

Small Towns Big Steps in Active Transport







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Introduction



Project Vision: To increase active transportation and realize its health benefits in small communities in British Columbia.

The relationship between land use and health is strong. From a health perspective, built environments have a significant influence on whether people are physically active, have social connections and can access healthy foods or services that enhance health and wellness.

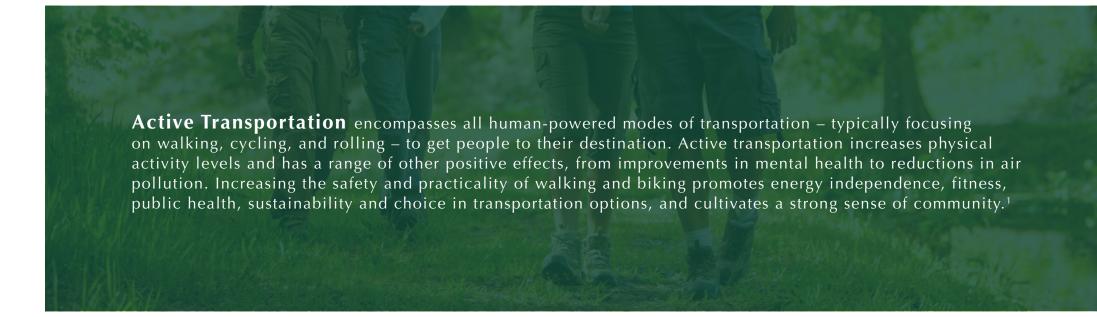
In British Columbia, physical inactivity tends to be greater in less urban communities. Evidence shows that physical activity rates are positively associated with community design that decreases the distance between housing, work, school and other amenities, while also making it comfortable for citizens to walk or cycle to those destinations.

The type of community planning and infrastructure that supports active transportation is not always feasible in smaller communities, which have fewer people and often a strong desire to retain the character of a smaller community (which includes resisting density). Local governments of smaller communities are often limited by a small tax base, which gives them fewer resources for staffing and capital and operational budgets. The cost of building infrastructure is a barrier, as are costs related to land acquisition and planning. It's not uncommon for smaller towns to have no planner on staff with expertise in active transportation, or even to have a permanent, full-time planner.

However, there are also assets in small communities that may set them up well for active transportation, such as lower traffic levels, higher levels of community trust, connections and closer relationships between citizens and local leaders. The problem is that we don't know much about best practices for small towns because they are not typically the subjects of active transportation research. While there is a good body of evidence about what works in large urban centres, we have much to learn about active transportation that works well in smaller places. This project came from a strong interest in filling the knowledge gap about best and promising practices for promoting active transportation in smaller communities. There were three project objectives:

- To identify factors related to increasing active transportation in small communities in BC
- To broadly share the active transportation successes and challenges in small communities
- To build active transportation planning capacity of local governments in small communities

Through a multi-method research process, this project aimed to uncover data to increase our knowledge about what works and what challenges active transportation in BC's small towns. We examined literature, collected relevant resources, surveyed small towns, interviewed local leaders and visited communities to experience active transportation in the context of a smaller place. In this report, we summarized the data from all these sources. We hope this report will help small towns improve active transportation in their community.





Summary

The vision for the Small Towns, Big Steps in Active Transport project is to improve our understanding of how to increase active transportation and realize its health benefits in small communities. Between June 2020 and November 2021, we implemented several research and engagement activities to accomplish our project objectives.

We started by reviewing literature to examine promising practices and advice to support active transportation in smaller cities, towns and villages. Next, we reached out to BC small towns (population 1,000 – 30,000) through a survey targeted at municipal staff to examine strengths, progress and persistent challenges in active transportation.

At the same time, we compiled data available at the community level that marked active transportation progress. We merged this with survey findings to identify and compare communities that made progress. Finally, we engaged with several small towns in BC, of various sizes and regions, to conduct qualitative interviews. We visited towns, where pandemic regulations allowed, to acquire photo and video documentation of active transportation progress. Through these activities, we aimed to find small towns in BC that are doing well in active transportation, in order to learn from them and share lessons broadly.

This report brings together highlights from the literature review and municipal survey, with case studies of active transportation in six BC small towns. We also include a resource list relevant for small towns working on active transportation. In this summary, we highlight key lessons emerging over our year spent engaging with small towns in BC on active transportation.



Key Lessons

1. Collaboration is the foundation of progress.

In our case study communities, we learned that collaboration is sometimes easier in small towns, as people are accustomed to collaborating and pooling resources to achieve results. This was certainly true for Burns Lake, a town that partnered with nearby Lake Babine Nation to collaborate on a sidewalk project that benefits everyone in the area.

Without a planner on staff within the municipality, the village is accustomed to finding leadership and champions wherever they emerge – like within the Seniors Society, mountain bike groups, and schools - and working interdepartmentally to make progress on active transportation. Staff see the value of looking to other projects and strategies to see where energy and know-how can be leveraged for active transportation.

2. Build the network. Don't let perfect get in the way of the possible.

All of the case study communities spoke about the need to create good connections to and between popular destinations such as commercial areas, recreation centres, parks and schools. They know that people travelling on foot, by wheelchair or bike need safe and comfortable routes. These have been mapped out in formal transportation plans in some places but in other places it is just well understood where the priority routes are and what needs to be done next.

We heard many times how important it is to prioritize progress over perfection. "Starting somewhere" was a key theme of discussions; staff in many towns indicated that it was more important to start than to wait for the perfect solution. Given the challenges that abound, perfect solutions for active transportation in small towns will be hard to come by.

Related to this, staff discussed the need to right-size active transportation infrastructure to the small town context. For example, some best practices in urban centres may not translate to small towns where traffic volumes are lower. Gibsons and Nelson gave examples of how their towns are testing options, like road closures, to see how changes work, knowing that adjustments can be made in the future if needed. Gibsons also highlighted how they are starting to connect many parts of their currently disconnected active transportation network, while noting that if they hadn't started with the pieces, they'd have nothing to connect now.

3. Be ready for grants.

All of the communities we interviewed spoke of the importance of being ready for grants. This meant having strategies and plans in place to ensure quick action for upcoming funding opportunities. This underlines how important external funding is to active transportation progress; as most small municipalities are unable to fund active transportation projects from their operating budgets.

Powell River acknowledged grant preparation challenges: small towns need to develop the "shovel-ready" projects called for in RFPs; funding is necessary to plan a project that's ready to implement; and funding is also required to develop active transportation plans and implement projects.

4. Use trails as connectors in the active transportation network.

An important piece to the active transportation puzzle in most case study communities was using trails and right-of-ways as connectors to build the network. Simply, travelling on trails is an enjoyable, and sometimes quicker, way to get from A to B.

We heard about this in Burns Lake, Gibsons, Powell River and Rossland, where the availability of greenspace and use of rightof-ways creates more linkages with pathways that facilitate mobility in conjunction with recreation.

Further, incorporating natural spaces in the active transportation network offers the chance for residents to spend time in nature and enjoy mental health benefits in that space. This concept of safe, healthy outdoor space was noted as particularly important during the COVID-19 pandemic.

5. Incorporate an equity lens.

Creating accessible opportunities for active transportation was an important part of the approach in all case study communities. In Duncan, they are coordinating with Cowichan Tribes. They also acknowledge that active transportation isn't always a choice for people with lower incomes and those without access to a car and this is factored into their planning.

In Nelson, developing plans for the primary bike route involved collaborating with people with mobility and vision challenges to understand strengths and weaknesses from their perspectives.

In Powell River, the new Zunga Bus offers accessible transit service that is improving how seniors and those with low income are getting around and connecting in the community.

Looking forward, these examples suggest a shift towards merging accessibility and active transportation plans in small towns, or at least, a deeper examination of how one supports the other.





6. Get the attention of council, build understanding and support in the community.

Most case study communities acknowledged their town's active, outdoorsy culture as a foundational factor in active transportation progress. Further, they suggested that active transportation was a priority for town council, up in the rankings with affordable housing and sustainability.

Leadership and champions for active transportation are critical to progress, and we see that these leaders can come from many places in small towns. In Powell River, Rossland, and Nelson, integrating active transportation with sustainability and climate change action helps to keep council's attention.

In Nelson, staff report back to council on active transportation progress each year, and invite ideas and collaboration on new projects going forward. Clearly, staff see this as an important piece for keeping council engaged while staying on track with the active transportation plan.

Staff in Nelson are mindful of the tensions that can arise between conventional (vehicle) transportation and active transportation. As such, they are actively looking for opportunities to merge funding and keep all transportation users engaged and excited about all types of transportation improvements. They see this active transportation paradigm shift as an important piece for balancing needs of all road users.

Community education is important to creating a positive atmosphere around active transportation. In Gibsons, the town works on explaining new active transportation infrastructure to residents so that the changes are less surprising. Good examples are the Advisory Bike Lane and green paint that signifies a dedicated bike lane.

The City of Nelson knows it is part of their role to highlight benefits of sidewalk bump-outs or sharrow signs, for example, and see this as a good way to keep the community engaged in active transportation.

In Powell River, staff realized the importance of extensive community engagement and education around active transportation concepts after a bike lane had to be removed due to community controversy and misunderstanding. Learning from this, they now prioritize engagement sessions to move active transportation projects forward in a positive way.

7. Place-making can encourage active transportation.

There is a strong connection between placemaking and walkability; towns with walkable downtown cores are often great examples of place-making. For example, the Totem Tour in Duncan helps pedestrians find the totem poles while walking through the downtown streets, and the Station Square Common in the heart of downtown provides a destination for outdoor gatherings or rest.

Public squares and parks for concerts, community events or seasonal markets, street furniture, benches, public art such as painted banners, murals or sculptures and attractive landscaping or flower baskets create environments that people are drawn towards and want to walk around.

The village in lower Gibsons and downtown cores of Burns Lake, Rossland and Nelson are dotted with seasonal planters, public art and benches that encourage strolling which creates a vibrant energy that also generates business for local shops and restaurants.

8. Highway as Main Street is a complex active transportation challenge in small towns.

Each of the case study communities highlighted issues with the provincial highway going through the heart of their towns, with traffic speed and volume as key concerns. There is a need to work with the Ministry of Transportation and Infrastructure in a continuous way, since the provincial highway issue is front and centre within active transportation planning in small towns. More emphasis on active transportation solutions on highways will have a big impact on making these spaces safe.

9. Look at opportunities to integrate active transportation improvements with other infrastructure upgrades and capital plans.

It makes great sense to integrate active transportation improvements into planned upgrades to other infrastructure. For instance, when water and sewer lines are being replaced and the road needs to be dug up and re-paved, this is a prime opportunity to also add a bike lane, sidewalk bulge or crosswalk. Collaboration between engineering/operations and planning can facilitate efficiency in these endeavours.

Gibsons has incorporated trails alongside their natural stormwater capture system and added an important link in their pedestrian and cycling network when they replaced pipes on a major road connecting lower and upper Gibsons.





10. Look at connections to neighbouring towns.

Residents living in rural areas and smaller communities often travel to different parts of the region to access a variety of shops and services as well as employment and recreation opportunities. Some communities – Rossland, Duncan, Gibsons – for example are working with other municipalities and regional districts to increase the opportunities and safety of active travel between communities.

Collaboration with adjacent communities or with the regional district ensures that the network lines up across municipal boundaries and works for people who live on either side.

11. E-bikes have arrived.

We heard in most small towns that e-bikes are positively changing the active transportation conversation. Given the difficult terrain with steep grades in many of BC's small communities, e-bikes may help make active transportation possible in places where it previously seemed impossible. Further, connections within the region between small cities, towns and villages may be facilitated by e-bikes.

Finally, e-bikes are making active transportation accessible for seniors and for some with mobility challenges. In fact, research in Powell River showed that seniors on e-bikes are a primary active transportation user group in that town. At the very least, leaders in small towns suggested that e-bikes are here, they are changing active transportation in a big way, and need to be factored into plans and projects going forward.

Conclusion

In the face of persistent, tough challenges, small communities in BC have made great strides in active transportation.

Leading towns have an established culture of learning and collaboration; are interested in exploring and testing options and approaches that reach all users in an equitable way; and spend time educating and engaging the public.

Council support is a distinct advantage in these towns, but it is also reinforced through staff efforts to merge active transportation and sustainability concepts and to keep active transportation plans on the agenda for council. Champions are key in active transportation projects. In small towns, champions come from many places, like municipal staff and council, community organizations, local businesses, and an active, outdoorsy public. Case study towns emphasized the importance of progress over perfection, not waiting for perfect solutions that may never come but acting to start putting the active transportation pieces together. Integrating concepts like place-making and way-finding help establish a walkable downtown core in small towns. Using trails to connect the downtown to home, recreation, and schools maximizes the active transportation network and use of available green space.

Although funding is a continuing need for active transportation in small towns – not only for new active transportation infrastructure, but also for planning to develop shovel-ready projects – leading towns tend to be clever with grant applications and leveraging opportunities within other capital projects.



Research Activities

 Sept Dec 2020
 Nov - Dec 2020
 Jan - Mar 2021
 Apr - Sept 2021

 Literature Review & Resources Collection
 Identify Indicators
 Municipal Survey
 Apply Indicators
 Case Studies

Figure 1. Research phases and timeline for Small Towns, Big Steps in Active Transport project.

Literature Review and Resource Collection

We searched and scanned academic and grey literature identified through Google Scholar, Google, PubMed, and Transport Research International Documentation (TRID) databases, as well as through manual searches of reference lists in relevant publications. We aimed to collect literature that could contribute to answering the question:

What interventions, infrastructure changes, and policies increase active transportation participation in small towns?

The scan of the literature was meant to provide a broad overview of active transportation interventions and advice relevant to small municipalities in British Columbia. It was not intended as a comprehensive review of the literature; rather, it aims to provide ideas for possible directions in order to promote active transportation in small cities, towns and villages.

Where possible, we accompany those ideas with evidence for what has worked, or at least been tried, in small communities in North America. Our time spent searching the literature yielded several resources relevant to small town active transportation. We compiled online resources that provide active transportation advice, and included them at the end of this report.

Identify Indicators

First, we defined "small town" in the context of this project. We applied a definition population between 1,000 and 30,000 residents - to BC municipalities to identify our target group of communities. We further reduced the group by eliminating those small towns located in close proximity to an urban area (generally any suburbs within Metro Vancouver and Capital Regional Districts) because the context for a suburban or exurb community is distinct from a stand-alone small town. This process yielded a target group of 86 small towns. Next, we gathered indicators that showed evidence of active transportation readiness and/or progress and for which there was data available at the municipal level for all target communities (Table 1). We assigned points to indicators to generate scores for communities.

Table 1. Indicators of active transportation readiness or progress for BC small towns.

Indicator	Data Source
Percentage of 'walk to work' commuting trips	BC Community Health Profiles (2016 census) ²
Percentage of 'bike to work' commuting trips	BC Community Health Profiles (2016 census) ²
ICBC cyclist crashes	2019 cyclist crashes – 2015 cyclist crashes³
ICBC pedestrian crashes	2019 pedestrian crashes - 2015 pedestrian crashes⁴
Active transportation projects funded (2004-2021)	B.C. Active Transportation Infrastructure Grants Program
Active transportation project funded under BC Physical Activity Action Plan (Active Communities)	Active Communities initiative records
Participation in Go By Bike	Go By Bike BC ⁶
Active Transportation Plan (or under development)	Internet search and municipal survey data

² http://communityhealth.phsa.ca/HealthProfiles

⁴ https://public.tableau.com/profile/icbc#!/vizhome/BC-CrashesinvolvingPedestrians-/PedestriansDashboard

⁵ https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/active-transportation/active_transportation_funded_projects_2004-2021.pdf ⁶ https://gobybikebc.ca/

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³ https://public.tableau.com/profile/icbc#!/vizhome/BC-CrashesinvolvingCyclists-/CyclistsDashboard)

Municipal Survey

We designed an online survey to collect active transportation data from municipalities, and ran the survey in November and December 2020. We asked about facilitators and barriers to active transportation planning and projects, as well as progress related to plans and policy development, infrastructure, events, and safety. We sent the survey to the Chief Administrative Officers (CAOs) in the 86 small towns via email and promoted the survey on the Union of BC Municipalities newsletter (Compass).

Apply Indicators

We applied the indicators listed in Table 1 to generate scores for communities. We used additional indicators collected via the municipal survey: (1) existence of a standalone active transportation plan or active transportation plan under development; and (2) active transportation leadership or champion in community to filter communities for selection as "leaders".

