

**DATE:** October 29, 2019

**TO:** Honorable Mayor and City Council

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

**VIA:** Daniel H. Rich, City Manager

**TITLE:** **Bike Share and Scooter Share Pilot Programs**



---

## **PURPOSE**

The purpose of this Study Session is for the Council to receive the bike share evaluation results, to provide direction for continuing the bike share pilot program, and to provide direction on moving forward with a scooter share pilot program.

## **BACKGROUND**

Since 2010, shared micromobility (which includes bikes, scooters, and transportation devices) has undergone substantial shifts in cities across the United States with the emergence of dockless bike share and, later, electric scooters (e-scooters). Cities continue to experiment and refine their approach to these programs as they balance benefits and costs. These shifts have included the decline of some bike share programs as shared e-scooter programs have emerged and won increasing market share.

### **Mountain View Bike Share Pilot Program**

On [September 26, 2017](#), 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 sustainability goals, encouraging a healthy economy, and minimizing traffic and parking congestion. 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. Permit regulations addressed safety, parking, data sharing, and operational conditions such as fleet size.

In May 2018, two operators, ofo and Lime, launched bike share operations in Mountain View. A third operator, Spin, initially applied to the program but withdrew their permit application before the program launched. Over the course of the year, both ofo and Lime withdrew from the program due to changes in their organizational and financial priorities, including a shift toward e-scooter share operations for Lime. In 2019, a fourth operator, JUMP, submitted a permit application and associated fees, but chose not to complete the application process due to a change in their organizational priorities and regional bike share conditions.



Lime and ofo bikes at Mountain View Transit Center

### **Potential Scooter Share Program**

The City has received several inquiries from e-scooter share operators, and one e-scooter share operator has applied for a City business license. City staff has been tracking micromobility programs and has noted a general preference among private operators for scooter share over bike share operations.

On May 14, 2019, staff presented initial regulatory concepts for a potential scooter share pilot program to the Council Transportation Committee (CTC). The CTC supported implementing a scooter share pilot program and recommended against regulations that would impose an undue burden on scooter share businesses or tie e-scooter deployment to bike share deployment.

On [June 25, 2019](#), the City Council adopted an urgency ordinance establishing a moratorium on shared mobility devices in order to allow time for the City to enact scooter share regulations and ensure that shared mobility devices are deployed in accordance with City regulations. This ordinance prohibits the commercial operation of

shared mobility devices for use by the general public, with an exemption for the existing bike share program.

Potential scooter share program concepts were presented to the Bicycle/Pedestrian Advisory Committee (B/PAC) on June 26, 2019, for initial discussion and feedback. Staff returned to the B/PAC on September 25, 2019, to present the bike share pilot program evaluation results and refined regulatory concepts for a scooter share pilot program. At the September 25 meeting, B/PAC members unanimously recommended continuing the bike share program. A majority of B/PAC members also supported staff's recommendation to implement a pilot scooter share program, with one member opposed due to concerns regarding the potential for head injuries. If a scooter share program were to be implemented, B/PAC members unanimously supported the proposed permit requirements with the following additions:

1. Scooter share operators should be encouraged to provide a helmet program; and
2. The City Council should deliberate whether or not to restrict scooter share operations to users 18 years of age and older.

## DISCUSSION

### Bike Share Evaluation Findings

Evaluation of the bike share program provides insight into operational performance, user experience, public perception, and operator concerns. Evaluation studies included trip data analysis, a field survey by staff of parking issues, a participant and stakeholder perception survey, and operator interviews. The results of the operational evaluation and survey results are provided in Attachments 1 and 2. Key findings are summarized below.

