

CITY OF SAN CARLOS

# Bicycle and Pedestrian Master Plan

FINAL | ADOPTED JUNE 9, 2020

*Prepared by*  
Alta Planning  
+ Design

*Prepared for*

**CITY** OF  
**GOOD**  
**LIVING**  
SAN CARLOS



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Council Member Sarah McDowell

Council Member Adam Rak

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**01.**

# **Introduction**

## 01. INTRODUCTION

The City of San Carlos is committed to improving the quality of life for residents and visitors by providing walking and bicycling as convenient and comfortable modes of transportation and recreation. Located between San Francisco and Silicon Valley, San Carlos is a key connection within the broader network of bustling employment and recreation hubs that characterizes the Peninsula region.

The Bicycle and Pedestrian Master Plan is an essential tool for guiding city staff and the development community in building a balanced transportation system where active modes are supported and accessible. The ultimate goal of the plan is to promote walking and bicycling through the creation of safe, comfortable and connected networks, and to encourage alternatives to single-occupancy motor vehicle trips.

# Purpose of the Plan

This Bicycle and Pedestrian Master Plan establishes a long-term vision for improving walking and bicycling in San Carlos and provides a strategy to develop a comprehensive bicycling and walking network that provides access to transit, schools, and downtown. This document also identifies a plan to implement these projects and programs through prioritization and phasing to ensure projects are manageable and fundable.

# Benefits of Walking and Bicycling

Active modes of transportation such as walking and bicycling create lasting impacts on both individuals and the communities they live in. The development of a safe and comfortable physical environment that supports these modes has been shown to:

- Improve access to outdoor amenities and increase recreational opportunities
- Reduce the risk of bicycle and pedestrian involved collisions and injuries
- Provide affordable transportation options for low-income and disadvantaged residents
- Increase a city's livability and quality of life
- Decrease visual and noise pollution caused by automobiles
- Reduce greenhouse gas emissions into the atmosphere

# Community Engagement Process

Engaging the San Carlos community has been a priority throughout the Plan process. A variety of outreach opportunities were used to seek input from residents and community members. The plan development process also included extensive coordination with partner agencies and other City departments to ensure this Plan meets community needs, advances initiatives of local and regional partners, and includes projects and programs that can feasibly be implemented. Refer to **Appendix C** for a summary of comments from community events.

## Community Workshops

### Community Workshops 1 and 2

Two community workshops were held on February 21, 2019 and March 5, 2019 with over 70 community members in attendance. The workshops were setup as an open house with stations around the room for participants to rotate between at their own pace. Participants were able to review the existing walking and biking network, collision data, and provided comments on where they would like to see improvements to the walking and biking network in San Carlos.

### Community Workshop 3

A third workshop was held on October 23, 2019. The workshop was attended by nearly 60 residents, who reviewed draft network maps for bicycling and walking improvements in San Carlos. Attendees provided feedback on the draft networks, which helped refine and prioritize the project list.



## 01. INTRODUCTION

### Online Survey

An online survey was available on the City's website from November 28, 2018 to March 15, 2019. The survey received 380 responses, documenting responses to why people walk, bike, and take transit in San Carlos, and what barriers prevent people from doing so. While the U.S. census provides us with data on who walks and bikes to work, this survey provides a much fuller understanding of why people walk and bike in San Carlos.

The top reason people indicated they bike in San Carlos is for recreation and exercise, as reported by over half of the respondents. Over a quarter of respondents bike in San Carlos as part of a work trip, and also to shop, dine, and run errands. The top two barriers people identified to riding, or riding more, is dealing with aggressive drivers, and poor road conditions for bicycling.

**Table 1:** Identified concerns when biking around San Carlos

CONCERN	NUMBER	PERCENT
Dealing with aggressive drivers	58	54.21%
Poor road conditions or lack of bicycle facilities (i.e. bike lanes, shared lane markings, multi- use trails)	58	54.21%
Knowing a safe route to get where you are going	33	30.84%
Other	33	30.84%
Carrying the things you need with you	26	24.30%
The amount of time you have	26	24.30%
Transporting other people	19	17.76%
Having your bike stolen or vandalized	10	9.35%
Finding a bike that you can ride comfortably	10	9.35%
Putting your bike on a bus or a train	9	8.41%
Knowing the rules of the road for biking	2	1.87%

## 01. INTRODUCTION

Eighty percent of respondents walk in San Carlos for recreation, to shop, dine, and run errands. In contrast, a third of survey respondents indicated they walk as part of a trip to work or school. Around half of survey respondents highlighted the same top three barriers to walking: sidewalks in poor condition, challenging crossings, and too heavy and fast vehicle traffic.

**Table 2:** Identified concerns when walking around San Carlos

CONCERN	NUMBER	PERCENT
Sidewalks or paths are in poor condition	181	51.86%
Intersections and crossings are challenging	175	50.14%
Traffic is too heavy and fast	159	45.56%
Other	94	26.93%
Concern about personal safety or security	90	25.79%
The amount of time you have	77	22.06%
Carrying the things you need with you	57	16.33%
Transporting other people	35	10.03%

## Community Input Map

An interactive mapping tool was posted on the City’s website and used throughout development of this Plan to gather input and feedback from the community directly on a map of the city.

Early in the process, community members were encouraged to draw routes or place pins on the map and add comments to identify desired walking or bicycling improvements, challenging locations, and other information about the walking and bicycling environment. This input informed the recommended bicycling and walking network improvements.

Once the draft network recommendations were created, community members were invited to “like” or “dislike” projects to show their preferences, in addition to adding comments on specific projects and seeing the feedback left by others. This input helped to refine the network recommendations.

## Pop-Up Events and Walking Tours

Three pop-up style events were held at the San Carlos Art and Wine Faire (October 4, 2018), Adult Community Center (October 12, 2018), and the Farmer’s Market (November 4, 2018). Participants were asked to identify where they like to walk and bike and to identify locations where they would like to see bicycle and pedestrian improvements in San Carlos. In addition, two walking tours were conducted on March 5, 2019 and March 29, 2019 to discuss improvement to walking and biking facilities in San Carlos.

## Commission and Council Meetings

### Transportation and Circulation Commission

The project team met with the Transportation and Circulation Commission throughout the project. The first meeting was held on January 15, 2019 to provide an overview of the Plan and garner feedback on walking and biking in San Carlos. The second meeting was held on December 17, 2019 to share the draft network recommendations.

### Economic Development Advisory Commission

The project team presented to the Economic Development Advisory Commission on September 24, 2019 to share the draft network recommendations.

### City Council

A meeting with City Council was held on June 9, 2020 to adopt the Plan.

# Plan Organization

The Plan is organized as follows:

**Chapter 1: Introduction** outlines the Plan’s purpose, community engagement process, and provides an overview of the Plan’s structure.

**Chapter 2: Vision, Goals, Objectives, and Policies** captures the vision and policy framework for the Bicycle and Pedestrian Plan.

**Chapter 3: San Carlos Today** provides an inventory of existing walking and bicycling facilities in San Carlos, as well as documents user experience and comfort of those facilities.

**Chapter 4: Recommendations** describes the specific projects, programs, and policy changes recommended to meet the active transportation needs of San Carlos.

**Chapter 5: Implementation** provides a strategy to evaluate and prioritize projects and provide details on funding opportunities to implement the Plan.

**Appendix A. Design Guidelines** identifies design recommendations for pedestrian and bicycle treatments throughout the city.

**Appendix B. Funding Sources** provides additional details on the potential funding sources described in Chapter 5.

**Appendix C. Community Engagement** includes written comments received from the community.

## 01. INTRODUCTION

**02.**

**Vision, Goals,  
Objectives,  
and Policies**

## 02. VISION, GOALS, OBJECTIVES, AND POLICIES

The San Carlos Bicycle and Pedestrian Master Plan is organized around a Vision Statement, three overarching goals, and a series of specific objectives and policies.



### **Vision**

A statement that serves as an aspirational guide.



### **Goals**

Broad, long-range targets for making the vision a reality.



### **Objectives**

The specific outcomes we want to achieve.



### **Policies**

Specific strategies for how to achieve the goals and objectives.

# **Vision**

San Carlos is a community where people of all ages and abilities can comfortably and conveniently walk or ride a bicycle.

# Goals, Objectives, and Policies

## GOAL 1:

### Maintain and Expand the Pedestrian and Bicycle Network

Maintain a complete and convenient network for walking and biking in San Carlos with connections to the region.

#### Objective 1.A:

Plan, design, and construct a complete pedestrian and bicycle network that accommodates the needs of all mobility types, users, and ability levels.

*Policy 1.A.1: Obtain funding for all high priority project recommendations by 2026.*

*Policy 1.A.2: Implement the recommendations for pedestrian and bicycle signage from the Citywide Wayfinding Study.*

*Policy 1.A.3: Coordinate implementation of the Peninsula Bikeway with neighboring jurisdictions.*

#### Objective 1.B:

Coordinate bicycle and pedestrian needs with other street and infrastructure investments.

*Policy 1.B.1: Incorporate Green Streets/Green Infrastructure best practices, as appropriate to the context, for new*

*streets and street retrofits, to enhance the pedestrian and bicyclist experience and reduce the impacts of development on storm water resources and enhance the natural environment.*

*Policy 1.B.2 Evaluate all streets during pavement resurfacing projects to determine if bicycle and pedestrian facilities can be provided (e.g. bike lanes, wider curb lanes or shoulders, crosswalk upgrades) when the striping is reapplied.*

*Policy 1.B.3 Work with transit providers to improve bicycle and pedestrian access (first/last mile connections) to transit stations and improve the comfort of transit stops by providing secure bike parking, benches, and covered waiting areas at stations and stops.*

*Policy 1.B.4 Work with adjacent governmental entities, the County of San Mateo, public service companies, and transit agencies to ensure that Plan recommendations are incorporated into their planning and areas of responsibility, and vice versa.*

## GOAL 2:

### Increase Support for Walking and Bicycling

Increase awareness and support of walking and bicycling through programs and citywide initiatives.

#### Objective 2.A:

Encourage more people to walk and bicycle in San Carlos as part of their daily routine.

*Policy 2.A.1: Continue to support the County of San Mateo Safe Routes to School program.*

*Policy 2.A.2: Explore opportunities for implementing a bicycle and/or scooter share program within San Carlos. Using lessons learned from other jurisdictions, develop policies to ensure safe use and accountability.*

*Policy 2.A.2: Encourage local community input in the planning and implementation of significant bike-ways and other pedestrian or bicycle related improvements by holding public meetings and workshops within the neighborhood where the project will be implemented.*

*Policy 2.A.3: Develop and distribute a citywide bicycle route map.*

*Policy 2.A.4: Renew Bicycle Friendly Community (BFC) Application through the League of American Bicyclists for Fall 2020. Strive to improve the city's BFC status by 2026.*

## GOAL 3:

### Improve Access and Safety for Pedestrians and Bicyclists

Design roadways that are accessible and comfortable for people of all ages and abilities to walk and bicycle.

#### Objective 3.A:

Design a Low Stress Bikeway Network suitable for all ages and ability levels riding bicycles.

*Policy 3.A.1: Design a network of continuous Low Stress Bike-ways as identified in this Master Plan. Projects that improve comfort at intersections and along corridors with high stress should be prioritized.*

*Policy 3.A.2: Prioritize the installation of bicycle parking in the public right-of-way including parks, downtown, and public facilities.*

*Policy 3.A.3: Work with private property owners to install bike parking in key commercial destinations.*

#### Objective 3.B:

Consider implementing a Vision Zero policy before 2024.

*Policy 3.B.1: Annually review the number, locations, and contributing factors of pedestrian-related and bicycling-related collisions to identify and implement ongoing improvements at key locations throughout the transportation network.*

*Policy 3.B.2: Identify opportunities to reduce exposure for people bicycling by reducing crossing distances or providing dedicated facilities.*

*Policy 3.B.3: Study the need to adopt school zone speed limits as low as 15 MPH.*

## 02. VISION, GOALS, OBJECTIVES, AND POLICIES

# 03.

# San Carlos

# Today

# Introduction

San Carlos contains 5.5 square miles of land situated between Belmont and Redwood City on the San Francisco Bay Peninsula. The relatively small area allows the City to examine the fine grain bicycle and walking network connecting residents to the city's parks and trails, retail and commercial districts, and regional transit centers. San Carlos' proximity to regional transportation corridors, such as the San Francisco Bay Trail, Caltrain, and El Camino Real, serve as active and shared transportation assets for residents and visitors to San Carlos. The population of San Carlos is nearly 30,000 people and will grow to 33,700 by 2030<sup>1</sup>.

This chapter include the following sections:

- Walking and Biking Today describes the existing pedestrian and bicycle network in San Carlos, transit access, and demographics.
- User Experience and Perceived Comfort analyzes the level of traffic stress on roadways for pedestrians and bicyclists.
- Safety analyzes the data on bicycle- and pedestrian-related collisions in San Carlos.



1 Association of Bay Area Governments (ABAG)

# Walking and Biking Today

## Existing Pedestrian Network

San Carlos has 63 miles of roadway with sidewalks on both side of the street and 22 miles of roadway with sidewalks on one side of the street – covering respectively 65% and 22% of roadways in San Carlos (see inventory in **Table 3**). The city’s steeper street grades, specifically the roadways in the north western section by Arguello Park and Arundel Elementary, generally are lacking sidewalks, as shown in **Figure 1**. Public feedback indicates that people walking often have trouble navigating areas where sidewalks end, exist on only one side of the street, or switch sides of the street. For example, San Carlos Avenue and Brittan Avenue are both collector streets that provide pedestrian connections to downtown and other nearby destinations, but have areas of partial sidewalk that can be challenging to navigate.

A Pedestrian Safety Assessment conducted for the City of San Carlos in 2010 identified key strengths, enhancement areas, and opportunity areas. Some of the key strengths included the City’s comprehensive enforcement policies, extensive public involvement processes, and an existing inventory of sidewalks and pedestrian opportunity areas. Areas that the Assessment identified the City could improve or add included:

- Adoption of Routine Accommodations for New Development
- Preparation of a Pedestrian Master Plan
- Safe-Routes-to-School Program and Grant Funding
- Traffic Calming Programs
- Collision History and Collision Reporting Practices
- Pedestrian-Oriented Speed Limits and Speed Surveys

- Pedestrian-Oriented Traffic Signal and Stop Sign Warrants
- Updated ADA Transition Plan for Streets and Sidewalks
- Pedestrian Safety Program
- Collection of Pedestrian Volumes
- Pedestrian/Bicycle Coordinator
- Use of Leading Pedestrian Intervals

**Table 3:** Roadways with Sidewalks







FACILITY TYPE	MILEAGE
Full Sidewalks	63.0
Partial Sidewalks	21.6
No Sidewalk	12.5
Total	97.1

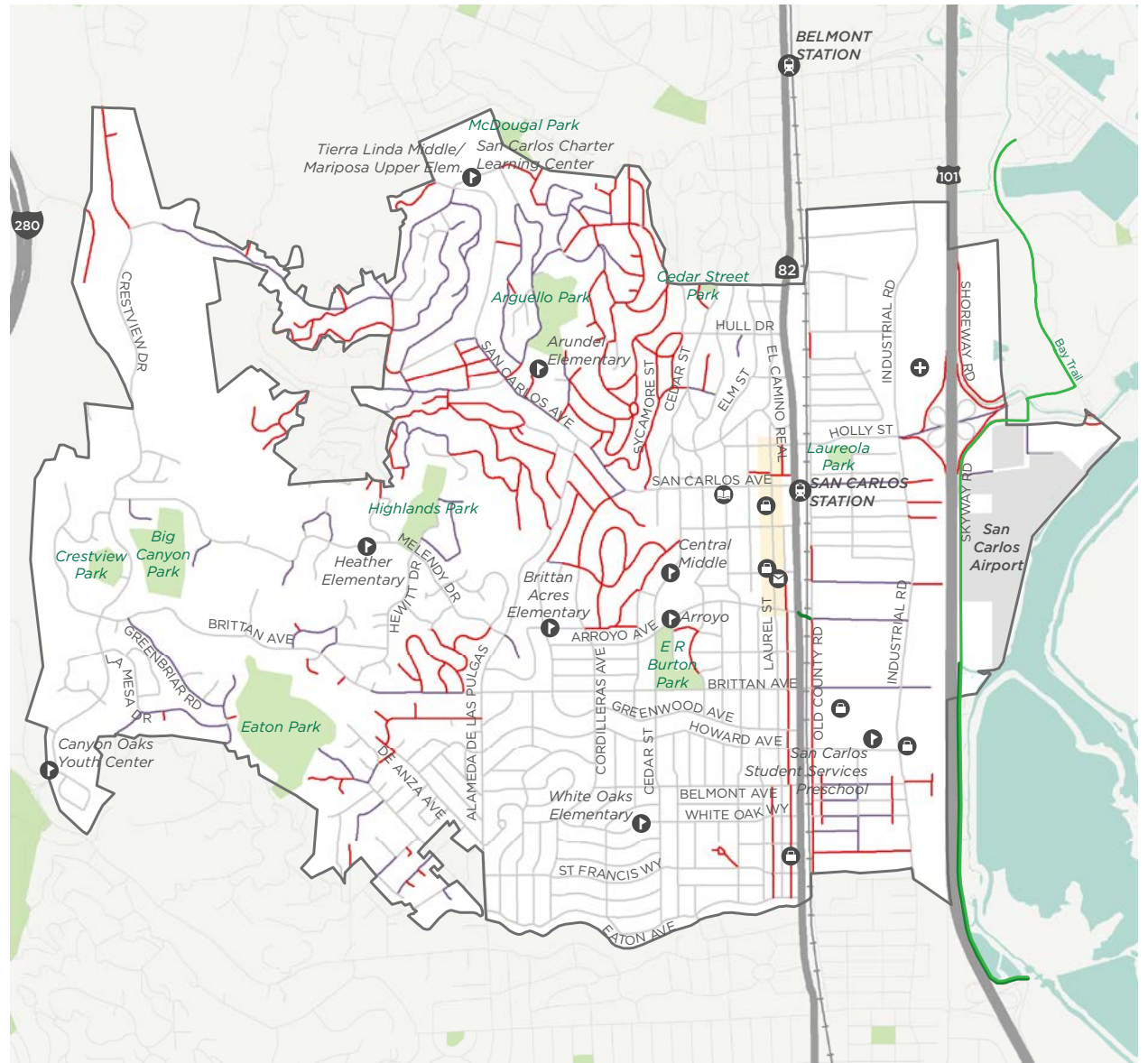
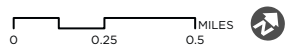
### 03. SAN CARLOS TODAY

**Figure 1:**  
Sidewalk Network

- Full Sidewalk
- Partial Sidewalk
- No Sidewalk
- Class I Shared-Use Path

**Destinations + Boundaries**

-  Post Office
-  Shopping
-  Hospital
-  Library
-  School
-  Caltrain Station
- Bay Trail
- Downtown
- Park
- San Carlos City Limit



### 03. SAN CARLOS TODAY

#### Existing Bicycle Network

The California Department of Transportation (Caltrans) designates four classes of bicycle facilities: Class I shared use paths, Class II bicycle lanes, Class III bicycle routes, and Class IV separated bikeways. San Carlos has over 20 miles of existing bikeway facilities, including 4.1 miles of shared use path, 10.8 miles of Class II bicycle lanes, and 7.1 miles of Class III Bicycle Routes (see inventory in **Table 4 and Figure 2**). North-south bikeways include bicycle lanes on Alameda de las Pulgas, Old County Road, and Industrial Road and a bike route on Cedar Street. Intermittent bikeways on San Carlos Avenue, Brittan Avenue, and Arroyo Street provide East-West connections. San Carlos currently has no separated bikeways (Class IV).

