



Peninsula Corridor Joint Powers Board

# Caltrain Bicycle Access & Parking Plan

October 2, 2008





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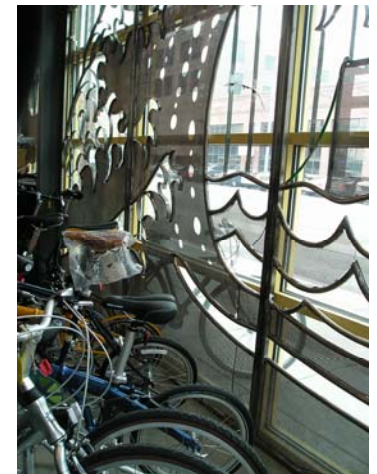
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# Executive Summary

Caltrain's progressive bicycle parking and onboard programs draw 8 percent of all passengers to arrive at stations by bike. Increasing this rate in order to build ridership on the system is a priority of the *Caltrain Strategic Plan*.

The *Caltrain Bicycle Access and Parking Plan* proposes to increase the number of passengers who bicycle to Caltrain stations by making improvements to access and bike parking at the top 10 stations which account for 75 percent of the system's cyclist-passenger volumes: San Francisco, 22<sup>nd</sup> Street, Millbrae, Hillsdale, San Mateo, Redwood City, Palo Alto, Mountain View, Sunnyvale and San Jose Diridon.

Caltrain's strategy is to provide a range of options to accommodate passengers' various needs for the bicycle portion of their Caltrain trip.

Plan recommendations include:

- Cyclist-specific customer service and marketing
- Increasing overall bicycle parking supply

- Providing a mix of bike parking for different user needs
- Improving station access for passengers with bikes
- Working with cities to improve station bike access
- Studying innovative station-side concepts such as real-time bicycle capacity information, bike sharing, and subsidies for folding bikes.

The *Caltrain Bicycle Access and Parking Plan* contains Bicycle Parking and Access Guidelines to supplement existing Caltrain Design Criteria and Standards. Plan recommendations will be implemented based on the timing of available funding.





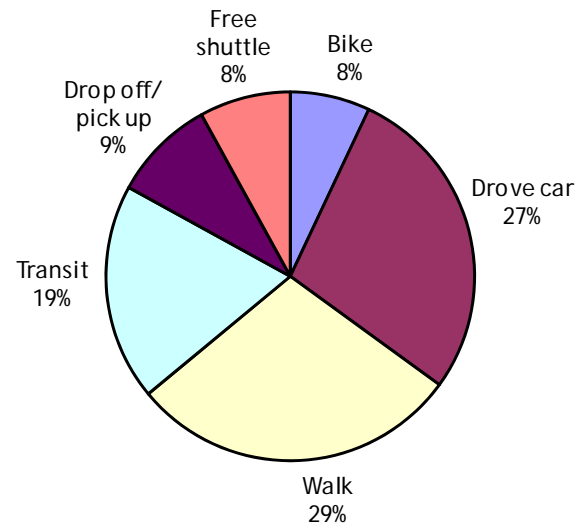
# 1 | Introduction

Each weekday, roughly 8 percent of all passengers arrive at Caltrain stations by bicycle. Caltrain's *Strategic Plan* calls for increasing the number of passengers who access stations by bike (and on foot and by transit) to reduce pollution, traffic congestion, and climate change impacts, and to improve the health and wellness of passengers, while outlining a balanced approach to accommodating the range of Caltrain users, including pedestrians, bicyclists, senior citizens, persons with disabilities and others.

Caltrain's strategy is to encourage and promote bicycle access to the stations by increasing and improving bicycle parking and by pursuing innovative approaches to managing demand of the onboard bicycle program.

The *Caltrain Bicycle Access and Parking Plan* focuses on systemwide improvements to bicycle access and parking, as well as specific access and parking improvements at the 10 Caltrain stations with the highest bicycle use: San Francisco, 22<sup>nd</sup> St, Millbrae, San

Mateo, Hillsdale, Redwood City, Palo Alto, Mountain View, Sunnyvale and San Jose Diridon.



Access modes to station

Source: 2007 Passenger Survey



This *Bicycle Access and Parking Plan* focuses on improvements to bicycle access to and parking at stations.

The recommendations in this plan include both conventional approaches and potential innovative concepts. Although no funding has yet been secured for any of the concepts in this plan, there are potential grant opportunities for implementing many of these projects.

## ***Bicycle Access and Parking Plan*** **priorities**

The Guiding Principles in the *Caltrain Strategic Plan* lay out broad goals to which the Priorities of this *Bicycle Access and Parking Plan* must conform and delineate in finer detail with respect to bicycle issues. The relevant elements of the Guiding Principles are listed in Appendix A. The Priorities are numbered for reference and are not listed in any particular hierarchy.

### **Priority 1: Improve bicycle access to Caltrain stations**

Encourage more passengers to bicycle to Caltrain stations by improving the convenience and safety of bicycle access. Caltrain encourages passengers to reach stations by any alternative mode to driving alone, including by bike, on foot, via transit and shuttles, and by carpooling. Access by these modes have social and environmental benefits in the form of reduced pollution, traffic congestion and climate change impacts, as well as improving health and wellness.

### **Priority 2: Improve bicycle parking at Caltrain stations**

Improve bicycle parking by making it more secure, convenient, flexible and readily available.

### ***CALTRAIN BICYCLE ACCESS AND PARKING PLAN*** **PRIORITIES**

- Improve bicycle access to Caltrain stations
- Improve bicycle parking at Caltrain stations
- Improve customer service to bicycling passengers
- Balance accommodation of all types of passengers
- Prioritize safety when considering improvements

### **Priority 3: Improve customer service to bicycling passengers**

Improve the efficiency of Caltrain’s administration and management of bicycle facilities to increase bicyclists’ customer satisfaction. Improving outreach, marketing, education, response-times, and providing better information will enhance the Caltrain experience for bicyclists.

### **Priority 4: Balance accommodation of all types of passengers**

Caltrain serves many types of passengers, both able-bodied and mobility-impaired, and conveys wheelchairs, luggage, bicycles, and strollers. Caltrain will work to balance accommodation of all types of users in the Caltrain environment with minimal infringement on other users.

## Priority 5: Prioritize safety when considering improvements

Caltrain's top concern is the safety of all passengers. In considering potential changes and improvements to the Caltrain system and infrastructure, safety and reduction of risk are essential criteria for prioritizing improvements.

## Overview of Plan chapters and appendices

There are six chapters and eight appendices in the *Caltrain Bicycle Access and Parking Plan*. This section contains a brief description of each.

### Chapter 1: Introduction

The "Introduction" chapter presents the Plan priorities and an overview of the contents of each chapter.

### Chapter 2: Background

The "Background" chapter provides a brief overview of the Caltrain rail system, bicycle parking at Caltrain stations and the system's onboard bicycle program; a synopsis of the process that resulted in this plan; and summaries of related Caltrain plans and plans by other agencies.

### Chapter 3: Systemwide Issues

Issues that are described in Chapter 3 include bicycle parking, bicycle access, information for cyclists, and safety.

### Chapter 4: Station-specific Issues

This chapter provides an overview of the 10 Caltrain stations with the highest numbers of bicycling passengers, with recommended improvements for each station.

### Chapter 5: Innovations

Three types of innovative station-side strategies for Caltrain's bicycle program are presented in Chapter 5: real-time information for cyclists, bikesharing, and a folding-bike subsidy.

### Chapter 6: Funding & Next Steps

Chapter 6 presents implementation and funding strategies for this plan's recommendations, including potential funding sources for capital improvements and potential revenue sources for operational enhancements.

### Appendix A: Relevant *Caltrain Strategic Plan* Guiding Principles

The *Caltrain Strategic Plan* Guiding Principles relevant to bicycles comprise Appendix A. These principles form the context of the *Caltrain Bicycle Access and Parking Plan* priorities.

### Appendix B: Station Details

This section contains detailed information for the 10 stations with the highest numbers of bicycling passengers, including key station features; history of recent improvements; highlights of published plans; bicyclist data; bicycle parking; and issues and recommendations regarding bicycle parking and station and platform access.



## Appendix C: Bicycle Access Guidelines

Appendix C provides guidelines for the improvements to bicycle access to Caltrain stations recommended in the body of the *Caltrain Bicycle Access and Parking Plan*. These include suggestions that are under the purview of the Peninsula Corridor Joint Powers Board, Caltrain's governing body, as well as those that will require coordination with local governments.

## Appendix D: Bicycle Parking Guidelines

Guidelines for the bicycle parking recommendations in the body of the Plan are summarized in Appendix D.

