

BELCARRA ACTIVE TRANSPORTATION NETWORK PLAN

Your Village, Your Move: Shaping Belcarra's Pathways

What is Active Transportation?

Active transportation includes any form of human-powered transportation. It is often synonymous with cycling and walking, however there are many forms.



An Active transportation Network includes all routes, connections, and amenities that support active modes, including:



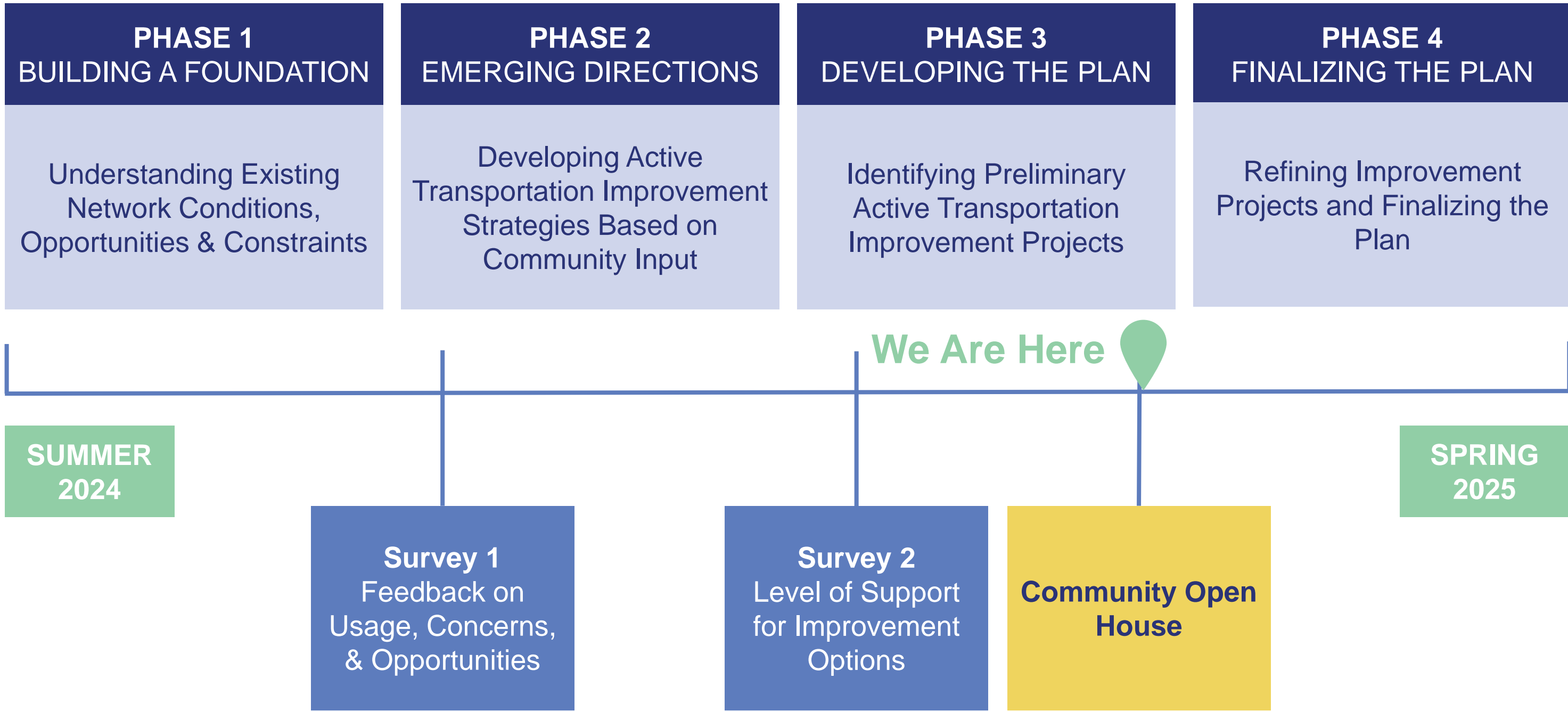
What is an Active Transportation Network Plan (ATNP)?

An ATNP identifies active transportation improvement projects, laying the groundwork for future initiatives and opening the door to funding opportunities. The Plan aims to:



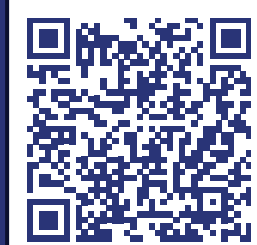
Plan Process

Belcarra's ATNP was developed over four phases beginning in Summer 2024. The ATNP is both led and refined through the public engagement process.



? WHERE ARE WE NOW?

- After reviewing the feedback that we gathered during the first round of community engagement, we began identifying key issues, opportunities, and improvement strategies.
- Now we want to share these ideas with Belcarra's residents and gather feedback to help us refine the Plan's projects and priorities.



ACTIVE TRANSPORTATION INFRASTRUCTURE FUNDING OPPORTUNITIES

Regional, Provincial, and Federal Active Transportation Infrastructure Grants

Regional Funding

TransLink's Bicycle Infrastructure Capital Cost Share (BICCS) Program

Provides funding for new or improved bicycle infrastructure projects located in areas with “high cycling potential”, including **cost sharing of up to 50%** or projects meeting eligibility criteria in Belcarra.

TransLink's Walking Infrastructure to Transit (WITT) Program

Provides cost-sharing for projects that improve the pedestrian environment around transit stations and stops, **covering up to 75% of eligible project costs** for local governments with populations under 15,000.

**The current ATNP project is also being 50% funded by TransLink!*

Provincial Funding

BC Active Transportation Infrastructure Grants Program

Provides funding to local governments and Indigenous communities for active transportation infrastructure projects, **covering up to 70% of eligible project costs** for local governments with populations under 15,000.

Federal Funding

Active Transportation Fund

Dedicates \$400 million over five years to support the expansion of active transportation networks across Canada, including contributions up to \$50 million with a maximum **contribution rate between 40-100%** depending on recipient and project location.

Will These Funding Opportunities Change Over Time?

Funding is available through a variety of programs that support active transportation infrastructure projects. These funding opportunities may change over time, with some programs potentially ending and new ones emerging.

How Will the Plan be Implemented?

The Plan will be implemented over the next 10+ years, starting with low-cost improvements that can be implemented quickly such as road shoulder improvements and measures to reduce vehicle speeds.

Larger projects such as creating new walking and biking routes will be implemented in several segments as separate projects that focus on the most critical areas such as the segment of Bedwell Bay Road between Kelly and Main Avenue.

This incremental approach helps spread costs over time and helps make use of the available funding programs.

? QUESTIONS & ANSWERS

How can we trust that this project won't turn into something too big or invasive, changing the character of our community?

We are developing context-specific solutions that align with Belcarra's rural character and match the needs of the Village.

How will these projects be funded? Will we as residents see an increase in taxes to cover the costs?

We are exploring a variety of funding opportunities, including regional, provincial, and federal grant programs. It is unknown at this time if the projects will impact taxes as project is still in the preliminary planning stage



WHAT WE HEARD FROM BELCARRA'S RESIDENTS

Community Feedback from Survey #1

Survey #1 was open from October 30th to November 24th, 2024. **143** responses were received. The purpose of the survey was to capture active travel observations and experiences in Belcarra.



