SFMTA
Municipal
Transportation
Agency

Strategy for Long-Term Bicycle Parking in San Francisco

November 8, 2013

SFMTA - About us

The San Francisco Municipal Transportation Agency (SFMTA) is responsible for the planning, implementation, regulation, maintenance and operation of the multimodal transportation system in the City and County of San Francisco. The city's transportation system includes transit, paratransit, streets, bicycle and pedestrian facilities, parking, traffic controls, and taxi services.

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Executive Summary

Long-term bicycle parking is an extremely important consideration for increasing the number of bicycle trips in a city. Long-term bicycle parking can provide economic benefits, make properties more attractive and valuable and increase overall bicycle use by providing an attractive, secure place for parking. San Francisco has existing long-term bicycle parking, including bicycle lockers, unattended shared bicycle areas and attended bicycle stations but there are plenty of opportunities to expand these bicycle amenities, including at transit centers, employment and retail areas and in high residential neighborhoods.

Long-Term bicycle parking should be cost effective to operators, relatively cheap to users and in dense urban areas where there is demand for these facilities. Additionally, the most successful long-term bicycle parking facilities are monumental or are an attraction; this helps draw users in. Inside facilities, racks and bicycle parking accommodations should be easy to use and they should include amenities besides parking, such as bicycle repair or food and drinks.

Based on existing facilities in San Francisco, international bike parking best practices, a geographic demand analysis and a survey of bicyclists, this Strategy establishes long-term bicycle parking recommendations for the city. These are intended to serve bicyclists where bicycles on transit are restricted, there are high volumes of bicyclists, topographic and geographic constraints to riding a bicycle and where there is high population and employment density.

Recommendations for long-term bicycle parking are divided into three types of facilities: bicycle lockers, unattended and attended facilities. Below is a brief description of the Strategy's recommendations.

- **Bicycle Lockers:** The Long-Term Bicycle Parking Strategy recommends on-demand bicycle lockers in existing SFMTA garages, at MUNI and BART transit stations and where feasible along Market Street, privately owned public open spaces and in private garages. In the future, if parking demand exceeds locker capacity, then the recommendation is for additional lockers or, if possible given space and operating constraints, adding an unattended bicycle storage areas.

- **Unattended Bicycle Parking:** The Strategy recommends unattended bicycle storage areas or rooms near transit stations with high volumes of bicyclists and transit riders and in locations with a high density of housing and few existing long-term bicycle parking opportunities. Potential locations include West Portal MUNI Station, SFMTA parking garages, the Ferry Building and the Transbay Terminal.

- **Attended Bicycle Parking:** The Strategy for Long-Term Bicycle Parking prioritizes the construction of two new attended facilities that feature unique but functional designs and raise the profile of bicycle parking and increases use.

In addition to permanent facilities, the SFMTA should continue its efforts to enforce temporary valet bicycle parking for events as required in the Transportation Code. A mechanism to encourage valet bike parking at large public events not covered by the Transportation Code, such as farmers markets, should also be explored in addition to piloting a "pop-up" long-term bicycle parking facility to gauge support and demand. If a pilot long-term bicycle parking is deemed successful, a visually appealing bicycle parking facility located at street level or within easy access to and from the street should be considered.

The Strategy for Long-Term Bicycle Parking in San Francisco is a planning study and provides general recommendations for different long-term bicycle parking facilities in different locations. Table 1 summarizes the estimated long-term bicycle parking capital and operating costs intended for the two initial implementation phases.

Table 1 Estimated Capital and Operating Costs for Long-Term Bicycle Parking

Facility Type	Number	Capital Costs	Annual Operating Cost
Bicycle Lockers	68	$334,800	$19,600
Unattended Bicycle Parking	5	$2,500,000	$10,000
Attended Bicycle Parking[1]	3	$3,600,000-$15,000,000	$360,000-$600,000

In addition to marketing new bike parking facilities, monitoring use and coordinating these opportunities with SFMTA divisions and other transit agencies are important elements for future success.

This Strategy recommends capital investment for bicycle lockers as it becomes available. Also, to fully understand the costs and future opportunities of unattended and attended bicycle parking facilities, the SFMTA recommends that the agency undertake a business plan to advance its existing Strategy for Long-Term Bicycle Parking in San Francisco. When a business plan is complete then the SFMTA will enter these facility types into the Capital Improvement Plan as a need.

[1] Capital costs for attended long-term bicycle parking varies and is dependent on the design needs and capital costs.

1. Introduction

1.1. Purpose

Assessing and developing a strategy for long-term bicycle parking in San Francisco will help determine priorities for implementation as bicycling and the demand for support facilities continues to rise. The Long Term Bicycle Parking Strategy covers best practices for long-term bicycle parking (parking a bicycle more than two hours), reviews existing facilities, analyzes demand and reviews existing codes and policies in San Francisco. Conclusions from this information lead to an overall strategy and recommendations that will guide future funding and implementation decisions. Given the city's policy goals, provision of additional long-term bicycle parking facilities is intended to improve conditions for bicycling in San Francisco, supporting the steadily growing number of people who choose to travel by bicycle in the city and helping motivate more residents, commuters and visitors to follow suit.

Ample supply of long-term bicycle parking is an extremely important consideration for cities like San Francisco with aspirations and potential to add large numbers of new bicycle trips and bicycles to the transportation mix. In European cities with high rates of bicycling, bicycles can clog streets and plazas when too many bicyclists use short-term racks for long-term bicycle parking, leading to chaotic and overcrowded public spaces. In part to help avoid this, San Francisco needs a strategy for providing long-term bicycle parking.

Long-term bicycle parking characteristics include longer parking durations within a sheltered or enclosed space that bicyclists use to store a bicycle between peak hour commute trips, overnight or longer.

Long-term bicycle parking can:

- provide economic benefits
- make properties more attractive and valuable
- increase overall bicycle use by providing an attractive, secure place for parking

1.2. Context

The SFMTA's 2013-2018 Strategic Plan commits the agency to a mode share goal of 50 percent auto and 50 percent non-auto (transit, bicycling, walking and taxi) for all trips by 2018. Meeting this mode shift goal will put the SFMTA and the city as a whole on track to meet the transportation needs of future residents, employees and visitors.

The need for improved long-term bicycle parking is highlighted in the SFMTA 2013-2018 Bicycle Strategy. This document sets new directions and policy targets to make bicycling a part of everyday life in San Francisco. The key actions are designed to meet the SFMTA's Strategic Plan mode share goal of 50 percent of all San Francisco trips made using sustainable modes. Goal 2 of the Strategy is to increase convenience for trips made by bicycle and includes objective 2.2, to increase the supply of adequate long-term bicycle parking.

The San Francisco Planning Code establishes long-term bicycle parking requirements for land uses, including office, retail establishments, schools and multi-family residences. Additionally, recent changes to the San Francisco Environment Code under the San Francisco Tenant Bicycle Parking in Existing Commercial Buildings Ordinance allow employees to store a bicycle in offices if sufficient long-term bicycle parking is not available on-site. This leaves a need for long-term bicycle parking recommendations for medium density residential areas where there are no storage requirements, at transit stations where bicyclists often transfer between modes of transportation and in retail areas where there are workers, visitors, and nearby residents wanting to park bicycles for extended periods of time.

A number of regional studies have highlighted the demand for long-term bicycle parking at transit hubs. The 2012 BART Bicycle Plan inventories existing bicycle parking facilities at BART Stations and recommends future improvements, such as providing adequate bicycle parking of each type at stations.[2] The 2008 Caltrain Bicycle Access & Parking Plan provides several bicycle parking recommendations for the San Francisco Caltrain Terminal, specifically to upgrade the existing bicycle lockers. Additionally, the SFMTA is working on a bicycle and transit integration study that will take the recommendations from the Long-Term Bicycle Parking Strategy and expand upon them for specific transit locations with project descriptions and potential pilot projects. The Long-term Bicycle Parking Strategy planning process considered existing BART, Caltrain, and SFMTA transit studies.

[2] Bay Area Rapid Transit. *BART Bicycle Plan: Modeling Access to Transit.* Berkeley, July 2012. http://www.bart.gov/docs/BART_Bike_Plan_Final_083012.pdf.

2. Locations, Categories and Types

This chapter summarizes best practices in long-term (i.e. over two hours), secure bicycle parking and assesses lessons learned from various case studies. Information is from news articles and press releases, annual reports, usage statistics and phone interviews with on-site facility operators and managing agencies. The lessons learned primarily focus on available parking types, advantages, limitations and costs. Appendix 1 is a table with information on long-term bicycle parking collected from specific cities and transit agencies and Appendix 6 is a list of sources and interviews referenced while writing the strategy.

Toppled and Disorganized Bicycles Parked in Copenhagen

2.1. Locations

The three primary generators of demand for long-term bicycle parking are transit centers, employment and retail centers, and multi-family residences.

2.1.1. Transit Centers

The greatest demand for long-term bicycle parking facilities is commonly within or near transit centers. In European cities with high bicycling rates, the most visible, innovative and highest capacity bicycle parking is at train stations. For example, the Muenster (Germany) main train station has a modern, attractive bicycle station that offers secure parking for 3,300 bicycles occupying the site of a former parking lot that accommodated two to three dozen vehicles. Amsterdam (Netherlands), Groningen (Netherlands), Odense (Denmark), and Copenhagen (Denmark) offer similar high-capacity bicycle parking facilities at their main train stations.[3]

Daniel Sparing VIA FLICKR

Groningen Station Bicycle Parking

2.1.2. Employment and Retail Centers

There is also considerable demand for long-term bicycle parking in downtown areas with major employment and shopping centers that attract high volumes of bicyclists. In European cities with high rates of bicycling, the long-term bicycle parking facilities accommodate the demand, prevent disorganization and increase security. For example, the City of Odense recently added 400 sheltered bicycle racks near its main shopping area, Groningen offers seven guarded long-term bicycle parking facilities and Copenhagen has 3,300 bicycle parking spaces in its center.[4]

[3] John Pucher and Ralph Buehler, "Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany," Transport Reviews 28, no. 4 (2008): 495-528.

[4] Ibid.

2.1.3. Residential Areas

Finally, there is demand for long-term bicycle parking in residential areas. In the Netherlands, of all the bicycles stolen, approximately half disappear in the vicinity of peoples' homes, particularly where there are few supervised bicycle parking facilities.[5] Bicycle storage is often an issue in dense urban environments where there is not adequate space to park a bicycle on private property or within a residential unit. In San Francisco, it is common to see bicycles locked to residential balconies and stairway railings. It is important to consider long-term bicycle parking facilities in these areas and evaluate their effectiveness in cities like San Francisco where the number of bicyclists is continually increasing.

2.2. Categories

Long-Term bicycle parking offers bicycle storage for a longer period, going beyond the objectives of short-term bicycle parking by adding a higher degree of security and weather protection. As previously stated, orderly, well-organized long-term bicycle parking becomes increasingly important as the number of bicyclists in a city increases.

Various types of long-term bicycle parking facilities exist in the US and the world, including attended, unattended, access-controlled and individually enclosed bicycle parking. In this strategy and in Table 2, there are three categories for different types of long-term bicycle parking:

- Bicycle lockers – locked storage facility accessible only by users
- Unattended shared bicycle areas – a room or area accessible to multiple users with a key or keycard
- Attended bicycle stations with optional amenities and services – monitored bicycle parking within a secure environment accessible to multiple users that can include other amenities such as bicycle repair, sales and bicycle rentals.

Table 2 Bicycle Parking Categories

	 Richard Drdul	 http://peciar.info/another-bike-station/
Bicycle Lockers	*Unattended Bicycle Area*	*Attended Bicycle Stations*

[5] CROW, *Design Manual for Bicycle Traffic* (Ede, The Netherlands: Centre for Research and Contract Standardisation in Civil Engineering, 2007).

2.3. Parking Types

In many cases, cities with long-term bicycle parking facilities also offer support beyond the policy level by providing funding or operations management for long-term bicycle parking. This facilitation ranges from funding or contracting operations of attended facilities, to renovating existing spaces and structures, to new construction of long-term bicycle parking. The three classes of long-term bicycle parking all have strengths and disadvantages. This section and the corresponding Table 3 include an overview of this information.

Table 3 Comparison of Different Long-Term Bicycle Parking Types' Potential

	Bicycle Lockers			Unattended Shared Bicycle Areas			Attended Bicycle Stations		
	Low	Mid	High	Low	Mid	High	Low	Mid	High
Capital Cost	◆				◆				◆
Operating Cost	◆			◆				◆	
Capacity	◆					◆			◆
Amenities	-			◆					◆
Security			◆		◆				◆

2.3.1. Bicycle Lockers

Bicycle lockers are storage containers that can provide long-term bicycle parking for users at a convenient location. There are two common types of bicycle lockers: standard lock-and-key lockers rentable by a single user or set of users and on-demand electronic lockers that are rentable on an hourly first-come-first-serve basis. Placement of bicycle lockers can occur wherever there is adequate space; typically lockers range from 22 square feet for an individual locker to 41 square feet for a quad of lockers (four).[6] Collective bicycle lockers also exist, but these are uncommon in North America and more prevalent in European countries such as the United Kingdom, the Netherlands, Germany and Belgium. Collective lockers store up to ten or more bicycles and can fit into an on-street bicycle parking space (depending on the number of bicycle parking spaces inside). With these collective facilities, users have a key or access code.

http://tbsh.info/golden_gate.html

http://www.el-cerrito.org/index.aspx?NID=537

Typical single-user bicycle locker (top) and BikeLink lockers in El Cerrito (bottom)

Single-user bicycle lockers are usually rented by a bicyclist and secured with an integrated lock.

[6] "BikeLink™ System Overview," eLock Technologies, 2011, accessed September 24, 2012, http://elocktech.com/docs/BikeLink%20brochure%20-%20eLocker.pdf.

Renting single-user lockers occurs on an annual, semi-annual or monthly basis and in many cases there is a deposit for a key. Single-user lock-and-key bicycle lockers employ outdated technology and suffer from a number of disadvantages, including:

- Keys are often not returned to the operating agency, leading to expensive re-keying costs to prevent theft.
- Because they use space inefficiently, demand often exceeds the number of lockers that can be accommodated at a given location.
- When a locker is not in use, it sits empty, yet is unavailable to anyone other than the key holder even though there may be a long waiting list for lockers.
- Renters may use lockers to store everything *but* bicycles if there is not a way to see inside.

Electronic on-demand lockers employing keycard access technology present a solution to most of the shortcomings of traditional lockers. Because lockers are no longer limited to a single renter, e-lockers make far more efficient use of space. On-demand lockers can serve seven to ten times more bicyclists compared to a traditional assigned locker system. When placed at a transit station, four on-demand bicycle lockers (one quad) can serve the parking needs of approximately 30 different bicyclists over the course of a year.[7] In the San Francisco Bay Area, BikeLink operates numerous e-lockers at 28 BART stations, and BikeLink cardholders can also access the bicycle stations at the Embarcadero, Downtown Berkeley, Ashby and Fruitvale BART stations. The BART on-demand lockers charge users a nominal hourly fee (three to five cents) that prevents permanent storage, encourages use by different bicyclists and offsets the cost of operations.[8] Single bicycle lockers with an on-demand system can cost up to $3,500. BART reports that about half of their existing BikeLink lockers are well used (80% occupancy) and the other half are either relatively new installations, gaining in popularity or they are at stations without high bicyclist demand. However, BART reports that there is a tipping point past which e-lockers "catch on" at a location and become quite popular.[9]

Collective bicycle lockers, bicycle drums, bicycle hangars, or Fietshangar are shared bicycle lockers that offer residents of multifamily housing without access to a garage the option to park their bicycles close to their residence in a secure, sheltered structure. Collective lockers can be positioned in the parking lane or sidewalk (depending on the width), and, in European countries, groups of individuals often rent them.[10] A collective locker that stores five bicycles costs approximately $4,000 per unit.

Bicycle lockers have potentially low operational costs that include seasonal cleaning, clearing system errors (if on-demand) and providing customer service. Administrative duties for traditional keyed lockers, however, can be burdensome and costly. In general,

[7] "Questions frequently asked by people considering purchasing BikeLink™ equipment," eLock Technologies LLC, 2010, accessed September 27, 2012, http://elocktech.com/docs/BikeLink%20brochure%20-%20general.pdf.
[8] If a bicyclist parks at a bicycle locker that is $0.05 per hour, for eight hours a day on 260 work days per year the annual cost is $104.
[9] Steve Beroldo (BART), phone interview by Matt Lasky and Jessica Kuo, July 31, 2012.
[10] "Fietshangar," Fietshangar, accessed September 28, 2012, http://www.fietshangar.nl/bookcms/cms/cms_module/index.php?obj_id=750&lang=eng.

individual bicycle lockers occupy more space per bicycle in comparison to other facility types but they are the most secure long-term bicycle parking type.

The overall benefits of individual bicycle lockers are the potential for low operating costs and high security; the primary disadvantages are the space requirements per bicycle, lack of capacity and other amenities for bicyclists. As noted earlier in this section, first-come-first-serve bicycle lockers provide a host of advantages over single-use lockers,

http://bartbikestation.com/services.php

Embarcadero Bicycle Station

2.3.2. Unattended Bicycle Areas

Unattended bicycle areas (or rooms) provide a covered bicycle storage facility with limited access. Access to these facilities is often with a keycard which may be specific to an employer, campus or available to the general public. Many public bicycle rooms in the San Francisco Bay Area are accessible using the BikeLink card. Since numerous individuals have keys or cards to these facilities, it is still necessary for users to lock bicycles while parked inside. In some cases, unattended bicycle areas have video monitoring that is reviewable by the operator if there is a theft or vandalism incident. The size and capacity of unattended bicycle areas can be as large as space allows. In some cases, unattended areas offer self-serve bicycle tools or a bicycle tire air pump. These parking facilities can be located inside buildings, parking garages or built as stand-alone units where there is adequate space. Based on anecdotal evidence from other cities, to ensure successful long-term bicycle parking, these facilities need to be easy to use and easy to locate when bicyclists reach a destination. Examples of unattended bicycle areas include the Embarcadero BART bicycle station where there is capacity for 96 bicycles and various bicycle rooms in San Francisco's office buildings.

jantos via FLICKR

Alewife Station Unattended Bicycle Parking, Cambridge, MA

University of British Columbia Unattended Parking Area - From straight on, you see right through to the cage, from an angle you see a bike parking image

Unattended facilities can be relatively low in capital cost when converting existing space in a parking garage or a room to long-term bicycle parking; conversely they can be expensive to build from the ground up. They also can vary in design – from basic chain-linked fenced areas to more elaborate indoor facilities. Cities and transit agencies have paired the development of unattended bicycle parking facilities with larger projects. For example the Ashby BART Station modernization project included construction of an unattended bicycle area facility and a similar area is included in the MacArthur BART Station renovation slated for completion in 2013. In addition to an access control system,

operations include maintenance of the space that may include sweeping the area, checking for non-bicycle related items and ensuring that there are no abandoned bicycles in the area. Operational costs for a large public facility run approximately $2,000 per month.[11] The user cost for long-term bicycle parking varies. Some are free or bundled in the lease or purchase of a residential unit or office space, while others may have a low user fee that helps offset operational costs. Since more than one person has access to these facilities, there are potential security issues in comparison to single-user facilities and attended facilities.

The overall benefits of unattended bicycle areas are the potentially low capital costs (per bicycle), low operating cost and the opportunity for large capacity. The disadvantages are less security, and large space requirements for the facility and potentially high capital costs.

