

Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut
X0B 1J0

04 June 2019

Attention: Manager of Licencing

RE: 8BC-BAF1929, BAF-3 Pipeline Project

The North Warning System Office (NWSO) and its Operations and Maintenance contractor, Raytheon Canada Limited (RCL) are proposing a project to replace the beach to summit fuel pipeline at the North Warning System (NWS) located at Brevoort Island, BAF-3. NWSO was issued the water licence 8BC-BAF1929 for operations of BAF-3 in April 2019. Item C7 requires board approval prior to conducting any work below the high water mark of any water body.

RCL and NWSO would like approval for a project that will include minor in-water work, but will also move bulk fuel piping further away from flowing water.

The existing fuel pipeline was installed in 1988 as a part of the original site construction. The pipeline has several current deficiencies, including:

- sections of pipeline which are submerged in water during the freshet;
- pipeline supports which are insufficient, broken, or otherwise inadequate; and
- corroded piping, whose walls are thinning to the point of required replacement.

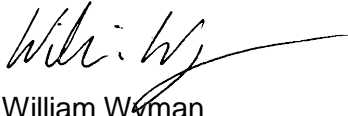
This project will also result in the pipeline being rerouted further away from the stream, crossing at one location rather than running above the stream from some distance (approximately 400 m) and adjacent to the stream further (approximately 650 m). See Figures 2 and 3 for the current piping routing and the proposed piping routing.

At the one stream crossing, supports will be anchored to boulders to ensure that the pipeline is properly supported. To anchor the supports:

- water will be temporarily routed around the boulders;
- holes will be drilled into the boulders; and
- the piping supports will be installed using rock anchors and water-safe epoxy.

Both rock anchors and water-safe epoxy will be used to ensure that the supports are not loosened by water entering the holes then freezing and thawing pushing the bolt from the boulder.

Please contact me with any questions,



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Raytheon Canada Limited, North Warning System
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Attachments:

- Figure 1: BAF-3 piping at current stream crossing
- Figure 2: Current piping routing
- Figure 3: Proposed piping routing