Over **50%** of respondents are concerned about the Village of Belcarra improving the Active Transportation Network. Residents expanded on the concerns, as summarized below:

- 1. Safety and Practicality Concerns:** There are concerns that bike lane improvements in other communities have made cycling less safe and that the proposed changes may not be practical or suitable for Belcarra.
- 2. Cost and Financial Feasibility:** A significant number of respondents believe the costs of implementing the improvements are too high and not justified for a small village like Belcarra.
- 3. Benefits for Non-Residents:** Some believe the proposed improvements will mainly benefit visitors who do not contribute to Belcarra's tax base, rather than the residents themselves.

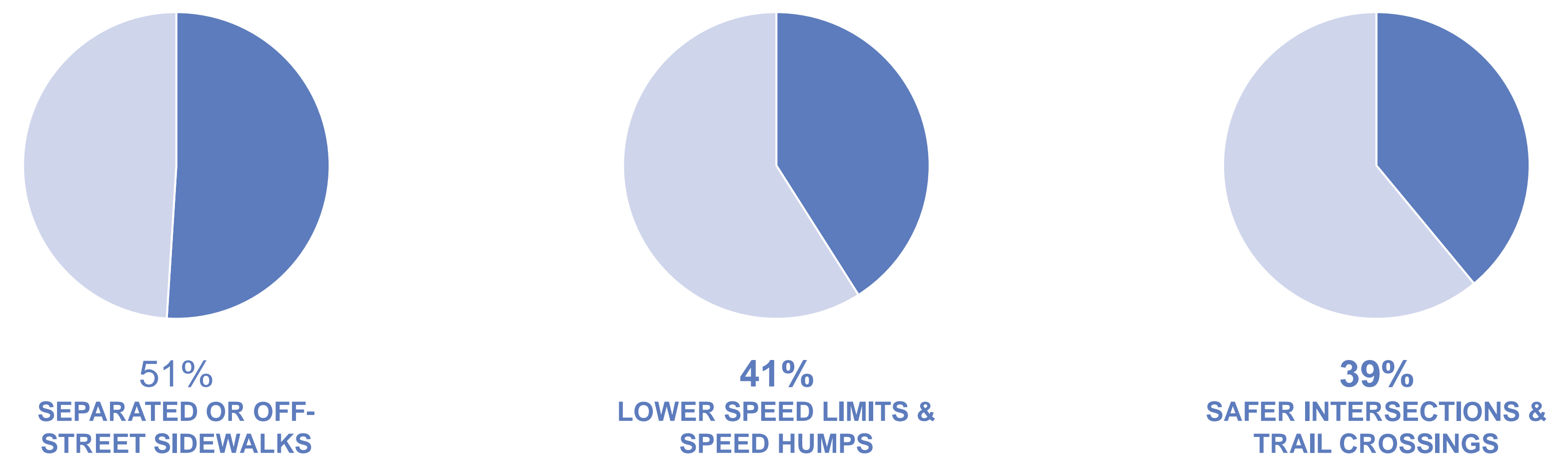
Most Frequently Used Active Travel Modes



Most Common Reason for Active Travel



Desired Safety Measures



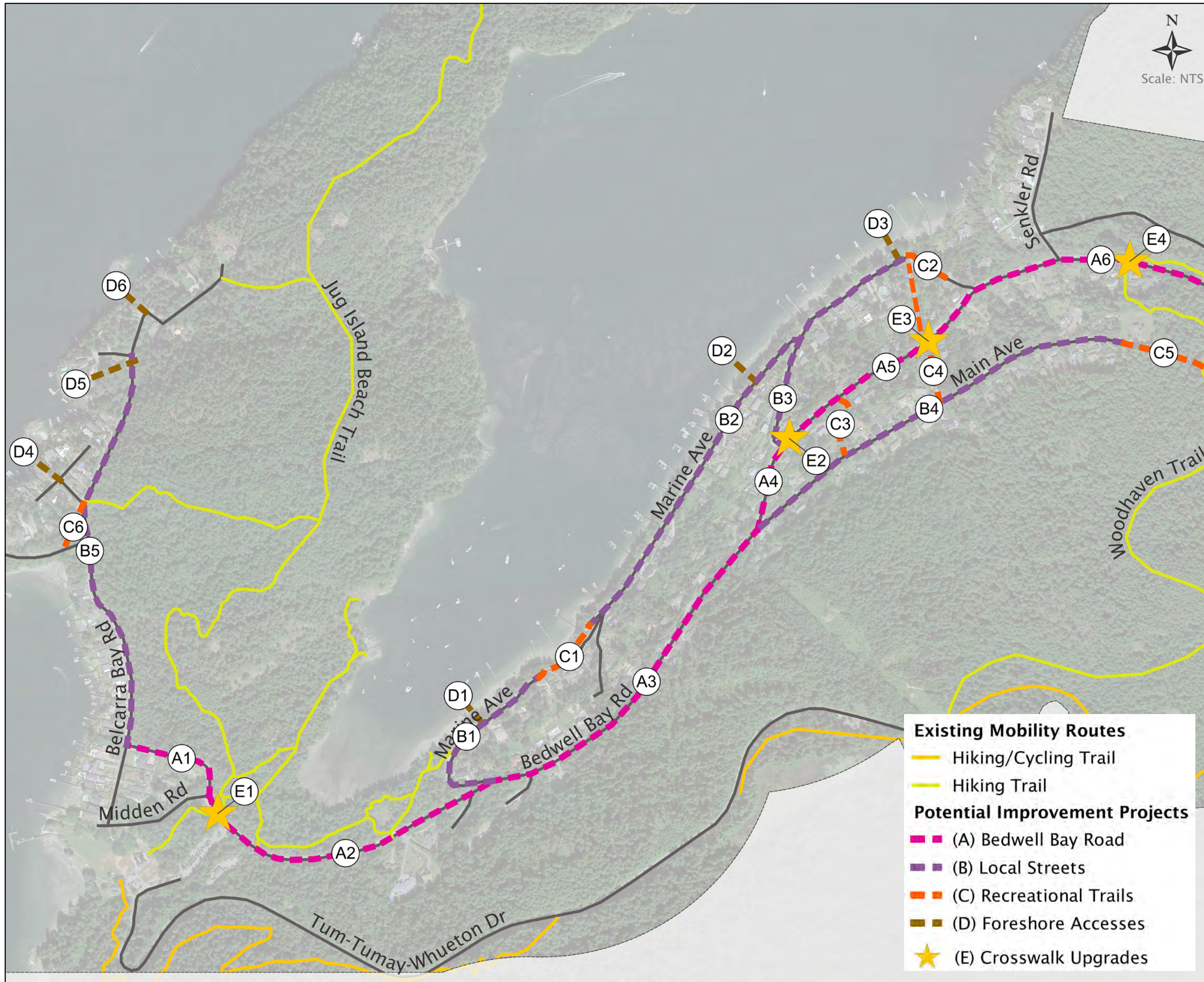
There were **37** open-ended comments about the importance of safety measures for the Village. The comments centred on Traffic Safety & Speed Control, Signage & Traffic Diversion, and Path & Trail Improvements.



