Coquitlam

City of Coquitlam

Strategic Transportation Plan Update

Discussion Paper #1: Discovering

May 2010
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URBANSYSTEMS.

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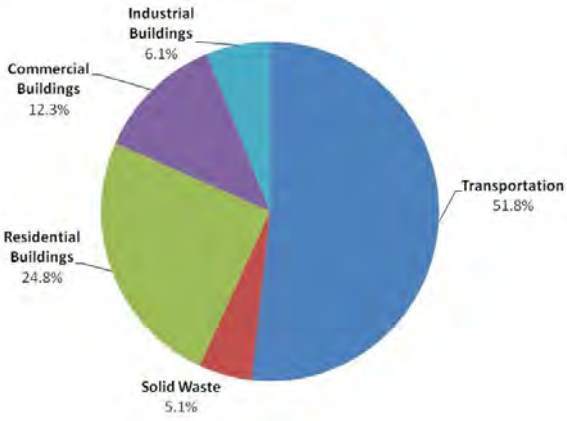
Executive Summary

Transportation is consistently identified by Coquitlam residents as one of the most important issues facing the City. The demand for improved transportation is generated by rapid growth in recent years and the expectation that population and employment in the City will continue to grow at significant rates in the future.

In fact, Coquitlam is one of British Columbia's largest and fastest growing communities. The City's population has doubled over the past 25 years to approximately 120,000 residents today. Rapid growth is expected to continue over the next 30 years, with an additional 100,000 residents anticipated to live in Coquitlam by the year 2041. Along with this growth, the City is undergoing a significant evolution from being a predominantly suburban, automobile-oriented community towards being a large and vibrant urban environment. The high rate of growth and resultant demand for infrastructure and services – such as transportation, infrastructure, housing, community facilities, and protection services – have resulted in unprecedented challenges and pressures for the City to ensure a high quality of life for its citizens.

City of Coquitlam GHG Emissions by Sector



Source: City of Coquitlam Community Energy & Greenhouse Gas Reduction Strategy

In addition to these significant local pressures, there is a growing awareness of climate change and, in particular, the contributions of the transportation sector. For example, the transportation sector is responsible for over half of the City's greenhouse gas emissions and 36% of the City's energy use. The Strategic Transportation Plan (STP) Update presents a significant opportunity to work towards being a more sustainable community by ensuring that its residents have attractive transportation choices that can help to reduce single-occupant vehicle use and support walking, cycling, transit, and car pooling while also supporting economic sustainability goals by supporting goods movement. Although this is a significant opportunity, it is also a considerable challenge facing the City. Currently, approximately two-thirds of all work trips made by City of Coquitlam residents take place in a single occupant vehicle.

If the City is to move towards truly more sustainable transportation patterns, a fundamental shift in transportation planning is required, to ensure that more

sustainable modes – namely carpooling, transit use, walking and cycling – account for a significantly greater share of travel to, from, and within the City.

By charting a new course towards sustainable land use and transportation planning in Coquitlam, the STP Update can go much further than simply achieving transportation-related goals. 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 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. A "business as usual" approach toward growth and development will likely not result in the desired outcomes for creating a livable and sustainable community.

The existing STP was approved by Council in 2001 and recommended transportation improvements for all types of travel in the City for the next 20 years and beyond. Since the STP was adopted, there have been a number of significant changes to land use patterns and the transportation network in and around Coquitlam, including the Pitt River Bridge, provision of Community Shuttle services, construction of new road corridors such as David Avenue Connector and Coast Meridian Overpass, implementation of new bicycle routes, and increased efforts at densification throughout the community and particularly in the Coquitlam City Centre area. Other upcoming initiatives such as the Gateway Program, Evergreen Line, provision of express bus services, and others will significantly impact future travel patterns in and around Coquitlam.

Key Facts & Issues

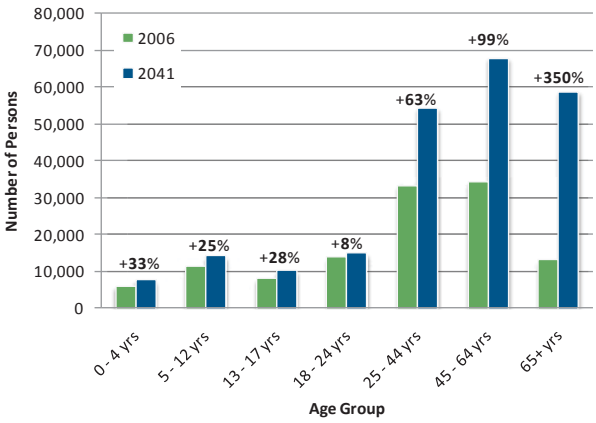
This is the first of five Discussion Papers being developed as part of the STP Update. The purpose of this Discussion Paper is to summarize existing travel patterns and transportation conditions throughout Coquitlam. The findings of this Discussion Paper will provide the basis from which the STP Update is developed. The following sections summarize key background information and significant issues from this Discussion Paper.

Key Facts: Demographics & Land Use

Demographics and land use shape the demand for transportation facilities and services. Key facts about the City's population which affect the STP Update include:

- **A large and growing population –** With a population of 120,000, Coquitlam is the sixth largest municipality in British Columbia. Coquitlam is also one of the fastest growing communities in the province, with an additional 100,000 residents anticipated to live in Coquitlam by the year 2041.
- **Aging population –** Coquitlam has an aging population as the 'baby boomers' move into older age groups. Travel behaviour will change significantly over the next 30 years as move people enter retirement age.
- **Automobile ownership –** There are approximately 83,400 automobiles registered for Coquitlam residents, which represents approximately 1.8 automobiles per household. Automobile ownership has grown more rapidly than population growth over the past decade.
- **Employment –** There are approximately 46,000 jobs in Coquitlam today. Job growth is envisioned to outpace population growth, and is expected to more than double to 94,000 jobs by 2041.
- **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 the densities of those uses, will largely determine how far, and what mode of transportation,

Change in Population by Age Group



Source: Metro Vancouver

people will use to get to their destinations. The City is directing much of its future residential and commercial development in the Regional City Centre and Neighbourhood Centres. In addition, much of the employment growth is also expected to be directed to the Regional City Centre, as well as Neighbourhood Centres, Service Commercial Corridors, and Industrial Areas.

Key Facts: Travel Characteristics

The STP Update requires an understanding of the current travel characteristics throughout the community. Key facts about the current travel characteristics include:

- **Mode share –** City of Coquitlam residents are heavily reliant on the automobile for trips to work. Approximately two-thirds of Coquitlam residents travel to work by single-occupant vehicle, with the remaining one third of the population carpooling, taking transit, walking, or cycling to work.
- **Trip distribution –** Currently, almost 80% of work trips that originate in Coquitlam travel to other parts of the region, and almost 70% of work trips from other parts of the region are destined to Coquitlam. This highlights the need for connections and services to other parts of the region.

Key Issues: Walking

Walking is the most fundamental form of transportation. Walking is part of every trip, whether that trip is made by car, transit, or bicycle. In order to support walking, the City has developed an extensive network of off-street trails and pathways. However, the following issues are affecting the walkability of the community:

- **Sidewalk coverage –** In many of the older areas of the City, particularly in Southwest Coquitlam, sidewalks have not been provided.
- **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.

- **Wide road crossings –** There are a number of major arterial roads and highways which are challenging, particularly for the elderly and disabled, to cross because of their width
- **Topography –** Physical challenges are presented by the steep topography throughout the community. Steep hills make walking more difficult for pedestrians, particularly those using mobility aids and the elderly. Additionally, curb letdowns are not consistently applied throughout the City, meaning that accessibility for persons using mobility aids is not universal.
- **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 such as shelters, benches, lighting, signage and other features that provide for a comfortable and safe environment are not always provided.
- **Pedestrian safety and security –** Pedestrian safety, comfort, and security are primary concerns for residents, particularly with respect to crossings along major roads. In addition, residents have reported that a lack of street lighting prevents a feeling of security.
- **Pedestrian facilities in commercial areas –** 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 districts on foot.

Key Issues: Transit

Transit is the primary alternative to automobile travel in Coquitlam and across the region, as it can offer competitive travel time and reduce overall environmental and community impacts of vehicle transportation. The existing transit system in Coquitlam is comprised of a variety of service types including HandyDart, Community Shuttle, conventional bus service, express bus service, and West Coast Express. The issues with current transit services and facilities within Coquitlam include:

- **Service levels –** Generally, peak hour service levels are 15 minutes or better but off-peak services tend to be 30-60 minutes. Service levels of 30 minutes or more during off-peak periods are unattractive and highlight some of the gaps in terms of service levels.
- **Service types –** Over the last ten years, many of the transit services in Coquitlam have diversified with more community shuttle services in the outlying areas. Increased FTN services would benefit Coquitlam residents especially if they are aligned along major corridors with intensified and mixed land uses.
- **Transit supportive facilities –** Other than signal coordination along some corridors, there are limited bus priority measures in Coquitlam such as queue jumpers, bus lanes or signal priority to move buses quickly and efficiently through congested areas.
- **Evergreen Line bus integration –**Strategies for integrating bus services will need to go through a thorough planning process to ensure that the bus integration plan is aligned with travel markets and customer needs.
- **Post-secondary institutions –**Currently there is no U-Pass program at Douglas College in Coquitlam.
- **Transit accessibility.** In order for transit to be successful, it must be accessible to as many people including those with varying physical abilities. TransLink's Access Transit Strategy will help to ensure that the transit system is accessible for as many people as possible recognizing the physical, cognitive or other challenges that existing or potential customers may face.
- **Park and ride –** There is one Park and Ride facility in Coquitlam located at Johnson St and Barnet Hwy. This lot contains 614 parking stalls anticipated to be fully utilized with the provision of the Evergreen Line.
- **Safety and security –** The level of real safety on TransLink services is generally very high as a professional bus driver with effective communications technology has access to emergency services on every transit vehicle. Safety and security are potential concerns at bus stops and waiting areas where lighting and visibility is limited.

Key Issues: Cycling

Cycling is an emerging mode of transportation in Coquitlam. The City wishes to develop a safe and comprehensive bicycle network to support healthy lifestyles and to recognize the positive environmental aspects of cycling as an attractive mode of transportation. The following issues with the bicycle network have been identified:

- **Incomplete bicycle network –** 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.
- **Cyclist safety and security –** Many people are interested in cycling and may already cycle occasionally, but are deterred from cycling due to safety concerns of interacting with motor vehicle traffic.
- **Challenging Intersections and corridors –** Several areas throughout the City have been identified as difficult areas or intersections which should generally be avoided by inexperienced cyclists.
- **Topography –** Topography can be a significant deterrent to many cyclists and is a significant challenge in many areas of the City, particularly in Southwest Coquitlam and the Westwood Plateau areas.
- **Limited connections to other municipalities –** Many existing bicycle routes do not provide adequate connections to surrounding municipalities, particularly to Port Coquitlam, New Westminster, and Burnaby.
- **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.
- **Support facilities and programs –** In addition to providing a comprehensive and safe network of bicycle routes throughout the City, support facilities such as bicycle parking should be provided to ensure that cyclists have a safe place to leave their bicycles.

- **Bicycle-Transit Integration –** Topography is a significant challenge for cycling throughout the City. By seamlessly integrating cycling and transit facilities, both these issues can be mitigated

Key Issues: Road Network

The roadway network is designed to support mobility for all modes of travel including general purpose traffic, goods movement, transit, walking, and cycling. Key issues related to the road network include:

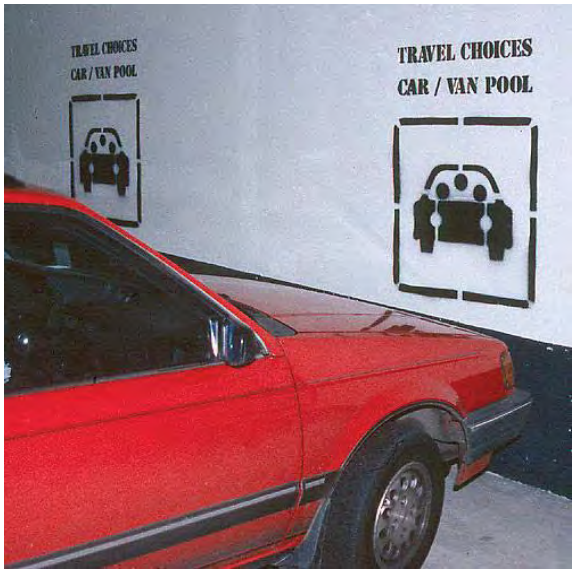
- **Roadway designation and function –** Some roadways in Coquitlam may not be operating as intended or indicated by their classification. The future of Coquitlam's transportation system will likely focus on a multi-modal roadway network that accommodates many different modes of travel, not just cars.
- **Discontinuous roadway network –** In key established areas of Coquitlam, some roadways do not provide a continuous connection. This affects the permeability of traffic including walking and cycling and forces many trips onto major facilities that are already congested.
- **Recurring Congestion and Delay –** There are several critical areas of traffic congestion along key corridors where traffic levels are consistently higher than the roadway capacity.
- **Funding for new roadways –** Like many communities throughout the region, Coquitlam is limited in its financial capacity to significantly expand its roadway network to accommodate growing travel demand.
- **Development-related impacts –** Coquitlam is a growing city and future traffic demands will likely exacerbate current traffic conditions.
- **Regional traffic –** Many of Coquitlam's roadways are configured to provide east/west connections between neighbouring municipalities and connections for regional through travel. Because of Coquitlam's central location, it serves a significant amount of regional travel on its arterial network in addition to local travel.
- **Supply and Price of Parking -** The supply and convenience (or inconvenience) as well as the price of parking has a significant impact on people's travel choices. An abundant supply of free parking encourages

people to drive their automobiles as they will be assured easy access to a parking spot.

Key Issues: Goods Movement

Coquitlam's role in moving goods is integrally linked to the Lower Mainland's role as a gateway region for domestic and international trade. There are several key trade corridors running through Coquitlam that have significant economic and community impacts, including the Highway 1 and Lougheed Highway corridors as well as the CPR railway network corridors. The primary issues pertaining to goods movement include:

- **Truck routes affected by congestion –** Truck routes which are affected by automobile congestion, particularly during the morning and afternoon peak periods when commuter demands are highest.
- **Neighbourhood impacts –** Impacts of trucks and freight trains on neighbourhoods, because of their visual, noise, and air quality impacts.
- **At-grade rail crossings –** which have significant delay and safety concerns as trains regularly block the roadway for significant amounts of time, notably at the Lougheed Hwy/Pitt River Road and Westwood/Davies crossings.
- **Consistencies across boundaries –** Inconsistent truck routes and definitions across the region.



Key Issues: Transportation Demand Management

To achieve the goals of the STP Update, the City wishes to explore various transportation demand management (TDM) programs to encourage people to walk, bicycle, use transit, and rideshare, as well as to discourage individuals from driving alone. The primary issues pertaining to TDM programs are:

- **Driving is predominant –** For the foreseeable future, driving is and will continue to be the most convenient and flexible mode of travel for most people in Coquitlam and throughout the region.

- **Few incentives and disincentives –** There are few policies and programs that encourage City residents to use alternative modes, and there are also few disincentives to driving alone.
- **Education and awareness** – Residents of the City are not well aware of the options that are available to them for using non-automobile modes.

1.0 INTRODUCTION

Transportation is consistently identified by Coquitlam residents as one of the most important issues facing the City. The demand for improved transportation is generated by rapid growth in recent years and the expectation that population and employment in the City will continue to grow at significant rates in the future. This growth will place significant pressures on the transportation system in coming years. In fact, managing the transportation system with an explicit focus on sustainable modes of travel has become essential to shift current mobility choices for residents, in addition to reducing greenhouse gas emissions (GHGs), supporting public health matters, and ensuring that Coquitlam is a livable and sustainable community. The challenges associated with making these transportation-related improvements are significant, however; the consequences of neglecting to make these changes are insurmountable. The stage for a new paradigm for transportation in Coquitlam is set and the Strategic Transportation Plan (STP) Update is the opportunity to help develop and support a more complete and sustainable City.

The existing STP was approved by Council in 2001 and recommended transportation improvements for all types of travel in the City for the next 20 years and beyond. The current STP includes a Road Network Plan, a Transit Service Strategy, Pedestrian and Bicycle Network Plans, as well as an Implementation Strategy to help the City make decisions for capital spending and setting priorities.

Since the STP was adopted, there have been a number of significant changes to land use patterns and the transportation network in and around Coquitlam, including the Pitt River Bridge, provision of Community Shuttle services, construction of new road corridors such as David Avenue Connector and Coast Meridian Overpass, implementation of new bicycle routes, and increased efforts at densification throughout the community and particularly in the Coquitlam City Centre area. Other upcoming initiatives such as the Gateway Program, Evergreen Line, provision of express bus services, and others will significantly impact future travel patterns in and around Coquitlam. Like many other well-developed cities, Coquitlam's road

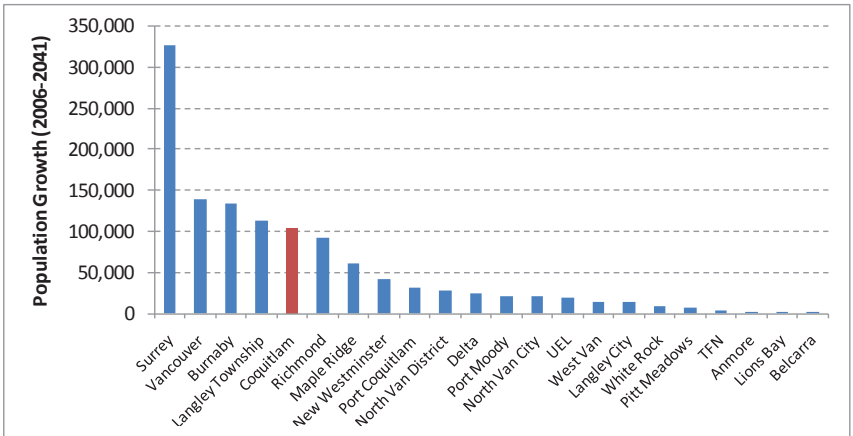
network is largely built-out with limited opportunity for significant expansion. As such, the STP Update will look at making the most effective and efficient use of the existing network and corridors and explore opportunities to significantly enhance facilities that support walking, cycling and transit.

This is the first of five Discussion Papers being developed as part of the STP Update. The purpose of this Discussion Paper is to summarize existing travel patterns and transportation conditions throughout Coquitlam. The findings of this Discussion Paper will provide the basis from which the STP Update is developed.

2.0CONTEXT

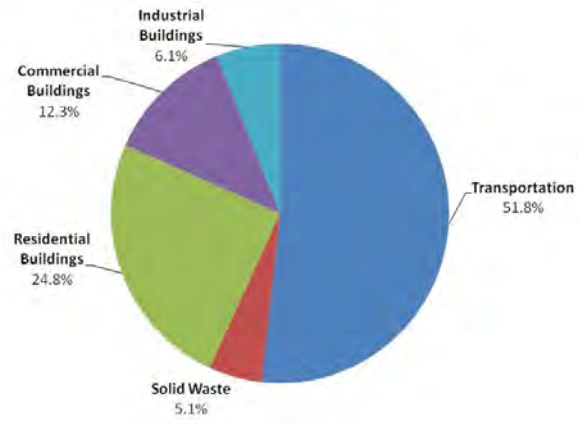
The City of Coquitlam is one of British Columbia's largest and fastest growing communities. The City's population has doubled over the past 25 years to approximately 120,000 residents today. Rapid growth is expected to continue over the next 30 years, with an additional 100,000 residents anticipated to live in Coquitlam by the year 2041. This is a faster growth rate (87%) than the regional average (55%) between 2006 and 2041 and is the fifth fastest in terms of absolute population growth. Along with this growth, the City is undergoing a significant evolution from being a predominantly suburban, automobile-oriented community towards being a large and vibrant urban environment. The high rate of growth and resultant demand for infrastructure and services – such as transportation, infrastructure, housing, community facilities, and protective services – have resulted in unprecedented challenges and pressures for the City to ensure a high quality of life for its citizens.

Population Growth in Metro Vancouver Communities



Source: BC Stats

City of Coquitlam GHG Emissions by Sector



Source: City of Coquitlam Community Energy & Greenhouse Gas Reduction Strategy

In addition to these significant local pressures, there is a growing awareness of climate change and, in particular, the contributions of the transportation sector. For example, the transportation sector is responsible for over half of the City's greenhouse gas emissions and 36% of the City's energy use. The STP Update presents a significant opportunity to work towards being a more sustainable community by ensuring that its residents have attractive transportation choices that can help to reduce single-occupant vehicle use and support walking, cycling, transit, and car pooling while also supporting economic sustainability goals by supporting goods movement. Although this is a significant opportunity, it is also a considerable challenge facing the City. Currently, approximately two-thirds of all work trips made by City of Coquitlam residents take place in a single occupant vehicle.

If the City is to move towards truly more sustainable transportation patterns, a fundamental shift in transportation planning is required, to ensure that

more sustainable modes – namely carpooling, transit use, walking and cycling – account for a significantly greater share of travel to, from, and within the City. By fostering a significant shift towards more sustainable modes of transportation and a significant reduction in the number of trips made by single occupant vehicles, the City can expect to see a substantial reduction in its transportation-related GHG emissions and an overall shift towards a more livable, healthy and vibrant community.

This shift towards a more sustainable transportation system is especially important given the rapid growth that is expected to occur within Coquitlam over the next 30 years. As Coquitlam is one of the fastest growing communities in the Province, this rapid growth requires a significant change in the approach in which land use and transportation decisions have traditionally been made in Coquitlam and other suburban communities. This rapid growth and development requires a focus not only on sustainable transportation, but also supportive land use policies that direct growth towards high density, mixed-use communities that are transit, pedestrian, and bicycle friendly.

By charting a new course towards sustainable land use and transportation planning in Coquitlam, the STP Update can go much further than simply achieving transportation-related goals. 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 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. A “business as usual” approach toward growth and development will likely not result in the desired outcomes for creating a livable and sustainable community.

2.1 City of Coquitlam Initiatives and Direction

In recognition of the significant challenges and pressures facing the City over the coming years related to rapid growth and development, the City has recently made significant advancements and commitments to livability and sustainability policies and practices through a variety of initiatives. Coquitlam is one of 176 local governments across the Province that has recently signed the Provincial Climate Action Charter with a pledge to be carbon neutral by 2012. In addition, the City has indicated that sustainability is a clear priority in several plans and strategies, including its Corporate Strategic Plan, Sustainability Guiding Principles, Citywide Official Community Plan, and various other documents. These policies all reaffirm the overarching need to move towards a more sustainable transportation system. This section summarizes the relevant portions of these City initiatives that can help influence and shape the direction of the Strategic Transportation Plan Update:

- **Coquitlam 2021: 2009-2011 Strategic Plan** strives to strategically position the City to face the challenges it faces with growth and development, and includes a number of sustainability principles and implications. The City's Vision in the Strategic Plan is that "Coquitlam in 2021 will be a community of neighbourhoods within a **vibrant urban city** where people of all ages, abilities and cultures choose to **live, learn, work and play**." The Strategic Plan will help make this vision a reality by focusing on five goals:
    1. Strengthen neighbourhoods;
    2. Expand local jobs and local prosperity;
    3. Increase active participation and creativity;
    4. Enhance sustainability of City services and infrastructure; and
    5. Achieve excellence in governance.

  The Strategic Plan includes a number of considerations that contribute towards sustainable land use patterns and transportation systems. The Plan states that achieving the City's vision will result in a community that:
    - Is pedestrian-friendly and served by safe, convenient and seamless transportation systems that offer choices for travel;

- Has vibrant commercial areas connected to neighbourhoods by an urban greenway;
- Has businesses choosing to locate, expand and prosper;
- Has ample parkland and a healthy, functioning ecosystem; and
- Has high quality urban spaces and public facilities.

- **Corporate Sustainability Principles.** The City built upon its strategic vision towards a sustainable, livable community through the development of its Corporate Sustainability Principles. Among other things, the Sustainability Principles recognize that regional growth and change impact the City, and states that the City is committed to its role in working towards a livable community through the protection of the Green Zone, encouragement of complete communities, provision of more transportation choices, and building of a compact, sustainable region.