2.3.3. Attended Bicycle Stations

Attended bicycle stations are second to bicycle lockers in providing the most secure bicycle parking. These facilities offer covered or indoor bicycle parking with an attendant present to supervise parked bicycles or assist users with valet services. Typically, attended long-term bicycle parking facilities have staff on-site during peak commute hours (7 to 9 AM, 4 to 6 PM) or during daytime hours (7 AM to 7 PM). There are examples of free attended bicycle parking and also cases where users must become paying members, signed up on a daily, monthly or annual basis with adjusted fees based on membership type to use the facility. Free attended stations have greater demand partly due to the price and the ease of use: paying takes time.[12] Like bicycle areas and some bicycle lockers, many bicycle stations use keycard technologies or similar devices to provide members with access. Many examples of attended bicycle stations also include a keycard-accessible self-service or unattended section. During off-hours, members still have 24-hour access to these unattended facilities and in some cases have restrictions on the maximum number of days for overnight parking to prevent permanent bicycle storage.

http://mommawheelie.files.wordpress.com

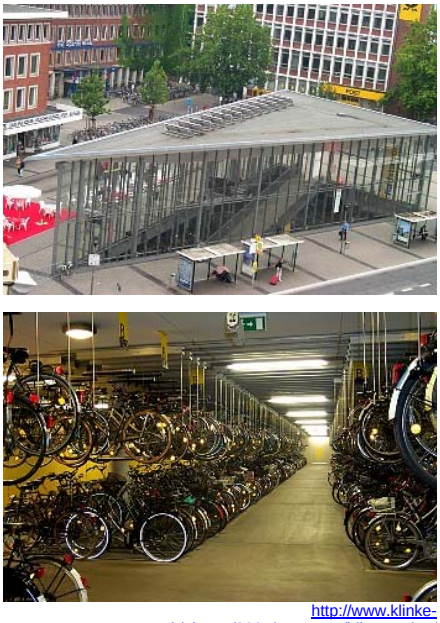
Triple-Decker bicycle racks inside the Downtown Berkeley Bicycle Station

Space most commonly dictates the size and capacity of bicycle stations and whether they can provide additional amenities. Typically, attended facilities have double-decker bicycle racks or other racks that provide the most efficient use of space. There are two types of double-decker racks: 1) simple two-level racks where bicyclists lift their bicycle onto the second level and 2) lift-assist racks where bicyclists pull down the top “bicycle trays”, load their bicycle and then lift the tray up. This second type can feature a spring or hydraulic lift-assist device. Lift-assist double-decker racks have higher use and preference by bicyclists than double-decker racks without them. The downtown Berkeley attended

[11] Steve Beroldo (BART), phone interview by Matt Lasky and Jessica Kuo, July 31, 2012.

[12] CROW, *Design Manual for Bicycle Traffic*.

bicycle station features triple-decker racks to maximize the use of limited space. Attended bicycle parking facilities can be in a number of locations: inside storefronts, parking garages or transit stations, or in plazas as standalone structures. Examples of attended bicycle stations in the San Francisco Bay Area include the popular and often full Warm Planet Bikes at the Caltrain Terminal and the BART Bicycle Stations in downtown Berkeley and at Fruitvale.



http://www.klinke-macrae.org.uk/photos/2001/muenster/bike_station/

Muenster Station, Germany Bicycle Parking Center with 4,000 parking spaces

Bicycle stations can be the most expensive long-term bicycle parking facilities to construct given the design and construction or necessary remodeling. However, grants and partnerships between local jurisdictions, transit agencies and other agencies can offset and divide the funding burden. The downtown Berkeley bicycle station cost $756,000 to build and only $50,000 came from BART. The remainder came from regional, state and federal grants. Like some unattended facilities, planning for bicycle stations has been bundled into overall renovations or new additions to transit centers preventing the construction of stand-alone stations from the ground-up. The Fruitvale BART bicycle station was included as part of a much larger BART transit center construction project.

Attended bicycle stations require a storefront or room with ample space to store parked bicycles, as well as other amenities and services that may include bicycle repair, maintenance stands, publicly available tools, a fully equipped bicycle shop, bicycle rentals or other sales and services. Some stations also provide lockers, changing rooms and showers, which research has demonstrated to attract more bicycle commuting and use of long-term parking facilities.[13] Additionally, investing in a self-service area during daytime hours can attract more users. Providing these revenue-generating amenities can help or potentially offset the challenge of funding operation costs completely. The attended facilities in Washington DC and Santa Monica, California have no-cost contracts, so operational expenses are paid completely from the operator and revenue generated by services they provide. Any revenue above operational costs is profit and goes to the operator.

[13] Ralph Buehler, "Determinants of bicycle commuting in the Washington, DC region: The role of bicycle parking, cyclist showers, and free car parking at work." *Transportation Research Part D*, 17 (2012): 525-31.

Similar to unattended bicycle rooms, the most cost effective way to implement this type of facility is on existing public property, reducing the costs of real estate or rent. In many instances, transit or government agencies contract out the operations of attended facilities and contract terms vary considerably. In some cases (like in Washington and Santa Monica), agencies have no-cost agreements where the contractor pays no rent and may keep any sales or services revenue in return for providing a specific amount of bicycle parking. In other cases, operators provide attended bicycle parking for a fixed fee, or they may receive a subsidy to successfully operate the facility.

The overall benefits of attended bicycle stations are the high security and the potential capacity and amenities offered. The disadvantages are the potential for high capital and operating costs, if fees for sales or services do not offset operations.

http://offthebeatenbiketrack.blogspot.com/

Freiburg Mobile Station, Germany
Bicycle Parking Center with 1,000 parking spaces

3. Lessons Learned From National and International Examples

A number of takeaways from other cities can be applied directly to the San Francisco long-term bicycle parking experience, including cost effectiveness measures and operations, user costs, location and diversity, the appeal of monumental facilities, rack types, access to amenities and analysis and evaluation.

3.1. Cost Effectiveness and Operations

The most cost-effective long-term bicycle parking solutions are located in public buildings or on public property. In many cases this means repurposing existing space, such as parking spaces in an existing parking garage or vacant space in a transit station. Locating long-term bicycle parking in such places may not require the owner or operator of the facility to purchase real estate or pay rent, significantly decreasing the initial capital and ongoing operational expenses. Additionally, bicycle lockers and unattended bicycle rooms are simpler to operate than staffed, full-service bicycle stations. Since bicycle locker and unattended systems do not require paid attendants to be on-site during business or commuting hours they incur lower operating costs.

There may be unintended consequences to not having attended facilities, such as less use and reduced security. Services or sales should accompany an attended bicycle parking facility to help offset the cost of operations. Attended facilities should have clearly defined facility layout, delineating the area dedicated for bicycle parking and the area dedicated for sales or services. An evaluation of the division between the area for bicycle parking and sales or services should occur regularly to confirm that use of the parking facility is the most cost-efficient (assuming cost efficiency is the goal of the parking facility). Additionally, prior to implementation of an attended facility, there should be a strategy or plan for funding business operations to increase the likelihood of self-sufficiency into the future and considerations for future expansion.

3.2. User Cost

Long-term bicycle parking ranges in costs, with the least expensive being free. Where possible, free attended facilities are the best option and enjoy the most use by bicyclists.[14] One local example is the facility at the San Francisco Caltrain Terminal currently operated by Warm Planet. This facility is free and attended and averages approximately 72 percent capacity, but has required an ongoing operations subsidy because the small size of the building limits the amount of space that can be dedicated to retail sales. Another example of a successful free attended long-term bicycle parking facility is in Apeldoorn (Netherlands) where a free attended facility led to stimulating bicycle use and reducing bicycle theft; two years after opening usage of the facility doubled.[15] However, if a fee is necessary for long-term bicycle parking facilities, then it should be a nominal amount. Additionally, the CROW Design Manual recommends that if

[14] Dirk Dufour, "Bicycle Parking in the City Centre," PRESTO, European Union Intelligent Energy – Europe Programme, February 2010, accessed September 12, 2012, http://www.presto-cycling.eu/images/factsheets/presto%20infrastructure%20fact%20sheet%20on%20bicycle%20parking%20in%20the%20city%20centre.pdf.

[15] CROW, *Design Manual for Bicycle Traffic*.

there is a cost to park a bicycle at a long-term facility, then this cost should be consistent across similar facilities citywide.[16] This could foreseeably be a challenge in San Francisco where different public and private agencies manage these facilities.

3.3. Location and Diversity

Supplying ample long-term bicycle parking requires multiple solutions. To meet the needs of the most users, long-term bicycle parking should be easy to use, intuitive and easily accessible. European examples have shown that bicycle rooms inside a train station can be far less popular than short-term, less secure bicycle parking used as long-term bicycle parking available at the street level. In the San Francisco Bay Area, the same trend is observable at the Ashby BART station, where use of covered outdoor bicycle racks just outside the station is higher relative to the cardkey-controlled, unattended bicycle parking area facility located adjacent to the unenclosed racks.[17] Underuse of bicycle parking facilities will occur if they do not respond to actual bicycle parking demands.[18]

To help ensure use, the CROW Design Manual recommends seven criteria for locating attended long-term bicycle parking:[19]

1. Situate the facility on a bikeway
2. Situate the facility in or adjacent to the core shopping area
3. Situate the facility within 150 meters from the center of the shopping area
4. If the facility has to be built on a quiet street, do not allow it to be more than 30 meters from the shopping center
5. Ensure visibility from the core shopping area with a good walking route
6. Situate the facility near (maximum of 50 meters) to bicycle destinations (e.g. - a transit station, public institution, etc.)
7. Situate the facility more than 300 meters from an existing long-term bicycle parking facility

http://peciar.info/another-bike-station/.

Washington, DC Bicycle Station

http://www.mfarch.com/project%20pages/bike_hanger/bikehanger.html

The Bike Hangar is a bicycle parking concept developed by Manifesto Architecture

Just as there is a diverse mix of bicyclists and bicycles on San Francisco streets, there should also be a diverse mix of long-term bicycle parking. The city has a growing number of bicycle parking facilities, but it is important to vary bicycle parking in location and facility types because not all long-term bicycle parking facilities meet the needs of all bicyclists.

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[16] Ibid.

[17] Steve Beroldo (BART), phone interview by Matt Lasky and Jessica Kuo, July 31, 2012.

[18] Dirk Dufour, "Bicycle Parking in the City Centre."

[19] CROW, *Design Manual for Bicycle Traffic*.

3.4. Monumental facilities

As noted in the Danish Cyclists' Federation Bicycle Parking Manual, good design and quality construction tend to influence human behavior. Since the design and layout of a bicycle parking facility will have a bearing on how and how much it is used, the appearance of the bicycle parking facility cannot be underestimated.[20] Many successful facilities are monumental structures or offer unique features, helping to market the facility and increase use. Examples from the US where this has occurred include Washington DC and Santa Monica. In Washington DC, the Department of Transportation built an architecturally unique facility. The highly designed structure is a monumental steel and glass structure that contradicts the architecture of the adjacent Union Station and is not actually very bicycle user friendly. However, the facility is very noticeable to bicyclists as well as visitors to the area. The Santa Monica bicycle center is not a highly designed facility (though it does possess some unique features) but it is prominently located near downtown Santa Monica and the Santa Monica Pier. Examples of unique features at other long-term bicycle parking facilities include the bicycle washing station in the 4,000-bicycle parking space Muenster (Germany) station and automated bicycle parking in Tokyo (Japan). In Tokyo, commuters coming into the station push a button at one of the designated elevators, and when the door opens, they can trust their bicycle to a giant robotic hand that takes hold of the bicycle and moves it to the underground garage where the machine safely parks and stores the bicycle. It takes approximately ten seconds for the bicycle's return to the commuter.[21] Another unique and yet-to-be-implemented concept is the Bike Hangar that hangs bikes off of sides of buildings on a Ferris wheel-like structure.

Providing a monumental facility or unique feature increases capital costs but ultimately may lead to greater recognition and use by bicyclists.

3.5. Rack Type

The need for diverse long-term bicycle parking types and locations demonstrates the need for offering different types of racks. Standard inverted U racks work well inside bike rooms where space is not at a premium. Where space is less abundant, racks that provide slightly less security but achieve economy of space by employing vertical offset or stacking may be appropriate. Double decker racks are common in many locations that must maximize space limitations. However, it is critical that the second level offers lifting assistance. Where double decker racks are used, a small number of standard racks at the ground level should also be available for

http://www.dero.com/blog/?p=320/

Double decker bicycle racks

[20] The Danish Cyclists Federation, *Bicycle Parking Manual.*

[21] Harden, Blaine Harden, "Tokyo's High-Tech Bike Storage Solution," Washington Post, August 14, 2008, accessed September 28, 2012, http://www.washingtonpost.com/wp-dyn/content/video/2008/08/14/VI2008081401614.html?sid=ST2008083000650.

bicyclists to provide an alternative for those that may have difficulty crouching under the second deck of racks in a double-decker arrangement. These extra racks also provide parking for atypical devices like tricycles, tandems, long-tail bicycles, bicycles with trailers and recumbents.

3.6. Access to Amenities

Many attended facilities in other cities offer unattended bicycle parking, either during attended hours if the facility is large enough, or after normal business hours. In these cases, even if the attended parking is free, bicyclists pay membership subscriptions to access the unattended facility and may also have access to amenities such as storage lockers, changing rooms and showers. Availability of these amenities has a stronger influence on urban bicycle commuting than providing bicycle parking alone.[22] Therefore, it can be worth additional costs to keep an attended facility open to subscribers, if amenities are available. Appropriate lighting and security of bicycle parking facilities such as guards and video-surveillance are common amenities to increase access during normal business hours and after hours.[23]

[22] Ralph Buehler, "Determinants of bicycle commuting in the Washington, DC region: The role of bicycle parking, cyclist showers, and free car parking at work."

[23] John Pucher and Ralph Buehler. "Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany."

4. Existing Facilities

To better understand the scope of current and future demand for long-term bicycle parking in San Francisco, existing supply must first be documented. Publicly available long-term bicycle parking facilities are located across the city and some of these existing facilities are more well-known and accessible than others. As Figure 1 shows (on page 21), most are concentrated where the highest density of people, jobs, transit and bicycling are, in the northeast quadrant of the city. Given the limited scope and budget of this project, the SFMTA primarily relied on a variety of existing resources to develop a baseline of existing long-term bicycle parking facilities. For this chapter, SFMTA staff identified previous efforts to estimate the amount of long term bicycle parking and reviewed relevant bicycle parking information available from both internal sources and other city agencies. The relative lack of existing data on private residential and workplace bicycle storage facilities suggests that a comprehensive inventory of existing long-term bicycle parking would be beneficial.

4.1. Office & Residential Garages

In 2010, the San Francisco Office of the Controller estimated the number of bicycle parking facilities in private and public San Francisco parking garages. The analysis estimated the existing inventory of bicycle parking provided per Planning Code Section 155, based on a review of building inventory information provided by Jones Lang LaSalle. The basis for the estimate was the number of bicycle parking spaces required per the Planning Code given construction or redevelopment dates and the required number of car parking spaces from the code, combined with the number of long-term bicycle parking spaces in SFMTA parking garages. The Controller's Office estimated a total of 1,167 Class 1, or long-term bicycle parking spaces. This estimate includes a number of important assumptions: it excludes "ad hoc" bike rooms or storage provided within buildings not required by Section 155 of the existing Planning Code and does not consider the provisions outlined in the Employee Bicycle Access Bill.

4.2. SFMTA Garages

The SFMTA operates 19 parking garages in San Francisco. Three garages have bicycle storage areas, six have lockers, and five have standard bike racks that are not enclosed separately but nevertheless offer cyclists an extra measure of security because they are located within sight of the parking garage attendant. Table 4 below presents details:

Table 4 Long-Term Bicycle Parking in SFMTA Garages

	Garage Name	Address	Bicycle Lockers	Bicycle Spaces in Unattended Area	Bike Spaces Near Attendant
1	Civic Center	355 McAllister St	0	0	8
2	Ellis O'Farrell	123 O'Farrell St	8	0	0
3	Fifth & Mission	833 Mission St	16	0	0
4	Golden Gateway	250 Clay St	8	30	0

	Garage Name	Address	Bicycle Lockers	Bicycle Spaces in Unattended Area	Bike Spaces Near Attendant
5	Japan Center	1610 Geary Blvd	0	44	0
6	Lombard	2055 Lombard St	0	0	4
7	Mission Bartlett	3255 21st St	0	0	6
8	Moscone	255 Third St	0	0	24
9	North Beach	735 Vallejo St	0	0	20
10	Performing Arts	360 Grove St	0	0	0
11	Polk Bush	1399 Bush St	0	0	0
12	Portsmouth	733 Kearny St	0	26	0
13	Saint Mary's Sq	433 Kearny St	6	0	0
14	SF Gen Hospital	2501 23rd St	0	0	0
15	16th & Hoff	42 Hoff St	6	0	0
16	Sutter Stockton	444 Stockton St	8	0	64
17	Union Square	333 Post St	0	0	0
18	Vallejo	766 Vallejo St	0	0	0
19	7th & Harrison	415 7th St	0	0	0
		Total	52	103	126

Additionally, the SFMTA has 19 parking lots. While these do not have existing bike parking, there are opportunities to provide it.

Table 5 Existing SFMTA Parking Lots

	Parking Lot Name	Parking Lot Address
1	Pierce-Lombard	3252 Pierce St
2	Cal-Steiner	2450 California St
3	8th & Clement	324 8th Ave
4	9th & Clement	330 9th Ave
5	Castro & 18th	457 Castro St
6	18th & Collingwood	4116 18th St
7	24th & Noe	4061 24th St
8	Lilac & 24th/Capp	1 Lilac St
9	18th & Geary	421 18th Ave
10	Geary & 21st	5732 Geary Blvd
11	7th & Irving	1340 7th Ave
12	.9th & Irving	1325 9th Ave
13	20th & Irving	1275 20th Ave
14	Ocean & Junipero Serra	2500 Ocean Ave

	Parking Lot Name	Parking Lot Address
15	19th & Ocean	3000 19th Ave
16	Ulloa & Claremont	807 Ulloa St
17	West Portal & 14th	174 West Portal Ave
18	Norton & Mission	20 Norton St
19	Felton & San Bruno	25 Felton St

4.3. Caltrain

The Caltrain Terminal at 4th and Townsend Streets has two types of long-term bicycle parking: bicycle lockers and attended parking at Warm Planet Bikes. Caltrain operates 180 individual bicycle lockers at the station. The locker rental fee is $33 for six months plus a $25 refundable key deposit. There is currently locker availability and if interested, an applicant must fill out the Caltrain Bicycle Locker Rental Agreement. Attended bicycle parking at Warm Planet is available Monday – Friday from 6:45 a.m. to 8:00 p.m. Daily parking is free, but a $1 fee is charged for bikes left overnight. Warm Planet has capacity to accommodate 170 bicycles and parks an average of 120 bicycles per day. Typical weekday counts range from 85 to 170 bicycles per day with peak demand occurring midweek consistently during the spring, summer, and fall seasons. Warm Planet is only able to park this number of bikes by sacrificing retail floor space, compromising the financial sustainability of the facility. Caltrain offers the space rent-free and provides an operating subsidy. Caltrain recently completed an RFP process and has contracted with a new operator to run the facility.

4.4. BART

Several San Francisco BART stations have long-term bicycle parking in one or more of the following forms: keyed lockers, unattended bike storage areas, or racks inside the fare gates. Table lists these stations and the type of parking available. BART's keyed metal lockers are rented on a quarterly or semi-annual basis and locked with a key that is assigned to a single user.[24] Applicants for lockers must fill out an application and pay $15 for three months or $30 for a year plus a $25 key deposit. One existing unattended storage area is located on the concourse level of the Embarcadero Station and another is planned for Civic Center BART Station for 2014. The Embarcadero bike station is a storage area accessible with a keycard that uses BikeLink technology to access and lock it. The cost to leave a bike at the Embarcadero bicycle station is 3 cents per hour from 9:00 a.m. to 6:00 p.m. on weekdays, and 1 cent per hour at all other times. Racks inside fare gates are not high security long-term bicycle parking but they provide space for bicyclists to leave a bicycle more securely locked than at a rack located on the street. Observations show that bikes are typically left on these racks inside the fare gates for longer than 2 hours, and often overnight. These locations inside the fare gates limit

[24] Bay Area Rapid Transit, *BART Bicycle Plan: Modeling Access to Transit* (July 2012): 12.

exposure of parked bicycles to just BART customers as well as offering shelter from outside elements.

Table 6 Long-Term Bicycle Parking at BART Stations[25]

Location	Keyed Lockers	Unattended Bicycle Area	Inside Fare Gates
16th St/Mission	0	0	154
24th St/Mission	0	0	140
Balboa Park	12	0	120
Civic Center	0	TBD	126
Embarcadero	0	96	0
Glen Park	12	0	42
Powell	0	0	14
Total	24	96	596

4.5. Public Institutions

Citywide, a number of public institutions have long-term bicycle parking. These facilities are typically for bicyclists wishing to park a bicycle while at the institution. One example is at University of California Hastings College of Law; this campus has an unattended bicycle area with 86 parking spaces. Additionally, the University of California, San Francisco (UCSF) has unattended parking at its Mission Bay and Parnassus campuses. UCSF has a “Bike Access Pass” or a shower program in partnership with its Fitness and Recreation Centers. San Francisco State University has an attended Bike Barn that is free and open Monday through Thursday from 7:30 a.m. to 10:00 p.m. and Friday from 7:30 a.m. to 5:00 p.m. The Bike Barn has 400 parking spaces and averages 150 bicycles per day. Bicyclists can leave a bicycle at the Bike Barn overnight at their own risk, however it is not encouraged by the University.

