E-Scooter Pilot Report

September 2021 – December 2022

TABLE OF CONTENTS

BACKGROUND

Shared Micromobility, E-Scooters & MDS Technology Overview

Micromobility & E-Scooters

"Micromobility" refers to small, lightweight vehicles/devices operating at speeds below 25km/h, such as bicycles, scooters, skateboards, and their battery-powered equivalents. "Shared micromobility" refers to fleets of such devices that are deployed by a company/organization for rental/use in urban areas; as of 2021, at least 298 cities in North America had at least one shared bike or shared e-scooter system under the shared micromobility umbrella, and 97 had both[1].

E-scooters are traditional "push" scooters that include a battery-powered motor to allow for push-free travel, and fall into one of the following ownership/regulatory categories:

Private E-Scooters

Private e-scooters are purchased/owned by a person. Private e-scooters are not regulated (e.g., no speed limits) and are forbidden from being used anywhere but private property as per the province of Alberta's *Traffic Safety Act*. Despite this legal restriction, unregulated private e-scooters are sold in many retail locations and are used by their owners on public roadways, sidewalks and paths/trails.

Shared E-Scooters

Shared e-scooters are purchased/owned by a company and are deployed in fleets. Fleets are deployed for rental through a phone-based application platform; users are charged fees based on factors such as trip length or time, which are calculated through MDS/GBFS tracking technology. Unlike private e-scooters, shared e-scooters are permitted to operate on public roadways, sidewalks and paths/trails through an exemption to the *Traffic Safety Act* and are regulated to impose maximum speeds at the discretion of the municipal authority where they are deployed. While private e-scooters have been available for purchase for many years, shared e-scooters were first introduced in 2017 in California and saw their first presence in Alberta in 2019.

Note: *For the purpose of this report, future references to "e-scooter" will refer to "shared e-scooters" exclusively, and references to "shared e-scooter companies" are intended to include "shared micromobility companies."*

MDS/GBFS and Micromobility Management Technology

Companies manage their shared e-scooter fleets through Mobility Data Specification (MDS) or General Bikeshare Feed Specification (GBFS) technology. MDS/GBFS are open-source data standards used for expressing information about e-bikes, e-scooters and other shared vehicles operating on public streets[2]. Municipalities often utilize

[1] https://nabsa.net/about/industry/
[2] https://www.openmobilityfoundation.org/understanding-gbfs-and-mds/

micromobility management software – such as the City of St. Albert's use of Populus during the E-Scooter Pilot Program – to access and interpret live MDS/GBFS feeds through software interfaces, which allows for the following:

- Monitoring of device identification, location and battery levels;
- Imposition of geographic mapping-based regulations, such as "no-go" zones, virtual parking corrals, slow-speed zones, etc.;
- Monitoring of device trips, including trip length, time, and start/end locations;
- Archiving and historical tracking of device use data.

Through utilizing the software, certain policies and regulatory stipulations can be implemented/enforced, such as preventing devices from being used in specific geographic areas, enforcing compliance with fleet size limits/parking regulations, and charging fees to shared e-scooter companies (e.g., $ per km, $ per trip, $ per regulatory violation, etc).

St. Albert's E-Scooter Pilot Program

2021 Season Overview

On August 16, 2021, City Council approved a motion to initiate an E-Scooter Pilot Program in St. Albert. The program sought to determine the viability of e-scooter sharing within the City, with the pilot running from September 2021 through the end of 2022.

The program was originally approved to have no limits on the amount of licensed e-scooter sharing companies or the number of deployed e-scooters. This was done both to promote a free-market approach to the program and to ensure that e-scooter companies were able to operate before the end of the 2021 operating season.

To regulate e-scooter sharing companies, the City imposed specific conditions on their issued Business Licences (See "Attachment 5: E-Scooter Business Licence Conditions"), which included the following key regulations:

- E-scooters may be used on sidewalks or trails only and may not be used on streets or roadways;
- E-scooter users must yield to other sidewalk traffic;
- E-scooters must not be used in transit zones or at a transit centre, at special events or inside buildings;
- E-scooters must be geo-blocked from accessing certain areas, such as the BMX park and Woodlands Skate Park;
- Riders are required to wear a helmet and be at least 16 years of age;
- E-scooter companies must remove a parked e-scooter that has not been rented by a resident for over 2 days.

