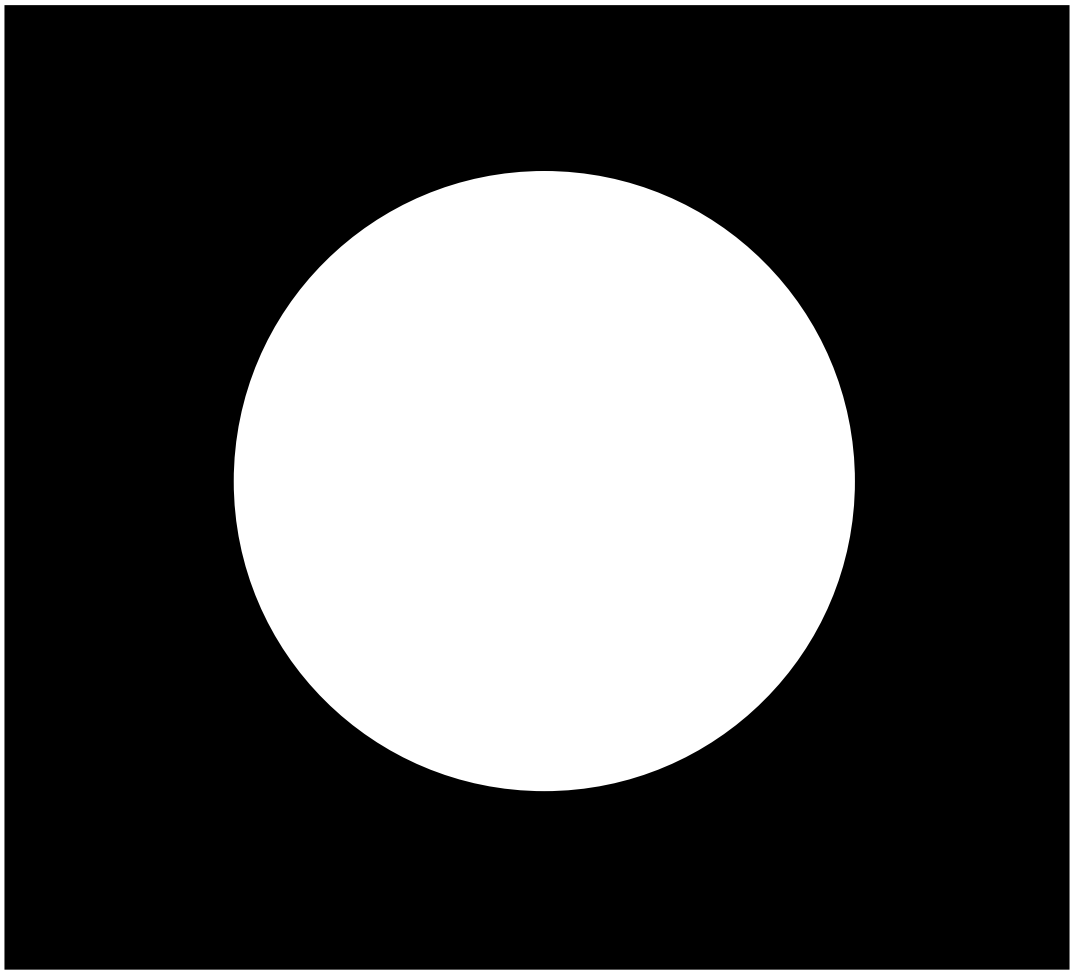
MOTT MACDONALD



TransPort Moody
Master Transportation Plan - Climate Action Update

May 2025

This page left intentionally blank for pagination.

Mott MacDonald
Suite 400
145 Wellington Street West
Toronto ON M5J 1H8
Canada

T +1 647 556 3200
mottmac.com

TransPort Moody
Master Transportation Plan - Climate Action Update

May 2025

Issue and revision record

Revision	Date	Originator	Checker	Approver	Description
1	20-Dec-2024	Armin Safari	Stephanie Ezra	George Wells	Draft for client review
2	28-Feb-2025	Armin Safari	Stephanie Ezra	Mike Logan	Update based on comments
3	9-May-2025	Armin Safari	Stephanie Ezra	Mike Logan	Final

Document reference:

Contents

Tables

Figures

Executive Summary

The City of Port Moody endorsed *TransPort Moody*, its Master Transportation Plan (MTP), in March 2017. The MTP set out a vision for the City's transportation system and established key targets and actions to achieve that vision for the future of transportation in Port Moody by 2045. In July 2020, the City adopted its Climate Action Plan (CAP), which outlines a comprehensive and strategic approach to reducing greenhouse gas (GHG) emissions, preparing for the impacts of climate change, and supporting the long-term liveability and prosperity of Port Moody. One of the CAP's key goals is to reduce transportation-related emissions by shifting away from single-occupancy vehicles to alternatives such as walking, cycling, and transit. The CAP builds upon the objectives of the 2017 MTP and has accelerated some of its targets to 2030, including:

- Residents walk, cycle, or take transit for 40% of trips by 2030 (up from 17% in 2017)
- 40% of passenger vehicles and 25% of commercial vehicles are electric by 2030

Port Moody consists of diverse neighbourhoods, key geographic features, and defined land use patterns. These factors significantly influence residents' mobility choices and overall travel behaviour. Prior to the COVID-19 pandemic, residents made an average of 3.6 trips per typical day. While most of these trips were completed by vehicle, many were also made using sustainable modes. Notably, 39% of school trips made by children were walking trips, and 20% of trips to work or university were completed by transit. Based on projections and using a slightly optimistic assumption that sustainable mode share trends will continue along the same trajectory as the past decade, estimates suggest the City's sustainable transportation mode share could reach 24% of trips by 2030. However, this business-as-usual scenario falls short of the CAP target of 40%, resulting in a 16% mode share gap. This gap translates to approximately 9,000 daily trips that would need to shift from private vehicles to sustainable modes by 2030.

In response to this projected shortfall, the update to the MTP is a strategic initiative aimed at exploring and defining a comprehensive set of transportation-related actions that will help the City meet CAP targets, as well as provincial GHG reduction goals. These actions are organized under *Big Moves*, each intended to address the gap between where we are and where we want to be.

Big Moves are a focused set of strategies designed to manage transportation demand, reduce vehicle travel, and support Port Moody in making significant and measurable progress toward achieving the CAP targets. While *TransPort Moody* remains a strong and guiding transportation vision for the City, the CAP provides renewed impetus to advance its existing thematic objectives and build upon the work already undertaken. The *Big Moves* developed as part of the MTP update are not intended to revise this vision, but rather to accelerate progress toward achieving it.

Public engagement was a critical component of the MTP update process, with feedback from various engagement phases incorporated throughout. There were two main phases of engagement. Phase 1 focused on gathering ideas for potential actions and strategies to help meet Port Moody's climate targets and transportation vision. This phase resulted in 28 initial *Big Move* ideas, developed through input from over 200 participants. Engagement activities included a *Big Moves* webinar, a public survey, and two workshops – one with community interest holders and another with City staff. Phase 2 sought feedback on the five proposed *Big Moves*. Input collected during this phase helped refine the draft *Big Moves* and associated

recommendations to support successful implementation. Engagement included an online survey and an in-person information session to share details and gather feedback on the proposed strategies.

The development of the *Big Moves* was guided by the Avoid, Shift, Improve (ASI) framework – a model widely used to shape sustainable urban mobility plans around the world. This framework helps identify the types of actions that reduce the impacts of travel and their associated GHG emissions. It also aligns with the Province's CleanBC Roadmap to 2030 transportation framework. As a first step toward evaluating and prioritizing the *Big Moves*, the long list of 28 ideas generated through Phase 1 public engagement was assessed at a high level. This initial screening considered both the feasibility of implementation in Port Moody and the potential contribution of each idea to the City's MTP and CAP goals. Ideas that had clear shortcomings or "fatal flaws" – such as low feasibility, limited applicability, or insufficient alignment with City objectives – were filtered out and are not being carried forward in the MTP update.

A preliminary shortlist of *Big Move* ideas was then developed and further refined through additional assessment and collaboration between the City and the project team. To help narrow down the ideas, emphasis was placed on the core objectives of the MTP update: shifting trips to sustainable transportation modes and reducing greenhouse gas emissions. During this refined assessment, it was recognized that some *Big Move* ideas could complement each other more effectively when viewed as part of a broader, integrated Big Move. As a result, several related ideas were grouped together to form more comprehensive strategies. While each individual idea – whether part of a broader package or a standalone initiative – was assessed independently, it is understood that their collective impact may be greater when implemented together. Their effectiveness, particularly in shifting travel behaviour and reducing emissions, is likely to increase through coordinated action.

Based on the assessment – and the potential to bundle some of the *Big Move* ideas – the following five proposed *Big Moves* were developed as part of the MTP update process (not listed in order of priority):

- ***Big Move #1 – Smarter Parking Initiative***: *A combination of parking maximums, paid on-street parking, and recreational parking demand management.*
- ***Big Move #2 – City-wide Speed Limit Reductions****: Reduce posted speed limits on all local residential streets in Port Moody to 30 kilometres per hour (km/h). On a case-by-case basis, consider reducing posted speed limits on busier collector and arterial roads to 40 km/h or lower.*
- ***Big Move #3 – Reallocation of Road Space****:* R*eallocate a minimum of 10% of road space from vehicles to sustainable modes of travel, green infrastructure, or public spaces.*
- ***Big Move #4 – Transit Supportive Infrastructure****: Provide additional overpasses across rail and Skytrain lines for walking and cycling near SkyTrain stations, and explore and implement transit priority measures along major road corridors like St. Johns Street.*
- ***Big Move #5 – Promotion of Sustainable Transportation Options****: A combination of transit promotional activities, school travel planning, and micromobility options.*

These *Big Moves* would provide a balance between policy instruments based on regulation or economic incentives, and those focused on service and infrastructure investments. Aligned with the ASI framework, the proposed *Big Moves* emphasize actions that aim to reduce or shift vehicle trips while improving opportunities for sustainable travel. Together, these actions are intended to support the City in working toward its CAP targets and advancing the implementation of the *TransPort Moody* vision.

1 Introduction

1.1 Purpose of Master Transportation Plan Climate Action Update

Mott MacDonald has been engaged by the City of Port Moody (the “City”) to support and update the City’s Master Transportation Plan (MTP)[1], TransPort Moody. The objective of this update is to align the TransPort Moody strategic goals and supporting actions with those identified in the City’s recently approved Climate Action Plan (CAP).

Port Moody endorsed TransPort Moody in March 2017. TransPort Moody sets out a vision for the City’s transportation system and established key measurable targets and actions to achieve the vision for the future of transportation in Port Moody by 2045.

1.2 Plan Development and Community Engagement

The CAP has advanced some of the TransPort Moody targets to 2030, providing a renewed impetus for the City to develop and implement a core set of transportation-related actions —"Big Moves”— intended to measurably contribute to achieving these targets. The MTP update process served to develop these Big Moves and their supportive actions, while also assessing transportation system risks and potential adaptability requirements.

Big Moves are a core set of transportation-related actions that are intended to manage demand for transportation, reduce vehicle travel, and help Port Moody make significant and measurable progress towards achieving the targets of the *Climate Action Plan*.

The initial assessment produced numerous Big Move ideas, which were refined through further evaluation and collaboration with the City. Emphasis was placed on actions that shift trips to sustainable transportation and reduce greenhouse gas emissions. Ideas that scored low were removed, while those with medium or high scores were further assessed qualitatively. Some ideas were bundled into broader initiatives to enhance their effectiveness, resulting in a refined shortlist of key actions, including initiatives related to parking, speed limits, road space reallocation, transit infrastructure, and driveway fees.

Public engagement was a critical component of this MTP updating process, with feedback from various engagement phases incorporated throughout the refinement process. There were two main phases of engagement:

1.2.1 Phase 1 Engagement

During Phase 1 of public and targeted interest holder engagement, conducted between February and April 2022, ideas were gathered on potential actions and strategies to meet Port Moody’s climate targets and transportation vision. This phase resulted in 28 initial Big Move ideas. Using a globally accepted framework for sustainable transportation plans, these ideas were refined down to five proposed Big Moves for the MTP Climate Action Update.

Overall, over 200 people were engaged through four different activities:

[1] https://www.portmoody.ca/en/city-hall/resources/Documents/Port-Moody-Master-Transporation-Plan.pdf

Big Moves Webinar
This event, attended by 38 participants, shared the vision, goals, and pillars of the Master Transportation Plan with the public. It featured project experts, including keynote speaker Chris Bruntlett, discussing equity, mobility, accessibility, sustainability, and climate action planning. Topics included early policy review results, the current state of transportation in Port Moody, responses to global trends, and anticipated challenges.

Public Survey
An online survey, completed by 164 participants, allowed the public to engage with Phase 1 key topics and provide feedback for drafting the "Big Moves." The survey was available on the project website and in paper form at various locations.

Big Moves Workshops
The workshops included two sessions: one with community interest holders and another with staff. The community interest holders' workshop had 13 participants from various organizations, such as Coast Mountain Bus, Fraser Health, and TransLink. The staff workshop involved 9 participants from the project team, including urban designers, policy planners, and transportation engineers, who reflected on community input and further developed the Big Moves.

This phase resulted in 28 initial Big Move ideas. Using a globally accepted framework for sustainable transportation plans, these ideas were refined down to five proposed Big Moves for the MTP Climate Action Update.

1.2.2 Phase 2 Engagement

During Phase 2 engagement in June and July 2024, feedback was sought on the five proposed Big Moves. The results from this phase were used to refine the draft Big Moves and recommendations to ensure successful implementation. The City conducted an online survey and hosted an in-person information session to provide information and gather feedback on the proposed Big Moves.

Public Survey
The public survey was available on the project webpage at engage.portmoody.ca from June 17 to July 14, 2024, and received 199 responses. The survey was intended to understand the public level of support or opposition for the proposed Big Moves, and to provide insight into the reasons why respondents stated they were not in support of a Big Move. Paper copies were available on request at City Hall and at the in-person information session.

Big Moves Information Session
The in-person information session was held on Thursday, June 27, 2024[2], and included a brief presentation along with an opportunity for the public to ask questions and review information boards on each proposed Big Move. Participants were encouraged to fill out the public survey to provide feedback on the proposed Big Moves. While there was limited attendance at this in-person session (approximately 4 participants), the information from the presentation and information boards was also made available on the Engage Port Moody project page.

The final implementation of the Big Moves has been guided by clear policy directions, prioritizing projects based on their expected impact and feasibility, and ensuring ongoing monitoring to deliver the expected benefits. This comprehensive approach aims to contribute to a sustainable and efficient transportation system for Port Moody residents and visitors.

[2] Information session took place between 5-7 PM at 100 Newport Drive, Port Moody, BC

1.3 Policy and Planning Context

The actions the City takes and the development of the Big Moves must be situated within the broader context of the global, provincial, and regional scale of the climate crisis, as well as the efforts being undertaken at multiple levels to address it.

1.3.1 The World

Carbon emissions and the resulting climate crisis are a challenge at a global scale. To prevent warming greater than 1.5ºC above pre-industrial levels, the world must cut emissions by at least 7.6% per year. In 2020 annual global emissions fell by 6.4% as a result of restrictions put in place to lessen the health impact of the COVID-19 pandemic. The largest single reduction came from the US, mostly due to a sharp decline in driving as economic and social activity was temporarily curbed in the early days of the pandemic. Despite this slowdown and the tangible disruption to daily life, the scale of GHG emissions reduction was less than that required annually to meet the 1.5ºC target.[3]

While COVID-19 has been disruptive, the climate crisis has put us all into "code red for humanity", in which we are perilously close to "putting billions of people at immediate risk" from climate catastrophe, economic risk, and the viability of civil society.[4]

To be sure, the level of disruption we all experienced during the early days of the pandemic should be avoided as an approach. It reinforces a call for policy measures that support a transformative but managed reduction in GHG emissions at the scale needed to exit code red and lessen worsening impacts, lest they reach a scale we cannot manage.

There is still time, but as the United Nations Intergovernmental Panel on Climate Change (IPPC) makes clear, we must 'raise the ambition level of mitigation'.

1.3.2 The City within the World

Historically, the most affluent 10% of global residents have contributed to over 50% of global emissions, with most Port Moody residents falling into this high global income category[5]. The average carbon emission footprint measured per person in Metro Vancouver is currently about 15% higher than the global average[6].

Transportation is a significant contributor to the climate crisis, with road transportation responsible for about 18% of all global carbon emissions[7]. In the City of Port Moody, road transportation is responsible for over 50% of community carbon emissions.[8] When considered together with the overall higher than average per capita carbon emissions, road transportation contributes to a significantly outsized proportion of carbon emissions in the City.

---

[3] Nature 2021, *COVID curbed carbon emissions in 2020 – but not by much.* https://www.nature.com/articles/d41586-021-00090-3

[4] UN 2021, *Secretary-General's statement on the IPCC Working Group 1 Report on the Physical Science Basis of the Sixth Assessment*

[5] Sources: https://emissions-inequality.org/ ; world inequality database, and Census 2016.

[6] Data from Metro Vancouver Air & Climate Change dashboard for 2019 (5.51 tonnes/CO_2eq) & Our World in Data (4.8 tonnes/CO_2eq)

[7] International Energy Agency (pre-COVID): Transport accounts for 24% of all energy-related emissions, with road transport constituting 75% of transport emissions.

[8] City of Port Moody 2020 Climate Action Plan

This also means that to meet policy targets established in the City's CAP, how residents move must play an outsized role toward reducing the City's carbon emissions. We know that the scale of change needs to be transformational to create transportation systems that are net-zero by design[9]. Within this context we must also understand that every action counts, and that individual action is an intrinsic part of collective transformation. This applies at multiple scales:

- Individuals within Port Moody
- Port Moody as an individual municipality within the World

The IPCC's Mitigation of Climate Change report notes that individuals can contribute to overcoming institutional barriers; that they can commit to low-carbon habits, and that a relatively small proportion of the population can establish new social norms that enable the type of transformational change needed[10]. In other words, both individuals within communities and individual communities can demonstrate leadership to effect transformational change. Given the City's current outsized transportation carbon emissions contribution, there is a defined need and moral and economic imperative to assume this role.

Myth
The City and its residents cannot meaningfully contribute toward mitigating the climate crisis.

Fact
Individuals and communities can contribute to overcoming barriers and enable climate change mitigation.

1.3.3 The City within the Region

The need for decisive action to reduce transportation-related GHG emissions is made clear through several provincial and regional policy initiatives.

CleanBC – Roadmap to 2030

As part of the CleanBC program, British Columbia (the "Province") recently released its Roadmap to 2030. The Roadmap provides specific transportation objectives, which further support the City's efforts. These include:

- accelerating the transition to zero-emissions vehicles to 90% of all light-duty vehicles sold in the Province, and targets for medium and heavy-duty vehicles
- reducing the energy intensity of goods movement by 10%
- reducing vehicle distances travelled by 25%, and encouraging a mode shift to 30% of trips by sustainable transportation modes by 2030

All these actions combined are intended to contribute toward the Province's, and therefore the City's, emissions reduction targets. Importantly, **these policy targets signal a need to significantly reduce vehicle travel, acknowledging that a shift to technological solutions alone will not be adequate to meet objectives**.

Metro Vancouver - Clean Air Plan

Metro Vancouver finalized the regional Clean Air Plan in 2021 with transportation as one of six specific issue areas. It establishes several goals and targets that align with or exceed those in the province's Roadmap to 2030 including:

- a 65% reduction in passenger vehicle GHG emissions from 2010 levels

[9] OECD (2021), Transport Strategies for Net-Zero Systems by Design, OECD Publishing, Paris, https://doi.org/10.1787/0a20f779-en.

[10] IPCC 2021 – Mitigation of Climate Change Draft.

- a 35% reduction in medium and heavy-duty vehicle GHG emissions from 2010 levels

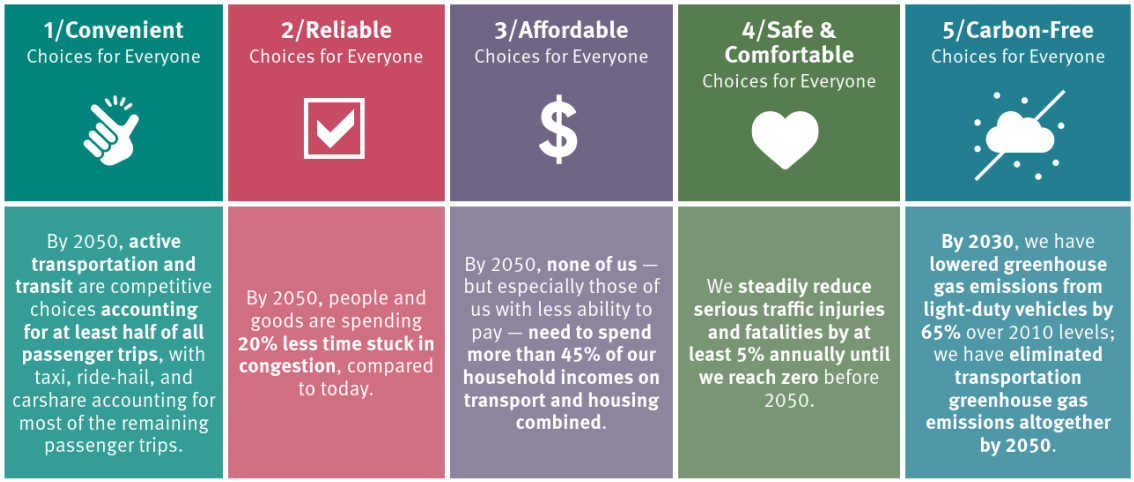
To work toward these GHG emissions goals, the plan identifies a number of specific strategies and actions for the region, with member jurisdictions identified to be a partner among most of these. Several of the actions are also noted as big moves that explicitly consider municipalities as the lead agency or lead partner, including:

- The use of pricing to reduce driving and emissions
- The expansion of active transportation networks
- The regulation of existing medium and heavy trucks

The Clean Air Plan makes clear that municipal action is fundamental to achieving regional and provincial climate objectives.

TransLink - Transport 2050

TransLink has been working with member jurisdictions and key partners over the last three years to develop Transport 2050, the region's new regional transportation strategy. Transport 2050 was endorsed by the Mayor's Council in early 2022. The strategy establishes five goals and associated headline targets:



As it relates to Port Moody's strategic objectives, key among these is the need to shift at least 50% of trips to sustainable modes by 2050 (with taxi, ride-hail, and car-share accounting for most of the remaining passenger trips), and to reduce GHGs from light-duty vehicles by 65% over 2010 levels (and have eliminated transportation GHGs altogether by 2050), in line with the region's Clean Air Plan.

The strategy also outlines ten transformative actions that are intended to be advanced in partnership with local governments, Indigenous Groups, senior levels of government, and other key partners. The strategy stresses that the most important actions municipalities can take is to shape the nature and location of growth, and to design and manage local streets and curbsides in new ways. To that end, **municipalities can take on decisive leadership roles to advance several of the ten transformative actions**, including:

- Supporting walkable, complete, and affordable communities
- Transforming roads designed mainly for cars into people-first streets designed for everyone
- Completing complete networks of protected bikeways in urban centres, and an expanded major bikeway network

The Transport 2050 strategy identifies a multitude of additional actions for which municipalities may lead or be strong partners on. It also provides a general policy framework for new and bold actions that may emerge out of ongoing planning work at multiple levels of governance.

Importantly, Transport 2050 acknowledges the role technology may play in contributing toward targets, while also identifying limitations, challenges, and potential threats—including those that come with automated vehicles— if not thoughtfully managed.

> "While technology may play a more significant role in helping meet our 2050 target — in order to achieve a 5–10% reduction in GHG emissions every year for the remainder of this decade to meet our 2030 target—we need significant, urgent, and immediate action by all levels of government on the scale of the mobilization that this country realized during the Second World War."

1.3.4 The City and its Neighbours

Municipalities across the region have recently updated strategic policy goals, climate action plans, and transportation plans to reflect the urgency of the climate crisis. The plans have developed big moves or transformative actions at various scales—from strategic in nature, to near-implementation ready. Many prioritize the need to mitigate carbon emissions, but they are also intended to provide benefits for everyday life.

City of Vancouver – Climate Emergency Action Plan

In 2019, the City of Vancouver approved the Climate Emergency response, which included several transportation "Big Moves" aiming for:

- 90% of people living within an easy walk or roll of their daily needs
- Two-thirds of trips in Vancouver to be by active transportation and transit.
- 50% of the km driven on Vancouver's roads to be by zero emissions vehicles

> "In terms of affordability, the individual (internal) costs of driving are already beyond the means of many. This trend will increase. There is no technological, economic, geopolitical, or spatial land use trend that will reverse this trend while reducing environmental impact. The opportunity to improve affordability for all lies in providing a means of access to opportunities through other less-prohibitive modes of transportation and the provision of walkable, complete communities."

Building on the Climate Emergency Response, the City of Vancouver approved its Climate Emergency Action Plan (CEAP) in late 2020. Among a comprehensive set of actions, the CEAP included two transportation-related "game-changer" actions, including:

- Planning for a transport pricing strategy in the Metro Core
- A residential parking permit, and polluting vehicle surcharge

While the game-changer actions require(d) further development, the intent is to move from high-level goals and target-setting to defined actions that contributed materially toward these.

City of Surrey – Transportation Plan

The City of Surrey is finalizing its Transportation Plan. The Plan proposes four bold moves including:

- Put Safety First - Value human life above all else in the transportation network by building streets that prioritize safety over the movement of vehicles.
- Support 15-minute Neighbourhoods - complete the walk and bike networks for all Surrey residents that live within an easy walk or roll of their daily needs.
- Connect Communities with Rapid Transit – build a Rapid Transit Network that supports and connects all of Surrey's communities.
- Invest in Green Transportation Choices – strengthen the multi-modal grid by prioritizing walking, cycling, and transit before personal vehicles.

These Big Moves are positioned at a strategic level and are also intended to support the City's Climate Action Strategy and tackle the climate crisis. Further work will be required to develop more defined actions for implementation; however, this strategy provides a framework for continued bold action.

City of Burnaby – Transportation Plan

The City of Burnaby's new transportation plan (2021) establishes five big moves among many supportive actions. These big moves are intended to work towards key policy targets, including a 50% sustainable transportation mode share.

The approved Big Moves set more defined targets, such that clarity is provided in terms of how the City intends to work toward overarching policy targets. These are largely infrastructure-based moves, and ongoing monitoring will inform specific projects and prioritization, as well as how these improvements are supporting the City's goals.