[25] Ibid. 16-17.

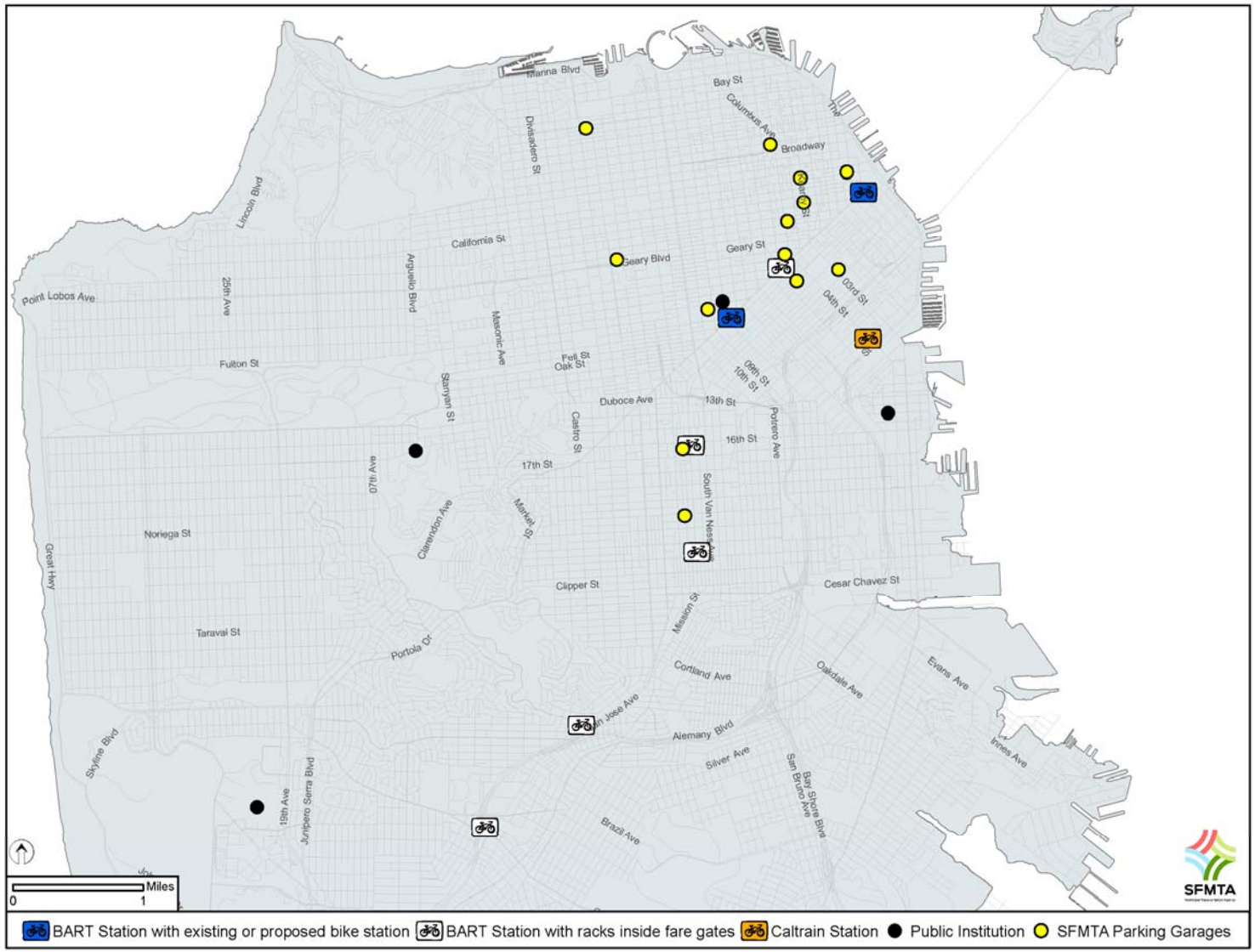

Figure 1 Existing Long-Term Bicycle Parking in San Francisco at SFMTA Garages, the Caltrain Terminal, and BART Stations

5. Policies

This chapter provide an overview, discussion and documentation of codes and policies relevant to long-term bicycle parking in San Francisco and selected cities in North America and Europe.

5.1. Best Practices

Nationally and internationally, cities have addressed the delivery of long-term bicycle parking indirectly through a variety of approaches and policy instruments in local ordinances and codes. These requirements mandate the amount and type of bicycle parking availability in various settings and at different land uses. Developers and building owners affected by local requirements are typically responsible for providing specific minimums of bicycle parking that may vary according to the use and scale of the development. Appendix 4 is an overview of long-term bike parking requirements in the cities of Portland, Vancouver and New York City as compared to recommendations from the Association of Pedestrian and Bicycle Professionals.

Because the majority of bicyclists will not travel far out of their way to seek out long-term facilities, the European Union's PRESTO Policy Guide on Cycling Infrastructure recommends that cities provide dispersed unsupervised bicycle parking facilities that are easily accessible.[26] In countries with a strongly established bicycle culture, the private sector may play a direct role in setting policy as well. In the Netherlands, the Dutch Cyclists' Union and a street furniture association have collaborated to develop a set of national bicycle parking standards. Where bicycle parking design meets these standards, the facility is marked with the FietsParKeur seal of quality.[27]

http://www.falco.nl/producten/fietsparkeren/fietsparkeur-producten/fietsenrek-ideaal/

FietsParKeur approval sticker

The 2008 Danish Cyclists' Federation lists eight basic principles for bicycle parking. These are not formal policies but they are best practice for the placement and implementation of bicycle parking. The eight principles with definitions are below and apply to both short- and long-term bicycle parking:[28]

- Attract attention: Raise the necessary awareness about bicycle parking—many prejudices can be shifted by arguing in favor of bicycle parking in the right contexts and by presenting decision-makers with good examples.
- Choose the right location: Bicycle parking facilities must be located close to the route naturally taken by cyclists. They must be visible, with easy access and at a

[26] Dirk Dufour, "Bicycle Parking in the City Centre," PRESTO, European Union Intelligent Energy – Europe Programme, February 2010, accessed September 12, 2012, http://www.presto-cycling.eu/images/factsheets/presto%20infrastructure%20fact%20sheet%20on%20bicycle%20parking%20in%20the%20city%20centre.pdf.

[27] "Wat is Fietsparkeur?" Fietsersbond, trans. Google Translate, last modified October 7, 2009, accessed October 12, 2012, http://www.fietsersbond.nl/de-feiten/fietsparkeren/fietsparkeur/wat-fietsparkeur.

[28] The Danish Cyclists Federation. Bicycle Parking Manual. Guidelines and Recommendations. 2008.

distance from the final destination which is in line with the purpose and duration of the parking.

- Outline a solution that works: Focus must be on access and room for maneuver as well as on the size and characteristics of the area. It must generally be easy to get around with the bicycle, place it in the stand and proceed on foot. When picking up the bicycle, it must be easy to find and get out.
- Make sure there are enough racks: Ensure that the number of racks and stands and facilities meet the current and future demands for parking.
- Identify the right racks: The individual rack should be designed so it offers satisfactory support for the bicycle.
- Make parking safe: Make sure that the bicycle is not exposed to vandalism or theft and that you can use the parking facility at all hours of the day and night without feeling insecure.
- Consider operation and maintenance: The parking facility must function and look good throughout its useful life and in the given conditions.
- Spoil the cyclists: The design and layout of the facility has a bearing on how much it is used.

5.2. San Francisco Planning Code

The San Francisco Planning Code includes requirements for long-term bicycle parking for various land uses. The Planning Code bicycle parking requirements were first adopted in 1996 for City-owned and leased buildings in San Francisco. These requirements were subsequently expanded on a piecemeal basis to include privately-owned garages in 1998, commercial and industrial uses in 2001, and residential uses in 2005. In 2013, the Bicycle Parking section of the Planning Code was rewritten.

The Planning Code provides a legal framework for bicycle parking requirements.

- Section 155.1 provides bicycle parking definitions and standards for facilities;
- Section 155.2 provides bicycle parking requirements for specific land uses;
- Section 155.3 provides bicycle parking requirements for city-owned and leased properties;
- Section 155.4 provides bicycle parking requirements for shower and locker facilities.

With a goal of providing bicycle parking for five percent of trips generated by each use, the San Francisco Planning Department revised the Planning Code in 2013 to provide additional requirements and more specific details about land uses and required long-term bicycle parking facilities. The Planning Code now meets many of the actions specified in the 2009 San Francisco Bike Plan. The Code addresses bicycle parking by identifying changes to current short-term and long-term bicycle parking requirements and organizing and consolidating the older Code sections.

The following list is an overview of exemplary aspects of the code relevant to long-term bicycle parking:

- Tailors requirements to specific uses, consistent with other requirements in the Code rather than number of automobile parking spaces.
- Triggers align with other established requirements in the Code including addition of a dwelling unit, enlargement by 20 percent, and addition of vehicle parking.
- Allows conversion of car parking to bicycle parking with the ratio of one Class 1 (long-term) bicycle parking space per 20 square feet of automobile parking space.
- Requires City-owned buildings and garages to comply with the new bicycle parking requirements. Bases the bicycle parking requirement on the amount of occupied square feet.

5.3. San Francisco Environmental Code

In 2012, the San Francisco Board of Supervisors adopted the *San Francisco Tenant Bicycle Parking in Existing Commercial Buildings Ordinance* into the San Francisco Environment Code. The code now requires owners of commercial buildings to either provide secure bicycle parking in buildings or within 750 feet of the entrance, otherwise property owners/managers must allow tenants to bring their bicycles into the building unless they apply for an exception. This legislation does not require building owners to build a bicycle room or dedicate a specific space for bicycle parking, but allows commercial tenant employees to bring their bicycles inside rented space if a separate and secure storage area is not available. [29]

5.4. San Francisco Bicycle Plan

Chapter two of the 2009 San Francisco Bicycle Plan is dedicated entirely to bicycle parking and includes extensive discussion of long-term storage. One of two key objectives in support of Chapter two's overall goal of ensuring plentiful, high quality bicycle parking for San Francisco is to provide secure short-term and long-term bicycle parking, including program support for bike stations and attended bicycle parking facilities at major events and destinations. Eleven of the chapter's 15 actions relate directly to long-term parking issues. Appendix 5 lists the relevant actions and how these are addressed in the Draft 2013 Planning Code.

5.5. Local and Regional Coordination

As the demand analysis in Chapter 6 presents, locations in the city with the greatest transit density have the most demand for long-term bicycle parking facilities, and yet no formal mechanisms exist to ensure that transit projects are coordinated with opportunities for long-term bicycle parking in San Francisco. To effectively implement long-term bicycle parking where it is most needed, the SFMTA must coordinate transit station planning and bicycle planning efforts as the transit and bicycle networks and their respective support facilities continue to expand and improve. A policy basis for improving internal communication and coordination exists within the SFMTA Fiscal Year 2013-2018 Strategic Plan. The Strategic Plan has four strategic goals under the vision:

[29] "Tenant Bicycle Parking in Existing Commercial Buildings," *San Francisco Department of the Environment*, amended March 6, 2012, accessed September 14, 2012, http://sfenvironment.org/policy/tenant-bicycle-parking-in-existing-commercial-buildings.

San Francisco: great city, excellent transportation choices. The fourth goal, *create a workplace that delivers outstanding service*, has the objective to improve internal communications and create a collaborative and innovative work environment.

As the City's overall mobility manager and operator of the entire surface transportation network, the SFMTA is in a unique position to coordinate provision of long-term bicycle parking with regional transportation agencies that serve San Francisco. Given the demand for long-term bicycle parking at major transit and transportation nodes, close coordination should continue with Caltrain, BART and the Transbay Joint Powers Authority (TJPA). There are no formal, specific policies or agreements linking these agencies' existing long-term bicycle parking facilities or future planning and implementation efforts but coordination is crucial especially given the existing and proposed upgrades to long-term bicycle parking on these agencies' properties. The following sections summarize long term bike parking projects and recommendations for regional transit operators and their facilities in San Francisco.

5.5.1. Caltrain

The Caltrain Bicycle Access & Parking Plan lists recommendations for bicycle improvements at stations system wide. Table 7 lists the long-term bicycle parking recommendations from Caltrain's plan for the two San Francisco Caltrain Stations.

Table 7 Caltrain Long-Term Bicycle Parking Recommendations at San Francisco Stations[30]

Station	Issues	Recommendations
4th Street Terminal	Need more flexible parking	Convert 134 key to electronic lockers
	Keys to locker compound are cumbersome to administer	Upgrade locker compound key lock to key pad code system
	Locker area often full of litter	Maintain/clean locker area
	Low Bikestation patronage (*this is no longer the case)*	Promote patronage of San Francisco Bicycle Parking Facility
22nd Street Station	Lack of secure parking	Provide 36 electronic lockers at street level

5.5.2. BART

The BART Bicycle Access Plan provides system-wide bicycle conditions for BART, including recommendations for improvements into the future. One of the recommendations is for Plentiful Parking.[31] To achieve this recommendation, there are three strategies associated with long-term bicycle parking:

- Provide adequate bicycle parking of each type—prioritize square tube, inverted U rack design for new racks and collaborate with BART police when siting bicycle parking. Parking should be placed inside the fare gates, visible to the station agent or adjacent to main paths of travel wherever possible.

[30] Peninsula Corridor Joint Powers Board (Caltrain). Caltrain Bicycle Access & Parking Plan, October 2, 2008.
[31] Bay Area Rapid Transit. *BART Bicycle Plan*. July 2012.

- Maintain bicycle facilities more frequently—remove clearly vandalized bikes and regularly maintain bicycle parking facilities, both those indoors and those exposed to the elements.
- Expand bicycle parking payment options—assess the feasibility and compatibility of Clipper card payment with existing and future bike parking, and to develop a retrofitting program and timeline.

Additionally, the SFMTA Long-Term Bicycle Parking Strategy will consider BART's draft station-by-station long-term bicycle parking recommendations that are a follow-up to the system wide Access Plan. There are eight BART stations in San Francisco, and five are on BART's priority list for bicycle parking improvements; the proposed improvements are in Table 8. These five stations have racks in the paid area and do not have existing on-demand bicycle lockers or bicycle stations. There are draft recommendations for more racks at all of the stations and unattended and attended long-term bicycle parking, as noted in the table below.

Table 8 BART Draft Station-By-Station Long-Term Bike Parking Improvements in San Francisco[32]

Stations	Recommended Long-Term Bicycle Parking	Status	Notes
16th Street	Unattended	Future	Concourse level unattended pending space review
24th Street	Unattended	Future	Concourse level unattended pending space review
Balboa	On-Demand Lockers	Planned	12 locker spaces planned
Civic Center	Unattended, Attended	Planned	-90 unattended parking planned -Interest in attended street level also (Civic or Powell)
Glen Park	On-Demand Lockers	Planned	12 locker spaces planned

5.5.3. Transbay Joint Powers Authority (TJPA)

According to TJPA planning staff, the Transbay Terminal project will include an unattended long-term bicycle parking facility with Phase I and an attended long-term bicycle parking facility with Phase II. There are no explicit plans for the unattended facility but design staff recommend it in the retail space at-street level bound by First, Second, Howard and Mission Streets. The Transbay Terminal 50% Construction Document's Transportation Element calls for a secure, attended, and enclosed bicycle storage area in Phase II, with a minimum of 4,000 square fee

[32] Per Steve Beroldo (BART) email to Matt Lasky, January 11, 2012.

6. Needs Assessment

To better understand the demand for long-term bicycle parking in San Francisco, the SFMTA performed a needs assessment. This evaluation includes two main components: a geographic demand analysis and a survey of bicyclists and residents working or living in San Francisco. Detailed results from both of these analyses are included in this chapter.

6.1. Demand Analysis

6.1.1. Methodology

A citywide analysis of long-term bicycle parking demand is central to developing an implementation strategy for future facilities. SFMTA staff performed a demand analysis for San Francisco using geographic information systems (GIS) to show relative demand for long-term bicycle parking citywide. This planning-level analysis is a first-cut study examining and identifying potential locations for these facilities. To assure the success of new long-term bicycle parking, this analysis should be cross-examined with specific sites that are typical locations – close to transit, at the ground level, on a high volume bicycle corridor, etc.

6.1.2. Data Used

The GIS demand analysis uses eight different criteria for evaluating the need of long-term bicycle parking in San Francisco. SFMTA staff plotted each of these criteria and then compiled them into one map with equal weights. Table 9 lists the criteria, how the data were used, and the data sources. Figure 2 is a map showing the aggregate result of the eight criteria for the whole city.

Table 9 Long-term Bicycle Parking Demand Criteria

Criteria	Definition for Evaluation	Source
Population Density	Population per square mile evaluated at the census block level.	2010 US Census
Employers	Point data with 200 foot buffers.	2010 Dun & Bradstreet Business Records, San Francisco Enterprise GIS Program
Zoning Type	Transit and Office Zoning.	2012 SF Planning Department
Proximity to Bikeway Facility	Distance to existing roadway bicycle infrastructure. Bicycle paths, lanes, and routes all scored equally.	2012 SFMTA
Bicycle Commuters	Bicycle commuters per square mile evaluated at the census block group level.	2010 American Community Survey – Five Year Estimates
Slope	Physical contours at five foot intervals.	2001 USGS

Criteria	Definition for Evaluation	Source
MUNI Station Rail Boarding/Alighting	Point data with 500 foot buffers with weekday daily total passengers getting on and off at stations	2007-2010 SFMTA
MUNI Stop Bus Boarding/Alighting	Points data 250 foot buffers with weekday daily total passengers getting on and off at stops.	2012 SFMTA

6.1.3. Results

The overlaying of data listed in Table 9 produces a geographical representation of relative demand analysis for long-term bicycle parking in San Francisco as shown in Figure 2. Figure 3 presents the same information with the highest demand areas demarcated in red along with corresponding neighborhood labels. Figure 3 also shows existing long-term bicycle parking at public buildings and public institutions.[33]

Based on the results of the demand analysis, the following neighborhoods have the most demand for long-term bicycle parking.

- Downtown/Tenderloin
- Duboce Triangle
- Financial District North
- Financial District South
- Hayes Valley
- Ingleside
- Inner Mission
- Inner Sunset
- Mission Dolores
- Nob Hill
- North Beach
- South Beach
- South of Market
- Van Ness/ Civic Center

As Figure 3 shows, overlapping the existing long-term bicycle parking facilities with the demand for facilities demonstrates that there are some facilities in areas with greatest demand. However, where there are facilities, capacity is likely to be inadequate. For example, the SFMTA parking garages have good geographic distribution; however at these locations the actual amount of long-term bicycle parking supply is limited. Typically the single-user bicycle lockers at these locations are only useable by individuals. Meeting the demand is an issue at many of the BART stations as well; bicycle parking inside the fare gates, including at Powell Street, Civic Center, and 24th Street/Mission, is often at capacity, as is the case with the Caltrain Terminal's attended bicycle parking station.[34] There are also areas with higher demand but no long-term bicycle parking facilities available, for example in the upper Market Street and inner Mission Street areas. In summary, there is greater demand for long-term bicycle parking, both where existing facilities are inadequate and where facilities are lacking.

[33] Existing long-term bicycle parking facility information is from interviews and web research and may not be all-inclusive.
[34] Bay Area Rapid Transit, *BART Bicycle Plan: Modeling Access to Transit* (July 2012): 16-17.

