



Fontana **Active** Transportation Plan

CITY OF FONTANA

ACTIVE TRANSPORTATION PLAN



2017



ACKNOWLEDGEMENTS

City of Fontana
City Council
City Manager
Community Development, Planning
Public Works, Engineering
Fontana Unified School District

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The City would like to thank the members of the Community who participated in the outreach events and helped shaped this plan.

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CHAPTER 1

INTRODUCTION & VISION

FONTANA ACTIVE TRANSPORTATION VISION

The City of Fontana is a community where people of all ages and abilities can easily, comfortably, and safely walk or ride a bicycle, or use other mobility devices to access jobs, schools, public transit, shopping, and other destinations as a part of daily life.

The City of Fontana developed this Active Transportation Plan to propel its overarching goal of becoming a community that is healthy, engaged, economically vibrant, family-oriented, and safe. The plan is to be used as a tool for implementing infrastructure improvements for better connectivity throughout Fontana and to surrounding cities and the region by providing safe and comfortable walking and bicycling linkages.

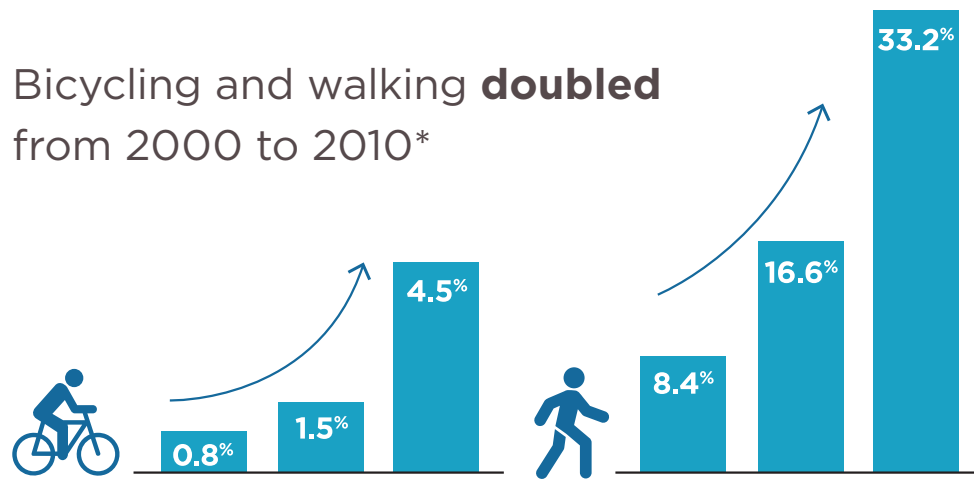
The project team, consisting of City representatives, implementation partners such as the California Department of Transportation (Caltrans), Fontana Unified School District, and consultants Alta Planning + Design, Arellano Associates, LLC., Psomas, and Iteris Inc., began the planning process in Summer 2016. Building off of the momentum of the City's concurrent planning effort, Fontana Forward: Fontana General Plan 2015-2035, the project team familiarized themselves with local factors influencing bicycling and walking conditions such as land use patterns and residents' physical activity levels.

The project team utilized these findings to develop a long-term vision for active transportation in Fontana and set priorities to help the City in achieving this vision. The vision for the City of Fontana is aligned with other regional and state active transportation visions and goals put forth by San Bernardino County Transportation Authority (SBCTA) and Caltrans. This document summarizes the planning process and findings from this effort, and provides tools for the City and its partners to use in implementing the long-term vision for active transportation presented herein.

Two supplement documents have been developed to complement this Active Transportation Plan, a Safe Routes to School Toolkit which focuses on strategies to increase active transportation at City of Fontana schools, and a Design Toolbox which presents a suite of infrastructure design options to increase safe walking and bicycling throughout Fontana.

PROJECT PURPOSE

Bicycling and walking **doubled**
from 2000 to 2010*



**Data from 2010-2012 California Household Travel Survey. Figures are as a percent of all trips. Charts are not to scale.*

California has seen significant growth in the use of active transportation over the last decade and has set an ambitious target to increase walking and bicycling across the state as presented in Caltrans' Toward An Active California State Bicycle + Pedestrian Plan, 2017.

The City of Fontana Active Transportation Plan will set the framework to enable residents and visitors of Fontana to engage in healthier activities and more sustainable living to support Statewide and active transportation goals. This will be achieved through the development of a comprehensive pedestrian and bicycling network that provides safe and comfortable access to local parks, schools, workplaces, shopping, and dining, as well as to destinations in other San Bernardino County communities.

The City of Fontana faces some barriers to active transportation that can be addressed through thoughtful planning, engineering, and design. Such barriers include wide roadways with fast-moving vehicle traffic like Foothill Boulevard, Valley Boulevard and Jurupa Avenue, Interstate 10, State Route 210, and Interstate 15. Fontana's existing bicycle network helps to integrate bicycling into the roadway system and there are many opportunities for enhancing connectivity and user experience. Many of the existing bike lanes are narrow and do not provide adequate connectivity between where people live, work, and play.

1 John Pucher, "Infrastructure, programs, and policies to increase bicycling: An international review," Preventive Medicine January 2010: S106-S125.



Public health is a top concern in San Bernardino County where one in three adults are obese according to the 2015 San Bernardino Community Healthy Indicators Reports. Public health concerns can result in higher health care costs for the residents of Fontana and potentially a less productive workforce, placing this added burden directly on individuals and businesses.³ One of the leading contributors to poor public health is adult obesity and physical inactivity. Creating a better physical environment that encourages walking and bicycling is a key strategy to fighting obesity and sedentary behavior and has been shown to have substantial impacts with relatively limited public investment.



Public participation and recommendations during outreach events

3 Karen Davis, "Health and Productivity Among U.S. Workers," The Commonwealth Fund August 2005: 1-12.

The City of Fontana is a middle-income community, yet approximately 16% of the population is living in poverty (ACS, 2015). Improving the public realm for walking and bicycling are proven, cost-effective ways to help those with financial difficulties become economically independent and access essential services, good jobs, and healthy food sources.⁴ Providing people with the opportunity for financial independence benefits the well-being and prosperity of not only those in need, but the entire community. The City of Fontana sought funding through the Caltrans Sustainable Transportation Planning Grant as a tool to help “Provide a safe, sustainable, integrated and efficient transportation system to enhance California’s economy and livability.” The City realizes the substantial, positive impact that safer and more connected pedestrian and bicycle infrastructure would have Citywide.

This plan continues to build upon recent efforts to transform Fontana into a city known as an active, healthy, and prosperous place to live, work, and play. Building off the progress of the general plan update and the award winning, community-based program Healthy Fontana, the project team conducted four catalytic events that engaged the community and gathered support and momentum to improve the City’s active transportation network.

Through interactive community engagement, that included a variety of interactive outreach strategies, this project is an opportunity to educate the community on opportunities to improve bicycling and walking. Outreach events also helped to gauge the community’s commitment level to active transportation facilities, increase awareness and promote mutual respect between road users, and identify current bicycle and pedestrian network deficiencies and safety issues. The resulting plan will reflect the community’s input and recommend a comprehensive active transportation network and safety improvements, as well as establish policies and programs to help implement the plan.



Survey participants during outreach events

4 Moore LV, et al., “Availability of recreational resources in minority and low socioeconomic status areas,” American Journal of Preventive Medicine 2008; 34(1): 16-22.

BENEFITS OF ACTIVE TRANSPORTATION

Bicycling and walking are low-cost and healthy transportation options that provide economic and livability benefits to communities. Both of these methods of movement are available to most everyone and require substantially less of an investment than is needed for an automobile. For many residents, walking and biking may also be their only option for transportation. A new and important shift in planning is the “8 – 80 Rule”, which says that when you make cities friendly for an 8-year old and accessible for an 80-year old, you will create a successful city for everyone. Addressing mobility for people of all ages and abilities allows for a well-connected, accessible network for all. This is becoming increasingly important as the older adult population grows nationally.⁵



ACTIVE TRANSPORTATION PLAN VISION

The vision of this Active Transportation Plan complements the Fontana Forward Principle to “Connect people and places. Provide safe and efficient transportation choices, including pedestrian, bicycle, and transit opportunities, along with well-maintained streets to connect people to City destinations”.

The City of Fontana will provide and promote pedestrian- and bicyclist- friendly environments including streets, sidewalks, and pathways that are attractive, convenient, and safe for active transportation modes and embody the Healthy Fontana model by improving personal health, environmental health, and elevating quality of life.

The City will also implement policies and programs to educate and encourage residents and visitors to use a variety of transportation choices as they travel throughout Fontana.

5 Penalosa, Gil. “Who We Are.” 8-80 Cities. 2015, <http://www.880cities.org/>



CHAPTER 2

GOALS & OBJECTIVES

This chapter is the heart of the Active Transportation Plan. It presents the plan’s vision, goals, objectives, and action items. It outlines the specific policy recommendations towards making Fontana a more pedestrian and bicyclist friendly community. The recommended policies were developed with consideration for the needs of the community and this plan’s goals.

The City of Fontana aims to increase the use of active transportation (e.g., walking, bicycling, transit, and other rolling devices) by residents and visitors of all ages and abilities.

Goals, objectives, and policies direct the way public improvements are made, where resources are allocated, and how programs are operated. They should support the City’s vision and be reflective of the City’s priorities.

GOAL 1: MOBILITY & ACCESS

Increase and improve pedestrian and bicyclist access to employment centers, schools, transit, recreation facilities, other community destinations across the City of Fontana, and facilities in neighboring cities for people of all ages and abilities.

Objective 1.A: Reduce vehicle miles traveled (VMT) by 4% by 2035

Policy 1.A: Accommodate the need for pedestrian and bicyclist mobility, accessibility, and safety when planning, designing, and developing transportation improvements. Such accommodations could include:

- a. Reviewing capital improvement projects to make sure that needs of active transportation travelers are considered in planning, programming, practices, design, reconstruction, retrofit, maintenance, construction, operations, and project development activities and products.
- b. Addressing the needs of all travelers through a “complete streets” approach to designing new transportation improvements or retrofitting older roadways as opportunities arise through maintenance of roadways and utility infrastructure through resurfacing and repurposing. Complete streets are roadways designed to facilitate safe, comfortable, and efficient travel for all roadway users. Typical accommodations include sidewalks, crosswalks, bicycle lanes, separated bikeways, bicycle routes and boulevards, shared-use paths, pedestrian cut-throughs speed reduction traffic calming, curb extensions, raised median refuge islands, or other pedestrian improvements, and
- c. Creating and implementing an Americans with Disabilities Act (ADA) Transition Plan that includes actions such as retrofitting street corners, crossings, and transit stops that do not meet current accessibility standards.



Objective 1.B: Reduce barriers to pedestrian and bicyclist travel.

Policy 1.B.1: Identify opportunities to improve or add pedestrian and bicycle crossings at I-10, State Route 210, Historic State Route 66 (Foothill Boulevard) and major arterials such as Jurupa Avenue and Arrow Boulevard.

Policy 1.B.2: Identify gaps in the pedestrian and bicyclist facilities network and needed improvements to and within key activity centers such as employment centers, schools, Fontana Metrolink station, bus stops, and retail areas, and define priorities for eliminating these gaps by making needed improvements.

Policy 1.B.3: Enhance connectivity between public right-of-way and private property with paths connecting residential areas to major streets and schools as new developments or redevelopments occur. This can be done by providing cut-through pathways.

Objective 1.C: Work with transit providers to develop high quality pedestrian and bicycle accessible transit stops and stations.

Policy 1.C.1: Coordinate with Omnitrans to establish appropriate designs for transit stops and station access ways. Bus stops can provide shelter from the weather, real-time arrival information, electronic signage, benches, garbage cans, and route maps. Bus stops can also become spaces to showcase public art.

Objective 1.D: Regularly evaluate pedestrian and bicycle activity levels, facilities, and programs.

Policy 1.D.1: Develop and implement an annual evaluation program to count active transportation roadway users and survey the community on pedestrian and bicycle facilities and programs.

GOAL 2: SAFETY

Improve safety for active transportation users through the design and maintenance of sidewalks, streets, intersections, and other roadway improvements such as signage, striping, lighting, wayfinding, and landscaping; as well as best practice, non-infrastructure programs (education and encouragement) to enhance and improve the overall safety of people walking and bicycling.

Objective 2.A: Reduce the combined number of collisions, injuries, and fatalities involving people walking and bicycling by 50% from 2015 levels by 2025.

Policy 2.A.1: Annually review the complaints from and collisions involving people walking and bicycling to inform ongoing improvements at intersections and other priority locations, such as unsafe corridors, throughout the City.

Policy 2.A.2: Identify opportunities to reduce traffic and vehicle exposure for people walking by reducing crossing distances and/or providing safe and convenient pedestrian facilities particularly along Foothill Boulevard, Sierra Avenue, Slover Avenue, and Valley Boulevard.

Policy 2.A.3: Identify opportunities to reduce traffic and vehicle exposure for people on bicycles by removing conflict zones through design, highlighting conflict zones, providing barriers and separation between modes of roadway users, redesigning intersections to accommodate bicycle travel, and/or providing other dedicated facilities.

Policy 2.A.4: Develop a Vision Zero Plan and Strategy to achieve zero traffic-related deaths through engineering, education, and enforcement.

Policy 2.A.5: Pursue Caltrans' funding opportunities to develop a Systemic Safety Analysis Report Program (SSARP) for the City.



GOAL 3: INFRASTRUCTURE & SUPPORT FACILITIES

Maintain and improve the quality, operation, and integrity of the pedestrian and bicycle network infrastructure that allows for convenient and direct connections throughout Fontana. Increase the number of high quality support facilities to complement the network, and create public pedestrian and bicycle environments that are attractive, functional, and accessible to all people.

Objective 3.A: Incorporate pedestrian and bicycle facilities and amenities into private and public development projects.

Policy 3.A.1: Support and encourage local efforts to require the construction of pedestrian and bicycle facilities and amenities such as landscaping, wayfinding and seating areas, as a condition of approval of new development and major redevelopment projects.

Policy 3.A.2: Facilitate pedestrian and bicycle travel during construction activities and development projects through public and private construction zones.

Policy 3.A.3: Establish and maintain pedestrian and bicycle design guidelines that address topics such as bikeways, sidewalk zones, street corners, bike parking, and street crossings. Consider official adoption of National Association of City Transportation Officials (NACTO) Urban Street and Urban Bikeway Design Guides, FHWA's Small Town and Rural Multi-modal Network Design Guide, and Association of Pedestrian and Bicycle Professionals (APBP) Bicycle Parking Guidelines.

Objective 3.B: Provide and maintain walkways and bikeways that are clean, safe, and attractive in accordance with Americans with Disabilities Act (ADA) and Public Right of Way Accessibility Guidelines (PROWAG) guidelines.

Policy 3.B.1: Provide routine maintenance of pedestrian and bicycle network facilities, as funding and priorities allow. Programs to support these maintenance efforts could include:

- a. Sidewalk repair programs, including incentives to property owners to improve adjoining sidewalks beyond any required maintenance,
- b. Bicycle rack installation programs, including incentives to property owners to install short-term bicycle racks in front of offices and business entrances and long-term bicycle racks for employees and transit users,
- c. Developing and administering a Pedestrian/Bicycle Service Request Form Program, and
- d. "Adopt a Trail" programs that involve volunteers for trail clean-up and other maintenance.

Policy 3.B.2 Work with property owners of vacant land adjacent to public walkways to identify and implement beautification opportunities on the vacant property, such as landscaping, fencing, and/or art installations.

GOAL 4: NON-INFRASTRUCTURE PROGRAMS

Increase awareness of the value of pedestrian and bicycle travel for commute and non-commute trips through encouragement, education, enforcement, and evaluation programs that support walking and bicycling.

Objective 4.A: Establish and enhance safe routes to and from schools that will enable and encourage more students to walk or ride a bicycle or scooter to/from school.

Policy 4.A.1: Identify and develop education and encouragement projects working with the school district(s) through the Safe Routes to School program. This program could include:

- a. Identifying Capital Improvement Programs (CIPs) working with the school district(s) and school community,
- b. Applying for state and federal Safe Routes to School funding and other grants to construct capital improvements and implement educational and encouragement programs, and
- c. Developing and distributing maps that identify the most appropriate routes for students to walk or ride a bicycle to/from school.
- d. Coordinate with Fontana Police Department to enforce safe driving behavior around school sites particularly during morning and afternoon drop-off/pick-up times.

Objective 4.B: Establish and enhance a Safe Routes for Seniors program that will enable and encourage more elderly residents and visitors to walk and ride a bicycle to services, access transit, and complete other active trips safely and conveniently.

Policy 4.B.1: Work with the senior community to identify and address barriers to increased walking, bicycling, and transit use.

Policy 4.B.2: Identify and develop education and encouragement programs working with seniors through the Safe Routes for Seniors program. This program could include:

- a. Identifying Capital Improvement Programs (CIPs) working with the senior community, prioritizing access to key senior origin and destination points, and

Policy 4.B.3: Developing senior pedestrian and bicycle mobility and safety trainings in conjunction with senior centers and senior organizations.

Policy 4.B.4 Identify Senior Facilities and create “Senior Zone” with 25 MPH posted speed limits in accordance with the California Vehicle Code and California Manual for Uniform Traffic Control Devices. Ensure these zones are enforced through coordination with the Fontana Police Department.



GOAL 5: EQUITY

Improve accessibility for people of all ages and abilities through public engagement, service delivery, and capital investments in accordance with ADA law and PROWAG guidelines.

Objective 5.A: Assist neighborhoods that desire to improve pedestrian access to, from, and within their neighborhood.

Policy 5.A.1: Develop a residential partnership program that enables neighborhoods to identify, prioritize, and move forward with pedestrian or bicycle access improvements.

Objective 5.B: Identify low-income and transit dependent communities that require pedestrian or bicycle access to, from, and within their neighborhood.

Policy 5.B.1: Implement pedestrian and bicycle projects that provide access to local services, schools, recreation centers, employment centers, shopping, and transit identified in Fontana Forward.

Policy 5.B.2: Improve pedestrian and bicycle access to facilities that serve low-income and transit dependent community members.

GOAL 6: IMPLEMENTATION

Implement the Active Transportation Plan over the next 20 years.

Objective 6.A: Determine funding needs for expanding and improving pedestrian and bicycle facilities and programs, and seek funding for those needs.

Policy 6.A.1: Develop and update a 20-year financial plan on a seven-year basis.

Policy 6.A.2: Apply for local, State, and Federal grants for major pedestrian and/or bicycle projects and programs, including the Active Transportation Program and Safe Routes to School.

Policy 6.A.3: Develop requirements and incentives for private property owners to incorporate pedestrian- and bicycle-friendly features into new projects.

Policy 6.A.4: Explore partnerships with private and public organizations (e.g. Kaiser Permanente) to fund incentive programs and events that encourage walking and bicycling.

Objective 6.B: Consider pedestrian and bicyclist projects into the City's Capital Improvement Program (CIP) that will create a more walkable and bikeable environment in Fontana.

Policy 6.B.1: Prioritize the top ten projects in this Active Transportation Plan for inclusion in the CIP.

Policy 6.B.2: Identify dedicated pedestrian and bicycle project funding by 2021.

Policy 6.B.3: Identify practices and methodology for the CIP to allow active transportation safety and connectivity projects to score well against vehicle oriented projects such as capacity enhancements and control devices.

Policy 6.B.4: Identify practices so that all projects can incorporate "complete street" best practices whether they are maintenance of roadways or utilities or new construction.

Objective 6.C: Ensure pedestrian and bicycle transportation is coordinated within the City.

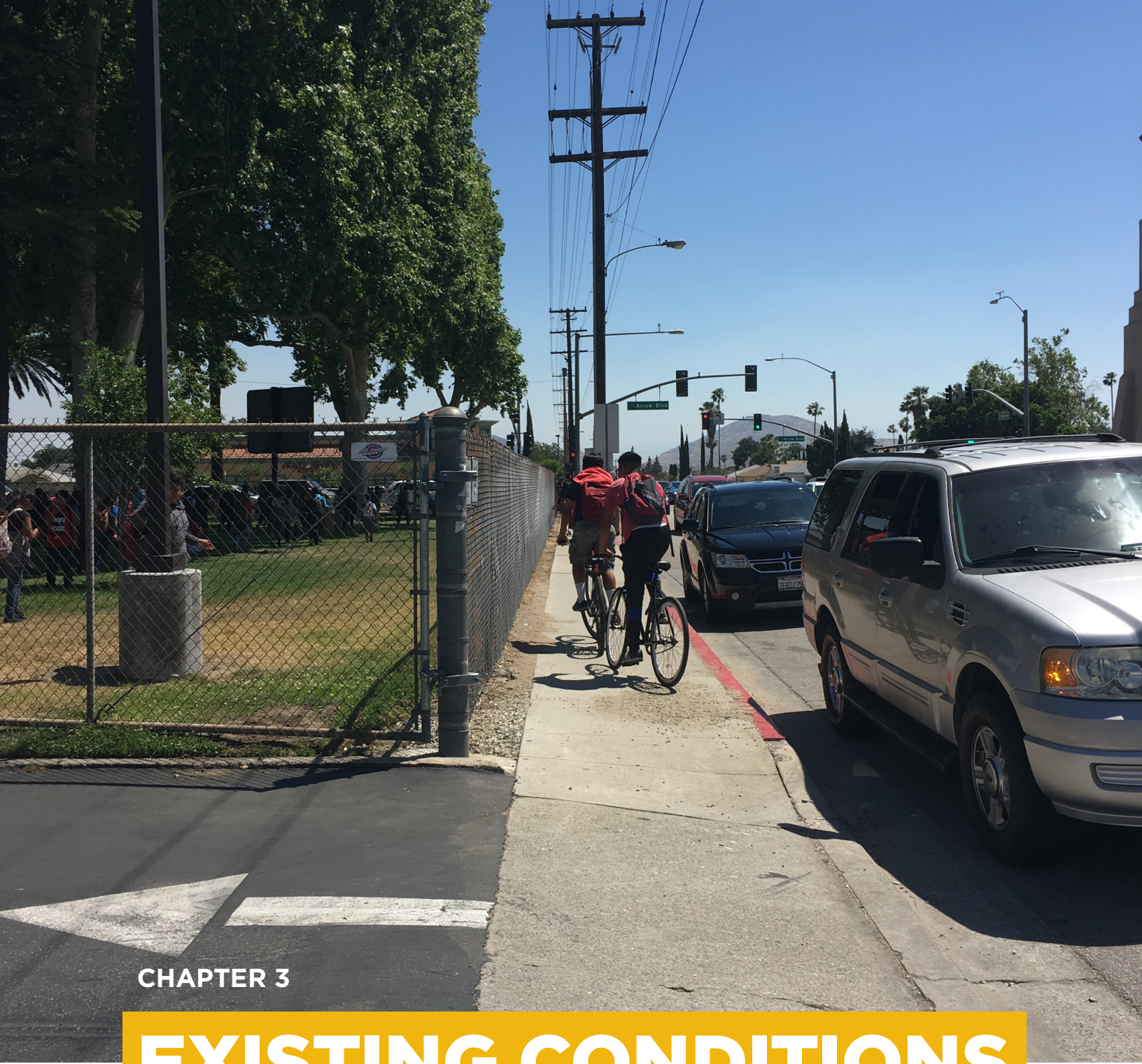
Policy 6.C.1: Designate a City Active Transportation Coordinator responsible for coordinating pedestrian and bicycle transportation within the City and externally. The Active Transportation Coordinator will be a regular participant at the City's Planning Commission meetings and have the authority to comment on private and public development and maintenance/construction projects as it relates to implementation of the Active Transportation Plan's visions, goals, objectives, and policies.

Objective 6.D: Review the Active Transportation Plan recommendations at regular intervals to ensure it reflects the most current priorities, needs, and opportunities.

Policy 6.D.1: Update the Active Transportation Plan every seven years to identify new facility improvements and programmatic opportunities as the pedestrian and bicycle networks develop, assess their feasibility, gauge public support, identify funding sources, and develop implementation strategies.







CHAPTER 3

EXISTING CONDITIONS

This chapter provides an overview of the major components of the City of Fontana's existing environment for walking and biking. This includes an assessment of the primary opportunities and constraints that exist for developing a safe and connected bicycle and pedestrian network. The assessment is based on the project team's review of existing plans, field observations, community input, and GIS-based analysis.

KEY PROJECT THEMES AND PLAN PRIORITIES

Based on the evaluation of Fontana's safety, infrastructure, and user needs as described in the following sections, the project team developed the following key themes and plan priorities:

Enhance Existing Bikeways – Fontana has an opportunity to leverage its overall biking network and better connect City residents, visitors, and commuters by enhancing its existing bikeways.

Improve Pedestrian Crossings – Many pedestrian crossings and intersections present the opportunity to improve safety, access, and connectivity.

Improve Cycling and Pedestrian Safety – Riding a bicycle on a sidewalk is a relatively common (and generally unsafe) activity in Fontana. Making safer spaces for bicyclists on the road or separated bikeways can reduce the incidence of sidewalk-bicycle riding and create safer conditions for all users. Providing pedestrian scale lighting can improve visibility and safety for those walking along the sidewalk and Pacific Electric Trail.

Leverage Community Support – Support for safe and active transit options is a concept that most everyone can get behind but it will take the actions of a few key community champions to lead the way. Those with active interests in making safe connections for walking and biking within Fontana, such as Parent-Teacher Associations, local advocates, and high school students, can help maintain project momentum and advance community conversations recognizing the benefits to the economy, safety, and physical and mental health that is associated with increased walking and biking.

Improve Connectivity to the Pacific Electric Trail – This key trail is also a regional link, connecting users beyond Fontana to Claremont (Los Angeles County) on the western end and the City of Rialto on the eastern end.

Consider Opportunities for Bicycle Boulevards – Bicycle Boulevards provide low stress riding within neighborhoods with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority.



SUMMARY OF PLAN REVIEWS

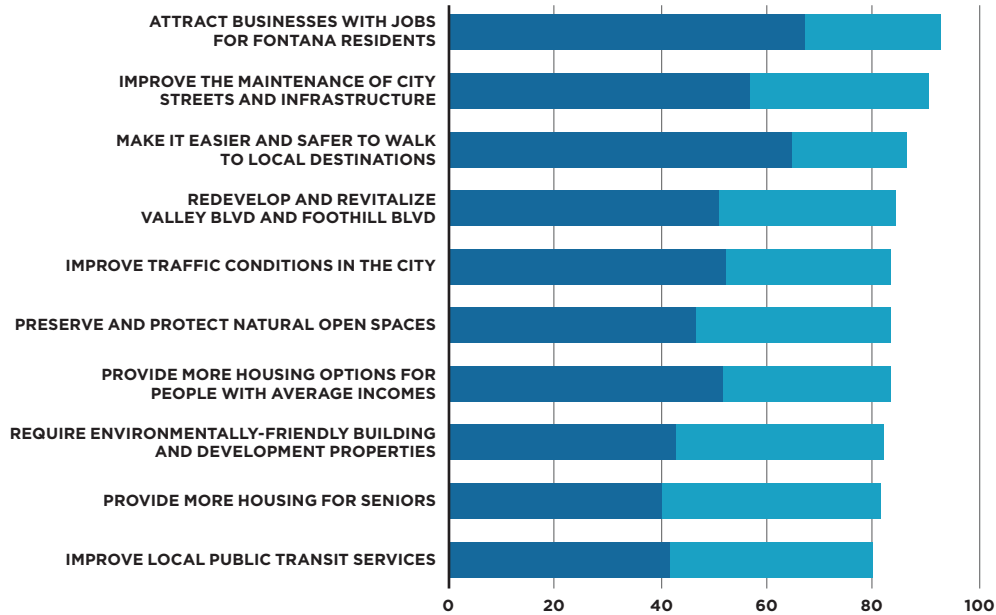
Citywide and regional plans form the foundation for understanding the existing conditions in the City of Fontana and will contribute greatly to the success of the Fontana Active Transportation Plan. Table 3.1 lists the plans and policies that were reviewed and used as a guide to help inform the recommendations presented in the City of Fontana Active Transportation Plan. A detailed summary of the plans reviewed is presented in Appendix A.

Table 3.1 Plans and Best Practices

REPORTS	YEAR
City of Fontana General Plan	2003
City of Fontana Circulation Element	2003
City of Fontana Parks, Recreation, and Trails Master Plan	2008
2015 General Plan Update	2015
San Bernardino County Non-Motorized Transportation Plan	2015
San Bernardino County Transit Access Improvement for Cyclists and Pedestrians	2012
Caltrans Toward an Active California State Bicycle + Pedestrian Plan	2017
BEST PRACTICES	YEAR
Pomona, California Active Transportation Plan	2012
Rancho Cucamonga, California Circulation Master Plan	2015
Marysville, California Bicycle and Pedestrian Master Plan	2016
Orem, Utah Bicycle and Pedestrian Plan	2010

Our Top Ten Future Priorities

True North Research, Inc. (2015), the % of residents answering "high priority" or "medium priority"



EXISTING BICYCLE INFRASTRUCTURE

The City of Fontana's bicycle network has approximately 46.9 miles of existing bikeway facilities as shown in Figure 3.1 and noted in Table 3.2. This includes approximately 16 miles of off-road bicycle facilities (bike trails), primarily the Pacific Electric Trail, and 34 miles of designated on-road facilities (bike lanes). There are currently no designated bicycle routes in the City.

Figure 3.1 Existing Bicycle Network and Select Land Uses

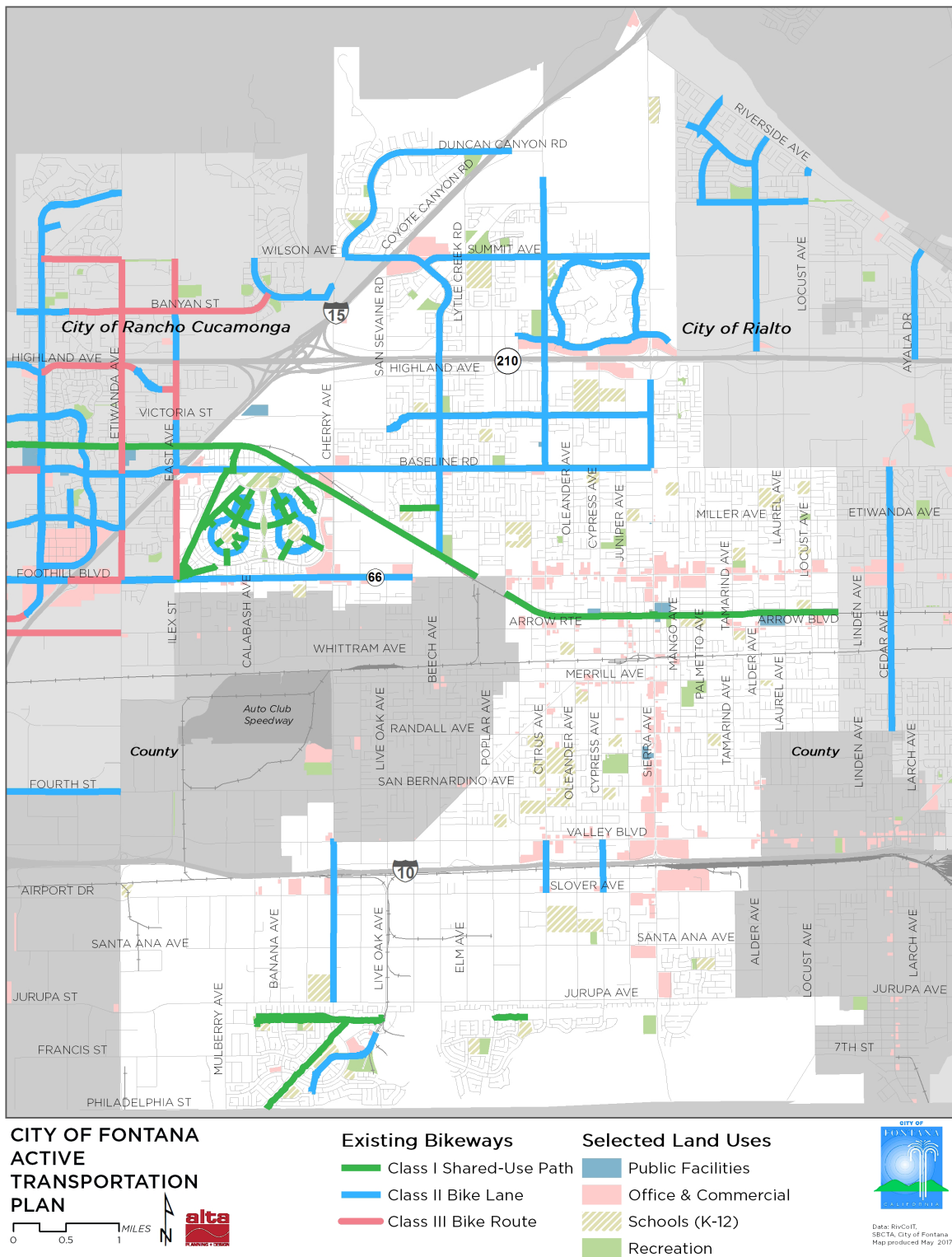
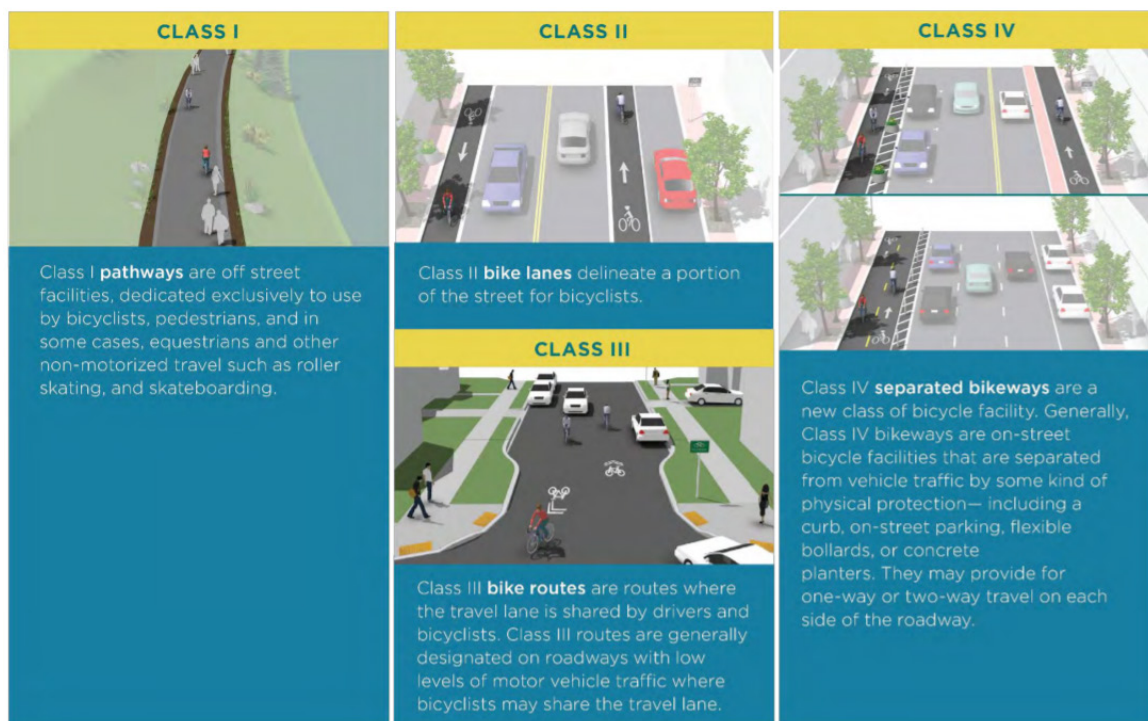


Table 3.2 Existing Bikeway Mileage by Facility Type

FACILITY TYPE	MILES
Class I Shared Use Path	15.7
Class II Bicycle Lanes	31.2
Class III Bicycle Routes	0.0
Total Mileage	46.9

Caltrans designates four 'classes' of bikeways that vary in level of motor vehicle separation



Although no priority projects were identified in the San Bernardino County Non-Motorized Transportation Plan (revised May 2015), the City of Fontana has been proactive in expanding their existing bikeway network and have constructed approximately 5.3 miles of bike infrastructure since the 2015 plan update.