- **Citywide Official Community Plan.** The Citywide Official Community Plan (OCP) is a comprehensive plan intended to guide future land use and servicing in ways that sustain broad community goals while recognizing the significant challenges it faces. To do so, the OCP identifies six Overarching Community Goals that form Coquitlam's framework for managing growth and development as noted in the following table. A detailed summary of the overarching goals objectives and policies that have a direct impact and influence on the Strategic Transportation Plan update are summarized in **Appendix A**.

Transportation-Related Overarching Community Goals and Objectives

Compact, Complete Community	Healthy Environment	Housing Choices
• Ensure that new developments foster completeness. This will help to improve Coquitlam's overall jobs to labour force balance. • Ensure that government services and public sector investment respond directly to the needs of the community. • Improve multi-modal linkages within the communities • Encourage transit-oriented development so that residents have the option of walking to a public transit station.	• Improve air quality, address climate change issues and reduce energy consumption in order to promote human and ecosystem health. • Provide for effective and prudent management of Coquitlam's watercourses through sustainable land use and development to minimize impervious areas and mitigate the impacts of stormwater runoff • Develop a balanced system of parks, trails and other open spaces to provide passive and active open space for all. • Demonstrate in the implementation of environmental best management practices.	• Encourage a range of housing forms while taking into account the need for compact neighbourhoods and options for intensification. This will ensure that the neighbourhood is serviceable by transit. • Ensure that new developments enhance the pedestrian experience.
Vital Economy	**Strategic Transportation Choices**	**Community Services & Infrastructure**
• Foster more local employment opportunities (industrial, Business Park, office, retail, service commercial and institutional). Residents will have more opportunities to work closer to home (also by accommodating home-based businesses). • Encourage office land uses in close proximity to rapid transit facilities. • Create a pedestrian-friendly experience around retail areas.	• Promote neighbourhood liveability and vitality by supporting all modes of travel. • Maximize mobility for people, goods and services by integrating all modes of travel. • Improve transit services and facilities so that residents are provided with more transportation choices. • Support walking and cycling as modes of travel. • Improve transportation system safety through planning, design and operations.	• Encourage accessible community facilities and programming by locating programs and services in neighbourhoods. • Expand and extend infrastructure services to accommodate future growth. This will help to provide for a more compact, complete community.

Consistent with other City policies and initiatives, the OCP has a strong commitment towards economic, social, and environmental sustainability. The OCP supports the integration of land use and transportation planning through the development of a compact, complete community that directs growth towards compact, mixed-use, high density, pedestrian- and bicycle-friendly, and transit-oriented communities, while also promoting sensitive approaches to residential intensification in the lower density residential neighbourhoods. The OCP emphasizes that land use patterns should be connected by attractive transportation services with an emphasis on the use of transit, walking, cycling, and carpooling. As noted previously, investing in transportation infrastructure goes well beyond the provision of transit services, roads, bicycle routes, and pedestrian facilities. As illustrated below, investment in transportation is a foundational element in helping to achieve each of the City's overarching community goals as well as economic, social, and environmental sustainability.

Overarching Community Goals and Linkages to Strategic Transportation Plan

- **Neighbourhood Transportation Initiatives.** In an effort to fulfill the objectives and goals established in the City's Official Community Plan as well as other policy initiatives and commitments made at the local, regional and provincial levels, the City has implemented a number of initiatives and programs that are intended to make effective improvements to neighbourhood transportation infrastructure. Specific

initiatives include making improvements to local streets (improving the pedestrian experience and increasing accessibility), engaging in traffic calming (by implementing a Traffic Calming Policy and allowing residents to initiate traffic calming projects) and recognizing the need to provide safer streets for elderly residents. In addition to these commitments, the City currently has a number of programs which aim to improve local transportation infrastructure. These include:

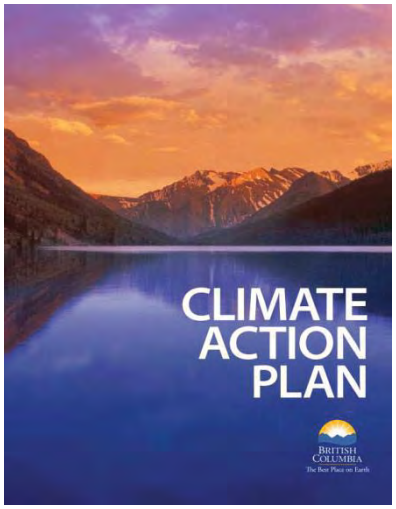
- The City's 2010 Sidewalk Program;
- The City's Transit Related Road Infrastructure Program (TRRIP);
- The City's Bicycle Program, which has been in place since 2001; and
- The City's Accessible Intersection Program.

2.2 External Initiatives and Direction

The basis for the STP update is not entirely reliant on the City's policies, but also on the many federal, provincial and regional planning initiatives which also provide context to guide the STP update, as described in the following sections. A concise overview table of all relevant plans and reports is provided in **Appendix B**. Included in this overview table, are the Neighbourhood and Area Plans, which are actually subsets of the City's OCP.

- **Federal Government**
  - **The Asia-Pacific Gateway and Corridor Initiative** is an integrated set of investment and policy measures focused on trade with the Asia-Pacific Region. Its mission is to establish Canada's Asia-Pacific Gateway and Corridor as the best transportation network facilitating global supply chains between North America and Asia. Some of the key trade corridors that make up the Asia-Pacific Gateway run through Coquitlam and are discussed in more detail in the Goods Movement section.
  - **South Shore Trade Area** – Transport Canada, Port Metro Vancouver and stakeholders have looked at key issues along road and railway corridors in the South Shore area including Coquitlam. They have identified projects including road/rail grade separations to facilitate the movement of goods and minimize community impacts.

- **Provincial Government**
  - **Climate Action Charter –** In 2007, the Province of BC developed the Climate Action Charter with the Union of BC Municipalities (UBCM). Almost all of the municipalities in the Province – including Coquitlam – 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.
  - **Climate Action Plan** – The Provincial Government has developed several plans and strategies to encourage alternatives to the single occupant vehicle and reduce greenhouse gas 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 Coquitlam, the Strategic Transportation Plan update can play a key role in helping to achieve significant reductions in GHG emissions.
  - **Provincial Transit Plan** – In January 2008, the Provincial Government announced a new strategy 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. Relevant projects announced as part of this plan include the Evergreen Rapid Transit Line and Bus Rapid Transit services along Highway 1. Investing in expanded transit services is one way of meeting the Province's climate action targets.
  - **Gateway Program –** The Gateway Program was established by the Province of British Columbia in 2003 in response to the impact of growing regional congestion, and to improve the movement of people, goods and transit throughout Metro Vancouver with efficient transportation choices and better connections. One of the main objectives of the Gateway Program is to reduce congestion-related idling, which contributes to reduced regional air quality. Relevant projects in Coquitlam include the Port Mann/Highway 1 expansion project including reconfiguration of the Cape Horn Interchange, as well as the North Fraser Perimeter Road.



- **Metro Vancouver**
  - **Regional Growth Strategy –** Metro Vancouver is currently updating the 1996 Livable Region Strategic Plan with a new Regional Growth Strategy. The Draft Regional Growth Strategy focuses on land use policies to guide the future development of the region and support the efficient provision of transportation, regional infrastructure, and community services. The strategies and actions set out in the Draft Regional Growth Strategy recognize the strong interrelationships between land use and transportation which are intended to contribute to improvements in air quality and reductions in GHG emissions by directing urban development in ways that reduce the demand for energy consumption, support energy savings in building form, and reduce vehicle travel. To that end, the Regional Growth Strategy includes five key goals:
    - Create a compact urban area;
    - Support a sustainable economy;
    - Protect the region's environment and respond to climate change;
    - Develop complete communities
    - Support sustainable transportation choices.

    Of particular relevance to the STP Update, the Regional Growth Strategy identifies the need to focus growth in Urban Centres and along Frequent Transit Corridors. Coquitlam City Centre is identified as one of seven Regional City Centres throughout Metro Vancouver, which are intended to focus office, retail, community, entertainment, cultural and institutional uses, and higher density housing in order to encourage walking, cycling, and taking transit to jobs, shopping, and other destinations. The planned Evergreen Line alignment is identified as a Frequent Transit Development Corridor. In addition, the plan recognizes the planned North Fraser Perimeter Road

- **TransLink**
  - **Transport 2040** is the region's long-range transportation strategy to accommodate growth and create a more sustainable region. Transport 2040 lays out the challenges facing Metro Vancouver over

the next 30 years and sets out six broad goals for the future of the transportation system in the region:

- Greenhouse gas emissions from transportation are aggressively reduced, in support of federal, provincial, and regional targets;
- Most trips are by transit, walking, and cycling;
- The majority of jobs and housing in the region are located along the Frequent Transit Network;
- Travelling in the region is safe, secure, and accessible for everyone;
- Economic growth and efficient goods movement are facilitated through effective management of the transportation network; and
- Funding is stable, sufficient, appropriate and influences transportation choices.

- **2010 10-Year Transportation and Financial Plan** identifies the investments needed to maintain, improve and enhance the regional transportation system over the next decade, as well as the new funding sources to pay for them. The features of the 10-year plan allow TransLink to maintain road and transit operations at current levels. This 10-year plan will put further expansion of the transportation system on hold for the time being until new funding sources are established.

The development of the STP Update must recognize and build upon the sustainability commitments that the City and other levels of government have already made. To do so, the STP Update will be explicitly linked to the achievement of the City's Community Vision as well as each of its Overarching Community Goals, as transportation is a foundational element that can help to achieve many aspects of the community's overall function and quality of life beyond just the transportation system. In particular, development and implementation of the STP Update will directly and indirectly help the City to achieve goals within each Overarching Community Goal in the OCP and help to move towards its overall community vision. In doing so, the Transportation Plan will help lead towards benefits in all aspects of environmental, social, and economic sustainability.

3.0COMMUNITY PROFILE

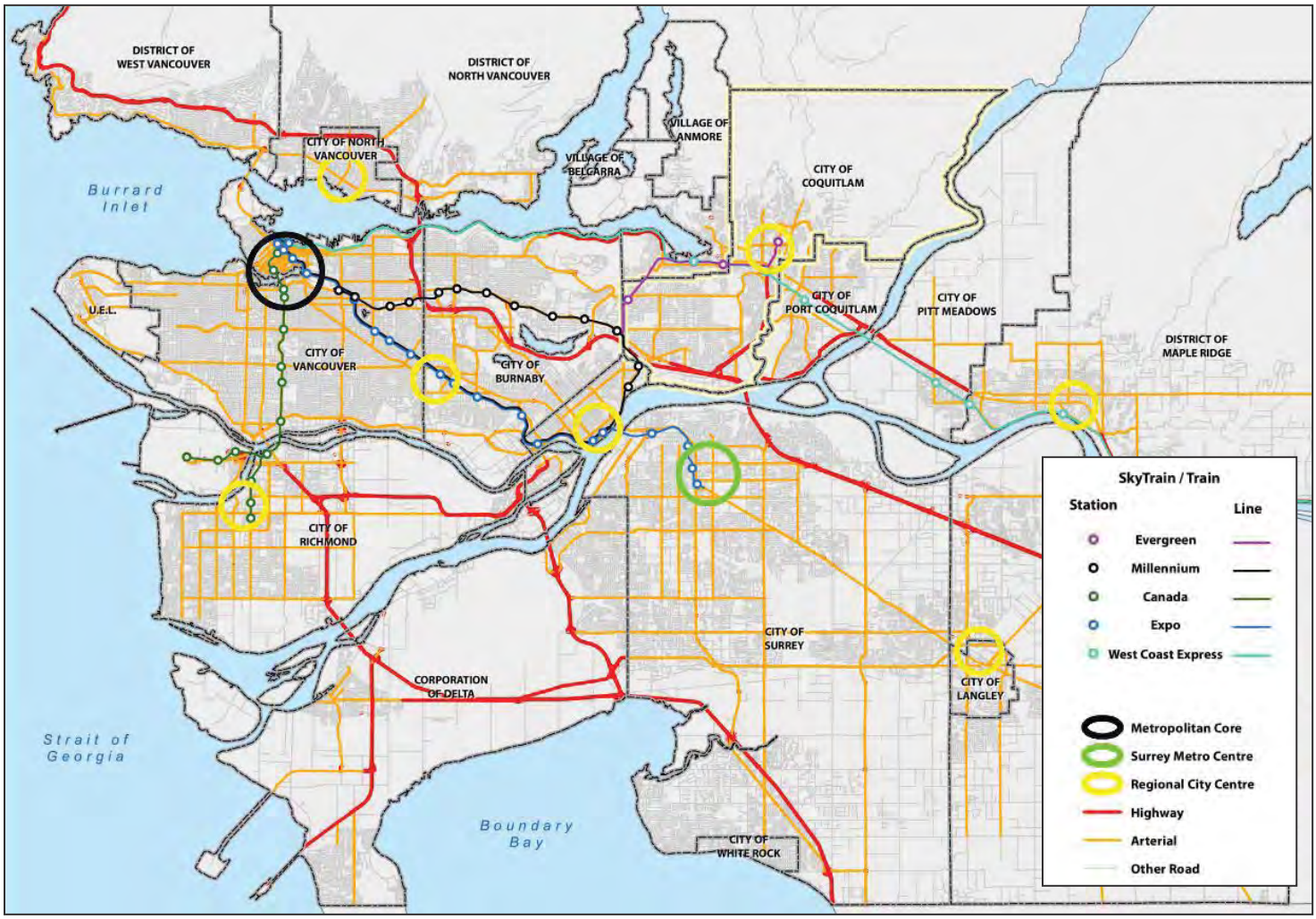
3.1 Regional Context

The City of Coquitlam is a significant community in the Metro Vancouver region for a number of reasons. As shown in **Map 1**, the City is centrally located within the region and acts as a key gateway to several surrounding communities including Port Coquitlam, Pitt Meadows, and Maple Ridge to the east; Surrey and Langley to the south; Burnaby, New Westminster and Vancouver to the west; and Anmore, Belcarra and Port Moody to the north. As a reflection of this central gateway location, the City is served by several regionally significant transportation corridors that are critical to the efficient movement of people and goods throughout Metro Vancouver including the Trans-Canada Highway, Lougheed Highway, Barnet Highway, West Coast Express, and the Canadian Pacific Railway. The City also has several planned regional-scale transportation infrastructure projects, such as the Gateway Program, North Fraser Perimeter Road, and Evergreen Rapid Transit Line.

The City of Coquitlam is one of the largest and fastest growing municipalities in the Metro Vancouver region. As previously noted, this rapid growth has resulted in unprecedented challenges and pressures for the City to ensure a high quality of life for its citizens. To accommodate much of this growth, the Coquitlam City Centre area has been identified as one of seven Regional City Centres throughout Metro Vancouver, and the only Regional City Centre in the Northeast Sector. The Coquitlam City Centre is envisioned to be the 'anchor' for a significant portion of the residential and employment growth throughout Coquitlam and the Northeast Sector. The successful management of this planned growth and development in Coquitlam and other high growth communities in the region will ultimately influence the success of the Metro Vancouver region as a whole.

There are several unique factors that influence transportation patterns throughout the city, including demographic characteristics, land use patterns, transportation options, and the cost of travel. The following sections discuss each of these considerations.

Map 1 – COQUITLAM IN REGIONAL CONTEXT



3.2 Factors Affecting Travel Patterns

Several factors will have an impact on how people travel today and over the next 30 years. Land use patterns – type, scale, mixture and density – influence the amount and the patterns of travel that people make every day. Why, where, and when people travel affect their choices that they make today. When preparing a strategic transportation plan, these very factors influence how we should plan transportation systems locally within

Coquitlam and with regional transportation solutions. In fact, it is imperative that the transportation system responds to the 'markets' for travel with effective and desirable transportation alternatives such as pedestrian, bicycle and transit facilities and services. These factors are described in more detail in the following sections.

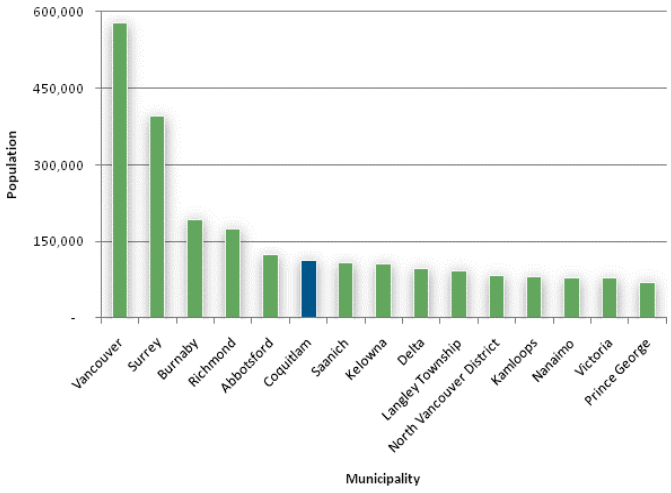
3.2.1 Demographics

Demographics shape the demand for transportation facilities and services. This section identifies key historic, current and forecast demographic patterns within the City of Coquitlam and how these influence the direction of the STP Update. Key facts about the City's population are discussed below and summarized in **Table 1**.

- **A Large Community.** With a population of approximately 120,000 people, Coquitlam is the sixth largest municipality in British Columbia, behind only Vancouver, Surrey, Burnaby, Richmond, and Abbotsford. Coquitlam is the fifth largest municipality in the Metro Vancouver region.

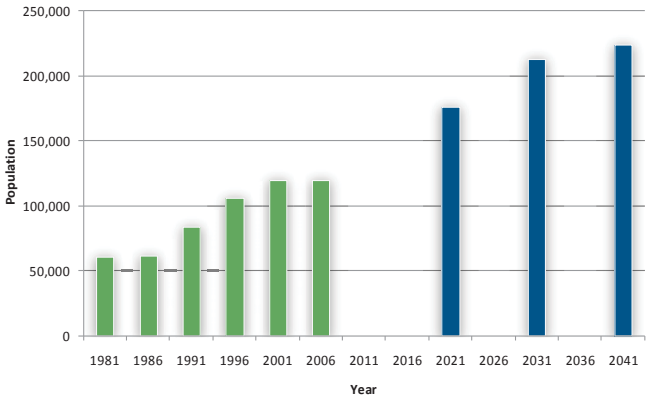
- **A Growing Community.** Over the past 25 years, Coquitlam's population has doubled, from approximately 61,000 residents in 1981 to 120,000 residents today. This represents an annual growth rate of approximately 1.2% between 1996 and 2006, which is only slightly lower than the regional average of 1.4%. Rapid growth is expected to continue over the next 30 years, with an additional 100,000 residents anticipated to live in Coquitlam by the year 2041, for a total population of approximately 225,000. This represents a projected annual growth rate of approximately 1.8%. In order to keep up with the transportation-related needs of Coquitlam's growing population, both the local and regional investment in transportation infrastructure must remain proportionate to the City's population growth.

Provincial Population Ranking



Source: BC Stats

Coquitlam Population Growth



Source: BC Stats

- **Population Density.** Coquitlam has a population density of approximately 980 residents per km^2, which is below the Metro Vancouver regional average of 1,070 residents per km^2. By 2041, Coquitlam's population density is expected to nearly double to 1,840 residents per km^2.

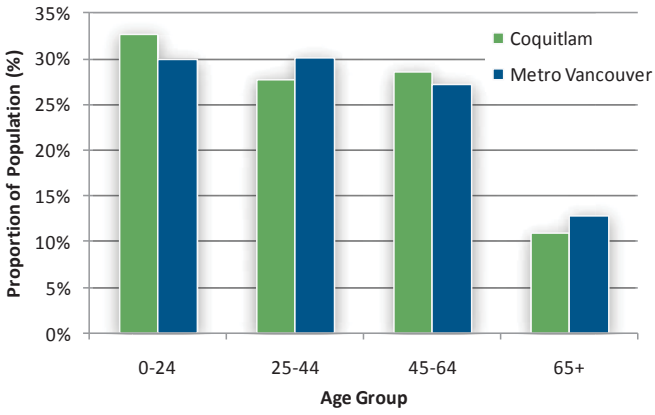
- **Household Size.** Coquitlam's average household size is approximately 2.8 people, which is higher than the regional average of 2.6 people per household. Coquitlam's average household size is expected to decrease to approximately 2.4 people per household by 2041.

- **Housing Stock.** Nearly half of the City's housing stock (47%) is made up of single family homes, which is significantly higher than the regional average of 35%.

- **Youth and Elderly Populations.** Coquitlam is home to a relatively large youth and seniors population. A third of Coquitlam's population is made up of youth aged 24 and under, which is higher than the regional average. Approximately 11% of Coquitlam residents are aged 65 and over, compared to 13% throughout Metro Vancouver. These two segments of the population are particularly important to focus on for the STP Update. Seniors tend to travel more during the mid-day and are also more reliant on transit services as compared to people in the labour force who travel more during peak times for commuting to work. Youth often do not have access to automobiles and are reliant upon transit, walking, cycling and carpooling. By attracting youth to these modes of transportation early in their lives, there is an opportunity to continue these trends into adulthood.

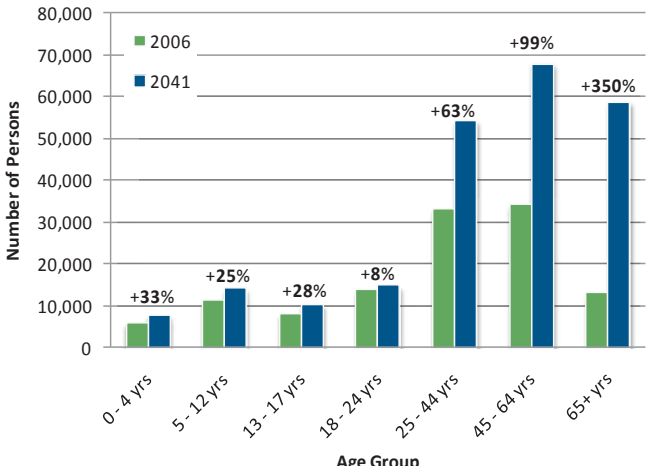
- **Aging Population.** **Coquitlam** has an aging population as the 'baby boomers' move into older age groups. Travel making behaviour will change significantly over the next 30 years as more people enter retirement age. By 2041, the

Age Profile



Source: Metro Vancouver and BC Stats

Change in Population by Age Group



Source: Metro Vancouver

increase in the number of people moving into older age groups will create new and varied transportation needs. The following chart shows the change in the distribution of Coquitlam residents by the various age cohorts. The 65+ age group today makes up approximately 11% of the entire population of Coquitlam. By 2041, this age group will represent over 25% of the entire population and will create a significant shift in terms of the transportation needs of an aging population as well as travel behaviour. As more people exit the work force, there will likely be more trips made during the midday for social, recreational and shopping purposes.

- **Income.** The median family income in Coquitlam is approximately $71,000, which is slightly higher than the regional average of $70,000. People's income has an impact on their decisions to travel by different modes as higher income earners will value their time higher and choose quicker and more expensive modes of transport.

- **Automobile Ownership.** There are approximately 83,400 automobiles registered to Coquitlam residents. This represents approximately 1.8 automobiles per household, which is higher than the regional average of 1.7. Automobile ownership has grown more rapidly than population growth over the past 10 years. The average annual growth rate in automobile ownership was 2.8%, more than double the population growth rate of 1.2% over this period. The fact that vehicles are more readily available has a significant impact on people's decisions to travel by car or by transit. On the other hand, this growth in motor vehicles may also be a market response to transit services not meeting demand.

- **Employment.** There are estimated to be approximately 46,000 jobs in Coquitlam today. Job growth is envisioned to outpace population growth, and is expected to more than double to 94,000 jobs by 2041. As such, there will be a higher ratio of labour force to jobs which means that Coquitlam residents will have more opportunities to work within their community and not have to travel as far for their journey to places of employment. This will help Coquitlam to become a more complete and self sustaining community in the future.