It should be noted that municipalities often regulate e-scooter companies through a licensing agreement, such as the one employed by the City of Red Deer for their ongoing E-Scooter Pilot Program[3].

Throughout the 2021 season, 5 e-scooter companies obtained licences to operate in St. Albert:

- Bird Canada Inc.
- Roll Technologies Inc.
- Spin Mobility Inc.
- Neutron Holdings Inc. (Lime)
- Superpedestrian Canada Inc. (Link)
    - *Note: Link did not provide the City with data regarding their participation in the 2021 season, and it is unclear if any Link e-scooters were actually deployed in St. Albert.

2022 Season Overview

In early 2022, Council directed Administration to implement the following regulatory changes to the E-Scooter Pilot Program:

- Limit the maximum amount of licensed e-scooter companies to 5;
- Limit the deployed fleet size of each e-scooter company to 60 e-scooters;
- Require e-scooter companies to remove a non-compliant parked e-scooter within 2 hours of receiving notice;
- Implement parking corrals in areas with high e-scooter parking traffic to limit e-scooter "clutter."

The 2022 Season began on May 18, 2022, with 4 e-scooter companies obtaining licences to operate (although only 3 companies were actively operating for the majority of the season):

- Bird Canada
- Roll Technologies Inc. (ceased future St. Albert operations in February 2023)
- Neutron Holdings Inc. (Lime)
- Spin Mobility Inc. (ceased St. Albert operations in June 2022)

For the 2022 season, Administration also contracted a 3rd party MDS-based micromobility management software – Populus – to manage the pilot. Utilizing the software, Administration was able to

- Monitor e-scooter fleets for compliance with parking requirements;
- Impose virtual parking corrals (unmarked corrals visible only through related e-scooter company apps), permanent no-go zones and temporary no-go zones (e.g., temporary no-go zone at Lion's Park for Canada Day);

[3] https://www.reddeer.ca/media/reddeerca/city-government/plans-and-projects/E-Scooter_Revised_Agreement.pdf

- Analyze and review e-scooter usage, including parking and trip frequency/location to identify and mitigate issues (e.g., parking data was used to determine optimal locations for virtual parking corrals).

Examples of data obtained through Populus are listed on page 7 of this report.

PILOT PROGRAM ADMINISTRATION, OBSERVATIONS & STATISTICS

Administrative Overview

As regulations for the E-Scooter Pilot Program were imposed via conditions on Business Licences, Business Licensing – a work unit of the Economic Development Department – administered and managed the pilot.

Material Costs & Revenue

The primary material cost of the E-Scooter Pilot Program was the contracting of micromobility management software (Populus[4]), which cost $6,000.00.

Revenue related to the pilot was exclusively obtained through Business Licensing fees paid by shared e-scooter companies; in total, the City collected $3,756.50 in licensing fees throughout the pilot.

Cost of Staffing Resources

Administration of the E-Scooter Pilot Program required the following:

- Design & Implementation of program regulations (no-go zones, parking corrals, speed limits, etc.) and communication of these regulations to companies;
- Regulatory compliance, including receiving/addressing resident complaints and confirming compliance with companies;
- Acting as an intermediary between Administration/residents and shared e-scooter companies/external organizations to share information and identify/address emergent issues;
- Monitoring of e-scooter usage in the City and modifying regulations as required (e.g., monitoring special event schedules, confirming if e-scooter traffic exists in the area, creating a temporary no-go zone mapping file, and providing related information/mapping files to e-scooter companies for implementation).

The summary of the above administrative processes is estimated to represent approximately ~8-10 hours of staff time per week over the course of an operating season (May to October), with higher resource/time requirements during the initial design/implementation period (May – June). It should be noted however that staff resources required to manage shared e-scooters depend on regulatory scope, existing regulatory precedence, etc.

[4] https://www.populus.ai/

Other internal departments noted minimal to no staffing resource costs related to the pilot program. Some minimal reported costs included Public Operations staff moving parked e-scooters to perform landscaping duties and removing some discarded e-scooters from the Sturgeon River. Other departments noted the cost in their work areas was limited to reviewing program regulations (e.g., reviewing parking corral locations) in addition to directing resident inquiries/complaints to Business Licensing.