EXISTING PEDESTRIAN INFRASTRUCTURE

The sidewalk network in Fontana is relatively complete, particularly along major roads such as Merrill Avenue and Sierra Avenue. However, gaps in the City's sidewalk network exist along some local and residential streets, and gaps exist in the industrial areas south of Interstate 10. The majority of signalized intersections in the City have curb cuts, ramps, and pedestrian signals yet some could be improved with high visibility crosswalks, pedestrian actuated countdown timers, and raised median island refuges where appropriate.

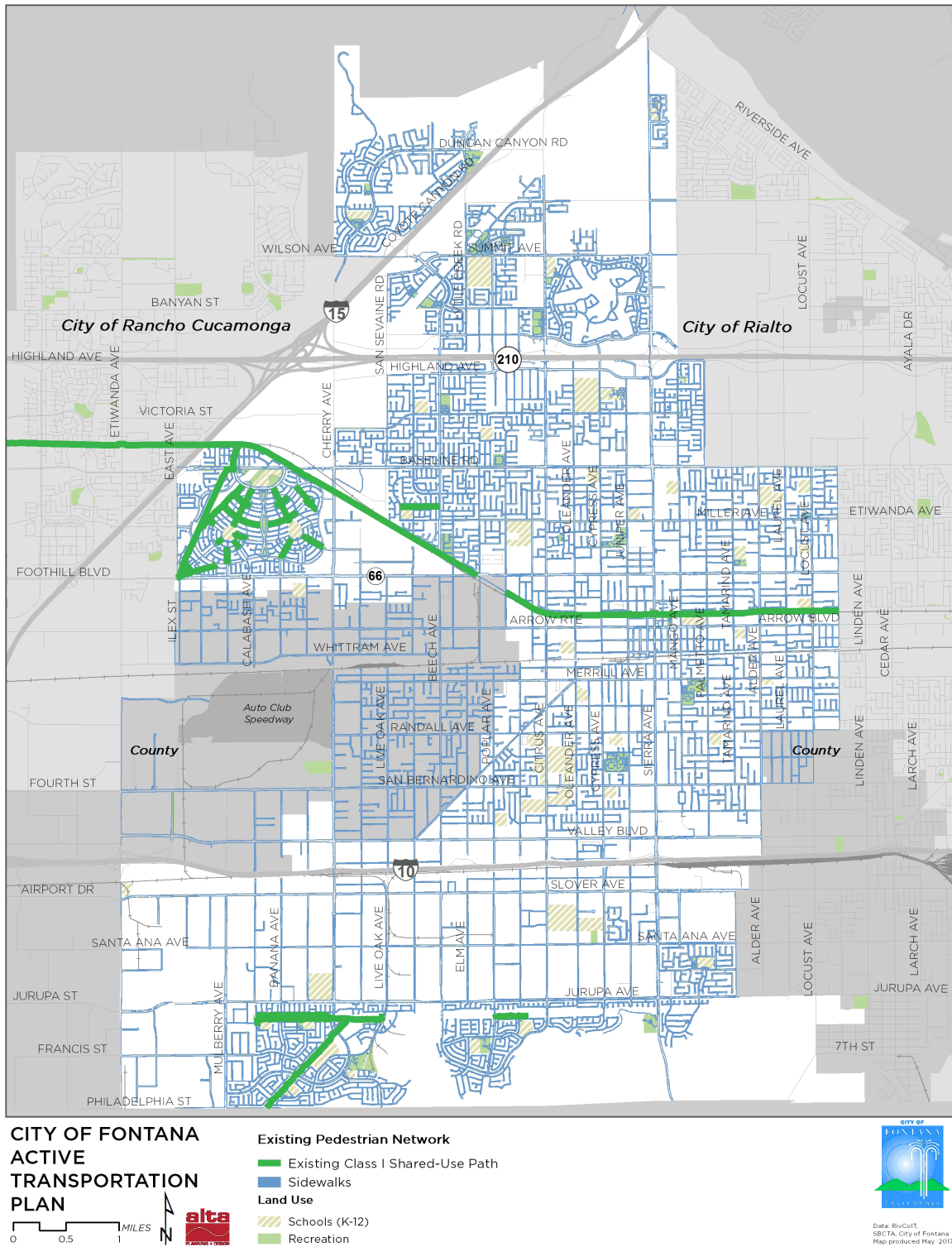
The Pacific Electric Trail is the City's most used off-road, Class I facility and provides a contiguous link from the neighboring communities of Rancho Cucamonga to the west and Rialto to the east. The multi-purpose trail along the historic Pacific Electric Railway Line allows for recreational and alternative transportation opportunities for residents and visitors alike. The Trail is well used particularly near school sites and provides a safe pathway for students removed from cars and trucks. Connections to the Pacific Electric Trail could be increased throughout the City via other shared-use paths, and improved on-road bikeways.

Figure 3.2 shows the existing pedestrian network within the City and includes all sidewalks and Class I shared-use paths.



Well maintained sidewalks outside Heritage Intermediate School (top) and in Downtown Fontana (bottom)

Figure 3.2 Existing Pedestrian Network





DATA COLLECTION

The Active Transportation Plan reviews the existing conditions of the bicycle and pedestrian network and identifies opportunity areas to expand and improve active transportation infrastructure. A variety of data was collected to inform this plan including City and regional GIS data, collision data, and school campus walk audit observations.

Walking audits are a process that involve the systematic gathering of data about environmental conditions (social, built and natural) that affect walking and bicycling. Audits were performed by consultant staff with experience in pedestrian, bicycle, and safety issues. The audits document factors that help or hinder safe walking and bicycling particularly around school sites. These factors include, but are not limited to, street lighting, sidewalk width and condition, traffic volume, vehicle speeds, presence of bicycle lanes, overgrown or lack of landscaping, topography, and presence of dogs, trash and debris. Walk audits were performed at ten Fontana Unified School District school sites that were selected based on the California Environmental Protection Agency CalEnviroScreen scoring (Table 3.3). A high score indicates an elevated exposure to pollution. An area with a high score is one that experiences a much higher pollution burden than areas with low scores. A detailed walk audit summary for each school site is provided in Appendix F.

Additional walk audits were performed at 35 other schools in Fontana that were not included in this Active Transportation Plan, the Rialto Citywide Safe Routes to School Program, or the San Bernardino County Transportation Authority Safe Routes to School Program.

The additional walk audits were part of a separately funded project that included Suggested Route to School Maps and engineering recommendations to improve bicycle and pedestrian access to schools.

Table 3.3 Pedestrian and Bicycle Audited Schools

SCHOOL	CALENVIROSCREEN SCORE POLLUTION LEVEL
Almond Elementary School	96-100%
AB Miller High School	86-90%
Juniper Elementary School	86-90%
Jurupa High School	91-95%
North Tamarind Elementary School	81-85%
Palmetto Elementary School	86-90%
Sierra Lakes Elementary School	81-85%
Southridge Middle School	81-85%
Truman Middle School	96-100%
West Randall Elementary School	96-100%



Pedestrian and bicyclist collision data for the City was analyzed to corridors and intersections of high concern for safety issues. Collision information for the City of Fontana is available through the California Highway Patrol (CHP) Statewide Integrated Traffic Records System (SWITRS). SWITRS data documented 419 bicycle- or pedestrian-involved collisions between 2010 and 2014 occurring within the City of Fontana limits. The City of Fontana provided data for 227 bicycle- or pedestrian-involved collisions within the same study period, 192 of which were not present in the SWITRS records. For certain analyses, only SWITRS data was used since more detailed information exists in these records; those sections are indicated as such.

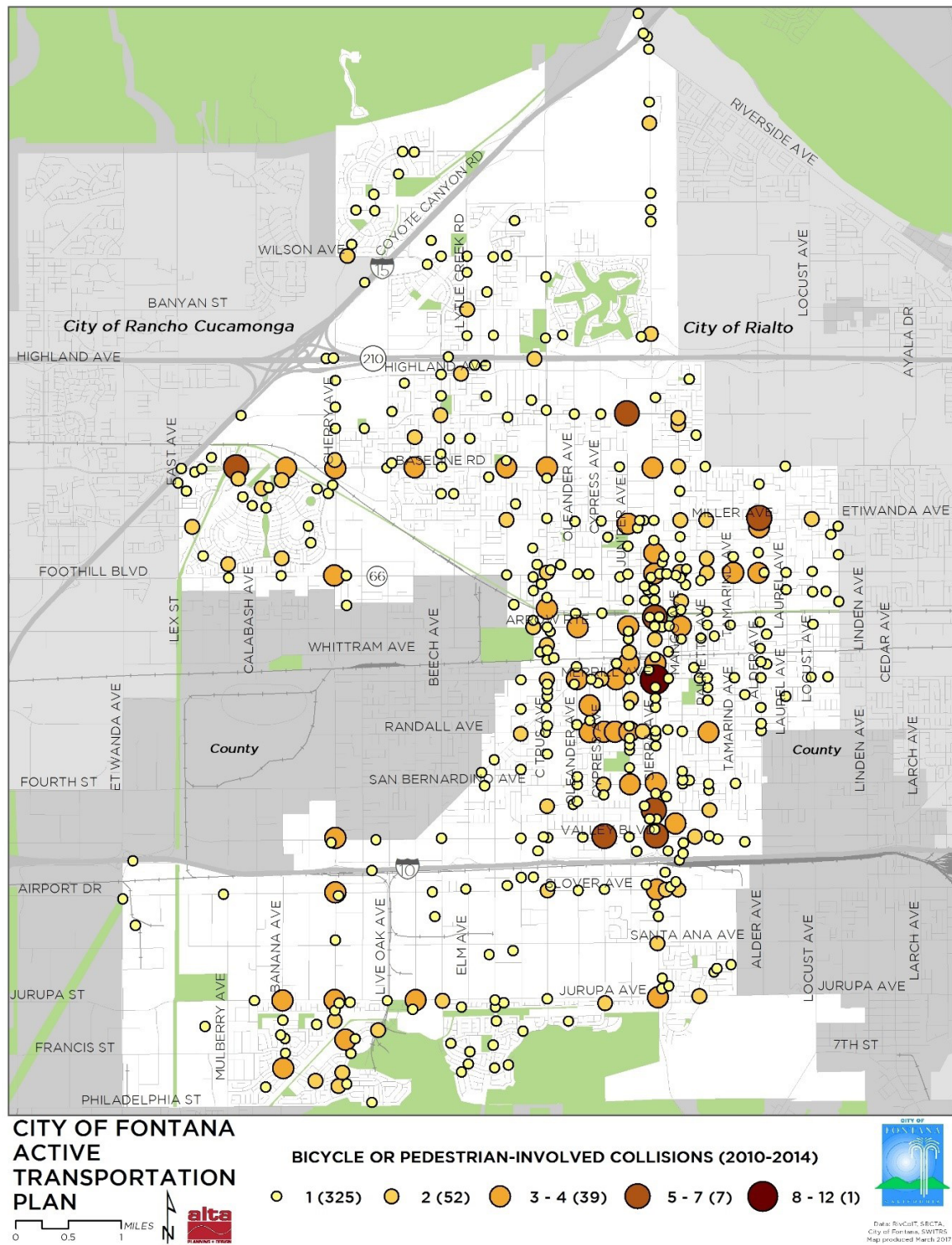
After combining the SWITRS data and the City of Fontana's supplemental collision data, a total of 300 pedestrian-involved collisions and 311 bicyclist-involved collisions occurred in the City of Fontana between 2010-2014, resulting in 22 fatalities. The City and the California Highway Patrol Statewide Integrated Traffic Records System (SWITRS) maintains collision data on an ongoing basis.

Figure 3.3 shows collisions involving a bicyclist or a pedestrian occurring within the City of Fontana between 2010 and 2014. SWITRS data is available from 2014-2016 yet is considered provisional data until it's been internally reviewed by Caltrans.

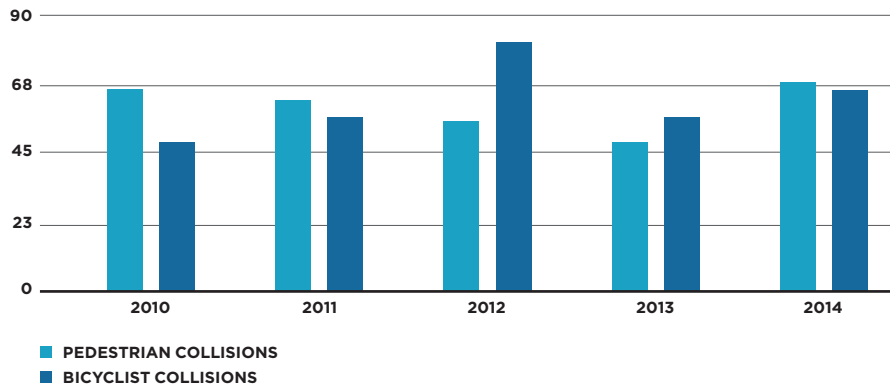
Appendix C presents the detailed collision analysis for the City of Fontana.



Figure 3.3 Number of collisions involving bicyclists or pedestrians



Collisions by Year



The most common types of collisions were “vehicle-pedestrian” and broadside collisions as shown in Table 3.4. In broadside collisions, the auto and bicyclist/pedestrian are often traveling at 90 degree angles to each other. This type of collision typically occurs at intersections, driveways, or within parking lots, and often occurs when bicyclists are riding against the normal flow of traffic. Rear end collisions generally are caused by excessive speed and/or lack of awareness of vehicles or bicycles slowing or stopping. Sideswipes generally occur when a car or bicycle fails to yield while changing lanes.

Table 3.4 Type of Collisions

TYPE OF COLLISION	NUMBER OF COLLISIONS
Broadside	238
Sideswipe	24
Head-On	33
Rear-end	22
Vehicle-Pedestrian	242
Other	27
Not Stated	11

Foothill Boulevard, Sierra Avenue, Slover Avenue, and Valley Boulevard were indicated as the primary (location of collision) or secondary (nearest cross-street) road for 21% of all collisions in the City. These major arterials share several characteristics that may have contributed to the high number of collisions on them. These characteristics are common on many of Fontana's roads. They are described below:

Long blocks: All the roads have long blocks that make walking to the nearest crosswalk inconvenient. This enables vehicular speeding and encourages pedestrians to cross mid-block and outside crosswalks. For example, the 2,500 foot stretch of road between Miller Avenue and Foothill Boulevard on Sierra Avenue does not have a single crosswalk, despite passing through residential areas. The majority of pedestrian actions preceding collisions was crossing outside a crosswalk.

Missing Sidewalks: Sidewalks lack connectivity and abruptly end mid-block on roads that otherwise have no shoulders. For example, on Foothill Boulevard, sidewalks tend to disappear when crossing undeveloped lots. However, these lots are often in between commercial and residential areas; connected sidewalks could facilitate and encourage residents to make short trips on foot more safely.

Incomplete Intersections: Not all the intersections have traffic control devices or crosswalks on all approaches, even when pedestrians would have 4+ lanes to cross. For example, the intersection of Valley Boulevard and Beech Avenue, the site of a 2013 bicycle collision, requires non-motorists desiring to cross Valley Boulevard to navigate nearly 100 feet without crosswalk or signals. With the exception of an ADA-accessible curb ramp in the northwest corner of the intersection, the sidewalks abruptly end in all directions before the intersection.

Wide Roadways: All four of the roads (Foothill Boulevard, Sierra Avenue, Slover Avenue, and Valley Boulevard) have at least 4 travel lanes, at least 12 feet wide, speed limits up to 50 miles per hour, and annual daily traffic (ADT) volume ranging from 15,000 (Slover Avenue) to 23,500 (Sierra Avenue).



A pedestrian hit by a vehicle traveling at

25 MPH

has an

89%

CHANCE OF SURVIVAL



A pedestrian hit by a vehicle traveling at

35 MPH

has a

68%

CHANCE OF SURVIVAL



A pedestrian hit by a vehicle traveling at

45 MPH

has a

35%

CHANCE OF SURVIVAL



Tefft, B. C. Impact speed and a pedestrian's risk of severe injury or death. Accident Analysis & Prevention 50 (2013) 871-878.



CHAPTER 4

NEEDS ANALYSIS

By collecting input from a variety of sources, the City of Fontana can develop an active transportation plan that meets the diverse needs of the community. This chapter assesses the needs for walking and biking. The assessment is based on insights gained from public outreach events, stakeholder interviews, and GIS-based mapping analysis.

COMMUNITY IDENTIFIED NEEDS

The community needs were identified by aggregating feedback received from the public on their views toward walking and bicycling conditions in Fontana. The public outreach process included comprehensive outreach that included five major components:

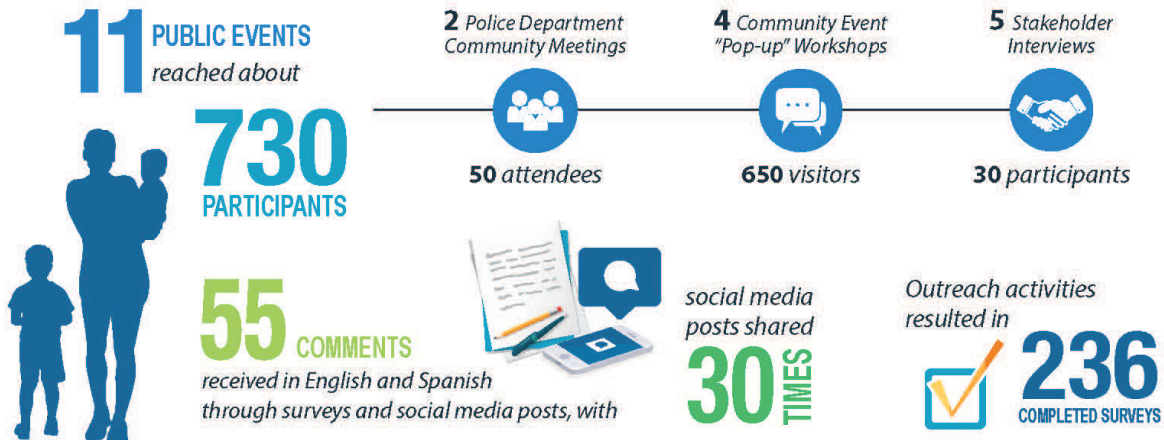
- Stakeholder Interviews
- Police Department Community Meetings
- Pop-up Workshops
- Project Website and Social Media Presence
- Online and Print Survey

The results of each platform for public input are described in the following sections. The major themes and community priorities identified through these outreach processes include:

- Improve bicyclist and pedestrian safety throughout the City
- Expand the regional bikeway and pedestrian network
- Promote alternative modes of transportation to reduce traffic congestion

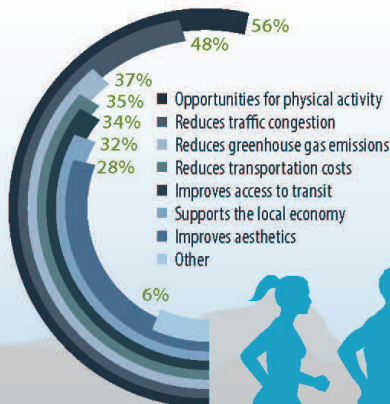


Summary of Outreach Activities

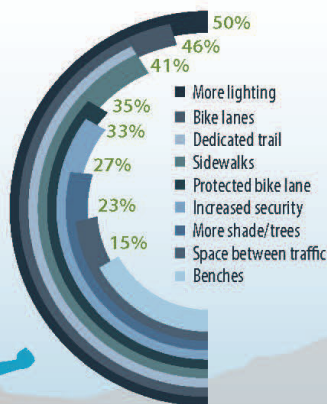


Survey Participation

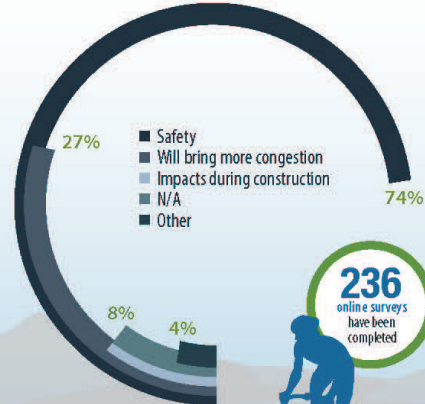
What benefits of an ATP do you see?



What improvements would encourage you to walk/run or ride a bicycle to your destination?



What do you see as concerns of an ATP?



236
online surveys
have been
completed



A summary of the community outreach events including location and number of participants is shown in Table 4.1 below.

Table 4.1 Community Outreach Event and Activity Summary

EVENT	DATE	LOCATION	APPROX. NO. OF PARTICIPANTS
Police Department Community Meeting #1	Monday October 3, 2016 6:30 - 8:30 PM	DW Long Elementary	30
Police Department Community Meeting #2	Thursday October 27, 2016 6:30 - 8:30 PM	Southridge Middle School	20
Sunset on Sierra	Saturday July 30, 2016 5:00 - 10:00 PM	Sierra Avenue & Arrow Boulevard	250
Let's Move	Saturday October 8, 2016 9:00 AM - 1:00 PM	Pacific Electric Trail (Seville Ave. & Wheeler Ave.)	100
Halloween Monster Bash	Monday October 31, 2016 4:00 - 7:00 PM	Southridge Park	150
Halloween Spooktacular	Monday October 31, 2016 4:00 - 7:00 PM	Jesse Turner Center	150
Online Survey	n/a	n/a	230

Stakeholder Interviews

Stakeholder interviews were held in early Fall 2016. Active Transportation Plan stakeholders were identified based on geographic location, existing organized groups, interest in project, and official structure. Thirty stakeholders attended five interview sessions.

Stakeholders provided input on the Plan from their unique perspectives and served as the liaison between the project team and their respective group. Prominent themes from the stakeholder interviews highlighted the importance of connectivity between the City of Fontana and neighboring cities, walkability between commercial districts and employment centers, and transportation safety.

Police Department Community Meetings

Police Department Community Meetings were held at two different school sites, DW Long Elementary in the northern portion of the City and Southridge Middle School in the southern portion of the City. These meetings provided the community with information on a variety of City projects, including the Active Transportation Plan, and participants were encouraged to complete the project survey.

Pop-up Workshops

The Project Team hosted four pop-up workshops at existing City events. These events are focused on engaging people of the community and leveraging an existing event that may or may not be closely related to active transportation. Not everyone in a community identifies themselves as a cyclists or pedestrian so they do not attend a meeting about those topics. Yet they do walk and bike in the community so it

is important to obtain their input so that we can identify opportunities to reflect their needs and wants. The event activities provided an overview of the Plan's purpose, goals, benefits, and process, while obtaining public input on the recommended bicycle and pedestrian network. These workshops featured a mapping activity where participants were asked to respond to the following two questions and place stickers on maps in accordance with their responses:

1. How can Fontana become more welcoming and accessible for travelers of all modes and abilities?
2. What would help make places in Fontana more connected to each other?

Custom stickers were designed as part of the pop-up workshop mapping activity



SUNSET ON SIERRA

The City of Fontana's 8th Annual Fontana Arts Festival and Sunset on Sierra was held in July 2016 and brought together artists, entertainers, businesses, and residents to create a street festival. The Project Team hosted a booth at the festival to provide information to the public about the Plan and to request feedback regarding improvements that could be implemented. The booth was flanked by large maps of the City with the current trails emphasized. Residents placed stickers on different areas of the City map where they desired to see better connections or trail enhancements. Residents completed the survey focused on preferences for better connectivity within the City and to adjacent cities. Guests were given the opportunity to spin a prize wheel to receive project promotional items or a "mystery prize." All visitors to the booth were given a project factsheet and a project "business card" with links to the online survey and social media addresses.

LET'S MOVE

The City of Fontana's Let's Move on the Trail event was held in October 2016 adjacent to the Pacific Electric Trail. The event featured several components including a Bike & Family Walk/Run event along the Pacific Electric Trail, Fontana Police Department Open House, John B. Roberts Fire Station #71 Open House, Healthy Fontana Pets Expo, and the Health, Safety & Fitness Expo along the Pacific Electric Trail. The Project Team hosted a display booth at the expo that featured activities to engage residents (over 100 visitors) and to solicit input on the Plan. Participants completed the survey on preferences and needs for trails and paths in the City. Participants also had the opportunity to provide input through an interactive mapping activity. Following participation in engagement activities, guests were provided the opportunity to spin a prize wheel to receive project promotional items.



HALLOWEEN MONSTER BASH

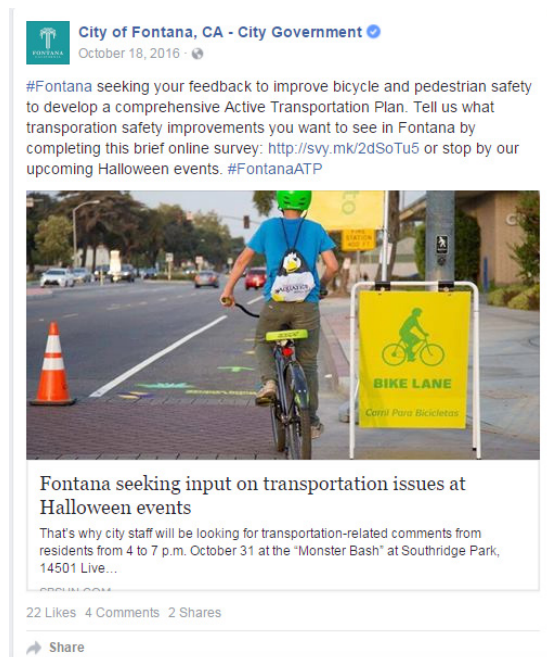
The City of Fontana's Halloween Monster Bash was one of two events held Halloween 2016. The event included a variety of "spooky" booths and activities such as games, pumpkin decorating contest, costume contest and several food vendors. Families visited the project booth and participated in the mapping activity and survey.

HALLOWEEN SPOOKTACULAR

The City of Fontana's Halloween Spooktacular was the second event held on Halloween 2016. The event featured several different food and craft vendors, and various booths for children to trick-or-treat. The Project Team hosted a display booth, which featured the survey to engage residents (over 150 visitors) and to solicit input on the Plan. The booth had a display board that showcased different aspects of an active transportation plan and residents had the opportunity to provide comments. Another map gave residents the opportunity to place stickers on different areas in the City where they would like to see a better connection or improvements. Residents were also given the project's "business card" that had a link to the online survey. Following participation in the hard copy survey by parents or caregivers, children were given candy as part of the "trick-or-treat" theme.

Project Website and Social Media Presence

The project website (www.fontana.org/fontanaATP) was an important tool for sharing information about the Fontana Active Transportation Plan and providing a consistent source for project updates to the general public. The project team spread word about the Plan and community outreach events through other social media outlets including Facebook and Twitter.



Snapshot of the Fontana Active Transportation Plan project website (top) and snapshot of a Facebook post feature the project hashtag #fontanaATP (bottom)



Online & Print Survey

The Project Team developed an eight-question survey, available in Spanish and English, seeking community input for the Plan. It was distributed online via the project's website and social media platforms. Printed surveys were distributed at stakeholder interviews and public meetings. Fontana residents submitted 236 surveys.

The survey revealed several trends regarding bicycling and walking activity, conditions, and preferences in Fontana. The majority of respondents felt the Fontana ATP would provide the community with opportunities for physical activity (55%) while reducing traffic congestion (48%). Survey participants expressed the need for safe, dedicated pedestrian and bicycle infrastructure in order

to switch from driving alone as their primary form of commuting (currently 78%) to walking or biking. 39% of survey respondents indicated they were “very likely” to use active transportation if the appropriate infrastructure was provided. This indicates that over 1/3 of the population of Fontana that responded to the survey is interested and willing to use active transportation (in some capacity) in place of their normal form of transportation.

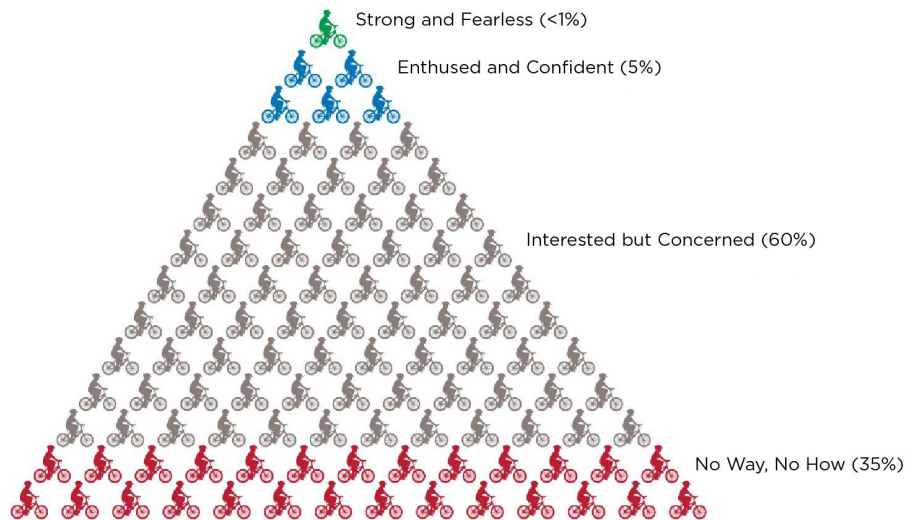
The survey responses are summarized in Appendix B.



Types of Bicyclists

This plan seeks to address the needs of all current and potential bicycle riders, and therefore it is important to understand the needs and preferences of all types of bicycle riders. Bicyclist's needs and preferences vary between skill levels and their trip types. The propensity to bicycle varies from person to person, providing insight into potential increases in bicycling rates. Generally, bicycling propensity levels can be classified into four categories, displayed in Figure 4.1.

Figure 4.1 Types of Bicyclists



Strong and Fearless (approximately 1% of population) - This group is characterized by bicyclists who will typically ride anywhere regardless of roadway conditions or weather. These bicyclists can ride faster than other user types, prefer direct routes, and will typically choose roadway connections, even if shared with vehicles, over separated bicycle facilities such as shared-use paths.

Enthusied and Confident (5-10% of population) - This group encompasses bicyclists who are fairly comfortable riding on all types of bikeways but usually choose low traffic streets or multi-use paths when available. These bicyclists may deviate from a more direct route in favor of a preferred facility type. This group includes all kinds of bicyclists such as commuters, recreationalists, racers, and utilitarian bicyclists.

Interested but Concerned (approximately 60% of population) - This group comprises the majority of the cycling population and represents bicyclists who typically only ride a bicycle on low-traffic streets or multi-use trails under favorable weather conditions. These bicyclists perceive significant barriers to their increased use of cycling, specifically fast-moving vehicles and other safety issues. These people may become “Enthusied & Confident” with encouragement, education, and experience.

No Way, No How (approximately 30% of population) - Persons in this category are not bicyclists, and perceive severe safety issues with riding in traffic. Some people in this group may eventually become more regular cyclists with time and education. However, a significant portion of these people will not ride a bicycle under any circumstances.

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

Commuters - adults who regularly bicycle between their residences and work.

Enthusiasts - skilled adults.

Casual / Family / Elderly riders - adults who use bicycles for running errands, recreation, tourism, exercise, or as a family activity.

School Children - children who bicycle to school.

An effective bicycle network accommodates bicycle riders of all abilities. Casual bicycle riders generally prefer roadways with low traffic volumes and low speeds. They also prefer paths that are physically separated from roadways. Because experienced bicycle riders typically ride to destinations or to achieve a goal, they generally choose the most direct route, which may include arterial roadways with or without bike lanes. Bicycle riders of all abilities and purposes ride every day in Fontana from commuting to school/work to recreational riding.

Types of Pedestrians

People walk for various reasons and pedestrian needs often vary, depending on trip purpose. For instance, a commuter may desire a well-connected direct route with efficient signal timing, while a recreational pedestrian may place greater importance on surrounding aesthetics. However, all pedestrians share some common needs including safety, connectivity, and accessibility (including accessibility for persons with disabilities).

Certain populations are more likely to depend on pedestrian infrastructure. Children travelling to and from school often have higher walking rates, though this trend has declined in recent years as more parents drive their children to school. College students also typically have higher walking rates since many students do not own vehicles. Mobility-impaired pedestrians may lack motorized transportation options and may consequently depend on transit and pedestrian-focused aspects of the transportation network. Older adults may also lack access to vehicles or the ability to drive, thereby relying heavily on transit and pedestrian mobility options.

It is important to remember that all trips start and end with walking even a trip that uses a vehicle. So regardless if someone identifies themselves as a pedestrian, they are a person that walks.

In general, we utilize the word “pedestrian” to encompass people who travel via means other than a bicycle. This can include walking, rolling (skateboards, scooters, wheelchairs), or using mobility aides such as canes, walkers, and crutches.

PEDESTRIANS WITH DISABILITIES

8% of Fontana residents are considered legally disabled. To adequately plan for pedestrians with disabilities, a variety of limitations must be considered. It is important to also be aware of how planning for people with one disability may affect users with other impairments. For instance, curb cuts and smooth transitions to the street assist people in wheelchairs, but may present challenges for sight-impaired pedestrians attempting to locate the sidewalk/street transition point. The sections below describe the various disabilities that should be taken into account.

People with mobility impairments range from those who use wheelchairs, crutches, canes, and prosthetic devices, to those who use no such devices but face constraints when walking longer distances, on non-level surfaces, or on steep grades. People with sensory impairments include those who are partially or fully blind or deaf. They also include persons with poor perceptions of touch or balance, as well as those who are color-blind.

Hearing-impaired pedestrians rely on visual information, which is often adequate. Their primary mobility difficulties include the inability to hear approaching vehicles and detect the time of their arrival. This is especially an issue in locations with limited sight distances, such as curved street segments, or overgrown vegetation impeding sight lines.



CHILDREN AND OLDER ADULTS

Children and many older adults do not fall under specific categories for disabilities, but must be considered when developing the pedestrian system to be a network for Fontana residents of all ages. Fontana is composed of a relatively young population, with a median age of 29 years old, and 31% percent of the population under the age of eighteen.⁷



7 - American Community Survey 2015 5-yr Estimate
table S1810

BICYCLE AND PEDESTRIAN SUITABILITY INDEX (BPSI)

The consultant team conducted a Bicycle Pedestrian Suitability Index (BPSI) as part of the Active Transportation Plan. The BPSI is an objective, data-driven process that identifies areas with high demand to help inform and prioritize potential bicycle and pedestrian projects. Counting the number of people walking and biking on every street in Fontana is cost-prohibitive. Instead, we can estimate the cumulative demand representative of where people live, work, play, learn, shop, and access transit. The BPSI measures potential demand (bicycle and pedestrian activity) by quantifying factors that generate bicycle and pedestrian movement. Results of the BPSI composite demand model are used to characterize the geographic distribution of bicycle and pedestrian demand within the City of Fontana.

BPSI provides the following benefits:

- Quantify factors that impact pedestrian and bicycle activity and objectively identify areas of expected pedestrian and bicycle activity
- Identify network gaps that have the greatest impact on network connectivity to help identify potential improvements that have the greatest benefits for pedestrians and bicyclists
- Provide a data-driven foundation for a project list that is informed by the spatial distribution of relevant demographics and demand factors
- Guide community leaders and the public on one aspect of the project prioritization process

Data inputs for six categories (live, work, play, learn, shop, access to transit) were incorporated into the demand analysis. Table 4.2 displays each category, inputs for each category, its source, and notes about what is included in the data.



Table 4.2 Source of Demand Model Inputs

CATEGORY	MODEL INPUT	SOURCE	NOTES
Live	Total Population	2015 American Community Survey (US Census)	Summarized by block group; population density was used as model input
Work	Total Employment	2015 American Community Survey (obtained through the Longitudinal Employer-Household Dynamics)	LEHD point data specified the number of jobs and locations of jobs
Play	Parks and Trails	City of Fontana, SBCTA	Includes municipal parks, open space, recreation areas, and public recreation centers like public pools and gyms
	Points of Interest	City of Fontana, SBCTA	Commercial destinations are approximated by service sector jobs (Arts, Entertainment, and Recreation; Accommodation and Food Services; Other Services [except Public Administration])
Learn	K-12 Schools	City of Fontana, SBCTA	Includes elementary, middle, and high schools in the study area
	Colleges	City of Fontana, SBCTA	Includes colleges and universities in the study area
Shop	Commercial destinations	2015 American Community Survey (obtained through the Longitudinal Employer-Household Dynamics)	Commercial destinations are approximated by service sector jobs (Arts, Entertainment, and Recreation; Accommodation and Food Services; Other Services [except Public Administration])
Transit	Bus Stops, Train Stations, Transit Centers	Omnitrans, Metrolink	Densities of bus stops, train stations, and transit center locations. Boarding/alighting data for each transit stop.

