



COUNCIL REPORT

To: Mayor and Council

Date: November 28, 2023

From: Trevor Seibel, Deputy CAO

File No: 5330-20-56

Subject: **Shannon Lake Road Active Transportation Corridor – Design Decision Points**

Report Prepared by: Evan Sun, Engineering Technologist II

RECOMMENDATION to Consider and Resolve:

THAT Council direct staff to proceed with the Shannon Lake Road Active Transportation Corridor design Option 3, Multi-use Pathway on Both Sides of Roadway; and

THAT Council direct staff to not proceed with the Roundabout design.

STRATEGIC AREA(S) OF FOCUS

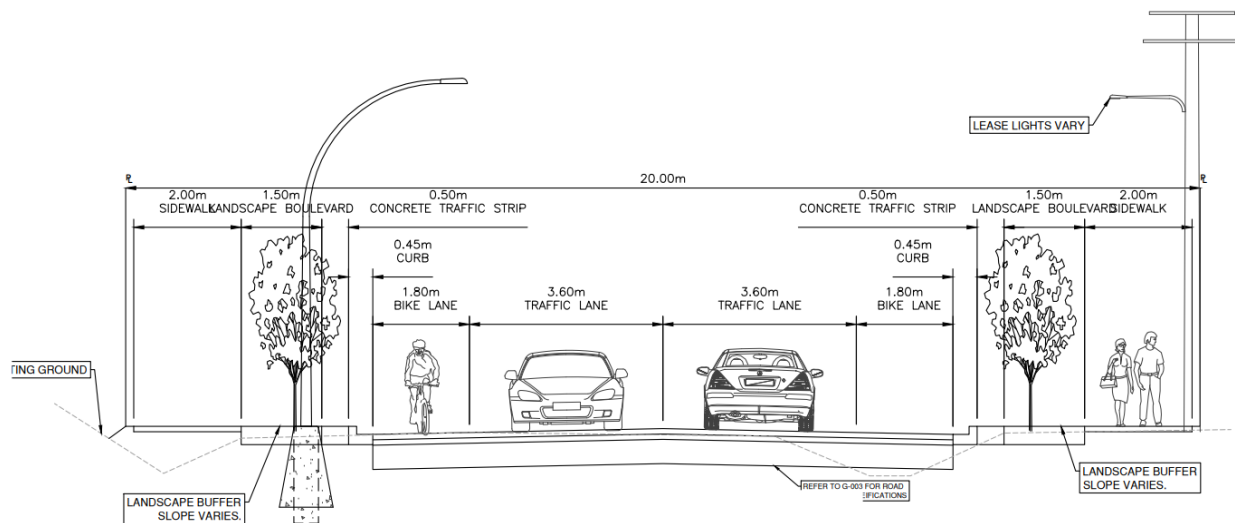
Invest in Infrastructure – We will invest in building, improving and maintaining infrastructure to meet the needs of, and to provide a high quality of life for, current and future generations.

BACKGROUND

Design Background

A conceptual design for the Shannon Lake Active Transportation Corridor was developed and presented by Stantec Consulting at the September 26, 2023 Council meeting. The design utilized the City's Urban Arterial cross section adopted within the City's Works and Services Bylaw No.0249 as a starting point. The existing conceptual design incorporated the pedestrian and cycling facilities guidelines as outlined in the BC Active Transportation Guide and a Road Safety Audit was completed on the design. With existing sidewalk on both ends of the project limits, the design aimed to provide continuity to match the existing cross-sections outside the project area. It is referred to as Option 1 in the tables and figures below.

Figure 1 – Option 1 Urban Arterial Cross Section



Option 1 conceptual design features a 2.0-metre-wide sidewalk, 1.8-metre on-road bicycle lane, and a 2.0-metre landscape boulevard. The design option provides the following benefits:

- Enhanced driver familiarity with pedestrian activity throughout the corridor is achieved by maintaining continuity with cross sections beyond project limits.
- Intersection crossings become safer as the direction of cyclists aligns consistently with that of vehicles.
- The boulevard's proximity to property lines facilitates the incorporation of additional plantings without obstructing sightlines.
- Compared to a Multi-Use Path (MUP), the proposed design ensures improved vehicle turning movements and traffic flow.
- Accommodates higher-speed bikes, such as road bikes and E-bikes, which approach vehicle speeds.

Additional Options Development

Based on Council's constructive feedback during the September 26th, 2023 Council meeting, the design was reviewed, re-evaluated, and revised to provide additional options for consideration. The following adjustments have been made to address specific feedback from Council and have been incorporated in the new design options.