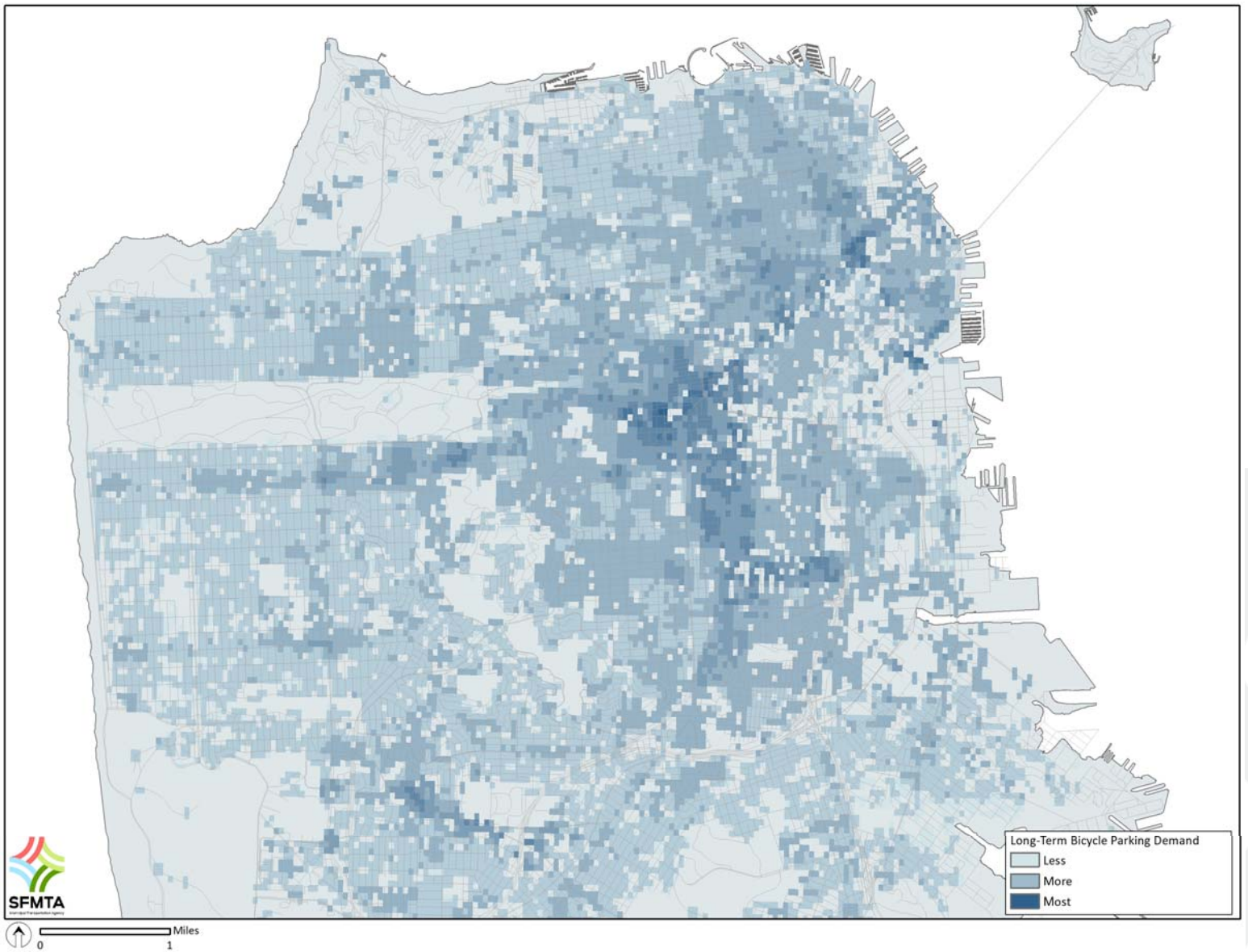

Figure 2 Long-Term Bicycle Parking Demand Analysis Results

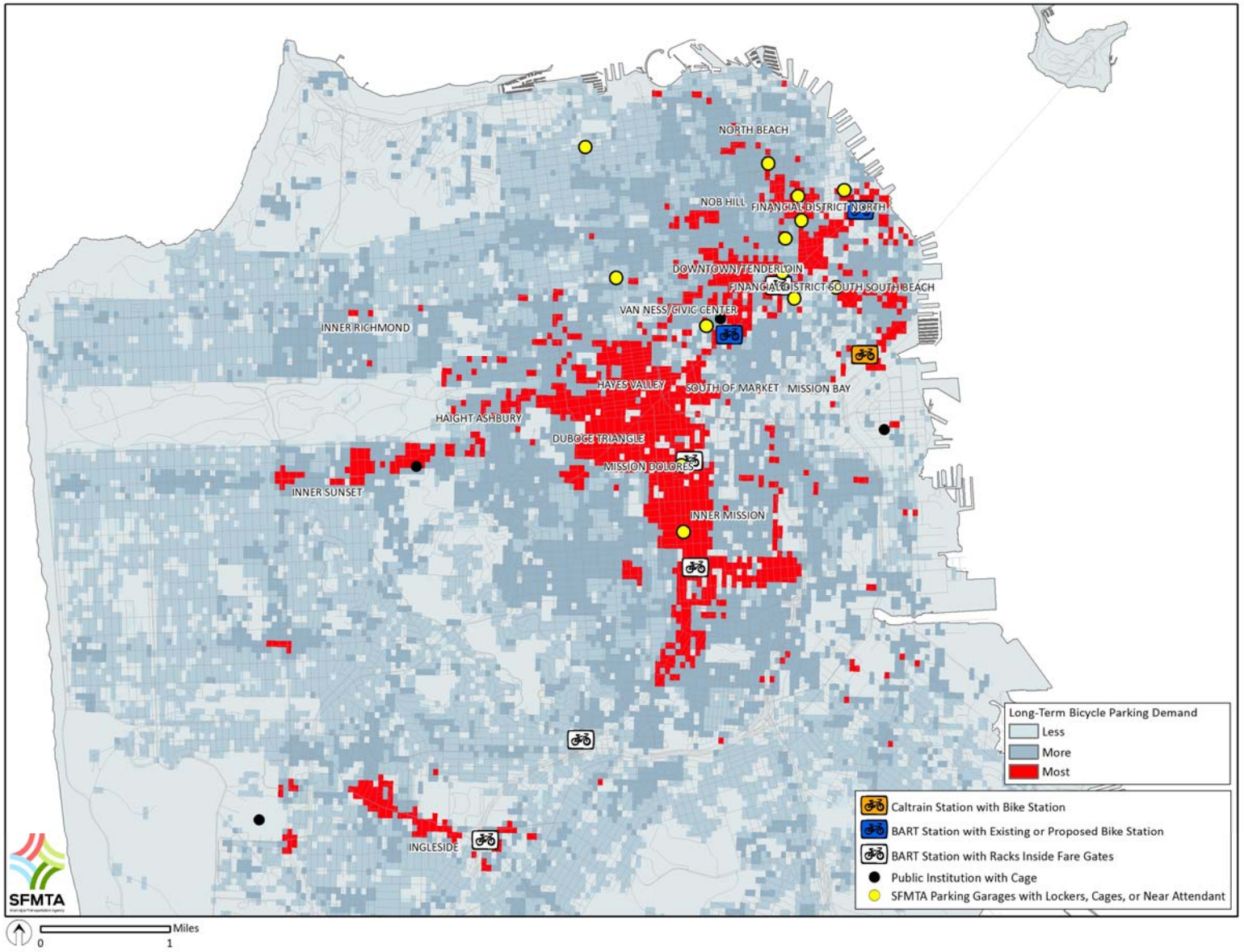

Figure 3 Long-Term Bicycle Parking *High* Demand Results

6.2. Location of Proposed Attended Bicycle Parking

The Dutch CROW *Design Manual for Bicycle Traffic* is the definitive international resource in the planning and design of bicycle facilities. The Manual has a chapter dedicated to bicycle parking including placement of long-term facilities. Using the CROW Design Manual's seven criteria for locating attended long-term bicycle parking, a proposed high-capacity facility in San Francisco should be along the Market Street corridor. The analysis presents that a location near the Powell Street BART Station and future Union Square/Market Street (UMS) Central Subway Station would be most suitable given the high demand for long-term bicycle parking in the area.[35] Below are the seven criteria and an explanation to why this area is the most appropriate. Figure 4 is a map displaying this information.

1. *Situate the facility on a bikeway* – Powell BART Station is at an intersection of the two existing bicycle routes on Market and 5th Streets. Both of these bicycle routes are slated for improvements, Market Street in 2014, with the implementation of the Better Market Street project and 5th Street with the completion of the Central Subway. Both facilities should have bicycle lanes or separated bikeways in the future.
2. *Situate the facility in or adjacent to the core shopping area* – the area surrounding Powell/UMS Station and Union Square is the only area in San Francisco zoned as downtown retail. This is the highest density retail area in the city.
3. *Situate the facility within 150 meters from the center of the shopping area* – the downtown retail zone is a high-use shopping area so the facility should be located somewhere within this area.
4. *If the facility has to be built on a quiet street, do not allow it to be more than 30 meters from the shopping center* - the downtown retail zone is approximately 450 square meters, adding an additional 150 meters to the area makes it 540 square meters. Staff will confirm that the site is within this area once a determination specific location has been determined.
5. *Ensure visibility from the core shopping area with a good walking route* – all of the streets in this area have sidewalks and are suitable for walking. Visibility will be determined with more detailed site analysis with a determination of the specific parking location.
6. *Situate the facility near (maximum of 50 meters) to bicycle destinations* (e.g. - a transit station, public institution, etc.) – Powell/UMS Station is the largest transit station in the area and within 50 meters of the Station should be the long-term bicycle parking facility. This will provide access to BART and MUNI connections.
7. *Situate the facility more than 300 meters from an existing long-term bicycle parking facility* – Powell Street BART Station has existing bicycle parking within the fare gate, however this is not a true long-term bicycle parking facility. There are also two parking garages within the 300 meter buffer with a total of 24

[35] CROW, *Design Manual for Bicycle Traffic*.

bicycle lockers. There is greater demand in this area for more than the existing available long-term bicycle parking facilities.

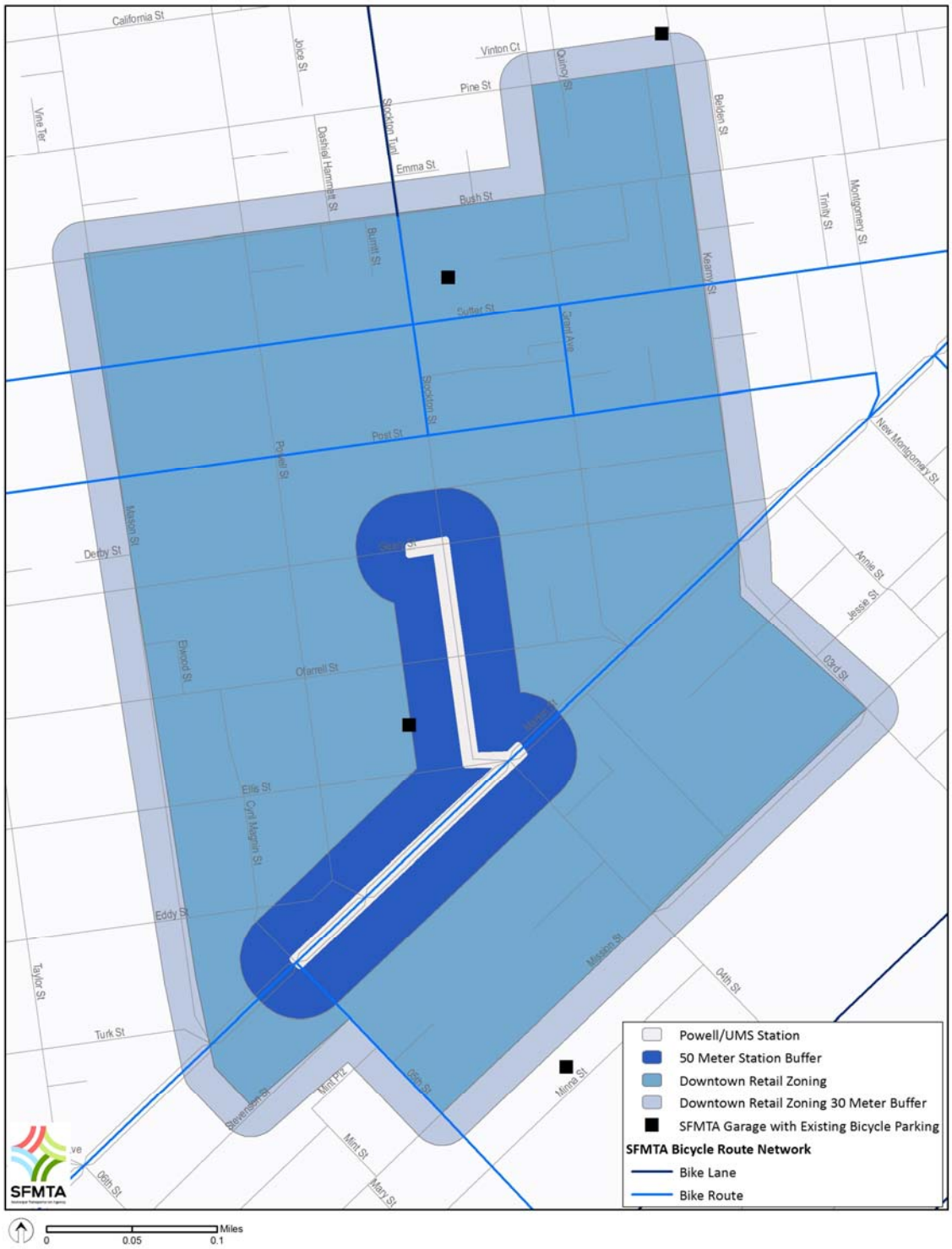

Figure 4 CROW Design Manual Criteria for Locating an Attended Bicycle Parking Facility in San Francisco

6.3. Bicyclist and Commuter Survey Results

6.3.1. Development

SFMTA staff developed a survey and collected public responses about the demand, value and desired amenities for long-term bicycle parking in San Francisco. SFMTA staff based the long-term bicycle parking survey on several other examples of bicycle parking surveys from the US and internationally. The San Francisco survey was online, available to residents of San Francisco and other neighboring cities, and was intended for bicyclists that ride a bicycle in San Francisco. Appendix 2 is a copy of the survey questions.

6.3.2. Deployment and Circulation

The survey was available on the SFMTA Survey Monkey website for approximately six weeks, between September 21 and November 9, 2012. SFMTA staff concentrated notification of the survey website primarily to San Franciscans. Staff emailed the survey web link to all city neighborhood groups available through the San Francisco Planning Department's Citidex.[36] The SFMTA posted the survey link on the SFMTA's bicycle parking website, Facebook site and posted it on the SFMTA Twitter feed. SFMTA staff provided the survey link to other agencies and organizations including the Building Owners and Management Association (BOMA), Caltrain, BART, East Bay Bicycle Coalition, and the San Francisco Bicycle Coalition.

SFMTA staff developed a business card flyer advertising the survey web link (Appendix 3) and printed and distributed 1,000 copies. Staff provided flyers to the San Francisco Bicycle Coalition for distribution, left flyers with a curbside bicycle mechanic station at Huckleberry Bicycles on Market Street and delivered flyers to bicyclists directly on October 16, 2012 at the intersection of South Van Ness and Market Street.[37] In the six weeks that the long-term bicycle parking survey was available online, there were more than 1,000 responses.

6.3.3. Results

Gender

As Figure 5 presents, respondents of the survey were:

- 62 percent male, and
- 37 percent female.

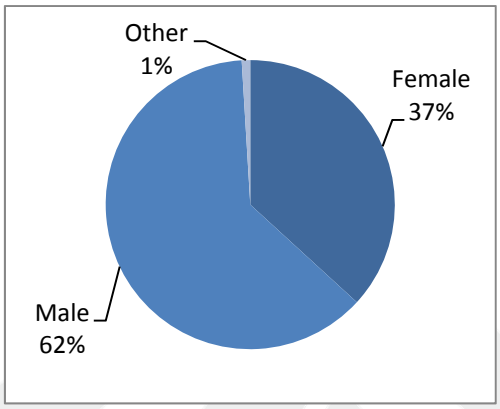

Figure 5 Gender of Respondents

The higher percentage of male responses could be related to the higher share of bicycle trips made by men in San Francisco and nationwide, although females were somewhat over-represented in the responses relative to their share of trips by bike. SFMTA phone and

[36] Citidexsf, Mayor's Office of Neighborhood Services. http://citidex.sfgov.org/
[37] Huckleberry Bicycles is located at 1073 Market Street.

in-person interviews conducted in January and June 2011 found that in San Francisco, 73 percent of bicycle riders are male and 27 percent are female.[38]

Residence

The survey was available to bicyclists who work *or* live in San Francisco. Therefore, a question asked whether respondents live, work or live and work in the city. As expected given outreach efforts to San Francisco neighborhood and interested groups, the majority of respondents stated that they live in San Francisco:

- 69 percent said that they live and work in San Francisco,
- 20 percent said that they live in San Francisco and work outside of the city, and
- 12 percent said that they live outside of San Francisco but work in the city.

Bicycling Frequency and Bicycle Availability

To understand who took the survey and what long-term bicycle parking facilities appeal to what type of bicyclists, the survey requested information about bicycle commuting frequency. Of the respondents, 78 percent stated that they ride a bicycle in San Francisco as part of their commute. Figure 6 shows that the majority of survey respondents are very regular bicyclists –68 percent of respondents said that they bicycle at least three days a week. Of the respondents that live in San Francisco but do not ride a bicycle to or from work, 73 percent own a bicycle. This demonstrates that the survey respondents that live in San Francisco that do not currently bicycle to work have the means to ride but do not for other reasons.

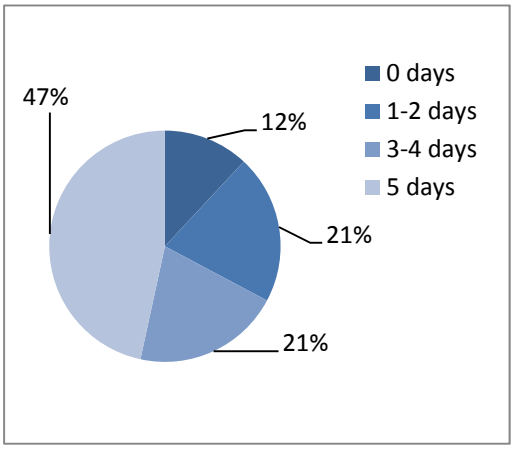

Figure 6 Frequency of Bicycling

Existing Long-Term Bicycle Parking

To determine the demand for long-term bicycle parking, an understanding of existing facilities is necessary. As Figure 7 shows, more than half of survey respondents that live in San Francisco stated that they park their bicycle inside their living space. This is likely because many do not have access to secure long-term bicycle parking and the best, most secure parking option is inside their home. Figure 7 also shows that a small percent of respondents (2 percent) park a bicycle at home in a short-term location –on the sidewalk rather than in a long-term bicycle parking location.

[38] SFMTA. *2011 Bicycle Count Report: City of San Francisco*, December 2011.

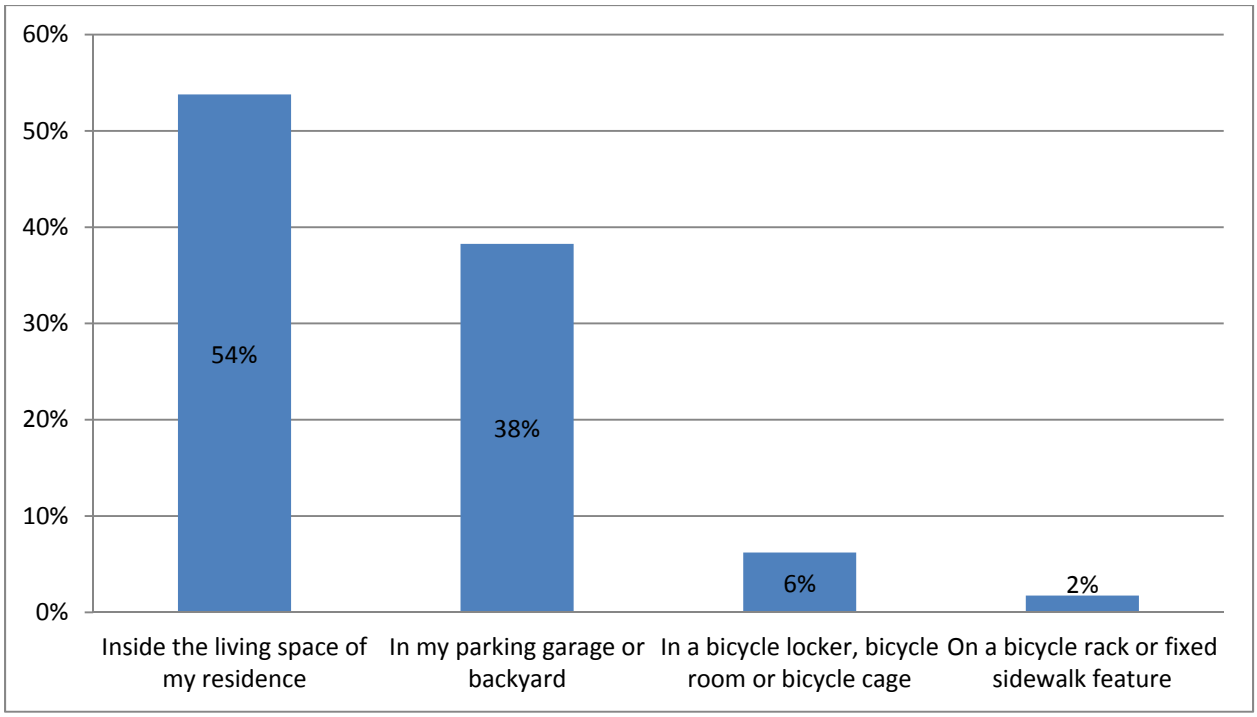

Figure 7 Bicycle Parking Locations for Respondents that Live in San Francisco

As Figure 8 shows, the majority of all apartment and single-room occupancy dwellers park their bicycle inside their living space; this demonstrates a need for long-term bicycle parking facilities near these residential uses. Also, as expected, the most common housing type where respondents park in a traditional long-term bicycle parking location (bicycle locker, shared bicycle room, or bicycle storage area) is large apartment and condominium buildings with more than ten units. This is likely due to these long-term bicycle parking facilities being more available given the necessary requirements to provide more long-term bicycle parking in larger buildings per the San Francisco Planning Code.[39]

[39] San Francisco Planning Code Table 155.5 states that BICYCLE PARKING SPACES REQUIRED FOR RESIDENTIAL USES - For projects up to 50 dwelling units, one Class 1 space for every 2 dwelling units and for projects over 50 dwelling units, 25 Class 1 spaces plus one Class 1 space for every 4 dwelling units over 50.

