

A full-page photograph of a cyclist riding a red road bike on a paved path that curves through a lush, green forest. The cyclist is wearing a blue jacket, a red and white helmet, and is leaning forward in a racing posture. Sunlight filters through the tall, straight tree trunks, creating dappled light on the path and the surrounding ferns and foliage. The forest appears dense and healthy, with various shades of green visible in the undergrowth and canopy.

Regional Greenways 2050

November 18, 2020

Regional Greenways 2050

The Regional Greenways 2050 plan was approved by the MVRD Board November 27th, 2020.

“That the MVRD Board:

- a) approve the Regional Greenways 2050 plan; and
- b) direct staff to include the Regional Greenways Network and supporting policies, as appropriate, in the update of the Regional Growth Strategy, *Metro 2050*.”

The plan is the region’s shared vision for a network of recreational multi-use paths for cycling and walking that connects residents to large parks, protected natural areas and communities to support regional livability.

Metro Vancouver acknowledges the input and feedback that contributed to the development of Regional Greenways 2050. Municipalities, TransLink, First Nations, other orders of government and their agencies, stakeholders and the public shared their knowledge, time, and insight which was critical to identifying the Regional Greenway Network and informing the plan. The plan includes a collaborative implementation framework and 5-year action plan to support the completion of the network.

4730 Kingsway, Burnaby, BC, V5H 0C6
www.metrovancouver.org

November 2020

COVER: LOWER SEYMOUR CONSERVATION RESERVE

Contents

1	Summary	4
2	Building a Resilient Region	4
3	Introduction	5
3.1	Greenways in Metro Vancouver	5
3.2	Benefits & Opportunities	7
3.3	Challenges	9
3.4	Metro Vancouver Context	10
4	Inter-regional Trails & the Regional Cycling Network	11
4.1	Major Bikeway Network	11
4.2	Experience the Fraser	12
4.3	The Great Trail	12
4.4	Lochside Regional Trail	12
4.5	International Trail Networks	12
5	Definition & Character	13
6	<i>Regional Greenways 2050</i>	17
6.1	Vision	17
6.2	Plan Goals	18
6.3	Regional Greenway Criteria	19
6.4	Regional Greenway Network	19
6.5	Existing Conditions – Greenway Operational Status Map	22
6.6	Regional Greenway & Major Bikeway Network Destinations	22
7	Site Planning & Design	24
8	Governance & Funding	25
9	Implementation Strategies and 5 Year Action Plan	28
10	Tracking Performance	34
11	Appendix A: Definitions	35
12	Appendix B: References	36

1 Summary

Regional Greenways 2050 is the region's shared vision for a network of recreational multi-use paths for cycling and walking that connects residents to large parks, protected natural areas and communities to support regional livability. The plan was developed in consultation with local jurisdictions, agencies, First Nations, and key stakeholders and focuses on regional scale recreational greenways. This network is complementary to TransLink's Major Bikeway Network. Together the two networks contribute to active transportation infrastructure in the region.

The *Regional Greenways 2050* plan identifies current challenges and benefits, provides an updated vision for a gap-free system of regional greenways, and an implementation framework that focuses on actions that can be undertaken in the next five years that will enable measurable progress toward this long term vision.

2 Building a Resilient Region

Building the resilience of the region is at the heart of Metro Vancouver's work; each of Metro Vancouver's regional plans and strategies supports a more resilient, low carbon, and equitable future. This commitment to resilience has informed this update of the region's shared regional greenway vision.

Regional Greenways 2050 is the region's shared vision for a network of recreational multi-use paths for cycling and walking that connects residents to large parks, protected natural areas and communities to support regional livability.

3 Introduction

Greenways promote regional livability by supporting active living, connecting natural areas and communities, and providing opportunities to protect and restore ecosystems. In 1999 the Metro Vancouver Regional District Board adopted a regional vision for a network of recreational greenways for Metro Vancouver. Since then Metro Vancouver, its member municipalities, TransLink, First Nations, other government agencies, and stakeholders have made significant progress in realizing that vision.

Developing the Regional Greenway Network will provide residents with additional routes for walking, running, rolling, riding horses, and cycling. Recent research has found that developing new trails in neighborhoods will replace a proportion of short vehicle trips for work and shopping and avoid the emission of greenhouse gases associated with motor vehicles. Connecting the Regional Greenway Network with the Major Bikeway Network and municipal cycling infrastructure will support low carbon active transportation (e.g. cycling, ebikes, etc.) for medium distance commutes (5-10 km).

This plan is the result of a collaborative effort and describes an updated vision for the region's network of regional greenways as well as actions that will guide implementation.

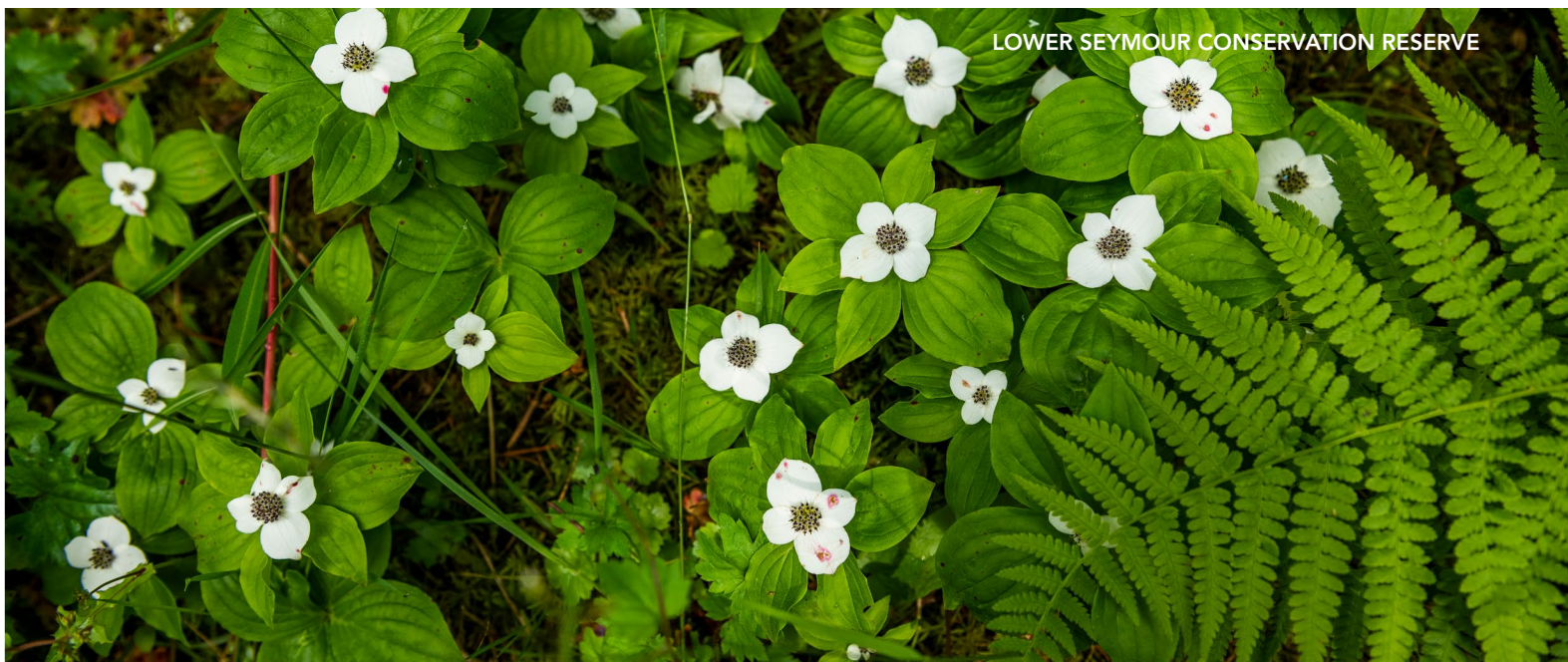
3.1 Greenways in Metro Vancouver

The history of regional greenway planning and development in Metro Vancouver began over a century ago when the City of Vancouver started construction on the Stanley Park Seawall. The next major milestone was the opening of the BC Parkway, Metro Vancouver's first multi-community connecting bikeway, for Expo 86. Broad support for a network of regional greenways emerged in the following decade when a flurry of greenway planning initiatives undertaken by local municipalities and the regional district culminated in the adoption of the *Greater Vancouver Regional Greenway Vision* in 1999. With the 2011 inclusion of a regional greenway network in *Metro 2040*, the regional growth strategy, the greenway concept was embedded in regional development plans.



