
Request for Decision



To:	Peter de Verteuil	File No:	5400-22
Meeting Date:	July 5, 2022 Joint Council	Submission Date:	June 23, 2022
From:	Brian Murphy, Director of Public Works and Engineering, City of Duncan		
Reviewed By:	Mr. John Dehoop, Manager, Infrastructure, Municipality of North Cowichan Mr. Clay Reitsma, Director, Engineering, Municipality of North Cowichan		
Subject:	Project Update – Canada Ave Complete Street – City of Duncan and Municipality of North Cowichan		

RECOMMENDATION:

That Council receive the July 5, 2022 Canada Ave Complete Street project update report of the City of Duncan Director of Public Works and Engineering, for information only.

BACKGROUND:

The Municipality of North Cowichan (MNC) and the City of Duncan (the City) are working collaboratively to design a “Complete Street” on Canada Avenue between Beverly Street and Sherman Road, to connect directly to the existing Friendship Trail.

Active transportation is a key consideration for Complete Street projects. For the Canada Avenue Complete Street project, the conceptual designs propose an active transportation corridor of more than 835 m of active transportation facilities in the form of new and accessible sidewalks and a new multi-use path. Improved road safety and traffic calming is also included in the designs. These active transportation facilities will tie into existing pedestrian and cycling networks at either end of the project and will improve connectivity and safety for people of all ages and abilities. Improvements to active transportation infrastructure along the Canada Avenue corridor has consistently been identified as a priority through joint planning initiatives including the University Village Local Area Plan and the City’s Transportation and Mobility Strategy (under development in 2022).

The active transportation facilities along Canada Avenue would provide continuous connections between Sherman Road’s existing pedestrian network (within the Municipality of North Cowichan) and Beverly Street, with a direct connection to the existing Friendship Trail into downtown Duncan.

“Complete Street” is a transportation design approach where streets are planned, designed, constructed, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities and all modes of transportation. Specific objectives for a Complete Street on Canada Avenue include:

- Improve the quality and safety of pedestrian facilities, including sidewalks and crosswalks

- Provide a bicycle facility that is attractive for and safely accommodates cyclists of all ages and abilities
- Improve the Friendship Trail on the east side of Canada Avenue
- Improve access to bus stops
- Reduce traffic speeding and improve traffic safety
- Upgrade the two bridges over Holmes (Bings) Creek (North Cowichan project)

Engineering design for Canada Ave Complete Street has progressed by reviewing the concept plans, identify alternative complete street configurations, and selecting a preferred concept for Canada Avenue. The proposed Complete Street cross-section for Canada Avenue is based on current design guidance and best practices in active transportation.

Pedestrians

A sidewalk or pathway is desirable on both sides of the road, to avoid pedestrians walking in the roadway and to minimize the potential for pedestrians to cross the road at unexpected locations.

Separation is desirable between the multi-purpose pathway and the road, to enhance safety and comfort for pedestrians by providing separation from motor vehicle traffic. The area between the pathway and road would be a grass or landscaped boulevard, potentially with sections of hardscape.

Bicycles

Multi-use Pathways are the most attractive and comfortable type of bicycle facility for cyclists of all ages and abilities (AAA). Protected bicycle lanes are also appropriate for AAA cyclists.

Multi-use pathways are hard-surfaced or compacted-surface facilities that are shared by cyclists, pedestrians and other non-motorized modes of transportation, including micro mobility devices and persons using wheelchairs and other mobility aids. Multi-use pathways are separated from roadways, although they may be located parallel to a roadway with a buffer zone in between.

Crossings

Crossings are an important part of the active transportation network, as they improve safety for pedestrians and cyclists where they cross major roads and prevent these major roads from becoming obstacles that discourage people from walking and cycling. Crossing treatments would be applied where pedestrians and cyclists cross Canada Avenue and other major roads (including Beverly Street and Sherman Road).

Transit

There are five bus stops on Canada Avenue between Beverley Street and Sherman Road. The bus stops will be reviewed for ease of access relative to road crossings and for improved lighting at the bus stops.

