



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

<b>TO:</b>	Mayor and Members General Issues Committee
<b>COMMITTEE DATE:</b>	February 10, 2022
<b>SUBJECT/REPORT NO:</b>	Public Bike Share Program Phased Procurement Process – Sustainable Operations Model and Funding (PED20109(d)) (City Wide) <b>(Outstanding Business List Item)</b>
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Peter Topalovic (905) 546-2424 Ext. 5129 Trevor Jenkins (905) 546-2424 ext. 1473
<b>SUBMITTED BY:</b>	Brian Hollingworth Director, Transportation Planning and Parking Planning and Economic Development Department
<b>SIGNATURE:</b>	

**Discussion of Appendix "A" of this Report in Closed Session is pursuant to Section 9.1, sub-section (i) of the City's Procedural By-law 21-021, as amended, and Section 239(2), sub-section (i) of the Municipal Act, 2001, as amended, as the subject matter pertains to:**

- a trade secret or scientific, technical, commercial, financial or labour relations information, supplied in confidence to the municipality or local board, which, if disclosed, could reasonably be expected to prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons, or organization.

**RECOMMENDATION**

- (a) That the Hamilton Bike Share system be transitioned from the current approach which provides no City contribution towards system operations or towards asset management to a Partnership Model approach which includes a City contribution toward operating and asset management costs to increase financial sustainability, maintain and improve service delivery, and build in asset management considerations;

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OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

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- (b) That a budget enhancement of \$302,400 to support the operating costs of the Hamilton Bike Share system be referred to the 2022 Operating Budget;
- (c) That upon approval by Council of the budget enhancement identified in Recommendation (b) that Council authorizes, directs and delegates authority to the General Manager of Planning and Economic Development Department to execute, on behalf of the City of Hamilton, the necessary agreements to amend and extend the existing contract with the current not-for-profit operator, Hamilton Bike Share Inc., to include the following:
  - (i) extended term of the agreement from December 31, 2022 to December 31, 2025;
  - (ii) a City contribution toward system operating costs of \$28 per bike, per month (total cost \$302,400);
  - (iii) key service and performance requirements for the operation of the system, including the Everyone Rides Initiative;
  - (iv) provisions related to potential future system expansion that would be based on generally the same terms and conditions, including geographic expansion and/or the expansion of the current fleet or the addition of e-bikes to the fleet;
  - (v) requirement for annual reporting by Hamilton Bike Share Inc. to the City, including an annual operating and financial report;
- (d) That a budget enhancement of \$54 K based on \$5 per bike, per month, to support the Everyone Rides bike share equity program through the provision of accessible bikes and fee subsidies for low income residents be referred to the 2022 Operating Budget;
- (e) That a budget enhancement of \$130 K to fund the bike share system connectivity fees with Mobility Cloud be referred to the 2022 Operating Budget and that Council authorizes, directs and delegates authority to the General Manager, Planning and Economic Development Department to execute, on behalf of the City of Hamilton, the necessary agreements with Mobility Cloud;
- (f) That a budget enhancement of \$108 K based on \$120 per bike, per year, to establish and fund a Bike Share Capital Reserve be referred to the 2022 Operating Budget;
- (g) That upon approval by Council of the budget enhancement identified in Recommendation (f) that staff be authorized and directed to establish a Bike Share Capital Reserve Fund and, a Bike Share Capital Reserve Fund Policy to

fund state of good repair capital improvements including new bike share parts and balancing equipment;

- (h) That the General Manager of Planning and Economic Development Department be authorized and directed to execute on behalf of the City of Hamilton, the necessary agreements to enter into a partnership with McMaster TransLab to analyse Hamilton Bike Share, Everyone Rides Initiative, and Commercial E-Scooter program data to support the delivery of the City's overall Micromobility Program to be funded from Project ID 4032155820 Sustainable Mobility to a maximum upset limit of \$15,000;
- (i) That Item ABL, respecting the Public Bike Share Program Phased Procurement Process, be identified as completed and removed from the Public Works Committee Outstanding Business List;
- (j) That the contents of Appendix "A" to this Report remain confidential.

## **EXECUTIVE SUMMARY**

At the General Issues Committee Meeting of November 26, 2021, the following direction was provided by Council:

"That Staff be directed to report back to the General Issues Committee, during the 2022 Operating Budget process, with options to effectively and efficiently provide financial sustainability for the Hamilton Bikeshare program in the City of Hamilton".

The purpose of Report PED20109(d) is to respond to this direction. This Report also responds to the direction provided by Council on November 25, 2020 through the approval of Report PED20109(c) to report back no later than Q2 2022 with a recommended procurement process to secure a long-term micromobility operator or operators for 2023 and beyond.

The Hamilton Bike Share system was launched in 2015 and has since become a network with over 130 hubs, 825 bikes, and with more than 1.98 million trips taken by residents and visitors. It has a significant equity, diversity and inclusion component that is one of its guiding principles and is operationalized through the community-led Everyone Rides Initiative (ERI), which provides low cost access to the system for eligible riders, expansion into underserved neighbourhoods, offers adaptive bikes, and delivers training programs.

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Community interest and support of the system is high as evidenced by the crowd-sourced fundraising campaign to support the continuation of the program when the former operator terminated its contract without notice during the onset of the COVID-19 pandemic. The “Micromobility Assessment of Operating Models, Funding Sources, and Role of Not-For-Profit Organizations” which was attached as Appendix “A” to the November 16, 2020 Public Works Committee Report PED20109(c) highlighted significant community benefit to continuing and expanding public bike share including: reduction of vehicle kilometres travelled by automobiles, greenhouse gas emissions savings, local air quality savings, congestion improvements, travel time savings, walking and cycling health benefits, and economic uplift potential.

