



The Corporation of Delta
COUNCIL REPORT
Regular Meeting

F.08

To: **Mayor and Council**

File No.: **5220-25/27B/DPW**

From: **Engineering Department**

Date: **April 04, 2017**

Deltaport Way/27B Avenue Pedestrian Overpass

The following report has been reviewed and endorsed by the Chief Administrative Officer.

▪ **RECOMMENDATION:**

THAT a joint letter from Mayor Lois E. Jackson and Tsawwassen First Nation's Chief, Bryce Williams, be sent to the Port of Vancouver to confirm if funding opportunities are available for this project.

▪ **PURPOSE:**

The purpose of this report is to provide an update on the Deltaport Way/27B Avenue Pedestrian Overpass.

▪ **BACKGROUND:**

In 2014, Tsawwassen First Nation requested the Port of Vancouver (the "Port") to consider applying to the Roberts Bank Rail Corridor Program to fund a pedestrian overpass over Deltaport Way/27B Avenue. Safe crossing of cyclists and pedestrians across Deltaport Way and the adjacent rail lines could be accomplished by a grade separated facility. A letter request was submitted to the Port on February 12, 2014, and outlined the proposed project scope and potential benefits (Attachment A). Delta does not have any direct jurisdiction in the project area, but is supportive of the project.

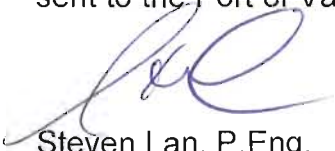
▪ **DISCUSSION:**

In response to Tsawwassen First Nation's request in 2014, the Port responded that funding to form the basis of a request to access matching funding from the Roberts Bank Rail Corridor Program for a \$4 million project was unavailable at the time. However, there may be funding for such a project as a community legacy benefit through the Container Capacity Improvement Program.

As several years have passed since the original request in 2014, it may be timely to request the Port to provide an update on whether the Deltaport Way/27B Avenue Pedestrian Overpass is still being considered as a candidate for a community legacy project under the Container Capacity Improvement Program. Staff recommend sending a joint letter to the Port to confirm if funding opportunities are still available for this project.

▪ **CONCLUSION:**

Safe crossing of cyclists and pedestrians across Deltaport Way and the adjacent rail lines could be accomplished by a grade separated facility. Staff recommend a joint letter from Mayor Lois E. Jackson and Tsawwassen First Nation's Chief, Bryce Williams, be sent to the Port of Vancouver to confirm availability of funding to support this project.

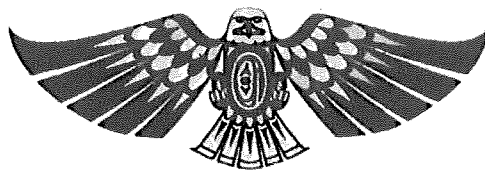


Steven Lan, P.Eng.
Director of Engineering

Department submission prepared by: Hon Yee, P.Eng., Transportation Engineer
HY/bm/ll

▪ **ATTACHMENT:**

A. 2014 Letter Request and Summary of Proposed Project Scope



TSAWWASSEN FIRST NATION
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February 12, 2014

Robin Sylvester, President and CEO
Port Metro Vancouver
100, The Pointe, 999 Canada Place
Vancouver, BC V6C 3T4

Dear Mr. Sylvester,

Subject: Deltaport Way Pedestrian Overpass

Thank you for meeting with TFN and the Corporation of Delta on January 31, 2014 to discuss the proposed pedestrian overpass over Deltaport Way and the BCR tracks.

Following this meeting TFN reviewed the design and reduced the proposed length and height of the initial concept over Deltaport Way, 27B and BCR rail tracks to a shorter length over TFN's 27B westbound lane and BCR tracks as shown on the attached submission.

This reduction in the length of overpass structure reduces the project cost from \$11 million to approximately \$4 million.