Since our goal in applying the indicators to communities was to develop a list of communities that had made progress on active transportation so that we could followup and do in-depth case studies, we also used "responded to survey" as an indicator of interest to reduce our list. Within our reduced list of communities, we stratified by community size (large = population>5,000; small = population<5,000) and regional health authority, and considered the subset of communities that scored in the top half of all communities in making our selections for follow-up case studies (Table 2).

In making our selections, we aimed to balance region and community size to showcase a diverse group of small towns with different active transportation challenges.

Table 2. "Leader" communities considered in case study selection process.

	Small Community (>1,000, <5,000)	Large Community (>5,000, <30,000)
Fraser	None	None
Interior	Chase; Invermere; Rossland	Revelstoke; Salmon Arm, Williams Lake; Nelson
Island	Duncan	Qualicum Beach; Courtenay
Northern	Burns Lake; Vanderhoof	Smithers
Vancouver Coastal	Gibsons	Powell River; Squamish; Whistler

Interviews and Case Studies

Though our original project plan (prepared prior to the pandemic) included visiting four communities in-person to conduct interviews and acquire visuals for our case studies, pandemic restrictions on travel required a new plan in spring 2021.

We decided to increase the number of potential case study communities to six, and conduct some investigations virtually in the spring prior to easing of travel restrictions. We selected Burns Lake and Rossland as good candidates for these virtual investigations as those visits would have been difficult to do by car if the travel restrictions were lifted.

Eventually, in June, our project team and municipal staff felt comfortable with in-person visiting to collect the data for four more community case studies. We selected and visited Powell River (June 14, 2021), Gibsons (July 19), Nelson (July 23), and Duncan (August 24).

For virtual investigations, we spent 90 minutes on Zoom with municipal staff most involved in active transportation work, and used a discussion guide to steer the conversation. We requested that staff follow-up with photos of their active transportation projects.

For in-person sessions, we used the same discussion guide within our 60 to 90 minute in-person interviews, and then toured the community to look at active transportation projects and infrastructure to acquire context and video clips for our video stories. We used online transcription to transfer audio files of interviews to text files, and analyzed interviews thematically to populate our case study template. We acquired consent for sessions to be recorded, names to be used in written products, and for photo and video use in the case studies.

Literature Review Highlights

What helps increase active transportation participation in small towns?

Active transportation increases physical activity levels and has a range of other positive effects, from improvements in mental health to reductions in air pollution (1). Increasing the safety and practicality of walking and biking promotes energy independence, fitness, public health, sustainability, choice in transportation options, and develops a stronger sense of community (2,3). We scanned literature to provide a broad overview of active transportation interventions and advice relevant to small towns in British Columbia. Here, we present highlights of the full literature review.

Overarching Concept: Inclusion

Facilities need to be "comfortable, convenient, safe, and attractive for everyone, regardless of age or ability" (3). This concept is referred to as 'All Ages and Abilities', 'AAA' or 'Triple A', and is supported by universal design. Further, active transportation facilities should be accessible at all times, and in all weather, with maintenance and operations planned to support this from the outset. Active transportation is more likely to achieve mobility for all if plans and policies are equitable, inclusive, age-friendly, accessible, and safe (3).



Small Town Context

Many small towns have good places to walk and ride bikes (2). The availability of parks and green spaces is a notable advantage in many small towns that supports active transportation and significantly increases the odds of walking for enjoyment (4). The perception of nearby trails and non-residential destinations predict active transportation in non-urban areas (5). Further, many small towns have compact centres that are suited for active transportation trips.

However, it is uncommon for small towns to have a complete and safe network that enables walking and cycling through the whole community, and infrastructure to support active transportation.

Some active transportation challenges and issues are common to small towns, including longer non-local trip distances, higher crash rates, and health and income disparity (6). Resources and infrastructure to support safe active transportation – such as speed reduction infrastructure, safe routes to school programs, pedestrian and cyclist safety programs - are less common in small communities in BC (7).

A "connected network is not developed by a single trail, sidewalk, or bike lane, but is comprised of many facilities that support walking and bicycling throughout the community (6)". One small town study showed that aesthetics of the walking environment – how pleasing it was to the walker - was the most important factor underpinning destination-walking (8).

The experience of active transportation comes together through aspects of the built environment that influence walking and cycling participation – in other words, people will likely walk and cycle to work and other destinations if they want to travel through and experience the route.

Challenges for walking and cycling in small towns and rural areas abound (6) (Figure 2). Well-targeted active transportation interventions in small and rural towns would need to plan around these challenges.

At the same time, small communities have great potential for active transportation, considering there's often good access to businesses, schools, and services within a relatively small community core.

Figure 2. Active transportation challenges in small towns and rural areas (6).



Agricultural Uses Considerations related to wide and slow-moving



Lack of Transportation Options

Lack of pedestrian and cycling facilities due to auto-oriented culture makes active transportation a less likely choice.



Highway as a Main Street

Provincial highways that pass through small towns and prioritize through traffic.



Public Lands Access

Proximity between small towns and public lands (which may be popular destinations), and the need to create linkages.



Constrained Terrain

Physical constraints to the provision of pedestrian and cycling facilities.



Climate and Maintenance

Cost of winter maintenance, and need for specialized equipment to clear active transportation facilities.



Auto-Oriented Roadways

Lower densities and greater distances between amenities favours vehicle travel.



Safety

High speeds, lack of space, and lack of well-defined pedestrian crossings making streets barriers that divide communities.



Bridges

Critical connections in multimodal networks. Separation is important due to constrained area; a narrow bridge can render a multimodal route undesirable; signing, marking, and active warnings are needed.

Pedestrian and Cycling Infrastructure

Overview of roadway infrastructure for biking and walking in small and rural towns (6).

Mixed Traffic Facilities

Yield Roadway: Designed for walkers, cyclists and motor vehicle traffic within the same slow-speed travel area. Bidirectional motor vehicle traffic without lane markings.

- Low cost, low maintenance
- Connects residential areas to network destinations
- Encourages slow travel speed

Bicycle Boulevard: Shared roadway bicycle facility, offering priority for bicyclists over motor vehicles.

- Increased comfort and less risk of injury for cyclists as motor vehicle traffic is lower and reduced
- Connects residential roads to commercial corridors and schools
- Can improve conditions for pedestrians, when sidewalks and crossings are part of design





Advisory Shoulder: Uses pavement markings to create usable shoulder for cyclists on roads that are too narrow to accommodate one. Motorists travel in both directions in centre lane, using the shoulder to pass as needed. Reconfiguration that adds bike and pedestrian infrastructure for lower cost to roads that aren't wide enough for protected bike lanes or sidewalks. "Applicable only to lower-speed, lower-volume, two-lane roads" (9).

- Also called advisory bike lane (ABL)
- Efficient use of existing space



Visually Separated Facilities

Paved Shoulder: Functional space for cyclists and pedestrians in the absence of more separated facilities.

- Improves cycling experience on higher speed/volume roads
- Stable surface that provides space for all users
- Reduces pedestrian crashes (from walking on roadway) and cyclist crashes from behind
- Requires increased striping and signs, and a wider roadway



Photo courtesy of Dan Burden from www.pedibikeimages.org

Bike Lane: Exclusive space for bicyclists, directly adjacent to motor vehicle travel lane.

- Pavement markings and optional signs designate lane
- Provides more separation distance between sidewalk and motor vehicle area
- Connects bike networks through busier areas
- Space for many skilled bicyclists
- Supports school access if designed as wider lane on lower speed/volume roads
- Visual cue for drivers that they should expect cyclists on the road



Physically Separated Facilities

Shared Use Path: Travel area for bicyclists, pedestrians, wheelchair users and others separate from motor vehicles.

- Low-stress, dedicated facility for a variety of users of all ages and abilities
- Can provide short-cuts to destinations
- Increases access to natural and recreational areas
- Small footprint with rural/small town character

Sidepath: Bi-directional shared use path immediately adjacent and parallel to a road.

- Offers high quality experience for a range of users
- Maintains small town/rural character
- Reduces roadway crossing distances
- · Completes a network where a high speed/volume road is the only corridor
- Requires a wide roadside environment

Sidewalk: Dedicated, safe, accessible space for pedestrians.

- Separated from the road physically by a curb or unpaved buffer
- Reduces pedestrian collisions in rural areas, reduces "walking along roadway" crashes
- May increase walking in areas with high traffic speed/volume
- May not support rural visual character
- · Requires moderate width roadside environment

Separated Bike Lane: Facility for exclusive use by cyclists within or directly adjacent to roadway, and physically separated with a vertical element.

- Roadway separation is the vertical element
- Increases cyclist comfort on high-speed/volume roadways
- Similar to sidepaths, but reduced operational and safety concerns related to bi-directional nature of sidepaths
- Reduces sidewalk riding and user conflicts
- Increases connectivity when configured as one-way directional lane on both sides of street
- More urban visual atmosphere
- · Requires wide roadside environment



Photo courtesy of Laura Sandt from www.pedibikeimages.org



Photo courtesy of Dan McCullough from www.pedibikeimages.org



Photo courtesy of Dan Burden from www.pedibikeimages.org



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Complete Streets

"The term 'Complete Streets' has been widely used to refer to roads that balance safety, access, and comfort for users of all modes, as opposed to the historic North American road design that typically prioritized motor vehicles (3)."

Small Town BC Example

Courtenay's 5th Street Complete Street Pilot Project (12), completed in 2018, involved substantial overhaul of aboveground and below-ground infrastructure to improve walking and cycling, and includes:

- Two newly paved vehicle lanes
- Bike lanes physically separated from vehicle traffic
- Improved accessibility for strollers, scooters, and wheelchairs
- Alternating parking and rain gardens throughout most of the corridor
- Innovative storm water management to improve drainage

Complete Streets

Concepts of safety, health and equity underpin the rationale for Complete Streets in small and rural towns. Further, moving towards Complete Streets makes good economic sense as "slowing traffic, widening sidewalks, adding trees and pedestrian crossings can increase property values, improve retail sales, and attract private investment (10)." Complete Streets policies and design guidelines are recommended in small towns to increase safety and comfort of residents as they walk or cycle to nearby destinations (11).

Small Town and Rural Multimodal Networks identified six principles to guide the development of complete streets/networks in small towns (6):

- 1. Cohesion: How connected is the network in terms of its concentration of destinations and routes?
- 2. Directness: Does the network provide direct and convenient access to destinations?
- **3.** Accessibility: How well does the network accommodate travel for all users, regardless of age, income level, or ability?

- 4. Alternatives: Are there a number of different route choices available within the network?
- 5. Safety and Security: Does the network provide routes that minimize risk of injury, danger, and crime?
- 6. Comfort: Does the network appeal to a broad range of age and ability levels and is consideration given to user amenities?

Complete Streets may look different in small and rural communities than in larger cities. For example, roads in agricultural areas could be made "complete" by adding a multi-use path alongside the road or by widening the shoulders to increase walking and cycling safety and by connecting to trails and public transportation.

Residential streets in small towns could be "complete" if the speed is low, crossings are well-marked and sidewalks have accessible curb cuts. Small communities can build on the strength of existing multi-use trail systems already in place by improving the connections to key destinations (work, library, downtown, shopping, restaurants) to increase active transportation opportunities (10).

Active Transportation to School

The most effective active travel to school initiatives "combine engineering improvements with education and encouragement programs, and sustain them over multiple years (20)." Engineering improvements in the school vicinity should focus on separation from motorized traffic through sidewalks, sidepaths and controlled crossings, accompanied by wayfinding enhancements (6).

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Small and rural communities may have multiple barriers to active school travel (16). Outside large cities, schools might be further from homes, and there may be fewer sidewalks or crosswalks on busy roads (e.g., provincial highways), longer blocks, and fewer people around for perceived safety. In small communities, a lack of capacity for municipal staff to work on active travel adds to the challenge (17).

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On the other hand, small and rural communities may have some advantages when it comes to designing and implementing changes to encourage active travel to school. Since life tends to revolve around schools as a key destination in smaller communities (6), it may be easier to make the case that the route to school deserves attention as the centre of community activity.

Active Transport to School

The most effective way for rural school districts to establish a permanent commitment to Safe Routes to School is by adopting policies that support walking and bicycling (18).



Also, decision-makers may be more accessible in a smaller, more intimate community, facilitating quicker decision-making and potentially less red tape. Finally, there may be more funding available per capita in smaller and more remote communities, given that some granting programs prioritize an equitable approach that increases opportunities for priority populations (18).

One recent study showed that walking to school was more common in non-urban than urban settings (13). Controlling for setting, the authors identified that 1) having a mother who actively commuted to work, 2) a safe neighbourhood to walk in (as reported by parents), and 3) living less than two kilometres from the school were the strongest predictors of active transportation for children. Based on this, small towns may be just as likely as urban centres to increase active travel to school, if issues like acceptability, safety, and distance to school are considered.

Schools with bicycle or pedestrian promotion policies were nearly three times more likely than schools without policies to register for walk-to-school-day (14). Schools that registered for walk-to-school-day were 17.5 times more likely to engage in recurring active transportation programs (14). This study also discussed the important role of schools in small and rural towns in the provision of opportunities to build pedestrian and biking safety skills, given that biking and walking infrastructure is less likely to exist and the municipality may be less able to fund skillsbased programming, as compared to larger urban centres (14).

Partnerships between small municipalities, schools and/or school districts are essential in building and sustaining active transportation to school.

Alberta champions indicated that municipal support was crucial to advancing active transportation at school within a holistic/ systemic approach, and recommended development of supportive municipal policies to create safer walking and cycling paths, improve road quality and maintenance, make funds available for active transportation initiatives, change regulations, and provide more resources for rural areas (15).

Active Transportation Safety

Small towns have issues that are different from urban centres when it comes to active transportation safety. As an example, child cyclists in rural areas are twice as likely to be injured from a motor vehicle collision than are child cyclists in urban areas (19). We know that perceived safety helps to encourage active transportation: for example, there's higher odds of utilitarian walking in small towns with the presence of crosswalks and pedestrian signals (4).

To make active transportation routes safer, strategies might include:

- Reducing speed limits
- Posting feedback for drivers when they exceed the limit
- Bicycle helmet encouragement and/or enforcement
- Stronger regulation for safe driving practices
- Improving active transportation infrastructure
- Improving road design, markings and signage

Further, a big barrier to active transportation is perceived lack of safety, so coupling engineering and enforcement approaches with culturally relevant and targeted safety education would be a more comprehensive way to support active transportation adoption in a widespread manner (20).

Small Town and Rural Multimodal Networks highlighted the role of speed management in safety of multimodal networks (6).

The smaller populations and limited road connectivity of small towns translate to increased emphasis on speed reduction over volume reduction for increased safety.



		Table 3. B.C. Community Road Safety
Design	Safety Benefit	Toolkit (7) recommendations for making
Wider and connected sidewalks At least 2m wide and free of obstructions.	Sidewalks can provide between a 50% and 88% reduction in vehicle-pedestrian crashes compared to locations without sidewalks.	cycling and walking safer.
Advance stop lines Effective in increasing drivers' ability to see people attempting to cross the road.	The likelihood of drivers yielding to pedestrians crossing can increase by approximately 60%.	
Off-street walking and bicycle paths Located away from motor vehicle traffic.	Cycling injury risk can be reduced by 30% to 90%, compared to on-street riding with no cycling infrastructure.	
Curb extensions and pedestrian refuge islands (+ offset crosswalk) Low-cost features reduce roadway crossing distances for people, allowing them to safely and more quickly reach the opposite side.	Raised refuge islands have reduced vehicle pedestrian crashes by 46% at marked crosswalks and by 39% at unmarked crosswalks. Drivers are more likely to yield to pedestrians when the person is crossing from a curb extension.	
Protected and connected bicycle lanes Runs alongside a street, physically separated from motor vehicle traffic, distinct from the sidewalk. Connected bicycle lanes ensure that the network of lanes is uninterrupted.	Can reduce vehicle-bicycle crashes resulting in injuries by as much 90%.	T
Leading pedestrian intervals Advanced green for pedestrians provide pedestrians with a several-second head start over drivers.	Low-cost safety design, can achieve a 59% reduction in vehicle-pedestrian crashes at intersections.	
Safe crosswalk signalization Timing "walk" signal to be safe with signals for drivers, also automated pedestrian detection systems and accessible pedestrian signals for people with visual limitations.	Increases pedestrians' compliance with crossing signals, and reduce the number of conflicts between drivers and pedestrians.	
In-street yield to pedestrian crosswalk signs Regulatory yield signs placed in the middle of the crossing, typically along the centre line of the road, to emphasize the possible presence of pedestrians in the crosswalk.	Low-cost safety feature can lead to a 13% to 46% increase in drivers yielding to pedestrians at the crosswalk.	
Rectangular rapid flashing beacons Form of warning amber flashing beacon used at unsignalized pedestrian crosswalks, activated by pedestrians.	Can increase the number of drivers yielding to crossing pedestrians by 52% to 77%.	ALA AA
Coloured bicycle lanes Increase the visibility of the lane to drivers, highlight the presence of cyclists and reinforce the right-of-way for cyclists.	Can improve the number of drivers yielding to cyclists by 12 to 20%.	27

A Part

Small Town and Rural Multimodal Networks (6) noted three traffic-calming, speed reduction measures for small and rural towns.



