UCSF

Bicycle and Micromobility Plan

JULY 2022

Acknowledgments

The project team is grateful for the time, expertise, and collaboration of many people and entities who helped shape UCSF's first-generation Bicycle and Micromobility Plan. In particular, UCSF is grateful to the San Francisco Municipal Transportation Agency, San Francisco Recreation and Parks, and the project's Coordination Committee, which brought a wide range of UCSF perspectives to the planning process.

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Contents

Executive Summary 1

Existing Conditions Highlights 2

Vision and Goals 5

Action Plan 5

Introduction..... 11

Plan Focus..... 12

Alignment with Other Initiatives 13

Development of the Plan 13

Existing Conditions..... 17

A Healthy, Affordable, and Convenient Choice... 18

Getting to and from Campus 21

Supporting the Decision to Ride..... 24

Keeping Up with Emerging Trends..... 26

Finding a Place to Park 28

Vision and Goals 37

Action Plan..... 41

Building a Safe and Connected Network..... 42

Supporting Sustainable Growth..... 60

Creating Reliable and Inclusive Amenities 70

Conclusion..... 86


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Executive Summary

As sustainable, healthy, and efficient ways of moving around San Francisco, biking and micromobility reinforce UCSF's mission to advance health worldwide. Since opening its doors in 1864, the way people get to and from UCSF has continuously evolved and in 2021 eight percent of commuter trips made to UCSF were by bike or scooter.

As UCSF continues to grow, the role of sustainable options like biking and micromobility will be more important than ever. By 2035, UCSF is expected to expand the population of learners, staff, and faculty across its campuses by around 40%. Growing as sustainably as possible is a key

objective for the University, which means not only using sustainable construction methods and materials, but building sustainable practices into all UCSF operations, including transportation. It is this commitment – coupled with an imperative to provide a world-class environment for the eight percent of UCSF commuters that already ride a bike or scooter – that led to the creation of UCSF's first Bicycle and Micromobility Plan.

The UCSF Bicycle and Micromobility Plan is a blueprint to help the University strengthen and grow its bicycle and micromobility programming and increase the share of people using these modes. Though not all people within the UCSF community are able to use biking or micromobility for their trips, UCSF is committed to making these options possible for as wide a range of people as possible. This plan was built on a foundation of existing data, insights collected from a survey completed by over 850 UCSF stakeholders, and with the guidance of a Coordination Committee comprised of 20 representatives across University departments and functions.

Existing Conditions Highlights

With roughly eight percent of all commuters riding a bike or scooter to campus, many learners, staff, faculty, as well as patients and visitors have already made biking to UCSF a part of their routine. Over the course of the COVID-19 pandemic, biking and micromobility became even more attractive to people as a low-contact way of moving from place to place. Even though fewer people overall made a physical commute to campus each day, the share of people who use bikes or scooters for trips they did make to UCSF actually grew during the pandemic from six percent in 2019 to eight percent in 2021.

Even with a strong and growing share of commuters riding to campus, there is potential for an even higher number of people to ride to campus. Over 10,000 learners, staff, or faculty (roughly 43% of the total campus population) live within five miles of the campuses (i.e., a 30-40 minute ride on a standard bike).[1] Many more commuters reside within a bikeable distance of regional transit, such as BART, Caltrain, and Ferry, further adding to the potential for biking or micromobility to provide first and last mile connections to transit. In addition, in San Francisco and nationally the rate of people purchasing and using both shared and personal e-bikes, e-scooters, and cargo bikes has grown significantly, making biking and other micromobility more accessible and utilitarian for more people than ever before.

With so many of UCSF's learners, staff, and faculty living within a roughly 30-minute ride of UCSF, a safe and connected route from home to campus is an essential prerequisite for growing the share of people who bike or use micromobility to get to

1 Analysis based on student and employee home zip code data as of August 2021.

UCSF. The City of San Francisco has over 70 miles of shared use paths, 13 miles of protected bicycle lanes, and 125 miles of conventional painted bike lanes. In addition, the City piloted 47 miles of “slow streets” during the COVID-19 pandemic to encourage safer, slower vehicular traffic on residential streets, many of which are proposed to become part of the permanent bike network in coming years. However, the quality of the City’s on-street bicycle network varies by neighborhood, creating inconsistent access for people biking to UCSF campus sites. As a result, traffic safety is still a major concern for UCSF stakeholders. Of over 850 UCSF survey respondents, 51% of people identified “safer routes and bike lanes” as a key opportunity to improve biking and micromobility to campus.

Momentum for a safer and more connected bike network in San Francisco is strong and continually growing. Building out the citywide high-comfort bike network is a key component of San Francisco’s transportation strategy and numerous initiatives are underway to envision and build out a safer and more connected bikeway network. These City initiatives arrive at an opportune moment for UCSF as both entities move towards aligned transportation and sustainability goals.

In addition to a physical environment that promotes biking and micromobility, UCSF’s transportation policies, practices, and programs factor strongly into individual and institutional transportation decisions. UCSF has already taken significant steps to achieve a high share of people that walk, bike, take transit, or use other sustainable modes. The UCSF Shuttle provides a free and well-used transit service that connects people across campus sites and to major transit stations within San Francisco. UCSF is also deemphasizing new vehicle parking in its building plans and instead dedicating that space to uses that directly support the University’s mission.

As UCSF endeavors to further reduce the share of people who drive to campus, the University’s must broaden the appeal of walking, biking, scooters,

and transit. In the context of San Francisco – where both shared micromobility and transit are relatively expensive on a per-mile basis – introducing resources and programs that provide a financial incentive to use sustainable modes would be especially impactful for promoting these modes for people who live further away from campus or who experience transportation cost burdens. In addition, specific educational programming and communication campaigns can help close knowledge gaps revealed through this planning process around topics like basic mechanic skills, theft prevention, and biking in San Francisco.

Finally, once people arrive on campus, bike/micromobility parking and amenities are the final pillar that support riders at UCSF. Up to now, the approach to bike/micromobility parking and end-of-trip amenities at UCSF has generally been reactive or ad hoc. To a degree, this approach has worked and today there are nearly 2,000 bike/micromobility parking spaces across Mission Bay, Mount Zion, and Parnassus Heights. However, this approach has also resulted in quality, consistency, and supply issues. In addition, the UCSF community frequently cites concerns about bike/scooter theft and secure bike parking as a top issue.

In addition to bike/micromobility parking, several other types of amenities are provided across campuses including fix-it stands that provide tools for basic repairs and lock docks that provide a place for people to store their locks in between use. Showers are available at Mission Bay and Parnassus Heights at the Fitness and Recreation Centers through the UCSF Fitness and Recreation Bike to Work Shower Pass. Only a few additional buildings have showers and personal lockers; most of these are located at Mission Bay within newer buildings.

Figure 1: Comparison of Bike/Scooter Commute Rates and Bike/Micromobility Parking Supply

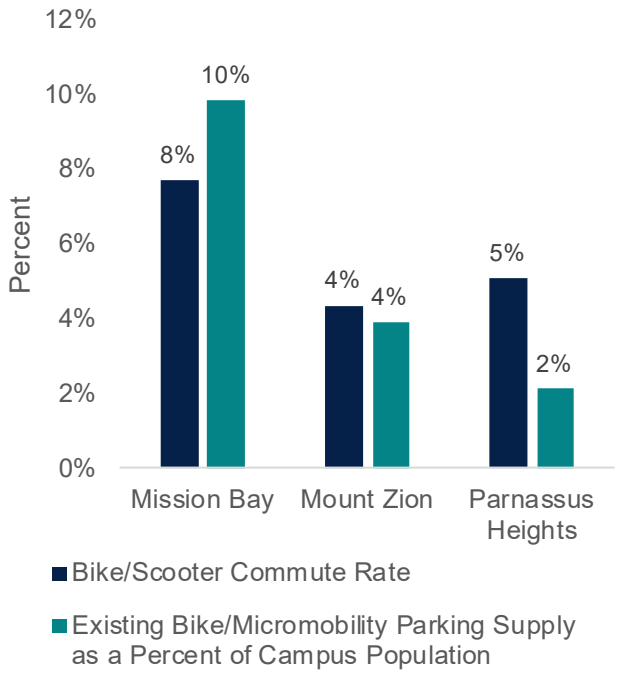
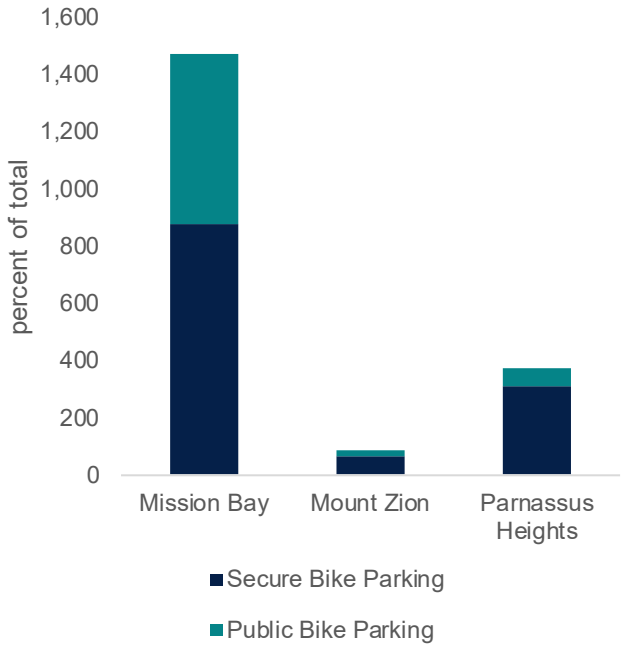


Figure 2: Mix of Badge-Secured and Publicly-Accessible Bike/Micromobility Parking by Campus



Vision and Goals

Using feedback from the Coordination Committee, the UCSF community, and analysis of existing data and planned growth, a vision, goals, and set of annual performance metrics were defined as a foundation for the plan's recommendations.

Vision

By 2035, UCSF will broaden the scope of its health leadership to include a world-class environment that integrates biking, micromobility, and emerging sustainable transportation options into its built environment, policies, and operations.

Goals

Goal 1: Provide a safe environment for biking and micromobility within the campus and community context.

Goal 2: Strengthen the role of biking and micromobility as part of the University's growth strategy.

Goal 3: Create a reliable and inclusive experience for existing and future riders.

Action Plan

Achieving the vision and goals of the plan will require action across UCSF departments and strong collaboration with the City and County of San Francisco. The recommended actions identified below are generally organized by the goal they most strongly support. Taken together, these actions cut across a wide range of policies, practices, and physical investments to make UCSF a world-class environment for biking and micromobility. For each recommended action, a range of implementation details and tracking metrics are defined.

Building a Safe and Connected Network

Though the City and County of San Francisco has been building out its high-comfort bike network over time, missing connections to and between UCSF campus sites – especially at Mount Zion and Parnassus Heights – prevent UCSF from attracting people who are otherwise interested and able to ride to campus. In addition, crashes between people biking and driving on streets within UCSF campus sites have led to serious injuries and deaths that may have been prevented with more protected infrastructure.

Building out the citywide high-comfort bike network is a key component of San Francisco's transportation strategy. Through a wide range of initiatives – including the *2021 Vision Zero Action Plan*, *2022 Golden Gate Park Access & Safety Program*, and ongoing *Active Communities Plan* – the City and County of San Francisco is moving towards their goal of 80% of all trips taken within San Francisco made by sustainable modes by 2035, including walking, biking, transit, and micromobility.

These City initiatives arrive at an opportune moment for UCSF as both entities move towards aligned transportation and sustainability goals. The City and County of San Francisco controls many of the streets required to connect to and between the UCSF campuses and there is an opportunity for productive collaboration between UCSF, SFMTA, and other implementation partners. The actions identified in this plan reflect this need for partnership, leadership, and accountability to make high-impact changes to safety and connectivity.

Table 1: Recommendation Summary for Building Safe and Connected Networks

Action	UCSF Champion	Partners	High Impact Action	Timeline	Tracking Metrics
Action 1: Collaborate with the City and County of San Francisco to close existing gaps in the Citywide high-comfort bikeway network	Campus Planning	Community and Government Relations Transportation SFMTA San Francisco Recreation and Parks SF Public Works SF Port	X	Ongoing	Increase in the miles of high-comfort routes within a quarter mile of campus. Increase in high-comfort connections to existing transit stations that serve UCSF.
Action 2: Prioritize high-comfort bikeways for key streets within campus boundaries.	Campus Planning	Community and Government Relations Signage Governance Committee Transportation UCSF PD SFMTA SF Public Works	X	Ongoing	Reduction in the year-over-year number of bicycle and scooter crashes that result in a severe injury or fatality within campus boundaries (including City streets). Reduction in the number of crashes on-campus involving a person riding a bicycle/ scooter and a pedestrian.
Action 3: Collaborate with Bikeshare Provider to expand bikeshare stations	Campus Planning	Community and Government Relations Transportation SFMTA Bikeshare Provider		Short-Term (0-3 years)	Increase in the number of bikeshare/scootershare trips that start/end on campus, including travel between campus sites.

Supporting a Sustainable Growth

As UCSF invests in its commitment to advancing health worldwide, its physical footprint and population will also grow. By 2035, UCSF will build out millions of square feet of new clinical, research, housing, and auxiliary facilities that will support a 40% increase in the population of learners, staff, and faculty. UCSF is committed to growing with care for its neighbors and the earth. With a focus on making sustainable and low impact modes like biking and micromobility appealing for trips to campus, this plan is a component of UCSF's commitment to sustainable growth. The recommendations in the plan focus on changes to programming, policies, and practices across the University to help make sustainable modes – like biking and micromobility – an easy choice for a broader spectrum of UCSF commuters.

Table 2: Recommendation Summary for Supporting Sustainable Growth

Action	UCSF Champion	Partners	High Impact Action	Timeline	Tracking Metrics
Action 1: Introduce a Sustainable Commute Benefit	Transportation	Human Resources Office of Sustainability UC Office of the President Transit and Shared Micromobility Providers Local and State agency partners	X	Mid-Term (3-6 years) for full program. Short-Term (0-3 years) for lower-income pilot program	Increase in the share of people who use bikes/scooters to travel to/from campus. Reduction in the share of people who drive alone to/from UCSF. Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.
Action 2: Continue to incorporate and evolve vehicle parking policy as part of sustainability and equity initiatives.	Transportation	Human Resources UC Office of the President		Mid-Term (3-6 years)	Reduction in the share of people who drive alone to/from UCSF.
Action 3: Strengthen educational programming and communication	Transportation	Human Resources Campus Planning Information Technology Office of Communication SF Bicycle Coalition UCSF Bikes!		Short-Term (0-3 years)	Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population. Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.
Action 4: Extend The 'Emergency Ride Home' program to learners	Transportation			Short-Term (0-3 years)	Increase in the share of people who use bikes/scooters to travel to/from campus. Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.
Action 5: Expand Institutional capacity and collaboration around biking and micromobility	Transportation	Office of Sustainability Campus Planning Real Estate Facilities Campus and Health Design & Construction		Short-Term (0-3 years)	Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.

Creating Reliable and Inclusive Bike/ Micromobility Parking and Amenities

A more proactive and consistent approach to bike parking and amenities will help UCSF respond to existing supply and security issues and attract more people to biking and micromobility as a core component of the institution's plan for sustainable growth. In the near term, a focus on right-sizing the quantity, quality, and distribution of supply at each campus and addressing concerns about theft are top priorities.

Table 3: Recommendation Summary for Reliable and Inclusive Amenities

Action	UCSF Champion	Partners	High Impact Action	Timeline	Tracking Metrics
Action 1: Adopt UCSF Standards for Bike/ Micromobility Parking and End-of-Trip Amenities	Campus Architect	Transportation Campus Planning Building Permit Services Campus and Health Design & Construction Facilities	X	Short-Term (0-3 years)	Percentage of new construction and renovations that meet all requirements of LEED for Bicycle Facilities Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists.
Action 2: Right Size Supply for Existing and Future Demand	Campus Planning	Transportation Facilities Campus and Health Design & Construction SFMTA	X	Ongoing	Increase in the number of secure (badge/key access) bicycle/scooter parking spaces per person (based on campus population, not including patients and visitors). Increase in the number of public (weather-protected preferred) bicycle/scooter parking spaces per person (based on campus population, inclusive of patients and visitors). Increase in the share of bicycle parking supply that accommodates adaptive, cargo, electric, and other non-standard bicycles and scooters. Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population.
Action 3: Implement High-Priority Bike/ Micromobility Amenity Projects	Campus Planning and Transportation	Campus and Health Design & Construction Facilities SFMTA	X	Short-Term (0-3 years)	Same as Action 2 Completion of short-term priorities identified for each campus site
Action 4: Grow Real and Perceived Security of Bike/ Micromobility Facilities	Transportation	Campus Planning UCSF PD Facilities Campus and Health Design & Construction	X	Ongoing	Reduction in the number of year-over-year bicycle and scooter thefts per total number of registered bicycles. Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population.


EXCEPT

Introduction

The mission of the University of California San Francisco (UCSF) is simple but bold: advance health worldwide. Inherent within this mission is the role of healthy, active, and sustainable forms of transportation like biking and micromobility. Situated within the City and County of San Francisco and spread across multiple urban campus sites, UCSF is not only a public health sciences research institution, but a medical provider and major employer in the broader San Francisco community. With over 24,000 existing staff, faculty, and learners traveling to and from UCSF's three primary campus sites each day – in addition to over ten thousand patients and visitors – transportation to and from UCSF has major implications on the University's ability to attract and retain talent, grow its operations, maintain strong community relationships, and combat climate change.

Since its founding in 1864, UCSF has grown to be the second largest employer in San Francisco and a prominent health partner for the community. Over the next decade, UCSF will continue to grow. By 2035, UCSF is expected to expand the population of learners, staff, and faculty across its campuses by around 40%. Growing as sustainably as possible is a key objective for the University, which means not only using sustainable construction methods and materials, but building sustainable practices into all UCSF operations, including transportation. Though the vast majority of UCSF's daily commuters already use transit, walking, biking, carpooling, and other lower-impact forms of transportation, the University is committed to reducing the share of people who drive to campus. It is this commitment – coupled with an imperative to provide a world-class environment for the eight percent of UCSF commuters that already ride a bike or scooter – that led to the creation of UCSF's first Bicycle and Micromobility Plan.

Plan Focus

Though not all people within the UCSF community are able to use bikes or micromobility for their trips, UCSF is committed to making these modes possible for as wide a range of people as possible. The UCSF Bicycle and Micromobility Plan is dedicated to all forms of biking and micromobility including:

- Personal bikes and e-bikes, cargo bikes, and adaptive bikes.
- Public bikeshare and scootershare operated by partners such as Bay Wheels, Lime, Spin, Scoot, and others.
- Other micromobility devices such as skateboards, personal scooters, and more.

Though UCSF has over a dozen campus sites within San Francisco and the surrounding area, this plan is focused on its three main campus sites at Mission Bay, Mount Zion, and Parnassus Heights.

Campus Snapshot

Mission Bay

2020 Population[1]: 10,200

2035 Projected Population[1]: 14,800

2021 Bike/Scooter Commute Rate[2]: 9%

Mount Zion

2020 Population[1]: 2,150

2035 Projected Population[1]: 2,500

2021 Bike/Scooter Commute Rate[2]: 5%

Parnassus Heights

2020 Population[1]: 11,300

2035 Projected Population[1]: 15,200

2021 Bike/Scooter Commute Rate[2]: 7%

1 Population does not include patients or visitors

2 Does not include remote work

Alignment with Other Initiatives

This plan does not stand alone. Though distinct in focus from other campus planning initiatives, the Bicycle and Micromobility Plan builds on other UCSF plans and studies. In particular, the *2014 Long Range Development Plan* is the guiding document that sets the strategic direction for the University. This Bicycle and Micromobility Plan supports the objectives of the *Long Range Development Plan*, and also incorporates work completed for the *Comprehensive Parnassus Heights Plan*, *Parnassus Avenue Streetscape Study*, and the *Irving Streetscape Study*.

UCSF also has a strong partner in the City and County of San Francisco. As the interest in biking and micromobility has risen, the City and County of San Francisco has adapted its policies and built environment to support these modes. There are currently over 200 miles of paths and bike lanes in the City and County of San Francisco, and more are on the way. In 2022, the City and County of San Francisco launched their *Active Communities Plan*, which will create a prioritized pipeline of active transportation infrastructure projects.

2014 LRDP Objectives

1. Respond to the City and Community Context
2. Accommodate UCSF's Growth Through 2035
3. Ensure UCSF's Facilities are Seismically Safe
4. Promote Environmental Sustainability
5. Minimize Facility Costs

Development of the Plan

UCSF's Bicycle and Micromobility Plan was developed by first examining existing conditions to establish a baseline. An extensive data collection effort was completed in Fall 2021 that built the foundation for the analyses and recommendations in this plan.

