



# staff report

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**TO:** Honorable Mayor and Members of the City Council

**ATTENTION:** Jeffrey L. Stewart, City Manager

**FROM:** Art Bashmakian, Director of Planning and Building Services  
Jason Friedman, Assistant Planner

**SUBJECT:** Consideration and possible action to adopt Resolution No. 16-XX – A Resolution adopting the Bellflower-Paramount Bike and Trail Master Plan.

**DATE:** May 23, 2016

## EXECUTIVE SUMMARY

The Cities of Bellflower and Paramount worked with the Southern California Association of Governments (SCAG) to develop a joint bicycle master plan (the "Master Plan") that provides a guide to connect the Pacific Electric Right-of-Way with the San Gabriel and Los Angeles Rivers Bicycle Trails, improve the connectivity of each city's existing bicycle infrastructure, and create a safer transportation network with more choices for residents and visitors. With the adoption of the Master Plan, the City would be eligible for future implementation grant funding. The Master Plan has been developed by Alta Planning + Design ("Alta") in consultation with the cities' residents, the Los Angeles County Metropolitan Transportation Authority, Bellflower Chamber of Commerce, City staff, and others. On April 18, 2016, the Planning Commission of the City of Bellflower recommended adoption of the Master Plan to the City Council. The Master Plan is now presented to the City Council for adoption consideration.

## RECOMMENDATION TO CITY COUNCIL:

- 1) Adopt Resolution No. 16-XX; or
- 2) Alternatively, discuss and take other action related to this item.

## FISCAL IMPACT

None.

## CEQA STATUS

Adopting this Resolution would not result in a potential for resulting in a direct or reasonably indirect physical change in the environment and, accordingly, does not qualify as a "project" under the California Environmental Quality Act (Cal. Pub. Res. Code §§ 21000, et seq.; "CEQA") or CEQA regulations (Cal. Code Regs. tit. 14, §§ 15000, et seq.; see Cal. Code Regs. tit. 14, §§ 15061(b)(3), 15378). Even if the Resolution were to qualify as a project, it would be categorically exempt as a Class 1 or Class 5 project since, at best, it would constitute a minor alteration of existing public structures involving no expansion of use; or a minor alteration in land use limitations (see Cal. Code Regs. tit. 14, §§ 15301, 15305). If the City Council approves the Master Plan and, at some future date, decides to implement its recommendations, the City will conduct additional environmental review.

## **BACKGROUND**

The Master Plan was funded by a Sustainability Planning Grant from SCAG and has been in the organizing, planning, and outreach stages since 2014. The cities of Bellflower and Paramount selected Alta, a nationally recognized bicycle and pedestrian planning firm, to lead the planning process. The Master Plan will provide a guide for the future development of bicycle infrastructure projects, policies, and programs throughout and between the two cities, creating a regionally connected bicycle network. It will also support multiple goals of Bellflower's General Plan related to sustainability, mobility, and land use. Lastly, formal adoption of the Master Plan will qualify the City for future State and Federal transportation funding opportunities to implement its recommended infrastructure.

At its March 1, 2016, meeting, the Paramount City Council adopted the Master Plan. On April 18, 2016, the Planning Commission of the City of Bellflower recommended adoption of the Master Plan to the City Council.

## **DISCUSSION**

### **PLANNING PROCESS AND PUBLIC OUTREACH**

The Master Plan was devised by Alta with the assistance of the Bellflower and Paramount communities, advocacy groups, volunteers, and City staff from the Public Works and Planning Departments. In summer 2014, the project team began the process with a strategy meeting, and bicycling and walking tours of the cities.

Throughout the process, Alta worked with the cities to coordinate a number of outreach efforts to provide the public with the basic framework for the Master Plan, and gather input through surveys about local bicycling conditions, and individual bicycling behavior and preferences. Outreach events were held on November 10, 2014, at the Bellflower Farmer's Market and on November 15, 2014, at Salud Park in Paramount. Surveys posed questions about where participants would like to see bike routes built, what types of bicycle facilities they would prefer, and what kinds of concerns people had with existing conditions. Data collected at the outreach events was taken into consideration as the Master Plan was developed.

With the help of volunteers, Alta coordinated bicycle counts throughout Bellflower and Paramount over the course of multiple days to help better understand ridership numbers and characteristics of the current network's users, accounting for estimated age, gender, level of helmet usage, and number of users traveling on the wrong side of the road. Alta also researched local bicyclist collision data to help identify areas to improve existing infrastructure.

Based on the field data collected, survey responses, and the identified bicycle "attractors and generators" (e.g., schools, parks, landmarks, mixed-use developments, and transit stations) throughout the cities, Alta developed a series of recommended bicycle improvements for future implementation in Bellflower and Paramount. The Planning and Public Works Departments weighed in on these recommendations, and the draft plan was provided to the public for comments and suggestions.

**PLAN OVERVIEW**

The Master Plan is organized into five chapters, and concludes with a series of appendices which include background information, plan and policy review, and detailed cost estimates for recommended infrastructure projects. After a brief introduction, the Master Plan reviews existing conditions in the communities related to bicycle infrastructure, local and regional destinations, and multi-modal connections. Next, the Master Plan provides an analysis of the needs of bicyclists in Bellflower and Paramount, based on community outreach, bicycle counts, and relevant collision data. The Master Plan concludes with chapters on infrastructure, policy, and program recommendations, project phasing information, and potential regional, state, and federal funding sources that those recommendations may be eligible for.

**PLAN BENEFITS**

Adoption of the Master Plan will make Bellflower more competitive in obtaining grant funding for implementing bicycle infrastructure and programs throughout the city. Such funding could help create a better connected bicycle network within the city, and provide a stronger link to the region’s active transportation routes. The Master Plan’s proposed improvements will make existing infrastructure safer and more approachable for current and new users, and provide a healthy and convenient alternative to travel through the city. Further, the Master Plan is consistent with the General Plan, as it fulfills numerous goals and policies as listed in the attached Resolution.

**ATTACHMENTS**

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**CITY OF BELLFLOWER**  
**RESOLUTION NO. 16-XX**

**A RESOLUTION ADOPTING THE BELLFLOWER-PARAMOUNT BIKE AND TRAIL MASTER PLAN**

**THE CITY COUNCIL RESOLVES AS FOLLOWS:**

**SECTION 1.** The City Council finds and declares as follows:

- A. In June 2014, the Southern California Association of Governments (SCAG) awarded a grant to the Cities of Bellflower and Paramount to develop the Bellflower-Paramount Bike & Trail Master Plan (“Master Plan”);
- B. The Cities of Bellflower and Paramount contracted with Alta Planning + Design (“Alta”) to be the Master Plan’s consultant firm to coordinate its development;
- C. Alta worked with the Cities to coordinate a number of outreach efforts to provide the public with information about the Master Plan, and gather input through surveys about local bicycling conditions and individual bicycling behavior and preferences;
- D. The Planning Commission recommended adoption of the Master Plan to the City Council at its April 18, 2016, meeting.

**SECTION 2.** *Factual Findings and Conclusions.* The City Council finds that the following facts exist:

- A. The purpose of the Master Plan is to provide 1) a broad vision and specific strategies and actions to improve bicycling conditions; 2) direction for expanding the existing network and improving connectivity within and between cities; and c) recommendations for education, encouragement, enforcement, and evaluation programs. The overall goal of the Master Plan is to increase the number of new bicyclists and bicycle trips in the region by providing a safer bicycling environment.
- B. The Master Plan will guide future bicycle infrastructure improvements and identify a path towards implementing the plan’s recommendations.
- C. Adoption of the Master Plan will allow the City to become eligible and/or more competitive for various active transportation grants to fund the implementation of the plan’s suggested improvements.
- D. The Master Plan advances the City towards the following goals and policies of the City’s General Plan including but not limited to the following:

1. Land Use Element Policy 2.13 – “Tie Bellflower together with new green corridors (e.g., landscaping along the Southern Pacific railway) between existing parks incorporating pedestrian, bicycle and equestrian pathways.”
2. Circulation Element Goal 4 – “Encourage the use of alternative and/or non-motorized transportation modes including bicycle and pedestrian travel.”
3. Circulation Element Policy 4.1 – “Promote the use of alternative forms of transportation (other than single passenger cars) to reduce congestion, traffic, noise, and air quality impacts.”
4. Circulation Element Policy 4.3 – “Provide pollution-free and congestion-reducing bicycle, jogging, walking, handicapped-accessible pathways and lanes which link major destination centers within the City as practical.”
5. Circulation Element Implementation Measure 4.2 – “Provide safe bicycle and pedestrian routes between residential neighborhoods and the schools, local commercial areas, and other uses.”

**SECTION 3.** *Environmental Assessment.* Because of the facts identified in Section 2 of this Resolution, adopting this Resolution would not result in a potential for resulting in a direct or reasonably indirect physical change in the environment and, accordingly, does not qualify as a “project” under the California Environmental Quality Act (Cal. Pub. Res. Code §§ 21000, *et seq.*; “CEQA”) or CEQA regulations (Cal. Code Regs. tit. 14, §§ 15000, *et seq.*; see Cal. Code Regs. tit. 14, §§ 15061(b)(3), 15378). Even if the Resolution were to qualify as a project, it would be categorically exempt as a Class 1 or Class 5 project since, at best, it would constitute a minor alteration of existing public structures involving no expansion of use; or a minor alteration in land use limitations (see Cal. Code Regs. tit. 14, §§ 15301, 15305). If the City Council approves the Master Plan and, at some future date, decides to implement its recommendations, the City will conduct additional environmental review.

**SECTION 4.** *Zoning Consistency.* The Master Plan is consistent with the general purpose of the BMC’s zoning regulations, which, in sum, is to encourage the most appropriate use of the land, provide adequate open space for light and air, lessen congestion on streets, and facilitate adequate provisions for community facilities and utilities, including transportation, water supply, sewage disposal, schools, parks and other public requirements which promote the public peace, health, safety, morale and general welfare. The Master Plan promotes the orderly development of a safe and convenient bikeway network, and encourages increased use of the bicycle as a means of transportation. This promotes improved public health, air quality, and the safety of those using the transportation network, lessens congestion, and enhances the general welfare by improving the city’s recreational facilities and access to schools, parks, and commercial activities.

**SECTION 5.** *Reliance on Record.* Each and every one of the findings and determinations in this Resolution are based on the competent and substantial evidence, both oral and written, contained in the entire record relating to the project. The findings and determinations constitute the independent findings and determinations of the City Council in all respects and are fully and completely supported by substantial evidence in the record as a whole.

**SECTION 6.** *Limitations.* The City Council's analysis and evaluation of the project is based on the best information currently available. It is inevitable that in evaluating a project that absolute and perfect knowledge of all possible aspects of the project will not exist. One of the major limitations on analysis of the project is the City Council's lack of knowledge of future events. In all instances, best efforts have been made to form accurate assumptions. Somewhat related to this are the limitations on the city's ability to solve what are in effect regional, state, and national problems and issues. The City must work within the political framework within which it exists and with the limitations inherent in that framework.

**SECTION 7.** This Resolution does not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Resolution's effective date. Any such amended part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Resolution.

**SECTION 8.** If any part of this Resolution or its application is deemed invalid by a court of competent jurisdiction, the City Council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Resolution are severable.

**SECTION 9.** To the extent that any other resolution pertaining to the Bellflower-Paramount Bike and Trail Master Plan is incorporated into this Resolution, it is superseded in its entirety.

**SECTION 10.** The City Clerk is directed to mail a copy of this Resolution to any person requesting a copy.

**SECTION 11.** The Mayor, or presiding officer, is hereby authorized to affix his or her signature to this Resolution signifying its adoption by the City Council of the City of Bellflower, and the City Clerk, or her duly appointed deputy, is directed to attest thereto.

**SECTION 12.** *Effective Date.* This Resolution will become effective immediately upon adoption and remain effective until superseded by a subsequent resolution.

**SECTION 13.** This Resolution may be appealed within ten (10) calendar days after its adoption. All appeals must be in writing and filed with the City Clerk within this time period. Failure to file a timely written appeal will constitute a waiver of any right of appeal.

**PASSED, APPROVED, AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF BELLFLOWER THIS \_\_\_ DAY OF \_\_\_\_\_ 2016.**

\_\_\_\_\_  
**Dan Koops, Mayor**

**ATTEST:**

\_\_\_\_\_  
**Mayra Ochiqui, City Clerk**

**APPROVED AS TO FORM:**

\_\_\_\_\_  
**Karl H. Berger, City Attorney**

**CITY OF BELLFLOWER**

**RESOLUTION NO. PC 16-03**

**A RESOLUTION OF THE PLANNING COMMISSION RECOMMENDING  
THE CITY COUNCIL ADOPT THE BELLFLOWER-PARAMOUNT BIKE  
AND TRAIL MASTER PLAN.**

The Planning Commission of the City of Bellflower does resolve as follows:

SECTION 1: The Planning Commission finds and declares as follows:

- A. In June 2014, the Southern California Association of Governments (SCAG) awarded a grant to the cities of Bellflower and Paramount to develop the Bellflower-Paramount Bike and Trail Master Plan ("Master Plan");
- B. The cities of Bellflower and Paramount contracted with Alta Planning + Design ("Alta") to be the Master Plan's consultant firm to coordinate its development; and
- C. Alta worked with the cities to coordinate a number of outreach efforts to provide the public with information about the Master Plan, and gather input through surveys about local bicycling conditions, and individual bicycling behavior and preferences.

SECTION 2: *Factual Findings and Conclusions.* The Planning Commission finds that the following facts exist:

- A. The purpose of the Master Plan is to provide 1) a broad vision and specific strategies and actions to improve bicycling conditions; 2) direction for expanding the existing network, and improving connectivity within and between cities; and c) recommendations for education, encouragement, enforcement, and evaluation programs. The overall goal of the Master Plan is to increase the numbers of new bicyclists and bicycle trips in the region by providing a safer bicycling environment;
- B. The Master Plan will guide future bicycle infrastructure improvements and identifies a path towards implementing the plan's recommendations;
- C. Adoption of the Master Plan will allow the City to become eligible and/or more competitive for various active transportation grants to fund the implementation of the plan's suggested improvements;
- D. The Master Plan advances the City towards the following goals and policies of the City's General Plan including but not limited to the following:
  - 1. Land Use Element Policy 2.13 - "Tie Bellflower together with new green corridors (e.g. landscaping along the Southern Pacific railway) between existing parks incorporating pedestrian, bicycle and equestrian pathways."

2. Circulation Element Goal 4 – “Encourage the use of alternative and/or non-motorized transportation modes including bicycle and pedestrian travel.”
3. Circulation Element Policy 4.1 – “Promote the use of alternative forms of transportation (other than single passenger cars) to reduce congestion, traffic, noise, and air quality impacts.”
4. Circulation Element Policy 4.3 - “Provide pollution-free and congestion-reducing bicycle, jogging, walking, handicapped-accessible pathways and lanes which link major destination centers within the City as practical.”
5. Circulation Element Implementation Measure 4.2 – “Provide safe bicycle and pedestrian routes between residential neighborhoods and the schools, local commercial areas, and other uses.”

SECTION 3: Environmental Assessment. Because of the facts identified in Section 2 of this Resolution, adopting this Resolution is not subject to the requirements of the California Environmental Quality Act (CEQA) in that the action constitutes general policy-making and a City administrative activity that will not result in direct or indirect changes to the environment, and, accordingly, does not qualify as a “project” under CEQA (Cal. Pub. Res. Code §§ 21000, *et seq.*; “CEQA”) or CEQA regulations (Cal. Code Regs. tit. 14, §§ 15000, *et seq.*; see Cal. Code Regs. tit. 14, §§ 15061(b)(3), 15378). Further, adoption of the resolution recommending approval of the Master Plan does not legally require the City to follow through on the proposed improvements. If the City Council approves the Master Plan and, at some future date, decides to implement its recommendation, the City will conduct the appropriate environmental review at that time.

SECTION 4: Zoning Consistency. The Master Plan is consistent with the general purpose of the BMC’s zoning regulations, which, in sum, is to encourage the most appropriate use of the land, provide adequate open space for light and air, lessen congestion on streets, and facilitate adequate provisions for community facilities and utilities, including transportation, water supply, sewage disposal, schools, parks and other public requirements which promote the public peace, health, safety, morale and general welfare. The Master Plan promotes the orderly development of a safe and convenient bikeway network, and encourages increased use of the bicycle as a means of transportation. This promotes improved public health, air quality, and the safety of those using the transportation network, lessens congestion, and enhances the general welfare by improving the city’s recreational facilities and access to schools, parks, and commercial activities.

SECTION 5: Recommendation. Based on the foregoing, the Planning Commission recommends the City Council approve the Bellflower-Paramount Bike & Trail Master Plan.

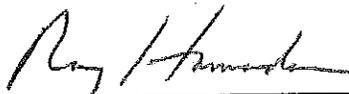
SECTION 6: Reliance On Record. Each and every one of the findings and determinations in this Resolution are based on the competent and substantial evidence, both oral and written, contained in the entire record relating to the project. The findings and determinations constitute the independent findings and determinations of the Planning Commission in all respects and are fully and completely supported by substantial evidence in the record as a whole.

SECTION 7: Limitations. The Planning Commission's analysis and evaluation of the project is based on the best information currently available. It is inevitable that in evaluating a project that absolute and perfect knowledge of all possible aspects of the project will not exist. One of the major limitations on analysis of the project is the Planning Commission's lack of knowledge of future events. In all instances, best efforts have been made to form accurate assumptions. Somewhat related to this are the limitations on the city's ability to solve what are in effect regional, state, and national problems and issues. The City must work within the political framework within which it exists and with the limitations inherent in that framework.

SECTION 8. Effective Date. This Resolution will become effective immediately upon adoption and remain effective until superseded by a subsequent resolution.

SECTION 9: The Planning Commission Chairman, or presiding officer, is hereby authorized to affix his signature to this Resolution signifying its adoption by the Planning Commission, and the Planning Commission Secretary, is directed to attest thereto.

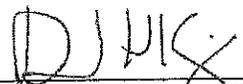
PASSED AND ADOPTED THIS 18<sup>th</sup> DAY OF APRIL 2016.

  
\_\_\_\_\_  
Ray Hamada, Chairman

Attest:

  
\_\_\_\_\_  
Art Bashmakian, Secretary

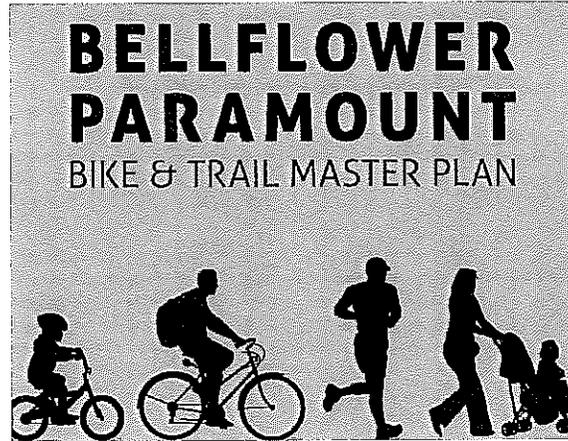
Approved as to form:

  
\_\_\_\_\_  
David King, Assistant City Attorney

Doc 338188

# Bellflower-Paramount Bike & Trail Master Plan

Public Draft | August 2015



Southern California Association of Governments

City of Bellflower

City of Paramount

Prepared by Alta Planning + Design



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# Acknowledgements

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## City of Bellflower

Scott A. Larsen, Mayor

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Ray Dunton

Sonny Santa Ines

Ron Schnablegger

## City of Paramount

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## Southern California Association of Governments

Prepared by **Alta Planning + Design**

with

**AECOM**

**Arellano Associates**

***Special thanks to the following agencies and organizations who provided input and participated in the development of this Plan:***

Bellflower Chamber of Commerce

CalMet Services

Jankovich Companies

Kingdom Causes

Los Angeles County Metropolitan Transportation Authority

Paramount Joint Unified School District

Paramount Petroleum

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# 1. Introduction

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The cities of Bellflower and Paramount recognize that bicycling is an important part of daily transportation for residents, commuters and visitors to the cities. The *Bellflower-Paramount Bike & Trail Master Plan* is for all people who desire to improve their level of daily physical activity or broaden their transportation options by bicycling to school, work and other local and regional destinations.

Bellflower and Paramount possess a number of assets that make them well-suited for bicycling as a transportation option. The nearby Los Angeles River Bicycle Path and San Gabriel River Trail offer convenient connections to regional destinations. The temperate climate and flat topography make bicycling comfortable for most people year-round.

Increasing the number of residents who bicycle for their everyday travel can address several interrelated challenges including traffic congestion and safety, improve public health and air quality, create a sense of community and support a vibrant local economy. By developing and implementing this Bike & Trail Master Plan, Bellflower and Paramount can begin to address these challenges and improve the quality of life for residents and visitors alike.

## 1.1. Overview of the Plan

The Bellflower-Paramount Bike & Trail Master Plan is organized into the following chapters:

- ◆ **Chapter 1** introduces the plan and its components.
- ◆ **Chapter 2** reviews existing conditions in the communities, including bicycle facilities, local and regional destinations, and multi-modal connections.
- ◆ **Chapter 3** analyzes the needs of bicyclists in Bellflower and Paramount, based on community outreach, bicycle counts, and analysis of relevant collision data.
- ◆ **Chapter 4** contains infrastructure, policy, and program recommendations.
- ◆ **Chapter 5** includes project phasing information along with federal, statewide, and regional funding sources that projects included in this plan may be eligible for.

The plan also includes appendices which provide additional information or detail. These include:

- ◆ **Appendix A** lists the required elements of a plan compliant with Active Transportation Program guidelines, and indicates where in the plan each element is addressed.
- ◆ **Appendix B** provides an overview of relevant planning and policy documents from federal, state, regional, and local agencies.
- ◆ **Appendix C** contains additional background analysis for the existing conditions presented in **Chapter 2**.
- ◆ **Appendix D** includes additional background analysis for needs identified in **Chapter 3**.
- ◆ **Appendix E** provides an overview of preliminary opportunities identified for improving the bicycling experience in Bellflower and Paramount.
- ◆ **Appendix F** includes detailed analysis of the West Santa Ana Branch right-of-way.
- ◆ **Appendix G** presents the results of the Bicycling and Walking Demand and Benefits model.
- ◆ **Appendix H** includes detailed cost estimates for priority projects identified in **Chapter 5**.

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## 2. Existing Conditions

### 2.1. Setting and Land Use

Bellflower and Paramount are neighboring cities in Los Angeles County, California. These two communities are bordered by the cities of Compton, Lynwood, Downey, South Gate, Long Beach, Lakewood, Cerritos and Norwalk. The City of Bellflower is approximately 6.2 square miles with a population of 76,619<sup>1</sup>. The City of Paramount is approximately 4.7 square miles with a population of 54,255<sup>1</sup>.

There are ample opportunities in the project area to connect the two cities to one another, as the only current bicycle connection is the West Santa Ana Branch Trail, referred to in Bellflower as the Bellflower Bicycle and Pedestrian Trail.<sup>2</sup>

According to land types reported by the County of Los Angeles, the project area includes the following acreages, shown in Table 2-1 and Figure 2-1.

Table 2-1: Bellflower and Paramount Land Use Types

Land Types	Acreage
City Halls	4
Hospitals and Medical Centers	36
Mobile Home Parks	183
Preschools	1
Private and Charter Schools	56
Public Elementary Schools	176
Public High Schools	91
Regional Parks and Gardens	97
Shopping Centers	9

For complete Land Use Maps from each city's General Plan, see Appendix C.

<sup>1</sup> 2008-2012 American Community Survey 5-year estimates

<sup>2</sup> For consistency in this plan, the trail will be referred to as the West Santa Ana Branch Trail at all locations.

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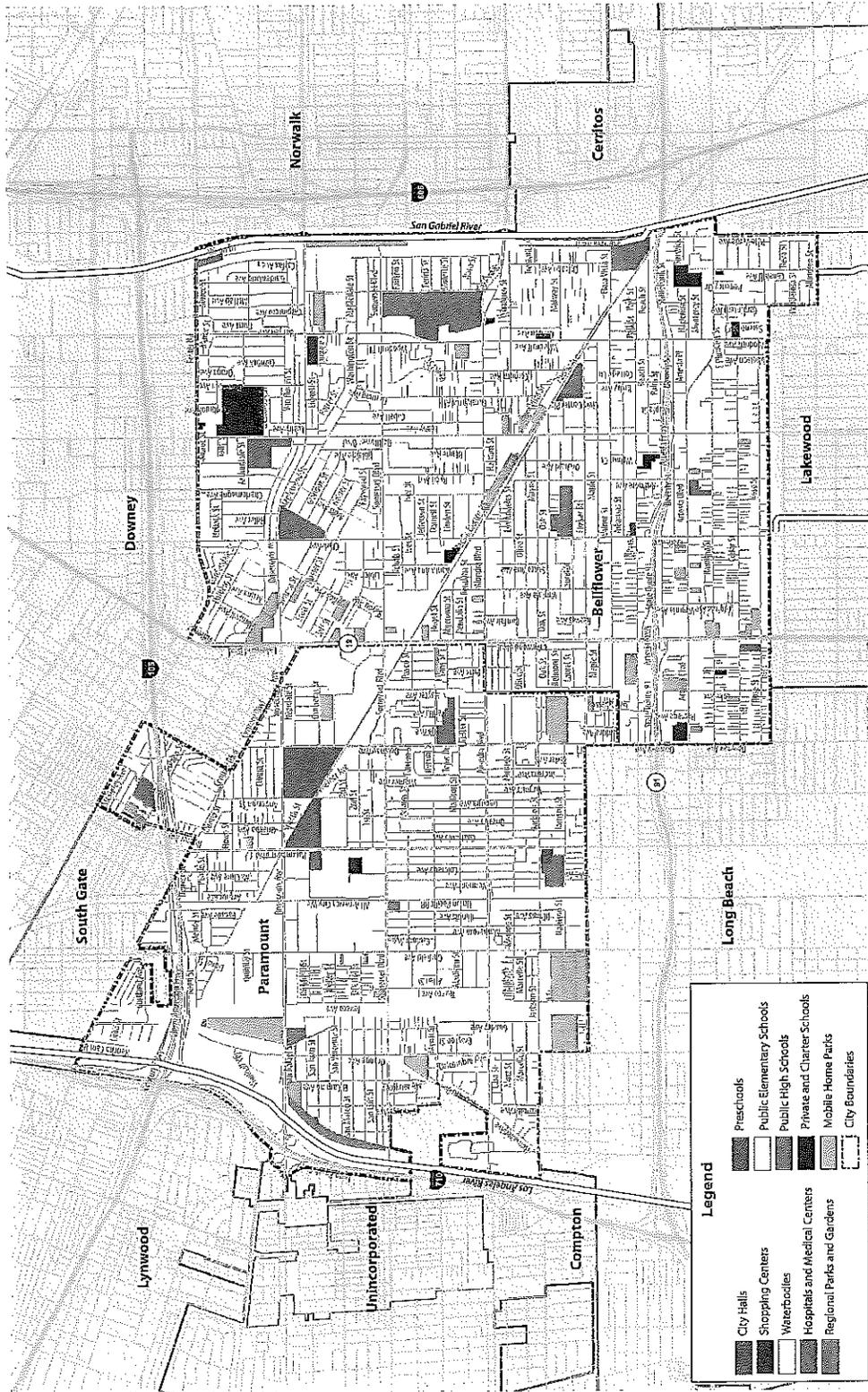


Figure 2-1: Project Area Land Types

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## 2.2. Existing Bicycle Network

### Existing Bikeways

Caltrans designates three common classes of bikeways:

**Class I** bikeways, or **shared-use paths**, provide for bicycle and pedestrian travel on a paved right-of-way completely separated from any street or highway. These paths are commonly used by bicyclists, pedestrians, joggers, in-line skaters, and others. Shared-use paths are separated from roadways, paved, and preferably ten feet wide with two foot wide shoulders.

#### CLASS I

##### Shared Use Path

Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized.

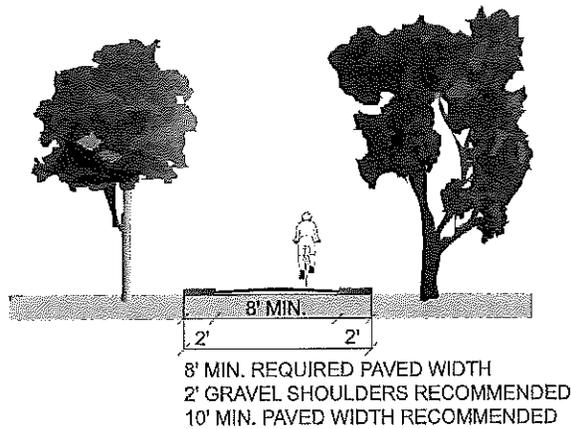


Figure 2-2: Class I Shared-use Path

**Class II bicycle lanes** are striped lanes on roadways for one-way bicycle travel. Bike lanes are at least five feet wide, and include bike signage. Because they may be adjacent to higher speed traffic, some cyclists may perceive these facilities to be uncomfortable or stressful to ride in.

#### CLASS II

##### Bike Lane

Provides a striped lane for one-way bike travel on a street or highway.

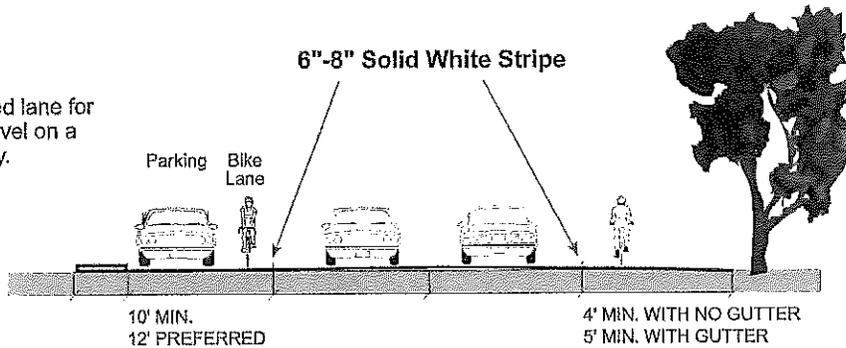


Figure 2-3: Class II Bicycle Lanes

**Class III bicycle routes** are roadways where bicyclists and motorists share a travel lane, and are designated by bike route signs or shared lane markings. These may be further enhanced with traffic calming measures, bicycle wayfinding signage, or crossing improvements at key locations to create a **Bicycle Boulevard**.

**CLASS III**

**Bike Route  
Signed Shared Roadway**

Provides for shared use with pedestrian or motor vehicle traffic, typically on lower volume roadways.

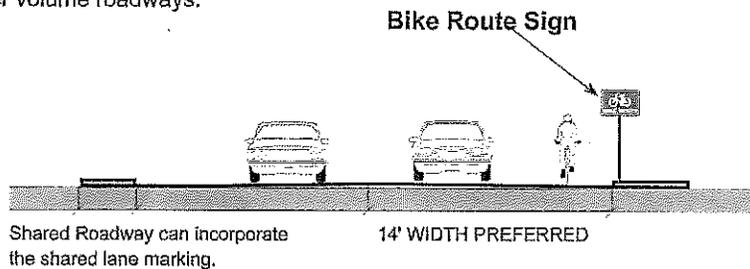


Figure 2-4: Class III Bicycle Route

There is a new, fourth type of bikeway that Caltrans has recognized and is currently developing design guidance for. **Class IV bikeways** are designated bicycle space on a road that is separated from vehicle lanes by physical barriers like curbing, on-street parking, or flexible bollards. Class IV bikeways can be one- or two-way facilities.

The cities of Bellflower and Paramount currently have a total of 6.9 miles of bikeways, including 6.3 miles of Class I Shared-use Paths, 0.1 miles of Class II Bicycle Lanes and 0.5 miles of Class III Bicycle Routes. There are no existing Bicycle Boulevards or Class IV bikeways in the communities. These facilities are summarized in Table 2-2 and displayed in Figure 2-5.

A detailed discussion of the existing bikeways is included in Appendix C.

Table 2-2: Existing Bikeways

Name	From	To	Class	Mileage
Bellflower Pedestrian and Bicycle Trail	Ripon Avenue/Ruth R. Caruthers Park	Somerset Boulevard	I	2.5
Los Angeles River Bicycle Path	Paramount northern City Limit	Paramount southern City Limit	I	2.2
San Gabriel River Trail	Bellflower northern City Limit	Alondra Boulevard	I	1.6
Woodruff Avenue	Bellflower southern City Limit	Rose Street	II	0.1
Ailington Street	Carpintero Avenue	Palo Verde Avenue	III	0.3
Flora Vista Street	Ripon Avenue	San Gabriel River Trail	III	0.1
Ripon Avenue	Bellflower Pedestrian and Bicycle Trail	Flora Vista Street	III	0.1
<b>Total</b>				<b>6.9</b>

## **Existing Bicycle Parking**

Secure bicycle parking is an essential element of a functional bicycle network. Bicycle racks are a common form of short-term secure bicycle parking and can be installed in various locations, including sites adjacent to retail such as parking lots, as well as in the public right of way in the furnishings zone of the sidewalk. Racks are appropriate for locations where there is demand for short-term bicycle storage. Bicycle lockers provide secure and sheltered bicycle parking and are recommended in locations where long-term bicycle storage is needed, such as transit stations.

The cities of Bellflower and Paramount do not currently have an inventory of bicycle parking facilities. Within the City of Paramount, there are an estimated ten private sites that have included bicycle racks as part of their improvements. Bicycle parking is provided at the Lakewood Boulevard and Norwalk Metro Stations, as shown in Figure 2-5.

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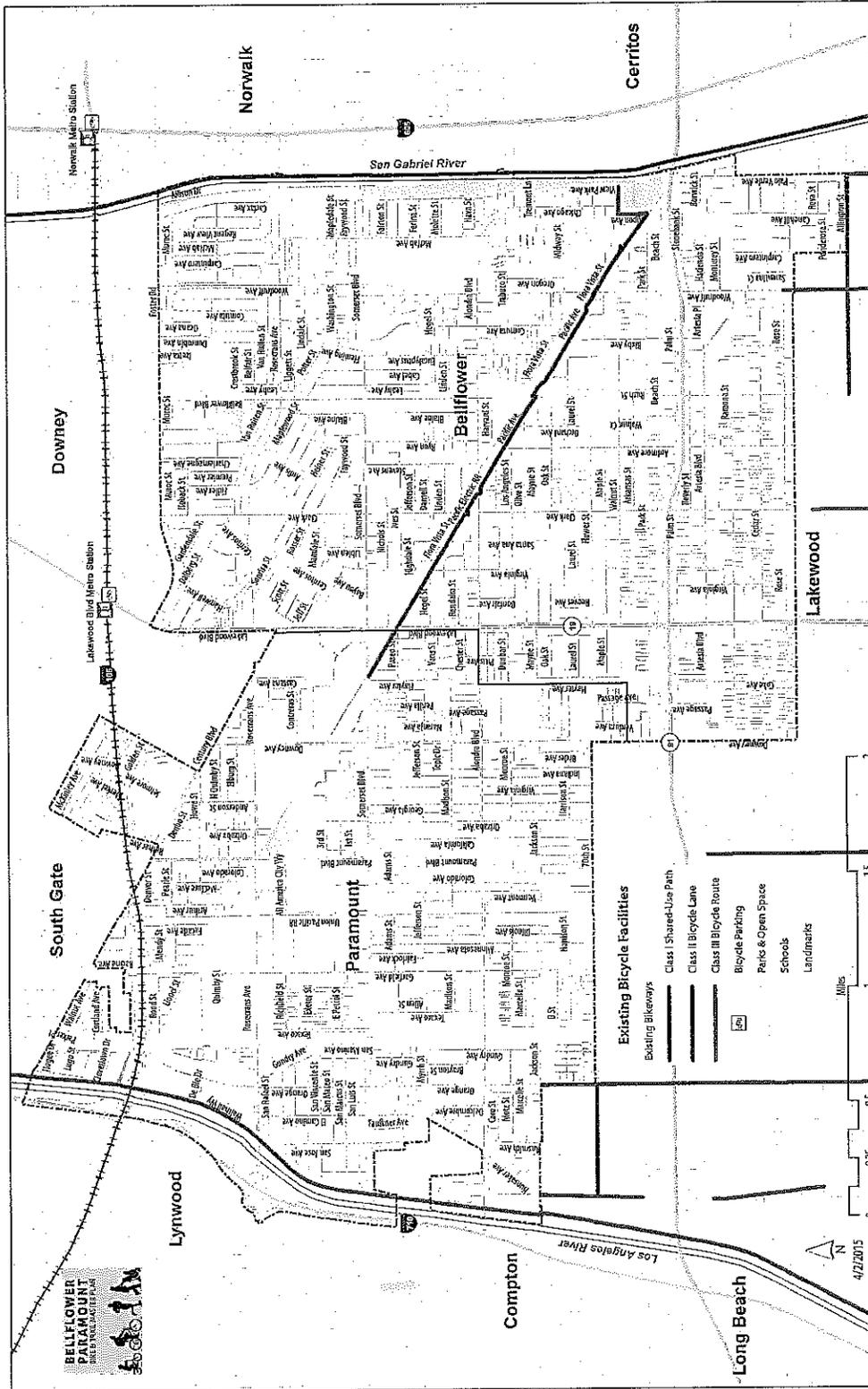


Figure 2-5. Existing Bicycle Network

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## 2.3. Existing Programs

Bicycle support and outreach programs generally are categorized into four 'E's:

- ◆ **Education** programs share information and teach safety skills to bicyclists, motorists, and pedestrians.
- ◆ **Encouragement** programs incentivize bicycling through fun competitions or other outreach campaigns.
- ◆ **Enforcement** efforts promote safe and legal behavior for bicyclists as well as motorists.
- ◆ **Evaluation** programs check progress in achieving goals like increased bicycle mode share or reduced crashes.

The cities of Bellflower and Paramount currently do not have any bicycle-related programs.

## 2.4. Existing Multi-Modal Connections

Bellflower and Paramount are served by Metro local buses and the Metro Green Line, displayed in Figure 2-6. Although there are no Green Line stops in either city, the Lakewood Boulevard and Norwalk stations are just north of Bellflower.

Long Beach and Norwalk also operate bus routes in Bellflower and Paramount, in addition to several Metro local buses that run through Paramount and Bellflower and connect to the Metro Blue Line and rapid bus routes west of Paramount. The numerous transit facilities within and nearby the cities create opportunities for transit access improvements and connections.

Metro provides racks on the front of buses for bicycle transport, as they are not allowed on board. The two Green Line stations accommodate bicycles with parking options. The Norwalk Station has 36 bike rack spaces and 40 bike lockers, and the Lakewood Boulevard Station has 22 bike rack spaces and 12 bike lockers.

### Existing Barriers to Bicycle Connectivity

While bicycle facilities are provided at the transit stations, there are multiple barriers that make it challenging for bicyclists to access transit stations from Bellflower and Paramount. These include:

- ◆ Rosecrans Avenue interchange with I-710
- ◆ Lakewood Boulevard approaches to Lakewood Boulevard Station
- ◆ Foster Road approach under I-605 to Norwalk Station

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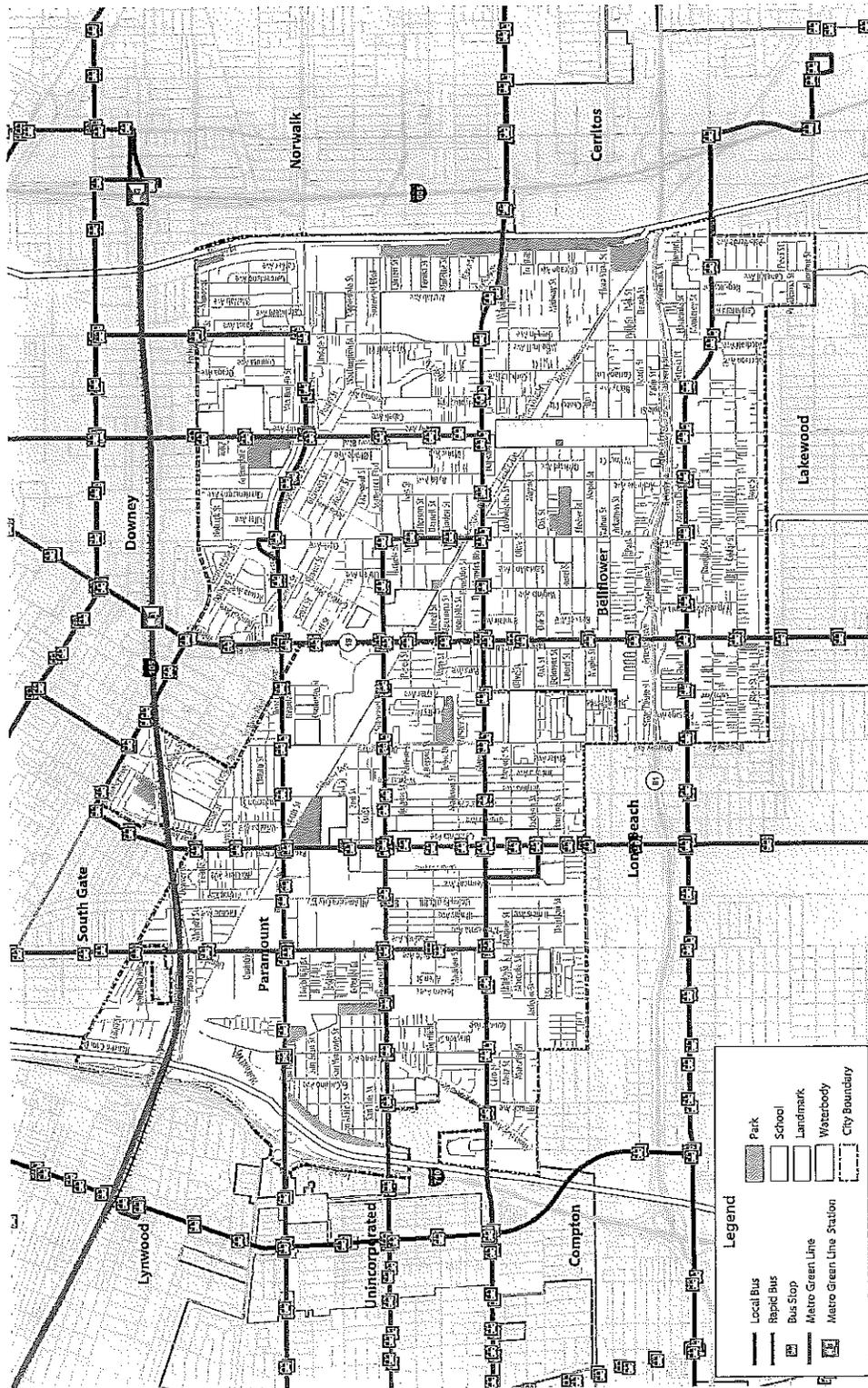


Figure 2-6: Transit Facilities

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## 3. Needs Analysis

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### 3.1. Types of Bicyclists

In order to address the needs of all bicyclists and potential bicyclists, it is important to understand the needs and preferences of all types of bicyclists. Needs and preferences vary between skill levels and their trip types. In addition, the propensity to bicycle varies from person to person, providing insight into potential increases in bicycling rates. Generally, bicycling propensity levels can be classified into four categories:

- ◆ **Strong and fearless** bicyclists will ride on almost any roadway despite the traffic volume, speed and lack of bikeway designation and are estimated to be less than one percent of the population.
- ◆ **Enthusiastic and confident** bicyclists will ride on most roadways if traffic volumes and speeds are not high, or if a Class II bike lane is provided. They are confident in positioning themselves to share the roadway with motorists when necessary and are estimated to be five percent of the population.
- ◆ **Interested but concerned** bicyclists will ride if bicycle paths or lanes are provided on roadways with low traffic volumes and speeds. They are typically not confident riding in traffic. *Interested but concerned* bicyclists are estimated to be 60 percent of the bicyclist population and the primary target group that will bicycle more if provided with low stress routes or bikeways that provide additional separation from moving vehicles.
- ◆ **No Way No How** individuals do not consider bicycling part of their transportation or recreation options and are estimated to be 35 percent of the population.

The needs of bicyclists also vary between trip purposes. For example, people who bicycle for sport recreational purposes may prefer long and unsignalized roadways, while bicyclists who ride with their children to school may prefer direct roadways with lower vehicular volumes and speeds. This plan considers these differences and develops a bikeway network to serve all user types. This section describes the different types of bicyclists and the respective needs for these categories of bicyclists.

- ◆ **Commuters** - adults who regularly bicycle between their residences and work or transit.
- ◆ **Enthusiasts** - skilled adults who bicycle for recreation, often bicycling long distances on roads or rural highways that may not have dedicated bicycle facilities.
- ◆ **Casual/Family/Elderly** riders - adults who use bicycles for running errands, recreation, tourism, exercise, or as a family activity.
- ◆ **School Children** - children who bicycle to school.

An effective bicycle network accommodates bicyclists of all abilities. Casual bicyclists generally prefer roadways with low traffic volumes and low speeds. They also prefer paths that are physically separated from roadways. Because experienced bicyclists typically ride to destinations or to achieve a goal, they generally choose the most direct route, which may include roadways with or without bike lanes. Bicyclists of all abilities and purposes ride every day in Bellflower and Paramount. Parents bicycle with their children to school, people bicycle to work, community members bicycle to transit stations, and recreational bicyclists ride on extended bicycle trips.

## 3.2. Bicycle Attractors and Generators

This section looks at land use patterns in Bellflower and Paramount that should be prioritized in the development of a bicycle network based on their ability to attract bicyclists. Bellflower and Paramount have a variety of destinations that have potential to generate significant bicycle traffic. Bicycle facilities should enable safe access to these destinations, accommodating current bicyclists and encouraging more people to bicycle to these locations. These destinations are illustrated in Figure 3-1.

### Schools and Parks

Schools are important locations to consider while constructing a bicycle network. School-aged children represent a large part of the population in Bellflower and Paramount. Network improvements and programs relative to school travel not only provide students who already ride with safe and convenient routes, but also may encourage more students to bike to school.

Bellflower and Paramount have 19 parks total, which all may be destinations for bicyclists.

### Landmarks and Other Destinations

Landmarks in the cities include hospitals, the Hollywood Sports Park and the two downtown areas. Downtown Paramount is located on Paramount Boulevard between Jackson Street and East Compton Boulevard. An activity generator within this area is the Paramount Theater.

