COMPLETE COMMUNITIES

DIRECTION

Creating compact, complete communities throughout Richmond (a range of services, amenities and housing choice, and sustainable mobility options within a five-minute walk of your home) will lead to sustained greenhouse gas reductions, reduced energy use and improved affordability.

50% 30 ADVANCING RICHMOND'S CLIMATE LEADERSHIP

Richmond

Direction Options: Which activities should the City focus on in the next five years that will reduce greenhouse gas (GHG) emissions by 50% by 2030?

Policy & Regulation

Examples could include:

- Continue planning for neighbourhood centres to encourage development of compact and complete communities throughout Richmond
- Consider alternatives and options for increasing density in single-detached areas, where appropriate
- Encourage higher density housing forms close to frequent transit or neighbourhood centres

Infrastructure

Examples could include:

- Build infrastructure that supports zero carbon, compact and complete communities (e.g. renewable energy, and zero-emission mobility infrastructure)
- Align investments in civic infrastructure, transportation, and community amenities with areas targeted for population and employment growth so residents can access what they need within their neighbourhood

Incentives

Examples could include:

- Develop policy and land use options to foster complete communities in Richmond
- Consider further reductions in parking stall requirements for new development built within areas that have frequent transit and adequate active transportation infrastructure

Collaboration & Partnerships

Examples could include:

- Work with the development community to implement a higher density housing program that meets the top level of the BC Energy Step Code, with Council support
- Collaborate with housing service providers on project that meets the top level of the BC Energy Step Code (i.e., Passive House / Net Zero Energy performance)

Advocacy

Examples could include:

- Advocate with TransLink to advance transit service improvements in Richmond, including upgrades identified in the South West Area Transport Plan

Outreach & Capacity Building

Examples could include:

- Deliver an education program to help drive innovative architectural and urban design solutions for energy efficient, low carbon housing along frequent transit corridors or within neighbourhood centres. This could include a funding incentive to help offset design costs.

Level of City Control and Funding Required ($ Low cost | $$ Moderate cost | $$$ High cost)

STRONG $$	STRONG $$$	MODERATE	MODERATE $	LIMITED $	LIMITED $
• Through the Official Community Plan (OCP), the City regulates land use and sets the types of densities and land uses permitted within Richmond • The OCP and Zoning Bylaw provides the City with powerful policy and regulatory tools for influencing overall GHG emissions in the city	• The City can review current land use policies and parking stall requirements in frequent transit areas and neighbourhood centres to identify levers for compact, complete communities with a variety of mobility options • The City's OCP and Zoning Bylaw are the primary tools with respect to the above requirements	• The City sets land use, density and regulatory provisions from the OCP and/or Zoning Bylaw, with changes to these documents requiring approval by City Council	• The City could jointly implement a demonstration program with housing service providers • The City could collaborate with non-profit organizations on issues of common interest • The City's OCP and Zoning Bylaw are the primary tools with respect to the above requirements	• The City collaborates with TransLink on regional frequent bus and rapid transit planning • City Council can issue a formal letter of support with respect to transportation and transit issues	• City staff can facilitate training for builders, trades, designers and architects in high performance construction, leveraging technical guides and programs already in place • Short-term funding incentives on design costs have shown to be strong drivers of innovation and improvement

EXISTING BUILDINGS

DIRECTION

Accelerate energy retrofits to existing residential, institutional, commercial and industrial buildings to shift to low-carbon heating and cooling systems.

Direction Options: Which activities should the City focus on in the next five years that will reduce greenhouse gas (GHG) emissions by 50% by 2030?