Table 1 – Summary of Key Demographic Indicators

	Coquitlam	Port Coquitlam	Vancouver	Surrey	Burnaby	Metro Vancouver
Current Population	**119,600**	54,500	599,800	412,700	210,500	2,180,400
Projected Population 2041	**224,000**	85,000	740,000	740,000	345,000	3,370,400
Current Population Density (ppl/km^2)	**982**	1,890	5,228	1,301	2,362	1,066
Projected Population Density 2041 (ppl/km^2)	**1,840**	2,946	6,451	2,333	3,871	1,649
Change in Population Density (2006-2041)	**+187%**	+156%	+123%	+179%	+164%	+155%
Current Employment	**46,000**	21,000	393,000	143,000	136,000	1,138,940
Projected Employment 2041	**94,000**	35,000	482,000	290,000	203,000	1,731,540
Multi-Family Housing (% Apartments)	**29.0%**	20.3%	59.0%	23.4%	45.7%	39.4%
Average Household Size	**2.8**	2.8	2.3	3.0	2.6	2.6
Median Age	**39.0**	37.5	38.6	37.0	39.1	39.1
Median Family Income	**$70,805**	$75,906	$64,007	$69,119	$61,369	$69,688
Registered Autos (autos/dwelling unit)	**1.8**	1.9	1.2	1.9	1.6	1.7
Annual Auto Growth Rate (1996-2006)	**2.8%**	2.3%	1.9%	4.3%	0.6%	3.1%
Annual Population Growth Rate (1996-2006)	**1.2%**	1.2%	1.1%	2.7%	1.2%	1.4%

3.2.2 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 the 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 to use sustainable modes of transportation, such as walking, cycling, or taking transit. In addition, certain types of land uses are more easily and efficiently served by sustainable 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. The following discussion identifies current and anticipated future land use patterns within the City of Coquitlam that influence the direction of the STP Update.

The Citywide Official Community Plan envisions an urban structure organized around specific facilities or centres. As show in **Map 2**, these facilities and centres consist of:

- **Regional City Centre,** which is to function as the downtown for Coquitlam and the broader Northeast Sector. This area is intended to be a high density residential neighbourhood with services, retail and employment to serve Coquitlam residents as well as residents of nearby cities. The Regional City Centre is envisioned to include attractive transportation facilities that serve all modes of travel.

- **Existing Neighbourhood Centres,** which include existing community-serving retail clusters in a number of areas, including Maillardville, Cariboo, Burquitlam, Austin Heights, Como Lake, Austin Mariner, and Westwood Plateau. The City has adopted, or is in the process of developing, Neighbourhood Plans for many of these existing Neighbourhood Centres. These Neighbourhood Centres are intended to be further developed with higher densities and a mixture of land uses in the commercial nodes as well as sensitive intensification and infill of

predominantly residential areas. These Neighbourhood Centres are intended to increase the attractiveness of transit, walking, and cycling.

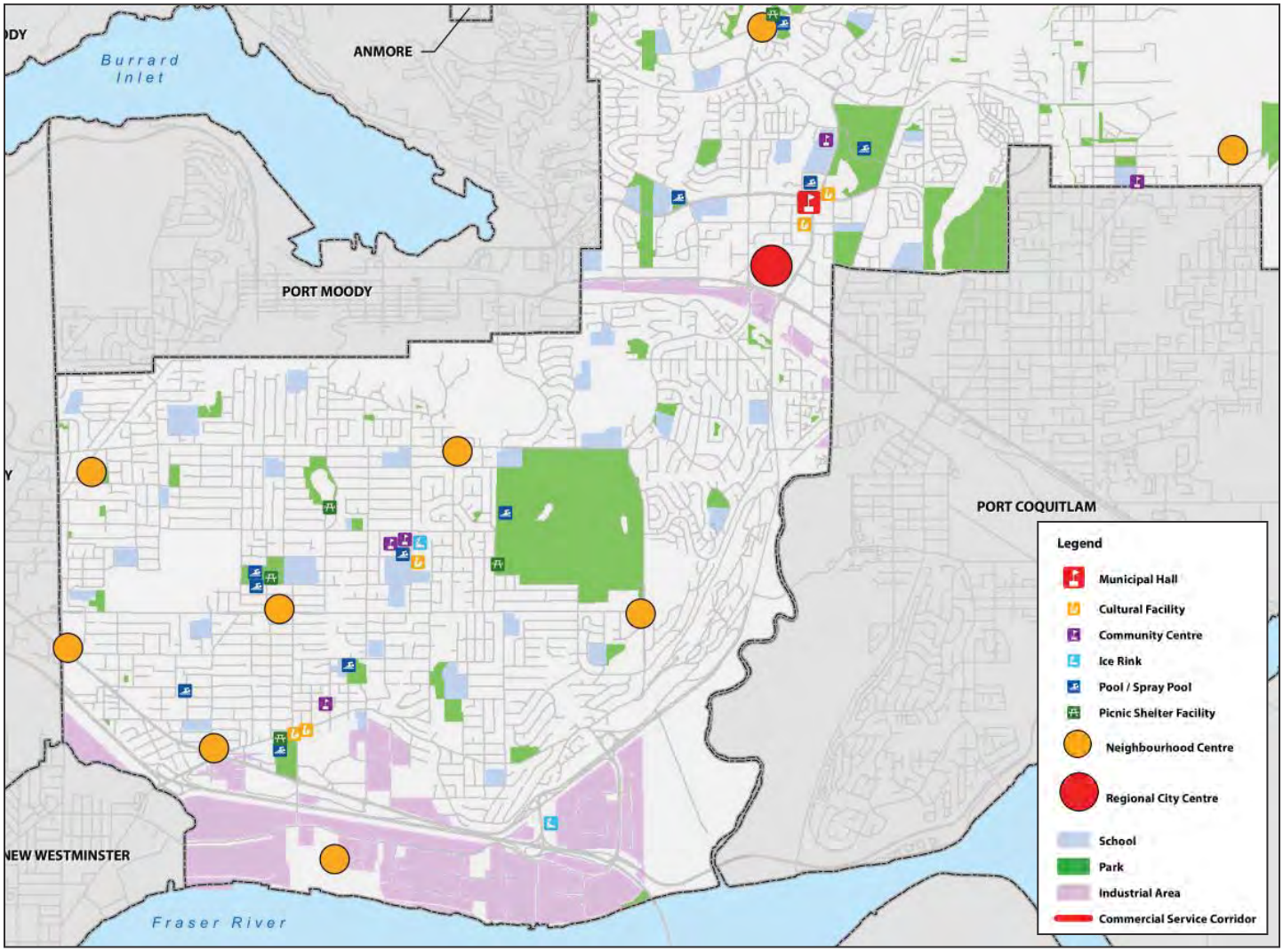
- **Planned Neighbourhood Centres,** which include Neighbourhood Centres that have not yet been developed. These Neighbourhood Centres will also consist of higher densities and mixture of land uses that support transit, walking, and cycling. Planned Neighbourhood Centres include a large portion of Northeast Coquitlam as well as the Waterfront Village development on the Fraser Mills site.

- **Service Commercial Corridors,** which are significant commercial and employment areas, oriented around two primary roadway corridors – Lougheed Highway in Southwest Coquitlam and Barnet Highway in Northwest Coquitlam.

- **Industrial Areas,** which are significant employment areas and generally located in between the Fraser River and the Trans-Canada Highway in Southwest Coquitlam. High concentration of truck activity.

- **Schools,** including Douglas College as well as numerous elementary, middle, and secondary schools throughout the City. Because of student age and income profiles, they are much more likely to walk, cycle or take transit.

Map 2 – EXISTING LAND USES



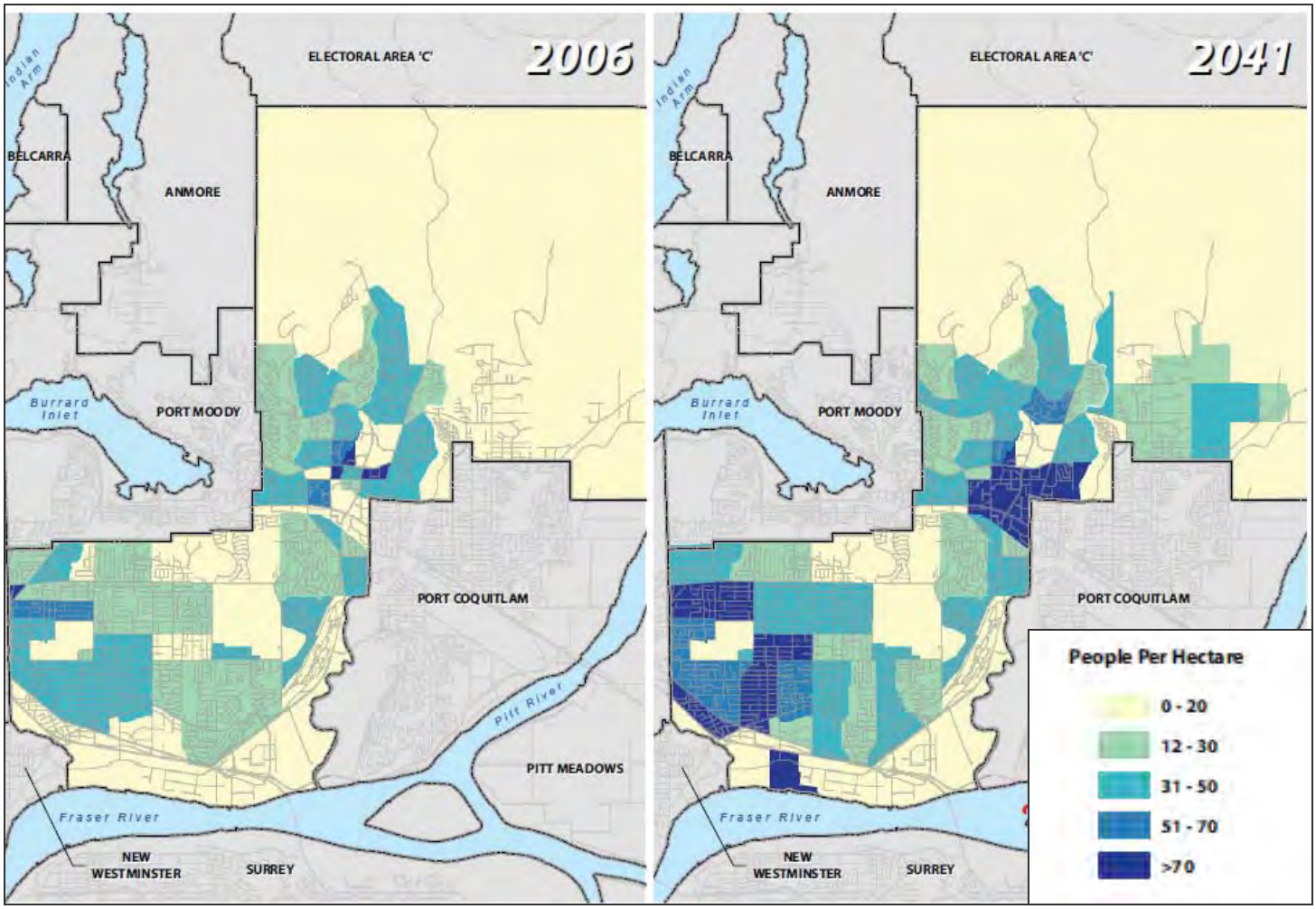
Map 3 and **Map 4** illustrate the current and planned residential and employment densities throughout the City. Mixture of land uses and densities are particularly important in determining the success of different types of transportation solutions. For the purpose of transit, lower densities of 30 people per hectare or below are generally supportive of community shuttle or local transit services. Conventional transit can be supported with moderate densities of approximately 50 people per hectare, while various types of rapid transit, such as bus rapid transit or rail rapid transit require densities of 60 – 70 persons per hectare or more to be successful.

TransLink's current Service Design Guidelines state that "At least 90% of residents and employees in urbanized development areas should have less then 450 metres walking distance to a bus stop" with urbanized areas being defined as areas having more than 15 residents per hectare or 20 jobs per hectare. As these are only guidelines, there are many other factors that guide the transit planning process in Metro Vancouver. The development of higher density, mixed-use neighbourhoods however, generally help to reduce the distances the average resident is required to travel as residents are able to access many services locally.

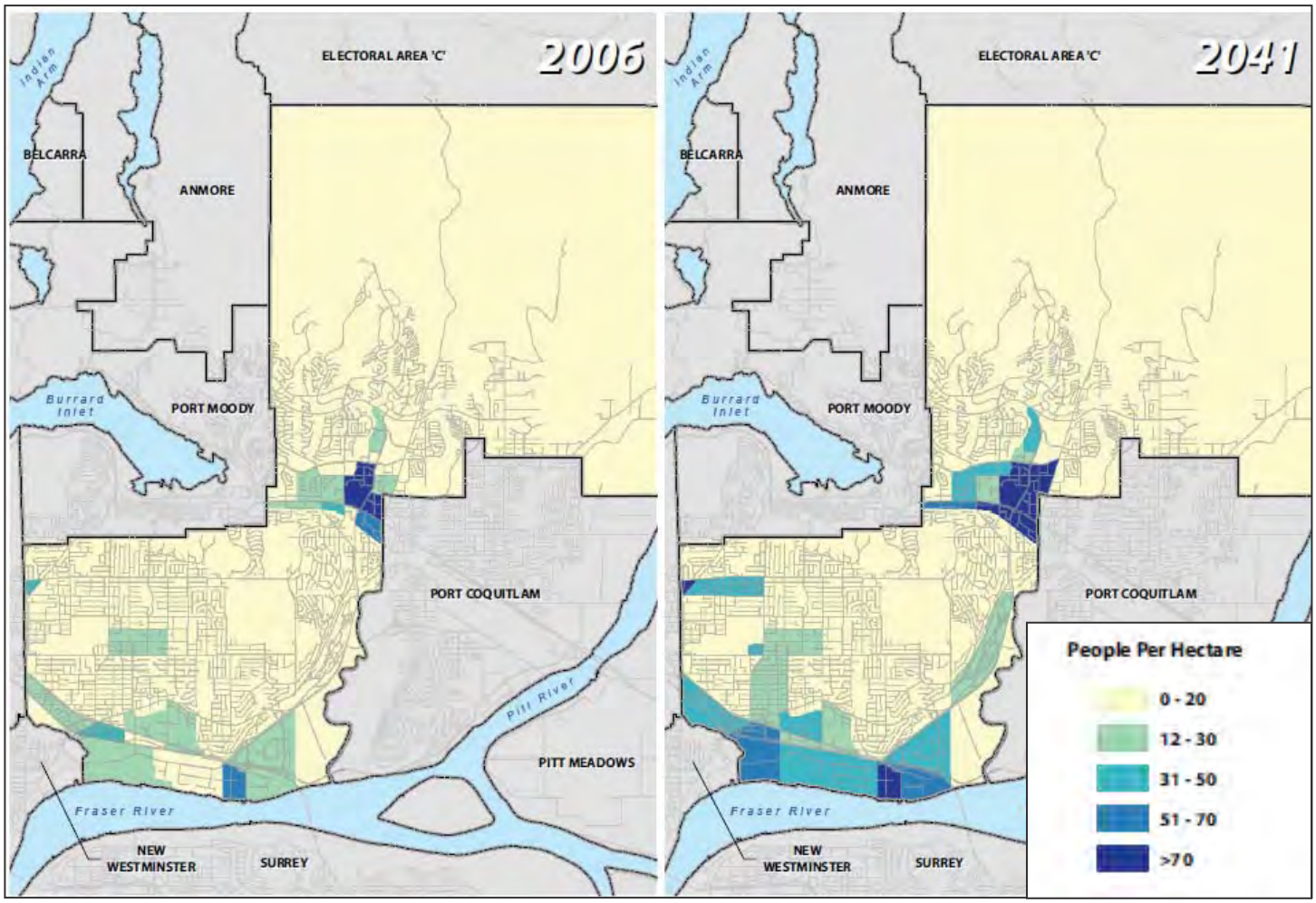
As shown in **Map 3** the City is directing much of its future residential development in the Regional City Centre and Neighbourhood Centres. In particular, the most significant residential growth is anticipated to occur in the Coquitlam City Centre, which is envisioned to be a high density, mixed use, transit-oriented neighbourhood. Coquitlam City Centre is expected to grow from a population of approximately 5,000 residents in 2006 to approximately 29,000 residents in 2041. The Neighbourhood Centres are also expected to accommodate a significant increase in residential population. Together, all the Neighbourhood Centres currently have a population of approximately 25,000 residents, and this is expected to increase to approximately 64,000 residents by 2041. Together, the Regional City Centre and the Neighbourhood Centres are expected to absorb over half (56%) of the City's overall residential growth through the year 2041. The remainder of Coquitlam's population growth will be dispersed throughout the rest of the City, with a slightly higher concentration in areas that currently have higher population densities.

In addition, the City's employment base is also expected to roughly double by the year 2041. Much of this growth will be directed to the Regional City Centre, Neighbourhood Centres, Service Commercial Corridors, and Industrial areas. Together, these land uses are expected to account for over two thirds of all employment growth in the City through the year 2041.

Map 3 –EXISTING AND PLANNED RESIDENTIAL DENSITY



Map 4 – EXISTING AND PLANNED EMPLOYMENT DENSITY



3.2.3 Transportation Infrastructure

The City is served by several regionally significant transportation corridors that are critical to the efficient movement of people and goods throughout Metro Vancouver and which influence the ultimate success of the regional economy. The transportation infrastructure that is available throughout the City ultimately influences the attractiveness of each mode and ultimately will determine people's travel choices.

The City is made up of a comprehensive, multi-modal transportation system that includes several regionally significant highways, including the Trans-Canada Highway, Lougheed Highway, and Barnet Highway which serve the primary purpose of moving people and goods through the City to its neigbouring gateway communities. In addition, the City is served by a number of roads classified as part of the Regional Major Road Network (MRN), including Austin Avenue, Como Lake Avenue, North Road, Mariner Way, Guildford Way, Pinetree Way, and David Avenue, which are shared by all users, including pedestrians, cyclists, buses, cars, and trucks. The City's roadway infrastructure will be expanded in the future through two major Provincial initiatives, namely the expansion of Highway 1 and twinning of the Port Mann Bridge, and the North Fraser Perimeter Road. In addition to these major roadways, the City is traversed by two major CPR railway corridors providing connections from Port Coquitlam and other communities in the Northeast Sector to inter-modal railway and port facilities in Vancouver, New Westminster, and Burnaby.

The City relies on a variety of transit services, including the West Coast Express commuter rail service, the 97 B-Line express bus service, and a number of conventional bus and Community Shuttle routes. The Evergreen Line is a planned rapid transit line that will connect Coquitlam City Centre with the Millennium SkyTrain Line at Lougheed Town Centre. The City's active transportation network is made up of 477 kilometres of sidewalks and 15 kilometres of bicycle routes.

3.2.4 Travel Cost

The overall cost of travel plays a significant role in influencing people's travel choices. Although not unique to Coquitlam, there are several components that make up the overall cost of travel for each travel mode. For automobile travel, the key components of cost include fuel, operating cost per kilometer including fuel, insurance and maintenance, parking charges and other out-of-pocket costs and finally travel time. For travel by transit, the key components of cost include fare and overall travel time from origin to destination including time to walk to a bus stop, wait for a bus, boarding time and in-vehicle time as well as walk time to the ultimate destination.

For cycling, the only costs are the capital cost to purchase a bicycle and the overall travel time from origin to destination. Walking does not incur any out of pocket expenses. The following table illustrates the various cost components for each of the modes of travel.

Table 2 – Cost Components for Modes of Travel

	Walking	Cycling	Transit	Automobile
Travel time	✓	✓	✓	✓
Walk to vehicle/bus stop/station			✓	✓
Wait for bus			✓	
Transit fare			✓	
Vehicle operating cost				✓
Parking charges				✓
Tolls				✓
Walk to final destination			✓	✓

All of these cost components, including their relative weighting, will impact an individual's decision to drive, take transit, walk or ride a bicycle. Providing more transit, pedestrian, and cycling services, facilities and incentive programs combined with disincentives to travelling by single occupant vehicle will make taking these modes more cost competitive with taking a car especially if transit travel times are close to auto travel times.

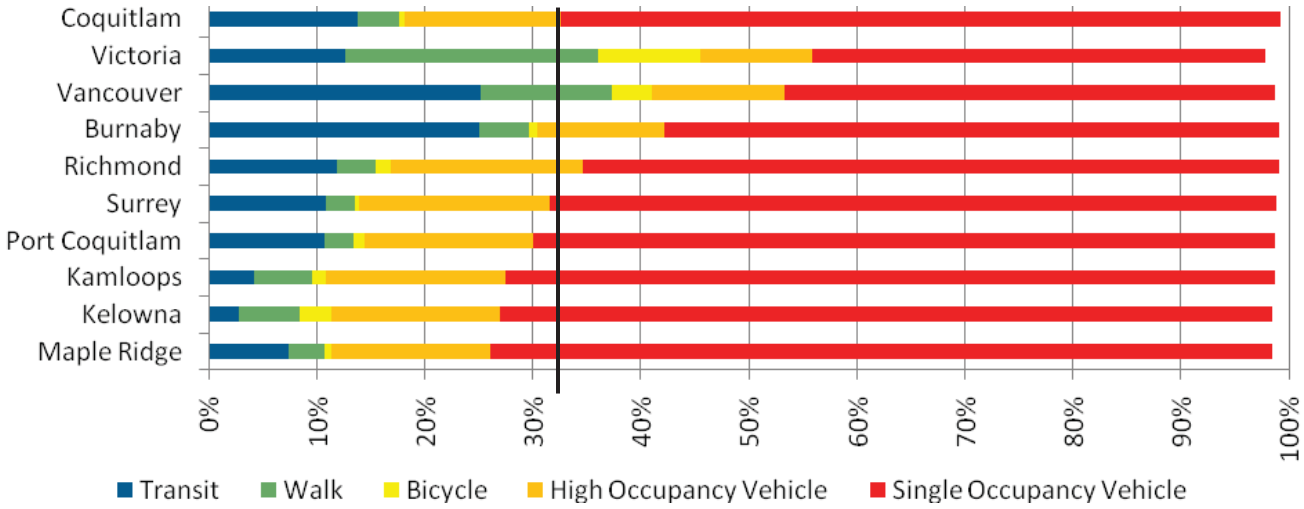
3.3 Travel Characteristics

The development of the Strategic Transportation Plan Update requires a deeper understanding of current travel characteristics throughout the community. This section provides information about travel characteristics of City of Coquitlam residents.

- **Mode share.** City of Coquitlam residents are heavily reliant on the automobile for trips to work. According to the 2006 Census, approximately two-thirds of Coquitlam residents travel to work by single-occupant vehicle. The remaining third of the population carpool, take transit, walk or bicycle to work.

