City of Coquitlam Strategic Transportation Plan

Report #1: Mobility Snapshot

May 2023



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City of Coquitlam | Strategic Transportation Plan - Mobility Snapshot



1.0 A Renewed Vision for Transportation in Coquitlam

Coquitlam is a vibrant and rapidly growing community of nearly 160,000 residents in the Northeast Sector of Metro Vancouver. Coquitlam is the sixth largest municipality in British Columbia and is the fifth fastest growing municipality in Metro Vancouver, with its population increasing by nearly 30,000 people, or 22%, between 2011 and 2022. Together, Metro Vancouver's five fastest growing cities of Surrey, Vancouver, Burnaby, Langley Township and Coquitlam have accommodated 74% of all population growth in the region since 2011. The City is located at the nexus of several regional transportation facilities, including Highway 1 and Highway 7, the Evergreen Extension of the Millennium Line SkyTrain, the R3 Rapid Bus route, the West Coast Express and several major rail corridors (see **Figure 1-1**). Coquitlam is a sought-after destination for families, young professionals and those looking for more space for a number of reasons, including:

- > Central location in the region.
- > Proximity to nature.
- Rapid transit options, including the Evergreen Extension of the Millennium Line SkyTrain and the R3 Lougheed Highway RapidBus.
- Prevalence of new high density, mixed-use developments near rapid transit.
- > Less expensive real estate relative to other parts of Metro Vancouver.

The City's existing Strategic Transportation Plan (STP) was adopted in 2012 and has served as an important planning tool for the City over the past 10 years. Since the existing plan was developed, the City has been continuously investing in transportation infrastructure. Between 2017 and 2021, the City has spent nearly \$100 million on transportation projects, representing an annual investment of approximately \$19.5 million. As a result, many of the projects identified in the existing STP have been implemented or implementation is underway.

The existing STP set a modest target that 30% of all daily trips be made by sustainable forms of transportation by 2031. The City has made progress working towards this achieving this target – in 2008, sustainable transportation accounted for approximately 18% of all daily trips made by Coquitlam residents¹, and this has increased to over 22% of all trips in 2022². However, there is still significant progress to be made, as the majority of trips in Coquitlam are still made by vehicle, as vehicles still account for over three-quarters (77%) of all daily trips made by Coquitlam residents.³

A lot has changed in Coquitlam since the existing STP was developed. The current STP was developed four years prior to the opening of the Evergreen Extension of the Millennium Line in 2016, which has had transformational impacts on land use and mobility patterns in

What is Sustainable Transportation?

Sustainable transportation refers to low and zeroemission forms of transportation. This includes walking, cycling, transit and other forms of micromobility such as e-scooters and skateboards.

Coquitlam and the Tri-Cities Region. While the existing STP accounted for rapid growth and changes with the introduction of SkyTrain, there were many uncertainties at the time the existing plan was developed.

At the same time, Coquitlam – like many cities – is facing a number of increasingly complex, interrelated and urgent challenges including the climate emergency, social inequity, public health, road safety, congestion, inflationary pressures and increasingly constrained municipal budgets. Transportation, integrated with other Citywide Coquitlam plans (e.g. Economic Development Strategy, Environmental Sustainability Plan) can help to address many of these challenges.

The STP Update will provide a renewed transportation vision for the City of Coquitlam. Integrated with Transport 2050, TransLink's recently adopted updated Regional Transportation Strategy for Metro Vancouver, the STP update will guide the City's transportation investments and decision-making over the next 25 years and beyond. This is the first report prepared as part of the STP Update. It provides an overview of existing conditions for transportation and mobility in Coquitlam and highlights key opportunities and challenges to be addressed through the STP process.

- 1 TransLink, 2008 Regional Trip Diary Survey
- 2 City of Coquitlam, 2022 Household Travel Survey

³ City of Coquitlam, 2022 Household Travel Survey



Railway

STRATEGIC TRANSPORTATION PLAN

2.1 Why an Updated Plan is Needed

The City's existing STP was adopted in 2012 and has served as the road map for Coquitlam's transportation system. The existing STP outlines high-level transportation policies and potential improvements for all types of travel for 20 years and beyond. The existing STP includes a vision and six goals. The existing vision states that Coquitlam's transportation system by 2031 will enhance the livability and sustainability of our community of neighbourhoods, by providing accessible, safe and convenient transportation choices with a greater emphasis on transit, walking and cycling both locally and between neighbouring communities.

The existing STP also includes the following six goals:

- **1.** Build high quality multi-modal facilities within and between neighbourhoods.
- 2. Develop transportation infrastructure and service to support a healthy environment.
- 3. Maintain and improve the quality of streets as a place for people.
- 4. Move people and goods efficiently.

- 5. Prioritize walking, cycling, transit and other sustainable modes of transportation.
- 6. Manage the transportation system efficiently as the community evolves.

The STP is part of the City's suite of Official Plans that support and align with the City's Strategic Plan and its five strategic goals (see Figure 1-2).

Figure 1-2: City of Coquitlam Planning Framework

Council approves all plans & projects

Community Engagement through:

- \rightarrow Public meetings

- → City employees
- \rightarrow Residents



Neighbourhoods



& Local Jobs



REVIEWED EVERY 10-15 YEARS: **Strategic Plan**



Infrastructure

ellence In overnance Citv G

REVIEWED EVERY 5-10 YEARS: **Official Plans & Planning Studies:**

& Active Citizens

Transportation Plan | Official Community Plan | Financial Plan | Master Plans

REVIEWED EVERY YEAR: City-wide Annual Business Plan:

Tactical priorities that help achieve the City's Strategic Goals and Vision.

REVIEWED EVERY YEAR: Coquitlam City Budget

Source: City of Coquitlam Strategic Plan (2020-2023)

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Like the other Official Plans, the STP requires a comprehensive update every 5-10 years. Transportation has also often been a top-of-mind issue (e.g. traffic congestion, public transit services) for the community in the City's Ipsos Community Satisfaction Surveys and this STP update will ensure the updated plan better reflects:

- > The City's changing demographics and priorities around equity, diversity and inclusion, climate action and housing affordability.
- > New and emerging mobility trends and best practices.
- > Completion of projects in the STP such as progress in building out the sidewalk and cycling network and certainty around rapid transit outcomes of the Evergreen Extension of the Millennium Line.
- Recent growth and development patterns with transformational impacts on land use and mobility patterns in Coquitlam and surrounding municipalities
- > A response to climate action and the City's Environmental Sustainability Plan (ESP). The ESP links to transportation with several goals, including reducing greenhouse gas (GHG) emissions and encouraging sustainable modes of transportation.
- Integration with the updated Regional Transportation Strategy, Transport 2050.

Coquitlam Central Station

1.3 Why Transportation Matters

Transportation is an important element in our everyday lives and directly impacts how safe, affordable and equitable our communities are. The modes we have available to us and choose to use have impacts for our own health and community. Creating a transportation system that prioritizes people and sustainability can address a wide range of broader societal objectives, shaping our communities and lives.



Safety: High automobile speeds and traffic volumes contribute to traffic-related injuries and fatalities for pedestrians, cyclists and motorists. Safe street design improves safety for all road users and addresses citizens' perception of safety.





Climate Action: Transportation-related air pollutants are the largest contributors to poor air quality and produce greenhouse gas (GHG) emissions, which have negative implications for community quality of life, public health and climate change. Supporting sustainable transportation options, such as walking, rolling, cycling and transit use are ways the City can implement climate action that improves air quality and the resilience of our transportation network.

Public Health: Transportation and urban planning policies can effectively encourage physical activity. With more active transportation and transit options, people can be more active. Being more physically active improves people's overall health and can reduce rates of chronic disease and premature death.





Equity & Affordability: Affordable and equitable transportation can enable residents of all incomes and abilities to access necessary services and supports (e.g., employment, education, healthcare, public and social services and healthy food) that are critical components to people's dignity and well being. The cost of owning a vehicle (such as car payments, insurance, maintenance and fuel) is significant and rapidly increasing. This also disproportionately impacts lower income individuals and families. The proportion the City has to spend on parking, street maintenance and mitigating negative health outcomes from vehicles reduces the dollars that could be spent supporting equity-deserving groups.

Economy: An efficient transportation network benefits more than just commuting employees - goods are delivered with ease, customers can access shops more frequently and the community becomes a sought-after destination for new businesses. Housing and transportation costs, both of which are often the two largest expenditures for households, are barriers for many. Affordable housing options need to be provided where households have access to sustainable, costeffective transportation options and choices, particularly transit and proximity to places of employment and daily needs.



1.4 An Equity-Centered Plan

In recent years, Coquitlam has strengthened its focus on promoting equity, diversity and inclusion (EDI) in the City's work and in the community at large. EDI initiatives seek to build an equitable and inclusive society for all by addressing the inherent injustices and biases that hinder and harm some people while benefiting others.

One of the aims of the updated STP is to develop a transportation network that serves all areas of the City and provides equitable access for all residents. This means being inclusive of – and prioritizing equity-deserving groups, including people of ages, abilities, backgrounds and identities. It is especially important to focus on centering equity and supporting equitydeserving populations, which may include, but are not limited to, the following:

- > Women
- > Seniors
- The Black, Indigenous and People of Colour (BIPOC) community
- > Immigrants and refugees
- > LGBTQ2SIA+ community
- People with accessibility needs, including those with challenges related to mobility, vision, hearing, strength, dexterity and/or comprehension
- > People who are socio-economically disadvantaged
- > People experiencing homelessness
- > People experiencing substance use disorder
- > People who are neurodivergent
- > People experiencing poor mental health

Applying an equity lens means continually asking:

- > Who will benefit from a policy, program, initiative, or service?
- > Who might be excluded from those benefits and why? Who might be harmed?

- > How might some population groups be unfairly burdened today or in the future? How might existing privilege be further entrenched?
- > Have important decisions been made with the direct input of those who will be most affected by those decisions?
- > From whose perspective is the success of the project being evaluated?

A GIS-based equity analysis was used to identify areas of the City where there are higher concentrations of equity-deserving groups. The results of this analysis identify under-served areas in the City where there is an opportunity to make strategic investments to improve transportation equity.

The equity analysis used nine indicators that were combined to determine an overall equity score. A higher equity score (dark red) indicates a higher equity need. The areas with the greatest concentrations of equity-deserving communities are found near rapid transit in the City Centre as well as the Burquitlam and Lougheed areas (see **Figure 1-3**).

It is important to note that there are several different methodologies that can be used to look at demographics and neighbourhood need, and this GIS analysis did not weigh the criteria and is limited to the information contained within the federal census. The equity-priority groups that are not captured within this GIS analysis (due to limitations in available spatial data) include persons with disabilities, the LGBTQ2SIA+ community, persons experiencing substance use disorder and persons experiencing homelessness.