Policy & Regulation

Examples could include:

- Transition residential and commercial buildings to use low-carbon heating and cooling systems (such as heat pumps)
- Implement Step Code for Existing Buildings energy requirements when available in the BC Building Code (est. 2024)
- In areas frequent transit service, consider reallocation of vehicle parking stalls in existing buildings to alternate modes (including bicycles, car share, ride hailing)

Infrastructure

Examples could include:

- Identify areas of the city where existing buildings could be connected to district energy, or share a future neighbourhood low carbon energy source for efficient heating and cooling

Incentives

Examples could include:

- Consider funding incentives for energy retrofit assessments, tailored to type of building
- Consider funding incentives for low-carbon mechanical system retrofits, such as heat pumps, tailored to the type of building
- Top up the Province's *CleanBC Better Homes* incentives with additional City incentive for existing homes (heat pumps and energy retrofits)

Collaboration & Partnerships

Examples could include:

- Implement a program with partners to help drive deep energy retrofits and installation of a zero-carbon heating systems in existing apartment buildings, focused on occupant health, comfort and affordability

Advocacy

Examples could include:

- Work with community partners to encourage expansion production of renewable natural gas (RNG) in BC, and use of RNG for residual and peak heating needs
- Continue to promote the availability of high-performance heat pumps in BC

Outreach & Capacity Building

Examples could include:

Condominium Buildings

- Deliver a Strata Energy Advisor Program starting in 2020, building upon good results from 2018/19 Metro Vancouver pilot

Rental Apartment Buildings

- Deliver a Rental Apartment Energy Efficiency Program starting in 2020, with incentives for low-carbon heating systems and energy improvements focused on occupant health, comfort and affordability

Level of City Control and Funding Required ($ Low cost | $$ Moderate cost | $$$ High cost)

Policy & Regulation	Infrastructure	Incentives	Collaboration & Partnerships	Advocacy	Outreach & Capacity Building
STRONG $$	**STRONG $$$**	**MODERATE**	**MODERATE $**	**LIMITED $**	**LIMITED $$**
• The City can regulate using the proposed "Energy Retrofit Code" once the Province implements this in 2024 • The City has authority to regulate building standards via the BC Building Code on major renovations, as well as off-street parking requirements through the Zoning Bylaw • Changes to the Zoning Bylaw require review and approval by Council	• The City approves and implements district energy projects within designated service areas, and can extend that to existing buildings where feasible	• The City can enhance existing CleanBC incentives, and allocate specific incentive funding to support low carbon retrofits for buildings not covered by CleanBC	• The City can work with senior levels of government in areas where jurisdiction is shared • The City can jointly implement programs with other local governments or Metro Vancouver Regional District • The City can collaborate with non-profit organizations on issues of common interest	• The City can request policy change and/or resourcing from senior governments at staff or political levels • City staff can participate in initiatives by community partners	• City staff can plan and implement outreach and education campaigns for local residents, strata councils, property owners, businesses and non-profit housing providers • The City can work with partners to co-fund and scale up efforts on regional programs that drive local projects

NEW BUILDINGS

DIRECTION

All new buildings will meet the top performance level of the BC Energy Step Code by 2025 (equivalent to Passive House or Net Zero Energy Ready), with incentives for new buildings to install low-carbon energy systems.

50% by 30 ADVANCING RICHMOND'S CLIMATE LEADERSHIP

Richmond

Direction Options: Which activities should the City focus on in the next five years that will reduce greenhouse gas (GHG) emissions by 50% by 2030?

Policy & Regulation

Examples could include:

- Review options to stimulate construction of buildings to the top performance level of the BC Energy Step Code
- Create a heat pump and mechanical system permit to ensure that new systems are optimized and installed correctly
- Consider applicability of land use regulation for onsite solar photovoltaic energy

STRONG $$

- Through the Official Community Plan (OCP), the City regulates land use and sets the types of densities permitted within Richmond
- The City can set BC Energy Step Code performance requirements for new buildings in our Building Bylaw, and can also set energy performance requirements as a condition of rezoning
- Changes to the City's Zoning Bylaw and Building Bylaw require approval by Council

Infrastructure

Examples could include:

- Continue current bylaw requirement for all large new buildings to connect or be ready to connect to district energy within the city centre
- Review options for small-scale renewable energy systems serving new buildings in neighbourhood centres

STRONG $$$

- The City can implement and/or approve district energy projects and smaller scale renewable energy systems

Incentives

Examples could include:

- Accelerate design and construction of low-carbon buildings that meet the top level of the BC Energy Step Code (i.e., Passive House / Net Zero Energy levels of performance)