Hamilton’s Bike Share system has operated for six years with no municipal levy funding for operating and relies primarily on funding programs from senior levels of government for capital infrastructure. One exception is the recent approval by Council to allow for the utilization of funds from cash-in-lieu of parking for micromobility, including bike share, though this funding is targeted for capital investments and one-time costs, as opposed to ongoing operating costs. However, there is growing evidence that to maximize their effectiveness, bike share systems should be operated similar to, and alongside, public transit systems and with predictable revenue sources sufficient to sustain a reliable and customer-focused service.

Hamilton Bike Share Inc. (HBSI) has been approved by Council as the interim bike share operator until at least December 31, 2022. In addition, on August 13, 2021, Council approved Report PED20134(b) which recommended that “upon the award of any agreements with a Commercial E-Scooter operator, the General Manager of Planning and Economic Development be authorized to amend the operating agreement with Hamilton Bike Share Inc. for the operation of the base bike share program ...”, which will require a contract amendment with HBSI.

In order to inform the phased procurement process, staff initiated a study “Micromobility Assessment of Operating Models, Funding Sources, and Role of Not-For-Profit Organizations” which was attached as Appendix “A” to the November 16, 2020 Public Works committee Report PED20109(c). The results of the Study indicate that the most stable bike share systems operate with a municipally-owned and operated base bike share system that receives financial support from the municipality and from grants, alongside a private sector, non-exclusive contract-based Micromobility system. Taking this into consideration, this Report recommends the continuation of the phased procurement process that would establish such a hybrid model to December 31, 2025. It would extend the existing base bike share operations under the existing not for profit operator, HBSI.

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This Report recommends employing the Partnership Model and maintaining a baseline funding scenario that maintains the current level of operations in the current service area with a maximum of 900 bikes for \$55 per bike, per month. This funding would be split towards an operating subsidy, the accessible bikeshare program, asset management, and connectivity fees. It is based on a target of funding 50% of the cost of the system through the Tax Levy, and the remaining 50% through revenues and grants, similar to the model for transit systems.

HBSI would be responsible for collecting user fees, grants, sponsorships and advertising, to contribute the remaining operational funds, as part of their obligations and incentives under the partnership, as it currently exists.

The Partnership Model, proposed in this Report, would establish a sustainable path forward for the bike share system; however, the current operator is maintaining the system only as a result of two unsustainable factors. First, is a reliance on donations, grants and private sector contributions; and while these funding sources have been able to keep the service operational, they are not a sustainable funding source and therefore create significant risk to the continued viability of the service. The second factor is to modify or reduce service levels such as station balancing, which creates a risk to the viability of the system as it can result in limited access to bikes at key station locations.

The Partnership Model, proposed in this Report, also lays the groundwork and establishes the parameters for system expansion. The Model is based on a per bike fee structure allowing for continued enhancement and expansion of the Program to new areas of the City on a per bike basis.

**Alternatives for Consideration – See Page 23**

**FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

Financial: Under the current contract with HBSI, the City does not contribute any funding for operations. The proposed phased procurement approach would extend this contract until December 31, 2025 and employ a sustainable operating model and funding.

The current bike share assets, including bikes and stations, are owned by the City, including the bike share equipment being donated by the City of Portland as outlined in Report PED21144 (July 7, 2021). Day-to-day maintenance of the City's assets would continue to be the responsibility of HBSI, and the City would cover a portion of those operations. Any expansions or major investments in the City's bike share assets, such as the purchase of new bikes, new stations, or new controllers, would

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continue to be the responsibility of the City and would be subject to the Council budget approvals process.

This Report is recommending an operations model and funding amount to sustain the existing base system with up to 900 bikes in the current bike share service area.

Based on the City's study "Hamilton Shared Micromobility - Assessment of Operating Models, Funding Sources, and Role of Not-For-Profit Organizations" which was attached as Appendix "A" to the November 16, 2020 Public Works committee Report PED20109(c) and information provided to the City from HBSI on bike share operations, the following is the proposed fee breakdown for sustaining bike share operations on a per bike, per month basis.

- General Operation Fee (paid to HBSI): \$28;
- Bike Connectivity Fee (paid to Mobility Cloud): \$12;
- Capital Improvement Fee (paid to a City Reserve Fund): \$10; and,
- Accessibility Fee (paid to the Everyone Rides Initiative): \$5.

For the up to 900 proposed bike share bikes, this totals a maximum upset limit of \$594 K annually. The remaining operational costs for the system would be the responsibility of HBSI in the form of user revenues, grants, sponsorships, and advertising.

The above costs do not cover any expanded bike share operating areas or capital replacement, however, the model has provisions for future expansion by using a per bike operations fee.

This report also recommends formalizing and augmenting the data monitoring program with McMaster Translab, to be funded through the existing from Project ID 4032155820 Sustainable Mobility to a maximum upset limit of \$15,000.

**Staffing:** There are no immediate staffing implications associated with this Report. The Bike Share Program will continue to be managed by existing staff resources within the Transportation Planning and Parking Division of the Planning and Economic Development Department.

**Legal:** Legal staff will review and approve all agreements and contracts associated with this Report.

## **HISTORICAL BACKGROUND**

The Hamilton Bike Share Program was fully launched on March 20, 2015. Since launching, the system has logged 1.98 million trips and 4.4 million kms travelled. The City purchased 750 initial bikes in 2014/15 for \$1.6 M through the Metrolinx Quick Wins Funding Program. In 2017, an additional 75 bikes were purchased through a Federation of Canadian Municipalities and Hamilton Community Foundation Grant for the initial expansion of the ERI, the bike share equity program. All bike share station racks (1,300) were refurbished and 650 new racks were added as part of an Ontario Municipal Commuter Cycling (OMCC) Program in 2019/20.