#### *Bike Share Operators, Fleet Size, and Ridership*

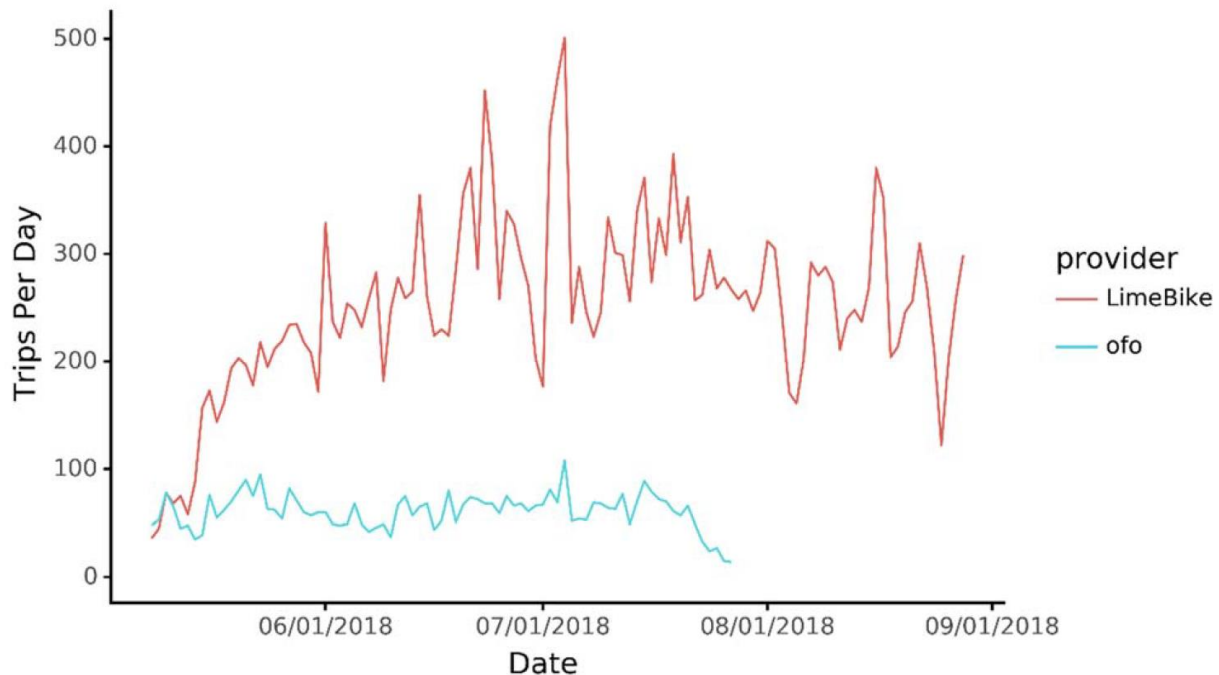
During the first six months of Mountain View's bike share program, Lime and ofo served over 13,000 riders and 50,000 rides, with users traveling over 45,000 miles.

During this time, Lime's bike share fleet size in Mountain View varied from 140 e-bikes in May 2018 to a high of about 300 in July 2018, with about 150 bikes in the City in November 2018. For ofo, an initial fleet of approximately 60 standard bikes was deployed, building up to almost 200 bikes by July 20, 2018, when staff received notice that the operator was withdrawing from the program.

The evaluation of ridership focused on total trip data from May 2018 through the end of August 2018 to assess the program before any operators began scaling back their fleets for discontinuation of the service. During this period, an average of 230 Lime bikes and 128 ofo bikes were made available to the public each day, leading to 33,532 trips taken in Mountain View.

As seen in Figure 1, ridership on Lime generally increased during the first two months of operations, with substantial peaks and troughs reflecting weekly patterns, random variability, and specific events. Toward the end of summer, ridership plateaued and decreased slightly with continued variability from week to week. For ofo bikes, ridership was consistently lower than Lime and remained relatively consistent throughout the pilot program until the bikes were removed on July 29, 2018. Peak usage occurred on the Fourth of July holiday, when approximately 500 trips were taken on Lime bikes and 100 trips on ofo bikes.

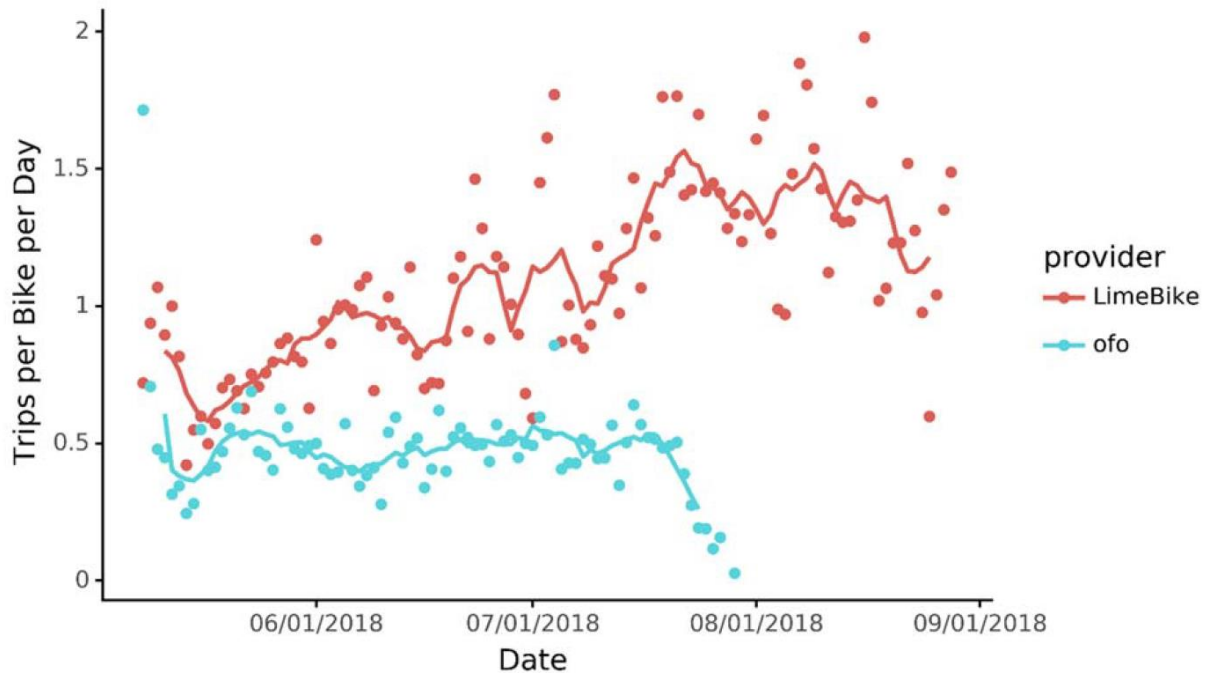
**Figure 1: Total Bike Share Trips by Day, Mountain View, May through August 2018**



