City of Campbell River

Master Transportation Plan

City of Campbell River

June 2012

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Contents

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Part 1

Introduction

The City of Campbell River is a vibrant and growing community strategically located in the Strathcona Regional District on the east coast of Vancouver Island. The City is a key urban centre serving central and northern Vancouver Island, providing services and amenities to many nearby island and mainland communities.

Communities such as Campbell River can no longer afford to deal with goals such as transportation, land use patterns, the environment, and the economy in isolation. It is uneconomical to invest in a single set of priorities such as transportation without serving other City goals and objectives. The benefits of investing in transportation infrastructure go far beyond simply the provision of roads, transit services, bicycle routes and pedestrian facilities. In broader terms, investment in transportation can also help the City achieve overarching goals and objectives, such as creating a compact, complete community with land use patterns that support alternatives to the automobile; promoting a healthy environment where greenhouse gas emissions (GHG) are reduced and local and regional air quality is improved; and ensuring a vital economy that allows residents to live, work and play locally while also supporting regional economic priorities through effective goods movement. In fact, transportation can be regarded as a "foundational" element in achieving the City's broad goals and objectives related to environmental, economic, and social sustainability.

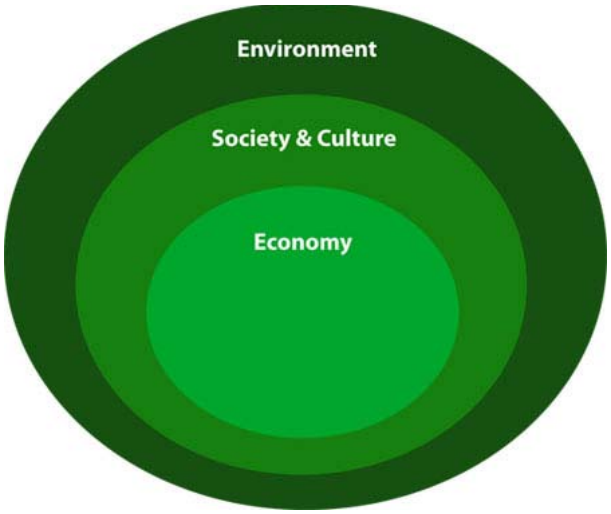
To help the City move towards sustainability, the City has prepared an update to its Master Transportation Plan. This process has allowed for the community to revisit its current and future transportation needs, and to incorporate a balanced approach towards all transportation modes within the existing planning framework.

1.1 Purpose of the Plan Update

In 2004, the City prepared the Master Transportation Plan for Area Roads (MTP), which recommended improvements to address current and anticipated future deficiencies in the road network to the year 2023. Since the 2004 MTP was completed, there have been a number of significant policy changes within Campbell River and externally that have placed an increasing emphasis on sustainability, as briefly summarized below.

Concurrent to the update of the Master Transportation Plan, the City of Campbell River has developed a new Sustainable Official Community Plan (SOCP). The SOCP establishes a policy framework and guidelines to move toward sustainable development throughout the community. Other City initiatives such as the Green City Strategy, the Carbon Neutral Strategy and the Community Energy and Emissions Plan indicate the City's sustainability priorities, in both the corporate and community context. In addition, several recent studies and plans have provided direction for the City's transportation network, particularly in the Downtown and Campbellton areas.

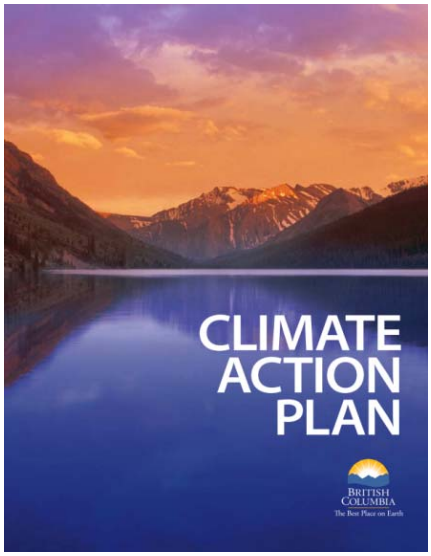
Figure 1: Three Pillars of Sustainability



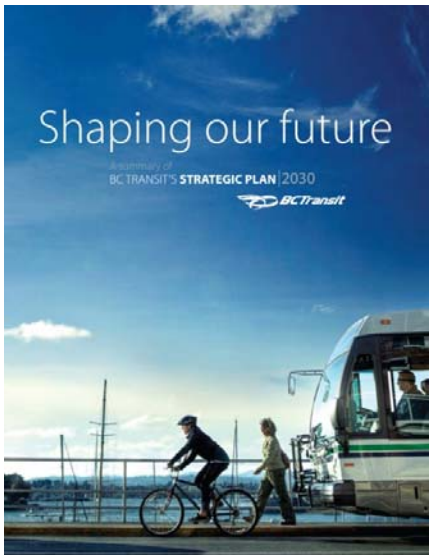
In addition, the MTP is influenced by many other provincial and regional planning initiatives including:

- **Climate Action Charter (2007)** The Province of BC developed the Climate Action Charter with the Union of BC Municipalities in 2007. 178 local governments – including Campbell River - have signed the Charter with a pledge to be carbon neutral by 2012. By signing the Climate Action Charter, local governments commit to measuring and reporting on their community's GHG emissions profile and working to create compact, more energy efficient communities. This is particularly

important for the Master Transportation Plan Update, as the BC Community Energy and Emissions Inventory estimates that transportation accounted for two-thirds (67%) of the City's GHG emissions in 2006.



- **Climate Action Plan (2008)** The Provincial Government has developed several plans and strategies to encourage alternatives to the single occupant vehicle and reduction of GHG emissions. The Provincial Climate Action Plan sets targets for British Columbia to reduce its GHG emissions by 33% from 2007 levels by 2020 and by 50% by 2050. As transportation is the largest contributor of GHG emissions in Campbell River, the MTP update can play a key role in helping to achieve significant reductions in GHG emissions.



- **Provincial Transit Plan (2008)** The Provincial Government announced a new strategy in 2008 to increase transit ridership by increasing travel choices for people around the province, with new fleets, green technology, new rapid transit lines, and new innovative services such as express bus services. Investing in expanded transit services is one way of meeting the Province's climate action targets.

- **BC Transit 2030 Strategic Plan (2010):** BC Transit's Strategic Plan establishes the organization's vision for shaping transit services now and into the future. To achieve greener travel and healthier communities, the transit service must respond to the key trends such as an aging population, continued growth and urbanization, volatile energy prices, a less predictable economy, and changes in technology. The plan recognizes the need to build public support for transit funding, transit-supportive land use patterns, and integration of transit with other sustainable transportation modes.

In addition, the community has grown rapidly in recent years, as the City's population has more than doubled over the past thirty years to its present population of approximately 32,000 residents. Projected future growth will place increasing pressure on the existing transportation system in both Campbell River and the surrounding area. Further, like many British Columbia communities, Campbell River faces growing concerns about the impact of transportation and land use patterns on GHG emissions, public health, and community livability. As a result, managing the transportion system with a focus on sustainable travel modes is becoming increasingly important.

To help the City move towards a sustainable transportation system, the City has updated its Master Transportation Plan. This Master Transportation Plan is intended to help shape Campbell River's transportation investments and programs over the next twenty-five years and beyond. This process is important to ensure that transportation investments work towards achieving the City's strategic vision and community goals, and make the best use of available resources. I

1.2 Study Process

The Master Transportation Plan has been developed based on a series of five Discussion Papers that have been prepared throughout the course of this study.

The fist Discussion Paper summarized existing travel patterns and transportation conditions throughout Campbell River. The second Discussion Paper involved the development of a traffic model to determine current and future traffic volumes and assess the relative impact of various road network improvements. The third Discussion Paper presented a Vision, Strategies, and Goals to guide transportation decision-making in Campbell River over the next twenty-five years, as

well as Targets to measure progress towards achieving the goals of the Plan.

The fourth Discussion Paper summarized the findings of the first three Discussion Papers to present a long-term vision with plans and strategies for each mode of transportation, as well as a comprehensive Transportation Demand Management (TDM) Strategy.

The fifth and final Discussion Paper included an implementation strategy, including cost estimates, timeline, and funding strategy, as well as a monitoring strategy to ensure the on-going success of the plan.

1.3 Consultation

The Master Transportation Plan Update has been developed with broad participation of the Campbell River community to ensure that the Plan reflects the values and interests of the community, as described below:

- **Steering Committee.** A Steering Committee was formed to guide the development of the Master Transportation Plan Update. The Steering Committee included 17 members representing various City departments; external agencies including the Ministry of Transportation & Infrsatructure, BC Transit, ICBC, RCMP, BC Ferries, School District #72, Strathcona Regional District, and First Nations; as well as several community members. Two Steering Committee meetings were held throughout the study.

- **Stakeholder Workshop.** An interactive stakeholder workshop was held on November 17, 2010 to identify transportation issues and opportunities and to discuss

transportation possibilities and priorities. Approximately forty participants attended this workshop. A summary of workshop feedback is provided in **Appendix A.**

- **Community Survey.** An on-line survey was posted on the Project Website to collect input from Campbell River residents regarding key transportation issues and opportunities in conjunction with the Stakeholder Workshop. Fifty-one survey responses were received. A summary of survey feedback is provided in **Appendix B.**

- **Public Open House.** A public open house was held on May 11, 2011 to present the Draft Master Transportation Plan and receive input from the community. Approximately 20 residents attended the open house.

- **Committees of Council Presentation.** An informal presentation was given to Committees of Council on May 11, 2011 to describe the study process and the components of the updated Master Transportation Plan.

Website and Social Media. A dedicated webpage was established for the Master Transportation Plan on the City's www.sustainablecampbellriver.ca website. The website included materials developed throughout the study and provided information about upcoming events. In addition, notifications about upcoming events and updates to the website were provided through an e-mail contact list developed through the SOCP Process and were posted on the Sustainable Campbell River Facebook page.

Part 2

Plan Overview

The Transportation Plan is intended to provide the City with a clear vision of a multi-modal transportation system to serve the residents and businesses of the community for the next twenty-five years and beyond. It is designed to support those modes that the City wishes to encourage - walking, transit, and cycling – to help achieve the City's overall commitments towards sustainability and livability that are outlined in a number of plans and strategies.

A vision for the Master Transportation Plan has been developed that builds upon the City's commitments to sustainability. In particular, the City's SOCP plays a pivotal role in setting the stage for the vision in the Master Transportation Plan. The SOCP outlines a vision for the future of the community, as well as implementation strategies and supporting goals to achieve the vision. The Master Transportation Plan builds on this visioning direction from the SOCP to ensure that the two processes are explicitly linked.

The proposed Vision, Strategies, Goals, and Targets helped shape the overall direction for the MTP Update and served as the basis from which improvement opportunities including investments were identified and prioritized. In order to understand their importance, it is first necessary to elaborate on the distinction between Vision, Strategies, Goals, and Targets for this process:

- **Vision** statements describe the broad aspirations for the future of transportation in the City. The Vision should strive to be an inspirational statement that acts as the framework to guide the direction of transportation in the City twenty-five years into the future and beyond.

- **Strategies** help guide the community towards fulfilling its vision. Strategies should be overarching, simple, succinct statements that are easily remembered and

referenced and articulate the 'means' for achieving the community's vision.

- **Goals** are more specific statements nested under each strategy that define how those strategies will be achieved, and can be measured either qualitatively or quantitatively over the period of the MTP Update.

- **Targets** are a way to measure progress towards achieving the goals of the Plan, and can help to ensure that the MTP is implemented as intended.

2.1 Visioning Direction

2.1.1 Vision

The SOCP provides four key themes which emphasize a compact, healthy, responsive and inclusive community that is committed to working toward environmental, economic, and social sustainability. Reflecting these themes of the SOCP, long-term vision for transportation in Campbell River includes:

- ***Campbell River is Compact and Green.*** *Our City's transportation system provides safe, direct connections between its liveable and complete neighbourhoods and vibrant downtown through an attractive greenway and multi-modal roadway network.*

- ***Campbell River is a Healthy Community.*** *Our City offers affordable transportation choices for people of all ages and abilities that support physical activity and healthy living, including walking and cycling.*

Campbell River's Vision

1. Campbell River is Compact and Green
2. Campbell River is a Healthy Community
3. Campbell River is Committed to Sustainability
4. Campbell River is Responsive and Inclusive

- ***Campbell River is Committed to Sustainability.*** *Campbell River's transportation will enhance the livability and sustainability of our community by providing transportation choices that are economically, socially and environmentally responsible.*

- ***Campbell River is Responsive and Inclusive.*** *The City will manage the transportation system in a fiscally responsible manner that promotes the community's sustainability vision.*

2.1.2 Strategies and Goals

To help achieve the vision identified above, the Master Transportation Plan has identified a number of strategies and goals. The strategies and goals for the Master Transportation Plan are more specific statements nested under one of three strategies identified in the Sustainable Official Community Plan -- **People, Place, and Function**. These strategies and supporting goals will shape the directions of the Master Transportation Plan as well as the measures of success and priorities for implementation of the transportation system improvements. The strategies and goals are outlined below.

1. Place Strategy *Provide for high quality multi-modal facilities within and between a network of compact, complete centres.*
Goals:
1.1 Land Use *Encourage higher densities and mixed land uses in neighbourhood centres, village centres and downtown to support walking, cycling, and transit*
1.2 Parks & Natural Environment *Develop a network of greenways that supports active transportation and recreation and that connect to parks, schools, neighbourhood centres, village centres and downtown*
1.3 Transportation *Provide safe, accessible, convenient, and affordable transportation choices, with emphasis on walking, cycling, and transit*
1.4 Housing *Manage traffic in residential neighbourhoods to improve safety and quality of life.*

2. Function Strategy *Manage and develop transportation infrastructure and services that support a healthy environment.*
Goals:
2.1 Buildings *Support building forms, designs, and orientations that create a walkable environment in neighbourhood centres, village centres and downtown*
2.2 Water *Consider opportunities to incorporate low impact development and stormwater management features in transportation infrastructure, such as bioswales, rain gardens, and permeable pavement*
2.3 Solid Waste Ensure that opportunities for waste management are provided in centres, at transit facilities, and along greenways
2.4 Infrastructure & Assets *Maximize the use of the existing transportation network by upgrading and improving existing facilities before building new facilities, and support initiatives which reduce the need to travel by single occupancy vehicle*

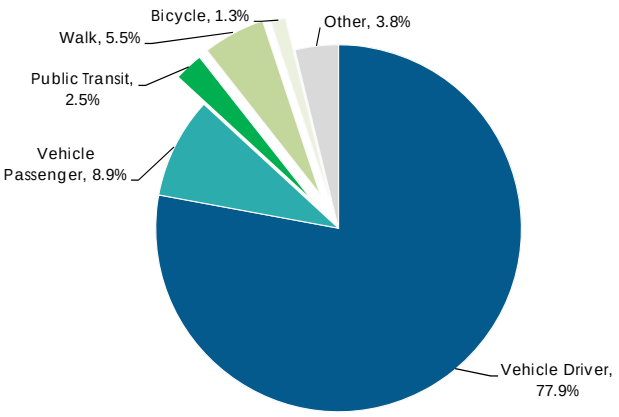
3. People Strategy *Ensure the safe, accessible, and efficient movement of people and goods throughout the City while providing opportunities for social interaction and recreation.*
Goals:
3.1 Economic Development *Maximize the efficiency of the transportation network to enhance the movement of people and goods*
3.2 Mutual Respect & Strong Relationship *Involve the public, agencies, and First Nations in the decision-making process for transportation improvements*
3.3 Creative Community *Seek innovative transportation infrastructure, facilities, practices, and technologies.*
3.4 Social Well-Being *Ensure that transportation in Campbell River is safe, accessible and affordable.*
3.5 Food Systems *Campbell River has a healthy, physically active population*

2.1.3 Targets

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

Currently, walking, cycling and transit account for approximately 9% of all commute trips in the City, as shown in **Figure 2**. While balancing the need to have an ambitious and bold target, yet ensuring that the target is realistic, the MTP Update establishes a target that 20% of all trips to work in twenty-five years be made by walking, cycling, or transit. This represents more than double the current mode share for these modes of transportation.

Figure 2: Mode Share of Trips to Work in Campbell River, 2006



Source: Statistics Canada, 2006 Census

Although an increase in mode share of just over 10% for walking, cycling and transit may seem relatively modest, experience elsewhere suggests that this is a relatively ambitious target that will require significant investment in public transit, walking, and cycling facilities.

It is recommended that this target be achieved by aspiring to a mode share of 10% for walking trips, 5% for cycling trips, and 5% for transit trips, as shown in **Table 1**. This is consistent with BC Transit's targets for transit throughout British Columbia. For smaller communities in BC, BC Transit's target for transit mode share is 3% in the near term, 4% by 2020, and 5% by 2035.

Table 1: Current (2006) and Target (2036) Mode Shares

Mode of Transportation[1]	2006	2036
Vehicle Driver	77.9%	70%
Vehicle Passenger	8.9%	10%
Public Transit	2.5%	5%
Walk	5.5%	10%
Bicycle	1.3%	5%
Total Sustainable Transportation	**9.3%**	**20%**

2.2 Context

This section summarizes some of the key features that influence the development of the Master Transportation Plan, including demographics, land use, and travel patterns in the community.

2.2.1 First Nations

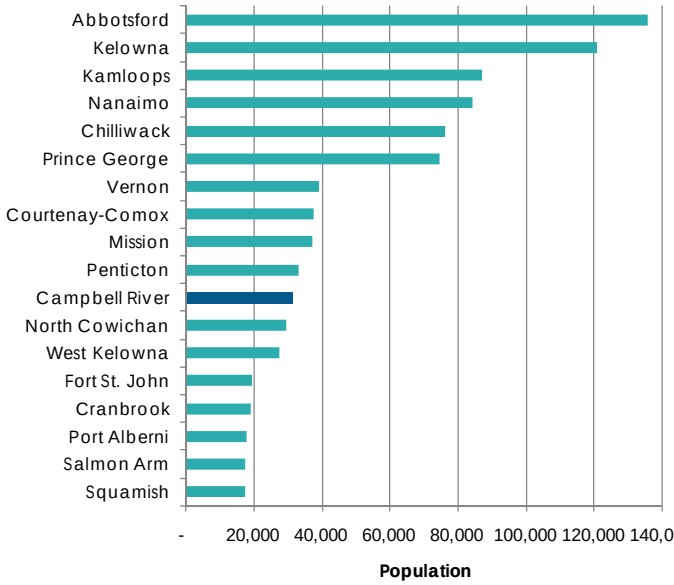
The City of Campbell River includes three First Nation Communities, including We Wai Kum, We Wai Kai, and Homalco. These communities are located in a number of locations that are both in developed and developing areas. Each of these areas are growing and will see increased demand on the City's infrastructure, in particular the transportation network. As these areas increase their settlement population, the Master Transportation Plan should consider them in future reviews and updates. These considerations should include the connectivity of not only the roadways, but the pedestrian, cycling and transit components.

2.2.2 Demographics

Demographics shape the demand for transportation facilities and services. This section identifies the historic, current, and forecasted demographic patterns in Campbell River and how these shape the direction of the MTP Update.

- **Population.** The City of Campbell River has a population of approximately 32,000, making it by far the largest community in northern Vancouver Island, and the 13th largest urban area in British

Figure 3: Population of Campbell River and Other Mid-Sized BC Communities

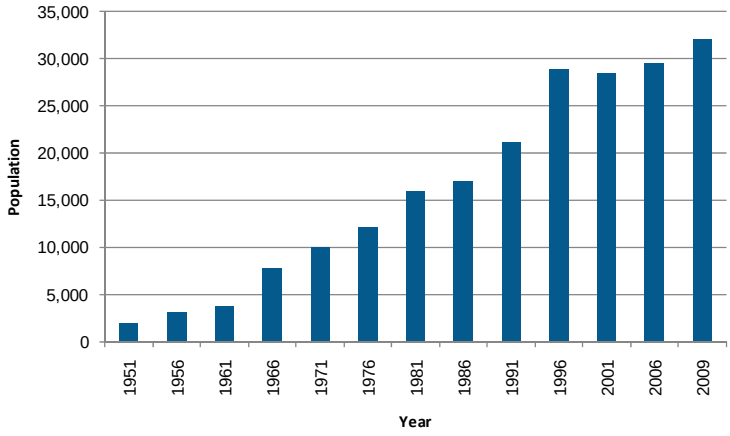


Source: BC Stats

Columbia. The City is a medium-sized community in the province, roughly comparable in size to Vernon, Courtenay-Comox, Mission, Penticton, North Cowichan, and West Kelowna, as shown in **Figure 3**.

- **Population growth.** The City's population has roughly doubled in size over the past 30 years, from approximately 16,000 residents in 1981 to its current population of 32,000 residents, as shown in **Figure 4**. In the next 25 years, Campbell River's population is projected to increase by approximately 10,000 additional residents. Part of Campbell River's long-term growth projections may be attributed to the upcoming retirement of the baby boom generation. The migration of this group to attractive retirement areas outside of large urban cores is expected to increase many communities' populations across Vancouver Island.

Figure 4: Population Growth in Campbell River, 1951 - 2009



Source: BC Stats

- **Population density.** Campbell River has a population of 206 people per km^2. Campbell River's population density is relatively low in comparison with many other small and mid-sized communities on Vancouver Island and the BC mainland.

- **Household size**. Campbell River's average household size is approximately 2.4 people, which is slightly below the provincial average of 2.5 people per household.

- **Housing stock.** 65% of the City's housing stock is made up of single detached dwellings, while apartments account for nearly 20% of the housing stock.

- **Youth and elderly populations.** Campbell River has a large youth population, with nearly one fifth of the

population under the age of 14. Another prominent age group in Campbell River is that of 65 years and older, accounting for 14% of the City' population. The dominance of both age groups is not unique to Campbell River, as many other island communities reflect this general population distribution. As mentioned previously, senior migration is expected to increase to Vancouver Island over the next 25 years, signifying aging populations throughout the Island. The youth and elderly populations of Campbell River are particularly important to focus on for the Master Transportation Plan, as seniors tend to travel more during mid-day and rely more on transit services as compared to people in the labour force who commute more during peak hours. Similarly, youth often do not have access to automobiles and are more reliant upon public transit, walking, cycling, and carpooling. By attracting youths to these modes of transportation early in their lives, there is an opportunity to continue these trends into adulthood.

2.2.3 Land Use

The most significant factor affecting how people travel is the proximity of where people live to where they work, shop, and play. The type, scale, and mixture of land uses along with densities of those uses, will largely determine how far, and consequently what mode of transportation, people will use to get to their destinations. The closer people are to their desired destination, the more opportunities there are for them walk, cycle, or take transit. In addition, certain types of land uses are more easily and efficiently served by alternative modes of transportation. For example, lower density residential areas that generate one-way travel demand during peak periods are more difficult to serve by transit than mixed-use corridors with major trip generators at either end.

2.2.4 Travel Characteristics

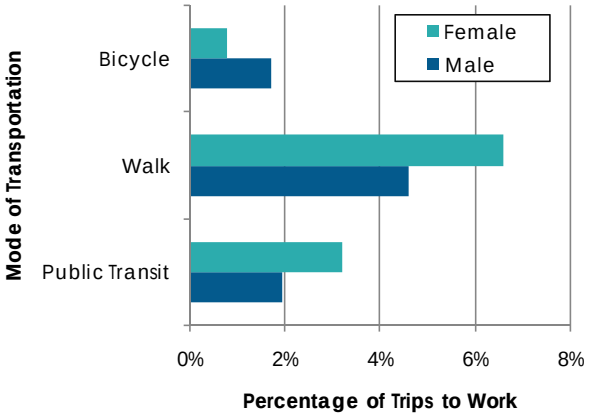
The development of the MTP Update requires an understanding of current travel characteristics throughout the community. The travel characteristics of a community are determined by many factors. For example, an individual's travel choice can be based on land use patterns, availability and accessibility of transit, topography, safety perceptions, distance to work, personal preferences, or financial reasons.

- **Mode share.** In Campbell River, approximately 78% of the labour force drives to work, which is slightly higher than the provincial average of 72%. A further 9% of Campbell River residents commute to work as passengers, while approximately 3% take public transit, 6% walk, and 1% cycle to work. The walking and cycling statistics of Campbell River closely reflect the provincial averages of 7% and 2% respectively.

- **Demographic Trends**. There are notable demographic patterns regarding the use of different modes of transportation. As shown in **Figure 5,** men are more than twice as likely as women to bicycle to work, while women are more likely to take transit or walk to work than men. In addition, youth aged 15 to 24 are significantly more likely to transit to work than all other age groups.

- **Historic Travel Patterns.** Commuting patterns have changed little over the past fifteen years. In fact, in 1996, 76% of commute trips in Campbell River were made by vehicle drivers, and this increased to 77% in 2006. Public transit use decreased over this period, from approximately 3.2% to 2.7% of all work trips. However, although walking and cycling accounted for a relatively

Figure 5: Mode Share of Walking, Cycling and Transit Trips to Work in Campbell River by Gender, 2006

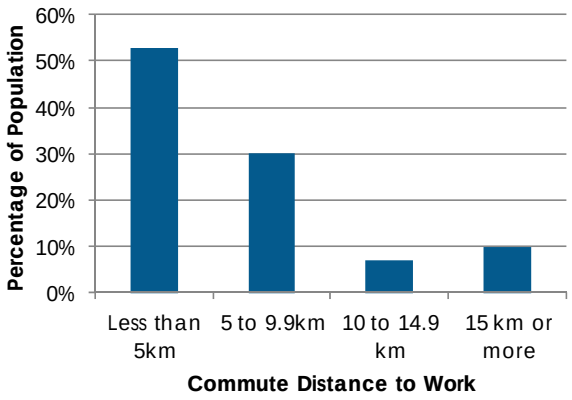


Source: Statistics Canada, 2006 Census

small proportion of work trips in both 1996 and 2006, these were the fastest growing modes of transportation. Between 1996 and 2006, walking trips to work increased by approximately 11% (from approximately 5.0% to 5.7%) while cycling trips to work increased by approximately 29% (from approximately 1.1% to 1.4%).

- **Trip Distance.** Most trips in Campbell River are relatively short, as shown in **Figure 6**. In fact, over half (53%) of all residents live less than 5 km from their place of work. This is significantly higher than the provincial average of 43% of residents across the province that live within 5 km of their place of work. As short trips are attractive for walking and cycling, these present opportunities to encourage non-automobile travel for short-distance trips.

Figure 6: Commuting Distance to Work in Campbell River, 2006



Source: Statistics Canada, 2006 Census

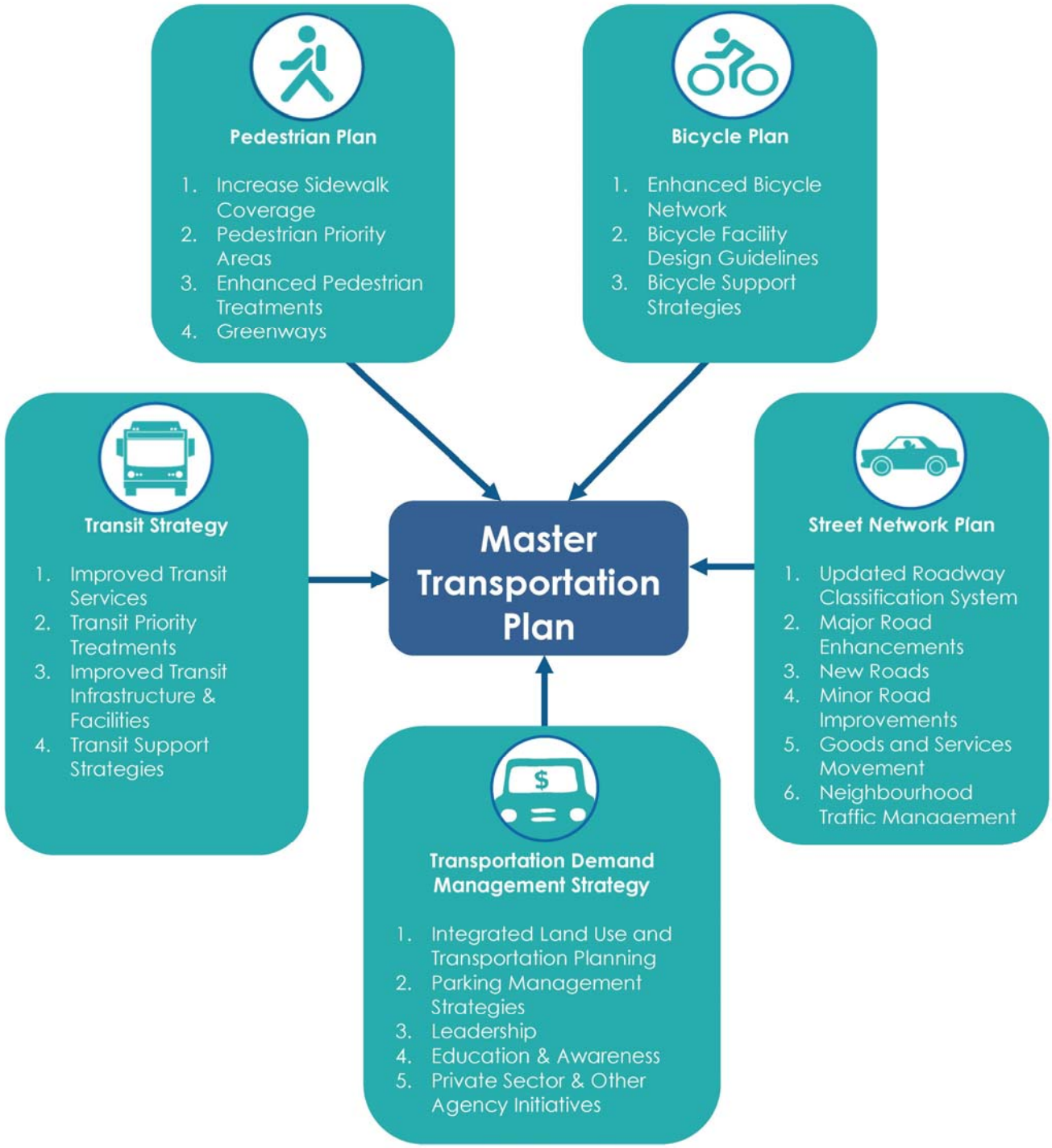
2.3 Key Features of the Plan

The long-term plan for the City of Campbell River's multi-modal transportation system is presented in the following sections. This plan presents a vision for each of the primary modes of travel – namely walking, cycling, transit, and the street network. In addition, the Plan provides guidance regarding a Transportation Demand Management (TDM) Strategy. The Master Transportation Plan has been developed based on the findings of a number of Discussion Papers throughout the study and feedback from City staff, agencies, stakeholders, and the public.

Each component of the Long-Term Master Transportation Plan contains several features designed to achieve the overall policy objectives for the City of Campbell River. Although these features are grouped by mode for the purpose of discussion, they are very much interdependent. For example, Street Network Plan describes features for major roadways that include provisions for pedestrian

facilities, cycling facilities and transit priority measures. This approach ensures that the resulting transportation system improvements are seamless and that the transportation system will help the City move towards sustainability. To this end, the Plan is not a "road building" strategy. Instead, all street network improvements are designed to support mobility and safety for all modes, including walking, cycling, transit, and goods movement. The key features of the Master Transportation Plan are illustrated in **Figure 7** and are described in detail in the following sections.

Figure 7 – Key Features of the Master Transportation Plan



Part 3

Walking

Walking is the most fundamental form of transportation, as it is part of every trip, whether that trip is made by car, transit, or bicycle. If suitable conditions exist within a community – such as having a complete, connected sidewalk network and major destinations close to where people live – walking can also be a convenient alternative to the automobile for almost all short trips. Walking is a primary alternative to automobile travel in Campbell River, as it accounts for approximately 5.5% of all trips to work in the City – more than any other non-automobile mode of transportation. Promoting walking can help reduce automobile dependence and greenhouse gas emissions, improve public health outcomes, increase social connections, reduce infrastructure demands, and create more livable and vibrant communities. Walking is a key element to support Campbell River's commitments towards liveability and sustainability as well as the vision and goals for the Master Transportation Plan Update.

In order to support walking, the City has developed an extensive network of sidewalks throughout the community, as well as a series of off-street trails and pathways that complement the sidewalk network. Many areas of Campbell River are very pedestrian-friendly, particularly in the Downtown area. For example, Shoppers Row and Pier Street provide a pleasant walking experience with ample and continuous sidewalks, landscaping, interesting store fronts, slow-moving traffic and frequent, well-marked crossing opportunities.

This section of the Master Transportation Plan presents a long-term Pedestrian Plan for Campbell River. Achievement of the vision, goals, objectives and targets of the Master Transportation Plan will require significant investments in pedestrian facilities, including the provision of sidewalks as well as enhanced pedestrian amenities in key areas.

3.1 Shaping Influences

Beyond the role of pedestrian facilities in creating vibrant, attractive, walkable communities and in supporting other modes of transportation, there are many factors that influence the long-term direction of the development of the Pedestrian Plan for Campbell River, as described below:

- **Most walking trips are short trips**. In most communities, the majority of walking trips are less than a five- or ten-minute walking distance, equal to approximately a 400 metre or 800 metre distance. In order to increase walking, pedestrian improvements can focus strategically on those short distance trips. There is a significant opportunity to shift some of these short trips from automobiles to walking.

- **The number of people with mobility challenges is rapidly increasing.** Today, people aged 65 and over make up approximately 14% of Campbell River's population, and the number of seniors is projected to more than double by 2035. Senior migration across Vancouver Island is expected to increase significantly over the next twenty-five years, which means large aging populations in Campbell River and other Vancouver Island communities. As the 'baby boomer' generation enters retirement age and moves into older age groups, travel making behaviour will change significantly and there will be new and varied transportation needs. Seniors as well as people with cognitive, physical and sensory disabilities face significant mobility challenges. With a significant increase in the number of people with mobility challenges over the next twenty-five years, there is an increasing need to ensure that pedestrian and transit facilities are universally accessible.

- **Improving walkability around schools can encourage children to walk at an early age**. Campbell River has a large youth population, with nearly one fifth of the population under the age of 14. The improvement of the walking environment around schools will encourage children to walk as a mode of transportation at an early age, which can be continued later in life.

- **Pedestrian treatments can be tailored to areas of higher pedestrian activity.** Key pedestrian generators, such as schools, parks, commercial areas, and transit facilities are located throughout the City. Attractive and comfortable pedestrian facilities above and beyond simply providing sidewalks -- such as benches, lighting, and safe crossings – are required around these generators in order to encourage pedestrian activity in and around these areas, particularly within relatively short walking distances to these areas, such as a five – to ten-minute walking distance, or approximately 400 to 800 metres. The relative demand for pedestrian activity can vary significantly based on type of land use and proximity to that land use, as shown conceptually in **Table 2**. The Pedestrian Plan should consider the different demand patterns associated with each type of pedestrian generator and provide treatments that are appropriate for each type of land use.

Table 2: Relative Pedestrian Demands for Typical Activity Centres and Proximities

Pedestrian Generators	Proximity to Land Use			
	<250 m	250-500 m	500-750 m	750-1000 m
Major commercial area	●	◕	◑	◔
School	●	◕	◑	◔
Recreation centre	◕	◑	◔	○
Major park	◑	◔	○	•
Hospital	◑	◔	○	•
Health centre	◑	◔	○	•
Shopping mall/plaza	◑	◔	○	•
Local commercial (e.g., corner store)	◑	◔	○	•
Major office building	◑	◔	○	•
Place of worship	◑	◔	○	•
Neighbourhood park	◔	○	•	•
Industrial site	◔	○	•	•
Highway commercial	○	•	•	•

●	◕	◑	◔	○	•
Highest Demand	**High Demand**	**Moderate Demand**	**Low Demand**	**Lower Demand**	**Lowest Demand**

- **Pedestrian facilities should be seamlessly integrated with transit.** Keeping in mind that every transit user is a pedestrian at some point, the pedestrian plan should integrate with the transit strategy. Although pedestrian trips are generally short-distance trips, walking can also support longer distance travel by transit. In that regard,

pedestrian improvements should be integrated with public transit improvements, to ensure that pedestrian safety and comfort is enhanced at transit exchanges and along key transit corridors. This can be achieved, for example, by ensuring that sidewalks provide access to bus stops throughout the City.

3.2 Facts and Observations

This section highlights key facts and observations regarding current pedestrian facilities in Campbell River.

- **Sidewalk Requirements.** As shown in **Table 3,** the City's Design Standards require that sidewalks be provided on both sides of all urban streets, except local roads in low density residential areas and industrial areas, which may have a sidewalk only on one side of the street. In rural contexts, shoulders are required on at least one side of local streets and both sides of collector streets.

- **Sidewalk coverage.** The City's sidewalk network includes approximately 150 km of sidewalks. However, in many areas of the City, no sidewalks have been provided. This forces pedestrians to walk on the street and makes walking a less desirable mode of transportation in these neighbourhoods. There are several large areas of the City with limited sidewalk coverage, including Quinsam, North Campbell River, and many single family residential neighbourhoods. There are also several 'missing links' in the sidewalk network which force pedestrians to walk on the street, detracting from the attractiveness and safety of walking. It has also been noted that in some cases sidewalks end on one side of the street, forcing the pedestrian to cross the street to continue walking along a sidewalk.

Table 3: City of Campbell River Pedestrian Requirements

Classification	Pedestrian Requirements
Rural Local Residential	Shoulder, 1 side
Rural Local Commercial/Industrial	Shoulder, 1 side
Rural Collector	Shoulder, 2 sides
Urban Local Low Density	Sidewalk, 1 side
Urban Local High Density	Sidewalk, 2 sides
Urban Local Commercial	Sidewalk, 2 sides
Urban Local Industrial	Sidewalk, 1 side
Urban Collector Minor	Sidewalk, 2 sides
Urban Collector Major	Sidewalk, 2 sides
Urban Arterial 3-lane	Sidewalk, 2 sides
Urban Arterial 4-lane	Sidewalk, 2 sides

- **Sidewalk quality and accessibility.** Although sidewalks are provided in many areas of the City, some existing sidewalks are not perceived to be comfortable, attractive, and accessible. Several comments were provided that noted a lack of "walkable" sidewalks. There are several factors that can detract from the quality of walking along a sidewalk. For example, many existing sidewalks do not have buffers between the curb and sidewalk, meaning that pedestrians have to walk adjacent to moving traffic, which is particularly uncomfortable for pedestrians walking on major roads. In some cases, on-street parking can act as an effective buffer between pedestrians and automobiles. In other cases, utility poles, newspaper boxes, overgrown bushes, or other street furniture which are often located on the sidewalk, limit the usable sidewalk width and creates accessibility challenges for persons using mobility aids.

- **Trail Network.** The City has a well-developed trail network, including the "greenways loop" that that is being developed by Greenways Land Trust and will provide a complete circuit around the city, as well as other facilities such as the Beaver Lodge Trails, ERT Trail, and Willow Creek trails. The trails are generally intended for recreational walking and cycling and also provide secondary connections throughout the community. Although the majority of these trails are primarily recreational, some of these facilities provide important connections to the overall pedestrian network.

- **Pedestrian Generators** Key pedestrian generators, such as schools, parks, commercial areas, and transit facilities are located throughout the City. Attractive and comfortable pedestrian facilities around these generators are necessary in order to encourage pedestrian activity in and around these areas,

particularly within relatively short walking distances to these areas, such as a 5-minute or 10-minute walking distance, or approximately 400 or 800 metres, respectively. In particular, the provision of attractive and accessible pedestrian facilities within commercial areas is seen as an important way to support local businesses and to encourage residents and visitors to visit the City's commercial areas on foot, particularly along Shoppers Row and elsewhere in the Downtown Core and along the waterfront. There is also a desire to have walkable commercial nodes elsewhere in the City, where commercial uses and services are within walking distance from residents.

- **Challenging road crossings.** It was noted that several intersections can be challenging for pedestrians to cross, which can create significant barriers to walking. Some of the safety concerns cited included visibility, lighting, hills, and high traffic speeds.