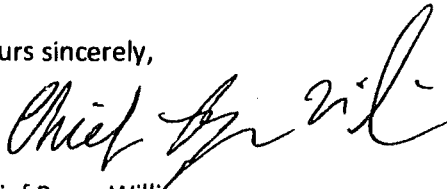
This project will eliminate a barrier to pedestrians and cyclists crossing the rail tracks at grade and improve safety as part of the future development of our Great Blue Heron Way within the overall alternate route for the Trans Canada Trail from the BC Ferries Tsawwassen terminal to Hope. In addition, under a habitat banking agreement Port Metro Vancouver (PMV) has committed to establishing an interpretive area along the dike just south of Deltaport Way. The interpretive area should be integrated into the design on the pedestrian overpass. Forward, integrated planning of these two initiatives would enhance the value of both the interpretive area and the associated habitat enhancement works undertaken by PMV. It would also welcome visitors to Tsawwassen Lands and the Port Corridor in way that is culturally appropriate and which recognizes the partnership between TFN and PMV.

We urge PMV to apply to the Roberts Bank Rail Corridor Program to meet their February 31, 2014 deadline for submissions or alternately include this submission as a future community legacy project under your Container Capacity Improvement Program.

Should you require any further information on our submission, please contact Tom McCarthy, our Chief Administrative Officer.

We look forward to working with you on this project. In the interim, we will work with various partners to provide letters of support for your information.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Chief Bryce Williams". The signature is fluid and cursive, with the first name "Chief" written in a larger, more prominent script than the last name "Williams".

Chief Bryce Williams

Cc Robin Johnston, Roberts Bank Corridor Program
Mayor Lois Jackson, Corporation of Delta
Cliff Stewart, Port Metro Vancouver



February 13, 2014

File: 2177.0018.01

Tsawwassen First Nation
1926 Tsawwassen Drive,
Tsawwassen, BC V4M 4G2

Attention: Ed Chanter, Director of Lands

Dear Sir

RE: DELTAPORT WAY CROSSING FOR BICYCLES AND PEDESTRIANS

Project Understanding

We are providing this brief to describe a potential option for improving safety related to pedestrian and bicycle crossing conditions at Deltaport Way and the sea dyke.

On a local basis, the sea dyke north and south of Deltaport Way is currently a pedestrian and cycling route within the Tsawwassen First Nation (TFN) lands. This dyke trail provides a scenic link between trails on the north and south sides of Deltaport Way. Recent weekend pedestrian counts amount to upwards of 700 people walking and cycling the sea dyke at Deltaport Way. The daily pedestrian and cycling use is likely to be considerably higher in the warmer months. Over the next 20 to 30 years TFN's projected development will see approximately 3000 new units and population will increase to approximately 8,000 which will significantly increase the number of walkers and cyclists on the existing sea dyke. TFN's Land Use Plan and residential Neighbourhood Plans contemplate a Great Blue Heron Way trail on TFN lands with extension to Ladner north of Deltaport Way. In addition, under a habitat banking agreement Port Metro Vancouver (PMV) has committed to establishing an interpretive area along the dyke just south of Deltaport Way. The interpretive area should be integrated into the design of the pedestrian overpass. Forward, integrated planning of these two initiatives would enhance the value of both the interpretive area and the associated habitat enhancement works undertaken by PMV. It would also welcome visitors to Tsawwassen Lands and the Port Corridor in a way that is culturally appropriate and which recognizes the partnership between TFN and PMV. TFN is currently levying off site levies (development cost charges) on new development to provide for a future overpass to grade separate Highway 17 to provide continuity between TFN lands north and south of the highway.

On a regional level, the sea dyke is an important component of Metro Vancouver and Fraser Valley Regional District "Experience the Fraser" concept intended to provide a future continuous trail between BC Ferries Tsawwassen Terminal and Hope on the south side of the Fraser River. Completion of this trail also constitutes an important TransCanada Trail alternative link to the interior of BC and rest of Canada.

