



Report to: Development Services Committee

Meeting Date: April 2, 2024

SUBJECT: Markham Centre Automobility Demonstration Zone Micro-Mobility Pilot

PREPARED BY: Chris Rickett, Director, Economic Growth, Culture and Entrepreneurship x 6590

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RECOMMENDATION:

1. That the report entitled “Markham Centre Automobility Demonstration Zone Micro-Mobility Pilot” be received;
2. That the City opt into participating in O.Reg 389/19 - Pilot Project - Electric Kick-Scooters;
3. That City Staff be directed to deliver a micro-mobility pilot in Markham Centre Demonstration Zone, with the boundaries being Highway 7 to the north, Highway 407 to the south, Warden Avenue in the west, and Kennedy Road in the east, to assess the uptake and impact of the use of micro-mobility solutions in the City and report back to Council in Q2 2025 with details of the pilot;
4. That City Staff be authorized to enter into an agreement to the satisfaction of the Director of Engineering and Director of Operations with Scooty Mobility Incorporated to undertake a micro-mobility pilot in Markham Centre;
5. That City Staff be directed to bring forward all necessary by-laws and by-law amendments to permit and regulate the use of e-scooters in the Markham Centre Demonstration Zone, in accordance with the Provincial Pilot (ON Reg. 389/19); and,
6. That City Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

This report seeks Council’s approval for staff to develop and deliver a micro-mobility pilot in Downtown Markham as part of the Ontario Vehicle Innovation Network (OVIN) Markham Centre Demonstration Zone (DZ).

BACKGROUND:

In Ontario’s 2021 Budget, the Government committed \$56.4 million over four years to create the OVIN. OVIN focuses on maximizing investments and impacts across Ontario’s entire automotive value chain, including a shift towards smart and clean technologies. Through a range of programs, OVIN is linking large companies (partnering with original

equipment manufacturers (OEMs), Tier 1, etc.), fleet operators, municipalities and utilities with Ontario start-ups and small- to medium-sized enterprises (SMEs) to encourage product innovation and open collaboration.

One of OVIN's programmatic streams includes supporting the creation of DZs, which are dedicated physical locations for showcasing advanced automotive technologies and smart mobility solutions. In partnership, the cities of Markham and Vaughan jointly applied and successfully secured funding in the amount of \$2.5M through March 31, 2025, from OVIN to deploy a DZ in each municipality.

Beyond providing physical locations for showcasing automotive and mobility technologies, the DZs allow Markham and Vaughan to explore solutions to their transportation and mobility challenges, such as alternative transport modes for short trips, first- and last-kilometre connectivity, pedestrian and cyclist safety, and reducing greenhouse gas emissions.

In Markham, the DZ is located in Markham Centre, focusing on Downtown Markham. Vaughan is focused on the Vaughan Metropolitan Centre. Both Markham and Vaughan DZs aim to provide companies that have smart mobility technologies and solutions opportunities to test, validate and showcase to potential customers, partners and residents in a controlled, real-world environment in accordance with applicable laws, regulations and approvals.

OPTIONS/ DISCUSSION:

Micro-mobility is a travel mode used for short-distance trips provided by lightweight, usually single-person vehicles, such as bicycles and scooters. More recently, micro-mobility systems have evolved to provide users with access to power assist vehicles such as pedal assist bikes (e-bikes) and electric kick-style scooters (e-scooters) to complete short trips in an urban setting and provide a "first and last km" solution, connecting destinations to higher order transit systems.

While conventional bike share programs have existed for many years, new vehicle innovations such as e-scooters and e-bikes, together with different ownership/operating models (for sharing programs), are presenting municipalities with decisions to make when considering shared-micro-mobility solutions as a transportation option, such as:

- Public or private ownership of the system;
- Vehicle types to be permitted, including bikes, e-bikes, e-scooters, etc.; and,
- Docked or dockless, where docked station systems require that all vehicles be returned to an available station (Hamilton and Toronto examples) or dockless design, where the vehicle can be left free-standing (typically in a designated area) or locked to any immovable object (e.g. bike rack or street furniture) within a street boulevard.