Downtown Bellflower is located around Bellflower Boulevard, between Beach Street and Harvard Street. This area is currently a hub for projects to attract more visitors and residents. In October of 2013, a mixed-use development opened at Bellflower Boulevard and Belmont Street, named Belmont Court. Bellflower is also in the planning process to develop a multi-modal transit center on Bellflower Boulevard at Mayne Street, near the West Santa Ana Branch trail. The center will likely feature mixed-use development, transit services, and bicycle amenities.

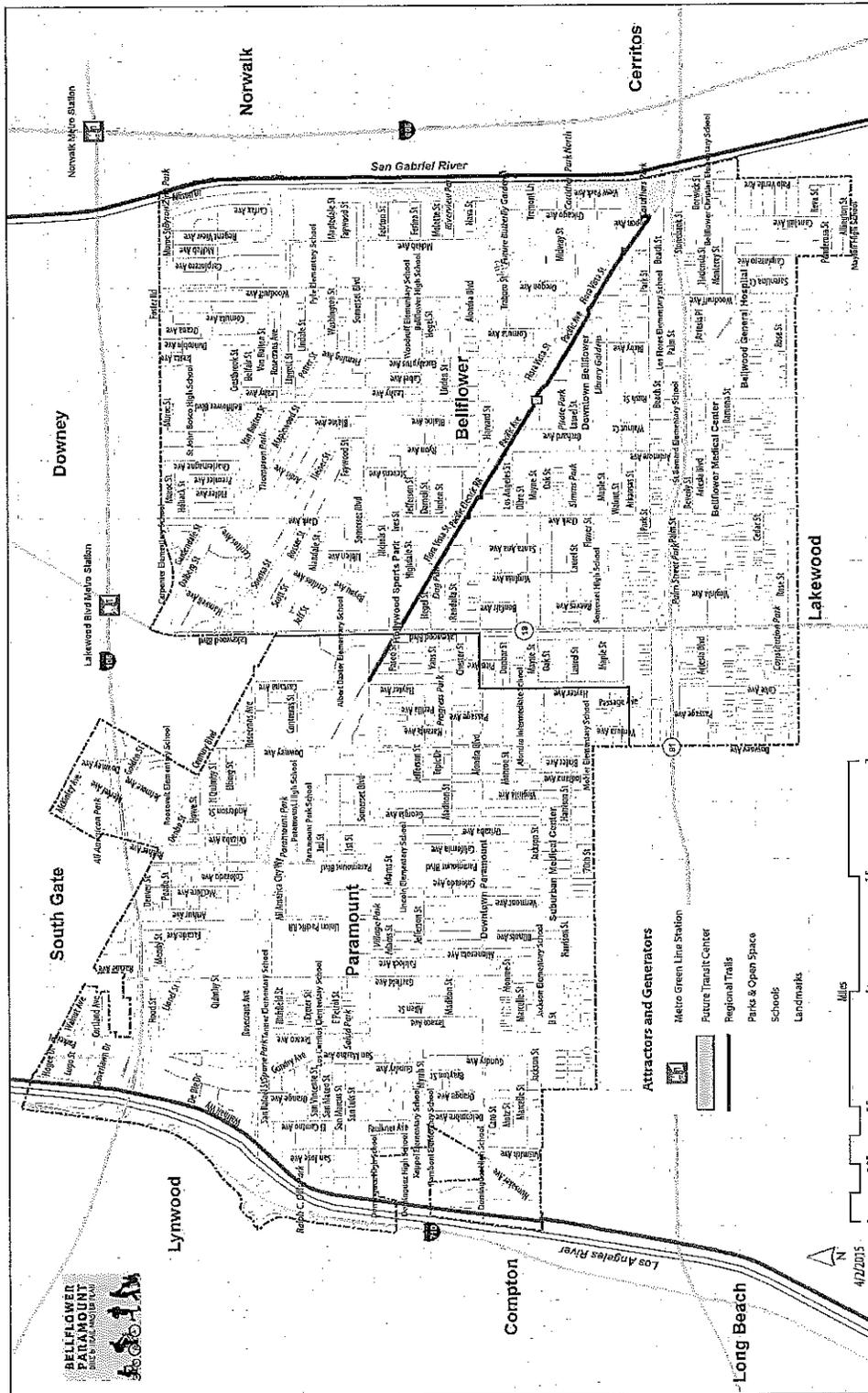


Figure 3-1: Attractors and Generators

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### 3.3. Community Identified Needs

An important part of the planning process is gathering input from stakeholders and the public. Numerous outreach efforts are being conducted for the development of this plan. This section summarizes these efforts.

#### **Kick-Off Meeting and Bike Tour**

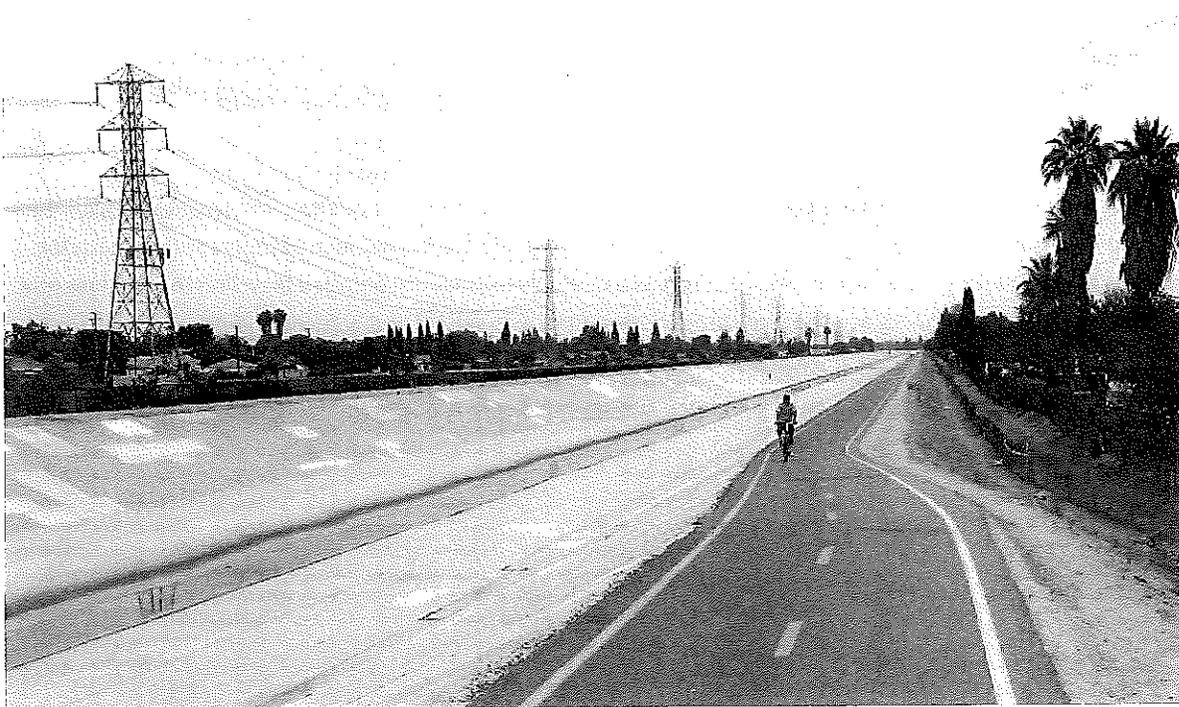
On June 26, 2014, staff from the cities of Bellflower and Paramount as well as the consultant team gathered to kick off the project and identify next steps. The meeting included a bike tour to provide the project team with the opportunity to assess the existing bicycling conditions and start the planning process.

#### **Community Survey**

A community survey was available online and in hard copies at outreach events from November to the end of December in 2014. The purpose of this survey was to gather input on bicycling in Bellflower and Paramount to inform the development of the Bike and Trail Plan. Questions included how often people bike, where they go or would like to go, why they bike and reasons that may deter them from biking.

For detailed survey results, see Appendix D.

Survey respondents primarily gave feedback on the community that they live in. The Bellflower section of the survey had 18 percent of respondents from Paramount, and 23 percent from other communities. Paramount received four percent of responses from Bellflower residents and 14 percent from other communities.



*The San Gabriel River Trail*

**Respondent Travel Mode Characteristics**

As shown in Figure 3-2, the majority of respondents bicycle a few times per month. Bicycle ridership numbers are roughly the same in both Bellflower and Paramount.

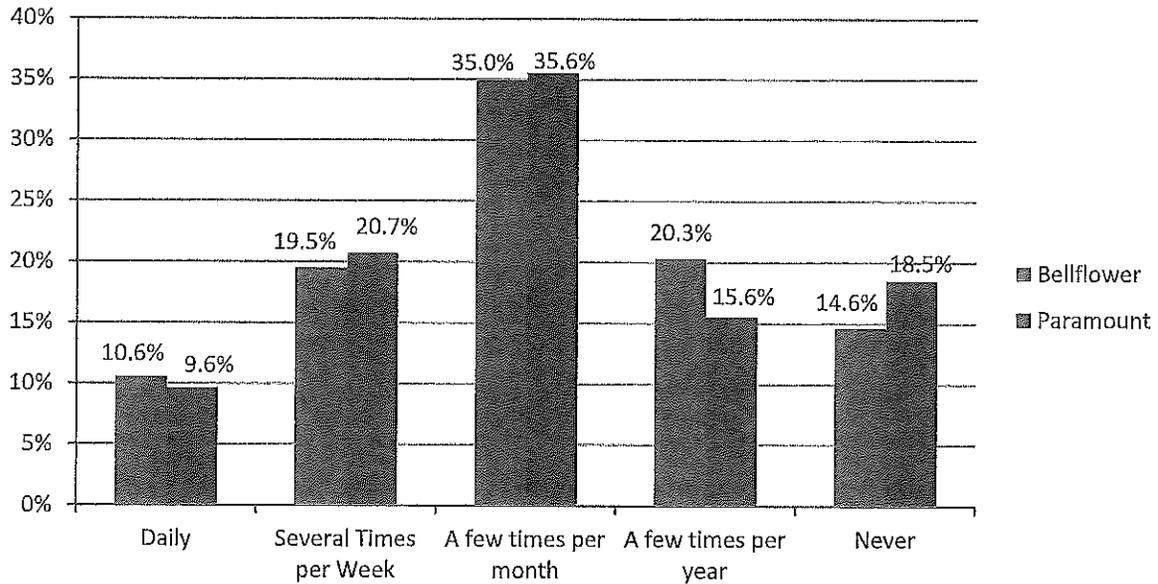


Figure 3-2: Ridership in Bellflower and Paramount

When asked how they currently use the shared use paths nearby, the majority of respondents said that they use them for recreation or exercise, both bicycling and walking. Respondents also said that they often use the paths for bicycle transportation.

**Barriers to Bicycling**

The survey asked respondents to note what prevents them from bicycling more often and what influences their decisions to bicycle. Survey respondents from both cities identified the importance of separation from motor vehicle traffic as they cited a lack of safe bikeways as a major factor that discouraged bicycling more frequently. In addition, a lack of knowledge of safe routes to destinations also served as a barrier to riding.

Secondly, the behavior of motorists and interactions with vehicles while riding discourages people from bicycling. Aggressive drivers, as well as a lack of comfort in sharing the road with cars, were noted as major factors that influences ridership in the area.

### ***Bicycle Infrastructure***

The survey invited participants to indicate where they would like to see new bicycle facilities and asked them to rank their interest in a number of bicycle programs.

Parks were listed as the most desired location to reach by bicycle, followed by grocery stores, nearby bikeways, and work. Respondents in Paramount said that it was also important to be able to bike to schools.



*A bicyclist rides in traffic on Bellflower Boulevard near Mayne Street.*

## Chapter 3 | Needs Analysis

The vast majority of respondents stated that they would ride to transit if safe and secure bicycle parking was available. When asked where new or improved bicycle parking facilities would have the greatest impact, transit was one of the most common responses. Responses also indicated commercial areas, schools, parks, libraries and bike trails were in need of new or improved bicycle parking facilities.

Finally, respondents had the opportunity to note where they would like to see general bicycling improvements. Identified locations include:

- ◆ Paramount Blvd
- ◆ Alondra Blvd
- ◆ Rosecrans Ave
- ◆ Bellflower Blvd
- ◆ Woodruff Ave
- ◆ Artesia Blvd
- ◆ Somerset Blvd
- ◆ Lakewood Blvd
- ◆ The intersection of Clark Ave/Flower St
- ◆ The intersection of Clark Ave/Alondra Blvd
- ◆ The intersection of Garfield Ave/Alondra Blvd



*Bicyclists often ride on the sidewalk when on-street facilities are absent or inadequate.*

## Pop-Up Outreach Events

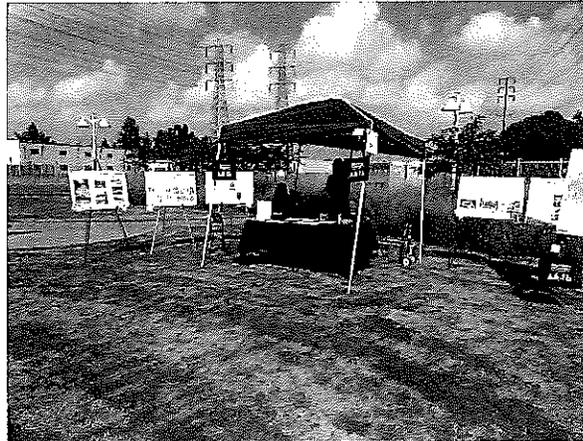
Pop-up outreach events were held on November 10 and 15, 2014 to gather input from members of the public on where they would like to see bikeways and what types of facilities would best suit the cities. Staff handed out reusable grocery bags with the project logo and flyers with project information. Community members also had the opportunity to fill out surveys and write comments on sticky notes to put on the boards.

On Monday, November 10, members of the project team set up a booth at the Bellflower Farmer's Market, which is held each Monday from 9:00 AM to 1:00 PM. Approximately 30 surveys were completed by people who stopped by the booth, and many also marked the boards with stickers to show what types of facilities they would like to see. Spanish language interpretation was provided by Arellano Associates at each of the outreach events.

On Saturday, November 15, members of the project team set up a booth at Salud Park in Paramount from 9:00 AM to 1:00 PM. The park attracts many community members looking to use exercise equipment, the track and sports fields. Approximately 15 surveys were filled out at this outreach event, and many showed support for the expansion of the bike trail into Paramount.



*Bellflower Farmer's Market outreach*



*Paramount Salud Park outreach*

## Chapter 3 | Needs Analysis

Comments noted on sticky notes included:

- ◆ Safety concerns with a history of collisions near the trail
  - The following trail crossings are challenging for bicyclists or pedestrians:
  - Bellflower Boulevard
  - Flower Street
  - Flora Vista Street
- ◆ Residents take young children to parks to ride bicycles, but feel unsafe bicycling elsewhere with children
- ◆ Some education is needed for bicyclists and pedestrians using shared-use paths to reduce conflicts and promote mutual respect
- ◆ A shared-use path is desired from Simms Park to Flora Vista Elementary School
- ◆ A desire for additional bicycle facilities near Las Flores Elementary School and Ramona Elementary School
- ◆ Parents wish to bicycle with their children to school, but have safety concerns
- ◆ Connect the Bellflower Pedestrian and Bicycle Trail to Cerritos Park
- ◆ Residents note bicycling on residential streets is often preferred to arterial streets because of lower speeds and traffic volumes, particularly in the mornings
- ◆ Bellflower Boulevard is narrow, has high traffic volumes, and cars are often perceived to be speeding
- ◆ Connections to Green Line stations are desired
- ◆ Additional trail access points are desired, particularly at Orchard Avenue and Ardmore Avenue

### 3.4. Bicycle and Pedestrian Counts

A group of volunteers conducted bicycle and pedestrian counts on four occasions at eight locations in the cities of Bellflower and Paramount. Counts were prioritized at existing bikeways, including the San Gabriel River Trail and the Los Angeles River Bicycle Path.

Counts were conducted on Thursdays and Saturdays: March 5 and 7, and April 16 and 18. Thursday counts were conducted during late afternoon from 4:00 p.m. to 6:00 p.m. to capture anticipated peak commute time. Saturday counts were conducted midday from 10:00 a.m. to 1:00 p.m. to capture recreational bicyclists and pedestrians. Weather on all count days was fair, with cool mornings and warm afternoons.

Counts were recorded in 15-minute intervals, and the four consecutive periods with the highest total were combined into a peak-hour count. Bicyclists and pedestrians were counted separately, and additional information about bicyclists was collected when feasible. These additional factors included gender and age (based on volunteer estimations), bicyclists traveling on the wrong side of the road, and helmet use.

Volunteers included students from Paramount High School and community members. Due to limited volunteer capacity, some count locations were eliminated or not counted during the weekend and weekday periods.

Across all locations, a total of 347 pedestrians and 475 bicyclists were recorded during the peak hour. Peak-hour count totals for each location are listed in Table 3-1. Intersection counts include bicycle and pedestrian volumes on all legs of the intersection. Screen line counts include a cross street for reference, but only include bicycle and pedestrian volumes along the primary corridor.

Table 3-1: Peak Hour Bicycle and Pedestrian Volumes by Location

Primary Corridor	Cross Street	Pedestrians	Bicyclists
<b>Intersection Counts</b>			
Los Angeles River Bicycle Path	Alondra Boulevard	28	106
Flower Street	Ardmore Avenue	62	23
San Gabriel River Trail	Foster Road	14	46
San Gabriel River Trail	Flora Vista Street	54	174
Bellflower Boulevard	Somerset Boulevard	45	17
<b>Screen Line Counts</b>			
Los Angeles River Bicycle Path	West Santa Ana Branch Right-of-way	19	37
West Santa Ana Branch Trail	Lakewood Boulevard	22	39
West Santa Ana Branch Trail	Bellflower Boulevard	103	33
<b>Total Peak Hour Volumes</b>		<b>347</b>	<b>475</b>

In Paramount, the Los Angeles River Bicycle Path at Alondra Boulevard had relatively high recorded bicycle volumes. Many young pedestrians were observed walking bicycles along Alondra Boulevard in groups or pairs. Along with the proximity of Dominguez High School, this may suggest students who live in Compton and attend school in Paramount may be bicycling to school in the morning and walking home with friends in the afternoon. The Los Angeles River Bicycle Path at Alondra Boulevard also had a relatively high peak hour bicycle count at 106, indicating there may be demand for a future trail connection.

Bellflower locations with relatively high pedestrian volumes included the West Santa Ana Branch Trail at Bellflower Boulevard and the San Gabriel River Trail at Flora Vista Street. The highest peak hour pedestrian volume was observed at the West Santa Ana Branch Trail and Bellflower Boulevard, reflecting the vibrant downtown pedestrian activity. The volunteer stationed at this location also noted many trail users crossed

Bellflower Boulevard at the unmarked midblock location of the trail or simply turned around when they reached Bellflower Boulevard, rather than proceeding to the signal to cross as signs currently instruct trail users to do. This suggests crossing improvements at Bellflower Boulevard would likely increase the comfort of trail users and lead to increased use. The San Gabriel River Trail at Flora Vista Avenue is a major connection between the San Gabriel River Trail and the West Santa Ana Branch Trail; it overwhelmingly had the highest bicycle volume as well, with 174 bicyclists counted during the peak hour.

Of 937 bicyclists counted at all locations during all count days, only fifteen percent were recorded as female (see Table 3-2). Gender of bicyclists can be a good indicator of the comfort level provided by a community’s bicycle network, and this large discrepancy in observed genders may indicate a lack of comfortable bikeways in the area.

Table 3-2: Gender of Bicyclists and Pedestrians

Gender	Pedestrians	Bicyclists
Female	28%	15%
Male	72%	85%

Only three percent of all bicyclists were observed riding on the wrong side of the street, and thirteen percent were observed bicycling on the sidewalk. Just over 60 percent of observed bicyclists were wearing helmets. Anecdotal observations suggest recreational sport cyclists were more likely to wear helmets than commuter or utilitarian bicyclists.

### 3.5. Collision Analysis

This report uses the Statewide Integrated Traffic Reporting System (SWITRS) to collect data on bicycle- and pedestrian-involved collisions. This data was analyzed for both Bellflower and Paramount as a combined dataset for the most recent five years where complete data was available—from 2008 through 2012.

Figure 3-3 at the end of this section displays the frequency of bicycle- and pedestrian-involved collisions on roadways.

For a detailed analysis of collisions in Bellflower and Paramount, see Appendix D.

#### Bicycle-Involved Collisions

From 2008 to 2012, there were 223 bicycle-involved collisions. The year 2012 had the highest number of collisions, though the distribution between the years was relatively even. The highest number of bicycle-involved collisions occurred on weekdays. Most involved in bicycle-related collisions were under the age of 18—41 percent of the victims and 20 percent of all parties involved.

Roadways with relatively high numbers of reported bicycle collisions include:

- ◊ Alondra Boulevard (24)
- ◊ Artesia Boulevard (13)
- ◊ Rosecrans Avenue (18)
- ◊ Somerset Boulevard (13)
- ◊ Bellflower Boulevard (16)
- ◊ Clark Avenue (12)
- ◊ Woodruff Avenue (15)
- ◊ Flower Street (10)
- ◊ Downey Avenue (14)
- ◊ Paramount Boulevard (10)

However, without knowing the volume of bicyclists on each roadway, it is difficult to draw any definitive conclusions regarding the relative collision risks based on this available data.

The intersections that had the most bicycle-involved collisions were the intersections of Alondra Boulevard at Downey Avenue (five collisions) and Alondra Boulevard at Woodruff Avenue (four collisions).

Bicyclists were at fault in 74 percent of bicycle-involved collisions, which may indicate a need for bicyclist education programs. The most common reasons for these collisions were the bicyclists riding on the wrong side of the road (75 percent) and violating the automobile right-of-way (10 percent).

Although collision reports do not include information on a bicyclist’s motivation for their travel behavior, wrong-way riding and automobile right-of-way violations are common in locations where bicycle facilities are not present, incomplete, or where there is insufficient guidance on where bicyclists should ride. These violations may also indicate a need for bicyclist education on how to properly use on-street bicycle facilities, and when to yield to other road users.

Bicyclists riding on the wrong side of the road were most frequently at fault for collisions on Alondra Boulevard, Bellflower Boulevard, and Downey Avenue—four lane arterials that carry relatively high vehicle volumes. This suggests bicyclists may be more likely to ride on the wrong side of roads that are difficult to cross.

Of the 223 bicycle-involved collisions, only 10 resulted in severe injuries and there were no fatalities.

### **Pedestrian-Involved Collisions**

From 2008 to 2012, there were a total of 243 pedestrian-involved collisions. The year 2012 had the highest number of collisions, though the distribution between the years was relatively even. The highest number of pedestrian-involved collisions occurred on weekdays. Most involved in pedestrian-related collisions were under the age of 18, four percent of the victims and 22 percent of all parties involved.

Roadways with relatively high numbers of reported pedestrian collisions include:

- ◆ Bellflower Boulevard (18)
- ◆ Rosecrans Avenue (17)
- ◆ Somerset Boulevard (17)
- ◆ Alondra Boulevard (16)
- ◆ Artesia Boulevard (15)
- ◆ Paramount Boulevard (15)
- ◆ Clark Avenue (15)
- ◆ Downey Avenue (12)
- ◆ Woodruff Avenue (11)
- ◆ Lakewood Boulevard (11)

However, without knowing the volume of pedestrians on each roadway, it is difficult to draw any definitive conclusions regarding the relative collision risks based on this available data.

The intersection with the most pedestrian-involved collisions is Woodruff Avenue and Flora Vista Street (four collisions). Based on observations during the project team bike tour, one contributing factor to this higher collision frequency may be the distance the crosswalk on Woodruff Avenue is set back from the intersection. Motorists turning right from Flora Vista onto Woodruff Avenue do not have good sight lines into the crosswalk until they have already completed their turn and are beginning to accelerate.

## Chapter 3 | Needs Analysis

The most common reasons for pedestrian-involved collisions were pedestrian violations (40 percent) and motorists violating the pedestrian right-of-way (29 percent). Pedestrians were at fault in 39 percent of these collisions.

Collisions resulting from pedestrian violations were reported most frequently on Rosecrans Avenue, Somerset Boulevard, and Clark Avenue. Roadways where drivers most commonly violated the pedestrian right-of-way, resulting in a collision, were Rosecrans Avenue, Somerset Boulevard, and Artesia Boulevard.

Of the 243 pedestrian-involved collisions, 10 were fatal (4 percent) and 31 resulted in severe injuries (13 percent).

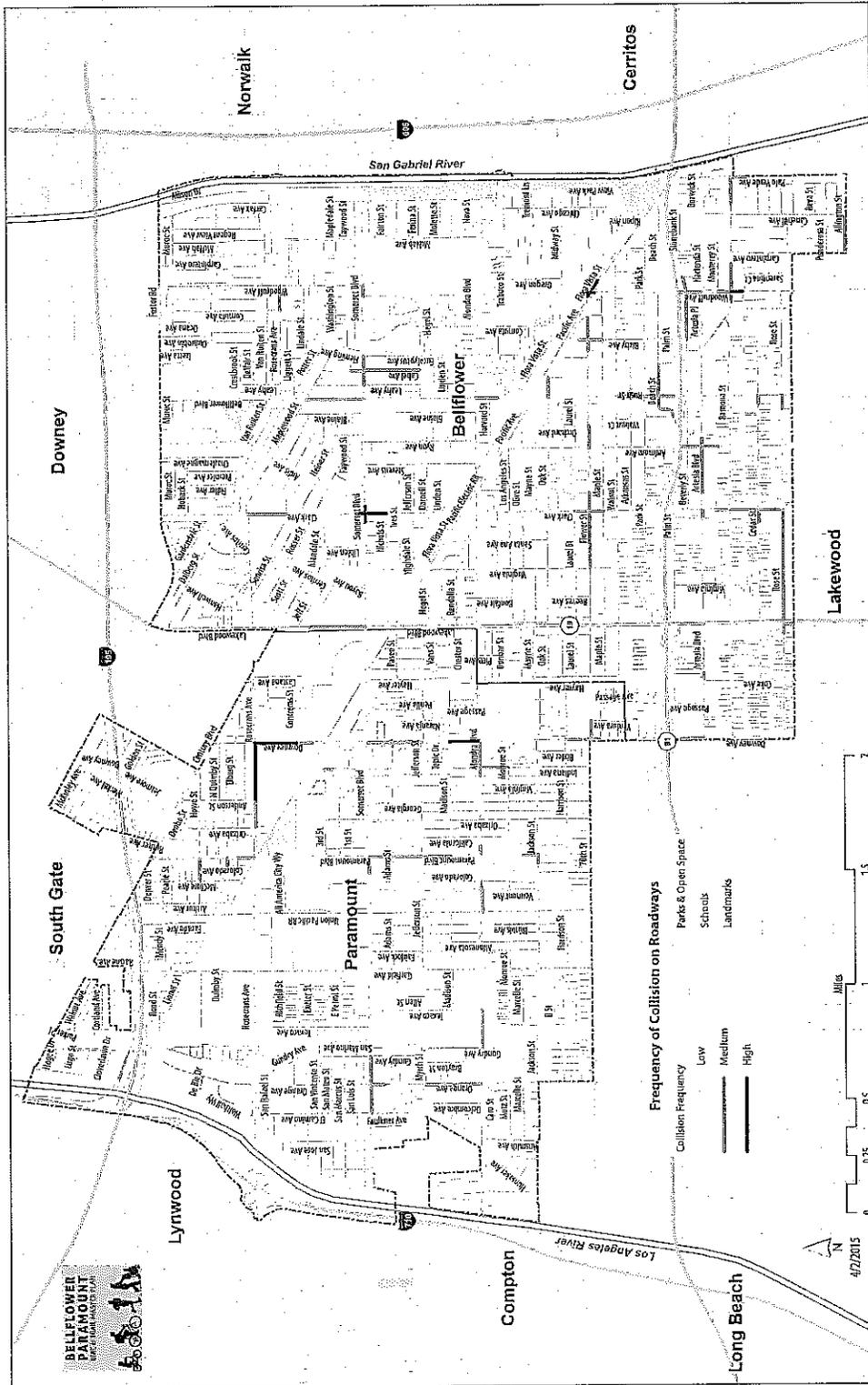


Figure 3-3: Frequency of Collision on Roadways

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## 4. Recommendations

### 4.1. Infrastructure

Infrastructure recommendations for Bellflower and Paramount include bikeways, intersection or crossing improvements, concept plans for specific project locations, bicycle parking, and a wayfinding program.

#### Bikeways

Bikeways proposed in this plan are organized into four categories. **Class I** shared-use paths are facilities completely separated from motor vehicle traffic, and intended for use by bicyclists as well as pedestrians. **Class II** bike lanes are dedicated space for bicyclists on roadways, delineated by striping and signage. **Class III** bike routes are streets where low vehicle volumes and speeds make it comfortable for bicyclists and motor vehicles to share space. This plan divides Class III facilities into **Bicycle Routes**, which have minimal treatments and signage, and **Bicycle Boulevards**, which may have more robust treatments including traffic calming or shared-lane markings. One project in Paramount is recommended for future study, and was not assigned a class of bikeway.

Recommended bikeways in Bellflower and Paramount are listed in Table 4-3 and Table 4-4 respectively, and mapped in Figure 4-1.

Project numbers reflect the jurisdiction, class, and serial number of the project segment. Serial numbers with letters following (i.e. 1a, 1b, etc) indicate projects that have been broken into multiple segments but are ultimately intended to function as a cohesive bikeway. Project numbers denoted with an asterisk will require coordination with a neighboring jurisdiction to implement.

This plan recommends a total of 18.9 miles of new bikeways in Bellflower, and 17.9 miles in Paramount. A summary of recommended bikeways by city and class is shown in Table 4-1.

Table 4-1: Summary of Recommended Bikeway Miles

Item	Bellflower	Paramount
Class I Shared-Use Path	0.9	4.0
Class II Bike Lanes	7.4	0.6
Class III Bicycle Route	2.1	3.3
Class III Bicycle Boulevard	8.5	8.8
Future Study	-	1.2
<b>Total</b>	<b>18.9</b>	<b>17.9</b>

Because on-street parking in many locations throughout Bellflower and Paramount is the only available supply of parking for residents and businesses, all efforts will be made to eliminate any impact to existing on-street parking during the design and construction of projects recommended in this plan. As the recommended bikeway projects enter their individual design phases, some may need to be modified, rerouted, or deleted from the plan altogether in order to protect existing on-street parking and other amenities and features in the community.

Planning-level cost assumptions are included in the bikeway tables. Unit cost assumptions are included in Table 4-2. All costs are per linear half-mile of facilities, and assume on-street bikeways are symmetrical on both sides of the roadway. A linear half-mile was selected as the basic unit for cost estimates because the majority of projects recommended in this plan are at least one half-mile in length.

Detailed cost assumptions for high-priority projects, highlighted in the tables below, are included in Chapter 5.1.

Table 4-2: Unit Cost Assumptions

<i>Item</i>	<i>Cost per linear half-mile</i>
Class I Shared-Use Path	\$295,000
Class II Bike Lanes	\$11,000
Class III Bicycle Route	\$4,500
Class III Bicycle Boulevard	\$8,000

Table 4-3: Bellflower Recommended Bikeways

<i>ID</i>	<i>Location</i>	<i>Begin</i>	<i>End</i>	<i>Length (ft)</i>	<i>Cost</i>
<b>Class I</b>					
BI-1	Rosecrans Avenue (north side)	Carpintero Avenue	McNab Avenue	280	
BI-2	360 ft east of Lakewood Boulevard	Somerset Boulevard	West Santa Ana Branch Trail	860	\$69,700
BI-3	Alondra Boulevard (south side)	West Santa Ana Branch Trail	Stevens Avenue	520	\$42,140
<b>Class II</b>					
BII-1*	Foster Road	Lakewood Boulevard	San Gabriel River Trail	10,350	\$31,280
BII-2	Somerset Boulevard	Cerritos Avenue	San Gabriel River Trail	9,550	\$28,860
BII-3	Alondra Boulevard	Stevens Avenue	San Gabriel River Trail	6,530	\$19,730
BII-4	Flower Street	Hayter Avenue	Flora Vista Street	8,620	\$27,300
BII-5	Artesia Boulevard	Ramona Street	San Gabriel River Trail	3,770	\$11,940
<b>Class III Bike Routes</b>					
BIIR-1	Ramona Street	Downey Avenue	Artesia Boulevard	9,680	\$11,970
BIIR-2a*	Foster Road	San Gabriel River Trail	Flatbush Avenue	590	\$730
BIIR-2b*	Flatbush Avenue	Norwalk Metrolink Station	Foster Road	830	\$1,030
<b>Class III Bike Boulevards</b>					
BIIB-1a	Gardendale Street	Foster Road	Cerritos Avenue	1,440	\$3,160
BIIB-1b	Cerritos Avenue	Gardendale Street	Clark Avenue	660	\$1,450
BIIB-1c	Clark Avenue	Cerritos Avenue	Van Ruiten Street	160	\$350
BIIB-1d	Van Ruiten Street	Clark Avenue	Ardis Avenue	1,650	\$3,630
BIIB-2	Cerritos Avenue	Cerritos Avenue	Somerset Boulevard	3,760	\$8,260

Bellflower-Paramount Bike & Trail Master Plan

ID	Location	Begin	End	Length (ft)	Cost
BIIIB-3a	Ardis Avenue	Foster Road	Mandale Street	4,150	\$9,120
BIIIB-3b	Mandale Street	Ardis Avenue	Betty Jean Avenue	290	\$640
BIIIB-3c	Betty Jean Avenue	Mandale Street	Somerset Boulevard (frontage road)	680	\$1,490
BIIIB-3d	Somerset Boulevard (frontage road)	Betty Jean Avenue	Stevens Avenue	470	\$1,030
BIIIB-3e	Stevens Avenue	Somerset Boulevard	Alondra Boulevard	2,570	\$5,650
BIIIB-4a	Maplewood Street	Ardis Avenue	Fleming Avenue	2,890	\$6,350
BIIIB-4b	Fleming Avenue	Maplewood Street	Somerset Boulevard	600	\$1,320
BIIIB-5a	Faust Avenue	Foster Road	Muroc Street	280	
BIIIB-5b	Muroc Street	Faust Avenue	Carpintero Avenue	200	
BIIIB-5c	Carpintero Avenue	Muroc Street	Rosecrans Avenue	2,450	
BIIIB-6	McNab Avenue	Rosecrans Avenue	Alondra Boulevard	4,880	
BIIIB-7a	Carpintero Avenue	Alondra Boulevard	Trabuco Street	390	
BIIIB-7b	Trabuco Street	California Avenue	Carpintero Avenue	420	
BIIIB-7c	California Avenue	Trabuco Street	West Santa Ana Branch Trail	2,420	
BIIIB-8	Hayter Avenue	Mayne Street	Flower Street	1,300	\$2,860
BIIIB-9	Mayne Street	Power Line Corridor 1,350 ft west of Lakewood Boulevard	Bellflower Boulevard	6,570	\$14,440
BIIIB-10	Ardmore Avenue	West Santa Ana Branch Trail	Southern city limit	6,780	\$14,901

Table 4-4: Paramount Recommended Bikeways

ID	Description	Begin	End	Length (ft)	Cost
<b>Class I</b>					
PI-1*	Existing overpass at projection of Arthur Avenue	Denver Street	Century Boulevard (South Gate)	510	\$41,330
PI-2a	West Santa Ana Branch Right-of-way	Los Angeles River Bicycle Path	Garfield Avenue	2,900	
PI-2b	West Santa Ana Branch Right-of-way	Garfield Avenue	Paramount Boulevard	2,950	
PI-2c	West Santa Ana Branch Right-of-way	Paramount Boulevard	Downey Avenue	3,020	
PI-2d	West Santa Ana Branch Right-of-way	Downey Avenue	Somerset Boulevard	1,700	
PI-3a	Power Line Corridor 1,500 ft west of Garfield Avenue	West Santa Ana Branch Right-of-way	San Vicente Street/Salud Park	3,500	\$283,650
PI-3b	Power Line Corridor 1,500 ft west of Garfield Avenue	San Vicente Street/Salud Park	Somerset Boulevard	1,200	\$97,250
PI-3c	Power Line Corridor 1,500 ft west of Garfield Avenue	Somerset Boulevard	Alondra Boulevard	2,580	\$209,090
PI-3d	Power Line Corridor 1,500 ft west of Garfield Avenue	Alondra Boulevard	Jackson Street	1,250	\$101,300
PI-4	Salud Park	San Vicente Street	Exeter Street	380	
PI-5	Projection of Vermont Avenue	Jackson Street	Harrison Street	660	\$53,490
PI-6	Power Line Corridor immediately west of Hayter Avenue	Dunbar Street	Jackson Street	760	\$61,590
<b>Class II</b>					
PII-1	Hunsaker Avenue	Myrrh Street	E 72 <sup>nd</sup> Street	3,070	\$9,280
<b>Class III Bike Routes</b>					
PIIIR-1a	Arthur Avenue	Denver Street	Howe Street	1,280	\$1,580
PIIIR-1b	Howe Street	Arthur Avenue	McClure Avenue	500	\$620
PIIIR-2a	Merkel Avenue	Gardendale Street	Century Boulevard	2,710	\$3,350
PIIIR-2b	Century Boulevard	Ruther Avenue	Merkel Avenue	500	\$620
PIIIR-2c	Ruther Avenue	Century Boulevard	Howe Street	840	\$1,040
PIIIR-3	Orizaba Avenue	Howe Street	West Santa Ana Branch Right-of-way	1,670	\$2,060

Bellflower-Paramount Bike & Trail Master Plan

<i>ID</i>	<i>Location</i>	<i>Begin</i>	<i>End</i>	<i>Length (ft)</i>	<i>Cost</i>
PIIR-4a*	Earnshaw Avenue	Century Boulevard	Golden Avenue	1,325	\$1,640
PIIR-4b*	Golden Avenue	Earnshaw Avenue	Barlin Avenue	120	\$150
PIIR-4c*	Barlin Avenue	Golden Avenue	Gardendale Street	1,270	\$1,570
PIIR-4d*	Gardendale Street	Barlin Avenue	Lakewood Boulevard	1,000	\$1,240
PIIR-4e*	Lakewood Boulevard	Metro Station	Gardendale Street	1,090	\$1,350
PIIR-5	70 <sup>th</sup> Street	Vermont Avenue	Hayter Avenue	4,920	\$6,080
<b>Class III Bike Boulevards</b>					
PIIB-1a	Howe Street	McClure Avenue	Century Boulevard	2,560	\$5,630
PIIB-1b	Century Boulevard	Howe Street	Earnshaw Avenue	1,210	\$2,660
PIIB-2	McClure Avenue	Howe Street	West Santa Ana Branch Right-of-way	970	\$2,130
PIIB-3a	San Carlos Street	Los Angeles River Bicycle Path	San Jose Avenue	160	\$350
PIIB-3b	San Jose Avenue	San Carlos Street	Myrrh Street	3,430	\$7,540
PIIB-3c	Myrrh Street	San Jose Avenue	Hunsaker Avenue	480	\$1,050
PIIB-4a	San Luis Street	Los Angeles River Bicycle Path	San Marino Avenue	2,890	
PIIB-4b	San Antonio Avenue	San Marcus Street	San Luis Street	290	
PIIB-4c	San Marcus Street	San Antonio Avenue	San Marino Avenue	2,610	
PIIB-4d	San Marino Avenue	San Vincente Street	San Luis Street	870	
PIIB-4e	San Vincente Street	San Marino Avenue	Salud Park	330	
PIIB-4f	Exeter Street	Texaco Avenue	Garfield Avenue	1,280	
PIIB-5	Jefferson Street	Texaco Avenue	Orizaba Avenue	4,390	\$9,650
PIIB-6a	3 <sup>rd</sup> Street	Orizaba Avenue	Proposed Class I path 100 ft west of Jetmore Avenue	480	\$1,050
PIIB-6b	Orizaba Avenue	3 <sup>rd</sup> Street	70 <sup>th</sup> Street	6,270	\$13,780
PIIB-7a	Vermont Avenue	Jefferson Street	Jackson Street	2,730	\$6,000
PIIB-7b	Vermont Avenue	Harrison Street	E 70 <sup>th</sup> Street	580	\$1,270
PIIB-8a	E 72 <sup>nd</sup> Street	Los Angeles River Bicycle Path	Orange Avenue	3,010	\$6,620
PIIB-8b	Jackson Street	Orange Avenue	Illinois Avenue	3,680	\$8,090
PIIB-9	Jackson Street	Vermont Avenue	Power Line Corridor 1,200 ft east of Downey Avenue	4,680	\$10,285
PIIB-10	Hayter Avenue	Somerset Boulevard	Dunbar Street	3,300	\$7,250
<b>Projects for Future Study</b>					
P-FS	Rosecrans Avenue	Los Angeles River Bicycle Path	West Santa Ana Branch Right-of-way	6,400	N/A

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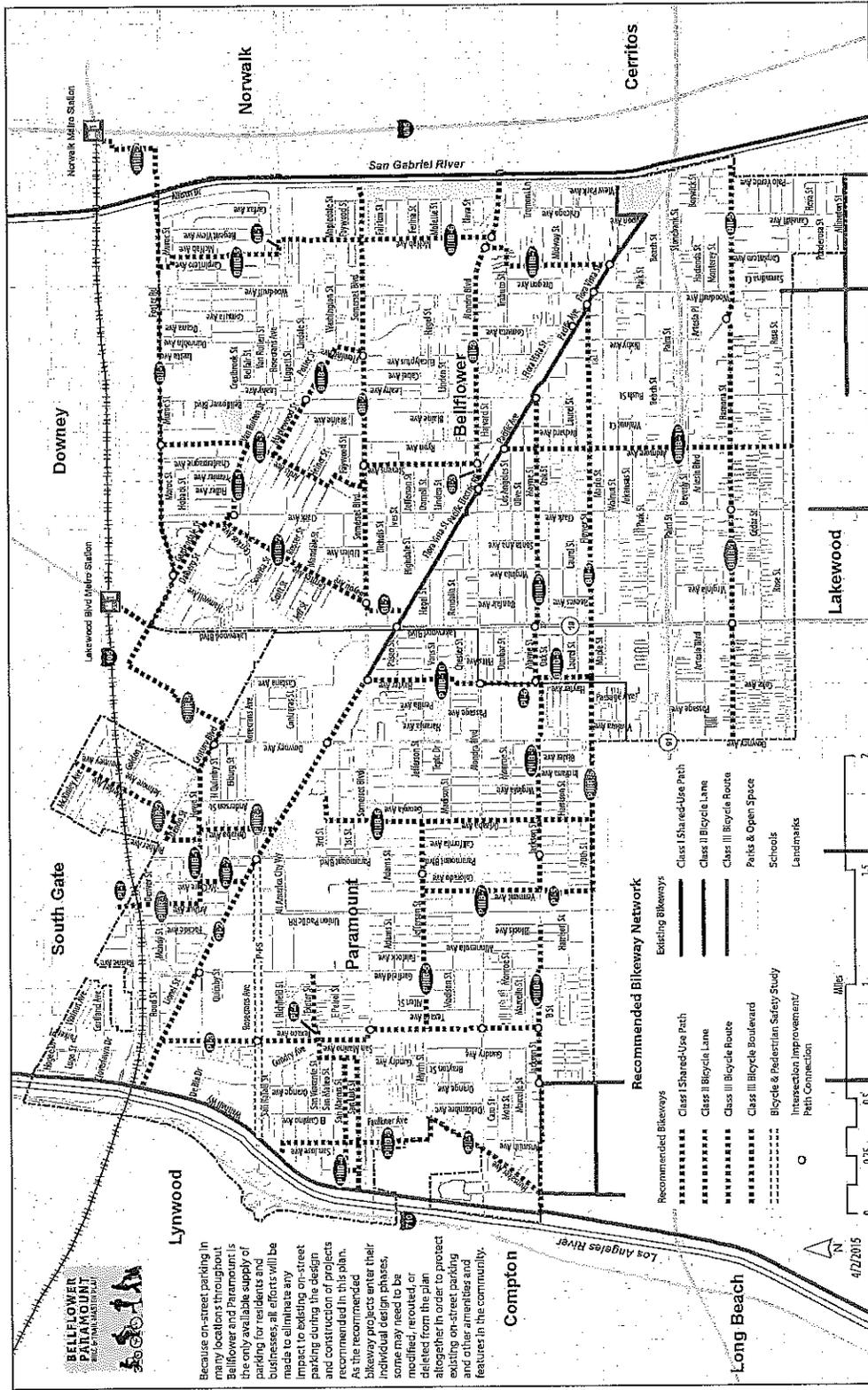


Figure 4-1: Recommended Bikeway Network

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## Intersection Improvements

Intersection improvements are recommended at the locations in Table 4-5 to facilitate movement along existing or recommended bikeways. Specific improvements should consider the unique context of each location and the best practices described in the NACTO Urban Bikeway Design Guide, as illustrated in Figure 4-2 through Figure 4-4. All improvements should comply with all applicable guidelines and policies in the California Manual of Uniform Traffic Control Devices (CA MUTCD).

Improvements for bicycle comfort and safety at these intersections are essential to expanding the reach of the existing and proposed shared-use paths in Bellflower and Paramount, and are key elements of the bicycle boulevard network where a route crosses an arterial.

