



CITY OF HAMILTON
PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT
Transportation Planning and Parking Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	May 31, 2021
SUBJECT/REPORT NO:	Free-Floating Carshare Pilot Program (PED20168(a)) (Wards 1, 2, and 3)
WARD(S) AFFECTED:	Wards 1, 2 and 3
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SUBMITTED BY:	Brian Hollingworth Director, Transportation Planning and Parking Planning and Economic Development Department
SIGNATURE:	

RECOMMENDATION

- (a) That the City of Hamilton implement a pilot permit program to allow for free-floating carshare parking in Wards 1, 2, and 3 for an 18-month period and report back to the Public Works Committee prior to the end of the pilot;
- (b) That the draft Amending By-law for On-Street Parking By-law 01-218 and Administrative Penalties By-law 17-225, attached as Appendix “A” and Appendix “B” to Report PED20168(a), which have been prepared in a form satisfactory to the City Solicitor, be approved;
- (c) That a permit fee of \$270.78 plus HST per free-floating carshare permit be included in the City’s User Fees and Charges By-law under the heading “Division Parking and School Crossing - Hamilton Municipal Parking System” effective September 1, 2021.

EXECUTIVE SUMMARY

Free-floating, or one-way carsharing, is a carsharing model where carshare vehicles holding a valid permit can park in designated on-street locations. This contrasts with

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the two-way carshare model, where a vehicle is picked up and dropped off at a specific spot in an off-street parking facility.

This Report seeks to create an 18-month pilot program for free-floating carshare operators to establish operations in Wards 1, 2, and 3. Free-floating carshare vehicles will only be able to start or end their trip within these Wards. Vehicles will be able to travel to destinations in other wards, but the vehicle will remain an active trip until they are returned to Wards 1, 2, or 3. If approved, a permit fee of \$270.78 plus HST per carshare vehicle would be included in the User Fees and Charges By-law effective September 1, 2021. This permit fee represents three times the 2020 on-street permit parking and time limit parking permit. This rate would be subject to change annually.

A summary of the proposed amendments to the On-Street Parking By-law is shown in Exhibit 1. Free-floating carshare vehicles that hold a valid permit will be exempt from the 12-hour time limit restriction imposed on on-street residential parking spaces. The permit will allow vehicles to occupy a designated parking space for a maximum of 72 hours. The 72-hour exemption is necessary during the start-up and establishment of the free-floating carshare program. However, experience shows that vehicles will move more frequently as the program matures.

Exhibit 1: Comparison of Parking Permissions between Private Passenger Vehicle (Existing) and Free-Floating Carshare Vehicle (Proposed)

Parking Space Type	Private Passenger Vehicle (Existing)	Free-Floating Carshare Vehicle (Proposed)
On-Street		
Revenue generating spaces (e.g. meters)	Required to pay the parking fee and must abide by any posted maximum durations and time limits.	Same as private passenger vehicles. Vehicles cannot end a trip in these spaces.
Non-Revenue Time Limited Parking Zone	Must abide by posted maximum durations and time limits. Eligible residents can obtain a Time Limit Exemption Permit from HMPS. They are still required to adhere to the 12-hour limit.	Vehicles can end a trip in these areas and remain parked for up to 72 hours. Carshare operators will be required to move their car out of the zone within 24 hours if there is a complaint.
Non-Revenue Zone with No Posted Time Limit	Must abide by the 12-hour limit.	Vehicles can end a trip in these areas and remain parked for up to 72 hours. Carshare operators will be required to move their car out of the zone within 24 hours if there is a complaint.
Parking by Permit Only Area	Eligible residents may be able to obtain a permit from HMPS. Otherwise, parking is prohibited in these areas.	Parking is prohibited in these areas at all times.
Off-Street		
Municipal Car Parks	Required to pay the parking fee, and must abide by hours of operation.	Same as private passenger vehicles. Vehicles cannot end their trip in these spaces.

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Under the proposed amendments to the Administrative Penalties By-law 17-225, proposed infractions related to the free-floating carshare permit provisions will provide an enforcement tool in the event of violations.