- **Topography** is a significant challenge for pedestrians in some areas of Campbell River, particularly between the Island Highway and adjacent neighbourhoods to the west, as well as between Downtown Campbell River and Quinsam. Some areas in particular have steep grades that are difficult to overcome for people with physical disabilities.

- **Accessibility.** Pedestrian facilities should be designed to be universally accessible. Improvements to the accessibility of pedestrian facilities can include ensuring a sufficiently wide 'clear zone' in the sidewalk to accommodate wheelchairs and other mobility aids, as well as implementing accessible curb letdowns and ensuring accessible access to transit facilities. Accessible features are important with an aging population, and particularly in areas with a high number of seniors'

facilities, such as the area around Campbell River Commons along Ironwood Street and 16th Avenue.

- **Transit integration.** Pedestrian facilities that provide access to bus stops and transit exchanges are not always planned and designed effectively. Furthermore, pedestrian amenities at bus stops and waiting areas do not always have adequate amenities such as shelters, benches, lighting, signage, schedules, maps and other features that provide for a comfortable and safe environment.

3.3 Long–Term Pedestrian Plan

This section describes the long-term Pedestrian Plan for Campbell River. The focus of the Pedestrian Plan is on completing key elements of the sidewalk network, as well as enhancing pedestrian facilities in major pedestrian areas so that walking becomes a highly convenient and attractive mode choice for more residents and visitors. In some areas of the City, the provision of sidewalks to complete the network and provide continuity for walking trips is essential. For many areas, such as the Downtown core, where walking will be most prominent, extraordinary treatments are required to make walking even more attractive. These will require treatments within and leading to those areas that go beyond the minimum standard and are accessible for all levels of mobility.

What does the Pedestrian Plan include?

1. Increase Sidewalk Coverage
2. Pedestrian Priority Areas
3. Enhanced Pedestrian Treatments
4. Greenways

1. Increase Sidewalk Coverage

As discussed above, there are several areas that do not meet the City's sidewalk standards. However, implementing new sidewalks throughout the City to meet the full City standards is beyond the City's financial resources. To that end, the Long-Term Pedestrian Plan recommends

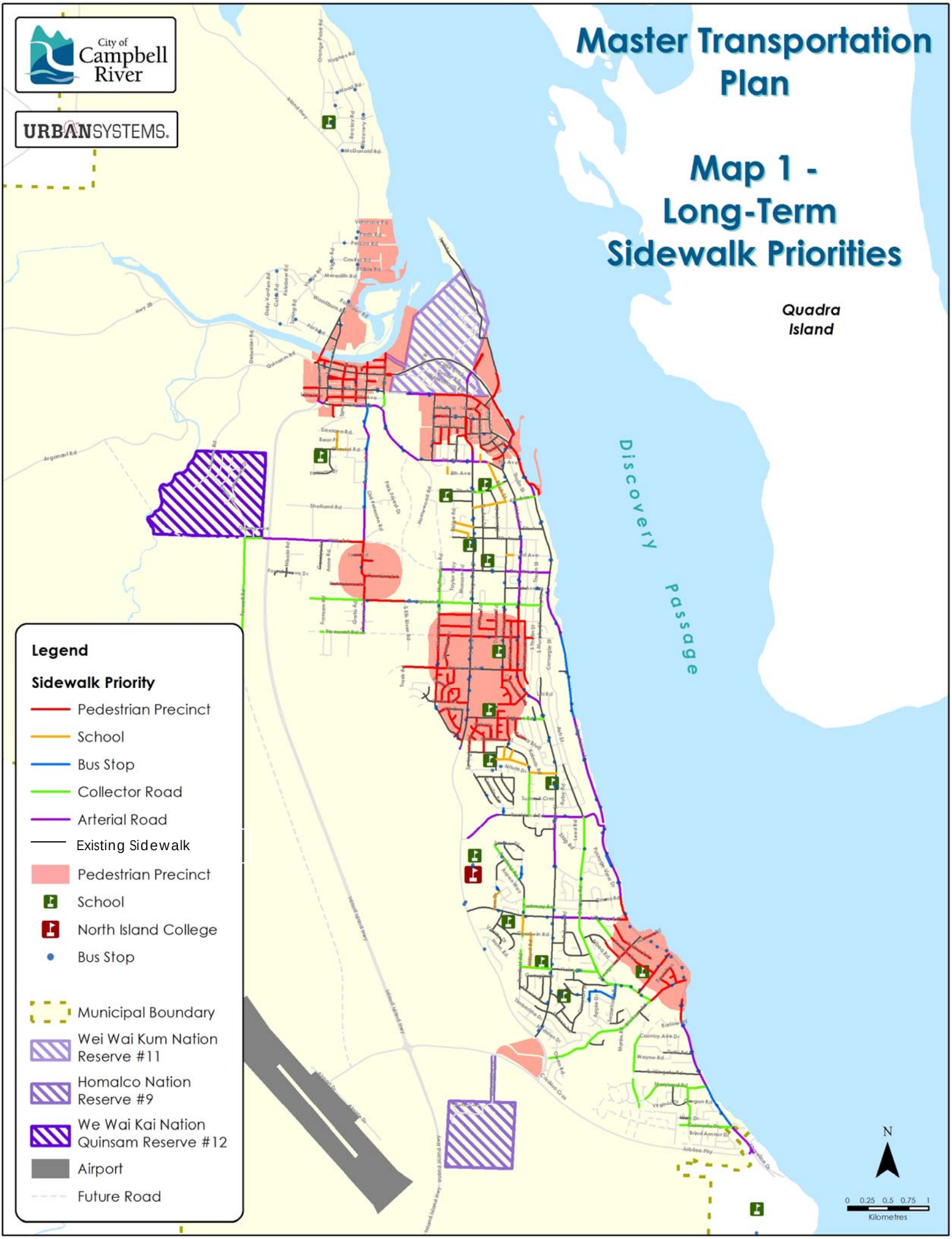
strategically increasing sidewalk coverage in areas that reflect higher pedestrian demand as well as areas that address safety concerns. It is recommended that the implementation of new sidewalks be prioritized in the following areas:

1. All streets in and around the Downtown and Village Centres should have sidewalks on both sides of the street.
2. All streets adjacent to schools should have a sidewalk on at least one side of the street (school side).
3. All streets adjacent to a bus stop should have a sidewalk on the side of the street with the bus stop.
4. All arterial streets should have sidewalks on both sides of the street to improve pedestrian safety, preferably separated by boulevards.
5. All collector streets should have a sidewalk on at least one side of the street to improve pedestrian safety and neighbourhood livability.

Recommended sidewalk priorities are summarized in **Table 4** below and shown in **Map 1**. Increasing sidewalk coverage in areas that address higher pedestrian demand and safety concerns can result in an increase of people walking for their daily activities.

Table 4: Sidewalk Priorities

	Minimum Standard
1. Within & around Downtown & Village Centres	2 sides
2. Adjacent to schools	1 side
3. Adjacent to bus stops	1 side
4. Arterial roads	2 sides
5. Collector roads	1 side


City of Campbell River
URBANSYSTEMS.
Master Transportation Plan
Map 1 - Long-Term Sidewalk Priorities
Quadra Island
Discovery Passage
Legend
Sidewalk Priority
Pedestrian Precinct
School
Bus Stop
Collector Road
Arterial Road
Existing Sidewalk
Pedestrian Precinct
School
North Island College
Bus Stop
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
N
0 0.25 0.5 0.75 1
Kilometres

2. Pedestrian Priority Areas

The Long-Term Pedestrian Plan defines four key types of pedestrian priority areas in which to identify design treatments that will make Campbell River an even more walkable community in the long-term. For planning purposes, the "catchment" for each pedestrian priority area has been defined based on the existing street grid and other features. A radius of approximately 400 metres has generally been used to define these areas for each pedestrian generator, which is reflective of approximately a five-minute walk and is considered a reasonable walking distance. Because of the proximity of many pedestrian generators in the City, these areas will typically overlap and pedestrian activity closer to the generator will be greatest. The discussion below briefly describes each pedestrian priority area in the City, as shown in **Map 2.**

1. **Pedestrian Precincts** are those areas where walking could be the primary mode of travel and should be prioritized. These are areas that support a diverse mix of higher-density land uses that attract multi-purpose trip making and where significant volumes of pedestrians can be expected. They are both walking destinations and areas within which people would likely walk between several locations for a variety of needs, such as to home, work, shopping or personal business. In addition to supporting walking, Pedestrian Precincts also support cycling and transit.

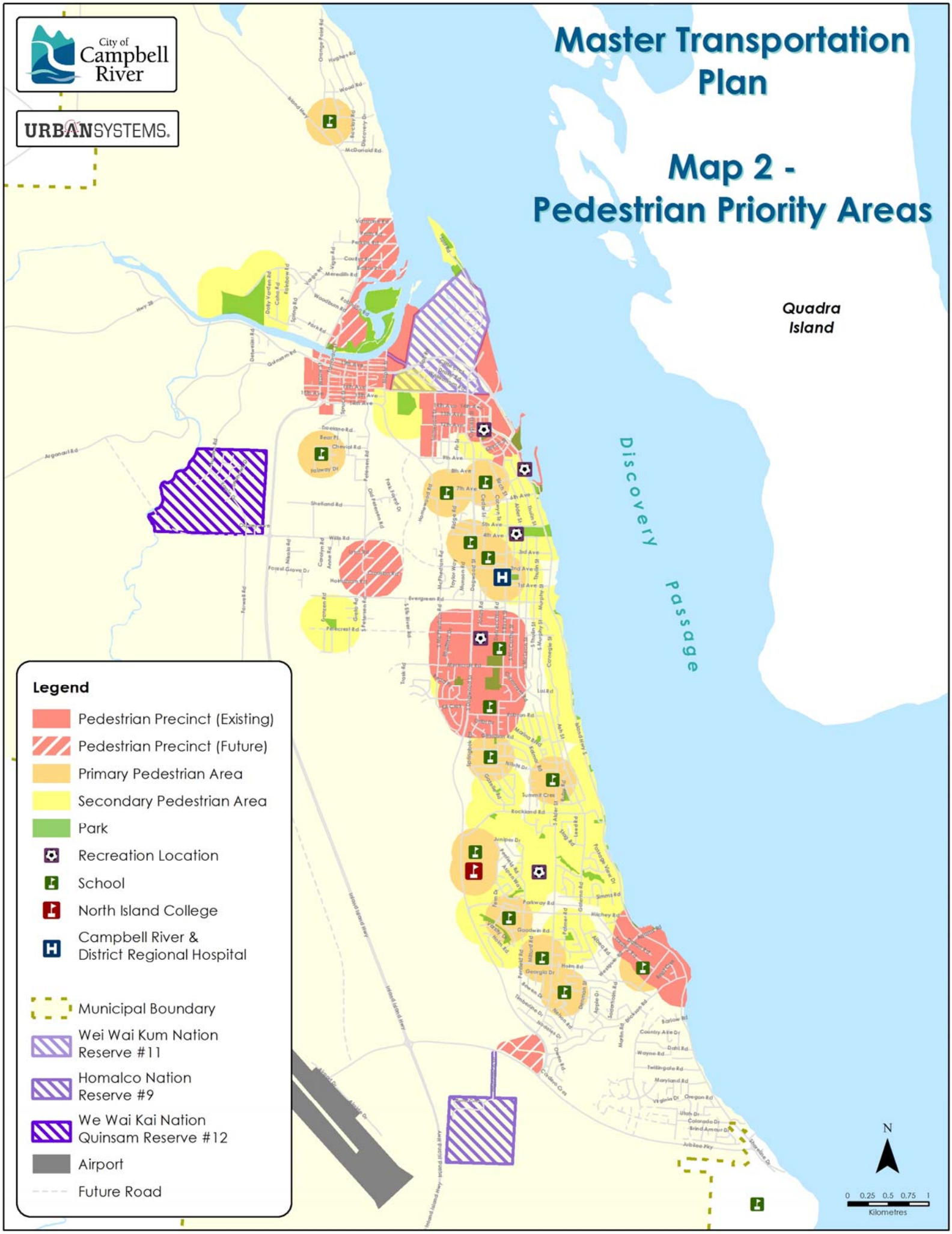
   Pedestrian Precincts throughout Campbell River reflect the Downtown Core and Village Centres designated in the City's SOCP. Four existing Pedestrian Precincts have been established in the Downtown core, Campbellton, Willow Point, and Dogwood / Merecroft. As development occurs in the future, additional Pedestrian Precincts will include Quinsam, North Campbell River, and Jubilee Heights. The highest quality and intensity of

treatments in Pedestrian Precincts would be located immediately within the commercial nodes in these areas, to create pedestrian "high streets" in these centres. However, the pedestrian precinct extends beyond these nodes to ensure a high quality walking experience to and from these centres within a five minute walking distance.

2. **Primary Pedestrian Areas** include areas around institutional uses throughout the City, including schools and hospitals. These areas will attract children and youth as well as seniors and require attractive and safe pedestrian facilities to increase pedestrian travel. These specific uses include elementary schools, middle schools, secondary schools, North Island College, and the Campbell River & District Regional Hospital.

3. **Secondary Pedestrian Areas** are those land uses within the City that will typically generate a moderate number of walking trips. As such, pedestrian facilities in the immediate area will be provided to encourage walking to and from the area. The specific uses identified as primary pedestrian generators include major parks, community centres, and recreation facilities.

4. **Other Areas** essentially represent the remaining areas of the City where lower volumes of pedestrians are expected, and where pedestrian facilities will be required to encourage people to walk. These areas generally comprise low density residential and light industrial developments.


City of Campbell River
URBAN SYSTEMS
Master Transportation Plan
Map 2 - Pedestrian Priority Areas
Quadra Island
Discovery Passage
Legend
Pedestrian Precinct (Existing)
Pedestrian Precinct (Future)
Primary Pedestrian Area
Secondary Pedestrian Area
Park
Recreation Location
School
North Island College
Campbell River & District Regional Hospital
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
N
0 0.25 0.5 0.75 1
Kilometres

3. Enhanced Pedestrian Treatments

There are a range of enhanced treatments that can improve the quality of the walking experience, above and beyond simply expanding the sidewalk network as described previously. The range of treatments in each pedestrian priority area is summarized below, but generally includes:

- **Crossing treatments** – beyond the provision of sidewalks, it is also important to address pedestrian barriers by improving pedestrian crossings.

- **Accessibility** – With an increase in seniors and people with mobility challenges, a variety of treatments are included that help to provide universally accessible facilities.

- **Amenities** – above and beyond improving safety by providing sidewalks and crosswalks, as well as designing pedestrian facilities to be universally accessible, there are a range of other pedestrian amenities that can be considered to help make attractive places such as signage and wayfinding, landscaping, benches, and lighting.

The Pedestrian Plan includes a range of treatments for different types of pedestrian priority areas based on the predominant land uses in each area. In this regard, the areas that could potentially generate the most walking should receive extraordinary, high quality pedestrian treatments to improve safety and accessibility, to encourage people to walk, and to make these areas "people places". The following discussion highlights the range of pedestrian treatments that are recommended within each of the

pedestrian priority areas to help make the City of Campbell River even more walkable.

- **Sidewalk coverage** and requirements are outlined in the City's 2010 Design Standards and require sidewalks on both sides of most streets. As mentioned previously, it is well beyond the City's financial resources to fully meet this sidewalk standard in all areas of the City. However, streets within Pedestrian Precincts and Primary Pedestrian Areas would benefit from having sidewalks on both sides of all streets as previously discussed.

- **Enhanced sidewalk width** is important to ensuring a comfortable space for pedestrians. In general, all sidewalks should have a minimum clear width of 1.5 m and wider in busy pedestrian areas. To be accessible for all individuals, sidewalks must be in good condition and free from major and minor obstructions, such as uneven surfaces, utilities, signs, and other street furniture. Where possible, the following sidewalk widths should be considered in each of the key pedestrian areas.
  - **Pedestrian Precincts** support higher pedestrian flows and should desirably support 3 metre sidewalks.
  - **Primary Pedestrian Areas** should have minimum sidewalk widths of 1.8 m and preferably 2.0 m to support wheelchair use.
  - **Other areas** should have sidewalks of 1.5 m or more.

- **Boulevards** can be provided between the curb and sidewalk to provide a buffer between pedestrians and motor vehicle traffic. Adjacent to commercial uses, sidewalks should generally extend from the curb to the property line/building face to maximize pedestrian space and to accommodate other amenities, such as street furniture and bicycle parking that can comfortably accommodate demands and do not interfere with

walking aids. Street trees may be incorporated into the sidewalks and can be included along streets with high pedestrian demands and where parking does not provide a buffer between the road and sidewalk, as street trees can play an important role in increasing pedestrian comfort and safety. In non-commercial areas, landscaped buffers may be provided to act as a buffer between pedestrians and vehicular traffic.

- **Narrower crossings** using intersection or mid-block curb extensions, bus bulges, and median islands can be provided to reduce crossing distances. Curb extensions extend the sidewalk across the curbside parking lane. They benefit pedestrians by improving visibility and reducing crossing distances. They also offer opportunities for pedestrian amenities, such as landscaping and benches and for incorporating low impact design treatments such as rain gardens.

- **Curb letdowns** at all intersections. Where possible, separate curb letdowns should be properly aligned with crosswalks. Designs which incorporate a single ramp that is positioned between the crosswalks will also be considered depending on the intersection configuration.

- **Marked crossings** are the simplest crossing treatment, which involves pavement markings indicating the crosswalk, and accompanying signs. Enhanced pavement markings such as “ladder” and zebra” markings increase the visibility of the crosswalk to approaching motorists.

- **Enhanced crosswalk treatments** may include flashing lights which are activated by pedestrians. The flashing lights alert motorists that pedestrians are crossing, and increase visibility of the crosswalk. A flashing light treatment offers advantages over a signalized pedestrian

crossing, as there is no delay for pedestrians waiting to cross, and delays to motorists are minimized because as soon as pedestrians clear the crosswalk vehicles can proceed.

- **Accessible pedestrian signals** that provide pedestrian crossing information in auditory format, such as audible tones or verbal messages, can be used at signalized intersections in high pedestrian areas to assist pedestrians with disabilities. Research has shown that these treatments provide a higher degree of confidence to pedestrians crossing major streets and have generally received positive support among all age groups.

- **Countdown timers** at key intersections to provide timing information to all users.

- **Automatic Pedestrian Phase** in the Downtown core to provide priority to pedestrians. An automatic pedestrian phase does not require a pedestrian to activate the signal.

- **Important connections**, such as overpasses, are expensive to construct, typically exceeding $1 million. Consequently, they are usually used only on multi-lane roads or other natural barriers such as rivers where there are few opportunities for pedestrians and cyclists to cross, or existing facilities are sub-standard and more costly to improve. The primary pedestrian connection that is recommended is a new bridge across the Campbell River to improve pedestrian and bicycle access to North Campbell River. In addition, opportunities for pedestrian and bicycle connections should be provided at cul-de-sacs to improve pedestrian and bicycle connectivity. Connections can be provided by identifying rightsof-ways and constructing short pathways to make connections.

- **Enhanced wayfinding signage** and maps to guide people to and around pedestrian precincts for non-residents and tourists. Enhanced wayfinding signage can be of particular benefit to tourists, to help orient visitors to key destinations within the City. Enhanced signage also benefits all users, and helps to ensure a sense of place at key destinations. Signage standards may support a theme for a given area, and should be designed to meet the needs of visually impaired.

- **Street furniture** (benches, water fountains) and other pedestrian amenities outside of the travelled portion of the sidewalk are essential to making people places and creating environments that are comfortable and interesting for pedestrians.

- **Accessible bus stops** consistent with BC Transit's Infrastructure Design Guidelines should be implemented to enhance comfort of all transit passengers and to ensure accessibility for all customers.

- **Pedestrian safety** will be enhanced with greater application of Crime Prevention Through Environmental Design (CPTED) audits and design practices.

- **Street lighting** to ensure pedestrian comfort as well as safety and security at all times of day. Street lighting can also be designed to support a particular theme for a given area.

- **Public facilities** such as washrooms and telephones should be available and accessible for pedestrians of all mobility levels and signed accordingly. For people that experience mobility challenges, public restroom facilities provide a high degree of comfort within key pedestrian areas.

- **Building design guidelines** within Pedestrian Precincts will continue to focus on pedestrian orientation features and accessibility for all people, such as sidewalk and streetscape improvements, accessibility features leading to and from buildings, and pedestrian friendly and accessible pathways leading toward buildings.

The potential range of treatments in each area is directly related to the potential of encouraging more people to walk in the City. In this regard, more extensive pedestrian treatments should be considered in high pedestrian areas, and perhaps more modest treatments in areas of lower demand. Because everyone is a pedestrian at some point in their trip or for their entire trip, no areas should be without comfortable and accessible pedestrian facilities. **Table 5** summarizes the potential range of pedestrian treatments that are recommended for each pedestrian area within the City.

Table 5: Pedestrian Area Treatments

	Pedestrian Precincts	Primary Pedestrian Areas	Secondary Pedestrian Areas	Other Areas
	• Downtown • Village Centres	• Elementary Schools • Middle Schools • Secondary Schools • Post-Secondary Schools • Hospitals	• Parks • Community Centres • Recreation Facilities	• Other Land Uses
Enhanced Sidewalk Width	✓	✓	✓	
Boulevards	✓		✓	
Narrower Crossings	✓	✓	✓	
Accessible Curb Letdowns	✓	✓	✓	✓
Accessible Bus Ramps	✓	✓	✓	✓
Marked Crossings	✓	✓	✓	✓
Enhanced Crosswalks	✓	✓	✓	
Accessible Pedestrian Signals	✓	✓	✓	
Countdown Pedestrian Timers	✓	✓	✓	
Automatic Pedestrian Phase	✓			
Wayfinding/signage	✓	✓	✓	
Street furniture	✓	✓		
Street lighting	✓	✓	✓	✓
Public facilities	✓			
Building design guidelines	✓		✓	

4. Greenways

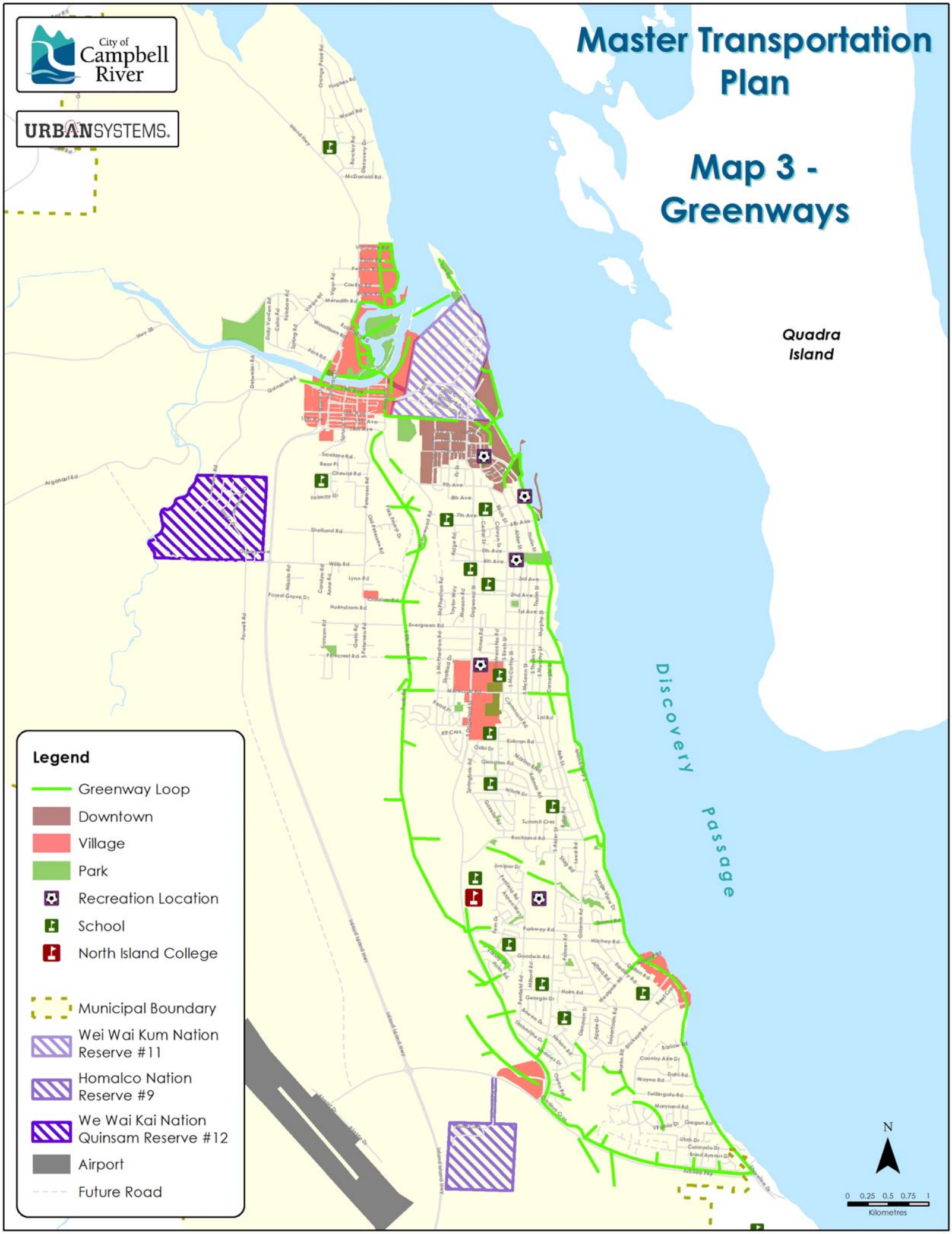
As shown in **Figure 3**, the City has a well-developed trail network, including the "greenways loop" that is being developed by the Greenways Land Trust and will provide a complete circuit around the city, as well as other facilities such as the Beaver Lodge Trails, the Rotary SeaWalk, and the multi-use pathway adjacent to South Dogwood Street.

In addition to creating a comprehensive trail and greenway system that links major parks and public destinations, the

greenway system accommodates many of the links needed to make walking to key pedestrian areas more attractive. The greenway system also redefines the role that City streets and boulevards can play in a livable community.

The City should continue to support the development of the greenway loop as well as other greenways throughout the community. Potential treatments along greenways include:

- A continuous, accessible wide pathway on one side of the street that can safety accommodate both pedestrians and cyclists
- Significant landscaping, including a boulevard between the curb and the pathway
- Narrow crossings at arterials using curb extensions
- Traffic calming features along the street to discourage speeding and short-cutting
- Pedestrian rest areas
- Pedestrian-scale lighting
- Public art and interpretive signage
- Alternative stormwater management techniques, such as rain gardens.


City of Campbell River
URBANSYSTEMS.
Master Transportation Plan
Map 3 - Greenways
Quadra Island
Discovery Passage
Legend
Greenway Loop
Downtown
Village
Park
Recreation Location
School
North Island College
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
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Part 4

Cycling

Cycling is a popular activity in Campbell River, both for commuting and recreational purposes. Over the past several years, within the context of the transportation system the role of the bicycle has changed dramatically. Once considered a vehicle predominantly used for leisure and recreation, the bicycle is now seen as a viable mode of transportation for many trip purposes, with approximately 1.3% of all trips to work made by bicycle in Campbell River.

Developing a safe and comprehensive bicycle network is an important way to support healthy lifestyles and to recognize the positive environmental aspects of cycling as a viable and attractive mode of transportation. With appropriate facilities, cycling can be time-competitive with both automobiles and transit, particularly over short- to moderate-distances during peak travel periods. This section of the Master Transportation Plan provides the long-term direction for the bicycle network as well as support strategies.

4.1 Shaping Influences

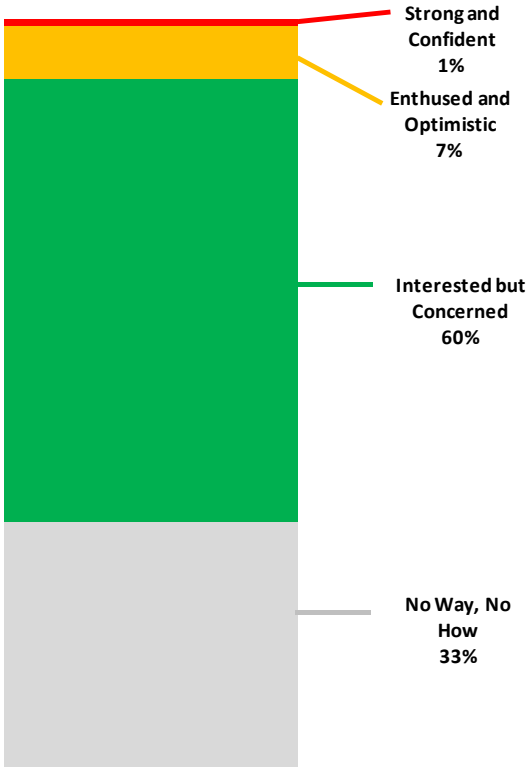
Beyond the role of bicycle facilities in creating attractive, communities and integrating with other modes of transportation, there are many factors that influence the long-term direction of the development of cycling improvement concepts for Campbell River, as described below:

- **Most cycling trips are short.** Similar to walking, most cycling trips are relatively short. There is a significant opportunity to shift some of the short- and medium-distance trips made in Campbell River, particularly given the fact that most trips in Campbell River all relatively short – 53% of commute trips (by all modes) in Campbell River are than 5 km, and 83% of commute trips are less than 10 km.

- **There are a wide range of different types of cyclists and there is an opportunity to tailor investments towards those who are interested in cycling but concerned about safety.** There are a wide range of different types of cyclists, ranging from those who currently cycle regularly for commuting purposes, to others who may not be comfortable cycling on bicycle routes on busy roadways. The City of Portland – often regarded as one of North America's leading cycling cities – has categorized the cycling market based on people's willingness to use bicycles for transportation. The first group, "Strong and Confident" cyclists, are a small group of very regular cyclists, representing less than 1% of the population, who would cycle regardless of road conditions. The "Enthused and Optimistic" group is made up of 7% of the population and is comfortable on most cycling facilities, such as bicycle lanes on arterial streets. The "No Way No How" group makes up 33% of the population and would be unwilling to use a bicycle for transportation, regardless of conditions.

  What remains is the key untapped market, the "Interested but Concerned" group, and there is a significant opportunity to focus on the needs of this large market segment to achieve a significant increase in bicycle use. In Portland it is estimated that this group accounts for approximately 60% of the population. Currently, approximately 1% of trips in Campbell River are made by bicycle, suggesting that most current cyclists are the "strong and fearless" or even the "enthused and confident" groups. The City has not significantly tapped in to the "interested but concerned" market but could see significant benefits if cycling improvements target that group and are able to shift even a modest proportion of trips made by that group towards cycling.

Figure 8: Markets for Cycling



Source: Adapted from Portland Office of Transportation Survey On Public Attitudes Towards Cycling

- **Most cyclists prefer facilities that are separated from motor vehicle traffic or are on streets with low traffic volumes and speeds.** A network of bicycle facilities is crucial to get people cycling, but careful consideration needs to be given to the selection and design of different types of bicycle facilities, as different types of bicycle facilities vary in their desirability. It is important to consider the types of cyclists and ensure that the type of facility matches the target user group. A study conducted by the Cycling in Cities Program at the University of British Columbia asked about preferences for different types of bicycle facilities, and found that all types of cyclists showed a preference for bicycle facilities that were separated from motorized traffic – such as off-street pathways or separated bicycle lanes – or which were located on residential streets with low traffic volumes. The study also found that the least preferred types of bicycle facilities were those located on major streets, particularly if on-street parking was present.

- **A dense bicycle network is required to make cycling an attractive option.** A study conducted by the Cycling in Cities Program at the University of British Columbia also found that, while good cycling facilities are important, cyclists need to be able to access these routes quickly. The study found that cyclists are unlikely to detour more than about 400 metres to find a route with a bicycle facility. As a result, the study concluded that a bicycle route network with designated facilities spaced a minimum of every 500 metres should be the goal for urban areas where there is a desire to increase the modal share of cycling.

- **Bicycle facilities should be integrated with transit.** Although most cycling trips are relatively short distances, if cycling trips are integrated with transit longer distance trips become more attractive. Cycling facilities can be

integrated with transit through the provision of bicycle parking at transit exchanges and rapid transit stations, and by allowing bicycles on transit vehicles.

4.2 Facts and Observations

Key facts and observations about the City's bicycle network and facilities include:

- **Bicycle facility standards.** The City's Design Standards state that street systems must be designed to allow for safe and efficient bicycle use on the roadway and to provide for continuity of connection to the bicycle network. The Standards state that major collector roads and urban arterial roads are required to have bicycle lanes, measuring 1.4-1.5 metres in width, on both sides of the street, as well as an optional multi-use pathway.

- **Incomplete bicycle network.** The City's previously identified existing and planned bicycle network includes approximately 85 km of bicycle routes within the City, including approximately 29 km of bicycle routes on Provincial Highways under the jurisdiction of the Ministry of Transportation & Infrastrucutre. The City has made progress on the implementation of its bicycle network in recent years, but there are still many areas of the City without bicycle facilities. In addition, although many of the bicycle routes are classified as designated routes, many of these routes have not been adequately marked or signed.

- **There are a range of different types of bicycle facilities** that appeal to the broad range of cyclists in Campbell River. The City's current bicycle network consists of the following types of facilities:

- **Bicycle Lanes** are separate lanes that are designated exclusively for bicycle travel.
- **Marked Wide Curb Lanes** are shared travel lanes that are wider than a standard travel lane and provide sufficient width for an automobile to safely overtake a bicycle.
- **Paved Shoulders** are typically found on streets without curb and gutter and with shoulders wide enough for bicycle travel.
- **Local Bikeways** are located on streets with lower motor vehicle traffic volumes and speeds. Most shared local bikeways include bicycle route signage, and some include bicycle pavement markings.
- **Multi-Use Pathways** are physically separated from motor vehicles and provide sufficient width and supporting facilities to be used by cyclists, pedestrians, and other non-motorized users. They can be reserved exclusively for the use of cyclists or can accommodate multiple users.

- **Crossings** are the critical locations on a bicycle route or pathway where these facilities intersect major roads. Crossing treatments can be used to assist cyclists, pedestrians and others in crossing major roads, and to minimize conflicts with motor vehicles.

- **Access to Downtown.** There are currently few bicycle routes that provide direct access to the Downtown core. Current bicycle routes include the bicycle lanes around the perimeter of Downtown on the Island Highway and a shared arterial bikeway on Alder Street which provides access to downtown from the south. There are opportunities to improve connections to, from, and within the Downtown core to make cycling a more attractive option for commuters.

- **Bicycle Parking and End-of-trip facilities.** End-of-trip facilities, including bicycle parking and other facilities such as showers and clothing lockers, can be a determining factor in whether someone decides to make a bicycle trip. They enhance the bicycling experience by providing cyclists with somewhere to park and somewhere to refresh themselves following their trip. The City does not currently have any requirements for bicycle parking or other end-of- trip facilities. There is also a lack of bicycle parking at key destinations throughout the community.

- **Topography.** Topography can act as a significant deterrent to many cyclists. Topography is a significant challenge in many areas of the City, particularly southwest of Downtown and west of the Island Highway.

- **Education and Awareness.** As cycling accounts for a small portion of commuting trips throughout the City, there is a lack of awareness about cycling routes in the City. There is a need for increased education about the cycling options available to them and to clarify the rules of the road for cyclists and motorists as well as improved signage to notify cyclists and drivers about the City's bicycle network.

- **Bicycle-Transit Integration.** Topography is a significant challenge for cycling throughout the City. In addition, many cyclists commute long distances throughout the City. By seamlessly integrating cycling and transit facilities, both these issues can be mitigated, for example, by providing additional bicycle parking at transit facilities and ensuring bicycle routes along steeper corridors are located on or close to transit routes so cyclists can choose to use transit instead of climbing the hill.

4.3 Long-term Bicycle Plan

This section describes the long-term Bicycle Plan for Campbell River, which includes a comprehensive, dense, connected bicycle network consisting of high quality bicycle facilities that are attractive to a variety of target markets, including the "strong and confident", "enthused and optimistic", and "interested but concerned". The Bicycle Plan also includes a range of support facilities, policies and programs, such as bicycle parking and other end-of-trip facilities, improved signage and wayfinding, bicycle-transit integration, and developing a bicycle user map.

What does the Bicycle Plan include?

1. Enhanced Bicycle Network
2. Bicycle Facility Design Guidelines
3. Bicycle Support Strategies

1. Enhanced Bicycle Network

As noted above, research at UBC found that cyclists are unlikely to detour more than about 400 metres to find a route with a bicycle facility. As a result, the study concluded that a bicycle route network with designated facilities spaced a minimum of every 500 metres should be the goal for urban areas where there is a desire to increase the modal share of cycling. In that regard, the potential bicycle network includes enhanced network coverage compared to the previous MTP to ensure that most residents will be located within 500 metres of a bicycle route when the entire bicycle network has been complete.

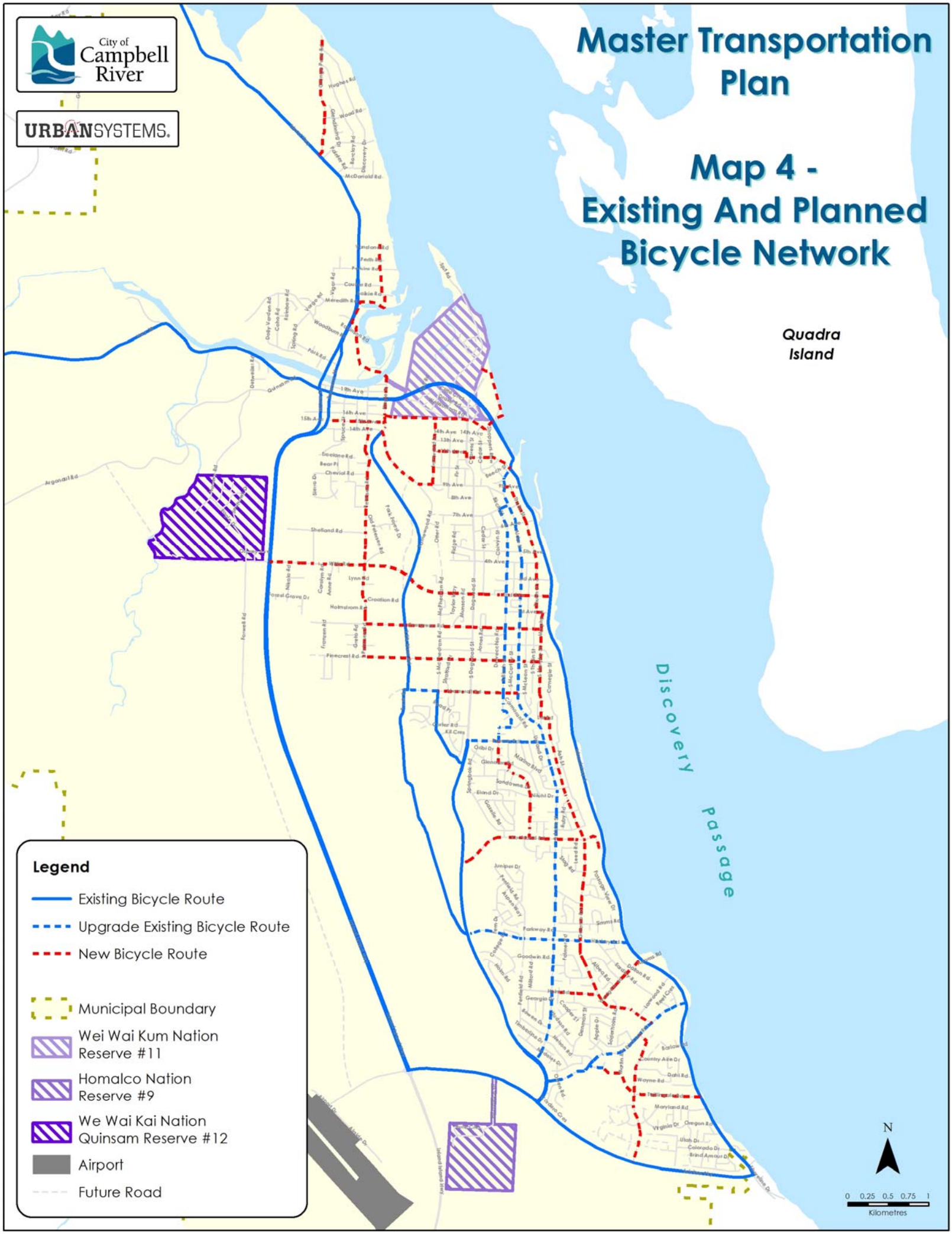
The recommended bicycle network is shown in **Map 4**. The layout of the bicycle network ensures that cyclists from almost all areas of the City can easily access a bikeway. The recommended bicycle network includes:

- **Existing routes**, which are designated bicycle routes which are signed and marked,
- **Upgraded routes**, which have been previously designated as bicycle routes but should be upgraded to

meet applicable guidelines including enhanced signage and pavement markings, and

- **New routes** which are newly identified bicycle routes to improve the density of the bicycle network and complete gaps in the network.