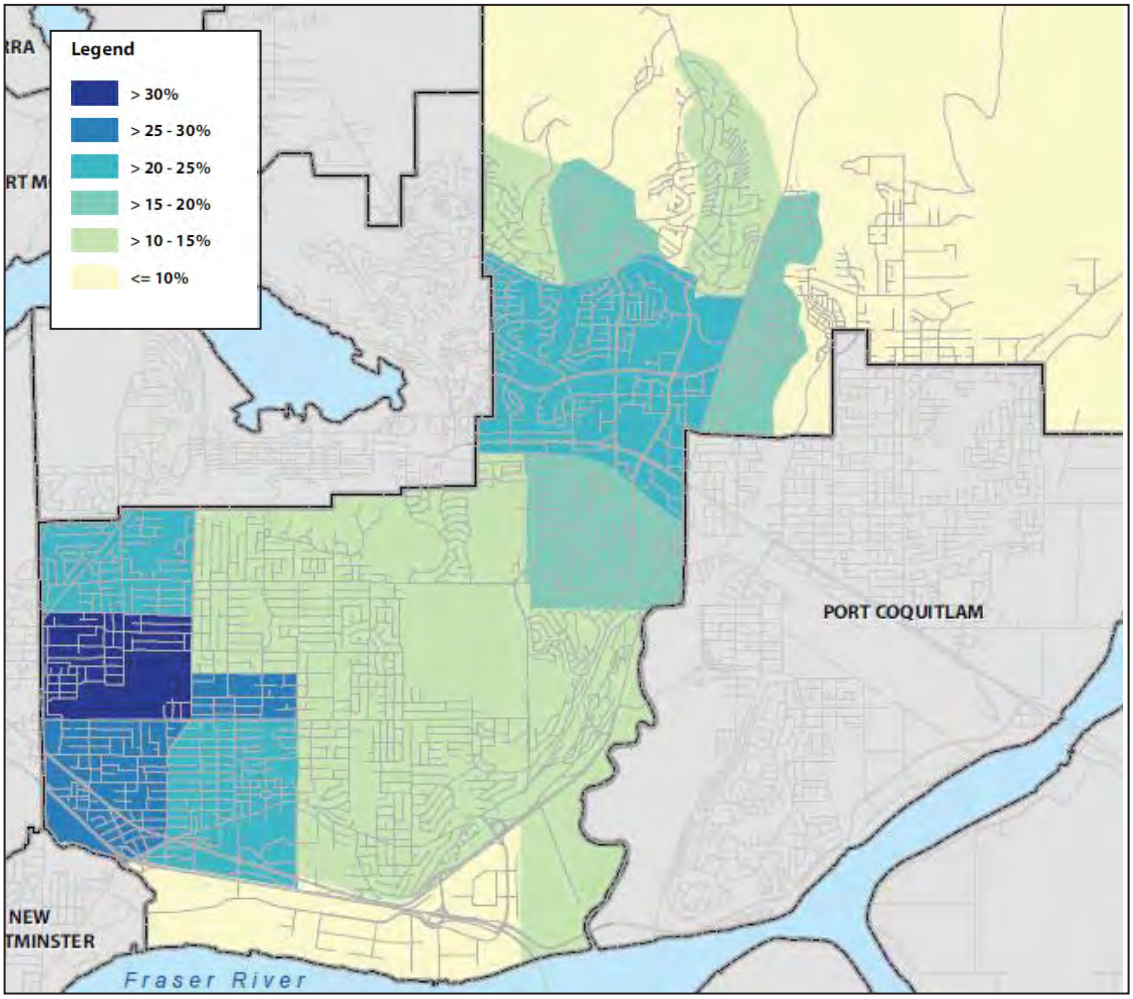
  Taken together, more sustainable modes of transportation – namely carpooling, taking transit, walking or cycling – account for approximately one-third of all commuting trips. As shown below, this is significantly below many other major urban communities throughout the Province, including Victoria, Vancouver and Burnaby, but is comparable to many other suburban municipalities in Metro Vancouver, including Richmond, Surrey, and Port Coquitlam. As shown in the figure below, there are significant improvements that should be made in regards to reducing SOV trips and increasing the number of trips taken by other, modes that will help Coquitlam achieve its sustainability goals.

Mode of Travel for Journey to Work



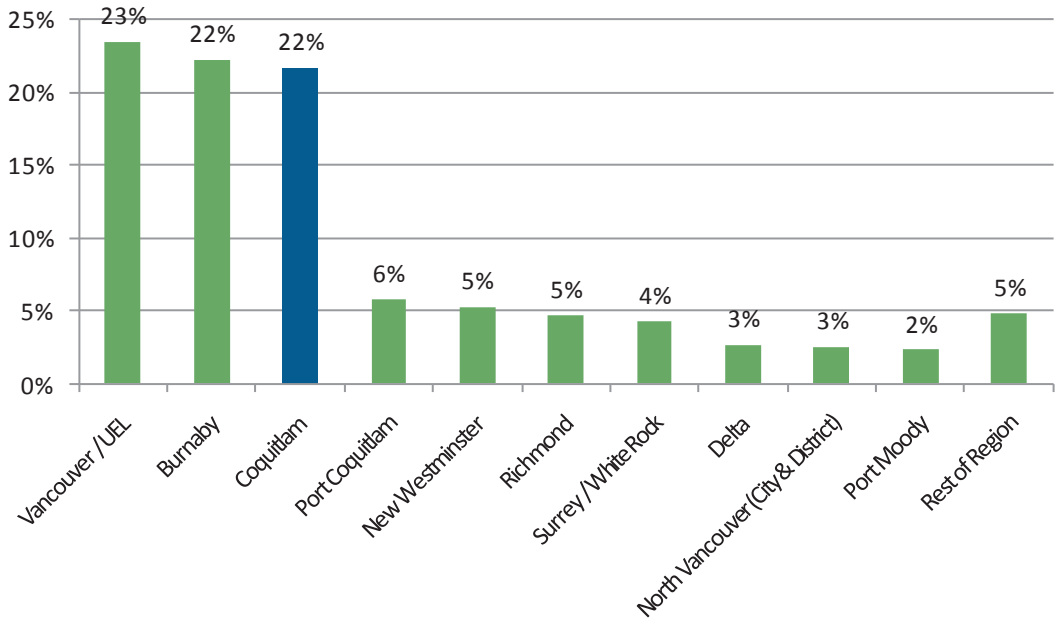
As shown in **Map 5**, mode share patterns vary significantly throughout the City, with the highest proportion of trips made by sustainable modes of transportation located in the Lougheed Town Centre area and the Coquitlam City Centre area.

Map 5 – SUSTAINABLE TRANSPORTATION MODE SHARES



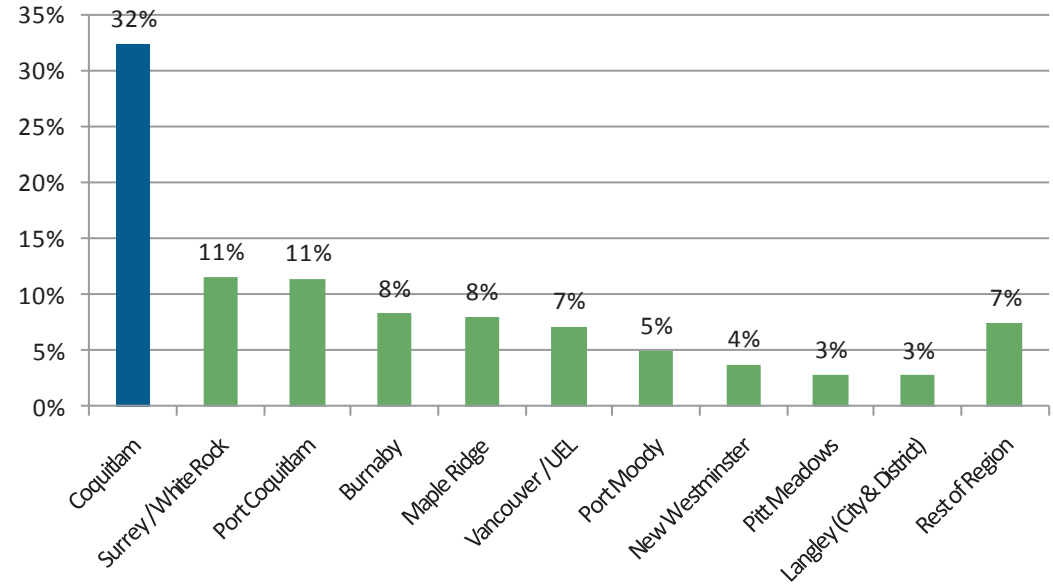
- **Trip distribution.** Currently, almost 80% of work trips that originate in Coquitlam travel to other parts of the region, while 70% of all work trips destined for Coquitlam originate in other parts of the region. This highlights the need for transportation choices to accomodate trips to and from other parts of the region for work-related travel. The following charts show the distribution of work trips that originate and destinate in Coquitlam.

Percent of Work Trips Originating from Coquitlam



Source: 2006 Census

Percent of Work Trips Destined for Coquitlam



Source: 2006 Census

The majority of work travel from Coquitlam is to Vancouver/UEL and Burnaby/New Westminster. Work trips travelling to Coquitlam originate largely from Surrey/White Rock and Port Coquitlam. The remainder of trips to Coqutlam are spread out evenly throughout the rest of the region.

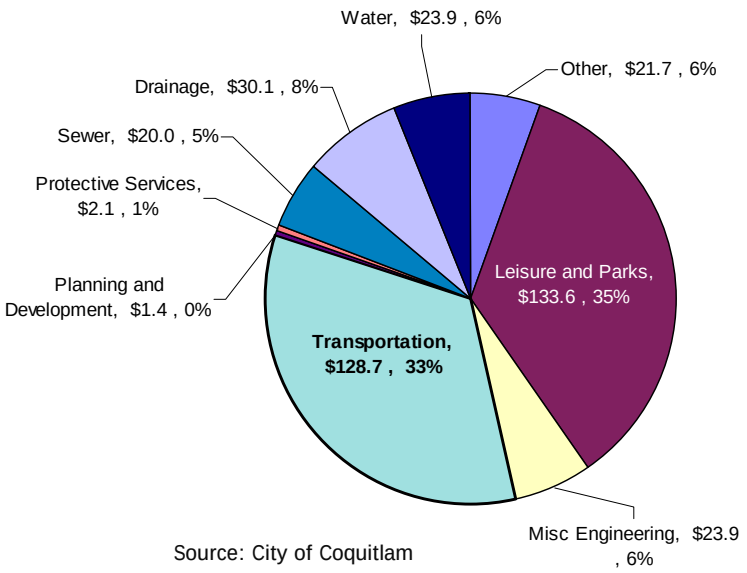
3.4 Spending on Transportation Infrastructure

Transportation accounted for approximately one third of the City's total capital expenditures over the last ten years, as shown in the figure below. In fact, capital expenditures on transportation over the past ten years total nearly $130 million.

Of these capital expenditures on transportation, the vast majority has been focused on improvements to the road network. Together, expenditures on the road network and road rehabilitation account for over 90% of the City's transportation capital spending over the past 10 years, as shown below. Cycling infrastructure and pedestrian infrastructure accounted for nearly 5% and nearly 3% of transportation capital spending over the past 10 years, respectively. The City spent less than 1% of its transportation capital budget on transit, although it should be emphasized that the majority of transit-related expenditures would be made by TransLink. As shown in the graph below, transportation expenditures have been relatively similar each year, with the exception of 2005 and 2006 which saw an increase in spending on the road network and cycling primarily due to the construction of the David Avenue Connector.

Overall Capital Spending, 2000 to 2009

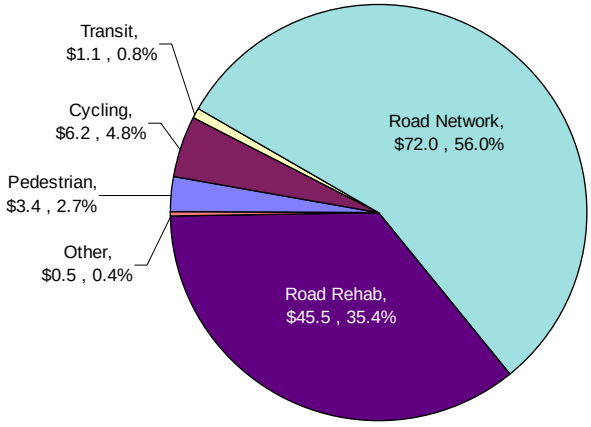
(Dollar figures are in millions)



Source: City of Coquitlam

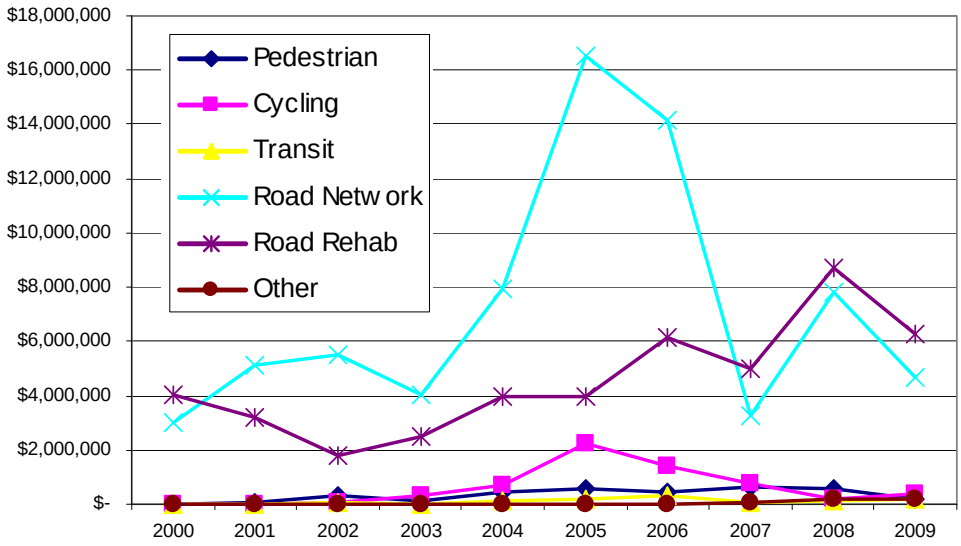
Transportation Capital Spending, 2000 to 2009*

(Dollar figures are in millions)



Source: City of Coquitlam

Transportation Spending Capital Trends, 2000 to 2009*



Source: City of Coquitlam

* Road Network spending is primarily for new road projects or for capacity, safety, and streetscape improvements to existing roads. In most cases Road Network spending includes the cost of the road surface, pavement markings, sidewalks, street lighting and traffic signals. Road Rehab spending is for resurfacing roads. Pedestrian spending is for exclusive pedestrian projects. This includes adding sidewalks, curb let downs, crossing treatments, signage and pedestrian signals on existing roadways. Similarly, cycling spending is for adding bike pavement markings, adding bike lanes, bike signage, and the provision of other bike facilities to existing roadways. The one exception is for the new David Avenue Connector where the cost of the bike lanes was separated out of the road network project and was reported as a cycling project. Transit spending is for transit support measures such as bus stop enhancements, sidewalks connecting to bus stops and transit access improvements. TransLink is the agency responsible for funding and providing transit services.

4.0 TRANSPORTATION SYSTEM REVIEW

The STP Update is shaped by the existing transportation system and the current issues affecting the success of the system. This section provides an overview of the current characteristics of the City's multi-modal transportation network and highlights the key issues to be addressed in developing a more balanced transportation system.

The Transportation System Review is structured to present general facts and observations and then key issues and opportunities for walking, transit, cycling, the road network, goods movement, and Travel Demand Management (TDM).

4.1 Walking

Walking is the most fundamental form of transportation. Walking 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. Promoting walking can help reduce automobile dependence and GHG emissions, improve public health outcomes and help to create more livable and vibrant communities.

In order to support walking, the City has a 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. This includes 477 km of sidewalks and approximately 70 km of off-street trails. The Strategic Transportation Plan aims to integrate sidewalk facilities and planned off-street trails identified in the Master Trails Plan, particularly where trails provide the only feasible pedestrian connection. The City has also developed a Sidewalk Program to assess and prioritize the construction of additional sidewalks throughout the City.

4.1.1 Facts & Observations

The following discussion summarizes the existing pedestrian systems in Coquitlam:

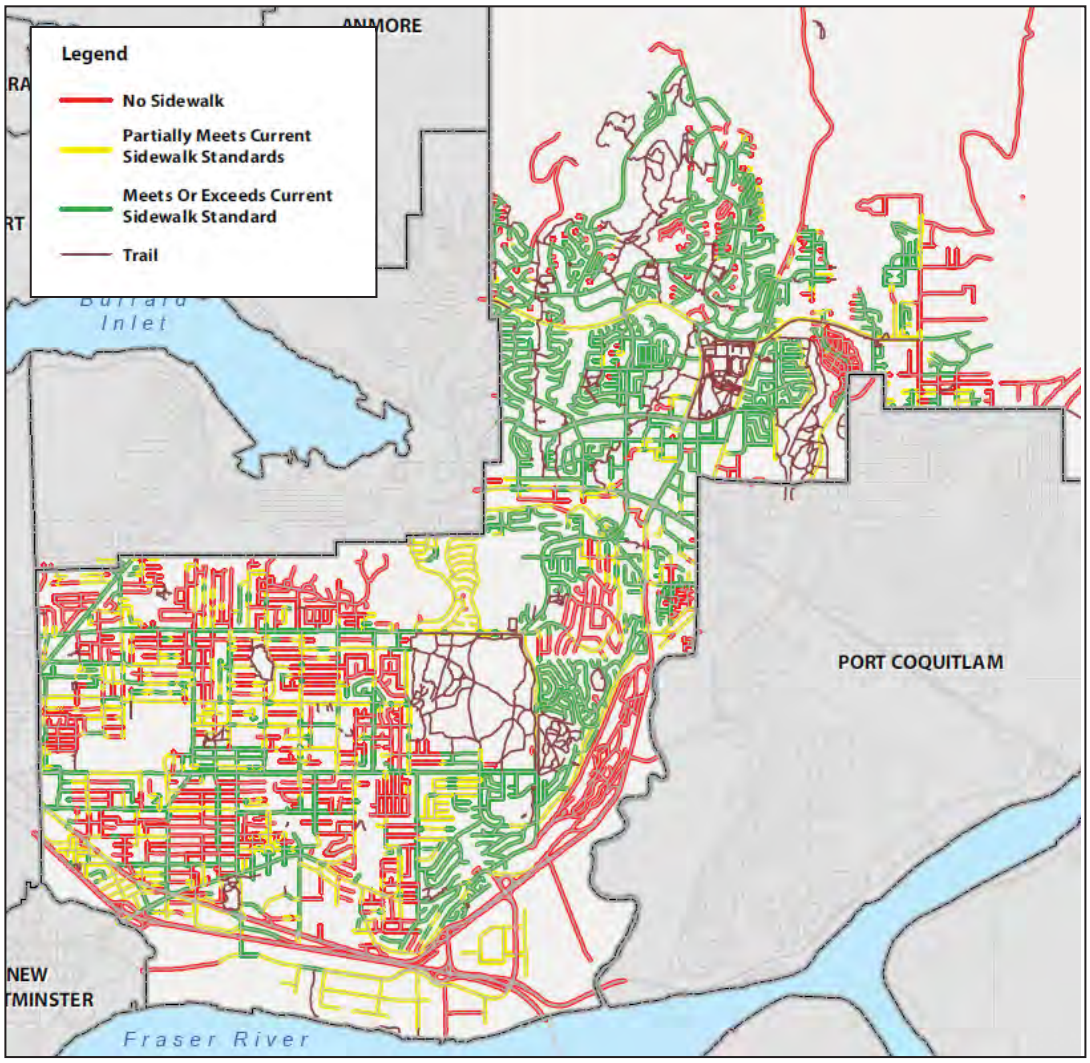
- **Sidewalk Requirements –** The City's Subdivision and Development Servicing Bylaw requires that sidewalks be provided on both sides of all streets in residential and commercial areas, except industrial areas and cul-de-sacs, which may have a sidewalk only on one side of the street. Sidewalks are not required on rural streets with gravel shoulders or on local streets within the RS-2 One-Family Suburban Residential or A-3 Agricultural and Resource zones.

- **Sidewalk Improvements –** The City has developed a process for prioritizing sidewalk improvements. The sidewalk prioritization process is based on two broad categories: pedestrian safety and walking potential. Based on the results of the sidewalk prioritization process, the City builds approximately 5-10 priority sidewalks each year. The City typically spends approximately $300,000 annually for construction of new sidewalks.

- **Trail Network –** The City's major trails are generally located within major parks, such as Mundy Park, Town Centre Park, Blue Mountain Park, Como Lake Park, Mackin Park, and Ridge Park; in forested areas, such as Riverview Forest, Coquitlam River Park, and Chineside Ravine; and within major utility rights-of-way. Although the majority of these trails are primarily recreational, some of these facilities provide important connections to the overall pedestrian network.

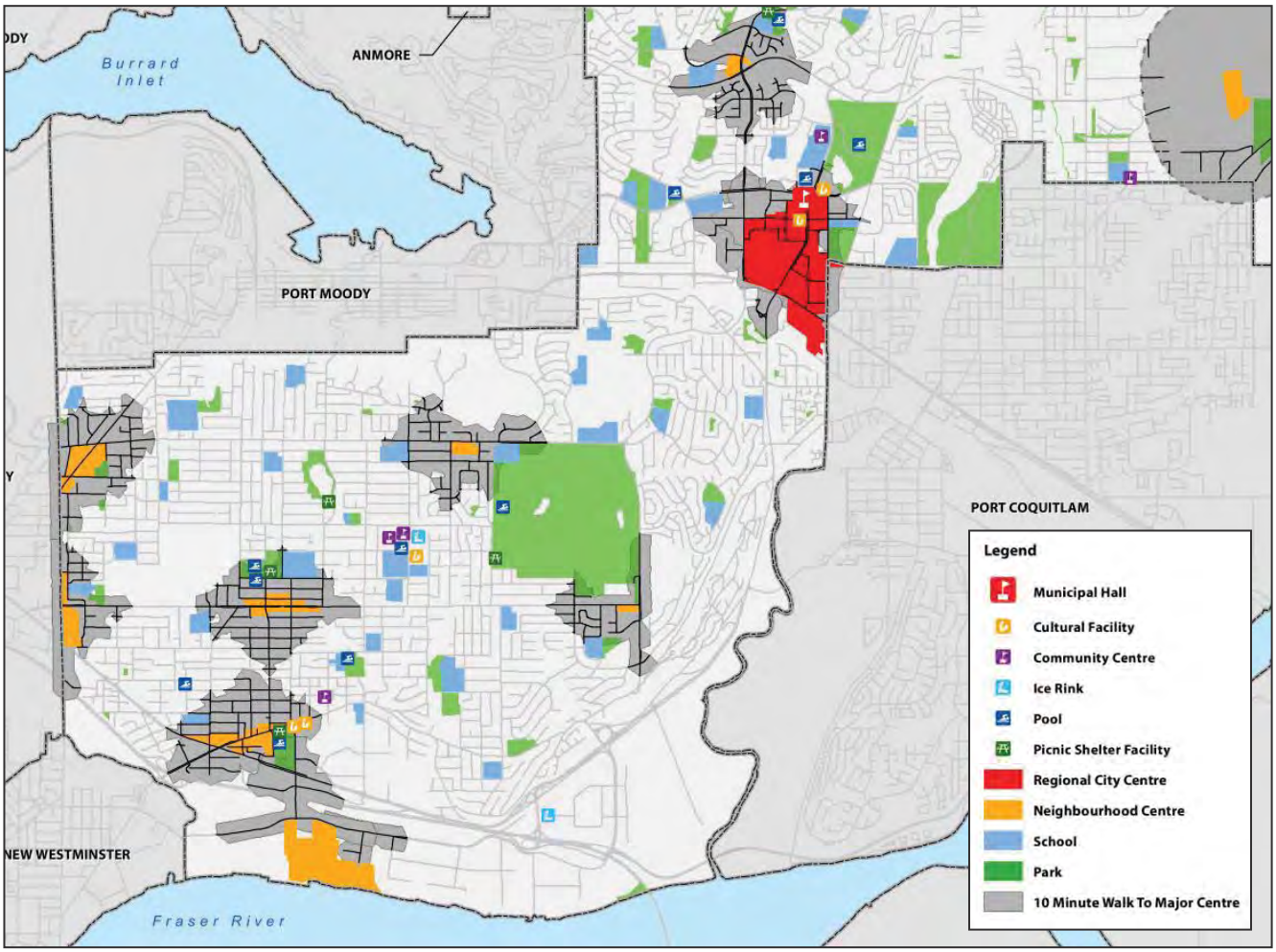
- **Sidewalk Standards –** As shown in **Map 6**, there are several large areas that do not meet the City's sidewalk standards. Most of the areas that are deficient in sidewalks are in some of the older subdivisions in the City, particularly in Southwest Coquitlam.

Map 6 – EXISTING SIDEWALK AND TRAIL NETWORK



- **Pedestrian Generators –** Key pedestrian generators, such as schools, parks, commercial areas, and transit facilities are located throughout the City, as shown in **Map 7**. 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 10-minute walking distance, or approximately 800 metres.