Staff will report back to Committee prior to the end of the pilot period to provide data collected by the carshare operator and to provide recommendations on whether to create a permanent program, necessary changes and any recommendations for expansion.

Alternatives for Consideration – See Page 8

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Each free-floating carshare vehicle operator will be required to pay an annual permit fee for each free-floating carshare vehicle in operation in the City. The proposed permit fee for 2021 is \$270.78 plus HST and will be included within the User Fees and Charges By-law effective September 1, 2021, and is subject to change annually. This price was established as three times the annual on-street residential parking permit rate. The levy will be impacted by an increase in revenue; it is estimated that 50 permits per year will be issued, totalling approximately \$13,539 per year.

Staffing: Hamilton Municipal Parking System (HMPS) staff would be required to issue permits to carshare vehicles. Parking enforcement of free-floating carshare vehicles would be required, the same as other vehicles in Hamilton. It is expected that approximately 50 permits would be issued, thus, negligible impact on staffing. Staff from Transportation Planning will implement, monitor and review the program, then report back to Committee.

Legal: An amendment to the On-Street Parking By-law 01-218, as shown in Appendix “A” attached to this Report, will permit free-floating carshare vehicles to park at the end of a trip in all unregulated and time limit parking locations on City streets within Wards 1, 2, and 3.

An Amendment to the Administrative Penalties By-law 17-225, as shown in Appendix “B” attached to this Report, would establish infractions and penalties related to free-floating carshare vehicle permit provisions.

Pursuant to the City’s Public Notice By-law 07-351, notice is required to be given prior to the enactment of the proposed permit fee of \$270.78 plus HST and prior to enactment of the proposed amendment to the Administrative Penalties By-law 17-225.

HISTORICAL BACKGROUND

Carshare has been operating in Hamilton since 2009, when Community CarShare, a Waterloo Region organization, began service using a station-based, two-way carshare model. Since then, Hamilton has grown to have nearly 50 station-based carshare vehicles pre-COVID, including nearly 40 managed by Communauto (the successor of Community CarShare) and another eight by Zipcar. Currently, two-way carshare operators are not required to obtain a permit to operate and work with City departments to lease vehicle parking space in municipal car parks.

Carsharing is a growing new-mobility industry evolving due to the growth in the sharing economy enabled by mobile technology. Recognizing the benefits of carsharing and that the free-floating operating model has worked successfully in other jurisdictions, the City is proposing an 18-month pilot to explore its merits. Free-floating carsharing co-exists with traditional two-way carsharing, bike-sharing, transit, and taxi/rideshare services in many cities worldwide, including Halifax, Toronto, Vancouver, Calgary and Edmonton.

Free-floating carshare programs exist in other Canadian municipalities. The Hamilton framework in this Report was developed using lessons from these jurisdictions.

Examples include:

- **Halifax Regional Municipality:** Operated a twelve-month pilot in 2016 that provided a time limit exemption in all residential areas. An October 2017 report to Halifax's Transportation Standing Committee concluded, "to date, this pilot has not generated any negative feedback and occupancy surveys of parking-controlled areas has not seen a significant volume of carshare vehicles parked." Following the pilot, the City choose to make the program permanent.
- **City of Toronto:** The City operated an 18-month pilot from November 2018 to April 30, 2020, that provided a 48-hour parking exemption. A February 2021 staff report "concluded that the pilot has proven to be successful." The City made the program permanent and increased the parking exemption time to 72 hours. Data from the pilot period revealed that the percentage of vehicles that overstayed the exemption time limit was high (>10%) during the first few months as usage built-up but then declined over time as membership grew. During the last quarter of the pilot, 1.5% or less of trips resulted in a vehicle overstaying the limit.
- **City of Calgary:** Calgary operates a tiered carshare permitting system that allows carshare vehicles to park in residential permit areas. Carshare operators must proactively redistribute vehicles and cannot exceed 25% of parking spaces on any individual block. The City reserves the right to remove permission to park

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in residential areas with a high number of confirmed infractions (this has not occurred as of the time of writing this Report).

Research from Canada and the U.S. have found the following outcomes of two-way carsharing:

- Canadian studies and carshare member surveys suggested that between 15 to 29% of participants sold a vehicle after joining a carsharing program¹;
- The same studies and surveys indicate that 25 to 61% of members delayed or had forgone a vehicle purchase¹; and,
- A typical carshare vehicle can replace 6 to 23 vehicles from the roads².

