal of the existing structure shall be carried out such that no significant debris enters the river. Busting of the existing structure while in place shall not be permitted. The Contractor shall ensure that all waste material from the bridge demolition is disposed of in accordance with the *Environmental Protection Act, SNL2002 CHAPTER E-14.2* and prior approval by the Department of Environment and Climate Change. The Contractor's Demolition Plan shall clearly demonstrate that there is compliance with all environmental requirements for the project and adhere to the Contractor's Responsibilities – Regulatory Agencies Section 805.

All work under this item will be in accordance with Section 919.04 of the Departments Specifications Book, MAINTENANCE OF TRAFFIC, except where superseded by the requirements of this or another Supplementary General Condition. The Contractor shall construct a temporary paved bypass to a RLU 60 (Modified) standard to accommodate traffic. This work will also involve the design and installation of a 240 meter, two lane temporary diversion upstream of the existing bridge. The temporary bridge and substructure shall be designed in accordance with CAN/ CSA S6-14, "Canadian Highway Bridge Design Code".

Fording or moving equipment through the river, or across any other watercourse,

will be strictly prohibited. Temporary culverts or temporary bridging are preferred at such locations where frequent fording would be required.

Bridge construction will be performed by contract forces. The various phases will involve:

- (a) field surveys;
- (b) temporary crossing installation;
- (c) demolition of old bridge
- (d) new bridge construction;
- (e) clean-up and rehabilitation.

The potential sources of pollution during construction would be limited to the possible siltation of the river during subgrade construction. To prevent siltation within the river during construction the contractor shall use the mitigation in the Specification book, Sections 815, 816, 817, 818 and 845. In addition, the potential exists for hydrocarbon spillage from temporary fuel storage facilities. Contractors will be advised of the environmental requirements for stream crossings and for hydrocarbon spill reporting and the necessity of strict compliance.

Owner's Policy (Division 8, General Specifications Book, 2011)

To ensure protection of the environment, the work at all times shall be subject to inspection by the staff of relevant municipal, provincial and federal agencies. Normally, all inspections other than by the Engineer will be arranged in advance through the Engineer. Any specific matters relating to environmental protection will be dealt with between the Contractor and the Engineer.

Any violations of environmental permits or authorizations or any environmental related incidents which are observed by inspectors representing regulatory agencies are to be reported by them prior to leaving the site to the Engineer. Except in emergency situations, environmental protection measures required by other agencies must be approved by the Engineer prior to implementation by the Contractor.

It is Owner's policy to protect the environment along the route of the project, in

areas adjacent the route, and in associated work areas such as pit or quarry sites. DTW is committed to cost-effective environmental protection measures that will prevent serious or irreversible environmental damage through the planning and implementation phases of the project.

Protection of Vegetation and Wetlands

The Contractor shall be made aware that the work required in and around water crossings shall be performed with due care and caution so as to prevent undue disturbance to adjacent vegetation and the environment from construction activities and off Right Of Way travel (Section 850). Immediately following and during some construction activities, the Engineer may identify areas requiring seeding/sodding or stabilization by a method to prevent erosion. Damage or disturbance of vegetation and/or wetlands outside the ROW shall be re-vegetated and/or restored to the satisfaction of the Resident Engineer at the Contractor's expense (Section 855).

Storage and Handling of Fuels and Other Hazardous, Toxic, or Dangerous Material

All storage tank systems must be registered under and in compliance with Newfoundland Regulation 58/03, The Storage and Handling of Gasoline and Associated Products Regulations, 2003 before commencing operation. Registration does not apply to storage tank systems of a capacity less than 2500 litres that are connected to a heating appliance. Contractors shall supply verification of storage tank registration to the Engineer prior to the commencement of work (Section 820).

Contractor Environmental Mitigation Plan

A Contractor Environmental Mitigation Plan (**CEMP**), completed by the contractor and approved by DTW before work commences, is required for this project. Elements required in a **CEMP** are:

- Pre-construction planning, including the identification project-environmental

interactions (e.g., Valuable Ecosystem Components including: public and worker safety, wildlife, habitat, plants, resource users, etc.);

- Detailed environmental mitigation measures to avoid negative or irreversible environmental impacts;
- Contingency plans for unplanned events;
- List of DTW and Contractor contacts and reporting numbers; and
- Decommissioning Plan that includes site rehabilitation measures.

The potential for adverse environmental impacts during construction will be minimized as all construction activities will be undertaken in accordance with the environmental requirements of the Department of Transportation Specification Book for transportation projects.

Prohibitions

The following are directives for the Owner and Contractor in carrying out this project. Reference is also provided to the Section where this prohibition is located in Division 8.

