



City of Richmond

Report to Committee

To: General Purposes Committee

Date: February 3, 2023

From: Lloyd Bie, P.Eng.
Director, Transportation

File: 01-0060-20-
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Milton Chan, P.Eng
Director, Engineering

Re: Steveston Highway Multi-Use Pathway Project - Update

Staff Recommendation

That Option 1 as described in the staff report titled “Steveston Highway Multi-Use Pathway Project - Update”, dated February 3, 2023, from the Director, Transportation and the Director, Engineering be approved and the Consolidated 5 Year Financial Plan (2023-2027) be amended accordingly.

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REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Finance	<input checked="" type="checkbox"/>	
Purchasing	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS:	APPROVED BY CAO

Staff Report

Origin

The Steveston Multi-Use Pathway project was approved by Council in three phases as part of the 2019, 2020 and 2023 Capital Budgets to implement an off-street cycling and pedestrian facility on the south side of Steveston Highway from Shell Road to Railway Avenue.

At the December 21, 2022 Public Works and Transportation Committee meeting, the following referral motion was introduced, moved and seconded:

That the delegation material be referred back to staff to further examine any projected pedestrian pathways or bike lanes being constructed on Steveston Highway and report back.

This report responds to the referral.

Staff have also received information on anticipated project costs through the construction procurement process for the Steveston Highway Multi-Use Pathway Project, Phases 1 and 2 that require Council consideration and approval due to approved budget implications.

This report supports Council's Strategic Plan 2018-2022 Strategy #2 A Sustainable and Environmentally Conscious City:

2.4 Increase opportunities that encourage daily access to nature and open spaces and that allow the community to make more sustainable choices.

This report supports Council's Strategic Plan 2018-2022 Strategy #4 An Active and Thriving Richmond:

4.2 Ensure infrastructure meets changing community needs, current trends and best practices.

This report supports Council's Strategic Plan 2018-2022 Strategy #6 Strategic and Well-Planned Growth:

6.3 Build on transportation and active mobility networks.

Background

The Steveston Multi-Use Pathway (MUP) project was approved in three phases, as part of the 2019, 2020 and 2023 Capital Budgets as follows:

- Shell Road to Mortfield Gate (Phase 1, 2019);
- Mortfield Gate to No. 2 Road (Phase 2, 2020); and
- No. 2 Road to Railway Avenue (Phase 3, 2023).

Phases 1 and 2 are in the procurement phase and discussed in the Budget Update section of this staff report. Detailed design for Phase 3 of the project will be completed following TransLink cost share funding approval (anticipated in March 2023).

The MUP is located on the south side of Steveston Highway, and once complete will extend from Shell Road to Railway Avenue. The project scope includes elements to support a safe, secure and comfortable cycling facility. The cross-section meets transportation design guidelines of an “AAA” (suitable for all ages and abilities) cycling route. The pathway will have a 3.0 metre wide paved surface. A buffer strip behind a concrete barrier curb will provide protection and setback for pedestrians and cyclists from traffic on Steveston Highway.

The project is consistent with City and regional plans and will expand coverage of the local cycling network to reach more residents, employees and visitors. Upon completion of the project, the Steveston Highway MUP will connect to other significant cycling facilities in the city, including the Railway Greenway, No. 2 Road MUP and Shell Road Trail and will be a critical element of the regional bikeway system.

In response to the construction tender for Phases 1 and 2 of the approved Steveston Highway MUP project, bids have been received exceeding the approved budget. As per Budget Amendment Policy 3001, an increase of the approved budget for a capital project greater than 5% requires Council approval. This report seeks Council direction to proceed with a Budget Amendment.

Analysis

This report is divided into two parts. The first section addresses the Council referral regarding the pedestrian and cycling facility planned on Steveston Highway. A project budget update for Phases 1 and 2 is discussed in the second part of this staff report.

Referral Response: Steveston Highway MUP

The concerns expressed regarding the Steveston Highway MUP project are related to three areas: selection of route, appropriateness of MUP design and the reallocation of road space to facilitate the off-street pathway.

Responses to each of these topics are addressed below.