Greenways in Metro Vancouver Timeline

1917	Construction of the Stanley Park Seawall commenced.
1929	A network of green corridors connecting the region for recreational driving was proposed in Vancouver's <i>Bartholomew Plan</i>
1969	Metro Vancouver identified a number of regional trail routes in its master plan for the new regional parks system (<i>A Regional Parks Plan for the Lower Mainland</i>).
1986	The BC Parkway was constructed as part of Expo 86 transportation infrastructure development.
1992	The City of Vancouver's Urban Landscape Task Force urged the establishment of a network of greenway corridors to link public open space in its <i>Greenways-Public Ways</i> report.
1995	Vancouver adopted its <i>City Greenways Plan</i> the first of its type in the region.
1996	The Metro Vancouver Board adopted the <i>Liveable Region Strategic Plan</i> —the region's first growth strategy—which included a plan for a network of recreational trails.
1999	The Metro Vancouver Board adopted the <i>Greater Vancouver Regional Greenway Vision</i> which more fully described the region's goal of a network of recreational greenways.
2004	The adoption of regional greenway sector plans concluded.
2011	The Metro Vancouver Board, 21 municipalities and TransLink adopted <i>Metro 2040</i> —the current regional growth strategy—which included a reference map of a regional recreational greenway network.
2012	The Experience the Fraser Concept Plan is completed.
2013	The Major Bikeway Network concept is created by TransLink as part of its Regional Cycling Strategy.
2017	The main cross country route of the Trans Canada Trail is declared complete.



3.2 Benefits & Opportunities

Regional leaders have recognized the importance of the Regional Greenway Network in ensuring the livability of Metro Vancouver since the 1990s. Expanding the network has become even more important as we better realize the significance of the climate emergency and the critical role of regional greenways in maintaining the physical and mental health of residents. The following section outlines some of the key benefits and opportunities regional greenways provide to the region.

- **Physical and Mental Health** — Regional greenways provide residents opportunities to be active outdoors and connect with nature, which has been demonstrated to improve physical and mental health. According to the *Where Matters* (2019) research project people who live in neighborhoods with more parks are healthier than those in areas with fewer parks. They are 43% less likely to be obese, 37% less likely to have diabetes, 39% less likely to have heart disease, and 19% less likely to have stressful days. The significant increase in visitation to greenways during the COVID-19 pandemic has demonstrated how vital regional greenways are to supporting the physical and mental health of regional residents. The design of our communities and recreational facilities affects people's ability to reach recommended daily activity levels. Developing the Regional Greenway Network can help residents access these health benefits more equitably.
- **Nature and Green Infrastructure** — The loss and fragmentation of natural areas threatens regional biodiversity, urban wildlife resiliency, and ecosystem services. While the Regional Greenway Network is primarily focused on identifying trail connections, expansion of the network provides opportunities to promote ecosystem connectivity and environmental cooling by protecting some of the region's remaining natural area, integrating green infrastructure and increasing regional tree canopy cover.
- **Climate Change** — Climate change is affecting our region in profound ways. Specifically, it's making summers hotter and drier, winters warmer and wetter, and increasing the occurrence of extreme weather events. Over the past number of years, we have also seen the negative effects on regional air quality from large scale forest fires. Regional greenways support climate change mitigation and adaptation through greenhouse gas avoidance and environmental resiliency improvements such as natural area protection and ecosystem restoration. For example, greenways can contribute to lowering greenhouse gas emissions and improving air quality by replacing trips by fossil-fuel powered vehicles. Cars and trucks are one of the most significant producers

The individual must choose to exercise, but communities can make that choice easier (Rails to Trails Conservancy)

of greenhouse gas emissions (31%) in the region and a significant source of smog forming emissions (16%). A recent study in the City of Vancouver found that daily transportation greenhouse gas emissions decreased by just over 20% for residents living near a greenway compared to before the greenway's construction. This was associated with a reduction in vehicle kilometers traveled (Ngo et al. 2018). Implementation of *Regional Greenways 2050* provides an opportunity to incrementally achieve the goals of the region's *Clean Air Plan* and *Climate 2050* strategy.

- **Growing Demand for Comfortable Cycling Facilities** — The 2019 *Benchmarking the State of Cycling in Metro Vancouver* report, developed by HUB Cycling and Translink, shows that cycling trips in Metro Vancouver have grown in the last 10 years from 1.7 % to 2.3 % of all regional commute trips. While the cycling network has increased by 237% since 2010, much of that infrastructure is not comfortable for all people. The bicycle infrastructure that is safe, secure, and accessible for everyone is still fragmented and doesn't yet fully link key destinations with residential areas (HUB, 2019). As regional greenways are intended to be off street routes, they create opportunities for residents to choose more active modes of travel and avoid unintentional injury due to motor vehicle collisions. *Regional Greenways 2050* provides an opportunity for Metro Vancouver, TransLink, municipalities and other orders of government and their agencies operating in the region to focus their efforts on filling gaps in and improving the comfort of the recreation and transportation cycling networks.
- **Urban Growth & Maintaining Livability** — With an anticipated 1.2 million new residents moving to Metro Vancouver by 2050, maintaining or improving regional livability is a significant challenge for the region. *Regional Greenways 2050* offers an opportunity to expand the Regional Greenway Network to support active living, improve the active transportation network by providing affordable low carbon transportation options, and protect and restore natural areas.
- **Better Tourist Experiences and Opportunities For Business Development** — Regional greenways support economic development and can enhance property values by maintaining the livability of regional communities and providing recreational amenities that make the region a more desirable place to work, live, and visit. One study estimated the annual economic impact of cyclists to be almost nine times as much as the one-time expenditure of public funds to construct bicycle facilities in the region (Lawrie, G. 2004).
- **Social Equity** — Providing all Metro Vancouver residents with equitable access to regional greenways to walk and cycle is a challenge presently. The reasons for this are complex. They can include geographic differences in opportunity, variations in municipal priority and funding, infrastructure design approaches that may make use of regional greenways difficult for people with disabilities, financial barriers that can impact lower-income communities, as well as social and cultural factors such as race and gender that may hinder some people from using regional greenways fully. Facilitating equitable access to public services such as regional greenways should be a goal of regional service providers. Implementation of the Regional Greenway Network provides an opportunity to develop more equitable access to regional greenways. To do this a wide range of partners and stakeholders will need to be engaged.
- **Cultural Awareness** — Some existing and proposed regional greenways follow traditional Indigenous routes for traversing the region. The implementation of *Regional Greenways 2050* provides an opportunity to work with Indigenous people to increase the awareness of their culture and traditional use of land throughout the region.



3.3 Challenges

Metro Vancouver, TransLink, municipalities, other orders of government and their agencies operating in the region, First Nations and stakeholders have developed just over half of the Regional Greenway Network over the past two decades. During these two decades of implementation a number of factors have challenged regional progress on development of the network. The incomplete portions of the network include the corridors where these challenges manifest themselves most acutely. *Regional Greenways 2050* provides an opportunity to overcome these challenges and complete the vision through a fresh collaborative vision and implementation framework.

- Securing Land Tenure** — Acquiring greenway corridors is a significant challenge for many jurisdictions. High urban land prices, historic development patterns, and a reliance on the willing seller-willing buyer land acquisition principle has supported the development of the existing elements of the Regional Greenway Network. *Regional Greenways 2050* provides an opportunity to focus efforts on the acquisition of greenway tenure through improved regional policy, clarified stakeholder roles and a 5-year action plan.
- Competing land uses**—In a highly urbanized region, integrating greenways into existing development is challenging despite the benefits to the people who live and work in these areas. Industrial port lands and farm lands are two areas where this competition is highest. Metro Vancouver, TransLink, municipalities, First Nations and stakeholders will need to work with the Port of Vancouver and Agricultural Land Commission to facilitate implementation where required. Working together provides the opportunity to identify creative design and communication approaches that optimize the integration of regional greenways with other land uses while contributing to regional livability.
- Funding** — Funding for greenway development and operations is obtained from various sources such as: municipal engineering, transportation, and parks budgets, Regional Parks, TransLink, Provincial and Federal grants, and community amenity contributions from private developers. *Regional Greenways 2050* provides an opportunity to secure enhanced capital funding resources through its implementation framework. The plan also highlights the need for greenway service providers to ensure that operational funding levels maintain pace with greenway infrastructure development.

3.4 Metro Vancouver Context

Metro Vancouver is a federation of 21 municipalities, one electoral area and one treaty First Nation. It provides sustainable regional services that contribute to a livable and resilient region and a healthy natural environment. The regional district accomplishes this by serving as the regional federation, delivering core services, and planning for the region.