Vehicle Traffic

Canada Avenue is a two-lane road with various left turn and right turn lanes. The minimum traffic lane widths must be designed to sufficiently accommodate trucks and other large vehicle and be consistent with BC Transit's Infrastructure Design Guidelines. Left turn lanes (for northbound traffic) will be designed in the centre of the upgraded road with median centre islands installed in between the zones where left turn lanes are required.

Traffic Calming

Traffic calming measures can discourage speeding and improve pedestrian safety on major roads. Traffic calming measures that would be appropriate and effective on Canada Avenue include:

- **Median Islands:** Median islands have been shown to reduce traffic speeds by 3 km/h to 8 km/h. Median islands can be located at midblock locations along the road, and at crossings to improve pedestrian safety. Median islands provide an opportunity to enhance the streetscape with landscaping and trees.
- **Curb Extensions:** Curb extensions involve extending the curb on one or both sides of the roadway, narrowing the width of the road. Curb extensions have been shown to reduce traffic speeds by 2 km/h to 8 km/h and reduce the speeds of turning vehicles. When combined with a crossing, curb extensions improve pedestrian safety by reducing the crossing distance, which reduces the amount of time pedestrians are exposed to traffic, and by improving the visibility of pedestrians to motorists.
- **Speed Display Signs:** Vehicle activated speed display signs incorporate a radar speed detector and are activated by vehicles travelling above a pre-determined speed threshold (for example, at 56 km/h or faster). Driver feedback signs have demonstrated a sustained reduction in traffic speeds of up to 10 km/h. The optimum locations for signs are where traffic speeds are highest and where approaching motorists would have a clear view of the sign at least 100 m in advance.

Other Design Considerations

- The crossing at Philip Street should be enhanced with a median island on the north side of the crossing and pedestrian-activated flashing beacons to improve pedestrian safety. The crossing at Philip Street will also need to consider MNC's plans to raise the intersection as a bypass for Canada Avenue flooding.
- Consideration for benches along the multi-use pathway
- Consideration for bike racks and e-bike charging station along the multi-use pathway
- Street trees and plantings in centre median islands and along the multi-use pathway
- Amenities to include at bus stops, if any. Possible amenities include seating, lighting, transit information and garbage cans.
- Left turn lanes for northbound traffic should be provided at locations with higher numbers of turning vehicles. It is not necessary to provide left turn lanes at all locations, however, as the few motorists making left turns at other locations can stop in the northbound traffic lane if necessary to wait for a gap in southbound traffic to make the turn.
- Onsite parking in some locations may need to be reoriented to avoid conflicts with pedestrians on the sidewalk or motor vehicles in the southbound traffic lane. For example, the parking in front of one building is oriented perpendicular to the road, and as a result motorists must back out across the sidewalk and into the road to exit the parking.
- Although some utility poles are located behind the existing sidewalk and would not likely impact designs, other poles are located at the edge of the road, on both the east and west sides of the road. It may be necessary to move some of these poles.
- The detailed engineering design for the two replacement bridge crossings (over Bings Creek) must be completed first in order to determine how the multi-use pathway and sidewalk will connect. The bridge replacements are a separate North Cowichan project.

The following image present an example cross-section of the intended conceptual design for the Canada Ave Complete Street project including a multi-use pathway.

