

bike share business plan

Sacramento Metropolitan Air Quality Management District

Technical Working Paper #4: Analysis of Prospective Sites and System Delivery in Sacramento Area



SACRAMENTO METROPOLITAN

Prepared for:



Prepared by:

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*Technical Working Paper #4: Analysis of
Prospective Sites and Delivery in
Sacramento Area*

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*Technical Working Paper #4: Analysis of
Prospective Sites and Delivery in
Sacramento Area*

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OVERVIEW

The Sacramento Metropolitan Air Quality Management District (SMAQMD) has requested a Bike Share Business Plan for a bike share system in the Sacramento area. This report describes candidate bike share station locations, presents infrastructure issues for each location, and evaluation criteria that can be used to expand beyond the first phase.

BIKE SHARE STATION LOCATIONS

Technical Working Paper #2: Demand, Density, Transit and Technology Integration, Tourism, and Equity describes the proposed bike share system in Sacramento, West Sacramento, and Davis. Bike share stations are proposed for a service area that is highly suitable for bike share based on several factors, including housing density, population density, job density, land use diversity, urban design, and proximity to local and regional transit services.

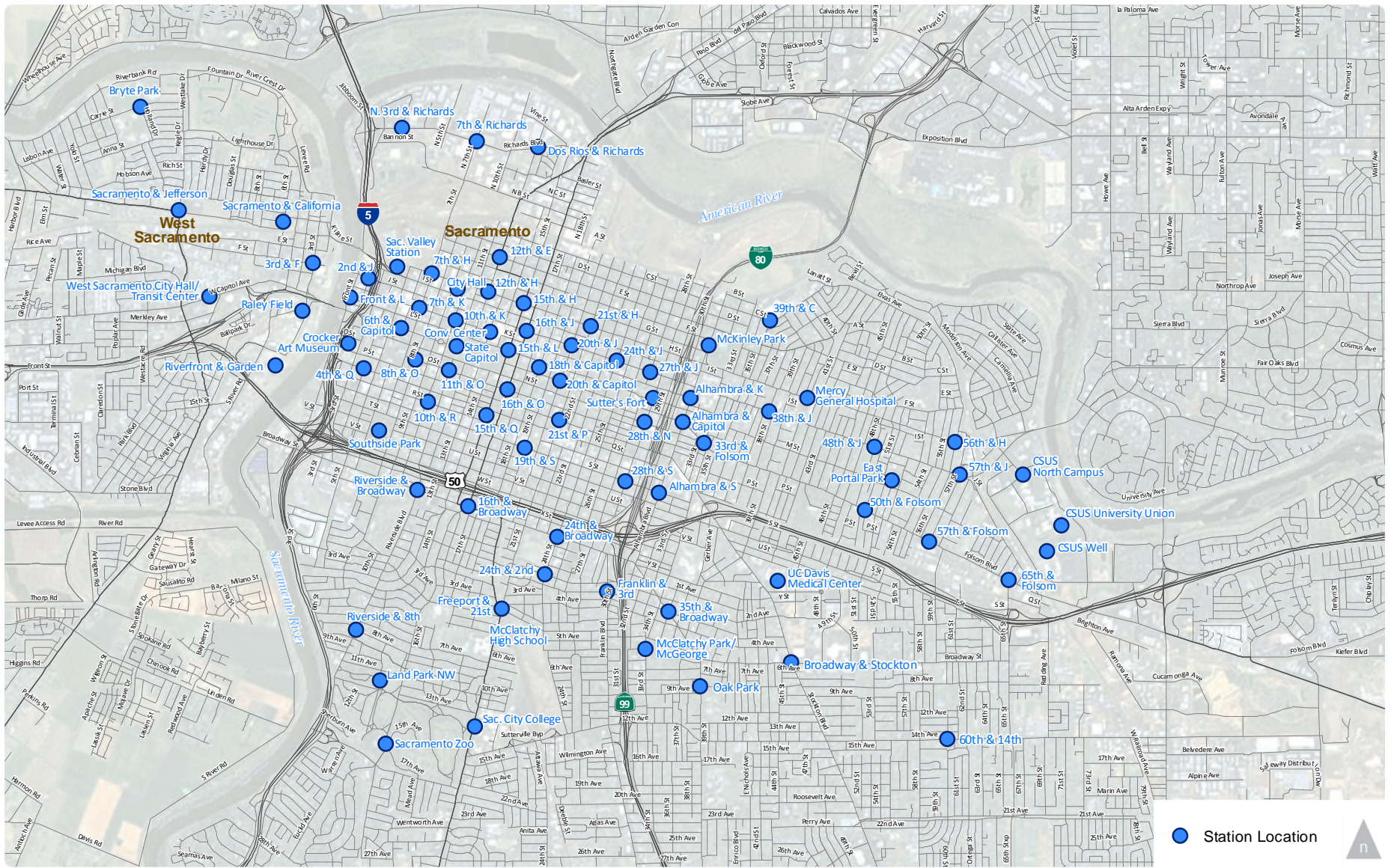
In Sacramento, the proposed bike share system service area includes several highly suitable neighborhoods, including portions of West Sacramento, Downtown Sacramento, Midtown Sacramento, East Sacramento, Tahoe Park, Oak Park, Curtis Park, and Land Park.