Within these goals, the City has also indicated a long-range road network form that **"*acknowledges a significant shift away from driving which will result in less road space being required to accommodate cars*".**

Walking	By 2030, 80% of the Burnaby pedestrian network will be completed to provide an accessible, safe, and comfortable walking and rolling environment.
Cycling	By 2030, the Phase 1 cycle network will be completed, providing clear consistent and continuous connections between Town Centres, major destinations and to neighbouring municipalities.
Transit	By 2030, the City will install 370 additional bus shelters or bus benches to increase transit passenger comfort.
Goods Movement	By 2023, the City will establish policies to require multi-family developments to provide secured storage amenities for oversized deliveries and goods requiring cold storage.
Driving	By 2026, develop and implement a Smart City Plan for Burnaby comprising of sensor technology, real-time data transmission and analytics to improve safety and optimize network performance.

City of New Westminster – Climate Action Framework

The City of New Westminster adopted its Climate Action Framework in 2019, containing seven bold steps. Three of these relate to transportation and build from the 2015 Transportation Master Plan goals:

CAR LIGHT COMMUNITY

Accelerate the Master Transportation Plan targets for mode split: 60% of all trips within the City will be by sustainable modes of transportation (walk, transit, bike, multi-occupant shared) by 2030.

POLLUTION FREE VEHICLES

By 2030, 50% of kilometres driven by New Westminster registered vehicle owners will be by zero emissions vehicles.

QUALITY PEOPLE-CENTRED PUBLIC REALM

A minimum of 10% of today's street space that currently only serves motor vehicles, excluding transit, will be reallocated for sustainable transportation or public gathering by 2030. The natural environment will be integrated with the public realm.

The City of New Westminster's Bold Steps provide ambitious goals and associated targets that are similar to Port Moody's. They are mainly strategic in nature, but the goal of quality people-centered public realm does express a more defined level of action, and the City is taking active steps toward the target of reallocating street space.

City of North Vancouver – Mobility Strategy and Climate & Environment Strategy

The City of North Vancouver is currently developing a Mobility Strategy and an aligned Climate & Environment Strategy. These strategies do not explicitly mention big or bold moves; however, the Climate & Environment Strategy includes a draft strategy to ***"Lead by Example"*** *by* ***"Fostering environmental leadership within our community and organization to inspire transformative change."*** The goal clarifies how the City sees its role as a driver of transformational change, and several of the actions in the draft Mobility Strategy reflect this aspiration, including:

- Rebalancing curb space and working with businesses to introduce pricing of on-street parking spaces
- Reclaiming more street space for people and nature
- Supporting sustainable mobility through growth and development, by establishing parking maximums for multi-unit residential buildings
- Promoting low and zero emission deliveries by exploring a permit system that incentivizes low emission vehicles

While the strategy includes a multitude of actions, those listed above are defined examples that will have a measurable individual impact on GHG emissions.

1.3.5 The City

The main intent of the MTP update is to align the 2017 Master Transportation Plan and the 2020 Climate Action Plan targets. These City strategic plans are discussed in further detail here.

2017 Master Transportation Plan

The 2017 Master Transportation Plan—*TransPort Moody*—established goals, high-level policies and actions to achieve the City's vision for the future of transportation. The vision was developed in consultation with the community and articulated as follows:

> *"Port Moody's multi-modal transportation system supports the development of a unique and safe and vibrant waterfront city.*
>
> *It provides convenient and attractive transportation choices connecting residents and the region to the City's thriving commercial areas, parks, trails, and neighbourhoods.*
>
> *The transportation network supports a healthy, active, liveable and sustainable community for people of all ages and abilities."*

A Compact, Complete City
a) Network of complete livable streets
b) Transit oriented communities
c) Vibrant waterfront

A Walkable City
a) Create great places and destinations
b) Enhance sidewalks and pathways
c) Improve safety and accessibility
d) Develop support programs

A Bicycle Friendly City
a) Develop a complete, comfortable and connected bicycle network
b) Make cycling convenient
c) Cycling support systems

A Transit Oriented City
a) Create a universally accessible transit system
b) Create more attractive transit services
c) Create a universally accessible transit system

Moving People and Goods
a) Update street network classification and guidelines
b) Multi-Modal Major Street Improvements
c) Improve connections across the railway
d) Safety and operational improvements
e) Goods movement network

A Safe and Livable City
a) Traffic calming
b) Improve personal safety

TransPort Moody's goals and objectives were organized against **six overarching themes**. To monitor progress of the goals and objectives, TransPort Moody established targets such that by 2045, the City would:

- Double the proportion of trips (from 20% to 40%) made by residents via walking, cycling, and transit to accommodate new trips related to growth.
- Reduce by 30% the average vehicle distance driven (from 10km per day to 7km per day per person).
- Reduce traffic-related injuries and fatalities with an ultimate goal to eliminate all fatalities from the transportation system.

To address challenges and work toward goals, the 2017 MTP identified key projects to improve transportation infrastructure to encourage walking, cycling, and transit. It also recommended localized intersection improvements to manage wait times for vehicular travel in place of road widening to promote livability and accommodate placemaking.

2020 Climate Action Plan

The City developed its Climate Action Plan (CAP) in July 2020, detailing its approach to reducing GHG emissions in support of the *United Nation's Climate Change Paris Agreement, BC Climate Change Accountability Act* and *CleanBC Plan*. The CAP identifies "reducing transportation emissions through a modal shift away from single-occupancy vehicles to alternatives such as walking, cycling and transit" as one of its key goals. The CAP builds upon the objectives of the 2017 Master Transportation Plan, and sets the following targets:

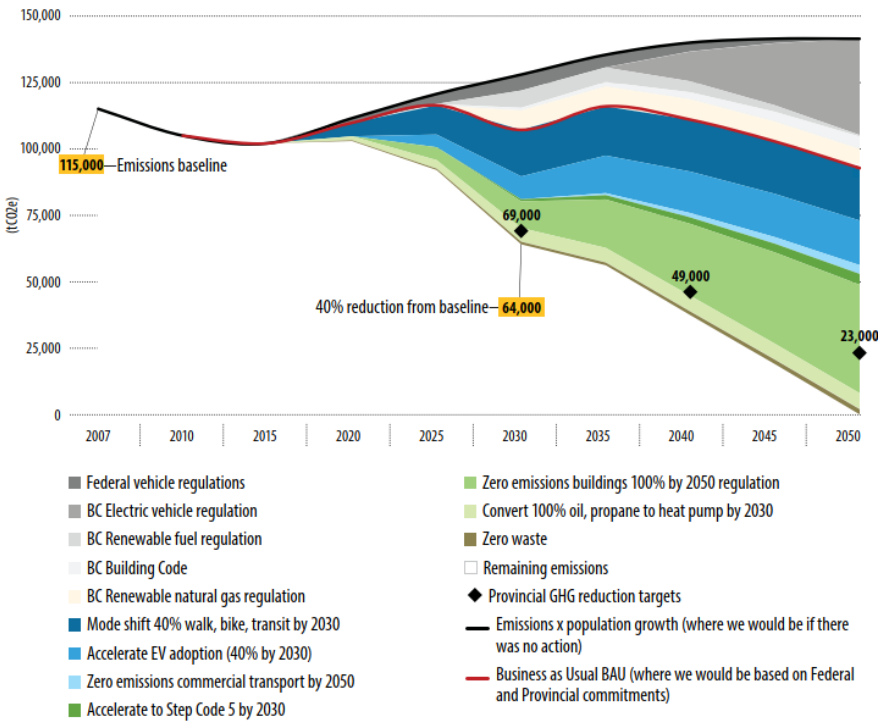
- Residents walk, cycle or take transit for 40% of trips by 2030 (up from 17% in 2017)
- 40% of passenger vehicles, and 25% of commercial vehicles are electric by 2030

In addition to these strategic goals and targets, the plan recommends several specific transportation-related, on-the-ground actions that the City can take to reduce emissions:

- Identify and implement policies to support the highest and best use of City-owned parking and curb space
- Accelerate the implementation of the 2017 Master Transportation Plan
- Consider creating pedestrian priority zones in key areas
- Work with schools to engage in School Travel Planning

The plan also asked what role autonomous vehicles could play to reduce emissions, noting that thoughtful policies are required to work toward desired outcomes.

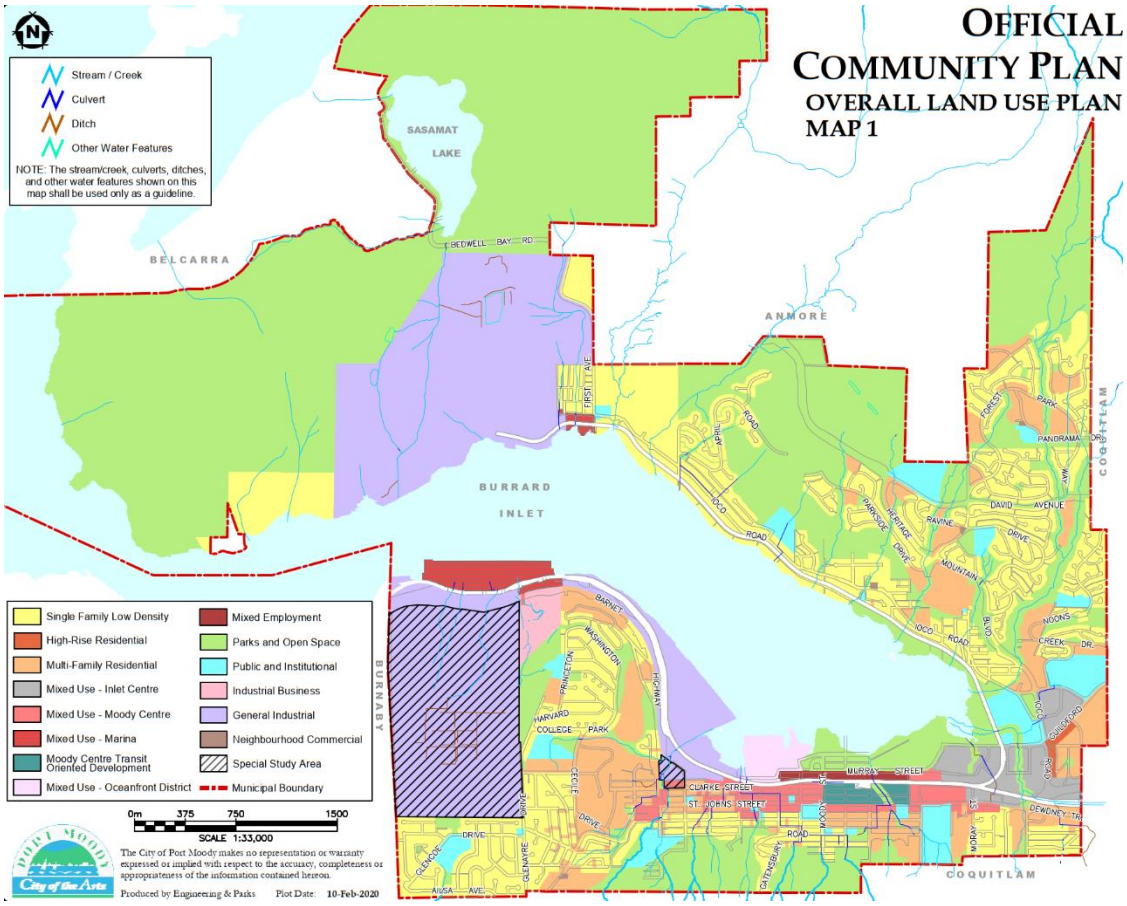
The high-level transportation targets established in the CAP ultimately aim to reduce annual transportation-related GHG emissions by about 25,000 tCO_{2eq} by 2030.



2 Existing Mobility Conditions

Port Moody consists of diversly structured neighbourhoods, key geographic features, and defined land use patterns. These features significantly influence the mobility choices of residents and overall travel patterns. Figure 1 illustrates the City's 2011 approved land uses, where the yellow areas are single family low density, purple areas are industrial, and green areas are parks and open spaces. The areas surrounding the Evergreen Line (including Moody Centre and Inlet Centre and the Murray-Clarke corridor) consist mostly of higher density mixed use zoning, which are intended to support transit-oriented land use.

Figure 1: Port Moody Official Community Plan Land Uses

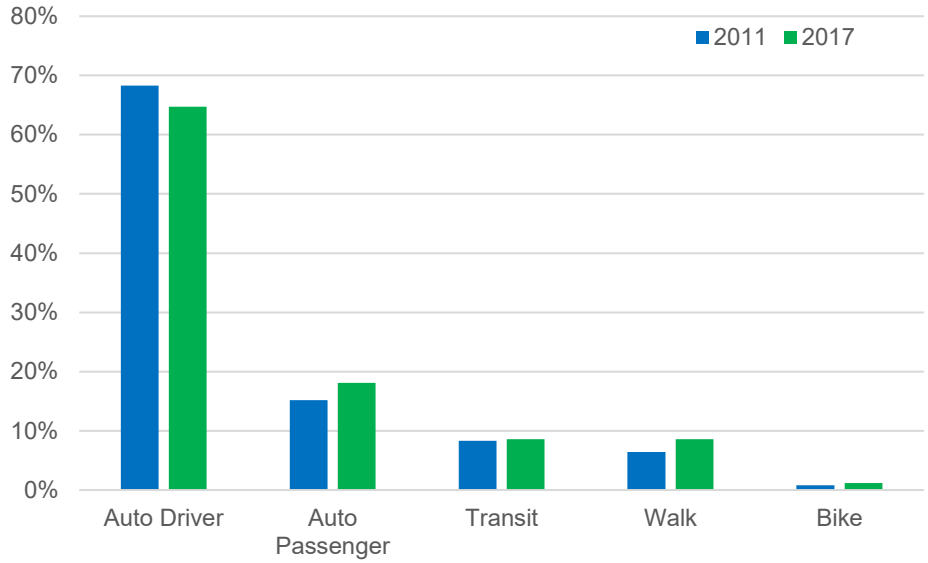


2.1 How Port Moody Travels

Prior to the COVID-19 pandemic, residents of Port Moody were making an average of 3.6 trips per typical day. Most of these trips were being completed by vehicle, with the average single occupancy vehicle trip about 10 km long. These patterns result in Port Moody residents travelling about 818,000 km per day by vehicle, which equates to 24 vehicle kilometres travelled per capita. This means that Port Moody has the sixth highest vehicle use in the Metro Vancouver region. As well, when comparing to municipalities that currently have direct access to SkyTrain, Port Moody has the lowest sustainable transportation mode share among its peers.

Many residents of Port Moody do travel by sustainable modes. Notably, 39% of trips to school by children are walking trips, and 20% of trips to work or university are on transit. The proportion of trips made by sustainable modes is also increasing, with walking trips showing the largest relative increase (Figure 2). Bicycle use is also growing in line with regional trends but remains a relatively small portion of trips at just over 1% of all trips in in Port Moody. Thus far, **the shift in sustainable mode use has not outpaced the absolute growth in vehicle trips—the number of overall vehicle trips continue to increase—but it does mean that as the population is growing, more trips are shifting to sustainable modes.**

Figure 2: Port Moody Transportation Mode Share (2011 & 2017)[11]

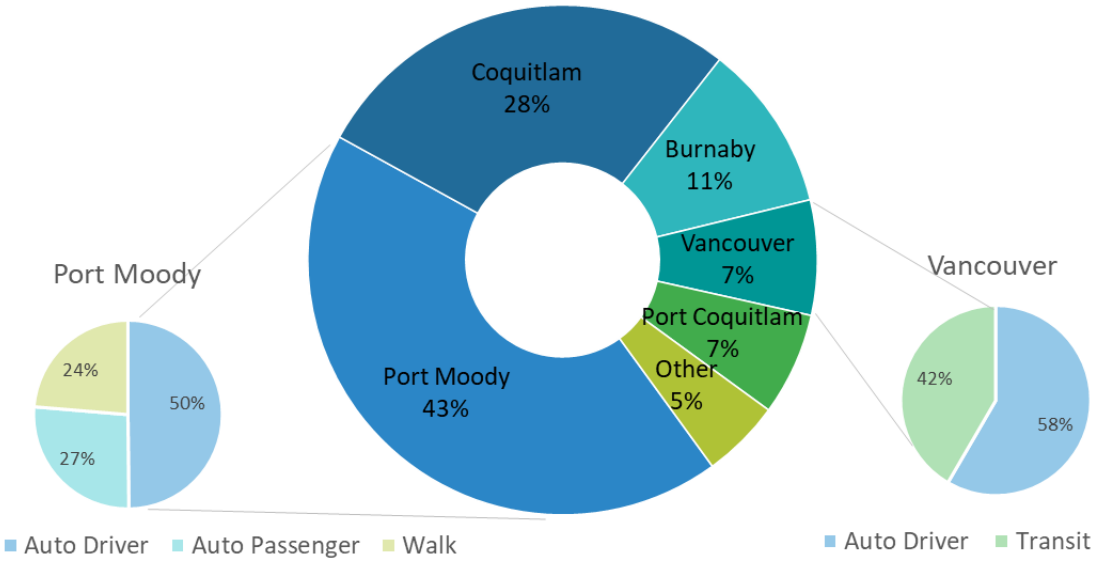


Where Port Moody Travels

Over three-quarters of all trips originating from Port Moody are to destinations within the Tri-cities. Burnaby and Vancouver are other main destinations. In line with typical mobility patterns, the more local the trips, the more likely they are to be to be made by active transportation modes. About **24% of all local trips—those that start and end in Port Moody—are completed with active transportation modes, meaning that active transportation plays a critical role locally.** For longer distance trips, such as those to Vancouver, transit plays a considerable role. Further details are shown in Figure 3 below.

[11] Data in this section and the come from TransLink Trip Diary 2017 and 2011, with extracts from the Regional Transportation Model for the bike proportion.

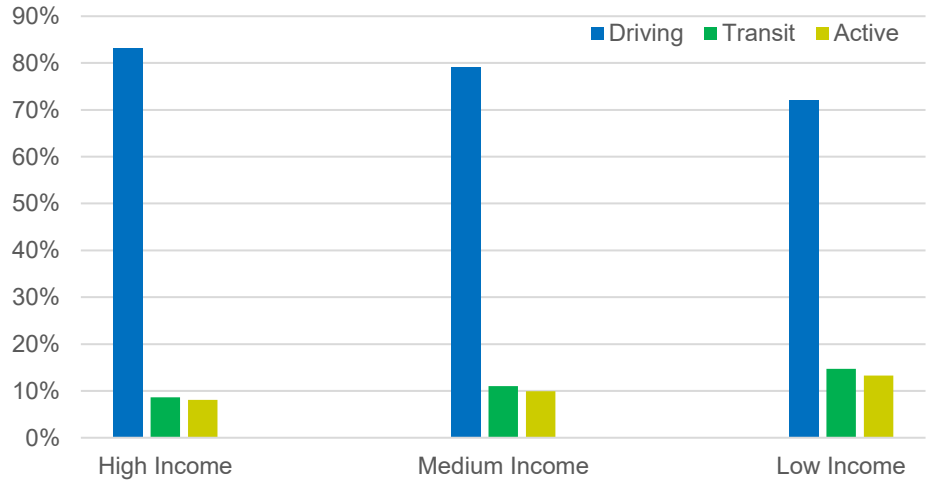
Figure 3: Trip Distribution and Mode Share in Port Moody



Who is Travelling

Income levels typically have a significant influence on how residents travel. Figure 4 below shows this pattern for Port Moody, where the share of vehicle trips made by lower income residents is 11% less than those made by the highest income residents. Lower income residents typically also make fewer trips and shorter trips, meaning that their share of overall travel by vehicle is even lower than that shown in the figure.

Figure 4: Mode Share by Income Group (All Trips – 2017)[12]



[12] Data extracted from the Regional Transportation Model, and which defines Low Income at <$50,000, Medium Income at $50,000 - $100,000, and High at >$100,000 at the household level in 2018

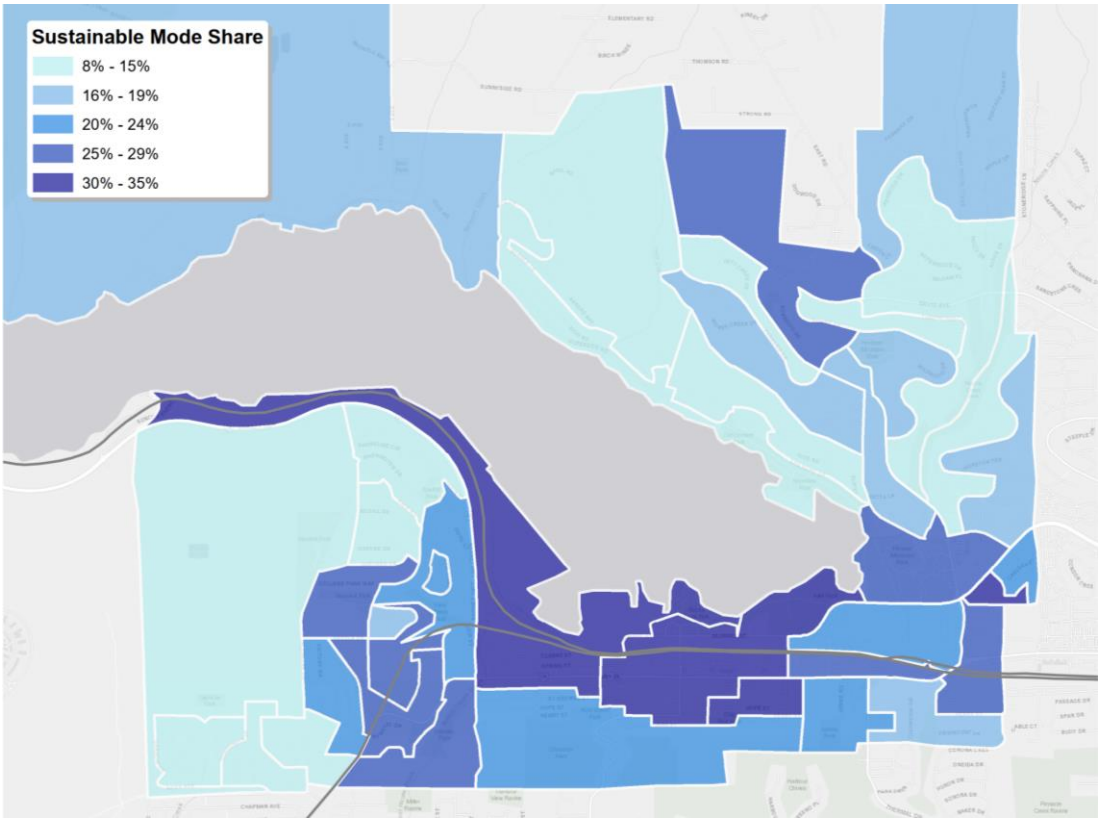
How Neighbourhoods Travel

The City's local land use and transportation network have a significant impact on how residents travel. Figure 5 below illustrates the share of commute trips made with sustainable transportation modes—walking, cycling, and transit—in different parts of the community. In some parts of the City, particularly around Moody Centre, Newport Village/Inlet Centre, and Seaview, up to one-third of all commute trips were made by sustainable modes in 2016. Areas with a higher sustainable transportation mode share align closely with areas that contain higher density, mixed land uses, and a more gridded street network.

Communities that consist of higher density mixed land use consistently result in more sustainable transportation outcomes and this pattern is also clear for Port Moody.

It is important to note that mode shares shown in the figure are from patterns prior to the opening of the Evergreen SkyTrain extension, further demonstrating the strong influence land use has on sustainable trip-making[13].

Figure 5: Sustainable Commute Mode Shares across the City



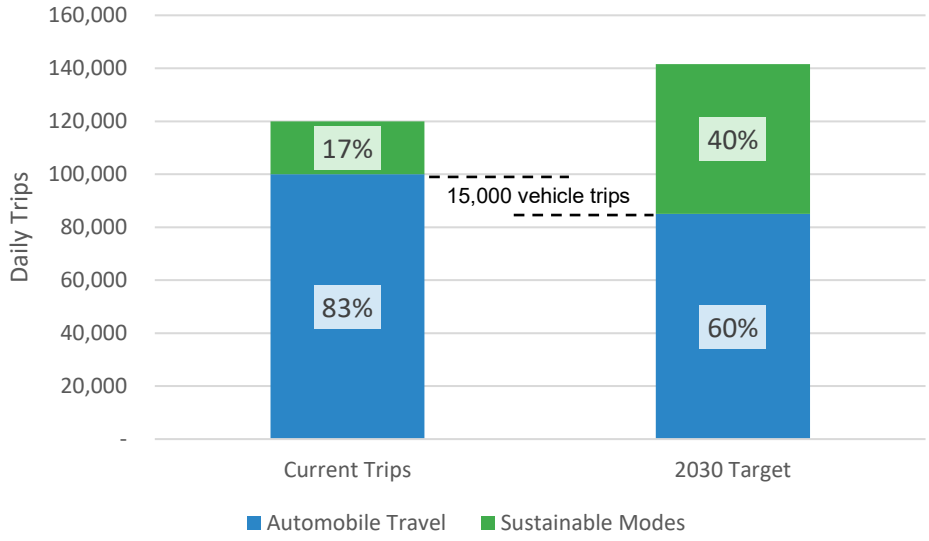
[13] Data is from the 2016 Census and relates to commute trips to work/university only. The subsequent census was undertaken during the COVD-19 pandemic, with results to be released in late 2022. The timing means that it will remain difficult to precisely understand the impacts of the Evergreen Line extension on commuting transportation behaviour over time.

2.2 Trends and Gap Analysis

Mode Share Trends

The Climate Action Plan established an ambitious target for residents of Port Moody to complete 40% of all trips by sustainable modes (walk, cycle, transit) by 2030. This target means that **from now until 2030, we need to shift about 15,000 daily trips made by residents from vehicle trips to sustainable transportation modes**.