Regional Greenways 2050 supports several goals outlined in the 2019-2022 *Board Strategic Plan* including: strengthening our livable region, fostering collaboration and engagement, taking leadership on climate action, and advancing Regional Parks' mission and vision to protect natural areas and connect people with them.

Between 2001 and 2016, the regional population grew from 1.9 million to 2.5 million people and regional growth is expected to add another 1.2 million people by 2050. *Metro Vancouver 2040: Shaping Our Region (Metro 2040)*, the regional growth strategy, represents the collective vision for how the region is going to accommodate this growth. *Metro 2040* includes a recreational greenway network reference map and a number of policy statements that support the

realization of this greenway network vision. As a Bylaw adopted by the MVRD Board, *Metro 2040* is the key implementation tool for regional planning. Metro Vancouver is working with its members to update the regional growth strategy. *Regional Greenways 2050* will be consistent with the updated regional growth strategy.

Metro Vancouver's *Climate 2050* policy guides regional action on climate change for the next 30 years. The Metro Vancouver Regional District Board's goal is to become a carbon neutral region by 2050 and set an interim target of 45% reduction by 2030 (compared to 2010 levels).

Metro Vancouver's *Ecological Health Framework* has a vision to achieve "a beautiful, healthy, and resilient environment for current and future generations". *Regional Greenways 2050* supports *Ecological Health Framework* strategies that aim to enhance ecosystem connectivity, conserve habitat for species and ecosystems, promote green spaces within communities, and increase natural and built green infrastructure.

TYNEHEAD REGIONAL PARK



4 Inter-regional Trails & the Regional Cycling Network

A number of other trail and bikeway plans have been developed over the years by other agencies and jurisdictions. *Regional Greenways 2050* took these plans into consideration during its development and incorporates or responds to the existing and planned trails and bikeways identified in those plans to support recreational and touring trips outside of the region. This includes links to the BC Ferry system and international airport.

4.1 Major Bikeway Network

First described in *Cycling for Everyone – the Regional Cycling Strategy (2011)*, the Major Bikeway Network (MBN) is TransLink’s cohesive, well-connected network of major bikeways. It connects urban centres, reinforces important high-volume local routes and serves longer-distance commuting and recreational trips. At this time the MBN is conceptual in some locations and lines are meant to represent desire lines or corridors that connect regionally- significant destinations in a direct way. The MBN will:

- a. parallel the rapid transit network and provide high-quality connections to transit stations, urban centres and regional transportation gateways;
- b. consists primarily of Class 1 and 2 bikeways;
- c. be distinctly marked and identified through consistent design elements and a coordinated way finding system; and
- d. integrate with Metro Vancouver’s Regional Greenway Network and existing inter-regional trails and bikeways.

TransLink is the convener and main planner for the Major Bikeway Network and provides cost-share funding to support local governments in implementing the Major Bikeway Network. The Major Bikeway Network depicted in *Regional Greenways 2050* reflects the 2018 interim Major Bikeway Network as it is currently being updated.





The relationship between the Regional Greenway Network and Major Bikeway Network is an important part of supporting cycling for recreation and transportation. The alignment of the Regional Greenways Network and the Major Bikeway Network provides a comprehensive and far reaching cycling network, that connects key regional destinations and contributes to a reduction in single-occupancy vehicle trips.

4.2 Experience the Fraser

Experience the Fraser (ETF) is a recreational, cultural and heritage project that extends along the Lower Fraser River Corridor from Hope to the Salish Sea. It seeks to fill connectivity gaps and add to the experiences available along the river. The “Canyon to Coast Trail” portion of the project is 550 kilometres of trail linking communities and points of interest on both sides of the river. About 43% of this proposed trail is already in place with segments provided by regional districts, municipalities and others. The Canyon to Coast Trail is strongly aligned with the Regional Greenway Network and including it in the greenways plan will support recreational trips from Hope to the Salish Sea.

4.3 The Great Trail

The Great Trail, also known as the Trans Canada Trail, is over 24,000 kilometers of multi-use trails that links Canada and Canadians. The Great Trail traverses Metro Vancouver communities and portions of it align with regional greenway routes.

4.4 Lochside Regional Trail

Located a short ferry trip from Metro Vancouver on Vancouver Island and operated by the Capital Regional District, the Lochside Regional Trail is a 29 km long multi-use trail located predominantly on a former railway line that links Swartz Bay to Victoria. The trail intersects with the Galloping Goose Regional Trail, a 55 km former railway line from Victoria to Sooke. This comfortable and scenic trail has a gentle grade and is a popular destination for Metro Vancouver cyclists.

4.5 International Trail Networks

Metro Vancouver borders on Washington State along its south east edge where three crossings of the international boundary with the United States are located. The Peace Arch Crossing near Blaine, Washington provides opportunities for Metro Vancouver cyclists to link onto the Whatcom County trail network.

5 Definition & Character

Regional Greenway – Regional greenways are linear recreation corridors that contain multi-use trails which are for the most part physically separated from road traffic. They connect multiple regional parks, communities and other important natural areas and protect ecosystem services.

Regional greenways include multi-use pathways that are generally 3-4 meters wide. Where volumes of visitors are very high or the proportion of cyclists travelling regional greenways are significant, greenway designs need to consider providing separated pathways for different users.

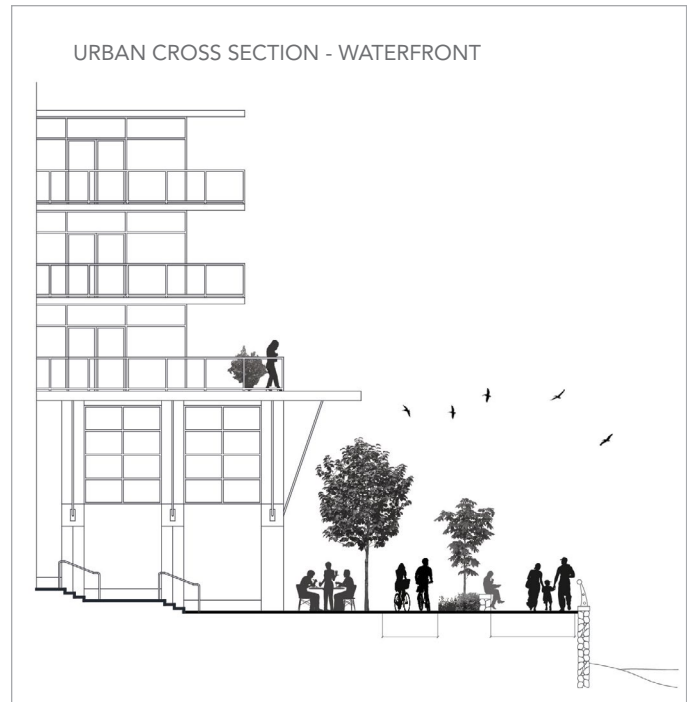
The character of greenways in Metro Vancouver varies as you travel from west to east and north to south. This reflects the region's complex topography, settlement patterns, and the evolution of local planning and engineering approaches. Because of this variation a one size fits all approach to the design and development of the Regional Greenway Network isn't practical. Greenway segments vary in character in response to a range of factors such as age, population density, adjacent land use, development model and terrain. The Regional Greenway Network in Metro Vancouver is composed of four main types of greenways. These are Urban, Sub-urban, Rural and Natural.



Urban:

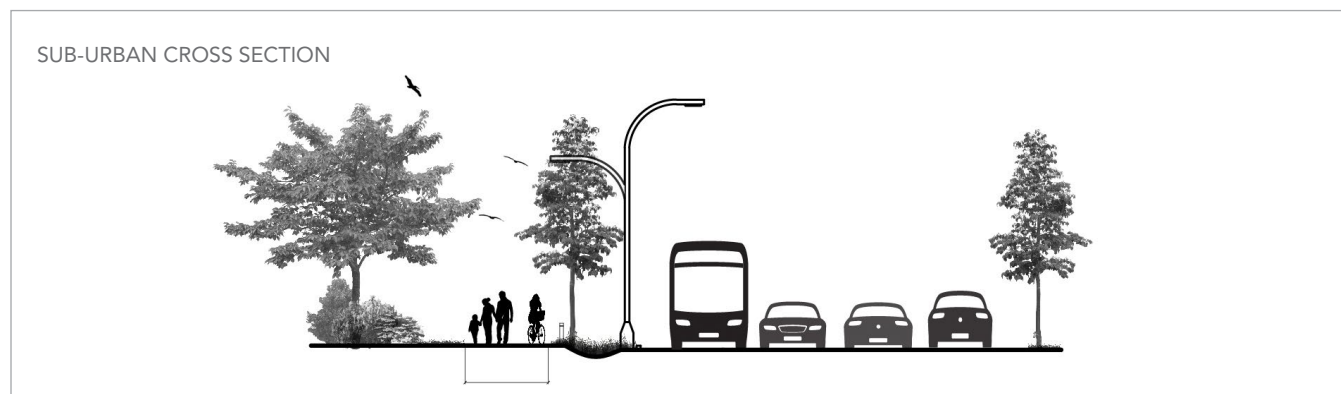
This type of greenway segment tends to be located in medium to high density commercial and residential portions of the region. They are characterized by a high proportion of pavement to landscaping.

