WALK, ROLL, RIDE, SMITHERS WIDE:

SMITHERS ACTIVE TRANSPORTATION PLAN

WATT Consulting Group

Town of Smithers

November 2019

Acknowledgements

In collaboration with the Town of Smithers and Watson Projects, WATT Consulting Group would like to thank all those citizens, elected officials, municipal staff, and stakeholders who provided their feedback and ideas into this process. We would like to acknowledge that the land on which the Town of Smithers was built is the traditional, ancestral, and unceded territory of the Wet'suwet'en Clans and home of the Gitimt'en Bear / Wolf Clan.

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EXECUTIVE SUMMARY

SETTING THE SCENE

To achieve the directions set out in the Official Community Plan, and to continue to foster a resilient and thriving community, the Town, in collaboration with WATT Consulting Group and Watson Projects, developed Smithers' Active Transportation Plan (ATP) to better support active mobility options in the community. The ATP is a visionary plan that includes a suite of strategies that integrate accessible, multi-use, pedestrian, and cycling improvements to increase options to advance the Town's commitment to reducing GHG emissions; increase the safety and use of active modes; and increase rural connectivity. The Smithers ATP is not simply an application of best practices from elsewhere, rather, the plan and process reflect the neighbourhood, people, climate and geography of Smithers.

DEFINING ACTIVE TRANSPORTATION

Active transportation refers to any travel mode that is human powered or self-propelled. The most common modes across Smithers are walking, rolling, cycling, skateboarding, rollerblading, and other wheeled modes that are human powered. In addition, residents of Smithers also tend to use winter-based active modes (e.g., cross-country skiing, snowshoeing, kicksledding) and horseback riding, which are predominantly used recreationally.

TRAVEL IN SMITHERS TODAY

The majority of Smithers' residents drive as their main commuting option (67%). About 18% of the population walks and 5% use a bicycle to commute, which are higher than provincial averages at 6.8% and 2.5%, respectively.

About 78% of Smithers' commuters take less than 15 minutes to get to their destination, and 12% take between 15 and 29 minutes. This is in contrast to the BC average where only 29% of commuters take less than 15 minutes and 33% take between 15 and 30 minutes to commute.

WHAT WE HEARD

Public engagement was a critical part of developing the Active Transportation Plan and key results are shown below.

Number of Participants

165 survey responses

31 photo submissions

70 Ideas Fair attendees

12 stakeholders

In one word, the future active transportation network in Smithers should be....

Safe
Connected
Easy to use
Inclusive
Accessible
Practical
Inviting
Maintained

Why we choose AT?

Health

Enjoyment

Reduce impact on the environment

Example of Citizen Photo Mapping

Railway Ave in Smithers is one of my regular routes for walking and cycling across town. The challenges are cars parked in the bike lane and the lane not defined all year. This is one of the safest and quickest ATP routes already developed.

Themes & Directions

Address Network Gaps

Sidewalk Maintenance

Amenities

Rural Connection

Improve Wayfinding and Branding

Ice & Snow Management

Road Safety & Vulnurable Road Users

Infrastructure Improvements

Education

VISION

The vision for the Smithers ATP is:

Smithers strives to support residents of all ages and abilities in choosing to travel by foot, bike and all other forms of active mobility to safely and efficiently get to where they need to go. Our future network is safe, cohesive and enjoyable, regardless of the season. Active transportation connects Smithers' local and rural residents and plays a foundational role in contributing to community health and overall quality of life.

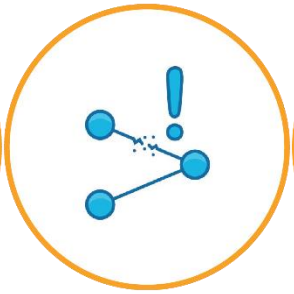
GOALS

1. Improve the safety and accessibility of all active transportation users.
2. Maximize the convenience of the active transportation network so it is enjoyable for all users.
3. Develop network connections both in town and with rural areas.
4. Foster a climate of active transportation to promote active living and community health.

STRATEGIC AREAS & ACTIONS

The three strategic areas that will guide the implementation of the Active Transportation Plan.

Safety & Accessibility



Connectivity

Improving the Climate of Active Transportation

A total of 12 strategies were developed based on the three strategic areas above. The 12 strategies comprise 42 unique actions. Each strategy is listed below.

Safety & Accessibility

1A | Enhance Winter Maintenance for Active Transportation

1B | Enhance Safety & Accessibility of All Highway Intersections

Connectivity

2A | Enhance the Cycling Network

2B | Enhance the Pedestrian Network

2C | Connect & Enhance Multi-Use Pathways

2D | Improve Connections to Rural Areas

Improving the Climate of Active Transportation

3A | Continue to Revitalize Downtown Streets

3B | Improve Wayfinding & Signage

3C | Continue to Foster Education & Awareness Programs

3D | Promote the Importance of Community Health and Active Living

3E | Establish Bike Parking Guidelines

3F | Support Electric Bicycle Adoption

THE FIVE BIG MOVES…

The ATP identifies a comprehensive set of 42 actions to put Smithers on course to achieving its vision and goals. While all actions are important, the following are the over-arching actions (i.e., "the big steps") that will help the Town enhance its active transportation network and yield the greatest benefit.

1. Implement a Protected Bicycle Lane on Third Avenue from Queen Street to King Street.

2. Designate King-Main Street as the North-South Cycling Spine.

3. Address Missing Link on Railway Avenue.

4. Develop a Bike Count Program.

5. Improve Safety at All Highway 16 Crossings.

IMPLEMENTATION & MONITORING

An action plan is guided by an implementation framework that includes: [a] timeframe / priority; [b] responsibility (i.e., who is responsible for implementation of action) and [c] implementation approach (i.e., how the action will be implemented).

A plan is only truly effective if it is actively monitored and evaluated on a regular basis. Monitoring and evaluation will allow the Town to rigorously test how well it is achieving the strategic actions identified in the ATP and, more importantly, how well it is meeting the goals. The three general metrics that will help the Town measure its active transportation success are [a] walking / cycling commute mode share (Stats Can); [b] walking and cycling mode share (all trips), which would be collected by the recommended pedestrian and bike count programs.; and [c] on road transportation GHG emissions, which would be collected through an updated Community Energy and GHG Emissions Reduction Plan. A number of other metrics are recommended in the plan and include a corresponding indicator and specific reference to which goal the metric is meeting. All of the recommended metrics should be reviewed every two years.

1.0 INTRODUCTION

Transportation plays an indispensable role at influencing both quality of life and local climate change. According to Smithers' 2012 Community Energy and GHG Emissions Reduction Plan, the on-road transportation sector was the largest source of community emissions, representing 51 percent of total emissions. This issue has become an important part of Smithers' policy framework as the Official Community Plan (OCP) contains explicit goals to reduce greenhouse gas (GHG) emissions and expand the diversity of transportation choices for Smithers' residents.

As per the Town's Official Community Plan, Smithers is committed to "ensuring a high quality of life for both current and future generations. Smithers uses collaborative and creative solutions to minimize and tackle the challenges of climate change and rising energy prices with innovation and awareness".

To achieve directions set out in the OCP, and to continue to foster a resilient and thriving community, the Town, in collaboration with WATT Consulting Group and Watson Projects, developed Smithers' Active Transportation Plan (ATP). The ATP is a visionary plan that includes a suite of strategies that integrate accessible, multi-use, pedestrian, and cycling improvements to increase options to advance the Town's commitment to reducing GHG emissions; increase the safety and use of active modes; and increase rural connectivity.

Downtown Smithers offers a number of amenities for active transportation users, such as benches to rest and bicycle racks to safely lock a bicycle.

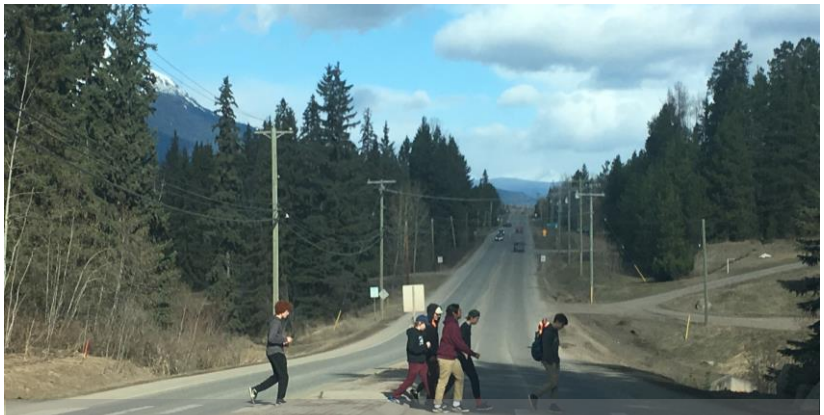
In Focus: Purpose of the Active Transportation Plan

The Active Transportation Plan will enhance Smithers' overall transportation network by paving a path forward that can deliver Smithers' residents greater transportation choices, comfort, convenience and safety when getting around town. The purpose of the ATP is to establish a vision, goals, metrics and a suite of strategies focused on active transportation policies, standards, infrastructure and programs that the Town could pursue over the next 10 plus years.

1.1 Active Transportation, So What?

Active transportation encompasses any mode that is human powered or self-propelled. The most common modes across Smithers are walking, rolling, cycling, skateboarding, rollerblading, and other wheeled modes that are human powered. In addition, residents of Smithers also tend to use winter-based active modes (e.g., cross-country skiing, snowshoeing, kicksledding) and horseback riding, which are predominantly used recreationally.

Providing a complete and inclusive active transportation network translates into a more climate friendly, equitable, accessible, and safe transportation network for all residents of Smithers. The ability for people to combine trips among various modes is also critical for promoting multi-modal travel. A pedestrian or cyclist who is able to walk/ride safely and comfortably to a transit stop downtown, place their bicycle on the bus bike rack and continue to their destination is an example of a successfully integrated transportation network.



The compact structure of Smithers enables its citizens to walk to various destinations, which helps explain why one out of five citizens walks to work according to the 2016 Census data.

Citizens of Smithers that walk, roll and bike identified through the online survey that their top motivation is health and fitness.

Examples of Active Transportation

- Walking 
- Rolling 
- Cycling 
- Skateboarding 
- Horseback Riding 
- Cross-country Skiing 

Purpose of Travel

- Errands 
- Recreational 
- Work 
- School 

Benefits of Active Transportation

Increase Physical Activity & Safety

AT helps to incorporate physical activity in your daily travel habits and reach healthy levels of exercise. Areas with high levels of AT use have fewer vehicle collisions and fatalities.

Environmentally Friendly

Replacing vehicle trips with AT can reduce GHG emissions, airborne pollutants, noise, and interruptions to natural systems.

Community Friendly

AT is available to everyone, promotes mixed land use, and compact development. Active modes users have a stronger sense of community and place.

Financial Savings

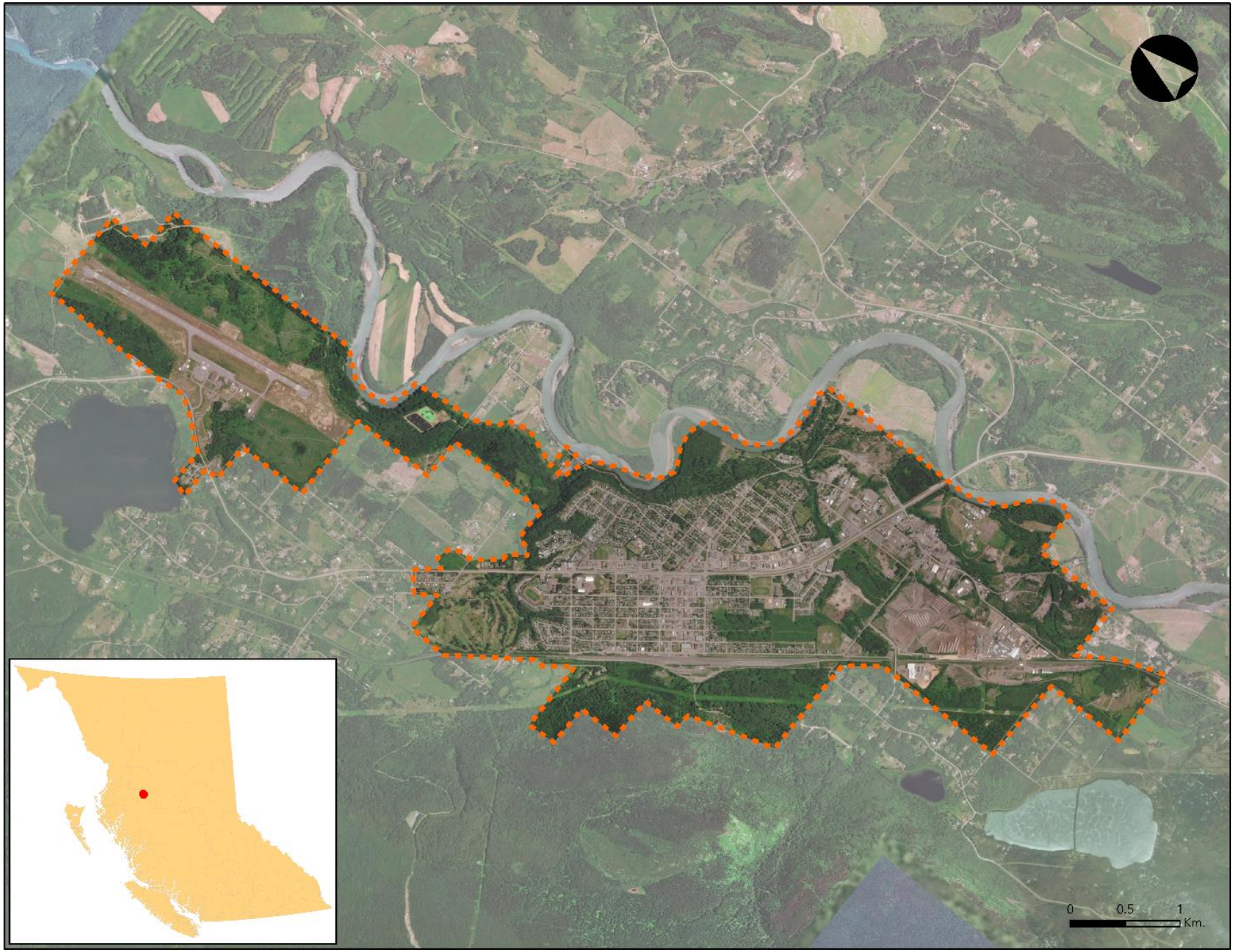
AT can reduce costs for individuals that substitute vehicle trips. It can reduce health care costs as it is proven to improve health. It also results in a more equitable distribution of public funds.

1.2 Community Context

The Town of Smithers is a thriving northern community that values its community vitality, economic diversity, and exceptional endowment of natural assets. Smithers is located in northwestern British Columbia within the Regional District of Bulkley-Nechako and is accessible by Highway 16 371 km from Prince George and 334 km from Prince Rupert, or from the Smithers Airport.

Incorporated as a town in 1921, the Town of Smithers covers an area of 16.32 km^2 at the eastern base of the Hudson Bay Mountain and has a resident population of 5,351 based on the 2016 Census. This alpine themed town provides easy access to outdoor activities such as skiing, fishing, camping, mountain biking, hiking, and many more—making it an adventurer's paradise.

The Bulkey River runs through the Town and was traditionally used by the Wet'suwet'en First Nation. Today it is also used by the tourism industry. The Bulkey Valley offers a pristine natural environment with numerous lakes and rivers ready to be explored. With its proximity to nature, Smithers has easy access to a number of mountains and other biking trails, including the 13 km Town Perimeter Trail. Smithers and its surrouning area has a diverse economy in natural resources, tourism, government, health care, education, service, and small business sectors. Its diverse economic opportunities coupled with recreational amenities make Smithres an attractive and affordable option, especially to young families.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1.3 Planning & Policy Context

Over the last decade, Smithers has completed numerous plans and processes related to community sustainability, accessibility and infrastructure improvements. These previous documents serve as the foundation for Smithers Active Transportation Plan to both connect with and build upon. This section summarizes key directions in these documents.

Official Community Plan (2010)

The Smithers Official Community Plan (OCP), which was last updated in 2010, is the principal planning document that provides guidance on future growth and development in Smithers. The OCP identifies a diversity of transportation choices as a core community goal, as follows:

Transportation: Provide a diversity of transportation choices. *"Smithers provides a range of transportation networks, facilities and modes necessary to support the Town's economy and environmental efforts. We support the development of an integrated and connected network of trails and pathways that encourage walking and biking as viable local transportation options. We support the development of regional transportation options and strategies to improve community health and wellbeing with the support of all stakeholders."*

Specific objectives of the Active Transportation Plan that align with Town plans:

- Increase active transportation modes that can promote non-motorized commuting.
- Increase safe route options for all ages and abilities.
- Improve connections between downtown, residential areas, schools, and front country tourism assets.
- Help meet climate targets and reduce GHGs.
- Reduce local traffic congestion and vehicle dependence.

Land use designations support walkable mixed residential neighbourhoods that are connected to the downtown and key amenities, continued support for a compact, pedestrian focused downtown streetscape and a connected trail network for all ages and abilities.

OCP policies related to the Active Transportation Plan are integrated throughout the document; examples are as follows:

- Integrated & Accessible Lane Use (Section 5.3.4)
- Park & Open Space (Section 8.2.1)
- Trails (Section 8.2.3)

- Street Network & Pedestrian Movement (Section 10.2.1)
- Highway 16 (Section 10.2.2)
- Transportation Options (Section 10.2.3)

Age-Friendly Assessment & Action Plan (2016)

The Age-Friendly Assessment and Action Plan includes a detailed audit, recommendations and priorities for improving municipally owned outdoor spaces, sidewalks, trails, public buildings and municipal recreation infrastructure. In relation to the ATP, the plan:

- Identifies sidewalks as one of its top priorities for improvement. Sidewalk recommendations include improving sidewalk connectivity and accessibility, improving Highway 16 crossings/approaches, more frequent snow removal/sanding, increasing associated budgets and ongoing downtown building access advocacy.
- Recommends various trail improvements that include installing profile signage at trailheads, rest areas with firm approaches, accessible benches in key areas, wintertime grooming and low-level lighting on high traffic trails.

See **Section 1.5.1** for a more detailed discussion of the two points identified above.

Sustainable Resiliency Plan (2012)

This plan integrates seven existing Town plans and strategies and outlines action items to further community sustainability and resiliency. While the plan is largely a strategic planning document, it does reference the value of investing in cycling and pedestrian trails as a cost saving alternative to private motor vehicles with numerous community benefits.

Community Energy & GHG Emissions Plan (2012)

This plan contains an inventory of community energy consumption and GHG emissions and provides reduction actions for a 2017 target year. The inventory identifies on-road transportation as the largest contributor (51%) of the Town's GHG emissions. Recommendations related to active transportation include:

- Supporting programs that encourage children to walk or bike to school while also addressing associated safety and infrastructure issues;
- Reducing use of private single occupant vehicles (i.e. transit shelters, vouchers and design);
- Encouraging cycling and walking as an emission free transportation option (i.e. support pedestrian/cycling facilities, improving infrastructure, creating a comprehensive non-auto transportation plan and pursuing grant funding); and

- Embracing new technology (i.e. public transit technologies, electric vehicle plug-ins).

Cycling Friendly Community Task Force Recommendations (2012)

In 2012 Smithers Council identified improving cycling as a top corporate priority. In response to this, a local task force was created to provide recommendations to Council. The task force went through an intensive planning process that included completing a cycling audit, creation of a cycling "hotspot" map, identifying core areas for improvement (safety, connectivity and convenience) and prioritizing strategies.

