## AGE-FRIENDLY <br> 



2023 Update

Town of Qualicum Beach

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## SUMMARY

The Town of Qualicum Beach wishes to maintain and improve mobility for persons of all ages and abilities, particularly for those who choose active modes of transportation, such as walking and cycling. To accomplish this, the Town adopted an Age-Friendly Transportation Plan in 2013.

In the ten years since the Plan was adopted, the Town has implemented many projects, and has added new projects in regular updates of the Plan. The 2023 update is the fifth review and update of the transportation priorities, and this update of the Plan incorporates the findings of the Highway 19A Safety Study. The highest-priority projects in the updated Age-Friendly Transportation Plan include:

- A "complete street" streetscape design on Highway 19A between Judges Row and Crescent Road West. The planned repaving of this section of Highway 19A within the next two years provides an opportunity to reconfigure the road to improve safety and comfort for all users, including cyclists and pedestrians, and discourage speeding.
- A traffic calming project on Village Way at Kwalikum Secondary School, incorporating sidewalks, pedestrian crossings, curb extensions and median islands.
- The Downtown Trail along Harlech Road between Beach Road and Memorial Avenue, connecting the Harlech Trail, the Memorial Trail and the Dollymount Trail, and providing continuous routes across the Town and to the waterfront.
- A roundabout on Highway 19A at the Village Way-Country Club Drive intersection, to improve intersection safety, discourage speeding, provide connections for pedestrians and cyclists, and improve access to and egress from Eaglecrest.
- RRFB flashing beacon crossings at five locations on Highway 19A (Buller Road, Garrett Road, Crescent Road West, Hall Road and Qualicum Road), three locations on Village Way (Berwick Road, Nootka Road and Hollywood Road), and on Bennett Road at Sunrise Drive, Jones Street at Fern Road, and Memorial Avenue at Fourth Avenue.
- Median islands at new RRFB crossings where feasible, and at other locations along the waterfront on Highway 19A to discourage speeding, increase pedestrian safety and improve safety for other road users.
- A raised crossing and speed table to discourage speeding in the $40 \mathrm{~km} / \mathrm{h}$ playground zone on First Avenue at Community Park.
- Trail etiquette signs to encourage cyclists and pedestrians to safely share pathways, and bicycle route and wayfinding signs to safely guide cyclists on the bicycle network and encourage more people to cycle.
- A traffic signal at the Memorial Avenue-First Avenue intersection remains a priority for the Town, but is deferred until the "active" status of the railway line is resolved.


## 1 INTRODUCTION

The Town of Qualicum Beach wishes to maintain and improve mobility and safety for persons of all ages and abilities, particularly for those who chose active modes of transportation such as walking and cycling. To accomplish this, the Town adopted an Age-Friendly Transportation Plan in 2013, a key component of which is a prioritized list of transportation projects throughout the community. Projects ranked as the highest priority are those that will best achieve the Town's goals to improve mobility and safety, and will provide the greatest "return on investment."

These priorities are intended to provide a basis for Town staff, decision makers, stakeholders and others to plan, budget and implement transportation projects. They are not intended to be "cast in stone." The list of priorities is updated every few years as conditions change, new projects are identified, and other projects are completed.

This document presents the fifth review and update of the transportation priorities. As illustrated in Figure 1.1, the Age-Friendly Transportation Plan was adopted in 2013 and the last update was in 2019. Since then, some projects have been completed and new transportation issues have arisen, particularly along Highway 19A. Given these changes, it is timely to re-evaluate transportation priorities and consider additional projects.

Figure 1.1 - Age-Friendly Transportation Plan timeline


### 1.1 Goals

Two goals were established for the Age-Friendly Transportation Plan, as well as several supporting objectives. The goals of the plan are to:

- Improve mobility by active transportation and other modes. The primary goal of the Plan is to improve mobility by walking, cycling and transit. Improving existing facilities for pedestrians and cyclists and developing new facilities will improve mobility for active transportation modes, and increase the number of trips by walking, cycling and transit. The Plan also seeks to ensure that mobility is maintained or improved for other modes, including goods movement and personal vehicles.
- Improve safety for vulnerable users and other road users. A significant deterrent to walking and cycling is "fear of traffic." Improving safety by improving the design of pedestrian and bicycle facilities will not only help to minimize conflicts between pedestrians, cyclists and other road users and reduce injuries, but will also reduce the fear of traffic for vulnerable road users, increasing the number of active transportation trips. The Plan also seeks to ensure that safety is maintained or improved for all other road users.

Specific objectives in support of the goals of the Age-Friendly Transportation Plan to improve mobility and safety include:

- Document transportation issues.
- Identify appropriate solutions.
- Determine priorities for implementation.
- Provide guidance for analysis and design of transportation facilities.

The Official Community Plan (2018), the Waterfront Master Plan (2016) and other community plans provided a basis for developing and subsequently updating the AgeFriendly Transportation Plan. Of particular relevance to the Age-Friendly Transportation Plan are policies in the Official Community Plan for transportation that "focus on alternative forms of transportation such as walking, cycling, transit," and a hierarchical road network and greenway network.

### 1.2 Completed Projects

A number of projects identified as high priorities in the original Age-Friendly Transportation Plan and in subsequent updates have been completed, and consequently have been removed from the list of transportation priorities. These include:

- Crossings with pedestrian-activated flashing beacons were implemented at:
- Highway 19A at Bay Street to improve pedestrian access to the waterfront.
- Highway 19A at the foot of the new Rodway Trail (at the Shady Rest).
- Highway 19A at Hemsworth Road, with new median islands.
- Village Way at Hemsworth Road and at Qualicum Road.
- Memorial Avenue at Garden Road, with new curb extensions.
- Qualicum Road at Fern Road, at the east end of the Dollymount Trail.
- Laburnum Road at Claymore Road, a school crossing.
- Bennett Road at Cardinal Way, a school crossing.
- Pedestrian countdown displays were installed at the Memorial/Fern intersection.
- An illuminated crossing was installed on Fern Road at Qualicum Foods.
- A median island was constructed on Berwick Road at Veterans Way to increase the visibility of the crossing, provide a refuge for pedestrians, channelize turning movements and reduce the speeds of vehicles turning at the intersection.
- The Hoylake Trail is a multi-use pathway that was constructed between Laburnum Road and Arbutus Street along the north side of the rail line.
- The Harlech Trail connecting to Mill Road at Beach Road.
- The Memorial Trail is a multi-use pathway constructed along Memorial Avenue between Highway 19A and Village Way.
- The Rodway Trail connects the north end of Arbutus Street to Highway 19A, and is a popular access route to the waterfront.
- An accessible trail was constructed in the Hemsworth Road right-of-way north of Village Way to Chester Road.
- An accessible crossing was constructed across the railway track at Berwick Road.
- A connection on Highway 19A west of Bay Street between sections of the waterfront pathway that accommodates pedestrians, cyclists and parked vehicles.
- The Highway 19A-Memorial Avenue intersection was converted to a roundabout to improve safety, discourage speeding and provide a connection to the waterfront for cyclists and pedestrians.
- The Village Way and Crescent Road intersections were realigned at Memorial Avenue.
- The right turn lane from eastbound Village Way to eastbound Hwy 19A was reconfigured to increase stop sign compliance and reduce the potential for rear-end collisions.
- Speed display signs to alert motorists to reduced speed limits and discourage speeding on:
- Highway 19A westbound west of Hall Road.
- Bennett Road northbound at Sunrise Drive entering the school zone at Arrowview Elementary School.
- A westbound left turn lane was implemented on Rupert Road at Berwick Road to accommodate motorists travelling to the new fire hall.