It is important to note, however, that the designation of a street as a bicycle route does not exclude the use of other streets by cyclists. In fact, all City roads should be considered bicycle streets and all road users should be educated to share the road with each other in a safe manner. Furthermore, when roads are upgraded to an urban standard or widened, and when any new roads are constructed, bicycle facilities should be incorporated.


City of Campbell River
URBANSYSTEMS.
Master Transportation Plan
Map 4 - Existing And Planned Bicycle Network
Quadra Island
Discovery Passage
Legend
Existing Bicycle Route
Upgrade Existing Bicycle Route
New Bicycle Route
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
N
0 0.25 0.5 0.75 1
Kilometres

2. Bicycle Facility Design Guidelines

The recommended bicycle network includes the provision of various treatments for on-street and off-street facilities. The selection of specific treatments is influenced by roadway characteristics, intended users, and other factors. A general description of each type of facility is provided below. The recommended bicycle facility types for each bicycle route are shown in **Map 5.** The City should develop comprehensive design guidelines for on-street and off-street bicycle facilities to ensure facilities are designed to a high standard.

a. Corridor Treatments

- **Bicycle lanes** are separate travel lanes designated for the exclusive use of bicycles, identified with a solid white line that is dashed in advance of intersections to indicate where motor vehicles may cross the lane for turning movements. Bicycle lanes are preferred for roadways that have higher traffic volumes, higher vehicles speeds, steep uphill grades, no or limited on-street parking, and limited driveway and/or bus service. Bicycle lanes should be at least 1.5 metres wide, excluding the gutter, where the posted speed limit is less than 70 km/h. There are several treatments that can be used to enhance the visibility and safety of bicycle lanes. These can include applying a contrasting colour, such as green or red, to bicycle lanes. Coloured bicycle lanes can be applied to continuous sections of roadways, or to be used at major conflict points to help guide cyclists. Other treatments include bicycle lanes that are physically separated from motor vehicle traffic and which are known as "cycle tracks." Cycle tracks are physically separated from motor vehicle travel either by a physical barrier, such as on-street parking or a curb or are grade-separated

- **Paved shoulders** are used on rural arterial and collector roads, without curbs and gutters. In order to safely

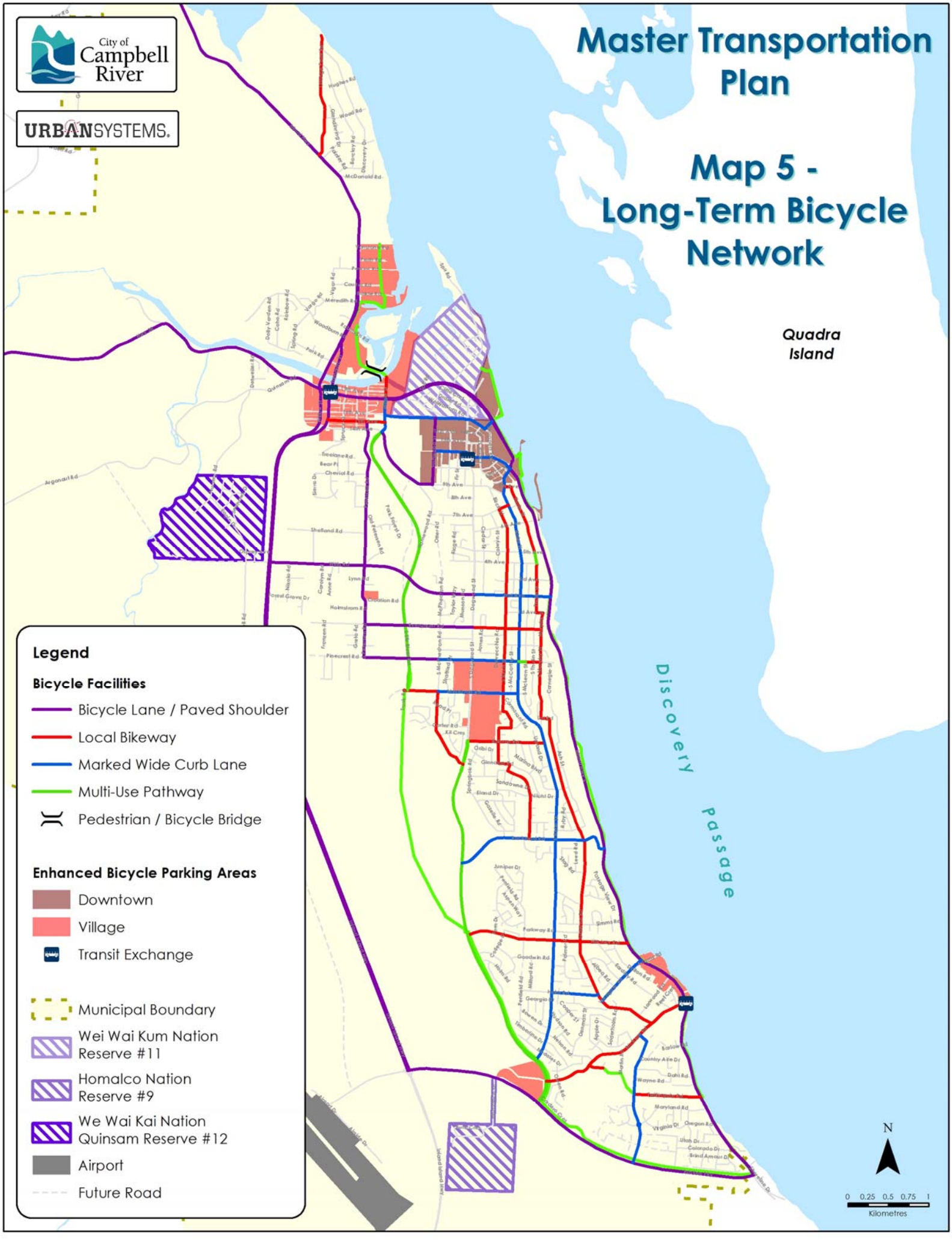
accommodate cyclists, paved shoulders should be 1.5 m wide, and should be wider where posted speed limits are 70 km/h or higher.

- **Marked wide curb lanes** are essentially wide travel lanes, with the addition of bicycle symbols and chevron markings (also known as “sharrows”) marked on the pavement. Marked wide curb lanes do not include a white line separating bicycles from other traffic, which means cyclists may travel in the lane where they feel most comfortable. The sharrow symbols serve to raise awareness to both cyclists and motorists of the correct cycling positioning in the lane, which serves to alert motorists to the potential presence of bicycles even if there are no bicycles on the road. Marked wide curb lanes are preferred for locations that have low to moderate traffic volumes, moderate speeds, steep downhill grades, and may or may not have parking and/or frequent driveway access. A width of 4.3 metres, not including the gutter, is recommended for marked wide travel lanes.

- **Local Bikeways** are located on local streets and lower volume collector roads. Because traffic volumes and speeds are generally low, cyclists and motorists are able to safely share the road without the need for physical improvements to the roadway. Consequently, it is not necessary to provide extra width for bicycles or designate specific areas of the roadway for bicycle use. As a result, local bikeways can be relatively inexpensive to implement. In some cases, the only improvements required are signage and pavement markings identifying the road as a bicycle route, and intersection treatments where the shared route intersects major roads. In cases where there are higher traffic volumes and speeds, traffic calming measures such as traffic circles, speed humps, and directional closures can be implemented to reduce

motor vehicle speeds and volumes and improve safety and comfort for cyclists.

- **Multi-use pathways** are off-street pathways used by cyclists, pedestrians, and other non-motorized users and are physically separated from roadways. A pathway can be located parallel to an adjacent roadway, utility corridor, waterfront, or in a natural environment. Multi-use pathways are perceived as safe and attractive routes for cyclists who prefer to avoid vehicular traffic. All users typically share the entire width of a pathway. Because the speeds of users can range from 4 km/h to 50 km/h, it is important that a pathway is sufficiently wide so that faster-moving users can travel around slower-moving users, thereby avoiding conflicts and collisions. Desirably, multi-use pathways are hard-surfaced, using concrete or asphalt. This means that all non-motorized users can be accommodated, including in-line skaters, persons in wheelchairs and cyclists on bicycles with narrow tires. Soft-surfaced pathways may be preferable in environmentally sensitive areas, and are typically constructed of stable materials such as a compacted aggregate. Soft surfaced pathways can accommodate most users, but are generally unsuitable for in-line skaters, some cyclists, and some wheelchair users. In some cases, multi-use pathways incorporate both a hard surface and a soft surface. The minimum width for a multi-use pathway is 4.0 metres.


City of Campbell River
URBANSYSTEMS.
Master Transportation Plan
Map 5 - Long-Term Bicycle Network
Quadra Island
Discovery Passage
Legend
Bicycle Facilities
Bicycle Lane / Paved Shoulder
Local Bikeway
Marked Wide Curb Lane
Multi-Use Pathway
Pedestrian / Bicycle Bridge
Enhanced Bicycle Parking Areas
Downtown
Village
Transit Exchange
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
N
0 0.25 0.5 0.75 1
Kilometres

b. Crossing Treatments

The critical locations on a bicycle route or pathway are where these facilities intersect major roads. Crossing treatments can be used to assist cyclists, pedestrians and others in crossing major roads, and to minimize potential conflicts with motor vehicles. The type of crossing treatment depends on the width of the intersecting road, the volume of motor vehicle traffic, and the number of cyclists, pedestrians and others using the crossing. The range of crossing treatments that will be considered throughout the bicycle network are highlighted as follows:

- **Marked crossings** are used on lower-volume roadways, where there is a need to identify the crossing to motorists. Crosswalk signage and pavement markings can be supplemented with "special crosswalk" enhancements, which include flashing amber lights and overhead internally-illuminated signs, which also shine light onto the crossing area. In addition, where off-street pathways intersect major roads, crossings should have enhanced pavement markings and signage indicating that cyclists are permitted to use the crossing.

- **Median islands** incorporate a raised island located on the centreline of the road, separating opposing directions of traffic. Median islands at marked crossings make it easier for pedestrians, cyclists and others to cross the roadway, as they only need to wait for a gap in one direction of traffic in order to cross half the road at a time. Median islands can also be extended through an intersection to obstruct turning movements to and from the side street, thereby reducing traffic volumes at the intersection and along the bicycle route.

- **Signalized crossings** are used where the number of persons crossing the roadway is higher, and where traffic

volumes and speeds are higher. Bicycle activated signals should be used at signalized crossings. These can only be activated by cyclists and pedestrians who must push a button. Motor vehicles on the side street cannot activate the signals.

- **Bicycle loop detectors** at traffic signals are marked so that cyclists know where to position their bicycles to activate the detector. In many cases, the same detector that is used for automobiles can be used for bicycles. At intersections with bicycle lanes, additional detectors may be required in the bicycle lane.

- **Bike boxes** are used at signalized intersections to provide cyclists an opportunity to proceed through the intersection when the signals turn green in advance of vehicles. This reduces conflicts between cyclists and motorists, and improves safety for cyclists. Bike boxes are beneficial where cyclists turn left from a traffic lane shared with left-turning and through traffic, and where cyclists travel straight through an intersection in a traffic lane shared with through and right-turning traffic.

- **Grade-separated crossings**, such as overpasses and underpasses, are expensive, and consequently are used only where there is a high volume of high-speed motor vehicle traffic, with no opportunity for a signalized at-grade crossing.

3. Bicycle Support Strategies

In addition to providing a comprehensive network of bicycle facilities with attractive crossings, support strategies are required to make cycling more convenient, as described below.

a. Enhanced On-Street Bicycle Parking in Key Areas

Every trip by bicycle requires that the bicycle be parked at the end of the trip. In many cases, this means locking the bicycle on the street where it could be stolen. The fear of theft or vandalism is a significant deterrent to cycling. Regardless of whether a bicycle is worth $100 or $5,000, no-one wants to have their bicycle stolen, particularly if they depend upon it for transportation. Consequently, providing safe and secure on-street parking at key locations throughout the City is a significant means of encouraging cycling. Additional bicycle parking is recommended in the key areas of Campbell River such as:

- Downtown
- Village Centres
- Neighbourhood Centres
- North Island College
- Campbell River and District Regional Hospital
- Transit Exchanges
- Higher Activity Transit Stops
- Other Major Employment Areas

Ideally, each of these areas should offer a range of bicycle parking facilities, especially where the duration of parking may vary significantly. Options should include:

- **Bicycle Racks** are the most common and versatile type of short-term bicycle parking. There are many different types of bicycle racks, including 'U' Racks, Post-and-Ring racks, and Coathanger racks. Bicycle racks can also tie into the City's Public Art Policy and be provided in conjunction with public art.

- **Bicycle 'Corrals',** also known as 'in-street bicycle parking' consist of bicycle racks grouped together in common areas within the roadway traditionally used for automobile parking. Bicycle corrals can be

implemented by converting one or two parking stalls. Bicycle corrals move bicycles off the sidewalks, leaving more space for pedestrians, sidewalk café tables, etc. Because bicycle parking does not block sightlines (as large motor vehicles would do), it may be possible to locate bicycle parking in 'no-parking' zones near intersections and crosswalks. In most communities the installation of bicycle corrals is driven by requests from adjacent businesses, and is not a city-driven initiative. In such cases, the City does not remove motor vehicle parking unless it is explicitly requested.

- **Bicycle Shelters** consist of bicycle racks grouped together within structures with a roof that provides weather protection. Bicycle shelters provide convenient short-term and long-term bicycle parking.

- **Bicycle Lockers** are essentially large metal or plastic stand-alone boxes that accommodate longer-term parking. They are most appropriate to consider at locations where cyclists will park their bicycles for an extended period of time, such as rapid transit stations or transit exchanges.

b. Enhanced Wayfinding and Signage

Wayfinding and signage helps to identify designated bicycle routes and guide cyclists throughout the bicycle network, and also provide a visual cue to motorists that they are driving along a bicycle route. This can also help "brand" the bicycle network, increasing awareness and marketing of the bicycle network for both cyclists and motorists. Enhanced wayfinding and signage can include:

- **Route signs** that indicate which streets are designated bicycle routes through the use of bicycle route signs and bicycle symbols on street name signs. Supplementary

tabs can be installed below bicycle route signs to indicate major destinations.

- **Wayfinding signs** can indicate directions to key destinations, as well travel distance and estimated riding time. Signs may consist of a single placard that lists several destinations with directional arrows or several destination blades that can be angled to emphasize the direction of travel.

- **Educational signs** provide information for cyclists and motorists regarding appropriate use of bicycle facilities, such as "Share the Road" signs and "Yield To..." signs.

Source: City of Gresham, Oregon

c. Public Bike Sharing Programs

Public bike sharing programs are common in Europe and increasingly popular in communities throughout North America, including Montreal, Washington DC, and Boston. Public bike sharing programs can range significantly in size and scale. For example, the Town of Golden BC recently launched a small bike sharing program with 15 public bicycles and two docking stations. The City can work with other agencies to determine the feasibility of implementing a public bike sharing program in Campbell River. There are a number of factors to consider in a feasibility study for a public bike share program, such as population density, demographics, mixture of land use, completion of the bicycle route network, current bicycle use, bicycle culture, and partnering opportunities with other agencies or the private sector.

d. End-of-Trip Facility Requirements

The City does not currently have requirements for bicycle parking or other end-of-trip facilities such as showers and clothing lockers in its Zoning Bylaw. It is recommended that

the City amend its Zoning Bylaw to provide requirements for the bicycle parking and end-of-trip facilities, and also develop design guidelines to regulate the overall quality and design of end-of-trip facilities. The City should also include bicycle parking in its sustainable development checklist. These requirements may also consider flexible parking requirements that allow for reductions in automobile parking if the number of bicycle parking spaces provided exceeds the City's minimum requirements.

e. Bicycle-Transit Integration

Integrating bicycle facilities with transit is particularly important in Campbell River given the topography of the community and the need to accommodate longer-distance commute trips. Bicycle-transit integration includes the provision of bicycle racks on buses as well as secure parking at major transit facilities and in major centres, such as the Downtown core and Village Centres.

f. Education and Awareness Programs

While it is important to focus on improving bicycle infrastructure to make cycling safer and more attractive, it is equally important to ensure the residents have the skills, information, confidence and support they need to bicycle more. There are a number of education and awareness programs and initiatives that the City can develop and support with its partners, including supporting cycling skills programs, safe routes to school program, and building on the success of events such as Bike to Work Week and Bike month.

In addition, the City can actively market and promote its bicycle facilities, policies and programs using various media. This can include developing a Bicycle User Map for Campbell River residents which could display information

such as bicycle routes, key destinations, transit routes, bicycle parking, and bicycle retailers, for example. The City could also develop a dedicated web presence and use other social media tools to promote and market cycling initiatives in Campbell River.

Part 5

Transit

Public transit is a significant alternative to automobile travel in Campbell River and across the region, as it accounts for approximately 2.5% of all trips to work in the City. Public transit can offer competitive travel times and reduce overall environmental and community impacts of vehicle transportation. For those who do not drive, transit is the only option for getting to jobs, school, shopping areas, and recreational centres.

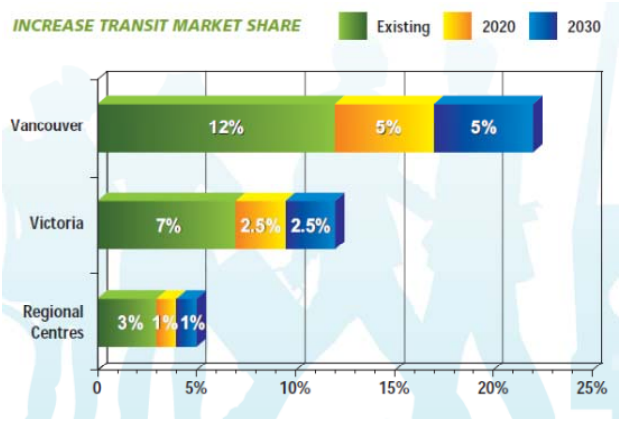
The existing transit system in Campbell River is made up of both conventional transit providing local service within the City and regional service to surrounding areas, as well as HandyDART service for customers with physical or cognitive disabilities that prevent them from using the conventional system. The City's public transit services are largely centered around the Community Centre Transit Exchange in Downtown Campbell River.

This section of the Master Transportation Plan presents a long-term vision for transit in Campbell River. Achievement of the vision, goals, objectives and targets of the Master Transportation Plan will require significant investments in transit services, facilities, and support measures. This includes the provision of attractive, convenient transit services that offer attractive alternatives to driving, as well as the provision of transit facilities and support measures that enhance the performance and reliability of transit services.

The Transit Strategy is influenced by a number of external plans and policies. Funding for the Campbell River Transit System is cost-shared between the City of Campbell River and BC Transit through a partnership with the Strathcona Regional District. Decisions about fares, routes and service levels are made by City Council based on information and planning provided by BC Transit. Transit buses are operated by Watson & Ash Transportation Co. Ltd. Other key external influences include:

- **Provincial Transit Plan.** The Transit Strategy is designed to achieve the goals of the Provincial Transit Plan. The Provincial Transit Plan is British Columbia's $14 billion strategy for expanding fast, reliable, and green transit. The plan emphasizes that, from a transportation perspective, the best means of reducing greenhouse gas emissions is to focus on dramatically increasing transit ridership (and thereby reducing single occupancy vehicles), linking transit to active modes of travel (walking and cycling) and encouraging transit supportive land uses. The Provincial Transit Plan sets a number of quantifiable targets, including increasing transit mode share in regional centres, such as Campbell River, from 3% today to 4% in 2020 and 5% in 2030, as shown in **Figure 9**.

Figure 9: Provincial Transit Plan Mode Share Targets



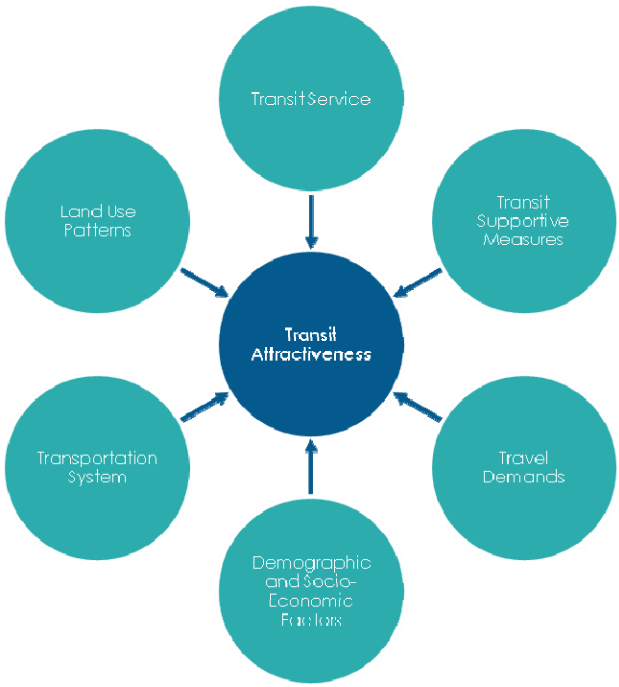
- **Campbell River Transit Future Plan.** BC Transit has completed a Transit Future Plan for Campbell River which in parallel with the MTP. The transit strategy in the MTP is intended to provide direction to the City and BC Transit regarding the long-term needs of the community with respect to transit services. The Transit Future Plan builds on the strategic direction for transit in Campbell River by providing retails related to the services, infrastructure and network required to meet the vision, goals and targets in the MTP.

5.1 Shaping Influences

The demand for transit services is highly influenced by a combination of factors, including the level and quality of transit service and the land use patterns and transportation systems within the community, as illustrated in **Figure 10**. The development of a transit system that is tailored to the needs of Campbell River residents involves consideration of these

various key components that make up and influence such a system. The following figure and discussion provide a broad overview of the factors that influence the attractiveness of transit. The discussion identifies those factors that are addressed specifically within the MTP.

Figure 10: Factors Influencing the Success of Transit



- **Transit services** are a key determinant of the success of transit. In basic terms, transit service must be attractive in order to generate ridership, and must generate sufficient ridership to become cost-effective and justify more resources. The primary contributors toward attractive transit service levels are **coverage** (amount of the community within walking distance of transit), **frequency** of service, and **directness** of routing between key destinations. If transit ridership and mode share are to increase, improvements in all aspects of service quality are required to ensure the retention of existing customers and the ability to attract new customers. The network of the future will also have to capture more non-commuter trips, a travel market that is difficult to capture.

- **Demographic and socio-economic factors**, such as age structure of the population, income, and automobile ownership, have a significant influence on the attractiveness of transit. In particular, the area's demographics are shifting towards an older population, with the proportion of elderly people in Campbell River forecast to increase from 22% in 2009 to 35% in 2019. This will place additional pressures on the transit system, particularly on custom and accessible transit services. As the number of elderly residents increases, transit service and handyDART service will need to expand and provide more neighbourhood oriented transit to address the mobility limitations of the elderly.

- **Land use patterns** – such as type, density, and form – can significantly influence the overall pattern of travel in a region and, consequently, the success of transit. The relationship between land use patterns and transit service levels is critical. For example, higher density mixed-use areas can typically generate high transit ridership, which, in turn, supports attractive levels of service. Conversely, low-density, single-use areas (such as single-family residential) with curvilinear street patterns typically generate single-purpose tripmaking, directional travel patterns, and increased travel times. These characteristics make transit service more costly to provide and generate low ridership. Low ridership discourages the provision of higher frequency service, thereby further discouraging the use of transit.

- **Transportation system.** Roads provide accessibility and mobility for all modes of travel. The layout and classification of the road network can affect the quality and attractiveness of transit service in a community. Some road network patterns can result in circuitous routing for transit vehicles, thereby dramatically increasing travel time and reducing the attractiveness of transit. The integration of other modes with transit service is also a key determinant of transit success. Bicycle and pedestrian access can be negatively affected by poor road network facilities and linkages that increase cycling or walking distances to transit.

  Although there is little opportunity to modify the layout of the established road network significantly, the road network section of the Master Transportation Plan uses transit accessibility as a key criterion in the development of road network options. The MTP also includes bicycle and pedestrian plans, which explicitly address connections to transit facilities for non-motorized modes.

- **Transit supportive measures.** Many transit facilities can be enhanced to improve transit travel time and to provide more comfort and convenience to users. These measures would make transit more competitive with the private automobile to attract new riders and encourage existing riders to continue using transit. Examples of transit supportive measures include the provision of comfortable and safe pedestrian connections to and from bus stops, transit priority measures, which reduce travel time by favouring the movement of transit vehicles over private automobiles, and safe, secure, and comfortable passenger waiting areas (such as bus shelters with adequate illumination). Furthermore, transit exchanges can intercept vehicle trips generated from the periphery of the transit service area and provide convenient access to transit by all modes. They also serve as major transfer locations between transit services.

- **Travel patterns** are influenced by the location of population and employment and strongly influence the success of transit service. For the purposes of transit planning, it is important to understand the current patterns of travel, including how much travel is occurring, why people travel, when people travel, where people travel, and how people travel.

5.2 Facts & Observations

This section highlights key facts and observations regarding current transit service and facilities in Campbell River.

- **Types of transit services.** As previously mentioned, there are a variety of different service types that are aligned with transit markets in Campbell River. These services provide routes that operate locally within Campbell River

and they also provide connections to neighbouring communities as well as to the Comox Valley transit system to the south. In addition, the Campbell River School District #72 operates 19 school buses.

- **Number of transit routes.** There are currently ten conventional transit routes providing local and regional fixed-route services.

- **Service Frequencies.** As shown in **Table 6**, bus service in Campbell River is provided seven days a week, excluding statutory holidays. Regular bus service typically begins early in the morning and continues until the late afternoon. Evening service is typically limited to Thursdays, Fridays, and Saturdays, with some busses operating as late as 10:00pm. Most transit routes run approximately once an hour throughout the day, with some operating at approximately 30 minute headways during the morning and afternoon peak periods. Service levels of 30 minutes or more are unattractive and highlight some of the gaps in terms of service levels. In addition, lack of convenient evening transit service as well as lack of transit service early in the morning impacts the success of transit.

Table 6: Summary of Existing Typical Transit Headways

Route #	Route Description	Headways					
		AM Peak	Mid-Day	PM Peak	Evening	Saturday	Sunday
1	Dogwood – Alder	30	30-60	20-35	120*	60	60
2	Alder - Dogwood	30	30-60	30	60*	60	60
3	Stories Beach	60	120	75	120*	60-120	120
4	Campbellton	55	40-70	30-60	120*	60	60
5	Rockland	60	60	60	180*	60	60
6	Oyster River	90	120-150	60	–	120-150	120
7	Petersen	60	45-60	65	50*	60	60
8	Shoppers Shuttle	60	60	60	120*	60	60
9	Rockland / Alder	6:54am	–	–	–	–	–
15	Homalco	8:45am	10:15am, 2:45pm	–	–	10:15am, 12:15pm, 2:45pm	–

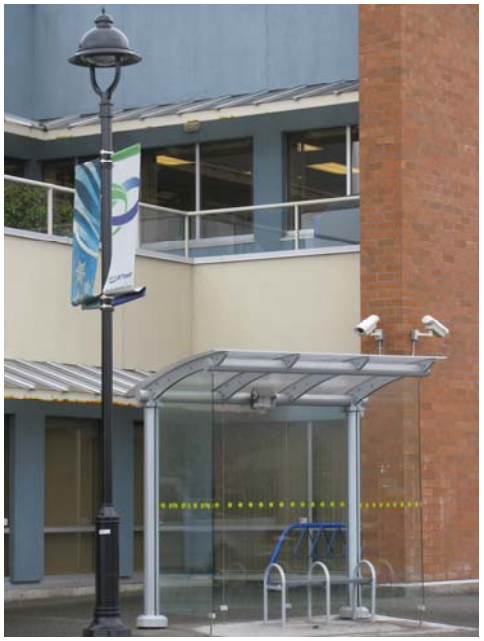
* = Thursday / Friday Only

- **Service to Key Destinations.** The transit system is anchored around the Community Centre Transit Exchange, with most transit routes converging in the downtown core. The transit structure also provides service to several other key destinations throughout the community, including North Island College, the Sportsplex, Timberline Secondary School, Carihi Secondary School, Southgate Middle School, Phoenix Middle School, Robron Centre for Life-Long Learning, City Hall, and the Campbell River & District Regional Hospital.

- **Route Coverage.** Campbell River's transit route coverage generally provides transit services within a reasonable walking distance to most Campbell River residents, as most developed areas of the City are within 400 metres – approximately a five minute walk – from a bus route. The transit coverage provides connections to most major destinations throughout the City.

- **Ridership.** According to the 2006 Census, public transit accounted for approximately 2.5% of all trips to work in

the City. Public transit use is higher among women than men (accounting for approximately 3.2% of all work trips made by women, compared to 1.9% of all work trips made by men). Public transit use is also highest among young adults, as transit accounts for nearly 9% of all commute trips among 15-24 year olds, compared to approximately 1.5% for people aged 25 and over.



- **Passenger facilities.** The attractiveness of transit is based not only on transit services, but on passenger facilities that are provided at bus stops and transit exchanges. Passenger facilities can include some form of weather protection, such as bus shelters, as well as benches, trash cans, and lighting for security at night. As shown in **Table 7,** approximately a third of all bus stops in Campbell River currently have seating, but less than 10% of bus stops provide weather protection with a shelter.

Table 7: Summary of Existing Passenger Facilities

Route #	Route Description	Total Bus Stops	Seating		Bus Shelter	
			Number	%	Number	%
1	Dogwood – Alder	41	15	37%	3	7%
2	Alder – Dogwood	32	13	41%	3	9%
3 / 6	Stories Beach / Oyster River	58	24	41%	9	16%
4	Campbellton	34	11	32%	0	0%
5	Rockland	28	0	0%	0	0%
7	Petersen	41	7	17%	2	5%
8	Shoppers Shuttle	3	0	0%	1	33%
	Total	**237**	**70**	**30%**	**18**	**8%**

- **Accessibility.** In order for transit to be successful, it must be accessible to as many people including those with varying physical, cognitive and other challenges and abilities. Accessibility of the transit system includes ensuring that vehicles are universally accessible as well as ensuring accessibility to bus stops and at transit exchanges.

- **Bicycle-Transit Integration.** Most buses are equipped with bicycle racks, to assist with longer commutes. Bicycles can be integrated with transit by ensuring that bicycle racks or bicycle lockers are provided at higher activity transit stops as well as transit exchanges.

- **Custom Transit.** Campbell River's transit system includes several custom transit services, including HandyDART which provides door-to-door custom transit service for people with physical or cognitive disabilities who are unable to use the conventional system without assistance. In addition, BC Transit offers the Taxi Saver Program, which provides a 50 per cent subsidy on taxi fares by providing coupons to registered customers who book their own trips with a taxi company

- **Service levels.** Campbell River's transit system currently provides approximately 21,000 hours of transit service per year. This represents approximately 0.68 service hours per capita, which is similar to many transit systems in most small and medium-sized throughout the Province, as shown in **Table 8**.

- **Special events.** There are many community-based special events that could incorporate transit use, such as Canada Day, Oceans Day, and Community Health Day and the City could develop a policy to provide community-based transit in conjunction with such events.

Table 8: Example Conventional Transit – Current Service Level Comparison

	Population	Annual service hours	Number of Vehicles	Annual ridership	Annual Service Hours per capita	Rides per capita	Rides per service hour
Campbell River	**30,900**	**21,000**	**9**	**580,000**	**0.68**	**18.8**	**27.4**
Greater Victoria	343.700	663.700	246	22,386,000	1.93	65.1	33.7
Nanaimo	98,500	101,300	41	2,490,000	1.03	25.3	24.5
Chilliwack	53,100	21,300	8	490,000	0.40	9.2	23.0
Comox Valley	45,700	24,000	10	530,000	0.52	11.6	21.5
Cowichan Valley	38,500	23,150	11	335,000	0.60	8.7	14.5
Vernon	37,600	21,000	8	400,000	0.56	10.6	19.0
Penticton	29,200	22,700	8	395,000	0.78	13.5	17.3
Sunshine Coast	20,600	16,700	6	500,000	0.81	24.3	29.7
Powell River	13,900	10,300	6	220,000	0.74	15.8	21.1
Prince Rupert	13,600	9,600	5	400,000	0.71	29.4	40.4
Whistler	10,700	73,900	29	2,725,000	6.85	254.7	36.8

5.3 Long–Term Transit Strategy

This section describes the long-term Transit Strategy for Campbell River. The purpose of the Transit Strategy is to confirm support for many long-term planned transit enhancements in the City and to identify other desired improvements to increase ridership and customer satisfaction. The long-term Transit Strategy will provide an input to the development of the Campbell River Transit Future Plan.

What does the Transit Strategy include?

1. Improved Transit Services
2. Transit Priority Treatments
3. Improved Transit Infrastructure & Facilities
4. Transit Support Strategies

To achieve the vision and goals of the Master Transportation Plan and the Provincial Transit Plan's 5% transit mode share target, the transit network must meet the future transportation needs of the Campbell River area. The network must support the direction of the Sustainable Official Community Plan by connecting existing and planned centres with high quality transit services. The key features of the Long-Term Transit Strategy are described below.

1. Improved Transit Services

The Transit Strategy includes three distinct layers of transit service to better match transit service to demand. The network is designed to be more competitive with automobile travel by improving the directness and reliability of the transit system. The network is less focused on the Downtown area than today's network with an increased emphasis on connections between major centres, including the Downtown, Villages, Neighbourhood Centres, North Island College, and major employment areas. Together, these three layers of service result in a transit structure which places most Campbell River residents within a five minutes (400 metre) walk to a transit route. The three transit service layers are described in further detail below and summarized in **Table 9**. The long-term conceptual structure of the transit system is illustrated in **Map 6**.

a. Frequent Transit Network (FTN)

Frequent Transit Service (FTN) service provides convenient, reliable, and frequent service (15 minutes or better throughout the day), with service provided throughout the entire day and on evenings, seven days a week. The goal of the FTN is to allow customers to spontaneously travel without having to consult a transit schedule. The FTN will carry a large share of the transit system's total ridership and for this reason

justifies capital investments such as transit priority, right-of-way improvements, a high level of transit stop amenities, and corridor branding. The FTN structure is intended to connect major centres, including Downtown, Villages, and Neighbourhood Centres identified in the SOCP, as well as schools and major employment areas. Frequent transit service would be provided in two areas::

- **Dogwood Corridor** to provide frequent, direct service along Dogwood Street, Erickson Road, and 16th Avenue. This corridor would connect several important destinations, including the Downtown core, several existing and planned Village Centres (including Willow Point, Jubilee Heights, Merecroft Village, and Campbellton), Neighbourhood Centres, and North Island College.

- **Island Highway Corridor** would provide frequent, direct service between Willow Point, Downtown and Campbellton via the Island Highway. This route would connect downtown with the Willow Point Village, several neighbourhood centres, and planned densification along the waterfront.

b. Local Transit Network (LTN)

The LTN is designed to connect neighbourhoods to local destinations and to the FTN. LTN services allow customers to plan a trip to work, school, local shopping centre, or personal trips by transit. Frequency and vehicle type are selected based on demand. In some cases smaller transit vehicles can be utilized to better match customer demand and operating conditions to local roads. The LTN would also have direct, relatively frequent service (30 minutes or better during peak periods), with service running all day and into

the evening. The structure of local transit services would include:

- **Alder Corridor,** providing direct service from Willow Point to Downtown and continuing to Campbellton and North Campbell River
- **North Campell River,** connecting North Campbell River with Campbellton and Downtown
- **Petersen – Downtown Circulator,** providing direct service between North Campbell River, Campbellton, Quinsam, and Downtown Campbell River.
- **Jubilee,** linking Jubilee, Homalco, Airport, South Willow Point and Willow Point Village

c. Targeted Services

Targeted Services are a collection of transit services that do not fit into the other definitions and are more focused on the specific needs of customers. These services include:

- **Regional services** provide connections between cities. The Transit Strategy includes an enhanced regional transit connection to the Comox Valley Transit System and south to Stories Beach.
- **Neighbourhood service areas** are located in low-density and/or growth areas of Campbell River to support local area connections to and from key centres (such as the Downtown core and Villages), as well as to and from FTN and LTN routes. These are areas where transit would be provided using either conventional buses or smaller vehicles, depending on the demand for transit in each area. In some areas, neighbourhood services could be

provided on a fixed-route, fixed-schedule basis or a demand-responsive basis. Smaller vehicle transit services could potentially operate along residential streets and into community centres and/or commercial developments.

- **HandyDART services** provide door to door services for customers unable to use the conventional transit service.

- **Seniors Transit.** The Transit Strategy recommends investigating strategies to provide improved custom transit service to seniors. For example, in North Vancouver they have developed a "Go Bus" that operates three days a week and is designed to provide service for isolated seniors. Some of the Go Bus costs are covered by foundations, non-profits, service clubs and others.