Recent research on the impact of free-floating carsharing found a 5% reduction in vehicle kilometres travelled in Canadian urban areas that implemented free-floating carsharing. The same study found that between 2 to 5% of free-floating carshare users sold a vehicle, and between 8 to 10% postponed purchasing a vehicle³.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Hamilton's City Council approved Transportation Master Plan (TMP) supports a free-floating carshare through policy actions 46, 62, 63, and 64:

- Policy 46 - Identify opportunities for and run pilot projects to assess the applicability and/or feasibility of implementing new technological opportunities, such as mobility as a service;
- Policy 62 - Adopt off-street and on-street parking policies and designs that ensure an adequate parking supply to support growth and economic development, contribute to the achievement of the mode share targets of the

¹ Communauto, 2000. Potentiel de L'Auto-Partage Dans Le Cadre d'Une Politique de Gestion de La Demande en Transport. In: Forum de L'AQTR, Gaz à Effet de Serre: Transport et Développement, Kyoto: Une Opportunité d'Affaires? Montréal, Canada. February 7.

Martin, E., Shaheen, S., Lidicker, J., 2010. Impact of carsharing on household vehicle holdings. Transp. Res. Rec. 2143, 150–158.

² Lane, C., 2005. PhillyCar-share: first-year social and mobility impacts of carsharing in Philadelphia, Pennsylvania. Transp. Res. Rec. 1927, 158–166.

Martin, E., Shaheen, S., Lidicker, J., 2010. Impact of carsharing on household vehicle holdings. Transp. Res. Rec. 2143, 150–158.

Zipcar, 2005a. Zipcar Customer Survey Shows Car-Sharing Leads to Car Shedding. Available at <https://www.autorentalnews.com/75124/zipcar-releases-survey-on-car-sharingimpact>.

³ Martin, E., Shaheen, S., 2016. Impacts of car2go on Vehicle Ownership, Modal Shift, Vehicle Miles Traveled, and Greenhouse Gas Emissions: An Analysis of Five North American Cities. Transportation Sustainability Research Center, Berkeley, CA.

TMP, and implement the Complete Liveable Better (CLB) streets and Vision Zero objectives of the TMP;

- Policy 63 - Evolve the Hamilton Municipal Parking System to support the increasing use of shared mobility such as carshare and other shared mobility options and, where applicable, park and ride, is supportive of a free-floating carshare; and,
- Policy 64 - Provide multi-modal access to/from and within employment lands, is also supportive of a free-floating carshare.

RELEVANT CONSULTATION

Consultation has taken place with HMPS staff who would be responsible for implementing the free-floating carshare permit process. Consultation has also taken place with the Ward 1, 2, and 3 Councillors, and carshare operator, Communauto, who currently operates a two-way carshare program in Hamilton.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Permitted and Non-Permitted Free-Floating Carshare Areas

This Report seeks to create an 18-month pilot permitting program for free-floating carshare operators to establish operations in Wards 1, 2, and 3. This corresponds to the area where the majority of existing two-way carshare vehicles are based. While free-floating carshare vehicles will be permitted in these areas, the operators may choose to establish a smaller operating area within these Wards. Expansion to other wards can be considered when staff report back on the pilot's findings, in consultation with the local Councillor, and drawing on the lessons learned.

Under the proposed amendments to the On-Street Parking By-law, free-floating carshare vehicles will not be permitted to end their trip (i.e. have returned the keys and are no longer using the vehicle) on through highways, in revenue-generating parking spaces or Municipal Car Parks. Carshare vehicles may park in an on-street metered parking space or Municipal Car Parks during an active trip, provided they have paid to be there, are parked within the posted time limit, and do not exceed the hours of operations in the respective Municipal Car Park. Vehicles will be able to travel to destinations in other wards, but the vehicle will remain an active trip in the booking system until they return the vehicle to Ward 1, 2, or 3.