#### Bike Parking

Bicycle travel requires a network of supportive amenities to provide bike storage and maintenance options. The 2012 Bicycle Plan identified the need for a city-wide bicycle parking siting plan. In 2015, the City added six bicycle racks in Downtown. In addition, the San Carlos Caltrain Station has 36 bike racks and 48 bicycle keyed lockers managed by Caltrain.

New development projects within San Carlos are required to provide bicycle parking. The number and type of support facility required can vary by land use type and size. The specific requirements are defined in Chapter 18.20 of San Carlos' Municipal Code.



### 03. SAN CARLOS TODAY

**Table 4:** Existing Bikeways and Mileage by Type







FACILITY TYPE		MILES
<p><b>Class I Shared Use Paths</b></p> <p>Shared use paths are completely separated from the street. They allow two-way travel by people bicycling and walking, and are among the most comfortable facilities for children and inexperienced riders as there are few potential conflicts between people bicycling and people driving.</p>		4.1
<p><b>Class II Bicycle Lanes</b></p> <p>Bicycle lanes are striped preferential lanes on the roadway for one-way bicycle travel. Some bicycle lanes include a striped buffer on one or both sides to increase separation from the traffic lane or from parked cars.</p>		10.8
<p><b>Class III Bicycle Routes</b></p> <p>Bicycle routes are signed where people bicycling share a travel lane with people driving. Because they are shared facilities, bicycle routes are most appropriate for low-speed and low-volume streets. Some Class III bicycle routes include shared lane markings or “sharrows” that recommend proper bicycle positioning in the center of the travel lane and alert drivers that bicyclists may be present. Bike Boulevards (Class IIIB) are bike routes on streets that prioritize through trips for bicyclists</p>		7.1
<p><b>Class IV Separated Bikeways</b></p> <p>Separated bikeways are on-street bicycle facilities that are physically separated from motor vehicle traffic by a vertical element or barrier, such as a curb, bollards, or vehicle parking aisle. They can allow for one- or two-way travel on one or both sides of the roadway.</p>		0.0
<p><b>Total</b></p>		22.0

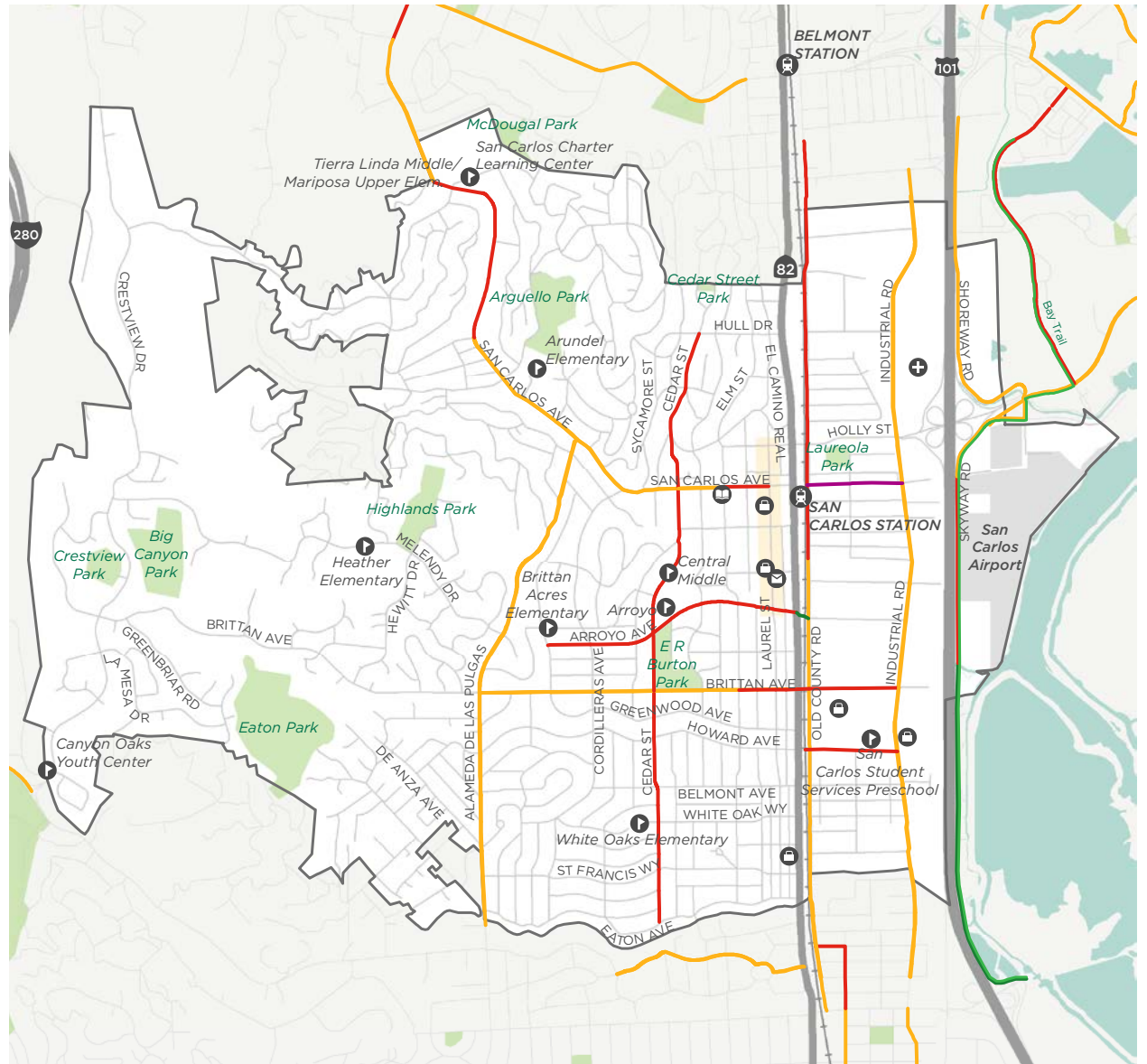
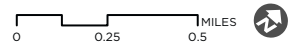
### 03. SAN CARLOS TODAY

**Figure 2:**  
Existing Bikeways

- Class I Shared-Use Path
- Class II Bicycle Lane
- Class III B Bicycle Boulevard
- Class III Bicycle Route

**Destinations + Boundaries**

-  Post Office
-  Shopping
-  Hospital
-  Library
-  School
-  Caltrain Station
- Bay Trail
- Downtown
- Park
- San Carlos City Limit



### 03. SAN CARLOS TODAY

#### Transit and Other Facilities

Cities across California are exploring how improvements to transit services and surrounding roadway infrastructure can make it easier for people to walk and bike to their local transit stop or station. Often called “Safe Routes to Transit” these programs acknowledge that people often walk and bike to transit stops, and efforts to fund station and access improvements supports more vulnerable users without reliable access to automobiles. The San Carlos Caltrain Station and the recently developed San Carlos Transit Station provide important transit hubs for residents to reach schools, shopping, and employment areas across the Bay Area. The Transit Center project is being developed to improve connections between SamTrans fixed-route bus services, San Carlos Caltrain, local shuttles, and people walking and biking. As shown in **Figure 3**, SamTrans bus routes in San Carlos include:

- The 397, 398, ECR, and RAPID lines provide connections to stops along El Camino Real, connecting cities along the Peninsula from Daly City to Palo Alto.
- Route 61 is a local route that connects the San Carlos Caltrain Station with a stop at Carlmont High School and near other schools on San Carlos Avenue, Melendy Avenue, and Brittan Avenue.

- Route 295 connections San Mateo, Hillsdale, San Carlos, and Redwood Caltrain Stations through Alameda de las Pulgas.
- Route 260 connects the Belmont and San Carlos Caltrain Station and provides a connection across Highway 101 to Redwood Shores.

All SamTrans buses are equipped with front-loading bicycle racks holding two bicycles, and two additional bicycles are allowed inside the bus, depending on the passenger load. The SamTrans Short-Range Transit Plan (2017-2026) indicates that all SamTrans coach buses are being retrofitted with new racks that hold three bicycles.

Caltrain has reported that the average weekday passenger boarding for the San Carlos Caltrain Station is 1,331 for 2018. The average mid-week bicycle boarding is 140 bikes per day making San Carlos Station rank 14th out of the 29 stations in the Caltrain system. Weekend bicycle counts were even higher with 252 bike boarding on Saturday and 142 bike boarding on Sunday.

### 03. SAN CARLOS TODAY

**Figure 3:**  
Transit Network

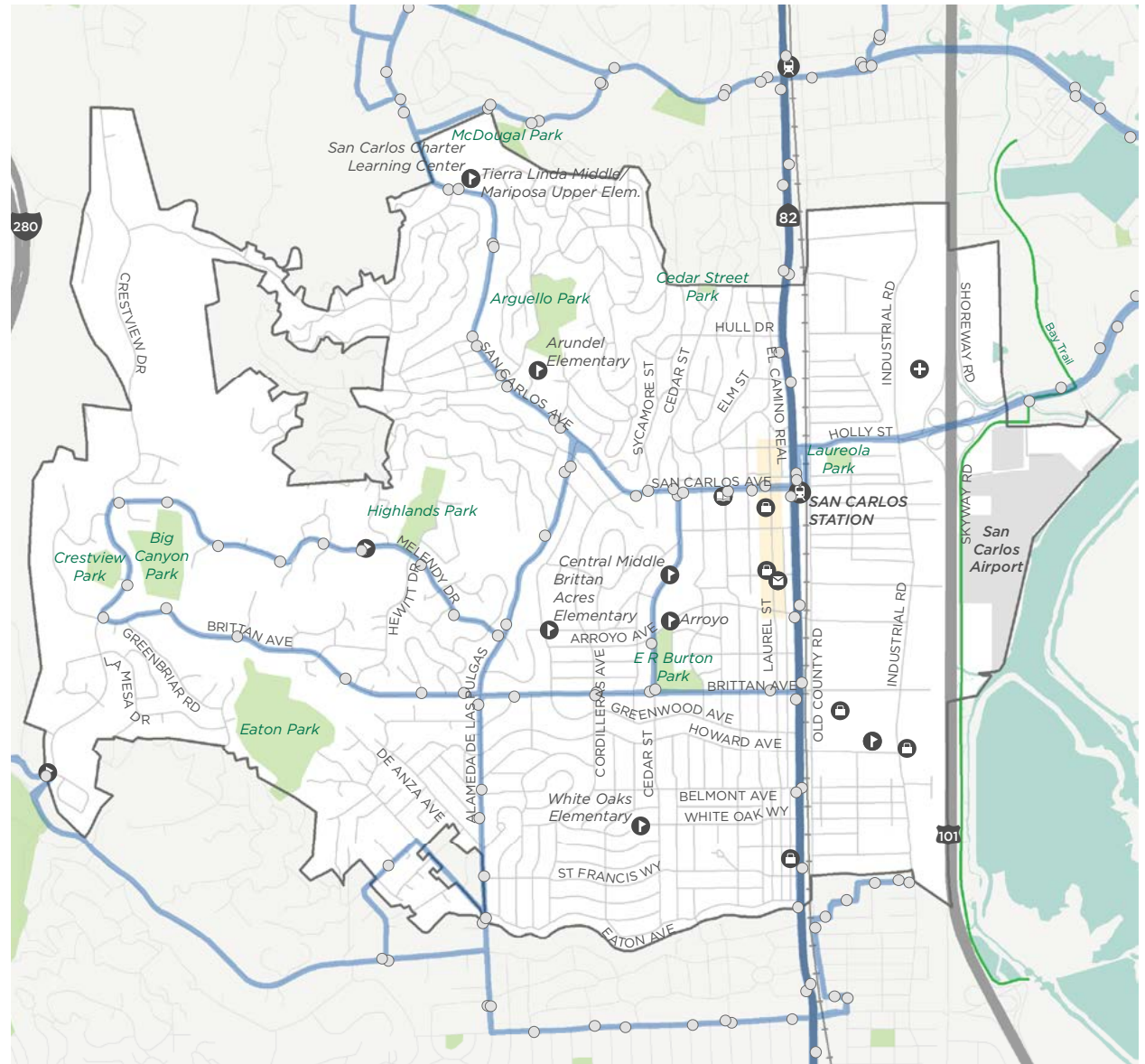
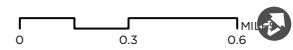
**SamTrans Bus Network**

- Stop
- Route

**Destinations + Boundaries**

- ✉ Post Office
- 🛒 Shopping
- ⊕ Hospital
- 📖 Library
- 🎓 School
- 🚆 Caltrain Station

- 🌿 Bay Trail
- 🏘️ Downtown
- 🌳 Park
- ▭ San Carlos City Limit



### 03. SAN CARLOS TODAY

#### Land Use & Major Destinations

San Carlos is primarily comprised of single-family homes (60% of land), and quaint neighborhood streets are a defining character of much of the City. Within the last two decades, some multifamily housing has been constructed in the Downtown area and along Laurel Street and the El Camino Real corridor north of Holly Street and south of Arroyo Street. Multifamily housing has also been concentrated along the southern edge of the Devonshire Area and along the western boundary of the city. The City's most recent Housing Element, adopted in 2015, identifies the capacity for 596 new residential units. Based on the identified underutilized parcels, much of this development will occur along El Camino Real, Laurel Street, Old County Road, San Carlos Avenue, and nearby roads. The ongoing proposal for multifamily housing as part of the Black Mountain proposal is anticipated to bring 69 townhomes off of Melendy Drive. Through the Bicycle and Pedestrian Master Plan effort, the City of San Carlos can strategize how this anticipated development can be paired with bicycle and pedestrian improvements in these areas.

Within San Carlos, there are a number of activity generators that have the potential to generate significant demand for walking and biking. These include:

#### Parks and Recreation Areas

- Arguello Park
- Bay Trail
- Big Canyon Park (including hiking trails)
- Burton Park
- Cedar Street Park
- Crestview Park (including hiking trail)
- Eaton Park (including hiking trails)
- Highlands Park
- Laureola Park
- McDougal Park

#### Commercial Areas and Corridors

- San Carlos Downtown Area
- San Carlos Market Place

#### Employment Areas

- San Carlos Downtown Area

#### Schools

- Tierra Linda Middle School
- Central Middle School
- White Oaks Elementary
- Heather Elementary
- Arroyo Elementary
- San Carlos Student Services Preschool
- Brittan Acres Elementary
- Mariposa Elementary
- Arundel Elementary
- San Carlos Charter Learning Center

#### Civic Buildings

- San Carlos City Hall and Library
- San Carlos Adult Community Center
- San Carlos Youth Center

#### Medical Facilities

- Palo Alto Medical Foundation

#### Transit

- San Carlos Caltrain Station

### 03. SAN CARLOS TODAY

## Demographics

San Carlos is home to just under 30,000 residents (29,954), according to the 2017 American Community Survey five-year estimates. Two thirds of households are families, and a third of households have children under the age of 18. As seen in **Table 5**, residents identify predominantly as white (77%), with 15% of residents identifying as Asian. Ten percent of residents identify as Hispanic or Latino. The average household income is \$152,521, significantly higher than the countywide average of \$105,667.

**Table 5:** Demographic Comparison to San Mateo County

*Source: ACS 2017 5-year estimates*

RACE	SAN CARLOS	SAN MATEO COUNTY
White	77.3%	52.1%
Black or African American	0.6%	2.4%
American Indian and Alaska Native	0.1%	0.3%
Asian	14.8%	27.6%
Native Hawaiian and Other Pacific Islander	0.3%	1.4%
Some other race	1.9%	10.8%
Two or more races	5.1%	5.3%
Hispanic or Latino	10.2%	24.9%

### 03. SAN CARLOS TODAY

## Commuting Modes

Based on journey to work data from the 2017 ACS 5-year data, two percent of residents walk to work and one percent of residents bike to work (see **Table 6**). This represents approximately 300 daily work-based bicycle trips and 600 daily work-based walking trips. The census data does not account for commuters with multiple modes of travel to and from work, such as a commuter that may ride a bicycle to the Caltrain Station before transferring to transit; for this response, the trip would be counted as a transit trip.

As shown in **Figure 4**, almost an equal number of people come to and leave San Carlos for their primary jobs, about 13,000 in each direction. Just over a thousand people live and work in San Carlos.

As part of the Bicycle and Pedestrian Master Plan process an online survey was conducted from December 2018 to March 2019 to get a better understanding of where people bike and walk in San Carlos. As shown in **Table 7**, 81% of survey respondents indicate they walk to shop, dine, or run errands and 35% of survey respondents bike to these destinations. In addition, 81% and 52% of survey respondents are walking and biking for recreation or exercise, respectively.