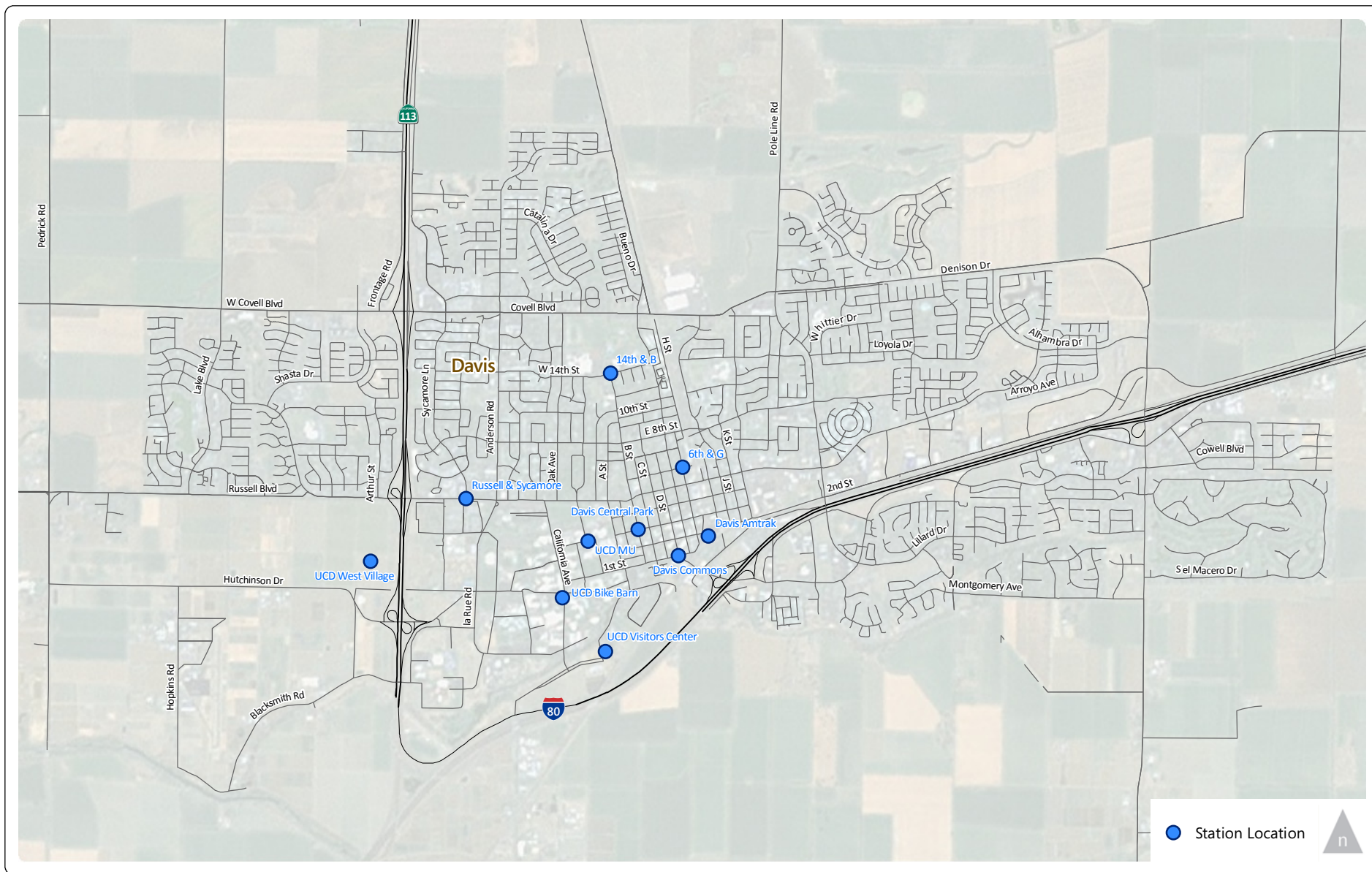
In Davis, the proposed bike share system service area includes Downtown Davis, Old North Davis, Central Davis, and the University of California, Davis (UC Davis) campus.

The proposed bike share system includes 88 stations:

- 68 in Sacramento
- 7 in West Sacramento
- 3 at California State University, Sacramento (CSUS)
- 6 in Davis
- 4 at UC Davis

Figure 1 shows station locations in Sacramento and West Sacramento. **Figure 2** shows station locations in Davis.