Pedestrian Plan (2019)

This in-house working plan has been used by Town staff over the last decade to maintain an inventory of existing and future pedestrian-related infrastructure that includes sidewalks, multi-use pathways and trails.

Council Strategic Plan (2019-2022)

The Town recently released its Council Strategic Plan (2019-2022). The Plan includes six Focus Areas, which describe the range of community systems that the Town is responsible for and would like to take leadership on including: [a] Our Economy [b] Community livability [c] Environmental responsibility [d] Our relationship with the Wet'suwet'en [e] Asset Management [f] Organizational effectiveness.

The 'Community Livability' focus area has a stated goal to "continue to make Smithers a place where people want to live and visit." One of the strategic priorities under this goal is to "increase and facilitate active transportation" where the Town is committing to [a] implement the Active Transportation Plan and [b] Support Cycle 16 bike trail to Telkwa.

Town Bylaws & Policies

In addition to planning documents, Smithers has bylaws and policies that directly relate to active transportation. These include:

- ***Subdivision Servicing & Development Standards Bylaw:*** This bylaw establishes the level of works and services required prior to subdivision approval or building permit issuance. This includes standards for roads, walkways, sidewalks and multi-use pathways.
- ***Traffic Bylaw:*** This bylaw regulates local traffic and establishes associated regulations and enforcement protocols. The bylaw formally designates a maximum 30 km/hr speed limit on Third Avenue.
- ***Snow & Ice Control Policy OPS-009:*** This policy establishes protocols and procedures for snow and ice control for vehicular and pedestrian passage on roads and sidewalks in Smithers. The policy identifies priority areas and snow / ice control standards (snow plowing, ice control, removal).

- ***Sidewalk Inspection & Maintenance DEV-002:*** This policy sets procedures for sidewalk assessments to follow when identifying defects, hazards and establishing priority rates for needed repairs.
- ***Downtown Sidewalk Improvements DEV-006:*** This policy establishes the specifications of sidewalk improvements in downtown Smithers.
- ***Traffic Marking on Residential Streets DEV-007:*** This policy establishes the standard for traffic marking on residential streets.

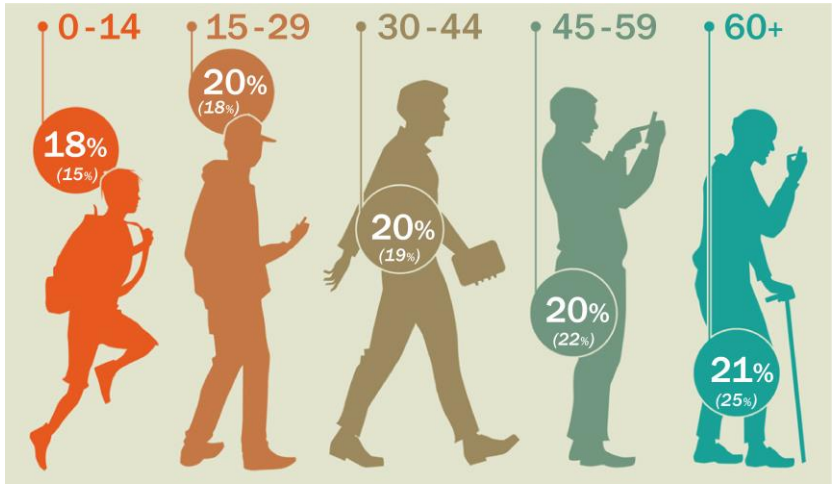
Perimeter Trail in Smithers.

1.4 Demographic Summary

Smithers' population has not changed significantly over the years; however, the composition of the population has been changing over time. Youth and adults under the age of 45 are leaving town, with older adults and seniors taking their place. While the Province grew by 5.6% from 2011 – 2016, Smithers' population decreased by 0.1%.

About 22% of Smithers' population is above the age of 60 compared to the BC average of 25%. The average size of a family in Smithers is 2.9 persons, supporting the fact that Smithers has a proportionally younger population than the BC average (2.8 persons).

***Figure 2**: Age Distribution in Smithers compared to Province (2016)*[1]



The age distribution shown in **Figure 2** indicates that Smithers has a proportionally younger population than the BC average, with a median age of 39.2 years compared to 43.0 for the province.

Smithers has a proportionally younger population than the BC average.

1.4.1 Transportation Mode Share

According to 2016 Census journey to work data, the majority of Smithers residents drive as their main commuting option (67%). About 18% of the population walks and 5% use a bicycle to commute; these modes of transportation are significantly higher than the BC averages of 6.8% and 2.5% respectively, as shown in **Figure 3** below.

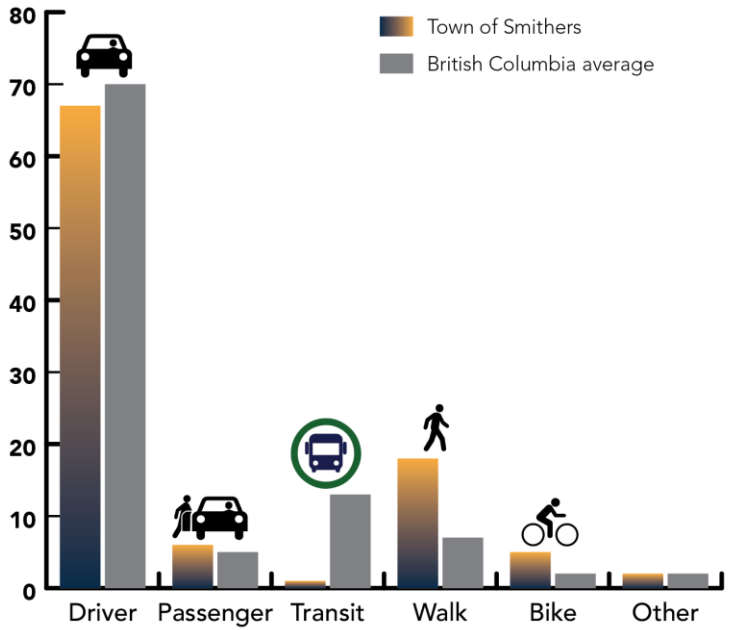


Figure 3: *Commuting Mode Share, Smithers vs. Province*[2]

There are certain factors that allow Smithers residents to utilize these modes of transportation. Smithers has a compact geography and the 13 kilometres of the Perimeter Trail, which makes most of the town accessible by foot and bicycle compared to other jurisdictions in other parts of the province. About 78% of commuters in the Town take less than 15 minutes to get to their destination, and 12% take between 15 and 29 minutes. This is a large contrast to the BC average where only 29% of commuters take less than 15 minutes and 33% take between 15 and 30 minutes to commute. See **Figure 4** for a summary of commuting duration in Smithers compared to the provincial average.

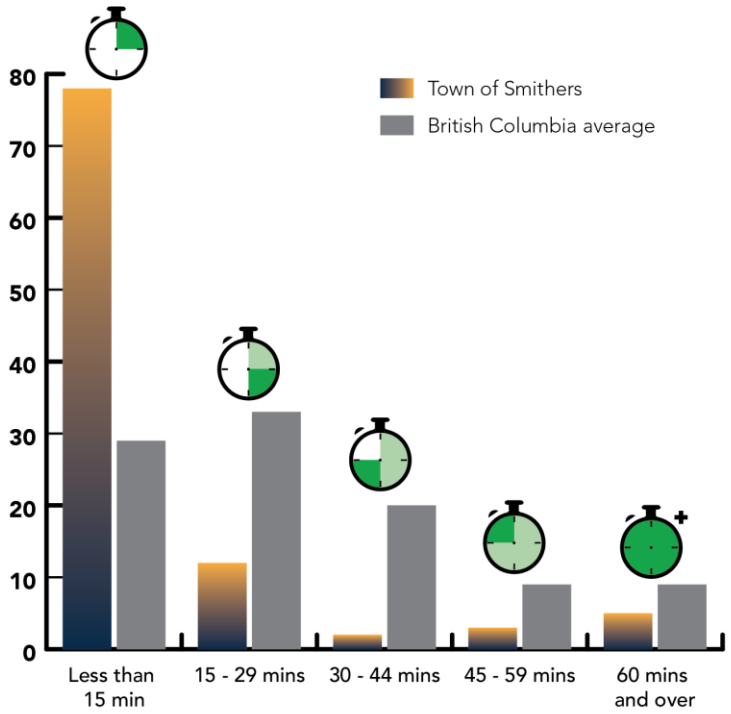


Figure 4: Commuting Duration[3]

1.4.2 Community Destinations

There are a number community destinations across the Town that serve one or many trip purposes including education, culture, recreation, and utilitarian travel. Community destinations are discussed in this section as some are currently accessed by active modes, while others are more challenging to access due to various barriers identified in latter sections of this document. See **Figure 5** for a visual summary of the key community destinations in Smithers.

Education

Schools represent destinations for a large number of active travel trips for families and students. Spatially identifying school locations can help provide an indication of potential safe routes to school and where there are opportunities for streetscape enhancements. The following public and private schools are located in the Town:

- Bulkley Valley Child Development Centre
- Muheim Elementary School
- St. Joseph's Elementary School
- Walnut Park Elementary School
- Smithers Secondary School
- Bulkley Valley Christian High School

Coast Mountain College is also located in Smithers.

Culture

The Town is fortunate to have a number of venues that host various cultural events. Those venues include:

- Dze L K'ant Friendship Centre Hall
- Old Church Hall
- Smithers Secondary School
- Central Park Building (including Smithers Art Gallery and Bulkley Valley Museum)
- Smithers Public Library
- Roi Theatre
- Bovill Square
- Royal Canadian Legion Smithers Branch 63

Many of these locations are centrally located making them good destinations for active travel trips.

Recreation

Recreation facilities are important community facilities that see a large proportion of active trips from their users. Smithers has a wide variety of recreation facilities which include:

- Baseball Fields
- Bike Park
- Curling Rink
- Disc Golf Course
- Fair Grounds
- Golf Course
- Gymnastics facility
- Ice Rink
- Skate Park
- Soccer Field
- Swimming Pool
- Running Track
- Mountain biking (outside Town boundary)
- Tennis Courts

Parks

Parks are a common destination for active travel. Smithers has a number of parks around the Town boundaries along with proximity to park space at Hudson Bay Mountain. The following are some of the largest parks located in the Town:

- Central Park
- Chandler Park
- Dogwood Park
- Elks Park
- Fair Grounds
- Heritage Park

- Ranger Park
- Riverside Park
- Veterans Peace Park
- Wildwood Park
- Willowvale Wetlands Area

Shopping / Services

Smithers' downtown core is the key shopping and service area including groceries, banking, retail and government services. The Town also has a regional airport.

Seniors Housing

In a number of communities including Smithers, seniors' residences are the origin of a high volume of walking trips. Smithers should provide a safe and comfortable streetscape environment for its aging population in order to enhance livability for seniors residing in the community. Bulkley Lodge is the only residential care facility. Apart from Bulkley Lodge, Smithers is home to a number of seniors housing facilities:

- The Meadows Assisted Living (14 units)
- Pioneer Place (31 units)
- Silverking Court (37 units)

Smithers has a number of businesses that are focused on active living and outdoor activities.

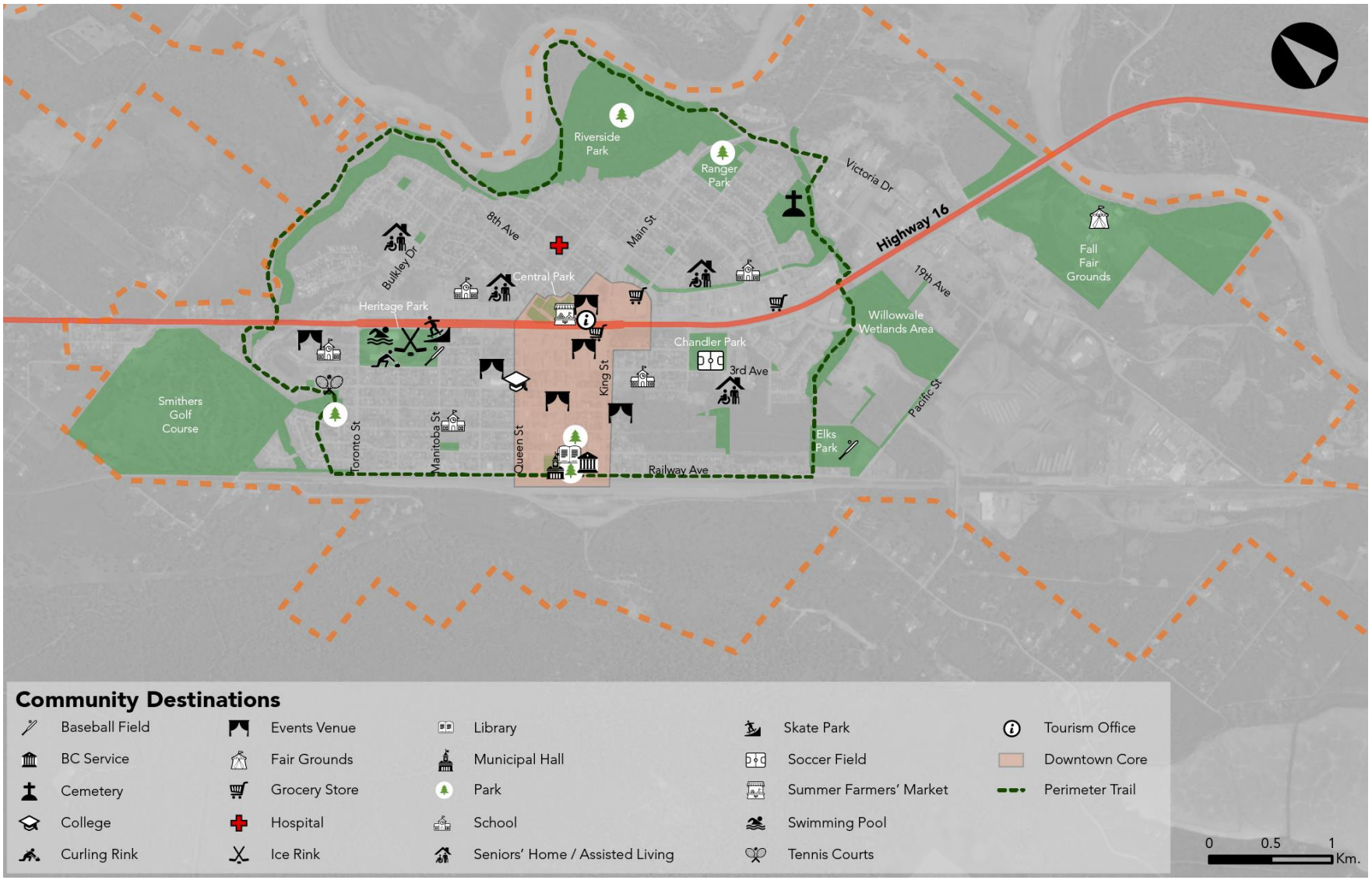


Figure 5: *Community Destinations in the Town of Smithers*

1.5 Existing Conditions

1.5.1 Pedestrian Network

A well connected and well maintained pedestrian network allows people of all ages and abilities to walk to their destination safely and comfortably. The Town has defined sidewalk requirements for new development in its Subdivision Servicing & Development Standards Bylaw. These requirements include sidewalk location, width and curb type and are specified for each road classification. Currently, Smithers has built approximately 44 km of pedestrian infrastructure to enable its residents to walk around the community, of which 22.5 km are sidewalks. In comparison, the total road network within the Town's boundaries (excluding the Highway) is approximately 72.4 km.

The Town has a variety of pedestrian infrastructure consisting of sidewalks, multi-use paths, paved shoulders, trails, and walkways (see **Figure 6**). The downtown core has high sidewalk coverage with sidewalks available on at least one side of the road with future plans to have a complete network of sidewalks on both sides of the road.

One of the key issues for the Town's pedestrian network has been the budget allocated for sidewalk improvements. Historically, there was a budget of $25,000 per year for sidewalk improvements. In the last number of years, with the development of the Pedestrian Plan, this budget increased to $125,000. In 2017, the Town conducted a road conditions assessment and the sidewalk budget was reduced to $75,000 for 2019.

What makes the Active Transportation network work well today?

- The **Perimeter trail** is a well utilized multi-use pathway that provides an active transportation corridor around the Town.
- **Fulton Avenue** is a popular and well utilized multi-use pathway.
- **Downtown** Smithers is walkable.

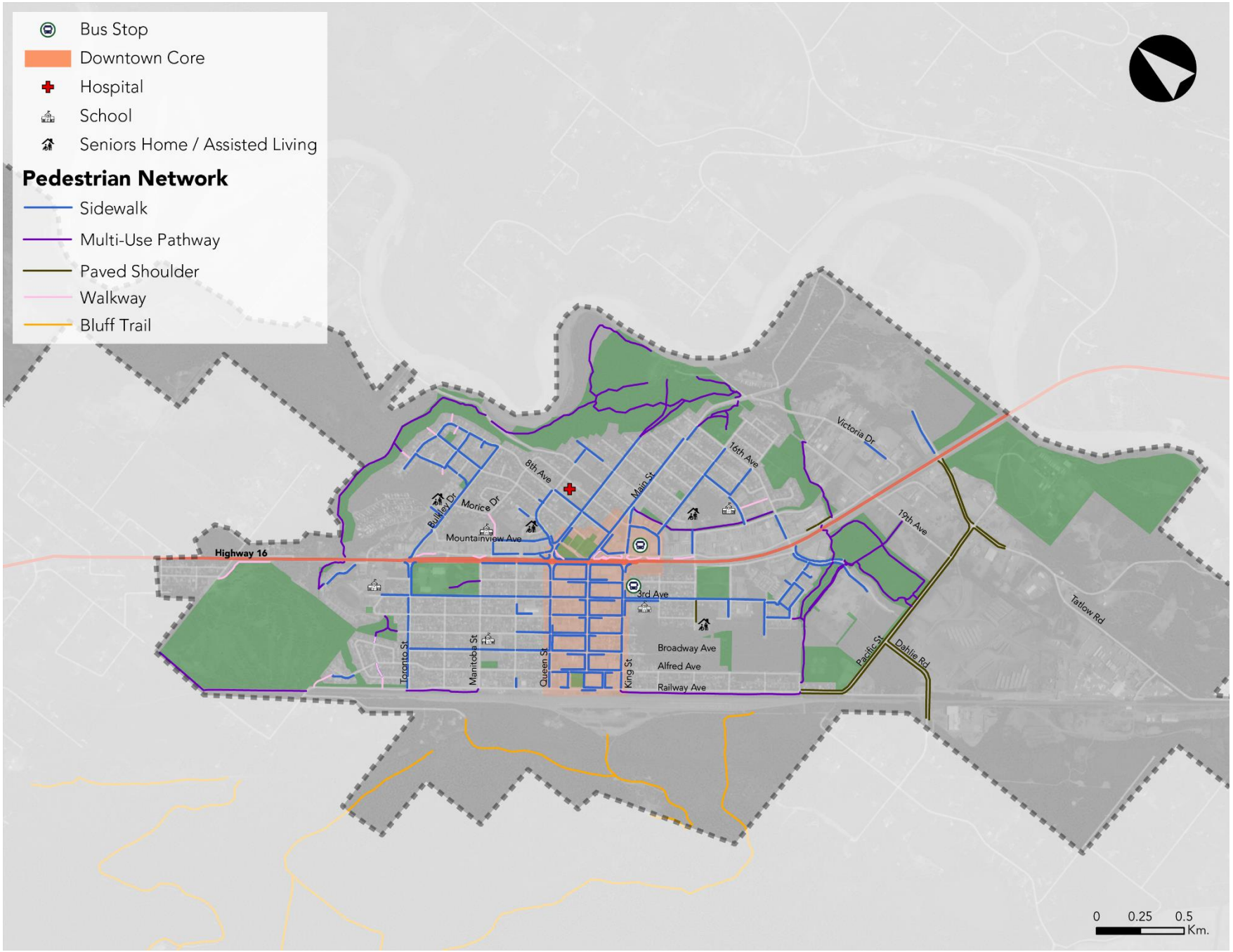


Figure 6: Existing Pedestrian Network

In Focus: Missing Links and Gaps in the Existing Pedestrian Network

The pedestrian network is well connected with the community destinations. Previous studies, such as the Age Friendly Assessment & Action Plan, conducted assessments of the pedestrian network. The plan identified a number of barriers for routes crossing Highway 16 to access destinations such as the hospital and downtown. A number of streets such as King Street, Main Street, and Queen Street were highlighted as not pedestrian friendly due to inconsistencies in highway crossing experiences such as signals being too quiet and crossing times being short. Four areas were identified as potential priority locations for improvement through the existing conditions analysis.