**Table 6:** Employment Inflow/Outflow for San Carlos

Source: 2017 ACS 5-year estimates

MODE (HOME-BASED WORK TRIPS)	2010	2017
Drive Alone	79.7%	76.0%
Carpool	6.9%	5.5%
Public Transit	4.8%	7.3%
Bicycle	--	1.1%
Walk	2.2%	1.9%
Work at Home	4.6%	7.4%
Other	1.8%	2.0%

**Table 7:** Reasons People Bike or Walk in San Carlos

Source: San Carlos Bicycle and Pedestrian Master Plan survey, 2019

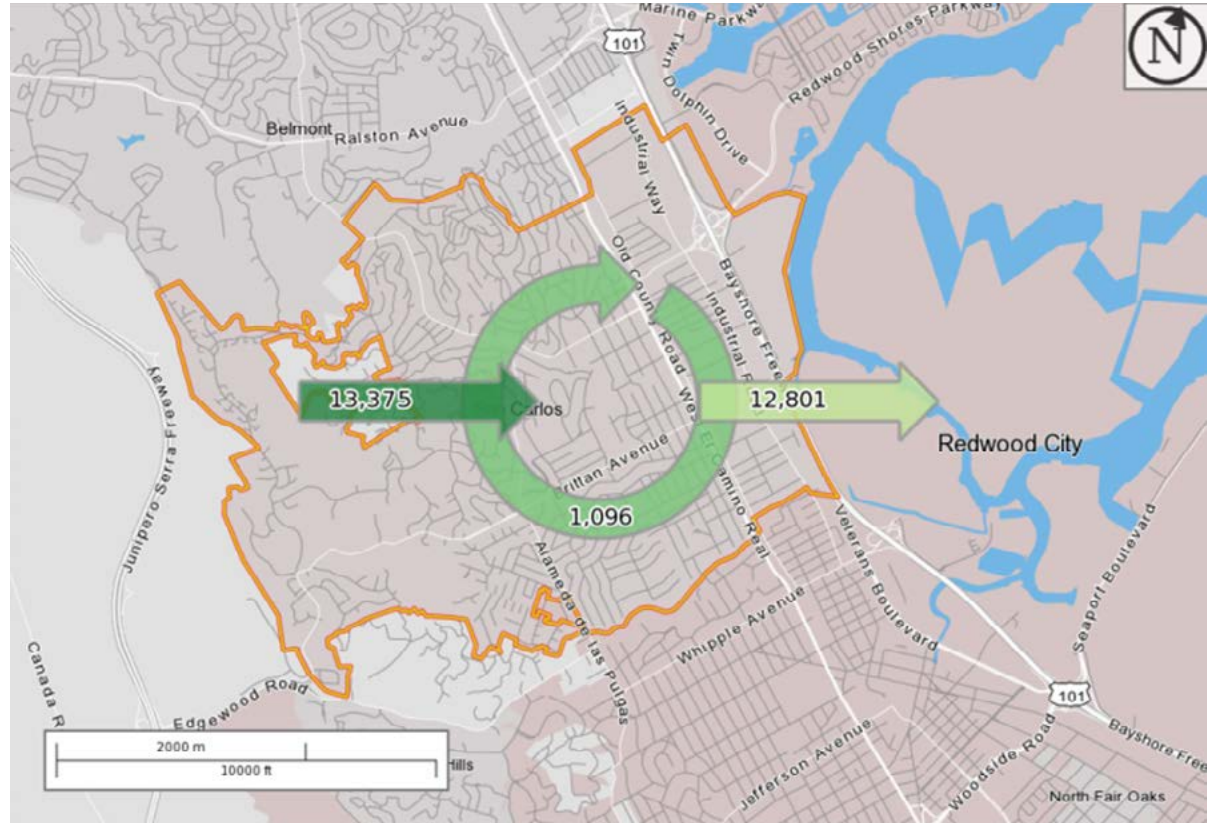
REASON	WALK		BIKE	
	#	%	#	%
As part of a trip to work	126	34%	95	28%
To shop, dine out, run errands, visit people, go to an event, or similar activity	301	81%	118	35%
For recreation or exercise	300	81%	173	52%
Other	29	8%	20	6%

\*Does not include responses from people who indicated they do not currently walk or bike in San Carlos

### 03. SAN CARLOS TODAY

**Figure 4:**  
Employment Inflow/  
Outflow for San Carlos

Source: OntheMap, US Census Bureau



# User Experience and Perceived Comfort

## Bicycle Level of Traffic Stress

Traffic stress is the perceived sense of danger associated with riding in or adjacent to vehicle traffic. Studies have shown that traffic stress is one of the greatest deterrents to bicycling. The less stressful—and therefore more comfortable—a bicycle facility is, the wider its appeal to a broader segment of the population. A bicycle network will attract a large portion of the population if it is designed to reduce conflicts with motor vehicles and if it connects people with where they want to go. Streets are considered low stress if they have relatively low vehicle speeds and volumes (e.g., a shared, low-traffic neighborhood street) or if there is greater physical separation between the bikeway and traffic lane on roadways with higher traffic volumes and speeds (e.g., a separated bikeway on a major street).

## Types of Bicyclists

Research indicates that the majority of people in the United States (56-73%) would bicycle if dedicated bicycle facilities were provided. However, only a small percentage of Americans (1-3%) are willing to ride if no facilities are provided. This research into how people perceive bicycling as a transportation choice has indicated that most people fall into one of four categories, illustrated below.



### 1%-3% STRONG & FEARLESS

Very comfortable and willing to ride on streets without designated facilities



### 5%-10% ENTHUSIASTIC & CONFIDENT

Very comfortable, but prefer streets with designated bike lanes



### 50%-60% INTERESTED, BUT CONCERNED

Comfortable on trails and streets with buffered or separated bike lanes and interested in biking more



### 30% NOT CURRENTLY INTERESTED

Physically unable or very uncomfortable even on streets with separated bike lanes

## Level of Traffic Stress Classification

To better meet the needs of the “Interested, But Concerned” cyclist, planners developed the Bicycle Level of Traffic Stress (BLTS) analysis as an objective, data-driven evaluation model to help identify streets with high levels of traffic stress.

The BLTS analysis quantifies stress levels when riding along a given roadway based on several roadway characteristics including: number of lanes, posted speed limit, existing bike facilities, street width, elevation change, and others. The outputs can also be codified to correspond to different types of bicyclists:

- **All ages and abilities (BLTS 1)**  
Level 1 includes off-street shared use paths and some very low-stress roadways suitable for all ages and abilities.
- **Average adult (BLTS 2)**  
Level 2 includes roadways that are comfortable enough that the mainstream adult population would ride a bicycle on them.
- **Confident adult (BLTS 3)**  
Level 3 includes arterial roadways with bicycle facilities that are probably only comfortable for an experienced, confident bicyclist.
- **Strong and fearless (BLTS 4)**  
Level 4 includes arterial roadways with no or minimal bicycle facilities ridden only by strong or fearless bicyclists.

### 03. SAN CARLOS TODAY

The lower the number, the lower the stress and the higher the level of comfort for people on bicycles. BLTS 1 and 2 roads are typically the roadways that appeal to the “Interested, but Concerned” cyclists.

Neighborhood streets carry relatively little vehicular traffic, at typically slower speeds and are generally considered BLTS 1 or 2. Multi-use trails, like the Bay Trail, are also considered BLTS 1. Collector and arterial streets without bicycle facilities are generally considered BLTS 3. Terrain, high vehicle speeds, curves, and other difficult environmental conditions also raise BLTS, while the presence of bicycle lanes reduce the BLTS. **Figure 5** displays the BLTS classifications for San Carlos. El Camino Real has BLTS 4, indicative of the high speeds and multiple travel lanes that makes it uncomfortable to people biking. Brittan Avenue, San Carlos Avenue, Old County Road, and Industrial Road are classified as BLTS 3.

### Pedestrian Level of Traffic Stress

Pedestrian connectivity and access to amenities is measured with the understanding that the quality of a pedestrian’s experience is influenced by a number of physical factors including elements like presence (or lack of) sidewalks, the type of roadway, the speed of traffic, elevation change, and the presence of pedestrian amenities. Similar to bicycles, roads that have lower traffic speeds and volumes, or greater separation from traffic, will provide a more comfortable experience for pedestrians.

These factors are aggregated into a single Pedestrian Level of Traffic Stress (PLTS) score. These scores range from PLTS 1 to PLTS 4, with PLTS 1 being the least stressful and PLTS 4 being the most stressful.

**Figure 6** shows the PLTS classification for San Carlos. Crosstown connectors, such as San Carlos Avenue, Industrial Avenue, Old County Road, and Brittan Avenue are classified as PLTS 3, due to their higher traffic volumes and roadway class. With high speeds and multiple lanes of travel, El Camino Real has PLTS 4.

<sup>1</sup> Roger Geller, City of Portland Bureau of Transportation. *Four Types of Cyclists*. <http://www.portlandonline.com/transportation/index.cfm?a=237507>. 2009; 2 Dill, J., McNeil, N. *Four Types of Cyclists? Testing a Typology to Better Understand Bicycling Behavior and Potential*. 2012.

### 03. SAN CARLOS TODAY

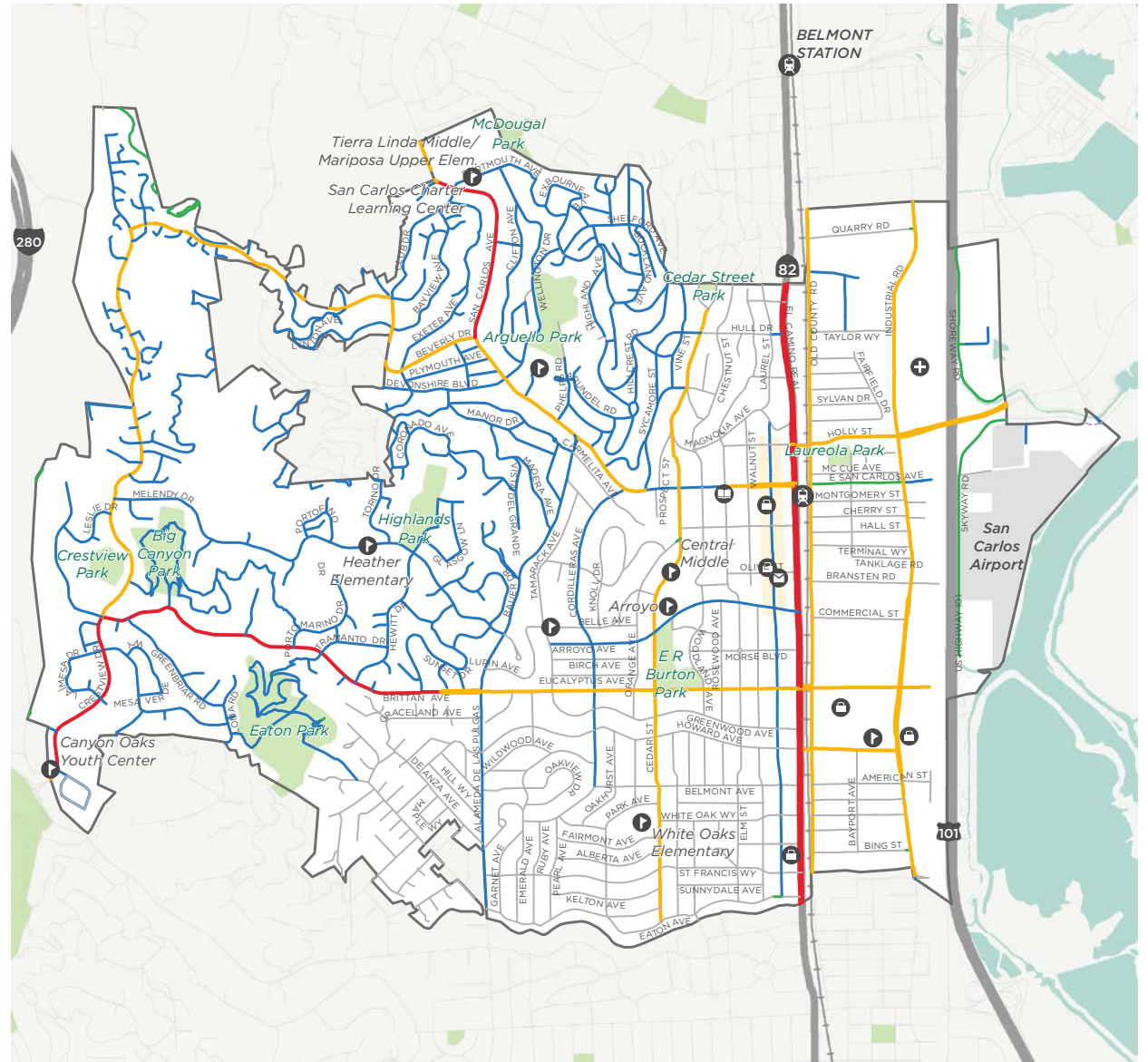
**Figure 5:**  
Bicycle Level of  
Traffic Stress (BLTS)

**BLTS Score**

- Level 1 All Ages and Abilities
- Level 1 All Ages and Abilities (Residential)
- Level 2 Average Adult
- Level 3 Confidant Adult
- Level 4 Fearless Adult

**Destinations +  
Boundaries**

- Post Office
- Shopping
- Hospital
- Library
- School
- Caltrain Station
- Downtown
- Park
- San Carlos City Limit



### 03. SAN CARLOS TODAY

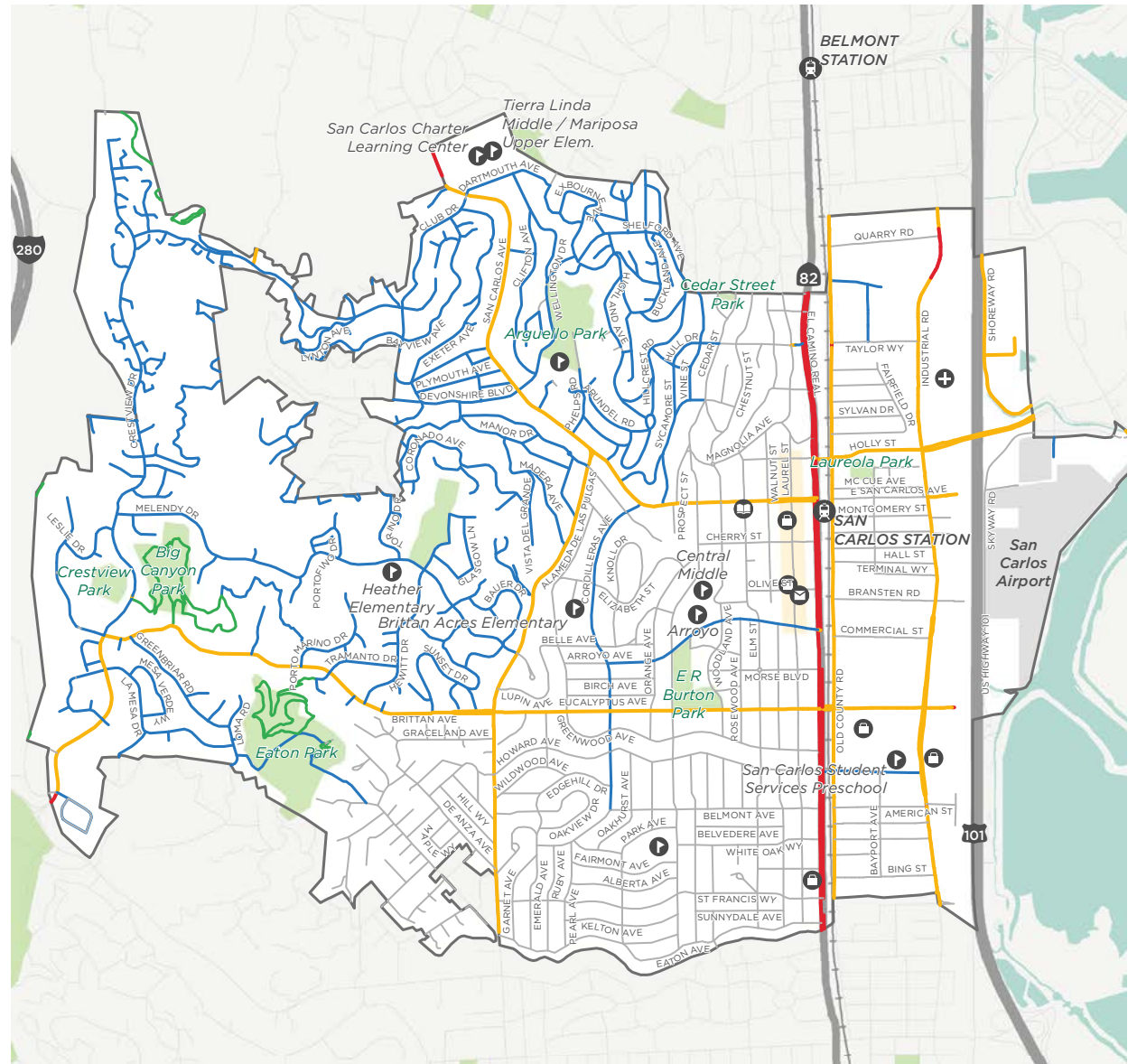
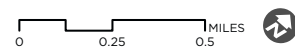
**Figure 6:**  
Pedestrian Level of Traffic Stress (PLTS)

**PLTS Score**

- Level 1 All Ages and Abilities
- Level 1 All Ages and Abilities (Residential)
- Level 2 Average Adult
- Level 3 Confidant Adult
- Level 4 Fearless Adult

**Destinations + Boundaries**

- Post Office
- Shopping
- Hospital
- Library
- School
- Caltrain Station
- Downtown
- Park
- San Carlos City Limit



# Safety

Data on bicycle- and pedestrian-involved collisions can provide insight into locations or roadway features that tend to have higher collision rates, as well as behaviors and other factors that contribute to collisions. These insights inform the recommendations to address safety challenges facing people bicycling and walking.

**Figure 7** show the location of bicycle-involved collisions and **Figure 8** shows pedestrian collisions within San Carlos between 2013 and 2017.

Between 2013 and 2017 there were 40 pedestrian-involved collisions and 35 bicycle-involved collisions, 75 in total (see **Table 8**). These collisions were concentrated along El Camino Real, Laurel Street, Industrial Road, Arroyo Avenue, and San Carlos Avenue. There were three pedestrian fatalities during the analysis period occurring at the intersections of El Camino Real and Belmont Avenue, San Carlos Avenue and Arundel Road, and on Highway 101 near the San Carlos Airport.