Equity Analysis

The equity analysis used nine equally weighted indicators based on Statistics Canada data in Coquitlam's census tracts:

- > Indigenous people
- People with limited knowledge of English
- > Low income groups
- > Recent immigrants
- > Seniors
- > Single parents
- > Visible minorities
- > Youth

FOSTER WENDE

ROCHESTER AVENUE

ALDERSON AVENUE

 Households with a high proportion of income spent on shelter

JREE



0 0.5

Kilometers

Fraser River

OVERALL EQUITY NEED



1.5 Plan Process

The STP Update is being developed over a five-phase process between July 2022 and May 2024, as shown below. The updated plan will be developed using a combination of technical analyses grounded in best practices and ensuring alignment with the local and regional policy and plans, along with input from community and stakeholder feedback.



The updated STP is being developed with extensive public and stakeholder engagement. The first round of public engagement took place during Phases 1 and 2 of the process between July and December, 2022, and involved nearly 1,500 participants, including:

- > **Project Website** on the Let's Talk Coquitlam Platform that was launched in July 2022.
- > **Meetings** with various Advisory Committees and Coquitlam Youth Council to introduce the project.
- > Community Survey that was available from July 1 to September 5, 2022 and received 854 valid responses.
- Pop-up Community Engagement with nine pop-up events at civic amenities (various parks, Place des Arts and Coquitlam Central Bus Exchange) and events (Canada Day, Farmers Market and Bike to Shop) in July and August 2022, with participation from nearly 500 participants.
- > Targeted Engagement involving eight meetings with several equity-deserving groups within the community including recent immigrants, people with disabilities and children and youth to better understand transportation in Coquitlam from their perspective.

Further details about the engagement process and what we heard from this preliminary engagement can be found in the corresponding **Phase 1 and 2 Engagement Summary Report.**

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2.0 Community Profile

Coquitlam is the sixth largest city in British Columbia and is the fifth fastest growing municipality in Metro Vancouver in absolute numbers, with its population increasing by nearly 30,000 people, or 22%, between 2011 and 2022. With rapid growth, many parts of the City are transforming into dense, mixed use and transit-oriented communities, particularly in proximity to rapid transit in the Coquitlam City Centre, Lougheed Town Centre and Burquitlam areas. This rapid growth and development is placing increasing pressures on the City's transportation system, meaning the transportation network must continue to evolve to meet the everyday needs of residents, businesses and visitors of all ages, abilities and backgrounds, ensuring there is a range of convenient, affordable and sustainable transportation choices. This section summarizes Coquitlam's land use, demographics, policy context and funding and investment context.

2.1 Geographic and Land Use Context

- Coquitlam is nestled between and serves as a gateway for several rapidly growing communities in the Northeast Sector. Coquitlam's access to nature and major amenities also draws many visitors. Because of this, Coquitlam is seeing increased pressure on the transportation network with more through traffic and visitors.
- > Coquitlam has historically been a suburban, automobile-oriented community. Coquitlam is evolving into a vibrant, mixed-use and dense community, particularly in the Coquitlam City Centre area and surrounding SkyTrain station areas.
- > Much of Coquitlam's growth and development is concentrated near rapid transit in key areas such as Coquitlam City Centre, Lougheed Town Centre and the Burquitlam area. The City's OCP also identifies a number of Local Centres that act as key commercial areas and destinations, including Maillardville, Austin Heights, Fraser Mills and Partington Creek (see Figure 2-1).
- > The City is home to significant institutional destinations, including səmiq wə?elə (Riverview) and Douglas College.
- > Outside of these areas, Coquitlam is still low density and predominantly made up of single-family homes, which makes trips by active and sustainable transportation more challenging as desired destinations have on average longer distances to access.
- Many areas of Coquitlam are very steep with slopes between 10–30%, which can be a barrier to walking, cycling and access to transit.







2.2 Demographic Context

- > Coquitlam is a sought-after destination. From 2011 to 2022, Coquitlam saw a 22% increase in population, with the population growing by nearly 30,000 residents from approximately 130,000 to nearly 160,000 residents. This is approximately 2,600 new residents every year (see Figure 2-2).
- > The City is expected to grow at an even faster rate in the future, with an anticipated population of approximately 253,000 residents by 2050, representing an increase of 68% from 2022 with nearly **100,000 new residents by 2050**, and a doubling of residents since the start of the existing STP. This is approximately **3,500 new residents every year**, resulting in nearly **1,500 of new housing units needed every year** (see Figure 2-2).
- > The City is also expecting to see significant growth in employment in the future. The City was home to approximately 55,500 jobs in 2017, and this is expected to increase at a similar rate to population growth by approximately 65% to nearly 92,000 jobs by 2050, representing over 36,000 new jobs by 2050.
- > The majority of this population and employment growth is anticipated in a few specific areas of the City, with the majority of growth concentrated close to rapid transit in Coquitlam City Centre, Lougheed Town Centre and Burquitlam areas (i.e. around SkyTrain stations, Coquitlam Central West Coast Express station and along the R3 RapidBus corridor) (see Figure 2-3).
- > Coquitlam is the largest City in the Northeast Sector, accounting for approximately 60% of its 265,000 residents. Similar rates of growth are anticipated elsewhere in the Northeast Sector, which will continue to place pressure on the City's transportation system.
- > Along with the many opportunities this growth brings, the City's transportation networks are facing new pressures, challenges and opportunities from a shift in priorities locally and regionally to enable a shift to sustainable transportation for both local and regional travel.



Figure 2-2: Projected Population Growth

Source: BC Stats Municipal and Sub-provincial Areas Population, 2011 to 2022, City of Coquitlam Population Projections, 2030-2050



POPULATION GROWTH (2017 - 2050)



≤ 500 people 501 - 1,000 people 1,001 - 2,750 people 2,751 - 6,500 people > 6,500 people

-O- SkyTrain

- 800 metre buffer from SkyTrain - station
- Highway
- Other Streets
 - Municipal Boundary

Figure 2-3: Projected Population Growth By Traffic Analysis Zone Source: City of Coquitlam Population Projections, 2030-2050)



- > Growth has brought a changing demographic to Coquitlam with more working age people and seniors, and fewer young families (see Figure 2-4). The median age of Coquitlam residents increased from 37 to 41.6 between 2001 and 2021, while the average household size dropped from 2.8 to 2.6 between 2006 and 2021.
- > The City will be rapidly aging in the coming years. There are approximately 25,000 residents aged 65 or over in Coquitlam, representing approximately 16% of the population. This is anticipated to more than double to nearly 55,000 residents by 2050, representing 22% of the population.
- > With more families, young professionals and those looking for more space, affordability, equity, diversity and inclusion, as well as climate action, are the top priorities for the City and its residents.



Figure 2-4: Change in Population Age Cohorts

Source: Canadian Census 2001-2021

2.3 Policy Context

The updated STP is closely linked to several other plans and policies at the local, regional and provincial levels as well as with the connections with Indigenous communities. These documents set the overarching goals, visions and objectives for land use, transportation and other key long-term planning considerations in the City and beyond.

2.3.1 Local Plans and Policies

Several overarching City plans are closely tied to the transportation plan. The City has a number of plans, policies and bylaws that will inform the development of the updated STP as noted below. Notably, the *Environmental Sustainability Plan* (ESP) adopted in 2022 has established targets for corporate and community greenhouse gas (GHG) emission reductions – 45% reduction from 2007 levels by 2030 and achievement of carbon neutrality by 2050. The City is also currently undertaking a number of parallel and related initiatives, including the *Climate Action Plan, Road Safety Strategy*, *E-Mobility Strategy* and *Citywide Parking Review*, all of which will inform and be informed by, the updated STP.

- > Financial Plan (2023-2027)
- > Business Plan (2023)
- > Environmental Sustainability Plan (2022)
- > Citywide Parking Review (ongoing)
- > Strategic Plan (2020-2023)
- > Housing Affordability Strategy (2015)
- > Master Trail Plan (2013)
- Community Greenhouse Gas Reduction Strategy (2012)

- > Subdivision and Development Servicing Bylaw
- > Citywide Official Community Plan including Area
 Plans and Neighbourhood Plans
- > Zoning Bylaw
- > Road Safety Strategy (ongoing)
- > E-Mobility Strategy (ongoing)
- > Climate Action Plan (ongoing)
- > Economic Development Strategy (ongoing)

2.3.2 External Plans and Policies

Both the Provincial and Federal governments have established bold targets to reduce GHG emissions. Canada has set a target to cut its GHG emissions by 40-45% below 2005 levels by 2030, while the Province's *CleanBC* plan includes targets to reduce GHG emissions to 40% below 2007 levels by 2030, 60% by 2040 and 80% by 2050.

The Province released *Move. Commute. Connect.* – *B.C.'s Active Transportation Strategy* in 2019. The strategy sets bold targets to double the percentage of trips taken with active transportation by 2030 as a way to help the Province meet its GHG emissions targets to support the implementation of active transportation infrastructure, the Province released the *B.C. Active Transportation Design Guide* to ensure consistent active transportation facility design across the Province. The Province also administers the *Active Transportation Infrastructure Grant* to support active transportation investments across British Columbia. It is anticipated that the Province will finalize a comprehensive *Clean Transportation Action Plan* in 2023, providing further clarity on how municipalities can integrate their strategic plans to further support emission reductions related to transportation.

These provincial initiatives, along with Canada's new federal *National Active Transportation Strategy* and *National Active Transportation Fund*, represent new partnership opportunities to help finance transformational active transportation infrastructure programs for communities with shovel-ready projects that meet the goals of making active transportation safe, comfortable and connected.

At the regional level, TransLink recently adopted Transport 2050, Metro Vancouver's updated Regional Transportation Strategy, which outlines a new long-range vision with over 100 actions or strategies to make transportation options more convenient, reliable, affordable, safe, comfortable and environmentally sustainable. The Transport 2050 strategy has a target for walking, cycling and transit to account for at least half of all passenger trips by 2050. TransLink's Transport 2050: 10-Year Priorities provides a blueprint of priority investments over the next decade to implement the goals and targets set out in Transport 2050. Metro Vancouver also recently adopted Metro 2050, Metro Vancouver's updated Regional Growth Strategy and *Climate 2050*, a climate strategy for the Metro Vancouver region.