Program Statistics Overview

2021 Statistics

Administration did not utilize micromobility management software in 2021, therefore statistics for this season were obtained exclusively through summaries provided by individual e-scooter companies:

	Unique Users	Total Trips	Average Trip Distance	E-Scooters Deployed (Average)	Reported Safety Incidents
Spin	1,200	821	2.7km	75	0
Roll	1,368	3,223	3.18km	94	0
Bird	1,309	3,479	?	71	0
Lime	2,370	4,398	1.6km	90	0
Total	**6,247**	**11,921**	**2.5km**	**330**	**0**

2022 Statistics

Utilizing Populus micromobility management software, Administration compiled statistics to determine how e-scooters were used during 2022:

- 19,821 e-scooter trips occurred;
- 50,005 km were travelled by e-scooters;
- 425,936 minutes (295.8 days) of total time was spent using e-scooters;
- 2.6 km was the average distance of a single e-scooter trip;
- 21 minute & 29 seconds were the average duration of an e-scooter trip;
- On average, ~134 e-scooters were deployed in St. Albert at any given time, although this number fluctuated (over 200 e-scooters were deployed at one time in June, while less than 100 were deployed for the final half of October 2022)
- 0.85 average e-scooter utilization rate was observed (number of trips per deployed e-scooter per day)

Detailed statistics and data visualizations can be found in “Attachment 2: Populus Data Visualizations” Below is a summary of key findings from the attachment:

- Overall trip counts (Figure 3) suggest e-scooters were widely used from the beginning of the 2022 season through the end of August, when trip counts started to decrease – lower trip levels were sustained for September and the

beginning of October, with the final drop in e-scooter trips taking place in mid-October.

- Most e-scooter trips took place during evenings and weekends (Figure 4), suggesting e-scooter use was primarily related to recreational/commercial trips as opposed to commuting trips.
- E-scooters saw their greatest levels of use during special events (Figure 5) – during the Rainmaker Rodeo (May 27 – 29, 2022) 735 e-scooter trips were recorded (3.7% of all e-scooter trips).
- A routes map (Figure 6) details levels of e-scooter use by street/pathway. This map indicates the following:
    - E-scooters were most commonly used on the Red Willow Trail system and in the Downtown/Central St. Albert Trail commercial areas;
    - Detailed data from this map indicates Perron Street was the street with the highest amount of recorded e-scooter trips (1,676 trips);
    - Detailed data from this map indicates a minimum of 4 e-scooter trips were recorded on almost every street/pathway in St. Albert, suggesting e-scooters were a viable transportation option in all areas of the City.
- A parking “heat map” (Figure 7) displays areas in St. Albert with high concentrations of e-scooter parking; this map suggests most e-scooters were parked in commercial areas, but also that e-scooter parking events were recorded throughout the City.
- E-scooter trip/origin destination maps (Figures 9, 10 and 11) indicate Downtown was the area with the highest levels of e-scooter use, with trips from other neighborhoods to Downtown (and vice-versa) being recorded for nearly every neighborhood, suggesting e-scooters were widely used for transportation to/from/within Downtown.
- A detailed count of e-scooter trips by neighborhood (Figures 12 and 13) indicate residential neighborhoods close to Downtown/central St. Albert Trail recorded the most e-scooter trips, while also revealing that nearly every neighborhood recorded at least 100 e-scooter trips in 2022.

E-Scooter Safety

When Administration designed regulations for the E-Scooter Pilot Program, the following regulations were imposed to reduce safety risks associated with e-scooter use:

- Speed limit of 15km/h (the lowest speed limit for e-scooters in Alberta);
- Restricting e-scooter use to sidewalks/trails only;
- Mandatory helmet use;
- Geo-blocking e-scooters from accessing higher-risk areas, such as the Woodlands Skate Park or St. Albert Transit stations.

Throughout the pilot, Administration did not receive reports of safety incidents/accidents involving e-scooters from Emergency Services, however a couple of anecdotal accounts of minor incidents were reported by residents. Similarly, none of the shared e-scooter companies reported receiving notification of safety incidents/accidents from their users.

Although no serious incidents were reported, it is certain that some e-scooter users experienced minor injuries while using e-scooters (e.g., cuts/bruises/scrapes) – similar to minor biking injuries – however these injuries are typically not reported.

Administration has joined an inter-municipal working group led by the Injury Prevention Centre[5], composed of municipal administrators of shared e-scooter programs throughout the province. The goal of this group is to share and discuss e-scooter related safety issues and solutions; for example, information was shared that 2022 was the first year when emergency centres applied a new code for e-scooter-related emergency room visits, and related data will become available in the near future.