## Appendix E: Onboard Operations

This appendix provides useful background information, discussion and context for Caltrain's bicycles-onboard program.

## Appendix F: Data Used to Inform Plan

Details regarding the survey methodology and data used for the analyses and recommendations in this plan are discussed here.

## Appendix G: Estimated Costs

Appendix G provides order of magnitude costs for improvements to bicycle station parking and access recommended in Chapters 3 and 4 and Appendix B.

## Appendix H: Bicycle Issues at Other Stations

Beyond the 10 Caltrain stations with the highest bicycle volumes profiled in Chapter 4 and Appendix B are a number of other stations with bicycle-related issues raised by cyclists and/or where bicycle improvements

are proposed in locally adopted plans. This appendix describes those issues and plans.



# 2 | Background

This chapter provides a brief overview of the Caltrain rail system, bicycle parking at Caltrain stations and the system's onboard bicycle program; a synopsis of the process that resulted in this plan; and summaries of related Caltrain plans and plans by other agencies.

## Caltrain: Past to present

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### Caltrain rail system

Caltrain is a commuter rail service that operates along the Peninsula between the cities of San Francisco and San José (with limited commute-hour service to Gilroy), passing through San Francisco, San Mateo and Santa Clara counties along the way. The Caltrain corridor runs parallel to the US 101 and El Camino Real corridors and serves major residential and employment centers along these corridors. A rail service has been operated by various private and public entities along the corridor for more than 145 years.

Historically, the stations were adjacent to and served the downtowns of small towns on the rail line. After

having been weakened for decades as a result of post-war automobile-scaled development, today these downtowns are being revitalized as livable communities with retail, entertainment and social activities—where walking and bicycling are encouraged.

Since 1992, Caltrain has been owned and operated by the Peninsula Corridor Joint Powers Board (JPB), comprised of representatives of the three counties served by Caltrain (referred to as “Member Agencies”); San Francisco, San Mateo and Santa Clara counties. Caltrain contracts with Amtrak to provide train service and maintain Caltrain equipment.

In 2007, almost 34,000 passengers rode Caltrain on the average weekday, a number that has grown nearly 10 percent annually over the past three years. Standees during peak periods are expected in the years leading up to 2015, when a number of changes will increase the



system's effective capacity<sup>1</sup> (see "Caltrain 2015" section, below). Caltrain serves 32 stations in 18 cities. It operates 98 weekday trains with a combination of local, limited-stop and Baby Bullet express service. On Saturdays, Caltrain operates 32 trains and on Sundays, there are 28 trains. All weekend trains serve 24 stops between San Francisco and San José.

There are direct transit connections with other transit service providers at almost all Caltrain stations, including Bay Area Rapid Transit (BART), San Francisco MTA (Muni), Santa Clara Valley Transportation Authority (VTA), Amtrak Capitol Corridor, Altamont Commuter Express (ACE), and SamTrans. San Mateo County Transit District is the managing agency for Caltrain.

### Bicycle parking at Caltrain stations

Bike parking is available at every Caltrain station, except College Park and San Martin stations. There are more than 400 bike rack spaces, and more than 1,100 bike locker spaces throughout the Caltrain system. In addition, there are four higher-volume bicycle parking facilities—two shared-access bike sheds, an automated bicycle station and a staffed bicycle station—which together provide an additional 358 spaces. It is estimated that about 1-to-2 percent of average weekday ridership (700-to-1,000 cyclists) park their bikes at Caltrain stations before boarding the train, with season fluctuation. This represents occupancy of 35-to-60 percent of systemwide bicycle parking.

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<sup>1</sup> *Caltrain Short Range Transit Plan*, FY 2005-FY 2017.

Under contract with Caltrain, Amtrak administers most of the bicycle lockers, but there are six other public agencies and two private operators that manage lockers and bike parking at Caltrain stations (and set their own fees and policies). For lockers administered by Caltrain, the cost is \$33 for 6 months, with a \$25 key deposit.

### Onboard bicycle program

Caltrain has one of the most generous onboard bicycle programs of all U.S. commuter rail operators. Every train has a guaranteed 16- or 32 -bike capacity: Bombardier trains carry 16 bikes; gallery trains carry 32. There are no peak hour or direction restrictions, other than capacity. Additional fees or permits are not required for bringing a bike onboard.

Coupled with the lack of convenient alternatives for last-mile connections to and from Caltrain stations, many passengers bring their bikes onboard because they are used on both ends of the train ride. According to the 2007 Annual Passenger Count, 2,350 passengers (7 percent of average weekday ridership) brought their bikes onboard.

The northernmost car of each train is a combination cab and bike car, irrespective of the train's direction of travel. (A cab car is a conventional trailer car equipped with an operator's compartment.) Passengers with bicycles wait at the north end of each platform for approaching trains. Bikes are boarded on a first-come, first-served basis; passengers with bikes rely on the honor system to determine boarding order.

1 percent of Caltrain passengers park their bike at a station.

7 percent of Caltrain passengers bring their bicycles onboard.

Once onboard, bikes are each secured with a bungee cord and stacked up to four deep at each rack. Caltrain provides yellow bicycle tags on which passengers label their destinations to help self-organize the bicycle stacking order. (Blank tags can be downloaded from [www.caltrain.com/Bike\\_Tag\\_Info.html](http://www.caltrain.com/Bike_Tag_Info.html).) To expedite unloading, bikes that are destined for sooner stops are stacked outside of bikes bound for further destinations.

Folding bikes are allowed on any car of the train, provided they are folded up. There are no fees, nor peak hour/direction restrictions for bringing folded bikes onboard. Folded bicycles can be stored in the luggage rack in the luggage car or can be placed on the floor near the passenger, as long as it does not block a needed seat or the aisle way.

Caltrain's onboard bicycle program has evolved greatly since a 1992 demonstration project first allowed up to four bikes in the cab car of off-peak trains. Subsequently, cab car bicycle racks were designed in a collaborative effort between Caltrain staff and cyclists and were installed by removing some seats in these cars.

The onboard bike program is so popular and well-used that, even with such high capacity, at times there are fewer bicycle spots available on a given train than the number of bikes waiting to board, a situation that forces some bikes to be denied boarding (known as "being bumped"). Passengers with bumped bicycles can either quickly park their bike at the origin station and board without it or wait for the next train.

Appendix E contains a brief overview of the issues associated with physically expanding bicycle capacity, including the relationship to Caltrain's projected

standee rate and the impact on systemwide dwell time, and thus, operating costs. In an effort to manage demand for onboard bike capacity, Caltrain is considering innovative demand management concepts, which are discussed in Chapter 5. For more information on the onboard program, see Appendix E.

## *Bicycle Access and Parking Plan process*

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In 2006, Caltrain secured a federal grant from the California Department of Transportation (Caltrans) to develop the agency's first plan to address station access and parking issues for bicycles. The focus of the Plan is the 10 stations with the highest bicyclist-passenger volumes, which are (listed from north-to-south):

- San Francisco
- 22<sup>nd</sup> St
- Millbrae
- San Mateo
- Hillsdale
- Redwood City
- Palo Alto
- Mountain View
- Sunnyvale
- San Jose

Public workshops were conducted at each of these stations, at which Caltrain staff and consultants, along with local jurisdiction staff, toured with Caltrain bicyclist-passengers. These passengers pointed out issues of importance to cyclists, such as inadequate bicycle parking, the need for way-finding signage, and station and platform access challenges.

A Technical Advisory Group (TAG) was established for the duration of the *Bicycle Access and Parking Plan*



development process, whose membership was open, unlimited and voluntary. The TAG included:

- Caltrain bicyclist-passengers
- Local city staff and Bicycle Advisory Committee members
- Representatives of the San Francisco and Silicon Valley bicycle coalitions and
- Staff from other agencies and institutions, including VTA, SFMTA, BART, Peninsula Alliance for Traffic Congestion Relief, Stanford University, Caltrans and MTC.

TAG meetings were open to the public and held roughly every quarter at Caltrain headquarters in San Carlos. Stakeholders who were unable to attend TAG meetings were asked to e-mail comments and questions to Caltrain staff. TAG members provided invaluable feedback for the Plan.

An internal Steering Committee comprised of Caltrain Operations, Engineering, Customer Service, Public Information, and Planning staff was also convened to review the Plan for feasibility and conformance with Caltrain operating procedures. Drafts of the Plan were reviewed by the TAG, internal Steering Committee, and senior Caltrain management.