FUTURE MOBILITY NETWORK

Recommended Improvements

Belcarra's active transportation network improvements can take a variety of forms depending on the context. There is no one-size fits all solution, so we prepared tailored design options for each of the improvement areas shown in the map below. The improvement projects are divided into separate segments (e.g., A1, A2, etc.) to demonstrate how they can be implemented in phases over time. The phased approach offers flexibility and helps reduce up-front costs.



Improvement Projects



What did we hear about from the first survey?
The dots below show how many responses we received in support of these improvements!

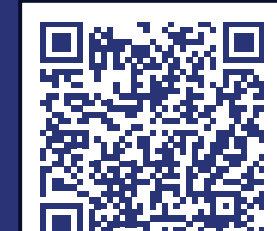
A. Bedwell Bay Road Walking & Biking Facilities \$ \$ \$ - \$ \$ \$ \$ \$ \$	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
B. Local Street Walking & Biking Facilities \$ \$ \$	● ● ● ● ● ●
C. Recreational Trail Improvements \$ \$ - \$ \$ \$	● ●
D. Foreshore Access Improvements \$ - \$ \$	
E. Crosswalk Upgrades \$ - \$ \$	● ●
F. Bedwell Bay Road Traffic Calming \$	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
G. Village-Wide Multimodal Wayfinding \$ \$	● ●
H. Pedestrian Lighting \$ \$ \$	●
I. Bicycle Parking \$	
J. Benches & Rest Areas \$	

Order of Magnitude Average Segment Cost Estimate

\$ \$ \$ \$ \$ > \$500k \$ \$ \$ \$ \$ \$250 - 499K \$ \$ \$ \$ \$ \$100 - 249K \$ \$ \$25 - 99K \$ < \$25k

\$ Costs may increase in locations where road widening is required

Order of Magnitude cost estimates have been developed at a high level for planning purposes only. Actual cost estimates require input from a detailed civil design for each project.



RURAL DESIGN STRATEGIES

ACTIVE TRANSPORTATION FACILITIES FOR RURAL CONTEXTS

Rural design strategies offer cost-effective alternative solutions in rural contexts. The following solutions may be implemented where limited space, environmental considerations, and budget constraints present challenges in rural contexts.

SIDEWALKS



Sidewalks provide dedicated spaces for pedestrians alongside the roadway. Sidewalks are typically constructed out of concrete, raised above the roadway, and separated by a curb.

Separated Sidewalks: Sidewalks that are separated from the roadway by a furnishing zone are facilities for All Ages and Abilities (AAA).

Non-Separated Sidewalks: Sidewalks that are located directly next to the roadway are considered supporting facilities that can be provided in rural contexts where AAA facilities are not feasible.

SHARED-USE PATHS



Shared-use paths are paved trails that are located within the road right-of-way but separated from vehicular lanes by a barrier or curb.

Separated Shared-Use Pathway: Separated shared-use paths separate pedestrians and cyclists using a painted line, visual separation, or a vertical or horizontal feature.

Un-Separated Shared Use Pathway: Un-separated shared-use paths do not provide separation between pedestrians and cyclists. These may be appropriate where volumes are low and there is limited width.

SHARED STREETS

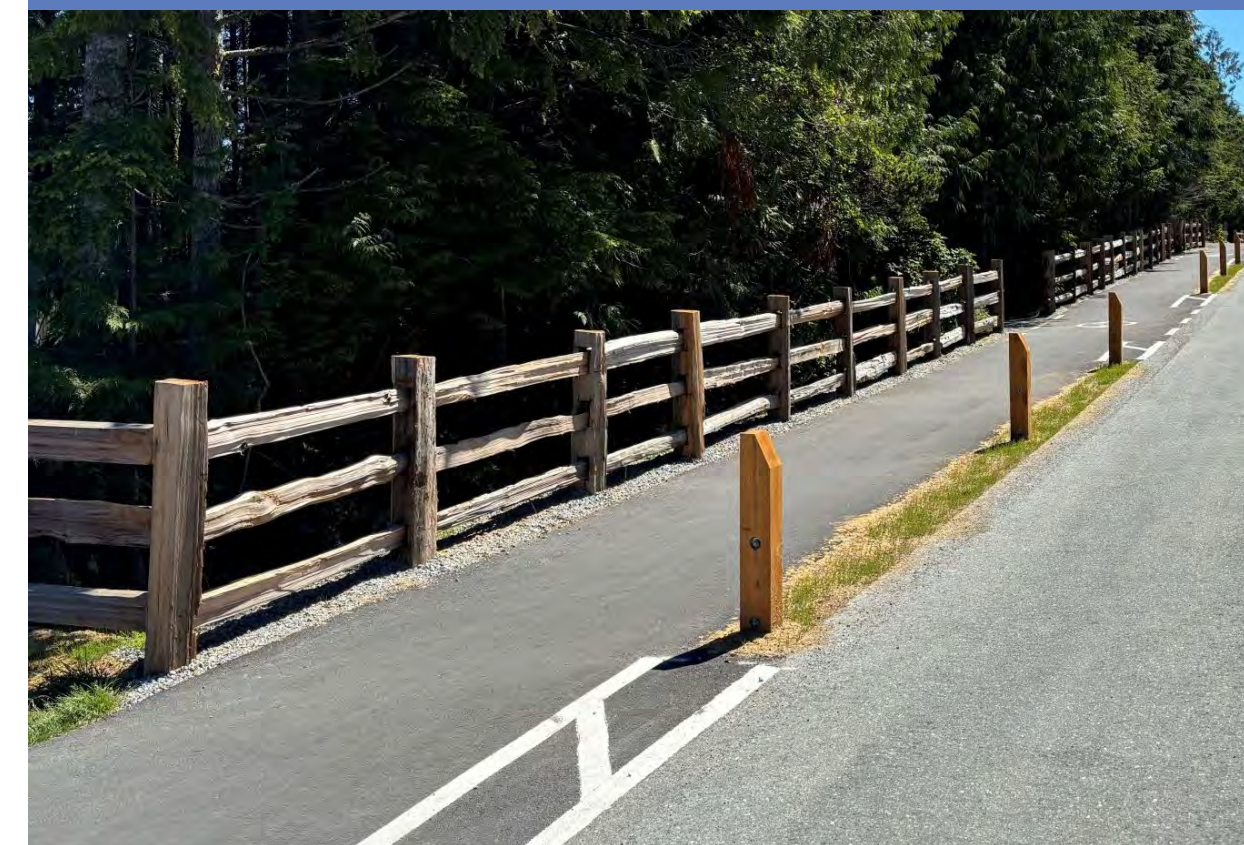


Shared streets are roadways where cyclists, vehicles, and sometimes pedestrians share the travelled way under low-speed conditions.

Bicycle Boulevards: Shared roadways that limit exposure to motor vehicle traffic with traffic calming measures, pavement markings, and signage.

