TOOLE DESIGN

CITY OF HAYWARD: MICROMOBILITY FEASIBILITY STUDY

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Information contained in this document is for planning purposes and should not be used for final design of any project. All results, recommendations, and commentary contained herein are based on limited data and information and on existing conditions that are subject to change.

CHAPTER 1
BASELINE CONDITIONS ASSESSMENT

1. BASELINE CONDITIONS ASSESSMENT

This chapter includes a review of the suitability and type of shared micromobility program most appropriate for the City of Hayward. It includes an overview of local plans, policies, and regulations related to or impacting a potential shared micromobility program, an analysis of peer cities and cities in the Bay Area with active shared micromobility programs, and a review of the local context in Hayward and best practices that contribute to the successful adoption of shared micromobility.

Key findings from the Baseline Conditions Assessment include the following barriers and opportunities, which are detailed more throughout this chapter.

Barriers	Opportunities
• The city's relatively low population density and single-family housing land use designations compared to other cities in the region are less appealing to private operators looking for profitable markets. If private operators are sought to provide shared micromobility services, the city should consider structuring its regulatory environment to offset this challenge. • Freeway interchanges (along Interstate 880 and Highway 92) as well as large multi-lane arterials like Hesperian Boulevard create infrastructural barriers for people riding bikes or scooters and could limit ridership. • Except for Bay Wheels, a patchwork of multiple shared micromobility models across the Bay Area creates challenges for regional collaboration. Bay Wheels is unlikely to expand beyond its current service area in the near future. • The city does not currently have resources for the capital investments required for docked bikeshare (dockless options would be much less resource-intensive).	• There are no significant local regulatory restrictions on micromobility, and shared micromobility is aligned with current city goals in the 2040 General Plan, Bicycle and Pedestrian Master Plan, and Racial Equity Action Plan. • City demographics are aligned with industry-wide demographics of shared micromobility riders. • A highly mobile commuter population with connections to transit (BART and AC Transit) aligns with shared micromobility as a first- and last-mile connection. • Mostly flat topography allows for easy use of all micromobility vehicle types (not just those with electric motors). E-scooters and e-bikes can be deployed strategically to help navigate more challenging topography (e.g., access to California State University East Bay). • The bicycle network is generally well-connected and includes multiple low-stress local streets that are comfortable for bicycling or riding an e-scooter. • The City is committed to bicycling and pedestrian improvements. • Multiple neighboring cities (Union City, San Leandro, unincorporated Alameda County) have not yet launched shared micromobility, creating an opportunity for regional collaboration. Fremont is also open to a future regional program.

PLAN AND POLICY REVIEW

The following local plans, policies, and regulations were reviewed as related to or impacting a potential shared micromobility program in Hayward:

- City of Hayward 2040 General Plan

- City of Hayward Bicycle and Pedestrian Master Plan
- Hayward Area Recreation and Park District Regulations Governing Use of Parks, Recreation Areas, and Facilities
- City of Hayward Racial Equity Plan
- City of Hayward Municipal Code and Traffic Code
- City of Hayward Climate Action Plan
- BART Station Access Policy
- BART Walk and Bicycle Network Gap Study
- CSU Hayward Campus Master Plan
- Alameda CTC Countywide Active Transportation Plan

Local and regional policy generally supports an increase in multimodal transportation, and most policies and plans prioritize improving the active transportation network. Most specifically call out the need for improved biking infrastructure, but only a few specifically point to the role of shared micromobility. Hayward's parks, recreation areas, and public facilities have established regulations around bicycles and electric and non-electric scooters, but the use of e-bikes is not specifically addressed outside of state regulations.

To enable widespread availability and use of a potential shared micromobility program, the City may need to review and update certain regulations in the Municipal Code, including bike parking regulations, the prohibition of parked vehicles in the roadway if they are used for advertisement or selling a service, and the prohibition of riding bicycles in certain parts of Downtown and the Central Traffic District. Additionally, e-scooter requirements related to speeds and where they can be operated will be important to consider. See Appendix A for the full plan and policy review.

MICROMOBILITY PROGRAM CURRENT PRACTICES

The following section details current practices for the setup, launch, operations, and evaluation of a shared micromobility program based on findings from peer cities across the region. For t

CONTRACTING AND PERMITS

A key step in establishing a shared micromobility program is determining the permitting and procurement process that will be used to secure equipment and a vendor to operate the program. For many new systems operating in the United States, the most common organizational model is for a jurisdiction to regulate and oversee the program and have a third-party (or third parties) pay a fee to use the right-of-way, provide the equipment, and operate the service. There are other organizational models, including agency or non-profit owned and managed programs. These typically require more significant funding and staff resources and were not considered here based on feedback from City staff. There are several ways that service can be initiated for programs overseen by a jurisdiction using third-party vendors:

- **Permit**: This is the most common form of regulation for bikeshare and scootershare programs in the United States. In this model, a permit process is established for vendors to apply to operate bikeshare and/or scootershare in the public right-of-way. The jurisdiction reviews applications and selects one or more vendors to provide service. There are typically fees associated with the permits that go towards paying for City staff time and other resources to oversee the program. Permits are often for a set period and may be renewed or the application process restarted at the end of the period. The terms of the permit can be revised at the end of a permit period and incorporated into the new application process. The

permit mechanism can take a significant amount of upfront time to draft and be approved by Council, but reduces time needed for evaluation and contracting, which can streamline service. A permit process may have less flexibility for vendors to propose new, value-added, or innovative terms of service.

- **Request for Proposals (RFP)**: An RFP solicits proposals from vendors interested in operating a shared micromobility program. RFPs outline what funding and resources the jurisdiction and its partners are bringing to the program and what is expected of the operator. For traditional bikeshare programs, jurisdictions often included some level of capital funding, sponsorship, and/or other resources. However, most recent RFPs are for shared micromobility operators that are prepared to bring the equipment and operating services at "no cost" or lower cost to the jurisdiction.[1] The benefit of an RFP process is that it allows the jurisdiction to be more flexible in its requirements and provides vendors with more scope to be innovative to stand out from their competitors. Some drawbacks include a longer review and contracting time than other procurement models, as well as not having the ability to communicate back and forth with applicants during the RFP process. Some cities issue Requests for Information (RFI) or Requests for Qualifications (RFQ), that are non-binding proposals and are often used to gather information about whether vendors are interested and what they can provide without (or prior to) releasing an RFP.
- **Direct Contract**: A direct contract is where a jurisdiction enters a contract with a specific vendor and works solely with them to provide bikeshare and/or scootershare services. These often derive from direct communications between a City and a vendor and are relatively quick, streamlined processes. However, they are dependent on local procurement rules as this limits the choices to only the services offered by that particular vendor.
- **Memorandum of Understanding (MOU)**: An MOU is similar to a direct contract, except it has less legally enforceable elements. This is a less common procurement method but allows multiple bikeshare and scootershare vendors to provide service on an expedited timeline with the MOU outlining the service agreement between the jurisdiction and the vendor(s). One benefit of the MOU process is it removes the time needed to create a formal permit process.

Most of the peer cities reviewed utilize a permit model to procure shared micromobility operators except for San Ramon, Richmond, and Bay Wheels, who used an RFP and contract process. Many cities launched as a pilot for a year, before making the program permanent. Ten of the 11 peer cities had contract lengths of 1 year for their dockless shared micromobility operators. The exception is Bay Wheels which has a 10-year contract with MTC. A longer contract length is more commonly seen in traditional docked bikeshare, as the costs to set up, maintain, and expand docked bikeshare are significantly higher than dockless systems.

[1] Note that there are still costs to the jurisdiction to manage and administer a micromobility program and provide any supporting programs such as educational, promotional, and safety programs.

The Role of Transportation Management Associations (TMAs) in Shared Micromobility

While Hayward does not currently have a TMA, other regions across the country have utilized TMAs to support small-scale shared micromobility programs:

- Westside Transportation Alliance (WTA): In Washington County, Oregon, WTA works with the transit agency and local employer Columbia Sportswear to provide bikeshare connecting the company's headquarters to two MAX (light rail) stations.
- Chittenden Area TMA: In Chittenden County, Vermont, CATMA works with multiple local cities to provide bikeshare throughout the region. While their previous bikeshare operators have ceased operations, CATMA plans to launch dockless regional bikeshare in 2023.

TMAs tend to face issues of limited funding and staff capacity, as well as an inability to scale micromobility efforts beyond their boundaries and have found better success partnering with city, regional, or transit agency gled programs.

Transportation Demand Management (TDM) Programs and Shared Micromobility

Hayward's current TDM Plan includes a recommendation to establish bikeshare and encouraging ways for developers to support the program. Most Bay Area cities with TDM plans focus more on carshare than bikeshare as a shared mobility strategy, however, many of the strategies employed for carshare will similarly apply. These options include providing discounted or free shared micromobility memberships to residents/employees or relaxing parking requirements for developers who provide access to shared micromobility.

PROGRAM BUSINESS MODEL AND FUNDING

Apart from the Bay Wheels program which is a public-private partnership, all cities used an agency permit or contract with private operators for their programs. Within both models, there are various funding structures, as outlined below.

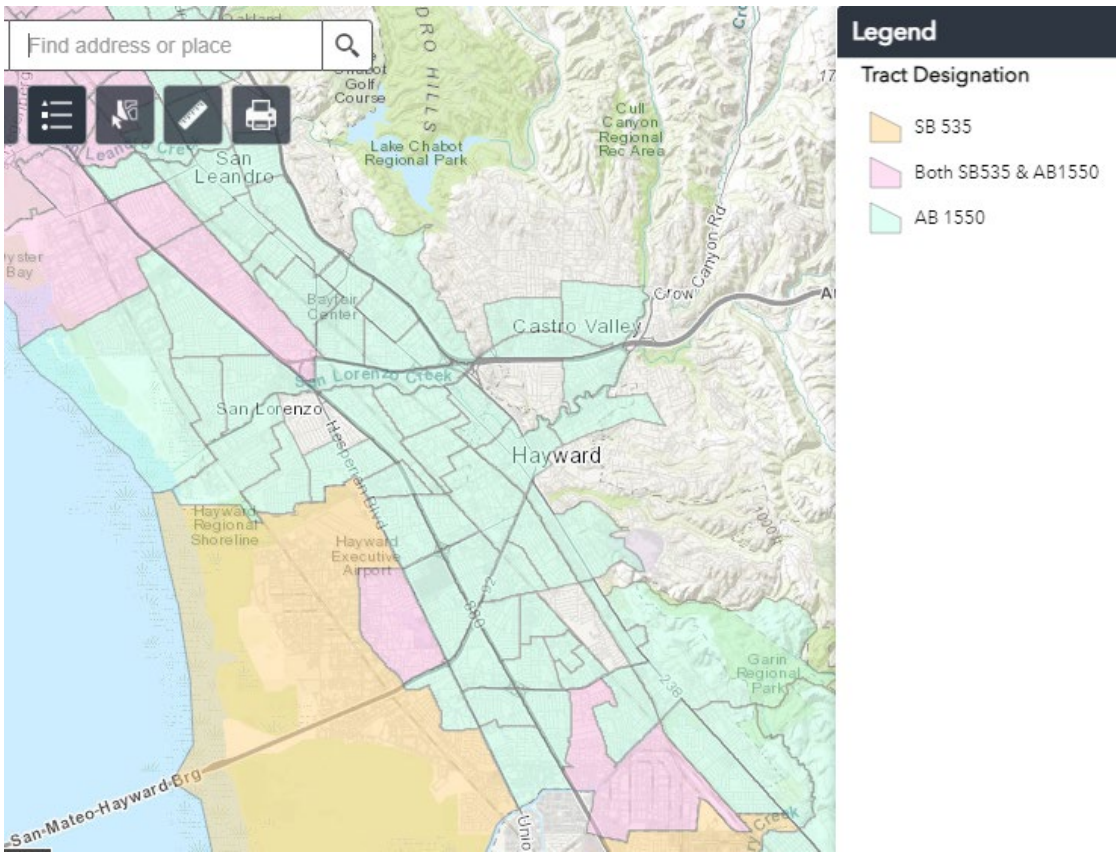
Public/Private Partnerships:

- **Bay Wheels** (Berkeley, Emeryville, Oakland, San Francisco, and San Jose): The system is a partnership between MTC, the five local governments, and Motivate (a subsidiary of Lyft). When the system launched as a pilot in 2013, the Bay Area Air Quality Management District funded bikeshare service in Mountain View, Palo Alto, Redwood City, San Francisco, and San Jose. MTC utilized public funds to support the pilot through 2015, at which time they approved an additional $16.4 million to expand the system. Motivate offered to operate the system at no cost to the public sector, and in 2015 MTC approved a contract to operate in Berkeley, Emeryville, Oakland, San Francisco, and San Jose. These cities have a regional coordination agreement to participate in the Bay Wheels program, as well as specific agreements with Motivate, who shares revenue with MTC and the participating cities. The Bay Wheels model of docked bikeshare is fairly resource intensive and may only be available to cities where the operator believes revenues will be sufficient to cover costs. Smaller cities may need to significantly subsidize costs and staff would need to also coordinate program set up and installation and be involved in ongoing program coordination.
- **Private Sector Supported** (Berkeley, Emeryville, Oakland, Santa Cara, San Jose, San Francisco, and Santa Rosa): Private companies provide the vehicles and operating services in return for user revenues. The companies pay fees to the city for use of the right-of-way, which can be used to cover staff costs in administering the program.

Regional and State Agency Funding Sources:

- **Alameda County Transportation Commission (Alameda CTC):** Alameda CTC distributes the following federal funds --
    - Transportation Fund for Clean Air (TFCA): Bikeshare is an eligible project for TFCA funding. Bikeshare programs must share membership or be interoperable with Bay Wheels, unless they are free to use or were refused by the Bay Wheels operator. These funds can pay for five years of operations, and equipment. Funds are distributed by Alameda CTC through a call for projects for the Comprehensive Investment Plan (CIP). The 2024 call for projects closed in June 2022, and the next call for projects is likely to take place in 2024.
    - Congestion Mitigation Air Quality (CMAQ) Funds: Bikeshare is an eligible project (for capital costs only) under federal CMAQ funds. Like TFCA funding, CMAQ funds are distributed by Alameda CTC through a call for projects for the CIP.
- **California Climate Investments - Clean Mobility Options (CMO):** CMO is a statewide public program that provides up to $1.5 million vouchers to government entities and nonprofits to develop and launch zero-emission mobility projects. The program has a requirement to focus on disadvantaged communities under SB 535 and AB 1550, and the majority of Hayward's census tracts are eligible as a project area. Bike libraries, bikeshare, and scootershare are eligible projects, and CMO funds can support planning, development and implementation (including outreach and operations). Applicants must have completed a community transportation needs assessment prior to applying for funding. Phase 1 of the application process is open from March 1, 2023 to April 5, 2023.

Figure 1: Census tracts eligible for CMO funding



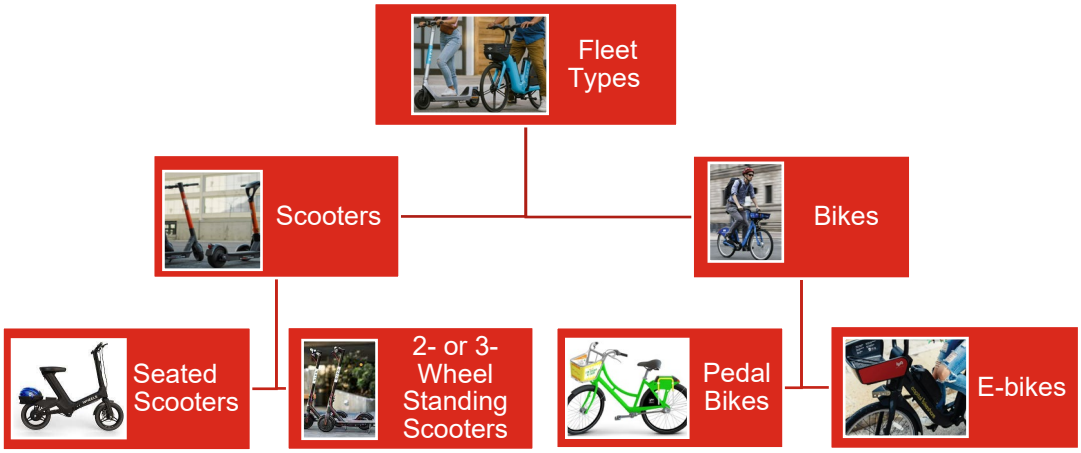
Source: cleanmobilityoptions.org

- **MTC Bike Share Capital Grant Program – no longer available** (Fremont and Richmond): MTC created a grant program to support micromobility programs in cities that were not included in the Bay Wheels program. These grants have been used to support this planning study and to launch bikeshare programs in Richmond and Fremont. Another system was planned in Marin and Sonoma Counties to be aligned with the new rail system; however the selected vendor has since gone out of business. In Fremont, the MTC grant was used to support capital costs, but HOPR (the vendor) is funding program operation through membership, user fees, and private sponsorships. As of 2022, MTC does not have plans to continue this grant program.

FLEET TYPES

There are a number of shared micromobility vehicle types, and these can be broadly categorized as bikeshare (including bikes and e-bikes) and scootershare (including stand-up and sit-down e-scooters). Other variations and vehicle types are in constant development including shared mopeds and other devices.

Figure 2: Fleet Types



The two most common fleet types (bikeshare and scootershare) cater to different use cases, trip lengths, and appeal to different user groups and demographics. Among the peer cities reviewed, e-scooters were the most popular vehicle type. Ten out of the 11 cities currently have e-scooters on their streets (Richmond is the only city reviewed that does not provide e-scooters). The majority (nine out of 11) had some form of bikeshare, whether it was Bay Wheels or another operator, and dockless e-bikes were the most popular bicycle type. Eight of the 11 cities had both bikes and scooters, and San Francisco was the only city with a moped operator, which is permitted separately from e-scooters as part of the Shared Electric Moped Parking Permit.

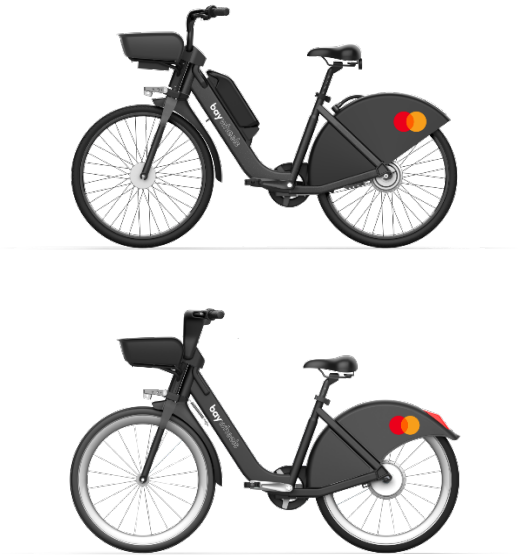
Jurisdictions can choose to have combined or separate contracting/ permitting processes for different vehicle types. Providing separate fleet caps, but a combined application and permitting process can streamline the application process for operators who would like to offer a multimodal fleet

Bikeshare

A bikeshare program consists of making bicycles and/or electric bicycles available for a fee to individual riders for short-term rental. Bikeshare is often preferred for longer distances and by users who are more familiar with riding a bike or more comfortable in a seated position. Some shared micromobility providers may not offer a bikeshare option because the cost to manufacture bicycles (especially e-bikes) is higher and ridership tends to be lower. Because of the lower return on investment, some operators will only offer bikeshare with some sort of funding support or incentives such as being able to provide higher levels of scootershare, which is reported to have a higher return on investment.

E-Bikes vs Pedal/Human-Powered Bikes

E-bikes and pedal bikes are operated very similarly, with the difference being the battery pack that provides assistance to an e-bike rider. E-bike benefits over pedal bikes include the ability to carry heavier loads, go longer distances, bike in hotter temperatures, and climb steep hills. While e-bikes are more expensive than traditional bicycles, e-bike sales have grown significantly in recent years, even outpacing growth rates for more traditional bicycles. Many private micromobility operators offer both e-bikes and pedal bikes to users.



Left: Bay Wheels e-bike. Right: Bay Wheels pedal bike.

Current California state law regulates e-bikes like human-powered bicycles, and e-bikes are not subject to the registration, licensing, or insurance requirements that apply to motor vehicles.

E-Bike Rebate Programs

In recent years, rebates for the purchase of e-bikes have been utilized to encourage wider adoption. The state has allocated $10 million for an e-bike rebate program which will likely begin in 2023. The program will be offered to residents who meet certain income requirements (<$51,000 for an individual and $106,000 for a family of four) and will provide $750 vouchers for a standard e-bike and $1,500 vouchers for a cargo e-bike.

Some local examples of organizations that provide e-bike rebate programs are listed below. Those that Hayward residents may be eligible for are noted with an asterisk:

- Bay Area Air Quality Management District: BAAQMD's Clean Cars for All program offers up to $7,500 toward the purchase of an e-bike or public transit for eligible residents that retire their car. Multiple zip codes in Hayward are eligible to participate in the program.
- City of Alameda: Alameda Municipal Power offers an e-bike rebate of up to $600 for all residential customers.
- East Bay Community Energy: EBCE has allocated $2 million dollars to promote an e-bike adoption program in 2023, with $4 million more set aside for 2024 and 2025. The program will include both a lending program (like a bike library) and an incentive or rebate program.

There are three classes of e-bikes under state law, and most shared micromobility providers offer Class 1 or Class 2 e-bikes in their fleets:

- **Class 1:** Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 20 mph.
- **Class 2**: Bicycle equipped with a throttle-actuated motor, that ceases to provide assistance when the electric bicycle reaches 20 mph.
- **Class 3**: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 28 mph.

Helmets are required for all e-bike riders 17 years of age and younger. There are no age restrictions on Class 1 and 2 e-bikes, but Class 3 e-bike riders must be at least 16 years of age. Class 3 e-bikes are not allowed on bike paths or shared-use paths unless the local jurisdiction explicitly allows it – Hayward does not currently have an ordinance that would allow Class 3 e-bikes on those paths.

Scootershare

Similar to bikeshare, a scootershare program makes e-scooters available for a fee to individual riders for short-term rental. Most private shared micromobility operators prefer to include some level of e-scooters in their fleet, as they have a lower unit cost and are usually more popular than bikes amongst users, resulting in a higher return on investment.

Like dockless bikeshare, cities usually have rules about where e-scooters can be parked and how to address poorly parked vehicles, as well as equity requirements to deploy e-scooters in specific neighborhoods within their service areas.

Table 1: Types of E-Scooters

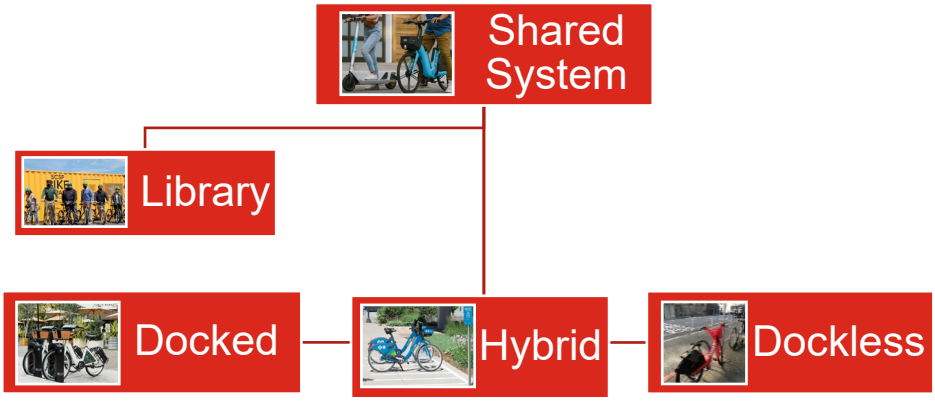
Vehicle Type	Description
Standing E-Scooter	  Riders stand on a platform mounted on two or three wheels and utilize a handlebar for steering and to engage the electric motor. Two-wheeled devices are the most common e-scooter vehicle type.