Micro-mobility provides an example of how the City can rethink the more conventional, auto-centric approach and tools utilized for transportation network planning. Public access to a fleet of shared, small and environmentally friendly vehicles supports the

multi-modal needs for city building in dense urban environments and a more sustainable, green, attractive, healthy and safe city.

Micro-mobility Pilot in Downtown Markham

On November 27, 2019, the Government of Ontario announced a 5-year e-scooter pilot (O. Reg. 389/19) that began on January 1, 2020, as part of the Open for Business Action Plan. Under the pilot, municipalities can pass local by-laws to allow e-scooters within municipal rights-of-way, along with other regulations which can be imposed on providers of shared e-scooter systems.

The regulation for the pilot program stipulates various e-scooter vehicle and operator safety criteria which must be met. Municipal considerations mentioned in the Province's guideline document are geared toward the management of private e-scooter-sharing systems, which can now operate in Ontario under this pilot program.

E-bikes are currently permitted to operate in the City, however, e-scooters require that a by-law be enacted to permit their use. The Highway Traffic Act (HTA) and Ontario Regulation 389/19 requires a municipality pass a by-law to:

- Allow e-scooter use on municipal roads during the 5-year pilot;
- Set the maximum speed limit to 24 km/h;
- Restrict the maximum weight of the vehicle at 45kg;
- Restrict the maximum power output of the vehicle at 500W;
- Set the minimum operator age limit at 16 years of age;
- Restrict passengers and cargo;
- Restrict baskets;
- Require riders to stand at all times;
- Require the use of bicycle helmets for riders under 18 years old;
- Restrict pedals or seats;
- Require that the vehicle has 2 wheels, brakes, a horn or bell, and one white light on front, one red light on rear and reflective material on sides;
- Restrict the maximum wheel diameter at 17 inches;
- That all HTA rules of the road will apply to the operation of e-scooters like bicycles; and,
- Not allow e-scooters on controlled access highways, sidewalks and multi-use pathways.

Scope of a Micro-mobility Pilot

To support a Micro-mobility Pilot in Downtown Markham as part of the OVIN DZ, staff are recommending that Council direct staff to bring forward the necessary by-laws and by-law amendments to permit and regulate the use of e-scooters. The use of e-scooters will be limited to Downtown Markham, between Warden Avenue in the west, Kennedy Avenue in the east, Highway 7 to the north and Highway 407 to the south.

Undertaking a pilot in this area will allow City staff to assess the potential impacts and uptake of a shared e-scooter and e-bike system in the City of Markham, helping to shape the City's overall transportation system.

To support the pilot, in addition to the provisions outlined above, per the Provincial Regulation, the City by-law will also include the following provisions to regulate where e-scooters can be operated:

- Permitted on dedicated boulevard cycle paths and bicycle lanes;
- Permitted on traffic lanes on roads that are posted at 50 km/h or less; and,
- Prohibited on multi-use paths and sidewalks or on any roadway that also prohibits pedestrians and/or bicycles.

To assist in the safety of e-scooter users and bicyclists, City staff recommend implementing temporary buffered bicycle lanes on Enterprise Boulevard from University Boulevard to Warden Avenue. These buffered bicycle lanes will require the prohibition of vehicular traffic within the curb lane of Enterprise Boulevard, requiring the removal of one traffic lane in each direction. These temporary buffered bike lanes will need to be designed and implemented to the satisfaction of the Director of Engineering and the Director of Operation and will need to be in place before the micro-mobility pilot is in service.

The proposed pilot will focus on the following:

- Collecting data relating to vehicle usage/maintenance;
- Collect data on vehicle incidents/complaints/collisions;
- Help to inform a future Citywide micro-mobility service permitting or licensing process;
- Identify operating/maintenance requirements (City and operator);
- Test the individual vehicle and system features in the City under a live "environment";
- Assess parking/storage/charging issues; and,
- Determine future geographical considerations for the expansion of micro-mobility solutions.

The following parameters will define the scope of the pilot program:

- **E-Scooter Type:** all e-scooters will be electric kick-style e-scooters with no seat or pedals, and riders will need to stand while using them. To adhere to the Government of Ontario's electric kick scooter pilot framework, there can only be one rider at a time, no cargo can be carried, baskets are not allowed, it must have two wheels and brakes, must have a horn or bell, as well as, front and rear lights;
- **Length of Agreement:** the term of the agreement will be from June 1, 2024 to March 31, 2025. The City will reserve the right to terminate the agreement in the case of an agreement breach.
- **Number of E-Scooters and E-Bikes:** the selected operator for the pilot will manage a fleet of no less than 70 and no more than 100 e-scooters and e-bikes.