Shared Lanes: General purpose travel lanes along low-volume and low-speed roadways with sufficient width to facilitate a small range of experienced cyclists amongst other motor vehicles.

PEDESTRIAN LANES



Pedestrian lanes are an effective strategy for creating dedicated pedestrian space along rural roads without the need for full sidewalks.

Buffered Pedestrian Lanes: Dedicated lanes that are separated from the roadway using paint or flexible bollards to create a buffer between vehicular traffic and pedestrians.

Painted Pedestrian Lanes: Dedicated lanes that are located directly next to the roadway and marked using a painted line. Painted lanes may be considered on rural roadways with low vehicle volumes and speeds.

ADVISORY LANES

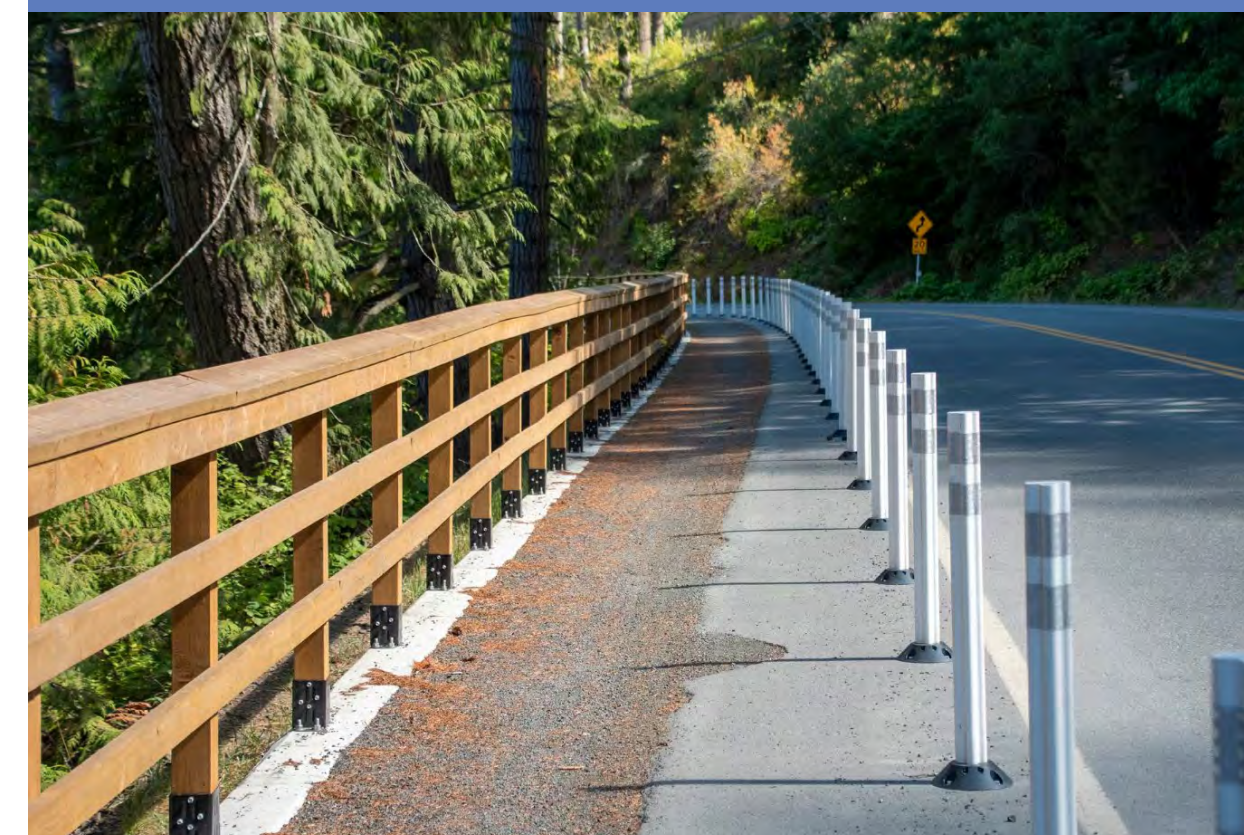


Advisory lanes are uni-directional pedestrian and/or bike lanes on either side of bi-directional vehicle lane. Motorists may temporarily enter the advisory lanes to pass oncoming traffic, after yielding to active modes.

Advisory Bike Lanes: Uni-directional bike lanes on either side of a narrow bi-directional vehicle lane.

Advisory Shoulders: Where no sidewalk exists, advisory lanes may be used for both walking and cycling, in which case the facilities are called "advisory shoulders".

ROAD SHOULDERS



Road shoulders alongside rural roads can be designed with sufficient width to accommodate active modes. These shoulders can be enhanced with painted buffer zones or rumble strips.

Walkable Shoulders: Walkable shoulders are paved spaces on the side of the roadway which may be used by pedestrians and cyclists.

Bike Accessible Shoulders: Bicycle accessible shoulders are paved shoulders on the right side of rural roads that are designed with sufficient width to accommodate cyclists.



ON-STREET IMPROVEMENTS

BEDWELL BAY ROAD

Conceptual Design Options

SIDEWALK



Sidewalks dedicate space for pedestrians alongside the roadway, typically constructed out of concrete, raised above the roadway, and separated by a curb.

Pros: Sidewalks offer a safer experience for pedestrians with clearly separated space from vehicles and cyclists. As a dedicated facility, sidewalks can be narrower than shared facilities, which can be easier to accommodate in constrained areas.

Cons: Sidewalks do not accommodate cyclists and cost more to build and maintain than some of the other design alternatives.

SHARED-USE PATH



Shared pathways provide shared space for pedestrians and cyclists. They provide two-way travel within the roadway but are separated from vehicle lanes by a barrier.

Pros: Shared paths accommodate pedestrians and cyclists in a single, wider path, separating active modes from vehicles in a more space-efficient manner than separate sidewalks and bike lanes.

Cons: Shared paths can create potential for conflict between pedestrians and cyclists and require additional width which can be difficult to achieve in constrained areas.

BUFFERED LANE



Buffered lanes provide dedicated space for pedestrians without the need for full sidewalks, typically marked using paint and bollards to create a buffer from vehicles.

Pros: Buffered lanes offer a low-cost and easy to implement solution that allows for flexibility by using painted buffers, bollards, or concrete curbs as separation.

Cons: Buffered lanes offer less protection for pedestrians than a raised sidewalk and they do not readily accommodate cyclists (unless they are made wide enough to be shared).

