



MEMORANDUM

Public Works Department

DATE: June 26, 2019

TO: Bicycle/Pedestrian Advisory Committee

FROM: Nate Baird, Transportation Planner
Ria Hutabarat Lo, Transportation Manager
Dawn S. Cameron, Assistant Public Works Director

SUBJECT: Scooter Share Pilot Program

RECOMMENDATION

Provide input regarding development of a pilot scooter share program.

BACKGROUND

Mountain View Bike Share Pilot Program

On September 26, 2017, the City Council supported the development of a one-year pilot bike share program using a permit system to allow privately funded dockless bike share services. The bike share pilot aimed to encourage people to use bicycles for first- and last-mile trips to support the City’s goals of embracing sustainable living, encouraging a healthy economy, and minimizing traffic and parking congestion. In order to allow for competition, comparison, and flux, the program permitted up to four operators with a combined fleet of up to 800 standard or electric bikes. Motorized scooters (also known as e-scooters or just scooters) were not addressed or permitted under the program.

When the bike share pilot program was launched in May 2018, three operators initially applied for permits, with Spin withdrawing their application prior to selection. The remaining two operators were Chinese-owned startup, ofo, which provided low-cost standard bikes, and a Bay Area startup, Lime, which provided e-bikes at a higher price point.

Shifting business plans and volatility in the device-sharing industry has resulted in both operators withdrawing from the program before the end of the pilot period. Citing a lack of market viability, ofo announced its withdrawal from bike share throughout much of the United States in July 2018. Since that time, Forbes Magazine has reported that the startup has experienced cash flow problems and executives have considered

filing for bankruptcy. In February 2019, Lime also announced its withdrawal from bike share in Bay Area cities in order to shift toward a scooter share business model.

In February 2019, another e-bike share operator, JUMP (which was acquired by Uber in 2018), submitted a permit application. City staff has also received inquiries from a bike share startup based in the East Coast. At this time, JUMP has put their plans for Mountain View operations on hold due to concerns regarding their regional prospects. These concerns relate to the current debate regarding the question of exclusivity of Bay Area Motivate's bike share contracts in San Francisco, San José, Oakland, Berkeley, and Emeryville. (Motivate operates Ford GoBike and was acquired by Lyft in 2018.)

While the bike share pilot program continues, no bike share services have been provided in Mountain View since March 2019. Staff is conducting an evaluation that captures the range of services that has been offered in Mountain View, and plans to bring the bike share program evaluation to the Bicycle/Pedestrian Advisory Committee (B/PAC) and Council by the end of 2019. Given the questions of financial sustainability and regional interoperability, staff continues to track the bike share market throughout the region and beyond.

Comparison of Bike and Scooter Share

While the bike share program has experienced significant flux over the past year, interest in electric scooter share has risen steadily. Like bike share, most scooter share operators are startup companies that continue to evolve rapidly as they develop new technologies, pursue financial viability, and learn to work with city governments.

In their Mountain View exit interview, ofo staff indicated that while bike share demand was relatively strong near Caltrain stations, major bus stops, and apartment complexes, the low overall trip rate of 0.5 trip per bike per day in July 2018 was insufficient to scale up operations to a viable level (1.5 to 2 trips per bike). They also indicated that e-scooters perform better in U.S. cities due to higher user demand and more acceptable margins.

Lime achieved a higher deployment and usage in Mountain View than ofo, with a high of 1.4 trips per bike per day in August 2018, which dropped to 0.4 trip per bike per day during the wet winter months of early 2019. During meetings with City staff, Lime staff expressed a preference for scooter share, which typically has quicker user adoption and higher trips per device per day than bike share. This is especially true in cities with relatively low populations and densities. By comparison, the population and density that Lime has identified as the threshold for a successful Lime bike share program is higher than that of Mountain View.

The issues expressed by both ofo and Lime staff have been borne out in other nearby cities. For instance, in San José, where both bike and scooter share programs have been operating, scooter share demand has outpaced bike share demand by more than 10 to 1. This difference is displayed in data from April 2018.

Figure 1: San José Bike and Scooter Share Operations, April 2018

	Fleet Size	Trips per Device per Weekday	
		E-Bikes	E-Scooters
Lime	80 bikes, 80 scooters	2.5*	12.5
Ford GoBike	400 bikes	0.85**	-
TOTAL	480 bikes, 80 scooters	1.145	12.5

* In February 2019, Lime withdrew bikes from the San José market.

** Ford GoBike usage has gradually risen. As of April 2019, the rate was 1.1 trips per bike per weekday.

City staff has been monitoring reports about the experience of other cities with e-scooters, including concerns related to device parking, user safety, and operating rules. Scooter share trips per vehicle per day are substantially higher than that of bike share, which suggests a higher level of user demand. In general, however, e-scooters appear to be more prone to concerns of parking and sidewalk use than bike share.