Physical measures, such as vertical deflections (e.g., speed bumps), horizontal shifts, and roadway narrowings, intended to reduce speed and enhance the street environment for non-motorists.



Non-physical measures using signs and markings are intended to raise awareness and reduce speed through visual indications.



Diversion treatments reduce cut-through traffic by obstructing or otherwise preventing traffic movements in one or more directions.

Street-scale Design and Place-making

Street-scale design and place-making support active transportation in a community by affecting the quality of pedestrians' and cyclists' experience, across all abilities. Streetscale features (Figure 3)– like sidewalks, street crossings, bicycle facilities, traffic calming, landscaping - are easier and less expensive to change than the road network (20). Improvements in local street-scale design can support Complete Streets or school active transportation initiatives, and improve access and equity across neighbourhoods and demographics.

One recent study (21) showed that for older adults, crossing signals had the strongest relationship to active transportation. On the other hand, for adolescents, street lights and sidewalk buffers were most important. Placemaking design (Figure 3) optimizes public spaces for people's benefit, making them distinctive, appealing, comfortable, and safe. Place-making design usually focusses on the enjoyment of pedestrians, cyclists, and those using assistive devices and transit (20).

In small towns, place-making on main streets can strengthen community identity through enhanced aesthetics, space for community activity, and attracting business. These factors could potentially result in greater community cohesion and public participation (6).

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The quality of the active transportation experience is expected to influence the user's likelihood of being active in a particular place again (20). Figure 3. Street-scale design and place-making interventions that encourage walking and biking (20).

Street-scale design to encourage walking	
Presence and coverage of sidewalks	Welcome to the Dord Court
Absence of trip hazards on sidewalks	TATION STREET COMMC
Buffer between sidewalks and traffic (e.g., planting strip or parked cars)	
Streetlights	
Quality of street crossings	
Curb cuts	
Public art	
Street furniture such as benches	
Variety of building designs	
Destinations	
Street-scale design to encourage biking	
Bicycle lanes	
Protected bicycle paths and multiuse trails	
Streetlights	
Bicycle racks	
Place-making interventions encouraging walking and biking	
Creation of pop-up retail or services	
Reactivate open space or an empty lot	
Create parklets (mini-parks)	
Improve pedestrian, bicycle, and transit facilities	
Create parklets (mini-parks)	
Install traffic-calming features like curb extensions, median islands, lane narrowing, roundabouts, high-visibility paint treatments, raised crosswalks	
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Municipal Survey Highlights

We designed a survey to collect information on active transportation challenges and progress from 86 small towns (population between 1,000 and 30,000) in BC. We distributed the survey to Chief Administrative Officer (CAOs) and promoted it through the Union of BC Municipalities newsletter (Compass) in November and December 2020.

Fifty-eight small towns participated in the survey. As intended, the majority of respondents were municipal staff (CAOs 38%, planning staff 45%, engineering staff 17%, parks and recreation staff 9%).

- C				
		Municipal Survey Res	pondents	
0	Ashcroft	Fort St. John	North Cowichan	Saltspring Island
	Barriere	Fruitvale	Northern Rockies	Sechelt
11	Burns Lake	Gibsons	Oliver	Smithers
	Chase	Harrison Hot Springs	Osoyoos	Southern Gulf Islands Electoral Area
	Chetwynd	Норе	Parksville	Sparwood
	Clearwater	Hudson's Hope	Pemberton	Squamish
	Coldstream	Invermere	Port McNeill	Telkwa
	Comox	Kent (Agassiz)	Powell River	Ucluelet
	Courtenay	Keremeos	Princeton	Valemount
	Cranbrook	Ladysmith	Qualicum Beach	Vanderhoof
0.	Cumberland	Lake Country	Quesnel	Warfield
	Dawson Creek	Lillooet	Revelstoke	Whistler
	Duncan	Logan Lake	Rossland	Williams Lake
	Fernie	Mackenzie	Salmo	
	Fort St. James	Nelson	Salmon Arm	



Facilitating Factors for Active Transportation

Primarily, small towns were motivated to work on active transportation to promote community connectivity and safety, improve quality of life and public health, and address climate change (Figure 4).

Community connectivity	
Traffic, cyclist, and pedestrian saf	ety
Improve quality of life	
Address climate change	
Improve public health	

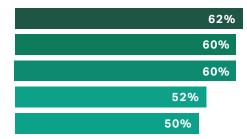


Figure 4. Motivators for active transportation improvements, selected as "top 5" by representatives of small towns in BC.

Half (50%) of survey respondents reported that their community had leadership or a champion acting on active transportation.

Many respondents (64%) indicated that their municipality had one or more policies that supported active transportation. Many respondents described policies in their Official Community Plan (OCP) or in transportation plans.

Over a third of respondents (38%) indicated that their municipality had low or no capacity to work on active transportation. About a quarter of respondents indicated that they had dedicated staff, funding, and/or resources that they could use in promoting active transportation (Figure 5).



Figure 5. Capacity available to municipalities to work on active transportation.

Respondents most frequently indicated (66%) that their municipality incorporated active transportation into their Official Community Plan (OCP). Less than half of respondents indicated that their municipality had a standalone active transportation plan (43%), age-friendly plan (41%), or a goal/target/plan for emissions reduction that specified active transportation (38%).

An additional 22% of respondents indicated that their municipality's active transportation plan was under development. Very few had a universal design or mobility plan for people with disabilities (3%) or no active transportation-related plans (2%) (Figure 6).

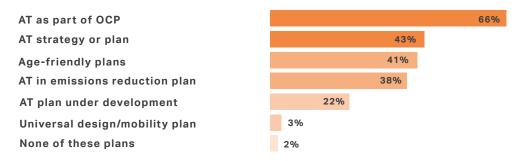


Figure 6. Proportion of municipalities with active transportation-related plans (AT = Active Transportation).

Active Transportation to School

Many respondents were unsure whether schools in their community had active travel plans (71%). Very few (7%) indicated that most schools had active travel plans (Figure 7).

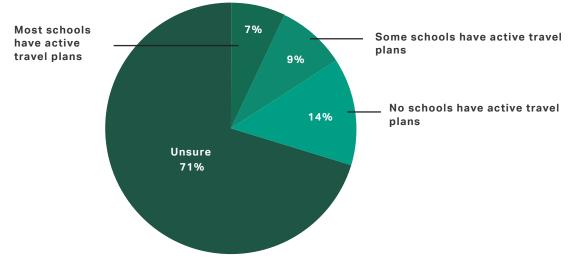


Figure 7. School active travel plans in small towns, from municipal staff perspective (AT = Active Transportation).

Existing Supportive Infrastructure for Active Transportation

Most commonly, municipalities had some 'continuous and connected pathways for pedestrians and cyclists' (57%), 'places to sit along active transportation routes' (53%), and 'paths or trails that connect two or more communities' (52%) (Figure 8). All other supportive infrastructure was much less common.

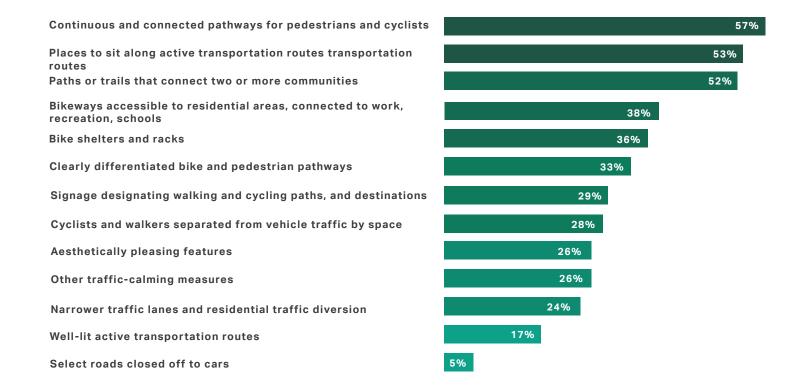


Figure 8. Existing active transportation infrastructure in BC small towns (AT = Active Transportation).

Barriers to Active Transportation Planning, Policies and Projects

One barrier was selected by most respondents: inadequate funding to plan and implement projects (72%) (Figure 9). Just 3% of respondents indicated their community had no barriers.

Inadequate funding	72%
Inadequate staff capacity	57%
Competing community priorities	55%
Auto-dependent culture	50%
Lack of travel behaviour data	48%
Lack of economic data	47%
Challenging weather conditions	47%
No existing AT infrastructure	45%
Lack of best practices	40%
Challenging topography, long distances	35%
Conflicting MOTI and municipal goals	35%

Figure 9. Top 10 barriers to planning or implementing active transportation policies, programs, or projects in BC small towns (MOTI = Ministry of Transportation and Infrastructure; AT = Active Transportation).

Safety

GOP:CAX(

For safety, most communities installed crosswalks in busy areas (76%), and built sidewalks (69%), and nearly half had enhanced lighting on active transportation routes (48%) (Figure 10).

76%

Installed crosswalks in busy areas		
Built sidewalks		
Enhanced lighting	48%	
Convenient AT connections	40%	
Lowered speeds	40%	
Built quality, on-street cycling infrastructure	28%	
Designated year-round, maintained bike lanes	19%	
Started with a pilot	12%	
Normalized active transportation during winter	12%	
Provided enough space for cyclists on hills	9%	
Designated car-restricted zones	<mark>5%</mark>	

Figure 10. Actions to improve active transportation safety in BC small towns (AT = Active Transportation).

Case Studies

Village of Burns Lake: Collaboration



Active transportation is a piece that we all carry a bit; we have a very small staff. In terms of the recent project with sidewalks, a lot of that was done via public works. And our Recreation Director deals with a lot of the vision and planning. Everybody just carries a little bit, but it's not somebody who is directly responsible for that ... we don't have a regular planner on staff.

DOLORES FUNK, MAYOR, VILLAGE OF BURNS LAKE

Burns Lake is a small town in northern BC Interior with 1,779 residents and an additional 900 residents living in First Nations communities within the municipal boundary.

Located between Prince George and Smithers on the shores of Burns Lake, the villagearea includes First Nations communities for Lake Babine Nation and Ts'il Kaz Koh Burns Lake Band, and lies on or near the traditional territories of the Wet' suwet' en, Lake Babine, Cheslatta Carrier, Ts'il Kaz Koh, Skin Tyee and Nee-Tahi-Buhn peoples. The head offices for Regional District of Bulkley-Nechako are in Burns Lake.

Mountain biking and snow sports like crosscountry skiing and snowmobiling are popular, and it's home to an active population that enjoys the outdoors. The village is a hub for logging, saw-milling, mining and local tourism that includes fishing and hunting. Many Indigenous people live in the area, and make up 40% of the population of Burns Lake. The population of seniors in Burns Lake is growing, while the population of children is declining.²

In Burns Lake, it's warm in the summer and cold in the long winter, with an average snowfall of about 190 cm.³ The school district operates three elementary schools and one secondary school in the Burns Lake region. Woyenne Nation operates Lake Babine Nation operates nearby Morris Williams Elementary.

88%	0%	10%	0%
drive to	public transit	walk to	bike to
work	to work	work	work

Champions

Burns Lake has a small municipal staff and lacks a dedicated planning team for active transportation. What they do have, however, is staff members that come together across departments, each contributing their piece of expertise and capacity to move active transportation forward. Project collaboration typically includes the Mayor, Councillors, Chief Administrative Officer (CAO), Recreation Services and Public Works.

Community champions come from the mountain bike groups, like Ride Burns, that are very active in Burns Lake, and educators who promote active lifestyles and who work on mountain bike trail development. The Burns Lake and District Seniors Society help out too, understanding the importance of accessible walking and wheeling opportunities for community health and even leading the development of a new walking track in the village.

Lake Babine Nation has active transportation champions too – like Bernard Patrick, Capital and Infrastructure Director and Former Chief Gordon Alec - and the Band was an important collaborator in the recent sidewalk project in the village. You're kind of limited to what you can do [in a smaller community]. So I see that there's more people outside doing things

to be used for sure.

and the more active transportation networks

we can give people, the more they're going

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DALE ROSS, Director of Public Works, Village of Burns Lake

Keeping up with our infrastructure ... are we fixing roads today or are we fixing water and sewer pipes ... because everything is aging. We're working at trying to be able to replace it all, but you can't replace it all at the same time. So, [we are] competing with ourselves.

SHERYL WORTHING, CHIEF ADMINISTRATIVE OFFICER , VILLAGE OF BURNS LAKE

Challenges

Burns Lake's active transportation vision is constantly met with challenges. As a very small community, Burns Lake has a limited tax base and therefore little funding to dedicate to special projects. Village council and staff find it "next to impossible" to do much without grants, especially considering competing priorities.

With all the water, road, and sewer infrastructure aging together, decisions need to be made about what to replace and when – it can't all be done at the same time. Staff find that active transportation infrastructure typically falls in the "nice to have" category, and gets trumped by infrastructure projects that are deemed an absolute necessity and funded by the regular budget received through taxation. They have come to rely on grants to accomplish their active transportation goals.

When Burns Lake does win a grant for active transportation infrastructure, they typically encounter challenges related to the short construction window – due to winter weather – and scarcity of contractors in the region. Burns Lake staff find that they need to have project funding decisions made by February, to ensure they have adequate time to plan and costeffective resources in place, before starting construction after the snow melts.

Securing a grant after the spring means that the Village have to scramble to collect and mobilize resources before poor weather conditions delay the project for at least another eight months.

Some other challenges relate to the context of a rural town and the tendency to live a fair distance outside the downtown core. Typically, people get around by car and must drive to access services. In order to bike or walk, issues of steep topography, lack of sidewalks and safe spaces must be considered.

Like many small towns in BC, the busy main highway runs right through the middle of town.

Luckily, the highway follows a winding path through town, so vehicles must slow to navigate turns. However, there's so much traffic coming through town due to the gasoline pipeline and growth at the Port of Prince Rupert, that traffic volume is a significant problem.

Truck traffic impacts the safety of downtown, and challenges the ability to make downtown more walkable and inviting. Burns Lake would value exploring alternatives to modifying the existing highway, such as a resource road that would push truck traffic outside of town. Unfortunately, a safety study by Ministry of Transportation and Infrastructure (MOTI) has not happened, and staff are not confident that reimagining the main highway would be a priority. And what we're really pushing for is a resource road, to maybe circumvent the town for larger truck traffic ... but a very hefty price tag on that. We probably will not be so fortunate as to see that but it's the solution to the issues we're having right now. ... you take your life in your own hands, if you're going to ride your bike on side of the highway.

DOLORES FUNK, MAYOR, VILLAGE OF BURNS LAKE

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We have this really strong vision that's come about by all these different developments, and by the partnerships and relationships that are building. So I feel like that's the key piece that's really more important than any kind of paper plan that dates itself.

DOLORES FUNK, MAYOR, VILLAGE OF BURNS LAKE

Facilitating Factors

Several factors help active transportation along in Burns Lake. First, staff, mayor and council have a strong vision for active transportation. Council is prioritizing active transportation, keeping it front and centre as one of four main sections in their three-year strategic plan.

They see how the community has changed in the last 15 years, and with contributions from community groups, strong partnerships, and new developments that support recreation – like the bike park, multiplex, recreation centre, walking track, walkable downtown – active transportation fits right in.

The strong vision grows from the people who live in Burns Lake. Many residents are seeking a certain type of outdoor lifestyle when they come to Burns Lake. For example, many come as tree planters and then choose to stay. Municipal staff know there are active people with active jobs in Burns Lake, which supports increasing active transportation in the village.