Seated E-Scooter and/or Adaptive E-Scooter	  Riders are seated and utilize a handlebar for steering and to engage the electric motor. Multiple private operators have developed seated/adaptive e-scooters. Higher costs to manufacture adaptive vehicles, as well as lower usage rates, have led to many operators not offering these vehicles unless required. Some operators offer separate programs where adaptive vehicles are provided at certain locations or where an adaptive vehicle can be delivered directly to a disabled user.

SYSTEM TYPES

This section summarizes the range of potential system types within a shared micromobility program, as illustrated in Figure 3.

Figure 3: Shared Micromobility System Types

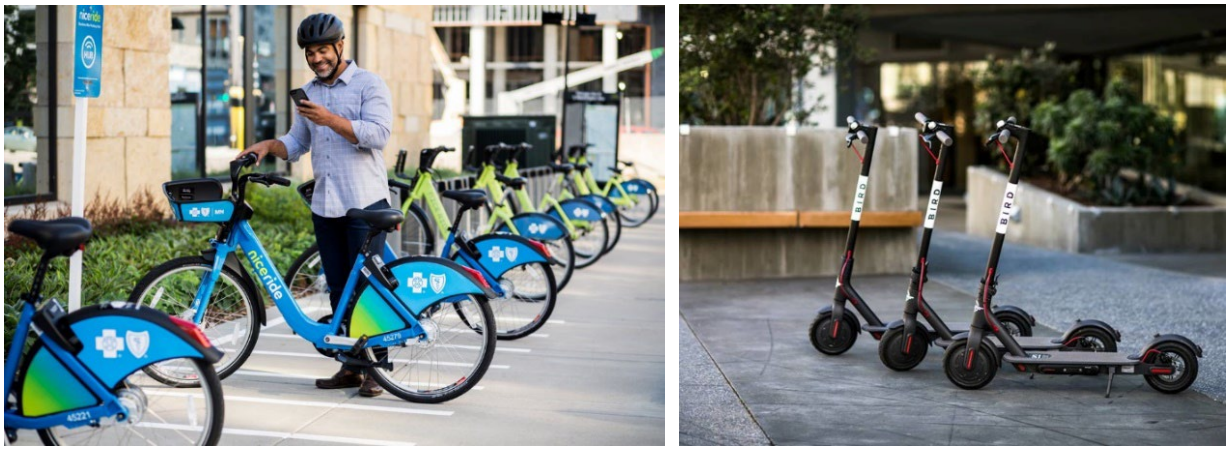


Docked vs Dockless

Docked shared micromobility systems are generally more expensive and time-intensive than dockless systems given the capital cost of purchasing the docks and station infrastructure and identifying, permitting, and installing stations in the public right-of-way. While a docked, station-based system creates more organized pick-up and drop-off, the availability of bikes and scooters is limited to the station locations.

Dockless systems provide more flexibility in where vehicles can be parked allowing closer access to destinations. There can be some issues in reliably knowing that a bike or scooter (or multiple devices for group rides) will be

available nearby, but this has been (at least partly) addressed in other systems by ensuring a sufficiently large fleet of vehicles and encouraging regular rebalancing, particularly to identified high-demand and equity areas.



Left: Dockless bikeshare (foreground) next to docked bikeshare (background). Right: Dockless e-scooters.

Dockless systems are more likely to have issues with clutter and bikes or scooters being parked blocking sidewalks, curb ramps, and other features in the right-of-way. Efficient and effective parking management is a critical aspect of a dockless program (see below).

In the peer cities, all programs other than Bay Wheels and Richmond's bikeshare used dockless systems. Bay Wheels offers docks in the cities where it operates, but e-bikes can also be parked at any public bike rack. Richmond's program included has bike hubs where bikes are required to be parked, though it is currently not operating.

Bike Library

Bike libraries lend bicycles to riders for short-term use. Users sign a bike out from a central location and return it when finished. Bike libraries operate similarly to brick-and-mortar bike rental stores, but often offer bikes for free or very low cost. Bike libraries are often run by community-based organization and non-profits, public libraries, or by private organizations like bike shops or employers. Bike libraries operated out of public libraries can often use the same check-out system and are often free to anyone with a library card.

Bike library operators who do not otherwise provide bikes for rental should ensure that they meet the necessary liability and insurance requirements (e.g., liability waivers, membership terms, safety checks, etc.).

Bike libraries require a staffed physical location for pick-up and drop-off, a fleet of bikes (that are often refurbished), regular maintenance, and a check-out process. As bike libraries usually operate out of only one or two physical locations, they should be conveniently located based on demand and use (e.g., near transit or areas with limited access to other transportation options).

A bike library in Golden, Colorado.

Some local examples of bike libraries include:

- City of Oakland: The City of Oakland received a $1,000,000 grant in 2022 as part of the CMO voucher program (see above) to develop a bike library that makes 500 e-bikes, cargo bikes, and adaptive bikes available for medium- and long-term rental to priority communities.
- Sonoma County Bicycle Coalition: The Sonoma County Bicycle Coalition operates a bike library that members can borrow for free for a week at a time. Members must reserve bikes at least one week in advance using an online reservation system.

Adaptive Bike Lending Programs

An adaptive bike user in Oakland.

Standard e-bikes and pedal bikes do not serve the full range of disabled users. Adaptive bikes (which can include tricycles, handcycles, recumbent bicycles, and other modified bicycles) make bicycling easier and accessible for people with different needs.

Adaptive bike lending programs are operated similarly to bike libraries, and usually require users to pick up and drop off the bicycles at a specific location.

The majority of shared micromobility programs do not offer adaptive bikes (e.g., in 2021 only 21% of programs offered adaptive vehicles). However, both Oakland and San Francisco have run adaptive bike lending pilot programs in recent years. San Francisco made their lending program permanent in 2022 and riders can access bikes at two locations on Saturdays from April to October by appointment only. Oakland's pilot ran in 2019 at Lake Merritt and was available for free to people with disabilities.

- University of California, Santa Cruz: UCSC provides bikes free of charge that are loaned on a quarterly basis. Students must submit an application with a short description of why the need a bike. The library is funded by student fees.
- East Bay Community Energy – Ride Electric E-Bike Adoption Program: EBCE has allocated $2 million dollars to promote an e-bike adoption program in 2023, with $4 million more set aside for 2024 and 2025. The program will include both a lending program (like a bike library) and an incentive or rebate program.

FLEET SIZE AND SERVICE AREA/DISTRIBUTION

Establishing minimum and maximum numbers of vehicles, as well as criteria for when the program can be expanded and by how much, provides jurisdictions with greater control over shared micromobility programs. Minimums help ensure that the system remains viable and provides utility to users. Maximums ensure that new programs are introduced in a controlled fashion and allow the public to get used to them and build support for expansion. Seasonal changes in ridership due to winter weather and flexibility for fleet expansion according to operator performance and ridership should also be considered when defining fleet sizes.

Shared micromobility devices need to be conveniently located a walkable distance from key origins and destinations. The North American Bikeshare and Scootershare Association (NABSA) found that cities with populations under 200,000 had an average of 1.8 bikes available per 1,000 residents and approximately 4.0 scooters available per 1,000 residents, and around 200 scooters and 200 bikes.[2] With a population of approximately 160,000 people, this would equate to approximately 288 bikes and 640 e-scooters in the City of Hayward. Bay Area peer cities with fleet caps often had less vehicles than the NABSA average – for example, San Ramon has 30 e-bikes and 120 scooters (0.2 e-bikes and 1.3 scooters per 1,000 residents), and Fremont had a fleet of 150 bikes and 100 scooters (0.66 bikes and 0.44 scooters per 1,000 residents).

Fleet minimums and maximums varied in the peer cities. Emeryville and Richmond do not have defined minimums or maximums. For cities that had specific fleet size requirements, minimums of 50 devices per operator were common, while maximum fleet sizes ranged from 200-2,000 for cities that had caps. Oakland, Santa Clara, San Jose, and San Ramon all included the opportunity for operators to expand their fleets if high utilization was achieved. Bay Wheels currently has 7,000 bicycles and 550 stations across all the cities in which the program operates.

Most often, the service area of a shared micromobility program is defined as the entire area under the jurisdiction of the regulating agency, e.g., the city boundary. However, some cities use defined boundaries that restrict operations to specific areas within a city – especially during the pilot period. These are often limited to central business districts and high-activity centers. All peer cities reviewed had city-wide service areas, although many had no-ride zones in parks or on trails. For example, Santa Rosa restricts riding at a few large shopping malls, local schools, and at specific areas in Downtown. Bay Wheels bicycles can be ridden anywhere bicycles are allowed throughout the Bay Area, although all rides must end within the boundaries of a city that is part of the regional program.

NUMBER OF OPERATORS

No peer city had more than five operators. The majority (except for San Francisco, Oakland, and Emeryville) placed caps on the number of permitted operators allowed. Peer cities tended to have either 1 operator or 3-5 operators. City size did not correlate to the number of operators, as cities with smaller geographies and/or populations did not necessarily have fewer operators than their larger counterparts.

[2] North American Bikeshare and Scootershare Association. (2022). *3rd Annual Shared Micromobility State of the Industry Report - 2021.* These statistics include permitted fleet caps and programs in varying stages of maturity and expansion.

STAFFING AND PROGRAM COSTS

Agency staff time is required for oversight, implementation, and evaluation of shared micromobility programs and should be considered in developing the program's fee schedule (see below). Many cities launching a shared micromobility program underestimate the level of effort needed to set up and manage the program, and staff time tends to be driven more by the number of vendors than the number of devices.

Multiple city departments are often involved in launching and managing a program, including procurement, contracting, planning, public works, the Mayor's Office, etc. Working with a smaller number of operators can reduce staff time needed to manage the program, foster closer relationships with the operator(s), and increase operator(s) attention on providing customer service rather than competition.

Staff costs can include time for oversight, reviewing permit applications, responding to media and public information requests, data analysis, operator coordination and communications, field checks, Council reporting, and other functions. Other costs can include removing or impounding vehicles, responding to community enquiries and information requests, parking enforcement, and costs to run programs and activities to promote and support the micromobility program.

Santa Clara was the only city reviewed that had publicly available information about staffing resources and costs. The City planned for staff time to include 13 hours ($3,500) to process each application, 306-1,067 hours ($82,000-$280,000) annually for program management (depending on the number of devices), and 1.5 hours ($300) per device for any necessary vehicle impoundments.

FEE STRUCTURE

Fees are used by jurisdictions to cover the staff time and other resources needed to oversee and monitor the program (see above). The typical types of fees are detailed in Table 2.

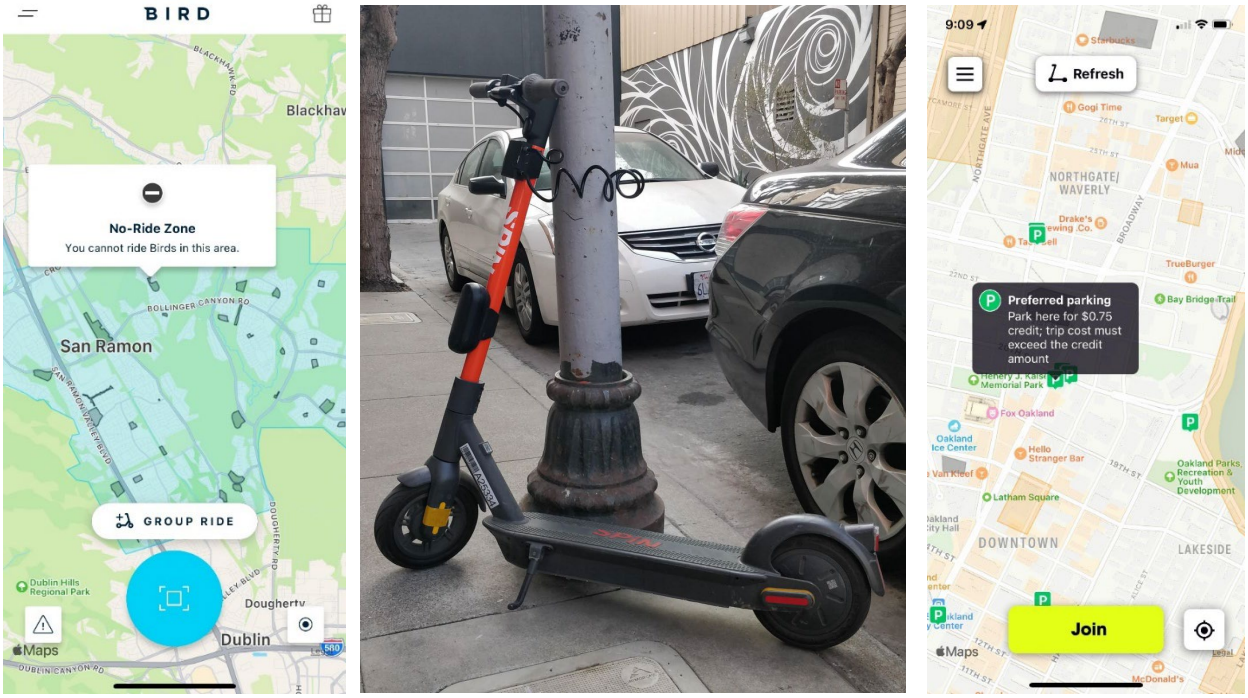
Table 2: Fee Types

Fee	Description
Application fee	Due every time an operator applies for the program or renews their permit. This fee is mostly used to pay for staff time to process the application and varies significantly between jurisdictions.
Annual fee	Typically a one-time, upfront fee that may be a fixed amount or assessed based on the number of vehicles deployed. This fee varies significantly between jurisdictions.
Per-trip or per-device fee	Ongoing fees that are often assessed monthly or quarterly depending on deployment or usage. Best practice is increasingly moving away from per device fees and towards per trip fees (usually $0.10 - $0.20 per trip) that are proportional to usage and incentivize both operators and agencies to support and promote the program.
Security deposit/bond	Some cities require operators to pay an upfront security deposit that is held in reserve until required to pay for any city resources needed to impound or relocate vehicles or address other issues.

In some cities, fees are also used to support costs related to active transportation infrastructure. For example, the City of San Francisco uses its e-scooter fees to accelerate its bike rack installation program and the City of Arvada (in Colorado) funded trail wayfinding signage from its fee collection.

Fees varied for the peer cities. Bay Wheels as a contracted operation does not have a fee schedule. Two pilot programs (San Ramon and Santa Rosa) had no fees and in two programs fees were waived by the City (Fremont and Richmond). The city with the highest fees was San Francisco, which charged a minimum of $43,734 in application and annual fees (not including per-vehicle fees). Of the seven cities who charged application fees, these ranged from $1,500 to $5,400. Of the five cities charging annual fees, these ranged from $5,260 to $30,000 per year. For ongoing fees, counter to trends in other parts of the USA, only one of the peer cities (Pleasant Hill) utilized a per-ride fee ($0.15/ride), while five cities had vehicle fees ranging from $64-$100 per vehicle per year.

PARKING MANAGEMENT AND GEOFENCING



Left: Screenshot of a no-ride zone in San Ramon.
Middle: An e-scooter in San Francisco locked to a pole.
Right: Screenshot of scooter parking and no-ride zones in Oakland (orange indicates no parking allowed, grey indicates no riding allowed, and green P markers indicate incentivized parking location).

Docked systems have minimal parking issues, while improper parking is the most common complaint about dockless systems. Parking complaints can be addressed using some of the following techniques:

- **Regulation and Enforcement:** Jurisdictions should include clear regulations for where devices can and cannot be parked. This should address use and parking on streets, sidewalks, in parks, and on pathways. Micromobility devices should be required to be parked in an upright position and improperly parked devices should be corrected by the operator within a specific amount of time. Enforcement of parking varies – operators can program rides so that users are unable to end their trip until they are parked in a designated parking zone, operators (and cities) can issue fines for mis-parked vehicles, and operators can incentivize good parking behavior by providing credits or discounts to users. Operators have the ability to track the locations of all their vehicles and usually actively monitor their fleet activity. When peer cities get reports (via 311 or other public complaints) of improper parking or other issues, they alert the operator who then must respond in a timely manner. Five peer cities charge additional fees for improper parking or for city staff removal/impounding of micromobility devices.
- **Parking Areas:** Jurisdictions can provide a sufficient supply of conveniently located micromobility parking by creating or expanding formal parking areas. These can range from “heavier” infrastructure such as bike racks, on-street bike corrals, and docking stations, to “light” infrastructure such as delineated parking areas that use paint, flexible delineators, and/or stencils. During pilot or early stages of a shared micromobility program, light infrastructure is more flexible and can be easily moved and adapted to respond to demand. Some cities do not require any infrastructure to delineate parking zones – for

example, San Francisco, CA allows e-scooters to be parked at any bike rack or in the area of the sidewalk closest to the curb (as long as they do not obstruct pedestrian space or obstruct access to transit, driveways, or utilities). Parking regulations varied across peer cities. All Bay Wheels bicycles must be parked at a docking station (e-bikes and pedal-bikes) or locked to a bike rack (e-bikes). Cities with dockless programs, which allow users to end their ride anywhere in the service area, generally have requirements for where bikes and scooters can be parked to reduce clutter and avoid obstructing pedestrian paths. Berkeley and Fremont are the only peer cities that require riders to end their trip at a designated parking area. Cities with designated parking areas generally communicate these through the vendors' apps.

- **Geofencing**: Geofencing can be used to define areas where devices can or cannot be used or parked. These areas can be updated for special events (e.g., parades, marathons, etc.), and operators can also remove all devices from a special event zone if provided advance notice. The City of Hayward can require operators to communicate "no-ride" or "no-park" zones as well as incentivized parking areas to users via their apps (for example, designating a parking area near BART stations or other high-use transit stops). While the technology continues to evolve, geofencing relies on on-vehicle GPS devices, and its accuracy can be affected by obstructions such as tall buildings. The two-dimensional nature of GPS can also create constraints, e.g., geofencing a bridge would also affect a trail or street located underneath the bridge.
- **"Lock-to" Requirements:** These regulations are less common and require devices to be fitted with a built-in lock (often a cable lock) that must be deployed to end the trip or some operators require users to photograph their parked device to complete a trip. Some cities have used these regulations to better organize parking. However, this does require that an adequate supply of bike racks or parking infrastructure be provided to be convenient to users. Four peer cities (Berkeley, Emeryville, San Francisco, and Santa Rosa) have "lock-to" requirements that require devices to be locked to a bike rack or other infrastructure to end their trip. Attendees at a mid-pilot community meeting in San Francisco expressed that the addition of a locking mechanism and lock-to requirement improved parking behavior and reduced scooters blocking accessible travel paths.
- **New Parking Technologies:** Operator technology continues to advance to support improved parking behavior. As an example, in 2022, Bird and Lime launched new tools that use a Google API to allow the companies to geo-locate parked micromobility devices within "less than a meter" accuracy – it is not clear if this technology has been deployed at scale.[3] Operators also can provide parking information and tips on their website or using in-app pop-ups at the end of a trip to remind users about proper parking.

VEHICLE REQUIREMENTS AND MAINTENANCE

The National Association of City Transportation Officials (NACTO) recommends that all micromobility devices should comply with the safety standards established by the Consumer Product Safety Commission (CPSC) and all other federal, state, and city safety standards. Combined vehicle requirements from NACTO and Transportation for America are detailed in Table 3 below.[4,5]

[3] Bellan, Rebecca. "Bird, Lime use Google's ARCore to power scooter parking solution." TechCrunch, 22 May 2022. https://techcrunch.com/2022/05/11/bird-lime-to-use-googles-arcore-to-power-scooter-parking-solution/
[4] National Association of Transportation Officials. *Guidelines for Regulating Shared Micromobility*. (2019). https://nacto.org/wp-content/uploads/2019/09/NACTO_Shared_Micromobility_Guidelines_Web.pdf
[5] Transportation for America. "Shared Micromobility Playbook." https://playbook.t4america.org/

Table 3: Standard Vehicle Requirements

Vehicle Requirements	Description
Safety Standards Compliance	All vehicles should meet national safety standards such as those established by the National Highway Traffic Safety Administration and Consumer Product Safety Commission (CPSC). All vehicles must be certified as safe to operate under any applicable standard by Underwriters Laboratories (UL) or an equivalent safety rating agency. For e-bikes/electric-assist bikes, refer to CPSC Public Law "107-319" (low speed electric bicycles) for maximum engine wattage. Note that these standards are evolving. For e-scooters, refer to CPSC in Public Law "107-319" for weight bearing standards. Note that these standards are evolving.
Speed	Maximum speeds should be set for vehicles at: 1. E-scooters: No greater than 15 mph 2. Class 1 e-bikes: No greater than 20 mph 3. Class 3 e-bikes: No greater than 28 mph
Vehicle ID	Each vehicle should have a unique identifier number prominently displayed to identify and track vehicles as needed.
On Vehicle GPS	Each vehicle should be equipped with on-board GPS capable of providing real-time location data.
Batteries	Operators should detail their battery safety practices, including: 1. Information on battery charging, storing, and disposal 2. Any prior incidents with battery tampering and procedures to prevent future tampering 3. Information about battery management systems 4. How operator identifies at-risk vehicles and responds to risks
Visibility	Each vehicle should have daytime running front and rear lights visible from 300-feet under normal conditions.
Remotely Disable Vehicle	In case of an equipment safety issue, operators must be able to remotely turn off and disable all potentially affected vehicles.

As shared micromobility devices are maintained by private operators, cities often include specific maintenance requirements in their regulations. Common requirements include meeting state vehicle codes, providing a maintenance and repair plan or an up-to-date record of maintenance activities, tamper-resistant security hardware on all devices, and monthly maintenance checks conducted by the operator (i.e., checks for tire condition, brake function, handlebar grips, brake levers, bell, lights, kickstands, etc.).