Figure 6: Vehicle Trip Reduction to Meet Mode Share Target

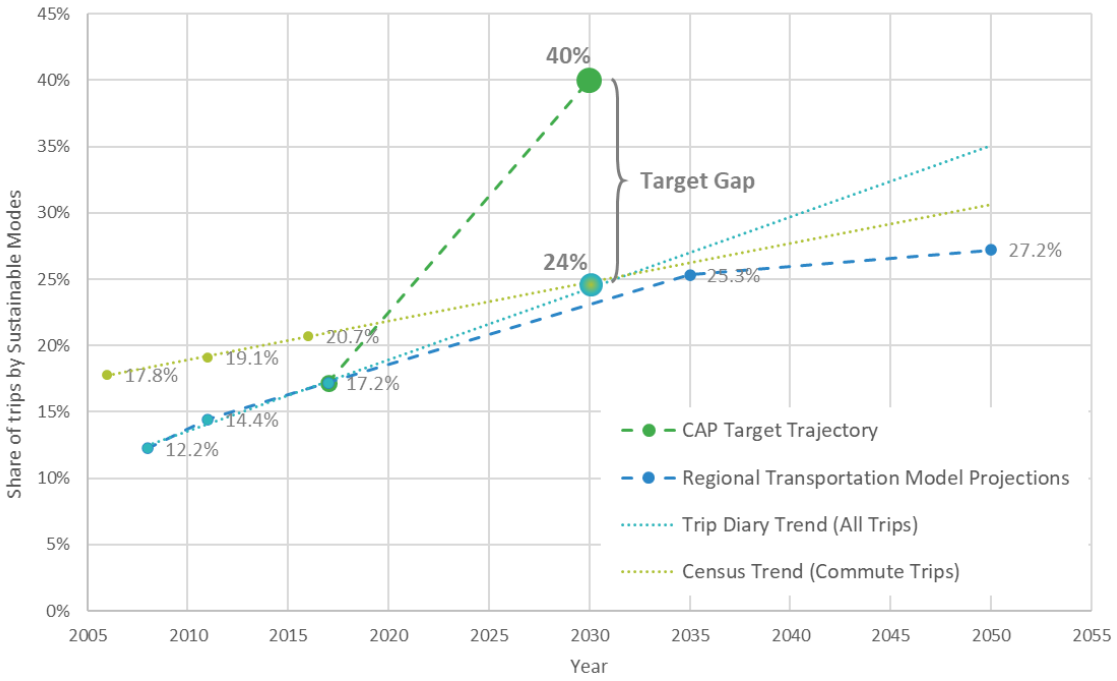


A key objective of the MTP Update is to understand the trajectory the City is currently on in terms of meeting this target. This business-as-usual trend can be estimated using several data sources, including those discussed in the prior section of this report. Figure 7 below summarizes the sustainable mode share trend estimates based on the three data sources described below and the implied gap between business-as-usual and policy targets.

Data Dive

- The Trip Diary (all trips) sustainable mode share trends are projected linearly into the future. This projection is based on the past three survey years and shows a general upward trend, with about a 0.5% shift toward sustainable modes per year.
- Data from the last three national censuses are included and also projected linearly. These data are only for commute trips (to work) and therefore do not account for a large proportion of trips and cannot be used directly to estimate the sustainable mode share trajectory. Despite this limitation, commuting mode share and all-day mode shares are typically highly correlated and the trend further verifies the shift toward sustainable modes. However, the census data suggest slightly slower growth in sustainable mode use than that by the trip diary.
- The Regional Transportation Model (RTM) runs at two future time horizons. As such, these data points are more comprehensive than a linear projection of existing conditions, providing an estimate of future transportation patterns based on currently committed system improvements and land uses changes reflecting population and job growth, i.e. business-as-usual. While the RTM can provide additional insight, it is important to not regard these projections as precise or as given.

Figure 7: Sustainable Mode Share Trend & Gap Analysis



Based on the projections and using a slightly optimistic assumption that sustainable mode share use trends will continue to follow that of the last decade, the estimates suggest that **by 2030 the City's sustainable transportation mode share will total about 24% of trips. This business-as-usual trajectory leaves a considerable gap of 16% mode share between the Climate Action Plan target of 40%.** This gap means that:

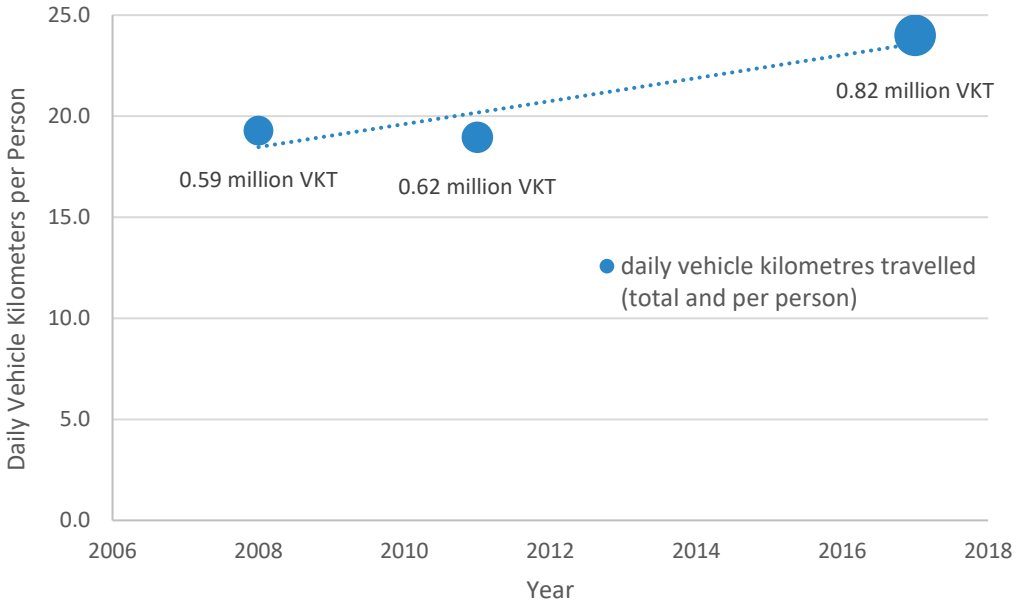
By 2030, approximately 9,000 additional daily trips that would otherwise be made by vehicle will need to be shifted to sustainable modes.

Vehicle Travel Distance Trends

TransPort Moody targets a reduction in the average vehicle distance travelled per person by 30 percent[14]. The Climate Action Plan does not specify a revised target; however, in terms of meeting GHG emissions reduction targets, this remains a key consideration for the City in addition to mode shift targets. If vehicle trip lengths and the amount of vehicle kilometres travelled by residents increases, this may offset any mode shift improvements. Figure 8 illustrates the estimated trend in the distances Port Moody residents are travelling by vehicle.

[14] TransPort Moody noted that residents travelled approximately 10 km per day per person in 2011, targeting 7 km per day per person by 2045. Updated understanding suggests that this target was intended to specify average driver trip length, as opposed to daily vkt. As residents make more than one vehicle trip per day on average, the actual daily vkt estimate is noted in the graph.

Figure 8: Estimated Trend in Vehicle Distance Travelled



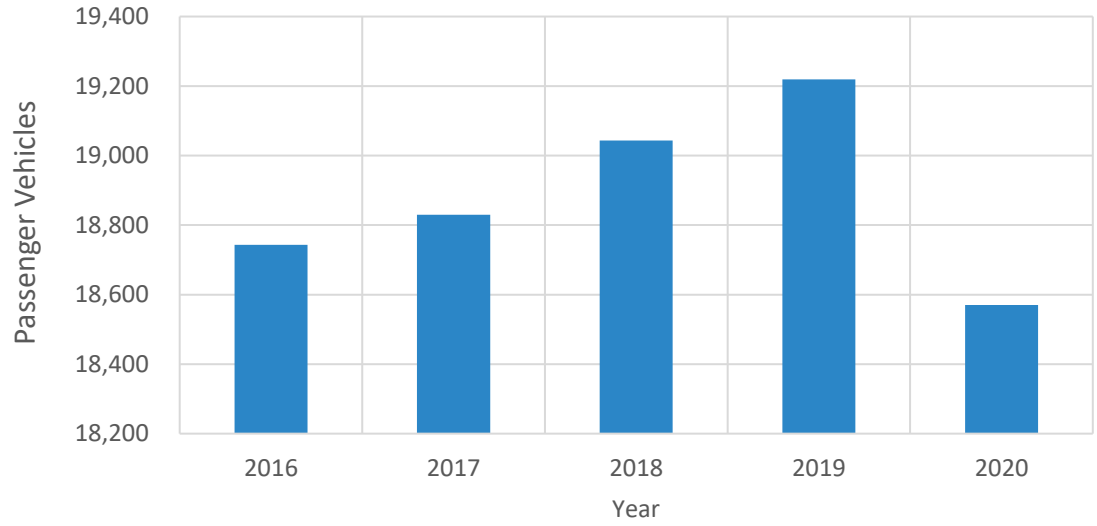
There is some uncertainty associated with vehicle kilometre travelled data, and data collection methodology has been revised over the years, meaning the figure may be underestimating past travel and overestimating the growth in vehicle kilometres travelled[15]. Despite these uncertainties, **it is currently very unlikely that Port Moody is on a trajectory to meet vehicle travel distance reduction targets**. These data uncertainties and the target definition suggest a need to update targets and how vehicle kilometres travelled are monitored.

Zero-Emissions Vehicle Trends

The Climate Action Plan set a target of 40% of passenger vehicles, and 25% of commercial vehicles to be electric vehicles (EV) by 2030, resulting in about 9,200 passenger EVs and 720 commercial EVs. These targets would imply that the total fleet would grow to approximately 23,000 passenger vehicles and 2,800 commercial vehicles. Figure 9 illustrates the total number of registered vehicles in Port Moody over the last five years. The COVID-19 pandemic had a clear impact on the number of registered vehicles, such that the overall number of registered vehicles in the City was reduced. It is unlikely that this trend will remain in the absence of continued pandemic or supply chain disruptions, or other policy measures.

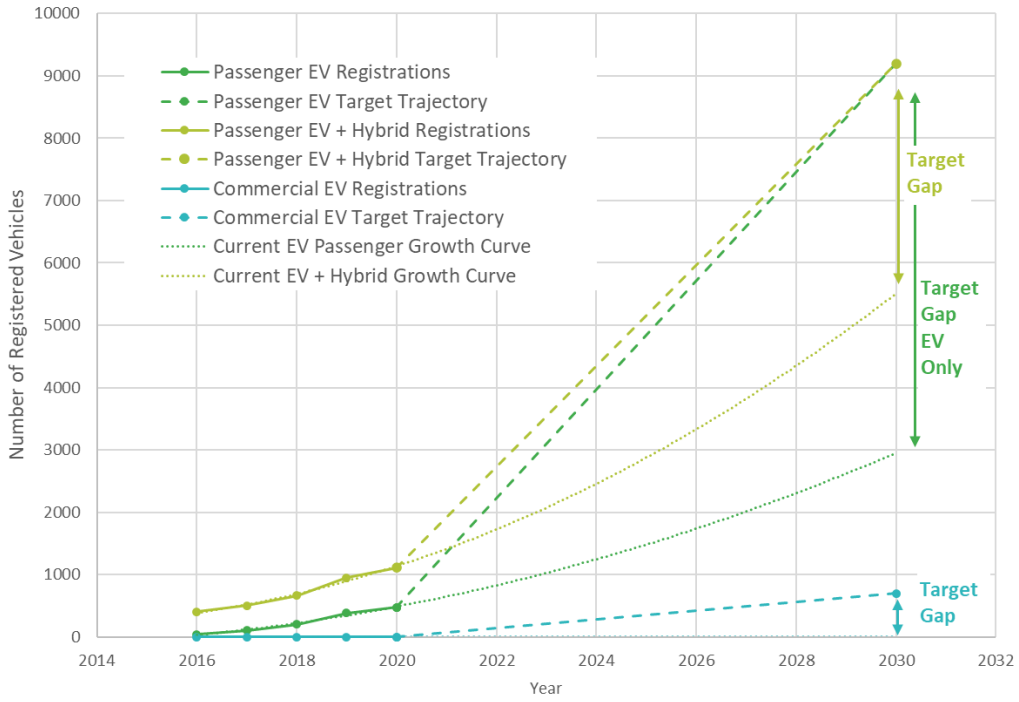
[15] Data comes from the 2008, 2011 & 2017 Trip Diary. 2008 & 2011 data was adjusted to translate northeast sector / tri-cities information to reflect Port Moody conditions. The Trip Diary methodology was updated between 2011 and 2017 to account for a transit bias in the data.

Figure 9: Port Moody Registered Passenger Vehicles



The number of passenger EVs continued to increase in the City even during 2020, with an average annual growth of about 2.0% over the last five years (to 2020). A similar trend has occurred for Hybrid vehicles; however, starting from a larger base amount, average annual growth was an order of magnitude less at 0.2%. The growth in EVs is starting to show potential signs of slow acceleration. These trends are summarized in Figure 10 below.

Figure 10: Port Moody Passenger & Commercial EV Growth Trends & Gap Analysis[16]



[16] Source data: ICBC

Despite some indications of accelerated EV uptake, it is **highly likely that the current EV growth trend will be insufficient to meet policy targets.** Even when including Hybrid vehicles as part of the EV fleet, it appears unlikely that the City will meet its policy targets in a business-as-usual approach. While BC leads the country in terms of EV uptake, many consumers continue to express concerns regarding range and price[17]. Further actions that either accelerate the uptake of EVs, or tempers (or reduces) the number of registered vehicles in the City, will be required.

The Travel Pattern Impact of COVID-19

The onset of the COVID-19 pandemic had a dramatic impact on travel patterns, through a combination of public health restrictions, work from home directives, apprehension to use public transit, reduction in tourist numbers, and supply chain disruptions. Travel patterns have since inched toward pre-pandemic conditions, with public transit facing the largest lingering impacts. TransLink currently estimates that transit ridership will recover to a level between 70% to 90% of pre-pandemic ridership by late 2024[18].

The extent to which the COVID-19 pandemic will result in longer-term impacts on travel pattern trends has been a vexing question across governmental agencies, academia, and industry, with significant implications for public policy, urban planning, and economic organization. This question is also an important consideration for Port Moody with respect to climate change goals and mode share targets. Work from home (telecommuting) provides the potential to reduce driving trips to work and can be considered a sustainable mode.

Data Dive

According to Statistics Canada, in June 2020 approximately 22% of Canadians worked from home—a five-fold increase from before the pandemic.[19] The main shift in transportation mode was from public transit to teleworking, with an almost 75% drop in transit mode share. A later Statistics Canada study found that telecommuting reduced several months later (by about 20%)[20], such that approximately 18% of Canadians were working from home before the second wave of the pandemic – fall 2020. As well, the study also provided insight into sociodemographic trends. Figure 11 below summarizes the total share of hours worked from home for select sociodemographic groups before and during COVID-19 across Canada. Given a more office-based economy in larger urban centres, it is likely that these values are even greater for Port Moody.

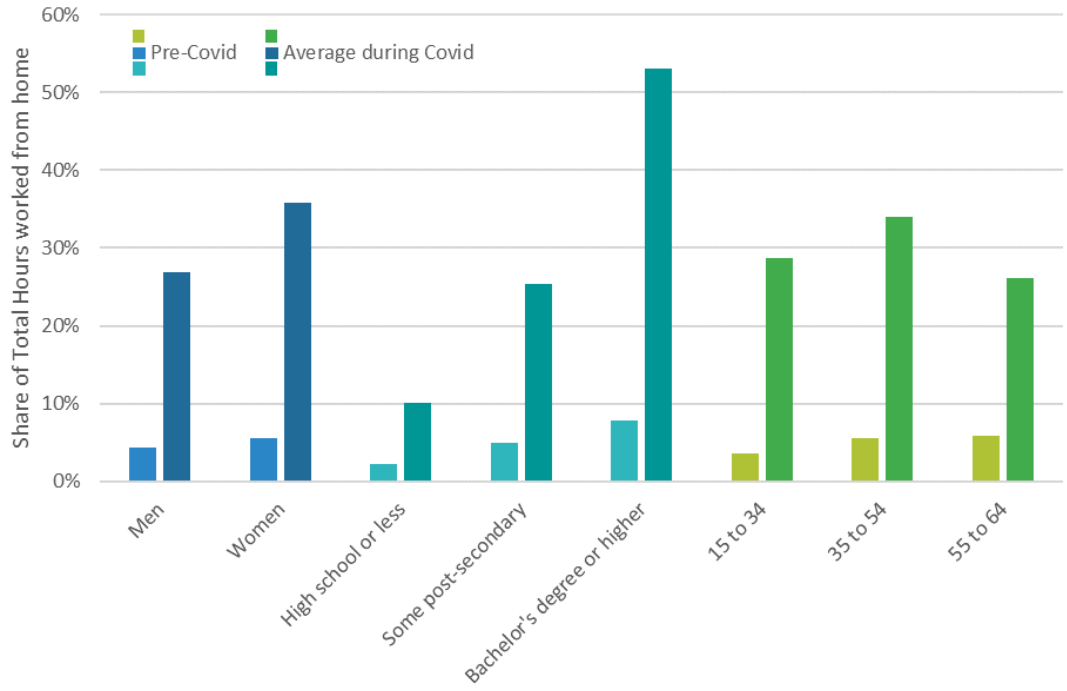
[17] Over 50% of Canadians stated their next vehicle purchase would be gas or diesel powered. Perhaps counter to perceptions, younger Canadians expressed a lower preference for purchasing an EV, likely due to price-point expectations. Source: Deloitte 2022 Global Automotive Consumer study

[18] TransLink Mayors' Council Meeting Dec, 2021

[19] Statistics Canada 2020 – Commuting to work during COVID-19

[20] Statistics Canada 2020 - Working from home after the COVID-19 pandemic: An estimate of worker preferences

Figure 11: Canadian Work from Home Patterns Before and During COVID-19[21]

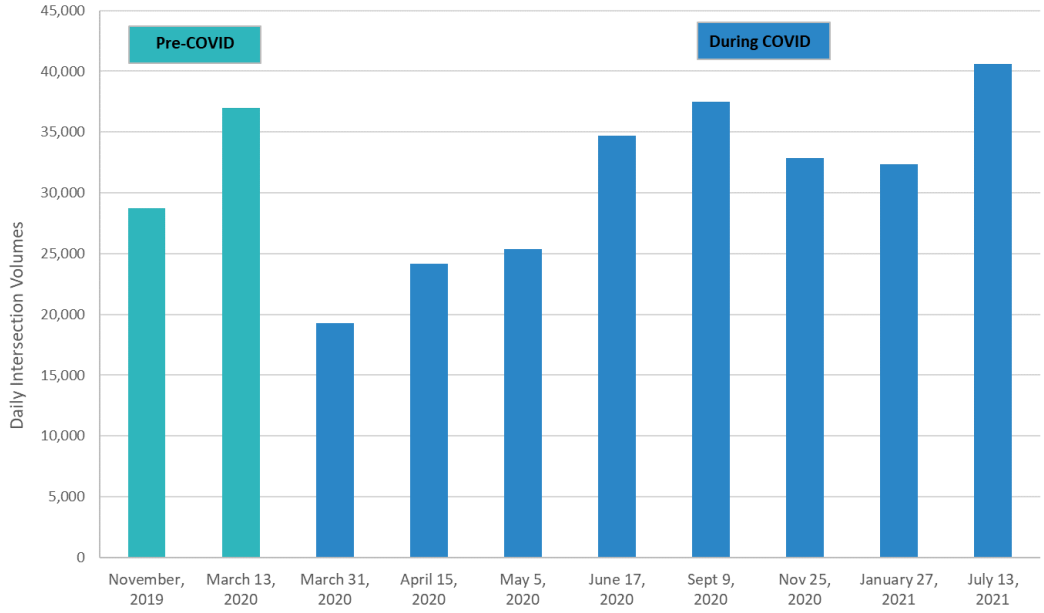


What Figure 11 tells us, and what is becoming increasingly common knowledge, is that work from home impacts everyone differently, and with large equity implications. Those with higher education levels—also a good indicator of income—have an increased ability to work from home. This pattern is particularly impactful for those workers and residents that make use of high-quality, frequent transit. As more people work from home and forgo transit trips, transit fare revenue decreases. With lower fare revenues, there is a risk that service cuts increase without further financial and intergovernmental support, reducing service for those who need it most.

It is also important to recognize that commute trips to and from work are only a proportion of daily trips. For Port Moody residents, approximately one-third of daily trips are for work or university. When considering commercial traffic, tourists, and taxi & ride hailing trips, commute trips become an even lower proportion of overall vehicle flows. As such, work from home may have a smaller impact on overall vehicle trips and flows on Port Moody's streets than might be expected. Figure 12 below verifies this condition. **Vehicle trips in the City do not appear to have decreased because of a higher rate of work from home**. Available data up to the summer of 2021 indicates they have likely increased since the onset of the pandemic.

[21] From summer to fall of 2020

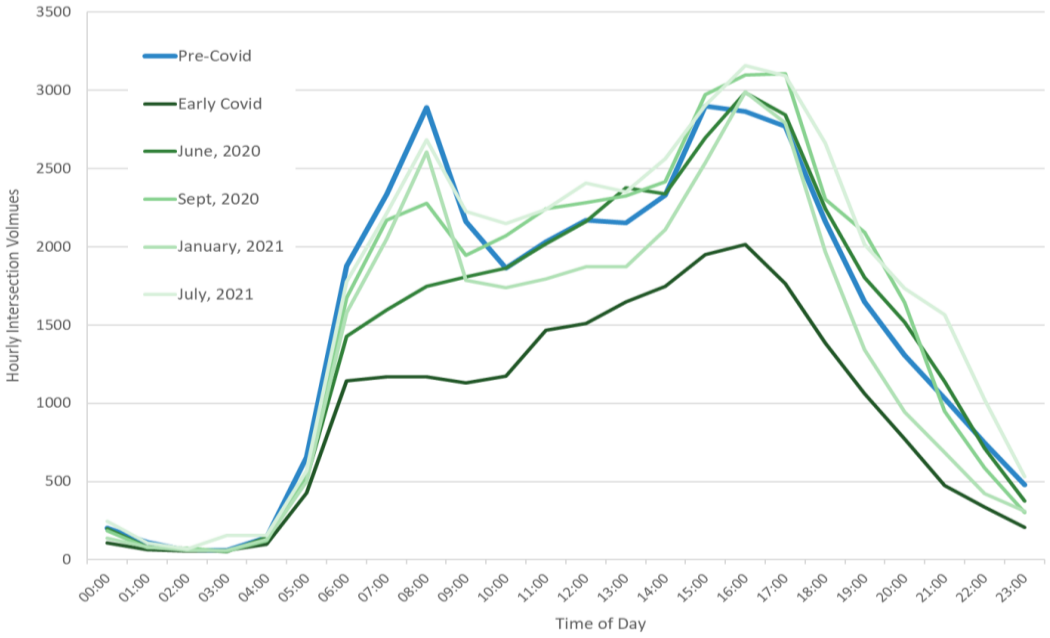
Figure 12: Traffic Volumes Before and During COVID-19[22]



Transportation policy and infrastructure decisions are often based on peak period transportation and traffic volumes. While overall traffic volumes may have stayed approximately the same as those before COVID-19, it is important to understand how these flows are distributed over the course of a typical day. This can provide insight into activity patterns and continues to help inform system improvements. Figure 13 below shows how the volumes over the course of a typical day shifted as the pandemic progressed.

[22] Data reflects the total daily volumes passing through the intersection of Moody St & St Johns St in all directions

Figure 13: Traffic Volumes over a typical Day at St. Johns & Moody St Intersection



At the onset of the pandemic, reductions in traffic volumes were most significant during the morning peak period, reflecting a shift to work from home, but also a large slow-down in economic activity. However, since that time peak hour volumes in the afternoon peak have exceeded pre-pandemic volumes and those in the morning peak are almost back to pre-pandemic levels – about 8% lower as observed in the summer of 2021.

Despite an estimated 20% of people telecommuting to work in the morning, traffic volumes have effectively returned to pre-pandemic conditions in the City

"Historical data suggest that improved communication possibilities do not lead to reduced aggregate travel times or travel distances. The expectation that improved communications and faster transport would lead to the "death of distance", causing us to spend less time on travel, has recurred repeatedly as new communication and transport technologies have been invented. But so far, this is not what has happened. Instead, we have exchanged the potential time savings for more access, both virtual and physical – more communication and more transport."[23]

Summary of COVID-19 Implications

The above assessment has the following key implications for the Master Transportation Plan Climate Action Update:

- Teleworking (work from home) will influence the transportation mode share mix in the City going forward; however, early estimates show that it will not significantly impact the amount of vehicle trips residents make, and may even increase it. As such, the gap analysis—showing a 16% gap between CAP sustainable mode share 2030 targets and business-as-usual forecasts—remains a strong estimate.

[23] Excerpted from Eliasson (2022) *Will we travel less after the pandemic?*

- Transit ridership is anticipated to take several years before recovering to pre-pandemic 2019 levels. Yet if 2019 service levels are not maintained due to financial pressures (resulting from lower fare revenues) and limited capacity for senior governments to continue additional support, recovery may take longer yet, meaning:
  - The business-as-usual gap analysis estimates in Section 2.2 are optimistic, and it will take even more for Port Moody to meet policy targets.
  - Those that rely or choose to rely on transit, such as essential workers and equity-denied communities, will be the most impacted.

3 Climate Change Risk and Vulnerability Assessment

Port Moody has adopted an integrated climate action framework that considers both aspects of climate change planning: mitigation and adaptation[24]. Integrating the two at all levels of policy, planning and practice will align climate action goals and advance the transition toward a more energy efficient, resilient, and sustainable future. Doing so at the community level has the potential to streamline resources and capacity, mainstream climate action in a way that prevents contradictions, and identify strategic co-benefits for health, infrastructure, equity and other community priorities.

To ensure that any actions taken to move the City toward its 2030 MTP targets are aligned with the objectives of low carbon resilience, it is key that Port Moody understand the impacts of climate change on its assets. Therefore, this section documents a high-level assessment of climate change risk and vulnerability, which serves to support and guide the development of the Big Moves.

Defining Risk and Vulnerability

Vulnerability refers to the propensity or predisposition of assets to be adversely affected.

Risk considers the ranking of potential for adverse consequences where something of value is at stake and where the occurrence and degree of an outcome is uncertain.

Source: https://www.ipcc.ch/sr15/chapter/glossary/

3.1 Description of Assets

There are seven asset types being considered in the risk and vulnerability assessment: Roads, Sidewalks, Traffic Signals, Streetlights, Curb Gutters, Railways, and Trails and Paths (including Bike paths, Multi-use paths, and Trails). The City's Asset Management Investment Plan (AMIP), 2014, includes Roads, Sidewalks, Traffic Signals and Streetlights under the category of Transportation System. These four categories have an estimated replacement value of $59,856,000. The average life of the system components is 25 years, and the average remaining life of the system is 9%, or 2 years. The quantities of these four asset types are shown in Table 1.

