



Committee of the Whole Report

For the Meeting of March 1, 2018

To: Committee of the Whole **Date:** February 26, 2018
From: Fraser Work, Director of Engineering and Public Works
Subject: David Foster Harbour Pathway Extension – Johnson Street Bridge Underpass

RECOMMENDATION

That Council direct staff to:

1. Finalize this detailed design and proceed with procurement and construction of the proposed Johnson Street Bridge Underpass.
2. Update the 2018 Financial Plan to set a project budget of \$544,000 for the extension of the David Foster Harbour Pathway under the new Johnson Street Bridge, consisting of \$444,000 from the Harbour Pathway Capital Budget from the deferred pedestrian bridges and \$100,000 contribution from the Trans Canada Trail Foundation.
3. Incorporate maintenance and operating costs of this new section of the pathway as part of the 2019 Operating budget.

EXECUTIVE SUMMARY

The David Foster Harbour Pathway is a five kilometre pedestrian route along the City's waterfront between Ogden Point and Rock Bay, with development of various segments currently underway. Council has previously approved construction of the Johnson Street Bridge underpass portion of the pathway for the first quarter of 2018. The proposed underpass will provide a connection between the Northern Junk Public Plaza and the Janion Building Public Plaza, on the downtown (east) side of the Inner Harbour.

The proposed underpass has been designed to 90 percent completion, and is ready for final design work, prior to tendering. The design is presented in this report for Council's consideration. The new pathway structure will consist of two segments - a suspended steel bridge structure with concrete topping, and an on-grade brick paver pathway. The bridge structure and pathway will be wheelchair accessible and will seamlessly integrate with Council's approved relevant Public Realm plans, providing a welcoming and safe pedestrian environment and an attractive waterfront connection.

Proposed project delivery has been coordinated with the Johnson Street Bridge completion schedule, and accelerated to meet Trans Canada Trail Foundation funding timelines. This project complies with the design treatment and aesthetics approved as part of the City's surrounding JSB Public Realm Plan.

The 90 percent design estimate includes an estimated \$320,000 construction cost, with a total estimated maximum project cost of \$544,000, including all professional services and project contingencies.

PURPOSE

The purpose of this report is to update council on the progress of the David Foster Harbour Pathway, Johnson Street Bridge pedestrian underpass design, and to seek approval to finalize the design and proceed with construction.

BACKGROUND

In May 2017, Council directed staff to proceed with the design and construction planning for the Johnson Street Bridge Pedestrian Underpass, as part of the David Foster Harbour Pathway program. The proposed underpass is approximately 30m in length (identified in figure 1, below in red), and consists of two segments – a bridge structure at the north end of the project (A), connecting to the new Janion Building Public Waterfront Plaza, and an at-grade, brick paver section, which will connect to the Northern Junk Public Plaza (B) proposed on the south side of the new Johnson Street Bridge.

Staff incorporated construction planning for the underpass into 2017 Downtown and Johnson Street Bridge Public Realm planning activities. Upon completion of those activities in October 2017, staff contracted Herold Engineering Ltd. to develop the detailed design drawings for the proposed pathway structural components and ensure required civil design was compatible with the emerging Northern Junk Public Plaza design, part of the Johnson Street Bridge Public Realm - Revised Design Concept which was adopted by Council in December 2017. Key design considerations for the underpass project also included functionality, public safety, accessibility, aesthetics, and long-term operations and maintenance needs.

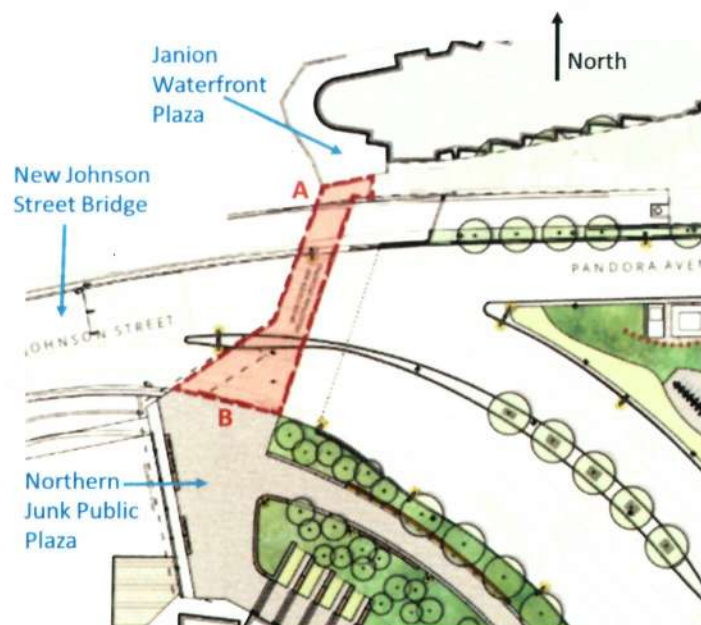


Figure 1: Proposed Johnson Street Bridge Underpass (red dashed area)

Underpass Design: The width of the proposed underpass varies, to match connection points at the south and north ends. The proposed bridge structure is 4.5m wide, however, the at-grade pathway widens to 5m immediately south of the bridge structure, eventually opening up to 16.75m

where it connects to the Northern Junk Public Plaza. The underpass is designed with a maximum 5% grade, to facilitate wheelchair access.