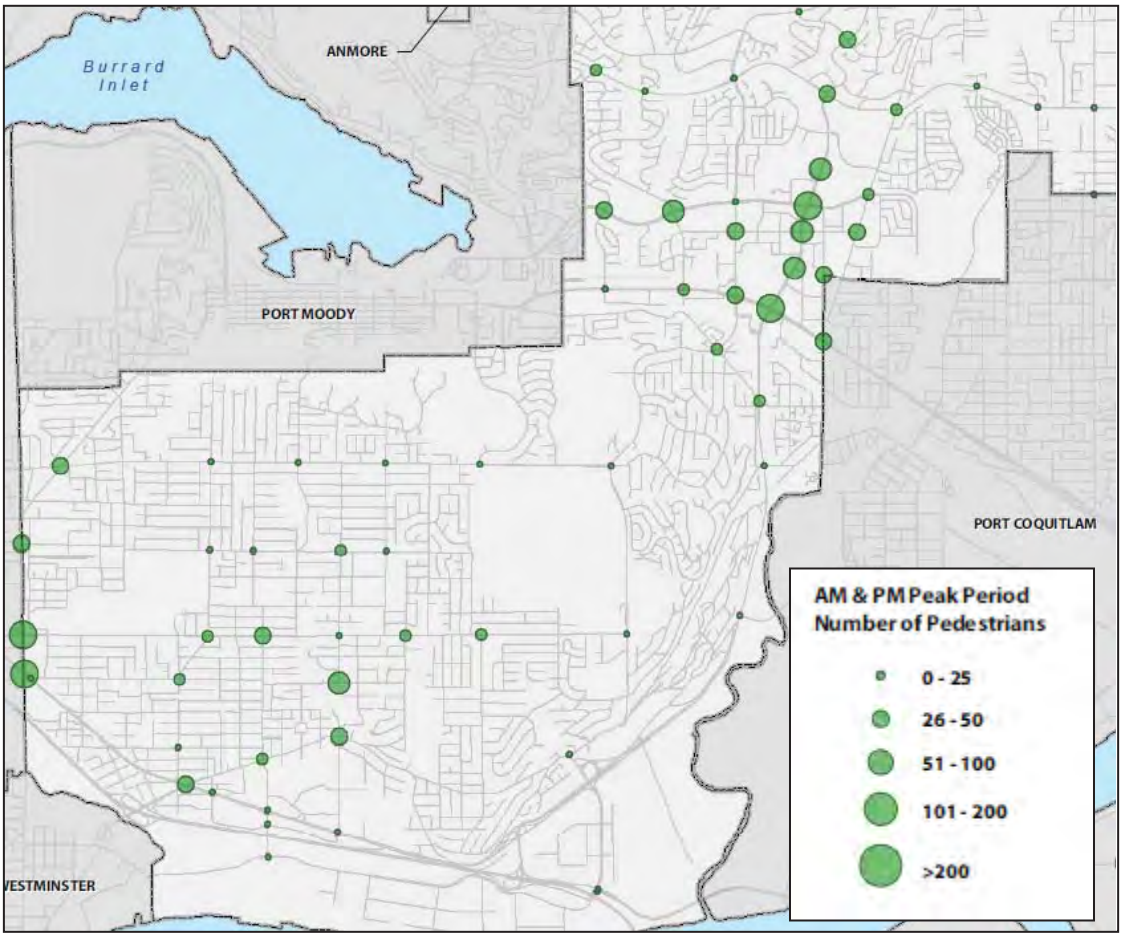
Map 7 – KEY PEDESTRIAN GENERATORS



Pedestrian Activity – As shown in **Map 8,** there are a number of areas with higher than average pedestrian activity levels during the PM Peak Period. These key pedestrian activity nodes are generally clustered around the Coquitlam City Centre area, with several intersections along Pinetree Way recording significant pedestrian volumes, as well as the Lougheed Town Centre area, with several intersections along North Road recording relatively high pedestrian volumes.

- **Topography –** Topography is a significant challenge for pedestrians in Coquitlam, particularly in Southwest Coquitlam and Northeast Coquitlam. Some areas in particular have steep grades that are difficult to overcome for people with physical disabilities.

Map 8 – PEDESTRIAN ACTIVITY



4.1.2 Key Issues

There are a number of issues that currently affect the walkability of the community and the integration of walking with other modes, particularly transit. These issues are highlighted below:

- **Sidewalk coverage.** In many of the older areas of the City, particularly in Southwest Coquitlam, sidewalks have not been provided. This forces pedestrians to walk on the street and makes walking a less desirable mode of transportation in these neighbourhoods. Historically, this has contributed to resident requests for neighbourhood traffic management strategies.
- **Missing links.** Within areas of the City in which sidewalks are generally provided, there are still many local streets, particularly in the southwest area, that do not have sidewalks or that do not meet the City's standards over (generally these are short segments). These 'missing links' in the sidewalk network force pedestrians to walk on the street, detracting from the attractiveness and safety of walking.
- **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. 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.
- **Wide road crossings.** In the City there are a number of major arterial roads and highways which are challenging to cross because of their width. This too which creates significant barriers to walking. Some examples of wide corridors include Lougheed Highway and Barnet Highway where the acute problems are typically within 400 m of key pedestrian generators. These wide road crossings are particularly difficult for persons with disabilities and the elderly. Wide streets also tend to encourage motorists to speed and to not stop for pedestrians who are waiting to cross the street.
- **Topography.** Physical challenges are presented by the steep topography of the City and the major ravines (such as Chineside Ravine)

throughout the community. Steep hills make walking more difficult for pedestrians, particularly those using mobility aids and the elderly. Additionally, curb letdowns are not consistently applied throughout the City, meaning that accessibility for persons using mobility aids is not universal.

- **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 and other features that provide for a comfortable and safe environment.
- **Pedestrian safety and security.** Pedestrian safety, comfort, and security are primary concerns for residents, particularly with respect to crossings along major roads. Wide crossings can be even more challenging for persons with disabilities and the elderly. Pedestrian safety is a reported issue in areas where sidewalks are missing and pedestrians must walk on the street. In addition, residents have reported that a lack of street lighting prevents a feeling or security.
- **Pedestrian facilities in commercial areas.** 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 districts on foot. For those who drive, pedestrian facilities are also important as they connect between parking areas with commercial establishments.

4.2 Transit

Transit is the primary alternative to automobile travel in Coquitlam and across the region, as it 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, shopping areas, and recreational centres.

The existing transit system in Coquitlam is comprised of a variety of service types including HandyDart, Community Shuttle, conventional bus service, express bus service (B-Line), and West Coast Express. These services are largely centred around the Coquitlam Exchange as well as the Coquitlam Recreation Centre, Lougheed Town Centre and Braid Station Exchange.

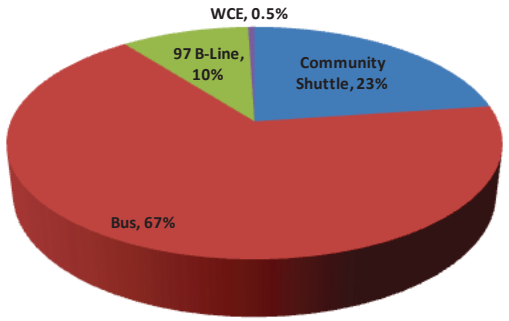
Transit services in Coquitlam, and throughout the Metro Vancouver region, are planned and funded by TransLink and operated by various subsidiary companies and contractors. The City participates in the transit planning process through the Northeast Sector Area Transit Plan, which was completed in 2002 and is due to be updated in the coming years. The STP Update is intended to provide direction to the City and TransLink regarding the long-term needs of the community with respect to transit services.

4.2.1 Facts & Observations

The following discussion highlights key facts and observations regarding existing transit services in Coquitlam:

- **Service hours** - relative to other developed areas of Metro Vancouver, Coquitlam has an adequate amount of service hours. The following figure provides a breakdown of the amount of service hours by service type. Conventional bus services make up two thirds of the total number of service hours in Coquitlam with Community Shuttle services at 23% and 97 B-Line at 10%. On an annual basis, Coquitlam receives a comparable amount of service hours to other similar areas of Metro Vancouver.

Transit Service Hours by Service Type



Source: TransLink

- **Types of transit services.** As previously mentioned, there are a variety of different service types that are aligned with transit markets in Coquitlam. These services provide routes that operate locally within Coquitlam and they also provide connections to neighbouring municipalities and beyond. The following provides a description of the different types of transit services available in Coquitlam:
  - **HandyDART:** Provides door-to-door custom transit service for people with physical or cognitive disabilities who are unable to use the conventional system without assistance. HandyDART services

have recently been enhanced through recent work by TransLink as part of their Access Transit Strategy.

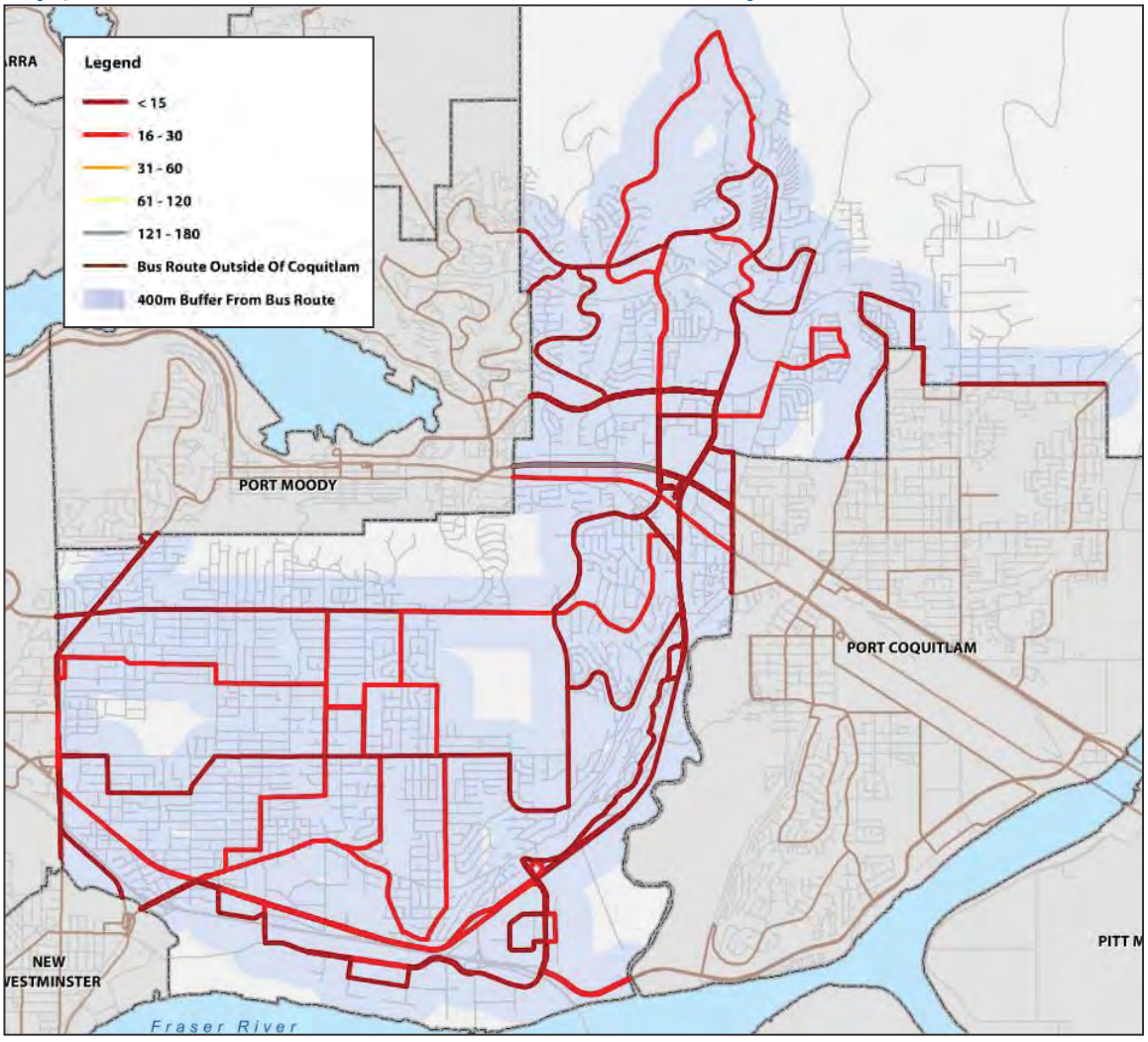
- **Local service:** Provides local area service and connections to the regional transit network using smaller, neighbourhood-friendly mini buses.
- **Local Bus:** Provide services between key destinations within Coquitlam using conventional buses on busier trunk routes.
- **Regional Bus:** Provides direct service between major regional destinations using conventional buses on regional corridors.
- **Limited-Stop Bus (Route #97 B-Line):** Provides direct, frequent, and limited stop service between Coquitlam City Centre and Lougheed Town Centre to serve regional trips that connect with the Millennium SkyTrain Line.
- **SkyTrain:** Although no SkyTrain stations are located within Coquitlam, the Lougheed Town Centre and Braid stations provide central hubs for many local and regional bus services that Coquitlam residents use to access SkyTrain services. These stations are located just outside of Coquitlam's boundaries but provide important connections for residents.
- **Commuter Rail:** A West Coast Express station located at the Coquitlam Exchange provides peak directional commuter service to downtown Vancouver.

- **Service coverage and structure of routes.** There are currently 30 transit routes that provide service locally and regionally in the Coquitlam area. Route coverage generally provides most Coquitlam residents access to transit services within a reasonable walking distance. Bus routes are largely structured in a "hub and spoke" pattern in the northeast area with most routes connecting radially with timed transfers at the Coquitlam Exchange. In the southwest, routes are structured with a modified grid pattern and connected to the Coquitlam Recreation Centre, Lougheed Town Centre and Braid Station Exchanges. **Map 9** illustrates the transit route coverage and peak service frequencies throughout Coquitlam.

- **Service frequencies.** Most of the transit services in Coquitlam are provided with adequate peak period service headways of 15 minutes or

better. Most services operate at 30 minute midday headways with evening and weekend services in the 30-60 minute range. The 97 B-Line route between Coquitlam Centre and Lougheed Town Centre provides high frequency, limited stop service and, along with the #169 and #701, qualifies as part of TransLink's Frequent Transit Network (15 min or better service throughout the day and into the evening, 7 days per week). **Table 3** provides a summary of headways for the various service types in Coquitlam.

Map 9 – TRANSIT ROUTE COVERAGE AND SERVICE FREQUENCIES



Source: TransLink bus route coverage shape files and current schedule information from www.TransLink.ca

Table 3 – Summary of Headways for Various Service Types

	Headways						
Line #	AM Pk	Midday	PM Pk	Eve	Late Eve	Sat	Sun/Hol
Community Shuttle							
C24	15	30	15	30	30	30	30
C26	30	30	30	60	60	60	60
C27	15	30	15	60	60	30	60
C28	15	30	15	60	60	30	60
C29	30	30	30	60	60	60	60
C30	30	30	30	60	60	60	60
C38	15	30	15	30	30	30	30
Local Bus							
143	12	30	12	20			
151	20	30	20	30	60	30	30
152	15	30	15	30	60	30	30
153	30	30	30	60	60	30	60
156	30	30	30	60	60	30	60
157	30	30	30	60	60	30	30
159	20	30	20	30	60	30	60
169	12	15	12	30	60	30	30
177	15	30	15	20	60	30	60
179	30		30	30			
189	30		30				
Regional Bus							
110	20	30	20	30	30	30	30
112	15	15	15	30	30	15	30
136	15	30	15	30	30	30	30
160	15	30	20	30	30	30	30
190	180		30				
701	15	15	15	30	30	15	15
791	30		30				
B-Line							
97	10	10	10	10	10	15	15
SkyTrain							
Mill. Line	5-6	6	5-6	6	8	6-8	6-8
Commuter Rail							
WCE	30i		30o				
Special							
TrainBus		180		60		120*	60*
N9					30		
150		60s	60s	60s		60s	60s

*Notes: i=inbound only, o=outbound only, *=limited service, s=summer only*

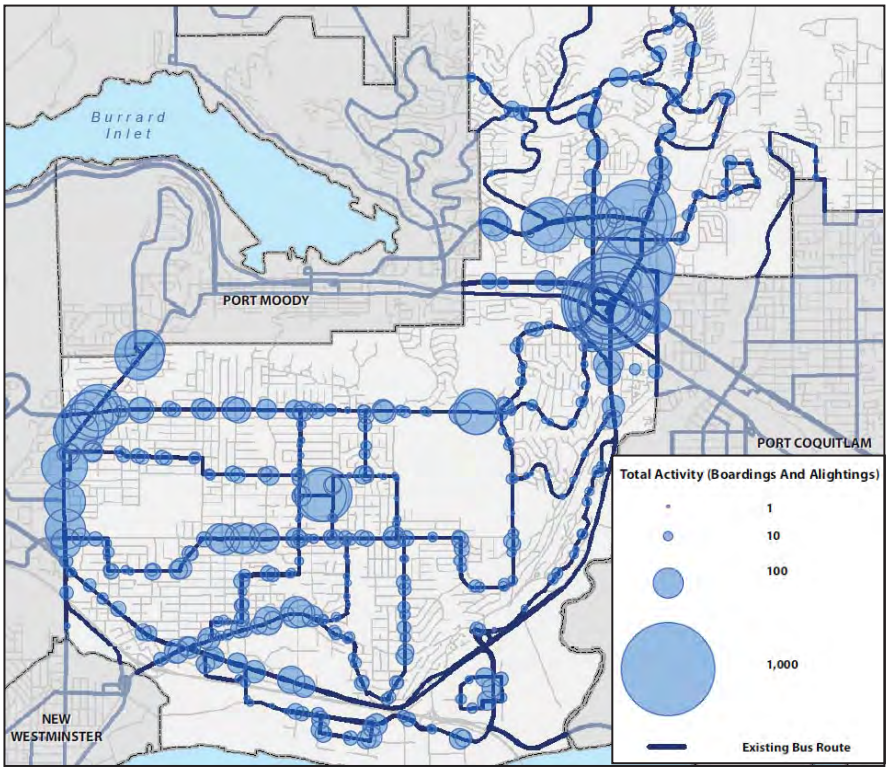
#110, #112, and #136 are listed as services within Coquitlam, although these routes only have limited coverage in Coquitlam adjacent to the Lougheed Town Centre SkyTrain Station

Source: TransLink transit route schedules: www.TransLink.ca

- **Transit exchanges**. There are two transit exchanges in Coquitlam: The Coquitlam Exchange and the Coquitlam Rec Centre Exchange. Both of these provide a timed transfer point between most routes that operate in Coquitlam. The Coquitlam Exchange is a major intermodal facility that provides connections between all modes of transportation including walking, cycling, other transit modes including the West Coast Express and also includes a driving with a 614 space Park and Ride lot.

- **Ridership.** Transit usage is concentrated around the Coquitlam Town Centre area where many of the transit services converge. Ridership is also high along the 97 B-Line route that provides express bus service between Coquitlam Town Centre and Lougheed Town Centre. **Map 10** shows the total peak period (6:00-10:00 AM and 3:00-7:00 PM) boardings and alightings for bus stops within Coquitlam, highlighting areas of high and low activity.

Map 10 – PEAK PERIOD BOARDING AND ALIGHTING ACTIVITY AT BUS STOPS



- **Planned Evergreen Line.** The Provincial government has committed to begin construction of the 11 km Evergreen Rapid Transit Line with an anticipated completion date of 2014. This new line will complete a significant link in the region's rapid transit network and provide Coquitlam residents with a quick and convenient transit connection to Lougheed Mall and other parts of Metro Vancouver. This line will provide a substantial increase in service levels for regional trips given the operating speeds of SkyTrain. Overall, ridership is forecast to increase significantly as residents will be provided with a transit option that will provide competitive travel times to the private automobile. A trip from Coquitlam Town Centre to Lougheed Town Centre will take approximately 13 minutes, travelling at an average speed over 50 kph. **Map 11** shows the general alignment and station locations of the planned Evergreen Line. Coquitlam is currently in negotiations regarding an additional station to be located between Coquitlam Central and Douglas College Stations at Lincoln Ave in order to provide more connections within the Town Centre area.

Map 11 – PLANNED EVERGREEN LINE ALIGNMENT AND STATIONS

- **Transit supportive infrastructure.** Measures to improve transit operations such as bus lanes, queue jumpers, priority signals and bus bulges are an effective means to improve the reliability and competitiveness of transit services. Currently, Coquitlam roadways provide limited application of transit supportive infrastructure. As such, there is significant opportunity to make better use of Coquitlam's roadway network to better support transit services and encourage more people to take transit.

- **Park and Ride.** There is one Park and Ride lot in Coquitlam, located at Johnson Street and Barnet Highway. This facility provides quick and convenient access to transit services for people who wish to drive part way and avoid critical congestion locations on their way to other regional destinations. There are over 600 spaces and parking costs $2 per day. This facility averages over 80% occupancy throughout the day. The Coquitlam Exchange is located nearby with many local and regional services including the West Coast Express which provides service to downtown Vancouver.

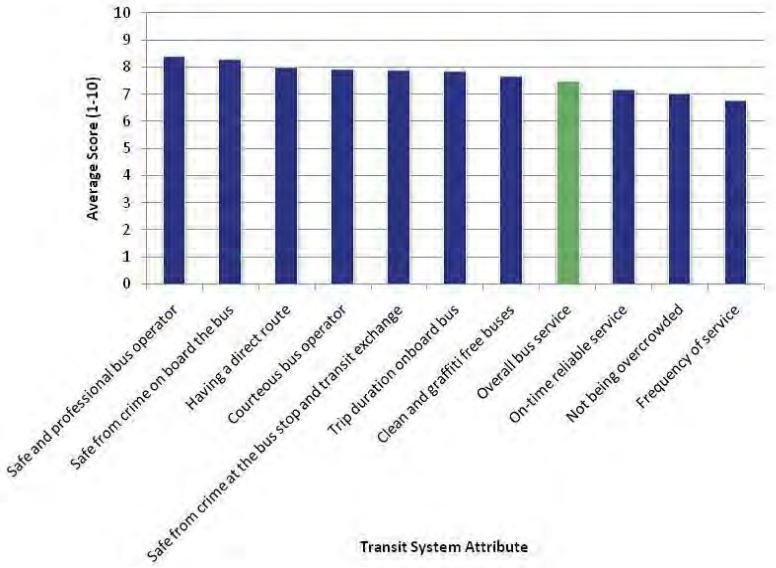
- **Northeast Sector Area Plan.** As mentioned earlier, TransLink with its partner agencies, jointly produced the Northeast Sector Area Transit Plan in 2002 which provided a short-term implementation strategy for services. Some of the general enhancements that have been implemented are shown in the table to the right.

  The Northeast Sector Area Transit Plan is due for an update particularly in consideration of the need to restructure services with of the Evergreen Line.

Phase I Improvements
• Implementation of the #97 B-Line express bus service between Coquitlam Town Centre and Lougheed Town Centre. • Integration of regional bus services with the Millenium SkyTrain line at Lougheed Town Centre and Braid Stations including improvements to routings and frequencies.
Phase II Improvements
• Introduce Community Shuttle services in north-eastern areas. • Enhancements to routings and frequencies for selected services. • Provide evening and midday TrainBus service to supplement WCE train service.
Phase II Improvements
• Enhancements to routings and frequencies for selected services. • Introduce Community Shuttle services in College Park and Seaview neighbourhoods.

- **Customer satisfaction.** TransLink conducts a quarterly customer satisfaction survey that tracks performance on a variety of service attributes along individual bus routes. Based on the most recent survey results, customers are generally satisfied with overall bus service in Coquitlam, with an average rating of 7.5 on a scale of one (lowest) to ten (highest), which is the same as the regional average. Customers are generally most satisfied with indicators related to safety and route directness, and are least satisfied with frequency of service, overcrowding of buses, and reliable service. In particular, customers were generally less satisfied with frequency of service on all of the routes that do not quality as FTN routes, while overcrowding was noted as a particular issue on the 97 B-Line, #143, and #C28 routes. In addition, on-time reliable service was noted as a particular issue on the #C28, #151, #159, #701, #112, and #143 bus routes.

Transit Customer Satisfaction on Coquitlam Routes



Source: TransLink

4.2.2 Key Issues

There are a number of issues with current transit services within Coquitlam that are discussed below:

- **Service levels.** As mentioned earlier, there are three routes, the 97 B-Line, #169 and #701, which qualify as an FTN routes in Coquitlam. Generally, peak hour service levels are 15 minutes or better but off-peak services tend to be 30-60 minutes. Service levels of 30 minutes or more during off-peak periods are unattractive and highlight some of the gaps in terms of service levels. These will need to be reviewed and aligned with the distribution of future development patterns so that effective services are provided with transit-supportive land uses. In particular, the provision of FTN-type services will go a long way to supporting transit ridership and provide good levels of service between key destinations.