Order of Magnitude Average Segment Cost Estimate

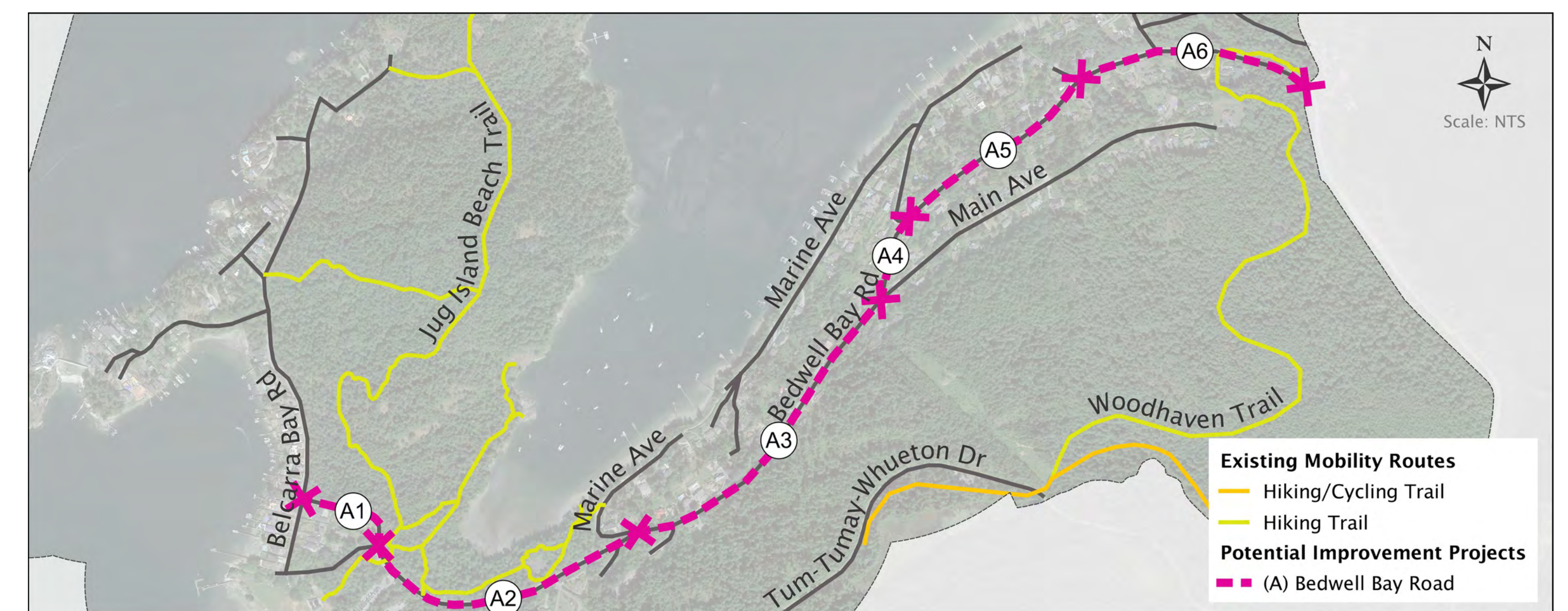
> \$500k \$250 - 499K \$100 - 249K \$25 - 99K < \$25k

Costs may increase in locations where road widening is required

Order of Magnitude cost estimates have been developed at a high level for planning purposes only. Actual cost estimates require input from a detailed civil design for each project.

Project Map

The map below shows where we are contemplating the proposed improvements along Bedwell Bay Road. The improvement projects are divided into separate segments (e.g., A1, A2, etc.) to demonstrate how they can be implemented in phases over time. The phased approach offers flexibility and helps reduce up-front costs.



Project Segments

A1. Belcarra Bay Rd to Midden Rd

A2. Midden Rd to Marine Ave

A3. Marine Ave to Main Ave

A4. Main Ave to Kelly Rd

A5. Kelly Rd to Watson Rd

A6. Watson Rd to Village Boundary



ON-STREET IMPROVEMENTS

LOCAL STREETS

Conceptual Design Options

ADVISORY SHOULDER



Advisory shoulders are painted pedestrian/bike lanes on either side of a single vehicle lane. Motorists drive in the centre but use the advisory lanes to pass oncoming traffic.

Pros: Advisory shoulders provide space for pedestrians and cyclists without the need to widen roadways. They can help reduce vehicle speeds and they are cost effective.

Cons: Advisory shoulders do not provide physical separation from vehicles, and they create potential for conflict when vehicles use the shoulder to pass oncoming drivers.

WALKABLE SHOULDER



Walkable shoulders are painted road shoulders on one side of a rural road. Walkable shoulders are designed with sufficient width to accommodate pedestrians and/or cyclists.

Pros: Walkable shoulders provide dedicated space for pedestrians and cyclists without the need to share with vehicles, offering a low-cost solution for quiet streets. These shoulders can be enhanced with painted buffer zones or rumble strips to further improve safety.

Cons: Walkable shoulders are bi-directional and may require additional width than uni-directional advisory shoulders. Physical buffers are optional but may increase costs and require additional maintenance.

Order of Magnitude Average Segment Cost Estimate

> \$500k

 \$250 - 499K

 \$100 - 249K

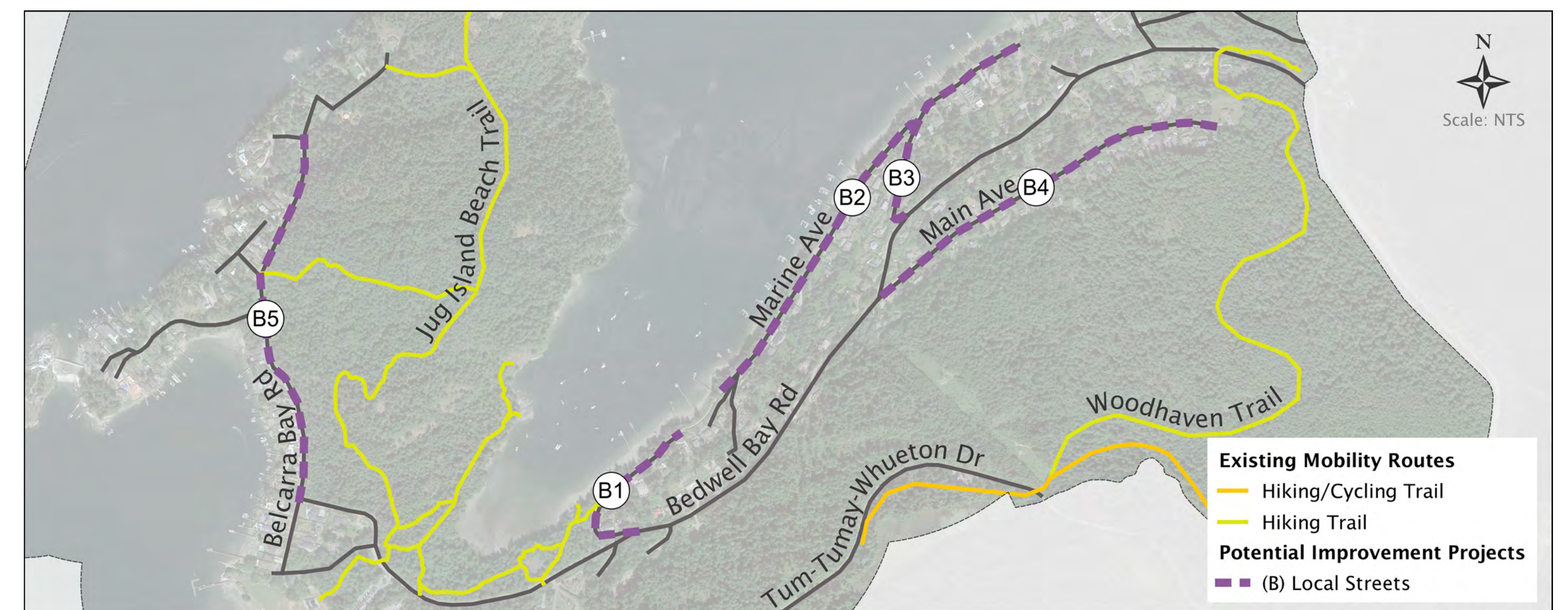
 \$25 - 99K

 < \$25k

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Project Map

The map below shows where we are contemplating the proposed improvements along local streets. The improvement projects are divided into separate segments (e.g., B1, B2, etc.) to demonstrate how they can be implemented in phases over time. The phased approach offers flexibility and helps reduce up-front costs.