## 2 HIGHWAY 19A SAFETY STUDY

This section presents the results of the Highway 19A Safety Study, which was undertaken to reduce traffic speeds and improve safety for pedestrians, cyclists, motorists and others on Highway 19A through Qualicum Beach. Projects on other roads are described in Section 3.

Highway 19A is the waterfront roadway in Qualicum Beach, and a popular year-round destination for residents and visitors. Speeding is a significant problem along much of Highway 19A, not just at the waterfront. Safety is a concern for pedestrians and cyclists, and the supply and configuration of parking is also an issue.

The Highway 19A Safety Study was undertaken to address these safety issues. The objective of the Safety Study is to create a safe and welcoming environment for all road users, for residents and visitors, and to reduce crashes, collisions and safety issues along the waterfront and other sections of Highway 19A.

### 2.1 Safety Issues

Highway 19A, also known as the Old Island Highway, traverses more than 7 km through Qualicum Beach, and comprises:

- Two traffic lanes (one in each direction).
- Paved shoulders of varying widths, used by cyclists and pedestrians.
- Roadside parking along the waterfront and at businesses at the west end of Town. Roadside parking is generally accommodated on gravel areas on the outside of paved shoulders, but in the section west of Bay Street with private properties on the north side of the road, designated parking bays are provided adjacent the westbound traffic lane..


### 2.1.1 Speeds

The speed limit on Highway 19A through Qualicum Beach is $50 \mathrm{~km} / \mathrm{h}$ west of Qualicum Road, and $70 \mathrm{~km} / \mathrm{h}$ east of Qualicum Road.

To quantify the extent and magnitude of speeding on Highway 19A, the Town collected speed data at 14 locations, from February 2021 through June 2023, as summarized in Table 2.1. Detailed speed data is included in the Appendices.

Table 2.1 - Highway 19A traffic speeds (km/h)

|  |  | Speed | Westbound |  | Eastbound |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Location | Limit |  | V85 | V50 | V85 |  |
| Seacroft Rd | May 2023 | 50 | 64 | 72 | 68 | 78 |
| Buller Rd | Jun 2023 | 50 | 67 | 76 | 66 | 76 |
| Beach Terr | May 2023 | 50 | 63 | 71 | 63 | 71 |
| 175m west of Crescent Rd | Jun 2023 | 50 | 60 | 67 | 58 | 66 |
| 25m east of Crescent Rd | Jun 2023 | 50 | 55 | 63 | 56 | 64 |
| 275m east of Crescent Rd | Apr/May 2023 | 50 | 61 | 69 | 62 | 70 |
| 250m west of Bay St | Feb/Mar 2021 | 50 | 55 | 62 | 60 | 67 |
| 75m east of Bay St | Apr/May 2023 | 50 | 59 | 67 | 58 | 66 |
| 450m west of Memorial Ave | Apr/May 2023 | 50 | 54 | 63 | 57 | 65 |
| Hemsworth Rd | Jan/Feb 2022 | 50 | 65 | 74 | 59 | 68 |
| Hemsworth Rd | Jul 2022 | 50 | 62 | 71 | 57 | 64 |
| 100m east of Hall Rd | Jan/Feb 2022 | 50 | 64 | 73 | 63 | 71 |
| Milner Gardens | Jan/Feb 2022 | 70 | 72 | 79 | 71 | 78 |
| West of Village Way | Feb/Mar 2022 | 70 | 76 | 84 | 77 | 85 |
| East of Village Way | Feb 2022 | 70 | 67 | 76 | 69 | 77 |

V50 $=$ Average traffic speed, $\mathrm{V}_{85}=85^{\text {th }}$ percentile traffic speed
The $85^{\text {th }}$ percentile speed ( V 85 ) is widely considered to be the representative measure of the speed of traffic - this is the speed at or below which $85 \%$ of motorists are travelling. On an arterial road such as Highway 19A, speeding is typically considered an issue when the $85^{\text {th }}$ percentile speed is $8 \mathrm{~km} / \mathrm{h}$ or higher than the speed limit. As Table 2.1 indicates, $85^{\text {th }}$ percentile speeds exceed this threshold at all 14 locations on Highway 19A where speed data was collected.

### 2.1.2 Crashes

ICBC provides a database of reported crashes on roads in British Columbia (excluding crashes in parking lots and involving parked vehicles). Crashes are classified as "casualty" crashes resulting in injury or fatality, and "property damage" crashes resulting in material damage only. Locations on Highway 19A with the highest numbers of reported crashes for the six years from 2017 through 2022 include:

1. Memorial Avenue. To address speeding and safety concerns, this intersection was converted to a roundabout in December 2021. For the five previous years from 2017 through 2021 there were 9 casualty crashes and 22 property damage crashes reported to ICBC. In 2022 following completion of the roundabout there were 2 casualty and 7 property damage crashes reported. Although this might suggest that the roundabout has not improved safety at this intersection, experience elsewhere suggests that a period of 6 to 12 months is required for motorists and others to adjust to a new roundabout. Crash reports for 2023 and later years should provide a clearer picture of the effects of the roundabout on intersection safety.
2. Village Way-Country Club Drive. This intersection had the second-highest number of reported crashes on Highway 19A in Qualicum Beach, with 4 casualty crashes and 14 property damage crashes from 2017 through 2022. The crash rate was higher prior to 2017, at which time the alignment of the right turn lane from Village Way to eastbound Highway 19A was adjusted to reduce rear-end collisions.
3. Bennett Road: 5 casualty and 6 property damage crashes.
4. Crescent Road West: 3 casualty and 6 property damage crashes.
5. Qualicum Road: 2 casualty and 7 property damage crashes.
6. Hall Road: 2 casualty and 3 property damage crashes.
7. Crescent Road East: 2 casualty and 2 property damage crashes.
8. Hemsworth Road: 1 casualty and 4 property damage crashes.
9. Yambury Road: 1 casualty and 2 property damage crashes.

### 2.1.3 Other Issues

Other safety-related issues identified on Highway 19A include:

- Pedestrian crossings. The Town has received requests for pedestrian crossings at locations along the length of Highway 19A.
- Bicycle facilities. The Town has received requests for improved facilities for cyclists on Highway 19A, and complaints about conflicts between cyclists and pedestrians on shared facilities.
- Parking. The Town has received requests for more parking on Highway 19A, especially along the waterfront, and complaints about safety concerns related to the configuration of some parking areas.


### 2.2 Safety Improvements

The Town has completed a number of safety improvements on Highway 19A in the ten years since the Age-Friendly Transportation Plan was first adopted in 2013, including:

- A roundabout at Memorial Avenue.
- Pedestrian crossings with flashing beacons at Bay Street, Hemsworth Road, and at the north end of the Rodway Trail at the Shady Rest.
- Median islands at Hemsworth Road.
- A speed display sign facing westbound traffic at Hall Road.
- A waterfront walkway connection for pedestrians and cyclists past the private properties west of Bay Street.
- Parking bays on the south side of the road east and west of Bay Street, with a shared pedestrian/bicycle shoulder.

Several other improvements were identified in the previous versions of the Plan. To address the speeding and safety issues described in Section 2.1, additional improvements were identified through the Highway 19A Safety Study, and are incorporated into this updated 2023 version of the Plan. All previous and new improvements on Highway 19A are illustrated in Figures 2.1 and 2.2, and in the Appendices.