The landscape component tends to be professionally designed and located within formal planting structures. Use is high and in some cases cyclists and pedestrians are physically separated to reduce conflict. An example of this type is the Stanley Park Sea Wall and Seaside Greenway in Vancouver.



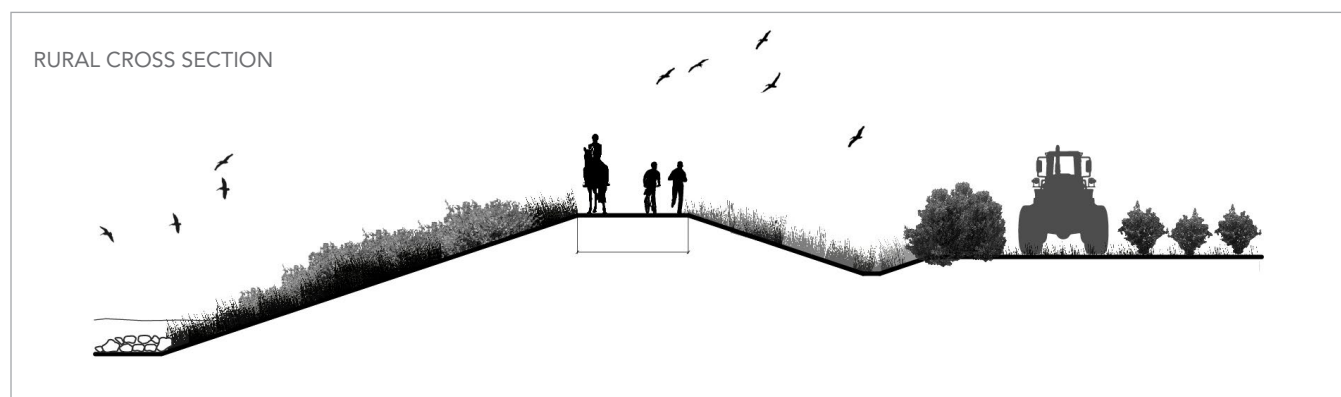
Sub-urban:

This type of greenway segment tends to be found in low to medium density urban areas. The proportion of pavement to landscaping is much more balanced, and the landscaped portions still tends to be professionally designed although the planting areas are usually less formally delineated. Use tends to be moderate and cyclists and pedestrians are commonly not physically separated. An example of this type is the Railway Avenue Greenway in Richmond or the BC Parkway in Burnaby.



Rural:

This type of greenway segment tends to be located in Metro Vancouver's rural and agricultural communities. Often located on drainage structures like dikes the trails in these segments tend to be unpaved and the landscaped portion covers a higher proportion of the cross section and is commonly composed of a combination of rough turf and remnant natural ecosystem. Use is moderate to low and cyclists and pedestrians are not separated. Equestrian use may be permitted as well. An example of this type is the Pitt River Regional Greenway west of Harris Landing and the portion of the South Langley Regional Trail west of 232nd Street in the Township of Langley.



Natural:

This type of greenway segment tends to be located in Metro Vancouver's rural communities or protected natural areas. Often located in mature riparian or mid- elevation forested ecosystems along watercourses, the trails in these segments tend to be graveled and located within a landscape composed predominantly of mature natural plant communities. Use is moderate to low and cyclists and pedestrians are not separated. Equestrian use may be permitted as well. An example of this type is the Seymour River Regional Greenway within the Lower Seymour Conservation Reserve and the Coquitlam River Trail in Coquitlam.



In some cases, constraints may be present that prevents the filling of a gap in the network with a segment of greenway that meets the ideal described in the typologies above. Filling these gaps in the Regional Greenway Network in the short term may require routing that doesn't allow for the establishment

of the ideal greenway type. Interim routes may include low speed and low volume roads, protected bike lanes, etc. to connect the network. Where this occurs the greenway connection will be established to the highest standard possible.

6 Regional Greenways 2050

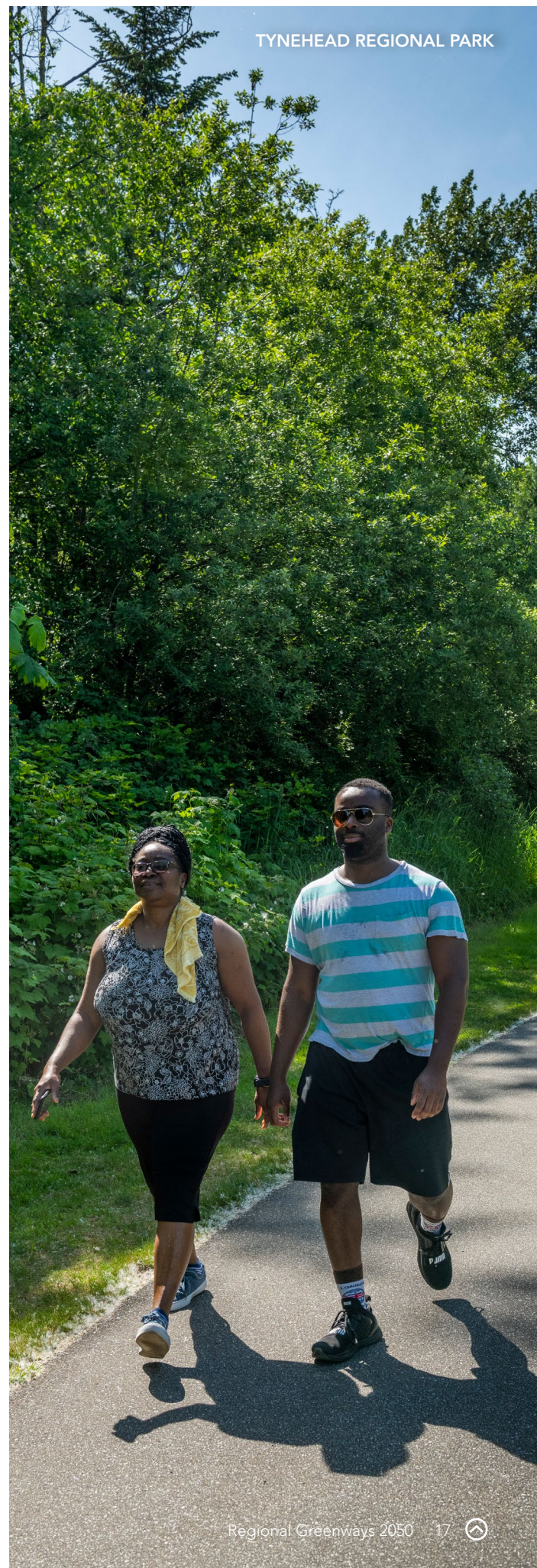
Regional Greenways 2050 is the region's shared 30- year vision for the development of a regional network of recreational greenways for walking, cycling, and, where appropriate, horse riding. The plan includes a vision statement, goals, a map of the Regional Greenways Network, a description of service provider and stakeholder roles, and a five-year action plan to guide implementation.

Six-in-ten (59%) of trail visitors say they use multi-use pathways without a particular destination in mind (just to get exercise, etc.). One-half (50% to 51%) cite scenic viewpoints or parks and cultural destinations as their destination. (Bird, G. 2019)

6.1 Vision

The region wide seamless network of recreational greenways and trails is the best way to experience the beauty of the region.

This vision statement guides Metro Vancouver, its member jurisdictions and other key regional stakeholders in the collaborative implementation of the Regional Greenway Network. It establishes a shared goal of a network of regional recreational routes for walking, cycling and, where appropriate, horse riding that is attractive, safe, secure, accessible for users and free of gaps. Some key regional greenways will support transportation cycling trips as well as recreational ones.



6.2 Plan Goals

This section describes the planning framework (goals and criteria) used to identify the greenway network through the collaborative planning process.