A common metric for evaluating the performance of bike share programs is bike utilization measured in the number of trips per bike per day. During the ridership evaluation period, average bike utilization was 0.84 trip per bike per day for the total program. The bike utilization rate for Lime bikes increased from the start of the pilot through to mid-August, when it reached almost two trips per bike per day before

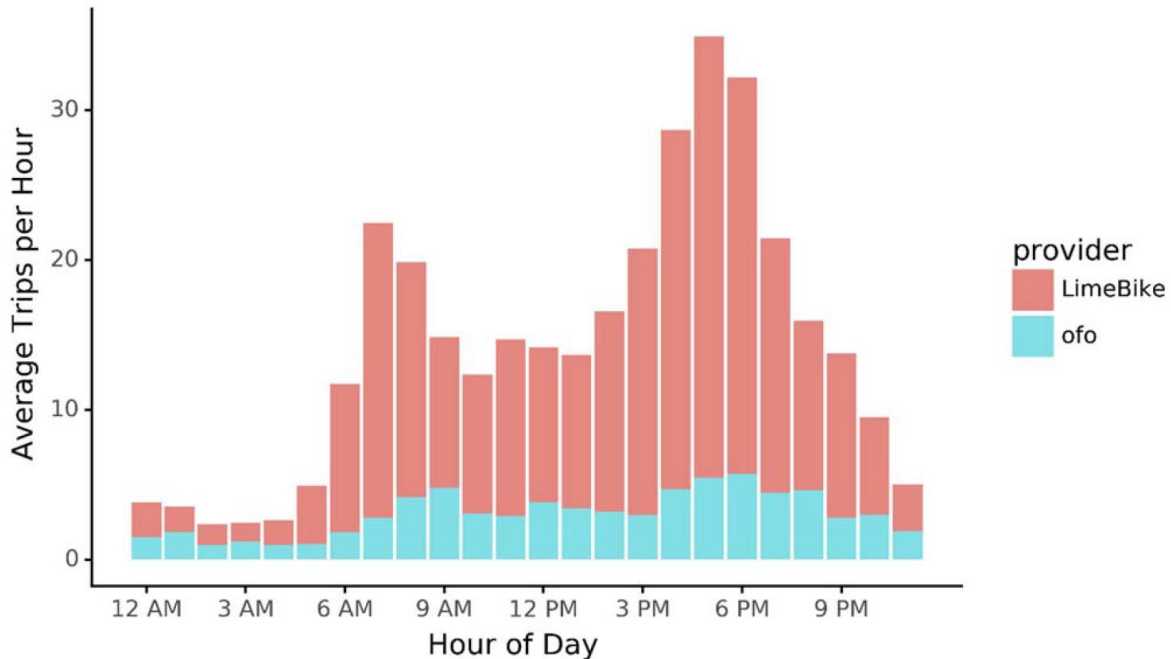
gradually declining through the end of the pilot. For ofo, the number of trips per bike per day stayed relatively consistent at around 0.5 trip per bike per day. These trends in bike utilization are shown in Figure 2 below in terms of daily utilization (points) and a seven-day moving average (lines) for each operator.

**Figure 2: Daily Bike Utilization, Mountain View, May through End of August 2018**



The ridership evaluation also considered trip patterns by time of day, day of week, and spatially. Consistent with broader travel patterns, a higher number of trips was observed on Tuesdays, Wednesdays, and Thursdays relative to other days of the week. For weekdays, the evening peak was substantially higher than the morning, which could suggest that the shared bikes were used for more recreational or “time-elastic” trip purposes.