In addition to existing conditions, this plan was built to anticipate and accommodate population growth and mode shift away from drive-alone trips across UCSF. With the COVID-19 pandemic ongoing, future transportation patterns are uncertain. Before the pandemic, 96% of UCSF's learners, staff, and faculty made a physical commute to campus each day. By 2021, the share of people within the UCSF community making physical commutes dropped to 61%. Remote work is a welcome trend for UCSF; it is a key strategy for low-impact and sustainable growth. Recognizing the lasting importance of remote work, this process used a middle-ground estimate (15% remote work) to project the number of future bike and micromobility trips to campus. The impacts of population growth at UCSF, even with a remote work rate of 15%, emphasize the importance of this plan. Without any change in the share of people who ride to UCSF, the sheer number of bike/scooter trips to campus is expected to increase by nearly 30% over 2019 conditions owing solely to population growth.

However, UCSF *is* planning for a growing rate of biking and micromobility. Drawing inspiration from a key obligation of the *Comprehensive Parnassus Heights Plan* – to reduce drive alone trips to campus by 15% - a portion of existing drive alone trips at each campus were redistributed to more sustainable modes, including biking and micromobility. Accounting for modest redistribution, the volume of bike/scooter trips to campus is expected to increase by over 35% from 2019 conditions.

UCSF Stakeholder Engagement

Engagement with the UCSF community also played a prominent role in the development of this plan. In total, this plan incorporated ideas and insights from over 850 survey respondents and in-depth group conversations with 24 UCSF staff, faculty, learners, and patients. The plan was also guided by a Coordination Committee comprised of approximately 20 UCSF stakeholders. Various UCSF and City and County of San Francisco departments provided guidance and input throughout the plan's development.

Finally, through this process interviews were conducted with five peer institutions including two sister UC campuses (UCLA and UC Davis Medical Center), the University of Washington, Temple University, and Oregon Health and Sciences University (OHSU). The best practices and lessons learned from these peer institutions helped guide recommendations for this plan.

Recommendations

Following a discussion of existing conditions, planned growth, and stakeholder feedback, this plan structures its recommended actions in three primary categories:

1. **Building a Safe and Connected Network:** Recommendations for implementing safe bikeways to, on, and between campus sites.
2. **Supporting Sustainable Growth:** Policy and programmatic recommendations tailored to address specific challenges expressed by campus stakeholders.
3. **Creating Reliable and Inclusive Bike/ Micromobility Parking and Amenities:** Recommendations and guidelines for end-of-trip amenities such as secure bike/micromobility parking, showers, and lockers.


8778
CA49619
43 Presidio + Calif.
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HERO
Meet Our
HEROES


SPIN

Existing Conditions

Building from a wide range of existing data, on-campus site visits, and stakeholder engagement, existing conditions for biking and using micromobility at UCSF were analyzed. This section explores what it is like to bike or use micromobility for travel at UCSF today, what is expected in the future, and what key challenges UCSF needs to focus on to support existing and future riders. A comprehensive Existing Conditions Report can be found in Appendix B.

A Healthy, Affordable, and Convenient Choice

With roughly eight percent of all commuters riding a bike or scooter to campus, many learners, staff, faculty, as well as patients and visitors have already made biking to UCSF a part of their routine. During focus group conversations, people shared that time savings, cost savings, built in exercise, and enjoyment were top reasons people currently ride to UCSF.

Over the course of the COVID-19 pandemic, biking and micromobility became even more attractive to people as a low-contact way of moving from place to place. Even though fewer people overall made a physical commute to campus each day, the share of people who use bikes or scooters for trips they did make to UCSF actually grew during the pandemic from six percent in 2019 to eight percent in 2021 (see Figure 3 and Figure 4). This mode shift occurred within the context of a large shift to work from home for UCSF commuters due largely to a general reticence to use transit to reduce risk of exposure to the COVID-19 virus. Though future trends are still uncertain, even small permanent gains in the rate of biking and scooter commutes to UCSF could result in hundreds more bike and micromobility trips to UCSF each day as more people return to on-site work.

Even with a strong and growing share of commuters riding to campus, there is potential for an even higher number of campus learners, staff, and faculty to bike to campus. Over 10,000 learners, staff, or faculty (roughly 43% of the total campus population) live within five miles of the campuses (i.e., a 30-40 minute ride on a standard bike).[1] Many more commuters reside within a

1 Analysis based on student and employee home zip code data as of August 2021.

Figure 3: Total Daily Commutes to Mission Bay, Mount Zion, and Parnassus Heights

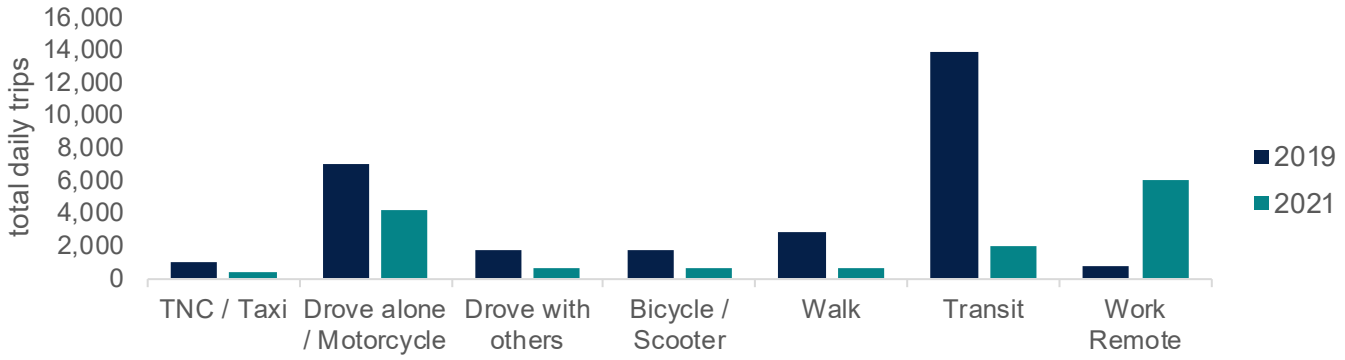


Figure 4: UCSF Commute Mode Share Excluding Remote Work

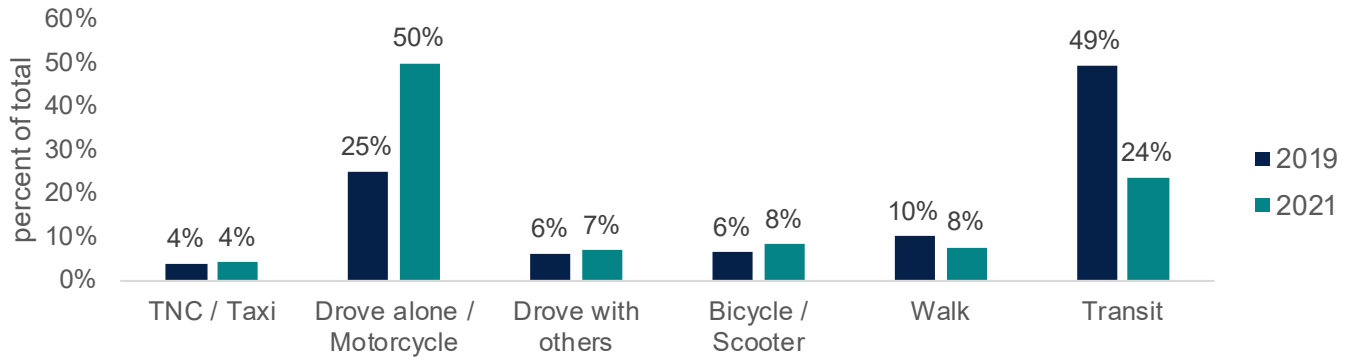
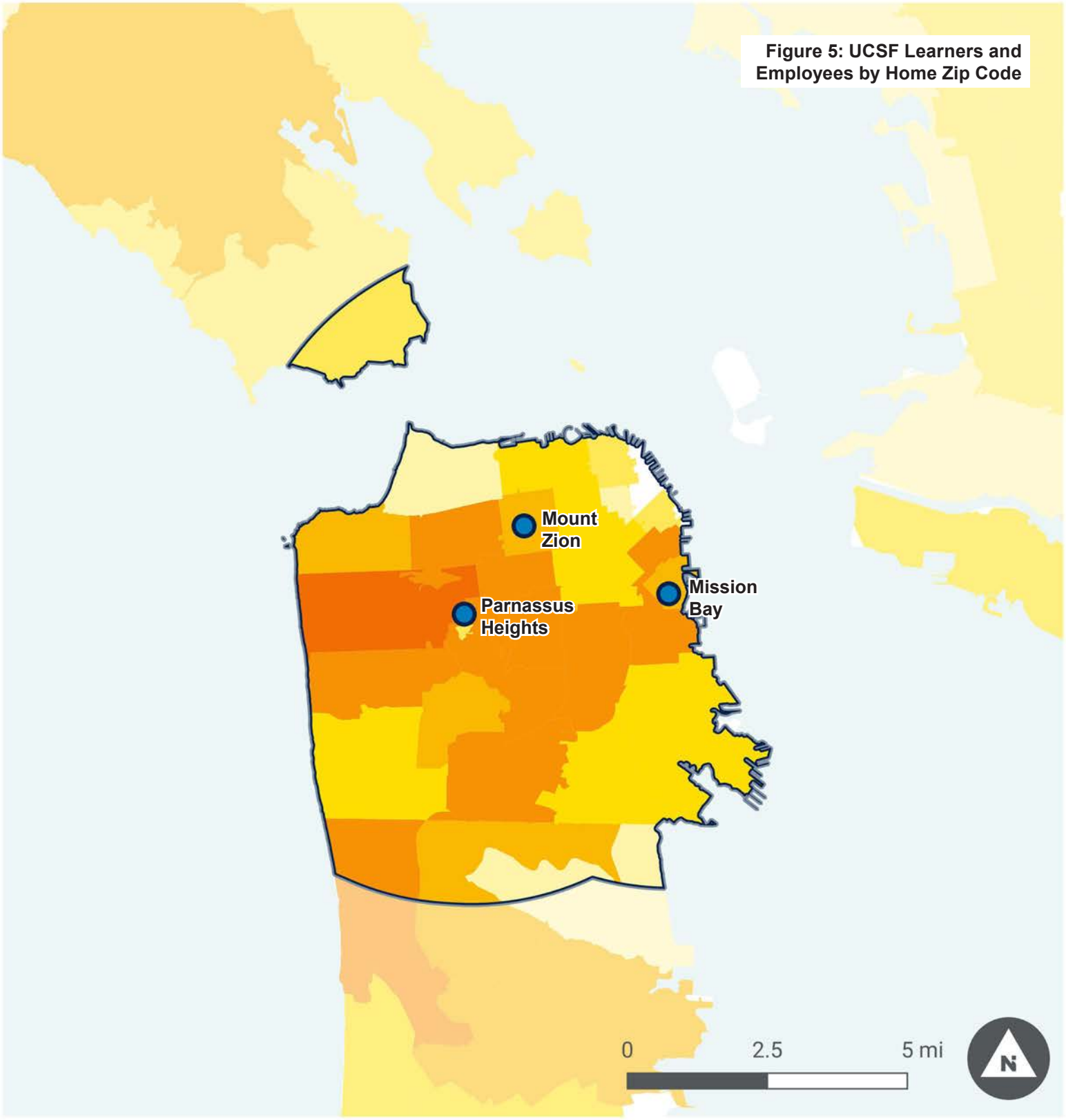


Figure 5: UCSF Learners and Employees by Home Zip Code



UCSF Student and Employee Population in ZIP Codes

- 0 - 21 people
- 21 - 61 people
- 61 - 138 people
- 138 - 263 people
- 263 - 418 people
- 418 - 759 people
- 759 - 1999 people

Main UCSF Campuses
Area within a bikeable distance (5 mi)

bikeable distance of regional transit, such as BART, Caltrain, and Ferry, further adding to the potential for biking or micromobility to provide first and last mile connections to transit.

When rates of biking and micromobility for commuting are broken down at the campus and UCSF category level, they show that learners and trainees ride at higher than average rates whereas other categories are far more likely to drive alone (see Figure 6 and Figure 7). Faculty, nurses, and nurse practitioners have the highest rates of driving alone. Survey results and focus group discussions identified that price sensitivity has an influence on commute behavior, especially for those with lower incomes.

Figure 6: 2021 Drive Alone Commute Rate by Personnel Category Excluding Remote Work

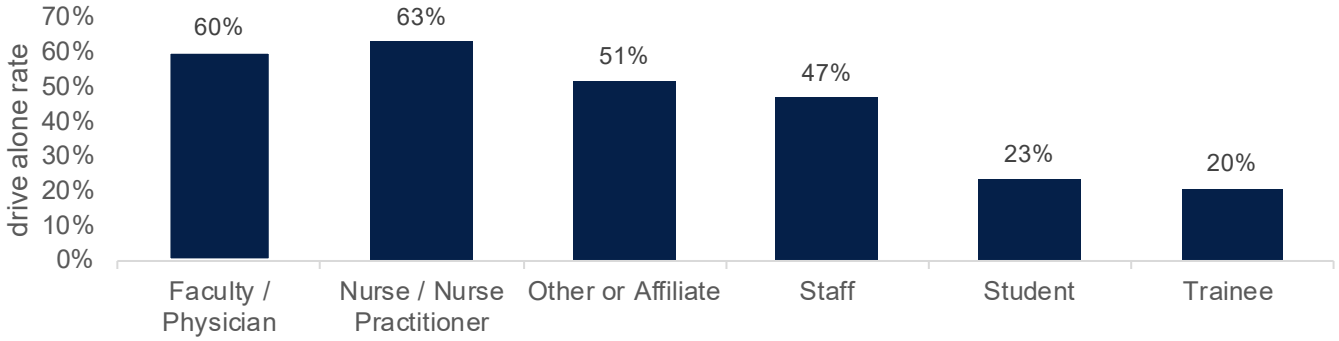
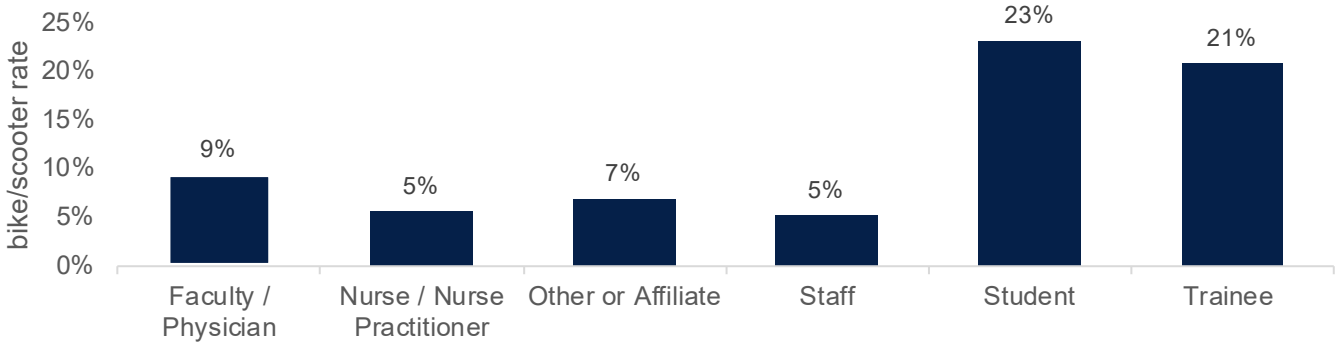


Figure 7: 2021 Bike/Scooter Commute Rate by Personnel Category Excluding Remote Work



As UCSF moves into the next decade of growth, there is an opportunity to shift driving trips into more sustainable modes. Today, the groups that generally have the highest drive alone rates for their commutes also make up the majority of UCSF's total population, magnifying the importance of encouraging mode shift among these groups. Commonly cited barriers to riding are shown in Figure 8. For groups with high drive-alone rates, providing safer routes and secure parking were strongly identified as the best opportunities to increase biking and micromobility (see Figure 9).

Figure 8: Barriers to Riding to UCSF by Category Reported in a UCSF Stakeholder Survey

	Concern about Theft	Need to Change Clothes	Not Practical for Me	Feel Unsafe Riding at Night	Don't Own a Bike/ Scooter	Not Physically Able to Ride	Too Hilly	Not Enough Secure Parking	No Safe Route	Too far
Groups with High (>50%) Rates of Drive Alone Commutes (n=147)	36%	27%	3%	20%	12%	1%	20%	29%	15%	20%
Groups with Average (30%-50%) Rates of Drive Alone Commutes (n=257)	35%	25%	7%	19%	21%	3%	23%	22%	26%	28%
Groups with Low (<30%) Rates of Drive Alone Commutes (n=127)	38%	15%	2%	26%	10%	1%	23%	28%	20%	10%

Figure 9: Opportunities for Better Biking/Micromobility at UCSF by Category Reported in a UCSF Stakeholder Survey

	Showers	Signs on Campus	Lockers	Group Rides	Access to Tools	E-Bike Outlets	Secure Parking	Emergency Ride Home	Covered Parking	Safer Routes
Groups with High (>50%) Rates of Drive Alone Commutes (n=147)	22%	0%	11%	3%	7%	14%	50%	15%	26%	52%
Groups with Average (30%-50%) Rates of Drive Alone Commutes (n=257)	20%	1%	12%	4%	12%	10%	46%	18%	22%	45%
Groups with Low (<30%) Rates of Drive Alone Commutes (n=127)	20%	2%	14%	7%	21%	9%	57%	18%	24%	54%

Getting to and from Campus

Safe and connected routes from home to campus are essential to growing the share of people who bike or use micromobility to get to UCSF. The City of San Francisco has invested significantly in their on-street bike network in recent years. The City has over 70 miles of shared use paths, 13 miles of protected bicycle lanes, and 125 miles of conventional painted bike lanes. In addition, the City piloted 47 miles of “slow streets” during the COVID-19 pandemic to encourage safer, slower vehicular traffic on residential streets, many of which are proposed to become part of the permanent bike network in coming years.

These infrastructure investments reflect a growing commitment to support biking and micromobility (see Figure 10).

Nevertheless, traffic safety is still a major concern for UCSF learners, staff, and faculty. Of over 850 UCSF survey respondents, 51% of people identified “safer routes and bike lanes” as a key opportunity to improve biking and micromobility to campus. This concern aligns with national research that shows that most people are uncomfortable interacting with high volumes and high-speed vehicles while they are biking. As a result, even though studies show that around 60% of people are interested in biking for transportation, around half will not consider biking unless they can ride in separated or protected bike lanes or shared use paths for the majority of their trip. Given this, growing the share of people who ride to UCSF is,

Figure 10: Existing San Francisco Bikeways

High Comfort Bikeway

- Separated Bike Lane (Class IV)
- Shared Use Path (Class I)
- Slow Streets

Main UCSF Campus Site

Other Bikeway

- Bicycle Lane or Buffered Bicycle Lane
- Bicycle Route or Bicycle Boulevard

in part, dependent on the quality of San Francisco's citywide bikeway network.

The quality of the City's on-street bicycle network varies by neighborhood, creating inconsistent access for people biking to the UCSF campuses. The bike network on or around each campus site also varies. Mission Bay is served by a few separated bike lanes and shared use paths south of Market Street. Meanwhile, Mount Zion is surrounded mostly by high-volume, high-speed streets that lack high-comfort bicycle infrastructure and numerous streets surrounding the campus that are on the City's High Injury Network, including Post Street, Divisadero Street, and Scott Street.[2] Several shared use paths and bike lanes skirt around the edges of Parnassus Heights, however, direct high-comfort connections to Parnassus Heights are limited and further complicated by the campus' steep topography.

The lack of high-quality bicycle infrastructure around Mt. Zion and Parnassus Heights correlates into higher rates of crashes involving people walking and biking on City streets. Nearly 90% of serious crashes that occurred around the Parnassus Heights Campus between 2017 and 2021 involved someone walking or biking.

Many focus group participants were eager to discuss the relationship between biking and micromobility at UCSF and biking around San Francisco generally. Focus group participants emphasized that recently implemented shared-use paths, separated bike lanes, and slow streets have made their bike commutes to campus feel safer and more comfortable, and expressed optimism for a permanent Slow Streets program. Focus group participants also confirmed what over 25% of survey respondents shared: that a lack of safe routes to and from campus prevents them from riding a bike. Several focus group participants shared their personal experiences with crashes while biking around San Francisco, including within the UCSF campus sites. For at least one participant, a crash resulted in them deciding to stop making commutes by bike, at least for now.