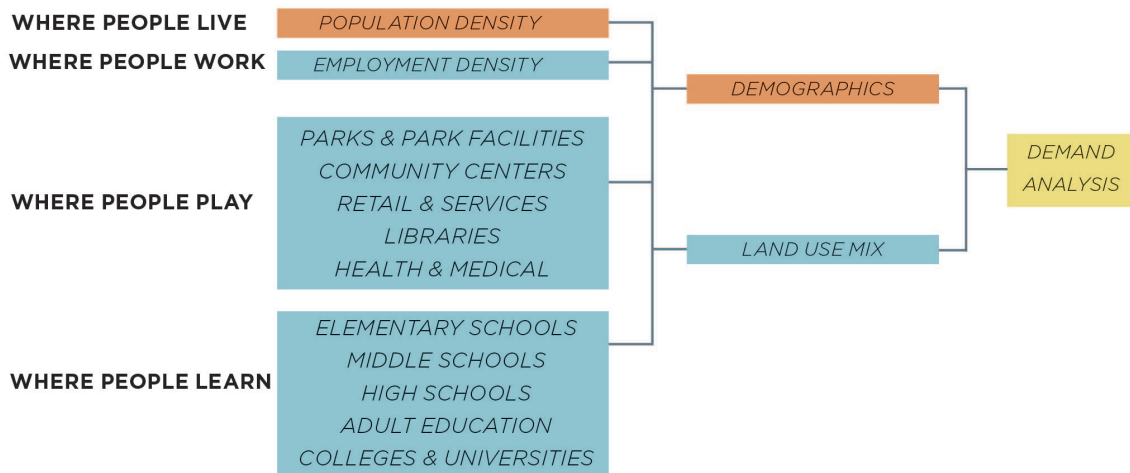
METHODOLOGY

The demand model relies on spatial consistency to generate logical distance and density patterns. An evenly spaced point grid was created that closely aligns with the street network. The rationale for using a point grid is that it allows for an evenly spaced sample. Data for population and employment are first analyzed individually at the census block level, which is the most geographically detailed level at which data is available. Then, this data is tied to the point grid data. All other data used for this analysis is tied directly to the point grid data. The resulting analyses shows where people are likely to walk and bike based on a quarter-mile radius within the demand model inputs. Although locations where people live, work, play, etc. were overlaid to determine demand, the results approximate pedestrian and bicyclist activity along a street network based on the locations of the points in the grid rather than the locations of the inputs.

The demand model's scoring method is a function of density and proximity. Areas that have more features and features that are closer together will have higher scores. Low feature density areas and areas where features are further apart will receive lower scores. Composite demand is calculated by summing all six categories: Live, Work, Play, Learn, Shop, and Access to Transit. All categories are given the same weight in the composite scoring and map.

The purpose of the demand analysis is to identify areas with the greatest relative bicycle and pedestrian activity along the street network and use the demand outputs to inform project recommendations. The following figures illustrate and describe how the demand model categories support a holistic profile of high-demand areas in the City of Fontana.

DEMAND MODEL APPROACH

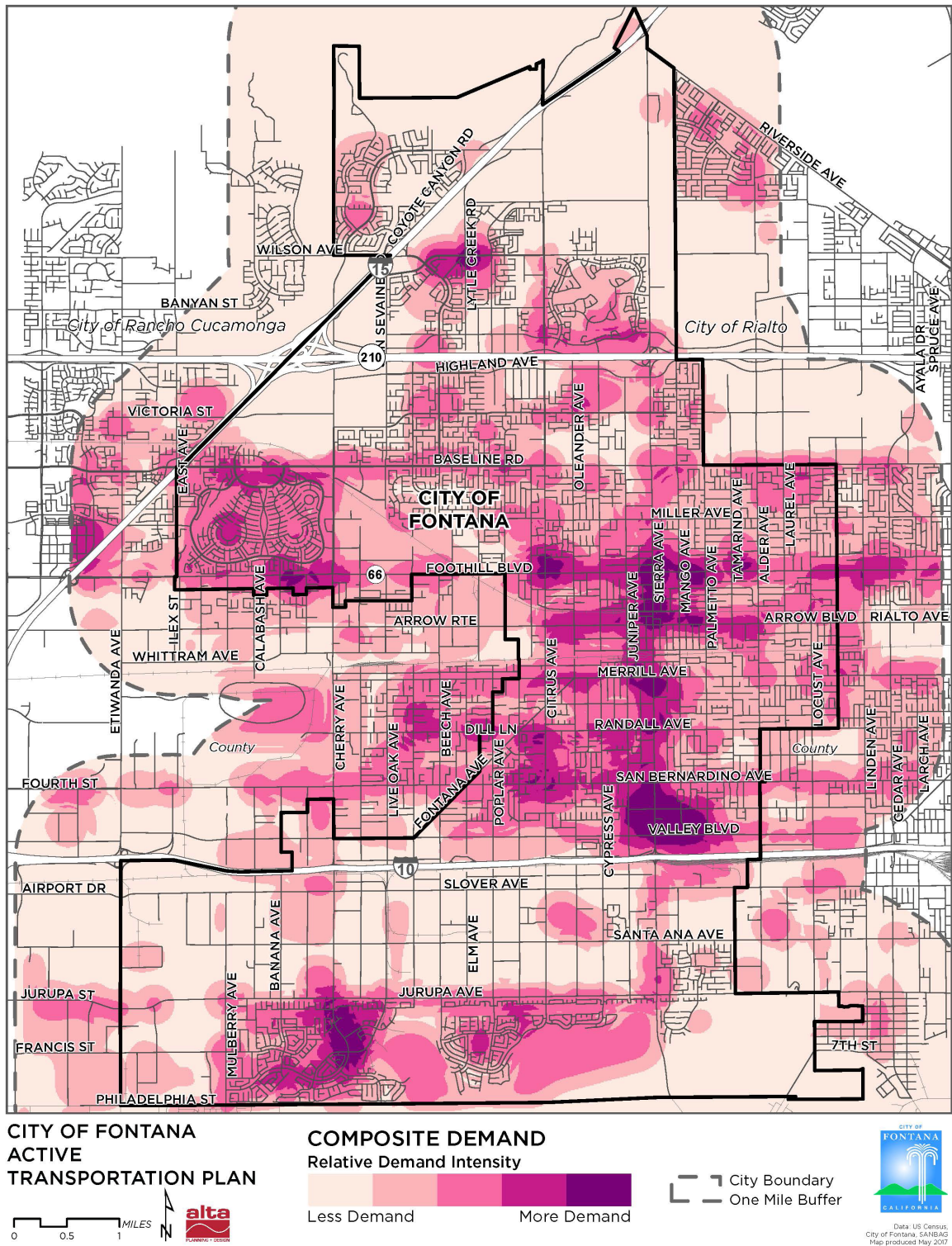


COMPOSITE DEMAND ANALYSIS

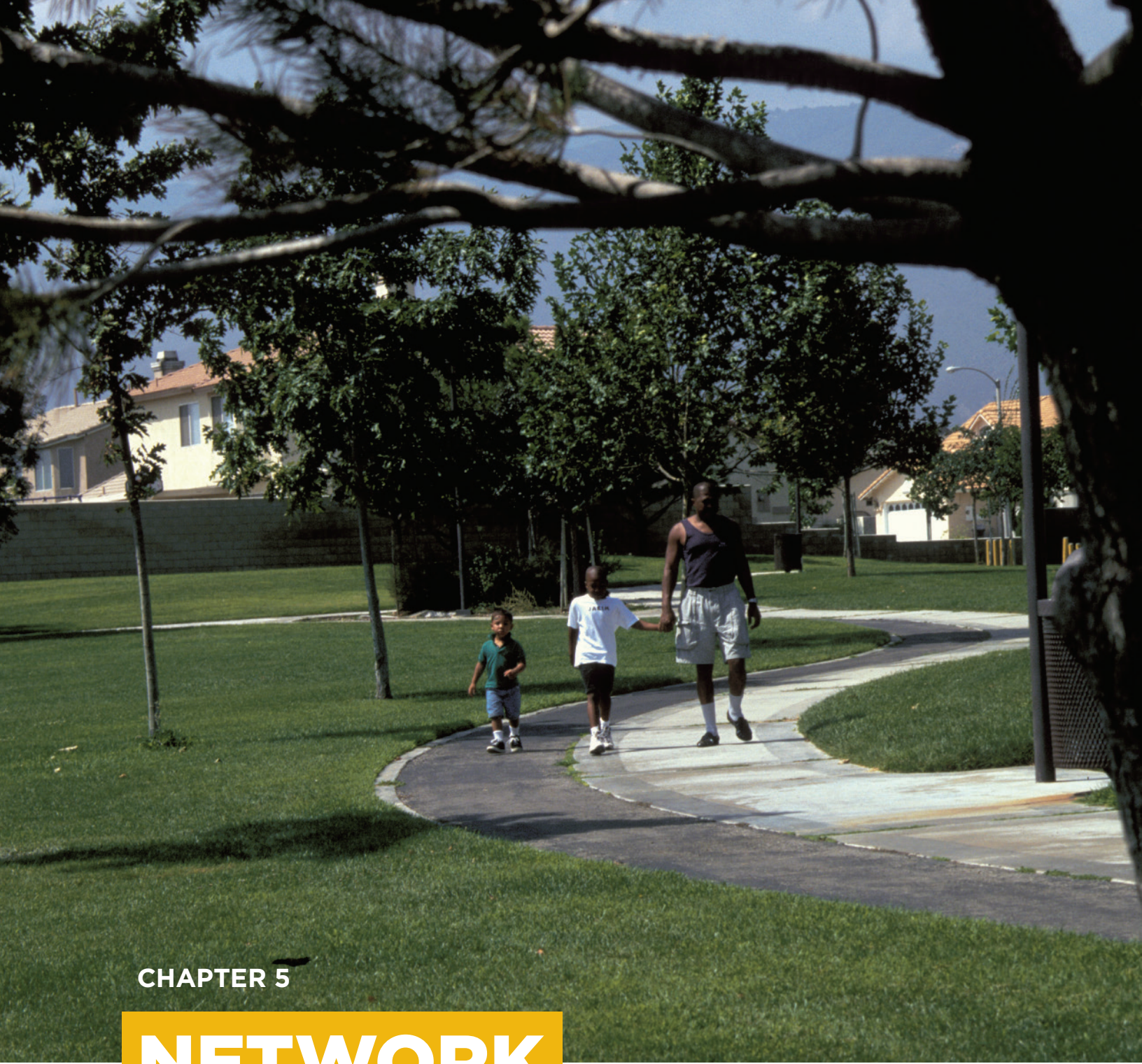
After independently processing the features, (Maps by individual category for each factor can be found in Appendix D) the composite model is created and grouped into five demand classes using breaks in the data values. Areas that yielded highest demand include the confluence of high employment, high bus ridership, retail land uses, Downtown, and multi-family housing. Areas largely dominated by single-family homes, in spite of representing potential trip generators, represent the lowest demand areas. Moderate demand is seen between high demand areas, representing movement between destinations in these areas. The map on the following page (Figure 4.2) displays the demand analysis for the Live, Work, Play, and Learn factors. The areas shaded more deeply in purple represent areas with the highest potential for supporting active transportation relative to other colors on the map. This composite map reveals the pedestrian and bicyclist activity is expected to be highest in Central and Downtown Fontana. Moderate to high pedestrian and bicyclist demand is expected in Southridge and Heritage Village. There is expected to be low demand in and around the Jurupa Industrial Park.



Figure 4.2 Composite Demand Map







CHAPTER 5

NETWORK RECOMMENDATIONS

This chapter details the infrastructure improvements recommended to create a safe, accessible, and connected pedestrian and bicycle network in Fontana. A diverse mix of facilities are recommended to create comprehensive network, including sidewalks, intersection improvements, on-road bicycle facilities, and shared-use paths.

The recommendations directly reflect the information collected and presented in the Existing Conditions and Needs Analysis chapters related to existing planning efforts, safety, public input, best practices, demand, equity, and the City of Fontana’s aspirations for becoming a premiere bike-friendly community. The quantified benefits that might occur as the result of implementing the recommended projects in this plan are detailed in Appendix G.

The analysis estimates the number of bicycle and pedestrian trips that would directly result from the implementation of the project list, approximates the corresponding reduction in vehicle trips and vehicle miles travelled (VMT), and assesses the potential health-, environmental-, and transportation-related benefits.

INFRASTRUCTURE RECOMMENDATIONS

Streets are an integral part of everyday life and public space. The term “Complete Streets” refers to designing streets for people of all ages and abilities using various travel modes such as walking, bicycling, transit, and driving. This chapter is organized into bicycle network recommendations and pedestrian recommendations.

A variety of on- and off-street bicycle facilities are recommended to accommodate the following:

- The range of abilities and comfort levels of bicyclists;
- The range of conditions for bicycling on different roadway environments; and
- Local preferences identified through the public input process.

The recommended bicycle network is made up of the following core types of facilities:

- Shared-Use Paths
- Bicycle Lanes and Buffered Bicycle Lanes
- Bike Routes and Neighborhood Greenways
- Road Rebalancing to accommodate bicycle facilities and enhance roadway safety

Similar to the bicycle network, the pedestrian network should accommodate people with a variety of needs, abilities, and possible impairments. The recommendations in this chapter will help improve pedestrian access and comfort and fall into three categories:

- Sidewalks - The most fundamental element of the pedestrian network
- Crossings and intersections particularly in school zones including midblock treatments.
- Transit Access



Bicycle Facility Types

The following bikeway recommendations include a number of treatments which are described below in greater detail.

SHARED-USE PATHS (CLASS I)

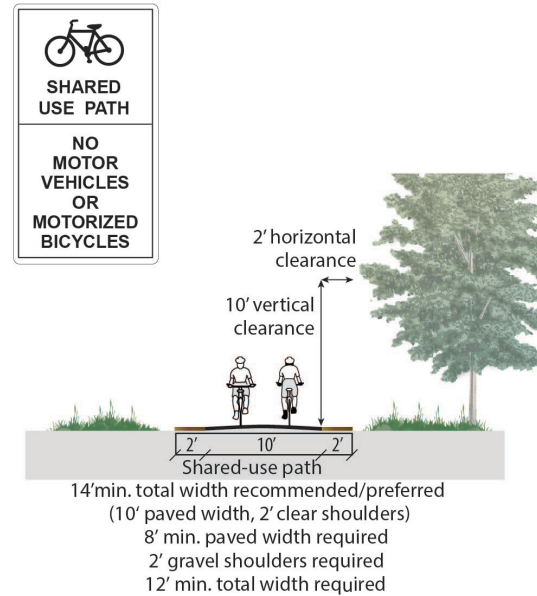
A shared-use path allows for two-way, off-street bicycle use and also may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. In Fontana, the Pacific Electric Trail is a high-quality Citywide example of a Class I facility. Other opportunities for shared-use paths can be found along rail corridors, storm-water channels, utility corridors, and in parks where there are few conflicts with motorized vehicles. Path facilities can also include amenities such as lighting, signage, and fencing (where appropriate). Key features of shared-use paths include:

- Frequent access points from the local road network
- Directional signs to direct users to and from the path
- Wayfinding signs to direct users to destinations and better understand time/distance
- A limited number of at-grade crossings with streets or driveways
- Terminating the path where it is easily accessible to and from the street system
- Separate pathways for pedestrians and bicyclists when heavy use is expected

CLASS I

Shared-Use Path

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



Caltrans Class I shared-use path design guidelines



Shared-use path makes for more relaxed cycling for all ages and abilities

The Southern California Edison-owned right-of-way parcels are an opportunity to expand Fontana's Class I facilities as shown in the proposed plan below.



Proposed Class I facility along SoCal Edison right-of-way crossing Parkside Way

BICYCLE LANES (CLASS II)

A bicycle lane is a portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential and exclusive use of bicyclists. Bicycle lanes are always located on both sides of the road (except one way streets), and allow bicyclists to ride in the same direction as adjacent motor vehicle traffic. Colored pavement (typically green) within a bicycle lane can be used to increase the visibility of the facility, identifies potential areas of conflict, and reinforces priority to bicyclists in conflict areas and in areas with pressure for illegal parking.



Colored pavement bicycle lane, San Francisco, CA

BUFFERED BICYCLE LANES (CLASS II)

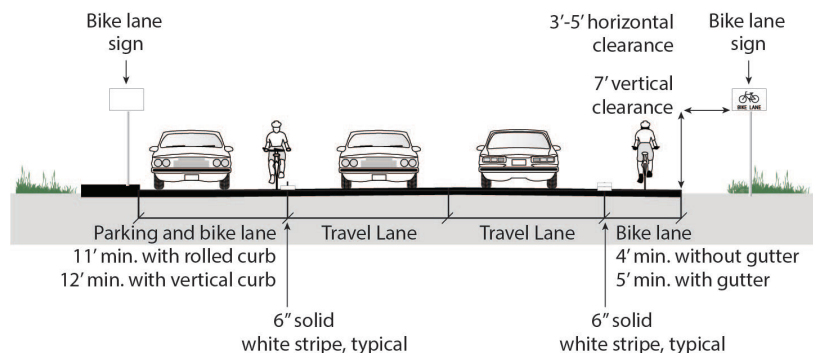
Bicycle lanes can be enhanced by adding buffer striping. Buffered bike lanes are bicycle lanes paired with a designated buffer space, separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Buffered bike lanes follow general guidance for buffered preferential vehicle lanes as per CAMUTCD guidelines. Buffered bike lanes are designed to increase the space between the bike lane and the travel lane and/or parked cars, with a goal of providing more comfortable conditions for bicyclists. This treatment is appropriate for bike lanes on roadways with high motor vehicle traffic volumes and speed, adjacent to parking lanes, or a high volume of truck or oversized vehicle traffic. Buffered Bike Lanes also further support and reinforce the California Vehicle Code 9C.04 “Three Foot Passing Law” through design. Buffers can be used to separate from the travel lane or in high turnover parking locations can separate from door zones. The existing Class II facility on Duncan Canyon Road could be improved to a buffered class II facility to increase bicycle-vehicle separation and provide a safer environment for cyclists.

Caltrans Class II bike lane design guidelines

CLASS II

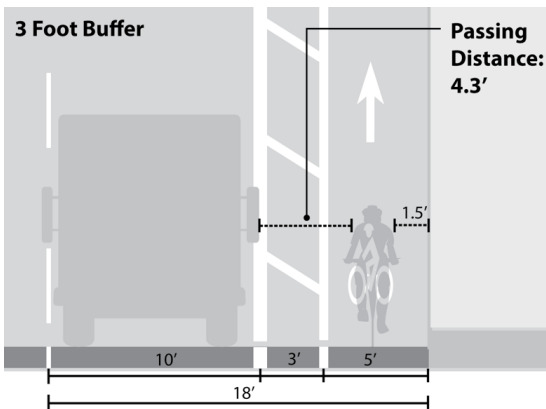
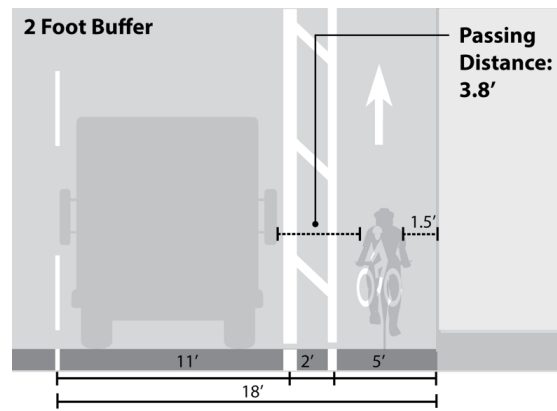
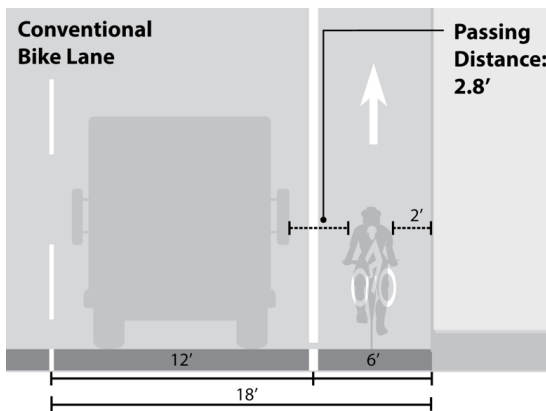
Bike Lane

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





Proposed buffered bike lane (class II) facility on Duncan Canyon Road



Passing distances widths for various buffered bike lane (class II) facilities. Through design we can help encourage motorists to pass by 3 feet, which is a new law passed in California in 2014 (CVC 21760).

BIKE ROUTES (CLASS III)

Bike routes generally employ bikeway signage, and may also use pavement markings, to guide bicyclists to popular destinations on low-volume, bike-friendly roadways. Bike routes serve as an alternative to roads that are less comfortable for cycling due to higher motor vehicle volumes and/or speeds. They were chosen as part of the network because of the importance of overall system connectivity and connectivity to destinations such as parks, neighborhoods, and schools. A shared lane marking (SLM) can be used to encourage bicycle travel and proper positioning within a shared travel lane. Placed in a linear pattern along a corridor (typically every 100-250 feet), shared lane markings make motorists more aware of the potential presence of cyclists; direct cyclists to ride in the proper direction; and remind cyclists to ride further from parked cars to avoid “dooring” collisions. In constrained conditions, the SLMs are placed in the middle of the lane. On a wide outside travel lane, the SLMs can be used to promote bicycle travel to the right of motor vehicles. In all conditions, SLMs should be placed outside of the door zone of parked cars and used on roadways with speed limits of 35 mph or less (below 30 mph preferred). SLM can be used in conjunction with the regulatory sign R4-11 “Bikes May Use Full Lane”.

In addition, many communities are utilizing “Bike Routes” in conjunction with traffic calming and branded wayfinding signage to create “Bicycle Boulevards” or “Neighborhood Greenways” to encourage and promote biking within and through neighborhoods to nearby destinations such as employment centers, schools, retail centers, and transit station.

NEIGHBORHOOD GREENWAYS (CLASS III)

Neighborhood greenways, are generally low-volume, low-speed neighborhood streets around core areas of the City modified to enhance bicyclist comfort and safety by using treatments such as signage, pavement markings, traffic calming and/or traffic reduction. Pedestrian and bicycle cut-throughs can also be integrated into the neighborhood greenway network to allow for continuous bike travel off of major corridors. These treatments allow through bicycle movements while discouraging motorized through-traffic.

Jurisdictions throughout the country use a wide variety of strategies to determine where specific treatments are applied. While no federal guidelines exist, several best practices have emerged. At a minimum, neighborhood greenways should include distinctive pavement markings and wayfinding signs.

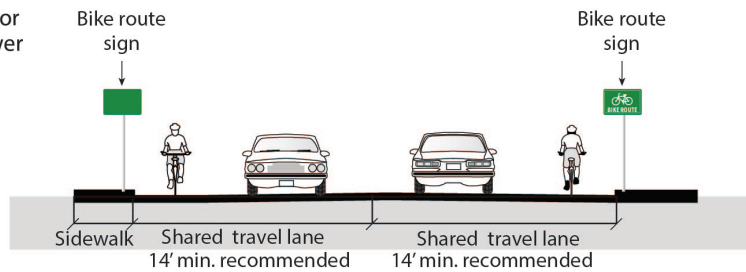
Traffic conditions on bicycle boulevards should be monitored to provide guidance on when and where treatments should be implemented. When motor vehicle speeds and volumes or bicyclist delay exceed the preferred limits, additional treatments should be considered.



Examples of neighborhood greenways, Berkeley, CA

CLASS III Bike Route

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



Caltrans Class III bike route design guidelines

SEPARATED BIKEWAYS (CLASS IV)

A separated bikeway or cycle track is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A separated bikeway is physically separated from motor traffic and distinct from the sidewalk. Separated bikeways have different forms but all share common elements—they provide space that is intended to be exclusively or primarily used by bicycles, and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed, separated bikeways are located to the curb-side of the parking (in contrast to bike lanes). Separated bikeways may be one-way or two-way, and may be at street level, sidewalk level or at an intermediate level. If at sidewalk level, a curb or median separates them from motor traffic, while different pavement color/texture separates the separated bikeway from the sidewalk. If at street level, they can be separated from motor traffic by raised medians, on-street parking or bollards.



A separated bikeway provides a physical separation from motor vehicles

By separating bicyclists from motor traffic, separated bikeways can offer a higher level of comfort than bike lanes and are attractive to a wider spectrum of the public. Intersections and approaches must be carefully designed to promote safety and facilitate left-turns from the right side of the street.

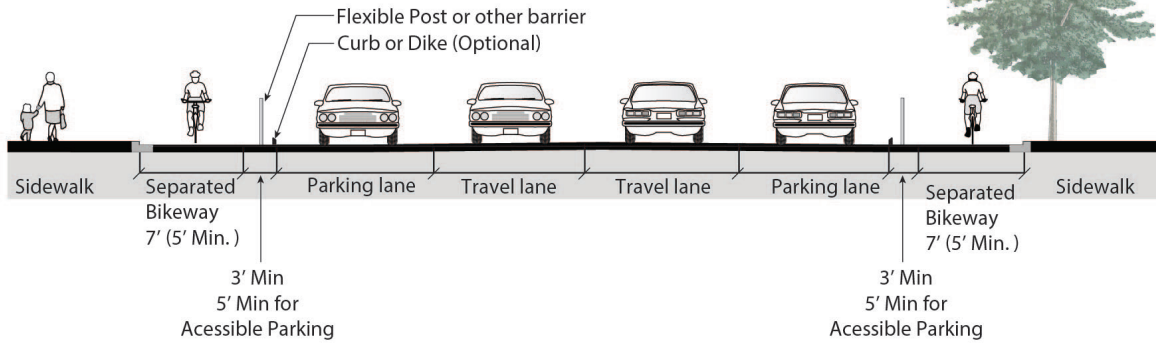
In December 2015, Caltrans published a design information bulletin (DIB 89) providing design guidance for separated bikeways. Incorporation into the Highway Design Manual is ongoing. FHWA also provides guidance on Separated Bikeways. However, they call them “Separated Bike Lanes”. In California, the word “Bikeways” was chosen as to not create confusion with the regulatory language in the California Vehicle Code referring to the use of “Bike Lanes”.



CLASS IV

Separated Bikeway

Provides a separated path for one-way bicycle travel adjacent to a street or highway. Bicycles are separated from motor vehicle traffic by a raised curb, bollards, parking with a painted buffer, or other vertical physical barrier.

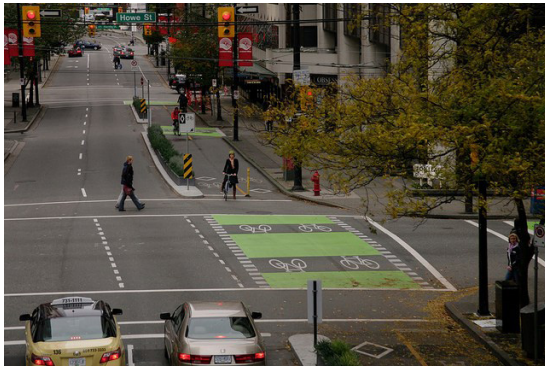


Caltrans Class IV separated bikeway design adjacent to on-street parking



INTERSECTION TREATMENTS

There are a variety of intersection treatments that can be applied to make a safer and more comfortable crossing environment for bicyclists throughout the City of Fontana. First, bicycle lanes should be extended up to and potentially through an intersection. At constrained intersections, green paint can be used to identify conflict areas where right-turning traffic needs to merge through a bike lane. As seen in the example below, green paint can also be used to delineate the preferred path of travel for the bicyclist through an intersection.



Bicycle-friendly intersection treatments including paint, bicycle signals, and bicycle boxes

WAYFINDING

Successful wayfinding orients people to their surroundings and informs them on how to best navigate to their destination along preferred bicycle facilities. Apart from serving as a guide to destinations, wayfinding increases users' comfort and accessibility to the bike facility network. It can offer a sense of safety – familiarizing users with the network and overcoming “barriers to entry” for people who are not frequent bicyclists. Basic elements to include in wayfinding signs include destinations, distances, and “riding time”. Often the inclusion of riding times dispels common overestimations of time and distance thus encouraging walking or cycling instead of defaulting to the car. Signs should be placed at decision points (where the navigator must choose whether to continue their route or change direction) along bike routes and bicycle boulevards or neighborhood greenways. Refer to the supplemental Design Toolbox document for details on wayfinding sign types, sign placement, and maintenance.

BICYCLE PARKING

Bicycle parking can be categorized into short-term and long-term parking. Bicycle racks are the preferred device for short-term bike parking. These racks serve people who leave their bicycles for relatively short periods of time - typically for shopping, errands, eating or recreation. Bicycle racks provide a high level of convenience and moderate level of security. Bicycle racks should be designed in such a way to provide two points of support to the bicycle frame. These two points of support enhance the safety and well-being of the bicycle from bent tires and rims. The location of bicycle racks is an important. They should be installed in close proximity to the front door. This allows for convenience of the bicyclists in door to door travel and also identifying where the bike racks are located. It also allows people that drive to the location to know that they can also bicycle and the destination has bike racks. The location to the front door also enhances safety as people are coming and going from the establishment rather than on the side or back of the building where the public is not present. Bicycle racks can be customized for individual businesses or as part of an area-wide or city-wide marketing biking campaign. For instance, the City of Carlsbad developed a “Bike the Village” custom bike rack for its downtown village to encourage people to bike to their village businesses.

Long-term bike parking includes bike lockers and bike rooms and serve people who intend to leave their bicycles for longer periods of time. Long-term parking is typically found in public transit stations and commercial retail/office buildings. These facilities provide a high level of security for longer periods of time but are less convenient than bicycle racks for quick errands.



Pedestrian Facility Types

Most trips begin and end as walking trips even when a car, bicycle, bus, or train is also involved. A high-quality pedestrian network will support all aspects of the transportation system and enhance mobility in Fontana. Every street in the City should be designed for pedestrians. Similar to bicyclists, pedestrians have a variety of characteristics and the transportation network should accommodate a variety of needs, abilities, and possible impairments. Age is one major factor that affects pedestrians' physical characteristics, walking speed, and environmental perception. Children have low eye height and walk at slower speeds than adults. They also perceive the environment differently at various stages of their cognitive development. Older adults walk more slowly and may require assistive devices for walking stability, sight, and hearing.

The following section provides recommendations to improve pedestrian access and comfort based on the major barriers identified by the community and through existing conditions analysis. Pedestrian facilities fall under two main designations, linear facilities (sidewalks and paths) and intersections.

Sidewalks are the most fundamental element of the pedestrian network and should provide the following tenets:

- Accessibility for all users
- Continuity
- Street lighting
- Street tree shade
- Separation from traffic by landscaped park strips, parking lanes, and/or drainage features
- Social space for standing, sitting, and visiting

Pedestrian-friendly intersections will include:

- Areas for pedestrians to congregate while waiting to cross the street
- Appropriate accessibility to (and maintenance of) all corner pedestrian features
- Corner and intersection design for pedestrian safety and comfort
- ADA compliance with push buttons, ramp design
- Minimization of pedestrian crossing distances
- Lighting that promotes visibility, legibility, and accessibility
- Transit stops where appropriate
- Optional: Countdown Pedestrian Signal Heads, Pedestrian Refuge Islands



SIDEWALKS

Sidewalks are the most fundamental element of the walking network, as they provide an area for pedestrian travel separated from vehicle traffic. A variety of considerations are important in sidewalk design. Providing adequate and accessible facilities can lead to increased numbers of people walking, improved safety, and the creation of social space. Sidewalks should be more than areas to travel; they should provide places for people to interact. There should be places for standing, visiting, and sitting. Sidewalks should contribute to the character of neighborhoods and business districts, strengthen their identity, and be an area where adults and children can safely participate in public life.

In downtown and commercial areas, such as along Sierra Avenue and Arrow Boulevard, they should provide for higher volumes (increased sidewalk width) and engagement at varying activity levels. In residential areas, they should be designed for comfort, recreation and socialization. Generally, Fontana has a comprehensive walking network but there are local streets where walking facilities are not available. The identification of gaps in the City's sidewalk network is a fine-grained exercise and should be filled in as redevelopment allows.



Well-designed crossing across S. Heritage Circle (top), Pedestrian dirt path adjacent to sidewalk along Arrow Blvd. (bottom)

Major design features and components of sidewalks can include the following treatments:

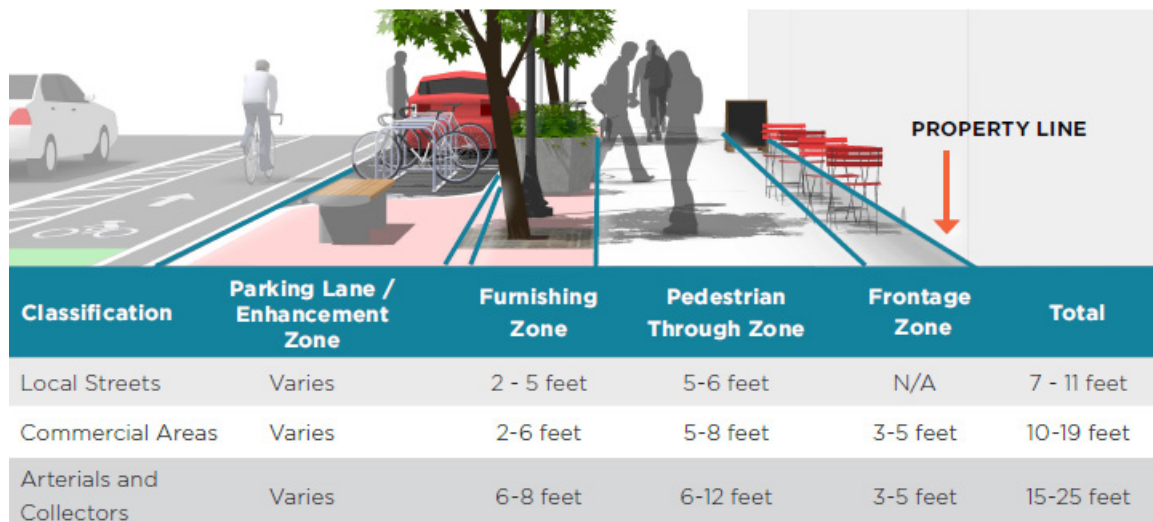
Sidewalk Width

The width and design of sidewalks will vary depending on street context, functional classification, and pedestrian demand. The following images shows the preferred widths of each sidewalk zone according to general street type. Standardizing sidewalk guidelines for different areas of the City, dependent on the above listed factors, ensures a minimum level of quality for all sidewalks.

It is important to provide adequate width along a sidewalk corridor. Two people should be able to walk side-by-side and pass a third comfortably. In areas of high demand, such as around schools, sidewalks should contain adequate width to accommodate the high volumes and different walking speeds of pedestrians. The Americans with Disabilities Act requires a 4-foot clear width in the pedestrian zone plus 5-foot passing areas every 200 feet as the minimum.

Sidewalk Obstructions

Obstructions to pedestrian travel in the sidewalk corridor typically include driveway ramps, curb ramps, sign posts, utility and signal cabinets and poles, mailboxes, fire hydrants and street furniture. Obstructions such as utility boxes, pull boxes and traffic signal cabinetry should be placed in the furnishing or utility zone between the sidewalk and the roadway to create a buffer for increased pedestrian comfort.



LANDSCAPING AND STREET FURNITURE

Landscaping, street trees, and street furniture can have a profound effect on improving the pedestrian feel of a corridor. The City should include the following in appropriate streetscape designs:

- Landscaping and street trees
- Planters
- Benches, tables, and chairs

Landscaping and tree maintenance enhances the pedestrian environment by creating a visual buffer from the roadway. Trees also offer welcome shade on warmer days.

Adequate space should be provided to grow a tree. It is important for the appropriate tree to be selected for your climate and space. Trees that have more evasive root systems can create sidewalk maintenance issues. Some trees can also create challenges with their sap, leaves, berries, or cones. Consult a Landscape Architect to help identify the right tree for the right space. Also consider overhead utilities when selecting a tree.

Sidewalks can become inaccessible due to overgrown vegetation, so landscaping needs to be designed and maintained to ensure compatibility with the use of pedestrian facilities. Curbs around landscaped areas should be flush with the adjacent sidewalk to prevent a trip hazard.

