



<u>COUNCIL AGENDA</u>	
Date: MAY 25, 2026 / <u>MAY 27, 2026</u> SP	Item: 8 / <u>6</u>



6.

DISTRICT OF WEST VANCOUVER
750 17TH STREET, WEST VANCOUVER BC V7V 3T3

COUNCIL REPORT

Date:	May 11, 2026
From:	Sean O'Sullivan, Senior Manager, Roads and Transportation Planning, Design, and Projects Dave Choo, Transportation Technologist
Subject:	Nelson Canyon Bridge Rehabilitation

RECOMMENDATION

THAT the Council report titled “Nelson Canyon Bridge Rehabilitation” dated May 11, 2026, from the Senior Manager, Roads and Transportation Planning, Design, and Projects and the Transportation Technologist, be received for information.

THAT staff be directed to include a funding request for the Nelson Canyon Bridge Rehabilitation Project as part of the District 2027 Capital Budget programming, with \$1,700,000 of the project to be funded by the District’s Asset Levy.

THAT \$400,000 for the replacement of the water transmission main crossing supported by the Nelson Canyon Bridge form part of the District’s 2027 Annual Capital Water Program funded by the Water Utility.

THAT staff be directed to prepare a tender package for the Nelson Canyon Bridge Rehabilitation Project and proceed with tendering upon receipt of budget approval for the project.

1.0 Purpose

This report has been prepared in response to Council’s July 7, 2025, direction to pursue detailed design of a full-deck replacement and seismic upgrades, of the Nelson Canyon Bridge; and provide refined cost funding options, a proposed project timeline, and detailed Class A cost estimate.

2.0 Legislation/Bylaw/Policy

The District applies the bridge engineering and construction specifications, standards and guidelines outlined by the Ministry of Transportation and Transit.

The District’s Capital Asset Management Procedures No. 04-30-372, 2017, outlines the process to achieve effective ongoing management and planning for the District’s capital assets.

3.0 Council Strategic Objective(s)/Official Community Plan

Council Strategic Plan

Council’s Strategic Plan (2024-2025) includes the following relevant Strategic Goals and Objectives:

- 4.0 Enhance the mobility within the community.
- 5.0 Deliver Municipal services efficiently.

Official Community Plan

The Official Community Plan (“OCP”), Section 2.4, outlines a need to use existing road networks more efficiently and provide a range of safe and accessible transportation options within our community and across the region. The OCP seeks to enhance road network safety for all users.

4.0 Background

Constructed in 1956 by the Ministry of Transportation and Transit, the Nelson Canyon Bridge was built as part of the original Trans Canada Highway 1 alignment over Nelson Creek. In 1974, following the completion of the new highway, the bridge was divested by the Provincial government to the District, in part due to the bridge supporting a critical water transmission main that services the western part of the District. The bridge has been closed to vehicular traffic for nearly 50 years and now forms part of the Trans Canada Trail. Findings from the previous structural inspections confirm that the bridge is no longer suitable for vehicular traffic due to ongoing deterioration of various components. According to a principal structural inspection report carried out in 2022 - an in depth assessment of all accessible components of a bridge - the bridge is expected to reach its end of service life by 2031.

To gain a preliminary understanding of public usage, pedestrian traffic data was collected using an automatic counter between April 16 and 20, 2025. The data showed that there were 47 to 139 westbound pedestrians per day and 29 to 87 eastbound pedestrians per day. It is expected that usage increases during the peak summer months.

4.1 Previous Decisions

Council at its **July 7, 2025, regular meeting**, passed the following resolution:

THAT the June 23, 2025, report from the Senior Manager of Roads & Transportation and the Transportation Technologist titled Nelson Canyon Bridge Update be received for information

THAT staff be directed to proceed with the Nelson Canyon Bridge Project by moving forward with the following next steps:

1. pursue the renewal of Nelson Canyon Bridge, which includes a full-deck replacement, and seismic upgrades described as Option 1 of the June 23, 2025, report from the Senior Manager of Roads & Transportation and the Transportation Technologist titled Nelson Canyon Bridge Update; and
2. staff report back to Council with refined cost funding options, a proposed project timeline, and detailed Class A cost estimate.

Council at its **February 24, 2025, regular meeting**, passed the following resolution:

THAT the Council report titled Nelson Canyon Bridge and 26th Street Pedestrian Bridge dated February 10, 2025, from the Senior Manager of Roads & Transportation and the Transportation Technologist, be received for information.

THAT staff be directed to proceed with the Nelson Canyon Bridge Project by moving forward with the following next steps:

1. pursue the renewal of Nelson Canyon Bridge, which includes both full-deck and half-deck replacement options, preventative fencing that may be required, and seismic upgrades described as Options 1 and 2 within the Council report titled Nelson Canyon Bridge and 26th Street Pedestrian Bridge dated February 10, 2025, from the Senior Manager of Roads & Transportation and the Transportation Technologist; and
2. staff report back to Council with an update on available funding mechanisms, a proposed project timeline, and detailed Class A cost estimate.

4.2 History

Historically, the transportation bridge-related program funding needs have been addressed through the annual capital budget. The budget funds the inspection, maintenance, and routine rehabilitation programs to ensure public safety, regulatory compliance and a planned approach to asset needs can be met.

The District's Bridge Asset Management Strategy was endorsed by Council in May 2024. The strategy was developed based on a 75- year structural design life, in accordance with the latest Canadian Highway Bridge Design Code. It outlines how major bridge structures are inspected, maintained, and planned for rehabilitation or replacement.

The most recent principal inspection of the Nelson Canyon Bridge structure was conducted in 2022, and the following issues were identified.