External Plans and Policies



Transport 2050 Regional Transportation Strategy



Regional Greenways 2050



Metro 2050 Regional Growth Strategy



Move Commute Connect **BC's Active** Transportation Strategy



National Active Transportation Strategy 2021-2026

City Plans and Policies



Official **Community Plan**



Plan

Strategic



Coouitlan

Environmental **Sustainability Plan**



Housing Affordability Strategy



Master **Trail Plan**

2.4 Funding and Investment Context

- > Over the last five years (from 2017 to 2021), the City has dedicated \$584 million in funding towards capital investments.
- > Over this period, 23% of this capital funding (\$134 million) has been allocated to transportation-related work for a variety of renewal and expansion projects.
- > Of the \$134 million of allocated funding, just over \$97 million has been spent from the start of 2017 to the end of 2021, representing \$19.5 million on average per year.
- > Of the \$97 million spent over the past five years, nearly half of this investment (46%) is from City Reserves, 20% from taxation, 14% from external grants, 12% from Development Cost Charges (DCCs) and 8% from other external contributions.
- > 59% of the City's transportation-related investments over the past five years has been allocated to new infrastructure or expansions to existing infrastructure, while 30% has been allocated to asset replacement and the remaining 11% to other items such as safety programs, street lighting, neighbourhood enhancements and planning studies.
- > Over this period, approximately 30% of the transportation-related investments have been on sustainable transportation infrastructure (see Figure 2-3), which is consistent with the City's 2012 STP 30% target for sustainable transportation mode share. The City has been able to supplement its own capital investments with grants and cost share opportunities to fund projects within the City.
- > Based on the first year of the 2022-2026 Capital Plan, approximately \$38 million of transportation-related capital projects was planned for 2022.

> Looking forward, approximately \$130 million of capital work for transportation-related infrastructure is planned for the next five years between 2023 and 2027, representing approximately \$26 million per year in transportation-related capital infrastructure over the next five years. Of the \$69 million allocated to expansion of new transportation-related infrastructure from 2023 to 2027, over 64% (or more than \$44 million) is for sustainable modes of transportation (walking, micromobility and transit infrastructure)

These amounts would be subject to confirmation during the upcoming annual budget approvals.



^{*}Note: Frontage works includes a combination of road rehabilitation, curb construction, some utilities, sidewalks, landscaping and may overlap several categories but has been listed separately.

Figure 2-5: Capital Spending on Transportation Projects (2017–2021)

City Of Coquitlam | Strategic Transportation Plan - Mobility Snapshot

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3.0 Mobility Snapshot

3.1 Overall Travel Patterns

3.1.1 Census Data (Journey to Work/School Trips)

Statistics Canada conducts the Census every five years and includes questions related to commute trips to work or school (referred to as "journey to work/school trips"). Census data does not include any trips other than journey to work/school trips, such as trips for shopping, dining, or social reasons.

- Between 2001 and 2016, there was a steady decline in the proportion of journey to work/school trips made by vehicle (including drivers and passengers) from nearly 88% to approximately 76%, along with a corresponding increase in the proportion trips by public transit from approximately 8% to 18% of all journey to work/school trips. Trips made by walking, cycling and other modes were relatively stable over this time (see Figure 3-1).
- > Through the COVID-19 pandemic, commutes to work were disrupted, with approximately 19% more people working from home in 2021 than in 2016. This resulted in a significant decrease in the overall number of journey to work/school trips made by Coquitlam residents, which helps reduce the environmental impact of vehicle trips. The areas with the highest proportion of residents working from home in 2021 were in Westwood Plateau and Eagle Ridge (see Figure 3-2).
- > While the number of total trips decreased, the proportion of journey to work/school trips made by vehicle (including drivers and passengers) increased to 80% in 2021, reversing the downward trend that had been seen over the previous two decades. However, the proportion of journey to work/ school trips made by walking also increased through the pandemic.



Figure 3-1: Historic Journey to Work/School Mode Share

Source: Canadian Census 2001-2021



POPULATION WORKING FROM HOME

Percent of Population Working from Home



Data Not Available

- -O- SkyTrain
- 800 metre buffer from SkyTrain station
 - Highway
- ----- Other Streets
- Municipal Boundary

Figure 3-2: Percentage of Population Working from Home Source: Canadian Census 2021



Figure 3-3: Journey to Work/School Mode Share 2021



- In 2021, approximately 18% of journey to work/school trips were made by sustainable transportation, an increase from approximately 12% in 2001 (see Figure 3-3).
- > In 2021, Coquitlam had the sixth highest sustainable transportation mode share for journeys to/from work or school among Metro Vancouver municipalities with population of at least 10,000. Coquitlam is comparable to many other similar sized communities such as Richmond and the District of North Vancouver (see Figure 3-4, with municipalities sorted based on the combined sustainable transportation mode share).

Source: Canadian Census 2021

Public Transit			Walk			Bicycle	Total
Vancouver North Vancouver City New Westminster Burnaby Richmond		15.1%	22.9% 22.5% 21.5%	6.3% 4.7% 5.0%	13.1% 12.3%	5.3% 2.4% 0.9% 0.9% 1.2%	41.3% 29.8% 29.7% 27.1% 19.3%
Coquitlam		12.8%		4.5%		0.5%	17.8%
North Vancouver District Port Moody West Vancouver Surrey White Rock Delta Port Coquitlam Langley City Pitt Meadows Maple Ridge Langley Township	9.2% 7.0% 5.7% 9.4% 8.0% 6.4% 5.5% 4.5% 2.7%	12.3% 13.1% ;		5.7% 3.6% 7.7% 2.7% 7.7% 3.6% 3.2% 4.0% 3.3% 3.2% 3.2% 3.2% 3.3%		2.2% 0.6% 1.7% 0.3% 0.6% 1.0% 1.0% 0.6% 0.9% 0.4% 0.5%	17.1% 16.5% 16.4% 14.0% 14.0% 12.2% 11.0% 9.7% 8.1% 6.5%

Figure 3-4: Regional Sustainable Transportation Mode Share for Journey to Work/School

Source: Canadian Census 2021

> Sustainable transportation mode share varies significantly throughout the City. The neighbourhoods with the highest sustainable transportation mode share include areas near rapid transit, including Coquitlam City Centre (30.5%) and Lougheed Town Centre and the Burquitlam area (24.9%) (see Figure 3-5). Areas that are the furthest from rapid transit, such as Ranch Park and Northeast Coquitlam, had the lowest sustainable transportation mode shares (11% and 10%, respectively).



SUSTAINABLE TRANSPORTATION MODE SHARE (TRANSIT, WALKING, & CYCLING)

Percent of Total Travels using a Sustainable Mode

> 23 % 16.6 - 23 % 13.1 - 16.5 % 9.6 - 13 % ≤ 9.5 % Data Not Available

- -O- SkyTrain
- ---- 800 metre buffer from SkyTrain
 - Highway
 - Other Streets
 - Municipal Boundary

Figure 3-5: Percentage Sustainable Mode Share by Neighbourhood for Journey to Work/School Source: Canadian Census 2021



- > Approximately half of all journey to work/school trips are less than 30 minutes, including 30.4% between 15 and 29 minutes and 20% less than 15 minutes (see Figure 3-6). Many of these shorter duration trips have the potential to be shifted to walking, cycling, or transit. Additional jobs in Coquitlam will give existing and future residents more opportunity for people to live and work with shorter commuter times.
- > 22.9% of commutes begin between 7:00am and 7:59am, identifying where peak morning volumes are most likely to occur (see Figure 3-7). 65.9% of commutes take place between 5:00am and 8:59am.
- > 29.4% of journey to work/school trips involve commuting within the City of Coquitlam (defined as a Census Subdivision), while 69.2% leave the City of Coquitlam but travel elsewhere within Metro Vancouver (defined as a Census division) (see Figure 3-8). This means that many commute trips are to other municipalities within Metro Vancouver, presenting an opportunity to better connect and utilize transit and active transportation networks.

Figure 3-6: Journey to Work/School Commuting Duration 2021



Source: Canadian Census 2021

Figure 3-7: Journey to Work/School Time Leaving for Work 2021



Source: Canadian Census 2021

Figure 3-8: Journey to Work/School Commuting Destination, 2021



Source: Canadian Census 2021

3.1.2 Translink Trip Diary Survey & Household Travel Survey (All Trips)

TransLink conducts a Metro Vancouver Regional Trip Diary Survey approximately every three to five years and includes all trips (not just commute trips to work or school). The most recent TransLink Regional Trip Diary Survey was conducted in 2017. To provide a current understanding of travel patterns, the City conducted a similar Household Travel Survey in 2022.

- In 2022, approximately 338,000 trips were made by Coquitlam residents every day, or approximately
 2.41 trips per person over 5 years of age.
- > 77.7% of trips are made by private vehicle, including 58.1% as driver and 19.6% as passenger.
- > Sustainable transportation accounts for approximately 22% of all trips, including 10.9% by transit, 9.7% by walking and 1.4% by cycling or other forms of micro-mobility (see Figure 3-9).
- > The proportion of trips made by sustainable transportation has been steadily increasing since 2011, from 15% of all trips in 2011 to 20% in 2017 and 22% in 2022 (see Figure 3-10).
- > The City is seeing some progress towards meeting its sustainable transportation mode share target of 30% of all trips by 2031 (see Figure 3-11).



Source: Household Travel Survey 2022



Figure 3-10: Mode Share of All Trips Made by Coquitlam Residents

Source: TransLink Trip Diary 2011-2017 & Household Travel Survey 2022





Source: TransLink Trip Diary 2008, 2011, 2017 & Household Travel Survey 2022

The Household Travel Survey broke down Coquitlam into six sub-areas (Burquitlam, Coquitlam Central, Coquitlam South, Maillardville/Austin Heights, Coquitlam Northwest and Coquitlam Northeast). The Household Travel Survey identified areas in Coquitlam that have the significant sustainable mode shares. **Coquitlam Central and Burquitlam had the highest overall sustainable transportation mode shares** as the areas that have regional rapid transit access (see **Figure 3-12**). The following areas had significant mode shares in the following modes:

- > Transit: Burquitlam (17%), Maillardville/Austin Heights (14%) and Coquitlam Central (12%).
- > **Bicycle/Micromobility:** Coquitlam South (2.5%) and Maillardville/Austin Heights (2.3%).
- > Walking: Coquitlam Central (17.2%) and Burquitlam (10.6%).

Other than trips returning to home (which were excluded as they are a combination of coming home from work, or a social, or shopping or school), the common trip purposes are **commuting to work or school (25% of all trips)**, **social or recreational trips (24%)** and **shopping or personal business (22%)** (see **Figure 3-13**).



SUSTAINABLE TRANSPORTATION MODE SHARE (TRANSIT, WALKING, & CYCLING)

Percent of Total Travels using a Sustainable Mode



- -O- SkyTrain
- ---- 800 metre buffer from SkyTrain
- station
 - Highway
 - Other Streets
 - Municipal Boundary

Figure 3-12: Sustainable Transportation Mode Share by Sub-Area Source: Household Travel Survey 2022



Figure 3-13: Purpose of All Originating Trips (Excluding "To Home" Trips)



Source: Household Travel Survey 2022

Note: Trips 'to home" were excluded because they are the combination of coming home from work, or a social, or shopping or school

40% of driving trips by Coquitlam residents are under 5 km and 65% of driving trips are under 10 km.