Observations from Administration

The following are observations provided by internal City departments regarding the E-Scooter Pilot Program:

Economic Development

- Statistics indicate high levels of e-scooter use in commercial areas – especially the Perron District and central St. Albert Trail commercial corridor – suggesting potential downstream benefits to nearby businesses.
- Shared micromobility has become an integrated part of transportation in major metropolitan areas around the world. In the Edmonton Metro region, Edmonton, St. Albert and Leduc are the only municipalities so far who have implemented some form of shared micromobility.
- Some businesses reported issues with shared e-scooter companies deploying e-scooters in undesirable areas; such issues were resolved through discussions with shared e-scooter companies; also, some businesses were observed to have a near permanent presence of e-scooters parked on/near their premises.

Transportation & Engineering

- The regulation allowing e-scooter use on sidewalks but not on roads is in alignment with Transportation & Engineering recommendations, although an identified issue was related to some companies deploying e-scooters from their Edmonton fleet in St. Albert that included “no sidewalk riding stickers,” potentially causing confusion for users in St. Albert (Edmonton forbids sidewalk riding).
- Observations suggest the requirement that all e-scooter users must wear helmets was not being followed.
- As data indicates e-scooters were used frequently in the Red Willow Trail system, the speed limit of 15km/h was appropriate due to the trail being a mixed-use trail (e.g., kids, pedestrians, bicyclists, etc.), and a higher speed limit could pose greater safety issues for different trail users.
- Some discarded/misparked e-scooters could create tripping hazards for pedestrians and bicyclists.

[5] https://injurypreventioncentre.ca/index

Public Operations

- Designated virtual parking corrals were helpful, and resulted with less e-scooters being abandoned/misparked when they were implemented;
    - Some concerns exists regarding parking corrals located on grass/turf and potential damage and/or interference with landscaping duties.
- Some of the shared e-scooter companies were able to coordinate with Public Operations to remove e-scooters discarded in the Sturgeon River, which reduced the need for Public Operations to perform this work.
- Resource costs were minimal, and primarily related to moving e-scooters to virtual parking corrals or out of an area where work needed to be performed (e.g., cutting grass).

Recreation & Parks

- E-scooters were observed being used as a mode of active transportation, in addition to a method of transportation to various City events.
- With the addition of more stringent regulations in 2022 (designated parking corrals, 2 hour pick-up requirement, etc.), less e-scooter “clutter” was observed.
- Servus Place observed minimal-to-no use of e-scooters by residents as a means of transportation to/from the facility.
- Physically-marked designated parking corrals – and the possible addition of “pads” as a marking device – would assist in preventing interference in parking lots and/or damage to grass/turf.
- Staff resource costs were minimal and related to reviewing site locations for no-go zones, temporary no-go zones and designated parking corrals.
- Companies should be selected through an RFP process, similar to how the City licences/manages use of public spaces by businesses (e.g., River Rentals Pilot).

Municipal Enforcement Services

- Minor observed issues included e-scooters not being parked properly (in the river, in trees, left on private property, etc).
- Some concern was expressed regarding the perception of shared e-scooters may suggest to residents that private e-scooters are also permitted to be used on public streets, when in fact they are forbidden from doing so.
- Resource costs were minimal, and primarily related to answering resident questions and/or redirecting such inquiries as needed.
- Future regulations should be designed/administered in a way that allows for Administration to alter regulations & requirements as needed to address emerging issues as they appear.

FEEDBACK

A detailed summary of all public feedback received can be found in “Attachment 3: Detailed Resident Feedback.”

Direct Resident Feedback & Complaints

Although some direct feedback was received in the 2021 season, all public feedback for the 2022 season was received through the dedicated Cultivate the Conversation (CTC) webpage, or in related social media posts.

Administration received ~10 complaints related to abandoned/misparked e-scooters and/or a lack of company response to such complaints during the first 2 months of the 2022 season. In subsequent months, no complaints were filed to the City; it is assumed that increased public understanding of program regulations and processes, combined with increased company responsiveness/compliance led to a decrease in such complaints, especially in comparison with the 2021 season.