Figure 2.1 - Highway 19A safety improvements (west)


Figure 2.2 - Highway 19A safety improvements (east)


### 2.2.1 Pedestrian Crossings

Five new pedestrian crossings with flashing RRFB beacons would be implemented on Highway 19A at the following locations:

- Buller Road on the east side of the intersection.
- Garrett Road on the east side of the intersection. This crossing would provide access to the bus stop located 40m to the east at Beach Terrace.
- Crescent Road West on the east side of the intersection. This crossing would provide access to the bus stop located 80 m to the west. In conjunction with this new crossing, Crescent Road would be realigned closer to a 90-degree angle, and the corner radius on the southwest corner would be reduced to improve safety by reduce the speed of vehicles turning right from eastbound Highway 19A to Crescent Road.
- Hall Road on the west side of the intersection. This crossing would provide access to the bus stop located on the northwest corner of the intersection.
- Qualicum Road on the east side of the intersection. This crossing would provide access to the bus stop located on the northeast corner of the intersection.

Flashing beacon crossings are suitable on roads with speed limits up to $60 \mathrm{~km} / \mathrm{h}$, which means that on the $70 \mathrm{~km} / \mathrm{h}$ section of Highway 19A, new pedestrian crossings would incorporate traffic signal heads rather than flashing beacons:

- Milner Gardens. A pedestrian signal would assist pedestrians crossing Highway 19A to and from the bus stop on the north side of the road.
- Yambury Road. Although a protected T-intersection was identified for this intersection in previous version of the Age-Friendly Transportation Plan, a traffic signal is preferred as it would improve safety for pedestrians crossing Highway 19A as well as for motorists turning left from Yambury Road to eastbound Highway 19A.


### 2.2.2 Median Islands

Median islands are raised islands in the centre of a road separating opposite directions of traffic. The primary benefits of median islands are reduced traffic speeds and improved safety for pedestrians crossing the road.

Figure 2.3 shows the median islands constructed at Hemsworth Road in conjunction with a pedestrian crossing with flashing beacons. Median islands increase the visibility of a crossing and can serve as a refuge for pedestrians, and consequently median islands should be incorporated at new pedestrian crossings on Highway 19A where it is practical to do so within the road right-of-way and other constraints.

Figure 2.3 - Median islands at Hemsworth Road


Image source: Google

Median islands installed in other Canadian communities are reported to have reduced traffic speeds by 3 to $8 \mathrm{~km} / \mathrm{h}$. Speed data collected at Hemsworth Road shows a 3 to $4 \mathrm{~km} / \mathrm{h}$ reduction in $85^{\text {th }}$ percentile traffic speeds after the median islands and pedestrian crossing were installed.

Median islands would also be implemented at intermediate locations along the waterfront to reduce traffic speeds. Median islands would be located along the waterfront between parking areas (in the vicinity of \#3087, \#3063/\#3047, \#2889, \#2831, \#2811 and \#2801), and between Judges Row and Elizabeth Avenue. The Town should consider using quick build materials to test the location and geometry of the median islands prior to the planned repaving project (see Section 2.2.6 for a further discussion of median islands as part of a complete street design).

### 2.2.3 Speed Display Sign

Figure 2.4 shows the speed display sign on westbound Highway 19A west of Hall Road where the speed limit decreases from $70 \mathrm{~km} / \mathrm{h}$ to $50 \mathrm{~km} / \mathrm{h}$. Data recorded by the sign before and after it was activated shows a $3 \mathrm{~km} / \mathrm{h}$ reduction in $85^{\text {th }}$ percentile speeds, and $30 \%$ fewer vehicles travelling at more than $55 \mathrm{~km} / \mathrm{h}$. Experience elsewhere in Canada indicates that speed display signs can reduce traffic speeds by up to $10 \mathrm{~km} / \mathrm{h}$.

Figure 2.4 - Speed display sign west of Hall Road


Image source: Google

To discourage speeding where eastbound motorists enter Qualicum Beach, a new speed display sign would be installed on eastbound Highway 19A east of Laburnum Road in the vicinity of Higson Crescent.

The Town recently acquired a mobile speed display sign that would be periodically deployed at other locations along Highway 19A as well as other roads in Qualicum Beach to further discourage speeding.

### 2.2.4 Roundabout

Figure 2.5 illustrates the concept design for a roundabout at the Village Way-Country Club Drive intersection, which has been a top priority in the Age-Friendly Transportation Plan since 2013. A roundabout would improve intersection safety and reduce crashes, reduce speeding on Highway 19A, and improve access across Highway 19A for motorists, pedestrians and cyclists. The challenge is that the roundabout will be an expensive project with an estimated cost in the range of $\$ 3$ million, and consequently the Town will need cost-share funding to undertake this project.

Figure 2.5 - Roundabout concept design at Village Way-Country Club Drive


### 2.2.5 Other Improvements

Other safety improvements along Highway 19A include:

- Bennett Road. Figure 2.6 illustrates the removal of the channelized right turn lane from eastbound Highway 19A to southbound Bennett Road. The uncontrolled school crossing on the channelized right turn lane is used by children walking to and from Arrowview Elementary School, as well as others. The speed limit on this section of Highway 19A is $70 \mathrm{~km} / \mathrm{h}$, which results in high speeds of right-turning vehicles.

Removing the channelized right turn lane and constructing a conventional right turn lane instead would require that motorists faced with a red signal come to a stop and yield to pedestrians. It would also reduce the speed of right-turning vehicles and reduce the potential for conflicts with other vehicles, an important consideration as the Bennett Road intersection had the third-highest number of reported crashes along Highway 19A from 2017 through 2022.

Figure 2.6 - Remove channelized right turn lane at Bennett Road


Image source: Google

- Parking bays. The waterfront connection for pedestrians and cyclists west of Bay Street incorporates parking bays at several of the private properties. Although the parking bays are 2.4 m wide, which is the maximum width typically used for on-street
parking bays, it can be uncomfortable for some motorists to enter and exit vehicles close to westbound traffic, particularly in the section with a horizontal curve. To address this issue, it would be desirable to add a 300 mm painted buffer between the parking bays and traffic lane to shift traffic away from parked vehicles. However, this may not be feasible due to rutting in the traffic lanes, as the buffer would shift vehicles out of the ruts and potentially create difficulties for motorists in controlling vehicles. Consequently, it may be necessary to defer this project until this section of Highway 19A is repaved and incorporates complete street features as described in Section 2.2.6.
- Chartwell Boulevard and Eaglecrest Drive. The wide medians at Highway 19A can cause conflicts between northbound and southbound vehicles that are simultaneously turning left onto the highway. This issue would be addressed by modifying the medians as illustrated in Figure 2.7, realigning opposing left-turning vehicles so that their paths do not overlap. These modifications would result in the removal of decorative features, trees and landscaping in the medians, as well as requiring that the utility pole on the Eaglecrest median be repositioned.

Figure 2.7 - Median modifications on Chartwell Boulevard and Eaglecrest Drive


### 2.2.6 Complete Street Design

The asphalt on Highway 19A along the waterfront has deteriorated, and the Town has budgeted for repaving the section from Memorial Avenue to Crescent Road West by 2026. This repaving project provides an opportunity to reconfigure Highway 19A as a "complete street" to address safety issues and better accommodate all road users. Eventually, the complete street design could be expanded to other sections of Highway 19A.

The objectives of a complete street design are to:

- Accommodate all modes, including pedestrians, bicycles, transit, traffic, deliveries and parking.
- Improve safety and comfort for all users, including people of all ages and abilities.
- Discourage speeding and unsafe behaviour.
- Design for environmental sustainability, including stormwater management and climate resiliency.

A complete street includes most or all of the following features:

- Walkways and pathways.
- Protected bicycle lanes.
- Pedestrian crossings and access to transit bus stops.
- Traffic calming features such as median islands and curb extensions.
- Parking bays.
- Landscaping, rain gardens and other natural features.