The mountain biking culture is embedded in Burns Lake, with teachers recruiting youth for trail-building. Mountain biking has evolved to fat biking in the winter, with community members commuting to work in the snow. Now with the advent of e-bikes, locals can get up the hills easier and travel to downtown.

Supportive non-profits keep up the active living culture in Burns Lake, with Spirit North, Ride Burns, Omineca Ski Club, and the Burns Lake and District Seniors Society encouraging physical activity in the area.



Cyclists can travel through the Burns Lake Kager Lake Trail System.

Photo courtesy of Margus Riga.

Easy access to existing trails all over Burns Lake supports active transportation. From the Boer Mountain trail system, to the Eveneshen Nature trail that winds through the heart of Burns Lake, many people use the trails to get from A to B. Moreover, the small footprint of Burns Lake proper encourages a walkable downtown.

Burns Lake knows snow and winter conditions. Village crew prioritize sidewalk clearing and lighting dark areas, keeping routes safe for walking year-round. This habit keeps people in Burns Lake walking all winter long.



Fat bikes are making cycle commuting in the winter more common in Burns Lake.

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There's so many people who live an active life, they would like to be able to translate that into their day-to-day more. Active living, outdoors and are a really big part of the people that live here.

SHERYL WORTHING, CHIEF ADMINISTRATIVE OFFICER, VILLAGE OF BURNS LAKE

Funding presents itself, then we hit the ground and make it happen. Because that's how we get all the nice to haves, ... we don't have any of those unless we have grants. And thankfully, we've been fairly successful over the last few years, managing to get grants for different projects. And that's what pushes us forward. So we worked really hard to go after those pieces.

DOLORES FUNK, MAYOR, VILLAGE OF BURNS LAKE

So ever since the sidewalks were built, I've noticed a lot of people walking and biking, and utilizing it quite a bit, which I was happy to see. ... And I thought it was a great idea, we always have a great working relationship with the Village of Burns Lake, we've done numerous projects together, and we are anticipating working with them a lot more. And I just can't wait to do more down the line.

BERNARD PATRICK, CAPITAL AND INFRASTRUCTURE DIRECTOR, LAKE BABINE NATION

Progress

Burns Lake is proud of their sidewalk project, with Phase one recently completed. Funded by a BC Active Transportation Infrastructure grant (2020-21, \$435,000), the new one kilometer sidewalk increases safety for community members travelling on foot along Ninth Avenue and Highway 16. People can walk or cycle between major village destinations like the regional hospital, Lake Babine First Nation Band Office, senior care facilities, doctor's office, and the high school.

Key active transportation routes involving Sus Avenue, Chas Avenue and Saw Street are immensely improved through the project. Staff feel that the piece that connects to the school is important for students to get to school safely. Completed in partnership with Lake Babine Nation, and with full support from Mayor and Council, the project and its later phase will create a network of sidewalk infrastructure through key areas in Burns Lake. Burns Lake has been building their community look and feel over the years. The revitalization of their downtown space invites pedestrians to socialize, play and shop. Businesses, coffee shops, splash park, playground, campground, and dog park are located lakeside near the lovely Spirit Square which draw residents to activities and services on foot.



Burns Lake residents enjoy activities at accessible Spirit Square. The Square is a good example of place-making close to downtown Burns Lake.

So it was a great network of sidewalks to put through that particular area. And we have seen a huge increase in people using sidewalks now. It's safer for our community. It just gave everybody, in that one area anyways, the access to get out and just move really easily. Moving forward, we certainly have phase two and phase three to keep connecting the community. ... it starts to make me and maybe the

committee realize that the more sidewalks we can put in to other parts of the upper avenues to get people walking and walking in a safe manner down to Highway 16, all the better. I think it's a really exciting project.

DALE ROSS, Director of Public Works, Village of Burns Lake







These three photos showcase the development of the Woyenne – 9th Ave Sidewalk, a collaboration between the Town of Burns Lake and Lake Babine Nation. The final photo shows the official Project Official Opening with former Chief Gordon Alec and Mayor Dolores Funk. Recently, Burns Lake completed a project to resurface a 400 metre track, located at the high school. Notably, the project was funded through community fund-raising efforts, which raised \$250,000 in financial and in-kind contributions. The track resurfacing committee partnered with School District 91 to plan, fundraise and implement the project. The project drew on local community organizations, the school district and municipality, Ts'il Kaz Koh First Nation, Lake Babine Nation, local businesses, and community members to partner with and increase capacity.

The result is a truly community-owned, accessible recreation space, that promotes walking and wheeling in the village. It fills a need for flat, smooth walking and riding space, and acts as a training ground for cycling safety around the village. Due to the community's generosity, there were extra funds for thoughtful pieces like adding a concrete walkway down the slope to the track, wide enough for a wheelchair or walker.

The project not only improved recreation accessibility, but spurred improvements to the whole surrounding area – with lighting, seating, and regular landscape maintenance. The village and Seniors Society are proud of the accomplishment, noting the popularity of the facility and its importance during the pandemic when other opportunities were limited.





Volunteers work together to improve the Burns Lake track which is now a recreation destination where seniors walk and children learn to ride bikes.

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I think it surprised us all, how popular it has become. I'm just so thankful when I go by or I walk there ... the use, it's tremendous. There's kids with tricycles, bikes, scooters, rollerbladers. It's not just the walking track that has improved, it's the whole ambience of that area as they've cleaned out trees, planted new trees... We have plans to add picnic tables, and one is wheelchair accessible. And we'll probably have enough money to add more benches...I think the biggest thing is, is that anybody and everybody can use it, I think that's the biggest advantage.

KAY SAUL, BERNICE MAGEE, Sandra Barth, Burns lake and district Seniors society

Photo courtesy of Priyanka Ketkar.

We live on a hill, most of the people come down from the hill to the downtown, and they're just walking to the dog park, to the splash park, which just didn't happen, 15 years ago. It's really been improved by various councils.

> VALERIE ANDERSON, DEPUTY CORPORATE OFFICER, VILLAGE OF BURNS LAKE

As someone who lives out of town, I like that we're able to now come into town, park and walk around to take care of everything we need to do without driving from point to point. I think that's really valuable.

KRISTY BJARNASON, COUNCILLOR, VILLAGE OF BURNS LAKE

Be ready for funding. Plan ahead. Honestly, the minute we hear that there's another active transportation grant, we're going to hit the ground running to make the application and then hopefully get it and do phase two. So that's the biggest thing, I think, is just to be ready.

SHERYL WORTHING, CHIEF ADMINISTRATIVE OFFICER, VILLAGE OF BURNS LAKE

You really can't do it all yourself, you better be working with the groups that are working hard to make things happen. If we can find ways to work with them and support them, and to make those assets grow, that's the key piece for making things happen that we just couldn't do on our own.

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DOLORES FUNK, MAYOR, VILLAGE OF BURNS LAKE

Advice For Other Small Towns

Burns Lake staff suggests other towns be prepared for any grant opportunities. They recommend a solid knowledge of the next steps for active transportation; an understanding that success comes with perseverance; and taking advantage of the momentum of other community projects by adding active transportation opportunities to existing capacity and priorities.

Burns Lake's economic diversification strategy is a great example of strengthening active transportation by taking advantage of opportunities to align it with other strategies. Moreover, the scope of teamwork required recognized the need for small towns to constantly collaborate in order fulfil projects. This relates to the importance of collaboration in a small community, recognized as something that might come more easily in a small town than a larger urban centre. In a small town, there's limited possible partners, so groups become effective at working together.

Next Steps For Burns Lake

Connect downtown and Boer Mountain Trail System

Burns Lake would like to connect the mountain biking trail system at Boer Mountain with the downtown core via the Eveneshen Nature Trail. This connection would provide a seamless route between recreation and the downtown destinations. It would be useful for residents, increase active transportation to recreation, and facilitate recreation tourism. The Village is actively looking for grant opportunities to fund this project.

Continue the sidewalk project

Burns Lake is keen to build Phase two and three of the sidewalk project over the next few years. They recognize its importance as a main route and for encouraging safe active transportation. They would like to engage the community to see where they'd like to have a sidewalk and act on that information. Generally, the plan would be to continue down Ninth Avenue to Centre Street, which bisects the whole upper village area, and would significantly increase opportunities for safe walking.

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I think it's a really exciting project ... I'm looking forward to continuing on that for sure ... Phase two and Phase three is about another three kilometers. It would really open up the opportunity for people ... maybe you don't even have access to a vehicle and [can] walk and especially the winter months ... it's just safer ...

DALE ROSS, Director of Public Works, Village of Burns Lake

3.

Connect neighbouring communities and increase safety of highway cycling

Burns Lake is considering opportunities to connect neighbouring communities like Francois Lake via active transportation. However, major modifications must be made to the highway to ensure cycling safety. They would like to engage with the regional district and Ministry of Transportation and Infrastructure (MOTI) to assess the feasibility of a trail system allowing cyclists to safely travel parallel to the highway.



Burns Lake active transportation infrastructure includes 'white ways' like the Boer Mountain Trail that allows residents to snowshoe and cross country ski through the winter months. The rest of the year the same trails are used for walking and mountain biking.



City of Duncan: Towards Equity



There's redevelopment and densification happening in the downtown core. And so [we're] making it as pedestrian- and cyclingfriendly as possible, and as well, working to achieve good transit connections.

MICHELLE GENEAU, Manager of Planning, City of Duncan

The City of Duncan sits on less than one square mile on Vancouver Island, about a 45-minute drive south of Nanaimo.

It is the smallest city in Canada by area. Duncan is part of the Cowichan Valley Regional District, and is in close proximity to neighbouring municipality North Cowichan. Duncan lies within the traditional territory of the Shhweenustham 'u tu Quw'utsun Hwulmuhw (Cowichan First Nations). Though 4,944 people live within Duncan city limits, many people who work in Duncan live in the surrounding, more populous Cowichan Valley. The City was officially named "City of Totems" in 1985 due to its collection of 44 totem poles.⁴

The average household income in Duncan is well below the BC average. The population of seniors in Duncan is climbing, while the population of children is staying the same.⁵

Winters in Duncan are mild and snow is rare; summers are warm. There are no public schools within Duncan city limits, though one independent school is situated partially within Duncan. Students who live in Duncan typically go to school in North Cowichan.

Champions

The manager of planning with the City of Duncan focuses on applying smart growth principles, Complete Streets approaches, and accommodating all mobility needs through the active transportation work in Duncan.

The Director of Public Works and Engineering also contributes to this work and leads development of the city's new transportation and mobility strategy: Small Town. Going Places.

Active Transportation planning is also supported by a planning technician who works closely with both the Manager of Planning and Public Works and Engineering staff.

77%	3%	16%	2%
drive to work	public transit to work	walk to work	bike to work

Challenges

Competing priorities challenge the attention active transportation can garner in Duncan. The city struggles with poverty, crime and homelessness, and city resources are often turned towards solution-finding for these challenges.⁶

Narrow roads on major travel routes, like Government Street, challenge the active transportation network. While Duncan was able to establish some dedicated bike lanes a few years ago with provincial grant funding, they scaled down to shared lanes where the road narrows too much for dedicated space. They are keen to prioritize developing dedicated cycling infrastructure.

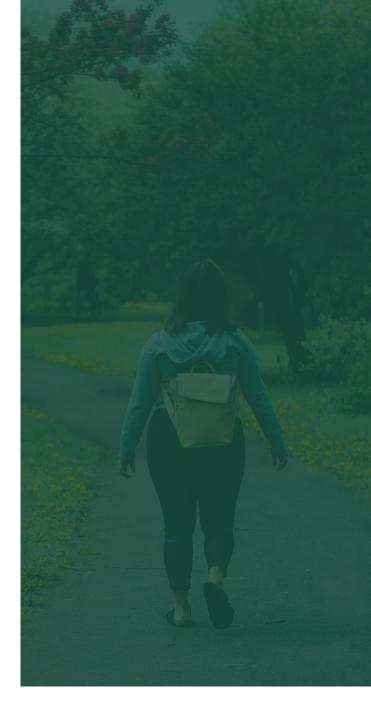
Highway 1, which runs through the middle of Duncan's square mile area, requires changes to establish safer active transportation. As such, Duncan is placed with the burden of funding the highway improvements despite scarce resources with high demands. Though Duncan has a corridor management plan, staff say change is impeded by the province which hasn't prioritized the actions.



A "Share the Road" sign encourages motor vehicle drivers to consider pedestrians, bikers, and other travelers using the road.



This roadway highlights a bike lane, sidewalk with a yellow line on the outer edge, crosswalk accompanied by a pedestrian crossing sign, and "Share the Road" sign. This shows where the green bike lane ends and moves to a shared road model where the road is too narrow for dedicated bike lane.



The highway poses several challenges for active transportation. Due to the development of commercial properties along the highway in the 50s, the current design prioritizes vehicle access with driveways that break up the sidewalk and travel route. The sidewalks have no separation from the high volume of traffic despite the highway acting as the main route through town. Further, the width of the highway precludes pedestrians with mobility challenges crossing in the allotted time. Ministry of Transportation and Infrastructure's (MOTI) strict timing for light systems on highways make prioritizing the pedestrian difficult in those situations.

As a result, Duncan is focusing on building multi-use paths in the area to replace the narrow sidewalk and creating separation from traffic with a wider travel area for pedestrians, cyclists and other users. Though MOTI has given the municipality right of way, the changes fall to the city to fund, unless they can secure a large grant.

Unfortunately, having a small city area means that some roads – and the active transportation infrastructure – that run parallel to the highway become dead ends at city limits. Duncan is looking at how to improve parallel roads and pathways on or near the highway to create better connections. The railway, though inactive, is another tricky aspect of Duncan's layout as it impedes development of direct routes. Staff feel restricted in improvements they can make near the railway, as the standards are different from roadways. Establishing an accessible crossing station at the train station took a long time; and developing the Friendship Trail railway crossing was impossible, thereby restricting trail meanders across roads rather than crossing the tracks.

One topography challenge in Duncan is the significant grade differentials. This change in grade between streets demanded infrastructure to allow for foot traffic. However, the resulting sets of stairs have become a common loitering area in the evenings, raising maintenance and safety challenges for the city.

As Duncan students typically go to school outside the city, making a difference in active travel to school is challenging for the City of Duncan, as it requires collaboration with schools, school districts and other municipalities. Little headway has been made due to many uncontrollable factors, including the greater distances students have to travel to go outside the municipality for school.

Where the City of Duncan has been influential on active travel to school is by working closely with the independent school that is partially within the city (Queen Margaret's School). The city and school are working together to improve the network.

As the urban centre for a larger geographic region, many people travel to Duncan as a destination for work or tourism. Active transportation plans need to consider the accommodation of vehicle traffic to the city. Moreover, transit serving Duncan is part of a regional system that extends beyond the municipality; as such, transit decisions and route planning largely fall outside of the city's jurisdiction.



This staircase provides a direct connection for pedestrians across a steep grade between the trail below and the road above.

Everybody uses active transportation at some point. We definitely have all types of users, whether it's recreational, or if that's their choice as a main mode of travel, [those] walking to different destinations downtown, or in the other areas of town as well. We also are aware that some people [are] not able to afford a vehicle. So we're really trying to accommodate everybody.

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MICHELLE GENEAU, Manager of Planning, City of Duncan

Facilitating Factors

Duncan staff indicated that active transportation is a priority for council and community members. Active transportation receives council's attention among other pressing issues like affordable housing, improving the downtown business area, environmental policy implementation and infrastructure and asset management. Project sites have gained the public's attention and supported interaction with the issues, such as PlaceSpeak for the Transportation and Mobility Strategy development.⁷

Staff consider all the potential users when planning active transportation opportunities in Duncan. Leading with an equity lens, they invite input from a range of users through engagement processes. For example, the advisory committee for people with disabilities will contribute to the development of the Transportation and Mobility Strategy, and add their thoughts on recreational, commuting, and daily living possibilities within the active transportation network.

Given Duncan's small size and juxtaposition with other municipalities, the city has a strong collaborative relationship with neighbouring municipalities. Most notably, Duncan streets are sometimes directly across from North Cowichan streets; as such, the two municipalities collaborate to ensure routes between both municipalities are smoothly connected. The Friendship Trail is a great example, as it is accessible from both communities which allows for easy travel between key destinations.