Caltrain staff convened a series of public meetings to present key findings of the Draft *Caltrain Bicycle Access and Parking Plan* before its release. Nearly 100 people attended and staff received more than 300 comments. The key findings also were presented at meetings with the San Francisco and Silicon Valley bicycle coalitions. Comments made at all meetings were incorporated into the public review draft Plan before its release.

### Data used to inform the Plan

Extensive data collection and research informed the *Caltrain Bicycle Access and Parking Plan* and was drawn from the following sources: the 2007 Annual Passenger Count; a qualitative online survey of Caltrain cyclist passengers; various bicycle parking surveys; and a “bump” count (see Appendix F).

### *Bicycle Access and Parking Plan* horizon

This *Bicycle Access and Parking Plan* has a five-to-seven year planning horizon, which coincides with the pre-electrification phase of *Caltrain 2015* (see below). This plan may be updated during this period in response to decisions made in the intervening years.

### Other Caltrain plans

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In addition to this *Bicycle Access and Parking Plan*, Caltrain has and will be developing several other plans to expand and improve services and infrastructure that influence bicycle access to Caltrain. These plans include the following:

#### *Caltrain Strategic Plan*

Adopted by the Caltrain Board in 2004, the *Caltrain Strategic Plan* defines the vision and policies for increasing ridership and evolving Caltrain service into the “preferred mode of travel along the Peninsula Corridor.” The *Strategic Plan* principles relevant to bicycle access are listed in Appendix A.

## Caltrain 2015

*Caltrain 2015* (adopted in concept by the Caltrain Board in 2006) defines a program to achieve the vision put forth in the *Caltrain Strategic Plan* (see above) by transforming the existing commuter service into a rapid rail system. The foci of this transformation are the electrification of the railroad from San Francisco to San José and the deployment of electric multiple unit (EMU) rolling stock. Electrification will enable Caltrain to operate a more efficient, flexible and reliable service with shorter commute times and more frequent service.

### Timeframe

The timeline for *Caltrain 2015* is:

- Pre-electrification (Present to 2015)  
5 trains per peak hour
- Electrification (2015)  
6 trains per peak hour
- Post-electrification (After 2015)  
More than 10 trains per peak hour

Caltrain will take this timeline into consideration when evaluating the useful life and cost of potential improvements proposed in the *Bicycle Access and Parking Plan* that could be impacted by *Caltrain 2015*.

## Outside agency plans

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This section presents regional and countywide plans beyond Caltrain's own plans that overlap in scope with the *Caltrain Bicycle Access and Parking Plan*. Plans adopted by local jurisdictions, such as bicycle plans and specific area plans that impact bicycle access to

stations and the stations themselves, are discussed in the context of each applicable station in Appendix B.

## Regional Bicycle Plan

The Metropolitan Transportation Commission (MTC) is scheduled to adopt an update to the *Regional Bicycle Plan for the San Francisco Bay Area* in 2009 in conjunction with the adoption of *Transportation 2035*, the regional transportation plan. The *Regional Bicycle Plan* provides extensive information about bicycle access to transit agencies throughout the Bay Area, including Caltrain.

## Transit Connectivity Plan

The Metropolitan Transportation Commission (MTC) commissioned the *Transit Connectivity Plan* in 2006 to identify and implement ways of improving the quality of linkages between Bay Area transit systems for the transit customer, with a focus on making multi-operator trips easier and less confusing. The Plan focused on select regional hubs, including the following Caltrain stations: San Francisco, Millbrae, Palo Alto, Mountain View and San Jose Diridon.

The primary strategies aimed at improving bicycle access to transit stations in the *Transit Connectivity Plan* call for improvements to way-finding signage and bicycle parking at these stations. MTC is working with transit operators and other stakeholders to develop way-finding guidelines to promote uniformity of signage. Implementation costs will be borne by the transit operators.



### County bicycle plans

At press time, the City/County Association of Governments was updating the 2000 *San Mateo Comprehensive Bicycle Route Plan* bikeway map, and VTA had published a draft *Santa Clara Countywide Bicycle Plan*, expected to be adopted in late 2008. The primary focus of the VTA plan is to coordinate and fund major projects and close gaps in the cross-county bicycle network.

# 3 | Systemwide Issues

This chapter addresses four general categories of issues that affect passengers who bicycle to reach Caltrain stations: bicycle parking, access, information and safety. Unique details pertaining to these issues at particular stations are profiled in Chapter 4 and Appendix B. Please see Appendix E for a discussion of systemwide onboard issues.

<i>Areas for Improvement</i>	
<b>Parking</b>	<ul style="list-style-type: none"><li>• Quantity and type</li><li>• Location</li><li>• Abandoned bikes</li></ul>
<b>Access</b>	<ul style="list-style-type: none"><li>• Access to stations</li><li>• Way-finding</li><li>• Circulation and platform access</li></ul>
<b>Information</b>	<ul style="list-style-type: none"><li>• Locker process</li><li>• Station way-finding and information</li><li>• Online information</li><li>• Marketing</li></ul>
<b>Safety</b>	<ul style="list-style-type: none"><li>• Awareness</li></ul>

## Parking

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Bicyclists have a variety of parking needs depending on how often they park, for how long, the value of the bicycle and accessories, and the level of personal security desired when leaving and retrieving the bike. Without parking that meets passenger needs, Caltrain passengers will be discouraged from cycling to stations and/or may opt to bring their bikes onboard trains, even when not absolutely necessary. If parking is to become a practical and optimal choice for many of the passengers who access Caltrain stations by bike, Caltrain must provide attractive parking options. The presence of racks in visible and convenient locations in and of itself also can be an attractor for bicycle trips to stations. While improved bicycle parking may not address the needs of all cycling passengers, the intent of the information in this chapter is to develop options for passengers whom they can help.



### Quantity and type

While bicycles are parked at close to 100 percent capacity at a few stations, for most it is the type of parking, rather than the quantity, that is the challenge. Most stations have only racks, which depending on location may not offer a sufficient level of security for many bicycle parkers, and traditional keyed lockers, which are reserved for long-term renters. There are not many options for cyclists who park at stations occasionally but want a higher level of security for their parked bike and accessories than a rack offers. See Appendix D for detailed information about all types of bicycle parking.

Electronic lockers are a new technology designed to offer very secure bicycle parking for regular, as well as occasional, users. Although the technology is relatively new, more agencies are moving in the direction of installing these secure lockers because they may have significant advantages over mechanical technology, allowing use by more cyclists and on an on-demand basis. It is recommended that Caltrain monitor the performance, operation and management of existing electronic lockers at Caltrain stations and elsewhere in the Bay Area, as well as advances in electronic locker technology, as it installs new or converts existing keyed lockers to electronic lockers.

The Bicycle Parking Guidelines found in Appendix D of this plan document recommended types of parking at each station according to the following proportions, which are based on existing parking demand and morning bicycle boardings at each station:

- Racks: 5-to-15 percent
- Conventional keyed lockers: 5-to-15 percent



- Shared parking: 70-to-90 percent (e.g., electronic lockers, bicycle sheds and bicycle stations)

Table 3.1 shows a summary of current bicycle parking capacity at the 10 Caltrain stations with the highest levels of bicycle access. Table 3.2 provides a summary of parking changes recommended for these stations.

### Location

Bicycle parking that is located in out-of-the-way locations is not well-used. Parking that is out of sight of passers-by is considered less secure than racks and lockers with a lot of visibility. Bicycle parking that is perceived to be farther than necessary from platforms or is otherwise inconvenient also is unpopular with cyclists. Rather than park at inconvenient and/or isolated designated bicycle parking, many cyclists prefer to lock their bicycles to well-located fixtures such as signposts and railings. This practice creates obstructions for all Caltrain passengers and must be avoided.

Bicycle parking should be convenient, visible and secure. Because they are considered less secure than lockers and bicycle stations, bicycle racks at Caltrain stations should be in plain view of frequent pedestrian traffic wherever feasible.

### Abandoned Bikes

Clearly abandoned bicycles are locked to bicycle racks at many Caltrain stations. When it occurs, this situation precludes users from parking at these rack spaces and gives the impression that bicycles are vulnerable to theft and vandalism. Abandoned

bicycles should be identified by attaching notices to all parked bikes at each station giving owners 30 days notice to remove the bicycle, and then removing tagged bikes that remain after 30 days. Increased staffing and other resources will be required for this effort.

## Access

Like any other traveler, bicyclists prefer to take the shortest and most direct route between two points, within their cycling skills and comfort level. Bicyclist behavior varies based on level of experience and confidence, and perception of personal safety.

With respect to station access, Caltrain has purview within each station's property boundary. On-street access to stations is controlled by the local jurisdiction in which each station is located, or in the case of state highway El Camino Real, which runs close to many Caltrain stations, the California Department of Transportation.