Figure 1. Janion Building Waterfront Plaza and JSB (looking East. Source: www.thecondogroup.com).



Figure 2. JSB Underpass looking at Janion Waterfront Plaza



Figure 3. JSB underpass and structure (looking South towards Northern Junk Plaza).



Figure 4. Proposed underpass design – Elevation (facing east). Figure shows the entire walkway that extends underneath the bridge deck, between the waterfront plaza (right in Figure 1) along the top of the rip-rap slope, in front of the main bridge vertical structural members.

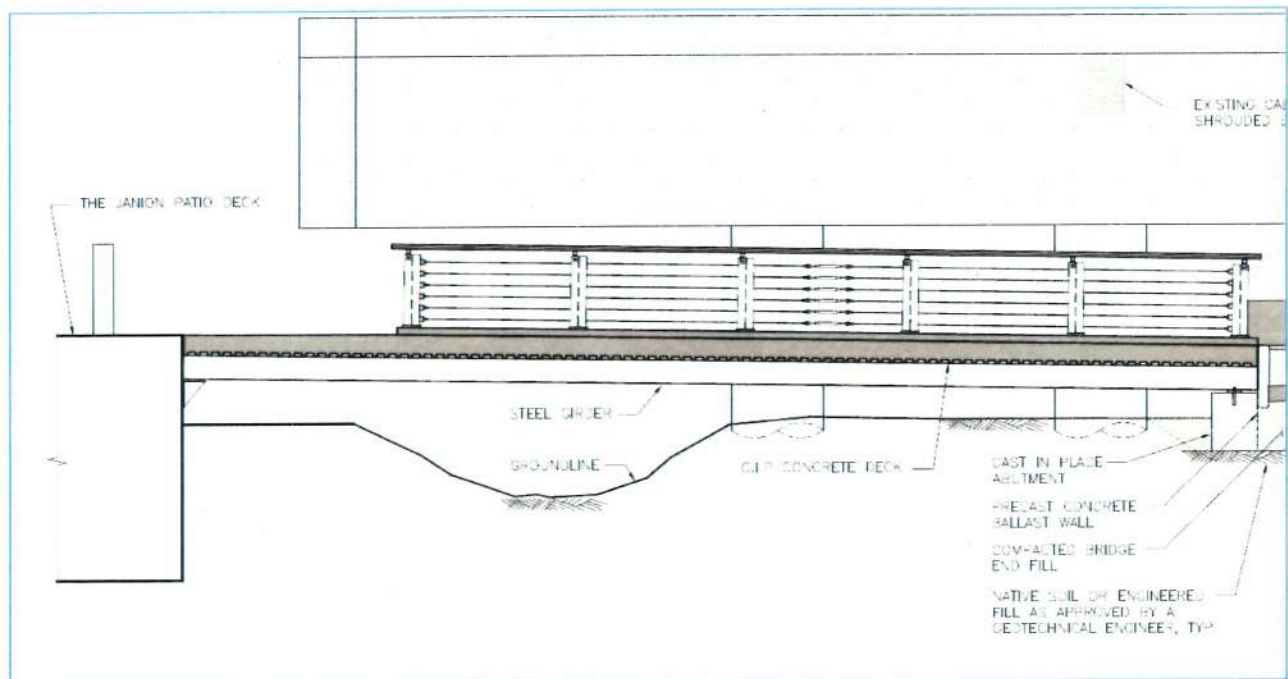


Figure 6. Proposed Underpass Bridge Structure / Connection to Janion Building.

The proposed pathway is designed to create a welcoming environment while prioritizing safety and functionality.

The pathway accommodates city maintenance/service vehicle access. The underpass will be maintained by the City, and will include City garbage and recycling bins near the Northern Junk Public Plaza. The underpass will also accommodate access to the emergency back-up generator for the new Johnson Street Bridge.

A Crime Prevention through Environmental Design (CPTED) assessment was conducted for the project, resulting in recommended features, such as overhead and integrated pathway lighting, landscaping design features, and colour treatments which support public safety and contribute to a welcoming environment for users.

