Transportation Master Plan

Summary Report

February 2014

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URBAN systems

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Introduction

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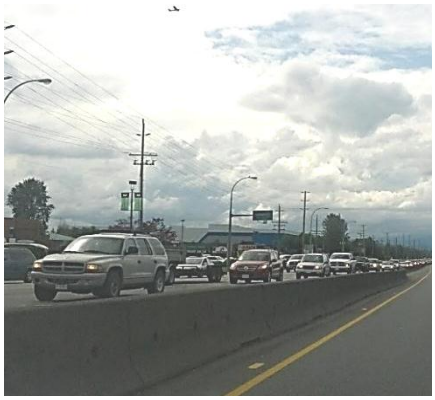
The City of Pitt Meadows is a vibrant and growing municipality of approximately 18,000 residents, located on the north shore of the Fraser River in the Lower Fraser Valley of British Columbia. Although the City has one of the smallest populations in Metro Vancouver, significant commercial and industrial development is increasingly positioning the City as a place to live and work. As a highly attractive place for families, visitors, and businesses, the City's population is expected to grow to 24,000 residents by 2041. While the City will only experience modest population growth in the coming years, it is surrounded by some of the highest growth communities in the Metro Vancouver region, including Maple Ridge, Coquitlam, Surrey, and the Township of Langley. While the moderate growth in Pitt Meadows will create some local pressures on the City's transportation network, rapid growth projected in neighbouring high growth communities will place increasing pressures on the City's transportation system. Given that these trends will continue into the future, there is a need to promote a balanced and sustainable transportation system to accommodate the increased growth locally and regionally.

The City of Pitt Meadows' Transportation Master Plan (TMP) is intended to provide a clear vision for the future of Pitt Meadows' transportation system and guide the City's investments in transportation infrastructure and programming over the long term. The benefits of long-term planning for transportation go far beyond simply the provision of roads, public transit, bicycle routes and pedestrian facilities. In fact, transportation can be viewed as the foundational element in achieving community goals and objectives related to the environment, economy, and health. The TMP seeks to guide the City to achieve larger community aspirations, including supporting alternatives to the automobile, promoting a healthy natural environment, protecting rural areas, and ensuring a vital local economy while also supporting the movement of people and goods.

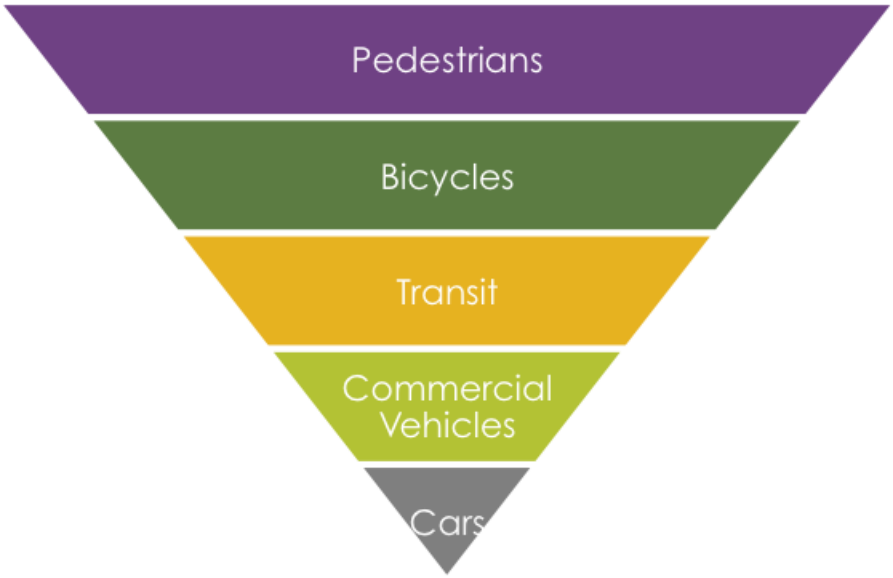
The TMP is also designed to address the changes in the landscape that have occurred since the adoption of the City's Official Community Plan (OCP). For example, growth and development in the area has resulted in major transportation investments to facilitate mobility between communities south and north of the Fraser, as well as to the Northeast Sector. This includes the Golden Ears and Pitt River Bridges, which both opened in 2009 and created transportation connections throughout the Lower Fraser Valley on a previously unseen scale. Further, the recently completed Highway 17 project (formerly known as the South Fraser Perimeter Road) provides a critical goods movement corridor connecting 176th Street in Surrey to Deltaport in Tsawwassen, influencing traffic movements across the Golden Ears

Bridge and within Pitt Meadows and Maple Ridge. While regional infrastructure projects and growth have positive economic benefits for Pitt Meadows, they have also resulted in increased delays and congestion at points along Lougheed Highway, and increased through traffic volumes along some of the City's roads, such as Hammond Road, Harris Road, and Old Dewdney Trunk Road.



In response to these new transportation realities, the TMP provides the City of Pitt Meadows with a clear roadmap to manage local transportation movements and connections, as well as the impacts of regional traffic. The TMP also provides guidance on managing current and future transportation demands in Pitt Meadows into the long-term, and the necessary planning and investments that will make transit, walking, and cycling accessible and attractive forms of transportation while facilitating efficient people and goods movement on the road network. As shown in **Figure 1**, the directions of the TMP are framed to consider the needs of pedestrians, cyclists, public transit, and goods movements before considering the need of private automobiles. This means that, in planning for Pitt Meadows' transportation system, sustainable transportation options will be prioritized over general purpose transportation. Ultimately, the successful application of the TMP will move Pitt Meadows towards a transportation system that is multi-modal, efficient, and provides improved mobility options for residents and visitors. However, in certain areas of the community, this transportation hierarchy may not be suitable, such as in rural / agricultural areas, and on truck routes where goods movement is a priority to support the local economy.

Figure 1: Pitt Meadows Transportation Master Plan - Transportation Hierarchy



1.1 Study Process

The TMP was developed through a number of discrete phases, including a series of three Discussion Papers, as shown in **Figure 2**.

- **Discussion Paper #1: Existing Conditions** summarized existing transportation, demographic, and policy conditions that influence the transportation system and provided guidance for the City as it began to develop the TMP. The report included a comprehensive assessment of Pitt Meadows' road and transit networks, and summarized key transportation issues and opportunities that emerged from the public consultation activities.
- **Discussion Paper #2: Visioning** presented a visioning direction with supporting goals and objectives, as well as targets to guide transportation decision-making in Pitt Meadows over the next 20 years and beyond. The Vision, goals, objectives, and targets are summarized in Chapter 2.
- **Discussion Paper #3: Draft Transportation Master Plan** presented the draft improvement strategies for the roads and transit networks, in order to guide planning and investment in the transportation system into the long-term.

Figure 2: Transportation Master Plan Process

Phase	**Phase 1:** Launch	**Phase 2:** Inventory and Assessment	**Phase 3:** Setting Future Directions	**Phase 4:** Transportation Improvement Concepts	**Phase 5:** Implementation & Monitoring	**Phase 6: Reporting**
Purpose	Data collection and review background information	Review existing conditions, opportunities and challenges	Establish vision, goals, and targets	Prepare improvement concepts for all modes	Develop an implementation strategy identifying short, medium and long term priorities	Prepare final plan, summarizing all 5 phases of the study
Reports		Discussion Paper #1: Existing Conditions	Discussion Paper #2: Vision, Goals & Objectives	Discussion Paper #3: Draft Transportation Master Plan		Final Transportation Master Plan *
* Includes the directions of the 2012 Pedestrian and Cycling Master Plan, and the 2014 Parking Strategy						

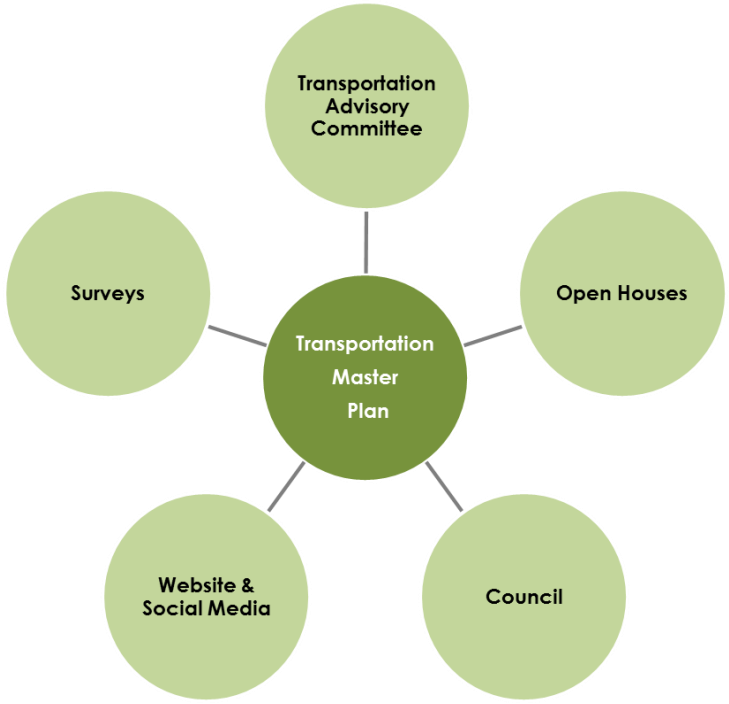
In addition, the City has recently developed two additional studies that influence the direction of transportation system and that are closely integrated within the TMP, including the 2012 **Pedestrian and Cycling Master Plan (PCMP)** which provides strategies and actions to guide the City to make walking and cycling more safe, attractive and convenient for local, short-distance trips, and the 2014 **Parking Strategy**, which includes strategies to improve parking efficiency throughout the City through management and enforcement, as well as Strategy recommendations for parking requirements and

specifications. This summary report incorporates the findings of the first three Discussion Papers as well as the 2012 PCMP and 2014 Parking Strategy.

1.2 Public Engagement

The City of Pitt Meadows' TMP has been developed with the broad participation of the Pitt Meadows community, in order to ensure that the TMP reflects the values and interests of residents and key stakeholders. Throughout the course of the study, there were several opportunities for public input through various forums, including an Open House booth set up on Pitt Meadows Day (June 1, 2013), and an online survey that was made available for residents to complete throughout May and June 2013. The plan was also continually guided through input and feedback received from City Staff, Council, and a Transportation Advisory Committee that represented a variety of key stakeholders, including Pitt Meadows residents, Ministry of Transportation and Infrastructure (MOTI), Coast Mountain Bus Company (CMBC), RCMP, Pitt Meadows Chamber of Commerce, BC Trucking Association, Pitt Meadows Regional Airport, and Onni Group.

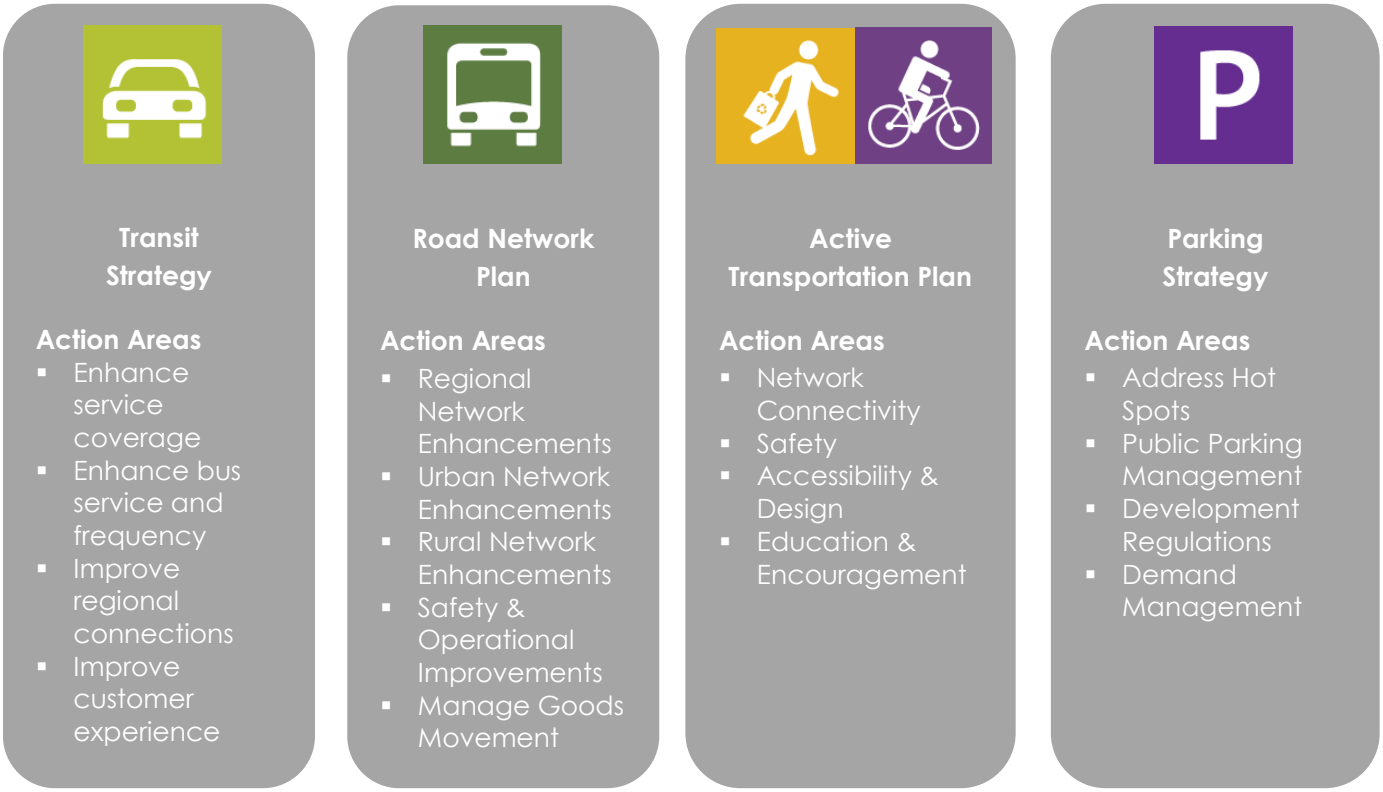
Figure 3: Public Engagement Process



1.3 Plan Framework

The framework of the TMP is built around key action areas related to four overarching topics - the road network, transit, active transportation, and parking. Each action area is supported by a number of strategies that detail how to achieve the overall action, as shown in **Figure 4**.

Figure 4: Transportation Master Plan Framework



Chapter 2.0
Vision and Goals

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A vision for the Transportation Master Plan was developed based on feedback received from the community and stakeholders. The visioning direction for the TMP builds upon the City's commitments to a sustainable and multi-modal transportation system as outlined in a number of plans and strategies, and in particular the vision identified in the OCP, Corporate Strategic Plan, and Pedestrian and Cycling Master Plan which emphasize increased transportation choice and enhanced mobility for all modes. This vision focuses on the ability of Pitt Meadows' compact urban centre to support sustainable travel behaviours and a livable community, while ensuring safety and efficiency in the rest of the transportation system. Reflecting these themes, the proposed TMP vision is outlined below:

> *Pitt Meadows is a vibrant, healthy, active, and diverse small city in a rural natural setting – a compact and sustainable community that supports an efficient and safe multi-modal transportation system that puts people first. Pitt Meadows' transportation system provides residents with attractive and convenient mobility choices with emphasis on walking, cycling and transit in order to reduce automobile dependency, encourage economic development, tourism opportunities, promote healthy lifestyles, and protect the natural environment.*

In support of the above vision, the TMP has four guiding goals:

Goal 1: A **balanced and multi-modal** transportation system

Goal 2: A **safe and accessible** transportation system

Goal 3: An **integrated** land use and transportation system

Goal 4: A **managed and cost effective** transportation system.