**Figure 3: Weekday Trips by Hour of Day, Mountain View, May through End of August 2018**



Almost one-third of trips were between 5 and 10 minutes long, which represents a distance of one-half to one mile. The vast majority of trips started or ended in Mountain View; however, a small proportion started or ended in the neighboring cities of Sunnyvale (3 percent), Los Altos (3 percent), and Palo Alto (2 percent).

Throughout the pilot period, the most popular origins and destinations for bike share trips were:

- Downtown Mountain View, with approximately half (50 percent) of all trips starting or ending in the area bounded by Central Expressway, Calderon Avenue, El Camino Real, and South Shoreline Boulevard;
- Mountain View Transit Center, with 20 percent of all trips starting or ending at the station;
- Google Campus, with 16 percent of trips starting or ending at the Googleplex; and
- Shoreline Amphitheatre, with 5 percent of all trips and large-event based peaks.

Other areas with high activity included neighborhoods southwest of the Mountain View Transit Center (likely making trips to and from the train station); other large employers, including Samsung and NASA; and the San Antonio Station area.

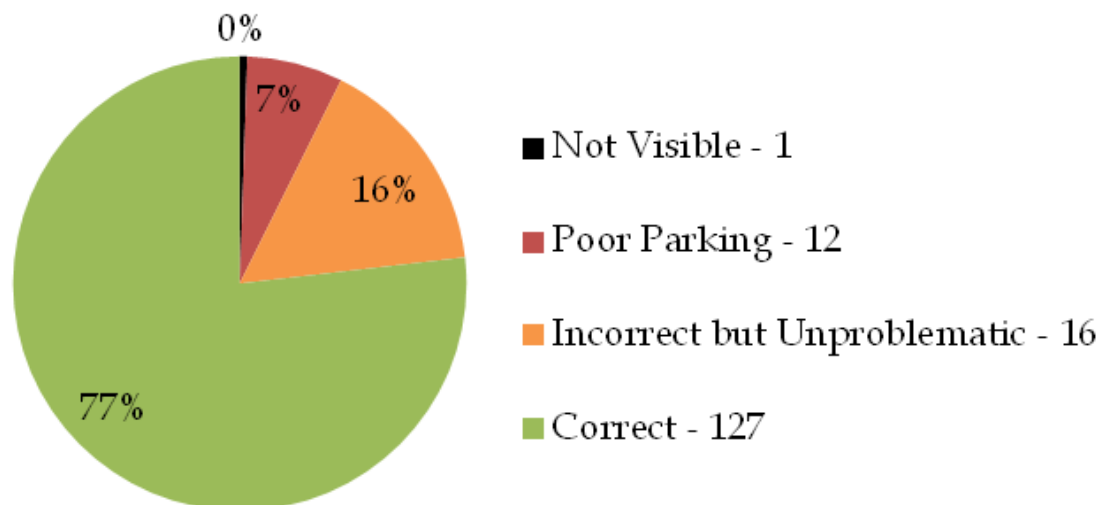
### *Public Perceptions and Parking Conditions*

Throughout the program, staff tracked public reaction to bike share, including social media posts (mostly on Twitter and NextDoor) and formal comments submitted by phone, e-mail, or the *Ask Mountain View* system.

When the program was initially launched, feedback was mixed, with some people supportive of expanded multi-modal transportation options in Mountain View and others expressing concerns about the program. The most common concern related to bike share parking under the free-floating system—particularly in residential neighborhoods and areas with narrow sidewalks.

Following an initial flurry of social media comments on the program, staff conducted a field survey of parking conditions in late May 2018. In the field survey, staff located available (parked) bikes using the bike share apps and then observed and documented parking performance. The field survey assessed parking performance for 190 bicycles, including 156 Lime and 34 ofo bicycles. Of these bikes, 93 percent were parked in a correct or unproblematic manner; 7 percent were parked poorly on the sidewalk, curb ramp, or other location; and one bike was not publicly visible. All bicycles were parked in an upright position.

**Figure 5: Observed Parking Performance, Late May 2018**



In the first six months of the program, staff received five comments, complaints, or requests for bike relocation or removal via *Ask Mountain View* or phone calls from members of the public. One comment related to a bike share operator who did not have a permit to operate in the City. Staff worked with the respective bike share operators to follow up and promptly resolve each of these issues. Lime directly received 18 to 20 complaints a month in July 2018 and August 2018 and reported resolving 95 percent of those complaints within 10 hours. From September through December 2018, the average number of complaints per month dropped to under six, with a similar number resolved within 10 hours.