Key Connections

Through focus group conversations and online feedback, several streets around each campus site were commonly identified as key connections for their ride to campus including:

Mission Bay

Minnesota Street

17th Street

Mariposa Street

4th Street

Mount Zion

Post Street

Sutter Street

Webster Street

Steiner Street

Masonic Street

Parnassus Heights

Irving Street

Parnassus Avenue

5th Avenue

2 The City and County of San Francisco High Injury Network identifies those streets within San Francisco that make up a disproportionately high share of the City's fatal and serious injury traffic crashes. Street blocks within the High Injury Network comprise just under 13% of the linear mileage of streets in San Francisco, but account for 75% of all severe injury and fatal crashes.

Supporting the Decision to Ride

UCSF's transportation policies, practices, and programs factor strongly into individual and institutional transportation decisions. A range of departments at UCSF currently intersect with biking and micromobility in some way, including Campus Planning, which oversee new building projects, the Office of Sustainability, and Campus Life Services. As the administrator for all campus transportation resources and services including the UCSF Shuttle, existing bike/micromobility parking and amenities, bike permits, employee emergency ride home program, monthly and daily vehicle parking permits, and other transportation demand management programs and educational resources, Campus Life Services plays a particularly strong and community-facing role in biking and micromobility initiatives at UCSF.

Though these departments and many others have helped to build campus environments that support biking and micromobility, there are existing gaps in resources and programs that could be limiting the share of people who use sustainable modes for their commute, including biking and micromobility. In particular, other recent initiatives, including the Long Range Development Plan and the Comprehensive Parnassus Heights Plan both identify a need for stronger and more comprehensive transportation demand management practices that emphasize sustainable transportation modes.

With a few exceptions, UCSF does not generally provide any financial benefits to its learners, staff, or faculty currently to incentivize trips via one mode or another. Leveraging federal policy, UCSF commuters may direct a portion of their paycheck to pay for specified transportation costs with pre-tax dollars. Currently, these federal pre-tax programs cover vehicle parking and transit costs only and cannot be used for costs associated with personal bikes or bikeshare membership. Legislation proposed as part of the Build Back Better Act will likely expand pre-tax benefits to include bike commuting expenses such as bike purchases, bikeshare/scootershare memberships, and routine maintenance.[3]

With sustainable transportation so prominently centered in the University's low-impact growth strategy, a more active approach to encouraging people to use transit, walking, biking, and other sustainable forms of transportation would crystallize the University's commitment to reduced vehicle emissions and minimize neighborhood traffic impacts. In the context of San Francisco, where both shared micromobility and transit are relatively expensive on a per-mile basis, resources and programs that provide a financial incentive to use sustainable modes would be especially impactful for promoting these modes for people who live further away from campus.

Supporting programming was also identified as a need by survey participants and in focus group conversations. People in the UCSF community revealed a strong interest in bicycle education/information, on-campus bike repair or support for breakdowns, and more options for showering/storing clothes after commuting. Specific education and information were frequently requested including:

- Basic mechanical skills to perform repairs
- Theft prevention tips (e.g., the best locks, what to leave on your bike versus taking with you, how to park properly, etc.)
- How to find a comfortable biking route to and between campus sites
- Biking norms in San Francisco, such as how to

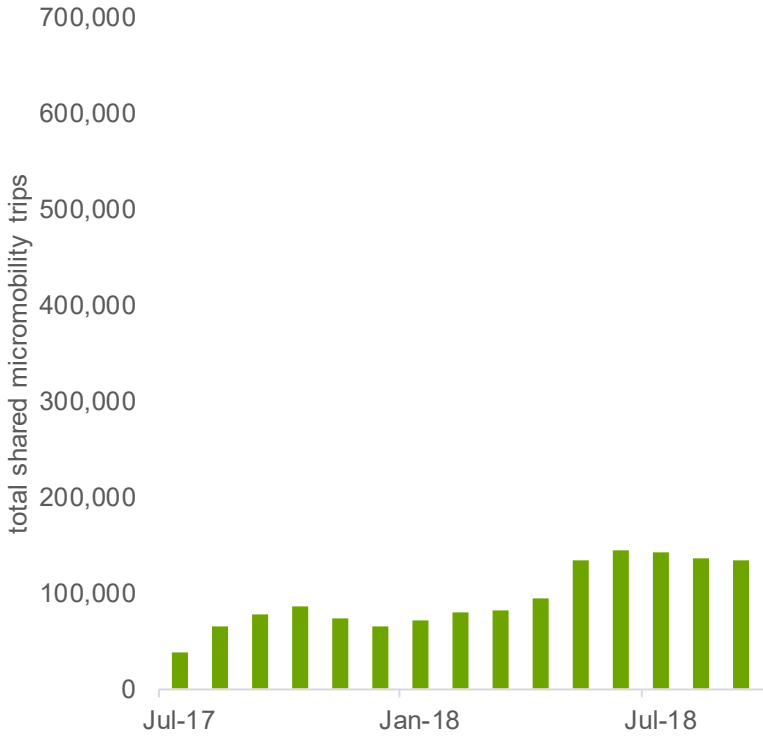
3 North American Bikeshare and Scootershare Association, State of Affairs: Current US Federal Policy Impacting Shared Micromobility. https://nabsa.net/2022/01/21/iijaandbbb/

navigate around Muni tracks and general rules of the road

- Tips for riding at night and in the rain
- Where to find bike parking, showers, and lockers on campus
- Space for knowledge sharing among UCSF commuters/community

Keeping Up with Emerging Trends

Transportation options and preferences are constantly evolving. Since 2013, the City of San Francisco has been working with private partners to grow its micromobility system, including its bikeshare system and scootershare systems. What started out as a fully docked system with fixed stations for bike access and drop off has evolved to become more flexible. Since 2018, the system has operated as a hybrid docked/dockless system, with users given the option to pay a premium to finish e-bike rides anywhere instead of at a fixed dock location. In addition, more micromobility modes – such as e-bikes, e-scooters, and mopeds – have been introduced into the system and can be parked by locking to any existing bike parking infrastructure.



New, electrified modes have tended to be more popular than regular pedal bikes. In 2021, trips made by classic bikeshare comprised only 13% of all shared micromobility trips. Scootershare use has grown dramatically since they were first introduced in late 2018 and now account for nearly half of all micromobility use in San Francisco. E-mopeds were introduced into the system in late 2020 and have seen a rapid growth in ridership.

People take thousands of bikeshare and e-scooter trips to and from UCSF each year. Today, there are four Bay Wheels stations on the Mission Bay campus, one station on the Mount Zion campus, and none directly on the Parnassus Heights campus, though one is relatively nearby at Lincoln Way/Arguello Boulevard. In partnership with the City and County of San Francisco, Lyft continues to expand their system and so far in 2022, two new stations were added to Mission Bay.

There is a strong link between transit and shared micromobility. Across the Bay Wheels system, 92% of riders have used shared micromobility to get to or from transit.[4] This trend is seen within UCSF-specific trips, as docked bikeshare trips frequently start at locations that are co-located with a transit station. Patterns observed from an analysis of dockless bikeshare trips across campuses revealed that even where no docked stations are provided, people leverage the flexibility of dockless technology to begin and end their trips close to their destination.

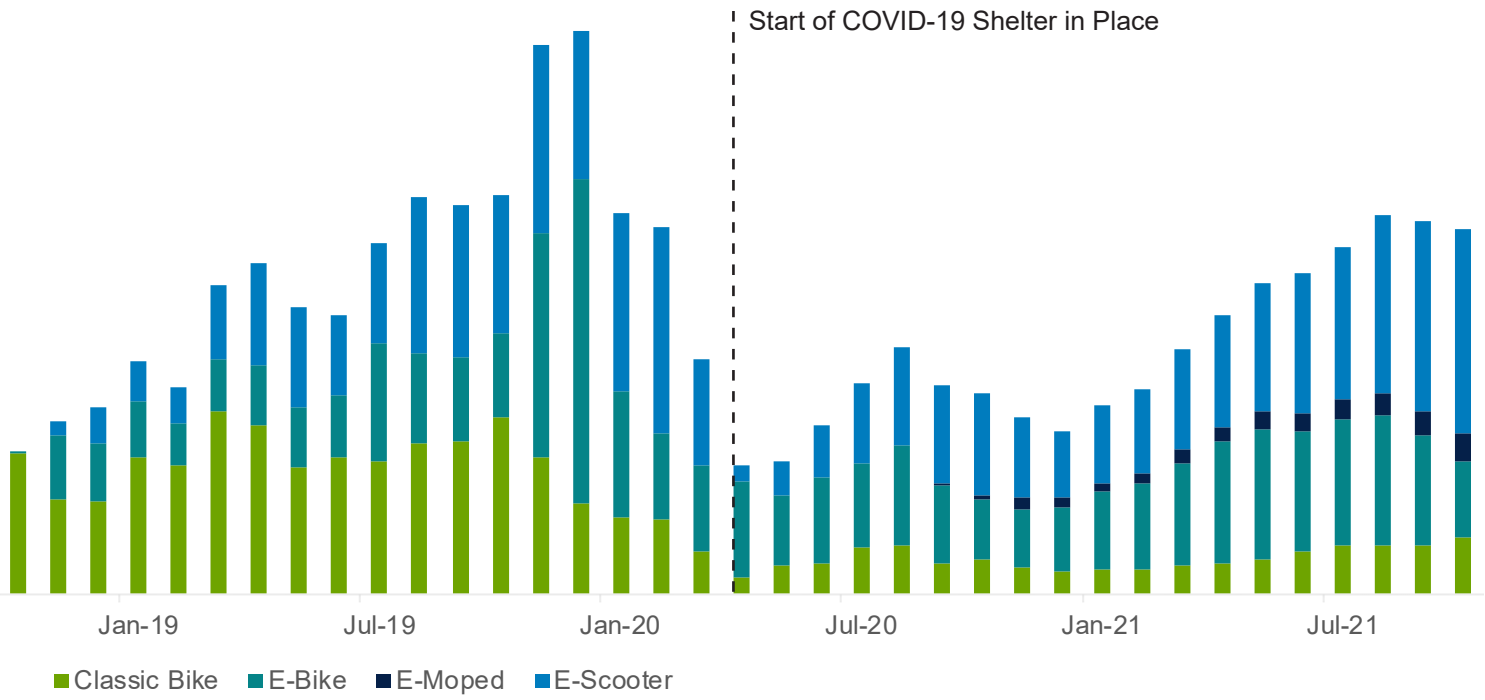
Trends in personal bike ownership are also changing. In 2021, personal e-bikes sales in the U.S. grew by an estimated 47% over 2020 (an increase of 240% from 2019).[5] Similarly, cargo and e-cargo bike demand has begun to grow in recent years and is expected to grow by over 11% annually between 2021 and 2031.[6] During on-campus observations, both e-bikes and cargo bikes

4 Lyft, Supplement to the 2022 Lyft Multimodal Report. https://drive.google.com/file/d/1_7l0vb2MUJETh3yGl1VtojVNgRq7E979/view

5 NPD, The Cycling Market Pedals Ahead in 2021. https://www.npd.com/news/blog/2021/the-cycling-market-pedals-ahead-in-2021/

6 Future Market Insights, Cargo Bike Market Snapshot. https://www.futuremarketinsights.com/reports/cargo-bike-market

Figure 11: Micromobility Use in San Francisco by Month (July 2017-November 2021)



were seen across UCSF, with a particularly high concentration of cargo and e-bikes at Parnassus Heights.

As trends in shared and personal micromobility continue to change, the environment at UCSF will need to adapt to ensure a wide range of bikes and micromobility devices can be secured to public racks around campus. For both dockless bikeshare and scootershare trips, people are required to lock their device to a bike rack or other fixed object at the end of their trip. However, conversations with the project's Coordination Committee and others suggest that these devices have impacted the public realm and are often left or secured in places that impede access for pedestrians and people with mobility disabilities. As dockless micromobility continues to grow, sufficient and conveniently-located bike/micromobility parking will help keep UCSF's campus accessible and organized.

Needs for people who have invested in personal e-bikes and cargo bikes are quite different. Because these bikes (and many other personal bikes) are often expensive or of high value to an individual, there is more concern about theft, which can be a barrier to the effectiveness of these modes for campus transportation. In addition, cargo bikes and electric bikes are often heavier and bulkier than traditional bikes, which emphasize the need for rack types that can accommodate a wide range of bikes, especially in secure, long-term facilities. Finally, electric bikes and scooters must be frequently charged, creating new needs for charging infrastructure within on-campus parking facilities.

Stakeholder Insight

Across all survey respondents, access to e-bike charging was most strongly identified as a key opportunity by groups with the highest drive-alone commute rates.

Finding a Place to Park

Up to now, the approach to bike/micromobility parking and end-of-trip amenities at UCSF has generally been reactive or ad hoc. To a degree, this approach has worked and today there are nearly 2,000 bike/micromobility parking spaces across Mission Bay, Mount Zion, and Parnassus Heights. However, this approach has also resulted in quality, consistency, and supply issues. Ten different rack styles are found at UCSF today, most of which do not meet best practices for security and usability. In addition, the supply of bike/micromobility parking across campus sites is inconsistent, with many more spaces per person provided at Mission Bay than at Mount Zion or Parnassus Heights. Finally, the UCSF community frequently cites concerns about bike/scooter theft and secure bike parking as a top issue. Even with secure enclosures, bike thefts still occur on campus and the perception that these facilities are not secure enough has led many to seek other arrangements for storing their bike at UCSF, including bringing bikes into their workspaces.

Best Practice

In general bike/micromobility parking styles should meet the following four principles:

1. The style should be recognizable as bike/micromobility parking and intuitive to use correctly without instructions.
2. The style should accommodate a wide range of bikes and devices with different heights, lengths, widths, and weights.
3. The style should support a bike upright when locked and allow a user to lock the frame and at least one wheel with a U-lock.
4. The style should be designed and constructed with appropriate materials to prevent tampering and deterioration.

Types of Bike/ Micromobility Parking on Campus

Based on an inventory of the style and quantity of all bike/micromobility parking provided across UCSF, an estimated 46% meets bicycle parking best practices, 45% meet some best practices, and the remaining 9% are generally not recommended.

UCSF currently provides secure bike parking at over 20 unique locations across campus sites either within bike enclosures in parking garages, a small number of bike lockers, and in indoor bike rooms. [7] Except for bike lockers, which are first-come, first-serve, all secure bike parking requires a person to have pre-authorized badge access to unlock the door (which is available for free and can be obtained by UCSF badge holders by request online or at Transportation offices). Indoor bike rooms have an additional level of security, as people must first register their bike to receive badge access and then coordinate with building facilities (such as the attendant at the front desk of a building) to gain access to each individual bike room. The small supply of existing bike lockers on campus have introduced maintenance, vandalism, and low-turnover issues.

The majority of secure, badge-restricted parking at UCSF is provided via space-saving rack types (such as vertical, wall-hanging racks or double decker racks), which provide an opportunity for greater supply but do not support a wide range of bike types and can lead to misuse and dramatically reduce the functional supply of an enclosure or bike room.

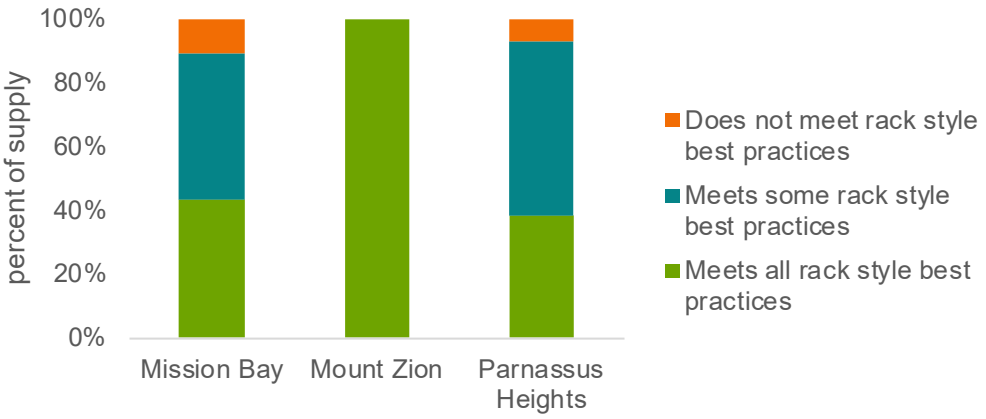
7 Beyond the indoor bike rooms noted on maps and in the text within this report, additional rooms may be operational within buildings as small rooms and spaces have been converted into indoor bike rooms.

Figure 12: Existing Bike Rack Styles at UCSF

Meets all rack style best practices

Meets some rack style best practices

Does not meet rack style best practices



Supply of Bike/ Micromobility Parking

As the newest campus to be built, over 75% of all bike/micromobility parking found at UCSF is at Mission Bay, even though only 43% of the UCSF population reports to that campus. When compared to the rate of bike and scooter commuting at each campus site, the quantity of bike/micromobility parking at Mission Bay and Mount Zion are generally aligned with the rate of bike and scooter commuting. At Parnassus Heights, however, the existing supply of bike/micromobility parking can only accommodate around two percent of the Parnassus Heights population, even though over five percent ride to Parnassus Heights.[8] Publicly-available bike parking is especially limited at Parnassus Heights and along much of Parnassus Avenue in the vicinity of the hospital, signage prohibits locking bikes to railings and other fixed objects.

Each campus also provides a different mix of secure, badge-restricted parking and publicly-accessible parking. Given that the vast majority of people coming to and from UCSF each day are UCSF badge holders, secure, long-term parking is essential for many in the UCSF community. Before the COVID-19 pandemic began, over 1,000 UCSF badge holders used available enclosures within parking garages.[9]

In addition to quantity, the location, style, and perceptions about security affect how well the existing supply actually meets demand. Concern about theft was in particular one of the most common issues discussed throughout this process. Between 2018 and 2021, a total of 338 bike-related thefts were reported to UCSF Police, and in any given year the majority of thefts – between 71%

Figure 13: Comparison of Bike/Scooter Commute Rates and Bike/Micromobility Parking Supply

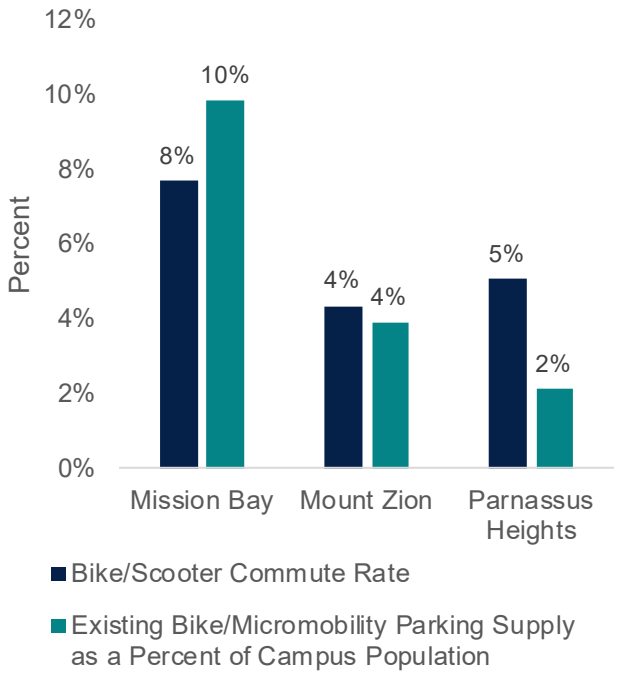
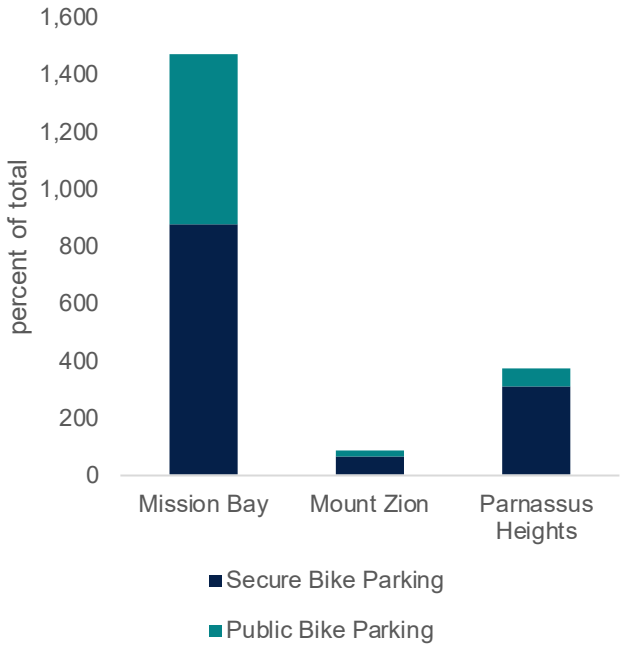


Figure 14: Mix of Badge-Secured and Publicly-Accessible Bike/Micromobility Parking by Campus



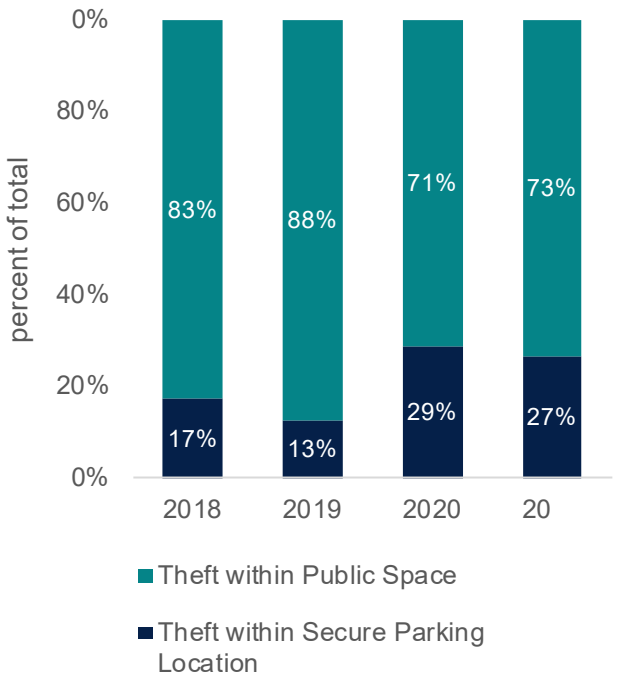
8 Although 2021 commute rates are reported elsewhere in this document, 2019 commute rates were used for this analysis to gain a better understanding of supply and demand outside of the height of the COVID-19 pandemic when rates of remote work have been highly variable.