Table 4-5: Recommended Intersection Improvements

<i>Jurisdiction</i>	<i>Corridor</i>	<i>Cross Street</i>
Paramount	West Santa Ana Branch Right-of-way	Garfield Avenue
Paramount	West Santa Ana Branch Right-of-way	Paramount Boulevard
Paramount	West Santa Ana Branch Right-of-way	Downey Avenue
Paramount	West Santa Ana Branch Right-of-way	Somerset Boulevard
Bellflower/Paramount	West Santa Ana Branch Right-of-way	Lakewood Boulevard
Paramount	Power Line Corridor 1,500 ft west of Garfield Avenue	Rosecrans Avenue
Paramount	Power Line Corridor 380 ft west of Texaco Avenue	Somerset Boulevard
Paramount	Power Line Corridor 380 ft west of Texaco Avenue	Alondra Boulevard
Paramount	Jackson Street	Power Line Corridor 380 ft west of Texaco Avenue
Paramount	Jackson Street	Orange Avenue
Paramount	Jefferson Street	Colorado Avenue
Paramount	Jackson Street	Paramount Boulevard
Paramount	Hayter Avenue	Alondra Boulevard
Bellflower	Gardendale Street	Foster Road
Bellflower	Ardis Avenue	Foster Road
Bellflower	Cerritos Avenue	Somerset Boulevard
Bellflower	Stevens Avenue	Somerset Boulevard
Bellflower	Fleming Avenue	Somerset Boulevard
Paramount	Mayne Street	Power Line Corridor immediately west of Hayter Avenue
Bellflower	Mayne Street	Lakewood Boulevard
Bellflower	West Santa Ana Branch Trail	Alondra Boulevard
Bellflower	Alondra Boulevard	Stevens Avenue
Bellflower	Alondra Boulevard	Carpintero Avenue
Bellflower	Alondra Boulevard	McNab Avenue
Bellflower	West Santa Ana Branch Trail	Ardmore Avenue
Bellflower	West Santa Ana Branch Trail	Bellflower Boulevard
Bellflower	West Santa Ana Branch Trail	Cornuta Avenue

<i>Jurisdiction</i>	<i>Corridor</i>	<i>Cross Street</i>
Bellflower	West Santa Ana Branch Trail	Flower Street
Bellflower	West Santa Ana Branch Trail	Woodruff Avenue
Bellflower	West Santa Ana Branch Trail	California Avenue
Bellflower	Ramona Street	Lakewood Boulevard
Bellflower	Ramona Street	Clark Avenue
Bellflower	Ramona Street	Artesia Boulevard
Bellflower	Van Ruiten Street	Clark Avenue
Bellflower	Maplewood Street	Bellflower Boulevard

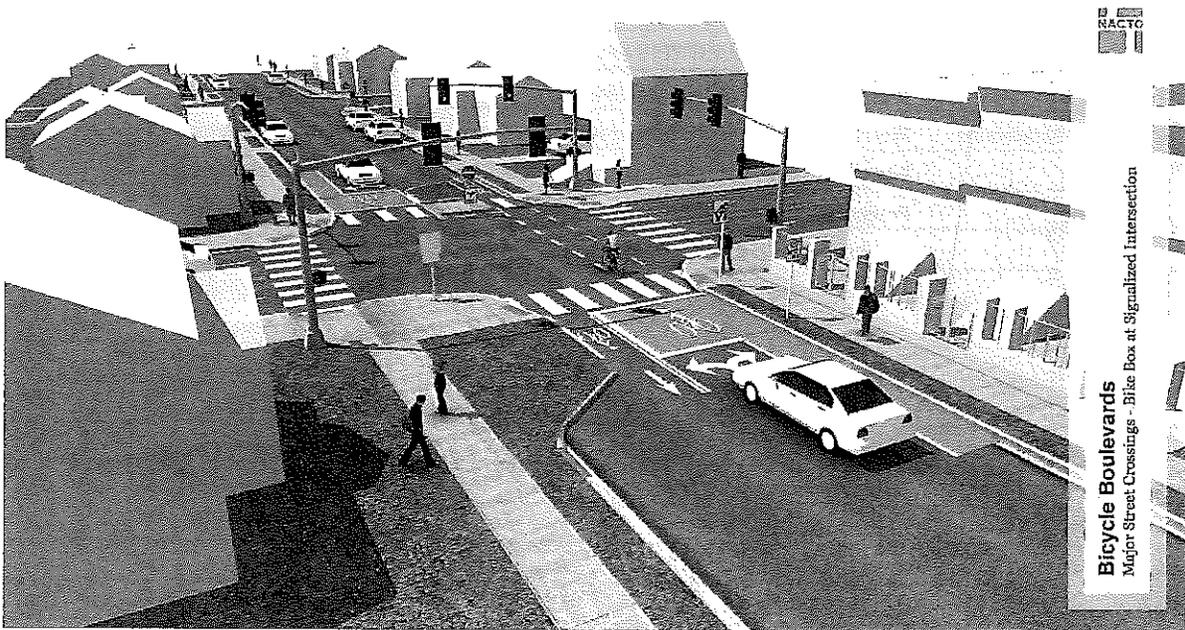


Figure 4-2: Bike Box at Signalized Intersection

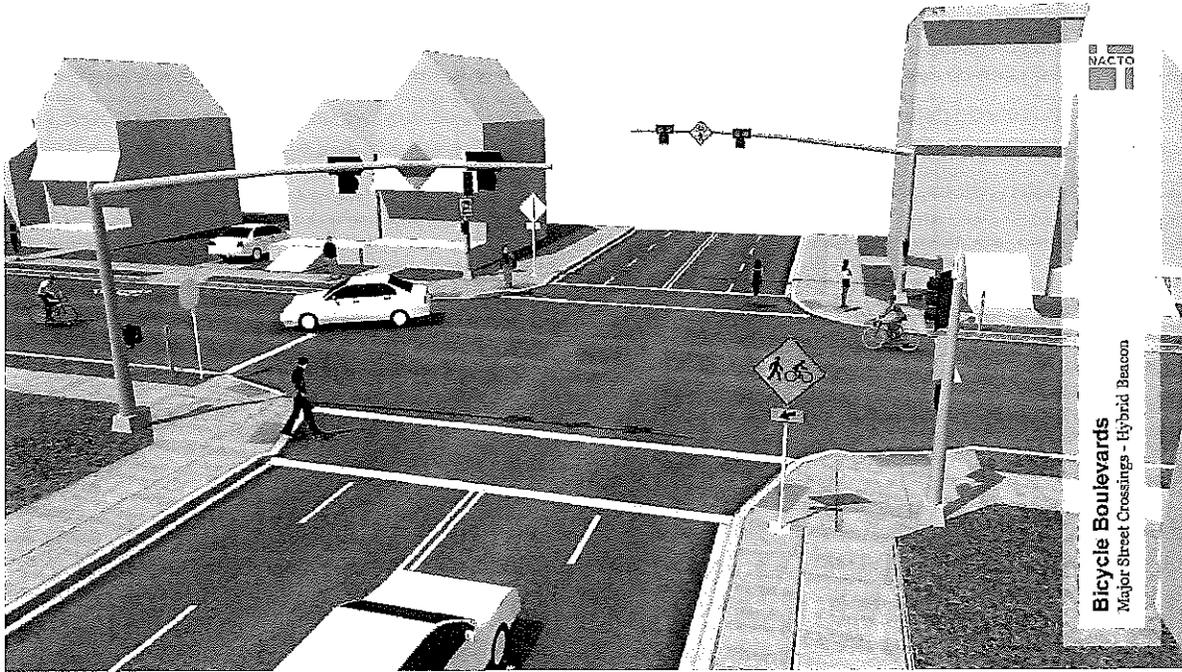


Figure 4-3: Hybrid Beacon

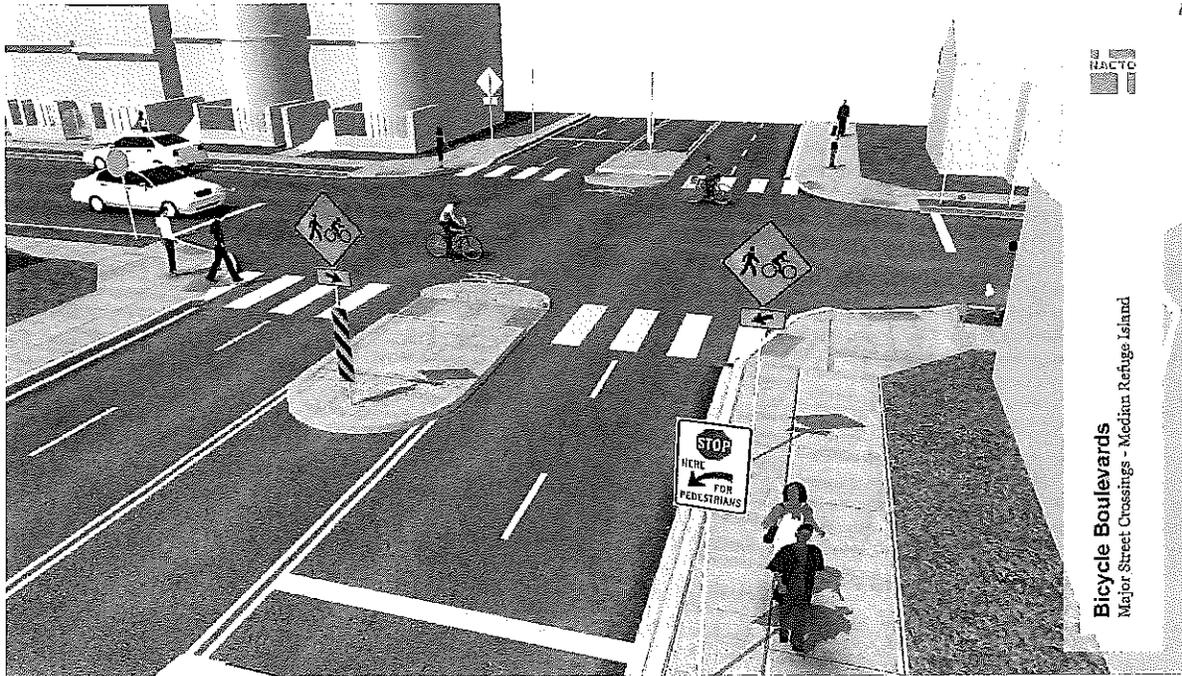


Figure 4-4: Median Refuge Island

## Bicycle Parking

Bicycle parking can be categorized into short term and long term parking. Bicycle racks are the preferred device for short term bicycle parking. These racks serve people who leave their bicycles for relatively short periods of time, typically for shopping or errands, eating or recreation. Bicycle racks provide a high level of convenience and a moderate level of security.

Long term bicycle parking includes bike lockers and bike rooms, and serves people who intend to leave their bicycles for longer periods of time and are typically found in commercial buildings. These facilities provide a high level of security, but may be less convenient than bicycle racks.

This plan recommends the cities of Bellflower and Paramount adopt bicycle parking design guidelines and policies as outlined in Chapter 4.2. A map of proposed bicycle parking locations is included in Figure 4-6.

## Wayfinding

A good bicycling environment not only includes bicycle facilities, but also includes an easily navigable network. Community wayfinding assists bicyclist residents, tourists, and visitors in finding key community destinations. Signs may also include information on the distance or time to each destination, as illustrated in Figure 4-5.

This plan recommends the development of a bicycle wayfinding program that provides guidance to destinations including schools, parks, commercial districts, civic buildings, and regional attractions including the West Santa Ana Branch Trail, the Los Angeles River Bicycle Path, and the San Gabriel River Trail.

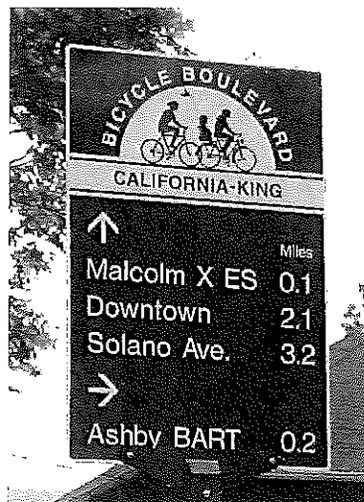


Figure 4-5: Sample Wayfinding Sign

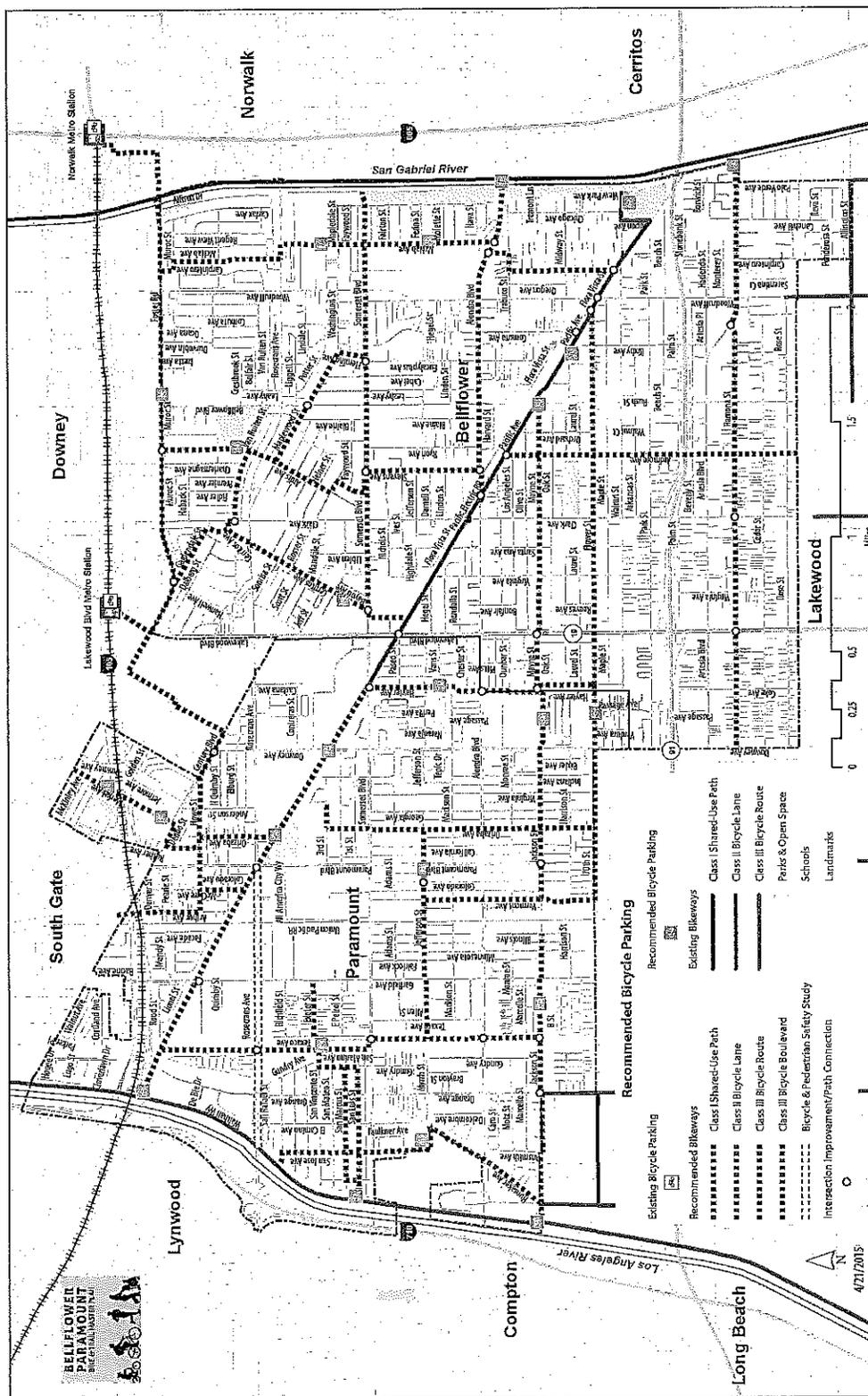


Figure 4-6: Recommended Bicycle Parking

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## 4.2. Policies

### Joint Policy Recommendations

This plan recommends both Bellflower and Paramount revise their existing policies as follows:

- ◆ Allow bicycling in public parks, adding the following restrictions: bicyclists may travel no more than 15 mph, and must yield to pedestrians, when riding on Class I shared-use paths, on sidewalks, and within parks. Encourage respectful shared-use path etiquette with guidelines in Table 4-6.

Table 4-6: Shared-use Path Etiquette

Guideline	Description
Be courteous and predictable	Bicyclists should always yield to pedestrians. The speed limit is 15 mph, or 10 mph when passing a pedestrian. No vehicle shall be operated at a speed greater than is reasonable for safe operation in the environment, nor in any manner which may endanger the safety of others or the protection of facilities and environmental resources.
Don't block the trail	Ride, walk, or run no more than two abreast; always single file when passing others. When stopping, move off the trail. Be aware of others approaching you from behind and make sure they know you are stopping.
Keep right	Ride, walk, or run on the right side of the trail. Stay as far right as is safe, except when passing others.
Pass on the left	Pass other path users traveling in your direction on their left side. Always yield to slower and oncoming traffic. Use hand signals to alert those behind you of your moves. Look ahead and back, and be sure the lane is clear before you pull out and pass. Pass with ample separation and do not move back to the right until you are safely past the other user. Remember that children and pets can be unpredictable!
Give warning before passing others	Give a clear signal that you intend to pass by announcing "on your left" or ringing your bell before passing.
Obey all traffic signs and signals	Use extra caution where trails cross streets. Stop at all stop signs and intersections and be cautious when crossing driveways. When entering or crossing a trail, yield to traffic already on the trail.
Use lights at night	Make yourself visible to others at night with a bright white light on the front of your bicycle, or carry a light if you are walking. Red lights on the back of your bicycle can make you more visible to others approaching you from behind.
Keep animals safe and under control	Keep pets on a short leash to avoid tripping or tangling other users. Walk pets on the right-hand shoulder and be aware of the potential hazard leashes pose for passing bicyclists and pedestrians. Always clean up after your pet.
Have you outgrown trails?	Trails have engineering and design limits. If your speed or style endangers other users, look for alternative routes that are better suited to your needs. Selecting the right route is safer and more enjoyable for everyone.

- ◆ Update or implement bicycle parking requirements:
  - Bicycle parking should be intuitive and easy to use, and be securely anchored to a surface or structure. The rack should keep the bicycle upright by supporting the frame in two places, and should allow a user to secure the frame and at least one wheel using a standard U-lock.
  - Racks should be located close to a main building entrance, in a lighted, high-visibility, covered area protected from the elements. Long-term parking should always be protected.
  - Bicycle parking should be required in the quantities listed in Table 4-7. In addition, bicycle parking should be provided at schools, along downtown corridors, and at bus stops.
  - Businesses or property owners that elect to provide additional bicycle parking beyond these minimum requirements, or who elect to provide bicycle parking where none is required, should be allowed to replace one required vehicle parking space with bicycle parking.

Table 4-7: Recommended Bicycle Parking Requirements

Land Use or Location	Physical Location	Quantity
Parks	Adjacent to restrooms, picnic areas, or other attractions	4 bicycle parking spaces per acre
Schools	Near office and main entrance with good visibility	4 bicycle parking spaces per 40 students
Public Facilities (libraries, community centers)	Near main entrance with good visibility	6 bicycle parking spaces per location
Commercial, retail and industrial developments over 10,000 square feet	Near main entrance with good visibility	1 bicycle parking space per 15 employees OR 6 bicycle parking spaces per 10,000 square feet
Shopping Centers over 10,000 square feet	Near main entrance with good visibility	8 bicycle parking spaces per 10,000 square feet
Transit Stations	Near platform, security or ticket booth	1 bicycle parking space or locker per 30 automobile parking spaces
Multi-Family Residential	Near main entrance with good visibility	1 short-term bicycle parking space per 10 residential units AND 1 long-term bicycle parking space per 4 residential units

- ◆ Adopt bicycle rack standards to ensure racks are uniform throughout the community and intuitive for bicyclists to use. Acceptable bicycle racks are shown in Figure 4-7.

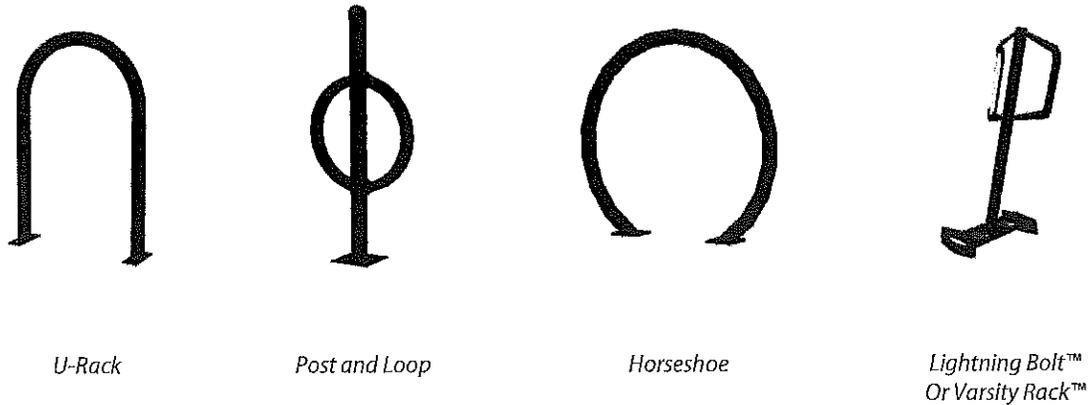


Figure 4-7: Acceptable Bicycle Rack Designs

- ◆ Consider bicycle facilities as part of the design and construction of all new roadways and, where feasible within existing right-of-way, as part of all upgrades or resurfacing of existing roadways.
- ◆ Consider endorsing the NACTO Urban Bikeway Design Guide as the best practice in bikeway design.
- ◆ Designate a staff person to implement the policies, programs, and projects identified in this Plan and apply for grant funding.
- ◆ Community Development Departments or Planning Departments should work with developers and school districts to implement planned improvements through redevelopment.

### **Bellflower Recommendations**

In addition to the Joint Policy Recommendations, this plan recommends the City of Bellflower revise its policies as follows:

- ◆ Adopt current best practices allowing low-speed electric-assist bicycles on Class I shared-use paths.
- ◆ Set a goal date to apply for Bicycle-Friendly Community designation through the League of American Bicyclists by 2019.

### **Paramount Recommendations**

In addition to the Joint Policy Recommendations, this plan recommends the City of Paramount revise its policies as follows:

- ◆ Remove mandatory bicycle licensing policy. This may deter residents from bicycling, and residents of nearby communities cannot reasonably be expected to license their bicycle in Paramount when they travel through the community.
  - Encourage licensing as a theft prevention measure, and consider adopting a voluntary online bicycle registry in partnership with the Los Angeles County Sheriff's Department.

### 4.3. Programs

Pedestrian, bicycle, and Safe Routes to School (SRTS) programs, such as education and enforcement programs, are essential in increasing the desirability and safety of walking and biking. Programs support a pedestrian and bicycle friendly culture, and encourage more people to walk or bike. Many programs can be categorized according to the “Four E’s”:

- ❖ **Education** programs are designed to improve safety and awareness. They can include in-classroom or after school programs that teach students how to safely cross the street or bicycle in the road. They may also include brochures, posters, or other information that targets pedestrians, bicyclists, or drivers.
- ❖ **Encouragement** programs provide incentives and support to help people leave their car at home and try walking or bicycling instead. Bicycle encouragement programs, in particular, target “interested but concerned” bicyclists who would like to ride a bike but who may not be confident in their skills or in their interactions with motorists.
- ❖ **Enforcement** programs enforce legal and respectful walking, bicycling, and driving. They include a variety of tactics, ranging from police enforcement to neighborhood signage campaigns.
- ❖ **Evaluation** programs are an important component of any investment. They help measure project success at meeting the goals of this plan and to identify adjustments that may be necessary.

This section presents a number of recommendations aimed to improve the bicycling environment, and encourage more community members to try bicycling for their transportation needs.

## Education Programs

Education programs are designed to improve cyclists' safety on the road while heightening motorist awareness. Education programs are available in an array of mediums that include long-term hands-on bicycle education for adults and children, public awareness campaigns that are aimed at the whole community, and instructions for motorists. Curriculums should be appropriate to the target audience and to the format of instruction.

Education programs in Paramount should be prioritized for bicyclists and pedestrians on Rosecrans Avenue and Alondra Boulevard between the Los Angeles River Bicycle Path and nearby high schools. Bellflower programs should focus on bicyclist, pedestrian, and motorist behavior on Bellflower Boulevard near downtown, and along the West Santa Ana Branch Trail.

Driver Education Campaign	
Description	Interacting with bicyclists on the road is often not included in training for new drivers. Teaching motorists how to share the road can help reduce potential conflicts between drivers and bicyclists. A driver education campaign will highlight common conflicts that occur in Bellflower and Paramount and inform drivers of the proper and safe way to behave on the road; for example, how to pass bicyclists at a safe distance. The campaign could feature traditional media, such as posters, billboards, and bus benches, and online media, like web banners and blog posts.
Target Audience	Drivers
Potential Partners	City PIO, Los Angeles County Bicycle Coalition, Multicultural Communities for Mobility
Timeframe	6 month campaign
Sample Program	Los Angeles Metro's Every Lane is a Bike Lane Campaign <a href="http://thesource.metro.net/2013/04/11/every-lane-is-a-bike-lane/">http://thesource.metro.net/2013/04/11/every-lane-is-a-bike-lane/</a>

Wayfinding Signage Program	
Description	Bicycle wayfinding provides destination, direction and distance information to bicyclists navigating through a network of bikeways. Wayfinding signage in Bellflower and Paramount could direct riders to and from destinations such as the LA River Path, the Bellflower Bike Trail and future trail extension into Paramount, the San Gabriel River Trail, and destinations along the existing and future paths. Wayfinding and signage could also create an identity for both Bellflower and Paramount by branding new bikeways with city logos on signs.
Target Audience	Bicyclists
Potential Partners	Army Corps of Engineers, Los Angeles County Public Works Department
Timeframe	Ongoing
Sample Programs	City of Los Angeles Wayfinding Signage <a href="https://ladotbikeblog.wordpress.com/2011/10/25/way-finding-signage-coming-to-los-angeles/">https://ladotbikeblog.wordpress.com/2011/10/25/way-finding-signage-coming-to-los-angeles/</a>  City of Berkeley Bicycle Boulevard Signage System <a href="http://www.cityofberkeley.info/bicycleboulevards/">http://www.cityofberkeley.info/bicycleboulevards/</a>

Share the Path Campaign	
Description	Conflicts between path users can occur on popular, well-used path systems. "Share the Path" campaigns promote safe and courteous behavior among all path users. These types of campaigns can involve the distribution of bicycle bells and other bicycle safety products, brochures with safety tips, and bicycle system maps at community rides and other public events. The Cities of Bellflower and Paramount could host a bicycle bell giveaway on a popular segment of the Bellflower Bike Trail to teach bicyclists on the path how to interact with other path users. Volunteers and agency staff could distribute bells and "Share the Path" brochures with information in both English and Spanish.
Target Audience	Bike path users
Potential Partners	Bellflower and Paramount Parks and Recreation Departments
Timeframe	3 month campaign
Sample Program	City of Portland's Share the Path Campaign <a href="https://www.portlandoregon.gov/parks/article/161457">https://www.portlandoregon.gov/parks/article/161457</a>

Bicyclist Skills Courses	
Description	Most bicyclists do not receive comprehensive instruction on safe and effective bicycling techniques, laws or bicycle maintenance. Bike skills training courses are an excellent way to improve both bicyclist confidence and safety. The League of American Bicyclists (LAB) has developed a comprehensive bicycle skills curriculum which is considered the national standard for adults seeking to improve their on-bike skills. The classes available include bicycle safety checks and basic maintenance and advanced on-road skills, commuting and driver education. Material is available in both English and Spanish. Metro has recently funded bicyclist skills courses in LA County.
Target Audience	General public
Potential Partners	Los Angeles County Bicycle Coalition, Los Angeles Metro
Timeframe	Ongoing as funding permits
Sample Program	Los Angeles County Bicycle Coalition and Los Angeles Metro, jointly hosted education courses <a href="http://la-bike.org/streetcyclingskills">http://la-bike.org/streetcyclingskills</a>

Kids Bike Rodeo	
Description	Bicycle Rodeos are events that help children develop basic bicycling techniques and road safety skills through the use of an interactive bicycle safety course. Rodeos use playgrounds and parking lot set-ups with stops signs, traffic cones and other props to simulate the roadway environment. Children receive instructions on how to maneuver, observe traffic control signs and signals, and look for oncoming traffic. Bicycle Rodeos provide an opportunity for instructors to check that children's helmets and bicycles are appropriately sized, and teach parents and guardians to fit their children's equipment.
Target Audience	Elementary school children
Potential Partners	Los Angeles County Bicycle Coalition, Los Angeles County Sheriff's Department
Timeframe	Ongoing as funding permits

Sample Program	League of Michigan Bicyclists' How to Run a Bike Rodeo Toolkit <a href="http://www.lmb.org/?option=com_content&amp;view=article&amp;Itemid=216&amp;id=181:bicycle-rodeos-how-to-run-an-event">http://www.lmb.org/?option=com_content&amp;view=article&amp;Itemid=216&amp;id=181:bicycle-rodeos-how-to-run-an-event</a>
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### Encouragement Programs

Encouragement programs focus on encouraging people to bicycle more frequently by providing incentives, recognition, or services that make bicycling a more convenient and viable transportation mode.

Bicycle System Maps	
Description	One of the most effective ways of making people aware of bicycling as a transportation option is to distribute maps and guides to show that bicycling infrastructure exists. A map can also demonstrate the ease of accessing different parts of the community by bike and highlight unique areas, shopping districts or recreational opportunities. Bellflower and Paramount could partner to develop a joint city-wide map to show connectivity between the two cities. The map could be available in hard copy and digital formats.
Target Audience	General public
Potential Partners	Los Angeles County Bicycle Coalition
Timeframe	3 months to develop
Sample Programs	Los Angeles Department of Transportation Bicycle Program Bike Maps <a href="http://www.bicyclela.org/maps_main.htm">http://www.bicyclela.org/maps_main.htm</a>  Bike Santa Monica Bikeways Map <a href="http://gismap.santa-monica.org/GISMaps/pdf/bikemap.pdf">http://gismap.santa-monica.org/GISMaps/pdf/bikemap.pdf</a>

Bike to Work/School Day	
Description	Bike to Work/School Day is celebrated nationwide as part of "Bike Month" every May. Jurisdictions throughout the United States hold events to encourage new people to ride bicycles and existing riders to continue to commute by bicycle. Throughout the day or week, agencies hold events to encourage people to participate in the program, such as free breakfast to bicyclists along well-used bikeways. Metro supports the program by distributing incentive items to bicyclists riding to work at volunteer-hosted stations on the morning of Bike to Work Day.
Target Audience	New and existing bicyclists
Potential Partners	Metro, Los Angeles County Bicycle Coalition
Timeframe	2 months
Sample Programs	League of American Bicyclists National Bike Month <a href="http://bikeleague.org/bikemonth">http://bikeleague.org/bikemonth</a>  Metro Bike Week <a href="http://www.metro.net/bikes/bike-week/">http://www.metro.net/bikes/bike-week/</a>

Community Rides	
Description	Organized group rides can encourage new riders to try riding a bicycle as they are designed to make all participants feel safe and comfortable. Community rides are led by an experienced bicyclist who teaches participants to follow bicycle regulations and safety measures. Often a ride organizer will remain in the back of the group to guarantee that no rider is left behind, further creating a welcoming environment for new riders. Bellflower and Paramount could work with local bicycle advocacy groups to organize city-wide or regional group rides to instill confidence in their residents when riding in the streets.
Target Audience	General public, families
Potential Partners	C.I.C.L.E, Los Angeles County Bicycle Coalition
Timeframe	Ongoing
Sample Program	C.I.C.L.E's Urban Expeditions Ride <a href="http://www.cicle.org/attend-an-event/urban-expeditions">http://www.cicle.org/attend-an-event/urban-expeditions</a>

Bicycle Co-op	
Description	Bicycle co-ops are community bike shops run by volunteers who teach people how to repair their own bikes in a comfortable, approachable environment. Co-ops often sell donated parts at a low cost, reducing the barrier to maintaining a bicycle for low-income riders. Some co-ops host "Earn-A-Bike" programs where children learn how to build a bike while participating in classes about bicycle safety, and get to keep their bicycles after completion of the program.
Target Audience	General public, low-income bicyclists
Potential Partners	Kingdom Causes Bellflower, Multicultural Communities for Mobility
Timeframe	Ongoing
Sample Programs	The Bicycle Kitchen <a href="http://www.bicyclekitchen.com/index.php?/projects/home/">http://www.bicyclekitchen.com/index.php?/projects/home/</a>  The Bicycle Tree <a href="http://www.thebicycltree.org/">http://www.thebicycltree.org/</a>

Safe Routes to School/Pilot Program	
Description	Safe Routes to School programs can include a wide variety of different infrastructure and non-infrastructure programs to encourage safe bicycling and walking to schools. A pilot program starts small and can generally include school walk audits, student commute hand tallies, and a compilation of programs like bike education, children's bike rides, and family events. Safe Routes to School programs are most successful when there are strong partnerships between agencies and school districts.
Target Audience	Students and families
Potential Partners	Paramount Unified School District, Bellflower Unified School District
Timeframe	Ongoing
Sample Program	Los Angeles Metro's Safe Routes to School Pilot Program

<http://www.metro.net/projects/srts/>

## Enforcement Programs

Motorists, pedestrians and bicyclists alike are sometimes unaware of each other's rights as they travel city streets. Enforcement programs target unsafe bicyclist and motorist behaviors and enforce laws that reduce bicycle/motor vehicle collisions and conflicts. Enforcement fosters mutual respect between roadway users and improves safety. These programs generally require coordination between law enforcement, transportation agencies, and bicycling organizations. Educating the public through enforcement policies will supplement the physical improvement of both Bellflower and Paramount. Bellflower and Paramount should work with the Los Angeles County Sheriff's Department to implement the suggested programs.

### Targeted Enforcement

Description	Targeted enforcement is a focused effort by law enforcement agencies to enforce laws that create safe conditions for all road users, minimize conflicts between modes, and educate road users on sharing the road. Targeted enforcement can include intersection patrols, handing out informational materials, and enforcing speed limits and safe behaviors. Information should be distributed in Bellflower and Paramount in English and Spanish.
Target Audience	All road users
Potential Partners	Los Angeles County Sheriff's Department, Los Angeles County Bicycle Coalition
Timeframe	Ongoing
Sample Program	City of Santa Barbara's Downtown Bicycle Enforcement <a href="https://local.nixle.com/alert/5299956/">https://local.nixle.com/alert/5299956/</a>

### Bicycle Theft Abatement Program

Description	The removal of abandoned bicycles on bike racks around the community frees up rack space for active riders and keeps the community clean. Bikes left in the same rack over a period of time are visibly marked to indicate if they remain at that site they will be removed and impounded. The Cities of Bellflower and Paramount can work with the Los Angeles County Sheriff's Department to initiate a similar program. The Sheriff's Department would hold the collected bikes for a period of approximately 90 days after which unclaimed bikes could be discarded.
Target Audience	Existing bicyclists
Potential Partners	Los Angeles County Sheriff's Department, Bellflower and Paramount Public Safety Departments
Timeframe	Ongoing
Sample Programs	Stanford University's Bike Abatement Program <a href="http://web.stanford.edu/group/SUDPS/bicycle.shtml#events">http://web.stanford.edu/group/SUDPS/bicycle.shtml#events</a>  City of Boulder's Impound Services <a href="http://user.govoutreach.com/boulder/faq.php?cid=23396">http://user.govoutreach.com/boulder/faq.php?cid=23396</a>

Speed Radar Trailers	
Description	Speed radar trailers can help reduce traffic speeds and enforce speed limits in areas with speeding problems. Police officers set up an unmanned trailer that displays the speed of approaching motorists along with a speed limit sign. Speed trailers may be effective on busier arterial roads without bikeway facilities or near schools with reported speeding. Speed trailer placement should not obstruct bicycle traffic. The speed trailers works as both education and enforcement tools as they educate drivers about their current speed in relation to the speed limit.
Target Audience	General public
Potential Partners	Los Angeles County Sheriff's Department, Bellflower Unified School District, Paramount Unified School District
Timeframe	Ongoing
Sample Program	Bellevue, Washington's Speed Radar Trailer Enforcement Program <a href="http://www.saferoutesinfo.org/program-tools/case-study-70-radar-trailers-neighborhood-bellevue-washington">http://www.saferoutesinfo.org/program-tools/case-study-70-radar-trailers-neighborhood-bellevue-washington</a>

Bicycle Patrol Units	
Description	On-bike officers are an excellent tool for community and neighborhood policing because they are more accessible to the public and are able to mobilize in areas where patrol cars cannot (e.g overcrossings and paths). Bike officers undergo special training in bicycle safety and bicycle-related traffic laws and are therefore especially equipped to enforce laws pertaining to bicycling. Bicycle officers help educate bicyclists and motorists through enforcement and also serve as excellent outreach personnel to the public at parades, street fairs, and other gatherings.
Target Audience	All road users
Potential Partners	Los Angeles County Sheriff's Department
Timeframe	Ongoing
Sample Program	LAPD's Bike Coordination Unit <a href="http://www.lapdonline.org/special_operations_support_division/content_basic_view/1030">http://www.lapdonline.org/special_operations_support_division/content_basic_view/1030</a>

Officer Education Advancement	
Description	In-depth training for officers on bicycle safety and bicycle-related traffic laws can improve safety for all road users. Trainings can involve regulations for bicyclists and motorists, enforcement techniques, and proper investigations. Officers can also become League Cycling Instructors (LCIs) through the League of American Bicyclists. Officers with LCI certification can lead bicycle education classes for other officers.
Target Audience	Police officers
Potential Partners	Los Angeles County Sherriff's Department, League of American Bicyclists.
Timeframe	Ongoing
Sample Program	Pima Association of Government's Officer Education Advancements <a href="http://www.pagnet.org/tabid/1032/Default.aspx#Enf">http://www.pagnet.org/tabid/1032/Default.aspx#Enf</a>

## Evaluation Programs

In order to track the progress of the Bellflower-Paramount Bicycle & Trail Master Plan, it is important that the two cities monitor and evaluate changes in bicycling to ensure the programs and facilities are achieving their desired results and to understand changing bicycling needs.

Annual Counts and Surveys	
Description	As a mechanism for tracking bicycling trends over time and for evaluating the impact of bicycle projects, policies and programs, Bellflower and Paramount should consider partnering with local advocacy groups and volunteers to conduct annual bike counts. Ongoing count data will enable the cities to analyze changes in bicycling levels and to track the impact of new bicycle infrastructure. Bellflower and Paramount can also consider installing an automated counter that publicly displays the cumulative number of bicyclists counted. Annual surveys should also be conducted to measure 'attitudes' about bicycling. These surveys could either be online or intercept surveys. Surveys should determine if bicyclists are reacting positively or negatively to bicycle facilities and programs implemented.  Count locations identified in the Bellflower-Paramount Bicycle & Trail Master Plan should be used annually to allow for comparison of data across multiple years.
Target Audience	New and existing bicyclists
Potential Partners	Bellflower and Paramount Public Works Departments, Bellflower and Paramount Parks and Recreation Departments, Kingdom Causes Bellflower, Los Angeles County Bicycle Coalition, Bellflower Planning Department
Timeframe	Ongoing, annually
Sample Program	Los Angeles County Bicycle Coalition's Bicycle and Pedestrian Count <a href="http://la-bike.org/2013LABikepedcount">http://la-bike.org/2013LABikepedcount</a>

Mobility Coordinator Position	
Description	A number of cities around the country staff a part-time or full-time Mobility Coordinator position or consolidate these resources by adding to another existing position. Bellflower and Paramount should arrange for existing or new staff to dedicate time toward implementation of the Bike and Trail Plan. Potential responsibilities of the Mobility Coordinator include monitoring facility planning, design, and construction that may impact bicycling; staffing bicycle advisory committee meetings; identifying new projects that would improve the bicycling environment and improve safety for bicyclists, pedestrians and motorists; and pursuing funding sources for project and program implementation.
Target Audience	General public
Potential Partners	Bellflower and Paramount Public Works Departments, Bellflower and Paramount Parks and Recreation Departments, Paramount Community Development Department
Timeframe	Ongoing
Sample Program	City of Pittsburg's Bicycle/Pedestrian Coordinator <a href="http://pittsburghpa.gov/dcp/bicycling">http://pittsburghpa.gov/dcp/bicycling</a>

Bicycle Report Card	
Description	A Bicycle Report Card tracks the changes and progress in bicycling infrastructure, programs, attitudes, and safety since plan adoption. An online map as part of the Report Card can help show changes to infrastructure as they are completed. Annual bicycle counts and surveys can be included as a portion of this task. Publishing and regular promotion of the Report Card can highlight to the public the efforts of the Cities. Reports should be made available in both English and Spanish.
Target Audience	General public
Potential Partners	Bellflower and Paramount Public Works Department, Los Angeles County Bicycle Coalition
Timeframe	Ongoing
Sample Programs	<p>City of Seattle's Bicycle Report Card  <a href="http://faculty.washington.edu/ostergm/CommuterProfiles/infoAboutCommutingModes/BicycleReportcard_web.pdf">http://faculty.washington.edu/ostergm/CommuterProfiles/infoAboutCommutingModes/BicycleReportcard_web.pdf</a></p> <p>City of Cincinnati's Bike Report Card  <a href="http://www.cincinnati-oh.gov/bikes/news/bike-report-card-shows-progress/">http://www.cincinnati-oh.gov/bikes/news/bike-report-card-shows-progress/</a></p>

## 5. Implementation Plan

### 5.1. Bellflower Priority Projects

Projects were prioritized based on connections provided to parks, schools, and existing bikeways, feasibility of implementation, and support from the community and from the implementing agencies. Cost estimates for each priority project are provided in this section. For a detailed description of cost estimate methods and assumptions, see Appendix H.

Concept plans for select projects are included in Section 5.3.

#### San Gabriel River Gateway

##### *Existing Conditions*

The San Gabriel River Gateway, located near Caruthers Park at the confluence of Flora Vista Avenue and the San Gabriel River Trail, has potential to be a key entrance to the Bellflower community. There is a narrow existing bridge over the San Gabriel River that provides access from the trail on the east side to Bellflower on the west side, but there is no clear guidance for residents or visitors on how to connect to the West Santa Ana Branch Trail or other destinations.

##### *Project Description*

Creating a small gateway park with seating, welcome signage, and wayfinding information will alert users of the regional San Gabriel River Trail that they are entering Bellflower, and guide them to community destinations.

Project recommendations include:

- ❖ Add decorative fencing to existing bridge
- ❖ Seating, welcome sign, and wayfinding information at a gateway park

See Concept Plan 5B in Figure 5-5 for project details.

##### *Cost Estimate*

Description	Estimate
Design	\$18,204
Environmental Planning and Permitting	\$10,922
Property Acquisition	-
Construction Management	\$30,340
Construction	\$151,700
Contingency	\$63,349
<b>Total Cost Estimate</b>	<b>\$274,575</b>

## Bellflower Boulevard Crossing

### *Existing Conditions*

The existing bicycle and pedestrian trail in the West Santa Ana Branch right-of-way offers a relatively comfortable connection to many parts of the Bellflower community, but the trail encounters challenges at many of the arterial roadways it crosses. At Bellflower Boulevard, trail users are currently required to use the sidewalk to travel from the trail north to the intersection of Bellflower Boulevard and Flora Vista Street, forcing bicyclists to dismount as riding on the sidewalk is currently prohibited. They must cross both Flora Vista Street and Bellflower Boulevard at the signalized intersection, before proceeding south along the sidewalk to rejoin the trail.

### *Project Description*

This project would improve the trail crossing in conjunction with the development of the new transit center and bicycle center currently being planned by the City of Bellflower on the northwest corner of the intersection.

Project recommendations include:

- ◆ Realign existing trail to a new crossing on the south side of the West Santa Ana Branch right-of-way
- ◆ Create a two-stage trail crossing with a median refuge island, rectangular rapid-flashing beacon, advance yield lines, and high-visibility crosswalk markings
- ◆ Remove existing decorative crosswalk across Bellflower Boulevard
- ◆ Replace existing decorative crosswalk across Mayne Street with high-visibility crosswalk markings

See Concept Plan 4 in Figure 5-4 for project details.

### *Cost Estimate*

Phase	Cost Estimate
Design	\$34,790
Environmental Planning and Permitting	\$20,874
Property Acquisition	-
Construction Management	\$57,983
Construction	\$289,915
Contingency	\$121,069
<b>Total Cost</b>	<b>\$524,630</b>

## Carpintero-McNab Bicycle Boulevard

*Includes project numbers BI-1, BIIIB-5a, BIIIB-5b, BIIIB-5c, BIIIB-6, BIIIB-7a, BIIIB-7b, and BIIIB-7c*

### Existing Conditions

Many of the north-south arterial roadways in Bellflower contain too many vehicles traveling too fast for most bicyclists to be comfortable riding next to them. Identifying and formalizing alternative, parallel routes on calmer streets can help bicyclists reach their destinations without braving the busier roadways.

Many local streets are excessively wide, which may encourage higher vehicle speeds than are appropriate for a residential neighborhood. These speeds, combined with a lack of shade, may discourage active transportation.

### Project Description

The Carpintero-McNab Bicycle Boulevard connects multiple schools, parks, and residential neighborhoods, running from Foster Road at the north edge of Bellflower all the way to the West Santa Ana Branch Trail. Project recommendations include:

- ◆ Class III bicycle boulevard treatments on Carpintero Avenue, McNab Avenue, California Avenue, and a handful of short connector segments to provide a low-stress alternative to Woodruff Avenue
- ◆ A Class I path on the north side of Rosecrans Avenue, providing a connection between Carpintero Avenue and McNab Avenue, which has an existing signalized crossing
- ◆ A new trail access point at the south end of California Avenue
- ◆ Intersection improvements to help bicyclists connect the short leg on Alondra Boulevard, at McNab Avenue and at Carpintero Avenue

### Cost Estimate

Phase	Cost Estimate
Design	\$63,687
Environmental Planning and Permitting	\$38,212
Property Acquisition	-
Construction Management	\$22,076
Construction	\$614,796
Contingency	\$221,632
<b>Total Cost</b>	<b>\$960,404</b>

## Flower Street Bike Lanes

*Includes project number BII-4*

### **Existing Conditions**

Flower Street is currently a four-lane arterial roadway with on-street parking on much of the corridor. It provides a key east-west connection from the West Santa Ana Branch Trail into Paramount, and continues west as 70<sup>th</sup> Street.

### **Project Description**

In Bellflower, Class II bicycle lanes can easily be added within the existing right-of-way, and are recommended for implementation during a future resurfacing project. The new cross-section would include one bicycle lane and one travel lane in each direction, and a center two-way left-turn lane.

Bike lanes are recommended the full length of the corridor in Bellflower, from Hayter Avenue to Flora Vista Street.