MODERATE $$

- The City could provide additional incentive for heat pumps to match generous incentives available for natural gas systems
- The City could develop an Exemplary Building Incentive program to drive ultra-low energy and zero emission new buildings

Collaboration & Partnerships

Examples could include:

- Partner with local governments and interested organizations on a regional program to accelerate zero emission and Passive House buildings
- Continue to promote and make available design and construction industry training on the BC Energy Step Code

MODERATE $

- The City could partner with Zero Emissions Building Exchange and Passive House Canada on industry education and showcasing leading buildings
- The City could implement programs with other local governments or Metro Vancouver Regional District
- The City could work with senior levels of government in areas of joint interest

Advocacy

Examples could include:

- Work with partners to encourage expansion of production of renewable natural gas in BC
- Continue participation in municipal 'Heat Pump Coalition' to advance mechanical systems with high coefficient of performance to be available in BC

LIMITED $

- The City can request policy change and/or resourcing from senior governments at staff or political levels
- City Council can make recommendations on various issues with respect to Provincial direction on the BC Energy Step Code

Outreach & Capacity Building

Examples could include:

Continue *Builder Breakfast* education series for builders, contractors and trades (two to three sessions per year) focused on air barrier detailing, high R-value walls, and right-sizing mechanical systems

- Develop technical training series focused on heat pump technology, installation and maintenance
- Increase industry knowledge in designing and constructing buildings to top level of the Energy Step Code (Passive House and Net Zero Energy)

STRONG $$

- The City could support local builders and designers with technical bulletins and training offered by BC Institute of Technology (BCIT), BC Housing and Small Planet Supply
- The City could promote and expand hands-on building air tightness training sessions for homebuilders and trades to meet the Step Code
- The City can offer training sessions on designing buildings to meet the top level of the Energy Step Code

Level of City Control and Funding Required ($ Low cost | $$ Moderate cost | $$$ High cost)

TRANSPORTATION—TRANSIT

DIRECTION

Foster wider use of frequent public transit throughout Richmond by implementing and upgrading transit stops, well-integrated with active transportation (walking/rolling, bicycling) and with car-sharing networks.

50% 30 ADVANCING RICHMOND'S CLIMATE LEADERSHIP

Richmond

Direction Options: Which activities should the City focus on in the next five years that will reduce greenhouse gas (GHG) emissions by 50% by 2030?

Policy & Regulation

Examples could include:

- Increase number of residents within transit and pedestrian catchment areas (See Complete Communities)
- Identify new opportunities to install more bike commuting facilities near transit stations (including secure bike storage), secured through development

STRONG $

- Richmond regulates land use and density through the Official Community Plan (OCP) to support densification along frequent transit routes
- Through the Zoning Bylaw, the City could set conditions for conversion of some parking stalls in commercial buildings into dedicated space for bicycle commuting (including secure storage)
- Changes to the OCP and Zoning Bylaw require approval by Council

Infrastructure

Examples could include:

- Increase citywide provision of shelters with daily boarding greater than 25 passengers
- Implement mobility hubs (places where different forms of transportation come together) at frequent transit stops and in neighbourhood centres to provide a wider range of mobility options for residents

MODERATE $$

- The City has a Street Furniture Program for bus shelters and other transit amenities
- The City also secures transit shelters through the redevelopment process, as part of transportation demand management measures

Incentives

Examples could include:

- Consider additional options to reduce parking stall requirements for new development within frequent transit, pedestrian-friendly and high car share zones

MODERATE $

- Through the Official Community Plan and Zoning Bylaw, the City can examine additional options to reduce parking stall requirements for new development in areas with high transit availability or neighbourhood centres with good walk / roll and bicycle infrastructure
- Changes to the OCP and Zoning Bylaw require approval by Council

Collaboration & Partnerships

Examples could include:

- Work with TransLink to expand electric bus service and create electric bus charging in Richmond through TransLink's Bus Electrification Pilot

LIMITED $

- The City can collaborate with TransLink on additional electric bus service and wider application of electric bus technology in Richmond
- TransLink has committed to operate its fleet with 100 percent renewable energy by 2050.