- **Service types.** Over the last ten years, many of the transit services in Coquitlam have diversified with more community shuttle services in the outlying areas. These neighbourhood-friendly buses provide a more cost effective transit service for areas with lower passenger demand. These shuttles are quieter and can penetrate deeper into neighbourhoods with narrower lane widths and tighter roadway curvatures. However, the increasing demand on Community Shuttle routes, along with the planned development of the Evergreen Line, will likely necessitate the conversion of many existing Community Shuttle routes to conventional buses, subject to community consultation that would be part of a Northeast Sector Area Transit Plan process. This may require road modifications to accommodate the larger vehicles. Increased FTN services would benefit Coquitlam residents especially if they are aligned along major corridors with intensified and mixed land uses.

- **Transit supportive facilities.** Other than signal coordination along some corridors, there are limited bus priority measures in Coquitlam such as queue jumpers, bus lanes or signal priority to move buses quickly and efficiently through congested areas. As such, buses are held up in the same traffic queues as private automobiles. There is a lot of opportunity to look at providing transit support facilities along major roadway corridors to help make transit services competitive with the private automobile and more reliable overall.

- **Evergreen Line bus integration.** Once the Evergreen SkyTrain Line is completed, many of the existing bus services in Coquitlam will be integrated with the new rapid transit stations. As such, the updated bus network will likely provide feeder services to maximize ridership on the Evergreen Line, as well as continuing to serve local and regional trips that do not involve the Evergreen Line. The Evergreen Line Bus Integration Plan will likely involve the addition, modification, and cancellation of certain routes. Strategies for integrating bus services will need to go through a thorough planning process to ensure that the bus integration plan is aligned with travel markets and customer needs.

- **Post-secondary institutions.** The U-pass allows unlimited access to TransLink services throughout Metro Vancouver for students at participating post-secondary institutions. Currently there is no U-Pass program at Douglas College in Coquitlam. The student union and school administration at Douglas College have petitioned TransLink to provide a universal student transit pass program similar to those at UBC, SFU, Langara and Capilano College. A U-Pass program at Douglas College would likely be a highly utilized pass program as there is nearby access to the Evergreen Line at the proposed Douglas College station.

- **Transit accessibility.** In order for transit to be successful, it must be accessible to as many people including those with varying physical abilities. TransLink's Access Transit Strategy will help to ensure that the transit system is accessible for as many people as possible recognizing the physical, cognitive or other challenges that existing or potential customers may face. With this in mind, Coquitlam's entire transportation system including bus stops, sidewalks and other pedestrian facilities needs to accommodate a wide variety of physical abilities.

- **Park and ride.** As noted earlier, there is one Park and Ride facility in Coquitlam located at Johnson St and Barnet Hwy. This lot contains 614 parking stalls anticipated to be fully utilized with the provision of the Evergreen Line, and the lot will likely be at capacity once the Evergreen Line is Built and when growth trends and enhanced intermodal facilities at Coquitlam Station. When placed correctly to intercept trips and where local services are not attractive for most customers, park and ride lots can be an effective means of getting people to use transit in outlying areas. This lot is a well utilized facility and the City's approach to park-and-ride facilities should be examined as part of the Transportation Plan.

- **Competitiveness of transit.** For transit to ultimately become a competitive alternative to the private automobile for many residents, a number of economic factors need to be in place. In short, the generalized cost of travel by transit, including the travel time and out-of-pocket expenses, have to be less expensive than taking a private automobile. Generally, the travel time costs of taking transit including walking to a

bus stop, waiting for the bus, the time spent on the bus and then the time spent walking to the final destination all have to be minimized in order for transit to be a competitive alternative to driving. Furthermore, cost disincentives to driving such as road and parking pricing need to be in place to encourage people to use transit. The density and mixture of land uses, as well as the proximity to frequent transit corridors and rapid transit stations areas, will play a key role in the future success of transit, as will the levels of service and cost of transit.

- **Safety and security.** The level of real safety on TransLink services is generally very high as a professional bus driver with effective communications technology has access to emergency services on every transit vehicle, and since TransLink has a dedicated transit police force. Safety and security are potential concerns at bus stops and waiting areas where lighting and visibility is limited. Safety concerns could be a barrier for some people to use transit and removing these barriers could be an effective strategy to encourage people to change their travel habits. A vibrant streetscape in a dense and mixed use area tends to be safer with more eyes on the street, better lighting and potential security staff at banks, shopping centres and others.

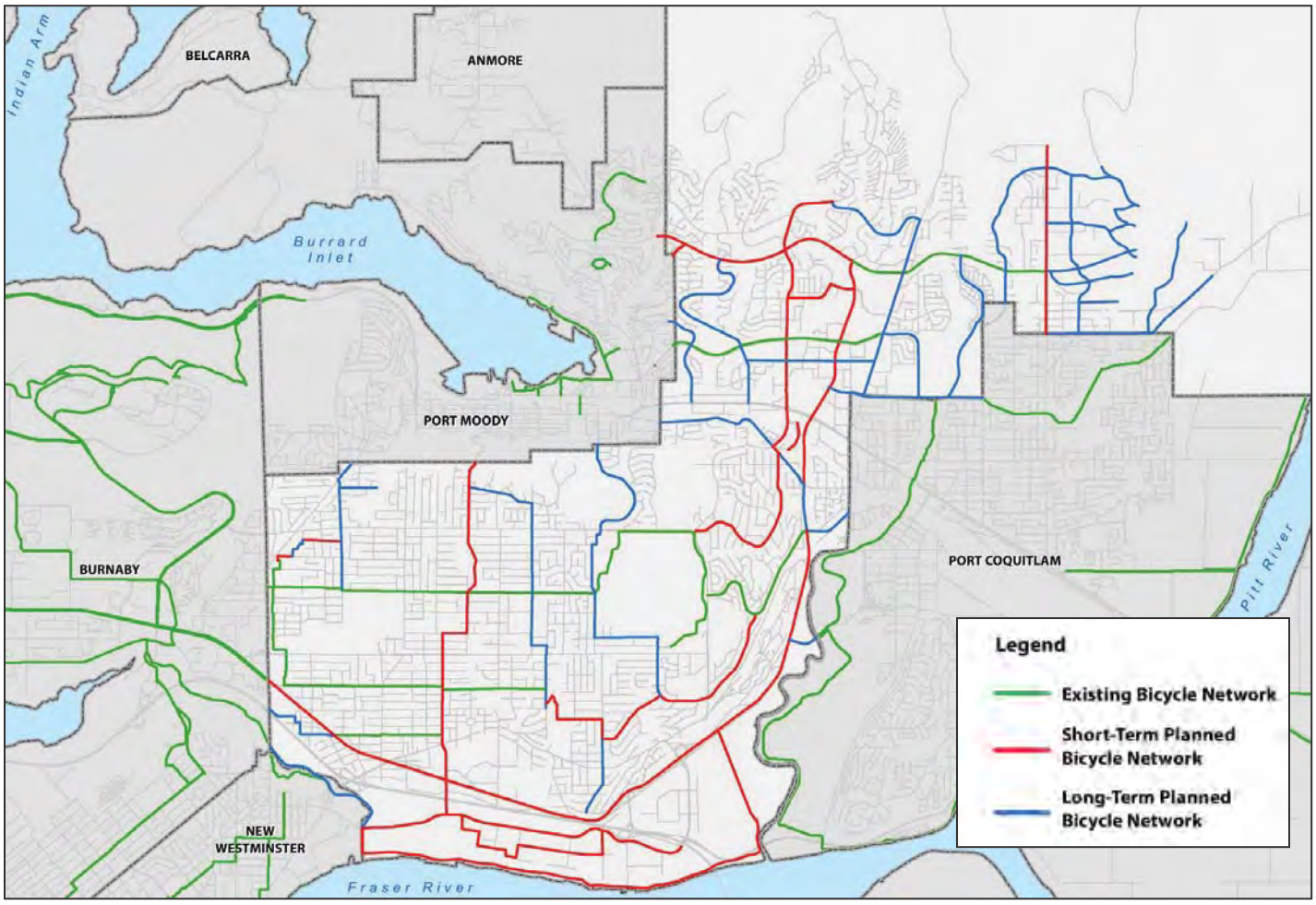
4.3 Cycling

Cycling is an emerging mode of transportation in Coquitlam. The City wishes to develop a safe and comprehensive bicycle network 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.

The City developed a Bicycle Network Plan as a component of the previous Strategic Transportation Plan, which identified a comprehensive network of planned on-street and off-street bicycle routes within the community as shown in **Map 12**. To help assess and prioritize investments in cycling infrastructure, the City subsequently completed a Cycling Infrastructure and Priority Strategy which identifies high priority bicycle routes to implement.

The City has also prepared a Master Trail Plan in 2005 which is intended to guide the planning and construction of a system of off-road trails in the City's parks and natural areas. The plan incorporates five types of trails, four of which are intended to accommodate all types of cyclists (the fifth — nature trails — accommodate mountain biking only). Some of the proposed trails identified in the Master Trail Plan provide connectivity within the City's bicycle network.

MAP 12 – EXISTING AND PLANNED BICYCLE NETWORK



4.3.1 Facts & Observations

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

- **Bicycle Use**. 2006 Census data indicate that 0.6% of all trips to work in Coquitlam are made by bicycle. The highest bicycle mode shares are in the Coquitlam Town Centre area, where the mode share exceeds 4%, which is the highest mode share of any census tract in the region outside the City of Vancouver.

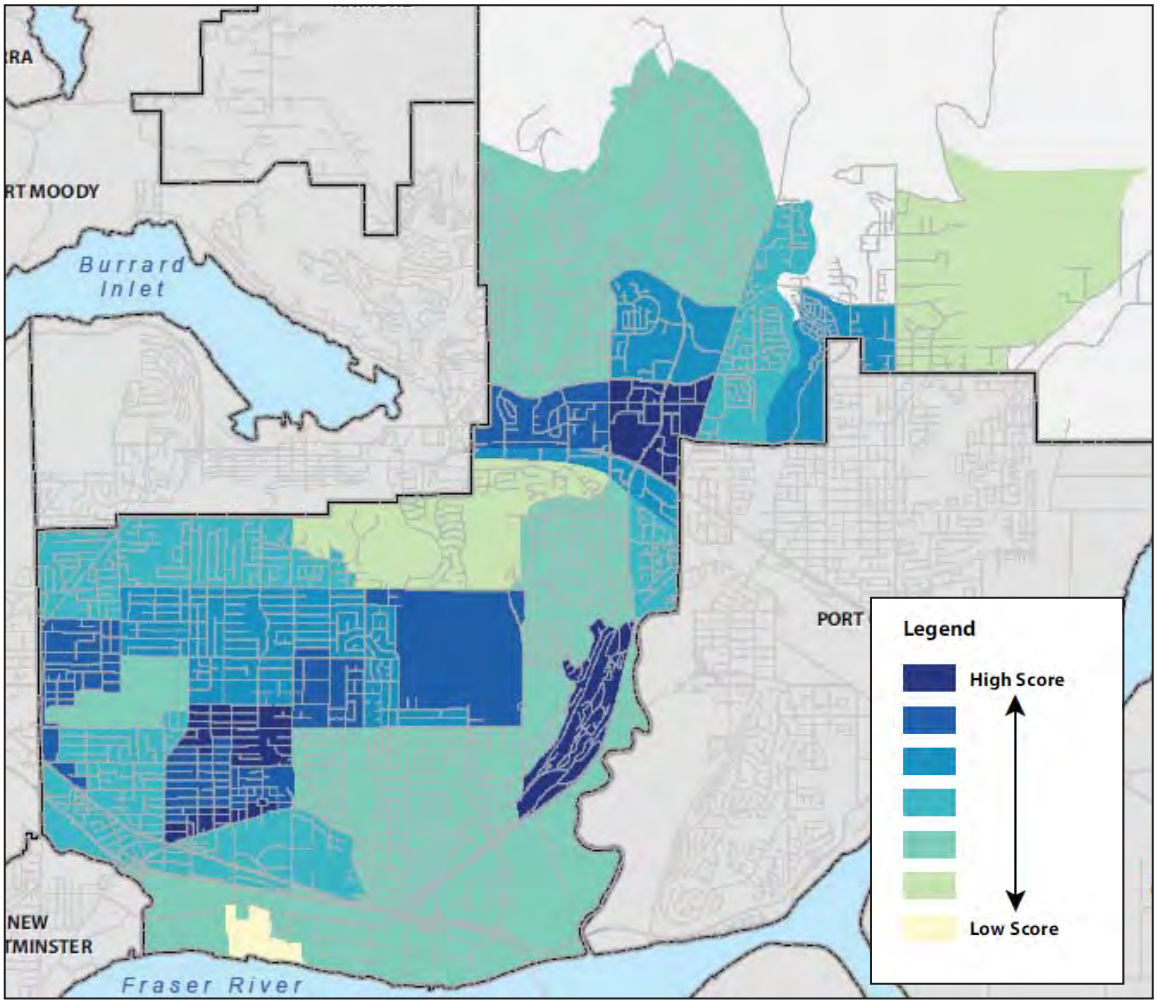
- **Network Development.** The City has implemented approximately 15 km of bicycle routes over the past several years, including bicycle lanes on Guildford Way, David Avenue, and Chilco Way; Marked Wide Curb Lanes on Foster Avenue, Alderson Avenue, Rochester Avenue, Westview Street, and Whiting Way; and multi-use pathways adjacent to Mundy Park. The City is constructing a further 6 km of bicycle routes in 2010.

- **Cycling Priorities.** The City has completed a Cycling Implementation and Priority Strategy, which presents a strategy for implementing the City's planned bicycle network and identifies the top 25 priority bicycle network improvements throughout the City.

- **Cycling Potential.** The City of Coquitlam is a diverse community comprising a range of different environments ranging from the City Centre and other neighbourhood centres to residential subdivisions and industrial areas. To help understand the unique conditions for cycling throughout the City and which areas of the City are most 'bicycle—friendly' a analysis of the cycling conditions throughout the City was conducted. This analysis examines road network density, road network connectivity, land use mix, and topography to identify unique issues and opportunities throughout the City and identify the areas with the highest potential to increase bicycle use. As shown in **Map 13**, the Cycle Zone Analysis indicates that the areas with the highest 'cycling potential' are

the Coquitlam City Centre and several Neighbourhood Centres, such as Maillardville and Austin Heights. These areas have relatively well-connected road networks, a significant amount of cycling generating land uses, and are relatively flat. In addition, the Riverview area and Mundy Park are also have relatively high cycling potential, although these areas are particularly suited for recreational cycling.

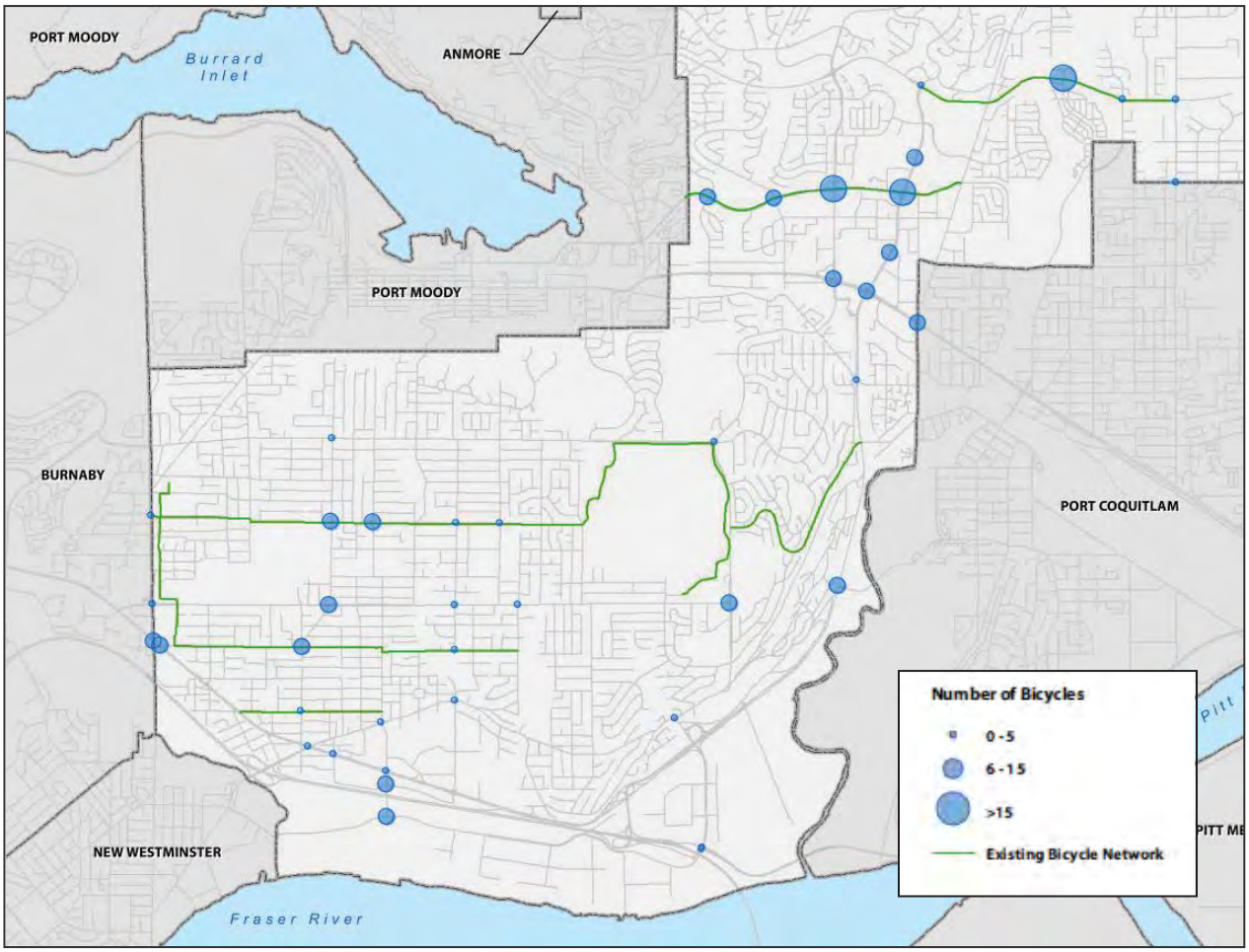
MAP 13 – CYCLING POTENTIAL



- **Cycling Activity.** As shown in **Map 14,** there are a number of key cycling activity nodes with higher than average bicycles activity levels during the PM Peak Period. These key cycling activity nodes include the City Centre area and the Lougheed Town Centre area and generally

correspond with existing bicycle routes, such as Guildford Way, David Avenue, Foster Avenue, and Rochester Avenue.

MAP 14 – CYCLING ACTIVITY NODES



4.3.2 Key Issues

Although the City has made significant progress implementing bicycle facilities in recent years, the following issues with the bicycle network have been identified:

- **Incomplete bicycle network.** 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.
- **Cyclist safety and security.** Market research in Metro Vancouver and elsewhere has shown that a significant amount of the population is interested in cycling and may already cycle occasionally, but are deterred from cycling due to safety concerns of interacting with motor vehicle traffic. Providing bicycle routes that minimize cyclists' interactions with motor vehicles, such as Neighbourhood Bikeways on low traffic residential streets, and off-street pathways and separated bicycle lanes that are physically separated from motor vehicle traffic can address these concerns and encourage residents to cycle more frequently.
- **Challenging Intersections and corridors.** Several areas throughout the City have been designated as "Zones of Caution" on TransLink's Metro Vancouver Cycling Map. These Zones of Caution have been identified and validated by stakeholders and municipal staff and denote difficult areas or intersections which should generally be avoided by inexperienced cyclists. Key Zones of Caution in Coquitlam include Lougheed Highway, United Boulevard, Johnson Street, Pinetree Way, and Westwood Street, although it should be noted that none of these corridors are designated as existing bicycle routes.
- **Topography.** Topography can act as a significant deterrent to many cyclists. Topography is a significant challenge in many areas of the City, particularly in Southwest Coquitlam and the Westwood Plateau areas.
- **Limited connections to other municipalities.** Many existing bicycle routes do not provide adequate connections to surrounding municipalities, particularly to Port Coquitlam, New Westminster, and Burnaby. In order to ensure that cyclists can travel not only within Coquitlam but also to surrounding municipalities, potential connections to be surrounding municipalities should be identified.
- **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.

- **Support facilities and programs.** In addition to providing a comprehensive and safe network of bicycle routes throughout the City, support facilities such as bicycle parking is provided to ensure that cyclists have a safe place to leave their bicycles. In addition, showers and clothing lockers are important at workplaces where cyclists may be commuting long distances. The City does not currently have requirements for bicycle parking or other end-of-trip facilities in its Zoning Bylaw. Although bicycle racks have been provided in many areas throughout the City, and bicycle lockers are provided at the Coquitlam Central West Coast Express Station as well as Braid and Lougheed Town Centre SkyTrain Stations in Burnaby, the provision of other facilities to support cycling is generally limited. Although there are no formal requirements for bicycle support facilities in private developments, many private developments have recognized the need to provide these facilities, but more can be done to support and encouraging cycling within the City, such as expanding education programs, improving end-of-trip facilities, and providing incentives.

- **Bicycle-Transit Integration.** Topography is a significant challenge for cycling throughout the City. In addition, many cyclists commute long distances beyond the City of Coquitlam. 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.

4.4 Road Network

The roadway 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, vehicles are often

given preferential treatment on the roadway network, sometimes at the expense of walking, cycling or even transit operations. Along most major roads in the City for example – major road network and arterials – general purpose traffic and goods movement are often treated as priority modes in the design and operation of the facility. On neighbourhood streets – collectors and local roads – vehicles have been 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.

This section of the of the report highlights the current and future conditions along the major roads in the City as well as the neighbourhood street system as a starting point for discussion in the updated Strategic Transportation Plan.

4.4.1 Facts & Observations

The following discussion highlights key facts and observations about the roadway network in Coquitlam:

- **Roadway Network** – The roadway network largely supports motor vehicle travel for residents of Coquitlam as well as key connections for regional auto trips. The network consists of 554 km of roadways and laneways as well as 129 traffic signals, as shown in **Map 15**. The network is largely developed and there is limited opportunity for significant expansion except to new developments in the northeast. The future of the roadway network will likely support alternate modes of transport including ridesharing, transit, cycling and walking to make effective use of existing facilities and corridors.
- **Road classification –** Coquitlam's roadway network consists of major roadways and neighbourhood roadways that serve distinct needs. Both

provide access to a variety of destinations and allows residents and visitors to fulfill travel needs for employment, education, recreation, shopping, socializing and others. There are two main components of the roadway network within Coquitlam broken down as follows:

Major Roadways

- Provincial highways including Highway 1 and the Cape Horn Interchange. These facilities mostly carry regional and provincial through traffic. Direct access to Provincial facilities is usually with interchanges (on ramps and off ramps) which are widely spaced in order to maintain operating speeds and minimize delay. Parking is restricted on Provincial highways and transit is limited to express bus services if at all.

- TransLink's Major Road Network and Coquitlam's arterials. These facilities largely accommodate regional through travel as well as travel to major destinations within Coquitlam. Direct access to arterials is typically limited to larger commercial properties or limited residential property access. Parking is limited and transit services are usually designated on arterial roadways.

- The major roadways carry high volumes of traffic and provide a continuous network with neighbouring municipalities.

- These roadways can be retrofitted with transit and cycling facilities in order to accommodate other modes of travel.

Neighbourhood Roadways

- These include the collector and local roadways within Coquitlam and do not necessarily provide a continuous network as some facilities are cul-de-sacs or dead-ends to discourage through travel on local roadways.

- These roadways tend to serve the needs for local travel between neighbourhoods as well as providing access to the major roadways network for longer distance travel.

- Neighbourhood roadways provide access to residential properties and typically have on-street parking available.