**Table 8:** Collision Summary (2013-2017)  
*2013-2017 Transportation Injury Mapping System, UC Berkeley*

COLLISION TYPE	TOTAL COLLISIONS	FATALITIES	SEVERE INJURIES	MINOR INJURIES
Bicycle-involved collisions	35	0	1	34
Pedestrian-involved collisions	40	3	4	33










### 03. SAN CARLOS TODAY

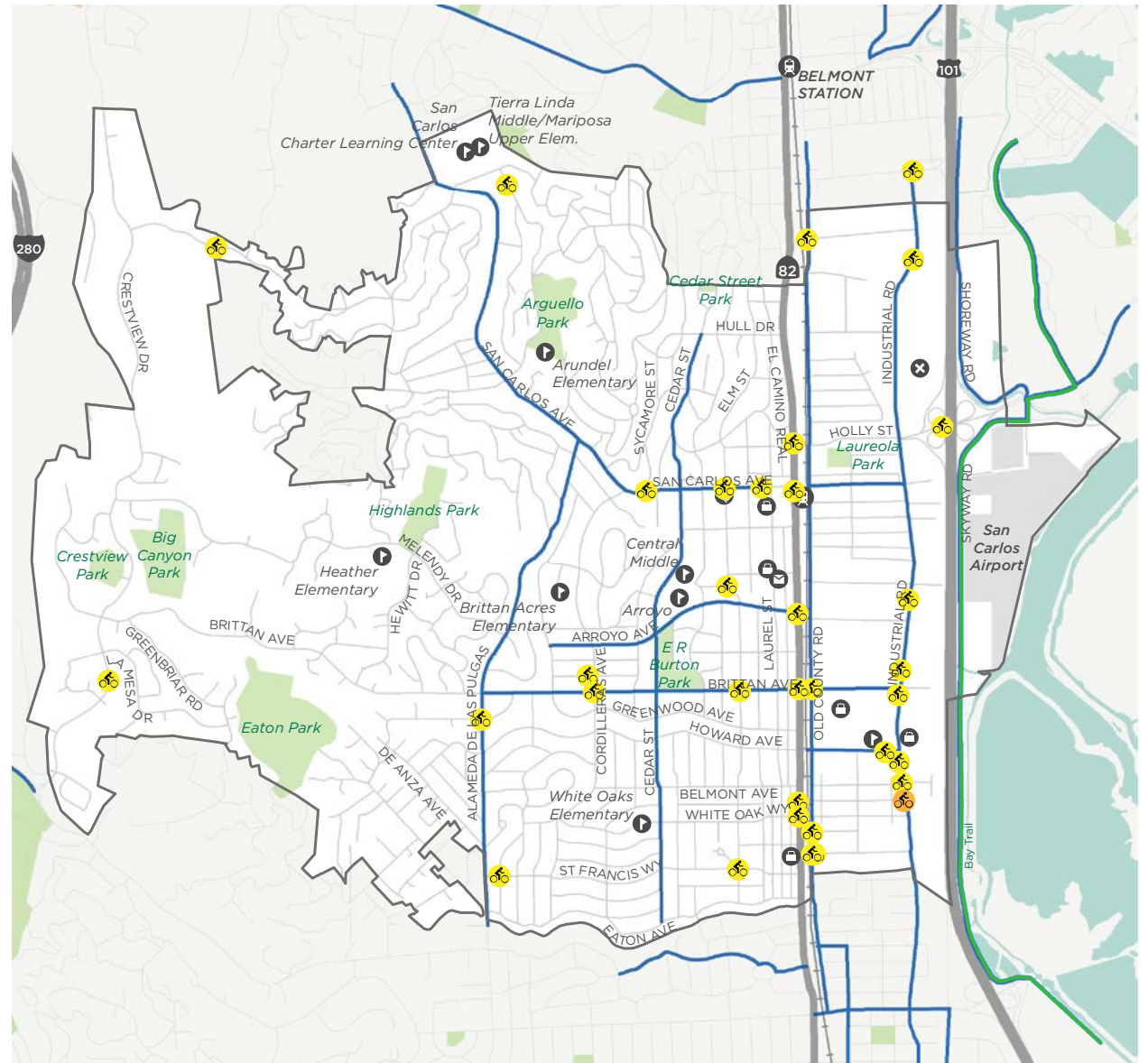
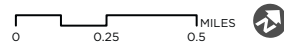
**Figure 7:**  
Bicycle Collisions

**Bicycle Collisions  
(2013 - 2017)**

-  Severe Injury (1)
-  Minor Injury (34)
-  Existing Bikeway

**Destinations +  
Boundaries**




-  Post Office
-  Shopping
-  Hospital
-  Library
-  School
-  Caltrain Station
-  Bay Trail
-  Park
-  San Carlos City Limit



### 03. SAN CARLOS TODAY







**Figure 8:**  
Pedestrian Collisions



**Pedestrian Collisions  
(2013 - 2017)**

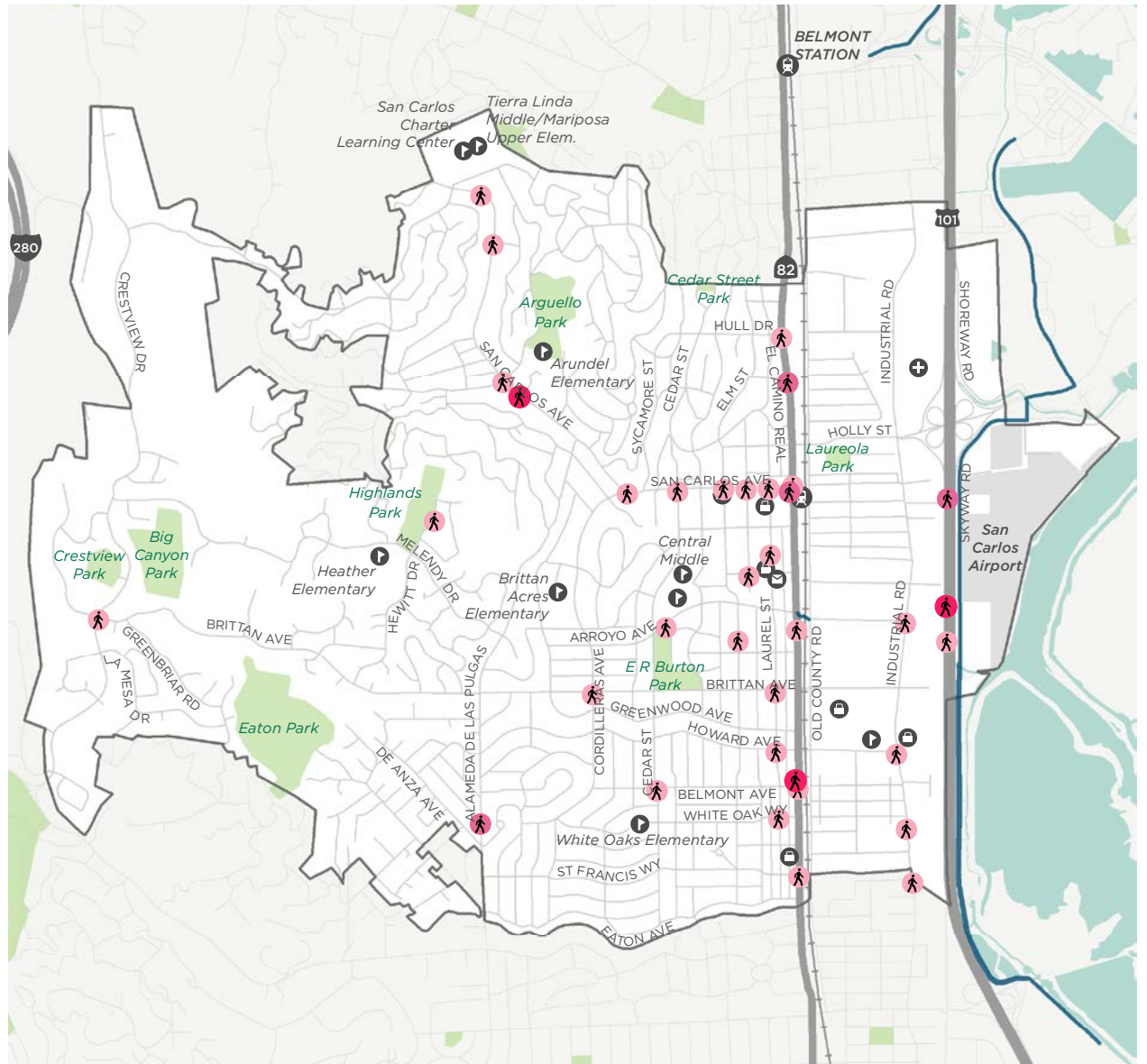
-  Fatality (3)
-  Severe Injury (4)
-  Minor Injury (33)

 Existing Shared-Use Path

**Destinations +  
Boundaries**

-  Post Office
-  Shopping
-  Hospital
-  Library
-  School
-  Caltrain Station

-  Park
-  San Carlos City Limit



**04.**

# **Recommendations**

# Introduction

The walking and biking network described in this Plan seeks to provide the San Carlos community with convenient and comfortable choices.

Built on the needs and opportunities identified through the evaluation of existing conditions, progress made since the development of the 2012 Bicycle Master Plan, extensive community input, and data driven analyses, this chapter presents the projects, programs, and policy changes for the City of San Carlos.

Recommendations are considered planning-level, meaning they should be used as a guide when implementing projects. In some cases, traffic impact analysis and more detailed design analysis will be required to evaluate specific site conditions and develop designs that reflect conditions and constraints.

## This chapter includes the following sections:

- Projects describes the proposed bicycling and walking infrastructure improvements
- Citywide Projects describes improvements that should be pursued throughout San Carlos as opportunities arise, but specific locations for these improvements have not been identified
- Programs includes recommended education, encouragement, enforcement, and evaluation activities to be pursued or expanded by the City and its partners
- Policy Changes includes changes to municipal codes, operating procedures, or other policies that will support a more walkable and bikeable San Carlos

# Projects

## Bicycle Network Projects

Bicycle network projects are categorized based on the four classifications recognized by Caltrans, along with two sub-classifications, described in detail in the Design Guidelines in Appendix A. These include:

**Class I Shared Use Paths:** Dedicated paths for walking and bicycling completely separate from the roadway



**Class IIB Buffered Bicycle Lanes:** Bicycle lanes that include a striped “buffer” area either between the bicycle lane and travel lane or between the bicycle lane and parked cars



**Class II Bicycle Lanes:** Striped lanes for bicyclists



**Class III Bicycle Routes:** Signed routes for bicyclists on low-speed, low-volume streets where lanes are shared with motorists



## 04. RECOMMENDATIONS

**Class IIIB Bicycle Boulevards:** Bicycle routes that are further enhanced with traffic calming features or other treatments to prioritize bicyclist comfort



**Class IV Separated Bikeways:** Onstreet bicycle facilities with a physical barrier between the bicycle space and motor vehicle lanes, including bollards, curbs, or parking



A summary of existing and proposed bicycle network improvements is provided in **Table 9**. **Figure 9** displays the recommended bicycle network for San Carlos.

**Table 9:** Existing and Proposed Bikeway Milage

BIKEWAY TYPE	EXISTING MILES	PROPOSED MILES
Class I Shared Use Path	4.1	5.1
Class II Bicycle Lanes	10.8	5.1
Class IIB Buffered Bicycle Lanes	0.0	4.4
Class III Bicycle Routes	6.8	3.4
Class IIIB Bicycle Boulevards	0.3	8.8
Class IV Separated Bikeways	0.0	6.2
<b>Total</b>	<b>22.0</b>	<b>33.0</b>

## 04. RECOMMENDATIONS

**Figure 9:**  
**Bikeway Projects**

### Proposed Bikeways

- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIB Buffered Bike Lane
- Class III Bicycle Route
- Class IIIIB Bicycle Boulevard
- Class IV Separated Bikeway
- Parking Removal
- Lane Reduction
- Peninsula Bikeway







### Improvement Areas

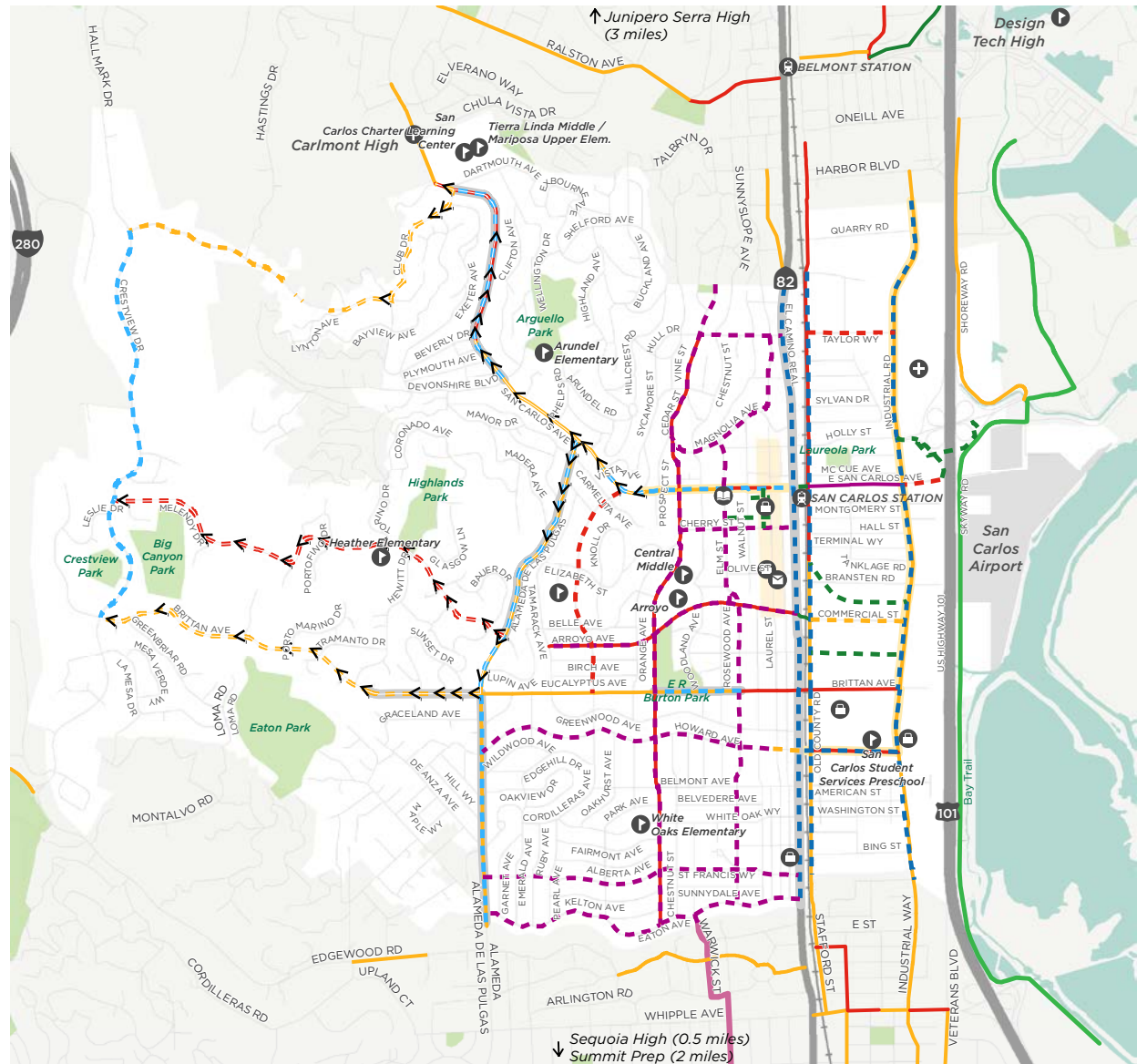
- Downtown

### Existing

- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIIIB Bicycle Boulevard
- Class III Bicycle Route

### Destinations + Boundaries

-  Post Office
-  Shopping
-  Hospital
-  Library
-  School
-  Caltrain Station
- Bay Trail
- Park
- Uphill Bikeway



## 04. RECOMMENDATIONS

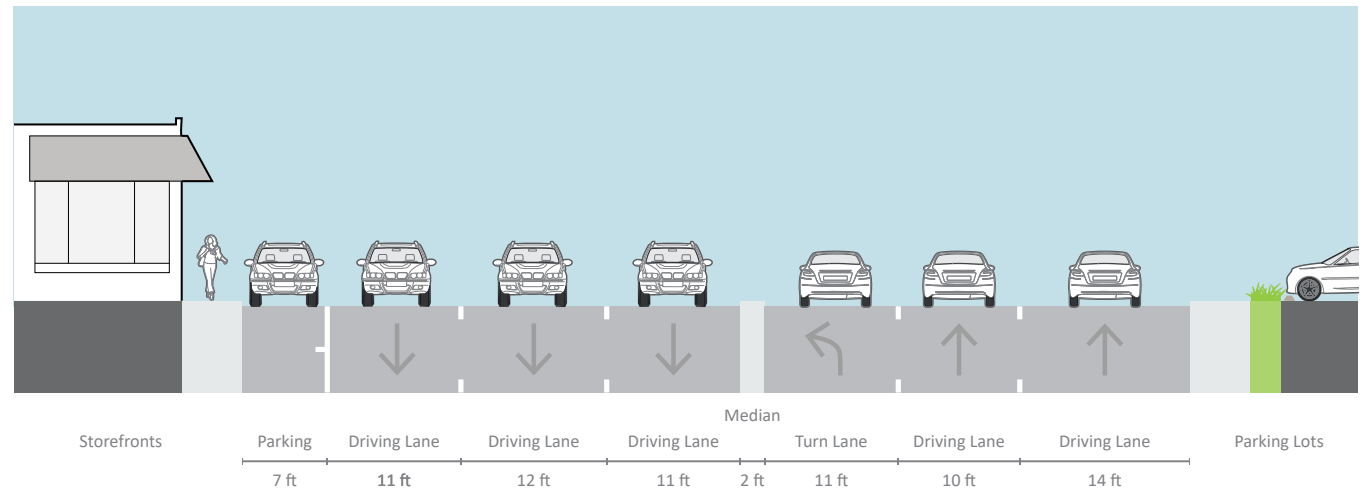
### Cross Sections

Figures 10 through 16 illustrate conceptual improvements along key corridors within the city. The following concepts explore the opportunities to install bicycle facilities and potential impacts to parking and travel lanes. Note that these are illustrative concepts only and specific design details will be considered during the design phase and associated public outreach for each recommended improvement.