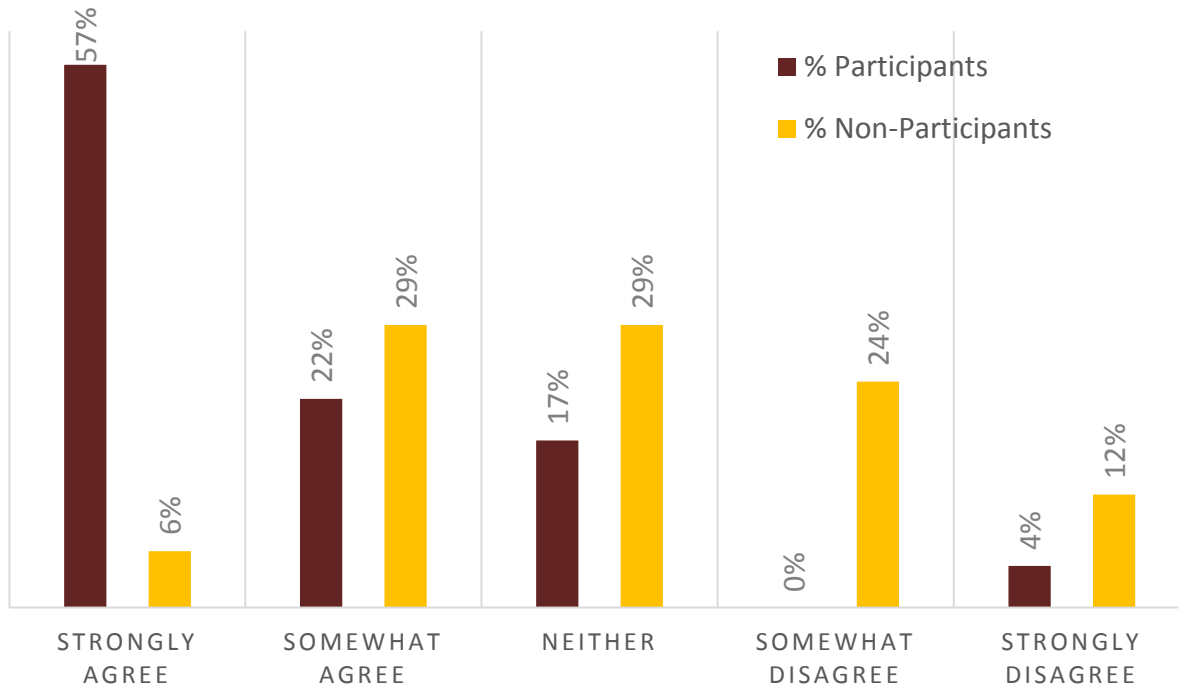
### *Perception Survey*

In August 2019, a survey was launched via Mountain View's Open City Hall site and publicized via various social media platforms. While survey participation was limited, with only 41 participants, respondents were roughly split between stakeholders who had tried the system (56 percent) and those who had not (44 percent). Most respondents were at least familiar with bike share systems (more than two-thirds of nonparticipants and more than 96 percent of bike share users surveyed).

According to survey results, opinions of bike share were split between people who tried or did not try the program. Overall, people who used bike share in Mountain View reported high satisfaction, saw it as a useful way to get around, and thought it provided multiple benefits. Those who did not use the system, however, had a less favorable perception of it (see Figure 6).