Highway 19A was originally the primary connection between Nanaimo and the north Island, and was designed to facilitate regional travel. A prevailing design practice at the time was to design highways to an operating speed at least $10 \mathrm{~km} / \mathrm{h}$ higher than the posted speed limit. Consequently, much of Highway 19A through Qualicum Beach is designed for speeds of $60 \mathrm{~km} / \mathrm{h}, 70 \mathrm{~km} / \mathrm{h}$ and even higher, and as a result traffic speeds are correspondingly high.

To reduce traffic speeds on Highway 19A and improve safety, a complete street design should be based on a design speed of $50 \mathrm{~km} / \mathrm{h}$ or less. The objective would be to alter the road design to encourage lower traffic speeds without having to rely on enforcement.

To this end, a complete street design should incorporate narrower traffic lanes than the default highway lane widths of 3.6 m or wider. Instead, lane widths should be between 3.3 m and 3.5 m . Narrower traffic lanes have been shown to reduce traffic speeds and reduce non-intersection crashes. Narrower lanes also provide more space within the road right-of-way for other features to accommodate pedestrians, cyclists and parking.

## 3 OTHER PROJECTS

This section describes new projects throughout Qualicum Beach added to this 2023 version of the Age-Friendly Transportation Plan. Projects on Highway 19A are described in Section 2, and all projects (previous and new) are listed in the Appendices.

### 3.1 New Projects

A number of new projects have been added to the Age-Friendly Transportation Plan to address safety issues, to provide new and improved facilities for pedestrians and cyclists, and to respond to other transportation-related issues.

### 3.1.1 Memorial Avenue

The Memorial Trail pathway from the waterfront currently terminates south of Village Way. The intent is to continue the pathway to First Avenue to provide a connection between the waterfront and the downtown. As discussed in Section 3.2, constraints associated with the "active" railway line prevent widening the railway crossing as would be the case if the existing sidewalk was replaced with a pathway. To avoid this, the sidewalk could be extended into the road and converted to a multiuse pathway with no increase in the overall width of the railway crossing. Even though this would narrow the northbound traffic lane it would still be an appropriate width.

The crossing on the north side of the Fourth Avenue intersection would be upgraded with flashing RRFB beacons. Pending the recommendations of the Bus Garage Property Conceptual Design and Mobility Study, a curb extension could be added on the northwest corner to improve pedestrian safety, matching the existing curb extension on the northeast corner.

### 3.1.2 First Avenue

First Avenue at Community Park is straight and relatively flat with long sight distances that lead to higher traffic speeds. Although this section of First Avenue is a $40 \mathrm{~km} / \mathrm{h}$ playground zone in effect from dawn to dusk, $85^{\text {th }}$ percentile speeds during the daytime are as high as $67 \mathrm{~km} / \mathrm{h}$. To discourage speeding and improve pedestrian safety, the following would be implemented on First Avenue:

- A raised crossing at Rye Road. Currently, the closest pedestrian crossing to the park is at Maple Street, two blocks beyond the $40 \mathrm{~km} / \mathrm{h}$ playground zone.
- A speed table in the vicinity of \#250 between Hemlock and Cedar Streets.

Experience elsewhere in Canada demonstrates that raised crossings and speed tables can reduce traffic speeds up to $13 \mathrm{~km} / \mathrm{h}$. To supplement these measures, the mobile speed display should be periodically deployed on First Avenue.

### 3.1.3 Village Way

New pedestrian crossings with flashing RRFB beacons would be installed at:

- Berwick Road (this location is already in previous versions of the Age-Friendly Transportation Plan).
- Nootka Road.
- Hollywood Road.

A speed display sign would be installed approximately 100 m east of Hemsworth Road facing westbound traffic, to encourage motorists to slow down where the speed limit decreases from $60 \mathrm{~km} / \mathrm{h}$ to $50 \mathrm{~km} / \mathrm{h}$. A " $50 \mathrm{~km} / \mathrm{h}$ Ahead" sign would also be installed west of Qualicum Road to alert westbound motorists to the upcoming reduction in the speed limit.

### 3.1.4 Crescent Road West

Speed tables were installed on Crescent Road East and West in 2021 when traffic was diverted onto Crescent Road around the site of the roundabout construction on Highway 19A at Memorial Avenue. Speed data shows that on Crescent Road East the two speed tables reduced traffic speeds from $85^{\text {th }}$ percentile speeds of 62 to $66 \mathrm{~km} / \mathrm{h}$ before the speed tables were installed to 54 to $57 \mathrm{~km} / \mathrm{h}$ after.

On Crescent Road West traffic speeds remain high despite three speed tables, with $85^{\text {th }}$ percentile traffic speeds ranging from 60 to $71 \mathrm{~km} / \mathrm{h}$. This is not surprising, as the speed tables are approximately 600 m apart, much farther apart than the optimum spacing of up to 250 m . To achieve the desired speed reduction on Crescent Road West, additional measures would be installed:

- A speed table at Balsam Street.
- A speed table in the vicinity of \#334 or \#340 Crescent Road West.
- A raised crossing at Bay Street, which would not only reduce traffic speeds but also improve safety for pedestrians and transit users walking to the bus stop on the south side of the road 10 m west of Bay Street.

Curb extensions would be constructed on the southwest and southeast corners of the Beach Road intersection, and the stop sign on Beach Road would be relocated further north to improve sight lines for northbound motorists turning into Crescent Road West. These "curb" extensions would not need to incorporate curbs - removal of asphalt would be sufficient.

A crushed aggregate walkway would be constructed on the southwest corner of the Arbutus Street intersection to provide a path to the raised crossing, and a streetlight would be added to illuminate the crossing. As well, the corner radius would be reduced to provide more area for pedestrians and reduce the speed of vehicles turning right from eastbound Crescent Road to southbound Arbutus Street.

### 3.1.5 Other Roads

New projects on other roads include:

- Berwick Road. A speed table would be installed between Fourth and Fifth Avenues where the $85^{\text {th }}$ percentile traffic speed is $62 \mathrm{~km} / \mathrm{h}$. To further discourage speeding on Berwick Road, the mobile speed display should be periodically deployed.
- Arbutus Street at First Avenue. Rolling stops and near misses have been reported at this all-way stop. Intersection watches conducted by Oceanside Community Safety volunteers in 2020 observed that almost $10 \%$ of vehicles failed to stop, and two motorists drove through the intersection at full speed. To improve safety, reduce conflicts and discourage speeding, a mini-roundabout would be constructed at the intersection. A roundabout with an inscribed circle diameter of 21 m would fit almost completely within the existing paved area.
- Arbutus Street at Rupert Road. A pedestrian signal would be installed to provide a safe crossing to the Laburnum Trail along the south side of Rupert Road west of Arbutus Street.
- Laburnum Road. A parking area would be created on the west side of Laburnum Road south of Claymore Road to provide safe parking for people using the Laburnum Trail. This project would involve infilling the ditch and adding a new gravel shoulder.
- Bennett Road at Arrowview Elementary School. Curb ramps would be added on the northwest and southwest corners of the school access road.
- Rupert Road between Qualicum Road and Bennett Road. The existing multiuse pathway west of Qualicum Road would be extended east to Bennett Road to connect to the planned pathway on Bennett Road.


### 3.1.6 General Projects

Projects that would be undertaken at multiple locations throughout the Town include:

- Trail etiquette signage would be installed on multiuse pathways to encourage pedestrians, cyclists, scooter users and others to be courteous and safely share the pathway. These trail etiquette signs would be in addition to regulatory signs that indicate that cyclists should yield to pedestrians.
- The mobile speed display sign would be deployed on roads with observed speeding issues. Data should be collected before, during and after the speed display sign is deployed to determine its effectiveness and for how long the effects are sustained.
- Centreline stop signs would be installed at unsignalized railway crossings on Arbutus Street, Beach Road and Qualicum Road to improve stop sign compliance, or if possible under applicable regulations, the stop signs would be removed.