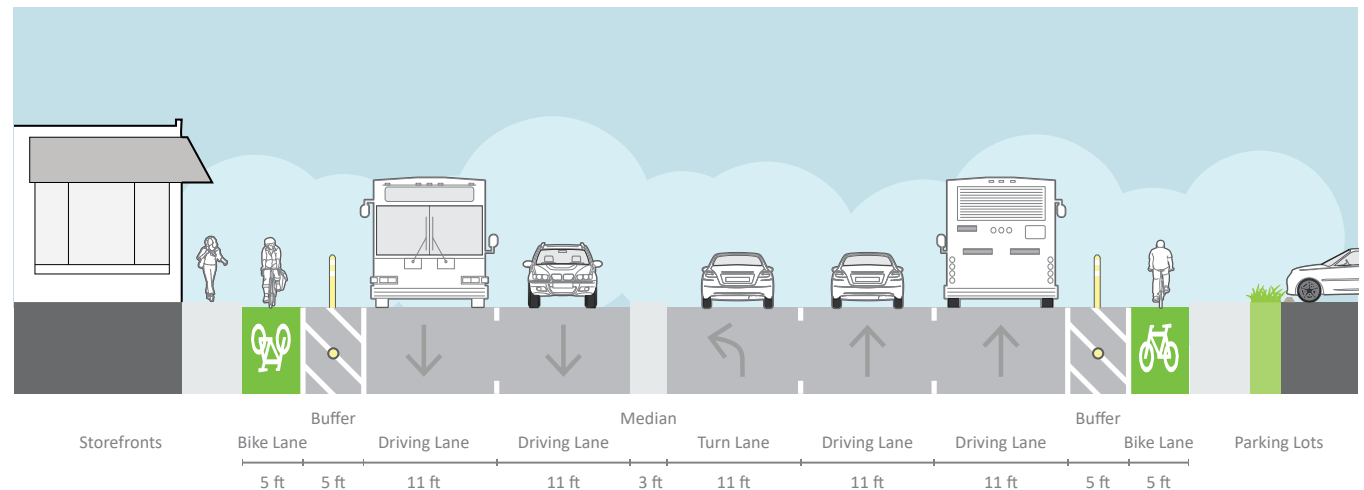
#### Figure 10: El Camino Real 78' Width

El Camino Real, South of  
San Carlos Avenue

#### Existing Conditions



#### Proposed Separated Bikeway

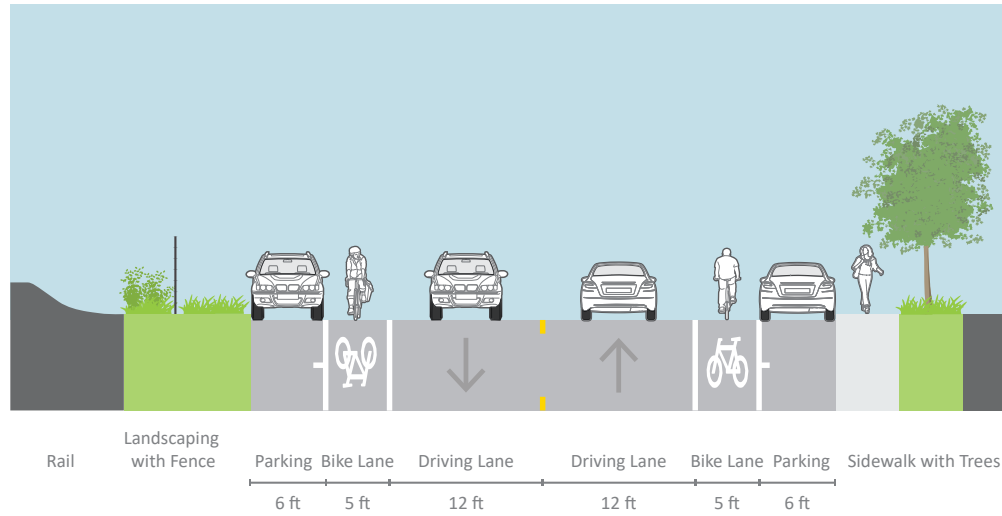


04. RECOMMENDATIONS

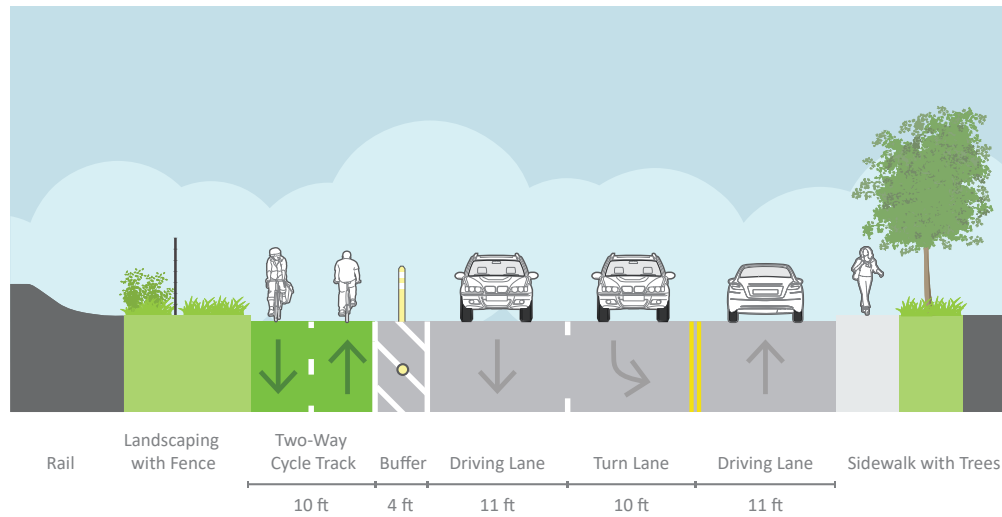
**Figure 11:**  
Old County Road  
45' Width

Old County Road, between  
Howard Ave and Bing St

**Existing Conditions**

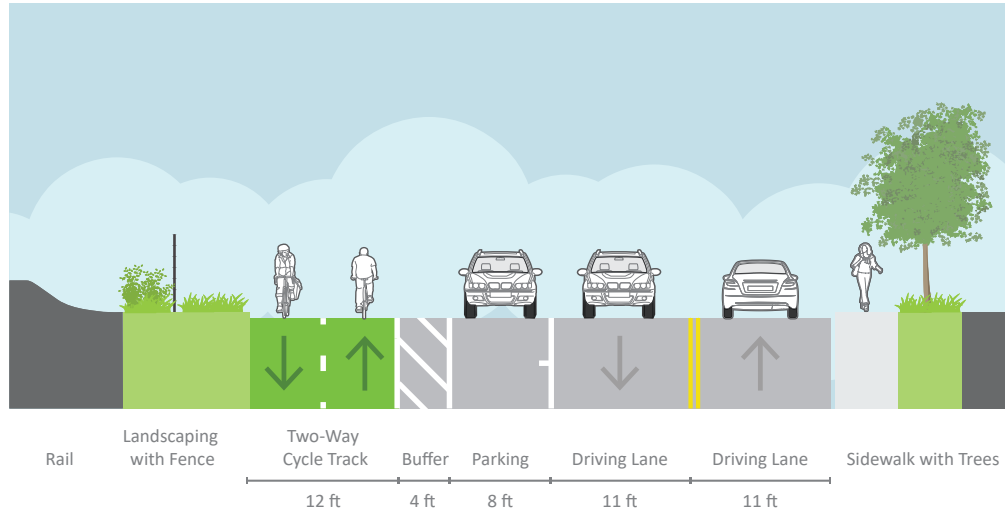


**Proposed Concept A Separated Two-Way Cycle Track**



## 04. RECOMMENDATIONS

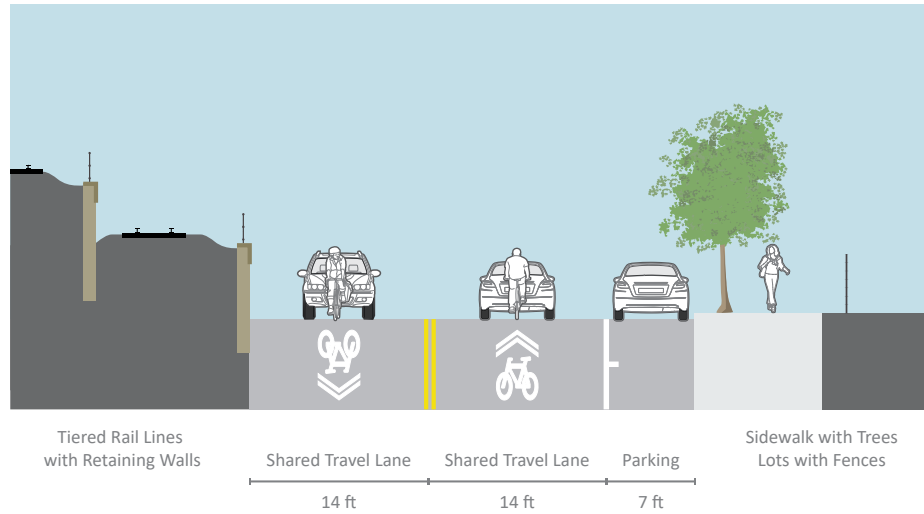
### Proposed Concept B Separated Two-Way Cycle Track with Parking



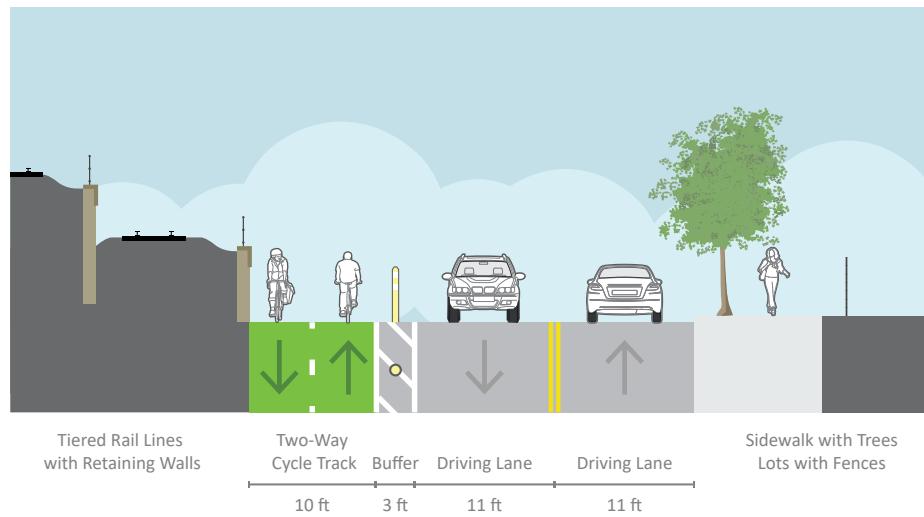
**04. RECOMMENDATIONS**

**Figure 12:**  
**Old County Road**  
**35' Width**  
 Old County Road, between  
 Cherry St and Terminal Way

**Existing Conditions**



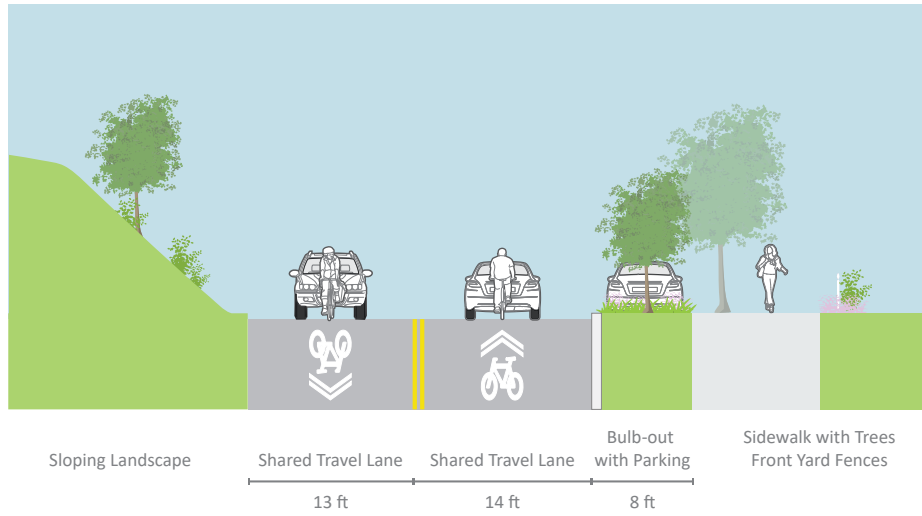
**Proposed Separated Two-way Cycle Track**



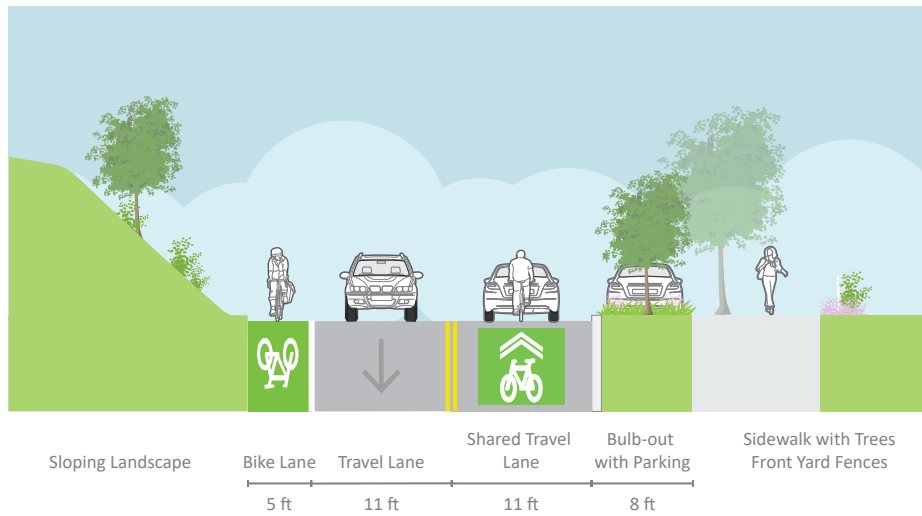
**04. RECOMMENDATIONS**

**Figure 13:**  
**Old County Road**  
**35' Width**  
 Old County Road,  
 North of Holly Rd

**Existing Conditions**



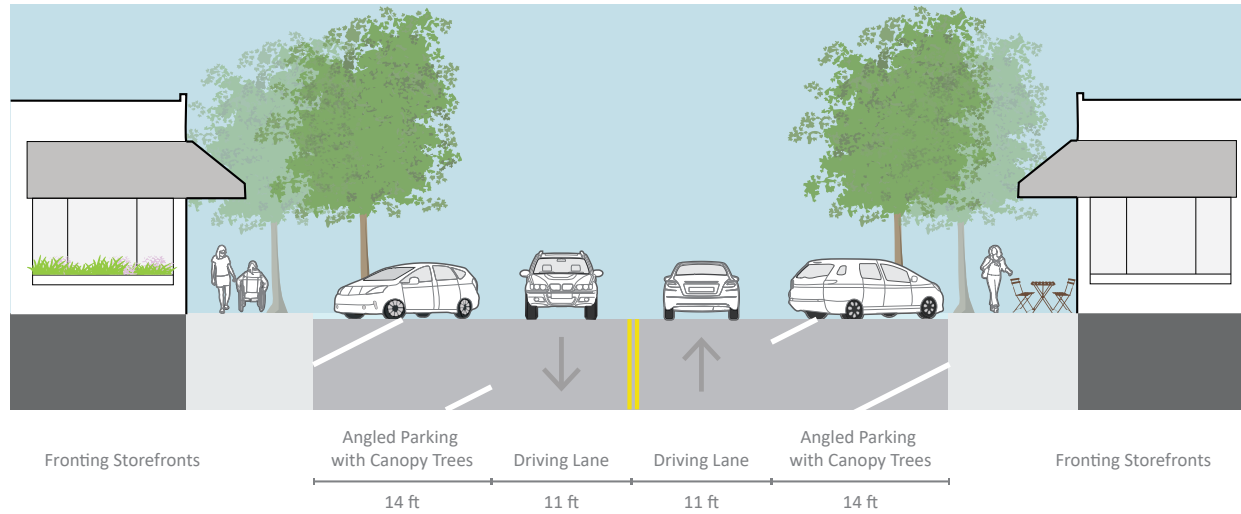
**Proposed SB Bike lane and Shared Travel Lane**



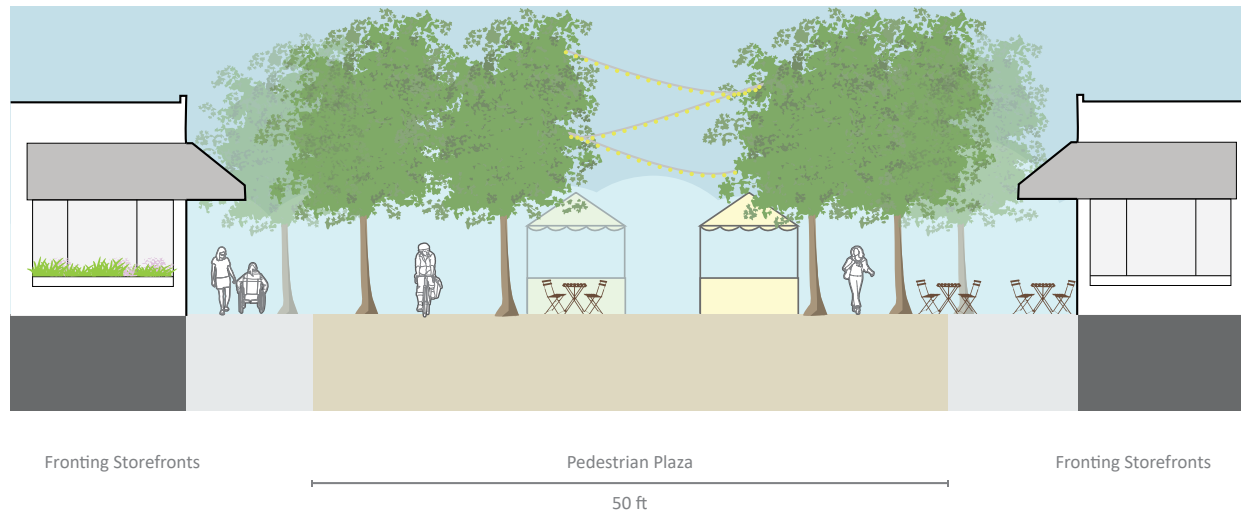
## 04. RECOMMENDATIONS

Figure 14:  
Laurel Street  
50' Width

### Existing Conditions



### Proposed Pedestrian Plaza

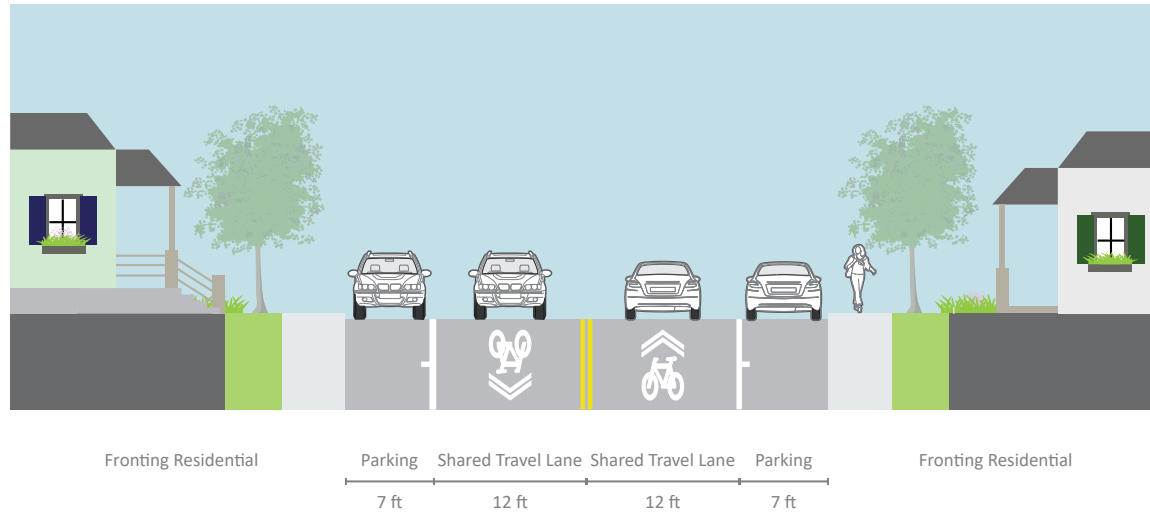


Further analysis of this proposed alternative will be conducted as part of the San Carlos Downtown planning process.

