Pedestrian & Cycling Master Plan

Summary Report

December 2012

City of Pitt Meadows
The Natural Place

URBAN systems




Contents

Appendices

1.0 Introduction

The City of Pitt Meadows is a vibrant and growing municipality of approximately 18,000 residents, located on the north shore of the Fraser River in the Lower Fraser Valley. The highly productive agricultural lands of the area define the local character and economic life of Pitt Meadows, and as such, the farmland has historically influenced the settlement pattern and growth of the community, and continues to do so today as the majority of residents live in a compact urban town centre. Pitt Meadows has no shortage of natural assets as the Thompson Mountain Range to the northeast, the abundant watercourses, and the great expanses of farmland comprise a natural setting that is an important part of Pitt Meadows' identity. This setting attracts residents and people from across the Metro Vancouver region to enjoy the City's services, amenities, and exceptional outdoor opportunities.

Promoting walking and cycling as attractive and convenient transportation choices can help reduce automobile dependence, increase physical activity levels, improve public health, reduce infrastructure demands, and create more livable and vibrant communities. Encouraging walking and cycling is a key part of the vision articulated in the Pitt Meadows' Official Community Plan (OCP) to increase transportation choice.

With an extensive network of bicycle routes, sidewalks, trails, parks and natural attractions, the City of Pitt Meadows offers unmatched opportunities for residents and visitors to walk and bicycle for transportation or recreational purposes. In fact, the exceptional outdoor opportunities associated with the trails and routes that wind through the scenic rural landscape of Pitt Meadows and alongside the farmland and marshes, along with the City's flat topography and favourable climate, readily attract people from all over Metro Vancouver and beyond.

With the last comprehensive Bikeways Plan developed in 1994 in conjunction with the District of Maple Ridge, the City identified the need for an updated active transportation vision for the community. This Pedestrian and Cycling Master Plan will guide planning and investment in walking and cycling facilities and support strategies over the next 25 years and beyond. The vision of the Pedestrian and Cycling Master Plan is supported by strategies focused specifically towards Pitt Meadows that are aimed at improving active transportation corridors, increasing connectivity in the community and to adjacent municipalities, and providing support facilities, programs and policies to further encourage walking and

cycling in Pitt Meadows. Further, the Pedestrian and Cycling Master Plan provides a framework for making walking and cycling more safe, convenient, comfortable, and accessible modes of transportation for Pitt Meadows residents and visitors alike.

The Pedestrian and Cycling Master Plan is intended to be a tool to support the City's multi-modal transportation system, and will be a pillar of the City's future Master Transportation Plan. As the majority of residents live in a compact urban centre within close proximity to services and amenities of the core, the focus of the Plan is on encouraging walking and cycling for local and short-distance trips. The Pedestrian and Cycling Master Plan delivers strategies that provide a comprehensive package of solutions to promote walking and cycling, including engineering, programming, and education initiatives. The approach of the plan was inspired and directed by feedback, comments, and input received from residents, City staff, and the community Stakeholder Committee.

1.1 Plan Process

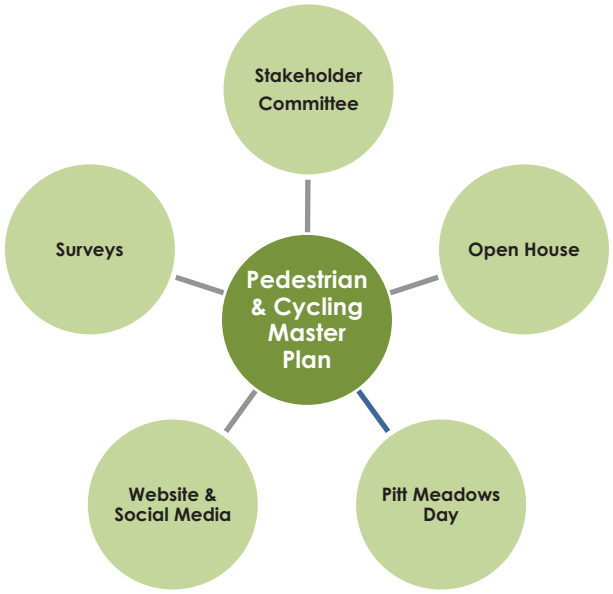
The development of the Pedestrian and Cycling Master Plan involved a comprehensive process over a six month period. The Pedestrian and Cycling Master Plan was developed in five discrete phases, based on a series of three Discussion Papers that were prepared throughout the course of the study. This document incorporates and summarizes the findings and directions from each of the three Discussion Papers and lays out the final plan. **Figure 1** describes the process for development Pitt Meadows' Pedestrian and Cycling Master Plan, and the sequencing of reports that were produced.

Figure 1:
Pedestrian and Cycling Master Plan Process

Phase	**Phase 1:** Project Initiation	**Phase 2:** Inventory and Assessment	**Phase 3:** Potential Action Areas	**Phase 4:** Implementation Strategy	**Phase 5:** Reporting
Purpose	• Collect & review background information	• Review existing pedestrian and cycling facilities • Identify walking & cycling opportunities and challenges	• Establish vision and goals • Preparation of future network plans • Develop action areas and supportive strategies	• Prepare strategy to implement action areas, identifying short, medium and long term project priorities	• Finalize and adopt the Pedestrian and Cycling Master Plan
Reports		Discussion Paper #1: Existing Conditions	Discussion Paper #2: Improvement Strategies	Discussion Paper #3: Implementation Strategy	Pedestrian and Cycling Master Plan

The Pedestrian and Cycling Master Plan was developed with the broad participation of the Pitt Meadows community, in order to ensure that the plan reflects the values and interests of residents and key stakeholders. There were several opportunities for public input through various forums, including an Open House (June 20, 2012), a booth set up on Pitt Meadows Day (June 2, 2012), and an online survey that was available for residents to complete throughout June 2012. The plan was also guided by input and feedback received from City Staff, Council, and a Stakeholder Committee that represented a variety of key stakeholders, including the Pitt Meadows and Maple Ridge Bicycle Advisory Committee, Ridge Meadows Parks & Leisure Services, School District #42, the Accessibility Committee, Pitt Meadows Economic Development, and HUB. **Figure 2** shows the range of public consultation activities where feedback and input was collected to inform the direction Pedestrian and Cycling Master Plan.

Figure 2:
Range of public consultation activities that informed the Plan.



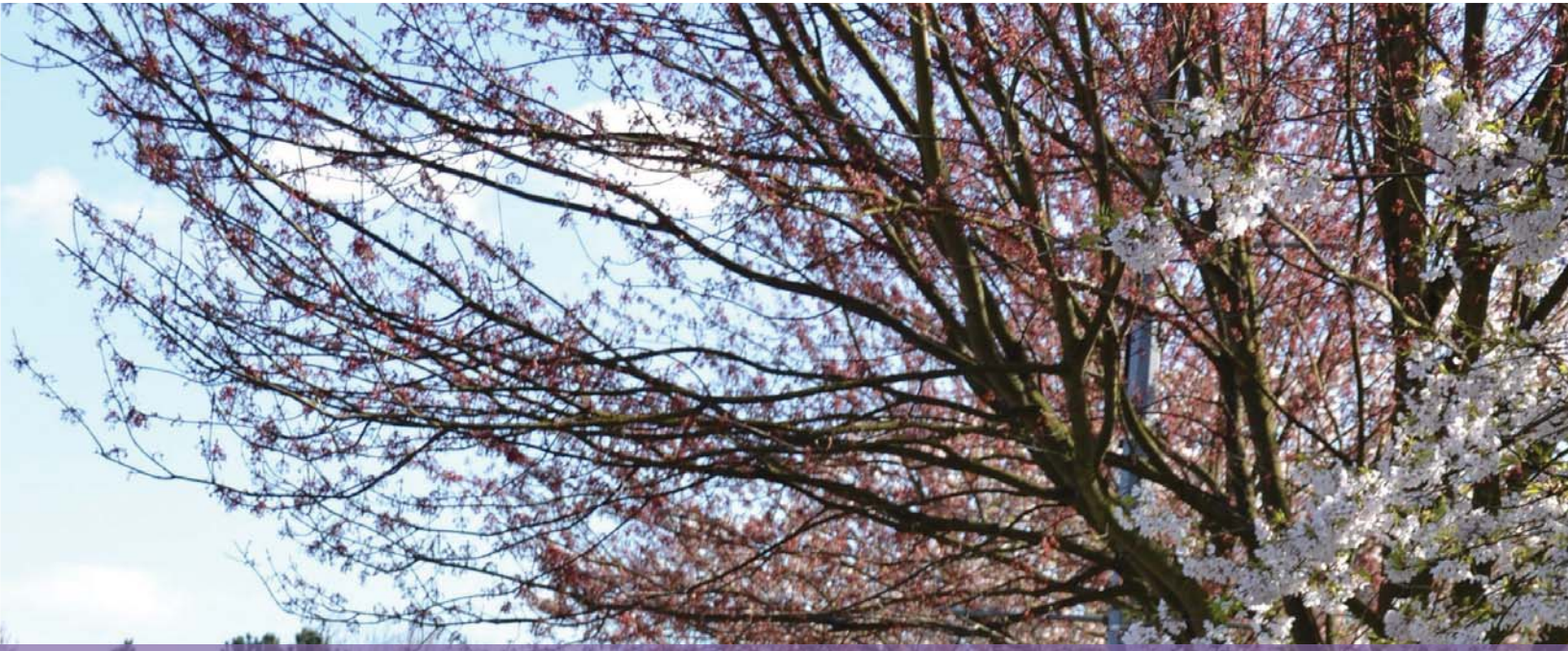
The Pedestrian and Cycling Master Plan is also explicitly linked to and informed by many of Pitt Meadows' key planning documents that contain active transportation policies and objectives, as well as broader aspirations that strongly influence transportation movements within and beyond municipal boundaries. Key local planning documents that have informed the development of the Pedestrian and Cycling Master Plan include:

- Corporate Strategic Plan (2012)
- Community Energy and Greenhouse Gas Emissions Plan (2011)
- Universal Design Guidelines for Outdoor Spaces (2010)
- Official Community Plan (2007)

These overarching plans and strategies also guide local planning and development activities, and provide direction to the Pedestrian and Cycling Master Plan on the integration of walking and cycling within the transportation landscape. Further, on the regional and provincial level, several initiatives also




influence the direction of the plan, including TransLink's Regional Cycling Strategy, the provincial Climate Action Charter, and the Metro Vancouver Regional Growth Strategy.



2.0 Vision and Goals



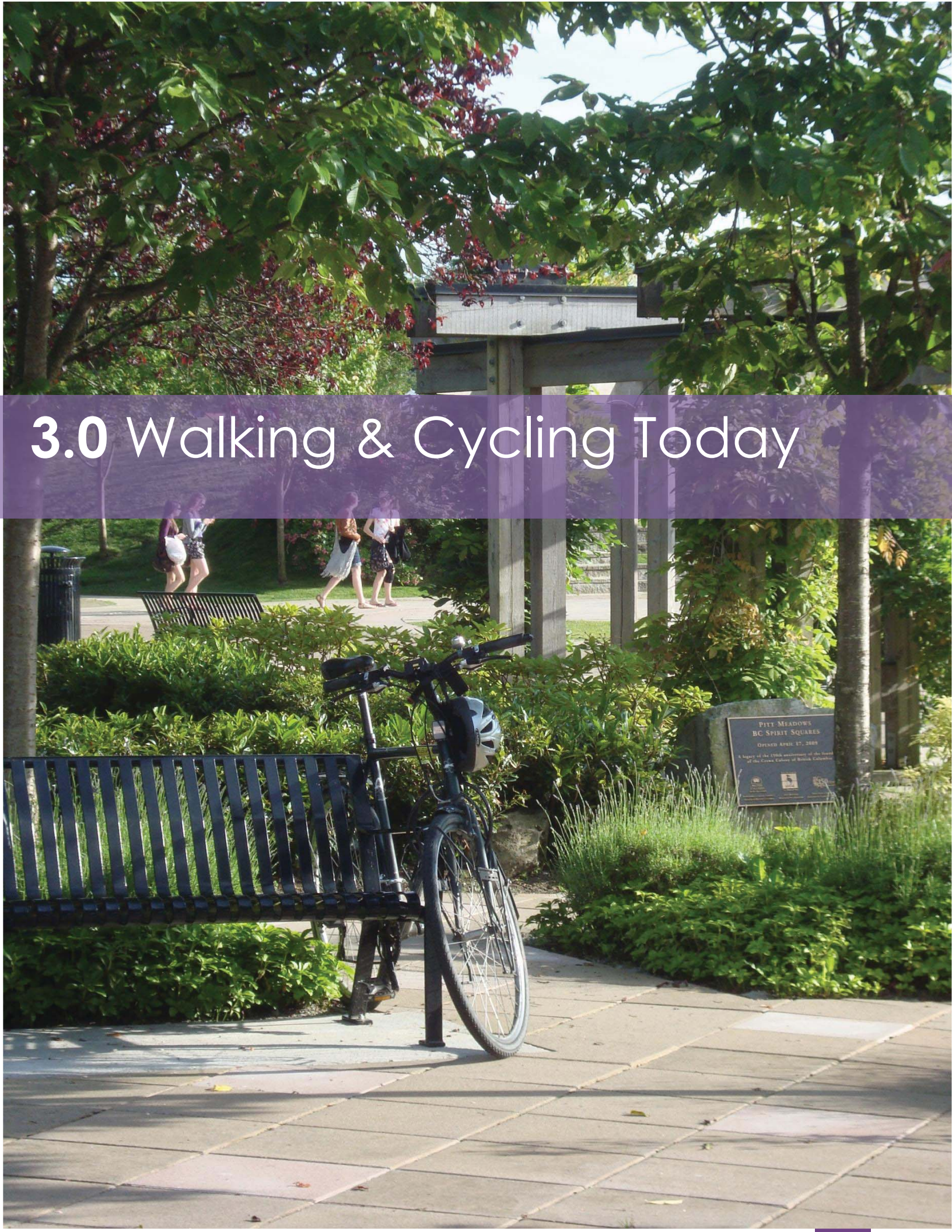

A vision for the Pedestrian and Cycling Master Plan was developed based on feedback received from the community and stakeholders, and also builds on the direction from the key City documents mentioned in Section 1.1, such as the Official Community Plan, Corporate Strategic Plan, and the Energy and Emissions Plan. The vision and goals of the Pedestrian and Cycling Master inform the overall direction of the Plan, and serve as the basis for the Plan's action areas and improvement strategies. The vision for the Pedestrian and Cycling Master Plan builds on the visioning direction particularly from the Official Community Plan and Corporate Strategic Plan, and is:

*Pitt Meadows is a **vibrant**, **healthy** and **active** small city in a natural setting – a **sustainable community** that promotes **walking and cycling as safe, convenient and attractive modes of transportation** to encourage active lifestyles for residents and visitors of **all ages and abilities.***

In support of the above vision, the Pedestrian and Cycling Plan has four guiding goals:

- **Goal 1: More** walking and cycling trips
- **Goal 2: Safer** walking and cycling
- **Goal 3: More places** to walk and cycle to
- **Goal 4:** Develop a walking and cycling **culture**

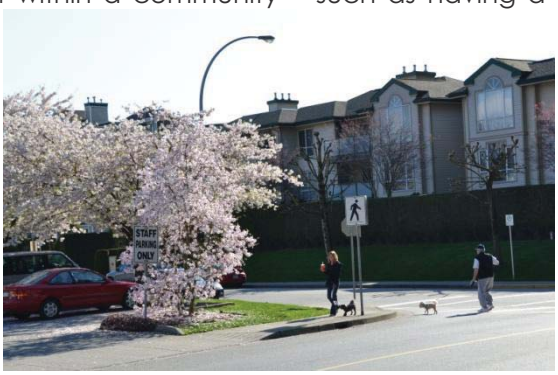
The directions received from residents and stakeholders input and feedback, as well as from the key community planning documents, indicated the need for a comprehensive approach towards walking and cycling within the Pedestrian and Cycling Master Plan. To do this, the Pedestrian and Cycling Master Plan is grouped into four Action Areas of **Network Connectivity**, **Safety**, **Accessibility & Design**, and **Education & Encouragement.**, each with a set of supportive walking and cycling improvement strategies. These Action Areas and strategies are the cornerstone of the plan, and are described in further detail in Section 4.



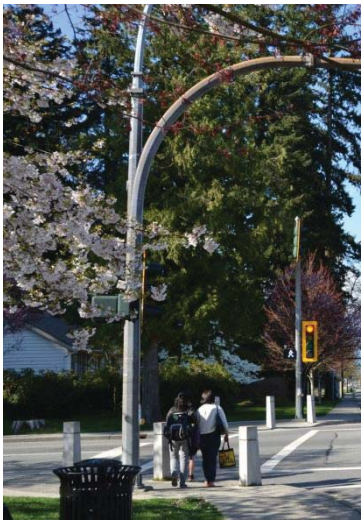
3.0 Walking & Cycling Today

Walking in Pitt Meadows

Walking is the most fundamental form of transportation. Walking is a part of every trip, whether that trip is made by car, transit, or bicycle. If suitable conditions exist within a community – such as having a complete, connected sidewalk network and major destinations nearby to where people live – walking can also be a convenient alternative to the automobile for almost all short trips. Promoting walking can help reduce automobile dependence and greenhouse gas emissions, improve public health outcomes and help to create more liveable and vibrant communities. Supporting walking in and around Pitt Meadows requires infrastructure and safety measures (i.e. sidewalks, trails, crosswalks and signalized crossings), and support programs. The current walking conditions in Pitt Meadows are summarized below:



- **Walking Activity.** According to the 2006 Census, walking accounts for approximately 2.8% of commute trips to work in Pitt Meadows. The majority of commute trips in the City are made by car, as 85% of Pitt Meadows residents use a car to get to work either as a driver or as a passenger. The 2008 Regional Trip Diary, which records trips for all purposes – not just commute trips – found that 11% of all daily trips in Pitt Meadows are made by walking. The Regional Trip Diary also reports that most walking trips in Pitt Meadows are short trips, as 60% of trips are two kilometres or less in length (approximately a 20-30 minute walk). In addition, most daily walking trips in the community are made to go to school, shopping, or personal business. This indicates that while not many walking trips are made for commuting (likely because many residents work outside of Pitt Meadows, a distance too far to walk), many residents living in the urban area are in close proximity to services and amenities, and walking is a convenient transportation option for day-to-day errands and business.



- **Sidewalks.** The City's *Subdivision and Development Servicing By law* requires sidewalks to be provided on at least both sides of all urban collector and arterial streets, as well as all local streets with predominantly multi-family residential, commercial or institutional land uses. Sidewalks are only required on one side of the street on urban local streets with lower density residential uses and industrials uses. Sidewalks are not required on rural roads. The City promotes a pedestrian-friendly Town Centre with safe, linked and convenient pedestrian connections that complement the higher densities and mixed use development of the area. The majority of roads in the downtown core have a sidewalk on at least one side of the street.

- **Trail Network** The trail network for both pedestrians and cyclists in Pitt Meadows contains the extensive dykes and pathways along the Alouette, Fraser, and Pitt Rivers. Most of the dyke trails in Pitt Meadows are part of the Trans Canada Trail, converging at the Pitt River Bridge, where the trail connects to the Traboulay PoCo Trail in Port Coquitlam and the Golden Ears Bridge connection to the Township of Langley. The trail network connects different areas of the community, linking parks, rural areas, schools, commercial areas, and the downtown core.

- **Crossings.** The City has nine signalized intersections are located along Harris Road and Hammond Road. All signalized intersections have pedestrian pushbuttons, with a mix of pedestrian countdown timers, audible pedestrian signals, and bollards located at some of the intersections.

- **Traffic calming.** Pitt Meadows has a number of traffic calming measures in place throughout the community's urban area, including curb extensions and traffic circles, as well as 30 km/hr zones. These features serve to reduce speeds, discourage high volumes of through traffic, and to minimize conflicts between different road users.

- **Support Programs** The City has participated in past and current initiatives, such as the Snow Angels Program, Walking Clubs, Pitt Meadows Day, community walking events, and Safe Routes to School plans that have promoted and educated residents on walking in and around the community.

3.1 Walking Issues and Opportunities

Through the Open House, the Pitt Meadows Day booth, and on-line survey, Pitt Meadows residents were asked to provide input and feedback on walking and cycling issues and opportunities. In regards to walking, many residents stated that they enjoy walking in the City, with the dykes and pathways, scenery, flat terrain, and services and amenities within walking distance often cited as favourite features of the walking environment. In regards to walking issues, respondents' feedback contained several common themes, which are summarized below:

- **Excessive traffic** volumes, speeds and noise on roadways (i.e. Harris Road, Airport Way, 203rd Street) make people feel uncomfortable and unsafe on adjacent sidewalks and shoulders;
- **Lack of urban sidewalks and rural shoulders** make for a fragmented walking network and an unpleasant walking experience. Places identified where walking infrastructure was lacking or unsafe included south Harris Road and Lougheed Highway (between Meadowtown Shopping Centre and Dewdney Trunk Road);
- **Insufficient lighting** in areas such as the dyke trails and sidewalks was a concern for many, as respondents feel unsafe walking in the evening where visibility is limited; and
- **Unsafe crossings or lack of crossings**, on key corridors such as Hammond Road, Ford Road, and Harris Road, were cited as a concern for many respondents. Unsafe crossings that lead to key




community destinations, such as Pitt Meadows Secondary School and Meadowtown Shopping Centre were also identified.

Residents indicated that walking in Pitt Meadows could be improved by providing the following:

- **More sidewalks,** or shoulder facilities in rural areas, to allow for safer separation between cars and pedestrians;
- **Controlled crossings** with pedestrian-actuated signals;
- **More off-street pathways** and **shortcuts** that address the missing pathway links;
- **Improved lighting** on pathways, as well as landscaping treatments to improve visibility and safety after dark;
- **Pedestrian amenities** such as garbage bins, dog bags, benches and places to sit, and signage to improve convenience and comfort of walking in the City; and
- **Accessibility considerations**, such as curb let-downs and safe route to school improvements.

Cycling in Pitt Meadows

Cycling is a popular activity in Pitt Meadows for both residents and visitors. Developing a safe and comprehensive bicycle network along with support education, communication and promotional programs is an important way to support healthy lifestyles and to recognize the positive environmental aspects of cycling as a viable and attractive mode of transportation. With appropriate facilities, cycling can be time-competitive with both automobiles and transit, particularly over short-to-moderate distances during peak travel periods. As with walking, supporting cycling activity in and around Pitt Meadows requires infrastructure and safety measures (i.e. bicycle lanes, trails, bicycle parking, and safe crossings), and support programs. The current cycling conditions in Pitt Meadows are summarized below:

- **Bicycle Activity.** According to the 2006 Census, cycling accounts for 0.8% of all trips to work. The 2008 Regional Trip Diary Survey reports that 1% of daily trips in the community (not just commute trips) are made by cycling. While these are both relatively low mode shares for cycling, it should be noted that the daily cycling statistics likely undercount the number of cyclists, in particular, since there are so many cyclists who travel to Pitt Meadows by other modes to ride their bicycle, and these bicycle trips may not be captured in the Regional Trip Diary data.

- **Bicycle Network.** The bicycle network in Pitt Meadows consists of both on and off-street facilities. Bicycle lanes are located on prominent corridors such as Hammond Road and Harris Road, with paved shoulders on Airport Way, Old Dewdney Trunk, and Lougheed Highway (provincial jurisdiction). In fact, Pitt Meadows has more lane kilometres of bicycle infrastructure per capita than any other municipality in Metro Vancouver. The heart of the off-street network is a multi-use trail system that loops around different areas of the City, for the use of both cyclists and pedestrians. Additional off-street trail connections connecting neighbourhoods to recreational areas, and the dykes further supplement this network. The City's bicycle network connects to

adjacent municipalities, with the Pitt River Bridge pathway linking cyclists to the Traboulay PoCo Trail system in Port Coquitlam to the west, and bicycle lanes connecting to the District of Maple Ridge in the east. To the south, bicycle lanes and access paths in Pitt Meadows facilitate cycling connections over the Golden Ears Bridge, to Surrey and Langley.

- **Crossings.** There are several challenging crossings that act as barriers for cyclists (and pedestrians), including barriers created by the Lougheed Highway and railway corridor. TransLink has identified 'Zones of Caution' in Pitt Meadows as Harris Road at Lougheed Highway, Harris Road at McMyn Road, Hammond Road at Maple Meadows Road, and the connection between Lougheed Highway and Hammond Road adjacent to Meadowtown Shopping Centre. Pitt Meadows has only one bicycle-actuated signal, located at Harris Road and Lougheed Highway, for the southbound direction only.

- **Bicycle Parking.** The City of Pitt Meadows' Zoning Bylaw requires bicycle parking for any new building or building additions / expansions, with resident/employee and visitor bicycle parking requirements for apartments, commercial, office, hotel, and industrial land uses. Although the Zoning Bylaw provides these requirements, this does not extend to retrofitting existing buildings and only applies to new buildings. This also does not apply to on-street bicycle parking that could be provided within the right-of-way. In particular, additional bicycle parking should be provided along the road right-of-way, particularly in key commercial areas such as Harris Road as well as Meadowtown and Meadowvale Shopping Centre.

- **Support Programs/Initiatives.** The joint Pitt Meadows/Maple Ridge Bicycle Advisory Committee (BAC) was established by both municipal councils in 1997 in order to advise both municipal Councils on cycling issues in the communities and implementation of the 1994 Bikeways Plan (which has since been implemented).

3.2 Cycling Issues and Opportunities

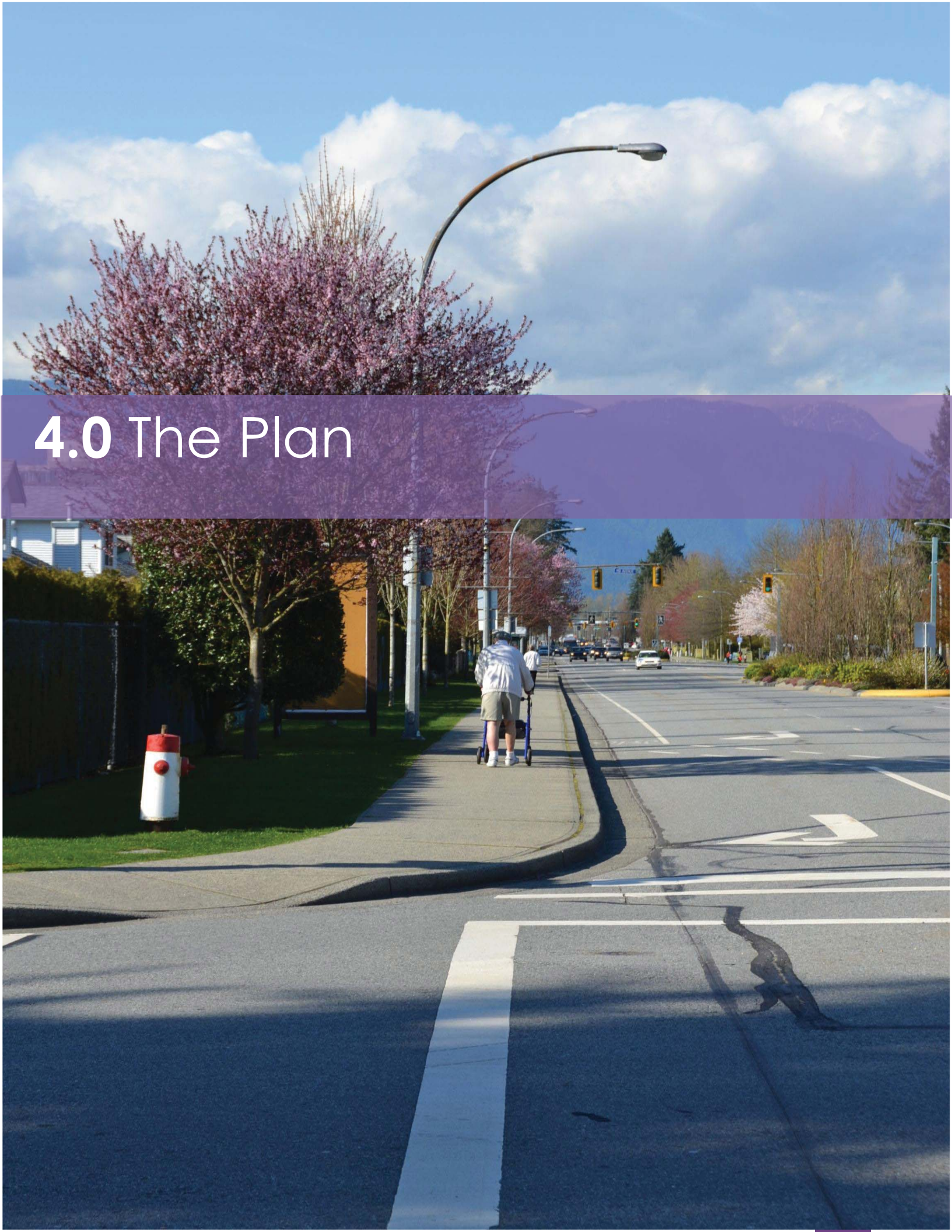
Throughout the public consultation activities, Pitt Meadows residents were asked to provide input and feedback on walking and cycling issues and opportunities. In regards to cycling, many respondents stated that there were many aspects they enjoyed about the local cycling environment in Pitt Meadows, such as the dyke trails, flat terrain, off-street paths, and the views and scenery. In regards to cycling issues, respondents' feedback contained several common themes, which are summarized below:

- **Narrow bike lanes and shoulders,** with vehicles sometimes encroaching into the bike lane or shoulder, was identified by many respondents as a concern on roadways such as Harris Road and Old Dewdney Trunk Road;
- **More bicycle lanes and routes** to improve the ease of moving around the community by bike;

- **Harris Road rail crossing** was perceived as dangerous for cyclists, with the terminus of the bicycle lane, the uneven surface, and busy traffic providing a challenging environment;
- **High vehicle speeds** (i.e. on Harris Road, Airport Way), as well as dangerous driving behaviour, was identified by many as a problem with the cycling network;
- **Lack of regional connections** to Maple Ridge from areas of Pitt Meadows such as Osprey Village and Meadowtown Mall;
- **Debris in bicycle lanes and shoulders** was also identified as an issue for cyclists;
- **Accessibility to the dykes** was seen as a challenge in places, such as entry gates and concrete barriers that can make it difficult for cyclists to pass through; and
- **Surface materials** of the dykes was also noted to be problematic for some, with preferences for paving or finer gravel material seen as more suitable for cyclists using the dyke trails.

Based on feedback from the survey and public consultation activities, residents indicated that cycling in Pitt Meadows could be improved by providing the following:

- **More and wider bicycle lanes**, including separated bike lanes;
- **More off-street trails and pathways** that connect with existing trails and destinations;
- **Bicycle parking** at key community destinations, such as the library, parks, commercial centres, Harris Road, and Hammond Road; and
- **Cyclist education** (for both cyclists and drivers).



4.0 The Plan

The directions received from residents and stakeholders input and feedback, as well as from the key community planning documents, indicated the need for a comprehensive approach towards walking and cycling within the Pedestrian and Cycling Master Plan. This section describes the strategies that provide the structure of the Pedestrian and Cycling Master Plan, which are intended to support the Plan's stated vision and goals. The strategies are organized under the four key action areas of **Network Connectivity**, **Safety**, **Accessibility & Design**, and **Education & Encouragement.** Some strategies are relevant only for walking, while others apply only to cyclists, and some apply to both. To help identify which strategies apply to which modes, the following icons are used:

Walking Strategy

Cycling Strategy

Walking and Cycling Strategy

The Action Areas and strategies are organized as follows:

Network Connectivity	Safety	Accessibility+ Design	Education + Encouragement
• Increase Urban Sidewalk Coverage • Comfortable Bicycle Facilities • Complete, Connected Urban Bicycle Network • Rural Walking and Cycling • Regional Connections • Short-Cuts	• Pedestrian Crossings • Bicycle Crossings • Maintenance • Slow Speed Zones • Safe Routes to School	• Pedestrian Accessibility • Bicycle-Transit Integration • Bus Stop Accessibility and Amenities • Bicycle Parking • Urban Design and Amenities • Wayfinding and Signage	• Walking and Cycling Education • Festivals and Events • Marketing and Promotion • Advisory Committee

Action Area 1: Network Connectivity

Expanding and enhancing the walking and cycling network is a fundamental part of making walking and cycling a convenient and attractive travel option in Pitt Meadows. The heart of the on-street network includes the sidewalks and bicycles lanes, while the off-street network is defined by the expansive multi-use trails that loop through and around different areas of Pitt Meadows. These existing walking and cycling routes provide good coverage, and many Pitt Meadows residents enjoy walking and cycling in the City, due to the existing infrastructure, the dyke and pathway systems, and the scenic views offered up in many parts of the community. Nonetheless, there are still notable gaps in both the walking and cycling networks, and the fragmented sidewalks, trails, and bicycles routes can make for sometimes uncomfortable and unattractive conditions. A more integrated and connected network of on and off-street pedestrian and cycling facilities can significantly improve the ease of moving around the community, and can thus make travel on foot and by bicycle a more attractive alternative to driving. Further, providing a more comprehensive network will also uphold the commitments in the OCP to enhanced pedestrian and cycling circulation. The following strategies and actions can support residents and visitors to Pitt Meadows to make better connections in and around their community.

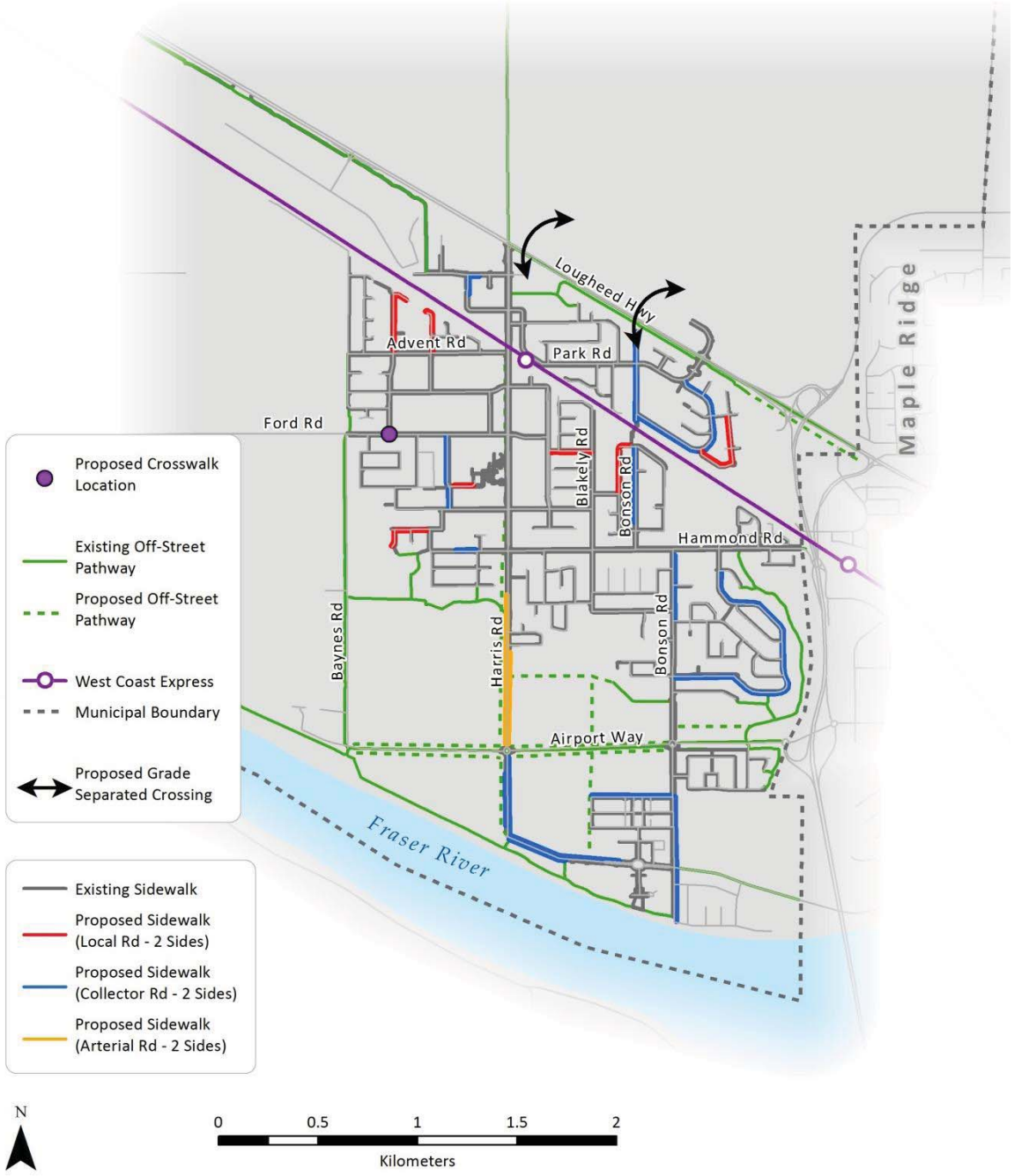
Strategy 1.1: Increase Urban Sidewalk Coverage

Pitt Meadows has an extensive network of sidewalks in the urban core that connect the Town Centre with surrounding residential and commercial areas, parks, community facilities, and regional greenways. In fact, most streets in the urban core currently have a sidewalk on at least one side of the street. The City's *Subdivision and Development Servicing Bylaw* requires that sidewalks be provided on both sides of collector and arterial roads, and on local roads with higher density residential and commercial developments. Local roads with low density residential and industrial uses are only required to have a sidewalk on one side. In order to ensure that the sidewalk network in Pitt Meadows' urban core is complete and facilitates continuous connections, the City will work to ensure full sidewalk coverage based on the following criteria:

- Sidewalks on both sides of all urban collector and arterial roads;
- Sidewalks on at least one side of all urban local roads; and
- Sidewalks on both sides of urban local roads that are on routes to schools, parks, commercial areas, other community facilities, and bus stops.

Proposed sidewalks on arterial, collector and local roads in Pitt Meadows' urban core are shown in **Figure 3** below.

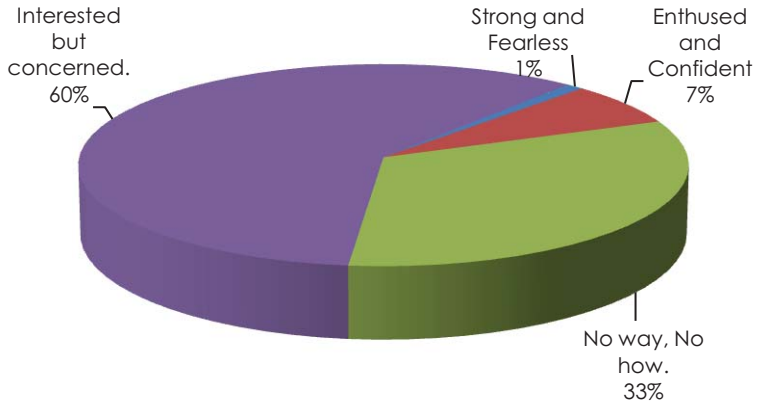
Figure 3:
Proposed sidewalk improvements to increase coverage on urban arterial, collector, and local roads.



Strategy 1.2: Comfortable Bicycle Facilities

The City of Pitt Meadows should plan the bicycle network and target infrastructure improvements where there is the greatest opportunity to increase the number of cycling trips. As a starting point in thinking about how to plan for bicycle networks, the City of Portland, Oregon conducted research to characterize cyclists and potential cyclists, and the typical distribution of these cyclist types in a community, as shown in **Figure 4**.

Figure 4
Target Market for Cycling (Portland, OR)



This research provides an applicable guide for any community designing and developing a bicycle network, with the following categories as a guide:

- **Strong and the fearless.** Those that are highly committed to cycling, are already cycling regularly, and will likely cycle regardless of available infrastructure (Typically less than 1% of residents).
- **Enthused and Confident.** Those that have a high interest in cycling, are confident in their cycling abilities, and will make efforts to cycle as long as reasonable facilities are provided (Approximately 7%).
- **No way, No how.** A wide cross-section of individuals who are unlikely to cycle and are not interested in cycling for a variety of reasons including age, health, disability, or other circumstances (approximately 33%).
- **Interested but concerned.** A wide cross-section of individuals who have an interest in cycling as part of their regular travel needs, but have significant concerns (typically related to safety or convenience) that limits their desire and commitment to cycling (up to 60%).




There are a range of different types of bicycle facilities that can be applied in various contexts. Six types of on-street and off-street bicycle facilities can be considered throughout the City, as summarized below and described in further detail in the following sections.

- **Off-Street Pathways** are physically separated from motor vehicles and provide sufficient width and supporting facilities to be used by cyclists, pedestrians, and other non-motorized users. In general, the minimum desired width for multi-use pathways is 4 metres, with a 3 metre width sufficient for lower-use pathways. Other pathway considerations include surfacing, as pathway surfacing plays a large role in accessibility, and the City's *Universal Design Guidelines for Outdoor Spaces* states that paved/firm surfaces (i.e. asphalt, stone dust, fine limestone, or gravel screenings) are necessary for accessible pathways.