It is estimated that the City's contract with Social Bicycles LLC and later Uber Inc. has resulted in a cumulative value of approximately \$5 M in operational and maintenance costs since the system launched.

In May of 2020, Uber Inc. terminated their operating agreement with the City of Hamilton, and HBSI agreed to operate the Program for the City on a provisional basis, as part of the staged approach to develop a long-term strategy for Micromobility in the City, with bike share as its anchor.

On May 27, 2020 Council approved a motion (Item 6.4) including part (b), that "staff be directed to initiate a competitive procurement process with a goal of identifying a preferred long-term operator for the SoBi Bike Share Program and report back to Council with the results of the procurement process prior to the end of 2020." Following this meeting, as an interim solution, in June 2020 the City entered into a provisional contract with the not-for-profit operator, HBSI, who was previously contracted to operate the Bike Share Program by Social Bicycles LLC, the successful proponent of the original Request for Proposals (RFP) process in 2013. HBSI also operates the City's bike share equity program, the ERI.

On November 25, 2020, Council approved Report PED20109(c) Public Bike Share Program Phased Procurement Process which established an operating agreement through to December 31, 2022 for the operation of the existing base bike share program through HBSI.

In Report PED20109(c), Council approved a hybrid Micromobility approach which allows cities to have direct operational control over at least one of the Micromobility operators, usually the bike share operator, to ensure that strategic mobility, equity, and community engagement goals are met while also allowing healthy competition in the market to encourage technology and process improvements and low prices to the end users. Municipally-operated bike share systems are supported structurally and financially by these cities; whereas, the for-profit, non-exclusive contracted or permitted

systems are supported and funded by the private sector, usually in the form of E-Scooter programs.

One difference between the hybrid model in other cities and Hamilton is that the current bike share system operated by HBSI has been entirely reliant on revenue through user fees, grants, sponsorship and donations to cover operating costs, which is atypical. As such, pursuing a sustainable funding model, will ensure the success of the City's overall Micromobility system.

The City currently has approved capital funding for bike share enhancements in the amount of \$460 K for bike share controller enhancements through the OMCC Program (Project ID 4661817124) for 900 controllers.

On July 7, 2021, (Report PED21144), Council approved a bike share equipment donation from Portland, Oregon which will result in an expanded fleet and extend the life of the existing fleet by providing a greater spare ratio for the fleet and a source of compatible parts.

On August 11, 2021, (PED20134(b)), Council approved Commercial E-Scooter Operations through the development of a RFP process and the award of operations contracts for up to two operators. The Program will run as a two-year pilot, with potential extensions, and fees collected will help offset operational impacts to the Bike Share Program.

Report PED20081 (September 21, 2021) established that the City's Parking Reserve Fund, which has a current balance of approximately \$465 K, can be used for capital improvements for the Transportation Demand Management (TDM) Program and the Micromobility Program, including the Bike Share Program.

The operations contract between the City and HBSI ends on December 31, 2022, which coincides with the end of an Ontario Trillium Fund Grow Grant awarded to the ERI. This Report is well timed, as it provides a sustainable path forward for the Micromobility system in Hamilton.

## **POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

There are no policy implications associated with this Report.



## **RELEVANT CONSULTATION**

Several internal stakeholders were consulted as part of the development of this Report including:

- Legal Services;
- Purchasing;
- Financial Planning, Administration and Policy; and,
- Hamilton Municipal Parking Service (HMPS).

Staff from the following organizations were interviewed for the Study “Hamilton Shared Micromobility - Assessment of Operating Models, Funding Sources, and Role of Not-For-Profit Organizations” attached as Appendix “A” to the November 16, 2020 Public Works Committee Report PED20109(c):

- City of Toronto;
- City of Kelowna;
- City of Philadelphia, Pennsylvania; and,
- City of Arlington, Virginia.

Information from additional cities was also used to develop this Report including Montreal; Vancouver; Seattle, Washington; Portland, Oregon; Washington D.C.; and, Minneapolis, Minnesota.

Organizations represented on the City’s Mobility Lab focus group were consulted as part of a public workshop pertaining to the operating models for the City’s Micromobility system on July 23, 2020. This included members of the Hamilton Cycling Committee (HCyC), Cycle Hamilton, Environment Hamilton, McMaster University, Mohawk College, Hamilton Health Sciences, Smart Commute Employer partners, and residents.

The Recommendations contained in this Report draw on best practices emerging from professional organizations researching and informing practice in Micromobility and, which have already been instituted in many cities across North America and around the world including the North American Bike Sharing Association (NABSA), the National Association of Transportation Officials (NACTO), and Share the Road.

HBSI was consulted in the development of this Report.

## **ANALYSIS AND RATIONALE FOR RECOMMENDATION**

### **Review of Operating Models**

Recommendation (a) of this Report responds directly to the motion approved on November 26, 2021 General Issues Committee: “that Staff be directed to report back to the General Issues Committee, during the 2022 Operating Budget process, with options to effectively and efficiently provide financial sustainability for the Hamilton Bikeshare Program in the City of Hamilton”.

In order to provide sustainable financial support for the Bike Share Program, an operating model must be chosen to establish a relationship with the contracted operator of the system and determine how funding will be distributed. There are four typical models that are analysed in this Report including: the Partnership Model, the Fee-For-Service Model, the Specific Components Model, also referred to as State of Good Repair Model, and the Privately-Operated Model. There are other models in use by the City of Hamilton and other cities for a variety of services, but the models analysed in this Report combine elements of these models.