Currently, the design remains within city property and does not include access to the shoreline from the underpass. Expanding the scope to include access to the shoreline through federal lands would result in increased construction and maintenance costs for the City. Designs would also be subject to a Facility Alteration Permit from federal agencies and any construction work below the high water mark would need to be coordinated within established fisheries windows. The City would also be required to negotiate a new water lot licence / lease with Transport Canada to facilitate on-going access. The current design facilitates waterfront views without additional property approvals, construction costs or added time.



Figure 7. Northern Junk Plaza design, connecting to the JSB underpass pathway, at the top left of the schematic.

ISSUES & ANALYSIS

Time: Proposed project delivery has been coordinated with the Johnson Street Bridge completion schedule and is being accelerated to meet Trans Canada Trail Foundation funding timelines. Substantial completion of the bridge structure before June 30, 2018 will satisfy Trans Canada Trail requirements for funding support. Careful coordination of underpass construction will be required to align with Johnson Street Bridge project activities, and avoid impacting the overall bridge construction schedule. Given the limited access options to the construction site for crews and materials delivery, tendering and construction is required to be phased as follows:

1. Complete underpass bridge structure prior to deconstruction of the existing Johnson Street Bridge and the installation of the Northern Junk Public Plaza.
2. Remove existing Johnson Street Bridge, followed by preparatory work for the Northern Junk Public Plaza.
3. Complete the at-grade portion of the underpass project to meet the proposed plaza area.

Limited engagement activities for the structural design of the bridge were undertaken, however, the proposed railings, lighting, and brick pavers are consistent with the approved public realm standards, which involved extensive public consultation and engagement.

Costs/Funding: The 2018 Financial Plan identified a “to be determined” budget line item for the delivery of this project, as staff were waiting for the completion of detailed design and cost estimates. There is \$3,070,000 currently available in the David Foster Harbour Pathway Capital Budget, following Council’s February 2017 decision to defer the construction of the two pedestrian bridges at Heron Cove and Raymur Point, and accounting for actual and committed pathway expenditures to date.

Herold Engineering has estimated the cost of construction for the pathway extension, based on the 90% design drawings. The estimated costs are contained in the table below:

Table 1. Project Cost Data.

Description of Work	Estimate	Totals
Engineering design (schematic / detailed) and surveying		\$76,000
Construction estimates (90% design)	\$320,800	
Public Art Allocation (1% of construction)	\$3,200	
Contract Administration / Supervision (10% of construction)	\$32,000	
Contingency (10% of construction)	\$32,000	
Market Condition Contingency (25% of construction)	\$80,000	
Estimated Construction Total	\$468,000	
Total Project Cost (not including GST)		\$544,000
Project External Funding – Trans Canada Trail		(\$100,000)
Estimated Costs – City Funds		\$444,000
David Foster Harbour Pathway - Current Funds Available		\$3,070,000
Remaining Capital Funds – Harbour Pathway		\$2,626,000

Should Council approve the proposed budget for the Underpass project, there would be \$2,626,000 remaining funds available for the Harbour Pathway. Proposed pathway enhancements for 2018, as well as timelines and budget for updating the 2008 Harbour Pathway Plan and an associated five year capital implementation and resourcing strategy, will be the subject of a separate report.

Public Art Integration: The 2008 Harbour Pathway Plan and the 2010 Art in Public Places Policy provides direction for integrating public art into capital projects. As a part of the conceptual design phase, staff from the City’s inter-departmental project team explored options for showcasing the underpass as a “special place” and featuring a public art component to the project, specifically a poem written by former City of Victoria Poet Laureate Janet Rogers. The poem, entitled Croxxing, was originally intended for incorporation in the Heron Cove Pedestrian Bridge.

A number of options were explored for integrating the poem into the project, including embedding fabricated words into the pathway, stamping the poem into the concrete bridge deck, applying a thermoplastic application on the bridge deck, projecting the poem on the underside of the Johnson Street Bridge, and incorporating the poem on a removable wall feature. The project estimate accounts for 1% towards a public art component as per the Art in Public Places Policy. Options and a separate recommended way-forward, associated costs and contributions, will be presented to Council at a future date, and can be installed after this project is complete.

Public Engagement: The City undertook an extensive public engagement and iterative review process for the Johnson Street Bridge public realm design between 2015 and 2017. The proposed

underpass treatments are consistent with the aesthetic, design and materials of the approved Public Realm and informed by a community design charrette, on-line public survey, and stakeholder meetings with the Downtown Residents' Association and community organizations. Council approved the public realm treatments at its meeting in December 2017.