### **Cost Estimate**

Phase	Cost Estimate
Design	\$43,183
Environmental Planning and Permitting	\$25,910
Property Acquisition	-
Construction Management	\$41,573
Construction	\$390,258
Contingency	\$150,277
<b>Total Cost</b>	<b>\$651,202</b>

## 5.2. Paramount Priority Projects

Projects were prioritized based on connections provided to parks, schools, and existing bikeways, feasibility of implementation, and support from the community and from the implementing agencies. Detailed cost estimates for each priority project are provided in this section, along with concept plan illustrations for select projects.

### West Santa Ana Branch Trail

*Includes project numbers PI-2a, PI-2b, PI-2c, and PI-2d*

#### Existing Conditions

The West Santa Ana Branch right-of-way presents a valuable opportunity for bicycle and pedestrian connectivity in Paramount, linking many community destinations with the Los Angeles River Bicycle Path.

#### Project Description

This plan recommends extending the existing Class I path terminating at Somerset Boulevard to connect to the Los Angeles River Bicycle Path. For ease of implementation, the project has been divided into four segments that may be funded and constructed in multiple phases.

Segment PI-2a recommends a Class I path from the Los Angeles River Bicycle Path to Garfield Avenue, and includes a small gateway park near the Los Angeles River Bicycle Path. This gateway would include welcome and wayfinding signage in addition to seating and other amenities, as shown in Figure 5-1.

Segment PI-2b recommends a Class I path from Garfield Avenue to Paramount Boulevard.

Segment PI-2c recommends a Class I path from Paramount Boulevard to Downey Avenue.

Segment PI-2d recommends a Class I path in the Los Angeles Department of Water and Power corridor just south of the West Santa Ana Branch right-of-way, to avoid conflicts with an active freight rail line making multiple deliveries daily to Paramount Petroleum (see Concept Plans 3A and 3B in Figure 5-2 and Figure 5-3). While this is the preferred alignment, a trail within the West Santa Ana Branch may be feasible.

#### Cost Estimate

Segment PI-2a

Phase	Cost Estimate
Design	\$91,650
Environmental Planning and Permitting	\$54,990
Property Acquisition	-
Construction Management	\$152,749
Construction	\$763,746
Contingency	\$318,940
<b>Total Cost</b>	<b>\$1,382,075</b>

Segment PI-2b

Phase	Cost Estimate
Design	\$162,660
Environmental Planning and Permitting	\$97,596
Property Acquisition	-
Construction Management	\$271,101
Construction	\$1,355,504
Contingency	\$566,058
<b>Total Cost</b>	<b>\$2,542,919</b>

Segment PI-2c

Phase	Cost Estimate
Design	\$147,111
Environmental Planning and Permitting	\$88,267
Property Acquisition	-
Construction Management	\$245,186
Construction	\$1,225,928
Contingency	\$511,948
<b>Total Cost</b>	<b>\$2,218,439</b>

Segment PI-2d

Phase	Cost Estimate
Design	\$96,100
Environmental Planning and Permitting	\$57,660
Property Acquisition	-
Construction Management	\$160,166
Construction	\$800,831
Contingency	\$334,427
<b>Total Cost</b>	<b>\$1,449,183</b>

## 'Sans' Neighborhood Bicycle Boulevard

Includes project numbers PI-4, PIIIB-4a, PIIIB-4b, PIIIB-4c, PIIIB-4d, PIIIB-4e, and PIIIB-4f

### Existing Conditions

The 'Sans' neighborhood in west Paramount has an interconnected grid network of streets between the Los Angeles River Bicycle Path and Salud Park, but has no existing bicycle facilities.

### Project Description

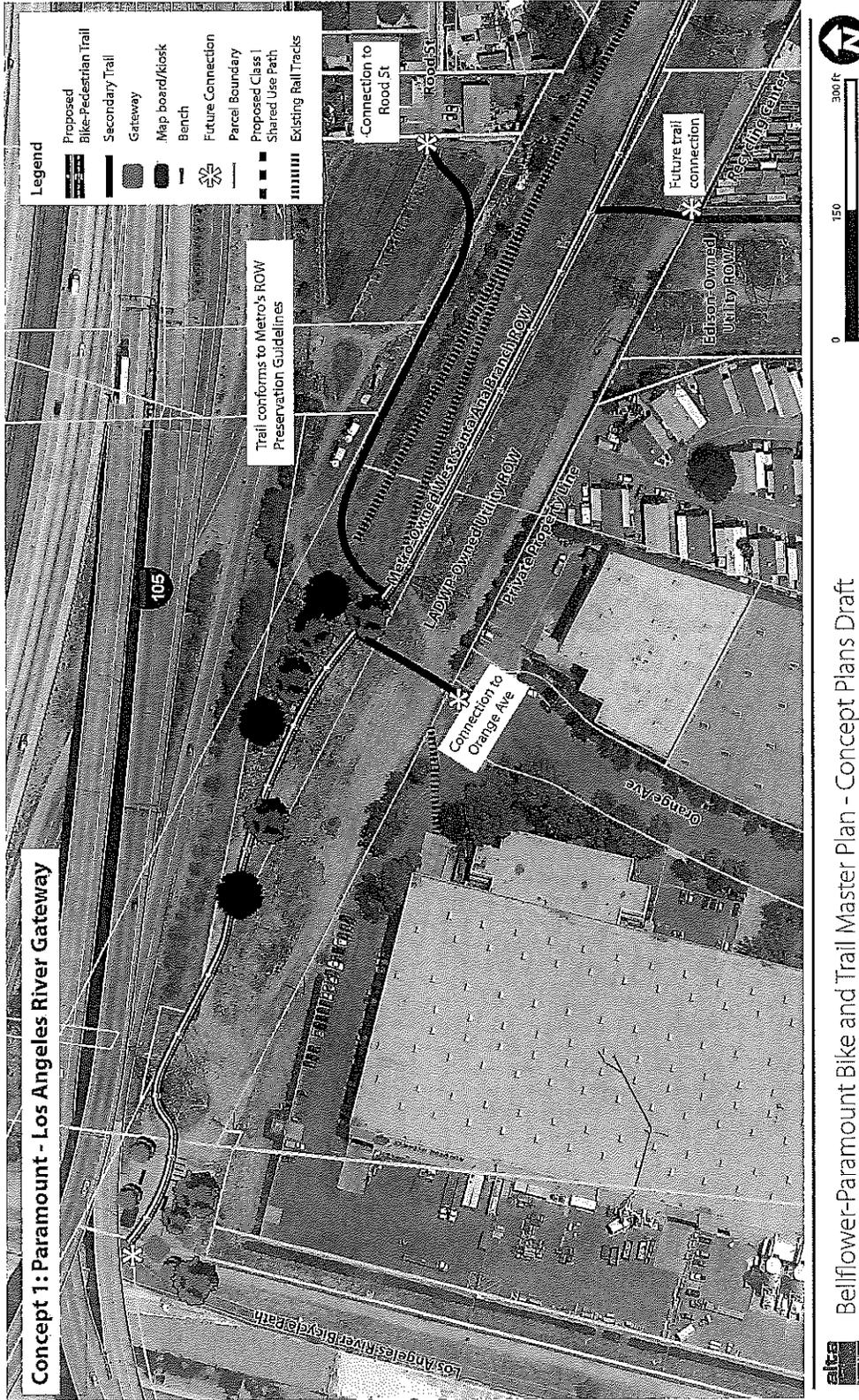
A network of bicycle boulevards will help families and visitors navigate between the Los Angeles River Bicycle Path and Salud Park, enabling connections to a broad set of regional destinations. Project recommendations include bicycle boulevard treatments on San Marcus Street, San Luis Street, San Marino Avenue, Exeter Street, and several small connecting blocks. A Class I path across the top of Salud Park will allow bicyclists to pass between Exeter Street and San Vicente Street.

### Cost Estimate

Phase	Cost Estimate
Design	\$43,764
Environmental Planning and Permitting	\$26,258
Property Acquisition	-
Construction Management	\$13,551
Construction	\$424,084
Contingency	\$152,298
<b>Total Cost</b>	<b>\$659,952</b>

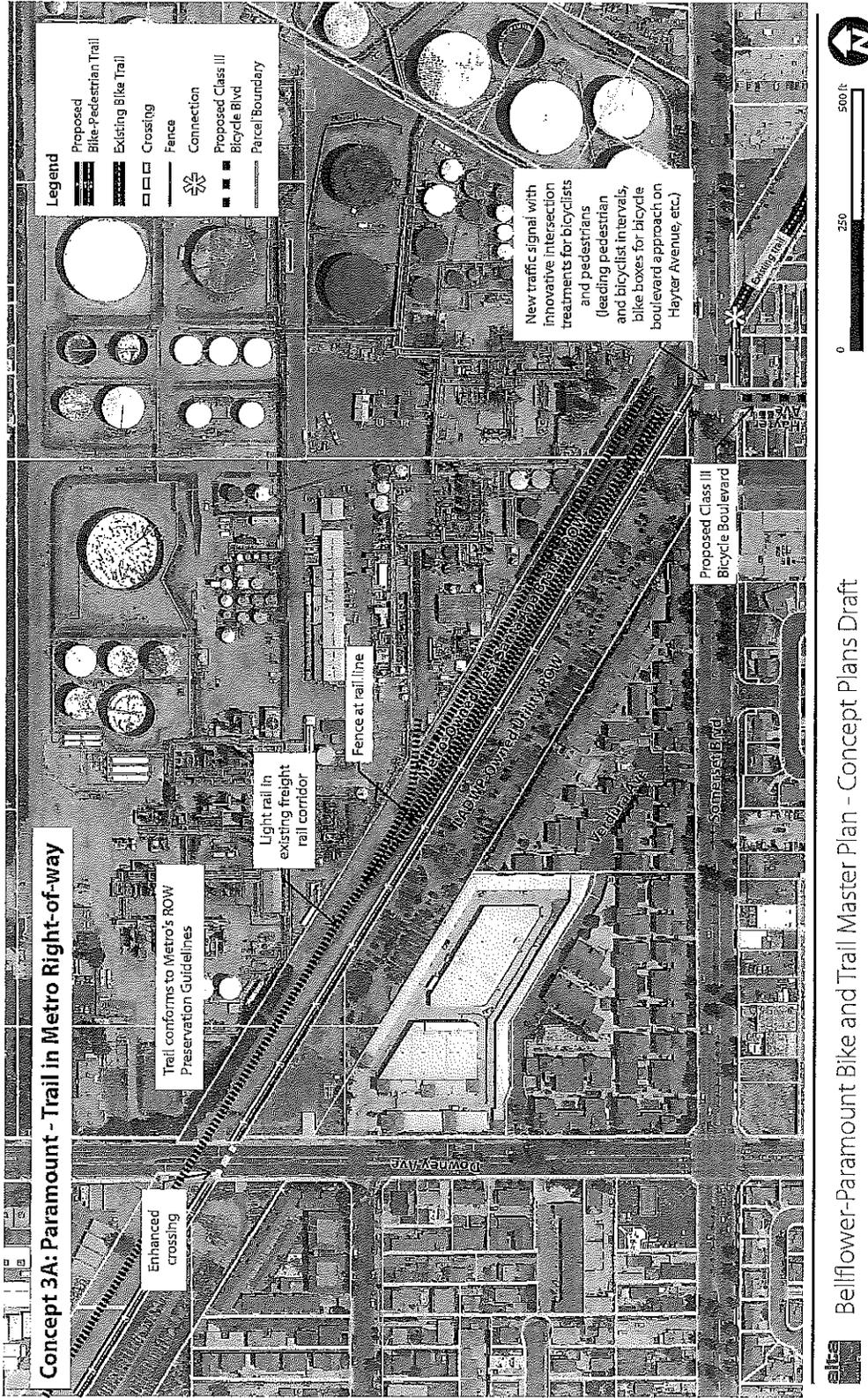
### **5.3. Concept Plans**

Concept plans for selected priority projects are presented on the following pages.



Bellflower-Paramount Bike and Trail Master Plan - Concept Plans Draft

Figure 5-1: Paramount - Los Angeles River Gateway



Bellflower-Paramount Bike and Trail Master Plan - Concept Plans Draft

Figure 5-2: Paramount - Trail in Metro Right-of-way

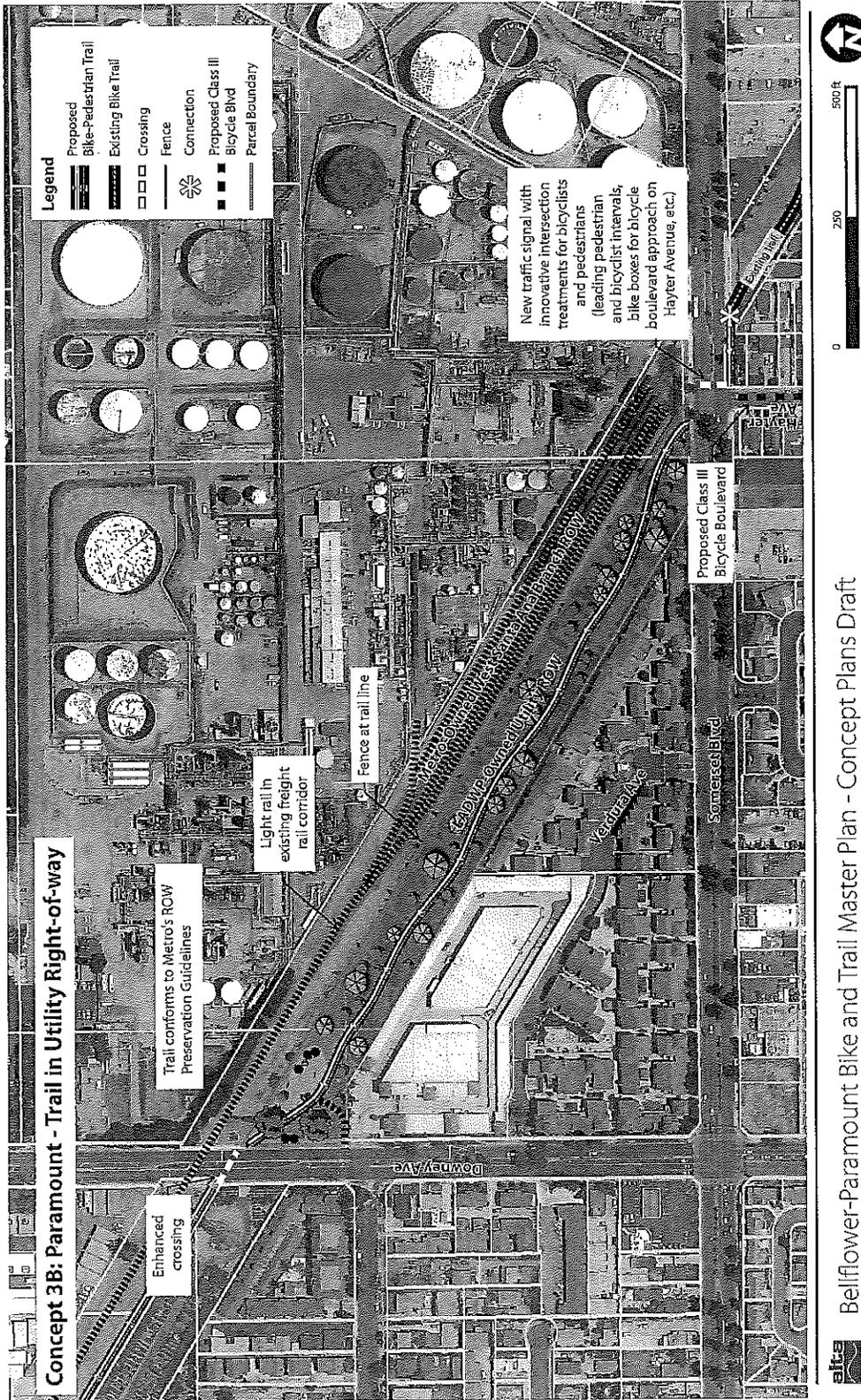


Figure 5-3: Paramount - Trail in Utility Right-of-way

Bellflower-Paramount Bike and Trail Master Plan - Concept Plans Draft

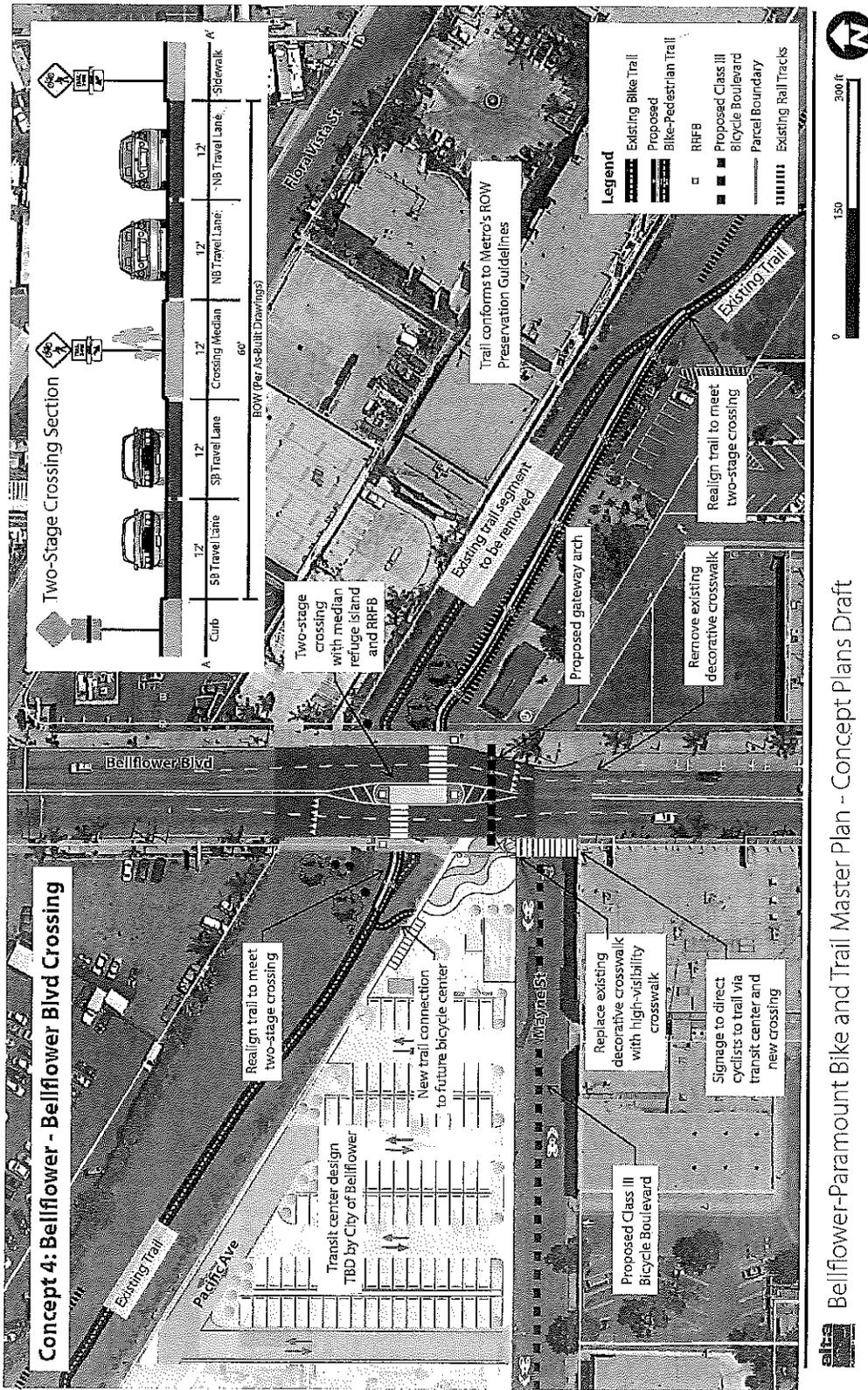
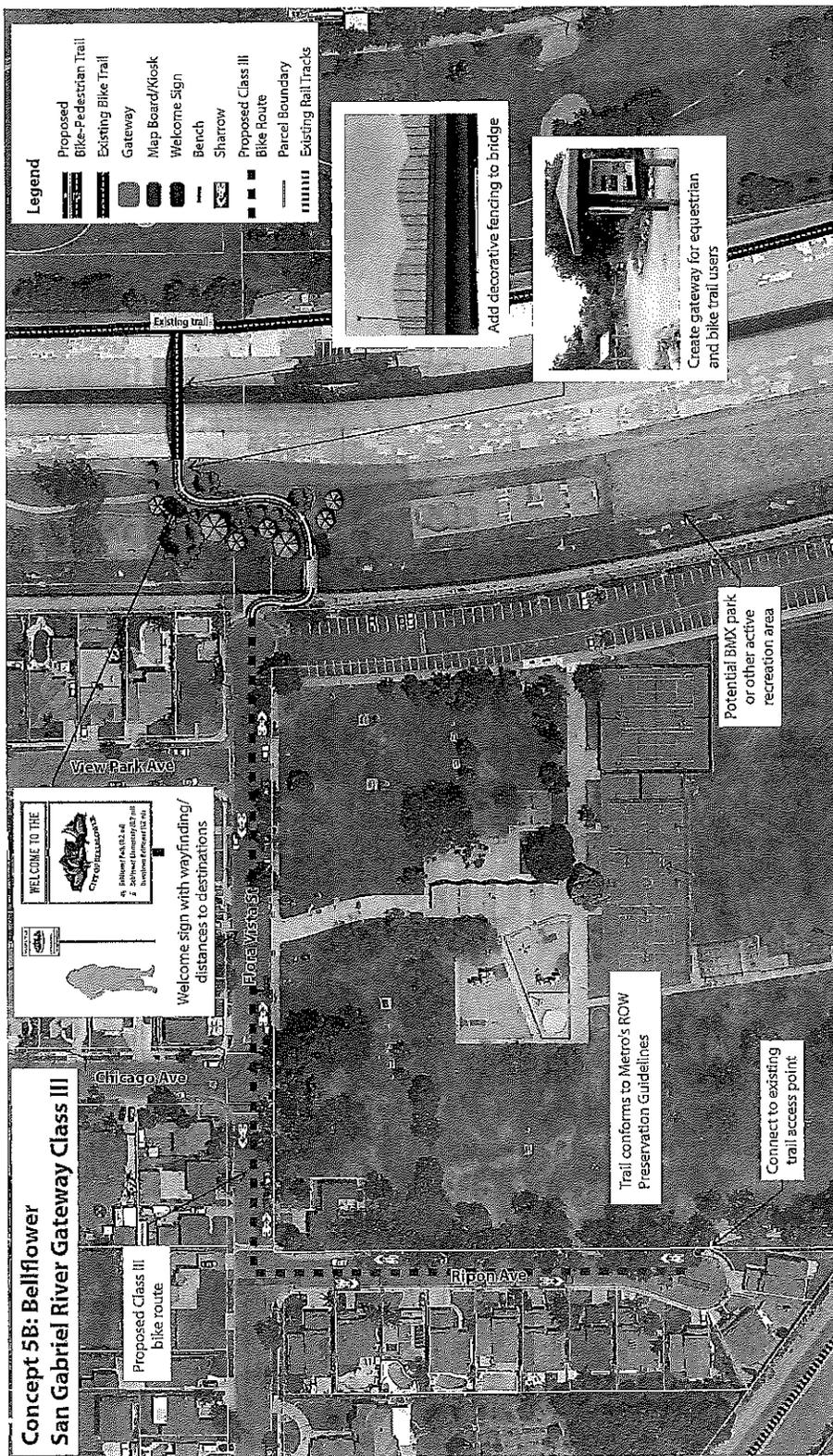


Figure 5-4: Bellflower - Bellflower Boulevard Crossing



Bellflower-Paramount Bike and Trail Master Plan - Concept Plans Draft

Figure 5-5: Bellflower - San Gabriel River Gateway Class III

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### 5.4. Maintenance

Bikeways require regular maintenance and repair. On-street bikeways are maintained as part of the normal roadway maintenance program, and extra emphasis should be placed on keeping bike lanes and roadway shoulders clear of debris and keeping vegetation overgrowth from blocking visibility. The high cost of maintaining Class I facilities may be shared among various agencies or departments. Typical costs for bikeway networks are shown in Table 5-1.

Table 5-1: Estimated Annual Maintenance Costs

Facility Type	Estimated Annual Maintenance Costs	Notes
Class I	\$8,750	Pavement repair or resurfacing, lighting, and removal of debris and vegetation overgrowth
Class II	\$2,000	Repainting lane stripes and stencils, sign replacement as needed
Class III Bicycle Route	\$1,000	Sign replacement as needed
Class III Bicycle Boulevard	\$1,250	Sign and sharrow stencil replacement as needed

## 5.5. Funding Sources

This chapter describes various sources of funding available to plan and construct bicycle and pedestrian facilities, including those related to school access and area improvement, as well as sources to provide education or encouragement programs.

Projects such as those described in this Plan can be funded through multiple sources, and not all sources apply to all projects. Many sources require a local funding match and most are competitive based on project merit and adherence to grant criteria.

This chapter covers federal, state, regional, and local sources of funding, as well as some non-traditional funding sources that have been used by local agencies to fund bicycle and pedestrian infrastructure and programs.

### Federal Sources

#### ***Moving Ahead for Progress in the Twenty-First Century (MAP-21)***

The largest source of federal funding for bicyclists and pedestrians is the US DOT's Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141. The Act replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012. SAFETEA-LU contained dedicated programs including Transportation Enhancements, Safe Routes to School, and Recreational Trails, which were all commonly tapped sources of funding to make non-motorized improvements nationwide. MAP-21 combines these programs into a single source called 'Transportation Alternatives' programs (TAP). More information on TAP, including eligible activities, can be found below and at:

<http://www.fhwa.dot.gov/map21/guidance/guidetap.cfm>

MAP-21 authorizes funding for federal surface transportation programs including highways and transit. It is not possible to guarantee the continued availability of any listed MAP-21 programs, or to predict their future funding levels or policy guidance. Nevertheless, many of these programs have been included in some form since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, and thus may continue to provide capital for active transportation projects and programs.

In California (see Section 7.2.1 Active Transportation Program), federal monies are administered through the California Department of Transportation (Caltrans) and Metropolitan Planning Organizations (MPOs). Most, but not all, of these programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system.

There are a number of programs identified within MAP-21 that are applicable to bicycle and pedestrian projects. These programs are discussed below.

*More information:* <http://www.fhwa.dot.gov/map21/summaryinfo.cfm>

## Transportation Alternatives

Transportation Alternatives (TA) is a new funding source under MAP-21 that consolidates three formerly separate programs under SAFETEA-LU: Transportation Enhancements (TE), Safe Routes to School (SR2S), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and streetscape projects including sidewalks, bikeways, multi-use paths, and rail-trails. TA funds may also be used for selected education and encouragement programming such as Safe Routes to School, despite the fact that TA does not provide a guaranteed set-aside for this activity as SAFETEA-LU did. MAP-21 provides \$85 million nationally for the RTP.

Complete eligibilities for TA include:

1. **Transportation Alternatives** as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including “on-road and off-road trail facilities for pedestrians, bicyclists, and other active forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990.” Infrastructure projects and systems that provide “Safe Routes for Non-Drivers” is a new eligible activity.

*For the complete list of eligible activities, visit:*

[http://www.fhwa.dot.gov/environment/transportation\\_enhancements/legislation/map21.cfm](http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm)

2. **Recreational Trails.** TA funds may be used to develop and maintain recreational trails and trail-related facilities for both active and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other active and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads.

Recreational Trails Program funds may be used for:

- ◆ Maintenance and restoration of existing trails
- ◆ Purchase and lease of trail construction and maintenance equipment
- ◆ Construction of new trails, including unpaved trails
- ◆ Acquisition or easements of property for trails
- ◆ State administrative costs related to this program (limited to seven percent of a state’s funds)
- ◆ Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a state’s funds)

Under MAP-21, dedicated funding for the RTP continues at FY 2009 levels – roughly \$85 million annually. California will receive \$5,756,189 in RTP funds per year through FY2014.

*More info:*

[http://www.fhwa.dot.gov/environment/recreational\\_trails/funding/apportionments\\_obligations/recfunds\\_2009.cfm](http://www.fhwa.dot.gov/environment/recreational_trails/funding/apportionments_obligations/recfunds_2009.cfm)

- 3. Safe Routes to School.** There are two separate Safe Routes to School Programs administered by Caltrans. There is the Federal program referred to as SRTS, and the state-legislated program referred to as SR2S. Both programs are intended to achieve the same basic goal of increasing the number of children walking and bicycling to school by making it safer for them to do so. All projects must be within two miles of primary or middle schools (K-8).

The Safe Routes to School Program funds non-motorized facilities in conjunction with improving access to schools through the Caltrans Safe Routes to School Coordinator.

*More info:* <http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm>

Eligible projects may include:

- ❖ **Engineering improvements.** These physical improvements are designed to reduce potential bicycle and pedestrian conflicts with motor vehicles. Physical improvements may also reduce motor vehicle traffic volumes around schools, establish safer and more accessible crossings, or construct walkways, trails or bikeways. Eligible improvements include sidewalk improvements, traffic calming/speed reduction, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, and secure bicycle parking facilities.
  - ❖ **Education and Encouragement Efforts.** These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits, and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).
  - ❖ **Enforcement Efforts.** These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian sting operations.
- 4. Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways.** At the time of writing, detailed guidance from the Federal Highway Administration on this new eligible activity was not available.

Average annual funds available through TA over the life of MAP-21 equal \$814 million nationally, which is based on a 2% set-aside of total MAP-21 authorizations. Projected MAP-21 apportionments for California total \$3,546,492,430 for FY 2013 and \$3,576,886,247 for FY 2014 (<http://www.fhwa.dot.gov/MAP21/funding.cfm>). The 2% set-aside for TA funds in California will be about \$71,000,000 for the next two fiscal cycles. State DOTs may elect to transfer up to 50% of TA funds to other highway programs, so the amount listed above represents the maximum potential funding.

TA funds are typically allocated through MPOs and require a 20 percent local match.

**Surface Transportation Program (STP)**

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP-funded bicycle and pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System. Fifty percent of each state's STP funds are suballocated geographically by population. These funds are funneled through Caltrans to the MPOs in the state. The remaining 50% may be spent in any area of the state.

**Highway Safety Improvement Program (HSIP)**

MAP-21 doubles the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides \$2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious injuries on all public roads, bikeways, and walkways. MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside unless safety statistics demonstrate that fatalities are increasing on these roads HSIP is a data-driven funding program and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state's Strategic Highway Safety Plan.

*Last updated in 2006, the California SHSP is located here:*

*[http://www.dot.ca.gov/hq/traffops/survey/SHSP/SHSP\\_Final\\_Draft\\_Print\\_Version.pdf](http://www.dot.ca.gov/hq/traffops/survey/SHSP/SHSP_Final_Draft_Print_Version.pdf)*

**Pilot Transit-Oriented Development Planning**

MAP-21 establishes a new pilot program to promote planning for Transit-Oriented Development. At the time of writing the details of this program are not fully clear, although the bill text states that the Secretary of Transportation may make grants available for the planning of projects that seek to "facilitate multimodal connectivity and accessibility," and "increase access to transit hubs for pedestrian and bicycle traffic."

**Congestion Mitigation and Air Quality Improvement Program (CMAQ)**

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and particulate matter which reduce transportation related emissions. These federal dollars can be used to build bicycle and pedestrian facilities that reduce travel by automobile. Purely recreational facilities generally are not eligible.

To be funded under this program, projects and programs must come from a transportation plan (or State (STIP) or Regional (RTIP) Transportation Improvement Program) that conforms to the SIP and must be consistent with the conformity provisions of Section 176 of the Clean Air Act.

### ***Partnership for Sustainable Communities***

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to “improve access to affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide.” The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure (“Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health”).

The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants). Bellflower and Paramount should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

*More info:* <http://www.epa.gov/smartgrowth/partnership/>

### ***Federal Transit Act***

Section 25 of the 1964 Urban Mass Transportation Act states that: “For the purposes of this Act a project to provide access for bicycles to mass transportation facilities, to provide shelters and parking facilities for bicycles in and around mass transportation facilities, or to install racks or other equipment for transporting bicycles on mass transportation vehicles shall be deemed to be a construction project eligible for assistance under sections 3, 9 and 18 of this Act.” The Federal share for such projects is 90 percent and the remaining 10 percent must come from sources other than Federal funds or fare box revenues. Typical funded projects have included bike lockers at transit stations and bike parking near major bus stops. To date, no projects to provide bikeways for quicker, safer or easier access to transit stations have been requested or funded.

### ***Community Transformation Grants***

Community Transformation Grants administered through the Center for Disease Control support community-level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if the benefits of such improvements accrue to population groups experiencing the greatest burden of chronic disease.

*More info:* <http://www.cdc.gov/communitytransformation/>

## State Sources

### **Active Transportation Program (ATP)**

In 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP). This program is a consolidation of the Federal Transportation Alternatives Program (TAP), California's Bicycle Transportation Account (BTA), and Federal and California Safe Routes to School (SRTS) programs. The ATP program is administered by Caltrans Division of Local Assistance, Office of Active Transportation and Special Programs.

The ATP program goals include:

- ❖ Increase the proportion of trips accomplished by biking and walking,
- ❖ Increase safety and mobility for nonmotorized users,
- ❖ Advance the active transportation efforts of regional agencies to achieve greenhouse gas reduction goals,
- ❖ Enhance public health,
- ❖ Ensure that disadvantaged communities fully share in the benefits of the program, and
- ❖ Provide a broad spectrum of projects to benefit many types of active transportation users.

The third call for projects is expected to be issued in spring of 2017. The California Transportation Commission ATP Guidelines are available here: [http://www.catc.ca.gov/meetings/agenda/2014Agenda/2014\\_03/03\\_4.12.pdf](http://www.catc.ca.gov/meetings/agenda/2014Agenda/2014_03/03_4.12.pdf)

Eligible bicycle and pedestrian projects include:

- ❖ Infrastructure Projects: Capital improvements that will further program goals. This category typically includes planning, design, and construction.
- ❖ Non-Infrastructure Projects: Education, encouragement, enforcement, and planning activities that further program goals. The focus of this category is on pilot and start-up projects that can demonstrate funding for ongoing efforts.
- ❖ Infrastructure projects with non-infrastructure components

The minimum request for non-SRTS projects is \$250,000. There is no minimum for SRTS projects.

The local match requirement for non-SRTS projects is 11.47%. There is no local match requirement for projects benefiting a disadvantaged community, stand-alone non-infrastructure projects, and SRTS projects.

*More info:* <http://www.dot.ca.gov/hq/LocalPrograms/atp/>

### ***State Highway Account***

Section 157.4 of the Streets and Highways Code requires Caltrans to set aside \$360,000 for the construction of non-motorized facilities that will be used in conjunction with the State highway system. The Office of Bicycle Facilities also administers the State Highway Account fund. Funding is divided into different project categories. Minor B projects (less than \$42,000) are funded by a lump sum allocation by the CTC and are used at the discretion of each Caltrans District office. Minor A projects (estimated to cost between \$42,000 and \$300,000) must be approved by the CTC. Major projects (more than \$300,000) must be included in the State Transportation Improvement Program and approved by the CTC. Funded projects have included fencing and bicycle warning signs related to rail corridors.

### ***Office of Traffic Safety (OTS) Grants***

Office of Traffic Safety Grants are supported by Federal funding under the National Highway Safety Act and SAFETEA-LU. In California, the grants are administered by the Office of Traffic Safety.

Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. Eligible grantees are governmental agencies, state colleges, state universities, local city and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants.

The California application deadline is January of each year. There is no maximum cap to the amount requested, but all items in the proposal must be justified to meet the objectives of the proposal.

*More info:* <http://www.ots.ca.gov/>

## Regional & Local Sources

### ***Clean Air Fund (AB 434/2766 Vehicle Registration Fee Surcharge)***

The Clean Air Fund is administered by SCAQMD. Local jurisdictions and transit agencies can apply. Funds can be used for projects that encourage biking, walking, and/or use of public transit. For bicycle-related projects, eligible uses include: designing, developing and/or installing bikeways or establishing new bicycle corridors; making bicycle facility enhancements/improvements by installing bicycle lockers, bus bike racks; providing assistance with bike loan programs (motorized and standard) for police officers, community members and the general public. A 10 to 15 percent match is required.

### ***Metro Call for Projects***

Every other year, Metro accepts Call for Projects applications in eight modal categories. The Call is a competitive process that distributes discretionary capital transportation funds to regionally significant projects. Capital funds are programmed 5 years out and typically provided, and design and right-of-way acquisition are eligible expenses as long as they are directly related and part of construction. So, a project awarded Call for Projects funds in 2015 would not be implemented until 2020.

### ***Metro Measure R Local Return***

Fifteen percent of the Measure R county sales tax is designated for use by local cities and the County of Los Angeles for transportation purposes, including bicycle-related uses such as infrastructure, signage, bike sharing, and education efforts.

*More info:* [http://ebb.metro.net/projects\\_studies/local\\_return/images/measure-r-Local-Return-Guidelines.pdf](http://ebb.metro.net/projects_studies/local_return/images/measure-r-Local-Return-Guidelines.pdf)

### ***TDA Article 3 Funds***

Administered by Metro. TDA Article 3 funds are allocated annually on a per capita basis to both cities and the County of Los Angeles for the planning and construction of bicycle and pedestrian facilities. Local agencies may either draw down these funds or place them on reserve. Agencies must submit a claim form to Metro by the end of the fiscal year in which they are allocated. Failure to do so may result in the lapse of these allocations.

*More info:* <http://www.metro.net/projects/tda/>

## **Private Sources**

Private funding sources can be acquired by applying through advocacy groups such as the League of American Bicyclists and the Bikes Belong Coalition. Most of the private funding comes from foundations wanting to enhance and improve bicycle facilities and advocacy. Grant applications will typically be through the advocacy groups as they leverage funding from federal, state and private sources. Below are several examples of private funding opportunities available.

### ***Bikes Belong Grant Program***

The Bikes Belong Coalition of bicycle suppliers and retailers has awarded \$1.2 million and leveraged an additional \$470 million since its inception in 1999. The program funds corridor improvements, mountain bike trails, BMX parks, trails, and park access. It is funded by the Bikes Belong Employee Pro Purchase Program.

More info: <http://www.bikesbelong.org/grants/>

### ***Bank of America Charitable Foundation, Inc.***

The Bank of America Charitable Foundation is one of the largest in the nation. The primary grants program is called Neighborhood Excellence, which seeks to identify critical issues in local communities. Another program that applies to greenways is the Community Development Programs, and specifically the Program Related Investments. This program targets low and moderate income communities and serves to encourage entrepreneurial business development.

More info: <http://www.bankofamerica.com/foundation>

### ***Robert Wood Johnson Foundation***

The Robert Wood Johnson Foundation was established as a national philanthropic foundation in 1972 and today it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas:

- ❖ To assure that all Americans have access to basic health care at a reasonable cost
- ❖ To improve care and support for people with chronic health conditions
- ❖ To promote healthy communities and lifestyles
- ❖ To reduce the personal, social and economic harm caused by substance abuse: tobacco, alcohol, and illicit drugs

More info: <http://www.rwjf.org/applications/>

### ***Community Action for a Renewed Environment (CARE)***

CARE is a competitive grant program that offers an innovative way for a community to organize and take action to reduce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them. By providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and "smart-growth" types of projects are eligible. Grants range between \$90,000 and \$275,000.

More information: <http://www.epa.gov/care/>

***Corporate Donations***

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Employers recognize that creating places to bike and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

## Appendix A. Active Transportation Program Compliance Checklist

Subject	ATP Compliance Checklist	Location in Plan
<b>Future Trip Estimates</b>	The estimated number of existing bicycle trips and pedestrian trips in the plan area, both in absolute numbers and as a percentage of all trips, and the estimated increase in the number of bicycle trips and pedestrian trips resulting from implementation of the plan.	Appendix G
<b>Collision Report</b>	The number and location of collisions, serious injuries, and fatalities suffered by bicyclists and pedestrians in the plan area, both in absolute numbers and as a percentage of all collisions and injuries, and a goal for collision, serious injury, and fatality reduction after implementation of the plan.	Chapter 3.5 and Appendix D
<b>Land Use Patterns</b>	A map and description of existing and proposed land use and settlement patterns which must include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, major employment centers, and other destinations.	Chapter 2.1 and Appendix C
<b>Existing and Proposed Bikeways</b>	A map and description of existing and proposed bicycle transportation facilities.	Chapter 2.2 and Chapter 4.1
<b>End-of-Trip Bicycle Parking</b>	A map and description of existing and proposed end-of-trip bicycle parking facilities.	Chapter 2.2 and Chapter 4.1
<b>Bicycle Parking Policy</b>	A description of existing and proposed policies related to bicycle parking in public locations, private parking garages and parking lots and in new commercial and residential developments.	Chapter 4.3 and Appendix B
<b>Bicycle Connections to other Modes</b>	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These must include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	Chapter 4.1
<b>Pedestrian Connections to other Modes</b>	A map and description of existing and proposed pedestrian facilities at major transit hubs. These must include, but are not limited to, rail and transit terminals, and ferry docks and landings.	<i>As a bicycle-focused plan, the scope of this plan does not include pedestrian facilities.</i>

Appendix A | Active Transportation Program Compliance Checklist

Subject	ATP Compliance Checklist	Location in Plan
<b>Wayfinding</b>	A description of proposed signage providing wayfinding along bicycle and pedestrian networks to designated destinations.	Chapter 4.1
<b>Maintenance</b>	A description of the policies and procedures for maintaining existing and proposed bicycle and pedestrian facilities, including, but not limited to, the maintenance of smooth pavement, freedom from encroaching vegetation, maintenance of traffic control devices including striping and other pavement markings, and lighting.	Chapter 5.5
<b>Education Programs</b>	A description of bicycle and pedestrian safety, education, and encouragement programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the law impacting bicycle and pedestrian safety, and the resulting effect on accidents involving bicyclists and pedestrians.	Chapter 4.3
<b>Community Involvement</b>	A description of the extent of community involvement in development of the plan, including disadvantaged and underserved communities.	Chapter 3.3
<b>Regional Plan Coordination</b>	A description of how the active transportation plan has been coordinated with neighboring jurisdictions, including school districts within the plan area, and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, general plans and a Sustainable Community Strategy in a Regional Transportation Plan.	Appendix B
<b>Project List</b>	A description of the projects and programs proposed in the plan and a listing of their priorities for implementation, including the methodology for project prioritization and a proposed timeline for implementation.	Chapter 4
<b>Past Expenditures and Future Financial Needs</b>	A description of past expenditures for bicycle and pedestrian facilities and programs, and future financial needs for projects and programs that improve safety and convenience for bicyclists and pedestrians in the plan area. Include anticipated revenue sources and potential grant funding for bicycle and pedestrian uses.	Appendix C, section C.3
<b>Implementation</b>	A description of steps necessary to implement the plan and the reporting process that will be used to keep the adopting agency and community informed of the progress being made in implementing the plan.	Chapter 5

Subject	ATP Compliance Checklist	Location in Plan
<b>Adoption Resolution</b>	A resolution showing adoption of the plan by the city, county or district. If the active transportation plan was prepared by a county transportation commission, regional transportation planning agency, MPO, school district or transit district, the plan should indicate the support via resolution of the city(s) or county(s) in which the proposed facilities would be located.	

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## Appendix B. Plan and Policy Review

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This chapter provides an overview of local, regional, state, and federal plans and policies that are relevant to the development of the Bellflower-Paramount Bike & Trail Master Plan.

### B.1. Local

#### City of Paramount General Plan, 2007

The *Paramount General Plan*, adopted in 2007, provides guidance for planning and development of the City. The Plan includes eight elements: Land Use, Transportation, Resources, Health and Safety, Economic Development, Public Facilities, Housing, and Implementation.

An objective of the Transportation Element is to encourage efficient use of alternative forms of transportation. This element includes a section on Transportation Demand Management, outlining the benefits that such programs would have on improving congestion and making more efficient use of the roadways. The policies in this element are primarily geared toward increasing transit ridership, though the overall idea of promoting alternative forms of transportation is directly related to the efforts of the bicycle master plan.

The Resource Management Element includes two policies that reflect the city's desire to improve bicycling, including:

- ◊ Resource Management Element Policy 4: The City of Paramount will require new larger residential developments to provide sufficient open space (including pedestrian and bicycle linkages) to meet local need.
- ◊ Resource Management Element Policy 15: The City of Paramount will seek to establish a comprehensive bikeway and pedestrian trail system for the city.

#### Municipal Codes

Table B-1 and Table B-2 present the municipal codes for Bellflower and Paramount, respectively, and include policies that relate to bicycling. Bellflower has a policy that restricts bicycling on identified city sidewalks, yet not throughout the whole city. It also prohibits bicycling through public parks. There is a chapter specifying the prohibited uses of the Bellflower Pedestrian and Bicycle Trail in the WSAB ROW, most relevant being the prohibition of motorized bicycles. The city has several ordinances that regulate bicycle parking, including a Transportation Demand Management policy requiring parking based on development size, and policies requiring a specified number of bicycling parking spaces at Game Arcades, Transitional/Supportive Housing Facilities, and Emergency Shelters.

Paramount has a chapter on bicycle registration, and a section of the Motor Vehicles and Traffic chapter on the designation of bikeways by the city's public works department.

Neither city has policies providing detailed guidance on city-wide bikeway installation, bicycle parking, or bikeway maintenance. Bikeway installation and maintenance requirements positively impact bicyclists by requiring frequent review of opportunities for installing new bikeways, the provision of accommodations for bicyclists when there is roadway construction, and the timely sweeping and repaving of bikeways. Bike parking

policies guide the city and developer on what types of bike parking is most secure, where it should be placed, and how much should be installed per land use.