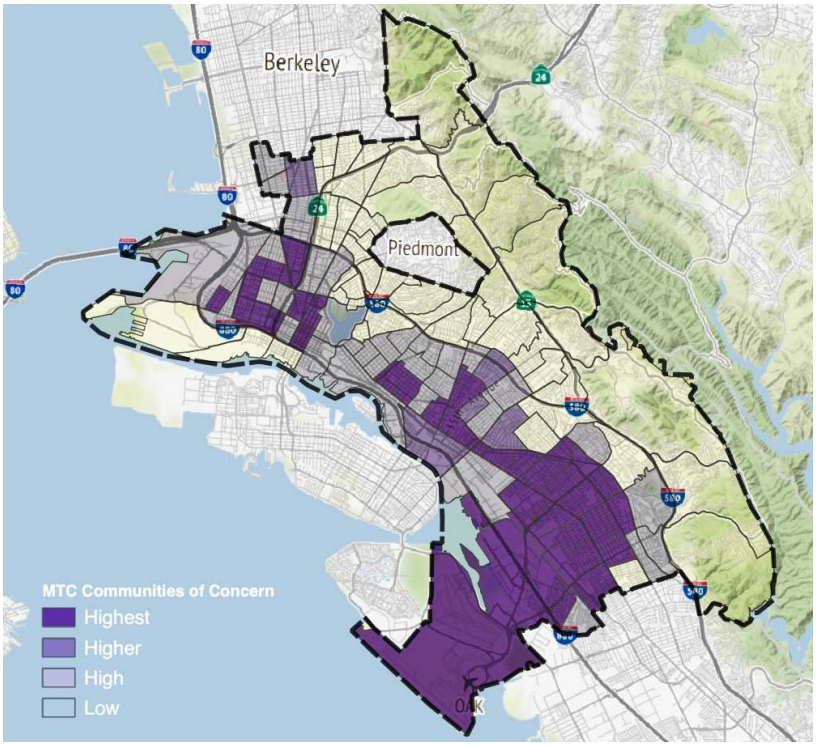
In the peer cities, most vehicle requirements were the typical requirements outlined above. Additionally, Oakland required that wheel sizes were no smaller than 9". Berkeley and Santa Rosa do not allow third party advertising on dockless vehicles. San Jose also required dockless operators (not including Bay Wheels) to pilot anti-sidewalk riding technology. In terms of maintenance, most programs require that the operator be responsible for maintaining the vehicles and any associated infrastructure and keep a record of maintenance. Most cities also require operators to include a way for a user to report that a vehicle is damaged, and to remove vehicles that are reported within a certain period. Some permits have additional requirements, such as San Francisco which requires operators to submit a maintenance plan and perform a maintenance check on each vehicle at least every two months.

EQUITY

There are multiple regulatory tools that jurisdictions can use to promote equitable access to shared micromobility. There is significant variation in the deployment of these tools and some jurisdictions request that operators submit

an “equity plan” to show how low-income and historically marginalized populations will be engaged in the program. Some techniques to improve access that can be included in city regulation and requirements for shared micromobility in Hayward in alignment with the city’s Racial Equity Action Plan include:

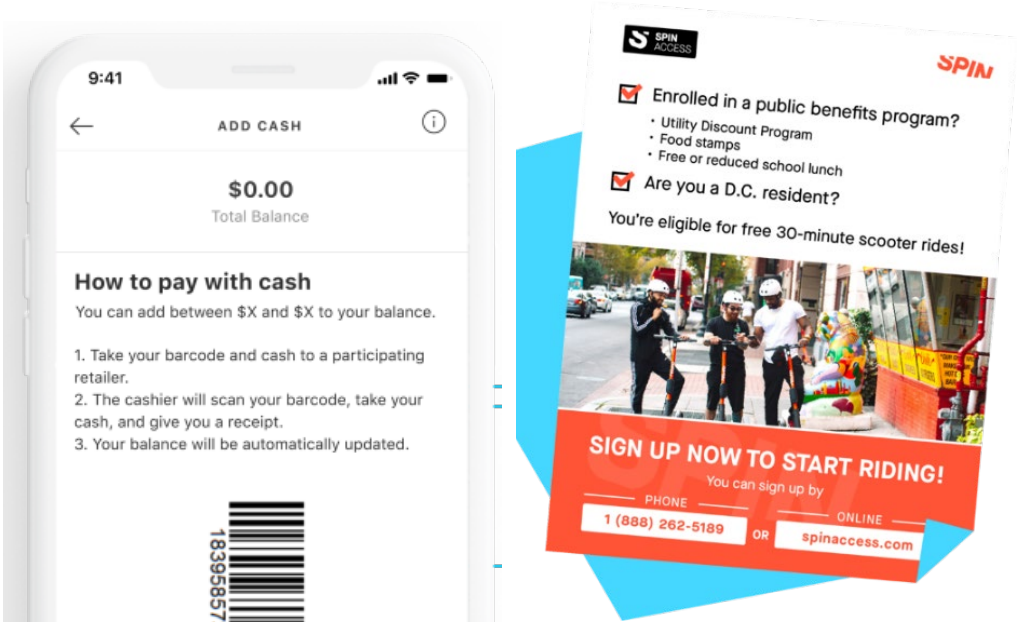
- **Equitable distribution:** Operators provide and rebalance a certain percentage of vehicles in underserved or defined “equity” zones. Jurisdictions can incentivize operator deployment in underserved areas by reducing fees for trips that start or end in these zones.
- **Discounted pricing**: Operators provide discounted pricing for low-income individuals - often partnering with community-based organizations and/or using already established low-income qualification programs to confirm eligibility.
- **Non-digital/underbanked access:** Operators provide alternative access programs for people who do not have access to a smart phone or the operator’s app or are unbanked/underbanked and need cash or pre-paid card payment options.
- **Multilingual access:** Operators provide their apps and communications in different languages.
- **Outreach/engagement with underserved communities:** Operators conduct digital and/or in-person outreach targeting underserved communities. This can include ad/social media campaigns, tabling/pop-up events, and demonstrations of the micromobility devices. Jurisdictions should ensure that underserved populations are engaged consistently and meaningfully throughout the program (not just during launch).
- **Access for users with disabilities:** Operators provide adaptive vehicles for users with disabilities or partner with other organizations that provide these services.



The City of Oakland requires 50% of e-scooters to be deployed in “Communities of Concern”.

Eight of 11 peer cities had equity requirements for micromobility operators. Common requirements included discounts for low-income riders (8 cities), alternative payment methods (7 cities), adaptive vehicles (6 cities), and

distribution in pre-determined equity zones (5 cities). A few cities also required user surveys and the development of a community engagement plan. Multi-lingual access requirements were also common across peer cities.



Left: Instructions for cash payment in the Bird app. Right: Advertisement for Spin's Access Program.

A mid-pilot review of San Francisco's program reported that more robust community engagement was needed to effectively serve historically disadvantaged communities, especially low-income individuals. Specifically, the participation in the low-income discount program was too low, and the report recommended additional engagement and multi-lingual outreach to increase participation.

ENCOURAGING CONNECTIONS TO TRANSIT

Shared micromobility is often used as a first- and last-mile connection to transit. ITDP recommended the following ways that shared micromobility could be better integrated with public transit[6]:

- **Physical Integration:** Shared micromobility devices should be available near transit. This can include designated parking areas at bus stops and transit stations, active transportation infrastructure that connects to transit, or mobility hubs where multiple modes of transportation are available. The City of Berkeley, BART, and a dockless scooter operator (SuperPedestrian) launched e-scooter parking at BART stations for quick and easy access.
- **Payment and Fare Integration:** Allows users to reserve, transfer between, and pay for multiple modes of transportation. This can be costly and time-consuming to implement but can be (at least partially) achieved using smart/RFID cards, mobile payment apps, or reduced fare transfers. Currently, Bay Wheels membership can be linked to Clipper Cards. However, the Clipper Card cannot be used to pay for rides or membership, but only to check out a bike (users maintain a separate Bay Wheels account that is used to pay for rides/membership). Bay Wheels is the only shared micromobility program in the region integrated with Clipper.

[6] Institute for Transportation and Development Policy. (2021). *Maximizing Micromobility: Unlocking Opportunities to Integrate Micromobility and Public Transportation.*

- **Informational Integration:** Clear, accessible information is key for informed trip-making decisions. Wayfinding signage, trip-planning applications (optimized for mobile use), and multimodal maps in public transit stations can promote use of micromobility. For example, BARTs “Trip Planner” website and smartphone app show real-time availability of Spin scooters in San Francisco, LINK scooters in Oakland, and HOPR scooters in Fremont.
- **Institutional Integration:** Cooperation across departments, agencies, organizations, and levels of government can increase opportunities to integrate micromobility with transit. Expanding micromobility service areas beyond city partners can improve access and align with regional transit routes. For example, BART currently allows micromobility operators to deploy their vehicles on BART property if they enter an agreement, and California State University previously worked with a now-defunct operator to provide bikeshare service on campus.

Scooters at the Downtown Berkeley BART station plaza.

Jurisdictions can also incentivize operators to propose ways to integrate with transit by encouraging pilots. Some recent examples include “deep linking” an API to allow riders to see all transportation options in the same app or reducing fees for deploying micromobility devices near transit.

SAFETY

Ensuring safe operations is a critical component of a micromobility program. Given the industry is relatively new, it is difficult to estimate collisions or injury rates and long-term trends for e-scooters and other shared micromobility devices. However, between 2018 and 2019, the estimated number of e-scooter injuries treated in emergency departments in the United States nearly doubled as e-scooter ridership increased across the country.[7,8]

Data from 2014-2018 from the National Electronic Injury Surveillance System (NEISS), which provides national estimates of injuries that present to emergency departments in the United States, found that nearly one-third of patients with e-scooter related injuries had a head injury.[9] This is more than double the rate of head injuries experienced by bicyclists, and is likely related to low helmet use among riders. A 2021 systematic review of injury patterns and circumstances associated with e-scooter collisions found that 92.8% of riders were injured in single

[7] Aizpuru M, Farley KX, Rojas JC, Crawford RS, Moore TJ Jr, Wagner ER. Motorized scooter injuries in the era of scooter-shares: a review of the national electronic surveillance system. *Am J Emerg Med*. 2019;37(6):1133-1138. doi:10.1016/j.ajem.2019.03.049

[8] Namiri NK, Lui H, Tangney T, Allen IE, Cohen AJ, Breyer BN. Electric scooter injuries and hospital admissions in the United States, 2014-2018. *JAMA Surg*. 2020;155(4):357-359. doi:10.1001/jamasurg.2019.5423

[9] Namiri, Nikan K., et al. "Electric scooter injuries and hospital admissions in the United States, 2014-2018." *JAMA surgery* 155.4 (2020): 357-359.

road user events, and 7.2% were injured in multiple road user events.[10] Single user events included falls, collisions with objects, excessive speed, and unfavorable road conditions. The limited data available suggests that the likelihood of a fatality or emergency department visit is similar for e-scooter riders and bicyclists. Overall, a trip by car in an urban area is for more likely to result in a fatality than a trip on an e-scooter or bicycle.[11]

Some jurisdictions request that operators submit a "safety plan" to show how safety will be addressed. Some of the more common techniques include:

- **Helmet distribution programs:** helmets are only required by state law for riders under 18 years old. Studies have shown that the majority of e-scooter riders do not wear helmets, but that the prevalence of head injuries for e-scooter riders involved in crashes is almost double that for bicyclists.[12,13,14] Helmet requirements in other cities have been difficult to enforce, are challenging for operators to implement, and result in lower ridership. These factors can limit the financial viability of a program if helmets were to be required for all riders. More common, operators will provide regular helmet distribution and mail-outs.
- **Rider Education:** many jurisdictions require that operators develop outreach and education campaigns to support safe rider behavior. These campaigns can take the form of pop-up events and safety trainings, traditional and social media campaigns, and in-app education.
- **Sidewalk Riding Detection and Support of Bike Infrastructure**: many jurisdictions are concerned about conflicts between pedestrians and shared micromobility devices being operated on the sidewalk. A 2022 study that reviewed e-scooter rider behaviors in Salt Lake City, UT and Tucson, AZ found that infrastructure and street design influenced rider crash and injury rates[15]. Riders who predominately rode on a sidewalk were 151% more likely to report experiencing a crash, while those who rode in bike lanes were 52% less likely to report experiencing a crash. The best way to limit sidewalk riding is to provide safe on-street or separated infrastructure for micromobility users - observations of riders in Salt Lake City suggest that e-scooter riders are less likely to ride on sidewalks when bike lanes are available, and e-scooter riders and bicyclists are more likely to use sidewalks on roads with more than six lanes or when light rail is present. A number of operators are developing technology that can detect sidewalk riding to help enforce sidewalk-riding bans; however, the technology is not yet available at scale.

Most peer cities require operators to include rider education in their apps and on their vehicles to inform riders where riding is allowed or not allowed, especially rules around sidewalk riding. Berkeley, Emeryville, and Oakland require a free or discount helmet give away. San Francisco requires operators provide one in-person safety training program every quarter.

LESSONS FROM PEER CITY INTERVIEWS

As follow up to the review of peer city policies and regulations conducted as part of the best practices review in the previous section, staff from four peer cities as well as BART were interviewed to get a more in-depth understanding of their programs' challenges, successes, and lessons learned. Every city interviewed expressed strong interest in shared micromobility but cited multiple challenges in sustaining their program. An overview of

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[10] Toofany, Manish, et al. "Injury patterns and circumstances associated with electric scooter collisions: a scoping review." *Injury prevention* 27.5 (2021): 490-499.
[11] ITF (2020), "Safe Micromobility", *International Transport Forum Policy Papers*, No. 85, OECD Publishing, Paris, https://doi.org/10.1787/0b98fac1-en.
[12] Namiri, Nikan K., et al. "Electric scooter injuries and hospital admissions in the United States, 2014-2018." *JAMA surgery* 155.4 (2020): 357-359.
[13] Currans, Kristina M., et al. "Scooting to a New Era in Active Transportation: Examining the Use and Safety of E-scooters." *National Institute for Transportation and Communities* (2022).
[14] Todd, Jay, et al. *Behavior of electric scooter operators in naturalistic environments*. No. 2019-01-1007. SAE Technical Paper, 2019.
[15] Currans, Kristina M., et al.

lessons learned from each interviewee is included below, and additional detailed takeaways are provided in the following section.

- **Pleasanton**: Pleasanton completed a feasibility study in 2019 to set up a pilot program, but pandemic challenges put a program launch on hold. The city is currently looking into launching the program with Bird as an interested operator, and they are in the process of updating e-bike regulations in their municipal code to more accurately define electric micromobility devices and where riding is allowed.
- **Pleasant Hill:** Pleasant Hill launched a pilot shared micromobility program with Bird in October 2022. The program has been indefinitely suspended, which is likely due to a combination of Bird staffing issues, service area limitations, wet weather impacting ridership, and industry-wide pivots to other markets.
- **San Ramon:** San Ramon launched in December 2022 with Bird as their e-scooter operator. The city had hoped to be part of a regional micromobility program as part of Contra Costa County's Innovate 680 initiative but ended up contracting directly with Bird due to delays in other cities participating.
- **Fremont:** Fremont launched a shared micromobility program with pedal bikes, e-bikes, and e-scooters in 2019 with Hopr as the operator. Unlike the other peer cities interviewed, Fremont had received grant funding to purchase its vehicles. The city noted issues with a lack of on-the-ground operator staff contributing to maintenance and vandalism issues. The program has now been paused, but there is interest in restarting the program on a more regional level.
- **BART**: Staff were generally supportive of shared micromobility programs, and have a standard property use license agreement for any shared micromobility operator wanting to place vehicles on their property. The agreement includes specific requirements that are detailed in the Local Context Analysis.

Both operators and agencies need financial incentives

Two of the four cities interviewed did not contribute any city funds (beyond staff time) to launch and manage their shared micromobility program. In Pleasant Hill and San Ramon, private operators owned and operated the vehicles and equipment, providing a portion of their revenue back to the city. While this means that the program was cost-neutral or even brought in revenue for these Cities, operators who are not seeing high enough returns are more likely to exit the market, as seen in Pleasant Hill.

In Fremont, the city received a grant from MTC to purchase bikes and scooters for their program and contracted with Hopr, who was paid to manage the program. In this case, the direct contract with the operator did not provide strong incentives to innovate or encourage ridership. Fremont staff also stated that they thought the financial burden and capacity issues of a small city managing a shared micromobility program might be alleviated if multiple neighboring jurisdictions worked together to manage a vendor that could provide at-scale service to a larger area.

All cities noted that not having enough field staff was a significant issue and may have been a result of their markets not generating high enough returns to hire more staff.

Public complaints were minimal

All cities interviewed had mostly positive feedback and stated that they had not received many complaints. The few complaints received were mainly for dockless vehicles left near residential driveways or blocking sidewalks, and staff stated that the operators addressed these concerns quickly. Cities did note that the low number of vehicles operating in their cities many have reduced the number of complaints.

Transit integration can boost ridership

Connections to transit, and particularly BART, were seen as crucial for ridership in the smaller cities interviewed. Pleasant Hill shared that one challenge to achieving high ridership was that the Pleasant Hill BART station is outside of the city's boundaries in Walnut Creek, and therefore inaccessible on a shared micromobility vehicle as Walnut Creek does not have a shared micromobility program. Pleasanton anticipated that ridership in a future shared micromobility program would likely be concentrated between the BART station and the business district.

BART staff were supportive of the lock-to requirements in Berkeley, San Francisco, and Oakland, stating that it helped ensure that BART property remained accessible to people entering and exiting the station.

Policy and infrastructure must support shared micromobility

A few cities noted that their focus is on building out their active transportation infrastructure to support mode shift, support public health, and reduce emissions and pollution. Many cities have significant gaps in their active transportation network, which they noted as a primary reason for not seeing higher shared micromobility ridership.

Supportive policy is also critical - Pleasanton is working on updating their municipal code to better define and regulate electric micromobility, which they are hoping will set the program up for success. In San Ramon, current East Bay Regional Parks regulation bans shared micromobility vehicles from the Iron Horse Trail, which may prevent less confident residents from utilizing shared micromobility as they would need to ride on city roads.

LOCAL CONTEXT ANALYSIS

A market analysis for shared micromobility in Hayward was conducted looking at geospatial, infrastructural, and demographic attributes that correlate with micromobility demand.

MICROMOBILITY IN THE REGION

The project team reviewed all cities in the Bay Area with currently operating shared micromobility programs including Berkeley, Emeryville, Fremont, Oakland, Pleasant Hill, Richmond, Santa Clara, San Jose, San Francisco, San Ramon, and Santa Rosa. The regional Bay Wheels program (operating docked and dockless pedal-bikes and e-bikes in Berkeley, Emeryville, Oakland, San Francisco, and San Jose) was also included in the review. Detailed findings from this analysis are included in Appendix B. Several other cities with similar characteristics to Hayward, including Pleasanton, San Leandro, Union City, and Walnut Creek do not currently have shared micromobility programs.

PREVIOUS MICROMOBILITY OPTIONS IN HAYWARD

Zagster provided a bikeshare program between 2015 and 2020 on the CSU East Bay campus. The service provided 10 bikes that could be checked out by students, faculty, and staff at two locations on campus. It closed when Zagster shut down due to the impacts of the COVID-19 pandemic. The University has expressed interest in working with the City to re-establish a bikeshare or shared micromobility program.

GEOGRAPHY AND POPULATION

Hayward is the sixth-largest city in the Bay Area, with a population of around 160,000, an area of 45 square miles (18 square miles of which is in the waters of the San Francisco Bay), and a population density of 3,557 people per square mile (5,295 people per square mile not counting the area of the City in the Bay). Higher population density is generally linked to higher demand. Hayward has lower population density citywide than San Francisco or Oakland but has higher density than multiple other peer cities that currently have shared micromobility programs.

Table 4: 2020 US Census Population Densities in Peer Cities

City	Population Density (persons per land square mile)
San Francisco	18,629
Berkeley	11,917
Emeryville	10,138
Oakland	7,878

Santa Clara	6,984
Hayward	**5,295**
San Jose	5,684
Pleasant Hill	4,892
Santa Rosa	4,189
San Ramon	3,995
Richmond	3,875
Fremont	2,943

Source: 2020 US Census

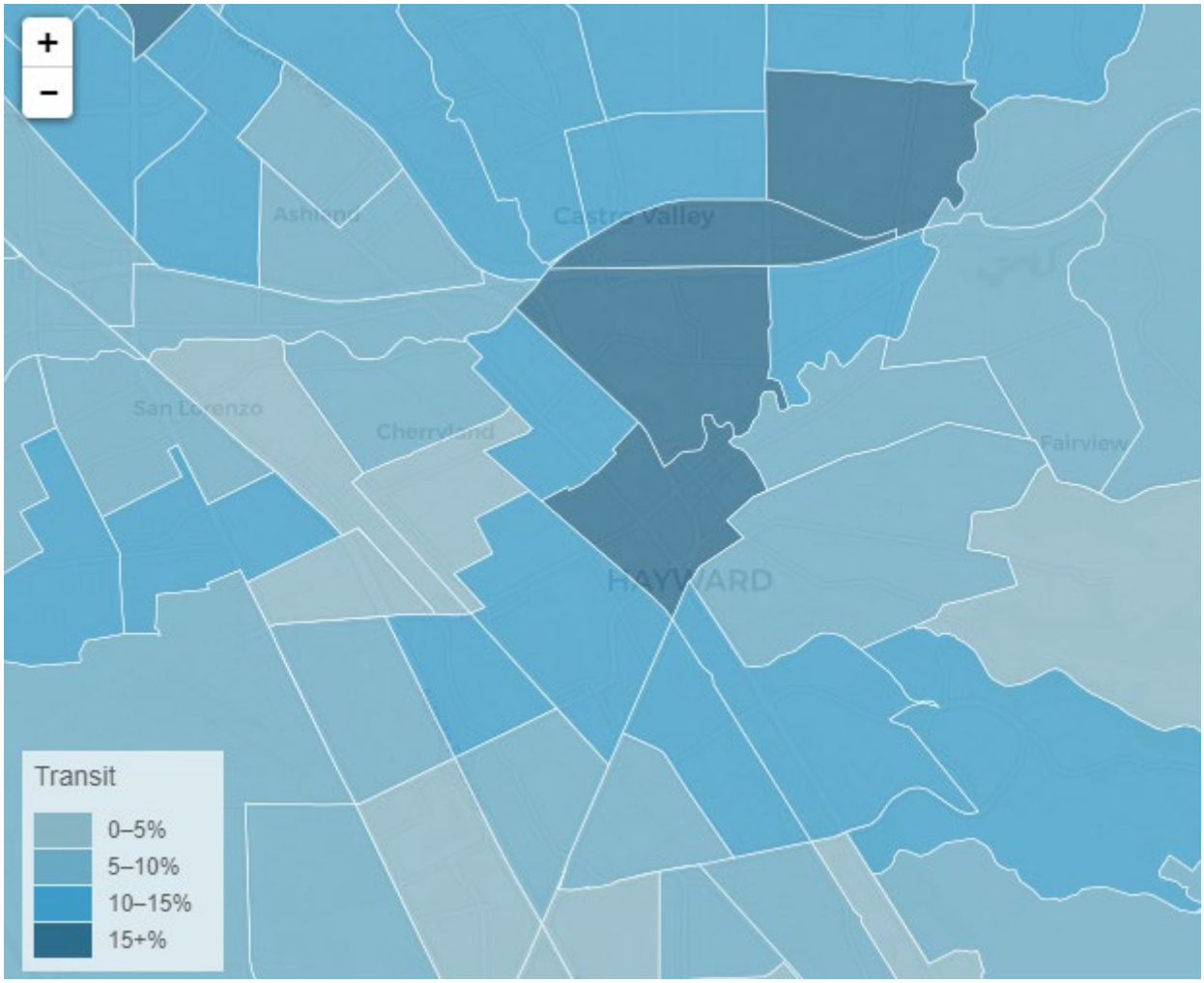
While many small cities across the country have successful shared micromobility programs, private operators often prioritize large, densely populated markets where ridership is likely to be higher. One way to encourage operator interest in smaller cities is to offer an exclusive permit/contract to operate.