Steveston Highway Route Selection

A cycling facility along Steveston Highway is identified in multiple City and regional plans. This route presents accessibility and connectivity benefits to the greater active transportation network.

A cycling facility along the Steveston Highway corridor will connect several activity centres in the city including the Ironwood residential, commercial and industrial areas, multi-family development along the north side of Steveston Highway and Steveston Village and Community Centre. Ultimately, the Steveston Highway MUP will connect these destinations regionally via the current George Massey Tunnel.

As has been identified by the public, traffic issues on Steveston Highway discourage cycling on this route, with traffic volume and speed being identified as significant barriers to cycling. To promote cycling on this regionally desirable cycling corridor, the provision of a separated

cycling facility to protect cyclists from traffic can encourage people to choose cycling over personal automobiles for travel on this route.

Official Community Plan

A future cycling route along Steveston Highway has been envisioned since the 2041 Official Community Plan (OCP) was adopted in 2012. A planned major street cycling facility is identified as part of the City’s Cycling Network Map (Figure 1). Development of the OCP, included study, analysis, public consultation and a Public Hearing as part of the OCP approval process.

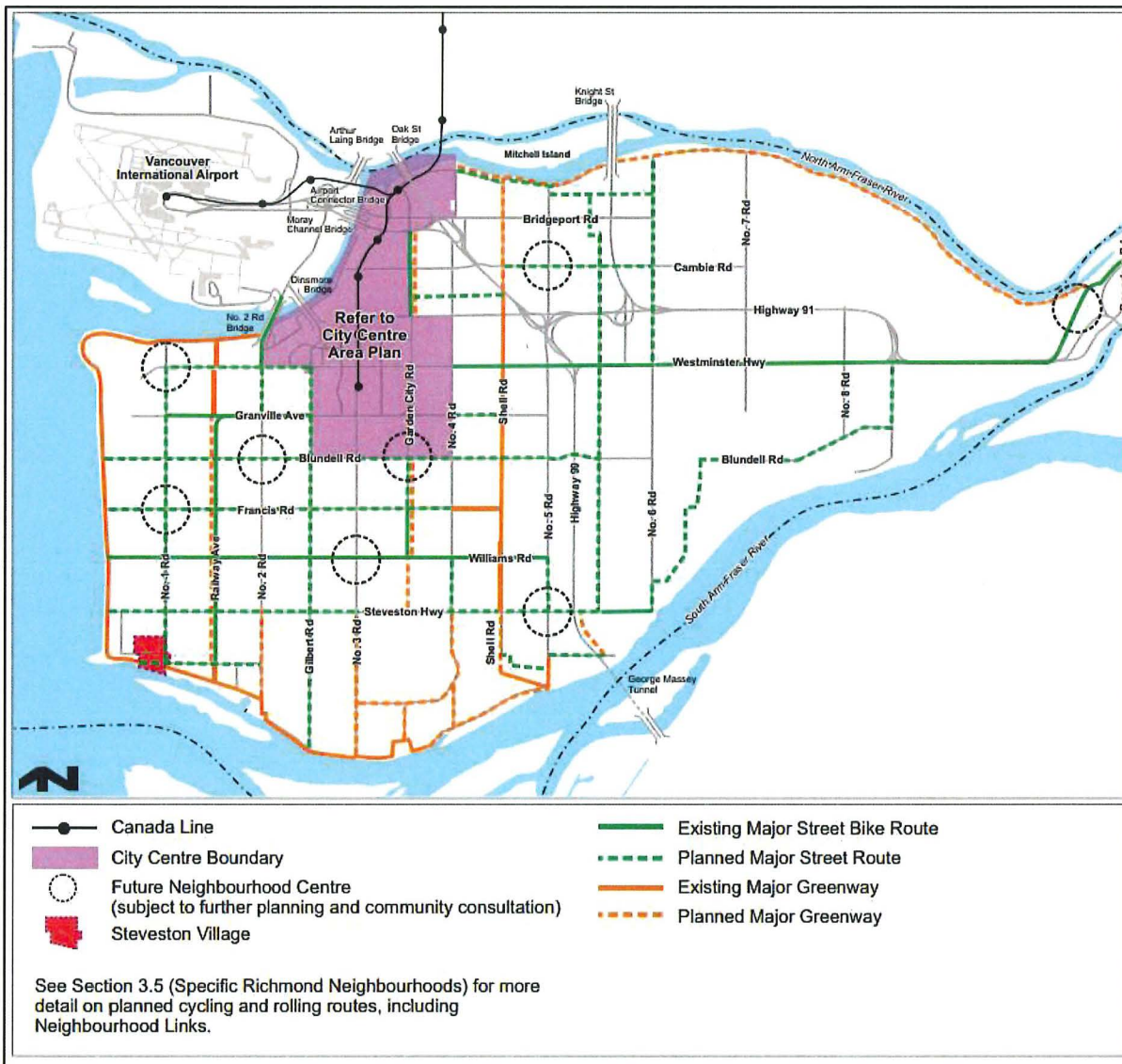


Figure 1: Official Community Plan Cycling Network

Regional Bikeway Network

The Steveston Highway corridor also has regional cycling significance. It is identified in TransLink’s Regional Cycling Network (Figure 2). The Steveston Highway MUP project forms both an integral part of the city’s major cycling network and the region’s bikeway network that connects this corridor to longer distance cycling trips from urban centres and major destinations in the community and the region.

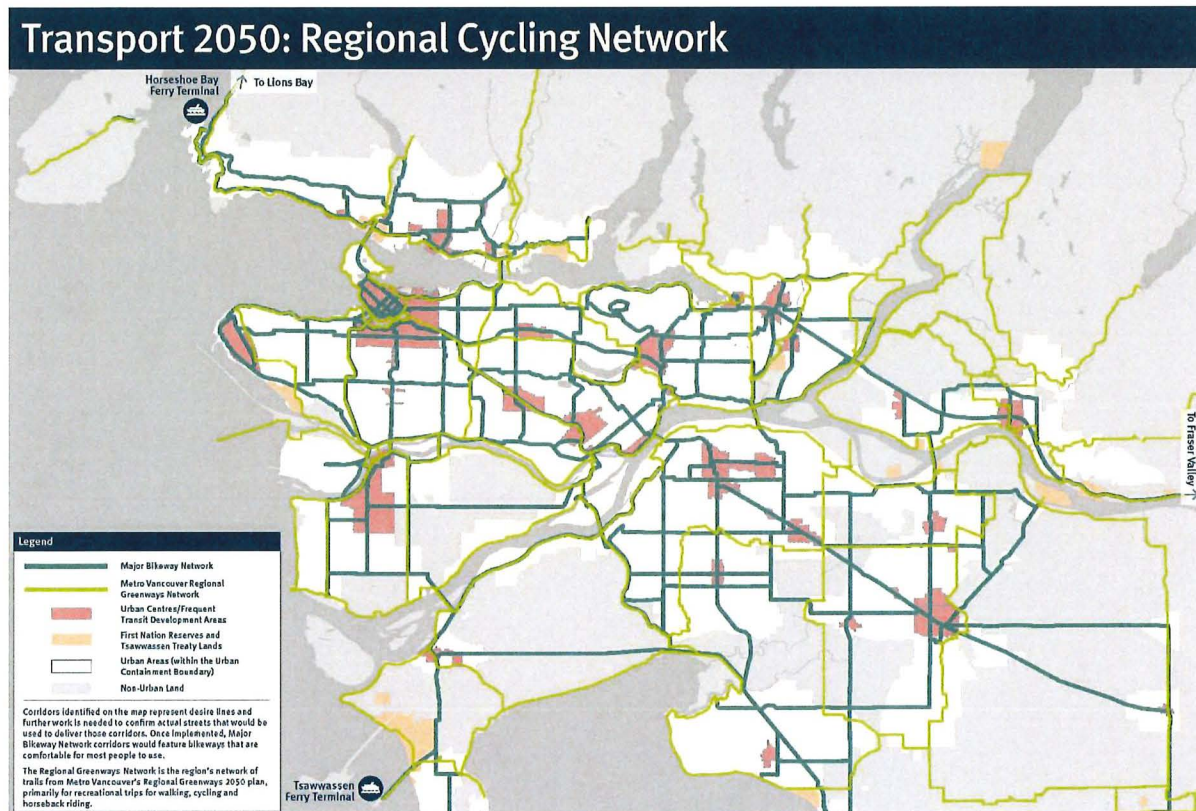


Figure 2: Regional Cycling Network

As the Steveston Highway corridor is part of the regional cycling network, the MUP project has received significant cost share contribution by TransLink who is providing 50% of the funding based on the regional importance.