Green infrastructure and landscaping is also a cost-effective, resilient approach to managing wet weather impacts that provides many community benefits.

While single-purpose gray stormwater infrastructure—conventional piped drainage and water treatment systems—is designed to move urban stormwater away from the built environment, green infrastructure reduces and treats stormwater at its source while delivering environmental, social, and economic benefits. Green infrastructure uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments. At the City or county scale, green infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the neighborhood or site scale, stormwater management systems that mimic nature soak up and store water.

LIGHTING

Pedestrian scale lighting improves visibility for both pedestrians and motorists - particularly at intersections and in areas where personal safety is a concern.

Pedestrian scale lighting is characterized by short light poles (around 15 feet high), close spacing, low levels of illumination (except at crossings), and the use of LED lamps to reduce glare, while maintaining a long service life and high energy efficiency. Lighting should be oriented downward to illuminate the pedestrian environment.

Both street and pedestrian lighting levels should be considered for the same street corridor, especially in areas with tree canopy. "Dark Sky" lighting could be pursued to reduce light pollution. To minimize the effects of light pollution, its recommended that lighting only be on when needed (motion-activated lighting) and only illuminate areas of high activity (such as parking lots). Pedestrian scale lighting should be used in areas of high pedestrian activity and along pedestrian corridors connecting destinations, including transit hubs and access points, and multi-family neighborhoods.

Pedestrian scale lighting fixtures should be consistent with surrounding architectural and streetscape design elements and can be used to incorporate local art, or other cultural or historical relevance, as seen on Sierra Avenue & Valencia Avenue (below).



TRANSIT STOP AMENITIES

6% of survey respondents use bus transit for their daily commutes to work or school. The City and Omnitrans could improve area transit stops by incorporating a variety of streetscape elements that can define the pedestrian realm, offer protection from moving vehicles, and enhance the walking experience. Pilot stations for streetscape improvements could be identified using ridership data to determine which Omnitrans bus stops have the highest daily boardings and alightings.

Public Info Kiosks and Signage at bus stops are an important element of good transit service. Signs serve as a source of information to patrons and operators regarding the location of the bus stop and are excellent marketing tools to promote transit use. Basic signs with route maps and applicable ADA information should be provided at all stops.

Lighting is important for safety and security. A brightly lit bus stop makes it easier for the bus driver to observe waiting passengers and allows motorists to see pedestrians around the bus stop.

Seating provides comfort and convenience at bus stops and are usually installed on the basis of existing or projected ridership figures. Seats may be installed by themselves or as part of a shelter. Riders of transit service often arrive early for buses, especially if the headways are 30 minutes or more so they do not miss a bus.

Shelters protect pedestrians from the sun, wind and rain; increase comfort for patrons waiting for rides; and may encourage more people to ride transit. Shelters can also serve as “public art” and many communities have become very creative with their bus shelters.



PARKLETS

A parklet is an outdoor space typically the size of an on-street parking space. These mini-parks are often designed for passive recreation and may include planters, benches, café tables and chairs. Additionally, parklets can be designed to include bike corrals, fitness equipment, chess boards and other activities. Because parklets may require the removal of an on-street parking space, outreach to adjacent property owners and businesses is recommended. There are several city-owned parcels in Downtown Fontana that could be transformed into urban parklets, notably city-owned surface parking lots along Sierra Avenue.

Parklets can enhance neighborhood vitality, especially in areas currently lacking public space or in locations where sidewalk space is constrained. The nature of a parklet will vary based on factors such as size, location, surrounding land uses and the duration of the installation. Parking availability should be considered when determining the overall benefit of parklet installation against parking loss. Because they are generally located adjacent to on-street parking, they do not impede motor vehicle or bicycle through travel.

Parklets can also be privately owned and a way for local businesses to expand in place, especially in downtowns. The City of Long Beach and Carlsbad in southern California both have programs to expand restaurant outdoor dining. These spaces also enhance the safety and vibrancy of the street by providing more “eyes” and activity on the street.



Parklet in Long Beach provides outside seating are (top), transit stop with seating, shelter, and lighting (bottom)

CROSSING AND INTERSECTIONS

Every intersection in Fontana should be designed for pedestrian safety and comfort, with pedestrian enhancements appropriate to traffic speed, traffic volume, pedestrian crossing distance, and other similar factors. This section describes the primary palette of options that should be considered for crossing and intersections improvements. As streets are repaved and reconstructed, pedestrian crossing ramps should be added.

ACCESSIBLE CURB RAMPS

Curb ramps are the design elements that allow all users to make the transition from the street to the sidewalk. There are a number of factors to be considered in the design and placement of curb ramps at corners. Properly designed curb ramps ensure that the sidewalk is accessible from the roadway. A sidewalk without a curb ramp can be useless to someone in a wheelchair, forcing them back to a driveway and out into the street for access. A perpendicular ramp is aligned so that the ramp is perpendicular to the centerline of the roadway. This design directs pedestrians to travel perpendicular to traffic when they enter the street and crosswalk. Although diagonal curb ramps might save money, they create potential safety and mobility problems for pedestrians, including reduced maneuverability and increased interaction with turning vehicles, particularly in areas with high traffic volumes. Perpendicular is the preferred option.

When reconstruction projects allow, additional improvements for accessible curb ramps should be considered as part of those projects.

CROSSWALKS

Crosswalks should be present everywhere that sidewalks and streets intersect, and may be marked or unmarked. Marked crosswalks encourages pedestrians to cross at designated locations and indicates to motorists that they must yield for pedestrians. Installing marked crosswalks alone will not necessarily make crossings safer, especially on multi-lane roadways. At mid-block locations, crosswalks can be marked where there is a demand for crossing and there are no nearby marked crosswalks. The heavily used intersection at Cherry Avenue and Jurupa Avenue, adjacent to Henry J. Kaiser High School, would be an excellent location for these kinds of improvements.



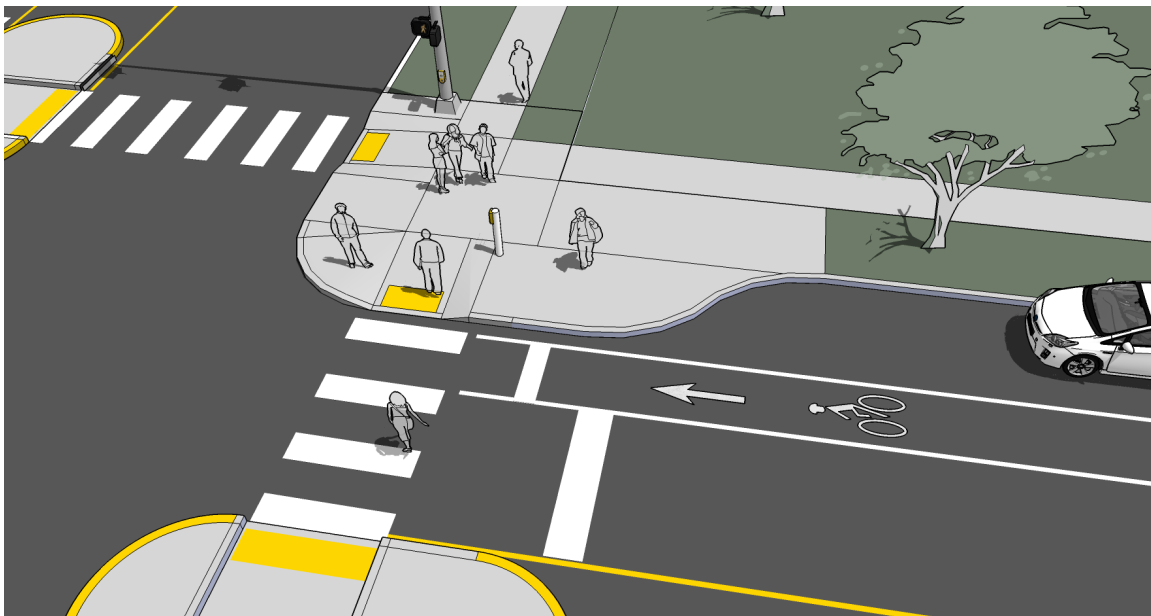
CURB EXTENSIONS

Curb extensions, or bulb-outs, shorten the crossing distance at intersections or midblock crossings, helping to minimize pedestrian exposure and increasing visibility for pedestrians and motorists. They are appropriate at crossings where it is desirable to shorten the crossing distance and there is a parking lane adjacent to the curb. Because they are generally located adjacent to on-street parking, they do not impede motor vehicle through travel. Curb extensions are best suited where parking lanes already exist to eliminate the need to merge from the curb lane, and to create a suitable turn radius for larger vehicles. Curb extensions should be considered at all intersections marked by high pedestrian activity.

TRAFFIC SIGNALS

Pedestrian signal indicators demonstrate to pedestrians when to cross at a signalized crosswalk. All traffic signals should be equipped with pedestrian signal indications except where pedestrian crossing is prohibited by signage. Typical concerns that pedestrians experience at signalized crossings in Fontana include:

- Delays caused by long signal cycles
- Lack of understanding of WALK and flashing / DON'T WALK indications
- Uncertainty about whether the button must be pressed to activate a pedestrian signal
- Lack of confirmation that someone has already pressed a push button
- Conflicts with turning vehicles at intersections



ACTUATED PEDESTRIAN SIGNAL

Manual activation of pedestrian signals is performed with a pedestrian push button. This requires the pedestrian to locate and press the push button to actuate the pedestrian signal phase. For this reason, pushbuttons should be easy to identify and access, and ideally, be user-responsive. A favorable alternative to manual actuation is passive detection made possible with a variety of automated detection equipment, including microwave and infrared detectors. Because detection is automatic, it saves the pedestrian the trouble of having to locate the pushbutton. Passive detection can also contribute to the efficiency of signal operations by allowing for walk time extensions, and/or not dedicating walk time in the absence of pedestrians.

PEDESTRIAN RECALL

Pedestrian recall is a traffic signal controller setting that automatically provides a pedestrian walk phase during every cycle. Since pedestrian recall does not require detection or actuation, it eliminates the need for push buttons or other costly detection equipment. This makes pedestrian crossings predictable, minimizes unnecessary pedestrian delay, and does not leave pedestrians wondering whether they have been detected or not. The most appropriate use of pedestrian recall is in locations and/or times of day with high pedestrian volumes.

PEDESTRIAN COUNTDOWN TIMERS

Pedestrian signal indications that only display a flashing don't walk indication can make it difficult for pedestrians to judge whether they have enough time to cross an intersection safely. Countdown indicators on pedestrian signals solve this by providing pedestrians with the exact amount of time they have to clear the intersection. The California MUTCD requires the use of countdown indicators for all signalized crossings with a change interval (flashing don't walk) greater than 7 seconds.

Leading Pedestrian Intervals

Leading Pedestrian Intervals (LPI) give pedestrians a WALK indication before vehicles are given a green light (typically 3-7 seconds). The advantage of LPI is that it puts pedestrians in the crosswalk in advance of cars and makes them more visible to turning motorists.



AUDIBLE PEDESTRIAN SIGNALS

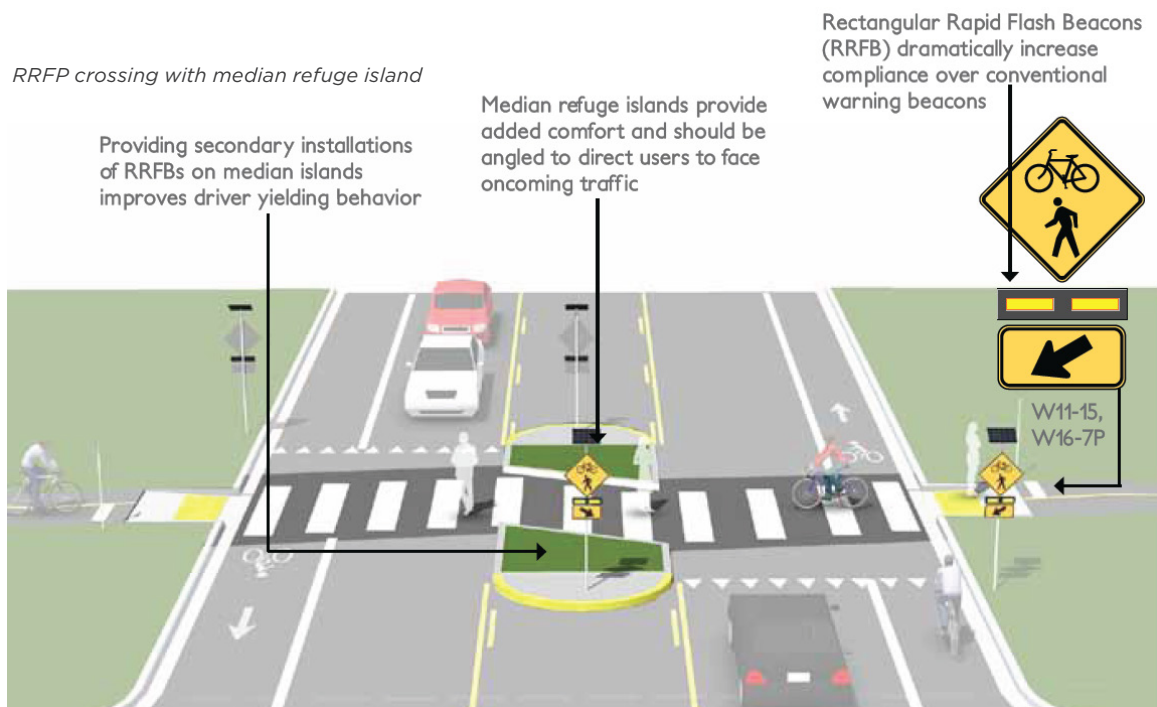
Audible pedestrian signals are designed to be accessible by individuals with visual disabilities. They provide audible tones or verbal messages to convey when it is appropriate to walk, when they must wait, and feedback when the signal has been actuated via push button. This eliminates the need for pedestrians to rely entirely on the audible cues provided by moving cars, which may be deceiving depending on the complexity of traffic signal operations at the intersection.

EXCLUSIVE PEDESTRIAN PHASES & SCRAMBLES

Exclusive pedestrian phases allow pedestrians to cross the street in both directions simultaneously.

“Scrambles” permit pedestrians to cross all four legs of an intersection or to cross diagonally while all motor vehicle traffic is stopped. This benefits car traffic by reducing turning conflicts and allowing cars to clear intersections more efficiently during their signal phase.

Scrambles are not widely used in the U.S., but when used they are typically found at downtown intersections with high volumes of pedestrians relative to motor vehicles. While they provide the convenience of a diagonal crossing, they have also disadvantages including longer pedestrian crossings times, complications to coordination with other nearby signals, and delay to pedestrians that only need to cross one leg of the intersection. The City currently has two locations with all-way pedestrian crossings, Cherry Avenue at Live Oak Avenue (N) and Citrus Avenue at Hawthorne Avenue. Jurupa Avenue and Almond Avenue, adjacent to Kaiser High School, could be a potential candidate for a scramble during school morning and afternoon rush hours. During the morning drop-off pedestrian and bicycle audit, students were observed crossing the intersection diagonally despite being unsafe to do so.



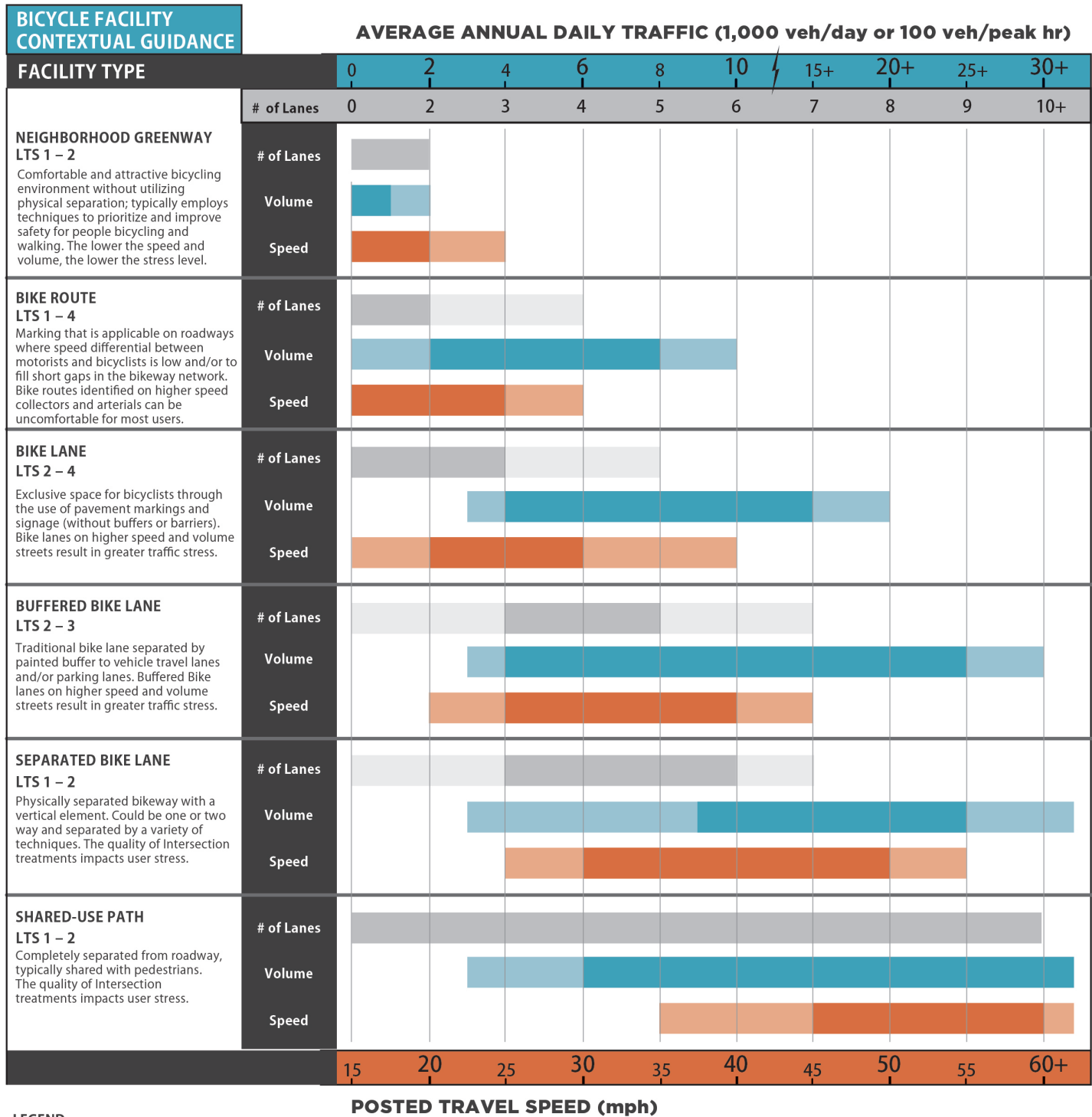
BIKEWAY NETWORK DEVELOPMENT

The development of the proposed bikeway network utilized a number of different analyses and tools including:

- Collision analysis
- Bicycle/Pedestrian Suitability Index
- SBCTA Non-Motorized Transportation Plan review
- Aerial imagery review

These processes were used in conjunction with professional planning judgment to determine what bikeway project types are warranted and most appropriate along roadways throughout Fontana. These recommendations also include new off-street bicycle and pedestrian facilities where they serve a major connectivity function in the network. The ultimate goal of the bikeway network is providing connectivity to destinations such as retail centers, job centers, schools, and recreation opportunities for all residents.





LEGEND
Level of Traffic Stress (LTS)
LTS 4 - Strong & Fearless Adult
LTS 3 - Intrepid Adult
LTS 2 - Average Adult
LTS 1 - All Ages & Abilities

min	LANES	max
min	VOLUME	max
min	SPEED	max
Acceptable	Desired	Acceptable



NATURE OF RECOMMENDATIONS

Recommended facilities for bicyclists strive to create a safe and comfortable biking environment for users of all ages and abilities and reflect national best practices in considering conditions such as traffic volumes, traffic speeds, and available roadway rights-of-way. Recommendations are considered planning-level, meaning that they should be used as a guide when considering implementation. In many cases, more detailed design studies will be required to examine specific site conditions and develop specific designs that reflect local conditions and constraints. In addition, working closely with the community and stakeholders along the corridor to understand their unique challenges and needs so that the project has their input and support can be important. Often simple striping changes can be done through on-going maintenance, however more significant changes may require a Capital Improvement Program process. In addition, the maps included in the report reflect the long-term vision for the network—implementation will not happen overnight. However, this plan also contains an Implementation Plan which provides a roadmap for implementing recommendations in a logical manner. The Implementation Plan prioritizes the most feasible projects that provide the greatest return in terms of need, safety improvement, and costs. The Implementation Plan also includes projects costs, develops a timeline for implementation and provides other resources such as potential funding sources.

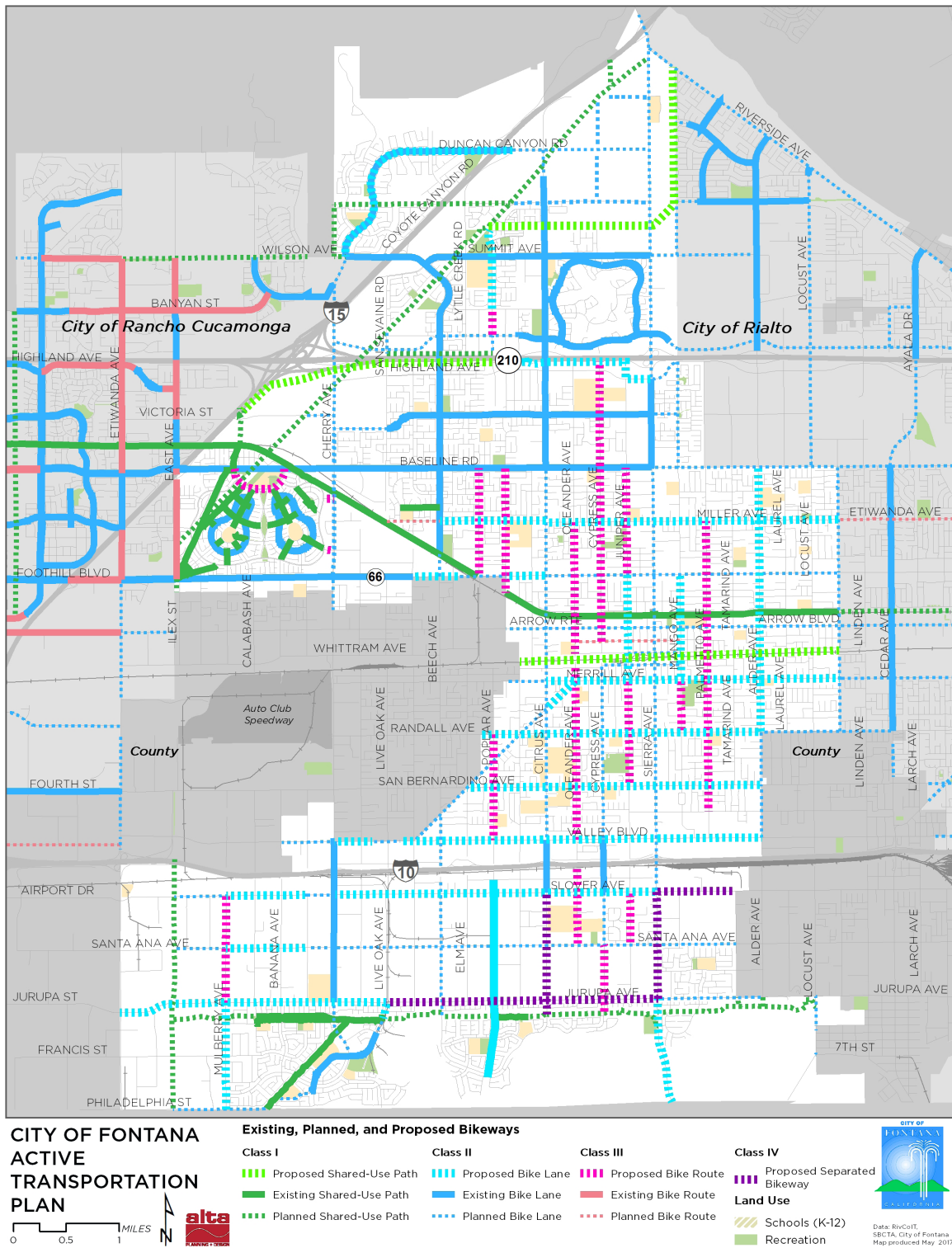
RECOMMENDATIONS OVERVIEW

Table 5.1 below provide a summary of improvements developed as part of this plan and shown in Figure 5.1 on the following page broken down by miles for linear facilities. Refer to the previous section for an overview of the different recommended improvement types. Figure 5.1 presents the entire existing, planned, and proposed bikeway network for the City of Fontana.

Table 5.1 Mileage Summary of Recommended Bikeway Facilities

CLASS	FACILITY TYPE	MILES
I	Shared-Use Path	8.65
II	Bike Lane (including buffered lanes)	37.33
III	Bike Route/ Neighborhood Greenway	17.98
IV	Separated Bikeway	5.48
Total		69.44

Figure 5.1 Existing, Planned and Recommended Bikeway Network



PEDESTRIAN NETWORK DEVELOPMENT

Pedestrian recommended improvements focus on closing sidewalk gaps in school zones, improving crossings through shortening crossing distances/block lengths and improving pedestrian signal timing to ADA-compliant 3.5 feet/second. In addition, improving lighting, safety, and creating shade through street tree planting were identified by the community as three main factors that would make it easier and more desirable to walk in Fontana. Finally, transit stops and connections should be improved through the addition of the transit stop amenities identified in this chapter.

Pedestrian facilities fall under two main designations, linear facilities (sidewalks and paths) and intersections. In many instances, the recommended bicycle network includes improvements which will benefit all roadway users, with particular focus on pedestrians the two networks complement one another.

A priority pedestrian network was identified using a multicriteria analysis to define a corridor with high demand and need for improvement. These criteria are shown in Table 5.2. Pedestrian Corridors as identified through this analysis are highlighted in blue on the map shown in Figure 5.2 and were identified using pedestrian collision data, missing sidewalks, Omnitrans bus stops and school zones. While there are many intersections which have been identified for improvements, we recommend prioritizing capital improvement programs–

Table 5.2 Pedestrian Priorities

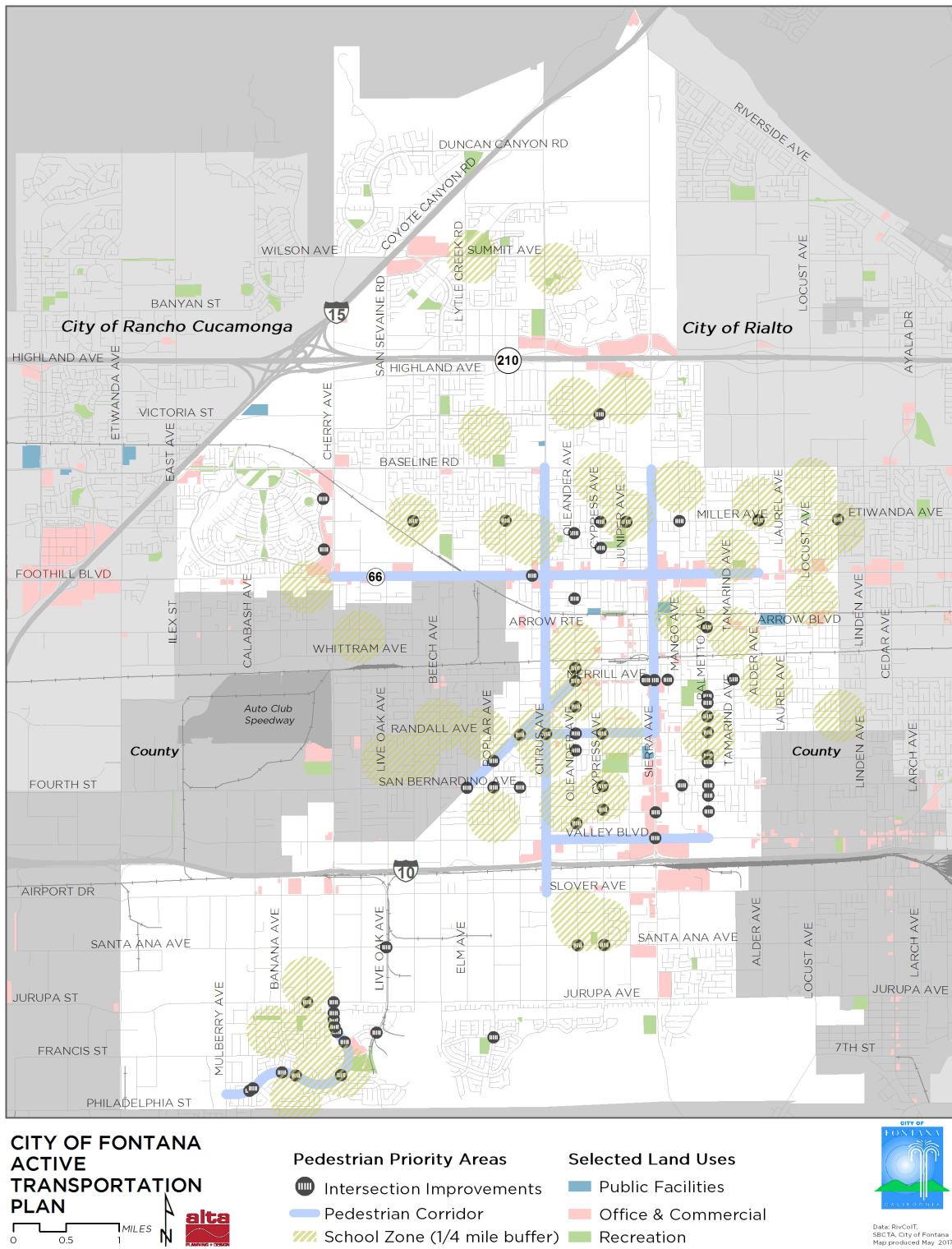
PEDESTRIAN PRIORITIES

1. Sidewalk gap closure in school zones (within 1/4 mile of school site)
2. Improve crossings in school zones (within 1/4 mile of school site)
3. Improve uncontrolled crossings
4. Improve pedestrian access to Omnitrans bus stops
5. Enhance pedestrian access in commercial areas

PEDESTRIAN CROSSING CONTEXTUAL GUIDANCE at unsignalized locations	Local Streets 15-25 mph		Collector Streets 25-30 mph			Arterial Streets 30-45 mph							
	2 lane	3 lane	2 lane	2 lane with median refuge	3 lane	2 lane	2 lane with median refuge	3 lane	4 lane	4 lane with median refuge	5 lane	6 lane	6 lane with median refuge
FACILITY TYPE													
Crosswalk Only	✓	✓	EJ	EJ	X	EJ	EJ	X	X	X	X	X	X
Crosswalk with Warning Signage and Yield Lines	EJ	✓	✓	✓	✓	EJ	EJ	EJ	X	X	X	X	X
Active Warning Beacon (RRFB)	X	EJ	✓	✓	✓	✓	✓	✓	X	✓	X	X	X
Hybrid Beacon	X	X	EJ	EJ	EJ	EJ	✓	✓	✓	✓	✓	✓	✓
Full Traffic Signal	X	X	EJ	EJ	EJ	EJ	EJ	EJ	✓	✓	✓	✓	✓
Grade Separation	X	X	EJ	EJ	EJ	X	EJ	EJ	EJ	EJ	EJ	✓	✓

LEGEND	
Most Desirable	✓
Engineering Judgement	EJ
Not Recommended	X

Figure 5.2 Pedestrian Priority Areas



BICYCLE AND PEDESTRIAN NETWORK OPPORTUNITIES AND CONSTRAINTS

The City of Fontana has the foundation to become a renowned bicycle and pedestrian friendly city. The relatively mild climate year-round, off-road opportunity corridors such as the Pacific Electric Trail, the concentration of commercial and workplace locations, the passion residents have for the outdoors, and the well-connected street grid in the downtown areas are all characteristics that will help move Fontana towards its bicycling and walking goals.

However, as indicated during public outreach, fieldwork, and in feedback from key stakeholders, bicycling and walking in Fontana does not occur without challenges. There are many safety concerns, physical barriers, and gaps in network connectivity that must be addressed in order to reach the goals identified for this plan. Closing gaps in the existing active transportation network will increase connectivity and allow for seamless travel by bicycle and on foot throughout Fontana and the surrounding region. Based off the citywide recommendations shown in Figure 5.1 and Figure 5.2, Table 5.3 discusses the many opportunities that exist as starting points for improvement, and the constraints that the City must address to become a more bicycle and walk-friendly city.



The segments presented in Table 5.3 are components of either the Alta Proposed Bicycle and Pedestrian Network (the network developed as a result of this Active Transportation Plan) or the planned San Bernardino County Transportation Authority Non-Motorized Transportation Plan 2015 network. This highlights the interconnectedness between the active transportation infrastructure planning efforts being led by the County and the local efforts of the City developed with this plan.