A Pavement Asset Management Program, developed for the City by EBA Consulting Ltd. in December 2013, assessed the condition of the road network to be in fair condition overall. The report also stated that an annual investment of $1.6M for road rehabilitation is required to maintain roads in the current condition. Without this investment, the condition of City roads will deteriorate, resulting in the overall road network being in very poor condition within the next 15 years (i.e. by 2028). Given the road condition, the AMIP indicated that maintaining the major road network should be a priority for the City.

Curb Gutters, Railways. Bike paths, Multi-use paths, and Trails are not described in the AMIP, however where possible approximate quantities of each asset type were extracted from the City's Open Data Portal are included in Table 1.

[24] Port Moody's integrated climate action framework was developed to align with principles of low carbon resilience (LCR), a lens that coordinates adaptation and mitigation strategies in planning, policy, and implementation processes. LCR strategies look for opportunities for co-benefits for health, equity, biodiversity and community livability. Simon Fraser University's Action on Climate Team (ACT) has developed numerous publicly available resources on implementing LCR: https://act-adapt.org/projects/low-carbon-resilience/

Table 1: Asset Types and Quantities

Asset Type	Quantity	Material Types
Roads	109 km	Asphalt; Gravel
Sidewalks	50 km	Concrete
Traffic Signals	35 signals	Electrical
Streetlights	2,017 lights	Electrical
Curb Gutters	207 km	Concrete
Railways†	12 km	Ballast and track
Trails and Paths (Bike paths, Multi-use Paths, and Trails)	43 km	Asphalt; Concrete; Brick; Pavers; Dirt; Gravel

†Does not include the SkyTrain Evergreen Extension

To inform the risk assessment, a set of asset design assumptions was developed. The assumptions are provided in Appendix B – Methodology Details and are provided by asset type and climate impact. Note that the assumptions are high level, and do not account for differences in the age or condition of individual assets. The assumptions were developed based on a combination of data sources, including:

- City of Port Moody Subdivision and Development Servicing Bylaw, 2010, No. 2831
- Master Municipal Construction Document Platinum Edition, 2009

Where specific design parameters were not readily available, assumptions have been developed based on the professional judgement of qualified engineers. It is important to note that the design assumptions used in this study were based on desktop study only and are generalized by asset category. They do not account for variance among asset sub-types, or individual assets, and specific thresholds will vary depending on asset-specific characteristics like age and condition. In a more detailed study, it would be recommended to develop more asset-specific design assumptions in collaboration with City staff and other key interest holders who hold specific knowledge about the City's assets.

3.2 Methodology

The climate change risk and vulnerability assessment (CRVA) was undertaken in two discrete parts – a GIS-based vulnerability assessment and an Excel-based risk assessment. The methodology for each part of the assessment is described in this section.

Vulnerability assessment

The vulnerability assessment involved a geospatial analysis using publicly available data, including:

- The City's Open Data Portal datasets for Topography, Roads, Sidewalks, Traffic Signals, Streetlights, Curb Gutters, Railways, and Trails and Paths (including Bike paths, Multi-use paths, and Trails)
- Vancouver Coastal Health's (VCH) Community Health and Climate Change datasets for High Temperature and Flooding exposures

The results of the vulnerability assessment are documented in Section 3.3.1.

Risk assessment

The risk assessment methodology was adapted from the five steps of the Public Infrastructure Engineering Vulnerability Committee (PIEVC) Protocol, a well-established framework for

delivering climate change vulnerability assessments of infrastructure in Canada. The steps in this process are: 1) Background, 2) Inventory, 3) Data Analysis and Climate Assessment, 4) Risk Assessment, and 5) Recommendations and Conclusions. Additional methodological details are provided in Appendix B – Methodology Details. The results of the risk assessment are documented in Section 3.3.2.

Climate Data

Current climate projections show that as the climate changes, Port Moody can expect hotter, drier summers; warmer winters with more rain from fall to spring; an increase in frequency and intensity of precipitation; and sea level rise[25]. Climate scientists use averages of global climate models downscaled to local areas to generate climate projections for future time periods such as the 2050s and 2080s. The Pacific Climate Impacts Consortium at the University of Victoria developed climate projections for the Eagle Ridge Hospital site in Port Moody. These projections are provided in detail in the CAP and in Appendix B – Methodology Details. The study also relies on flood and heat modelling from Vancouver Coastal Health (VCH) and projections from the IPCC AR5. For this study, four indicators have been selected based on their relevance to asset categories in this study, including:

Port Moody can expect hotter, drier summers; warmer winters with more rain from fall to spring; an increase in frequency and intensity of precipitation; and sea level rise

- Heat: Extreme heat and/or heatwaves (days reaching and/or sustaining temperatures over 30ºC);
- Snow and Ice: Less frequent, more extreme snow and ice storms;
- Sea Level Rise (SLR): Sea Level Rise (0.5 m); and
- Precipitation: Increased long-term average rainfall and short-duration precipitation events, with the average Intensity-Duration-Frequency Curve expected to increase on average by 34% by 2050[26]

IPCC Data

The CRVA presented in this report uses data from IPCC's Fifth Assessment Report (AR5). In 2021, the IPCC released its Sixth Assessment Report (AR6). This report makes its strongest-ever statement on the human impact on the climate that "it is unequivocal that human influence has warmed the global climate system since pre-industrial times". Specifically, the report attributes anthropogenic activity to nearly all of the 1.1°C increase in mean global temperatures observed since the Industrial Revolution.

However, scenarios from AR5 are commonly considered appropriate and adequately precautionary as a basis to understand risk and vulnerability. Further, the use of AR5 RCP 8.5 aligns with the data reflected in the CAP.

[25] City of Port Moody (2020). Climate Action Plan: A path towards a carbon neutral, resilient Port Moody. Accessed on February 3rd, 2022 at: Port Moody Climate Action Plan July 2020

[26] Kerr Wood Leidal (2019). Moody Centre Stormwater Management Servicing Plan. Accessed on February 3rd, 2022 at: https://www.portmoody.ca/en/city-services/resources/Documents/MoodyCentre_FinalReport_compressed_20191004.pdf

3.3 Assessment Results

3.3.1 Climate Change Vulnerability Assessment Results

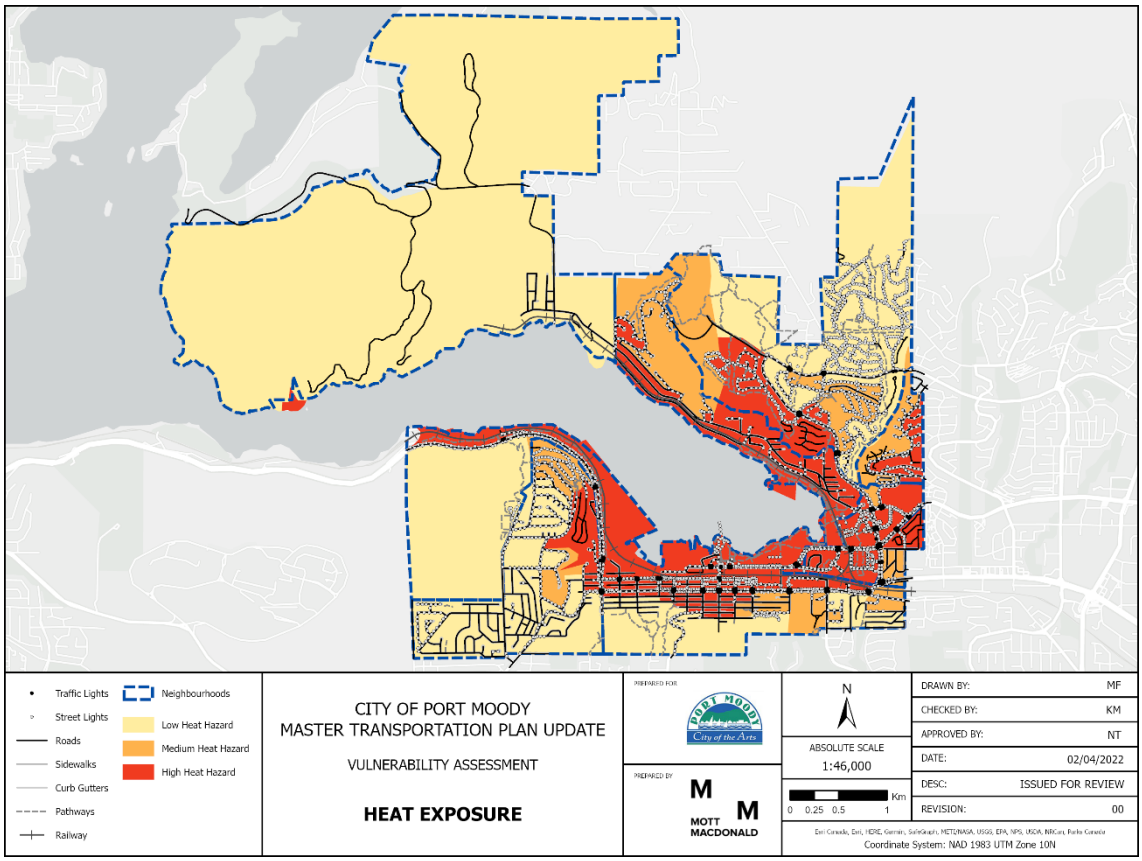
The vulnerability assessment results are presented in this section by climate impact including: Heat, Snow and Ice, SLR, and Precipitation.

Heat

Figure 14 shows exposure to heat in the City based on Vancouver Coastal Health's Community Health and Climate Change data for higher temperatures[27]. The map shows VCH's exposure score specifically and does not include sensitivity or adaptive capacity information. This is because sensitivity and adaptive capacity in this context considers social factors such as health indicators, which are not relevant to infrastructure exposure, the key focus of this study.

Based on this exercise, **it is evident that heat exposure is concentrated in the City's urban areas, and around the inlet.** Portions of all types of assets being considered in this study fall within areas that are considered highly exposed. Specific neighbourhoods where assets are more likely to be impacted by high heat include Moody Centre, Inlet Centre, and Pleasantside.

Figure 14: Vulnerability to Heat in the City of Port Moody



[27] Community Health and Climate Change (arcgis.com)

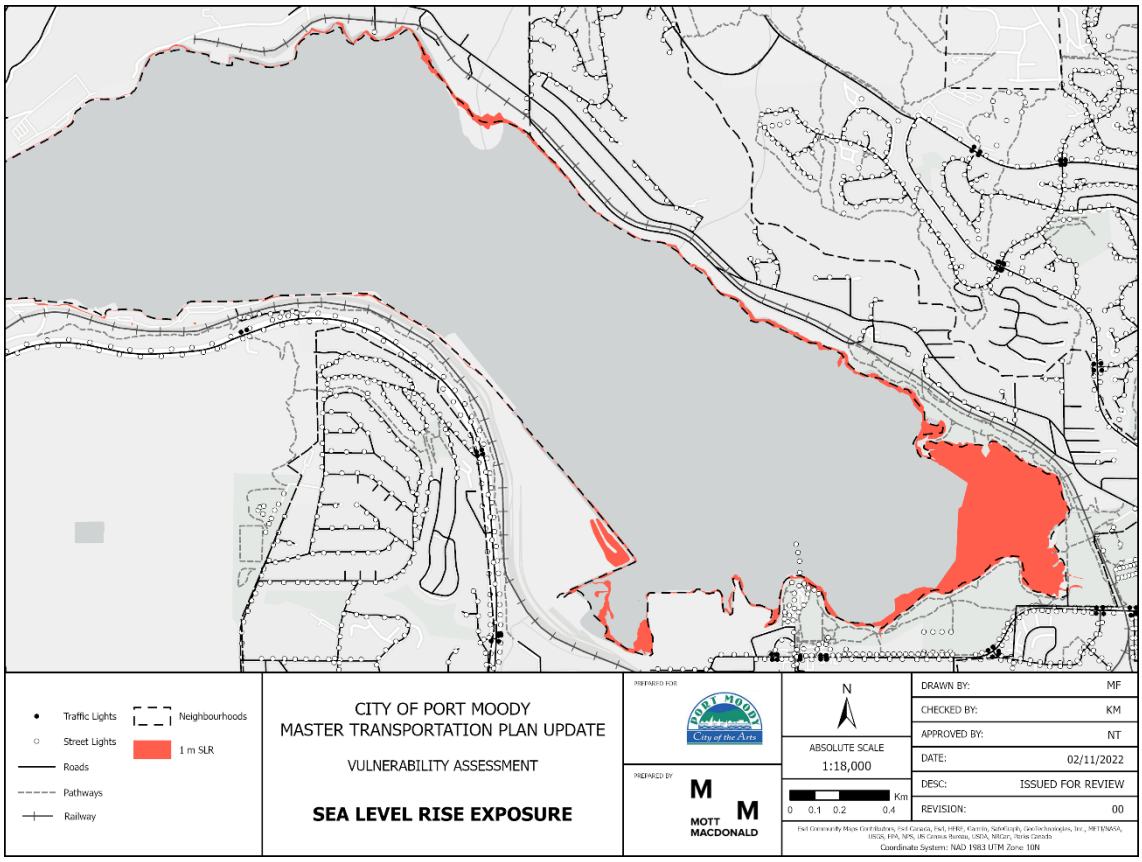
Snow and Ice

Detailed, quantitative modelling for winter weather is difficult to achieve and was not readily available for this study, and therefore vulnerability to snow and ice has not been mapped. The impacts of snow and ice are unpredictable from a geospatial perspective, and it is feasible that all parts of the city will be exposed to snow and ice impacts over time. There are several key factors that may influence the vulnerability of specific assets that are not captured fully in this CRVA. Firstly, durability to maintenance activities will play an important role in the severity of impacts from snow and ice events on assets. For example, a gravel path that undergoes snow clearing may be subject to accelerated erosion. The age of the asset is also important to consider. An aging, paved road with existing cracking and pot holes may decline rapidly with the introduction and removal of snow and ice. Neighbourhood context and density may also play a role. During a heavy snow event, space for snow storage may impact the City's ability to regain full capacity and function of a road or sidewalk. City staff may hold institutional knowledge about where these, and other factors, may increase particular assets' vulnerability to snow and ice.

Sea Level Rise

While projections indicate that SLR of 0.5 m is likely to occur by 2050, geospatial data for this time horizon was unavailable, and therefore modelling of 1 m SLR was utilized in the vulnerability mapping shown in Figure 15. **Modelling suggests that there are few transportation infrastructure assets that will be impacted by SLR in the City.** However, it is important to note that this study utilized a "bathtub model" which assumes a uniform, flat water surface and does not consider tides or surges. It is important to note that SLR projections are evolving rapidly, and it is advisable to revisit the impacts of SLR regularly for this reason.

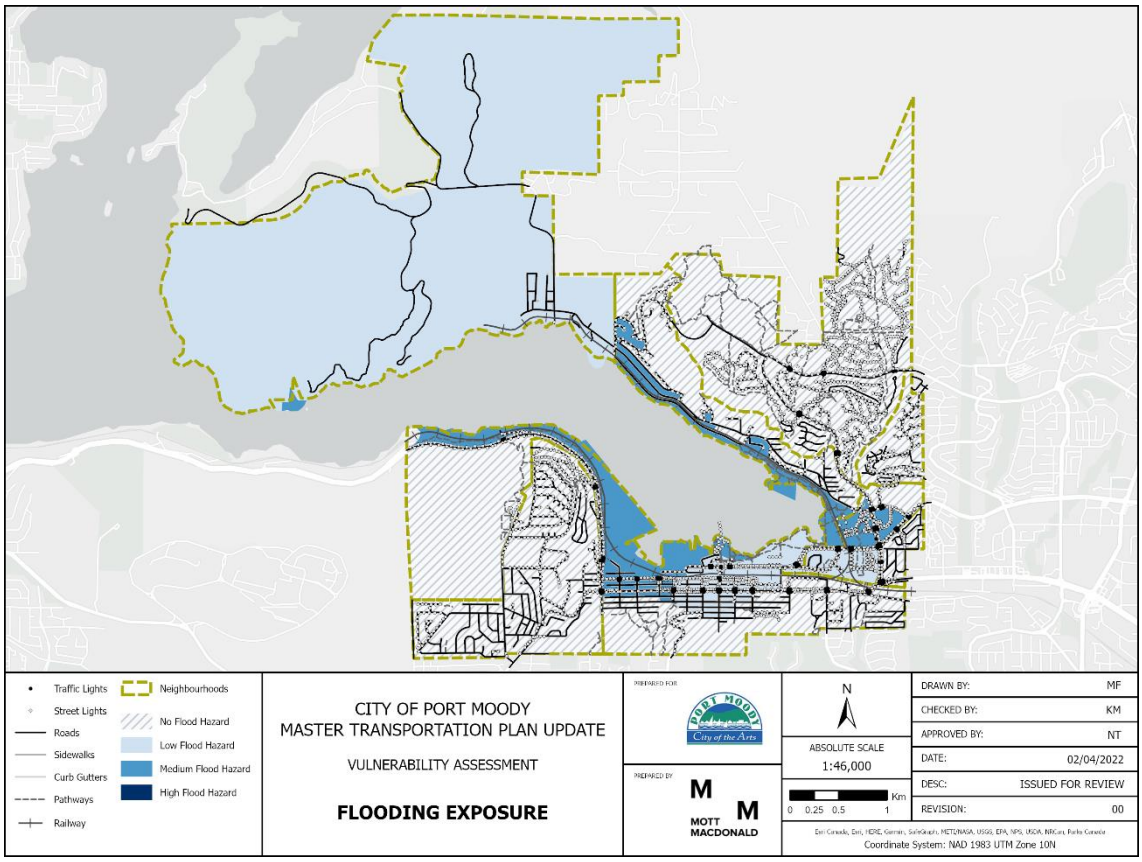
Figure 15: Vulnerability to SLR in the City of Port Moody



Precipitation

Figure 16 relies on VCH data and shows flooding exposure which is determined based on the percentage of a given dissemination area in identified 200-year floodplains. This means that the greater the proportion of the area that has been flooded by 200-year storm events in the past, the more vulnerable it is to future flooding. **The areas with the highest vulnerability are concentrated around the Port Moody Inlet in low elevation, flatter areas. This includes Moody Centre, Inlet Centre, and Pleasantside.**

Figure 16: Vulnerability to Flooding in the City of Port Moody.



3.3.2 Climate Change Risk Assessment Results

Adapted from the PIEVC protocol, and the methodology described above, a semi-quantitative risk evaluation process was undertaken. Risk values were then calculated based on the formula:

$$R = P \times S$$

[R = Risk, P = Probability of the event occurring, S = Severity of the event]

Probability and Severity have been scored on a 1 to 7 scale and the risk value is determined by multiplying the probability and severity scores, yielding a value between 0 and 49. Scores of 12 to 41 are considered “medium risk”, while scores of 42 to 49 are considered “high risk”. Note that the PIEVC protocol recommends developing adaptation options for all medium and high risk items. The Risk assessment considers only physical risks to infrastructure and does not include potential social, economic, or health impacts on users of infrastructure.

Table 2 contains the findings of the climate risk assessment. Medium-risk asset items have been flagged in italics. There were no high-risk items identified in the assessment.

Table 2: Climate Risk assessment Results

Asset Type	Climate change Impact (IPCC / CAP)	Probability Score	Severity (Potential Consequence)	Severity Score	Risk score
Roads	*Heat*	*7*	*Impact restricted to minor cracking and decreased longevity on asphalt or concrete surfaces*	*2*	*14*
	Snow and Ice	*4*	*Impact restricted to minor cracking and decreased longevity on asphalt or concrete surfaces; partial loss of capacity during heavy snowfall events*	*3*	*12*
	SLR	*7*	*Potential for necessary relocation or subsequent loss of assets*	*3*	*21*
	Precipitation	*6*	*Potential for temporary loss of function during heavy precipitation events*	*3*	*18*
Sidewalks	Heat	*7*	Impact restricted to minor cracking and decreased longevity	1	*7*
	Snow and Ice	*4*	*Impact restricted to minor cracking and decreased longevity on asphalt or concrete surfaces; partial loss of capacity during heavy snowfall events*	*3*	*12*
	SLR	*7*	*Potential for necessary relocation or subsequent loss of assets*	*3*	*21*
	Precipitation	*6*	*Potential for temporary loss of function during heavy precipitation events*	*5*	*30*
Traffic Signals	*Heat*	*7*	*Potential for occasional loss of function with heat events*	*3*	*21*
	Snow and Ice	*4*	*Ice build up could result in critical loss of function, particularly when wind events are concurrent, requiring increased serviceability*	*4*	*16*
	SLR	*7*	*Potential for necessary relocation or subsequent loss of assets*	*3*	*21*
	Precipitation	*6*	*Potential for occasional loss of some capacity where electrical equipment is aging and situated at or near grade*	*3*	*18*
Streetlights	*Heat*	*7*	*Potential for occasional loss of function with acute heat events*	*3*	*21*
	Snow and Ice	*4*	*Ice build up could result in critical loss of function, particularly when wind events are concurrent, requiring increased serviceability*	*4*	*16*
	SLR	*7*	*Potential for necessary relocation or subsequent loss of assets*	*3*	*21*

Asset Type	Climate change Impact (IPCC / CAP)	Probability Score	Severity (Potential Consequence)	Severity Score	Risk score
	Precipitation	*6*	*Potential for occasional loss of some capacity where electrical equipment is aging and situated at or near grade*	*3*	*18*
Curb Gutters	Heat	7	Impact restricted to minor cracking and decreased longevity	1	7
	Snow and Ice	*4*	*Impact restricted to minor cracking and decreased longevity; ice build up blocking water flow*	*4*	*16*
	SLR	*7*	*Potential for necessary relocation or subsequent loss of assets*	*3*	*21*
	Precipitation	*6*	*Potential for temporary loss of function during heavy precipitation events*	*5*	*30*
Railways	*Heat*	*7*	*Potential for rail buckling during acute heat events*	*4*	*28*
	Snow and Ice	*4*	*Increased maintenance requirements with potential for temporary loss in capacity following snow and ice events*	*3*	*12*
	SLR	*7*	*Potential for necessary relocation or subsequent loss of assets*	*3*	*21*
	Precipitation	*6*	*Potential for temporary loss of function during heavy precipitation events*	*5*	*30*
Trails and Pathways	Heat	7	Impact restricted to minor cracking and decreased longevity on asphalt or concrete surfaces; low or no impact on gravel/dirt/etc.	1	7
	Snow and Ice	4	Impact restricted to minor cracking and decreased longevity on asphalt or concrete surfaces; partial loss of capacity during heavy snowfall events	2	8
	SLR	*7*	*Potential for necessary relocation or subsequent loss of assets*	*3*	*21*
	Precipitation	*6*	*Potential for temporary loss of function during heavy precipitation events; soft surfaces are more vulnerable to erosion*	*5*	*30*

3.3.3 Results by Individual Climate Hazard

The PIEVC protocol recommends developing adaptation options for assets that score over 12 which constitutes a medium risk level or higher. While developing detailed recommendations for action is outside the scope of this study, asset categories with scores over 12 have been identified in Table 3 to Table 6 by climate hazard. These results have been compared with the vulnerability maps to identify potential priority areas for action.

Heat

Roads, Traffic Signals, Streetlights and Railways were found to be the most at risk from heat, as shown in Table 3. However, assets adjacent to the inlet, including those in Moody Centre, Inlet Centre, and Pleasantside, were found to be more vulnerable. For Roads, impacts are expected to be limited to minor cracking and decreased longevity. Considering that the AMIP indicated that roads in the City are nearing the end of their lifespan, and are in relatively poor condition, considering the impacts of increasing heat as the City invests in its road network, for example selecting more heat durable materials for replacements, would be beneficial. Based on the MMCD, Traffic Signals and Streetlights in the City are likely built to withstand temperatures up to 34ºC. While the threshold used for temperatures in 2050 in this study is 30ºC, these asset types may be particularly vulnerable during heatwave events, especially in the most vulnerable neighbourhoods identified above. Similarly, Railways may be prone to buckling during acute extreme heat events, however further study is required to understand the specific design thresholds for the City's railway assets.

Table 3: Asset types at medium risk to heat

Asset Type	Risk Score	Risk Level
Roads	14	Medium
Traffic Signals	21	Medium
Streetlights	21	Medium
Railways	28	Medium

Snow and Ice

The impacts of Snow and Ice events have not been geospatially modelled for Port Moody. However, Traffic Signals, Streetlights, and Curb Gutters were the asset categories found to be most at risk from these climate impacts, as shown in Table 4. For Traffic Signals and Streetlights, the primary concern is from build up of ice. When combined with more intense wind that may be present during a winter storm, there is risk of critical loss of function of these assets. To understand where vulnerability is highest, more detailed assessments of the age and design thresholds of specific assets would be necessary. Snow and ice also present a risk to Curb Gutters, which may have their longevity impacted and be more susceptible to minor cracking and may also be susceptible to blockage from ice during snow and ice events, limiting their ability to convey stormwater.

Table 4: Asset types at medium and high risk to Snow and Ice

Asset Type	Risk Score	Risk Level
Traffic Signals	16	Medium
Streetlights	16	Medium
Curb Gutters	16	Medium

Sea Level Rise

All of the asset categories in this study are considered to be at medium risk from SLR, as shown in Table 5. If SLR resulted in submergence of any of these asset types, they would lose their functionality. However, based on the vulnerability assessment, very few assets in the city are in the area expected to be impacted by SLR. SLR is also projected to occur gradually over time, which would allow the City the opportunity to relocate or decommission vulnerable assets. However, it is important to note that the vulnerability assessment shows limited vulnerability of assets in the city. It is also important to note that the CRVA does not include storm surge modelling, where a storm event interacts with high tides to increase the inundation zone of water. More detailed SLR and storm surge modelling, especially near the inlet, would help to determine what specific assets in the city are at risk.

Table 5: Asset types at medium and high risk to SLR

Asset Type	Risk Score	Risk Level
Roads	21	Medium
Sidewalks	21	Medium
Traffic Signals	21	Medium
Streetlights	21	Medium
Curb Gutters	21	Medium
Railways	21	Medium
Trails and Paths (Bike paths, Multi-use paths, and trails)	21	Medium

Precipitation

All of the assets assessed in the risk assessment were found to be at medium risk from precipitation, as shown in Table 6. For Roads, Sidewalks, Curb Gutters, Railways, and Trails and Paths, the primary impact is expected to be temporary loss of function, or reduced function from flooding during acute events. Where assets were found to be more vulnerable, in low lying areas near the inlet, it may be useful to undertake more detailed risk assessments to understand the age and capacity of stormwater infrastructure and understand where to focus adaptation efforts. Traffic Signals and Streetlights may be vulnerable depending on the elevation of electrical equipment. Again, more detailed study, at the individual asset level and in low-lying, more vulnerable areas would help the City to understand where adaptation efforts are required.