INFRASTRUCTURE ISSUE ANALYSIS

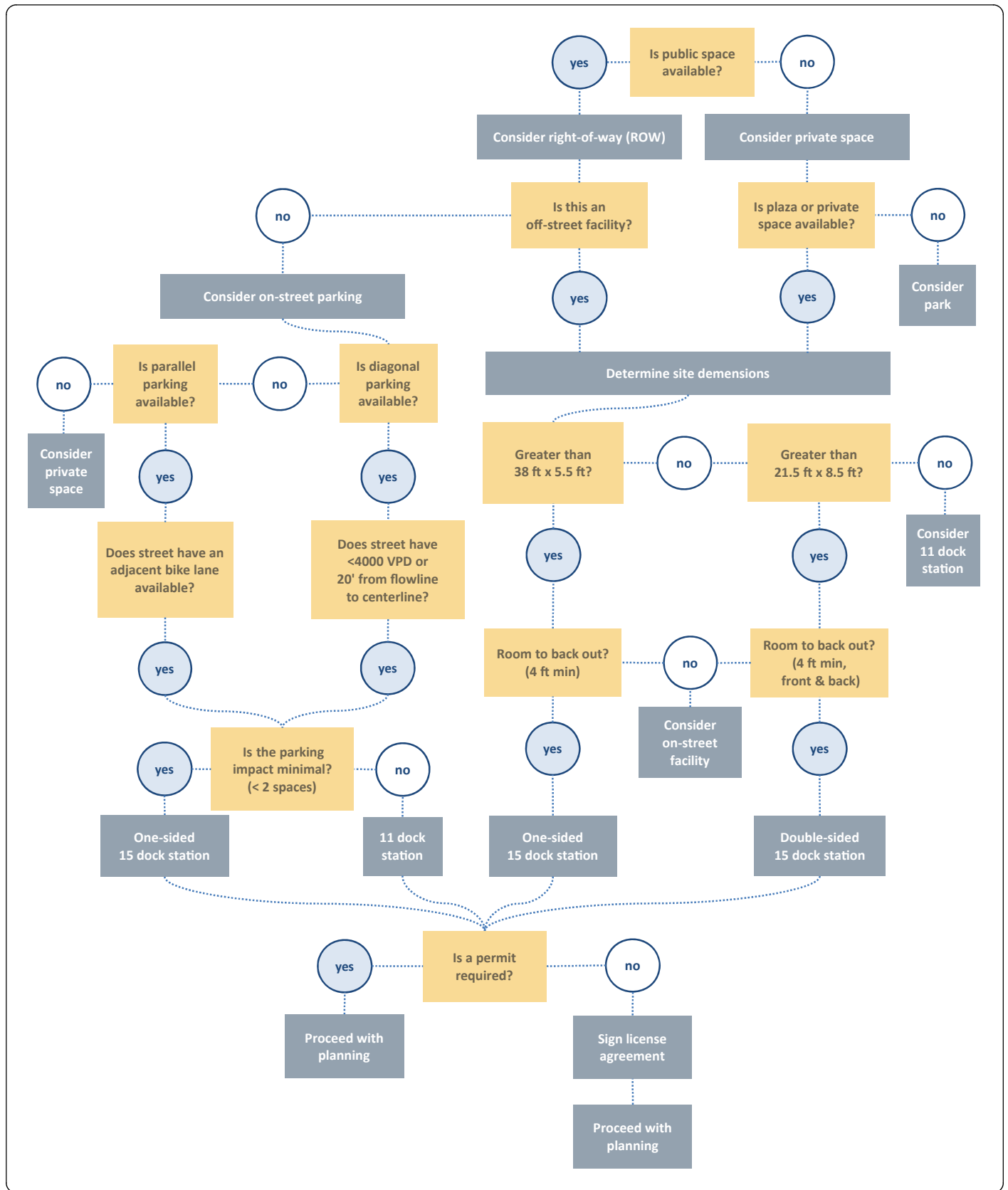
The station locations presented in *Technical Working Paper #2: Demand, Density, Transit and Technology Integration, Tourism, and Equity* represent locations likely to positively contribute to a bike share system in the Sacramento area. The station locations were developed to maximize accessibility to destinations, social equity, connectivity to transit, recreational opportunities, and utilitarian function. Physically placing the stations as closely as possible to the proposed locations shown on **Figure 1** and **Figure 2** is ideal; however, actual station locations may vary slightly depending on the infrastructure issues at each site.