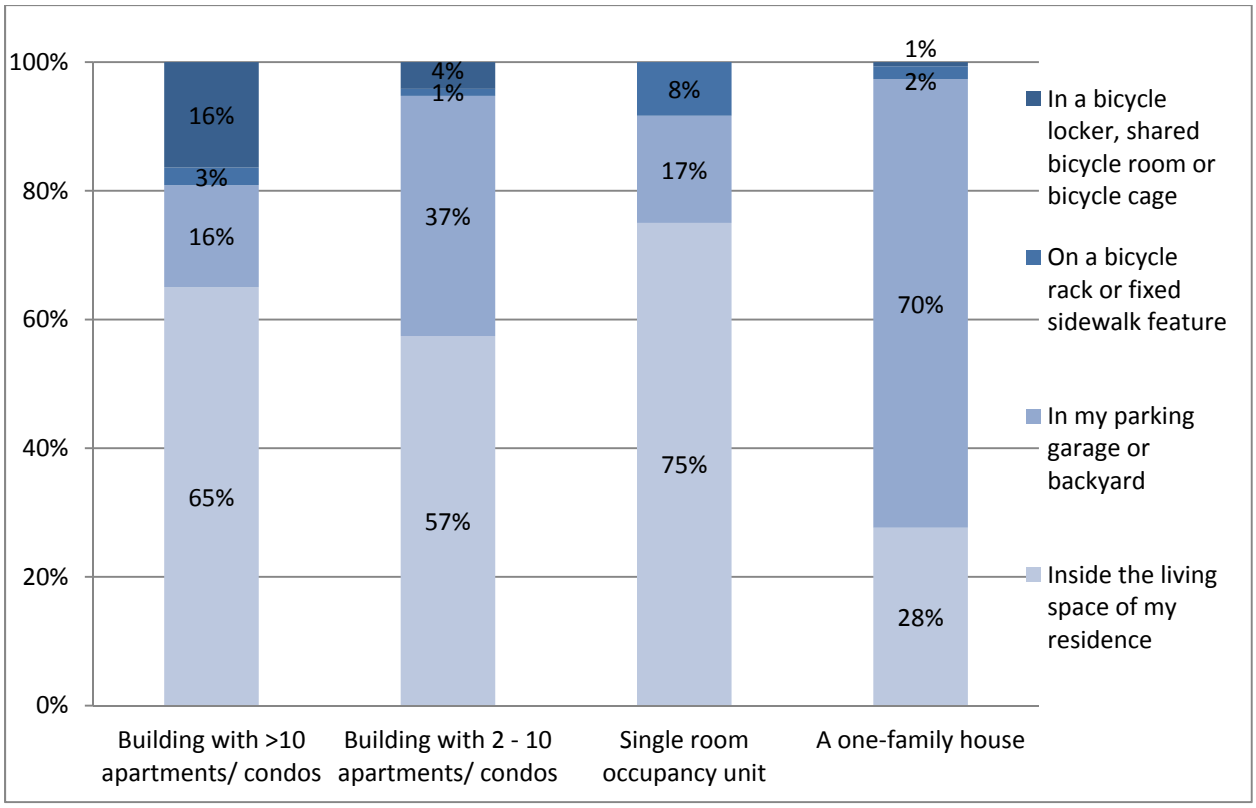

Figure 8 Respondents' Housing Type and Bicycle Parking Locations

Demand also exists for long-term bicycle parking facilities at or near workplaces. As Figure 9 shows, of survey respondents that work in San Francisco, 51 percent stated that they park their bicycle inside their workplace during the day and only 16 percent park at more conventional long-term bicycle parking locations (bicycle locker, shared bicycle room, or inside a parking garage). Twenty percent of respondents park their bicycle on the sidewalk, whether at a rack or at a fixed sidewalk feature. Given the large percentage of respondents parking bicycles inside work and the 20 percent of bicyclists that park bicycles at short-term bicycle parking locations for extended periods of time, there is clearly demand for additional long-term bicycle parking facilities at or near San Francisco's workplaces.

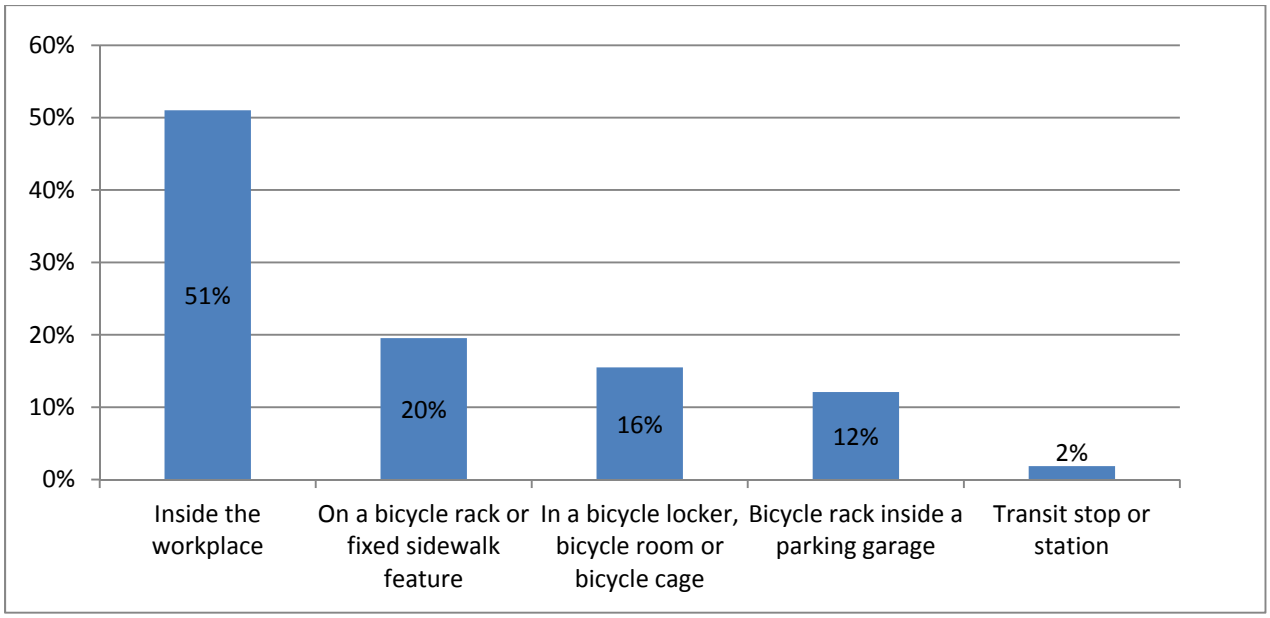

Figure 9 Respondents' Bicycle Parking Locations at Work

Demand for Additional Long-Term Bicycle Parking

Respondents had interest in long-term bicycle parking and demand for additional facilities. Both men (82 percent) and women (83 percent) stated that they were more likely to bicycle if secure bicycle parking facilities were available at destinations, and both men (78 percent) and women (79 percent) stated that they were more likely to bicycle if secure bicycle parking were available at a transit stop or station. As Figure 10 shows, of survey respondents that own a bicycle, work in San Francisco and *do not* currently bicycle to work:

- 60 percent stated they would bicycle more to work if there were long-term bicycle parking near their destination, and
- 52 percent of respondents stated that they would bicycle more to work if there were long-term bicycle parking near transit.

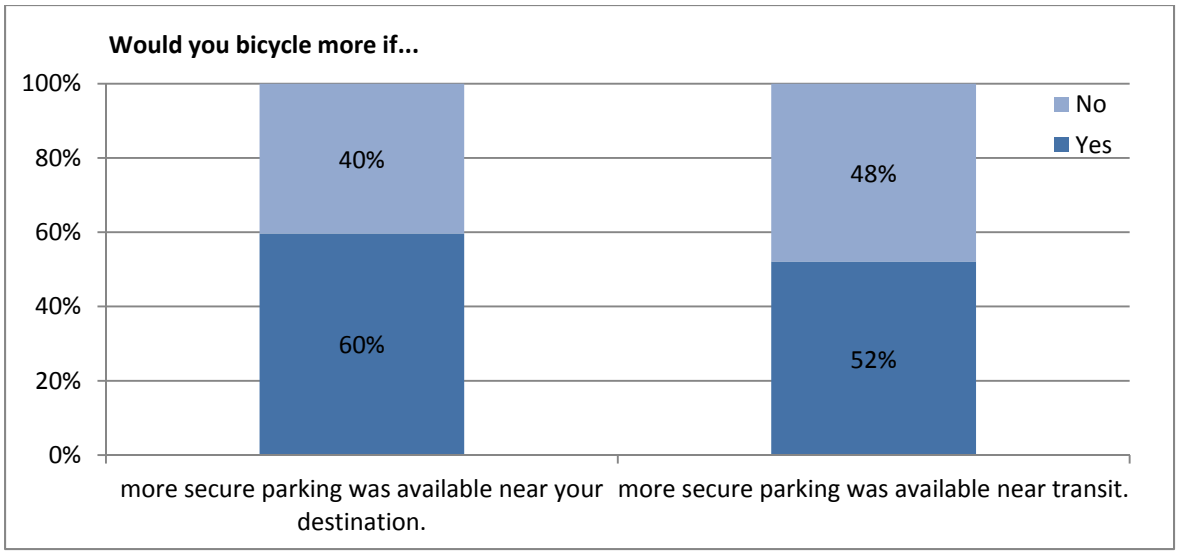

Figure 10 Impact of Long-Term Bicycle Parking on Bicycle Owners who Do Not Bicycle to Work

Availability of long-term bicycle parking may increase the number of bicyclists in San Francisco that ride on a regular basis. As Figure 11 shows, respondents indicated that availability of long-term bicycle parking is a major determinant of the choice to ride. For respondents that currently do not ride a bicycle any day of the week and may or may not own a bicycle, 42 percent said that they would ride a bicycle more often if long-term bicycle parking were available. Additionally, for respondents that currently bicycle to work at least once per week, *at least* 84 percent stated that they would bicycle to work more often if additional long-term bicycle parking was available. Not only could more long-term bicycle parking motivate those who currently choose not to ride to change their travel behavior, it could increase bicycle use by those who are already riding.

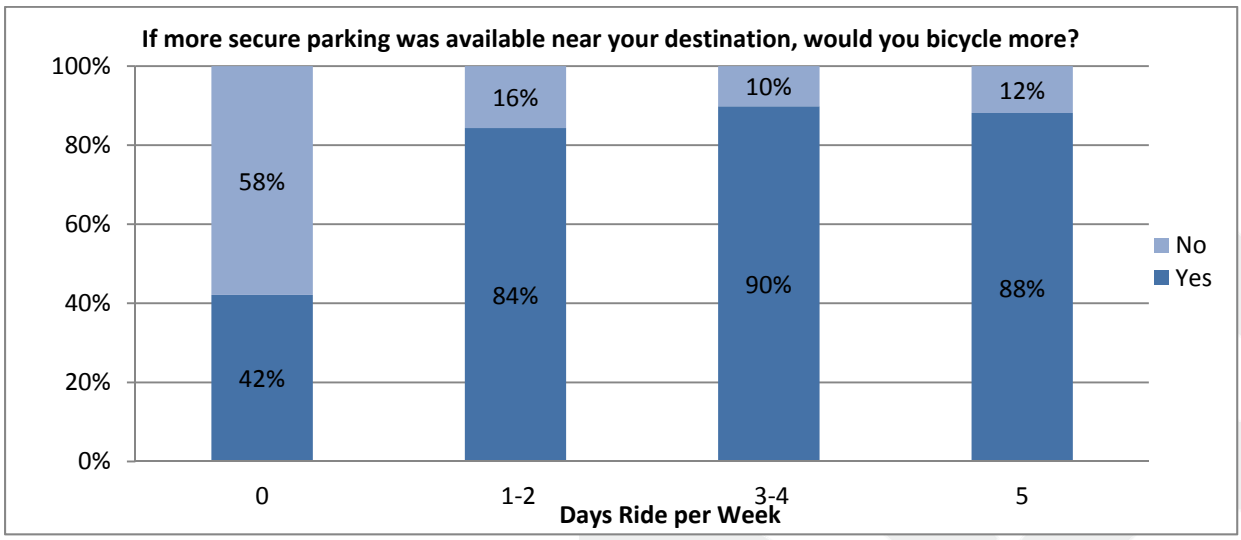

Figure 11 Rider Frequency with Additional Long-Term Bicycle Parking

Willingness to Pay for Long-Term Bicycle Parking

Of the respondents that live in San Francisco and ride at least one to two days per week, the majority of respondents are willing to pay for using long-term bicycle parking. Fifty-six percent of respondents said they would be willing to pay less than $5.00 per day (Figure 12), however, 22 percent would not be willing to pay to use these facilities. Figure 13 shows that approximately half of the respondents that do not ride a bicycle to work are willing to pay some amount for long-term bicycle parking and the majority of respondents that bicycle at least one to two days would pay less than $5.00 per day.

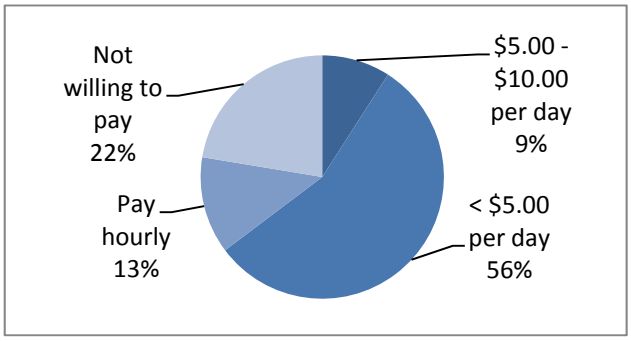

Figure 12 Amount Bicyclists are willing to pay for long-term bicycle parking

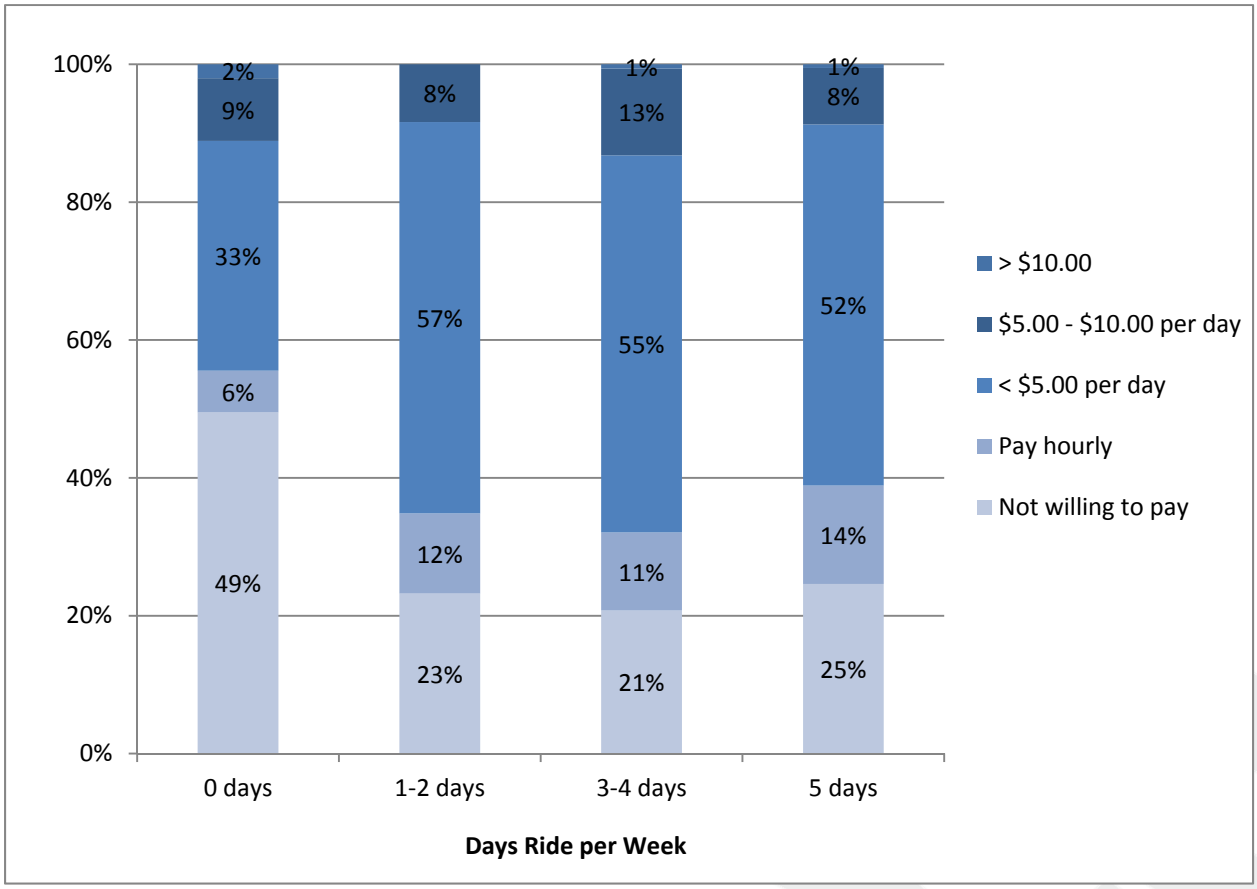

Figure 13 Bicyclists' Riding Frequency and Willingness to Pay for Long-Term Bicycle Parking

Amenities and Preferences

A variety of different amenities can be provided in conjunction with long-term bicycle parking, including storage lockers, bicycle tools, bicycle repair, bicycle share stations, bicycle supplies, food and drink, changing rooms and showers. The survey asked respondents their interest in these different types of amenities and whether they were willing to pay for them if they were available with a long-term bicycle parking facility. The amenity that generated the most interest was storage lockers for personal items. Forty-two percent of all respondents said that they were very interested in them; 40 percent of respondents were also very interested in access to bicycle tools and a bicycle share station (Figure 14).[40] Amenities with the least interest were showers, changing rooms, and a café.