Once inside the station, Caltrain focuses a great deal of attention on efforts to improve access by all passengers to each station's platforms and trains. This requires balancing accommodation of different types of users, including pedestrians, mobility-impaired passengers, auto-drivers, and bicyclists. Caltrain is committed to maintaining safety for all passengers.

Within stations, bicyclists are permitted to ride wherever cars can be driven. As mandated by the Americans with Disabilities Act (ADA), Caltrain has installed ADA-accessible facilities such as curb cuts and ramps. These facilities have the added benefit of

allowing bicycles (and other wheeled items such as strollers and roll-on luggage) to be rolled between grades, instead of having to be carried. Cyclists must dismount at curb cuts and are required to walk their bikes on platforms, sidewalks, and ramps to minimize conflicts with passengers with disabilities and other pedestrians.

### SHARED PARKING FACILITIES

Passengers who arrive at the San Francisco, Menlo Park, Palo Alto and Mountain View Caltrain stations by bicycle can use shared parking facilities, including bicycle sheds and staffed and automated bicycle parking facilities (see Chapter 4 and Appendices B and D).

Each shared parking facility has been customized for local conditions, such as available space and demand, and is operated based on available capital funds and ongoing operational resources.

Caltrain seeks partnerships on establishing shared bicycle parking facilities. Caltrain was the lead agency in securing grants for construction and the first three years of operation of the San Francisco attended facility; in other cases, Caltrain has played a secondary role.



**Table 3.1: Existing bicycle parking capacity<sup>1</sup>**

Station	Total racks	Total keyed lockers	Other bike parking <sup>2</sup>	Total parking spaces
San Francisco	22	180	130	332
22 <sup>nd</sup> Street	12	0	0	12
Millbrae	28	53	0	81
San Mateo	6	24	0	30
Hillsdale	12	22	0	34
Redwood City	20	52	0	72
Palo Alto	61	96	96	253
Mountain View	25	116	52	193
Sunnyvale	15	75	4	94
San Jose Diridon	18	48	0	66
<b>Totals</b>	<b>219</b>	<b>666</b>	<b>282</b>	<b>1,167</b>

1. Covers 10 stations profiled in Chapter 4 only.

2. Includes attended and automated bicycle parking facilities and electronic lockers.

**Table 3.2: Recommended bicycle parking**

Station	Total existing spaces	Recommended total spaces <sup>1</sup>	Minimum additional spaces <sup>2</sup>	RECOMMENDED CHANGES	
				Add'l new e-lockers <sup>3</sup>	Upgrade of key to e-lockers <sup>3</sup>
San Francisco	332	308	0	0	134
22 <sup>nd</sup> Street	12	40	28	36	0
Millbrae	81	45	0	0	46
San Mateo	30	49	19	18	18
Hillsdale	34	39	5	12	16
Redwood City	72	88	34	39	36
Palo Alto	253	187	0	0	65
Mountain View	193	199	0	0	87
Sunnyvale	94	66	0	0	62
San Jose Diridon	66	71	15	22	35
<b>Totals</b>	<b>1,167</b>	<b>1,092</b>	<b>101</b>	<b>127</b>	<b>499</b>

1. Includes all types of bike parking and is based on Bicycle Parking Guidelines (Appendix D). Recommended totals may be lower than existing; however, overall proportion of existing rack, key lockers and shared bicycle parking is recommended to be adjusted to better serve bicyclists' needs at each station (see Table D-2).
2. Difference between number of recommended spaces and existing total parking. No removal of parking if difference is less than zero.
3. See Table D-1 (Appendix D) for more details.

**Table 3.3: Sample bicycle parking fees**

Bicycle parking type	Cost	Key deposit/ other
Caltrain key lockers	\$33 for 6 months	\$25
Palo Alto electronic lockers	\$0.05 per hour	
VTA key lockers	Free	\$25
Palo Alto Bikestation	\$10 for 10-park, \$12 per month, \$96 per year	\$20 annual membership
Mountain View Bike Shed	Free	\$25
San Francisco Bike Facility	Free	Charges for parking over 24 hours

### Bicycling to stations

Bicycle routes leading to and from Caltrain stations can be inconvenient and intimidating due to high motor vehicle volumes and speeds; an absence of bicycle lanes, paths, or wide shoulder lanes; and gaps and barriers that require circuitous routing. These roadway characteristics discourage all but the most experienced cyclists from biking to and from Caltrain stations.

Consistent with Appendix C of the *Bicycle Access and Parking Plan*, it is recommended that Caltrain work proactively with cities and Caltrans to ensure the safest and most convenient bicycle access possible for passengers. Caltrain will support the implementation of bikeways to stations, as well as improvement of roadway conditions, both in retrofit and in new

construction projects, in an effort to encourage more passengers to bicycle to Caltrain stations.

### Way-finding to stations

Potential bicyclists may be discouraged from riding to Caltrain stations because they are unaware of safe bicycle routes. It is recommended that Caltrain work proactively with cities and Caltrans to provide way-finding signs and route information about optimal routes between Caltrain stations and nearby destinations. Caltrain also will use and implement way-finding signage guidelines for regional transit hubs being developed as part of the Metropolitan Transportation Commission’s region-wide Transit Connectivity Plan (see Chapter 2).

## Mini-highs

One of the most common obstacles to accessing the bicycle car of each train is “mini-highs,” concrete ramps that facilitate wheelchair access to Bombardier trains at the Hillsdale, Palo Alto, Mountain View and San Jose Diridon stations. When a train stops such that the bike car doors open at a mini-high, it is difficult for a passenger carrying a bicycle on or off the train to navigate around it.

In the longer term, Caltrain will be revisiting platform profile and dimensions, including the possibility of level boarding; however, there may be additional mini-highs needed before a level boarding program is completed.

## Stairway channels

Cyclists are permitted to walk their bicycles on ramps and into elevators. There are only a handful of Caltrain station locations where there is no accessible ramp or elevator that complements stairway access. However, it is often quicker for cyclists to use stairways, even though this requires carrying the bike rather than rolling it, because ramps sometimes take a circuitous route or are in use by a person with disabilities.

Stairway channels are recommended on all new and reconstructed stairways and on existing stairways that lack nearby ADA ramps or elevators.

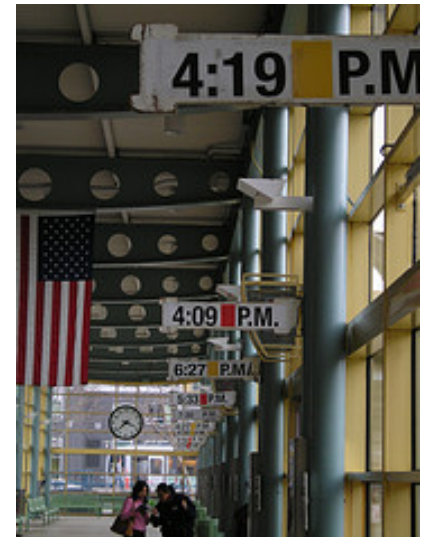
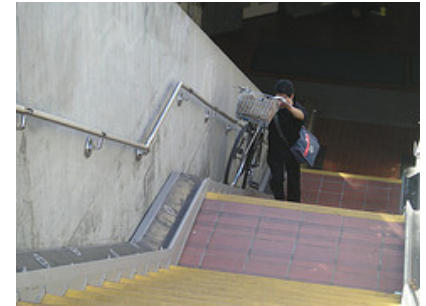
## Information

Providing accurate, useful and timely information is very important in setting and meeting customer expectations and giving customers a positive experience and impression of Caltrain services. Cycling passengers, in particular, can make better-informed decisions about their trip plans when they are aware of all the options available to them.

## Locker rental

Cyclists attempting to rent a Caltrain bicycle locker often find the process frustrating due to the lack of response and poor customer service. Contributing to this frustration is the fact that multiple agencies administer bicycle parking at various Caltrain stations, sometimes even setting different prices (see Table 3.3). Under contract to Caltrain, Amtrak currently administers locker rentals at Caltrain stations where the local jurisdiction does not do so.

Ensuring a staff position with responsibility for management of bicycle lockers at all Caltrain stations, and responsive to locker inquiries and issues in a timely manner, is recommended. This position could either be a dedicated Caltrain staff-person or a private contractor. It also is recommended that Caltrain provide online real-time locker availability and online key locker rentals; conduct occasional staffed tabling events at stations at which cyclists can register for a locker and obtain the locker key in person; and expand rental payment options beyond mailed checks to include credit card, automated debit, and links to other media such as ticket vending machines, TransLink universal fare card and cell phones.