These goals are supported by a series of objectives to guide the City in achieving the transportation system goals and visioning direction of the TMP. The corresponding set of objectives within each goal are described below:

Goal 1: A balanced and multi-modal transportation system

Objectives:

1.1 Design complete streets that comfortably accommodate the needs of all street users
1.2 Promote attractive streetscapes to encourage sustainable travel and foster great places
1.3 Support economic growth through ensuring connectivity by all modes to the City's civic facilities, commercial and industrial areas
1.4 Support the provision of enhanced local and regional transit service
1.5 Increase the amount of people walking, cycling and taking transit

1.6 Ensure vehicle and goods movement access to both rural and urban areas of the transportation system

1.7 Support and protect designated goods movement corridors within the City, to ensure access to local and regional businesses and services

Goal 2: A safe and accessible transportation system

Objectives

2.1 Design a safe transportation system for all street users

2.2 Develop a universally accessible transportation system to remove barriers for children, seniors, and people with physical or cognitive disabilities

2.3 Ensure that walking, cycling and transit are convenient, comfortable, and attractive transportation choices for people of all ages and abilities

2.4 Promote affordable transportation choices

2.5 Ensure road connections and mobility in rural areas, to support the City's rural economy and businesses

2.6 Mitigate the impact of rail on the City's road network

2.7 Fewer collisions throughout the City, including reduction in collisions involving pedestrians and cyclists.

Goal 3: An integrated land use and transportation system

Objectives

1.1 Focus higher densities and mixtures of land uses along Harris Road to support frequent transit service

1.2 Provide high quality amenities and urban design features along Harris Road and other Frequent Transit Corridors and adjacent to West Coast Express Stations

1.3 Ensure that residential neighbourhoods are walkable and bicycle-friendly

1.4 Promote efficient road connections within the City's rural road network

1.5 Support building forms and design features that enhance walking, cycling, transit, and goods movement

1.6 Ensure connectivity to the regional road and transit networks

1.7 Support strategic parking management initiatives

Goal 4: A managed and cost-effective transportation system

Objectives

4.1 Leverage partnership opportunities for funding assistance with City transportation projects;

4.2 Maximize the efficiency of the existing street network, including promoting walking, cycling, and transit, before expanding the street network

4.3 Improve the experience for walking, cycling and transit trips through improved signage, wayfinding, and information

4.4 Support transportation demand management initiatives which reduce the need to travel and reduce single occupancy vehicle trips

4.5 Support education and awareness initiatives that promote road safety

4.6 Provide information and support systems to enhance opportunities for walking, cycling and transit in the community

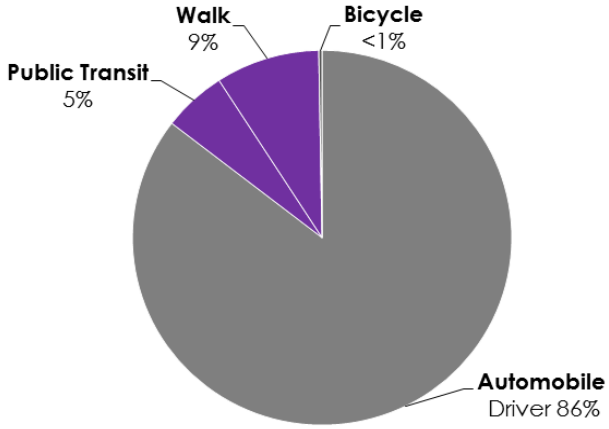
Targets are a critical component of a transportation plan, as they are an effective way to measure progress towards achieving the goals and objectives of the TMP. Targets will also help to ensure that the TMP is implemented as intended, and to determine whether the plan is achieving its goals.

One of the most common targets for transportation plans is mode share, or the percentage of trips made by each mode of transportation. It implies much more than simply how people are choosing to travel. Among other things, changes in mode share can be an indicator of how attractive the City will be for walking, cycling and using transit; how integrated the City's transportation system is with land use patterns; and how well the transportation system is helping to achieve the City's vision of a balanced and sustainable transportation. It is also an indication of how investments in alternative modes can shift the amount of driving that people in support of healthier and more vibrant communities.

As shown in **Figure 5,** the majority of daily trips in Pitt Meadows are made by private vehicle, with 86% of all daily trips in the community made by car, 5% by transit, 9% by walking, and less than 1% by bicycle. Altogether, the sustainable transportation modes of transit, walking, and cycling capture 14% in total of daily trips in Pitt Meadows today.

Figure 5: Pitt Meadows, Mode Share of All Daily Trips (2011)

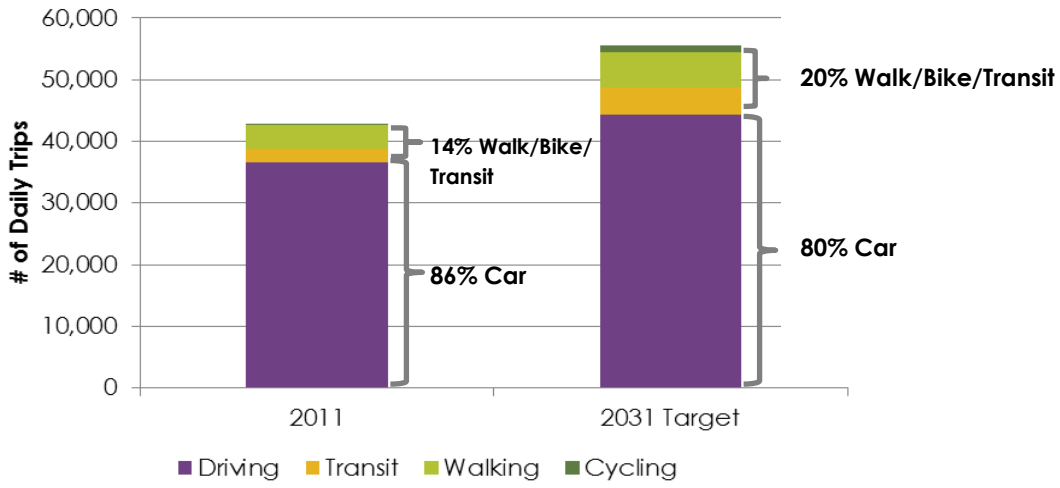
Source: 2011 TransLink Regional Trip Diary Survey



The Transportation Master Plan has set a future mode share target for 20% of daily trips in the city to be by walking, cycling, and transit by 2031. Incorporating growth, **Figure 6** illustrates this 2031 target, showing that the number of daily car trips would increase by 22%, walking trips would increase by nearly 50%, and transit trips would almost double. The number of cycling trips under this target scenario increase from 100 to over 1,000 daily trips.

Figure 6: 2011 Mode Share and 2031 Mode Share Target

Source: 2011 TransLink Regional Trip Diary Survey



Historically in Pitt Meadows, walking, cycling, and transit have generally accounted for 13-14% of daily commute trips. A change in mode share can be difficult to achieve, and like many communities, sustainable mode share in Pitt Meadows has been slowly increasing over time. However, the TMP mode share target of 20% of trips by sustainable modes by 2031 is necessary to ensure that Pitt Meadows transportation system develops in a way that achieves the vision and goals of the TMP and actively supports alternatives to the private vehicle. Through designing a transportation network that provides safe, convenient, and attractive choices for all modes of transportation, a significant shift towards walking, cycling and transit can be achieved while still accommodating for some growth in vehicle travel.

Chapter 3.0
Transportation in Pitt Meadows

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This section briefly summarizes the current state of the transportation system in the City, in regards to the road network, transit, walking, and cycling. Further details can be found in the Transportation Master Plan Discussion Papers, as well as the 2012 Pedestrian and Cycling Master Plan, and the 2014 Parking Strategy.

- **Road Network.** The road network in Pitt Meadows is designed to support mobility for all modes of travel including general purpose traffic, goods movement, transit, walking and cycling. In total, Pitt Meadows has 130 km of roadways, including 6 km of provincial highways; 15 km of arterial roads; 23 km of collector roads, and 85 km of local streets. Lougheed Highway is the one provincial highway running through Pitt Meadows. The city's major urban streets radiate off from Harris Road, the city's 'main street', which is the predominant north-south road in the urban core. Rural roads provide key linkages throughout rural Pitt Meadows, and provide access to rural areas, industrial areas, the Town Centre area, and eastward to Maple Ridge. The City also has a designated truck route network that is designed to keep trucks out of the city's urban core, except for local deliveries. The City operates nine signalized intersections in Pitt Meadows, all located on Harris Road and Hammond Road in the urban core.

  As employment patterns indicate, the majority of commuters in Pitt Meadows are leaving the City for their job in another municipality in the morning, and returning in the afternoon, as reflected in intersection count and turning data. In terms of traffic volumes, Lougheed Highway accommodates the highest traffic volumes through Pitt Meadows, with approximately 50,000-60,000 vehicles per day. Along Harris Road, the traffic volumes are highest in the northern urban segments, particularly between Lougheed Highway and Hammond Road. In the south and northernmost sections of Harris Road, traffic volumes taper out and are typically less than 5,000 vehicles per day. Hammond Road and Airport Way typically experience traffic volumes exceeding 6,500 vehicles per day, with volumes nearing 10,000 vehicles per day in some areas. Areas of vehicle congestion and delays are seen at Lougheed Highway intersections, particularly the intersections at Kennedy Road and Harris Road are currently operating at near failing or at failing conditions during the peak hours, and are experiencing significant delays and queues during peak hours. These intersections are also the City's top two collision locations.

- **Transit.** The existing transit system in Pitt Meadows is made up of a combination of commuter-oriented services designed to connect to regional transit nodes, as well as community-oriented services which provide coverage for trips to and from local destinations. Conventional bus and shuttle service in Pitt Meadows provides local coverage and service within the City and surrounding region, and supplements the West

Coast Express service. The City's public transit services are largely centred around the Pitt Meadows West Coast Express Station in the City's urban core. In general, Pitt Meadows' transit system serves those living in the urban core, with rural areas north or west of the core not served by public transit. Pitt Meadows is served by four bus routes, one of which, the 701, is a designated frequent transit network (FTN) route, providing service every 15 minutes throughout the day. Route 595 provides 30 minute service in all periods except in the late evenings, while Route 791 runs every 20-30 minutes. The community shuttle routes generally provide 30 minute service in all service periods but do not operate on Sundays.

- **Walking.** The majority of roads in the Pitt Meadows' core have a sidewalk on at least one side of the street. The City's *Subdivision and Development Servicing Bylaw* requires sidewalks to be provided on at least both sides of all urban collector and arterial streets, as well as all local streets with high activity land uses. Sidewalks are only required on one side of the street on urban local streets with lower density residential uses, and sidewalks are not required on rural roads. The City promotes a pedestrian-friendly Town Centre with safe and convenient pedestrian connections that complement the higher densities and mixed use development of the area. All signalized intersections on Harris and Hammond roads have pedestrian pushbuttons, with a mix of pedestrian countdown timers, audible pedestrian signals, and bollards. Pitt Meadows also has an extensive trail network that connects different areas of the community, linking parks, rural areas, schools, commercial areas, and the downtown core. The trail network for both pedestrians and cyclists in Pitt Meadows contains the extensive dykes and pathways along the Alouette, Fraser, and Pitt Rivers.

- **Cycling.** 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 trails connect 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.

Chapter 4.0
Transit Strategy

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TransLink, Metro Vancouver's regional transportation authority, is responsible for providing transit services in the City of Pitt Meadows and throughout Metro Vancouver. Decisions about fares, routes, and service levels are all made by TransLink in cooperation with local municipalities. Municipalities throughout Metro Vancouver not only participate in the planning and design of transit services and major facilities, such as transit routes and stops, but also play a role in providing the local infrastructure in which to accommodate transit services and passengers.

The existing transit system in Pitt Meadows is made up of conventional bus service, community shuttles, and West Coast Express commuter rail. Conventional bus service in Pitt Meadows includes one Frequent Transit Network (FTN), route 701, which runs at least every 15 minutes in both directions throughout the day and into the evening. Route 791 provides local circulation and coverage, while Route 595 operates as limited-stop express service. Community shuttles (C41, C43, and C44) provide local coverage and operate with longer headways (30-60 minutes) than the conventional routes. In addition, the West Coast Express commuter rail service operates in peak hours in the peak direction on weekdays.

Currently, approximately 5% of all daily trips in Pitt Meadows are made by transit. While transit supports many residents in their daily journeys, limited transit frequency and coverage still prevent transit from being a more convenient and attractive transportation choice for more residents for both local and regional trips. As Pitt Meadows and surrounding communities experience population and employment growth into the future, and more people choose to live and work in the community, it will become increasingly important to ensure that transit services reflect growth patterns throughout the community.

The targets of the TMP seek to increase transit mode share to 8% of daily trips. Ultimately, more people will use transit over time if it satisfies their travel needs and is competitive with other modes. This will require improved transit service and supportive facilities that can increase the attractiveness of taking transit locally and to regional destinations, as well as the integrated land uses that enable greater investments in transit. In this regard, the TMP provides the City of Pitt Meadows with an opportunity to examine the role of transit within a multi-modal framework to shape land use and travel patterns, and to achieve City aspirations. The preferred directions and priorities for transit can be used as input and guidance to the area transit planning processes and other on-going work by TransLink.

4.1 Key Issues & Opportunities

Key issues and opportunities to improve the transit system in Pitt Meadows identified through the consultation with the public and stakeholders include:

- **West Coast Express** service improvements, including more frequent service, weekend service, reverse peak service, and all-day and evening service;
- **Regional transit network improvements** particularly to Surrey, Vancouver and the SkyTrain network;
- **Local transit service improvements** within Pitt Meadows to rural areas and South Bonson ;
- Improvements to **amenities** at bus stops; as there is a need for shelters and garbage cans; and
- **Improved customer information** at West Coast Express stations and bus stops, including schedules and maps.

4.2 Improvement Strategies

The directions received from resident and stakeholder input and feedback, as well as from the key community planning documents, indicated the need for a comprehensive approach towards transit planning within the TMP. This section describes the key transit action areas that are intended to support the TMP vision and goals:

- Enhance service coverage
- Enhance bus service and frequency
- Improve regional connections
- Improve customer experience

These strategies are intended to provide direction to the City and TransLink with respect to transit planning, decisions, and future investments.

Action Area 1: Enhance Service Coverage

Although conventional bus routes in Pitt Meadows generally provide service within a five to ten minute walking distance to most of the urban core of Pitt Meadows, several key areas of the community are currently not well-served by transit. Most notably no transit service is provided to the southwest corner of Pitt Meadows' urban core, which is a growing commercial and industrial area. Additional underserved areas include rural areas and new potential links in the road network. Strategies to enhanced transit service coverage are shown in **Figure 7** and described in further detail below. It is recommended that the City work with TransLink to pursue the following strategies to improve transit coverage in Pitt Meadows:

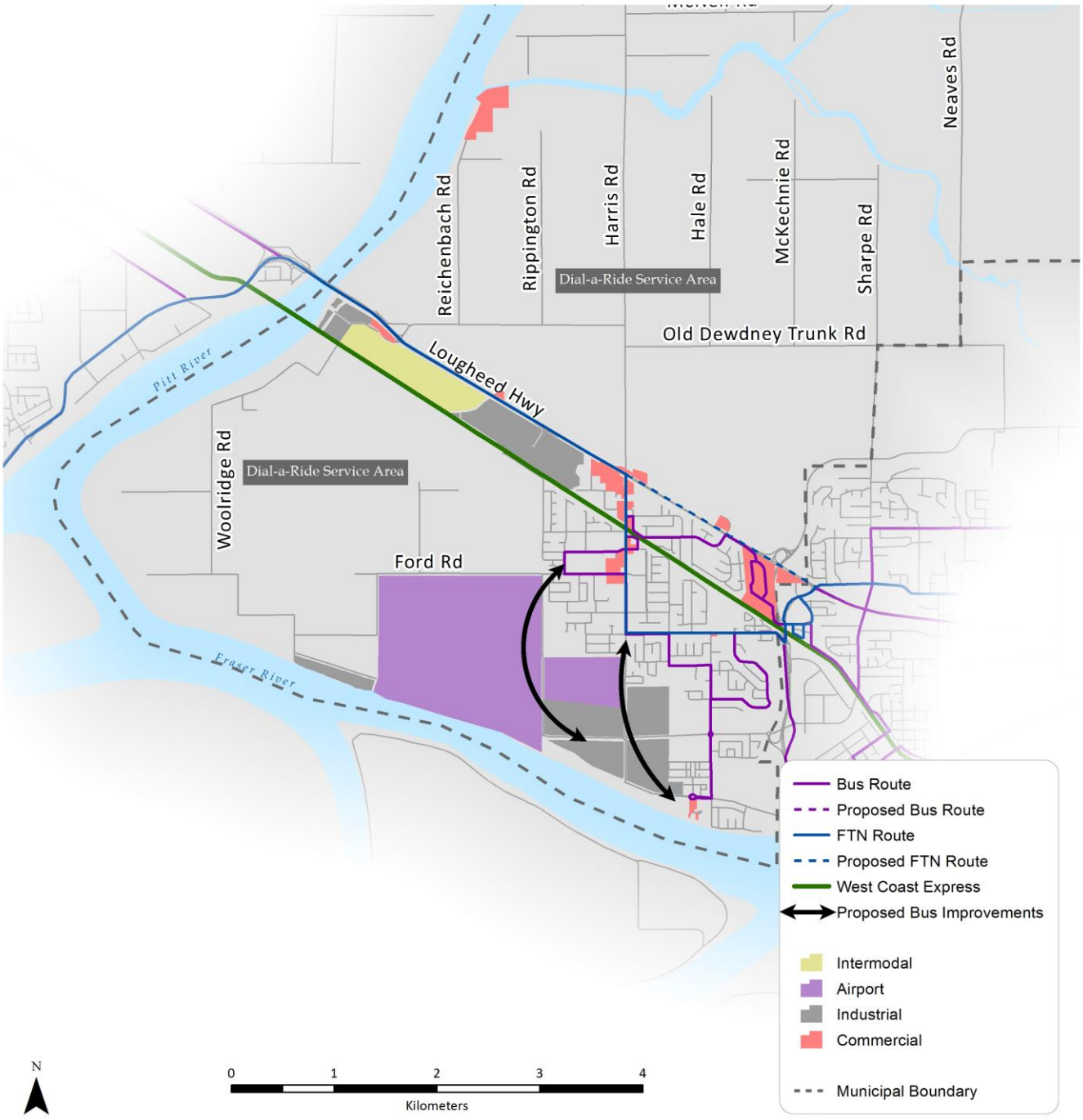
Strategy 1.1 Increase transit coverage to south Pitt Meadows. Key areas of Pitt Meadows that are currently under-served by transit include South Bonson and the developing commercial and industrial areas in the City's southwest corner. In addition to the expansion of the South Bonson neighbourhood, significant commercial, industrial (and to a smaller degree residential) development is expected to occur in the southwest area of Pitt Meadows, including in and around the South Bonson Industrial lands and the Golden Ears Business Park. Further, anticipated expansion of services and training opportunities at the Pitt Meadows Regional Airport will increase travel demand to this area of the community. With increased residential, commercial and industrial development in southwest Pitt Meadows, improved transit service coverage will be needed for employees, visitors, and customers.