Table 5.3 Opportunities and Constraints

SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
Class I Shared-Use Paths					
SAN BERNARDINO COUNTY PARCEL FROM SOUTHERN CALIFORNIA EDISON UTILITY NORTH TO RIVERSIDE AVE Proposal: 3.1 mile long Class I Bike Path. Convert existing dirt utility road.					
Southern California Edison Utility North to Parkside Way	Alta Proposed	12'	1	Plenty of room to widen path	Needed: Knox Ave midblock crossing control
Parkside Way to Citrus Ave	Alta Proposed		1		Needed: Parkside Way midblock crossing control
Citrus Ave to Cypress Ave	Alta Proposed	12'	1		Needed: Cypress Ave midblock crossing control
Cypress Ave to Sierra Ave	Alta Proposed	12'	1		Needed: Sierra Ave midblock crossing control
Sierra Ave to Tierra Vista Ave	Alta Proposed	12'	1		
SOUTHERN CALIFORNIA EDISON UTILITY NORTH SPUR I FROM BRIDLEPATH DR TO SOUTHERN CALIFORNIA EDISON UTILITY NORTH SPUR II Proposal: 1.6 mile long Class I Bike Path. Convert existing dirt utility road.					
Connector Path to Bridlepath Drive	NMTP, 2015	10'	1		Needed: Bridlepath Dr midblock crossing control
Bridlepath Dr to Cherry Ave	NMTP, 2015	10'	1		Needed: Cherry Ave midblock crossing control
Cherry Ave to 15 Freeway	NMTP, 2015	16'	1		Needed: 15 Freeway crossing
15 Freeway to Lytle Creek Rd	NMTP, 2015	10'	1		Needed: Lytle Creek Rd midblock crossing control
Lytle Creek Rd to SCE Utility North Spur II	NMTP, 2015	10'	1	Utilize proposed Southern California Edison Utility North path to connect south to San Bernardino County Parcel	
CONNECTOR PATH FROM WILSON AVE TO SOUTHERN CALIFORNIA EDISON NORTH SPUR I Proposal: 0.5 mile long Class I Bike Path. Convert existing dirt utility road.					
Wilson Ave to Southern California Edison North Utility Spur I	NMTP, 2015	25'	1		



SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
SOTHERN CALIFORNIA EDISION UTILITY NORTH FROM EAST AVE TO SIERRA AVE Proposal: 6.5 mile long Class I Bike Path. Convert existing dirt utility road.					
East Ave (West Fontana boundary) to W Liberty Pkwy	NMTP, 2015	21'	1	Utilize Miller Ave intersection for crossing control	Needed: W Liberty Parkway midblock crossing control
W Liberty Pkwy to Canal	NMTP, 2015	15'	1		Bridge required to cross canal
Canal to S Heritage Circle	NMTP, 2015	18'	1	Entry points at W Liberty Pkwy and unnamed dead-end street. Possibly utilize Liberty Pkwy crossing control.	Needed: S Heritage Cir midblock crossing control
S Heritage Circle to Baseline Ave	NMTP, 2015	14'	1	Two potential paths: North side is likely best, since it is closest to W Liberty Pkwy	
Baseline Ave to Del Norte St	NMTP, 2015	14'	1		Needed: Del Norte St midblock crossing control
Del Norte St to Victoria Ave	NMTP, 2015	15'	1	Intersects with Pacific Electric Bike Trail	Crosses a dry dirt canal
Victoria Ave to 210 freeway	NMTP, 2015	13'	1	Utilize Cherry Ave underpass to cross 210 freeway. Intersections with proposed canal bikeway.	210 freeway. No bikeways on Cherry Ave.
210 freeway to San Sevaine Rd	NMTP, 2015	15'	1		Needed: San Sevaine Rd midblock crossing control
San Sevaine Rd to Beech Ave	NMTP, 2015	16'	1	Entry points at Rosena Park	Needed: Beech Ave midblock crossing control
Beech Ave to Summit Ave/Lytle Creek Rd	NMTP, 2015	13'	1	Consider utilizing Summit Ave/Lytle Creek Rd intersection	Needed: Summit Ave midblock crossing control
Lytle Creek Rd to Vienna Lane	NMTP, 2015	12'	1	Utilize, or build a new, path through Fontana Park. Intersects with proposed SCE North Path	Needed: Vienna Lane midblock crossing control
Vienna Lane to Citrus Ave		12'	1		Needed: Citrus Ave midblock crossing control
Citrus Ave to Sierra Ave		15'	1		

SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
SR-210 DRAINAGE (SOUTH) FROM VICTORIA AVE TO KNOX AVE					
Proposal: 2.5 mile long Class I Bike Path, constructed adjacent to existing canal					
Victoria Ave to Cherry Ave	Alta Proposed	22'	1	Diverge from San Sevaine Trail, utilize top of canal channel	Needed: Cherry Ave midblock crossing control
Cherry Ave to San Sevaine Rd	Alta Proposed	22'	1	Continue path along 210 fence	Canal ends 500ft before San Sevaine. Needed: San Sevaine Rd midblock crossing control
San Sevaine Rd to Beech Ave	Alta Proposed	5'	1		Very small, unkempt existing trail. Needed: Beech Ave midblock crossing control
Beech Ave to Knox Ave	Alta Proposed	18'	1	Utilize utility road along 210 fence	
SR-210 DRAINAGE (NORTH) FROM SAN SEVAINE RD TO KNOX AVE					
Proposal: 1 mile long Class I Bike Path, constructed adjacent to existing canal.					
San Sevaine Rd to Beech Ave	NMTP, 2015	18'	1	Two options: North or South of canal. Both 18'	Needed: Beech Ave midblock crossing control
Beech Ave to Knox Ave	NMTP, 2015	18'	1	Possibly entry points at Lytle Creek Rd and at Maloof Ave	
SAN SEVAINE TRAIL EXTENSION FROM PACIFIC ELECTRIC TRAIL TO VICTORIA AVE					
Proposal: 0.5 mile long Class I Bike Path, constructed adjacent to existing canal. Extension of existing San Sevaine Trail					
Pacific Electric Bike Trail to Victoria Ave	NMTP, 2015	18'	1	Entry point to Pacific Electric Inland Empire Trail	Needed: Victoria St crossing or underpass Wanted: Victoria St midblock crossing control (used by students)
METROLINK TRAIL FROM CATAWBA AVE TO MAPLE AVE					
Proposal: 3 mile long Class I Bike Path, constructed adjacent to existing Metrolink rail.					
Fontana west boundary (Catawba Ave) to Citrus Ave	Alta Proposed	16'	1	Dirt path on northern edge of Metrolink ROW	Needed: Citrus Ave midblock crossing control
Citrus Ave to Juniper Ave		16'	1	Entry point at Oleander Ave	Metrolink 50ft decrease in ROW width 640ft from Juniper Ave, totaling 45ft ROW north of tracks. Needed: Juniper Ave midblock crossing control



SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
Juniper Ave to Sierra Ave	Alta Proposed	N/A	N/A	Bike Path through station or around on Orange Way	Fontana Metrolink Station
Sierra Ave to Mango Ave	Alta Proposed	N/A	N/A		Needed: Mango Ave midblock crossing control
Mango Ave to Palmetto Ave	Alta Proposed	N/A	N/A		Culvert along north edge. Path must be south of Culvert. 37ft between tracks and culvert. Needed: Palmetto Ave midblock crossing control
Palmetto Ave to Alder Ave	Alta Proposed	N/A	N/A		ROW decreases slightly: 35ft between tracks and culvert. Needed: Alder Ave midblock crossing control.
Alder Ave to Locust Ave	Alta Proposed	N/A	N/A	Entry point at Laurel Ave	Needed: Locust Ave midblock crossing control
Locust Ave to Maple Ave	Alta Proposed	N/A	N/A		Double tracks, reducing available space for path to 22ft. Needed: Maple Ave midblock crossing control

SAN SEVAINE TRAIL (SOUTH) FROM PHILADELPHIA AVE TO I-10 FREEWAY
Proposal: 2.5 mile long Class I Bike Path, constructed adjacent to existing canal.

South City Limit (Philadelphia Ave) to Marlay Ave	NMTP, 2015	16'	1	Path options both sides of canal.	Needed: Rail crossing (active?). Needed: Marlay Ave midblock crossing control.
Marlay Ave to Jurupa Ave	NMTP, 2015	15'	1		
Jurupa Ave to Slover Ave	NMTP, 2015	16'	1	Must use path on west side of canal.	Another canal from east converges, eliminating the east side path.
Slover Ave to I-10 Freeway	NMTP, 2015	16'	1		Rail crossing, 6 tracks. Canal goes under freeway, with most viable path on west side

SOUTHERN CALIFORNIA EDISON UTILITY SOUTH I FROM SAN SEVAINE TRAIL TO RANCHERIAS DR
Proposal: 0.8 mile long Class I Bike Path. Convert existing dirt utility road.

San Sevaime Trail to Mulberry Ave	NMTP, 2015	15'	1		
Mulberry Ave to Rancherías Dr	NMTP, 2015	15'	1		Needed: Countryside Dr midblock crossing control. Needed: Ponderosa Dr midblock crossing control.

SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
SOUTHERN CALIFORNIA EDISON UTILITY SOUTH II FROM LIVE OAK TO POPLAR AVE Proposal: 1.1 mile long Class I Bike Path. Convert existing dirt utility road.					
Live Oak Ave to Village Dr	NMTP, 2015	15'	1		Needed: Village Dr midblock crossing control
Village Dr to Beech Ave	NMTP, 2015	15'	1		Needed: Beech Ave midblock crossing control
Beech Ave to Poplar Ave	NMTP, 2015	15'	1		Needed: Poplar Ave midblock crossing control
SOUTHERN CALIFORNIA EDISON UTILITY SOUTH III FROM CATAWBA PARK TO LOCUST AVE Proposal: 3 mile long Class I Bike Path. Convert existing dirt utility road.					
Catawba Park to Citrus Ave	NMTP, 2015	12'	1		Needed: Citrus Ave midblock crossing control
Citrus Ave to Cypress Ave	NMTP, 2015	12'	1		Needed: Cypress Ave midblock crossing control
Cypress Ave to Sierra Ave	NMTP, 2015	8'	1	Concrete path (only 8' wide). Cross Sierra Ave within utility ROW rather than in Martin Tudor Park	Needed: Sierra Ave midblock crossing control
Sierra Ave to Locust Ave	NMTP, 2015	15'	1	Path options increase as you approach Locust Ave	Needed: Via Larga midblock crossing control. Needed: Volante Dr midblock crossing control
Class II Bike Lanes					
SIERRA AVE (CENTRAL) FROM BASELINE AVE TO MERRILL AVE Proposal: 2 mile long Class II					
Baseline Ave to Miller Ave	NMTP, 2015	80'	6	Convert 1st and 6th lanes to bikeway.	Undergoing construction; final road width unclear.
Miller Ave to Foothill Ave	NMTP, 2015	60'	4		Width varies, ranging between 60' and 70'
Foothill Ave to Merrill Ave	NMTP, 2015	70'	4	Bike boxes at downtown intersections	Street parking; frequent driveways.



SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
VALLEY BLVD FROM BANANA AVE TO ALDER AVE Proposal: 4.5 mile long Class II					
Banana Ave to Almond Ave	Alta Proposed	54'	4		Narrow road for most of block (no curbs or sidewalks). Widens to 84' on east end.
Almond Ave to Cherry Ave	NMTP, 2015	86'	4		Road widens to 125' at Cherry Ave intersection (40' wide dedicated right turn)
Cherry Ave to Fontana Ave	Alta Proposed	84'	4	Roundabout at Fontana Ave	Gaps in sidewalk
Fontana Ave to Poplar Ave	Alta Proposed	84'	4		Road narrows to 72' just east of Fontana Ave (no curbs or sidewalk on north side). Gaps in sidewalk
Poplar Ave to Cypress Ave	Alta Proposed	96'	4	Road widens. South side right lane is 31' wide	Gaps in sidewalk
Cypress Ave to Juniper Ave	Alta Proposed	108'	4	Road widens for half a block east of Cypress Ave	Road narrows to 84' just west of Juniper Ave (no curb or sidewalk on south side)
Juniper Ave to Sierra Ave	Alta Proposed	96'	4		Landscaped median
Sierra Ave to Health Care Pkwy	Alta Proposed	94'	6		More driveways closer to Sierra
Health Care Pkwy to Palmetto Ave	Alta Proposed	85'	5		
Palmetto Ave to Alder Ave	Alta Proposed	85'	4		Fairly frequent driveways for businesses
ALDER AVE (NORTH) FROM BASELINE AVE TO RANDALL AVE Proposal: 2.5 mile long Class II via Road Diet (4 to 3 lane conversion)					
Baseline Ave to E Foothill Blvd	Alta Proposed	64'	4	Convert from 4 lanes to 3 lanes (include center turn lane) and bike lanes	300ft from Baseline, road narrows to 50ft and then to 42ft
E Foothill Blvd to Vine St	Alta Proposed	64'	4	Painted median	
Vine St to Randall Ave	Alta Proposed	64'	4	Access to Pacific Electric Trail	

SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
CYPRESS AVE (SOUTH) FROM SLOVER AVE TO SOUTHERN CALIFORNIA EDISON UTILITY PATH Proposal: 1.1 mile long Class II					
Slover Ave to Santa Ana Ave	NMTP, 2015	53'	2		53' from Citrus Ave to Citrus High School - no room for turning lane and bike lanes.
Santa Ana Ave to SCE Utility Path	Alta Proposed	30'	2		
JUNIPER AVE (CENTRAL) FROM FOOTHILL AVE TO MERRILL AVE Proposal: 1 mile long Class II via Road Diet (4 to 3 lane conversion)					
Foothill Ave to Merrill Ave	Alta Proposed	60'	4	Juniper adds 2 lanes in this segment. Not necessary.	
JURUPA AV FROM ETIWANDA AVE TO LIKE OAK AVE Proposal: 3.25 mile long Class II					
Etiwanda Ave to Mulberry Ave	Alta Proposed	96'	4	26' right lane	
Mulberry Ave to Calabash Ave	Alta Proposed	78'	4	Consider removing painted median.	Narrower road.
Calabash Ave to Almond	Alta Proposed	78'	5	Remove 5th lane	Landscaped median inhibits opportunities-north side of street has no shoulder in places and is not wide enough to fit two lanes plus bike lane
Almond to Cherry	Alta Proposed	106'	6	Reduce to 4 lanes Scramble signal at Almond	
Cherry to Live Oak Ave	Alta Proposed	86'	5	Remove 5th lane	Landscaped median inhibits opportunities north side of street has no shoulder in places and is not wide enough to fit two lanes plus bike lanes
MERRILL AVE FROM CATAWBA AVE TO MAPLE AVE Proposal: 3 mile long Class II					
Catawba Ave to Citrus Ave	NMTP, 2015	64'	4	Road diet	Road narrows to 54' midblock Gaps in sidewalk (and curb) on north side
Citrus Ave to Oleander Ave	Alta Proposed	64'	4	Road diet	Road narrows to 54' 320' west of Fontana Ave
Oleander Ave to Pepper Ave	Alta Proposed	68'	4		
Pepper Ave to Sierra Ave	Alta Proposed	58'	4	Enhance existing crosswalk at Nuevo with ped-activated flashing beacon	Road narrows



SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
Sierra Ave to Alder Ave	Alta Proposed	68'	4	Opportunity for crosswalk at Newport Ave	Needed: crosswalks at Tamarind Ave stop sign
Alder Ave to Maple Ave	Alta Proposed	62'	2		Width varies. Just west of Laurel, road narrows to 25' for 300'

MILLER AVE FROM BEECH AVE TO MAPLE AVE
Proposal: 4.25 mile long Class II via Road Diet (4 to 3 conversion)

Beech Ave to Lime Ave	Alta Proposed	64'	4	Road diet	Road narrows to 50' 650' west of Lime Ave; sidewalk missing from south side.
Lime Ave to Alder Ave	Alta Proposed	64'	4	Road diet Roundabout at Almeria. Roundabout at Cypress Ave. Roundabout at Mango. Roundabout at Alder	Needed: Crosswalk missing from north leg at Almeria. Consider mid-block crosswalk in front of Almeria school Needed: Crosswalk on west leg at Juniper and at Tamarind.
Alder Ave to Maple Ave	Alta Proposed		2	Road diet might not be necessary here - there are turn lanes already in place (but not a dedicated turning median) Roundabout at Maple	Road narrows for 250' just west of Laurel

FONTANA AVE FROM MERRILL AVE TO RANDALL AVE
Proposal: 0.5 mile long Class II

Merrill Ave to Randall Ave	Alta Proposed	70'	2	Roundabout at Fontana & Merrill	Dedicated right turn lane at Oleander. Road narrows to 50' 100' from Merrill Ave
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HIGHLAND AVE FROM KNOW AVE TO HIGHLAND AVE
Proposal: 1.7 mile long Class II

Knox Ave to Highland Ave	Alta Proposed	32'	2	Consider adding a stop sign on Knox.	Highland dead-ends, requiring a path to connect back with the main S Highland Ave
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SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
LIVE OAK AVE FROM JURUPA AVE TO FERNWOOD WAY Proposal: 0.3 mile long Class II					
Jurupa Ave to SCE Utility	Alta Proposed	40'	2	Ample shoulder for a bike lane.	Needed: Midblock crossing control at proposed SCE Utility Path. Needed: Crosswalks on Jurupa
SCE Utility to Village Dr	NMTP, 2015	40'	2	Roundabout at Village Dr	
Mountain High Dr to Fernwood Way	NMTP, 2015	40'	2		Street parking.
MULBERRY AVE FROM JURUPA AVE TO PHILADELPHIA AVE Proposal: 1 mile long Class II					
Jurupa Ave to Philadelphia Ave	Alta Proposed	94'	4		
POPLAR AVE (SOUTH) FROM BOYLE ST TO BEECH AVE Proposal: 1.75 mile long Class II					
Boyle Ave to Santa Ana Ave	Alta Proposed	64'	2		Sidewalks missing from Slover, 600' south
Santa Ana Ave to Jurupa Ave	Alta Proposed	40'	2		Road narrows 600' south of Santa Ana, to 40'. Might not be space for bike lanes (in part because the shoulder is so unclear)
Jurupa Ave to Beech Ave	Alta Proposed	38'	2	Roundabout at Village Dr	Wanted: Crosswalk at San Roque Rd
RANDALL AVE FROM LIME AVE TO PALMETTO AVE Proposal: 2.75 mile long Class II					
Lime Ave to Poplar Ave	Alta Proposed	64'	2		Road 10' narrower for 300' east of Lime Ave
Poplar Ave to Catawba Ave	Alta Proposed	30'	2	Roundabout at Fontana/Catawba	No sidewalks
Catawba Ave to Citrus Ave	Alta Proposed	50'	3		
Citrus Ave to	Alta Proposed	64'	4	Road diet Roundabout at Cypress	Add crosswalks Oleander on north and west legs of intersection At Cypress, Mango, and Palmetto, add marked crosswalks on west leg of each intersection



SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
SAN BERNARDINO AVE FROM FONTANA AVE TO ALDER AVE Proposal: 2.75 mile long Class II via Road Diet					
Fontana Ave to Alder Ave	Alta Proposed	64'	4	Road diet. Roundabout at Fontana Ave and at San Bernardino and at Catawba and at Mango and at Palmetto	Sidewalk sporadic near Fontana Ave At Oleander, add marked crosswalk on north and east legs of intersections At Cypress, add marked crosswalk on the west leg of intersection
SANTA ANA AVE FROM MULBERRY AVE TO TAMARIND AVE Proposal: 5.3 mile long Class II					
San Sevaire Trail to Mulberry Ave	NMTP, 2015	50'	2		Heavy truck route No sidewalks
Mulberry Ave to Railroad	Alta Proposed	30'	2		Road narrows to 26' 300' east of Mulberry. Too narrow for Class II
Railroad to Poplar Ave	NMTP, 2015	64'	4		
Poplar Ave to Catawba Ave	NMTP, 2015	50'	3		
Catawba Ave to Juniper Ave	NMTP, 2015	44'	3		Narrows to 24' east of Catawba for 650' No sidewalk on south side
Juniper Ave to Tamarind Ave	NMTP, 2015	64'	4		Needs crosswalks on all legs at Juniper and at Tamarind Might have to narrow lanes to fit bike lanes
SIERRA AVE FROM JURUPA AVE TO PHILADELPHIA AVE Proposal: 1 mile long Class II					
Jurupa Ave to Philadelphia Ave	Alta Proposed	80'	4		Needed: midblock crossing control at proposed trail
SLOVER AVE FROM SAN SEVAIRE TRAIL TO SIERRA AVE Proposal: 4.5 mile long Class II					
San Sevaire Trail to Mulberry Ave	NMTP, 2015	70'	4	Add entry point to proposed trail	Heavy truck route. Lanes are 13' and 16' Sidewalk sporadic
Mulberry Ave to Sierra Ave	Alta Proposed	80'	4		Road is wider, but now there is street parking. Slight fluctuations in width throughout route

SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
MANGO AVE (CENTRAL) FROM FOOTHILL BLVD TO MERRILL AVE					
Proposal: 1 mile long Class II					
Foothill Blvd to Merrill Ave	Alta Proposed	60'	4	Road diet opportunity	
Class III Bike Route					
ALMERIA AVE FROM BASELINE AVE TO PACIFIC ELECTRIC TRAIL					
Proposal: 1.2 mile long Class III					
Baseline Ave to Miller Ave	Alta Proposed	40'	2	Add crosswalk to Miller Ave	
Miller Ave to Foothill Blvd	Alta Proposed	40'	2	Add crosswalk to Fairview/Almeria, by the school	
Foothill Blvd to Pacific Electric Trail	Alta Proposed	27'	2		27' wide near Foothill, widens to 44' near bike trail
CYPRESS AVE (NORTH) FROM HIGHLAND AVE TO VALENCIA AVE					
Proposal: 2.75 mile long Class III					
Highland Ave to Valencia	Alta Proposed	40'	2	Consider a roundabout at Miller Ave Opportunities for chicanes at the many 3-way intersections (or prior to them) Add crosswalk at Harvey Drive by park Add 4th crosswalk arm at Foothill Blvd Roundabout at Miller Ave	
JUNIPER AVE (CENTRAL) FROM BASELINE AVE TO SAN BERNADINO AVE					
Proposal: 2.5 mile long Class III					
Baseline Ave to Foothill Blvd	Alta Proposed	44'	2		Add 4th crosswalk at Miller Ave
Merrill Ave to San Bernardino Ave	Alta Proposed				
MANGO AVE (CENTRAL) FROM MERRILL TO RANDALL AVE					
Proposal: 0.5 mile long Class III					
Merrill Ave to Randall Ave	Alta Proposed	40'	2	Add 4th crosswalk at Randall Ave	



SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
LIME AVE FROM BASELINE AVE TO FOOTHILL BLVD Proposal: 1 mile long Class III					
Baseline Ave to Miller Ave	Alta Proposed	40'	2	Opportunities for chicanes at the many 3-way intersections. Add crosswalk and ADA curb ramp 140' S of San Jacinto, by the walking path.	Road narrows to 32' 280' from Baseline Rd
Miller Ave to Foothill Blvd	Alta Proposed	26'	2	Add 3rd and 4th crosswalk arms at Miller.	Lime dead-ends just north of Foothill Blvd (and it's 20 ft. higher than Foothill). Pacific Electric Trail is to west, so must pave Lime Ave extension to east Sidewalk missing from west side south of Miller Ave for 315'
MEYER CANYON RD FROM E LIBERTY PKWY TO CHERRY AVE Proposal: 0.06 mile long Class III					
E Liberty Pkwy to Cherry Ave	Alta Proposed			Super sharrows Consider a roundabout	
MILLER AVE FROM PLUMARIA AVE TO BEECH AVE Proposal: 0.5 mile long Class III					
Plumaria Ave to Beech Ave	NMTP, 2015	36'	2	Enhance existing crosswalk at Hemlock with ped-activated flashing beacon	No direct connection to Pacific Electric Inland Empire Trail. Empty lot between. Sidewalk missing on south side from Poppy to Beech (630')
MULBERRY AVE FROM SLOVER AVE TO JURUPA Proposal: 1 mile long Class III					
Slover Ave to Santa Ana Ave	Alta Proposed	70'	4	Sharrows or super sharrows	Heavy trucking route. 50% of east side missing a sidewalk. 90% of west side missing a sidewalk.
Santa Ana Ave to Jurupa Ave	Alta Proposed	70'	2		Road narrows to 52' midblock for 700' Only has sidewalk on east side near Santa Ana Ave

SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
OLEANDER AVE (NORTH) FROM MILLER AVE TO ORANGE WAY Proposal: 1.25 mile long Class III					
Miller Ave to Orange Way	Alta Proposed	38'	2	Roundabouts at Fairview Ave and at Upland Chicanes around the 3-arm intersections Add crosswalk arm to east side at Arrow Blvd	Needed: Intersection control at Foothill Blvd
OLEANDER AVE (CENTRAL) FROM CERES AVE TO VALLEY BLVD Proposal: 1.6 mile long Class III					
Ceres Ave to Valley Blvd	Alta Proposed	38'	2	Roundabouts at Ceres and at Merrill and at Athol and at Iris Dr	Needed: Crosswalks at north and west arms of Randall Ave Needed: Crosswalk at east and north legs at San Bernardino Ave. No intersection control at Valley Blvd
OLEANDER AVE (SOUTH) FROM RAILROAD TO SANTA ANA AVE Proposal: 0.75 mile long Class III					
Railroad to Slover Ave	Alta Proposed	30'	2		No sidewalks
Slover Ave to Santa Ana Ave	Alta Proposed	55'	2	Roundabout at Santa Ana Ave	Road is 46' from Slover Ave to Jurupa Hill HS; same south of the HS. Road has 3 lanes next to HS.
PALMETTO AVE FROM MILLER AVE TO MARYGOLD AVE Proposal: 2.75 mile long Class III					
Miller Ave to Merrill Ave	Alta Proposed	40'	2	Chicanes near 3-leg intersections	
Merrill Ave to Marygold Ave	Alta Proposed	40'	2	Opportunities for roundabout at every 4-leg intersection (Orchid, Hibiscus, Pine, Randall, Hawthorne, Holly, San Bernardino, Tullock, Marygold) Chicanes near 3-leg intersections	
POPLAR AVE (CENTRAL) FROM RANDALL AVE TO VALLEY AVE Proposal: 1 mile long Class III					
Randall Ave to Valley Ave	Alta Proposed	44'	2	Roundabout at Fontana Ave and at San Bernardino (assuming road diet). Chicanes around 3-arm intersections	Sidewalk missing on east side for 300' south of Randall Ave Road briefly narrows just south of Fontless Ct. Add crosswalk to west arm at San Bernardino. Needed: Intersection control at Valley Blvd



SEGMENT	NETWORK	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
ROANOKE RD FROM E LIBERTY TO CHERRY AVE Proposal: 0.08 mile long Class III					
E Liberty Pkwy to Cherry Ave	Alta Proposed	70'	4	Sharrows or super sharrows	
S HERITAGE CIRCLE FROM BASELINE AVE TO BASELINE AVE Proposal: 0.7 mile long Class III					
Baseline Ave to Baseline Ave	Alta Proposed	90'	4	Sharrows or super sharrows	86' includes a 40' median. No shoulder
Class IV Separated Bikeway					
SLOVER AVE FROM SIERRA AVE TO TAMARIND AVE Proposal: 0.75 mile long Class IV					
Sierra Ave to Tamarind Ave	Alta Proposed	112'	6	Transitions from 2 lanes east of Tamarind to 6 lanes. Few driveways.	
SIERRA AVE (SOUTH) FROM SLOVER AVE TO JURUPA AVE Proposal: 2 mile long Class IV					
Sierra Ave to Santa Ana Ave	Alta Proposed	114'	6	17' right lane; 9' painted shoulder (east).	50 mph speed limit
Santa Ana Ave to Jurupa Ave	Alta Proposed	114'	5	15' painted shoulder (west)	50 mph speed limit
JURUPA AVE FROM LIVE OAK AVE TO SIERRA AVE Proposal: 2.6 mile long Class IV					
Live Oak Ave to Beech Ave	Alta Proposed	98'	6	Few driveways. Reduce to 4 general travel lanes.	
Beech Ave to Sierra Ave	Alta Proposed	92'	6	Few driveways. Reduce to 4 general travel lanes.	
CITRIS AVE (SOUTH) FROM SLOVER AVE TO JURUPA AVE Proposal: 1.2 mile long Class IV					
Slover Ave to Santa Ana Ave	Alta Proposed	66'	3		Width varies - as narrow as 52 ft in places.
Santa Ana Ave to Jurupa Ave	Alta Proposed	64'	4	20' right lanes.	New development on east side may increase frequency of driveways.

SEGMENT	WIDTH	# THRU LANES	OPPORTUNITIES	CONSTRAINTS
Priority Pedestrian Corridor				
FONTANA AVE Proposal: Complete Sidewalk Network				
Merrill Ave to San Bernardino Ave	1.44 miles	6	Sidewalk installation can greatly improve connectivity to the surrounding areas.	County-owned parcels along westside of Fontana Ave south of San Bernardino Ave
CHERRY AVE Proposal: Improve Recreational Crossings				
Mulberry Ave to Jurupa Ave	1.95 miles	6	Crossing improvements can benefit trail users and motorists	Multi-lane roadways with multiple conflict points
RANDALL AVE Proposal: Complete Sidewalk Network and Improve Crossings				
Fontana Ave to Sierra Ave	1.25 miles	6	Routes to adjacent schools can be improved	Various land-use types exist along this corridor
SIERRA AVE Proposal: Placemaking in Fontana City Center				
Randall Ave to Baseline Rd	2.5 miles	3	Improvements in the pedestrian realm can make this area a unique destination	Multiple stakeholders and various land use types requires careful outreach and attention to competing interests
FOOTHILL BLVD Proposal: Placemaking along the Regional Connection				
Cherry Ave to Alder Ave	4 miles	3	Sidewalk connectivity can improve access to the residential and commercial areas along this corridor.	Multiple stakeholders and various land use types requires particular focus on Historic Route 66.
VALLEY BLVD Proposal: Complete Sidewalk Network				
Citrus Ave to Palmetto Ave	1.5 miles	3	Sidewalk installation can greatly improve connectivity to the surrounding areas.	Commercial and industrial uses mix with residential to create hazards and incongruous pedestrian infrastructure
CITRIS AVE Proposal: Safe Routes to Schools				
Slover Ave to Baseline Rd	4 miles	3	Sidewalk connectivity and improved crossing treatments can create safer routes to schools along this corridor	Multiple stakeholders and various land use types along this lengthy corridor may create difficulties for infrastructure implementation







CHAPTER 6

IMPLEMENTATION PLAN

The long-term vision for active transportation in Fontana has been set. Now the City must begin to implement the vision - *but where do we start?*

The following section answers this question and presents the project prioritization strategy and project cost estimates for the bicycle and pedestrian recommendations presented in Chapter 5.

The City should use this section as a guide for achieving the vision and goals established in this plan. As a general strategy, the City should regularly evaluate how well recommendations are being met and whether these recommendations still meet the needs of Fontana’s residents and visitors. The goals presented in the introduction of this plan also serve with specific benchmarks defined for infrastructure and non-infrastructure improvements. Implementation progress should be regularly tracked on at least an

annual basis—an annual “state of active transportation” report is a good means of accomplishing this in a format that can be easily shared with the public to inform them on plan progress. In addition, best practices in bicycle and pedestrian accommodation is a rapidly-evolving field, the recommendations in this plan should be re-evaluated at least every seven years to ensure that these still constitute best-practices and still reflect Fontana’s long-term vision for creating and maintaining active streets.

PROJECT PRIORITIZATION STRATEGY

The intent of evaluating projects is to create a prioritized list of projects for implementation. As projects are implemented, lower ranked projects move up the list. The project prioritization list included in this plan is flexible and should be used as a guideline to implementation. While one project may be ranked higher than another in this guide, funding may better align with a lower ranked project to help leverage local money with competitive, regional, state, and federal resources. The high-priority project list, and perhaps the overall project list, may change over time as a result of changing bicycling and walking patterns, land use patterns, implementation constraints and opportunities and the development of other transportation improvements.

Project prioritization was developed through feedback the project team received from City staff as well as input from the community.

The project prioritization strategy looked at a suite of indicators to determine the need, feasibility, and benefit of implementing each recommended bikeway segment individually. The project team developed prioritization criteria and collectively determined the importance of each consideration by assigning each category an appropriate weight. The criteria and maximum score are shown in Table 6.1. Figure 6.1 depicts a map of the project prioritization results with individual corridor prioritization scores presented in Table 6.2.

Table 6.1 Criteria for Project Prioritization

CRITERIA	DESCRIPTION	MAX. SCORE
Community Support	The project or area is directly identified for improvement during the community input phase (up to 20 pts)	20
Proximity to school	The project directly connects to a school (20 pts) The project connects to an existing facility that connects to school (10 pts) The project does not connect to retail/commercial land-use (0 pts)	20
Proximity to retail	The project directly connects to retail/ commercial land-use (15 pts) The project connects to an existing facility that connects to retail/ commercial land-use (7 pts) The project does not connect to retail/ commercial land-use (0 pts)	15
Proximity to Recreation	The project directly connects to a recreational opportunity (15 pts) The project connects to an existing facility that connects a recreational opportunity (7 pts) The project does not connect to a recreational opportunity (0 pts)	15
Safety	The project addresses a location with a history of bicycle- and pedestrian-involved collisions (10 pts) The project is parallel to a corridor with a history of bike/ped collisions (5 pts)	10
Demand	The project is in a location that falls within areas of estimated high demand (Score/No Score)	10
Access to Open Space	The project creates new open space providing ecological, environmental and aesthetic benefits (Score/No Score)	10
Total Possible Score		100

Figure 6.1 Potential Project Prioritization

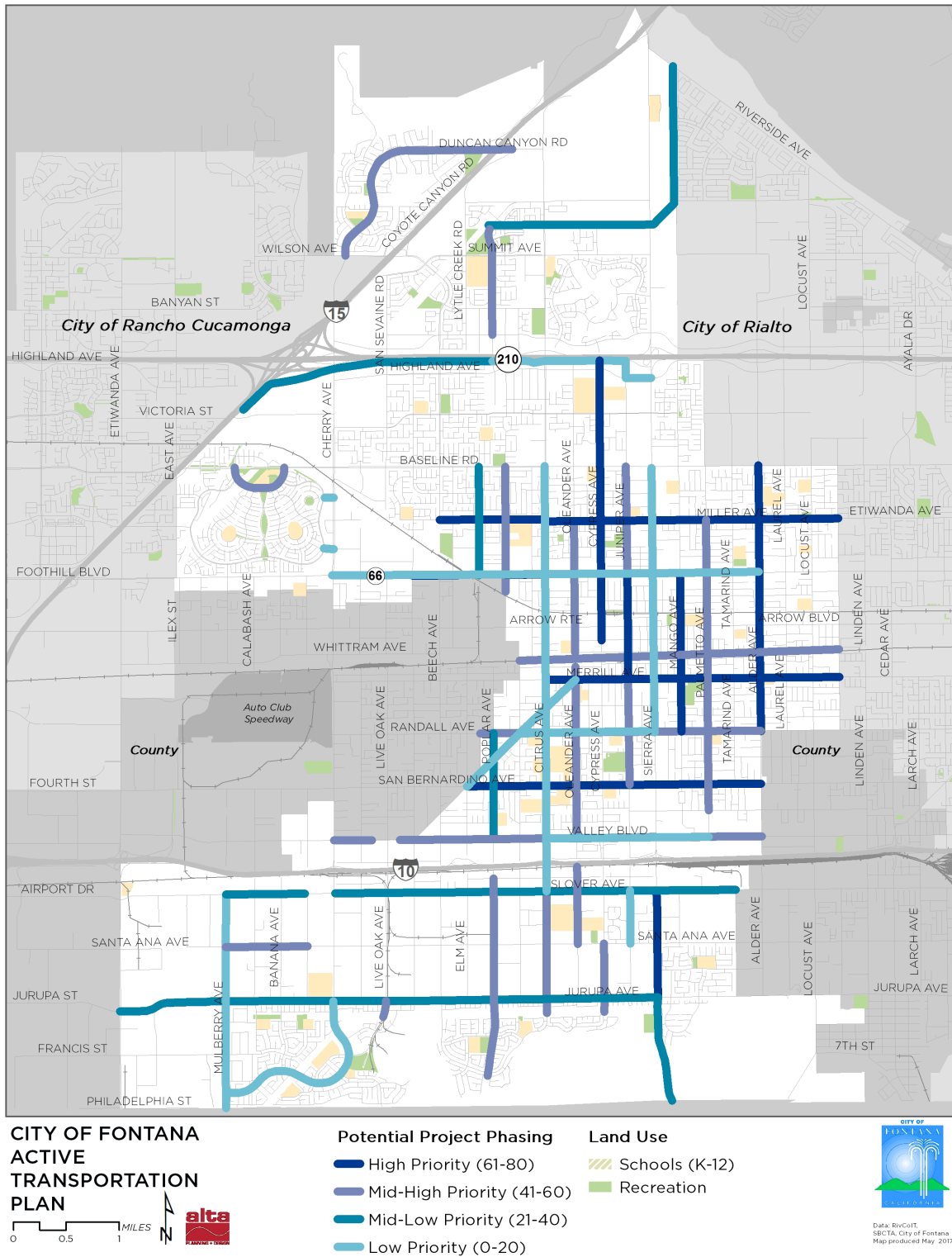


Table 6.2 Project Prioritization Scores

CORRIDOR	FROM	TO	CLASS	MILES	PRIORITIZATION
Score					
Sierra Ave	Slover Ave	Jurupa Ave	IV	1.01	80
San Bernardino Ave	Fontana Ave	Alder Ave	II	2.78	80
Merrill Ave	Mango Ave	Alder Ave	II	0.75	80
Merrill Ave	Alder Ave	Maple Ave	II	0.75	80
Merrill Ave	Citrus Ave	Mango Ave	II	1.27	80
Foothill Blvd	Almeria Ave	Citrus Ave	II	0.38	80
Foothill Blvd	Hemlock Ave	Sultana Ave	II	0.42	80
Alder Ave	Baseline Ave	Randall Ave	II	2.52	72
Miller Ave	Beech Ave	Maple Ave	II	3.77	72
Cypress Ave	Highland Ave	Valencia Ave	III	2.65	72
Mango Ave	Foothill Blvd	Merrill Ave	II	1.00	65
Juniper Ave	Foothill Blvd	Merrill Ave	II	1.00	65
Mango Ave	Merrill Ave	Randall Ave	III	0.50	65
Fontana Ave	Merrill Ave	Randall Ave	II	0.38	65
Live Oak Ave	Jurupa Ave	SCE Utility South	II	0.16	60
Randall Ave	Citrus Ave	Alder Ave	II	2.04	52
Randall Ave	Lime Ave	Citrus Ave	II	0.62	52
Almeria Ave	Baseline Ave	Foothill Blvd	III	1.18	52
Knox Ave	Curtis Ave	Sierra Lakes Pkwy	III	0.25	52
Knox Ave	SB Co Parcel	Curtis Ave	II	0.76	52
Oleander Ave	Miller Ave	Orange Way	III	1.24	50
Metrolink	Catawba Ave	Maple Ave	I	3.03	50
Cypress Ave	Santa Ana Ave	SCE Utility Path	III	0.64	50

CORRIDOR	FROM	TO	CLASS	MILES	PRIORITIZATION
Oleander Ave	RR	Santa Ana Ave	III	0.73	50
Oleander Ave	Ceres Ave	Valley Blvd	III	1.62	50
Poplar Ave	Boyle Ave	Beech Ave	II	1.87	45
Juniper Ave	Baseline Rd	Foothill Blvd	III	1.02	45
Citrus Ave	Slover Ave	SCE Utility South	IV	1.15	45
Valley Blvd	Sierra Ave	Alder Ave	II	1.00	45
Valley Blvd	Citrus Ave	Sierra Ave	II	1.03	45
Valley Blvd	Banana Ave	Citrus Ave	II	1.39	45
Juniper Ave	Merrill Ave	San Bernardino Ave	III	1.00	45
Palmetto Ave	Merrill Ave	Marygold Ave	III	1.25	45
Cherry Ave	Beech Ave	Bridlepath Dr N/ Oshawa Dr	II	0.96	45
Duncan Canyon Rd	Bridgepath Dr N/ Oshawa	Dr Lytle Creek Dr N	II	1.34	45
Valley Blvd	Cherry Ave	Redwood Ave	II	0.36	45
Santa Ana Ave	Mulberry Ave	Almond Ave	II	0.78	45
S Heritage Cir	Baseline Ave	Baseline Ave	III	0.70	42
Palmetto Ave	Miller Ave	Merrill Ave	III	1.50	42
SB Co Parcel	SCE Utility North Spur II	Riverside Ave	I	3.14	40
Sierra Ave	Jurupa Ave	S City Limit	II	0.99	40
Jurupa Ave	Etiwanda Ave	Mulberry Ave	II	1.02	37
Jurupa Ave	Mulberry Ave	Cherry Ave	II	1.02	37
Jurupa Ave	Cherry Ave	Live Oak Ave	II	0.50	37
Jurupa Ave	Live Oak Ave	Beech Ave	IV	0.53	37

CORRIDOR	FROM	TO	CLASS	MILES	PRIORITIZATION
Jurupa Ave	Beech Ave	Citrus Ave	IV	0.99	37
Jurupa Ave	Citrus Ave	Sierra Ave	IV	1.05	37
Slover Ave	Sierra Ave T	amarind Ave	IV	0.75	35
Slover Ave	Cherry Ave	Sierra Ave	II	3.04	35
Slover Ave	Mulberry Ave	Almond Ave	II	0.75	35
Poplar Ave	Randall Ave	Valley Blvd	III	1.00	30
210 Adjacent Path	Victoria St	Knox Ave	I	2.48	29
Lime Ave	Baseline Ave	Foothill Blvd	III	1.02	29
Highland Ave	Knox Ave	S Highland Ave	II	1.67	20
Meyer Canyon Rd	E Liberty Pkwy	Cherry Ave	III	0.09	17
Juniper Ave	Slover Ave	Santa Ana Ave	III	0.50	15
Roanoke Rd	E Liberty Pkwy	Cherry Ave	III	0.08	0
Mulberry Ave	Slover Ave	Jurupa Ave	III	1.01	0
Mulberry Ave	Jurupa Ave	Philadelphia St	II	1.01	0

PROJECT COST ESTIMATES

A summary of potential construction and maintenance costs for the recommended bikeway network is presented in Table 6.3. Costs are shown per unit for each bikeway class type and were estimated for the year 2020. Bikeway network costs were estimated by applying distance-based cost factors (by mile) to projects in each proposed facility class. The combined cost for the proposed bikeways within the Fontana is estimated \$64.5 million.