In October 2022, staff applied to the 2023 BC Active Transportation Infrastructure Grant Program for Phase 2 of the Steveston Highway MUP. The Province has recently announced the City’s application has been approved to receive \$500,000 in cost-shared grant funding.

The status of approval and cost share funding for each phase of the project is described in Table 1.

Table 1: Steveston Highway MUP - TransLink and external share of project costs

Phase	Road Section	Capital Budget Approval Year	TransLink Funding	External Funding
1	Shell Road-Mortfield Gate	2019	\$1,410,000	
2	Mortfield Gate-No. 2 Road	2020	\$3,600,000	\$500,000 ⁽²⁾
3	No. 2 Road-Railway Avenue	2023	\$2,850,000 ⁽¹⁾	

⁽¹⁾ Funding application currently pending approval by TransLink

⁽²⁾ Grant announced and at contract execution stage

Cycling Network Plan Update

In July 2022, Council adopted the Cycling Network Plan Update to guide and prioritize investment in new cycling facilities and safety improvements throughout Richmond. The Cycling Network Plan Update included a comprehensive data based study and two rounds of public and stakeholder engagement to develop the priorities for investments in new and upgraded facilities in the years ahead. The plan identified the Steveston Highway MUP as a short term priority project in the City. HUB Cycling was one of the many external stakeholders engaged in the development of this plan. The City’s Active Transportation Committee and HUB Cycling have endorsed the project.

Consultation for the Cycling Network Plan generated key objectives for major cycling routes that the Steveston Highway MUP project achieves:

- Create multi-purpose facilities that can accommodate both commuter and recreational users.
- Distribute coverage to locate residents within 800 metres of a major cycling route.
- Facilitate local and regional connectivity

A continuous cycling facility on Steveston Highway is desirable based on the results of the Cycling Network Plan feedback and from a service level standpoint.

State of Cycling in Metro Vancouver Report

In 2019, Hub Cycling and TransLink released a joint research study on the State of Cycling in Metro Vancouver. Throughout the region, in areas where the network has grown and improved, the rate of collisions involving people who cycle has dropped, and cycling trips have increased significantly. The largest gains have been made where homes and key destinations are linked by a cohesive network of cycling routes.

Review of Alternate Routes to Steveston Highway

Currently cyclists desiring to travel on Steveston Highway have the option of using cycling facilities located 800 metres to the north on Williams Road or over two kilometres to the south along the dike trail. One of the key findings from the Cycling Network Study is that proximity to comfortable cycling amenities fosters increased cycling in cities. Although an 800 metre detour by car could be considered acceptable for motorists, the same detour may be seen as a barrier to cycling by some.

Currently, a trip between Steveston Village and Ironwood Plaza requires an additional two kilometers of travel by cyclists via Williams Road. The on-street painted bike lanes on Williams Road do not provide the “AAA” design standard and therefore may not be considered suitable by all cyclists. The multiple residential driveways on Williams Road interrupts the bike lane and creates conflict between cars and cyclists. There are no plans to upgrade the bike lanes on Williams Road. If the City were to upgrade the bike lanes on Williams Road to the same standard as Steveston Highway, the costs would be consistent with those estimated for the Steveston Highway MUP project.

For cyclists choosing the south dike trail as an alternate route to Steveston Highway, this trip becomes very lengthy and circuitous between Railway Avenue and Shell Road. The route is discontinuous along the waterfront and requires cyclists to ride to other roads, such as Finn Road for portions of the trip. There are also sections of unpaved pathway that may not be appropriate for all bicycles along this corridor.

The vision for a cycling facility on Steveston Highway reflects local and regional plans, and is aligned with the research on how to increase the number of cycling trips in a community through expanded and accessible cycling facilities that are comfortable for cyclists of all ages and abilities.