Strategy 1.2 Provide transit service along the North Lougheed Connector. In August 2013, the City received conditional approval from the ALC for exclusion of agricultural land to facilitate the development of the North Lougheed Connector, which is an identified road network link in the City's OCP. Upon completion, it is required that the connector be designated by TransLink as a Major Road Network (MRN) route, as the connector is expected to serve a significant commercial development on the north side of Lougheed Highway. It is recommended that the City of Pitt Meadows encourage TransLink to provide transit service along the North Lougheed Connector. This would provide transit service to the North Lougheed Planning area and an additional transit connection between Maple Ridge and Pitt Meadows with communities to the west, including the Northeast Sector and future Evergreen Line.

Strategy 1.3 Encourage paratransit options to expand service coverage to rural areas of Pitt Meadows. Paratransit, a type of transit service that does not have fixed routes or schedules, has been used in many jurisdictions nationwide as a means to provide basic transit coverage to areas below serviceable transit densities. With the low-density and dispersed land uses of rural Pitt Meadows, both Dial-a-Bus and Taxi Script are on-demand service concepts that TransLink could pursue to connect employees and residents in the rural areas of Pitt Meadows to the conventional bus and West Coast Express services.

Strategy 1.4 Explore the feasibility of paratransit options as a means to increase service coverage within Pitt Meadows' built-up area. Flexible routing could also be explored for segments of Route C41 as a means to better serve lower-density neighbourhoods within Pitt Meadows' urban core. Flexible routing can allow for the expansion of transit service coverage on an on-demand basis.

Figure 7: Transit coverage and frequency improvements in Pitt Meadows



Action Area 2: Enhance Bus Service and Frequency

The provision of more direct and frequent bus service during both the peak and off-peak periods in Pitt Meadows is paramount if public transit is to become a more attractive and convenient transportation choice in the city. It is recommended that the City work with TransLink to pursue the following service-related priorities:

Strategy 2.1 Establish a frequent transit connection between Pitt Meadows and the Evergreen Line. With the implementation of the future Evergreen Line, which provide a direct rapid transit link Coquitlam to Vancouver, there will be increased demands for transit passengers to connect between Pitt Meadows and the Evergreen Line station at Coquitlam Central Station. As such, a frequent transit connection should be established that allows Pitt Meadows' transit passengers to efficiently and seamlessly connect to the Evergreen Line. Providing this link can further enhance the appeal of using transit for regional travel outside of Pitt Meadows. It is recommended that the City encourage TransLink to begin planning for frequent transit service along Lougheed Highway, potentially with connections between the city centres in Maple Ridge, Pitt Meadows, and Port Coquitlam, to enhance rapid transit connections for communities located east of the Evergreen Line. This could include supporting the establishment of an additional FTN route along Lougheed Highway into Coquitlam that bypasses the core of Pitt Meadows, and provides a more direct link for transit passengers travelling between Maple Ridge, Pitt Meadows, and the Tri-Cities. In this manner, the two FTN routes can serve both the growing Maple Ridge market, as well as the Pitt Meadows core.

Strategy 2.2 Maintain the Frequent Transit Network routing in Pitt Meadows. It is important that the existing FTN route along Harris and Hammond Roads in Pitt Meadows be preserved, as this is a critical connection to the FTN network for Pitt Meadows' transit passengers. The City should also work with TransLink to explore potentially expanding Frequent Transit Network coverage to south Pitt Meadows employment centres to serve the growing commercial and industrial developments as development occurs in that part of the City. Additionally, building on Strategy 1.2, the City should work with TransLink to explore the suitability of establishing an FTN link along the planned North Lougheed Connector.

Strategy 2.3 Support changes that enhance service and connections in Pitt Meadows. Every year, TransLink undertakes service optimization reviews, which is a process of reallocating transit resources from areas of low productivity to where demand is higher. Especially as the commercial and industrial areas of Pitt Meadows grow, it is recommended that the City of Pitt Meadows collaborate with TransLink to review emerging areas of transit demand (i.e. south Pitt

Meadows, Osprey Village) and where improved service quality and connectivity can make transit service more efficient and attractive. The 2013 service optimization will result in the conversion of the C41 route to a two-way service, with 60 minute headways in both directions, and a more desirable route into the Pitt Meadows civic centre.

Strategy 2.4 Improve periods of operation. The City should encourage TransLink to explore expanding operating periods on the non-FTN routes in Pitt Meadows, in order to meet a wider range of transit passenger needs outside of peak times. For example, Route C41, Pitt Meadows' main local circulator, does not operate in the late evening service period or on Sundays and holidays. The City should work with TransLink to promote all-day/every day operation of transit routes in Pitt Meadows where feasible to ensure that residents can access transit for vital services on any day of the week.

Action Area 3: Improve Regional Connections

Expanded regional transit connections are needed to make transit a more viable alternative for residents to connect to destinations farther from Pitt Meadows. Transit connections should better link Pitt Meadows to Maple Ridge, Langley Township, City of Surrey, and the Tri-Cities municipalities. The City should work and collaborate with TransLink to pursue the following improvement priorities for regional routes serving Pitt Meadows:

Strategy 3.1 Encourage TransLink to expand West Coast Express service to off-peak periods. A key limitation of the transit system in Pitt Meadows was identified as the peak-hour only and peak-direction only operations of the West Coast Express. Currently, the West Coast Express operates primarily to serve commuters in the peak hours in peak directions only. The West Coast Express could effectively attract more regional trips to be made by transit, provided that additional peak-period service as well as off-peak service is in place, including additional service during the mid-day, evenings, and weekends. As such, it is recommended that the City advocate for West Coast Express service improvements including more frequent daily service, evening and weekend service, and reverse peak service.

Strategy 3.2 Examine usage of the Park and Ride at Pitt Meadows WCE Station and consider expanding capacity to encourage additional park-and-ride use. Once the Evergreen Line is opened, and frequent transit connections are provided between Pitt Meadows and

Coquitlam Central Station, increased park-and-ride capacity in central Pitt Meadows may be necessary. The City should work with TransLink on expanding park-and-ride capacity as necessary to allow for better leveraging of the bus and SkyTrain systems.

Strategy 3.3 Work with the Ministry of Transportation and Infrastructure to establish and/or enhance transit priority measures along Lougheed Highway. Transit priority measures along congested corridors can help make transit travel more competitive, reliable, and attractive. The City should work with MOTI to consider transit priority measures on Lougheed Highway in particular. Currently, Lougheed Highway already has a High Occupancy Vehicle (HOV) lane. However, where delays and congestion exist today or are anticipated to increase in the future, the City and MOTI can examine opportunities for additional or enhanced transit priority treatments that reduce delays to bus services. This can involve enhanced bus shoulder lanes, transit signal priority measures, or queue jumper lanes along Lougheed Highway. There are already bus priority lanes at the Kennedy Road and Old Dewdney Trunk Road intersections.

Action Area 4: Improve Customer Experience

The attractiveness of transit is based not only on transit services, but also on passenger facilities provided at transit exchanges and bus stops. Passenger accessibility and facilities at bus stops and exchanges can have a significant impact on passenger safety and comfort, in addition to attracting new customers. Often, passenger amenities and accessibility features are components under the City's jurisdiction. Considerations for improving the customer experience in Pitt Meadows include:

Strategy 4.1 Ensure all FTN bus stops have amenities. Currently, 23% of bus stops throughout Pitt Meadows have both bus shelters and benches – all of which are located along Pitt Meadows' FTN corridors on Hammond and Harris Roads. In the long-term, the City should strive to provide seating, shelter, and customer information at *all* bus stops along FTN corridors. The City should develop a prioritization methodology for bus stop amenity improvements, where precedence is given to:

- Bus stops along frequent transit network routes;
- Bus stops near key existing or future employment areas such as southwest Pitt Meadows; and
- Bus stops that service other residential growth areas.

Strategy 4.2 Improved accessibility to transit. Increased accessibility to transit can serve to enhance services for existing customers and attract new riders. Today, many individuals experience barriers to using transit for various reasons, ranging from the physical challenges of the system (such as accessing bus stops and transit exchanges)through to those that experience cognitive difficulties getting around on transit. With an aging population, the number of people with mobility impairments will increase in the future and recommendations to improve transit accessibility in Pitt Meadows can include working with TransLink's Access Transit program to ensure that people with disabilities and seniors are comfortable and confident using public transit, and that the needs of seniors

are accommodated by transit operators. TransLink provides services through its Access Transit program such as presentations, bus training, orientation session, and one-on-one sessions about accessibility features for using the transit system.

Strategy 4.3 Improve bus stop accessibility on FTN and other corridors. As of May 2013, just over half (56%) of the 52 bus stops in Pitt Meadows were classified as being fully accessible, with inaccessible stops shown in **Figure 8**. Along the FTN corridor (Harris and Hammond Roads) over 80% of stops are considered fully accessible. There are also additional opportunities for the City to enhance infrastructure leading to bus stops, such as ensuring that there is a sidewalk adjacent to the bus stop, crosswalks near the bus stop, and accessible curb letdowns. It is recommended that the City prioritize improvements to make *all* FTN bus stops fully accessible, followed by prioritizing improvements for bus stops on local circulator routes adjacent to the civic centre, senior facilities, and schools. The City should ultimately strive to have all of its bus stops fully accessible.

Figure 8: Transit Accessibility Gaps in Pitt Meadows

Strategy 4.4 Provide better customer support that goes beyond reducing physical barriers. This can involve providing information on the City's website about transit and travel planning supports (i.e. TransLink mobile apps), real-time transit information signs showing the time until the next bus arrives, customer outreach, and specialized training for transit users and staff to make the system more accessible for everyone.

Strategy 4.5 Develop transit wayfinding measures. In addition to standard system maps, TransLink provides an online trip planner and mobile application that allows customers to plan their transit trip by entering an address, intersection, bus stop number, or bus route. Wayfinding information can be accessed on a variety of platforms including Google Maps and by telephone from a live customer service agent. In addition to the above, several additional strategies could be undertaken by the municipality to improve wayfinding within Pitt Meadows. These include improved on-street signage to key transit areas (such as Pitt Meadows Station); and, encourage TransLink to provide additional transit information at bus stops, including route maps and schedules at all FTN stops.

Chapter 5.0
Road Network Plan

City of Pitt Meadows
The Natural Place

URBAN systems

Maintaining a safe and efficient street network to support all modes is one of the key elements to supporting mobility in Pitt Meadows. The need to manage the road network is increasingly important, as a growing population locally and regionally will mean that vehicle travel and growth pressures will increase over the next 20 years. In fact, it is anticipated that Lougheed Highway traffic volumes in the westbound morning rush hour and afternoon eastbound rush hour volumes will each increase by 30% by 2041. To date, significant road investments have been made in and around Pitt Meadows to address recent growth, such as the Golden Ears and Pitt River Bridges, which now facilitate more efficient people and goods movement connections between North and South of Fraser Communities, as well as the Northeast Sector. In addition to the growth in the road network, the Vancouver Intermodal Facility (VIF) is also generating more rail traffic to address regional goods movement demands. This growth along with improved transportation links benefit Pitt Meadows in regards to more efficient transportation movements, local economic benefits, and better integration with neighbouring communities. However, negative impacts are also introduced with increased road and rail traffic, including increased traffic on some of Pitt Meadows' key road corridors, and congestion along Lougheed Highway and Old Dewdney Trunk Road, impacts on agricultural traffic, and delays at the rail crossings. Recognizing that vehicle use is the primary mode of transportation in Pitt Meadows, and that future population and employment growth in the City and surrounding municipalities will continue this trend, it is important to plan for and manage the movement of vehicles now and into the future.

The TMP seeks to reduce vehicle travel from 85% of daily trips today, to 80% of daily trips by 2041. With growth over time, this still represents an increase in daily vehicle trips from 37,000 trips per day today, to 45,000 trips per day by 2041. The Road Network Plan is a critical component to achieve these targets of the TMP, as it seeks to accommodate more efficient movement of automobiles, including truck traffic. The potential roadway network improvement concepts explored within this chapter are organized by regional improvements, urban enhancements, intersections and crossings, and goods movement. These concepts are intended to be integrated with other corridor improvements for transit, cycling and pedestrians, benefiting a broad range of transportation users. Many of the improvement concepts are designed to address east-west mobility challenges across Pitt Meadows, as well as to address traffic flow on the urban and rural roads of Pitt Meadows.

5.1 Roads Issues & Opportunities

Key themes related to the road network issues and opportunities in Pitt Meadows include:

- **Traffic congestion** on several major roads, such as Harris Road, Lougheed Highway, and Old Dewdney Trunk Road.
- **Rail traffic** was noted as often resulting in congestion and delays at the at-grade crossings (Harris Road and Kennedy Road). Safety concerns were identified at the rail crossings, relating to vehicles making illegal manoeuvres to avoid waiting at the crossing.

- **Safety and speeding** was noted as an issue on several major roads and neighbourhood roads.
- **Harris Road** was identified as having a number of issues such congestion – particularly during peak periods – with high speeds and volumes creating safety concerns for non-motorists. Also, congestion issues were noted particularly at the rail crossing and at the intersection of Harris Road with Lougheed Highway.
- **More facilities for walking and cyclists,** including sidewalks, bike lanes and better bicycle facilities along Harris Road, Airport Road, parts of Hammond and Bonson.

Opportunities to improve the road network that were identified by residents included:

- **Rail crossing** alternatives such as grade separation, and providing a schedule or notification of train activity.
- **Intersection Improvements,** particularly at Harris Road and Lougheed Highway, Hammond Road and Bonson Road, and Harris Road and 122nd Street, primarily to improve issues of congestion and safety.
- **Road safety** and traffic calming for identified speeding issues particularly on Bonson Road, Ford Road, Park Road, 122nd Avenue, as well as park and school zones.
- **More attractive alternatives** to driving, such as improved walking and cycling facilities and routes.

5.2 Improvement Strategies

This section describes the key road network strategies that are intended to support the TMP vision and goals to improve mobility and accessibility within the City's road network. These strategies are:

- **Regional Network Enhancements**
- **Urban Network Enhancements**
- **Rural Network Enhancements**
- **Safety & Operational Improvements**
- **Manage Goods Movement**

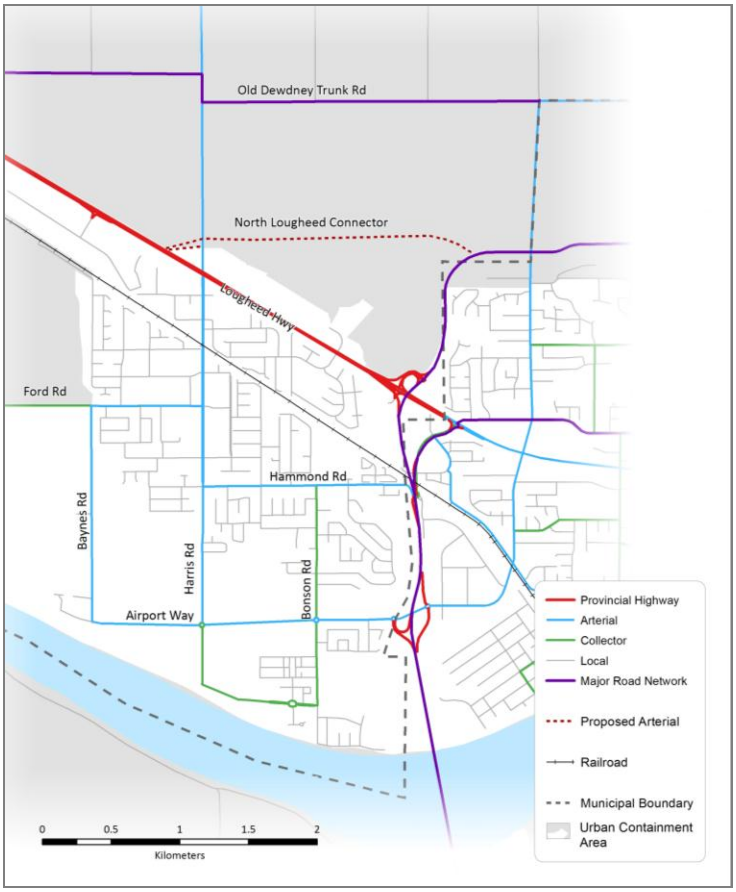
Action Area 1: Regional Network Enhancements

Pitt Meadows is located between several large and rapidly growing municipalities, and its road network supports the movements of regional traffic through Pitt Meadows to and from these adjacent communities, in addition to supporting local Pitt Meadows traffic. In fact, the Lougheed Highway corridor, which is under provincial jurisdiction, accommodates the highest traffic volumes in Pitt Meadows, with up to 60,000 vehicles per day traveling through. As growth in neighbouring municipalities continues, the number of vehicles traveling through Pitt Meadows will increase. Currently, the Lougheed Highway intersections at Harris Road and Kennedy Road are already operating at or near failing conditions during the peak hours, experiencing significant traffic delays and queues during morning and afternoon peaks. With anticipated growth in population and traffic along the Lougheed corridor, these conditions of congestion and delay along Lougheed intersections are projected to increase. In addition, with more commercial and industrial development anticipated in Pitt Meadows, there is a need for more efficient goods movement connections throughout the community. To address the traffic pressures in Pitt Meadows, regional network enhancements identified for Pitt Meadows include:

Strategy 1.1 North Lougheed Connector / Harris Road and Lougheed Highway Interchange. The City's OCP identifies a potential future roadway connection from Pitt Meadows to Golden Ears Way in Maple Ridge, via the North Lougheed Connector. With future commercial development anticipated on the north side of Lougheed Highway, between Harris Road and Meadows Garden Way, the North Lougheed Connector will be required to service this area, since access from the new development to Lougheed Highway will be limited. The additional traffic on the North Lougheed Connector will also require intersection improvements where the Connector meets Harris Road (north of Lougheed Highway), particularly in the form of an interchange at Harris Road and Lougheed Highway interchange, to facilitate the movement of traffic between Lougheed Highway and the North Lougheed Connector. The components of this project are discussed below:

The North Lougheed Connector would serve the future anticipated commercial development on the north side of Lougheed Highway. It would also connect the Golden Ears Way and Abernethy Connector in Maple Ridge directly to the Lougheed Highway west of Harris Road, reducing traffic volumes on Old Dewdney Trunk Road. The proposed North Lougheed Connector will facilitate east-west movement between Pitt Meadows and Maple Ridge, influencing both commuter and goods movement traffic.