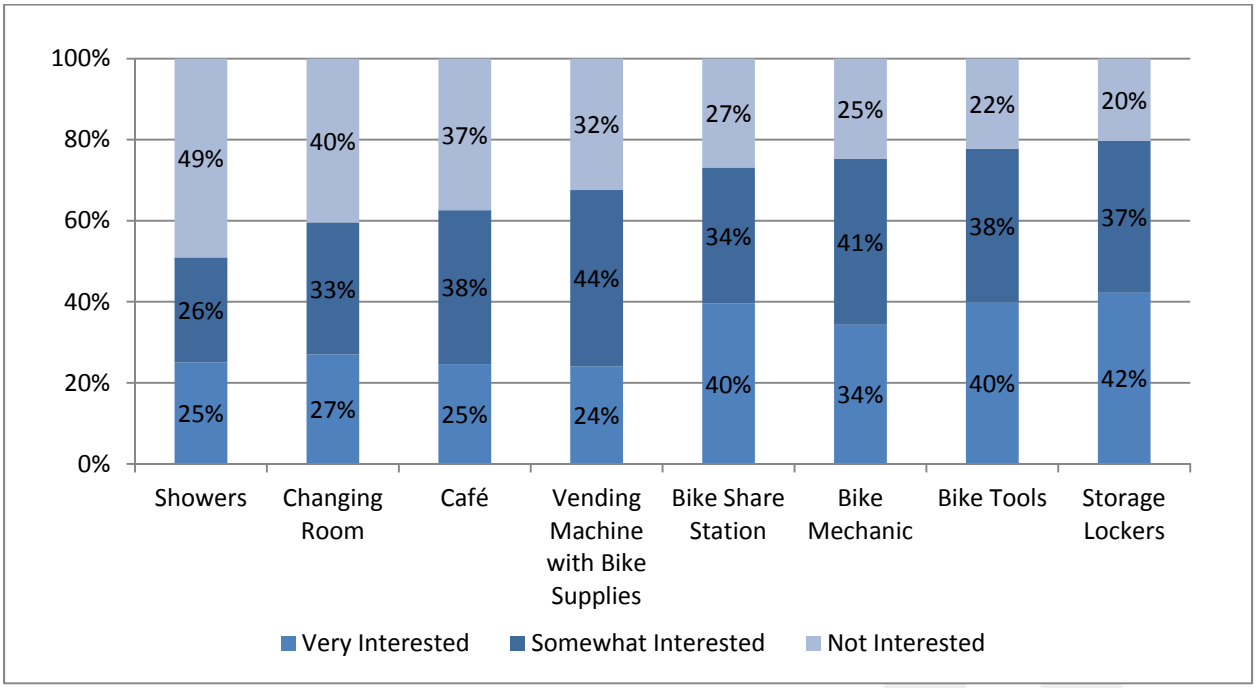

Figure 14 Respondents' Interest in Long-Term Bicycle Parking Amenities

Overall, the survey found that there is willingness for survey respondents to pay for amenities that may be available with long-term bicycle parking. As Figure 15 shows, the majority of respondents said that they were willing to pay for amenities except showers, changing rooms and bicycle tools. This is understandable given the lack of interest in showers and changing rooms (Figure 14) and the relative moderate price of the most commonly used and easy-to-use tools. Respondents are willing to pay for a café, vending machine, and a bicycle share station. This also makes sense given that these amenities cost money, whether purchasing items from a vending machine or a café or

[40] The intention of the survey was to define storage lockers as lockers for clothes, bicycle gear, and anything else that fits into a relatively small space. SFMTA staff realizes that this was not explicit and survey respondents may have interpreted storage lockers to mean bicycle lockers.

paying the cost of a bicycle share membership. Lastly, most respondents are willing to pay for bicycle repair and for renting storage lockers.

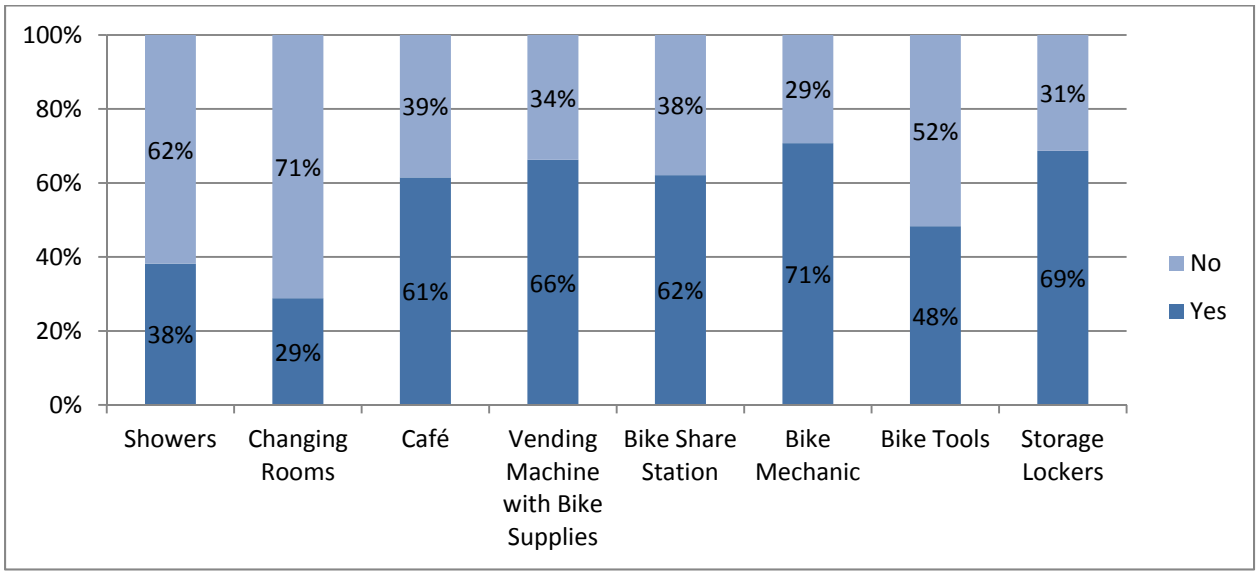

Figure 15 Respondents' Willingness to Pay for Different Long-Term Bicycle Parking Amenities

6.4. Conclusions

Together, the GIS demand analysis for long-term bicycle parking in San Francisco and the long-term bicycle parking survey led to the following conclusions that informed the recommendations in the final two chapters.

- Specific neighborhoods in the city (Downtown/Tenderloin, Ingleside, Nob Hill, Duboce Triangle, Inner Mission, North Beach, Financial District North, Inner Sunset, South Beach, Financial District South, Mission Bay, South of Market, Haight Ashbury, Mission Dolores, Van Ness/Civic Center, and Hayes Valley) have greater demand for long-term bicycle parking in comparison to other neighborhoods; these neighborhoods vary in land use types including office, retail, and residential.
- Existing supply of long-term bicycle parking in high demand areas does not satisfy the need.
- Many San Francisco bicycle commuters park their bicycle inside their workplace and there is demand for more long-term bicycle parking facilities near places of employment.
- Many San Francisco bicyclists park their bicycle inside their home and there is demand for more long-term bicycle parking options in high-density housing areas.
- Many San Franciscans that do not currently ride a bicycle to work have a bicycle available for riding.

- Bicyclists and bicycle owners not currently bicycling to work could benefit from construction of new long-term bicycle parking, which will lead to an increase in overall bicycle ridership in San Francisco.
- Bicyclists prefer free long-term bicycle parking; if a fee is necessary it should be less than $5.00 per day to maintain adequate levels of use.[41]
- Amenities should be provided with long-term bicycle parking, with a strong preference for repair services and some interest in food concessions. Showers and changing rooms appear largely unnecessary given the lack of stated interest in such facilities.

[41] Based on information collected for Chapter 3, long-term bicycle parking should cost considerably less than $5.00 a day for success.

7. Recommendations for Long-Term Bicycle Parking

This chapter provides recommendations for expanding the supply of unattended and attended long-term bicycle parking in San Francisco. Recommendations are for two phases: a near-term priority phase during which the SFMTA can pilot and evaluate bicycle parking facilities and a future phase with an expansion of long-term bicycle parking facilities throughout San Francisco. The priority phase allows the testing of different facilities, especially those that are new to San Francisco and provides opportunities to test demand at specific locations. Based on bicycle parking use at new facilities and implementation during the priority phase, the SFMTA will respond to the demonstrated need with planned future implementation.

7.1. Locations in San Francisco

Building on the analysis presented in the needs assessment (Chapter 6), this Strategy recommends additional or new long-term bicycle parking facilities where there is the greatest existing and future demand. The maps included in Chapter 6 show that the greatest demand is in downtown San Francisco, in and around the Mission District, the Inner Sunset, Duboce Triangle, Hayes Valley, north of downtown including Nob Hill and North Beach, Ingleside near Balboa Park BART Station and City College of San Francisco, and near the West Portal MUNI Station. This Strategy recommends that new long-term bicycle parking facilities be concentrated in these areas for the following reasons.

1. Bicycle on Transit Restrictions (downtown San Francisco, the Mission District, Ingleside, West Portal) –bicycles are not currently allowed on MUNI light rail vehicles at all hours. Therefore people need to leave bicycles in these locations when transferring from bicycle to rail or vice versa.
2. High Bicycle Volumes (downtown San Francisco, the Mission District) – based on SFMTA count information and the long-term bicycle parking survey, the greatest demand for long-term bicycle parking is in downtown San Francisco (given the highest density of jobs, transit, bikeways, etc.) and the Mission District. Large numbers of bicyclists require large numbers of bicycle parking spaces.
3. Topographic and Geographic Constraints (Ingleside, Inner Sunset, West Portal) – bicycling around the hills of San Francisco is possible but is challenging in some areas. These neighborhoods have the greatest challenge of topography and geography and bicyclists tend to ride locally and connect to transit accessing downtown San Francisco. Bicyclists need places to leave bikes when making the modal transfer
4. High Population Density (Mission District, Duboce Triangle, Hayes Valley, North Beach, Nob Hill) – as suggested by the long-term bicycle parking survey results, the most populous areas of the city have great demand for bicycle storage given that many of these apartments and condominiums do not have secure bicycle parking available for residents.

7.2. Types of Facilities

This section provides recommendations for improving and implementing the three broad categories of bicycle parking (bicycle lockers, unattended, and attended bicycle parking) in San Francisco including amounts, locations and capital and operating cost estimates.

7.2.1. Bicycle Lockers

The Strategy for Long-Term Bicycle Parking recommends on-demand bicycle lockers in a number of locations. In the future, if parking demand exceeds locker capacity, then the recommendation is for the SFMTA to consider adding additional lockers or, if possible given space and operating constraints, adding an unattended bicycle room or area. Unattended facilities offer less security but more capacity than lockers.

Locations

SFMTA Parking Garages

Existing Bicycle Lockers to be replaced at the Ellis O'Farrell SFMTA Parking Garage

This Strategy recommends implementation of on-demand bicycle lockers in San Francisco given the success of these facilities at Bay Area BART Stations. As stated in Chapter 4 and listed in Table 10, there are 52 existing bicycle lockers in SFMTA parking garages with the traditional lock-and-key design. Some of these existing facilities are broken or misused for non-bicycle storage, and SFMTA is currently seeking funds to replace them with e-lockers. The SFMTA should work with the parking garage operators to verify that the lockers are placed in the most appropriate locations, increasing their likelihood of use and turnover. For example, in some garages there are two sections for vehicle parking: one section for hourly parking and one section for monthly parking. At some garages the hourly parking section is closed during late-night hours. In this situation, *if operationally feasible,* the lockers should be placed in the monthly section of the garage and people parking bicycles should have 24 hour access. Once in place, the SFMTA should monitor use of the lockers to confirm that there is demand. In low-demand locations, the SFMTA should consider moving the lockers to other garages or surface parking lots with demonstrated or strong potential for demand.

Table 10 SFMTA Garages with Existing Lockers

Garage Name	Address	Bicycle Lockers
Ellis O'Farrell	123 O'Farrell St	8
Fifth & Mission	833 Mission St	16
Golden Gateway	250 Clay St	8
Saint Mary's Square	433 Kearny St	6
16th & Hoff	42 Hoff St	6
Sutter Stockton	444 Stockton St	8
	Total	52

Transit Connections

Secure bicycle parking near the 16th Street, 24th Street and Balboa Street BART Stations will increase the number of transit riders bicycling to the stations and then transferring to the regional rail system. There is long-term bicycle parking demand in these locations but there is limited space to provide larger long-term bicycle parking facilities at the stations. BART is researching opportunities to develop unattended long-term bicycle parking on the concourse levels of the Mission Street stations and the SFMTA recommends additional facilities where there are existing nearby SFMTA surface lots or where other opportunities arise such as in publicly owned public spaces near transit stations and stops. These additional SFMTA facilities will provide long-term bicycle parking options for BART users as well as residents in the area. Priority opportunities for on-demand lockers near these BART stations are at the Lilac Street lot in the Mission District, located one and a half blocks from the 24th Street BART Station and the San Jose Avenue lot in Ingleside, adjacent to the Balboa Park BART Station.

The SFMTA also recommends on-demand bicycle lockers near high-use MUNI rail stops. MUNI does not permit non-folding bicycles onboard light rail vehicles, so providing secure bicycle parking nearby will help facilitate this modal transfer. One priority location is near 9th Avenue and Irving Street where commercial land uses, high MUNI rail use and demand for long-term bicycle parking all converge.

Other opportunities for bicycle lockers are at regional vanpool and carpool drop-off and pick-up locations in San Francisco. Given the volumes of private bus lines traveling to and from Silicon Valley and vanpools to the East Bay and North Bay, the SFMTA should consider installation of on-demand bicycle lockers at these connections.

The short-term recommendation is a minimum of four (one single quad) of lockers at 16th Street, 24th Street and Balboa Street BART Stations and 9th Avenue and Irving Street MUNI stop.

Market Street, POPOS, and Private Garages

This Strategy also recommends on-demand bicycle lockers where space allows along Market Street. Given the wide sidewalks, there may be opportunities to place bicycle lockers on the sidewalk that should be considered with future implementation of the Better Market Street Plan. The City of Oakland has placed e-lockers on wide sidewalks proximate to BART entrances in downtown at Frank Ogawa Plaza and at 19th Street and Broadway. Alternatively, installation of bicycle lockers could occur on privately owned public open spaces (POPOS) along Market Street and in the Financial District of San Francisco where there is limited sidewalk space.

The SFMTA should work with the City Planning Department to confirm that bicycle lockers can fit into the existing City Planning requirements for POPOS and the agencies should develop an incentive program for property owners to place long-term bicycle parking, such as on-demand lockers in POPOS and private garages. Property managers and owners may consider the overall aesthetics of bicycle lockers and may wish to implement facilities with better design than the traditional bicycle lockers.

Residential Areas

A pilot program for residential collective bicycle lockers positioned in the parking lane or where space allows on the sidewalk for long-term bicycle storage in residential areas should be pursued. Such facilities would be new to San Francisco and perhaps to the United States and the initial phase should be the installation of two to four facilities followed by an evaluation of their use and benefit. This Strategy recommends that these facilities operate with an electronic, on-demand system, at least initially, to allow turnover and use to be optimized and to help ensure that the lockers are used to permanently store bikes. Use would be restricted to residents living only in buildings neighboring the lockers. As recommended by the CROW Design Manual, testing of these residential long-term bicycle parking facilities should occur in the older, higher-density residential areas with the most long-term bicycle parking demand and where there is higher than average bicycle thefts.[42] Given these criteria and a preliminary subjective review of information, the Mission District, the Inner Sunset, Duboce Triangle, Hayes Valley and north of downtown in Nob Hill and North Beach may provide the best locations due to high long-term bicycle parking demand. These collective facilities are relatively portable so evaluating different locations is possible.

Examples of residential collective bicycle lockers in London (top) and Rotterdam (bottom)

If collective lockers prove successful, the SFMTA should develop an application process for future implementation of collective bicycle lockers similar to the existing bicycle corral application process. Interested property owners could apply to have a collective bicycle locker located in front of their property and agree to maintain the area free of debris. The SFMTA would then establish criteria and score locations to determine the most appropriate placement. The SFMTA could also work with the Department of Public Works and private properties interested in purchasing these facilities and placing them in the public right-of-way.

Costs & Operations

On-demand bicycle lockers vary in price depending on the power source, access keys, and overall design of the locker. Table 11 lists estimates for capital costs for bicycle lockers. Lockers for use at SFMTA Parking Garages and Surface Lots would most likely come in groups of four lockers. The Market Street lockers would be more expensive assuming that property managers and owners would want better looking facilities than the standard lockers recommended for SFMTA garages and transit connections. The residential or collective lockers are made in different, larger designs and are more costly.

[42] CROW, *Design Manual for Bicycle Traffic*.

Table 11 SFMTA Capital Costs for Priority Bicycle Lockers*

		Initial Phase		Secondary Phase	
Location	**Cost**	**Number**	**Total Cost**	**Number**	**Total Cost**
SFMTA Parking Garages	$3,000	52	$156,000	-	-
Transit Connections	$3,000	12	$36,000	-	-
Market Street[43]	$4,200	-	-	10	$42,000
Residential Neighborhoods	$8,400	4	$33,600	8	$67,200

**Conceptual level estimate includes 20% contingency*

Like the existing BikeLink lockers at BART stations, the SFMTA bicycle lockers should have a nominal cost per hour charged to users (approximately $0.05 per hour). This will ensure that there is turnover between users, aiding in long-term operations. The nominal fee can also be used to offset costs of operations and the software license. The operating costs of bicycle lockers, as listed in Table 12, are lower than the operating costs for other long-term bicycle parking facilities.

Table 12 Annual Operating Costs for Priority Bicycle Lockers

		Initial Phase		Secondary Phase	
Location	**Annual Cost**	**Number**	**Annual Cost**	**Number**	**Annual Cost**
SFMTA Parking Garages	$200	52	$10,400	-	-
Transit Connections	$200	12	$2,400	-	-
Market Street[44]	$200	-	-	10	$2,000
Residential Neighborhoods	$400	4	$1,600	8	$3,200

7.2.2. Unattended Bicycle Parking

The San Francisco Planning Code sets requirements for secure long-term bicycle parking for buildings, including offices, retail properties, apartment and condominium buildings and schools. The type of parking most commonly required is an unattended bicycle area. Beyond the code requirements, this Strategy recommends unattended bicycle areas or rooms near transit stations with high volumes of bicyclists and transit riders and in locations with a high density of housing and few existing long-term bicycle parking opportunities. Alternatives to on-demand unattended bicycle facilities are recommended where users arrive at one time during commute hours. If each user has to use a keycard and wait until the door has closed from the previous entry before entering themselves, then queuing and significant delays can result, causing people to miss transit connections.

[43] Privately funded.
[44] Ibid.

Locations

West Portal

An unattended facility near the West Portal MUNI station is recommended. This station is a major destination for people accessing transit and the surrounding topography between this area and downtown San Francisco is considered a barrier to bicycling. Placement of bicycle parking facilities needs to be planned to create the least number of bicycle and train conflicts to mitigate travel time impacts and bicycle safety issues. There are opportunities at the station itself and the nearby SFMTA off-street parking lot on Ulloa Street.

SFMTA Parking Garages

Bicycle parking storage exist in three SFMTA parking garages: 250 Clay Street, 1610 Geary Boulevard and 733 Kearny Street. The areas are either near the parking garage attendant or video monitored and bicyclists are "buzzed" inside by the parking lot attendant. These facilities do not permit unlimited long-term bicycle storage but do allow people to leave a bicycle up to three days at a time. SFMTA Off-Street Parking should consider developing a permit system that would allow people to store bicycles for longer periods of time (administrative costs would need to be taken into account). The permit could require renewal with a nominal fee, discouraging abandoned bicycles. The proposed permit process would allow SFMTA garage operators to remove bicycles if permits are not kept current. Some SFMTA garages are not open with an attendant 24 hours a day but are only keycard accessible during late night hours. *Where feasible,* the SFMTA should provide a 24-hour access system for people wishing to park a bicycle.

Pending an evaluation of on-demand bicycle lockers, new unattended bicycle parking facilities are also recommended at SFMTA garages in downtown San Francisco and the Mission District. The SFMTA currently plans to replace the existing lock-and-key lockers in off-street garages with on-demand bicycle lockers. If demand remains high and user response to the new access technology is positive, the SFMTA should consider developing new unattended parking facilities to expand the capacity in these garages.

Ferry Building

The SFMTA should work with the Port of San Francisco and relevant stakeholders to develop an unattended long-term bicycle parking facility at or within close proximity to the Ferry Building. The Ferry Terminal is a high-demand location with bicyclists and commuters connecting with regional ferry service; MUNI and BART services are also in the immediate area. This area could serve as a major node and given the high transit use, number of bicyclists and jobs downtown, it may lend itself to becoming an attended facility in the future. The new facility would supplement the existing unattended long-term bicycle parking in the Embarcadero BART Station. This existing facility is underground and is a challenge for non-BART patrons to access.

Transbay Terminal

An unattended long-term bicycle parking facility is proposed for Phase I of the new Transbay Terminal. This facility would be located at ground level in a retail space between Natoma and Minna Streets and First and Second Streets. Specific location and

design details are still under consideration and will not be finalized until Phase I is closer to its 2017expected completion date. The planned site will park a minimum of 100 bicycles; the SFMTA recommends parking in excess of this amount.

Costs & Operations

Like the existing unattended bicycle parking facility at the Embarcadero BART station, publicly available unattended SFMTA bicycle parking facilities should have a nominal cost per hour. This will ensure that there is turnover between users and aid in offsetting the long-term costs of operation. Unattended long-term bicycle parking facilities should employ the same collections system as the on-demand bicycle lockers and like the lockers, these funds can help offset the cost of operations. Table 13 lists the capital costs for priority unattended bicycle parking facilities and Table 14 has the associated annual operating costs.