2022 Social Media Campaign

To generate public feedback from younger demographics during the 2022 season of the pilot, a social media campaign was undertaken using limited promotional funds ($300 to promote Facebook posts). The main purpose of this campaign was to direct younger demographics to the dedicated Cultivate the Conversation webpage/survey, however most of this feedback was provided directly through related social media platforms.

This effort included 37 posts published to Social Media – including 31 Instagram Polls – which were viewed thousands of times by users (detailed statistics regarding this effort can found in “Attachment 3”):

- 6 Facebook ads were promoted:
  - 57,731 people were reached;
  - 106,578 ad impressions were made;
  - 612 resulting clicks to the Cultivate the Conversation webpage.
- 23 polls were posted to the *City of St. Albert* Instagram account:
  - 1,198 responses were provided;
  - 8,045 views were logged for each poll (an average of 350/poll).
- 8 polls were posted to the *Amplify* Instagram Account:
  - 202 responses were provided;
  - 721 views were logged for each poll (an average of 90/poll).

Detailed results from each poll are included in the “Instagram Polls” section of “Attachment 3.” The following is a summary of key information and feedback from the polls:

- For questions regarding whether or not e-scooters should remain available in St. Albert, the overwhelming majority answered “Yes,” with 75% being the lowest polled rate of support.
- For questions regarding e-scooter speed limits, almost no responses suggested a slower speed, with the rest of the responses being somewhat split between keeping the speed limit as is or increasing the speed limit.
- A majority of respondents (~60%) indicated they had not used an e-scooter.
- Most respondents expressed support for the existing e-scooter parking policy.

General Resident Feedback & Cultivate the Conversation Survey

General Feedback Points

Detailed feedback submitted to the Cultivate the Conversation webpage – and related survey – are listed in "Attachment 3," in addition to general feedback comments provided on posts made as part of the social media campaign; 91 such feedback points were received during the 2022 season. Feedback in the attachment is classified into 3 categories:

- Positive: The feedback point was in full support of the availability of e-scooters, without any major criticisms/suggestions regarding program regulations.
    - E.g.: *Love the scooters! Unfortunately, they were not in Riverside very often but when they were, we used them. I thought it was great fun and would definitely use them again next summer.*
- Mixed: The feedback point was either in general support of e-scooters or noted no official support or opposition and included specific criticisms/suggestions regarding program regulations.
    - E.g.: *I support the scooter program but would suggest some changes. 1) helmets should not be mandatory 2) the speed should be increased. Great way to explore the city trail system!*
- Negative: The feedback point did not support the availability of e-scooters, and did not include any specific suggestions or criticisms for regulatory changes.
    - E.g.: *Hate seeing them littering the community, just left any where and any where.*

The following is a summary of total feedback points in the context of the above classification:

- 35 positive points (38.5%);
- 35 mixed points (38.5%);
- 21 negative points (23.1%);

Although limited by a small sample size of responses, the results are similar to observed trends reported in public feedback sections of other municipal e-scooter pilot programs[6]; public reception to e-scooter programs is mixed, although the majority of respondents generally support the availability of e-scooters, with a significant portion of this support noting specific regulatory criticisms/suggestions.

The following is a summary of key/common feedback points provided to Administration:

- A common point of feedback was the speed of e-scooters, with some noting the slow speed makes e-scooters an unviable transportation option for commuting purposes.
- The most common point of negative feedback involved the aesthetics of parked/abandoned e-scooters, with many comments describing them as "eye

[6] E.g., City of Leduc: https://www.leduc.ca/sites/default/files/E-Scooter%20Survey%20Results%20Summary%20-%20Fall%202022.pdf

sores" and other comments suggesting it made parts of the City look disorganized or "messy."

- Some mixed/negative feedback involved issues that do not exist for shared e-scooters – complaints involving e-scooters going 30km/h, e-scooters not being equipped with bells, etc., where submitted despite all shared e-scooter companies imposing speed limits and adding bells/sound-warning devices to their e-scooter fleets, as per regulatory requirements.
    - A possible explanation for this feedback is confusion involving private vs. shared e-scooters, as only private e-scooters being used illegally in public areas would be able to meet the descriptions of the complaints submitted above.
- Many feedback points suggested some form of parking corral/designated parking system for e-scooters to help limit e-scooter clutter.
- Feedback was received regarding the infeasibility of the rule requiring helmet use, as users do not carry helmets around for the chance they may use an e-scooter.