1. **Downtown core:** Given the high level of pedestrian activity in the downtown core, consideration should be given to the provision of wide, well-maintained, unobstructed sidewalks on both sides of the road for the busiest part of the downtown.
2. **Columbia Drive:** There are no sidewalks on either side of Columbia Drive outside of the Bulkley Valley District Hospital. This is a major trip generator that attracts vulnerable users and should have all ages and abilities friendly pedestrian infrastructure.
3. **Area between Bulkley Drive and Highway 16:** This area contains an elementary school, a church, and assisted living facilities. It is considered an area that facilitates active travel and therefore the infrastructure in that area should be designed for safe and comfortable travel. It has been identified as a walking corridor for students of Smithers Secondary School with the highway crossing considered as a pinch point.
4. **Area between Montreal Street to Queen Street:** This is another area that potentially attracts a larger number of active travellers, as there is a high school and most of the recreational facilities are also located in that part of the Town. In addition, the surrounding area consists of higher residential density. Connections to the downtown core and various neighbourhoods should be strong in order to attract more people to travel to those places using active transportation modes.

1.5.2 Cycling Network

The existing cycling network in Smithers consists of on-street and off-street facilities including paved shoulders, shared use lanes, and multi-use paths. In total, Smithers provides 12.3 km of bicycle facilities, of which 80% are paved shoulders. Approximately 100 bicycle racks are installed across the Town, with the majority located in the downtown core. See **Figure 7**.

Smithers' cycling network provides strong connections east to west as it has a number of routes running that direction. However, there are a lack of north-south routes close to the downtown core, despite the number of bicycle racks that are located along Main Street. In addition, while some bicycle facilities are present south of Highway 16, there are few facilities north of the highway.

The Fulton Avenue multi-use path is well used by the community. The expansion of this pathway to connect to the Perimeter Trail would address one of the biggest issues that was identified in the online survey—lack of connectivity.

 | ***Figure 7**: Existing Cycling Network*

1.5.3 Multi-Use and Recreational Trails

The Town has an extensive network of trails within its boundaries and in the immediate vicinity. The Perimeter Trail provides connectivity to the outskirts of the Town and is a key active transportation route for Smithers residents. In addition, Smithers is in proximity to many regional trails and recreation opportunities. These include:

- **Lake Kathlyn Connector Trail:** This trail begins at the intersection of Railway Avenue and Zobnick Road and provides a 4 km signed route to Lake Kathlyn Public Beach. The majority of this trail is on local paved roads.
- **Rotary Community Trail to Town:** In 2008 the Rotary Club of Smithers developed a trail that connects the Town of Smithers to Hudson Bay Mountain Resort. This recreation trail permits hiking and mountain biking in the summer and skiing, snowboarding and snowshoeing in the winter.
- **Smithers Community Forest Trails:** The trails in the Smithers Community Forest provide a diverse network of hiking, biking and Nordic skiing trails. Access to the Seymour Lake Trailhead is from Hudson Bay Mountain Road.
- **Bluff Recreation Site:** This network offers trails of varied difficulty and is frequently used by hikers, joggers and mountain bikers. The trails are managed by the Smithers Mountain Biking Association.
- **Smithers to Telkwa Multi-Use Pathway:** In the concept refinement stages, Cycle 16 Trail Society, in collaboration with MOTI, Village of Telkwa, Town of Smithers and Regional District of Bulkley-Nechako, seek to construct a separated multi-use pathway along Highway 16 that connects the communities of Smithers and Telkwa.

Where can we do better?

- The cycling network does not serve the needs of all Smithers' residents, particularly those who are less comfortable cycling in a vehicle lane.
- Smithers has a number of recreational trails but there are gaps in connectivity to access those trails.

2.0 PLAN PROCESS & ENGAGEMENT

2.1 Introduction

Community input was a core component to ensuring that the Smithers Active Transportation Plan reflects the neighbourhoods, people, climate and geography of Smithers. Engagement opportunities provided an opportunity to not only exchange ideas, information and concerns with the community, but also establish common ground for action.

The following outlines how the community of Smithers was engaged (i.e. "What Was Done") and summarizes key themes and directions that resulted from community feedback (i.e. "What We Heard").

A strong connection was made between winter maintenance and the ability of users to access active transportation infrastructure.

Connectivity gaps or fragments in the existing active transportation network were consistently identified as a top opportunity for improvement.

2.2 What Was Done

The following engagement activities were undertaken:

Public Launch: The public launch in Spring 2019 marked the community's first introduction to the project and included key pieces of information, such as the ATP introduction & purpose, public involvement opportunities and key project dates & milestones. Launch activities included the creation of a project webpage (www.smithers.ca/active), distribution of a press release, circulation on social media and community posters.

Public Survey: A public survey provided an opportunity for the community to directly share their thoughts on key issues / opportunities and provide feedback to shape the direction of

the ATP. The survey was comprised of a series of open and close-ended questions and was open from April 10th, 2019 to June 1st, 2019. It was available both online and in paper format.

Ideas Fair: An open-air Ideas Fair was hosted in downtown Smithers on May 1, 2019 between 3 – 6 pm. The project team, including Town representatives, were available to answer questions and walk participants through a series of informational and interactive display boards. Boards asked for feedback and ideas on the existing active transportation network, key issues, innovations and the overall future network. In addition to the boards, Smithers Community Policing set-up a kid's bike course on a closed portion of 2nd Avenue.

Stakeholder Interviews: During May 2019 one-on-one interviews were held with representative(s) from the Ministry of Transportation & Infrastructure (MOTI), Smithers Bikes, Cycle 16 Trail Society, Smithers District Chamber of Commerce, Access Smithers, Smithers Community Services Association, School District 54, Smithers Mountain Bike Association (SMBA) and Tourism Smithers. The purpose of the interviews was to understand local organizations' involvement in active transportation and obtain feedback on key barriers and opportunities.

Photo Sharing: From April 15th – June 7th, 2019, the community was invited to share photos of existing active transportation infrastructure that they like using or that creates challenges. Photos were received via Instagram using the hashtag #SmithersATP or emailed to active@smithers.ca. The purpose of the photo sharing was to have the community help build a visual photo catalogue to illustrate specific examples of transportation needs and opportunities.

Additional engagement opportunities were carried out independently by the Town of Smithers. This included display of the Ideas Fair boards and surveys in the Municipal Office lobby, in the Town of Smithers' booth at the Northwest Trade Expo (May 3rd – 4th) and during Bike to School & Work Week celebrations (May 27th – June 1st).

2.3 What We Heard

This section summarizes key take-aways, themes and directions that resulted from feedback received from the engagement activities.

Key Take-Aways

- Community **motivators** for choosing Active Transportation include health, enjoyment, reduce environmental impact and convenience.
- The **purpose** of choosing active travel is driven by recreation / fitness reasons as well as for daily life (i.e. run errands, go downtown, travel to work or school).
- **Existing** active transportation infrastructure, notably the Perimeter Trail, Town sidewalks, multi-use pathways, and paved cycling shoulders, are all well used and valued.
- Core **areas** to address in an overall network plan include overall accessibility, connectivity, convenience and safety.
- Transportation choices are limited for vulnerable populations that cannot drive, including school aged children, seniors and those with mobility impairments and is especially heightened during the winter months.

Citizen Photo Mapping - #smithersATP

Toronto Street sidewalks are well used by school children, young families, and people of every age group. The Toronto route is a side safe street for bike traffic along with other active modes of transport.

– Smithers resident

Railway Ave in Smithers is one of my regular routes for walking and cycling across town. The challenges are cars parked in the bike lane and the lane not defined all year. This is one of the safest and quickest ATP routes already developed.

– Smithers resident

The graphic below is a visual summary of the engagement process.

By the numbers...

165 Public Survey Respondents

70 Ideas Fair Attendees

31 Citizen Photo Mapping Submissions

12 Stakeholder Interview Participants

Themes & Directions

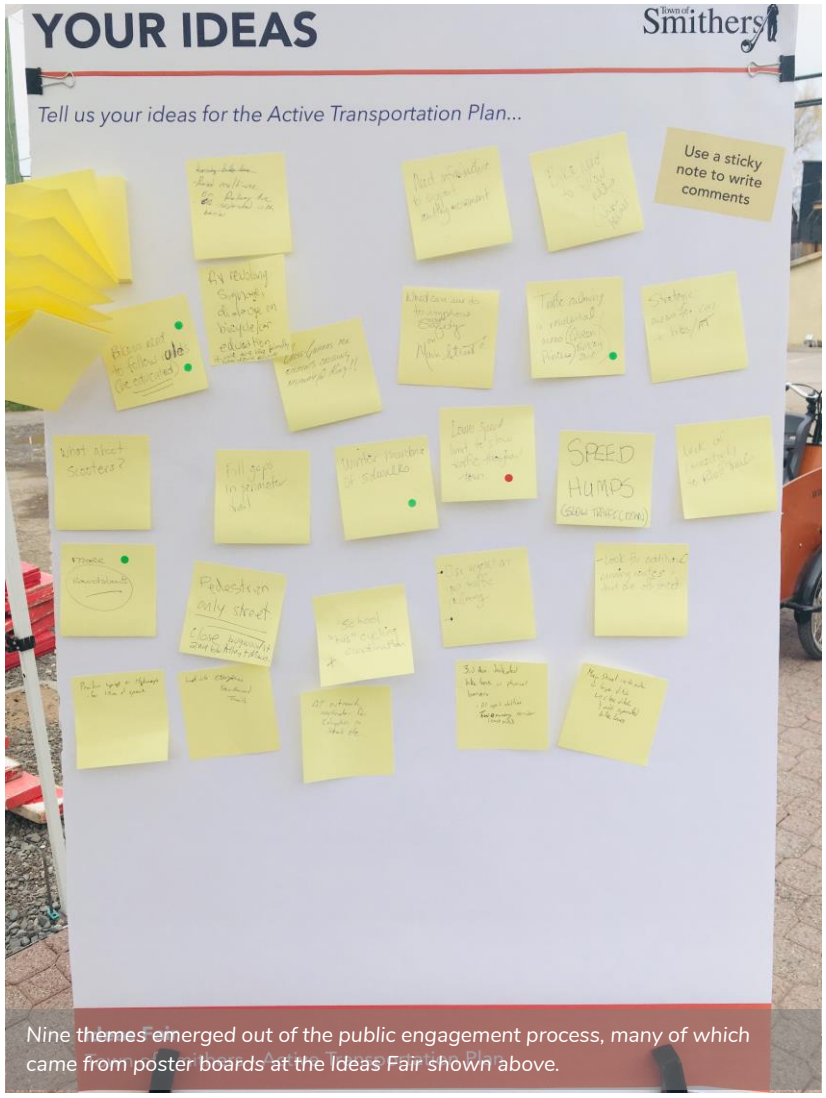
This section summarizes key themes and directions that emerged from the community engagement findings and serve to deepen the understanding of existing challenges and opportunities.

Network Gaps

Connectivity gaps or fragments in the existing active transportation network were consistently identified as a top opportunity for improvement. Participants highlighted the need for a complete network that supports enjoyable and convenient access. Numerous examples pointed to the need to connect downtown, public spaces and schools with higher density residential areas, seniors housing and hotels. Many participants referenced the dead-ending of sidewalks and painted bike shoulders as examples as well as the completion of the Perimeter Trail, specifically behind Montreal Place and along Railway Avenue. The lack of an in-town school bus route and dedicated in-town transit route further reinforced the need for strategic connections.

Rural Connection

Participants reinforced the desire to have improved cycling connections to the rural area, including improved infrastructure and connection to other trails networks. Suggestions included a



Nine themes emerged out of the public engagement process, many of which came from poster boards at the Ideas Fair shown above.

direct access link to the Bluff Recreation Area either via improved paved shoulder or pedestrian / cyclist CN overpass. Participants also identified access to water as being important, citing Seymour Lake, Lake Kathlyn and the Bulkley River. The recreation amenity / tourism value was identified as a key opportunity area in creating this larger network. In addition, connecting Telkwa to Smithers was identified as an important rural connection.

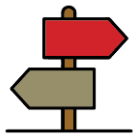
Safety

Participants identified safety as a top concern, especially for cyclists and parents of young children. Vehicular speed, lack of separated bike paths/shoulders, highway intersections and congested areas (school drop off areas, Main Street) were all expressed areas of concern.

Specific examples included Perimeter Trail highway crossings, cars not stopping for pedestrians at intersections, uneven sidewalks and cyclists not feeling safe due to parked cars and narrowed lanes (winter). There was universal challenge with crossing Highway intersections, both in the downtown core and at pedestrian controlled crossings. Numerous participants indicated the need for traffic calming infrastructure in the community and suggested strategies, such as speed bumps, reducing speed limits as well as “soft” design elements such as street trees.

Sidewalk Maintenance

Participants reinforced the direct link between level of maintenance and the ability to use existing sidewalk infrastructure safely. Many expressed concerns with sidewalk condition, especially uneven sidewalks, inaccessible let downs, ice and cracks. Sidewalk condition also leads to some choosing to walk on the road as the smoother surface. Some participates expressed the desire for more systematic sidewalk repairs and replacement to improve accessibility in high traffic areas (i.e. Post Office, Toronto Street).



Wayfinding & Branding

Numerous participants expressed the desire for consistent signage and branding. This included active transportation route branding and maps for both in town and within the rural areas. Acknowledgement was made to have wayfinding meet accessibility design protocols, for example tactile wayfinding. Interpretative signage along the Perimeter Trail was also identified as being of value. Participants also identified the tourism potential in having a coordinated network and associated information.

Infrastructure Improvements

Participants expressed desire for infrastructure improvements to directly address safety concerns, improve accessibility and support

active mobility choices. Participants identified the need for a concentration of convenient routes to key community destinations as well as physically separated bike lanes, safe routes to school and an expanded Perimeter Trail network with some separation to minimize residents having to walk and cycle on the shoulder of a street. Some participants identified the need for a clear cycling route through Smithers along the highway corridor. Formalizing informal trail networks such as trails on Dolher Flats and Fair Grounds were also provided as examples.

Amenities

Participants identified active transportation amenities to support non-motorized travel. For example, some expressed the need for secure bike storage & year-round bike racks in central locations. In addition, pedestrian infrastructure included ensuring there are rest areas and benches available. Numerous participants referenced the desire for a pleasant and attractive overall active transportation experience.

Ice & Snow Management

A strong connection was made between winter maintenance and the ability of users to access active transportation infrastructure. Participants cited icy / slippery sidewalk conditions as a top barrier to walkers and narrowed lanes a top barrier for cyclists. Some participants identified the winter potential to pack snow to encourage fat biking and cross-country skiing on the Perimeter Trail. Spring dust control due to excess gravel left on the shoulders was also identified as an area to be improved upon.

Education

Many participants identified the need for improved education of both drivers and cyclists on how to share the road. Some participants identified the importance of this role in building an active transportation culture and tolerance between users. This was also an area where participants expressed opportunities for an increase in collaboration and coordination amongst existing education initiatives. For example, exploring partnerships between school safety initiatives and the work of Smithers Bikes.

3.0 VISION & GOALS

3.1 Vision Statement & ATP Goals

Vision Statement

Smithers strives to support residents of all ages and abilities in choosing to travel by foot, bike and all other forms of active mobility to safely and efficiently get to where they need to go. Our future network is safe, cohesive and enjoyable, regardless of the season. Active transportation connects Smithers's local and rural residents and plays a foundational role in contributing to community health and overall quality of life.


A TRAIL FOR OUR FUTURE WITH A VIEW OF OUR HISTORY

FROM WHERE YOURE STANDING, Smithers Perimeter Trail stretches in either direction along Railway Avenue, eventually wrapping around the downtown and bringing walkers and bikers right back here. It is many decades in the making, beginning in the 1970s with sections added progressively over the years. Today, the trail clocks in at about 12 kilometres.

In 2005, following a request from the Town of Smithers to incorporate this missing link of the Perimeter Trail, CN Rail gifted a one-kilometre-long, 50-foot-wide right-of-way along the railway tracks to the town for $1. Dozens of people walk this section daily, using it to exercise the dog, catch up with a friend or commute to work. Most of the trail gets used year-roundrain, snow or shine.

In 2014, Smithers Community Services Association and the Town of Smithers planted 40 trees and placed signage along this stretch of the Perimeter Trail in honour of SCSAs 40th anniversary and the towns centennial, both in 2013. CNs EcoConnexions From the Ground Up grant, in partnership with Communities in Bloom and Tree Canada, funded half the $50,000 project costs.

Smithers was formed not just as a railroad town, but also as a resource town, and natural resources continue to support the community. The Wetzin'kwa Community Forest Corporation, whose logging revenues go directly toward community initiatives, contributed funding for the signage and trail beautifi cation along this section of the Perimeter Trail, as did the Town of Smithers and Smithers Community Services Association.

One kilometre to the south, the trail turns east past the local ball diamond and a bridge added in 2011 connects the Perimeter Trail to Willowvale Wetlands 1,400 metre circle trail. From there, the trail heads north toward Riverside Municipal Campground and follows the Bulkley River for a stretch before turning west along Chicken Creek, past Smithers Golf and Country Club and eventually returning to Railway Avenue.

WETZIN'KWA · CN · Smithers Community Services Association · Smithers

No motorized vehicles · No consumption of alcohol · Clean up after dogs · You are here · Trails closed dusk to dawn


A fully realized Active Transportation Network can make downtown an even better destination.

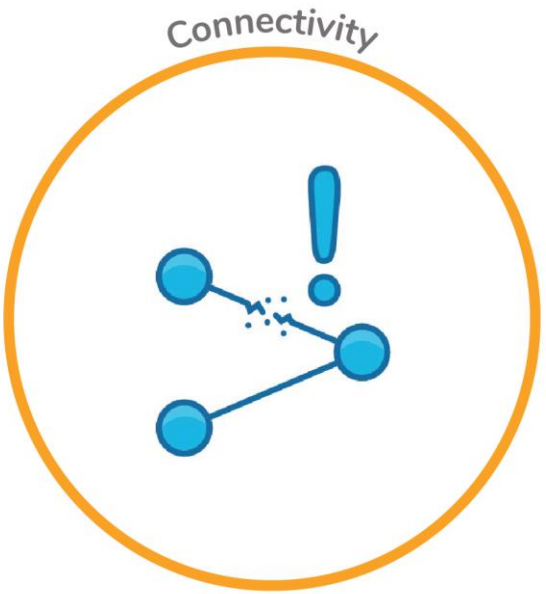

ATP Goals
1. Improve the safety and accessibility of all active transportation users.
2. Maximize the convenience of the active transportation network so it is enjoyable for all users.
3. Develop network connections both in town and with rural areas.
4. Foster a climate of active transportation to promote active living and community health.