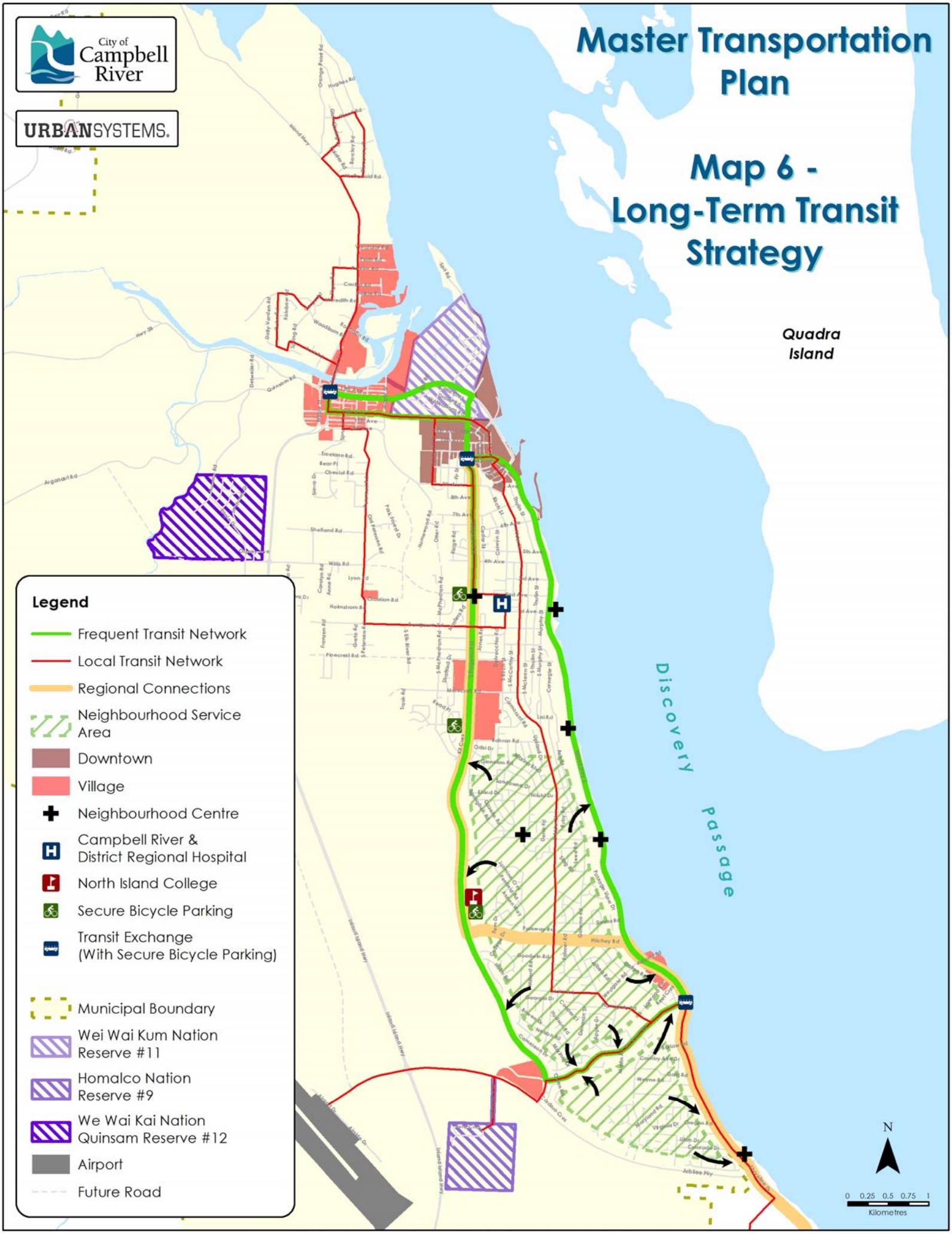

City of Campbell River
URBANSYSTEMS.
Master Transportation Plan
Map 6 - Long-Term Transit Strategy
Quadra Island
Discovery Passage
Legend
Frequent Transit Network
Local Transit Network
Regional Connections
Neighbourhood Service Area
Downtown
Village
Neighbourhood Centre
Campbell River & District Regional Hospital
North Island College
Secure Bicycle Parking
Transit Exchange (With Secure Bicycle Parking)
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
N
0 0.25 0.5 0.75 1
Kilometres

Table 9: Transit Service Hierarchy

	Frequent Transit Network (FTN)	Local Transit Network (LTN)	Targeted Services
Land use	High to medium density along corridors	Medium to low density	Varies depending on service
Vehicle type	Standard or high capacity bus	Standard or small bus	Standard or small transit vehicles, vans, taxis, commuter rail vehicles
Service frequency	15 minutes or better between 7:00 a.m. - 7:00 p.m., 7 days a week	Frequency based on demand	Varies depending on service
Service span	6:00 a.m. – 11:00 p.m., 7 days per week, extended based on demand	7:00 a.m.-10:00pm, 5 days per week, extended based on demand	Varies depending on service
Stop interval	Frequent stops along a corridor, 500m apart or less.	250m - 500m	Varies depending on service
Facilities and amenities	**Branded local stops;** -quality customer amenities at stops **Select major stops with enhanced amenities** -Level door boarding -off-board fare payment -real time customer information -bike storage	**Local stops** -quality customer amenities at stops -enhanced amenities around major stops	Varies depending on service
Signal priority	Transit is given signal priority over other traffic at key intersections along the corridor	At key delay points only	Only if part of RTN or FTN
Lane priority	By-pass lanes at key areas of congestion,	No lanes	Only if part of RTN or FTN

The Transit Strategy projects that the service hours for the conventional and custom transit system will roughly triple over the next 25 years from 21,200 conventional hours and 5,500 custom service hours to approximately 70,000 conventional hours and 10,000 custom hours, as shown in **Table 10**. To provide this service, it is estimated that the transit fleet will need to increase from 9 conventional vehicles and 4 custom vehicles to 20-25 conventional vehicles and 7-10 custom vehicles over this period.

Table 10: Current and Projected Annual Service Hours

	Conventional transit system	Custom transit system	Total
Current	21,200	5,500	26,700
Projected 2035	70,000	10,000	80,000

2. Transit priority treatments

Transit priority is a term used to refer to a variety of physical and operational improvements designed to give transit vehicles and their passengers priority over general vehicle traffic. Transit priority elements can be:

- **Regulatory,** such as the successful "Yield to the Bus" regulations and signage),
- **Operational**, such as retiming traffic signals to respect the large number of passengers on transit vehicles compared to private vehicles), or
- **Physical**, such as exclusive transit ways, intersection queue jumper, bus bulges, and transit signal priority measures).

Transit priority treatments are recommended along future Frequent Transit Network corridors. Where delays and congestion exist today or are anticipated to get worse in the future, the City will examine opportunities for priority treatments that reduce delays to bus services, such as transit signal priority measures and queue jumpers at intersections. These transit priority treatments will improve service for transit, often at the expense of vehicles. Although many of these treatments will impact vehicles, they are key to supporting long-term transit ridership by prioritizing transit over vehicles.

3. Improved transit infrastructure and facilities

The attractiveness of transit is based not only on transit services, but on passenger facilities that are provided at bus stops and transit exchanges.

a. Transit exchanges. Transit exchanges are facilities where passengers transfer from one bus route to another, or even change modes to walk, bike or drive. They are typically located within the activity centres of the community to reinforce the relationship with land use patterns. If properly planned and designed, transit exchanges can become effective multi-modal exchanges and pedestrian-oriented sites. The Downtown Transit Exchange is currently the primary transit exchange within the City. The Transit Strategy recommends additional transit exchanges in Willow Point and Campbellton. In addition, to accommodate the future increase in transit vehicles, the City will need to expand its Operations Centre. At a minimum, transit exchanges should provide weather protection, seating, transit route and schedule information, lighting, bicycle parking, and other amenities as shown in the table below.

b. Enhanced Passenger Amenities. Although providing attractive bus services with connections to desired destinations both locally and regionally is critical to the success of transit in Campbell River, passenger amenities at bus stops can also have a significant impact on attracting new users. In the long-term, the City should strive to provide seating, shelters, lighting, and customer information at all stops in Campbell River, consistent with BC Transit's Infrastructure Design Guidelines as shown in **Table 11**.

Table 11: Transit Passenger Facility Guidelines

Facility	Attributes
Major stops with enhanced amenities	• High end transit shelter • Level door boarding • Off-board fare payment • Real time schedule information • Bike storage • Customer way finding information • Universally accessible
Higher activity transit stops	• Transit shelter • Bike storage • Quality customer information • Universally accessible
Lower activity transit stops	• Universally accessible • Bench

c. **Expanded Transit Operations Centre.** The Campbell River Transit System has one combined conventional and custom transit operations and maintenance facilities that accommodates the existing fleet of 9 conventional buses and 4 handyDART buses. The facility is at operational capacity and the future expansion of transit services will require new facilities to accommodate a forecast fleet of 20-25 conventional vehicles and 7-10 handyDART vehicles.

4. Transit Support Strategies

a. **Improved Customer information.** The improvement of customer information helps to assist existing customers to navigate the transit system and makes it easier for new users to access the transit system for the first time. The following customer information tools are of particular interest:

- Improved **signage and passenger wayfinding** at transit exchanges
- Develop an **online trip planner** using the BC Transit website allowing customers to plan their transit trip by entering an address, intersection, bus stop number, or bus route
- Provide **real-time transit information** along FTN corridors showing the actual time until the next bus arrival
- Develop corridor and vehicle **branding standards** for FTN corridors
- **Additional transit information** at bus stops, including route maps, schedules, and bus stop ID numbers
- Transit information on Google Transit Trip Planner
- Develop a **SmartPhone application** for use on iPhones, BlackBerries or other portable devices to provide up-to-date transit information

- Develop a **Social Media** presence allowing customers to keep up-to-date via Twitter, Facebook, or a blog.

b. Expanded Transit Pass Programs. A partnership between the Provincial Government and BC Transit now offers the U-Pass BC Program to students at all public post-secondary schools across the province. The U-Pass Program places a universal transit pass in the hand of each student as a mandatory program at each participating post-secondary institution.

BC Transit supports expanding the U-Pass Program to post-secondary institutions throughout the Province, including North Island College, subject to a student referendum to approve participation. Based on the experience of other schools, this initiative will significantly increase transit ridership and reduce driving trips, consequently minimizing congestion on the roadway network.

The City could also work with BC Transit to examine the potential of resident pass programs along future Frequent Transit Network Corridors and in the Downtown and Village Centres. In the Downtown, where attractive transit services are already or planned to be in place, resident transit pass programs may be possible for new or existing developments to reduce impacts on the roadway network. In such cases, new developments would be required through the development approvals process to provide transit passes for each unit. Similar to the U-Pass Program, a resident pass program would require high participation levels in order to make the reduced pass cost feasible. BC Transit and the City would need to monitor usage patterns and perhaps make adjustments to service levels as demands rise.

c. **Transit Oriented Design.** Land use patterns significantly influence overall travel patterns and, consequently, the success of transit. Communities that are more transit oriented" not only support higher levels of transit, but also are more pedestrian and bicycle friendly. Transit Oriented Communities are places that, by their design, allow people to drive less and walk, cycle, and take transit more. In practice, this means concentrating higher density, mixed-use, human scale development around frequent transit stops and stations, in combination with mobility management measures to discourage unnecessary driving.

d. **Improved accessibility to transit.** Improved accessibility to transit is designed to enhance services and facilities for all existing customers and to attract new riders. Today, many individuals experience barriers to using transit for various reasons, ranging from the physical challenges of system elements (such as accessing bus stops and transit exchanges) through to those that experience cognitive difficulties getting around on transit.

The Campbell River Transit System should strive to be accessible to all. Accessibility could be improved by making investments in:

- Identifying alternative options to fixed route transit service in rural and suburban areas with dispersed population
- Implementing audible stop announcements on transit vehicles and at stops
- Upgrading existing and new transit infrastructure to meet BC Transit's Infrastructure Design Guidelines
- Improving fleet access for mobility aids and strollers

- Designing accessible service to facilitate spontaneous travel
- Improving written and online material for those with visual impairments
- Providing customers more convenient and affordable fare payment options
- Integrating handyDART services with conventional services where possible
- Improving accessibility for cyclists to use the transit system
- Developing and trialing new accessible transit solutions

Part 6
Street Network

The street network is designed to support mobility for all modes of travel including general purpose traffic, goods movement, transit, walking and cycling. In most communities in North America however, motor vehicles are often given preferential treatment on the roadway network, sometimes at the expense of walking, cycling or even transit. Along most major roads in the City for example, general purpose traffic and goods movement are often treated as priority modes in the design and operation of the roadway. On neighbourhood streets – collectors and local roads – vehicles have been the priority mode in the way communities and streets are designed and managed, sometimes at the expense of other modes to get around a community and quality of life. Whether this preferential treatment toward vehicles is merely a reflection of current travel demand patterns, it can certainly influence the shape of the community and the travel modes that people are most inclined to use in addition to the liveability of neighbourhoods and major activity nodes in the City.

Campbell River has a generally well established grid road network, particularly in the north-south direction. In the east-west direction, the grid is interrupted at several locations, providing a discontinuous road network. The main north-south arterial roads in Campbell River are Dogwood Street, Alder Street, Petersen Road, and Island Highway. In addition, the Inland Island Highway (Highway 19) is the major north-south connection between Nanaimo and Port Hardy. The road network consists of 29 km of arterial roads, 23 km of collector roads, 135 km of local roads, and 36 signalized intersections, 14 of which are located on the Provincial highways and thus under the jurisdiction of the Ministry of Transportation.

This section of the Master Transportation Plan presents a long-term vision for the multi-modal street network in Campbell River. To meet the vision, goals and objectives of the Master

Transportation Plan, the primary objective of the Street Network Plan is to provide a strategy for managing the existing road network and to promote the integration of all travel modes into the system to improve safety and mobility for all road users.

6.1 Shaping Influences

There are essentially three foundational approaches to shaping the long-term direction of the street network in the City to address issues of mobility and safety as well as to accommodate planned expansion and growth areas. For the purpose of identifying all long term possibilities for the City's major street network, the approaches are generally aligned with the following three scenarios.

- **Manage the existing roadway network.** In an effort to make best use of resources and minimize costs to address mobility and safety issues, there are several strategies and improvement concepts to manage the existing roadway network. In relative terms, these are often referred to as management strategies or minor capital improvements to enhance the performance of the existing system. In some cases, these improvements could include incorporating transit priority measures and intersection improvements to support the movement of people, not just traffic.

- **Expand the existing network.** In some cases, the existing roadway network may be expanded to address issues of mobility and safety. These improvements may include corridor widening for general purpose vehicles or transit as well as to accommodate other modes.

- **Build new roadway connections.** There are also some planned growth areas of the City. In addition to these areas, the street network in some areas of the City is not well developed and many major roads serve regional, local, neighbourhood and site traffic. Regardless of the condition or reason, new roadways are also examined in the MTP to address some of these challenges.

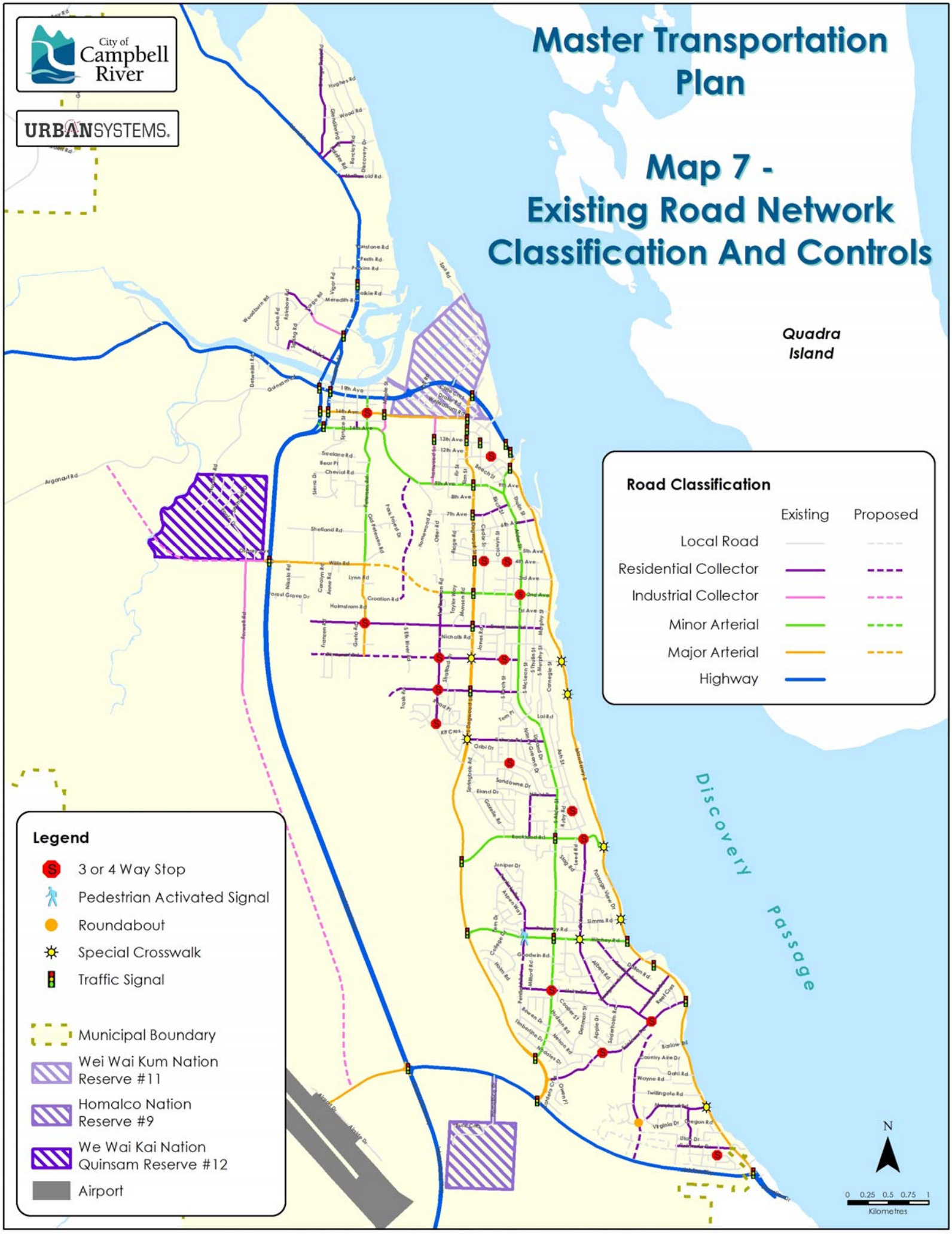
Discussions with community and agency stakeholders have been used to assess the relative merits of these three approaches - not only evaluating the optional improvement concepts, but to develop priorities that best serve the interests of the community.

In order to develop and evaluate the Street Network Plan, the transportation model that was developed for the previous MTP was updated using the same TMODEL/2 software. To simplify the model, however, the number of traffic zones were reduced from the previous model, from 80 zones to 45 zones by consolidating a number of traffic zones. Based on population data from the City's Sustainable Official Community Plan, the 2010 population was assumed to be 31,800 and this was projected to grow at an average annual growth rate of 1.0% per year through to 2036, for a future population of approximately 41,000 residents in 2036. For each zone, population and employment figures were established for 2010 and 2036. All of the key roads in the City were then input to the mode with each road represented in terms of their classification, length, speeds, number of lands, and intersection controls. The model includes all arterial and collectors as well as some of the local roads of significance. The purpose of this model is to estimate current and future traffic volumes throughout the City and to assess the effectiveness of various street network options.

6.2 Facts and Observations

This section summarizes key facts and observations about the City's street network.

- **Street classification and jurisdiction.** Campbell River's street network is classified according to a hierarchy based on function, traffic service, land access, traffic volumes, as shown **Map 7**, including:
    - **Provincial Highways**, which are under the jurisdiction of the Ministry of Transportation & Infrastructure and are intended to provide for inter-regional travel. The primary role of highways is to move traffic with minimal interruption from traffic controls and with restrictions on property access.
    - **Arterial Roads,** which are intended for longer-distance intra-regional travel from one part of the City to another and which provide limited access to individual parcels
    - **Collector Roads,** which are intended to connect traffic from local roads to arterial roads and which place equal importance on traffic movement and access to properties.
    - **Local Roads,** which are not intended for through travel and which provide a high level of access to individual properties.


City of Campbell River
URBANSYSTEMS.
Master Transportation Plan
Map 7 - Existing Road Network Classification And Controls
Quadra Island
Road Classification
Existing
Proposed
Local Road
Residential Collector
Industrial Collector
Minor Arterial
Major Arterial
Highway
Legend
3 or 4 Way Stop
Pedestrian Activated Signal
Roundabout
Special Crosswalk
Traffic Signal
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Discovery Passage
N
0 0.25 0.5 0.75 1
Kilometres

- **Network Connectivity.** The City has a well developed grid network, particularly in the north-south direction. The north-south connections – particularly Dogwood Street, Alder Street and the Island Highway – provide good north-south connections between the residential areas of Rockland and Willow Point in the south and the Downtown area, but there is no direct connection between these residential areas the commercial / industrial area of Campbellton. In the east-west direction, the grid is interrupted at several locations, providing a discontinuous road network. In particular, there is a lack of east-west connections between Petersen Road and Dogwood Street and between the residential area along the Alder street corridor to the Island Highway between Rockland Road and 1st Avenue.

- **Traffic Controls.** As shown in **Map 7**, there are 36 signalized intersections in Campbell River, 14 of which are located on the Provincial highways and thus under the jurisdiction of the Ministry of Transportation & Infrastructure. This includes 34 full traffic signals, and two half signals for pedestrians. In addition, there are 16 crosswalks with flashing lights in Campbell River. There are also seventeen multi-way stops (3- or 4-way stops) in the City.

- **The street network not only supports vehicle travel but all other modes of transportation.** The street network represents a critical component of the City's transportation network, not only for supporting automobile traffic, but also walking, transit, cycling, and goods movement. Effectively, the road network is the skeleton of the overall transportation system. To that end, this street network plan recognizes opportunities to integrate improvement opportunities for all modes along the street network, not just vehicle travel.

- **Current Traffic volumes.** Arterial roads through the City accommodate the highest traffic volumes, particularly those in the north-south direction. **Map 8** shows modelled traffic volumes throughout the City and illustrates that Dogwood Street experiences the highest traffic volumes in the City, particularly between 2nd Avenue and 9th Avenue, which currently accommodates over 15,000 vehicles per day. Traffic volumes on Dogwood Street decrease to approximately 6,000 – 12,000 per day north of 9th Avenue and to approximately 9,000 – 12,000 vehicles per day between 2nd Avenue and Merecroft, and continue to decrease south of Merecroft Road. Alder Street also has relatively high traffic volumes, with approximately 9,000 – 12,000 vehicles per day through much of the corridor, and the Island Highway carries approximately 9,000 – 12,000 vehicles per day. Most of the other arterial roads throughout the City accommodate approximately 6,000 vehicles or fewer per day. Traffic volumes throughout the City are projected to increase by approximately 30% by 2036.[1]

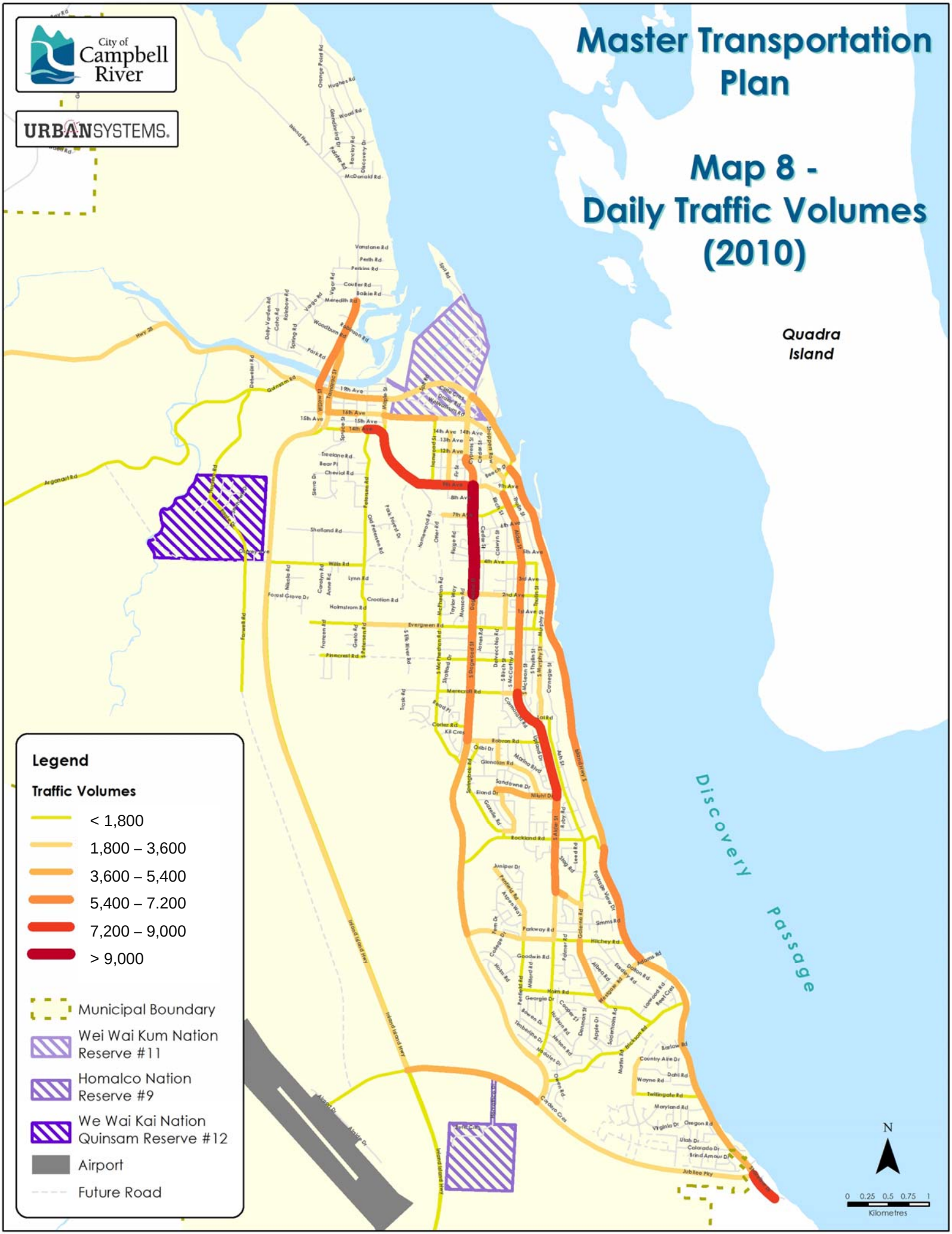
- **There are few areas of delay and congestion today and in the future.** The overall performance of an urban roadway is typically measured by the delays experienced at major intersections, also referred to as Level of Service (LOS). In most urban areas, signalized intersections are the source of most delay experienced on the roadway network. 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. A LOS C or better is generally used as the target for planning purposes. Overall, most signalized intersections in Campbell River are currently operating at

[1] Note that modeled traffic volumes shown in Map 8 vary somewhat from observed traffic volumes noted in later sections of the document.

LOS B or better during the afternoon peak period today and in the future (without improvements), as shown in **Map 9**. The primary exceptions are the intersection of Shoppers Row and Island Highway, and Alder Street and 2nd Avenue.

- **Several key intersections within the City have relatively high collision rates.** ICBC collects and maintains statistics for all reported collisions in British Columbia. The collision data classifies collisions based on the type of collision as follows: fatality, injury, or property damage only, and also includes reported collisions involving pedestrians or cyclists. Collision data was provided for all collisions reported to ICBC between 2003 and 2009. As shown in **Map 10**, the highest collision locations throughout the City are generally found at various intersections with Dogwood Street and the Island Highway.

  To further account for traffic volumes, collision rates were calculated for the locations with the highest number of collisions throughout the City. For the fifteen locations thoughout the City with the highest number of collisions, collision rates were calculated which identify the relative number of collisions based on the traffic volumes through the intersection. In addition, collision severity was calculated to provide an indication of the type of collision, as summarized in **Table 12**. Areas of the City with the highest collision rates are generally similar to those locations which experience congestion and delay as noted above.


City of Campbell River
URBANSYSTEMS
Master Transportation Plan
Map 8 - Daily Traffic Volumes (2010)
Quadra Island
Discovery Passage
Legend
Traffic Volumes
< 1,800
1,800 – 3,600
3,600 – 5,400
5,400 – 7.200
7,200 – 9,000
> 9,000
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
N
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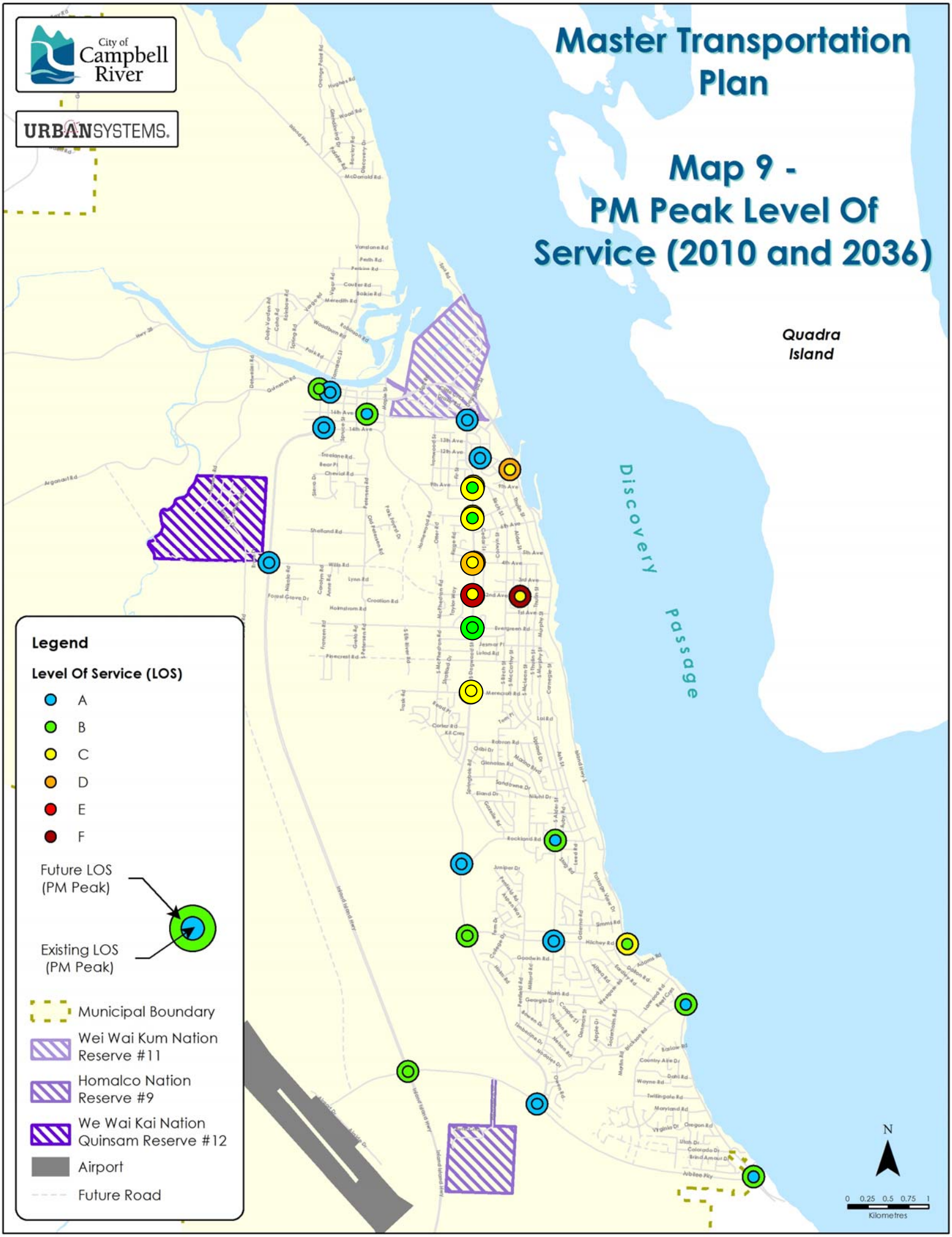
Kilometres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Map 9 - PM Peak Level Of Service (2010 and 2036)
Quadra Island
Discovery Passage
Legend
Level Of Service (LOS)
A
B
C
D
E
F
Future LOS (PM Peak)
Existing LOS (PM Peak)
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
N
0 0.25 0.5 0.75 1
Kilometres

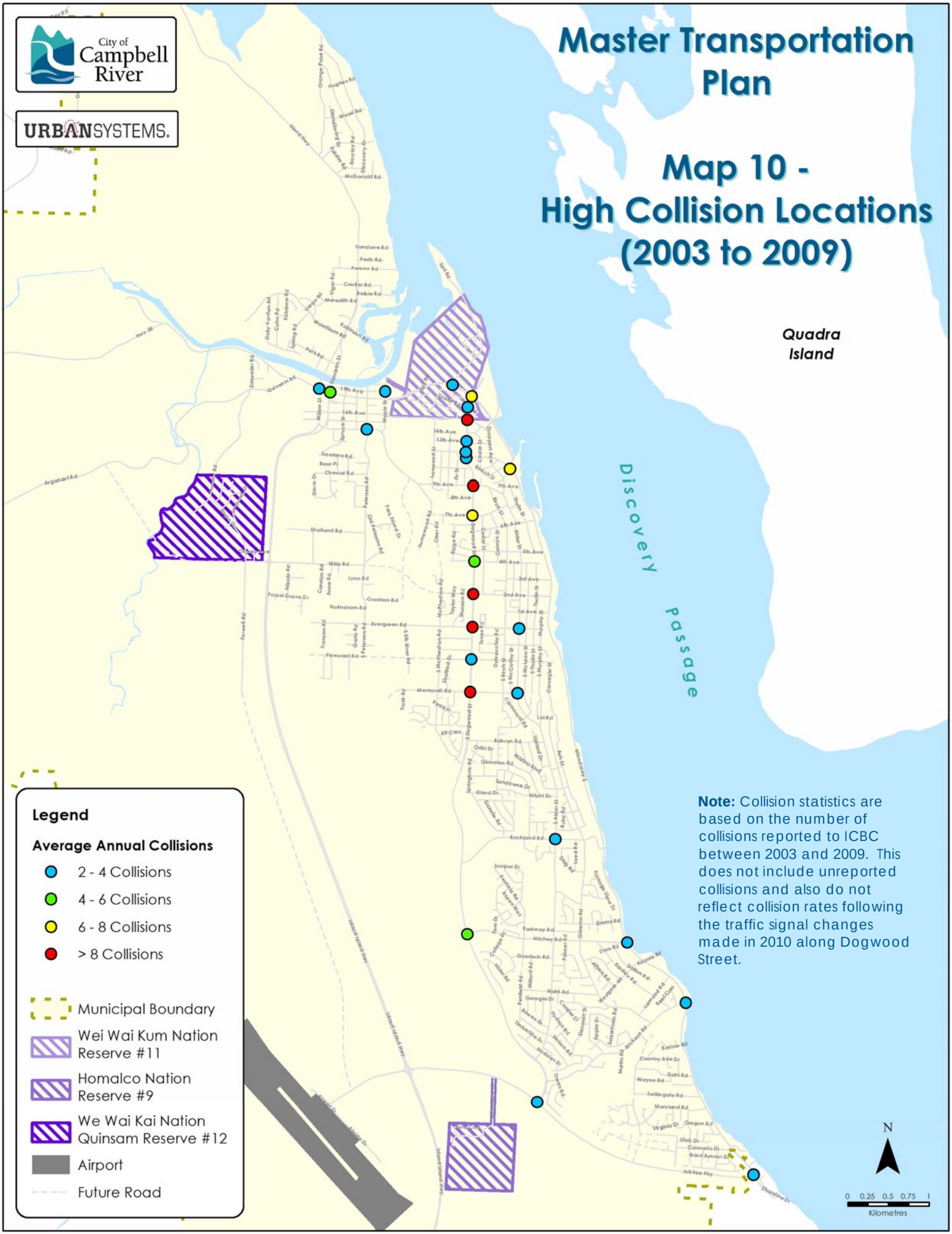

City of Campbell River
URBANSYSTEMS
Master Transportation Plan
Map 10 - High Collision Locations (2003 to 2009)
Quadra Island
Discovery Passage
Legend
Average Annual Collisions
2 - 4 Collisions
4 - 6 Collisions
6 - 8 Collisions
> 8 Collisions
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
Note: Collision statistics are based on the number of collisions reported to ICBC between 2003 and 2009. This does not include unreported collisions and also do not reflect collision rates following the traffic signal changes made in 2010 along Dogwood Street.
N
0 0.25 0.5 0.75 1
Kilometres

Table 12: Collision Type, Rate and Severity at Top 15 Collision Locations, 2003 – 2009*

		Collision Type				Collision Rate and Severity		Pedestrians / Cyclists	
Street	Cross-Street	Property Damage Only	Injury	Fatality	Total Collisions	Collision Rate (col/MVK)	Collision Severity Index	Pedestrian	Cyclist
Dogwood St	2nd Ave	34	52	0	**86**	3.0	6.4	8	1
Dogwood St	9th Ave	40	43	0	**83**	3.0	5.7	1	0
Dogwood St	Evergreen Rd	29	47	0	**76**	2.5	6.6	0	0
Dogwood St	16th Ave	33	31	0	**64**	2.9	5.4	1	1
Dogwood St	Merecroft Rd	26	24	0	**64**	2.1	4.2	2	0
Island Hwy	Shoppers Row/St. Anns	26	24	0	**50**	2.3	5.3	0	0
Dogwood St	7th Ave	22	22	0	**44**	1.5	5.5	1	0
Dogwood St	Island Hwy	21	22	1	**44**	1.7	7.8	0	1
Dogwood St	4th Ave	19	19	0	**38**	1.7	5.5	0	0
Island Hwy	Tamarac St	20	18	0	**38**	1.4	5.3	0	0
16th Ave	Tamarac St	18	15	0	**33**	1.9	5.1	0	1
16th Ave	Maple St	8	19	1	**28**	1.6	10.6	0	1
Island Hwy	Hilchey Rd	13	15	0	**28**	1.0	5.8	0	0
Petersen Rd	14th Ave	10	17	0	**27**	1.5	6.7	0	0
Dogwood St	Hilchey Rd	14	7	0	**21**	1.1	4.00	0	0

* Collision statistics are based on the number of collisions reported to ICBC between 2003 and 2009. This does not include unreported collisions and also do not reflect collision rates following the traffic signal changes made in 2010 along Dogwood Street.

- **Neighborhood livability is affected by traffic volumes, noise, and speed.** Traffic noise, vehicle speeds on residential streets, and short-cutting and overall traffic volumes are primary concerns of many residents. These issues can become more prominent when there are recurring delays on the major roadways. Generally speaking, the local area traffic issues may often be dealt with through neighbourhood transportation improvements, although they are often affected by the designation and design of the street as well.

6.3 Long-Term Street Network Plan

This section describes the long-term plan for multi-modal improvements to the street network in Campbell River. Improvements include an updated roadway classification system, enhancements to accommodate all users along the City's major roadways, recommended new roads, improvements to minor road improvements, a goods and services movement strategy, as well as guidelines for neighbourhood traffic management.

1. Updated Street Classification System

The street classification system is designed to guide the City's short- and long-term decisions regarding the configuration and design of roads and supporting facilities, as well as relationships with adjacent land uses. In some cases, the existing classification neither reflects the current or planned role and function of a given roadway as anticipated.

Because the MTP outlines long-term directions that are consistent with the classification of roadways, the MTP includes an updated Roadway Classification System. It is generally desirable to minimize the number of changes to an existing road classification. However, classifications for some roadways have been updated to better reflect their current and planned long-term role and function, as shown in **Map 11**. Unlike design standards for roads and other municipal infrastructure, a classification system represents the *typical* form and function for each class and are meant only as guidelines. The typical characteristics of each type of roadway are shown in **Table 13**, although there may be some variations in the actual characteristics of certain roadways.

What does the Street Network Plan include?