This Friendship Trail (siiye `yu) is a multi-modal trail separated from traffic that provides a safe, enjoyable route for all ages and abilities.

Duncan also works closely with Cowichan Tribes, and the Cowichan Valley Regional District, with efforts to plan jointly whenever possible and improve connections in the whole area. For example, Duncan's previous active transportation plan engaged Cowichan Tribes and the regional district as partners, and the Municipality of North Cowichan and Duncan partnered on the University Village Sustainable Local Area Plan.⁸

Collaboration is facilitating Duncan's active transportation progress. For example, plans to develop a multi-use path on the highway are enhanced through the partnership between Duncan and Cowichan Tribes. Both recognize the importance of a safe walking and cycling route along the highway's residential areas in the southern part of town, including the Cowichan Tribes community, where there are many pedestrians including families with small children. These groups need to cross the bridge and walk along the highway to access town services. There's alignment between Duncan's and Cowichan Tribes' priority on addressing the issue, and the changes are also part of Cowichan Tribes' transportation plan.

Moreover, Duncan's collaboration with MOTI on the corridor plan has allowed for exploration of highway modifications to improve pedestrian safety, particularly to address crossing between unmarked locations. Possibilities identified in this collaboration include developing another signalized intersection; an overpass (which would require additional travel area); or an underpass (which may cause additional safety concerns and would be a complicated construction project).

Similar to other towns, funding is always an issue for active transportation projects in Duncan. To facilitate progress in the face of uncertain funding, Duncan looks to development applications to examine adjacent existing active transportation facilities that can be concurrently improved, or plan for new facilities in the development area.

They are always looking to expand sidewalks, and this can sometimes be done through road dedications. Working with developers to find the funds and facilitate progress creates efficiency. Grants are essential too: implementation of the bike lane projects on Canada Avenue and Government Street was supported by grant funding.

Duncan recently adopted the Master Plan for McAdam and Rotary Parks (June 2021). The plan "supports a productive natural environment while welcoming a wide range of people to use and enjoy the parks."⁹ Also prominent in Duncan is beautiful Centennial Park, with a variety of activities and natural spaces, accessible from downtown, residential areas, and by bike lanes on Government Street. Duncan parks encourage recreation and active transportation by integrating accessible physical activity opportunities into everyday life.



The dyke trail in McAdam & Rotary Parks offers a shaded route along the river that connects residential areas with playing fields, tennis courts and the main highway and commercial area.

 $^{\ ^{}g}\ https://www.northcowichan.ca/assets/Departments/Planning~and~Land~Use/docs/Bylaw3582UVLAP.pdf$

^e https://duncan.ca/wp-content/uploads/dlm_uploads/2021/07/McAdam-Rotary-Parks-Master-Plan-June-2021-low-res.pdf

Progress

Duncan is proud of the grant-funded bike lanes that travel along Canada Avenue, one of the city's main travel corridors, Ingram Street, and busy Government Street. Staff are partnered with North Cowichan to further improve and extend the bike lanes north, thereby connecting them to the Friendship Trail. This would ultimately improve the route to Vancouver Island University, Cowichan Campus.

Duncan's active transportation network would also improve with Habitat for Humanity's new six-plex development on Jubilee Street near Centennial Park. The planned cycling infrastructure on Jubilee will link up to the larger cycling network on Government Street and Canada Avenue. This would create a truly accessible active transportation option for residents who don't drive.

Aligning affordable housing with cycling network improvements demonstrates Duncan's commitment to equity approaches. At the new development on Jubilee Street, the city expanded the sidewalk and plans to install bikes lanes on both sides of Jubilee. In order to reserve the bike lane space while creating efficiency, Duncan collaborated with developers to temporarily install artificial turf. The turf looks great, was inexpensive, requires no maintenance, and is easily removable when they are ready to put in new bike lanes.

For several years, downtown walkability has been a priority for Duncan, and today they have a sidewalk network covering nearly 30 kilometres. After all, many people live, work, visit and access services in the downtown area.

Duncan's downtown walkability is enhanced through: widened sidewalks; improved signalized intersections; midblock connections; and an enhanced City Square.

The City Square is a flexible space for various events and uses (such as farmer's markets and concerts), and is closed to vehicles through moveable bollards. The city works with the Downtown Business Improvement Association to determine configurations for the event closures, while ensuring businesses are accessible.



Artificial turf beside the new sidewalk on Jubilee Street acts as a temporary, cost-effective measure to protect space for the upcoming bike lane installation.

New in summer 2021, the Station Street Common is a place-making feature of downtown Duncan that enhances walkability.

A collaboration between City of Duncan and the Downtown Duncan Business Improvement Association, Station Street Common is a wheelchair accessible space that features attractive concrete tables with benches and umbrellas.

It's an ideal space for meetings, resting, or enjoying takeout from nearby restaurants.¹⁰ These combined strategies have boosted the downtown pedestrian experience.

There is excitement around the development of the Duncan's Transportation and Mobility Strategy, Small Town. Going Places. Strategy development has included a mobility audit for people with accessibility challenges, and engagement of a range of user groups through PlaceSpeak and engagement sessions. Staff believe the strategy will provide much needed guidance on priority projects and network improvements to maximize Duncan's active transportation potential.



Station Street Common is a great example of place-making to encourage active transportation in Downtown Duncan. The gated entrance welcomes people to enjoy this pocket park with picnic tables and umbrellas. The area is surrounded by Totem Poles and attractive landscaping.



Downtown Duncan encourages active transportation with pleasing aesthetics, places to rest, attractive cobblestone walkways and bollards that enable roads to be closed to cars.



Attractive landscaping heightens aesthetics and safety for pedestrians, on active transport routes in Duncan.



Bollard cover on the perimeter of a town square that can be closed to cars for community events.



One thing we have to accept as a small community is sometimes we need to focus on implementing small pieces of the network. Just starting small and making that contribution to the bigger network, ... whatever projects you can, and it'll help you achieve the bigger goals.

MICHELLE GENEAU, Manager of Planning, City of Duncan

Advice For Other Small Towns

Duncan staff recommended that other small towns working on active transportation actively coordinate and consult with community members' and community groups' priorities. They also recommended collaborating with other local jurisdictions to make transitions as smooth as possible.

Further, they advised starting with smaller pieces of the network, rather than waiting to achieve the big goal at once. Progress within a piecemeal approach is better than no progress at all. Staff considered mid-block connections an important tool to promote safety and route connectedness. They advised planning midblock connections through the development process.

Finally, staff recommended wayfinding activities: interactive and fun routes that can easily enhance the walkability of a small area. Duncan's Totem Walk, indicated with yellow footprints, is an inexpensive strategy to encourage walking.



Two totem poles with eagles at the top, spreading their wings, are part of the Totem Tour.



Yellow footsteps show the way on the "Totem Tour." This is a delightful example of wayfinding that showcases local culture while encouraging active transportation.

One other major thing that's sometimes put on the backburner is wayfinding. ... if you can make it interactive and fun ... laid out so that they know where to find these other little destinations, and how far of a walk it is ... just so people get a better idea of what's within reach. In Duncan, we have the yellow footprints ... the Totem Walk, so that is just a visual path ... something that you can visually follow and it brings you around to the different totems within the community. And so just little things, don't even have to be cost-intensive, but just kind of liven up the experience of commuting by foot.

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Matt Blakely, Planner, City of Duncan

Next Steps For Duncan

Place-making

Duncan is interested in augmenting place-making by creating spaces and destinations that encourage active transportation. This could include: inviting spaces next to businesses; small parks; interesting architecture; and resting features, such as benches.

2.

Transportation + Mobility Strategy

A priority for Duncan is completing the Transportation and Mobility Strategy, and implementing the top priorities. Strategy efforts will also include collaborating with local partners to determine and execute unique active transportation improvements.

Equitable approaches

Duncan values the application of an equity lens; they strive for an inclusive and accessible system. They will continue to engage user groups in priority-setting and consider the range of users for active transportation opportunities.

Town of Gibsons: Exploring Options



I want to look back and feel that I've made a difference and improved the community in some way. And I'd like to see ... this town become a place where people of all ages and abilities can make their way through town ... and be able to do it fairly easily and find that they can access almost the whole town, with our trail network, and have a good time doing it ...

DAVE NEWMAN, DIRECTOR OF INFRASTRUCTURE SERVICES, TOWN OF GIBSONS

Gibsons is a small town located on the southern Sunshine Coast, with a population of 4,605 residents.

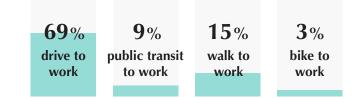
It is connected to the lower mainland by a 40-minute ferry ride from Horseshoe Bay, and its proximity to Vancouver makes it possible to commute to the big city for work. The Town of Gibsons is on the traditional lands of the Skwxwú7mesh - Squamish Nation. In Gibsons, it's warm and dry in the summer, and mild and rainy in the winter, with infrequent snowfalls.¹¹

Previously a forestry and fishing town, Gibsons is now diversified with construction trades, business services, retail and tourism.¹¹ Extensive outdoor opportunities, beaches, and a quieter and less expensive way of life (compared to Vancouver) entice people to move to and visit Gibsons. The population of seniors is growing, while the population of children is stable.¹² There is one elementary school, one secondary school and one alternative school within the Town of Gibsons.

Champions

The Director of Infrastructure Services and Director of Planning are active transportation champions with strong visions for inclusive and accessible active transportation opportunities. The directors work in tandem with keen staff, a supportive council and the Infrastructure Services Department to strengthen Gibson's active transportation foundation.

An updated active transportation plan has been adopted by Council and incorporated into the Official Community Plan. Project priorities include: developing scenic, interesting routes; connecting broken routes and improving networks; amplifying community amenity contributions from developers; and enhancing the walkability of central commercial areas.



Challenges

Gibsons struggles with the steep connection between upper and lower Gibsons. This topography challenges their goals around all ages and abilities (AAA) standards. Despite issues, they aim to ensure everyone has options for safe travel.

Gibsons was originally built with wide straight roads, which tend to encourage speed in population-dense areas. One example is Glassford Road, an old-style residential street



Gibsons seawalk offers an accessible biking, walking and wheeling route to connect destinations along the water including recreational areas and shops and restaurants in the lower Gibsons village. popular with families, is often used by drivers enroute to the ferry or lower Gibsons.

Due to the high speed traffic concerns, the town decided to trial a closure of the road, a project that they are currently working on and monitoring outcomes.

A lack of funding is a constant obstacle to active transportation projects. Thankfully, Gibsons has been successful in winning grants that enabled recent progress on connecting routes. Another funding challenge is the costs of long-term maintenance.

The team in Gibsons has found that the community needs time adapting to new infrastructure, which requires communications and education.

Not many residents see active transportation changes made in bigger cities, which limits their frame of reference to understand, appreciate and welcome similar changes in Gibsons. 66

The other big picture thing is to make sure we have the money to maintain and ultimately replace our infrastructure. ... in 20 years, that road still needs repaving. And so we need to make sure that whatever we're building we're able to maintain.



DAVE NEWMAN, DIRECTOR OF INFRASTRUCTURE SERVICES, TOWN OF GIBSONS One example was the advisory bike lane (ABL) built on Shaw Road. This was so new, with very few examples of ABLs in other places, that people were resistant to the change. There were some protests, largely over removing street parking.



Signage detailing how the road is shared on the Advisory Bike Lane on Shaw Road. This street sign indicates the maximum speed is 30km/ hour and demonstrates that cars are to yield to cyclists, travel in the centre and move right to make way for oncoming traffic. Another area of tension is achieving balance among residents' perceptions of safety, infrastructure feasibility, and engineers' drive towards best practices.

The mid-block crosswalk at Gower Point Road over to Dougall Park is a prime example. Residents requested a safe mid-walk crosswalk but it would have required restructuring of the curb to ensure pedestrians visibility beyond parked cars – this was valued beyond the budget at \$25,000. Luckily, this proposed change received grant funding recently and the town has advanced on the project.

Finally, the town identified many challenges through Gibsons' safe routes to school study a few years ago. Parents were concerned about the possibility of encountering wildlife, like bears and cougars, along school routes on the trails. Moreover, students travel along the highway, which has a very narrow shoulder, and the rocks on the road cause flat bike tires.

A problem unique to Gibsons is the ferry traffic, which coincides with school schedules. The traffic, combined with unmaintained highway intersection crosswalks, creates dangerous conditions for students to commute by bike or on foot. Staff are committed to discussing this issue with MOTI every chance they get.

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... People tend to be resistant to change. Also a lot of people don't see the new types of bike lanes coming out, ... we have very little green paint on the Coast, which are high conflict areas between cyclists and vehicles. So that's sometimes a challenge , to communicate to people as to why things are being done in a certain way ... it's getting people familiar with different types of infrastructure.

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DAVE NEWMAN, DIRECTOR OF INFRASTRUCTURE SERVICES, TOWN OF GIBSONS

I tend to keep my ears open to comments and thoughts about active transportation. I can often pull those back up, when we're finding the appropriate situation ... or a type of infrastructure, some problems that might be an issue in another town. And I found quite often that I'm able to draw on experiences of myself or others, when we're looking at creating or improving our own networks.

7

DAVE NEWMAN, DIRECTOR OF INFRASTRUCTURE SERVICES, TOWN OF GIBSONS

Facilitating Factors

The council and staff approach active transportation as part of a system integrated with affordable housing, and natural asset management. A strong staff culture of learning, collaboration and support –drawing on research and community experiences – facilitates real active transportation progress.

The Directors are personally interested in developing and participating in cycling culture for both recreation and transportation purposes. They observe that the Town Council is composed of like-minded people who prioritize active transportation as a close second to affordable housing.

Other facilitating factors include: positive cooperative relationships with developers; zoning bylaws (such as Gibson's strict bike parking requirements); and staff and Council's recognition of the physical and mental benefits that come from outdoor activity.

Grants are an integral factor for active transportation; without them, progress would be more difficult. During the pandemic, the citizens' need to be outdoors increased Gibson's grant success: they secured the BC Tourism-Dependent Communities Funded Project, valued at \$675,000.

This grant facilitated the connection of several trails, and the addition of bike racks to help cyclists travel from the ferry into the town core safely.



The Gibsons Marina is a gateway destination for many boaters travelling to the Sunshine Coast and is located along the seawalk.

Finally, the consideration of options for diverse road users also facilitates progress.

These considerations include: the possibility of connecting a networks focussed on a diversity of users, thereby completing the system; a range of options to fit the parameters of the project while balancing road users' needs (e.g., developing a multi-use path, rather than a separated bike lane, due to extreme construction challenges); and options for different road users (e.g., seniors may require less steep and busy routes compared to competent cyclists).



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North Fletcher is a pretty street. [The changes are] meant to slow down traffic and provide accommodation for cyclists and pedestrians, without huge additional costs ... [there's] sidewalks on both sides of the road [and] bike lanes, [and] asphalt for vehicles as well.

DAVE NEWMAN, DIRECTOR OF INFRASTRUCTURE SERVICES, TOWN OF GIBSONS

I think with the pandemic, it was a bit of a silver lining when people got outside and got to appreciate a safe, outdoor space to just be with the people they love, ... and I think a lot more people started using our trails , started getting outside and feeling safe. And so that helped the town, there was a lot of COVID grant money for improving outdoor spaces.

LESLEY-ANN STAATS, DIRECTOR OF PLANNING, TOWN OF GIBSONS

Progress

Gibsons' priority is working on completing the missing links in their active transportation network. Their recent progress has been facilitated by a large grant. Staff acknowledge that it's an accomplishment – not a shortcoming – that they built the disconnected pieces in the first place: "If we didn't build them, even though they weren't continuous, we wouldn't have a project right now to connect them. And we'd have nothing." Indeed, this perspective of valuing progress over perfection, rings true in many small towns.

Gibsons staff noted that the town tends to act strategically to respond to opportunities. For example, while the town used a smaller grant to construct a bike lane on one side of Gibsons Way, they are planning to build the second bike lane in the near future since the road also requires water main replacement infrastructure.

The Mahan Trails, Gibsons Seawalk, Inglis Trail, Shaw Road advisory lane and North Fletcher Road are excellent models of active transportation progress. The town is proud of Mahan Trail's connecting routes, which network through a forest.

