

# Attachment # 1

## **MTP Amendments**

## Background

Changes in technology have drastically reshaped how we've moved over the ages. Recent innovations like shared mobility, micromobility, autonomous vehicles and the electrification of transport, are changing expectations with how transportation needs are accommodated.

These new technologies bring possibilities to improve our transportation system, including opportunities to reduce reliance on fossil fuels, improve goods movement, and improve mobility and access to destinations. With proper thought, due diligence, and foresight, micromobility can be managed and harnessed to improve transportation systems, cities, and quality of life. This management must be done in conjunction with neighbouring municipalities and at the regional level with Translink. A coordinated approach to new mobility solutions will help increase the likelihood of success and permanency.

New mobility is currently assuming several forms, but can be generalized into three main areas:

1. Micromobility
2. Autonomous Mobility
3. The Electrification of Mobility.
  - ▶ **Micromobility** includes small electric and/or human powered transportation devices that provide mobility to users over relatively short distances. These vehicles generally operate at speeds faster than walking, but slower than an automobile. Examples of micromobility include bicycles, scooters, skateboards, and hoverboards.

- ▶ **Autonomous mobility** refers to the automation of vehicles or devices that would normally require a driver or an operator. This includes autonomous automobiles, including personal automobiles, ride-hailing, shuttles, and busses, as well as autonomous freight vehicles and delivery vehicles, such as automated ground robots and drones.
- ▶ **The electrification of mobility** includes not only micromobility and personal vehicles, and buses, but also the future expansion to larger freight vehicles with continued improvements to electric battery ranges and power. It is also expected that future cost reductions will increase adoption levels of electrified mobility.



## Micromobility

Bicycle sharing programs were the original shared micromobility platforms and have. With sufficient station density, consistent bicycle availability, supporting cycling infrastructure, and the population density to support them, bicycle sharing programs can flourish.

The ability to pick up a bike at will and return it to any station within the operating area, while not worrying about bicycle theft or indoor storage creates a level of convenience and security unparalleled by personal bicycles. Electric bicycle sharing promises to bring this convenience to the next level as these e-bikes can help overcome traditional barriers to cycling, like hilly terrain, or a lack of physical endurance. They are not only excellent first- and last-mile connectors, but can replace short-distance automobile trips too.

Different ownership models (Public, Private non-profit, Private for-profit), much like the different types of bicycle sharing systems (dock-based, dockless, and hybrid), can be better suited for different contexts. Conducting a feasibility will help to understand if the City has the necessary elements for a bicycle sharing program to succeed, and what a successful program would look like in New Westminster.

Other shared mobility programs, such as electric scooters, will need to await Provincial legislation that provides the sufficient direction for municipalities to establish appropriate operating parameters. Currently eight municipalities have been granted permission to operate electric scooters under the “Electric Kick Scooter Pilot

Project Regulation” [B.C. Reg. 200/2021]. This regulation will be in effect until April 5, 2024. Until such time, the City, through its regional partnerships should encourage the Provincial Government to regulate electric micromobility devices.

### ◆ Micromobility Options in the City of Richmond ◆



Photo credit: City of Richmond

## Autonomous Mobility

Though SkyTrain is an example of autonomous mobility, future forms of autonomous mobility will likely be operating on streets and sidewalks.

Many North American municipalities and states are operating pilot projects or have adopted legislation permitting and regulating the use of various autonomous devices in the past couple years. These include testing of autonomous cars by Google, Uber, Apple, Samsung, GM, Tesla, Nissan, as well as testing of autonomous delivery vehicles.

Autonomous delivery vehicles, including ground robots and drones, which have the potential to support “last-mile” delivery will also require careful consideration regarding how these devices can be used on streets and in the air. If not managed appropriately, these devices have the potential to disrupt the public realm and restrict mobility within public rights-of-way.

## Electrification of Mobility

The City has implemented Zoning Bylaw regulations that require Level 2 charging stations for all residential vehicle parking spaces in new developments, and electrical outlets within long-term bicycle parking areas.

As noted, most electric micromobility devices are unregulated by the Province, with the exception of electric bicycles (motor-assisted cycles) which, under the Motor Vehicle Act, prohibits operation by anyone under the age of 16.