KEY WORD	PROPOSED GOAL
Collaborate	Develop and implement the plan collaboratively.
Connect nature	Connect people with regionally important natural areas and scenic views.
Connect communities	Connect communities and regionally important destinations.
Protect	Enhance regional ecosystem connectivity by protecting natural areas and enhancing green space along greenways and trails.
Experience	Provide a diversity of greenway experiences that are comfortable for most ages and abilities.
Prosperity	Support regional economic development and tourism.

Nearly half (47%) of Metro Vancouver residents selected scenic viewpoints and 34% chose large parks as their top two destinations for multi-use paths (Bird, G. 2019).

6.3 Regional Greenway Criteria

The Regional Greenway Network that forms the core of *Regional Greenways 2050* was identified using the following criteria. These criteria were informed by the regional greenway definition and goal statements described above and reflect the input of the representatives of Metro Vancouver, Translink, other orders of government and their agencies operating in the region, and stakeholders.

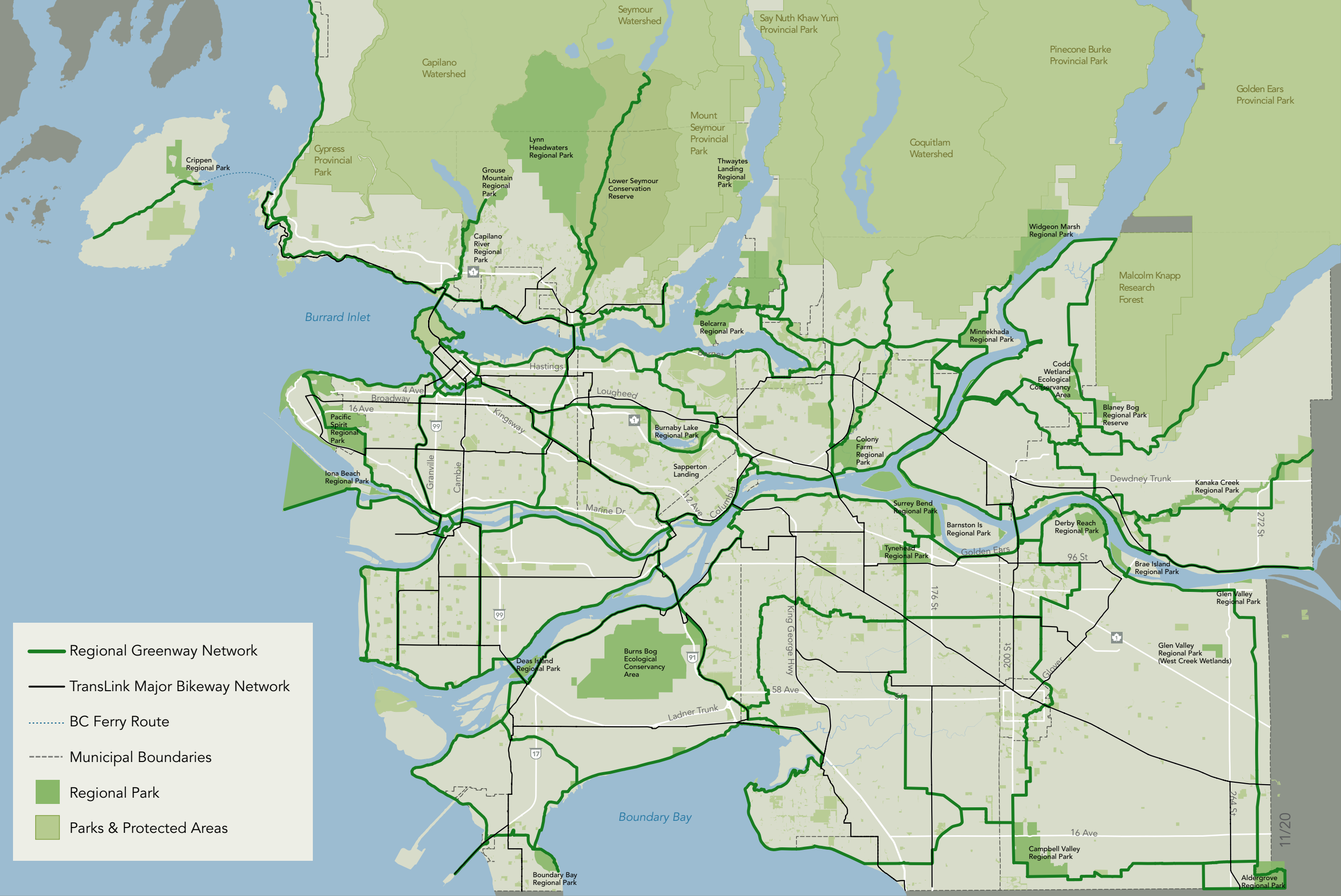
- **Criteria 1:** Connects regionally important natural areas, communities and destinations to each other with a trail separated from vehicle traffic.
- **Criteria 2:** Connects two or more adjacent municipalities/regions directly or via bridges, ferries and tunnels with a trail separated from vehicle traffic.
- **Criteria 3:** Located adjacent to regionally significant natural, cultural, & scenic values (e.g., marine headlands and beaches, Fraser River, mountains.)
- **Criteria 4:** Enables recreational trips of varying lengths and a diversity of experiences

In order to achieve a seamless network, not every route meets all of the criteria. Additionally, a number of gaps were identified in the existing greenway route planning. The identified network includes proposed links to fill these gaps where required.

6.4 Regional Greenway Network

The Regional Greenway Network is a 30-year vision for recreational trails that support walking, cycling, and, where appropriate, horse riding (Map 1). The Major Bikeway Network is primarily targeted to transportation cycling. The two networks are complimentary and together increase the reach of both initiatives.

The trail routes contained in the Regional Greenway Network have been identified from a set of plans developed over two decades by municipal governments, Metro Vancouver and TransLink such as transportation plans, greenways plans, and Official Community Plans. For this reason, some of the identified greenways will require further review to confirm trail alignment. Other routes, such as those that follow operational rail corridors or natural features in developed areas will require long term changes in land use or infrastructure transitions to realize. Service providers may identify provisional routes to meet demand in the short to medium term. As the region responds to climate change impacts over the coming decades there will also be emerging opportunities to co-locate new greenways with new infrastructure such as dikes.