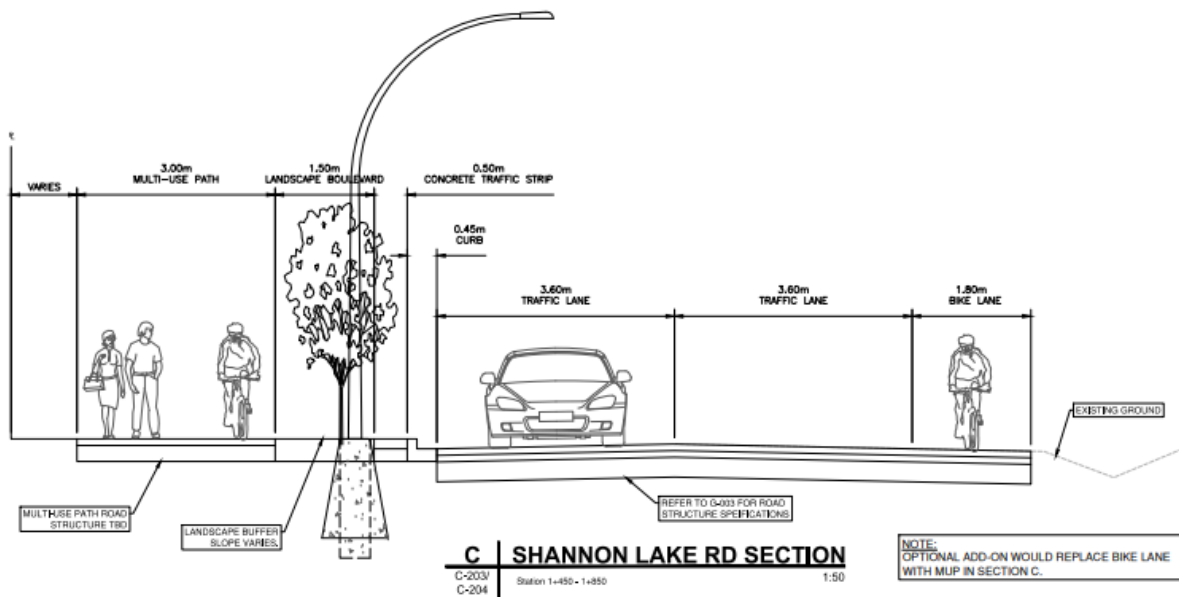
- Removal of on-street parking on Shannon Lake Road near the Shannon Lake Regional Park.
- Separating pedestrians and cyclists from vehicle traffic.
- Explore design options that incorporates a multi-use pathway.

Additionally, the design has now progressed based on Council’s direction with options for revised cross-section designs, continuous pedestrian facilities on both sides of roadway and roundabout considerations. Cross-section drawings and cost estimates accompany each option to provide a comprehensive understanding of the proposed changes.

Option 2 – Partial Multi-use Pathway Cross Section

The Option 2 Partial Multi-use Pathway conceptual design features 3.0-metre multi-use pathway on the entirety of the west side of the road and a 2.0-metre landscape boulevard in select areas. A multi-use path is also located from the Westbank First Nation Boundary to Asquith Court on the east side. From Asquith Court to Swite Road there will just be a bike lane on the east side of the road. The design team reviewed including a multi-use pathway on just the west side of the road, but it was not recommended due to the commercial and residential connections on the east side of the road.

Figure 2 – Option 2 Partial Multi-use Pathway Cross Section



The Multi-use pathway option is off the roadway and is physically separated from motor vehicle traffic. The design provides the following benefits:

- Enhanced safety for general users through effective separation from vehicular traffic.
- Inclusivity for a diverse range of users.
- Reduced crossing distance across Shannon Lake Road.
- A narrower paved width between curbs, contributing to the mitigation of vehicle speeding.
- Streamlined maintenance of the landscape boulevard for City parks operation staff.

While Option 2 has benefits for roadway users of all types, it will leave some gaps in the network. Cyclists on the east side of the roadway will have to transition from the roadside to a multi-use pathway, and then return to the roadside over a 420m distance. Also, there is no pedestrian facility along Shannon Lake Road between Asquith Court and Swite Road. Option 2 is the least desirable option of the three proposed conceptual designs.

Option 3 – Multi-use Pathway on Both Sides of the Road

Further development of the multi-use path option was completed to ensure there is safe access to the residential and commercial areas along Shannon Lake Road for all road users. A continuous multi-use pathways on both sides of the roadway is included from the Westbank First Nation Boundary to Swite Road. Landscape boulevards are included along the roadway at select locations. There is sufficient right-of-way for the path on both sides of the road to accommodate these improvements. The conceptual design includes the safety benefits of the multi-use path, with the improved connectivity to the many destinations in the neighbourhood.