Figure 9: North Lougheed Connector Alignment



In August 2013, the City of Pitt Meadows received conditional approval from the Agricultural Land Commission (ALC) for exclusion of agricultural land to facilitate the development of the North Lougheed Connector. The proposed ultimate configuration of the North Lougheed Connector consists of two travel lanes in either direction, with right-of-way preserved for three-lanes in either direction. The key transportation conditions attached to the ALC approval are as follows:

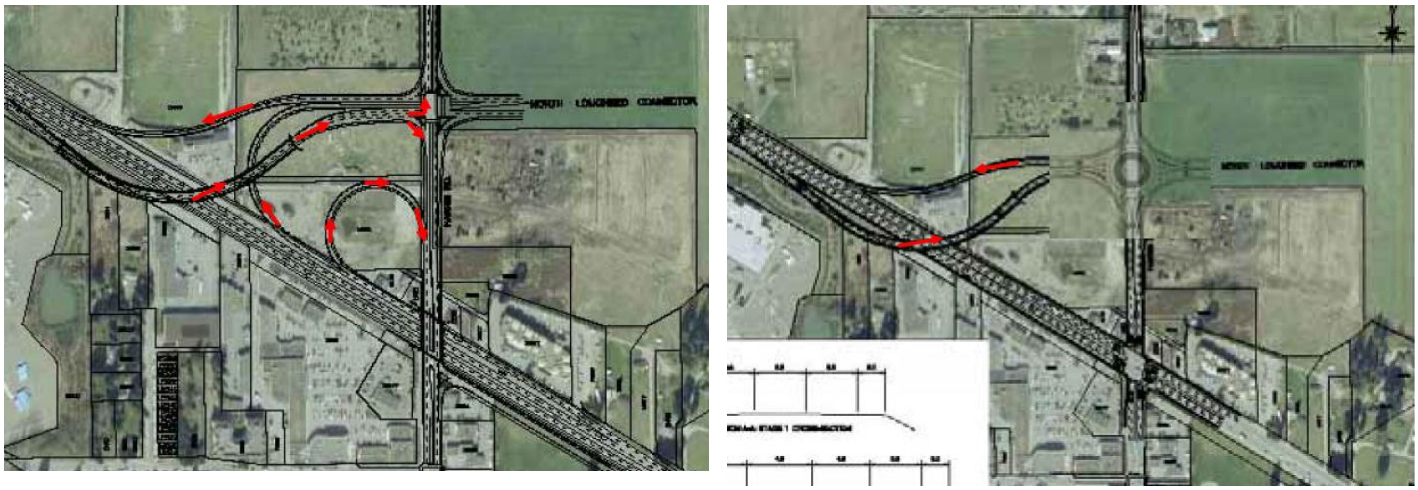
- Development of a **traffic calming plan on Old Dewdney Trunk Road** (west of Sharpe Road) to be implemented after completion of the Connector.
- Substantial commencement and a firm commitment to **completion of construction of the North Lougheed Connector within three years** from the date of the Old Dewdney Trunk Road traffic calming agreement.

Part of this project would also involve designating the North Lougheed Connector by TransLink as a Major Road Network (MRN) route and the removal of the MRN designation for Old Dewdney Trunk Road. With the involvement of TransLink and development adjacent to the Connector, it is

recommended that the City pursue funding and financing sources from TransLink and private developers.

The development of the North Lougheed Connector will require improvements at the Lougheed Highway intersection at Harris Road to accommodate the additional traffic, with potential concepts options as a signalized intersection or roundabout. This interchange is intended to reduce the wait times on Harris Road for northbound vehicles accessing Lougheed Highway. Two conceptual configurations for the interchange are seen in **Figure 10**, with the preferred option as the roundabout configuration. The roundabout interchange would be a two-lane roundabout, with four exit and entry points at the North Lougheed Connector, Harris Road North, Lougheed Highway entrance/exit, and Harris Road south. The western leg of the roundabout would provide access to a westbound on-ramp to Lougheed Highway, as well as the eastbound flyover exit from Lougheed Highway.

Figure 10: Potential Configurations of Harris Road and Lougheed Highway Interchange (Source: Delcan)



Traffic modelling, based on the roundabout concept shown in **Figure 10**, has evaluated and determined the future traffic volumes on Lougheed Highway and other major corridors in scenarios with and without the North Lougheed Connector. **Table 1** illustrates the projected hourly traffic volumes that would be experienced along east and west Lougheed Highway in the event that North Lougheed Connector is *not* built (Scenario 1) and in the scenario that the connector *is* built (Scenario 2).

Table 1: Lougheed Highway - Projected Traffic Volumes in 2031 (AM Peak)

Road Segments		Lougheed Hwy - west of Harris Road		Lougheed Hwy - west of Meadow Garden/Park Road	
		Eastbound	Westbound	Eastbound	Westbound
North Lougheed Connector (NLC) scenario	Scenario 1: NLC not constructed	2,220 vph*	2,880 vph	2,050 vph	2,680 vph
	Scenario 2: NLC constructed	2,470 vph	3,060 vph	2,010 vph	2,470 vph
Difference in traffic volumes on Lougheed Highway (Absolute/% Difference)		+250 vph +11%	+180 vph /+6.3%	-40 vph /-1.8%	-215 vph /-8.0%

* vehicles per hour

A summary of the North Lougheed Connector impacts on Lougheed Highway and other corridors in the city are described below:

- The North Lougheed Connector would provide some **congestion relief on Lougheed Highway between Harris Road and Golden Ears Way**, with approximately 6% of Lougheed Highway traffic expected to divert to the new North Lougheed Connector
- The North Lougheed Connector is also expected to result in a **reduction in volume on Old Dewdney Trunk Road between Lougheed Highway and Golden Ears Way**. However, if no treatments are in place, more pressure will be placed on the east and westbound movements at the Lougheed Highway intersection with Old Dewdney Trunk Road.
- The segment of **Lougheed Highway between Harris Road and Old Dewdney Trunk Road is expected to see an increase of approximately 200 vehicles per direction**. This is a result of the turn movements at the Old Dewdney/Lougheed Highway intersection shifting over to the new interchange on Harris Road to access the North Lougheed Connector. The corridor volumes on this Lougheed Highway segment are currently in the range of 3,000 vehicles per hour in the peak direction and are expected to increase to approximately 3,300 vehicles per hour by 2041. The new connector is expected to increase the corridor volumes to 3,500 vehicles per hour.
- The **eastbound ramp of the interchange is expected to attract approximately 450 vehicles per hour**, while the westbound on-ramp is expected to draw approximately 600 vehicles per hour during the peak hour.

Overall, the North Lougheed Connector is expected to provide some traffic relief through reducing traffic levels on Lougheed Highway (between Harris Road and Golden Ears Way), and on Old Dewdney

Trunk Road (Lougheed Highway and Golden Ears Way). However, more pressure will be placed onto the eastbound and westbound through movements at the Old Dewdney Trunk road and Lougheed Highway intersection (if no treatments are in place), which is currently operating at capacity during the peak hours.

Strategy 1.2 Widening of Lougheed Highway for a dedicated eastbound 'priority' lane to access Harris Road

The intersection of Lougheed Highway and Harris Road is the primary access point for those driving to and from the urban core of Pitt Meadows. Along with regional through-traffic, many Pitt Meadows residents use Lougheed Highway to access jobs, shopping, and other business opportunities in nearby municipalities. The volume of regional traffic along Lougheed Highway during peak hours can often delay local Pitt Meadows traffic seeking access through the Harris Road intersection, with eastbound traffic on Lougheed Highway often queued up as far west as Allen Way during the afternoon peak, creating significant delays for residents and visitors entering Pitt Meadows. In the event that the North Lougheed Connector and Harris Road Interchange are not built, a solution to enhance access to Pitt Meadows during peak hours can be through the establishment of an additional 'priority' lane for eastbound traffic turning south onto Harris Road.

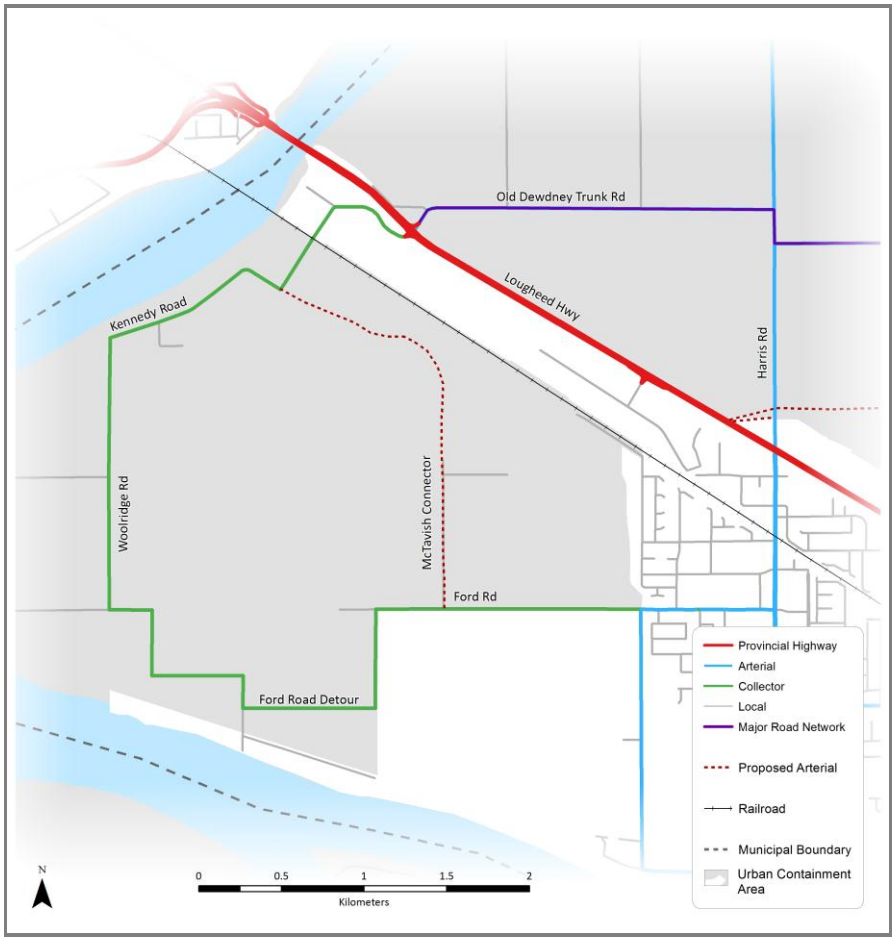
The current eastbound configuration of the Lougheed Highway and Harris Road intersection consists of one left-turn lane, three through lanes, and one dedicated right-turn lane that begins approximately 300 metres upstream of the intersection. Extending this right-turn lane further westward for those destined for Harris Road is a strategy to reduce delays and congestion for both local and regional traffic. The dedicated lane would allow eastbound vehicles destined for Pitt Meadows' urban core to bypass queues on Lougheed Highway. The implementation would require widening on the south side of Lougheed Highway to extend the dedicated right-turn lane, with an extension westward to Allen Way

Strategy 1.3 Old Dewdney Trunk Road. Old Dewdney Trunk Road is currently an important east-west route, with approximately 12,000 vehicles per day. Agricultural vehicles heavily rely on the Old Dewdney Trunk, and through traffic can negatively impact agricultural vehicles traveling on the road to access fields. A traffic calming plan was stated as a conditional requirement for the ALC approval of the land exclusion for the North Lougheed Connector, linked to the condition that Old Dewdney Trunk Road be removed from TransLink's Major Road Network (MRN). It is recommended that the City prioritize the development of a traffic calming or corridor management plan for Old Dewdney Trunk Road. The traffic calming plan should include considerations for traffic calming impacts on agricultural traffic, and could also potentially include specific recommendations for Lougheed Highway, such as converting the current dual left-turn east-bound lanes at the intersection of Old Dewdney Trunk and Lougheed Highway to a single lane to reduce east-bound traffic on Dewdney Trunk Road.

Strategy 1.4 McTavish Connector. The City's OCP identifies a proposed road connecting Kennedy Road to Ford Road, with a connection via McTavish Road. The McTavish Connector

would create an alternate route through the southwest quadrant of Pitt Meadows, and would have significant benefits to traffic flow, including through its role as a truck route. The McTavish connector is envisioned as a two-lane road (one lane in each direction). Currently, truck traffic associated with the industrial uses along Lougheed Highway and other areas use Kennedy Road, Wooldridge Road and Ford Road Detour. The McTavish Connector would provide a much more direct connection between the Pitt River Bridge, Vancouver Intermodal Facility, Pitt Meadows Regional Airport, and industrial areas, and thus has significant benefits for the truck network. With this connector in place, the current route used on Kennedy Road, Woolridge Road and Ford Road Detour would no longer need to be designated as a truck route. Traffic modelling demonstrates that the McTavish Connector would divert vehicle trips off of the Kennedy-Woodridge-Ford Detour Route, with less impact on reducing traffic volumes on Lougheed Highway and Harris Road than the North Lougheed Connector. It is recommended that, recognizing the benefits of the proposed McTavish Connector to goods movement, this improvement be of equal status with other regional network improvements.

Figure 11: Proposed McTavish Connector Alignment



Action Area 2: Urban Network Enhancements

Pitt Meadows' urban area is bounded by Lougheed Highway to the north, Baynes Road to the west, the Fraser River to the south, and the District of Maple Ridge to the east. The City's urban area contains the majority of the commercial and residential areas of Pitt Meadows, with additional industrial development anticipated in the future. With a projected increase in both residents and jobs, the urban area will be supporting more activity, traffic, and connections than before. It is important that the urban road network be managed to support vehicle traffic, but also to enhance neighbourhood livability and sustainable transportation modes. Some key strategies to ensure that the urban road network supports the goals and objectives of this plan include:

Strategy 2.1 Complete Streets Road Classification. The street network within Pitt Meadows generally serves two primary roles – access and mobility. The City has a classification for its street network that guide its short- and long-term decisions regarding the configuration and design of streets and supporting facilities. This classification establishes a 'hierarchy' to describe streets according to their speed limit, width, type of bicycle facilities, pedestrian facilities, and whether on-street parking is permitted. Street classifications in Pitt Meadows include urban and rural classifications for arterial, collector, and local roads. The current street classifications provide general direction for vehicular traffic, and also provides guidance on infrastructure for alternate modes, through the inclusion of gravel shoulders (rural roads), sidewalks and bike lanes (urban roads). They do not, however, consider context sensitive applications based on the surrounding land uses. As a result, it is recommended that the City develop flexible, complete street guidelines that consider all types of road users of all ages and abilities that consider the relative priority of general purpose traffic, goods movement, transit, bicycles, pedestrians, and land use integration based on the road classification, as shown below in **Table 2**.

Table 2: Complete Street Classification Guiding Principles
(Indicating High to Low Emphasis)

	General Purpose Traffic	Goods movement	Transit	Bicycles	Pedestrians
Major Road Network	High	High	High	Low	Low
Urban Arterials	High	Low	High	Medium	Medium
Urban Collectors	Medium	Low	Medium	Medium	High
Urban Local	Low	Low	Low	High	High
Rural Arterials / Collectors	High	High	Low	Medium	Low

Strategy 2.2 Harris Road Streetscape

Harris Road is the gateway to Pitt Meadows, and is a key multi-modal corridor accommodating many types of road users from vehicles, transit, cyclists, and pedestrians. Harris Road is not just a roadway corridor for people moving through, it is also a destination in and of itself as many of Pitt Meadow's prominent commercial and community destinations are located along Harris Road,

including the Civic Centre, the Public Library, Family Recreation Centre, Pitt Meadows Elementary School, and MeadowVale Shopping Centre. With so much activity and vibrancy within the Harris Road corridor, there is an option to rethink the design of the corridor to make it a more appealing environment for non-motorized road users, while still accommodating vehicles. To date, beautification projects have been added to Harris, including street trees and landscaping. Some short to medium-term beautification works planned for Harris Road include street furniture, wayfinding signage and landscaping.