◆An autonomous drone delivering medicine◆



Photo credit: TechCrunch

SETTING THE STAGE



SHAPING INFLUENCES



PLAN FRAMEWORK



STRATEGIES, POLICIES AND ACTIONS



IMPLEMENTATION



SETTING THE STAGE



SHAPING INFLUENCES



PLAN FRAMEWORK



STRATEGIES, POLICIES AND ACTIONS



IMPLEMENTATION



# DETAILED POLICIES AND ACTIONS

## Policy 9A - Plan for Micromobility Actions

	Timeframe				Project Type			Relative Capital Cost
	Quick Win	Short-Term	Medium-Term	Long-Term	Capital	Operating	Planning	
<ul style="list-style-type: none"> <li>9A.1: Work with Translink and other municipal partners to ensure a cohesive approach to micromobility region-wide.</li> </ul>								N/A
<ul style="list-style-type: none"> <li>9A.2: Through regional partnerships, encourage the Provincial Government to regulate and provide guidance on all micromobility devices under the Motor Vehicle Act.</li> </ul>								N/A
<ul style="list-style-type: none"> <li>9A.3: Conduct a feasibility study for a future electric bicycle sharing program.</li> </ul>								\$
<ul style="list-style-type: none"> <li>9A.4: Adopt a permitting framework, inclusive of operational parameters, service requirements, data sharing, and pricing controls for future shared e-scooter programs, pending regulation from the Provincial Government.</li> </ul>								\$
<ul style="list-style-type: none"> <li>9A.5: Adopt a policy that gives direction on how equity and universal accessibility must be considered in any shared micromobility permitting program.</li> </ul>								N/A
<ul style="list-style-type: none"> <li>9A.6: Complete the Active Transportation Network Plan.</li> </ul>								\$
<ul style="list-style-type: none"> <li>9A.7: Identify and prioritize new locations for publically accessible bicycle parking.</li> </ul>								N/A
<ul style="list-style-type: none"> <li>9A.8: Investigate funding sources and opportunities for new micromobility parking on-street and in the furniture zones.</li> </ul>								N/A
<ul style="list-style-type: none"> <li>9A.9: Through partnership with Translink investigate opportunities for fare integration with local shared micromobility services.</li> </ul>								N/A

# DETAILED POLICIES AND ACTIONS

	Timeframe				Project Type			Relative Capital Cost
	Quick Win	Short-Term	Medium-Term	Long-Term	Capital	Operating	Planning	
<b>Policy 9B - Plan for Autonomous Mobility</b>								
Actions								
<ul style="list-style-type: none"> <li>9B.1: Working with TransLink and regional partners, ask the provincial government to adopt a framework or regulations for autonomous vehicles</li> </ul>								N/A
<ul style="list-style-type: none"> <li>9B.2: In collaboration with Translink and municipal partners, ensure a cohesive approach to autonomous vehicles and autonomous mobility region-wide.</li> </ul>								N/A
<b>Policy 9C - Support the Electrification of New Mobility</b>								
Actions								
<ul style="list-style-type: none"> <li>9C.1: Amend the Zoning Bylaw to include a provision for electric vehicle charging requirements for new non-residential buildings.</li> </ul>								N/A
<ul style="list-style-type: none"> <li>9C.2: Invest in secure e-bike parking at City Facilities.</li> </ul>								\$\$
<ul style="list-style-type: none"> <li>9C.3: Implement an e-bike educational program for seniors.</li> </ul>								\$
<ul style="list-style-type: none"> <li>9C.4: Investigate and determine appropriate parameters for curbside electric vehicle charging in commercial areas.</li> </ul>								N/A