4.0 STRATEGIC AREAS & ACTIONS

Based on the existing conditions review and the themes derived from the public and stakeholder engagement process, three strategic directions emerged to guide the implementation of the Active Transportation Plan. These three themes broadly align with the ATP goals and vision.

- Safety & Accessibility
- Connectivity
- Improving the Climate of Active Transportation

The three themes are described in detail on the following pages, and include a series of strategies and recommended actions to achieve the vision and goals of this Plan.



Strategy Area 1 – Safety & Accessibility

Through the public engagement process, safety was identified as a main topic of concern to Smithers' residents, especially for cyclists and parents of young children. The public survey found that safety concerns were the top barrier identified by cyclists. Specifically, 'icy / slippery conditions' was the top barrier identified for pedestrian and cyclists during the winter season. In addition, narrower bike lanes due to snow banks continues to result in unsafe and uncomfortable conditions for pedestrians and cyclists alike. In general, residents want to feel safe and comfortable while travelling alongside motor vehicles. The combination of vehicle speed, lack of separated bike lanes / shoulders, highway intersections and congested areas were all expressed as areas of concern.

Priority #2 in the Town's Age Friendly Assessment and Action Plan (2016) directs the Town to improve sidewalks and to specifically [a] increase the frequency of snow removal and sanding of sidewalks and [b] improve safety at pedestrian crossings. Moving toward an all ages and abilities network requires safety and accessibility to be front and centre. The following actions have been identified to enhance the overall safety and accessibility of the network.

1A. Enhance Winter Maintenance for Active Transportation

Through the public engagement process, it became evident that winter maintenance is critical for supporting active transportation choices. As a winter community striving to improve active transportation options, Smithers must continue to enhance winter maintenance of its pedestrian infrastructure to encourage more walking trips year round.

Action 1A1: Amend Snow & Ice Control Policy to Clarify Priority Routes and Schedule

The Town's Policy # OPS-009 on Snow & Ice Control provides a priority process for snow and ice control for pedestrians under prevailing winter conditions. It helps ensure that snow and ice control is undertaken to provide for vehicular and pedestrian passage on roads and sidewalks on a priority basis. The Policy prioritizes Snow Plowing, Snow Blowing and Ice Control on all Municipal sidewalks under the following priorities established for roadways:

- Priority 1: Downtown core, major roads, emergency routes, school routes, bus routes, roads with steep grades, and during the spring melt; areas with known drainage problems.

- Priority 2: Remaining residential roads and lanes that provide primary access to residents.
- Priority 3: Town of Smithers owned parking lots and remaining lanes are prioritized in the following order: 1) Downtown core; and 2) remaining developed lanes.

It is recommended that the Town amend the policy to include greater detail on the roadway priorities and standards as follows:

- The specific routes and uses that are included in the priority ratings to provide greater transparency about specific locations for snow clearance. A map showing these routes and key uses such as schools, school routes, and roads with steep grades would be valuable, similar to what other jurisdictions have done including the City of New Westminster and District of Mackenzie.
- The maximum desirable period of time from the end of an accumulation of 7.6 cm of snow until plowing on roads with compacted snow. Priority 1 routes could target 12 hours after the end of snowfall.
- Similar to the above, the maximum desirable period of time after icy road conditions appear until application of sand and other de-icing treatments. Priority 1 routes could target 12 hours.

Action 1A2: Establish Cycling Maintenance Priority Routes

Similar to pedestrian infrastructure, participants in the public engagement process stressed the importance of winter maintenance of cycling infrastructure. Specifically, the community cited narrowed bike lanes as one of the top barriers facing cyclists. Supporting winter cycling requires cycling to be safe, comfortable, and enjoyable for all users.

The Town's Snow & Ice Control Policy does not provide any direction on the maintenance of cycling infrastructure. A priority network would help cyclists understand which routes will be cleared of snow and ice after a heavy snowfall. The maintenance priority network could model the recommended future cycling network, which would prioritize maintenance of routes that are expected to have higher bicycle volumes. The priority bike route typologies (see **Section 5.1.1**), in order, would include:

1. Protected Bicycle Lane (Third Avenue)
2. Buffered / Unbuffered Bicycle Lanes
3. Bicycle Boulevards (Collectors Roads)

Action 1A3: Improve Transparency of Snow and Ice Control Process

To complement the recommended changes to the Snow & Ice Control Policy, it is recommended that the Town provide more information about the snow removal process on its website.

The public engagement process identified a number of concerns about snow removal and the general lack of understanding of when and how the process occurs. Other northern communities such as Quesnel[4] and Mackenzie[5] have detailed information about their snow removal processes on their websites, which include the priority routes, maps showing the plowing routes, the schedule, and the snow clearing methods.

While this information is largely provided in the Town's Snow & Ice Control Policy, it is not a presented in simple and accessible form for public consumption. Improving the existing page on the Town's website similar to what Quesnel and Mackenzie have done, would provide greater transparency to the community and allow them to better plan active travel trips.

1B. Enhance Safety & Accessibility of All Highway Intersections

For both pedestrians and cyclists alike, intersection safety was identified as a top concern. Specifically, the public online survey reported that Highway 16 crossings were among the top 5 barriers identified for both active modes. Crossing Highway 16 provides real and perceived safety risks for residents, with some feeling insecure with vehicles travelling at higher speeds and others feeling invisible to distracted motorists trying to get to their destinations as fast as possible.

In October 2019, the Ministry of Transportation and Infrastructure installed pedestrian countdown timers and pedestrian accessible signals at all of the Highway 16 intersections within the Town boundary. This is anticipated enhance the accessibility of these intersections. However, as outlined in the actions below, more can be done to improve overall to accessibility at Highway 16 intersections to better accommodate for vulnerable users including children, seniors, and those with mobility impairments.

Action 1B1: Improve Safety at Main Street / Highway 16

The Main Street-Highway 16 intersection has been identified as an ongoing concern for pedestrians. There have been a number of near misses and there was a recent pedestrian fatality at the intersection in May 2019. One of the main issues is poor sightlines for right-turning vehicles turning onto the highway from Main Street.

It is recommended that the Town work with MOTI to install an electronic blank out sign at this intersection to enhance the visibility of people walking or biking across the intersection. These signs are well-illuminated, clearer and more readable at a distance. An electronic blank out sign can be mounted overhead of turning vehicles. The sign rests in a blank or dark state until it is activated, at which point a customizable message can appear to further warn motorists to be aware and expect vulnerable people crossing the road. This can

enhance awareness to motorists and improve overall safety for pedestrians.

Examples of 'turning vehicles yield to pedestrian' blank out sign. Photo credit: SESA, 2019

Action 1B2: Improve Pedestrian Safety at King Street & Frontage Road

In an overall effort to improve safety and accessibility along King Street, consideration should be given to adding a sidewalk on the west side of King Street from Frontage Road to Princess Crescent. This would help minimize instances of pedestrians having to walk on the busier road next to vehicles. In addition, consideration could be given to providing a zebra crossing at King Street and Frontage Road to facilitate safer crossings for pedestrians accessing Safeway and other commercial destinations on the east side of King Street.

Action 1B3: Improve Pedestrian Safety at Queen Street & Frontage Road

In an overall effort to improve safety and accessibility at Queen Street & the Frontage Road intersection, consideration should be given to the Town's Age Friendly Assessment and Action Plan (2016) that directs the Town to improve safety at pedestrian crossings. The Age Friendly plan identified this area by the Tim Hortons' junction of the Frontage Road, Queen Street, Columbia Drive, and 6th Avenue as a complicated and dangerous intersection needing attention to promote safe pedestrian movement. Consideration should be given to redirect pedestrian traffic to facilitate safer crossings for pedestrians around the drive through uses and highway traffic.

Action 1B4: Review Curb Ramp Designs to Ensure they Meet Accessibility Standards

Curb ramps are an important universal design element and critical for those using wheelchairs and mobility devices. While most of the Highway 16 intersections provide a basic level of curb ramp, the Town should continue to work with MOTI to review them to ensure they are meeting the latest design standards as recommend by the Transportation Association of Canada (TAC) and the BC Active Transportation Design Guide. Chapter G.3 of the BC Active Transportation Design Guide outlines seven components that should be followed to create a universally accessible crossing.

For instance, the guide indicates that the desired curb ramp width (exclusive of flared sides) is 1.8 metres, with a constrained limit width of 1.5 metres. The absolute minimum curb ramp width is 1.2 metres. It also recommends 8.3% as the running slope of a curb ramp and should have a cross slope no steeper than 2% at intersections. Accessible curb ramps should also include tactical attention indicators (TAI) to alert people of an impending change in elevation, conflicts with other transportation modes, and/or other potential hazards.

The priority intersections to review include Queen Street, Main Street, and King Street.

Action 1B5: Enhance Bicycle Highway 16 Crossings

Improving connectivity to and from downtown must include enhancements to Highway 16 crossings. As shown in **Figure 22**, the future cycling network includes four routes that directly intersect with Highway 16. These routes include:

- Bulkley Drive / Toronto Street
- King Street
- 16 Avenue
- Manitoba Street

Currently, the most significant issue for cyclists at these intersections is the risk of a 'right hook' collision, where right turning motor vehicles hit or cut across the path of a through moving bicycle user. The BC Active Transportation Design Guide (G.4, On-Street Bikeway Crossings) provides recommendations on a number of signage, pavement marking and geometric design treatments that can be implemented to reduce these risks and improve motorists' awareness of bicycle users. The Bulkley Drive / Toronto Street and 16 Avenue intersections (southbound lane) will have a dedicated right turn with a continuous bike lane. The recommended treatments for these intersections are as follows:

- **Signage**: A 'Turning Vehicles Yield to Bicycles Sign' (TAC, RB-37) should be installed, which would require motorists to yield to the cyclist.
- **Road Marking**: To accompany signage, a dashed segment of the bicycle lane should be provided near the intersection to allow motor vehicles to weave across the bicycle lane into the dedicated right turn lane (see **Figure 8**). The dashed segment of the bicycle lane should be a minimum of 18 metres in length and follow a minimum 10:1 length to width ratio (10m x 1m). Even though the figure shows a green conflict zone, this treatment is only recommended for locations with more than 4,000 vehicles per day, which is not applicable in the Smithers context.

The King Street / Highway 16 and 16 Avenue / Highway 16 (northbound) intersection has a different geometric configuration with a channelized right turn lane. The BC

Active Transportation Design Guide recommends removal of the channelized right turn lane or adjusted to a 'smart' right turn island to reduce motor vehicle speed and enhance sightlines. However, this might not be possible for these intersections due to roadway geometry, traffic operations, and cost. As such, the recommended treatment is to design the bicycle lane straight through to the intersection, which is similar to the dedicated right turn lane configuration. Signage and road markings (dashed segment) would need to be applied.

Enhancing the bicycle crossings at the highway will also require transitions between different bicycle facility types to ensure safe and intuitive transition for cyclists. The future cycling network includes a transition from a painted unbuffered bike lane to a bicycle boulevard at the Bulkley Drive / Toronto Street and 16 Avenue / Highway 16 intersections as shown in **Figure 22**. For these intersections, when transitioning to a bicycle lane, a dashed bicycle lane is recommended 25 metres prior to the intersection, with a Reserved Bicycle Lane sign installed. In addition, a Reserved Bicycle Lane Ahead sign should be used to alert road users of the transition (see **Figure 11**).

The transition from bicycle boulevard to a bicycle lane should carry through to the far side of the intersection and should transition from solid to dashed and include the installation of a Reserved Bicycle Lane Ends sign. Sharrow pavement markings could also be included on the bicycle boulevard to guide bicycle users' lateral position on the road and help shift them into or out of the bicycle lane, although this is not required (see **Figure 10**).

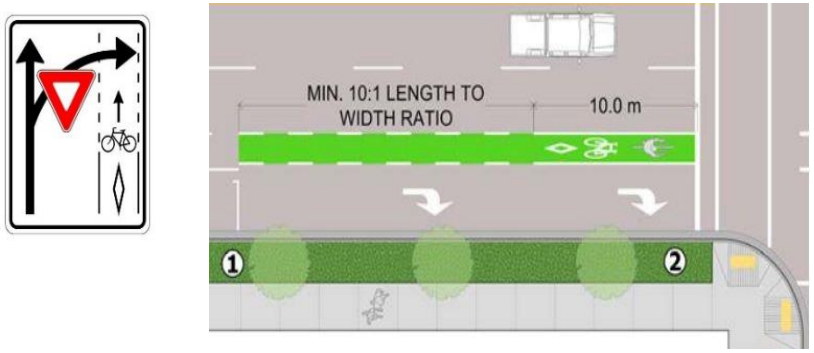


Figure 8. *Recommended treatments for continuous bicycle lane with dedicated turn lane for Highway 16 intersections (e.g., Toronto Street). Source: BC Active Transportation Design Guide, 2019.*

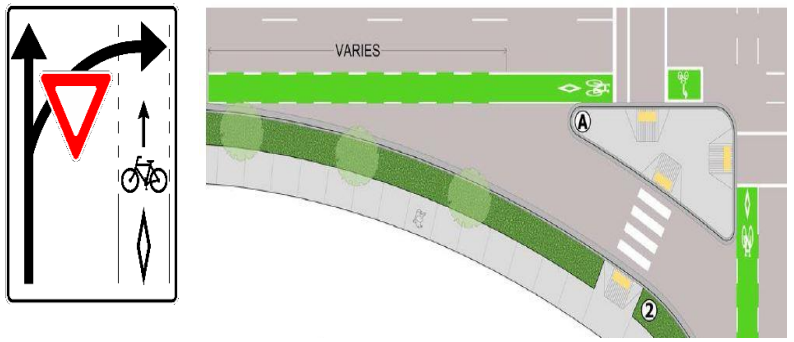


Figure 9. *Recommended treatments for bicycle lane with channelized right turn island (King Street / Highway 16). Source: BC Active Transportation Design Guide, 2019.*

Figure 10. *Painted bicycle lane to bicycle boulevard transition for Toronto Street / Highway 16, Source: BC Active Transportation Design Guide, 2019.*

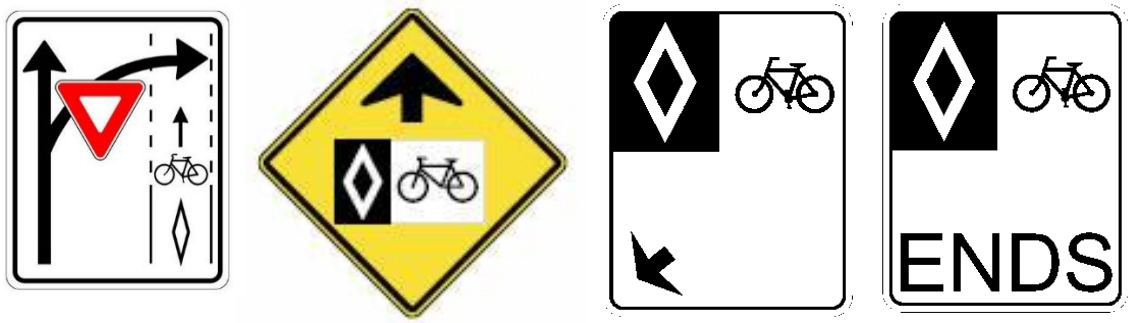


Figure 11. *Recommended signage for painted bicycle lane to bicycle boulevard transition, from left to right: Turning Vehicles Yield to Bicycles Sign' (TAC, RB-37), Reserved Bicycle Lane Ahead sign (MUTCDC WB-10), Reserved Bicycle Lane sign (MUTCDC RB-90, RB-91), Reserved Bicycle Lane Ends sign (MUTCDC RB-92).*

Action 1B6: Implement Bicycle Signal Detection at Highway 16 Intersections

As part of improving safety and the overall crossing experience for cyclists at Highway 16 intersections, bicycle signal activation could be considered. This would result in traffic signals passively detecting bicycles and/or allowing cyclists to manually call a phase with a push button. Push buttons are the recommended detection system for Smithers.

Specifically, it is recommended that push buttons be implemented at all of the Highway 16 intersections that intersect with the future cycling routes including Bulkley Drive / Toronto Street, King Street, and 16 Avenue. Push buttons should be installed in such a way whereby cyclists do not need to dismount. They should be located on the curb to be accessible to the cyclist and to allow for enough room for snow clearing equipment to avoid damaging the push button. Bicycle push buttons should have a supplemental sign explaining their purpose and use, and be mounted immediately above or incorporated into the push button.

Examples of bicycle push buttons in Victoria, BC.

Action 1B7: Upgrade Perimeter Trail Highway Crossings

The Perimeter Trail currently has two Highway 16 zebra crossings: one is immediately west of Schibli Street and the other is east of 16 Avenue. As part of improving safety, the Town could work with the Ministry of Transportation and Infrastructure to upgrade these crossings to align with design recommendations in the BC Active Transportation Design Guide. Section G.5 of the guide (Off-Road Pathway Crossings) provides guidance on unsignalized mid-block crossings.

Recommended upgrades are as follows:

- **Signage** | the existing signage on Highway 16 leading up to the crossing is a Pedestrian Crossing Ahead sign. As the Perimeter Trail is a multi-use pathway, a 'Shared Pathway' sign (MUTCDC RB-93) should be installed approximately 100m ahead of the multi-use pathway.
- **Pavement Markings** | the existing crossing is a Zebra style crosswalk. As a multi-use pathway, cross-ride markings should be installed. Cross-rides alert road users to the presence and right-of-way of crossing persons cycling and walking. As a provincial highway, however, cross-ride markings can only be implemented where pathway users have a stop control. As such, the Town will need to work with MOTI to determine what is feasible.

Beyond these two recommended enhancements, the Town may consider a stop or yield sign to control movements of pathway users and/or a pedestrian overhead sign to alert motorists to the presence of pathway users.

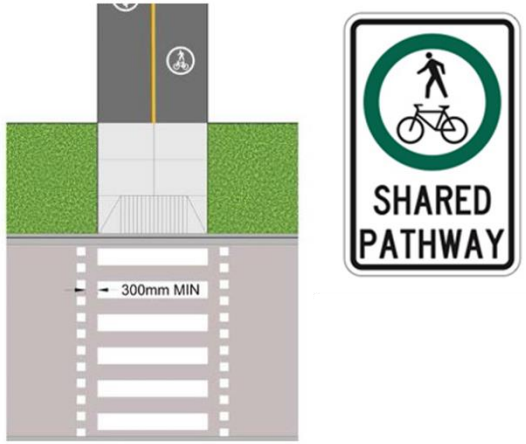


Figure 12. *An example of a Combined Crossing Pavement Marking (left) and Shared Pathway Sign, MUTCDC RB-93 (right). Source: BC Active Transportation Design Guide, 2019.*

Strategy Area 2 – Connectivity

Through the engagement process Smithers' residents identified the need to address existing connectivity gaps in the active transportation network, which make it hard to access a variety of destinations. There is a need to connect downtown, public spaces and schools with higher density residential areas, seniors housing and hotels.

Beyond the Town's boundary, it is equally important to enhance connections to the surrounding rural areas including the Bluff Recreation Area, Seymour Lake, Lake Kathlyn and the Bulkley River, among others. During the engagement process, the community reinforced the desire to have improved cycling connections to rural areas beyond the Town's boundary, including improved infrastructure and connection to other trails networks. Recognizing this desire, access to the rural areas is critical for supporting the many recreational opportunities afforded to both Smithers' residents and visitors. Creating, and—in most cases—enhancing connections will not only improve access to destinations, but help residents and visitors prioritize active transportation modes over driving.