The underpass designs were shared in January 2018 with the Janion Building Strata and Northern Junk property owners. Design details will continue to be shared with the Strata who will review and endorse (or otherwise) the final linkage plans at their February 28, 2018 regular meeting. This report is submitted in advance of that stakeholder formal approval due to the short timelines associated with this project to secure external funding, and based on their informal approval of the designs during engagement sessions in January 2018.

OPTIONS & IMPACTS

The City will be ready to proceed with construction in the first quarter of 2018. Procurement options will be explored to determine a timely, efficient and cost-effective sequencing for construction of each of the different project components.

Option 1: Finalize detailed designs and proceed with construction (RECOMMENDED)

Under this option, the 2018 Financial Plan would be updated to reflect a project budget of \$544,000 (design, construction, and contingencies) and the City would immediately proceed to procurement/construction. The bridge structure, along with initial civil elements of the works for the underpass, would be prioritized to ensure external funding is received from the Trans Canada Trail Foundation. Final landscaping, lighting, and finishing would be completed after the old bridge is removed in Q2 2018.

If the Janion Building Strata identifies any further comments or issues with the current design at their February 28, 2018 meeting that cannot be met within the current timelines and budget, staff will return to Council with additional considerations at a following Council meeting.

Option 2: Finalize detailed designs and initiate construction after the old Johnson Street Bridge is removed (not recommended).

Under this option, staff would complete the detailed designs and procurement process as above, but would wait to construct the underpass until after the new Johnson Street Bridge project is opened and the old bridge is removed. The advantage is that the project would be completed all at once, with no physical obstructions or impediments in the way that could impact construction timelines. However, the underpass would not be completed until fall 2018. Given the timelines, the project would not receive external funding from the Trans Canada Trail Foundation.

Option 3: Amend designs and report back to Council with alternative design (not recommended).

Under this option, the proposed design could be returned to staff for further revisions, as directed by Council. Significant design changes for the structure, surface finishes, or other major elements of the design would impact construction timelines, and would likely result in forfeiture of Trans Canada Trail Foundation funding support.

2015 – 2018 Strategic Plan

The underpass is consistent with Objective 8 of the 2015 – 2018 Strategic Plan to complete a Multi-Modal and Active Transportation Network and support completion of the David Foster Harbour Pathway.

Official Community Plan Consistency Statement

This project supports policies and actions identified in Goal 7 and 8 of the Official Community Plan. The David Foster Harbour Pathway is part of the Greenways Network as set out in Map 6.

Impacts to Financial Plan:

In February 2017 Council deferred construction of two pedestrian bridges at Heron Cove and Raymur Point, due to unfavorable market conditions and a single bid higher than the available budget. The Johnson Street Bridge underpass project, at 90% detailed design stage, has a construction cost estimate of \$468,000 which includes a 35% contingency. Already-secured design services account for the remainder of project costs, resulting in a total budget requirement of \$544,000. The Trans Canada Trail Foundation has earmarked a \$100,000 contribution towards the completion of the underpass by June 30, 2018.

Staff recommend funding the underpass project through the existing 2018 Harbour Pathway capital program, which has a total available budget of \$3.07M, as a result of the 2017 deferral of the pedestrian bridges.

Accessibility Impact Statement

The design of the underpass meets ADA guidelines for wheelchair-accessible grades and will link to existing portions of the Harbour Pathway already established at the Janion Building. Access to the path for wheelchair users from Wharf Street will be via the Northern Junk public plaza. Given the stair system/grade limitations at the connection to the Janion plaza, future accessible connections between the waterfront pathway and the upland sidewalk network will be explored at additional locations north of the Janion site.

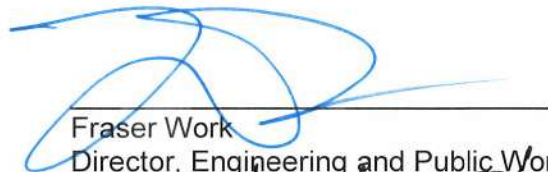
CONCLUSIONS

Extending the David Foster Harbour Pathway is a strategic priority for Council. The proposed underpass will provide an attractive, accessible waterfront connection that will support local and tourist pedestrian traffic, and link public plaza spaces on both sides of the new Johnson Street Bridge.

Respectfully submitted,



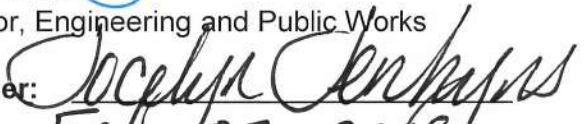
Brad Dellebuur
Assistant Director, Transportation



Fraser Work
Director, Engineering and Public Works

Report accepted and recommended by the City Manager:

Date:



Feb 27, 2018

List of Attachments

- Appendix A – Site Reference Photos (current state)
- Appendix B - 90% Detailed Design - Pathway Extension