Table 6: Asset types at medium and high risk to precipitation

Asset Type	Risk Score	Risk Level
Roads	30	Medium
Sidewalks	30	Medium
Traffic Signals	18	Medium
Streetlights	18	Medium
Curb Gutters	30	Medium
Railways	30	Medium
Trails and Paths (Bike paths, Multi-use paths, and trails)	30	Medium

3.4 Multi-hazard Risk

While considering individual climate hazards provides valuable insights into the City's vulnerability to climate change, it is also important to consider interactions between hazards, known as multi-hazard risk. While there are nuances in the ways that multi-hazard risk is understood in the industry, there are three mechanisms by which interactions may occur[28]:

- Triggering: when one hazard directly triggers another, setting off a domino effect.
- Influence: where one hazard influences another, changing its probability of occurrence or magnitude.
- Coincidence: where hazards occur in the same place simultaneously, challenging response efforts

The results of this study found that the impacts of heat, SLR, and precipitation are likely to be concentrated around the inlet, including in the densely populated neighbourhoods of Moody Centre, Inlet Centre, and Pleasantside. Coincidence of SLR and precipitation may lead to increased impacts of flooding, and if heavy precipitation were to follow a snow and ice event, the City's stormwater infrastructure may be unable to function leading to flooding. It is recommended that further study be undertaken particularly in the areas identified as vulnerable to these climate change impacts.

The results of this study found that the impacts of heat, SLR, and precipitation are likely to be concentrated around the inlet, including in the densely populated neighbourhoods of Moody Centre, Inlet Centre, and Pleasantside.

Further, while outside the scope of this study, it is also important to consider the impacts of non-climate risks, particularly seismic risk in a Metro Vancouver context. It is understood that the City is undertaking an all hazards mitigation planning exercise currently. It would be beneficial for the City to review the results of the climate change risk and vulnerability assessment alongside the results of that study.

3.5 Low Carbon Resilience Considerations

The low carbon resilience framework looks for integrated strategies to reduce GHG emissions and vulnerability to climate change impacts. Table 7 identifies potential opportunities for low carbon resilience within each of the asset categories considered in the risk and vulnerability assessment.

[28] Natural Hazards | Natural Hazards 101: Multi-hazards and multi-hazard risk (egu.eu)

Table 7: Low Carbon Resilience Opportunities

Asset Type	Low Carbon Resilience Considerations
Roads	● Where possible, utilize lighter colored materials to reduce urban heat island effect ● Prioritize effective maintenance to avoid the need for complete replacement which is more carbon intensive ● Consider opportunities to invest in non-road transportation infrastructure to build resilience while reducing reliance on privately owned vehicles ● Maximizing green infrastructure while reducing road surface area
Sidewalks	● Consider permeable surfaces in low traffic areas to improve stormwater infiltration ● Where possible, utilize lighter colored materials to reduce urban heat island effect ● Include green infrastructure directly next to sidewalks to reduce urban heat island effects
Traffic Signals	● Where replacing, reinforcing or relocating electrical equipment to reduce vulnerability, replace with more energy efficient models
Streetlights	● Where replacing, reinforcing or relocating electrical equipment to reduce vulnerability, replace with more energy efficient models
Curb Gutters	● Consider opportunities to integrate green infrastructure (e.g. rain gardens) to reduce stormwater runoff into curb gutters while reducing urban heat island effect
Railways	● During routine maintenance, consider opportunities for painting tracks white, or more permanently restressing track to higher temperature thresholds to prevent buckling that may otherwise require replacement which is more carbon intensive
Trails and Paths (Bike paths, Multi-use Paths, and Trails)	● Consider permeable surfaces in low traffic areas to improve stormwater infiltration ● Where possible, utilize lighter colored materials to reduce urban heat island effect

4 Big Move Generation

Through a thorough review of the existing climate-related planning and policy context at multiple scales (Section 1.3), an analysis of the gap between current mobility trends and strategic policy targets (Section 2.2), and an assessment of risk to transportation infrastructure (Section 3.3), the City is a better able to formulate the City's role in effecting transformative change and define the necessary scale at which transportation Big Moves will need to support.

The City's Role

The City's existing strategic plans and policy goals point the City in a direction toward making transformative changes to the transportation system. The City's neighbouring municipalities and the region as a whole are actively working toward bold goals and implementing Big Moves to meet local, regional, and global targets. Individuals and communities of all scales can, and must, contribute. The City absolutely can show strong leadership and do its part; the actions the City takes can make a difference, but these actions must be bold.

Big Moves are a core set of transportation-related actions that are intended to manage demand for transportation, reduce vehicle travel, and help Port Moody make significant and measurable progress towards achieving the targets of the *Climate Action Plan*.

TransPort Moody remains a strong transportation vision for the City. The Climate Action Plan provides a renewed impetus to work toward *TransPort Moody's* existing thematic objectives and build upon work already undertaken. As such, Big Moves developed as part of the MTP update are not intended to revise the vision, but to contribute to achieving it sooner and more rapidly.

New and improving technology, such as an uptake in electric vehicle use, will continue to play a role. Measures that further support their continued uptake are required. Alone these will not be sufficient. **To meet strategic targets including GHG emissions reductions, the City will need to avoid about 9,000 additional daily vehicle trips by 2030.** This will require an additional mode shift of approximately 16% compared to business-as-usual trends. The length of vehicle trips will also need to be reduced. Above all, the Big Moves to be developed must manage demand for transportation and reduce vehicular travel through individual and collective behaviour change.

On their own, each Big Move will need to promote about a 3-4% transportation mode shift. In practise, actions must work together to achieve a 16% mode shift and provide desired outcomes and co-benefits.

These changes may not always be immediately convenient; however, inaction will invariably lead to larger challenges and higher costs. It is possible to imagine an alternative future, and when done right, with the needs of the community in mind, these Big Moves can lead to a transportation system that provides benefits for all.

Big Move Enabling Principles

The essence of the policy and planning context review summary, gap analysis, and risk assessment can be synthesized into the following six draft enabling principles to support the development of the MTP Update Big Moves:

- **Bold Leadership:** Actions the City takes *can* make a difference, but these must be bold and demonstrate leadership.

- **Strong Vision:** *TransPort Moody* remains a strong vision for the City, the goals and targets need to be expedited, such that we achieve *TransPort Moody – sooner!*
- **Collective Action:** Actions that manage transportation demand and reduce vehicle trips are required, and this will require individual and collective behaviour change.
- **Measurable Impact:** The Big Moves must strive to be implementation-oriented and demonstrate a measurable mode shift and greenhouse gas reduction benefit.
- **Low Carbon Resilience:** The transportation Big Moves should seek to reduce the City's risk and vulnerability to climate change and will endeavour to provide climate adaptation benefits where possible.
- **Equitable Outcomes:** The Big Moves should seek to maximize co-benefits and provide the Port Moody community a roadmap toward a fair transportation system that fits all lifestyles, financial situations, and abilities.

These principles capture the role of the City in enabling the development of Big Moves. The following section details these developments.

4.1 Step 1 - Ideation

Big Move Development Framework

The development of Big Moves was guided by the Avoid, Shift, Improve (ASI) framework. This framework is used to develop sustainable urban mobility plans around the world. It provides an initial indication of the types of actions that support reducing the impacts of travel and their associated greenhouse gas (GHG) emissions. It also mirrors the Province's CleanBC Roadmap to 2030 transportation framework. The ASI framework categorizes sustainability improvements as follows:

- **Avoid:** Avoid or reduce travel or the need to travel.
- **Shift:** Shift to more energy efficient modes
- **Improve:** Improve the efficiency of existing transport modes

The **Avoid** category is the highest priority in the framework because the greatest reduction in travel impacts comes when a given trip is not made at all or reduced significantly in distance. By managing transportation demand and locating typical trip destinations in proximity to trip origins, the overall need to travel longer distances is reduced.

The **Shift** category is the second priority in the framework because shifting trips currently made by passenger vehicles to public transit and active modes can significantly reduce emissions, noise, and congestion within and around Port Moody, and provide additional co-benefits.

The **Improve** category is the lowest priority in the framework. As it is unlikely that trips made by individual motorized transport can be eliminated entirely by avoiding travel or shifting to sustainable modes, the impacts associated with passenger vehicles and trucks can be mitigated using vehicle and fuel technologies and design, such as electric vehicles (EVs) or fleet rightsizing.

Policies that promote sustainable travel can be classified into five different types of instruments (or measures) within the ASI framework listed below and in **Figure 17**. Often, individual actions will span across more than one category, or be combined with measures from other categories. Additionally, cities such as Port Moody may not always have full control over enacting or implementing these actions, often requiring ongoing work with partner agencies and senior levels of government.

- **Planning Instruments** – these are sets of actions that focus mainly on the interaction of land use and transportation and how space is allocated within cities.
- **Regulatory Instruments** – these are sets of actions that rely on standards, bylaws, and regulations (such as emission standards, or speed limits)
- **Economic Instruments** – these are sets of actions that rely on setting prices, taxes, or subsidies for components of the transportation system, at both the microeconomic and macroeconomic scale (for example, parking pricing or fuel taxes).
- **Information Instruments** – these sets of actions focus on providing users more information, awareness, or education about the transportation system, or about the impacts of behaviours and choices (such as travel plans, apps, or school education programs)
- **Investment Instruments** – these sets of actions focus on technologies or infrastructure that improve existing modes of transportation and their networks, or potentially introduce new modes. These can range from more fuel-efficient engines to new public transit networks.

Figure 17: Avoid-Shift-Improve Framework Schematic[29]

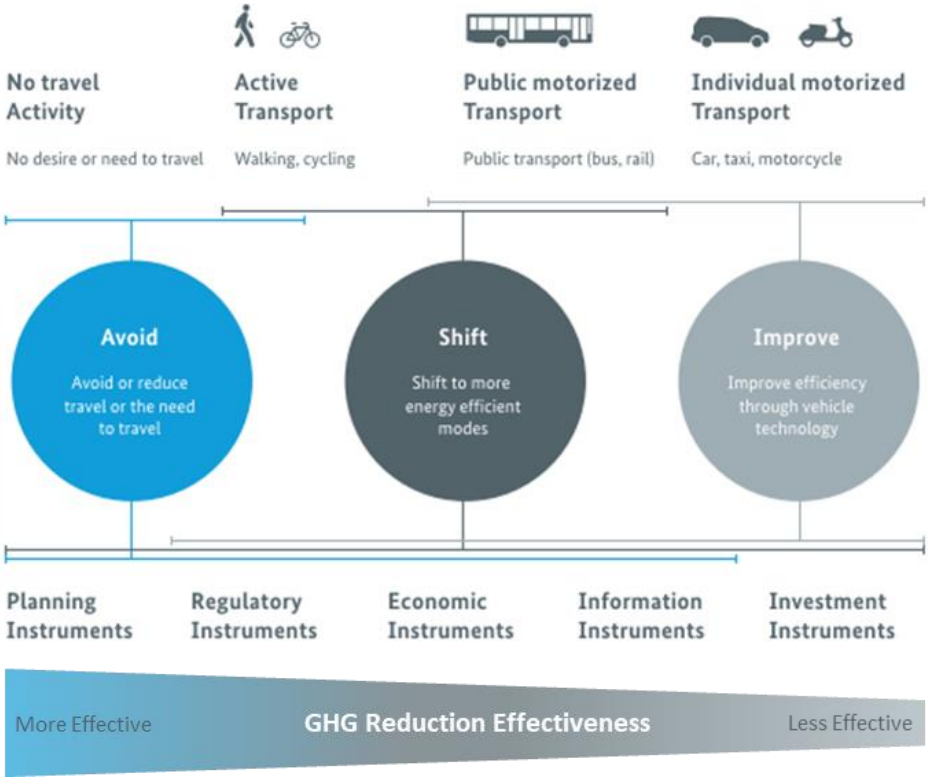


Figure 17 also shows how the different instruments relate to the Avoid-Shift-Improve framework. As previously indicated, instruments that support avoiding or reducing the need to travel longer distances are the most impactful in terms of energy and greenhouse gas emissions reductions. These are followed by instruments that support a shift to more energy efficient transportation modes for those trips that remain on the network. In a mature transportation system, measures that focus on improving technologies or providing more infrastructure are often the least impactful in terms of reducing greenhouse gases. When not done carefully, these may even increase greenhouse gas emissions. Historically, this has typically been the case as additional

[29] Adapted from the GIZ (German Agency for International Cooperation) iNUA #9: Avoid-Shift-Improve (A-S-I) - SUTP

driving has been induced through roadway expansion[30]. As such, for Port Moody, additional investments or technological improvements ***must*** focus on public transit and active transportation so that climate targets can be met.

Supported by the ASI framework described so far in this section of the report, Big Moves were also generated to contribute explicitly towards the vision and its six key directions established in the 2017 *TransPort Moody* Master Transportation Plan. **The Big Moves being developed as part of the MTP update are not intended to recast a new vision for the City's transportation system. Instead, they are intended to achieve the existing vision themes sooner, such that they align the vision with the City's 2030 climate targets.**

Big Move Generation Process

The long list of actions intended to result in measurable progress towards Port Moody's climate goals was generated by compiling ideas from multiple sources, including:

- A City staff workshop held in late May 2022.
- An external interest holder workshop held in late May 2022.
- A Transportation Committee workshop held in June 2022.
- A survey hosted on the City website that solicited ideas for Big Moves from the public. The survey opened in March 2022.

For each of the events listed above, detailed notes were taken, and Big Moves ideas were identified based on themes within and between the different events or distilled from specific or tactical examples noted by participants. In addition to those generated at the workshops and from the survey, Big Move ideas were added to the long list by the project team based on best practices from climate action plans of neighboring municipalities and a scan of literature from municipalities around the world.

The long list of Big Move actions focused on ideas that are typically more applicable at a strategic city-wide scale. This means that the action would impact travel behavior across much of the city or could be applied to many different geographical areas of the city. In many cases, further details or geographical specificity are required before implementation can proceed. Many of the identified ideas relate to economic or regulatory instruments, as these are known to be more impactful. However, there is also a need to provide transportation system improvements and ongoing investments. As such, the long list considers ideas across the spectrum of different types of instruments that can be used. The process also took into account low carbon resilience principles, with the goal of including climate resilience considerations alongside GHG reductions in the Big Moves.

Big Move Longlist

The longlist of Big Moves ideas is presented in Appendix C – Big Moves Details. They are shown in terms of their main contribution toward the City's TransPort Moody vision themes, such that they demonstrate an alignment with the City's strategic transportation policy direction. Alignment with the TransPort Moody vision is also considered as part of one of the main criteria used in the assessment framework discussed in the next section.

[30] Duranton, Gilles, and Matthew A. Turner. 2011. "The Fundamental Law of Road Congestion: Evidence from US Cities." American Economic Review, 101 (6): 2616-52.

4.2 Step 2 - Evaluation

As a first step towards the evaluation and prioritization of the Big Moves, the longlist was assessed at a high level based on feasibility for implementation in Port Moody and potential contribution towards the City's Master Transportation Plan and Climate Action Plan goals. The potential Big Moves were assessed for shortcomings or fatal flaws related to feasibility, applicability, or due to a lack of expected contribution toward City goals. As such, these ideas have been filtered out and are not being taken forward in the MTP update process.

Assessment Framework

The following criteria, also developed using the ASI framework, were used to assess the initial feasibility and anticipated performance of each of the longlisted Big Moves in terms of measurable progress towards the goals of the Master Transportation Plan and Climate Action Plan:

- **Implementation:** The feasibility of implementing each of the Big Moves was rated based on anticipated policy complexity, significant capital costs, technological readiness, and jurisdictional challenges.
- **Mode Shift:** Each of the Big Moves was rated based on its estimated potential for shifting travel from private passenger or commercial vehicles.
- **VKT or GHG Reduction:** The estimated reduction in Vehicle Kilometres Travelled (VKT) associated with each Big Move was rated. Although this criterion has some overlap with the mode shift criterion, it also captures the effects of Big Moves that will reduce or avoid travel altogether. In most cases, VKT is also a good indicator of GHG emissions reductions; however, for some actions – those that focus on electric vehicle mobility for example, VKT does not capture emissions reduction potential.
- **Traffic Safety:** Each of the Big Move ideas was rated based on its estimated potential for reducing traffic collisions and their associated impacts in Port Moody. At this level of evaluation, this criterion is intended to capture a conceptual reduction in collision rate (crashes/million vehicle kilometres) rather than an absolute reduction in collisions, as that metric would have significant overlap with the mode shift and VKT reduction criterion. This criterion was added to the assessment framework based on safety concerns being a key theme heard in the public and interest holder engagement thus far.
- **Co-benefits:** This criterion acknowledges that Big Moves may come with a range of additional benefits, including those that are not necessarily related to mode shift, VKT reduction or safety. These may include benefits such as improved transportation equity, affordability, noise, and traffic stress reduction, reduced chauffeuring burdens, health and wellness benefits, increasing recreational opportunities, local business vitality, ability to leverage past investments, revenue generation potential, low carbon resilience opportunities, and other tangible outcomes.
- **Applicability / Specificity:** This criterion assesses Big Move ideas in terms of how well they align with addressing needs identified in the past MTP and the MTP vision themes, community concerns, and the time scale of impact. Some ideas may have the ability to provide large impact and co-benefits, but these will only be realized after many years. To that end, and to reflect the urgency and need for moving forward with implementation, ideas that demonstrate lower levels of specificity are also scored lower as their lack of specifics make them less applicable for the update.

Each Big Move was assessed using the above criteria at a qualitative level relative to other Big Moves on the longlist. The qualitative scoring was based on a review of the benefits and

challenges associated with the historical implementation of Big Move actions in other cities, literature[31], and using professional experience and judgement. The initial high-level assessment facilitated Big Moves with fatal flaws and expected low performance to be eliminated from further consideration in the next phase of the process. The results of the initial assessment of the Big Moves longlist are documented in Appendix C – Big Moves Details. Out of a longlist of 28, the initial assessment resulted in 13 options being taken forward for further consideration – the preliminary Big Moves shortlist. The preliminary shortlisted Big Moves are described in further detail in Appendix C – Big Moves Details and include supporting rationale—mainly how an individual Big Move idea contributes to the key MTP Update and Climate Action Plan objectives—and how it is relevant for Port Moody. Initial considerations and challenges related to implementation, and key co-benefits are also discussed.

4.3 Step 3 – Refinement

The preliminary shortlisted Big Move ideas was further refined through a further level of assessment and based on discussion and collaboration with the City and project team. It was determined that to further narrow-down the ideal candidates, the scoring should emphasize the core objectives of the MTP update — namely to shift trips to sustainable transportation and to reduce greenhouse gas emissions. As such, the following criteria were weighted more heavily (double that of the remaining criteria) to refine the shortlisted Big Moves:

- Mode Shift
- VKT or GHG Reduction

During the refined assessment process, it was determined that some Big Move ideas may complement one another more directly if viewed as a package of ideas, ultimately resulting a broader Big Move idea. The constituent ideas, whether part of broader Big Move packages or the entire shortlist of ideas, were assessed individually. However, it is recognized that their effectiveness—including their potential to shift modes and reduce greenhouse gas emissions—may also increase when the work together. In other words, these ideas together will demonstrate that “the whole is greater than the sum of the parts”. This means that an analysis of the mode shift and greenhouse gas reduction potential, which is done at the level of an individual Big Move idea and then totalled, may underestimate the actual mode shift and greenhouse gas reduction benefits that these actions working together produce. The results of the refined assessment using the weighted criteria, as well as further qualitative considerations are provided in Appendix C – Big Moves Details.

Refined Big Moves Shortlist

Based on the prior assessment, and the potential to bundle some of the Big Move ideas, the following five proposed Big Moves are being recommended to take forward as part of the MTP update process (not listed in order of priority):

- **Big Move #1** – Smarter Parking Initiative
- **Big Move #2** – City-wide Speed Limit Reductions
- **Big Move #3** – Reallocation of Road Space
- **Big Move #4** – Transit Supportive Infrastructure
- **Big Move #5** – Promotion of Sustainable Transportation Options

[31] For example, see: P. Kuss, K.A. Nicholas, A dozen effective interventions to reduce car use in European cities: Lessons learned from a meta-analysis and Transition Management, Case Studies on Transport Policy (2022), doi: https://doi.org/10.1016/j.cstp.2022.02.001

This refined shortlist also provides a balance between policy instruments that are based on regulatory or economic incentives, and those based on service and infrastructure investments. In line with the above-mentioned Avoid-Shift-Improve Framework, the refined shortlist emphasizes actions that aim to reduce or shift vehicle trips, while improving opportunities for sustainable travel. As such, this list of Big Move actions would also enable the City to reach its committed Climate Action Plan targets, and expedite the *TransPort Moody* vision.

5 Five Big Moves

This section highlights the five Big Moves, detailing their specific actions, contributions to the Climate Action Plan, and respective considerations and challenges as well as respective additional benefits. It also includes what we heard on the Big Moves and discusses the necessary policy directions to ensure their individual and collective success.

5.1 Big Move #1 – Smarter Parking Initiative

Action

This proposed Big Move includes a combination of three specific parking initiatives:

- **Parking Maximums:** Convert the minimum parking requirements to maximums for new developments outside of the transit-oriented areas, eliminating or minimizing the requirement for additional parking (Note: the BC Government recently passed Bill 47 Housing Statutes (Transit-Oriented Areas) Amendment Act, which has already eliminated minimum and maximum parking requirements within the transit-oriented areas).
- **Paid On-Street Parking:** Implement paid on-street parking at the areas that have high parking occupancy and limited parking availability. This achieving about an 85% parking occupancy rate, meaning that at any given time one out of seven parking spots on a street block remains available for someone wishing to park at that location.
- **Recreation Parking Demand Management:** Better manage parking demand at busy park and recreational areas around the city. Similar to the Paid On-Street Parking idea, this approach would focus on achieving the desired parking occupancy rate and desired parking turnover in parking lots that support recreational areas.

Contribution to Climate Action Plan Targets

- With parking maximums in place, new developments would have a limit on the amount of available parking they can include, providing more incentive to choose alternate forms of transportation.
- Implementing paid on-street parking and managing parking demand in recreational areas would:
  - Reduce the circling of vehicles looking for parking.
  - Decrease the number of vehicle kilometers travelled.
  - Improve traffic flow.
  - Encourage a shift from vehicular trips to more sustainable travel modes.

Consideration and Challenges

- Parking Maximums
  - This action would need to ensure or retain some level of accessibility parking requirements.
  - As converting parking minimums to maximums may not directly lead to reduced provision of parking, the maximum requirements may need to be reviewed periodically and reduced

over time and/or based on information such as the regional review undertaken in Metro Vancouver's regional parking study.
  - Require the development of a Transportation Demand Management (TDM) plan to encourage sustainable, multimodal travel and reduce dependence on private vehicles in new developments.
- Paid On-Street Parking & Recreation Parking Demand Management
  - Require a phased approach with ongoing monitoring and potential supportive policies to ensure the desired parking occupancy and turnover outcomes are achieved.
  - May have minimal impact or benefit if implemented in areas where there are significant off-street parking opportunities that remain unpriced.

Additional Benefits

- Parking Maximums
  - Implementing parking maximums could potentially support housing affordability by reducing the costs associated with parking construction.
- Paid On-Street Parking & Recreation Parking Demand Management
  - Improves overall parking management, which would facilitate more parking turnover and local business activity.
  - Lowers stress for vehicle drivers looking for parking and can help manage visitation to uphold a quality experience for all visitors.
  - The pay parking system will operate under a user-pay cost recovery model. New infrastructure, maintenance, equipment, enforcement, upgrades, customer services, and ongoing support for pay parking will continue to be funded by the revenue it generates. Excess revenues will support the City's operations and services that are being used by customers paying for parking.

What We've Heard

Based on the feedback received during Phase 2 engagement, the levels of support or opposition to the proposed Big Move 1 - Smarter Parking Initiative were mixed. A total of 198 responses were obtained from the survey:

- **55%** of survey respondents were satisfied or very satisfied with the Big Move.
- **36%** were dissatisfied or very dissatisfied.
- **9%** were neutral or not sure.

Residents who chose 'very dissatisfied' or 'dissatisfied' were invited to share the reasons for their selection. Out of the 68 responses received, the most frequently mentioned reasons include:

- **Accessibility Needs:** Many Port Moody residents rely on private vehicles due to neighborhood topography, travel distances, and the number of families with children, making alternative travel modes challenging for some (26 mentions).
- **Financial Burden:** Concerns about the potential financial burden of paid on-street parking and the added barrier it may create for accessing public parks and greenspaces (19 mentions).
- **Opposition to Parking Maximums:** Some respondents believe the City should provide more parking to support further density, particularly in developments outside of transit-oriented areas (18 mentions).

- **Public Transit Improvements:** A need for improvements in public transit, such as increased frequency, efficiency, and comfort, to enable residents to drive less often (5 mentions).

5.2 Big Move #2 – City-wide Speed Limit Reductions

Action

Reduce posted speed limits on all local residential streets in Port Moody to 30 kilometres per hour (km/h). On a case-by-case basis, consider reducing posted speed limits on busier collector and arterial roads to 40 km/h or lower.

Contribution to Climate Action Plan Targets

- At slower driving speeds, urban traffic typically flows more smoothly, leading to lower emissions.
- Streets with slower speeds enhance safety and comfort for pedestrians, cyclists, and other modes of travel.
- The increased safety and comfort encourage the use of more sustainable travel alternatives, reducing the overall reliance on driving.

Consideration and Challenges

- Modification of bylaws and installation of significant signage.
- Implementation of traffic calming measures may be required on some streets to enhance effectiveness.
- Requires further studies to assess the impacts on transit and emergency vehicles.
- Close collaboration with municipal partners to ensure cohesive implementation.

Additional Benefits

- Improve safety and comfort for all road users.
- Reduce collisions and traffic noise.
- Improve intersection signal operations for pedestrians.