Project Segments

B1. Marine Ave (West)

B2. Marine Ave (East)

B3. Kelly Rd

B4. Main Ave

B5. Belcarra Bay Rd



OFF-STREET IMPROVEMENTS

RECREATIONAL TRAILS

Conceptual Design Options

PAVED TRAIL



Paved trails provide safe and enjoyable walking and biking experiences away from vehicular traffic. The paved surface improves accessibility to accommodate more users.

Pros: Paved trails provide a smooth, accessible surface that can accommodate a wider variety of users including strollers, wheelchairs, and bikes. Paved trails also require less maintenance and remain stable during wet conditions.

Cons: Paved trails are more expensive to build and have a less natural look and feel than unpaved trails.

UNPAVED TRAIL



Unpaved trails provide walking and biking options that are separated from vehicular traffic. The unpaved surface maintains natural character but limits accessibility.

Pros: Unpaved trails provide a lower cost alternative to paved facilities while maintaining separation from the road network and blending into the surrounding environment with a more natural look and feel than paved trails.

Cons: Unpaved trails require more frequent maintenance and become muddy or uneven in wet weather. Unpaved trails are also less accessible to people of different ages and abilities.

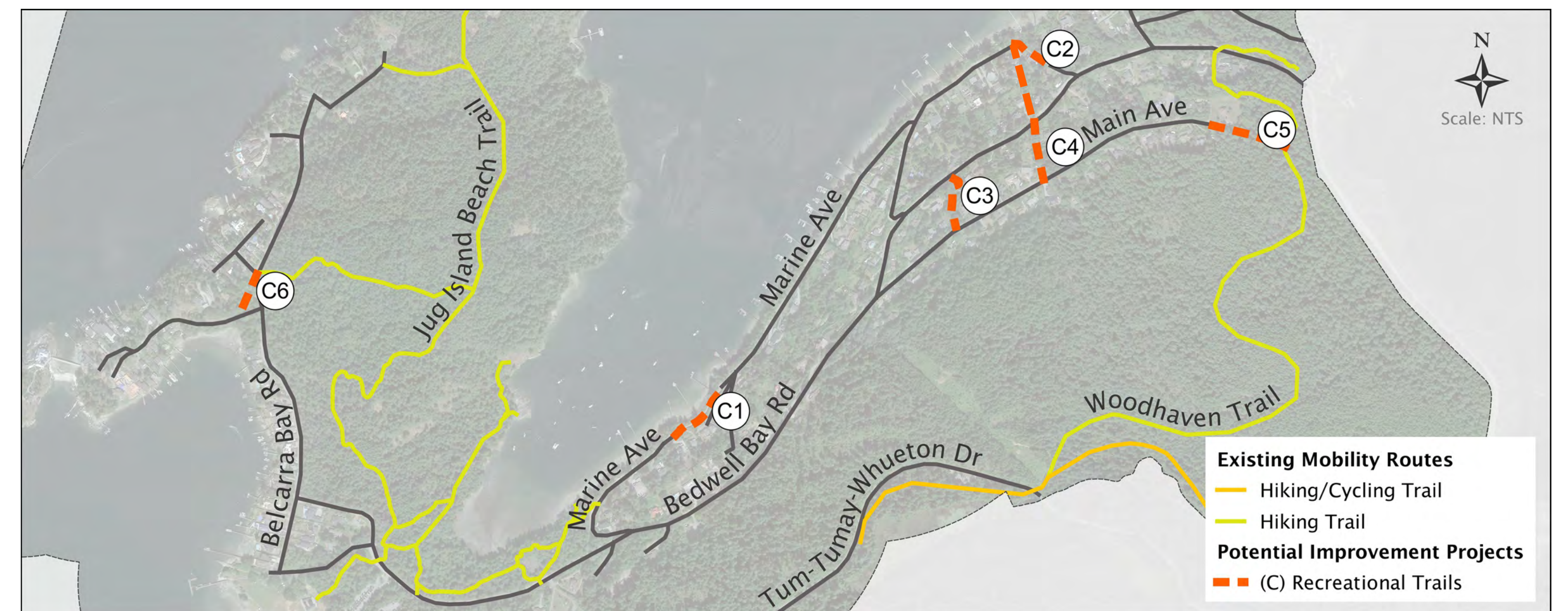
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Project Map

The map below shows where we are contemplating the proposed improvements along recreational trails. The improvement projects are divided into separate segments (e.g., C1, C2, etc.) to demonstrate how they can be implemented in phases over time. The phased approach offers flexibility and helps reduce up-front costs.