Advocacy

Examples could include:

- Work with Mayors' Council, TransLink and Province of BC to expand high-frequency transit in Richmond

LIMITED $

- While TransLink is the decision-maker on transit service levels and types of transit vehicles used, the City is a key stakeholder for regional transit planning and service provision via the South West Area Transport Plan, and can advocate for expansion of rail transit in Richmond

Outreach & Capacity Building

Examples could include:

- Encourage TransLink's outreach team to continue to participate in Richmond's community events

LIMITED $

- The City could co-sponsor events in tandem with local community organizers (e.g., annual Car Free Day)

Level of City Control and Funding Required ($ Low cost | $$ Moderate cost | $$$ High cost)

TRANSPORTATION—WALK / ROLL / BIKE

DIRECTION

Prioritize active transportation by implementing walking, rolling and biking infrastructure that is safe, easy to navigate, accessible for all, and keeps transportation expenses low.

50% 30 ADVANCING RICHMOND'S CLIMATE LEADERSHIP

Richmond

Direction Options: Which activities should the City focus on in the next five years that will reduce greenhouse gas (GHG) emissions by 50% by 2030?

Policy & Regulation

Examples could include:

- Continue to develop policies that reduce reliance on cars by switching to sustainable modes of travel such as walking / rolling, bicycles, transit and car sharing
- Ensure all walk / roll infrastructure is accessible and easy to navigate for those with mobility challenges, hearing and vision needs, consistent with new design standards

Infrastructure

Examples could include:

- Accelerate build-out of low-energy, zero-emission transportation by leveraging grants and cost-sharing opportunities
- Install more dedicated bike paths, wider sidewalks, bicycle racks and bus shelters
- Build momentum with showcase "50 x 30" transportation infrastructure
- Improve walking and cycling connectivity within neighbourhoods (including new easements, pathways and bicycle routes)

Incentives

Examples could include:

- Consider further reductions in parking stall requirements for new development built within areas that have frequent transit and adequate active transportation

Collaboration & Partnerships

Examples could include:

- Continue to facilitate learn-to-bike, e-bicycle and bicycle-sharing programs
- Facilitate measures to expand local services offered by shared mobility providers (e.g., Modo, Car2Go, EVO)

Advocacy

Examples could include:

- Request greater funding for improved cycling infrastructure (as well as access and egress points) along regional / provincial/federal controlled roads and bridges

Outreach & Capacity Building

Examples could include:

- Develop more community programs and events to engage residents in active travel modes

Level of City Control and Funding Required ($ Low cost | $$ Moderate cost | $$$ High cost)

Policy & Regulation	Infrastructure	Incentives	Collaboration & Partnerships	Advocacy	Outreach & Capacity Building
STRONG $	STRONG $$$	STRONG $	MODERATE $$	LIMITED $	LIMITED $$
• Municipalities regulate land use (Official Community Plan) and can create urban design guidelines for streets, sidewalks, lanes and bicycle paths	• In tandem with development requirements, and updated street, bicycle and sidewalk standards, the City could allocate capital investment in showcase projects for walking / rolling and biking infrastructure, and can pursue cost-sharing opportunities with other types of government	• The City currently reduces parking requirements for new development tied to transportation demand management measures (e.g. dedicated car share parking, secure bicycle storage, or transit subsidy) that reduce reliance on cars • The Zoning Bylaw regulates off-street parking requirements, and any changes require review and approval by Council	• The City could increase funding for learn-to programs, and engage with residents and business owners on e-mobility and active transportation	• The City could co-sponsor learn-to programs, pilot car-sharing initiative and engage with residents and business owners on e-mobility and active transportation	• The City could co-sponsor events in tandem with local community organizers (e.g., annual Car Free Day)

TRANSPORTATION–
ELECTRIC VEHICLES AND CHARGING INFRASTRUCTURE

DIRECTION

Facilitate electrical mobility for all residents and businesses in Richmond, with multiple options for charging at home, at work, and on-the-go for personal electric vehicles (EV), electric car-share vehicles, and e-bicycles/e-scooters.