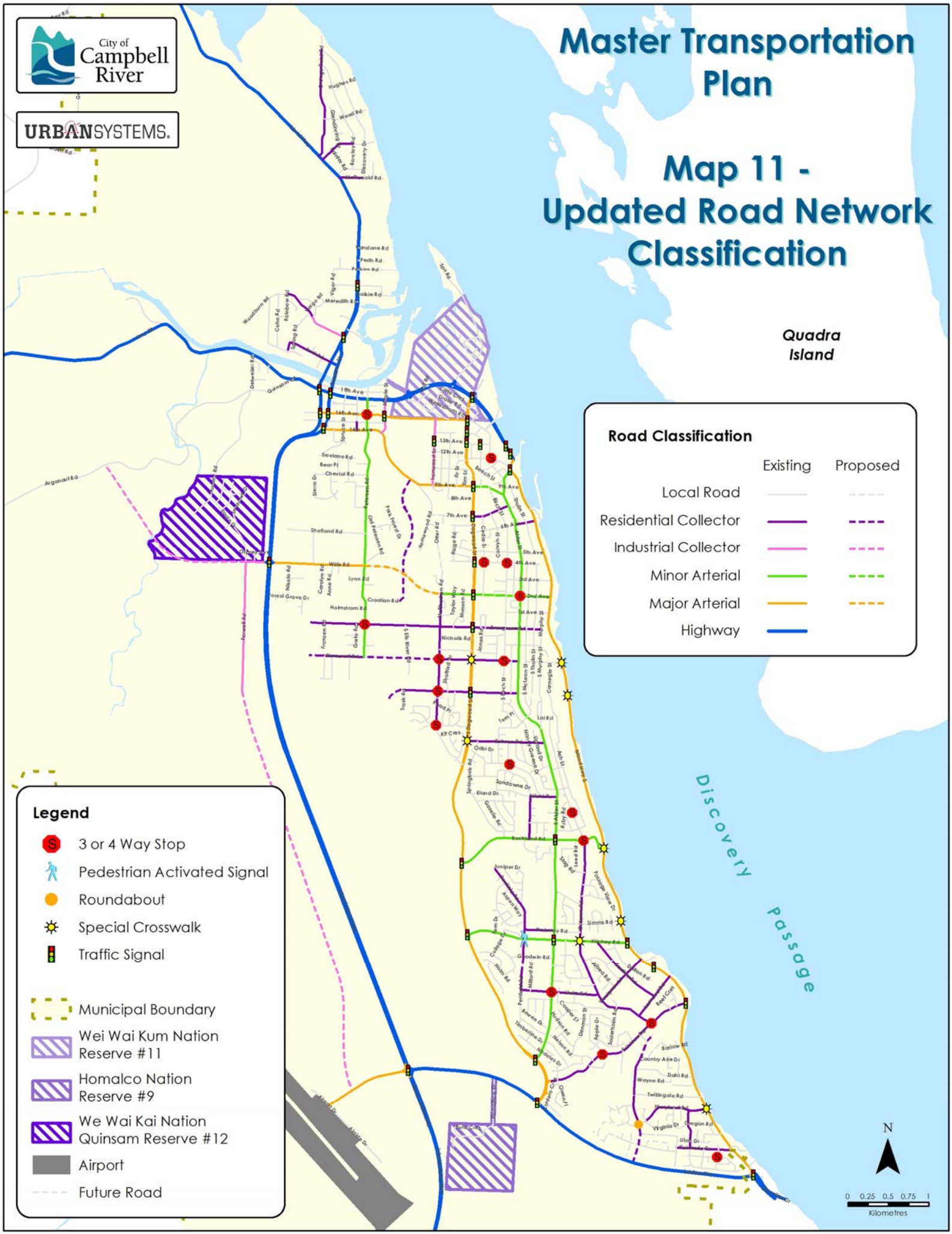
1. Updated Street Classification System
2. Major Road Enhancements
3. New Roads
4. Minor Road Improvements
5. Goods and Services Movement
6. Neighbourhood Traffic Management

Table 13 – Roadway Classification Guidelines

	Major Arterial	Minor Arterial	Collector	Local
Expected traffic demands (approx. Daily)	10,000 +	5,000 – 15,000	1,000 – 8,000	< 1,000
Traffic and connectivity	Regional and cross-town traffic connecting to major destinations and highways	Cross-town traffic connecting to major arterials	Neighbourhood traffic connecting to arterials	Local street traffic connecting to individual properties and collectors
Typical form	2-4 lanes plus turn lanes at intersections	2 lanes plus turn lanes at key intersections	2 lanes	2 lanes
Typical pavement width	20 m	14 m	12 – 15 m	9 – 12 m
Property access	Very limited	Limited	No limitations	No limitations
Control	Generally signalized or roundabouts	Generally signalized or roundabouts	Generally unsignalized or 4-way stop	Unsignalized
Transit services	Yes – primary transit corridors	Yes – primary or local transit	Yes – local transit	No
Typical intersection spacing	400 m	200 m	60 m	60 m
Sidewalks	2 sides	2 sides	2 sides	1 or 2 sides

As part of the updated classification system presented in **Map 11**, the designation for some roadways has been updated to better reflect their current and planned role and function, including:

- **Jubilee Parkway (west of Inland Island Highway)** is changed from Provincial Highway to major arterial as this segment is under the City's jurisdiction.
- **Petersen Road (south of Willis Road)** is changed from major arterial to minor arterial to reflect lower traffic demands
- **9th Avenue / Homewood Road / 14th Avenue (between Inland Island Highway and Dogwood Street)** is changed from minor arterial to major arterial to reflect higher traffic demands and its role as a truck route.


City of Campbell River
URBANSYSTEMS.
Master Transportation Plan
Map 11 - Updated Road Network Classification
Quadra Island
Road Classification
Existing
Proposed
Local Road
Residential Collector
Industrial Collector
Minor Arterial
Major Arterial
Highway
Legend
3 or 4 Way Stop
Pedestrian Activated Signal
Roundabout
Special Crosswalk
Traffic Signal
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
Discovery Passage
N
0 0.25 0.5 0.75 1
Kilometres

2. Major Road Enhancements

There are five major north-south corridors in Campbell River, including the Inland Island Highway, Petersen Road, Dogwood Street, Alder Street, and the Island Highway. Many of the major road enhancements are intended to improve mobility and safety for all modes of transportation along these north-south corridors, as well as key east-west corridors, such as 2nd Avenue, 14th Avenue, and 16th Avenue. Many corridors throughout the City have different roles in accommodating various modes of transportation, and different strategies have been recommended for each corridor. In particular, two broad types of strategies have been identified for the five major north-south corridors throughout the City (Highway 19, Petersen Road, Dogwood Street, Alder Street, and Highway 19A). First, the MTP recognizes that the primary function of Highway 19 and Dogwood Street are to accommodate high traffic volumes, and strategies have been developed to improve mobility for motor vehicles to ensure these corridors are convenient and attractive options for motor vehicles. Second, Petersen Road, Alder Street and Highway 19A are intended to function as multi-modal corridors and accommodate all modes of transportation. As such, the primary strategies for these corridors are to balance motor vehicle traffic with other modes, such as transit, walking and cycling.

All of these major roads support the highest traffic and transit demands in the City, as well as goods movement. In addition, some are located within pedestrian priority areas and must therefore provide attractive and convenient sidewalk and crossing facilities. The improvement strategies for major roads described within this section of the plan reflect the integration of the pedestrian, bicycle and transit plans described in previous sections of the MTP, as well as other opportunities for safety and mobility improvements to existing facilities. Recognizing that the MTP is intended to

provide broad direction for each of these corridors, specific corridor plans or local area improvement opportunities should be used to confirm suitability of specific treatments. Major road enhancements are shown in **Map 12.** An evaluation of all street network improvements is provided in **Appendix C.**

a) Dogwood Street

Dogwood Street is the primary north-south roadway in the City of Campbell River. It is a major arterial road that extends from Jubilee Parkway in the south to Highway 19A in the north. Dogwood Street is generally a four-lane road, except north of 9th Avenue through the Downtown core, where it generally has two ravel lanes. On-street parking is not permitted at any point along the corridor. Observed traffic volumes along the corridor vary as follows:

- 9th Avenue to Highway 19A: approximately 6,000 – 9,000 vehicles per day
- Merecroft Road to 9th Avenue: approximately 11,000 – 13,000 vehicles per day
- Hilchey Road to Merecroft Road: approximately 7,000 – 8,000 vehicles per day
- Jubilee Parkway to Hilchey Road: approximately 5,000 or fewer vehicles per day.

Dogwood Street serves an important function in the City's street network, as it is a designated truck route and a major transit corridor in addition to accommodating the highest automobile volumes in the City. Dogwood Street also has a multi-use pathway to accommodate bicycles and pedestrians parallel to the roadway between Jubilee Parkway and Robron Road, as well as sidewalks on both sides of the street between Robron Road and 9th Avenue, as well as between 11th Avenue and 16th Avenue.

Safety is a key issue on Dogwood Street, as it is home to eight of the top ten collision locations in the City. Although safety is an issue throughout the corridor, the primary issues identified along Dogwood Street are between Merecroft Road and 9th Avenue. This portion of the corridor experiences the highest traffic volumes and includes six traffic signals at Merecroft Road, Evergreen Road, 2nd Avenue, 4th Avenue, 7th Avenue and 9th Avenue as well as a pedestrian crosswalk with flashing lights at Pinecrest Road. There are currently no dedicated left-turn lanes at any intersections along this portion of the corridor.

In order to improve mobility and safety in this portion of the corridor, the City adjusted the signal operations to a split three-phase timing in June, 2009 and subsequently modified the signal timing to improve performance in January, 2011. Since the three-phase signal was introduced and subsequently modified, travel times have been reduced through this segment and level of service has improved at all the intersections, and are now generally operating at LOS B or C. However, with projected population and employment growth, LOS is projected to decrease at several intersections, particularly at the 2nd Avenue and 4th Avenue intersections.

Since the original change to signal operations, there has not been a significant reduction in collisions along this segment of the corridor. Prior to the change in signal timing, there were 65 reported collisions between July, 2008 and June, 2009, compared to 62 reported collisions July, 2009 and June, 2010. In addition, collision data shows that a significant portion of collisions through this segment of the corridor are rear-end or left-turn collisions, as shown in **Table 14**.

Table 14: Collisions and Left Turning Vehicles on Dogwood Street (Merecroft Rd to 16th Avenue)

Intersection	Total Collisions (2003 – 2009)	Collision Type			Left-Turning Vehicles (PM Peak Hour)	
		Rear End	Left-Turn	Other	North bound	South bound
Merecroft Road	64	49%	29%	22%	17	186
Evergreen Road	76	29%	49%	22%	83	51
2nd Avenue	86	42%	44%	14%	7	81
4th Avenue	38	53%	21%	26%	29	24
7th Avenue	44	40%	25%	35%	9	53
9th Avenue	83	44%	16%	60%	176	54
16th Avenue	64	19%	37%	56%	58	22

The primary purpose of the improvements to Dogwood Street is to maximize its vehicle capacity and improve safety. Recommended improvements to Dogwood Street include:

- **Add dedicated left turn lanes** at Merecroft Road, Evergreen Road, 2nd Avenue, 4th Avenue, 7th Avenue, and 9th Avenue (southbound) in order to minimize the impact of left turning vehicles on mobility and to improve safety. It is recommended that current lane widths be maintained to ensure for consistency throughout the corridor. Accommodating left-turn lanes will require widening the right-of-way from the current 20 metres and will require property acquisition at many intersections. At some locations, this is a long-term recommendation due the location of existing buildings, and road widening at these locations should be considered over the long-term as redevelopment occurs.
- **Install accessible pedestrian signals** to provide crossing information to pedestrians and enhance the pedestrian environment.

- **Install countdown timers** to provide countdown information to users crossing at key intersections.
- **Equip traffic signals with pre-emption capabilities for transit vehicles** to allow for transit vehicles to pre-empt traffic signals as Dogwood Street is identified as a future Frequent Transit Corridor.
- **Improved transit passenger facilities** including shelters, seating, and customer information at all bus stops along Dogwood Street recognizing its role as a Frequent Transit Corridor.

b) Alder Street

Alder Street is a minor arterial road that provides a north-south alternative to utilizing Dogwood Street. Alder Street extends south from the intersection with Dogwood Street and continues north to St. Ann's Road. Alder Street generally provides two travel lanes and two parking lanes along most of its length. Alder Street also plays an important multi-modal corridor, as it is a transit corridor and is designated as a bicycle route. Alder Street is predominantly a single-family residential corridor.

Alder Street generally accommodates approximately 7,000 – 9,000 vehicles per day north of Merecroft Road, and approximately 6,000 vehicles per day or less south of Merecroft Road. Given that Alder is a two-lane road, it is operating near capacity today. Traffic signals are only provided on the southern portion of the corridor, at Hilchey Road and Rockland Road, and an additional signal is planned to be implemented in 2013/2014 at Dogwood Street. In addition, there is a 4-way stop at 2nd Avenue. The lack of intersection controls, particularly between Merecroft and 9th Avenue, has been noted as contributing to the attractiveness of Alder Street as compared to Dogwood

Street, which has six traffic signals over this stretch. A travel time survey recently conducted for the City found that travel times along this portion of Alder Street are significantly less than along the same portion of Dogwood Street, even after the signal timing changes on Dogwood Street. Additionally, the intersection of Alder Street and 2nd Avenue is projected to experience significant delays in the future, with an LOS "F" given the current configuration. Finally, sidewalks are only provided on one side of the street between Murphy Street and 6th Avenue, as well as south of Rockland Road.

The purpose of the road network enhancements for Alder Street is to reduce traffic volumes and improve safety and mobility for all road users on Alder Street, in conjunction with improvements to Dogwood Street to accommodate diverted traffic from Alder Street. In that regard, the strategy for Alder Street does not include additional vehicle capacity. It should be noted that prior to any major changes to this corridor, the City should provide further opportunity for input into the changes that will be made through this area. Recommended improvements to Alder Street include:

- **Install traffic signals** when warranted at 2nd Avenue and Merecroft Road. Roundabouts could also be considered at these locations, although property acquisition may be required.
- **Provide curb extensions** at all major intersections and crosswalks along Alder Street. Curb extensions will shorten the pedestrian crossing distances across Alder Street itself and across intersecting streets. Curb extensions enhance pedestrian safety and delineate parking along Alder Street.
- **Install bicycle facilities** along Alder Street. Given the current road width and a desire to maintain on-street parking, marked wide curb lanes would be the most suitable bicycle facility. I

- **Sidewalks** should be provided continuously on both sides of the entire portion Alder Street. Sidewalks should be at least 1.8 metres wide and include a boulevard between the sidewalk and on-street parking.
- **Improved transit passenger facilities** including seating and shelters at bus stops with higher passenger activity.
- **Signage** at Dogwood and Alder Street intersection to encourage the use of Dogwood Street as the primary route to Downtown instead of Alder Street and to indicate that Alder Street is not a designated truck route and discourage trucks from using Alder Street.

c) Island Highway (1st Avenue to Jubilee Parkway)

The Island Highway is a Major Arterial road along the Campbell River waterfront. The Island Highway is generally two-lanes and accommodates approximately 10,000 – 13,000 vehicles per day. The Island Highway is a multi-modal corridor, as it accommodates transit currently and is identified as a future Frequent Transit Corridor and also has on-street biycle lanes as well as an off-street multi-use pathway. This corridor connects Willow Point and several Neighbourhood Centres with Downtown Campbell River. Significant multi-family and commercial infill redevelopment is anticipated along the Island Highway in the future. The Island Highway provides a scenic route along the waterfront for residents and visitors alike. The purpose of improvements to Island Highway will be to improve safety and operations for all modes and also improve the visual environment as a key gateway to the City. In 2005, the City completed the South Island Highway (19A) Conceptual Design, which included a comprehensive redesign of the Island Highway between Jubilee Parkway and 1st Avenue. To date, the City has completed improvements to the highway between Rockland Road and Willow Creek. The recommended improvements for the remainder of the corridor include:

- **Install a 4-metre centre left-turn lane or landscaped median** throughout the corridor, although it should be noted gaps should be provided in the median to allow for emergency access.
- **Improve pedestrian and bicycle mobility and safety** by incorporating 1.7 metre bicycle lanes in each direction, in addition to a 1.5 metre sidewalk with 1.35 metre boulevard on the west side of the street, and 4.0 metre multi-use pathway on the east side of the street.
- **Install roundabouts** at Rockland Road, Hilchey Road, Pinecrest Road, Rotary Park, and potentially at Jubilee Parkway in conjunction with the Ministry of Transportation & Infrastructure.
- **Install a traffic signal** when warranted at 2nd Avenue, subject to future traffic demands.
- **Improve pedestrian connections** between the Island Highway and the residential neighbourhoods uphill by providing pedestrian linkages Pinecrest Road, Merecroft Road, and south of rotary beach park.
- **Improve transit operations and facilities** by providing transit pullouts as well as passenger amenities such as shelters, seating, illumination and passenger information.

The design also includes a number of other features to improve the aesthetics and environmental features of the corridor, including undergrounding the overhead lines and promoting environmental management through bioswales and other stormwater management techniques.

d) Highway 19A (Dogwood Street to St. Ann's Road)

This portion of the Island Highway is under the jurisdiction of the Ministry of Transportation & Infrastructure. This corridor is classified as a Provincial Highway and provides a connection between Downtown Campbell River, the BC Ferries Terminal, and the Inland Island Highway. This corridor is currently

designed for high speed motor vehicle travel, and includes two travel lanes in each direction with a wide centre median with dedicated turn lanes at intersections.

Several studies in recent years have recommended a reconfiguration of this corridor, including the Downtown Study for the City of Campbell River and the Downtown and Campbellton Area Transportation Network and Parking Plan. These plans identify the need to create a more livable downtown and to re-design Highway 19 along the waterfront to be a traffic calmed, pedestrian- and bicycle-friendly link. These previous studies suggested that this stretch could be reduced to one travel lane in each direction with the introduction of wider sidewalks, a waterfront walkway, dedicated bicycle lanes, and on-street parallel or angled parking, and curb extensions, for example. This would provide an opportunity to continue the City's waterfront pathway network north of the ferry terminal. In addition, the Island Highway and St. Ann's Road intersection is projected to have poor LOS in the future and it is recommended that a roundabout be considered at this location. This segment currently handles approximately 7,000 vehicles per day. Based on these traffic volumes and the network analysis that was conducted for this study as well as previous studies, a two-lane roadway would be able to accommodate the current and planned traffic volumes. It is recommended that the City conduct a feasibility study in conjunction with the Ministry of Transportation & Infrastructure and BC Ferries to investigate the possibility of accommodating a multi-modal facilities along this corridor without impacting mobility and safety along this segment.

Figure 11: Conceptual Design of Waterfront Portion of Highway 19A

Source: Downtown and Campbellton Transportation Network and Parking Plan

e) 16th Avenue

16th Avenue is an arterial road providing an east-west connection between Downtown, Campbellton, and the Inland Island Highway. It is generally a two-lane roadway with on-street parking on each side of the street. 16th Avenue generally accommodates approximately 4,000 - 6,000 vehicles per day, including a significant portion of trucks, which account for approximately 6% of traffic in the PM peak hour and approximately 10% of traffic in the AM peak hour. 16th Avenue is also a transit route and has been identified as a future Frequent Transit Corridor and is a designated bicycle route with sidewalks on both sides of the street. The Downtown and Campbellton Area Transportation Network and Parking Plan recommends improvements to improve multi-modal accommodations along 16th Avenue. The City has also recently initiated a Local Improvement Project on 16th Avenue between Ironwood Street and Dogwood Street, which will include 5-metre travel lanes in each direction as well as a 4-metre centre buffer and left turn lanes. 16th Street has a road width of 14 metres, which provides significant opportunities to enhance the corridor for all modes, as follows:

- **Install traffic signal** when warranted and provide left-turn lanes at Petersen Road by replacing existing four-way stop.

- **Provide curb extensions** at all intersections to improve pedestrian safety, reduce pedestrian crossing time, and delineate on-street parking.
- **Improved transit passenger facilities** including shelters, seating, and customer information at all bus stops along 16th Avenue recognizing its role as a Frequent Transit Corridor, as well as an on-street transit exchange on 16th Avenue near Tamarac Street.
- **Provide signage** indicating that 16th Avenue is a designated truck route.

In addition, the Downtown and Campbellton Area Transportation Network and Parking Plan noted that, although on-street parking is currently permitted on both sides of the street, it did not appear to be highly utilized. As such, that study recommended replacing on-street parking with a centre landscaped median, with left turn lanes where necessary.

f) 14th Avenue / Homewood Road / 9th Avenue

This corridor provides an alternate east-west connection along arterial roadways between Downtown, Campbellton, and the Inland Island Highway as well as a direct connection to Dogwood Street. It is generally a two-lane roadway with on-street parking on each side of the street. 14th Avenue generally accommodates approximately 5,000 – 6,000 vehicles per day, including a significant portion of trucks, which account for approximately 6% of traffic in the PM peak hour. 14th Avenue is also a transit route and has sidewalks on at least one side of the street throughout most of the corridor. Recommended improvements include:

- **Install traffic signals** when warranted and provide left-turn lanes at Petersen Road and Willow Street (Highway 19).
- **Install bicycle lanes** on both sides of the street to improve bicycle safety.
- **Provide curb extensions** at all intersections to improve pedestrian safety, reduce pedestrian crossing time, and delineate on-street parking.
- **Provide sidewalks on both sides of the street** throughout the entire corridor to improve pedestrian safety and comfort.
- **Improved transit passenger facilities** including shelters, seating, and customer information at all bus stops along the corridor.
- **Provide signage** indicating that 14th Avenue is a designated truck route.

g) Petersen Road

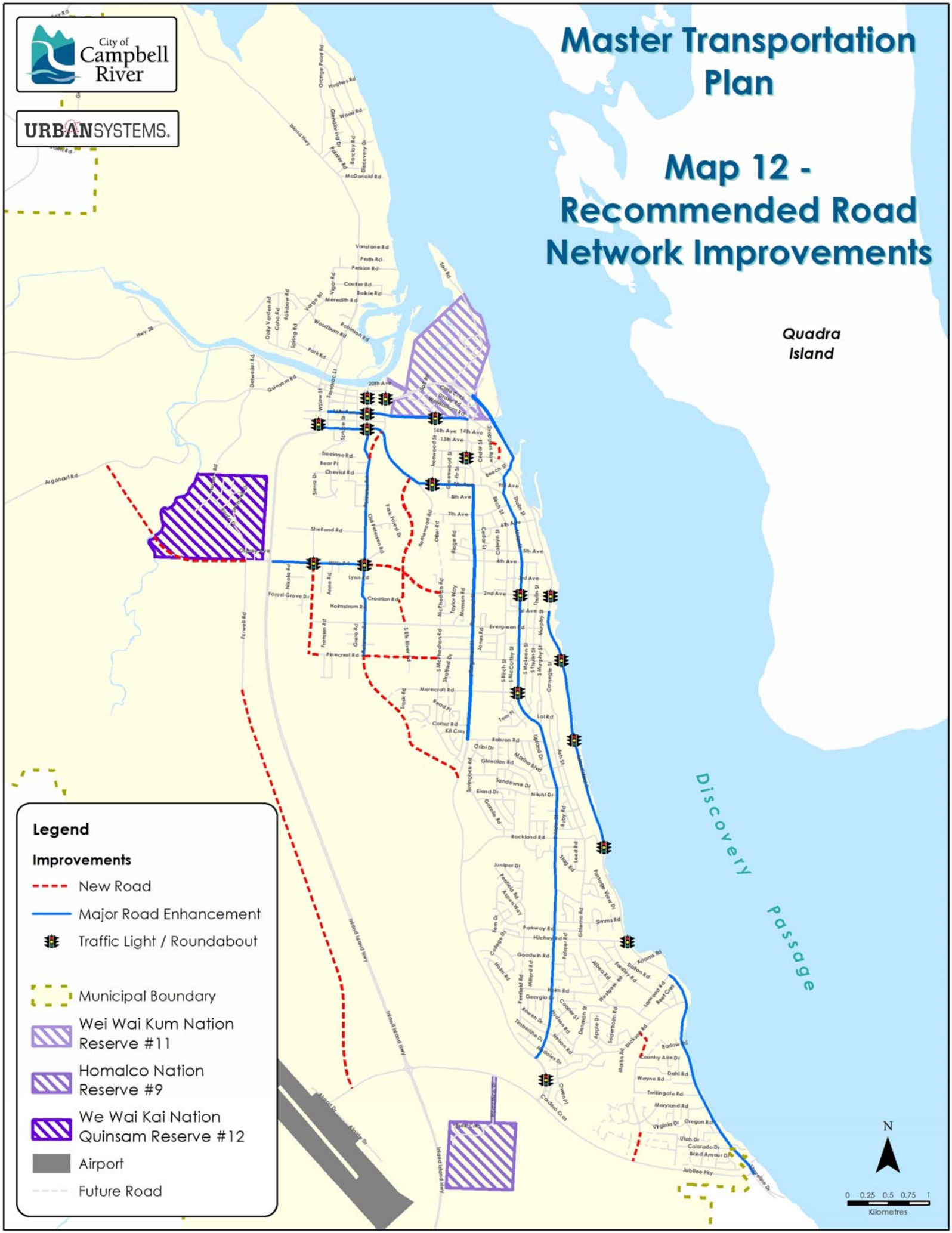
Petersen Road is currently a two-lane road with a rural cross-section, with gravel shoulders and ditches on both side of the street. Petersen Road is located in Quinsam, which is expected to accommodate modest growth over the next twenty-five years and is designated as a Village Centre in the City's SOCP. As redevelopment occurs in this area, Petersen Road should be upgraded to an urban standard, including bicycle lanes, sidewalks, and enhanced transit facilities. In addition, the Downtown & Campbellton Area Transportation Network and Parking Plan recommended that over the long-term, Petersen Road be re-aligned to improve safety and connectivity to the Campbellton area as redevelopment occurs, although it should be noted that there are grade and property challenges associated with this realignment.

h) Willis Road

Willis Road is currently a two-lane road with a rural cross-section, with gravel shoulders and ditches on both side of the street. Willis Road is located in Quinsam, which is expected to accommodate modest growth over the next twenty-five years and is designated as a Village Centre in the City's SOCP. Willis Road provides a direct connection to the Inland Island Highway and will serve an important connection in the City's transportation network once the Willis – 2nd Connector is implemented. As redevelopment occurs in this area and as the Willis-2nd Connector is constructed, Willis Road should be upgraded to an urban standard, including bicycle lanes, sidewalks, and enhanced transit facilities.

Master Transportation Plan

Map 12 - Recommended Road Network Improvements



3. New Roads

A number of new road connections have been identified in previous studies to improve network connectivity and to accommodate new development. A number of new roads are recommended to improve network connectivity and accommodate future growth as described below and shown in **Map 12**:

- **Willis – 2nd Connector** has been previously identified to provide an arterial road connection between Petersen Road and McPhedran Road. This connection would improve east-west connectivity through central Campbell River and provide more direct access to the Inland Island Highway. This link was recommended in the previous MTP and also identified in the Nunn's Creek Area Road and Greenways Plan to accommodate future growth in the Nunn's Creek and Quinsam areas.

  As noted in the previous MTP, this connector provides a more direct, continuous east-west connection from the Inland Island Highway in the west through to the Island Highway in the east, and would reduce turning movements and improve safety at key intersections. Forecast future traffic volumes along this connector indicate that it would accommodate approximately 6,500 daily vehicles by 2036. This would add approximately 600 additional vehicles per day on Willis Road west of Petersen Road and approximately 1,300 vehicles per day on Petersen Road compared a future base scenario. The Willis – 2nd Connector would also serve to provide relief to several other east-west connections, particularly Evergreen Road, 9th Avenue / Homewood Road, and 16th Avenue and would also divert some traffic from Dogwood Street, as shown in **Table 15**. As the Willis – 2nd Connector would serve an important role in the City's transportation network, it would also serve an important multi-modal function and

should accommodate transit, and also have sidewalks and bicycle lanes on both sides of the street.

Table 15: Forecast 2036 Two-Way Daily Traffic Volumes, with and without Willis – 2nd Connector

	Without Connector	With Connector	Difference
Willis – 2nd Connector	n/a	6,500	+ 6,500
Evergreen Road	7,500	3,500	- 4,000
9th Avenue / Homewood Road	13,700	12,700	- 1,000
16th Avenue	11,200	10,400	- 800
Willis Road	3,200	3,800	+ 600
Dogwood Street (north of 2nd Avenue)	21,100	20,000	- 1,100
Petersen Road	4,900	6,200	+ 1,300

- **Nunn's Creek Connector** is recommended to provide a north-south connection between Homewood Road and Evergreen Road in the Nunn's Creek Area Road and Greenways Plan. This would be a collector road that would be constructed in conjunction with planned residential development along the corridor between Petersen Road and McPhedran Road. Although the primary purpose of this connector would be to accommodate future growth in this area, this option could also provide some additional relief to both Petersen Road and Dogwood Street.

- **Pinecrest Road and Walworth Road Extensions** have been previously recommended to provide an improved grid network for the South Quinsam Heights area south of Willis Road. The Pinecrest Road link would extend Pinecrest Road west to connect with Petersen Road and beyond to Walworth Road. The Walworth Road extension would provide an additional north-south link to Willis Road west of Petersen Road. These connections should only be considered as future development occurs in South Quinsam Heights.

- **Eagle Drive Extension**, is recommended in the long-term to extend existing Eagle Drive south as potential future

industrial/commercial development occurs on the west side of the highway.

- **Willis Road – Argonaut Connector** is recommended in the long-term to provide a connection from Highway 19 to Highway 28.
- **Petersen – Dogwood Connector** was recommended in the 2004 MTP to improve network connectivity and provide relief to Dogwood Street north of Robron Road. It should be noted that there are significant implementation challenges with this connector as there is no currently right-of-way and the connection would pass through the Beaver Lodge Lands. As recommended in the 2004 MTP, the City should conduct a more detailed feasibility study to determine feasibility of this connector, including preferred location and right-of-way requirements.
- **New links in developing areas**, including the Willow Creek extension to Jubilee Parkway to connect the growing residential area in south Campbell River to Jubilee Parkway, as well as new roads in Jubilee Heights and North Campbell River as identified in neighbourhood plans.

4. Minor Road Improvements

In addition to the improvements noted above for the major roads in Campbell River, the MTP includes a number of recommended improvements for other arterial roads, collector roads, and local roads throughout the City. These remaining roadways generally carry lower traffic volumes and provide support for access and circulation near the major roads. Proposed improvements on these corridors include intersection safety improvements, pedestrian

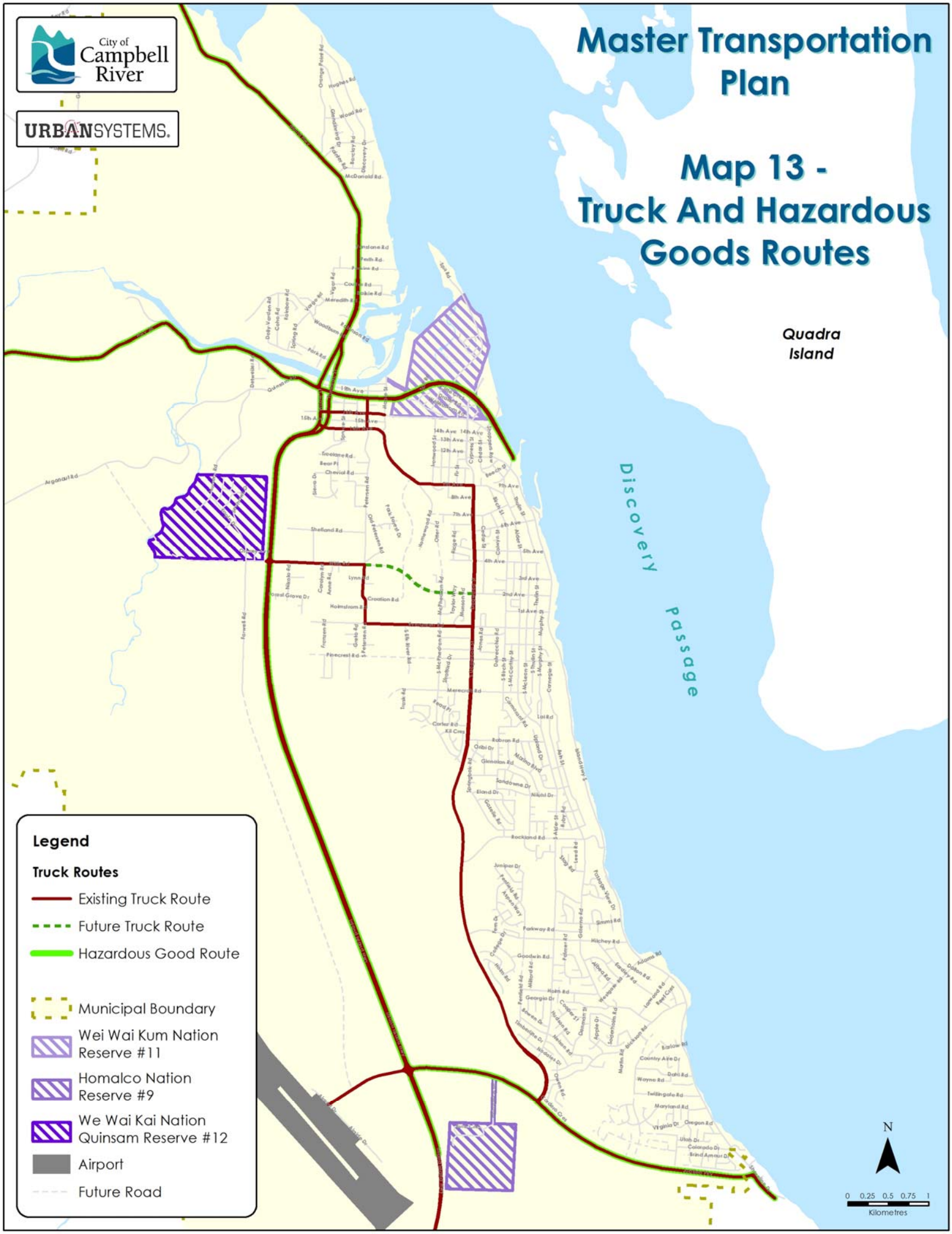
improvements including sidewalks and crossing treatments, and bicycle and greenway facilities.

5. Goods and Services Movement

The movement of goods and services throughout the City is critical to supporting the local and regional economy. Any road under the jurisdiction of the Ministry of Transportation & Infrastructure must be considered a truck route. As such, the Inland Island Highway, Jubilee Parkway, Highway 28, and the Island Highway between the Inland Island Highway and the BC Ferries terminal are designated truck routes. Several other corridors throughout the City are also designated as truck routes, including Dogwood Street between Jubilee Parkway and 2nd Avenue, Petersen Road between 14th Avenue and the Island Highway, Willis Road, 14th Avenue, and 16th Avenue, as shown on **Map 13**.

As indicated in the City's Traffic and Highway Regulation Bylaw, trucks include any vehicle with a gross vehicle weight of 13,700 kg or higher. The bylaw states that trucks are expected to use the designated truck routes to a point closest to their destination before they leave the designated truck route to reach their destination.

Truck routes should be signed to direct trucks and minimize the potential for drivers to inadvertently turn onto a non-truck route. The MTP recommends implementing a signage strategy to ensure that truck drivers understand the designated truck routes in the City.


City of Campbell River
URBANSYSTEMS.
Master Transportation Plan
Map 13 - Truck And Hazardous Goods Routes
Quadra Island
Discovery Passage
Legend
Truck Routes
Existing Truck Route
Future Truck Route
Hazardous Good Route
Municipal Boundary
Wei Wai Kum Nation Reserve #11
Homalco Nation Reserve #9
We Wai Kai Nation Quinsam Reserve #12
Airport
Future Road
N
0 0.25 0.5 0.75 1
Kilometres

6. Neighbourhood Traffic Management

The City has adopted Neighbourhood Traffic Management Policies and Procedures to improve safety for all road users and enhance the livability of neighbourhoods by minimizing the negative impacts of traffic and improving streetscapes. The purpose of the Neighbourhood Traffic Management Policy is to:

- Balance the needs of vehicles, pedestrians and cyclists within neighbourhoods, and
- Ensure that roads are being used for their intended purpose.

The objectives of the Neighbourhood Traffic Management Policy are to:

- Reduce vehicle speeds
- Discourage through traffic
- Minimize conflicts between street users
- Improve the neighbourhood environment

To date, traffic calming measures have been implemented on Murphy Street, including a realignment of the South Alder Street and South Murphy Street intersection, as well as new sidewalks and curb bulges. The Neighbourhood Traffic Management Policy includes procedures for new developments and existing neighbourhoods as follows:

a) New Developments

Traffic calming shall be considered during the design, approval and construction of all newly developed or re-developed roads.

b) Existing Neighbourhoods

In response to traffic calming requests from existing neighbourhoods, the City will:

- Prioritize the request,
- Initiate a study,

- Identify/quantify the problem,
- Develop a plan, and
- Implement the plan.

There are a variety of different traffic calming measures which may be used to reduce vehicle volumes, lower speeds, decrease conflicts, and increase aesthetics. Acceptable traffic calming measures are shown in **Table 16.**

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Table 16: Acceptable Traffic Calming Measures

Vertical Deflection	Horizontal Deflection	Obstruction	Signing
• Raised Crosswalk • Raised Intersection • Speed Humps • Textured Crosswalk	• Curb Bulge • Curb Radius Reduction • On-Street Parking • Raised Median Island • Traffic Circle • Gateway Median	• Partial Closure • Diagonal Diverter • Intersection Channelization • Raised Median Through Intersection • Right-In / Right-Out Island	• Traffic Calmed Neighbourhood Sign

Part 7

Travel Demand Management

A major strategy to achieve the vision and goals of the MTP includes managing existing transportation infrastructure, providing attractive services and facilities to encourage alternative modes, and developing supportive strategies using a demand-oriented approach. In support of the City's goals towards promoting sustainable transportation, the MTP Update includes long-term directions for transit, cycling and walking for local and regional travel. In order to encourage residents and the local workforce to make use of these alternatives, support policies and programs may be implemented by public and private sector agencies.

Travel Demand Management (TDM) is the term used to represent a broad range of policies and programs used in many communities throughout North America to encourage people to walk, bicycle, use transit and rideshare, as well as to discourage individuals from driving alone. Attractive alternatives must be in place in order to make TDM policies and programs more effective. TDM strategies can be expected to influence travel behaviour in the following three overarching ways, thereby reducing the costs of maintaining and expanding transportation facilities:

- **Change the amount of travel** by encouraging trip-makers to combine two or more purposes into a single trip, by avoiding commute trips, and by reducing the length of trips.

- **Change the mode of travel** by encouraging the use of non-SOV modes, such as walking, bicycling, carpooling, and transit, and/or by discouraging people from driving alone.
- **Change the time of travel** to reduce the growth in peak period travel by encouraging shifting the time in which people travel to outside peak periods.

7.1 Shaping Influences

In addition to providing safe, attractive, and convenient transit services and facilities, bicycle facilities, and pedestrian infrastructure, there are a number of other factors that can help to encourage alternative transportation choices and reduce automobile travel. Some of the key shaping influences for managing travel demand include:

- **For the foreseeable future, driving is and will continue to be the most convenient and flexible mode of transportation for most people in Campbell River.** Driving accounts for the majority of trips in Campbell River, as approximately 87% of commute trips made by Campbell River residents are made by automobile, with less than 10% of commute trips made by walking, cycling or transit. A comprehensive strategy is required beyond providing multi-modal transportation infrastructure and services in order to achieve the MTP target of 20% of all trips made by walking, cycling, or transit.

- **There are few incentives to using sustainable modes of transportation.** At this point, there are few policies and programs that encourage City residents to use alternative modes. Incentives to reduce single occupant vehicle travel include improving infrastructure and services for non-automobile modes, transit pass programs, and employer assistance programs.

- **There are few disincentives to driving alone.** Along the same lines, there are currently few policies or programs in the City that discourage City residents and workers from driving alone, such as parking management strategies.

- **Most residents are not well aware of the transportation choices available to them.** Residents of the City are not

well aware of the options that are available to them for using non-automobile modes, as there are currently few targeted educational or promotional programs directed by the City or other agencies.

7.2 Facts & Observations

The City has undertaken several initiatives in recent years to help manage travel demand, including:

- Promoting and supporting Bike to Work Week each spring,
- Offering discounted transit passes to employees through BC Transit's ProPass program (planned for 2011),
- Providing bicycle racks outside most City facilities, and
- Providing dedicated carpool parking stalls at City Hall

7.3 Travel Demand Management Strategy

1. Integrated Land Use and Transportation Planning

Land use policies and decisions within the City can have the greatest influence on travel demands and mode choice. Land use policies that support high densities are likely to have the most significant impact on mode choice. Lower density development patterns generally encourage automobile use and discourage the use of other modes of transportation. Higher density development patterns, particularly along primary transit corridors, support the development of attractive transportation services and facilities. Consequently, residents of the City will have a range of attractive transportation choices, reducing reliance on the automobile. Mixture of land uses is also critical to support alternative modes of transportation, as this ensures that there are a greater variety of destinations within

reasonable distance (such as homes, workplaces, stores, restaurants, or parks) to generate multi-purpose trips in an area for people to walk or bike.

2. Parking Management Strategies

The effective management of parking supply throughout the City is fundamental to achieving the vision and goals of the MTP as well as the City's broader goals and objectives. One way to discourage excessive automobile use and encourage the use of other modes of transportation is to limit the supply of parking. Parking supply strategies are a fundamental component of an overall parking management strategy because of the link between the availability of parking and the choice to use an automobile for travel.

A summary of recommended parking strategies which could be implemented in the City is provided below. All of these involve changes in municipal policies, and changes in the way parking is provided for new and existing developments. The most significant change is to municipal bylaws, reducing and capping the amount of parking that is provided in a new development by providing incentives to walk, bike or use transit, rather than requiring developers and others to meet or exceed a required number of parking stalls as is the case at present.

- **Parking Maximums.** In most municipalities, including Campbell River, there is no maximum restriction on the amount of parking that can be provided in a development. The City currently requires that a developer meet or exceed a specific minimum amount of parking, based on land use type. Although many developers provide only as much as is required, developers often provide additional parking above and

beyond the required amount, often in the belief that additional parking makes their development more attractive to potential buyers and tenants. This situation can be avoided by modifying bylaws to specify a maximum amount of parking, optionally with a minimum amount as well.