INTRODUCTION

There are several common infrastructure issues that affect the implementation of bike share stations, including:

- Is public right-of-way available for an off-street station?
- Is there private property nearby with an interested owner?
- If in public right-of-way, will the station be placed in the amenity zone, in a plaza, in a park, or on-street?
- Is there enough room for on-street stations? Is traffic sufficiently calm (low volume, low speed)?
- Is there enough space for the station, including a back-out zone?
- What will the station's power source be? Solar, or wired to a traditional power source?
- Is there sufficient vertical clearance for a solar station?
- What permitting will be necessary for the preferred location?

Figure 3 provides a flowchart of the bike share station siting decision making process.



SPACE REQUIREMENTS FOR BIKE SHARE STATIONS

In general, stations with more docks require less frequent rebalancing than stations with fewer docks. For new station installations, Denver Bike Sharing's minimum station size is 15 docks. 15 docks is the minimum station size recommended for a Sacramento system; however, 11 stations should be considered where space for a 15 dock station is not available. Station sizes larger than 15 docks should be considered at station locations where there is a large demand for bike share.

Stations are typically one-sided. Stations can be expanded beyond 15 docks either by adding additional length to a station or by using a double-sided station. **Table 1** shows the typical dimensions for a 15 or 11 dock station.

TABLE 1 – STATION DIMENSIONS

	One-Sided Station	Double-Sided Station
11 Dock Station		
Width	32 feet	16 feet
Station Depth	6 feet	8.5 feet
Back-out zone width	4 feet	4 feet (both sides)
15 Dock Station		
Width	38 feet	21.5 feet
Station Depth	6 feet	8.5 feet
Back-out zone width	4 feet	4 feet (both sides)

Source: Federal Highway Administration. "Bikesharing in the United States: State of the Practice and Guide to Implementation." September 2012.

SOLAR STATIONS VERSUS WIRED STATIONS

A bike share station's power source can either be solar or it can be wired to a traditional power source. Once installed, wired stations require little maintenance. However, finding a power source for wired stations can prove difficult. Bike share stations do not typically connect directly to the electrical grid. In most cases, power for wired stations is provided by nearby property owners who pay for the cost of

electricity. The bike share system operator is responsible for the capital cost of connecting each station to the breaker box. Where there are no adjacent buildings from which to draw electricity, the station must connect directly to the electrical grid with a separate power meter. Connecting stations to breaker boxes or installing power meters can be very expensive. In California, wired stations may require more in-depth environmental review (California Environmental Quality Act or National Environmental Protection Act) than solar stations.

Solar stations require approximately 11 feet of clear height to maintain sufficient levels of sunlight. They are easier to implement because they do not require individual agreements with nearby property owners. However, during extended periods without sunlight, solar stations require battery exchanges. Battery exchanges are completed as necessary by bike rebalancing crews.

Denver Bike Sharing operates a system with both wired and solar stations. After operating the system for several years, they would prefer a completely solar system since battery exchanges can easily be completed by bike rebalancing crews. Additionally, a solar system would eliminate the need to maintain electricity agreements with individual property owners.

Solar is recommended as the primary power source for the Sacramento bike share system.

STATION-LEVEL ANALYSIS

Tables 2-4 present a station-level infrastructure analysis for each of the proposed stations in West Sacramento, Sacramento and Davis. The tables provide the station location, jurisdiction, permitting agency or agencies, and implementation options.

For most stations, multiple implementation options are provided. These options may not be exhaustive; as the bike share system operator moves forward the chosen implementation option may differ from those shown. However, each candidate implementation option should be explored and the preferred option chosen.

In general, locating a bike share station in an amenity zone, plaza, or on private property with an interested owner is preferable to locating it in a park or in on-street parking. An amenity zone is space along the right-of-way reserved for pedestrian amenities such as street lights, benches, parking meters, newspaper vending machines, trees, and bus stop shelters. Implementation of stations in amenity zones

and other unpaved areas may require minor grading and construction of decomposed granite or concrete station platforms.

As the bike share system operator moves forward, they should give preference for choosing locations with enough space to accommodate a 15 bike stations. 11 bike stations should be implemented where space for a 15 dock station is not available.

**TABLE 2 – STATION-LEVEL INFRASTRUCTURE ANALYSIS
WEST SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
Riverfront & Garden	West Sacramento	West Sacramento	<ul style="list-style-type: none"> Construct decomposed granite platform for station in Garden Park Incorporate station into nearby redevelopment site On-street parking on Garden Street or Riverfront Street
West Sacramento City Hall / Transit Center	West Sacramento	West Sacramento	<ul style="list-style-type: none"> Plaza in front of West Sacramento Community Center Plaza in front of West Sacramento City Hall
Raley Field	West Sacramento	West Sacramento	<ul style="list-style-type: none"> Plaza at Riverfront Street / Ballpark Drive Incorporate station into nearby redevelopment site On-street parking on Riverfront Street
3rd & F	West Sacramento	West Sacramento	<ul style="list-style-type: none"> Plaza/walkway south of the CalSTRS building at 3rd Street Off-street parking at CalSTRS building On-street parking on F Street
Sacramento & California	West Sacramento	West Sacramento	<ul style="list-style-type: none"> Wide sidewalk on west side of Sacramento Avenue Off-street parking off Sacramento Avenue On-street parking on California Street
Sacramento & Jefferson	West Sacramento	West Sacramento	<ul style="list-style-type: none"> Off-street parking off of Sacramento Avenue
Bryte Park	West Sacramento	West Sacramento	<ul style="list-style-type: none"> Construct decomposed granite platform for station in Bryte Park On-street parking on Carrie Street or Holland Drive