2A. Enhance the Cycling Network

Smithers' existing cycling network consists of on-street and off-street facilities including paved shoulders, shared use lanes, and multi-use pathways that combine for a total of 12.3 km of bicycle facilities. While cyclists have a number of east-west routes available to them, north-south connections in the Town are lacking.

To improve overall connections within the Town, and to begin to meet the needs of all ages and abilities, the Town will need to develop and formalize a cycling network, which will provide clarity about the bike route options available to residents and visitors, as well as the specific facilities.

Action 2A1: Establish Route Typologies

In line with the BC Active Transportation Design Guide[6] and TAC Geometric Design Guide for Canadian Roads Chapter 5 (Bicycle Integrated Design), it is recommended that the Town adopt the following bicycle route typologies for its existing and future network. The more detailed infrastructure design guidelines for each route typology are presented in **Section 5.1.1**.

Protected Bicycle Lane

Protected bicycle lanes are separate travel lanes designated exclusively for bicycle use and other forms of active transportation that are physically separated from motor vehicles and pedestrians by vertical and/or horizontal elements.

Buffered / Unbuffered Bicycle Lane

A separate travel lane designated exclusively for bicycle use that are delineated by a painted line and/or a painted buffer area. This type of facility may also include an 'unbuffered bicycle lane', which only includes white longitudinal line running parallel to the alignment of the road to visually separate the bicycle lane from the motor vehicle and/or parking lanes.

Bicycle Boulevard

Also referred to as neighbourhood bikeways and greenways, bicycle boulevards are a shared roadway that provides a continuous corridor of suitable operating conditions for cyclists, including limiting exposure to motor vehicle traffic and designing for low motor vehicle speeds. For less experienced bike users, bike boulevards can serve as a stepping stone facility that help increase comfort level using on-street facilities.

Multi-Use Pathway

Multi-use pathways are off-street facilities that are physically separated from motor vehicle traffic and can be used by any non-motorized user including pedestrians and cyclists as well as other forms of active transportation such as skateboards, in-line skates, and—in the Smithers context—cross-country skis. The Town's existing multi-use pathway facilities include the Perimeter Trail and Fulton Multi-Use Path.

Action 2A2: Implement a Protected Bicycle Lane on Third Avenue from Queen Street to King Street

Third Avenue is currently designated as a bicycle route where cyclists travel along a shared use lane (i.e., "sharrows"). To improve the safety and accessibility of the bike network, it is recommended that the Town implement a sidewalk level protected bicycle lane on Third Avenue between Queen Street and King Street (~400m in length). The specific design and overall streetscape changes would be determined through a downtown revitalization strategy for Third Avenue (see Action 3A1). This would serve as a valuable opportunity to engage downtown businesses, visitors, and customers about what they would like Third Avenue to look and feel like in the future.

A number of studies have found that protected bicycle lanes are the safest type of bicycle facility; one study reported that protected bicycles lanes were the safest type of facility with a 90% decrease in safety risk compared to a major street with no cycling infrastructure.[7] A protected bicycle lane on Third Avenue would achieve the following:

- Allow cyclists of all ages and abilities to comfortably cycle into and out of the downtown core.
- Reduce the overall risk of collisions and/or injuries for cyclists using this route.
- Third Avenue is already a priority snow clearing segment in the Town's Snow & Ice Control Policy.

As shown in **Figure 13**, the recommended facility is a sidewalk level protected bike lane due to the road right-of-way being constrained on Third Avenue. Further, this facility allows on-street parking to be preserved on both sides and offers maintenance benefits as the pathway and sidewalk can be cleared of snow at the same time.

Example of a bike facility (right) in Saanich, BC, which would look similar to the facility on Third Avenue. While Third Avenue presently has sharrows, research has reported that sharrows on busier roads can actually be less safe than having no pavement markings at all by creating a false sense of security.

Action 2A3: Upgrade Third Avenue to an Unbuffered Bicycle Lane

To connect cyclists with the future protected bicycle lane downtown, and to provide east-west connectivity and directness to destinations, Third Avenue could be upgraded to an unbuffered bike lane from Toronto Street to Queen Street and from King Street to 16 Avenue (with the exception of the block fronting Muheim Memorial Elementary School to maintain on-street parking). The rationale is to:

- Maintain Third Avenue as the Town's east-west cycling corridor.
- Improve safety for cyclists by increasing the level of protection from motor vehicle traffic.
- Provide a direct connection to the future protected bike lane in the downtown.

The implementation of this facility requires the removal of on-street parking due to the constrained road right-of-way. The BC AT Guide recommends[8] avoiding the use of parking adjacent bicycle lanes due to the following reasons:

- Presents additional conflict points for bicycle users.
- Greater risk of 'dooring' as all vehicles have a driver, but many do not have a passenger.
- Should a person cycling get 'doored' or have to enter the travel lane to avoid 'dooring,' they risk serious injury in a collision with a moving motor vehicle.

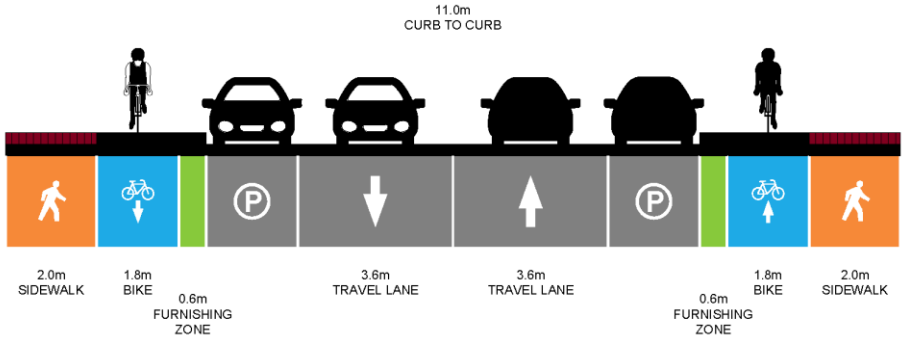


Figure 13. *Protected bike facility on Third Avenue (King to Queen Street).*

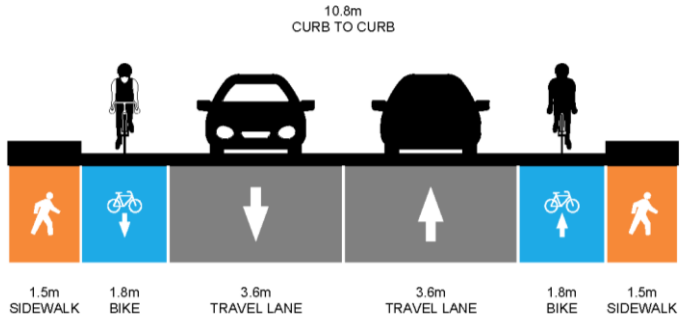


Figure 14. *Third Avenue Painted / Unbuffered Bike Lane.*

- Parking adjacent bike lanes are often blocked by delivery vehicles, taxis, and other private vehicles.

Action 2A4: Designate King-Main Street as the North-South Cycling Spine

The Town does not currently have a designated north-south cycling route, which results in cyclists having to take multiple routes to access a destination. It is recommended that King Street and Main Street be upgraded to an unbuffered bicycle for the following reasons:

- Cycling route usage data from a recent UNBC study[9] indicate that King Street is among one of the Town's most frequently used cycling routes.
- The corridor provides direct connectivity with the Perimeter Trail on both the south and north ends of town.
- Muheim Memorial Elementary School is located on Third Avenue, which would allow students to comfortably cycle to and from school.
- A number of community destinations are along the King Street corridor including grocery stores, cafés, restaurants, parks, and Canada Post.
- It connects with the Fulton Multi-Use Pathway, which would facilitate improved connectivity and direct travel to destinations.

The implementation of this bike facility on King Street would require the removal of on-street parking on both sides.

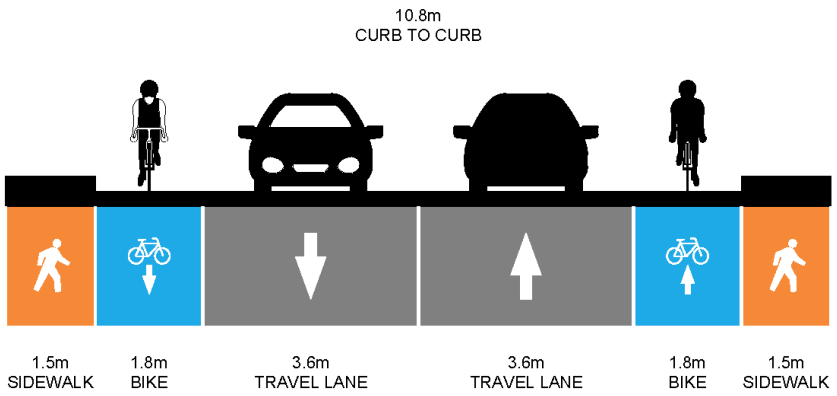


Figure 15. *Cycling Spine on King Street.*

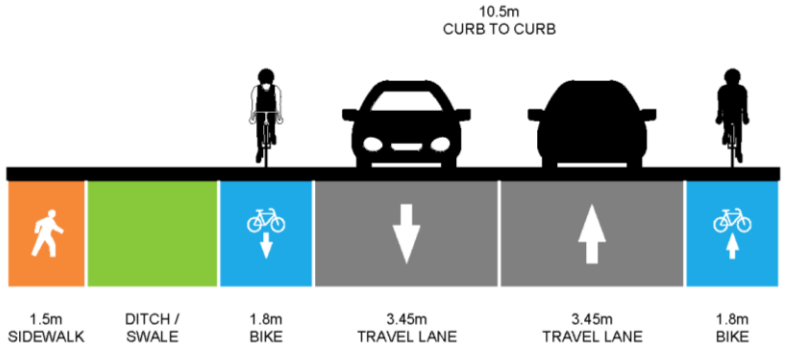


Figure 16. *Unbuffered Bike Lane on Main Street (8 Avenue to Perimeter Trail).*

Action 2A5: Formalize a Buffered Bike Lane on Highway 16

Even though cycling on Highway 16 would not be comfortable for most cyclists, the provision of a painted / buffered bike lane would provide connectivity for recreational and commuting cyclists alike. Further, it would also improve safety for cyclists visiting and/or passing through Smithers. A large segment of Highway 16 within the Town's boundary already has a shoulder and would therefore provide the necessary width to accommodate a buffered bike lane.

In line with the BC Active Transportation Design Guide, the recommended facility is a buffered curbside bicycle lane to accommodate bicycle passing movements and to provide additional space between cyclists and moving motor vehicles. The guide recommends this facility where motor vehicle speeds are 50 km/h or greater and bicycle volumes are greater than 1,500 bicycles per day.

The facility is recommended on Highway 16 between the western boundary of Town (Edmonton Street) and extending to the Bulkley Bridge. The Town will need to work with MOTI to implement the facility.

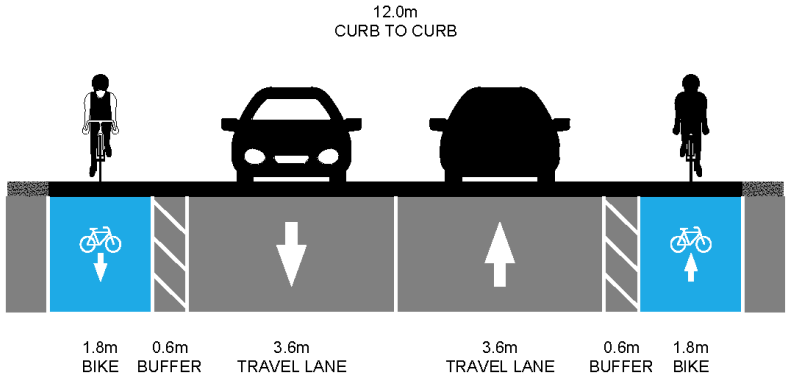


Figure 17. *Buffered Bicycle Lane on Highway 16 (this cross-section is specific for 16 Avenue to 19 Avenue).*

Action 2A6: Establish Bicycle Boulevards on Local Streets

Bicycle boulevards are intended to provide a series of local connections within the Town that will link residential areas to schools, recreational, and commercial destinations. The bicycle boulevards will act as the "ribs" in the cycling network. All of the recommended bicycle boulevards on local streets are shown in **Figure 22** and listed as follows:

- Eighth Avenue
- Tenth Avenue
- Mountainview Avenue
- Victoria Drive

Bicycle boulevards are recommended on all of these local streets because they will allow residents living north of Highway 16 to safely travel along a cycling route and connect

with the larger cycling network. Bicycle boulevards along these streets should be designed in accordance with the infrastructure design guidelines described in **Section 5.1.1**.

According to the BC Active Transportation Design Guide, the maximum speed limit on a bicycle boulevard should be no more than 30 km/h if it is to be considered to be an all ages and abilities cycling facility. As such, the posted speed limits on the local streets recommended for bicycle boulevards will need to change to 30 km/h, which would require signage and pavement markings (optional). Traffic calming measures on these streets will not be required due to existing motor vehicle volumes.

Action 2A7: Establish Bicycle Boulevards on Collectors

For bicycle boulevards to truly function as the "ribs" of the cycling network, a number of collector streets will also require this facility to provide connectivity and greater safety for bike users. The following collectors are recommended for bicycle boulevards to enhance connections with commercial / shopping destinations, residential density, schools, and existing multi-use pathways (e.g., Perimeter Trail, Fulton Multi-Use Pathway).

- Queen Street (Eighth Avenue to Perimeter Trail)
- Bulkley Drive (Morice Drive to Eighth Avenue)
- Toronto Street (Third Avenue to Railway Avenue)
- Manitoba Street
- Princess Street
- 16 Avenue (Third Avenue-Dahlie Road / Fulton Avenue-Main Street)

Similar to local streets, the bicycle boulevards should be designed in accordance with the infrastructure design guidelines described in **Section 5.1.1**. The posted speed limit on these streets will need to change to 30 km/h if it is to be considered an all ages and abilities cycling facility. If this is not feasible, then consideration will need to be given to higher levels of treatment such as traffic calming measures, as described in the infrastructure design guidelines.

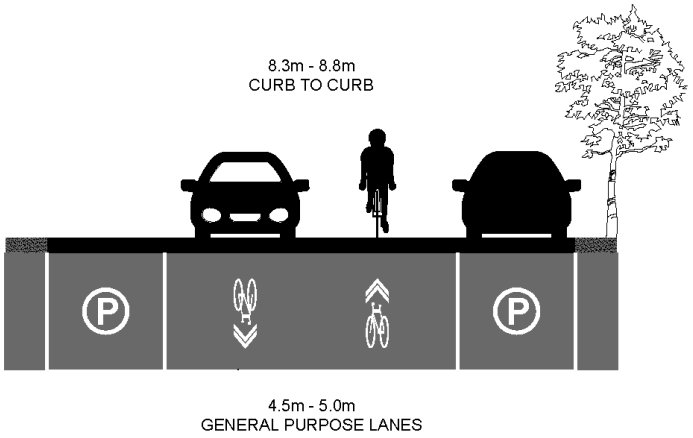


Figure 18. *Bicycle Boulevard on Eighth Avenue.*

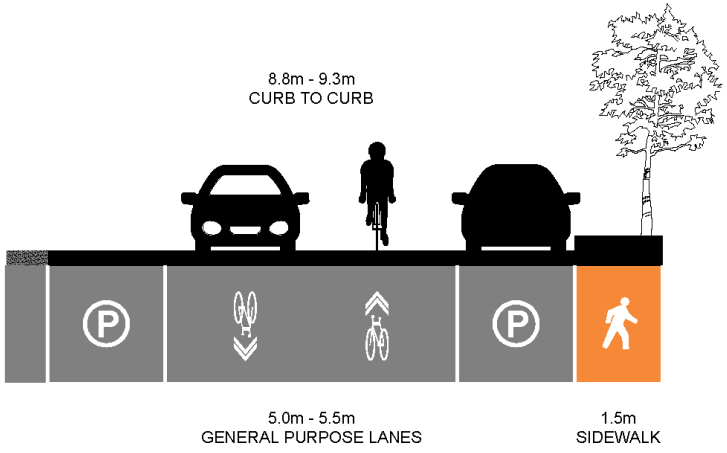


Figure 19. *Bicycle Boulevard on Toronto Street.*

Action 2A8: Establish a Bicycle Boulevard on Main Street Downtown

One of the strategies identified in the Town's 2008 report *Planning for a Vibrant Downtown Smithers* was to "reinforce Main Street as the primary entrance to the downtown core". A key action identified for this strategy was to make Main Street suitable for a mix of pedestrian, cyclist, and car traffic, which would require good signage and streetscape improvements as part of enhancing the overall public realm. Main Street has largely fulfilled the strategy of becoming the primary entrance to the downtown by offering high walkability for residents and visitors alike. And, even though Main Street has the majority of the Town's bike racks, it does not currently offer a bike facility.

To meet the strategic direction set out in the Town's 2008 report, Main Street should be formalized as a bicycle boulevard. Further, cycling route usage data from a recent UNBC study found that the downtown segment of Main Street is among one of the Town's most frequently used streets for cyclists.

The recommended design would be in accordance with the infrastructure design guidelines described in **Section 5.1.1**; however, the design challenge for Main Street is the front-in angled parking between Third Avenue and Broadway Avenue. Front-in angled parking results in poor sightlines for drivers backing out, which may result in a collision with a cyclist. Conversion of the angled parking to back-in angled parking can increase motorist's sightlines and reduce the risk of drivers blindly backing out of the parking stall into a cyclist.[10]

The BC Active Transportation Design Guide does not provide any guidance on how to design a bicycle boulevard with angled parking configurations. As such, more detailed conceptual design will need to be completed should the Town pursue this action.

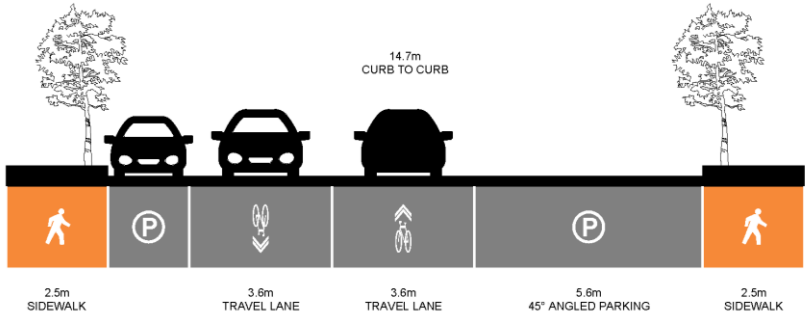


Figure 20. *Bicycle boulevard on Main Street downtown.*

2B. Enhance the Pedestrian Network

In the public online survey, the top two barriers identified in the pedestrian network included (1) lack of connectivity (e.g., gaps in network) and (2) lack of infrastructure. Dead-ending of sidewalks and level of maintenance of sidewalk infrastructure were specifically highlighted in the public engagement process as significant issues facing the pedestrian network today. Moreover, priority #2 in the Town's Age Friendly Assessment and Action Plan (2016) directs the Town to improve sidewalks to "encourage safe all season and all abilities pedestrian movement throughout the town". This includes improving sidewalk connectivity and accessibility, among others.

Enhancing the pedestrian network requires a multi-pronged approach that includes expanding overall sidewalk coverage, establishing a process for prioritizing sidewalk upgrades and where new sidewalks should go, and identifying how sidewalks and pathways could be better designed through the development process.

Action 2B1: Update Requirements for Sidewalks in Subdivision Servicing & Development Standards Bylaw

Chapter C.2 of the BC Active Transportation Design Guide provides recommendations on 'Pedestrian Through Zones', which refer to sidewalks, off-road pathways, or a walkable shoulder depending on the context.[11] The guide specifically outlines recommended widths for Pedestrian Through Zones, which differ based on land use and adjacent road type. For land use, the guide states that a pedestrian through zone should be wider in areas with higher pedestrian activity, window shopping, or large surges of activity to maintain pedestrian movement.