Table B-1: Bellflower Municipal Code Ordinances Regarding Bicycling

Code	Bicycling Ordinance
<b>Business Licenses and Regulations: Scheduling of License Fees</b>	
5.08.120 Amusements—Circus, Menagerie, Tent Show, Theatrical Performance, Vaudeville	D. For operating a golf course, miniature golf course, bicycle course, golf practice driving course or archery range, the annual license tax shall be upon the same basis and in the same manner as the annual license tax as specified in Section 5.08.020
<b>Business Licenses and Regulations: Mechanical and Electronic Amusement Devices</b>	
5.52.120 Denial of Appeal	At the conclusion of the hearing before the City Council, the City Council shall deny the appeal if it finds and determines any of the following: F. There would not be adequate parking or bicycle storage areas available for the premises for which the permit is being sought
<b>Streets, Sidewalks, and Public Places: Prohibiting the use of skateboards, roller skates and bicycles on designated sidewalks</b>	
12.28.020 Definitions	As used in this chapter: Any Sidewalk or Portion Thereof "Any sidewalk, or portion thereof" shall mean any sidewalk and any immediately adjacent handicapped ramp, curb, driveway apron, step, stair, handrail, planter, bench, patio or other paved area reserved for the use of pedestrians. Bicycle "Bicycle" shall mean and include any device upon which a person may ride, which is propelled by human power through a system of belts, chains or gears and which has wheels at least twenty (20) inches in diameter and a frame size of at least fourteen (14) inches.
12.28.040 Skateboards, Roller Skates and Bicycles Prohibited	No person shall operate, use, drive or cause to be propelled a skateboard, roller skates or bicycle on any sidewalk, or portion thereof, which has been designated as an area where operation of skateboards, roller skates and bicycles is prohibited.
<b>Streets, Sidewalks, and Public Places: Regulations for Public Parks</b>	
12.40.040 Bicycle and Other Vehicles Prohibited	A. For purposes of this chapter, the following definitions shall apply: 1. The term "public park" shall mean those areas of the City designed and designated as parks for public recreational use, and also includes the City's skate park, Town Center Plaza, pocket parks, and green belt open spaces. 2. The term "skate park" shall mean a public park or that portion of a public park which has been designated by the City as being a facility operated primarily for skating. A skate park shall be identified by signage located on the site. B. No person shall ride or operate a unicycle, bicycle, tricycle, four-wheeled cycle, scooter, or other motor- or human-powered vehicle within the boundaries of any public park. Notwithstanding the foregoing, a person may ride or operate the following vehicles within any portion of a public park which is not a skate park: a tricycle, stroller, or baby carriage. E. The provisions of this chapter shall not be deemed to apply to the following: 1) the operation or riding of any vehicle used to provide mobility to any disabled person; or 2) the operation or riding of a motor vehicle on a paved driveway from the street to a parking lot of the

Code	Bicycle Policies
	public park; or 3) the wheeling of a bicycle or other human-powered vehicle from outside the boundaries of a public park to a place within the public park designated for parking such vehicle if such transportation occurs solely on paved paths within the public park and the vehicle is not ridden during such operation.
<b>Streets, Sidewalks, and Public Places: Regulations for the Bellflower Pedestrian and Bicycle Trail</b>	
12.44.050 All Applicable State of California Bicycle Laws Enforced and Use of Bicycles in Designated Area of the Trail	A. All applicable State of California Vehicle Code laws relating to the use of bicycles, including, but not limited to, the wearing of helmets, operating in a safe manner, and not riding a bicycle while intoxicated, shall be enforced. B. A person may use a bicycle on the Trail, but only within the lane designated for such use.
12.44. REGULATIONS FOR THE BELLFLOWER PEDESTRIAN AND BICYCLE TRAIL.	<p>12.44.010 "Trail" shall mean that area designated as a public pedestrian and bicycle travelway and associated property owned by the Los Angeles County Metropolitan Transportation Authority (LACMTA) and consisting of the railway corridor that bisects the City from Lakewood Boulevard, approximately six hundred (600) feet south of Somerset Boulevard to the City's eastern border, immediately south of Caruthers Park. (Ord. 1189 § 1, 2/22/10)</p> <p>12.44.030 A. No person shall use a motorized vehicle, including any bicycle, scooter, and other means of transportation propelled by a motor or engine, on the Trail, except as provided in Subsection B of this section. B. This section shall not apply to: 1. Any motorized vehicle being used for maintenance, law enforcement, or other emergency response purposes, by the City of Bellflower or any State or County agency in the course and scope of that agency's official duties; or 2. Disabled person's transportation, as long as it is operated on the portion of the Trail designated for pedestrian use and not for bicycle use.</p> <p>Chapter 12.44 also lists a series of allowed and prohibited uses on the trail.</p>
<b>Buildings and Construction: Congestion Management Program</b>	
15.24.040 Transportation Demand and Trip Reduction Measures	B. 1. Nonresidential development of twenty-five thousand (25,000) square feet or more shall provide the following to the satisfaction of the City: A bulletin board, display case, or kiosk displaying transportation information located where the greatest number of employees are likely to see it. Information in the area shall include, but is not limited to, the following: d. Bicycle route and facility information, including regional/local bicycle safety information 2. Nonresidential development of fifty thousand (50,000) square feet or more shall comply with Subsection (B)(1) of this section and shall provide all the following measures to the satisfaction of the city: c. Bicycle racks or other secure bicycle parking shall be provided to accommodate four (4) bicycles per the first fifty thousand (50,000)

Code	Bicycle Policies
	<p>square feet of nonresidential development and one (1) bicycle per each additional fifty thousand square feet of nonresidential development. Calculations which result in a fraction of one-half (0.5) or higher shall be rounded up to the nearest whole number. A bicycle parking facility may also be a fully enclosed space or locker accessible only to the owner or operator of the bicycle, which protects the bike from inclement weather. Specific facilities and location (e.g., provision of racks, lockers or locked room) shall be to the satisfaction of the City.</p> <p>3. Nonresidential development of one hundred thousand (100,000) square feet or more shall comply with Subsections (B)(1) and (2) of this section and shall provide all of the following measures to the satisfaction of the City:</p> <p>d. Safe and convenient access from the external circulation system to bicycle parking facilities onsite.</p>
<b>Zoning: SF Single Family Zoning</b>	
17.16.180 Transitional/Supportive Housing	<p>A. Transitional and supportive housing including single resident occupancy shall be subject to the standards and regulations as follow:</p> <p>14. C. Each single resident occupancy unit shall be provided at least one (1) lockable bicycle parking space in a location that is adjacent to that single resident occupancy unit.</p>
<b>Zoning: C-G General Commercial Zone</b>	
17.44.220 Game Arcades	<p>In addition to any other requirement of this Code, the following shall apply to any game arcade:</p> <p>H. A minimum of one (1) bicycle rack space shall be provided for every one (1) mechanical or electronic amusement machine. Such bicycle parking shall not be located on public right-of-way or within required parking spaces.</p>
17.44.330 Emergency Shelter	<p>A. Emergency Shelter Standards and Regulations. Emergency shelters for homeless persons shall be subject to and comply with the following standards and regulations:</p> <p>9. Decorative bicycle racks shall be provided at the facility. Bicycle racks shall be used for bicycle parking only. Location of bicycle racks shall be subject to the Director of Planning.</p>
<b>Zoning: Open Space Zoning District</b>	
17.64.070 Game Arcades	<p>Game arcades as accessory use to commercial recreation in the O-S Zone may be permitted after approval of a Conditional Use Permit and provided the following conditions are satisfied:</p> <p>H. A minimum of two (2) bicycle rack spaces shall be provided for every one (1) mechanical or electronic amusement machine. Such bicycle parking shall not be located on public right-of-way or within required parking spaces.</p>

Table B-2: Paramount Municipal Code Ordinances Regarding Bicycling

Code	Bicycle Policies
<b>Bicycles</b>	
Sec. 7-1. Registration requirements	<p>(a) No person shall operate or permit to be operated on any street within the city any bicycle propelled solely or in part by muscular power, unless such bicycle shall first have been registered and licensed as provided in this chapter.</p> <p>(b) No person shall operate or permit to be operated on any street within the city any motorized bicycle. As described under section 406 of the California Vehicle Code, unless such motorized bicycle shall first have been registered and licensed as provided in this chapter.</p>
Sec. 7-2. Sheriff to register	<p>(a) Any person desiring to register a bicycle shall make application thereof in writing to the sheriff of the county, upon forms provided for the purpose of registration. Such forms shall show the name</p>

Code	Bicycle Policies
	<p>and address of the applicant, a description of the bicycle or motorized bicycle to be registered, including the name, serial number and color thereof, together with such other information or description as may be required. Any bicycle or motorized bicycle not having a serial number shall have a permanent registration number dye stamped onto its frame, as described in subsection (b) of this section.</p> <p>(b) Upon receipt of any such application. Said sheriff shall register said bicycle or motorized bicycle with a permanent registration number which shall correspond with the license number issued.</p> <p>(c) When a bicycle or motorized bicycle is so registered, a copy of the registration certificate and a license shall be issued to the applicant. A second copy of the registration certificate shall be kept by the sheriff.</p>
Sec. 7-3. License decal	<p>A license plate which shall be in the form of a state decal shall be attached to the frame of the bicycle or motorized bicycle on the frame tube directly under the seat of said bicycle or motorized bicycle. It shall be unlawful for any person to remove, mutilate, deface or destroy such license decal or to transfer any such license decal to any bicycle or motorized bicycle for which the same was not issued.</p>
Sec. 7-4. Transfer of registration	<p>It shall be the duty of any person residing within the city who sells or transfers ownership of any such bicycle or motorized bicycle, to report such sale or transfer by returning to said sheriff the copy of the registration certificate issued to that person as license thereof, together with the name and address of the person to whom such bicycle or motorized bicycle was sold or transferred and such report shall be made within five days of such date of such sale or transfer. It shall be the duty of the purchaser or transferee of such bicycle or motorized bicycle to apply for a registration certificate and license decal within five days of the date of such sale or transfer. It shall be unlawful for any person to refuse, fail or neglect to conform to any provision of this section.</p>
Sec. 7-5. Re-registration	<p>If the license decal is lost, stolen or mutilated, the person owning such bicycle or motorized bicycle, shall make application to re-register such bicycle or motorized bicycle within ten days of the loss. The previous registration shall be canceled and the bicycle or motorized bicycle shall be re-registered as in the same manner as in section 7-2 of this chapter.</p>
Sec. 7-6. Renewal of registration and license decals	<p>Bicycle and motorized bicycle registrations shall be renewed as of January 1 of the third year following the year it was first registered, to begin January 1, 1979. Renewal of a bicycle or motorized bicycle license shall be indicated by a supplementary adhesive device affixed parallel to and above or below the license decal with the expiration date shown. The above renewal procedure is set forth under section 39001 of the California Vehicle Code.</p>
Sec. 7-7. License fees	<p>(a) At the time a bicycle or motorized bicycle is first registered and licensed a fee not to exceed two dollars per year or any portion thereof shall be charged.</p> <p>(b) For each transfer of registration certificate issued, a fee not to exceed one dollar shall be charged.</p> <p>(c) For replacement of a bicycle or motorized bicycle license or registration certificate, a fee not to exceed one dollar shall be charged.</p> <p>(d) For each bicycle or motorized bicycle license renewal, a fee not to exceed one dollar per year shall be charged.</p>
Sec. 7-8. Retail sales	<p>Each bicycle or motorized bicycle retailer and each bicycle or motorized bicycle dealer shall supply to each purchaser a registration certificate and license decal at the time of purchase. The registration certificate and license decal shall be obtained from the city. All fees obtained by the city from the above retailers and dealers shall be applied to the city school safety program or for the maintenance of the bike paths or lanes within the city.</p>
Sec. 7-9. Fines	<p>Failure to comply with any section of this chapter shall carry a fine not to exceed five dollars per occurrence.</p>

Ordinance	Bicycle Policies
<b>Motor Vehicles and Traffic</b>	
Sec. 29-34. Posting and designating lanes	<p>(a) Pursuant to the provisions of section 21207 of the California Vehicle Code, the city council hereby designates the director of public works as the director and coordinator of the city to designate those areas of the city as the city bicycle route as set forth in the adopted general plan</p> <p>(b) The director of public works is hereby authorized to erect or place signs and markings along and upon any street right-of-way in the general plan bicycle route of the city as may be directed by the city council from time to time, designating the existence of such bicycle lane and routes as may be necessary to regulate the operation and use of vehicles and bicycles with respect to the bicycle route.</p> <p>(c) When the bicycle route has been established and designated as indicated by signs or markings, no person shall drive or park any vehicle or bicycle contrary to such signs or markings.</p>
<b>Zoning</b>	
Sec. 44-86.1 Travel demand measures	<p>B. 1. Nonresidential development of twenty-five thousand (25,000) square feet or more shall provide the following to the satisfaction of the City:                      A bulletin board, display case, or kiosk displaying transportation information located where the greatest number of employees are likely to see it. Information in the area shall include, but is not limited to, the following:                      d. Bicycle route and facility information, including regional/local bicycle safety information</p> <p>2. Nonresidential development of fifty thousand (50,000) square feet or more shall comply with Subsection (B)(1) of this section and shall provide all the following measures to the satisfaction of the city:                      c. Bicycle racks or other secure bicycle parking shall be provided to accommodate four (4) bicycles per the first fifty thousand (50,000) square feet of nonresidential development and one (1) bicycle per each additional fifty thousand square feet of nonresidential development. Calculations which result in a fraction of one-half (0.5) or higher shall be rounded up to the nearest whole number. A bicycle parking facility may also be a fully enclosed space or locker accessible only to the owner or operator of the bicycle, which protects the bike from inclement weather. Specific facilities and location (e.g., provision of racks, lockers or locked room) shall be to the satisfaction of the City.</p> <p>3. Nonresidential development of one hundred thousand (100,000) square feet or more shall comply with Subsections (B)(1) and (2) of this section and shall provide all of the following measures to the satisfaction of the City:                      d. Safe and convenient access from the external circulation system to bicycle parking facilities onsite.</p>

## **B.2. Regional**

### **Los Angeles County Bicycle Master Plan, 2012**

The 2012 *Los Angeles County Bicycle Master Plan* serves as an update to the 1975 *County Bikeway Plan*, guiding the development of bicycle facilities and programs for the next 20 years. The Plan proposed 831 miles of new bikeways to add onto the 144 miles that existed at the time of the Plan's creation. Bellflower and Paramount did not have any proposed facilities, with the exception of a small portion of a Class II bike lane on Somerset Boulevard that falls within Paramount.

### **Southern California Association of Governments (SCAG) Regional Transportation Plan, 2012**

SCAG adopted its *Regional Transportation Plan (RTP)* and *Sustainability Communities Plan (SCS)* in April 2012 with the goal of increasing mobility for those who live in and visit Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The RTP recommends increasing regional bikeway mileage from 4,315 to 10,122 miles, as well as retrofitting sidewalks to comply with the ADA and implementing safety improvements. SCAG also recommends key bikeways to connect the region and facilitate bicycle travel. Policies included in the RTP and SCS include addressing bicyclist and pedestrian safety, increasing bicycle and pedestrian mode share, encouraging local active transportation plans, and improving air quality in the region.

### **Los Angeles County Metropolitan Transportation Authority Bicycle Transportation Strategic Plan, 2006**

The *LA Metro Bicycle Transportation Strategic Plan* was prepared with the Bicycle Transportation Account Compliance Document to replace the 1996 sub-regional bicycle master plans. The purpose of the Strategic Plan is to guide the cities, County and transit agencies in planning bicycle facilities. The Plan identifies 167 bike-transit hubs throughout the County, which include numerous transit services, high activity levels and opportunities for bicycle access improvements. Gaps in the inter-jurisdictional bikeway network are identified in the Plan with the intention of guiding local planners on where connectivity to other jurisdictions is necessary. The recently constructed portion of the West Santa Ana Branch Trail in Paramount was identified in the Plan as a gap in the inter-jurisdictional bikeway network.

### **B.3. State**

#### **California SB 99 (Active Transportation Program), 2013**

Previously, the California Bicycle Transportation Account (1994) was one of the most important pieces of bicycle-related legislation and required all cities and counties to adopt a bicycle master plan in order to be eligible to apply for Bicycle Transportation Account (BTA) funding. In September 2013, Governor Jerry Brown signed legislation creating the Active Transportation Program (ATP), consolidating existing federal and state transportation programs: the Transportation Alternatives Program (TAP) (includes the Transportation Enhancements Program and Recreational Trails Program) Bicycle Transportation Account (BTA), and Safe Routes to School (SR2S). In August 2014, the CTC approved \$221 million in bicycle and pedestrian-related projects statewide.

The purpose of the ATP is to encourage increased use of active modes of transportation, with the goal of increasing in biking and walking trips, increasing safety and mobility for all users, and helping to achieve greenhouse gas reduction goals. In addition, the Active Transportation Program is intended to enhance public health, ensure an appropriate share of benefits to disadvantaged communities, and promote projects that benefit many active transportation users.

#### **California Government Code §65302 (Complete Streets), 2008**

California Assembly Bill (AB) 1358, also known as the Complete Streets Bill, amended the California Government Code §65302 to require that all major revisions to a city or county's Circulation Element include provisions for the accommodation of all roadway users including bicyclists and pedestrians. Accommodations include bikeways, sidewalks, crosswalks, and curb extensions.

#### **California SB 375 – Sustainable Communities, 2008**

Senate Bill (SB) 375 is intended to compliment Assembly Bill (AB) 32: The Global Warming Solutions Act of 2006 and encourage local governments to reduce emissions through improved planning. Under SB 375, the California Air Resources Board (CARB) is required to establish targets for 2020 and 2035 for each region covered by one of the State's 18 metropolitan planning organizations (MPOs). Each of California's MPOs will then prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its greenhouse gas (GHG) reduction target through integrated land use, housing, and transportation planning. One way to help meet the emissions targets is to increase the bicycle mode share by substituting bicycle trips for automobile trips.

#### **Deputy Directive 64 & Traffic Operations Policy Directive 09-06, 2008 & 2009**

The California Department of Transportation (Caltrans) adopted two policies in recent years that are relevant to bicycle planning initiatives, Deputy Directive 64 and Traffic Operations Policy Directive 09-06. Similar to AB 1358, Deputy Directive 64 (DD-64-R1) sets forth that Caltrans address the "safety and mobility needs of bicyclists, pedestrians, and transit users in all projects, regardless of funding." Traffic Operations Policy Directive 09-06 is designed to ensure the provision of bicycle and motorcycle detection on all new and modified approaches to traffic-actuated signals in the state of California.

### **California Transportation Plan, 2006**

The California Transportation Plan 2025 seeks to provide for mobility and accessibility of people, goods, services, and information throughout California. It encourages consideration of bicycle and pedestrian facilities in capacity improvement projects, and promotes integration of active transportation into modeling and projection efforts.

The Plan also speaks to the public health benefits of active transportation, urging better education of youth on personal health and air quality impacts of making trips by bicycle or on foot.

### **Assembly Bill (AB) 1193, 2014**

Assembly Bill (AB) 1193 adopted three key reforms to improve local bikeway design and construction. This bill requires Caltrans to create engineering standards for protected bike lanes and enables jurisdictions to build cycletracks without consulting Caltrans. This bill frees communities from having bikeway designs compliant solely with the California Highway Design Manual if designs are based on standards crafted by a national association of public agency transportation officials. The bill also requires Caltrans to develop design standards for cycle tracks for inclusion into the Highway Design Manual by 2016.

### **Assembly Bill (AB) 2245, 2014**

AB 2245, signed by Governor Jerry Brown in 2014, streamlines California Environmental Quality Act (CEQA) reviews for bike lane projects. Planners are no longer required to conduct environmental impact reports (EIRs) for these projects, which are currently required under CEQA. Under AB 2245, cities and counties are required to prepare a traffic and safety study of the proposed bicycle lane project, file a CEQA-exemption notice with the state and County, and conduct public hearings to discuss the project's impact.

### **Senate Bill (SB) 1183, 2014**

Senate Bill 1183 allows jurisdictions to propose a small vehicle registration fee on their local ballot to fund bike trails and paths on park district lands. The fee must be no more than five dollars and requires approval from at least 2/3 of local voters.

### **Senate Bill (SB) 743, 2013**

SB 743 removes Level of Service (LOS), a measure of car traffic congestion, from the methods used to analyze environmental impacts under the California Environmental Quality Act (CEQA). CEQA requires all new projects to analyze potential environmental impacts. CEQA requires mitigation when projects cause traffic delay, despite the roadway conditions improvements bicycle and pedestrian projects provide for other users. Under SB 743, Vehicle Miles Traveled (VMT) will become mandatory in 2016 as a CEQA impact. Once regulations are updated, projects will perform better if they reduce vehicle miles travelled, instead of being knocked for reducing motor vehicle capacity, which greatly benefits bikeway and road diet projects.

## B.4. Federal

### **USDOT Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations, 2010**

Under this policy statement, every transportation agency, including the federal DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. The policy also encourages agencies to “go beyond minimum standards to provide safe and convenient facilities for these modes,” citing the health, safety, environmental, transportation, and quality of life benefits that active transportation offers to individuals and communities alike.

### **USDOT Bicycle and Pedestrian Safety Initiative, 2014**

In September 2014, the USDOT announced a new bicycle and pedestrian safety campaign. The purpose of this 18-month campaign is to improve practices and policies and promote design improvements. The campaign will begin with road safety assessments in every state and result in resources to aid communities in building safer streets for bicyclists, pedestrians and transit users. The FHWA’s proven pedestrian-related countermeasures include:

- ◆ Medians and pedestrian crossing islands in urban and suburban areas
- ◆ Pedestrian hybrid beacons
- ◆ Road diets

### **FHWA Office of Safety Proven Safety Countermeasures Initiative, 2012**

Improving safety is a top priority for USDOT, and to this end they have published guidance on the implementation of safety countermeasures intended to reduce injuries and fatalities on roadways. The nine countermeasures USDOT has endorsed and encourages all communities to consider are:

- ◆ Roundabouts
- ◆ Corridor access management
- ◆ Backplates with reflective borders
- ◆ Longitudinal rumble strips and stripes on two-lane roads
- ◆ Enhanced delineation and friction for horizontal curves
- ◆ Safety edge
- ◆ Medians and pedestrian crossing islands in urban and suburban areas
- ◆ Pedestrian hybrid beacons
- ◆ Road diet

Each countermeasure has a fact sheet that explains design guidance, detailed descriptions, and in-depth evaluations of the features.

### **Road Diet**

A road diet involves redistributing excess road width to create bike lanes, pedestrian refuge islands, parking, or turn lanes. They have multiple safety and operational benefits for all modes of transportation, including:

- ◆ Decreasing the number or width of travel lanes bicyclists and pedestrians must cross, thereby reducing the occurrence and severity of multiple-threat crashes (where one vehicle stops for a pedestrian, but the motorist in the next lane does not)
- ◆ Improving safety for bicyclists when bike lanes are added, and providing additional buffer space between pedestrians and vehicles
- ◆ Improving speed limit compliance and decreasing crash severity when crashes do occur

The most common road diet involves converting a four-lane roadway to three lanes, including a center turn lane, and adding bike lanes and/or on-street parking. This can be a cost-effective improvement when a road diet is coordinated with regularly scheduled repaving or restriping projects.

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## Appendix C. Existing Conditions Background

### C.1. Land Use Maps

Land use maps from the General Plans for Bellflower and Paramount are shown on the following pages in Figure C-1 and Figure C-2 respectively.

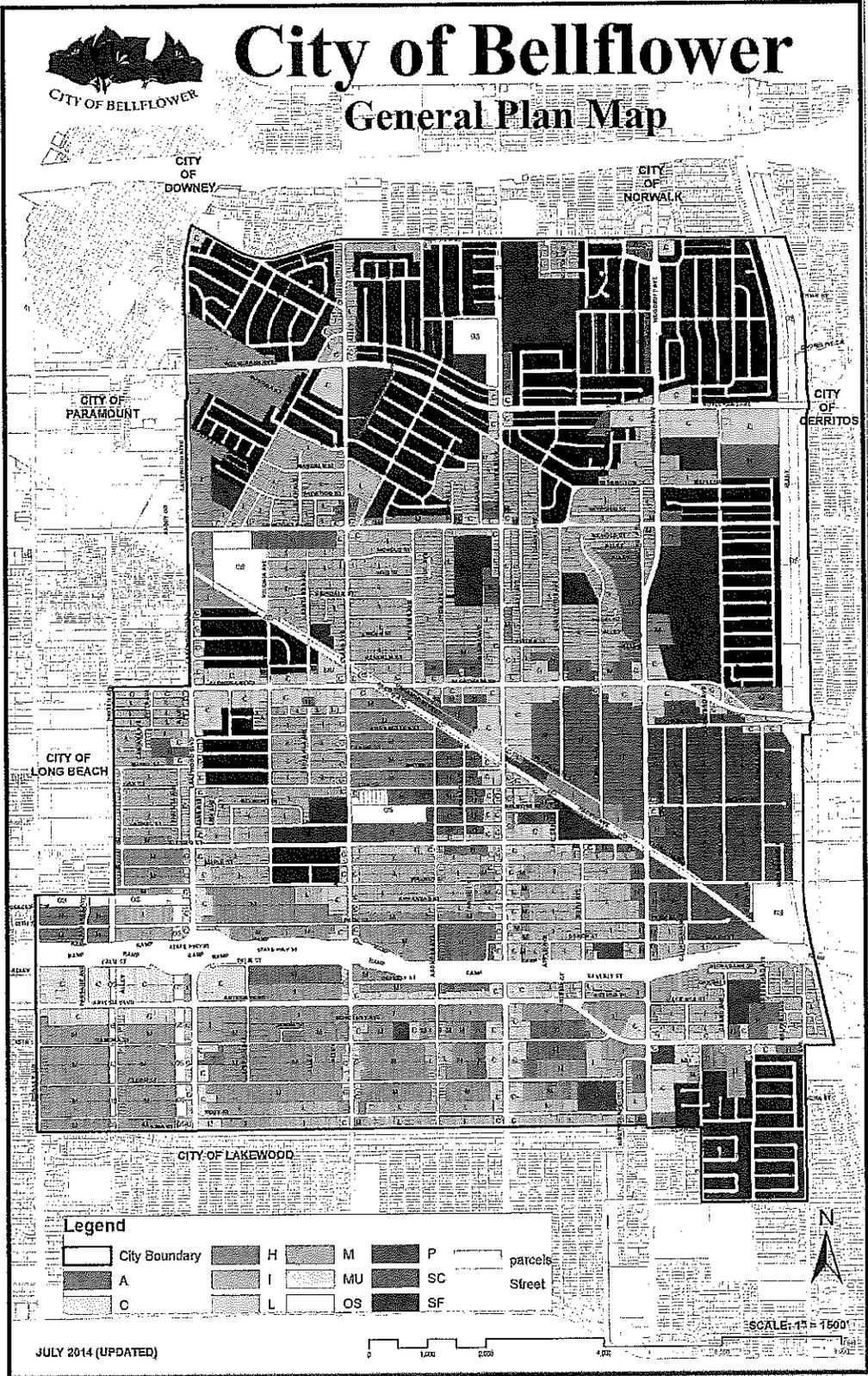


Figure C-1: Bellflower Land Use Map

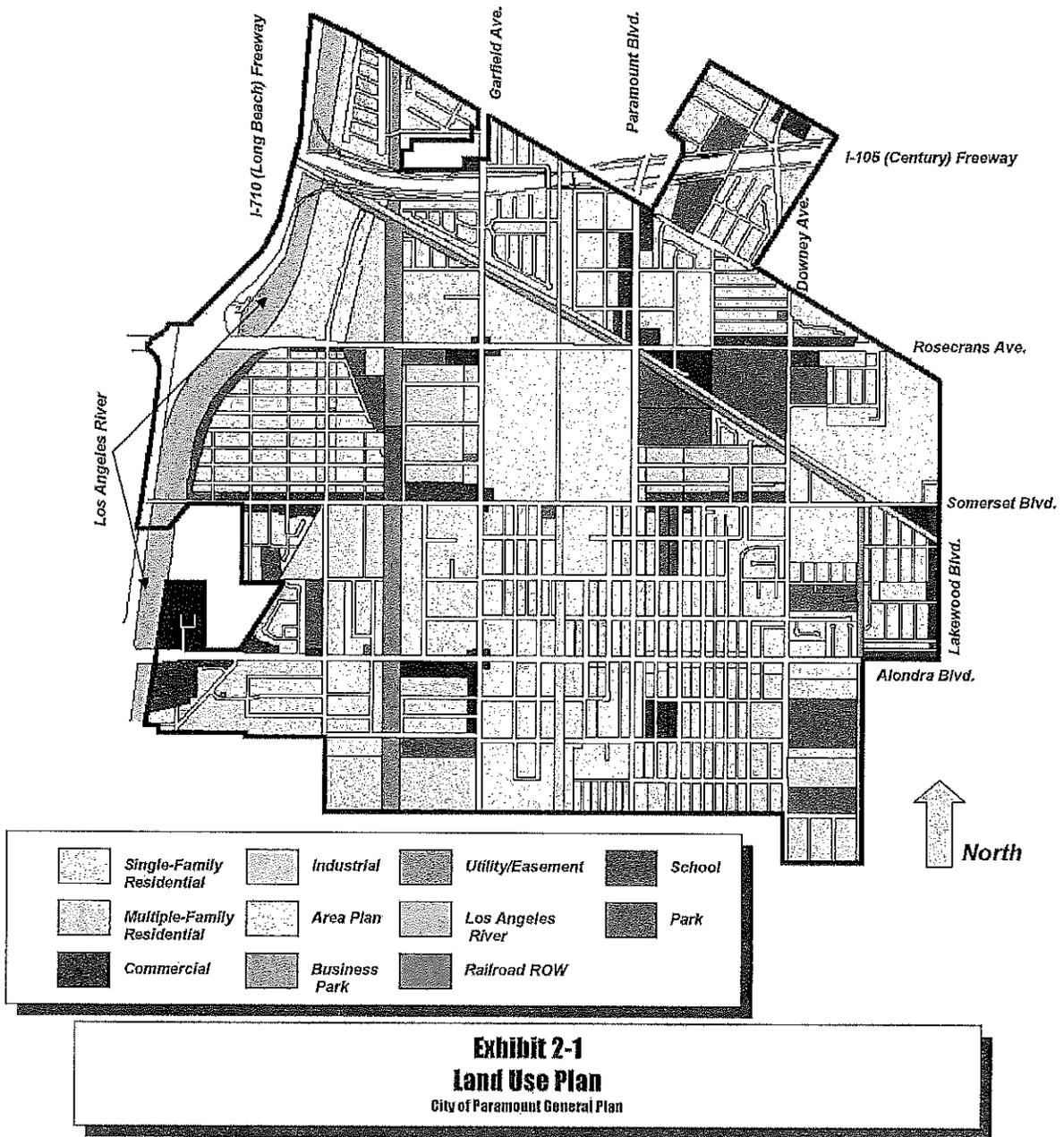
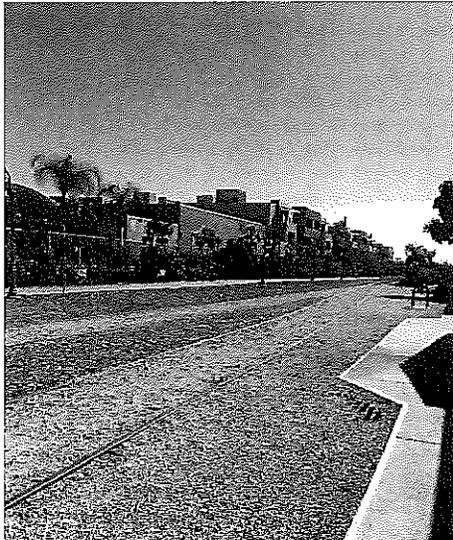


Figure C-2: Paramount Land Use Map

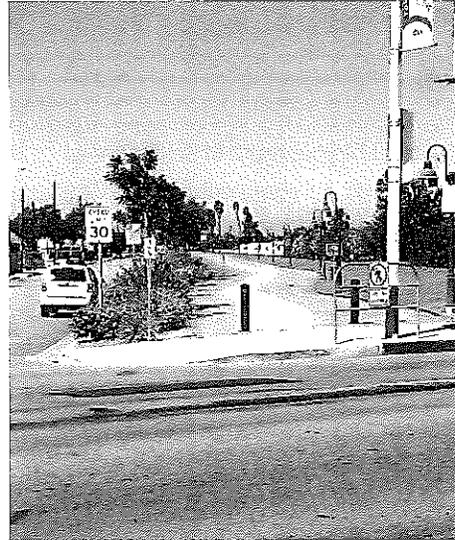
## C.2. Existing Bikeways Detail

### Bellflower Pedestrian and Bicycle Trail

The Bellflower Pedestrian and Bicycle Trail, opened in 2009, makes use of the Pacific Electric Railroad – West Santa Ana Branch corridor. The first segment spanned 2.3 miles from Lakewood Boulevard to Ruth R. Caruthers Park. This stretch of shared-use path was recently extended into Paramount, ending at Somerset Boulevard. The trail currently does not have regional connections and only connects Bellflower and Paramount, although a Class III bike route links the southeast end of the trail to the San Gabriel River Trail.



*Class I trail along the Pacific Electric Railroad/West Santa Ana Branch.*



*WSAB trail crossing Bellflower Boulevard poses some difficulties for pedestrians*

### Los Angeles River Bicycle Path

The county-owned Los Angeles River Bicycle Path in its entirety is a 52-mile long stretch from Canoga Park to the river's terminus at the Pacific Ocean in Long Beach. The river and path run along the western side of Paramount for a total of 2.2 miles. There is currently a gap in the path between South Atlantic Boulevard in Vernon and the Interstate 5 overpass in Los Angeles, therefore bicyclists must ride on-street for a few miles.

**San Gabriel River Trail**

The San Gabriel River Trail, owned by the County of Los Angeles, exists for 1.6 miles adjacent to the eastern city limit of Bellflower, extending to the north and south.. The river trail is a total of 28 miles long, from the base of the San Gabriel Mountains to Seal Beach.



*The San Gabriel River Trail is an important facility for commuter and recreational bicyclists*

**Allington Street**

The Allington Street bicycle route in Bellflower is 0.3 miles long, providing a connection to the City of Lakewood.

**Woodruff Avenue**

A short 0.1-mile segment of bike lanes runs along Woodruff Avenue from the Bellflower eastern city limits to Rose Street, connecting to Lakewood at the south.

**Flora Vista Street and Ripon Avenue**

The bicycle routes on Ripon Avenue and Flora Vista Street connect the Bellflower Pedestrian and Bicycle Trail to the San Gabriel River Trail, directing bicyclists around Ruth R. Caruthers Park.

**C.3. Past Bicycle- and Pedestrian-Related Expenditures**

Recent investments in bicycle infrastructure in Bellflower and Paramount have been made for the 2.9-mile stretch of the West Santa Ana Branch Corridor. Table C-1 displays the costs of the Class I trail in Bellflower.

Table C-1: Bellflower Class I Shared-use Path Expenditures

Type	FY 2012-2013	FY 2013-2014	FY 2014-2015
Personnel	\$157,200	\$153,300	\$163,300
Maintenance and Operations	\$20,000	\$30,000	\$35,000
<b>Total</b>	<b>\$177,200</b>	<b>\$183,300</b>	<b>\$198,300</b>

## C.4. Attractors and Generators

### Schools

#### Bellflower Schools:

- ◆ Adventist Union Elementary
- ◆ Albert Baxter Elementary
- ◆ Bellflower Christian Elementary
- ◆ Bellflower High
- ◆ Las Flores Elementary
- ◆ Pace Elementary
- ◆ Pyle Elementary
- ◆ Ramona Elementary
- ◆ Somerset High
- ◆ St. Dominic Savio Elementary
- ◆ Washington Elementary
- ◆ Woodruff Elementary

#### Paramount Schools:

- ◆ Alondra Intermediate
- ◆ Keppel Elementary
- ◆ Leona Jackson Elementary
- ◆ Los Cerritos Elementary
- ◆ Mokler Elementary
- ◆ Our Lady of the Rosary Catholic School
- ◆ Paramount High
- ◆ Paramount Park School
- ◆ Roosevelt Elementary
- ◆ Tanner Elementary
- ◆ Wesley Gaines Elementary
- ◆ Wirtz Elementary
- ◆ Zamboni Middle

### Parks

#### Bellflower Parks:

- ◆ Byron Zinn Park
- ◆ Caruthers Park
- ◆ Caruthers Park North
- ◆ Constitution Park
- ◆ Future Butterfly Garden
- ◆ Future Dog Park
- ◆ Library Gardens

- ◆ Palm Street Park
- ◆ Pirate Park
- ◆ Riverview Park
- ◆ Simms Park
- ◆ Thompson Park

#### Paramount Parks:

- ◆ All American Park
- ◆ Paramount Park
- ◆ Progress Park
- ◆ Ralph C. Dills Park
- ◆ Salud Park
- ◆ Spane Park
- ◆ Village Park

## Appendix D. Needs Analysis Background

### D.1. Community Survey Results

A community survey was available online and in hard copies at outreach events from November to the end of December in 2014. The purpose of this survey was to gather input on bicycling in Bellflower and Paramount to inform the development of the Bike and Trail Plan. Questions included how often people bike, where they go or would like to go, why they bike and reasons that may deter them from biking.

#### Respondent Demographics

**Figure D-1** displays the origins of survey respondents. While a majority of the respondents chose the survey for the city they lived in, 18 percent of the Bellflower survey respondents were from Paramount and 23 percent were from other cities; 4 percent of the Paramount survey respondents were from Bellflower and 14 percent were from other cities.

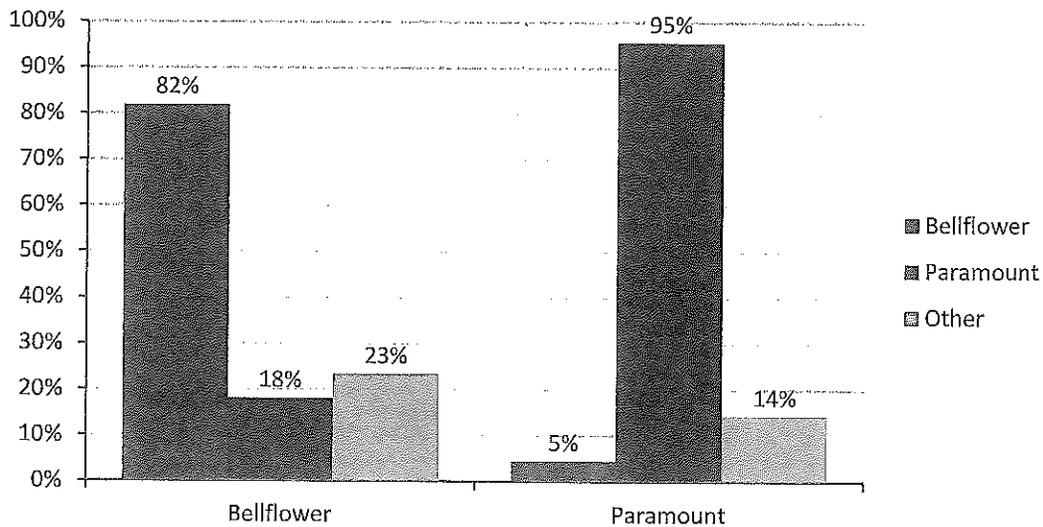


Figure D-1: Respondent Origins

As shown in **Figure D-3** and **Figure D-2**, 62 percent of Bellflower survey respondents were female and 38 percent were male, with a majority between the ages of 26 and 35 (24.3 percent), 36 and 45 (22.6 percent), and over 55 (23.5 percent). Paramount survey respondents were also mostly female (77%), but slightly younger with the majority of people between the ages of 26 and 35 (28.9 percent) and 36 and 45 (29.7 percent).

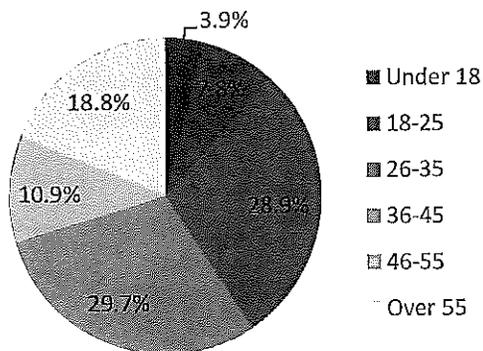


Figure D-2: Paramount Survey Respondents

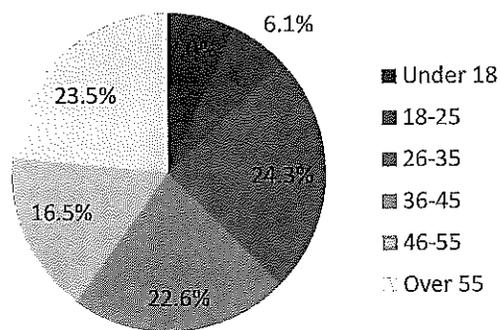


Figure D-3: Bellflower Survey Respondents

### Respondent Travel Mode Characteristics

As shown in **Figure D-4**, the majority of respondents bicycle a few times per month. Bicycle ridership numbers are roughly the same in both Bellflower and Paramount.

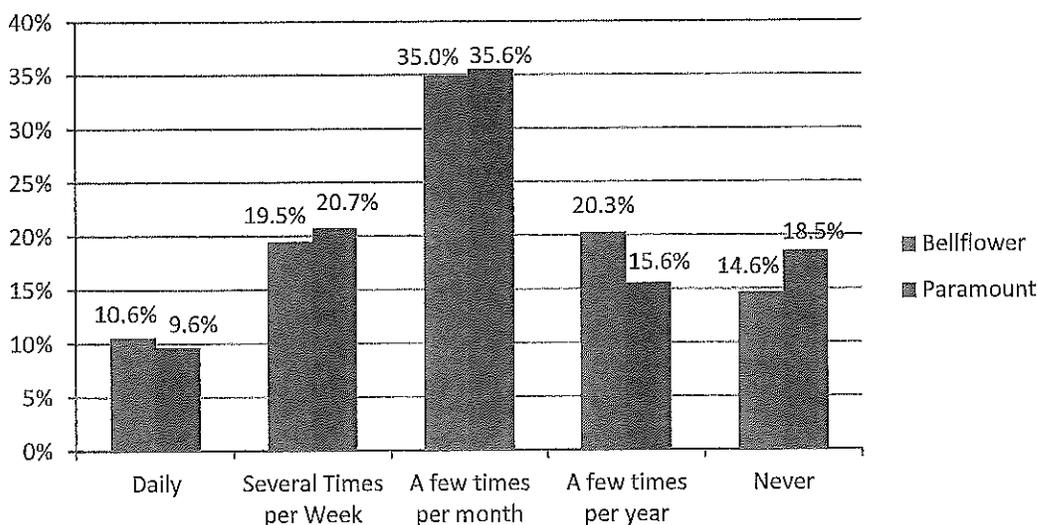


Figure D-4: Ridership in Bellflower and Paramount

Respondents reported that they use the Bellflower Bike the most out of the three nearest shared use paths. In Paramount, respondents also reported that they often use the LA River bike path. Results for the usage of each nearby path are shown in **Figure D-5**.

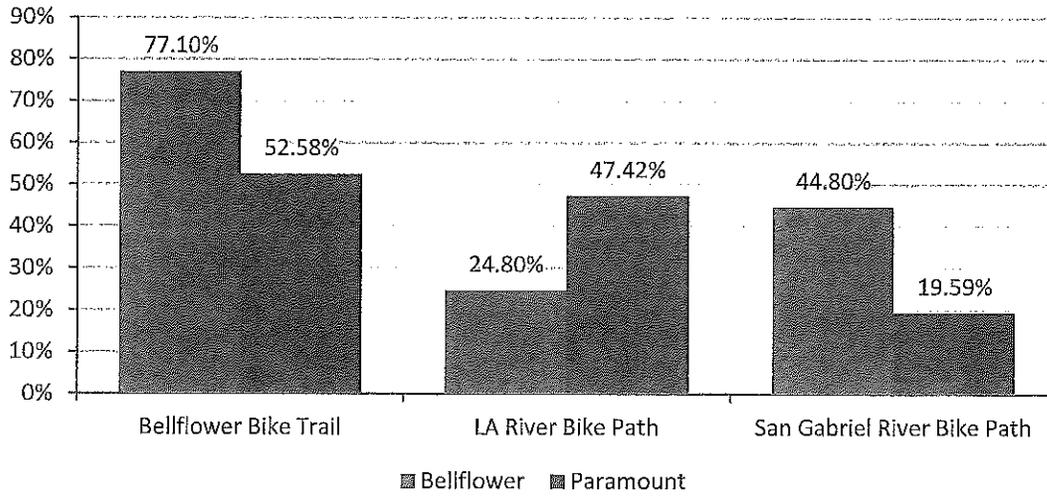


Figure D-5: Shared Use Path Usage

When asked how they currently use the shared use paths nearby, the majority of respondents said that they use them for recreation, both by bicycling and walking. Respondents also said that they often use the paths for bicycle transportation and running/jogging. All responses are shown in **Figure D-6**.

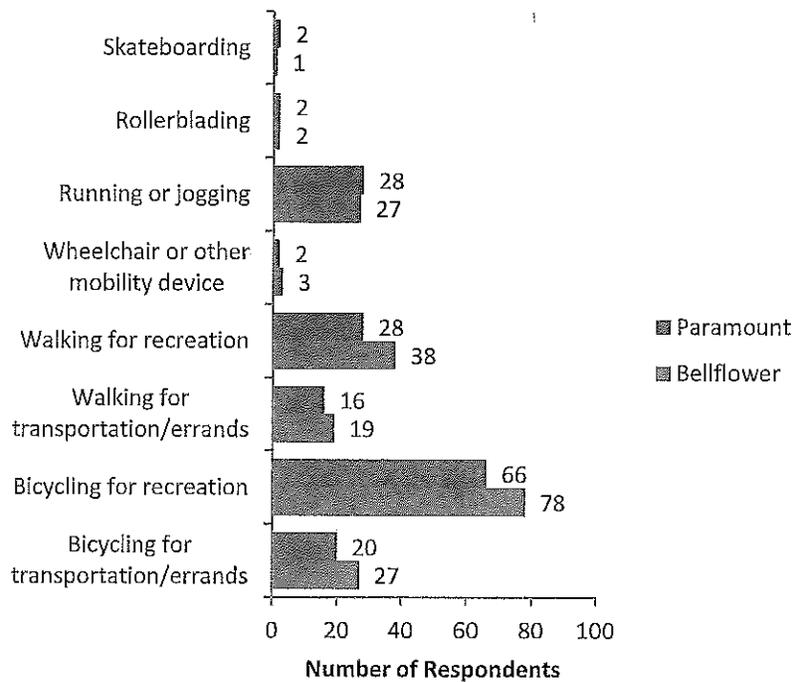


Figure D-6: How the Shared Use Paths are Used

### Barriers to Bicycling

The survey asked respondents to note what prevents them from bicycling more often and what influences their decisions to bicycle. Several themes emerged from the responses. First of all, survey respondents from both cities identified the importance of separation from motor vehicle traffic as they cited a lack of safe bikeways as a major factor that discouraged bicycling more frequently. In addition, a lack of knowledge of safe routes to destinations also served as a barrier to riding.