Shorter distance trips present a significant opportunity to shift some of these shorter distance trips to other modes such as walking, cycling and other forms of micromobility.




3.2 Walking and Accessibility

Walking is the most fundamental form of transportation – every trip, regardless of mode, starts and ends with walking. This section provides an overview of national and international best practices and emerging trends in walking and accessibility that the City can consider and to make walking the preferred choice for most short trips, as well as a snapshot of the existing conditions for walking in Coquitlam.



3.2.1 Best Practices and Emerging Trends

Universal Design

- Universal design principles create inclusion for all by making designs equitable, flexible, simple and intuitive to navigate.
- > Universal design considers people of all ages and abilities, focusing on those facing accessibility challenges in the transportation network (reduced mobility, vision, hearing, strength, dexterity and comprehension).

The *BC Active Transportation Design Guide* has a universal accessibility design toolkit to improve the pedestrian network, including:

- Ensuring surfaces are smooth, firm, slip-resistant, free of tripping hazards and well-maintained year-round;
- > Accessible curb ramps;
- Frequent resting spots, especially on uphill segments;
- > Detectable warning surfaces;
- > Audible pedestrian signals;
- > Pedestrian scale lighting;
- Van-accessible parking and bus stops; and
- > Intuitive wayfinding.



Accessible Curb Ramps and Tactile Paving Surfaces



Intuitive Wayfinding



Pedestrian Safety

- > Safety for people walking includes both personal safety (e.g., sightlines, lighting, eyes on the street) and traffic safety (e.g., wide sidewalks with separation from motor vehicles or bicycles, reduced speeds and volumes).
- > Vehicle speeds are one of the most significant factors influencing pedestrian safety, as a pedestrian is significantly more likely to be seriously injured or killed if struck by a vehicle travelling at higher speeds. Speed reduction are important tools to slow vehicle traffic and include:
 - Default speed limit reductions, either on a city-wide basis or on certain classification of roads.
 - Traffic calming treatments such as speed humps, speed tables, raised crosswalks, curb extensions and traffic circles. Most traffic calming treatments can be considered on local residential streets, whereas vertical measures such as speed humps and raised crosswalks are typically only possible on collector and arterial streets.
- > Safe intersection design principles include minimizing conflict between users, reducing speeds at conflict points, ensuring clear sightlines and clarity of right-ofway and making intersections as compact as possible. Specific best practices include:
 - Providing pedestrian countdown timers and leading pedestrian intervals.
 - Adding curb extensions and median refuge islands to reduce crossing distances.
 - Enhancing crosswalks with additional pavement markings and flashing beacons where warranted, according to the Transportation Association of Canada's (TAC) Pedestrian Crossing Control Guide.
 - Providing separate phases for left turning vehicles.
 - Improving lighting.
 - Replacing channelized right turns with urban smart channels.
 - Tighter geometry to reduce speeds.



Pedestrian Crossing

Crime prevention through environmental design (CPTED) is a suite of design strategies that can reduce the threat of crime to those travelling by active transportation through special considerations for lighting, sightlines, fencing and pedestrian activity.

The likelihood of pedestrian fatality when hit by a motor vehicle travelling 30 km/h or less correlate with a lower probability of death (10%), whereas at speeds above 40 km/h, the probability of death increases significantly (less than 70% chance survival rate).



Pedestrianizing the Public Realm

- > The Pedestrian Through Zone should be separated from the street with a buffer zone. The Pedestrian Through Zone should have a constrained limit width of at least 1.8 metres, which allows two people using mobility devices to pass one another. In areas of high pedestrian activity, the desired sidewalk width is 2 metres or greater. This gives space for people to comfortably walk at different paces, supporting higher volumes and a broader range of users.
- > Streets are a critical component of a community's public realm and can offer spaces for people to socialize, recreate, shop and work. Places to rest, especially for an ageing population, and street trees to provide shade, are important to facilitate walking for all ages and abilities.

Tactical urbanism is a method of rapid, lowcost project implementation using a set of techniques designed to enhance the built environment, with the intent of bringing about long-term positive outcomes for the community education and encouragement.

Promotion and Encouragement

- > Safe Routes to School provide education, encouragement, enforcement, engineering and evaluation around school sites to improve safety for all street users – especially children and families – and encourage sustainable school transportation.
- > Piloting unique engagement and programming techniques like tactical urbanism, School
 Streets or other temporary closures of streets to vehicles can create environments that support walking and pedestrians.
- > Clubs or groups can help get people active while encouraging social interaction. A common example of a type walking club is a Seniors' Walking Group.
- > Travel training for different groups such as children, youth, seniors and newcomers can introduce how to use transit but also how to walk to transit and SkyTrain.
- > Developing maps and wayfinding around SkyTrain and transit highlighting amenities and destinations within five, ten, or fifteen-minute walking distances.



City of New Westminster Agnes Greenway Temporary Activation



3.2.2 Walking Snapshot

What has changed since the last STP

Since 2011, the City has made progress in filling in gaps in the pedestrian network, with 638 km of sidewalks, or approximately two-thirds (66.5%) of streets having a sidewalk on at least one side of the street (see **Figure 3-14**).

Between 2017 and 2021, the City spent \$7.6 million (approximately \$1.5 million per year) on pedestrian infrastructure such as sidewalks, sidewalk rehabilitation, curb extensions, crosswalks, accessibility improvements and pedestrian signals, as well as \$20 million (approximately \$4 million per year) on corridor improvements that include multi-use pathways.

Infrastructure

- > The City has a comprehensive pedestrian transportation network, including 638 km of existing sidewalks and multi-use paths adjacent to streets, in addition to a network of off-street pathways.
- > Two-thirds (66.5%) of all streets have a sidewalk or multi-use path on at least one side of the street, including 56.4% of streets with a sidewalk or multi-use path on both sides of the street.
- > There are still significant gaps in the sidewalk network, with one third (33.5%) of all streets without any sidewalk or multi-use path, including 22.5% of all streets that do not have a sidewalk or multi-use path on both sides of the street, and 11.0% of all streets that do not have a sidewalk or multiuse path which is needed only on one-side of the street.
- > Approximately 80% of all streets without a sidewalk or multi-use path on both sides of the street are on local streets, most of which are located in Southwest Coquitlam.

> The majority of arterial streets (85%) and collector streets (80%) have a sidewalk or multi-use path on at least one side of the street.

Travel Patterns

Based on the 2022 Household Travel Survey:

- > Walking is the mode of transportation that saw the greatest increase in trips because of the COVID-19 pandemic.
- > Approximately 33,000 walking trips are made by Coquitlam residents every day.
- > Walking accounts for approximately 9.7% of all trips made by Coquitlam residents.
- > Walking mode share is highest in Coquitlam City Centre (17.2%) and Burquitlam (10.6%) and is lowest in Northeast Coquitlam (3.6%).
- > Walking mode share is significantly higher among children and youth, representing 15% of all trips made by people aged 19 and under.
- > Other than trips to home, the most common reason for walking trips is for social or recreational purposes (43% of all walking trips), followed by shopping or personal business (22%), and grade school (17%). Only 6% of walking trips are to commute to work or post-secondary school.
- > The average walking trip distance is slightly less than 1 km, or approximately a 10-15 minute walk.
- > Walking is integral to transit trips, as 89.2% of all transit trips start by walking to the transit facility.



			Arterial	Collector	Local	Total
Full Gap (Sidewalk or multi-use pathway needed on both sides)		Length	8.4 km	14.8 km	192.3 km	215.6 km
		%	5.7%	7.1%	32.0%	22.5%
Partial Gap (Sidewalk or multi-use pathway needed on one side only)	No Existing Sidewalk	Length	14.3 km	27.5 km	63.6 km	105.4 km
		%	9.6%	13.2%	10.6%	11.0%
	Sidewalk on One Side	Length	8.2 km	26.7 km	62.3 km	97.1 km
		%	5.5%	12.8%	10.3%	10.1%
No Gap (No sidewalk or multi- use pathway needed)		Length	117.3 km	139.7 km	283.6 km	540.6 km
	%		79.2%	66.9%	47.1%	56.4%
Total		Length	148.2 km	208.7 km	601.8 km	958.7 km
		%	100%	100%	100%	100%



PEDESTRIAN NETWORK GAPS





Support Policies and Initiatives

- > The Environmental Sustainability Plan prioritizes walking, cycling and transit through transportation demand management, education and outreach, wider sidewalks and more walking infrastructure.
- > The Burquitlam-Lougheed Neighbourhood Plan (BLNP) and City Centre Area Plan (CCAP) have been crafted to enable sustainable transportation choices, and those plans include quality pedestrian wayfinding.
- > The Subdivision and Development Servicing Bylaw states that sidewalks are required on both sides of all streets, with those near schools and community centres having 1.5 metre minimum width but 1.8 metre width preferred. The BC Active Transportation Design Guide notes that 1.5 metres is the absolute minimum constrained limit and should only be used under constrained conditions.
- > Streetscape standards in the CCAP have been revised to include wider sidewalks and a pedestrian realm with more amenities, and effort is underway to update citywide standards.
- > The OCP aims to make walking the main mode of travel to local destinations.

Figure 3-15: Barriers to Walking/Walking More

Barriers

Based on Community Survey responses (see **Figure 3-15**), the top barriers for walking are:

- > Distance/ time required to walk to destinations (42%).
- Road safety, traffic speed and dangerous drivers (31%).
- Lack of continuous sidewalks and crosswalks (25%).

Safety

The top reported locations for collisions involving pedestrians, based on ICBC claim data (2015-2019), include:

- > Lougheed Highway at North Road (21)
- > Barnet Highway at Pinetree Way (7)
- > Westwood Street at Lincoln Avenue (7)
- > Westwood Street at Crabbe Avenue (7)
- > Glen Drive at Pacific Street (7)



Community Survey (2022)



Summary of Issues

- > Nearly one quarter (22.5%) of all streets do not have a sidewalk or multi-use path on either side of the street, with most of those gaps being on local streets.
- > 23.2 km of collector and arterial streets do not have a sidewalk or multi-use path on either side of the street and 41.8 km of collector and arterials streets only have a sidewalk on one side of the street.
- > Low density single family residential land uses outside of the City Centre result in long travel distances for commuting that are unlikely to be made by walking, although walking is still important in these areas for basic access and recreation.
- > Steep topography is a challenge for walking, especially in Northwest and Northeast Coquitlam, as well as Central Coquitlam, Maillardville and Cape Horn.
- > Walking mode shares are lowest in single family residential neighbourhoods with steep topography, accounting for less than 1% of all commute trips in Northeast Coquitlam and 2% of all commute trips in Westwood Plateau and Cape Horn based on 2021 Census data.
- > The City has a growing population of seniors and the City's median age is growing faster than the region. Seniors may have a stronger reliance on walking but may also have mobility challenges.
- Maze/baffle gates can be challenging for people using mobility aids.