Most of the dense and urbanized parts of the city are on a relatively flat plain, and steep hillsides define the eastern edges of the city. While hills can pose a challenge for pedal-powered devices, e-bikes and e-scooters have been successful in other hilly Bay Area cities.

EMPLOYMENT

Employment density is another key indicator of demand – especially commuters traveling from home-to-work, to access public transit, or to run errands or make social trips through the day or after work. The city's location provides access to major employment hubs across the region (e.g., Oakland, San Francisco, San Jose, Silicon Valley, etc.). The City of Hayward Bicycle and Pedestrian Master Plan found that 75,000 Hayward residents commute to work in other parts of the Bay Area with a mean commute time of 35.6 minutes. Over 75% of residents commute outside of the city for work, including 35% of residents who travel outside of the county. A high percentage of commuters traveling outside the city for work provides an opportunity for shared micromobility to fill first- and last-mile gaps between workers' homes and transit – in particular BART and AC Transit. Although 2021 American Community Survey data estimates that only 3% of workers in Hayward utilize public transit to get to work, there are multiple census tracts that have high percentages (15% or more) of transit commuters (see Figure 4).

Figure 4: Percentage of Commuters Taking Transit



Source: MTC Vital Signs

LAND USE

The western part of the city along the San Francisco Bay and the southern border is primarily industrial. Residential land uses are concentrated in the central part of the city and consist mainly of single-family residential housing. Medium-density housing is located primarily in the northwest portion of the city, and there is limited high-density residential. Mixed-use is mostly found along Mission Boulevard, and retail/commercial uses are concentrated in the downtown area and at the Southland Mall.

Key destinations and areas of focused future development within Hayward are listed below:

- Downtown City Center*
- Cannery Transit Neighborhood*
- Mission Boulevard Mixed-Use Corridor*
- South Hayward BART Mixed-Use Corridor & Urban Neighborhood*
- Manufacturing headquarters and plants (Annabelle Candy, Columbus Salame, Shasta, Pepsico)
- Educational institutions (California State University East Bay, Chabot College, Life West Chiropractic College)

- Retail (Southland Mall, other shopping centers)
- Hospitals (St. Rose Hospital)
- Regional parkland and open space (Don Castro Regional Recreation Area, Dry Creek Pioneer Regional Park, the Hayward Regional Shoreline, Garin Regional Park)

*Priority Development Area for focused housing and employment growth as defined by the 2040 General Plan

DEMOGRAPHICS

The following demographic analysis uses NABSA's 2021 State of the Industry Report and 2020 US Census data to compare demographics of shared micromobility users to Hayward residents.

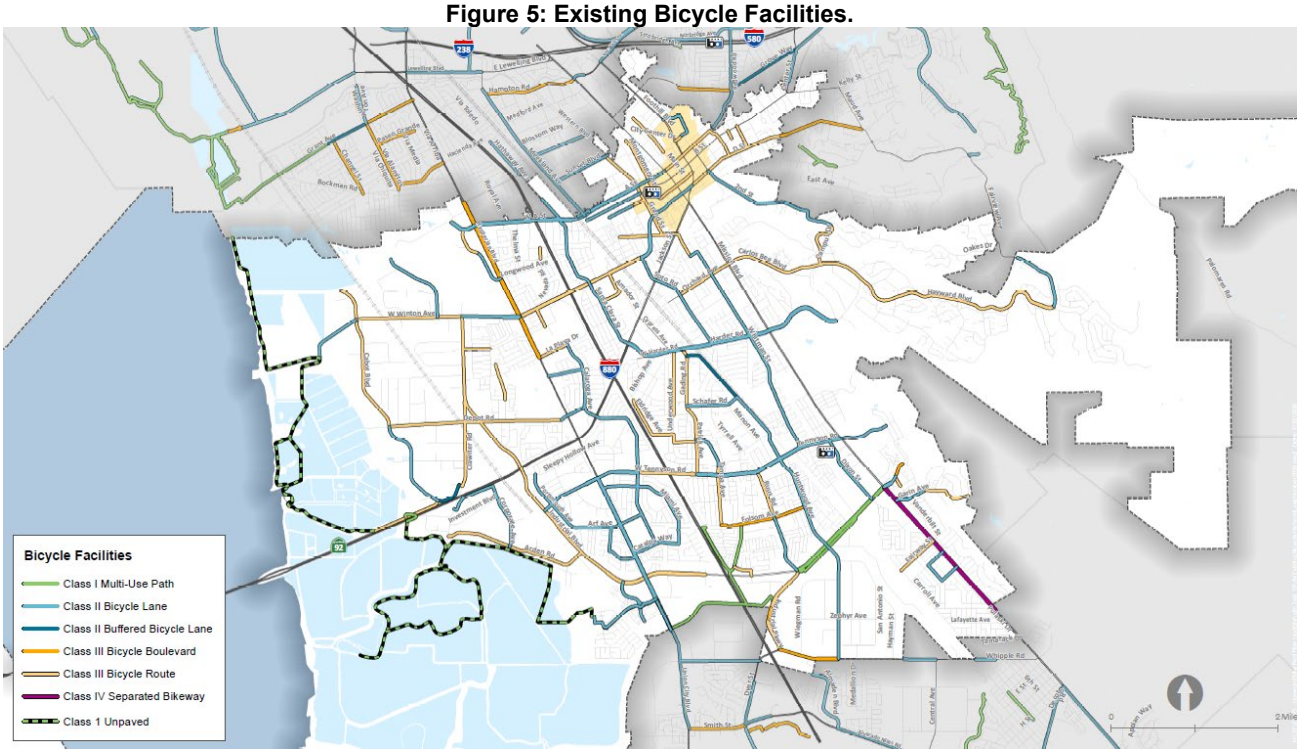
- **Race:** In North America, White riders are over-represented in micromobility, while people of color are mostly under-represented. Lyft (Bay Wheels) ridership data in the East Bay included 53% of riders identifying as members of racial and/or ethnic minority groups. Hayward's diverse population (39.5% Hispanic or Latino, 27.9% Asian, 16.1% White, 9.8% Black, 9.5% two or more races, and 13.3% other races) may require additional outreach effort to engage typically under-represented racial groups.
- **Income:** In North America, the highest income earners (household incomes of $100,000+) are highly over-represented in shared micromobility ridership, while the lowest earners (household incomes of <$15,000) are also somewhat over-represented. People between these incomes are typically under-represented. Bay Wheels riders in the East Bay had a $77,000 median household income. The median annual household income in Hayward is $98,857and 8.5% of residents live under the poverty line. The Bicycle and Pedestrian Master Plan found that in Hayward low-income workers, high-income workers, and people below the poverty line biked more than other groups. There may be opportunities to better engage low- to medium-income earners to use discount programs offered by most shared micromobility providers.

BICYCLE INFRASTRUCTURE

A connected network of bike infrastructure is critical to supporting a successful shared micromobility program. There are currently around 82 miles of bikeways in the city, including Class I, II, III and IV facilities as shown on Figure 4. The 2020 Bicycle and Pedestrian Master Plan found that Hayward's street network is predominantly comprised of low-stress local streets, although most of the major arterials in the city are high-stress due to limited bike facilities as well as high volumes and speeds of vehicular traffic (see Figure 5). Currently, city municipal code bans sidewalk riding in Downtown (the shared area in Figure 5 bound by A Street, D Street, Foothill Boulevard, and Watkins Street). Studies show that when bike lanes are present, micromobility users (specifically e-scooter riders) use the sidewalk less frequently.[16]

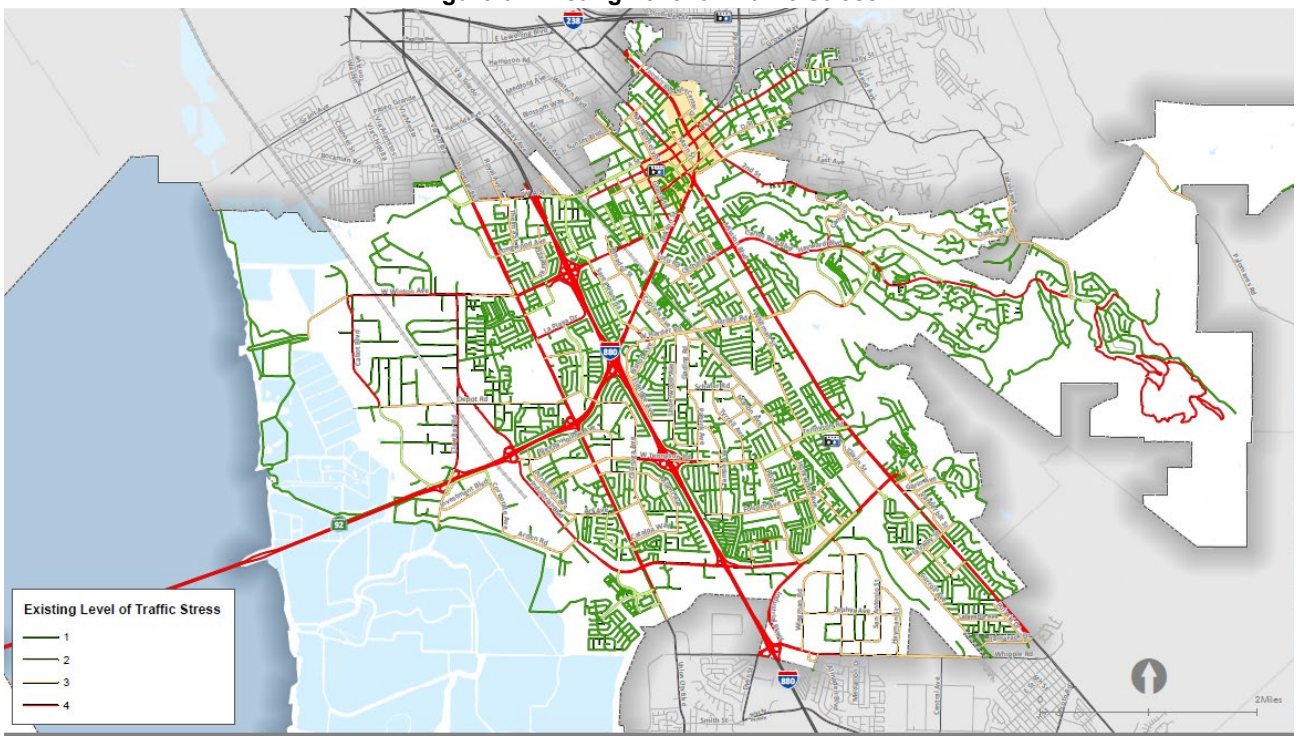
[16] Currans, Kristina M., et al. "Scooting to a New Era in Active Transportation: Examining the Use and Safety of E-scooters." *National Institute for Transportation and Communities* (2022).

Figure 5: Existing Bicycle Facilities.



Source: Hayward Bicycle and Pedestrian Master Plan

Figure 6: Existing Level of Traffic Stress



Source: Hayward Bicycle and Pedestrian Master Plan

TRANSPORTATION MODES AND TRIP PURPOSES

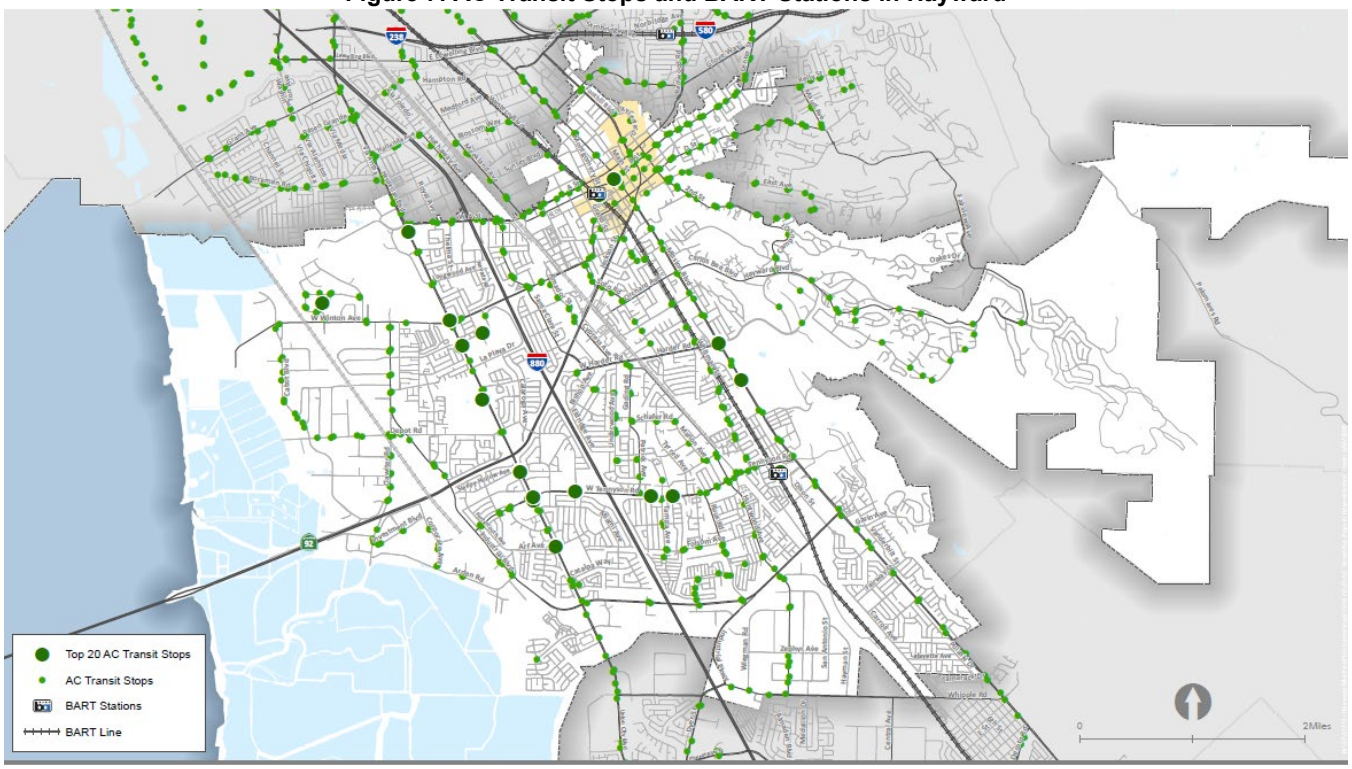
According to the Bicycle and Pedestrian Master Plan, most commute trips in Hayward are taken in private vehicles (82%), while walking is 2.3% of trips and biking only 1.1% of trips. Over 80% of workers in Hayward have two or more vehicles available at home, but this is not a predictor of commute mode (over 40% of Hayward workers who bike to work have 3+ vehicles, while half the people who walk to work own 2+ vehicles).

The 2013 California Household Travel Survey found that 28% of all non-work trips made by Hayward residents are less than one mile in length and an additional 31% of non-work trips are between one and three miles. According to the North American Bikeshare Association (NABSA) 2021 State of the Industry Report, the average micromobility trip length is 1.5 miles for bikeshare trips and 1.3 miles for e-scooter trips. Almost two-thirds of all non-work trips in Hayward are within a three-mile range and could potentially be served by micromobility.

TRANSIT

Shared micromobility is increasingly viewed a as an important first- and last-mile connection to transit, and deploying vehicles and providing parking at or adjacent to transit stations can contribute to higher ridership.[17] Within Hayward, the major transit options include BART, local bus lines (AC Transit), and regional rail (Amtrak).

Figure 7: AC Transit Stops and BART Stations in Hayward



Source: Hayward Bicycle and Pedestrian Master Plan

BART

Two BART stations are located within the city – South Hayward Station (28601 Dixon Street) and Hayward

[17] Mohamed Abouelela, Emmanouil Chaniotakis, Constantinos Antoniou, Understanding the landscape of shared-e-scooters in North America; Spatiotemporal analysis and policy insights, Transportation Research Part A: Policy and Practice, Volume 169, 2023,103602, ISSN 0965-8564, https://doi.org/10.1016/j.tra.2023.103602.

Station (699 B Street). Currently, most riders access the station via driving or carpooling. See Table 4 for more detailed station characteristics from the BART Walk and Bicycle Network Gap Study.

Table 5: BART Station Characteristics

Station	BART Lines served	Daily Station Entries (2015)	Daily Station Exits (2019)	Ridership (compared to all 48 BART stations)	Access Mode (2015)		Parking Spaces (2019)	
					Walking	Biking	Bike	Vehicle
Hayward Station	Green (Daly City-Berryessa/North San Jose)	5,592	4,597	43rd highest	29%	6%	116	1,449
South Hayward	Orange (Richmond-Berryessa/North San Jose)	3,469	2,950	32nd highest	25%	6%	102	1,272 (often full)

Source: BART Walk and Bicycle Network Gap Study (2020)

Based on 2022 ridership data, Hayward Station had an average of 1,500 daily station entries and 993 daily station exits, while South Hayward Station had 1,491 daily station entries and 957 daily station exits. The most popular trip pairings, based on station entry/exit data were between the two Hayward BART stations and the Downtown San Francisco stations as well as the Fruitvale and Fremont stations, reflecting larger commuting patterns (see Table 6).

Table 6: Station entries and exits at Hayward and South Hayward BART stations

Entry Station/Exit Station	Most used entry stations	Most used exit stations
Hayward Station	1. Embarcadero 2. Powell 3. Fruitvale 4. Montgomery 5. Fremont	1. Embarcadero 2. Montgomery 3. Fruitvale 4. Powell 5. Fremont
South Hayward Station	1. Embarcadero 2. Powell 3. Montgomery 4. Civic Center 5. Fruitvale	1. Embarcadero 2. Montgomery 3. Powell 4. Civic Center 5. Fruitvale

Biking and walking currently account for 35% of trips to and from the station Hayward Station and 31% of trips South Hayward Station, as noted in Table 4. This means that approximately two-thirds of BART riders are potential shared micromobility users, especially when considering most of these people are traveling less than three miles and the majority of them are going to or coming from San Francisco, which also has a robust shared micromobility and transit system.

As detailed in a previous section, BART is supportive of shared micromobility on its property. Interested operators must apply for a $2,000 annual property use license agreement and agree to the following requirements:

- Vehicles must only be locked to approved bike racks outside of BART stations and operators must reimburse BART if additional racks are required to accommodate shared micromobility vehicles.
- Vehicles must be deployed and rebalanced during off-peak hours (outside of the hours of 6-9am and 4-7pm).
- Operators must share relevant and useful data with BART.
- Operators must have the following insurance: worker's compensation, commercial general liability, automobile, property, and network security and privacy liability.

Alameda Contra Costa Transit (AC Transit)

AC Transit provides service to the western portion of the East Bay, as well as Transbay routes to San Francisco and some areas in San Mateo and Santa Clara counties.

Hayward is served by multiple AC Transit lines: 10, 28, 34, 41, 56, 60, 86, 92, 95, 97, 99, and 801. These lines connect downtown Hayward and the city's two BART stations to multiple neighborhoods in Hayward and to cities across the East Bay, including Oakland, San Leandro, Castro Valley, Union City, and Fremont.

Amtrak

The Hayward Amtrak station is located at 22555 Meekland Avenue and is served by seven daily round trips of the Capital Corridor route (which connects San Jose to Auburn). There are currently 4 BikeLink lockers for bike storage at the station, and 73 vehicular parking spaces.

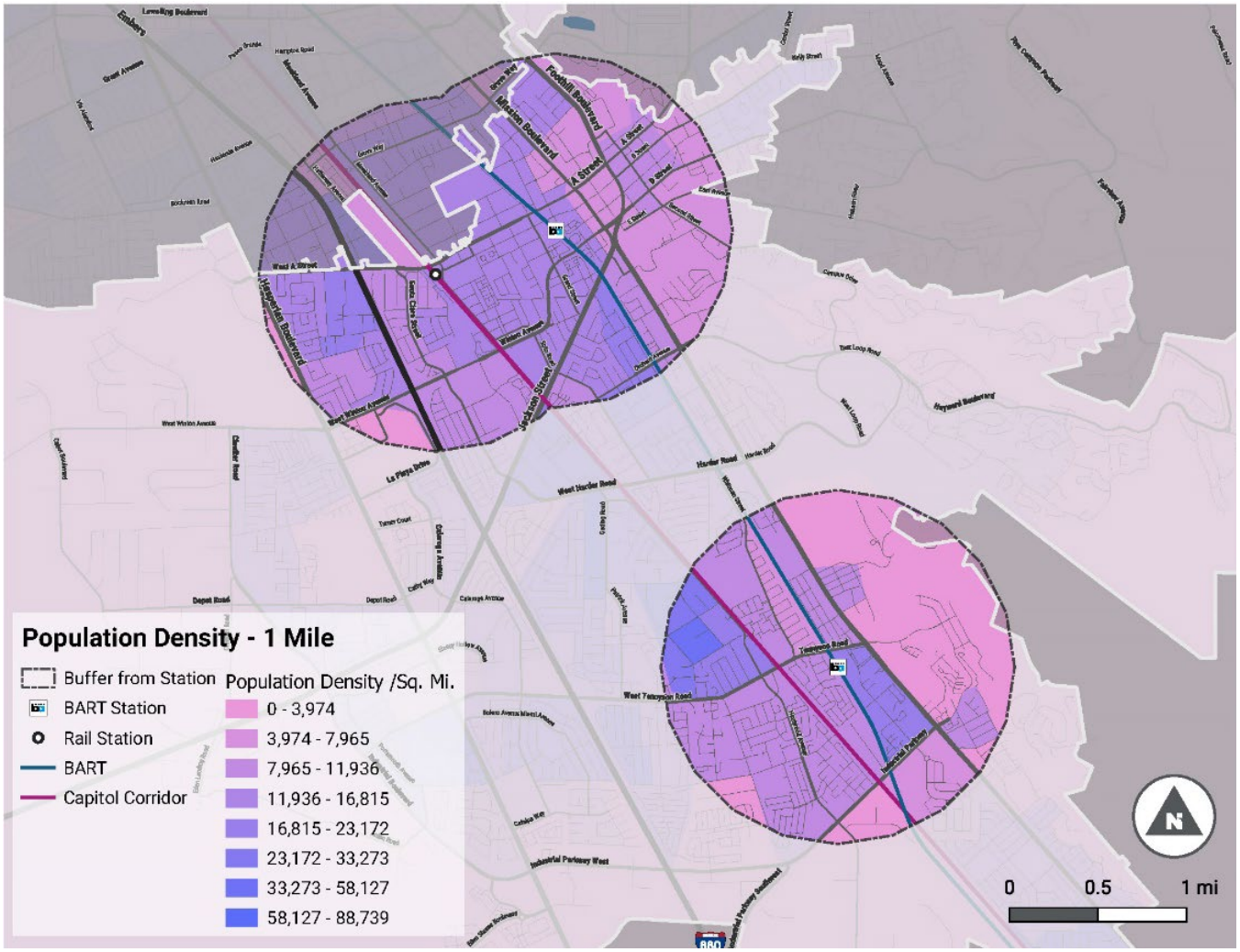
Analysis of Population and Job Density around Transit

Best practices indicate that shared micromobility service areas in dense, mixed-use areas have the highest potential for trip-generation and demand, though attention should be paid to ensure that the service area extends to lower-density areas to provide connectivity where there may be limited public transit.[18]

Population density within a one-mile radius of the BART and Amtrak stations was evaluated – as a reasonable shared micromobility trip length. Figure 7 shows that population density is almost five times higher within a mile of the stations compared to the entire city (14,915 people per square mile vs 5,295 people per square mile). Job density was also much higher near BART and Amtrak – with over three times as many jobs within one square mile of the stations compared to the citywide average (3,892 jobs per square mile compared to 1,081 jobs per square mile). These high population and job densities indicate that the areas around the transit stations are likely to have higher potential shared micromobility ridership. These densities were also compared to the neighboring city of Fremont, which also has a BART station and a shared micromobility program – Hayward had much higher population densities near transit, and about half the job density in comparison to Fremont (see Table 7).