Figure 3 – Option 3 Multi-use Pathway Section A-A

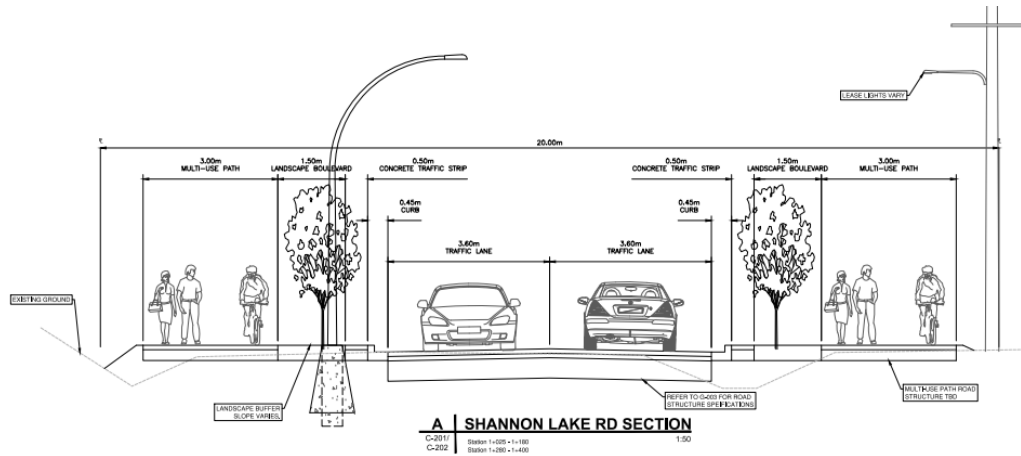


Figure 4 – Option 3 Multi-use Pathway Section B-B

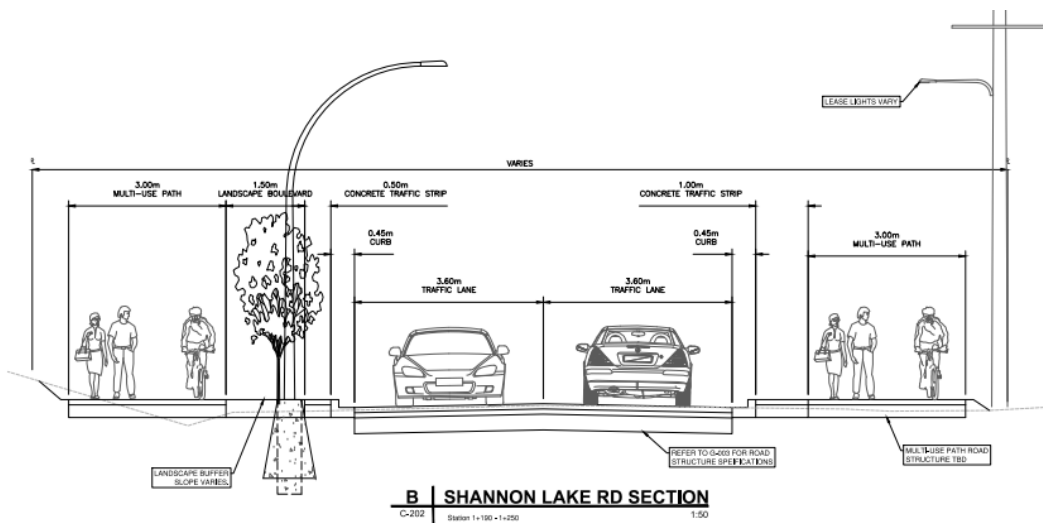


Table 1: Conceptual Cross-section Option Costs

	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>
	<i>Urban Arterial Cross Section</i>	<i>Partial Multi-use Pathway</i>	<i>Multi-use Pathway on Both Sides of the Road</i>
Comparative Totals	\$4,750,000.00	\$4,800,000.00	\$5,175,000.00

Decision Point #1 – Cross-section

Option 3 is recommended to advance to a tender ready design. This option ensures consistent accessibility for both pedestrians and cyclists while providing enhanced safety for both active transportation users and vehicles. The neighbourhood has many residential and park accesses that these improvements will help provide safe access to. While Option 1 provides similar improvements to the network, it is slightly less desirable due to cyclists not being separated from vehicle traffic and sidewalk is not consistent on the east side through the entire corridor. Both Options 1 and 3 are a major benefit to the community.