- **Reduced and flexible bylaw requirements.** Many municipalities provide reductions in minimum bylaw requirements in certain circumstances. An example of this is a mixed-use development where the total amount of parking is reduced in recognition of the ability for residents, employees, and restaurant patrons to share a common parking supply, because the peak demand for each group occurs at different times during the day. The City may consider parking requirement reductions in a number of cases, including:
  - Established trip reduction programs which support the use of alternative modes of transportation
  - Shared parking where complimentary use can be demonstrated
  - Provision of transit passes
  - Enhanced bicycle parking

- **Preferential parking areas.** To encourage ridesharing and to support the features of other parking management strategies, a portion of the parking supply can be allocated for vehicles involved in carpooling, vanpooling, or car sharing. The allocated spaces are reserved specifically for ridesharing participants and are more conveniently located than those set aside for SOV trips. The goal of this strategy is to provide an incentive for single occupant drivers to switch to carpooling or vanpooling or to encourage car sharing programs. The City should also encourage electric vehicle parking stalls and provision of charging stations.

- **On-street time limits.** The strategy of on-street time limits would be to regulate the use of on-street parking with time restrictions, typically through signage identifying the duration of permitted parking. On-street time limits are most often used in commercial zones to encourage a relatively high degree of parking turnover of shoppers, while discouraging the practice of long-term commuter parking. They are also used in residential areas where long-term commuter parking is a problem. In this case, residents are exempt from the parking time limits through the use of parking permits. Resident-parking only zones can similarly be created to reduce the degree of "spillover" near a downtown or activity centre. The City currently has on-street time limits (one-hour and two-hour limits) in the Downtown core. Time restrictions could be expanded to other Village Centres throughout the City. In the long-term, the City may consider parking pricing in the Downtown core.

3. Leadership

If the City wants to encourage other agencies and private sector businesses to implement TDM measures, the City must lead by its actions for its own employees. There are a number of initiatives that the City could take in addition to what it is currently doing to encourage its own employees to use alternate forms of transportation. Possible TDM measures that the City could pursue for its own employees include:

- **Ridematching.** Provide ridematching assistance to encourage and help facilitate employee ride sharing.
- **Guaranteed Ride Home.** Establish and promote a guaranteed ride home (GRH) program for staff.
- **Preferred Parking.** Establish preferred parking policy for carpool groups of two or more employees.

- **Flexible Work Arrangements.** Provide flexibility in start and finish times wherever possible if that flexibility helps facilitate employee carpool arrangements.
- **Car Sharing.** Introduce corporate car share pilot program, subject to favourable business case evaluation.
- **Bicycle Parking.** Provide covered bike parking at outdoor locations in the City Centre area.
- **Cycling Support Measures.** Encourage employee cycling by offering cycling skills course, through active participation in the annual Commuter Challenge, and by ensuring that bicycle route signage in the City meets high standards.

4. Education & Awareness

TDM is all about changing people's behaviour. However, many residents are not aware of the options available to them. Consequently, an important part of a TDM program and initiative is marketing and education efforts intended to encourage a shift in travel patterns and greater use of alternative modes of transportation.

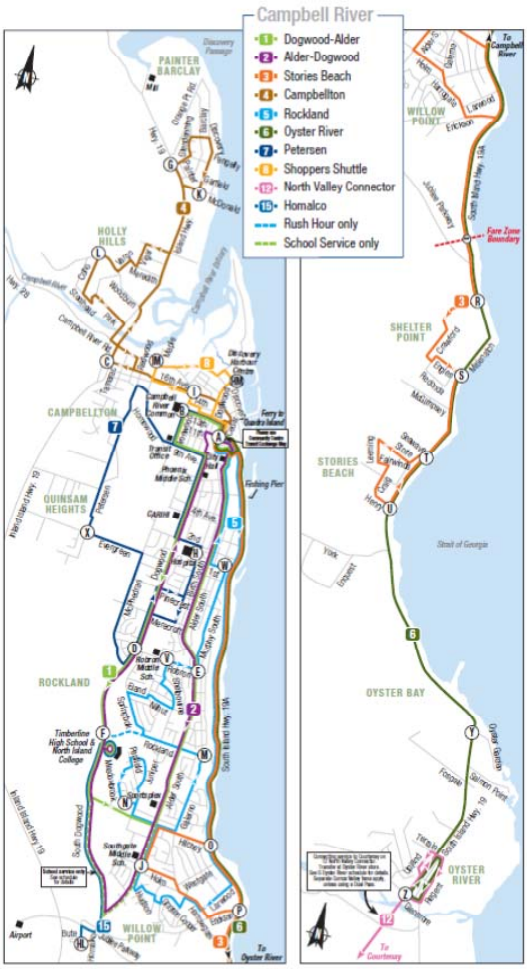
Strategies to improve education and awareness generally fall into two categories: distributing existing information from other groups and agencies, and developing and running more locally generated programs.

a) Information Distribution

The first strategy involves distributing information that has already been produced, either by the City or by other agencies. There are many existing resources that describe programs and initiatives already under way, such as:

- **Transit.** BC Transit currently produces a number of materials and resources designed to provide information on transit services and facilities as well as general information on how to use transit, both for the general

Transit Route Map

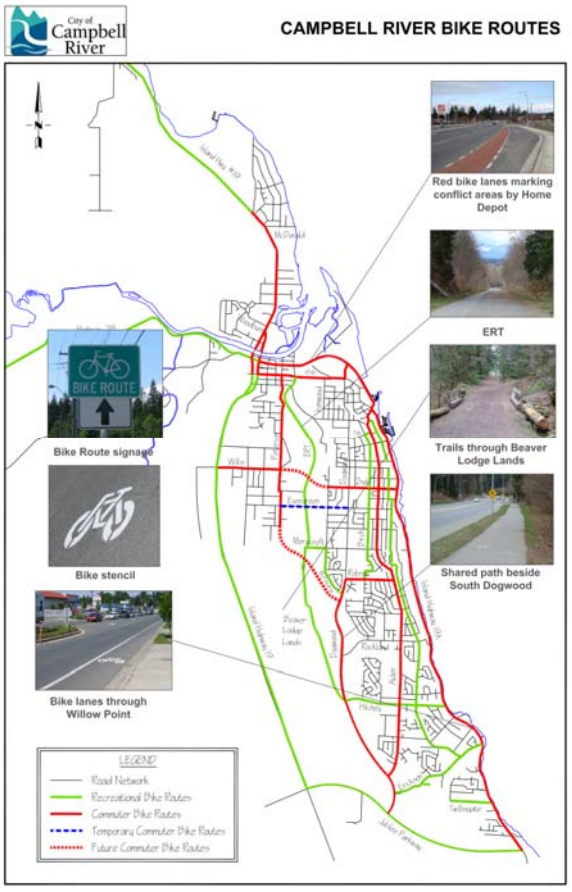


public and specific groups. Some of the information already produced by BC Transit includes:

- Transit area map for Campbell River
- Route maps and schedules
- Transit Exchange maps
- Information on how to use the transit system
- Accessible services

As noted in the Transit Strategy, there are a number of recommendations to improve transit customer information to assist existing customers to navigate the transit system and makes it easier for new users to access the transit system for the first time. The following customer information tools are recommended in the MTP:

- Develop an **online trip planner** using the BC Transit website allowing customers to plan their transit trip by entering an address, intersection, bus stop number, or bus route
- Provide **real-time transit information** along FTN corridors showing the actual time until the next bus arrival
- Develop corridor and vehicle **branding standards** for FTN corridors
- **Additional transit information** at bus stops, including route maps, schedules, and bus stop ID numbers
- Transit information on Google Transit Trip Planner
- Develop a **SmartPhone application** for use on iPhones, BlackBerries or other portable devices to provide up-to-date transit information
- Develop a **Social Media** presence allowing customers to keep up-to-date via Twitter, Facebook, or a blog.



- **Cycling.** A number of cycling resources are available on the City's website, including a bicycle route map, basic principles of cycling, and information about Bike

to Work Week. In addition, the Bicycle Plan includes a number of educational and awareness programs, such as supporting cycling skills programs, safe routes to school programs, and continuing to promote events such as Bike to Work Week. The Bicycle Plan also includes marketing and promotion strategies such as developing an increased web presence for cycling, using social media tools to promote and market cycling, and 'branding' the bicycle network.

b) Develop Local Programs

The second strategy involves the City creating developing and running more locally generated TDM programs, and actively working with resident groups, employers and institutions to promote transit, cycling, walking, or carpooling. Under this strategy, it is recommended that the City create a TDM Coordinator position to oversee the development and implementation of these community programs. Some initiatives and programs could include:

- **Safety training and education activities** targeting cyclists, to improve cycling skills in traffic.
- **Marketing activities** targeting employers for adoption of transit fare incentives and implementation of trip reduction programs.
- **Marketing of ridesharing, carpooling and vanpooling services.**
- **Improved information for transit users** regarding routes, schedules and real-time bus arrival information.
- **Education programs** for school children and parents intended to improve pedestrian safety and encourage children to walk to school.
- **Bike-to-work week** and other marketing and education programs to encourage cycling.

- **Community-based marketing** of transportation services, whereby information regarding available transportation services is customized to a person's needs
- **Recognizing local companies** that offer the Employer Pass Program
- **Encouraging use of alternate fuel vehicles**, such as hybrid vehicles, electric cars, Smart Cars, etc.

Before identifying or implementing any new initiatives or programs, the assigned TDM coordinator will need to conduct research to identify key barriers and benefits to reducing SOV use. This research can also be used to identify and prioritize potential initiatives and programs that the City can develop and implement.

5. Private Sector and Other Agency Initiatives

In addition to the City-led initiatives described in the previous section, there is also a role for major employers, small businesses, schools, and residents in reducing travel demands. Each of these groups provides different opportunities for trip reduction. Each of these groups has a different role to play in encouraging TDM initiatives:

- **Major employers.** The are many large employers in Campbell River, including the School District and Campbell River and District Regional Hospital. These employers provide the most significant opportunity for implementing successful TDM programs because they have a much larger pool of potential participants.

- **Small businesses.** On their own, small businesses may not have the resources and staff requirements to successfully implement TDM initiatives. However, many small businesses are clustered together in specific areas, such as in Downtown, Campbellton, and North Campbell River. By working together, the businesses in each of

these areas can develop the resources required to provide programs and incentives to encourage employees to change their travel behaviour. Examples could include having several businesses in an area participate in a company car sharing program.

Part 8

Implementation & Monitoring

8.1 Implementation Strategy

This section presents an implementation and phasing strategy. For the phasing strategy, the priorities identified in the MTP are presented in terms of short-term (0 to 5 years), medium-term (5 to 10 years), and long-term (10 to 20 years).

The following sections summarize the priorities and costs for capital improvements identified in each chapter of the Master Transportation Plan in which the City has some or all responsibility. The cost estimates are 'Class D' based on conceptual plans and unit costs, and are intended for discussion purposes only. In several cases, the City may work with other levels of governments or the private sector to establish cost sharing agreements or seek grant opportunities in order to off-set total project costs. For the transit strategy, costs have been provided in terms of service hour and fleet requirements.

Detailed cost estimates and priorities for each mode of transportation are included in **Appendix D**.

8.1.1 Pedestrian Plan Implementation

The Pedestrian Plan includes four key themes: increased sidewalk coverage, pedestrian priority areas, enhanced pedestrian treatments, and greenways. This section summarizes the capital costs and priorities required to increase sidewalk coverage through new sidewalk construction.

Cost estimates for sidewalks are based on a unit cost of $200 per metre of sidewalk. However, if significant implementation challenges were noted, such as topography, property impacts, or retaining walls, a unit cost

of $1,000 per metre of sidewalk was used instead. These unit costs include curb and sidewalk construction, but do not account for significant driveway rehabilitation, landscaping, or property acquisition.

Table D.1 in Appendix D identifies all the new sidewalks that are recommended in the MTP and outlines the preliminary capital costs, potential funding partners, and priorities for implementation. The total estimated cost to implement all of the facilities identified in the Pedestrian Plan is approximately **$14.6 million dollars**, as shown in **Table 17**. This magnitude of improvement will require significant investment, and it will take well over 25 years for the City to complete the implementation of all recommended sidewalk facilities identified in the Plan based on current and historic funding levels for sidewalk construction. It is for this reason that implementation priorities are used to help identify those improvements that should be completed in the short term, medium term and long term horizons. Priorities have been established based primarily upon providing new facilities to areas that either already experience or have the potential for generating and experiencing the highest pedestrian demands, and on providing network improvements to enhance the safety and comfort of pedestrians throughout the City. The Pedestrian Plan prioritized sidewalk implementation in the following areas:

1. Downtown and Village Centres
2. Adjacent to Schools
3. Adjacent to Bus Stops
4. Arterial Streets
5. Collector Streets

The following guidelines were used to establish short-term, medium-term, and long-term priorities for new sidewalk construction:

Short-term priorities:

- Arterial roads in Pedestrian Areas (Downtown and Village Centres)
- Collector roads in at least two of the following areas: Pedestrian Areas (Downtown and Village Centres), adjacent to schools, or adjacent to bus stops
- Key missing link in the sidewalk network

Medium-term priorities:

- Arterial roads outside Pedestrian Areas (Downtown and Village Centres), but adjacent to school or bus stop
- Collector roads in at least one of the following areas: Pedestrian Areas (Downtown and Village Centres), adjacent to schools, or adjacent to bus stops
- Local roads adjacent to schools
- Local roads downtown
- Other missing link in the sidewalk network

Long-term priorities:

- Arterial or collector roads in rural areas
- Arterial or collector roads not located in pedestrian areas, adjacent to schools, or adjacent to bus stops
- Local roads adjacent to bus stops
- Local roads in Village Centres
- Roads with significant implementation challenges

As noted in **Table D.1**, the City will be involved in the funding for many of these sidewalk improvements. In the future, there may be the opportunity for some contribution from potential redevelopment activities, particularly in the Downtown, Village Centres, and rural areas that may redevelop in the future. On the City's side, these improvements may be funded from general tax revenue or it may also be possible to recover a portion of the sidewalk improvement costs through regular development cost charges (DCCs). The City will also want to explore the possibility of incorporating some of these improvements with already scheduled maintenance or

rehabilitation of the City's network. To that end, it is expected that priorities may shift over time to coordinate with other activities. The City should also explore other funding partners to implement sidewalk improvements, such as ICBC through the Safer Cities Initiative.

As shown in **Table 17**, it is anticipated that the cost of short-term improvements is approximately **$1.57 million**. This represents approximately **$315,000 annual investment** in new sidewalk construction. **Table 18** lists the short-term recommended sidewalk improvements.

Table 17: Summary of Cost and Priorities of Sidewalk Improvements

	Short-Term	Medium-Term	Long-Term	Total
Major Arterials	$250,000	$1,384,000	$816,0000	$2,450,000
Minor Arterials	$274,000	$634,000	$1,274,000	$2,182,000
Residential Collectors	$906,000	$1,470,000	$2,550,000	$4,926,000
Industrial Collectors	$42,000	n/a	n/a	$42,000
Local Roads – Pedestrian Areas				
Downtown	$0	$0	$275,000	$275,000
Campbellton	$0	$0	$1,312,000	$1,312,000
Merecroft	$0	$184,000	$1,896,000	$2,080,000
Quinsam	$0	$0	$232,000	$232,000
Willow Point	$0	$86,000	$134,000	$220,000
Total	$0	$270,000	$3,849,000	$4,119,000
Local Roads – Schools	$95,000	$609,000	$0	$704,000
Local Roads – Bus Stops	$0	$0	$168,000	$168,000
Total	**$1,567,000**	**$4,367,000**	**$8,657,000**	**$14,591,000**

Table 18: Short-Term Sidewalk Improvements

Roadway	From	To	Distance	Total Cost
Alder St	Albatross Cres	Evergreen Rd	1,120 m	$224,000
Cheviot Rd	Westmore Rd	Petersen Rd	360 m	$72,000
Eardley Rd	Westgate Rd	Larwood Rd	450 m	$90,000
Eland Dr	Steenbuck Dr	Superior Dr	115 m	$23,000
Erickson Rd	Harrowgate Rd	w/o Reef Cres	240 m	$96,000
Erickson Rd	Reef Cres	Island Hwy	110 m	$22,000
Evergreen Rd	Birch St	e/o Birch St	70 m	$14,000
Hilchey Rd	Dalton Rd	Island Hwy	160 m	$32,000
Holm Rd	Cook Rd	Galerno St	270 m	$54,000
Larwood Rd	Harrowgate Rd	Island Hwy	600 m	$120,000
Maple Street	14th Ave	16th Ave	210 m	$42,000
McPhedran Rd	Evergreen Rd	n/o Nichols Rd	90 m	$18,000
McPhedran Rd	n/o Nichols Rd	Pinecrest Rd	290 m	$116,000
McPhedran Rd	Pinecrest Rd	Merecroft Rd	400 m	$80,000
Merecroft Rd	McPhedran Rd	w/o Quadra Ave	190 m	$38,000
Merecroft Rd	Birch St	McCarthy St	80 m	$16,000
Merecroft Rd	McCarthy St	Alder St	90 m	$36,000
Pinecrest Rd	Dogwood St	Delvechhio Rd	300 m	$60,000
Pinecrest Rd	Birch St	McCarthy St	80 m	$32,000
Pinecrest Rd	McCarthy St	Alder St	90 m	$18,000
Robron Rd	Christopher Rd	Marina Blvd	220 m	$44,000
Rockland Rd	Shelbourne Rd	Mountain View Pl	90 m	$18,000
7th Ave	w/o Alder St	Colwyn St	170 m	$34,000
7th Ave	e/o Cedar St	Dogwood St	90 m	$18,000
14th Ave	Marwalk Cres	e/o Spruce St	170 m	$34,000
14th Ave	Redwood St	w/o Maple St	270 m	$54,000
16th Ave	Ironwood St	w/o We Wai Kum Rd	230 m	$92,000
16th Ave	w/o We Wai Kum Rd	e/o We Wai Kum Rd	170 m	$34,000
16th Ave	e/o We Wai Kum Rd	Dogwood St	90 m	$36,000

8.1.2 Bicycle Plan Implementation

Cost estimates and implementation priorities for the Bicycle Plan included in the MTP have been prepared and are presented in this section. **Table D.2 in Appendix D** summarizes all of the routes identified in the Bicycle Plan, including potential funding partners and implementation priorities based on network development and

implementation considerations (ease of construction and cost). The table includes preliminary capital costs for all facilities which are based on the unit costs and assumptions described below and shown in **Table 19**.

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

Table 19: Bicycle Facility Unit Costs

Facility Type	Unit Cost
Bicycle lane (widening required)	$700,000/km
Bicycle lane (no widening required)	$30,000/km
Paved shoulder (widening required)	$300,000/km
Paved shoulder (no widening required)	$20,000/km
Marked wide curb lane (new route)	$15,000/km
Marked wide curb lane (upgrade)	$10,000/km
Local bikeway (new route)	$15,000/km
Local bikeway (upgrade)	$10,000/km
Off-Street Pathway (new route)	$300,000 /km
Off-Street Pathway (upgrade)	$150,000/km

The total cost to implement the Bicycle Plan is estimated to be approximately **$1.24 million**, excluding bicycle facilities that would be incorporated as part of street network projects (see following section) and excluding the pedestrian/bicycle bridge over the Campbell River.

Priorities were established based on routes that would establish a spine network connecting the Downtown and

Village Centres. As shown in **Table D.2 in Appendix D**, The priority bicycle facilities to be implemented over the short-term are estimated to cost approximately **$230,000**. This represents an annual investment of approximately $50,000 in bicycle facilities. **Table 20** lists the short-term recommended bicycle improvements.

Table 20: Short-Term Bicycle Improvements

Roadway	From	To	Facility Type	Distance	Total Cost
Alder St / St. Ann's Rd	Dogwood St	Shopper's Row	Marked Wide Curb Lane	7,500	See road network plan
Birch St	7th Ave / Alder St	Robron Rd	Local Bikeway	3,200	$32,000
Christopher Rd / Shelbourne Blvd	Robron Rd	Rockland Rd	Local Bikeway	1,500	$22,500
Hilchey Rd	Dogwood St	Hwy 19A	Marked Wide Curb Lane	2,000 m	$20,000
Holm / Westgate	Alder St	Hwy 19A	Marked Wide Curb Lane	700 m	$10,500
Homewood Rd	Maple Street	Ironwood Street	Bicycle Lane	1,000 m	$30,000
Ironwood St	14th Ave	9th Ave	Bicycle Lane	815 m	$25,000
Maple St	ERT Trail	Island Hwy	Marked Wide Curb Lane	180 m	$3,000
Pinecrest Rd	McPhedran Rd	Alder St	Marked Wide Curb Lane	975 m	$15,000
	Alder St	McLean St	Multi-Use Pathway	80 m	$12,000
	McLean St	Murphy St	Local Bikeway	170 m	$2,550
Robron Rd	Dogwood St	Alder St	Local Bikeway	950 m	$9,500
11th / 12th Ave	Ironwood Rd	St. Anne's Rd	Marked Wide Curb Lanes	965 m	$15,000
15th Ave	Tamarac Street	Maple Street	Local Bikeway	700 m	$10,500
16th Ave	Maple St	Island Hwy	Marked Wide Curb Lane	1,400 m	$21,000

8.1.3 Transit Strategy Implementation

To meet the Provincial Transit Plan and MTP targets of doubling transit mode share of work trips from 2.5% to 5%, significant transit operating and capital resources are required. This section outlines the key priorities, service hours and fleet projections required for the Transit Strategy. Further details are provided in **Table D.3 in Appendix D**.

Implementation of the Transit Strategy is described in further detail in BC Transit's corresponding Campbell River Transit Future Plan.

Service changes and infrastructure projects identified in this section vary significantly in terms of timelines, complexity, costs and process, meaning that initiatives will not necessarily be completed in a strictly chronological order. The priorities are not scheduled on a year-by-year basis as the implementation of the Transit Strategy is dependent on a number of factors that change from year to year such as:

- Availability of funding from local government, the provincial government and the federal government;
- Community growth factors (e.g., community development and shifts in demographic factors);
- Phasing of major projects (e.g., new operation and maintenance centre, new transit exchanges);
- Operational and capacity demands of the system; and
- Opportunities for value added partnerships (e.g., road improvement projects by local government).

The key components of the transit strategy are shown in **Table 21**. The Transit Strategy will significantly increase transit service from 21,200 service hours to approximately 66,500 service hours and calls for significant capital investment over the next 25 years. Given the significant increase in transit investment anticipated over the coming decades, the way in which transit is and will be funded needs to be reviewed.

The ambition of Sustainable Campbell River Initiative and the Provincial Transit Plan will require BC Transit and its local partners to continue endeavours to achieve stable and predictable revenue sources. For this reason, BC Transit will establish a task force to investigate alternative funding and transit incentive options in an attempt to reduce the

dependence on increasing local property, provincial, and federal taxes to fund transit projects.

Table 21: Transit Strategy Projects and Initiatives

Project / Initiative	Description
1. Improve Evening Service	a. Extend evening service to Monday, Tuesday and Wednesday
	b. Extend evening service to Sunday and statutory holidays
2. Establish U-Pass Program	a. Establish U-Pass Program at North Island College
3. Establish Transit Facilities	a. Replace existing operation and maintenance centre
	b. Create new transit exchange at Willow Point
	c. Create new transit exchange at Campbellton
4. Establish Primary Transit Routes	a. Dogwood b. Alder c. Island Hwy d. Reconfigure other local services as required
5. Frequent Transit Network	a. Increase peak frequency on primary routes to 20 minutes
	b. Increase peak frequency on primary routes to 15 minutes
	c. Increase mid-day frequency on primary routes to 30 minutes
	d. Increase evening frequency on primary routes to 30 minutes
	e. Extend late evening service on primary routes
	f. Extent primary transit service to South Dogwood and North Campbell River and increase peak frequency on Dogwood to 10 minutes
	g. Increase mid-day and early evening frequency on Dogwood and Island Hwy routes to 20 minutes
	h. Establish all-day frequent service on Dogwood and Island Highway routes i. Study to identify needs and opportunities for transit priority measures
6. Enhance Local and Regional Services	a. Establish direct inter-regional service between Campbell River and the Comox Valley b. Extended the span of service on local routes (7am-10pm) c. Conduct future transit service feasibility studies for Quinsam Crossing, Quadra Island and Cortez Island
7. Enhance Custom Transit Services	a. Expand HandyDART service hours
	b. Introduce demand-responsive services
	c. Implement a seniors oriented service

8.1.4 Street Network Plan Implementation

This section summarizes the street network improvement strategies that are recommended in the MTP. The implementation responsibilities and priorities that are assigned to each of the improvements as well as the capital costs associated with each of the improvements are also summarized.

In order to help shape the implementation of these improvements, each project has been designated as a short-term, medium-term or long-term priority based on the overall assessment of needs. However, changes in growth patterns, funding partners, and property requirements may affect priorities during the timeframe of the Plan and it should be recognized that priorities may shift over time.

Table **D.4 in Appendix D** summarizes all of the street network improvement strategies that have been identified as part of the Street Network Plan. The table also identifies the estimated construction costs and potential funding partners for each project. It should be noted that the construction costs summarized in this document are Class 'D' cost estimates only and are intended for budgeting purposes without further functional planning and design. They have been prepared on a project by project basis, considering construction unit costs of similar project elsewhere in British Columbia. The costs associated with acquiring property, if necessary, for each of these projects has not been included. A 40% contingency has been applied to all street network projects.

The total cost of road enhancements is estimated to be approximately **$23,158,000**, and the total cost of constructing new streets is approximately **$32,542,000**. The total estimated cost for all street network improvements is **$55,700,000**. In order to prioritize among these investments, the MTP includes

a goal to maximize the use of the existing transportation network by upgrading and improving existing facilities before building new facilities. In that regard, enhancements to existing roads were generally assigned a higher priority than new road construction. In addition, many of the identified new roads are intended to serve future developments over the long-term and are not required until such development occurs. Among the existing road enhancements, the key priorities were enhancements to the City's three primary north-south corridors: Dogwood Street, Alder Street, and the Island Highway. It is recognized that not all of the identified improvements along each corridor will necessarily be implemented at the same time. As such, each of these corridors has been identified as having short and medium term priorities, as shown in **Table 22**. Finally, it should be noted that these priorities may shift over time to reflect development patterns and funding grant availability. As such, if funding should become available for identified projects, they may be reconsidered as a higher priority. Based on these considerations, the Street Network Plan has identified approximately **$8.4 million** in street network improvements over the short-term.

Table 22: Short-Term Street Network Improvements

Roadway	From	To	Description	Total Cost
Dogwood St	Merecroft Rd	9th Ave	• Dedicated turn lanes at Merecroft Rd, Evergreen Rd, 2nd Ave, 4th Ave, 7th Ave, and 9th Ave • Accesible pedestrian signals • Transit passenger facilities	$5,900,000
Alder St	Dogwood St	St. Ann's Rd	• Traffic signal / roundabout at Merecroft Rd and 2nd Ave • Transit passenger facilities • Curb extensions • Sidewalks • Marked Wide Curb Lanes	$3,300,000
Island Hwy	1st Ave	Jubilee Pkwy	• Per South Island Highway Conceptual Design	$7,500,000

8.1.5 Summary

The overall cost of implementing all of the MTP improvements is over $70 million. It will take well many years to implement all the projects identified in the plan. It should be noted, however, that many of the costs below may be implemented in conjunction with development over the long-term, and that there are many opportunities for cost-sharing through partnerships and grant applications with other levels of government. The City should leverage all opportunities to seek external funding.

The overall cost to implement the short-term priorities identified in the MTP is approximately $10,179,500. This represents just over $2,000,000 in annual capital funding for new transportation projects. As shown in **Table 23** below, overall capital investments in walking and cycling represent approximately 20% and 2% of total investment, respectively, while the street network accounts for approximately 78% of overall MTP investment. These investment levels by mode are generally consistent with the mode share targets established as part of the MTP.

Table 23: Transportation Plan Improvement Capital Costs (Short-Term and Total)

	Short-Term	Total	Proportion of Total Investment	Mode Share Target
Pedestrian Plan	$1,567,000	$14,591,000	20%	10%
Bicycle Plan	$228,500	$1,237,700	2%	5%
Transit Strategy	n/a	n/a	n/a	5%
Street Network Plan	$8,384,500	$55,700,000	78%	80%
Total	$10,179,500	$71,528,700	100%	100%

8.2 Monitoring Strategy

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

The monitoring program needs to be:

- ***Meaningful.*** The monitoring strategy should yield meaningful results and point to the success in achieving the vision, goals and targets of the MTP.
- ***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 plan, 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.

1. Progress Implementing the Plan

- Number of completed projects identified in the MTP
  - Sidewalks (# projects)
  - Bicycle Route (# projects)
  - Transit (# projects)

- Street 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 frequent transit corridors)

- Services
  - Transit (annual transit service hours)

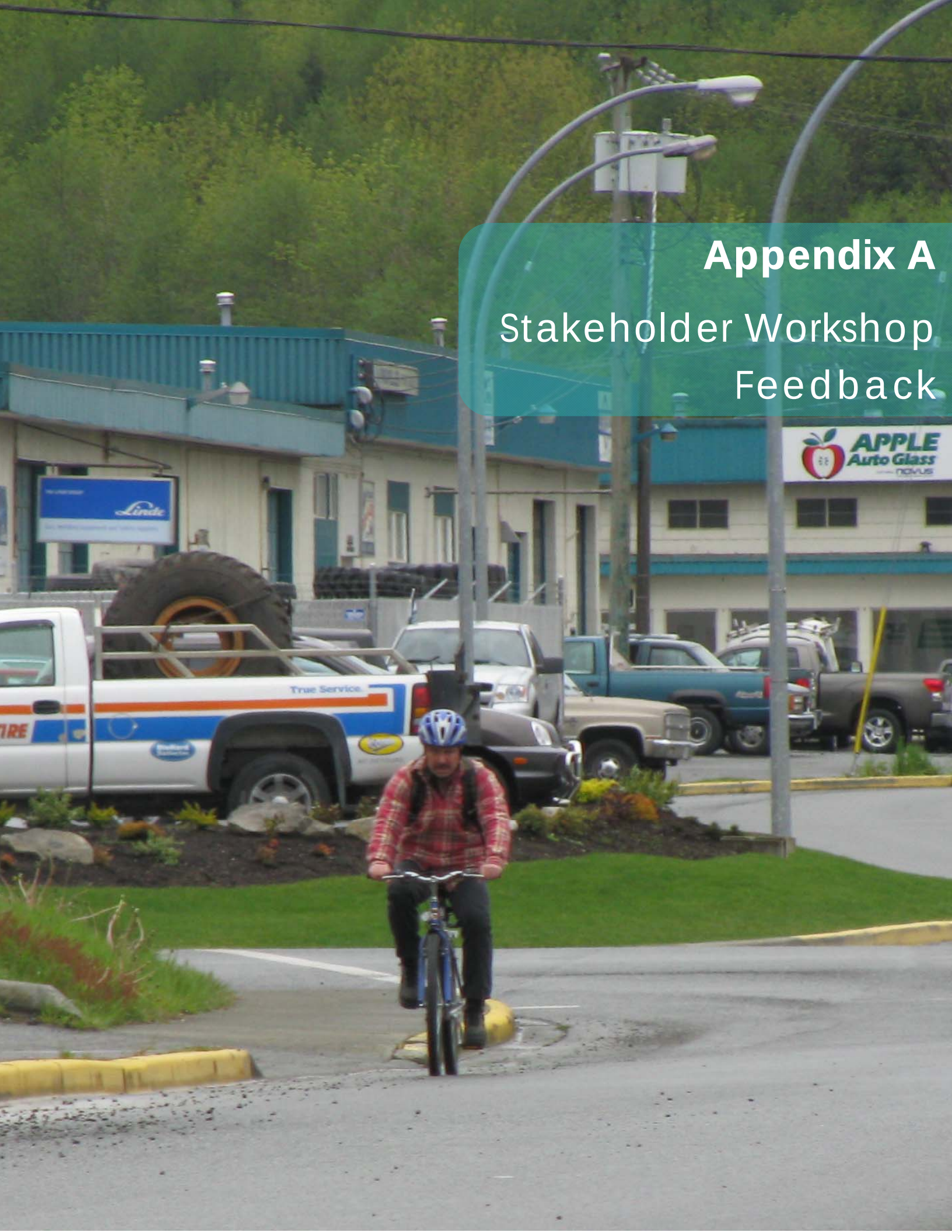
2. Outcomes

- Mode Share of Work Trips
  - Transit (%)
  - Walking (%)
  - Cycling (%)

- Ridership
  - Transit customers (annual ridership)

- 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



Appendix A

Stakeholder Workshop Feedback

2353 - 13353 Commerce Parkway, Richmond BC V6V 3A1
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WORKHOP SUMMARY

file:	1479.0016.01
subject:	Campbell River Master Transportation Plan Update Stakeholder Workshop #1
meeting date:	November 17, 2010

The first Stakeholder Workshop for the City of Campbell River's Master Transportation Plan Update was held on November 17. There were approximately 40 participants at this workshop. The workshop began with a presentation by the City of Campbell River and Urban Systems staff. Following the presentations, there were three separate discussion periods each with two key questions, as shown below:

Part 1 Discussion – WOW!
- What's at stake for the City?
- What can be achieved?

Part 2 Discussion – NOW...
- What are the transportation issues in Campbell River?
- What are the transportation opportunities in Campbell River?

Part 3 Discussion – HOW?
- What are the transportation possibilities in Campbell River?
- What are your relative priorities?

The notes below summarize the comments that were recorded at the Stakeholder Workshop, grouped by key themes identified. In most cases, the notes are a verbatim report of written comments.

ITEM DISCUSSION

1.0 *What's at stake for the City?*

Liveability / Attractiveness of the City
- Connected to walkability and bikeability
- Liveability where residential streets don't have lots of traffic
- Community culture – do we want to have a car culture or another culture?
- Do people want to come here and stay here?
- Attract new people to Campbell River

Land Use and Transportation Connections
- Reduced urban sprawl
- Improved North and South connectors (i.e. Willis connector)
- Transportation links to other communities – regional connections
- Integrated system that allows cars, bikes, and transit

Safety
- Neighbourhood Traffic Patterns
- Speeds
- Crosswalks
- Classifying intersections- acceptance of a slightly lower speeds to achieve safety.

ITEM DISCUSSION

Downtown Core – Commerce & Activity
- Disjointed Area
- Character

Waterfront Character
- Recognition for the City
- Sewer line / pathway opportunities
- Property access issues

Demographic Needs
- Changing demographics – changing transportation needs
- Need better mobility for seniors
- Ironwood Area – aging population
- Transportation barriers (i.e. cost, access) for youth
- Strong start, family programs and school ready
- Transit to First Nation reserves
- Keeping Youth

Health and Wellness
- For all segments of the population

Economy
- Movement of goods? Economic impact
- Economic health and sustainability
- Economic investment / growth
- Jobs are an issue, and transportation is key

Community Identity
- Community connections
- Community identity
- Image of being left behind, all talk but no culture change

Regional Implications
- Regional Population – ability to be a service centre
- Regional Connections

Other
- Increased transportation costs
- Use of existing road network (modal split)
- GHG emissions
- Efficiency/Congestion
- Noise/Comfort

2.0 *What can be achieved?*

Integration of Different Land Uses
- Smart Growth (greater density/walkability, mixed-use)
- Viability of mixed-use development
- Enhanced land use patterns / mixed use
- Connections to the mainland → attract jobs as hub for Vancouver Island
- Multi-use development – improve the quality of life, health wellness, and viability of alternative transportation
- Commercial zones spread out to encourage walking to local stores

ITEM DISCUSSION

Improved Neighbourhood Design
- Retrofitting the suburban design
- Limiting Growth (sprawl)
- Restrict additional deforestation

Multi-modal transportation system
- Community that is easy to get around by all modes
- Greater access to commercial/work/etc by alternate modes of transportation
- Multi modal transportation enhances social interactions

Improved Transit Facilities
- Better transit service/cheaper
- Transit rail line will be needed eventually
- May need to have affordable efficient transit due to changes in vehicle ownership affordability including a rail transit line
- Study on what prevents people from using the bus

Improved Biking Facilities
- Increased ridership (bikes)
- More children biking to school

Walking Facilities
- More children walking to school

Economic Opportunities
- Tourism – enhanced/increased

More Community Interactions
- Cohesive social groups
- Community cohesion
- Gaining community and improved way of life
- A liveable community

Planning for Climate Change
- Reduced GHG emissions /Less dependence on fossil fuels
- Climate change and it's negative impacts locally
- Planning for a future of reduced resources like fossil fuels
- Prepare for the future versus reacting

3.0 What are the transportation issues in Campbell River?

Transit Service / Facilities
- Bus stops require safe ingress/egress (i.e. Alder)
- Need online route finder – real time, trip planner option
- Transit does not go out to the airport
- Image problem with transit, especially among young people
- Need airport shuttle to downtown/ferry/hospital
- Can get to destinations on transit, but not home
- Youth, seniors, special needs
- Need more frequent transit service

Pedestrian Facilities
- Pedestrian crosswalk at 6th and Alder is dangerous. Blind on your left going east crossing Alder St.

ITEM DISCUSSION

- Alder and Pinecrest crosswalk is dangerous, needs light (hill-can't stop)
- No sidewalks along east side of Alder between 6th and 5th.
- Lack of place for pedestrian 'rests' i.e. Downtown
- No sidewalks along entry to Spit Rd.
- On Island Highway, there is no pedestrian access to water from hilltop above the bluff between 1st Avenue and Rockland
- Good accessibility generally for pedestrians in the downtown, but new residential facilities for seniors near Ironwood need to be connected to the Shopping Core (i.e. sidewalks needed on 16th / curb let downs at intersections)
- City needs to infill at sidewalk development right through residential areas. Because the psychological barrier needs to be removed at the source.
- Very dangerous crossing at Alder Street and McLean Street. High speeds, poor visibility of crosswalk for vehicles
- Adds to the character of the community, but not attractive in the most important areas

Bicycle Facilities

- Great recreational biking infrastructure, but less so for commuting, and access to commercial areas
- No bike parking on South Dogwood Street
- Spit Road entrance – no lane or path to connect from highway to Spit Road
- Need to clarify/define the rules for cyclists – which side of the road? With or against traffic flow? Visibility at night (safety) using lights/luminous jackets
- Dogwood Street problem intersections where the bike path intersects with road: Rockland Road, Hilchey Road, and South Alder Street
- Birch Street and 5th Ave, the stop signs are for cross street not for bike lanes
- On Island Highway, just south 1st Avenue, the bike path ends and so cyclists end up on the road, going uphill
- Clean debris from the shoulder of Inland Island Highway, near MacDonald Road

Multi-Use Pathway

- Traffic rules are confusing on multi-use pathways
- The planned multi-use pathway at south end of Petersen Road is through private land
- Debris at the North end of the Seawalk

Road Network

- South Alder Street neighbourhoods: Cul-de-sacs have no access, need to enhance pedestrian connectivity
- Shoppers Row: cars backing out of angle parking have limited visibility
- Petersen Road: Great corridor but needs maintenance
- No Soft boundary between traffic and pedestrians in downtown
- Separation of pedestrians and vehicles at intersections – cars slow to allow pedestrians to cross
- Emergency vehicles on Highway 19A

Commercial Development

- Need commercial nodes in the South Alder Street/Rockland Road
- Stop developing commercial areas without sidewalks

Topography

- Hills are a challenge, deterrent

Goods Movement

- 9th and Dogwood: Grade Issue
- S. McLean Street: Used as a truck route (alternative to dogwood) – enforcement
- Island Highway – Impacts of Landscaping on Roads

ITEM DISCUSSION

4.0 What are the transportation opportunities that Campbell River should explore?

Land Use and Transportation Connections
- Every residence within 10 minutes of a bike/walking trail
- Reduce trips through better land use integration – residential above commercial or industrial uses
- Higher density opportunities for living downtown

Neighbourhood Traffic
- Calm traffic through road narrowing, closure of roads, densification (consult with residents first). Funding through local improvement charges, gas tax (federal), carbon tax (provincial), other grants
- Traffic Calming

Road Network
- Reduced trip generation
- Traffic circles to replace traffic lights

Transit
- Hybrid/electric buses
- Shuttle Service – downtown/free
- Express busses on major corridors
- Mandatory bus passes – schools, college, and major employers
- Route finder
- Peak hour transit between Willow Point and Downtown (express – no stops)
- Improve transit reliability – focus on comfort, frequency, directness, and peak versus off-peak
- Combined bus systems (school/public)
- Trolley along Dogwood and Waterfront Highway
- Bus Priority Intersections
- Better regional connections / coordination
- Bus hostess (tourism presence)
- More bus shelters

Cycling
- A dedicated cycle route between Alder and Dogwood
- A Campbell River Cycling Coalition / Bike Club - assess safety, marking, standards etc of bike routes and lanes
- Bike rider education
- More bicycle routes
- Bike routes connecting to commercial centres
- Bike trail – South Murphy Street / Robron Road area
- Paved bike way connecting South Alder Street (near the Candy Lane, north side of the creek) to the South Elk River Road
- Bike parking throughout downtown

Pedestrians
- Keep downtown pedestrian to enhance experience and to promote tourism
- Improved safety at pedestrian crosswalks
- Extension of the Seawalk at Willow Point, between Marine centre and Hidden Harbour
- Solar pedestrian crossing lights
- Pedestrian connectivity to schools, colleges, libraries, bus stops, trails
- Completion of Greenway Loop

ITEM DISCUSSION

- Pedestrian-oriented downtown precinct

Multi-Use Trails

- Continue bike trail/multi-use trail along the waterfront (North)
- Beaver Lodge Lands – rail-trail hard surfacing

TDM

- Murphy Street Potential

Goods Movement

- South Dogwood Street: consider 3-Lane cross section

5.0 *Transportation Possibilities*

Downtown

- Keep downtown oriented toward pedestrian scale activity through appropriately scaled building / hard and soft infrastructure
- Establish a pedestrian precinct downtown that is visually interesting, physically engaging, and designed with interest and mystery
- Keep downtown pedestrian only to enhance experience, promote tourism

Transit

- Consider an electric trolley system along length of coastal route (Spit Rd to Ocean), taking advantage of spectacular view. This will enhance the sense of place, and enhance tourism and accessibility.