Secondly, the behavior of motorists and interactions with vehicles while riding discourages people from bicycling. Aggressive drivers, as well as a lack of comfort in sharing the road with cars, were noted as major factors that influences ridership in the area. A breakdown of conditions that discourage bicycling is shown in

**Figure D-7.**

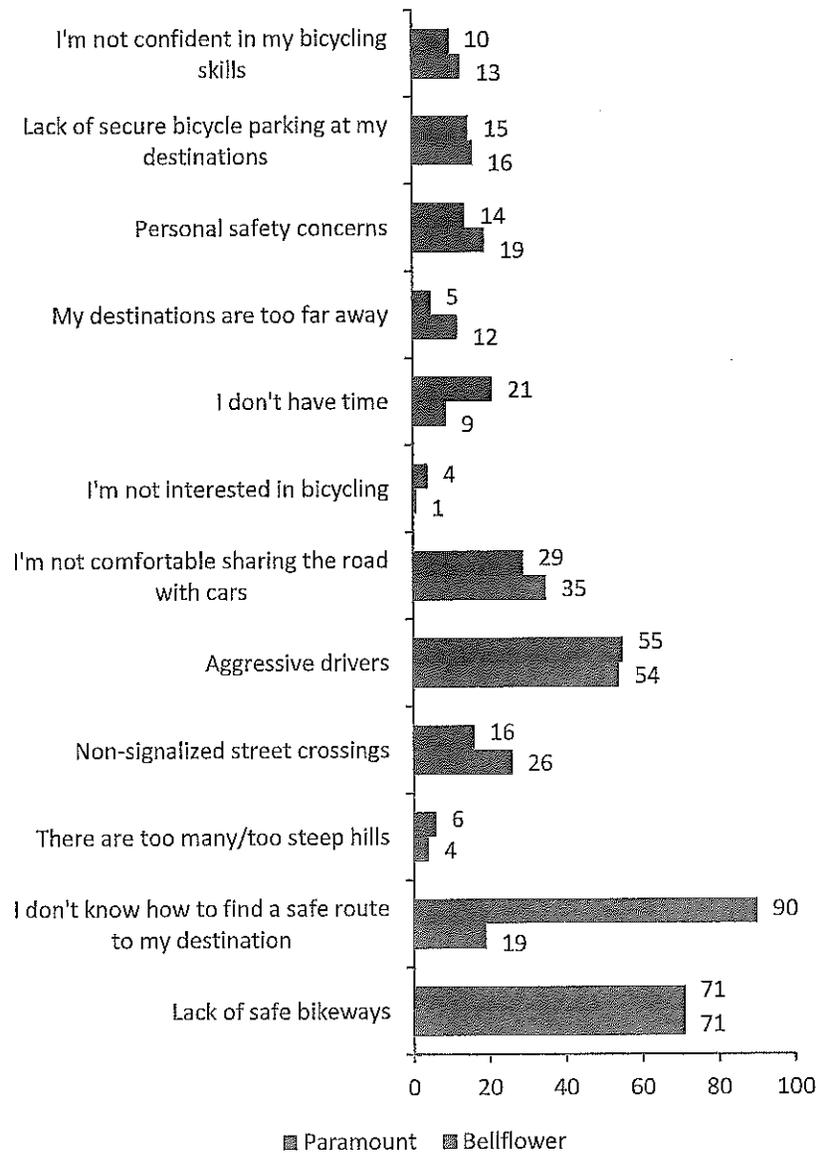


Figure D-7: Conditions that Discourage Bicycling

### Bicycle Infrastructure and Programs

The survey invited participants to indicate where they would like to see new bicycle facilities and asked them to rank their interest in a number of bicycle programs.

As displayed in **Figure D-8**, parks were listed as the most desired location to reach by bicycle, followed by grocery stores, nearby bikeways, and work. Respondents in Paramount said that it was also important to be able to bike to schools.

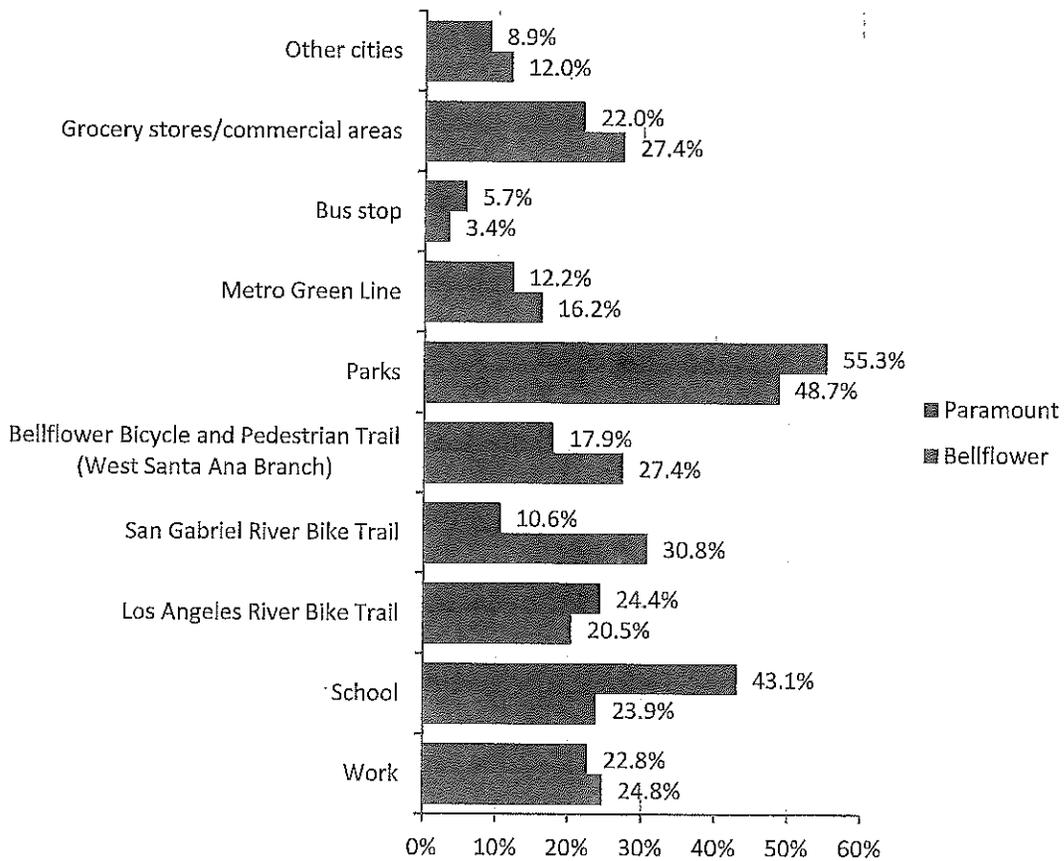


Figure D-8: Desired Destinations to Reach by Bicycle

As shown in **Figure D-9**, the vast majority of respondents stated that they would ride to transit if safe and secure bicycle parking was available. When asked where new or improved bicycle parking facilities would have the greatest impact, transit was one of the most common responses. Responses also indicated commercial areas, schools, parks, libraries and bike trails were in need of new or improved bicycle parking facilities.

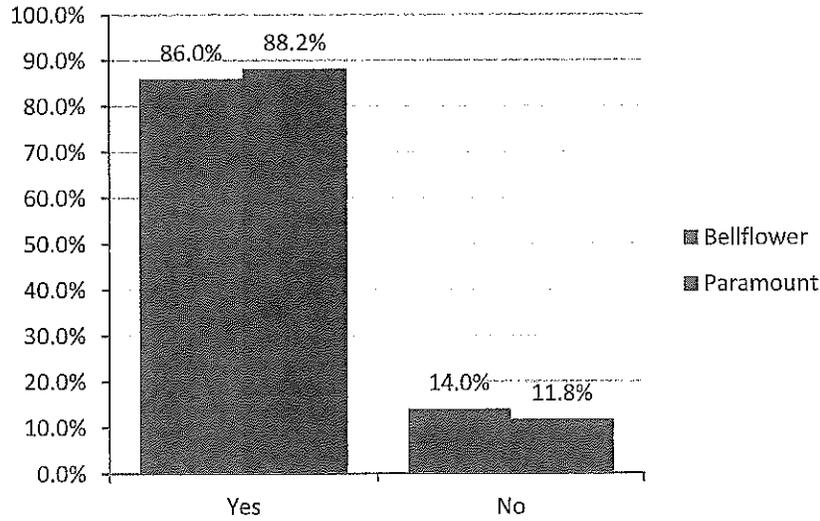


Figure D-9: Interest in Riding to Transit with Provision of Bicycle Parking

Finally, respondents had the opportunity to note where they would like to see general bicycling improvements. Identified locations include:

- ◆ Paramount Blvd
- ◆ Alondra Blvd
- ◆ Downey Blvd
- ◆ Rosecrans Ave
- ◆ Bellflower Blvd
- ◆ Woodruff Ave
- ◆ Artesia Blvd
- ◆ Lakewood Blvd
- ◆ Somerset Blvd
- ◆ Orange Ave
- ◆ Atlantic Blvd
- ◆ Cherry Ave
- ◆ The intersection of Clark Ave / Flower St
- ◆ The intersection of Clark Ave/Alondra Blvd
- ◆ The intersection of Garfield Ave / Alondra Blvd

## D.2. Collision Analysis

This report uses the Statewide Integrated Traffic Reporting System (SWITRS) to collect data on bicycle- and pedestrian-involved collisions. This data was analyzed for both Bellflower and Paramount as a combined dataset.

### Bicycle-Involved Collisions

From 2008 to 2012, there were 223 bicycle-involved collisions. The year 2012 had the highest number of collisions, though the distribution between the years was relatively even. The highest number of bicycle-involved collisions occurred on weekdays. Most involved in bicycle-related collisions were under the age of 18—41 percent of the victims and 20 percent of all parties involved.

Table D-1 displays the roadways with the most bicycle-involved collisions.

Table D-1: Roadways with the Most Bicycle-Involved Collisions

Roadway	Number of Collisions
Alondra Boulevard	24
Rosecrans Avenue	18
Bellflower Boulevard	16
Woodruff Avenue	15
Downey Avenue	14
Artesia Boulevard	13
Somerset Boulevard	13
Clarke Avenue	12
Flower Street	10
Paramount Boulevard	10

The intersections that had the most bicycle-involved collisions were the intersections of Alondra Boulevard at Downey Avenue (five collisions) and Alondra Boulevard at Woodruff Avenue (four collisions).

Bicyclists were at fault in 74 percent of bicycle-involved collisions. The most common reasons for these collisions were the bicyclists riding on the wrong side of the road (75 percent) and violating the automobile right-of-way (10 percent). Although collision reports do not include information on a bicyclists' motivation for their travel behavior, wrong-way riding and automobile right-of-way violations are common in locations where bicycle facilities are not present, incomplete, or where there is insufficient guidance on where bicyclists should ride. These violations may also indicate a need for bicyclist education on how to properly use on-street bicycle facilities, and when to yield to other road users.

The movements of the parties preceding the collisions are listed in Table D-2. The most common movement of both bicyclists and drivers was proceeding straight.

Table D-2: Movements Preceding Bicycle Collision

Movement	Bicyclist	Driver
Not stated	1	1
Stopped	5	11
Proceeding straight	174	91
Making right turn	7	68
Making left turn	3	27
Making u-turn	0	
Backing	0	2
Slowing/stopping	0	3
Changing lanes	2	0
Entering traffic	7	13
Other unsafe turning	7	0
Crossed into opposing lane	1	0
Parked	0	4
Traveling wrong way	14	2
Other	4	0

Bicyclists riding on the wrong side of the road were most frequently at fault for collisions on these roadways:

- ◆ Alondra Boulevard: 13 collisions
- ◆ Bellflower Boulevard: 11 collisions
- ◆ Downey Avenue: 11 collisions
- ◆ Rosecrans Avenue: 10 collisions

These roadways are four-lane arterials that generally have high volumes of traffic. This may indicate that it is difficult for bicyclists to cross, therefore they ride on the wrong side of the road.

The roadways on which bicyclists most frequently violated the automobile right-of-way, resulting in collisions, are Bellflower Boulevard (2 collisions) and Mayne Street (2 collisions).

The high number of bicyclists at fault in the bicycle-involved collisions may indicate the need for bicyclist education programs.

Of the 223 bicycle-involved collisions, only 10 resulted in severe injuries and there were no fatalities. All of the collisions resulted in some sort of injury, whether mild or severe. Table D-3 and Figure D-10 show the breakdown of the severity of bicycle-involved collisions.

Table D-3: Bicycle Collision Severity

Collision Severity	Count
Fatal	0
Severe Injury	10
Other Visible Injury	102
Complaint of Pain	111
<b>Total</b>	<b>223</b>

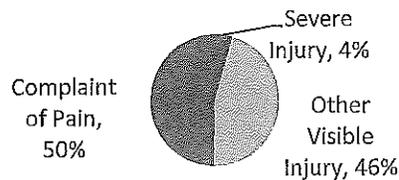


Figure D-10: Bicycle-Involved Collision Severity

## Pedestrian-Involved Collisions

From 2008 to 2012, there were a total of 243 pedestrian-involved collisions. The year 2012 had the highest number of collisions, though the distribution between the years was relatively even. The highest number of pedestrian-involved collisions occurred on weekdays. Most involved in bicycle-related collisions were under the age of 18, four percent of the victims and 22 percent of all parties involved.

Table D-4 displays the ten roadways with the highest number of pedestrian-involved collisions. The intersection with the most pedestrian-involved collisions is Woodruff Avenue and Flora Vista Street (four collisions).

Table D-4: Roadways with the Most Pedestrian-Involved Collisions

Roadway	Number of Collisions
Bellflower Boulevard	18
Rosecrans Avenue	17
Somerset Boulevard	17
Alondra Boulevard	16
Artesia Boulevard	15
Paramount Boulevard	15
Clark Avenue	15
Downey Avenue	12
Woodruff Avenue	11
Lakewood Boulevard (SR 19)	11

The most common reasons for pedestrian-involved collisions were pedestrian violations (40 percent) and motorists violating the pedestrian right-of-way (29 percent). Pedestrians were at fault in 39 percent of these collisions.

The movements of the parties preceding the pedestrian collisions are listed in Table D-5. The most common movement for both bicyclists and pedestrians was proceeding straight.

Table D-5: Movements Preceding Pedestrian Collision

Movement	Pedestrian	Driver
Not Stated	68	4
Stopped	5	4
Proceeding Straight	113	138
Making Right Turn	3	34
Making Left Turn	1	40
Making U-Turn	0	2
Backing	1	10
Slowing/Stopping	0	3
Changing Lanes	0	1
Entering Traffic	20	8
Other Unsafe Turning	0	2
Crossed into Opposing Lane	1	0
Parked	0	0
Other	57	4

The roadways on which pedestrians most frequently were at fault for pedestrian violations are:

- ◆ Rosecrans Avenue: 10 collisions
- ◆ Somerset Boulevard: 9 collisions
- ◆ Clark Avenue: 7 collisions
- ◆ Artesia Boulevard: 7 collisions

The roadways on which drivers most frequently violated the pedestrian right-of-way, resulting in collisions, are:

- ◆ Rosecrans Avenue: 11 collisions
- ◆ Somerset Boulevard: 9 collisions
- ◆ Artesia Boulevard: 9 collisions

Of the 243 pedestrian-involved collisions, 10 were fatal (4 percent) and 31 resulted in severe injuries (13 percent).

Table D-6 and Figure D-11 show the numbers and percentages of collision severity.

Table D-6: Pedestrian Collision Severity

Collision Severity	Count
Fatal	10
Severe Injury	31
Other Visible Injury	82
Complaint of Pain	120
<b>Total</b>	<b>243</b>

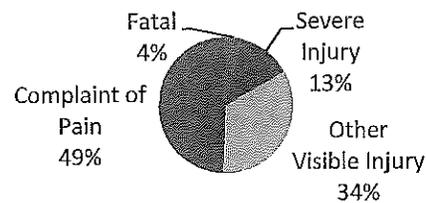


Figure D-11: Pedestrian-Involved Collision Severity

## Appendix E. Opportunities

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Based on preliminary field investigations, the project team identified opportunities for potential improvements, displayed in Figure E-1. These opportunities were refined and revised into the proposed bikeway network.

### E.1. Gateways

Gateways create a sense of place, marking the edge of a city, community, or other geographic feature. They can be simple, consisting of signs listing the name of the destination, or can be small parks with open space, places to sit, drinking fountains, or other amenities.

Potential gateways are located on or near city limits, providing bicyclists with an enjoyable entrance into each. A total of seven areas were chosen as potential locations for treatments. These treatments may include trail repair and realignment, decorative lighting, landscaping, security improvements, signage and/or public art.

### E.2. Bicycle Boulevards

Bicycle boulevards are generally defined as low-volume, low-speed streets that have been optimized for bicycle travel using treatments such as traffic calming and traffic reduction, signage, pavement markings, and intersection treatments. These treatments allow through-movements for bicyclists while discouraging similar through trips by non-local motorized traffic.

### E.3. Connections to Transit

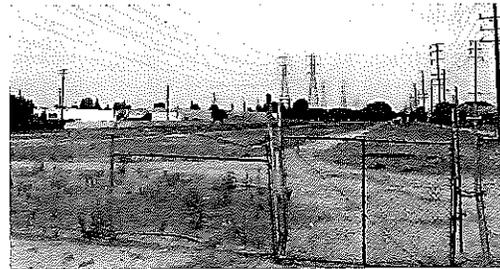
Although there are currently no Metro Green Line stations within Bellflower or Paramount, it is important to provide bicycle connections to the two stations just to the north. As previously described, these stations have bicycle parking accommodations including bicycle racks and lockers. Figure E-1 displays connections from potential bicycle boulevards to the Norwalk and Lakewood Boulevard stations. These connections would have to be constructed outside of city limits and therefore would require coordination with the cities of Downey and Norwalk, and with Metro.

## E.4. Power Line Corridors

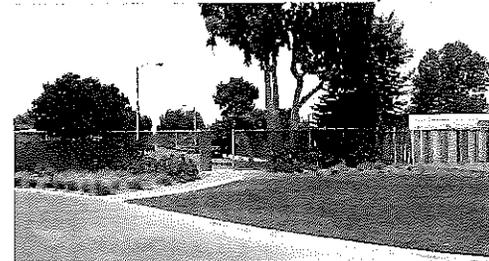
Southern California Edison owns two power line corridors in the study area: one in Paramount that runs north to south between Orange Avenue and Garfield Avenue from the West Santa Ana Branch to the southern city limits, and one in Bellflower north of Park Street that runs from the western city limit to Lakewood Boulevard

The Los Angeles Department of Water and Power owns two additional corridors. One runs south from the intersection of Somerset Boulevard and the West Santa Ana Branch traveling through Paramount, Bellflower, and Lakewood. The other parallels the WSAB ROW from the Los Angeles River to Somerset Boulevard.

The identified power line corridors present opportunities for bicycle accommodations. Acquisition of easements would provide space for multi-use trails and/or crossing treatments for bicycle facilities on intersecting streets. Paramount has recently constructed Salud Park within one corridor, providing much needed neighborhood green space. The City has a lease on the corridor north and south of Salud Park as well, offering additional opportunities for trail connections.



*Power line corridors provide opportunities for multi-use trails and/or other treatments for bicycle facilities*



*Salud Park in Paramount is an example of a successfully utilized power line corridor*

## E.5. Under-capacity Roadways

Figure E-2 highlights roads that are under capacity—currently carrying less traffic than they are designed for. Roadways that are under capacity may be potential candidates for road diets. Road diets are retrofits that make streets safer for all modes of transportation. Excess lanes or width is redistributed to create on-street parking, dedicated turn lanes, bike lanes, wider sidewalks, transit stops, or other features that support travel by all modes of transportation.

The analysis used in Figure E-2 takes into consideration the number of lanes and the average daily traffic (ADT) of the roadways in Bellflower and Paramount. Four-lane roadways are assumed to have a capacity of 20,000 vehicles per day, and six-lane roadways are assumed to have a capacity of 30,000 vehicles per day. According to this analysis, there are numerous four-lane roadways within the cities that are under capacity, listed in Table E-1. Not all identified segments are good candidates for road diets, but each should be evaluated for potential bikeway connections. Further analysis would be required should the city decide to move forward with a road diet, including a motor vehicle level of service (LOS) analysis. It is recognized that not all of these roadways would function appropriately with a lane reduction.

Table E-1: Under-capacity Roadways

Roadway	From	To
Hunsaker Avenue	Paramount southern city limit	Myrrh Street
Orange Avenue	Paramount southern city limit	Rosecrans Avenue
Paramount Boulevard	Alondra Boulevard	Rosecrans Avenue
Downey Avenue	Flower Street	Jefferson Street
Downey Avenue	Somerset Boulevard/Compton Boulevard	Paramount northern City Limit
Clark Avenue	Rose Street	Artesia Boulevard
Clark Avenue	Flower Street	Rosecrans Avenue
Bellflower Boulevard*	Flower Street	Somerset Boulevard/Compton Boulevard
Bellflower Boulevard*	Rosecrans Avenue	Foster Road
Woodruff Avenue	Rose Street	Artesia Boulevard
Woodruff Avenue	Alondra Boulevard	Somerset Boulevard/Compton Boulevard
Palo Verde Avenue	Allington Street	Artesia Boulevard
Artesia Boulevard	Downey Avenue	Bellflower Boulevard
Flower Street	Lakewood Boulevard (SR 19)	Woodruff Avenue
Compton Boulevard/Somerset Boulevard	Orange Avenue	Woodruff Avenue
Rosecrans Avenue	Lakewood Boulevard (SR 19)	Bellflower Boulevard
Foster Road	Lakewood Boulevard (SR 19)	Clark Avenue
Foster Road	Ardis Avenue	Regent View Avenue

\*A detailed traffic analysis has already been completed, and determined Bellflower Boulevard is not a candidate for a road diet.

The results of this analysis are preliminary and require further investigation and engineering evaluation. Bellflower Boulevard has already been further analyzed by the City of Bellflower and it was determined that this is not a candidate for a road diet.

## E.6. West Santa Ana Branch Right-of-way

The West Santa Ana Branch right-of-way runs from northwest to southeast across Paramount and Bellflower. The Bellflower Pedestrian and Bicycle Trail runs from Somerset Boulevard in Paramount to Flora Vista Street in Bellflower, where a Class III bike route provides a connection to the San Gabriel River Trail.

The Bellflower Pedestrian and Bicycle Trail demonstrates the positive community reaction to provision of pedestrian and bicycle facilities. The WSAB ROW offers the opportunity to extend the existing bike trail west to serve the city of Paramount and connect with the Los Angeles River Bicycle Path. Provision of on-street bike facilities would further increase provision of a bicycle network with work, school, and play connections serving the cities of Bellflower and Paramount.

The corridor between Facade Avenue and the Los Angeles River Bicycle Path offers a unique opportunity to construct a trail to bridge the gap between the Los Angeles River Bicycle Path and the existing Bellflower Pedestrian and Bicycle Trail.

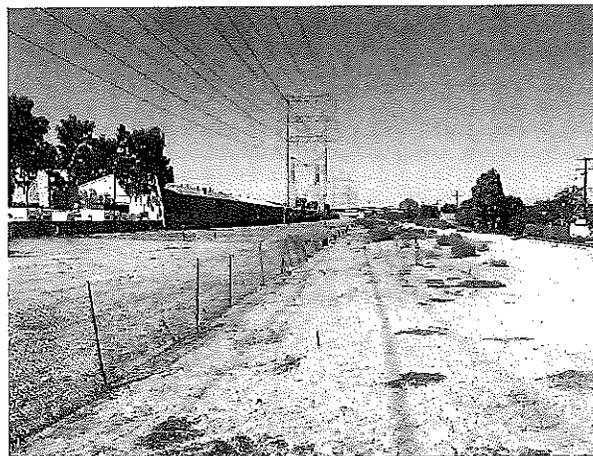
## E.7. West Santa Ana Branch Trailhead

A potential trailhead can be located in Pacific Electric right-of-way where the WSAB ROW meets the Los Angeles River Bicycle Path. The development of the WSAB shared-use path is an important consideration in this plan, and a trailhead will help seamlessly connect the corridor to the regional bike trail network. Features of this trailhead can include landscaping, a playground, additional green space, benches, bicycle parking, and informational kiosks.

## E.8. Additional Treatments

Foster Road is a roadway on the northern border of Bellflower, close to the two Metro Green Line stations. Providing this connection would be key to facilitating access to transit. A two-way cycle track could provide bicyclists with a safe and comfortable way to maneuver this roadway, and should be studied for long-term implementation in partnership with the City of Downey.

A bicycle and pedestrian connection across Salud Park, south of Los Cerritos Elementary School, was identified as needing improvements to accommodate travel across the north end of the park.



*Location of the potential West Santa Ana Branch trailhead in Paramount*

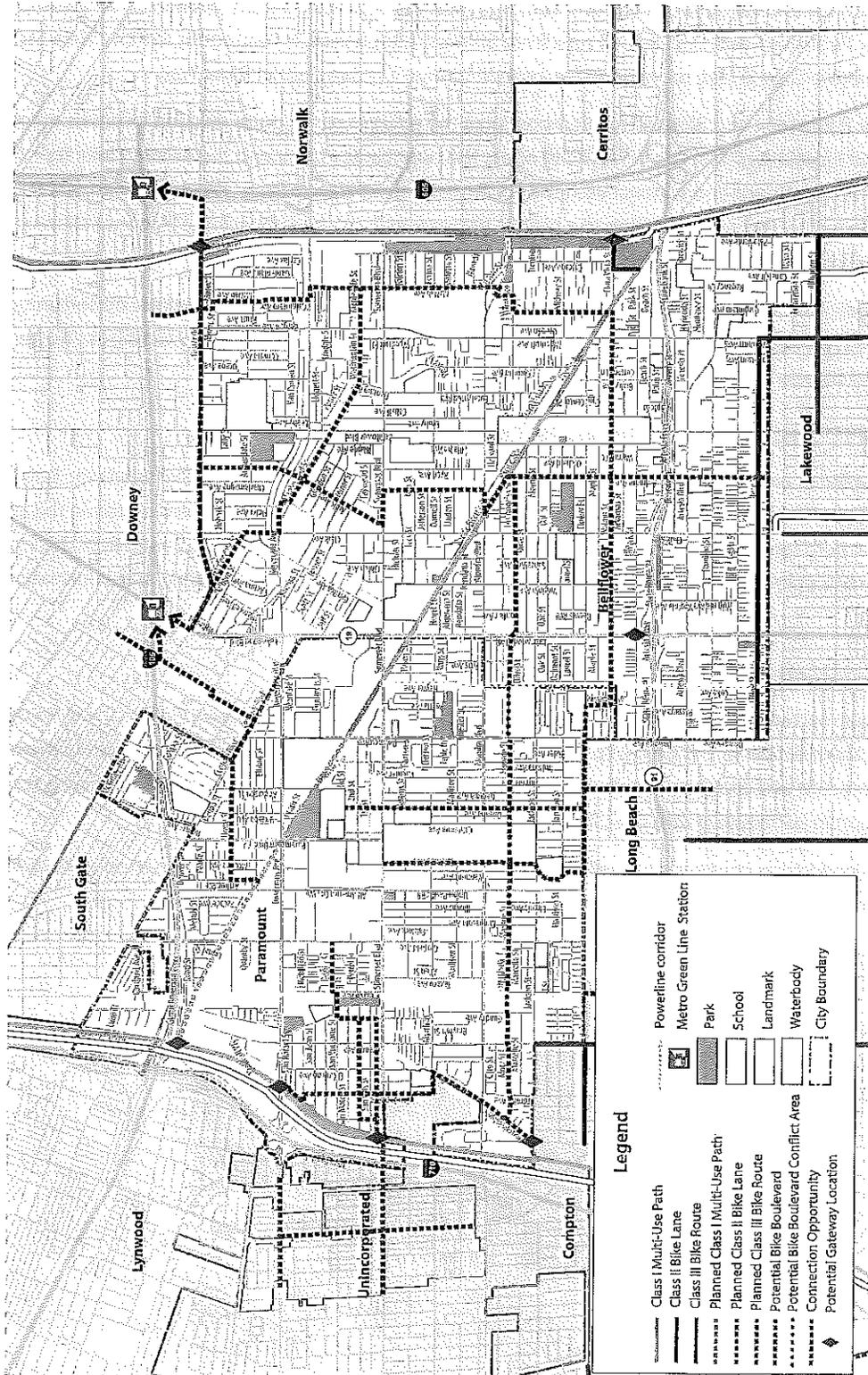


Figure E-1: Bikeway Facility Opportunities

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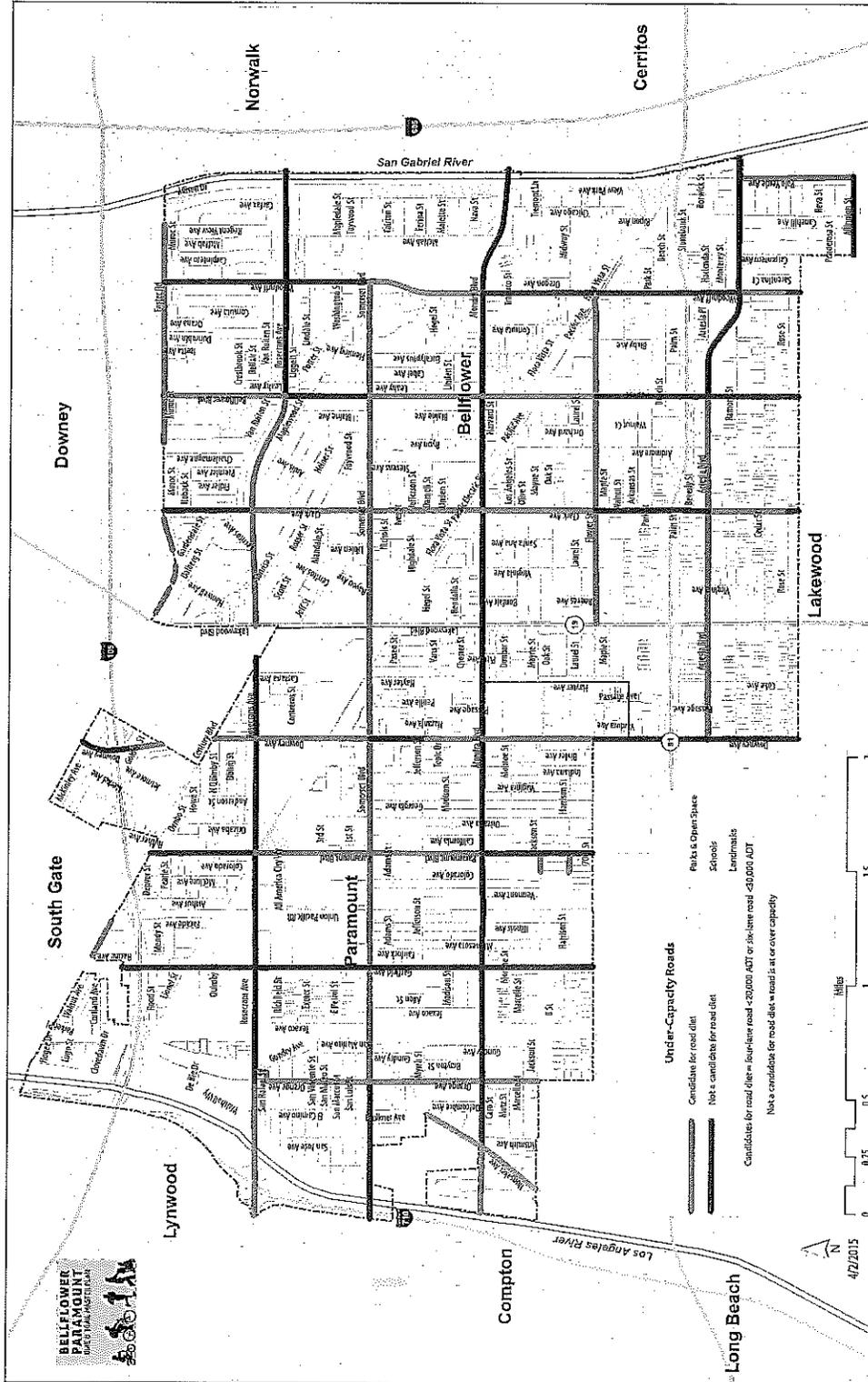


Figure E-2: Under Capacity Roads

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## Appendix F. West Santa Ana Branch Right-of-Way

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The Pacific Electric Railway (PE), or Red Car system, provided transit service throughout Southern California from 1901 to 1961. At its peak, the PE Railway connected cities throughout Los Angeles, Orange, Riverside, and San Bernardino counties. Passenger service operating on the right-of-way running through the cities of Bellflower and Paramount ran south from downtown Los Angeles, along the alignment currently used by the Metro Blue Line, to the Watts Station where the rail line turned southeast to travel along the West Santa Ana Branch to a terminal station in Santa Ana. Passenger service to Santa Ana ceased in 1950 and to Bellflower in 1955.

Now owned by the Los Angeles County Metropolitan Transportation Authority (Metro) and Orange County Transportation Authority (OCTA), the right-of-way is known as the West Santa Ana Branch right-of-way (WSAB ROW) in Los Angeles County and the Pacific Electric right-of-way (PE ROW) in Orange County. The right-of-way extends for 20 miles at a diagonal from the city of Paramount in Los Angeles County to the city of Santa Ana in Orange County. It has been primarily unused since PE Railway service ended in 1961.

Metro purchased the WSAB ROW, along with other former railroad corridors throughout Los Angeles County, for future transportation project use. Measure R, a transportation sales tax measure approved by Los Angeles County voters in 2008, included funding for the "West Santa Ana Branch Transit Corridor Project" as a FY 2020 to FY 2025 project with operation anticipated by 2027.

In 2012, the Southern California Association of Governments (SCAG), in coordination with Metro and OCTA, completed an Alternatives Analysis (AA) study to explore opportunities for connecting Los Angeles and Orange Counties through the reuse of the WSAB ROW/PE ROW. The AA study identified and assessed a wide range of transportation alternatives, and resulted in the recommended use of the right-of-way for a future light rail transit (LRT) system with an integrated shared-use path for bicyclists and pedestrians. The proposed future Bellflower Station is shown in Figure F-1. Community members participating in the AA study process saw the linear bicycle and pedestrian trail adjacent to the future LRT system as linking the communities along the corridor and connecting to existing regional trails.

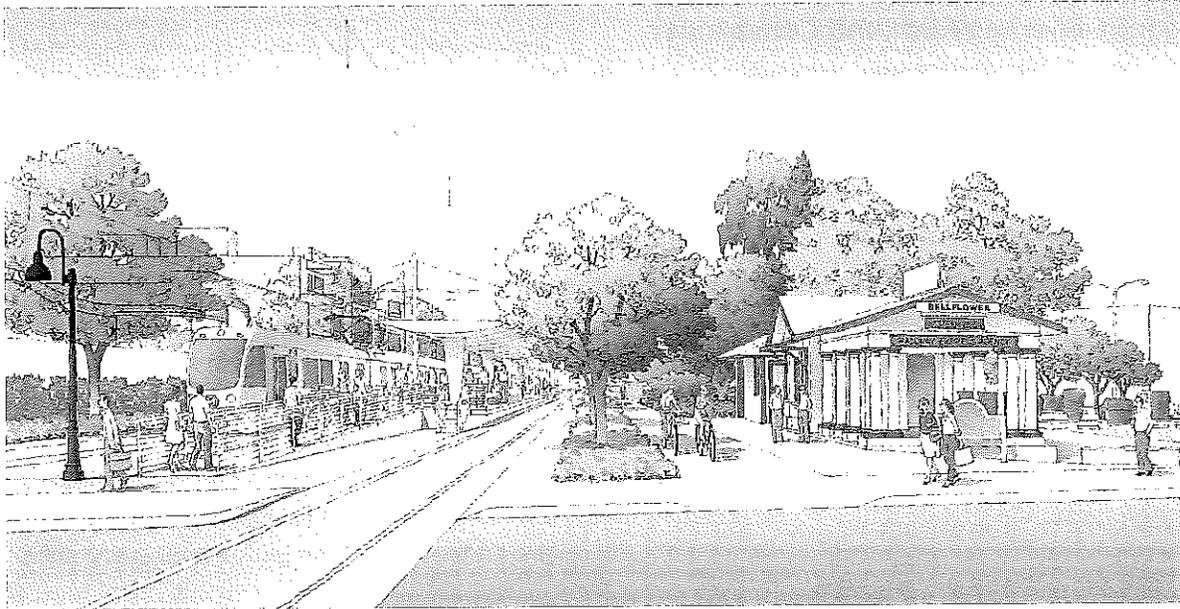


Figure F-1: Bellflower Station Rendering

Use of Metro-owned rail rights-of-way is governed by a Metro Board-approved policy known as the *MTA Rights-of-way Preservation Guidelines*. The policy provides for the preservation of the former railroad rights-of-way for future transportation projects, while encouraging utilization on an interim basis for the creation of revenue, such as the rail lines in the WSAB ROW used by Paramount Petroleum for deliveries. Under this policy, construction of a shared-use path is prohibited unless the facility is designed so that the sponsor can demonstrate that it will not have to be relocated or removed to allow for construction or operation of a future transportation project. Some short-term use for a bicycle and pedestrian path has been allowed with the understanding that the facility be designed to be easily removed so as not to preclude future construction and operation of a transit project.

Short-term use of the right-of-way is exemplified by the Bellflower Pedestrian and Bicycle Trail implemented by the city of Bellflower. Dedicated in November 2009, the 2.3-mile-long asphalt shared-use path begins at the Ruth R. Caruthers Park and Bellflower Skate Park and extends west to the intersection of Lakewood Boulevard and Paseo Street. The Bellflower Pedestrian and Bicycle Trail is comprised of a ten-foot-wide asphalt shared-use path with a centerline, a two-foot-wide decomposed granite median, and a four-foot-wide asphalt pedestrian walkway. Street crossings are made at existing signalized intersections. The Bellflower Bike Trail has signage, street lights, boxed landscaping, and benches, and is seen as a great asset to the community by Bellflower residents. Paramount has an existing shared-use path in the WSAB ROW from Lakewood Boulevard to Somerset Boulevard. Based on the positive community reaction to the path in Bellflower and Paramount, the city is considering extending the path in the WSAB ROW to connect with the existing Los Angeles River Bicycle Path at the western city limits.

The following provides an assessment of opportunities and constraints related to the use of the WSAB ROW for extension of the existing Bellflower Pedestrian and Bicycle Trail west through the city of Paramount to connect with the existing Los Angeles River Bicycle Path along the eastern bank of the river. The assessment is based on the right-of-way width and constraints, right-of-way ownership, current land uses lining the right-of-way, and transportation and mobility issues.

### Right-of-way Width and Constraints

The width of the WSAB ROW presents both opportunities and constraints for future use, whether for transit or bicycle and pedestrian usage. The width of the Los Angeles County portion of the right-of-way varies from 195 feet within Paramount (west of Paramount Boulevard) to 75 feet within the City of Bellflower (east of Bellflower Boulevard). From Paramount Boulevard west to the Los Angeles River, the right-of-way ranges from 200 to 220 feet in width.

The WSAB ROW width is sufficient to accommodate both future rail use and a bicycle and pedestrian path even in the narrowest portion. Between future rail stations, an average 30-foot width is required for at-grade operations or placement of columns for aerial operations. With 15 to 20 feet for a bicycle and pedestrian facility, approximately 50 feet ROW width would be required, as shown in Figure F-2. Even at future rail stations, there would be sufficient width to accommodate the 45-foot width required for the two rail tracks and station platform, plus the 15 to 20 feet for the bicycle and pedestrian facility, for a total of approximately 65 feet. In some station areas, future station access plans may require use of some of the station-adjacent ROW to accommodate passenger drop-off, bus and shuttle, and parking facilities. Future design and engineering plans will clarify transit system ROW needs.

Currently, there are some right-of-way constraints due to encroachments and leased land uses by Metro as discussed in the next section. The encroachments and utilities will be addressed in the future by Metro with implementation of a transit project.

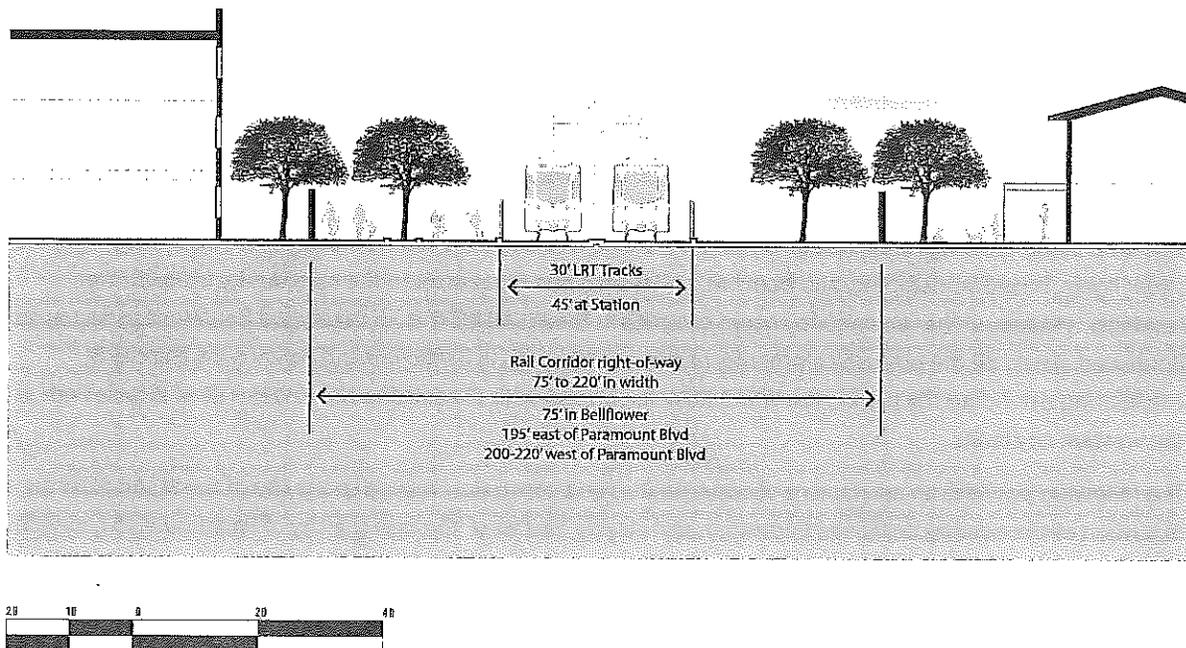


Figure F-2: West Santa Ana Branch Light Rail Cross Section

### Right-of-way Ownership

In Los Angeles County, the West Santa Ana Branch right-of-way is primarily owned by Metro, with some portions owned by other public agencies. As shown in Figure F-3, from the Los Angeles River to Garfield Avenue in Paramount, the northern portion of the right-of-way is owned by Metro, while the southern portion is owned by the Los Angeles Department of Water and Power (DWP), and the right-of-way immediately adjacent to the Los Angeles River and under the I-105 Freeway is owned by the California Department of Transportation (Caltrans). Between Garfield Avenue and Somerset Boulevard in Paramount, Metro owns the northern portion of the right-of-way, while DWP owns the southern portion.

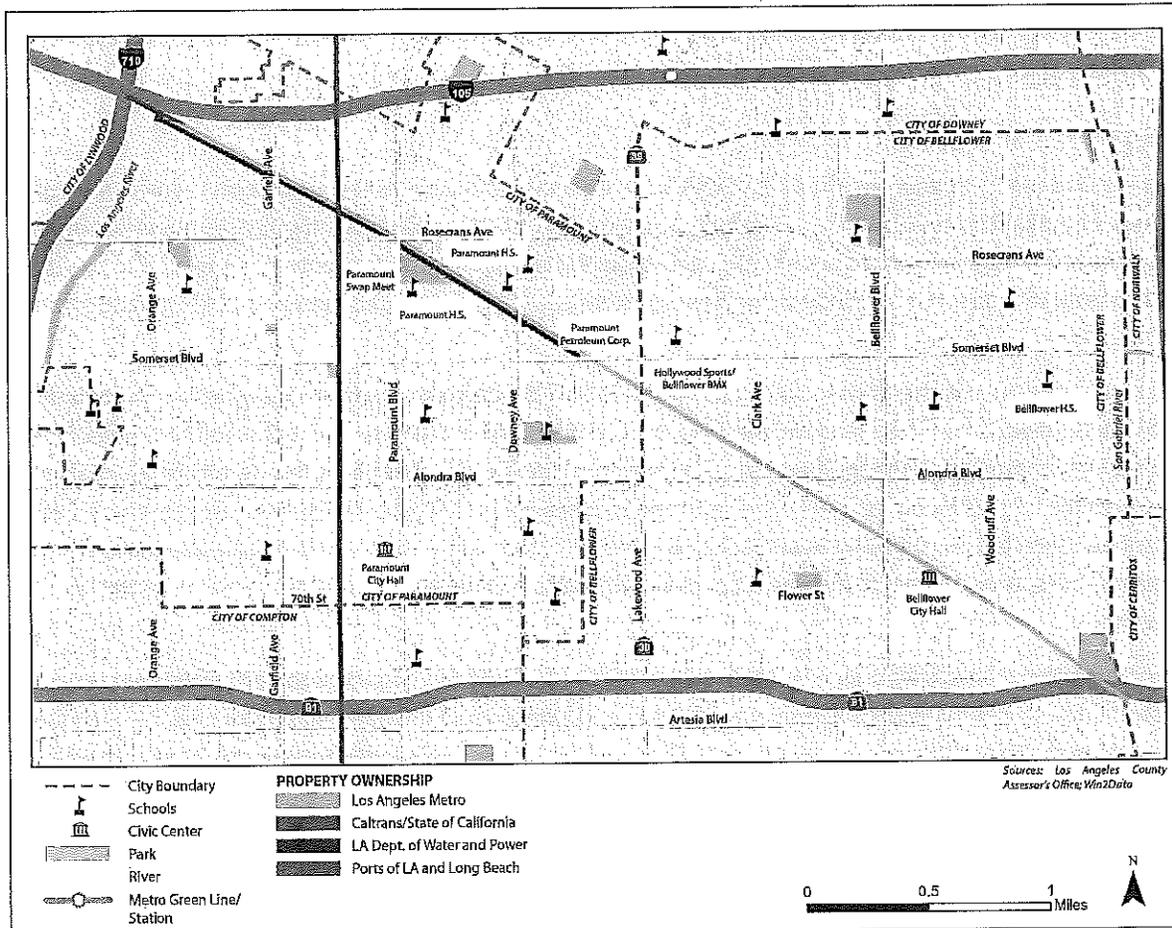


Figure F-3: West Santa Ana Branch Right-of-way Ownership

There is an opportunity west of Somerset Boulevard to the Los Angeles River in Paramount to secure an agreement with DWP for use of land under their power lines for a shared-use path, with no impact on the protected Metro-owned portion of the right-of-way. Soil contamination in the area closest to the Los Angeles River would need to be evaluated, and may increase the cost of any trail construction if cleanup or mitigation is required. East of Somerset Boulevard, there is an opportunity to work with Metro for interim use of their ROW with the understanding that any facility would be designed to be removed and possibly incorporated into any future transit project. The city of Paramount has had past success in working with the DWP.