9 The unique number of users for secure parking locations was only available for enclosures within garages. As a result, the number of people who use secure locations is likely higher to account for additional secure locations, including all of the existing indoor bike rooms at Mission Bay.

and 88% – occur at publicly-accessible (non-secure) locations.

Even though only 12% to 29% of bike thefts were reported at access-controlled locations, the perception that existing bike enclosures are not secure has deterred many people from using them. During focus group conversations, indoor bike rooms were generally described as more secure and preferable to enclosures within garages. People in the UCSF community shared that inadequate lighting, bike rack styles that do not accommodate cargo bikes and e-bikes, instances of theft, and maintenance of enclosures were all issues that need to be addressed with secure parking within garages. UCSF has taken recent steps to address theft at enclosures, including at Millberry Union where a new structural steel enclosure, doors, and locking mechanisms were installed in 2022.

Figure 15: Reported Bike Thefts by Location Type



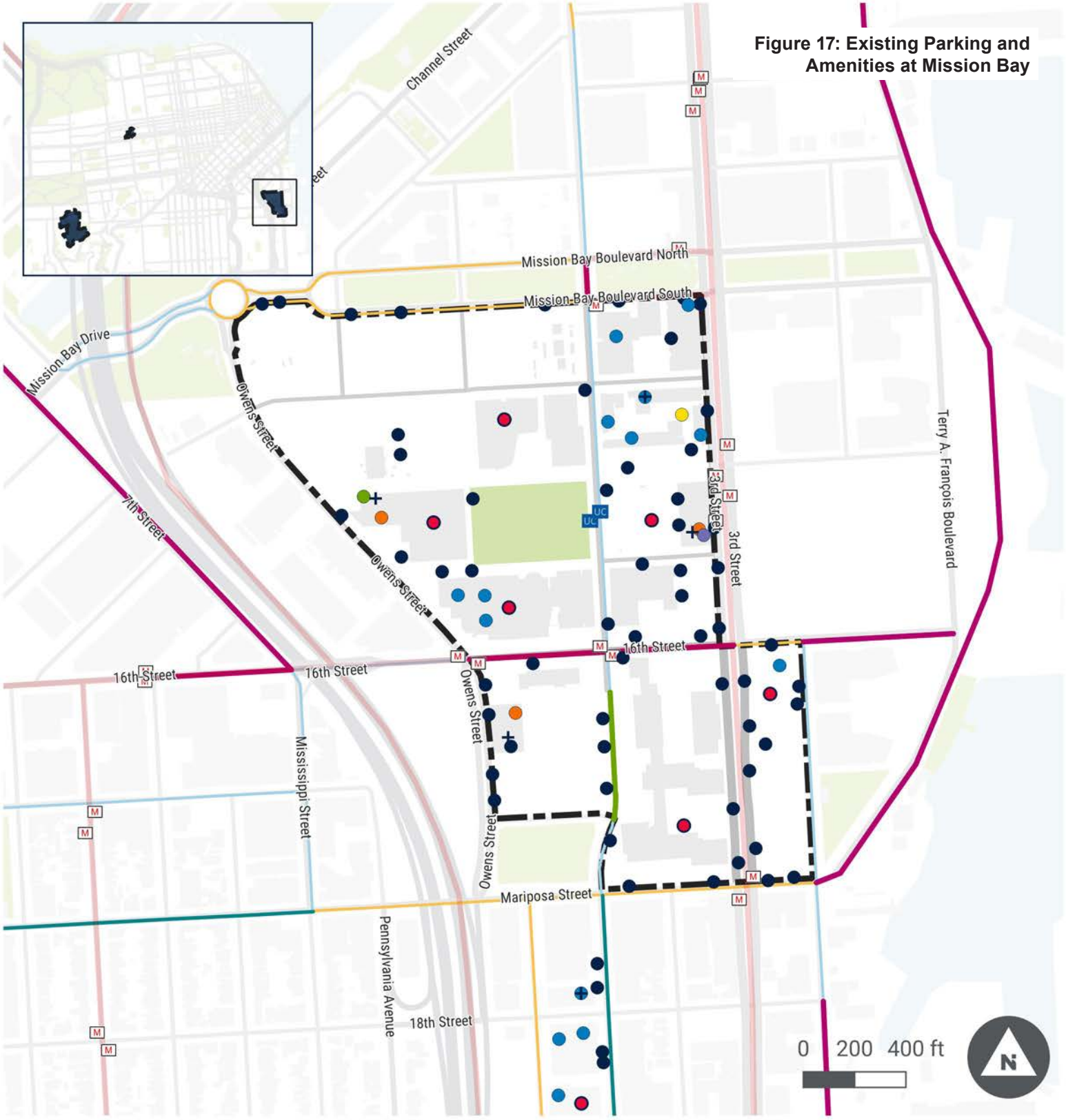
Finding and Using Amenities

In addition to bike parking, several other types of amenities are provided across campuses including fix-it stands that provide tools for basic repairs and lock docks that provide a place for people to store their locks in between use. Showers are available at Mission Bay and Parnassus Heights at the Fitness and Recreation Centers through the UCSF Fitness and Recreation Bike to Work Shower Pass. Only a few additional buildings have showers and personal lockers; most of these are located at Mission Bay within newer buildings.Although information about many of these amenities is provided on the Campus Life Services' website, most feedback from the UCSF community revealed that word of mouth is the primary way people learn about where to park, where to shower, and how to get access to building bike rooms or garage enclosures. During focus group conversations, many people shared that they were not aware of some of UCSF's existing resources.

In addition, information about bike and micromobility amenities is limited on physical wayfinding signage. Because much of the existing secure bike parking supply is provided within structured vehicle parking garages, wayfinding to help direct people to nearby secure parking and to help them navigate safely through garage entrances is critical. In some locations, signage does not clearly explain whether someone biking should enter as a motor vehicle or as a pedestrian, and the rules appear to be different from location to location.

Figure 16: Sample of Existing Amenities and Signage

Figure 17: Existing Parking and Amenities at Mission Bay



Access-Restricted Bike Parking

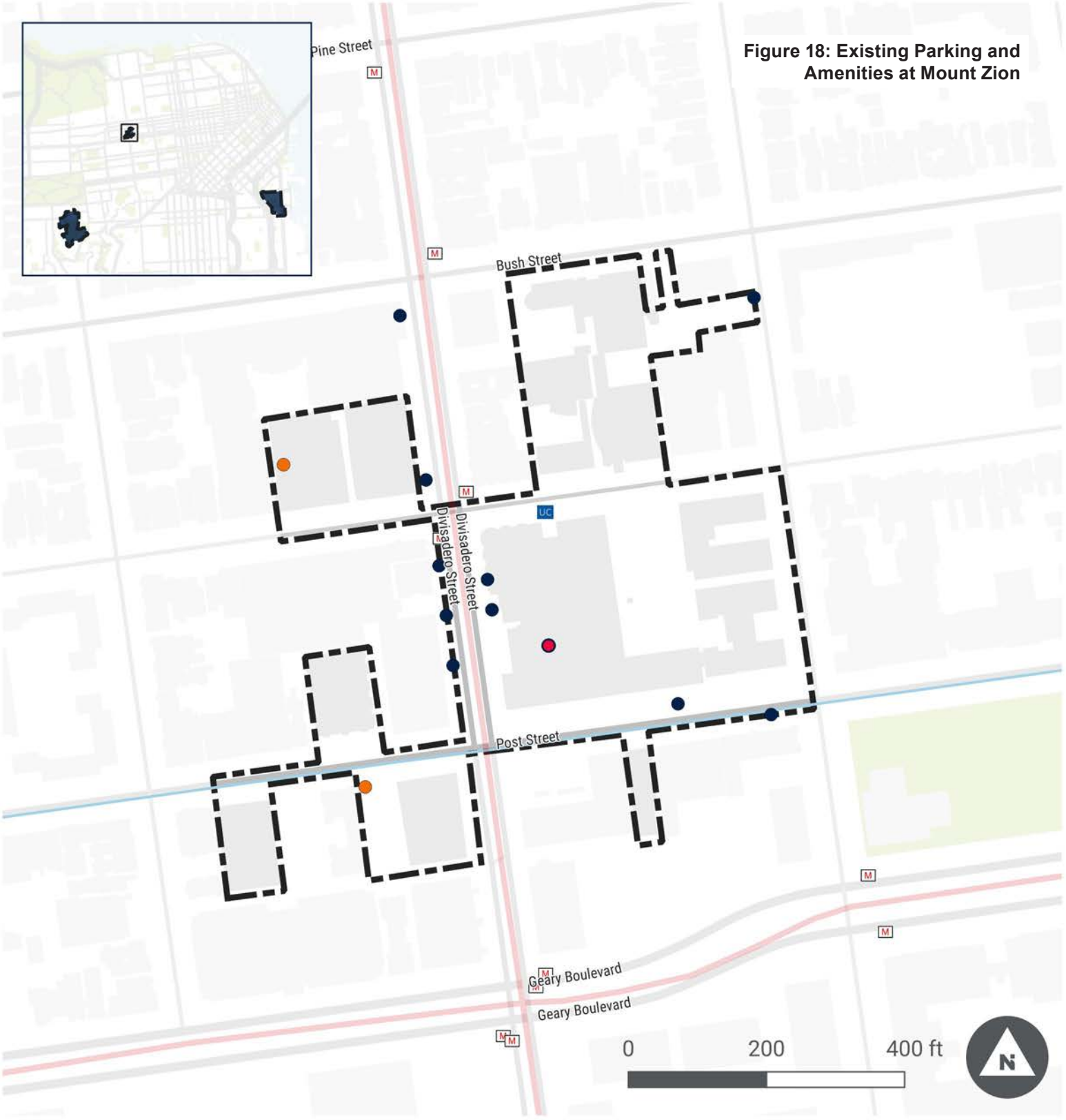
- Building Bike Room
- Garage Bike Enclosure
- Bike Locker
- Access-Restricted Outdoor Bike Rack

Publicly Accessible Bike Parking

- Outdoor Bike Rack
- Public Rack Within Garage

- Campus Shower Location
- Fix-It Station
- Bicycle Lane or Buffered Bicycle Lane
- Bicycle Route or Bicycle Boulevard
- Separated Bike Lane
- Shared Use Path
- Slow Streets
- Muni Stops
- UCSF Shuttle Stops
- Mission Bay Campus Boundary

Figure 18: Existing Parking and Amenities at Mount Zion



Access-Restricted Bike Parking
- Garage Bike Enclosure

Publicly Accessible Bike Parking
- Outdoor Bike Rack

- Campus Shower Location
- Bicycle Lane or Buffered Bicycle Lane
- Muni Stops
- UCSF Shuttle Stops
- Mission Bay Campus Boundary

Figure 19: Existing Parking and Amenities at Parnassus Heights

Access-Restricted Bike Parking
- Garage Bike Enclosure

Publicly Accessible Bike Parking
- Outdoor Bike Rack

- Campus Shower Location
- Bicycle Lane or Buffered Bicycle Lane
- Bicycle Route or Bicycle Boulevard
- Slow Streets
- Muni Stops
- UCSF Shuttle Stops
- Mission Bay Campus Boundary

Vision and Goals

Since opening its doors in 1864, the way people get to and from UCSF has evolved. For biking and micromobility, UCSF's current resources have grown organically and with significant success: In 2021, eight percent of commuter trips made to UCSF were by bike or scooter.

Now, as the campus moves into another decade of significant growth, it does so within new and evolving contexts. Combating climate change, adverse health outcomes, and quality of life impacts that result from car dependence are more important than at any other moment in the University's history. In cities across the world, public and private partners

are working together to make streets safer for vulnerable users on foot and on bike, who are disproportionately injured and killed in traffic crashes. Finally, paradigm shifts in the way UCSF and the rest of the world work were accelerated over the course of the COVID-19 pandemic, bringing a rapid increase in remote work, some of which is likely to persist long-term.

Though not all people within the UCSF community are able to use biking or micromobility for their trips, UCSF is committed to making these modes possible for as wide a range of people as possible. The UCSF Bicycle and Micromobility Plan is a blueprint to help the University strengthen and grow its bicycle and micromobility programming and increase the share of people using these modes. Using feedback from the Coordination Committee, the UCSF community, and analysis of existing data and planned growth; a vision, goals, and set of annual performance metrics were defined as a foundation for the plan's recommendations.

Vision

By 2035, UCSF will broaden the scope of its health leadership to include a world-class environment that integrates biking, micromobility, and emerging sustainable transportation options into its built environment, policies, and operations

Goal 1

Provide a safe environment for biking and micromobility within the campus and community context.

Addressing safety is the most important factor affecting the University's ability to reach a higher biking and micromobility mode share. Because the vast majority of streets are owned by the City, achieving this goal will require strong and ongoing collaboration with the City and surrounding community, while also incorporating safety measures on University-owned streets and circulation paths.

Performance Metrics

1. Reduction in the year-over-year number of bicycle and scooter crashes that result in a severe injury or fatality within campus boundaries (including City streets)

   Data Source: City and County of San Francisco Crash Database[1]

2. Reduction in the number of crashes on campus involving a person riding a bicycle/scooter and a pedestrian.

   Data Source: City and County of San Francisco Crash Database

3. Increase in the number of miles of high-comfort biking routes within a quarter mile of campus.

   Data Source: SFMTA Bike Network Map [2]

4. Increase in high-comfort connections to existing transit stations that serve UCSF.

   Data Source: SFMTA Bike Network Map

1 San Francisco Department of Public Health (SFDPH) TransBASE tool, queried for each campus location, which is updated with injury crashes quarterly: https://transbase.sfgov.org/dashboard/dashboard.php

2 SFMTA Bike Network, Class I, Class IV, or "slow street" bike facility types: https://data.sfgov.org/Transportation/MTA-bikewaynetwork/ygmz-vaxd

Goal 2

Strengthen the role of biking and micromobility as part of UCSF's Growth Strategy.

An appreciable increase in the share of people who ride bicycles and use micromobility for campus travel will allow the University to grow responsibly while minimizing negative impacts to surrounding neighborhoods and promoting environmental sustainability. In addition, by planning for more bicycle/scooter/sustainable travel instead of vehicle trips, facility costs can be dramatically reduced by decreasing the demand for structured parking and taking advantage of space efficiencies offered by bicycles, scooters, and other emerging sustainable transportation options.

Performance Metrics

5. Increase in the share of people who use bikes/scooters to travel to/from campus.

   Data Source: Transportation Commute Survey

6. Reduction in the share of people who drive alone to/from UCSF.

   Data Source: Transportation Commute Survey

7. Increase in the number of bikeshare/scootershare trips that start/end at UCSF.

   Data Source: Bikeshare/Scootershare system data, as available[3]

8. Percentage of new construction and renovations that meet all requirements of LEED for Bicycle Facilities.

   Data Source: LEED Ratings

9. Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum rank by 2035.

   Data Source: League of American Bicyclists Annual Rankings

3 Bay Wheels data for both docked and dockless trips with start and end location are provided monthly: https://www.lyft.com/bikes/bay-wheels/system-data

Goal 3

Create a reliable and inclusive experience for existing and future riders.

Addressing issues raised by existing riders will not only ensure those people continue using active modes for campus transportation, but will make it more attractive for a wider range of people to ride bicycles or scooters. In the end, bicycle and micromobility options should be viewed as reliable, convenient, and easily accessed modes for the full spectrum of people who interact with UCSF's campus sites.

Performance Metrics

10. Reduction in year-over-year bicycle and scooter thefts per total number of registered bicycles.

    Data Source: UCSF Police Bike Theft Data and Bike Registration Data

11. Increase in the number of access-controlled bicycle/scooter parking spaces per person.

    Data Source: Bicycle/Scooter Parking Inventory and UCSF Population (badge holders only)

12. Increase in the number of public bicycle/scooter parking spaces per person.

    Data Source: Bicycle/Scooter Parking Inventory and UCSF Population (including patients/visitors)

13. Increase in the share of bicycle parking supply that accommodates adaptive, cargo, electric, and other non-standard bicycles and scooters.

    Data Source: Bicycle/Scooter Parking Inventory

14. Increase in year-over-year users of access-controlled bicycle/scooter parking locations as a percentage of total campus population.

    Data Source: Bike Enclosure/Room Entry Data and UCSF Population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Action Plan

Achieving the vision and goals of the plan will require action across UCSF departments and strong collaboration with the City and County of San Francisco. The recommended actions identified below are generally organized by the goal they most strongly support. Taken together, these actions cut across a wide range of policies, practices, and physical investments to make UCSF a world-class environment for biking and micromobility. For each recommended action, a range of implementation details and tracking metrics are defined. Timelines for implementation are organized into four categories:

- Short-term (0-3 years)
- Mid-term (3-6 years)
- Long-term (by 2035)
- Ongoing

Building a Safe and Connected Network

With so many of UCSF's learners, staff, and faculty living within a roughly 30-minute ride of either Mission Bay, Mount Zion, or Parnassus Heights, a safe and connected route from home to campus is an essential prerequisite for growing the share of people who bike or use micromobility to get to UCSF. Without a route people feel comfortable riding along, most people will not consider biking or using micromobility as an option for their trip, even if they live just a short distance away. This is especially true for novice riders, people who need to travel with children or older adults, or other people who may be especially vulnerable in mixed traffic conditions.

Though the City and County of San Francisco has been building out its high-comfort bike network over time, missing connections to and between UCSF campus sites – especially at Mount Zion and Parnassus Heights – prevent UCSF from attracting people who are otherwise interested and able to ride to campus. In addition, crashes between people biking and driving on streets within UCSF campus sites have led to serious injuries and deaths that may have been prevented with more protected infrastructure.

Momentum for a safer and more connected bike network in San Francisco is strong and continually growing. Building out the citywide high-comfort bike network is a key component of San Francisco's transportation strategy. Through a wide range of initiatives – including the 2021 Vision Zero Action Plan, 2022 Golden Gate Park Access & Safety Program, and ongoing Active Communities Plan – the City and County of San Francisco is moving towards their goal of 80% of all trips taken within San Francisco made by sustainable modes by 2035, including walking, biking, transit, and micromobility.

These City initiatives arrive at an opportune moment for UCSF as both entities move towards aligned transportation and sustainability goals. The City and County of San Francisco controls many of the streets required to connect to and between the UCSF campuses and there is an opportunity for productive collaboration between UCSF, SFMTA, and other implementation partners. The actions identified below reflect this need for partnership, leadership, and accountability to make high-impact changes to safety and connectivity.

Safe and Connected Network, Action 1:

Collaborate with the City and County of San Francisco to close existing gaps in the Citywide high-comfort bikeway network.

As the City and County of San Francisco moves into an active period of planning for their next generation of safe and connected bikeway investments through the Active Communities Plan, UCSF comes to the process with a strong understanding of how the citywide network must evolve to meet the needs of tens of thousands of people who travel to UCSF each day. This planning process – which included perspectives from a diverse Coordination Committee, over 850 survey participants, and four key stakeholder focus group conversations – revealed the outsized role that San Francisco's bikeway network has on the ability

Stakeholder Insight

Of over 850 UCSF survey respondents, 50% identified "safer routes and bike lanes" as a key opportunity to improve biking and micromobility to campus.