- The bridge is estimated to reach its end of service life by 2031.
- The bridge received an urgency rating of 4 out of 5 according to the Ministry of Transportation Inspection Manual. This rating indicates that the structure requires moderate-priority structural repairs to remain in long-term service and has moderate safety concerns.
- The bridge currently has no seismic force-resisting features in place, and therefore, the structure is expected to perform poorly during a seismic event.

In 2022, following the principal inspection, it was proposed that the District review rehabilitation options focused on reducing the existing dead load of the bridge deck structure and installing seismic resistance features to extend the bridge’s useful life, with the intended outcome of a betterment approach to minimize capital investment.

In 2024, the District retained a qualified professional to continue with preliminary design tasks, develop a Class C cost estimate for available rehabilitation options, and develop a concept report with rendering images for the options.

In 2025, following the direction from Council, staff worked with the consultant to develop a 100% detailed design and Class A cost estimate.

5.0 Analysis

5.1 Discussion

100% Detailed Design

The 100% detailed design incorporates refinements to the previously proposed timber deck and water utility design, as well as seismic resiliency improvement features.

The updated total capital budget estimate (Class A) is approximately \$2,100,000 for the project. The budget includes a 30% contingency to reflect the risk of unknown conditions typical for major bridge retrofit projects, where it is anticipated that additional repairs to existing steel and concrete components may only be identified during the demolition phase of the existing decking.

Construction Timeline

To ensure construction is complete within the asset's remaining service life and to minimize budget impacts from future escalating costs, staff recommend allocating funding for the project budget as part of the District's 2027 Capital Budget programming and proceeding with procurement immediately.

Based on the proposed schedule, and anticipated construction duration, the project is expected to be completed by the end of 2028.

Phased Construction

Staff evaluated the feasibility of delivering the project through a phased construction approach over a two-year period in order to spread capital investment for the project over a longer period of time.

Under this approach, phase 1 would include replacement of the existing bridge deck and watermain. Phase 2 would complete the project through installation of the required seismic upgrades.

The estimated Class A capital cost for phase 1 is approximately \$1.9 million, with a further \$400,000 required to complete phase 2.

While phased construction would result in an estimated \$200,000 reduction in expenditures, the additional costs associated with returning to complete a second phase would increase the total project cost to approximately \$2.3 million. This represents an overall increase of \$200,000 compared to completing the project in a single phased construction period.

In addition to the higher overall cost, phased construction presents several risks, including an extended project timeline, increased complexity in coordination and quality control, and duplicated costs related to engineering, contract administration, and contractor mobilization. There is also a risk that future construction cost escalations could further impact the final project budget.

Based on the increased overall cost and associated risks, staff do not recommend proceeding with phased construction and recommend delivery of the project in a single phase.

Climate Change & Sustainability

The Council’s Strategic Plan supports the environment and climate change by protecting our natural environment, reduce greenhouse gas emissions, and adapt our community to become more resilient in a changing climate.

5.2 Public Engagement and Outreach

Not applicable.

6.0 Financial Implications

The anticipated required funding for the Nelson Canyon Bridge, based on the current detailed design cost estimate in 2025 dollars, to include a contingency of 30%, is \$2,100,000.

The budget estimate has been prepared in accordance with Class A estimate requirements and includes allowances for engineering, construction, and contingency.

The budget estimate will require further refinement prior to tender to account for the accumulated inflation and to address cost uncertainties, including tariffs, fuel, and transportation surcharges.

Available Funding Sources

Funding sources available for renewal of the bridge assets considered in this report are limited to the asset reserves (Asset Levy) and unrestricted Community Amenity Contributions – Community Serving Reserve. As the Nelson Canyon Bridge also supports a critical water transmission main, a contribution from the water utility is recommended to be considered for the portion of the project costs attributable to water infrastructure.

Figure 1 illustrates the proposed funding mechanism based on the required budget for bridge rehabilitation and watermain replacement.

Project category	Funding option	Budget
Bridge Rehabilitation	Asset Levy and/or Unrestricted Community Amenity Contributions	\$1,700,000
Watermain Replacement	Rate Funded – Water Utility	\$400,000
		\$2,100,000 (Total)

Figure 1 – Proposed funding mechanism

Asset Management is a fundamental program related to the maintenance of District assets. As the owner of complex and costly infrastructure networks, the District has adopted a series of asset management plans for infrastructure within and making up its road network, including the Bridge Asset Management Plan endorsed by Council. Capital funding available through the Asset Levy is limited and is allocated to maintenance and replacement projects based on condition, risk, and priority, consistent with the District’s asset management plans.

Due to the failure risk of the bridge structure and the criticality of the water main, the Nelson Canyon Bridge rehabilitation is considered a high priority. However, as a significant capital undertaking, the project will place added pressure on limited funding capacity. Advancing this work may require staff to defer other capital maintenance priorities, and those trade-offs will need to be carefully considered as part of the District’s overall capital planning.

7.0 Options

7.1 Recommended Option

THAT the Council report titled “Nelson Canyon Bridge Rehabilitation” dated May 11, 2026, from the Senior Manager, Roads and Transportation Planning, Design, and Projects and the Transportation Technologist, be received for information.

THAT staff be directed to include a funding request for the Nelson Canyon Bridge Rehabilitation Project as part of the District 2027 Capital Budget programming, with \$1,700,000 of the project to be funded by the District’s Asset Levy.

THAT \$400,000 for the replacement of the water transmission main crossing supported by the Nelson Canyon Bridge form part of the District’s 2027 Annual Capital Water Program funded by the Water Utility.

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Considered Options

Council may request further information or provide alternate direction (to be specified).

8.0 Conclusion

This report provides a refined budget estimate based on the 100% detailed design in 2025 dollars. Subject to Council's approval of the proposed funding strategy and construction timeline, staff will be able to proceed with the development of the construction tender package and aim to complete the project by the end of 2028.

Author: 
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