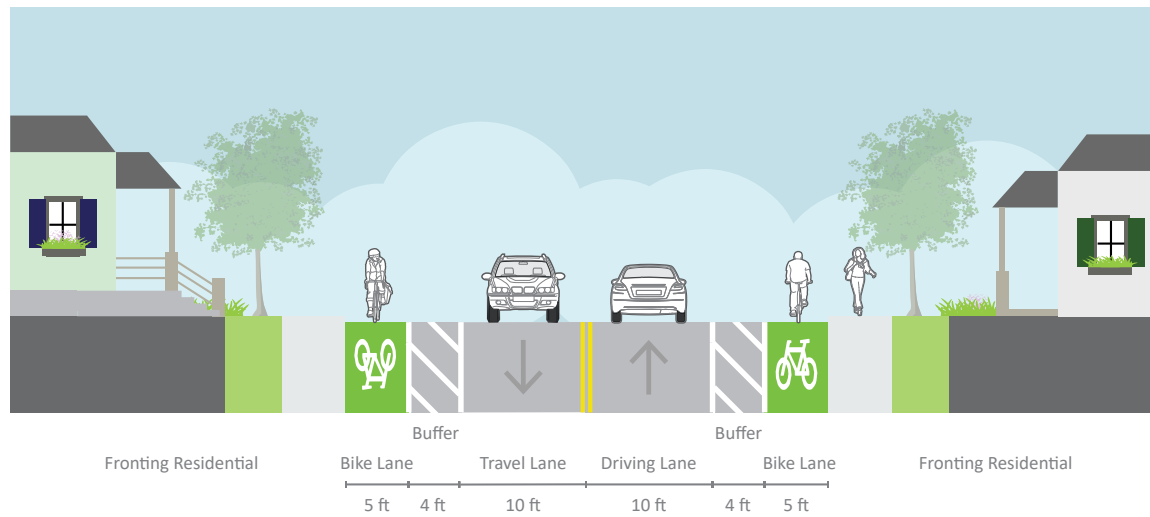
## 04. RECOMMENDATIONS

**Figure 15:**  
San Carlos Ave  
39' Width  
San Carlos Ave, between  
Wellington Dr and  
Dartmouth Ave

### Existing Conditions



### Proposed Buffered Bikeway



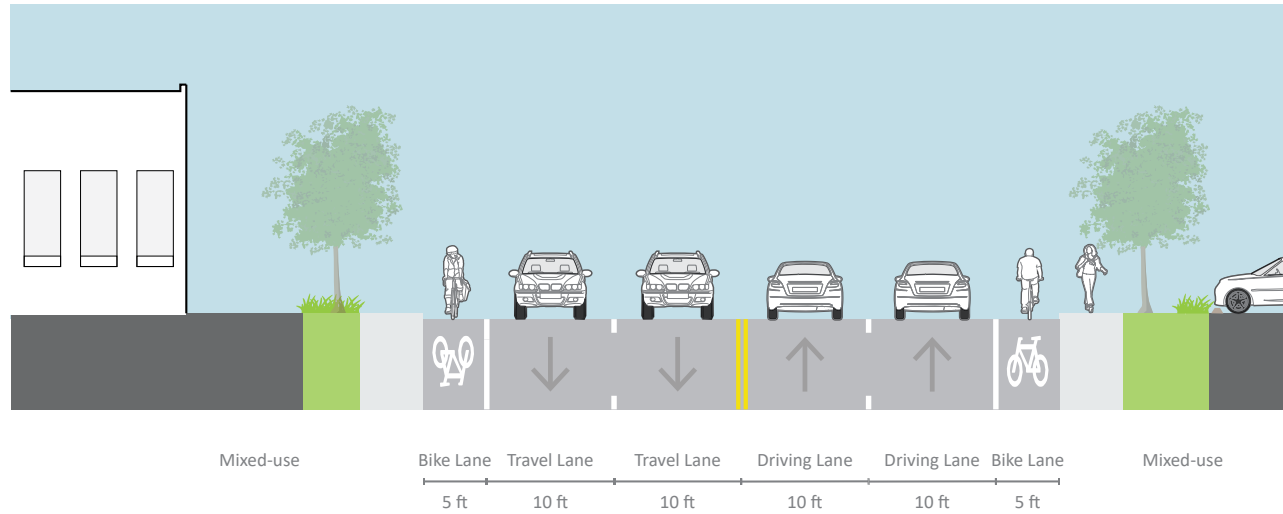
**04. RECOMMENDATIONS**

**Figure 16:**

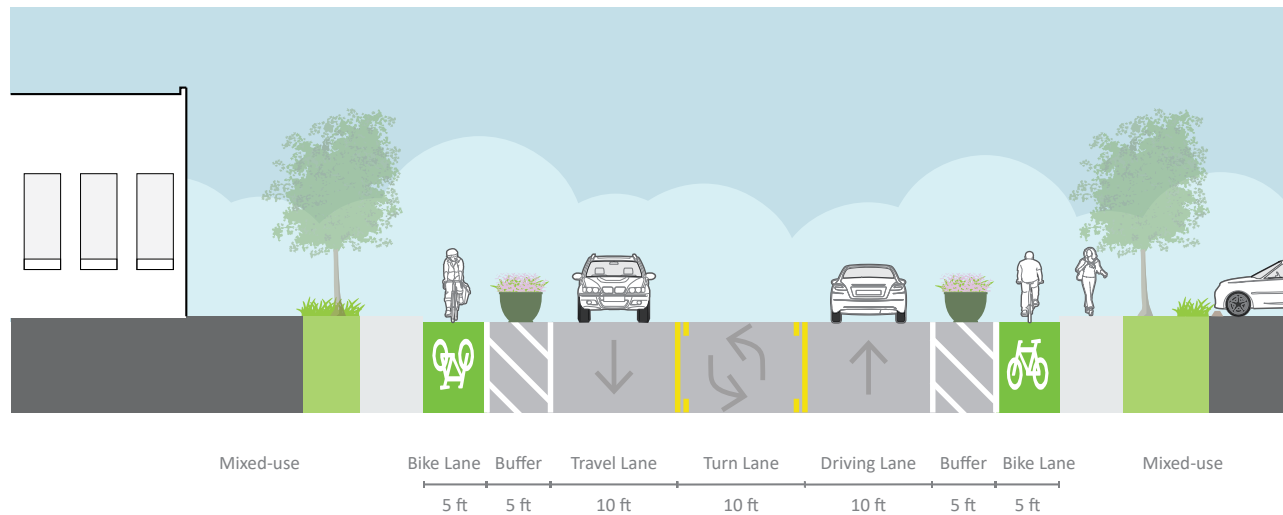
**Industrial Rd  
50' Width**

Industrial Road, between  
Commercial St and Brittain Ave

**Existing Conditions**



**Proposed Buffered Bikeway**



## 04. RECOMMENDATIONS

### Pedestrian Network Projects

Proposed pedestrian network projects in San Carlos include building new sidewalks to close gaps in the pedestrian network, enhancing crossing conditions at intersections, improvements to signalized intersections, installing pedestrian beacons, stop sign warrant studies, and walking environment enhancements. These recommendations are identified within Priority Pedestrian Routes as shown in **Figure 18**. These routes provide important walking connections to the highest number of neighborhood destinations such as schools, parks, libraries, and major transit stops. Priority Pedestrian Routes also include streets and intersections in San Carlos where people walking have been the victim of an automobile collision.

### Types of Pedestrian Improvements

There are many streets in San Carlos with sidewalks or pathways, but the network is inconsistent. Sidewalk recommendations are focused on those corridors where they are likely to serve a large number of pedestrians. Sidewalk improvements are recommended at the following locations:

ROADWAY	START	END
San Carlos Ave	Wellington Dr	Alameda De Las Pulgas
San Carlos Ave	Upland Ave	Cordilleras Ave
Brittan Ave	Milano Way	Rogers Ave

## 04. RECOMMENDATIONS

**Figure 17:**  
Pedestrian  
Recommendations

### Proposed

- Pedestrian Improvement
- Sidewalk Improvement
- Class I Shared-Use Path
- Priority Pedestrian Route







### Improvement Areas

- Downtown Improvement Area

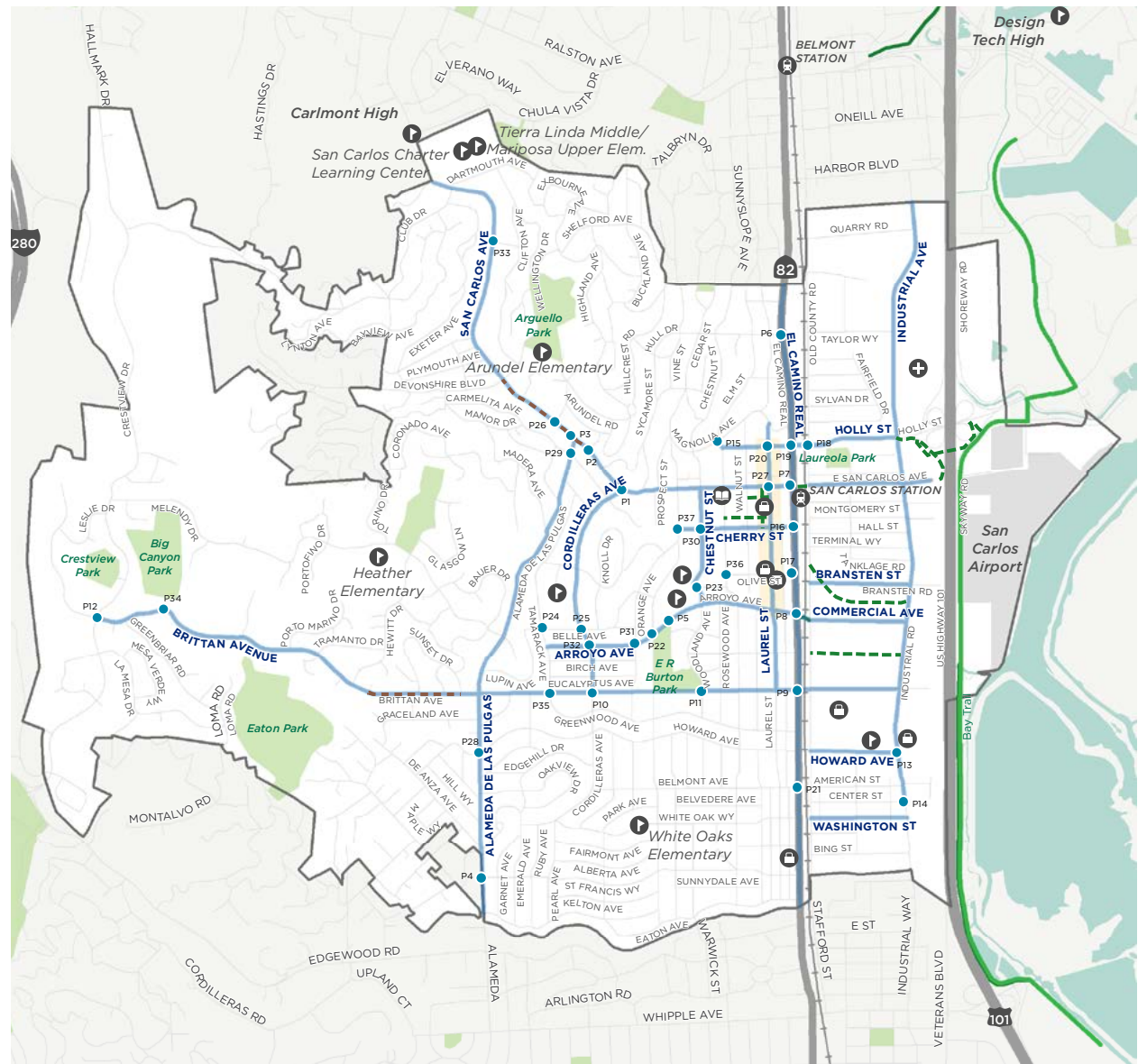
### Existing

- Class I Shared-Use Path

### Destinations + Boundaries

-  Post Office
-  Shopping
-  Hospital
-  Library
-  School
-  Caltrain Station
- Bay Trail
- Park
- San Carlos City Limit

0 0.25 0.5 MILES 



## 04. RECOMMENDATIONS

In addition to sidewalk improvements, this Plan recommends 39 pedestrian safety improvements to enhance the pedestrian experience. Specific facility recommendations and designs for these locations will be developed by the City on a case-by-case basis due to the highly varied context at each location. The recommendations are broken into the following categories.

### Crossing Improvements

#### Curb Extension



Curb extensions, or bulb-outs, are extensions of the sidewalk and curb at the corners of intersections. They normally extend out the width of the parking lane, 7' to 8'. Curb extensions shorten the roadway crossing distance and make pedestrians more visible to motorists. They can also help calm traffic by narrowing the travel lane, and provide additional space for plantings and street furnishings.

#### Curb Reduction



Shorter turn radii at corners shorten the crossing distance for pedestrians and require vehicles to turn more slowly, increasing safety at the intersection.

## 04. RECOMMENDATIONS

### High Visibility Crosswalk Marking



High visibility crosswalks use marking patterns that are more visible to motorists than the standard parallel “transverse” markings, and help increase yielding behavior and deter encroachment. Ladder, zebra, and the continental markings (shown here) are commonly used patterns.

### Advance Yield/Stop Lines



Advance yield and stop lines inform motorists of the correct position to wait for pedestrians at marked crossings. Advanced yield lines are triangular pavement markings (“shark teeth”) placed in advance of uncontrolled crossing locations. These markings are especially important at multi-lane, uncontrolled crossings to ensure vehicles in one lane stop sufficiently far back so that approaching vehicles in the other lane can see the pedestrian and also yield. Advance stop lines are used in advance of stop signs or signalized crossings.

### Curb Ramp



Curb ramps provide a transition between the sidewalk and roadway crossings. Curb ramps are essential for pedestrians using wheeled mobility devices and provide universal access for all users including small children, adults pushing strollers, people with luggage, etc. Each corner should have two “perpendicular” ramps, one leading directly into each crosswalk. Ramps should include a tactile warning surface to inform users with visual impairments that they are transitioning between the sidewalk and the roadway.

## 04. RECOMMENDATIONS

### Pedestrian Refuge Island



Pedestrian refuge islands are typically areas at the mid-point of a marked crossing that provide a protected waiting space for pedestrians. They allow pedestrians to cross the roadway in two separate stages.

### Signal Improvements

#### Leading Pedestrian Interval



A Leading Pedestrian Interval (LPI) typically gives pedestrians a 3–7 second head start when entering an intersection with a corresponding green signal in the same direction of travel.

### Pedestrian Beacons

#### Pedestrian Hybrid Beacon



Pedestrian Hybrid Beacons (PHB), also known as High-Intensity Activated Crosswalk Beacons (HAWKs), are user-activated traffic control devices that cycle through a flashing yellow, steady yellow, and then steady red light to stop vehicles and allow pedestrians to cross a road safely. They can be installed in mid-block locations or at intersections where a full traffic signal is not warranted.

## 04. RECOMMENDATIONS

### Rectangular Rapid Flash Beacon



Rectangular Rapid Flash Beacons (RRFBs) are user-activated pedestrian beacons that use flashing high intensity LED lights to alert motorists to the presence of pedestrians in the crosswalk. They can be installed at any uncontrolled crossing location.

### Stop Sign Warrant Study

#### Stop Sign/Signal Warrant Study



Stop sign or signal warrant studies evaluate traffic conditions, pedestrian characteristics, and physical characteristics of the location to determine whether installation of a traffic control device is justified at a particular location.

### Walking Environment Enhancement

#### Parklets



Parklets provide public seating platforms and often convert curbside parking spaces into public community spaces.

## 04. RECOMMENDATIONS

### Temporary Street Closures



Temporary street closures close down streets to motor vehicle access. These can include events such as Farmer's Markets, open streets events, block parties and other festivals. Temporary closures can activate the street and showcase participating businesses and communities.

### Shade Trees



Shade trees can increase pedestrian comfort by providing a shaded environment, dampening noise pollution, and adding aesthetic value to the built environment. Street trees have the added benefit of contributing to stormwater management for jurisdictions.

### Pedestrian Scale Lighting



Pedestrian-scale lighting can improve walking accessibility at night time by illuminating sidewalks, crosswalks, curbs, and signs as well as barriers and potential hazards. Pedestrian-scale lighting should be employed in areas of high pedestrian activity.

#### 04. RECOMMENDATIONS

**Table 10** below identifies the types of pedestrian improvements by project number as identified on **Figure 17**.

**Table 10:** Pedestrian Improvements by Location

PROJ-ECT	CROSS STREET A	CROSS STREET B	CROSSING IMPROVEMENTS						SIGNAL IMPROVE-MENTS	PEDESTRIAN BEACONS		STOP WARRANT STUDY	SPACE ACTIVA-TION	
			CURB EXTEN-SION	CURB REDU-CTION	HIGH VISIBILITY CROSS-WALK	ADVANCED YIELD/STOP	CURB RAMP	PEDEST-RIAN REFUGE ISLAND	LEADING PEDESTRIAN INTERVAL	PEDEST-RIAN BEACON	RRFB			
P1	San Carlos Ave	Cordilleras Ave	✓					✓						
P2	San Carlos Ave	Upland Ave						✓						
P3	San Carlos Ave	Alameda de las Pulgas						✓						
P4	Alameda de las Pulgas	St Francis Wy						✓						
P5	Arroyo Ave	Chestnut St						✓						
P6	El Camino Real	Hull Dr	✓	✓	✓			✓		✓				
P7	El Camino Real	San Carlos Ave	✓		✓			✓		✓				
P8	El Camino Real	Arroyo Ave								✓				✓

#### 04. RECOMMENDATIONS

PROJ-ECT	CROSS STREET A	CROSS STREET B	CROSSING IMPROVEMENTS						SIGNAL IMPROVE-MENTS	PEDESTRIAN BEACONS		STOP WARRANT STUDY	SPACE ACTIVA-TION
			CURB EXTEN-SION	CURB REDU-CTION	HIGH VISIBILITY CROSS-WALK	ADVANCED YIELD/ STOP	CURB RAMP	PEDEST-RIAN REFUGE ISLAND	LEADING PEDESTRIAN INTERVAL	PEDEST-RIAN BEACON	RRFB		
P9	El Camino Real	Brittan Ave	✓		✓		✓	✓	✓				
P10	Brittan Ave	Cordilleras Ave	✓		✓		✓						
P11	Brittan Ave	Woodland Ave	✓		✓	✓					✓		
P12	Brittan Ave	Crestview Dr	✓	✓	✓		✓						
P13	Industrial Ave	Howard Ave	✓	✓	✓		✓		✓				
P14	Industrial Ave	Center St	✓		✓	✓	✓			✓			
P15	Magnolia Ave	Elm St	✓		✓		✓						
P16	El Camino Real	Cherry St							✓				
P17	El Camino Real	White Oak Way	✓		✓								
P18	Holly Ave	Old County Rd	✓		✓								

04. RECOMMENDATIONS

PROJ-ECT	CROSS STREET A	CROSS STREET B	CROSSING IMPROVEMENTS						SIGNAL IMPROVE-MENTS	PEDESTRIAN BEACONS		STOP WARRANT STUDY	SPACE ACTIVA-TION
			CURB EXTEN-SION	CURB REDU-CTION	HIGH VISIBILITY CROSS-WALK	ADVANCED YIELD/ STOP	CURB RAMP	PEDEST-RIAN REFUGE ISLAND	LEADING PEDESTRIAN INTERVAL	PEDEST-RIAN BEACON	RRFB		
P19	Holly Ave	El Camino Real	✓		✓			✓	✓				
P20	Holly Ave	Laurel St	✓		✓				✓				
P21	El Camino Real	Belmont Ave								✓			
P22	Cedar St	Arroyo Ave	✓		✓								
P23	Woodland Ave	Chestnut St			✓								
P24	Tamarack Ave	Belle Ave			✓								
P25	Cordilleras Ave	Belle Ave	✓		✓								
P26	San Carlos Ave	Phelps Rd						✓					
P27	San Carlos Ave	Laurel St			✓				✓				
P28	Alameda De Las Pulgas	Howard Ave						✓				✓	

#### 04. RECOMMENDATIONS

PROJ- ECT	CROSS STREET A	CROSS STREET B	CROSSING IMPROVEMENTS						SIGNAL IMPROVE- MENTS	PEDESTRIAN BEACONS		STOP WARRANT STUDY	SPACE ACTIVA- TION
			CURB EXTEN- SION	CURB REDU- CTION	HIGH VISIBILITY CROSS- WALK	ADVANCED YIELD/ STOP	CURB RAMP	PEDEST- RIAN REFUGE ISLAND	LEADING PEDESTRIAN INTERVAL	PEDEST- RIAN BEACON	RRFB		
P29	Alameda De Las Pulgas	Carmelita Dr			✓	✓	✓						
P30	Chestnut St	Cherry St	✓		✓	✓							
P31	Orange Ave	Arroyo Ave			✓								
P32	Cordilleras Ave	Arroyo Ave										✓	
P33	Kenton Ave	San Carlos Ave										✓	
P34	Brittan Ave	Trail Connecting Parks			✓	✓					✓		
P35	Brittan Ave	Greenwood Ave	✓									✓	
P36	Olive Ave	Elm St	✓		✓	✓							
P37	Cherry St	Cedar St	✓										

## 04. RECOMMENDATIONS

# Citywide Projects

In addition to specific infrastructure projects and related programmatic efforts, some amenities are needed citywide to complete the transportation network. These amenities should be installed as a matter of policy in conjunction with any City project as opportunities arise, or when development occurs. Citywide amenities recommended in this Plan include a comprehensive wayfinding program, secure bicycle parking, pedestrian scale lighting, and amenities.