Cultivate the Conversation Survey

A survey regarding the E-Scooter Pilot Program was available for the duration of the pilot and was promoted limitedly through paid "boosts" to social media posts, in addition to a small number of CityLights/City Highlights posts.

Despite a high number of recorded views of social media posts promoting the CTC for pilot program feedback, in addition to almost 1,000 unique visits to the CTC webpage, only 54 respondents completed the survey in 2022. A detailed record of survey results can be found in "Attachment 3," and the following are results from key survey questions:

- 53.7% of survey respondents reported having used an e-scooter in St. Albert;
    - 48.3% of which used e-scooters 1-5 times
    - 17.2% of which used e-scooters 6-10 times
    - 34.5% of which used e-scooters 10+ times
- 64.8% of survey respondents supported the availability of shared e-scooters in St. Albert. Out of those who expressed support:
    - The highest reported concerns with e-scooters were the aesthetics/appearance of parked e-scooters, followed by excessive numbers of e-scooters and sharing trails/sidewalks with e-scooters;
    - Most respondents who used e-scooters reported either using them recreationally (e.g., to travel to parks/special events, to socialization events, etc.), followed closely by spontaneous use (e.g., respondent decided to rent an e-scooter after seeing one parked nearby). Other reported uses included travelling home and shopping trips;
    - Regarding the number of available e-scooters to rent, respondents were split evenly between keeping the number about the same and increasing the amount of e-scooters (only one respondent suggested less e-scooters);

    - The overwhelming majority of respondents supported the existing e-scooter parking policy;
    - A majority (62.9%) of respondents noted that the availability of shared e-scooters in St. Albert improved their perception of St. Albert, with no respondents suggesting a more negative perception.

Shared E-Scooter Company Feedback

- Shared e-scooter companies noted that the 15km/h speed limit for e-scooters is the slowest e-scooter speed limit in the province, and that feedback was received through their platforms stating that speeds were too slow;
    - Most Albertan municipalities – including City of Edmonton – impose a speed limit of ~20km/h for e-scooters, although such municipalities often restrict usage of e-scooters to roads, streets and mixed-use trails/bike paths.
- Shared e-scooter companies noted that a fleet cap size of 75-100 e-scooters per company would be desirable.

RECOMMENDATION FOR SHARED E-SCOOTERS IN ST ALBERT

Highlighted Benefits of Shared E-Scooters

The following are benefits provided through the availability of shared e-scooters for use in St. Albert, as identified by Administration:

- An Alternative & Accessible Short-Distance Transportation Option
    - E-scooters are available for use anytime, and provide transportation options at times when traditional options are limited;
        - E.g., 1,876 e-scooter trips (~10% of all trips) were recorded between the hours of 12:00AM and 6:00AM
- E-scooters are an accessible mode of transportation for residents who may not have access to a personal vehicle due to age, driver's license status, or income;
    - Data confirms e-scooters travelled on nearly every street/pathway in St. Albert, suggesting they are a reliable transportation option within the City;
    - Some municipalities in the United States have worked with companies to employ programs to provide cheaper micromobility options to eligible low-income residents, veterans, students, seniors, etc[7].
- E-Scooters provide environmental benefits by reducing car usage and related emissions:
    - A 2020 report by the National Association of City Transportation Officials is often quoted in the micromobility industry: 45% of e-scooter trips replace a car trip[8];

[7] https://help.bird.co/hc/en-us/articles/360051003951-Community-Pricing-
[8] https://nacto.org/shared-micromobility-2019/

        - Applying this metric to St. Albert's e-scooter statistics results with 8,919 car trips being replaced by e-scooter trips in 2022.
- Statistics indicate high levels of e-scooter use in commercial areas – especially Downtown – an indicator that aligns with Council's priority of Fostering a Vibrant Downtown.
- Research published by shared e-scooter company Neuron Mobility in 2022 highlighted economic benefits associated with e-scooter programs across Canadian cities, suggesting 70% of e-scooter trips resulted in a purchase at a local business, with an average spend of $27/trip ($11,300.00 per deployed e-scooter annually)[9].