- **Cycle Tracks** are physically separated from motor vehicle travel lanes but are located within the road right-of-way. Cycle tracks are a hybrid type bicycle facility combining the experience of an off-street path with the on-street infrastructure of a conventional bicycle lane.

- **Bicycle Lanes** are separate lanes that are designated exclusively for bicycle travel and also include pavement markings.

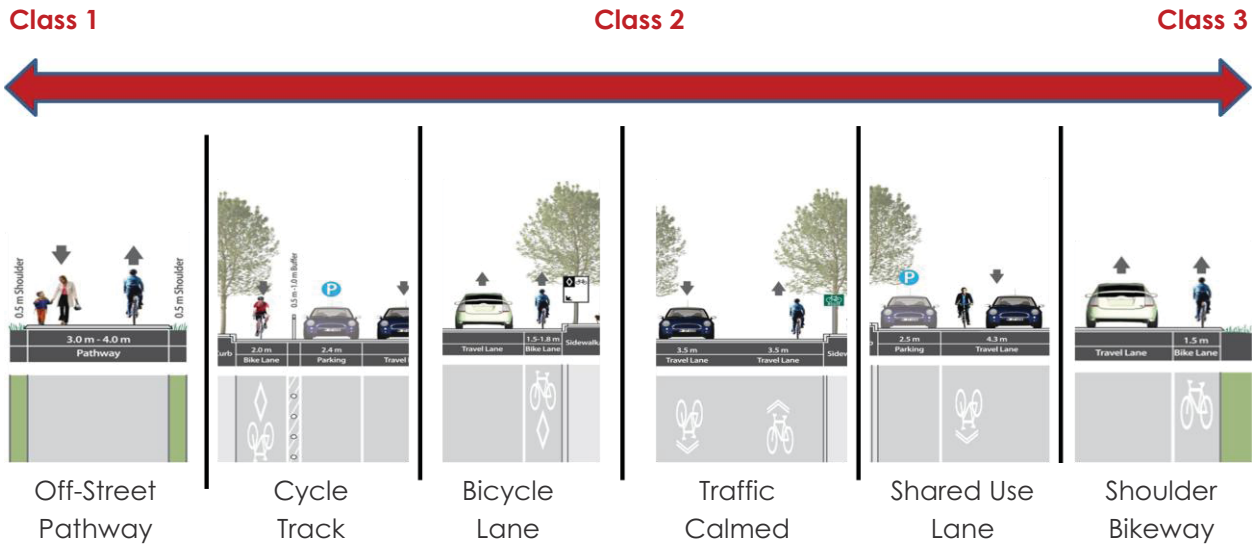
- **Neighbourhood Bikeways** are routes on streets with low vehicle speeds and volumes, which include a range of treatments ranging from relatively basic facilities consisting of signage and pavement markings, to bikeways with varying degrees of traffic calming implemented to improve safety for cyclists and other road users. For example, signage can include identification signs at key decision points along the bikeway (i.e. intersections with collector roads, arterial roads, and other bikeways). Wayfinding signage can be provided when a bikeway is adjacent or en route to key areas, such as commercial areas, employment centres, and recreation destinations. Pavement markings can be used consistently along a bikeway corridor to reinforce the presence of the bikeway to both cyclists and motorists, and can also be applied at difficult turns or jogs in the bikeway, and at intersection decision points.

- **Shared Use Lanes** provide direct routes for experienced cyclists along the outer lane of a roadway.

- **Shoulder Bikeways** are typically found on streets without curb and gutter with shoulders wide enough for bicycle travel. Shoulder bikeways often, but not always, include signage alerting motorists to expect bicycle travel along the roadway.

To ensure that the bicycle network is comfortable and attractive for the Interested but Concerned segment of the population, this strategy recommends a classification of the six types of bicycle facilities noted above based on user comfort. As shown in **Figure 5**, each type of bicycle facility is located on a continuum between "Class 1" facilities which are comfortable for most people including the Interested but Concerned group and consist of facilities that are physically separated from motor vehicle traffic; to "Class 2" which are comfortable for many people and include bicycle lanes as well as traffic calmed routes; and "Class 3" which are comfortable for few people including the Strong and Fearless and Enthused and Confident groups.

Figure 5
Bicycle Facility Hierarchy



Strategy 1.3: Complete, Connected Urban Bicycle Network

Pitt Meadows has an extensive network of existing bicycle facilities, consisting of both on-street and off-street facilities. In fact, the City has more lane kilometres of bicycle infrastructure per capita than any other municipality in Metro Vancouver. However, there are still several important missing links in the City's bicycle network, including connections on Bonson Road (north and south), Ford Road, on Harris Road between Airport Way and the Fraser River, and rural connections north of the Alouette River. With the majority of on-street infrastructure in Pitt Meadows in the form of bicycle lanes, there is an opportunity to implement more bicycle facilities to increase the safety, convenience and comfort of Pitt Meadows' bicycle network.

It is important that bicycle facilities are direct and provide adequate connections to key destinations within the community. Providing direct routes that connect to key destinations will ensure that bicycles have travel times that are competitive with automobiles. With this in mind, the urban bicycle network has been designed to:

- Ensure that all residents in the urban core are within 400 metres of a designated bicycle route;
- Connect to key commercial areas;
- Connect with all schools, parks and community facilities; and
- Integrate with the off-street pathway network.

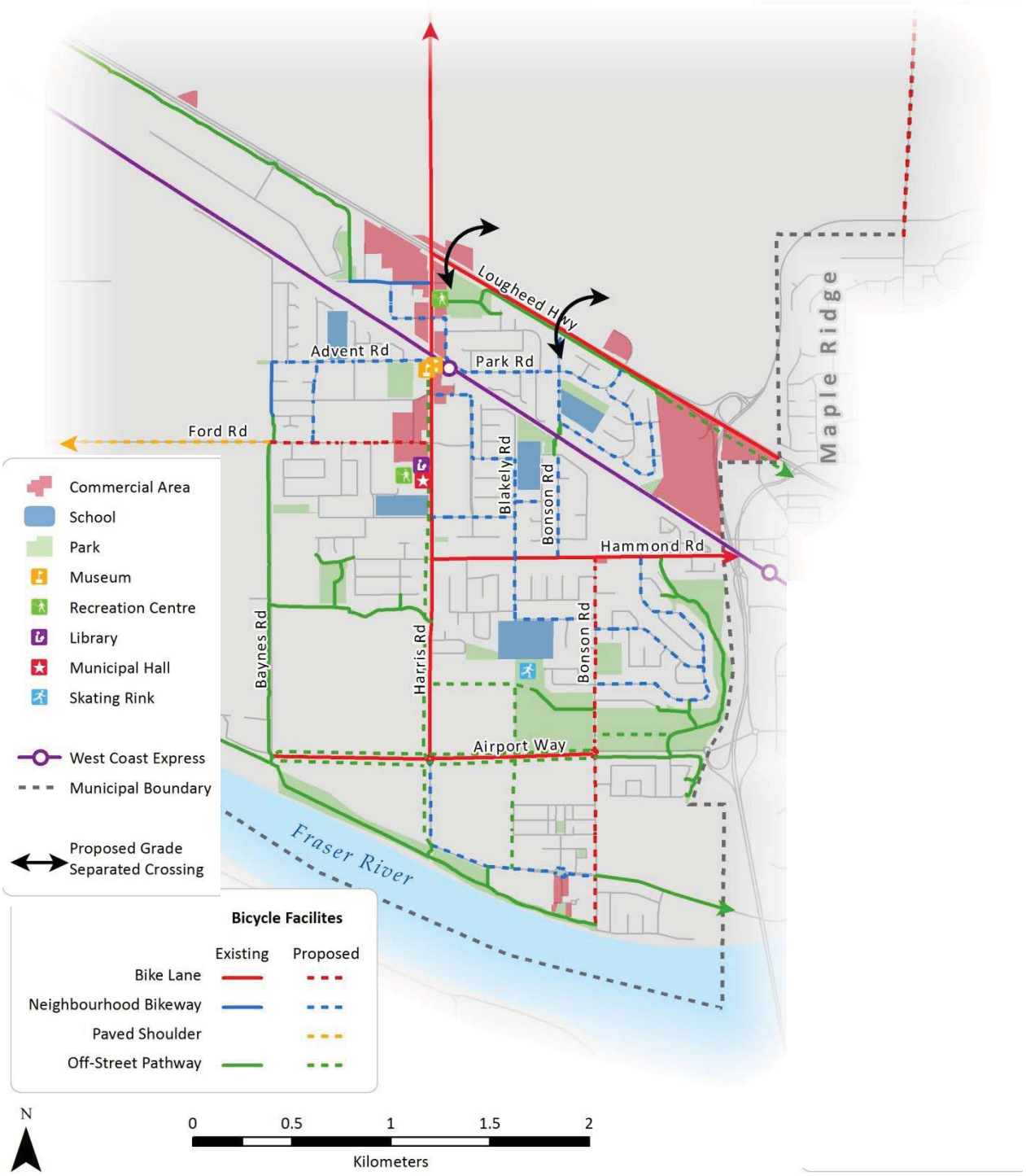
The existing and proposed bicycle network in the urban core is shown in **Figure 6**, along with key cycling destinations throughout the community. The figure shows proposed bicycle lanes on Bonson Road and Ford Road, with the majority of proposed improvements in the form of neighbourhood bikeways to




connect residential neighbourhoods to each other and to key destinations in the core. Some off-street pathways are proposed to enhance off-street connections in and around the City.

In addition, although both Harris Road and Hammond Road already have painted bicycle lanes, it is recommended that these facilities be upgraded to cycle tracks, or separated bicycle lanes in the future. In particular, along Harris Road an off-street pathway, or cycle track(separated bike lane) is recommended for consideration in the long-term. In that regard, it is recommended that the City undertake a more detailed visioning and planning study for the Harris Road corridor.

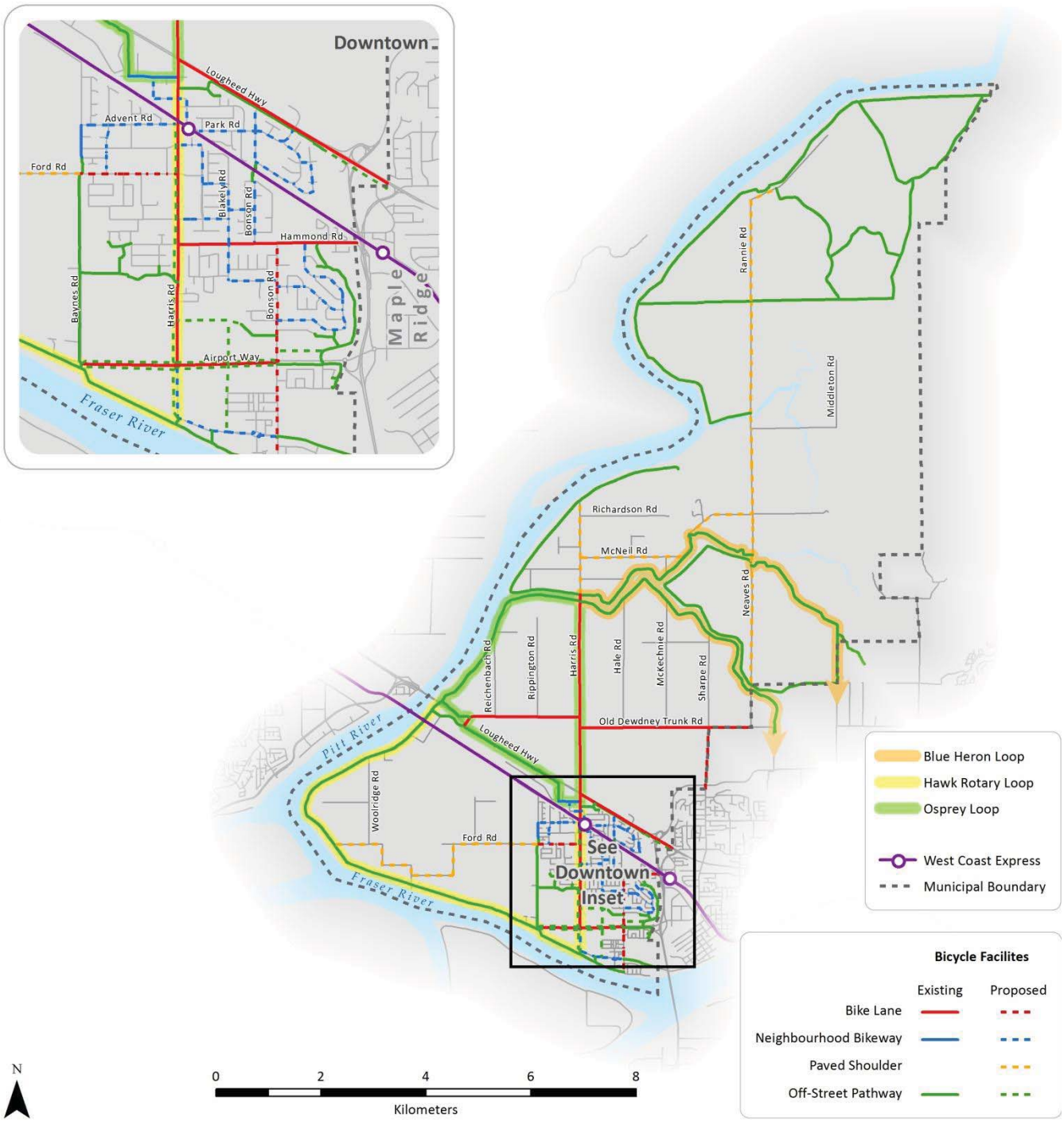
Figure 6
Existing and Proposed Bicycle Network (Urban Core)



Strategy 1.4: Rural Walking and Cycling

With flat topography, relatively low traffic volumes, scenic rural landscape alongside the City's farmland and marshes, and connections to the City's extensive network of off-street pathways, Pitt Meadows' rural areas offer significant opportunities for cycling and walking for residents and visitors alike. Currently, the City's rural roads are well used by recreational and sport cyclists from across the region, although few rural roads have dedicated cycling facilities. In addition, few rural roads have pedestrian facilities. The City has established standards for rural road cross-sections in its *Subdivision and Development Servicing Bylaw*, although many rural roads do not meet these standards. Over time, the City can widen several important rural roads, including Ford Road (west), Harris Road (north), McNeil Road, and Neaves Road to provide paved shoulders where possible to be used by both cyclists and pedestrians. Figure 7 shows trail routes and proposed paved shoulders in outer Pitt Meadows.