## Wayfinding

Wayfinding signs direct bicyclists or pedestrians along the existing network and to key community destinations. The City has adopted a Wayfinding Program including bicycle and pedestrian signs. This Plan recommends that the City develop and implement a comprehensive wayfinding program for bicyclists and pedestrians utilizing the concepts developed from the City's Wayfinding Project.

### Pedestrian and Bikeway Wayfinding



## 04. RECOMMENDATIONS

### Bicycle Parking

No bicycling network is complete without convenient and secure bicycle parking. Bicycle parking can take many forms, from a simple bicycle rack to secure storage in a locker or gated area. This Plan recommends the City continue to expand its bicycle parking and repair stations as opportunities arise and new development occurs.

#### Short term 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, dining, or recreation. Bicycle racks provide a high level of convenience and moderate security. Where possible, on-street bicycle corrals can be used to provide increased bicycle parking where high demand or limited sidewalk space exists. Repair stations with basic tools and wayfinding or guide signs help bicyclists navigate along the way.

#### Long term bicycle parking

Long-term bicycle parking includes bike lockers and secure parking areas (SPAs) and serves people who intend to leave their bicycles for longer periods of time. Bike lockers may vary in design and operation including keyed lockers that are rented to one individual on an annual or monthly basis or e-lockers that can be reserved online in hourly increments and unlocked with a credit card or an

access code. These facilities provide a higher level of security than bicycle racks, and are typically found at transit stations, multifamily residential buildings, and commercial buildings, though they may also be useful in Downtown San Carlos, near the Caltrain Station, or in other areas where bicyclists running multiple errands would benefit from a secure place to store parcels in addition to their bicycle.

### Pedestrian Scale Lighting

Pedestrian scale lighting is a type of lighting with frequent lampposts at low height that illuminate the walking area. This typically includes poles 12 to 15 feet high spaced 25 to 30 feet apart, directly above walking areas. Pedestrian scale lighting not only increases visibility of pedestrians for drivers at night, it contributes to a more comfortable and inviting streetscape for people walking at night. Pedestrian scale lighting should be appropriately designed to illuminate only the areas needed and be no brighter than necessary. Street trees should be appropriately maintained so they do not obstruct illumination from the lighting along sidewalks and pathways. This Plan recommends the City evaluate locations where pedestrian scale lighting may improve pedestrian comfort and encourage walking, including downtown, the Industrial Arts district, and trails.

### Amenities

Sidewalk and trail furnishings like benches, shade structures, restrooms, water fountains, and trash receptacles contribute to a cleaner, more comfortable, and more pedestrian-oriented public realm. These elements not only encourage the activation of sidewalk and trail networks, they contribute to a more accessible pedestrian network for all residents. Seniors and those with mobility impairments will benefit from frequent places to stop and rest. This Plan recommends the City identify and pursue opportunities to provide amenities in the downtown, near transit stops, and along trails in the community.

# Programs

This section describes recommended bicycle and pedestrian related programs for the City of San Carlos. The recommendations are organized in four E's:

- Education programs are designed to improve safety and awareness. They can include programs that teach students how to safely ride or teach drivers to expect bicyclists. They may also include brochures, posters, or other information that targets bicyclists or drivers.
- Encouragement programs provide incentives and support to help people leave their car at home and try biking instead.
- Enforcement programs enforce legal and respectful 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 success at meeting the goals of this plan and to identify adjustments that may be necessary.

## Education

### Safe Routes to School

San Carlos benefits from the robust Safe Routes to School (SRTS) program coordinated by San Mateo County Office of Education. Schools in the city participate in activities with the SRTS program, but involvement varies from school to school.

Since the program's establishment in 2011, San Mateo County's Safe Routes to School (SRTS) program has helped enable and encourage students all across the County to walk or bicycle to school. Based on the national model, San Mateo County's SRTS program focuses on five key areas: Education, Encouragement, Enforcement, Engineering, and Evaluation.

San Mateo County's SRTS has helped schools throughout the county by providing resources for events like Walk and Roll to School Days, as well as suggested walking and bicycling routes for students. In addition, San Mateo County's SRTS program has provided project coordination and helped facilitate education and enforcement programs like Bike Rodeos and Parent Education Events.

In 2013, Improvement Plans and Walk and Roll to School Maps were created for Brittan Acres Elementary, Central Middle, Arroyo, Arundel Elementary, and Heather Elementary. This Plan recommends that the City of San Carlos partner with San Mateo County Office of Education and the San Carlos Unified School District to develop improvement plans and Walk and Roll to School Maps for the remaining schools in the district.

### Bike Education Classes and Repair Centers

This Plan recommends working with local community organizations such as the Silicon Valley Bicycle Coalition to offer bike education classes, which the City can support by advertising the classes and/or providing meeting space. Classes and programs could include the following:

#### *Adult Bicycling Skills Classes*

- Adults can learn riding skills, rules of the road, crash avoidance, theft prevention, how to ride at night, and how to use bike safety equipment in these classes.

#### *Bike Mechanic Classes*

- These workshops are designed to teach basic bike maintenance skills and how to use different tools.

#### *Family Biking Workshops*

- Bike workshops that teach parents with kids with their own bikes and helmets how to ride together safely on a designed course.

#### *Bike Repair Centers*

- Existing community facilities such as libraries and community centers can be adapted to offer bike repair services, fix it stations, and hydration stations.

## 04. RECOMMENDATIONS

### Encouragement

#### Bicycle Friendly Business Program

Bicycle Friendly Business programs recognize businesses who make it easy and convenient for both employees and customers to arrive by bicycle. This requires different strategies to accommodate the different needs of customers and employees. To accommodate customers, providing bicycle parking and supporting City bicycling projects can make it safer and easier to travel by bicycle. Some businesses also choose to offer discounts or incentives to people who arrive by bicycle.

For employees, offering secure longterm parking for bicycles is key. This could include a secure gated bicycle parking area, or access to bicycle lockers. If space is not available for dedicated secure bicycle parking, business owners and landlords can consider allowing employees and tenants to bring bicycles inside and store them in their workspace or another designated location. Providing changing areas, showers, or lockers to store belongings can also make it easier for employees to bicycle to work.

By recognizing businesses who support bicycling, San Carlos can support their local economy while fostering partnerships with the Chamber of Commerce and business owners to build community support for bicycling projects and programs. The League of American Bicyclists has a Bicycle Friendly Business program or some communities have chosen to develop their own programs.

#### Bike to Work Month and Day

A day-wide campaign encouraging everyone to try commuting by bicycle for the first time and celebrate those who ride regularly. This event becomes a community-wide effort as companies, organizations, and individuals support Bike to Work Day each year by hosting one or more of the energizer stations.

#### International Walk and Roll to School Days

During international walk and “roll” to school days, students and families are invited to walk or “roll” to school if a safe route is available to them. This event celebrates active transportation and encourages families and students to consider alternatives to driving single-family vehicles to and from school. The City of San Carlos should continue to support the School District in their Safe Routes to School endeavors.

#### Transportation Awareness Campaign

Media campaigns enhance awareness of transportation related issues such as safety. They can be developed for print, social media, and video collateral for advertising on billboards, in newspapers, online, and on the radio. Campaign topics include the three-foot passing law and using shared-use paths.

### Enforcement

#### Crossing Guard Program

The effectiveness of a crossing guard can be the deciding factor in a parent feeling comfortable enough to let their child walk or bicycle to school. The City should continue to work with the School District and the San Mateo County Office of Education to identify locations for crossing guards.

### Evaluation

#### Bicycle Friendly Community Program

The League of American Bicyclists (LAB) recognizes communities who have put in significant effort toward bicycle-related projects and programs by awarding Bronze to Diamond certifications. Communities apply every four years with applications focusing on engineering feats, encouragement programs, enforcement policies, and evaluation and planning.

San Carlos is currently a Bronze level community. The City of San Carlos should strive to improve its status by 2026. Efforts to elevate San Carlos status should include the policy, programmatic, and infrastructure recommendations in this Plan.

## 04. RECOMMENDATIONS

### Annual Collision Data Review

Reviewing bicycle and pedestrian related collisions and near-misses on an annual basis can help the City identify challenging intersections or corridors. This review should include an assessment of the existing infrastructure to determine whether improvements can be made to reduce the number of collisions in the community. This Plan recommends the City review bicycle and pedestrian related collision data on an annual basis to identify needed improvements.

### Parent Surveys

Continue to gather school parent survey data as currently led by the School District. The National Center for Safe Routes to School provides a standard parent survey, collecting information on modes of travel, interest in walking or bicycling to school, and challenges to walking and bicycling to school. The information gathered from the parent surveys can help the City and School District provide programs that are attractive to parents. Parent surveys can also help measure parent attitudes and changes in attitude towards walking and bicycling to school.

### Student Walking and Biking Counts

Student hand tallies are one way to count the number of students who walk, bicycle, take transit or carpool to school. The National Center for Safe Routes to School provides the standard tally form. It is recommended the School District continue to conduct student tallies on an annual basis. Counts can also be held on annual walking or bicycling to school events. These are an excellent way to track the number of students who walk or bicycle to school over time. Grant applications will often require this information.

# Policy Changes

The following recommended changes include policies, operational changes, and municipal code revisions that support the goals of this Plan or address community-identified barriers to walking and bicycling in San Carlos.

### Vision Zero Policy

Vision Zero is a traffic philosophy that rejects the idea that traffic crashes are accidents, and instead asserts that serious injuries or fatalities on the transportation system are preventable and unacceptable.

The more San Carlos understands where and why crashes happen, the more different departments can take actions to reduce them. The City can use this understanding to develop roadway designs that prioritize bicycling, walking, and other transportation facilities that enhance comfort and can be implemented quickly to adapt and respond to identified challenges.

Asking questions and analyzing questions about the causes and locations of crashes can help the City reprioritize funding for projects that target behaviors and locations that may be contributing to crashes:

- What are the total number of crashes (all modes)? Of these crashes, how many were fatal or severe injuries?

- What were the most striking contributing factors?
- How are the crashes affected by posted speed, road class, or other identifiable feature of the road?

This Plan recommends the City consider whether adoption of a Vision Zero Policy is an appropriate step to increase the City's existing commitment for all users of its diverse transportation systems. The Vision Zero Network has resources and case studies available to guide cities as they develop and implement Vision Zero Action Plans.

### School Zone Speed Limits

On January 1, 2008, AB 321 took effect allowing local governments to extend school zones up to 1,000 feet and reduce speed limits within 500 feet of a school site to 15 mph in residential neighborhoods or on highways with speed limits of 30 mph or less.

At 15 mph, more than 90 percent of pedestrians are likely to survive a crash with only minor injuries. As speeds increase, however, crash severity increases dramatically. At 30 mph most crashes result in serious injuries to pedestrians, and nearly half may be fatal. At 40 mph, 90 percent of pedestrians will be killed in a crash. Reducing speeds even slightly can have a profound effect on safety for people walking and bicycling to school.

Cities that have already enacted this law include Berkeley, San Francisco, Los Angeles, and

Goleta. This Plan recommends the City enact this law around eligible schools. AB 321 requires engineering and traffic surveys to be conducted to indicate that the existing speed limit is not appropriate. In addition, San Carlos can work with local law enforcement to educate parents and drivers about the new policy and why certain school areas were selected.

### Bicycle Parking for Large Events

The San Carlos Municipal Code currently addresses the procedures and requirements to apply for a Special Event Permit within the City. This Plan recommends revising the Special Events Permit Guidelines Section to require events expecting more than 5,000 attendees provide secure, attended bicycle parking for attendees at no charge. Key considerations include:

- A space that is enclosed and secured on three sides ("corral") must be provided, with the fourth side consisting of tables for checking in bicycles
- The corral must be in a visible and easily accessible location within one block of the event
- Bicycle parking must be offered for the full duration of the event, including the bicycle parking attendants having access to the location at least one hour before and one hour after the event for setup and break down
- Availability and location of free bicycle parking must be noted on all event promotion where transportation or directional information for

## 04. RECOMMENDATIONS

the event is advertised, in the same format and with an equal amount of space as parking and transportation information for other modes

- Bicycle parking must be attended and monitored at all times with a number of staff sufficient for the size of the event and whether attendees are expected to arrive for a single start time or arrive throughout the event
- Bicycles will be checked in and returned with a claim check to ensure the correct bicycle is released to each person, and bicycle valet attendants will record and share the number of bicycles parked at the event in order to better estimate the space needed for the following year
- The valet bicycle parking service provider shall have insurance; should the event sponsor provide the bicycle parking service, bicycles checked in must be insured against theft
- The City of Oakland operates a successful bicycle parking policy for large events, and may be a resource to San Carlos.

### Shared Micromobility

Shared micromobility systems, such as bike share or scooter share, broaden the suite of choices that provide an alternative to the car. While the business model for privately-funded and operated dockless (or free-floating) programs is fairly new, early research and evaluation suggests that shared micromobility devices hold benefits for stimulating transit ridership and reducing congestion. For

example, 34 percent of scooter share riders in Portland, OR reported that they would have driven a personal vehicle or hailed a taxi/Uber/Lyft in place of their last e-scooter trip if the shared micromobility system was not in place. In Santa Monica, CA, this figure is over 50 percent according to their 2019 shared mobility device user survey<sup>1</sup>.

<sup>2</sup> A study of Washington D.C.'s Capital Bikeshare and Metrorail systems found that every 10 percent increase in bike share ridership yields a 2.8 percent increase in transit ridership.<sup>3</sup> A user survey conducted by scooter-company Lime, showed 39 percent of riders in the San Francisco, CA market reported that they used Lime to get to or from public transportation.<sup>4</sup>

The City of San Carlos would likely benefit from a responsibly deployed micromobility fleet. The City should work with one or more vendors to develop a pilot program that would allow a limited fleet of bikes and/or e-scooters within a defined geographic region for a fixed period (typically one-year or less). The pilot program would allow the city to examine and refine system characteristics including:

- Licensing and Permits: Cities have largely shifted away from procurement and exclusive contracts for establishing bike and scooter share. Licensing or permitting programs are used as a way to manage micromobility providers, including establishing the rules, responsibilities, and conduct of operators. Establishing a process for the fair and thorough vetting of vendors is an important first step in regulating for or

partnering to address the topics below.

- Vendor Fees: Cities issuing micromobility permits have the ability to set application fees, annual renewal fees, and per unit fees to establish funding for the City's oversight of the program and/or infrastructure upgrades.
- Fleet Size: Fleet size requirements allow cities to cap the number of micromobility units deployed, or develop variable fleet size policies that require vendors to remove or add units to achieve the desired average number of rides per unit per day.
- Parking Policies: Cities can build dockless mobility parking requirements into micromobility permits and contracts. These requirements can include mandatory response times to customer complaints on improperly parked units and penalty fees for failure to comply.
- Trail and Sidewalk Requirements: Cities that allow dockless mobility providers to operate have a diversity of policies on the legality of riding e-scooters and e-bikes on sidewalks and multiuse paths or trails. Prohibiting the use of electric micromobility devices on facilities shared with pedestrians is recommended to ensure safe and comfortable walking conditions.
- Investments in Bike Infrastructure: A micromobility pilot program should also consider whether safe and comfortable bike infrastructure is available for micromobility riders to use.

## 04. RECOMMENDATIONS

- **Geographic Areas of Operation:** Cities can control where micromobility units are concentrated through two primary methods: system rebalancing requirements and geofenced operation boundaries. System rebalancing requirements allow cities to identify key locations or areas where units should be located after recharging. Geofenced operation boundaries allow cities to define zones where dockless mobility units should not be ridden. These boundaries are most often enforced by in-app warnings, accompanied by user penalty fees for riding outside of an approved area.

During the pilot phase data collection, including trip origins and destinations, routes, vehicle use, crash reports and complaints are collected and analyzed, in addition to structured community feedback. Pilot programs allow cities to remain flexible and provide an opportunity to adjust permit terms, consider proposals from different service providers, and incorporate community input into program planning before issuing a long-term permit program.

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1 City of Santa Monica. (2019). City of Santa Monica Shared Mobility Device Pilot Program User Survey Results Conducted 01-25-2019 to 02-15-2019. [https://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/Shared-Mobility\\_UserSurveySummary\\_20190509\\_FINAL.PDF](https://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/Shared-Mobility_UserSurveySummary_20190509_FINAL.PDF)

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2 City of Portland. (2018). 2018 E-Scooter Findings. <https://www.portlandoregon.gov/transportation/article/709719>

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3 Ma, Ting & Liu, Chao & Erdogan, Sevgi. (2015). Bicycle Sharing and Transit: Does Capital Bikeshare Affect Metrorail Ridership in Washington, D.C.? [https://www.researchgate.net/publication/271273828\\_Bicycle\\_Sharing\\_and\\_Transit\\_Does\\_Capital\\_Bikeshare\\_Affect\\_Metrorail\\_Ridership\\_in\\_Washington\\_DC](https://www.researchgate.net/publication/271273828_Bicycle_Sharing_and_Transit_Does_Capital_Bikeshare_Affect_Metrorail_Ridership_in_Washington_DC)

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4 Lime. (2018). San Francisco Scooter Use Survey Results. <https://www.li.me/hubfs/Lime%20San%20Francisco%20Scooter%20Survey%20Findings.pdf>

**05.**

# **Implementation**

## Introduction

This chapter outlines a strategy towards implementation of the infrastructure projects and includes the following sections:

- Project Prioritization presents the method and data sources used to prioritize projects for implementation, along with a summary of the results
- Funding Strategy provides an overview of competitive funding sources and eligibilities for the projects in this Plan

The intent of prioritizing projects is to create a strategic list to guide implementation. The project list and prioritization results are flexible concepts that serve as guidelines. Over time as development occurs or other changes to land uses and the transportation network take place, this framework can be used to reprioritize remaining projects and continue pursuing implementation of this Plan.