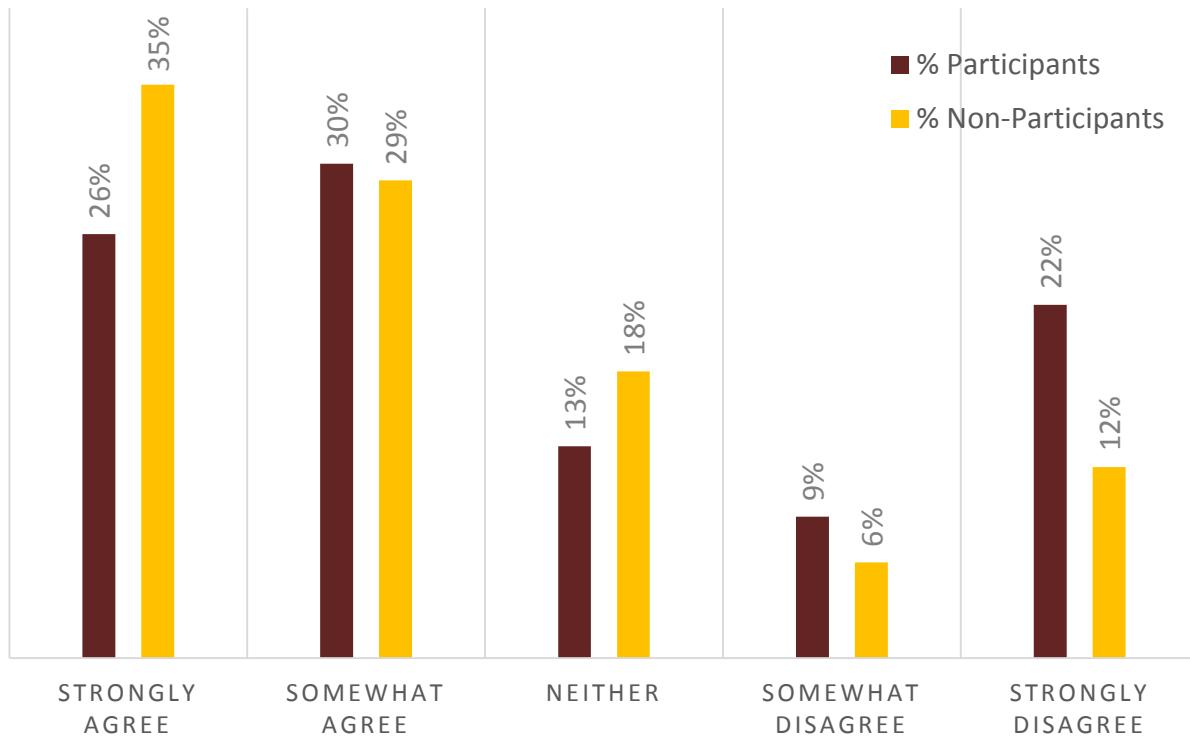
**Figure 6: “The bike share program made it easier and faster for people to get where they need to go”**



Among participants, two-thirds of users reported using bike share to replace car trips, including drive-alone, taxi, and transportation network company (TNC, e.g., Uber and Lyft) trips; and over half of users reported using bike share to connect to Caltrain. Users also noted that the bike share parking requirements were generally clear, but less so in downtown Mountain View, where designated parking zones were in place.

One issue for which there was broad support among both participants and nonparticipants was the need for low-stress bike network facilities in Mountain View. Demand for low-stress bike facilities such as trails and protected bike lanes was especially strong among nonparticipants (see Figure 7). In addition to demand for more trails and protected bikeways, survey respondents also indicated that they would be more likely to use bike share if there were e-assist bicycles, an ability to ride between cities, and easy, reliable connections. Half of survey respondents also indicated that they would like to see an e-scooter share program in Mountain View.

**Figure 7: “There aren’t enough bike trails or protected bike lanes where I want to go”**



Overall, staff considers the program to have been well received by both bicyclists and community stakeholders, with occasional concerns regarding bikes that were parked in a manner that blocked the public right-of-way and needed to be moved by the operator. In such cases, operators appropriately responded by relocating bicycles.

#### *Operator Perceptions and Performance*

Staff conducted exit interviews with both ofo and Lime after they left the City’s bike share pilot program. Both operators cited business reasons for their companies’ decisions: Lime cited a shift to focus on scooters, except for in larger and denser cities, such as Seattle. They noted that there are much higher trips per device per day for scooters and, therefore, scooters provided a better business case. The other operator, ofo, cited a global strategy to focus on a handful of larger U.S. cities and less costly, less-regulated countries.

#### *Recommendation to Continue Bike Share Pilot Program*

Overall, the pilot program evaluation results show that bike share has been an effective and well received program for incentivizing alternative transportation trips, presenting

minimal issues with parking. The utilization rates in terms of trips per bike per day were under both operators' expectations of two to four rides per bike per day, and financial viability for this evolving market is still uncertain. However, new bike share operators may choose to enter the Mountain View market in connection with a scooter share program and/or with potential future bike share programs in neighboring cities. **Staff recommends continuing the existing bike share pilot permit program through the duration of a scooter share pilot program.**

### **Proposed Scooter Share Pilot Program**

There is interest in the community and from operators in establishing a scooter share program in Mountain View. Staff used the bike share permit requirements (Attachment 3) and program evaluation as a starting point for considering a proposed pilot permit program for scooter share. However, based on other cities' experiences with scooter share, staff is recommending that a scooter share program incorporate more stringent requirements than those of bike share. These requirements will address California State laws regarding scooters, lower levels of user familiarity, and CTC and B/PAC feedback related to scooter operations, parking, safety, and business viability. Described below is an overview of how the proposed scooter share permit requirements would differ from bike share.