Figure 7
Existing and Proposed Bicycle Network



Strategy 1.5: Regional Connections

The City of Pitt Meadows is strategically located between Maple Ridge to the east, Langley to the south, and Port Coquitlam and other northeast sector communities to the west. The City therefore provides important connections between these communities. As many cycling trips take place beyond Pitt Meadows' borders, it is critical to ensure seamless connections to adjacent municipalities. The City's bicycle network connects users to many adjacent municipalities, with the Pitt River Bridge pathway linking cyclists to the Traboulay PoCo Trail system in Port Coquitlam to the west, and bicycle lanes connecting to the District of Maple Ridge in the east. To the south, bicycle lanes and access paths in Pitt Meadows facilitate cycling connections over the Golden Ears Bridge, to Surrey and Langley. In particular, Pitt Meadows should work with Maple Ridge to improve east-west bicycle route connectivity between the two municipalities. The bicycle route along Airport Way currently continues into Maple Ridge along 113B Avenue and 203 Street, but improved connections are needed between the two communities along Old Dewdney Trunk Road and Lougheed Highway. Cycling improvements and connections along Lougheed Highway require the City to continually work with agencies such as the Ministry of Transportation and Infrastructure. In addition, an important regional connection for pedestrians is to the Maple Meadows West Coast Express Station. Although this station is located in Maple Ridge, it is within walking distance to many Pitt Meadows residents.

Strategy 1.6: Short-Cuts

Trails and short-cuts can provide key off-street connections for pedestrians and bicyclists to important community destinations such as other neighbourhoods, commercial areas, community centres, parks, and schools. For trips to these destinations, people are unlikely to walk or bicycle if their route options are indirect, circuitous, and not time-competitive with driving. However, the presence of trails and short-cuts can significantly reduce travel time and make walking and cycling more attractive options than other modes. People can also appreciate trail and short-cut connections, as there is an increased sense of security and comfort, as routes are typically off-street and separated from car traffic, and often can be more scenic as well.

The OCP proposes trails under the Pitt River Bridge (complete), Harris road south, east of Baynes Road, and a trail connecting Harris Road and Bonson Road.

Action Area 2: Safety

Safety, both real and perceived, is important in attracting more people to walk and cycle in Pitt Meadows. As vulnerable road users, pedestrians and bicyclists are subject to a higher level of risk, and a lack of perceived safety can effectively discourage walking and cycling. The prevalence of automobiles and automobile-oriented street design can feel threatening to more vulnerable road users, and the perceived walkability and bikeability of an area becomes inherently linked to safety. In fact, no matter the extent of the networks, if people do not feel safe using the community's sidewalks, trails, or bicycle lanes to get to their destination, then they will likely opt for their car. This is why a safe walking and cycling environment is important, in addition to that of comfort and convenience. As such, safety was identified as one of the top issues facing pedestrians and bicyclists in Pitt Meadows. Many of those walking in Pitt Meadows feel uncomfortable and unsafe in environments with high traffic volumes, speeds and noise, where sidewalk and crossing infrastructure is inadequate or lacking, and in low-lit areas. Bicyclists also feel vulnerable on roads with high traffic volumes and speeds, and expressed concerns over unsafe crossings and vehicles encroaching into narrow bike lanes and shoulders. To overcome these concerns, there are a number of engineering and education strategies that can improve pedestrian and cyclist safety in Pitt Meadows.

Strategy 2.1: Pedestrian Crossings

The City of Pitt Meadows currently has nine signalized intersections along Harris and Hammond Roads. The pedestrian crossing features at these intersections vary, but typically include a combination of pedestrian-activated pushbuttons, pedestrian countdown timers, audible pedestrian signals, and bollards. To improve pedestrian safety and accessibility at each of these intersections, all signalized intersections should have consistent treatments and be retrofitted to include pedestrian pushbuttons, pedestrian countdown timers, audible pedestrian signals, and other features described in **Table 1**.

In addition to the signalized intersections, more pedestrian crossings at other locations around the community can be considered. This should include ensuring that all intersections between a collector and arterial roads have a marked pedestrian crosswalk at all legs of the intersection. Most intersections of this type in Pitt Meadows are already outfitted with either a fully signalized crossing or a marked pedestrian crosswalk, however there are still some arterial-collector intersections that would benefit from a marked pedestrian crosswalk, such as Ford Road and 189A Street.

In addition, several intersections with marked crosswalks only have marked crosswalks on some of the intersection legs. It is recommended that the City upgrade all existing crosswalk locations to ensure all legs of the intersection have a marked crosswalk and, where feasible, also have curb extensions to reduce pedestrian crossing time as well as accessible curb letdowns at all intersection approaches to ensure the intersection is fully accessible. The City should also consider improvements to unsignalized pedestrian crossings with a pedestrian-activated signal. The strategy also identifies potential new pedestrian overpasses across Lougheed Highway at Harris Road and in the Bonson Road vicinity.

Table 1
Pedestrian Crossing Improvements to Signalized Intersections

Intersection Location	Pedestrian Crossing Features		
	Pedestrian Push Button	*Pedestrian Countdown Timers*	*Audible Pedestrian Signals*
1. Harris Rd & Lougheed Hwy	Existing	Recommended	Recommended
2. Harris Rd & McMyn Rd	Existing	Existing (E-W Harris Road) N-S McMyn Recommended	Existing
3. Harris Rd & 124 Ave	Existing	Existing (E-W Harris Road) N-S 124 Ave Recommended	Recommended
4. Harris Rd & 122 Ave	Existing	Existing (E-W Harris Road) N-S 122 Ave Recommended	Existing
5. Harris Rd & Ford Rd	Existing	Existing (E-W Harris Road) N-S Ford Rd Recommended	Recommended
6. Harris Rd & 119 Ave	Existing	Existing (E-W Harris Road) N-S 119 Ave Recommended	Recommended
7. Harris & Hammond Rd	Existing	Recommended	Recommended
8. Hammond Rd & Blakely Rd	Existing	Recommended	Recommended
9. Hammond Rd & Bonson Rd	Existing	Recommended	Recommended

The City has built several curb extensions throughout the urban core of Pitt Meadows to improve crossing conditions for pedestrians. Curb extensions shorten the crossing distance for pedestrians, make pedestrians more visible, and have a traffic calming effect in slowing down vehicles (beneficial also to cyclists using the route). It is recommended that the City continue its curb extension program on key corridors, such as those that are on routes to school.

Curb extensions should be implemented with consideration for cyclists. Bicycle routes and bicycle lanes can be incorporated into corridors with curb extensions, with design guidance provided in the Transportation Association of Canada (TAC) Bikeway Traffic Control Guidelines. On arterial and collector roads, new curb extensions should be built with provisions to allow cyclists to pass through without mixing with traffic. For example, when a bicycle lane is present, dashing the bicycle lane painted lines on the approach and adjacent to the curb extension indicates the cyclists' ability to continue alongside the curb extension. Care should be taken to ensure that the curb extension does not reduce the width of the bicycle lane. On local roads with designated bicycle routes (and no bicycle lanes), shared lane markings can be placed on the roadway on the approach to curb extensions, in order to indicate to

the placement of cyclists through the curb extension narrowing, and also to identify to motorists the possible presence of cyclists and the need to share the road.

Strategy 2.2: Bicycle Crossings

While bicyclists tend to cross in many of the same areas as pedestrians, there are less cyclist crossing features currently available. The City should consider installing more bicycle-activated pushbuttons at all nine signalized intersections to increase the safety and comfort of bicyclists crossing the road. There are currently two bicycle push-buttons on the Lougheed Highway intersections with Harris Road and Old Dewdney Trunk Road, for bicyclists going southbound. Opportunities exist to install more bicycle push-buttons along high volume motor vehicle and bicycle traffic corridors, namely along Harris Road and Hammond Road, where the majority of the signalized intersections are located.

The intersections of Harris Road / Lougheed Highway intersection (provincial jurisdiction) and the CP Rail crossing (CP jurisdiction) on Harris Road were identified as difficult and dangerous crossing areas for cyclists. Both of these crossings are outside the City's jurisdiction, and the City will explore collaborative efforts with both the Ministry of Transportation & Infrastructure (MOTI) and CP Rail to address safety concerns at these problematic crossings. In addition, there can be future consideration of a pedestrian / bicycle overpass over Lougheed Highway, which will require the City to engage with the BC MOTI to explore the possibility of an above-grade crossing.

Strategy 2.3: Maintenance

The maintenance of bicycle facilities is just as important as providing them, as quality and maintenance contribute significantly to comfort levels. The City can communicate to citizens that safe cycling is a continued City priority through maintenance initiatives that keep bicycle lanes and shoulders free of debris and obstructions, including snow removal, sweeping of bike facilities, and ensuring that painted lines are kept visible.

Strategy 2.4: Slow Speed Zones

To minimize speeding in residential areas, traffic calming measures can be applied where appropriate. For example, curb extensions will be considered for all marked crosswalks in Pitt Meadows, where feasible, as both a visual and physical measure to signal traffic to slow down. Curb extensions are traffic calming solutions that involve extending the sidewalk or curb line out into a parking or travel lane, effectively reducing both the width of the vehicles travel lanes. A curb extension improves the ability of pedestrians and motorists to see each other, and reduces the pedestrian crossing distance, thus providing safer conditions. Curb extensions should also be applied to signalized crosswalks in Pitt Meadows, if feasible.

The implementation of 30 km/hr zones in neighbourhoods can also be considered as a method to improve pedestrian and cyclist safety. Recent initiatives in areas of the United Kingdom, as well as in New York City, have initiated "20 is Plenty" campaigns to call for slower traffic speeds (less than 20 mph or 30 km/hr) on residential roads. It is believed that a speed limit of 20 mph on residential roads is necessary to make the road environment more safe and comfortable for those walking and cycling in the roadway. Another type of slow speed zones is seen in the City of Vancouver, which has posted all local street bikeways as 30 km/hr. For Pitt Meadows to implement this on neighbourhood roads, 30km/hr speed limit signs would need to be posted in all streets in the area where the speed limit is in effect.

Strategy 2.5: Safe Routes to School

Safe Routes to School is a term used to describe an international movement to improve children's safety as they walk and bicycle to school. The initiative is built on five program elements, called the "5 E's" of Safe Route to School, which are engineering, education, encouragement, enforcement, and evaluation. Promotion of the Safe Routes to School program is an important initiative to support the safety of students walking and cycling to school in Pitt Meadows, and it is also an important program as it educates both students and parents on road and traffic safety, and the benefits of walking and cycling. It is recommended that this initiative be led by Pitt Meadows schools and the School District No.42, with support from the City.

Action Area 3: Accessibility + Design

The way communities are designed can have a significant influence on the walkability and bikeability of an area. In particular, there are many ways in which the City can promote universal accessibility and design that promote walking and cycling for people of all ages and abilities. This section describes some specific strategies to work towards creating a universally accessible community, particularly in the urban centre, and encouraging designs that will help make Pitt Meadows more walkable and bikeable. By ensuring that the community is designed to be accessible for seniors, children, parents with strollers, people with disabilities, and transit users, the overall experience of walking and cycling in the community will be improved for all residents and visitors.

Strategy 3.1: Pedestrian Accessibility

It is important that the walking and cycling environments of Pitt Meadows are accessible and usable by a large cross section of people, including people with disabilities, seniors, and parents with children. It is important that the design of the walking environment includes accessibility features to accommodate the unique needs of these groups, and to provide better pedestrian circulation for everyone. Accessibility guidelines for on and off-street pedestrian infrastructure are provided in Pitt Meadows' *Plan and Design for Choice* Manual, and it is recommended that any considerations for existing, new, or modified infrastructure in Pitt Meadows continue to follow these guidelines. One of the clear areas of opportunity in Pitt Meadows is to ensure that all the signalized intersections of Pitt Meadows have accessible crossing features. The Manual provides guidance on features such as accessible pedestrian signals, traffic islands, let downs, curb ramps, tactile surfaces and warning strips, and directional guiding strips that can make pedestrian crossings safer and accessible for all. This strategy also includes ensuring that all sidewalks have a clear zone free of obstructions, such as benches, utility poles or newspapers boxes. Another clear area of opportunity in Pitt Meadows is improving access to multi-use pathways. In general, multi-use pathway access should be designed to restrict access from unauthorized motor vehicles (i.e. motorcycles, all-terrain vehicles). As certain gate designs can be an impediment to safe and convenient trail access for pedestrians, cyclists and mobility-impaired users, the use of removable bollards can be explored to facilitate access to pathways for all users, while maintaining access for maintenance and emergency vehicles. Bollards should be properly placed to minimize the obstruction for cyclists and pedestrians, and should be placed some distance from the intersection so users are focussed on the cross-traffic rather than the bollard. Bollards should also be reflective for night-time visibility.

Strategy 3.2: Bicycle-Transit Integration

Currently, all busses in Metro Vancouver are equipped with bicycle racks, and bicycles are also allowed on the West Coast Express (WCE) trains, with bicycle racks and lockers located at the station. Further bicycle-transit can be achieved through more visible bicycle parking at the Pitt Meadows WCE Station, and through providing accessible cycling connections to the Maple Meadows WCE Station in Maple Ridge, particularly to facilitate better connections for those who live in the southeast neighbourhoods of Pitt Meadows, near the Maple Ridge border. It is recommended that the City of Pitt Meadows engage with TransLink for better bicycle connections and parking within WCE stations.