Currently, the railway and Deltaport Way create a barrier to pedestrian and bicycle traffic along the dyke system, interrupting a system that has the potential to connect BC Ferries, TFN, Brunswick Point and Ladner via a seaside and riverside recreational route. Ongoing expansion of the Roberts Bank Rail Corridor and Deltaport will add to this physical barrier. The Roberts Bank T2 development is projected to generate a significant increase in both the daily truck traffic as well the volume of train traffic servicing the

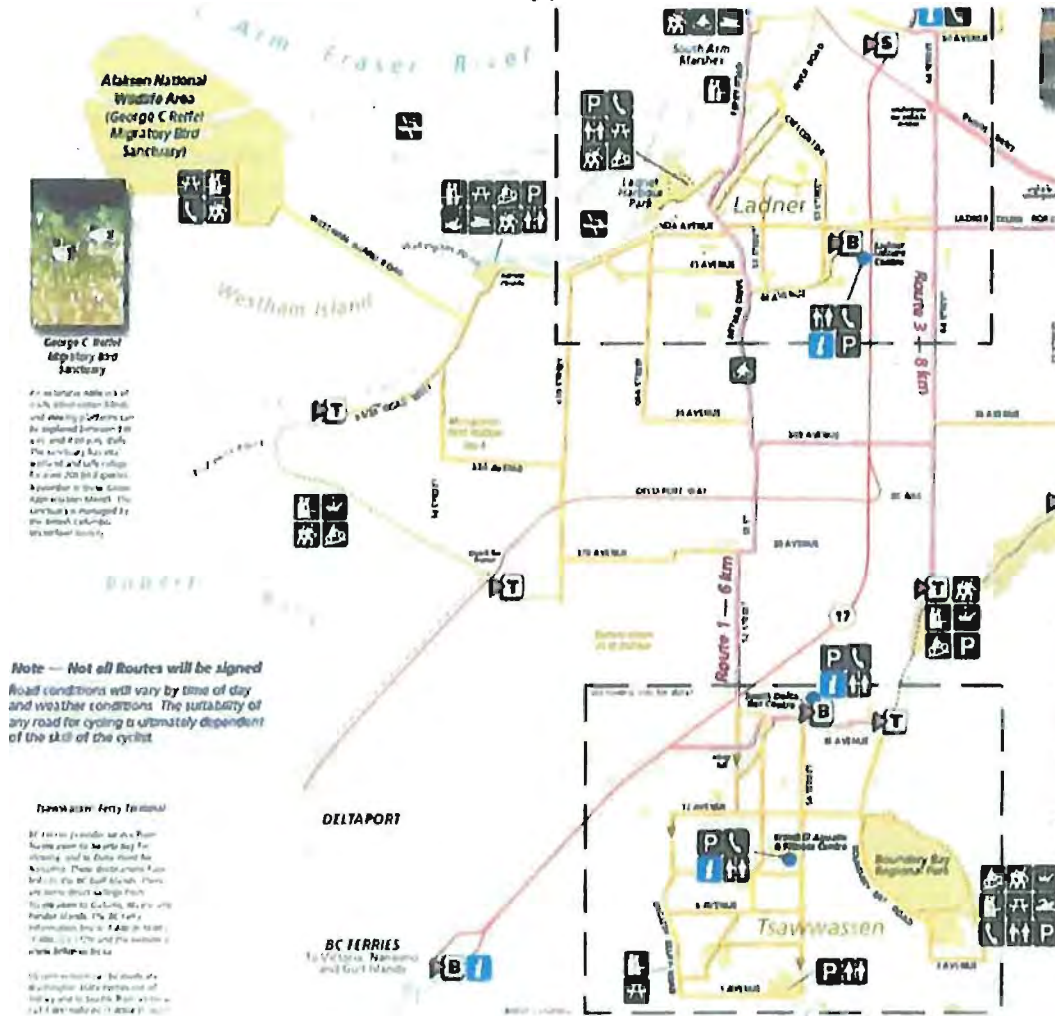


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port. The combination of increased recreational use plus increased truck and train traffic results in a higher opportunity for conflicts and exacerbates the concern over the safe use of the dyke trail across the Deltaport Way corridor. Although 41b Street is the designated cycling route intended to divert cyclists away from Deltaport Way and the rail corridor, this diversion is not a practical solution and we understand that cyclists and pedestrians continue to make unsafe crossings of the roadway and tracks. Furthermore, the recreational potential of the dyke system is not fully realized by this discontinuity.