### Station way-finding and information

It is recommended that Caltrain post way-finding and information at stations (in conjunction with MTC's *Transit Connectivity Plan*) that include bicycle parking locations at the station; parking rental contact information (centrally and on each block of lockers); directions to nearby destinations; how and when passengers may bring their bicycles onboard a train; and the approximate location where the bicycle car stops and where cyclists should queue on platforms. (In lieu of painted queue lines, it has been suggested that Caltrain consider implementing a number system, similar to what is used at delicatessens. However, the benefits do not outweigh the potential costs, including labor and maintenance of the machines.)

At many Caltrain stations, contact information for bicycle parking rentals is neither posted on the lockers themselves or on station information boards. Station maps do not show bicycle parking locations. (See Chapter 5 for additional discussion on real-time information.)

### Online information

Bicycle program information (both parking and onboard) currently available on the Caltrain Web site is not comprehensive. This situation is complicated because bicycle parking is managed by different agencies at stations throughout the Caltrain system. There are currently no maps available online that show the location of bicycle parking.

It is recommended that the Caltrain Web site provide comprehensive information in user-friendly text, graphical and video formats, including:

- FAQs about the bicycle parking and onboard programs
- Bicycle parking locations at each station and recommended access routes to each station
- Contact, price and registration information for all bike parking options, including those administered by other agencies
- A how-to guide for new onboard users, including a downloadable brochure and video

### Marketing

It is important that Caltrain passengers who currently or who could potentially bicycle to their train have comprehensive information on all parking and onboard options. It is recommended that Caltrain create proactive and creative marketing campaigns to encourage passengers to:

- Bike to Caltrain stations, rather than drive
- Park their bikes at the station(s), rather than bring them onboard
- Use a folding bicycle or rent lockers at two stations if a bike is needed at both ends of the trip.

### Online information

Targeting the Caltrain cycling demographic with multimedia and text messages, digital video clips, etc. is recommended.

### Publicize improved bicycle parking & folding bikes

In all bicycle program information and outreach materials, highlight bicycle parking and folding bikes as alternatives to bringing one's bike onboard. Highlight reliability, convenience and time-savings as benefits to users of such strategies.

### Folding bicycle demos

Coordinate with folding bike retailers and manufacturers to host demonstrations at stations, where cyclists can view and test ride folding bikes. Publicize availability of folding bicycles at Warm Planet Bicycles, operator of the San Francisco station bicycle parking facility.

### Discount for double locker rentals

Offer a discount for passengers who rent two lockers to encourage keeping bicycles at the origin and destination stations. (According to the 2007 online survey, 60 percent of Caltrain cyclists own two or more bikes.)

### "Bike Cars for Bicyclists" campaign

Encourage passengers not carrying a bicycle onboard to avoid boarding and disembarking through the bike car doors and to reserve seats with views of the bicycle racks for passengers with bikes.

## Safety

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Cyclists must not ride on platforms, ramps or within other station areas. The implementation of a "Walk Your Bike" campaign to promote safety awareness

among bicyclists to walk their bikes on platforms, ramps and sidewalks in consideration of their fellow passengers; as well as installing "Walk Your Bike" stencils at all station ramps and curb cuts, is recommended.





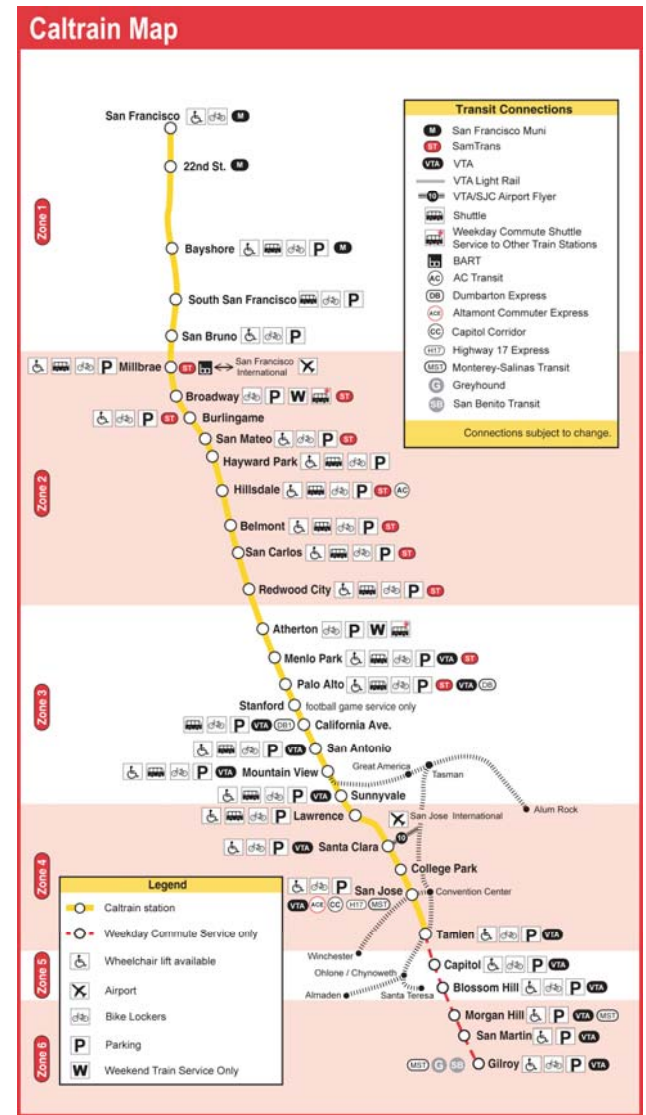
# 4 | Station-Specific Issues

This chapter provides a brief overview of the 10 Caltrain stations with the highest numbers of bicycling passengers (see box). Each station section contains a paragraph on key features of the station and two tables: one which presents data related to bicycle ridership and parking at the station; the other which summarizes issues and recommendations for each station.

Please see Appendix B for detailed information concerning recent station history, published plans and bicycle-related parking and access issues at each station, as well as annotated aerial maps indicating locations of station-specific issues and corresponding recommendations.

**STATIONS WITH HIGHEST NUMBER OF BICYCLING PASSENGERS**  
(from north to south)

- San Francisco
- 22<sup>nd</sup> Street
- Millbrae
- San Mateo
- Hillsdale
- Redwood City
- Palo Alto
- Mountain View
- Sunnyvale
- San Jose Diridon





San Francisco Attended Bicycle Parking Facility



## San Francisco Station

### Key features


The San Francisco station is currently the northern terminus for the Caltrain system. Although it serves the highest volume of passengers of any station, its waiting areas are constrained and platforms are narrow.













Table 4.1: San Francisco station profile

Rack spaces (occupied/total)	9/22
Lockers (occupied/total)	136/180
Other bike parking (occupied/total)	73/130
AM passenger boardings (northbound/southbound)	0/1,641
AM passenger boardings with bikes (northbound/southbound)	0/186

Table 4.2: San Francisco station issues and recommendations

 – Parking	 – Information/Outreach
 – Access	 – Safety

ISSUES	RECOMMENDATIONS
 Need more and more flexible parking	Convert 134 key to electronic lockers

ISSUES	RECOMMENDATIONS
  Keys to locker compound are cumbersome to administer	Upgrade locker compound key lock to key pad code system
 Racks on Townsend are not well-used	Remove “wheel-bender” bicycle racks
 Need more bicycle parking	Provide more racks in Townsend Plaza
 Locker area often full of litter	Maintain/clean locker area
 Conflicts between bus, taxi, auto, bicycle and pedestrian traffic on Townsend	Convert taxi zone area to Bike Greeting Zone/ Walk Your Bike transition on Townsend
 Platform double doors create bottlenecks that choke platform access	Ensure both platform double doors are opened for passenger access
 Lack of bicycle (and pedestrian) facilities on Townsend	Install bike lanes and reconfigure parking on Townsend (City plans sidewalks)
  Bicycles can cause conflicts with other passengers on the narrow and crowded platforms	Mark path for passengers bringing bikes onboard
 Local destinations and station areas are difficult to find	Install way-finding signage
 Low Bikestation patronage	Promote patronage of San Francisco Bicycle Parking Facility

## 22<sup>nd</sup> Street Station





### Key features









The 22<sup>nd</sup> Street Caltrain station is located beneath Highway 280 in a marginal neighborhood with very little pedestrian activity. There are no elevators or ADA-accessible ramps between street level and the platforms.