Recommended Motion

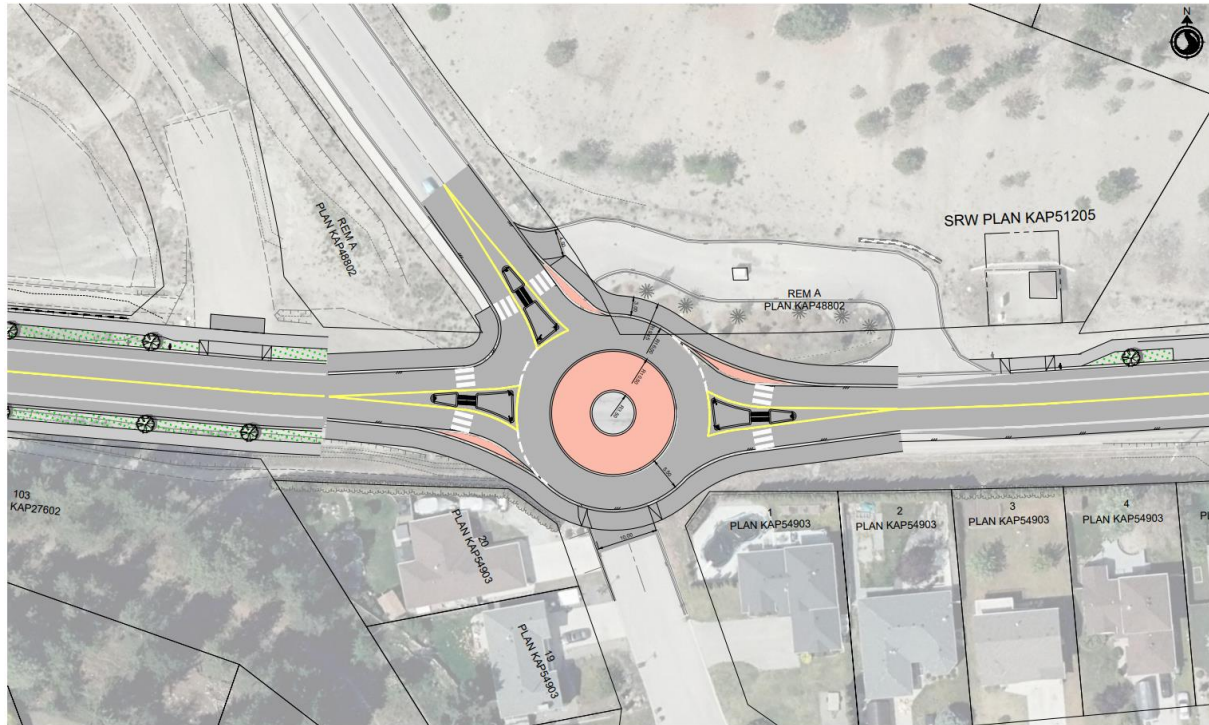
THAT Council direct staff to proceed with the Shannon Lake Road Active Transportation Corridor design Option 3, Multi-use Pathway on Both Sides of Roadway.

Alternative Motion

THAT Council direct staff to proceed with the Shannon Lake Road Active Transportation Corridor design Option 1 Urban Arterial Cross Section.

Decision Point #2 – Roundabout

Figure 5 – Roundabout Concept



Stantec Consulting has advanced the design for a roundabout at the Shannon Lake Road, Asquith Road, and Asquith Court intersection since the Council presentation on September 26th. Advancing the design provided an updated cost estimate, which is \$1,500,000. The intersection is expected to function acceptably based on a 10-year horizon. The eastbound left turn performance would improve with the addition of the roundabout, but it would be a detriment to the southbound through movement. Typically, West Kelowna completes a major road reconstruction project every second year, but with cost escalations due to inflation in recent years, it is becoming increasingly difficult to maintain that level of service improvements. Due to the many needs in the arterial road network, it is recommended that the construction of the roundabout is deferred until it is required.

Table 2: Roundabout Costs

	<i>Roundabout</i>
Total	\$1,500,000.00

Recommended Motion

THAT Council direct staff to not proceed with the Roundabout design.

Alternative Motion

THAT Council direct staff to complete the design with the roundabout included.

FINANCIAL IMPLICATIONS

The Shannon Lake Road Active Transportation Corridor project estimated costs are provided in the tables above and include construction, contingency, contract administration, inspections, utilities, and consulting. Depending on the alternative selected, the appropriate budget request will be brought forward in the 2024 budget. Additionally, the project is eligible for Grant Funding from both BC Active Transportation program (up to \$500,000) and ICBC Road Safety funding. The grant application for the BC Active Transportation Program is in progress.

REVIEWED BY

Rob Hillis, Engineering Manager

Allen Fillion, Director of Engineering & Operations

Corinne Boback, Legislative Services Manager / Corporate Officer

APPROVED FOR THE AGENDA BY

Trevor Seibel, Deputy CAO

Powerpoint: Yes No

Attachments:

Attachment 1 – Option 1 Urban Arterial Conceptual Design

Attachment 2 – Option 2 Partial Multi-use Pathway

Attachment 3 – Option 3 Multi-use Pathway on Both Sides of the Road

Attachment 4 – Roundabout Concept