### 3.2 Projects Affected by the "Active" Railway Line

The following projects are included in previous versions of the Age-Friendly Transportation Plan, and are retained in this version. These projects are affected by the "active" status of the railway line through Qualicum Beach, which precludes crossings and imposes onerous requirements for traffic signals and other improvements within 100 feet (30m) of the railway track.

- Memorial Avenue-First Avenue. A traffic signal is planned at this intersection to address safety issues and reduce traffic congestion on First Avenue. A new multiuse crossing for pedestrians and cyclists on the north side of the intersection would connect the Dollymount and Memorial Trails to the planned Downtown Trail as well as provide access to the downtown. The additional requirements associated with the "active" railway line are estimated to cost more than $\$ 250,000$. Consequently, the Town has deferred this project until the status of the railway line changes. In the interim, the road can be narrowed to provide a pathway connection on the east side across the railway track as described in Section 3.1.1, and an additional streetlight can be added on the northwest corner to improve illumination of the intersection.
- Downtown Trail crossing on Beach Road at Mill Road. A new multiuse crossing would be implemented on the north side of the intersection to connect the recentlyconstructed Harlech Trail on the northwest corner to the planned Downtown Trail on the northeast corner. As this crossing is only 20 m from the railway track, the crossing cannot be implemented until the status of the railway line changes.
- Arbutus Street at Hoylake Road-Harlech Road. The existing crossing on Arbutus Street on the north side of the Hoylake Road intersection provides a connection to the Museum Trail. A new multiuse crossing would be implemented across Arbutus Street to connect the Hoylake Trail on the south side of Hoylake Road with the bicycle route on Harlech Road, and would include a short section of pathway on one side of Arbutus Street across the railway track. This new crossing cannot be implemented until the status of the railway line changes.


### 3.3 Other Actions

In the course of reviewing transportation projects and priorities, a few simple low-cost improvements were identified to existing transportation facilities that would address operational and safety issues. These actions can be undertaken independently of the list of transportation priorities:

- Pave the walkway behind the barrier at the pedestrian crossing on Highway 19A at the Shady Rest to improve accessibility.
- Prohibit parking on the shoulder at the Shady Rest to avoid parked vehicles obstructing sight lines to the pedestrian crossing. Also consider designating some parking in this area for accessible parking.
- Paint a white line at the edge of the paved shoulder (or 1.8 m outside the white fog line where the asphalt is continuous) in front of businesses with angled parking, such as \#2795 (Qualicum Beach Ocean Suites), \#3281 (Westerlea Resort Motel) and \#3285 (Buena Vista Resort Motel) to discourage motorists from parking vehicles extending into the shoulder and obstructing cyclists and pedestrians.
- Remove the portion of the fence beside Crescent Road West at Highway 19A that is in the road right-of-way, and prohibit parking in the road right-of-way east of the intersection to improve sight lines to the east for motorists on Crescent Road West turning left to westbound Highway 19A. This action would be undertaken in advance of the new crossing and intersection reconfiguration described in Section 2.2.1.
- Convert the parallel parking on the north side of Highway 19A east of Bay Street to angle parking.
- Designate the right lane on eastbound Fern Road at Memorial Avenue for right turn only, to avoid safety issues when eastbound motorists proceed straight through the intersection. This would be an interim measure pending recommendations from the traffic study undertaken as part of the Bus Garage Property Conceptual Design and Mobility Study.
- Establish a local improvement program to construct sidewalks on local streets as requested by property owners. The local improvement program would assign some or all of the cost of constructing a sidewalk to affected property owners, who would be canvassed with a petition to determine if there is sufficient support for the sidewalk. Improvements could be financed as an installment on property taxes amortized over several years.


## 4 PRIORITIES

The Town does not have unlimited resources available to implement all actions identified in Sections 2 and $3-$ at least not for many years. Recognizing this, the Age-Friendly Transportation Plan prioritizes the projects that will provide the greatest "return on investment." This section describes how projects were evaluated, and identifies those that are considered priorities for implementation.

The purpose of the evaluation documented in this section is to objectively determine the relative importance of various projects, in terms of their contribution to the goals of the Age-Friendly Transportation Plan. Priorities were determined based on a set of objective criteria. Each project was evaluated and a rating calculated from its cumulative score, with the highest ratings indicating the highest-priority projects to be implemented first.

The results of the evaluation are intended to provide a basis for Town staff, decision makers, stakeholders and others to plan, budget and implement transportation projects. The results of the evaluation are not intended to be "cast in stone." Rather, it is expected that the evaluation will be updated every two or three years as conditions change, new issues and projects are identified, and projects are completed.

### 4.1 Criteria

The following criteria were used to assess and prioritize the projects described in Sections 2 and 3 . For each criterion, a rating from 1 to 5 was assigned, with 5 indicating the highest priority. Ratings were determined qualitatively and reflect the relative benefits or implications of each project with respect to other projects.

- Safety. This criterion provides a measure of the relative improvement in safety associated with each action. A subjective rating reflects a range from negligible safety improvements to significant improvements, as described below.
- $5=$ significant safety benefits, with minimal safety implications.
- $3=$ moderate safety benefits. May also include some safety implications.
- $1=$ minor safety benefits and some safety implications.
- Use. This criterion provides a measure of the current use and potential future use if the facility is improved. It is calculated as ( $1 / 2 \times$ existing use) + (future use), where:
- 3 = high use.
- 2 = moderate use.
- 1 = low use.
- Vulnerable users. This criterion provides a measure of the use of a facility by pedestrians, cyclists, seniors, children, persons with disabilities and other vulnerable users. It is subjectively assessed as:
- $5=$ high number of users of multiple categories.
- $3=$ high number of users of one category, or moderate number of multiple categories.
- $1=$ average number of vulnerable users.
- Network contribution. This criterion provides a measure of the relative contribution of a facility within the overall transportation network. The contribution of each facility is considered in terms of directness of access and proximity to alternative facilities. Ratings are assigned as follows:
- 5 = critical network link that completes a gap in the transportation network between high-use attractions, with no alternatives within walking distance.
- 3 = moderately important link that completes a gap in the network, but is also close to an alternative facility of use to some.
- 1 = unimportant link on periphery of network or with a connection at one end only.
- Cost. This criterion reflects the anticipated capital and operating costs associated with each action. Ratings are based on an estimate of order-of-magnitude costs, and include the potential for funding from other agencies to reduce the Town's costs (for example, ICBC provides cost-sharing funding for safety improvements that benefit vulnerable road users).
- 5 = lowest cost (e.g. less than $\$ 5,000$ )
- 3 = moderate cost (e.g. $\$ 25,000$ to $\$ 100,000$ )
- 1 = highest cost (e.g. more than $\$ 1$ million)
- Other. This criterion reflects other factors that could increase or decrease the priority of each action. These other factors might include, for example, the appeal of a facility to users, support for other Town objectives, opportunity to advance the project (or defer it) by combining it with another road project, the complexity of the project, dependency on redevelopment of adjacent properties, property acquisition requirements, regulatory or legislative obstacles, and community support or opposition. A subjective rating reflects opportunities or obstacles to implementation, as summarized below:
- 5 = significant opportunities to implement the project in the short term.
- 3 = neutral, no significant opportunities or obstacles to implementation.
- $1=$ significant obstacles that prevent implementation in the short term.


### 4.2 Priorities

This section identifies the projects that are considered priorities for implementation, based on the results of the evaluation described above.