35% shared that they travel between campus sites daily, weekly, or monthly. Over 20% indicated that their use either personal bikes, bikeshare, or scootershare to travel between campus sites.

for both UCSF and the City and County of San Francisco to realize their sustainable transportation, safety, and equity goals. With campus sites dispersed around San Francisco, a safer and more connected bikeway network will benefit community members in both UCSF and the City as a whole

To help guide partnership and collaboration between UCSF and the City and County of San Francisco, network concepts were developed for this plan that build on the existing investments that both the City and UCSF have made to streets and public spaces. This network is focused exclusively on high-comfort connections, which includes shared use paths, separated bike lanes, and slow streets. Though other types of connections – like conventional painted bike lanes or signed bike routes – are acceptable to confident and experienced riders, research shows that around half of all people have a very low tolerance for biking in unprotected bike lanes.[1]

As shown inFigure 20, major network gaps that are addressed in this network concept include 17th Street, Post Street, and Scott Street, among others. Though the specific connections identified in the network concept were intentionally selected based on UCSF community feedback, where UCSF community members live, and the ability to leverage existing City and UCSF investments, UCSF looks forward to collaborating with the City and the wider community to identify specific streets that meet the full range of needs across the city.

Fundamentally, there are three basic principles UCSF seeks to achieve with a safer and more connected bikeway network: First, the network must include connections to and through each campus site that people of all ages and abilities can confidently and comfortably navigate. Second, the network must reinforce the connection between biking, micromobility, and transit by ensuring major transit stations are in close proximity to the high-comfort network. And third, the network must make it possible for people to navigate between campus sites along a relatively direct route.

Action 1 Implementation Details

UCSF Champion: Campus Planning

Partners: Community and Government Relations, Transportation, SFMTA, San Francisco Recreation and Parks, SF Public Works, SF Port

Cost/Effort: Low; Primarily led and implemented by others

Expected Impact: High

- Connects over 10,000 UCSF learners, staff, and faculty in addition to patients and visitors to jobs, healthcare, and other services
- Supports 8% of existing UCSF commuters who currently bike or ride scooters to campus
- Provides necessary protection for encourage a wider range of people (51-56% of all people) who are interested in biking, but concerned about traffic safety
- Reduces potential conflicts between vehicles and people riding bikes/scooters

Implementation Timeline: Ongoing

Performance Metrics

- Increase in the miles of high-comfort routes within a quarter mile of campus.
- Increase in high-comfort connections to existing transit stations that serve UCSF.

1 Dill, J. McNeil, N. “Revisiting the Four Types of Cyclists: Findings from a National Survey” Transportation Research Board 95th Annual Meeting, 2016. Note that children and elderly have not been surveyed as a separate category but are understood to have a very low tolerance of roadway stress.

Figure 20: Potential Network Concept Connecting UCSF Campus Sites to Adjacent Neighborhoods and Key Transit Stations

Base Information

- Existing High-comfort Bikeway: Shared Use Path, Separated Bike Lane, or Slow Street
- Other Bikeway

Transit Connections

- BART
- CalTrain
- Ferry Building
- Salesforce Transit Center

Network Concept

- Potential New High-Comfort Bikeways to Support Inter-Campus and Transit Connectivity

Safe and Connected Network, Action 2:

Prioritize high-comfort bikeways for key streets within campus boundaries.

Though UCSF does not own the majority of streets within campus boundaries, its learners, staff, faculty, patients and visitors rely on these streets to get to and from their destinations. Using a combination of city streets and internal pathways on UCSF property, a network of high-comfort bikeways within the campus boundaries was developed. The streets and internal pathways included in the network concepts pass through a range of contexts and thus different approaches to design will be needed for different connections. Though more study and design will be required, in general this network identifies internal pedestrian-priority zones, protected bike lanes along busier streets that have higher motor vehicle speeds and volumes, and shared, low speed design for streets with low vehicle volumes or other spaces that clearly prioritize pedestrians or transit.

Cautious of introducing sign clutter, several different types of wayfinding and etiquette signage are recommended for UCSF, including signs that direct people to preferred high-comfort routes and destinations (including major bike/micromobility parking facilities) and signs and surface markings that clarify where and how people biking or using micromobility should navigate shared pedestrian pathways. In particular, the latter should make it clear that while people riding are welcome to use campus pathways where other vehicles are prohibited, these are “pedestrian-first” spaces where slow speeds and deference to people walking is expected. High-comfort bikeway examples and network details for each campus site are provided below.

Action 2 Implementation Details

UCSF Champion: Campus Planning

Partners: Community and Government Relations, Signage Governance Committee, Transportation, UCSF PD, SFMTA, SF Public Works

Cost/Effort: Medium; Primarily led and implemented by others

Expected Impact: High (similar to Action 1)

Implementation Timeline: Ongoing

Performance Metrics

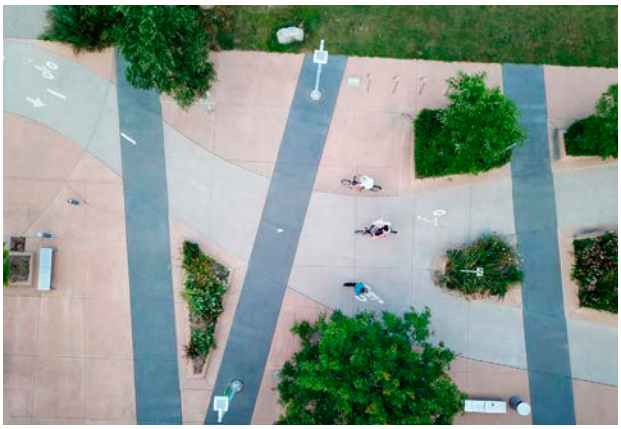
- Reduction in the year-over-year number of bicycle and scooter crashes that result in a severe injury or fatality within campus boundaries (including City streets).
- Reduction in the number of crashes on-campus involving a person riding a bicycle/scooter and a pedestrian.

Figure 21: High-comfort Bikeway Types and Look Book

Separated Bikeways

Shared, Slow spaces

Pedestrian Priority Zones



Intersection and Conflict Area Treatments

Mission Bay

In general, Mission Bay is the most well-connected campus to existing high-comfort bikeways within the City and also has the highest rate of biking of UCSF's three primary campus sites. The network concept for Mission Bay focuses on closing gaps from the north and west and establishing a strong, high-comfort spine for riders through the campus.

Given the limited space available and competing transit needs on 3rd Street, 4th Street is envisioned as the high-comfort north/south spine for Mission Bay. Though conventional painted bike lanes are currently provided on 4th Street, this network envisions upgrading these to separated or parking-protected bike lanes through the campus, which may require eliminating parking on one side of the street. Where 4th Street meets Koret Quad between Gene Friend Way and Campus Way, a confluence of UCSF activity – specifically UCSF shuttles - will make a continuous separated facility challenging to implement. As a campus focal point where UCSF shuttles, micromobility, and strong pedestrian activity are concentrated, a signature shared space that prioritizes slow vehicle movements, priority for people walking, and greater interactions between users would create an environment that is comfortable and accommodating for all. Whether curbed or curbless, this block-long space would make a continuous high-comfort bikeway possible from north to south through the campus and strengthen the presence of the campus where multiple pedestrian promenades and prominent UCSF buildings converge.

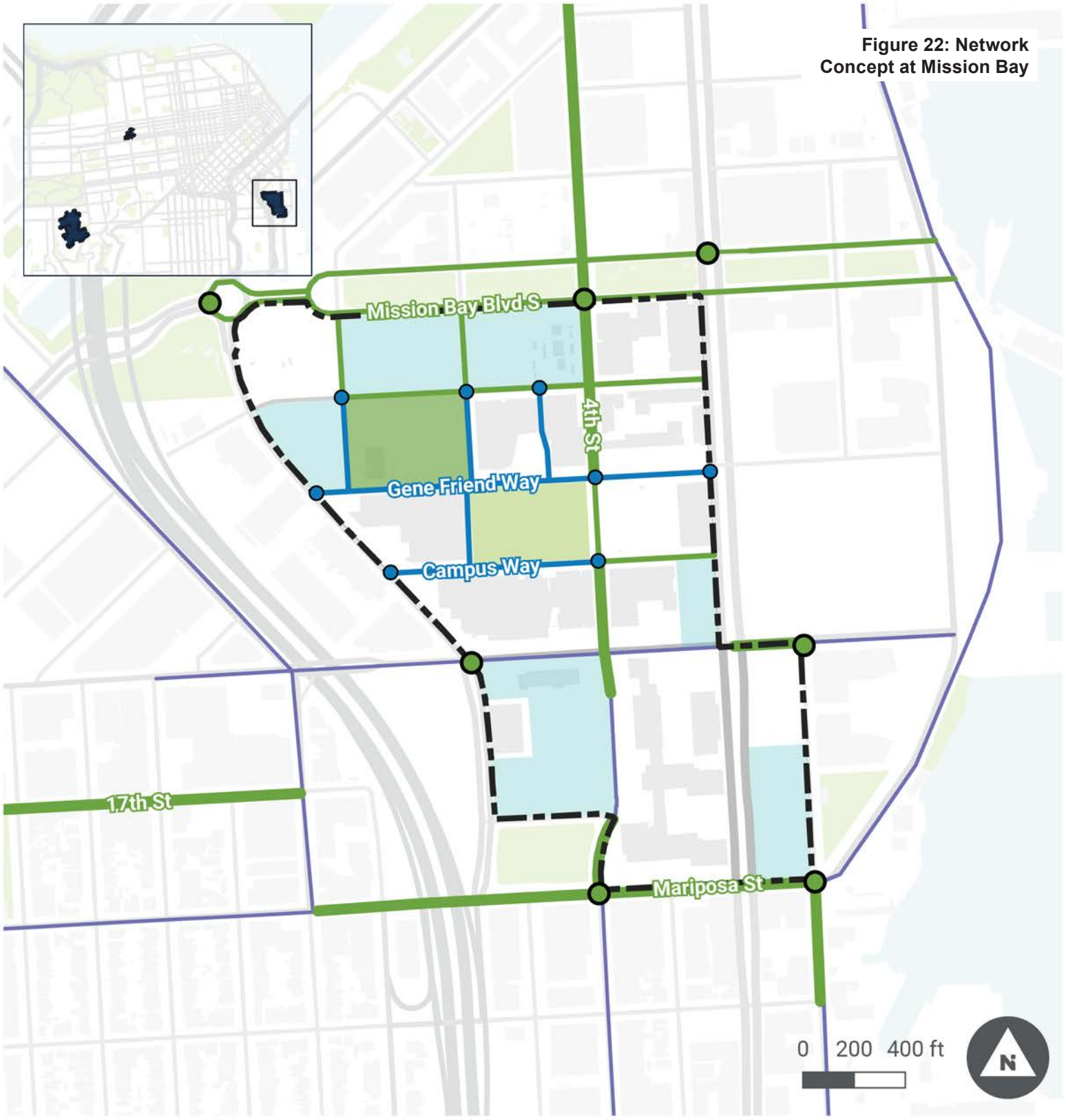
Along many internal campus pathways and smaller streets, the network concept includes stronger use of wayfinding and surface markings to help people biking or using micromobility navigate the campus and to reinforce that slow speeds and deference to people walking is expected on all shared pathways. With new construction, additional internal campus pathways should utilize surface materials, surface markings, and signs to design generous shared pedestrian pathways that can clearly and safely accommodate both people walking and biking or using micromobility.

In addition to the 4th Street spine, the network concept at Mission Bay incorporates a range of east/west connections that flow into existing high-comfort bikeways along the Blue Greenway/San Francisco Bay Trail, 7th Street, and Mariposa Street. Maintaining protection for people riding as they approach and travel through intersections should be strongly prioritized as part of future street improvements at Mission Bay, as several existing separated bikeways terminate and leave people vulnerable as they enter complicated and busy intersections. In particular, intersections along 16th Street undermine the effectiveness of the existing separated bike lane and should be retrofit to incorporate protected elements.

Priority Projects

- Work with the City of San Francisco to co-develop high comfort bikeway solutions for 4th Street and a signature pedestrian and transit priority plaza where 4th Street meets Koret Quad.
- Work with the City of San Francisco to use rapid-installation methods to address complex intersections where protected bikeways currently terminate, especially on 16th Street.
- Develop a standard suite of signage and markings for internal campus pathways to reinforce slow speeds and pedestrian priority through shared areas including Campus Way and Gene Friend Way.
- Work with the City of San Francisco to identify high-comfort bikeway solutions for Mariposa Street.
- As the northwestern portion of Mission Bay develops, incorporate traffic calming elements such as raised crossings and curb extensions into Nelson Rising Way and Mission Bay Boulevard South.

Figure 22: Network Concept at Mission Bay



Base Information

- Existing High-comfort Bikeway
- Mission Bay Campus Boundary

Future Development

- Future Buildings
- Future Open Space

Proposed Network Concept

- Separated Bikeways
- Shared, Slow Spaces
- Pedestrian Priority Zones
- Directional Signage
- Pedestrian Priority Zone Signage

Mount Zion

Without any existing high-comfort bikeways on the Mount Zion campus, the network concept focuses on establishing new connections that build into the citywide network. New high-comfort bikeways at Mount Zion will not only connect the campus site to nearby neighborhoods but will also help address several streets with a history of crashes. Within the boundaries of the Mount Zion campus site, Divisadero Street, Post Street, and Scott Street are on the City's High Injury Network.

The Mount Zion campus comprises just a few blocks with a mix of UCSF and non-university buildings. While the gridded street network at Mount Zion offers several options for establishing key north/south and east/west connections for people biking and using micromobility, there are many competing needs for limited street space within the area. In particular, high-frequency transit routes run along Geary Boulevard and Divisadero Street, which introduce more complexity and potential conflicts into bikeway design. Frequent bus service and UCSF Shuttles operate on Sutter Street.

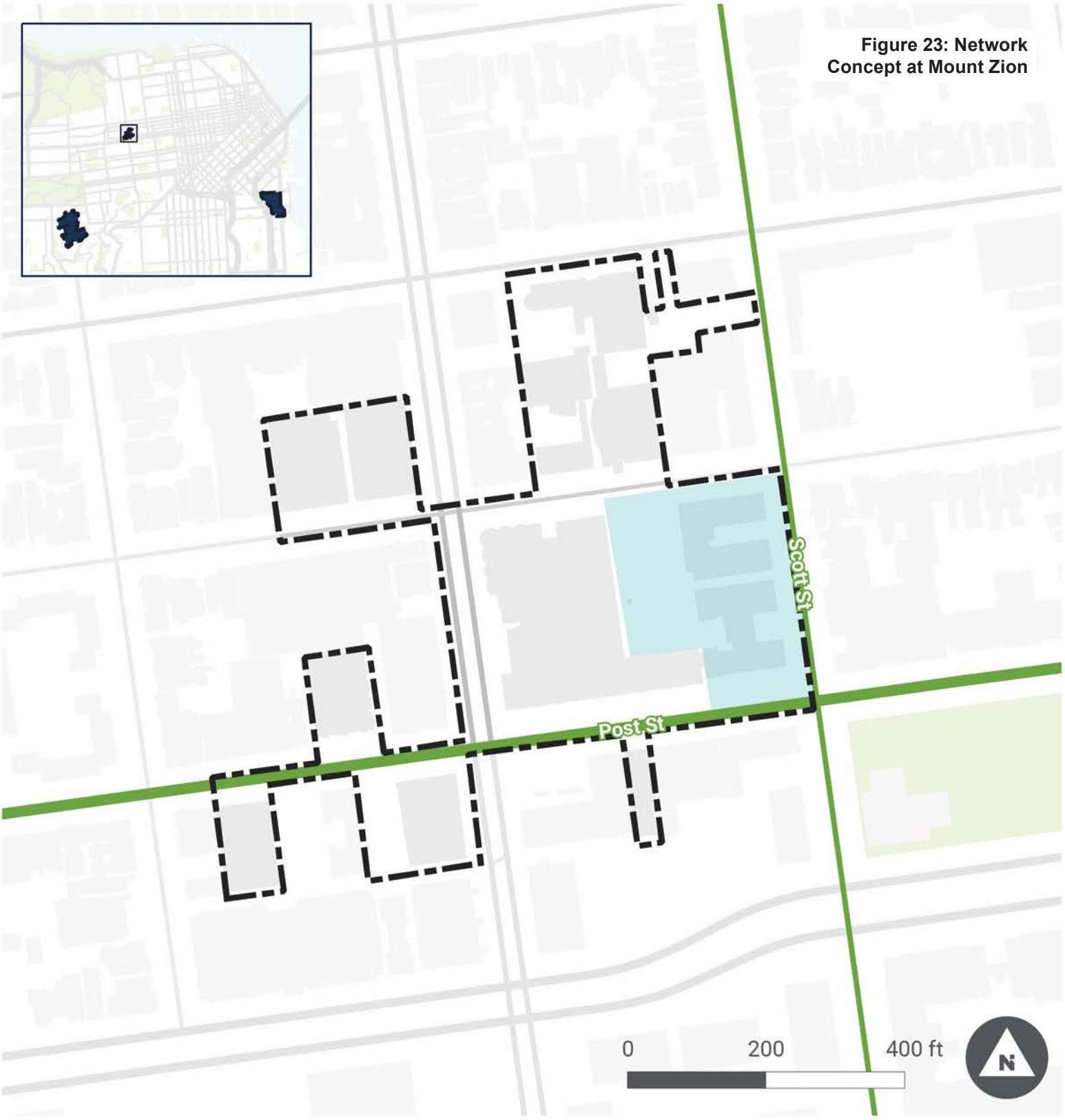
In lieu of compromising streets that currently prioritize transit, the network concept for Mount Zion envisions upgrading the existing conventional painted bike lanes on Post Street. This will extend the City's high-comfort bike network and connect several Bay Wheels bikeshare stations. In the north/south direction, a shared, slow street design along Scott Street is envisioned as the on-campus bikeway. The recently completed Western Addition Community Based Transportation Plan identified Webster Street as a key bikeway and although it is several blocks east of the Mount Zion campus, it could also become a high-comfort connection for people traveling to Mount Zion in lieu of Scott Street.

Upgrading Scott and Post Streets to high-comfort bikeways will require some significant changes. On Scott Street, narrowing the vehicle travel lanes, implementing parallel or back-in instead of head-in angle parking, and incorporating strong traffic calming elements such as speed humps, raised crosswalks, and chicanes would help control vehicle speeds and emphasize priority for people on bikes and using micromobility. A high-comfort bikeway design on Post Street will be more complicated. At roughly 50 feet between existing curbs, there is likely not enough space on Post Street to comfortably accommodate two vehicle travel lanes, two parking lanes, and separated bike lanes on each side of the street. In collaboration with the City, several design solutions for Post Street could be pursued including converting one of the parking lanes or converting to one-way operation (as is the case east of Gough Street) to provide more space for separated bike facilities.

Priority Projects

- Support the development of a high-comfort bikeway on Post Street.
- Support traffic calming elements such as raised crossings, curb extensions, chicanes, narrower travel lanes, and back-in angle parking on Scott Street.

Figure 23: Network Concept at Mount Zion



Base Information

- Existing High-comfort Bikeway
- Mount Zion Campus Boundary

Future Development

- Future Buildings

Proposed Network Concept

- Separated Bikeways
- Shared, Slow Spaces

Parnassus Heights

Because the core of the campus is so compact and because the two key streets within the campus boundary – Parnassus Avenue and Irving Street – are such short segments, connecting the campus to the adjacent neighborhoods and Golden Gate Park will lead to a better connected network for people biking or using micromobility to travel to Parnassus Heights.

The existing campus environment presents several connectivity challenges. Though several high-comfort connections skirt around the edges of Parnassus Heights, connections to and on the campus itself are limited. In addition, many of the streets leading to Parnassus Heights – especially from the north – are too steep for the vast majority of people to ride up. Recognizing the prominence and complexity of both Irving Street and Parnassus Avenue as they pass through UCSF, the University has invested in the design of safer streetscapes for both of these key campus corridors, and has a plan in place to implement the construction.

As the primary streets through the campus and without many other east-west streets in the area, both Parnassus Avenue and Irving Street serve a wide range of UCSF and general transportation needs. Muni light rail and bus service is provided along Irving Street and Parnassus Avenue, respectively, and significant loading and emergency vehicle operations introduce additional complexity into these streets. Recognizing these needs, along with the imperative to provide a safe and accessible environment for people walking, biking, and driving, the streetscape planning efforts on Irving Street and Parnassus Avenue include design elements that emphasize slow, pedestrian-priority streetscapes.