Project Segments

C.1 Marine Trail

C.2 Watson Trail

C.3 Taylor Trail

C.4 Tatlow Trail

C.5 Main Trail

C.6 Turtlehead Trail

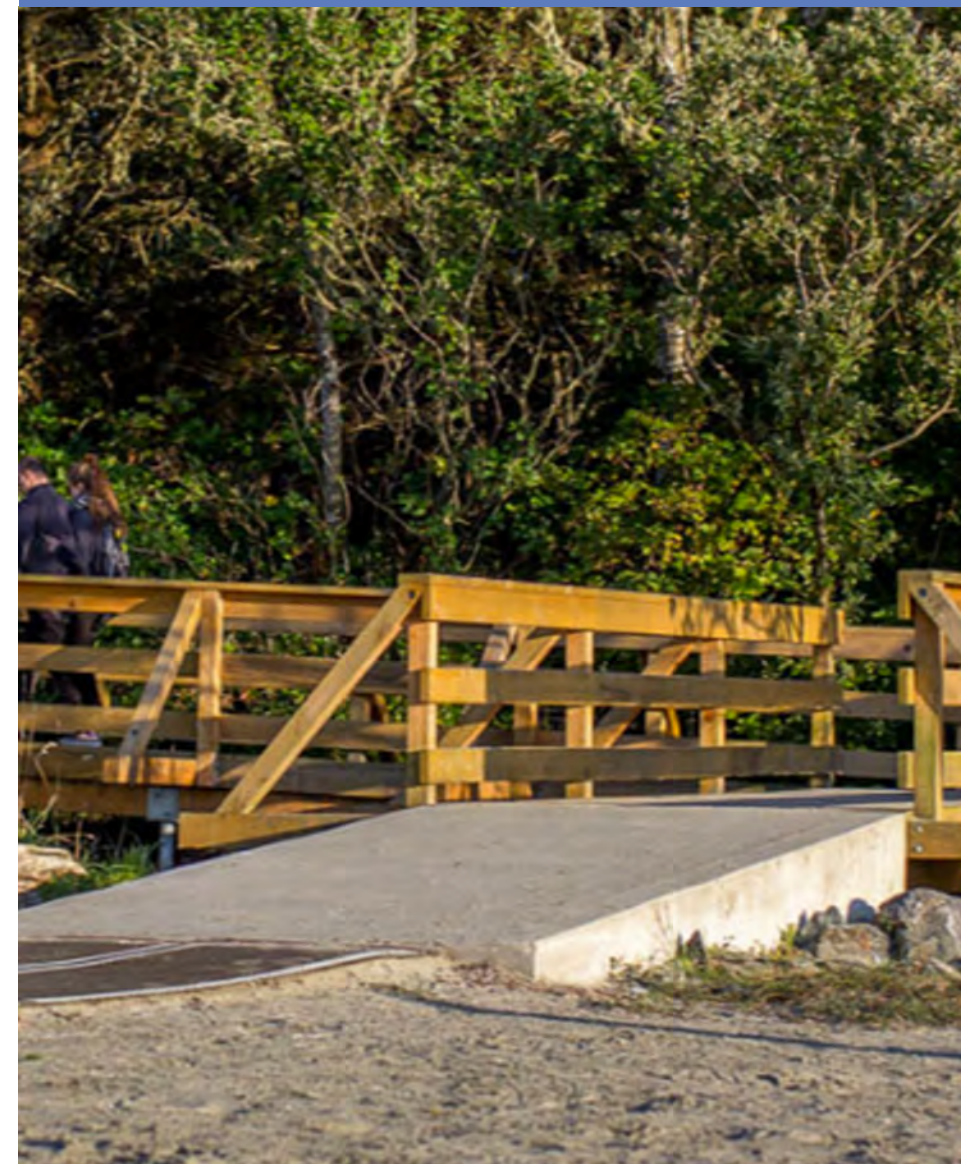


OFF-STREET IMPROVEMENTS

FORESHORE ACCESS

Conceptual Design Options

PAVED TRAIL OR STAIRS



Paved trails or stairs provide safe walking with reduced tripping hazards. The paved surface can improve accessibility to accommodate more users.

Pros: Paved trails and stairs can a more accessible surface that can accommodate a wider variety of users. Paved trails or stairs also require less maintenance and remain stable during wet conditions.

Cons: Paved trails or stairs are more expensive to build and have a less natural look and feel than unpaved trails or stairs.

UNPAVED TRAIL OR STAIRS



Unpaved trails or stairs provide walking options that are more cost effective and less impactful to the environment than paved alternatives. The unpaved surface maintains natural character but limits accessibility.

Pros: Unpaved trails or stairs provide a lower cost alternative to paved facilities while blending into the surrounding environment with a more natural look and feel than paved trails or stairs.

Cons: Unpaved trails or stairs require more frequent maintenance and become muddy or uneven in wet weather. Unpaved trails or stairs are also less accessible to people of different ages and abilities.

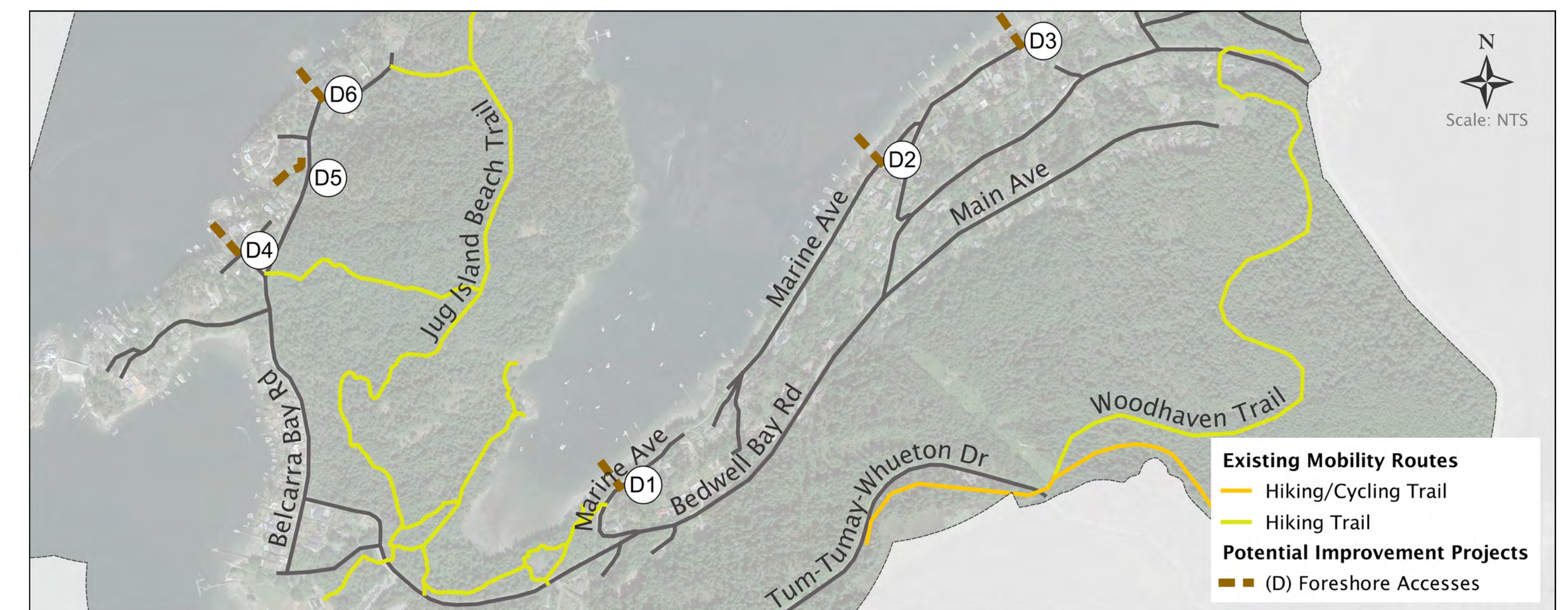
Order of Magnitude Average Segment Cost Estimate

> \$500k \$250 - 499K \$100 - 249K \$25 - 99K < \$25k

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Project Map

The map below shows where we are contemplating the proposed improvements along foreshore accesses. The improvement projects are divided into separate segments (e.g., D1, D2, etc.) to demonstrate how they can be implemented in phases over time. The phased approach offers flexibility and helps reduce up-front costs.



Project Segments

D.1 Marine Avenue East

D.2 Marine Avenue West

D.3 Suba Divers Trail

D.4 Whiskey Cove Lane

D.5 Coombe Lane

D.6 Salish Road



CROSSING IMPROVEMENTS

CROSSWALK UPGRADES

Conceptual Design Options

RAISED CROSSWALK



Raised crosswalks create a level surface for pedestrians and slow vehicle speeds, improving visibility and reinforcing pedestrian priority.