MAP 1 –
REGIONAL
GREENWAY
NETWORK

Regional Greenway Network

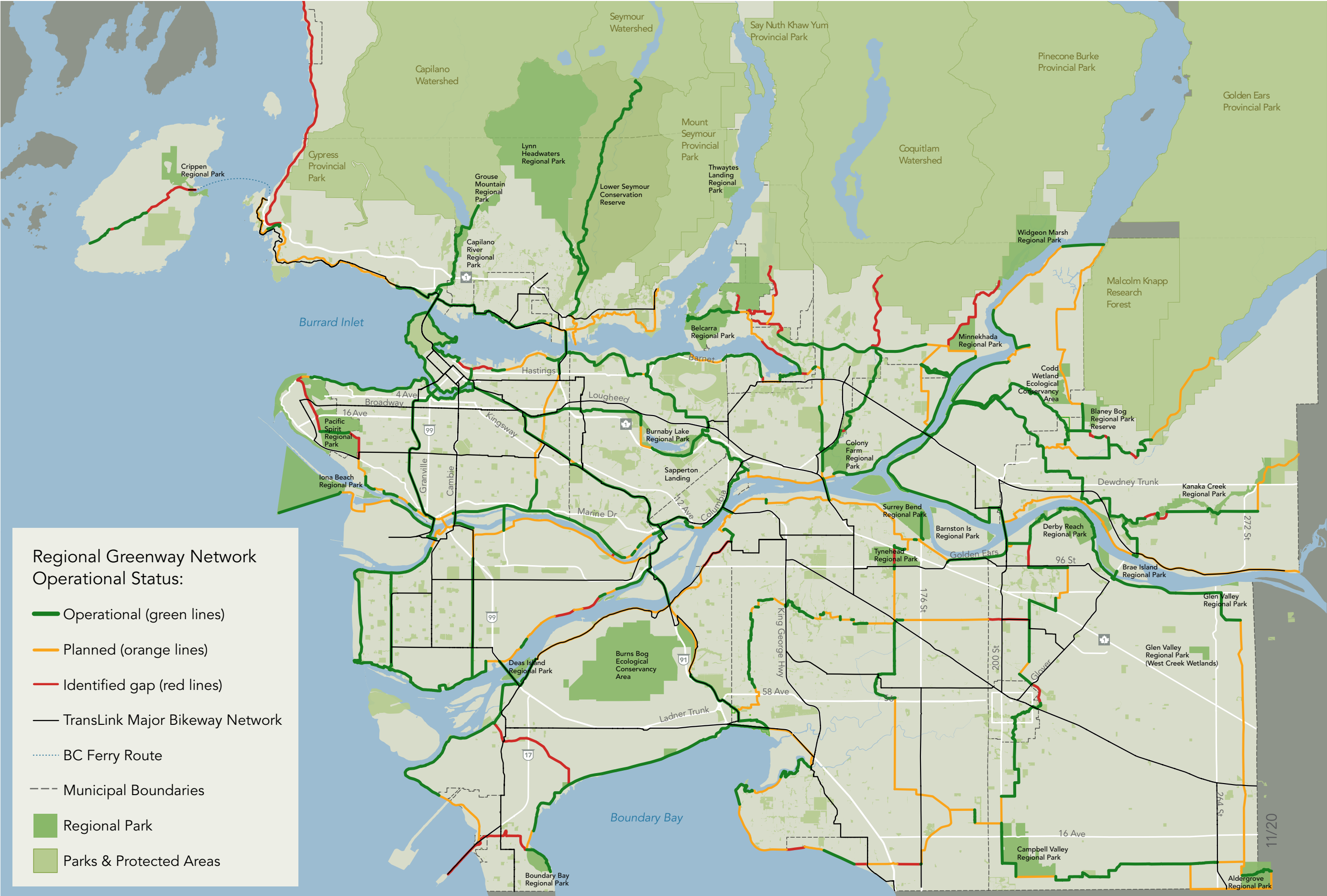
TransLink Major Bikeway Network

BC Ferry Route

Municipal Boundaries

Regional Park

Parks & Protected Areas



Regional Greenway Network
Operational Status:

- Operational (green lines)
- Planned (orange lines)
- Identified gap (red lines)
- TransLink Major Bikeway Network
- BC Ferry Route
- Municipal Boundaries
- Regional Park
- Parks & Protected Areas

MAP 2 –
GREENWAY
NETWORK
OPERATIONAL
STATUS

6.5 Existing Conditions – Greenway Operational Status Map

Metro Vancouver, TransLink and other orders of government and their agencies operating in the region have made significant progress constructing the Regional Greenway Network since planning started in the 1990's. Map 2 identifies the portions of the greenway network which are operational (complete or interim), planned or new proposed segments to fill an identified gap.

The Regional Greenway Network is composed of approximately 860 kilometers of multi-use paths of which about 490 kilometers or 57% are currently operational. Of the remaining 43% of the network, about 82 kilometers have been proposed to fill gaps identified in current plans.

The operational status of trails in the Regional Greenway Network is classified using a three class system – Operational, Previously Planned and Identified Gap.

Operational: This classification includes routes that are considered complete or interim. These regional greenways are available to the public for walking and cycling. Some portions may be interim in nature as they do not meet the goal of being separated from traffic.

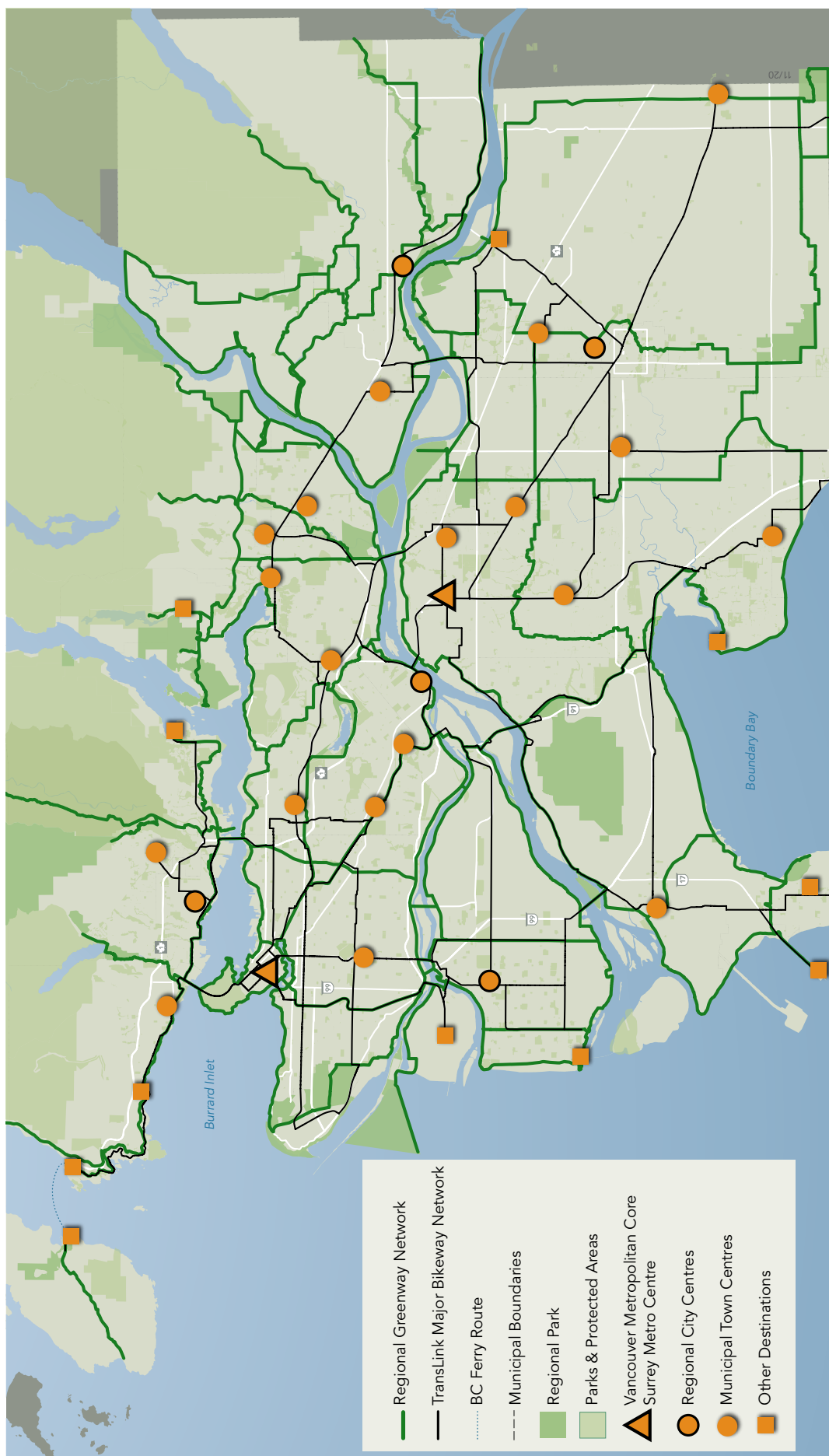
Identified Gap: These regional greenways are new routes that are proposed through the *Regional Greenways 2050* development process to fill gaps in the network. These routes are conceptual and will require additional planning and consultation to confirm feasibility and alignment.

Planned: These regional greenways are proposed future routes identified in the existing plans of greenway and active transportation service providers. They require some combination of conceptual planning, land acquisition, detailed design, funding and construction to make them available to the public for walking and cycling.

6.6 Regional Greenway & Major Bikeway Network Destinations

Together the Regional Greenway Network and Major Bikeway Network provide cycling and walking connections to many large parks and protected areas, city centers and other important destinations. The following map (Map 3) shows how the two networks act jointly to provide recreational and transportation cycling connections to many key regional destinations.

MAP 3 – REGIONAL GREENWAY NETWORK & MAJOR BIKEWAY NETWORK DESTINATIONS





7 Site Planning & Design

Because *Regional Greenways 2050* is a strategic plan, it focuses on the identification of a regional scale network of greenway routes. During the plan implementation process more detailed site planning and design processes will be required to make the vision a reality.

There are many excellent existing planning and design resources available to greenway planners and designers. These include the Transport Association of Canada's (TAC) *Geometric Design Guide for Canadian Roads* along with the BC Supplement, the *BC Active Transportation Design Guide* (2019) and *Get There by Bike* (2013) – TransLink's wayfinding guidelines for transportation cycling in Metro Vancouver.

While greenways offer important benefits to regional communities, care must be taken in site planning and design to mitigate potential conflicts with adjacent land uses. Potential land use conflicts need to be addressed through additional community engagement and the incorporation of appropriate mitigation measures by the responsible jurisdiction during the detailed planning and design phases.

Communities throughout the region have their own unique history, landscapes and features that can be recognized and celebrated through design to enhance user experience and connect them to place.

The BC Active Transportation Design Guide's (2019) states that multi-use paths should be 3 – 4 m wide and separated from vehicle traffic. It also encourages designers to consider site characteristics and anticipated use during the design process. This may lead to designs that separate users.