Table 4.3: 22<sup>nd</sup> Street station profile

Rack spaces (occupied/total)	3/12
AM passenger boardings (northbound/southbound)	4/728
AM passenger boardings with bikes (northbound/southbound)	0/59

Table 4.4: 22<sup>nd</sup> Street station issues and recommendations

 – Parking	 – Information/Outreach
 – Access	 – Safety

	ISSUES	RECOMMENDATIONS
	Lack of secure parking	Provide 36 electronic lockers at street level
	Inconvenient and insufficient bicycle parking	Provide 10 rack spaces at street level
	Carrying bicycles up and down stairways is slow and cumbersome and can delay other passengers	Add stairway channels to both station stairways
	Siting of station features exacerbates platform crowding	Move TVM south on southbound platform
	Need rack spaces for bumped bikes	Move platform bicycle rack closer to bike car
	Lack of rail schedule and way-finding information	Post maps and schedules on both platforms
	Passengers trespass on unsigned service access ramp	Construct a fence and gate to restrict access to maintenance ramp
	Station area is dark	Improve platform and stairway lighting



*Bicycle rack southbound platform*



## Millbrae Station

### Key features

The Millbrae station is served by Caltrain and BART and connects to the San Francisco International Airport. Most passengers traveling on either system must go through the elevated concourse level to descend to their train platform. The station is operated by BART.



“Coat hanger” Bicycle rack



Hidden bicycle racks

Table 4.5: Millbrae station profile

Rack spaces (occupied/total)	17/28
Lockers (occupied/total)	16/53
AM passenger boardings (northbound/southbound)	308/643
AM passenger boardings w/ bikes (northbound/southbound)	11/15

Table 4.6: Millbrae station issues and recommendations

<b>P</b> – Parking	<b>i</b> – Information/Outreach
<b>BIKE LANE</b> – Access	 – Safety

ISSUES	RECOMMENDATIONS
<b>P</b> Need more and more flexible parking	Convert 46 key to electronic lockers

ISSUES	RECOMMENDATIONS
<b>P</b> “Coat-hanger” racks under Millbrae Avenue overcrossing are not well-used	Replace racks under Millbrae Ave. with inverted U racks
<b>P</b> Visually obstructed racks on southbound platform are not well-used	Relocate far racks closer to existing racks on southbound platform
<b>BIKE LANE</b> Difficult for cyclists to cross El Camino Real between Millbrae Ave. and Victoria Ave.	Add crosswalks to El Camino Real
<b>BIKE LANE</b> Challenging biking conditions to station	Construct bikeways from El Camino Real to station
<b>BIKE LANE</b> Elevators are only convenient option to reach platform with a bicycle	Install stairway channels between both platforms and the concourse level
<b>i</b> Rental contact information not posted on bicycle lockers	Post rental contact information on all locker blocks
<b>i</b> Local destinations and station areas are difficult to find	Improve way-finding signage within station and to/from station

## San Mateo Station

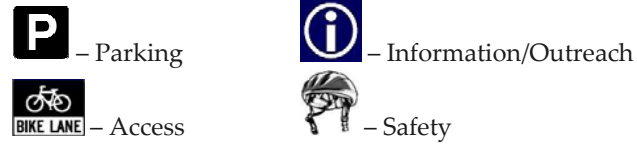
### Key features

San Mateo station is located in downtown San Mateo. There is an underground parking garage beneath the station. The northbound platform is very narrow and access is constrained.

Table 4.7: San Mateo station profile

Rack spaces (occupied/total)	3/6
Lockers (occupied/total)	15/24
AM passenger boardings (northbound/southbound)	327/362
AM passenger boardings w/ bikes (northbound/southbound)	20/26

Table 4.8: San Mateo station issues and recommendations



	ISSUES	RECOMMENDATIONS
<b>P</b>	Bicycle parking administration is a low priority for City	Reclaim bicycle parking administration from City
<b>P</b>	Need more and more flexible bicycle parking	Convert 18 key to electronic lockers and add 18 new electronic lockers
<b>P</b>	Current bicycle parking is inconvenient and not sufficiently visible	Move /add bike parking to station plaza and install concrete pad for new parking adjacent to southbound platform
<b>BIKE LANE</b>	No direct route from Railroad Avenue to northbound platform	Provide connection through fence from northbound platform to Railroad Ave.



Way-finding sign



## Hillsdale Station

### Key features

The Hillsdale station has especially long, narrow platforms that are elevated between 15 and 20 feet above street level, the result of a recent reconstruction project.

Table 4.9: Hillsdale station profile



Rack spaces (occupied/total)	3/12
Lockers (occupied/total)	11/22
AM passenger boardings (northbound/southbound)	745/300
AM passenger boardings w/ bikes (northbound/southbound)	36/14



Route through Bay Meadows when gate is closed

Table 4.10: Hillsdale station issues and recommendations

 – Parking     
  – Information/Outreach  
 – Access     
  – Safety

	ISSUES	RECOMMENDATIONS
	Parking administration is a low priority for City	Reclaim bike parking administration from City
	Locker pad is not level, rendering doors inoperable	Replace concrete locker pad

	ISSUES	RECOMMENDATIONS
	Need more and more flexible parking	Provide 2 key and 8 electronic lockers in west parking lot
	No bicycle parking on east side of station	Provide 2 key and 20 electronic lockers in east parking lot
	Need rack spaces for bumped bikes	Provide 2-to-6 rack spaces in parking lots close to north end of platforms
 	Bay Meadows fence access forces cyclists to weave between parked cars and pedestrians	Provide opening in Bay Meadows parking lot fence for through cyclists
	No bicycle lanes on east side of station	Provide bike lanes on Pacific Ave./Delaware St. as part of Bay Meadows Phase II project
	Carrying bicycles up and down stairways is slow and cumbersome	Install channels on southwest parking lot stairways
	Challenging cycling conditions to station	Install bicycle lanes on El Camino Real and Hillsdale Blvd.

## Redwood City Station

### Key features








The Redwood City station serves as the timed-transfer station for passengers changing to/from limited-stop trains. The station is in downtown Redwood City, immediately adjacent to and accessible from Sequoia Station shopping center.

Table 4.11: Redwood City station profile

Rack spaces (occupied/total)	20/20
Lockers (occupied/total)	52/52
AM passenger boardings (northbound/southbound)	545/235
AM passenger boardings w/ bikes (northbound/southbound)	45/23

Table 4.12: Redwood City station issues and recommendations

 – Parking	 – Information/Outreach
 – Access	 – Safety

	ISSUES	RECOMMENDATIONS
	Bicycle locker location is inconvenient	Relocate lockers from north Broadway parking lot to parking near bus bays
	Need more flexible bicycle lockers	Upgrade 16 key to electronic lockers and add 12 electronic lockers
	Lack of parking on east side of station	Provide bike racks and 8 key and 42 electronic lockers near Winslow Street
	Need more bicycle racks	Install bike racks in brick median between southbound platform and shopping center
	Winslow/Middlefield Road entrance to southbound platform is circuitous	Install stair opening to southbound platform at Winslow/Middlefield
	City plaza landscaping constrains access from Broadway to station	Widen chokepoint in city plaza
	Bicycle parking location unclear	Provide way-finding to bike parking



Choke point in plaza access



Fence that separates northbound platform from Winslow Street/Middlefield Road



Abandoned bicycles parked in racks contribute to crowded platform conditions



Double decker bicycle lockers

## Palo Alto Station

### Key features

Palo Alto station is in downtown Palo Alto and serves Stanford University.

Table 4.13: Palo Alto station profile

Rack spaces (occupied/total)	55/61
Lockers (occupied/total)	92/96
Other bike parking (occupied/total)	11/96
AM passenger boardings (northbound/southbound)	656/166
AM passenger boardings with bikes (northbound/southbound)	42/22

Table 4.14: Palo Alto station issues and recommendations



– Parking



– Information/Outreach



– Access



– Safety

	ISSUES	RECOMMENDATIONS
	52 “temporary” bicycle lockers slated to be removed from Alma Street parking lot during station reconstruction	Retain 52 lockers in the Alma street parking lot
	Need additional and more flexible parking	Convert 65 key to electronic lockers
	Need rack spaces for bumped bikes	Relocate racks on northbound platform to north end of platform
	Insufficient spaces in bicycle racks	Routinely tag and remove abandoned bicycles from racks
	Local destinations and station areas are difficult to find	Provide way-finding signage/information
	Challenging biking conditions to station	Improve bicycle access on Alma St. and University Ave.
	Low usage of Bikestation	Promote use of Bikestation

## Mountain View Station

### Key features

The Mountain View station serves as the transfer point to VTA light rail. The station is in the downtown.