Free-floating carshare vehicles that hold a valid permit will be exempt from the 12-hour time limit restriction imposed on on-street residential parking spaces. The permit will allow free-floating carshare vehicles to occupy a designated parking space for a

maximum of 72 hours. If complaints are received about a vehicle in a time-limited area that has not exceeded the 72-hour limit, the carshare operator will be required to move the free-floating vehicle within 24 hours.

Cost of Free-Floating Carshare Permits

If approved, a permit fee of \$270.78 plus HST per carshare vehicle would be included in the User Fees and Charges By-law, effective September 1, 2021. This rate would be subject to change annually. The initial price of \$270.78 was established at three times the 2020 on-street permit parking and time-limit parking permit. Parking Operations will use the revenue generated through the permitting process to cover any capital or operational costs associated with free-floating carshare operations.

The permit's cost to operate a free-floating carshare vehicle is indexed to the existing on-street permit parking price and was derived by examining permit prices in other municipalities in Canada. The Halifax Regional Municipality (HRM) charges a free-floating carshare fee equal to the on-street permit parking fee (\$30 per year). Toronto and Vancouver have permit costs which range from \$75 to \$1,500 depending on the area and permit type, which in some cases are significantly higher than Hamilton's proposed fee, as is the average parking rates in these cities overall. Staff have determined Hamilton's fee to be mid-range compared to all other Canadian municipalities with free-floating carshare permits.

Program Assessment

Free-floating carshare system operators will be required to share anonymous trip-related data with the City of Hamilton during the pilot monthly. This will include the number of vehicles, the number of vehicle trips, the number of active members, average trip duration, average trip length, percentage of trips after which the vehicle was parked for greater than 72 hours, the average length of time between uses, and other information to aid in assessing the success of the program and future expansion opportunities. Staff will work on a report back to Committee before the end of the pilot program.

Benefits of Free-Floating Carsharing to Residents

Carshare is an important option in offering Hamilton residents' various mobility choices and has proven to be an effective Transportation Demand Management (TDM) tool. Carshare is unique from other commercial vehicles, as the vehicle itself is the service, instead of most other commercial vehicles where the vehicle is a means to deliver goods and services. Carshare service provides a sustainable and affordable transportation option that reduces vehicle ownership rates, greenhouse gas (GHG) emissions and reduces household expenses.

The benefits of free-floating carshare include increased mobility, increased accessibility, increased affordability, and improved convenience for residents. Carshare use leads to lower automobile ownership rates over time, improving congestion while sustainably maintaining accessibility and mobility. The reduced automobile ownership rates and vehicle kilometres travelled help reduce Hamilton's carbon footprint.

A personal vehicle costs between \$8,000 to \$10,000. Households that reduce ownership of a personal vehicle can significantly lower their household transportation costs. Two-way carsharing in Hamilton has continued to serve Hamiltonians' needs for trips that start and end at the same destination for ten years. Introducing a new carsharing model will expand mobility options for residents and complement existing carshare services, transit, public bike-share, and taxi/ridesharing services.

Canadian municipalities have shown that there is latent demand for free-floating carshare services. Programs in Montreal, Vancouver, and Halifax, and a pilot in Toronto, have proven to be successful and popular from a user perspective. However, these jurisdictions' lessons show that the programs also need to be managed to mitigate potential impacts.

Enforcement and Management

Carshare operators will be required to move free-floating vehicles out of the zone within 24 hours of a complaint being submitted from Transportation Planning staff or a local resident, even if the 72-hour period has not elapsed. A condition of the permit will require carshare operators to submit a phone number and email that City staff can submit complaints to, as well as, list them on their public website for residents to submit complaints directly to them.

ALTERNATIVES FOR CONSIDERATION

Council could choose not to permit free-floating carshare vehicles. This would result in a business-as-usual scenario, where transportation options in the City are not improved. Therefore, the benefits, such as reduced vehicle ownership rates and congestion reduction, are not realized.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

Healthy and Safe Communities

Hamilton is a safe and supportive City where people are active, healthy, and have a high quality of life.

Built Environment and Infrastructure

Hamilton is supported by state-of-the-art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” – Amending By-law for On-Street Parking By-law 01-218

Appendix “B” – Amending Administrative Penalties By-law 17-225

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