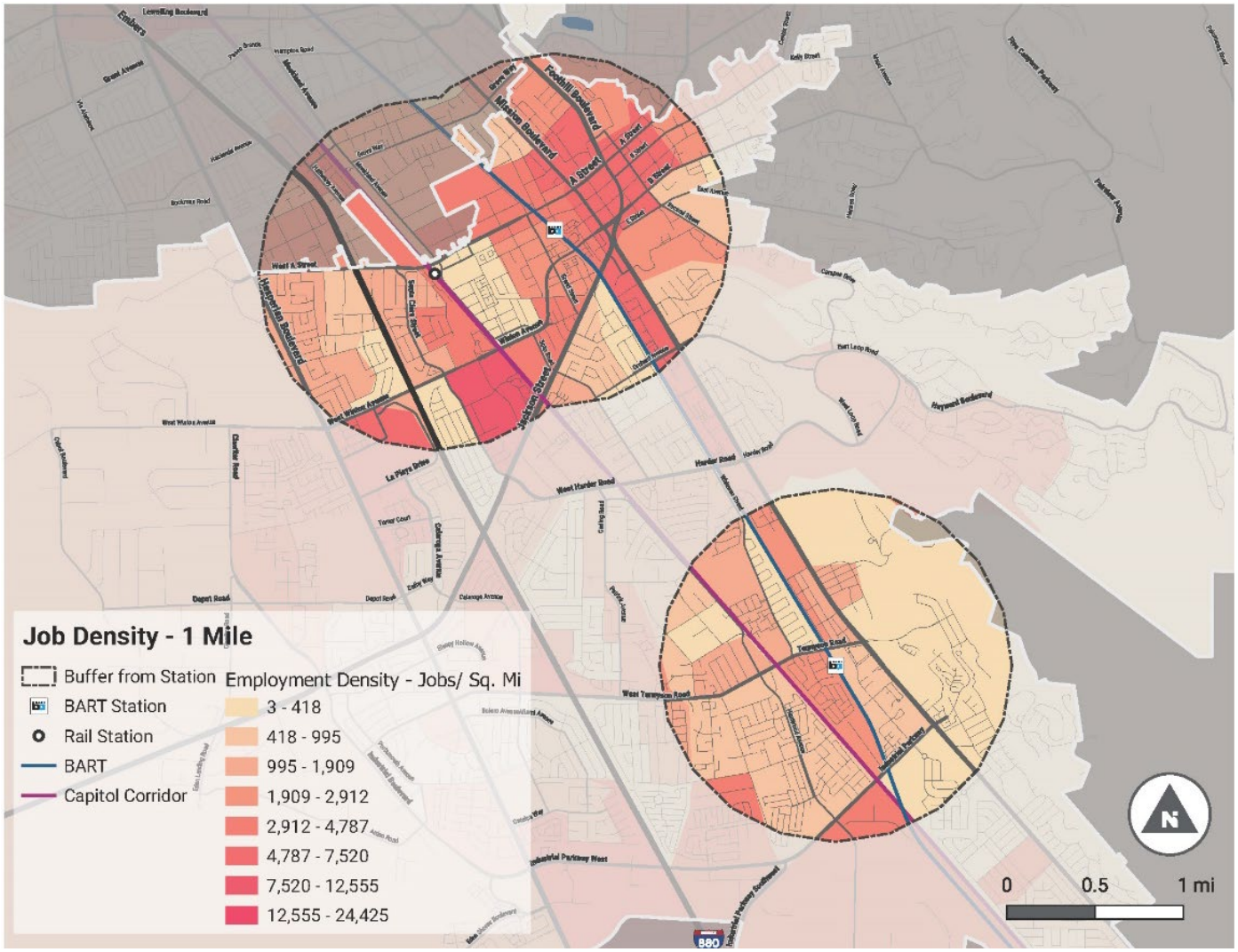
[18] Yanocha, Dana, et al. "The bikeshare planning guide." (2018).

Figure 8: Population Density within 1 mile of Hayward BART Stations



Source: 2019 American Community Survey

Figure 9: Job Density within 1 mile of Hayward BART Stations



Source: 2019 LODES WAC

Table 7: Population and Job Density in Hayward compared to Fremont

	Average density within 1 mile of Hayward BART and Amtrak Stations	Average density within 1 mile of Fremont BART Station
Population Density	14,915 people / square mile	9,001 / square mile
Job Density	3,892 jobs / square mile	8,645 jobs / square mile

Source: 2019 LODES WAC, 2019 American Community Survey

CHAPTER 2
OUTREACH AND ENGAGEMENT SUMMARY

2. OUTREACH AND ENGAGEMENT SUMMARY

As part of the Feasibility Study, community members across Hayward were asked about their travel patterns and preferences, familiarity with shared micromobility, and general perceptions, interest, and concerns for a potential shared micromobility program in Hayward. A total of 236 people engaged directly with the project team to share their thoughts and feedback.

ENGAGEMENT TAKEAWAYS

The majority of people engaged with during this project support micromobility options (such as bikeshare and scootershare) coming to Hayward. Three quarters (75%) of people at tabling events (115 people) and 69% of survey respondents (121 people) were in favor of a shared micromobility program.

Takeaways from public feedback are listed below and detailed further in the following sections.

1. **Shared bikes and scooters are convenient and good for the environment.**
2. **Micromobility can improve access to recreation, transit, and dining/entertainment destinations in Hayward.**
3. **The service area should be citywide to accommodate a variety of trip purposes.**
4. **Sidewalk clutter is a major concern.**
5. **Safe rider behavior and safer streets are needed for a successful program.**
6. **Docked bikeshare was the most popular system type, and e-bikes were the preferred vehicle type, although e-bike libraries and e-bike rebate programs were also popular.**

The input gathered from this community engagement effort demonstrates that community members are generally supportive of the City of Hayward introducing a shared micromobility program and hope that the City addresses infrastructure and safety concerns in combination with any shared micromobility program. Many residents are excited about the potential community, economic, environmental benefits that will come from a shared micromobility program.

ENGAGEMENT PROCESS

Public outreach consisted of the following engagement activities:

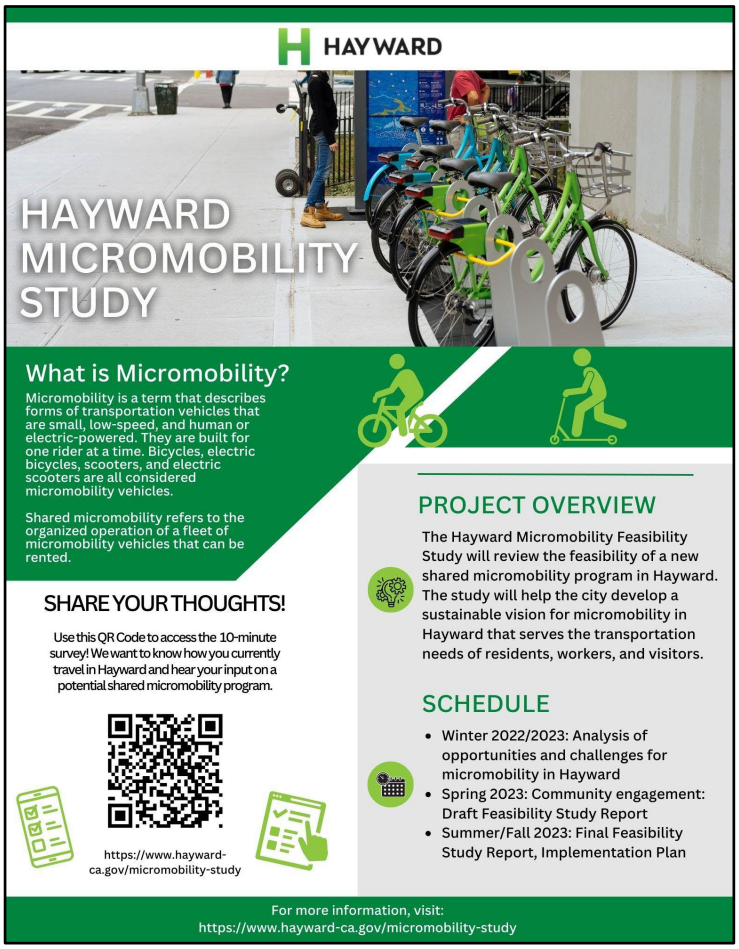
- Project website
- Project flyer
- Online survey
- Two (2) in-person tabling events at the Hayward Farmers Market and the South Hayward BART Station
- Social media and email promotion

PROJECT WEBSITE

The project website included accessible project messaging, the project timeline, a summary of project needs and benefits, and links to surveys and flyers. The website also included the dates and locations of the two tabling events so residents knew when and where they could talk to project staff. The City of Hayward's website also offers on-demand translation into 10 additional languages to ensure the content is accessible for as many community members as possible.

PROJECT FLYER

A project flyer was developed with accessible content and made available in Spanish and English. A large-scale version of this flyer was created with additional project information that was displayed at both tabling events. The flyer and display board provided residents a brief description of micromobility, an overview of the project, project schedule, and invited residents to learn more and provide feedback through a survey they could access through a QR code and link to the project website.



SURVEY

An online survey targeted people who live, work, or frequently visit Hayward for their feedback and perceptions of shared micromobility. The survey was promoted through the City's website and Instagram account and at both in person engagement events, where paper versions were also available. A total of 121 people took the survey, with 98 complete responses and 23 partial responses. See Appendix C for full survey responses.

Survey Demographics

- 85% of respondents live in Hayward, 31% work in Hayward, and 8% go to school in Hayward (the survey did not take responses from those who did not meet at least one of those criteria).
- 86% of respondents lived within zip codes in Hayward – 40% in the 94541 zip code, 36% from the 94544 zip code, 11% in the 94545 zip code, and 11% in the 94542 zip code. Other zip codes represented among respondents were from the Castro Valley, Dublin, Oakland, Piedmont, Kentfield, San Francisco, and Fremont.
- 8% of responses indicated that they had a mobility-related disability.
- 63% of respondents currently own either a bike or scooter, and 58% of respondents indicated that they have not used bikeshare or scootershare before.

Additional detailed demographics from the community survey are described in Table 8 below in comparison to citywide statistics.

Table 8: Demographic Data

Demographics	Survey respondents	Citywide statistics
Gender	Male: 46.9% Female: 45.9% *Prefer not to answer: 7.1%*	Male: 50.7% Female: 49.3%
Race/Ethnicity	White: 42% Asian: 18% Hispanic or Latino: 18% Black: 4% Native American or Indigenous: 1% *Prefer not to answer: 16.3%*	White: 25% Asian: 29% Hispanic or Latino: 39% Black: 9% American Indian and Alaska Native: 0.9%
Annual Household Income	Less than $20,000: 1% $20,000 - $34,999: 3.1% $35,000 - $49,999: 3.1% $50,000 - $74,999: 10.3% $75,000 - $99,999: 12.4% $100,000 - $149,999: 20.6% $150,000 - $199,999: 10.3% $200,00 or more: 16.5% *Prefer not to answer: 22.7%*	Less than $24,999: 13.3% $25,000 - $34,999: 5.5% $35,000 - $49,999: 6.5% $50,000 - $74,999: 13.3% $75,000 - $99,999: 13.2% $100,000 - $149,999: 20.4% $150,000 - $199,999: 10.9% $200,00 or more: 17.0%
Age	0 – 18: 1% 18 – 24: 4.1% 25 – 44: 53.1% 45 – 64: 28.6% 65+: 8.2% *Prefer not to answer: 5.1%*	0 – 19: 24% 20 – 24: 5% 25 – 44: 32% 45 – 64: 25% 65+: 14%

Source: 2023 Hayward Micromobility Survey, 2020 US Census, 2021 American Community Survey

TABLING EVENTS

Two tabling events shared information about the study, promoted the survey, and gathered feedback on a potential shared micromobility program. Events were conducted at the Hayward Farmers Market and at the South Hayward BART Station to promote feedback from a diverse cross-section of community members and offered tote bag giveaways as an incentive to reach more people. A total of 115 residents were engaged across the two pop-up events, and 106 flyers were distributed.

At the Hayward Farmers Market, about two thirds of people supported a shared micromobility program, while about a third of people had concerns about safety or were skeptical about its success due to past experiences in other Bay Area cities. Some expressed their concerns about reckless use and disorder. Other community members suggested having low-cost riding fees to make it accessible to everyone.

Hayward Farmers Market tabling event

At the South Hayward BART station, the community was generally interested in the project and most people (approximately 84% from a short in-person poll) thought it would be beneficial if Hayward had a shared micromobility program. Many community members suggested having bicycles and scooters at BART stations. Individuals who were not in favor (approximately 16% from the poll) were concerned about people discarding the bicycles/scooters in random locations and general safety concerns. Several people commented on wanting to have docking stations for the bicycles/scooters.

South Hayward BART station tabling event

EMAIL OUTREACH AND SOCIAL MEDIA

The project and survey were promoted in the City's monthly newsletter in February 2023, with 215 click-throughs to the project webpage. The City's social media accounts (Instagram, Facebook, Nextdoor, and Twitter) promoted the project and survey, with a 4.8% engagement rate (double the normal engagement rate) and over 2,000 impressions.

DETAILED PUBLIC FEEDBACK

CONVENIENCE AND ENVIRONMENTAL BENEFITS

The community members engaged generally see micromobility options as a convenient way to travel for short distance trips and could see potential benefits such as revitalizing businesses by encouraging more traffic, thereby creating a more vibrant Hayward. The community was also excited about the positive environmental impacts and the potential for increased transit use.

Of all survey respondents, the top reasons that people supported micromobility included:

- "Scooters and bikes help reduce carbon emissions" (49%)
- "Scooters and bikes make it easier and faster for people to get where they need to go" (38%)
- "Scooters and bikes make using public transit easier" (32%).

During the tabling events, some specific feedback examples from community members included:

- "These micromobility options will help people be more active! I would love this!"
- "This is the future of transportation"
- "I would be interested in seeing bikeshare and scootershare. It would benefit young people when buses and BART run late"
- (Translated from Spanish) "It would be a good idea to implement because I do not have a bicycle. If we had them by the BART station, I would be able to access them".

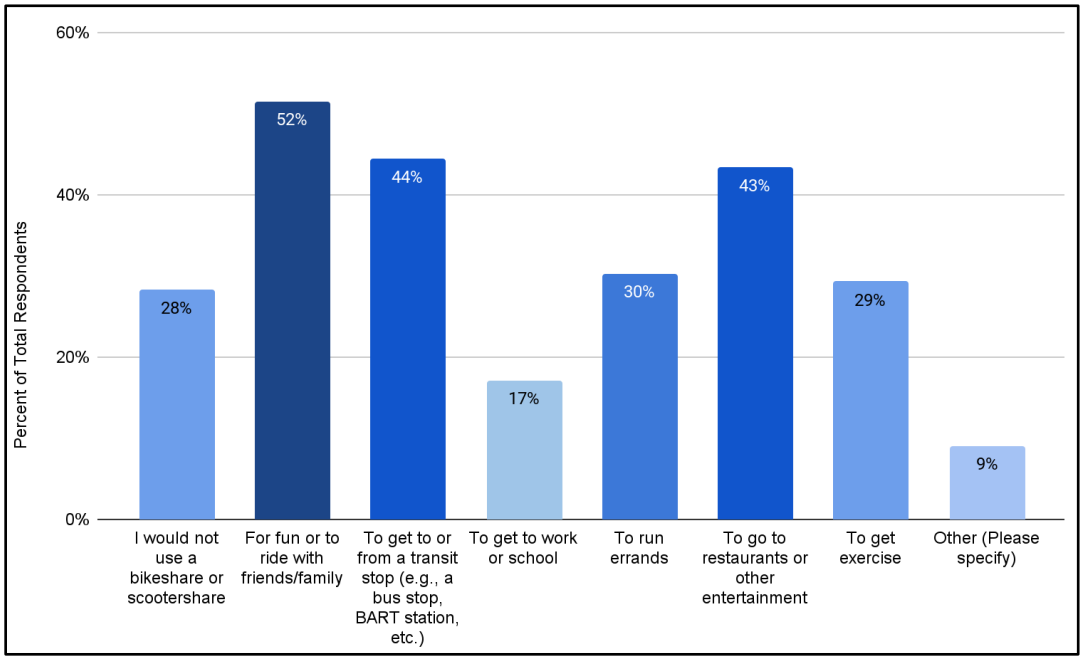
IMPROVED ACCESS TO RECREATION, TRANSIT, AND DINING/ENTERTAINMENT

The most popular survey responses to the question "What purposes would you use bikeshare or scootershare for in Hayward?" were for fun or to ride with friends and family (51.5%), to get to or from a transit stop (44.4%), and to go to restaurants (43.4%) – see Figure 10. The most suggested locations for shared micromobility in Hayward included:

- BART stations and bus stations (35% of survey respondents indicated that they use transit at least once a week and up to multiple days a week, with the Hayward BART Station being the most used transit station (45%)
- Downtown
- Parks
- Colleges including California State University, East Bay, and Chabot College.

Shared micromobility cannot serve every trip purpose and 40% of respondents noted that having too much to carry (e.g., children, pets, tools, shopping bags, etc.) would prevent them from using the service (see Figure 11).

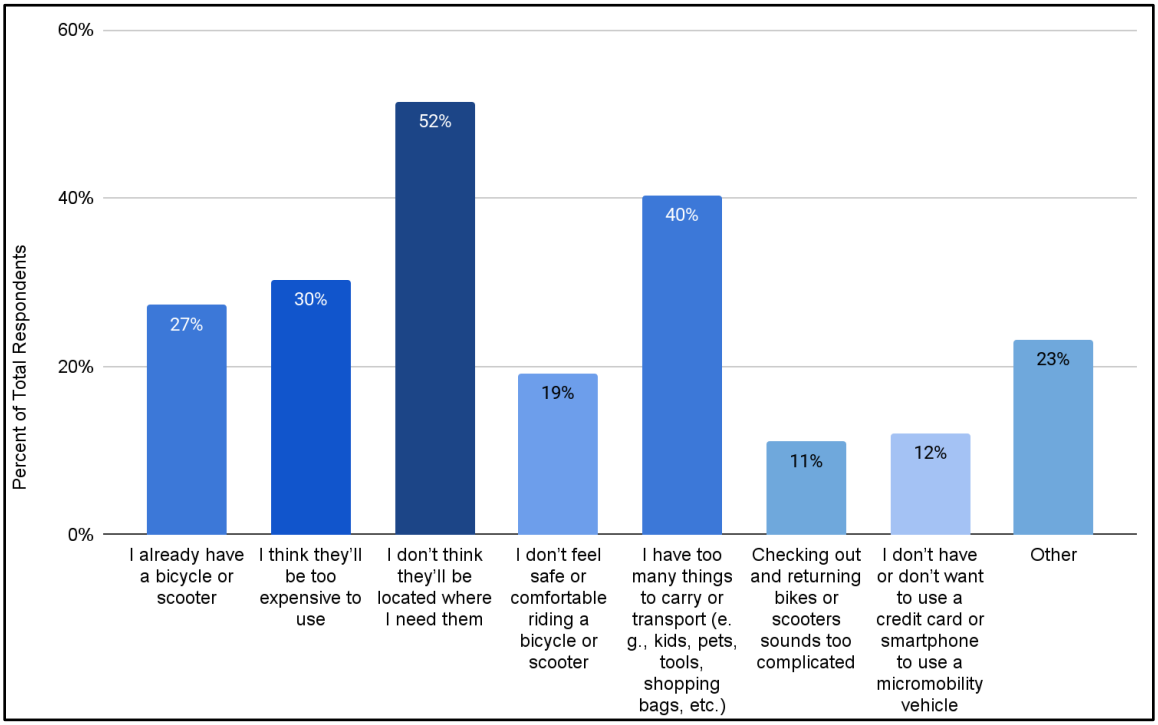
Figure 10: Responses to "What purposes would you use bikeshare or scootershare for in Hayward?"



CITYWIDE SERVICE AREA

The top response to the survey question "What might stop you from using shared micromobility (bikeshare or scootershare) in Hayward?" was "I don't think they'll be located where I need them" (see Figure 11).

Figure 11: Responses to "What might stop you from using shared micromobility in Hayward?"



Based on responses to how community members would use shared micromobility (see Figure 10), this indicates that shared micromobility devices should be located across the city and in particular near transit, colleges, commercial areas with dining options, and throughout more residential areas.

SAFE RIDER BEHAVIOR AND SAFER INFRASTRUCTURE

Over a quarter of survey respondents (28%) indicated that they would not use bikeshare or scootershare. Many concerns about a potential program were related to safety. However, the majority of survey respondents were either neutral or disagreed with the statements “scooters and bikes are unsafe to ride” and “scooters and bikes should not be in the road with drivers” – see Figure 12.

Figure 12: Responses to “How much do you agree or disagree with the following statements”

	Strongly agree	Agree	Neutral	Disagree	Strongly Disagree	Responses
Scooters and bikes will not be parked properly and create clutter on sidewalks Count Row %	34 34.3%	42 42.4%	12 12.1%	7 7.1%	4 4.0%	99
Scooters and bikes are unsafe to ride and could result in injuries to their riders Count Row %	12 12.1%	14 14.1%	32 32.3%	29 29.3%	12 12.1%	99
Scooters and bikes should not be in the road with drivers Count Row %	16 16.2%	21 21.2%	21 21.2%	27 27.3%	14 14.1%	99
E-scooters and e-bikes go too fast and could be a crash risk to other road users Count Row %	9 9.1%	12 12.1%	30 30.3%	31 31.3%	17 17.2%	99
Totals Total Responses						99

The main public feedback around safety centered on safe rider behavior and the need for safe infrastructure:

- **Micromobility users need to be properly educated and rules should be enforced** on safe use of the shared bicycles and scooters. One survey respondent stated, “it would be better to offer people vouchers to purchase their own bikes, have community rides, and day fairs teaching people basic bike care.” Another respondent shared their experience with the Berkeley shared micromobility program, saying, “riders almost never stop at stop signs… riders zip through crowds of people causing a pedestrian hazard.” Some community members at the tabling events mentioned concerns that minors may be able to gain access to the devices and that users may not know about the rules and regulations.
- **More bicycle and pedestrian-friendly streets are needed** - 19% of survey respondents stated they would not feel safe riding a bicycle or scooter in Hayward and multiple community members at the tabling

events stated that Hayward's current active transportation infrastructure does not support safe and seamless use of micromobility. One survey respondent stated, "I have the physical means, access, and passion about bikes to bike more - but I rarely use it to travel to BART, downtown, to the farmers market, etc. because biking down B Street is dangerous," while another said "I live in Downtown Hayward and it just does not seem like a safe area to ride a bike in."