#### *Federal Consumer Product Safety*

While bicycles and electric bicycles are subject to Federal consumer product safety regulations, motorized scooters do not yet have equivalent standards. However, such regulations may be adopted in the future. Permit requirements, then, would require scooter share operators to follow all relevant Federal standards, or guidelines, including any that may be established in the future. To ensure that scooter share includes only low-speed devices, staff recommends that the regulations require that scooters be incapable of exceeding a speed of 15 miles per hour – which is the speed limit for City trails – when operating solely by motor. Additionally, staff recommends that the proposed requirements allow the City to terminate any permit if the battery, motor, or any other aspect of a motorized scooter or fleet of motorized scooters is determined to be unsafe for public use.

#### *Other Equipment Safety Requirements*

The proposed requirements would impose equivalent standards as the City's bike share permit requirements for brakes, lights, and reflectors, with reference to the relevant sections of the California Vehicle Code that deal with equipping motorized scooters.

### *Notification of Rules for Motorized Scooters*

Requirements for notifying users of rules would reflect the more stringent State rules that govern the use of motorized scooters. Specifically, staff proposes that there must be visible language to notify users that all State and local laws must be followed and to make users aware of California rules regarding:

- Not riding motorized scooters on sidewalks;
- Operating in same direction as vehicles on the roadway;
- Not carrying any passengers;
- Using a helmet for users under 18 years of age; and
- Not riding under the influence of alcohol or any drugs.

### *Robust User Education*

Based on B/PAC input and concerns regarding scooter injuries, staff proposes that operators be required to provide user education that incorporates mandatory video or in-person training as well as randomized learning and assessment tests aimed at reinforcing training and ensuring that users:

- Understand how to operate scooters;
- Are aware of City and State laws regulating scooter operations and parking;
- Are aware of the main risks associated with use of motorized scooters, including the potential for head injuries; and
- Are encouraged to follow rules and implement strategies to minimize risks, including use of helmets, safe riding speed, and sober riding.

In addition, operators would be encouraged to implement a helmet program, which could include helmet giveaways or the provision and stocking of helmet tree stands at key locations such as the Mountain View Transit Station, as recommended by the B/PAC.



**Scooter education and enforcement signage in Santa Monica, CA**

### *Driver's License and Minimum Age Requirements*

In addition to the above safety requirements, operators would be required to ensure and verify that all users have a valid driver's license as stipulated under State law. This would set the minimum age to ride shared scooters at 16 years old.

B/PAC requested that the City Council deliberate on the question of potentially restricting scooter share operations to users 18 years of age and older. Staff concurs with the suggested age limit for two reasons: (1) most scooter share operators already have an age restriction of 18 years in place and, therefore, this requirement would have minimal effect on their business operations; and (2) State law requires people under 18 years of age to wear a helmet when riding an e-scooter; therefore, a minimum age of 18 years would alleviate enforcement issues related to helmet use.

### *Designated Parking Areas*

A number of cities have reported persistent problems and issues with free-floating scooter parking. In order to reduce potential problems of parked scooters obstructing pedestrian traffic flow or creating a safety hazard, staff recommends that free-floating parking not be permitted for scooter share. Instead, staff recommends scooters be required to park only in designated parking areas, as approved and permitted by the City.

To ensure an ample number of parking locations are available for the success of the program, staff recommends that scooter operators be required to work with the City to identify and mark designated parking areas. Designated parking areas would be established on Castro Street, at the two Caltrain stations, within City parks, at City-owned facilities, and other areas within the public right-of-way. Marking may include pavement marking and/or signage that makes the designated parking areas available to all permitted mobility device share operators as well as privately owned mobility devices.



**A designated scooter hub in Santa Monica, CA**



**Scooter Drop Zone in Long Beach, CA**

Staff will also continue to monitor other approaches to parking. In San Francisco, for example, shared scooter devices are required to have a locking device that attaches the scooter to racks, sign posts, and/or other fixed objects. This has helped mitigate vandalism and untidiness in their free floating system. The approach requires users to more carefully consider where to park securely and prevents a variety of vandalism opportunities. However, this may still result in a cluttered pedestrian travel way, and staff advises a more conservative approach to regulating scooter parking at this time.

Staff also proposes that operators be required to implement strategies such as bonuses, discounts, surcharges, and/or penalties that incentivize users to park only at designated parking areas throughout the City and incentivize operators to provide parking hubs at sufficient hub density. In other jurisdictions, an additional fee as low as \$1 helped incentivize users to seek out and utilize designated virtual hubs (marked with paint and signs). Users could then earn a \$1 ride credit by riding devices located in areas outside designated parking hubs to a designated hub.