In the long-term, provided the McTavish Connector is built and will provide an alternate route for traffic, options for reducing Harris Road vehicle capacity can be considered – especially given that the four-lanes on Harris Road are not at capacity for most of the day. As such, in conjunction with the construction of the McTavish Connector, the City should undertake a corridor study for the potential reconfiguration of Harris Road, evaluating the feasibility of introducing elements into the roadway, such as on-street parking, wider bicycle lanes with or without parking buffer, wider sidewalks, landscaped boulevards between the sidewalk and roadways, or transit priority measures (i.e. bus bulges). These features can improve and enhance the street environment for transit passengers, cyclists, and pedestrians and can also slow down vehicle speeds on Harris Road and make for a safer and more pleasant 'main street' of Pitt Meadows.

Strategy 2.3 Neighbourhood Traffic Calming

Many of Pitt Meadows' neighbourhoods have connected street patterns, smaller block sizes, trails, sidewalks and street trees that encourage walking and cycling-friendly environments. Neighbourhood road networks may also in some instances encourage vehicle short-cutting, and encourage high vehicle volumes and speeds than is desirable for livable neighbourhoods. To address these issues, the City has been implementing traffic calming measures, primarily in the form of curb extensions and marked crossings, to minimize speeding in residential areas and to make pedestrians more visible. In order to continue applying curb extensions and other traffic calming treatments where needed, the City should develop traffic calming guidelines or a traffic calming policy to establish a formal process to identify and prioritize neighbourhoods requiring traffic calming treatments.

Action Area 3: Rural Network Enhancements

Pitt Meadows' rural areas are primarily in the north of the municipality, as well as in the southwest quadrant, west of Baynes Road. The City's rural area contains the majority of agricultural farming operations, with small pockets of more light industrial and commercial operations. With a projected increase in residents and jobs, rural roadways will likely start to experience more traffic, especially when they provide a quieter alternate route to major roads such as Lougheed Highway. It is important to ensure that the rural road network continue to support agricultural traffic and goods movement that supports farming operations, but also that the design and management of these roads minimizes the

conflicts between general purpose traffic and rural residents / agricultural-related traffic for which they are intended.

Strategy 3.1 Rural Road Classification

In order to create a rural road network that is more reflective of its intended purpose it is recommended that road classifications be updated in the City's Subdivision and Development Servicing Bylaw. Currently in Pitt Meadows, the City's Subdivision and Development Servicing Bylaw specifies design requirements for the Pitt Meadows road network, with requirements varying by road classification and urban context as shown in **Table 3.**

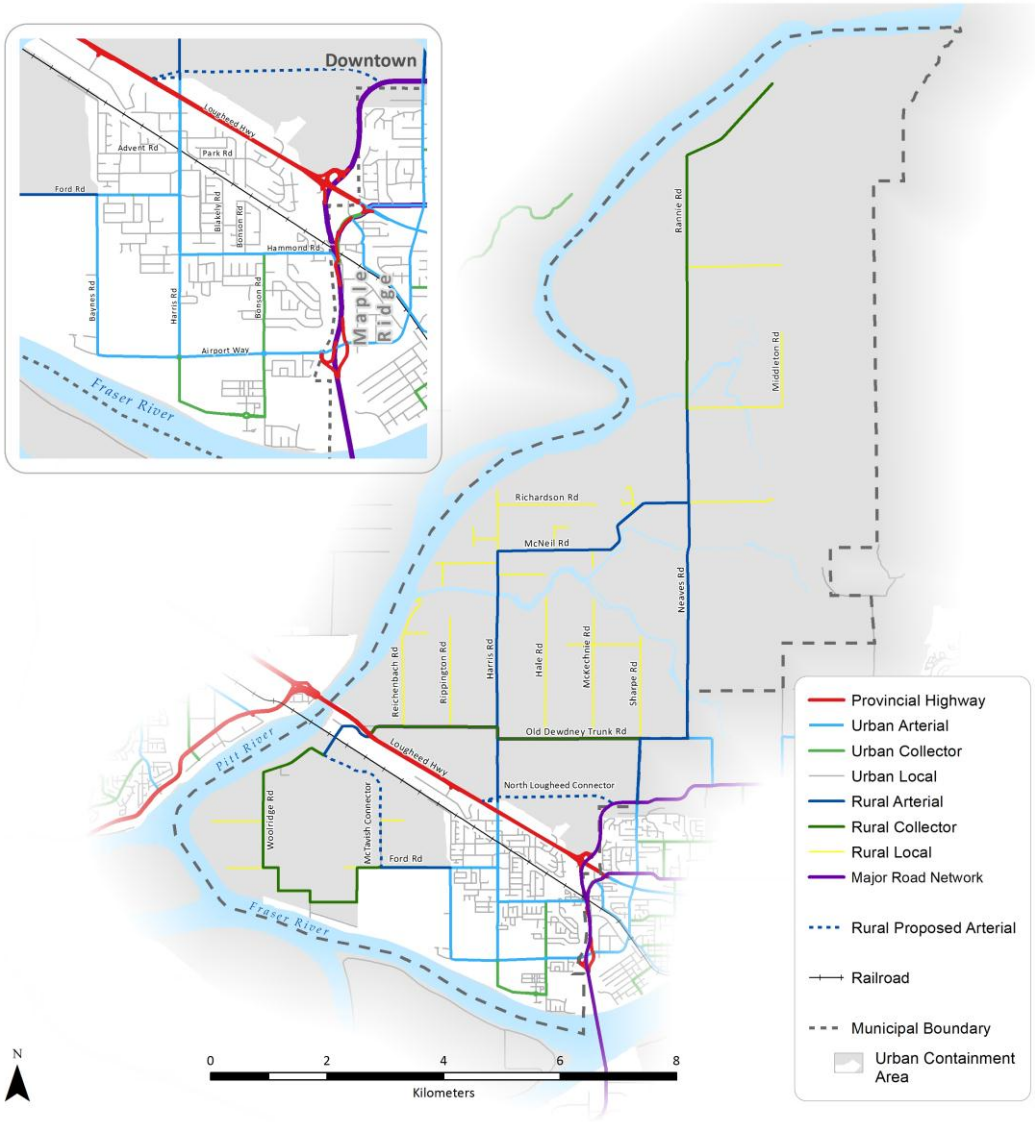
Table 3: Current Rural Road Design Standards

Classification	Right-of-Way Width	Roadway Pavement Width	Travel Lanes	Design Speed	Sidewalk requirements
Arterial (Rural)	20m	9.6m	2 lanes	60 km/hr	0
Collector (Rural)	20m	7.0m	2 lanes	60 km/hr	0
Local (Rural)	20m	7.0m	2 lanes	50 km/hr	0

As outlined in Schedule 4B of the City's OCP, many of the primary rural roads are designated as rural arterial roads, including Woolridge / Ford Road Detour, Harris Road, Old Dewdney Trunk Road, Neaves Road, and McNeil Road. Given the potential future McTavish Connector and North Lougheed Connector projects, it is recommended that some of these rural road classifications be modified to redirect through traffic and non-agricultural traffic to more appropriate corridors. In particular, key recommendations are detailed below (and shown in **Figure 12**):

- Redesignate Old Dewdney Trunk Road as a Rural Collector, in conjunction with completion of the North Lougheed Connector. This classification identifies that it is a feeder route for key local rural roads west of Neaves Road. The ALC requires that traffic calming measures be implemented on Old Dewdney Trunk in conjunction with the opening of the North Lougheed Connector to discourage non-agricultural traffic and regional through-traffic.
- Redesignate a portion of Kennedy Road, Woolridge Road and the Ford Road Detour as Rural Collector, in conjunction with the completion of the McTavish Connector. This classification identifies that it is to act as a feeder route for adjacent local rural roads. Consider implementation of traffic calming measures on Kennedy Road, Woolridge Road and the Ford Road Detour to discourage use of the road by non-agricultural traffic and non-resident through traffic.

Figure 12: Rural Road Re-Classification



Strategy 3.2 Rural Road Improvements

In order to improve the rural road network in both a strategic and financially practical manner, it is recommended that roads designated as rural arterial be brought up to municipal standards to include a pavement width of 9.6m (with paved shoulders), provided at the time of road upgrading or road re-development. This approach also aligns with the recommendations of the Pedestrian and Cycling Master Plan to provide paved shoulders on key rural roads in order to provide a safer space for people to cycle and walk in the City's rural areas.

Action Area 4: Intersections and Crossings

Intersections and crossings have a key impact on traffic flow and on mitigating congestion and delay in the road network. Strategies for managing strategic intersections and key crossings in Pitt Meadows include:

Strategy 4.1: Work with the Province to mitigate congestion and delay at Lougheed intersections. The overall performance of an urban roadway is typically measured by the delays experienced at major intersections, also referred to as Level of Service (LOS). The level of service is a measure of vehicle delay where LOS A suggests that there is no delay and LOS F indicates that there is significant delay and the intersection is experiencing significant queuing. Currently, the signalized intersections under the jurisdiction of the City of Pitt Meadows are generally operating with little to no delays, and are expected to continue to operate under a LOS C or better during peak hours into 2041. However, growth in regional traffic along Lougheed Highway will place increasing pressure on several intersections under the jurisdiction of MOTI today and in the future. This includes the intersections of Harris Road and Kennedy Road, which are expected to be operating at failing conditions in both the morning and afternoon peaks by 2041 (LOS F), with minor congestion and delays at Lougheed Highway intersections with Park Road and Golden Ears Way experienced during the afternoon peaks by 2041. Comparisons between existing and future level of service changes are shown in **Table 4.** Given these anticipated future conditions, the City should encourage the MOTI to achieve smoother traffic flow. Importantly, it is likely that the addition of the North Lougheed Connector and Harris Road / Lougheed Interchange will improve traffic flow and reduce intersection delays and congestion along Lougheed Highway.

Table 4: Intersection Level of Service, Existing and Future

(highlighted boxes identify intersections where conditions worsen over time)

Intersection	Existing Level of Service		Future Level of Service	
	AM	**PM**	**AM**	**PM**
Lougheed Highway / Old Dewdney Trunk / Kennedy Road	LOS E	LOS F	LOS F	LOS F
Lougheed Highway / Harris Road	LOS F	LOS E	LOS F	LOS F
Lougheed Highway / Park Road	LOS C or better	LOS C or better	LOS C or better	LOS E
Lougheed Highway / Golden Ears Way	LOS C or better	LOS C or better	LOS C or better	LOS D

Strategy 4.2: Implement safety improvements at key 'hot spot' intersections. A detailed safety review was conducted for the top ten collision intersections where traffic data was available, with findings illustrated in **Table 5**. The top collision locations are located on Lougheed Highway

and are under provincial jurisdiction, and the City should support MOTI to make safety improvements at these locations. In particular, the top two collision locations are along Lougheed Highway at Harris Road and Kennedy Road. Lougheed Highway and Harris Road also have experienced five pedestrian/cyclist collisions in the past five years, indicating that this is a collision 'hot spot' for both vehicles and other road users.

Table 5: Top Collision Locations in Pitt Meadows (ICBC 2008-2012)

	Location	Jurisdiction	Average Annual Number of Collisions	Average Annual Collision Rate
1	Lougheed Highway & Harris Road	Ministry	152	6.7
2	Ford Road/Harris Road	City	16	3.5
3	122 Avenue/122A Avenue & Harris Road	City	13	2.5
4	Harris & 124 Avenue	City	10	2.1
5	Hammond Road & Blakely Road	City	3.2	1.6
6	Hammond Road & Bonson Road	City	2.4	1.1
7	Lougheed Highway & Meadow Gardens Way / Park Road	Ministry	31	1.0
8	Hammond Road/Harris Road	City	4	0.8
9	Meadowtown Centre & Lougheed Highway	Ministry	11.4	0.7
10	Harris Road & 119 Avenue	City	2.4	0.6

Action Area 5: Manage Goods Movement

The efficient movement of goods and services throughout Pitt Meadows and the surrounding region is critical to support both the local and regional economy. The movement of goods and services takes place along both the road and rail network in Pitt Meadows. The City's designated truck route network (shown in **Figure 13**) is designed to facilitate truck movement outside of the urban core of Pitt Meadows, with goods movement permitted within the urban core to allow for local deliveries. As the City's road network evolves and expands over time to include potential corridors such as the North Lougheed Connector and McTavish Connector, it is recommended that the following strategies be pursued:

Strategy 5.1 Add the North Lougheed Connector to the designated truck route network, in order to effectively serve the commercial development anticipated on the north side of Lougheed Highway and to remove goods movement pressure off of Old Dewdney Trunk Road. This

designation should be done ***in conjunction with the removal of Old Dewdney Trunk Road from the truck route network.*** These changes would serve to re-route truck traffic to the new North Lougheed Connector and Lougheed Highway instead of Old Dewdney Trunk.

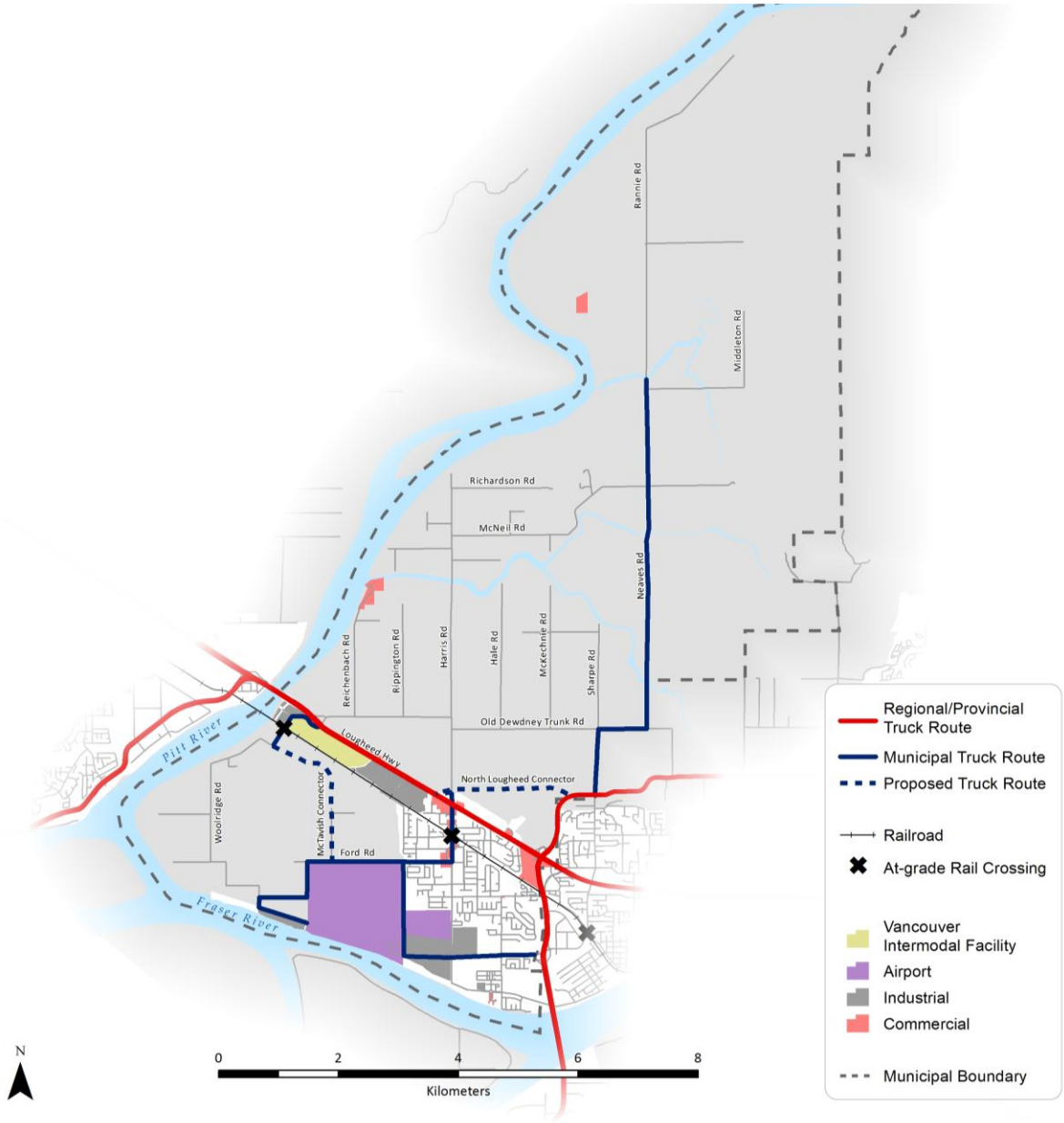
Strategy 5.2 Add the McTavish Connector to the designated truck route network, as this will route will provide more direct and efficient goods movement connections through southwest Pitt Meadows. This should be done *in conjunction with the removal of the current Kennedy-Woolridge-Ford Road detour route*. These changes would serve to re-route truck traffic to the new McTavish Connector instead of the Woolridge-Ford Road detour route.

Strategy 5.3 Mitigate the impact of rail on the road network. Recognizing that significant amount of goods movement by rail through Pitt Meadows is leading to frequent delays at both the Harris Road and Kennedy Road at-grade rail crossings, the City should explore collaborative efforts with CP Rail and the Vancouver Intermodal Facility to reduce impacts of rail traffic on the road network. This can include encouraging initiatives such as providing more information to the public and businesses about train traffic and general crossing schedules, coordinating train crossings to occur outside of peak hours, and other efforts that may be able to reduce duration that vehicles and trucks have to wait at the Harris Road and Kennedy Road rail crossings. The possibility of grade separation over the rail corridor at Harris Road was evaluated by the City, and this option was not recommended due to cost implications and the impacts of an overpass on nearby buildings and land uses. Providing grade separation at this location is now not as important due to grade separation over the rail that has been provided at Golden Ears Way.