What We’ve Heard

Based on the feedback received during Phase 2 engagement, the levels of support or opposition to the proposed Big Move 2 - City-wide Speed Limit Reductions were mixed. A total of 199 responses were received from the public survey:

- **51%** of survey respondents were very satisfied or satisfied with the Big Move.
- **43%** were dissatisfied or very dissatisfied.
- **7%** were neutral or not sure.

were invited to share the reasons for their selection. Out of the 75 responses received, the most frequently mentioned reasons included:

- **Increased Vehicle Congestion**: Concerns about potential increased vehicle congestion and longer travel times caused by slower speeds. Participants expressed frustration with existing vehicle congestion through parts of Port Moody, particularly during peak times, and the need for increased monitoring of speeds (30 mentions).

- **Selective Speed Limit Reductions**: Suggestions that the reduction of speed limits should not be city-wide but applied in select areas determined on a case-by-case basis (e.g., in high pedestrian areas and on local neighborhood streets instead of busier arterial roads) (13 mentions).
- **Impact on Climate Action Targets**: Concerns that this Big Move would have little impact on the City's climate action targets and could lead to increased idling and greenhouse gas (GHG) emissions (11 mentions).

5.3 Big Move #3 – Reallocation of Road Space

Action

Reallocate a minimum of 10% of road space from vehicles to sustainable modes of travel, green infrastructure, or public spaces.

Contribution to Climate Action Plan Targets

- Supports mode shift from vehicles and provides opportunities for non-motorized travel on roadways.
- Provides opportunity for climate adaptation strategies- including removal of pavement or hardscape to reduce runoff and lessen the urban heat island effect.

Consideration and Challenges

- Involves reallocating road space on streets that offer direct routes for those taking transit or using active transportation modes, or in areas rich in destinations.
- A 10% reallocation target is comparable to targets in other Metro Vancouver municipalities and is considered a minimum target. Further work may refine this target.
- Many residents see the reduction of regional through-traffic as a priority. Road space reallocation done at strategic locations may contribute toward reducing these types of trips.
- Considerable coordination challenges with TransLink may be experienced, and there may be financial implications in the form of reduced Operations, Maintenance, and Rehabilitation (OMR) funding received. TransLink approval is also required when making any changes to speed or capacity on Major Road Network.

Additional Benefits

- Significant safety and comfort improvements for those using active transportation modes.
- Improvements in bus reliability, and local economic vitality.
- Reduction in traffic, noise, and air pollution.

What We've Heard

Based on the feedback received during Phase 2 engagement, the levels of support or opposition to the proposed Big Move 3 - Reallocation of Road Space were mixed. A total of 198 responses were received using the public survey:

- **53%** of survey respondents were satisfied or very satisfied with the Big Move.
- **41%** were dissatisfied or very dissatisfied.

- **6%** were neutral or not sure.

Residents who chose ‘very dissatisfied’ or ‘dissatisfied’ were invited to share the reasons for their selection. Out of the 75 responses received, the most frequently mentioned reasons include:

- **Increased Congestion**: Concerns about potential increased congestion and the need for road space to accommodate both Port Moody residents and regional vehicle travel as the population and density increase (40 mentions).
- **Minimal Impact on Mode Shift**: Belief that residents will continue to rely on private vehicles and that existing transit and bike ridership is insufficient to support road reallocation, especially during winter/rainy months (21 mentions).
- **Need for More Information**: Requests for more information and data collection to explore potential changes to specific roads (7 mentions).

5.4 Big Move #4 – Transit Supportive Infrastructure

Action

Provide additional overpasses across rail and Skytrain lines for walking and cycling near SkyTrain stations, and explore and implement transit priority measures along major road corridors like St. Johns Street.

Contribution to Climate Action Plan Targets

- Provides active transportation connections and reliable public transit options to reduce vehicle dependency.
- Adding overpasses would promote a shift in travel modes by decreasing the walking and cycling distances required to access transit.

Consideration and Challenges

- Crossings are anticipated to have a relatively high cost, and additional funding streams or external partners including new developments may be required.
- May require acquiring additional right-of-way to support implementation.
- Connection could be enhanced with green infrastructure, and act as an extension into the park system along Burrard Inlet.

Additional Benefits

- Increases connectivity across the rail corridor and could make Rocky Point Park more accessible for several neighbourhoods and new residents, supporting mental and physical health.
- Improves walkability, which typically promotes local business activity.

What We’ve Heard

Based on the feedback received during Phase 2 engagement, there was overall support for the proposed Big Move 4 – Transit-Supportive Infrastructure. A total of 198 responses were received using the public survey:

- **78%** of survey respondents were either satisfied or very satisfied with the Big Move.

- **15%** were dissatisfied or very dissatisfied.
- **5%** were neutral or not sure.

Residents who chose ‘very dissatisfied’ or ‘dissatisfied’ were invited to share the reasons for their selection. Out of the 23 responses received, the most frequently mentioned reasons include:

- **Prioritization of Vehicle Travel**: Concerns about ensuring new infrastructure does not increase vehicle congestion (8 mentions).
- **Cost Concerns**: Worries about the potential cost of new pedestrian and cycling infrastructure (6 mentions).
- **Sufficiency of Existing Infrastructure**: Belief that the existing infrastructure (two pedestrian overpasses) is sufficient to meet current and future demand (4 mentions).

5.5 Big Move #5 – Promotion of Sustainable Transportation Options

Action

This Big Move includes a combination of several smaller initiatives to promote sustainable transportation options, including:

- **Transit Promotional Activities:** incorporate city-wide educational and promotional opportunities to encourage the use of transit as an alternative mode of transportation. This may include media campaign, event, workshop, and/or online public transit promotion.
- **School Travel Planning:** work closely with schools in Port Moody to develop school-specific information and promotions packages that would encourage students, parents, and teachers to make school trips with sustainable transportation modes. This would also include identifying infrastructure and safety improvements around schools.
- **Micromobility Options:** support micromobility options through regulatory updates and seek the introduction of shared micromobility providers in Port Moody. This would also include bikeshare partnership, electric scooters, and car share support.

Contribution to Climate Action Plan Targets

- The trip range extension that e-bikes provide, particularly in combination with bus and SkyTrain, allows many residents and families to effectively reduce or forgo car ownership entirely, lowering emissions.
- Reduces GHG emissions by shifting travel modes from single-occupancy vehicles to active transportation modes.
- Reduces GHG emissions from vehicles by providing alternative micromobility options for residents and visitors, especially for short trips.

Consideration and Challenges

- Transit Promotional Activities
  - Requires considerable coordination with TransLink.
  - May require various transit promotional initiatives to attract additional ridership.

- School Travel Planning
  - Requires close collaboration with schools in Port Moody
- Micromobility Options
  - Requires regulation of micromobility options to ensure that operations are safe.
  - Requires consideration for supporting those who may not be able to afford personal e-bikes or e-scooter.
- The City should continue to invest in building infrastructure that supports safe and comfortable sustainable transportation options.

Additional Benefits

- Provides alternate ways to get around Port Moody without driving.
- Helps to alleviate traffic congestion by providing alternatives to cars.
- Provides greater mobility to residents that don't have the ability to drive due to age or physical ability.
- Improves safer zones around schools.

What We've Heard

Based on the feedback received during Phase 2 engagement, the levels of support or opposition to the proposed Big Move 5 – Promotion of Sustainable Transportation Options were mixed. A total of 198 responses were received using the public survey:

- **57%** of survey respondents were either very satisfied or satisfied with the Big Move.
- **29%** were very dissatisfied or dissatisfied.
- **14%** were neutral or not sure.

Residents who chose 'very dissatisfied' or 'dissatisfied' were invited to share the reasons for their selection. Out of the 53 responses received, the most frequently mentioned reasons include:

- **Opposition to E-Bike Purchase Incentives**: As the draft Big Move 5 – Promotion of Sustainable Transportation Options – included e-bike purchase incentives as one of the actions, concerns were raised about the use of tax dollars to financially incentivize or subsidize e-bike purchases (30 mentions). In response, this action was removed from Big Move 5. Instead, planning for and providing micromobility options (such as bicycles, e-bikes, e-scooters, and shared-bike fleets) could help reduce carbon emissions and would expand travel choices in Port Moody. A citywide bike-share program and other micromobility options could be promoted in place of e-bike purchase incentives.
- **Need for Safe Cycling Infrastructure**: Calls for safe and separated cycling infrastructure to support all ages (7 mentions).
- **Low Potential for Impact**: Belief that the dependence some residents have on private vehicles, including seniors, families, regional commuters, and people with disabilities, limits the potential impact of this initiative (11 mentions).

6 Next Steps

6.1 Actions and Implementation Strategies

Updating existing policies and developing new policy directions are essential to supporting the implementation of the five recommended Big Moves. These policy directives within the MTP Update are designed to help the City of Port Moody meet its climate action goals while aligning with provincial greenhouse gas reduction targets.

The Big Moves collectively promote sustainable modes of travel, improved road safety for all users – including pedestrians, cyclists, and drivers – and enhanced traffic flow through innovative streetscape design.

The 5 Big Moves are not intended to be implemented sequentially, nor can they all be implemented simultaneously due to varying timelines and capital investment needs. However, several actions can begin immediately, and some initiatives may proceed in parallel. Table 8 outlines the specific actions and implementation strategies for each Big Move across short-term (0–2 years and 3–5 years), medium-term (5–10 years), and long-term (10+ years) horizons.

Table 8: Short-, Medium-, and Long-Term Actions and Implementation Strategies for the 5 Big Moves

Actions for the 5 Big Moves	Short-term		Medium-term	Long-Term
	0–2 years	3–5 years	5–10 years	10+ years
Big Move #1 – Smarter Parking Initiative				
• Transition from minimum to maximum parking requirements for new developments outside transit-oriented areas, minimizing or eliminating mandatory parking provisions.	X			
• Develop requirements for Transportation Demand Management (TDM) to encourage sustainable, multimodal travel and reduce dependence on private vehicles in new developments.	X			
• Review and update the citywide curb access management and parking plan to: o Implement paid on-street parking in high-demand, low-availability areas o Improve parking demand management at popular parks and recreational sites across the city	X	X		
Big Move #2 – City-wide Speed Limit Reductions				
Conduct a comprehensive road safety assessment that integrates data analysis, site evaluations, and stakeholder engagement to identify and prioritize safety improvements for inclusion in the City's Capital Program.	X	X		

Reduce posted speed limits to 30 km/h on all local residential streets in Port Moody. Consider speed limit reductions to 40 km/h or lower on select collector and arterial roads based on road safety assessment.		X	X	
Review and update existing policies and bylaws to support the implementation of speed limit reductions across the transportation network.	X			
Big Move #3 – Reallocation of Road Space				
Identify high-priority corridors to reallocate at least 10% of road space from private vehicles to sustainable transportation modes, green infrastructure, or public spaces.		X	X	X
Conduct and evaluate traffic analyses through a multimodal lens to assess the potential impacts and benefits of reallocating road space from vehicles to sustainable uses.	X	X		
Reallocate a minimum of 10% of road space from vehicles to sustainable modes of travel, green infrastructure, or public spaces.		X	X	X
Big Move #4 – Transit Supportive Infrastructure				
Explore opportunities for new pedestrian and cycling crossings over rail lines and SkyTrain station to improve access to transit.		X	X	X
Identify and assess transit priority measures along major corridors, such as St. Johns Street.	X	X		
Collaborate with TransLink to refine and implement transit-priority improvements and explore potential funding opportunities through grants.	X	X	X	X
Big Move #5 – Promotion of Sustainable Transportation Options				
Integrate citywide education and promotional campaigns to encourage transit use and shift travel behavior toward sustainable modes.	X	X	X	X
Partner with schools to develop customized outreach materials and programs that promote walking, cycling, and transit for school trips.	X	X	X	X
Implement shared micromobility options to address first-mile and last-mile connectivity challenges across the city.	X	X	X	X
Advocate to higher levels of government for regulatory updates that support the safe and expanded use of micromobility options.	X	X	X	X

6.2 Monitoring and Evaluation

Monitoring and reporting on the effectiveness of the 5 Big Moves is necessary to ensure that the planned initiatives are progressing well and align with the climate action. A monitoring program will also enable City staff to justify continued expenditures and allocation of resources to implement prioritized initiatives of the Big Moves. Monitoring will also provide a means of identifying changing conditions which would require changes to the Plan.

The monitoring program needs to be:

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

The monitoring program will focus on two main components. The first is the degree of progress the City has made towards implementing the Big Moves, which is detailed in Table 9. The second is the outcome of the Big Moves, which are outlined in Table 10 and

Table 11. These outcomes, which are summarized in more detail below, should be monitored every 2 to 5 years based on the availability of data.

Table 9: Number of completed projects identified in the Big Moves (Progress)

Measure of Success	Indicator
Public Realm	$ invested
Bicycle Network	$ invested
Transit-Supportive Infrastructure	$ invested
Sustainable Transportation Options	$ invested

Table 10: Vehicle Activity (Outcome)

Measure of Success	Indicator
Traffic Volume Counts	Average Annual Daily Traffic (AADT) Volumes
Travel Time	Average peak period travel time on key corridors
Crash Statistics	Number of reported vehicle collisions
Vehicle Kilometre Travelled (VKT)	Total VKT per capita
EV Ownership	Percentage of registered electric vehicles

Table 11: Mode Share of Work Trips (Outcome)

Measure of Success	Indicator
Walking	%
Cycling	%
Transit	%
Auto (Driver)	%
Auto (Passenger)	%

Ongoing monitoring and assessment will evaluate travel behaviour and operations to help move the plan forward and adjust priorities as needed. As the transportation network is modified to allow for non-motorized and transit infrastructure, and as new innovations and technologies are introduced, this plan must adopt its priorities and projects accordingly. The City will be monitoring the road network to ensure its operating efficiently. Transportation impact studies, corridor studies, and a Transportation Monitoring Program will be used to evaluate and track changing patterns, growth, traffic conditions and development.

A. Appendix A – Engagement Events

Public engagement has been a critical component of this MTP update process. Feedback from various engagement phases has been incorporated into the Big Moves development and refinement process across the various stages of work.

A.1 Round 1 of Public & Interest Holder Engagement

The first round of public and interest holder engagement aimed to develop a comprehensive list of Big Moves. During this phase, conducted between February and April 2022, the community explored actions to adapt the transportation system to climate change and mitigate future impacts. Ideas were solicited on strategies to meet Port Moody's climate targets and transportation vision, resulting in 28 initial Big Move ideas. Using a globally accepted framework, this list was refined to five proposed Big Moves for the MTP Climate Action Update. Engagement activities from February to March 2022 involved 224 participants through:

- Hosting a Big Moves Webinar featuring keynote speaker Chris Bruntlett, with 38 attendees
- Conducting an online survey with 164 participants
- Facilitating a Staff Big Moves Workshop and a Community Interest Holder Big Moves Workshop with 20+ community interest holders and staff
- Collecting 44 submissions to the Ideas Page
- Attracting 561 visits to the project website

A.1.1 Big Moves Webinar

The Big Moves Webinar aimed to share the vision, goals, and pillars of the Master Transportation Plan with the public. Keynote speaker Chris Bruntlett and other project experts discussed:

- Results of early policy review and the necessity of the Update
- The current state of transportation in Port Moody
- How the MTP can respond to global trends and current events
- Anticipated challenges and strategies to meet MTP and CAP targets

A.1.2 Public Survey

The online survey engaged the public with Phase 2 key topics, gathering feedback to inform the drafting of the "Big Moves." It was available on the project website through Engage Port Moody and in paper form at various locations such as City Hall, libraries, community centres, etc.

The survey participation included 164 respondents who provided valuable feedback. Demographics of survey respondents showed that 95% were Port Moody residents, with 50% living in Moody Centre or Inlet Centre. Age distribution indicated that most respondents were aged 60-69 (24%) and 30-39 (23%), while participants aged 20-29 were underrepresented. Additionally, 90% of respondents did not own a business in Port Moody.

A.1.3 Community Interest Holders Big Moves Workshop

The Big Moves workshops aimed to develop potential "Big Moves", consider their impacts, and explore equitable policies and projects that support vulnerable groups. The first workshop included interest holders and representatives from community organizations and groups that are

either new to MTP planning processes or most vulnerable to climate change impacts and transportation system changes. Attendees included:

- Coast Mountain Bus
- Fraser Health
- Greens Teams Canada
- Trails BC
- TransLink
- Force of Nature
- Glenayre Community Association
- Port Moody Design Panel (Adaptable & Accessible Design)
- Port Moody Economic Development Committee
- Port Moody Seniors Focus Committee
- Port Moody Transportation Committee
- West Coast Climate Action Network

A.1.4 Staff Big Moves Workshop

The second Big Moves workshop allowed the project team of urban designers, policy, transportation, and sustainability planners, and transportation engineers to reflect on community input and further develop the Big Moves around key considerations.

A.1.5 Key Themes for Big Moves

The following section highlights common themes observed across the online survey, and Big Move Workshop activities. The emerging key themes for Big Moves are the following.

- **Road Infrastructure & Traffic Reduction**: Many respondents want to improve vehicle flow by reducing vehicle movements, reallocating road space for vulnerable users, and enhancing access to arterial roads.
- **Expanded Transit Options:** Respondents seek improvements and expansions in public transportation. Staff are eager to collaborate with TransLink to enhance public transit access and multimodal connections.
- **Active Transportation:** There is strong support for increasing active transportation infrastructure, such as expanding the bike network, prioritizing separated bike lanes, and ensuring pedestrian paths are connected, accessible, and safe.
- **Connectivity:** Improving connectivity of various transportation modes, including cycling, trails, sidewalks, greenways, and public transit, is a priority. Connecting these networks to the rest of the region is also important.
- **Engagement, Awareness, and Education:** Respondents desire effective communication and education on transportation modes, reducing GHG emissions, and available incentives for alternatives to single-occupancy vehicles.
- **Land Use:** Staff support developing complete communities with essential services within walking distance to reduce travel needs. Coordinating land use and transportation opportunities, including mixed-use developments, is also emphasized.
- **Green Energy & Infrastructure Solutions:** There is support for investing in green infrastructure and developing a green energy fund, including the electrification of vehicles and public transit.
- **Partnerships/Collaboration:** Encouraging collaboration with Metro Vancouver, TransLink, and local businesses is seen as vital for promoting sustained long-term use of space and access to services.

This first round of engagement informed the draft Big Moves and outlined considerations for the next phase. Key points considered for the next phase were:

- **Expand Vision:** Focus more on climate action and sustainable transportation modes.
- **Support Mode Shift:** Increase access and opportunities for walking, cycling, and public transit, while acknowledging the need for vehicles for essential purposes.
- **Prioritize Safety and Accessibility:** Enhance mobility for all ages and abilities, including children, seniors, and persons with disabilities.
- Consider Traffic Reduction: **Improve movement efficiency by reducing vehicle use and enhancing** connectivity across different paths and roads.
- **Think Regionally:** Ensure Port Moody's transportation system connects well regionally, including transit and bike/pedestrian infrastructure.
- **Promote Behavior Change**: Educate the public on mobility options and the environmental impact of transportation choices.
- **Act on Climate Strategies:** Integrate climate-focused solutions to reduce GHG emissions, including green energy and infrastructure projects.

A.2 Round 2 of Public Engagement

This round of public engagement aimed to refine the Big Moves. Between June and July 2024, feedback was sought on the five proposed Big Moves to support their implementation. The results of Phase 2 have been used to refine the draft Big Moves and recommendations. Feedback was collected through a public online survey from June 17 to July 14, 2024, with paper copies available at City Hall and during the in-person Big Moves information session. Engagement opportunities were promoted through:

- A media release distributed to local media and a news story posted on portmoody.ca, accompanied by e-notifications to subscribers.
- A feature box with a link to the Engage Port Moody project page added to the portmoody.ca homepage.
- An entry for the information session in the digital city calendar.
- Emails sent to Engage Port Moody registrants, the Citizen Advisory Group, and civic committee members, encouraging participation and sharing the engagement opportunity with their networks.
- Social media campaigns to promote both the online survey and the open house.
- Digital signage, including Pattison digital billboards and the Newport digital sign, to further increase awareness and participation.

A.2.1 Public Survey

The survey participation included 199 engaged participants who submitted responses, 504 informed participants who visited the project webpage and contributed to a tool or downloaded documents, and 971 aware participants who viewed the project webpage at least once. Demographics of survey respondents showed that 97% were Port Moody residents, with the majority living in Inlet Centre (22%), Heritage Mountain/Heritage Woods/Twin Creeks (20%), Moody Centre (19%), and College Park/Glenayre/Harbour Heights/Seaview (18%). Age distribution indicated that 54% of respondents were under 50 years old, with the most common age group being 30-39 years old at 29%. Additionally, 46% were 50 years or older, with 10% aged 70 or older. Notably, 9% of respondents owned or operated a business in Port Moody.

A.2.2 In-person Big Moves Information Session

The in-person Big Moves information session, held on June 27, 2024, included a brief presentation, a Q&A session, and information boards detailing each proposed Big Move.

Participants were encouraged to complete the public survey to provide their feedback. Although attendance was limited (approximately four participants), the information was made available online on the Engage Port Moody project page.

A.2.3 Public Survey Results

The public survey gathered 199 responses, providing insights into community opinions on the proposed "Big Moves". Table 12 summarizes the quantitative feedback and qualitative key themes from open-ended responses, with the frequency of each theme noted in parentheses. These results will guide future transportation planning and implementation.

Table 12: Phase 2 Public Survey Results

Big Move	Action Components	Survey Results	Participant Concerns
Smarter Parking Initiative	• **Parking Maximums:** Convert the minimum parking requirements to maximums for new developments outside of the transit-oriented areas, eliminating or minimizing the requirement for additional parking. • **Paid On-Street Parking**[32]: Implement paid on-street parking at areas with high parking occupancy and limited availability, aiming for an 85% occupancy rate. • **Recreation Parking Demand Management**: Better manage parking demand at busy park and recreational areas to achieve desired occupancy and turnover rates.	• 55% satisfied or very satisfied • 36% dissatisfied or very dissatisfied • 9% neutral	• Accessibility needs and reliance on private vehicles due to neighborhood topography, travel distances, and family needs (26 mentions) • Financial burden of paid parking and barriers to accessing public parks and greenspaces (19 mentions) • Opposition to parking maximums, with a preference for more parking to support increased density (18 mentions) • Need for public transit improvements to reduce reliance on private vehicles (5 mentions)
City-Wide Speed Reductions	• Reduce posted speed limits on all local residential streets in Port Moody to 30 km/h. • On a case-by-case basis, consider reducing posted speed limits on busier collector and arterial roads to 40 km/h or lower.	• 51% satisfied or very satisfied • 43% dissatisfied or very dissatisfied • 7% neutral	• Potential increased congestion and longer travel times, with frustration over existing congestion during peak times (30 mentions) • Suggestions for selective speed limit reductions in high pedestrian areas and local streets rather than city-wide (13 mentions) • Concerns about minimal impact on climate action targets and potential for increased idling and GHG emissions (11 mentions)
Reallocation of Road Space	• Reallocate a minimum of 10% of road space from vehicles to sustainable modes of travel, green infrastructure, or public spaces.	• 53% satisfied or very satisfied • 41% dissatisfied or very dissatisfied • 6% neutral	• Potential increased congestion, with the need to accommodate growing population and regional vehicle travel (40 mentions) • Minimal impact on mode shift, with continued reliance on private vehicles and insufficient transit and bike ridership, especially in winter (21 mentions)

[32] In summer 2024, pay parking was implemented at five locations where parking is in high demand, including Rocky Point Park, Esplanade Avenue, Murray Street, commercial area of Suter Brook Village, and Ungless Way. The goal of this pay parking program is to improve turnover of parking to increase availability for incoming users, and to encourage a shift toward more sustainable modes of transportation that help reduce traffic and emissions

			• Need for more information and data collection on specific road changes (7 mentions)
Transit-Supportive Infrastructure	• Provide additional overpasses across rail and SkyTrain lines for walking and cycling near SkyTrain stations. • Explore and implement transit priority measures along major road corridors like St. Johns Street.	• 78% satisfied or very satisfied • 15% dissatisfied or very dissatisfied • 5% neutral	• Prioritization of vehicle travel to avoid increased congestion (8 mentions) • Concerns about the potential cost of new pedestrian and cycling infrastructure (6 mentions) • Belief that existing infrastructure (two pedestrian overpasses) is sufficient for current and future demand (4 mentions)
Promotion of Sustainable Transportation Options	• **E-Bike Purchase Incentives:** Encourage e-bike ownership through financial support from the City. • **Transit Promotional Activities:** Incorporate city-wide educational and promotional opportunities to encourage transit use. • **School Travel Planning:** Work closely with schools to develop information and promotion packages encouraging sustainable school trips. • **Micromobility Options**[33]: Support micromobility options through regulatory updates and the introduction of shared micromobility providers.	• 57% satisfied or very satisfied • 29% dissatisfied or very dissatisfied • 14% neutral	• Opposition to e-bike purchase incentives, with concerns about tax dollars being used for subsidies (30 mentions) • Need for safe and separated cycling infrastructure to support all ages (7 mentions) • Low potential impact due to dependence on private vehicles, including seniors, families, regional commuters, and people with disabilities (11 mentions)

[33] The City began participating in the provincially-led Electric Kick Scooter Pilot Project starting May 31, 2024.

B. Appendix B – Methodology Details

B.1 Risk Assessment Steps

B.1.1 Step 1: Background

This included compilation and review of relevant documents, reports, plans and other data including the city's:

- Climate Action Plan (CAP), 2020
- Asset Management Investment Plan, 2014
- Geospatial datasets for transportation infrastructure, overlaid where applicable with climate projections from the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5)
- Master Municipal Construction Documents, 2009

B.1.2 Step 2: Inventory and Baseline Conditions

General descriptions of the transportation infrastructure were developed, utilizing the City's Open Data Portal and Asset Management Investment Plan. Due to the limited scope of the CRVA, interest holder and public engagement was not undertaken, however the extensive work undertaken by the Climate Action Committee in developing the CAP was reviewed and considered as part of the assessment.

B.1.3 Step 3: Data Analysis and Climate Assessment

We confirmed the climate data, scenarios and time horizon for the assessment. Data was selected to align with the CAP. A qualitative review of the recently completed Intergovernmental Panel Climate Change Sixth Assessment Report was also undertaken. Relevant climate thresholds for the study, including probabilities of occurrence, were defined to be used as inputs to the risk assessment.

B.1.4 Step 4: Risk Assessment

Used a semi-quantitative risk evaluation process that consisted of:

- a scale to describe the likelihood / probability of a climate impact occurrence;
- a scale to describe the level of consequence / severity of impact on assets if that climate impact occurs, based on an improved understanding of their relative vulnerability through geospatial assessment; and
- a scale to assign a priority rating to each risk, given these two variables.