Unbeknownst to many residents, some of the trails are actually the town's natural engineered storm water system – part of Gibsons' natural asset system.¹⁴

Mahan Road stretches all the way from Gower Point Road, near the beaches in lower Gibsons, to the commercial centre in upper Gibsons, with connecting trail pieces at intervals throughout the forest.¹⁴

The Gibsons Seawalk boosts accessible and diverse active transportation opportunities. People who arrive by boat land at the marina and walk along the seawalk to restaurants and beaches. It's wheelchair accessible and a beautiful connecting piece in active transportation network. The wheel-chair accessible Inglis Trail connects lower Gibsons to the commercial corridor of upper Gibsons through an off-road, forested, switch back route. People needing a lower gradient option can connect from there to Helen's Way along the trail.

The construction of an advisory lane on Shaw Road was ground-breaking. Despite the tensions from public's unfamiliarity with this type of facility and sharing the road, the lane serves to safely connect both the Inglis and Mahan Trails. Lastly, upgrades to North Fletcher Road truly showcases Gibson's innovative progress. Previously an "old-style" road (i.e. wide and straight and encouraging speed), North Fletcher now stands out as a feature of the community. It's interesting, winding road discourages vehicle traffic while encouraging active transportation, with gorgeous views and ample pedestrian space. The transformation enhances the area's residential streetscape and virtually eliminated traffic volume and speed concerns.



The Advisory Bike Lane on Shaw Road prioritizes active transportation and connects a residential area with schools and the main commercial area.



Bridges connect active transportation trails through the stormwater ponds. An example of how Gibsons has incorporated active transportation into their natural assets infrastructure.

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If I'm ever going from lower to upper with my kids on a bike, there's no way we can go up School Road [or] Gibson's Way. So it's kind of nice, you feel safe in the forest, [along Inglis Trail]. That's a really beautiful trail. And I often see wheelchairs, the electric ones, it's hard packed. I take my e-bike up there too. So that's a nice link from lower Gibsons all the way up and it goes right to the commercial corridor of upper Gibsons.

LESLEY-ANN STAATS, DIRECTOR OF PLANNING, TOWN OF GIBSONS

Helens Way ... was one of the most gratifying projects I was involved in, ... because we used to see people from Christenson Village in their scooters and they'd be going down Gibsons Way amongst traffic, and now they can go down to lower Gibsons via the woods, on their scooters, and it's just improved life, I believe, for some of these people and made them that much more independent.

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DAVE NEWMAN, DIRECTOR OF INFRASTRUCTURE SERVICES, TOWN OF GIBSONS

Advice For Other Small Towns

Gibsons staff recommended looking around for examples of what worked in other similar places before tackling an active transportation project. They recognized the common challenges of existing roads, difficult topography and a finite amount of money as reasons to have many "tools in their belt." Like other small towns, they highlighted the importance of action over perfect solutions.

Gibsons also advised linking and partnering with advocacy groups, which aids community understanding of and engagement with active transportation issues and projects. In Gibsons, Transportation Choices, or TRAC, advocates for all types of active transportation on the Sunshine Coast. Municipal staff find it helps to talk to TRAC members about relevant research and standards, their ideas and how to balance transportation priorities across many user groups.

Gibsons staff indicated that there may be better opportunities in small towns to communicate with members of the public. Public discussions over local government processes and active transportation constraints have generated great ideas to meet multiple objectives.

As parking is a big issue, Gibsons staff state that coming up with parking solutions is one of the best ways to reduce opposition to active transportation projects. Using right of ways for active transport as much as possible decreases the competition.

Gibsons also recommended exploring cost-sharing opportunities for active transportation routes that go outside town boundaries, which can encourage support for improving those networks.

For Gibsons, that means exploring these opportunities in collaboration with the Sunshine Coast Regional District and the MOTI.



And sometimes, if we were to wait for the best or perfect solution, nothing would get done. So sometimes these steps can be incremental, or they have to fit within existing curbs, or, the funds that we have. I think it is being imaginative, being aware of the options that you may have with cycling infrastructure.

DAVE NEWMAN, DIRECTOR OF INFRASTRUCTURE SERVICES, TOWN OF GIBSONS

GIBSONS PUBLIC MARKET

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I think you need to solve the parking issue, if you're going to take away parking, especially for small towns with small businesses, where they rely on people driving and parking right in front of their store. I think the biggest challenge that we have had is where parking is in competition. So if communities can solve their parking issues, and not make active transportation networks compete with parking or vehicles, then that would help the process.

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LESLEY-ANN STAATS, DIRECTOR OF PLANNING, TOWN OF GIBSONS Gibsons staff stressed the importance of applying for, and being ready for, 100% grantfunded projects as that adds resources to expedite progress.

Gibsons staff stressed the importance of applying for, and being ready for, 100% grantfunded projects as that adds resources to expedite progress. Moreover, ensuring continued Council and public support facilitates action.

Their last piece of advice was to explore opportunities with the development community to fund active transportation improvements, including maintenance, operating and replacement costs for all new infrastructure. Community amenity negotiations with developers are key to Gibson's progress.

Next Steps For Gibsons

Completing the network

Gibsons will actively work to complete their active transportation network. Their vision is to add in the links to complete the network. Many of these connections involve ongoing communication with MOTI.

For example, on Reed Road, they are planning a multi-use path that will link the northern boundary of Gibsons with the other parts of the community. Another example is at the west end of the Venture Way multiuse path: Gibsons is planning a link to the residential area and the shopping center, with added pedestrianactivated crosswalks.

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Exploring and testing options

Gibsons is exploring strategies to reduce traffic speed and ensure routes are walkable and bikeable. One example is the pilot closure of Glassford Road, a wide and straight street that invites speeding. The proposed closure is an alternative to lowering the posted speed further (which hasn't had much effect in the past due to the older design of the road). This trial will provide data to support similar projects.

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This recent grant that we received where we're actually constructing ... we're joining up all these links, and making this complete network. ... it's going to make our cycling infrastructure that we have far more usable ... developing these key connections.

DAVE NEWMAN, DIRECTOR OF INFRASTRUCTURE SERVICES, TOWN OF GIBSONS

3.

4.

Supportive infrastructure

Gibsons is installing supportive infrastructure to complete and enhance their active transportation network. They have money set aside for bike racks, signage and e-bike charging stations.

Factoring in e-bikes

Gibsons is also considering the increased use of e-bikes, and its influence within the active transportation system. For example, e-bikes are making it much more viable to shop in upper Gibsons for residents coming from lower Gibsons. Staff will keep an eye on the e-bike trend and factor this into planning and projects.



Steep hills challenge active transportation in Gibsons, especially going from Lower Gibsons to Upper Gibsons.

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I'm excited that Glassford Road is going to close temporarily as a trial ... it'll be so much safer for the children and the parents will feel more at ease, I hope. And that just creates an opportunity to assess how that works out and we'll all learn from it.

LESLEY-ANN STAATS, Director of Planning, Town of Gibsons

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City of Nelson: Changing the Conversation



I think once we start changing the conversation, that it's no longer active transportation versus transportation, ... it's all just a new way of building infrastructure.

SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON The City of Nelson, in the BC Interior, lies largely on the south shore of the Kootenay River.¹⁵ Nelson is part of the Regional District of Central Kootenay, and is on the traditional territories of the Sinixt, the Syilx, and the Ktunaxa peoples.

With 10,664 people making their home in Nelson, the easy access to outdoor activities in the mountains, trails and lakes draws an active group.

The city has a compact, walkable downtown core, featuring many restored heritage buildings from the silver rush days. The historical mining and forestry activity made Nelson a transportation and distribution hub for the region in the early 1900's. Today, Nelson is a cultural centre, with many businesses focused on natural foods. Mountain-biking and rock-climbing are popular in the area.¹⁶

The population of seniors in Nelson is climbing, while the population of children has been declining in recent years.¹⁷ In Nelson, winters are cold and snowy, and it's hot and dry in the summer. There are five elementary schools, one middle school and one secondary school in the area.

Champions

With over 20 years of experience in Nelson, the City Manager is a keen active transportation advocate and role model. He's been involved in active transportation since the initial plan was developed in 2010.

The Senior Planner is leveraging the strong culture in Nelson of long-term planning to solidify an accessible active transportation system that reduces greenhouse gas emissions.¹⁵

A supportive Council, strong advocacy groups, and an active, engaged population, also champion active transportation in Nelson.

66%	1%	26%	5 %
drive to	public transit	walk to	bike to
work	to work	work	work

¹⁵ https://www.nelson.ca/DocumentCenter/View/357/Active-Transportation-Plan-PDF?bidld=

¹⁶ https://en.wikipedia.org/wiki/Nelson,_British_Columbia

¹⁷ http://communityhealth.phsa.ca/HealthProfiles/HealthReportFactorsThatAffectHealth/Nelson

Challenges

Steep topography, sometimes in combination with snow and ice, interfere with active transportation progress in Nelson. Snow clearing and other winter maintenance for active transportation routes is expensive and demands collaboration with the Public Works Department to ensure it happens. Further, property owners sometimes neglect their responsibility of clearing their sidewalks, rendering some routes impassable.

Planning staff are currently working with Public Works to establish a predictable snow clearing schedule for primary active transportation corridors, and are struggling to get some operators on board.

Other physical barriers that challenge active transportation connections include the highway, which forms an obstacle between neighbourhoods, and the railway tracks, which in turn, forms a barrier between the waterfront and downtown.

The Nelson Bridge, known to locals as the Big Orange Bridge, or BOB, is a challenge for the many active transportation users looking to travel from the North Shore to downtown. The Big Orange Bridge is busy: 10,000 or more vehicles cross the bridge daily, including logging trucks.

Though there are fairly wide sidewalks, there is no dedicated cycling infrastructure on the bridge. To start addressing the barrier, Nelson and Ministry of Transportation and Infrastructure (MOTI) worked together on a cyclist-triggered light that notifies motorists of cyclists.

Though this may not be enough to get more fearful cyclists crossing the bridge, it's a step towards a more inclusive solution.

Staff observed that a major barrier is the perception of active transportation versus transportation, the idea that enhancing active transportation takes something away from another user group.



Drivers entering the bridge are notified with a flashing sign when cyclists are currently on the bridge.

Though cyclists were excited about the implementation of a primary bike route along High Street, planners noted it had low vehicle counts and that on-street parking and street narrowness could activate competing interests. Staff struggled with two options: 1) try and reduce traffic and make it a shared street; or 2) create a two-way bike lane, and change High Street into a one-way for cars. Residents, staff and council were split on the options, which created some confusion in the community.

Ultimately, Nelson decided to implement the shared street model to test and monitor its functioning. Staff will report back to Council and suggest modifications if needed. Staff noted also that there are always a few vocal residents invested in opposing active transportation changes, and navigating controversy is an ongoing challenge to progress.

Finally, funding is a constant challenge. Staff acknowledge that their topography and intersections with the highway are not simple which makes their active transportation projects complex. This complexity often requires expensive solutions that are grantdependent.

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[MOTI] commissioned a study to look at, how do we make it safe for active transportation users to go along the bridge? There's a lot of people on the North Shore that commute into work. And, it's a challenging area, and especially when you're trying to get people that aren't super comfortable to start cycling ... the bridge is a major barrier. And, though the warning lights are a step in the right direction [it] might not be enough for that clientele that's kind of fearful of biking in traffic. But, step in the right direction.

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SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON

The [city's] four major goals [are] all related to ... prosperity in our community ... enhancing sustainability of city services and infrastructure, strengthening neighborhoods, and expanding local jobs and local prosperity. And when you think about active transportation, it hits all of those.

KEVIN CORMACK, CITY MANAGER AND SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON

Facilitating Factors

Nelson City Council was really involved in the development of the Active Transportation Plan, back in 2010, with many councillors invested in active transportation as a mechanism for fighting climate change. The Nelson-Creston MLA spearheaded the more recent update of the Plan. Council identified key priority areas for Nelson, and active transportation was one of them. Active transportation is also a key component of the Climate Action Plan. City staff recognized that the elected officials' interest in active transportation has truly contributed to their progress.

The new five-year Active Transportation Plan focuses on implementation, with key actions to be accomplished in a shorter time frame.

Every year, staff report to Council on accomplishments and highlight the next year's Plan. This process ensures everyone is engaged and implementation moves forward. Prioritizing implementation confers other advantages, like having shovel-ready projects at their fingertips when grants are available. The 2010 Active Transportation Plan helped Nelson make headway on sidewalks, but the review and update clearly demonstrated the need for cycling infrastructure.

Their ability to clearly define the project needs over the next five years strengthened their grant funding case– which was needed – when the BC Active Transportation Grants were opened for submissions. From mountain biking to water sports, Nelson's active community culture supports active transportation and isn't afraid to ask for changes to support this culture. The West Kootenay Cycling Coalition is an important actor: they've alerted staff of funding opportunities and Coalition members' interests. Many local businesses in Nelson, such as the bike shops, have a vested interest in development of the cycling culture and amenities to support cycling. This is reciprocal, as Nelson supports local businesses when improving active transportation infrastructure; for example, local fabricators built bike racks around the city.

Nelson, like other small towns, has taken advantage of upgrading other infrastructure like sewer and water, to make active transportation improvements. It's a natural work-around solution to securing more funding. You need that culture in the community, where people are asking for those amenities. The cycling coalition did push us, because it's important to have those groups that say, 'Hey, there's funding available', they will make sure you're on track. And I think we've created a good relationship with the group. We talk regularly, we don't necessarily agree on everything ... but we're able to work together, to advance this.

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KEVIN CORMACK, CITY MANAGER AND SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON

We learned a lot ... something that's good for people in wheelchairs is often really bad for [people with visual impairments], because then you're eliminating barriers, or you're eliminating all the cues that they use to know when to turn. We're all learning as we go.

SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON Strong engagement processes underpin equitable active transportation progress in Nelson, with hundreds of residents attending planning sessions. Throughout the engagement process for the Active Transportation Plan review, they had a citizens' committee, and different lenses like business, seniors and youth were represented. Nelson's Senior Planner met with a resident who has a mobility challenge to get his perspective. And recently, through the bike route project, walked the route with a legally blind resident who uses that corridor with an assistance dog.

Staff found that the BC Active Transportation Design Guide supported community engagement sessions and guided their decision-making. Staff found they could explain complex design ideas, like curb extensions, to the public by using rationale laid out in the Guide. As well, the Guide demonstrates that the "best standard" can be interpreted in different ways in various contexts. This helped navigate conversations about dedicated bike lanes and alternative options in certain locations. Staff also noted the advantages of collaborating with the consultants who developed the Guide on the bike route project. Another supporting factor comes from the e-bike loan program, which provides loans, repayable over time through the city utilities bill, of up to \$8,000 per household for the purchase of e-bikes.

Nelson has seen great uptake of the e-bike program, especially with city staff. Staff re-pay the loans through payroll deductions. With the momentum and excitement generated by the program, it's easy to see e-bikes taking off.



Though Nelson has its topography challenges, it also has some natural advantages – in terms of layout –that facilitate active transportation. One is that the city is mostly laid out in a traditional grid, which makes it easy to encourage pedestrian movement.

This is complemented by neighbourhoods that have sidewalks on both sides of the street – in fact, there's about 60 kilometres of sidewalks for pedestrians in the city. Secondly, Nelson has narrow streets, which is a natural speed deterrent. And a third factor is the rail trail – or The Great Northern Trail – which provides great opportunities for connecting neighbouring communities. This trail connects Nelson to Salmo, and connects downtown Nelson to the Fairview neighbourhood.

Over the long-term, staff believe a perspective shift that supports transportation as a whole, rather than pitting active transportation against vehicles, will open up possibilities for improving culture, funding and projects. They recognize this has potential in pooled funding opportunities for all types of transportation improvements. A wider active transportation perspective reduces controversy and supports progress over time.

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In the community, everyone was like, "why are you doing curb extensions? It makes no sense." While in that guidebook, there's a section that really clearly explains curb extensions, and why you do them. People may still disagree, but it's hard to argue, once you have something that you can point to really quickly. And I think it is applicable to all municipalities for sure.

> SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON

If you just say ... we're investing in our transportation network, and then as part of your repaving project, you really look at your signage, you look at your pavement markings, it's just a new way of doing things. So I think once we start changing the conversation, that it's no longer active transportation versus transportation, ... it's all just a new way of building infrastructure.

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SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON

We sometimes as local governments, kind of make things difficult for ourselves, just how we label or categorize things. Why would we create a controversy in our community by pitting one group against another? It's all transportation, whether you're walking, using a car, using your bike [or] skateboard, let's just bring that together and say, actually, this funds transportation, and now we don't have to say, drivers are bad and buses are good. Sometimes we create our own controversies that are unnecessary.