It is important to note the following general assumptions about the cost estimates. First, all cost estimates are conceptual, since there is no feasibility or preliminary design completed, and second, the design and administration costs included in these estimates may not be sufficient to fund environmental clearance studies. Costs do not include environmental remediation or right-of-way acquisition. Finally, costs estimates are a moving target over time as construction costs escalate quickly, and as such, the costs presented should be considered as rough order of magnitude only.

Table 6.3 Unit Construction and Maintenance Cost Assumptions

ITEM	UNIT	ESTIMATED COST	ESTIMATED MAINTENANCE COST PER YEAR
Class I Shared-Use Path	Mile	\$2,200,000	\$18,000
Class II Bike Lane	Mile	\$118,000	\$6,000
Class III Bike Route	Mile	\$16,000	\$2,000
Class IV Separated Bikeway	Mile	\$139,000	\$6,000

Table 6.4 and Table 6.5 present the planning level construction and maintenance cost assumptions used to determine project cost estimates and include both the proposed network developed for this plan and the SBCTA planned active transportation network. Unit costs are typical or average costs informed by Alta Planning + Design's experience working with California communities. While they reflect typical costs, unit costs do not consider project-specific factors such as intensive grading, landscaping, or other location-specific factors that may increase actual costs. For some segments, project costs may be significantly greater.

Table 6.4 Estimated Cost Summary by Project Type

PROJECT TYPE	TOTAL MILEAGE	ESTIMATED CONSTRUCTION COST (YEAR 2020)	ESTIMATED MAINTENANCE COST (20 YEAR DESIGN LIFE)
Class I Shared-Use Path	26.15	\$58,295,100	\$475,800
Class II Bike Lane	42.97	\$5,103,200	\$266,700
Class III Bike Route	16.2	\$265,500	\$35,600
Class IV Separated Bikeway	5.48	\$1,328,400	\$97,500
Total		\$64,570,000	\$875,600

Table 6.5 Estimated Construction and Maintenance Cost per Project

CLASS I SHARED-USE PATHS	CONSTRUCTION COST	MAINTENANCE COST (20 YR DESIGN LIFE)
San Bernardino County Parcel from Southern California Edison Utility North to Riverside Ave	\$6,999,900	\$57,100
Southern California Edison Utility North Spur I from Bridlepath Dr to SCE Utility North Spur II	\$3,566,800	\$29,100
Connector Path from Wilson Ave to Southern California Edison Utility North Spur I	\$1,114,600	\$9,100
Southern California Edison Utility North from East Ave to Sierra Ave	\$14,490,200	\$118,300
SR-210 Drainage (South) from Victoria Ave to Knox Ave	\$5,528,600	\$45,100
SR-210 Drainage (North) from San Sevaine Rd to Knox Ave	\$2,229,300	\$18,200
San Sevaine Trail Extension from Pacific Electric Trail to Victoria Ave	\$1,114,600	\$9,100
Metrolink Trail from Catawba Ave to Maple Ave	\$6,754,600	\$55,100
San Sevaine Trail (South) from Philadelphia Ave to 1-10 Freeway	\$5,573,100	\$45,500
Southern California Edison Utility South I from San Sevaine Trail to Rancherias Dr	\$1,783,400	\$14,600
Southern California Edison Utility South II from Live Oak Ave to Poplar Ave	\$2,452,200	\$20,000
Southern California Edison Utility South III form Catawba Park to Locust Ave	\$6,687,800	\$54,600
CLASS II BIKE LANES	CONSTRUCTION COST	MAINTENANCE COST (20 YR DESIGN LIFE)
Sierra Ave (Central) from Baseline Ave to Merrill Ave	\$237,500	\$12,400
Valley Blvd from Banana Ave to Alder Ave	\$534,400	\$27,900
Alder Ave (North) from Baseline Ave to Randall Ave	\$299,300	\$15,600
Cypress Ave (South) from Slover Ave to Southern California Edison Utility Path	\$59,400	\$3,100
Juniper Ave (Central) from Foothill Ave to Merrill Ave	\$118,800	\$6,200
Jurupa Ave from Etiwanda Ave to Like Oak Ave	\$386,000	\$20,200
Merrill Ave from Catawba Ave to Maple Ave	\$356,300	\$18,600
Miller Ave from Beech Ave to Maple Ave	\$447,700	\$23,400
Fontana Ave from Merrill Ave to Randall Ave	\$45,100	\$2,400
Highland Ave from Knox Ave to Highland Ave	\$198,300	\$10,400
Live Oak Ave from Jurupa Ave to Fernwood Way	\$35,600	\$1,900
Mulberry Ave from Jurupa Ave to Philadelphia Ave	\$120,000	\$6,300
Poplar Ave (South) from Boyle St to Beech Ave	\$207,800	\$10,900
Randall Ave from Lime Ave to Palmetto Ave	\$326,600	\$17,100
San Bernardino Ave from Fontana Ave to Alder Ave	\$330,200	\$17,200
Santa Ana Ave from Mulberry Ave to Tamarind Ave	\$629,400	\$32,900
Sierra Ave from Jurupa Ave to South City Border	\$117,600	\$6,100
Slover Ave from San Sevaine Trail to Sierra Ave	\$534,400	\$27,900
Mango Ave (Central) from Foothill Blvd to Merrill Ave	\$118,800	\$6,200

CLASS III BIKE ROUTE	CONSTRUCTION COST	MAINTENANCE COST (20 YR DESIGN LIFE)
Almeria Ave from Baseline Ave to Pacific Electric Trail	\$19,500	\$2,600
Cypress Ave (North) from Highland Ave to Valencia Ave	\$44,900	\$6,100
Juniper Ave (Central) from Baseline Ave to San Bernardino Ave	\$16,600	\$2,200
Mango Ave (Central) from Merrill Ave to Randall Ave	\$8,100	\$1,100
Lime Ave from Baseline Ave to Foothill Blvd	\$16,600	\$2,200
Meyer Canyon Rd from E Liberty Pkwy to Cherry Ave	\$1,500	\$200
Miller Ave from Plumaria Ave to Beech Ave	\$8,100	\$1,100
Mulberry Ave from Slover Ave to Jurupa Ave	\$16,300	\$2,200
Oleander Ave (North) from Miller Ave to Orange Way	\$20,300	\$2,800
Oleander Ave (Central) from Ceres Ave to Valley Blvd	\$26,000	\$3,500
Oleander Ave (South) from railroad to Santa Ana Ave	\$11,900	\$1,600
Palmetto Ave from Miller Ave to Marygold Ave	\$44,700	\$6,100
Poplar Ave (Central) from Randall Ave to Valley Ave	\$16,300	\$2,200
Roanoke Rd from E Liberty to Cherry Ave	\$1,300	\$200
S Heritage Circle from Baseline Ave to Baseline Ave	\$11,400	\$1,500
CLASS IV SEPARATED BIKEWAY	CONSTRUCTION COST	MAINTENANCE COST (20 YR DESIGN LIFE)
Slover Ave from Sierra Ave to Tamarind Ave	\$103,900	\$4,700
Sierra Ave (South) from Slover Ave to Jurupa Ave	\$278,400	\$12,500
Jurupa Ave from Live Oak Ave to Sierra Ave	\$360,100	\$16,100
Citrus Ave (South) from Slover Ave to Jurupa Ave	\$166,200	\$7,400

ON-STREET BIKEWAY IMPLEMENTATION STRATEGIES

Based on the recommended network presented in the previous sections, this section provides an overview of selected strategies that can be employed to update urban roadways to improve existing bikeways and create new bike lanes.

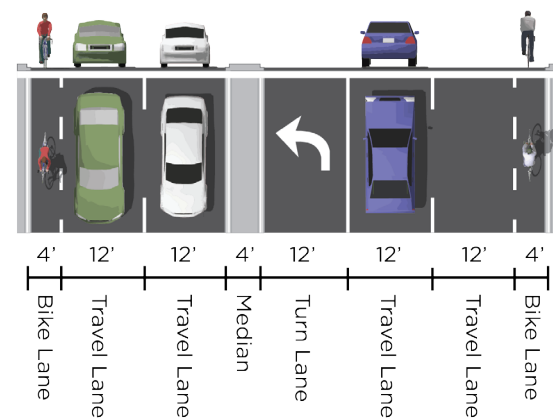
Improving Existing Bike Lanes Through Lane Narrowing

Lane narrowing utilizes roadway space that exceeds minimum standards to provide the needed space for bike lanes. Many roadways have existing travel lanes that are wider than those prescribed in local and national roadway design standards, or which are not marked. Many guidelines and manuals allow for the use of 11-foot and 10-foot wide travel lanes to improve existing bike lanes. Narrower lane widths (less than 11 feet) can be used effectively in urban arterial street improvement projects where the additional space can be used to relieve traffic congestion or address specific collision patterns.

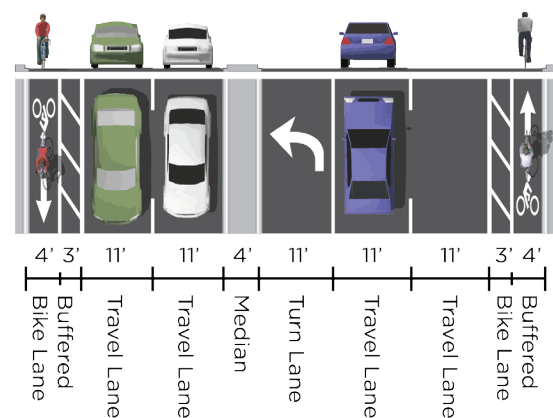
Duncan Canyon Road has a posted speed limit of 45 mph with an existing Class II bike lane in each direction. There is an opportunity to add a 3-foot buffer to the bike lane by reducing the width of the travel lanes and turn lane. Adding a buffer will create more comfortable condition for bicyclists and help to reduce incidence of sidewalk bicycle riding. Figure 6.2 shows an example of how Duncan Canyon Road bike lanes could be improved by striping a buffer.

Figure 6.2 Typical cross section along Duncan Canyon Road shows an example of adding a buffer to a existing bike lanes

EXISTING



PROPOSED





Examples of traffic calming through painted shoulder markings (left) and painted center median (right)

Traffic Calming Along Bike Routes and Neighborhood Greenways

Traffic calming can slow and deter motorists from driving on a street that has been prioritized for biking and walking. There is a suite of physical design measures that can be placed on roads to slow traffic and improve safety. Two traffic calming measures that could be easily implemented in Fontana are narrowing travel lanes through striping improvements and installing neighborhood traffic circles or roundabouts. Neighborhood greenways are recommended on several segments of Juniper Avenue and Oleander Avenue where posted speed limits and intersection density are conducive to safe, and comfortable bicycle riding conditions.

Randall Avenue and Santa Ana Avenue are two continuous east/west corridors in Fontana that have relative low traffic volumes. The right-of-way (ROW) through the corridor varies widely and has intermittent bike lanes. Where the ROW widens, narrowing travel lanes through striping will help slow speeding vehicles and installing curb extensions at selected intersections.

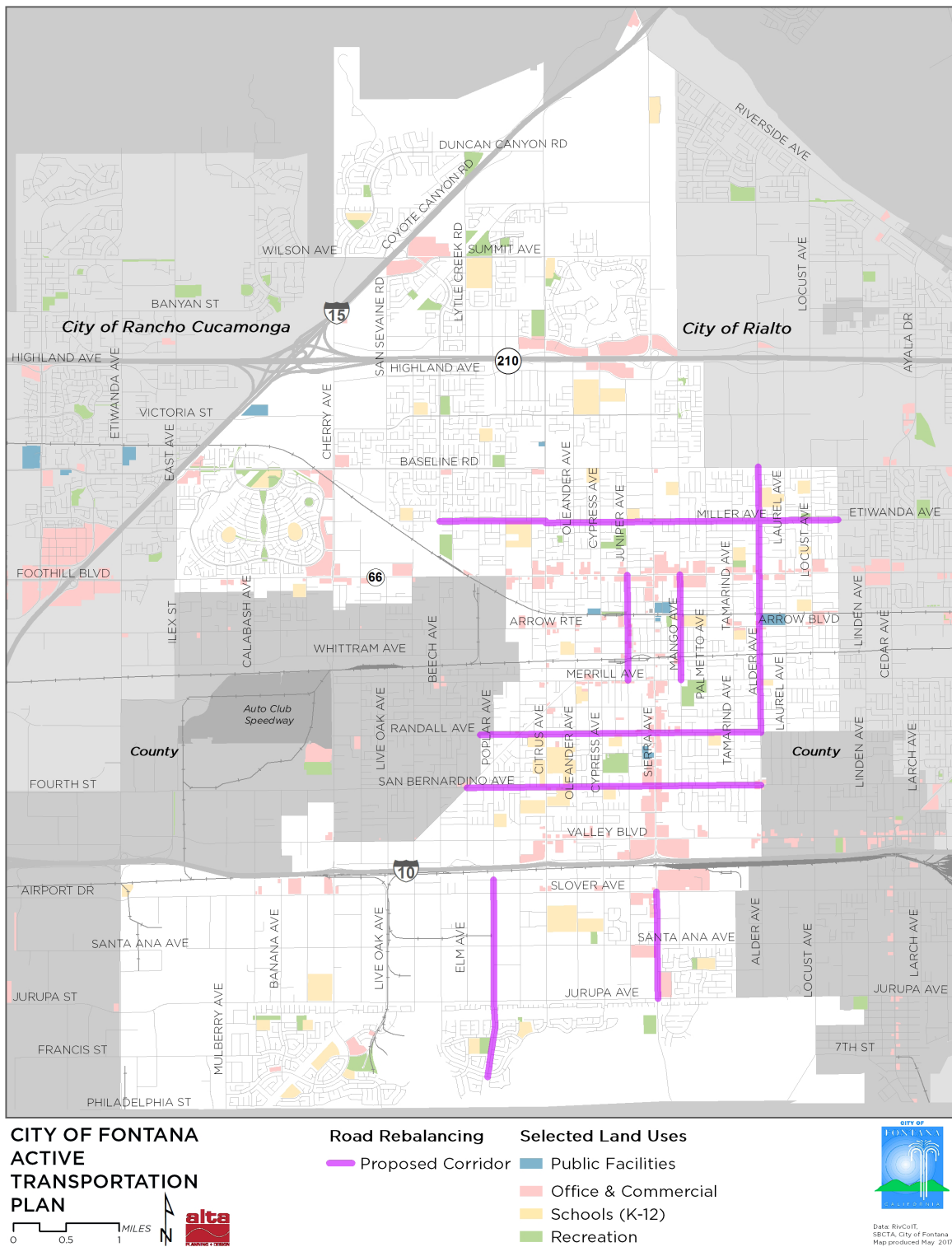
Road Rebalancing

Streets with excess vehicle capacity provide opportunities for bicycle lane retrofit projects. The repurposing of a single travel lane will generally provide sufficient space for bike lanes on both sides of a street.

Eight potential road rebalancing candidates have been identified along the following corridors (Figure 6.3):

- Poplar Avenue between Boyle Avenue and Beech Avenue
- San Bernardino Avenue between Fontana Avenue to Alder Avenue
- Miller Avenue between Beech Avenue to Maple Avenue
- Alder Avenue between Baseline Avenue and Randall Avenue
- Mango Avenue between Foothill Boulevard and Merrill Avenue
- Randall Avenue between Alder Avenue and Lime Avenue
- Sierra Avenue between Slover Avenue and Jurupa Avenue
- Juniper Avenue between Foothill Boulevard and Merrill Avenue

Figure 6.3 Proposed Road Rebalancing Corridors

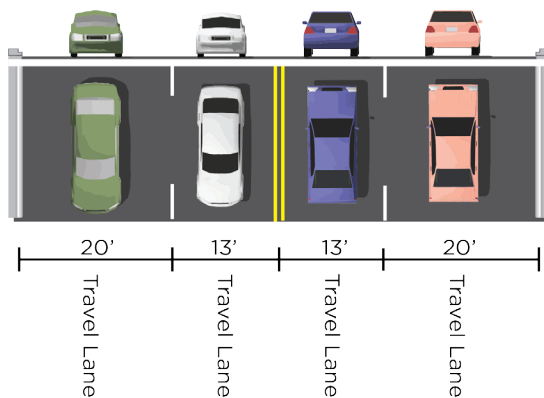


Land use analysis and preliminary traffic engineering evaluation of the existing average daily traffic (ADT) indicates that these eight corridors are good candidates for roadway rebalancing. The Federal Highway Administration (FHWA) advises roadways with ADT of 20,000 or less make good candidates for road rebalancing studies. Additional research and case studies can be found at http://safety.fhwa.dot.gov/road_diets/info_guide/ch3.cfm

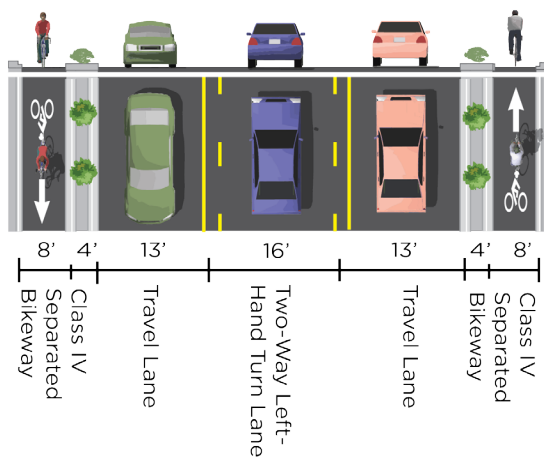
Figure 6.4 shows an example of a typical road rebalancing cross section that could be applied to San Bernardino Avenue.

Figure 6.4 Proposed road rebalancing on San Bernardino Avenue

EXISTING



PROPOSED



Road rebalancing projects from four travel lanes to three travel lanes enhances the safety for motorists by allowing the safe and prudent driver to lead the way at a more appropriate speed. It also provides a center turn lane for motorists turning left and space for motorists to make a right-turn. They also allow space to be created for people riding bicycles and reduce the “dual threat” for pedestrians crossing multiple lanes in the same direction. The center turn lane can also allow for a raised pedestrian island for mid-block crossings to reduce block lengths.

Parking Reduction

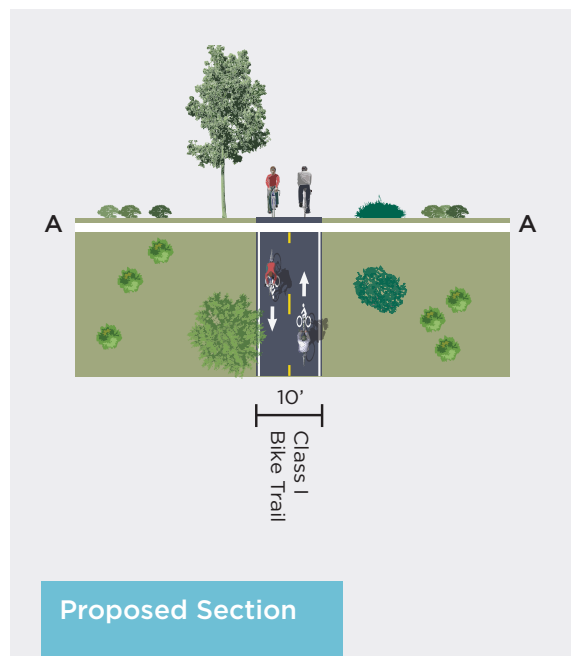
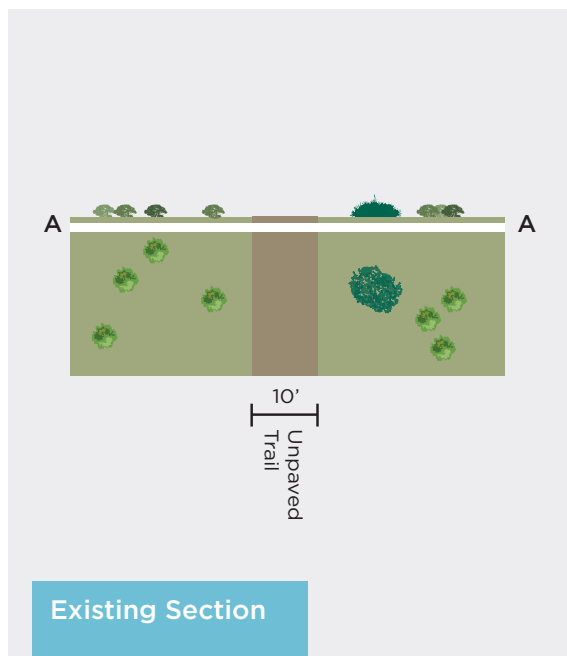
Bike lanes can replace one or more on-street parking lanes on streets where excess parking exists and/or the importance of bike lane connectivity outweighs parking needs. For example, parking may be needed on only one side of a street. Eliminating or reducing on-street parking also improves sight distance for bicyclists in bike lanes and for motorists on approaching side streets and driveways. Parking reduction can be used in conjunction with other on-road bicycle facilities to create a safer, more comfortable riding experience.

PRIORITY PROJECT CUTSHEETS

Cutsheets for the top 20 priority projects within the City of Fontana have been developed that take into account existing conditions, community feedback, opportunities, and constraints. The cutsheets present infrastructure improvements and concepts that could be implemented by the City to improve the active transportation network. They are not intended to be used as official construction or engineering drawings.

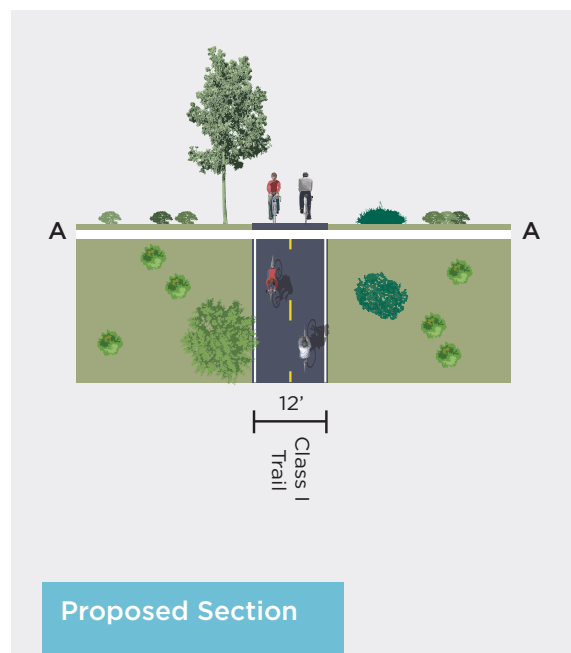
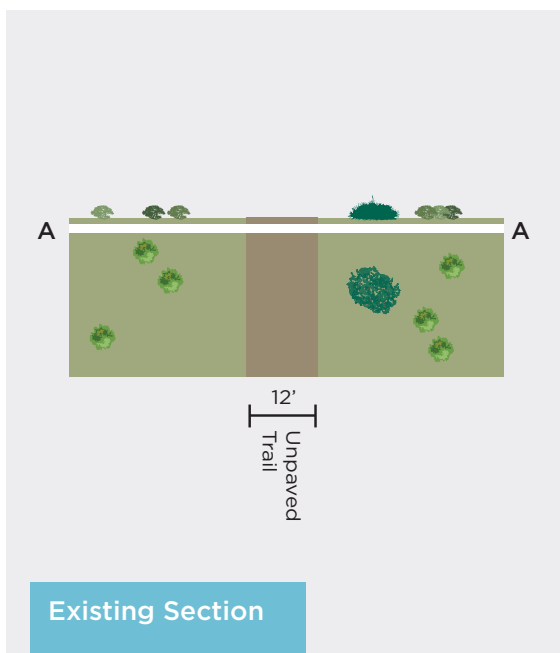
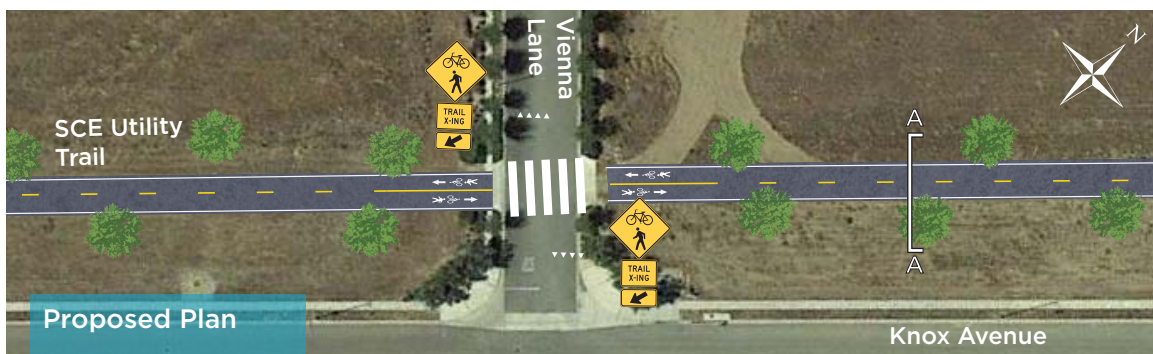
EDISON TRAIL AT PARKSIDE WAY:

Formalizing the existing unpaved Edison Trail improves accessibility, comfort and safety for all users, and encourages the community to bike on a regular basis. Adding improvements such as signage, yield markings, or a raised crossing helps to improve safety at intersections.



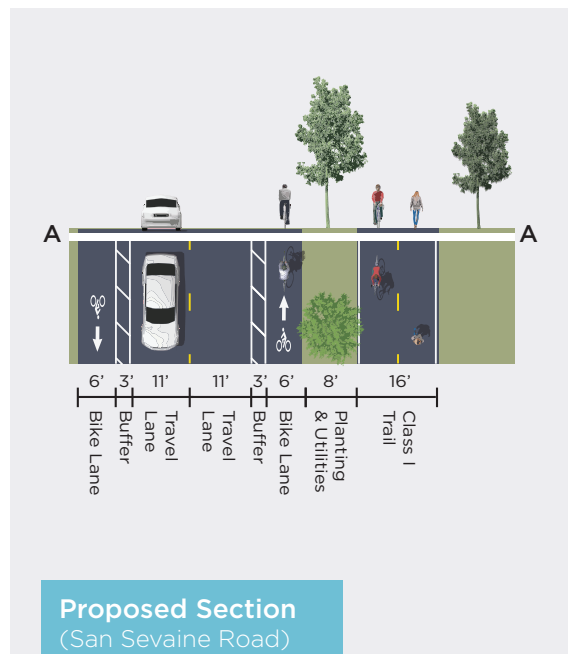
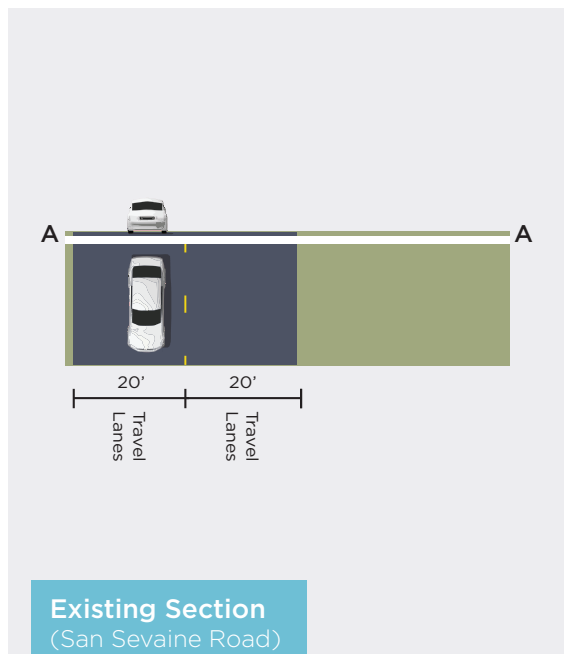
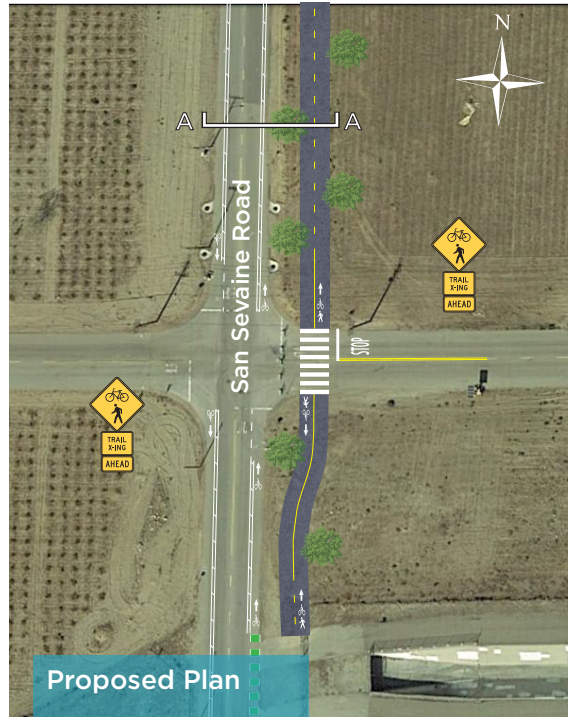
SOUTHERN CALIFORNIA EDISON UTILITY TRAIL AT VIENNA LANE:

Formalizing the existing unpaved utility trail improves accessibility, comfort and safety for all users, and provides a comfortable connection to Fontana Park. Improving mid-block street crossings with such features as crosswalks, signage, yield markings, and wayfinding can help improve trail safety, comfort, and visibility.



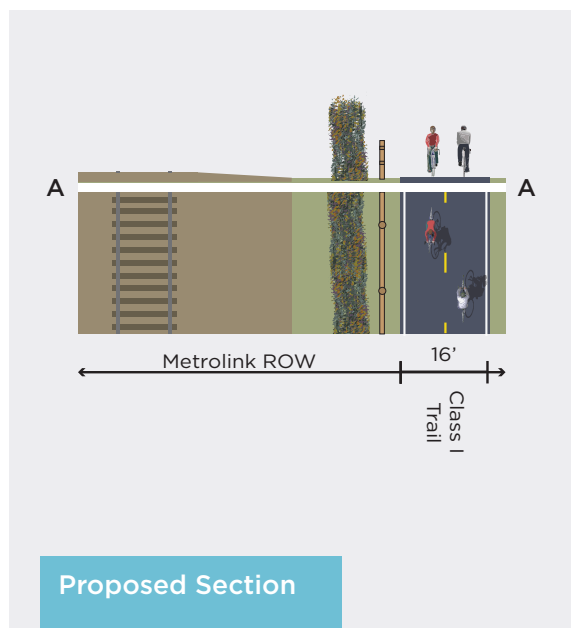
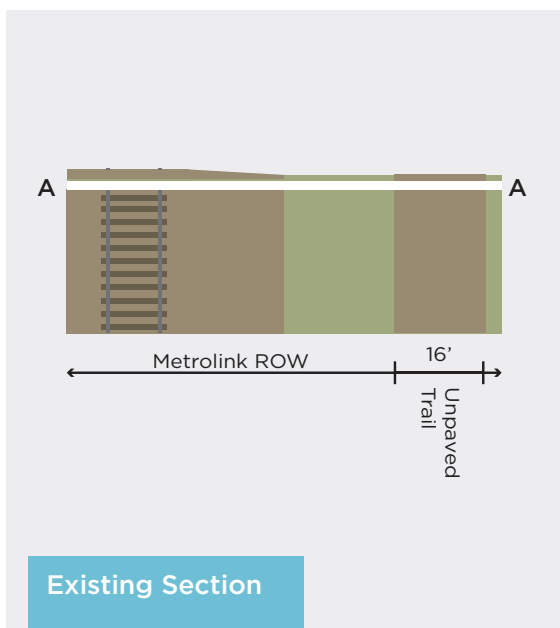
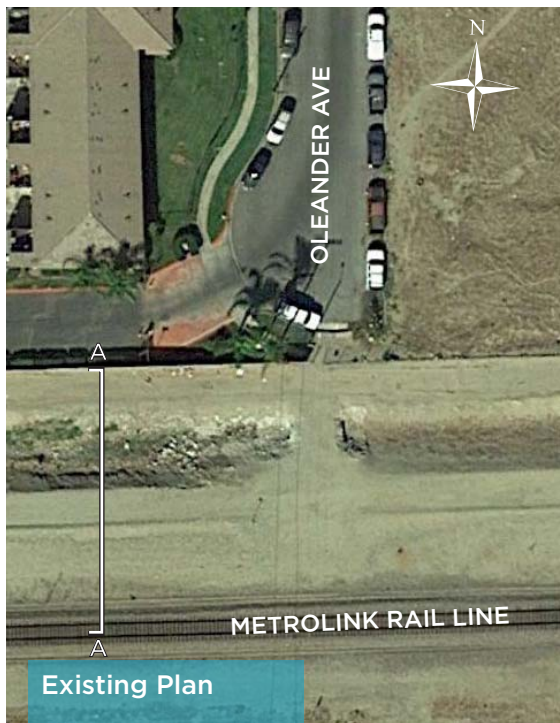
SAN SEVAINE TRAIL EXTENSION AT NORTH FRONTAGE ROAD:

Creating a sidepath along San Sevaime Road will provide a comfortable connection between the Pacific Electric Bike Trail and the frontage trail. Installing crossings with signage, and striping will help increase the visibility of the trail users to motorists.