Strategy 5.4 Update the Truck Route Bylaw

The City currently has a designated truck route network that was determined through collaboration with TransLink and the BC Trucking Association, with local truck route network approved by Council in 2012. It is recommended that the City establish a more formal truck route bylaw, to establish truck weights (heavy and light trucks) and regulations around use of roadways. This type of work should be done in cooperation with the District of Maple Ridge to ensure there is consistency regarding truck routes and regulations across boundaries.

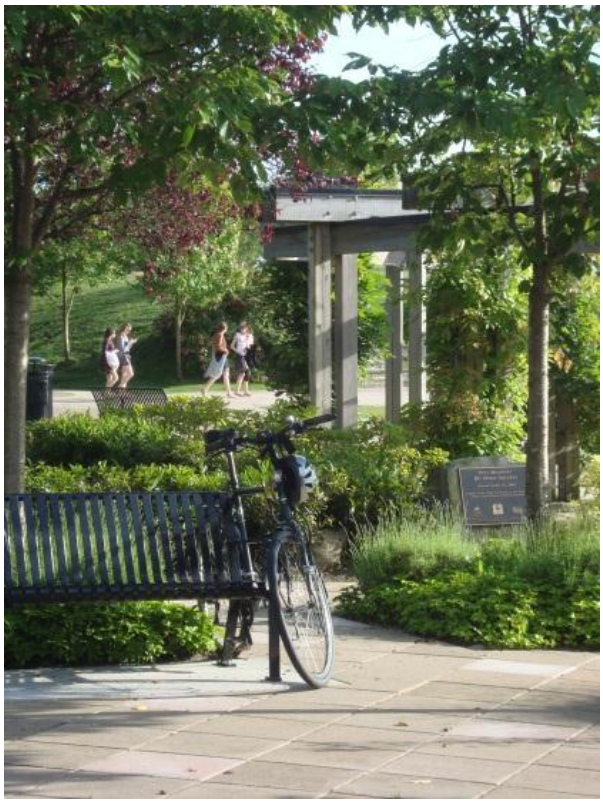
Figure 13: Proposed Future Truck Route Network in Pitt Meadows



Chapter 6.0
Active Transportation Plan

City of Pitt Meadows
The Natural Place

URBAN systems



Walking and cycling are popular activities in Pitt Meadows for both residents and visitors. 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 locally for transportation or recreational purposes. However, while Pitt Meadows has supportive active transportation infrastructure and high rates of recreational walking and cycling, there remains a significant opportunity to increase the number of local walking and cycling trips taken by residents for work, leisure, and day-to-day business. Currently, approximately 9% of all daily trips in Pitt Meadows are by walking or cycling, with the majority of daily trips in Pitt Meadows still largely made by automobile. The targets of the TMP are to increase walking and cycling to 12% of daily trips (10% by walking, 2% by cycling) and reaching this target can be achieved through active transportation improvements in Pitt Meadows' compact urban core, where there is significant potential to increase local walking and cycling trips to nearby neighbourhoods, services and amenities.

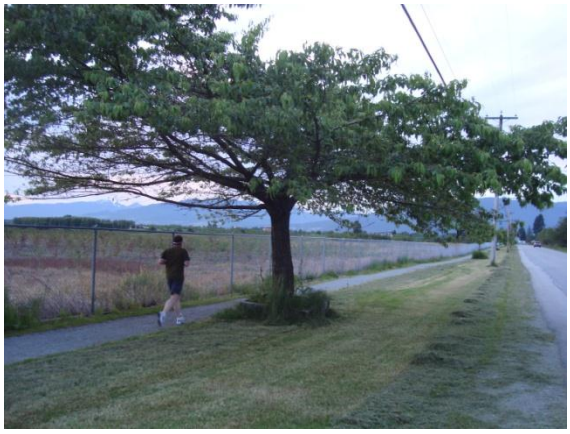
Recognizing the significant potential to attract more people to walk and cycle in the community, the City developed the Pedestrian and Cycling Master Plan (PCMP) in 2012, as a tool to guide the development of the walking and cycling networks in Pitt Meadows. The PCMP, intended as one of the key pillars of the TMP, shapes the City's long-term approach to providing walking and cycling infrastructure, safety measures, and support programs that will position walking and cycling as increasingly attractive and accessible options for short, local trips. At its core, the PCMP supports the City in its aspirations for a more multi-modal transportation system, and sets out a framework of engineering, education, and program strategies to advance walking and cycling in Pitt Meadows. The PCMP provides the walking and cycling directions for the TMP, and are summarized below. More detailed information on the PCMP strategies can be found in the 2012 Pedestrian and Cycling Master Plan Final Report (available on the City of Pitt Meadows municipal website).

6.1 Key Issues & Opportunities

Through the public engagement and consultation process for the PCMP, key themes emerged on walking issues opportunities emerged, that directly shaped the strategies of the PCMP. In brief, these key opportunities for walking and cycling are described below:

- **Excessive traffic volumes, speeds and noise** on many major roadways make walking and cycling feel uncomfortable and unsafe on adjacent sidewalks, shoulders, and bicycle lanes;
- **Lack of infrastructure,** such as sidewalks, paved shoulders, and bicycle routes make for fragmented walking and cycling networks;
- **Unsafe crossings or lack of crossings,** on key corridors such as Hammond Road, Ford Road, Harris Road and Lougheed Highway were cited as a concern for both cyclists and pedestrians; and
- **Narrow bicycle lanes and shoulders,** on Harris Road and Old Dewdney Trunk Road were identified as making cycling uncomfortable and unsafe.

Opportunities that were identified throughout the PCMP consultation process to improve walking and cycling in Pitt Meadows included:



- **More sidewalks**, shoulder facilities, and (separated) bicycle lanes to allow for safer separation between cars and pedestrians / cyclists;
- **Controlled crossings** with pedestrian-actuated signals;
- More **off-street pathways** and shortcuts;
- **Improved lighting** on pathways, as well as landscaping treatments to improve visibility and safety after dark;
- **Amenities** such as bicycle parking, garbage bins, dog bags, benches, and signage to improve convenience and comfort of walking and cycling in the City; and
- **Accessibility considerations**, such as curb let-downs and safe route to school improvements.

6.2 Improvement Strategies

To address these key issues and opportunities that emerged throughout the PCMP consultation, the PCMP provides a comprehensive approach to walking and cycling improvements. The PCMP sets out four key action areas of **Network Connectivity**, **Safety**, **Accessibility & Design**, and **Education & Encouragement**. These action areas and their supportive walking and cycling strategies are the cornerstone of the PCMP, and are summarized below. 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 within the PCMP, and also here:

Walking Strategy

Cycling Strategy

Walking and Cycling Strategy

Action Area 1: Network Connectivity

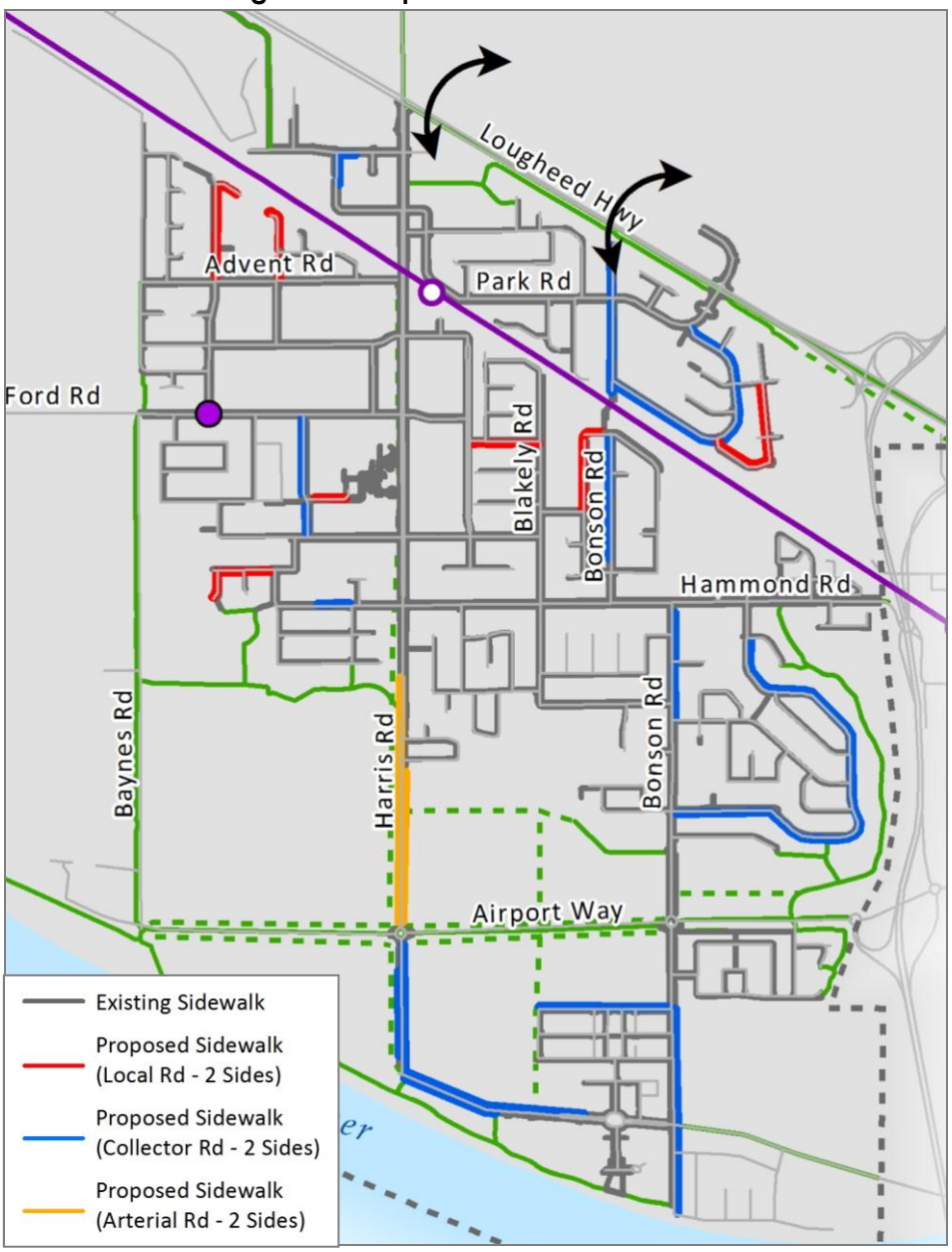
Expanding and enhancing the walking and cycling network is a fundamental part of making walking and cycling a convenient and attractive travel option in Pitt Meadows. A more integrated and connected network of on and off-street pedestrian and cycling facilities can significantly improve the ease of moving around the community, and can thus make travel on foot and by bicycle a more attractive alternative to driving. The following strategies and actions can support residents and visitors to Pitt Meadows to make better network connections in and around their community.

Strategy 1.1 Increase Urban Sidewalk Coverage. Most of the 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 most collector and arterial roads, while local roads with low density residential and industrial uses are only required to have a sidewalk on one side. The City will work to ensure full sidewalk coverage based on the following criteria, with a more detailed Pedestrian Network Plan illustrated in **Figure 14**.

- 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.

The PCMP identified several challenging crossings that act as barriers for cyclists and pedestrians and proposed a single grade separated crossing of the Lougheed Highway at either Harris Road or Bonson Road as shown in Figure 14.

Figure 14: Proposed Sidewalk Network



Strategy 1.2 Comfortable Bicycle Facilities. The focus for the City's bicycle network is to target infrastructure improvements where there is the greatest opportunity to increase the number of cycling trips. This includes focussing bicycle planning on the 'Interested but Concerned' segment of the population, which is believed to be the largest, focusing on facilities that will promote cycling for this group is the main focus of this strategy. Six types of on-street and off-street bicycle facilities to be considered in the bicycle network are off-street pathways, cycle tracks, bicycle lanes, neighbourhood bikeways, shared use lanes and shoulder bikeways. As can be seen in **Figure 15**, the most comfortable type of bicycle facility, and thus more likely to attract more of the 'interested but concerned' demographic are multi-use pathways, cycle tracks, and bikeways. Having more of these comfortable facilities integrated into Pitt Meadows' network can influence perceptions around the safety of riding in Pitt Meadows, and thus increase bicycle ridership over time.

Figure 15: Bicycle Facility Hierarchy

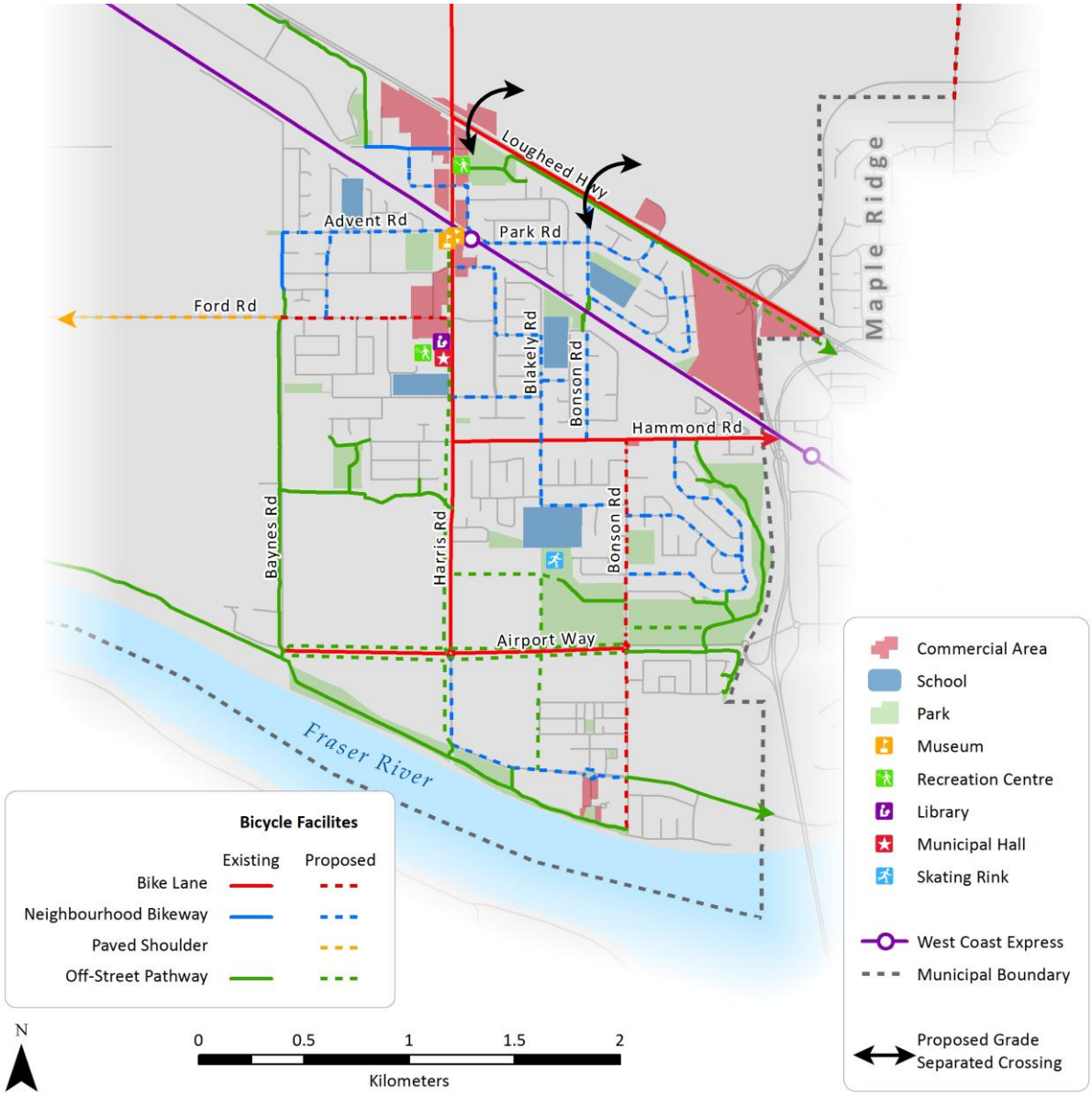
Strategy 1.3 Complete, Connected Urban Bicycle Network. Pitt Meadows has an extensive network of existing bicycle facilities, however, there are still several important missing links in the City's bicycle network, including key connections on Bonson Road, Ford Road, and Harris Road, as well as in some rural areas 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 the bicycle network. The recommended urban bicycle network is shown in **Figure 16** and 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 urban bicycle network contains 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. Rural network improvements include primarily paved shoulders to accommodate bicyclists in these areas. In addition, it is recommended that Harris and Hammond Road bicycle facilities be considered for conversion to separated bicycle facilities in the long-term.

Figure 16: Proposed Bicycle Network



Strategy 1.4 Rural Walking and Cycling. Currently, the City's rural roads are well used although a very few number of these roads have dedicated cycling or 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. The widening of key rural roads, including Ford Road (west), Harris Road (north), McNeil Road, and Neaves Road can provide paved shoulders where possible to be used by both cyclists and pedestrians.