The guide recommends that the Pedestrian Through Zone should have a constrained limit width of at least 1.8 metres, which allows two people using mobility devices to pass one another. Further, this width is recommended for snow clearing operations to help prevent plow damage to road amenities and utilities. It is recommended that the Town update the Subdivision Servicing & Development Standards Bylaw to require the following:

- All road types (local, collector, arterial) should have a sidewalk with a minimum width of 1.8m.
- All Commercial Zones, especially in the downtown, should be designed to 2.4-3.0m irrespective of road type.

Even though the Subdivision Servicing & Development Standards Bylaw does not require sidewalks on both sides of a Local road, as part of increasing sidewalk coverage over time, the Town should provide—over the long term—sidewalks on both sides of a local roads in locations that have

schools, seniors homes, parks, and community facilities, which will improve connectivity and enhance safety.

The BC Active Transportation Design Guide also provides direction on the 'Furnishing Zone', which is located between the Pedestrian Through Zone and the curb or pavement edge. It provides space for utilities, street furniture, landscaping, street trees, and snow storage. It is recommended when there is sufficient right-of-way available, as it can create a buffer between motor vehicles and pedestrians. Further it can help create a more functional and pleasant pedestrian environment.

As shown below, a Furnishing Zone is only recommended in the Town's Commercial Zone with a suggested width of 2.0m. This width would allow for street trees, landscaping, utility poles and streets lights as well as providing enough space for people with mobility and visual impairments.

Pedestrian Through Zone & Furnishing Zone Recommended Widths

Zone	Road Type	Sidewalk Width (m)		Sidewalk Location	Furnishing Zone Width (m)	
		Desirable	Constrained		Desirable	Constrained
Agricultural A-1	Any	N/A	N/A	None	N/A	N/A
Urban Residential R-1,2,2A,3,4,5	Local	2.1	1.8	One Side	N/A	N/A
	Collector / Arterial	2.4	1.8	Both Sides	N/A	N/A
Rural Residential R-6,7	Any	N/A	N/A	None	N/A	N/A
Commercial	Any	2.4-3.0	2.1	Both Sides	2.0	0.6
Industrial	Local	1.8	1.5	One Side	N/A	N/A
	Collector	1.8	1.5	One Side	N/A	N/A
	Arterial	2.1	1.8	Both Sides	N/A	N/A
Public Use	Local	1.8	1.5	One Side	N/A	N/A
	Collector	1.8	1.5	Both Sides	N/A	N/A
	Arterial	2.1	1.8	Both Sides	N/A	N/A

Action 2B2: Refine Sidewalk Upgrade Process

The Town's Sidewalk Inspection and Maintenance Policy (DEV-002) "assesses the conditions of sidewalks within the municipality in order to identify any defects or hazards on the sidewalk and to establish priorities for repair of sidewalks in the municipality according to the resources available". The policy provides a defect / hazard rating system that is organized as follows:

- Minor (rating 1), review at next inspection
- Moderate (rating 2), as budget allows or part of a repair program
- Major (rating 3), requires repair as soon as schedule and budget allows

Based on recent inspections, the Town has developed a list of sidewalk upgrade projects from 2018-2023. It is recommended that the Town continue to implement its inspection schedule but refine its rating system by prioritizing upgrades based on pedestrian count data. The existing inspection schedule does not use pedestrian count and relies on staff's general knowledge of pedestrian activity. Pedestrian counts will provide a better understanding of actual foot traffic in the Town and identify where pedestrians might be walking in the shoulder or directly on the road due to uneven sidewalks, inaccessible let downs, and poor overall condition (see Action 3C6 for more details).

Action 2B3: Increase Sidewalk Coverage

Increasing sidewalk coverage is intended to address gaps in the network and connect people to places they want to go. Networks gaps, which were identified in the engagement process, force some pedestrians to make unnecessary crossings and, in some cases, walk on the road next to motor vehicle traffic. While it may be desirable to have sidewalks in all parts of the Town, budgetary constraints and limited resources will not make this possible and therefore new sidewalks will need to be prioritized where they are needed most. It is recommended that the Town consider the following criteria when deciding where to construct a new sidewalk or add a sidewalk to the other side of the street:

- Where there are connections to schools, community centres, and bus stops.
- Where there is a large proportion of people using mobility devices, people pushing strollers, and visually impaired pedestrians, such as near health care facilities, assisted living facilities, and seniors housing including Bulkley Lodge, the Meadows Assisted Living, Pioneer Place, and Silverking Court.

Recommended locations for new sidewalks are shown in **Figure 28**. To better rationalize these locations, the Town should conduct pedestrian counts at these locations (see Action 3C6 for more details).

2C. Connect and Enhance Multi-Use Pathways

Both the Perimeter Trail and Fulton Multi-Use Pathway are among Smithers' most treasured assets that offer residents and visitors a path to the Town's many recreational opportunities. Even though both are highly popular, there are a number of opportunities to enhance them to continue to support active travel within and beyond the Town's boundaries.

Action 2C1: Address Missing Link on Railway Avenue

One of the Perimeter Trail's largest gaps in connectivity is along Railway Avenue between King Street and Manitoba Street, where trail users are forced to travel on the street. This gap, which is approximately 800m in length, results in uncomfortable cycling and walking conditions. Per the Future Cycling Network (**Figure 22**), it is recommended that the Town implement an unbuffered bike facility and sidewalk to fill this gap, which would be a more cost-effective option than completing the off-street Perimeter Trail. The facility should be designed in accordance with the infrastructure design guidelines described in **Section 5.1.1**.

Action 2C2: Enhance Signage on the Perimeter Trail

As part of the Wayfinding and Branding Strategy (see Action 3B1), consideration must be given to specific signage improvements on the Perimeter Trail, which would benefit locals and visitors alike. The specific enhancements to the signage on the Perimeter Trail can include:

- **Map Kiosks**: a map kiosk functions like an orientation map about the trail user's current location, attractions that are accessible by the trail (e.g., the Bluff BC Recreation Site, the Smithers Golf and Country Club, etc.), and common destinations that are easily accessible by the trail, which could include the downtown, the library, schools, and recreational facilities, among others.
- **Kilometre Marker**: Kilometre markers can be placed every 400 metres along the trail to improve overall user experience. They allow recreational users to more easily track distance travelled and could also help to determine location in case of an accident or other emergency.
- **Interpretive Signs**: Continue signage, similar to Railway Avenue interpretive signage, along popular route sections, such as Riverside Park area and Wetlands. Work in collaboration with Tourism Smithers, BV Museum, Office of the Wet'suwet'en and local cultural groups as partners.

Action 2C3: Connect Fulton Multi-Use Pathway to Permiter Trail

As an overall strategy to improve connectivity, especially for recreational users, it is recommended that the Town expand the Fulton Multi-Use Pathway further east to directly connect with the Perimeter Trail as shown in **Figure 22**. This would reflect feedback heard through the engagement process about the community's desire to see further expansion of both multi-use pathways.

Action 2C4: Address Gap on Perimeter Trail Behind Alpine Village Estates

The community has expressed concern about the trail closure on the Perimeter Trail behind Alpine Village Estates. The closure has resulted in a major gap in connectivity, especially for recreational users. This will require attention as part of better connecting and enhancing the overall multi-use pathway network. It is recommended that the Town work directly with the Alpine Village Estates to address this important gap.

2D. Improve Connections to Rural Areas

Smithers is very much connected to its rural areas and recreational assets, such as the Bluff Recreation Area, Seymour Lake, Lake Kathlyn and the Bulkley River, among others. These destinations are opportunities to improve connections between the Town to these areas through expanding existing infrastructure.

Action 2D1: Support the Design and Construction of the Telkwa-Smithers Pathway Project

The Cycle 16 Trail Society has been advocating for an off-highway pathway connecting the Village of Telkwa and the Town of Smithers. A report was completed in 2017 that outlined different conceptual designs for the pathway and in 2019 a conceptual refinement of Phase 1 (Smithers bridge to Laidlaw Road) was completed. It is recommended that the Town continue to work with the Cycle 16 Trail Society, the Village of Telkwa, Regional District of Bulkley-Nechako and the Ministry of Transportation & Infrastructure to finalize the design of the pathway and support funding applications for construction.

In addition, within the Town's boundary, consideration will need to be given to how to safely connect cyclists from the Bulkley Bridge to Tatlow Road and more directly to downtown. While it may be desirable to see an off-street multi-use pathway address this gap, a buffered bike facility on

Highway 16 (Action 2A5) could address this problem if implemented by the Town in collaboration with MOTI.

Action 2D2: Provide Direct and Safe Access to Rural Connections

As shown in **Figure 22**, the future cycling network will enhance connections to a number of the surrounding rural destinations including Seymour Lake and Bluff BC Recreation Site. The Town could continue to work with MOTI and maintenance contractors for ongoing maintenance of these connections.

Increasing rural connectivity to and from the Town will require an expansion of existing infrastructure.

Strategy Area 3 – Improving the Climate of Active Transportation

Moving Smithers toward sustainable mobility means creating the conditions for which active transportation is not an afterthought, but rather a central part of the everyday life of a Smithers resident and visitor. Since the early 1900s, the private motor vehicle has been the dominant form of transportation—dictating how we move around our communities. As a result, it has come to influence the culture of how we think about transportation and the way our communities should be planned and designed.

Creating a climate of active transportation requires a complete shift in mindset whereby active forms of mobility are not just viewed as a transportation mode, but as enhancing quality of life, community health, and improving the overall livability of Smithers. To realize this transformation, a number of strategies will need to be pursued ranging from education and awareness, tourism and marketing, active living, and thinking about how active transportation can be designed for all ages and abilities.

Beyond the challenges of being a winter town, active transportation options may generally be less attractive than driving because of the lack of options. In the short term, Smithers has a chance to make active transportation more attractive by maintaining infrastructure during the winter season, expanding opportunities for bicycle parking, and working with businesses and larger employers to support the provision of end-of-trip cycling facilities. In the longer term, the Town must prepare itself for emerging mobility solutions such as electric bicycles, which can be a highly attractive and convenient option for all ages and abilities with the potential to replace motor vehicle trips altogether.

3A. Continue to Revitalize Downtown Streets

Action 3A1: Develop Third Avenue as the Town Greenway

In 2008, the Town completed a downtown charrette to enhance and build on the Town's existing core and ensure that its vitality and vibrancy continued in the future. One of the strategic directions in the charrette was titled "improving gateways & circulation", which would, among other things, reinforce Main Street as the primary entrance to downtown.

The charrette identified Third Avenue as the "Town Greenway", which would prioritize pedestrian and cyclist traffic by incorporating special features such as marked bicycle lanes, enhanced street tree treatments, special paving, or storm water features. Even though Third Avenue was identified as the greenway, the charrette did not include a more conceptual streetscape design showing how active travel could be accommodated on this proposed greenway. Further, the Town's Strategic Priorities (2015-2018) identified

the need to “develop greenways (people-focused transportation corridors), which could enhance landscaping and infrastructure improvements on existing Town Streets.

As Third Avenue is the recommended east-west cycling corridor with a protected bicycle facility in the downtown area (Action 2A2), the Town has an opportunity to undertake a specific charrette for this important downtown greenway. This would serve as a valuable opportunity to engage downtown businesses, visitors, and customers about what they would like Third Avenue to look and feel like in the future.

The specific charrette design principles and direction would need to be developed through detailed design; however, the specific active transportation considerations could include:

- **Streetscape & Sidewalk Elements** | street trees, lighting, sidewalk materials, seating / benches, planters and landscaping, and other considerations that would result in cohesive design and development of Third Avenue’s character. In addition, this could include opportunities for traffic calming measures to improve overall pedestrian safety.
- **Design of Bike Facility** | this would include a detailed concept design of the protected bicycle facility including its overall width, signage, pavement markings, type of separation, and furnishing zone.
- **Parking** | this would include details on the type and location of on-street parking and the specific signage to accompany it.

It is anticipated that a number of other revitalization topics will surface as part of this process and it will be important to ensure that specific streetscape designs align with the vision of the Active Transportation Plan, which specifically envisions a protected bicycle facility on Third Avenue.

3B. Improve Wayfinding and Signage

Consistent wayfinding and signage are critical for orienting visitors and new residents about the key destinations in the community. Wayfinding can provide simple, clear, and intuitive information to help people navigate spaces effectively and intuitively. It helps people identify how they can navigate a town, neighbourhood, or active transportation network effectively from their present location to their destination. In short, wayfinding should [a] connect places [b] be predictable and [c] be simple and easy to follow. These guiding principles inform the recommended actions below.

Action 3B1: Create a Wayfinding Branding Strategy

As a first step, the Town should work with Tourism Smithers to develop a wayfinding branding strategy that is specific to

the active transportation network. The purpose would be to establish a common theme, style, and brand that could broadly inform the materials, colours, graphics, icons, signs, and mapping needs that the Town wants to market itself as. Ultimately, the purpose would be to enhance communications, understanding, and navigation for both local residents and visitors to help find services, key community destinations, and recreational opportunities both within and beyond the Town boundary. The wayfinding branding strategy would identify specific types of signage for the downtown and multi-use pathways, as described below.

Example of a pedestrian monolith (left) and pedestrian fingerposts (right).
Photo credit: City of Victoria, Press & Journal.

Action 3B2: Enhance Pedestrian Wayfinding Signage Downtown

The BC Active Transportation Design Guide[12] includes specific recommendations around pedestrian wayfinding. Based on the recommended wayfinding branding strategy, the Town could implement the following pedestrian wayfinding signage in and around downtown:

1. **Pedestrian Monolith** | A pedestrian monolith sign provides support to pedestrian at key decision points. They include the name / address of the current location, directions to nearby destinations, an overview map, community branding, and other supporting information.
2. **Pedestrian Fingerposts** | Fingerposts provide directional information to proximate destinations as a final step in a pedestrian's journey. They include times or distances to destinations and include recognizable brand identity.

The BC Active Transportation Design Guide recommends the following criteria for placement of pedestrian wayfinding signage:

- On streets with high levels of foot traffic (e.g., Third Avenue, Main Street).
- At intersections or junction points to help with route decision-making.
- Where there is lighting to ensure the information is readable in darker conditions and in the winter months.

Local destinations could be featured in wayfinding systems to reflect the nature of lower density areas or to integrate cycling wayfinding with walking wayfinding. Destinations could include:

- Recreational bike facilities
- Bus stops
- Shopping centres
- Parks, open spaces, sports facilities
- Public washrooms
- Civic facilities (e.g. community centres, libraries).

Action 3B3: Formalize Cycling Wayfinding Signage

The Town's existing cycling wayfinding does not meet industry standards recommended by the Transportation Association of Canada and the BC Active Transportation Design Guide, among others. As part of developing the Wayfinding Branding Strategy (see Action 3B1), the Town could create specific cycling wayfinding signage that aligns with best practices. This signage would be available throughout the cycling network and include the following.

Decision Signage

- **Purpose**: Indicate to cyclists that they are on a designated bike route and to make motorists aware of the bike route. It is useful for cyclists who require different information than motorists such as different destinations that may be of more interest to non-motorists or bicycle route. Design signs typically contain up to three destinations.
- **Placement**: Place the sign at a safe stopping distance before the turn (e.g., near-side of intersection). The BC Active Transportation Design Guide recommends placement of decision signs 50 metres in advance of the intersection if there are no turn lanes present. They could be placed on King Street, 3rd Avenue, and Railway Avenue, all of which connect to major destinations.
- **Application**: Decision signage in Smithers can include destinations such as [a] Smithers Town Office [b] Smithers Public Library, [c] Bovill Square, and [d] Information Centre. Other locations could include Main Street and the Museum / Art Gallery.

Figure 21. *Examples of decision signage from the City of Gresham and City of Portland.*

Confirmation Signage

- **Purpose**: After decision points, confirmation signs reassure cyclists of their direction and confirm additional destinations reached along that route.
- **Placement**: Locate 20-30 metres after turns and repeated every 400 metres in urban areas and 800 metres in rural areas.

3C. Continue to Foster Education & Awareness Programs

Creating a vibrant active transportation culture requires consistent engagement and education at a young age. Parents may want their children to walk or cycle to school, but only if a safe route is a viable option, which is all too often not the case. A number of initiatives could be pursued to make active travel to school a safe option. Equally important, however, is providing educational opportunities for adults who may have overlooked the benefits of active transportation because driving is an easier option for them.

Action 3C1: Support an E-Bike Awareness Event

The Town should work with a local electric bicycle provider (e.g., bike store) to launch an e-bike awareness event. The purpose of the event would be to provide prospective e-bike users with an opportunity to test ride an electric bicycle and better understand how they operate; what their benefits are compared to a regular bicycle; and information about their costs. Electric bikes make cycling possible for a much wider diversity of people as they can increase the length of bicycle trips, minimize the impact of hills and other terrain challenges, and allow people to bike with heavier cargo loads. This can help increase bicycle accessibility for women, seniors, and people with disabilities. Research has shown that electric bikes are ridden twice as far and twice as often as traditional bicycles.[13]

Action 3C2: Develop a Kids on Wheels Program

Developing bike skills is critical for helping children gain confidence and comfort riding to school, engaging in recreational activities, and developing a sustainable lifestyle. Community policing—in partnership with the Town—already conducts an annual Bike Rodeo program for school age children. However, the Town of Smithers Recreation Department and RCMP should support a Kids on Wheels program, which is a program offered by the BC Cycling Coalition (BCCC) that introduces young children to the joy of cycling and active, outdoor, sustainable lifestyles. It is a week-long camp designed to introduce young children (aged 2.5 to 5) how to ride balance bikes in a safe environment; learn important skills such as stopping, balancing and gliding; and learn road signs and safety rules for the road.

The Town could support this by offering funding to School District No. 54 to bring the Kids on Wheels program to elementary schools in Smithers.

Action 3C3: Develop a Safe Routes to School Program

As part of a longer-term strategy to formalize safe active travel to and from school, the Town, in collaboration with School District No. 54, and the Regional District of Bulkley Nechako should develop a Safe Routes to School Program based on existing best practices. A number of communities around BC and across Canada have created safe routes to school programs for the common purpose of getting more children to walk and bike to school. The Capital Regional District[14] in Greater Victoria provides a template that could be modeled in Smithers. The CRD's Active and Safe Routes to School Program involves a detailed process that begins with a data collection process, implementation of education and encouragement activities, then tracking results to determine changes. Some of the key steps, which could be adopted in Smithers, include:

- **Planning** | the planning process includes [a] data collection to understand how students travel to and from school and parent's perception of school travel [b] school walkabouts to explore transportation challenges facing the school and how they might be overcome [c] action plans that identify infrastructure improvements, educational efforts, and promotional and support programming [d] school travel plans, which identify and prioritize the engineering, encouragement and enforcement actions needed to create a more safe and comfortable environment for active travel [e] best routes maps showing the most popular and comfortable routes to walk or bike to each school.
- **Implementation** | this phase includes the implementation of education and encouragement activities such as a bike skills course to promote and celebrate active travel.
- **Evaluation & Results** | follow-up surveys are completed to understand driving habit changes, and, specifically, whether there was a change in students using active transportation as part of their travel to school and as their usual form of transportation.

Action 3C4: Develop a Bike Count Program

Like many other smaller communities in BC, Smithers does not have a formal mechanism to document cycling usage and demand. As a result, cycling patterns and overall use of the network is limited at the Town level, which makes it challenging to monitor how cycling mode share is changing over time. To address this, the Town could build on their existing speed watch programs by integrating bicycle counts. Bike counts can be integral to transportation planning and

infrastructure development. As part of the CRD bike count program, smaller communities in the Capital Region of Victoria including Esquimalt, Oak Bay, and Sidney have been relying on volunteers to count bicycle volumes at a number of different locations in the region on a bi-annual basis since 2011.