Multi-Use Pathway Design

The design of the Steveston MUP complies with industry geometric guidelines, including the BC Active Transportation Design Guide. The 3.0 metre width proposed for the Steveston Highway MUP exceeds the minimum width of a multi-use pathway of 2.7 metres. The recommended minimum width of the buffer zone of 0.6 metres is also achieved with the project’s proposed 1.0 metre buffer. The existing grass shoulder on the south side of Steveston Highway will be replaced with a concrete barrier curb to provide physical protection from traffic.

Benefits of the Steveston Highway MUP Design

The design of the Steveston Highway MUP achieves the benefits of such facilities as described in the provincial guide:

- Limited interaction along this corridor with driveways (unlike Williams Road). Provides continuous and direct routes with minimal stops and jogs.
- Physical separation from motor vehicle traffic.
- Considered appropriate for people of all ages and abilities.
- Can encourage recreational walking and cycling trips and is appealing to families and less experienced bicycle users.
- Can be a tourist attraction or destination by providing a long-distance route to natural or recreational areas.

Traffic Lane Widths

Decreasing driver speed is one of the most effective ways to improve road safety outcomes. The Province of B.C.’s Community Road Safety Toolkit, indicates that reducing typical vehicle lane widths commonly set between 3.3 to 4.0 metres to between 2.75 to 3.0 metres has numerous safety benefits. Narrower lanes influence drivers’ perception of their margin of error, causing

them to slow down. The existing travel lane widths on Steveston Highway range from 3.1 to 3.7 metres. The revised cross section proposes travel lane widths between 3.1 to 3.25 metres, which will be wider than the Provincial guide minimum widths.

A study commissioned by the City of Surrey found that the reduction of travel lane widths on some of the city's arterial roads resulted in 13 to 20 km/h reductions in speed. The narrower lanes did not adversely affect drivers' lane control.

The design of the Steveston Highway MUP project is consistent with industry and provincial guidelines and meets the minimum standards for all road and pathway cross sectional elements.

Budget Update

Following Council's approval of the 2019 and 2020 Council Capital Budget staff initiated detailed design of both Phases 1 and 2 of this project based on the parameters of the approved project budget and scope. Following completion of the detailed design, a procurement process for the construction of both Phase 1 and 2 together was conducted to capitalize on the economy of scale gained through a larger project size and scope. As Phase 3 of the project is part of the approved 2023 Capital Budget, it is not included in the current procurement process. Phase 3 of the Steveston Highway MUP will be designed and constructed as a separate project and is not part of the budget update provided in this report.

The procurement process for Phases 1 and 2, was conducted using a public, competitive request for proposal process. Staff have received and reviewed the proposals and pricing for this work. The pricing received, in combination with contingency and ancillary items required to complete these phases of the project, exceeds the approved budget amount.

Construction market volatility remains a significant challenge to accurately define budgets for capital projects. Construction cost estimate reports were based on knowledge and experience with the current, ever-changing market conditions. Staff have reviewed the updated project cost received through the request for proposal process and determined them to be a valid reflection of current conditions based on similar projects.

Additionally, through the design phase several items arose which impacted the cost of construction, including additional requirements for roadway re-profiling, increased lighting requirements and additional private property impact scope, as well as tree removals, pruning and replanting.

Table 2 outlines the budget shortfall based on tendered prices and cost estimates completed by staff and consultants.

Table 2: Budget Update

Budget Breakdown	Project Budget and Costs
City Funding (2019)*	\$1,000,000
Translink Funding (2019)	\$1,410,000
City Funding (2020)*	\$2,500,000
Translink Funding (2020)	\$3,600,000
External Funding (2023)	\$500,000
Total Approved Budget	\$9,010,000
Estimated Total Cost**	\$11,500,000
Budget Variance	(\$2,490,000)

*City funding sources are 94.05% from Roads Development Cost Charges and 5.95% from Capital Reserve

**Estimated costs to complete the project includes 10% contingency, allowance for private property impacts, third party utility impacts and other ancillary items

The approved City funding in 2020 for \$3.0M was subsequently reduced to \$2.5M upon award of the external funding via the 2023 BC Active Transportation Infrastructure Grant.