There are leased land use impacts in the City of Paramount, as Metro has leased land for an oil and rail line that runs along the WSAB ROW between Downey Avenue and Somerset Boulevard to provide service to the Paramount Petroleum facility. This facility occupies the entire Metro-owned portion of the right-of-way, with the southern DWP segment possibly available for bicycle and pedestrian path use.

In Paramount, there are some encroachments on the right-of-way, such as by commercial uses and/or related parking, primarily on the northern side of the right-of-way. There is a pedestrian bridge over the right-of-way connecting two portions of Paramount High School located on opposite sides of the right-of-way. There are a significant number of underground utilities typically under the streets crossing the right-of-way, as well as major overhead utility lines and towers crossing or running along the right-of-way. These are not anticipated to impact use of the right-of-way for bicycle and pedestrian use.

### **Adjacent Land Uses**

Existing land uses located along the WSAB ROW, such as schools and parks, will both support usage of the right-of-way for a shared-use path and raise challenges. During the AA study effort, community members living along the right-of-way raised concerns about noise, privacy, nighttime lighting, and security issues related to bicycle and pedestrian usage. It is anticipated that these concerns would be addressed through the design and location of the path.

As shown in Figure F-4, the land uses lining the WSAB ROW differ between the two cities as well as the two sides of the right-of-way. Within Paramount, there is a marked difference in land uses lining the northern side of the right-of-way compared to the southern side. The northern side is lined primarily by low density residential uses (54 percent) along with commercial (18 percent) and industrial uses (16 percent). The southern side has a larger mix of uses with industrial being the primary land use (26) percent followed by low density residential (22 percent), transportation and utility uses (14 percent) and parks and medium-high residential uses (both 12 percent).

The distribution of land uses on the northern side of the right-of-way running through Bellflower is similar to Paramount—primarily low density residential (28 percent) with a mix of medium-high residential, commercial, and park uses. The southern side is predominantly low and medium- high density residential (64 percent) along with some industrial and commercial land uses.

The high percentage of residential uses along the right-of-way—with 54 percent on the northern side in Paramount and 28 percent in Bellflower, and the reverse on the southern edge with 64 percent in Bellflower and 22 percent in Paramount—will require sensitive design and location of bicycle and path facilities, as well as future transit projects.

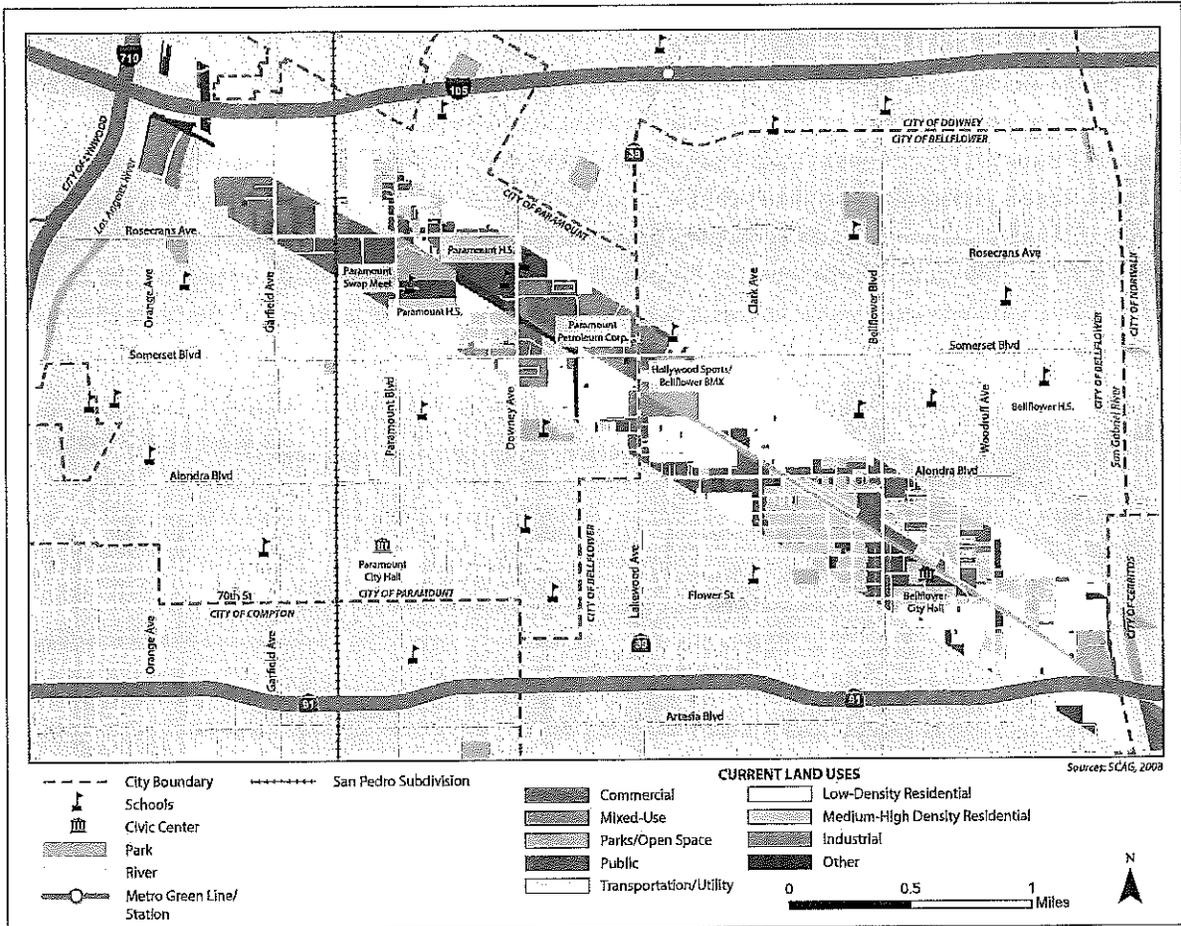


Figure F-4: Land Uses Adjacent to West Santa Ana Branch Right-of-way

### Transportation and Mobility Issues

In Bellflower and Paramount, the WSAB ROW crosses major railroad tracks and many city streets. The San Pedro Subdivision rail line, which runs north-to-south in Paramount between Garfield Avenue and Paramount Boulevard, is owned by the Ports of Long Beach and Los Angeles and operated by the Union Pacific (UP) Railroad. There is minor rail activity in this corridor, and the ports have offered to sell the right-of-way to Metro, though UP has first right to repurchase. This rail trackage is proposed to be used to connect future rail transit from the WSAB ROW north to downtown Los Angeles. The WSAB ROW's diagonal configuration also results in multiple, and frequently closely-spaced, crossings of many city streets, including six major arterials as shown in Figure F-5.

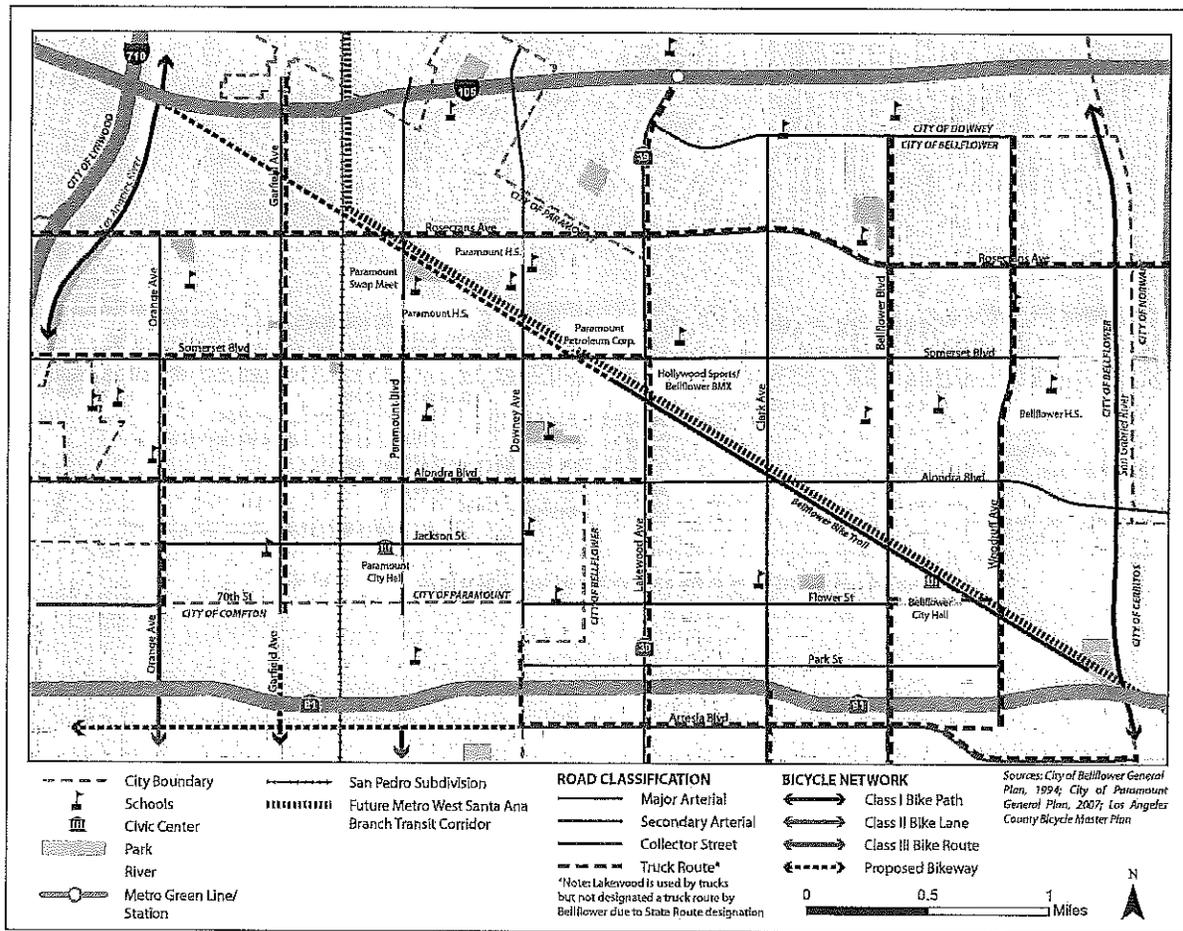


Figure F-5: Roadway Classifications and Bicycle Network

Whether the WSAB ROW is used for a shared-use path or future rail transit operations, the diagonal configuration will result in operational safety concerns requiring careful consideration, design, and implementation of improvements to ensure safety for pedestrians, bicyclists, rail passengers, automobiles, and the subregion’s heavy truck traffic. Currently, many of the crossings along the Bellflower Pedestrian and Bicycle Trail are not signalized, requiring bicyclists to travel north or south to the closest signalized intersection. Not wishing to travel out of their way, bicyclists and pedestrians have been observed crossing unsafely at the unsignalized

right-of-way crossing, creating conflicts with motorists. In the future, with construction of the rail transit system in this corridor, signals will be added to provide a safe crossing for trains, pedestrians, and bicyclists.

Currently, there are only two Class I shared-use paths in the cities of Bellflower and Paramount—the Bellflower Pedestrian and Bicycle Trail on the WSAB ROW, and the Los Angeles River Bicycle Path running along the eastern edge of the river south to Willow Street in the city of Long Beach. With implementation of future bicycle lanes on streets crossing the WSAB ROW and extension of the shared-use path to the Los Angeles River, there will be an opportunity to create a network of active transportation facilities in the community.

## Appendix G. Bicycling and Walking Demand and Benefits

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The following analysis quantifies the benefits that might occur as Bellflower and Paramount become more bicycle-friendly and expand their bikeway networks. The analysis estimates the number of bicycle trips that would directly result from an expanded bikeway network, approximates the corresponding reduction in vehicle trips and vehicle miles traveled (VMT), and assesses the potential health-, environmental-, and transportation-related benefits. Benefits stemming from increased walking are also quantified, because Class I bike paths are shared between bicyclists and pedestrians. Therefore expanding or building a new bike path may increase walking as well as bicycling.

The impact analysis utilizes a standard methodology for calculating health-, environmental-, and transportation-related benefits. All projections are based on five-year estimates from the United States Census Bureau, and are then extrapolated through the use of various multipliers derived from national studies and quantified in terms of monetary value where appropriate. The estimated monetary values are then calibrated to baseline values and compared to bicycling mode splits of peer cities that have implemented comparable bikeway networks in the recent past.

The model uses adult commute trips from the U.S. Census Bureau's American Community Survey (ACS) journey-to-work data to extrapolate utilitarian trips. The 2009 National Household Travel Survey (NHTS) provides information about the ratio of work trips to other trip purposes. The model extrapolates school and college trips based on national mode split numbers for those populations.

The foundation of this analysis is the ACS 2008-2012 five-year estimate for Bellflower and Paramount. Model variables from the ACS include: total population, employed population, school enrollment (grades K-12 and college students), and journey-to-work mode split.

The 2009 NHTS provides a substantial national dataset of travel characteristics, particularly for trip characteristics of bicycling and walking trips. Data used from this survey include:

- ◆ Student mode split, grades K-12
- ◆ Trip distance by mode by trip purpose
- ◆ Ratio of walking/bicycling work trips to utilitarian trips
- ◆ Ratio of work trips to social/recreational trips
- ◆ Average trip length by trip purpose and mode

Several of these variables provide a way to estimate the number of walking and bicycling trips made for other reasons than work trips, such as shopping and running errands. NHTS 2009 data indicate that for every bicycle work trip, there are slightly less than two utilitarian bicycle trips made. Although these trips cannot be directly attached to a certain group of people (not all of the utilitarian bicycling trips are made by people who bicycle to work), these multipliers allow a high percentage of the community's walking and bicycling activity to be captured in an annual estimate.

The Safe Routes to School Baseline Data Report (2010) was used to determine the percent of students who walk or bicycle by the parents' estimate of distance as well as the frequency of carpooling for trip replacement.

### Disclaimer

As with any model, the accuracy of the result is dependent on the accuracy of the input data and other assumptions. Effort was made to collect the best data possible for input to the model.

### Peer Cities

In order to estimate future bicycling mode split increases that may result from implementation of the Bellflower-Paramount Bike & Trail Master Plan, the consultant team examined mode splits of peer cities. Important selection factors when choosing a peer city include the existing street network, geographic location, climate, topography, socio-demographic data, and the completeness of the city's bicycle and pedestrian network. The selection of peer cities requires thoughtful consideration by the model developer, and it may be necessary to approach the process iteratively in order to identify the most appropriate group of cities for the impact analysis. Table G-1 shows general characteristics of Bellflower-Paramount and the selected peer cities.

Table G-1: General Characteristics Comparison of Selected Peer Cities

	Bellflower-Paramount, CA	Alameda, CA	Athens, GA	Cupertino, CA	Emeryville, CA	Santa Monica, CA	Sunnyvale, CA
<b>Street Network<sup>1</sup></b>	Large grid	Loose Grid	Suburban Collectors	Large Grid	Grid	Tight Grid	Loose Grid
<b>Region</b>	Western	Western	Southeast	Western	Western	Western	Western
<b>Climate</b>	Semi-arid	Mediterranean	Humid Subtropical	Mediterranean	Mediterranean	Mediterranean	Mediterranean
<b>Elevation (ft)</b>	69-71	33	636	236	23	105	128
<b>Population<sup>2</sup></b>	130,714	73,812	115,452	58,302	10,080	89,736	140,081
<b>Population Density per Square Mile<sup>3</sup></b>	11,000-12,000	6,956	852	5,200	8,089	10,664	6,200
<b>Percent Minority Population<sup>4</sup></b>	58%	55%	35%	71%	56%	22%	57%
<b>Bicycle Friendly Community Award Level<sup>5</sup></b>	None	Bronze	Bronze	Bronze	Bronze	Silver	Bronze
<b>Walk Friendly Community Award Level<sup>6</sup></b>	None	None	None	None	None	Silver	None

<sup>1</sup> American Community Survey. (2008-2012).

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*

<sup>5</sup> "Current Bicycle Friendly Communities." (2014). *The League of American Bicyclists*. [http://bikeleague.org/dites/default/files/BFC\\_MasterList\\_2014.pdf](http://bikeleague.org/dites/default/files/BFC_MasterList_2014.pdf)

<sup>6</sup> "Full List of Walk Friendly Communities." (2014). *Walk Friendly Communities*. <http://www.walkfriendly.org/communities/list.cfm>

Alameda, Athens, Cupertino, Emeryville, Santa Monica, and Sunnyvale were chosen by the consultant team as peer cities because they have similar design, geographic, and demographic characteristics to Bellflower and Paramount, and because each city has achieved a Bronze level League of American Bicyclists' Bicycle Friendly Community® designation or higher.

After the identification of peer cities based on general characteristics, the consultant team analyzed the bike and walk commute data from each city. Compared to selected peer cities, Bellflower-Paramount has the lowest bicycle commute mode share (0.65 percent) according to five-year American Community Survey data from 2008-2012. Table G-2 shows the current and estimated mode split for Bellflower-Paramount and peer cities.

Table G-2: Estimated Future Walk and Bike Mode Split

	Bellflower-Paramount	Alameda, CA	Athens, GA	Cupertino, CA	Emeryville, CA	Santa Monica, CA	Sunnyvale, CA
Employed Population <sup>7</sup>	53,461	37,206	50,065	25,081	6,300	48,346	71,344
Daily Bicycle Commute Trips <sup>8</sup>	350	576	741	221	161	1,514	909
Bicycle Commute Mode Share <sup>9</sup>	0.65%	1.55%	1.48%	0.88%	2.56%	3.13%	1.27%
Estimated Future Bicycle Commute Mode Share <sup>10</sup>	<b>1.33%</b>						

**Multipliers**

Multipliers were developed through an analysis of the relationship between two or more model inputs (such as the number of vehicle-miles reduced) and associated model outputs (such as the cost of road maintenance per every vehicle-mile travelled). The model used for this study utilizes over 50 multipliers in order to extrapolate daily, monthly, and annual trip rates, trip distance, vehicle trips replaced, emission rates, physical activity rates, and other externalities linked to an increase in bicycling and walking trips and to a decrease in motor vehicle trips. Individual multipliers of note are covered in more detail in the sections that follow.

**Limitations**

The primary purpose of the analysis is to enable a more informed policy discussion on whether and how best to invest in a bicycle network in Bellflower-Paramount. Even with extensive primary and secondary research incorporated into the impact analysis model, it is impossible to accurately predict the exact impacts of various factors. Accordingly, all estimated benefit values are rounded and should be considered order of magnitude estimates, rather than exact amounts.

<sup>7</sup> American Community Survey (2008-2012).

<sup>8</sup> *Ibid.*

<sup>9</sup> *Ibid.*

<sup>10</sup> Based on the difference between Bellflower-Paramount's existing bicycle commute mode share and the 25<sup>th</sup> percentile bicycle mode share of peer cities.

## G.1. Bicycling and Walking Demand and Benefits Model

Table G-3 below presents commute to work data estimates for Bellflower and Paramount, as well as nearby cities and comparison geographies, as reported in the 2008-2012 American Community Survey 5-year estimates. This information for Bellflower and Paramount is one of several inputs of the demand model. For the purposes of the Bellflower-Paramount Bike & Trail Plan, averages were used for Bellflower and Paramount data.

Table G-3: Mode Split Comparison

Geography	Walk	Bike	Transit	Carpool	Drive Alone
<b>Bellflower</b>	1.8%	0.6%	4.6%	10.6%	78.9%
<b>Paramount</b>	3.3%	0.8%	5.2%	12.5%	74.8%
Alameda, CA	4.2%	1.6%	15.2%	9.0%	61.8%
Athens, GA	6.7%	1.9%	4.0%	8.8%	72.8%
Cupertino, CA	1.2%	0.7%	2.5%	9.5%	79.2%
Emeryville, CA	8.0%	3.7%	19.3%	9.4%	52.5%
Santa Monica, CA	5.6%	3.5%	3.8%	4.1%	71.8%
Sunnyvale, CA	1.3%	1.5%	4.5%	10.2%	76.8%
California	2.7%	1.1%	5.2%	11.3%	73.2%
United States	2.8%	0.6%	5.0%	9.8%	76.3%

Source: 2009-2013 American Community Survey 5-year estimates

Table G-4 shows the estimated number of daily bicycling and walking trips. Based on the model input data from NHTS 2009, the majority of trips are non-work utilitarian trips, which include medical/dental services, shopping/errands, family personal business, meals, and other trips. These daily estimates can be extrapolated to annual trips using the total number of annual work, school, and college days in a year.

Table G-4: Current Weekday Bicycling and Walking Trips

	Bicycling	Walking	Source
Weekday commute trips	700	2,862	Employed population from ACS multiplied by mode split from ACS, doubled for round-trips
Weekday K-12 trips	622	1,338	School children population from ACS multiplied by mode split from SRTS Baseline Data Report (2010), doubled for round-trips
Weekday college trips	307	1,250	Employed population from ACS multiplied by mode split from NHTS 2009, doubled for round-trips
Daily utilitarian trips	1,128	12,374	Bicycle/walking commute trips (above) multiplied by mode-specific utilitarian trip multiplier from NHTS 2009
Daily social/recreational trips	2,295	7,700	Bicycle/walking commute trips (above) multiplied by mode-specific social/recreational trip multiplier from NHTS 2009
<b>Current daily walking and bicycling trips</b>	<b>5,052</b>	<b>25,524</b>	
<b>Annual Extrapolation</b>			
Annual commute trips	175,700	718,362	Bicycle/walking and walk- or bike-to-transit trips multiplied by annual work days
Annual K-12 trips	93,246	1,244,834	K-12 bicycle/walking trips multiplied by annual K-12 school days
Annual college trips	49,090	199,986	College bicycle/walking trips multiplied by annual college class days
Annual utilitarian trips	320,680	4,545,845	Annual commute trips multiplied by mode-specific utilitarian trip multiplier

## G.2. Trip Replacement

To estimate the total distance residents travel to work or school by walking and bicycling, the model isolates different walking and bicycling user groups and applies trip distance information for walking or bicycling trips by mode based on NHTS 2009. Table G-5 shows the trip replacement factors and results.

Table G-5: Current Walking and Bicycling Trip Replacement (Annual)

	Bicycling	Walking	Source
Vehicle commute trips replaced	167,573	903,395	Redistribution of bikers/walkers using existing mode split if that mode were not available
K-12 vehicle trips replaced	61,723	941,366	SR2S Baseline Data Report, 2010
College vehicle trips replaced	37,530	161,250	NHTS 2009
Utilitarian vehicle trips replaced	269,979	3,905,783	Redistribution of bikers/walkers using existing mode split if that mode were not available
<b>Vehicle Miles Traveled</b>			
Commute VMT replaced	593,208	605,274	NHTS 2009 average bicycle trip distance for "Work" trips
K-12 VMT replaced	47,402	334,299	SRTS 2010, percent of students who walk or bicycle by parent's estimate of distance
College VMT replaced	55,545	90,300	NHTS 2009 average trip distance for "School/Daycare/Religious" trips
Utilitarian VMT replaced	511,160	2,603,855	Derived from NHTS 2009
Total VMT reduced	1,207,315	3,633,729	
Per capita VMT reduced	9	28	

## G.3. Health Benefits

The implementation of a well-designed, connected bicycle network across Bellflower-Paramount will encourage a shift from energy-intensive modes of transportation such as cars and truck to active modes of transportation such as bicycling. The impact analysis model evaluates and quantifies the estimated increase in bicycling trips, the estimated increase in hours of physical activity, and the annual savings resulting from reduced healthcare costs. In order to evaluate these health factors, the consultant team analyzed readily-available data inputs.

### Health Calculations

The primary inputs into the health component of the impact analysis model come from five-year estimates of commute trip data from the US Census Bureau. Five-year estimates were chosen because they are the most reliable dataset available from the US Census Bureau between the decennial censuses, and because they allow for analysis at the individual census tract level.<sup>11</sup>

After extrapolating the commute trip data to recreational trips and to estimate daily, monthly, and annual trip values, the consultant team used a series of multipliers and assumptions to calculate the various health factors. If Bellflower-Paramount implements all of the recommended projects, the two cities could experience 1,474,000 more bicycling trips per year than is currently experienced. Using trip distance multipliers derived the National

<sup>11</sup> "When to use 1-year, 3-year, or 5-year estimates." *US Census Bureau*.  
[http://www.census.gov/acs/www/guidance\\_for\\_data\\_users/estimates](http://www.census.gov/acs/www/guidance_for_data_users/estimates)

Household Travel Survey (NHTS) and annual vehicle trip replacement factors derived from a combination of US Census data, NHTS data, and historic Safe Routes to School data, the estimated increase in distance bicycled is 1,888,000 miles per year, resulting in 1,344,000 fewer vehicle-miles travelled (VMT) annually.

These annual distance estimates and VMT reduction estimates were used to calculate changes in physical activity rates among in Bellflower-Paramount. Implementation of the recommended projects could result in 189,000 more hours of physical activity per year among Bellflower-Paramount residents than currently occurs. This increase in physical activity means that 1,454 more residents will be meeting the Centers for Disease Control and Prevention (CDC) minimum number of hours of physical activity per day, which is equal to a jump from approximately 12.23 percent of the regional physical activity need being met to 13.34 percent of the regional physical activity need being met – an increase of 9 percent. This growth in the percent of people within the two cities exercising also equates to a \$71,000 reduction in healthcare expenses per year. Table G-6 summarizes the annual health benefits for Bellflower-Paramount.

Table G-6: Annual Health Benefits

	Bellflower-Paramount
Increase in Annual Bicycle Trips	1,474,000
Increase in Annual Miles Bicycled	1,888,000
Increase in Annual Hours of Physical Activity	189,000
Increase in Number of Residents Meeting CDC Recommended Number of Hours of Physical Activity	1,454
Increase in Physical Activity Need Met	1.11%
Annual Healthcare Cost Savings	\$71,000

#### G.4. Environmental Benefits

While the causes of physical inactivity and pollution stem from many sources, the implementation of the recommended bicycle projects in Bellflower-Paramount will contribute to a shift from energy-intensive modes of transportation such as cars and trucks to active modes of transportation such as bicycling. The impact analysis model evaluates and quantifies the estimated increase in bicycling trips and the annual savings from reduced vehicle emissions. In order to evaluate these environmental factors, a number of readily-available data inputs were analyzed.

##### **Environmental Calculations**

The primary inputs into the environmental component of the impact analysis model come from five-year estimates of commute trip data from the US Census Bureau. Using the same estimates of VMT reduction calculated in the health benefits analysis, changes in hydrocarbon, particulate matter, nitrous oxides, carbon monoxide, and carbon dioxide were analyzed. In total, the replacement of motor vehicle trips with active transportation trips may result in an estimated 3,177,000 fewer pounds of CO<sub>2</sub> emissions per year and 43,000 fewer pounds of other vehicle emissions. Based on a review of air emissions studies, each pound of emissions were assigned an equivalent dollar amount based on how much it would cost to clean up the pollutant or the cost equivalent of how much damage the pollutant causes the environment. The total reduction in vehicle emissions is equal to a savings of \$45,000 in related environmental damage or clean-up per year. Other potential ecological services associated with the bicycle projects such as water regulation, carbon sequestration, carbon

storage, and waste treatment exist, but the quantifiable value of these services are negligible on the overall impact of the joint bicycle master plan. Table G-7 summarizes the annual environmental benefits for Bellflower-Paramount.

Table G-7: Annual Environmental Benefits

	Bellflower-Paramount
CO2 Emission Reduced (lbs)	3,177,000
Hydrocarbons Reduced (lbs)	11,435
Particulate Matter Reduced (lbs)	76
Carbon Monoxide Reduced (lbs)	104,209
Nitrous Oxides Reduced (lbs)	7,966
<b>Total Vehicle Emission Costs Reduced</b>	<b>\$45,000</b>

### G.5. Transportation Benefits

The most readily-identifiable benefits of the recommended project list derive from their use as a connection between activity centers and residences. While no money may change hands, real savings can be estimated from the reduction costs associated with congestion, vehicle crashes, road maintenance, and household vehicle operations.

#### **Transportation Calculations**

The primary inputs into the health component of the impact analysis model come from five-year estimates of commute trip data from the US Census Bureau.

Utilizing the same calculations for estimated increase in annual bicycle trips and annual VMT reductions used in the health and environmental components, transportation-related cost savings can be calculated. By multiplying the amount of VMT reduced by established multipliers for traffic congestion, vehicle collisions, road maintenance, and vehicle operating costs, monetary values can be assigned to the transportation-related benefits. In total, an annual cost savings of \$1,733,000 is estimated for the two cities. Table G-8 summarizes the annual transportation benefits for Bellflower-Paramount.

Table G-8: Annual Transportation Benefits

	Bellflower-Paramount
Reduced Traffic Congestion Costs	\$94,000
Reduced Vehicle Collision Costs	\$672,000
Reduce Road Maintenance costs	\$201,000
Household Vehicle Cost Savings	\$766,000
<b>Total Vehicle Cost Savings</b>	<b>\$1,733,000</b>

## G.6. Total Benefits

If the Bellflower-Paramount Joint Bicycle Master Plan is implemented, the two cities could experience a total of \$1,849,000 in health-, environmental-, and transportation-related benefits per year. Table G-9 summarizes all calculated benefits.

Table G-9: Total Annual Benefits

	Bellflower-Paramount
Annual Health Benefits	\$71,000
Annual Environmental Benefits	\$45,000
Annual Transportation Benefits	\$1,733,000
Total Annual Benefits	\$1,849,000

## G.7. Current Benefits

To the extent that bicycling and walking trips replace vehicle trips, they reduce emissions of several potentially harmful air pollutants. These benefits are shown in Table G-10.

Table G-10: Annual Benefits of Current Bicycling and Walking Trips

	Bicycling	Walking	Total
Yearly vehicle miles reduced	1,207,315	3,633,729	4,841,043
<b>Air Quality Benefits</b>			
Reduced Hydrocarbons (pounds/year)	3,620	10,895	14,515
Reduced Particulate Matter (pounds/year)	27	81	108
Reduced Nitrous Oxides (pounds/year)	2,529	7,610	
Reduced Carbon Monoxide (pounds/year)	33,005	7,610	10,139
Reduced Carbon Dioxide (pounds/year)	982,157	2,956,059	3,938,216

Source: EPA report 420-F-05-022 "Emission Facts: Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks." 2005.

## G.8. Potential Future Bicycling and Walking Trips

Estimating future benefits requires additional assumptions regarding Bellflower and Paramount's future population and anticipated commuting patterns in 2035. Future population predictions as determined by the SCAG 2012 RTP Growth Forecast (for 2035) were used in this model. Table G-11 shows the projected future demographics used in the future analysis.

Table G-11: Projected Future Demographics

Demographic	Value	Percent of Population	Source
Population	143,900	110%	SCAG 2012 RTP Growth Forecast (for 2035)
Employed population	58,782	41%	Same as current model estimate
Total enrollment K-12	44,251	31%	Same as current model estimate
Total college/graduate	10,075	7%	Same as current model estimate

The analysis predicts that the bicycle mode split will double by 2035, due in part to bicycle network implementation and education/encouragement programs. This results in a future bicycling mode split of 1.4 percent.

### G.9. Future Benefits

The trip replacement factors remain the same as in the model of current trips. Table G-12 shows the air quality benefits of the future projected walking and bicycling trips.

Table G-12: Annual Benefits of Current Bicycling and Walking Trips

	Bicycling	Walking	Total
Yearly vehicle miles reduced	2,474,000	3,996,000	6,469,000
<b>Air Quality Benefits</b>			
Reduced Hydrocarbons (pounds/year)	7,417	11,979	19,396
Reduced Particulate Matter (pounds/year)	55	89	144
Reduced Nitrous Oxides (pounds/year)	5,181	8,368	13,549
Reduced Carbon Monoxide (pounds/year)	67,622	109,224	176,874
Reduced Carbon Dioxide (pounds/year)	2,012,304	3,250,308	5,262,612

Source: EPA report 420-F-05-022 "Emission Facts: Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks." 2005.

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## Appendix H. Priority Project Detailed Cost Estimates

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The following memo presents detailed cost estimates for priority projects in Bellflower and Paramount, including a discussion of assumptions and methods.



# Bellflower Paramount Joint Bicycle Master Plan

## Cost Estimate for Priority Projects

### Planning Stage ROM Estimate



**Bellflower Paramount Joint Bicycle Master Plan  
Planning Stage ROM Estimate  
Cost Estimate for Priority Projects**

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**ESTIMATE NARRATIVE & CRITERIA**

**1 SCOPE OF ESTIMATE**

This estimate consists of the anticipated capital costs for selected priority bike infrastructure projects from the proposal Bellflower-Paramount Joint Bicycle Master Plan. This estimate was prepared by performing quantity survey from planning documents and preliminary pricing research. The estimating team has used the design documents as well as best practice judgment to include allowances for scope that can reasonably be expected to be included in the design intention. However, the estimate does not include allowances for scope creep (new scope or design details) than cannot be interpreted from the drawings. The planning team and lead agencies are encouraged to review the assumptions and detailed cost back-up to confirm that the scope of work is aligned with the design intent.

- 1.1 This estimate was prepared for the owner and planning team in the preliminary planning stage.
- 1.2 This estimate is an independent Rough-Order-of-Magnitude (ROM) Estimate. It is intended that this estimate will be used in initial budgeting discussions for the bicycle master plan.
- 1.3 This estimate is not meant to be compared to a future bid estimate at final design. Significant variances in design, scope, assumptions, and methods will likely occur between this stage and final design.
- 1.4 It is the intention of this estimate to capture the Intended basis of design and project requirements, including allowances and contingencies for undeveloped design and scope that can reasonably be expected to be included in the final design.
- 1.5 It is the intention of this estimate to capture the "FAIR MARKET VALUE" under "STABLE" bidding conditions for the "average complete and responsible bid" with a fair overhead and fee.

**2 QUANTITIES AND SCOPE**

The scope has been quantified using planning concept drawings, design standards from the County of LA's 2010 Bike Masterplan, and discussions with the Alta Planning team. Allowances and contingencies have been carried for scope that can be reasonably assumed to be included based on the known project conditions and intended scope. However, the estimate does not carry allowances for additional project elements / scope additions not known at this time.

**3 BASIS OF ESTIMATE**

This estimate is based on design documents:

- 3.1 Bellflower-Paramount Bike and Trail Master Plan- Concept Plans Draft- 7 drawings
- 3.2 Los Angeles County Bike Master Plan, Appendix F- Design Guidelines
- 3.3 Los Angeles County Bike Master Plan, Appendix H- Engineering Unit Cost Estimate (used when appropriate to develop detailed estimate.)
- 3.4 Additional pricing sources: United States Department of Transportation, California Department of Transportation, Federal Highway Administration, Los Angeles Department of Transportation, RS Means, and historic cost information.

**4 CONSTRUCTION COSTS INCLUDE**

- 4.1 Material, including shipping and handling, taxes, delivery
- 4.2 Construction equipment
- 4.3 Labor, prevailing wage
- 4.4 Subcontractor overhead & profit - 15-20% over bare cost
- 4.5 General contractor overhead, including general requirements, general conditions, bond, insurances, and profit - 20% over to direct construction cost.
- 4.6 Contract procurement method assumes competitive-bid general contractor.

**ESTIMATE NARRATIVE & CRITERIA**

**5 SOFT COSTS INCLUDE**

- 5.1 Design Fee - 10% allowance over construction cost
- 5.2 Environmental Planning and Permitting - 2% allowance over construction cost
- 5.3 Property Acquisition - Los Angeles Department of Water and Power (LADWP) Right-of-Way (ROW) Only- It assumed that LADWP will not charge for use of the ROW. However, it is assumed that there will be some fee required in order to relocate an existing tenant occupying the ROW between Downey Ave., and Somerset Blvd..

**6 CONTINGENCY**

- 6.1 **Design Contingency in this Estimate:** A 20% mark-up on top of the project total has been included in this cost estimate for design contingency. "Design contingency" represents undeveloped design and scope that has not yet been developed in the design documents. This includes scope that may be intended but is not yet apparent and fully represented to a sophisticated enough level to interpreted properly by the estimator. As the design level increases from Rough-order-of-Magnitude to final construction design, the design contingency should decrease from roughly 20% to near 0%. At each milestone phase of design, the design contingency should be reduce. However, it is assumed this will not necessarily result in a decrease in overall cost as these costs are expected to be absorbed by developments in design.
- 6.2 **Construction Contingency Definition:** A 10% mark-up on top of the project total has been included is this cost for construction contingency. "Construction Contingency" represents changes that are likely to occur during the construction. These changes may include agency driven changes and/or unforeseen conditions, scope changes, site conditions, and scheduling changes throughout the construction phase of the project.
- 6.3 **Best Practices for Contingency Allowance:**

Design Level	Design Contingency	Construction Contingency	Total Contingency
1 <i>Rough-order-of Magnitude</i>	<i>20% to 30%</i>	<i>10%</i>	<i>30% to 40%</i>
2 Conceptual	15% to 20%	10%	25% to 30%
3 Schematic Design	10% to 15%	10%	20% to 25%
4 Design Development	5% to 10%	10%	15% to 20%
5 Construction Document	0% to 5%	10%	10% to 15%

**7 ESCALATION**

- 7.1 **Escalation Carried in this Estimate:** A total of 22.13% on top of the construction cost has been included in the estimate to account for cost escalation between the report date and anticipated year of construction, 2020. The average escalation increase per year used in the calculation is 4% per year. (See attachment A.)
- 7.2 **Escalation Methodology:** This percentage is meant to capture anticipated commodity and labor escalation between the report date to the Mid-Point of Construction based on a long term market trend. Escalation adjustment is meant to account for normal market growth in the project city. The escalation factor is calculated based on long term commodity and labor escalation rate data and is not meant to forecast or anticipate rapid shifts in the market, such as recessions, depressions, or spikes. Projects that are put on hold for more than a few months should be re-assessed to determine if current escalation factors are still accurate with those used at the time of the estimate.
- 7.3 **Source:** The long range annual escalation factor has been calculated by aggregating escalation procured from several government and consulting sources, including California Department of Transportation, Association of General Contractors America, Engineering News Record, and other public and private industry sources. The average escalation factor calculated when aggregating the data is 3.99%. This estimate rounds the escalation rate up to 4% per year for long range estimating purposes.

## ESTIMATE NARRATIVE & CRITERIA

### 8 POTENTIAL VARIANCES FROM THIS COST ESTIMATE

The following issues could create potential variances between the current estimate and the final construction value.

- 8.1 Proposals or estimates based on drawings further developed than the basis of this estimate.
- 8.2 Adjustments to the project delivery due to funding, scheduling, or construction delays.
- 8.3 Restrictive technical specifications or excessive or unpredictable contract conditions.
- 8.4 Additional project requirements from municipalities, utility agencies, environmental agencies, and freight rail companies.
- 8.5 Additional engineering requirements not known at this time.
- 8.5 Bid procurement other than assumed by this estimate.

### 9 ASSUMPTIONS

- 9.1 The site will be fully accessible during normal working hours.
- 9.2 Construction contract procurement method is GC competitive bid.
- 9.3 Prevailing Wage Rate Structure.
- 9.4 The construction contract will be awarded to a single general contractor and not split up into several bidding packages.
- 9.5 Large trail end parks will be located at the LA river connection and San Gabriel river connection. Medium/small trail parks will be located at Bellflower Blvd and Paramount Blvd.
- 9.6 All major trail / arterial road crossings will have two-stage pedestrian crossing signals with medians and push buttons.
- 9.7 No structures will be demolished or relocated.
- 9.8 No overhead lines or tower structures will be affected. No temporary service or relocations will be required.
- 9.9 No underground utilities exist that will be affected along the entire Class I Bike path.
- 9.10 There will be a active railroad crossing on the Class I path between Garfield and Paramount. It is assumed that the freight railroad will agree to a trail crossing at this location. (No grade separation will be needed.) The trail crossing will be a signal and small barrier arm gates with fencing across the PE ROW at both sides of the crossing. It is assumed that there is only one crossing.
- 9.11 A security fence will be required separating the trail from the freight rail from the railyard at Somerset all the way North to Garfield.
- 9.12 No temporary shoring or mass excavation will be needed.
- 9.13 Installation of temporary traffic signaling will not be required. Only traditional traffic control.
- 9.14 See the details of the projects and unit price back-up. Assumptions are included throughout the back-up.

### 10 LAND COSTS

- 10.1 The West Santa Ana Branch Pacific Electric ROW Class I Bike Trail includes an option along a portion of the trail that would occupy land owned by LADWP.
- 10.2 It is assumed that Los Angeles Department of Water & Power allows usage of this land at no cost to other city agencies. However, since there is an existing plant nursery at the proposed location, it is assumed that there will be relocation fees incurred.
- 10.3 The costs included in the estimate for moving the existing tenant are only an allowance.

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*AECOM has prepared this estimate with principles and practices following the code of ethics of the American Society of Professional Estimators.*

# Bellflower Paramount Joint Bicycle Master Plan Cost Estimate for Priority Projects

Bellflower Priority Projects - Executive Summary				
	LF	\$/LF	2015\$	2020\$
B-1 San Gabriel River Gateway	1	LS	\$499,953	\$610,400
B-2 Bellflower Boulevard Crossing	1	LS	\$524,630	\$640,528
B-3 Carpintero -McNab Bicycle Boulevard	11,040	\$80	\$881,001	\$1,075,626
B-4 Flower Street Bike Lanes	8,620	\$76	\$651,202	\$795,061
<b>ESTIMATED BUDGET</b>			<b>\$2,556,786</b>	<b>\$3,121,615</b>

Alternative Options:

Alt B2: Omit Lighting Allowance - At San Gabriel River Gateway and Bellflower Crossing	DEDUCT	2,055	(\$132)	(\$272,134)	(\$332,252)
Alt B3: Decomposed Granite Path at San Gabriel Gateway	DEDUCT	1,360	\$0	\$0	\$0

See detailed cost estimate worksheet for scope quantities, assumptions, and pricing

# Bellflower Paramount Joint Bicycle Master Plan Cost Estimate for Priority Projects

## Bellflower Recommended Bikeways - Summary by Segment

ID	Location	Begin	End	Length (ft)	\$/LF	Estimated Cost	
						2015\$	2020\$
<b>Class I</b>							
				280	\$284	\$79,403	\$96,944
BI-1	Rosecrans Avenue (north side)	Carpintero Avenue	McNab Avenue	280	\$284	\$79,403	\$96,944
<b>Class II</b>							
				8,620	\$76	\$651,202	\$795,061
BIJ-4	Flower Street / Road Diet	Hayfer Avenue	Flora Vista Street	8,620	\$76	\$651,202	\$795,061
<b>Class III Bike Boulevards</b>							
				11,040	\$80	\$881,001	\$1,075,626
BIIB-5a	Faust Avenue	Foster Road	Muroc Street	280	\$80	\$22,344	\$27,280
BIIB-5b	Muroc Street	Faust Avenue	Carpintero Avenue	200	\$80	\$15,960	\$19,486
BIIB-5c	Carpintero Avenue	Muroc Street	Rosecrans Avenue	2,450	\$80	\$195,512	\$238,703
BIIB-6	McNab Avenue	Rosecrans Avenue	Alondra Boulevard	4,880	\$80	\$389,428	\$475,458
BIIB-7a	Carpintero Avenue	Alondra Boulevard	Trabuco Street	390	\$80	\$31,122	\$37,998
BIIB-7b	Trabuco Street	California Avenue	Carpintero Avenue	420	\$80	\$33,516	\$40,921
BIIB-7c	California Avenue	Trabuco Street	Bellflower Bike trail	2,420	\$80	\$193,118	\$235,780
<b>ESTIMATED BUDGET</b>						<b>\$1,611,606</b>	<b>\$1,967,631</b>

See detailed cost estimate worksheet for scope quantities, assumptions, and pricing

Bellflower Paramount Joint Bicycle Master Plan  
 Cost Estimate for Priority Projects

June 1, 2015

Bellflower Recommended Bikeways - Extended Summary by Segment

ID	Location	Length (ft)	Construction		Indirect	Design	ENV	Property Acquisition	Project Subtotal	Contingency	Total 2015\$	\$/LF	Escalation	Total 2020\$
			Direct	Indirect										
Estimated Cost														
Class 1		1,782	\$439,752	\$61,604	\$51,836	\$01,101	\$0	\$001,292	\$180,388	\$781,680	\$439	\$172,684	\$924,364	
BI-1	Rosecrans Avenue (north side)	280	\$48,667	\$3,987	\$5,265	\$3,159	NA	\$61,079	\$18,324	\$79,403	\$284	\$17,541	\$96,944	
BI-4	San Gabriel Gateway / Caruthers Park	1502	\$388,084	\$7,617	\$46,570	\$27,942	NA	\$540,213	\$162,064	\$702,277	\$468	\$155,143	\$857,420	
Class 2		8,620	\$390,258	\$41,573	\$43,183	\$25,910	\$0	\$500,924	\$150,277	\$651,202	\$76	\$143,859	\$795,061	
BI-4	Flower Street / Road Diet	8620	\$390,258	\$41,573	\$43,183	\$25,910	NA	\$500,924	\$150,277	\$651,202	\$76	\$143,859	\$795,061	
Class 10	Elke Boulevares	11,040	\$566,129	\$18,089	\$58,422	\$38,053	\$0	\$670,693	\$203,303	\$881,001	\$80	\$124,625	\$1,005,626	
BIIB-5a	Faust Avenue	280	\$14,368	\$459	\$1,482	\$889	NA	\$17,188	\$5,156	\$22,344	\$80	\$4,936	\$27,280	
BIIB-5b	Muroc Street	200	\$10,256	\$328	\$1,058	\$635	NA	\$12,277	\$3,683	\$15,960	\$80	\$3,526	\$19,486	
BIIB-5c	Carpintero Avenue	2450	\$125,635	\$4,014	\$12,985	\$7,779	NA	\$150,394	\$45,118	\$195,512	\$80	\$43,191	\$238,703	
BIIB-5	McNab Avenue	4880	\$250,245	\$7,996	\$25,824	\$15,494	NA	\$299,560	\$89,868	\$389,428	\$80	\$86,030	\$475,458	
BIIB-7a	Carpintero Avenue	390	\$19,989	\$639	\$2,064	\$1,238	NA	\$23,940	\$7,182	\$31,122	\$80	\$6,875	\$37,998	
BIIB-7b	Trabuco Street	420	\$21,538	\$688	\$2,223	\$1,334	NA	\$25,782	\$7,735	\$33,516	\$80	\$7,404	\$40,921	
BIIB-7c	California Avenue	2420	\$124,097	\$3,965	\$12,806	\$7,684	NA	\$148,562	\$44,566	\$193,118	\$80	\$42,662	\$235,780	
<b>ESTIMATED BUDGET</b>			\$1,393,138	\$141,267	\$159,441	\$92,055	\$0	\$1,779,900	\$568,976	\$2,348,876	\$80	\$571,169	\$2,920,045	

See detailed cost estimate worksheet for scope quantities, assumptions, and pricing

# Bellflower Paramount Joint Bicycle Master Plan Cost Estimate for Priority Projects

		Paramount Priority Projects - Executive Summary		TOTAL	
		LF	\$/LF	2015\$	2020\$
P-1	West Santa Ana Branch Trail	10,570	\$742	\$7,840,078	\$9,572,059
P-2	Sans Neighborhood Bicycle Boulevard	8,270	\$80	\$659,952	\$805,745
<b>ESTIMATED BUDGET</b>				<b>\$8,500,031</b>	<b>\$10,377,804</b>

Options

Alt P1: W. Santa Ana Branch (LADWP ROW in lieu of PE ROW)	ADD	1,700	\$634	\$1,077,849	\$1,315,960
Alt P2: Hazmat Soil Abatement at PE ROW	ADD	10,570	\$313	\$3,313,230	\$4,045,168
Alt P3: Omit Lighting Allowance	DEDUCT	10,570	\$0	(\$1,231,676)	(\$1,503,770)

Notes:

1. See detailed cost estimate worksheet for scope quantities, assumptions, and pricing
2. Property fees for Alt P2: This alternative assumes the project will be responsible for relocating the existing plant nursery tenant. This is the worst case scenario. The best case scenario could be that the tenant's lease is up and the city could decide to allow the project to lease the land without fee.
3. Hazardous abatement: The base scope assumes traditional excavation and hauling to local landfill with no dump fee. Alternative P2 assumes excavation, testing, enclosing in plastic wrap, and hauling to special landfill with dump fee.