There have also been reports of injuries associated with scooters. On May 2, 2019, the Centers for Disease Control and Prevention (CDC) announced results of a scooter safety study in Austin. The study noted that there were 20 individuals injured per 100,000 e-scooter trips taken during the three-month study period—an injury rate that is substantially higher than other modes. Among those injured, 33 percent were first-time users, 37 percent blamed going too fast, 33 percent reported drinking alcohol in the prior 12 hours, and 19 percent blamed equipment malfunction. These results highlight the importance of training first-time users, educating users on safe behaviors, encouraging use of helmets, and addressing product safety and maintenance.

Staff has also collected examples of scooter share permit requirements from other cities, which inform the following discussion regarding the potential for a scooter share pilot program in Mountain View.

Current Scooter Regulations

On May 9, 2019, a new Chapter 19, Article VI of the Mountain View City Code related to Bicycles, Electric Bicycles, Motorized Scooters, and Transportation Devices became effective. When combined with California Vehicle Code requirements for motorized

scooters, which were amended in 2018, all e-scooter users operating in Mountain View must:

- Hold a driver's license;
- Not ride along any sidewalks;
- Ride only streets with speed limit of 35 mph or less unless riding in a bike lane;
- Ride in same direction as motor vehicles;
- Ride close to right-hand edge of the roadway;
- Ride in the bike lane if one is available;
- Not ride under the influence of alcohol or drugs;
- Not carry a passenger or passengers;
- Use lights and reflectors when dark;
- Use a helmet if younger than 18 years;
- Yield to any pedestrian in a crosswalk;
- Yield to blind pedestrians;
- Not attach to any vehicle; and
- Not wear earplugs in both ears.

The above rules apply to both users who participate in a scooter share program as well as users operating privately owned e-scooters.

On June 25, 2019, the City Council considered adopting an urgency ordinance to prohibit shared e-scooters and similar device programs that have not received permits from the City. This urgency ordinance is proposed to address the concern that a number of device share companies have deployed devices without notifying or working with the respective municipal jurisdiction to address concerns and ensure that State and local standards are met.

DISCUSSION

Scooter share appears to have potential benefits in terms of the viability and sustainability of services, as well as demand and usability for those traveling. In order

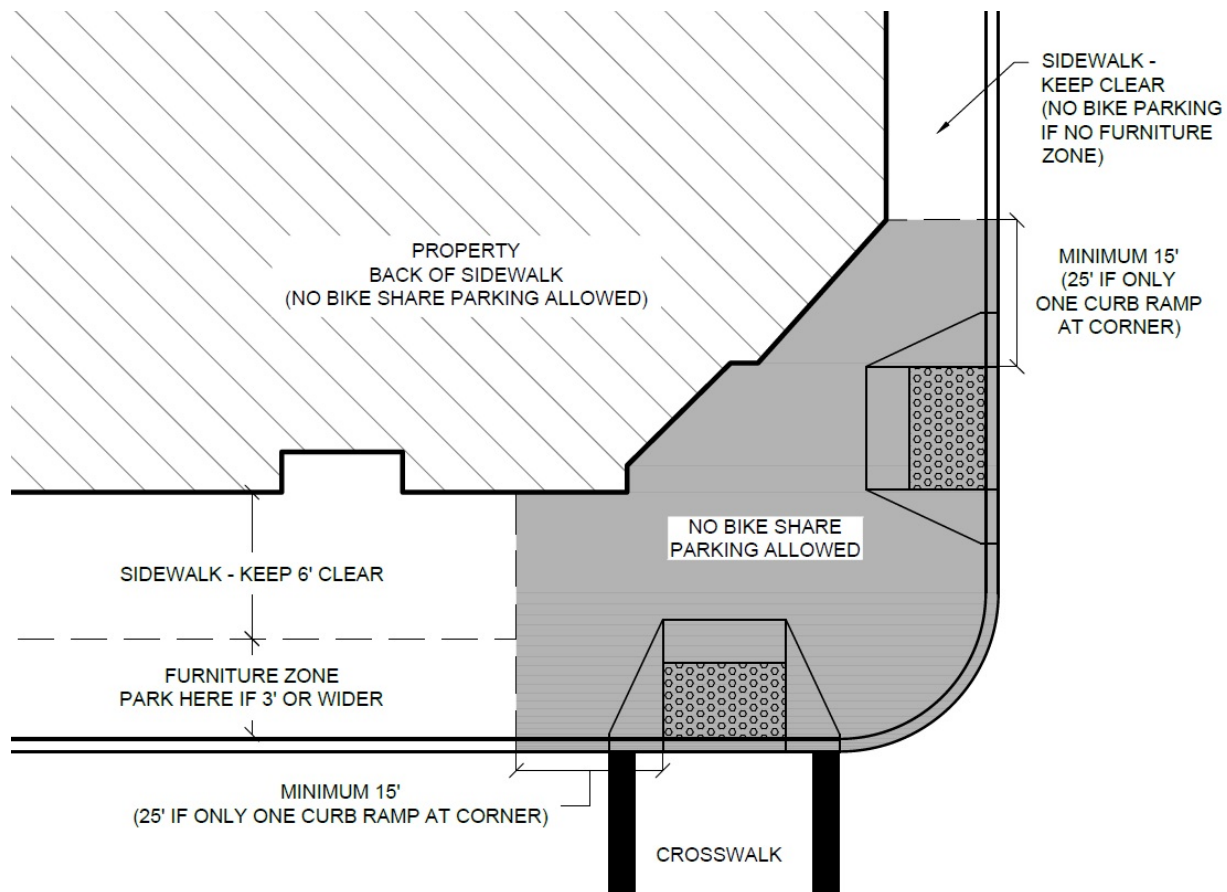
to provide expanded options for first- and last-mile trips, the City may wish to launch a scooter share pilot program in Mountain View.