## Project Prioritization

With limited funding, the City of San Carlos has to decide where to prioritize building approximately 30 miles of bikeways, one mile of new and improved sidewalks, and 37 pedestrian safety improvements. The intent of evaluating projects is to create a strategic list to guide implementation. The project list and evaluation results are flexible concepts that serve as guidelines. Over time as development occurs or other changes to land uses and the transportation network take place, this framework can be used to reevaluate remaining projects and continue pursuing implementation of this Plan.

## 05. IMPLEMENTATION

### Methodology

As shown in **Table 11**, recommended projects were evaluated using four criteria that support the vision and goals of the Plan: connectivity, safety, comfort, and routes to school. Each criterion is based on one or more metric. Projects were evaluated on whether the project fully met, partially met, or not met the minimum thresholds. Projects that perform at the highest levels (fully or partially meet criteria) across multiple categories were ranking into three tiers: high, medium, and low. Projects that are in progress are not ranked.

**Table 11:** Criteria for Recommendation Prioritization

CATEGORY	METRIC
Connectivity	Projects that provide access to parks, library, or downtown are given priority.
	Projects that provide access to Caltrain are given priority.
Safety	Projects that are within 200 ft of reported bicycle- or pedestrian-related collisions between 2013 and 2017.
	Projects that are within 200 ft of reported severe or fatal bicycle- or pedestrian-related collisions between 2013 and 2017.
Comfort	<b>BIKE ONLY</b> Projects that implement a new low stress bikeway are given priority (including Class I, Class IIB, Class IV, and Class IIIB bicycle facilities).
	<b>PED ONLY</b> Projects that implement a pedestrian improvement along a high stress roadway (PLTS 3 or 4) are given priority.
Routes to School	Projects within ¼ mile of a school or along an identified walking/biking route to school are given priority.

## 05. IMPLEMENTATION

### Priority Projects

Tables 12 through 14 outline the high, medium, and low priority recommended bikeways, sidewalks, and pedestrian spot improvements. Figure 18 shows the high priority improvement and improvements that are in process. Figure 19 shows the medium priority improvements. This Plan prioritizes building over nine miles of bikeways as high priority projects and 15 pedestrian safety improvement locations.

**Table 12:** Bikeway Prioritization

ROADWAY	START	END	PROPOSED CLASS	MILEAGE	PRIORITIZATION CATEGORY
Holly St Overpass	Industrial Rd	Holly St Overpass	1	0.1	In Progress
Holly St Overpass	San Carlos Ave	Airport Dr	1	0.5	In Progress
Cherry St	Cedar St	El Camino Real	3B	0.4	High
Elm St	Magnolia Ave	Eaton Ave	3B	1.4	High
Arroyo Ave	Tamarack Ave	El Camino Real	3B	0.8	High
San Carlos Ave	Vista Ave	El Camino Real	2B	0.6	High
San Carlos Ave	Club Dr	Wellington Dr	2B	0.7	High
San Carlos Ave	Cranfield Ave	Club Dr	2	0.1	High
Cedar St	Eaton Ave	San Carlos City Limits	3B	2.0	High
Old County Rd	San Carlos City Limit	San Carlos City Limits	4	1.9	High
Alley	Elm St	Laurel St	1	0.1	High
Saint Francis Way	Alameda de las Pulgas	El Camino Real	3B	1.0	High
El Camino Real	San Carlos City Limits	San Carlos City Limits	4	1.9	Medium
San Carlos Ave	El Camino Real	Old County Rd	1	0.04	Medium

## 05. IMPLEMENTATION

ROADWAY	START	END	PROPOSED CLASS	MILEAGE	PRIORITIZATION CATEGORY
Alameda de las Pulgas	San Carlos Ave	San Carlos City Limits	2B	1.6	Medium
Laurel St	San Carlos Ave	Cherry St	1	0.1	Medium
Laurel St Paseo	Laurel St	Walnut St	1	0.07	Medium
Crestview Dr	Brittan Ave	Club Dr	2B	1.3	Medium
Eaton Ave	Alameda De Las Pulgas	El Camino Real	3B	1.1	Medium
Howard Ave	El Camino Real	Industrial Rd	4	0.3	Medium
Howard Ave	Alameda De Las Pulgas	Laurel St	3B	0.9	Medium
Howard Ave	Laurel St	El Camino Real	2	0.09	Medium
Industrial Rd	San Carlos City Limits	Bing St	4	1.4	Medium
Brittan Ave	Cedar St	Elm St	2B	0.3	Low
Brittan Ave	Milano Wy	Crestview Dr	2	0.9	Low
Magnolia Ave/ Laurel St	Hull Dr	Cedar St	3B	0.6	Low
Hull Dr	Cedar St	El Camino Real	3B	0.3	Low
Melendy Dr	Alameda De Las Pulgas	Crestview Dr	3	1.4	Low
Club Dr	San Carlos Ave	Crestview Dr	2	1.2	Low

## 05. IMPLEMENTATION

ROADWAY	START	END	PROPOSED CLASS	MILEAGE	PRIORITIZATION CATEGORY
Pedestrian Pathway	Industrial St	Old County Rd	1	0.3	Low
Railroad Bend	Old County Rd	Industrial Rd	1	0.3	Low
Cordilleras Ave	Brittan Ave	San Carlos Ave	3	0.7	Low
Taylor Way	Old County Rd	Industrial Rd	3	0.3	Low
E San Carlos Ave	Industrial Rd	Holly St Overpass	3	0.1	Low
Brittan Ave	Milano Ave	Alameda de las Pulgas	2	0.3	Low
Commercial St	Old County Rd	Industrial Rd	2	0.3	Low

## 05. IMPLEMENTATION

**Table 13:** Sidewalk Prioritization

ROADWAY	START	END	PRIORITIZATION CATEGORY
San Carlos Ave	Wellington Dr	Alameda De Las Pulgas	In Progress
San Carlos Ave	Upland Ave	Cordilleras Ave	Medium
Brittan Ave	Milano Way	Rogers Ave	Low

**Table 14:** Pedestrian Improvement Prioritization

PROJECT	CROSS STREET A	CROSS STREET B	PRIORITIZATION CATEGORY
P2	San Carlos Ave	Upland Ave	In Progress
P3	San Carlos Ave	Alameda de las Pulgas	In Progress
P26	San Carlos Ave	Phelps Rd	In Progress
P1	San Carlos Ave	Cordilleras Ave	In Progress
P27	San Carlos Ave	Laurel St	High
P14	Industrial Ave	Center St	High
P13	Industrial Ave	Howard Ave	High
P12	Brittan Ave	Crestview Dr	High
P10	Brittan Ave	Cordilleras Ave	High
P33	Kenton Ave	San Carlos Ave	High
P5	Arroyo Ave	Chestnut St	High
P7	El Camino Real	San Carlos Ave	High
P6	El Camino Real	Hull Dr	High
P8	El Camino Real	Arroyo Ave	High
P9	El Camino Real	Brittan Ave	High
P19	Holly Ave	El Camino Real	High

## 05. IMPLEMENTATION

PROJECT	CROSS STREET A	CROSS STREET B	PRIORITIZATION CATEGORY
P28	Alameda De Las Pulgas	Howard Ave	High
P36	Olive Ave	Elm St	High
P16	El Camino Real	Cherry St	Medium
P4	Alameda de las Pulgas	St Francis Wy	Medium
P29	Alameda De Las Pulgas	Carmelita Dr	Medium
P16	El Camino Real	Belmont Ave	Medium
P17	El Camino Real	White Oak Way	Medium
P18	Holly Ave	Old County Rd	Medium
P22	Cedar St	Arroyo Ave	Medium
P30	Chestnut St	Cherry St	Medium
P31	Orange Ave	Arroyo Ave	Medium
P32	Cordilleras Ave	Arroyo Ave	Medium
P34	Brittan Ave	Trail Connecting Parks	Medium
P35	Brittan Ave	Greenwood Ave	Medium
P37	Cherry St	Cedar St	Medium
P11	Brittan Ave	Woodland Ave	Low
P25	Cordilleras Ave	Belle Ave	Low
P15	Magnolia Ave	Elm St	Low
P23	Woodland Ave	Chestnut St	Low
P24	Tamarack Ave	Belle Ave	Low
P20	Holly Ave	Laurel St	Low

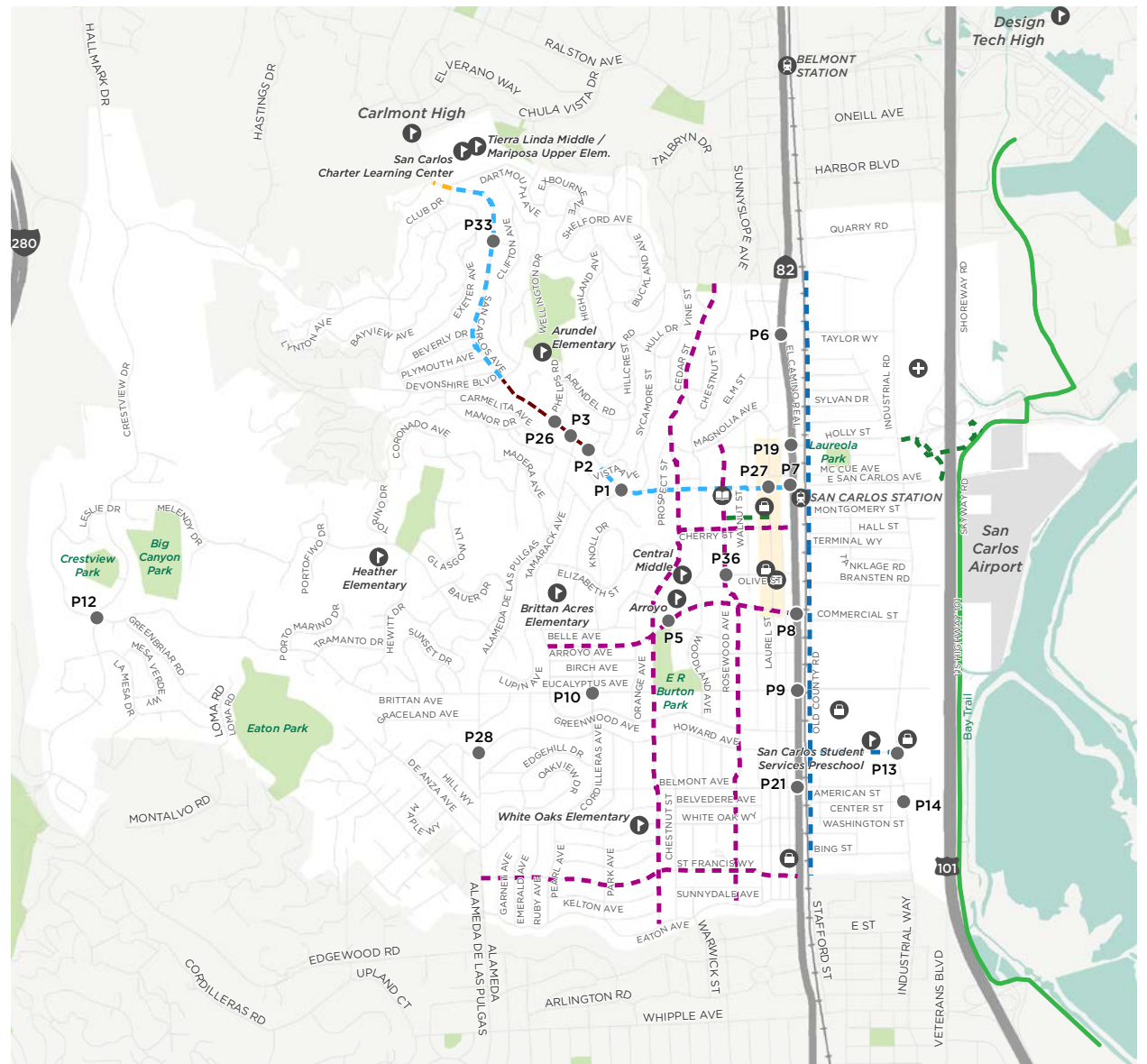
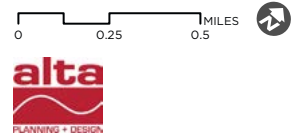
## 05. IMPLEMENTATION

**Figure 18:**  
High Priority Projects

- Spot Improvement
- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIB Buffered Bike Lane
- Class IIIB Bicycle Boulevard
- Class IV Separated Bikeway
- Sidewalk

### Destinations + Boundaries

- ✉ Post Office
- 🛒 Shopping
- ⊕ Hospital
- 📖 Library
- 🎓 School
- 🚉 Caltrain Station
- 🌿 Bay Trail
- 🌳 Park
- 🏘️ Downtown



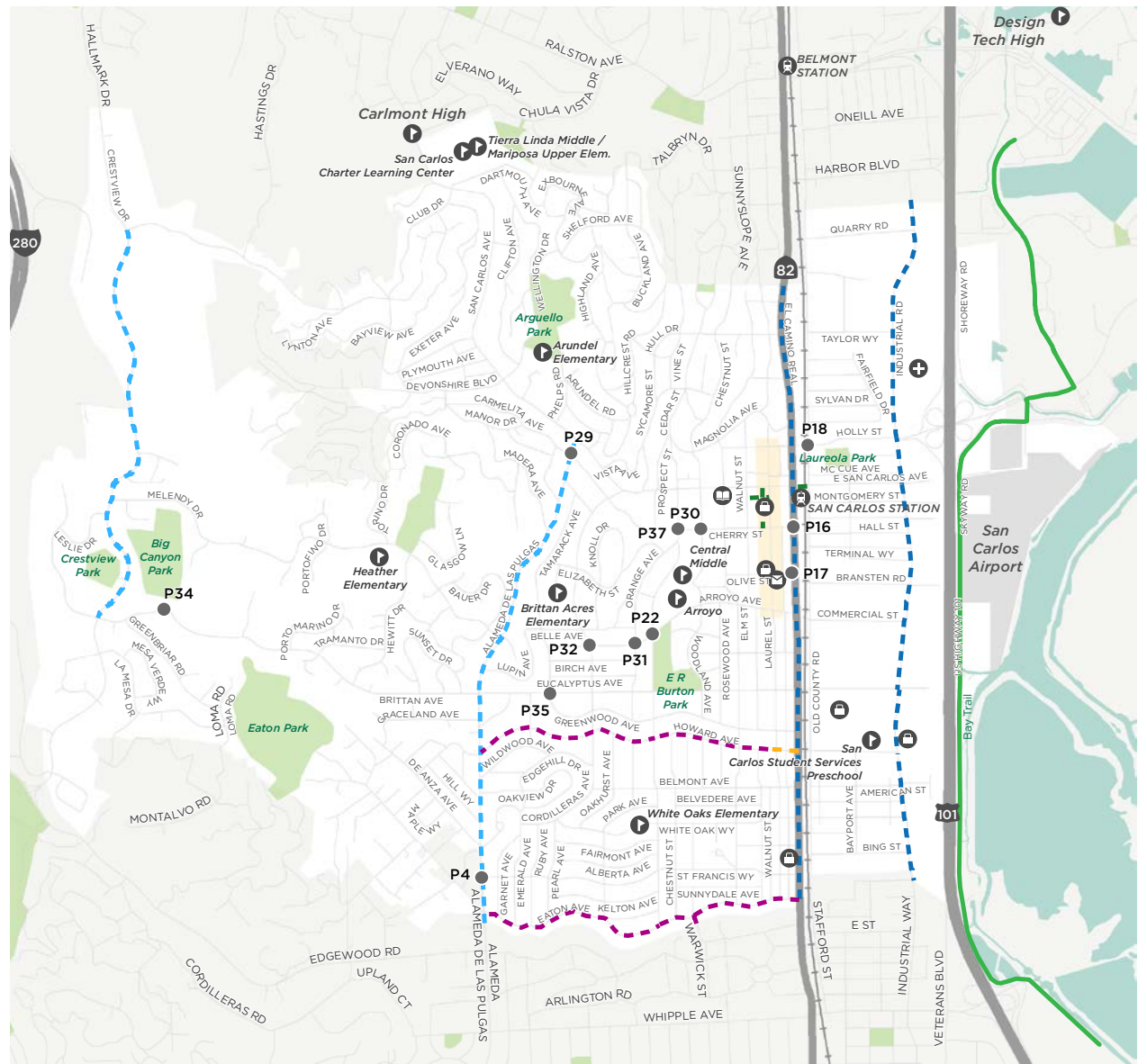
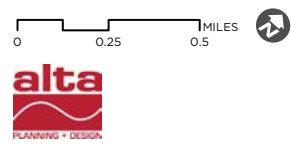
## 05. IMPLEMENTATION

**Figure 19:**  
Medium Priority Projects

- Spot Improvement
- Class I Shared-Use Path
- Class II Bicycle Lane
- Class IIB Buffered Bike Lane
- Class IIIB Bicycle Boulevard
- Class IV Separated Bikeway

### Destinations + Boundaries

- 📧 Post Office
- 🏪 Shopping
- 🏥 Hospital
- 📖 Library
- 🎓 School
- 🚆 Caltrain Station
- 🌿 Bay Trail
- 🌳 Park
- 🏘️ Downtown



# Funding Strategy

There are a variety of potential funding sources including local, regional, state, and federal. The City should also take advantage of private contributions in developing the proposed system. This could include a variety of resources such as volunteer labor during construction or monetary donations towards specific improvements. The funding sources considered appropriate for San Carlos are listed in **Table 15** and discussed in detail in **Appendix B: Funding Sources**.

**Table 15:** Funding Sources

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**FUNDING SOURCES**

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**Federal Funding Sources**

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TIGER (Transportation Investment Generating Economic Recovery)

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**State Funding Sources**

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Active Transportation Program (ATP)

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Solutions for Congested Corridors Programs

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Highway Safety Improvement Program (HSIP)

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Sustainable Transportation Planning Grant Program (STP)

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Office of Traffic Safety: National Safety Program 405(h) Nonmotorized Safety

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Recreational Trails Program

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Affordable Housing and Sustainable Communities Program

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Highway Safety Improvement Program

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Urban Greening Grants

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Local Partnership Program

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Road Maintenance and Rehabilitation Program

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**Regional Funding Sources**

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Bicycle Facilities Grant Program

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One Bay Area Grant Program 2

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Measure A Pedestrian and Bicycle Program

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Transportation Funds for Clean Air

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**FUNDING SOURCES**

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**Local Funding Sources**

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Assessment Districts

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Impact Fees

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Open Space District

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**Non-Traditional and Private Funding Sources**

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California Conservation Corps (CCC)

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Rails to Trails Conservancy (RTC)

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Grant and Foundation Opportunities

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Adopt-A-Trail/Path Programs

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Memorial Funds

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Revenue-Producing Operations