Projects are prioritized based on the total score calculated as the sum of the ratings for the six evaluation criteria. Where two or more actions have the same total score, they are prioritized based on a weighted score, where safety, vulnerable users and network contribution are weighted at twice the other criteria. Two scores are included in Table 4.1, indicated as $X / Y$, where $X$ is the unweighted total score and $Y$ is the weighted score.

For locations with mutually-exclusive actions, such as a roundabout and a traffic signal, the highest-ranked project is considered the priority. Detailed results of the evaluation of all projects are included in the Appendices.

The highest-priority projects include:

- A "complete street" streetscape design on Highway 19A between Judges Row and Crescent Road West. The planned repaving of this section of Highway 19A within the next two years provides an opportunity to reconfigure the road to improve safety and comfort for all users, including cyclists and pedestrians, and discourage speeding.
- A traffic calming project on Village Way at Kwalikum Secondary School, incorporating sidewalks, pedestrian crossings, curb extensions and median islands.
- A roundabout on Highway 19A at the Village Way-Country Club Drive intersection, to improve intersection safety, discourage speeding, provide connections for pedestrians and cyclists, and improve access to and egress from Eaglecrest.
- The Downtown Trail along Harlech Road between Beach Road and Memorial Avenue, connecting the Harlech Trail, the Memorial Trail and the Dollymount Trail, and providing continuous routes across the Town and to the waterfront.
- Extension of the Memorial Trail south across the railway track to First Avenue, to provide a continuous pathway between the waterfront and downtown.
- A neighbourhood bikeway on Primrose Street between the planned Downtown Trail on Harlech Road and the roundabout on Memorial Avenue at Rupert Road.
- Trail etiquette signs to encourage cyclists and pedestrians to safely share pathways, and bicycle route and wayfinding signs to safely guide cyclists on the bicycle network and encourage more people to cycle.
- RRFB flashing beacon crossings at five locations on Highway 19A (Buller Road, Garrett Road, Crescent Road West, Hall Road and Qualicum Road), three locations on Village Way (Berwick Road, Nootka Road and Hollywood Road), and on Bennett Road at Sunrise Drive, Jones Street at Fern Road, and Memorial Avenue at Fourth Avenue.
- Median islands at new RRFB crossings where feasible, and at other locations along the waterfront on Highway 19A to discourage speeding, increase pedestrian safety and improve safety for other road users.
- A raised crossing and speed table to discourage speeding in the $40 \mathrm{~km} / \mathrm{h}$ playground zone on First Avenue at Community Park.
- A traffic signal at the Memorial Avenue-First Avenue intersection remains a priority for the Town, but is deferred until the "active" status of the railway line is resolved.