Bike & Pedestrian Facilities

- Increased public education about bikes/sharing the road
- Petersen Road: maintain for Bike Route ERT
- Consider use of bulb-outs to reduce crossing distances and increase pedestrian visibility

Multi-Use Trails

- Need dog/owner control on multi-use / bike trails
- Extend the bike/walk route along the waterfront
- At Island Highway/Spit Road – provide bike/walking connections to the spit

Connection to Schools

- School bicycle safety programs (sponsored by the City?)
- Safe Routes to School
- Walking School Bus/Safe Routes to School
- Crosswalks near the schools

Other

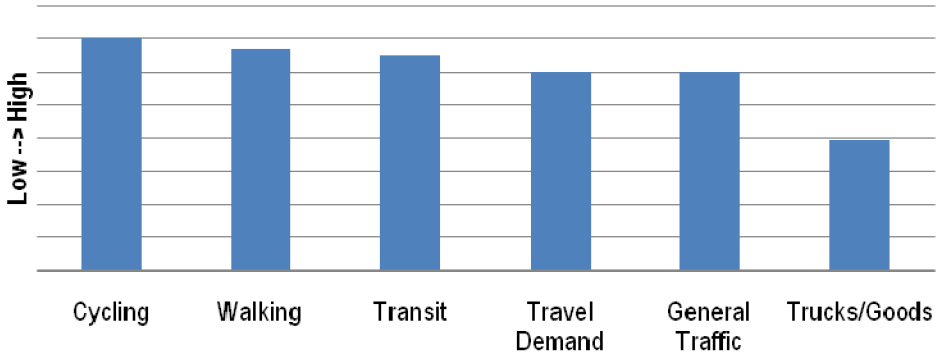
- Priority on safe, green transportation i.e. cycling and walking, plus better traffic flows using roundabouts, traffic circles

6.0 *What are your relative priorities?*

Participants were asked to rank their priorities for each mode of transportation on a scale from 1 (highest) to 6 (lowest). The average score for each mode of transportation is shown in the graph below. In general, most participants indicated that cycling, walking and transit were the highest priorities, while most participants ranked goods movement as the lowest priority. Although general traffic received a relatively low average score, it should be noted that this category received almost an equal number of responses from people saying it was a relatively high priority (9 responses) as those who indicated it was a relatively low priority (10 responses). In fact,

ITEM DISCUSSION

general traffic received more people indicating that it should be the highest priority mode than any other mode, followed by cycling (8 responses) and travel demand (6 responses).



The preceding is the writer's interpretation of the proceedings and any discrepancies and/or omissions should be reported to the writer.

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Appendix B

Community Survey Feedback

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URBANSYSTEMS.

SURVEY SUMMARY

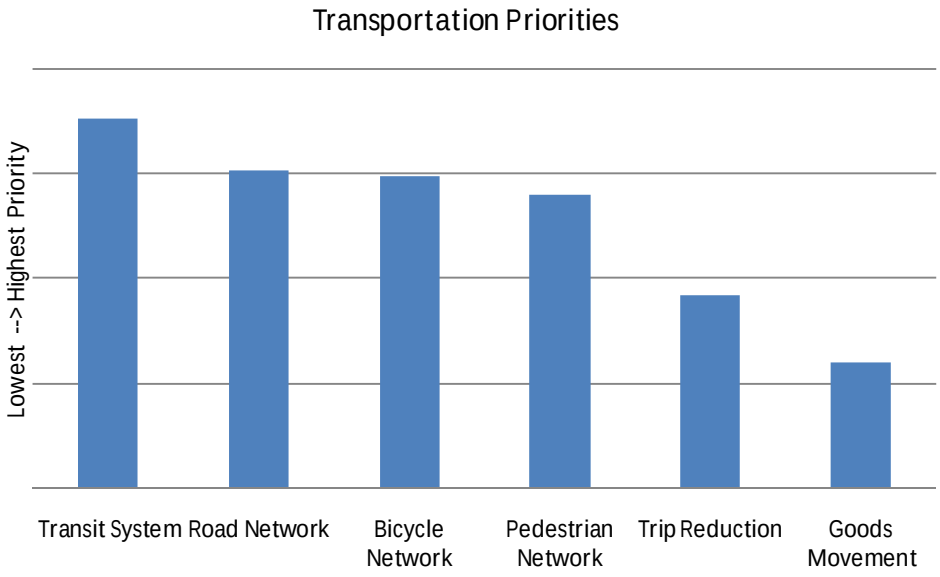
file #: 1479.0016.01
subject: Campbell River Master Transportation Plan Update
Transportation Issues and Opportunities Survey

As part of the Master Transportation Plan Update, the City of Campbell River developed a survey to collect input from Campbell River residents regarding key transportation issues and opportunities. The survey was posted on the City's Sustainable Campbell River website (www.sustainablecampbellriver.ca) and submissions were accepted online, by e-mail, fax, or in person at City Hall. This survey was posted on-line in early November and was available for a two week period. The survey closed on November 24 and took place in conjunction with the first Stakeholder Workshop for the Master Transportation Plan Update, which was held on November 17. The survey was made available for one additional week (until December 1) to collect any additional late responses. The City of Campbell River offered a free one month transit pass as a prize for completing the survey. Fifty one survey responses were received.

The notes below summarize the comments that were provided by survey respondents for each question, grouped by key themes identified. In most cases, the notes are a verbatim report of written comments.

1. *What aspects of Campbell River's transportation system should be considered as the highest priorities in the updated Master Transportation Plan?*

   Respondents were asked to rank six topics on a scale from 1 through 6, with 1 being most important and 6 being least important. On average, respondents noted that the transit system should be the highest priority, followed by the road network, bicycle network, and pedestrian network. On average, respondents indicated that trip reduction and goods movement were lower priorities.



2. *In your opinion, what are the top three transportation issues or challenges facing Campbell River today or in the future*?

Road Network

- The lights on Dogwood (x 4 respondents)
- Lack of Willis – 2nd Connector
- Going from a "small town" to a City, some streets that have no lights now need lights
- Main arteries to and from the downtown core
- Too many traffic lights
- Finishing the road works on the South Island Highway
- Transportation corridors are being clogged with inefficient traffic controls
- Island Highway should be set up as more tourist/beach strip type atmosphere opposed to main highway
- Lack of sensible traffic control measures
- Connections for emergency services and tourism
- Need better feeder network from local population centres (subdivisions) to downtown area
- Highway 19A upgrade between Hilchey and Rockport is a beautiful piece of work, but how practical is it? For example, how do large emergency vehicles (ie fire trucks) get through these narrow single lane areas, where there is a wide boulder strewn centre median, and a high sidewalk curb to contend with?

Traffic

- Vehicle flow (x 4 respondents)
- Need to improve flow of traffic on main routes to reduce residential cut through
- North/South traffic flow
- North/South traffic to commercial/retail centres uses Highway 19A and Alder instead of Dogwood and Highway 19 (Inland Island Highway)
- Too many cars
- Moving traffic from Willow Point through to Downtown.
- Reducing truck traffic in high profile areas
- Heavy traffic on residential streets-lower speed limit
- Migration of traffic to back streets when 1 and 2 are not managed effectively
- Main streets for traffic are also family neighbourhoods
- Getting people out of their cars
- Rush hours
- Avoid neighbourhood traffic volume/safety issues before they happen, not on an ad hoc basis (learn from other cities)
- Limit traffic volumes to what can be handled by bridge over the Campbell River
- Traffic throughways that minimize time and fuel consumption
- Traffic: Campbell River's car culture needs to transition to a cycle and pedestrian friendly culture

Transit Facilities

- Transit system (x 6 respondents)
- Transit frequency (x 4 respondents)
- There are some large empty buses travelling around - perhaps smaller buses more often would serve people better (x 3 respondents)
- Lack of convenient evening transit (x 3 respondents)
    - Need to better accommodate evening activities around town & more stops

- A more efficient bus system that focuses on business people, seniors, students and the general public
- Lack of transit service early morning
- Creating transit systems that work
- Some routes are unreliable i.e. Painter Barclay, bus is often not on time
- Transit system that fits needs
- Impractical transit services - level of service is too low to be a reliable mode of transportation
- More city wide buses and more synchronized routes
- Improved bus schedule between Willow Point and downtown

Cycling Facilities

- Lack of bicycle lanes (x 10 respondents)
- Lack of bicycle racks/parking (x 4 respondents)
- Lack of safety for bikes downtown (e.g. cars angle parking)
- More roads (e.g. Hilchey, Alder, South Dogwood etc.) should have safe bike lanes
- A bicycle route system that would corridor less traffic areas to reduce accidents (should be in well lit areas also)
- Build a bike trail from Willow Point

Pedestrian Facilities

- Lack of "walkable" sidewalks (x 3 respondents)
- Brightly light cross walks
- Sidewalks that end
- I would like to see more overhead walkways over crowded highway areas
- No sidewalks on some major roadways (e.g., Petersen, Evergreen west of McPhedran)
- Turn a couple of blocks of Shoppers Row into a pedestrian mall - in Europe these are wonderful places, good for business and good for everyone, every town and village has one and they are always full of strolling people. This could have been done when the spirit square was built, it would have been a brave decision but a good one.
- More linear parks for pedestrians, such as the one in Penfield, would be a huge asset to the community.
- Street lights are often not placed on the same side of the street as sidewalks;
- Sidewalks end on one side of the street for no apparent reason and the pedestrian has to cross the street.
- The new pedestrian lights around the city are excellent.

Goods Movement

- Transporting goods with as little pollution as possible

Land Use & Development

- Parking (x 2 respondents)
- Urban sprawl (x 5 respondents)
- Aging population requiring more designated parking
- Having services (from grocery stores to medical offices) within walking/cycling distance of housing
- Distances people must travel to reach shopping & entertainment centres
- Limit sprawl of retail stores
- Lack of pedestrian shopping downtown, causes more traffic

- Shops & services scattered rather than clustered
- The city centre needs to be made into a place to attract people rather than a place to drive through
- Pedestrian needs continue to be overlooked in new development
- Car oriented subdivision developments
- Developers need incentives to build with Smart Growth Principles.
- Better design around commercial development (Chances casino being a terrible example as are some drive thru's like Tim Horton's
- Future developments need to take place in existing neighbourhoods. Stop clearing new areas for new neighbourhoods (development)
- Lack of neighbourhood shops i.e. minimarts within short walking distance of residential areas

Safety

- Pedestrian safety (x 2 respondents)
- Lack of safe cycling lanes or paths (x 3 respondents)
- Getting the police to deal with speeding or aggressive drivers better. They need to share the streets.
- Traffic violations
- People do not feel safe on transit or at bus stops (e.g., by community hall)
- Turn lanes are great; however, markings on the pavement cannot be seen by strangers, in the dark, during rain or under snow. Each needs to be signed by overhead signs.

Transportation System

- Having a system that is designed and functions in such a way as to encourage increased ridership on public transport
- Bicycles, electric scooters, and carts having no real place of their own in the city, are interfering with walkers on the sidewalk - need lanes
- Having a transportation system that encourages more concentrated urban development to keep travel times and congestion down, otherwise we will suffer from the negative effects of urban sprawl (e.g. Nanaimo).
- Having a transportation system that is progressive compared to other communities on Vancouver Island
- Putting in place a system that will transport people to their destinations within a satisfactory time frame
- Public transportation connecting Campbell river with Courtenay/Comox

Accessibility/Connectivity

- Access to downtown core
- There are some great bike lanes/paths but they don't all connect and some of the corridors you need to travel to connect between designated paths are not very safe for cyclists (e.g., through Campbellton).

Walkability / Bikeability

- While there are lots of great recreational walking trails, it is almost impossible to do your day to day business by walking
- Creating roads that are bike and pedestrian friendly and safe in an effort to move people out of vehicles into greener transportation.

- Need more bicycle lanes and pedestrian walkways to accommodate the growing population that want to go green. Allow the bike lanes to be used by electric scooters, those that impede traffic with going only 25 or 30 km/hr.
- Getting the Sea Walk finished for walking and biking

Management

- Stop spending money on unnecessary capital and maintenance projects.
- Reduce the city fleet of vehicles by 25%. No more Hybrid SUV's. Total waste of money.
- A lack of capability to manage the transportation system. This includes daily operations and specifically capital projects

Other

- Financial
- Fees are too high for low income people
- Air connections for emergency services and tourism.
- Nay sayers, they whine about everything you try to do, think only of themselves, do not see the whole picture
- People and changing their mind set from small town, to City - people are too used to getting places quickly
- Public support and change in habit
- Bureaucracy
- Encouraging more environmental options for transportation, when we aren't big enough to have great transit
- Balancing commuter needs with environmental considerations
- Dependence on motor vehicles
- Political will
- Decision-makers being closed minded and not listening to the peoples need and wants
- Noise reduction along shoreline
- Focus on the car as a primary transportation
- More green spaces

3. *In your opinion, what are the top three transportation improvements that the City should implement in the future? Please be specific in describing the location and type of opportunity?*

Road Improvements

- Traffic calming (x 3 respondents)
- Traffic light synchronizations (x 2 respondents)
- Traffic lights along Dogwood – increase green lights by 5 seconds along Dogwood (north-south) and decrease green lights by 5 seconds on cross-streets (east-west)
- Complete Willis – 2nd Connector (x 2 respondents)
- Traffic circles (x 2 respondents) i.e. most lights on Dogwood, Rockland/19A, Jubilee/19A and Dogwood/19A
- Dogwood Street Comments:
    - Fine tune Dogwood traffic lights
    - Improve flow on Dogwood to release pressure on Alder and other routes
    - Dogwood Street needs to be fixed, made into 3 lanes and bike lanes. Dogwood extension needs a bike lane on the South bound and north bound the existing bike lane

should be reserved for pedestrians while the unused side walk should be converted to bike lane. This would require the removal of some curbing at the intersections.
    - Dogwood needs to flow faster to encourage more traffic, and therefore lighten the traffic on Alder
    - Single lane Dogwood with centerline left turn lane and curb side right turn lanes where traffic circles are not installed
    - Resolve Dogwood to help move traffic flow smoothly
    - Put the lights on dogwood back to normal, Let elected officials decide ... not ICBC
- Alder Street Comments
    - A four-way stop at South Alder and Merecroft
    - Traffic calming and sidewalks on Alder Street
    - Alder Street and other residential streets should have a lower speed limit to discourage use
    - Move traffic away from Inland Island highway between Hilchey and Alder, slow speed limit and help create more beach traffic, bike traffic, pedestrian traffic, family environment
- Need several large feeder routes that are faster flowing: North/South and East/West
- Define future major roadways, making them 4 lanes plus bike lanes and sidewalks for the next 50 years of expansion. Even though land the city does not presently own. Then developers and people wanting to buy there will be aware of the traffic corridors they will live with. Define both north-south and east-west corridors.
- Extend design concepts of the new Highway 19A section between Hilchey and Rockland north
- A designated route which would get traffic to the downtown core more quickly
- More clearly indicate where to stop to trigger traffic sensors, some people hang out in the road waiting forever
- Shared use roadways - community wide
- Snow removal from all areas of the city in a timely manner, not just main arteries.
- Lights at the bottom of the Rockland Hill to allow left turns into town
- Separation of pedestrian and bike traffic from other traffic

Parking

- Parking
- The parking lots downtown are much too big. Dig them up and put in greenspace or pedestrian squares
- Have longer parking times on Shoppers Row

Public Transit

- Smaller buses (x 2 respondents)
- Public transit service (x 3 respondents)
- Nighttime service (x 2 respondents), and:
    - Provide more bus stops in residential areas and increase evening routes to encourage use for community activities such as hockey practice, dance lessons, crafts at the community centre, fitness at the Sportplex etc
    - Buses out in the Area D that would run longer in the evenings so that students and seniors that don't drive cars anymore could facilitate going to visit loved ones in the hospital or go to a movie or a restaurant and come home about 11:00 P.M. at night instead of Thurs. Fri. & Saturday nights.
- Fees/Cost Improvements:

    - Have 1 day a week where children under 6 and their parents are able to ride for free (pregnant women included)
    - More transit - cheaper
    - Have a cheaper bus pass rate for low income folks
    - Incentives to use mass transit/financial penalties for choosing not to
- Frequency Improvements
    - More frequent bus service on routes closest to downtown, i.e. every 15 min on route 1 or 2
    - Transit frequency on Dogwood and old Island Highway to/from downtown
    - Better bus scheduling, more connection points
    - Better mass transit, extensive with expanded times
    - Run buses more often to reduce on waiting times
- Automated air driven or hybrid/electric driven regenerative brake buses with quick recharge as necessary
- More and better routes and frequency of public transport

Cycling Facilities

- Bike lanes/routes
    - More bike lanes (x 8 respondents)
    - Develop bicycle/pedestrian route from Jubilee to the Campbell River with Tyee Spit spur. The city needs trained planners in cycle transportation so mistakes like the Dogwood bike lane are not repeated.
    - Bike lanes must be separate from vehicles & pedestrians - the bike lane from McPhedran to Jubilee on Dogwood needs to be separated from pedestrians to allow people to bike at a commuting speed, currently it is hazardous to ride due to number of pedestrians with dogs. A bike lane that parallels South Dogwood maybe along Birch or Alder would be good
    - Cycling lanes on main routes into downtown (x 2 respondents) incl. near Alder / Dogwood / Island Highway
    - Child friendly bike paths
    - Connect up the bike paths/bike lanes to encourage cycling
    - Upgrade Beaver Lodge Lands, ERT as a bike route
- Bike Storage (x 2 respondents)
- Have designated bike parking areas downtown - maybe by the library or tourist info centre, also the malls, would have to be secure (maybe indoors) so bikes would be less likely to be stolen or vandalized

Pedestrian Facilities

- More and better sidewalks (x 4)
- Turn a couple of blocks of Shoppers Row into a pedestrian mall - in Europe these are wonderful places, good for business and good for everyone, every town and village has one and they are always full of strolling people. This could have been done when the spirit square was built, it would have been a brave decision but a good one. Also, more linear parks for pedestrians, such as the one in Penfield, would be a huge asset to the community. And, street lights are often not placed on the same side of the street as sidewalks; sidewalks end on one side of the street for no apparent reason and the pedestrian has to cross the street. The new pedestrian lights around the city are excellent.
- Closed streets downtown for pedestrian only traffic e.g. shoppers row

- Pedestrian friendly transport
- Pedestrian crossings at the south end of Willow Point--e.g. Dahl Road
- Clearing of existing sidewalks
- The Merecroft Village, the Save-On Foods mall areas are very dangerous for pedestrians. Start using your planning department to properly plan for pedestrian friendly parking lots.

Goods Movement

- Dealing with the overload of big truck transport in the downtown areas
- I would like to see less large trucks off of the South Island Highway especially when the children are getting out of the Schools about 3:00 P.M.

Land Use & Development

- Having higher density housing closer to current amenities
- More strategic land use decisions linked directly to how transportation will be accommodated
- Rezone more areas in residential neighbourhoods for small mini malls within walking distances of homes.
- Walkable cities, reduce urban sprawl, concentrate population density
- New development needs to be built with the CMHC modified grid design so that residents can walk or cycle around their neighbourhood rather than drive much farther on dangerous feeder roads.

Safety

- On dark rainy winter nights it is difficult to see pedestrians at cross walks, lit cross walks a must!
- Improve safety of transit property (mainly bus stops)
- Make dangerous intersections like 9th and Birch "No left turns" (off Birch onto 9th) or block them off completely. Same on South McLean. That dissuades cut-through traffic far more than extended curbs that cannot be seen in the dark or under snow (We do have snow here!)
- Sweep gravel/glass from roadsides and bike lanes more regularly

Network Connectivity

- Defined bike, electric scooter, and pedestrian route network throughout city
- Pedestrian/cycling connections and inter-connectivity

Regional Connections

- Transit system that would go further down Island
- Encourage the Province and Federal government to build a bridge to Quadra, then to Cortes, then to ?, and Powell River, etc. all the way to Vancouver. Then we won't be at the mercy of the ferry system and the main link to the island would come through Campbell River, bringing travellers and money here
- Frequent bus service on major corridors connecting to airport, ferry, and greyhound terminals. Also improve connections to Courtenay. Encourage bus service to Gold River and Port Hardy

Accessibility

- I feel that we could have more access to the Handy Dart Service outside of the City (ie in the Stories Beach & Oyster Bay areas), as there are a lot of struggling seniors that would benefit from this service.
- Shopping center shuttle Discovery-Tyee-Commons

Management

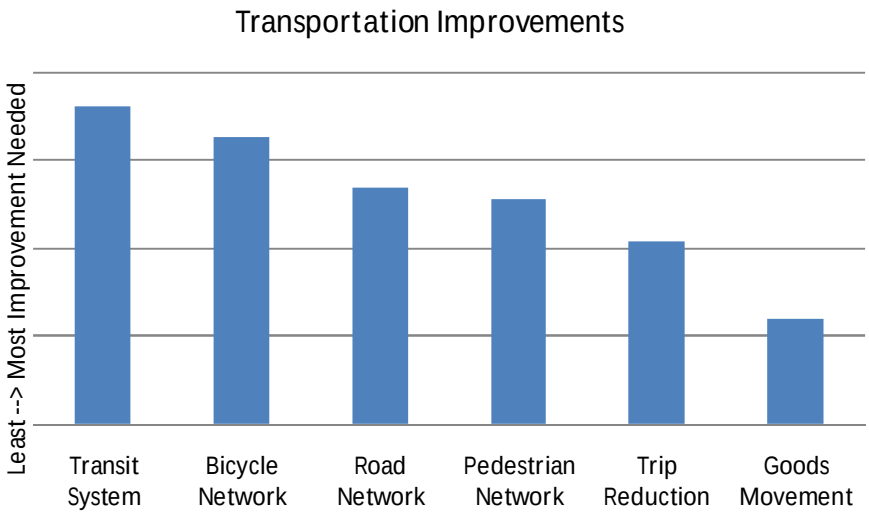
- Reduce costs at City Hall and on the roads. Don't spend any more capital money in excess of $100K per year for 5 years
- The next city council will severely curtail all spending. City Hall surveys, Green activities, and other nominal value activities are gone.
- City support in running a car pool
- Listen to the people and don't shoot them down just because some engineering book says you need more accidents per year to qualify a change

Other

- Scooter friendly sidewalk intersections
- The economic future of CR looks quite poor. It is currently unsustainable. Therefore, we must do all we can to make CR very progressive, including a well thought out integrated transportation, economic, development plan.
- Get Dogwood running properly
- Wider shoulders for use by bicycles, electric scooters and carts especially on high traffic streets.
- Encourage airline investment
- We must create a community that keeps our young here and attracts new people to move here and have businesses. We must also overcome the blue collar stigma that keeps new people and their businesses away from CR. We must be very progressive and distinguish ourselves from the many retirement communities on Vancouver Island. A "Retirement Community" is not economically sustainable. Examples of "progressive" include: going "carbon neutral", having free buses downtown for shoppers, having express buses running during rush hour along major north-south arteries and coordinated with the timing of secondary routes, having tram service down Dogwood to promote concentrated urban development along this route, etc.
- Discouraging parents from picking up their children up from school. There are over 50 cars a day at Southgate School. It is well documented in many developed countries that the perception of crime is many times exaggerated from the actual statistics on crime. This false perception is fed by today's hyper media. The danger is far greater that a child will be run over as opposed to being assaulted by a stranger or using drugs. Addressing this issue will educate children in the value of alternative transportation, self-reliance, etc.
- Debit or credit card payments. (more people are not carrying cash)
- Encourage motorcycle and road legal scooter use (not battery powered scooters that are designed to circumvent the law)
- Too many signs

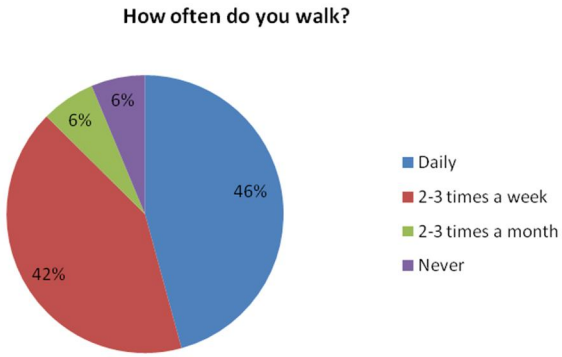
4. What transportation facilities need the most improvement in Campbell River today?

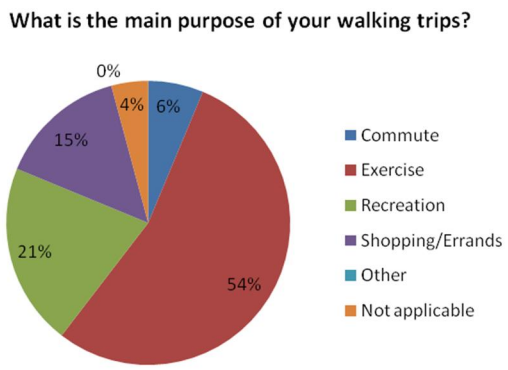
Respondents were asked to rank six topics on a scale from 1 through 6, with 1 needing the most improvement and 6 needing the least improvement. On average, respondents noted that the transit system and bicycle network were in need of the most improvement, and trip reduction and goods movement in need of the least improvement.



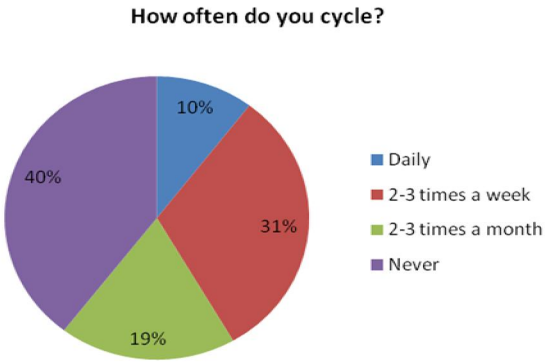
5. *How often do you walk, cycle, or take transit? What is the main purpose of your walking, cycling, or transit trips?*

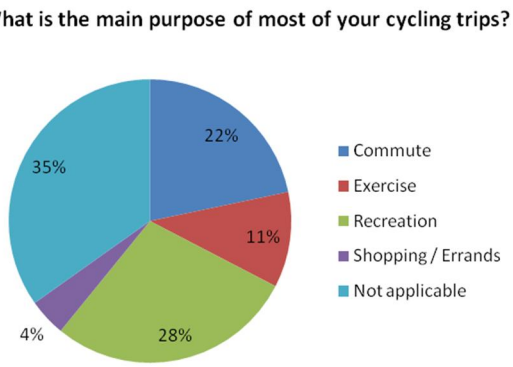
Walking



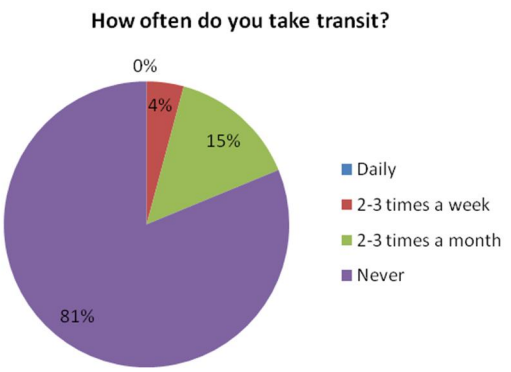


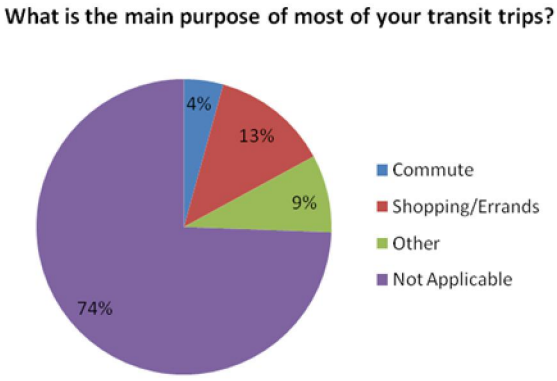
Cycling





Public Transit





6. How could the City help you walk more often as part of your daily routine?

Road and Traffic Lights

- Traffic lights need to be reprogrammed to give more priority to pedestrians. Red directional lights could incorporate so traffic would not turn in on pedestrians in cross walks.
- Extend new Highway 19A design all along the shore from Jubilee to Tyee Spit and beyond
- Parking and access.

Walkways

- Better sidewalks (x 3 respondents)
- More urban trails
- Robron field is a well used short cut for hundreds of people going to the Merecroft shopping centre. The field is wet and muddy much of the year, a path with good drainage would benefit many
- Surface the muddier trails with gravel
- By finishing the Sea Walk
- I think that general upgrading to Beaver Lodge lands so it isn't muddy would be good
- Designated walk ways like the sea walk.
- Have a large an integrated walking path system, much like is being currently developed
- More public walkways, let's see the Campbell River connected to the Oyster River by walkway
- A paved pathway from Painters Lodge to downtown
- Maintain and improve walking routes such as the Seawalk. Some shrubs between the Seawalk and the highway would decrease offensive road noise and make the walk more beautiful by hiding the cars on the road.
- Turn a couple of blocks of Shoppers Row into a pedestrian mall
- Lots of walking trails already - nothing needs to be done here
- Clear the sidewalks! Hedges overgrown so you can't walk on the sidewalk, and telephone poles planted in the middle of the walk make walking difficult on Alder Street, for example.
- Excellent already. Finish Jubilee trail
- Recreational improvements - such as the trail along Jubilee and great upgrades in the Beaver Lodge Lands increase my interest in recreational walking in town.

Weather and Topography

- The weather is a problem
- Our recreation walks have more to do with weather conditions. Campbell River has a wide variety of recreational walking areas to suit all levels of capability.
- Too many hills, so not viable from where I live.
- I walk outside when it is nice, and exercise inside when it is raining.

Land Use

- Have lit pedestrian routes, and less car-centric development – i.e. fewer strip malls, encourage more development in the Shoppers Row / 10th Ave old 'downtown' area
- Without moving to a different area, I would need more neighbourhood scaled commercial located within my neighbourhood
- Create "walkable" urban environments, so less urban sprawl
- I often park downtown and walk to several places on errands, walk to restaurants, shopping, Beaver Lodge Lands and the arena. Other than making multiple errand trips more practical through a combination of walking and biking (see suggestion below re lockers), I'm not sure there is anything the City can do.

Safety

- I live in the Oyster Bay Area (Area D) and I have to cross a very busy Highway if I want to frequent the Bus or go for a walk to the Oyster River Nature Park or go to the Beach, which I do quite frequently - I often feel that I am taking my life in my hands every time I try to cross that busy Highway near the Discovery Store with my Shopping Cart! Sometimes I have to wait for about 5-8 minutes to get across the road.
- I'd like more sidewalks because it would make me feel safer. I would like the police to ticket drivers who refuse to let pedestrians cross the road. I can't walk more than what I do because it is my main transportation already.
- I work downtown. I walk to the Save-on Foods for lunch. I take Dogwood because it is faster but it is extremely unsafe. When people fly down the Dogwood Hill, they don't slow down - there should be some traffic calming devices here. My wife walks downtown to work on Alder Street. The sidewalks run out on one side, continue on the other and so on. Put sidewalks on both sides of Alder. The Gas Tax Fund could pay for this.

Accessibility

- Hard to do as I commute too far with no bus services
- Can't. Too far to work, I need my vehicle for work and at home.
- Transit closer to work. I would walk from the bus stop to work if it was closer

Other

- It's pretty good
- As a person with a permanent disability it isn't possible for me to walk for exercise or to run errands
- The city cannot and should not get involved. It is NOT the city's responsibility
- Nothing, work at home
- Water at the dog park for our dogs. I am tired of taking water with me.

7. How could the City help you cycle more often as part of your daily routine?

Bicycle Routes

- Designated bike routes (x 3 respondents)
- Bike lanes (x 6 respondents)
- Flatter routes (i.e. Around Rockland)
- A paved trail through or around the Beaver Lodge Lands.
- Better North/South bike routes. Dogwood is particularly unsafe for cyclists
- Cyclist activated traffic lights would help
- Maintain and increase urban and forested bike routes around town
- Lots of cycling trails, nothing needs doing here
- Finish Jubilee trail
- More connector paths
- More shared use roadways
- Bicycle friendly street
- More connectivity in bike path network
- Wider shoulders on some roads
- Improved commuter routes - separated from traffic, better facilities (i.e. shower facilities at work, bike storage)

End-of-Trip Facilities

- Put lockers at some key locations (e.g., Tyee Plaza/library, Thrifty's, Merecroft) so you can shop and secure your groceries etc. while going to more than one location. It gets hard to lug around groceries etc. to multiple locations.

Weather and Topography

- Wind sheltered corridor, a trip that normally takes 35 minutes by bike can go up to an hour and a half in a southeaster
- Weather and bikes with motors
- Too many hills, so not viable from where I live
- Flatten the hills
- Strategic routes that avoid challenging terrain

Safety

- Designated safe cycle routes and sweeping of the streets for rocks and glass as this causes flat tires.
- Provide bike routes in and out of downtown that keep bicycles away from vehicles - navigating large intersections without a bike lane is scary and dangerous
- Allow more room for cyclists. Vehicles drift into cycling lane (i.e. willow point).
- Safe bike lanes
- Ensure that there are safe cycling lanes
- It's is incredibly dangerous to cycle to work on Alder Street. It would be easy for the City to place a bike lane on Alder to accommodate commuters. A number of traffic calming signs could be erected. Again, the Gas Tax Fund would pay for this.
- Safe bike lanes, safe & covered bike storage (like in front of the Sportsplex)

Personal Barriers

- Because of my disability cycling isn't an option

- Can't physically cycle. Knee and hip problems.
- I cannot ride a bike as I have Arthritis in my neck. However, my husband has a motor cycle and he feels that car drivers could be more watchful of careful Motor Cycle Drivers.

Education
- More promotion to enhance how easy commuting can be
- Education to drivers so they will share the road.

Other
- The city cannot and should not get involved. It is NOT the city's responsibility
- It can't. I am a lifelong cyclist and commuted to work by bicycle for over 30 years

8. How could the City help you take transit more often as part of your daily routine?

Frequency / Scheduling
- More frequent (x 12 respondents)
- Better scheduling (x 3 respondents)
- Extended hours (x 3 respondents)
- More predictable / on time (x 2 respondents)
- In the Oyster Bay Area the buses only appear to facilitate persons that work in business or go to school. They do not help the average Housewife, or senior that wants to go downtown to run a few errands, maybe have lunch and return home about 3:00 or 4:00 P.M. in the afternoon. There is too much of a lapse in time for anyone to enjoy looking in the shops, maybe having a leisurely lunch with some friends, and then going to the Library and then going home and starting their supper or whatever. Who wants to come home at 2:00 p.m. on the Oyster River bus - and if you miss the bus you are punished and have to wait until 4:45 or on Mon. Tues. Wed. you have to wait until 5:45. Give me a break Campbell River - there is 30,000 people living in this town and if you would run more buses - people would take them.
- At the moment the schedules don't suit my needs.
- Make it more convenient, more buses. We are too small for this to work really well.

Routing
- More routes (x 2 respondents)
- Make it fast, direct - no need to meander down back streets
- The routes need to be reworked to make them more efficient,
- Transit to airport
- Connect bus to ferry (train) and airport.
- Current routes do not work for me
- Routes could use better synchronization but I am pretty happy with it the way it is
- 2-way routes (buses go both ways on a route, not just in a circle). But considering the number of empty or near empty buses going by, I'd guess the cost would be too high. Maybe smaller buses would be more efficient?

Fees
- Special transit pass for off hours
- Free or cheap bus passes subsidized through property taxes. Have a more progressive transit system

Education/Promotion

- Promote more awareness of transit options, I am completely unaware of what the bus routes are, how frequently they run, etc
- Advertise rates and routes

Facilities

- More shelters would help.
- Make well lit stops closer to where I live running more frequently early morning to late evening. I work at the hospital shift work.
- Have updated transit routes and times at all bus stops. They have this system in UK.
- Install pullouts so the bus doesn't slow other traffic.

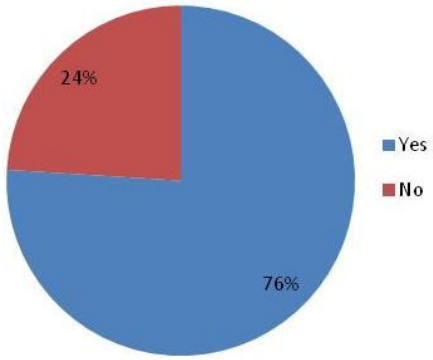
Attractiveness of Other Modes

- We live on a bus route but because of health issues our car is the most necessary and convenient.
- Would rather cycle
- Will likely choose cycling/walking over transit
- It's nice to know the option is there but I don't use the bus currently
- I work at John Hart Generating Station and there is no transit to work. I would like that option on poor weather days and when daylight is limited - especially if I could cycle in one direction and put my bike on transit in the other direction.

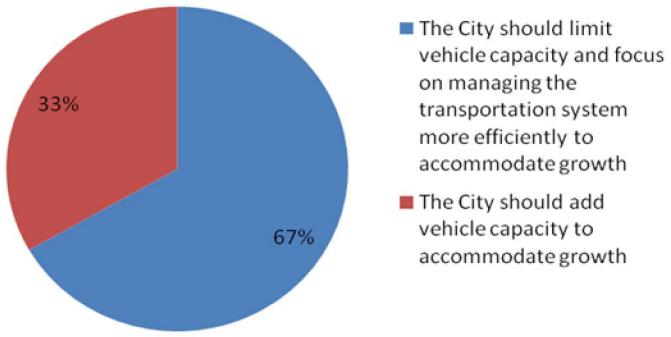
Other

- Smaller busses
- Transit is a tough one because a transit system becomes more efficient with increased population. The two go hand in hand.
- The city cannot and should not get involved. It is NOT the city's responsibility
- The one time I wanted to use the bus the bus company could not tell me where the bus stop was that was closest to me on the Island highway. They said they did not know
- The only transit I would be able to use would be the parabus system.