Strategy 1.5 Regional Connections. As many cycling trips take place beyond Pitt Meadows' borders, it is critical to ensure seamless connections to adjacent municipalities. While a number of key connections already exist, the City of Pitt Meadows should work with Maple Ridge to improve east-west bicycle route connectivity between the two municipalities, with focus areas including improved connections along Old Dewdney Trunk Road and Lougheed Highway.

Strategy 1.6 Short-Cuts. The presence of trails and short-cuts can significantly reduce travel time and make walking and cycling more attractive options in Pitt Meadows. 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. It is recommended that these strategic short-cutting opportunities are built upon, and that the City work with and encourage developers to provide pathways in future developments that may reduce walking and cycling travel times throughout Pitt Meadows.

Action Area 2: Safety

Safety, associated with high traffic volumes, speeds and noise, and lack of infrastructure and lighting was identified as one of the top issues facing pedestrians and bicyclists in Pitt Meadows. Safety, both real and perceived, is important to attract more people to walk and cycle in Pitt Meadows. The prevalence of automobiles and automobile-oriented street design can feel threatening to more vulnerable road users, and regardless of the extent of walking and cycling infrastructure, if people do not feel safe using sidewalks, trails, or bicycle lanes, they will likely opt for their car instead. 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. All signalized intersections in Pitt Meadows should have consistent treatments and include pedestrian pushbuttons, pedestrian countdown timers, audible pedestrian signals, and other features. In addition, more pedestrian crossings, including intersections between collector and arterial roads, should have marked crosswalks. It is

recommended that the City upgrade all existing crosswalk locations to ensure all intersection legs have a marked crosswalk and, where feasible, curb extensions. It is recommended that the City continue its curb extension program on key corridors, such as those that are on routes to school. However, special consideration in curb extension design should be given to allow cyclists to pass through without mixing with traffic. Since the PCMP was adopted in 2012, the City has installed additional curb extensions along Ford Road and Park Road, and has made improvements to the unsignalized crossing on Harris Road and Civic Centre.

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 bicycle-activated pushbuttons at all signalized intersections to increase the safety and comfort of bicycle crossings. In addition, the 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. Though outside of the City's jurisdiction, the City should explore collaborative efforts with both the Ministry of Transportation & Infrastructure (MOTI) and CP Rail to address safety concerns at these problematic crossings.

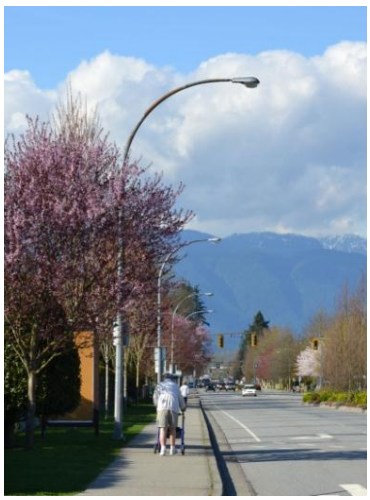
Strategy 2.3 Maintenance. The maintenance and quality of bicycle facilities contributes significantly to comfort levels. The City can communicate to citizens that safe cycling is a continued City priority through maintenance initiatives that keep bicycle lanes and shoulders free of debris and obstructions, including snow removal, sweeping of bike facilities, and ensuring that painted lines are kept visible.

Strategy 2.4 Slow Speed Zones. The implementation of 30 km/hr zones in neighbourhoods could be considered as a method to improve pedestrian and cyclist safety. Slow speed zone neighbourhood initiatives in New York and London, England have been implemented under the guidance that a speed limit of 30 km/hr on residential roads is necessary to make the road environment more safe and comfortable for those walking and cycling in the roadway.

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 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



Community design strongly influences walkability and bikeability of an area. There are many ways the City of Pitt Meadows can promote universal accessibility and design, in order to encourage walking and cycling for people of all ages and abilities. The strategies below are intended to work towards creating a universally accessible community, particularly in the Pitt Meadows' urban centre, and encouraging designs that will help make Pitt Meadows more attractive for walking and cycling.

Strategy 3.1 Pedestrian Accessibility. It is important that the walking and cycling environments in Pitt Meadows are accessible for a large cross section of people, including people with disabilities, seniors, and parents with children. 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. Some key areas of opportunity include ensuring that all the signalized intersections in Pitt Meadows have accessible crossing features, ensuring all sidewalks are free of obstructions, and improving access to multi-use pathways for all users (excluding unauthorized users)

Strategy 3.2 Bicycle-Transit Integration. With bicycle racks already provided on busses, and at West Coast Express stations and trains, further bicycle-transit integration in Pitt Meadows 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. It is recommended that the City of Pitt Meadows encourage TransLink to provide better bicycle connections and parking within WCE stations.

Strategy 3.3 Bus Stop Accessibility & Amenities. With just over half of all bus stops in Pitt Meadows fully accessible, there are opportunities to improve the accessibility of bus stops throughout Pitt Meadows. Passenger amenities at bus stops can also have a significant impact on attracting new users. Amenities could include benches, shelters, lighting, and customer information. Amenities can improve infrastructure leading to bus stops, such as ensuring that there is a sidewalk

leading to the bus stop, a crosswalk near the bus stop, and accessible curb letdowns.

Strategy 3.4 Bicycle Parking. 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. Improved facilities for bicycle parking are relatively inexpensive and can be seen as a positive "quick win" for the City. Additional and/or improved bicycle parking is recommended in key areas of Pitt Meadows, such as key commercial areas, cultural and civic facilities on Harris Road, schools, parks, including Bonson Park, Harris Park, Hoffman Park, North Bonson Park, Pitt Meadows Athletic Park, and Somerset Park, and Harris Road Landing (Pitt River Regional Greenway); and trailheads along the dyke. For locations within the public realm, the City should work to implement bicycle parking where possible within the road right-of-way. For bicycle parking within the private realm, it is important to work with developers to encourage additional bicycle parking with private developments when possible, especially in Town Centre developments near high activity areas and key cycling destinations. In addition, the City should also develop a program to encourage private developments to retrofit existing buildings, particularly in multi-family developments.

Strategy 3.5 Urban Design and Amenities. In the design, construction, and maintenance of its streetscapes, the City should emphasize design quality and amenities for both pedestrians and bicyclists. This can 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 ways the City can encourage walking and cycling through urban design include mixed used developments with street-oriented retail uses, street-oriented developments enhanced sidewalk widths to improve pedestrian comfort, landscaped boulevards between the curb and the pathway, pedestrian amenities (i.e. benches and places to rest), street trees and lighting, and public art.

Strategy 3.6 Wayfinding and Signage. Pedestrian and cyclist friendly design can be supported through the provision of better wayfinding information for people using the City's sidewalks, trails, and bicycle routes. 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 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. Signage and wayfinding measures, such as stencils on the sidewalks indicating directions to key areas, can be measures appropriate in urban areas. Wayfinding in rural areas is also important, to ensure that people in rural

areas are aware of trailheads, paths, and bicycle lanes options. As walking and cycling networks expand, wayfinding information will need to be updated and located accordingly. The City should follow the recommendations of its Trail Signage Plan, and should also follow TransLink's recent Regional Bicycle Wayfinding Strategy.

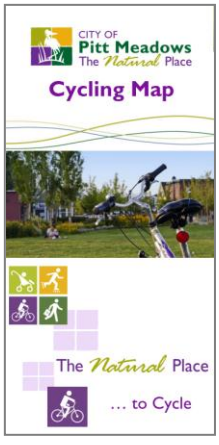
Action Area 4: Education & Encouragement

It is not enough to just provide active transportation 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.

Strategy 4.1 Walking and Cycling Education. There are a number of education and awareness programs and initiatives that the City can develop and support, including supporting cycling skills programs, awareness on roundabout 'rules-of-the-road', safe routes to schools program, and events such as Bike to Work Week and Bike Month. The City should continue to identify opportunities to collaborate with agencies and organizations such as HUB, TransLink's TravelSmart Program, and ICBC and RCMP to promote education and awareness around walking and cycling.

Strategy 4.2 Festivals and Events; The City already supports a number of festivals, events, and community activities that bring awareness to walking and cycling in the community (i.e. Snow Angels, Walking Clubs, Pitt Meadows Day, Walking Events, and Bike to Work Week). The City should continue to support these events, and seek to introduce new events in the future, such as cyclovias, Open Street Days, and parklet programs.

Strategy 4.3 Marketing and Promotion. The City can actively market and promote its walking and bicycle facilities and trails, policies and programs using various media. The City recently created a Bicycle User Map for Pitt Meadows residents, which provides information such as bicycle routes, key destinations, and transit routes. Other initiatives can include developing a dedicated webpage exclusively for walking and cycling to provide general information about the benefits of walking and cycling, trail loops, current pedestrian and cyclist routes in Pitt Meadows, and other walking and cycling resources and tools.



Strategy 4.4 Bicycle and Pedestrian Advisory Committee. It is recommended that Pitt Meadows create a dedicated Pitt Meadows

Bicycle and Pedestrian Advisory Committee to advise on local walking and cycling issues, with a key role to advise Council on the implementation of the PCMP. Another option is to work with Maple Ridge to expand the role of the current Bicycle Advisory Committee to form a more comprehensive committee focussing on both walking and cycling issues. One of the main roles of a dedicated Pitt Meadows Bicycle and Pedestrian Advisory Committee can be to advise Council on the implementation of the Pedestrian and Cycling Master Plan.

Chapter 7.0
Parking Strategy

City of Pitt Meadows
The Natural Place

URBAN systems

With the introduction of higher density housing and retail, office, and mixed-use developments, Pitt Meadows is seeing a shift in parking trends that has resulted in a broader range of user groups seeking, and competing for, access to shared parking resources, with impacts particularly evident in the Town Centre Commercial Area, Civic Centre area, the area adjacent to the West Coast Express station, and Osprey Village. The City recognizes the need to provide residents and businesses with parking supply that is sufficient to meet the needs of a growing and vibrant community, while at the same time utilizing parking management options to selectively manage travel demand to discourage single-occupant vehicle travel and support walking, cycling, transit, and ridesharing consistent with the policy objectives of the City's OCP and Corporate Strategic Plan.

The City recently developed a 2014 Parking Strategy to investigate current parking trends in the Town Centre Commercial Area, Civic Centre, and Osprey Village to determine if the existing parking supply is meeting the demand from the different user groups. The Parking Strategy seeks to:

- Investigate current parking trends and determine if existing parking supply is meeting demand from different user groups, including residents, employees, and the general public;
- Identify challenges and review best practices to alleviate issues;
- Identify strategies to better manage parking demand in high demand areas;
- Explore opportunities for more efficient parking management in both existing and future developments;
- Encourage better parking practices through the development approval process;
- Identify opportunities to improve parking efficiency through improved pro-active management and enforcement; and
- Make recommendations for changes to off-street parking requirements in the zoning bylaw and on- and off-street parking specifications.

The following sections summarize the issues, opportunities, and strategies for parking as identified in the City's 2014 Parking Strategy. Further detail can be found in the Parking Strategy report.

7.1 Key Issues & Opportunities

The development of the 2013 Parking Strategy included opportunities for public and stakeholder consultation, in order to gain an in-depth understanding of parking issues and opportunities in Pitt Meadows today. This included a Parking Strategy project booth hosted on Pitt Meadows Day (June 1, 2013) to solicit feedback from residents, as well as stakeholder communication with various City staff,

community organizations, and specific businesses with parking concerns. Several key themes emerged that directly shaped the approach of the Parking Strategy, including:

- Parking is constrained in Osprey Village. Businesses compete with the community centre for spaces in the public lot, some employers cannot find parking for their employees while others fear that a lack of parking will deter customers.
- Newer multi-family residential developments result in parking spillover into surrounding streets. Important to rectify with numerous mixed-use proposals expected in future.
- Parking at the new library is confusing and is located too far from the library, potential opportunities to utilize parking in adjacent condominiums for library parking.
- Parking behaviour is an issue throughout the community as motorists park on curbs in some areas (i.e. Osprey Village), people sometimes park in excess of allowable time limits, and school areas have insufficient options for short-term parking.
- Parking design standards and time restrictions are inconsistent throughout the City, with perhaps a need for new standards that are applied consistently throughout Pitt Meadows.
- West Coast Express parking spillover is concentrated in specific areas and makes resident parking in these areas very challenging.
- Parking enforcement is challenging due to inconsistent time restrictions. Clearly articulated parking enforcement guidelines/protocols would simplify enforcement. Poor parking habits are reinforced by inappropriate and ineffective parking design.
- 90% of Pitt Meadows residents surveyed during Pitt Meadows Day stated that they often or always find available parking, while the remaining 10% stated they rarely or never find parking available.
- 60% of residents surveyed on Pitt Meadows Day said they feel that they or visitors should be entitled to on-street parking in front of residential properties.
- 40% of residents surveyed on Pitt Meadows Day stated that the acceptable walking distance between their parked car and destination is about one block. 48% said two blocks or more is an acceptable distance, while 13% said less than one block is an acceptable distance.

7.2 Improvement Strategies

To address these parking issues and opportunities, the Parking Strategy provides a comprehensive approach to improve parking management and demand. The Parking Strategy sets out four key action areas of **Addressing Hot Spots, Public Parking Management, Development Regulations, and Demand Management**. These action areas and their supportive strategies are summarized below.

Action Area 1: Address Hot Spots

There are three locations where moderate occupancy rates and anticipated future development may necessitate specific parking management solutions. These locations were identified through consultation with the public, stakeholders, and data analysis, and were seen as areas that require

specific management to rectify existing parking issues and ensure appropriate conditions in future. Specific areas include Osprey Village, areas surrounding the West Coast Express train station, and Civic Centre as described below.

Strategy 1.1 Parking management in Osprey Village. Osprey Village is a newer, mixed-use community with unique parking issues. Businesses compete with the community centre during special events to ensure their customers and employees have access to parking. On-street parking on Barnston View Road is highly sought-after, but only a small supply is available. The following recommendations seek to ensure businesses have adequate parking, special event parking is accommodated without impacting businesses, and parking demand associated with future development is addressed:

- Introduce a **permit system** to balance competing interests for parking in the off-street lot among retail employees and community centre patrons. A 2 to 4-hour time limit can accommodate short-term customers without permits, and a specified quantity of permits issued to businesses will allow permitted vehicles to park in excess of the 4-hour time limit.
- Improve **communications** and deliver information on parking restrictions and availability via signage, message boards, social media and online information, and other outreach activities.
- Provide **alternate parking supply options** to ease parking issues through more on-street parking outside the village centre, in and around Bishops Reach, and at the southern end of Barnston View Road.
- Pursue **demand management** opportunities to encourage commuting by alternative modes to Osprey Village.

Strategy 1.2 Parking management in West Coast Express Station area. On-street parking is a public resource for the betterment of the community and it is suggested that the City continue to facilitate WCE commuting by accommodating all-day WCE parking on-street. However, as WCE ridership is expected to increase over time and parking rates may increase in the WCE lot, both

may increase parking demand on-street. The City should monitor on-street parking around the WCE station to ensure that conditions remain acceptable for residents in future.

Strategy 1.3 Parking management in the Civic Centre. Ford Road between Harris Road and 190a Street was identified as a parking "hot spot" resulting from competing interests among businesses and the high-density residential buildings. Parking occupancies are highest on Saturday morning, when 65% of available parking spaces are occupied. The six 15-minute spaces closest to Harris Road are also well occupied. Residents and City staff noted that parking occupancy is also high on Friday/Saturday evenings when the adjacent pub is busy and on Sunday mornings when the church is busy. Two actions are recommended to improve parking management on Ford Road:

- Signage and wayfinding should be used to encourage use of the Civic Centre parkade and reduce parking demand on Ford Road; and
- Time restrictions on Ford Road should be altered to be more consistent.

Action Area 2: Public Parking Management

Public parking is a municipally-owned resource that should be managed by the City for the benefit of the community. Appropriate management is dependent on the surrounding context, land use, and the types of vehicles and individuals that need to be accommodated for maximum benefit to the surrounding area. The following strategies are recommended to improve public parking management in Pitt Meadows.

Strategy 2.1 On-Street Parking Management. On-street parking restrictions are inconsistent throughout Pitt Meadows as a result of case-by-case application of time restrictions over time in response to specific issues or complaints. In many cases, restrictions are unnecessarily long or are in locations where they are no longer needed. It is recommended that the City make parking time restrictions more consistent to improve driver's comprehension and reduce the burden on bylaw enforcement. Two on-street parking time restrictions should be utilized: 2-Hour time restrictions on streets regularly exceeding 75% occupancy and short-term 15-minute time restrictions on streets adjacent to land uses that require short stay parking.

Strategy 2.2 Parking Signage and Wayfinding. Signage and wayfinding is used when public parking supplies are unknown to drivers or have poor visibility from major approaches. Signage and wayfinding may also be used to encourage parking in certain areas. Parking wayfinding signs are currently used in isolated areas to communicate the location of public parking supplies, most notably in Osprey Village and the Civic Centre area. It is recommended that the City develop a uniform approach to parking wayfinding. All elements should be blue and feature the letter "P" prominently, as these are the recognized elements of parking signs. Three elements are recommended:

- **Identification signs** that confirm the location of a public parking and display information regarding restrictions, time limits, etc.
- **Directional signs** that indicate the path to follow towards public parking. Directional signs may also indicate distance.
- **Wayfinding** emblem that is placed at regular intervals to guide pedestrians between a parking area and their destination. This may be a series of small signs or a ground stamp.

