

DATE: March 13, 2024  
TO: Eric Corrigan (Stantec)  
CC: Cody Bagg (USL), Stacie Crane (Stantec)  
FROM: Sam Roosma (USL)  
FILE: 1961.0480.14  
SUBJECT: Flume Creek and Day Road DFAA Flood Damage – Fortis BC Pipeline Relocation at Beach Avenue Culvert Crossing

Urban Systems Ltd. (USL) was retained by the Ministry of Transportation and Infrastructure (MOTI) to design the replacement of culvert crossings conveying Flume Creek under Margaret Road and Beach Avenue. Where Flume Creek crosses Beach Avenue, there is an existing Fortis BC pipeline which is an 88 mm diameter PE distribution pressure main. The existing gas pipeline crosses above the existing CSP culverts which will be removed as part of this project. The proposed concrete box culverts conflict with the existing gas pipeline. Throughout the design development, USL communicated with Fortis BC staff regarding the gas pipeline to resolve Fortis requirements to accommodate the proposed works. After review of the culvert design, Fortis BC concluded that the gas pipeline will need to be relocated and due to cover constraints it must go below the box culverts. The purpose of this memorandum is to outline the anticipated chronology and requirements of the works required to relocate the existing gas pipeline as well as the assignment of responsibilities.

The following summarizes the anticipated work required for the relocation and the responsibilities of different parties:

- The contractor awarded the culvert replacement project (the Contractor) should begin coordination with Fortis BC promptly after award of the contract.
- A temporary bypass pipeline will be required. The Contractor will be responsible for design, supply, and installation of a structural support system to suspend the temporary bypass pipeline over the excavation. The structural support system design must be signed and sealed by a professional engineer licensed to practice in British Columbia and must be submitted to Fortis BC for review and approval. Approval of the structural support system design is expected to take 8-12 weeks from submission to Fortis BC.
- Fortis BC forces will complete the installation of the temporary bypass pipeline using the structural support system designed, supplied, and installed by the Contractor. The temporary bypass pipeline will be installed on the live system with hot tapping tees, so no interruption of service is anticipated. This step is anticipated to take 1 working day.
- With the temporary bypass pipeline installed and operational, the Contractor will be able to remove the existing culvert and excavate down to the subgrade of the proposed culvert bedding.
- When the subgrade is exposed, Fortis BC forces will install the relocated permanent gas pipeline. Once the relocated permanent gas pipeline installation is complete and backfilled to culvert bedding subgrade, Fortis BC forces will decommission the temporary bypass pipeline. This is anticipated to be the end of Fortis BC's work and presence on site.

Expectations of the Contractor for any work required of Fortis BC forces include, but are not limited to the following:

- Sufficient notice to Fortis BC prior to any activity that requires their presence on site. At least 2-weeks notice, or as required by Fortis BC, should be provided.

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- The Contractor will be responsible to assist Fortis BC forces as necessary to allow them to complete the works. This may include, but is not limited to, excavation, removal and disposal of gas pipeline (existing or temporary bypass), and placement and compaction of bedding and embedment material.

Should there be a need to contact Fortis BC regarding this project, contact information for two Fortis BC staff who were involved in the correspondence are provided below.

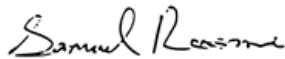
Name: Nick Boyd  
Title: Planning and Design Technologist  
Phone: 250-751-8309  
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Name: Jason Cochran  
Title: Operation Supervisor – Sunshine Coast  
Phone: 604-317-8575  
Email: Jason.Cochran@fortisbc.com

The contents of this memorandum are for reference only. All details related to the treatment of the Fortis BC gas pipeline required to accommodate the proposed culvert replacement should be confirmed by the Contractor with Fortis BC directly.

Sincerely,

**URBAN SYSTEMS LTD.**



Sam Roosma, P.Eng.  
Water Resources Engineer

cc: Cody Bagg, P.Eng., Design Manager, USL  
Stacie Crane, PMP, Project Manager, Stantec

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Enclosure

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