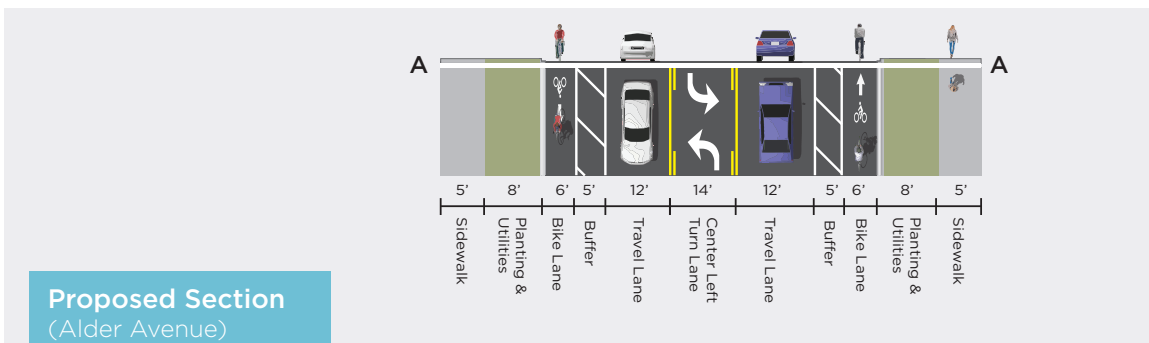
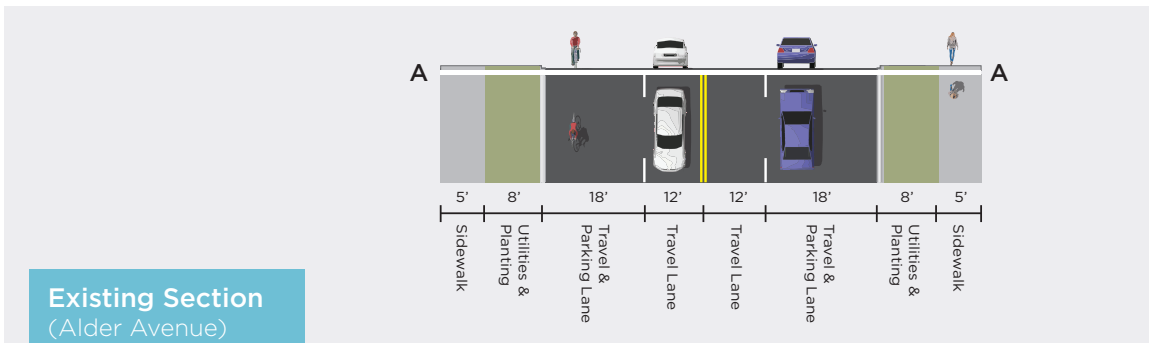
METROLINK TRAIL AND OLEANDER AVENUE:

Formalizing the existing unpaved trail that runs parallel to the Metrolink rail line and creating access points to adjacent dead-end streets will provide a great asset to the surrounding communities. A vegetative buffer and fencing between the trail and rail line will make the facility more comfortable. Providing shared lane markings and wayfinding signage on adjacent streets will help increase visibility of the trail and make additional connections.



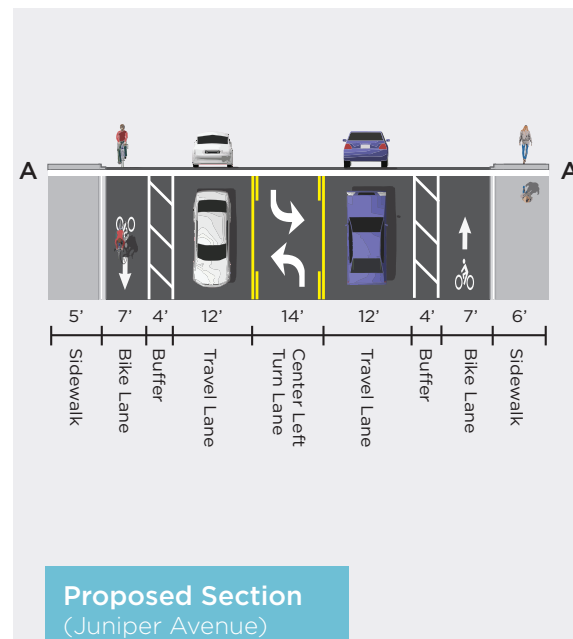
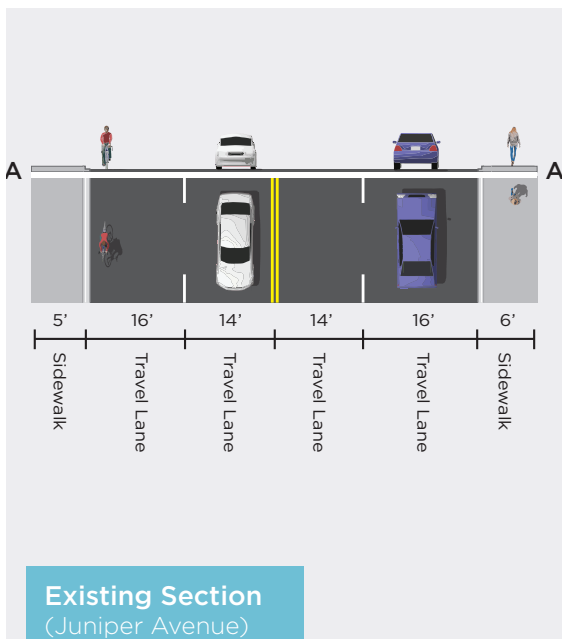
ALDER AVENUE NORTH AND WABASH AVENUE:

A lane reduction from four lanes to three lanes (including a two-way left turn lane), from Baseline Avenue to E. Foothill Blvd., allows the creation of buffered bike lanes on both sides of Alder Avenue. The inclusion of conflict striping helps motorists and bicyclists identify where conflicting movements may occur, such as driveways and intersections.



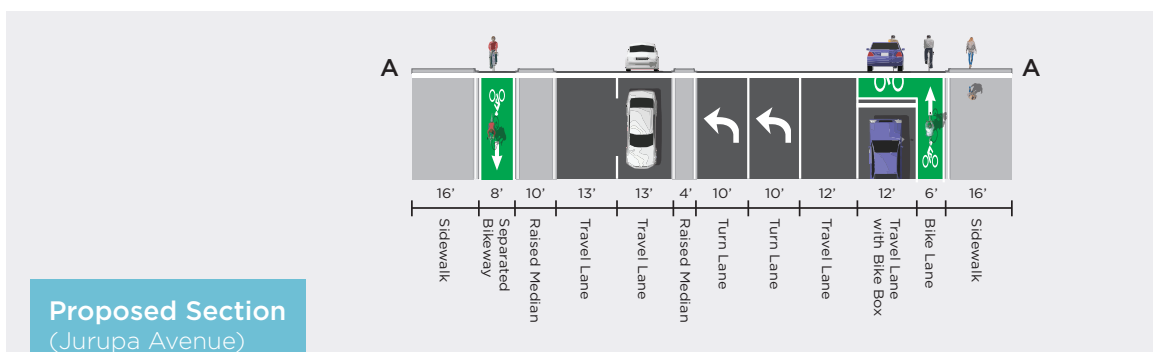
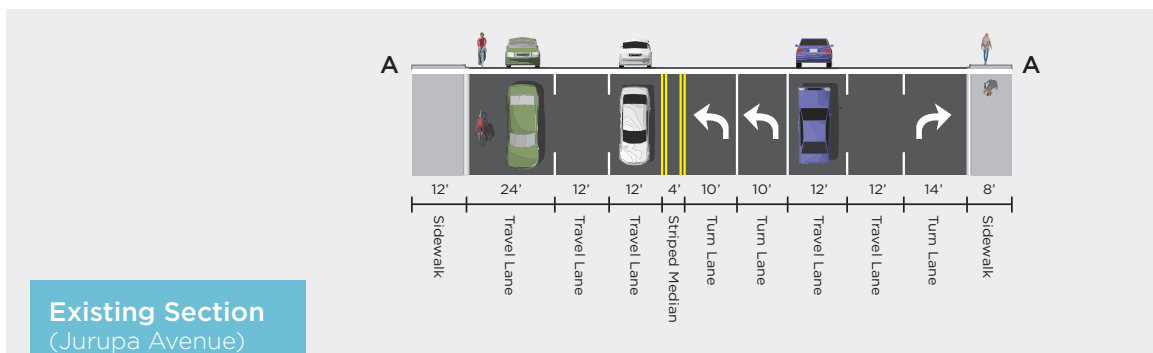
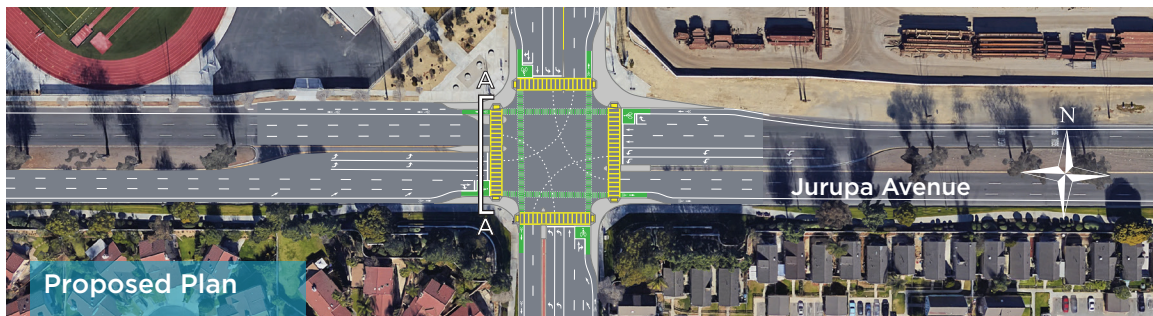
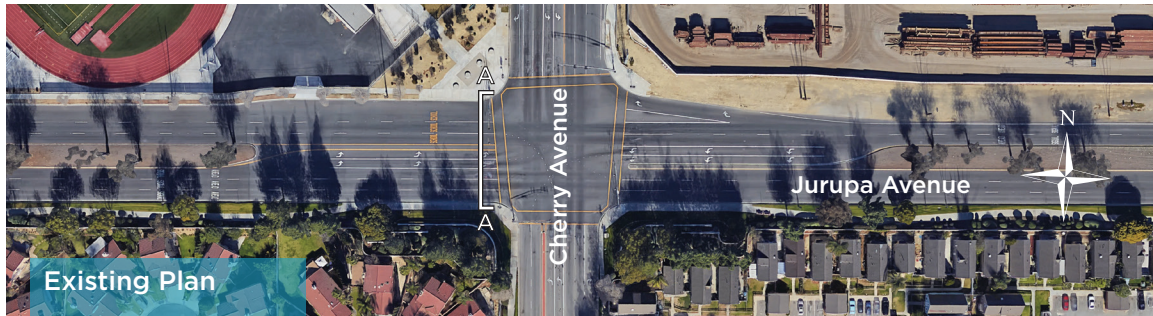
JUNIPER AVENUE AND VALENCIA AVENUE:

A lane reduction from four lanes to three lanes (including a two-way left turn lane), from Foothill Ave. to Merrill Ave., allows the creation of bike lanes on both sides of Juniper Avenue and eliminates merging conflicts where Juniper reduces down to two travel lanes. Inclusion of conflict striping will help motorists and bicyclists identify each other in the street space.



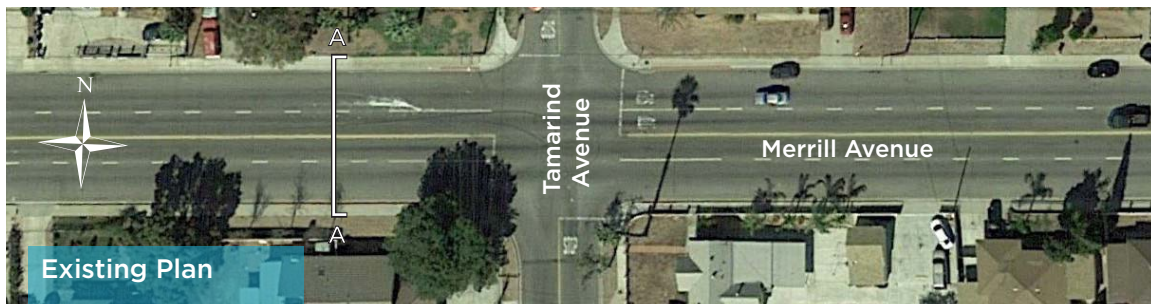
CHERRY AVENUE AND JURUPA AVENUE:

A thorough redesign of the intersection at Cherry Avenue and Jurupa Avenue includes high visibility crosswalks, curb extensions, median refuge islands to reduce the crossing exposure for pedestrians. Bike lanes, bike boxes, and conflict markings will help make bicyclists more visible.

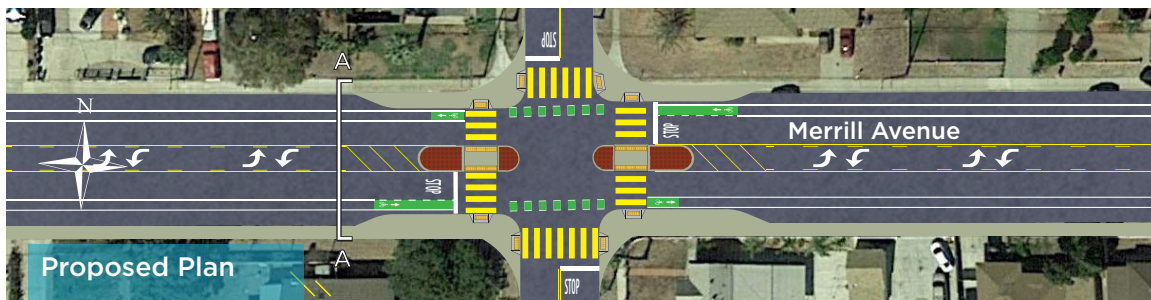


MERRILL AVENUE AND TAMARIND AVENUE:

A lane reduction from four lanes to three lanes (including a two-way left turn lane), from Sierra Ave. to Alder Ave., allows the creation of bike lanes on both sides of Merrill Avenue. The inclusion of conflict striping helps motorists and bicyclists identify where conflicting movements may occur. Crosswalks and two-stage crossings resulting from the pedestrian islands will make the intersection more comfortable for pedestrians as well.

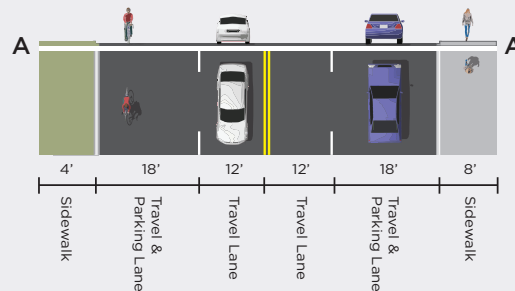


Existing Plan

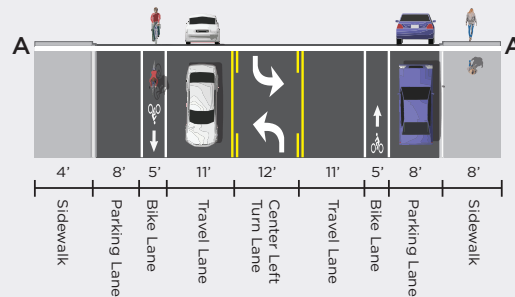


Proposed Plan

Existing Section
(Merrill Avenue)

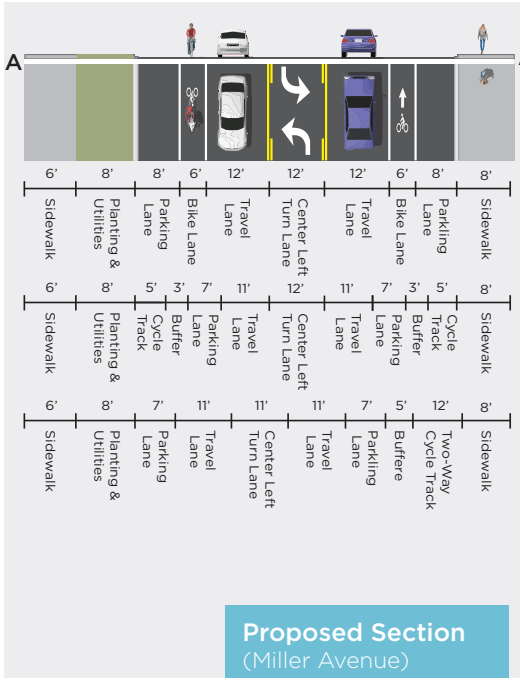
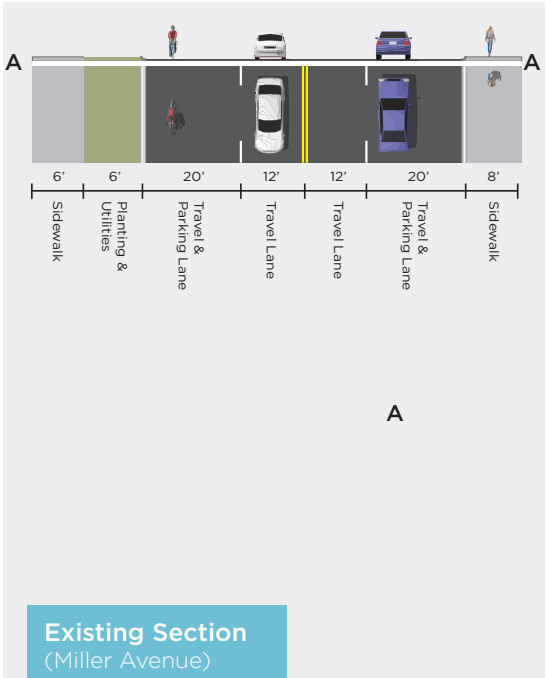
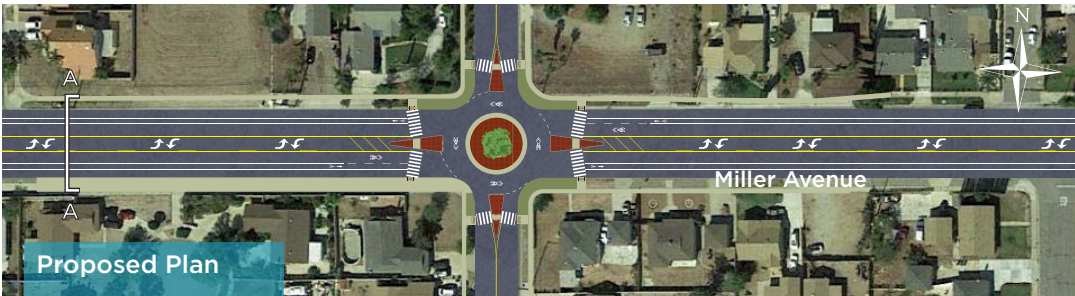


Proposed Section
(Merrill Avenue)



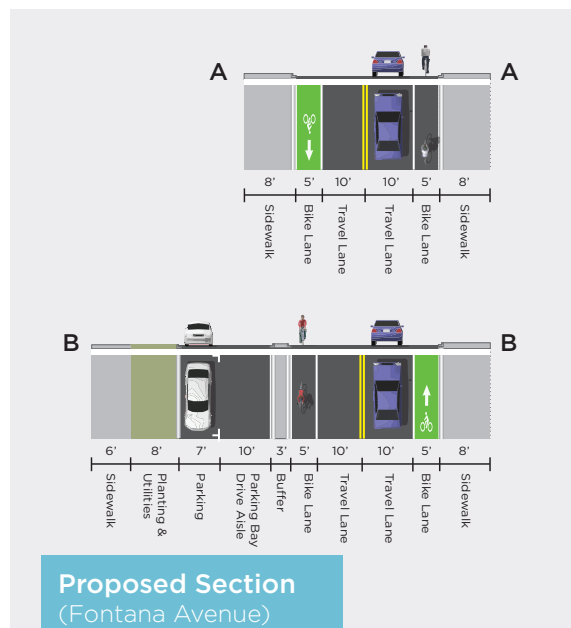
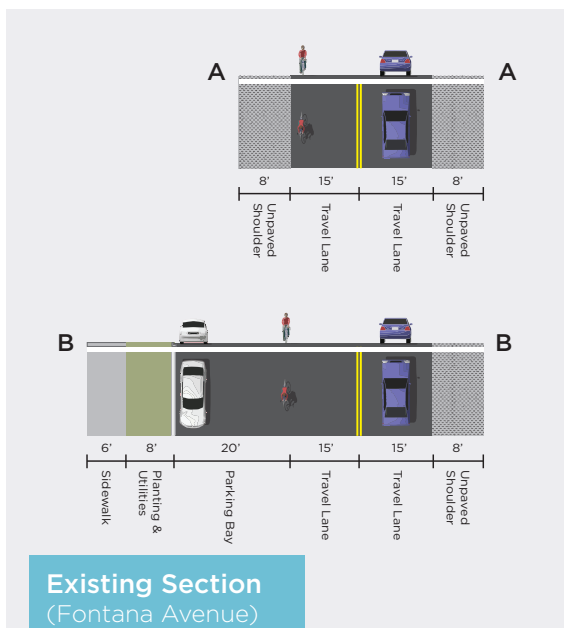
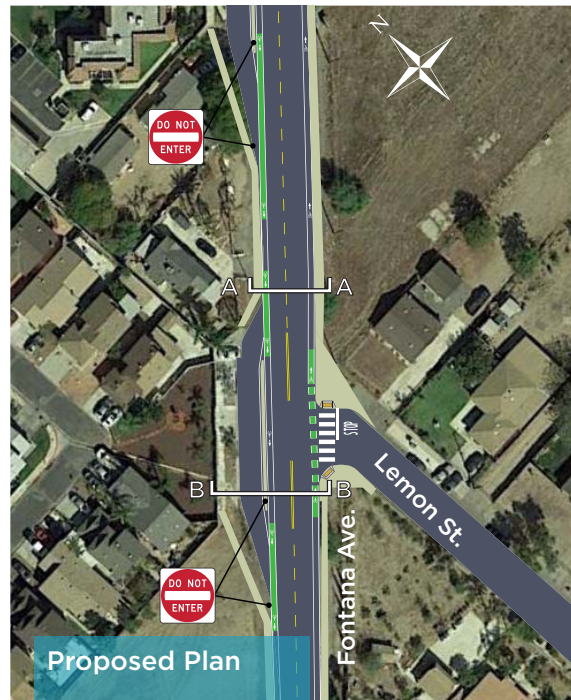
MILLER AVENUE AND MANGO AVENUE:

A lane reduction from four lanes to three lanes (including a two-way left turn lane), from Lime Ave. to Alder Ave., allows the creation of bike lanes on both sides of Miller Avenue. Converting intersections to roundabouts will reduce speeds and make the corridor more comfortable.



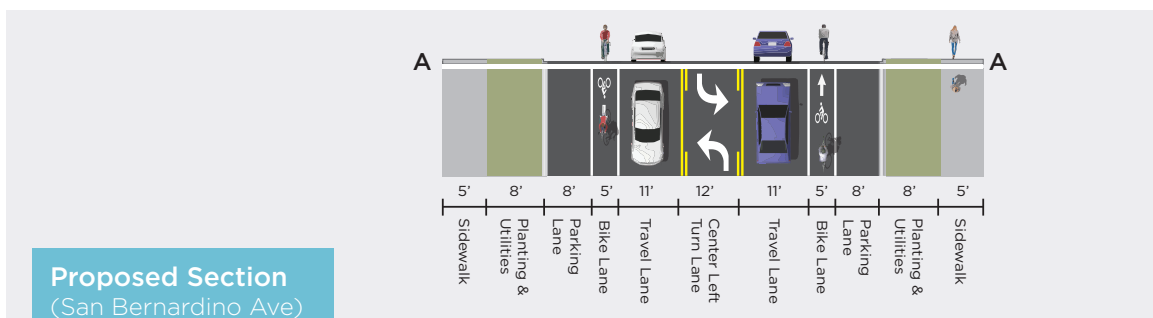
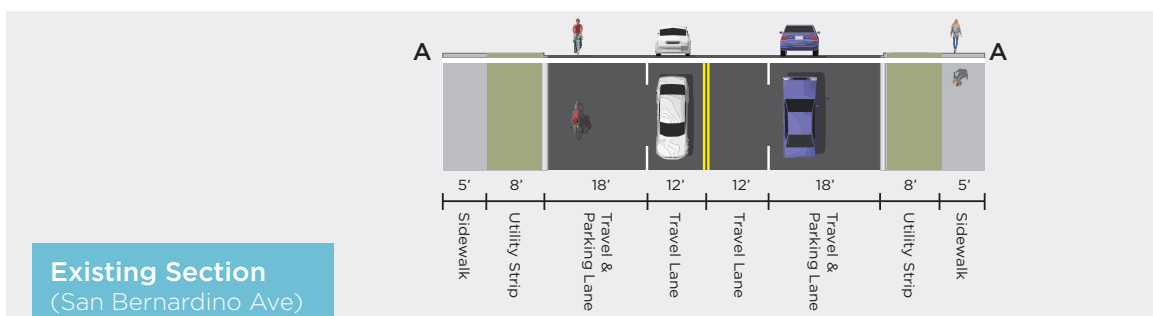
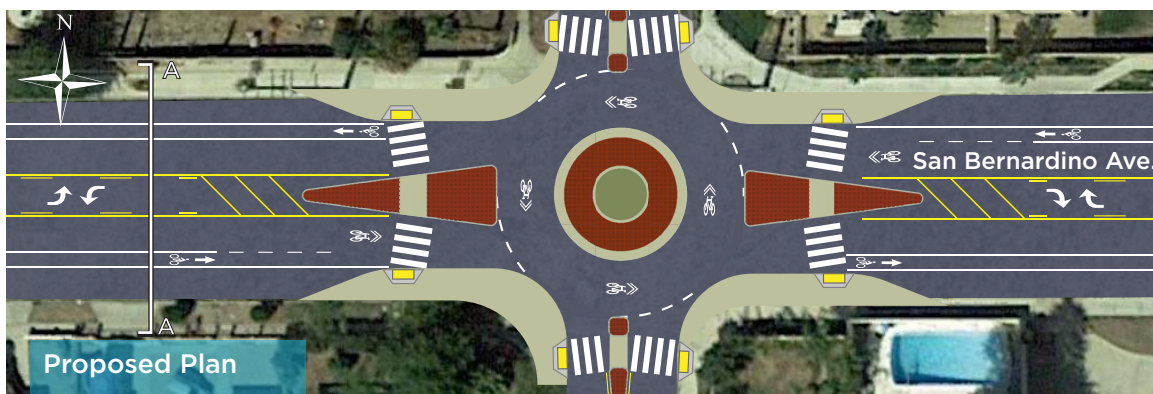
FONTANA AVENUE AND LEMON STREET:

The installation of bike lanes on Fontana Avenue from Merrill Ave. to Randall Ave. will help bicyclists and motorists identify conflict areas, such as the large parking bays along the corridor, especially if they are paired with conflict pavement markings. Creating a physical buffer between the parking bays will also create a more intuitive and comfortable corridor for bicyclists. Inclusion of sidewalks and crosswalks will open the corridor to pedestrian travel as well.



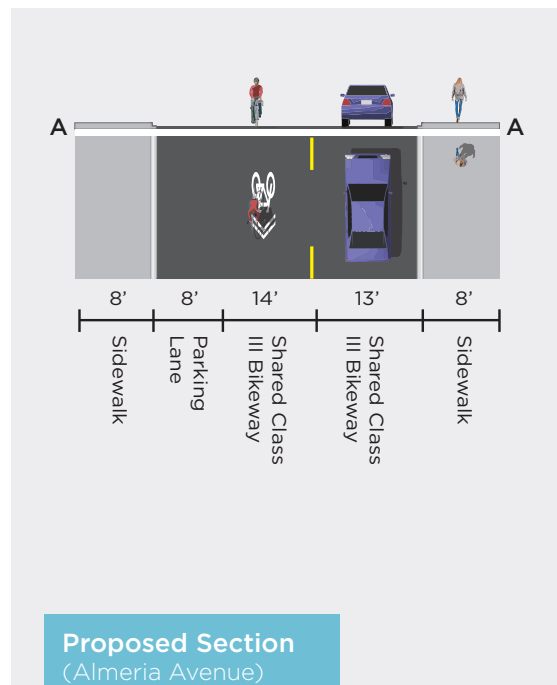
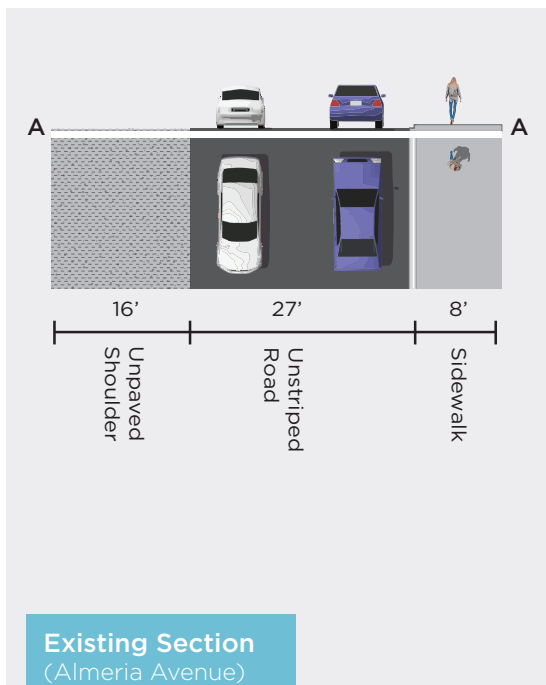
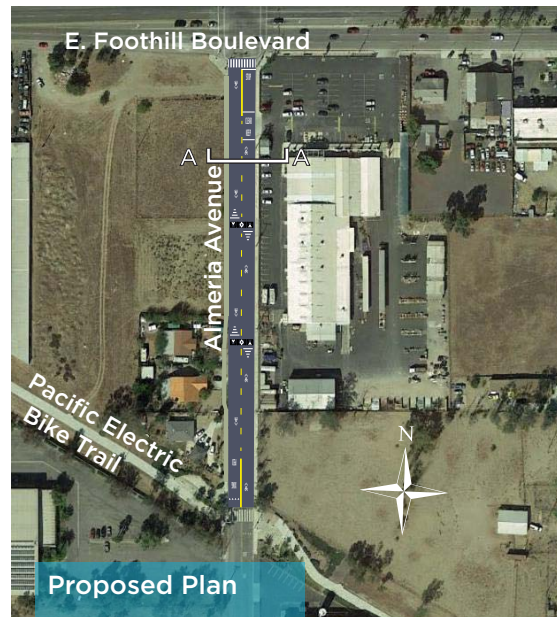
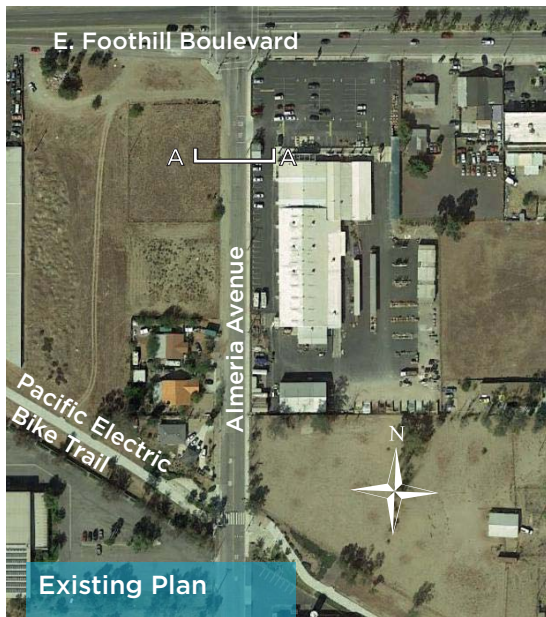
SAN BERNARDINO AVENUE AND MANGO AVENUE:

A lane reduction of four lanes to three lanes (including a two-way left turn lane), from Fontana Ave. to Alder Ave., allows the addition of bike lanes on both sides of San Bernardino Avenue. Converting intersections to roundabouts will reduce speeds along the corridor. The roundabout splitter islands also reduce crossing distance for pedestrians and create a two-stage crossing.



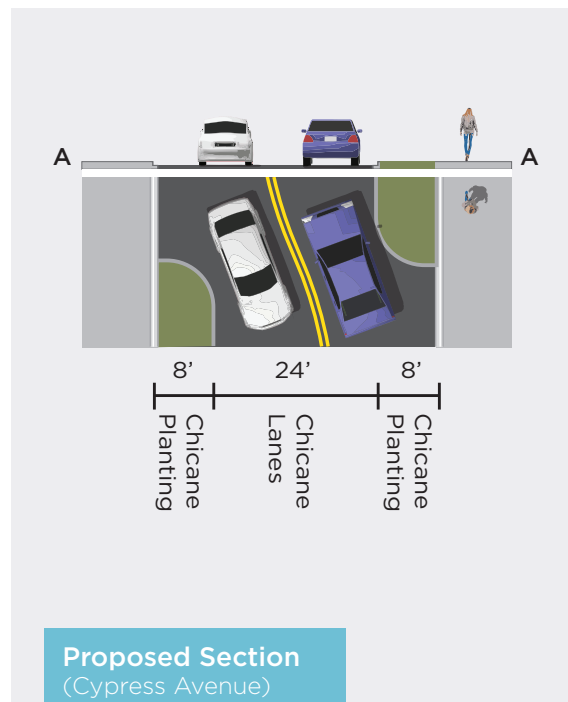
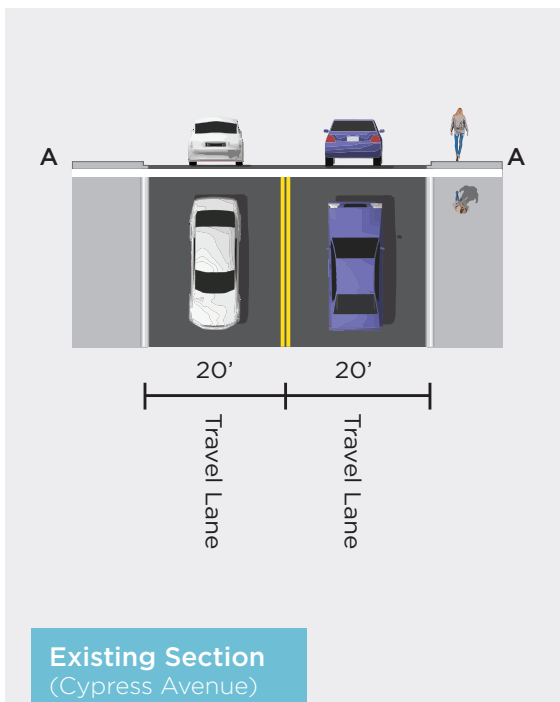
ALMERIA AVENUE NEAR E. FOOTHILL BOULEVARD:

Striping Almeria Avenue with shared lane markings will encourage bicyclists to ‘take the lane,’ reducing the need for bicyclists to ride on the rough, unpaved shoulder, and increasing the visibility of bicyclists to motorists. Inclusion of traffic calming features, such as speed humps, will help regulate traffic speeds to create a bicycle boulevard feeling. Installing a sidewalk on the west side will increase pedestrian connectivity.



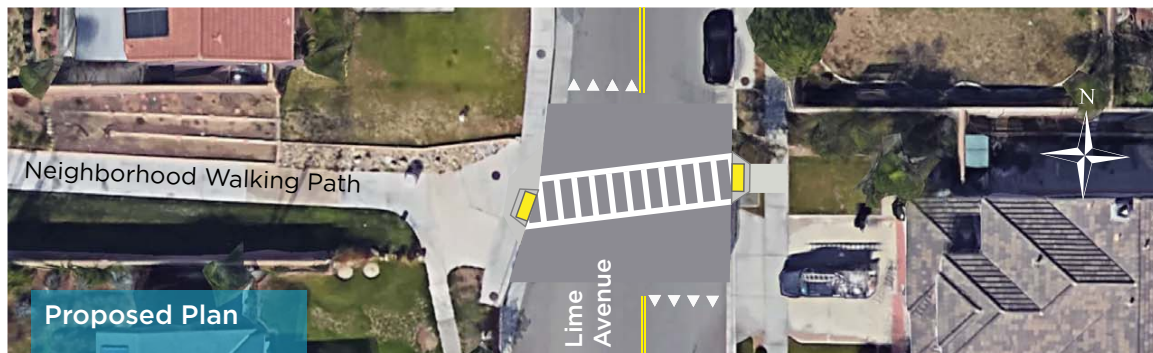
CYPRESS AVENUE NEAR ELAINE DRIVE:

Converting Cypress Avenue into a Class III Neighborhood Greenway will create a more comfortable corridor for all users. Implementing striping, signage, and traffic calming features (such as chicanes) will help regulate traffic speeds and encourage users to share the road.