Table 4.15: Mountain View station profile

Rack spaces (occupied/total)	29*/25
Lockers (occupied/total)	91/116
Other bike parking (occupied/total)	25/52
AM passenger boardings (northbound/southbound)	1,109/105
AM passenger boardings with bikes (northbound/southbound)	75/10

\* Including 4 bicycles locked to other fixtures.

Table 4.16: Mountain View station issues and recommendations

**P** – Parking

**i** – Information/Outreach

**BIKE LANE** – Access

 – Safety

ISSUES	RECOMMENDATIONS
<b>P</b> Insufficient spaces on racks	Routinely tag and remove abandoned bikes from racks

ISSUES	RECOMMENDATIONS
<b>P</b> Need additional and more flexible parking	Add racks to plaza area by bus turnaround and convert 87 key to electronic lockers
<b>BIKE LANE</b> Siting of station features exacerbates platform crowding	Relocate TVMs and shelters on northbound platform
<b>BIKE LANE</b> Video-detection traffic signal on Evelyn and Hope causes excessive delays	Improve timing and video detection for cyclists at Evelyn/Hope signal
<b>BIKE LANE</b> No bike lanes leading to station from west	Install sharrows on Evelyn between Hope and Castro
<b>BIKE LANE</b> Circuitous access to station from southwest	Provide access through fence at Bush/Evelyn to station
<b>BIKE LANE</b> Inconvenient access from Moffett Blvd. to station for bikes	Improve bike access from Moffett Blvd.
<b>i</b> Local destinations and station areas are difficult to find	Provide way-finding signage/directions



Parking lot fence at end of Bush Street



## Sunnyvale Station

### Key features

Sunnyvale station is in downtown Sunnyvale. A new station plaza and a large car-parking structure were opened in 2003.

Table 4.17: Sunnyvale station profile

Rack spaces (occupied/total)	14/15
Lockers (occupied/total)	41/75
AM passenger boardings (northbound/southbound)	1,104/36
AM passenger boardings w/ bikes (northbound/southbound)	48/1



Unpaved service road

Table 4.18: Sunnyvale station issues and recommendations



– Parking



– Information/Outreach



– Access



– Safety

ISSUES	RECOMMENDATIONS
Need additional and more flexible bicycle lockers	Convert 62 key and 16 bring-your-own-lock lockers to electronic lockers
Need more bicycle racks	Install racks in plaza area near bus turnaround
Need rack spaces for bumped bikes	Install concrete pad and bicycle racks near north end of northbound platform
Electronic locker doors cannot be fully opened	Reinstall electronic lockers correctly
Unpaved service road adjacent to northbound platform is muddy in winter	Pave service road
Missing “Walk your Bike” sign northbound on Mathilda Ave. overcrossing	Install “Walk your bike” sign on northbound overcrossing
Locker alley is dark	Improve lighting in locker area

## San Jose Diridon Station





### Key features








The San Jose Diridon station is a historic structure with a passenger waiting hall, a gift/snack shop and restrooms. In addition to Caltrain, the station is served by the Capitol Corridor, Amtrak Coast Starlight, Altamont Commuter Express (ACE), and VTA light rail.

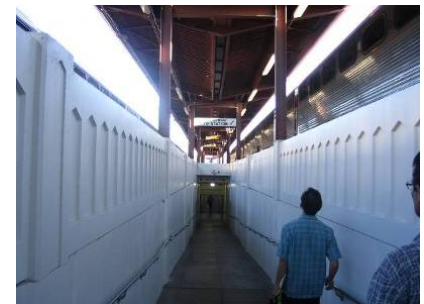
Table 4.19: San José station profile

Rack spaces (occupied/total)	7/18
Lockers (occupied/total)	43/48
AM passenger boardings (northbound/southbound)	1,128/1
AM passenger boardings w/ bikes (northbound/southbound)	62/0

Table 4.20: San Jose station issues and recommendations

-  – Parking
-  – Information/Outreach
-  – Access
-  – Safety

ISSUES	RECOMMENDATIONS
 Need additional and more flexible parking	Convert 38 key to electronic lockers
 “Coat-hanger” racks not well-used	Replace racks with inverted U racks
 Current bicycle parking is hidden by station building	Provide bicycle parking near bus bays
 Lack of bicycle parking on west side of station	Provide bicycle parking on west side of station
 Difficult to cross S. Montgomery Street to access pathway adjacent to light rail tracks east of station	Install mid-block crosswalk on South Montgomery St
 Local destinations and station areas are difficult to find	Provide way-finding signage/directions
 Buses do not share road with bikes on portion of San Fernando Street marked with sharrows	Educate bus operators regarding sharrow markings





# 5 | Innovations

Beyond conventional, well-established methods and strategies for improving bicycle parking, access and customer service; this chapter considers three such ideas: real-time information, bicycle sharing and a folding bicycle subsidy. Consideration of Caltrain's onboard program is discussed in Appendix E.

## INNOVATIVE IDEAS FOR CONSIDERATION

- Onboard bicycle capacity information
- Bikesharing
- Folding bike subsidy

### Onboard bicycle capacity information

Advising Caltrain cyclists about the limitations of the onboard bicycle program could recalibrate their expectations. Examples of such information include:

### Type and number of bicycle cars on scheduled trains

Knowing the onboard bike capacity of each train (based on the number of Gallery or Bombardier bicycle cars) would allow passengers with bicycles to make decisions to: avoid riding in the periods of highest peak bicycle demand; arrive at trains earlier; reposition themselves to board the second bicycle car, if available; and, for trips in which a bicycle is not needed at both ends, park their bicycles rather than bring them onboard. Sufficient secure bicycle parking at stations with frequent bumping will be necessary to allow this shift.

Train sets are assembled and scheduled for runs the night before service, so information regarding the type of train, number of bike cars, and location of the second bike car is known at that point, although unforeseen maintenance sometimes requires adjusting train sets in the morning. The occasional morning switch notwithstanding, this information would be invaluable to cyclists. If posted on the Internet, cyclists could find



out before leaving home what the bicycle capacity is likely to be for the train they plan to take. Visual message signs (VMS, also known as “variable message signs”) provide information on almost all train platforms, and are being upgraded to provide real-time train arrival information. Bicycle car information could be conveyed in this manner, as well.



The Altamont Commuter Express (ACE) posts total bicycle capacity for each train to the system Web site daily. (Note: ACE runs just eight trains per day using three six-car train sets, compared to the 98 trains Caltrain runs with 20 train sets.)

Providing scheduled train configuration data on the Internet and the VMS system would require increased coordination between Amtrak and Caltrain, which would be facilitated if the data could be input electronically instead of manually. The potential cost and resources needed to implement such a scheme, and the development of the process require further analysis and development beyond the scope of this Bicycle Plan.

### Real-time onboard bicycle occupancy

A real-time count of onboard bicycle occupancy on upcoming trains (taking into consideration the number of bicycles disembarking at a given station) would inform passengers with bicycles waiting at the station as to how many bicycles can be accommodated on the approaching train before it arrives. Somehow linking such a system with destination information contained on each cyclist’s ticket would be insufficient because Caltrain’s fare system is based on a zonal fare system, not station-to-station fares.



An information system that provided real-time onboard bicycle occupancy would require an automated process that allows passengers with bicycles to enter their destination, calculates the number of onboard bike spaces available to passengers boarding at the next station, and communicates this information to passengers with bicycles waiting at the next station platform. To transmit this information to passengers waiting at stations would require technology that could communicate with each station’s VMS and, possibly, cyclists’ cell phones/PDAs.

Such a real-time information system would optimize onboard bicycle space and would reduce the uncertainty of being able to bring one’s bike onboard. Depending on the lead time, passengers could park their bikes before the train’s arrival. The cost and resources needed to implement such a scheme, and the development of the process, require further analysis, which is beyond the scope of this plan.

### Bikesharing

Bikeshare programs are a concept whereby bicycles can be rented and returned flexibly in a wide area. They are usually designed to encourage occasional, short bike trips where car traffic and parking, and transit are inconvenient.

A wide array of contemporary technologies have made bikeshare programs more feasible, including electronic rental and locking via smart cards or cellular phones, GPS tracking and variable pricing. Even so, most bikeshare programs are not fully self-sustaining based on user fees alone, and are often operated as private-

public partnerships, with costs subsidized by advertising on street kiosks and transit shelters.

Currently, bikeshare programs are in operation in Paris, Barcelona and other European cities. Deutsche Bahn (the national German rail operator) has established the “Call Bike” program in six cities. For the most part, bicycles can be reserved and paid for via cell-phone, and picked up and returned to any major intersection, not necessarily at rail stations. The City of San Francisco has plans to implement a similar bikeshare program tied to the contract for advertising on bus shelters.