KEVIN CORMACK, CITY MANAGER, CITY OF NELSON

We've made significant changes that will hopefully reduce traffic volumes to the point where this becomes a local street again, and it's not used for short cutting. I think the speed humps will discourage people from using it as a shortcut. And anecdotally, I hear some people living along there say that it's already changed, and even from some of the users. So, it'll take a bit of time, and we need to be patient with it.

SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON

Progress

Nelson is proud of its lakeside trail, which encourages active transportation for all ages and abilities along the waterfront. The trail links the beach, baseball and soccer fields, parks and a large hotel. They are planning to extend the trail, to cross over the CP line and connect to the Railtown area, which is in the process of revitalization.

Recently, the city assessed possibilities to reduce traffic on busy High Street and dangerous congestion around a nearby school. After seeing a host of poor driver decisions, amidst children crossing the intersection and cyclists finding their way through, consultants recommended that this intersection be closed.



Signage reminds drivers to slow down and to expect traffic calming measures designed to slow vehicles as they move through the neighborhood.





A busy and dangerous intersection was recently closed to motor vehicle traffic. Now, cyclists and pedestrians near the elementary school can more safely navigate the route.

The result is a clearer situation for all users that will encourage, instead of discourage, active transportation. This is a great example of Nelson's tendency to research options, assess the situation, then implement changes to support active transportation.

The completion of Phase 1 of the Primary Bike Route, which is planned to stretch from one end of the city to the other, is an excellent example of progress. The project was supported by the BC Active Transportation Strategy funding of \$424,510. Phase 1, which connects Lakeside Park to the Fairview neighbourhood, is the first two-kilometre piece of the primary bike route. The project made changes along the High Street corridor, to encourage cycling through to downtown along a low-speed and low traffic volume route.

The changes included a shared roadway design, with traffic calming measures including six new speed humps, pavement markings and signage. They also upgraded some pedestrian infrastructure, including adding sidewalks and roll over, barrier-free curbs, as well as tactile strips for those with visual challenges. Extras included the installation of a safe bike locker for 20 bikes downtown in the City Parkade on Vernon Street and 22 new bike racks downtown.



Parking meters double as bike racks for cyclists in Nelson.



Workers install a bike rack on the sidewalk, next to downtown street parking. This encourages people to cycle throughout the downtown core.

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With a bike lane [people] don't [have to share with traffic]. So you're not training people to bike within that shared road concept. [Sharing is] most likely what's going to happen to most of our network, there's very little opportunity for segregated bike lanes. So I think it's important to consider, predictability in your network.



SEBASTIEN ARCAND, SENIOR PLANNER, CITY OF NELSON



I think if you can have some good long-term planning ... it's not something separate or new, and it's just good urban planning. Being cognizant of what's in it for everyone, so you don't create your own internal or community controversies ... not making it something that one wins and one loses.

KEVIN CORMACK, CITY MANAGER, CITY OF NELSON

Advice For Other Small Towns

Nelson staff recommended transforming the transportation conversation into a unified vision that incorporates active transportation more generally. This shift minimizes controversy, and elevates funding possibilities through a shared vision for all transportation users.

Staff also recommended progressing without perfect solutions; after all, small towns have to work within the complexities of existing infrastructure and competing interests of transportation users. They know that the interim solution on the Big Orange Bridge and possibly the shared streets model are not perfect, but feel they are steps in the right direction. Waiting for a perfect solution that may never be found only delays progress and active transportation uptake. They further advised against trying to emulate cycling infrastructure in Vancouver and Victoria, as small towns have their own unique needs.

Knowing that budget will always be a barrier to active transportation progress, Nelson staff recommended looking at the Capital Plan and finding opportunities, like repaving or upgrading sanitation infrastructure, as active transportation opportunities. They advise others to look at where money is already being spent and insert active transportation into that sunk cost. They further recommended securing additional funding to hire experts to design and implement new infrastructure, thereby removing pressure from elected officials. Project funding demonstrates that money is being brought in, the community is enhanced, and the project is putting people to work.

Finally, they recommended working on the community culture that supports active transportation, through positive social media, outdoor gatherings, festivals, and enjoyable opportunities for people to gather. These are opportunities to meet the active transportation audience in the community, discuss options, and discover what changes excite them.



Beautiful and creative murals along alley walls encourage active transportation in Nelson.

Next Steps For Nelson

Further connect Lakeside Trail

Over the next year, Nelson plans to pave more portions of the Lakeside Trail to encourage and support people of all ages and abilities. They will be adding to the existing one-kilometer of paved trail.

2.

Phases 2 and 3 of Primary Bike Route

A priority for Nelson is to continue the Primary Bike Route. Now that the first phase is complete, they are in the planning stages for the next two phases. This includes: developing the conceptual route designs; determining the linkage between the first portion of the route through downtown and Rosemont; and identifying a connection further up to Selkirk College.



3.

Enhance the Big Orange Bridge for active transportation

A major challenge for Nelson is the inadequate cycling infrastructure on the Nelson Bridge / Big Orange Bridge. A priority is to find a better solution – more than the cyclist-activated light – that will accommodate cyclists in a dedicated space. The city is also prioritizing a seamless connection between the bridge and the primary bike route for commuters. Both changes will require collaboration with MOTI.



Targeting the missing middle

The city really wants to target the "missing middle" – the 20% to 60% of the population that has a bike or an interest in biking but are hesitant. Staff realize that this "missing middle" is waiting for enhanced infrastructure or possibly an e-bike purchase.





City of Powell River: The Champions



There's so many reasons to promote active transportation that are not just carbon emissions, ... social connectedness, and [creating an] enjoyable community to live in. So that's why my passion lies there.

ANASTASIA LUKYANOVA, SUSTAINABILITY PLANNER, CITY OF POWELL RIVER

Powell River, population 13,157, is located on the upper Sunshine Coast, on the traditional territory of the of Tla'amin Nation.

It is a 90-minute ferry ride from Comox on Vancouver Island and approximately 5-hours from Vancouver with driving and two ferries. Powell River is the location of western Canada's first pulp and paper mill, which was started in 1908. In its prime, the mill was the largest in the world, but now operates at very limited capacity.

The population of seniors in Powell River is growing, and projected to be 35% of the total population in 2028. The people of Tla'amin Nation reside in a village just north of Powell River, and Indigenous people are 5% of the Powell River population.¹⁸ Powell River has a mild climate compared to other parts of British Columbia and little snow, but much rain in winter. Powell River School District operates one secondary school (Brooks, also Francophone), and five elementary schools in the city, and there is one Francophone elementary school.

Champions

Powell River is fortunate to have a team of champions working on active transportation together – this is unusual in a small town. City staff who grew up in walkable communities, and who now want to create the same in Powell River, lead the work.

The Sustainability Planner works interdepartmentally with the Director of Planning Services and the Senior Planner. They actively push active transportation forward, alongside and integrated with sustainability initiatives.

85 %	3%	8%	2%
drive to	public transit to work	walk to	bike to
work	to work	work	work

Challenges

Powell River has its share of challenges when it comes to active transportation. Its location as a coastal community largely built on a steep slope rising from the ocean means that it's literally an uphill battle to get people walking and cycling.



Signage welcomes people to the Seawalk, noting the viewpoint and length of the path. This is a good example of wayfinding, to promote active transportation. Competing priorities also cause challenges to active transportation goals. These include the struggle for affordable housing; need for infill development; upkeep of existing roads; and infrastructure projects that completely absorb engineering staff resources.

Like other small towns, lack of dedicated active transportation funding challenges progress. Since it isn't within the city operations budget, staff feel active transportation infrastructure and maintenance cannot be consistently offered as a service. Although they've won grants, they feel this is an inadequate approach as it fails to address the broader system. Moreover, funding across the board is required –beyond infrastructure development.

They also need funding for the planning process, and the shovel-ready drawings.

Other barriers include some push-back from business owners and shoppers on commercial corridors, who aren't keen about prioritizing bike lanes over vehicle parking spaces. 66

Active transportation is just not part of the standard set of services that we provide that we have mechanisms to fund. It's kind of nice to have, and it's an emerging one.

ANASTASIA LUKYANOVA, SUSTAINABILITY PLANNER, CITY OF POWELL RIVER

Let's be clear about the funding. It's not just the funding to put the infrastructure in the ground, it's also the funding to get the construction-ready documents in order to be eligible to apply for that funding to put the infrastructure in the ground. Because we have all the other plans and studies we need, we just don't have those shovel-ready drawings. And we don't have capacity right now to put them together.

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DANIELLA FERGUSSON, SENIOR PLANNER, CITY OF POWELL RIVER Common across many small towns in BC, the highway-as-main street issue challenges the safety of active transportation and the influence the municipality has on the provincial road. City staff would like to see traffic slowing to 30 km/hr on their main corridor – Marine Avenue – bulb outs and safe crossings, and a wider road that could accommodate a bike lane. Changes to promote active transportation require persistent effort engaging with MOTI and navigating design standards that differ for provincial highways and city streets. Staff feel that these changes will be difficult or impossible to make.



A visually separated bike lane on Joyce Avenue in Powell River.

Facilitating Factors

Powell River is at an advantage with its cross-departmental, capable team of active transportation champions. The team is a key factor in their progress and plans. Planning with a systems approach, one that makes linkages and connects land use, sustainability and transportation to provide a sense of belonging and well-being keeps active transportation integrated with city priorities. The team has a strong orientation towards Design Thinking, learns from mistakes, and accessibility and equity underpin their planning.

Powell River planning staff recently acquired an e-bike to use on building inspections, and now other staff are using it too. The Sustainability Planner rides an e-bike to work every day. This role-modelling helps staff demonstrate leadership in the community and creates a culture of active transportation among city staff. A supportive City Council, user group support, and community advocacy further boost active transportation progress.

Specifically, the Powell River Cycling Association is advocating for safe and comfortable direct routes and contribute to building the cycling culture.

Rising public engagement and community collaboration is also facilitating progress. One example is the newly designed bike racks near the recreation centre, library and City Hall. Local students designed the racks and city staff worked on implementation. In the Cranberry neighbourhood, residents successfully pressured the city to reduce traffic speeds to improve safety, thereby creating a new 30 km/hr zone in the neighbourhood.



A cyclist secures his bike on one of the new bike racks at the recreation centre.



New bike racks in Powell River were a collaboration between local students and city staff.

To reduce those speeds ... we need to change how the street is designed, right? So you actually naturally slow down

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We've got an excellent mountain biking network ..., over 80 kilometers of trails, that also translates to people getting around on bike off-road, then saying, 'how can we get to school or work or shopping on-road in a way that feels as safe and enjoyable as off-road routes?' And so, lots of members of the community here are advocating to us [about] safe and comfortable direct routes, [that] we can take kids on, and that seniors feel comfortable on around town ... that level of public support and a bit of public pressure was inspiring to see.

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DANIELLA FERGUSSON, SENIOR PLANNER, CITY OF POWELL RIVER

Progress

Powell River's seawalk is a beautiful active transportation facility. The trail is accessible and flat, can be used for walking, cycling and e-biking and for both recreation and commuting purposes. It goes from the central park area all the way to the Townsite neighbourhood. Looking ahead, Powell River plans to connect the seawalk from one end of the city to the other.



The Zunga Bus, a unique Powell River project that offers on-demand bus service, allows people to schedule a ride through an app. The Zunga bus is an exciting pilot project in Powell River, funded by Innovative Solutions Canada. Though the city has a conventional large bus, BC transit service is challenged with routing it in a small, low density community which makes the wait and trip times quite long. The Zunga bus solves these challenges by routing on demand, based on user request, location and destination.

People generally book their rides through the Zunga bus app, but to promote greater accessibility, can also do it by phone.

With record ridership in June - during the COVID-19 pandemic no less - the pilot is demonstrating demand and is collecting the data needed to scale the program for greater reach. Zunga Bus is a great illustration of how Powell River is building a culture of accessibility and community movement. We got a call from a lady who says that she and her husband don't drive anymore. And [the Zunga Bus has] just been life changing for them to be able to go for coffee and just get out. They've been feeling very limited with how they can access the community services. Having a service like this can really be impactful for someone's life.

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ANASTASIA LUKYANOVA, SUSTAINABILITY PLANNER, CITY OF POWELL RIVER

If you're at the very beginning, it may be more valuable to spend a bit of that time identifying what is it that we actually want to become?

JASON GOW, DIRECTOR OF PLANNING SERVICES, CITY OF POWELL RIVER

Advice For Other Small Towns

Powell River active transportation champions strongly encourage others to learn from mistakes and adjust processes for desired outcomes. Staff reflected on their failure to adequately engage the public over a new bike lane, which resulted in public outrage over lost parking spaces, and eventually, the bike lane was removed. Staff are now invested in creatively and meticulously engaging the public; they are actively strategizing to excite and educate the public about the relationship between active transportation and community improvements.

Powell River recognizes that their progress is attributable to their champions, and recommended having champions who can both role model, and push forward, community active transportation progress.

Finally, they advised developing a strong foundation for the big vision and goals at the outset. They suggest using visuals to enhance engagement, avoiding piecemeal approaches, and keeping staff focussed on the big picture even when there's turnover.



A physically separated multi-use path for active transportation users stretches through the forest in Powell River, with the recreation complex as a destination on the route.



People can travel across the well-lit pedestrian bridge which goes over a steep gulley and creek.



Next Steps For Powell River

Continue active transportation work within a sustainability approach

Powell River tracks active transportation efforts with their sustainability targets; they recognize the interplay between greenhouse gas emission targets and mode shifts away from cars. They envision a larger network plan to further enhance active transportation and sustainability.

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Complete the active transportation network

Powell River is prioritizing completing networks through connections to commercial corridors and trails. Staff recognize that a network is crucial to establishing meaningful active transportation within the community. They are working to move bikes from the provincial highway, to quieter Willingdon Street, where they will build cycling infrastructure and work towards a Complete Street design.

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So we're right at that stage where we're starting to put these things into motion. And that's why we find it really exciting to be working on this right now. JASON GOW, DIRECTOR OF PLANNING SERVICES, CITY OF POWELL RIVER

3.

Step up the infrastructure

Within the next five to ten years, Powell River is hoping to develop physical protection between bike lanes and busy streets to further promote cycling. They will likely start with residential streets before moving onto arterial streets and protected facilities.



Improve active transportation opportunities for seniors and schools

Powell River has a large senior population that uses e-bikes and mobility scooters. Staff recognize that increased connections and accessibility are required to ensure safe travel. Improvements to the active transportation connections to school – in particular the sole secondary school – could result in the area becoming a real hub for active transport.

Keep building the momentum

Powell River champions see the excitement for active transportation growing in their community, and aim to leverage that enthusiasm to chart further progress.



City of Rossland: Persistence





I'd like to share with other communities in our region ... and help them move forward with active transportation [within] and between our communities. The advent of e-bikes has just blown apart the world of active transportation especially in this part of the country where the topography is challenging. Now it's realistic to think that we can ride a bike between Rossland and Trail, which years ago, we wouldn't have even contemplated. So it's not only making our community a better place to travel within, it's actually to extend that outside our communities.

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STACY LIGHTBOURNE, MANAGER OF PLANNING AND DEVELOPMENT, CITY OF ROSSLAND

The City of Rossland is a small community in the BC Interior with 3,729 residents.

Located within the Kootenay Boundary Regional District and on the traditional territory of the Sinixt Nation, Rossland is near other small towns in the area, like Trail and Warfield. Rossland has an outdoorsy culture that attracts tourists; the Red Mountain Resort provides abundant skiing, snowboarding and mountain biking opportunities.

The population of seniors in Rossland is growing, and projected to be 30% of the total population by 2028.¹⁹ Rossland gets plenty of snow: about 370 cm/year in the town; and over 750 cm at Red Mountain. The temperatures are moderate and there are plenty of sunny days in Rossland, with highs of 25C in the summer and 3C average in the winter. There are two elementary (K-9) schools and one online private secondary (grades 7-12) school in Rossland.

Champions

With nearly 20 years of experience in the city, the Manager of Planning and Development leads active transportation projects in Rossland. She recognizes that Rossland is a great place to work, play and live, and believes active transportation can make a real difference in the community. Highly proficient with grants, she is capable of securing funding to push active transportation momentum within the town's unique context.