Recommendation

In the context of the benefits listed above, Administration recommends that the City continues to maintain the availability of shared e-scooters, based on the following rationale:

- E-scooters were widely used by residents throughout the pilot program, indicating a market need for micromobility options in St. Albert;
- The presence of e-scooters did not create notable operational challenges or impose significant costs to administration throughout the pilot;
- The above-mentioned benefits would provide mobility, social, and economic advantages to St. Albert residents and businesses;
- Maintaining the availability of shared e-scooters will allow St. Albert to integrate new shared micromobility devices and technology (e.g., e-bikes) while also building capacity for management of new technology.

Recommendations for a regulatory framework to manage shared e-scooters are listed in the Agenda Report.

Shared Micromobility – Regulatory Considerations & Examples

Operational Regulations

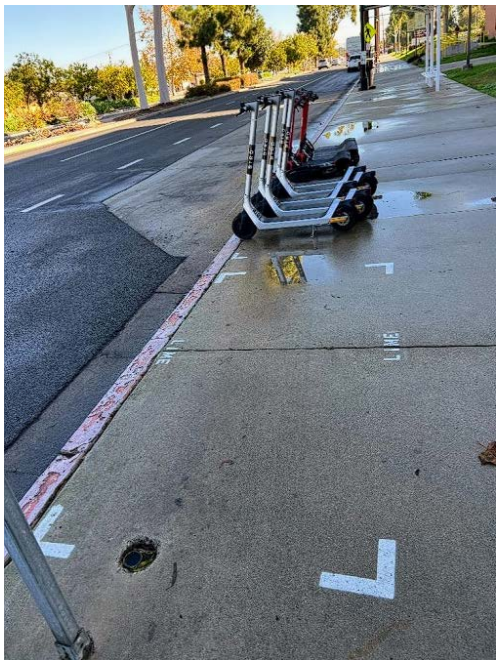
Parking Requirements & Parking Corrals

Parking regulations are a key component of a shared micromobility. Most municipalities with shared micromobility adopt some form of designated parking requirements, including parking corrals. As indicated in feedback received from internal City departments, the imposition of stricter parking regulations and virtual parking corrals in 2022 contributed to a noted decrease in observations of e-scooter clutter, misparked e-scooters and related complaints.

Parking corrals can take various forms, from a virtual parking corral with no markings to a physically-marked corral with painted lines and bollards. The left figure below is an example of a basic marked parking corral from the City of Long Beach, while the figure

[9] https://www.rideneuron.com/wp-content/uploads/2022/10/CA-Prosperity-Report-Oct-16.pdf

on the right is an example of a parking corral from the City of Calgary with painted lines and moveable bollards.



If St. Albert were to impose physically-marked corrals with bollards – similar to the example from the City of Calgary – Administration estimates the cost to be ~$2,000.00 per corral. Parking corrals similar to the example from the City of Long Beach would impose a lesser cost, and virtual parking corrals (marked only through shared e-scooter company apps) would impose no cost.

Micromobility Device Deployment Equity

One issue highlighted in public feedback was the lack of availability of e-scooters in some residential areas. Municipalities with shared micromobility sometimes address this issue by imposing regulations to ensure that companies have a minimum number of devices deployed across specified geographic areas, to ensure equitable access for all residents.

Speed Limits

The E-Scooter Pilot Program imposed a speed limit of 15km/h for all e-scooters, as per safety-based recommendations from Transportation & Engineering. Concerns such as e-scooters operating in traffic-heavy areas and mixed-use trails, e-scooter use being restricted to sidewalks/paths/trails, and the increase in risk associated with faster speeds were considerations when determining the speed limit.

Some municipalities utilize micromobility management software to increase/reduce device speed limits in certain geographic areas, depending on an area's safety risk, geographic features, pedestrian counts, etc.

No-Go Zones

Throughout the pilot, permanent “no-go zones” were employed in various areas to prevent e-scooters from being used, such as the Woodlands Skate Park and Fowler Athletic Field. Similarly, “temporary no-go zones” were employed to restrict e-scooter use in special event areas for the duration of the event, such as the Farmer’s Market and Canada Day.

Most municipalities will include a regulatory option for the municipality to add, remove and/or modify such zones as needed to flexibly react to emerging issues related to e-scooter use and parking.

Pick-Up Times & Compliance

For the 2022 season, shared e-scooter companies were required to remove misparked/illegally-parked e-scooters within 2 hours of receiving notice. Administration noted a reduction in complaints regarding misparked e-scooters and related removal requests after the imposition of this regulation. Maintaining similar regulations would assist in reducing the aesthetic issues related to abandoned e-scooters or e-scooter “clutter.”