Source: Fehr & Peers

**TABLE 3 – STATION-LEVEL INFRASTRUCTURE ANALYSIS
SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
2nd & J	Sacramento	California State Parks	<ul style="list-style-type: none"> On-street parking on 2nd Street or J Street Construct decomposed granite platform for station in nearby green space on J Street or 2nd Street Consider relocating station outside of Old Sacramento to minimize permitting with California State Parks
Front & L	Sacramento	California State Parks	<ul style="list-style-type: none"> Plaza west of Front Street On-street parking on Front Street or L Street Consider relocating station outside of Old Sacramento to minimize permitting with California State Parks
3rd & Richards	Sacramento	Sacramento	<ul style="list-style-type: none"> Off-street parking off Richards Boulevard
Sacramento Valley Station	Sacramento	Sacramento	<ul style="list-style-type: none"> Sidewalk in front of station Off-street parking in front of station Sidewalk on H Street between station and walkway to platforms; near Sacramento Valley Station light rail station
Crocker Art Museum	Sacramento	Sacramento, Crocker Art Museum Association	<ul style="list-style-type: none"> Sidewalk or plaza on O Street Construct decomposed granite platform for station in Crocker Park On-street parking on O Street or 2nd Street
4th & Q	Sacramento	Sacramento, State of California Department of General Services	<ul style="list-style-type: none"> Plaza at CalPERS building on Q Street Plaza at CalPERS building on R Street Sidewalk on south side of R Street between 3rd Street and 4th Street
6th & Capitol	Sacramento	Sacramento	<ul style="list-style-type: none"> Amenity zone on Capitol Mall On-street parking on 6th Street Consider relocating station to a plaza at nearby building on Capitol Avenue
7th & Richards	Sacramento	Sacramento, Regional Transit	<ul style="list-style-type: none"> Sidewalk on 7th Street north of Richards Boulevard Plaza at 7th & Richards/Township 9 light rail station

**TABLE 3 – STATION-LEVEL INFRASTRUCTURE ANALYSIS
SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
7 th & H	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on northwest corner of 7th Street/H Street • Off-street parking at 7th Street/G Street • Consider relocating station to nearby location with wide sidewalk
7 th & K	Sacramento	Sacramento	<ul style="list-style-type: none"> • Coordinate station site with Entertainment & Sports Center (ESC)
8 th & O	Sacramento	Sacramento, Regional Transit, State of California Department of General Services	<ul style="list-style-type: none"> • Plaza at 8th & O light rail station • Off-street parking at 8th Street/O Street • On-street parking on 8th Street
Southside Park	Sacramento	Sacramento, Sacramento Department of Parks and Recreation	<ul style="list-style-type: none"> • Amenity zone on 6th Street • Construct decomposed granite platform for station in Southside Park • On-street parking on 6th Street
City Hall	Sacramento	Sacramento	<ul style="list-style-type: none"> • Plaza in front of City Hall • Amenity zone on 9th, 10th, I, or H Street • On-street parking on 9th, 10th, I, or H Street
10 th & K	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 10th Street north of K Street • On-street parking on 10th Street • Consider relocating station to nearby location with wide sidewalk
10 th & R	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 10th Street north of R Street • Sidewalk on south side of R Street between 10th Street and 11th Street • On-street parking on 10th Street or R Street
11 th & O	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 11th Street • On-street parking on 11th Street