# Transportation Projects - Maps <br> Transportation Projects - Priorities 

Traffic Speed Data
ICBC Crash Data


Town of Qualicum Beach

| Transportation Priorities |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Criteria: 5 = Highest Priority, $1=$ Lowest Priority |  |  |  |  |  |  |  |  | 31 January 2024 |  |  |
| Status | Location Description |  | Criteria |  |  |  |  |  | Total | $\begin{gathered} \text { Weighted } \\ \text { Score } \end{gathered}$ | Notes |
|  |  |  |  | $\frac{\stackrel{\diamond}{\omega}}{\frac{\stackrel{1}{x}}{1}}$ |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & 0 \\ & \times 1 \end{aligned}$ |  |  |  |  |
|  |  |  | x2 |  | $\times 2$ | x 1 |  |  |  |  |
| New | Hwy 19A, Crescent Rd W-Judges Row | "Complete street" streetscape design |  | 4 | 4 | 4 | 5 | 2 | 5 | 24 | 37 | Repaving Memorial Ave-Crescent Rd W budgeted for 2024-26 |
|  | Village Way at Kwalikum Secondary School | Traffic calming - phase 1 crosswalk improvements | 4 | 4 | 4 | 5 | 4 | 3 | 24 | 37 | New crosswalk, sidewalk, parallel parking, medians and street trees |
|  | Downtown Trail, Beach Rd-Memorial Ave | Multiuse pathway on Harlech Rd | 3 | 5 | 5 | 5 | 2 | 3 | 23 | 36 | Defer crossing at Beach Rd while railway status remains "active" |
|  | Village Way at Kwalikum Secondary School | Traffic calming - full project | 5 | 4 | 4 | 5 | 2 | 2 | 22 | 36 | New crosswalk, sidewalk, parallel parking, medians and street trees |
|  | Hwy 19A-Village Way-Country Club Dr | Roundabout | 5 | 5 | 3 | 5 | 1 | 3 | 22 | 35 | Top 10 crash location |
| New | Memorial Ave,\#150-First Ave | Multiuse pathway on east side | 3 | 4 | 5 | 5 | 2 | 3 | 22 | 35 | Widen existing sidewalk into road to avoid increasing rail crossing width |
|  | Jones St at Fern Rd | Flashing RRFB crossing and streetlight | 5 | 3 | 3 | 4 | 4 | 3 | 22 | 34 | Add flashing RRFBs to existing crossing |
|  | Bennett Rd at Sunrise Dr | Flashing RRFB crossing and streetlight | 5 | 4 | 3 | 3 | 4 | 3 | 22 | 33 |  |
|  | Core bicycle network | Bicycle route and wayfinding signs | 2 | 5 | 3 | 5 | 4 | 3 | 22 | 32 |  |
|  | Memorial Ave-First Ave | Traffic signal | 5 | 5 | 3 | 5 | 2 | 1 | 21 | 34 | Defer to avoid additional cost/complexity of railway signals while railway status "active" |
|  | Primrose St, First Ave-Rupert Rd | Neighbourhood bikeway | 3 | 3 | 4 | 5 | 3 | 3 | 21 | 33 | Includes 4 traffic circles on Primrose Stand Beach Rd |
| New | Memorial Ave at Fourth Ave | Flashing RRFB crossing | 5 | 4 | 3 | 3 | 3 | 3 | 21 | 32 | Add flashing RRFBs to existing crossing |
| New | First Ave at Rye Rd | Raised crosswalk | 4 | 3 | 4 | 3 | 4 | 3 | 21 | 32 | Sight distances > 100m, traffic speeds 85 th percentile $=66-67 \mathrm{~km} / \mathrm{h}$ in $40 \mathrm{~km} / \mathrm{h}$ playground zone |
| New | Various trails | Trail etiquette signage | 3 | 3 | 5 | 2 | 5 | 3 | 21 | 31 |  |
| New | Hwy 19A, east of Bay St, east of Judges Row | Median islands | 2 | 4 | 3 | 5 | 3 | 4 | 21 | 31 | Between parking areas, use quick build materials to test geometry and benefits prior to repaving |
| New | Hwy 19A at Higson Cr | Speed display sign | 3 | 5 | 1 | 5 | 4 | 3 | 21 | 30 | After $50 \mathrm{~km} / \mathrm{hand}$ "Entering QB" signs between \#3346 and \#3350 facing eastbound traffic |
| New | Memorial Ave-First Ave | Additional streetight on NW corner | 2 | 5 | 3 | 4 | 4 | 3 | 21 | 30 |  |
|  | Village Way-Qualicum Rd | Roundabout | 5 | 4 | 3 | 4 | 1 | 3 | 20 | 32 |  |
|  | Village Way at Berwick Rd | Flashing RRFB crossing | 5 | 2 | 3 | 4 | 3 | 3 | 20 | 32 | Add flashing RRFBs to existing crossing |
|  | Hwy 19A at Hall Rd | Flashing RRFB crossing | 5 | 3 | 3 | 3 | 3 | 3 | 20 | 31 | $50 \mathrm{~km} / \mathrm{h}$ limit, sight distances > 100 m |
| New | Hwy 19A at Qualicum Rd | Flashing RRFB crossing, median island | 5 | 3 | 3 | 3 | 3 | 3 | 20 | 31 | $50 \mathrm{~km} / \mathrm{h}$ limit, sight distances > 100 m |
| New | Hwy 19A-Bennett Rd | Normalize intersection | 2 | 4 | 5 | 4 | 2 | 3 | 20 | 31 | Remove "pork chop" island and uncontrolled school crossing, top 10 crash location |
|  | Rupert Rd at Arbutus St | Pedestrian signal | 5 | 3 | 3 | 2 | 4 | 3 | 20 | 30 | $70 \mathrm{~km} / \mathrm{h}$ limit, extend pathway to crossing |
| New | Crescent Rd W at Bay St | Raised crosswalk | 4 | 3 | 3 | 3 | 4 | 3 | 20 | 30 | Sight distances > 100 m , traffic speeds 85 th percentile $=63-68 \mathrm{~km} / \mathrm{h}$, bus stop 10 m west |
|  | Hwy 19A at Garrett Rd | Flashing RRFB crossing | 5 | 2 | 3 | 3 | 3 | 3 | 19 | 30 | $50 \mathrm{~km} / \mathrm{h}$ limit, sight distances > 100 m , bus stop 40 m east at Beach Terr |
| New | Hwy 19A at Buller Rd | Flashing RRFB crossing | 5 | 2 | 3 | 3 | 3 | 3 | 19 | 30 | $50 \mathrm{~km} / \mathrm{h}$ limit, sight distances > 100 m |
| New | Hwy 19A at Crescent Rd W | Flashing RRFB crossing, intersection realignment | 5 | 2 | 3 | 3 | 3 | 3 | 19 | 30 | $50 \mathrm{~km} / \mathrm{h}$ limit, sight distances $>100 \mathrm{~m}$, bus stop 80 m west |
|  | Bennett Trail, Hwy 19A-Railway tracks | Pathway/sidewalk | 5 | 3 | 3 | 2 | 3 | 3 | 19 | 29 | Alignment to be determined |
|  | Village Way Trail, Nootka Rd-Hwy 19A | Pathway | 3 | 3 | 4 | 3 | 3 | 3 | 19 | 29 | Both sides of road east of crossing at Christian Fellowship school, include in roundabout project |
|  | Village Way-Qualicum Rd | Additional streetlight | 2 | 3 | 3 | 4 | 4 | 3 | 19 | 28 |  |
| New | Laburnum Rd at Claymore Rd | Upgrade flashing beacons to RRFBs | 2 | 3 | 4 | 3 | 4 | 3 | 19 | 28 | School crossing, $60 \mathrm{~km} / \mathrm{h}$ limit |
| New | Village Way east of Hemsworth Rd | Speed display sign | 3 | 4 | 1 | 4 | 4 | 3 | 19 | 27 | Facing westbound traffic, $50 \mathrm{~km} / \mathrm{h}$ zone begins |
| New | Village Way at Hollywood Rd | Flashing RRFB crossing | 5 | 1 | 3 | 3 | 3 | 3 | 18 | 29 | $60 \mathrm{~km} / \mathrm{h}$ limit, bus stops on NW and SE corners |
| New | Village Way at Nootka Rd | Flashing RRFB crossing | 5 | 1 | 3 | 3 | 3 | 3 | 18 | 29 | $60 \mathrm{~km} / \mathrm{h}$ limit, bus stops on NW and SE corners |
|  | Railway Stat Memorial Ave | Full closure | 5 | 3 | 2 | 3 | 2 | 3 | 18 | 28 | Traffic redirected to Village Way |
|  | Village Way-Qualicum Rd | Traffic signal | 3 | 3 | 3 | 4 | 2 | 3 | 18 | 28 | Roundabout is higher priority |
| New | Hwy 19A, \#2919-\#3035 | Buffered parking bays | 2 | 2 | 2 | 5 | 4 | 3 | 18 | 27 | Shift lane lines to create 300 mm painted buffer adjacent parking bays |
|  | Memorial Ave-Fern Rd | Advance protected left turn northbound | 2 | 5 | 2 | 5 | 2 | 2 | 18 | 27 | Re-evaluate after Memorial-First intersection is signalized |
| New | Bennett Rd at Arrowview Elementary | Curb ramps | 1 | 2 | 5 | 3 | 4 | 3 | 18 | 27 | NW \& SW corners of school access |
| New | Crescent Rd W at Balsam St | Speed table | 2 | 3 | 3 | 3 | 4 | 3 | 18 | 26 | Sight distances > 100m, traffic speeds 85 th percentile $=60-62 \mathrm{~km} / \mathrm{h}$ |
| New | Crescent Rd W at\#334-\#340 | Speed table | 2 | 3 | 3 | 3 | 4 | 3 | 18 | 26 | Sight distances > 100m, traffic speeds 85 th percentile $=63-71 \mathrm{~km} / \mathrm{h}$ |
| New | First Ave at \#250 | Speed table | 2 | 3 | 3 | 3 | 4 | 3 | 18 | 26 | Sight distances $>100 \mathrm{~m}, 40 \mathrm{~km} / \mathrm{h}$ playground zone |
| New | Crescent Rd W-Arbutus St | Crushed aggregate walkway, streetight | 2 | 3 | 3 | 3 | 4 | 3 | 18 | 26 |  |
| New | Railway crossings at Arbutus Street, Beach Rd, Qualicum Rd | Centreline stop signs | 2 | 3 | 1 | 4 | 5 | 3 | 18 | 25 |  |
|  | Rupert Rd, Primrose St-Memorial Ave | Pathway | 4 | 2 | 3 | 2 | 3 | 3 | 17 | 26 | Extension of Primrose St. neighbourhood bikeway to Memorial Ave. |
|  | Laburnum Rd-Rupert Rd | Barriers on shoulder to protect pathway users | 3 | 2 | 3 | 2 | 4 | 3 | 17 | 25 | Concrete barriers where pathway is on shoulder or road |
| New | Hwy 19A-Yambury Rd | Traffic signal | 4 | 1 | 3 | 3 | 2 | 3 | 16 | 26 |  |
|  | Jones St, Valdez Ave-Fern Rd | Pathway/sidewalk | 4 | 2 | 3 | 2 | 2 | 3 | 16 | 25 | West side north of Garden Rd., new crossing at Garden Rd. |
|  | Laburnum Rd-railway tracks | Pathway connection across tracks | 3 | 3 | 3 | 3 | 3 | 1 | 16 | 25 | Widened shoulder with barrier or separate pathway crossing, defer while railway status "active" |


Town of Qualicum Beach - Traffic Speeds


# Technical Memorandum 

## To: Rob Dickinson

From: Richard Drdul


Date: 31 January 2024

## Re: Reduced Speed Limits on Residential Streets

This memorandum addresses the suggestion to reduce the speed limit throughout the Town to $30 \mathrm{~km} / \mathrm{h}$ to address road safety concerns. Although there are benefits associated with a $30 \mathrm{~km} / \mathrm{h}$ speed limit, to do so at this time would incur costs in the hundreds of thousands of dollars for signs along every road with a $30 \mathrm{~km} / \mathrm{h}$ speed limit, and with no certainty that safety issues would be resolved as a result. Instead, it is recommended that speed limits on residential streets in Qualicum Beach remain as they are for now, pending any changes to the Provincial Motor Vehicle Act, and in the meantime the Town address localized safety issues with traffic calming measures and other safety projects in the Age-Friendly Transportation Plan.