50% by 30 ADVANCING RICHMOND'S CLIMATE LEADERSHIP

Richmond

Direction Options: Which activities should the City focus on in the next five years that will reduce greenhouse gas (GHG) emissions by 50% by 2030?

Policy & Regulation

Examples could include:

- Establish electric vehicle (EV) charging requirements for new commercial buildings
- Complete the network of public EV charging stations in all Richmond neighbourhoods
- Consider a low-carbon requirement in ride-hailing services (such as taxi cabs)

Infrastructure

Examples could include:

- Implement mobility hubs (places where different forms of transportation come together) at transit stops in neighbourhood centres and city centre (with access to public EV charging, car-sharing, bike share)
- Expand off-street public EV charging at City facilities
- Pilot test public Level 2 EV charging from LED streetlight circuits, and that also allow electric car-share vehicles to recharge

Incentives

Examples could include:

- Develop an EV charging retrofit advisor program for multi-unit residential buildings (strata and rental properties)

Collaboration & Partnerships

Examples could include:

- Encourage expanded car share service areas in Richmond
- Explore potential to combine EV retrofit projects for existing multi-unit residential buildings to reduce cost of transformer upgrades
- Partner with BC Hydro or private commercial properties to increase public EV charging network in Richmond

Advocacy

Examples could include:

- Advocate for future *right-to-charge* legislation in BC that would allow residents in rental and condo apartment buildings to recharge their EV at home
- Support BC Utilities Commission approval of a distinct EV charging rate

Outreach & Capacity Building

Examples could include:

- Promote electric mobility (EVs, autonomous EVs and car-share networks)
- Create guides on installing Level 2 EV charging in existing single-family and semi-detached homes, as well as townhouses

Level of City Control and Funding Required ($ Low cost | $$ Moderate cost | $$$ High cost)

STRONG $

- Through the Zoning Bylaw, the City could set EV charging infrastructure requirements for parking stalls in new commercial development, with changes to the Zoning Bylaw requiring approval by Council

STRONG $$$

- The City could implement mobility hubs (places where different forms of transportation come together) at key transportation nodes and neighbourhood centres
- The City could pilot test the provision of curbside Level 2 EV charging through integration of charging equipment on LED streetlights

MODERATE $$

- The City could co-fund dedicated EV Advisor for existing multi-unit rental and strata buildings interested in making parking stalls EV-ready
- For existing commercial buildings, the City could provide incentives to offset the cost of retrofitting parking stalls to be EV-charging ready

MODERATE $$

- City could work with car-sharing service providers to expand coverage in Richmond
- The City could work with BC Hydro on electrical transformer upgrades that are cost-shared between several buildings wanting to install EV charging capacity

LIMITED $

- Work with other interested local governments and regional district to advocate for *right-to-charge* legislation

LIMITED $

- The City could continue working with E-Motive to promote interest in EVs
- EV charging technical guides can be created for single-detached homes and townhomes

GREEN INFRASTRUCTURE AND NATURAL ENVIRONMENT

DIRECTION

Maximize the climate-related benefits of Richmond's green infrastructure by improving the security of existing carbon stores (urban tree canopy and peatland areas) and finding opportunities for additional carbon sequestration using natural systems.

50% by 30 ADVANCING RICHMOND'S CLIMATE LEADERSHIP

Richmond

Direction Options: Which activities should the City focus on in the next five years that will reduce greenhouse gas (GHG) emissions by 50% by 2030?