TFN possesses a vision to connect the local community via multi-use pathways that provide safe access to enjoyment of the lands in this area. Constructing a pedestrian bridge to grade separate the multi-use trail over Deltaport Way and the rail corridor will significantly improve the safety for recreational users and will result in a continuous recreational route that best utilizes the sea dyke and which is consistent with TFN's vision for a safe environment.

Planned facilities are illustrated on the following plan.



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Site Description

The area where the dyke trail intersects Deltaport Way is congested by utility corridors (water and BC Hydro), the existing MoTI Roberts Bank Overhead (structure #2023), multiple rail lines entering the causeway, 27b Avenue eastbound (south of the structure), and 27B Avenue westbound (north of the structure). Each of these elements represents essential infrastructure associated with the port and adjacent lands and needs to be maintained.



Concept Outline

Safe crossing of cyclists and pedestrians across Deltaport Way and the adjacent rail lines could be accomplished by a grade separated facility. For the purpose of this brief we have collaborated with Structurecraft Limited to develop a conceptual arrangement for the pedestrian bridge and ramps. Structurecraft developed a high level concept for a pedestrian bridge that would cross all of the transportation infrastructure, however the estimated cost of this option was prohibitive. A new concept



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has been developed which crosses 27b Ave eastbound at grade and reduces the length of the east approach and the maximum height, thereby significantly reducing the total estimated cost. This alignment has the trail crossing 27b Ave eastbound at-grade and passing under the western end of the Deltaport Way bridge. The multiuse path ramps up at an approximate 6% grade parallel to and adjacent to the north side of the Deltaport Way structure. The pedestrian bridge swings over the 27b Ave westbound lanes and BC Rail tracks as soon as the required elevation is attained (5.5m clearance over the road and 7.01m clearance over the rail).

The location of existing overhead high voltage hydro lines on the north side of the BCR tracks affects the alignment of the grade separation in as much as it is preferable to develop a bridge geometry which avoids the costs associated with relocating these lines. The overhead hydro constrains the ramp on the north side of the structure and the preferred alignment provides the grade length needed to obtain the required clearance under the lines.

The area is recognized to have soft compressible soils and high groundwater tables and as such the design of the foundations for the proposed pedestrian overpass structure will need to account for the nature of the ground conditions.

The anticipated order of magnitude cost for a structure of this type is in the range of \$4M, exclusive of GST.

In conclusion, the benefits of the Deltaport Way overpass include:

- Elimination of existing safety hazard for pedestrians and cyclists crossing BCR trackage
- Addresses future increased exposure and degraded safety conditions expected with the planned increase in truck and train traffic servicing the port facility
- Meets the future needs of increased trail use anticipated from TFN land development
- Continuous local seaside GBHW trail connection through TFN lands
- Contribution to completion of Experience the Fraser between Tsawwassen Ferry Terminal and Hope

We trust the foregoing is satisfactory for discussion purposes.

Sincerely,

URBAN SYSTEMS LTD.

A handwritten signature in blue ink, appearing to read "Greg Smith".