Summary of Opportunities

- > Walking mode share of commute trips increased by 36% between 2001 and 2021 based on Census data.
- Walking saw the greatest increase in trips during the COVID-19 pandemic.
- Walking mode share is highest in dense, mixed-use areas of the City, including 17.2% of all trips in Coquitlam City Centre and 10.6% of all trips in the Burquitlam area.
- Most walking trips are relatively short, with the average walking distance being slightly less than 1 km, or a 10-15 minute walk.
- Pedestrian-friendly, or "people-first" streets can be considered that prioritize people walking and consider the needs of pedestrians in street design.
- Pedestrian safety projects can be identified based on the City's Best Routes to School program and Road Safety Strategy.
- > The Subdivision and Development Servicing Bylaw should be updated to require wider sidewalks, especially around transit and SkyTrain stations, schools and in commercial areas such as the City Centre and in neighbourhood centres such as Austin Heights.
- > Opportunities to remove unnecessary bollards/ gates along multi-use pathways and walkways to improve access.
- > Opportunities for reduced speed limits, improved pedestrian scale lighting and introducing more traffic calming treatments to reduce vehicle speeds and improve pedestrian safety.
- > Multi-use paths should also be at least 4 metres wide to reduce conflicts between users and on both sides of streets per BC Active Transportation Design Guide.
- > Opportunities to separate pedestrians from bicycles on multi-use pathways whenever possible to improve pedestrian safety.
- > Opportunities to incorporate safe intersection design principles to improve pedestrian safety.



3.3 Cycling and Micromobility

Cycling and rolling is a popular activity for both commuting and recreation that is expected to increase in the future. Creating a bicycle-friendly community can help foster a more balanced transportation system that encourages healthy and active living, creates a more livable community and results in cost-effective and efficient solutions in terms of a community's infrastructure investments. This section provides an overview of the best practices for building a cycling and rolling network and culture, as well as a snapshot of the existing conditions of cycling and rolling in Coquitlam.



3.3.1 Best Practices and Emerging Trends

All Ages and Abilities Network

- > A complete, connected and comfortable network of All Ages and Abilities (AAA) bicycle facilities is required to see a significant increase in cycling mode share.
- Physically separated facilities are required on major streets, while neighbourhood bikeways can serve quieter streets.
- > Bicycle lanes and pathways should be wide enough to allow for cargo bikes, safe passing and separate pedestrians where possible.
- > Intersection treatments such as cross-rides, bicycle signals and protected intersections improve the safety and comfort of a bicycle facility.

Rapid Implementation

 Rapid implementation strategies can support building out a AAA network through a fast, flexible and lower cost approach.

Dockless Bike Share - Calgary



Docked Bike Share - Vancouver





Separated and Wide Bicycle Facilities – Edmonton



Planning for Micromobility

- > Deloitte predicts that over 130 million e-bikes will be sold worldwide over the next decade and the growth is outpacing electric cars.
- E-bikes can make cycling more practical for seniors, people with reduced mobility and anyone travelling up Coquitlam's steep topography.
- > E-bikes can increase and extend the range of cyclists, increase the distance and frequency of cycling trips and reduce household costs related to transportation when replacing car trips.
- > Access to charging and designing bicycle infrastructure to be wide enough to include passing are design and infrastructure considerations required to accommodate e-bikes and micromobility.
- Micromobility includes bicycle share and scooter share systems with a variety of ownership and operation models and can be docked or dockless.

Bicycle Parking and End-of-trip Facilities

- > Bicycle parking and other end-of-trip facilities (e.g., showers, lockers and repair stands) help to make cycling more attractive and convenient.
- > Both short-term (e.g., bicycle racks) and long-term (e.g., bicycle lockers, cages and parkades) bicycle parking are important in making cycling a feasible everyday mode of transportation.
- > Bicycle parking design should consider a range of bicycle shapes and sizes, including cargo bikes and bicycles with trailers.
- Lockers and cages with good lighting can provide additional protection from the elements and add a greater sense of security.

Micromobility is a category of small oneperson electric vehicles, such as e-bikes, e-scooters, or other devices. These extend the comfort and ease of travelling over longer distances and / or neutralize topographical challenges thanks to the electric motor.

Micromobility can be privately owned or owned and operated as part of shared transportation systems. It can be used for personal travel or play a role in goods movement via cargo e-bikes.

As of January 2023, the City of Coquitlam is participating in the Province's electric kick scooter pilot project with e-scooters being legal on city streets. The City is also planning to allow dockless shared e-scooters and e-bikes by summer 2023.

The *BC Active Transportation Design Guide* provides a full overview of end-oftrip facilities, recommending that 50% of long-term and 10% of short-term bicycle parking be designed to accommodate e-bikes by providing an electrical outlet.



Short-term Bicycle Parking



Car-Free Streets

- > Open street events temporarily restrict motor vehicle traffic along one or more corridors to allow for free-flowing active transportation for people of all ages and abilities.
- > School Streets restrict access to vehicles on a block beside a school. The block is open to walking, biking and rolling during pick-up/ drop-off (30 to 60 minutes depending on location). Play Streets can be included and promote safe active outdoor play.
- Events can be time restricted (i.e., closures on Sunday once or twice per year in the spring and summer or on school streets from 7:30–9am and 3:00–4:30pm).



Car-Free Street

3.3.2 Cycling and Rolling Snapshot

What has changed since the last STP

Since 2011, the City has made progress in building out its cycling network with an increase of 217% in infrastructure built to a total of 117 km of cycling facilities (see **Figure 3-16**).

Since 2011, the City has increased its supply of AAA infrastructure (multi-use pathways and cycle tracks) by 217% to 32 km today; however, the quality of the facilities varies with people cycling having to share space with people walking on multi-use pathways that are typically only 3 metres wide.

Between 2017 and 2021, the City spent \$20 million (approximately \$4 million per year) on walk/cycle projects that include multi-use pathways.

Infrastructure

- > The City has 117 km of cycling infrastructure, including 32 km of multi-use pathways. While multi-use pathways are generally considered AAA, many ought to be wider to reduce conflicts with people walking.
- > 74% of residents are within 400 metres of a bicycle route and 51% of residents are within 400 metres of a AAA bicycle route.
- Less than one third (29%) of Coquitlam's cycling network is considered 'Comfortable for Most' according to TransLink and HUB Cycling's 2019 State of Cycling report.

Bicycle Lane	49 km
Multi-use Pathway	32 km
One-way Cycle Track	0.2 km
Shared Bikeway	36 km



EXISTING BIKE NETWORK - RESIDENTS LIVING WITHIN 400 M OF A BIKE FACILITY



Residents living within 400m of a Bike Facility

---- SkyTrain

800 metre buffer from SkyTrain
 station

- Highway
 - Other Streets



Figure 3-16: Existing Bicycle Network – Residents Living within 400 metres of a Bicycle Facility





Travel Patterns

Based on the Community Survey:

- > 12% of Community Survey respondents report travelling by non-electric bicycle at least once a week. 53% of respondents reported travelling by non-electric bicycle at least once in the last year.
- > 16% of respondents say they bicycle more now than they did before the COVID-19 pandemic.
- > 24% of respondents reported using an electric bicycle (e-bike) in the last year.

Based on the Household Travel Survey:

- > Over half (53.8%) of households in Coquitlam have a bicycle or e-micromobility device. The highest proportions are in Northeast Coquitlam (71.9%) followed by South Coquitlam (63.1%) and Northwest Coquitlam (62.9%).
- > There is an average of 1.36 bicycles or e-micromobility devices per household, including 0.97 adult bicycles per household, 0.28 child bicycles per household, 0.08 adult e-bicycles per household and 0.03 e-micromobility devices per household.
- > Approximately 4,700 trips are made by cycling or other forms of micromobility by Coquitlam residents every day.
- > Cycling and other forms of micromobility accounts for approximately 1.4% of all trips made by Coquitlam residents.
- Mode share for cycling and other forms of micromobility is highest in South Coquitlam (2.5% of all trips) and Maillardville and Austin Heights (2.3%), despite steep topography in those areas.
- > Approximately 80% of cycling trips and trips by other forms of micro-mobility are made by people identifying as male, with only 20% of trips made by people identifying as female. The small proportion of trips made by people identifying as female is an indicator that the cycling network is not perceived to be comfortable for many people.

- > Mode share for cycling and other forms of micro-mobility is higher among children and youth, representing 3% of all trips made by people aged 19 and under.
- > Other than trips to home, the most common reason for cycling or micromobility trips is to commute or grade school (28% of all cycling or micromobility trips), followed by social or recreational purposes (20%), commuting to work or post-secondary (18%) and shopping or personal business (17%).
- > The average cycling or micromobility trip distance is 8.1 km, which is slightly more than a 30 minute distance based on average cycling speed of 15 km/hr.

Support Policies and Initiatives

- The Zoning Bylaw and Bicycle Parking Design Guidelines lay out high quality design and supply requirements for bicycle parking.
- The Subdivision and Development Servicing Bylaw requires bicycle facilities on community collectors.
- > The OCP aims to provide bicycle facilities and programs that support cycling for local and regional travel.
- > Streetscape standards in the CCAP revised to include wider sidewalks and a pedestrian realm with more amenities and efforts to update citywide standards are underway.
- > As of January 2023, the City of Coquitlam is participating in the Province's electric kick scooter pilot project with private and shared e-scooters being legal on city streets. The City is also considering shared micromobility operators, with the service anticipated to launch by summer 2023. The changes include allowing e-scooters to operate on all streets with a speed limit of 50 km/h or less and where speed limits are higher than 50 km/h, on designated bike facilities with use prohibited on sidewalks and trails.



Barriers

Based on Community Survey responses (see **Figure 3-17**), the top barriers for cycling are:

- Road safety, traffic speed and dangerous drivers (40%).
- > Lack of protected bicycle lanes or crossings (39%).
- > Topography (19%).

Safety

The top reported locations for collisions involving cyclists, based on ICBC claim data (2015-2019), include:

- > Guildford Way at Falcon Drive (5)
- > Barnet Highway at Pinetree Way (4)
- > Pinetree Way at Lincoln Avenue (3)
- > Westwood Street at Lincoln Avenue (3)
- > Lougheed Highway at North Road (3)
- > Lougheed Highway at Colony Farm Road (3)



Source: Community Survey (2022)



Summary of Issues

Cycling and micromobility account for a relatively small mode share, with approximately 1.4% of all trips made by Coquitlam residents.