Table 13 Estimated Capital Costs for Priority Unattended Bicycle Parking*

		Initial Phase		Secondary Phase	
Location	**Cost**	**Number**	**Total Cost**	**Number**	**Total Cost**
West Portal	$500,000	1	$500,000	-	-
SFMTA Parking Garages	$500,000	-	-	2	$1,000,000
Ferry Building (funded by Port)	$500,000	-	-	1	$500,000
Transbay Terminal (funded by TJPA) [45]	$500,000	-	-	1	$500,000

**Conceptual level estimate includes 20% contingency*

Table 14 Estimated Operating Costs for Priority Unattended Bicycle Parking

		Initial Phase		Secondary Phase	
Location	**Annual Cost**	**Number**	**Annual Cost**	**Number**	**Annual Cost**
West Portal	$2,000	1	$2,000	-	-
SFMTA Parking Garages	$2,000	-	-	2	$4,000
Ferry Building (funded by Port)	$2,000	-	-	1	$2,000
Transbay Terminal (funded by TJPA)[46]	$2,000	-	-	1	$2,000

7.2.3. Attended Bicycle Parking

In addition to the existing attended long-term bicycle parking facility at the 4th Street Caltrain Terminal and the proposed attended long-term bicycle parking facility at the Transbay Terminal, this Strategy prioritizes the construction of two new attended long-

[45] Part of the Transbay Terminal Phase I construction includes a storefront unattended long-term bicycle parking facility; scheduled for completion in 2017.
[46] Ibid.

term bicycle parking facilities in San Francisco. These facilities should feature unique but functional designs to raise the profile of bicycle parking and increase use. In addition to permanent facilities, the SFMTA should continue its efforts to enforce temporary valet bicycle parking for events.[47] A mechanism to encourage valet bike parking at large public events not covered by the Transportation Code, such as farmers markets, should also be considered.

Location

Attended long-term bicycle parking should be located where there is the greatest demand for use. One proven location is along Market Street, the highest volume bicycle corridor in San Francisco.[48] As described in Chapter 6, an attended facility in the Powell Street BART Station/Union Square Market Street Central Subway Station area would serve bicyclists well, however other opportunity sites for an attended facility may exist in the Market Street business and office district. One potential opportunity site would be in an existing storefront. Ground-floor storefronts are at street level and offer very high visibility to people passing by. The proposed station should park at least 300 bicycles and offer free valet parking during core hours and paid self-service cardkey access during unstaffed hours.

Downtown Berkeley Bike Station Self-Service Instructions Sign

Amenities

Experience shows that amenities offered in conjunction with attended long-term bicycle parking will increase its popularity and success. Based on the preferences from the survey presented in Chapter 6, recommended amenities include repair services, storage lockers and bicycle retail. Showers and changing rooms appear unnecessary given the lack of stated interest in such facilities. Depending on how the contract type, amenities provided at the attended long-term bicycle parking facilities may be at the discretion of the operator, however the operator should monitor and evaluate the selected amenities to confirm that they meet or exceed an established threshold of use. Charging for these amenities help offset the overall cost of operations.

Costs & Operations

Private vendors operate attended long-term bicycle parking facilities throughout the US, including in San Francisco at the Caltrain Terminal. Different contract models for these facilities exist. At some locations, the vendor charges users for parking and/or amenities to cover operational costs and to potentially make a profit, while in other locations the service is free, but the vendor may require a subsidy to operate the facility. This Strategy recommends that a private vendor manage and operate the attended long-term bicycle parking facilities in San Francisco and long-term bicycle parking

[47] As required in the Transportation Code.
[48] SFMTA, *2011 Bicycle Count Report: City of San Francisco*.

should be free for normal, daily use. A no-cost facility is consistent with the current service available at the Caltrain Terminal.[49] The operator would not collect fees for normal use but would charge for premium access, service, or amenities and any extended (multi-day) bicycle storage. In designing the facility and selecting an operator for the attended bicycle parking, a minimum number of bicycle parking spaces should be established and a baseline set of amenities that the operator will offer should be determined.

Capital costs for attended long-term bicycle parking can vary widely depending on design details and whether an existing structure can be used. Table 15 lists wide-ranged cost estimates for attended facilities that depend on the amount of planning, design, and construction required.

Table 15 Estimated Capital Costs for Priority Attended Bicycle Parking*

		Initial Phase		Secondary Phase	
Location	**Cost**	**Numb.**	**Total Cost**	**Numb.**	**Total Cost**
Downtown San Francisco	$1,200,000-$5,000,000	1	$1,200,000-$5,000,000	-	-
Transbay Terminal (funded by TJPA)	$1,200,000-$5,000,000	-	-	1	$1,200,000-$5,000,000
TBD	$1,200,000-$5,000,000	-	-	1	$1,200,000-$5,000,000

**Conceptual level estimate includes 20% contingency*

A funding stream should be identified to offset costs of operation. Table 16 contains conservative operating expense estimates based on the existing costs for the attended Caltrain and BART bicycle parking facilities. These operating costs do not include any cost for rent; ideally (though unlikely given the lack of optimal locations) these sites are on city property and will not require this reoccurring monthly cost.

Table 16 Estimated Operating Costs for Priority Attended Bicycle Parking[50]

		Initial Phase		Secondary Phase	
Location	**Annual Cost**	**Number**	**Annual Cost**	**Number**	**Annual Cost**
Downtown San Francisco	$120,000-$200,000	1	$120,000-$200,000	-	-
Transbay Terminal (funded by TJPA)	$120,000-$200,000	-	-	1	$120,000-$200,000
TBD	$120,000-$200,000	-	-	1	$120,000-$200,000

[49] If for any reason, the Peninsula Corridor Joint Powers Board Authority initiates a cost for long-term bicycle parking at the Caltrain Terminal then the SFMTA should follow suite and consider charging for use of its facility. Additionally, if the long-term facility demand far exceeds capacity a bicyclists surcharge should be considered.

[50] Operating costs could be as low as $0 per year if a zero-sum contract, giving complete operational and profit control to a facility operator.

Pilot Attended Facility

Prior to developing attended long-term bicycle parking facilities in San Francisco, an attended parking facility should be piloted. The SFMTA should coordinate a “pop-up” or pilot long-term bicycle parking facility to gauge support and demand. This pilot facility could resemble event bicycle parking but in a high-demand bicycle parking area, like near the Powell Street BART Station, Ferry Building or at the street-level in the Financial District. Once a pilot long-term bicycle parking is deemed successful, a visually appealing bicycle parking facility located at street level or within easy access to and from the street should be designed and developed.

7.3. Total Costs

The Strategy for Long-Term Bicycle Parking in San Francisco is a planning study and provides general recommendations for different long-term bicycle parking facilities in different locations. The information in this chapter is intended to be used to support more detailed, project-specific planning and design leading to implementation at priority locations. Table 17 summarizes the estimated long-term bicycle parking capital costs intended for the two initial implementation phases and Table 18 summarizes the operating costs for these facilities.

Table 17 Estimated Capital Costs for Priority Long-Term Bicycle Parking

			Initial Phase		Secondary Phase	
Facility Type	**Location**	**Cost**	**Number**	**Total Cost**	**Number**	**Total Cost**
Bicycle Lockers	SFMTA Parking Garages	$3,000	52	$156,000	-	-
	Transit Connections	$3,000	12	$36,000	-	-
	Market Street[51]	$4,200	-	-	10	$42,000
	Residential Neighborhoods	$8,400	4	$33,600	8	$67,200
Unattended Bicycle Areas	West Portal	$500,000	1	$500,000	-	-
	SFMTA Parking Garages	$500,000	-	-	2	$1,000,000
	Ferry Building (funded by Port)	$500,000	-	-	1	$500,000
	Transbay Terminal (funded by TJPA)[52]	$500,000	-	-	1	$500,000
Attended Bicycle Stations	Downtown San Francisco	$1,200,000-$5,000,000	1	$1,200,000-$5,000,000	-	-
	Transbay Terminal (funded by TJPA)	$1,200,000-$5,000,000	-	-	1	$1,200,000-$5,000,000
	TBD	$1,200,000-$5,000,000	-	-	1	$1,200,000-$5,000,000
	SFMTA Total			**$1,925,600-$5,725,600**		**$2,309,200-$6,109,200**

[51] Privately funded.

[52] Part of the Transbay Terminal Phase I construction includes a storefront unattended long-term bicycle parking facility; scheduled for completion in 2017.

Table 18 Operating Annual Costs for Priority Long-Term Bicycle Parking

			Initial Phase		Secondary Phase	
Facility Type	**Location**	**Cost**	**Number**	**Total Cost**	**Number**	**Total Cost**
Bicycle Lockers	SFMTA Parking Garages	$200	52	$10,400	-	-
	Transit Connections	$200	12	$2,400	-	-
	Market Street	$200	-	-	10	$2,000
	Residential Neighborhoods	$400	4	$1,600	8	$3,200
Unattended Bicycle Areas	West Portal	$2,000	1	$2,000	-	-
	SFMTA Parking Garages	$2,000	-	-	2	$4,000
	Ferry Building (funded by Port)	$2,000	-	-	1	$2,000
	Transbay Terminal (funded by TJPA)	$2,000	-	-	1	$2,000
Attended Bicycle Stations	Downtown San Francisco	$120,000-$200,000	1	$120,000 - $200,000	-	-
	Transbay Terminal (funded by TJPA)	$120,000-$200,000	-	-	1	$120,000 - $200,000
	TBD	$120,000-$200,000	-	-	1	$120,000 - $200,000
	SFMTA Total Annual Costs			**$136,400 - $216,400**		**$129,200 - $209,200**

8. Recommendations for Continued Long-Term Bicycle Parking Success

In addition to requiring sound planning, design and implementation processes, the success of long-term bicycle parking depends on less tangible factors like coordination, operations, marketing and monitoring. At the local level, design and siting decisions require coordination between city agencies. At the regional level, achieving and maintaining high levels of use depend on coordination with regional transit agencies. This chapter offers programmatic recommendations for marketing, monitoring, evaluating and continued coordination.

8.1. Marketing

Many existing long-term bicycle parking facilities are not visible to the public due to their location within parking garages and are not always obvious to those who work in the buildings and do not arrive by car. Additional outreach efforts to provide information about the location and accessibility of bicycle parking will help to ensure that city investments are well used and will provide encouragement to potential bicycle commuters. Additionally, wayfinding signs helps ensure that the public is aware of these facilities.

As additional long-term bicycle parking facilities are rolled out, consistent with the 2009 San Francisco Bike Plan, the SFMTA should consider:

- Conducting a publicity campaign informing bicyclists and potential bicyclists of the availability and location of bicycle parking;
- Providing a fact sheet showing free and fee-based bicycle parking available at City-owned parking garages;
- Developing and publish a comprehensive, high-quality brochure, including a map showing bicycle parking locations in appropriate detail; and
- Developing a web-based map application showing bicycle parking locations.

A public outreach campaign should encourage private property owners to provide safe, secure off-street bicycle parking facilities at their buildings. The campaign should recommend that building owners survey building tenants to determine the quantity of bicycle parking spaces required and select a convenient location for a centralized parking facility and then plan, design and construct the bicycle parking facility. Additionally, specific bike parking signs should be installed to direct bicyclists to these facilities.

8.2. Monitoring and Evaluation of Facilities

Long-term bicycle parking demand is not constant and patterns of parked bicycles change according to the time of day, day of the week or season of the year. Long-term bicycle parking can also fluctuate in use over longer periods of time. To address long-term bicycle parking capacity deficiencies and excesses, city agencies and long-term bicycle parking operators should monitor use of facilities. This monitoring is important for determining future facilities— any need for expansion, reduction or relocation of long-term bicycle parking. Additionally, changes in mode share and bicycle collisions near these facilities should be monitored and surveyed.

Both individual and collective bicycle lockers can be moved, so if demand is found to be low in a specific location or safety is an issue, then they can be relocated to somewhere with more potential demand or interest. Alternatively, in a location where lockers are in high demand, the SFMTA may consider adding lockers or an unattended facilities to help meet the need. Where unattended bicycle parking facilities are in high demand and lack capacity, the SFMTA or operator should consider expansion and, if demand is extremely high, consider converting the space to an attended bicycle parking facility. For larger attended facilities, the SFMTA should monitor the number of parked bicycles. If demand exceeds capacity, overcrowding can result both inside and outside of the station, which affect transit operations and discourage bicycling. If capacity for either an unattended or attended facility greatly exceeds demand, the operator can increase marketing efforts, offering incentives to park at the station or focusing on shifting bicyclists parking at other facilities to the more secure attended facility. Demand and use of long-term bicycle parking is dynamic and must be responsive to this demand.

8.3. Local & Regional Coordination

8.3.1. Intra-Agency Coordination

The SFMTA is in a unique position to coordinate the planning and implementation of long-term bicycle parking at MUNI and other transit stations in San Francisco. As a first step, the SFMTA must work collaboratively internally, identifying opportunities for implementation in current and future projects. Opportunities to expand long-term bicycle parking at city parking garages and parking lots also exist, requiring SFMTA staff to work across divisional and subdivisional groups, for example Livable Streets should continue coordinating opportunities for long-term bicycle parking implementation with the Off-Street Parking subdivision. The SFMTA should also coordinate funding opportunities and potential implementation during other improvement projects that occur with transit and Off-Street Parking.

8.3.2. Interagency Coordination

Outside of the SFMTA, Livable Streets staff should help coordinate efforts of other city agencies to deliver long-term bicycle parking. For example, this Strategy recommends long-term bicycle parking at the Ferry Building, which is Port property. Port planners are aware of the need and may be able to benefit from SFMTA's expertise and assistance with regard to design, placement and procurement. The SFMTA should also continue coordination with the Planning Department on implementing the revised bicycle parking planning code and specifications for proper long-term bicycle parking facility design.

8.3.3. Regional Coordination

Effective planning and implementation of long-term bicycle parking in San Francisco requires coordination at the regional level as well. Many of the favorable long-term bicycle parking locations are on or near regional transit agencies' properties. The SFMTA should continue coordinating the operation of existing facilities and planning and implementation of future facilities with the appropriate agencies as described below and as opportunities arise.

- The Transbay Joint Powers Authority (TJPA) is planning long-term bicycle parking with the new San Francisco Transbay Terminal. Facilities should be coordinated with existing city bicycle parking specifications and on-street bikeways.
- Peninsula Corridor Joint Powers Board (Caltrain) operates the existing long-term bicycle parking facility at the 4th Street Terminal. Caltrain is working on a new contract for the site (SFMTA staff served on the proposal selection committee). This facility will likely expand its capacity in the near future. Additionally, Caltrain plans to expand bicycle parking facilities near the 22nd Street Station but given the station layout and lack of available real estate, they will need to partner with the City on implementation.
- BART is planning unattended long-term bicycle parking facilities at the Civic Center, 16th, 24th and Glen Park Stations.

The SFMTA must work collaboratively and creatively with regional agencies in planning, developing, and funding these facilities. The Bay Area Air Quality Management District and the Metropolitan Transportation Commission have a particular interest in promoting facilities that serve regional trips. Coordination of payment and access media for long-term bicycle parking facilities within San Francisco and beyond (for example with the Clipper card) will improve the user experience and increase overall use.

8.4. City and Public Review

The majority of proposed long-term bicycle parking accessible to the general public will be on the sidewalk, in the street or in public buildings property. Prior to any public outreach or city approvals and after SFMTA review, other relevant city departments will need to approve locations and designs of facilities, as appropriate. These departments will vary depending on the proposed facility locations. For example, proposed bicycle lockers on the sidewalk should be reviewed at a minimum by the Planning Department for design and any adjacent planning projects, Public Works for sidewalk encroachment and the Fire Department for public safety review.

Many of the long-term bicycle parking facilities will be viewable by San Francisco residents, workers and visitors that are both bicyclists and non-bicyclists. Prior to installing new facilities in prominent public locations, specifically bicycle lockers and attended facilities, the SFMTA should provide the public with the opportunity to review and comment on proposed locations and facility designs. Such review can occur through the SFMTA website, public meetings and traffic engineering public hearings.

Appendix 1 – Review of Long Term Bicycle Parking Best Practices from Other Cities and Transit Agencies