83%	1%	13%	2%
drive to	public transit	walk to	bike to
work	to work	work	work

Challenges

With the city built on the side of a mountain, Rossland has steep hills that challenge active transportation routes. The combination of sheer grade, deep snow and ice cover presents barriers to planning and operationalizing walking and cycling infrastructure.



A bird's-eye shot of two bikers about to enter a tunnel along the trail.

Photo courtesy of R. Flett from City of Rossland.

Similar to other small towns, the main highway runs through the downtown area. The Rossland team – including the Manager of Planning and Development, Chief Administrative Officer, Council, Mayor and the previous Planning Manager – persistently engaged with the Ministry of Transportation and Infrastructure (MOTI) to create bump outs to slow traffic. However, this request was a completely new highway modification in BC. Since there were no local examples to work from, the Rossland team needed to bring ideas and illustrations from other jurisdictions to justify the modification.

The team's efforts paid off: Ministry of Transportation and Infrastructure invested in the bump outs.

Rossland's lack of active transportation data challenges grant applications. They are stuck estimating the number of trips, and cyclists and walkers using the infrastructure. A strong foundation of data would be valuable to Rossland's grant success. 66

To create these bump outs was a big challenge with MOTI actually ... to allow that to happen on a highway because it hadn't been done before. ... it was not what was normally done, and [didn't] strictly follow the tech manual, [it was] an innovation. It had to go through the process. It's challenging at the time. But sometimes these conversations ... we all learn from them, too.

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STACY LIGHTBOURNE, MANAGER OF PLANNING AND DEVELOPMENT, CITY OF ROSSLAND

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It's an active community. Any new route that we put in is well-received ... the public [is] keen on recreation, [and] active transportation as well. And council's focused on climate action, and [active transportation] is a big part of it. For us, active transportation has mostly meant trails and neighborhood links. And that's why people like it, because it just makes it easier to get from A to B within our community.

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STACY LIGHTBOURNE, MANAGER OF PLANNING AND DEVELOPMENT, CITY OF ROSSLAND

Facilitating Factors

Several factors augment active transportation in Rossland. First and foremost, active transportation is a high priority for locals, due to the active and outdoorsy culture, and the council, which is heavily focused on climate action.

A culture of innovation, learning and improvement also facilitates progress. Most notably, Rossland recognized the potential in utilizing Right of Ways (ROW) for paths which would create links in the active transportation network. Students from Selkirk College laid out the groundwork for identifying and employing Right of Way paths. The concept of ROWs encouraged creative means to get people from A to B, especially as Rossland ROWS do not have roads due to steep conditions. As the town integrated and actualized these opportunities into their plan, staff continued to prioritize learning and continuous improvement.

Community engagement, complemented with innovative concepts, also enhance progress. For instance, residents couldn't comprehend a snowplow pushing through narrowed roads and tight corners. A design exercise proved the idea successful, while also cultivating an idea to utilize the new bike lane as snow storage. This further cemented engagement and partnership with the operations team.

An advisory group, composed of community volunteers, supports community and partnership engagement across the region and facilitates active transportation. For example, the group surveyed community members on whether they would use a proposed change and asked about their current barriers to active transportation.



Bike racks are readily available for cyclists, which encourages active transportation throughout Rossland.

A few other factors employed by Rossland to support active transportation are quite clever. One is requiring new residential development to consider and provide active transportation linkages. For example, in the new Caldera subdivision at Red Mountain, the city required builders to put an active transportation tunnel under the new road as a means to continue the Centennial Trail.

A second factor is combining infrastructure upgrades – like sewer and water – with active transportation improvements, thereby ensuring that active transportation is always on the radar. Rossland recently received a grant with city funds to accomplish this: they repaired a cross country ski/ mountain biking trail, while also fixing the waterline right below.

Finally, active transportation progress is expedited through grant success in two parts. In the beginning, the development of their active transportation plan was grant-supported, and that plan is now leveraged, fulfilling a key requirement for subsequent grants. 66

We have lots of right of ways throughout town, [not actual] roads; they're city property. They presented an opportunity to create links. And there were lots of ideas ... in this case, it was trails, linkages. And so then we developed an active transportation plan, which identified the main drivers – schools, downtown, and neighborhoods - and then tried to find ways using the right of ways to get around town and through town. We have gradually been chipping away at those projects over the last few years with the help of all the grants that were available. And learning as we go, we've definitely improved the product as we've been going along.

STACY LIGHTBOURNE, MANAGER OF PLANNING AND DEVELOPMENT, CITY OF ROSSLAND

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[Narrowing the highway and placing drainage behind the parking spaces] was even harder than the bump outs because it's not normally done. But we thought it would work best for snow melt, [it's] usually melting at the curb and people have to step in a puddle before they get on the sidewalk. And now it doesn't happen like that. It drains to the back of cars, so you don't have that issue when you go from your car to the sidewalk. It may seem small, but it's actually quite a big deal. It's made quite a big difference. Traffic travels much slower ... because of everything that's there to narrow [the road].

STACY LIGHTBOURNE, MANAGER OF PLANNING AND DEVELOPMENT, CITY OF ROSSLAND

Progress

Rossland's active transportation progress has largely centred around building trails using the Right of Ways. Larger projects like the bike lanes have typically been done as part of a larger infrastructure project where the road is being dug up to replace sewer, water and storm infrastructure.

In 2010, MOTI was interested in upgrading the provincial highway (Columbia Avenue) – a very wide highway with very narrow sidewalks – that runs through Rossland's downtown. Rossland jumped at the opportunity to fix what was



Pedestrians can easily walk around Downtown Rossland to explore shops and dine at restaurants and cafes. Benches and statues line the streets to create visually interesting and inviting public spaces. underneath the highway and improve what was on top, recognizing the importance of the downtown core to the community as a place to socialize and shop. The result is an attractive, walkable downtown; and a traffic-controlled narrower highway with bump outs, sidewalks and vertical-style parking. It took persistence to push past the opposition to introducing a new "highway as main street" design but the result is a vibrant downtown to emulate in other BC small towns. The new design has other positive impacts to facilitate walking downtown. The storm water that normally would run along



A view of Washington Street showcasing the bike lane going uphill and angled parking (which can act to slow traffic).

the curb, runs at the back of all the parking spaces. Like the bump outs, this is not normally done on a provincial highway, but it had the added benefit of diverting snow melt (slush) at the curb that pedestrians have to climb over before reaching the sidewalk. So now the snow melts and drains to the back of the cars. The angled parking along with the bump outs creates a perception of narrowing and drivers slow down because of the narrowed sight lines.

Washington Street was a key grant-funded project. The street is a significant connector, running from downtown to the midtown destinations (including schools, skate park, arena, City Hall and affordable housing), to the ski hill.

The project on Washington started with replacing 100-year-old water lines and other aging infrastructure that lay underneath the street.

Rossland decided to concurrently improve active transportation between the downtown and school zones. This resulted in Rossland's first bike lane, which is bidirectional, separated from traffic and incorporates newly-built sidewalks on either side of the street. The upper half of Washington street includes a multipurpose pathway for walking and riding.





These maps highlight Rossland before and after the Washington and Plewman Intersection Upgrade. The main focus was to replace old water and sewer pipes while also improving the safety of active transportation routes.

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That's what we need in our community to have people get out of their cars ... people like trails. People use them for recreation, but it's about getting from A to B, in a fun way or off the road. It's just more enjoyable, [and] sometimes it's shorter, because it cuts across, you don't have to go on the roads.

STACY LIGHTBOURNE, MANAGER OF PLANNING AND DEVELOPMENT, CITY OF ROSSLAND

The Centennial Trail is the main off-road link between the ski hill and downtown.

It's a wide gravel trail that has infrastructure (water and sewer lines that go to the ski hill) underneath. The trail is groomed for cross country skiing in the winter. People commute from town with fat bikes up the trail to the ski hill, which is the main employer in Rossland.

Rossland has made progress by pushing the boundaries on grants to make changes relevant to the community. An example of this was on a grant that requested proposals for specific active transportation infrastructure, not including recreational trails. With trails being more enjoyable and heavily used by Rosslanders, the city decided to put in a trail connection within the grant, knowing that the link was a main transportation driver. They also created a switchback trail to overcome steep topography and attract seniors residing close by.



A group of bikers cycle through the trail, enjoying the natural beauty of Rossland. Trails are great connectors in the active transportation network in Rossland.

Photo courtesy of R. Flett from City of Rossland.



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Don't necessarily take 'no' for an answer, try to negotiate. Other constraints in Rossland would be the topography, how steep it is. There's ways around that, it might not be perfect, but it it's doable. It's good to identify those possible constraints and barriers, but to not see them as a total barrier ... try to find ways, talk to people or be creative.

STACY LIGHTBOURNE, MANAGER OF PLANNING AND DEVELOPMENT, CITY OF ROSSLAND

Advice For Other Small Towns

Rossland's advice for BC small towns working on active transportation is to look at the utility of Right of Ways and consider linkages. Even when the terrain is steep, switchbacks create a way around that people will use. Also consulting with residents on their walking patterns, and then adding linking trails to connect popular routes, keeps people moving.

Rossland also recommended promoting active transportation with major employers in neighbouring communities and the regional district. Connections between small towns are becoming increasingly important, especially with the advent of e-bikes.

The Manager of Planning advises persistence in the face of limitations. From her experience, projects often had multiple constraints, and endurance proved advantageous. A key example was the major change to the highway through downtown. Despite the significant barriers, staff persistence convinced MOTI to expand the parameters of the project.

Finally, Rossland suggests considering future infrastructure maintenance during the planning

stages. In Rossland's case, erosion is a key concern when building on a mountain with snow and water issues. Planners now develop maintenance strategies for new projects with the operations team.



This 'all ages and abilities' bike lane is divided to allow cyclists to travel in both directions. The bike lane is separated from the main road with a narrow island that is decorated with attractive shrubbery. A speed limit of 30km/ hour reinforces safety in the area.

Next Steps For Rossland

Continue the Centennial Trail

Rossland plans to continue extending the Centennial Trail through to the Black Jack Cross Country ski area, eventually going under the highway, and utilizing Right of Ways on many properties to pull the trail through.

2.

Finish implementation of the current active transportation plan and develop a new one

With the current active transportation plan about 85% implemented, Rossland plans to check off the remaining few projects before developing a new plan. The new plan would assess gaps in the first plan, improve the routes and consider opportunities for e-bikes and fat bikes.



3.

Connect communities and subdivisions

Another major emphasis will include extending active transportation outside the city to reach subdivisions like Redstone. The Green Link – utilizing wagon roads and rail grade – will ideally go towards Warfield and Trail, maximizing the use of e-bikes to commute between towns. With 1,000 metres of elevation difference between Trail and Rossland, most thought active transportation between the towns was impossible. Now, with e-bikes the possibility is there. Connecting across communities will require close collaboration with the regional district, which is already under way, and with neighbouring communities and their active transportation plans.



Planning for winter maintenance

Rossland is moving towards winter maintenance of some busier trails to encourage active transportation year-round. The city currently maintains the ski hill trail, and is now considering maintenance options for other popular trails. For example, grooming for fat biking is on the radar.



Man commutes to work at Red Mountain on his fat bike, with skis tied to his backpack.



Mother and daughter use an e-bike to travel uphill in the winter in Rossland.



Resources for Small Town Active Transportation

Resources for Small Town Active Transportation

Title	Organization or Authors	Location
Active Transportation Design Guide	BC Ministry of Transportation and Infrastructure	https://www2.gov.bc.ca/assets/gov/driving-and- transportation/funding-engagement-permits/ grants-funding/cycling-infrastructure-funding/ active-transportation-guide/2019-06-14_bcatdg_ compiled_digital.pdf
Active Transportation Planning in BC: Local Government Success Stories	BC Recreation and Parks Association Union of BC Municipalities	https://physicalactivitystrategy.ca/wp-content/ uploads/2018/10/Local-Government-Success- Stories.pdf
Active Transportation Planning Beyond the Greenbelt: The Outer Ring of the Greater Golden Horseshoe Region	Toronto Centre for Active Transportation (TCAT) Smith Lea N, Mitra, R, Hess P, Loewen N, Culp D.	https://www.tcat.ca/wp-content/ uploads/2017/03/ATPBtG.2017.03.16.forweb-1.pdf
B.C. Community Road Safety Toolkit	Government of British Columbia	https://www2.gov.bc.ca/gov/content/ transportation/driving-and-cycling/road-safety- rules-and-consequences/bc-community-road- safety-toolkit
Healthy Rural Communities Tool Kit: A Guide for Rural Municipalities	Caldwell WJ, Kraehling P, Kaptur S, Huff J.	https://www.publichealthontario.ca/-/ media/documents/l/2015/ldcp-built- environment-toolkit.pdf?la=en≻_ lang=en&hash=7D41BCA46D2038655B6EAA9F 8EB849C1
Small Town and Rural Multimodal Networks.	US Department of Transportation	https://www.fhwa.dot.gov/environment/bicycle_ pedestrian/publications/small_towns/
Geometric Design Guide for Canadian Roads	Transportation Association of Canada	https://www.tac-atc.ca/en/publications-and- resources/geometric-design-guide-canadian- roads
Complete Streets Work in Rural Communities	Smart Growth America, National Complete Streets Coalition	https://www.eesi.org/files/cs-rural.pdf
The Best Complete Streets Policies of 2018	Smart Growth America	https://smartgrowthamerica.org/resources/the- best-complete-streets-policies-of-2018

Active Transportation and Complete Streets in British Columbia: Challenges, Progress and Best Practices	The British Columbia Cycling Coalition	https://www.refbc.com/sites/default/files/Co mpleteStreetsandActiveTransportationReport- Jan2017-Final.pdf
Backgrounder: Rural Complete Streets	Toronto Centre for Active Transportation, Clean Air Partnership	https://www.completestreetsforcanada.ca/ wp-content/uploads/2019/01/Rural-Complete- Streets-final.pdf
Getting the Wheels Rolling: A guide to using policy to create bicycle friendly communities.	ChangeLab Solutions	https://www.changelabsolutions.org/sites/ default/files/Getting_the_Wheels_Rolling_ Toolkit-FINAL_20130823_0.pdf
Active Transportation Beyond Urban Centers: Walking and Bicycling in Small Towns and Rural America	Loh TH, Walljasper J, Sonenklar D, Mills K, Levinger D.	https://www.railstotrails.org/resourcehandler. ashx?id=4141
Active School Travel: Policy and Practice Recommendations for Alberta School Jurisdictions	Ever Active Schools	https://everactive.org/wp- content/uploads/2020/11/ PolicyPracticeRecommendations-20200831-WEB. pdf
Rural Communities: Best Practices and Promising Approaches for Safe Routes	Safe Routes to School National Partnership	https://www.saferoutespartnership.org/sites/ default/files/resource_files/rural_communities_ best_practices_and_promising_approaches_for_ safe_routes.pdf
Increasing Cycling in Canada: A guide to what works.	Verlinden Y, Manaugh K, Savan B, Smith Lea N, Tomalty R, Winters M.	https://www.tcat.ca/wp-content/ uploads/2019/09/Increasing-Cycling-in-Canada- A-Guide-to-What-Works-2019-09-25.pdf
Complete Streets, Complete Networks, Rural Contexts	We Choose Health, Active Transportation Alliance	https://atpolicy.org/wp-content/uploads/2016/04/ CSCN-Rural-Companion-v3-LOW-RES-PROOF.pdf
Costing of Bicycle Infrastructure and Programs in Canada	Toronto Clean Air Partnership. Benni, J., Macaraig, M., Malmo-Laycock, J., Smith Lea, N. & Tomalty R.	https://www.tcat.ca/wp-content/ uploads/2016/08/Costing-of-Bicycle- Infrastructure-and-Programs-in-Canada.pdf
Transportation Design Guidelines: All Ages and Abilities Cycling Routes	City of Vancouver	https://vancouver.ca/files/cov/design-guidelines- for-all-ages-and-abilities-cycling-routes.pdf
Putting Smart Growth to Work in Rural Communities	Mishkovsky N.	http://www.epa.gov/smartgrowth
Healthy Canada by Design Health and active transportation: an inventory of municipal data collection and needs in the Lower Mainland of B.C. 2013	van Balen E, Winters M.	https://hcbdclasp.files.wordpress.com/2013/04/ hcbd-bc-transportation-and-health-data- inventory.pdf

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