# Bellflower Paramount Joint Bicycle Master Plan Cost Estimate for Priority Projects

## Paramount Recommended Bikeways - Summary by Segment

ID	Location	Begin	End	Length (ft)	\$/LF	Estimated Cost	
						2015\$	2020\$
<b>Class I</b>				<b>10,950</b>	<b>\$695</b>	<b>\$7,610,377</b>	<b>\$9,291,614</b>
PI-2a	West Santa Ana Branch Right-of-way	Los Angeles River Bicycle Path	Garfield Avenue	2,900	\$477	\$1,382,075	\$1,687,394
PI-2b	West Santa Ana Branch Right-of-way	Garfield Avenue	Paramount Boulevard	2,950	\$831	\$2,452,919	\$2,994,803
PI-2c	West Santa Ana Branch Right-of-way	Paramount Boulevard	Downey Avenue	3,020	\$735	\$2,218,439	\$2,708,523
PI-2d	West Santa Ana Branch Right-of-way	Downey Avenue	Somerset Boulevard	1,700	\$852	\$1,449,183	\$1,769,327
PI-4	Salud Park	San Vicente Street	Exeter Street	380	\$284	\$107,761	\$131,567
<b>Class II</b>				<b>2,890</b>	<b>\$80</b>	<b>\$230,624</b>	<b>\$281,572</b>
PIIIB-4a	San Luis Street	Los Angeles River Bicycle Path	San Marino Avenue	2,890	\$80	\$230,624	\$281,572
PIIIB-4b	San Antonio Avenue	San Marcus Street	San Luis Street	290	\$80	\$23,142	\$28,255
PIIIB-4c	San Marcus Street	San Antonio Avenue	San Marino Avenue	2,610	\$80	\$208,280	\$254,292
PIIIB-4d	San Marino Avenue	San Vicente Street	San Luis Street	870	\$80	\$69,427	\$84,764
PIIIB-4e	San Vicente Street	San Marino Avenue	Salud Park	330	\$80	\$26,334	\$32,152
PIIIB-4f	Exeter Street	Texaco Avenue	Garfield Avenue	1,280	\$80	\$102,145	\$124,710

See detailed cost estimate worksheet for scope quantities, assumptions, and pricing

Belflower Paramount Joint Bicycle Master Plan  
 Cost Estimate for Priority Projects

Paramount Recommended Bikeways - Extended Summary by Segment

Estimated Cost

ID	Location	Length (ft)	Construction Direct	Construction Indirect	Design	ENV	Property Acquisition	Project Subtotal	Contingency	Total 2015\$	\$/LF	Escalation	Total 2020\$
		10,956	\$2,272,057	\$832,513	\$602,667	\$302,800	\$0	\$3,854,736	\$1,753,241	\$7,610,377	\$695	\$1,753,241	\$9,291,614
PI-2a	West Santa Ana Branch Right-of-way	2,900	\$763,746	\$152,749	\$91,650	\$54,990	NA	\$1,063,134	\$318,940	\$1,382,075	\$477	\$305,319	\$1,687,394
PI-2b	West Santa Ana Branch Right-of-way	2,950	\$1,355,504	\$271,101	\$162,660	\$97,586	NA	\$1,886,861	\$566,058	\$2,452,919	\$831	\$541,883	\$2,994,803
PI-2c	West Santa Ana Branch Right-of-way	3,020	\$1,225,928	\$245,186	\$147,111	\$98,267	NA	\$1,706,492	\$511,948	\$2,218,439	\$735	\$490,084	\$2,708,523
PI-2d	West Santa Ana Branch Right-of-way	1,700	\$800,831	\$160,166	\$96,100	\$57,660	NA	\$1,114,756	\$334,427	\$1,449,183	\$852	\$320,144	\$1,769,327
PI-4	Salud Park	380	\$66,048	\$5,411	\$7,146	\$4,288	NA	\$82,893	\$24,868	\$107,761	\$284	\$23,806	\$131,567
		2,890	\$1,428,199	\$477,85	\$15,255	\$9,176	NA	\$1,774,08	\$53,221	\$280,624	\$90	\$53,943	\$281,572
PIIIB-4a	San Luis Street	280	\$14,871	\$475	\$1,535	\$921	NA	\$17,802	\$5,341	\$23,142	\$80	\$5,112	\$28,255
PIIIB-4b	San Antonio Avenue	2,610	\$133,840	\$4,277	\$13,812	\$9,287	NA	\$160,215	\$48,065	\$208,280	\$80	\$46,012	\$254,292
PIIIB-4c	San Marcus Street	870	\$44,613	\$1,426	\$4,604	\$2,752	NA	\$53,405	\$16,022	\$69,427	\$80	\$15,337	\$84,764
PIIIB-4d	San Marino Avenue	330	\$16,922	\$541	\$1,746	\$1,048	NA	\$20,257	\$6,077	\$26,334	\$80	\$5,918	\$32,252
PIIIB-4e	San Vicente Street	1,280	\$65,638	\$2,087	\$6,774	\$4,064	NA	\$78,573	\$23,572	\$102,145	\$80	\$22,565	\$124,710

See detailed cost estimate worksheet for scope quantities, assumptions, and pricing

**BELFLOWER AND PARAMOUNT PRIORITY PROJECTS - ESTIMATE DETAIL**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL	COST
	TOTAL			ALL BUILDINGS	PER LENGTH
<b>BI-4 San Gabriel River Gateway (Class 1)</b>					
<b>CONSTRUCTION COSTS</b>					
Trailhead					\$58
Demo, clear & grub, & grading	15,000	SF	\$0.15	\$2,250	
Decomposed granite, allow 50%	7,500	SF	\$2.00	\$15,000	
Landscaping & irrigation, allow 50%	7,500	SF	\$5.50	\$41,250	
Trees	10	EA	\$350.00	\$3,500	
Benches	2	EA	\$1,250.00	\$2,500	
Waste bins	2	EA	\$1,100.00	\$2,200	
Gateway monument, allowance	1	LS	\$5,000.00	\$5,000	
Wayfinding signage	2	EA	\$300.00	\$600	
Bike racks	2	EA	\$1,750.00	\$3,500	
Map board / kiosk	1	EA	\$2,500.00	\$2,500	
Lighting					\$15
Lighting allowance at park	4	EA	\$5,000.00	\$20,000	
Bridge upgrades					\$39
Decorative fencing, allow tube steel	284	LF	\$175.00	\$49,700	
Repair cracks, seal, allowance	2,840	SF	\$1.25	\$3,550	
Paint striping	284	LF	\$0.53	\$150	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>				<b>\$151,700</b>	
General Contractor OH&P / Construction Management	151,700	%	20%	\$30,340	
<b>TOTAL CONSTRUCTION COSTS</b>				<b>\$182,040</b>	
<b>SOFT COST</b>					
Design Fee	182,040	%	10%	\$18,204	
Environmental Planning and Permitting	182,040	%	6%	\$10,922	
Property Acquisition - NONE	NONE			NONE	
<b>TOTAL SOFT COST</b>				<b>\$29,126</b>	
<b>SUBTOTAL PROJECT COST</b>				<b>\$211,166</b>	
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	211,166	%	20%	\$42,233	
Construction Contingency - Static 10%	211,166	%	10%	\$21,116	
<b>TOTAL CONTINGENCY</b>				<b>\$63,349</b>	
<b>TOTAL BI-4 SAN GABRIEL RIVER GATEWAY</b>				<b>\$274,515</b>	
<b>BBC BELFLOWER BLVD CROSSING</b>					
<b>CONSTRUCTION COSTS</b>					
<b>DEMO &amp; PREP</b>					
Remove existing paved trail	608	LF	\$12.75	\$7,752	\$10,324
Remove existing light poles, assumed	8	EA	\$220.00	\$1,672	
Remove existing decorative crosswalk	90	LF	\$10.00	\$900	
<b>Pathway construction</b>					
Path Construction (Class 1) - Shared bike & ped, 3 lane, 17' wide (match existing)	695	LF	\$173.81	\$120,799	\$130,049
Connect to existing bike path	2	EA	\$500.00	\$1,000	
Trail connection to future bicycle center	55	LF	\$150.00	\$8,250	
<b>Road construction</b>					
Clean pavement, sandblast striping, patch & repair	27,962	SF	\$1.00	\$27,962	\$83,467
Construct concrete median with curbs	2,375	SF	\$15.00	\$35,625	
Ladder striping crossings, 3 ea.	160	LF	\$40.00	\$6,400	
Advanced stop bar	90	LF	\$8.00	\$720	
Thermoplastic median striping and edge striping	2,320	LF	\$4.00	\$9,280	
Thermoplastic dashed striping	1,160	LF	\$3.00	\$3,480	
<b>Trailheads</b>					
Demo, clear & grub, & grading	5,000	SF	\$0.15	\$750	\$17,075
Decomposed granite, allow 50%	2,500	SF	\$2.00	\$5,000	
Native landscaping / hydroseed	1,250	SF	\$2.50	\$3,125	
Trees, 4 per each trail head	8	EA	\$350.00	\$2,800	

**BELFLOWER AND PARAMOUNT PRIORITY PROJECTS - ESTIMATE DETAIL**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL	COST
	TOTAL			AMOUNT	PER LENGTH
Benches	2	EA	\$1,250.00	\$2,500	
Waste bins	2	EA	\$1,100.00	\$2,200	
Wayfinding signage	2	EA	\$350.00	\$700	
<b>Signaling</b>					<b>\$49,000</b>
New pedestrian crossing signal with push button activation, 50' boom with flashing red signals	2	EA	\$20,000.00	\$40,000	
Push button activation at median	2	EA	\$4,500.00	\$9,000	
<b>Lighting</b>					
Lighting allowance at trailheads - Included in path cost					
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	<b>1</b>			<b>\$289,915</b>	<b>\$289,915</b>
General Contractor OH&P / Construction Management	289,915	%	20%	\$57,983	
<b>TOTAL CONSTRUCTION COSTS</b>	<b>1</b>			<b>\$347,898</b>	<b>\$347,898</b>
<b>SOFT COST</b>					
Design Fee	347,898	%	10%	\$34,790	
Environmental Planning and Permitting	347,898	%	6%	\$20,874	
Property Acquisition - NONE	NONE			NONE	
<b>TOTAL SOFT COST</b>	<b>1</b>			<b>\$55,664</b>	<b>\$55,664</b>
<b>SUBTOTAL PROJECT COST</b>	<b>1</b>			<b>\$403,562</b>	<b>\$403,562</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	403,562	%	20%	\$80,712	
Construction Contingency - Static 10%	403,562	%	10%	\$40,356	
<b>TOTAL CONTINGENCY</b>	<b>1</b>			<b>\$121,069</b>	<b>\$121,069</b>
<b>TOTAL BBC BELFLOWER BLVD CROSSING</b>	<b>1</b>			<b>\$524,630</b>	<b>\$524,630</b>
<b>P1-2a West Santa Ana Branch- LA River to Garfield</b>					
<b>CONSTRUCTION COSTS</b>					
Pathway construction					\$201
Path Construction (Class 1) - Shared bike & ped, 3 lane, 17' wide (match existing)	2,900	LF	\$173.81	\$504,054	
Connect to existing bike path	2	EA	\$500.00	\$1,000	
Trail connection to other trails	525	LF	\$150.00	\$78,750	
<b>Trailhead parks</b>					<b>\$13</b>
Demo, clear & grub, & grading	15,000	SF	\$0.15	\$2,250	
Decomposed granite, allow 50%	3,750	SF	\$2.00	\$7,500	
Native landscaping / hydroseed	11,250	SF	\$0.82	\$9,225	
Trees	6	EA	\$350.00	\$2,100	
Benches	2	EA	\$1,250.00	\$2,500	
Waste bins	2	EA	\$1,100.00	\$2,200	
Gateway monument, allowance	1	LS	\$5,000.00	\$5,000	
Wayfinding signage	2	EA	\$350.00	\$700	
Bike racks	2	EA	\$1,750.00	\$3,500	
Map board / kiosk	1	EA	\$2,500.00	\$2,500	
<b>Lighting</b>					<b>\$3</b>
Lighting allowance at trailhead	2	EA	\$5,000.00	\$10,000	
<b>Enhanced Crosswalk- Garfield</b>					<b>\$45.68</b>
Roadwork - same as Bellflower	1	LS	\$83,467.00	\$83,467	
Signaling - same as Bellflower	1	LS	\$49,000.00	\$49,000	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	<b>2,900</b>			<b>\$763,746</b>	<b>\$263</b>
General Contractor OH&P / Construction Management	763,746	%	20%	\$152,749	
<b>TOTAL CONSTRUCTION COSTS</b>	<b>2,900</b>			<b>\$916,495</b>	<b>\$316</b>
<b>SOFT COST</b>					
Design Fee	916,495	%	10%	\$91,650	
Environmental Planning and Permitting	916,495	%	6%	\$54,990	
Property Acquisition - NONE	NONE			NONE	
<b>TOTAL SOFT COST</b>	<b>2,900</b>			<b>\$146,639</b>	<b>\$51</b>
<b>SUBTOTAL PROJECT COST</b>	<b>2,900</b>			<b>\$1,063,134</b>	<b>\$367</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	1,063,134	%	20%	\$212,627	

**BELFLOWER AND PARAMOUNT PRIORITY PROJECTS - ESTIMATE DETAIL**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL	COST
	TOTAL			ALL BUILDINGS	PER LENGTH
Construction Contingency - Static 10%	1,063,134	%	10%	\$106,313	
<b>TOTAL CONTINGENCY</b>	<b>2,900</b>			<b>\$318,940</b>	<b>\$110</b>
<b>TOTAL P1-2A WEST SANTA ANA BRANCH- LA RIVER TO GARFIELD</b>	<b>2,900</b>			<b>\$1,382,075</b>	<b>\$477</b>
<b>P1-2b West Santa Ana Branch- Garfield to Paramount</b>					
<b>CONSTRUCTION COSTS</b>					
<b>Pathway construction</b>					<b>\$174</b>
Path Construction (Class 1) - Shared bike & ped, 3 lane, 17' wide (match existing)	2,950	LF	\$173.81	\$512,745	
<b>Fencing</b>					<b>\$155.83</b>
Security fencing at rail yard, assume tubular steel, 10' high	2,950	LF	\$155.83	\$459,708	
<b>Enhanced Crosswalk- Rosencrans</b>					<b>\$56.13</b>
Roadwork - allow 25% greater cost than Bellflower	1	LS	\$104,333.75	\$104,334	
Signaling - allow 25% greater cost than Bellflower	1	LS	\$61,250.00	\$61,250	
<b>Enhanced Crosswalk- Paramount</b>					<b>\$44.90</b>
Roadwork - Same as Bellflower	1	LS	\$83,467.00	\$83,467	
Signaling - Same as Bellflower	1	LS	\$49,000.00	\$49,000	
<b>Railroad crossing</b>					<b>\$25.42</b>
Railroad crossing signals, ped gates, arms, and signage, assumed available power source is available within 100 LF	1	LS	\$75,000.00	\$75,000	
Chain link fencing to avoid pedestrian crossing	250	LF	\$40.00	\$10,000	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	<b>2,950</b>			<b>\$1,355,504</b>	<b>\$459</b>
General Contractor OH&P / Construction Management	1,355,504	%	20%	\$271,101	
<b>TOTAL CONSTRUCTION COSTS</b>	<b>2,950</b>			<b>\$1,626,604</b>	<b>\$551</b>
<b>SOFT COST</b>					
Design Fee	1,626,604	%	10%	\$162,660	
Environmental Planning and Permitting	1,626,604	%	6%	\$97,596	
Property Acquisition - NONE	NONE			NONE	
<b>TOTAL SOFT COST</b>	<b>2,950</b>			<b>\$260,257</b>	<b>\$88</b>
<b>SUBTOTAL PROJECT COST</b>	<b>2,950</b>			<b>\$1,886,861</b>	<b>\$640</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	1,886,861	%	20%	\$377,372	
Construction Contingency - Static 10%	1,886,861	%	10%	\$188,686	
<b>TOTAL CONTINGENCY</b>	<b>2,950</b>			<b>\$566,058</b>	<b>\$192</b>
<b>TOTAL P1-2B WEST SANTA ANA BRANCH- GARFIELD TO PARAMOUNT</b>	<b>2,950</b>			<b>\$2,452,919</b>	<b>\$831</b>
<b>P1-2c West Santa Ana Branch- Paramount to Downey</b>					
<b>CONSTRUCTION COSTS</b>					
<b>Pathway construction</b>					<b>\$174</b>
Path Construction (Class 1) - Shared bike & ped, 3 lane, 17' wide (match existing)	3,020	LF	\$173.81	\$524,911	
<b>Fencing</b>					<b>\$155.83</b>
Security fencing at rail yard, assume tubular steel, 10' high	3,020	LF	\$155.83	\$470,617	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	<b>3,020</b>			<b>\$995,528</b>	<b>\$329</b>
General Contractor OH&P / Construction Management	1,225,928	%	20%	\$245,186	
<b>TOTAL CONSTRUCTION COSTS</b>	<b>3,020</b>			<b>\$1,471,114</b>	<b>\$487</b>
<b>SOFT COST</b>					
Design Fee	1,471,114	%	10%	\$147,111	
Environmental Planning and Permitting	1,471,114	%	6%	\$88,267	
Property Acquisition - NONE	NONE			NONE	
<b>TOTAL SOFT COST</b>	<b>3,020</b>			<b>\$235,378</b>	<b>\$78</b>
<b>SUBTOTAL PROJECT COST</b>	<b>3,020</b>			<b>\$1,706,492</b>	<b>\$565</b>
<b>CONTINGENCY</b>					

**BELFLOWER AND PARAMOUNT PRIORITY PROJECTS - ESTIMATE DETAIL**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL	COST PER LENGTH
	TOTAL			ACE BUILDINGS	
Design Contingency - ROM Level (20%)	1,708,492	%	20%	\$341,298	
Construction Contingency - Static 10%	1,708,492	%	10%	\$170,849	
<b>TOTAL CONTINGENCY</b>	<b>3,020</b>			<b>\$511,948</b>	<b>\$170</b>
<b>TOTAL P1-2C WEST SANTA ANA BRANCH- PARAMOUNT TO DOWNEY</b>	<b>3,020</b>			<b>\$2,218,439</b>	<b>\$735</b>
<b>P1-2d West Santa Ana Branch- Downey to Somerset</b>					
<b>CONSTRUCTION COSTS</b>					
Pathway construction					\$174
Path Construction (Class 1) - Shared bike & ped, 3 lane, 17' wide (match existing)	1,700	LF	\$173.81	\$295,480	
Fencing					\$156
Security fencing at rail yard, assume tubular steel, 10' high	1,700	LF	\$155.83	\$264,917	
Enhanced Crosswalk- Somerset					\$78
Roadwork - same as Bellflower	1	LS	\$83,467.00	\$83,467	
Signaling - same as Bellflower	1	LS	\$49,000.00	\$49,000	
Enhanced Crosswalk- Downey					\$64
Roadwork - same as Bellflower	1	LS	\$83,467.00	\$83,467	
Signaling - 1/2 of Bellflower	1	LS	\$24,500.00	\$24,500	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	<b>1,700</b>			<b>\$800,831</b>	<b>\$471</b>
General Contractor OH&P / Construction Management	800,831	%	20%	\$160,166	
<b>TOTAL CONSTRUCTION COSTS</b>	<b>1,700</b>			<b>\$960,997</b>	<b>\$565</b>
<b>SOFT COST</b>					
Design Fee	960,997	%	10%	\$96,100	
Environmental Planning and Permitting	960,997	%	6%	\$57,660	
Property Acquisition - NONE	NONE			NONE	
<b>TOTAL SOFT COST</b>	<b>1,700</b>			<b>\$153,759</b>	<b>\$90</b>
<b>SUBTOTAL PROJECT COST</b>	<b>1,700</b>			<b>\$1,114,756</b>	<b>\$656</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	1,114,756	%	20%	\$222,951	
Construction Contingency - Static 10%	1,114,756	%	10%	\$111,476	
<b>TOTAL CONTINGENCY</b>	<b>1,700</b>			<b>\$334,427</b>	<b>\$197</b>
<b>TOTAL P1-2D WEST SANTA ANA BRANCH- DOWNEY TO SOMERSET</b>	<b>1,700</b>			<b>\$1,449,183</b>	<b>\$852</b>
<b>Alt B1 Alternate San Gabriel River Gateway (Class III)</b>					
<b>CONSTRUCTION COSTS</b>					
Pathway construction					\$44.06
Class 1 Shared-Use Path	342	LF	\$173.81	\$59,444	
Class III Bike Route	1,237	LF	\$8.19	\$10,134	
Trallhead	1	LS	\$78,300.00	\$78,300	
Lighting					
Lighting allowance at park	15,000	SF	\$5.00	\$75,000	
Bridge upgrades	1	LS	\$53,400.32	\$53,400	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	<b>1,579</b>			<b>\$276,278</b>	<b>\$175</b>
General Contractor OH&P / Construction Management	276,278	%	20%	\$55,256	
<b>TOTAL CONSTRUCTION COSTS</b>	<b>1,579</b>			<b>\$331,534</b>	<b>\$210</b>
<b>SOFT COST</b>					
Design Fee	331,534	%	10%	\$33,153	
Environmental Planning and Permitting	331,534	%	6%	\$19,892	
Property Acquisition - NONE	NONE			NONE	
<b>TOTAL SOFT COST</b>	<b>1,579</b>			<b>\$53,045</b>	<b>\$34</b>
<b>SUBTOTAL PROJECT COST</b>	<b>1,579</b>			<b>\$384,579</b>	<b>\$244</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	384,579	%	20%	\$76,916	
Construction Contingency - Static 10%	384,579	%	10%	\$38,458	
<b>TOTAL CONTINGENCY</b>	<b>1,579</b>			<b>\$115,374</b>	<b>\$73</b>

**BELLFLOWER AND PARAMOUNT PRIORITY PROJECTS - ESTIMATE DETAIL**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL	COST
	TOTAL			ALL BIDDINGS	PER LENGTH
<b>TOTAL ALT B1 ALTERNATE SAN GABRIEL RIVER GATEWAY (CLASS III)</b>					
	1,579			\$499,953	\$317
<b>Alt B2 Omit Lighting Allowance - Bellflower</b>					
<b>CONSTRUCTION COSTS</b>					
Lanes					
San Gabriel River Gateway Park	-1	LS	\$20,000.00	-\$20,000	
San Gabriel River Gateway Trail	-1,360	LF	\$63.45	-\$86,288	
Bellflower Boulevard Crossing Trail	-695	LF	\$63.45	-\$44,096	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	2,055			-\$150,384	-\$73
General Contractor OH&P / Construction Management	-150,384	%	20%	-\$30,077	
<b>TOTAL CONSTRUCTION COSTS</b>	2,055			-\$180,460	-\$88
<b>SOFT COST</b>					
Design Fee	-180,460	%	10%	-\$18,046	
Environmental Planning and Permitting	-180,460	%	6%	-\$10,828	
Property Acquisition - NONE					
<b>TOTAL SOFT COST</b>	2,055			-\$28,874	-\$14
<b>SUBTOTAL PROJECT COST</b>	2,055			-\$209,334	-\$102
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	-209,334	%	20%	-\$41,867	
Construction Contingency - Static 10%	-209,334	%	10%	-\$20,933	
<b>TOTAL CONTINGENCY</b>	1,700			-\$62,800	-\$37
<b>TOTAL ALT B2 OMIT LIGHTING ALLOWANCE - BELLFLOWER</b>					
	2,055			-\$272,134	-\$132
<b>Alt B3 Decomposed Granite in lieu of AC Paving</b>					
<b>CONSTRUCTION COSTS</b>					
Lanes					
San Gabriel River Gateway Trail - Deduct AC paving	-1,360	LF	\$51.00	-\$69,360	
Bellflower Boulevard Crossing Trail	1,360	LF	\$51.00	\$69,360	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	1,360				
General Contractor OH&P / Construction Management		%	20%		
<b>TOTAL CONSTRUCTION COSTS</b>	1,360				
<b>SOFT COST</b>					
Design Fee		%	10%		
Environmental Planning and Permitting		%	6%		
Property Acquisition - NONE					
<b>TOTAL SOFT COST</b>	1,360				
<b>SUBTOTAL PROJECT COST</b>	1,360				
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)		%	20%		
Construction Contingency - Static 10%		%	10%		
<b>TOTAL CONTINGENCY</b>	1,700				
<b>TOTAL ALT B3 DECOMPOSED GRANITE IN LIEU OF AC PAVING</b>					
	1,360				
<b>Alt P1 West Santa Ana Branch- Downey to Somerset Alternate</b>					
<b>CONSTRUCTION COSTS</b>					
Pathway construction					
Path Construction (Class 1) - Shared bike & ped, 3 lane, 17' wide (match existing)	1,700	LF	\$173.81	\$295,480	\$174
Fencing					
Security fencing at rail yard, assume tubular steel, 10' high	1,700	LF	\$155.83	\$264,917	\$155.83
LADPW ROW					
Demo/ clear & grub existing nursery	151,900	SF	\$0.25	\$37,975	\$273

**BELFLOWER AND PARAMOUNT PRIORITY PROJECTS - ESTIMATE DETAIL**

DESCRIPTION	QUANTITY	UNIT	UNIT	TOTAL	POST
	TOTAL		RATE	ALL BUILDINGS	PER LENGTH
Grading	151,900	SF	\$0.30	\$45,570	
Landscaping allowance	151,900	SF	\$2.50	\$379,750	
<b>Trailhead</b>					<b>\$11</b>
Trail end park- similar to park at Bellflower	1	LS	\$18,737.50	\$18,738	
<b>Enhanced Crosswalk- Somerset</b>					<b>\$78</b>
Roadwork - same as Bellflower	1	LS	\$83,467.00	\$83,467	
Signaling - same as Bellflower	1	LS	\$49,000.00	\$49,000	
<b>Enhanced Crosswalk- Downey</b>					<b>\$64</b>
Roadwork- same as Bellflower	1	LS	\$83,467.00	\$83,467	
Signaling - 1/2 of Bellflower	1	LS	\$24,500.00	\$24,500	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	<b>1,700</b>			<b>\$1,282,883</b>	<b>\$755</b>
General Contractor OH&P / Construction Management	1,282,863	%	20%	\$256,573	
<b>TOTAL CONSTRUCTION COSTS</b>	<b>1,700</b>			<b>\$1,539,436</b>	<b>\$906</b>
<b>SOFT COST</b>					
Design Fee	1,539,436	%	10%	\$153,944	
Environmental Planning and Permitting	1,539,436	%	6%	\$92,366	
Property Acquisition - LADWP ROW allowance for relocating existing nursery tenant	158,125	SF	\$1.00	\$158,125	
<b>TOTAL SOFT COST</b>	<b>1,700</b>			<b>\$404,435</b>	<b>\$238</b>
<b>SUBTOTAL PROJECT COST</b>	<b>1,700</b>			<b>\$1,943,870</b>	<b>\$1,143</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	1,943,870	%	20%	\$388,774	
Construction Contingency - Static 10%	1,943,870	%	10%	\$194,387	
<b>TOTAL CONTINGENCY</b>	<b>1,700</b>			<b>\$583,161</b>	<b>\$343</b>
<b>TOTAL ALT P1 WEST SANTA ANA BRANCH- DOWNEY TO SOMERSET ALTERNATIVE</b>	<b>1,700</b>			<b>\$2,527,032</b>	<b>\$1,486</b>
<b>Alt P2 Hazmat Soil Abatement in PE ROW</b>					
<b>CONSTRUCTION COSTS</b>					
<b>Deduct</b>					<b>-\$2</b>
Excavation and hauling- standard methods					
P1-2a	-2,900	LF	\$7.56	-\$21,911	
P1-2b	-2,950	LF	\$7.56	-\$22,289	
P1-2c	-3,020	LF	\$7.56	-\$22,818	
P1-2d	-1,700	LF	\$7.56	-\$12,844	
<b>Add</b>					
Excavation and hauling - using hazmat abatement					
P1-2a	2,900	LF	\$175.00	\$507,500	
P1-2b	2,950	LF	\$175.00	\$516,250	
P1-2c	3,020	LF	\$175.00	\$528,500	
P1-2d	1,700	LF	\$175.00	\$297,500	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	<b>10,570</b>			<b>\$1,769,888</b>	<b>\$167</b>
General Contractor OH&P / Construction Management	1,769,888	%	20%	\$353,978	
<b>TOTAL CONSTRUCTION COSTS</b>	<b>10,570</b>			<b>\$2,123,865</b>	<b>\$201</b>
<b>SOFT COST</b>					
Design Fee	2,123,865	%	10%	\$212,387	
Environmental Planning and Permitting	2,123,865	%	10%	\$212,387	
Property Acquisition - NONE		SF			
<b>TOTAL SOFT COST</b>	<b>10,570</b>			<b>\$424,773</b>	<b>\$40</b>
<b>SUBTOTAL PROJECT COST</b>	<b>10,570</b>			<b>\$2,548,638</b>	<b>\$241</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	2,548,638	%	20%	\$509,728	
Construction Contingency - Static 10%	2,548,638	%	10%	\$254,864	
<b>TOTAL CONTINGENCY</b>	<b>10,570</b>			<b>\$764,592</b>	<b>\$72</b>
<b>TOTAL ALT P2 HAZMAT SOIL ABATEMENT IN PE ROW</b>	<b>10,570</b>			<b>\$3,313,230</b>	<b>\$313</b>

**BELFLOWER AND PARAMOUNT PRIORITY PROJECTS - ESTIMATE DETAIL**

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL	COST PER LENGTH
	TOTAL			ALL BUILDINGS	
<b>Alt P2 Omit Lighting - Paramount</b>					
<b>CONSTRUCTION COSTS</b>					
Deduct					\$64
Lighting- Class I Path	-10,570	LF	\$63.45	-\$670,634	
Lighting- LA River trailhead	-1	LS	\$10,000.00	-\$10,000	
		LF			
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>	-10,570			<b>-\$680,634</b>	<b>\$64</b>
General Contractor OH&P / Construction Management	-680,634	%	20%	-\$136,127	
<b>TOTAL CONSTRUCTION COSTS</b>	-10,570			<b>-\$816,761</b>	<b>\$77</b>
<b>SOFT COST</b>					
Design Fee	-816,761	%	10%	-\$81,676	
Environmental Planning and Permitting	-816,761	%	6%	-\$49,006	
Property Acquisition - NONE		SF			
<b>TOTAL SOFT COST</b>	-10,570			<b>-\$130,682</b>	<b>\$12</b>
<b>SUBTOTAL PROJECT COST</b>	-10,570			<b>-\$947,443</b>	<b>\$90</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	-947,443	%	20%	-\$189,489	
Construction Contingency - Static 10%	-947,443	%	10%	-\$94,744	
<b>TOTAL CONTINGENCY</b>	-10,570			<b>-\$284,233</b>	<b>\$27</b>
<b>TOTAL ALT P2 OMIT LIGHTING - PARAMOUNT</b>	<b>-10,570</b>			<b>-\$1,231,676</b>	<b>\$117</b>

### Unit Price Calculations

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	COST PER MILE	COST PER FOOT
<b>Class 1 Shared-Use Path - 17' wide</b>					
<b>CONSTRUCTION COSTS</b>					
Path Construction (Class 1) - Shared bike & ped, 3 lane, 17' wide (match existing)					
<b>DEMO &amp; PREP</b>					
					<b>\$14</b>
Clear & grub	89,760	SF	\$0.15	\$13,464	
Excavate 9" and haul to landfill	2,493	CY	\$16.00	\$39,893	
Fine grading	89,760	SF	\$0.20	\$17,952	
<b>PATH</b>					
					<b>\$51</b>
Path surface, 3" AC paving over 6" aggregate base	89,760	SF	\$3.00	\$269,280	
<b>STRIPING &amp; SIGNAGE</b>					
					<b>\$7</b>
Signs, allow 16 per mile	16	EA	\$300.00	\$4,800	
Painted striping, bike lane, dashed	5,280	LF	\$0.40	\$2,096	
Painted striping, bike to ped lane, solid	5,280	LF	\$0.53	\$2,795	
Painted bike symbols, 2 ea @ 70' O.C.	151	EA	\$85.00	\$12,823	
Painted pedestrian symbols, 2 ea @ 70' O.C.	151	EA	\$85.00	\$12,823	
<b>LANDSCAPING</b>					
					<b>\$28</b>
Clear & grub, 5' both sides	52,800	SF	\$0.15	\$7,920	
Landscaping, allow hydroseed & misc. shrubs	52,800	SF	\$2.00	\$105,600	
Treated wood curb, both sides	10,560	LF	\$3.00	\$31,680	
Trees, allow 1 tree per 30', 24" box	176	EA	\$350.00	\$61,600	
<b>LIGHTING</b>					
					<b>\$63</b>
Light pole fixture, 10' tall, 80' O.C., including wiring & trenching	67	EA	\$5,000.00	\$335,000	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>				<b>\$917,726</b>	<b>\$174</b>
General Contractor OH&P / Construction Management	375,926	%	20%	\$75,185	\$14
<b>TOTAL CONSTRUCTION COST</b>				<b>\$992,911</b>	<b>\$188</b>
<b>SOFT COSTS</b>					
Engineering & Design	992,911	%	10%	\$99,291	\$19
Environmental Planning and Permitting	992,911	%	6%	\$59,575	\$11
Property Acquisition - NONE					
<b>TOTAL SOFT COST</b>				<b>\$158,866</b>	<b>\$30</b>
<b>SUBTOTAL PROJECT COST</b>				<b>\$1,151,777</b>	<b>\$218</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%) (0% at Final Design)	1,151,777	%	20%	\$230,355	\$44
Construction Contingency (Project) - Static (10%)	1,151,777	%	10%	\$115,178	\$22
<b>TOTAL CONTINGENCY</b>				<b>\$345,533</b>	<b>\$65</b>
<b>TOTAL CLASS 1 SHARED-USE PATH - 17' WIDE</b>				<b>\$1,497,310</b>	<b>\$284</b>
<b>Class II Bike Lane (Road Diet, 4 to 3 lanes ) Unit Cost Estimate - 2 Lanes</b>					
<b>CONSTRUCTION COSTS</b>					
Path Construction (Class II) - Bike lane, 2 lane, 5' wide ea.					
<b>DEMO &amp; PREP</b>					
					<b>\$4</b>

### Unit Price Calculations

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	COST PER MILE	COST PER FOOT
Remove street painted striping, solid	15,840	LF	\$0.55	\$8,712	
Remove street painted striping, dashed	10,560	LF	\$0.36	\$3,775	
Remove parking space striping	400	EA	\$25.00	\$10,000	
<b>STRIPING &amp; SIGNAGE</b>					<b>\$20</b>
Thermoplastic striping, bike lane x 2	10,560	LF	\$4.00	\$42,240	
Thermoplastic bike symbols, 2 per 70'	151	EA	\$212.50	\$32,057	
Thermoplastic bike boxes at intersections, 2 per intersection, 15'x15' plus 5'-6"x20' colored path both sides of intersection	8	EA	\$2,417.50	\$19,340	
Signs, allow 32 per mile (16 each side)	32	EA	\$350.00	\$11,200	
<b>STREET STRIPING</b>					<b>\$14</b>
Thermoplastic roadway striping, solid x 1	5,280	LF	\$4.00	\$21,120	
Thermoplastic striping, dashed x 1	5,280	LF	\$3.00	\$15,840	
Paint parking spaces, allow 100 per block	400	EA	\$35.00	\$14,000	
Arrows at intersections, allow 12 x 4 intersection/mile	48	EA	\$212.50	\$10,200	
Crosswalk striping, allow	2,640	LF	\$4.00	\$10,560	
<b>SIGNALLING</b>					<b>\$8</b>
Signal modification/ loop detection for bicycles, per intersection, allow \$10K per intersection x 4 intersections per mile	4	EA	\$10,000.00	\$40,000	
Modifications of traffic signals for new lane configuration - not included					
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>				<b>\$239,044</b>	<b>\$45</b>
General Contractor OH&P / Construction Management	127,324	%	20%	\$25,465	\$5
<b>TOTAL CONSTRUCTION COST</b>				<b>\$264,509</b>	<b>\$50</b>
<b>SOFT COSTS</b>					
Engineering & Design	264,509	%	10%	\$26,451	\$5
Environmental Planning and Permitting	264,509	%	6%	\$15,871	\$3
Property Acquisition - NONE					
<b>TOTAL SOFT COST</b>				<b>\$42,321</b>	<b>\$8</b>
<b>SUBTOTAL PROJECT COST</b>				<b>\$306,831</b>	<b>\$58</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	306,831	%	20%	\$61,366	\$12
Construction Contingency - Static 10%	306,831	%	10%	\$30,683	\$6
<b>TOTAL CONTINGENCY</b>				<b>\$92,049</b>	<b>\$17</b>
<b>TOTAL CLASS II BIKE LANE (ROAD DIET, 4 TO 3 LANES) UNIT COST ESTIMATE - 2 LAN</b>				<b>\$398,880</b>	<b>\$76</b>
<b>Class III Bike Route Unit Cost Estimate - 2 Ways</b>					
<b>CONSTRUCTION COSTS</b>					
Path Construction (Class II) - Bike lane, 2 lane, 5' wide ea.					
<b>DEMO &amp; PREP</b>					
None					
<b>STRIPING &amp; SIGNAGE</b>					<b>\$8</b>
Thermoplastic bike symbols, 2 per 70'	151	EA	\$212.50	\$32,057	
Signs, allow 32 per mile (16 each side)	32	EA	\$350.00	\$11,200	

### Unit Price Calculations

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	COST PER MILE	COST PER FOOT
<b>STREET STRIPING</b>					
None					
<b>SIGNALLING</b>					
None					
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>				<b>\$43,257</b>	<b>\$8</b>
General Contractor OH&P / Construction Management	43,257	%	20%	\$8,651	\$2
<b>TOTAL CONSTRUCTION COST</b>				<b>\$51,909</b>	<b>\$10</b>
<b>SOFT COSTS</b>					
Engineering & Design	51,909	%	10%	\$5,191	\$1
Environmental Planning and Permitting	51,909	%	6%	\$3,115	\$1
Property Acquisition - NONE					
<b>TOTAL SOFT COST</b>				<b>\$8,305</b>	<b>\$2</b>
<b>SUBTOTAL PROJECT COST</b>				<b>\$60,214</b>	<b>\$11</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	60,214	%	20%	\$12,043	\$2
Construction Contingency - Static 10%	60,214	%	10%	\$6,021	\$1
<b>TOTAL CONTINGENCY</b>				<b>\$18,064</b>	<b>\$3</b>
<b>TOTAL CLASS III BIKE ROUTE UNIT COST ESTIMATE - 2 WAYS</b>				<b>\$78,278</b>	<b>\$15</b>
<b>Class III Bike Blvd. with Traffic Calming Unit Cost Estimate - 2 Ways</b>					
<b>CONSTRUCTION COSTS</b>					
Path Construction (Class III - Bile lane, 2 ways)					
<b>DEMO &amp; PREP</b>					
None					
<b>STRIPING &amp; SIGNAGE</b>					
Bike symbols, 2 per 70'	151	EA	\$212.50	\$32,057	
Signs, allow 32 per mile (16 each side)	32	EA	\$350.00	\$11,200	
<b>STREET STRIPING</b>					
None					
<b>SIGNALLING</b>					
None					
<b>TRAFFIC CALMING</b>					
Arterial intersection, assume 2 bulb outs, additional signage	3	EA	\$20,000.00	\$60,000	
Modify Signaling at minor arterial intersection	3	EA	\$10,000.00	\$30,000	
Minor intersection, assume speed bump, additional signage	7	EA	\$7,500.00	\$52,500	
Neighborhood traffic circle, allow 1 per mile	1	LS	\$50,000.00	\$50,000	
Speed bumps, allow 10 per mile	10	LS	\$3,500.00	\$35,000	
<b>SUBTOTAL DIRECT CONSTRUCTION COST</b>				<b>\$270,757</b>	<b>\$51</b>
General Contractor OH&P / Construction Management	43,257	%	20%	\$8,651	\$2
<b>TOTAL CONSTRUCTION COST</b>				<b>\$279,409</b>	<b>\$53</b>
<b>SOFT COSTS</b>					
Engineering & Design	279,409	%	10%	\$27,941	\$5

Client: Cities of Bellflower and Paramount  
 Facility: Bellflower-Paramount Joint Bicycle Master Plan  
 Project: Cost Estimate for Priority Projects  
 Phase: Planning

06/04/16

### Unit Price Calculations

DESCRIPTION	QUANTITY	UNIT	UNIT RATE	COST PER MILE	COST PER FOOT
Environmental Planning and Permitting	279,409	%	6%	\$16,765	\$3
Property Acquisition - NONE					
<b>TOTAL SOFT COST</b>				<b>\$44,705</b>	<b>\$8</b>
<b>SUBTOTAL PROJECT COST</b>				<b>\$324,114</b>	<b>\$61</b>
<b>CONTINGENCY</b>					
Design Contingency - ROM Level (20%)	324,114	%	20%	\$64,823	\$12
Construction Contingency - Static 10%	324,114	%	10%	\$32,411	\$6
<b>TOTAL CONTINGENCY</b>				<b>\$97,234</b>	<b>\$18</b>
<b>TOTAL CLASS III BIKE BLVD. WITH TRAFFIC CALMING UNIT COST ESTIMATE - 2 WAYS</b>				<b>\$421,348</b>	<b>\$80</b>

Owner: Cities of Bellflower and Paramount  
 Institution: Bellflower-Paramount Joint Bicycle Master Plan  
 Project: Cost Estimate for Priority Projects  
 Phase: Planning

6/4/2015

**ATTACHMENT A  
 ESCALATION CALCULATION**

**PREPARATION DATE: 6/4/2015**

**ESCALATION PER YEAR =**

<b>2015</b>	<b>4.00%</b>
<b>2016</b>	<b>4.00%</b>
<b>2017</b>	<b>4.00%</b>
<b>2018</b>	<b>4.00%</b>
<b>2019</b>	<b>4.00%</b>
<b>2020</b>	<b>4.00%</b>

<b>Years</b>	<b>2015</b>	<b>12/31/2015</b>	<b>6.9 mo</b>	<b>2.30% or</b>	<b>1.0230</b>
	<b>2016</b>	<b>12/31/2016</b>	<b>12.0 mo</b>	<b>4.01%</b>	<b>1.0401</b>
	<b>2017</b>	<b>12/30/2017</b>	<b>12.0 mo</b>	<b>3.99%</b>	<b>1.0399</b>
	<b>2018</b>	<b>12/30/2018</b>	<b>12.0 mo</b>	<b>3.99%</b>	<b>1.0399</b>
	<b>2019</b>	<b>12/30/2019</b>	<b>12.0 mo</b>	<b>4.00%</b>	<b>1.0400</b>
	<b>2020</b>	<b>7/1/2020</b>	<b>6.0 mo</b>	<b>2.02%</b>	<b>1.0202</b>

**Calculated Escalation 22.09%**

**ESCALATION : 22.09%**