As noted earlier, some regional greenways follow historic Indigenous travel routes and may pass near known archaeological sites or areas with high archaeological potential. Consequently, planning, design and construction processes need to incorporate appropriate archaeological practices. This also means that there will be opportunities to work with local First Nations on routing and incorporating recognition of areas of cultural significance during greenway design and construction processes.

It should also be recognized that in some cases additional approval processes may be required as part of the site planning and design process. In particular proponents of transportation, and recreation corridors may require review by agencies such as the Agricultural Land Commission, the Port of Vancouver, and public utilities.

8 Governance & Funding

This section outlines the roles of responsible jurisdictions and advocates, and describes the collaborative governance and funding models for regional greenway development in Metro Vancouver.

Governance

The Regional Greenway Network is developed and managed using an informal collaborative governance system. Collaborative governance is a governing arrangement where one or more public agencies directly engage non-governmental stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets (Ansell & Gash, 2007).

In this model Metro Vancouver acts in its convener role to bring together other key public agencies such as TransLink, the Province, regional municipalities, First Nations, and other key stakeholders to update the shared plan for the Regional Greenway Network and track progress on plan implementation as appropriate. Implementation of the plan is achieved by municipalities, TransLink, the Ministry of Transportation and Infrastructure and Metro Vancouver through capital development and operations programs.



Stakeholder Roles

Over the years, Metro Vancouver's and TransLink's roles with respect to cycling infrastructure have evolved in a complementary manner. Metro Vancouver supports collaborative planning for the Regional Greenway Network and works to develop and operate a small number of Regional Parks greenways that support walking, cycling, and, where appropriate, horse riding in a natural setting. TransLink promotes and funds (through a cost share program with municipalities) the development of transportation bikeways that support commuting, shopping, and work. Municipalities develop portions of the Regional Greenway Network, the Major Bikeway Network as well as the neighborhood and community scale routes that link to the the broader

regional networks. Other orders of government and their agencies operating in the region, such as the Ministry of Transportation and Infrastructure, provide important bridge crossings, linkages to ferries and support cycling on highways when suitable.

This section outlines the roles of Metro Vancouver, agencies, and other key stakeholders within the collaborative governance model. The table identifies the general functions carried out by an agency or stakeholder, sets the context for the following implementation section, and promotes consistency of proposed actions with the roles of the various regional stakeholders.

AGENCY	REGIONAL GREENWAY NETWORK ROLES							
	Convener	Planner	Designer, Developer & Operator	Collaborator	Capital Grant Provider	Advocate	Policy Developer	Researcher
Metro Vancouver	X	X	X	X		X	X	X
Municipalities		X	X	X		X	X	X
TransLink			X	X	X	X	X	X
Provincial Government		X	X	X	X	X	X	X
Federal Government			X	X	X	X	X	X
NGOs				X	X	X		X

Funding

Reflecting the governance model described above, the allocation of capital and operational funding for the Regional Greenway Network is provided collaboratively without formal coordination. The majority of capital funding is provided by agencies with direct responsibility for offering greenway services for recreation and active transportation (e.g., municipalities, TransLink and Metro Vancouver Regional Parks). Funding levels reflect available resources, land use development activities, as well as the individual plans and priorities of each agency.

Senior levels of government with limited direct responsibility for providing greenway services may offer capital funding through grant programs designed to promote health, recreation, climate change mitigation and active transportation (i.e., Province of BC, and Government of Canada). Grant funding also includes the Greater Vancouver Regional Fund, which pools 95% of the region's federal gas tax allocation for TransLink to invest in regional transportation projects. Active transportation projects are an eligible expenditure under this program. Grant funding helps leverage local funding to promote capital development that furthers the policy goals of these senior levels of government.

Again, the operations of the Regional Greenway Network is wholly funded by those agencies with direct responsibility for offering greenway services for recreation and active transportation. As grant funding is not a factor in the operations of the Regional Greenway Network, each regional greenway service provider manages their assets using financial resources sourced through their core revenue streams such as property or income taxes. Service providers need to plan for operational funding increases with the development of new sections of the network.



9 Implementation Strategies and 5 Year Action Plan

This section identifies the roles required to support the implementation of this plan and a set of short term actions outlining the implementation efforts for each stakeholder group for the following 5 years.

ROLE	METRO VANCOUVER POTENTIAL FIVE YEAR ACTIONS
Convene & Collaborate	• Support <i>Climate 2050</i> development and implementation • Support <i>Transport 2050</i> development • Support City of Vancouver, Burnaby and New Westminster efforts on the False Creek to Fraser River Blueway • Collaborate with other jurisdictions and stakeholders to build greenway segments • Collaborate with TransLink on needed actions where the Regional Greenway Network and Major Bikeway Network overlap
Promote & Advocate	• Promote the collaborative implementation of <i>Regional Greenways 2050</i> • Promote the development and implementation of consistent greenway branding and way-finding standards



Plan & Policy	• Adopt a Regional Parks Greenway Network Plan • Commence conceptual and detailed planning for priority segments of current Regional Parks greenway routes (examples include Delta South-Surrey Regional Greenway and Brunette Fraser Regional Greenway) • Update Regional Parks design standards as required • Update <i>Regional Parks Land Acquisition 2050</i> strategy with greenway lands • Initiate planning for new potential Regional Parks greenway routes (for example the Burnaby Lake South connection) • Develop policies and plans for incorporation of green infrastructure in Metro Vancouver regional greenway segments • Include the Regional Greenway Network and supporting policies, as appropriate, in the update of the regional growth strategy, <i>Metro 2050</i>. • Identify opportunities for further developing regional greenways within Metro Vancouver utility corridors • Develop operating agreements for Regional Greenways located within Metro Vancouver utility corridors
Build	• Secure tenure to Regional Parks greenway routes • Design Regional Parks greenway routes • Construct priority regional greenway segments located in regional parks • Identify opportunities for incorporation of green infrastructure, restoration of ecosystems and unprotected natural areas in greenway segments during site planning and design process
Operate	• Operate and maintain Regional Parks' greenways
Educate & Inform	• Publish Board adopted greenways plan online • Collaborate with TransLink and others on educational campaigns to promote utility and recreational cycling • Collaborate with TransLink and others to track and report on Regional Greenway Network expansion
Fund	• Investigate a Regional Parks greenway program with tax requisition funding • Explore Regional Parks Development Cost Charges (DCC) program to expand support for Regional Parks greenway development • Explore options for obtaining a proportion of regional allocation of Federal Gas Tax funding for regional greenway development • Seek capital grants when available

ROLE	TRANSLINK POTENTIAL FIVE YEAR ACTIONS
Convene & Collaborate	• Collaborate with Metro Vancouver on implementation where the Regional Greenway Network and Major Bikeway Network overlap
Promote & Advocate	• Collaborate with Metro Vancouver and others on educational campaigns to promote transportation and recreational cycling
Plan & Policy	• Update TransLink's <i>Regional Transportation Strategy (Transport 2050)</i> and include reference to the Regional Greenway Network in Transport 2050 plan
Operate	• Operate and maintain TransLink's portions of the Regional Greenways Network
Educate & Inform	• Collaborate with Metro Vancouver and others to track and report on greenway network expansion
Fund	• Explore options for broadening active transportation grant program to include regional greenways and include Metro Vancouver in program when appropriate

ROLE	MUNICIPAL JURISDICTIONS POTENTIAL FIVE YEAR ACTIONS
Convene & Collaborate	• Provide a regional greenways representative to support ongoing communication, engagement and liaison • Explore partnerships with neighboring municipalities, Metro Vancouver, TransLink, the Province or others to facilitate planning, construction and operation of portions of the Regional Greenway Network • Collaborate with adjacent jurisdiction on planning and development of cross-boundary greenway connections • Collaborate on development of regional greenways design guidelines if a need for this is identified