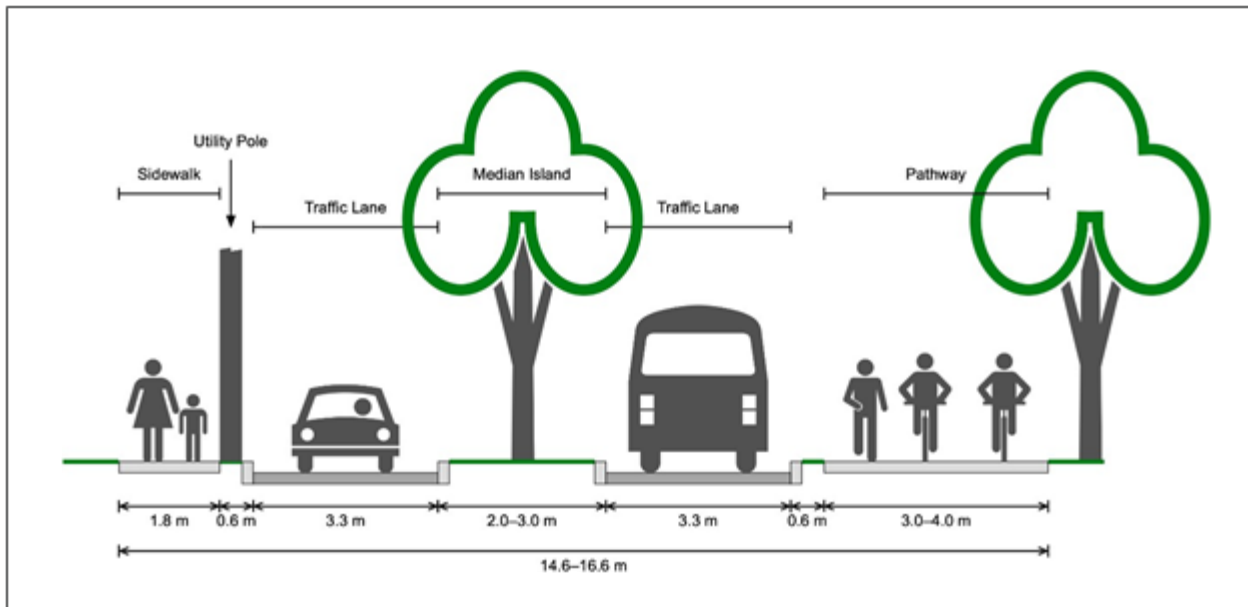


Figure 1 – Complete Street Cross-Section with Multi-Use Pathway

ANALYSIS:

City of Duncan has committed \$50,000 for engineering design for Canada Ave Complete Street in the 2022 Financial Plan. Additionally, capital funds are allocated in 2023 for \$195,000 and 2024 for \$150,000 for potential project construction (Gas Tax funds).

North Cowichan has \$125,000 allocated for engineering design in 2022. MNC will be updating capital requests for construction and construction management services for 2024 based on the cost estimates that come through the engineering design process. North Cowichan also has additional funds allocated to Complete Streets projects in their five-year capital plan.

In Q1 2022, engineering design progressed to the first set of conceptual design drawings for the Canada Ave Complete Street project.

The actual cost requirements for City and MNC funding contributions to the overall project will depend on several factors (outlined below) and the ability to fund these contributions will need to be confirmed in the respective future capital plans to complete detailed design and for eventual construction of the project. The ultimate feasibility of the project will need to be assessed by staff for approval by Council as these factors are clarified as the initial designs progress. See discussion that follows under “Federal Active Transportation Grant Application” and “Project Budget”.

Federal Active Transportation Grant Application

In March 2022, staff submitted a grant application for Canada Ave Complete Street to the Federal Active Transportation Fund (Infrastructure Canada - 2022 intake).

The first-ever Active Transportation Fund will provide \$400 million over five years to support a modal shift away from cars and toward active transportation, in support of Canada's National Active Transportation Strategy. The Active Transportation Fund will invest in projects that build new and expanded networks of pathways, bike lanes, trails and pedestrian bridges, in addition to supporting active transportation planning and stakeholder engagement activities. Contributions of up to \$50 million are available for capital projects that build new or enhance existing active transportation infrastructure, or which provide ancillary features and facilities that promote active transportation or enhance user safety and security. The maximum program contribution rate from the Federal Government is 60% for Municipal projects in provinces.

Capital Projects will be assessed on:

Improved community connectivity and accessibility

Economic benefits

Environmental and climate benefits

Improved user mobility, safety and security

Project viability

City and North Cowichan staff worked collaboratively on a joint application for this grant in March and have presented the project as a joint project that is of keen interest to both local governments.

If successful for the grant award, the City and MNC funding contributions to the overall project (40% of their respective portions of the project plus any cost escalation or overruns) would need to be confirmed within their respective capital plans to complete the detailed design and for construction of the project. The feasibility of the project would be assessed by staff for approval by Council if and when the grant award is announced. See discussion that follows under “Project Budget”.