SIDEWALK CLUTTER AND ACCESS ISSUES

Over three quarters of survey respondents (76%) agreed with the statement that shared micromobility options would not be parked properly and create obstacles in the public right-of-way (see **Figure 12**). Many respondents elaborated on their answers, stating things such as, "dockless shares are basically litter," "bikes will be scattered throughout the city unless there is a docking station," and "people might just leave them everywhere", as well as voicing concerns that shared micromobility may cause "accessibility issues for members of our community who are disabled."

USER COSTS AND EQUITY ISSUES

Of the 73 survey takers who were willing to pay to use shared micromobility (74%), the majority of those 73 respondents (67%) would be willing to pay $2-$4 for a 10-minute or approximately 2 mile ride. About a quarter (26%) of survey respondents stated they would not be willing to pay for bikeshare or scootershare at all. Two-thirds of the respondents who were not willing to pay for shared micromobility and who shared their incomes had annual household incomes of over $100,000 (above the median annual household income in Hayward of $98,857), which indicates that those who are not willing to pay for services are not necessarily low-income. Some respondents noted the importance of equitable access to the program. One person stated "I think an equity focus is really important - most Hayward residents who could use these services do not have a lot of money," while another said that the service "might be too expensive or inaccessible to people who need them the most."

PREFERRED FLEET AND SYSTEM TYPE

Survey respondents were most interested in seeing docked bikeshare (67% were either somewhat or very interested) that offered e-bikes (63% were either somewhat or very interested). Over half (53%) of respondents said they would be more likely to use shared micromobility if the devices were electric (e-scooters or e-bikes). Community members at tabling events also noted that docking stations would help prevent street clutter and safety hazards.

Many survey respondents were also supportive of other programs that could alleviate congestion, support the environment, and encourage mode shift: 57% supported an e-bike library and 62% supported an e-bike rebate program. One survey respondent stated that their preferred micromobility option would be to have devices "free for people to use and stored in a central area [with] staff or public demonstrations on how to use them."

CHAPTER 3
EVALUATION OF POTENTIAL PROGRAM OPTIONS

3. EVALUATION OF POTENTIAL PROGRAM OPTIONS

Potential shared micromobility fleet and system types detailed in the Micromobility Program Best Practices section were evaluated based on a set of nine criteria developed in collaboration with City staff and informed by public feedback:

1. City staff time: Day-to-day staff needs to oversee the program.
2. External costs to the city: Capital funds/grants needed, costs of purchasing equipment, and potential revenues.
3. Breadth of coverage/potential ridership: Vehicle access and availability across the city.
4. Market appeal: Ability for private operators to launch, operate, and sustain a profitable program.
5. Parking deployment, rebalancing, and right-of-way management: Complexity of managing distribution and parking of vehicles citywide.
6. User affordability: Costs to user compared to Bay Wheels and transit; opportunity to offer low-income discounts.
7. Partnership and regional collaboration opportunities: Potential for sponsorship/advertisement, interoperability with Bay Wheels, ability to expand to neighboring jurisdictions.
8. Implementation timeline: Ease and speed of launching the system.
9. Theft Prevention / Security: Security of vehicles and locking capabilities.

The scoring criteria is detailed in Table 9 – with each potential system/fleet type scored out of a possible 27 points. E-bike rebates were not included in this evaluation.

Table 9: Evaluation Criteria and Scoring

Criteria	High Score (3 points)	Medium Score (2 points)	Low Score (1 point)
City staff time	- Requires minimal city staff oversight on a day-to-day basis	- Requires some city staff oversight on a day-to-day basis	- Requires significant city staff management day-to-day
External City Costs	- No city funds or grants needed to launch AND/OR - Can levy fees on operators to cover staff costs	- Some funding, grants, sponsorship, or partnerships needed to launch AND/OR - Can levy fees, but some subsidies may be needed to encourage operators	- Funding, grants, sponsorship, or partnerships required to launch AND/OR - Subsidies or paid contract required to encourage operators
Breadth of Coverage / Potential Ridership	- Provides micromobility access citywide including at high-use transit stations	- Provides micromobility access to key areas of the city, but not citywide	- Provides limited micromobility access (i.e., 1-2 neighborhoods at most)
Market appeal	- Private operators can easily launch, operate, and sustain a program with very limited capital investments and see a potential for profitable operations	- Private operators can launch and sustain a program with some capital investment and see a potential for profitable operations	- Private operators need to provide significant upfront capital investment to launch and the program will need to be subsidized for operations
Parking, Deployment, Rebalancing, and Right-of-Way Management	- Minimal management of vehicle deployment and rebalancing required by city staff - The technology supports organized parking in the right-of-way	- Regular management (at least daily) of vehicle deployment and rebalancing required from operator and/or city staff (assuming adequate regulation) - The operator has a track record of putting in place systems to manage parking, remove misparked vehicles, and encourage good parking behavior	- Significant management (multiple times a day) of vehicle deployment and rebalancing required from operator and/or city staff (assuming adequate regulation) - The operator does not have systems in place to manage parking, remove misparked vehicles, and encourage good parking behavior
User Affordability	- On-par or less than Bay Wheels and/or transit costs per-ride/per-mile AND/OR - Can easily implement low-income discounts	- Within range of Bay Wheels and/or transit costs per-ride/per-mile AND/OR - Providing discounts would require city staff coordination	- Significantly higher costs per-ride/per-mile than Bay Wheels and/or transit AND/OR - Low-income discounts are not possible

Partnership and Regional Collaboration Opportunities	- High potential for sponsorship/ advertising to offset city costs AND/OR - Easily interoperable with Bay Wheels or other nearby shared micromobility services - AND/OR - Able to expand the program to neighboring jurisdictions at low cost and minimal administrative effort	- Some potential for sponsorship/ advertising to offset city costs AND/OR - Somewhat interoperable with Bay Wheels or other nearby shared micromobility services AND/OR - Able to expand the program to neighboring jurisdictions with some effort	- Limited/no potential for sponsorship/advertising to offset city costs AND/OR - Not interoperable with Bay Wheels or other nearby shared micromobility services AND/OR - Expansion to other jurisdictions would be a lengthy and complex process
Implementation timeline	- Can be implemented within 6 months	- Can be implemented in 6 - 12 months	- Would need over 1 year for implementation
Theft Prevention / Security	- Devices are secured to infrastructure (station/rack/pole) when not in use - Anti-theft technology is enabled and deployed at scale	- Device is locked to itself (not infrastructure) - Anti-theft technology is enabled	- Devices have history of theft or security issues - Limited or no anti-theft technology

The following assumptions were made for each of the options considered:

- **Bike Library:** City would need to raise/contribute significant funds to procure equipment and launch the program, but that a third party would manage day-to-day operations with minimal city oversight. Bikes would be available for free rental (like a regular library).
- **Docked Bikeshare:** City would need to raise/contribute significant funds to procure equipment and launch the program and a third party would manage day-to-day operations and receive some funding from the city for operational costs
- **Dockless Bikeshare:** No capital costs to the City, but City staff time would be needed for program setup and oversight of a private operator with potential to levy fees to bring in revenue.
- **Dockless Scootershare:** Assumes no capital costs to the City, but City staff time would be needed for program setup and oversight of a private operator with potential to levy fees to bring in revenue.

Some scores were variable, as they would be dependent on how the program is regulated. For example, City staff time needed for a scootershare program would depend on a variety of factors, including enforcement requirements, number of operators in the program, and complexity of rules around parking and deployment. In these cases, a range of points was provided.

Based on this scoring system, dockless scootershare and dockless e-bikes scored the highest based on the evaluation criteria (with high end scores of 23 out of 27), but this assumes that there is high operator interest in Hayward as a potential market and that the program requirements ensure limited staff oversight and incentivize operators to promote wide-ranging vehicle availability and comply with keeping the right-of-way clear.

While program requirements can be structured to achieve most of these assumptions, lessons from peer city interviews demonstrate the precariousness of a shared micromobility program in a smaller Bay Area city.

Table 10: Final Scoring

Evaluation Criteria	Bike Library	Docked Bikeshare (e-bikes and pedal bikes)	Dockless E-Bikes	Dockless Pedal Bikes	Dockless Scootershare
City Staff Time	1-2	2	1-3	1-3	1-3
External Costs to the City	1	1	3	3	3
Breadth of Coverage / Potential Ridership	2	1	3	3	3
Market Appeal	1	1	1-3	1	1-3
Parking, Deployment, Rebalancing, and Right-of-Way Management	3	3	1-2	1-2	1-2
User Affordability	3	2	2	2	1
Partnership and Regional Collaboration Opportunities	2	2	3	2	3
Implementation Timeline	1	1	2-3	3	3
Theft Prevention / Security	2	3	2	1	2
TOTALS	**16-17**	**16**	**18-23**	**17-19**	**18-23**

CHAPTER 4
RECOMMENDATIONS

4. RECOMMENDATIONS

SHORT TERM: PROMOTING EXISTING E-BIKE REBATES AND RESOURCES

Although not technically a shared micromobility program, **e-bike rebates can achieve many of the goals of this study, including reducing vehicular travel, traffic congestion, and parking demand and supporting walking, bicycling, and transit ridership.**

There are currently several e-bike rebate programs that Hayward residents are already eligible for, but the details about the programs, including qualifications and steps to utilize them, are not always clear or widely known. These programs are also administered through many different agencies, and there is not a central location where Hayward residents can access this information and understand which program is the best fit for them.

Therefore, this strategy recommends setting up a clearing house and creating one central location where Hayward residents can find information about all the e-bike rebate programs they may be eligible for, as well as a communications and outreach campaign to promote these programs. Since these programs are already funded with outside resources, a relatively small investment from the City of Hayward has the potential to create a significant mode shift as the number of residents having access to e-bikes increases.

REBATE RESOURCES

In Table 11, current and proposed local/regional, statewide, and national e-bike rebate programs are listed. Based on recent interest at all levels of government to encourage e-bike adoption, this list will need to be updated regularly to stay accurate.

Table 11: Current and Proposed E-bike Rebate Resources

Program	Administering Agency/ Organization	Amount	Eligibility Requirements	Estimated Eligible Hayward Residents*	Notes	Link to more Information
Local/Regional Programs						
Vehicle Replacement Program	Clean Cars for All / Bay Area Air Quality Management District	Up to $7,500	Must live in qualified zip code, meet low-income requirements, and trade in eligible vehicle	**~82,800 individuals**	Income limits are 400 times the federal poverty level; 6 of Hayward's 9 zip codes are eligible; and only those with a qualifying vehicle to trade in (model year 2005 or older, under 10,000 lbs.) are eligible.	https://www.baaqmd.gov/?sc_itemid=CBAE9738-E434-49FE-A090-FDF74F655AD3
E-bike Incentive Program and E-bike Lending Program**	East Bay Community Energy (EBCE)	TBD	EBCE customers in Alameda County	**~12,675 households** are eligible for 40% of the incentive budget dedicated to support income-qualified customers. **All EBCE customers** would be eligible for the remaining 60% of incentives. (EBCE is the default provider in Hayward)	30,000 residential accounts are on CARE throughout Alameda County; about 9.75% of Alameda County population lives in Hayward. Estimated eligibility assumes equal distribution of CARE customers throughout the county. This program is not yet active but expected to launch in 2023.	https://ebce.org/news-and-events/east-bay-residents-will-soon-enjoy-new-local-electric-bike-programs/
Statewide Programs						
E-Bike Voucher**	California Air Resources Board, administered by Pedal Ahead	TBD, ~$1,000	Californians living at or below 300% of the federal poverty level	**~62,611 individuals**	This program is not yet active and will be launching second quarter of 2023.	https://www.calbike.org/e-bike-purchase-incentives-faqs/
E-bike purchase Discount**	University of California	TBD	UC Students	No estimate available	This program is not yet active.	University of California graduate student

						workers end strike, ratify three-year contracts
National Programs						
Tax credit**	US Internal Revenue Service	30% tax credit up to $1,500	TBD	No estimate available	This tax credit is not currently approved. The Electric Bicycle Incentive Kickstart for the Environment (E-BIKE) Act legislation was introduced in 2021 and re-introduced in March 2023.	https://panetta.house.gov/media/press-releases/reps-panetta-blumenauer-thompson-and-schiff-reintroduce-e-bike-act
E-bike purchase low interest loans	Clean Energy Credit Union	Varies	Member of Clean Energy Credit Union via membership to "field of membership" orgs listed on site	No estimate available		https://www.cleanenergycu.org/personal/electric-bicycle-loans/
Low interest loans for e-bike purchases	Various e-bike manufacturers	Varies	Varies	No estimate available	A variety of manufacturers and retailers offer loan programs through Affirm Synchrony, Klarna, Bread, and PayPal Credit. Loans range from 10-30% APR, sometimes with 0% APRs for short term loans (usually 6 or 12 months). For example, RadPower offers a 0% APR on a 6-month loan; APR is over 15% for 1 or 3 year loans.	https://easyebiking.com/best-electric-bike-financing-options-in-the-usa/

**Estimates are based on 2022 federal poverty levels and 2020 Census data; they do remove children or others that do not drive.*

***Program not yet active or passed through legislation.*

COMMUNICATION, EDUCATION AND PROMOTION STRATEGIES

Clearing House Examples

Below are a few examples of clearing house sites related to e-bikes and other resources that provide ideas for what is effective and ineffective.

- Climate Action Center
- Ride Review: E-bike Incentives
- Vermont Electric Vehicle Incentive Programs
- Denver Sustainable Transportation Programs
- Banff Environmental Rebates and Incentives Programs
- California Energy Efficiency Programs Clearing House
- California Department of Community Services & Development Assistance Program Clearing House

Based on these and other examples, the key components to explain in the clearing house site and in related communications are:

- **Types of Programs**: With a wide range of programs types available, it is crucial for residents to understand how each one works and the pros and cons of each, including purchase vouchers, rebates, discounts, and car replacement programs. Direct links to applications for each program should be included and should be easily accessible.
- **Eligibility Requirements**: The eligibility requirements for programs differ, with some based on where you live or what energy provider you have, or your income level.
- **Timing of Funding Availability:** Depending on the program type and structure, some require the applicant to pay the cost up front and are later reimbursed versus receiving a discount or voucher at the time of purchase. This is critical to understanding what program makes sense for each individual's budget.
- **Deadlines**: With so many new programs coming out and older programs changing or being phased out, it is critical to have current information publicized and advertised regularly, particularly around any key deadlines or around new program launches.

LONG TERM: REGIONAL SHARED MICROMOBILITY STRATEGY

While large, dense cities in the Bay Area like San Francisco and Oakland have had long-running shared micromobility programs, smaller cities in the Bay Area have faced challenges sustaining programs long-term. Many Bay Area cities (e.g., Mountainview, Sunnyvale, Foster City, San Mateo, Burlingame, and South San Francisco) have had private operators remove service in 2019 and 2020 after deciding to prioritize other markets or pivoting from bikes to scooters or for other reasons. In more recent news, Fremont paused their bikeshare program due to issues working with their contracted operator, Richmond paused their bikeshare program due to their operator leaving the industry entirely, and Pleasant Hill's e-scooter operator suspended operations after not achieving a profitable number of rides. This demonstrates a need for program flexibility – if one operator leaves, the program should be able to continue and onboard a new operator.

While multiple bikeshare and scootershare operators have an interest in expanding their footprint in the Bay Area (for example, the recent program launch of Bird scootershare in San Ramon and the upcoming launch of LEAP e-bikeshare in Richmond), the history of market exits has shown that it can be difficult for both public agencies and private operators to sustain a successful program in a smaller service area like Hayward. The Bay Wheels program

demonstrates an alternative to multiple small city programs by providing the operator (Lyft) with a regional service area that creates better connectivity and a larger potential rider pool. As Bay Wheels does not currently plan to expand its docked bikeshare to other cities in the region, **the long-term strategy proposed is to work with neighboring cities and unincorporated areas to develop a regional service area and solicit potential private operators.**

Table 12: Potential Partners for Regional Shared Micromobility Program

Potential Partner Agencies	Population	Shared Micromobility Status
City of Hayward	159,827	No program
City of Fremont	227,514	Paused Program
City of Union City	68,681	No program
City of San Leandro	88,868	No program
Alameda County (Castro Valley, San Lorenzo)	94,509	No program
TOTAL	**639,399**	

CASE STUDIES

There are multiple funding and governance models to consider for a regional program, which can be explored more when the Implementation Plan is developed. The following case studies illustrate a few examples of how other regional programs have been launched and maintained.

SACOG Regional Shared Micromobility Program (Sacramento Region, CA)

Owner	Lime
Operator	Lime
Total Population Served	645,477
Vehicles and System Type	Dockless Bikeshare and Scootershare
Number of vehicles / stations	~600 bikes and scooters

The Sacramento Council of Governments (SACOG) launched a regional bikeshare system in the cities of Davis, Sacramento, and West Sacramento in 2018. The system is a public-private partnership under which the operator (Lime) owns and operates the system and provides certain service level requirements, advertising and sponsorship revenue sharing, and the implementation of an equity plan. SACOG and each of the cities have a program agreement with Lime to operate shared bikes and scooters, and SACOG has contributed funding for public bike racks across the region for shared bike parking.

Roaring Fork Valley Bikeshare Program (Roaring Fork Valley, Colorado)

Owner	WE-Cycle (with funding support from public and private partners)
Operator	WE-Cycle
Total Population Served	23,431 (does not include 1 million+ visitors to the region each year)
Vehicles and System Type	Docked Bikeshare
Number of vehicles / stations	228 pedal bikes, 25 e-bikes / 49 stations

Through a public-private-non-profit partnership between the Roaring Fork Transportation Authority (RFTA), the non-profit bikeshare operator (WE-Cycle), and the cities of Aspen, Willits, Basalt, El Jebel, and Snowmass Village, the Roaring Fork Valley region has a bikeshare system of 284 bikes and 55 stations. The program originally started in Aspen in 2013 and has since expanded to additional jurisdictions. In 2021, most (62%) of the funding for the system came from RFTA, the local cities, as well as the county, who commit funds as part of their annual budget. The system was also supported by sponsorship, donations, and private sector support (26%), as well as user fees (3%). WE-cycle employs multiple full and part-time staff to manage the regional program.

ValleyBike Share (Pioneer Valley, Massachusetts)

Owner	Cities of Northampton, Amherst, Chicopee, Springfield, West Springfield, Easthampton, Holyoke, South Hadley; and the University of Massachusetts
Operatorv	Bewegen Technologies
Total Population Served	402,066
Vehicles and System Type	Docked e-bikeshare
Number of vehicles / stations	~700 e-bikes / 61 stations

Pioneer Valley Planning Commission, the region's Metropolitan Planning Organization, collaborated with multiple cities in Pioneer Valley, MA and the University of Massachusetts-Amherst on a regional docked e-bikeshare program. The MPO received $1.3 million in CMAQ funding to support the system launch. This is a public-private partnership between the public agencies and the operator (Bewegen Technologies), with one city (Northampton) as the lead agency responsible for grants, contracts, and coordinating among the other partners. Each city owns its own equipment and is responsible for its own stations. The operator (Bewegen Technologies) provides the operation and maintenance of the system for no cost to the participating agencies and keeps all user and sponsorship fees.

APPENDICES

APPENDICES

APPENDIX A: PLAN AND POLICY REVIEW

CITY OF HAYWARD 2040 GENERAL PLAN (MOBILITY ELEMENT AND CLIMATE ACTION PLAN)

The General Plan's Mobility Element aims to provide strategies with the goal of a balanced transportation network that supports and encourages walking, bicycling, and transit ridership. The Mobility Element incorporates several items from the Climate Action Plan, and includes policies around implementing multimodal connections, creating streets that serve all users, improving bicycling amenities, and providing alternative transportation modes. Bikeshare is called out as a policy (M-8.6) for the city to pursue, with the City encouraging large employers and BART to host bikesharing programs available to the public.

CITY OF HAYWARD BICYCLE AND PEDESTRIAN MASTER PLAN

The Bicycle and Pedestrian Master Plan establishes the city's vision and approach to improving walking and biking in Hayward, focusing on a comprehensive, integrated, and connected network of active transportation facilities and services. The Plan provides an extensive evaluation of the state of walking and biking in Hayward and found that certain groups of people are walking and biking more than others, as shown on Figure 1. The Plan does not specifically mention micromobility, however, the 153 miles of bikeways recommended in the Plan will also benefit shared micromobility users. Shared micromobility can also be a tool to increase the number of users of the bikeway system and the visibility of people requiring safe, comfortable, and connected bike facilities.

WHO IS WALKING MORE	WHO IS BIKING MORE
• Low-income workers • High school and college students • Workers ages 25 to 44 • People slightly above the poverty line • People with one or two vehicles available at home • Women • Hispanic/Latinx residents	• Low-income and high-income workers • High school and college students • People below the poverty line • People with no vehicles available • Men • Hispanic/Latinx residents • People aged 65 and older
WHO IS WALKING LESS	**WHO IS BIKING LESS**
• High-income workers • Workers ages 45 to 55 years old • People with three or more vehicles available at home • People aged 65 years and older • Men	• Moderate-income workers • Workers aged 45 to 55 years old • People with only one vehicle available at home • Women • Black or African American Residents

Figure 13: Demographic Summary of Walking and Biking in Hayward

HAYWARD AREA RECREATION AND PARK DISTRICT REGULATIONS GOVERNING USE OF PARKS, RECREATION AREAS, AND FACILITIES

The ordinance guiding use of parks, recreation areas, and facilities in Hayward was last updated in 2019. Electric bicycles are not specifically addressed, but regulations applying to bikes and electric and non-electric scooters include:

- No bicycles or scooters allowed at any District facility specifically designated exclusively for skateboards or in-line skates.
- Bicycles and scooters are permitted on designated paths and trails only
- Individuals 17 years and younger must wear a helmet when using bicycles or scooters on District property

CITY OF HAYWARD RACIAL EQUITY ACTION PLAN (2020)

The Racial Equity Action Plan is an aspirational roadmap for organizational change and improving service to the community, intentionally addressing racial inequities in Hayward. While micromobility is not mentioned specifically, the Plan's vision for service provision should be incorporated into the development of any future micromobility program. This includes ensuring that the following elements of the plan are represented:

- All people in Hayward have access to important information from the City in a language and a format that they can understand.
- All people in Hayward are represented in an equitable manner regardless of the language they speak, access to technology, and familiarity with government processes.
- All people in Hayward receive high-quality City services that meet their needs.

HAYWARD MUNICIPAL CODE AND TRAFFIC CODE

The Hayward Municipal Code does not include any regulations that would not allow e-bike or e-scooter operations, or the operation of a shared micromobility program. Bicycle parking, which can be utilized by micromobility devices, is required for multi-family residential, recreation, civic, education, entertainment, office and service, and retail and food uses.