- > There is a lack of a connected and complete city-wide AAA network that connects all destinations.
- > Multi-use paths are often too narrow or only on one side of major streets.
- Most residential bikeways and neighborhood greenways have posted speed limits of 50 km/hr.
- Steep topography is a challenge for cycling, particularly in Northwest and Northeast Coquitlam.
- > Only 51% of residents are within a reasonable (400m) cycling distance of a AAA facility.
- The quality of cycling infrastructure varies.
 Less than one-third of the cycling network is considered to be comfortable for most.
- Maze/baffle gates and bollards can be challenging and even hazardous for people cycling.

Summary of Opportunities

- > Despite the relatively low mode share, cycling saw greater interest in cycling during the COVID-19 pandemic, with 16% of Community Survey respondents saying they cycle more now than they did before the COVID-19 pandemic.
- Increasing use of e-micromobility such as e-bikes and e-scooters can help to address topography challenges.
- > Increasing the number of AAA cycling facilities can help to make cycling a safe and comfortable mobility choice for all residents.
- > Opportunities to remove unnecessary bollards/gates along pathways to improve access.
- > Opportunities for encouragement campaigns to increase cycling mode share.
- > Opportunities to improve bike parking at shopping or leisure destinations as well as end of trip facilities for work or school, especially for e-bikes and e-scooters, including charging stations.
- > Opportunities for enhanced multi-modal integration, including cycling network connections with SkyTrain stations.
- The Subdivision and Development Servicing Bylaw could be updated to reflect the BC Active Transportation Design Guide for desired and constrained widths.



3.4 Public Transit

Public transit can reduce the overall environmental and community impacts of transportation. Public transit benefits those who choose to use it as well as those who have no other option. For people who do not drive or cannot afford to drive, transit can often be the only option for getting to work, school, shopping areas and recreational centres. Convenient and attractive public transit is critical to creating a vibrant and sustainable community.

In combination with walking and cycling, transit can provide an attractive alternative to automobile travel for both local and regional connections. While public transit network planning and operations is under the jurisdiction of TransLink, this section outlines the best practices for public transit the City can influence and the existing conditions of public transit in the City. Reallocating road space for this efficient people mover on major arterials will support people having a choice other than driving for longer trips, especially those travelling elsewhere in the region.



3.4.1 Best practices and Emerging Trends

Bus Speed and Reliability

- > Identifying the cause of increases in bus travel times along existing routes and applying transit priority measures such as infrastructure changes and operational policies to improve speed and reliability.
- > The implementation of queue jumps, turn/ movement restrictions and/or dedicated transit lanes can prioritize transit along a corridor and at intersections. Further information regarding this is available in the Transit Priority Toolkit published by TransLink.
- TransLink is planning additional RapidBus and Bus Rapid Transit (BRT) corridors as part of Transport 2050.
- > Curbside management can help transit by reducing conflicts between buses, parked cars and other vehicles at bus stops. Examples include converting parking into bus lanes during peak hours or on high-frequency transit corridors.
- > Bus bulges, boarding islands, floating bus stops and improved platform designs and amenities can improve transit operations, as well as safety and accessibility for pedestrians and cyclists.

Improving the Customer Experience

- Improving amenities at transit stops can make transit a more convenient option for potential users.
- > Basic amenities like transit maps, information, seating, accessibility features, weather protection, lighting and waste receptacles can make the transit experience more user-friendly.
- Digital amenities like live bus arrival estimates and apps can also help transit users set expectations and plan their trips.
- > Multi-modal integration can support first-andlast-mile trips.

Frequent Transit

- Frequent transit refers to routes that have transit service with headways of 15 minutes or less.
- > To increase flexibility and coverage, ondemand transit can be considered where customers use an app, website, or phone number to book transit trips.
- Shuttles can also offer solutions for a variety of contexts such as mitigating topography, reducing use for parking, or transportation for employees.



Transit Priority Lane



Multi-Modal Integration

Enhancing active transportation facilities and ensuring comfortable connections to transit stops can enhance the transit experience and make transit more accessible.

Improved sidewalks, bicycle facilities and adding micromobility systems near transit stops can help resolve the 'first- and last-mile' problem of accessing transit. Multi-modal transportation hubs can provide bicycle parking and other end-of-trip amenities.

Transit Amenities

Having appropriate amenities at transit stops is a key way to improve the user experience and make transit a more convenient option for potential users. Basic amenities like transit maps, information, seating, accessibility features, weather protection and waste receptacles can make the transit experience more user-friendly. Digital amenities like live bus arrival estimates and apps can also help transit users set expectations and plan their trips.

TransLink's *Passenger Facility Design Guidelines* outline specific improvements and guidance on improving transit areas for users. In addition, the *BC Active Transportation and Transit-Oriented Development Design Guide* offers guidance for amenities to help integrate active modes with transit in both the public and private realms and is uniquely and specifically designed to fit the contexts of all B.C. communities.

Bus Stop with Amenities





3.4.2 Public Transit Snapshot

What has changed since the last STP

The Millennium Line Evergreen Extension opened in December 2016, adding the Burquitlam, Lafarge Lake-Douglas, Lincoln and Coquitlam Central SkyTrain stations in the City of Coquitlam.

RapidBus services have been introduced with the R3 RapidBus between Coquitlam and Maple Ridge.

The transit network changed significantly with the introduction of SkyTrain which is ideal for longer trips to Vancouver or neighbouring municipalities. However, the introduction replaced some bus routes.

Between 2017 and 2021, the City spent approximately \$1 million on planning, transit priority measures and transit shelters.

Infrastructure and Service

- > 28% of residents live within 400 metres of the Frequent Transit Network (FTN), with most of these being adjacent to the SkyTrain alignment and in the City Centre (see Figure 3-18).
- There are four SkyTrain stations (Burquitlam, Coquitlam Central, Lincoln and Lafarge Lake-Douglas) within Coquitlam boundaries. Three SkyTrain stations (Inlet Centre, Braid and Lougheed) in neighbouring municipalities are also located in close proximity to Coquitlam residents.
- > The West Coast Express station at Coquitlam Central allows riders to travel to/from downtown Vancouver in 30 minutes during peak travel periods (i.e. Monday to Friday morning and evening commute periods).
- > The City has 562 bus stops.
- > Over half (294) of Coquitlam's bus stops do not have amenities such as a bench or shelter.
- > The vast majority (87%) of Coquitlam's bus stops are designated as wheelchair accessible by TransLink. TransLink defines this with a display of a white and blue decal featuring the International Symbol of Access due to having a raised passenger landing area with minimum dimensions to allow buses to deploy a ramp.



EXISTING TRANSIT NETWORK





Travel Patterns

Based on TransLink ridership data:

> Transit saw a decrease in trips during the COVID-19 pandemic but has started to recover some of this ridership in 2022. This is supported by TransLink's 2022 ridership data where transit ridership in the Northeast Sector was 77% of pre-pandemic levels.

Based on the 2022 Household Travel Survey:

- > Approximately 37,000 transit trips are made by Coquitlam residents every day.
- > Transit accounts for approximately 10.9% of all trips made by Coquitlam residents. This includes 7.1% of all trips by SkyTrain, 3.5% by bus and 0.3% by West Coast Express.
- > Transit mode share is highest in Burquitlam (16.9%), Maillardville / Austin Heights (14.0%) and Coquitlam City Centre (12.0%) and is lowest in South Coquitlam (7.2%) and Northeast Coquitlam (8.8%).
- > More than half (55%) of all transit trips are made by people who identify as female.
- Transit mode share is significantly higher among children and youth, representing 15% of all trips made by people aged 19 and under.
- > Other than trips to home, the most common reason for transit trips is for commuting (61% of all transit trips), followed by social or recreational purposes (17%) and shopping or personal business (11%).
- > The average trip distance for public transit is 17.8 km. Most people access transit by walking (89.2%) while 6.0% drive to transit, 4.0% are driven to transit as a passenger, 0.7% bicycle to transit and 0.1% use e-micromobility, HandyDART, moped/scooter, or school bus.

In terms of bus passenger trips, 55% stay within Coquitlam (see **Figure 3-20**), while most SkyTrain and West Coast Express trips travel outside Coquitlam (93%) (see **Figure 3-21**).

Support Policies and Initiatives

- > TransLink's Transport 2050 and accompanying 10-Year Priorities identify a desire for direct bus service between Coquitlam City Centre and Surrey City Centre, as well as an exploratory business case to extend eastward extension of the Millennium Line to Port Coquitlam.
- > TransLink's Bus Speed and Reliability Studies present opportunities to implement transit priority measures. Prior to the R3 RapidBus, Lougheed Highway from Coquitlam City Centre to Maple Ridge was identified as one of the top twenty corridors that generates the most passenger-hours of delay in the region. This corridor has an average of 171 person-hours of increased travel time and impacts 19,200 daily passengers.
- TransLink provides cost-share funding to implement active transportation infrastructure connections to transit stops and stations.
- > The Broadway Subway (scheduled to open in 2026) will provide more destinations accessible by rapid transit.



Barriers

Based on Community Survey responses (see Figure 3-19), the top barriers for transit are:

- > Waiting time is too long (37%).
- > Travelling by public transit is too slow (31%).
- > Public transit is unreliable / uncertain (18%).
- > Public transit is too crowded (18%).

Figure 3-19: Barriers to Taking Transit/Taking Transit More



Community Survey (2022)

Summary of Issues

- Transit use saw considerable decline in commute trips during the COVID-19 pandemic, although it has since recovered to 77% of its pre-pandemic ridership in the Northeast Sector.
- > There is a lack of frequent transit service in many areas of the City, with few corridors that are part of TransLink's current Frequent Transit Network (FTN). The only FTN corridor is along Guildford Way and Pinetree Way.
- > The majority of residents (72%) do not live within 400 metres of the FTN.

- > There is limited-service frequency on many routes, particularly during evenings and weekends.
- > Steep topography presents a challenge to access transit in many areas of the City.
- There is a lack of north-south transit connections, particularly through central Coquitlam.
- > Many bus routes are circuitous and indirect.



Summary of Opportunities

- > Public transit has the highest non-automobile mode share, accounting for 10.9% of all trips from the Household Travel Survey.
- > Based on the Household Travel Survey, public transit is highest in areas near the SkyTrain, accounting for 16.9% of all trips in the Burquitlam area and 12% of all trips in Coquitlam City Centre.
- > Although transit mode share declined during the COVID-19 pandemic, the proportion of journey to work/school trips by public transit still increased by 58% between 2001 and 2021 based on Census data.
- > There are opportunities for improved passenger amenities and customer information at bus stops.
- > There are opportunities to improve transit accessibility, including ensuring all bus stops are accessible and considering installing tactile walking surface indicators (TWSIs) at transit facilities.
- Transit service can be improved by conducting Bus Speed and Reliability studies and reviewing existing routing and service frequencies.