Specific wayfinding is recommended in the Civic Centre / Ford Road and Osprey Village.

Strategy 2.3 On-Street Parking Design. The design of on-street public parking is impacting parking habits and traffic safety in certain locations of Pitt Meadows, as confirmed through observations and feedback from residents. Parking dimensions appear to vary by location and signage is not always clear and can create confusion, particularly with variable time restrictions. School zone drop-off areas are another area of concern. Parking design standards are required to clearly articulate criteria for on-street parking areas and may also include design criteria for private off-street parking facilities. Improvements to on-street parking design include:

- Establish parallel on-street parking space dimensions and apply consistently throughout Pitt Meadows
- Conduct a study specifically to assess the adequacy and safety of drop-off/pick-up on 119 Avenue, near Pitt Meadows Elementary School.

Strategy 2.4 Parking Enforcement. Clear and consistent restrictions and articulated parking enforcement guidelines are needed to provide enforcement personnel with guidance on how enforcement is to be conducted and to clarity to drivers on how parking enforcement is being conducted in case of dispute. Recommended strategies to support parking enforcement include:

- Using **enforcement equipment** with built-in ticket printing, camera and license plate recognition, 3G wireless communication, and real-time updates to citation database.
- The City may consider reducing parking **violation rates** to improve the public perception of Bylaw Enforcement and to provide incentive to make payment to address any issues of outstanding payments.

Action Area 3: Development Regulations

To ensure parking regulations are consistent with City policies, the 2013 Parking Strategy recommends a number of revisions to existing and new parking regulations.

P **Strategy 3.1 Apartment Parking Supply Rates.** Upon a review of the City's apartment parking supply rates and vehicle ownership rates, it appears that the City's minimum parking supply rates exceed parking demand. Two recommendations are put forward to address this issue.

- Reduce minimum parking supply rates unit in the Town Centre, and Mainstreet Commercial zones.
- Retain existing minimum parking supply rates and encourage developers to make monetary contributions in-lieu of required parking. The City can then use monies collected to provide public parking that can be used more efficiently or improve walking, cycling, and transit infrastructure.

P **Strategy 3.2 Townhouse Parking Supply Rates.** It is recommended that the City retain the existing minimum parking supply rate for townhouse land uses. Any issues of parking spillover from townhouses are suggested to result from improper use of available parking and not from a lack of parking supply.

P **Strategy 3.3 Parking Supply Maximum.** It is recommended that the City develop a parking maximum of 125% the minimum parking supply rate. Limiting parking supply is in line with City objectives of increasing land use density and creating a compact urban form. Consideration may be given to limiting parking maximums to TC, MC, and RM zones. A clause may also be included in Zoning that allows the City to issue a variance on the maximum where a parking study prepared by a qualified professional and approved by the City determines that additional parking supply is justified.

P **Strategy 3.4 Cash-in-Lieu.** The City should establish a cash in-lieu mechanism which can provide an opportunity for the City to decrease parking supply associated with new development, while increasing public parking supply and enhancing alternative transportation infrastructure. The cash in-lieu rate should be set at $10,000 per space.

Action Area 4: Demand Management

Demand management refers to strategies that seek to influence travel behaviour to encourage sustainable, more economic travel options. Pursuit of demand management strategies will help reduce parking demand and ease parking congestion in high demand areas, as well as help the City achieve sustainable transportation objectives.

P **Strategy 4.1 Bicycle Parking & End-of-Trip Facilities.** The City's Zoning Bylaw contains bicycle parking supply requirements for all new buildings and changes in occupancy. The Zoning Bylaw

also includes bicycle parking design criteria for siting, security, lighting, and dimensions for both Class 1 and Class 2 bicycle parking. The following recommendations to these standards are recommended:

- Increase the Class 1 bicycle parking requirement for apartment land uses to 1.0 spaces per unit;
- Consider developing a program to provide bicycle parking at existing sites, as recommended in the Pedestrian and Cycling Master Plan (See Section 5 of this report, Action Area 3);
- Encourage future retail, office, and institutional developments to provide shower and change facilities as justification for a reduction in parking supply.

P **Strategy 4.2 Unbundled Parking.** Multi-family residential developments typically include at least one parking space with the purchase of a unit. This provides little incentive for residents to use alternative travel modes and often results in excessive parking supply. 'Unbundled' parking scenarios entail a multi-family residential unit being sold without a parking space and providing the option to purchase or rent a space. It is recommended that the City pursue opportunities to encourage unbundled parking in future multi-family residential developments through:

- Including a policy in the OCP addressing unbundling;
- Establishing a provision in the Zoning Bylaw that specifies the quantity of required parking that may be unbundled; and
- Using unbundled parking as for justification to reduce parking supply, as permitted in the Zoning Bylaw.

P **Strategy 4.3 Osprey Village Transportation Demand Management.** Enhanced travel options are important for Osprey Village to reduce and reduce parking demand. The following options are recommended specifically for Osprey Village and may also be considered elsewhere in Pitt Meadows:

- Provision of **long-term bicycle parking**, in a central location in Osprey Village.
- **Bus stop improvements**, particularly on the bus stop on Fraser Way immediately east of Barnston View Road in Osprey Village. The City should work with TransLink to provide a bench, shelter, schedule information, and adequate lighting.
- **Priority parking**. Consider designating one or two spaces in the Osprey Village parking lot as carpool spaces that may be used by vehicles with more than one occupant in excess of the four hour time limit. This would encourage carpooling among employees and reduce parking demand.
- **Employee Travel Planning**. It is recommended that the City develop a staff travel plan template that identifies all travel options available for employees working in Osprey Village, customized for each business based on operating hours and work travel requirements.
- Providing an **Events Shuttle,** with bookings through the community centre, should be considered, particularly for large events to decrease demand for parking in Osprey Village.

Chapter 8.0
Implementation

City of Pitt Meadows
The Natural Place

URBAN systems

The City of Pitt Meadows Transportation Master Plan provides long-term direction for roads, transit, walking, cycling, and parking to make the transportation system more effective, efficient and balanced in terms of moving people and goods within the community. The comprehensive strategies are intended to guide the City of Pitt Meadows' planning and capital investment decisions, and to provide the City with clear directions and priorities. The plan provides the City with a vision for the future of transportation in the community over the long-term. However, recognizing the long-term vision of the Plan will require significant investment. An implementation strategy is required to prioritize short-term improvements that are within the range of the City's current capital budget for investment in new transportation infrastructure.

This chapter presents an implementation and phasing strategy, identifying capital **road and transit project costs and priorities** over the short-term (0 to 5 years), medium term (5 to 10 years), and long-term (10 years and beyond). Project priorities and associated costs for walking and cycling improvements are detailed further in the City's 2012 Pedestrian and Cycling Master Plan, but are summarized in this section. This implementation strategy will assist in the City's capital planning process and ensure that projects proposed for Council consideration in its capital planning process reflect the current transportation system needs and the City's broader priorities. In addition, a monitoring program is provided to ensure that the TMP is implemented as intended over time.

8.1 Implementation Strategy

The following sections summarize the priorities and costs for capital improvements that are identified within the Transportation Master Plan and which are within the City's jurisdiction. The recommended capital improvements are grouped into the following categories:

- Road Network improvements;
- Transit improvements; and
- Pedestrian & bicycle - network and crossing improvements.

In addition to these capital investments that are within the City's jurisdiction, there are a number of other costs that are not included, such as intersection improvements on the Lougheed Highway (Ministry of Transportation & Infrastructure) and transit service improvements (TransLink).

The implementation strategy includes planning-level cost estimates for both major and minor road network improvements (**Table 6 & 7**), and transit, walking and cycling improvements (**Table 8**). Where possible, the implementation strategy has used road network costs identified from previous studies, including costs identified in the City's 2009 *Development Cost Charge (DCC) Review*, which have been factored up 10% to accommodate for inflation.

Cost estimates have not included any design work, are provided for discussion purposes only, and should be confirmed through future phases of planning and design. Costs for identified projects could

vary significantly for each initiative as costs change over time and are typically not used for project budgeting purposes. In addition, possible contributions from other agencies and the private sector are not possible to estimate. The costs presented in the implementation strategy are largely for comparative purposes and should be refined further to establish project budgets. All costs are summarized in **Table 9.**

Table 6

Major Road Capital Improvements

Project Description	Partners	Total Project Cost	% Cost Sharing by Others	City's responsibility	DCC Recoverable	Priority
North Lougheed Connector	Federal Government, TransLink, MOTI, Private sector	$11.2 million	49%	$6.3 million	38%	Short-Term
Harris Road and Lougheed Highway Interchange	Federal Government, TransLink, MOTI, Private sector	$42 million	75%	$11.6 million	38%	Short-term
Old Dewdney Trunk Traffic Calming Plan	-	$500,000	0%	$500,000	-	Short-term
Woolridge / Ford Road Traffic Calming Plan	-	$500,000	0%	$500,000	-	Medium-term
McTavish Connector	-	$4 million	0%	$4 million	100%	Long-term
			Major Road Subtotal	***$22.9million***		

Table 7

Minor Road Capital Improvements

Project Description	Partners	Total Length	% Cost Sharing by Others	City's Responsibility	Priority
Rural & Minor Road Improvements					
Harris Road Streetscape	-	-	0%	$200,000	Medium-Term
Harris Road shoulder widening (river to McNeil Road)	-	700m	0%	$210,000 *	Long-term
McNeil Road shoulders	-	3.7 km	0%	$1.13 million*	Long-term
Neaves Road shoulders	-	4 km	0%	$1.2 million*	Long-term
Ford Road shoulders (west of Baynes)	-	1.5 km	0%	$450,000*	Long-term
203rd Street shoulders	-	1 km	0%	$300,000	Long-term
			Rural & Minor Roads subtotal	***$500,000***	
Safety & Operational Improvements					
Minor intersection improvements	-	-	0%	$175,000	Medium-term
			Safety & Operational subtotal	***$175,000***	
			Minor Road Network Total	***$675,000***	

*Road widening costs captured in bicycle network capital costs in Table 8

Table 8

Transit and Active Transportation Capital Improvements

Project Description	*Unit Cost*	*Total Cost*	Priority
Transit Network Improvements			
Bus stop accessibility upgrades	16 stops at $5,000 / stop	$80,000	Short-term
Bus stop shelters (FTN routes only)	8 shelters at $15,000 / shelter	$120,000	Medium-term
Bus stop benches (non FTN routes)	28 benches at $2,000 / bench	$56,000	Long-term
	Transit subtotal	***$256,000***	
Walking and Cycling Improvements			
Pedestrian	-	$1.85 million	Detailed in City's *Pedestrian and Cycling Master Plan*
Bicycle	-	$6.4 million	
Ped / Bicycle Crossing	-	$334,500	
	Walking and Cycling subtotal	***$8.58 million***	

As summarized above, the level of investment required to implement all improvements recommended in the TMP is estimated to be in the range of **$32.4 million** (in 2014 dollars). This is equivalent to approximately **$1.08 million per year** for a 30-year planning horizon. It should be noted that these cost estimates do not include items such as property costs, environmental mitigation costs, and utility relocations. **Table 9** provides a summary of all costs of the recommended road, transit, walking, and cycling improvements captured within the TMP.

Table 9
Estimated Summary Level of Investments for Capital Improvements

Category of Capital Improvement	Short-term	Medium-term	Long-term	Total
Road Network Improvements	$18.4 million	$875,000	$4.3 million	$23.6 million
Transit Improvements	$80,000	$120,000	$56,000	$256,000
Pedestrian Improvements	$269,200	$530,000	$1.05 million	$1.85 million
Bicycle Improvements	$89,000	$280,000	$6.03 million	$6.4 million
Pedestrian / Bicycle Crossing Improvements	$144,000	$133,000	$57,500	$334,500
TOTAL	***$19 million***	***$1.93 million***	***$11.5 million***	**$32.4 million**

8.2 Funding Strategy

Wherever possible, the City should work with other agencies and levels of governments, and developers to establish cost sharing agreements or to seek grant opportunities in order to off-set total project costs. It is estimated that the short-term priorities identified in **Table 9** will cost approximately $19 million to implement. However, this cost 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 can leverage its investments by identifying partnership opportunities and pursuing external funding sources. The City should pursue all available sources of funding for transportation facilities and programs, including the programs identified below. This can include leveraging other funding sources within the City, such as using development cost charges. While local governments are often required to front-end the cost of growth-related infrastructure, much of these costs can be recovered through DCC's as growth occurs. As stated in the City's 2009 DCC Review, and identified in **Table 6**, many of the City's major road projects can be recoverable through DCCs over time.

In addition, the City should pursue other external sources of funding such as developers, TransLink, the Federal and Provincial Governments and other benefitting agencies and organizations. As funding opportunities change regularly, the City should regularly check with all levels of government to keep up to date on current funding opportunities. Some options for the City to pursue include:

- ***Major Road Network (MRN) Minor Capital Program*** is an annual allocation of TransLink capital funds dedicated to managing and improving the efficiency of the existing MRN network. Eligible projects include minor capital works such as improvements to MRN intersections, geometrics, safety, and network continuity.
- ***Major Road Network (MRN) Operation, Maintenance and Rehabilitation Program*** is allocated on an annual basis to fund the operation, maintenance and rehabilitation of the Major Road Network on a pro rata basis, depending on the number of MRN lane kilometres within each municipality.
- ***Transit-Related Road Infrastructure Program (TRRIP)*** is allocated for transit improvements, such as transit priority signals, queue-jumping lanes for buses, and bus lanes. TransLink contributes up to half of the costs of municipal capital projects, up to the maximum funding allocated to each municipality.
- **Bicycle Infrastructure Capital Cost Sharing Program (BICCS)** is intended to encourage municipalities to construct more bicycle routes and remove physical barriers to cycling. Funding is available in both "block allocations" on a per capita basis, and "regional needs" funding based on a set of criteria including safety, network contribution, demand and adherence to guidelines. Funding through TransLink's BICCS program is typically up to 50 percent of the project cost.
- **Infrastructure Canada** manages several programs that provide funding for environmental and local transportation infrastructure projects in municipalities across Canada. Typically, the federal government contributes one-third of the cost of municipal infrastructure projects. Provincial and municipal governments contribute the remaining funds, and in some instances, there may be private sector investment as well.
- **Provincial programs and initiatives** such as Provincial Cycling Investment Program (PCIP) and Cycling Infrastructure Partnerships Program (CIPP) offer funds to municipalities undertaking projects to support and encourage cycling at the local-level.

- **Green Municipal Funds**. The Federation of Canadian Municipalities manages the Green Municipal Fund, with a total allocation of $550 million. This fund is intended to support municipal government efforts to reduce pollution, reduce greenhouse gas emissions and improve quality of life. The expectation is that knowledge and experience gained in best practices and innovative environmental projects will be applied to national infrastructure projects.

- **ICBC** provides funding for road improvements, including pedestrian and bicycle facilities, particularly where these have the potential to reduce crashes, improve safety, and reduce claims costs to ICBC. Funding is available through ICBC's Road Improvement Program, for studies and implementing safety improvements, as has done on some of Pitt Meadows' intersections (i.e. larger signalheads). Other ICBC programs include the Speed Watch Program (through the Community Policing Centres), Speed and Intersection Safety Program, Counter Attack, Operation Red Nose, and Road Sense Speaker Program for Schools.

- **Private sector**. At the time of development many corporations wish to be good corporate neighbours — to be active in the community and to promote environmentally-beneficial causes. Bicycle and pedestrian facilities are well-suited to corporate sponsorship, and have attracted significant sponsorship both at the local level and throughout North America. Examples in B.C. include Construction Aggregates in Sechelt, which constructed an overpass over a gravel conveyor to provide a link for pedestrians and cyclists, and 7-Eleven and Molson Breweries which have sponsored multi-use pathways in Vancouver, Burnaby and New Westminster. In addition, VanCity provides funding through its Environmental Fund and TD provides funding through its Friends of the Environment Foundation.

8.3 Monitoring

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

- ***Meaningful.*** The monitoring program will need to outline a monitoring strategy that yields meaningful results and can point to the success in achieving the City's broad goals and

objectives, such as the OCP, greenhouse gas reduction, promotion of sustainable modes of transportation, etc.

- ***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 TMP, and secondly, the outcomes of the plan, as summarized below. It is recommended that the City monitor progress in each of these areas every 1-2 years, based on data availability.

Implementation Progress

- **Number of completed projects identified in the TMP**
  - Sidewalks (# projects)
  - Bicycle Route (# projects)
  - Transit (# and % bus stops with shelters, # and % of bus stops with benches, # and % of accessible bus stops,)
  - Road Network (# projects)
- **Annual investment levels**
  - Walking ($ and % of City's total transportation capital investments)
  - Cycling ($ and % of City's total transportation capital investments)
  - Transit ($ and % of City's total transportation capital investments)
  - Street Network ($ and % of City's total transportation capital investments)
- **Network development**
  - Sidewalk network (km of existing facilities)
  - Bicycle Network (km of existing facilities)
  - Transit Network (km of transit corridors)
- **Mode Share of Work Trips**
  - Driving (%)
  - Transit (%)
  - Walking (%)
  - Cycling (%)
- **Vehicle Activity**
  - Traffic Volume Counts (AM/PM vph/vpd)
  - Intersection Counts
  - Collision data (collision rate / frequency)
- **GHG Emissions**
  - Transportation-related GHG emissions (tonnes)

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