Strategy 3.3: Bus Stop Accessibility and Amenities

In addition to improving bicycle access to WCE stations, there are opportunities to improve the accessibility of bus stops throughout Pitt Meadows. TransLink collects statistics on the accessibility of bus stops throughout the region. As of July 2012, just over half (55.5%) of the 52 bus stops in Pitt Meadows were classified as being fully accessible. There are a range of criteria that TransLink uses to classify bus stops as accessible, and there are opportunities for the City to improve infrastructure leading to bus stops, such as ensuring that there is a sidewalk leading to the bus stop, crosswalk near the bus stop, and accessible curb letdowns. In addition, passenger amenities at bus stops can also have a significant impact on attracting new users, such as provide benches, shelters, lighting, and customer information. Since all transit users are pedestrians at the beginning and end of their journey, improving pedestrian accessibility to bus stops and passenger amenities at bus stops can help make it more attractive for people to walk at either end of their transit trips and encourage walking in the community.

Strategy 3.4: Bicycle Parking

Every trip by bicycle requires that the bicycle be parked at the end of the trip. In many cases, this means locking the bicycle on the street where it could be stolen. The fear of theft or vandalism is a significant deterrent to cycling. Regardless of whether a bicycle is worth $100 or $5,000, no-one wants to have their bicycle stolen, particularly if they depend upon it for transportation. Consequently, providing safe and secure on-street parking at key locations throughout the City is a significant means of encouraging cycling in addition to developing a comprehensive network of bicycle facilities. The design of bicycle parking can also be used as form of public art or civic branding, as can be seen in the images below.





Improved facilities for bicycle parking are relatively inexpensive and can be seen as a positive "quick win". Additional and/or improved bicycle parking is recommended in key areas of Pitt Meadows, such as:

- **Key commercial areas**, including Meadowtown Shopping Centre and Meadowvale Shopping Centre, Osprey Village, and the other commercial areas along Harris Road;
- **Key cultural and civic facilities** on Harris Road, including City Hall, the library, and the recreation centre;
- **Schools**, including Davie Jones Elementary, Edith McDermott Elementary, Highland Park, Pitt Meadows Elementary, and Pitt Meadows Secondary. Racks already exist at several schools, but some designs can result in 'wheel-bending' and would benefit from replacement to a new type;
- **Parks**, including Bonson Park, Harris Park, Hoffman Park, North Bonson Park, Pitt Meadows Athletic Park, and Sommerset Park, and Harris Road Landing (Pitt River Regional Greenway); and
- **Trailheads** along the dyke.

The bicycle parking locations described above includes both locations within the public and private realm. For locations within the public realm, the City should work to implement bicycle parking where possible within the road right-of-way. This can take place either on sidewalks, while ensuring that sufficient clear width is provided for pedestrians or on-street by considering replacing an on-street motor vehicle parking stall with an on-street bicycle corral.

Furthermore the City should continue to provide facilities for their own employees for showering and getting changed in addition to bicycle parking. In addition to providing facilities for its employees, this also demonstrates leadership on behalf of the City and will help encourage others in the community to follow suit.

For bicycle parking within the private realm, the City's Zoning Bylaw contains bicycle parking requirements for any new building or building additions or expansions and it is important to explore opportunities for additional bicycle parking with private developments when possible, especially in Town Centre developments near high activity areas and key cycling destinations. In addition, to meeting the bicycle parking requirements for new developments, the City should also develop a program to encourage private developments to retrofit existing buildings, particularly in multi-family developments.

The Zoning Bylaw does not include requirements for other end-of-trip facilities such as showers and clothing lockers. However, there is a provision in the Zoning Bylaw that off-street vehicle parking requirements may be reduced by up to 10% where many things, including end-of-trip cycling facilities have been provided.

Finally, bicycle parking in both the public and private realm can benefit from improved signage and wayfinding so users know where parking is located. This could include providing information about the location of bicycle parking racks on the City's website, and also by providing signage to bicycle parking facilities.

Strategy 3.5: Urban Design and Amenities

In the design, construction, and maintenance of its streetscapes, the City shall emphasize design quality and amenities for both pedestrians and bicyclists, guided by relevant principles of "Complete Streets" and "Green Streets". This can also include design measures in some instances that reduce vehicle speeds, enhance lighting, and improve the safety and comfort levels of vulnerable road users. Some of the way in which the City can encourage walking and cycling through intentional urban design include:

- Mixed used developments with street-oriented retail uses;
- Street-oriented developments with minimal building setbacks and parking lots located at the rear of buildings to create a more interesting streetscape;
- Enhanced sidewalk width on commercial streets to improve pedestrian comfort;
- Landscaping, including a boulevard between the curb and the pathway;
- Pedestrian amenities, such as benches and water fountains, and garbage cans;
- Street trees;
- Street level lighting;
- Public art and interpretive signage;
- Alternative stormwater management techniques, such as rain gardens.

Strategy 3.6: Wayfinding and Signage

Pedestrian and cyclist friendly design can be supported through providing better wayfinding information for people using the City's sidewalks, trails, and bicycle routes. Wayfinding materials should be simple, easy to read, and easy to install and allow residents and visitors to locate key amenities and facilities within Pitt Meadows. Wayfinding can support those walking and cycling in Pitt Meadows in both urban and rural areas, using both on and off-street facilities. The City's draft 2011 *Trail Signage Plan* sets out a plan for signage around shared-use trails and bicycle lanes, and is an important guide for strategic sign designs and locations for those using bike lanes and off-street trails. Wayfinding is important in both the urban and rural areas of Pitt Meadows, to ensure that people in rural areas are aware of trailheads, paths, and bike lanes options. In addition, the provision of wayfinding information in

the urban core is necessary to ensure that residents and visitors can locate, and walk or cycle to, key community services and amenities. As walking and cycling networks expand, wayfinding information will need to be updated and located accordingly. It should also be noted that TransLink is currently developing regional bicycle wayfinding guidelines, and the City should support and implement the recommendations of that study. Enhanced wayfinding and signage can include several types of information, including:

- **Route** signs that indicate which streets are designated bicycle routes through the use of bicycle route signs and bicycle symbols on street name signs. Supplementary tabs can be installed below bicycle route signs to indicate major destinations.
- **Wayfinding** signs can indicate directions to key destinations, as well travel distance and estimated walking and cycling time. Signs may consist of a single placard that lists several destinations with directional arrows or several destination blades that can be angled to emphasize the direction of travel.
- **Educational** signs provide information for cyclists and motorists regarding appropriate use of bicycle facilities, such as "Share the Road" signs and "Yield To..." signs.

Action Area 4: Education + Encouragement

It is not enough to just provide infrastructure and facilities, as programs must also be in place to encourage people to walk and cycle in Pitt Meadows. Education is a considered a 'soft' measure for promoting walking and cycling, as it involves no engineered features or design mechanisms, but involves promoting awareness and informational material about walking and cycling in Pitt Meadows. Education initiatives can include providing information promoting alternative modes of transportation, local walking and cycling networks (such as trail maps that show recommended routes and facilities), and programs that teach road safety and cycling skills. In addition, the compact core of Pitt Meadows means that walking and cycling distances are relatively short to most destinations, and education and awareness initiatives by the City can emphasize this fact to encourage residents to walk and cycle. Through spreading information and awareness about walking and cycling in the community, the City can use cost-effective education initiatives to enable people to feel more safe and comfortable using active modes to get around, while encouraging increased use of pedestrian and cycling facilities.

Strategy 4.1: Walking and Cycling Education

While it is important to focus on improving bicycle and pedestrian infrastructure to make cycling and walking safer and more attractive, it is equally important to ensure the residents have the skills, information, confidence and support they need to walk and cycle more. There are a number of education and awareness programs and initiatives that the City can develop and support with its partners, including supporting cycling skills programs, safe routes to schools program, and events such as Bike to Work Week and Bike Month as described below. To do so, the City should continue to identify opportunities to collaborate with agencies and organizations such as HUB, TransLink's TravelSmart Program, and ICBC and RCMP traffic safety programs to promote education and awareness around walking and cycling.

Strategy 4.2: Festivals and Events

The City already has a number of bicycle and pedestrian programs in place, including supporting programs in place by other agencies and partners, and will continue to support these and other programs and events in the future. Some of the support programs that the City is currently involved in include:

- **Snow Angels** winter initiative, which is a way to support physical activity and residents with mobility issues. This program is reliant on neighbours helping neighbours to clear public sidewalks

after a snowfall, so that sidewalks remain free of snow and those who are elderly, have mobility or other health issues, can still use the sidewalks to run errands, go shopping, and travel around. This initiative recognizes the importance of walking for certain vulnerable groups, and aims to facilitate a safe walking environment year-round in Pitt Meadows.

- **Walking Clubs.** The Maple Ridge and Pitt Meadows Parks and Leisure Services promotes several walking and running clubs, free of charge. There are a variety of clubs, ranging from recreational/leisure, women's groups, endurance walking, and indoor walking clubs offered most days of the week, at various locations throughout the community.

- **Pitt Meadows Day.** Every spring, the City hosts Pitt Meadows Day for a day of all-ages activities and events. The City typically closes down a portion of Harris Road for Pitt Meadows Day during the duration of the parade, providing a car-free environment which encourages walking and cycling to and from the day's events, and allows people to move safely throughout the area.

- **Walking Events.** The Maple Ridge and Pitt Meadows Parks and Leisure Services and Metro Vancouver Parks hosts and promotes active walking events such as Fit for Heart Month, World Walking Day, Move for Health Day, and Active Month. The Parks and Leisure Services team also works with neighbourhood groups and residents who want to host a local neighbourhood walking event, and provides free walking club start up kits to interested residents.

- **Bike to Work Week.** The City of Pitt Meadows promotes and supports bike to work week, which is usually organized annually by the regional bike coalition HUB. The City advertises Bike to Work week to the community at large, and spreads awareness of local biking resources and amenities.

Strategy 4.3: Marketing and Promotion

The City can actively market and promote its bicycle facilities, policies and programs using various media. This can include developing a Bicycle User Map for Pitt Meadows residents which could display information such as bicycle routes, key destinations, transit routes, bicycle parking, and bicycle retailers, for example. The City could also develop a dedicated webpage exclusively for walking and cycling to provide general information about the benefits of walking and cycling, a description of the current pedestrian and cyclist facilities in Pitt Meadows, a link to the pedestrian and bicycle maps, and other resources, including Trail Loop maps.




Strategy 4.4: Bicycle and Pedestrian Advisory Committee

Maple Ridge and Pitt Meadows have had a joint Bicycle Advisory Committee (BAC) since 1997. The purpose of the BAC is to advise the Councils on cycling issues in the communities and implementation of the 1994 Bikeways Plan. The Committee is comprised of eight volunteer members, including councillors from each municipality, a representative from HUB (formerly the Vancouver Area Cycling Coalition), three members at large from Maple Ridge, and two members at large from Pitt Meadows. The BAC meets on a monthly basis. Although the BAC is effective at advising on cycling issues in the community, there is no similar committee tasked with dealing with pedestrian issues. As such, it is recommended that Pitt Meadows work with Maple Ridge to either create a separate Pedestrian Advisory Committee or expand the role of the BAC to form a more comprehensive Bicycle and Pedestrian Advisory Committee. There is also an option to create a dedicated Pitt Meadows Bicycle and Pedestrian Advisory Committee to advise on local walking and cycling issues. With the Pedestrian and Cycling Master Plan providing an updated active transportation vision for the Pitt Meadows, one of the main roles of a dedicated Pitt Meadows Bicycle and Pedestrian Advisory Committee can be to advise Council on the implementation of this Plan.

5.0 Implementation Strategy




This Implementation Strategy details the priorities and costs for capital improvements within the City's jurisdiction that are required for implementation of the Pedestrian and Cycling Master Plan. The Implementation Strategy identifies walking and cycling capital project priorities over the short-term (0 to 5 years), medium term (5 to 10 years), and long-term (10 years and beyond).

The recommended capital improvements in the Implementation Strategy are grouped into three categories: sidewalk improvements, bicycle improvements (including both on-street and off-street facilities), and crossing improvements. The Implementation Strategy includes order-of-magnitude cost estimates for each capital project based on typical unit costs and recent construction pricing in Pitt Meadows and throughout Metro Vancouver. Cost estimates have been provided to identify the relative cost between projects for planning purposes, but should not be used for budgeting purposes. Wherever possible, the City should work with other agencies and levels of governments to establish cost sharing agreements or to seek grant opportunities in order to off-set total project costs.

5.1 Responsibility and Methods of Implementation

Table 2 outlines the primary responsibility of each of the key strategies in the Pedestrian and Cycling Master Plan, as described previously in Section 4. Many of the features of the Plan are the primary responsibility of the City, while others are the primary responsibility of other agencies or organizations, such as the Ministry of Transportation and Infrastructure, TransLink, School District #42, the District of Maple Ridge, or the private sector. For those strategies identified as the primary responsibility of the City, Table 2 indicates whether they will be implemented through capital planning, operating and maintenance, or policy development and programming.