Additional parking-related permit requirements could include performance standards for moving scooters parked incorrectly, rebalancing devices, and ensuring devices are not abandoned.

### *Minimum and Maximum Number of Scooters*

In seeking to achieve balance and consistency with the pilot bike share program, staff recommends that under the pilot scooter share program, each operator would be required to provide a minimum of 200 scooters. The minimum will ensure that each company has a large enough presence to provide full-time staff within the City for rebalancing the scooters and responding to calls to move or repair them.

Likewise, staff recommends retaining a cap of 400 scooters per operator, with a City cap of 800 scooters for all scooter share operators collectively. The City maximum would help curtail the potential problem of too many devices that may be underutilized or may clutter the right-of-way. The operator cap of 400 scooters also ensures there could be at least two operators in the program.

### *Fees*

For the bike share pilot program, bike share operators pay the City's temporary encroachment permit fee of \$927 to cover staff time to review and process the permit. The operators are also required to provide a \$25 per bicycle performance deposit for future public property repair and maintenance costs that may be incurred, for removing and storing bicycles improperly parked, or if a company is not present to remove bicycles if its permit is terminated. The performance deposit is refundable if the operator removes all bikes from the City and there is no damage to repair.

Due to the popularity and success of scooter share in other locations, some cities have assessed additional fees to scooter share operators beyond city administrative costs and performance deposits. In most cases, these fees are utilized for infrastructure improvements, including bike lanes or bike racks. A fee study would typically be conducted to determine such fee amounts.

To avoid delays in launching a pilot program in order to perform fee studies, staff recommends using the same fee structure for the pilot scooter share program that is used for the pilot bike share program (i.e., the temporary encroachment permit fee and a per-scooter performance deposit). In addition, operators receiving permits will be required to fund setting up the designated scooter parking areas.

Should Council decide to make the bike and/or scooter share programs permanent after the conclusion of the 18-month pilot program, staff would conduct a fee study to confirm that the fees collected are covering all of the City's administrative costs and to

determine if an annual fee toward active transportation infrastructure improvements would be appropriate.

### **Coordination with Other Jurisdictions**

The City of Palo Alto recently announced that they are working to launch a pilot bike and scooter share program. Staff will coordinate with Palo Alto on permit requirements to help support interoperability between the cities.

In addition, Caltrain has begun a project to facilitate better active transportation access to their stations, and micromobility will be a key feature of their expected recommended improvements. Staff will be working with Caltrain to designate shared device parking areas at the Mountain View and San Antonio stations.

### **RECOMMENDATIONS**

Staff recommends that the City continue the bike share pilot permit program with the expectation that other bike share operators may desire to test the Mountain View market in conjunction with scooters. Staff also recommends that the City implement an 18-month pilot scooter share program as described in the proposed approach. The Sustainability Action Plan-4 (SAP-4) supports micromobility services, with actions related to bike and scooter share included in SAP-4 Goal T3 “Develop policies and programs that support active transportation.” Key proposed requirements for the operators include:

- Adhering to evolving product safety standards;
- Continuous and varied methods to inform and educate users on operating rules and safe riding habits;
- Minimum age of 18 years old to ride shared scooters;
- Use of designated parking areas only;
- Minimum of 200 scooters and maximum of 400 scooters per operator, with a City cap of 800 scooters;
- Use of temporary encroachment permit fee structure and a per scooter performance deposit with a requirement that operators fund the cost of establishing the designated parking areas.



Staff requests Council direction for the following question:

1. Does the Council concur with the staff recommendation to extend the bike share pilot permit program through the duration of a scooter share pilot program?

### **NEXT STEPS**

Based on Council direction, staff will finalize the scooter share pilot program requirements and identify an initial list of potential designated scooter parking areas. Prior to launching the scooter share pilot program, staff will return with an ordinance to revise the moratorium on shared mobility device programs to allow for a permitted scooter share program. Permit applications would be released by March 2020. Following permit applications review and approval, staff will work with the operator(s) to set up the designated parking areas to be followed by launching scooter share in Mountain View. An evaluation will be conducted toward the end of the 18-month pilot to determine whether the City would like to make both bike share and scooter share permanent programs, including any changes to the requirements and fees.

### **PUBLIC NOTICING**

Agenda posting. A notice of the availability of the Council report was sent to the B/PAC, Silicon Valley Bicycle Coalition, and other interested parties and was posted on social media.

NB-RHL-DSC-MAF/TC/2/CAM  
935-10-29-19SS  
190525

- Attachments:
1. Bike Share Operational Evaluation
  2. Bike Share Preliminary Survey Results
  3. Mountain View Bike Share Permit Requirements

cc: TP, TM, APWD – Cameron