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- **Operating Speed:** e-scooters will be limited to a maximum speed of 24 km/h (average speed for urban cycling);
 - **Operating Areas:** e-scooters will be permitted to operate on traffic lanes of roads with posted speed of 50km/h or less (where no bike lanes are provided) and bike lanes located within Downtown Markham, between Warden Avenue, Kennedy Avenue, Highway 7 and Highway 407. E-scooters will not be permitted to operate on sidewalks.
 - **Lock-Up E-Scooters:** all commercial e-scooters will be required to have a “locking” mechanism and will be required to be fastened to e-scooter parking/docking areas to ensure that they cannot be left anywhere and potentially blocking sidewalks.
 - **Parking Management and Enforcement:** the operator will be required to identify and implement e-scooter parking/docking areas. They will also be required to educate users on proper parking procedures, such as not blocking the sidewalk clearway path of travel, obstructing features such as utility accesses, garbage bins, or doorways, or curbside zones reserved for uses such as buses, taxis or loading.

The City and members of the public will be able to report improperly parked e-scooters, which the operator will be required to address within a defined time period.

The following by-laws will need to be enacted and amended to permit the proposed micro-mobility pilot in Downtown Markham:

- E-Scooter By-Law – an e-scooter by-law must be drafted and enacted.
- Traffic By-law – 106-71 – will need to be amended.
- Lane Designation By-Law – 2018-130 – must be amended.
- Parking By-Law – 2005-188 – will need to be amended.

These will come to Council in May 2024 to permit the pilot to begin.

Selecting a Micro-mobility Pilot Partner

As part of the OVIN Markham Centre Demonstration Zone program, City staff undertook a competitive public call for proposals, inviting companies to propose first- and last-kilometre solutions to be demonstrated in Downtown Markham.

The proposal call yielded eight micro-mobility proposals of various types, and staff recommend that Scooty Mobility Incorporated (Scooty) be the micro-mobility partner for the OVIN Markham Centre Demonstration Zone.

Founded in 2019, Scooty is a GTA-based micro-mobility company with a Canadian team that understands the needs of local residents and employers. Scooty is a member of York University’s YSpace Accelerator Program, giving them a local understanding of the opportunities and conditions within Downtown Markham.

Scooty operates micro-mobility programs with e-scooters and e-bikes in the City of Brampton and Metrolinx. It is also the only micro-mobility company with access to GO

Transit Stations and a payment application that integrates with Presto. This collaboration with Metrolinx makes Scooty unique in its ability to deliver a first- and last-kilometer solution in Downtown Markham.

Implementing a Micro-mobility Pilot in Downtown Markham

To support the by-law changes and the Micro-Mobility Pilot in Downtown Markham, staff will prepare communication collateral to inform the public of the aforementioned requirements and regulations.

FINANCIAL CONSIDERATIONS

The Micro-Mobility Pilot in Downtown Markham will be implemented at the cost of the commercial operator, who will charge market rates to utilize e-scooters in the area. The City will not be charged to provide e-scooters as part of the pilot.

Staff and communication costs will support the pilot, which will be paid for as part of the OVIN DZ project, which the Province of Ontario funds. The installation of a bike lane along Enterprise Boulevard will also be funded through the OVIN DZ project to support the pilot.

HUMAN RESOURCES CONSIDERATIONS

A total of four staff resources have been secured to support the OVIN DZ, and the Province of Ontario funds them.

ALIGNMENT WITH STRATEGIC PRIORITIES:

Building Markham's Future Together

Markham Is More: 2023-2027 Markham Economic Development and Culture Strategy
Digital Markham

BUSINESS UNITS CONSULTED AND AFFECTED:

Economic Growth, Culture and Entrepreneurship

Engineering

Operations

Bylaw

Planning and Urban Design

Risk Management

ITS

Legal Services

Finance

RECOMMENDED BY:

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Frank Clarizio
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ATTACHMENTS:

- Not applicable