

LONG POINT CAUSEWAY REHABILITATION AND REPLACEMENT OF BRIDGE OVER BIG CREEK

ENGINEERING SERVICES FOR DETAIL DESIGN, CONTRACT DOCUMENTS, AND
CONTRACT ADMINISTRATION SERVICES DURING CONSTRUCTION

Council Presentation
Tuesday March 10, 2020

AGENDA

Project Updates

Construction Impacts

Status of Utilities

Status of Environmental Permits
and Approvals

DESIGN SCHEDULE

Completed Design Submissions

Geotechnical Reports – Nov. 12, 2019

30% Bridge Design – Nov. 18, 2019

30% Roadway Design – Dec. 19, 2019

- Minor comments received from the County on both 30% submission packages

60% Bridge Design – Feb. 6, 2020

- County has reviewed submission with no further comments

Upcoming Design Submissions

90% Bridge Design – April 15, 2020

Bridge Design Tender – May 15, 2020

60% Roadway Design – on hold*

* Refer to the following Environmental permits / approvals slides



Fall 2020*

Tentative Bridge Construction Start

BRIDGE AESTHETIC FEATURES

Big Creek Bridge will feature a patterned concrete parapet wall and aluminum railing similar to Weightman Bridge (Portage Rd, Niagara Falls).

The lighting design is proceeding based on County standards. If decorative light poles/fixtures are to be implemented, Parsons requires these details to update the illumination calculations.



UTILITIES

A kick-off meeting with utilities was held on December 3, 2019

- Hydro One
- Bell
- Enbridge Gas
- Execulink Telecom

Conflicts with Hydro One poles have been identified

Hydro One's Municipal Road Relocation Procedure has been initiated

A site visit to review these conflicts is scheduled for March 10, 2020

Hydro pole relocation is required prior to start of the bridge construction.

This work is also dependent on receipt of environmental permits/approvals

STAGE 4 ARCHAEOLOGICAL ASSESSMENT



Lithic Drill

85 block units (1 m²) on the west side of the Causeway over a 122 m² area have been excavated

- Analysis of faunal artifacts is complete
- Analysis of Indigenous pre-contact ceramic and lithic artifacts is ongoing

Approximately 237 block units are remaining to be excavated, which will resume in Spring 2020



Indigenous Ceramic Fragment

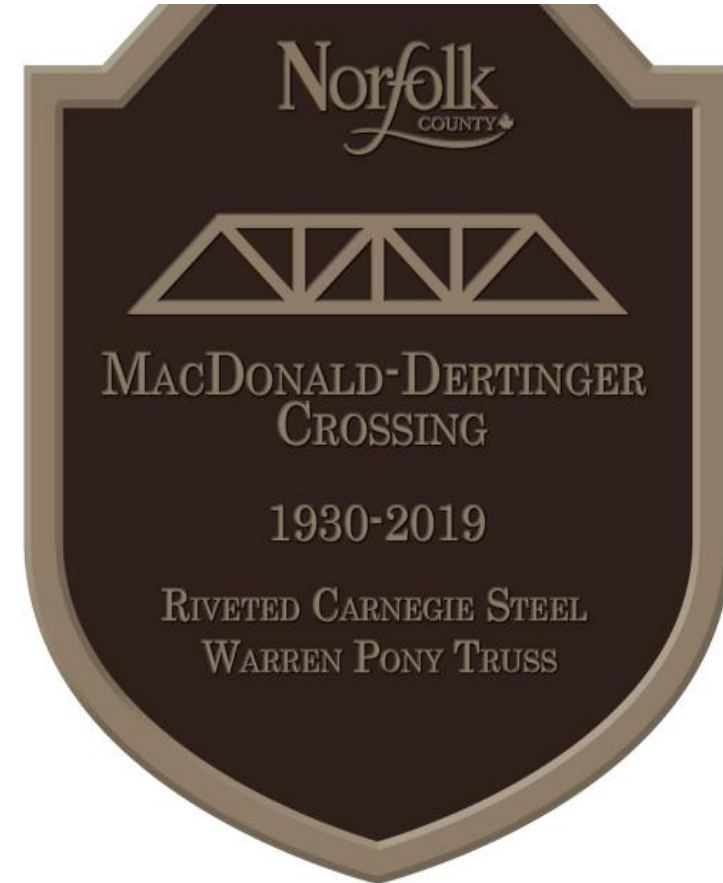
Monitoring agreements have been negotiated with:

- Mississaugas of the Credit First Nation (MCFN)
- Haudenosaunee Development Institute (HDI)
- Six Nations of the Grand River (SNGR)



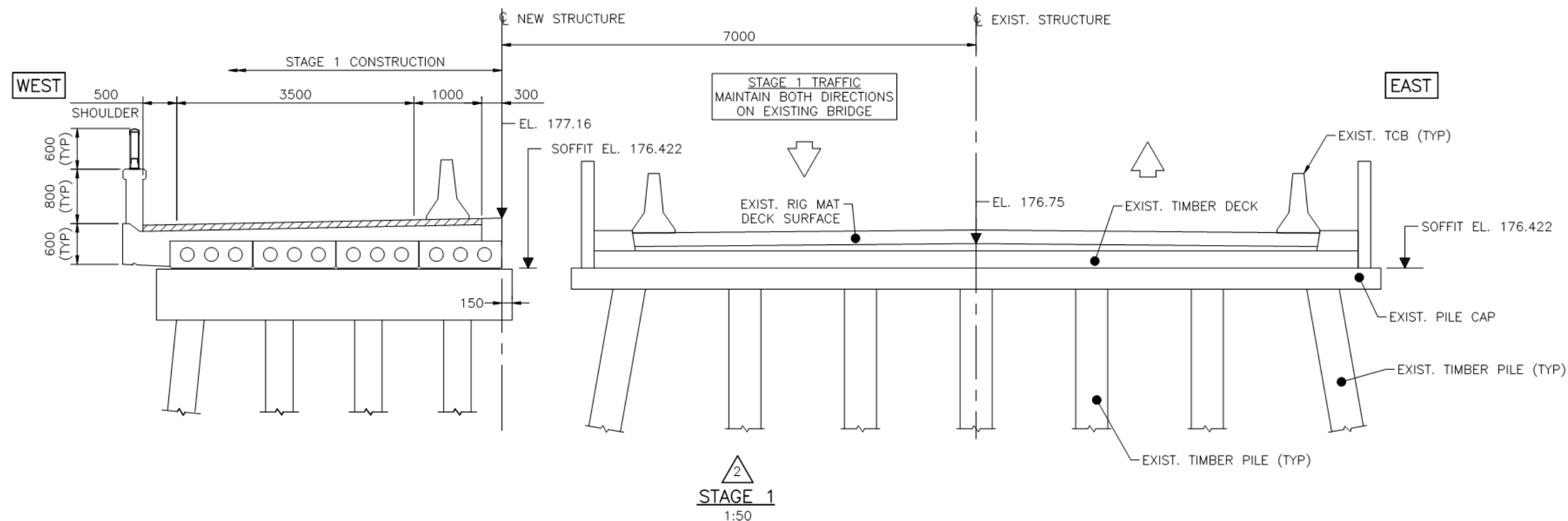
COMMEMORATIVE AND EDUCATIONAL PLAQUES

- **Environmental Study Report (ESR) Commitments**
 - Complete process to install a commemorative plaque at the new bridge (to commemorate the existing bridge)
 - Complete process to install a Tundra Swan Interpretative Plaque with The Dr. Jerome Katchin Waterfowl Foundation to enhance look-out locations in the study area
- **Next Steps**
 - Norfolk County is seeking input from Heritage staff – Parsons is awaiting further direction from the County



Example Commemorative Plaque

CONSTRUCTION, STAGE 1



West side of new bridge to be constructed

Two-way traffic to remain on existing bridge

Access to William Lane, Hugh Lane, George Lane to be maintained

STAGE 2



Improve shoulder to accommodate Hugh Lane traffic

Contractor to provide access to local residents on Hugh Lane during construction

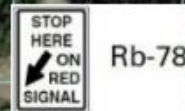
Demolition of Existing Bridge and Construction of East Side of New Bridge

Access to George Lane Closed during Stage 2

William Ln.

Hugh Ln.

George Ln.



Long Point Rd.



Completed West Side of New Bridge

Potential extended construction area

Assume Posted Speed = 50km/h

Will Council agree to pay for maintenance of private lane to be used in lieu of George Lane?