- > TransLink's Ten-Year Investment Plan identifies opportunities to upgrade the existing R3 Rapid Bus to a fully-separated BRT line with dedicated bus lanes and transit signal priority across the length of the Lougheed corridor.
- The previous STP identified a potential new SkyTrain station between Inlet and Coquitlam Central stations.
- > TransLink's Transport 2050 identifies the opportunity to develop an exploratory business case to study the potential of extending the Millennium Line to Port Coquitlam, with an interim focus to implement a fast, reliable Port Coquitlam Express bus service along this corridor.
- > TransLink's Transport 2050 recommends considering additional passenger ferry services to connect locations where waterbased transit offers greater accessibility, convenience, travel times and reliability compared to land-based transit alternatives. There is an opportunity to explore the potential for passenger ferry services to connect the future Fraser Mills development with New Westminster and North Surrey, as well as establish linkages to New Westminster's Q to Q Ferry.



COQUITLAM BUS PASSENGER TRIPS ORIGIN AND DESTINATION PATTERNS



Maillardville / Austin Heights

O— SkyTrain

- --- 800 metre buffer from SkyTrain ---- station
 - Highway
 - Other Streets
 - Municipal Boundary

Figure 3-20: Bus Passenger Trips Origin and Destination Source: Household Travel Survey 2022





COQUITLAM SKYTRAIN / WCE PASSENGER TRIPS ORIGIN AND DESTINATION PATTERNS



	-0-
	(11)
	_
ights	

- -O- SkyTrain
 - 800 metre buffer from SkyTrain
 station
- Highway
- Other Streets
- Municipal Boundary

Figure 3-21: SkyTrain and West Coast Express Trips Origin and Destination Source: Household Travel Survey 2022





3.5 Driving, Parking and Goods Movement

Trips by private vehicle are currently the most common mode of transportation in Coquitlam, accounting for approximately 77% of all trips. While the City had been seeing a continuous decline in the mode share of vehicle trips over the past two decades, the COVID-19 pandemic and new mobility recovery patterns such as ongoing work from home has seen a recent increase in vehicle trips, with recent traffic counts suggesting the number of vehicle trips has rebounded to be similar to pre-pandemic levels. The City's street network accommodates all modes and connects people to their everyday destinations. The City is committed to ensuring a robust street network that safely and comfortably incorporates all modes to ensure the City's continued economic growth, livability and success. Certain arterials in Coquitlam are part of the Major Road Network (MRN) and serve interregional vehicle trips that only pass through Coquitlam.



This section provides an overview of the best practices to maintain or improve access, operations and safety, as well as a snapshot of the existing conditions of driving, parking and goods movement in Coquitlam.

3.5.1 Best Practices and Emerging Trends

Complete Streets

- > Complete Streets move people, not just cars. They are designed and operated to enable safe and comfortable use for all and balance the amount of space on the street to a variety of modes and separate users by speed.
- > They recognize that streets have different roles, functions and characteristics depending on their context. Complete Streets can be reviewed as a network to ensure the maximum people-moving efficiency and allocation of additional space for sustainable modes is considered holistically.
- > Complete Streets can be flexible and include a range of policies, programs and infrastructure. For example, repurposing parking to patio spaces or moveable bollards to allow for increased bicycle, pedestrian and public spaces in warmer months.

Street Reallocation

- > Many communities are actively considering the need to shift the amount of street space currently allocated to drivers to other users to improve the access and/or mobility functions of the corridor.
- > This can include converting one or more parking or driving lanes into bicycle lanes, transit and/or truck-only lanes, wider sidewalks, or parklets.
- > It can also involve creating turning lanes, dynamic curbside spaces and converting entire streets to shared streets or pedestrianonly spaces.

Transportation Demand Management (TDM)

> Transportation Demand Management (TDM) strategies such as pay parking, increased enforcement of time regulations, bicycle parking supply, car and vehicle sharing options or working with developers to provide transit passes to new residents can help optimize use of the transportation network.

Vision Zero

- > People who walk, roll, or cycle are more vulnerable and are disproportionally killed and injured by traffic collisions and need special consideration when designing streets.
- > Vision Zero strategies and the Safe System Approach aim to prioritize human health and safety by eliminating all traffic-related fatalities and serious injuries by:
 - Reducing motor vehicle speeds.
 - Reducing motor vehicle volumes.
 - Modifying streets and intersections for safer walking and cycling (e.g., traffic calming, all ages and abilities cycling infrastructure, leading pedestrian intervals, enhanced crosswalks and curb extensions).
 - Considering pilot projects to improve street design at problematic locations.
 - Improving enforcement.
 - Providing educational programs (e.g., road safety campaigns, safe and active school programs).



Parking Management

> A key to good parking management is to define the goals for parking management. Well defined goals such as defining who the parking is for, where it should be and how it is priced can help optimize parking use for its desired use. Other strategies for balancing parking use can be to reduce allowable parking time to encourage turnover, introduce user restrictions and price parking to achieve a target occupancy rate.

Emerging Modes and Technologies

- > Best practices for preparing for ride-hailing are considering the allocation of additional pick-up and drop-off spaces at key locations and within underground parking facilities and establishing clear data-sharing agreements with Transportation Network Companies.
- > Zero Emission Vehicles (ZEVs) or electric vehicles (EVs) are becoming increasingly common in our region. While they do support lowering GHG emissions, they do not reduce congestion and safety concerns.
- > Car share services increase mobility options and affordability by providing access to motor vehicles without having to purchase a private vehicle, allowing residents to make most trips by active transportation and transit and use a car only when required.
- > Mobility-as-a-service (MAAS) refers to the shift towards shared, integrated transportation systems, including car share, ride-hailing and micromobility. Mobility apps can be used to book and pay for trips on a variety of modes, with seamless multi-modal integration.



Road Space Reallocation to Bicycles



Car Share

> Autonomous vehicle (AV) technology continues to be explored and could have implications on vehicle ownership, land use and transportation patterns. Municipalities wishing to take a proactive approach are studying the implications of an autonomous future with the aim of leveraging this new technology in support of their visions and road space reallocation goals.

Goods Movement and Delivery

- > Optimizing goods movement routes and deliveries with urban delivery and cyclelogistics (i.e. moving goods by bike) can create less congested and safe street networks, when combined with a supporting AAA cycling network.
- > Logistics hubs can support the transfer of goods from vans or trucks to last-mile delivery bicycles.
- > Bicycle facilities should be wide enough to accommodate delivery bicycles, as well as curbspace management that facilitates shortterm parking to allow goods to be picked up and dropped off.
- > End-of-trip facilities should include space to accommodate the charging and storage of cargo bicycles.

Harmonizing Truck Permits

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- > Across the region, municipalities are moving towards a simple, harmonized definition of a truck as being any vehicle with a gross vehicle weight of more than 11,800 kg.
- > These vehicles are restricted from through travel on the municipal network outside of truck routes.
- Regionally, municipalities are also moving towards defining the legal vehicle weights and dimensions by adopting the Commercial Transport Regulations by reference into their Street and Traffic Bylaws.



Electric Vehicle Charging



E-Cargo Bicycles



What has changed since the last STP

- > Between 2017 and 2021, the City spent almost \$50 million on road rehabilitation and street network modifications that include planning, design and implementation of projects for motorists such as accommodations of higher motor vehicle volumes, soundwall replacements, speed reduction programs and parking programs, among others. This accounts for approximately 51% of the City's transportation capital spending over the five years.
- > Based on ICBC data, approximately 107,000 Coquitlam residents have active drivers licenses. The number of active drivers licenses in Coquitlam increased by approximately 5% from 2017-2021, although the number of active drivers licenses per capita has remained constant over the past five years at 0.69 drivers licenses per capita (including all ages).
- > Based on ICBC data, there are approximately 76,000 registered passenger vehicles in Coquitlam, representing approximately 0.5 vehicles per person. While the number of registered passenger vehicles has increased slightly over the past years, this has matched population growth, with the number of passenger vehicles per person remaining relatively stable over the past five years, with a slight decline through the COVID-19 pandemic.

- > Based on ICBC data, the presence of electric and hybrid vehicles has increased significantly since 2017. The number of electric and hybrid vehicles has grown by 217% since 2017. Electric and hybrid vehicles have grown from 2% of all registered passenger vehicles in 2017 to 8% in 2021. The Household Travel Survey found that 87% of vehicles in Coquitlam are petrol, with 5.3% electric, 5.1% hybrid, 1.8% diesel and 1.2% plug-in hybrid.
- The City of Coquitlam saw its first carshare vehicle by Modo in 2015. There are currently 17 Modo carshare vehicles operating in Coquitlam as of December 2022.



ICBC Registered Electric and Hybrid Passenger Vehicles in Coquitlam



> The City installed its first electric vehicle user-pay public charging station in the parking lot at City Hall in 2015, and has since followed with more public charging stations at various civic facilities across the city.

Infrastructure

- > The City has 625 km of streets
- The City's street network is made up of different classifications of streets that reflect their different roles and functions (see Figure 3-22).
- > The City has a network of designated truck routes, including provincial highways and several municipal streets such as Lougheed Highway, United Boulevard, Barnet Highway, David Avenue, Pipeline Road, Coast Meridian Road and portions of Guildford Way and Johnson Street (see Figure 3-23).
- > There are several types of intersection controls throughout the City, including fully signalized intersections, pedestrian activated signals and stop controlled intersections.
- > Coquitlam has six priced Level 1 Electric Vehicle (EV) charging outlets at two locations serving up to six vehicles as part of an initial pilot project. There are 25 Level 2 charging stations at 10 locations in the City which are intended for active charging, not long-term parking.

Travel Patterns

Based on the 2022 Household Travel Survey:

- > 93% of Coquitlam household have at least one vehicle. The neighbourhoods with the lowest rate of household vehicle ownership are next to rapid transit stations, at Burquitlam (86.2% of households with at least one car) and Coquitlam City Centre (89.1%)
- > The average household has 1.56 vehicles. Automobile ownership is lowest in Coquitlam City Centre (1.27 vehicles per household) and Burquitlam (1.40) and highest in South Coquitlam (1.89) and Northeast Coquitlam (1.74).
- > Approximately 77.7% of all trips made by Coquitlam residents are made by private vehicle, including 58.1% as drivers and 19.6 as passengers.
- > There is a difference in gender for driver trips compared to passenger trips. People identifying as female account for 46% of all driving trips but 60% of all passenger trips.
- > 43% of all vehicle trips stay in Coquitlam, with Coquitlam Centre and Coquitlam South being the most popular destinations (see Figure 3-24). Other common destinations include Port Coquitlam, northeast Burnaby and Port Moody.
- > The average trip distance for vehicles is 9.2 km (11.1 km for drivers and 7.3 km for passengers). 65% of all trips are under 10 km, many of which could be replaced by transit or cycling. 40% of driving trips are under 5 km, many of which could be replaced by walking or cycling.
- > Shopping and personal business is the most common trip purpose for vehicle trips (24% of all vehicle trips), followed by commute to work or post-secondary (23%) and social or recreational trips (22%).