Table 2
Primary Responsibility and Project Type for Pedestrian and Cycling Master Plan Strategies and Actions

Strategy		Primary Responsibility		Method of Implementation		
		City	Other	Capital	Operating & Maintenance	Policy / Programming
Network Connectivity						
1.1	Increase Urban Sidewalk Coverage	✓		✓		
1.2	Comfortable Bicycle Facilities	✓				✓
1.3	Complete, Connected Urban Bicycle Network	✓		✓		
1.4	Rural Walking and Cycling	✓		✓		
1.5	Regional Connections	✓	✓	✓		
1.6	Short-Cuts	✓	✓			✓
Pedestrian Crossings						
2.1	Pedestrian Crossings	✓		✓		
2.2	Bicycle Crossings	✓		✓		
2.3	Maintenance	✓			✓	
2.4	Slow Speed Zones	✓			✓	
2.5	Safe Routes to School		✓		✓	✓
Accessibility & Design						
3.1	Pedestrian Accessibility	✓		✓		
3.2	Bicycle-Transit Integration		✓			✓
3.3	Bus Stop Accessibility and Amenities	✓	✓	✓		
3.4	Bicycle Parking	✓	✓	✓		
3.5	Urban Design & Amenities	✓	✓			✓
3.6	Wayfinding & Signage	✓			✓	
Education & Encouragement						
4.1	Walking and Cycling Education	✓	✓			✓
4.2	Festivals and Events	✓	✓			✓
4.3	Marketing & Promotion	✓				✓
4.4	Bicycle and Pedestrian Advisory Committee	✓				✓

The following sections provide a summary of the costs and priorities for each of the features of the Pedestrian and Cycling Master Plan that have been identified as being the primary responsibility of the City and involving resources for capital infrastructure. It should be noted that some of the strategies listed above are relevant only for pedestrians or cyclists, while others apply to both pedestrians and cyclists. Sections 5.1 to 5.3 summarize the costs and priorities required to improve the pedestrian and cycling networks and thus implement the Pedestrian and Cycling Master Plan, including increased sidewalk and bicycle network coverage, and crossing improvements. Sidewalk improvements, bicycle improvements, and crossing improvements will address multiple strategies and actions of the Plan, and the following sections also highlight which Plan strategies are addressed through these improvements.




5.2 Sidewalk Improvements

Sidewalk improvements are based on ensuring full sidewalk coverage in Pitt Meadows' urban core, with recommendations for improvements based on the premise to provide sidewalks:

- On both sides of all urban collector and arterial roads;
- On at least one side of all urban local roads; and
- On both sides of urban local roads on routes to schools, parks, commercial areas, civic facilities and bus stops.

Recommended sidewalk improvements in this section pertain to the implementation of the following strategies in the Pedestrian and Cycling Master Plan:

» ***Strategy 1.1*** *Increase Urban Sidewalk Coverage*
» ***Strategy 2.5*** *Safe Routes to School*
» ***Strategy 3.3*** *Bus Stop Accessibility*

Based on recent construction pricing in Pitt Meadows, the City has provided a unit cost of $200 per metre of new sidewalk (equivalent to approximately 125m^2). This unit cost has been used to develop cost estimates for sidewalk improvements.

Table A.1 in Appendix A details the sidewalk improvements and outlines the preliminary capital costs and priorities for implementation of the proposed sidewalk network (refer to Figure 3 in Section 4 for a map showing these improvements). The total estimated cost to implement all of the sidewalk facilities is approximately **$1.9 million**. This magnitude of improvement will require significant investment, and it will take well several years for the City to complete the implementation of all recommended sidewalk facilities identified in the Plan, based on current and historic funding levels for sidewalk construction. It is for this reason that implementation priorities are used to help identify those improvements that should be completed in the short term, medium term and long term horizons. Priorities have been established based primarily upon providing new facilities to demand areas that either already experience or have the potential for generating and experiencing the highest pedestrian demands, in areas that will fill network gaps, and on providing network improvements to enhance the safety and comfort of pedestrians throughout the City. In general, the highest priorities for short-term implementation were identified where a recommended sidewalk would fill in a network gap and/or if it was located in the Town Centre. Moderate priority sidewalks for medium-term implementation were identified on collector or local streets that were in also in proximity to schools, bus stops or parks. Longer-term priority sidewalks for longer-term implementation were on streets that would be improved through redevelopment or on local streets with lower anticipated demand.

The City of Pitt Meadows will likely be primarily funding many of these sidewalk improvements. In the future, there may be the opportunity for some contribution from potential redevelopment activities, particularly in the Town Centre and rural areas that may redevelop in the future. On the City's side, these improvements may be funded from general tax revenue or it may also be possible to recover a portion of the sidewalk improvement costs through regular development cost charges (DCCs). The City will also want to explore the possibility of incorporating some of these improvements with already scheduled maintenance or rehabilitation of the City's network. To that end, it is expected




that priorities may shift over time to coordinate with other activities. The City should also explore other funding partners to implement sidewalk improvements, such as provincial grants, TransLink programs and other opportunities.

As mentioned above, the anticipated cost to implement all recommended sidewalk improvements is approximately **$1.9 million,** as summarized in **Table 3** and further detailed in **Table A.1** in **Appendix A**. However, the short-term priorities are only estimated to cost approximately **$269,000**, which represents an annual investment of just over $55,000 per year in new sidewalks over the next five years. **Table 4** summarizes the recommended short-term sidewalk improvements.

Table 3
Summary of Cost and Priorities of Sidewalk Improvements

Roadway Type	Distance (m)	Short-Term	Medium-Term	Long-Term	Total
Arterials	1,260			$252,000	$252,000
Collectors	6,385	$218,000	$442,000	$617,000	$1,277,000
Local	1,636	$51,200	$88,000	$188,000	$327,200
Total	**9,281m**	**$269,200**	**$530,000**	**$1,057,000**	**$1,856,200**

Table 4
Summary of Short-Term Improvements

Street	From	To	Distance	Criteria	Cost
Mitchell Road	191A St.	East of 190 St.	95m	Network Gap	$19,000
McMyn Road	191 street	West of 191B St.	50m	Network Gap, Town Centre	$10,000
124th Avenue/192A Street	Harris Rd	Davison Rd	120m	Network Gap, Town Centre	$24,000
190A Street	119 Ave	Ford Rd.	315m	Town Centre, Route to School & Park	$63,000
191 Street	124 Ave	McMyn Rd.	160m	Town Centre	$32,000
119B Avenue	190A Street	Civic Centre	41m	Town Centre	$8,200
194B Avenue	119B Ave	120B Ave	215m	School, Park	$43,000
Bonson Road	Hammond Road	116a Ave.	350m	School, Park	$70,000
				Total	**$269,200**

5.3 Bicycle Improvements

Cost estimates and implementation priorities for the proposed bicycle network included in the Pedestrian and Cycling Master Plan (refer to Figure 6 and 7 in Section 4 for a map of these improvements) are presented in this section. **Table A.2 in Appendix A** provides a more detailed list all of the routes identified in the proposed bicycle network for both Pitt Meadows' rural and urban areas. The table includes preliminary capital costs for all facilities which are based on the unit costs and assumptions described and shown below in **Table 5**.

The majority of the recommended urban bicycle facilities can be accommodated within the existing road width. The recommended paved shoulders in the rural roadways generally require that the roads be widened to accommodate the new facility. For roadways that already have sufficient space to accommodate travel lanes plus a new bicycle facility, the costs of implementation are considerably lower. In these cases, it may be possible to re-allocate the existing road space and re-stripe the travel lanes and/or parking lanes to create the desired facility.

Recommended bicycle improvements in this section pertain to the implementation of the following strategies in the Pedestrian and Cycling Master Plan:

- ***Strategy 1.3*** *Complete Urban Bicycle Network*
- ***Strategy 1.4*** *Rural Walking and Cycling*
- ***Strategy 1.5*** *Regional Connections*
- ***Strategy 2.5*** *Safe Routes to School*

Table 5 outlines the unit costs that been applied to the bicycle network projects, as detailed in **Table A.2** in **Appendix A.**

Table 5
Bicycle Facility Unit Costs

Facility Type	Unit Cost
Bicycle lane (no widening required)	$30,000/km
Paved shoulder (widening required)	$300,000/km
Paved shoulder (no widening required)	$20,000/km
Local bikeway (new route)	$15,000/km
Off-Street Pathway (new route)*	$100,000 /km

* Cost estimated provided by the City of Pitt Meadows

Priorities were established based on proximity to the urban core and rural areas. Short-term priorities are assigned to proposed bicycle facilities that will provide direct access and connectivity to the Town Centre (defined as the Harris Road corridor, from 119 Avenue, to Lougheed Highway). Medium-term priorities are assigned to proposed bicycle facilities that will provide access in and around the residential areas of Pitt Meadows' urban core. Longer-term priorities are assigned to bicycle routes that provided access in and around the rural areas of Pitt Meadows (primarily paved shoulders). *Note that paved shoulders in the rural areas will also benefit pedestrians walking in these areas. In addition, off-street pathways are part of the proposed bicycle network projects, and these will also be for pedestrian use.*




As summarized in **Table 6** and detailed in **Table A.2**, the total cost to implement all recommend bicycle improvements is approximately **$6.4 million**. However, the highest priority bicycle facilities to be implemented over the short-term are estimated to cost approximately **$89,000**, representing an annual investment in bicycle facilities of less than $20,000 per year, excluding other funding opportunities. **Table 7** summarizes the short-term recommended bicycle facilities.

Table 6
Summary of Bicycle Facility Improvements

Facility Type	Distance (km)	Short-Term	Medium-Term	Long-Term	Total Cost
Bicycle Lane	2.6	$23,700	$55,000		$79,200
Local Bikeway	10.5	$65,625	$92,880		$158,505
Paved Shoulder	19.7			$5,907,000	$5,907,000
Cycle Track	2.4			N/A	N/A
Off-Street Pathways (Note: Also for pedestrian use)	4.9		$131,000	$123,000	$762,000
Total	**40.1 km**	**$89,325**	**$279,380**	**$6,030,000**	**$6,398,705**

Table 7
Summary of Short-Term Bicycle Improvements

Facility Type	Street	From	To	Distance (m)	Total Cost
Bicycle Lane	Ford Road	Harris Rd	Baynes Rd	790	$23,700
Local Bikeway	Advent Road	Harris Rd	188 St.	795	$11,925
	189A Street	Ford Rd	Advent Rd	400	$6,000
	191 Street	McMyn Rd	124 Ave	170	$2,550
	124 Avenue	191 St.	192 A St.	265	$3,975
	192A St/Park Rd	124 Ave	North Bonson Rd.	795	$11,925
	Blakely Road	120B Ave	116B Ave	800	$12,000
	119 Avenue	Harris Rd	Blakely Rd	420	$6,300
	120 B Avenue	Blakely Rd	193 St.	230	$3,450
	193 Street	120B Ave	122A Ave	315m	$4,725
	122A Avenue	193 St.	Harris Rd	185	$2,775
			Total	**5,165m**	**$89,325**

It should be noted that the paved shoulders and off-street pathways that account for much of this cost, will benefit both cyclists and pedestrians. Recognizing this is an ambitious plan, the City will need to seek out funding partners, including grants from the provincial government and project funding from agencies such as TransLink.

5.4 Crossing Improvements

Crossing improvements are required to benefit both pedestrians and cyclists to move through the urban core of Pitt Meadows. **Table A.3** in **Appendix A** identifies all new crossing improvements needed to implement the strategies in the Pedestrian and Cycling Master Plan. **Table A.3** outlines the preliminary capital costs and priorities for implementation.

Recommended crossing improvements in this section pertain to the implementation of the following strategies in the Pedestrian and Cycling Master Plan:

- ***Strategy 2.1*** *Pedestrian Crossings*
- ***Strategy 2.2*** *Bicycle Crossings*
- ***Strategy 2.5*** *Safe Routes to School*
- ***Strategy 3.1*** *Pedestrian Accessibility*

Table 8 outlines the unit costs that have been applied to crossing improvement projects, as detailed further in **Table A.3** in **Appendix A.**

Table 8
Unit Costs for Crossing Types

Facility Type	Unit Cost
Pedestrian Countdown Timers	$4,000 for 8 (full intersection), or $500 each
Audible Pedestrian Signals	$7,500 for 8 (full intersection) or $940 each
Bicycle Pushbuttons	$5,000
Curb extensions	$5,000
Marked crosswalk	$1,000

The total estimated cost to implement the crossing improvements is approximately **$334,500.** Implementation priorities have been used to help identify those improvements that should be completed in the short term, medium term and long term horizons. Short-term priorities are assigned to crossing improvements within the Town Centre. Medium-term improvements are assigned to projects that are on arterial roads and generally serve multiple demands (such as proximity to a bus stop and school or park). Longer-term priorities are those projects that are outside the Town Centre and do not serve multiple pedestrian demands. It should be noted that this excludes major crossing improvements, including pedestrian/bicycle overpasses as well as crossing improvements at Harris Road and the CP Rail line, both of which require further information to develop cost estimates.

5.5 Summary

The overall capital costs for the Pedestrian and Cycling Master Plan are summarized in **Table 9** below. Overall, the complete implementation of all capital projects in the plan is estimated to cost $8.6 million. However, by prioritizing projects into short-term, medium-term, and long-term horizons, it is estimated that the highest priority projects for implementation over the short-term would cost just under $505,000. This is equivalent to an annual investment of approximately $101,000 over the next five years. Although this is approximately triple the City's current investment levels of $30,000 on pedestrian and cycling, this

represents a higher order of capital investments. It is for the reason that the City should seek partnership opportunities with other agencies and leverage external funding sources to assist in the implementation of the short-term priorities, as described in further detail in the following section.

Table 9
Summary of Costs and Priorities of All Proposed Improvements

	Short-Term	Medium-Term	Long-Term	Total
Pedestrian Improvements	$269,200	$530,000	$1,057,000	$1,856,200
Bicycle Improvements	$89,325	$279,380	$6,030,000	$6,398,705
Crossing Improvements	$144,000	$133,000	$57,500	$334,500
Total	**$502,525**	**$942,380**	**$7,144,500**	**$8,589,405**

5.6 Funding Strategies

The costs of implementing the improvements identified in the Pedestrian and Cycling Master Plan can be significantly reduced by pursuing external funding sources and partnership opportunities for many of the identified projects. This section describes several funding strategies and potential funding sources that the City may consider to help leverage its investments and to maximize its ability to implement transportation improvements.