On Parnassus Avenue, two large, raised crosswalk plazas will promote slow vehicle traffic and emphasize pedestrians at the most prominent and active location on the campus. On Irving Street, a realigned intersections and a dramatically realigned curb on the south side of the street expands space for sidewalks and curbside amenities, like bikeshare or bike parking. The proposed designs will dramatically change the look and feel of the

Figure 24: Parnassus Avenue Streetscape Plan

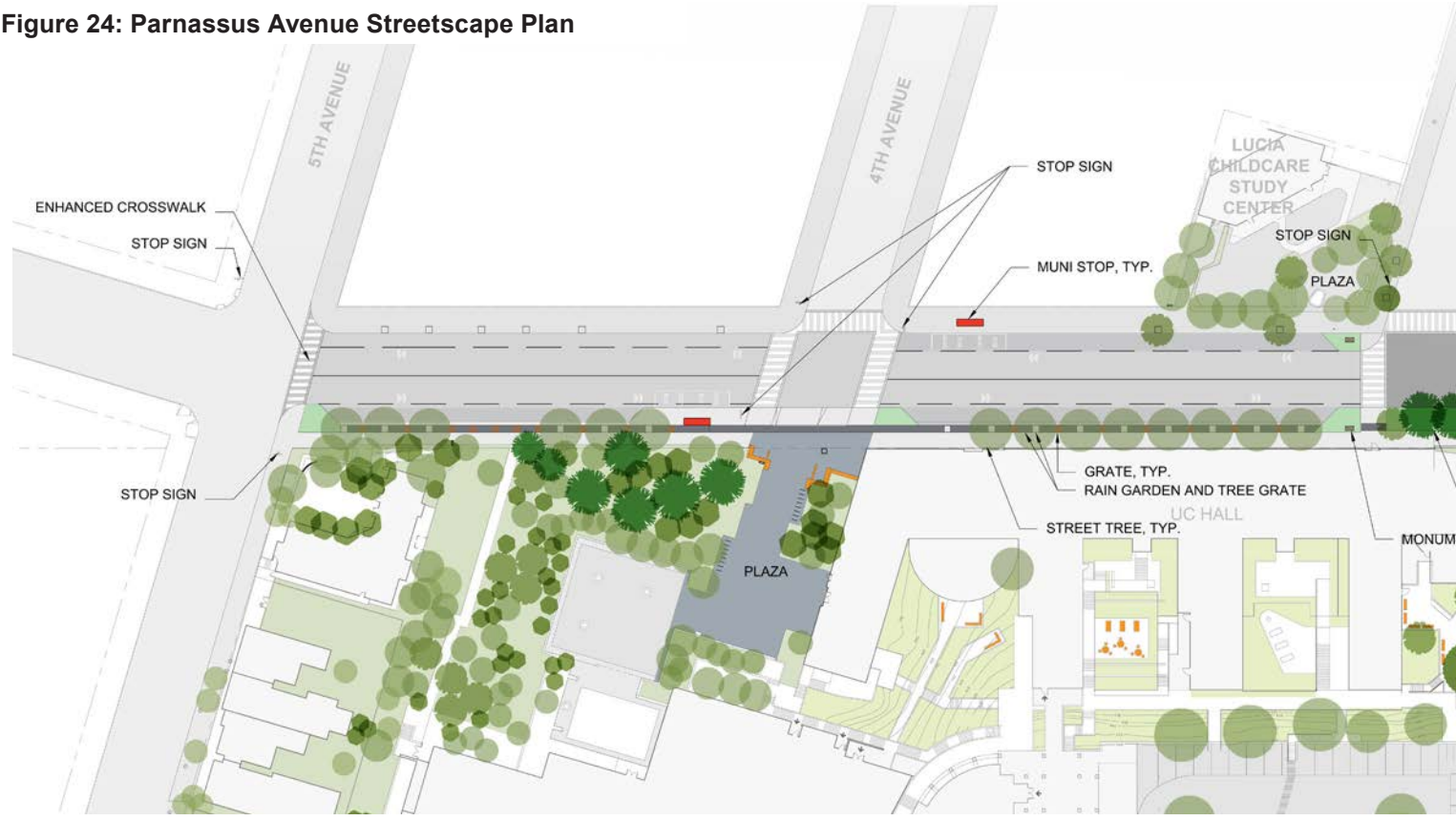


Figure 25: Irving Streetscape Study Design

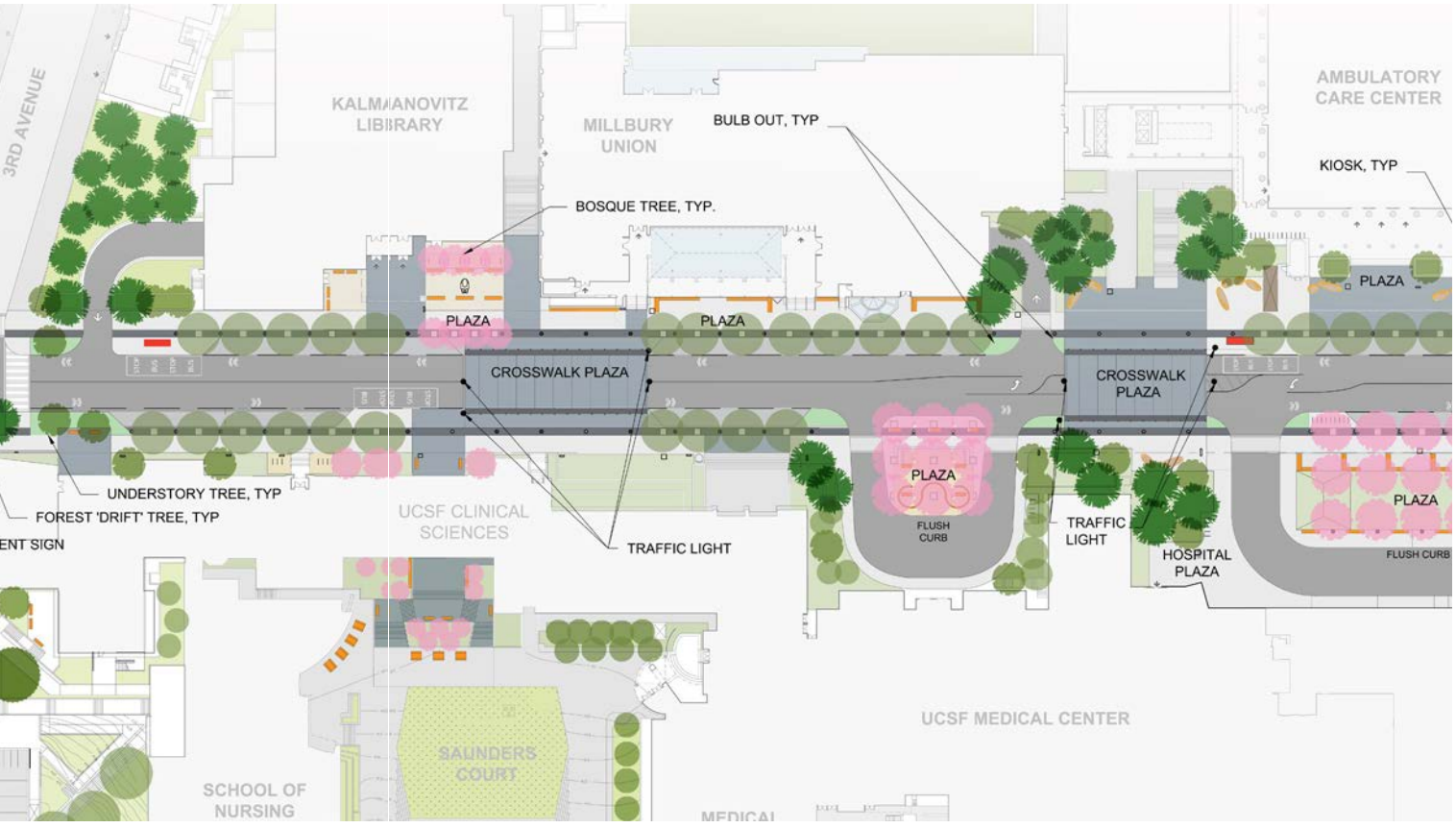


Figure 26: Network Concept at Parnassus Heights

Base Information

- Existing High-comfort Bikeway
- Parnassus Heights Campus Boundary

Future Development

- Future Buildings
- Future Open Space

Proposed Network Concept

- Separated Bikeways
- Shared, Slow Spaces
- Warning Signage at Access Points

streets and keep vehicle speeds low through the core of the campus. Coupled with a focus on making high-comfort connections to adjacent neighborhoods, these investments will help create a much more inviting environment for people biking to Parnassus Heights.

Finally, though it is used more prominently for recreation than transportation today, Medical Center Way is the key route from Aldea Housing to the core of the campus. As a narrow and winding street with existing speed lumps at key locations, the street provides a steep but speed-restricted way for people to travel to and from Parnassus Avenue. In the future, this shared, slow speed environment can be reinforced with additional speed lumps and signage at the access points to the street that set an expectation that people on bikes may be using the street.

Priority Projects

- Continue to incorporate pedestrian priority features on Parnassus Avenue.
- Advance the Irving Streetscape Study to final design and construction.
- Install additional warning signage on Medical Center Way at all access points to reinforce an expectation that people biking use the street. Consider installing additional speed lumps along straight stretches of the street where speeds are likely to be highest.

Stakeholder Insight

In a survey of over 850 UCSF community members, 39% of respondents shared that they do not use bikeshare or scootershare because it is too expensive. In addition, 38% indicated that they don't use bikeshare or scootershare because there aren't enough bikeshare stations or scooters near their home or work.

Safe and Connected Network, Action 3:

Collaborate with bikeshare provider to expand bikeshare stations.

Since launching in 2013, the Bay Wheels bikeshare system has grown and adapted to emerging micromobility trends. What started out as a fully docked system with conventional bikes has grown to be a hybrid docked and dockless system that includes classic bikes, e-bikes, and a small fleet of adaptive bikes. Though the number of bikeshare stations across campus sites differs, people are using bikeshare to get to and from all three campus sites today. Even at Parnassus Heights – where no existing bikeshare stations are provided on campus and where the hills to reach the campus are steep – data shows that people take advantage of the system's dockless e-bikes to end their trip anywhere on campus.

Relying on dockless operations comes with several tradeoffs. Though the flexibility of ending a trip anywhere provides a convenience to users, it comes at a cost. Anyone who ends their ride outside of a bikeshare station must pay an extra fee. Further, only shared e-bikes – which are already more expensive for users than classic bikeshare bikes – can be used for dockless trips. As a result, bikeshare trips specifically to Parnassus Heights, where no stations are provided on campus, can be quite expensive and exacerbate a common feeling that bikeshare is too expensive to begin with.

Locations for future bikeshare stations were identified for each campus. The recommended locations were developed based on existing and planned station locations, dockless bikeshare trip start and end points, and community feedback shared via surveys, focus groups, and an online mapping tool. These locations are reinforced by proposed mobility nodes on campus, which will

Action 3 Implementation Details

UCSF Champion: Campus Planning

Partners: Community and Government Relations, Transportation, SFMTA, Bike Share Provider (currently Lyft)

Cost/Effort: Low; Primarily led and implemented by others

Expected Impact: Medium

- Expands bikeshare to nearly 20,000 existing learners, staff, and faculty, and visitors at Parnassus Heights
- Reduces user cost by $2 per trip for dockless trips converted to docked trips

Implementation Timeline: Ongoing

Performance Metrics

- Increase in the number of bikeshare/scootershare trips that start/end on campus, including travel between campus sites.

provide a concentrated supply of bike/micromobility parking within high-foot traffic areas, near transit, and close to UCSF activity centers. Together with the proposed bikeshare stations, these investments will increase the usability of the bikeshare system for UCSF commutes while ensuring that dockless micromobility vehicles have a place to lock their devices at the end of a trip, as required by local law.

Mission Bay

At Mission Bay, two new stations were installed in early 2022 that will help meet latent demand observed through dockless bikeshare trip data and on-site observations. As new buildings and uses come online – especially in the northwest portion of the campus where no bikeshare stations exist or are planned – demand will likely increase in this area and a new station may be warranted. A new station is proposed in the vicinity of Nelson Rising Lane and 5th Street, which will serve a range of housing, research, and open space uses that are planned for the future.

Mount Zion

Given the compact nature of the campus, limited plans for growth, and existing bikeshare stations and trip patterns, no new bikeshare stations are proposed at Mount Zion.

Parnassus Heights

At Parnassus Heights, two new stations are proposed to help meet existing demand and reduce costs for people using bikeshare to travel to the campus. Given the existing demand revealed through data and on-site observations, a new station in the vicinity of Irving Street and Arguello Boulevard is recommended for installation in the near-term. A second station on Parnassus Avenue is recommended for the mid-term to be incorporated into the design of the plaza at 4th Avenue and Parnassus Avenue.

Figure 27: Bikeshare Recommendations at Mission Bay

Base Information
- Existing High-comfort Bikeway
- Mission Bay Campus Boundary

Future Development
- Future Buildings
- Future Open Space

Proposed Network Concept
- Separated Bikeways
- Shared, Slow Spaces
- Pedestrian Priority Zones

Bikeshare
- Existing Station
- Planned Future Station
- Recommended Station

Transit
- M Muni Stop
- UC UCSF Shuttle Stop

Figure 28: Bikeshare Recommendations at Parnassus Heights

Table 4: Recommendation Summary for Building Safe and Connected Networks

Action	UCSF Champion	Partners	High Impact Action	Timeline	Tracking Metrics
Action 1: Collaborate with the City and County of San Francisco to close existing gaps in the Citywide high-comfort bikeway network	Campus Planning	Community and Government Relations Transportation SFMTA San Francisco Recreation and Parks SF Public Works SF Port	X	Ongoing	Increase in the miles of high-comfort routes within a quarter mile of campus. Increase in high-comfort connections to existing transit stations that serve UCSF.
Action 2: Prioritize high-comfort bikeways for key streets within campus boundaries.	Campus Planning	Community and Government Relations Signage Governance Committee Transportation UCSF PD SFMTA SF Public Works	X	Ongoing	Reduction in the year-over-year number of bicycle and scooter crashes that result in a severe injury or fatality within campus boundaries (including City streets). Reduction in the number of crashes on-campus involving a person riding a bicycle/ scooter and a pedestrian.
Action 3: Collaborate with Bikeshare Provider to expand bikeshare stations	Campus Planning	Community and Government Relations Transportation SFMTA Bikeshare Provider		Short-Term (0-3 years)	Increase in the number of bikeshare/scootershare trips that start/end on campus, including travel between campus sites.

Supporting Sustainable Growth

As UCSF invests in its commitment to advancing health worldwide, its physical footprint and population will also grow. By 2035, UCSF will build out millions of square feet of new clinical, research, housing, and auxiliary facilities that will support a 40% increase in the population of learners, staff, and faculty. UCSF is committed to growing with care for its neighbors and the earth. With a focus on making sustainable and low impact modes like biking and micromobility appealing for trips to campus, this plan is a component of UCSF's commitment to sustainable growth.

UCSF has already taken significant steps to achieve a high share of people that walk, bike, take transit, or use other sustainable modes. The UCSF Shuttle provides a free and well-used shuttle service that connects people across campus sites and to major transit stations within San Francisco. UCSF is also deemphasizing new vehicle parking in its building plans and instead dedicating that space to uses that directly support the University's mission.

Best Practice

Recommendations in this section will have the most impact when implemented alongside the bikeway network and bike/micromobility amenity recommendations provided in this plan. Though each recommendations holds strong potential on its own, their potency grows as the built environment changes to better support biking and micromobility.

With a significant share of UCSF's commuters already using sustainable modes for their trips to campus, UCSF must broaden the appeal of walking, biking, scooters, and transit to achieve a higher share of trips made by sustainable modes. The policies, programs, and practices of the University must clearly demonstrate a preference for sustainable modes and help people overcome barriers that prevent them from leaving their car at home. In addition to safe bikeways to campus and secure bicycle parking, online survey respondents and focus group participants identified a range of other challenges to biking and using micromobility. Their concerns included sensitivity to transit and shared micromobility costs, a lack of knowledge of available resources, uncertainty about maintaining their bike, and concern about what to do in the event of an emergency. The recommendations below focus on changes to programming, policies, and practices across the University to help make sustainable modes – like biking and micromobility – an easy choice for a broader spectrum of UCSF commuters.

Sustainable Growth, Action 1:

Introduce a Sustainable Commute Benefit.

On average, people in the San Francisco area spend over 12% of their income on transportation.[2] Though UCSF already leverages federal tax policy to allow employees to pay for vehicle parking and transit costs using tax-free dollars, UCSF should explore a stronger sustainable commute benefit that provides a financial incentive to use preferred, sustainable modes. Though it would represent a large and recurring investment of resources, a direct sustainable commute benefit represents the most significant step UCSF can take toward encouraging mode shift away from driving to more sustainable modes.

2 U.S. Bureau of Labor Statistics, Consumer Expenditures for the San Francisco Metropolitan Area: 2019-2020. https://www.bls.gov/regions/west/news-release/consumerexpenditures_sanfrancisco.htm

Accounting for the costs of building and maintaining roadway infrastructure and parking, driving continues to be one of the most heavily subsidized modes of transportation in our society.[3] A sustainable commute benefit at UCSF would help to rebalance built-in incentives that affect transportation decisions and help ensure the University is able to devote its time, investments, and land to uses that support its mission. Existing trends at UCSF show that people with lower incomes – including learners and trainees – already rely on biking and micromobility at far higher rates than other personnel categories. While a sustainable commute benefit would help provide a financial incentive to use a sustainable mode for those who are reticent to leave their car at home, it would also provide relief and reward to those who have been using bikes and micromobility to commute to campus out of necessity.

Though commute benefits can be structured in many different ways, a sustainable commute benefit should incorporate supports for walking, biking/scooter use, shared micromobility, and transit. Similar benefit programs offered at peer institutions and other major employers commonly incorporate a range of features that may be combined or mutually-exclusive based on employee enrollment in the benefit, including:

- A debit card or direct payment that can be used for eligible transportation costs each month
- A "human-powered" reward program for walking, biking, and scooter use that provides a modest benefit ($150-$200 annually) to cover maintenance, repair, and equipment costs.
- A shared micromobility program that provides a free or discounted rate for bikeshare and scootershare memberships.
- A transit incentive that provides a transit pass or a monthly allowance to cover commuting-related transit costs.

Peer Success Stories

Within the Bay Area, San Francisco State University (SFSU) has successfully launched a transit-specific benefit. OneCard is SFSU's student ID card and also functions also as a Clipper Card. For $180 per semester, learners can use their OneCard and receive unlimited rides on SF MUNI and a 50% discount on trips to and from the Daly City BART station, as part of BART's Higher Education Discount Program (HEDP). The HEDP partners with BART with local universities to provide discounted rides for students. The University covers the difference between regular fares and the discounted fares. For SFSU, their portion of the trip is paid through a combination of student fees and the San Francisco County Transportation Authority's Transportation Fund for Clean Air grant program.

The University of Washington's U-PASS benefit provides learners and employees with a subsidy for unlimited rides on regional buses, commuter trains, light rail and water taxis. Learners who pay the Services & Activities Fee are automatically enrolled in the U-PASS program, while faculty and staff pay $150 per quarter. Staff at the University of Washington's credits the U-PASS benefit for contributing to the university's high rates of bicycle, walking, and micromobility and low drive-alone commute rates (17% with a goal of 12%).

3 Herriges, D. In Transportation Costs, "It's the System, Stupid". (2017): https://www.strongtowns.org/journal/2020/8/17/in-transportation-costs-its-the-system-stupid

Action 1 Implementation Details

UCSF Champion: Transportation

Partners: Human Resources, Office of Sustainability, UC Campuses, UCOP, Transit and Shared Micromobility Providers, Local and State agency partners

Cost/Effort: High

Expected Impact: High

- Supports a 0.3% to 14% reduction in Vehicle Miles Traveled (VMT)[1]
- Reduction in transportation cost burden for lower-income learners and staff

Implementation Timeline: Mid-Term (3-6 years); recommend piloting a program for lower-income learners and staff in the near term (0-3 years)

Performance Metrics

- Increase in the share of people who use bikes/scooters to travel to/from campus
- Reduction in the share of people who drive alone to/from UCSF
- Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035

1 CAPCOA. Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. 2021. https://www.caleemod.com/documents/handbook/full_handbook.pdf

As a large institution, UCSF is well-positioned to work with transit and shared micromobility partners to establish cost-effective options for building out a sustainable commute benefit program. Across institutions and employers, a range of funding mechanisms – from parking revenues to student fees to grant awards – are used to cover the direct and administrative costs of sustainable commute benefits. As part of UCSF's suite of transportation demand management practices, additional study and coordination should be pursued to establish a program that works for UCSF's specific context.