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SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
State Capitol	Sacramento	Sacramento, State of California Department of General Services, California State Parks	<ul style="list-style-type: none"> • Sidewalk on north side of N Street at 11th Street • Construct concrete or decomposed granite platform in Capitol Park near 12th Street • On-street parking on L Street or N Street
Dos Rios & Richards	Sacramento	Sacramento	<ul style="list-style-type: none"> • Off-street parking off Richards Boulevard or Dos Rios Street
12th & E	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on E Street • On-street parking on E Street • Consider relocating station to nearby location with wide sidewalk
12th & H	Sacramento	Sacramento	<ul style="list-style-type: none"> • Sidewalk on south side of H Street west of 12th Street • On-street parking on H Street • Consider relocating station to nearby location with wide sidewalk
Convention Center	Sacramento	Sacramento, Sacramento Convention Center Administration	<ul style="list-style-type: none"> • Plaza in front of Convention Center on 13th Street • K Street Mall between 12th Street and 13th Street
15th & H	Sacramento	Sacramento	<ul style="list-style-type: none"> • Plaza in front of Wells Fargo Pavilion • Plaza at southwest corner of 15th Street/H Street • Amenity zone on 15th Street or H Street • On-street parking on H Street or 15th Street
15th & L	Sacramento	Sacramento, California State Parks	<ul style="list-style-type: none"> • Amenity zone on L Street or 15th Street • Construct decomposed granite platform for station in Capitol Park • On-street parking on L Street
15th & Q	Sacramento	Sacramento, Sacramento Department of Parks and Recreation	<ul style="list-style-type: none"> • Sidewalk on 15th Street or Q Street (southwest corner of 15th Street/Q Street) • Construct decomposed granite platform for station in Fremont Park • On-street parking on Q Street, R Street, or 15th Street • Off-street parking off of Q Street or R Street

**TABLE 3 – STATION-LEVEL INFRASTRUCTURE ANALYSIS
SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
16 th & J	Sacramento	Sacramento, Sacramento Convention Center Administration	<ul style="list-style-type: none"> • Amenity zone on 16th Street or J Street • Construct concrete or decomposed granite platform at Sacramento Memorial Auditorium • Off-street parking off of 16th Street
16 th & O	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 16th Street or O Street • On-street parking on O Street
18 th & Capitol	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 18th Street or Capitol Avenue • On-street parking on 18th Street or Capitol Avenue
19 th & S	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 19th Street or S Street • Off-street parking on 19th Street or S Street • On-street parking on 19th Street or S Street
20 th & J	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 20th Street north of J Street • Off-street parking off of J Street • On-street parking on 20th Street
20 th & Capitol	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 20th Street or Capitol Avenue • On-street parking on 20th Street or Capitol Avenue
21 st & H	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 21st Street or H Street • On-street parking on 21st Street or H Street
21 st & P	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 21st Street or P Street • Off-street parking on P Street • On-street parking on 21st Street or P Street
24 th & J	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 24th Street • On-street parking on 24th Street
27 th & J	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 27th Street or J Street • Construct decomposed granite platform for station in Marshall Park • On-street parking on 27th Street
Sutter's Fort	Sacramento	Sacramento, California State Parks	<ul style="list-style-type: none"> • Plaza in front of Sutter Health building on L Street • Construct decomposed granite platform for station in Sutter's Fort State Historic Park • Amenity zone on 26th, 28th, K, or L Street • On-street parking on 26th, 28th, K, or L Street

**TABLE 3 – STATION-LEVEL INFRASTRUCTURE ANALYSIS
SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
28 th & N	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 28th Street or N Street • On-street parking on 28th Street
28 th & S	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on 28th Street or S Street • Off-street parking on S Street • On-street parking on 28th Street or S Street
Riverside & Broadway	Sacramento	Sacramento	<ul style="list-style-type: none"> • Off-street parking at Riverside & Broadway
16 th & Broadway	Sacramento	Sacramento	<ul style="list-style-type: none"> • Off-street parking at 16th & Broadway • Plaza at southeast corner of 16th Street/Broadway
24 th & Broadway	Sacramento	Sacramento, State of California Department of General Services	<ul style="list-style-type: none"> • Off-street parking at 24th Street/Broadway • On-street parking on 24th Street north of Broadway
McKinley Park	Sacramento	Sacramento, Sacramento Department of Parks and Recreation	<ul style="list-style-type: none"> • Amenity zone on Alhambra Boulevard or F Street • Construct decomposed granite platform for station in McKinley Park • On-street parking on Alhambra Boulevard
Alhambra & K	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on Alhambra Boulevard • Off-street parking at Alhambra Boulevard/K Street
Alhambra & Capitol	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on Alhambra Boulevard or Capitol Avenue • Off-street parking at Alhambra Boulevard/Capitol Avenue
Alhambra & S	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on Alhambra Boulevard south of S Street • On-street parking on Alhambra Boulevard
33 rd & Folsom	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on Folsom Boulevard • On-street parking on 33rd Street
39 th & C	Sacramento	Sacramento	<ul style="list-style-type: none"> • On-street parking on C Street