The budget variance outlined within this report is largely due to the uncertainty within the construction market and industry volatility as a result of the COVID-19 pandemic, supply chain restrictions and high levels of inflation. This volatility has led to unforeseen price increases that have significantly impacted the construction costs.

The following general market conditions have contributed to this cost increase:

- Material and equipment costs, subject to supply challenges and shortages, has led to inflated pricing by contractors to offset future risk.
- High levels of work on the market results in general contractors and consultants operating over capacity. The competition level in the marketplace is reduced as contractors and consultants are not actively pursuing new projects.
- General inflationary pressures caused by the pandemic, sanctions and supply chain issues related to foreign direct suppliers, are leading to price increases in the construction industry for the foreseeable future, barring sudden and unforeseeable industry downturns

In order to help mitigate these impacts, staff have been working to constantly monitor market conditions and account for escalation and contingency allowances when planning for future works, including Phase 3 of this project which remains projected to be within the approved budget amount.

Options to Proceed

Due to the results of the construction tender process, staff reviewed options to address the potential project budget impacts. Staff have prepared the following options for Council consideration as outlined below.

Option 1 – Proceed with Project and Increase Budget (Recommended)

Option 1 is to amend the budget for the Steveston Multi Use Pathway, Phases 1 and 2 capital projects to address the budget shortfall of \$2.49 million. The budget increase encompasses all tendered and estimated costs provided through a competitive procurement process. Staff have requested TransLink for additional funding options for this project, however, TransLink has advised additional cost sharing for this project is not available. Award of construction contract for Phase 1 and Phase 2 of this project would proceed immediately following Council approval of the budget increase. The additional funding required to cover the anticipated costs for the project are available in the Roads DCC uncommitted balance and Capital Reserve accounts. Should Council endorse this option, the Consolidated 5 Year Financial Plan (2023-2027) will be amended accordingly.

Option 2 – Reduce Scope of Project

Option 2 proposes reducing the current project scope to align the construction costs with the current approved budget. Based on the total existing budget, this option is anticipated to reduce the extent of the project limit by 20 to 30 per cent to be deferred to a future phase. The result of a change in scope could have financial implications that will need to be further assessed. If directed by Council, Staff will bring forward a proposal regarding the details of reducing the project scope and associated impacts to the approved TransLink funding, the current construction procurement and future capital budget planning process. There is no guarantee that TransLink cost share or external funding from the Province will be supported for the reduced scope. Additional construction tender related issues resulting from a change in project limits could necessitate reissuing the construction tender. Ultimately, without certainty on these two critical components of the project, even a reduced project scope raises challenges with respect to project costs.

Option 3 – Cancel the Project

Based on the tender results received, with Council direction, staff can proceed to terminate the project and leave the roadway in its current form and continue with normal maintenance. Both the Translink funding secured for this project (\$5,010,000) and the BC Active Transportation Infrastructure Grant (\$500,000) will be lost as a result of this option. Approved Capital funding for Phase 1 and 2 of this project would be returned to its funding source.

Financial Impact

Option 1 is recommended by staff and would require the Consolidated 5 Year Financial Plan (2023-2027) to be amended, and an increase to the project's capital budget by \$2,490,000 with \$2,341,845 funding from the Roads DCC and \$148,155 funding from Capital Reserve accounts. Implementing the project now, as envisioned, will allow the city to utilize the secured TransLink and Provincial funding to the fullest amount totalling approximately 48% of the project value. This option reduces any risk with respect to escalating construction costs going forward.

Conclusion

The Steveston MUP Project has been an integral part of the City's cycling network plan as identified in the 2041 Official Community Plan, as well as a planned major street cycling route identified as part of TransLink's Regional Cycling Network. This infrastructure will connect several activity centres in the City for pedestrians and cyclists and is aligned with the research on how to increase the number of cycling trips in a community through expanded and accessible cycling facilities. The design of the MUP will be to industry standards, and will provide an off-street facility protected from traffic that is accessible for cyclists of all ages and abilities.

Staff recommend that Option 1 be approved to continue with the project as planned with approved Capital Budget and TransLink funding, to increase the project budgets by \$2.49M, and amend the Consolidated 5 Year Financial Plan (2023-2027) accordingly.



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