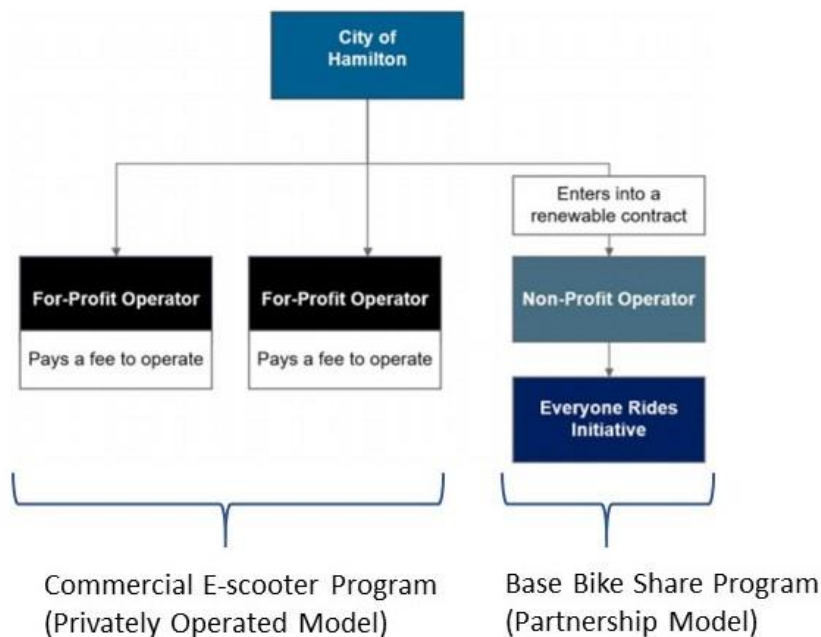
- Partnership Model

The Partnership Model is a broad term that describes the relationship between the municipality and service provider in both the public bike share context and public transit context; where the municipality has financial responsibilities for operations, but so does the operator. This Model maintains the current partnership between the City and HBSI and funds a portion of the operations, while requiring that HBSI also be responsible for a portion of the operational funding. This Report recommends a baseline funding scenario that only maintains the current level of operations in the current service area with a maximum of 900 bikes for \$55 per bike, per month, which was established based on cost estimates for operations, support for the accessible bike program, connectivity fees, and asset management principles. Generally, in this Model, the revenue/cost ratio is expected to be approximately 50%, so the City would cover 50% of the operations, with the operator responsible for the other half.

The Partnership Model also builds in incentives for the operator, as they need to meet their commitment through user fees, grants, sponsorship, and donations. As per the City’s Micromobility assessment of operating models, funding sources, and role of not-for-profit organizations attached as Appendix “A” to the November 16, 2020 Public Works Committee Report PED20109(c), this Model is consistent with those recommendations to establish a hybrid operating model with a municipally-supported bike share program and a commercial E-Scooter program. It is diagrammatically explained in Figure 1.

There are other alternatives for consideration in terms of the model and the funding amount, corresponding to various service levels and expansion areas; however, this Model focuses on the base case, which maintains the partnership between the City of Hamilton and HBSI and requires both parties to provide operational funding. This model can be scaled to include expansion to other areas of Hamilton, more pedal bikes and trikes, as well as, the introduction of new technology including E-bikes and E-trikes.

Figure 1: Illustration of Proposed Organizational Structure for Future Shared Micromobility in Hamilton



The Partnership Model is a popular delivery model for bike share systems in North America, especially for mid-sized cities that have existing bike share programs, as highlighted in Table 1. In these cities, the existing bike share program is supported by the city in terms of operational control and financial contribution for operations. Typically, the city owns the bike share equipment and subcontracts operations to a non-profit, social enterprise or for-profit operator. The City of Hamilton has employed this model since 2015, except for requiring the operator to cover all the operating costs, which is atypical. Adopting the recommendations of this Report would bring Hamilton in-line with most other cities that use the Partnership Model and fund all or a portion of bike share operations.

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Table 1: Operating and Funding Model for Various North American Jurisdictions

Jurisdiction	Operating Model	Funding Model
Long Beach - Long Beach Bike Share	Publicly-owned, Non-profit Operated Non-Profit	Funded by City <ul style="list-style-type: none"> <li>Transportation Mobility Bureau Budget</li> </ul>
Milwaukee - Bublr Bikes	Non-Profit	Partial funding by City (via matching contribution) <ul style="list-style-type: none"> <li>The City also supports Bublr Bikes by securing federal grants</li> <li>Recent expansion funds provided by a \$1.9 M Federal Congestion Mitigation and Air Quality Improvement Grant</li> </ul>
Minneapolis - Nice Ride	Non-Profit	Partial funding by City <ul style="list-style-type: none"> <li>City's Operating Budget and Federal Grants</li> <li>Currently pursuing a Joint Shared Mobility Request for Proposals with the cities of Minneapolis and St. Paul</li> </ul>
Buffalo - Reddy Bike	Non-Profit	Funded by City <ul style="list-style-type: none"> <li>The City of Buffalo, with funding from the New York State Department of Transportation's Congestion Mitigation and Air Quality Improvement Program, supports the system</li> </ul>
New Orleans - Blue Krewe	Non-Profit	Partial funding by City <ul style="list-style-type: none"> <li>Partnership with City, including fiscal support from the Greater New Orleans Foundation and other donors</li> </ul>
Austin, Texas - MetroBike	City operated	Funded by City <ul style="list-style-type: none"> <li>Fully integrated with City's transit provider</li> </ul>
Toronto - Bike Share Toronto	Publicly-owned, Privately Operated	Funded by City <ul style="list-style-type: none"> <li>Toronto Parking Authority Budget</li> <li>Eligible Section 37 Planning Act Reserve Funds and Toronto Parking Authority revenues</li> <li>Funds from the Provincial Government's Ontario Municipal Commuter Cycling Program</li> </ul>
Sacramento	Publicly-owned, Privately Operated	Funded by City <ul style="list-style-type: none"> <li>Sacramento Metropolitan Air Quality Management District was the lead applicant for funding from the Sacramento Area Council of Governments 2013 funding round. In 2015, SACOG became the lead agency on the project and advanced the project as a publicly owned/privately operated hub-based bike share system</li> </ul>