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SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
38 th & J	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on J Street • Off-street parking on J Street • On-street parking on Dolores Way, 37th Street, or 38th Street
Mercy General Hospital	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on H Street • On-street parking on San Miguel Way, San Antonio Way, or 40th Street
48 th & J	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on J Street or 48th Street • Off-street parking on J Street • On-street parking on 48th Street, 49th Street, or 50th Street
50 th & Folsom	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on Folsom Boulevard • Off-street parking on Folsom Boulevard • On-street parking on 49th Street
East Portal Park	Sacramento	Sacramento, Sacramento Department of Parks and Recreation	<ul style="list-style-type: none"> • Construct decomposed granite platform for station in East Portal Park • On-street parking on M Street
56 th & H	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on north side of H Street between 55th Street and 56th Street • Off-street parking on H Street or 56th Street
57 th & J	Sacramento	Sacramento	<ul style="list-style-type: none"> • Off-street parking on J Street • On-street parking on 57th Street south of J Street
57 th & Folsom	Sacramento	Sacramento	<ul style="list-style-type: none"> • Off-street parking on Folsom Boulevard
65 th & Folsom	Sacramento	Sacramento, Regional Transit	<ul style="list-style-type: none"> • Plaza at University/65th Street light rail station • Amenity zone on east side of 65th Street north of Folsom Boulevard • Off-street parking on Folsom Boulevard or 65th Street
CSUS North Campus	Sacramento	CSUS	<ul style="list-style-type: none"> • Construct concrete or decomposed granite platform south of State University Drive near bus station

**TABLE 3 – STATION-LEVEL INFRASTRUCTURE ANALYSIS
SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
CSUS University Union	Sacramento	CSUS	<ul style="list-style-type: none"> Plaza on west side of Hornet Bookstore
CSUS Well	Sacramento	CSUS	<ul style="list-style-type: none"> Plaza in front of The Well
UC Davis Medical Center	Sacramento	Sacramento, UC Davis Sacramento Campus	<ul style="list-style-type: none"> Amenity zone on X Street Plaza in front of Education Building at 45th Street/X Street Off-street parking on 45th Street or X Street
35th & Broadway	Sacramento	Sacramento	<ul style="list-style-type: none"> Amenity zone on 34th Street, 35th Street, 3rd Street, or Broadway On-street parking on 34th Street, 35th Street, or 3rd Avenue
McClatchy Park/McGeorge	Sacramento	Sacramento, Sacramento Department of Parks and Recreation, University of the Pacific McGeorge School of Law	<ul style="list-style-type: none"> Amenity zone on east side of 33rd Street at Donner Way Construct decomposed granite platform for station in McClatchy Park On-street parking on Donner Way or Montgomery Way
Oak Park	Sacramento	Sacramento, Sacramento Department of Parks and Recreation	<ul style="list-style-type: none"> Off-street parking at Oak Park Community Center Construct decomposed granite platform for station in Oak Park On-street parking on 8th Avenue
Stockton & Broadway	Sacramento	Sacramento	<ul style="list-style-type: none"> Off-street parking on Stockton Boulevard or Broadway
60th & 14th	Sacramento	Sacramento	<ul style="list-style-type: none"> Off-street parking on 14th Avenue On-street parking on 60th Street
Franklin & 3rd	Sacramento	Sacramento	<ul style="list-style-type: none"> Amenity zone on Franklin Boulevard On-street parking on 3rd Avenue
24th & 2nd	Sacramento	Sacramento	<ul style="list-style-type: none"> Amenity zone on west side of 24th Street south of 2nd Avenue Off-street parking on 2nd Avenue On-street parking on 2nd Avenue

**TABLE 3 – STATION-LEVEL INFRASTRUCTURE ANALYSIS
SACRAMENTO STATIONS**

Station Location	City	Permitting Agency	Implementation Options
Freeport & 21st	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone on Freeport Boulevard, 4th Avenue, 5th Avenue, or Vallejo Way • Off-street parking on Freeport Boulevard • On-street parking on Vallejo Way or 5th Avenue
Sacramento City College	Sacramento	Sacramento, Sacramento City College, Sacramento Department of Parks and Recreation	<ul style="list-style-type: none"> • Amenity zone on Freeport Boulevard • Plaza in front of Rodda Hall at Freeport Boulevard/Park Drive • Construct decomposed granite platform for station in Land Park
Sacramento Zoo	Sacramento	Sacramento, Sacramento Department of Parks and Recreation	<ul style="list-style-type: none"> • Plaza in front of Sacramento Zoo • Construct decomposed granite platform for station in Land Park
Land Park NW	Sacramento	Sacramento, Sacramento Department of Parks and Recreation	<ul style="list-style-type: none"> • Construct decomposed granite platform for station in Land Park • On-Street parking on 13th Street or 13th Avenue
Riverside & 8th	Sacramento	Sacramento	<ul style="list-style-type: none"> • Amenity zone in on Riverside Boulevard • On-street parking on 7th Street or 8th Street