To implement a more formal bicycle count program, the Town could consider a similar program and conduct bike counts once a year in the summer. Counts would occur on the highest order cycling routes including the protected bike lane on Third Avenue and unbuffered bicycle lanes. The recommended priority count locations include:

a. Third Avenue at Main Street
b. Fulton Avenue at Princess Street
c. King Street at Third Avenue
d. Perimeter Trail and Highway 16 eastern crossing

In the longer term, counts could be conducted twice a year to include the winter season. The data collected by the counts could be used to inform where the Town could prioritize its next bike facility investment, and ultimately, better understand if cycling ridership is increasing over time.

Action 3C5: Develop a Pedestrian Count Program

Once a bike count program is established, the Town could also integrate pedestrian counts into existing speed watch programs. The purpose of the pedestrian count program is to provide data to support the Town's Sidewalk Inspection and Maintenance Policy (DEV-002) by more strategically prioritizing sidewalk upgrades based on where pedestrians are actually travelling.

Given limited resources, the Town could conduct counts twice per year—once in the summer and once in the winter. The counts could occur over a two-day period to capture pedestrian activity at three distinct periods of the day: morning, afternoon, and evening. In line with best practices, the counts should be completed in 15-minute intervals. Recommended locations are as follows, based on the presence of pedestrian trip generators including hospitals, schools, and seniors' facilities:

- Eighth Avenue between Queen Street and King Street
- Bulkley Drive between Highway 16 and 7th Avenue
- Third Ave between Montreal Street and Queen Street

Action 3C6: Establish an 'Adopt A Sidewalk' Program

A good practice to strengthen the community is providing opportunities for volunteering and helping fellow residents. The concept of this program is to allow able-bodied residents to "adopt" a sidewalk and clear it from snow during the winter season. This has worked well in communities across BC and is a significant help for seniors or people with a mobility challenge.

3D. Promote the Importance of Community Health and Active Living

One of the strongest drivers of active transportation is public health. It has been demonstrated over time that physical activity is positively correlated with improved fitness and physical, mental and social health. To facilitate more active living for Smithers residents, the active transportation network should be safe, convenient and accessible to everyone.

Land use is an integral factor of choosing active transportation over other modes and placemaking can improve the walkability and bikeability of neighbourhoods, as well as add destinations that are adjacent from people's homes, reducing travel distances.

A successful plan should take a holistic approach including 'concrete' measures, but also cultural measures that will increase awareness on the benefits of active transportation and encourage the public to use active transportation modes. The following actions identify how the Town could enhance community health through its active transportation network.

Action 3D1: Continue to Engage and Implement the Age Friendly Plan

Our most vulnerable road users are children, seniors, and people with a physical or mental disability. While vulnerable road users were engaged through the development of the Active Transportation Plan, these groups tend to be under-represented in community planning processes. Targeted outreach should be conducted with each group to better understand how they would like to be engaged in active transportation planning and design. This may include a bike or walking tour, small group activities, and an ideas wall located in a central location downtown, for example. Understanding each group's unique needs will help to address those issues and identify opportunities to promote active and independent living.

Action 3D2: Continue to Partner with Health Authority and Traffic Safety Committee

The Town should continue to partner with the Northern Health Authority and the Traffic Safety Committee to formalize the importance of the built environment and community health. Establishing a cross-agency partnership not only helps raise public and political awareness on active transportation, but also benefits from combining existing resources. One of the most common outcomes of such collaborations are information materials (e.g., infographics, reports) that highlight the health benefits and impacts of active transportation in the community.

Action 3D3: Continue to Partner with BC Transit to Strengthen the Transit-Active Transportation Nexus

While transit is not directly a form of active transportation, walking is an important part of a transit trip and thus contributes to active travel and physical activity more broadly. Cycling and transit can also be integrated, which facilitates multi-modal trips and results in health benefits. As part of promoting public health through the implementation of the Active Transportation Plan, it is recommended that the Town continue to work closely with BC Transit. Specific actions could include the provision of covered bike parking at bus stops in the Town, as well ensuring bicycles can be accommodated on bus bike racks at all times.

3E. Establish Bike Parking Guidelines

Even though Smithers residents and visitors benefit from access to public bicycle parking racks, the provision of bicycle parking in new developments is critical for supporting cycling trips. Research has reported that bicycle parking supply is a determinant of cycling for current and potential cyclists. More specifically, higher quality bicycle parking facilities are associated with more bicycle use.[15] Recognizing these benefits, the Town has an opportunity to demonstrate its leadership and commitment to supporting cycling through its OCP and Zoning Bylaw.

Action 3E1: Establish Bicycle Parking Guidelines in the Form & Character Development Permit Area Guidelines

Amending the Town's Form & Character Development Permit Area Guidelines to encourage bicycle parking for multi-family residential uses would ensure new development consider provisions that support cyclists. This would also include specific guidelines around electric bikes, which are becoming more commonplace in BC communities. The guidelines could include:

- Locations for short-term bicycle parking such as at the main building entrance.
- Safety and security features including dedicated bicycle-only secure access points to minimize theft.
- Accessibility, which would include siting the bicycle parking in locations where cyclists do not have to dismount and minimizing the number of bike parking spaces that are vertical to make it easier to park the bicycle.
- Stall and aisle dimensions, which could include spacing between obstructions and spacing between bicycle racks. Best practices recommend 0.6 metres clearance if the rack has single-sided access and 2.5 metres if the rack has double-sided access. A minimum of 0.7 metres is provided between racks and 1.8 metres provided between bike racks that hold more than two bicycles.

For electric bikes, the guidelines could include:

- Designing a certain percentage of the long-term bicycle parking spaces to accommodate electric bikes, which would include bicycling parking racks of 0.9m in width and 2.5m in length.
- Provision of control access to the bicycle parking room by way of a lock or keypad.
- Provision of 110V electrical outlets to a certain percentage of the long-term bicycle parking spaces.

3F. Support Electric Bicycle Adoption

Electric bikes are an emerging transportation phenomenon that are gaining popularity. With supportive cycling infrastructure in place, e-bikes have the potential to substitute for, or completely replace, almost all trips taken by a gasoline powered car, which could address congestion issues and mitigate parking challenges within urban areas. Research has reported that one of the main barriers facing prospective e-bike users is the lack of secure public parking available, which is critical for helping minimize theft of the electric bike.[16]

Action 3F1: Provide Secure Bike Parking Downtown

The Town recently installed a publicly accessible electric vehicle charging station in the Second Avenue parking lot. A recently published report includes e-bike parking design guidelines.[17] To align with the best practices in that report, the Town could provide a secure bicycle parking facility in the Second Avenue parking lot location, which would include the following:

- Individual, self-contained bicycle lockers.
- A covered (i.e., shelter) bicycle parking area that protects bicycles from precipitation.
- Provision of some bicycle parking racks that have larger dimensions to accommodate an electric cargo bike.
- The provision of charging outlets (standard 110V wall receptacle), that could be placed directly on the parking rack and/or within 2 metres from the rack itself.

5.0 OUR FUTURE NETWORK

5.1 Future Cycling Network

The future cycling network is shown below displaying the recommended route typologies. The cycling infrastructures design guidelines are presented in Section 5.11, which provide guiding statements on the general appearance, dimensions, surface treatments, signs, and paint markings for each route typology.

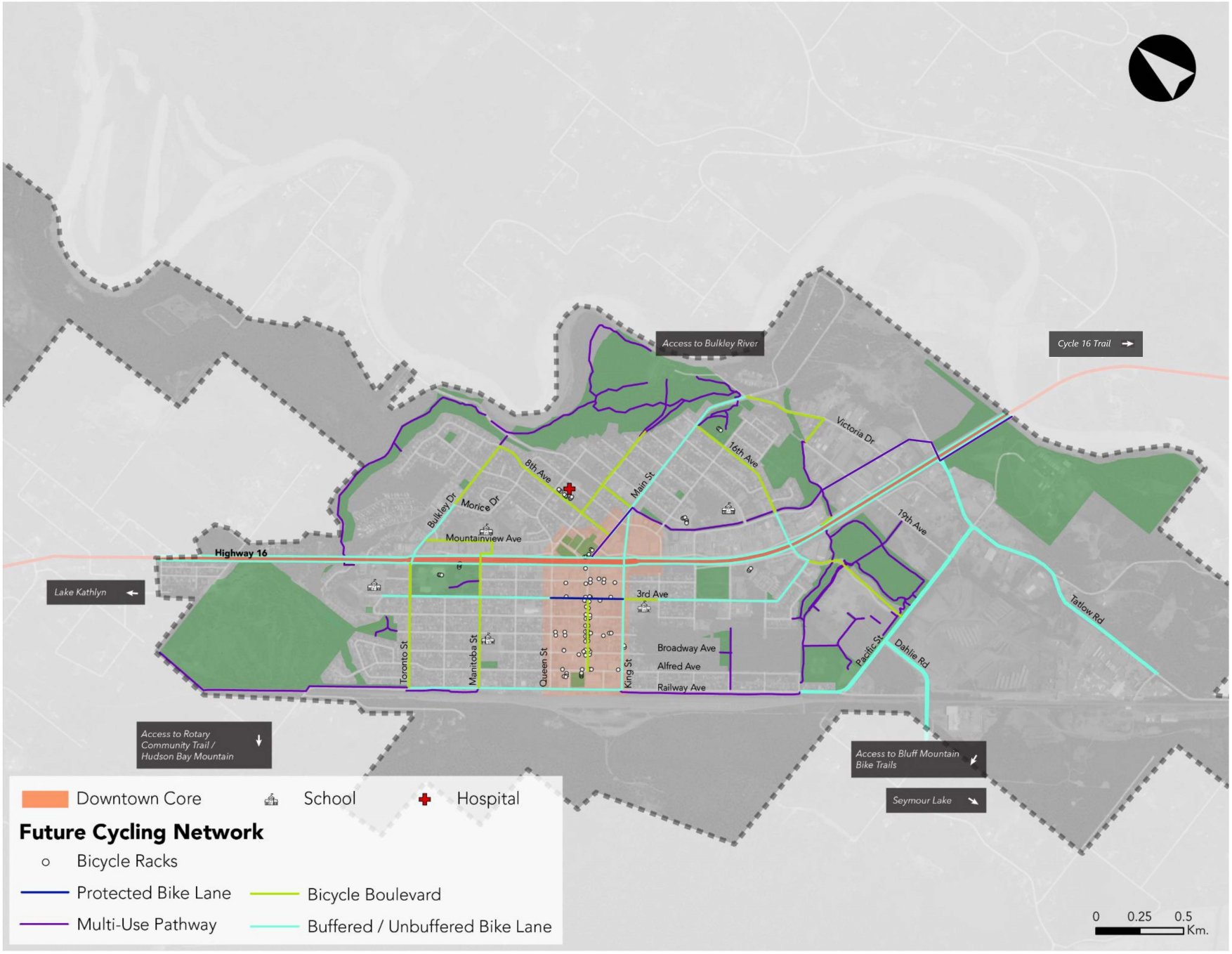


Figure 22. *Future Cycling Network* | **73**

5.1.1 Cycling Infrastructure Design Guidelines

The infrastructure design guidelines for the recommended route typologies are directly informed by industry standards and best practices including the BC *Active Transportation Design Guide*[18] and the Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads Chapter 5 (Bicycle Integrated Design). The recommended infrastructures design guidelines are included for each route typology below.

Protected Bike Lane

Protected bicycle lanes are separate travel lanes designated exclusively for bicycle use and other forms of active transportation that are physically separated from motor vehicles and pedestrians by vertical and/or horizontal elements. The following outlines the recommended infrastructure design guidelines for protected bicycle lanes in the Town.

- **Type of Protected Facility** | Uni-directional facility
- **Desired Width** | 2.5m to accommodate passing and side-by-side travel
- **Constrained Limit Width** | 1.8m; anything narrow than this width does not allow people to pass each other in the bike lane. Further, a narrow lane could present challenges for snow clearing equipment.
- **Type of Separation** | Raised (Sidewalk Level Protected Bike Lane), which is an appropriate facility when the road right-of-way is constrained and there is limited space for a buffer.
- **Spacing** | Continuous with breaks for emergency access as needed.
- **Signage** | The Reserved Bicycle Lane sign (MUTCDC RB-90, RB 91) should be installed and the Reserved Bicycle Lane Ends sign (MUTCDC RB-92) should be installed at the end of the reserved lane denoting the end of the protected bicycle lane.
- **Pavement Markings** | the bicycle symbol and Reserved Use diamond symbol are recommended. The Bicycle symbol should point in the direction of travel with the diamond below it, and should be placed at each approach to all crossings.

Figure 23. *Illustration of a Sidewalk Level Protected Bike Lane for Third Avenue. Source: BC Active Transportation Design Guide, 2019.*

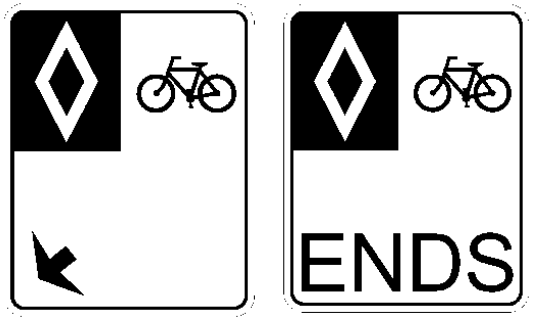


Figure 24. *Reserved Bicycle Lane sign MUTCDC RB 91 (left) and Reserved Bicycle Lane Ends sign MUTCDC RB-92 (right).*

Example of a bi-direction protected bicycle facility in Victoria, BC.

Buffered and Unbuffered Bike Lane

A separate travel lane designated exclusively for bicycle use that is delineated by a painted line and/or a painted buffer area. This type of facility may also include an 'unbuffered bicycle lane', which only includes a white longitudinal line running parallel to the alignment of the road to visually separate the bicycle lane from the motor vehicle and/or parking lanes. The following outlines the recommended infrastructure design guidelines in the Town.

- **Desired Width** | 1.8m (with extra 0.6m if buffered bike lane)
- **Constrained Limit Width** | 1.5m (with extra 0.3m if buffered bike lane)
- **Signage** | The Reserved Bicycle Lane sign (MUTCDC RB-90, RB 91) should be installed continuously along the length of the bicycle lane. In a rural environment, signs should be placed after every intersection and spaced mid-block at least every 200 to 400 metres The Reserved Bicycle Lane Ends sign (MUTCDC RB-92) should be installed at the end of the reserved lane denoting the end of the bicycle lane.
- **Pavement Markings** | the bicycle symbol and Reserved Use diamond symbol are recommended. The Bicycle symbol should point in the direction of travel with the diamond below it, and should be placed at each approach to all crossings. Directional bicycle lane lines are white in colour with a width of 100 to 200 millimeters. Bicycle lane lines are solid except in locations where motor vehicles are permitted to cross the bicycle lane to complete turning movements. The locations require dashed white line markings consisting of a 1.0 metre long line segment with a 1:10 ratio (i.e., a 1.5m wide bike lane would require a 15.0 metre dashed while line in length).

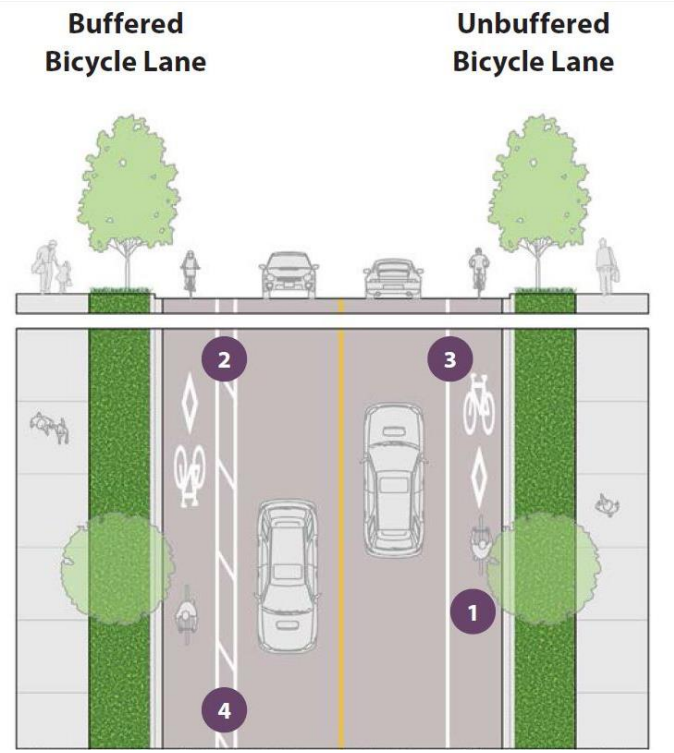


Figure 25. *Cross-section of a buffered vs. unbuffered bicycle lane. Source: BC Active Transportation Design Guide, 2019.*

Bicycle Boulevard

Also referred to as neighbourhood bikeways and greenways, bicycle boulevards are defined by TAC as a shared roadway that provides a continuous corridor of suitable operating conditions for cyclists, including limiting exposure to motor vehicle traffic and designing for low motor vehicle speeds.[19] These facilities may include Level 1 treatments such as signage and pavement markings or Level 2 treatments such as traffic calming. The desired average daily traffic on a bicycle boulevard is 500 motor vehicles per day or less and the maximum average daily traffic is 1,000 vehicles.[20]

The desired clear width—referring to the road's operating space—on a bicycle boulevard is between 4.0m and 5.5m, which provides ideal width to allow motor vehicles and bicycle to comfortably share the road, while helping to ensure that bicycle and motor vehicles travel at similar speeds.

- **Desired Width** | Parking lane = 1.9m; clear width (road's operating space) = 5.5m
- **Constrained Limit Width** | Parking lane = 1.9m; clear width (road's operating space) = 4.0m
- **Posted Motor Vehicle Speed** | Posted speed limit and operating motor vehicle speeds of 30 km/h or less.
- **Signage** | The Bicycle Route sign (MUTCDC IB-23) should be used and spaced 400 metres apart.

Figure 26. *Bicycle Route sign (IB-23) for Bike Boulevards.*

- **Pavement Markings** | Shared use lane pavement markings (i.e., "sharrows") could be in place to indicate the positioning of bicycle users, although this is not required for all bike boulevards.
- **Traffic Calming** | Traffic calming consist of devices that reduce motor vehicle speeds closer to cycling speeds, and/or reduce motor vehicle volumes, thereby making the neighbourhood bikeway a safer, more pleasant bicycle route. The types of traffic calming devices suitable for a bicycle boulevard can generally be categorized as vertical deflections and horizontal deflections, both of which are described below:
    - Vertical deflection includes speed humps, speed tables, and speed cushions, for example
    - Horizontal deflection includes curb extensions, traffic circles, and chicanes, for example.

Multi-Use Pathway

According to the BC Active Transportation Design Guide, multi-use pathways are off-street pathways that are physically separated from motor vehicle traffic and can be used by any non-motorized user including pedestrians and cyclists as well as other forms of active transportation such as skateboards, in-line skates, and—in the Smithers context—cross-country skis. Smithers currently has two multi-use pathway facilities including [a] the Perimeter Trail and [b] Fulton Multi-Use Pathway. The following outlines the recommended infrastructure design guidelines in the Town.