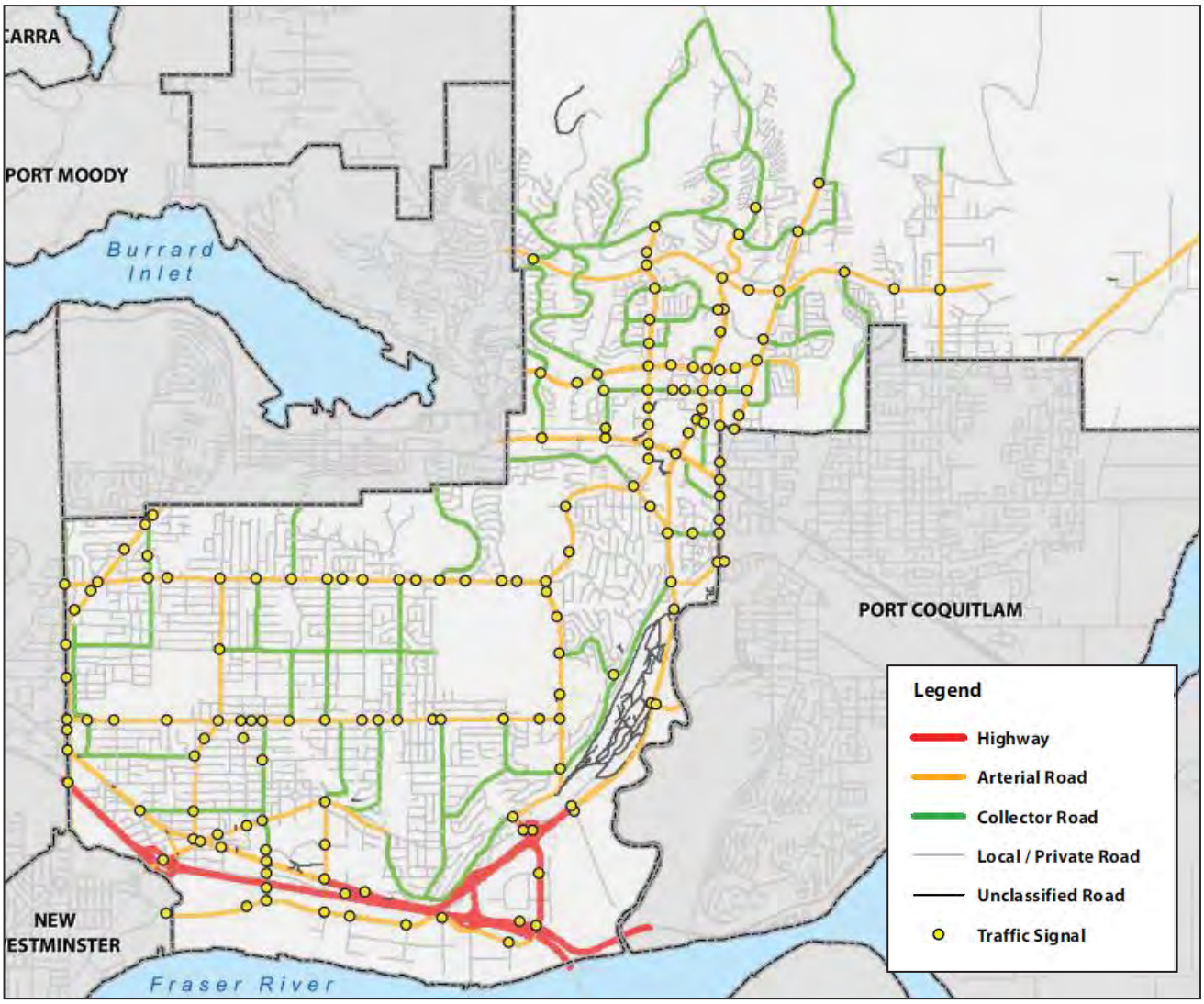
- Transit services are usually limited to community shuttles or HandyDart vehicles.

- Neighbourhood roadways can be designed to encourage safety and livability with elements that provide for traffic management, traffic calming, safe routes to school, etc.

- Many neighbourhood roadways have on-street parking or provide access to off-street parking facilities. Parking is of particular concern in the Town Centre area as well as other high activity areas.

- **Financing and managing the roadway network –** The roadway network in the City of Coquitlam is owned and/or co-managed by the City, TransLink and the Province. The Ministry of Transportation owns and manages the Provincial Highway system including the signals located immediately adjacent to the highway ramps at the Brunette and the Cape Horn Interchanges. The City of Coquitlam owns and manages the remainder of the roadway network and is responsible for all capital improvements, operations and maintenance. TransLink shares responsibility for planning, capital improvements and maintenance of the Major Road Network. These investments are generally designed to support the regional transportation system and mobility of general purpose traffic, goods movement as well as transit. Major Road Network investments that support transit – such as transit priority treatments and upgraded signal systems – are generally funded 100% by TransLink.

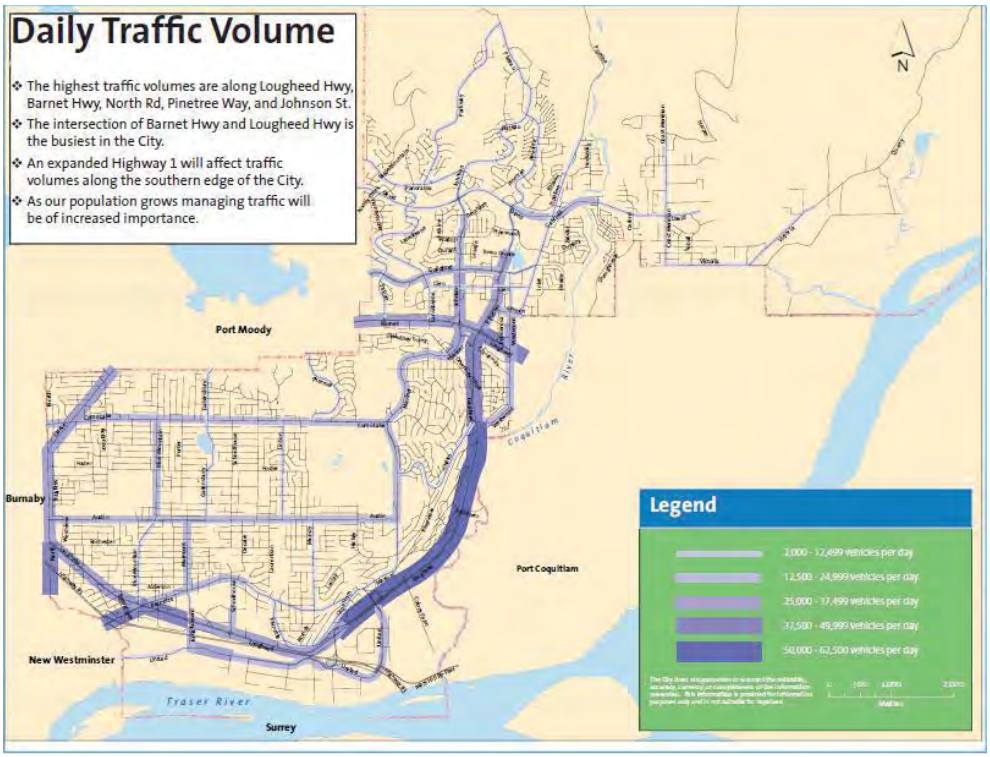
MAP 15 – ROADWAY CLASSIFICATION AND TRAFFIC SIGNALS



- **Traffic volumes –** There are a few key roadway facilities that carry the majority of traffic throughout Coquitlam. As shown in **Map 16**, the Lougheed Highway corridor in particular serves as the major backbone to Coquitlam's arterial roadway network with over 50,000 two-way vehicle trips per day. Other major traffic volume corridors include Barnet

Highway, North Rd/Clarke Rd, United Blvd, Brunette Ave, Johnson/Mariner and Pinetree Way. Generally, the majority of traffic flows in Coquitlam are for east/west travel including through trips along Lougheed and Barnet Highways.

MAP 16 – DAILY TRAFFIC VOLUMES ALONG KEY FACILITIES

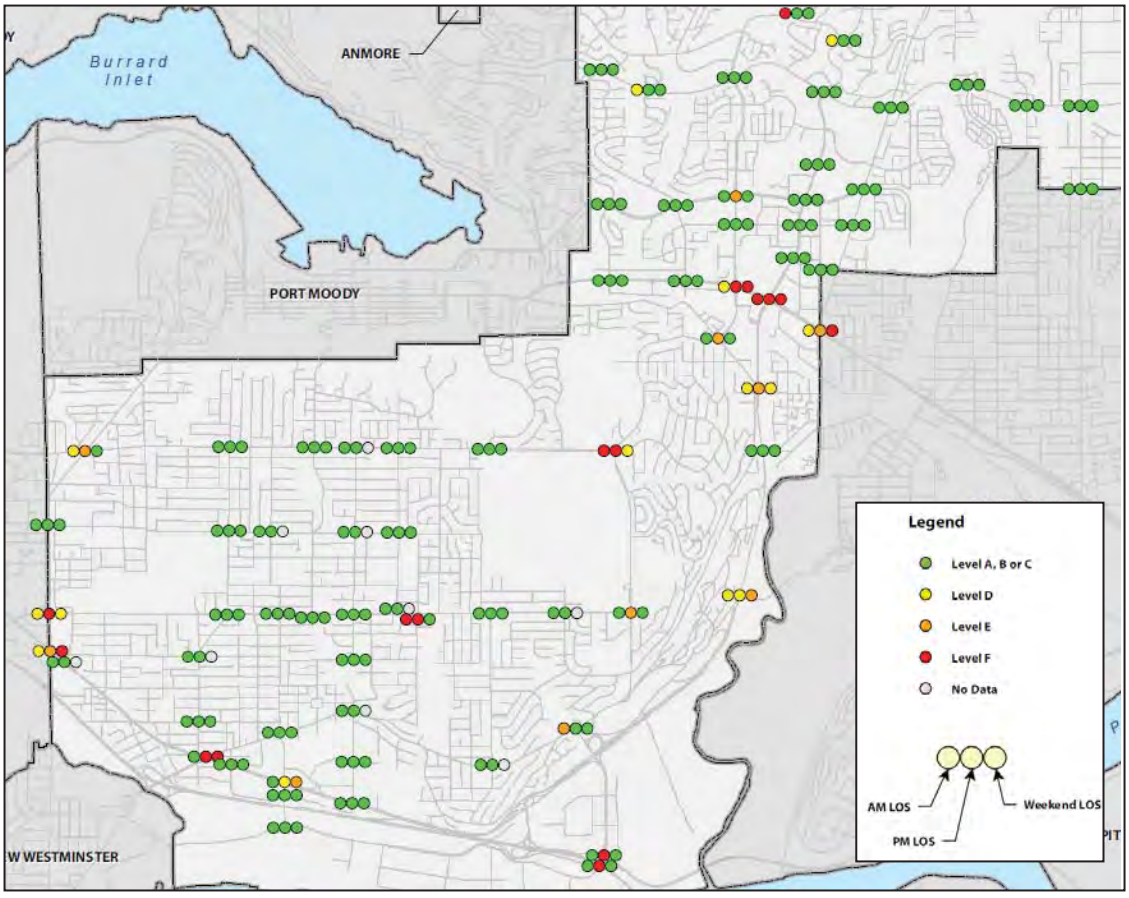


- **Traffic controls** – The City of Coquitlam and the Provincial Ministry of Transportation and Infrastructure operate and maintain all traffic signals within Coquitlam. The City of Burnaby and Port Coquitlam have jurisdiction over a number of traffic controllers at Coquitlam's boundary. The City of Coquitlam also operates a number of signalized pedestrian crossings. Traffic signals are typically coordinated along major arterials in order to facilitate the movement of through traffic.

- **Traffic congestion and recurring delay –** In most urban areas, signalized intersections are the source of most delay experienced on the

roadway network. The levels of service (LOS) illustrated below for the morning, afternoon and weekend peak periods show the areas of congestion and recurring delays. 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 D or better is generally used as the target for planning purposes. Overall, most signalized intersections in Coquitlam are operating at LOS D or better during the peak periods, as shown in **Map 17**. The Coquitlam City Centre area and select intersections along the Lougheed Highway and North Road corridors experience the greatest delays during most peak periods, including weekend afternoons.

MAP -17 – INTERSECTION LEVEL OF SERVICE FOR AM, PM AND WEEKEND PERIODS



- **Recent and planned network changes of other agencies –** There are several network improvements that have been recently completed or planned by neighbouring municipalities and the Ministry of Transportation and Infrastructure. The following discussion highlights those key projects that will influence conditions within Coquitlam:

  - **Port Coquitlam** – The recent opening of the Coast Meridian Overpass was planned and funded by the City of Port Coquitlam and TransLink. The new four lane link between north and south Port Coquitlam provides a valuable connection between Northeast Coquitlam and the Maryhill Bypass. It is anticipated that this will support major north-south travel for general purpose travel, goods movement and transit.
  - **Port Moody** – The Murray-Clarke Connector will provide an enhanced east-west connection between Murray and Clarke Streets through Port Moody's town centre. This will provide a quicker connection for Coquitlam residents travelling along Guildford Way and David Ave and connecting to Barnet Hwy.
  - **Gateway Program** – The Provincial government has already begun the construction of the Port Mann/Highway 1 expansion project scheduled to be open to traffic by the end of 2012. This will include widening of Highway 1 through Coquitlam as well as the reconfiguration of the Cape Horn Interchange. A widened King Edward underpass will also be constructed as part of this project. This major highway expansion project will have significant impacts on automobile travel to, from and through Coquitlam as it will provide increased capacity on Highway 1 and connecting roadways.

- **Parking –** There are many on and off-street facilities throughout Coquitlam for drivers to park their automobile to access shops, schools, institutions and services. On-street parking is generally provided with many of the streets and intersections having parking restrictions for safety and emergency access reasons. Some areas of the town centre contain on-street parking restrictions for residents only. Businesses are

required to provide a minimum amount of parking spots depending on the size and nature of the business as defined in Coquitlam's parking policies.

The City's Street and Traffic Bylaw and the Motor Vehicle Act regulate on-street parking. These regulations are designed to protect and enhance pedestrian and traffic safety. In the Town Centre area, on-street metered parking is provided on portions of Glen Drive, Pinetree Way and High Street.

4.4.2 Key Issues

- **Roadway designation and function –** There is a need to review the existing roadway network to ensure that key facilities are operating as intended. As mentioned earlier, it will be challenging to build significant new links in the roadway network in order to relieve congestion. The future of Coquitlam's transportation system will likely focus on a multi-modal roadway network that accommodates many different modes of travel, not just cars. As noted in Coquitlam's OCP, there are policies that provide support for a multi-use roadway network for cars and for transit vehicles, cyclists, pedestrians, carpools and vanpools as well as commercial vehicles. As such, the concept of "complete streets" will provide a holistic approach and guiding principle to roadway planning that considers the needs of all users. The updated STP will likely look at optimizing the existing network for the efficient flow of goods to industrial and commercial areas and allow for efficient and reliable transit services including access to Evergreen Line, Millennium Line and West Coast Express Stations. Furthermore, the roadway network design will likely provide for the safety and efficiency of vulnerable road users such as pedestrians and cyclists.

- **Discontinuous roadway network –** In key established areas of Coquitlam, some roadways do not provide a continuous connection. This affects the permeability of traffic and forces many trips onto major facilities that are already congested. A continuous grid network provides for an efficient allocation of traffic and provides some redundancy when

key facilities experience accidents or other unforeseen events that disrupt traffic patterns. Furthermore, a dense grid of roadways provides for effective pedestrian connections and circulation.

- **Recurring Congestion and Delay –** As mentioned earlier, there are critical areas of traffic congestion along key corridors where traffic levels are consistently higher than the roadway capacity. This delay is of concern as it affects the livelihood and quality of life for residents of Coquitlam and is a symptom of demand exceeding capacity. The inefficiency in the roadway network leads to lost productivity, frustration and negative economic impacts not to mention poor air quality. These traffic issues will become more problematic as the City continues to grow, but physical, financial and community constraints may make it unfeasible to significantly build on or expand the existing network. There is a need to focus on strategies to manage the roadways in these areas more efficiently and effectively.

- **Funding for new roadways –** Like many communities throughout the region, Coquitlam is limited in its financial capacity to significantly expand its roadway network to accommodate growing travel demand. The current practice is to manage the network within its existing funding program and then apply for grants or negotiate cost sharing agreements with senior levels of government to provide new facilities. Without a stable and predictable new revenue source, it could be difficult to plan for significant investments in the roadway network or other transportation facilities to meet future needs.

- **Development-related impacts –** Coquitlam is a growing city and future traffic demands will likely exacerbate current traffic conditions. Already there are significant areas of traffic delay throughout the city and these will likely only get worse as the city and the region continue to grow and develop. There will be a need to explore development-related cost charges for key growth nodes to cover the costs of providing new links in the transportation network.

- **Emergency response –** Traffic calming and other changes to the roadway can impact emergency response times. Furthermore, as the city continues to grow, there will be increasing challenges for emergency access, particularly along major corridors during peak commuter periods.

- **Regional traffic –** Many of Coquitlam's roadways are configured to provide east/west connections between neighbouring municipalities and connections for regional through travel. Because of Coquitlam's central location, it serves a significant amount of regional travel on its arterial network in addition to local travel. There are negative community impacts of providing for regional through traffic such as congestion delay, air quality, noise, safety and others with possible limited benefits.

- **Supply and Price of Parking -** The supply and convenience (or inconvenience) as well as the price of parking has a significant impact on people's travel choices. An abundant supply of free parking encourages people to drive their automobiles as they will be assured easy access to a parking spot. Disincentives for parking including the supply and price of parking a vehicle, particularly in the higher density areas with adequate supply of transit services, can shift travel habits towards more sustainable modes.

4.5 Goods Movement

Coquitlam's role in moving goods is integrally linked to the Lower Mainland's role as a gateway region for domestic and international trade. There are several key trade corridors running through Coquitlam that have significant economic and community impacts. These include the Highway 1 and Lougheed Highway corridors as well as the CPR railway network corridors that are key links in the Asia-Pacific gateway.

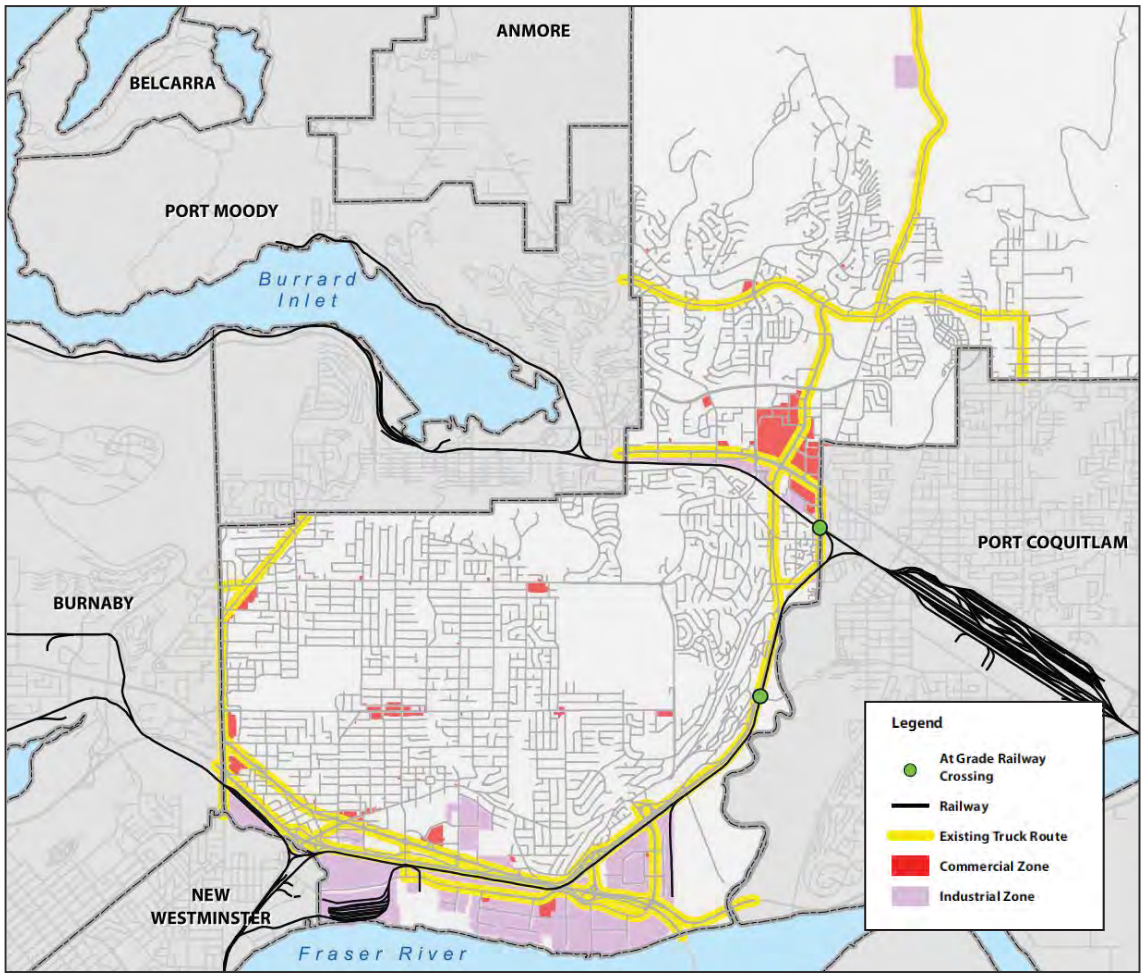
In terms of local goods movement, there are a significant number of local businesses including retailers, warehousing, logistics, resources and other businesses that rely on an efficient truck network to move and deliver goods. The efficient movement of goods and services within the City of

Coquitlam is recognized as being critical to the economic competitiveness and well-being of the municipality.

4.5.1 Facts & Observations

- **Truck Definition –** Coquitlam's Street and Traffic Bylaw defines a truck as a vehicle or combination of vehicles with a gross vehicle weight in excess of 13,600 kg. These vehicles are restricted to use designated truck routes as defined in Schedule A of the bylaw including time of day restrictions. For local delivery, a truck must use a designated route to the closest point possible and then use city arterial streets to reach their destination. The following map highlights the key corridors that are defined as truck routes in Coquitlam as well as the railway network and commercial and industrial zones. Similar to other communities in Metro Vancouver, enforcing this bylaw is difficult given the complexity of the roadway network and resources available for enforcement officers.

MAP 18 – DESIGNATED TRUCK ROUTES IN COQUITLAM



- **Goods movement corridors –** Highway 1 and Lougheed Highway are major truck routes as is the CPR rail network that runs through Coquitlam. These are vital components of the region's gateway network and provide for the efficient movement of freight. These components form critical links in the overall supply-chain and have been identified as such through the Asia-Pacific Gateways and Corridors Initiative.

- **Industrial areas –** There is a significant amount of industrial land within Coquitlam with a focus in the Southern area. These areas include

businesses for manufacturing, warehousing and logistics as well as transload facilities. There tends to be a concentration of heavy trucks in these areas as the businesses are reliant on these larger vehicles to move their goods. Furthermore, these businesses are time sensitive with efficient operations dependent on reliable truck delivery times. As such, the roadways that provide access to these areas need to designed with consideration for the needs of heavy trucks and the businesses that rely on them.

- **Commercial areas –** There is also a significant amount of commercial land within Coquitlam that is reliant on an efficient truck network. As with the industrial lands, commercial and retail businesses rely on trucks to deliver goods to their stores and ultimately to customers. The need to provide local deliver truck access to these properties is critical for the economic competitiveness and efficiency of businesses operating in Coquitlam.

- **Rail corridors –** The CPR rail corridor creates a significant divide within certain parts of the community as crossings are limited. The South Shore Trade Area Study identified key road/rail grade separation projects to enhance the efficiency and safety of the goods movement network.

- **Short Sea Shipping –** Port Metro Vancouver has identified potential short sea shipping nodes within Coquitlam. Brunette Creek/Canfor and Fraser Mills have both been identified as prospective future sites for short sea container shipping nodes. These would provide a future marine terminal used to barge containers between port facilities in order to make best use of Metro Vancouver's waterways and reduce truck volumes on the roadway network.