The "risks" identified were related to the relationship between climatic events and the components of infrastructure. This is mathematically illustrated as:

$$R = P \times S$$

[R = Risk, P = Probability of the event occurring, S = Severity of the event]

The PIEVC Protocol scoring matrices were used to assess risk and severity. Risk scores were developed by asset type (e.g. roads, sidewalks, etc.) using a combination of quantitative engineering analysis, and qualitative indicators.

The results of the risk assessment are documented in Section 3.3.2.

B.2 Assumptions and Data

The baseline assumptions, by asset type with their climate impact have been listed in **Table 13.**

Table 13: Baseline Design Assumptions by Asset Type and Climate Impact

Asset Type	Heat	Snow and Ice	SLR	Precipitation
Roads	Designed to withstand temperatures greater than 30ºC	Designed to withstand accumulation of snow and ice	Assets within the SLR inundation zone prone to complete loss of function due to submergence and reduced longevity due to saltwater exposure. Roads outside of the inundation zone would remain largely unaffected	Supporting drainage infrastructure designed to a 1 in 100-year event as defined in the City's Subdivision and Development Servicing Bylaw (2010)
Sidewalks	Designed to withstand temperatures greater than 30ºC	Designed to withstand accumulation of snow and ice	Assets within the SLR inundation zone prone to complete loss of function due to submergence. Sidewalks outside of the inundation zone would remain largely unaffected	Supporting drainage infrastructure designed to a 1 in 100-year event as defined in the City's Subdivision and Development Servicing Bylaw (2010)
Traffic Signals	Operating temperature range 34 C to -74 C	May be unable to withstand significant ice build up	Assets within the SLR inundation zone prone to complete loss of function due to submergence. Traffic signals outside of the inundation zone would remain largely unaffected	If electrical components are exposed to water there is potential for complete failure of an asset
Streetlights	Operating temperature range 34 C to -74 C	May be unable to withstand significant ice build up	Assets within the SLR inundation zone prone to complete loss of function due to submergence. Streetlights outside of the inundation zone would remain largely unaffected	Electrical component exposure to flooding would result in failure
Curb Gutters	Designed to withstand temperatures greater than 30ºC	Designed to withstand accumulation of snow and ice	Assets within the SLR inundation zone prone to complete loss of function due to submergence	Supporting drainage infrastructure designed to a 1 in 100-year event as defined in the City's Subdivision and Development Servicing Bylaw (2010)

Asset Type	Heat	Snow and Ice	SLR	Precipitation
Railways	May or may not be designed withstand temperatures more than 30ºC depending on age of rail	Designed to withstand accumulation of snow and ice	Assets within the SLR inundation zone prone to complete loss of function due to submergence	Supporting drainage infrastructure designed to a 1 in 100-year event as defined in the City's Subdivision and Development Servicing Bylaw (2010)
Trails and Paths (Bike paths, Multi-use paths, and trails)	Designed to withstand temperatures greater than 30ºC	Designed to withstand some accumulation of snow and ice	Assets within the SLR inundation zone prone to complete loss of function due to submergence. Trails and paths outside of the inundation zone would remain largely unaffected	Supporting drainage infrastructure designed to a 1 in 100-year event as defined in the City's Subdivision and Development Servicing Bylaw (2010)

The GIS-based vulnerability assessment relied on existing models and geospatial datasets. The data used for the CRVA is summarized in Table 14. The CRVA considers a 2050-time horizon.

Table 14: CRVA Data Inputs

Climate Impact	Risk Assessment Data	Vulnerability Assessment Data
Heat	Pacific Climate Impacts Consortium (PICS) Eagle Ridge Hospital site projections	VCH – PRISM Climate Normals 1981-2010[34]
Snow and Ice	IPCC AR5	No geospatial assessment undertake
SLR	BC Ministry of Environment	Port Moody Open Data – Contours 1m
Precipitation	PICS Eagle Ridge Hospital site projections	VCH – 200-year floodplains

The projected full range of change to climate variables relevant to this project, based on IPCC's guidance note on likelihood scales[35] up to 2070, can be articulated as follows:

- *Virtually certain* increase in extreme heat and heatwave events
- *Very likely to virtually certain* increase in long-term average rainfall and intense short-duration precipitation events
- *Virtually certain* increase in sea levels

[34] The VCH model for extreme heat uses a threshold of 18ºC. This is because the modelling was developed primarily to demonstrate health impacts of climate change. For this risk assessment, which is focused on infrastructure impacts and not health, a 30ºC threshold is considered to align with AR5 RCP 8.5, and the CAP. The vulnerability assessment relies on the VCH model as it was not possible to develop a bespoke heat model within the scope of this study. While the extreme heat threshold used in the CRVA respectively are different, the relative vulnerability to extreme heat across the city is assumed to be the same irrespective of the specific temperature threshold.

[35] IPCC (2010). Guidance Note for Lead Authors of the IPCC Fifth Assessment Report on Consistent Treatment of Uncertainties. https://www.ipcc.ch/site/assets/uploads/2017/08/AR5_Uncertainty_Guidance_Note.pdf

- *Likely* increase in intense storms and cyclogenesis.

The probabilities of occurrence associated with each of the IPCC's likelihood scale definitions are provided in Table 15.

Table 15: Likelihood Scales from the IPCC

Term	Likelihood of the Outcome (probability)
Virtually certain	99-100%
Very likely	90-100%
Likely	66-100%
About as likely as not	33-66%
Unlikely	0-33%
Very unlikely	0-10%
Exceptionally unlikely	0-1%

Variables are presented as changes from the baseline period (1971-2000) and are all averaged over a 30-year period (2050s are 2041-2070). Climate change projections were based on Representative Concentration Pathway (RCP) 8.5. RCPs are scenarios developed by the IPCC that capture potential concentrations of greenhouse gases dependent on different anthropogenic (human) emissions levels. RCP 8.5 represents a scenario where emissions continue to rise throughout the 21st century, and is recommended for, and commonly used in, climate adaptation planning.

Probability and Severity have been scored on a 1 to 7 scale and the risk value is determined by multiplying the probability and severity scores, yielding a value between 0 and 49. Scores of 12 to 41 are considered "medium risk", while scores of 42 to 49 are considered "high risk" (Figure 18). Note that the PIEVC protocol recommends developing adaptation options for all medium and high risk items. While this is outside the scope of this assessment, high level recommendations for further study and planning are provided in Sections 3.3.3 and Sections 4. The Risk assessment considers only physical risks to infrastructure and does not include potential social, economic, or health impacts on users of infrastructure.

Figure 18. PIEVC Risk Levels

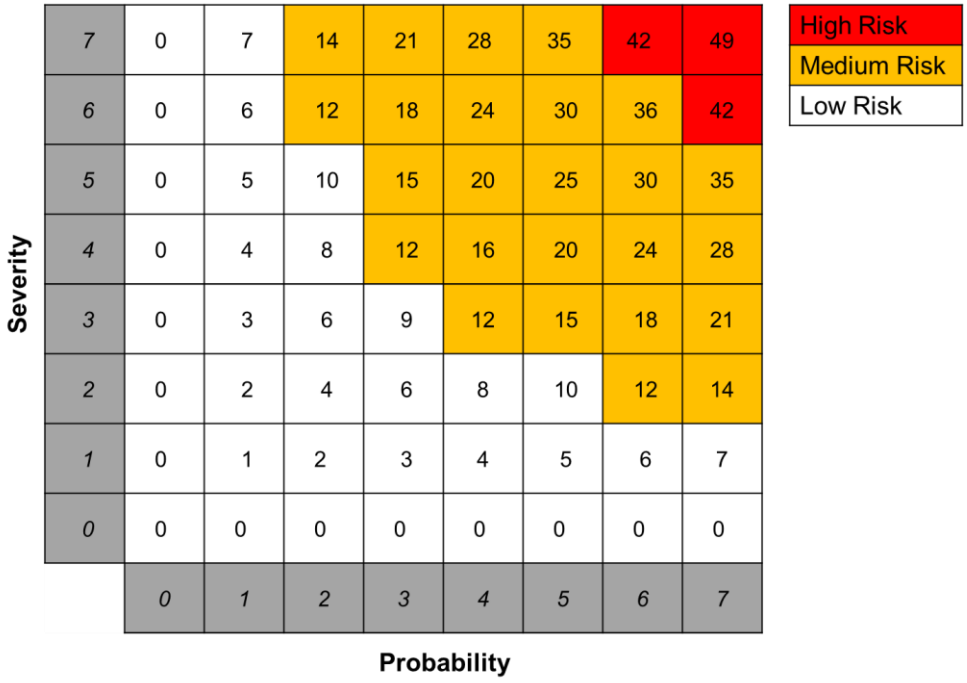


Table 16 describes the scale used for selecting the probability of occurrence of a climate hazard.

Table 17 describes the scale used for selecting the severity of impact after a climate hazard has occurred.

The risk assessment asks the question, “If a particular climate impact occurs, what would the impact on a given asset type be?” Note that this risk assessment is undertaken at the ‘asset type’ level. The impacts and severity scores have been developed with consideration for average impacts on a particular asset type, for all assets of that type across the city. The risk assessment results should be interpreted alongside the results of the vulnerability assessment to understand where vulnerability to a given risk is higher or lower.

Table 16: Average Annual Probability of Occurrence Scoring Matrix

Score	Probability Classifications – Method A
0	Negligible / Not Applicable
1	Highly Unlikely / Improbable
2	Remotely Possible
3	Possible / Occasional
4	Somewhat Likely / Normal
5	Likely / Common
6	Probable / Often
7	Highly Probable / Approaching Certainty

Source: Adapted from PIEVC

Table 17: Severity of Impact Scoring Matrix

Score	Impact Classifications
0	Negligible or Not Applicable
1	Very Low/Unlikely/Rare/Measurable Change
2	Low/Seldom/Marginal/Change in Serviceability
3	Occasional Loss of Some Capacity
4	Moderate Loss of Some Capacity
5	Likely Regular/Loss of Capacity and Loss of Some Function
6	Major/Likely/Critical Loss of Function
7	Extreme/Frequent/Continuous/Loss of Asset

Source: Adapted from PIEVC

B.3 Exclusions and Limitations

- The climate parameters used in this study were developed based on desktop research and all climate projections found in this report rely on previous climate studies that are publicly available or provided by the City.
- The asset information, including quantity and type, used in the CRVA, was compiled from the City's Open Data Portal and have not been independently validated.
- The risk assessment considers assets at the 'asset type' level. This results in several key limitations:
  - Where more than one material type is present for a specific asset type, severity scores have been averaged in the semi-quantitative assessment
  - Asset-specific characteristics, including age and condition are not captured
  - The geospatial location of specific assets, which impacts their exposure, is not considered. This limitation is partially offset by the geospatial vulnerability assessment.
- Asset design assumptions have been developed based on limited data, and the assumptions used have been applied uniformly within asset types.
- The City is undertaking several concurrent studies that are related to this plan, including developing an All Hazards Management Plan. Plans that are currently under development have not been considered in this assessment.
- Due to the limited, high-level scope of this study, the CRVA relied on existing climate data sets to make use of readily available data. Specifically:
  - Heat modelling used for the vulnerability assessment was obtained from VCH and utilizes a temperature threshold of 18ºC versus the 30ºC threshold used for the risk assessment.
  - Flood modelling used for the vulnerability assessment was obtained from VCH and utilized a 1-in-200 year storm event for modelling floodplains, whereas the risk assessment assumes a 1-in-100 year event per the City's Subdivision and Development Servicing Bylaw (2010).
- Existing climate data sets for Sea Level Rise and Winter Weather were not available at the necessary level of detail for the vulnerability assessment, and so proxy-based assessments were performed. Specifically:
  - Sea Level Rise was modelled using the available 1-meter contour line dataset from the City's open data portal; sea level rise inundation is depicted for up to 1 meter using

a “bathtub model” approach which assumes uniform sea surface elevation and does not account for tidal activity.

– Winter weather modelling is not available and thus surface material type is used to gauge and approximation of vulnerability.

Therefore, assets identified as exposed or highly vulnerable to a given climate impact may not be reflected as such in the risk assessment.

C. Appendix C – Big Moves Details

C.1 Big Move Longlist

The following longlist of Big Moves ideas (Table 18) was generated using the process documented in Sections 4.1 of this report. They are shown in terms of their main contribution toward the City's TransPort Moody vision themes, such that they demonstrate an alignment with the City's strategic transportation policy direction. Alignment with the TransPort Moody vision is also considered as part of one of the main criteria used in the assessment framework discussed in the next section.

Table 18: Big Moves Longlist

Big Move	Type of Instrument	Compact Complete City	Walkable City	Bicycle-Friendly City	Transit-Oriented City	Move People and Goods	Safe and Liveable City
Parking Maximums	Regulatory	✓	✓	✓	✓	✓	✓
Multi-Modal Development Review	Regulatory	✓	✓	✓	✓	✓	✓
Slow Zone Pilot	Regulatory	✓	✓	✓			✓
Micromobility Approval and Regulation	Regulatory				✓	✓	✓
Recreation Parking Demand Management	Regulatory	✓				✓	✓
Connected and Autonomous Vehicle Support	Regulatory					✓	✓
Curbside Loading and Delivery Management	Regulatory					✓	✓
Speed Limit Reductions	Regulatory		✓	✓			✓
Strategic EV Charging Incentives	Regulatory					✓	
Paid On-Street Parking	Economic	✓				✓	
Vehicle Registration Fees	Economic	✓					✓
Congestion Charging	Economic					✓	
E-Bike and Bicycle Purchase Incentives	Economic			✓		✓	
Micromobility Goods Movement Support	Economic			✓		✓	✓

Driveway Amenity Fee	Economic	✓	✓		✓		✓
People-First Streets	Planning	✓	✓	✓	✓	✓	✓
Multi-Modal Roadway Standards	Planning	✓	✓	✓	✓	✓	✓
SkyTrain Access Planning	Planning	✓	✓	✓	✓	✓	
Reallocation of Road Space	Planning	✓	✓	✓	✓	✓	✓
Parks and Recreation Transit Access Standards	Planning				✓	✓	✓
Transit Oriented Development Areas Expansion	Planning	✓	✓		✓	✓	
School Travel Planning	Information		✓	✓	✓	✓	✓
Workplace Travel Planning	Information		✓	✓	✓	✓	✓
Bikeshare Partnership	Investment			✓			
Carshare Support	Investment	✓				✓	
Rail and SkyTrain Crossing	Investment	✓				✓	✓
City-wide Transit Universal Pass	Investment				✓	✓	
Third SkyTrain Station	Investment	✓	✓	✓	✓	✓	✓

The scoring system used to rank the longlisted Big Moves using the above criteria is shown in Table 19.

Table 19: Criteria Scoring

Score	Meaning
	• Big Move anticipated to have excellent performance on this criterion
2	• Big Move anticipated to have good performance on this criterion
1	• Big Move anticipated to have adequate performance on this criterion
0	• Big Move anticipated to have minimal or no contribution toward this criterion
X	• Big Move anticipated to have poor or negative performance on this criterion such that it constitutes a fatal flaw for inclusion in the shortlist.

C.2 Initial Longlist Assessment Results

The results of the initial assessment of the Big Moves longlist are documented in Table 20. The scoring for each of the criteria within the framework is shown, in addition to an overall score which is a summation of the scores across the criteria.

Big Moves that were scored with a fatal flaw on any of the criterion were not given an overall score (i.e, the entire idea was given no score, as it was not to be evaluated further). These were considered unsuitable for carrying forward to the next stage due to known implementation challenges that could not be mitigated at this time or due to poor performance against the goals of the MTP or CAP. As well, those Big Move ideas that received a score of 66% (or 12 out of a possible 15) were considered as performing adequately for further consideration as part of the process. Out of a longlist of 28, this resulted in 13 options being taken forward for further consideration – the draft shortlist.

At this stage of the MTP update, it is noted that a higher score does not necessarily mean it would be prioritized as a Big Move for implementation, rather that it best satisfied the initial screening criteria for this assessment. Based on further City input, shortlisted Big Moves will be evaluated in more detail to identify the Big Moves prioritized for implementation.

As well, Big Move ideas that have not been taken forward for further consideration at this initial longlist assessment phase may still play a supportive role in the MTP and have remained for future considerations for the City. This includes potential ideas that currently have a low feasibility or applicability score, as conditions or policy directions from senior levels of government may change.

Table 20: Big Moves Longlist Assessment

Big Move	Instrument	Mode Shift	VKT or GHG Reduction	Traffic Safety	Additional Co-benefits	Feasibility	Applicability / Specificity	Score	Comments
Parking Maximums	Regulatory	3	2	1	3	2	3	14	Taken forward for further consideration
Multi-Modal Development Review	Regulatory	2	2	1	2	3	0	10	While applicable in general, the City is currently updating how it undertakes developent reviews
Slow Zone Pilot	Regulatory	1	1	2	2	3	3	12	Taken forward for further consideration
Micromobility Approval and Regulation	Regulatory	1	1	1	1	2	1	7	Typically limited impact, particularly if only applicable locally; requires provincial support
Recreation Parking Demand Management	Regulatory	2	2	1	2	3	3	13	Taken forward for further consideration
Connected and Autonomous Vehicle Support	Regulatory	X	X	2	2	1	0	0	Without very careful implementation, likely leads to more driving; very limited ability for Port Moody to contribute locally
Curbside Loading and Delivery Management	Regulatory	1	1	1	2	2	2	9	Unlikely to have citywide impact, as it concerns a limited number of trips. May be beneficial for other objectives
Citywide Speed Limit Reductions	Regulatory	2	2	3	3	2	3	15	Taken forward for further consideration
Strategic EV Charging Incentives	Regulatory	0	3	0	3	3	3	12	Taken forward for further consideration
Paid On-Street Parking	Economic	2	3	1	3	1	3	13	Taken forward for further consideration
Vehicle Registration Fees	Economic	2	2	1	2	0	2	9	Currently understood to be outside of the City's jurisdiction; low feasibility - potentially fatal flaw
Congestion Charging	Economic	3	3	2	3	X	3	0	Ideal versions are outside the City's jurisdiction; tolling is not permitted in the MVA; no global exampls of implementation in suburban city
E-Bike Purchase Incentives	Economic	3	2	1	2	2	3	13	Taken forward for further consideration
Micromobility Goods Movement Support	Economic	1	1	3	1	2	2	10	Unlikely to have citywide impact, as it concerns a limited number of trips. May be beneficial for other objectives
Driveway Amenity Fee	Economic	3	3	2	2	1	2	13	Taken forward for further consideration
People-First Streets	Planning	2	2	3	3	2	X	0	In principle, people-first streets are a very important policy goal. Lack of specificty at this point, makes this idea a fatal flaw.
Multi-Modal Roadway Standards	Planning	2	2	3	1	2	1	11	Roadway standards should be updated to provide complete streets; however, without implementation follow-up, will have minimal impact
SkyTrain Access Planning	Planning	2	2	1	2	2	0	9	Worthwile policy goal; action would require further specificity to result in impact (see rail corridiro crossing idea below)
Reallocation of Road Space	Planning	3	3	2	3	1	3	15	Taken forward for further consideration
Parks and Recreation Transit Access Standards	Planning	2	2	1	2	2	1	10	Idea needs follow-through for impact. Port Moody should continue to work with TransLink & Metro Van to improve access to parks
Transit Oriented Development Areas Expansion	Planning	3	3	1	3	1	0	11	Worthwile policy goal with many benefits; OCP update currently exploring land use planning, and remains the applicable process for idea
School Travel Planning	Information	1	1	2	2	3	3	12	Taken forward for further consideration
Workplace Travel Planning	Information	1	1	2	2	2	1	9	Workplace travel planning can be impactful. Port Moody currently has limited large employers, for which this idea is typically more applicable
Bikeshare Partnership	Investment	2	1	1	1	2	2	9	Considered to have moderate impact; city may continue exploring these opportunites as part of ongoing transportation improvements
Carshare Support	Investment	1	2	1	1	2	2	9	Considered to have moderate impact; city may continue exploring these opportunites as part of ongoing transportation improvements
Rail and SkyTrain Grade-separated Crossing	Investment	2	1	2	2	3	3	13	Taken forward for further consideration
City-wide Transit Universal-pass	Investment	3	3	1	3	0	2	12	Taken forward for further consideration
Third SkyTrain Station	Investment	3	2	1	3	0	3	12	Taken forward for further consideration

C.3 Preliminary Big Moves Shortlist

Based on the results of the first round of assessment, explored in the prior section, the following Big Moves ideas were shortlisted and recommended to be carried forward for further consideration by the City.

- Parking Maximums
- Slow Zone Pilot
- Recreation Parking Demand Management
- City-wide Speed Limit Reductions
- Strategic EV Charging Incentives
- Paid On-Street Parking
- E-Bike Purchase Incentives
- Driveway Amenity Fee
- Reallocation of Road Space
- School Travel Planning
- Rail and SkyTrain Grade-separated Crossing
- City-wide Transit Universal Pass
- Third SkyTrain Station

The shortlisted Big Moves are described in further detail below and include supporting rationale—mainly how an individual Big Move idea contributes to the key MTP Update and Climate Action Plan objectives—and how it is relevant for Port Moody. Initial considerations and challenges related to implementation, and key co-benefits are also discussed. They are structured as one-page vignettes.

C.4 Shortlisted Big Moves Descriptions

C.4.1 Parking Maximums

Description	Rationale
The City currently requires new developments and redevelopments to provide a minimum number of vehicle parking spots based on the number of units, floor area, or other land use characteristics.	Many cities have now removed parking minimum requirements and are increasingly moving toward parking maximums, particularly for land uses in closer proximity to transit or denser urban areas.
This Big Move idea would entail converting the existing parking minimum requirements to parking maximum requirements. This means that the number of on-site parking spaces permitted to be implemented for a specific land use would be capped.	Parking minimum requirements have led to an oversupply of parking, increased the distances between buildings, and created large impermeable surfaces. The provision of large amounts of parking has been shown to induce vehicular travel[36]. As well, these minimums often hamper redevelopment of existing buildings, and when structured parking is provided, can add considerably to the construction costs. Acknowledging these challenges, many developments already seek variances to minimum parking requirements. Converting minimum requirements to maximums would provide developments more flexibility in terms of deciding how much parking should be provided, while not imposing any fundamental

[36] Millard-Ball, A., West, J., Rezaei, N., & Desai, G. 2021. What Do Residential Lotteries Show Us About Transportation Choices? Urban Studies.

Description	Rationale
	burdens, as they may still choose to provide what was previously required. The idea to remove parking minimums (a component of implementing maximums), was also an idea that was provided through the phase 2 survey, and garnered support from other residents.

Considerations & Challenges	Co-Benefits
● This action would need to ensure or retain some level of accessibility parking requirements. ● As converting parking minimums to maximums may not directly lead to reduced provision of parking, the maximum requirements should be reviewed periodically and reduced over time and/or based on information such as the regional review undertaken in Metro Vancouver's regional parking study . ● Historically, on-site parking requirements were believed to be needed to reduce challenges with demands on neighbouring on-street parking. Where this may become an issue, mitigation measures that facilitate improved on-street parking management may be needed. ● To retain flexibility while incentivizing developments toward desired outcomes, an associated pay-in-lieu mechanism can also be considered. While Port Moody does not currently have pay-in-lieu for variances to minimum parking provision requirements, this mechanism could be used to require developments that desire greater than the maximum parking provision requirements to pay into a fund that the City may use to support sustainable mobility investments. ● The action could be further supported by permitting or requiring unbundled parking.	● Potential large improvements in housing affordability. Underground parking construction typically costs over $50,000 per space. Considering amortization, particularly with higher interest rates, these costs can exceed $80,000 per space passed on to owners or tenants. ● Spurs economic vitality and increased small businesses, as well as finer-grained, missing middle developments. This typically also increases a city's tax base. ● Reduces impermeable surface area and therefore lowers the amount of (polluted) surface run-off and the urban heat island effect; an increasingly imperative need for climate resilience and adaptability, as well as improves opportunities for green infrastructure and urban forestry. ● Parking lots and structures may end up as stranded assets, as driving becomes increasingly unaffordable for residents, and, with the advent of autonomous vehicles some time in the future (assuming policy to in place for shared use). ● Constructing underground parkades produces considerable embodied carbon. As well, for safety reasons, these typically require 24 hour artificial lighting – increasing energy demands and associated costs.

C.4.2 Slow Zone Pilot

Description	Rationale
This Big Move would identify a neighbourhood or area of the City where posted speed limits would be reduced to 30 kph on most or all of the streets in that area. The City of Vancouver has recently implemented a Slow Zone Pilot. The City of Surrey has also implemented a Slow Streets Pilot Project, and the City of Nelson has been working toward implementing such a pilot.	At slower driving speeds, urban traffic typically flows more smoothly, such that it results in lower emissions. As well, because streets with slower speeds improve safety and comfort for other modes, this can promote mode shift and reduced driving. Currently, the Provincial government, through the Motor Vehicle Act, stipulates default speed limits on urban roadways, unless otherwise signed. As some residents and drivers may be skeptical of the benefits a pilot would allow the City togain an improved understanding of potential benefits and impacts ahead of committing greater resources required for a more permanent implementation. Signage would only be required in the pilot area, which could be closely monitored. Traffic calming and slower speeds were expressed as needs by a number of residents in the phase 2 survey.

Considerations & Challenges	Co-Benefits
● In addition to the required signage, it may be necessary to provide further traffic calming or branding elements to signal to drivers that they are entering the slow zone.	● Considerable safety and comfort benefits for all street users, particularly those walking/rolling, and cycling, as well as those who are lingering or gathering.

Description	Rationale
● A review of ICBC data to identify collision hotspots will be required. As well, further community input would facilitate identifying an appropriate pilot zone or zone(s).	● Considerable reduction in traffic noise and air pollutants. ● Potential to implement in close collaboration with the community, such that it promotes increased social interaction.