## 4.10 Curbside Management

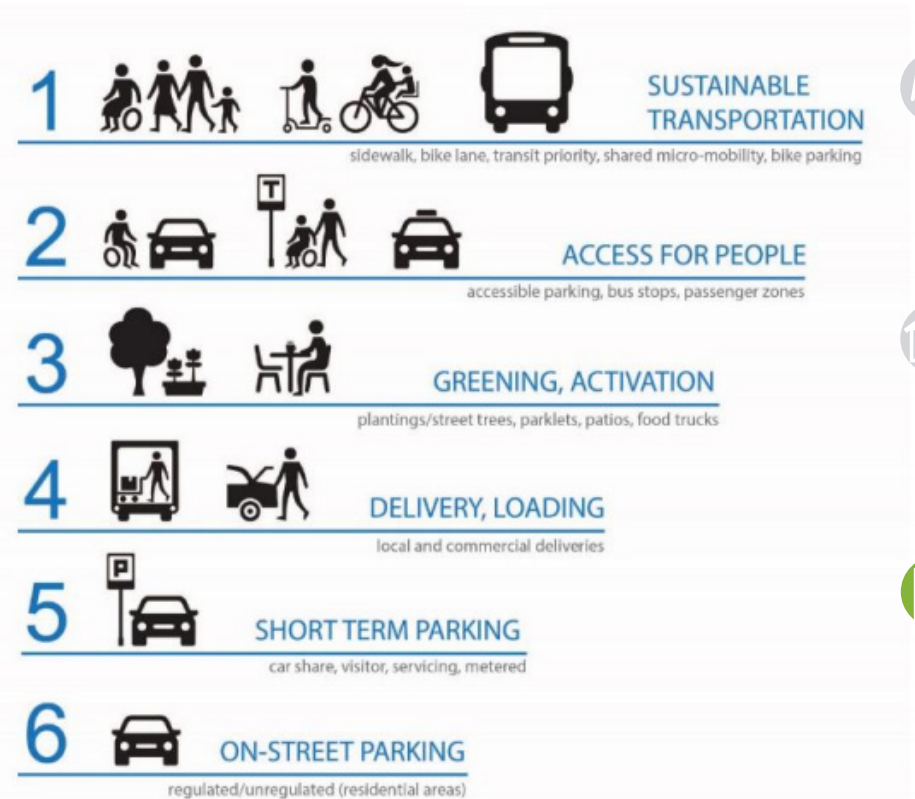
Curbside space is where mobility meets access. As transportation options continue to evolve, there will be increased demand for curbside space. Optimizing this valuable flex space will need to be done using clear principles and priorities. The prioritization of curb space needs to account for the local context of land use and activity within street blocks.

At a general level, the figure to the right, Hierarchy of Curbside Access, identifies the functional priorities for curbside uses. These priorities will assist with evaluating the trade-offs necessary and help ensure that the allocation of curbside and right-of-way in specific locations meets the City's broader community, transportation, and livability goals.

Designated curbside uses in the City are generally allocated on a request or as-needed basis for loading zones, taxi zones, and accessible parking spaces. The demand for curbside space is evolving and increasingly requires proactive and intentional management to support City goals. Many larger cities are now developing and deploying technology for the management of curbside space. As these technologies become more advanced and widespread, the City may consider adopting various new approaches for managing curbside space, particularly in commercial areas like Downtown.

Curbside space is starting to be managed differently than it traditionally has been, accordingly the hierarchy of prioritization of curbside space should be made clear. Sustainable transportation modes should be prioritized whenever possible. This includes sidewalk space for pedestrians, bike or transit priority lanes, shared micromobility and bike parking.

### ◆ Hierarchy of Curbside Access ◆



# DETAILED POLICIES AND ACTIONS

## Policy 10A - Modernize Curbside Management Policies and Approaches

### Actions

	Timeframe				Project Type			Relative Capital Cost
	Quick Win	Short-Term	Medium-Term	Long-Term	Capital	Operating	Planning	
<ul style="list-style-type: none"> <li>10A.1: Consolidate curbside uses for efficiency and to optimize the space allocated to specific functions</li> </ul>		●	●				●	N/A
<ul style="list-style-type: none"> <li>10A.2: Implement flex zones that accommodate multiple uses in the right-of-way. This can include combined commercial and passenger loading zones, different functions at different times using time-of-day restrictions, as well as multiple functions occupying the same block.</li> </ul>		●	●		●			\$
<ul style="list-style-type: none"> <li>10A.3: Explore options for the digitization of curbside space as a means of establishing dynamic parking pricing and parking durations to optimize parking use.</li> </ul>			●				●	N/A