Source: Fehr & Peers

**TABLE 4 – STATION-LEVEL INFRASTRUCTURE ANALYSIS
DAVIS STATIONS**

Station Location	City	Permitting Agency	Implementation Options
Davis Commons	Davis	Davis	<ul style="list-style-type: none"> Plaza in front of Davis Commons Amenity zone on E Street or Richards Boulevard On-street parking on E Street
Davis Amtrak	Davis	Davis,	<ul style="list-style-type: none"> Plaza at Davis Amtrak Off-street parking at Davis Amtrak On-street parking on 2nd Street or H Street
Davis Central Park	Davis	Davis, Davis Community Services	<ul style="list-style-type: none"> Amenity zone on 3rd Street, B Street, or C Street Plaza at 3rd Street/C Street On-street parking on C Street
Davis 6th & G	Davis	Davis	<ul style="list-style-type: none"> Amenity zone on 6th Street or G Street Off-street parking on 6th Street On-street parking on 6th Street
Davis 14th & B	Davis	Davis	<ul style="list-style-type: none"> Off-street parking north of 14th Street On-street parking on 14th Street or B Street Construct concrete or decomposed granite platform in near Mary L. Stephens Library
Davis Russell & Sycamore	Davis	Davis	<ul style="list-style-type: none"> Amenity zone on Sycamore Lane Off-street parking north of Russell Boulevard
UC Davis MU	Davis	UC Davis	<ul style="list-style-type: none"> Amenity zone on North Quad Coordinate station site with new Unitrans Memorial Union Terminal
UC Davis Bike Barn	Davis	UC Davis	<ul style="list-style-type: none"> Construct concrete or decomposed granite platform near Unitrans Hutchison Bus Terminal Off-street parking in Parking Lot 43
UC Davis Visitors Center	Davis	UC Davis	<ul style="list-style-type: none"> Amenity zone on Vanderhoef Quad Plaza at Conference Center, South Entry Parking Structure, Alumni and Visitors Center, or Mondavi Center
UC Davis West Village	Davis	UC Davis	<ul style="list-style-type: none"> Plaza on south side of Tilia Street between Sage Street and North Sage Street On-street parking on Sage Street

Source: Fehr & Peers

EVALUATION AND EXPANSION

Every bike share system is unique. Therefore, there are no predetermined evaluation criteria that apply to each system. Additionally, each system has its own criteria for expansion. This section describes implementation options for the initial system launch, criteria for expansion beyond the proposed system, and how to evaluate the first phase.

INITIAL LAUNCH

To implement the proposed Sacramento area bike share system, the system operator may choose to launch the system in phases. Launching the system in phases would ease the station permitting process and decrease the time necessary to launch the system. The necessary first phase would include stations within the following service area: West Sacramento near the Sacramento River, Downtown Sacramento, Midtown Sacramento, Davis, and UC Davis. Remaining stations in East Sacramento, Oak Park, Tahoe Park, Curtis Park, and Land Park could be launched together as a second phase or phased individually.

EXPANSION BEYOND THE PROPOSED SYSTEM

Expansion beyond the proposed system may become possible as bike share matures in the Sacramento area and as areas of the region redevelop. To be eligible for bike share stations, other parts of the Sacramento region should demonstrate their suitability based on factors including housing density, population density, job density, land use diversity, and urban design. Other factors to consider include transit accessibility and opportunities for self-sufficient standalone systems.

Further feasibility analysis is necessary to identify likely areas for bike share system expansion. However, based on redevelopment plans in the region and the Regional Demand Screening presented in *Technical Working Paper #2: Demand, Density, Transit and Technology Integration, Tourism, and Equity*, candidate areas for further assessment include:

- In Sacramento:
 - Redevelopment areas such as the Railyards and Township 9
 - 65th Street light rail station area

- Areas south of Sutterville Road, such as Carleton Tract, Hollywood Park, North City Farms, South Land Park, and Little Pocket
- Areas north of the American River, such as Gateway Center, South Natomas, and Del Paso Boulevard
- In West Sacramento: the Bridge District, Washington District, and Bryte and Broderick neighborhoods
- Areas along Folsom Boulevard in Sacramento County, Rancho Cordova, and the City of Folsom near Regional Transit light rail stations
- In Davis, the area approximately bounded by Covell Boulevard to the north, State Route 113 to the West, Putah Creek to the south, and Pole Line Road to the east

EVALUATION OF FIRST PHASE

To consider expansion beyond the proposed system, the operator of the Sacramento area bike share system should develop criteria by which potential expansions can be evaluated. For example, Denver Bike Sharing works with property owners, building managers, and public spaces to incorporate Denver B-cycle stations in areas of high density, with good visibility and access to public transportation. Additionally, Denver Bike Sharing annually reviews the total ridership of their stations and considers relocating the bottom 10 percent.

Though ridership is an important factor for a bike share system's revenue, it may not be the only criteria against which station performance should be evaluated. Criteria for expansion should account for other bike share system goals, such as social equity, access to transit, and public health. Nonetheless, financial performance and sustainability is important to the longevity of a bike share system in Sacramento. To maximize financial performance and sustainability, station location refinement should be a high priority to the Sacramento area bike share system operator.