The Hayward Traffic Code permits bicycles on public streets, specifying that bicycles must be ridden in a bicycle lane on streets where such lanes have been established (Section 10.02). Riding bicycles, mopeds, and skateboards is prohibited in certain parts of Downtown Hayward (Section 10.01). Bicycles cannot be parked against storefront windows, the main-traveled portion of sidewalks, or in any manner that creates a hazard to pedestrians, traffic, or property (Section 10.03). A shared micromobility program would have to align with these Traffic Code regulations, which could be achieved with rider education, geofencing and specific parking management requirements. Two requirements that may be more challenging are Section 6.10, which does not allow vehicles to be operated in the Central Traffic District (an area designated by the Traffic Engineer) if they are used for advertising purposes, and Section 8.13, which does not allow vehicles to be parked in the roadway for the purpose of advertising/selling. Further clarification is needed regarding whether the branding and information provided on micromobility devices or in designated micromobility parking areas qualifies as advertising.

Both the Municipal Code and the Traffic Code do not include specific regulations for electric bicycles or electric scooters. Current California state law regulates e-bikes like human-powered bicycles, and e-bikes are not subject to registration, licensing, or insurance requirements that apply to motor vehicles. There are three classes of e-bikes:

- Class 1: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 20 mph.

- Class 2: Bicycle equipped with a throttle-actuated motor, that ceases to provide assistance when the electric bicycle reaches 20 mph.
- Class 3: Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 28 mph.

Helmets are required for all e-bike riders 17 years of age and younger, and all riders of Class 3 e-bikes must be 16 years of age and wear helmets. Class 3 e-bikes are not allowed on bike paths or shared-use paths unless the local jurisdiction explicitly allows it.

California state law defines e-scooters as motorized scooters with two wheels, a motor, handlebars, and a floorboard that can be stood on while riding. State law requires a maximum speed of 15 mph, prohibits e-scooter operation on sidewalks, requires helmets for users under 18, and e-scooters must be operated in bike lanes or trails whenever they are available. E-scooters may not be operated on streets with speed limits greater than 25 mph unless operated in a Class II or Class IV bike facility, although local jurisdictions may authorize operation of e-scooters on streets up to 35 mph. Riders must have a valid driver's license, but scooters do not need to be registered or insured like motor vehicles.

BART STATION ACCESS POLICY (2016)

The BART Station Access Policy aims to support the broader livability goals of the Bay Area, reinforce sustainable communities, and enable riders to get to and from stations safely, comfortably, affordably, and cost-effectively. The policy includes primary modes to invest in for all BART station types. South Hayward Station is defined as a "Balanced Intermodal" station (where 25-40% of riders are expected to walk, bike, or take transit, and 25-40% are expected to drive) and Hayward Station is a split between a "Balanced Intermodal" station and an "Urban with Parking" station (where 60-75% of riders are expected to walk/bike/take transit and 25% expected to drive). BART's policy prioritizes investments in walking and bicycling access to both stations. These priorities are aligned with the policy's station access design hierarchy (see Figure 2). The policy also calls out the importance of innovation and partnerships, specifically mentioning bikeshare operators as a group to build partnerships with and committing to research and piloting emerging technologies.

Shared micromobility devices are not allowed onboard trains. While not currently available at the BART stations within Hayward, 16 BART stations across the region have Bay Wheels bikeshare available either right outside the station or within a block of the station.

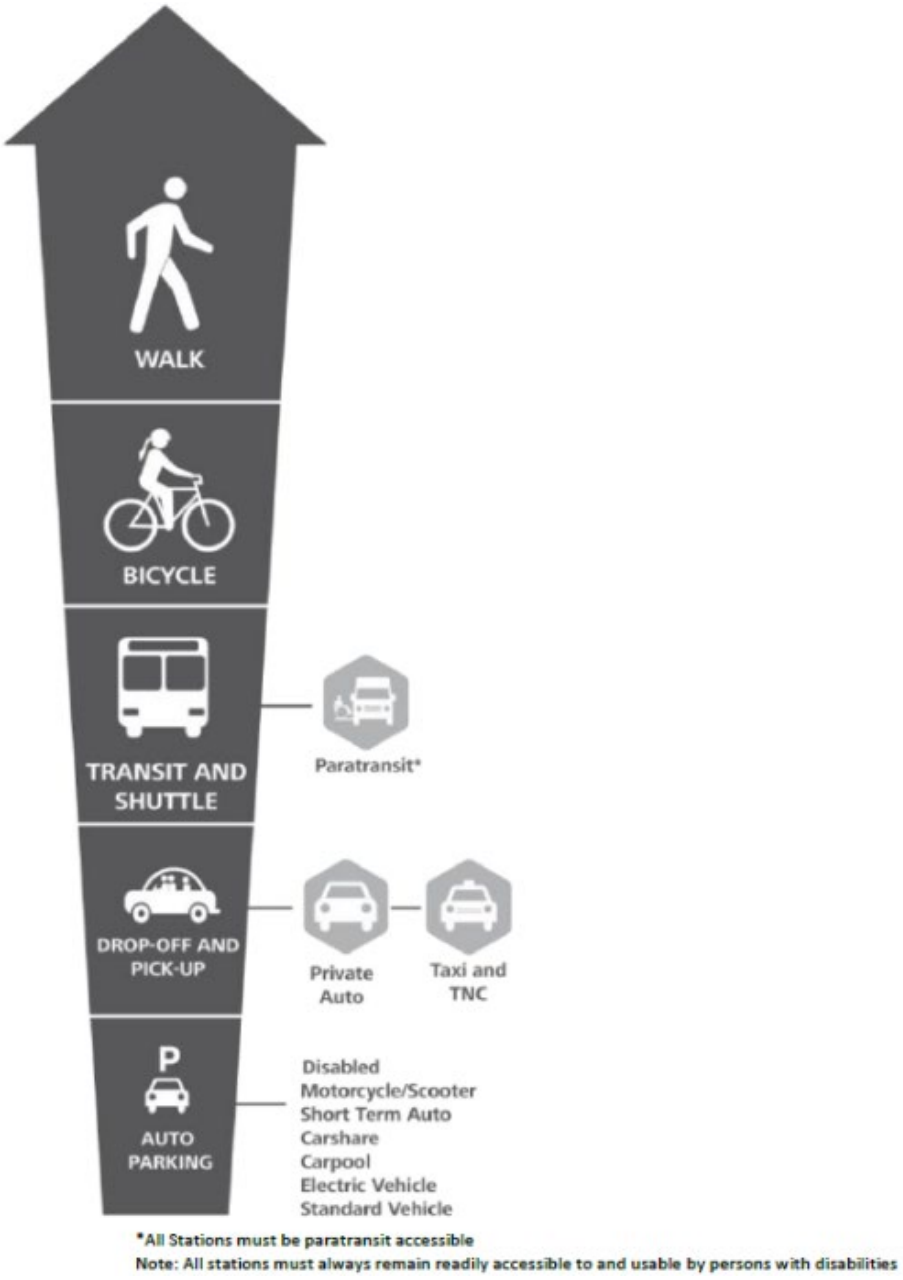


Figure 14: BART Station Access Design Hierarchy

BART WALK AND BICYCLE NETWORK GAP STUDY (2020)

The Walk and Bicycle Network Gap Study evaluates existing conditions and identifies conceptual access improvements to and from 17 BART stations, including Hayward and South Hayward. While the study does not focus on micromobility, it does call out the need for buffered and separated facilities for bicyclists, scooters, and other new modes of mobility, and recommendations included for improved pedestrian and bicycling access would positively impact micromobility.

- **Hayward Station:** Since 2008, there have been growing numbers of people walking and bicycling in the station area. Current access to the station by walking or bicycling is high-stress, and the Study recommends

improving pedestrian and bicycling facilities for safer, more comfortable travel. The station may connect to the East Bay Greenway alignment through Hayward (a planned 16-mile bikeway between Lake Merritt and Hayward BART stations).

- **South Hayward Station:** There have been growing numbers of people walking and bicycling in the station area, although the station area was developed primarily for vehicular access. The train tracks on Tennyson Road are a major barrier to accessing the station and significantly increases the walking or bicycling time for people who live close to the station. The Study mostly recommends sidewalk improvements but notes that the most impactful improvements to active transportation access are long-term and could be addressed by the East Bay Greenway.

CSU HAYWARD CAMPUS MASTER PLAN: ACCESS, CIRCULATION, AND PARKING FRAMEWORK

The Access, Circulation and Parking Framework aims to improve conditions for sustainable transportation, ensure commuters and visitors have multiple convenient modes of access, and reduce the number of car commuters through physical, operational, and policy changes. Currently, most students, faculty, staff, and visitors commute to campus by car and once on campus, walking is the primary mode to get around.

Topography is a barrier for bicycling to and on campus. The campus is relatively compact, but terraced, and the nearest BART station is two miles away, but separated by steep terrain. Cross-campus bicycling trips utilize two 25 mph roadways or use the wider pedestrian walkways. The plan also includes adding bike parking to encourage bike use at key destinations throughout campus. Electric-powered micromobility devices could address topography issues and allow students who live near campus or near BART to access campus without using a personal vehicle. Increased shared micromobility volumes may require the campus to reconsider whether designated dismount zones are needed to reduce conflict between pedestrians and bicyclists or e-scooter riders.

The plan also includes a Transportation Demand Management Program, consisting of improved transit service, parking management, and incentives for alternative modes (transit, carpools, guaranteed ride home, car sharing; no incentives specifically related to biking). Bicycling incentives and/or discounts for a future shared micromobility program should be considered.

ALAMEDA CTC COUNTYWIDE ACTIVE TRANSPORTATION PLAN

The Countywide Active Transportation Plan identifies the regional goals of safety, multimodal connectivity, encouragement, and impactful investment. The plan analyzed the stress of the bikeway network, high injury networks (HIN) for pedestrians and bicyclists, identified major barriers, and established a framework for prioritizing projects. There are approximately 12 miles of bicycling HIN and 12 miles of pedestrian HIN in the City of Hayward, each representing about 3% of the City's local roadway network. The plan shows that bikeway connectivity and comfort is low, with freeways and major arterials creating barriers to improved connections. This also provides challenges for micromobility, which primarily utilize bikeway infrastructure.

Emerging mobility is included in the Plan as an Area of Focus for the Future, and the county intends to provide resources related to shared- and micromobility to local jurisdictions, although specific resources are not defined. The Plan includes micromobility best practice resources for local jurisdictions, specifically referencing San Francisco's scooter share pilot and evaluation program and Contra Costa Transportation Authority's Countywide Bicycle and Pedestrian Plan, which encourages docked and dockless bikeshare opportunities at a local level in the county.

APPENDIX B: PEER CITY ANALYSIS

Table 13: Overview of Program History, Operators, and Staffing

City	Population (as of 2020 census)	Bay Wheels?	Start Date	Operators	Business Model	# of Operators	System Type	Contract/ Permit Length	Partnership Roles	City Staffing
Berkeley	**124,321**	Yes	May-22	Veo, Link, Spin	Agency Permit/Contract and Private Operator(s)	Not including Bay Wheels, max 3 [3 currently]	Dockless	Permit: 1 year	City administers permiting program, private operator responsible for operation and marketing	N/A
Emeryville	**12,905**	Yes	Aug-21	Lime, Link, Spin, Veo	Agency Permit/Contract and Private Operator(s)	Not specified [4 currently, not including Bay Wheels]	Dockless	Permit: 1 year	City administers permitting program, private operator responsible for operation and marketing	Environmental services - 2 staff
Fremont	**230,504**	No	Pilot: Fall 2019, Permanent: June 2021	Hopr	Agency Permit/Contract and Private Operator(s)	Not specified [Currently 1 operator]	Dockless	Contract: 2 year agreement	City is using $250,000 from 2017 MTC grant of $350,000 to support program: $200,000 to HOPR to lease equipment and use $50,000 for program administration. Because of grant restrictions, city's contribution won't be for leasing e-scooters or program operation. HOPR is funding program operation through membership, user fees, and private sponsorships.	N/A
Oakland	**439,349**	Yes	2019	LINK, Veoride, Lime	Agency Permit/Contract and Private Operator(s)	No max - must score at least 70 during application evaluation [3 operators currently, not including Bay Wheels]	Dockless	Permit: 1 year	City administers permitting program, private operator responsible for operation and marketing	N/A - can follow up with MTC during Task 4
Pleasant Hill	**34,613**	No	October 2022	Bird	Agency Permit/Contract and Private Operator(s)	1 currently (pilot, did not do competitive process)	Dockless	1 year	Regional effort by 511 Contra Costa (funded by Bay Area Air Quality Management District's Transportation Fund for Clean Air and Measure J), Pleasant Hill opted in	N/A - can follow up with MTC during Task 4
Richmond	**226,610**	No	Summer 2021, relaunch Sept 2022	LEAP Mobility and element LEV	Agency Permit/Contract and Private Operator(s)	1 (sole source contract)	Dockless	Contract: August 24, 2022, to June 30, 2023	E-bike program launched in the summer of 2021 via a $1 million grant from the Metropolitan Transportation Commission; relaunch Sept 2022 with Charleston Mobility as sole source contract of $345,000 for ~10 months of service	N/A - can follow up with MTC during Task 4
Santa Clara	**127,647**	No	Summer 2022	Bird, Veo	Agency Permit/Contract and Private Operator(s)	Max 3 [Currently 2]	Dockless	Permit: 1 year	City administers permitting program, private operator responsible for operation and marketing	**Staffing:** Principal Planner, Senior Civil Engineer, and Associate Civil Engineer. **Application staff time:** 13 hours ($3,466.94) per application **Program management staff time:** 306-1,067 hours ($82,287.85-$280,452.26) annually, depending on # of devices **Impoundment staff time:** 1.5 hrs ($304.92) per device
San Jose	**1,013,240**	Yes	Feb-19	Lime, Bird, Veo	Agency Permit/Contract and Private Operator(s)	Max 3 - not including Bay Wheels [Currently 3]	Dockless	Permit: 1 year	City administers permitting program, private operator responsible for operation and marketing	N/A

City	Population (as of 2020 census)	Bay Wheels?	Start Date	Operators	Business Model	# of Operators	System Type	Contract/ Permit Length	Partnership Roles	City Staffing
San Francisco	**873,965**	Yes	Pilot fall 2018; Yearly permits starting May 2019	Lime, Spin, Bird, Revel (Revel is operating as Shared Electric Moped Organization)	Agency Permit/Contract and Private Operator(s)	Not specified [currently 4, not including Bay Wheels]	Dockless	Permit: 1 year, with option to extend 1 year at SFMTA discretion	City administers permitting program, private operator responsible for operation and marketing	N/A
San Ramon	**84,605**	No	Pilot: Nov 2022	Bird	Agency Permit/Contract and Private Operator(s)	Max 1 [Currently 1]	Dockless	Pilot Operating Agreement: 1 year with 2 optional 1- year renewals	Regional effort with $8 million from Contra Costa Transportation Authority (funded by Bay Area Air Quality Management District's Transportation Fund for Clean Air and Measure J). San Ramon opted into program, CCTA issued RFP	N/A
Santa Rosa	**178,127**	No	Jul-22	Bird	Agency Permit/Contract and Private Operator(s)	Max 1 [Currently 1]	Dockless	Pilot Permit: 1 year	City administers permitting program, private operator responsible for operation and marketing	N/A
Berkeley, Emeryville, Oakland, San Francisco, San Jose	**2,463,780**	Yes	Pilot program: 2013 (San Francisco, Redwood City, Palo Alto, Mountain View and San Jose), Permanent program: 2015	Bay Wheels (Lyft)	Agency Owned and Private Operator(s)	Max 1 [Currently 1]	Docked AND Dockless	Contract: 10 years	Partnership between MTC, the five local governments (Berkeley, Emeryville, Oakland, San Francisco, and San Jose), and Motivate (a subsidiary of Lyft). Cities have regional coordination agreement, as well as specific agreements with the operator. Each city can dedicate additional costs. Operator revenue shared with MTC and cities.	N/A

Table 14: Detailed Fees, Vehicle Types, Parking Management, and Equity Requirements

City	Population (as of 2020 census)	Fleet Caps	Fees					Vehicle Type(s) Currently in Operation							Service Area	Parking Management (for dockless vehicles)			Equity Requirements (for dockless vehicles)			
			Application Fee	Annual Fee	Per-Ride Fee	Per-Vehicle Fee	Other	E-scooters	Dockless Bikes	Docked Bikes	Dockless E-bikes	Docked E-bikes	Seated Scooters	Mopeds		Lock-to Required	Designated Parking (Virtual and/or Physical infrastructure)	Free-floating	Geographic distribution	Low-income discounts	Adaptive vehicles	Require ways to use and pay without credit card or smart phone
Berkeley	**124,321**	Min: 50 per operator Max: none [As of July 2022: Veoride: 250 standing 250 seated scooters; Link: 250 standing, 0 seated scooters Spin: 400 standing scooters, 100 electric bikes]	$1,500	$15,000	None	$64	Improper Parking Fee ($ amount not specified)	**X**		**X**	**X**	**X**	**X**		Citywide -- no geo-fencing without City permission; UC Berkeley currently geofenced as no-ride zone	Yes	Yes - Virtual and Physical	No	Yes - at least 50% Equity Priority Communities (MTC)	Yes - Discount varies based on operator.	Yes - permit specifically available to operators with seated devices	Yes
Emeryville	**12,905**	No min/max, but city can set max at later date	$2,630 (Renewal: $1,052)	$5,260	None	None	Confiscation and Retrieval: $131 per device; Storage: $263 per device; Disposal: Actual cost per device	**X**		**X**	**X**	**X**	**X**		Citywide but only in City ROW (City may add parks, plazas, campuses etc to service area at its discretion)	Yes	Yes - Virtual only	Yes	No	Yes	Yes	No
Fremont	**230,504**	50 pedal bikes, 100 e-bikes, and 100 e-scooters	None assumed	None assumed	None assumed	None assumed	None assumed	**X**	**X**		**X**				Citywide; Portions of Fremont Central Park are restricted	No	Yes - Virtual and Physical	No	N/A	N/A	N/A	N/A
Oakland	**439,349**	Min: 50 vehicles Max: None Operators may request additional Dockless Vehicle permits to increase fleet size on a weekly basis	$2,500	$30,000	None	$64	$0.10 every time a Scooter is parked or left standing in a metered zone during meter hours of operation; $50 per improperly parked vehicle, $140/hr for confiscation. Upon request, Operators must pass at least 50% of the fine amount for improper parking ($25) on to the user responsible.	**X**		**X**	**X**	**X**			Citywide	Yes	Yes - Virtual and Physical	Yes	Yes -- 50%+ of scooters must be deployed in MTC's Communities of Concern.	Yes - SNAP or CARE participants. Discount varies based on operator.	Yes	Yes

City	Population (as of 2020 census)	Fleet Caps	Fees					Vehicle Type(s) Currently in Operation							Service Area	Parking Management (for dockless vehicles)			Equity Requirements (for dockless vehicles)			
			Application Fee	Annual Fee	Per-Ride Fee	Per-Vehicle Fee	Other	E-scooters	Dockless Bikes	Docked Bikes	Dockless E-bikes	Docked E-bikes	Seated Scooters	Mopeds		Lock-to Required	Designated Parking (Virtual and/or Physical infrastructure)	Free-floating	Geographic distribution	Low-income discounts	Adaptive vehicles	Require ways to use and pay without credit card or smart phone
Pleasant Hill	**34,613**	150 e-scooters in pilot	None	None	$0.15	None	City staff scooter removal: $75-$250 per incident City storage of improperly parked scooter: $100/device/three business days	**X**							Citywide, not allowed on the Contra Costa Canal trail	No	No parking areas	Yes - scooters must be parked in specific parts of the PROW	None	None	None	None
Richmond	**226,610**	N/A - former e-bike fleet was 250	None assumed	None assumed	None assumed	None assumed	None assumed, as city is compensating operator			**X**	**X**				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Santa Clara	**127,647**	Min: 60 per operator Max: 3,000 across all operators (1,000 bikes/e-bikes and 2,000 e-scooters) [Current permits: Bird: 800 e-scooters & 200 e-bikes, Veo: 300 e-scooters; max numbers can be adapted for special events]	$3,470	$27,430	None	<60 vehicles: No fee 60+ vehicles: $70 per vehicle $35/vehicle for additional vehicles	Improper parking: ($100 for the first violation, $200 for the second violation $500 for third and subsequent violations; then $305 impound fee) $20,000 performance bond for any public property repair and maintenance required, removal/storage of vehicles, or unpaid fines.	**X**			**X**				Citywide, with no-ride zones in City parks (excluding the san Tomas Aquino/Saratoga Creek Trail)	No	Yes - Virtual only	Yes	Yes - 5% of fleet must be deployed in the City's Equity Priority Community	Yes. Discount varies by operator.	No	No
San Jose	**1,013,240**	Min: 50 per operator Max: 2,000 per operator (can apply for expansion based on ridership)	$1,953	None	None	$97	Property repair and maintenance deposit: $10,000	**X**		**X**	**X**	**X**			Citywide, can be restricted by Director	No	Yes - Virtual only	Yes	Yes - 20% of fleet in "Community of Concern" defined by MTC	Yes - waive customer deposit fees.	Yes	No

City	Population (as of 2020 census)	Fleet Caps	Fees					Vehicle Type(s) Currently in Operation							Service Area	Parking Management (for dockless vehicles)			Equity Requirements (for dockless vehicles)			
			Application Fee	Annual Fee	Per-Ride Fee	Per-Vehicle Fee	Other	E-scooters	Dockless Bikes	Docked Bikes	Dockless E-bikes	Docked E-bikes	Seated Scooters	Mopeds		Lock-to Required	Designated Parking (Virtual and/or Physical infrastructure)	Free-floating	Geographic distribution	Low-income discounts	Adaptive vehicles	Require ways to use and pay without credit card or smart phone
San Francisco	**873,965**	Max: 10,000 across all operators [Current permits: Lime up to 2,000 Spin up to 2,000 Bird (Scoot) up to 1,500]	$5,394	$38,340	None	$200 to SFMTA for every two vehicles to pay for bicycle rack	None	**X**		**X**	**X**	**X**		**X**	Citywide, Restrictions: Promenade path of the Embarcadero	No	Yes - Virtual only	Yes - scooters must be parked on bike rack or in area of sidewalk closest to curb	Yes - limited deployment in Downtown Core, minimum requirements in Key Neighborhoods	Yes - minimum 50% discount off rental fees, or a plan that offers unlimited trips under 30 minutes; waive customer deposit fees	Yes	Yes
San Ramon	**84,605**	Current permit: 120 electric scooters and 30 electric bikes; will start with 75 at "nests". Fleet size can be adjusted with CCTA and city permission.	N/A	N/A	N/A	N/A	N/A	**X**			**X**				Citywide, with multiple small no-ride zones. Bird e-bikes are allowed on the Iron Horse Trail, e-scooters are not allowed on the Iron Horse Trail.	No	No parking areas	Yes - discounts for parking in "nests"	N/A	Yes	N/A	"desirable" but not required as per RFP
Santa Rosa	**178,127**	min 50, max 200	N/A	N/A	N/A	N/A	Security deposit: $10,000	**X**							Citywide, with no-ride zones at large shopping malls, specific areas in Downtown, Santa Rosa Jr College, and Santa Rosa High School	Yes	No parking areas	Yes	No	Yes	Yes	Yes
Berkeley, Emeryville, Oakland, San Francisco, San Jose	**2,463,780**	7,000 bicycles (both traditional bikes and hybrid electric bikes) at 550 stations. 4500 in SF, 1000 in SJ, 1400 in East Bay Cities (as of 2015).	None	None	None	None	None			**X**	**X**	**X**			Entire Bay Area (where cycling is permitted), but trips must ends within service area. Some no-ride zones in SJ and SF.	Yes at docking station or to bike rack	Yes - Virtual and Physical	X - only for ebikes		Yes - $5 annual membership, discounted rides		Yes - Can pay cash with Clipper Card; can also buy prepaid card with cash at local stores or online, no social security info is needed

APPENDIX C: SURVEY RESPONSES

Response Counts

Completion Rate:	**81%**		
	Complete		98
	Partial		23
			Totals: 121

1. What language do you want to take the survey in? ¿Qué idioma prefieres?

Value	Percent	Responses
English	97.5%	118
Espanol	2.5%	3
		Totals: 121

Note: While 3 people opted to take the survey in Spanish, they did not fill out any subsequent questions.