Greg Smith, P.Eng.
Sr Transportation Engineer

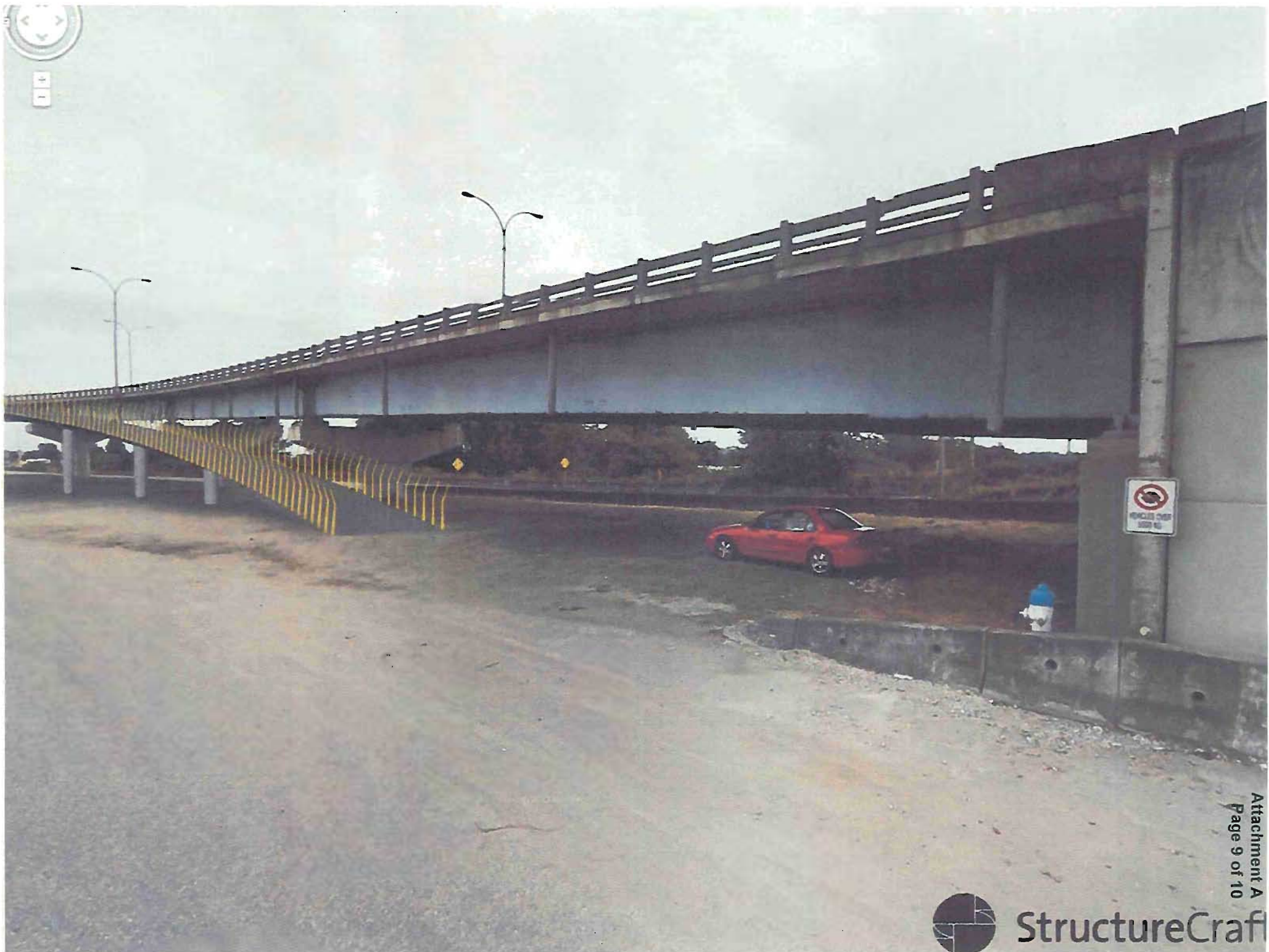
cc: Tom McCarthy, CAO, TFN
Gerald Epp, Structurecraft

/grs





50 feet 10 m



Bridge
Location

BC HYDRO & POWER AUTHORITY

BC RAILWAY CO.

BC RAILWAY CO.

BC RAILWAY CO.