The most appropriate bikeshare program model for a service like Caltrain’s is the OV fiets (public transport bike) program in the Netherlands, which is specifically tied to rail stations. Commuters sign up for a subscription and pay an annual fee of 9.5 euros (roughly \$14) to receive a membership card. The card is used to manually check out bicycles from guarded bike-stores located at train stations or from lockers with available rental bikes (electronic self-serve). The cost is 2.85 euros (roughly \$4) for up to 20 hours. Users are billed each month by automatic deduction from their bank account (set up as part of the subscription process). Bikes returned to a different location are charged an additional fee.

The advantages of this model over a rent-and-return-anywhere bikeshare program are:

- Avoiding the need to collect and redistribute bicycles over a wide area because all bikes are returned to train stations; analogous to how library books can be returned to any library within a given system.

- The simple billing system/fee structure is geared to regular users, i.e. those who use it to bike to work from the train station in the morning and to return by bike to the train station after the work day.
- Subscribers can rent a bike from any OV fiets location, so if their work location varies, they can still be assured of having a bike to use, whether they disembark at Train Station A today, or at Station B, as long as there is an OV fiets there.

### Folding bike subsidy program

There are no restrictions for bringing folded bicycles onboard Caltrain; they are permitted in all cars at all times. When folded up, most models can fit on the luggage rack of the luggage car, but they also can be placed on the floor adjacent to the passenger as long as they do not block a needed seat or the aisle. Folding bicycles are a good option to ensure that a bicycling passenger does not get bumped; 38 of 1,032 respondents (3.7 percent) to the 2007 online bicycle survey said they bought a folding bicycle to avoid getting bumped. Nonetheless, folding bikes are not widely used, in part due to cost, efficiency and comfort, and limited availability. This section discusses these potential barriers.

### Cost

Folding bikes are more expensive than conventional bicycles. While low-end models are available for less than \$500, good ones cost between \$500 and \$1,000 or more.

Because folding bicycles combine the convenience of having a bicycle at both ends of the trip without the

operational challenges associated with accommodating full-sized bicycles onboard, Caltrain should encourage passengers to purchase and use these bikes. In response to cyclists in Santa Cruz County frequently being faced with full exterior bike racks on buses, the Santa Cruz County Regional Transportation Commission sponsors a folding bicycle subsidy program that is administered through a nonprofit organization. County residents who take a two-hour bicycle safety training class are eligible to save up to \$200 on a folding bicycle purchased through a participating local retailer, as well as receiving \$70 worth of discounts on monthly bus passes. The program is paid for through a grant that can fund up to 140 rebates.

### **Efficiency/comfort**

Folding bikes are perceived as not being comfortable or efficient for long rides, so most cyclists prefer to use conventional bicycles. However, the overwhelming majority of bike trips to and from Caltrain stations are relatively short: 40 percent of bike trips between home or work and Caltrain stations are less than 10 minutes and 45 percent of these trips are between 10 and 20 minutes.<sup>2</sup>

### **Limited availability**

Retailers tend not to stock many folding bikes because there is limited demand and few manufacturers. At press time, in addition to offering bicycle repairs, the operator of the San Francisco Bicycle Facility was

focusing on folding bicycle sales since there is a potentially large Caltrain passenger customer base.

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<sup>2</sup> 2007 online survey.

# 6 | Funding and Next Steps

This chapter presents funding and revenue options for implementing the recommendations detailed in chapters 3 and 4 and Appendix B. The *Caltrain Bicycle Access and Parking Plan* outlines certain bicycle program-related priorities; however, the actual order of implementation may be determined in part by the availability of funding. Nonetheless, Caltrain should consider developing criteria with which to rank recommended projects to prioritize pursuit of the most likely funding sources for the highest ranked projects.

## Implementation and funding strategies

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Various projects and programs to improve bicycle access to and parking at Caltrain stations call for a variety of implementation strategies, in addition to traditional funding and revenue sources. This section presents some of these approaches.

### Staffing for programs

A critical *Caltrain Bicycle Access and Parking Plan* priority is to improve customer service and administration of bicycle lockers; however, because operating funds are the most difficult type of funding to secure, it is strongly recommended that Caltrain allocate internal funding for staff to oversee bicycle locker management. Such an investment will have immediate pay-off with an increase in the number of bicycles parked at stations, a reduction in complaints, and dwell-time delay reductions as a result of fewer bicycles being brought onboard trains. Staff support also is urgently needed for marketing and outreach of the bicycle programs, as well as review and integration of the Bicycle Access and Parking Guidelines (Appendices C and D) with Caltrain Design Standards.

### Capital projects

None of the recommended projects in this plan are funded. In addition to pursuing outside funds (see below), Caltrain should leverage opportunities to incorporate station-specific and systemwide projects



into larger capital projects whenever opportunities arise. Projects that are eligible for grant funding, such as parking infrastructure, should be implemented as applications for funds are granted. Caltrain also should participate closely with local jurisdictions to fund and implement projects that affect bicycle access to stations, but which lie within local rights of way.

### Innovative projects

Caltrain is committed to conducting feasibility studies of the potential innovative projects and programs discussed in Chapter 5. These investigations should include exploration of the potential for private-public partnerships. In some cases, it may be wise to implement small scale pilot projects in order to identify and address issues, before investing in improvements on a wide-scale.

## Funding sources

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Once projects and programs recommended in this plan have been prioritized, Caltrain staff can begin to identify potential funding sources for each, including:

- Grants from funding agencies
- Inclusion in future year Caltrain capital improvement program (CIP) and operating budgets
- Incorporation into actual capital projects in cases where bicycle component was not originally included in CIP, and
- Coordination with local jurisdictions and other public agencies for projects outside of Caltrain’s sole purview.

## Revenue for operations

Because grants are primarily available for capital projects, Caltrain will likely fund most operational improvements with operating revenue and user fees. At present, 41 percent of Caltrain’s operating budget is funded from farebox revenue and 50 percent from contributions by the three Member Agencies (see p.5). Unlike most other Bay Area transit agencies, Caltrain has no dedicated revenue stream, such as a sales tax (e.g., VTA, SamTrans, SFMTA) or property tax (e.g., BART). User fees cover only a fraction of bicycle facility operating and maintenance costs, as described below.

### Lockers

Rental fees of Caltrain-managed lockers generate approximately \$60,000 annually, which covers about half of estimated annual locker operating and maintenance costs. Agencies that manage non-Caltrain lockers—such as the City of San Mateo—collect and retain fees generated by the lockers they manage. There are no grant funds available for bicycle locker operations and management costs.

### Bicycle parking facilities

Operating costs beyond the inaugural year of bicycle parking facilities are rarely eligible for external grant programs. The San Francisco staffed bicycle parking facility is an exception: Caltrain secured grants for the first three years of operation of this contractor-managed facility, which are supplemented by retail and repair revenue. Parking is currently free to users of the San Francisco and Mountain View facilities, while Palo Alto users pay fees to the facility operator (see Chapter 3 and Appendix B).

### Funding for capital projects

Funding for Caltrain systemwide capital improvements comes primarily from federal, state and other grant programs. Therefore, a majority of the cost to implement recommended systemwide and station-specific bicycle-related capital improvements is expected to come from grant funding sources including:

- Transportation Funds for Clean Air (TFCA), administered by the Bay Area Air Quality Management District
- Transportation Development Act Article III (TDA3), allocated to local cities and counties
- Transportation Enhancements (TE), federal funds allocated on a competitive basis by MTC
- Congestion Mitigation Air Quality (CMAQ), federal funds administered by MTC
- Bicycle Transportation Account (BTA), allocated by the State
- Regional Measure II (RM2), administered by MTC
- Proposition K, San Francisco's local transportation fund
- Measure A, San Mateo County's local transportation fund, and
- Measure A, Santa Clara County's local transportation fund.

Generally, these grants may be used for capital projects to install bicycle parking and construct bicycle lanes, paths, bridges and tunnels. Most require or encourage a local match contribution. Required matching funds for systemwide improvements are contributed equally by Caltrain Member Agencies. For site-specific

projects, funding is sought from the local Member Agency or local jurisdiction. Some sources restrict eligible applicants to local jurisdictions, in which case Caltrain must partner with local agencies to apply.

# Acknowledgments

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These TAG members attended multiple TAG meetings during the development of this plan. Please see [www.caltrain.com/xxx](http://www.caltrain.com/xxx) for the full TAG membership list. (A working URL will be published in the final plan.)

## Photo credits

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