Sustainable Growth, Action 2:

Continue to incorporate and evolve vehicle parking policy as part of sustainability and equity initiatives.

Though adjustments to parking policy and pricing can be complex, they are effective. UCSF has taken important steps in the past to reduce drive alone commute rates through parking policy, however more can be done to encourage mode shift among groups with the highest drive alone rates.

Today, UCSF employees in higher-earning positions drive alone to campus at nearly three times the rate of lower-earning personnel. While driving is a more important option for some groups than others – for example, people with disabilities or people who commute outside of transit service hours – current trends demonstrate that price sensitivity has effectively reduced drive alone rates for some groups but not others.

When introducing parking policy changes, it is essential to do so alongside other initiatives that make other modes of transportation more convenient and affordable. Completed alone, changes to parking policy can create undue burden. Cooperation and coordination among a wide range of stakeholder will be needed to explore future evolutions to UCSF's parking policies.

At UCSF, two major shifts – phasing out monthly parking permits and introduce wage-based pricing – can help the University align its parking policy with its sustainable transportation and equity goals. Though these programs will require additional planning, funding, and coordination to implement, an overview for each is provided below.

Permit Structure

Daily vehicle parking permits are foundational for a flexible and sustainable commute program. Especially as the COVID-19 pandemic has accelerated a shift to hybrid remote and in-person operations, daily parking permits give both UCSF and its commuters flexibility while ensuring people don't decide to drive to work simply because the cost of a monthly permit is already sunk. Though monthly permits are still offered, UCSF has already embraced daily parking permits and many people have made the switch. Only a small percentage of UCSF commuters continue to purchase monthly permits. With the mechanisms for daily parking permits already in place, UCSF should consider phasing out use of monthly parking permits altogether to ensure that the decision to drive to UCSF is an active choice on a daily basis.

Pricing Model

With a few exceptions the current pricing structure for parking does not reflect income discrepancies across the UCSF community. Trends show that

Action 2 Implementation Details

UCSF Champion: Transportation

Partners: Human Resources, UCOP and other UC Campuses for wage-based pricing

Cost/Effort: High

Expected Impact: Medium

- May reduce vehicle trips by 1-3% for every 10% increase in cost[1]

Implementation Timeline: Mid-Term (3-6 years)

Performance Metrics

- Reduction in the share of people who drive alone to/from UCSF

1 Victoria Transport Policy Institute, Parking Pricing Implementation Guidelines. https://www.vtpi.org/parkpricing.pdf

Peer Success Story

Oregon Health and Sciences University (OHSU) recently overhauled their parking pricing system to focus on their dual goals of reducing drive-alone trips and promoting equity. The previous system provided a per-diem discount for purchasing a limited number of annual parking permits, which gave preference to tenured faculty who tend to have higher incomes among the institution's employee base.

In place of the annual permit system, OHSU has instituted a daily parking reservation system that uses wage-based pricing. The new system is based on a progressive pricing policy; employees who earn more pay a higher daily parking rate. Moreover, parking placed closer to campus buildings are reserved for patients and staff who are likely to be commuting for night or early-morning shifts. Representatives from OHSU emphasized that policies relating to parking must also balance a 'patient-first' approach, by providing adequate and equitably-priced parking for patients. However, changes to parking pricing, placement, and availability should be complimented by a suite of TDM programs and incentives that make the value proposition of using sustainable modes real for the campus community. OHSU's new program is projected to result in net neutral parking revenues; even though the University is planning on fewer driving trips and parking payments, the increased rate for higher earners will cover the loss in volume.

pricing has been an effective tool for promoting sustainable modes among some people – especially lower-earning groups – while others continue to drive alone to campus at high rates.

Wage-based pricing models establish the cost of parking such that the cost of parking is roughly proportional across incomes. Because the cost of parking is already an effective tool for reducing driving among lower-earning groups, UCSF should explore wage-based pricing that aligns parking costs and income for higher-earners within the UCSF system. Combined with the sustainable commute benefit recommendation described above, changes to UCSF's parking permits and pricing model would create powerful levers that promote sustainable transportation behavior. As a major policy shift, additional study and coordination across a range of stakeholders would be required to study and implement an effective and equitable policy for the UCSF context.

Sustainable Growth, Action 3:

Strengthen educational programming and communication.

UCSF already offers a wide range of physical and programmatic resources that support biking and micromobility on campus. However, through the community engagement process people commonly shared that they were unaware of the full range of resources and programs offered by the University. From where to find secure bike parking to how to get a bike permit to where to shower, people are eager for more accessible information about existing resources.

Feedback received from the survey and focus groups also highlighted a need for new educational resources. A lack of knowledge and confidence around several basic topics present a barrier to trying out biking or micromobility for UCSF commutes. Dedicated bike safety education will also help support a culture of safety on campus and equip both new and experienced riders with tools to safety navigate San Francisco on bikes and scooters. Filling this educational gap is a relatively easy-to-implement action that will not only directly respond to needs of existing riders, but generate much stronger awareness of biking and micromobility as an option for people who are interested in riding to campus. Some of the most commonly-requested educational resources included:

- Basic mechanic skill classes
- Classes and digital resources to help new riders and new-to-San Francisco riders learn about the rules of the road, navigating to and between campuses, and how to navigate Muni tracks
- Resources for theft-proofing bikes parked on campus
- Tips for riding at night and in the rain

Action 3 Implementation Details

UCSF Champion: Transportation

Partners: Human Resources, Campus Planning, Information Technology, Office of Communication, SF Bicycle Coalition, UCSF Bikes!

Cost/Effort: Medium

Expected Impact: Medium

- Educational resources, awareness campaigns, and unifying information in a single platform can reduce VMT by 1% to 26%.[1] High-end VMT reduction is achieved when programming is tailored to expressed needs, such as night-riding or basic mechanic skills.

Implementation Timeline: Short-Term (0-3 years)

Performance Metrics

- Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population.
- Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.

1 CAPCOA. Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity. 2021. https://www.caleemod.com/documents/handbook/full_handbook.pdf

- Digital and in-print information about where to park, shower, and change at UCSF
- Group bike rides and bike caravans

A Coordination Committee member suggested that the University partner with UCSF Bikes! to conduct an annual 'State of UCSF Micromobility' report and webinar, which would provide the University to communicate plan progress while allowing campus stakeholders to voice their experiences. As UCSF grows its physical and programmatic offerings that support biking and micromobility, communication will become even more important. Given the strong health benefits of biking and micromobility, UCSF's focus as a health institution also provides avenues to promote biking and micromobility as healthy and sustainable mode of transportation. From onboarding materials to the bike registration process to physical signage and wayfinding, UCSF has a wide range of existing mediums that can be leveraged to generate much greater awareness of existing and future educational resources and programming.

Table 5 summarizes recommendations for communicating existing and new programs and resources. In general, the recommended communication tools leverage existing mediums to help streamline the implementation process.

Table 5: Educational Resources and Communication Methods

Resource/ Topic	Communication Medium				Notes
	Classes	Onboarding Materials	Wayfinding & Signage	Website & Apps	
Basic Mechanic Skills	X			X	Partnership with SF Bicycle Coalition and UCSF Bikes!
Riding in SF/ Bike Safety	X	X		X	Partnership with SF Bicycle Coalition and UCSF Bikes!
Theft Prevention	X	X	X	X	High-quality signage should be posted within secure parking facilities
Riding at Night/ in the Rain	X			X	Partnership with SF Bicycle Coalition and UCSF Bikes!
Where to Park, Shower, & Change		X	X	X	Inventory/map of locations should be updated on an annual basis and at the completion of all new buildings Maps should be added to website
Group Rides/ Caravans				X	Partnership with UCSF Bikes! Consider annual programming during Bike Month (May)

Sustainable Growth, Action 4:

Extend the Emergency Ride Home program to Learners.

Emergency Ride Home programs provide "commuter insurance" for people who walk, ride a bike or scooter, or take transit for their commute by ensuring anyone who encounters an unexpected, qualifying emergency can use rideshare to get home and be reimbursed for the cost of the ride. UCSF currently offers an emergency ride home for employees that covers up to $50 per ride, but not learners. The City and County of San Francisco also provides a citywide emergency ride home program for people employed within San Francisco, however the program likewise does not cover students. Learners at UCSF are currently covered by the "Late Night Lyft" program, which allows learners to take a Lyft home during the hours of 10PM and 1AM and be reimbursed for up to $10 of the total trip cost up to 15 times per month. This program is very well used, but is fundamentally different from an emergency ride home program that operates at any time of day for specific emergency events.

Given that UCSF's students and trainees bike or take micromobility to UCSF at over double the rate of any other group, the emergency ride home program should be extended to learners who are both more reliant on biking and micromobility and likely less able to afford the cost of an unexpected rideshare trip. In addition, given that learners comprise a relatively small percentage of UCSF's campus population, extending this benefit to learners may not represent a significant cost to the University.

Action 4 Implementation Details

UCSF Champion: Transportation

Cost/Effort: Low

Expected Impact: Low

- This strategy is minimally effective as a stand-alone strategy, but reinforces other programs discussed in this plan.

Implementation Timeline: Short-Term (0-3 years)

Performance Metrics

- Increase in the share of people who use bikes/scooters to travel to/from campus.
- Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.

Sustainable Growth, Action 5:

Expand institutional capacity and collaboration around biking and micromobility.

Across a wide range of policy, program, and physical investments, the recommendations in this plan represent a significant commitment to advancing biking and micromobility as prominent modes of travel at UCSF. These recommendations will require people from different departments to collaborate as new programs are launched, measured, and modified. Especially as projects and programs get off the ground, additional capacity will ensure UCSF is equipped to successfully deliver recommendations and measure progress. Housed within Transportation, additional capacity should focus on overseeing projects, tracking metrics, establishing routine maintenance and operational procedures, and facilitating cross-disciplinary collaboration. Absent dedicated staff to provide this capacity, at a minimum a working group comprised of key partners across UCSF including Transportation, the Office of Sustainability, Campus Planning, Real Estate, Facilities, and others should be convened regularly as biking and micromobility projects and programs move into implementation.

As capacity for overseeing a comprehensive bike and micromobility program grows, UCSF should continue to seek out opportunities to expand the reach of biking and micromobility across campus practices. Within UCSF's existing structures, there may be an opportunity to facilitate stronger collaboration on biking and micromobility, especially within the framework of sustainability. UCSF's Sustainability Steering Committee develops strategies for achieving the University of California's Office of the President (UCOP) sustainability goals and implements strategies through relevant work groups dedicated to discrete topics. Biking and micromobility are currently situated within the climate change working group, however others such as the culture shift, green building, and sustainable operations working groups have strong overlap with biking and micromobility. Especially as UCSF moves into another decade of growth and emerging technologies continue to evolve, strong collaboration within existing institutional structures will uncover new opportunities to integrate biking and micromobility into UCSF operations and ensure the University stays ahead of trends as they create new and different needs on campus.

Action 5 Implementation Details

UCSF Champion: Transportation

Partners: Office of Sustainability, Campus Planning, Real Estate, Facilities, Campus and Health Design & Construction

Cost/Effort: Medium

Expected Impact: Medium

Implementation Timeline: Short-Term (0-3 years)

Performance Metrics

- Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.

Table 6: Recommendation Summary for Supporting Sustainable Growth

Action	UCSF Champion	Partners	High Impact Action	Timeline	Tracking Metrics
Action 1: Introduce a Sustainable Commute Benefit	Transportation	Human Resources Office of Sustainability UC Office of the President Transit and Shared Micromobility Providers Local and State agency partners	X	Mid-Term (3-6 years) for full program. Short-Term (0-3 years) for lower-income pilot program	Increase in the share of people who use bikes/scooters to travel to/from campus. Reduction in the share of people who drive alone to/from UCSF. Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.
Action 2: Continue to incorporate and evolve vehicle parking policy as part of sustainability and equity initiatives.	Transportation	Human Resources UC Office of the President		Mid-Term (3-6 years)	Reduction in the share of people who drive alone to/from UCSF.
Action 3: Strengthen educational programming and communication	Transportation	Human Resources Campus Planning Information Technology Office of Communication SF Bicycle Coalition UCSF Bikes!		Short-Term (0-3 years)	Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population. Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.
Action 4: Extend The 'Emergency Ride Home' program to learners	Transportation			Short-Term (0-3 years)	Increase in the share of people who use bikes/scooters to travel to/from campus. Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.
Action 5: Expand Institutional capacity and collaboration around biking and micromobility	Transportation	Office of Sustainability Campus Planning Real Estate Facilities Campus and Health Design & Construction		Short-Term (0-3 years)	Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists and achieve Platinum ranking by 2035.

Creating Reliable and Inclusive Amenities

With a safe and connected network and institutional practices that promote biking and micromobility, reliable and accessible on-campus amenities are the final pillar that will support existing and future riders at UCSF.

A more proactive and consistent approach to bike parking and amenities will help UCSF respond to existing supply and security issues and attract more people to biking and micromobility as a core component of the institution's plan for sustainable growth. In the near term, a focus on right-sizing the quantity, quality, and distribution of supply at each campus and addressing concerns about theft are top priorities. UCSF's approach to future bike/micromobility parking and amenities must keep pace with demand as the campus grows, travel patterns change, and new trends become more mainstream.

Stakeholder Insight

In a survey of over 850 UCSF community members, 41% of people shared that concern about bike or scooter theft prevented them from riding to UCSF. Additionally, 29% indicated that there is not enough secure parking.

Today at UCSF, there is one secure bike parking space for every 12 UCSF badge holders at Mission Bay, one for every 34 at Mount Zion, and one for every 36 at Parnassus Heights.

Reliable and Inclusive Amenities, Action 1:

Adopt UCSF standards for bike/ micromobility parking and end-of-trip amenities

Though UCSF has made significant investments in bike/micromobility parking and amenities, the University is growing and will need to accommodate more people riding to campus in the future. By 2035, the population of learners, staff, and faculty will grow by over 8,000 people. Maintaining or increasing the percentage of people who bike and use micromobility to travel to campus each day is central to UCSF's strategy for sustainable growth. Even if the percentage of riders doesn't change, the number of bike/scooter trips to campus is expected to increase by over 30% as UCSF's population grows.

A reasoned, consistent, and institutionalized approach to accommodating increased bike and micromobility trips will help ensure resources are invested wisely. Using UCSF-specific data, community feedback, and a best practices review of peer institutions, bike and micromobility parking and amenity standards were developed that respond to UCSF's specific needs and characteristics. In addition to providing a more consistent and high-quality experience for users, these standards will clarify bike and micromobility needs from the beginning of all new building projects, reduce the range of rack types that need to be procured and maintained, and may create small economies of scale for purchasing.

Standard Bike and Micromobility Facility Types

With a wide range of learners, staff, faculty, patients, and visitors traveling to and from UCSF each day, the proposed campus standards embrace a mix of bike/micromobility facility types and locations according to each campus site's characteristics. Four key bike/micromobility facility types were developed for UCSF to meet the range of needs on campus, including a mix of campus-wide and building specific facilities:

Action 1 Implementation Details

UCSF Champion: Campus Architect

Partners: Transportation, Campus Planning, Building Permit Services, Campus and Health Design & Construction, Facilities

Cost/Effort: Low

Expected Impact: High

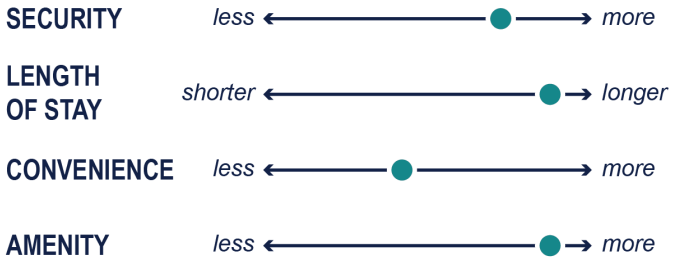
- Institutionalizes a consistent, high-quality, and tailor-made approach to meeting UCSF bike/micromobility amenity needs at each campus
- Ensures all new construction and retrofits meet bike/micromobility amenity best practices

Implementation Timeline: Short-Term (0-3 years)

Performance Metrics

- Percentage of new construction and renovations that meet all requirements of LEED for Bicycle Facilities
- Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists.

Active Commuter Hubs provide a one-stop shop for long-term bike and micromobility commuters at UCSF. As a resources that is accessible to all badge holders, Active Commuter Hubs are distributed around campus to provide convenient, secure, and well-appointed facilities for people who will be on campus for several hours or more. In particular, Active Commuter Hubs are intended to provide a secure, long-term facility for people who primarily work in buildings that do not have a Building Bike Room. Active Commuter Hubs may be located within parking structures, free-standing structures, or in building structures that have exterior access.

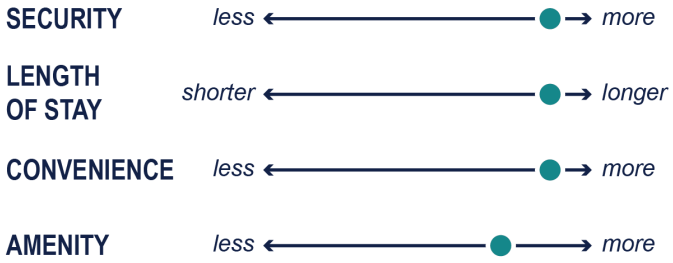


Security Features:
- Secure rack styles
- Pre-approved badge access
- Conspicuous closed circuit video signage
- Extra bright lighting
- Enclosed within durable, tamper-proof exterior materials

Priority Amenities:
- Lock docks to accommodate at least 25% of total supply
- Personal lockers to accommodate at least 25% of total supply (unless located within building with additional shower/locker facilities)
- At least 5% of total parking supply spaced extra wide (to accommodate bikes at least 8.5 feet long)
- Fix-it stand & floor-mounted pump
- Bench (for enclosures with greater than 100 spaces)
- Intermittent and signed outlets for e-bike charging
- High-visibility, exterior branded signage
- Clear on-site wayfinding to/from enclosure, especially when shared with motor vehicles
- On-site educational signage & resources

Optional Amenities:
- Bench (for enclosures with less than 100 spaces)
- Bike parts vending machine
- On-site showers

Building Bike Rooms provide secure, long-term bike parking for specific building populations. These locations are access-restricted to people who use a specific building or group of clustered buildings on a regular, long-term basis. These locations may be co-located with end-of-trip amenities. Today, Building Bike Rooms are found in 11 buildings at Mission Bay, though none are provided at either Mount Zion or Parnassus Heights.



Security Features:
- Secure rack styles
- Pre-approved and location-restricted badge access
- Conspicuous closed circuit video

Priority Amenities:
- Lock docks to accommodate at least 25% of total supply
- Personal lockers to accommodate at least 10% of total supply (unless located within building with additional locker facilities or a housing building)
- At least 5% of total parking supply spaced extra wide (to accommodate bikes at least 8.5 feet long)
- Fix-it stand & floor-mounted pump
- Intermittent and signed outlets for e-bike charging
- On-site educational signage and resources
- Access to showers/lockers within building

Optional Amenities:
- Bench
- Bike parts vending machine

Mobility Nodes provide a concentrated supply of bike/micromobility parking within high-foot traffic areas and close to UCSF activity centers. These locations are highly convenient for a large range of users, mostly rely on foot traffic to self-enforce security, and may be co-located with weather-resistant end-of-trip amenities. These locations are well-suited within close proximity of other transportation facilities, such as shuttle/transit stops and bikeshare stations. Though they don't currently meet all the standards recommended for Mobility Nodes, there are several locations across UCSF today that generally align with this facility type.

Security Features:	• Secure rack styles • Natural surveillance within high-foot traffic areas
Priority Amenities:	• Weather protection via shelter or building overhang for 25% of total supply (for Nodes with greater than 40 spaces) • Fix-it stand and ground-mounted bike pump • Free-standing or shelter-mounted educational resources
Optional Amenities:	• Weather protection via shelter or building overhang (for Nodes with less than 40 spaces)

Visitor Spaces provides a place within 50 feet of all major building entrances for a person to secure their personal bike/micromobility device. Visitor spaces include parking locations within the public right-of-way. Though they are not provided at all building entrances today, Visitor Spaces are provided at all UCSF campuses.

Security Features:	• Secure rack styles
Priority Amenities:	• N/A
Optional Amenities:	• N/A

Supply Standards for New Buildings and Retrofits

Supply standards were developed based on each campus' population characteristics, existing and projected rates of biking and micromobility, plans for new building construction, and local and national best practices. The supply standards are provided on a per-person basis. Because some facility types (like Active Commuter Hubs) are campus resources and other (like Building Bike Rooms) are building-specific resources, new building projects and retrofits should first identify the population that will be served by each facility before determining the targeted supply. For full details, see Appendix A.