Legend

- Temporary Concrete Barrier
- TC-54 Barrels
- Property Lines
- Construction Area
- Portable Signal

REQUEST FOR TEMPORARY SPEED LIMIT REDUCTION

Current posted speed limits are

- 70 km/h north of the bridge
- 60 km/h south of and at the bridge

Speed limit reduction to 50 km/h is requested during construction for 1 km stretch:

500 m upstream to 500 m downstream of the bridge





PROPERTY IMPACTS

The right-of-way (ROW) boundary survey was finalized on Jan. 9, 2020

Clear Zone: The unobstructed, traversable area provided beyond the edge of the through travelled way available for use by errant vehicles

The majority of the structures along the east side of the roadway encroach into the ROW but are not within the desirable clear zone and thus not roadside hazards

Structures may conflict with proposed ditches – to be reviewed in further detail upon progression of roadway design

ADDITIONAL EFFORT - SURVEY

- As discussed with Norfolk County, additional survey data is needed to refine grading design around the bridge and determine slope grading on federal lands
- Exact survey limits could not be determined until the alignment was developed, during preliminary (30%) design
- Access to survey within the marshy area west of the bridge is exceedingly challenging and time consuming
- **This also reduces risk of costly construction claims for potentially significant fill quantity variances**
- Requested amount: \$6,000 + HST
- Parsons further recommends completing additional test pits and/or boreholes in this area **to reduce risk of construction claims for excavation quantity variances**
 - Test pits and/or boreholes would be an additional cost depending on scope of investigation



ENVIRONMENTAL PERMITS AND APPROVALS

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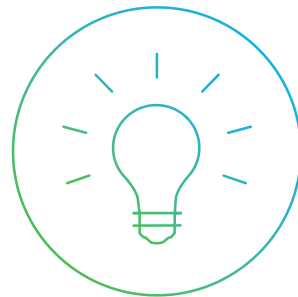
- Permit and Approval Acquisition Plan accepted by Norfolk County on October 21, 2019
- Potentially Required Permits and Approvals:
 - Ministry of the Environment, Conservation and Parks (MECP)
 - Environmental Activity and Sector Registry
 - Permit to Take Water (PTTW)
 - *Endangered Species Act* (ESA) Permit (17 species)
 - Notice of Activity Form and Mitigation Plan for Barn Swallow
 - Environment and Climate Change Canada, Canadian Wildlife Service (CWS)
 - *Species at Risk Act* (SARA) Permit (5 species)
 - *Canada Wildlife Act* Permit
 - Fisheries and Oceans Canada (DFO)
 - *Fisheries Act* Authorization (FAA) / SARA Permit (4 species)
 - Ministry of Natural Resources and Forestry (MNRF)
 - *Public Lands Act* Work Permit
 - License to Collect Fish for Scientific Purposes
 - Wildlife Scientific Collector's Authorization
 - Long Point Region Conservation Authority (LPRCA)
 - Permit under the Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses Regulation
 - Transport Canada
 - Navigation Protection Program Approval – **new, due to changes to *Canadian Navigable Waters Act* in Fall 2019**

AGENCY CONCERNS – CRITICAL HABITAT

- **As identified in the Environmental Study Report, this project will significantly impact critical habitat**
 - **Critical Habitat (CH):** Federally, CH is the habitat that is necessary for the survival or recovery of listed extirpated, endangered, or threatened species, and that is identified as CH in a recovery strategy or action plan
 - CH is legally provided an additional level of protection, and DFO has never to date issued authorization for destruction of CH
- **Given the urgent need to replace Big Creek Bridge, the agencies are reviewing permits/approvals in two phases:**
 1. For the bridge construction and related roadway approach work
 2. For the remaining roadway reconstruction work
- **In initial discussions with DFO, they agreed to proceed with the permitting process for the bridge work due to existing safety risks and limited impact to CH, but would not proceed with permitting for the remaining Causeway reconstruction due to the proposed extent of impact to CH (approx. 15,000 m²)**
 - Further discussions with the agencies are required to proceed with the Causeway reconstruction design: proof of requirement for roadway widening and a detailed review of alternatives may be required
 - **If the impacted area cannot be sufficiently reduced there is a risk that permits/approvals may not be granted and roadway reconstruction per the approved Environmental Assessment may not proceed as planned**
 - Discussions regarding permitting for the Causeway reconstruction are anticipated to resume in Summer 2020