C.4.3 City-wide Speed Limit Reductions

Description	Rationale
This Big Move is similar to the idea of a Slow Zone Pilot; however, speed limit reductions would apply city-wide. The preliminary idea would be to reduce posted speed limits to 30kph on all residential streets, with consideration given to reduce posted speed limits on collectors and arterials to 40 kph or possibly lower, on a case-by-case basis. The City of Rossland B.C. lowered speed limits within the city to 30 kph in 2015. A number of communities, particularly medium-sized cities in Alberta, have implemented city-wide speed limit reductions. Montreal sets residential street speed limits at 30 kph with many arterials at 40 kph.	At slower driving speeds, urban traffic typically flows more smoothly, such that it results in lower emissions. As well, because streets with slower speeds improve safety and comfort for other modes, this can promote mode shift and reduced driving. A city-wide implementation of reduced speed limits is anticipated to have a significant safety improvement, with considerable additional co-benefits (noted below). A city-wide implementation approach will also increase legibility for residents and visitors, such that it would be understood that these reduced limits apply throughout the entire geography of the City (as opposed to a specific area, as would be the case in a pilot). Traffic calming and slower speeds were expressed as needs by a number of residents in the phase 2 survey.

Considerations & Challenges	Co-Benefits
● Over the past number of years, the Union of BC Municipalities has advocated to the Province to reduce—or allow for the efficient reduction of—the default speed limits in urban areas. It is understood that municipalities have agency over the posted speed limits on their streets through Section 146 of the Motor Vehicle Act; however, city-wide implementation would require adequate signage, education, and communications if the City were to pursue this approach. ● In addition to the City approaching implementation through bylaw changes and significant signage, continued advocacy and collaboration with other municipal partners and the Province to enact modifications to default posted speed limits through the Motor Vehicle Act could be considered. ● In addition to the required signage, it may be necessary to provide further traffic calming measures on some streets to better reconcile a reduced posted speed limit with the design of the street. ● Ahead of implementation, further study and collaboration with partner agencies would be required to understand potential impacts to transit and emergency vehicles (typically, these impacts are not significant), and the appropriate suitability across collector and arterial roadways.	● Significant safety and comfort benefits for all street users city-wide, particularly those walking/rolling, and cycling, as well as those who are lingering or gathering. ● At a city-wide implementation scale, in particular if implemented also on collector and arterial streets, the scale of collision reduction becomes measurable in economic terms. There may be an opportunity to work with ICBC to find creative ways to further monetize these benefits through preferential insurance rates for Port Moody residents (similar to the new distance-based discount). ● Significant reduction in traffic noise, as well as other air contaminants. ● Reduced wildlife-vehicle collisions. ● Lower income and marginalized communities typically live closer to arterials and busy streets, including in Port Moody. As such, a city-wide implementation will likely support more equitable outcomes given these communities currently bear a larger portion of the negative impacts of vehicular travel. ● Improved intersection signal operations for pedestrians (clearance times are in part calculated based on vehicle approach speeds).

C.4.4 Strategic EV Charging Incentives

Description	Rationale
For this Big Move idea, the City would incentivize the implementation of charging stations in strategic locations throughout the City, delivered by the private sector or other partners. Such locations could include gas stations, commercial parking lots, large format stores, car dealerships, etc.	The City already provides some public charging stations. However, additional incentives and charging opportunities will be required to promote and support a quicker shift to electric vehicles. The strategic locations described in this Big Move idea are typically businesses that already have considerable vehicular-

Description	Rationale
The City could stipulate the requirement of these through the issuance of business licenses for new and existing businesses that fall under the relevant uses. Businesses that remain non-complaint (or choose not to partake), would see their business license fee increase as compared to like businesses that implement the required charging infrastructure. The City of Vancouver recently implemented this action.	based infrastructure in place and are also those that most directly benefit from vehicular-based economic activity. As such, there is a strong rationale for these types of businesses to be more directly involved in supporting a shift to EVs. The results of the phase 2 survey suggest that many residents see vehicle electrification strategies as a priority.
Considerations & Challenges	**Co-Benefits**
• The City of Port Moody is relatively small in comparison to neighbouring municipalities, such that the additional costs associated with implementation or non-compliant licensing may discourage some businesses from wanting to operate within the city or create other boundary effects – the business licensing fee must be designed carefully. • Adequate time must be provided for businesses to adapt, and additional guidance by the City will be needed in terms of the EV charging requirements and how they relate to the specific businesses. • Despite general resident support for vehicle electrification strategies, many residents also felt that there should be a lower emphasis on electric vehicles noting equity concerns, and the priority should be to improve public transportation. • A potential need for a feasibility study to understand impacts to the energy grid demands.	• While some additional up-front costs may be incurred by local businesses, this also presents an opportunity for them to attract more customers, particularly as more residents purchase EVs. • As the EV fleet continues to expand while fossil-fuel powered vehicles are phased out, such a program will likely provide some businesses an opportunity to transition how they operate and generate revenue. • The costs of this program are almost entirely borne by local businesses, which typically benefit from vehicular travel. The City may even generate some additional revenue. This provides a more equitable way to provide EV incentives that does not subsidize those with greater means. • Supporting a switch to EVs would increase vehicle drivers' resilience in the face of fluctuating, and often sky rocketing, gas prices.

C.4.5 Paid On-Street Parking

Description	Rationale
This Big Move would implement performance-based paid on-street parking at key locations around the City, particularly in busy commercial areas. The pricing levels would be set to achieve a desired performance of the on-street parking opportunities. Typically, cities aim to achieve about an 85% parking occupancy rate, meaning that at any given time one out of seven parking spots on a street block remains available for someone wishing to park at that location.	Paid on-street parking is a tool used by many cities to better manage valuable curb space and signal this value to vehicle drivers. This typically results in less circulation for those seeking to park on street—reducing vehicle kilometers travelled, and improving traffic flow, as well as promoting a shift in some vehicular trips to other modes. The City of Port Moody currently does not have any paid on-street parking. Paid on-street parking is a tool used in cities throughout the world, and typically corelates closely with areas that have dynamic local economies and street activity.
Considerations & Challenges	**Co-Benefits**
• As paid on-street parking is new for the City, additional upfront resources will be required to implement a system. To allow the system to pay for itself in due time (and generate positive revenue), a critical amount of paid on-street parking areas will need to be identified. • Paid on-street parking may have minimal impact or benefit if implemented in areas where there are significant off-street parking opportunities that remain unpriced. As well, the City will need to better understand current demand/occupancy in these key locations and monitor closely to set initial prices. • This Big Move would likely require a phased approach with ongoing monitoring and potential supportive policies to ensure the desired performance-based outcomes are achieved.	• Paid parking improves overall parking management, which typically facilitates more parking turnover and therefore more local business activity in areas that are dependent on parking. • Lower stress for vehicle drivers looking for parking, as the performance-based system is designed such that there will likely always be at least one spot available. • For the City, paid parking would serve as a tool to provide additional revenues that could fund sustainable mobility or climate adaptation investments. Often a way to distribute funds is to use what are called "parking benefit districts" that ensure a specified proportion of the revenue generated goes toward improving the area where the paid parking applies.

Description	Rationale
● While a majority of residents believe better managing on-street parking to be a priority, most did not see pay parking as priority (in the phase 2 survey). Some residents suggested paid parking for non-residents only.	

C.4.6 Recreation Parking Demand Management

Description	Rationale
This Big Move would implement performance-based paid parking at busy park and recreational areas around the City. Similar to the Paid On-street Parking Big Move idea, the pricing levels would be set to achieve a desired performance of the recreational supporting parking lots. Given these types of parking lots typically serve a different purpose than on-street parking spaces, the performance may need to be based on a larger occupancy factor (e.g. 95% occupancy), or a different objective entirely.	Paid parking is a tool used by many cities to better manage valuable city space and signal this value to vehicle drivers. This typically results in less circulation for those seeking a parking spot, reducing vehicle kilometers travelled. It also promotes a mode shift in some vehicular trips to other modes for those that can more easily use other modes, while managing parking demand to ensure a higher parking availability for those that are more reliant on vehicle access. The City of Port Moody currently does not have any paid parking lots at recreation areas or parks that it administers. Belcarra Regional Park recently introduced paid parking to help manage demand and retain a quality visitor experience. Many other jurisdictions use paid parking at these types of lots to manage demand and ensure some availability. As well, the revenue generated can be used to improve alternative modes for those that do not have access to vehicles.
Considerations & Challenges	**Co-Benefits**
● As paid parking at park and recreational areas is new for the City, additional upfront resources will be required to implement a system. To allow the system to pay for itself in due time (and generate positive revenue), a critical amount of paid parking areas will need to be identified. ● To implement this Big Move idea, the City could also work with Metro Vancouver to potentially coordinate resources, share data and lessons learned. ● Depending on the location, paid parking at park and recreational areas may also require assessing other parking opportunities and policies in the area and may require working in coordination with paid on-street parking. ● This Big Move would likely require a phased approach with ongoing monitoring and potential supportive policies to ensure the desired performance-based outcomes are achieved. ● The need to better manage off-street parking was considered a high to medium priority for a slight majority of residents but ranked relatively low among strategic priorities.	● Paid parking at these lots will also provide the City with additional tools to help manage visitation and uphold a quality experience for all visitors. ● Lower stress for vehicle drivers looking for parking, as the performance-based system is designed such to facilitate some parking availability throughout the day, and could also provide the data-basis for information on websites to show availability and support resident trip planning. ● For the City, paid parking would serve as a tool to provide additional revenues that could fund sustainable mobility, climate adaptation investments, or park improvements.

C.4.7 E-Bike Purchase Incentives

Description	Rationale
The Big Move would incentivize the uptake of e-bike use. The main idea would be to directly encourage e-bike ownership through financial support from the City.	The advent of high-performing e-bikes provides the opportunity to shift a significant number of vehicle trips that may otherwise be too far by conventional bikes. As the City also has some significant elevation changes, e-bikes would make climbing hills

Description	Rationale
	much less physically demanding (a concern heard through public engagement). The main component of this idea is to encourage e-bike ownership, similar to incentives put in place by senior levels of government for electric vehicles. Life-cycle greenhouse gas emissions are lower for e-bike ownership than any other main mode of transportation aside from walking and conventional cycling. Ownership is also more efficient in terms of emissions produced per kilometer travelled than shared use programs.[37]
Considerations & Challenges	**Co-Benefits**
● The financial incentives would need to be large enough to encourage a significant proportion of the population to then contribute toward the remainder of the purchase price. This may be a challenge for the City to support financially without finding additional funding streams. ● The incentive program should be designed equitably, such that households of lower means are provided larger incentives. ● While e-bikes can significantly extend the travel range, and reduce physical exertion, the provision of safe and comfortable infrastructure must also be provided (through ongoing improvements or complementary potential Big Moves). ● Widespread adoption of e-bikes may lead to a significant need to provide secure bike parking, to protect these high-valued assets, and may require infrastructure enhancements and increased maintenance. ● The City should also continue to work with e-mobility providers to support the introduction of e-bike share, which may also act as a stepping stone to direct e-bike ownership. Different sharing models exist and would need to be explored in more detail to determine feasibility for the City.	● The trip range extension that e-bikes provide, particularly in combination with bus and SkyTrain will allow many residents and families to effectively reduce car ownership or forgo it entirely, significantly contributing to affordability and lowering emissions. ● Potential to contribute significantly towards transportation equity outcomes: currently, EV incentive programs continue to benefit those with greater means, as those with low-incomes are often not in a position to purchase EVs even with rebate incentives in place. E-bikes are more affordable by nature and means-based financial incentives further improve their affordability. ● An uptake in e-bikes may provide a springboard for additional community support for high-quality active transportation infrastructure, which will benefit users using a variety of active modes – creating a positive feedback loop.

C.4.8 Driveway Amenity Fee

Description	Rationale
This Big Move idea would enact a fee on properties that have driveways connected to public roads and right-of-ways. The fee could potentially be administered through property tax assessments or as a parcel tax, both of which are authorized mechanisms under the BC Community Charter. Ultimately, the intent of this idea is to promote a reduction in driving. As such, the idea would be to apply a base annual fee against existing driving levels for those properties with a driveway. On an annual basis, residents would declare their levels of driving across vehicles owned and be provided a discount against the base fee if their levels of driving have decreased (this is similar to how ICBC will administer its new distance-based discount, how Port Moody administers a tiered water & sewer rate by housing type, and shares some characteristics with Vancouver's Empty Homes Tax).	Port Moody consists of a variety of different land uses, but also includes a significant portion of single-detached homes. Almost all these properties have a driveway that connects properties to public streets and serve as amenity value to those property owners. Often, the existence of a driveway access effectively precludes the curb space from being used by a broader public – in effect a personal amenity that is privatizing public space, and also creates additional challenges for safe walking and cycling infrastructure. As well, there is a large correlation between dwelling type and transportation mode share (see the Mobility Context Report), meaning those that reside in lower density areas, and typically with driveways, produce more transportation (and household) emissions than residents in higher density locations.

[37] ITF 2020 – Good to Go? Assessing the Environmental Performance of New Mobility

Description	Rationale
For multifamily or other share residential properties, such a driveway amenity fee would naturally be lower as it would be spilt amongst strata properties/households.	

Considerations & Challenges	Co-Benefits
● This idea would position Port Moody as a leader in terms of policy innovation; however, there may be many challenges, including public acceptability. ● It is currently understood that the City has within its authority the ability to stipulate this fee; however, further work would be required to better understand operational details. A key element would be how it is administered and potentially enforced, in terms of the amount driven declaration: it would likely require data-sharing and close collaboration with ICBC. ● The fee would need to strike a balance, such that it is not undue for residents, but also covers its administration costs and allows the City to generate some revenue to support sustainable transportation infrastructure investments. ● Such a fee could further be made more equitable if it is rated against the property assessment value.	● Revenue generation could go toward funding sustainable transportation infrastructure and services (including complementary Big Move actions). ● The fee more closely connects infrastructure and external costs with its use, similar to how fees for water, natural gas, etc work and are already tiered in Port Moody. ● Affordability ranked in the middle of factors that residents felt important as part of the transportation system. Affordability was also identified as a barrier to a more equitable system. This suggests that some residents may understand the potential equity benefits (and need) of the idea. ● This Big Move would fall under a type of economic instrument. These typically have the largest mode shift or vkt reductions benefits, meaning that it is likely to also have significant air quality and noise reductions benefits over time. ● In the longer-term, with the advent of autonomous vehicles, driveways for many properties may become an obsolete amenity, laying the groundwork for property development that does not require driveways at all.

C.4.9 Reallocation of Road Space

Description	Rationale
This Big Move proposes that the City work toward a significant reallocation of road space to other modes. In line with other municipalities in the Region, including the City of New Westminster and the City of Vancouver, the City of Port Moody should strive to reallocate a minimum of 10% of the space on its roadways currently allocated to vehicle travel toward that of sustainable modes, green infrastructure, or the public realm.	A significant majority of space within the City's streets is currently dedicated toward the use of vehicles, with limited space dedicated to walking and lingering, and almost no space dedicated toward cycling and public transit. As streets are by definition intended for public use, a fundamental question arises when considering this space allocation: most of this public space is not accessible to everyone, and even illegal to enter for those walking. As well, sustainable modes of transportation are more efficient in terms of space. Reallocating space to these modes not only supports safer, more comfortable and reliable travel, but it can also be a more efficient use of valuable city space. When sustainable modes are prioritized through dedicated infrastructure, there is typically a large behavioural response leading to a shift in how people travel. The general strategy to reimagine how road space is currently used in the City was found to be a high priority for residents. The idea to reallocate ~10% of road space provides more definition to that general strategy.

Considerations & Challenges	Co-Benefits
● It should be noted that a 10% reallocation target is born out of a comparative from other regional municipalities and is considered an initial minimum target. Further work may refine this target. ● For this Big Move to deliver measurable outcomes, it will also be necessary to reallocate space on streets that offer direct	● Significant safety and comfort improvements for those using active transportation modes. Protected infrastructure for cycling was expressed as a key barrier to equitable transportation by residents. ● Significant bus transit operational and reliability improvements if dedicated transit infrastructure is provided.

Description	Rationale
routes for those taking transit, or using active transportation modes, or in areas rich in destinations. This would include streets identified in the 2017 Master Transportation Plan. ● Typically, areas where road space reallocation is most meaningful, are also areas with the most competing demands for that space. For Port Moody, this may also mean regional traffic or local traffic that may have limited alternative routes would be impacted. ● There is rarely a unified vision in terms of what space reallocation means for a given street. Further exploration and community engagement will be required to identify or confirm the street(s) or areas, and what these could look like. ● Many residents see the reduction of regional through-traffic as a priority. Road space reallocation done at strategic locations may contribute toward reducing these types of trips. ● Considerable coordination challenges with TransLink may be experienced, and there may be financial implications in the form of reduced OMR funding received. TransLink approval is also required when making any changes to speed or capacity on MRN roads.	● Potential to improve the public realm and active business frontages for patios and or green infrastructure, such that it promotes local economic vitality. This can also provide a significant opportunity for climate adaptation strategies – including removal of pavement or hardscape to reduce runoff and lesson the urban heat island effect. ● Road space reallocation projects typically result in an overall reduction in traffic (reduced traffic). This has multiple co-benefits including improved noise and air quality outcomes.

C.4.10 School Travel Planning

Description	Rationale
This Big Move would be undertaken as a program and see the City taking an active role in working closely with schools in Port Moody to develop catered information and promotions packages that would encourage students, parents, and teachers to make school trips with sustainable transportation modes. As well, this program would identify infrastructure and safety improvements around schools, including the introduction of School Streets.	School travel planning and program initiatives can have an immediate and a longer-term impact. In the more immediate term, they support a reduction in driving children to and from school. In the longer-term, promoting and educating children about sustainable modes, and providing them the confidence to use these modes, can instill mobility behaviours that last into their lifetime. The need for safer zones around schools was heard directly through the interest holder and public engagement process. School travel planning is also a policy direction that was included in the Climate Action Plan.
Considerations & Challenges	**Co-Benefits**
● Each school in Port Moody has its own unique needs and characteristics. Close collaboration will be required for all initiatives. ● Initiatives such as School Streets may cause some challenges for participants, particularly where schools are located on streets that do not have a strong grid structure – meaning there are fewer alternative ways to travel or bypass a school street for local residents.	● Using active transportation to go to and from school allows children to exercise and be active as part of their daily routine, resulting in improved health outcomes. As well, this provides children with more independence. ● Many parents currently drive their children to school. For some, this creates additional pressures on daily schedules and reduced flexibility. ● For initiatives such as School Streets, an overwhelming majority of participants (kids, teachers, and parents) report feeling safer and improvements in well-being[38]

[38] 2021-2022 School Street Program Report (vancouver.ca)

C.4.11 Rail and SkyTrain Grade-separated Crossing

Description	Rationale
This Big Move would provide an additional grade-separated active transportation crossing over the rail and SkyTrain corridor in the vicinity of Moody Centre Station.	The 2017 MTP identified the potential need for additional active transportation overpasses, including one east of Moody Centre Station. Given the successful introduction of the SkyTrain into Port Moody and considerable developments proposed around the station, there is a need to continue to leverage the SkyTrain investment and improve access to the station. As well, with new developments such as Moody Centre, there will be significant demand to access Rocky Point Park and businesses along Murray Street. A new crossing that connects directly to the Moody Centre Station would also improve connections between several bus routes and the Station, negating the need for bus passengers to travel over the Moody St overpass on the bus. A new crossing will reduce walking, cycling, and transit access distances, which will promote mode shift. This is also something residents expressed as a need in the phase 2 survey.

Considerations & Challenges	Co-Benefits
● A crossing is anticipated to have a relatively high cost, and additional funding streams or external partners including new developments may be required. ● Consider connecting a new crossing directly to the Moody Centre SkyTrain & WCE station ● May require acquiring additional right-of-way to support implementation. ● Connection could be enhanced with green infrastructure, and act as an extension into the park system along Burrard Inlet	● Increased connectivity across the rail corridor will make Rocky Point Park more accessible for several neighbourhoods and new residents, with access to green space vital to mental and physical health. ● Increased connectivity improves walkability, which typically also promotes local business vitality.

C.4.12 City-wide Transit Universal Pass

Description	Rationale
This Big Move would implement a universal transit pass for all residents of the City of Port Moody. This idea is modelled after the U-pass which is provided to post-secondary students in the Region. It would allow all Port Moody residents unlimited travel on the transit system for a flat monthly or annual fee. This fee would be paid by all Port Moody households, independent of their current level of transit use; however, it would be lower than current fare prices.	U-pass programs have been found to have significant mode shift and transit ridership benefits. As the population of Port Moody is similar in scale to that of the student populations of UBC and SFU, the City may be in a unique “sweet spot” position to show leadership on an action that may be too impactful were larger municipalities to implement it. Larger municipalities with large populations would have a larger impact on costs, as is noted under considerations and challenges below. The need to further incentivize public transit was a key theme heard through the public and interest holder engagement thus far.

Considerations & Challenges	Co-Benefits
● For such a pass to be implemented, close collaboration and a feasibility exploration with TransLink would be required. U-pass programs have typically been valid for secondary students and their institutions only, owing to the unique travel needs of students. ● U-pass programs are intended to be revenue-neutral, meaning that the responsible agency (TransLink) does not	● For lower income residents, a U-pass program may improve transportation affordability, such that the program contributes toward equity. ● A U-pass could contribute toward stabilizing TransLink revenues as transit continues to recover from the pandemic and with ongoing remote work ridership impacts. It also deemphasizes transit funding through farebox recovery,

Description	Rationale
collect additional revenue overall. However, they are not necessarily cost neutral, as there may be some administrative burdens, and with the increase in ridership, additional service may need to be provided. Mechanisms could be put in place that mitigate these issues, or the City may need to contribute additional funding to offset additional costs. ● Were this idea deemed feasible in terms of interagency collaboration and Regional impact, there may be challenges with public acceptability. Those residents that do not see themselves using transit at any time, or that have minimal current service, may not be willing to pay a fee they see as not personally beneficial.	acknowledging that transit plays a fundamental role in supporting the Regional economy, independent of daily ridership levels.

C.4.13 Third SkyTrain Station

Description	Rationale
This Big Move idea would be to build a third SkyTrain station between Queen Street and Barnet Highway. The idea builds on previous high-level assessment undertaken in 2021 and has been a consideration since the introduction of the Millennium Line Evergreen extension into the City.	The area around Moody Centre and the Seaview neighbourhoods are anticipated to grow and contribute toward increased potential transit ridership. As well, a station at the proposed location will provide existing residents and neighbourhoods in the western part of the City improved access to the SkyTrain network.
Considerations & Challenges	**Co-Benefits**
A number of considerations and challenges were documented in the 2021 and brought to council for consideration. These include: ● A need to consider situating the station further west to better support existing and new development, and reduce catchment overlap with Moody Centre. ● The need for more detailed technical study to determine technical feasibility as well as financial feasibility, particularly if situated further west. ● A significant capital cost that would likely require funding support from private developer partnerships, and/or other innovative approaches, as senior levels of government have historically not provided financial support for infill stations. ● Close collaboration with TransLink and other partners.	● Provides the opportunity for additional transit-oriented development, to further leverage the investment and increase community walkability (to support more active transportation trips even if they are not part of a transit journey). ● May contribute toward additional commercial and business interest and increase the land use mix such that this supports the local economy and tax base, as well as support further ridership along the SkyTrain network by non-local residents visiting the City. ● May contribute toward supporting more affordable housing options, and combined with the opportunity to use transit and active modes, an overall decrease in cost of living pressure.

C.5 Shortlisted Big Moves Weighted Scoring

Initially shortlisted ideas that scored “low” (14 – 15)[39] once weighting was applied, were removed from further consideration. Ideas that scored above 15 were assessed further qualitatively. It was determined that the ideas that scored within a “medium” or “high” score were not to be taken forward through the MTP update process at this time, given potential parallel processes that may provide future direction on the idea, or concern around feasibility or applicability. These included, a Slow Zone Pilot, Strategic EV Charging Incentives, E-bike Purchase Incentives, School Travel Planning, and a City-wide Transit Universal Pass.

[39] In this evaluation, low scores were considered to be 14-15, medium scores 16-17, high scores 18-19, and very high scores 20-21. As a reminder, these are relative to the initial shortlist, meaning that ideas scoring “low” here still score higher than the majority of the initial long list.

It was also determined that some Big Move ideas may complement one another more directly if viewed as a package of ideas, ultimately resulting a broader Big Move idea. This potential is noted in Table 21 under the column “Comments”.

Table 21: Big Moves Shortlist Refinement - Weighted Scoring

Big Move	Mode Shift	VKT or GHG Reduction	Traffic Safety	Additional Co-benefits	Feasibility	Applicability / Specificity	Weighted Score	Comments
Weighting	200%	200%	100%	100%	100%	100%		
Parking Maximums	6	4	1	3	2	3	19	High score. Take forward for further consideration, potentially as part of broader big move.
Slow Zone Pilot	2	2	2	2	3	3	14	Low score. Larger citywide speed limit reduction idea scores higher. Not considered further.
Recreation Parking Demand Management	4	4	1	2	3	3	17	Medium score. Take forward for further consideration, potentially as part of broader big move.
Citywide Speed Limit Reductions	4	4	3	3	2	3	19	High score. Take forward for further consideration.
Strategic EV Charging Incentives	0	6	0	3	3	3	15	Low score and City currently working with Tri-Cities on a zero-emissions mobility strategy. Not considered further.
Paid On-Street Parking	4	6	1	3	1	3	18	High score. Take forward for further consideration, potentially as part of broader big move.
E-Bike Purchase Incentives	6	4	1	2	2	3	18	High score. However, City currently working with Tri-Cities on a zero-emissions mobility strategy. Not considered further.
Driveway Amenity Fee	6	6	2	2	1	2	19	High score. Take forward for further consideration.
Reallocation of Road Space	6	6	2	3	1	3	21	Very High score. Take forward for further consideration.
School Travel Planning	2	2	2	2	3	3	14	Low score and City already has strategic policy direction to implement this action. Not considered further.
Rail and SkyTrain Grade-separated Crossing	4	2	2	2	3	3	16	Medium score. Take forward for further consideration as part of a broader big move.
City-wide Transit Universal-pass	6	6	1	3	0	2	18	High score. However, not take forward for further consideration given feasibility and jurisdictional challenges.
Third SkyTrain Station	6	4	1	3	0	3	17	Medium score. Take forward for further consideration as part of a broader big move.

The constituent ideas, whether part of broader Big Move packages or the entire shortlist of ideas, were assessed individually. However, it is recognized that their effectiveness—including their potential to shift modes and reduce greenhouse gas emissions—may also increase when the work together. In other words, these ideas together will demonstrate that “the whole is greater than the sum of the parts”. This means that an analysis of the mode shift and greenhouse gas reduction potential, which is done at the level of an individual Big Move idea and then totalled, may underestimate the actual mode shift and greenhouse gas reduction benefits that these actions working together produce.