The City should regularly check with all levels of government to keep up to date on current funding opportunities. The City should pursue all available sources of funding for transportation facilities and programs, including the programs identified below (Note: as funding opportunities change regularly, the information in this section is subject to change):

- **Provincial Programs and Initiatives** i.e. Provincial Cycling Investment Program (PCIP) and Cycling Infrastructure Partnerships Program (CIPP).
- **Regional Programs and Initiatives.** TransLink funding and cost sharing programs i.e. Major Road Network Minor Capital Program, the Major Road Network Operation, Maintenance and Rehabilitation Program, the Transit-Related Road Infrastructure Program (TRRIP), and Bicycle Infrastructure Capital Cost Sharing (BICCS)
- **Infrastructure Canada**
- **Green Municipal Funds**
- **ICBC**
- **Private sector**
- **Advertising**

6.0 Monitoring




A monitoring strategy is essential to ensure that the Pedestrian and Cycling Master Plan is implemented as intended, and to determine whether the plan is achieving its goals. A monitoring program will also enable City staff to justify continued expenditures and allocation of resources to implement prioritized initiatives of the Pedestrian and Cycling Master Plan. Monitoring also provides a means of identifying changing conditions which would require changes to the Pedestrian and Cycling Master Plan
The monitoring program needs to be:

- **Meaningful.** The monitoring strategy should yield meaningful results and point to the success in achieving the vision and goals of the Pedestrian and Cycling Master Plan.
- **Measurable.** The monitoring program needs to establish criteria that are readily measurable and for which data or information can be readily obtained.
- **Manageable.** The monitoring program needs to take into account the resource limitations of the City and will identify measures where information is accessible or data is simple to collect.

The monitoring program will focus on two components: first, the degree of progress in implementing the Pedestrian and Cycling Master Plan, and secondly, the outcomes of the plan, as summarized below. It is recommended that the City of Pitt Meadows monitor progress in each of these areas every 1-2 years, based on data availability.

Number of completed projects identified in the Pedestrian and Cycling Master Plan

- Sidewalks (# projects)
- Bicycle Route (# projects)

Annual investment levels

- Walking ($ and % of City's total transportation capital investments)
- Cycling ($ and % of City's total transportation capital investments)

Network development

- Sidewalk network (km of existing facilities)
- Bicycle Network (km of existing facilities)

Mode Share of Work Trips

- Walking (%)
- Cycling (%)

GHG Emissions

- Transportation-related GHG emissions (tonnes)

Proximity

- Walking (% of road network with sidewalk)
- Cycling (% of City within 400 metres of existing bicycle route)

Appendix A

Cost Estimates and Priorities




Table A.1 Sidewalk Capital Improvements

Roadway	From	To	1 or 2 Sides Needed	Side Req'd	Distance	Total Cost	Safety		Connectivity	Demand				Priority			Notes
							Arterial	Collector	Network Gaps	Town Centre	School	Bus Stop	Park	Short-Term	Medium-Term	Long-Term	
Arterial Roads																	
Harris Road	Airport Way	South of Hammond Rd	1	W	770 m	$154,000	•									•	As development occurs
Harris Road	Airport Way	Fieldstone Walk	1	E	490 m	$98,000	•									•	As development occurs
Collector Roads																	
North Bonson Road	118B Ave	120 B Ave	1	W	405m	$81,000		•			•		•		•		
North Bonson Road	Somerset Drive	North end of Bonson Rd	1	W	405m	$81,000		•			•		•		•		
Somerset Drive	North Bonson Rd	Park Rd	1	S, E	800m	$160,000		•			•		•			•	
South Bonson Road	Hammond Rd	116a Ave	1	E	350m	$70,000		•				•	•	•			
Wildwood Crescent	South Bonson Rd	Hammond Rd	1	S, E	1,400m	$280,000		•				•	•		•		
South Bonson Road	River Rd	Sutton Ave	1	E	620m	$124,000		•				•				•	
Sutton Ave	South Bonson Rd	Lasser Rd	1	N	400m	$80,000		•								•	
Harris Road	Airport Way	Fraser Way	1	W	400m	$80,000		•								•	
Fraser Way	Harris Rd	Dyke entrance trail	1	S	305m	$61,000		•					•			•	
Fraser Way	Harris Rd	West of traffic circle	1	N	560m	$112,000		•					•			•	
Mitchell Road	191A St.	East of 190 St	1	N	95m	$19,000		•	•					•			
190A Street	119 Ave	Ford Rd	1	W	315m	$63,000		•		•	•		•	•			
191 Street	124 Ave	McMyn Rd	1	E	160m	$32,000		•		•				•			
McMyn Road	191 St.	West of 191B Street	1	S	50m	$10,000		•	•	•				•			
124 Avenue/192A Street	Harris Rd	Davison Rd	1	S	120m	$24,000		•	•	•			•	•			
Local Roads																	
189 A Street	Advent Rd	124 Ave.	1	W	280m	$56,000					•					•	
Nikola Street	Advent Rd	End of Nikola Rd	1	W	175m	$35,000					•					•	
119B Avenue	190A Street	Civic centre	1	N	41m	$8,200				•	•		•	•			
118B Avenue	190 St.	189A St.	1	S	135m	$27,000							•			•	




(Continued) Table A.1 Sidewalk Capital Improvements

Roadway	From	To	1 or 2 Sides Needed	Side Req'd	Distance	Total Cost	Safety		Connectivity	Demand				Priority			Notes
							Arterial	Collector	Network Gaps	Town Centre	School	Bus Stop	Park	Short-Term	Medium-Term	Long-Term	
189A Street	118B Ave.	Trail to Mitchell Park	1	W	135m	$27,000							•			•	
120B Avenue	Blakely Rd	193 St.	1	S	215m	$43,000							•			•	
Chesnut Crescent	Somerset Drive	Cedar Lane	1	W	440m	$88,000					•		•		•		
194B Street	119B Ave	120B St	1	W	215m	$88,000					•		•	•			
				Total	**9,281 m**	**$1,856,200**											




Table A.2 Bicycle Capital Improvements

Roadway	From	To	Facility Type	Improvement Type	Distance	Total Cost	Priority			Treatments
							Short-Term (Town Centre Route)	Medium-Term (Residential Routes)	Long-Term (Rural Routes)	
Ford Road	Harris Rd	Baynes Rd	Bicycle Lane	No widening required	790m	$23,700	•			No widening required, signage and pavement markings
South Bonson Road	Hammond Rd	Fraser Way	Bicycle Lane	No widening required	1,850m	$55,500		•		No widening required, signage and pavement markings
Ford Road	Baynes Rd	Dyke Trail	Paved Shoulder	Widening req'd	5,000m	$1,500,000			•	Road widening required. Implement in conjunction with road improvements.
Harris Road	Alouette River	Dyke Trail (N)	Paved Shoulder	Widening req'd	1,760m	$528,000			•	
McNeil Road	Harris Rd	Neaves Rd	Paved Shoulder	Widening req'd	3,760m	$1,128,000			•	
Neaves Road	Dyke Trail (north)	South Alouette River	Paved Shoulder	Widening req'd	9,170m	$2,751,000			•	
Advent Road	Harris Rd	188 St.	Local Bikeway	New Route	795m	$11,925	•			Signage and pavement markings
189A Street	Ford Rd	Advent Rd	Local Bikeway	New Route	400m	$6,000	•			
191 Street	McMyn Rd	124 Ave	Local Bikeway	New Route	170m	$2,550	•			
124 Ave	191 St.	192 Ave	Local Bikeway	New Route	265m	$3,975	•			
192A Street/Park Rd	124 Ave	North Bonson Rd.	Local Bikeway	New Route	795m	$11,925	•			
Park Rd	North Bonson Rd	Lougheed Hwy	Local Bikeway	New Route	375m	$5,625		•		
Somerset Drive/Cedar Lane	Park Rd	North Bonson Rd.	Local Bikeway	New Route	1,125m	$16,875		•		
North Bonson Road	Lougheed Hwy	Rail Overpass	Local Bikeway	New Route	480m	$7,200		•		
	Rail Overpass	Hammond Rd	Local Bikeway	New Route	537m	$8,055		•		
Blakely Rd	120B Ave	116B Ave	Local Bikeway	New Route	800m	$12,000	•			
119 Avenue	Harris Rd	Blakely Rd	Local Bikeway	New Route	420m	$6,300	•			
120 B Avenue	Blakely Rd	193 St.	Local Bikeway	New Route	230m	$3,450	•			
193 Street	120B Ave	122A Ave	Local Bikeway	New Route	315m	$4,725	•			
122A Avenue	193 St.	Harris Rd	Local Bikeway	New Route	185m	$2,775	•			
116B Avenue	Blakely Rd	South Bonson Rd	Local Bikeway	New Route	390m	$5,850		•		
Wildwood Crescent	South Bonson Rd	Hammond Rd	Local Bikeway	New Route	1,400m	$21,000		•		
116A Ave	South Bonson Rd	Wildwood Cres	Local Bikeway	New Route	615m	$9,225		•		
Harris Road/Fraser Way	Airport Way	South Bonson Rd	Local Bikeway	New Route	1,270m	$19,050		•		
Harris Road	Advent Rd	Fraser Way	Cycle Track		2,440m	TBD			•	TBD. More details req'd
Airport Way	Baynes Rd	South Bonson Rd	Off-Street Path		835m	$83,500			•	Lighting to be considered as part of long-term off-street pathway upgrades
N/A	Fraser Way	Pitt Meadows Secondary	Off-Street Path		890m	$89,000		•		
N/A	Harris Road	Pitt Meadows Secondary	Off-Street Path		420m	$42,000		•		




(Continued) Table A.2 Bicycle Capital Improvements										
Roadway	**From**	**To**	**Facility Type**	**Improvement Type**	**Distance**	**Total Cost**	**Priority**			**Treatments**
							Short-Term (Town Centre Route)	**Medium-Term (Residential Routes)**	**Long-Term (Rural Routes)**	
N/A	Existing trail	South Bonson Road	Off-Street Path		395m	$39,500			•	
Lougheed Hwy	Meadowtown	Maple Ridge	Off-Street Path		N/A	N/A				Alignment and costing TBD
					Total	**$6,398,705**				




Table A.3 Crossing Improvements

			Safety		Demand				Priority			Notes
Intersection	**Improvement**	**Total Cost**	**Arterial**	**Collector**	**Town Centre**	**School**	**Bus Stop**	**Park**	**Short-Term**	**Medium-Term**	**Long-Term**	
Harris Rd & Lougheed Hwy	• Pedestrian Countdown Timers (all) • Audible Pedestrian Signals • Bicycle Pushbutton	$16,500	•		•		•		•			Provincial / Federal funding partners
Harris Rd & McMyn Rd	• Pedestrian Countdown Timers (N-S McMyn) • Bicycle Pushbutton	$7,000	•	•	•		•	•	•			
Harris Rd & 124 Ave	• Pedestrian Countdown Timers (N-S 124 Ave Required) • Audible Pedestrian Signals • Bicycle Pushbutton	$14,500	•	•	•		•	•	•			
Harris Rd & 122 Ave	• Pedestrian Countdown Timers (N-S 122 Ave) • Bicycle Pushbutton	$7,000	•	•	•		•	•	•			
Harris Rd & Ford Rd	• Pedestrian Countdown Timers (N-S Ford Road) • Audible Pedestrian Signals • Bicycle Pushbutton	$14,500	•		•		•		•			
Harris Rd & 119 Ave	• Pedestrian Countdown Timers (N-S 119 Ave) • Audible Pedestrian Signals • Bicycle Pushbutton	$14,500	•	•	•	•	•		•			
Harris & Hammond Rd	• Pedestrian Countdown Timers (all) • Audible Pedestrian Signals • Bicycle Pushbutton	$16,500	•				•			•		
Hammond Rd & Blakely Rd	• Pedestrian Countdown Timers (all) • Audible Pedestrian Signals • Curb extensions • Bicycle Pushbutton	$36,500	•	•		•	•			•		
Hammond Rd & Bonson Rd	• Pedestrian Countdown Timers (all) • Audible Pedestrian Signals • Curb extensions • Bicycle Pushbutton	$26,500	•	•			•				•	
Harris & CP Rail Crossing	• Crossing/Safety Improvements	TBD	•		•		•		•			Provincial / Federal funding partners; further detail req'd for cost estimate
Ford Road & 189A Street	• Marked Pedestrian Crosswalk	$1,000	•	•			•				•	
Lougheed Highway & Harris Road	• Overpass	TBD	•		•		•				•	Provincial / Federal funding partners; further detail req'd for cost estimate
Lougheed Highway & Bonson Road	• Overpass	TBD	•				•				•	Provincial / Federal funding partners; further detail req'd for cost estimate
119 Ave & 190A Street	• Curb extensions at existing e-w crosswalk	$10,000		•	•	•			•			
119 Ave & 190A Street	• Curb extensions at existing n-s crosswalk	$10,000		•	•	•			•			
116B Avenue (crosswalk in front of Pitt Meadows Secondary)	• Curb extensions at existing crosswalk	$10,000		•		•	•	•		•		
Blakely Rd & 120B Avenue	• Curb extensions at existing crosswalks	$20,000		•		•		•		•		
North Bonson Road & Somerset Dr.	• Curb extensions at existing crosswalk	$10,000		•		•	•	•		•		
North Bonson Road & Park Road	• Curb extensions at existing crosswalks	$30,000		•		•	•			•		
North Bonson Road & 120b	• Curb extensions at existing crosswalk	$10,000		•		•		•	•			




(Continued) Table A.3 Crossing Improvements

Intersection	Improvement	Total Cost	Safety		Demand				Priority			Notes
			Arterial	Collector	Town Centre	School	Bus Stop	Park	Short-Term	Medium-Term	Long-Term	
Advent Road & 189A Street	• Curb extensions at existing crosswalk	$10,000		•		•				•		
Advent Road & 188 Street	• Curb extensions at existing crosswalk	$10,000		•							•	
122 Ave & 189A Street	• Curb extensions at existing crosswalk	$20,000		•			•				•	
122 Ave & 191B Street	• Curb extensions at existing crosswalk	$20,000		•	•		•	•	•			
191 B Street & Ford Rd	• Curb extensions at existing crosswalk	$20,000	•	•	•		•		•			
	Total	**$334,500**										


City of Pitt Meadows
The Natural Place