Pros: Raised crosswalks improve pedestrian visibility by elevating them above the roadway while acting as a traffic calming measure to slow down vehicles.

Cons: Raised crosswalks are more expensive to build than some of the alternative options and are not always suitable for high volume roadways with high vehicle speeds.

PEDESTRIAN FLASHER



Pedestrian flashers and Rectangular Rapid Flashing Beacons (RRFBs) flash when activated by a push-button to warn drivers that a pedestrian is crossing.

Pros: Pedestrian flashers increase pedestrian visibility when activated by pedestrians, ensuring that they are only used when needed. They are less expensive than raised crosswalks and more suitable to higher volume roadways.

Cons: Pedestrian flashers do not physically require vehicles to slow down, so they are more susceptible to being ignored than raised crosswalks.

DECORATIVE CROSSWALK



Decorative crosswalks enhance the visibility of a crosswalk and can also be used as branding and wayfinding along an active transportation route.

Pros: Decorative crosswalks are a low-cost easy to implement solution to improve pedestrian visibility while helping improve aesthetics and enhance community identity.

Cons: Decorative crosswalks do not physically slow down vehicles, and they require more maintenance than some of the alternative options as the painted designs wear down over time.

Order of Magnitude Average Segment Cost Estimate



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Project Map

The map below shows where we are contemplating the proposed improvements for crosswalk upgrades. The improvement projects are divided into separate segments (e.g., E1, E2, etc.) to demonstrate how they can be implemented in phases over time. The phased approach offers flexibility and helps reduce up-front costs.



Project Segments

- E.1 Bedwell Bay Road & Jug Island Beach Trail
- E.2 Bedwell Bay Road & Kelly Road
- E.3 Bedwell Bay Road & Tatlow Trail
- E.4 Bedwell Bay Road & Woodhaven Trail



VILLAGE-WIDE IMPROVEMENTS

SAFETY & TRAFFIC CALMING MEASURES

Traffic calming measures help reduce vehicle speeds to make roads safer for people walking and biking. Supportive amenities such as lighting, bike parking, signage, and wayfinding support safe and enjoyable trips for people of all ages and abilities.

Bedwell Bay Road Speed Reduction

REDUCED SPEED LIMITS Ⓢ



Reduced speed limits encourage drivers to slow down, making roads safer for people walking and biking, and discouraging non-residents from driving along the roadway. Reducing speed limits along Bedwell Bay Road offers a quick, easy to implement, low-cost, and effective approach to improving safety for all users along the roadway.

SPEED RADAR SIGNS Ⓢ



Radar speed signs are pole mounted devices equipped with radar speed detectors that slow drivers down by alerting them of their speed. Providing speed radar signs in strategic locations (i.e., locations where speeding is known to occur) along Bedwell Bay Road is a quick way to encourage drivers to slow down.

PAVEMENT MARKINGS Ⓢ



Pavement markings are road surface markings that guide and regulate traffic to improve safety for all users, including drivers, cyclists, and pedestrians. Pavement markings include symbols and words indicating speed limits, reminding drivers to slow down, and designating road users in shared spaces.

Supportive Amenities

WAYFINDING SIGNAGE Ⓢ Ⓢ



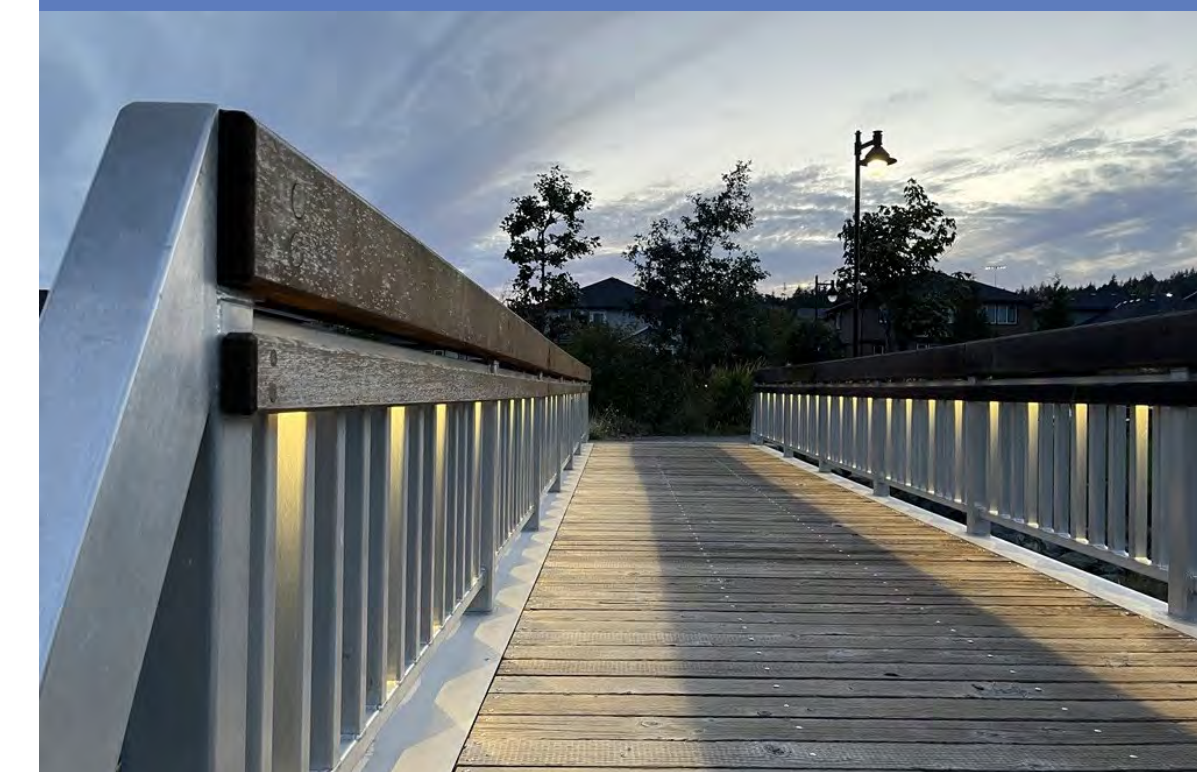
Wayfinding signage supports safe and enjoyable trip making by providing simple, clear, and intuitive information to help people navigate unfamiliar environments. They also help to navigate trails and establish active transportation routes. Effective wayfinding signage should be strategically located and provided in a format that is easy to understand.

BENCHES & BIKE PARKING Ⓢ



Benches provide spaces for people to rest, making trails and pathways more accessible to a wider range of users, and providing a place for people to stop during a long trip or enjoy a scenic view. Bike parking provides convenient access to trails and beaches.

PEDESTRIAN SCALED LIGHTING Ⓢ Ⓢ Ⓢ



Contextually appropriate lighting is important to ensure that pedestrian and cycling facilities are safe, accessible, and reliable throughout all seasons and times of day. Low impact is designed to minimize cast shadows with appropriate illumination levels, gradual lighting transitions, and suitable colour temperatures.

Ⓢ Ⓢ Ⓢ \$100k - \$249K Ⓢ Ⓢ \$25k - \$99K Ⓢ < \$25k