While scooter share programs operate in a similar manner to dockless bike share, there are some key differences that would need to be addressed by a pilot scooter share program if the City were to implement such a program. These are discussed below:

Parking

Under the bike share program, the City utilizes a “hybrid” approach that has mostly allowed free-floating bike parking, except for designated areas, such as the Transit Center and Castro Street in downtown, where parking is restricted to geo-fenced zones. Parking provisions included in the bike share permit requirements include requirements related to “rebalancing” bikes so that they are in the right places to meet demand and relocating bikes that are incorrectly parked. They also include parking rules that are captured in the recent update to the City ordinance on the use of bikes, motorized scooters, and transportation devices. The updated ordinance includes provisions requiring users to park upright at designated spaces or in the hardscaped area of the furniture zone, where doing so would not block pedestrian and wheelchair access. As shown in Figure 2, areas where parking is not permitted include a 6’ clear width of sidewalks, within 15’ of crosswalks, any transit platforms or waiting areas, within 10’ of bus stops, loading, or accessible parking, and within 5’ of dining areas or street furniture needing pedestrian access (such as seating or parking meters).

Figure 2: Mountain View Bike Share Parking Requirements



At a minimum, a potential scooter pilot program would include the above requirements. Given the experience of other cities, however, staff is of the opinion that scooter share may warrant more prescriptive parking regulation than that associated with bike share to ensure that e-scooters are parked upright in a manner that does not block pedestrian access. For example, the City could restrict e-scooter parking to designated areas throughout the City, rather than the free-floating parking rules used for the bike share program. The City could also consider measures to verify parking behaviors. For example, in some jurisdictions, users take a picture of how they have parked their e-scooters in order to end their trip and verify that they have parked correctly. While the latter provision adds an element of accountability, it could affect efforts to ensure that scooters are accessible to low-income users who access e-scooters without a smart phone.

Fleet Size

Based on previous research, staff had recommended a Citywide fleet size of up to 800 shared bikes for the current bike share pilot, with a minimum of 200 (standard bikes)

and maximum of 400 bikes for any single operator. The goal of these fleet size restrictions was to allow appropriate competition, provide sufficient deployment to ensure reliable service levels, and avoid an excessive surplus of bikes in the City. If the current bike share program continues and scooter share is added as a separate program, staff recommends maintaining the above fleet size requirements for bike share. Scooter share fleet size requirements would then be additional to bike share requirements.

Scooter share companies indicate that a fleet of 250 to 500 devices is needed to ensure business viability, particularly for systems where scooter charging occurs through in-house or trained technicians.¹ In order to balance business viability and potential impacts, staff suggests that an initial Citywide fleet of up to 800 scooters, with a minimum of 200 and maximum of 400 for a single operator, could be considered for a potential scooter share pilot program. The minimum fleet would need to be deployed within a certain time frame, such as 14 days. As shown in Figure 3, this provision could result in up to 1,600 shared devices within the City.

To ensure that devices are being used, fleet expansion beyond 250 scooters could be contingent upon performance standards such as average weekday utilization rates of two trips per device per day. When taken together, these provisions would ensure a mix of devices, competition on service quality and availability, and a maximum number of scooters.

Figure 3: Existing Bike Fleet and Proposed Scooter Fleet Requirements

	Bikes per Operator	All Shared Bikes	Scooters per Operator	All Shared Scooters	All Shared Devices
Minimum	200		200		
Maximum	400	800	400	800	1,600

While e-scooters are more financially sustainable for operators, bikes still offer superior health and environmental benefits associated with the use of human power. Therefore, a previous proposal that was presented to the Council Transportation Committee (CTC) on May 13, 2019 suggested a mechanism to encourage companies to provide bikes as well as e-scooters. The CTC recommended against tying e-scooter deployment to bike share due to concerns of overburdening e-scooter share operators with a program that has not yet proven financially viable.