The Partnership Model has additional benefits to the City, beyond being less costly, as it relies on both partners to contribute financially to the operations. The Model also has less impact to full-time employee (FTE) requirements of City Staff because the collection of user fees, grants and sponsorships are the responsibility of the operating partner. It also allows the operating partner to access grants the City and for-profit operators do not have access to. The Model ties this funding to the number of bikes in the system so it can equitably scale as the system is expanded. It lessens the dependence on grants and private sector contributions while still incentivising the operator to continue pursuing those funding mechanisms in a more supportive and sustainable manner.

This option also staggers the City's risk and workload, allowing it to work with HBSI to establish a sustainable bike share program through to 2025; determining the next steps for a procurement that will cover 2026 to 2031. It should also be noted that, HBSI exists for the sole purpose of operating bike share, and over the multi-year analysis period, the City has options to sell the entire system to HBSI or merge HBSI as an agency of the City, similar to other entities like a parking authority, a trust or an independent body with Council representation on its board. Continuing the partnership with HBSI allows the City to leverage skills and experience of a competent local operator that is dedicated to operating equitable micromobility in Hamilton and is familiar with the needs of the residents.

The Partnership Model is the preferred option for many reasons as described above and especially because it has built-in incentives to ensure the operator's performance, while also guaranteeing the City's support and participation in the provision of public bike share.

- Fee-for-Service Model

Under a Fee-for-Service Model, the City would contract out the operations and maintenance of the bike share system to an external entity. Potential operators would bid a fixed sum to operate the bike share system on the City's behalf, for a certain period of time (e.g. five years). Typically, the operator's responsibilities are limited to maintaining the bikes and stations, rebalancing the fleet as needed, and deploying new equipment.

As the City would be paying the full cost of operations, it is expected that the cost per bike, per month, could be approximately \$105 per bike/month or \$55 more (+45%) than the fee proposed in this Report. The successful operator may also be a for-profit entity, which would likely prevent it from accessing grants to support other initiatives, such as equity membership programs and accessible bike share.

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This Model would require the City to take on a number of responsibilities performed by HBSI today (Table 2), such as collecting user fees, generating advertising, operations of equity programs, and potentially call centre/customer service functions. While some functions could potentially be done by existing resources, there is an estimated City Staff impact of two to three FTE to continue these services at a comparable level as today.

While the City would directly collect revenue from user fees, advertising and sponsorship, it is unlikely that these will offset the cost differential between the Fee-for-Service and Partnership Models.

Table 2: Comparison of Typical Responsibilities: Fee-for-Service

<b>Bike Share Operator Responsibilities</b>	<b>City Responsibilities</b>
<ul style="list-style-type: none"> <li>• Maintenance of bicycles and station</li> <li>• Rebalancing fleet</li> <li>• Deploying new bikes and stations</li> <li>• Customer Service (varies)</li> </ul>	<ul style="list-style-type: none"> <li>• Collecting User Fees (currently done by HBSI)</li> <li>• Advertising, marketing and sponsorship (currently done by HBSI)</li> <li>• Customer Service (currently done by HBSI)</li> <li>• Equity Programs (currently done by HBSI)</li> <li>• Connectivity Fees (currently done by HBSI)</li> <li>• Capital Investments</li> </ul>

○ Specific Components Model (State of Good Repair)

This Model involves funding specific components of the bike share program that are related to the City’s assets. While this Model is not a popular one for supporting bike share systems, it recognizes that the City is responsible for the on-going cost of its assets. In the case of Hamilton Bike Share, the components that would become the City’s responsibility include: the bike connectivity fees, balancing vehicle maintenance, bike parts and bike repair activities. Currently, these costs are absorbed by HBSI and are a significant challenge due to a lack of sufficient funding. As a result, the condition of the bikes is declining, and causing impacts to operations.

This Model would not establish a partnership, but HBSI would invoice the City for bike parts and bike repairs. The City would contract directly with Mobility Cloud for connectivity fees and with Fleet Services for vehicle maintenance.

While this Model provides support for the Hamilton Bike Share service, it may not satisfy the requirement for long-term sustainability. Its cost is marginally lower than the Partnership Model, but it is also variable and not as predictable as the Partnership Model.

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○ Privately-Operated Model

The Privately-Operated Model sees an external entity take responsibility for covering all operating costs. This is how bike share initially operated in Hamilton during the Social Bicycles and Jump/UBER period. This Model has been financially sustainable in a select number of very large cities, where the operator offsets costs by selling advertising (bikes and stations) and user fees. Systems in very large cities, like New York City and Paris, have been sustainable using this Model due to their high advertising rates, however, the vast majority of small, mid, and large-cities that have attempted to use it, have failed. This Model typically works for a few years, though many cities lack the critical mass required to support bike share through advertising rates alone, including BIXI Toronto, Pronto Cycle Seattle, Boise Greenbike, Wichita Bike Share ICT, and Harrisburg Bike Share.

If it's not feasible for the private entity to breakeven or make a profit from advertising, the operator can leave the market at any time. Hamilton went through this in 2020 when Uber unexpectedly shut down operations. This leaves jurisdictions without the essential service that many residents and workers depend on to get to work, school, or to make trips. The inherent uncertainty of this Model creates risks for jurisdictions. Municipalities often end up taking over the system or providing funding to prevent the systems from shutting down.