Table 7: Supply Standards by Facility Type and Campus Site

		Secure, Access-Restricted Facilities				Publicly-Accessible Facilities			
		Active Commuter Hub		Building Bike Room		Mobility Node		Visitor Spaces	
People Served		Campus Population: Serves buildings within a 1,000 foot radius not including those with Building Bike Rooms		Building Population: Serves expected daily population of regular building occupants (badge holders only)		Campus Population: Serves buildings with entrances within 200 feet (including all regular building occupants and visitors)		Building Population: Serves expected daily population (including all regular building occupants and visitors)	
Acceptable Rack Types	**U Rack/ Hoop**	X		X		X		X	
	Vertical	X		X					
	Two Tier w/assist	X		X					
		Housing	**All Other Uses**	**Housing**	**All Other Uses**	**Housing**	**All Other Uses**	**Housing**	**All Other Uses**
Supply Guidance	**Mission Bay**	N/A	1 space per 40 people	1 space per 3 people	1 space per 16 people	1 space per 14 people	1 space per 33 people	1 space per 14 people	1 space per 33 people
	Mount Zion	N/A			1 space per 20 people	1 space per 12 people		1 space per 12 people	
	Parnassus Heights	N/A			1 space per 20 people	1 space per 12 people		1 space per 12 people	
Notes		• At least 25% of total supply to be ground-mounted • At least 5% of total supply spaced extra wide • Provide 1 personal locker per 4 parking spaces • Provide 1 lock dock per 4 parking spaces • If all secure parking at a campus is provided within 1 Active Commuter Hub, augment supply to provide 1 space per 20 people		• At least 25% of total supply to be ground-mounted • At least 5% of total supply spaced extra wide • Provide 1 personal locker per 10 parking spaces • Provide 1 lock dock per 4 parking spaces • Provide 1 shower on site per 100 people (non-housing)"		• Depending on site characteristics, supply requirements may be split across a Mobility Node and Visitor Spaces at public entrances • In all cases, no fewer than 4 spaces should be provided at all public entrances • Where >40 spaces are provided, at least 25% to be covered/ sheltered			

Reliable and Inclusive Amenities, Action 2:

Right-size supply for existing and future demand.

Using the standards above, location-specific bike/micromobility parking recommendations were developed for each campus. These recommendations were based on existing conditions and may need to be revisited as the campus evolves. In addition to modifying the existing supply to respond to actual demand and UCSF community feedback, locations for future bike parking facilities were identified based on where building investments at each campus will create natural opportunities to provide new amenities.

Mission Bay

Today, around 75% of people who ride to Mission Bay are UCSF Badge holders, however that percentage is expected to grow to almost 95% based on plans to build new housing, research, and clinical spaces on the campus. Given this, the recommended approach to bike/micromobility amenities for Mission Bay emphasizes long-term, secure bike parking and access to amenities. Mission Bay also has several areas with significant foot traffic, transit activity, and existing bikeshare, which create opportunities for natural surveillance and clustered transportation facilities. Though UCSF has invested heavily in the built environment at Mission Bay over the last 20 years, many more buildings are expected to be built at the campus by 2035. With so much building planned, there is significant opportunity to build new secure facilities as part of already-planned investments making it more cost-effective to build highly-desired facility types, such as Building Bike Rooms.

Action 2 Implementation Details

UCSF Champion: Campus Planning

Partners: Transportation, Facilities, Campus and Health Design & Construction, SFMTA (for racks within the public right-of-way)

Cost/Effort: High

Expected Impact: High

Implementation Timeline: Ongoing

Performance Metrics

- Increase in the number of secure (badge/key access) bicycle/scooter parking spaces per person (based on campus population, not including patients and visitors).
- Increase in the number of public (weather-protected preferred) bicycle/scooter parking spaces per person (based on campus population, inclusive of patients and visitors).
- Increase in the share of bicycle parking supply that accommodates adaptive, cargo, electric, and other non-standard bicycles and scooters.
- Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population.

Mount Zion

Compared to both Mission Bay and Parnassus Heights, Mount Zion has a higher share of existing and projected visitors that ride to campus. Now and in the future, between 20% and 25% of people who ride to Mount Zion each day are patients or visitors who cannot access badge-restricted facilities. In addition, the campus has a compact footprint with limited new buildings expected over the coming decade. Given these characteristics, the proposed mix of bike/micromobility facility types at Mount Zion incorporates a higher share of publicly-accessible parking and amenities. In addition to introducing two Mobility Nodes, the most notable addition to Mount Zion is a new proposed Active Commuter Hub within the core campus area as new building or renovation occurs in the future.

Parnassus Heights

Around 90% of people who ride to Parnassus Heights each day are UCSF Badge holders. Although significant building plans are anticipated at the campus over the coming decade, this percentage is not anticipated to significantly change. As a result, secure facilities are a priority today and will continue to be a priority in the future. Plans to construct new buildings in the coming decade create opportunities for bike and micromobility facilities to be incorporated into building plans from the beginning and to introduce indoor bike rooms to Parnassus Heights where none exist today. Finally, Parnassus Avenue and Irving Street are very active streets with strong pedestrian and transit activity. These streets offer ideal locations for clusters of bike and micromobility parking near other transportation facilities.

Figure 29: Bike/Micromobility Facility Recommendations for Mission Bay

Base Information

- Existing High-comfort Bikeway
- Mission Bay Campus Boundary

Future Development

- Future Buildings
- Future Open Space

Proposed Network Concept

- Separated Bikeways
- Shared, Slow Spaces
- Pedestrian Priority Zones

Bikeshare

- Existing Station
- Planned Future Station
- Recommended Station

Bike/Micromobility Parking

- Existing Active Commuter Hub
- Recommended Active Commuter Hub
- Existing Building Bike Room
- Recommended Building Bike Room
- Existing Mobility Node
- Recommended Mobility Node

Figure 30: Bike/Micromobility Facility Recommendations for Mount Zion

Base Information

- Existing High-comfort Bikeway
- Mount Zion Campus Boundary

Future Development

- Future Buildings

Proposed Network Concept

- Separated Bikeways
- Shared, Slow Spaces

Bikeshare

- Existing Station

Bike/Micromobility Parking

- Existing Active Commuter Hub
- Recommended Active Commuter Hub
- Recommended Mobility Node

Figure 31: Bike/Micromobility Facility Recommendations for Parnassus Heights

Base Information

- Existing High-comfort Bikeway
- Parnassus Heights Campus Boundary

Future Development

- Future Buildings

Proposed Network Concept

- Separated Bikeways
- Shared, Slow Spaces

Bikeshare

- Recommended Station

Bike/Micromobility Parking

- Existing Active Commuter Hub
- Recommended Active Commuter Hub
- Recommended Building Bike Room
- Existing Mobility Node
- Recommended Mobility Node

Reliable and Inclusive Amenities, Action 3:

Implement high-priority bike/ micromobility amenity projects in the short-term.

Though building out the full range of bike/ micromobility amenity recommendations will take place over time, several projects on each campus will help address immediate needs. For each campus, a smaller list of short-term priority projects (0-3 years) has been developed based on observations, data analysis, and community feedback.

Action 3 Implementation Details

UCSF Champion: Campus Planning and Transportation

Partners: Campus and Health Design & Construction, Facilities, SFMTA (for racks within the public right-of-way)

Cost/Effort: High

Expected Impact: High

- Responds to immediate needs revealed through existing conditions analyses and stakeholder feedback.
- Ensures all existing campuses have a baseline supply of bike/micromobility parking that matches existing need.

Implementation Timeline: Short-Term (0-3 years)

Performance Metrics

- Same as Action 2.
- Completion of short-term priorities identified for each campus site.

All Campus Sites

1. Ensure bike/micromobility parking is provided within 50 feet of all major building entrances.
2. Ensure all existing Active Commuter Hubs have exterior signage that identify the facility.

Mission Bay

Priority projects at Mission Bay focus on redistributing existing resources to higher-demand areas, upgrading existing facilities, and responding to common requests made during community outreach.

3. Implement a Mobility Node at Gene Friend Way between 3rd Street and 4th Street. Remove existing wave racks and replace with secure rack styles. Incorporate a shelter, repair stand and pump, and educational resources on-site.
4. Introduce new amenities at the northwest corner of Koret Quad to create a Mobility Node. Consider relocating existing racks from Campus Way west of Genentech Hall to increase the existing supply at this location. Incorporate a shelter, repair stand and pump, and educational resources on-site.
5. Retrofit Mission Hall to include a Building Bike Room.
6. Retrofit Rock Hall to include a Building Bike Room.
7. Upgrade existing Active Commuter Hubs to include on-site educational information, a supply of personal lockers, and additional ground-mounted spaces. Consider replacing rack types that don't meet best practices (specifically any crank case and two tier racks that are not equipped with lift assist) to make room for additional amenities.

Mount Zion

Priority projects at Mount Zion focus on upgrading existing facilities and creating higher-quality amenities at high-activity areas near key buildings.

1. Upgrade existing Active Commuter Hubs to include on-site educational information, a supply of personal lockers, and fix-it stands and pumps.
2. Implement a Mobility Node at the main entrance to the Medical Center on Divisadero Street.

Parnassus Heights

Priority projects at Parnassus Heights focus on augmenting existing supply to meet demand and upgrading existing facilities.

1. Implement a Mobility Node at Irving Street and Arguello Way. Consider creating an in-street corral to create space for bike/micromobility parking without impeding the limited sidewalk space.
2. Upgrade the existing Active Commuter Hub at Millberry Union to include on-site educational information, a supply of personal lockers, and additional ground-mounted spaces. Consider replacing rack types that don't meet best practices (specifically any crank case and a portion of the vertical racks) to make room for additional amenities.
3. Upgrade the existing Mobility Node near the Medical Building 1/Ambulatory Care Center Building lobby by replacing existing racks with secure rack types that can accommodate a wider range of bike types.

Reliable and Inclusive Amenities, Action 4:

Grow real and perceived security of bike/micromobility facilities.

Today, concern about bike/scooter theft has a major impact not only on travel mode decisions, but also on-campus parking behavior. Fearful of theft, many people shared through the community engagement process that they forego use of existing bike/parking facilities altogether and instead find a place close to their workspace to store their bike or scooter, even if it is not technically allowed. People in the UCSF community also commonly shared that they were not aware of secure parking locations, or that what they did know they learned via word of mouth.

A multi-pronged approach will help mitigate thefts, build confidence, and grow awareness of secure parking facilities. At the most basic level, phasing out rack styles that do not meet best practices and ensuring all new facilities are equipped with high-quality racks that are tamper proof and installed properly will create a baseline of security for all on-campus bike/micromobility parking. Ensuring public racks are located in well-trafficked locations will create natural surveillance during many hours of the day. A general shift over time toward Building Bike Rooms will reduce the number of people with access to individual secure parking facilities and produce greater security in the process. Finally, a greater supply of bikeshare stations and shared scooters on each campus will create opportunities for biking/micromobility that fully eliminate concern about personal bike or scooter theft. Even with these shifts, investing in discrete security features and practices at existing and new facilities will be essential to truly make biking and micromobility a reliable choice for campus commutes.

Key Actions

Short-Term (0-3 years)

- Develop capacity for active monitoring of key bike/micromobility parking facilities via on-site security with direct line of sight and daily monitoring. In the short-term, focus monitoring on locations with known theft issues.
- Provide passive monitoring at all secure parking facilities through extra-bright lighting, well-maintained facilities, and conspicuous video surveillance.
- Incorporate a secure lock giveaway program into UCSF's bike registration process.
- Develop, distribute, and display educational materials within all enclosures, bike rooms, and on outdoor signage to promote secure locking habits and advertise UCSF security measures.

Ongoing

- Phase out rack styles that do not meet best practices as they reach the end of their useful life or as retrofit opportunities arise.
- Evaluate bike theft data on a quarterly basis and modify monitoring approach as needed.
- Incorporate aesthetic elements into key enclosures.

Monitoring and Maintaining Facilities

Both active and passive monitoring will help UCSF address bike/scooter theft concerns. In the near-term, developing staff capacity for active monitoring of UCSF's largest bike/micromobility facilities will reduce opportunities for theft. Now and in the future, large campus-wide parking facilities (Active Commuter Hubs) should be actively monitored via routine (several times per day) walk-through monitoring. Ideally, all future Active Commuter Hubs should be built to allow for staff with direct line of sight to the bike/micromobility parking facility.

While staff capacity grows, locations with a history of theft should be prioritized for active walk-through monitoring including the Millberry Union enclosures and the Owens Street Garage enclosure. These two locations accounted for 85% of thefts that occurred within secure parking locations between 2018 and 2021. Bike theft data should be evaluated on a quarterly basis and the approach to monitoring adjusted as needed based on results.

In addition to active monitoring, all existing and future secure parking facilities should be equipped with passive monitoring features. Lighting, locking features, and general cleanliness at all secure parking locations should be evaluated and attended to on a monthly basis. In addition, conspicuous video surveillance should be installed and maintained at all facilities.

Programmatic Modifications

Because everyone who uses a secure parking location on campus must first register their bike, the bike registration process offers an ideal touchpoint for ensuring all who use UCSF's secure parking facilities are well-equipped to keep their bike or scooter secure. As mentioned above, enhanced communication and education is recommended for a wide range of bike and micromobility-related topics, including information on preventing theft. These materials, as well as other resources related to secure parking and amenities on campus, should be shared with new registrants.

In addition, high-quality locks can help make bikes locked within UCSF's facilities more secure. High-quality locks – such as U-locks and chains – can be quite expensive. Through a partnership with a local bike shop or a bulk purchasing agreement with a supplier, UCSF should introduce a secure lock giveaway program into the bike registration process to ensure everyone parking on campus is using a strong and durable lock.

On-Site Physical Investments

Finally, physical investments at secure parking locations will help make facilities feel well-maintained, clean, and cared for. Active monitoring and maintenance – as described above – will help make sure facilities are routinely cleaned. Educational information that promote good locking habits and advertise UCSF security measures should be developed and displayed within all Active Commuter Hubs, Building Bike Rooms, and Mobility Nodes.

Recent investments at the Millberry Union enclosure at Parnassus Heights introduced higher-quality enclosure materials (structural steel), doors, locking mechanisms, and installation methods that should be incorporated into additional existing enclosures. As the campus grows, investments in new bike/micromobility parking facilities will also provide UCSF with an opportunity to incorporate aesthetic elements ranging from wall murals to fully designed exteriors into secure parking facilities. Especially where facilities are public-facing, aesthetic elements not only contribute to UCSF's general campus appearance, but help reinforce that these facilities are valued and well cared for.

Action 4 Implementation Details

UCSF Champion: Transportation

Partners: Campus Planning, UCSF PD, Facilities, Campus and Health Design & Construction

Cost/Effort: High

Expected Impact: High

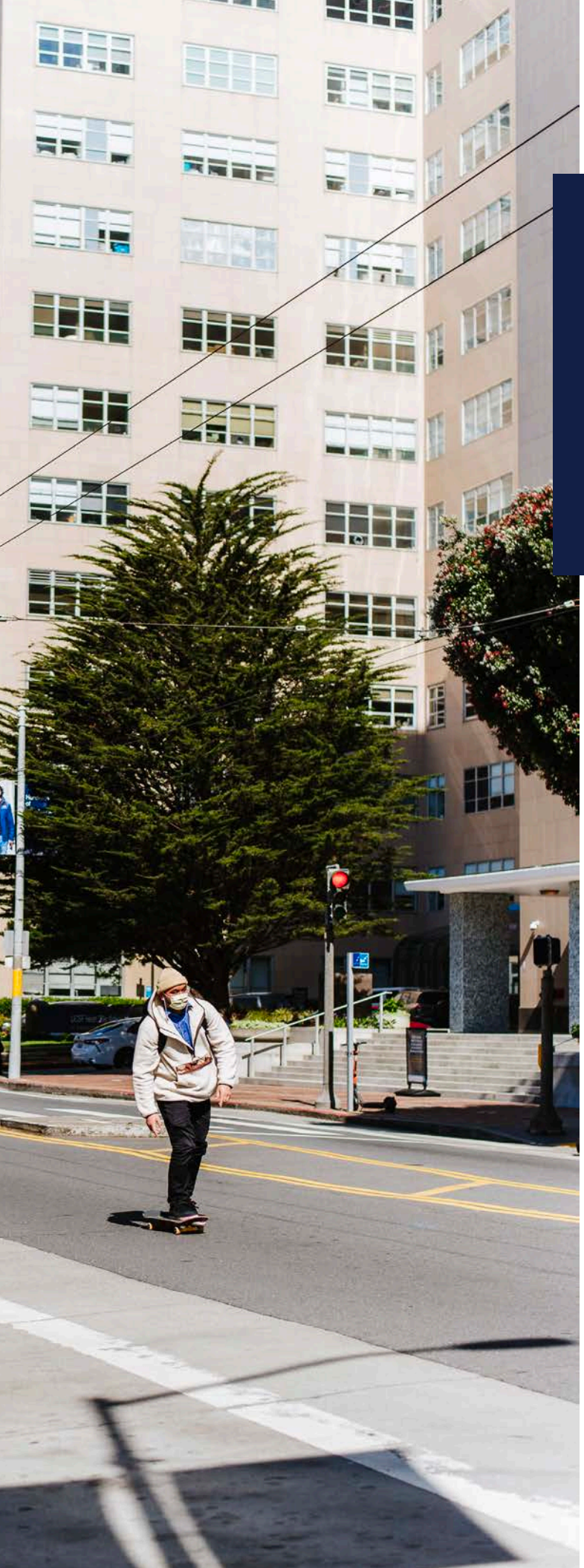
Implementation Timeline: Ongoing

Performance Metrics

- Reduction in the number of year-over-year bicycle and scooter thefts per total number of registered bicycles.
- Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population.

Table 8: Recommendation Summary for Reliable and Inclusive Amenities

Action	UCSF Champion	Partners	High Impact Action	Timeline	Tracking Metrics
Action 1: Adopt UCSF Standards for Bike/ Micromobility Parking and End-of-Trip Amenities	Campus Architect	Transportation Campus Planning Building Permit Services Campus and Health Design & Construction Facilities	X	Short-Term (0-3 years)	Percentage of new construction and renovations that meet all requirements of LEED for Bicycle Facilities Maintain and improve UCSF's Bicycle Friendly University ranking from the League of American Bicyclists.
Action 2: Right Size Supply for Existing and Future Demand	Campus Planning	Transportation Facilities Campus and Health Design & Construction SFMTA	X	Ongoing	Increase in the number of secure (badge/key access) bicycle/scooter parking spaces per person (based on campus population, not including patients and visitors). Increase in the number of public (weather-protected preferred) bicycle/scooter parking spaces per person (based on campus population, inclusive of patients and visitors). Increase in the share of bicycle parking supply that accommodates adaptive, cargo, electric, and other non-standard bicycles and scooters. Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population.
Action 3: Implement High-Priority Bike/ Micromobility Amenity Projects	Campus Planning and Transportation	Campus and Health Design & Construction Facilities SFMTA	X	Short-Term (0-3 years)	Same as Action 2 Completion of short-term priorities identified for each campus site
Action 4: Grow Real and Perceived Security of Bike/ Micromobility Facilities	Transportation	Campus Planning UCSF PD Facilities Campus and Health Design & Construction	X	Ongoing	Reduction in the number of year-over-year bicycle and scooter thefts per total number of registered bicycles. Increase in the year-over-year number of unique users at secure (badge/key access) bicycle/scooter parking locations as a percentage of total campus population.



Conclusion

Biking and micromobility have grown to become a prominent mode of transportation at UCSF. In 2021, eight percent of UCSF commuters rode a bike or scooter to campus. This relatively high share of bike and micromobility commuting emphasizes the practicality and convenience of biking and micromobility for campus commutes. With the Bicycle and Micromobility Plan, UCSF builds on this strong foundation. AS UCSF plans for significant growth between now and 2035, the ability for UCSF to meet the needs of its community hinges on its ability to make sustainable modes – like biking and micromobility – a preferred choice among an even larger

share of UCSF commuters. With over 10,000 existing learners, staff, and faculty living within a 30-minute ride of campus.

Achieving the vision and goals of the plan will require action across UCSF departments and strong collaboration with the City and County of San Francisco and other partners (such as Baywheels). The actions identified in this plan cut across a wide range of policies, practices, and physical investments that work together to achieve the vision set for the plan: By 2035, UCSF will broaden the scope of its health leadership to include a world-class environment that integrates biking, micromobility, and emerging sustainable transportation options into its built environment, policies, and operations.

UCSF