4.5.2 Key Issues

- **Truck routes affected by congestion –** As with other modes of transport, trucks are affected by automobile congestion. As such, the

economic impacts of delays to the trucking industry are significant throughout the Metro Vancouver region. Truck volumes tend to peak during the midday but there is still a significant volume of trucks that travel during the morning and afternoon peak periods when commuter demands are highest.

- **Neighbourhood impacts –** Trucks and freight trains are seen by some residents as a nuisance because of their visual, noise and air quality impacts. As mentioned previously, however, trucks and trains are an integral part of the local, regional, provincial and national economies and well being of the City as a whole. No business can operate without an effective truck network and customers are indirectly reliant on this network to get goods delivered to retailers.

- **At-grade rail crossings –** Transport Canada's South Shore Trade Area Study identified two critical at-grade rail crossings in Coquitlam. The Lougheed/Pitt River Rd and the Westwood/Davies crossings have significant delay and safety concerns as trains continuously block the roadway for significant amounts of time. The forecasts for international trade are on a growth trend that will see more frequent and longer freight trains moving goods from port facilities in Vancouver to the rest of Canada. As such, the delays associated with at-grade rail crossings will continue to be an issue as our dependence on international trade continues to grow.

- **Consistencies across boundaries –** The harmonization of truck routes and definitions is a key issue in supporting a regional truck network. There is significant variation across Metro Vancouver in terms of what defines a truck and what restrictions or allowances are put in place. There are also inconsistencies in the regional truck network as some municipalities do not designate truck routes.

4.6 Transportation Demand Management

In most municipalities, it is not enough to just provide pedestrian facilities, bicycle routes and transit services to achieve the livability and sustainability goals of the community. As a minimum, consistent policies and programs may be required to encourage people to walk, bike, or use transit. In many cases, communities have taken a more proactive approach toward reducing single-occupant vehicle trips, including both incentives to use other modes and disincentives from driving alone.

Transportation Demand Management (TDM), is the term used to represent a broad range of policies and programs 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 trip reduction 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:

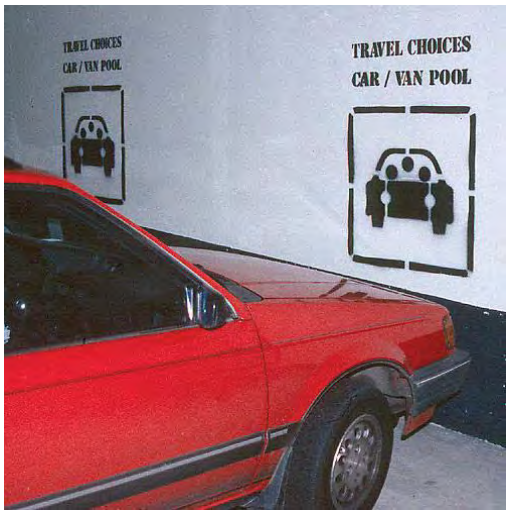
- **Change the amount of travel** by encouraging trip-makers to combine two or more purposes into a single trip, by avoiding commute trips (i.e. by encouraging working from home and home-based businesses), and by reducing the length of trips.
- **Change the mode of travel** by encouraging the use of 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.

4.6.1 Facts & Observations

The City has undertaken several initiatives in recent years to support reduced car use. The following discussion highlights some of these key initiatives:

- The City has initiated an Employee Transit Pass Program. TransLink offers a 15% discount, and the City further subsidizes transit passes another 25%, for a total staff discount of 40% on an annual transit pass.

- There are a number of dedicated car pool parking stalls in the underground parkcade at City Hall. Several car pooling groups of staff commuting from the Fraser Valley and Vancouver are part of this program.
- The City provides secure bicycle parking and showers to support employees who cycle to work.
- The City is currently developing a parking management strategy for the Coquitlam Town Centre that will consider cash-in-lieu payments as a substitute for on-street parking facilities, parking supply rates, potential sites for future off-stret parking facilities, and a review of on-street parking management strategies, such as parking duration restrictions, pay parking, parking control techologies, and enforcement.
- The Ctiy has worked worked with developers to provide parking spaces for car co-ops at developments with reduced parking, as well as increased bicycle parking spaces and end-of-trip facilities at mixed-use developments.
- The City promotes and supports the Commuter Challenge, Jack Bell Rideshare, and promotional events such as bike-to-work week.
- The City has amended its Street and Traffic Bylaw to allow zero emission vehicles to travel on city streets within a 50 km/h speed limit.
- TransLink offers a 'TravelSmart' program through which it works with major employers to establish TDM programs that encourage employees to reduce single-occupant vehicle (SOV) travel. The 'TravelSmart' program includes a number of TDM initiatives, such as telework, ridesharing, car sharing, active transportation and guaranteed ride home programs, as well as a discounted transit passes for companies with 25 or more employees. TransLink also supports the Jack Bell Foundation Van and Carpool program, which matches and provides vehicles to groups of commuters that wish to travel together.



The broader implementation of effective Transportation Demand Management programs and integration with existing City initiatives will

involve the municipality, residents, and major employers and employment centres.

4.6.2 Key Issues

The primary issues pertaining to TDM programs are highlighted below:

- **Driving is predominant.** For the foreseeable future, driving is and will continue to be the most convenient and flexible mode of travel for most people in Coquitlam and throughout the region. Our communities have been largely structured around car travel and the automobile is a major component of North American culture.
- **Few incentives.** At this point, there are few policies and programs that encourage City residents to use alternative modes. As outlined in this Discussion Paper, alternative modes, particularly transit, are not yet time-competitive with the car. Incentives to reduce SOV use include improving infrastructure and services for non-automobile modes, transit pass programs, and employer assistance programs.
- **Few disincentives.** Along the same lines, there are currently few policies or programs in the City that discourage City residents and workers from driving alone. These disincentives may include parking management (restricted supply and higher costs) and other road pricing strategies.
- **Education and awareness.** 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.

APPENDIX A

OCP POLICIES

Overarching Community Goal	Relevant Objectives	Relevant Policies
Compact, Complete Community	**Ensure that New Developments Foster Completeness**	• Encourage any major new developments to reinforce existing community and neighbourhood focal points. Place particular emphasis on Coquitlam Regional Town Centre and all Skytrain and West Coast Express Station Areas. • Provide opportunities to add ground-oriented housing through sensitive infill and intensification in lower density neighbourhoods. • Continue to support complete communities goal over the long-term. Consider additional growth in areas anchored by uses with the potential to become focal points, such as community centres, parks, and existing smaller-scale commercial uses. • Add additional business activities which will provide household-supporting jobs.
	Responsive and Appropriately Located Government Services	• Prioritize City infrastructure investments that reinforce efforts to direct future growth to the City's Regional Town Centre, and Village Centres. • Prioritize City investments in parks, leisure and other City facilities that reinforce efforts to direct future growth to existing centres and any areas appropriate for residential intensification.
	Improving Community Linkages	• Support continued development of the Coquitlam Regional Town Centre with provision of attractive transportation services that support all modes of travel. Provide improved connections to nearby municipalities. • Support compact, mixed-use transit-oriented developments around Skytrain Station areas. Integrate land use and transportation facilities that provide attractive pedestrian, bicycle and bus access to the area. • Ensure transportation supports continued success and future expansion of key commercial areas within the City. Provide attractive levels of transit service and convenient walking and cycling connections to adjacent neighbourhoods. • Increase accessibility to major employment areas of the City from local and regional destinations, as well as external gateways. Achieve this through attractive transit services, roadway network connections, and more support from senior government in rail, marine, and urban transportation investment issues • Recognize Coquitlam's strategic role in broader regional transportation networks.
	Transit-Oriented Development (TOD)	• Create a distinct Village Centre featuring a multi-modal transportation hub and strong civic identity through urban parks and squares. • Provide an interconnected street network throughout the neighbourhood to facilitate ease of walking and cycling and to enable a more efficient use of infrastructure. • Achieve tree-lined, safe, pedestrian-friendly streets. • Provide compact development that contains a range of uses at medium to high densities within a ten-minute walk or a 400m radius from the multi-modal transit hub.
Healthy Environment	**Air Quality, Climate Change and Energy**	• Recognize the impact of vehicle emissions on regional air quality and potentially on climate change. Implement policies to promote transportation alternatives and land use patterns that enable a broader range of choices with reduced impacts. • Further assess ways of adapting City practices that impact air quality and potentially climate change. • Recognize the benefits of vegetation and landscaping treatments in improving air quality, and regulating temperature.
	Water Resources	• Refine existing efforts toward groundwater protection. • Adopt and implement the City's Stormwater Policy and Design Manual, including appropriate consideration in capital planning for infrastructure. Implementation shall entail servicing standards for streets and lanes in the Subdivision and Servicing Bylaw which promote infiltration opportunities and additional pervious cover. • Ensure appropriate interim approaches to watercourse management. Investigate and apply site-specific, best-management measures for mitigating the impacts of stormwater runoff through the development

		process.
	Parks, Trails, and Other Open Spaces	• Develop an inter-connected comprehensive off-road trail system. • Recognize the value of urban plazas in the open space network.
	An Environmentally Responsible City	• Continue to assist in conserving energy, water and other materials within City operations. • Continue to foster broader transportation choices in serving City needs.
Housing Choices	**Housing Choice and Affordability**	• Develop a prudent and comprehensive process for residential intensification through sensitive development that integrates with community character. • Continue to respond to land constraints by facilitating attractive forms of compact housing types.
	Neighbourhoods	• Reinforce landscaping as a character element. • Recognize the importance of built form in respecting neighbourhood character. • Improve integration of all transportation modes through minimizing the amount of street frontage occupied by garages or locating garages to the rear of property. • Help enhance the perception of neighbourhood street safety by providing for street overlooks, pedestrian-scale lighting features and maximizing direct grade access to the street. • Where significant redevelopment is to occur, enhance the sense of a unified streetscape. • Create opportunities for public gathering spaces such as "village squares" in and around larger commercial areas.
Vital Economy	**Industry, Business Parks and Office**	• Provide for the needed land base for industrial, business park and office activities. • Ensure lands are served through an effective transportation network. • Identify and manage present and future utility servicing needs. • Refine industrial and business park land use designations and zoning. This may result in more focused industrial precincts that tend to favour higher density forms. • Continue to encourage the development of office space serving a more regional function in the Town Centre, including further refinements to local transportation and servicing plans. • Identify suitable locations for office uses within Lougheed and Burquitlam Station Areas, near rapid transit facilities. • Provide for smaller scale office uses which serve local household needs in areas close to existing community and neighbourhood retail centres.
	Retail and Service Commercial	• Enhance transportation accessibility for region-serving retail, particularly along highways and major arterials. • Identify and encourage an appropriate supply of regiona-scale retail within Coquitlam. • Reinforce and enhance established community level shopping centres and precincts. • Provide for community and neighbourhood scale retail and service commercial facilities in new locations as needed to respond to population growth. • Encourage new retail developments and redevelopments to respect human-scale design principles. • Address the impact of service stations, fast-food outlets and convenience stores on pedestrian environments. • Enhance pedestrian connections to and within existing regional scale facilities, including power centres and big-box retail. • Ensure easy and convenient transit and cycling connections to retail areas.
	Institutional	• Further assess the land use, transportation, servicing and labour force needs of specific institutional employers and respond with appropriate strategies.
	Technology and Knowledge-Based Business	• Promote Coquitlam Town Centre and Southwest Coquitlam as technology and knowledge-based business nodes. • Recognize the role of transportation and utilities policies and investments in attractive technology and knowledge-based businesses.
	Film and Tourism	• Consider developing an eco-tourism and outdoor recreation strategy. • Concentrate hotels in strategic locations within walking distance of existing amenities and services, such as transit, restaurants, in walking distance. • Provide pedestrian-friendly amenities and cycling facilities to serve existing and new hotels.

Strategic Transportation Choices	**Transportation to Support Neighbourhood Livability and Vitality**	• Develop and maintain a hierarchy of roads throughout the City to accommodate regional and inter-community traffic and direct it to the major road systems. • Maintain and improve the quality of neighbourhood streets as a place for people and transportation. • Ensure continued neighbourhood safety through road access and improvement s.
	Roadway Networks for People, Goods and Services	• Develop the roadway network as a multi-use facility for automobiles, transit vehicles, cyclists, pedestrians, carpools and vanpools as well as commercial vehicles delivering goods and services. • Provide for network efficiency through a strategic and systematic approach. • Manage and expand road network in a fiscally and environmentally sustainable manner. • Recognize travel demands generated by new and infill developments. • Cooperate with other governments and agencies to enhance connectivity and consistency of the Major Road Network. • Provide for transit needs through appropriate road design. • Incorporate provisions for cyclists and pedestrians in the development of all future major road projects. • Improve local circulation for all travel modes. • Ensure that the roadway network is accessible to individuals of varying ages and physical abilities.
	Transit Services and Facilities	• In support of regional transportation demands, enhance rapid transit access between Coquitlam and various regional destinations. • Promote the implementation of attractive transit services to other key destinations not served by SkyTrain. • Enhance the level of transit service for travel within Coquitlam neighbourhoods. • Recognize that transit priority measures on roadways will enhance transit reliability. • Meet the needs of people with specialized access requirements. • Recognize the unique transit needs of major institutions and employers
	Pedestrian and Cycling Mobility	• Foster the development of facilities that enable safe and convenient pedestrian travel. • Ensure consistent and attractive pedestrian connections to neighbouring municipalities. • Facilitate walking to transit stations. • Facilitate cycling to key destinations. • Enhance the comfort and safety of cycling trips. • Promote increased accessibility to public transit by cyclists through attractive connections between the cycling network and the transit facilities. • Support the development and implementation of complementary programs to support bicycle use.
	Transportation System Safety	• Minimize exposure to collisions. • Reduce the risk of collisions. • Pursue partnerships to address high collision locations in the City through safety reviews of intersections and corridors. • Minimize the consequences of collisions, particularly for vulnerable users such as cyclists and pedestrians.
Community Service & Infrastructure Needs	**Accessible Community Facilities and Programming**	• Create opportunity for localized programs and services in neighbourhoods. • Encourage programming to promote a sense of place and neighbourhood uniqueness. • Celebrate and enhance the role of Town Centre civic and recreational facilities as a community focal point. • Reinforce Coquitlam Town Centre as a major library facility. • Facilitate the continued support and operation of facilities and services targeting the needs of specific age groups, with particular reference to seniors and youth. • Encourage citizens of all ages to feel welcome and self-sufficient in community facilities. • Encourage physical environments that do not inhibit the movement of people with disabilities.
	Community Safety	• Recognize the land use connection to fire safety. • Recognize the role of appropriate land use combinations in crime prevention.
	Sustainable Utilities	• Promote a community-wide infrastructure and capital planning process which integrates maintenance, rehabilitation and upgrading of existing infrastructure with the need to expand and extend infrastructure

		services to accommodate the needs of future growth. • Expand, extend and stage infrastructure services to accommodate future growth consistent with the City's overall growth management strategy that provides for a more compact, complete community. • Prepare and implement a comprehensive long-term servicing strategy for Greenfield development and redevelopments. • Proactively assess infrastructure conditions. • Advocate the interests of the community with Provincial and Federal agencies.

APPENDIX B

RELEVANT PLANS AND REPORTS

Scope	Document Name	Author	Summary of Policies/Targets
Federal	Sustainable Transportation: The Canadian Context	Canada	• Explores sustainable transportation in Canada by discussing the nature of the challenges and what is currently being done to address them. The Report presents the current state of transportation in Canada and presents solutions that help to make the various modes of transportation more sustainable now, and in the future.
Provincial	Climate Action Plan	Province of BC	• Outlines strategies and initiatives to reduce greenhouse gas emissions in BC by 33% by 2020. The Plan established targets, goal specific strategies and incentives for those who make efforts to reduce GHG emissions.
Regional	Regional Growth Strategy (Draft)	Metro Vancouver	• One of the five goals of the Strategy is to "Support Sustainable Transportation Choices." This is to be accomplished by: Coordinating land use and transportation decisions to encourage the use of transit, high occupancy vehicles, cycling and walking.
	Transport 2040	TransLink	• The Plan identifies the challenges and key goals, and proposes strategies to reach those goals. The Goals are as follows: **Goal 1:** GHG emissions from transportation are aggressively reduced, in support of federal, provincial and regional targets. **Goal 2:** Most trips are by transit, walking and cycling. **Goal 3:** The majority of jobs and housing in the region are located along the Frequent Transit Network. **Goal 4:** Traveling in the region is safe, secure, and accessible for everyone. **Goal 5:** Economic growth and goods movement are facilitated through effective management of the transportation network. **Goal 6:** Funding for TransLink is stable, sufficient, and appropriate. This influences transportation choices.
	2010 10-Year Plan	TransLink	• The Plan identifies the requirements necessary to meet the goals of Transport 2040. The Plan identifies that there is a significant funding gap to sustain existing investments and services which will are to result in reductions to investments and substantial cuts in transit services (e.g., a reduction of existing bus services y 40%)
	Northeast Sector Area Transit Plan	TransLink	The Plan, written in December 2002 includes the following: • A review of land use and transportation characteristics that guide the development of services, an evaluation of route performance for the Northeast Sector bus services, the identification of key transit issues and market opportunities, the development, evaluation, and refinement of service concepts and A four-year implementation strategy.
Municipal	Coquitlam 2021 Strategic Plan	City of Coquitlam	• Goal to increase active participation and creativity by developing a sustainable system of parks and open spaces. • Goal to enhance sustainability of City services and infrastructure by developing a sustainable infrastructure and land management program and recognize open space and natural areas as a form of infrastructure.
	Embedding Sustainability in the Business of City Government	City of Coquitlam	• Identifies the City's commitment to sustainability. • Articulates the goal of reducing green house gas emissions from City operations by 20% in 10 years. • Focus on long term infrastructure planning, life cycle planning and construction, design and maintenance of City infrastructure incorporating, where appropriate, sustainability best practices.
	Coquitlam Economic Action Plan	City of Coquitlam	• Capitalize on major transportation infrastructure to create new business opportunities.
	Master Trail Plan	City of Coquitlam	• Guides the provision of a city-wide, off-road network of trails in the City's Parks and Open Spaces. The Mater Trail Plan includes a Trail Network Plan which identifies existing trails and conceptually illustrates proposed trail connections and where future trails are to be constructed.
	Coquitlam	City of	• The Coquitlam Fraser Greenway is proposed to enhance east-west walking and cycling connectivity

	Fraser Greenway	Coquitlam	within the Pacific Reach area in southwest Coquitlam. The project considers route location, alignment and evaluates 4 different options.
Neighbourhood and Area Plans	Maillardville Neighbourhood Plan	City of Coquitlam	• The City is in the process of updating the Maillardville NP. It is intended that the Plan will achieve the provision of more transportation choices for existing and future residents and business. Making transit, walking and cycling easier to use will increase livability and help reduce impacts on air quality and GHGs.
	Lougheed Neighbourhood Plan	City of Coquitlam	• As the plan encourages a significant increase in the population and redevelopment of commercial precincts, improvements to the pedestrian and cycling realms are directed in the NP. Improvements and upgrades to the transportation network (including the road network) are encouraged, specifically in those areas with greater densities.
	Northwest Area Plan	City of Coquitlam	• The Plan outlines a number of upgrades planned for the road network however the Plan recognizes that rapid transit to Coquitlam Regional Town Centre is key to meeting the transportation needs of the Plan area. As in other Area Plans, considerable focus has been put on improving the pedestrian and cycling network.
	Northeast Area Plan	City of Coquitlam	• The Plan identifies a number of specific improvements that are to be undertaken to the road network however the Plan also recognizes that the road network should be a multi-use facility and should support transit, cycling and walking. The Plan promotes an attractive, safe and accessible bicycle and pedestrian network.
	Lower Hyde Creek Village Neighbourhood Plan	City of Coquitlam	• The primary transportation objective is to encourage walking, cycling and the use of public transit instead of the automobile. This is to be done by: developing a coherent pattern of streets and uses, improving accessibility, safety and pedestrian comfort, and slowing vehicular traffic.
	Upper Hyde Creek Village Neighbourhood Plan	City of Coquitlam	• Similar to the Lower Hyde Creek Plan, the primary transportation objective of the Plan is to encourage walking, cycling and the use of public transit instead of the vehicles. In suitable locations, a Green Streets Pilot program will be implemented.
	Smiling Creek Neighbourhood Plan	City of Coquitlam	• The Plan establishes a framework for the creation of a compact and walkable village neighbourhood using a coherent, dense and connected pattern of public streets, lanes and pedestrian and cycling routes. The transportation aim of the Plan is to encourage walking, cycling and the use of public transit as an alternative to the private automobile
	Burquitlam Neighbourhood Plan	City of Coquitlam	• The Plan describes the new Transit Villages that will be developed along the future rapid transit line. The development of these Transit Villages will be built according to best practices for TOD development. A significant focus has also been placed on Clarke Rd. which is to be redeveloped with retail frontage, wide sidewalks, street trees and coordinated street furniture to improve the pedestrian experience. Cycling and walking are identified as key forms of transportation for the Burquitlam neighbourhood.
	Waterfront Village Centre Neighbourhood Plan	City of Coquitlam	• Environmentally-Friendly, Community Oriented Transportation specifically, efficient, low-impact transportation systems is one of the 8 pillars for sustainability that form the basis for the Plan. A key focus of the Plan is to create an expansive network of pedestrian and cyclist connections and to prioritize the environment for pedestrians, cyclists and transit users. In addition, a TDM Plan has also been created for the neighbourhood.
	Southwest Area Plan	City of Coquitlam	• The Plan focuses on increasing transportation choices, particularly cycling, walking and taking transit. Cycling walking is promoted in the Plan by developing incentives, improving safety and accessibility, encouraging the development of end-of-trip facilities and by developing and maintaining a comprehensive walking and cycling network. The Plan also recognizes the importance of facilitating the movement of goods as this significantly impacts the economy.
	Austin Heights Neighbourhood Plan (Draft)	City of Coquitlam	• A key focus of the Plan will be to create more transportation choices for Austin Heights, making it easier to walk, cycle or take transit, which will cut down on contributions to air pollution.
	City Centre Area Plan	City of Coquitlam	• A key message of the CCAP is to promote a culture of walking, cycling and transit use. The Plan commits the City to provide a full range of sustainable, multi-modal transportation choices in

			consideration of general and specific accessibility and mobility needs in the City Centre for maintaining economic vitality and reducing greenhouse gas emissions.
	Partington Creek Village Neighbourhood Plan (Draft)	City of Coquitlam	• The City is in the process of developing the Plan. The Draft development concept proposes a pedestrian oriented main street, a mix of transit-supportive land uses and densities within the proposed urban development 'village areas, and a concentration of residential land uses within a 10 minute walk of the village centre.
	Lougheed and Burquitlam Guidelines	City of Coquitlam	• Design guidelines for outdoor streetscapes, urban greenways, public open spaces, public art, private realm development and parking areas.
	Maillardville Neighbourhood Centre Development Permit Guidelines	City of Coquitlam	**Objectives of the Design Guidelines are as follows:** • Integrated design theme and distinct identity for public spaces, streetscapes and other publicly accessible environments. • Develop a well connected network of high-quality streetscapes particularly for pedestrians, bicyclists and transit users, but also to accommodate vehicular circulation. • To enhance the local traffic circulation systems, while protecting the arterial function of Brunette Ave. • To recognize Maillardville as a visible "gateway" to Coquitlam.
	Southwest Coquitlam – Town Centre Area Plan	City of Coquitlam	• Identifies proposed location of further transit-related facilities • Plan policies require the need for convenient pedestrian circulation to transit stops as well as to parks and schools, be considered in the subdivision approval process. • The Province's long-term plans to upgrade the Trans Canada Hwy may have implications for sites within the plan boundary. • Where possible, encourage landowner participation in new road construction through the development process (policy). • Reductions of on-site parking requirements by up to 30% for developments within the Town Centre DPA. • Reduce conflicts between industrial traffic and residential neighbourhoods (policy F-2). • Major development applications and subdivisions should be reviewed in terms of transit-service and accessibility (policy F-3). • Implementation of the pedestrian-orientation concept in the Town Centre area (policy E-3).
	Regional Town Centre Concept Plan and Urban Design Guidelines	City of Coquitlam	• Provides design guidelines for pedestrian spines, pedestrian transportation networks and other public sector components.