Public Bike Share systems operate similar to other public transit systems, and to maintain equity in the transportation system, must operate in areas that may not be revenue generating, which requires municipal funding support. This is one of the key reasons why the Privately-Operated Model is not sustainable in the long term.

**Model Analysis**

The total cost to the City and operator differs between models. The estimated annual cost of the four models outlined in this Report are summarized in Table 3. The Table provides a breakdown of where the different fees will go, and the total cost to the City and operator.

Table 3: Cost Comparison of Potential Operational Models

<b>Model</b>	<b>Operating &amp; Accessibility Fee To Operator</b>	<b>Connectivity Fee To Mobility Cloud</b>	<b>Capital Improvement To City Reserve</b>	<b>Total Cost to City</b>	<b>FTE Impact to City</b>	<b>Estimated Cost to Operator<sup>1</sup></b>
<b>Partnership</b>	\$356 K	\$130 K	\$108 K	\$594 K	0	\$493 K

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<b>Model</b>	<b>Operating &amp; Accessibility Fee To Operator</b>	<b>Connectivity Fee To Mobility Cloud</b>	<b>Capital Improvement To City Reserve</b>	<b>Total Cost to City</b>	<b>FTE Impact to City</b>	<b>Estimated Cost to Operator<sup>1</sup></b>
<b>Fee-for-Service</b>	\$1,166 K	\$130 K	\$108 K	\$1,404 K <sup>2</sup>	1 <sup>3</sup>	\$0
<b>State of Good Repair</b>	\$126 K	\$130 K	\$108 K	\$363 K	0	\$723 K
<b>Privately-Operated</b>	\$54 K	\$130 K	\$108 K	\$292 K	0	\$795 K

<sup>1</sup> Operator would need to offset these costs through user fees, advertising, grants and other channels.

<sup>2</sup> The City would collect user fees and advertising revenue, though it is highly unlikely revenue will offset costs.

<sup>3</sup> The 1 FTE required for Fee-for-Service is in addition to the 'Total Cost to City' column

The base fee that is the City's responsibility is the bike connectivity fee, as it is required to make the City's assets operational. The other fees listed may all vary according to the type of model being employed and the priorities identified for the program; in the case of this Report, a sustainable funding model. The Partnership Model being recommended strikes a balance as a mid-range fee the City can pay to establish sustainable operations.

**Financial Analysis and Impacts of Proposed Partnership Model**

HBSI has provided information on current and past operating costs and revenues through financial statements and other documents. These figures are provided in Confidential Appendix "A" to this Report. Staff have validated this information against real world data and other systems, and developed estimates of current and expected revenues and expenditures for the different elements of the system.

HBSI's current gross operating cost, under normal conditions, is approximately \$80 to \$90 per bike, per month, which is comprised of labour to repair and rebalance bikes, facilities, insurance, and administrative costs. At present, HBSI assumes the cost of software connectivity, which is approximately \$130 K per year. Due to a lack of dedicated funding, very little is invested at present in asset management or asset renewal, with the exception of previously committed City investments in capital and controllers.

Staff's review of HBSI's operating expenses and revenues suggest that taking into account only user revenues and committed sponsorships, the system revenues are covering operating costs. HBSI's costs are presently off-set through a combination of user fees, sponsorships, grants, and donations. Under current operations, it is

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OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.



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estimated that the operating deficit is in excess of \$400 K per year. Previous one-time donations in 2020 have allowed the system to continue to operate.

Under the Partnership Model, staff are proposing a levy contribution to the program of \$40 per bike, per month, for operations, consisting of \$28 per bike, per month, to HBSI for general operating, and \$12 per bike, per month, to Mobility Cloud for connectivity fees. The balance of the overall costs will be offset by HBSI through user fees, sponsorship, advertising and grants. The impact of these contributions is shown in Table 4, along with comparisons to the current operating model. This projection assumes 900 bikes in service and thus represents an upper limit of costs.

Under the proposed Partnership Model, there would still be a need for the operator to seek some sponsorships and other revenue streams, but overall the Partnership Model is designed to provide for a financially sustainable system over time.

It is also expected that with further investments in the maintenance of the bike share assets, as discussed below, more effort can be spent on true operations as opposed to maintenance, thereby improving overall operational efficiency.

Table 4: Comparison of Proposed Bikeshare Funding Models (900 bike fleet)

	<b>Current Model</b>	<b>Partnership Model</b>
<b>Estimated Revenue (Operator)</b>		
User Fees	\$310 K to \$340 K	\$310 K to \$340 K
Donations, Sponsorships and Fundraisers <sup>(1)</sup>	\$260 K to \$280 K	\$110 K to \$160 K
Partnership Model City Contribution	nil	\$302 K
Connectivity Fee City Contribution	nil	\$130 K
<b>Total</b>	<b>\$570 K to 620 K</b>	<b>\$852 K to \$932 K</b>
<b>Estimated Expenses (Operator)</b>		
Operating Expenses	\$795 K	\$795 K
Connectivity Fee	\$130 K	\$130 K
<b>Total</b>	<b>\$925 K</b>	<b>\$925 K</b>
<b>Operating Surplus (Deficit)</b>	<b>(\$305 K to \$355 K)</b>	<b>\$7 K to (\$73 K)</b>

<sup>(1)</sup> Donations are one time and may not continue to future years. Value shown based on 2020 estimate

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Staff are further proposing a levy contribution of \$10 per bike, per month, into a capital renewal reserve, and \$5 per bike, per month, toward the bike share equity program. The details of each expense category are provided below:

1. **General Operation Fee (\$28):** this covers general day-to-day operations of the bike share system, including maintenance of bicycles and stations, rebalancing the fleet, deploying new bikes and stations, call centre/customer operations, and collecting user fees. This fee would be paid to HBSI.
2. **Bike Connectivity Fee (\$12):** this covers the monthly cost paid to the cellular provider to connect the controllers on the bike to the network and the backend support for system operations (e.g. software, servers, etc.). This fee is typically covered by the municipality in bike share systems where the bikes and station are owned by the municipality and operated by someone else. In Hamilton's case, this fee would be paid to Mobility Cloud, the software-provider for the backend support system used to connect the City-owned equipment to the network.
3. **Capital Improvement Fee (\$10):** the fee will be put into a reserve to offset capital costs related to bike share, including renewal of bike controllers, bikes, and stations, and other components necessary to operate the system. It will be managed by the City. It should be noted that this will not be enough to replace the existing assets alone so other funding (e.g. grants) will be required.
4. **Accessibility Fee (\$5):** a fee to enable operation of the ERI accessible and adaptive bike program (e.g. trikes) which allows people with disabilities and varying bike needs to access bike share. The Program is popular and ensures that bike share remains inclusive to all members of the local community.

Following the acquisition of the Portland bike donation, there will be up to 900 operational bikes in the City's fleet, meaning the annual cost upset limit would be \$594 K per year. For comparison, Bike Share Toronto pays \$103 per manual bike, per month, to their for-profit operator, or \$8,712,000 per year, excluding bike connectivity, capital improvement, and accessibility-related costs.

### **Contract Extension**

A phased approach to continue the operation of the Hamilton Bike Share service was directed by Council on May 27, 2020 (Report PED20109(a)) and on November 16, 2020 (Report PED20109(c)). This Report recommends a contract extension with HBSI to operate the bike share system to December 31, 2025, with the note that there may be a requirement of additional capital investments to keep the system operating to this point.

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The extension will allow the City's E-Scooter Pilot Program to operate for up-to three years and allow staff to evaluate and review the suitability of E-Scooters in Hamilton and report back to Council. Aligning the bike share contract with E-Scooter contracts will allow staff to evaluate if it is feasible or desirable to have the City's Micromobility Program delivered by a single operator.

The following parameters used to guide the contract amendments being proposed in this Report including:

1. **Service Levels:** which will include requirements for balancing, customer service, maintaining state of good repair of bikes and other related elements that are standard for bike share contracts and are already contained in the existing contract.
2. **User Fees:** will be set by the City and HBSI that are practical and within industry standards and will require both parties to agree to fee or membership changes.
3. **Partnership Fee Stabilization:** ensures that City's contribution to bike share operations is based on an equal sharing of net costs and to ensure that any excess revenues would be invested into the system or used to off-set the City's contribution.
4. **Equity Program (Every Rides Initiative):** will report on the use of the City's contribution through the Accessibility Fee and how it is benefiting bike share and ERI members.
5. **System Expansion:** to new geographic areas and/or to add additional pedal bikes to the system can be requested by either the City or HBSI, as long as the same fee system recommended in this Report is applied on a per pedal bike basis.
6. **E-bikes:** may be added to the system by the City, and HBSI will manage these, provided that the capital costs are covered by the City or through grant programs and that a similar operations fee be applied by the City to operate these bikes. Additional fees or grants may be required for E-bike operations as they have higher operational costs.
7. **Annual Reporting:** HBSI will provide an annual report on operations, including revenues and expenses, as well as, ridership statistics.

### **McMaster Data Partnership**

McMaster University's TransLab has been analysing bike share data from the start of the Program in 2015. The Lab has a collaborative partnership with HBSI. TransLab has leveraged this partnership at no cost to the City or the Bike Share Program, and published numerous scholarly, peer-reviewed journals using the bike share data. This has helped researchers internationally and has helped City Staff use the data to identify gaps in the cycling network.

This Report recommends formalizing this partnership between the City and McMaster TransLab to continue the data analysis work and build upon it to analyse the E-Scooter data from the Commercial E-Scooter Pilot. This partnership will help the City determine the performance of the overall Micromobility system and use McMaster as an independent third party to provide the City with data that can be used for decision making and for charging fees. It is expected that a formal partnership will require the City to pay McMaster for their services through the fees associated with the Bike Share Program and the E-Scooter Program. Other providers can do this type of work, but since McMaster has been heavily involved in the Program for so many years, it makes financial sense and builds community capacity by continuing and expanding the relationship with TransLab.

### **Potential System Enhancements**

This Report and the recommended funding do not provide for system expansion. However, the proposed Partnership Model would establish the framework and foundation upon which Council could, in the future, decide to expand the service. Staff are recommending that the amended agreement with HBSI set out the parameters for future system expansion in substantially the same terms as the current system. The system expansion would be at the discretion of Council and subject to the City funding the capital costs of acquiring the bikes and stations and a similar operating contribution of \$55 per pedal bike, per month.

The City's Micromobility assessment of operating models, funding sources, and role of not-for-profit organizations attached as Appendix "A" to the November 16, 2020 Public Works Committee Report PED20109(c) analysed the propensity of different areas of Hamilton that would best support shared mobility devices. The analysis found that the top performing expansion opportunities are:

- A 1.9 km<sup>2</sup> eastward expansion of the existing service area from Ottawa to Kenilworth (Lawrence to the CN Corridor); and,
- A 13.2 km<sup>2</sup> expansion on the Mountain, north of Mohawk Road (Upper Gage to Scenic).

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Both expansion opportunities would require capital and operating cost investments to implement and sustain; allowing over 96,000 more residents to access bike share in their community. These expansions would also support the growing investments in cycling infrastructure and routes in these areas, including the Keddy Access Trail, Mountain Brow Trail, Cannon Bike Lanes, and the Pipeline Trail.