Other municipalities employ various parking regulations, removal requirements and related fees/fines in order to encourage company compliance. For example, the City of Long Beach has employed the following regulatory framework for their shared micromobility service [10]:

- E-Scooters must be parked in designated parking areas;
- E-Scooters not parked in a designated parking area must be removed within 2 hours of receiving notice;
    - This removal requirement does not apply to any e-scooter parked in a corral;
- Any e-scooter that is not removed within the 2 hour limit may be impounded by the City, and a fee is charged to the company per impounded e-scooter;
- When a company reaches a certain level of compliance “strikes,” they may have their permit suspended or revoked.

Micromobility management software also allows for municipalities to track policy/compliance with such stipulations, allowing for the tracking of compliance violations through monitoring the location of devices. Such efforts work to further reduce e-scooter “clutter” and encourage company compliance.

Commercial Viability

The market size of St. Albert may restrict the commercial viability of some shared e-scooter companies, unless such companies are also able to operate in neighboring municipalities.

[10] https://www.longbeach.gov/globalassets/go-active-lb/media-library/documents/programs/micro-mobility-program-e-scooterse-bikes/2022-july-shared-micromobility-program-final

Fees and other operating costs imposed by the City on companies may also limit commercial viability, so care must be made to ensure any such fees would not "price-out" companies, should they be imposed.

Revenue Generation

Municipalities with permanent shared micromobility services use various means to charge fees to companies. Many municipalities also use micromobility management software (e.g., Populus) to implement, monitor and charge such fees. Some examples of fee structures are:

- Licensing agreements that include permit fees and security deposits for companies;
  - E.g., The City of Red Deer's E-Scooter Pilot Program charges companies $15.00 per e-scooter (max $5,000.00/company) and a security deposit of $25.00/e-scooter (minimum $5,000.00, maximum $15,000.00)[11].
- A dollar amount charged to a company per completed e-scooter trip:
  - E.g., charging a $0.25 fee/trip for the 2022 season in St. Albert would have resulted in the collection of ~$5,000.00 in revenue.
- A dollar amount charged per deployed e-scooter, per specific time period:
  - E.g., a fee of $0.25 per deployed e-scooter per day charged for the 2022 season would have resulted with ~$5,500.00 in collected revenue;
  - This fee structure would also encourage companies to deploy fleet sizes adjusted closely to market demand in order to reduce operating costs.
- Compliance fees can be charged per infraction:
  - E.g., fees can be charged per misparked e-scooter, e-scooters not collected within the 2-hour limit, e-scooters parked outside of a corral, etc.

*Note: Municipalities that charge fees based on e-scooter usage, fleet sizes, compliance infractions, etc. utilize micromobility management software to manage/enforce fee collection. Imposing such fee structures without micromobility management software would require significant administrative resources to accurately track fleet sizes, trips, regulatory infractions, etc.

The Future of Shared Micromobility and Micromobility Management Technology

The shared micromobility industry relatively new, and as such is in a state of growth and evolution. For example, the City of Edmonton added shared e-bikes to their shared micromobility in 2022 for the first time (Edmonton's e-scooter pilot began in late summer of 2019). As such, it is expected that more devices and new technology will continue to be deployed under the "Shared Micromobility" umbrella.

Similarly, the technology used to manage shared micromobility devices – MDS/GBFS Technology – is being continuously improved to allow for other devices and new

[11] https://www.reddeer.ca/media/reddeerca/city-government/plans-and-projects/E-Scooter_Revised_Agreement.pdf

technology to be managed through micromobility management software. Some examples of devices that may be manageable through MDS technology in the near-future are:

- Personal delivery devices (e.g., delivery robots/drones)
- Shared Cars
- Taxis/Rideshare Vehicles

Some cities are also beginning to utilize new “Curb Data Specification” (CDS) technology – similar to MDS technology and managed through similar software – to apply “digital curbside management” policies to manage parking restrictions and enforcement. For example, the City of Oakland recently implemented a new “Smart Loading Zone” program in partnership with Populus to manage the use of curb spaces and loading zones by commercial fleets such as Uber, food delivery services and package deliveries[12].

[12] https://www.americancityandcounty.com/2023/01/24/oakland-launches-smart-loading-zone-program-for-commercial-unloading-at-the-curbside/