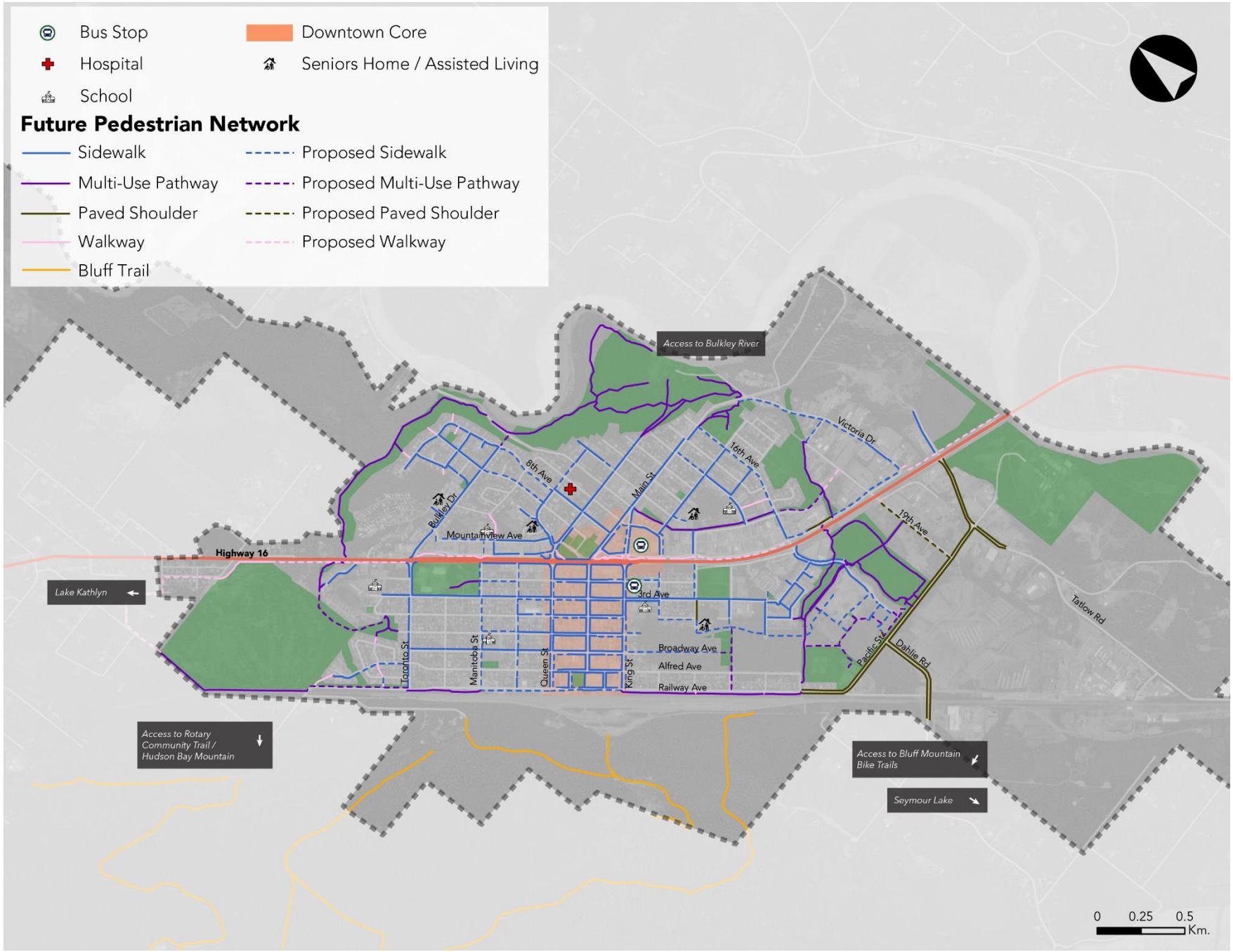
- **Desired Width** | According to TAC, the recommended lower limit width is 3.0m, which provides comfortable width for one cyclist in each direction.
- **Constrained Limit Width** | 2.7m is the practical lower limit width, which is based on an operating envelope of a single cyclist (1.2m) and the operating envelope (1.5m) of two pedestrians walking abreast.
- **Surface Material** | The preferred surface type is asphalt, which can accommodate a wide range of users and trip purposes. It provides a smooth continuous surface that is accessible for all user groups and its resiliency and flexible material can last over a decade if installed properly and maintained.
- **Signage** | Both TAC and the BC Active Transportation Design Guide recommend the Shared Pathway sign (MUTCDC RB-93), which indicates that both people walking and cycling are permitted to use the pathway.

Figure 27. *Shared Pathway sign (left) recommended for multi-use pathways and example of pavement marking (right).*

- **Pavement Markings** | A multi-use pathway symbol can supplement signage and enhance awareness of the shared-use function of the pathway. In the Smithers context, these symbols could be placed every 50m on the Perimeter Trail, if the trail is upgraded to asphalt in the near future.

5.2 Future Pedestrian Network

The future pedestrian network reflects the Town's priority list for sidewalk upgrades and overall accessibility improvements.



 | ***Figure 28.*** *Future Pedestrian Network*

6.0 IMPLEMENTATION PLAN

6.1 The Five Big Moves

The Active Transportation Plan identifies a comprehensive set of 42 actions to put Smithers on course to achieving its vision and goals. While all actions are important, the following are the over-arching actions (i.e., "the big steps") that will help the Town enhance its active transportation network and yield the greatest benefit. Most of these actions are recommended to be implemented in the short-term.

1. Implement a Protected Bicycle Lane on Third Avenue from Queen Street to King Street

To improve the safety and accessibility of the bike network, it is recommended that the Town implement a sidewalk level protected bicycle lane on Third Avenue between Queen Street and King Street.

2. Designate King-Main Street as the North-South Cycling Spine

The north-south cycling spine on King-Main Street will significantly enhance connectivity to destinations along this corridor and directly connect with both the Perimeter Trail and Fulton-Multi-Use Pathway.

3. Address Missing Link on Railway Avenue

One of the Perimeter Trail's largest gaps in connectivity is along Railway Avenue between King Street and Manitoba Street, where trail users are forced to travel on the street. It is recommended that the Town implement an unbuffered bike facility and sidewalk to fill this gap, which would be a more cost-effective option than completing the off-street Perimeter Trail.

4. Develop a Bike Count Program

The Town could build on its existing speed watch programs by integrating bicycle counts, which will provide the necessary data to help the Town help prioritize bike facility investments over time and better monitor / evaluate cycling mode share.

5. Improve Safety at all Highway 16 Crossings

While improving crossings is important at all Highway 16 intersections, priority could be given to Main Street where a blank out sign is recommended to enhance the visibility of people walking or biking across the intersection.

6.2 Action Plan

The action plan summarizes all the strategies and actions in Section 4.0. The framework has been organized into the three strategy areas above: (1) Safety & Accessibility (2) Connectivity and (3) Improving the Climate of Active Transportation.

Each action is guided by the following:

- **Timeframe / Priority**: Each recommended action includes a timeframe for implementation: short-term is within three years; medium-term is between 3 to 7 years; and long-term refers to 7 years and beyond. Determining the timeframe for each action is partly influenced by how important it is to the community in helping to each the goals identified in Section 3.0. The overall prioritization of the actions may shift over time depending on how the community's priorities evolve; however, the recommended timeframe should be used as a guiding framework.
- **Responsibility**: Each action identifies a primary and secondary role. Even though the Town will be responsible for implementation of the majority of actions, there are other important partners who may need to be involved to help support the action.
- **Implementation Approach**: Identifies how each recommended action will be implemented, which includes [a] a capital project; [b] operations and maintenance budgets; [c] policy / regulation; [d] education / programming / advocacy.

 **Strategy Area 1. Safety & Accessibility**		**Timeframe** Short-term, Medium-term, Long-term	**Responsibility**		**Implementation Approach**
			Primary	**Secondary**	
STRATEGY 1A. Enhance Winter Maintenance for Active Transportation					
1A1	Amend Snow & Ice Control Policy to Establish a Sidewalk Winter Maintenance Priority Network	Short-term	Town	N/A	Policy Amendment
1A2	Establish a Cycling Maintenance Priority Network	Short-term	Town	N/A	Policy Amendment
1A3	Improve Transparency of Snow and Ice Control Process	Short-term	Town	N/A	Education / Programming / Advocacy
STRATEGY 1B. Enhance Safety & Accessibility of All Highway Intersections					
1B1	Improve Safety at Main Street / Highway 16	Short-term	MOTI	Town	Capital Project
1B2	Improve Pedestrian Safety at King Street & Frontage Road	Medium-term	Town	N/A	Capital Project
1B3	Improve Pedestrian Safety at Queen Street & Frontage Road	Medium-term	Town	N/A	Capital Project
1B4	Review Curb Ramp Designs to Ensure they Meet Accessibility Standards	Short-term	MOTI	Town	Capital Project
1B5	Enhance Bicycle Highway 16 Crossings	Medium-term	MOTI	Town	Capital Project
1B6	Implement Bicycle Signal Detection at Highway 16 Intersections	Medium-term	MOTI	Town	Capital Project
1B7	Upgrade Perimeter Trail Highway Crossings	Medium-term	MOTI	Town	Operations & Maintenance

 **Strategy Area 2. Connectivity**		**Timeframe** Short-term, Medium-term, Long-term	**Responsibility**		**Implementation Approach**
			Primary	**Secondary**	
STRATEGY 2A. Enhance the Cycling Network					
2A1	Establish Route Typologies	Short-term	Town	N/A	Policy – Adoption of Cycling Network Map
2A2	Implement Protected Bicycle Lane on Third Avenue from Queen Street to King Street	Medium-term	Town	N/A	Capital Project
2A3	Upgrade Third Avenue to an Unbuffered Bicycle Lane	Short-term	Town	MOTI	Capital Project
2A4	Designate King-Main Street as North-South Cycling Spine	Short-term	Town	MOTI	Capital Project
2A5	Formalize a Buffered Bike Lane on Highway 16	Long-term	MOTI	Town	Capital Project
2A6	Establish Bicycle Boulevards on Local Streets	Short-term to Medium-term	Town	N/A	Capital Project
2A7	Establish Bicycle Boulevards on Collectors	Short-term to Medium-term	Town	MOTI	Capital Project
2A8	Establish a Bicycle Boulevard on Main Street	Medium-term	Town	N/A	Capital Project
STRATEGY 2B. Enhance the Pedestrian Network					
2B1	Update Requirements for Sidewalks in Subdivision Bylaw	Short-term	Town	N/A	Regulatory Amendment
2B2	Refine Sidewalk Upgrade Process	Medium-term	Town	N/A	Regulatory Amendment

 Strategy Area 2. Connectivity		Timeframe Short-term, Medium-term, Long-term	Responsibility		Implementation Approach
			Primary	Secondary	
2B3	Increase Sidewalk Coverage	Ongoing	Town	N/A	Capital Project / Operations & Maintenance
STRATEGY 2C. Connect & Enhance Multi-Use Pathways					
2C1	Addressing Missing Link on Railway Avenue	Short-term	Town	N/A	Capital Project
2C2	Enhance Signage on Perimeter Trail	Medium-term	Town	N/A	Operations & Maintenance
2C3	Connect Fulton Multi-Use Pathway to Perimeter Trail	Medium-term	Town	N/A	Capital Project
2C4	Address Gap on Perimeter Trail Behind Alpine Village Estates	Short-term	Town	Alpine Village Estates	Capital Project
STRATEGY 2D. Improve Connections to Rural Areas					
2D1	Support the Design and Construction of the Telkwa-Smithers Pathway Project	Medium-term	MOTI	Cycle 16 Trail Society	Education / Programming / Advocacy
2D2	Provide Direct and Safe Access to Rural Connections	Medium-term	Town	MOTI	Capital Project / Operations & Maintenance

 **Strategy Area 3. Improving the Climate of Active Transportation**		**Timeframe** Short-term, Medium-term, Long-term	**Responsibility**		**Implementation Approach**
			Primary	**Secondary**	
STRATEGY 3A. Continue to Revitalize Downtown Streets					
3A1	Develop a Revitalization Strategy for 3rd Avenue	Short-term	Town	N/A	Education / Programming / Advocacy
STRATEGY 3B. Improve Wayfinding & Signage					
3B1	Create a Wayfinding Branding Strategy	Medium-term	Town	Tourism Smithers	Capital Project
3B2	Enhance Pedestrian Wayfinding Signage Downtown	Medium-term	Town	Tourism Smithers	Capital Project
3B3	Formalize Cycling Wayfinding Signage	Medium-term	Town	Tourism Smithers	Capital Project
STRATEGY 3C. Continue to Foster Education & Awareness Programs					
3C1	Support an E-Bike Awareness Event	Medium-term	Town	Local Bike Shop	Education / Programming / Advocacy
3C2	Develop a Kids on Wheels Program	Medium-term	Town	RCMP	Education / Programming / Advocacy
3C3	Develop a Safe Routes to School Program	Long-term	School District No. 54	ICBC	Education / Programming / Advocacy
3C4	Develop a Bike Count Program	Short-term	Town	RCMP	Education / Programming / Advocacy

 **Strategy Area 3. Improving the Climate of Active Transportation**		**Timeframe** Short-term, Medium-term, Long-term	**Responsibility**		**Implementation Approach**
			Primary	**Secondary**	
3C5	Develop a Pedestrian Count Program	Short-term	Town	RCMP	Education / Programming / Advocacy
3C6	Establish an 'Adopt A Sidewalk' Program	Long-term	Town	N/A	Education / Programming / Advocacy
STRATEGY 3D. Promote the Importance of Community Health and Active Living					
3D1	Continue to Engage and Implement the Age Friendly Plan	Ongoing	Town	N/A	Policy
3D2	Continue to Partner with Health Authority and Traffic Safety Committee	Ongoing	Town	Health Authority; Traffic Safety Committee	Education / Programming / Advocacy
3D3	Continue to Partner with BC Transit to Strengthen the Transit-Active Transportation Nexus	Ongoing	Town	BC Transit	Education / Programming / Advocacy
STRATEGY 3E. Establish Bike Parking Guidelines					
3E1	Establish Bicycle Parking Guidelines in the Form & Character Development Permit Area Guidelines	Medium-term	Town	N/A	Policy Amendment
STRATEGY 3F. Support Electric Bicycle Adoption					
3F1	Provide Secure Bike Parking Downtown	Medium-term	Town	N/A	Capital Project

6.3 Funding Opportunities

There are a number of ways the Town could pay for its Active Transportation Plan. Some of the funding is anticipated to come directly from the Town's capital planning budget while other funding opportunities may be available through the development process and grants from provincial and federal governments. The following funding opportunities have been identified.

Capital Planning

The Town adopted its Five-Year (2019-2023) Capital Plan and Five-Year Special Operating Projects Plan in early 2019. The plans were informed by Council's strategic priorities over this five year period, which include [a] economy [b] community livability [c] environmental responsibility [d] relationship with the Wet'suwet'en [e] asset management [f] organizational effectiveness. The plans identify $2,742,500 for the roads / streets capital repaving program over the 2019-2023 period, which could help pay for a number of the recommended cycling infrastructure improvements in the Active Transportation Plan. The sidewalk capital upgrade program has been allocated $670,000, which is anticipated to pay for a number of the sidewalk improvements identified by the Town.

Development

Through the Town's Development Permit Areas application process, developers are required to pay for off-site works and services, which include lane paving, drainage, and sidewalk construction. This process could also include requirements to pay for high quality bicycle parking facilities in multi-family residential developments, for example.

Provincial BikeBC Program

BikeBC is the Ministry of Transportation and Infrastructure's cost-sharing program that assists local governments to develop cycling infrastructure. The program has helped pay for over 100 projects ranging in size and scope, reflecting the diversity of BC's geography and communities.[21] Past funding projects have included major cycling path and bike lane improvements, wayfinding signs, repair stations, bike racks, lockers or upgrades to existing infrastructure that prioritizes safety for cyclists. Smaller communities such as Smithers with populations less than 15,000 are eligible to apply for funding that covers up to 75% of project costs, while communities with more than 15,000 people are eligible for 50% of costs covered.

ICBC

ICBC's Road Improvement Program provides funding for road improvement projects and studies that help make roads safer for drivers, cyclists, and pedestrians. Over $150 million has been invested in 6,500 road improvement projects since 1990.

Climate Action Revenue Incentive Program

The Climate Action Revenue Incentive Program (CARIP) is a conditional grant program that provides funding to local governments that have signed the B.C. Climate Action Charter equal to 100 percent of the carbon taxes they pay directly to support local government operations. The program encourages investment in climate action.

The Town has been receiving grants from the CARIP program since 2012 and the 2018 CARIP Public Report[22] identified a number of proposed corporate actions for 2019 including infrastructure upgrades that are recommended in the Active Transportation Plan. There are opportunities to draw from CARIP revenues to fund more of the recommended bicycle and pedestrian infrastructure improvements, which will help the Town lower its transportation related GHG emissions.

Green Municipal Fund

The Green Municipal Fund (GMF) is a program administered by the Federation of Canadian Municipalities intended to help Canadian communities expand their sustainability initiatives. Since 2000, the GMF has deployed $900M in financing to 1,250+ sustainability initiatives and a further $1 billion has been committed to the fund through the Federal 2019 budget.

The specific GMF initiative that is relevant to Smithers is the "Capital Project Transportation Networks Commuting Options", which is a combined loan and grant funding program for capital projects that reduce pollution by improving transportation systems and networks. This program covers a number of topics including bike paths, walking and cycling networks that promote accessibility and safety, and evaluation of active transportation infrastructure, among others.

6.4 Monitoring & Evaluation

A plan is only truly effective if it is actively monitored and evaluated on a regular basis. Monitoring and evaluation will allow the Town to rigorously test how well it is achieving the strategic actions identified in the ATP and, more importantly, how well it is meeting the goals. The three general metrics that will help the Town measure its active transportation success are [a] walking / cycling commute mode share (Stats Can); [b] walking and cycling mode share (all trips), which would be collected by the pedestrian and bike count programs; and [c] on road transportation GHG emissions, which would be collected through an updated Community Energy and GHG Emissions Reduction Plan. All of the recommended metrics should be reviewed every two years.

ATP Goal	Measuring the Goal	Indicator	Data Source
Improve the safety and accessibility of all active transportation users.	Collisions involving people walking and cycling	Total recorded	ICBC
	Proportion of intersections with bicycle signal detector	Percentage	Town / MOTI
Maximize the convenience of the active transportation network so it is enjoyable for all users.	Proportion of new developments with long-term bike parking	Percentage	Town
	Total public bike racks	Number	Town
	Number of cycling wayfinding signs	Number	Town
Develop network connections both in town and with rural areas.	Total length of cycling network	Total km	Town
	Total length of pedestrian network	Total km	Town
	Proportion of streets with a sidewalk on one side	Percentage of all streets by road class	Town
Foster a climate of active transportation to promote active living and community health.	Proportion of electric bicycles sold	Percentage of all bicycle sales	Local bike shops
	Annual Enrollment in Kids on Wheels Program	Total registrations	BC Cycling Coalition

6.5 Plan Summary

Smithers's first Action Transportation Plan is a forward looking, ambitious, yet achievable strategic document that will enhance the Town's overall transportation network by offering Smithers residents greater transportation choice, comfort, convenience and safety when getting around town. The ATP involved an extensive public and stakeholder engagement process with the Smithers community where hundreds of residents shared their input on what is not working, and what they would like to see in their future active transportation network.

A number of strategic actions were developed across three strategy areas to provide concrete direction on how the network could be developed to serve the needs of all residents and visitors. The implementation strategy will help Council prioritize the recommended actions in the short, medium, and long-term and continue to meet the community's values and contribute to community health and overall quality of life. Further, committing to the recommended actions will help the Town further reduce its GHG emissions, increase the safety and use of active modes, and increase rural connectivity.

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