- Contractors, subcontractors and their personnel shall not harass wildlife or waterfowl or unduly disturb fish (Section 805);
- No pesticides or other products shall be used without prior approval of the Owner and the Department of Environment and Climate Change and Conservation (ENVC) (Section 810);
- The Contractor shall not wash equipment or containers, nor dump herbicides in or near any fresh or salt water bodies, or at any location where the herbicide may enter a body of water (Section 810);
- No person shall discharge into a body of water any sewage or effluent (Section 815);
- The use of equipment or machinery in a watercourse or water body is not permitted (Section 815);
- The contractor shall not ford a watercourse without prior approval from the Resident Engineer (Section 815);
- Silted or muddy water is not permitted to be released into any watercourse or water body or into any ditch or areas that leads directly to a watercourse or waterbody (Section 815.07);

- Smoking shall be prohibited within 10 m of a fuel storage area or during refueling operations (Section 820.03);
- Fueling or servicing of mobile equipment shall not be allowed within 100 m of a watercourse, water body, or designated wetlands (Section 820.03);
- The Contractor shall ensure that no servicing or washing of heavy equipment occurs adjacent to watercourses and designated wetlands. Fueling, servicing or washing of equipment shall not be allowed within 100 m of a watercourse (Section 820.04);
- No waste material shall be deposited in any watercourse or wetland (Section 825.01);
- There shall be no open burning of waste material, slash or grubbing material onsite. Rubber tires, waste oil, or similar material shall not be used to ignite slash or used to maintain the burning operation (Section 835);
- Unnecessary cutting of trees is to be avoided. Care will be taken during construction to prevent damage to trees and shrubs adjacent to the flagged clearing limits which are to remain after construction (Section 850);
- The Contractor shall not use living trees as survey marks and shall not cut blazes or otherwise mark live trees except with removable surveyor's tape and/or tags (Section 850);
- The Contractor shall limit equipment travel to the surveyed right-of-way and existing municipal and provincial roads. Use of equipment of any type is not permitted outside the clearing limits of the right of way without prior approval (Section 850); and
- Should any archaeological remains be encountered, such as stone, bone or iron tools, concentrations of bone, fireplaces, house pits and/or foundations, work in the area of the find shall cease immediately in accordance with the Historic Resources Act (RSNL1990 CHAPTER H-4) (Section 860).

Operation

The bridge is a permanent operation. Winter maintenance will consist of snow clearing and the application of sand and salt for ice control.

The temporary bridge will serve to allow traffic to continue during the construction of the new bridge. It will be removed once the new bridge is open to traffic.

Occupations

The various types of occupations anticipated for this project include:

- (a) Civil Engineers;
- (b) Structural Engineers; 2231
- (c) Engineering Technicians; 2231
- (d) Road Surveyors; 2154
- (e) Heavy Equipment Operators; 7521
- (f) Drillers and Blasters; 7372
- (g) Carpenters; 7271
- (h) Heavy Equipment Mechanics; 7312
- (i) Labourers; 7621
- (j) Truck Drivers; 7511
- (k) Concrete Finishers; 7282
- (l) Concrete Technicians; 7282
- (m) Material Technicians and Engineers; 2231
- (n) Steel Erectors. 7236
- (o) Senior Environmental Planner 2121

Project-related Documents

- Contractor Environmental Mitigation Plan.
- Department of Transportation and Infrastructure Specifications Manual

APPROVAL OF THE UNDERTAKING

The following is a list of the permits, licences, approvals that may be necessary for this project:

MAJOR REGULATORY APPROVALS BY TYPE AND AGENCY

Type of Permit	Agency
1. Stream crossing approvals	Dept. of Fisheries & Oceans
3. Stream crossing approval	Water Resources
4. Fuel storage & handling	Government Service Centre
5. Solid waste disposal	Government Service Centre
6. Commercial Cutting	Fisheries and Land Resources
7. Environmental Assessment	Municipal Affairs and Environment

SCHEDULE

The Department of Transportation and Infrastructure would like to complete the requirements of the Environmental Assessment Act and seek approval for the project by 2021 08 20. A tender call could take place in summer 2021 with diversion construction starting shortly after. The anticipated project is expected to start Sept 2021 and be completed 30 June 2022.

FUNDING

The approximate cost is \$3.3 million and the Provincial Government will fund the project.

Appendix A

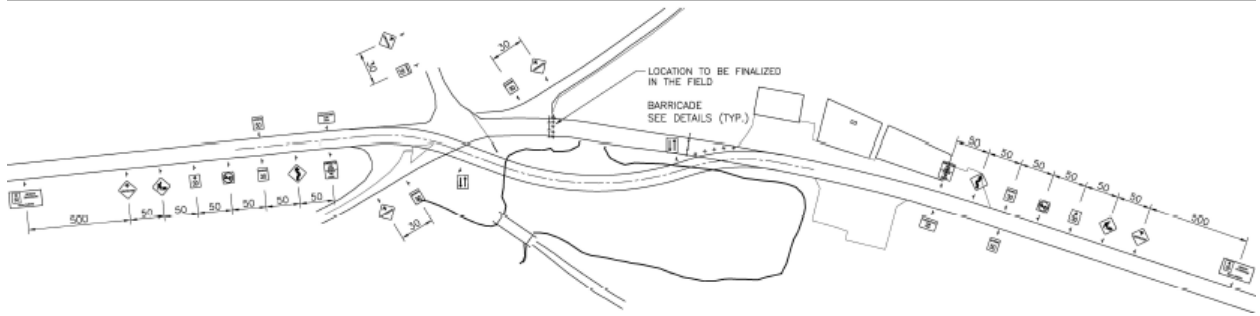
General Project Details



Map 1: Location on Island



Map 2: Close up of site



Drawing of Bridge and Temporary Crossing Locations



Photo looking west



Photo looking north