¹ The alternative to this type of service and charging is the use of independent contractors who drive through the City to pick up scooters for overnight charging and service.

Safety and Operations

The City's current bike share pilot program includes a number of requirements that relate to safety and operations. For example, permit applicants must confirm that their fleet meets Federal safety regulations; is equipped with lights and reflectors as stipulated under the California Vehicle Code; and receives regular scheduled inspections and maintenance. Permittees must also provide a 24-hour customer service line for reporting service and other issues, and must remove any bikes that are inoperable or unsafe within 24 hours. Permittees also agree to educate users on parking requirements, helmet use by people under 18 years of age, and relevant State and local laws regarding bike operations. Finally, permittees provide a performance deposit which may be used to reimburse the City for any damage to public property.

If the City initiated a scooter share pilot program, similar safety and operational requirements would be included as relevant to e-scooters. Relative to bike share, scooter share programs have drawn more media attention on a range of issues, including safety. This may reflect the newness of e-scooters, a lack of user experience, human error, evolving product standards, greater sensitivity of scooters to uneven surfaces, and maintenance and charging practices.

Within the scooter share universe, there are a range of scooter products as well as maintenance and charging practices. For example, some companies use in-house staff to collect scooters for overnight charging and inspection by trained and experienced technicians. Other companies opt to use independent contractors who compete to pick up scooters for charging in their own homes, and who may even carry out minor maintenance on behalf of the operator.

Scooters are subject to more stringent road rules than bicycles, with State laws that ban sidewalk riding and require users to hold a valid driver's license. These more stringent regulations would be included in requirements for a potential scooter share pilot in Mountain View and would be reflected in more robust education and enforcement programs required of the operators.

Staff recommends that the pilot program include requirements for operators to verify that users hold a driver's license, participate in safety training (such as videos or in-person seminars), and correctly respond to safety-related questions. Staff is also exploring measures to monitor and ensure that e-scooter users do not ride along sidewalks and to verify that scooters are adequately maintained to ensure product safety.

Insurance

The City's current bike share pilot program includes standard insurance requirements to address potential risks associated with the program. Staff anticipates that the City would impose similar requirements on a scooter share program.

If the City moves forward with a scooter share pilot program, the City Attorney and Risk Management staff would determine requirements related to insurance and indemnification.

Data Sharing and Other Requirements

The existing bike share pilot program includes a number of requirements related to data sharing. Information obtained as a result of these requirements is currently being assessed as part of a bike share evaluation. The evaluation will consider the performance of the bike share pilot program, including the appropriateness of requirements involving data sharing. Based on the feedback that is obtained from the bike share evaluation, the City may also wish to include similar data requirements in the scooter share program.

Additionally, staff recommends use of a data partner and open APIs² to allow for analysis of anonymized trip information. General Transit Feed Specification (GTFS) is a common format for sharing unlocked transit schedule and arrival data for use in a range of software applications. GTFS could be used as a model for publicly distributing trip-making data related to bike and scooter share. This could allow for analysis of trends as well as helping riders find nearby devices and compare travel times and costs to other modes of transportation.

RECOMMENDATION

Staff recommends that the B/PAC provide input on the following questions:

1. Does the B/PAC support the concept of developing a pilot e-scooter share program?
2. Does the B/PAC have any major issues or concerns related to the proposed approach and parameters for a pilot program that should be addressed in next steps?

² Open APIs are publicly available application programming interfaces, which allow developers to access information from a central source and create apps to analyze, visualize, or combine the data.

3. Does the B/PAC have specific input on the following recommendations:
 - Restricting scooter parking to designated areas;
 - Verifying scooter parking behavior using a smartphone camera;
 - Adopting a maximum fleet size of 800 scooters, or 400 scooters per operator;
 - Requiring that fleet size expansion beyond 250 scooters per operator be contingent upon average weekday utilization of two trips per device per day;
 - Mandating robust educational strategies such as online or in-person training and assessment;
 - Exploring mechanisms to monitor and ensure that e-scooters to not operate along sidewalks; and
 - Expanding data sharing to include open APIs and parking data.

NEXT STEPS

Staff anticipates the following next steps prior to launching a potential pilot scooter share program:

1. Meet stakeholders (including community members and scooter share companies) for input into the guidelines and operating parameters of the pilot program.
2. Develop and present a potential regulatory framework at a Council Study Session in fall 2019.
3. Continue to work with neighboring jurisdictions and regional agencies to maximize the potential for consistent requirements and interoperability.
4. Identify site locations in the City where scooter parking should be designated and how best to install any improvements needed.
5. Draft guidelines governing the City's requirements for scooter share companies to participate in the pilot. Present draft guidelines to the B/PAC and City Council.
6. Present proposed pilot program to the City Council.