Policy & Regulation

Examples could include:

- Create policy to protect carbon already stored within Richmond soils, peatlands and urban tree canopy, and investigate additional sequestration opportunities
- Consider developing a city-wide urban forest management strategy for private land

MODERATE $

- City has authority to set standards in new development regarding tree retention, planting and proportion of a lot that is green space, and has policies and bylaws in place to do so

Infrastructure

Examples could include:

- Maintain water table levels (the level below the surface of the ground at which you start to find water) within City-owned central wetlands peat areas

LIMITED $$$

- The City could use its freshwater, wastewater, and road infrastructure to help protect water table levels (the level below the surface of the ground at which you start to find water)

Incentives

Examples could include:

- Consider options to increase the tree canopy in urban areas of Richmond by encouraging a net gain in number of trees planted each year

MODERATE $$

- The City could fund a subsidized tree-planting program for private land in urban areas

Collaboration & Partnerships

Examples could include:

- Work with Federal Government and the Province of BC to enhance water table levels within City-owned central wetlands peat areas
- Partner with Agricultural Land Reserve (ALR) Commission and Kwantlen Polytechnic University on the use of agricultural waste as biomass fuel

MODERATE $$

- City could work with Agricultural Land Reserve Commission and Kwantlen Polytechnic University to develop a best practice guidance for land owners, and a new course within their agricultural program

Advocacy

Examples could include:

- Advocate for provincial policy or a municipal mandate over carbon sequestration within in agricultural lands, i.e. power to designate Environmental Site Assessments on agricultural lands

LIMITED $

- City could request ALR policy change
- The Farm Practices Protection Act and ALR Legislation limits what the City can influence on agricultural land

Outreach & Capacity Building

Examples could include:

- Promote best agricultural practices and resiliency by protecting carbon in soils
- Promote value of central wetlands, Sturgeon Bank, and Richmond's urban tree canopy

LIMITED $

- City could partner with external organizations on outreach and education campaigns for agricultural land owners, businesses and general public

Level of City Control and Funding Required ($ Low cost | $$ Moderate cost | $$$ High cost)

WASTE MANAGEMENT AND CIRCULAR ECONOMY

DIRECTION

Create a circular economy in Richmond by supporting an integrated waste and materials management approach that shifts the focus from waste recycling to waste reduction, where materials we use stay in circulation to be used, re-used and recycled multiple times into new products.

50% by 30 ADVANCING RICHMOND'S CLIMATE LEADERSHIP

Richmond

Direction Options: Which activities should the City focus on in the next five years that will reduce greenhouse gas (GHG) emissions by 50% by 2030?

Policy & Regulation

Examples could include:

- Promote the circular economy by reducing the production of waste through City policies and programs
- Assess if the City can implement and promote circular economy principles as regulation
- Include product life-cycle analysis and assessment tools into City procurement processes

Infrastructure

Examples could include:

- Develop a waste tracking database for local industry that includes online tools for better management of materials

Incentives

Examples could include:

- Incentivize and support re-use, remanufacturing and repair programs for electronic waste

Collaboration & Partnerships

Examples could include:

- Support local businesses to use a low-waste, high-value approach when using plastics
- Partner with large local retailers to develop business-led supply chain Extended Product Responsibility programs to eliminate waste

Advocacy

Examples could include:

- Promote adoption of Extended Producer Responsibility programs and initiatives by senior governments
- Advocate for longer product and services warranty periods

Outreach & Capacity Building

Examples could include:

- Improve public awareness of best practices to prevent food waste
- Provide resources to retailers to help households to reduce waste
- Cooperate with local and regional organizations and schools in order to deliver circular economy and waste reduction training and education

Level of City Control and Funding Required ($ Low cost | $$ Moderate cost | $$$ High cost)

MODERATE $	LIMITED $	MODERATE $$	MODERATE $$	LIMITED $	LIMITED $
• The City can learn from a recent legal decision against the City of Victoria's plans for single-use plastics, which suggested limits to local government mandates in this area • City could require a food waste reduction plan as a condition of local business licences and permits	• The City could increase the proportion of recycled and reclaimed materials used in City projects	• The City could provide additional space for materials sorting at City facilities (e.g. Public Works Yard)	• The City could participate in regional, national and international waste reduction/ circular economy pilot initiatives, zero waste stakeholder committees and conferences • The City could implement a business-to-business online waste resource marketplace • The City could encourage local businesses to support the New Plastics Economy Global Commitment to increase recycled content in goods, eliminate unnecessary packaging, and utilize reuse/refill processes	• The provincial government has the strongest mandate for action on Extended Producer Responsibility	• Help the public further understand the importance of material recycling