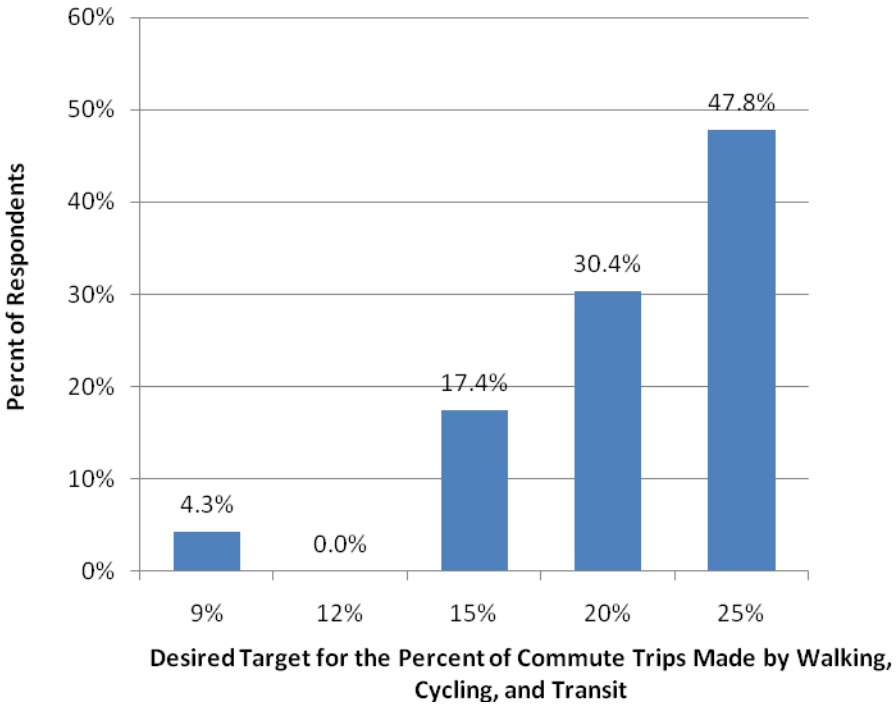
9. *Should the City give priority to development proposals that reduce automobile requirements over those that require vehicle parking?*



10. Should the City limit vehicle capacity (such as parking or roadway), or add vehicle capacity as the community continues to grow?



11. Walking, cycling, and transit currently account for approximately 9% of all commute trips in the City. What would be acceptable target for walking, cycling, and transit trips by the year 2035?



12. Do you have any other comments?

Alternative Modes

- Enable and encourage cycling and walking

- New comers to Campbell River do not come here for parking opportunities they come for an active retirement. The more walking and cycling pathways the better for all of us.
- The City needs to take dramatic steps to decrease vehicle use, we have a great climate & manageable size for biking/walking/ transit options, there just needs to be more incentive to use them & disincentive to use vehicles.
- While I agree we shouldn't promote more vehicle use, because of my disability I already find it difficult to function because of the lack of designated parking. The last two questions were very difficult to answer. Because of the way our city is laid out it would be almost impossible to make those changes.
- Working with community employers to accommodate commuting by bicycle or running will reduce car traffic in peak time of the day e.g. showers in the work place, bike storage, employee lockers etc.
- I think if the community wishes to continue to attract new people, limiting vehicle capacity will be detrimental. However, it would be great if more could be done for walking and cycling. Maintenance of these types of pathways would be less onerous than road maintenance.
- The reality is that we drive cars and that is not likely to change. Focus on that but make other options available. Aim for dramatic change in 16 by making it more viable rather than making it more difficult to drive.
- The transit system is so poor that it does not encourage one to use. I lived in Germany for 2 years and saw how they run a very efficient system that is always on time even in large cities plus they have a great network of cycle paths

Development & Growth

- It would be smarter to simply limit growth to a population of <40,000. Why assume "accommodate growth". I thought this was a "sustainable" project!
- Current subdivision growth is doing nothing to shorten walking/cycling time so motivation for alternative commuting is likely small. Housing should be closer to work/shopping via densification of downtown and mixed use neighbourhoods (i.e. Jubilee/Dogwood area).
- All new developments that lie more than 1 km from a commercial location should include a commercial location. All new developments that lie more than 1 km from a park of 0.5 ha in area should include a park of that size.

Parking

- Reduce parking spots and increase cost downtown, Increase tree planting in the area removed from parking to help deal with the carbon footprint of the vehicles and increase blacktop

Economy

- I believe the city changing directly to tourist-based industries directly without any supporting industrial value-added support may be a mistake. I believe a majority of wealth in the economy has come from resource-based industries, and there will be a lag time

Other

- Why not parking meters in some locations?
- I think the city is doing a great public service in their methods and plans for the future.
- Keep up the good work and don't change the lights on Dogwood
- Let's make Campbell River progressive and attractive to encourage our young to stay here and to attract new people to move here to set-up businesses.

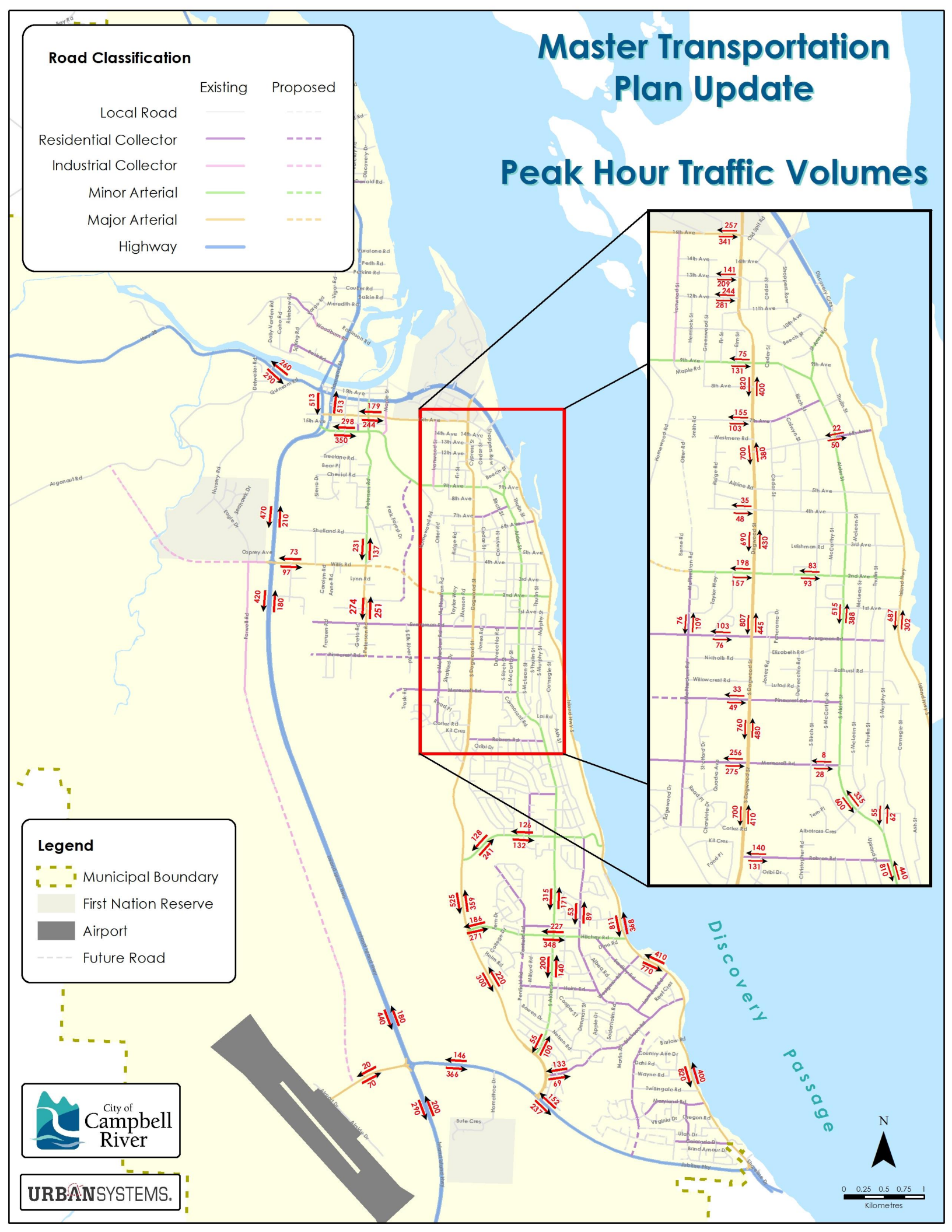
- Improve communications to public as to how specific short-term projects connect to long range goals for community. The school district should also be included in these discussions to ensure the value of neighbourhood schools is understood. As neighbourhood schools are closed in favour of larger consolidated more fiscally efficient schools, the ability for students to walk to school is lost. This instils within our youth the culture of driving.
- Is Gregor Robertson our Mayor too?
- Do not listen to radical small groups of people who have their own agenda when it comes to decisions. Unfortunately the silent majority do not agree with them but won't challenge them.
- Many people cannot manage walking or cycling due to the hills in Campbell River therefore it would be best to invest in improving the transit system. Motorcycles and scooters require less parking area and have a smaller carbon footprint so perhaps these could be encouraged during the warmer weather months. Campbell River accommodates travellers from the North Island who require a vehicle to get around and need to be able to park conveniently while purchasing their supplies particularly in foul weather. More residential buildings in the downtown core may improve all round economics of Campbell River and reduce the need for more roadways. Higher density residential could also be considered at Campbellton, Merecroft and Willow Point.
- As a driver of an emergency vehicle (ambulance) recent changes have made emergency response more dangerous and lengthened response times. First the work from Hilchey south to Erickson, the meridians have made manoeuvring through difficult and confusing to the general driving public. The lights on Dogwood have made emergency responses most difficult because of traffic congestion, now making Alder or better Birch the safer and easier route for emergency response. The new work on the island highway from Hilchey north is by far the worst. A lot of emergency calls are done into the condos and apartments along this section of hwy, as well it was the quickest route to Willow Point or even south of Jubilee Parkway, now it is completely unsafe to respond on this route as drivers have nowhere to go if an emergency vehicle is behind them. This has forced us to use Alder though a slower and longer route. A gentle reminder in the form of newspaper articles to drivers of Campbell River that when an emergency vehicle is behind you or approaching the law is to pull over and "stop". Local drivers have a habit of pulling over but not stopping, and wondering why an emergency vehicle does not go around them, this is one of the most dangerous situations when operating an emergency vehicle,

URBAN SYSTEMS LTD.

U://projects_VAN/1479/0016/01/M-Meeting-Notes/2010-11-30 Survey Feedback Summary

Appendix C

Road Network Evaluation


Master Transportation Plan Update
Peak Hour Traffic Volumes
Road Classification
Existing
Proposed
Local Road
Residential Collector
Industrial Collector
Minor Arterial
Major Arterial
Highway
Legend
Municipal Boundary
First Nation Reserve
Airport
Future Road
City of Campbell River
URBANSYSTEMS.
Discovery Passage
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Appendix D

Cost Estimates and Priorities

Table D.1: Pedestrian Plan Capital Improvements

Roadway	From	To	1 or 2 Sides Needed	Side Req'd	Distance	Total Cost	Priority					Potential Funding Partners		Priority			Notes
							Arterial	Collector	Pedestrian Area*	School	Bus Stop	City	Private	Short-Term	Medium-Term	Long-Term	
Major Arterial Roads																	
Dogwood St	9th Ave	11th Ave	1	W	360 m	$360,000	•		DT			•				•	Retaining wall on west side from 9th to 11th; challenging implementation
Homewood Rd	Maple St	9th Ave	1	N	800 m	$160,000	•				•	•			•		
Island Hwy	Jubilee Pkway	n/o Barlow Rd	1	W	2,000m	$400,000	•				•	•			•		
	Rockland Rd	1st Ave	1	W	3,000 m	$600,000	•				•	•			•		
Willis Rd	Hwy 19	Fisher Rd	2	Both	840 m	$336,000	•						•			•	Rural, as redevelopment occurs
	Fisher Rd	Petersen Rd	2	Both	300 m	$120,000	•		Q				•			•	Rural, as redevelopment occurs
9th Ave	Ironwood St	Dogwood St	1	N	500 m	$100,000	•				•	•			•		
14th Ave	Marwalk Cres	e/o Spruce St	1	S	170 m	$34,000	•		CT			•		•			
	Redwood St	w/o Maple St	1	S	270 m	$54,000	•		CT			•		•			
16th Ave	Maple St	Ironwood St	1	N	620 m	$124,000	•				•	•			•		North side adjacent We Wai Kum Nation
	Ironwood St	w/o We Wai Kum Rd	2	Both	230 m	$92,000	•		DT			•		•			North side adjacent We Wai Kum Nation
	w/o We Wai Kum Rd	e/o We Wai Kum Rd	1	N	170 m	$34,000	•		DT			•		•			North side adjacent We Wai Kum Nation
	e/o We Wai Kum Rd	Dogwood St	2	Both	90 m	$36,000	•		DT			•		•			North side adjacent We Wai Kum Nation
Minor Arterial Roads																	
Alder St	n/o Cottonwood Dr	Rockland Rd	1	E	570 m	$114,000	•				•	•			•		
	Murphy St	Albatross Cres	1	E	210 m	$42,000	•				•	•			•		
	Albatross Cres	Evergreen Rd	1	E	1,120 m	$224,000	•		M		•	•		•			
	n/o Evergreen Rd	4th Ave	1	W	720 m	$144,000	•				•	•			•		
	5th Ave	6th Ave	1	E	350 m	$70,000	•				•	•			•		
Hilchey Rd	Alder St	Dalton Rd	1	N	750 m	$150,000	•				•	•			•		
	Dalton Rd	Island Hwy	1	N	160 m	$32,000	•		WP		•	•		•			
Petersen Rd	14th Ave	Highland Rd	2	Both	460 m	$92,000	•				•		•			•	Rural, as redevelopment occurs
	Highland Rd	Willis Rd	2	Both	1,220 m	$244,000	•				•		•			•	Rural, as redevelopment occurs

Roadway	From	To	1 or 2 Sides Needed	Side Req'd	Distance	Total Cost	Priority					Potential Funding Partners		Priority			Notes
							Arterial	Collector	Pedestrian Area*	School	Bus Stop	City	Private	Short-Term	Medium-Term	Long-Term	
	Willis Rd	Evergreen Rd	2	Both	720 m	$144,000	•		Q		•		•			•	Rural, as redevelopment occurs
	Evergreen Rd	Pinecrest Rd	2	Both	400 m	$80,000	•				•		•			•	Rural, as redevelopment occurs
Rockland Rd	Dogwood St	w/o Gazelle Rd	1	N	560 m	$112,000	•					•				•	
	Shelbourne Rd	Mountain View Pl	1	S	90 m	$18,000	•					•		•			Missing Link
	Mountain View Pl	Galerno Rd	1	S	570 m	$114,000	•				•	•			•		
	Galerno Rd	Island Hwy	1	S	340 m	$340,000	•					•				•	Retaining wall, topography challenges
2nd Ave	McPhedran Rd	Dogwood St	1	N	390 m	$78,000	•					•				•	
	Birch St	Island Hwy	1	N	540 m	$108,000	•					•				•	
9th Ave	Alder St	Dogwood St	1	S	380 m	$76,000	•					•				•	
Residential Collector Roads																	
Colorado Dr	Island Hwy	End	1	S	630 m	$126,000		•				•				•	
Eardley Rd	Hilchey Rd	James Rd	1	E	300 m	$60,000		•				•				•	
	James Rd	Westgate Rd	1	E	230 m	$46,000		•	WP			•			•		
	Westgate Rd	Larwood Rd	1	E	450 m	$90,000		•	WP	•		•		•			
Erickson Rd	Dogwood St	e/o Hudson Rd	1	S	670 m	$134,000		•				•				•	
	e/o Hudson Rd	Martin Rd	2	Both	370 m	$148,000		•				•			•		Missing Link
	Martin Rd	w/o Homestead Rd	1	S	250 m	$50,000		•				•				•	
	w/o Harrowgate Rd	Harrowgate Rd	1	S	70 m	$14,000		•				•				•	
	Harrowgate Rd	w/o Reef Cres	2	Both	240 m	$96,000		•	WP			•		•			Missing Link
	Reef Cres	Island Hwy	1	S	110 m	$22,000		•	WP		•	•		•			Missing Link
Evergreen Rd	Walworth Rd	Petersen Rd	2	Both	670 m	$268,000		•					•			•	Rural, as redevelopment occurs
	Petersen Rd	McPhedran Rd	2	Both	930 m	$372,000		•			•		•			•	Rural, as redevelopment occurs
	McPhedran	Dogwood St	1	N	390 m	$78,000		•				•				•	
	e/o Dogwood St	Birch St	1	S	340 m	$68,000		•				•				•	
	Birch St	e/o Birch St	1	N	70 m	$14,000		•				•		•			Missing Link
	Alder St	Murphy St	2	Both	275 m	$110,000		•				•				•	
Galerno Rd	Rockland Rd	Alexander Dr	1	W	2,150	$430,000		•			•	•			•		
Harrowgate Rd	Alexander Dr	Erickson Rd	1	S	570 m	$114,000		•			•	•			•		
Holm Rd	Penfield Rd	Alder St	1	S	370 m	$74,000		•		•		•			•		
	Cook Rd	Galerno St	1	S	270 m	$54,000		•			•	•		•			Missing Link

Roadway	From	To	1 or 2 Sides Needed	Side Req'd	Distance	Total Cost	Priority					Potential Funding Partners		Priority			Notes
							Arterial	Collector	Pedestrian Area*	School	Bus Stop	City	Private	Short-Term	Medium-Term	Long-Term	
Larwood Rd	Harrowgate Rd	Island Hwy	1	S	600 m	$120,000		•	WP	•	•	•		•			
Maryland Rd	Willow Creek Rd	Island Hwy	1	S	900 m	$180,000		•				•				•	
McPhedran Rd	2nd Ave	s/o Lonsdale Cres	2	Both	200 m	$80,000		•				•				•	
	s/o Lonsdale Cres	Evergreen Rd	1	E	160 m	$32,000		•				•				•	
	Evergreen Rd	n/o Nichols Rd	1	E	90 m	$18,000		•	M		•	•		•			
	n/o Nichols Rd	Pinecrest Rd	2	Both	290 m	$116,000		•	M		•	•		•			
	Pinecrest Rd	Merecroft Rd	1	W	400 m	$80,000		•	M		•	•		•			
	Merecroft Rd	Cortez Rd	2	Both	420 m	$168,000		•	M			•			•		
Merecroft Rd	End	McPhedran Rd	2	Both	420 m	$168,000		•					•			•	Rural, as redevelopment occurs
	McPhedran Rd	w/o Quadra Ave	1	S	190 m	$38,000		•	M			•		•			Missing Link
	Birch St	McCarthy St	1	S	80 m	$16,000		•	M	•		•		•			Missing Link
	McCarthy St	Alder St	2	Both	90 m	$36,000		•	M	•		•		•			Missing Link
Montana Dr	Colorado Dr	Utah Dr	1	W	75 m	$15,000		•				•				•	
	Utah Dr	Maryland Dr	1	E	390 m	$78,000		•				•				•	
Niluht Dr	Alder St	Shelbourne Blvd	1	N	320 m	$64,000		•		•		•			•		
Parkway Rd	Penfield Rd	Alder St	1	S	370 m	$74,000		•				•				•	
Penfield Rd	Holm Rd	End	1	Either	90 m	$18,000		•					•			•	As redevelopment occurs
	Goodwin Rd	Hilchey Rd	1	Either	220 m	$44,000		•		•		•			•		
	Hilchey Rd	Meadowbrook Dr	1	W	200 m	$40,000		•			•	•			•		
	Juniper Dr	Juniper Dr	1	W	600 m	$120,000		•			•	•			•		
Pinecrest Rd	End	Petersen Rd	2	Both	480 m	$192,000		•					•			•	Rural, as redevelopment occurs
	McPhedran Rd	Dogwood St	1	N	390 m	$78,000		•	M			•			•		
	Dogwood St	Delvechhio Rd	1	N	300 m	$60,000		•	M	•	•	•		•			Missing Link
	Birch St	McCarthy St	2	Both	80 m	$32,000		•	M	•		•		•			Missing Link
	McCarthy St	Alder St	1	N	90 m	$18,000		•	M	•		•		•			
Robron Rd	Christopher Rd	Marina Blvd	1	S	220 m	$44,000		•	M	•	•	•		•			
	Marina Blvd	Alder St	1	S	350 m	$70,000		•			•	•			•		
Shelbourne Blvd	Niluht Dr	s/o Murray Pl	1	W	250 m	$50,000		•				•				•	
	s/o Murray Pl	Rockland Rd	2	Both	270 m	$108,000		•				•				•	
Westgate Rd	Galerno Rd	Albea Rd	1	S	230 m	$46,000		•				•				•	
	Albea Rd	w/o Island Hwy	1	S	370 m	$74,000		•	WP			•			•		
Willow Creek Rd	Maryland Rd	Twilingate Rd	1	W	240 m	$48,000		•				•				•	
	Twilingate Rd	Wayne Rd	1	E	150 m	$30,000		•				•				•	
	Wayne Rd	Country Aire Dr	2	Both	260 m	$104,000		•				•				•	
6th Ave	Alder St	Island Hwy	1	S	235 m	$47,000		•				•				•	

Roadway	From	To	1 or 2 Sides Needed	Side Req'd	Distance	Total Cost	Priority					Potential Funding Partners		Priority			Notes
							Arterial	Collector	Pedestrian Area*	School	Bus Stop	City	Private	Short-Term	Medium-Term	Long-Term	
7th Ave	w/o Alder St	Colwyn St	1	S	170 m	$34,000		•		•		•		•			Missing Link
	e/o Cedar St	Dogwood St	1	S	90 m	$18,000		•		•		•		•			Missing Link
Industrial Collector Roads																	
Maple Street	14th Ave	16th Ave	1	E	210 m	$42,000		•	CT			•		•			Missing Link
Local Roads – Pedestrian Areas																	
Beech St	10th Ave	w/o Alder St	1	W/S	210 m	$42,000			DT				•		•		As redevelopment occurs
Cedar St	Cedar St	13th Ave	1	S	80 m	$16,000			DT				•		•		As redevelopment occurs
Cedar St	14th Ave	16th Ave	1	W	110 m	$22,000			DT				•		•		As redevelopment occurs
Fir St	10th Ave	12th Ave	1	E	70 m	$14,000			DT				•		•		As redevelopment occurs
Greenwood St	10th Ave	12th Ave	1	E	200 m	$40,000			DT				•		•		As redevelopment occurs
Hemlock St	10th Ave	12th Ave	1	W	200 m	$40,000			DT				•		•		As redevelopment occurs
10th Ave	Ironwood St	Fir St	2	Both	290 m	$58,000			DT				•		•		As redevelopment occurs
13th Ave	e/o Ironwood St	w/o Greenwood St	1	S	70 m	$14,000			DT				•		•		As redevelopment occurs
14th Ave	Dogwood St	Cedar St	1	S	105 m	$21,000			DT				•		•		As redevelopment occurs
16th Ave	Roberts Reach Rd	Parking Lot	1	E	40 m	$8,000			DT				•		•		As redevelopment occurs
Maple St	Island Hwy	Campbell River	2	Both	250 m	$100,000			CT				•			•	As redevelopment occurs
Petersen Rd	Island Hwy	Campbell River	2	Both	120 m	$48,000			CT				•			•	As redevelopment occurs
Redwood St	14th Ave	19th Ave	2	Both	460 m	$184,000			CT				•			•	As redevelopment occurs
Spruce St	14th Ave	19th Ave	2	Both	440 m	$176,000			CT				•			•	As redevelopment occurs
15th Ave	Tamarac St	Petersen Rd	2	Both	480 m	$192,000			CT				•			•	As redevelopment occurs
17th Ave	Tamarac St	Redwood St	2	Both	340 m	$136,000			CT				•			•	As redevelopment occurs
	Petersen Rd	End	1	North	110 m	$220,000			CT				•			•	As redevelopment occurs
19th Ave	Tamarac St	Redwood St	2	Both	290 m	$116,000			CT				•			•	As redevelopment occurs
	w/o Petersen Rd	Maple St	2	Both	260 m	$104,000			CT				•			•	As redevelopment occurs
20th Ave	Maple St	End	2	Both	90 m	$36,000			CT				•			•	As redevelopment occurs
Albatross Cres	Christopher Rd	Alder St	2	Both	390 m	$156,000			M			•				•	
Birch St	Albatross Cres	Parking Lot	2	Both	250 m	$100,000			M			•				•	
	Parking Lot	Merecroft	1	E	200 m	$40,000			M			•				•	
	Merecroft Rd	Mid block	1	E	230 m	$46,000			M	•		•			•		
	Mid block	Pinecrest Rd	1	E	60 m	$120,000			M			•				•	
	Pinecrest Rd	Evergreen Rd	1	E	390 m	$78,000			M	•		•			•		
Christopher Rd	Glenalan Rd	Robron Rd	2	Both	250 m	$100,000			M			•				•	
Christopher Rd	Robron Rd	Albatross Cres	2	Both	150 m	$60,000			M	•		•			•		
Cormorant Rd	Albatross Cres	Merecroft Rd	2	Both	340 m	$136,000			M			•				•	
Delvechhio Rd	Pinecrest Rd	Elizabeth Rd	2	Both	290 m	$116,000			M			•				•	
Gemsbock Dr	Springbok Rd	Glenalan Rd	1	S	160 m	$32,000			M			•				•	

Roadway	From	To	1 or 2 Sides Needed	Side Req'd	Distance	Total Cost	Priority					Potential Funding Partners		Priority			Notes
							Arterial	Collector	Pedestrian Area*	School	Bus Stop	City	Private	Short-Term	Medium-Term	Long-Term	
Glenalan Rd	Gemsbock Dr	Christopher Rd	1	N	310 m	$62,000			M			•				•	
Glenalan Rd	Christopher Rd	Kalmar Rd	2	Both	160 m	$64,000			M			•				•	
Kalmar Rd	Glenalan Rd	Robron RD	2	Both	140 m	$56,000			M			•				•	
McCarthy St	Merecroft Rd	Bathurst Rd	2	Both	600 m	$240,000			M			•				•	
Nichol Rd	McPhedran Rd	Dogwood St	2	Both	390 m	$156,000			M			•				•	
Oribi Dr	Springbok Rd	Glenalan Rd	1	W/S	300 m	$60,000			M			•				•	
Quadra Ave	Merecroft Rd	Cortez Rd	2	Both	470 m	$188,000			M			•				•	
Read Pl	McPhedran Rd	Quadra Ave	2	Both	120 m	$48,000			M			•				•	
Springbok Rd	Serengeti Ave	Robron Rd	1	W	430 m	$86,000			M			•				•	
Stratford Dr	Merecroft Rd	Pinecrest Rd	1	W	400 m	$80,000			M			•				•	
Willowcrest Rd	McPhedran Rd	Dogwood St	2	Both	390 m	$56,000			M			•				•	
Dalton Rd	Hilchey Rd	End	1	Either	670 m	$134,000			WP				•			•	As redevelopment occurs
Arnason Rd	e/o Albea Rd	Westgate Rd	1	S	430 m	$86,000			WP			•			•		Missing Link
Croation Rd	Petersen Rd	End	1	Either	460 m	$92,000			Q				•			•	Rural, as redevelopment occurs
Douglas Rd	Petersen Rd	End	1	Either	130 m	$26,000			Q				•			•	Rural, as redevelopment occurs
Holmstrom Rd	Petersen Rd	End	1	Either	470 m	$94,000			Q				•			•	Rural, as redevelopment occurs
Lynn Rd	Petersen Rd	End	1	Either	100 m	$20,000			Q				•			•	Rural, as redevelopment occurs
Local Roads – Schools																	
Birch St	6th Ave	9th Ave	1	Either	520 m	$104,000				•		•			•		
Cheviot Road	Westmore Road	Petersen Road	1	N	360 m	$72,000				•		•		•			Missing Link
Elkhorn Rd	Ridge Rd	4th Ave	1	Either	240 m	$48,000				•		•			•		
Eland Dr	Steenbuck Dr	Superior Dr	1	S	115 m	$23,000				•		•		•			Missing Link
Milford Rd	Goodwin Rd	Holm Rd	1	Either	400 m	$80,000				•		•			•		
Goodwin Rd	Penfield Rd	Milford Rd	1	Either	120 m	$24,000				•		•			•		
Fern Dr	Hilchey Rd	Meadowbrook Dr	1	Either	240 m	$48,000				•		•			•		
Niluht Dr	Shelbourne Blvd	Superior Dr	1	Either	420 m	$84,000				•		•			•		
Sandowne Dr	Shelbourne Blvd	Superior Dr	1	Either	400 m	$80,000				•		•			•		
Westmore Road	Cheviot Road	Treelane Road	1	Either	220 m	$44,000				•		•			•		
6th Ave	Dogwood St	Alder St	1	S	500 m	$100,000				•		•			•		
Local Roads – Bus Stops																	
Fairmile Rd	Grayson Rd	Fairfield Rd	1	W	100 m	$20,000					•	•				•	
Gazelle Rd	Springbok Rd	Rockland Rd	1	N	70 m	$14000					•	•				•	
Grayson Rd	Soderholm St	Fairmile Rd	1	N	290 m	$58,000					•	•				•	
Juniper Dr	Penfield Dr	Holly Pl	1	W	150 m	$30,000					•	•				•	

Roadway	From	To	1 or 2 Sides Needed	Side Req'd	Distance	Total Cost	Priority					Potential Funding Partners		Priority			Notes
							Arterial	Collector	Pedestrian Area*	School	Bus Stop	City	Private	Short-Term	Medium-Term	Long-Term	
Meadowbrook Dr	Fern Dr	Pine Dr	1	W	70 m	$14,000					•	•				•	
Soderholm Rd	Galerno Rd	Grayson Rd	1	W	160 m	$32,000					•	•				•	

Legend:

Direction: e/o = East of w/o = west of n/o = north of s/o = south of

** Pedestrian Areas:* DT = Downtown CT = Campbellton M = Merecroft Village WP = Willow Point Q = Quinsam

Table D.2: Bicycle Plan Capital Improvements

Roadway	From	To	Facility Type	Improvement Type	Distance	Total Cost	Potential Funding Partners			Priority			Treatments
							City	Prov/ Fed	Private	Short-Term	Medium-Term	Long-Term	
Alder St / St. Ann's Rd	Dogwood St	Shopper's Row	Marked Wide Curb Lane	Upgrade	7,500	See road network plan	•	•		•			Pavement Markings (existing signage)
Birch St	7th Ave / Alder St	Robron Rd	Local Bikeway	Upgrade	3,200	$32,000				•			Pavement Markings (existing signage)
Christopher Rd / Shelbourne Blvd	Robron Rd	Rockland Rd	Local Bikeway	New route	1,500	$22,500				•			Signage and pavement markings
Erickson Rd	Dogwood St	Hwy 19A	Marked Wide Curb Lane	Upgrade	2,100 m	$21,000					•		Pavement Markings (existing signage)
Evergreen Rd	Petersen Rd	Dogwood St	Bicycle Lanes	New route	1,300 m	$39,000					•		Signage and pavement markings
	Dogwood St	Murphy St	Local Bikeway	New route	840 m	$25,000					•		Signage and pavement markings
Hilchey Rd	Dogwood St	Hwy 19A	Marked Wide Curb Lane	Upgrade	2,000 m	$20,000				•			Pavement Markings (existing signage)
Holm / Westgate	Alder St	Hwy 19A	Marked Wide Curb Lane	New route	700 m	$10,500				•			Signage and pavement markings
Homewood Rd	Maple Street	Ironwood Street	Bicycle Lane	New route	1,000 m	$30,000				•			Signage and pavement markings
Ironwood St	14th Ave	9th Ave	Bicycle Lane	New route	815 m	$25,000				•			Signage and pavement markings
Maple St	ERT Trail	Island Hwy	Marked Wide Curb Lane	New route	180 m	$3,000				•			Signage and pavement markings
	Island Hwy	20th Ave	Local Bikeway	New route	430 m	$6,500						•	Signage and pavement markings
Merecroft Rd	McPhedran St	McLean St	Marked Wide Curb Lane	Upgrade	1,070 m	$16,100					•		Pavement Markings (existing signage)
North Campbell River Greenway	Vanstone Rd	Baikie Rd	Local Bikeway	New route	580 m	$9,000						•	Signage and pavement markings
	Baikie Rd	Campbell River	Multi-Use Pathway	New route	1,700 m	$500,000						•	New Pathway
Orange Point Rd	Hwy 19	End	Local Bikeway	New route	1,400 m	$21,000						•	Signage and pavement markings
Petersen Rd	16th Ave	Pinecrest Rd	Paved Shoulder	New route	2,800 m	See road network plan	•	•	•			•	Road widening required. Implement in conjunction with road improvements.
Pinecrest Rd	Petersen Rd	McPhredan Rd	Bicycle Lanes	New route	900 m	$27,000						•	Signage and pavement markings
	McPhedran Rd	Alder St	Marked Wide Curb Lane	New route	975 m	$15,000				•			Signage and pavement markings
	Alder St	McLean St	Multi-Use Pathway	Upgrade	80 m	$12,000				•			Upgrade existing pathway
	McLean St	Murphy St	Local Bikeway	New route	170 m	$2,550				•			Signage and pavement markings

Robron Rd	Dogwood St	Alder St	Local Bikeway	Upgrade	950 m	$9,500				•			Pavement Markings (existing signage)
Rockland Rd	Dogwood St	Hwy 19A	Marked Wide Curb Lane	New route	1,925 m	$30,000					•		Signage and pavement markings
Twilingate Rd	Willow Creek Rd	Hwy 19A	Local Bikeway	New route	800 m	$12,000						•	Signage and pavement markings
	Willow Creek Rd	Nature Park Dr	Multi-Use Pathway	New route	500 m	$150,000						•	New pathway
	Nature Park Dr	Erickson Rd	Local Bikeway	New route	170 m	$2,550						•	Signage and pavement markings
Thulin / Murphy / Galerno	9th Ave / Alder St	5th Ave	Local Bikeway	New route	1,000 m	$15,000					•		Signage and pavement markings
	5th Ave	4th Ave	Multi-Use Pathway	New route	130 m	$20,000					•		New pathway
	4th Ave	Erickson Rd	Local Bikeway	New route	6,550 m	$100,000					•		Signage and pavement markings
Willis Rd	Hwy 19	Petersen Rd	Paved Shoulder	New route	1,100 m	See road network plan	•	•	•			•	Road widening required. Implement in conjunction with road improvements.
Willis Rd– 2nd Ave	Petersen Rd	Dogwood St	Bicycle Lane	New route	1,050 m	See road network plan	•	•			•		New road connection. Implement in conjunction with road improvements.
Willow Creek Rd	Erickson Rd	Jubilee Pkway	Local Bikeway	New route	1,800	See road network plan	•		•		•		New road south of Twilingate Rd, north of Country Aire Dr. Signage and pavement markings
2nd Ave	Dogwood St	Highway 19A	Marked Wide Curb Lane	New route	950 m	$15,000	•				•		Signage and pavement markings
11th / 12th Ave	Ironwood Rd	St. Anne's Rd	Marked Wide Curb Lanes	New route	965 m	$15,000	•			•			Signage and pavement markings
15th Ave	Tamarac Street	Maple Street	Local Bikeway	New route	700 m	$10,500	•			•			Signage and pavement markings
16th Ave	Maple St	Island Hwy	Marked Wide Curb Lane	New route	1,400 m	$21,000	•	•		•			Signage and pavement markings
Campbell River Bicycle/Pedestrian Bridge	North River	South River	Bridge	New route	200 m	$1,000,000 +	•	•				•	New Bridge
			TOTAL			**$1,237,700 ***							

* excludes Campbell River bicycle/pedestrian bridge and projects to be implemented in conjunction with other road network improvements

Table D.3: Transit Strategy Improvements

Project / Initiative	Description	Cost		Priority		
		Service Hours	Fleet Requirements	Short-Term	Medium-Term	Long-Term
1. Improve Evening Service	a. Extend evening service to Monday, Tuesday and Wednesday	1,800	0	•		
	b. Extend evening service to Sunday and statutory holidays	500	0	•		
2. Establish U-Pass Program	a. Establish U-Pass Program at North Island College	n/a	n/a	•		
3. Establish Critical Transit Facilities	a. Replace existing operation and maintenance centre	n/a	n/a	•		
	b. Create new transit exchange at Willow Point	n/a	n/a	•		
	c. Create new transit exchange at Campbellton	n/a	n/a	•		
4. Establish Primary Transit Routes	a. Additional fleet and service hours	20,000	4	•		
5. Frequent Transit Network	a. Increase peak frequency on primary routes to 20 minutes	5,300	4		•	
	b. Increase peak frequency on primary routes to 15 minutes	2,600	2		•	
	c. Increase mid-day frequency on primary routes to 30 minutes	4,500	0		•	
	d. Increase evening frequency on primary routes to 30 minutes	2,300	0		•	
	e. Extend late evening service on primary routes	1,000	0		•	
	f. Extend primary transit service to South Dogwood and North Campbell River and increase peak frequency on Dogwood to 10 minutes	3,000	3			•
	g. Increase mid-day and early evening frequency on Dogwood and Island Hwy routes to 20 minutes	5,300	0			•
	h. Establish all-day frequent service on Dogwood and Island Highway routes	4,300	0			•
	i. Study to identify needs and opportunities for transit priority measures					•
6. Enhance Local and Regional Services	a. Establish direct inter-regional service between Campbell River and the Comox Valley	1,500	0			•
	b. Extended the span of service on local routes (7am-10pm)	5,500	2			•
	c. Conduct future transit service feasibility studies for Quinsam Crossing, Quadra Island and Cortez Island					•
7. Enhance Custom Transit Services	a. Expand HandyDART service hours					•
	b. Introduce demand-responsive services					•
	c. Implement a sernios oriented service					•

Table D.4: Street Network Plan Capital Improvements

Roadway	From	To	Description	Total Cost	Potential Funding Partners			Priority		
					City	Prov/ Fed	Private	Short-Term	Medium-Term	Long-Term
Road Enhancements										
Dogwood St	Merecroft Rd	9th Ave	• Dedicated turn lanes at Merecroft Rd, Evergreen Rd, 2nd Ave, 4th Ave, 7th Ave, and 9th Ave • Accesible pedestrian signals • Transit passenger facilities	$5,900,000	•	•		•	•	
Alder St	Dogwood St	St. Ann's Rd	• Traffic signal / roundabout at Merecroft Rd and 2nd Ave • Transit passenger facilities • Curb extensions • Sidewalks • Marked Wide Curb Lanes	$3,300,000	•	•		•		
16th Ave	Tamarac St	Dogwood St	• Traffic signal and dedicated left turn lanes at Petersen Rd • Transit passenger facilities • Curb extensions	$1,100,000	•	•			•	
14th Ave / Homewood Rd / 9th Ave	Tamarac St	Dogwood St	• Traffic signal and dedicated left turn lanes at Willow St and Petersen Rd • Transit passenger facilities • Curb extensions • Sidewalk • Bicycle lanes	$2,750,000	•	•			•	
Petersen Rd	Pinecrest Rd	14th Ave	• Upgrade to urban standard • Sidewalks • Transit passenger facilities • Bicycle lanes	$1,750,000			•			•
Willis Rd	Hwy 19	Petersen Rd	• Upgrade to urban standard • Sidewalks • Bicycle lanes	$750,000			•			•
Island Hwy	1st Ave	Jubilee Pkwy	• Per South Island Highway Conceptual Design	$7,500,000	•	•		•	•	
New Roads										
Willis Rd	Petersen Rd	McPhedran Rd	• New Road	$4,000,000	•	•			•	
Homewood Rd	Croatian Rd	9th Ave	• New Road	$4,750,000			•			•
Pinecrest Rd	McPhedran Rd	Petersen Rd	• New Road	$3,200,000			•			•
Walworth Rd	Evergreen Rd	Willis Rd	• New Road	$2,200,000			•			•
Willis Rd	Hall Rd	Argonaut Rd	• New Road	$2,500,000			•			•
Eagle Dr	Jubilee Pkwy	Farwell Rd	• New Road	$6,800,000			•			•
Tyee Plaza	10th Ave	13th Ave	• New Road	$850,000			•			•
Willow Creek Rd	Twilingate Rd	Jubilee Pkwy	• New Road	$1,250,000			•			•
Petersen Rd	Highland Rd	Maple St	• Road Realignment	$1,150,000			•			•
Dogwood-Petersen	Dogwood Rd	Petersen Rd	• New Road	$5,900,000			•			•

City of Campbell River

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