Plan & Policy	• Update municipal land use, greenway, transportation or trail plans to reflect the network identified in the regional greenway plan as appropriate • Support inclusion of updated Regional Greenways Network and policy statements supporting network implementation in <i>Metro 2050</i> • Update capital plans to include municipal sections of the Regional Greenway Network • Incorporate greenways in all relevant bylaw updates and revisions • Update municipal greenway design standards to align with regional standards if appropriate • Develop policies and plans for incorporation of green infrastructure in regional greenway segments • Identify optimal greenway routes with private landowners through the development planning process where appropriate • Work with TransLink, municipalities, and other orders of government and their agencies operating in the region to develop regional greenways operations and maintenance agreement(s) that defines roles and responsibilities as appropriate
Build	• Identify short, medium and long term priorities from <i>Regional Greenways 2050</i> for implementation • Include greenway development in municipal capital projects where appropriate (for example, road widening, utility projects) • Protect or acquire greenway corridor lands to expand the network • Plan, design and build greenway segments that meet the goals and objectives of <i>Regional Greenways 2050</i> • Identify opportunities for incorporation of green infrastructure, restoration of ecosystems and unprotected natural areas in greenway segments during site planning and design process • Use land use change levers to support the development of regional greenways through setback acquisition, public amenity funding, etc. as appropriate • Implement development bylaw requirements for provision of greenways along identified Regional Greenway Network routes where appropriate
Operate	• Operate and manage municipal portions of the Regional Greenway Network • Liaise with municipal operations staff to ensure greenway construction is done in a manner that facilitates efficient and effective maintenance • Plan for increases in operational budgets to accommodate new greenways
Fund	• Incorporate greenway funding estimates in amenity fees and other appropriate fees to fund regional greenway construction and trees/replanting of open space along greenway corridors • Identify high priority portions of the regional and local greenway network for inclusion in future capital plans • Explore options for grant funding from TransLink, the Province and others to support development of municipal portions of the Regional Greenway Network
Educate and Inform	• Collaborate with Metro Vancouver, TransLink and others to track and report on Regional Greenway Network expansion

ROLE	ACTIONS REQUESTED OF OTHER GOVERNMENTS AND AGENCIES
Promote & Advocate	• Maintain and strengthen Provincial and Federal policy that supports improved public health through an active lifestyle and active transportation
Plan & Policy	• Support strategic planning as well as detailed planning and design of regional greenway corridors where appropriate • Province to update active transportation policy and active transportation design guidelines as necessary
Build	• Ministry of Transportation and Infrastructure and other Provincial and Federal transportation infrastructure owners and operators construct portions of Regional Greenway Network where aligned with regional transportation and infrastructure projects • BC Ferries to support the linkage of Tsawwassen and Horseshoe Bay terminals to the Regional Greenway Network • Vancouver International Airport to support the development of regional greenway segments identified in the Vancouver Airport Authority's <i>YVR 2037 Master Plan</i> and <i>Regional Greenways 2050</i>
Operate	• Operate Provincial and Federal portions of the Regional Greenway Network where appropriate
Fund	• Maintain and strengthen Provincial and Federal capital grant programs that support the development of recreational greenways and transportation bikeways • Maintain and strengthen the Federal Gas Tax Fund

ROLE	ACTIONS REQUESTED OF FIRST NATIONS
Advocate	Promote and champion the concept and goals of the <i>Regional Greenways 2050</i> when it aligns with First Nations' trail initiatives
Collaborate	Work with Metro Vancouver, TransLink, municipalities, and other orders of government and their agencies operating in the region to increase the awareness of indigenous culture and traditional use of land throughout the region through greenway planning and construction

ROLE	ACTIONS REQUESTED OF NGOs AND OTHER STAKEHOLDERS
Advocate	Promote and champion the concept and goals of <i>Regional Greenways 2050</i>
Collaborate	Support strategic network planning as well as detailed planning and design of regional greenway corridors
Develop Policy	Release supportive policy statements related to regional greenways
Research	- Contribute to original research that demonstrates the value and need for regional greenways - Consider opportunities to support the tracking of plan implementation



COLONY FARM REGIONAL PARK

10 Tracking Performance

The primary goal of *Regional Greenway 2050* is to complete the network by 2050. Regional service providers recognize that this is ambitious and will require an increased focus on the resourcing of the detailed planning and development of the missing components of the network.

Tracking progress on the development of the missing portions of the network is an important part of the implementation process. Stakeholders will need to identify the database which best reflects the current extent and quality of the Regional Greenways Network and determine how best to resource and manage the database to form an effective Regional Greenway Network implementation tracking tool. It is anticipated that due to the level of effort to update this database that status reports will be provided every 5 years.

In addition to tracking the completion of the greenways network, Metro Vancouver will also track the completion of major implementation milestones such as the adoption of plans, policies, or standards documents at the end of each 5-year implementation plan.

BOUNDARY BAY REGIONAL PARK



11 Appendix A: Definitions

Ecosystem Services: These are the benefits people obtain from ecosystems.

Ecosystem Connectivity: The physical and functional links between ecosystems that support biodiversity by allowing movement of species across the region.

Social Equity: The promotion of justice and fairness and the removal of systemic barriers that may cause or aggravate disparities experienced by different groups of people. This can include the many dimensions of identity, such as socioeconomic status, ethnicity, sex, age, disability, gender, sexuality, religion, indigeneity, class, and other equity related issues.

Green Infrastructure: The natural, enhanced, and engineered assets that collectively provide society with ecosystem services required for healthy living.

Regional Greenway: Regional greenways are linear recreation corridors that contain multi-use trails which are for the most part physically separated from road traffic. They connect multiple regional parks, communities and other important natural areas and protect ecosystem services.

Regionally Important Natural Area: The large natural areas protected primarily by government jurisdictions. They include regional parks, provincial parks, national parks, ecological reserves, wildlife management areas, private protected areas and large natural municipal parks.

Important Destinations: The regional facilities within communities that are highly sought after tourist or leisure destinations. They include museums, aquariums, national historic sites, cultural facilities or features, sports venues and scenic villages (e.g., Steveston).

The Major Bikeway Network (MBN): TransLink's cohesive, well-connected network of major bikeways. It connects urban centres, reinforces important high-volume local routes and serves longer-distance commuting and recreational trips. The MBN will:

- a. parallel the rapid transit network and provide high-quality connections to transit stations, urban centres and regional transportation gateways;
- b. consists primarily of Class 1 and 2 bikeways (see Table 7);
- c. be distinctly marked and identified through consistent design elements and a coordinated wayfinding system; and
- d. integrates with Metro Vancouver's Regional Greenway Network and existing inter-regional trails and bikeways.

Class 1 Bikeway: Is comfortable for all cyclists. These bikeways may be a neighborhood street bikeway with extensive traffic calming & crossings at every major street, an off-street path, or a cycle track (on-street lane separated from traffic).

Class 2 Bikeway: Is comfortable for most cyclists. These bikeways may be a neighborhood street bikeway with moderate traffic calming & crossings at most major streets, a bicycle lane, or a paved shoulder.

Regional Greenways Network (RGN): The region's network of recreational greenways which support recreational walking, cycling, and, where appropriate, horse riding.

Transportation cycling: Cycling on the regional greenway and bike networks to commute, shop, work, or for other specific purposes.

Recreational cycling: Cycling on the regional greenway and bike networks for fun or exercise often with no specific destination.

12 Appendix B: References

- Ansell and Gash, 2007. Collaborative Governance in Theory and Practice. The Journal of Public Administration Research and Theory, Oxford Press.
- Bird, G. 2019. Multi-use Pathway Survey. Justason Market Intelligence Inc.
- Frank, et al, 2019. Where Matters: Health and Economic Impacts of Where We Live. Vancouver, Canada. UBC.
- Frisch, M. 2019. Economic Impact Analysis of the Kansas City, Mo. Bicycle Master Plan: Summary of Findings. Urban Planning + Design, University of Missouri Kansas City.
- Lawrie, J. 2004. Pathways to Prosperity; Economic Impacts of Investment in Bicycle Facilities: A Case Study of North Carolina Northern Outer Banks. North Carolina Department of Transportation.
- Metro Vancouver, 2011. *Metro 2040: Shaping Our Future*. Vancouver, Canada: Metro Vancouver.
- Metro Vancouver, 2018. *Metro Vancouver's Ecological Health Framework*. Vancouver, Canada. Metro Vancouver.
- Metro Vancouver, 2019. *Climate 2050: Strategic Framework*. Vancouver, Canada: Metro Vancouver.
- Racca and Dhanju. 2006. Property Value/Desirability Effects of Bike Paths Adjacent to Residential Areas. Newark, Delaware. University of Delaware.
- Ngo, et al, 2018. Effects of new urban greenways on transportation energy use and greenhouse gas emissions: A longitudinal study from Vancouver, Canada. Transportation Research Part D: Transport and Environment. Volume 62, July 2018, Pages 715-725.
- TransLink, 2011. *Cycling for Everyone – A Regional Cycling Strategy for Metro Vancouver*. Vancouver, Canada: TransLink.
- TransLink, & HUB Cycling (2019). *Benchmarking the State of Cycling in Metro Vancouver*. Vancouver, Canada: TransLink.