## Background

The default "statutory" speed limit on municipal roads in BC is $50 \mathrm{~km} / \mathrm{h}$. Although it may be an appropriate speed limit for major roads, $50 \mathrm{~km} / \mathrm{h}$ speeds on local streets and some collector roads are generally uncomfortable for residents, pedestrians and cyclists. Reduced speeds of $30 \mathrm{~km} / \mathrm{h}$ or $40 \mathrm{~km} / \mathrm{h}$ are generally more compatible with typical activities and land uses on these streets. Reduced speed limits offer many potential benefits, including less potential for and severity of injuries, improved livability, less noise, and more local trips made by walking and cycling.

Communities across Canada have implemented or are considering reduced speed limits, in specific neighbourhoods or throughout the entire municipality. Some communities have reduced speed limits to $40 \mathrm{~km} / \mathrm{h}$, and some to $30 \mathrm{~km} / \mathrm{h}$. Most communities have limited the reduced speed limits to residential neighbourhood streets (local streets), while a few have also included commercial, collector and arterial roads.

Currently, to implement a speed limit in BC less than the default $50 \mathrm{~km} / \mathrm{h}$ limit requires that signs be posted along all roads with reduced speed limits, amounting to as much as $\$ 10,000$ per kilometre of road. The only way to avoid these costs is to amend the Motor Vehicle Act to permit speed limits to be reduced without the need for costly signs along each road.

The Union of BC Municipalities passed a resolution in September 2019 asking the Province to amend the Motor Vehicle Act to allow municipalities to implement blanket $30 \mathrm{~km} / \mathrm{h}$ speed zones in residential areas. The resolution was rejected by the Province in February 2020. However, the Province occasionally updates the Motor Vehicle Act to reflect changing conditions, and it is expected that a future change to the Act will include either a default $30 \mathrm{~km} / \mathrm{h}$ speed limit on local residential streets throughout BC , or a provision that would permit municipalities to set blanket speed limits without associated and costly signage along all roads.

## Recommendation

At this time, it is recommended that:

- Speed limits in Qualicum Beach remain as they are for now.
- The Town wait for the Province to make changes to the Motor Vehicle Act regarding reduced speed limits, particularly changes that would permit speed limits to be reduced without costly signage along all roads.
- The Town review the experience in other communities where reduced speed limits have been introduced, to anticipate other actions that should be undertaken in conjunction with reduced speed limits to adequately address road safety and other issues.
- In meantime, the Town address localized road safety issues with traffic calming measures and other transportation projects identified in the Age-Friendly Transportation Plan.


## Rationale

1. Reducing the speed limit would be expensive, as the Motor Vehicle Act requires that signs be installed on every road. Funds could be more effectively spent on localized traffic calming measures and other transportation safety projects.

Currently, the Motor Vehicle Act requires that signs be installed on all roads with speed limits that differ from the default $50 \mathrm{~km} / \mathrm{h}$ limit. The typical practice when installing speed limit signs is to sign a roadway at every intersection in both directions (plus additional signs as necessary). Assuming an average block length of 200 m would require 10 signs per kilometre of road. Assuming a cost of $\$ 1,000$ per installed sign results in a cost of $\$ 10,000$ per kilometre of roadway to implement a $30 \mathrm{~km} / \mathrm{h}$ speed limit.

This cost estimate is consistent with the experience in other communities. A pilot project in Vancouver on a total of 3.3 km of streets required 120 speed limit signs at a total cost of $\$ 33,000$, equivalent to $\$ 10,000$ per kilometre of road. A pilot project on four streets in Winnipeg required 224 signs at a total cost of $\$ 83,000$, equivalent to $\$ 8,000$ per kilometre of road.

Faced with these costs, some municipalities have instead opted to employ "gateway" signage where $30 \mathrm{~km} / \mathrm{h}$ signs are installed only at entry points into the municipality rather than along all affected roads. It is uncertain whether this approach complies with the Motor Vehicle Act, and as a result it could create issues for enforcement of speed limits and liability in the event of a collision.

In estimating the costs of a municipal-wide $30 \mathrm{~km} / \mathrm{h}$ speed limit, the Town should err on the side of caution and assume that signs would be required at all intersections on all roads, and that based on the experience in Vancouver and Winnipeg the cost could be $\$ 8,000$ to $\$ 10,000$ per kilometre. There are 113 kilometres of roads in Qualicum Beach, which means that the total cost of implementing a $30 \mathrm{~km} / \mathrm{h}$ speed limit could be as high as $\$ 1$ million.
2. $30 \mathrm{~km} / \mathrm{h}$ signs on their own have little effect on speeds. Road changes are necessary as well in order to effectively resolve speeding and safety issues.

Motorists drive at a speed that feels comfortable or appropriate for the conditions. This means that on its own, a $30 \mathrm{~km} / \mathrm{h}$ speed limit sign on a road that feels comfortable to drive at $50 \mathrm{~km} / \mathrm{h}$ will not significantly reduce traffic speeds.

Currently, there is no data available that shows a significant reduction in traffic speeds as a result of an area-wide $30 \mathrm{~km} / \mathrm{h}$ speed limit. A pilot project in six neighbourhoods in Surrey found that "a reduction to $30 \mathrm{~km} / \mathrm{h}$ or $40 \mathrm{~km} / \mathrm{h}$ did not translate to a significant reduction in vehicle speed." Internationally, a study of $32 \mathrm{~km} / \mathrm{h}(20 \mathrm{mph})$ zones in the UK found only a $1 \mathrm{~km} / \mathrm{h}$ reduction in traffic speeds, and a study in Minnesota found a $2-3 \mathrm{~km} / \mathrm{h}(1-2 \mathrm{mph})$ reduction in mean speeds in areas where the speed limit was reduced to $32 \mathrm{~km} / \mathrm{h}$ ( 20 mph ).

In Montréal, speed data shows that in $30 \mathrm{~km} / \mathrm{h}$ zones motorists typically drive at $40-45 \mathrm{~km} / \mathrm{h}$. A Councillor who initially supported a $30 \mathrm{~km} / \mathrm{h}$ speed limit now says that the experience shows a reduced speed limit needs to be supported by road design changes to effectively discourage higher speeds. The mayor of a borough with a road where the speed limit was reduced to $30 \mathrm{~km} / \mathrm{h}$ says that signs and enforcement "were not enough," and reports that the borough now plans to narrow the road to achieve lower traffic speeds. The mayor of Victoria noted that a new city-wide $30 \mathrm{~km} / \mathrm{h}$ speed limit "will be supported with ongoing infrastructure investments like speed humps and other traffic calming measures."

Although the evidence of lower traffic speeds is inconclusive, other benefits have been reported for area-wide speed reductions. In Toronto, a 28\% reduction in pedestrian-motor vehicle collisions and a $67 \%$ decrease in major and fatal injuries has been attributed to a $30 \mathrm{~km} / \mathrm{h}$ speed limit on local streets.
3. Not every street has a speeding or safety problem. Traffic calming is a more effective way to resolve localized safety issues in the small number of locations where there are problems.

Most residential streets in Qualicum Beach do not have chronic speeding problems or other road safety issues. As in communities across Canada, neighbourhood traffic problems in Qualicum Beach are limited to a small number of locations.

Rather than incurring the costs of signs necessary to reduce the speed limit to $30 \mathrm{~km} / \mathrm{h}$ on all roads in the Town, with no certainty that safety issues would be resolved as a result, a more effective approach would be to implement traffic calming measures and other projects in the Age-Friendly Transportation Plan to address localized speeding and safety issues. Traffic calming and other transportation projects are more likely to produce desired results, whereas a municipal-wide $30 \mathrm{~km} / \mathrm{h}$ speed limit would not likely resolve issues without additional physical changes to roads, including traffic calming.