Cc: Manager of Field Operations, CIRNAC



Figure 1: BAF-3 piping at current stream crossing

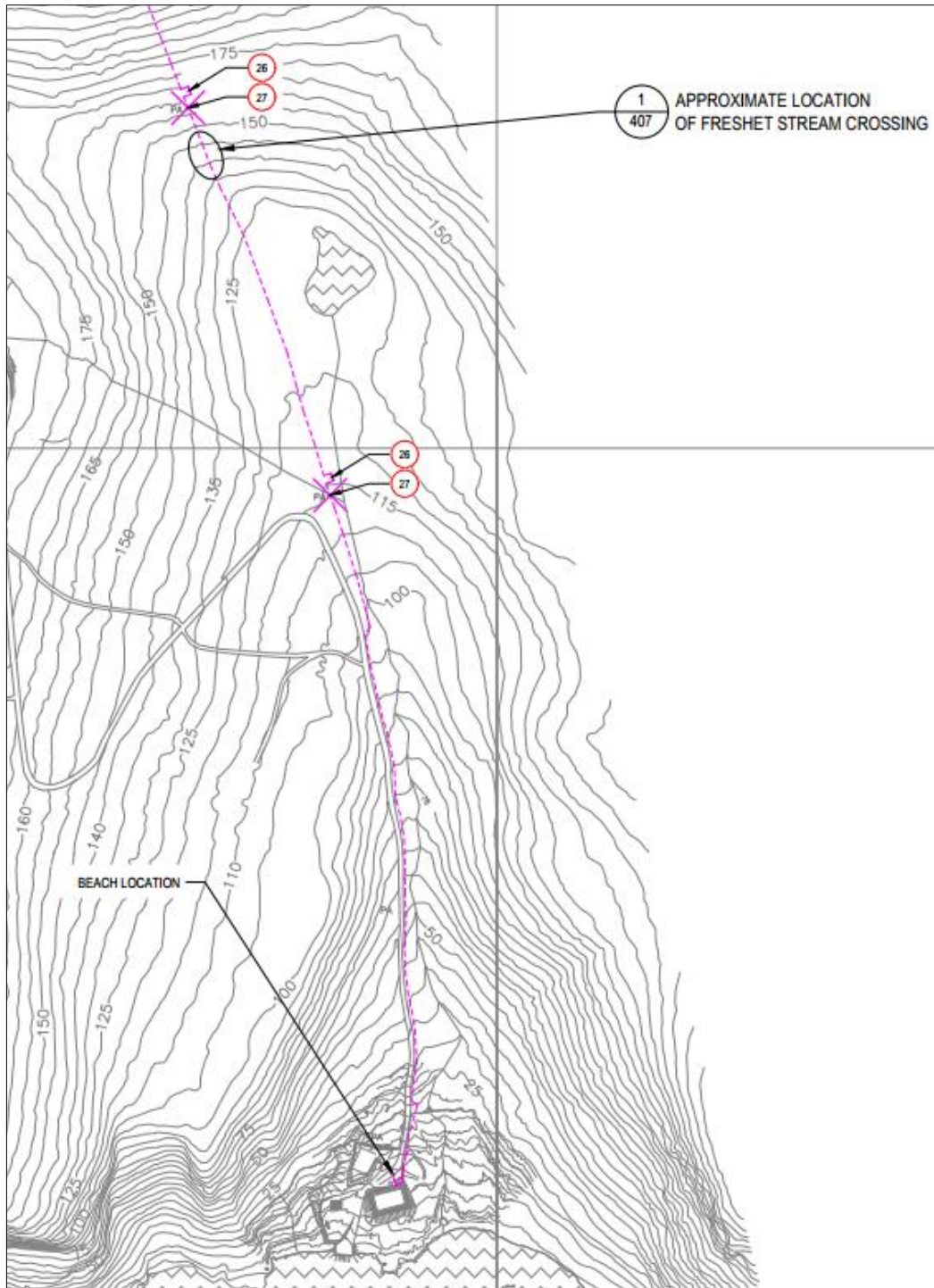


Figure 2: Current piping routing

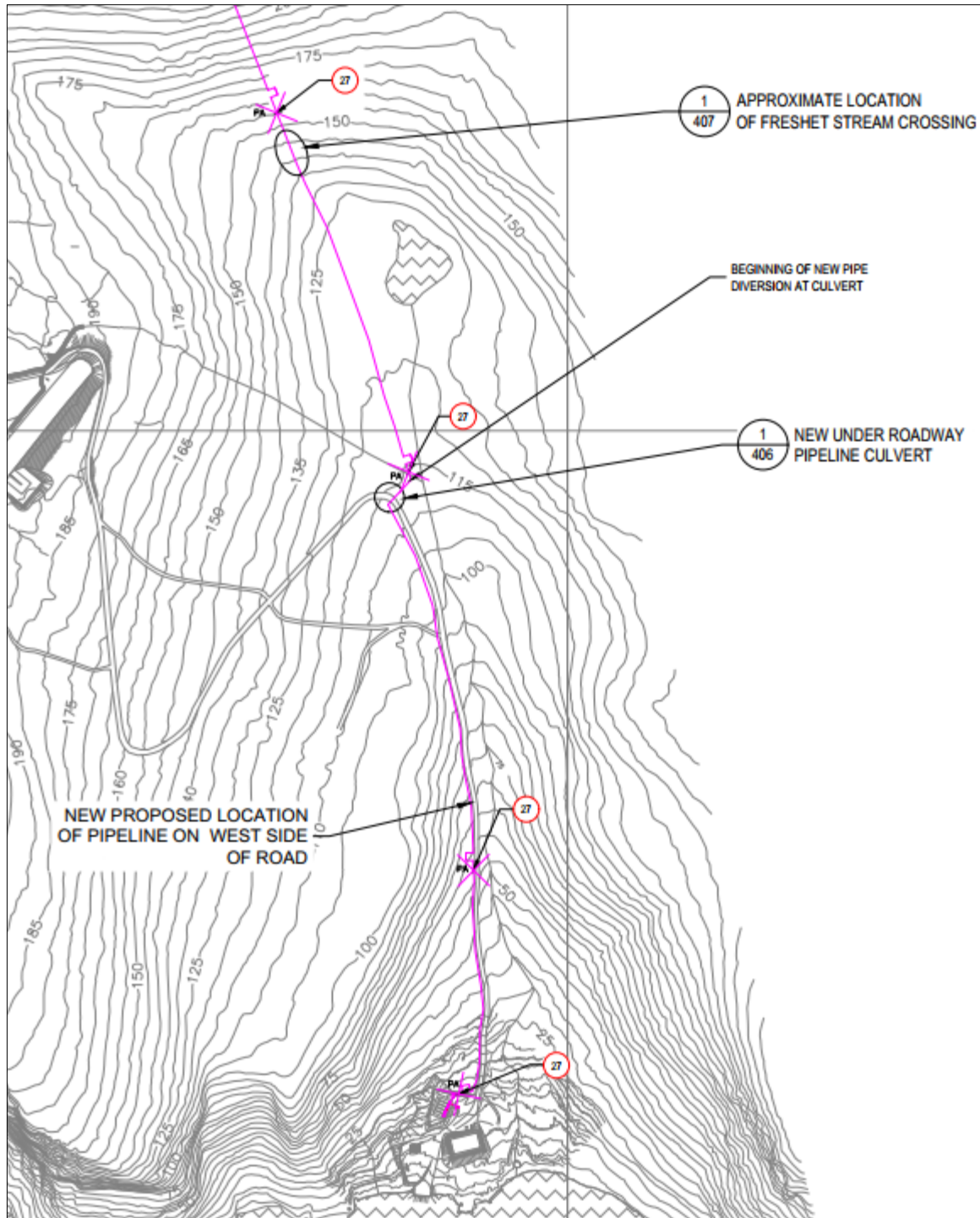


Figure 3: Proposed piping routing