STREET NETWORK CLASSIFICATION





EXISTING TRUCK ROUTES



STRATEGIC TRANSPORTATION PLAN


COQUITLAM VEHICLE TRIPS ORIGIN AND DESTINATION PATTERNS



Coquitlam Centre Coquitlam North West Coquitlam North East Coquitlam South Maillardville / Austin Heights O— SkyTrain

- -- 800 metre buffer from SkyTrain -- station
- Highway
- Other Streets
- Municipal Boundary

Figure 3-24: Vehicle Trips Origin and Destination Source: Household Travel Survey 2022





Based on Census Data:

- > The 2021 Census found that 80% of Coquitlam residents commute to work or school by private vehicle (74% as drivers and 6% as passengers).
- There was a downward trend in driving commute trips from 2001 to 2016, and with COVID-19, there was an increase in the percentage of trips made by motor vehicle.

Support Policies and initiatives

- The City is in the process of simplifying street classifications in its Subdivision and Development Servicing Bylaw.
- > The Road Safety Strategy is currently underway.
- > The E-mobility Strategy is currently underway.

 The City's City-Wide Parking Review is currently underway and intended to identify 'made-in-Coquitlam' opportunities to incorporate Transportation Demand Management and Payment-in-Lieu requirements and policies within the City, particularly within new developments in Transit-Oriented Development areas.

Barriers

Based on Community Survey responses (see **Figure 3-25**), the top barriers to owning a zero or low emission vehicle are:

- > Purchase cost is too expensive (59%).
- > Vehicle range is limited (39%).
- There is limited or no access to charging at home (30%).



Figure 3-25: Barriers to Owning a Zero / Low Emission Vehicle

Source: Community Survey (2022)



Safety and Operations

- > The top reported locations for collisions involving motor vehicles, based on ICBC claim data (2015-2019), include:
 - Barnet Highway at Pinetree Way/Lougheed Highway (652).
 - Barnet Highway at Johnson Street/Mariner Way (498).
 - Lougheed Highway at North Road (465).
- > Most of the signalized intersections in the City currently have minimal or moderate increases in travel time for motor vehicles (see Figure 3-26). Intersections where increases in travel times and congestion for vehicles may be present during peak times include:
 - David Avenue and Coast Meridian Road
 - Lougheed Highway and Westwood Street
 - Lougheed Highway and Pinetree Way
 - Barnet Highway and Johnson Street
 - David Avenue and Pinetree Way
 - Mariner Way and Como Lake Avenue
 - Lougheed Highway and North Road
 - Brunette Avenue and Lougheed Highway
 - Brunette Avenue and King Edward Street

- > 2022 average speed data suggest that vehicles are travelling in the 40-60 km/hr on most of the municipal streets where the speed limit is 50 km/hr see Figure 3-27 and Figure 3-28). Lougheed Highway between Pitt River Road and Colony Farm Road (posted speed limit of 70 km/hr) sees slower speed in the peak direction during peak periods.
- > 2022 speed data (see Figure 3-25) suggests that vehicles are travelling above the posted speed limit at several locations in the City, many of which have steep topography and lower speed limits (see Figure 3-29 and Figure 3-30):
 - Pinetree Way north of David Avenue
 - Thermal Drive
 - Gatensbury Street
 - Dawes Hill Road
 - Foster Avenue between Gatensbury Street
 - Schoolhouse Street and
 - North Road south of Highway 1
- > Lougheed Highway, Barnet Highway, Pinetree Way, Westwood Street and portions of Como Lake Avenue, Brunette Avenue and Austin Avenue have the greatest variance in travel speeds, indicating lower vehicle travel time predictability with higher potential for increases in travel times for vehicles, congestion and/or collisions (see Figure 3-31 and Figure 3-32)



Summary of Issues

- > Use of passenger vehicles continues to be the predominant mode of transportation, as 80% of commute trips to work or school are made by driving or passengers based on the 2021 Census.
- > While driving declined during COVID-19, rates of driving have generally rebounded to pre-COVID-19 levels based on analysis of historic traffic data.
- > Single family residential neighbourhoods and neighbourhoods with steep topography have the highest use of passenger vehicles, with drivers and passengers accounting for almost 90% of all commute trips to work and school in the Northeast Coquitlam, Ranch Park, Cape Horn and Central Coquitlam neighbourhoods based on 2021 Census.
- > The number of registered vehicles in Coquitlam has not declined over the past five years (ICBC), and has been relatively consistent with population growth.
- The number of active drivers licenses in Coquitlam increased by approximately 5% from 2017-2021 (ICBC).
- > There are several locations throughout the City experiencing a number of collisions.
- > There are a number of intersections with increases in travel times and congestion for vehicles during peak periods, particularly in the City Centre, Lougheed and Burquitlam areas.
- > Speeding is an issue at several locations in the City, particularly in hilly areas and on streets with lower speed limits.

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Summary of Opportunities

- > The number of electric and hybrid vehicles has been rapidly increasing over the past five years from ICBC data, and there is strong interest among community members in shifting towards more electric and hybrid vehicles.
- > Other than some select locations in the City Centre, Lougheed and Burquitlam areas, most intersections in the City operate with reasonable levels of congestion and increases in travel times for motor vehicles.
- > There are opportunities to review the City's truck route bylaw to harmonize it with regional practices.
- There are opportunities to consider new and emerging forms of goods movement, including urban freight delivery using electric cargo bicycles.
- > There are opportunities to reallocate street space and provide more walking, cycling, and dedicated transit routes within the City, which can create safer and more comfortable places for people to travel by modes other than motor vehicle. This can also improve the efficiency and safety of the transportation network and reduce congestion.

Driving and Parking





Road Traffic in Coquitlam



EV Charging Spaces



AM(PM) INTERSECTION LEVEL OF SERVICE FOR VEHICLES



Figure 3-26: Existing AM (PM) Overall Intersection Level of Service for Vehicles Source: Synchro Modelling





AM AVERAGE SPEED FOR VEHICLES





Figure 3-27: AM 85th Percentile Speed for Vehicles Source: 2022 TomTom – March to May 2022





PM AVERAGE SPEED FOR VEHICLES



Other Streets School Commercial Park Municipal Boundary

Highway

Figure 3-28: PM 85th Percentile Speed for Vehicles Source: 2022 TomTom – March to May 2022





AVERAGE AM SPEED ISSUES FOR VEHICLES



Figure 3-29: AM Speed Issues for Vehicles Source: 2022 TomTom – March to May 2022





AVERAGE PM SPEED ISSUES FOR VEHICLES



Figure 3-30: PM Speed Issues for Vehicles Source: 2022 TomTom – March to May 2022





AM VARIANCE (85TH PERCENTILE SPEED VS. 15TH PERCENTILE SPEED) FOR VEHICLES



Highway Other Streets School Commercial Park Municipal Boundary Figure 3-31: AM Speed Variance for Vehicles Source: 2022 TomTom – March to May 2022





PM VARIANCE (85[™] PERCENTILE SPEED VS. 15[™] PERCENTILE SPEED) FOR VEHICLES



Highway
Other Streets
School
Commercial
Park
Municipal Boundary

Figure 3-32: PM Speed Variance for Vehicles Source: 2022 TomTom – March to May 2022





4.0 Closing and Next Steps

This is the first report prepared as part of the process to develop the STP Update. This report summarizes best practices and existing conditions for all modes of transportation in the City today. In summary:



- > A lot has changed in Coquitlam since the existing STP was developed. The current STP was developed four years prior to the opening of the Millennium Line Evergreen Extension in 2016, which has had transformational impacts on land use and mobility patterns in Coquitlam and the Northeast Sector. This growth has also meant that Coquitlam's population demographics are changing with a growing median age (41.6) and percentage of seniors (16%), as well as a dropping household size (2.6) and percentage of children (15%).
- > The existing STP set a modest target that 30% of all trips be made by sustainable transportation by 2031, and the City is making progress towards this target with a current sustainable transportation mode share of 22% of all trips – an increase from 15% in 2011. However, based on the Coquitlam Household Travel Survey, the majority of trips in Coquitlam are still made by vehicle (77.7% of all trips).





> Since 2011, the City has made progress in filling in gaps in the pedestrian network. Two-thirds (66.5%) of all streets have a sidewalk or multi-use path on at least one side of the street, including 56.4% of streets with a sidewalk or multi-use path on both sides of the street. Between 2017–2021, the City spent \$7.6 million on pedestrian infrastructure improvements, as well as \$20 million on corridor improvements that include multi-use pathways. The average walking trip distance is just under one km (0.95 km). Distance/time required to walk to destinations (42%) and road safety, traffic speed and dangerous drivers (31%) were the top barriers for walking. > Since 2011, the City has made progress in building out its cycling network with an increase of 217% in infrastructure built to a total of 117 km of cycling facilities. Between 2017-2021, the City spent \$20 million on walk/ cycle projects that include multi-use pathways. The average bicycle/micromobility trip distance is 8.1 km. Road safety, traffic speed and dangerous drivers (40%) and lack of protected bicycle lanes or crossings (39%) were the top barriers for cycling.





- > The Millennium Line Evergreen Extension opened in December 2016, adding the Burquitlam, Coquitlam Central, Lincoln and Lafarge Lake-Douglas SkyTrain stations in the City of Coquitlam. In 2020, the R3 RapidBus between Coquitlam and Maple Ridge was launched. Between 2017 and 2021, the City spent approximately \$1 million on planning, transit priority measures and transit shelters. 10.9% of people used transit and most people walk to access transit (89%) based on the Household Travel Survey. Long waiting time (37%) and perception that travelling by public transit is too slow (31%) were the top barriers for public transit.
- > Between 2017 and 2021, the City spent almost \$50 million on road rehabilitation and street network modifications.
 Households in Coquitlam own approximately 1.56 vehicles. The average trip distance for vehicles is 9.2 km.
 Perception that cost is too expensive (59%) and vehicle range is limited (39%) were the top barriers for owning a zero or low emissions vehicle.



The next phase of work will focus on charting the course for the future of transportation in Coquitlam. A future vision with supporting goals will be developed along with detailed strategies and actions to achieve the vision and goals. The strategies and actions will lay out the long-term plan, which will be followed by an implementation and monitoring strategy identifying short-, medium-and long-term priorities.

Coouitlam