Project Budget

For the grant application, the project cost was estimated using 2024 projected unit costs. The project cost was submitted as:

Total Estimated Project Cost: \$4,757,880

Total Eligible Project Cost: \$3,126,210

Total Active Transportation Fund Amount Requested: \$1,875,726 (60%)

Ineligible Project Costs: \$1,631,670

Ineligible project costs of \$1,631,670 are related to storm sewer upgrades and the significant upgrades to Canada Avenue itself within the vehicle travel lanes. The City's aging water main is also designated for replacement in conjunction with the project. These are important components of the overall project but were not eligible for Federal Active Transportation grant funding. The grant funding portion is

limited to the new multi-use pathway on the east side of Canada Ave and sidewalk improvements on the west side of Canada Ave (as well as pedestrian crossings, landscaping, drainage, and lighting) as these are the project components that can be directly associated with “active transportation”.

If the grant is awarded and for the project to ultimately proceed, the remaining portion (40%) of the eligible project costs (\$1,250,484), the ineligible project costs (\$1,631,670) and any additional scope changes, cost escalation and cost overruns would need to be funded by City and MNC capital plans for the project to proceed to construction.

Additionally, the portion of the project to be funded by each respective municipality will also have to be negotiated and agreed considering jurisdictional boundaries as well as combined benefits to residents and visitors in both municipalities from a successful complete Street project.

Project Schedule

The project schedule that was submitted in the grant application indicated that the project would be constructed in 2024; however, this schedule will be revisited when the grant award is announced and depending on the outlook for sufficient capital funding for the remaining portions of the project that need to be funded.

Next Steps

Before the Canada Ave Complete Street design can progress any further, the detailed design for the planned upgrade of two bridges over Holmes (Bings) Creek in North Cowichan must be completed first. This is a separate North Cowichan project and engineering design is in progress. Additionally, the detailed design work currently underway for the North Cowichan storm flood protection gate, the road settling rehabilitation and flood protection improvements between the City boundary and Philip Street in North Cowichan must also be completed before further design of the Complete Street can progress. These also are separate North Cowichan projects although the City has identified a capital contribution of \$95,000 for the floodwall-related projects in the 2022 approved Financial Plan.

Once these North Cowichan projects have advanced further, the Canada Ave Complete Street conceptual designs can be revisited for further changes as required. There is also feedback from both municipalities on the first set of conceptual designs to be incorporated into a second set of conceptual designs at that time.

Currently the project awaits the outcome of the Federal Active Transportation grant application. If the grant is awarded, the remaining project costs (discussed above) and the respective contributions to the project by both the City and MNC will need to be confirmed for the project to proceed through detailed design to construction. The ultimate feasibility of the project would be assessed by staff for approval by Council when the grant award is announced.

If the grant funding is not successful, the entire project costs will need to be assessed within the City and MNC financial plans to determine if the project is feasible in future years. Or the parties can wait for another potential grant funding opportunity and re-assess options at that time.

IMPLICATIONS:

Financial:	If the grant is awarded and for the project to ultimately proceed, the remaining portion (40%) of the eligible project costs (\$1,250,484), the ineligible project costs (\$1,631,670) and any additional scope changes, cost escalation and cost overruns would need to be funded by the City and MNC capital plans in order for the project to proceed to construction. The ultimate feasibility of the project can be assessed by staff for approval by Council when the grant award is announced.
Policy/Legislation:	The project will be formally tendered, in compliance with each jurisdiction's purchasing policy.
Strategic Priority:	City of Duncan Council Priority #8 Increase Partnerships and Connections with the Community and Neighbouring Jurisdictions
Sustainability:	Active transportation (pedestrian and cycling) is a well-recognized sustainability goal
Communication:	Further updates to City and MNC Council based on the outcome of the grant application
Staffing Implications:	These projects can be very complex and consume significant staff time if done in house. As such, a consulting team has been retained to undertake the design. The construction phase would be managed by the engineering consultant with general oversight from the City and MNC Engineering Departments.

ALTERNATE OPTION:

N/A

APPENDICES:

Appendix A: Canada Ave Complete Street Conceptual Design Drawings (March 2022)

Appendix B: Canada Avenue Complete Street from Evans Street to Sherman Road – Friendship Trail – North Cowichan Staff Report – September, 2018