City	Parking Type (lockers / unattended shared cages / attended bike stations)	Name of Parking Location	Location Type (near Transit, in transit, Downtown, etc)	Year Opened	Owner	Operator	Capital Cost	Annual Operating Cost	Operating Funding Source	Funding Agencies	Sq. Footage	Capacity (# bikes)	Estimated annual operating cost of one bike parking space (Annual Operating Cost/Capacity)	Rack Type	Amenities	User Fee	Usage Trends	Lessons Learned
Fruitvale BART	Attended Bike Station	Fruitvale BART Bike Station	by transit (Fruitvale BART Station)	2004	BART	Alameda Bicycle (Professional Services Agreement)	$800,000+	$70,000	Fruitvale Repair/Bike Sales ("reaching self-sufficiency"); BART subsidies	BART Subsidy; Unity Council / Fruitvale Development Corporation	NA	200	$350	double tier storage racks; on two floors (second floor accessibly by freight elevator)	free valet parking, repairs & sales, rentals	free attended	~10% increase in usage every year since opening	Shop has been reaching $70,000/year in sales - nearly equating to operating costs; Bike Station was part of TOD parking structure
Chicago	Attended Bike Station	McDonald's Cycle Center	in Millennium Park, near Downtown (park district facility)	2004 as Millennium Park Bike Station, 2006 McDonald's sponsorship	City of Chicago	Bike n Roll (vendor contract with City of Chicago)	$3.2 million	McDonald's $5 million grant in 2006 to underwrite Cycle Center's operations for next 50 years	Bike n Roll pay for their own operating costs through memberships, rentals, tours, plus grant	FHWA	16,448	300	NA	double tier racks	24/7 access; 150 lockers available; towel and shower services; snack bar, bike repair, bike rental; no overnight parking	free to public to park; $20 member reg fee for access to showers; add $10 for locker; $30 monthly; $169 yearly; daily rental fee option	reached capacity among men, lockers were getting too crowded; more availability among women; male cyclists use the long term parking aspect of the facility much more	operates as more than a bike parking facility - focus on tours and rentals to fund operation costs; waiting list for men due to reaching capacity in lockers, no waiting list for women; men must start as dedicated monthly members before becoming annual members
San Francisco	Attended Bike Station	Warm Planet	near Transit	2007	Peninsula Corridor Joint Powers Board	Warm Planet	$850,000	$120,000	General fund, repairs, bike sales	Caltrain	NA	170	$706	Custom - two shelves	Shop, bathroom, bike shop and repair	Free	last 6 months averaging 125 bikes, ranging from 85-150 bikes	agency should hold control of setting bike parking cost; outfit the bike parking space with standard non-proprietary racks; understand demand
SF Bay Area	Bike Lockers	Electronic Lockers	near transit (BART)	NA	BART	BART/BikeLink	$14,000/quad (4 lockers) including purchase and install	$400/quad	BikeLink user fees/BART	BART	NA	Depends on Station	$100	BikeLink Lockers; quads store up to 4 bikes in 4 lockers	none	~3 cents/hr self-serve		
St. Louis	Both Attended and Unattended	Downtown Bike Station	in Downtown	2011	City of St. Louis	Downtown St. Louis Community Improvement District (CID)	$300,000	NA	adjacent Bike Shop (also Co-Tenant) Operates Bike Station; contracted Downtown CID "Clean Team" for day-to-day maintenance	Downtown St Louis Community Improvement District; City of St Louis	1,450	100+ racks	NA	double tier racks; vertical racks	24/7 key-coded secure access, 5 showers, changing room, 70 lockers; next to full-service bike shop (Bike Shark)	$20 reg fee; $150 yearly; $20 monthly	100+ members and 53 active users since opening	took over abandoned building renovated as a LEED Gold building; public-private partnership similar to Cleveland's
Berkeley	Both Attended and Unattended	Downtown Berkeley BART Bike Station (Store Front Station street-level)	near transit (BART), in Downtown	2010	BART	Alameda Bicycle (Professional Services Agreement)	$756,000; ($496,784 from MTC/Safe Routes to Transit; $80,000 from FTA Grant; $130,000 from PTMISEA; $50,000 from BART Capital funds)	$190,000	Repair services, BikeLink fees, subsidy	BART, City of Berkeley & rent from tenant (EBBC)	4,000	268 (155 valet, 113 self-service)	$709	155 spaces on triple-decker racks in valet area; 113 spaces in double-tier (lift-assist) and vertical racks in smart-card self-park area	bike rental, demos, rempairs, bathrooms and lockers	free attended; self-service 3 cents per hour from 9am - 6pm weekdays, and 1 cent per hour all other times	usage increased ~42% over last three years at the attended station	custom-made racks ordered by Alameda Bicycles; easier to find funding for capital costs, operating costs are the brunt of running attended Bike Stations
Santa Monica	Both Attended and Unattended	Bike Center	in Downtown	2011	City of Santa Monica	Bike n Roll (no-charge vendor contract)	~$2 million (mostly from construction contract)	$0 (to Santa Monica)	Bike rental and membership fees	LA County Metro TA	5,300	360	$0 for City; unknown for Bike n Roll operations	double tier and U-racks	24/7 self service access; bike rentals, lockers, showers, towels, tours, repairs	$50 monthly, with locker and towel; $299 annual with locker and towel	membership retention rose slightly in June over a year; total rentention rate 83.46%; monthly pass revenue increased steadily; peak in summer	retrofitted existing parking garage (used to be 27 parking spaces); one main center, another satellite self-service center; outreach and marketing help from Santa Monica Spoke; securing access system was a challenge
Washington, DC	Both Attended and Unattended (after-hours)	Bikestation	by transit (Union Station)	2009	Station owned by Union Station Redevelopment Corporation (USRC); land owned by National Parks Service; DDOT has free long-term lease	Bike n Roll (no-charge vendor contract)	$4+ million	$0 (to DDOT)	Bike n Roll generating revenue from membership fees, rentals and repairs	FHWA	1,700	126	$0 for DDOT; unknown for Bike n Roll operationst	double tier and U-racks	24/7 access; lockers and changing rooms; repairs and rentals	$20 member reg fee; $96 yearly; $12 monthly; $1 daily	usage increasing over years	Siting by major transit center to make it multimodal hub; dealt with structural building issue due to customized architecture; Bikestation key fob pay-as-you-go model - not compatible across states
Cleveland	Both Attended and Unattended (after-hours)	The Bike Rack	in central Downtown	2010	City of Cleveland	Downtown Cleveland Alliance (DCA)	$628,800	$84,000/year; DCA wrote business plan to run/fund operations	fundraising, major sponsorship from Cleveland Clinic; membership fees, bike rentals, repairs	Funded from Energy Efficiency Conservation Block Grants (EECBG); American Recovery and Reinvestment Act (ARRA)	1,600	50	$0 for City; $1,680 for partners	custom-made double tier racks	24/7 self service; lockers, showers, changing room, repair shop, rentals, info center; no overnight parking	$15 reg fee; $150 yearly; $25 monthly; $5 daily; free outdoor parking	mainly used by Downtown employees; average 30-35 users daily	repurposed under-utilized ground floor of City-owned parking garage; use keycard access system; racks made up the majority of capital costs since already owned property to refurbish; would be cheaper if didn't have LEED certification
Seattle	Both Attended and Unattended (after-hours)	Bike Port	corner of Downtown	2003 (closed Dec 2011)	Bike Alliance of Washington	Bike Alliance of Washington; Mobis Bikestation operated until 2010	$750,000	$35,000	County Metro, City, , Transit District	Metro, City of Seattle, South Transit, Bike Alliance Washington, JRA Bikes (rent)	2,080	67	$522	double tier racks	24/7 secure self-service; shower, lockers, full service repair shop; self-service bike stand and tools, vending machine	$2 daily; $15 monthly; $120 yearly	20% usage rate in Sept 2011	was not located in central commuter hub, was on bottom of a hill; usage was always low; commuters preferred to use employer-provided bike parking in own buildings; operated in same building as Bike Washington Alliance HQ
New York City	Covered On-Street Racks; open, unattended	Bike Shelters (19)	Various	2008 - ongoing installations	NYCDOT	NYCDOT	$100,000/shelter ($2 million total)	maintenance provided in transit shelter contract	part of bus shelter vendor agreement	NYCDOT	NA	8-10 bikes/shelter (4-5 racks/shelter)	NA	standard NYCDOT sidewalk racks	n/a	n/a	heavily used by transit station	NYC lacking bike station due to limited space; challenging finding space for shelters within the public ROW; competes with other street furniture; 48 hour time limit for parking
Berkeley BART	Unattended Bike Cage	Downtown Berkeley BART Bike Station (self service below-ground in BART)	in transit (concourse level)	1996	BART	Originally Mobis bike station; currently Alameda Bicycle (Professional Services Agreement)		$2,000	BART General Fund	BART	500	80	$25	steel cage	none	3 cents per hour from 9am - 6pm weekdays, and 1 cent per hour all other times	this used to be an attended station, until the above-ground facility began operating	The operating cost of the first 10 months from November 1999 to March 2001 was $133,405 (when it was attended) - source: http://www.transformca.org/ia/bikestat/04.shtml ; Mobis bike station prior to BikeLink had more thefts; self-service stations not expensive since own property within BART stations
Ashby BART	Unattended Bike Cage	Ashby BART Bike Station	by transit (Ashby BART Station)	2011	BART	Alameda Bicycle (Professional Services Agreement)	part of $400,000 modernization construction of Ashby BART Station	$2,000	BART General Fund	BART	NA	128	$16	double tier racks	none	3 cents per hour from 9am - 6pm weekdays, and 1 cent per hour all other times	Ashby underutilized (people still parking in outside racks, lots of space left in locked station; only 40-50% utilization daily)	Not enough marketing of Bike Station at Ashby; users still prefer to part at outdoor racks, at greater risk of theft
San Francisco	Unattended Bike Cage	Embarcadero BART Bike Station	in transit (Embarcadero BART concourse level)	2002 (switched to self-station in 2009)	BART	Originally Mobis bike station; Alameda Bicycle took over in 2008		$2,000	BART General Fund	BART	NA	96	$21	steel cage	none	3 cents per hour from 9am - 6pm weekdays, and 1 cent per hour all other times	Usage increased by 21% between 2008/09 and 2010/11	Alameda Bicycle dealt with marketing issues from thefts that occurred from Mobis bike station operations; transfer of technology for improved security; dealt with MUNI/BART brake dust issues affecting BikeLink technology
Portland Area	Unattended Bike Cages	Bike & Ride	in transit centers: Beaverton, Gresham Central, Sunset	2011	TriMet	TriMet/BikeLink	~$1.1 million stimulus funds for three facilities; along with replacing and refurbishing 174 bike lockers	TBD	NA	Part of $1.8 million grant from the American Recovery and Reinvestment Act (ARRA, stimulus bill)	NA	~80 secure sheltered spaces inside shared cage; more racks outside in covered spaces	TBD	double tier and U-racks	24/7 self service access; repair station; bike maintenance vending machine; bike lock hitching post; security camera	$5 one-time fee to verify customer ID; 3 cents/hr; $20 for BikeLink card		repurposing parking spaces; "planned regional Bike & Ride network" for bike-integrated transit; BikeLink technology; shared bike shelter as transition away from assigned bike lockers
MacArthur BART	Unattended Bike Facility	MacArthur BART Bike Station	plaza outside BART station	TBD 2013	BART	will be Alameda Bicycle	$600,000 part of renovation of BART plaza	$2,000	BART General Fund	BART; City of Oakland	NA	174 additional indoor spaces planned	$11	double tier racks	no additional amenities; security camera	3 cents per hour from 9am - 6pm weekdays, and 1 cent per hour all other times	n/a	will be self-serve kiosk facility; not a cage due to aesthetics

Appendix 2 – Survey

The SFMTA is evaluating the feasibility of long-term bicycle parking facilities in San Francisco and this **5-minute survey** will aid in assessing the demand, value and desired amenities pertaining to future facilities.

Bicycle use in San Francisco is increasing. To support this trend and help provide secure bicycle parking facilities in San Francisco, the San Francisco Municipal Transportation Agency (SFMTA) is surveying San Francisco residents and workers about their need for secure long-term bicycle parking. Long-term bicycle parking which is intended for people who need to leave a bicycle for longer than two hours, provides a greater level of security than a sidewalk rack and typically offers more protection from the elements.

Thank you for taking 5 minutes to answer 14 questions to help make San Francisco more bicycle-friendly!

1. Do you work or live in San Francisco? Check the box that applies to you.

	Work in San Francisco	Work Outside of San Francisco
Live in San Francisco		
Live outside of San Francisco		

2. Do you own a bicycle?
   - Yes
   - No

Example Secure Bicycle Parking

Bicycle Lockers

btaoregon.org

Bicycle Room

Richard Drdul

Bicycle Cage

3. How would you characterize where you live?
   - A one-family house
   - A single room occupancy unit
   - A building with two to ten apartments/condominiums
   - A building with greater than ten apartments/condominiums

4. If you own a bicycle, where do you store it at your home?
    - Inside the living space of my house/apartment/condominium
    - In my parking garage or backyard
    - In a bicycle locker, shared bicycle room or bicycle cage
    - On a bicycle rack outside of my house/apartment/condominium
    - On a fixed feature (i.e. sign post, pole) on the sidewalk outside of my house/apartment/condominium
    - I do not own a bicycle
    - Other:
5. Do you currently ride a bicycle in San Francisco for any of your trips to or from work?
    - Yes
    - No

6. How many days a week do you ride a bicycle **in** San Francisco for any type of trip?
    - 0
    - 1-2
    - 3-4
    - 5+
7. Do you currently ride transit in San Francisco to or from work?
    - Yes
    - No

8. If you ride a bicycle **in** San Francisco for at least part of your commute, where do you typically park your bicycle **in** San Francisco during the day?
    - Inside my workplace
    - On a bicycle rack on the sidewalk outside of my workplace
    - On a fixed feature (i.e. sign post, pole) on the sidewalk outside of my workplace
    - On a bicycle rack inside a parking garage
    - In a bicycle locker, shared bicycle room or bicycle cage
    - At a transit stop or station
        - If at transit, please specify Muni, BART, Cal train, or other
    - Other:
    - I don't bicycle to/from work **in** San Francisco
    - I live in San Francisco but don't work in San Francisco, so I bring my bicycle with me

9. If more secure bicycle parking (bicycle locker, shared bicycle room or bicycle cage) became available near one of your destinations **in** San Francisco, would you be more likely to bicycle **in** San Francisco?
    - Yes
    - No

10. If more secure bicycle parking (bicycle locker, shared bicycle room or bicycle cage) became available near a transit station or stop **in** San Francisco, would you be more likely to combine a bicycle and transit trip **in** San Francisco?
    - Yes
    - No

11. If additional secure long-term bicycle parking became available **in** San Francisco, how much would you be willing to pay to use such a facility?
    - Less than $5.00 per day
    - $5.00 to $10.00 per day
    - Greater than $10.00 per day
    - I would not be willing to spend any money for secure long-term bicycle parking

12. How interested are you in other amenities if they were available with long-term bicycle parking. Select your interest level based on the scale below.

				Are you willing to pay for it?	
	Not Interested	Somewhat Interested	Very Interested	Yes	No
Vending machine with bicycle supplies					
Bicycle tools for do-it-yourself repairs					
Access to bicycle mechanic (for fee)					
Storage lockers					
Changing room					
Showers					
Café					
Bicycle share station					
Other:					

13. What is your gender?
    - Female
    - Male

14. Do you have any additional comments or suggestions about long-term bicycle parking in San Francisco?

For more information about bicycle parking in San Francisco, please visit the SFMTA's website at, www.sfmta.com/bikeparking. If you have comments or questions about the survey, please contact Matt Lasky, SFMTA Project Manager at matt.lasky@sfmta.com or 415.701.5228.

Appendix 3 – Survey Flyer

Front

Back

Appendix 4 – Long-Term Bicycle Parking in Other Cities

Portland			Vancouver		New York City		APBP, 2010	
Use Category	**Specific Uses**	**Long-term Spaces**	**Specific Use**	**Class A Class B**	**Specific Use**	**Enclosed**	**Use Category**	**Long-term**
Household Living	Multi-dwelling	1.5 per 1 unit in Central City plan district; 1.1 per 1 unit outside Central City plan district	Dwelling	min. 1.25 per unit 0.75 per unit for a certain district	Use Group 2 (Residential except for single family detached)	1 per 2 units	Multi family	None if private garage exists, 0.5 space for each bedroom, min. of 2 spaces
Group Living		2, or 1 per 20 residents			dormitory or frat/Sorority student housing	1 per 2,000 sq. ft.		
	Dormitory	1 per 8 residents						
			Senior/ assisted housing	0.1 to 0.25 per unit based on size and type	residence or units for elderly	1 per 10,000 sq. ft.	Senior housing	0.5 spaces for each bedroom, min. 2 spaces
Retail Sales And Service		2, or 1 per 12,000 sq. ft.of net building area	retail and service	1 per 500 sq. mete	General Retail	1 per 10,000 sq. ft.	General food sales or groceries	1 space for each 10,000 s.f. min. 2 spaces
							General retail	1 space for each 10,000 s.f. min. 2 spaces
Office		2, or 1 per 10,000 sq. ft. of net building area	Office	1 space per 500 sq. meters	Use Group 6B (Office)	1 per 7,500 sq. ft.	Office	1.5 space for each 10,000 s.f. min 2 spaces

Portland			Vancouver		New York City		APBP, 2010	
Use Category	**Specific Uses**	**Long-term Spaces**	**Specific Use**	**Class A Class B**	**Specific Use**	**Enclosed**	**Use Category**	**Long-term**
	Temporary Lodging	2, or 1 per 20 rentable rooms	Hotel	1 for 30 units (none for b&b)				
Commercial Outdoor Recreation		10, or 1 per 20 auto spaces	Cultural and Recreational (including theater, auditorium, fitness centre)	min 1 for each 500 sq. meters to 1 per 250 sq. meters	Use Group 8A and 12A (Amusement: theaters, stadiums, arena)	1 per 20,000 sq. ft.	*Assembly (church, theaters, stadiums, parks, beaches, etc.)	1.5 spaces for each 20 employees, min. 2 spaces
Major Event Entertainment		10, or 1 per 40 seats or per CU review					*Assembly (church, theaters, stadiums, parks, beaches, etc.)	1.5 spaces for each 20 employees, min. 2 spaces
Manufacturing And Production		2, or 1 per 15,000 sq. ft. of net building area	Transportation and storage, utility and communication, wholesale	1 for 1000 Sq. meters or 1 per 17 employee whichever greater			Manufacturing and production	1 space per 12,000
Warehouse And Freight Movement		2, or 1 per 40,000 sq. ft. of net building area					Auto sales, rental, and delivery, automotive serving,	1 space for each 10,000 s.f. min. 2 spaces

Portland			Vancouver		New York City		APBP, 2010	
Use Category	**Specific Uses**	**Long-term Spaces**	**Specific Use**	**Class A Class B**	**Specific Use**	**Enclosed**	**Use Category**	**Long-term**
							repair, and cleaning	
Commercial Parking		10, or 1 per 20 auto spaces	Parking	determined by Planning Director	Public parking garages	1 per 10 auto parking spaces	off-street parking lots and garages	1 space per 20 automobile, min is 2
Basic Utilities	Light rail stations, transit centers	8						
Community Service		2, or 1 per 10,000 sq. ft. of net building area			Libraries, museums, non commercial art gallery	1 per 20,000 sq. ft.	Non-assembly cultural (library, government buildings, etc.	1.5 spaces for each 10 employees, min. 2 spaces
	Park and ride	10, or 5 per acre						
Parks And Open Areas		Per CU review			All other Community Facilities (all other Use Group 3 and 4)	1 per 10,000 sq. ft.	*Assembly (church, theaters, stadiums, parks, beaches, etc.)	1.5 spaces for each 20 employees, min. 2 spaces
Schools	Grades 2	2 per classroom, or	elementary	1 per 17 employee			kindergarten and	1.5 per 10 employees , min

Portland			Vancouver		New York City		APBP, 2010	
Use Category	**Specific Uses**	**Long-term Spaces**	**Specific Use**	**Class A Class B**	**Specific Use**	**Enclosed**	**Use Category**	**Long-term**
	through 5	per CU or IMP review					elementary (1-3)	2 spaces
	Grades 6 through 12	4 per classroom, or per CU or IMP review					grade 4-12	1.5 per 10 employees and 1.4 space for each 20 students planned capacity, min 2 spaces
Colleges	Excluding dormitories (see Group Living, above)	2, or 1 per 20,000 sq. ft. of net building area, or per CU or IMP review	Secondary or College	0.4 space for every 10 students	colleges, universities	1 per 5,000 sq. ft.	colleges and universities	1.5 spaces for each 10 employees plus 1 space for each 10 students of planned capacity; or 1 space per 20,000 s.f., whichever greater
Medical Centers		2, or 1 per 70,000 sq. ft. of net building area, or per CU or IMP review	Hospital or similar use	1 per 17 employees on a max worksheet			Healthcare/hospital	1.5 space for each 20 employees or 1 space for each 50,000 sq. ft. whichever greater. Min of 2 spaces

Portland			Vancouver		New York City		APBP, 2010	
Use Category	**Specific Uses**	**Long-term Spaces**	**Specific Use**	**Class A Class B**	**Specific Use**	**Enclosed**	**Use Category**	**Long-term**
Religious Institutions		2, or 1 per 4,000 sq. ft. of net building area	place of worship	None	houses of worship	None		
Daycare		2, or 1 per 10,000 sq. ft. of net building area	Child day care facility	None			daycare	1.5 for each 20 employee, min 2

Appendix 5 – 2009 Bike Plan Long-Term Bicycle Parking Action Items

Action	Action Text	How the Draft 2013 Planning Code Addresses the 2009 Bike Plan Actions
Action 2.1	Work with the Planning Department to consolidate Sections 155.1-155.5 of the Planning Code to provide clearer regulation, guidance and exemptions related to bicycle parking.	The 2013 Code provides consolidation, greater detail, and clearer explanations for bicycle parking.
Action 2.2	Work with the Planning Department to modify the Planning Code's requirements for bicycle parking so that they are less dependent on automobile parking provisions.	The 2013 Code requirements are dependent on square footage and units and in almost all cases, not automobile parking provisions.
Action 2.3	Work with the Planning Department to amend the Planning Code to increase required bicycle parking for new residential developments.	The 2013 Code increases parking requirements for residential developments.
Action 2.4	Work with the Planning Department to increase monitoring and enforcement of bicycle parking provisions in the Planning Code, especially when issuing building permits.	The 2013 Code does not increase monitoring and enforcement of bicycle parking provisions.
Action 2.6	Work with the responsible San Francisco agencies and entities to ensure that all garage bicycle parking is secure, well monitored and well-advertised at garage entrances and other appropriate locations.	The 2013 Code addresses the location for bicycle parking in parking garages and requirements for bicycle parking signs (section 155.1.4.B).
Action 2.8	Ensure that all City leases are negotiated to include the required level of bicycle parking by cooperative efforts of the City Real Estate Department and the SFMTA.	The 2013 Code addresses the provision of bicycle parking at all City leased buildings (section 155.3).
Action 2.9	Pursue a citywide policy to provide secure bicycle parking at all City buildings in areas to be specified by the individual agencies, subject to safety regulations and available space, by cooperative efforts of the City Real Estate Department, the Planning Department, and the SFMTA.	The 2013 Code addresses the provision of bicycle parking at all City buildings (section 155.3).

Action	Action Text	How the Draft 2013 Planning Code Addresses the 2009 Bike Plan Actions
Action 2.10	Work with the Planning Department to amend the Planning Code to lower the number of automobile parking spaces required in buildings where Class I bicycle parking is provided.	The 2013 Code allows the reduction of automobile parking requirements with the inclusion of additional bicycle parking spaces (section 155.3.d).
Action 2.11	Work with the Planning Department to amend the Planning Code to require bicycle parking in each individual building of large, multiple-building developments.	The 2013 Code addresses the distribution of required bicycle parking close to individual buildings in a multi-building development (section 155.1.3).
Action 2.12	Work with the Planning Department to amend the Planning Code to require building owners to allow tenants to bring their bicycles into buildings unless Class I bicycle parking is provided.	The 2013 Code does not address bringing bicycles into buildings but the San Francisco Environment Code addresses this in a 2012 amendment
Action 2.14	Develop and maintain an SFMTA bicycle parking outreach campaign in various formats to provide relevant bicycle parking information such as garage locations with bicycle parking and bicycle locker availability.	The 2013 Code does not address a bicycle parking outreach campaign *but a campaign is recommended with future implementation of long-term bicycle parking facilities and this will be a recommendation in the Long-Term Bicycle Parking Strategy*.

Appendix 6 – Sources

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