AGENCY CONCERNS - LIGHTING

- **Provisions for lighting to be installed at a future date are included in the bridge design:**
 - Concrete bases for light poles
 - Conduits for wiring
 - Openings for power supply, pedestals, junction boxes, etc.
- **MECP has expressed concern about the future bridge lighting, e.g. minimizing light spillover outside of the road right-of-way**
 - Conditions regarding lighting may be included in the Endangered Species Act Permit
 - How will these conditions be enforced if/when the lighting is installed at a future date?
- **Discussions are ongoing with MECP to confirm the proposed ESA Permit conditions and determine how to ensure they are enforced**



SCHEDULE – PERMITS AND APPROVALS

- Several permits/approvals have legislated timelines for agency reviews, resulting in the following estimated overall timelines:
 - Endangered Species Act Permit (MECP) – 12–18 months
 - Fisheries Act Authorization/SARA Permit (DFO) – 12–18 months
 - Species at Risk Act Permit (CWS) – 12–18 months
- Based on these timelines, receipt of all required permits/approvals is not anticipated until **Fall 2020 or later**
- Informal discussions with agencies began in September 2019 to initiate the process
- Agencies (DFO, MECP, CWS) and Norfolk County have participated in regular meetings to expedite this review process
 - November 29, 2019 – Kick-Off Meeting
 - December 13, 2019 – Meeting
 - December 20, 2019 – Meeting & Site Visit
 - January 10, 2020 – Meeting
 - February 14, 2020 – Meeting
 - Next meeting scheduled on March 13, 2020

DELIVERABLES – PERMITS AND APPROVALS

- **Deliverables In Progress**

- Lighting Plan
- ESA Permit - Terrestrial
 - Step 1 - Information Gathering Form, March 2020
 - Step 2 – Avoidance of Alternatives, March 2020
 - Step 3 – ESA Permit Application, following approval of Steps 1 & 2
- SARA Permit – Terrestrial
 - Application for SARA Permit, anticipated April 2020 pending agreement of compensation
- ESA Permit – Fisheries
 - Step 1 - Information Gathering Form, following aquatic field work, June 2020
 - Step 2 – Avoidance of Alternatives, following aquatic field work, June 2020
 - Step 3 – ESA Permit Application, following approval of Steps 1 & 2
- SARA Permit – Fisheries
 - Application for SARA Permit, anticipated June 2020 following aquatic field work and pending agreement of compensation

- **Submissions to Agencies**

- Terrestrial SAR Impact and Mitigation Memo
- Aquatic SAR Preliminary Offsetting Strategies
- Federal Wetland Impact Memo
- Vegetation and Habitat Characterization Memo

- **Next Steps**

- Determination of offsetting/compensation for fisheries and wetlands, and negotiations with agencies
- Aquatic habitat assessment (field work) to occur in Spring 2020
- Applications for MNRF, LPRCA, and Transport Canada
- Install turtle exclusionary fencing for Stage 1 construction

CONTINGENCY FOR SAR PERMITS

- **Due to the timelines for the SAR permits and urgent need to replace the bridge, if the project is deemed an emergency then agencies can grant a conditional approval to proceed prior to issuing permits**
 - The project must be needed to ensure human health and safety
 - Requisite proof will need to be provided to the agencies for approval to proceed
- **Conditions will include (at a minimum):**
 - Mitigation measures as stated in the ESR
 - Mitigation measures as provided to the agencies in the permitting process
- **All SAR permits will still be required and all obligations (e.g. offsetting and compensation) will need to be met**
- **Further discussions with agencies regarding this course of action is required to confirm the conditions by which they grant approval for the project to proceed**
 - Norfolk County is to advise if they would like Parsons to initiate these discussions

ADDITIONAL EFFORT – PERMITS AND APPROVALS

- **Parsons' effort to obtain permits and approvals as discussed with Norfolk County may be more than anticipated in our proposal for the following reasons:**
 - Discussions with Agencies and negotiations regarding offsetting and compensation measures are ongoing but overall effort cannot yet be determined
 - Additional field work requirements from DFO, CWS, and MECP identified in Winter 2019/2020
 - Terrestrial species habitat characterization carried out in Winter 2019/2020
 - Aquatic habitat characterizations to be carried out in Spring 2020
 - Change in legislation for the *Canadian Navigable Waters Act* in Fall 2019, now requiring approval and notification to public
 - Installation of turtle exclusionary fencing prior to having a contractor on board is not part of Parsons' original project scope
- **We are tracking our effort under the original budget and will notify Norfolk County of potential overruns**



THANK YOU

QUESTIONS?