2. Please select all that apply for you:

Value	Percent	Responses
I live in Hayward	84.5%	98
I work in Hayward	31.0%	36
I go to school in Hayward	7.8%	9
I do not live, work, or go to school in Hayward, but am a regular visitor	4.3%	5

3. How often do you travel using the following modes?

	Never	Less than once a month	1-3 days a month	At least once a week	Multiple days a week	Daily	Responses
Drive alone	5 5.0%	4 4.0%	4 4.0%	13 13.0%	45 45.0%	29 29.0%	100
Carpool with others	40 40.0%	16 16.0%	12 12.0%	11 11.0%	19 19.0%	2 2.0%	100

Public transit	35 35.0%	33 33.0%	10 10.0%	6 6.0%	16 16.0%	0 0.0%	100
Bicycle	57 57.0%	21 21.0%	8 8.0%	7 7.0%	7 7.0%	0 0.0%	
Walk	13 13.0%	14 14.0%	17 17.0%	12 12.0%	27 27.0%	17 17.0%	100

4. How often do you take transit from the following locations?

	Never	Less than once a month	1-3 days a month	At least once a week	Multiple days a week	Daily	Responses
Hayward BART station	31 31.0%	39 39.0%	14 14.0%	4 4.0%	12 12.0%	0 0.0%	100
South Hayward BART station	68 68.0%	18 18.0%	3 3.0%	3 3.0%	8 8.0%	0 0.0%	100
AC Transit (any bus stop)	72 72.0%	17 17.0%	4 4.0%	3 3.0%	4 4.0%	0 0.0%	100
Amtrak Hayward Station	88 88.0%	9 9.0%	2 2.0%	1 1.0%	0 0.0%	0 0.0%	100

5. How far do you typically travel from home (one-way) for the following types of trips? Please make your best guess about distances

	I do not travel for this purpose	<1 mile	1-3 miles	3-5 miles	5-10 miles	10+miles	Responses
Work	18 18.2%	3 3.0%	9 9.1%	8 8.1%	13 13.1%	48 48.5%	99
School	77 77.8%	2 2.0%	7 7.1%	7 7.1%	2 2.0%	4 4.0%	99
Shopping or errands	1 1.0%	7 7.1%	27 27.3%	35 35.4%	22 22.2%	7 7.1%	99
Visit friends or family	7 7.1%	6 6.1%	9 9.1%	13 13.1%	21 21.2%	43 43.4%	99
Other social/recreational	8 8.1%	2 2.0%	11 11.1%	16 16.2%	20 20.2%	42 42.4%	99

6. Do you currently have access to a working personal bicycle or scooter?

Value	Percent	Responses
Yes, both	18.2%	18
Yes, only a bicycle	42.4%	42
Yes, only a scooter	2.0%	2
No	37.4%	37

Totals: 99

7.

7. Have you used shared micromobility (bikeshare/scootershare) before outside of Hayward?

Value	Percent	Responses
Yes, I've used both bikeshare and scootershare	25.3%	25
Yes, only bikeshare	7.1%	7
Yes, only scootershare	9.1%	9
No, I haven't used either bikeshare or scootershare	58.6%	58

Totals: 99

8. Where have you used shared micromobility before?

Open Ended Response
San Francisco
San Diego
Vancouver, Canada
Several cities throughout the bay area, but most often in Oakland. Also outside of California in Cities such as Portland, Oregon.
San Francisco
Sacramento, Oakland and various cities around the country and within CA such as San Diego.
New York City Oakland
San Francisco, Oakland, Washington DC
Scooters in San Jose. Bikes in Boston.
San Jose, CA, San Francisco, CA and Portland, OR
San Francisco

San Diego, Berkeley
Portland Oregon
San Diego Hawaii UCSB UCLA
Long Beach CA and Boston MA
San Jose and San Francisco
San Francisco, Oakland, San Diego
San Francisco, Oakland, Chicago, Sacramento
Bikeshare in Hawaii and scooters in San Francisco
San Francisco
San Diego, CA
SF city
Oakland, Portland, Washington DC
San Francisco Vancouver, Canada
South Lake Tahoe
Oakland San Francisco
San Francisco, San Diego, Los Angeles
CSU East Bay
Oakland; San Francisco; Berkeley
I've shared micromobility multiple times in San Francisco
San Jose, California
San Jose, Emeryville, San Francisco, San Diego
San Jose
San Jose
Oakland
In Oakland
Oakland
Mexico city
Seattle WA, Lake Tahoe area
Berkeley & San Francisco

9. How interested are you in seeing the following shared micromobility options in Hayward?

	Very interested	A little interested	Neutral	Somewhat disinterested	Not at all interested	Responses
Docked/station based bikeshare (all rides start and end at a bikeshare station) Count Row %	40 40.0%	27 27.0%	11 11.0%	4 4.0%	18 18.0%	100
Dockless or "free-floating" bikeshare (no stations, and rides can start and end anywhere within the bikeshare service area)	23 23.0%	25 25.0%	16 16.0%	7 7.0%	29 29.0%	100
E-bikeshare (bicycles are equipped with electric motors to assist riders while pedaling)	41 41.0%	22 22.0%	8 8.0%	8 8.0%	21 21.0%	100
Dockless or "free-floating" e-scootershare (no stations, and rides can start and end anywhere within the service area)	33 33.0%	16 16.0%	14 14.0%	6 6.0%	31 31.0%	100

10. How likely are you to support a shared micromobility program in Hayward? This kind of program would allow for short-term rental of shared micromobility vehicles like bikes, e-bikes, and escooters.

Value	Percent	Responses
Very likely	49.0%	49
Somewhat likely	20.0%	20
Neither likely nor unlikely	8.0%	8
Somewhat unlikely	4.0%	4
Very unlikely	19.0%	19
		Totals: 100

11. What would you be willing to pay for a 10 minute/2 mile ride using shared micromobility?

Value	Percent	Responses
$2-$4	49.5%	49
$4-$6	21.2%	21
$6-$8	2.0%	2
$8+	1.0%	1
I would not be willing to pay to use shared micromobility	26.3%	26
		Totals: 99

12. The following options include things that someone might dislike about shared micromobility (bikeshare/scootershare). How much do you agree or disagree with the following statements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Responses
Scooters and bikes will not be parked properly and create clutter on sidewalks	34 34.3%	42 42.4%	12 12.1%	7 7.1%	4 4.0%	99
Scooters and bikes are unsafe to ride and could result in injuries to their riders	12 12.1%	14 14.1%	32 32.3%	29 29.3%	12 12.1%	99
Scooters and bikes should not be in the road with drivers	16 16.2%	21 21.2%	21 21.2%	27 27.3%	14 14.1%	99
E-scooters and e-bikes go too fast and could be a crash risk to other road users	9 9.1%	12 12.1%	30 30.3%	31 31.3%	17 17.2%	99

13. The following options include things that someone might like about shared micromobility (bikeshare/scootershare). How much do you agree or disagree with the following statements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Responses
Scooters and bikes make it easier and faster for people to get where they need to go	38 38.4%	43 43.4%	12 12.1%	4 4.0%	2 2.0%	99
Scooters and bikes make using public transit easier	32 32.3%	35 35.4%	25 25.3%	4 4.0%	3 3.0%	99
Scooters and bikes help to reduce car traffic	32 32.3%	31 31.3%	16 16.2%	13 13.1%	7 7.1%	99
Scooters and bikes save people money on transportation	25 25.3%	30 30.3%	32 32.3%	8 8.1%	4 4.0%	99
Scooters and bikes help reduce carbon emissions	49 49.0%	35 35.0%	10 10.0%	1 1.0%	5 5.0%	100

14. What purposes would you use bikeshare or scootershare for in Hayward? Select all that apply.

Value	Percent	Responses
I would not use a bikeshare or scootershare	28.3%	28
For fun or to ride with friends/family	51.5%	51
To get to or from a transit stop (e.g., a bus stop, BART station, etc.)	44.4%	44
To get to work or school	17.2%	17
To run errands	30.3%	30
To go to restaurants or other entertainment	43.4%	43
To get exercise	29.3%	29
Other (Please specify)	9.1%	9

Other:
General mobility from place to place, saving huge amounts of time walking. It would also make railfanning trips more quick, easy, and fun.
I feel people will just park them everywhere and disregard the safety of others
NONE
To get around town
To get home from BART
To visit family & friends, to EXPLORE Hayward communities
Unlike denser cities like San Francisco and Oakland, amenities, schools, work and other essential destinations are further than a 2+ mile radius for most people. Which makes the car more convenient to use. Instead of implementing micro mobility options that have the potential of creating a problem for the city, I'd prefer that these funds and resources be better utilized and spent on improving and creating safer and more reliable public transit connections around Hayward that will be affordable for everyone in the community - not just those that have a credit card to spend on a short term rental scooter/bike.
library

15. What might stop you from using shared micromobility (bikeshare or scootershare) in Hayward? Select all that apply.

Value	Percent	Responses
I already have a bicycle or scooter	27.3%	27
I think they'll be too expensive to use	30.3%	30
I don't think they'll be located where I need them	51.5%	51
I don't feel safe or comfortable riding a bicycle or scooter	19.2%	19
I have too many things to carry or transport (e.g., kids, pets, tools, shopping bags, etc.)	40.4%	40
Checking out and returning bikes or scooters sounds too complicated	11.1%	11
I don't have or don't want to use a credit card or smartphone to use a micromobility vehicle	12.1%	12
Other (Please specify)	23.2%	23

Other:
As previously mentioned, amenities and essential destinations may be further for 1 some people that will actually benefit from these micro mobility option. Improving affordable public transit connections should be a priority instead of the micro mobility option. The ones benefitting from this would be the companies who charge a fee to use the bikes instead of the funds being directed back into the community.
Bikes should not be treated as vehicles. I am uncomfortable without separate bike lanes with dividers.
Harzardous Joyriding
Hills
I am an avid bike rider. I feel Hayward has very limited access to "safe" routes/ paths for bikes and scooters
I am too old (76)
I have the physical means, access, and passion about bikes to bike more - but I rarely use it to travel to BART, downtown, to the farmers market etc because biking down B st is dangerous.
I think that they should be easy to find, ex. Infront of grocery stores, big box stores, schools, libraries, hospitals/clenics, parks, churches and malls/plazas, etc.
If none are nearby, if most are being used already, or if batteries are low.
N/A
Not enough places to park
Safety in traffic concerns, drivers don't slow for pedestrian even with right of way. I can foresee hazardous situations.

Some Hayward streets feel unsafe on a bike or scooter
They are too dangerous to use.
They will be filthy dirty, broken.
Too dangerous
You have to make sure that locations are within biking distance. Also that there are safe bike friendly routes between those locations
driving might be easier esp with multiple stops
Hygiene safety
Lack of policing support
Never used one so not sure what to expect
Not safe for pedestrians
traffic

16. Would you be more likely to use shared micromobility if the vehicles were electric (e.g., e-scooters or e-bikes)?

Value	Percent	Responses
Yes	53.5%	53
No	14.1%	14
Unsure	20.2%	20
I would not use shared micromobility	12.1%	12
		Totals: 99

17. Would you be interested in participating in either of the following programs? Select all that apply.

Value	Percent	Responses
E-bike Library (similar to a public library, an e-bike library is a place people can go to borrow e-bikes for free)	56.6%	56
E-bike Rebate Program (residents who purchase an e-bike are eligible to receive a rebate)	61.6%	61
None of the above	27.3%	27

18. Do you have any other comments, questions, or concerns about shared micromobility in Hayward?

Responses
Although I know the city is working on it, the lack of safe, maintained, and protected bike lane infrastructure will be a barrier to adoption. Also, having ebikes will likely be a game changer for local college students who have a big hill to climb and a (pre-pandemic, at least) heavily impacted and under resourced shuttle.
I have concerns that if micromobility is implemented before proper bike infrastructure then it will be unsuccessful. The micromobility will be blamed instead of the root cause.
ebike library is a really good idea.
Im concerned that in the downtown are where the bars are people can and will drive under the influence on a e bike or scooter.
We need more protected bikelanes to make this safe for riders
No
Would want to keep sidewalks clear and safe for pedestrians and make sure riders know safety rules and where to ride etc so it's safe for them and others on roads
Thanks for doing it. I am a strong supporter for this idea and it will facilitate public transportation usage for sure!
i have been to two locations with micromobility: portland, or and san francisco. it seemed to be okay in portland. in san francisco the bikes and scooters often block the sidewalk/road. they get stolen or the companies dont maintain them well. if there is an organized effort to keep them functional and available, i think it could help others. but my concern is it will create issues instead. i would love if bus was expanded instead
Oakland found a lot of their scooters in the lake. New york's bikes have bent rims, broken gears, and damaged seats. it would be better to offer people vouchers to purchase their own bikes, have community rides, and day fairs teaching people basic bike care.
Just don't want to see abandoned bikes all over. This would be my biggest concern.
What happened to walking from A to B
I think an equity focus is really important- most Hayward residents who could use these services do not have a lot of money. Personally I can afford to buy a e bike etc but don't have one currently since I have a 4yo to transport.
As a resident of the newly built apartment complex on the foothill (Lincoln Landing), I think the residents would benefit from micro-mobility near or around this area. It would increase additional foot traffic to and from downtown Hayward and nearby restaurants and shops.
The Loop is proof that Hayward is doing everything for cars and nothing for people. Give one lane to buses and micromobility, only.

Hayward should embrace a future with micro mobility vehicles sharing roads. But the already-very-busy Hayward PD also needs to be prepared to enforce laws and help with theft or reckless riding.
The idea sounds good on paper but not sustainable. First, I used to ride my ebike 50 miles daily to/from work for years so am a big fan of ebikes and public transit. However there is a big difference between owning and riding your own ebike (that you paid for), and using a bike/scooter as a service (which you don't own). The vast majority of people won't care to not damage or keep the rental in good usable shape. Most people won't keep it clean either. So in time you'll have a fleet of costly scooters/ebikes/bikes that will be broken and filthy. People won't want to use them, instead they'll want to avoid them. Look at how similar programs failed in San Francisco. Second, there needs to be a safe place for people to ride. The city need to create safe places for riders. For over 5 years I've been trying to get the city to just add green paint to an bike lane along my neighborhood because it's too dangerous to ride a bike. To this date it's still not done. People need to be able to feel safe before riding anything next to cars.Third, when it relates to safety we need more traffic enforcement. Once people feel that automotive or motorcycle riders are driving in a safe manner then they'll entertain riding bikes/scooters etc. Nobody will want to risk their health and safety. In all it's the big picture that needs to be considered for this progam to be successful in the long term. There are a few pieces of the picture that need to be addressed before investing in this program.
I know for sure people in Hayward would utilize this service. In Portland they require you to take a picture of the scooter or bike where it was parked to verify it isn't parked improperly. Failure to do so invokes an extra fee. This usually motivates people to not be rude or careless when parking their scooter after their trip. I think this would be great for Hayward.
My concern is the lack of support from the Hayward police for property crimes. This type of activity would only increase the opportunity for property crimes. Unless there is a stronger focus from the police to help with property crimes, I fear this will result in a failed investment. Additionally, your minimum is too high above. I might be willing to pay to rideshare but not $2-4/10 min. That is too much for the service, given what Hayward currently has to offer. If you created a community share with Castro Valley and San Leandro and/or increased the "things to do" in Hayward (which would likely happen if the policing were better) then it might be more enticing too.
-Could be great for high school students, will need to review laws if helmets and being 18 years old is a requirement. MEHS traffic is heavy -Laws should be enforced if broken by riders -Designated parking spots for these vehicles at shopping centers would be a benefit -May see unhoused community using the vehicles, but could reduce stolen bikes/ scooters -I imagine families/ people using the micromobility which could increase local business
I hope they set up specific lanes for shared micromobility to use. I wont be comfortable using them, or even driving around them if there's no specific lanes. Need to build more bumps especially in highly congested areas like wide intersections for safety.
Might be too expensive or inaccessible to people who need them the most. Will probably clutter sidewalks and curbs.
It would be great if the city micromobility program worked with local schools/university/colleges.
It's all about safety for riders and drivers. Parking them everywhere and disregard where they can park after each use. I don't want Hayward to be SF that in the end cost a lot of issues.
The people that have credit cards to rent them probably already have bikes of their own. The people that need them the most probably won't have credit cards! And with so few renting stations returning them would be a problem in my view and we would have them scattered around like shopping carts!
Confusing where to drive (pedestrian or vehicle road?). So installing the signs on streets help for sure.
this study was not open to real study looking for information but geared to what you want - I travel to different cities they are left all over, used for joy riding, dangerous down streets and sidewalks, pull off the power grid - have EMF's, litter the streets- I dont go near those streets anymore - my friend in berkeley tripped overone and is suing the city- knee surgery
I believe I've shared my concerns in the previous questions.
I answered the question above, but dockless shares are basically litter. It's also noteworthy that scooters are more dangerous to their users than bicycles because the tiny front wheel increases the risk of a crash.

In my opinion this is a great idea! I think it's time for HAYWARD to be just like a lot of the other townships-LET'S KEEP "MOVING" FORWARD (no pun intended)! ;-D My family and I would WELCOME the micro/e-mobility in our community. We support it STRONGLY. It is an excellent idea to get around the city. VERY clever, indeed!
I generally support this program. However, Hayward needs to focus on creating safe bike and scooter paths across the city first. As a resident of Hayward and active cyclist, I do not feel safe riding on most of Hayward's roads, especially Mission Blvd (except short section in South Hayward)
The city does not have adequate infrastructure for bikes/e-bikes (e.g., separate bike lanes). The city also lacks adequate policing resources to manage traffic (speed enforcement, bike lane infractions, cycling on sidewalks) and theft/vandalism. Without policing, risks of accidents and injury go up with bikes/e-bikes. Shared bikes/e-bikes will be vandalized and stolen, adding to the existing problem of abandoned bikes, shopping carts, etc. throughout the city. Please allocate these funds to more policing.
Biggest concerns is micro-mobility causing accessibility issues for members of our community who are disabled. Also, there aren't many protected bikes lanes in Hayward and many of the main roads have speed limits that don't make bike/scooter riders feel safe. Thus they ride on the sidewalks creating possible collisions with pedestrians.
I would love to see this happen! However, I think in order for it to happen safely we would need a) some way to keep scooters/bikes from cluttering sidewalks, b) clear rules about where different vehicles can be used, and c) safe routes for all types of vehicles.
SF is a good example on how scooters and other micro vehicles are unsafe and cause nothing but another problem for pedestrians and motorists.
Just do it already. Hayward says it is a progressive city, but mircomobility scooters, e-bikes and shared programs - has been implemented throughout the country for years now.

19. What is your age?

Value	Percent	Responses
0-18	1.0%	1
18-24	4.1%	4
25-44	53.1%	52
45-64	28.6%	28
65+	8.2%	8
Prefer not to answer	5.1%	5

Totals: 98

20. What is your gender identity?

Value	Percent	Responses
Female	46.9%	46
Male	45.9%	45
Prefer not to answer	7.1%	7
		Totals: 98

21. What race or ethnicity do you identify with? Check all that apply.

Value	Percent	Responses
American Indian, Native American, or Indigenous	1.0%	1
Asian or Pacific Islander	24.5%	24
Black or African American	4.1%	4
Hispanic or Latino	18.4%	18
White / Caucasian	41.8%	41
Not listed (please specify)	1.0%	1
Prefer not to answer	16.3%	16

Not listed (please specify)	Count
other	1
Totals	1

22. What is your annual household income level?

Value	Percent	Responses
Less than $20,000	1.0%	1
$20,000- $34,999	3.1%	3
$35,000 - $49,000	3.1%	3
$50,000-$74,999	10.3%	10
$75,000 - $99,999	12.4%	12
$100,000 - $149,999	20.6%	20
$150,000 - $199,999	10.3%	10
$200,000 or higher	16.5%	16
Prefer not to answer	22.7%	22
		Totals: 97

23. Do any of the following disabilities currently affect your daily life? Select all that apply.

Value	Percent	Responses
Blindness or vision impairment	2.2%	2
Hearing impairment	3.2%	3
Mobility disability (e.g., difficulty walking or climbing stairs)	7.5%	7
None	74.2%	69
Don't know/not sure	2.2%	2
Another disability or disabling health condition:	5.4%	5
Prefer not to answer	8.6%	8

24. What is your home zipcode?

Responses
94110
94541
94541
94541
94541
94544
94544
94541
94904
94545
94544
94541
94544
94542
94541
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95455
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94618
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94544
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94544-8211
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94544
94544
94542
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94612
94541
94544
94539
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94541
94544
9454 1/4
94544
94544

25. What are the nearest cross-streets to your home address?

Responses
27th and dolores
D st. Winton
Windfeldt
D and Grand
City Center Drive and Second Street
industrial and mission
Hesperian
D and Grand
El Portal and Via Casitas
Morningside
Harder/Patrick
b st
Elmhurst and Larchment
Hayward Blvd and tribune
Staley Ave
mlk and burbank
Mission
92
Fairview Ave
santa clara
Madeiros and Dst
Burbank St
Kay and Avondale
C & D street
Mission and Hampton
Tennyson
garin
Elmhurst and Townsend
Foothill
Dodge Ave
College Ave. & Patton St.
2nd street, Bland street
Valle Vista and Hub Lane
Mission/Highland
Industrial
B street center street and Kelly street
Garin and industrial blvd
5th and D
Hesperian Blvd, Turner Ct.
Hesperian
Winton and santa clara
Atherton St & D St
C and Myrtle St
C and Atherton
Mission and Carlos Bee
Hayward Blvd

Dublin Blvd/Hacienda
Bryon and Kelly
Mission Blvd & Lafayette
Hayward Blvd
B street
Mission blvd
hackermore/spur
Mission Blvd
Vanderbilt
Mission Blvd.
Garin
mission and industrial
Fairview
Hazel & Main
Fairview Ave and Five Canyons Pkwy
Tennyson and Mission
A st. and Montgomery St.
Mission and Alquire parkway
Harder Rd. & Huntwood Autobahn
redwood/grove
Prospect and Simon streets
Tampa
26460 mockingbird ln
Frey and Calaroga
Shaffer/Gading
Mission blvd and Fletcher ln
Jackson & Winton Ave
Tennyson
Thomas L Berkeley Way & Martin Luther King Jr Way
Second street and campus
Mission & Garin
Scotts creek Blvd and Milpitas blvd
B st
Tennyson and Mission
Rose, prospect
4th St and C St.
1st and d st.
B St
Tennyson
Huntwood and Meekland Avenues
harder
Ruus and Snowberry Ct