The estimated overall gross costs of these two options are summarized in Table 5. Staff continue to monitor for funding opportunities through Federal and Provincial investment programs (e.g. Investing in Canada Infrastructure Program). However, these programs typically only support capital investments and cannot be used to offset operating costs. Reliable and consistent operational funding is a necessity to being able to expand the bike share system. In addition to these costs, any large-scale expansion of the system would potentially require additional City staff resources to provide oversight and management of the expansion area, and coordinate between the bike share operator and internal City groups.

Table 5: Estimated Costs for Bike Share Service Area Expansion

<b>Expansion Opportunity</b>	<b>Number of Stations/Bikes</b>	<b>Estimated Capital Cost (2020\$)</b>	<b>Estimated Gross Operating Costs (2020\$)</b>
Lower City - East to Kenilworth (Lawrence to CN Corridor)	8 stations / 60 pedal bikes	\$200 K	\$765 K/year
Mountain – North of Mohawk (Upper Gage to Scenic)	120 stations / 557 pedal bikes	\$2.3 M	\$602 K/year

Note: Operating estimates do not consider the additional distance that would be required for the operators to travel, the additional storage and fleet maintenance space required, and additional vehicles required for the expansion. There may also be a need for additional storage space.

The propensity analysis also suggested other expansions opportunities including an eastward expansion of the lower City service area to Eastgate Square, the south Mountain (Mohawk to Rymal), Valley Park, a realignment of the Dundas deployment, and the historic cores of Stoney Creek, Ancaster, and Waterdown. Further investment in cycling infrastructure in these areas would help increase their propensity. Additional investments in cycling infrastructure, both in these areas and City-wide, will also help to continue the Bike Share Program’s success.

### **Everyone Rides Initiative (ERI)**

Hamilton's ERI would continue to operate under the recommended model. ERI is an initiative of HBSI and operates independently and at no cost to the City. It provides cycling education, outreach, discounted access to the bike share system, advice and support to the City on system expansion, and promotes a range of initiatives that remove barriers to cycling across the City. This Report is proposing a financial contribution to the adaptive Bike Share Program, a part of the ERI Program, to ensure the City is providing Accessibility options for its residents. This provision was discussed with the Hamilton Advisory Committee for Persons with Disabilities (ACPD).

Regardless of the operating model, most of the cities reviewed also had equity considerations built into the shared Micromobility programs, although few are as comprehensive as the ERI. These include discounts for low income riders, alternative payment arrangements for those without credit cards and/or smartphones, requirements or incentives for operators to deploy some of their fleet in marginalized neighbourhoods, translated services and program materials, cycling safety training and education, and targeted system expansion plans to ensure equitable distribution. An emerging part of these Programs is the provision of more accessible bike types including tricycles as part of the bike share offering. The Accessibility fee being proposed in this Report will help support this overall programming and the provision of various bike types for those who cannot ride a two-wheeled bike.

### **Electric Bike Share Bikes (E-bikes)**

Electric assist bikes (E-bikes) have become popular for bike share systems, especially those that operate in areas with grade changes (e.g. hilly areas). E-bikes look like a normal bike but provide a boost to rider through a pedal assist. E-bikes help with hills and inclines, reduce emissions by 97% relative to automobiles, allow people to travel longer distances, and help to get people cycling who may not otherwise ride a traditional bike because of physical constraints. Riders often make longer and more trips due to less physical exhaustion and convenience. Toronto Bike Share has introduced E-bikes as part of their fleet, while Portland's BikeTown system replaced their manual bike system with a fully electric fleet.

The City's existing bike share bikes are manually-powered, which reflects the available bikes at the time of its initial procurement. Integrating E-bikes could help increase the usefulness of the system to residents of different abilities, particularly if the system expands across the Escarpment. Staff continue to monitor opportunities through Federal and Provincial investment programs to see if there is an opportunity to introduce E-bikes into the fleet as a pilot.

Experience in other jurisdictions has found that E-bikes cost twice as much to purchase and operate as manual bikes but are generally used twice as often per day. Should E-bikes be introduced within the City's bike share fleet, a new monthly E-bike rate would need to be negotiated with the operator.

## **ALTERNATIVES FOR CONSIDERATION**

### **Alternative Option 1: Pursue Funding Specific Components – State of Good Repair**

This option will result in variable spending, due to funding specific components of the bike share service that relate to the maintenance of the City's bike fleet and stations, including the bike connectivity fees, balancing vehicle maintenance, bike parts and bike repair activities. The funding amount is lower, but similar to the Partnership Model, however, it may not result in a fully sustainable bike share service.

### **Alternative Option 2: Pursue the Fee-for-Service Model**

The City would completely take over all aspects of bike share system operations and contract out operations using a set fee, regardless of what revenues are collected. This is not the recommended approach as it creates uncertainty and risk to the continued viability of the City's existing Bike Share Program, while potentially costing the City significantly more in the long term. This may also present a challenge as the current operating contract with HBSI continues to December 31, 2022.

### **Alternative Option 3: Pursue the Privately-Operated Model**

The City could open-up the operation of Micromobility technologies, including bike share and E-Scooters, to any for-profit or non-profit entity, through an open permit-based program. This is not the recommended approach as it creates uncertainty and risk to the continued viability of the City's existing Bike Share Program, and the market for other forms of Micromobility in the City is uncertain and untested. This may also present a challenge as the current operating contract with HBSI continues to December 31, 2022.

## **ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN**

### **Community Engagement and Participation**

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

**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.

**Clean and Green**

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

**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” to Report PED20109(d) - CONFIDENTIAL - HBSI Operational Costs for the Hamilton Bike Share System

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