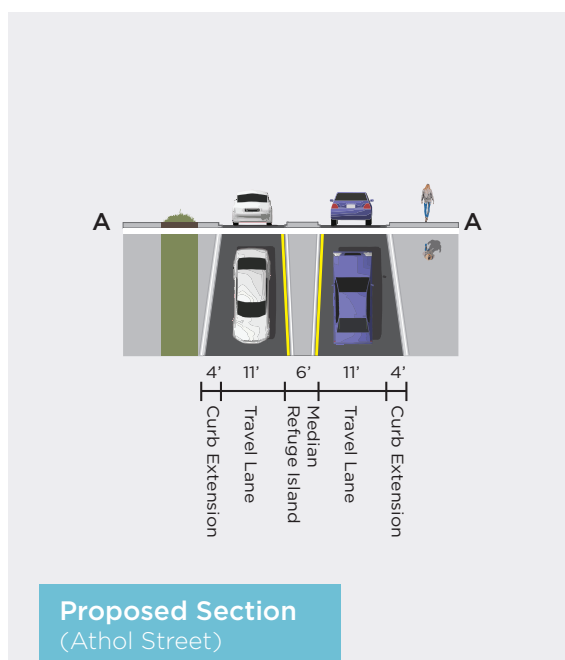
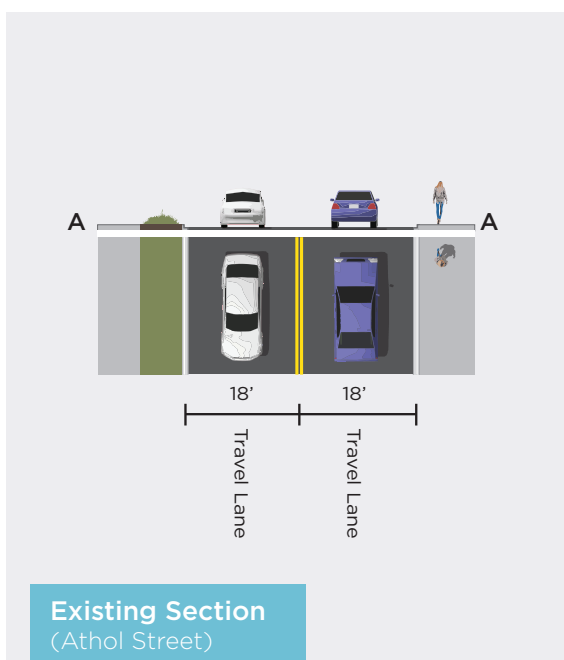
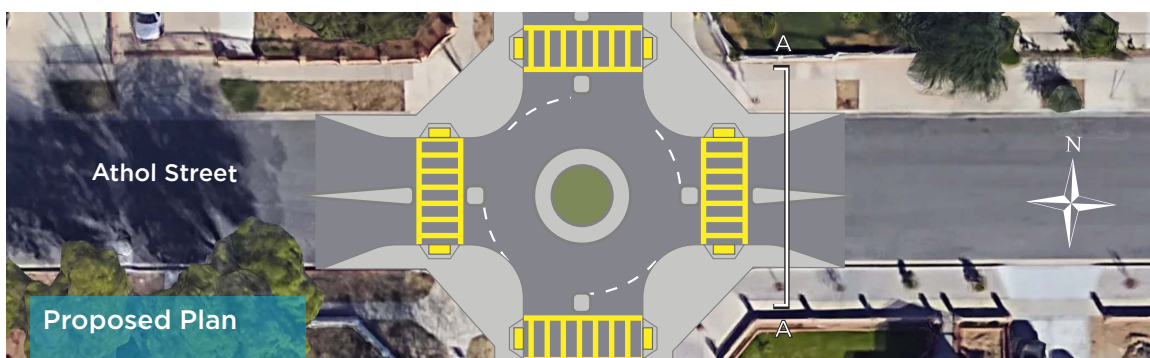
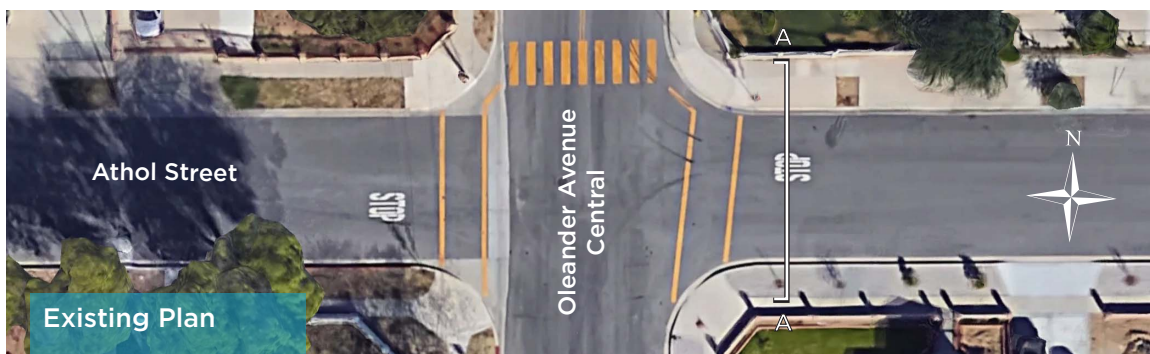
LIME AVENUE SOUTH OF SAN JACINTO AVENUE:

Adding a crosswalk at this location will increase safety and visibility for pedestrians and bicyclists crossing Lime Avenue from the adjacent neighborhood path. Place west ramp where shown to minimize subsurface conflicts.



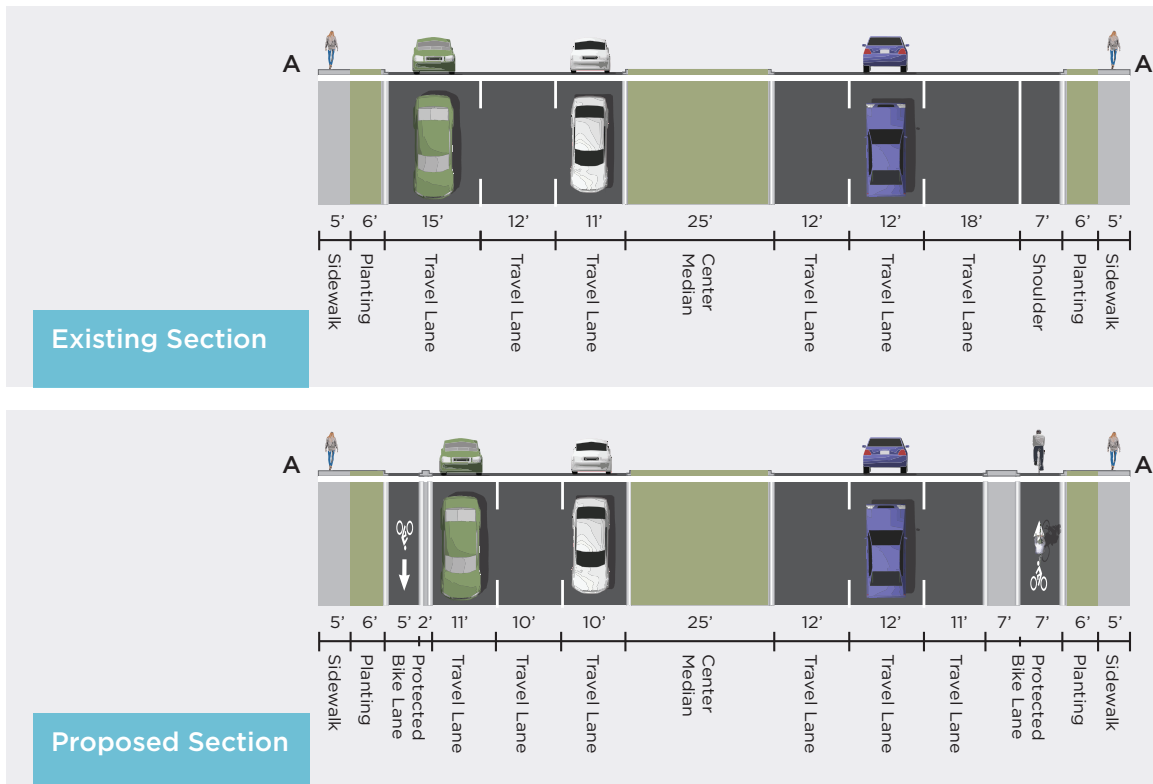
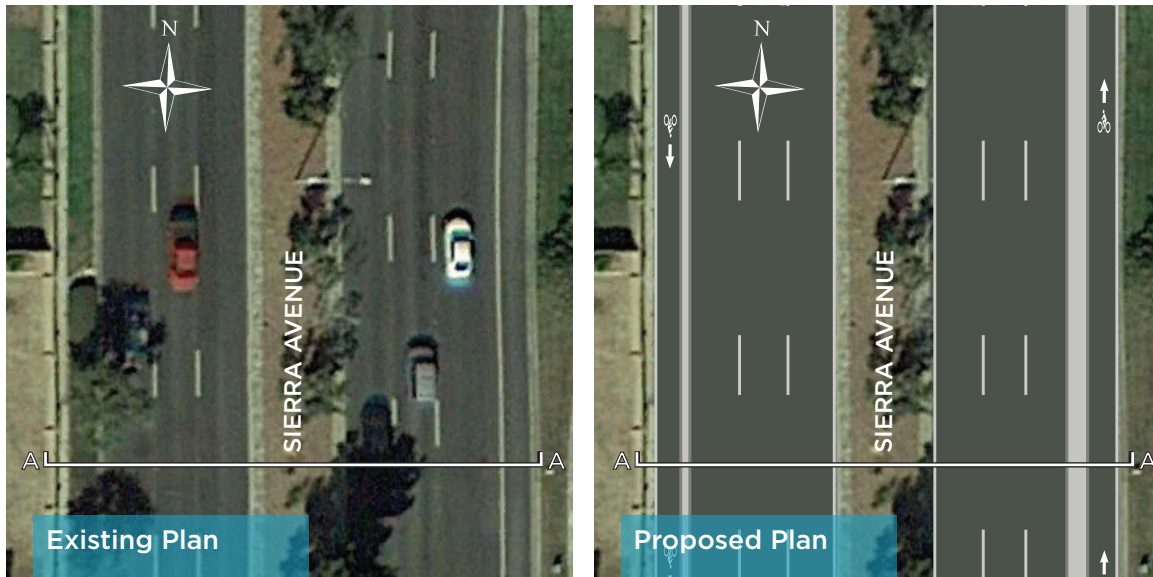
OLEANDER AVENUE AND ATHOL STREET:

A traffic circle creates a much safer crossing for all users by minimizing potential conflict zones, while high visibility crosswalks, curb extensions and median refuge islands increase visibility and safety for pedestrians.



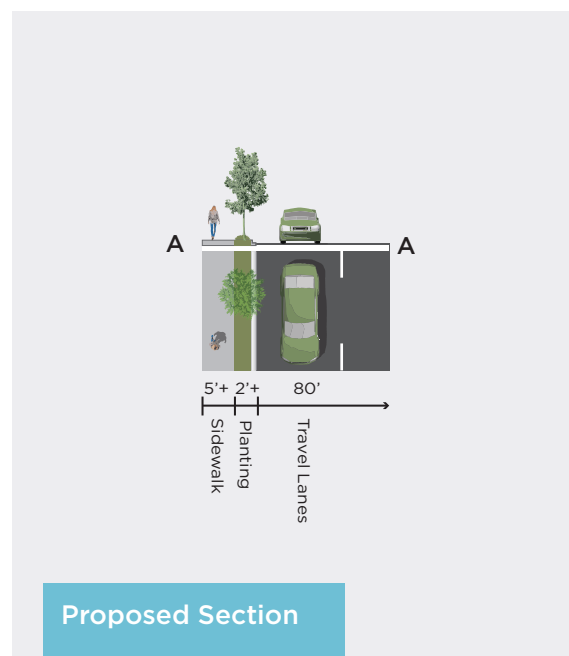
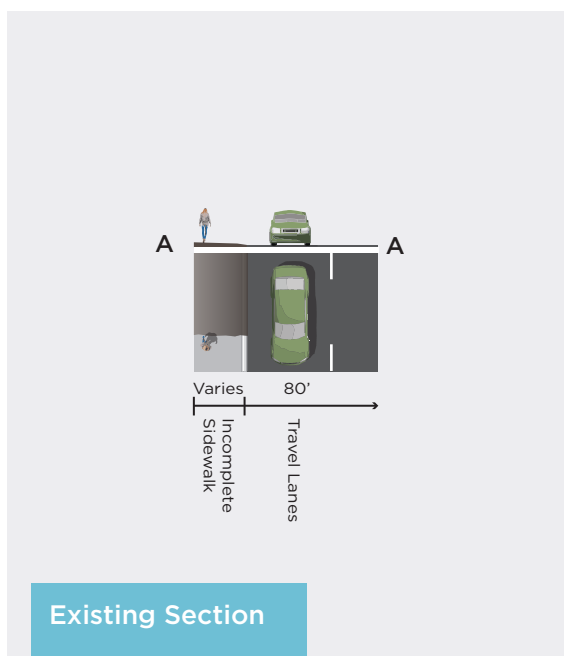
SIERRA AVENUE NEAR SLOVER AVENUE:

Oversized lanes allow for the creation of physically separated cycle tracks on both sides of the road, which creates a much more safe condition for bicyclists.



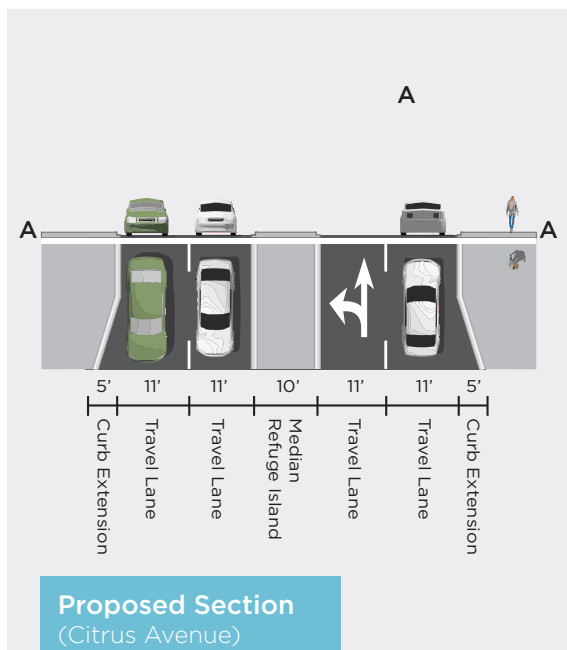
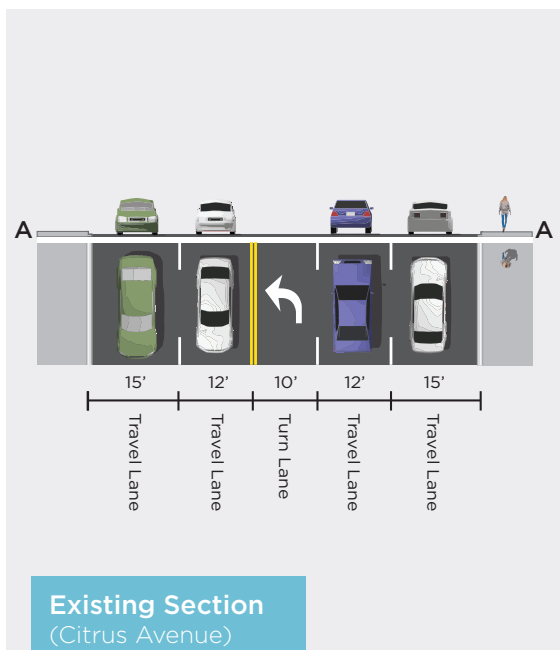
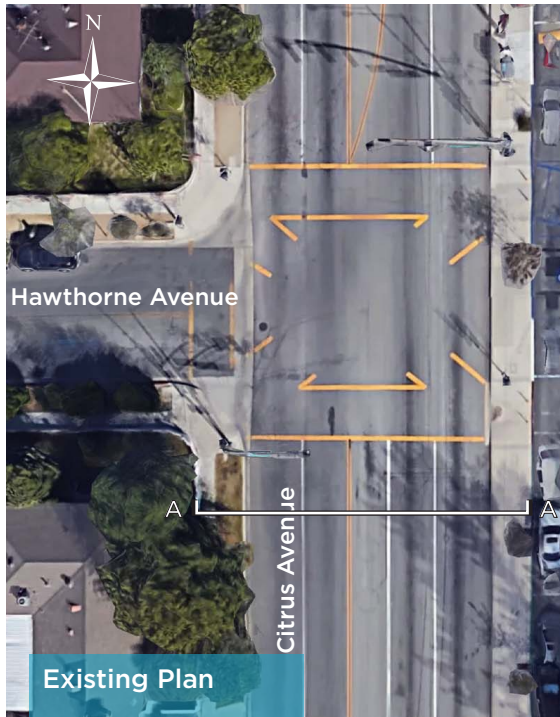
FOOTHILL BOULEVARD:

Closing gaps in the sidewalks along Foothill Boulevard will improve safety and access to the residential and commercial areas along this corridor.



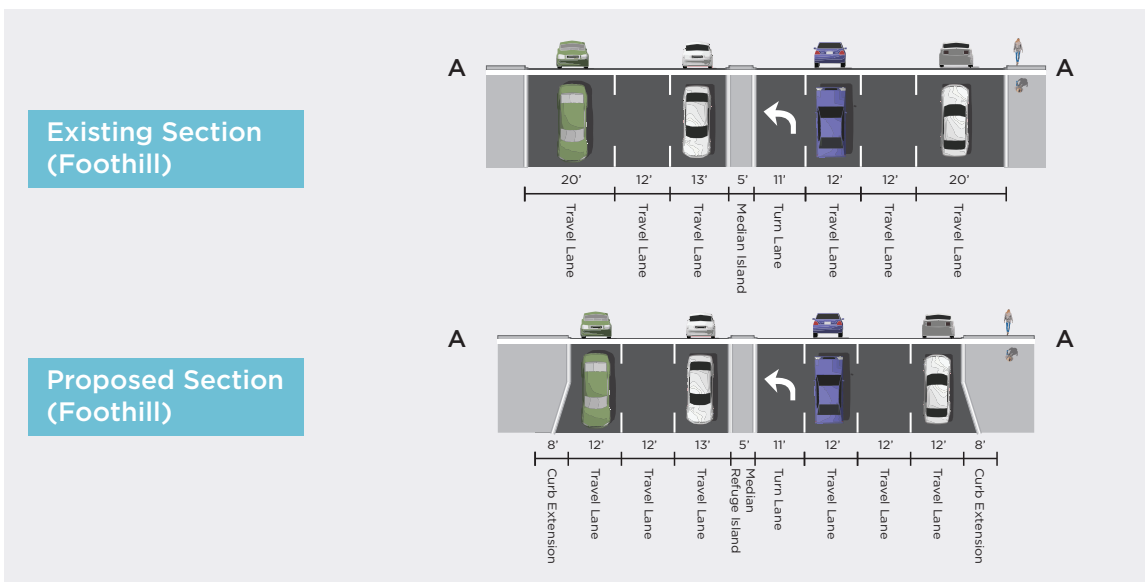
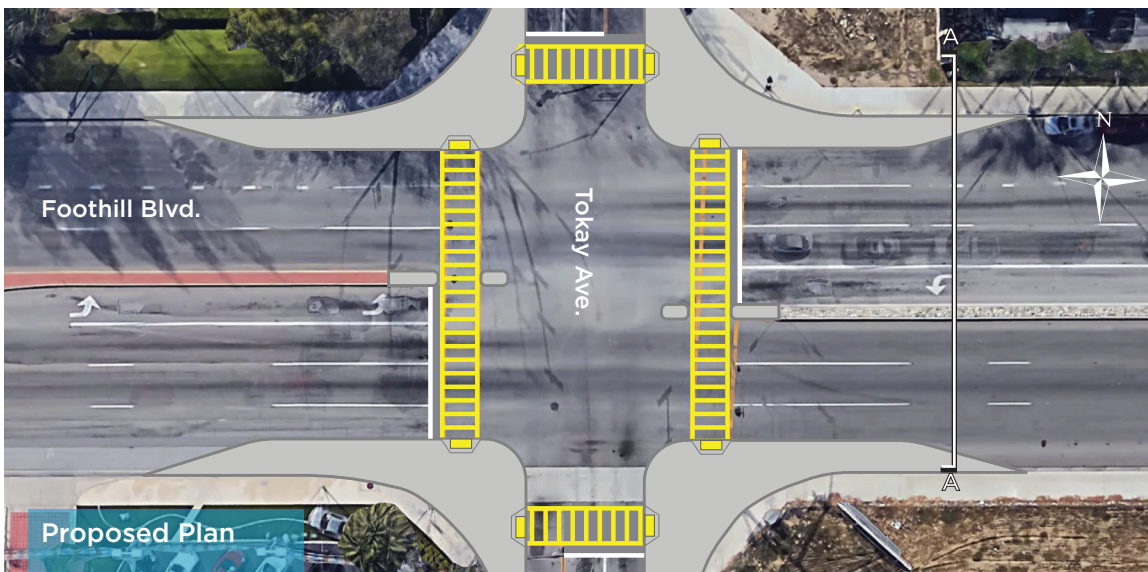
CITRUS AVENUE AND HAWTHORN AVENUE:

Curb extensions, high visibility crosswalks and median refuge islands will greatly increase the visibility of pedestrians, making it safer for high school students to walk or bike to and from school. Reducing the crossing distance also decreases the portion of the signal cycle dedicated to the all-pedestrian phase.



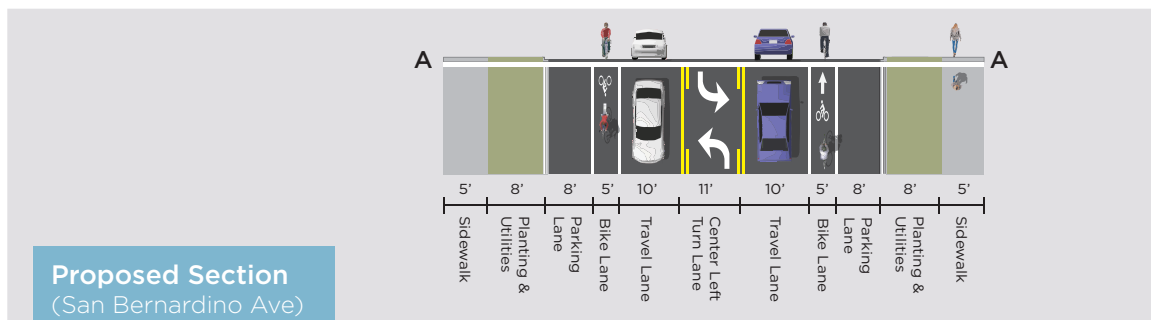
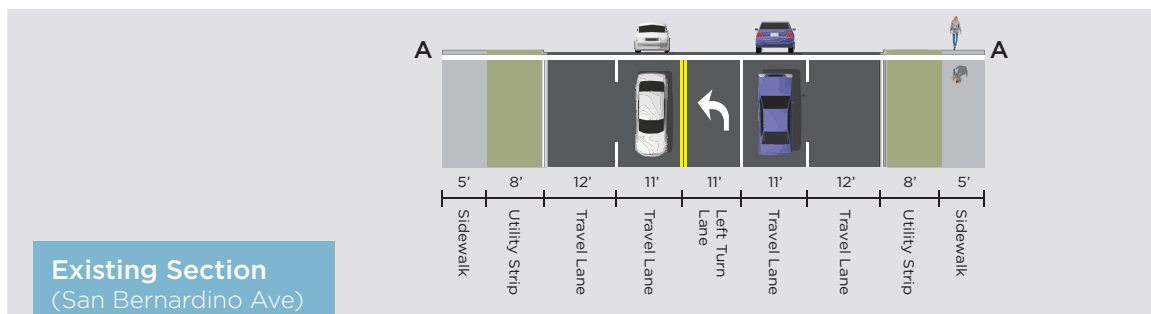
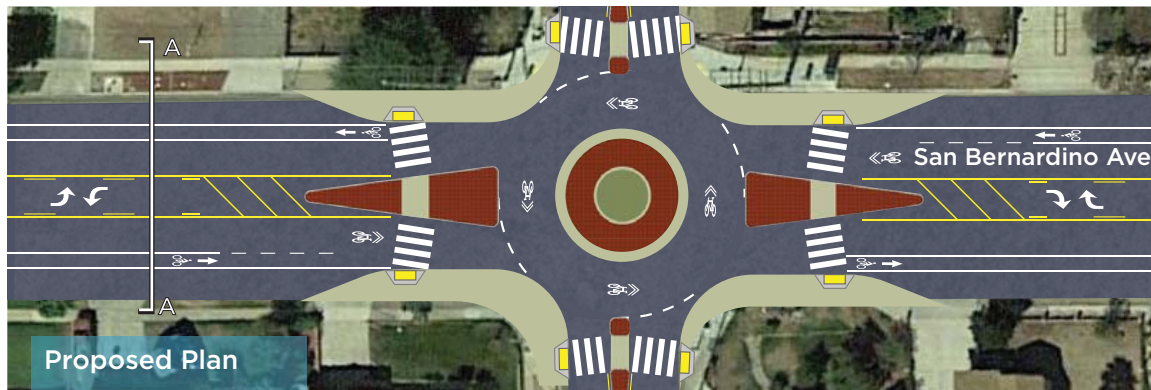
FOOTHILL BOULEVARD & TOKAY AVENUE:

Curb extensions, high visibility crosswalks and median refuge islands will increase the visibility of pedestrians, making it safer to cross this very wide existing Boulevard.



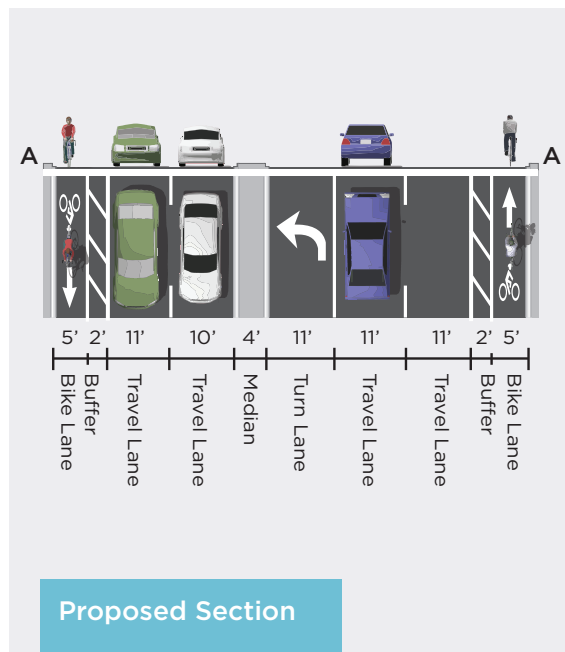
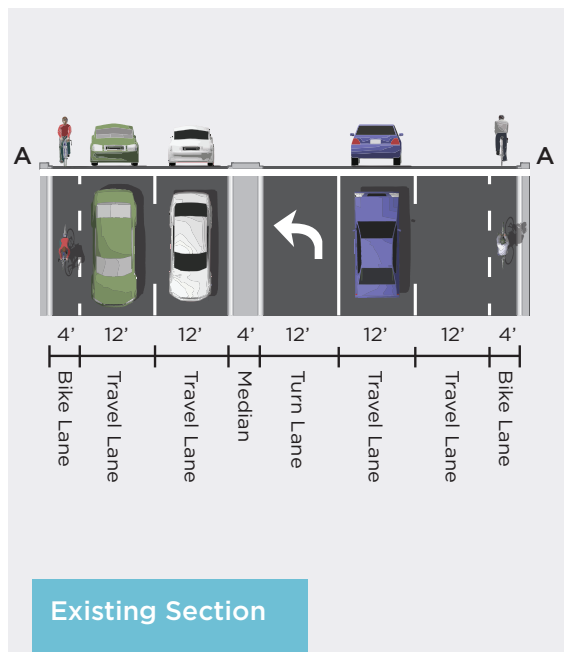
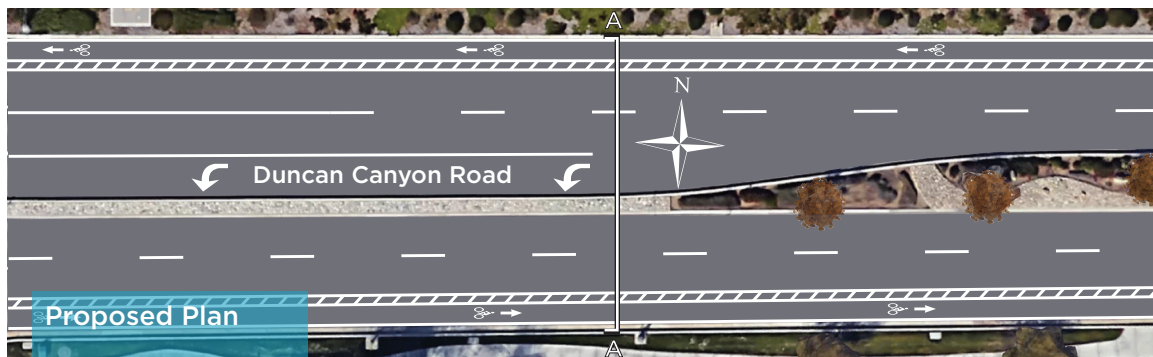
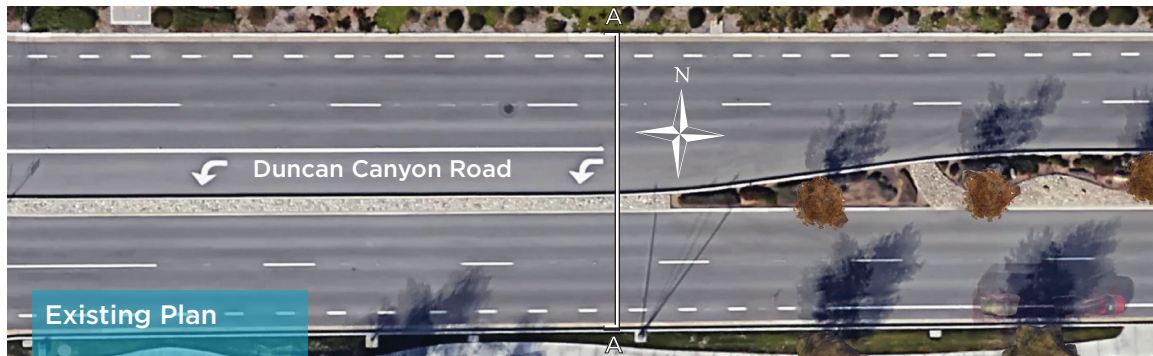
SAN BERNARDINO AVENUE AND PALMETTO AVENUE:

A lane reduction of four lanes to three lanes (including a two-way left turn lane), allows the addition of bike lanes. Converting the intersection of San Bernardino Avenue and Palmetto Avenue to a roundabout will reduce speeds along the corridor and roundabout splitter islands reduce crossing distance for pedestrians and create a two-stage crossing.



DUNCAN CANYON ROAD:

Upgrading the existing bike facility on Duncan Canyon Road to include a buffer between bicyclists and vehicles can be achieved by reducing the width of the travel lanes without reducing the number of travel lanes. This will significantly increase comfort and safety for bicyclists.







CHAPTER 7

PERFORMANCE MEASURES

There are a number of indicators that can be measured to quantify the benefits and performance of active transportation infrastructure. These evaluations are important to justify capital investment in the City's bicycle and pedestrian network. This section looks at a number of indicators including vehicle miles traveled (VMT), environmental and public health metrics, and provides baseline measurements for future evaluations.

The recommended network bikeway and pedestrian improvement projects of the Active Transportation Plan were analyzed for the potential of the projects to reduce vehicle miles traveled by shifting previous auto trips to bicycle and pedestrian trips due to an enhancement in the active transportation network. Reduction values were calculated for both year 2012 and year 2040 conditions (2012 would be an estimate if all facilities were present under existing conditions).

To the extent possible, the analysis relied on methods described in the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures (August 2010).

The draft results of the analysis show that based on full implementation of the ATP projects by the year 2040, the reduction in overall citywide VMT would be 2 percent. A detailed list of VMT reduction by active transportation infrastructure segment is presented in Appendix I.

Step 1: Determine Citywide Bicycle Users

Based on the data from the US Census (Percentage of Workers Who Commuted by Bicycle in Large Cities: 2008–2012), 154 or 0.2% of workers commute by bicycle in the City of Fontana. Extrapolating the 0.2% mode share to all persons in Fontana (204,961 in 2016 per the City's web site), that is 410 bicycle users.

Step 2: Determine Citywide Increase in Bicycle Users with ATP projects

Based on the CAPCOA SDT-5: Incorporate Bike Lane Street Design methodology showing a 1% increase in share of workers commuting by bicycle (for each additional miles of bike lanes per square mile), the following calculation was performed:

69.44 miles of new bikeway from
Fontana ATP / 42.43 square miles
within Fontana = 1.64% additional
share of bicycle commuters

Therefore, the ATP bikeways would increase the share of bicycle riders from 0.2% to 1.93% or from 410 to 3,956 in the City of Fontana. This is based on 2012 values; 2040 conditions are 38.7% higher or 5,487 bicycle users.

Step 3: Apportion New Bicycle Users to ATP Projects

New bicycle users were apportioned to ATP projects by the miles of the bikeway and the number of residents, workers, and students in the traffic analysis zones adjacent to the bicycle facilities. The total of 3,956 2012 new users and 5,487 new users were proportionally distributed among the ATP projects, although it is assumed that these users would use multiple ATP projects and streets with no bicycle improvements as well.



Step 4: Determine New Pedestrian Users due to ATP Projects

Based on CAPCOA SDT-1: Neighborhood/ Site Enhancement, ATP improvements to the quality, speed, and safety of pedestrian crossings would contribute to increased pedestrian usage of existing sidewalk facilities. Based on the data from the US Census (Percentage of Workers Who Commuted by Walking in Large Cities: 2008–2012), 602 or 0.8% of workers commuted by walking in the City of Fontana. Without available pedestrian count data, it is assumed that these improvements would shift auto trips at a level six per location or 1% of the Citywide walking commuters (602) per location in 2012 and eight per location in 2040 (38.7% growth).

Step 5: Determine VMT Reduction

To determine VMT reduction per ATP, the average bicycle trip of 5.86 miles (average auto trip length within the City of Fontana) was used. The pedestrian trip length was assumed to be 0.5 miles. Each of these values was multiplied by the new active transportation users at each location and then by two to account for round trips.

The values were summed and compared to the overall daily citywide VMT.

Performance measures for the City of Fontana are important for assessing whether the goals of the plan are being achieved over time. While the measures are focused on assessing progress over the long-term, data on these measures should be collected on a regular basis to help track interim progress on achieving goals. Frequent tracking of measures will provide the City with feedback on whether policy adjustments are needed to achieve the plan objectives.

The performance measures are generally outcome-based (focused on achieving policy objectives) rather than output-based. The intent of outcome-based performance measurement is to prioritize investments that do the best job of achieving desired plan outcomes.

PERFORMANCE METRICS

The City of Fontana ATP's performance metrics (Table 7.1) were selected to track achievement on the plan's goals using data that can easily be attained on a regular basis wherever possible. Each measure is categorized based on the goal area that it targets, including safety, network connectivity, personal health, environmental health, and quality of life. Data sources and update frequencies are identified to enable easy tracking of the measures, and a baseline measurement is shown using the most recent available data for the measure.

Table 7.1 Performance Metrics

GOAL AREA	PERFORMANCE MEASURE	DATA SOURCE (FREQUENCY)	BASELINE MEASUREMENT
Safety	Three-year moving average of the number of fatal and severe bicyclist injuries	Fatality Analysis Reporting System (annual); Statewide Integrated Traffic Records System (annual; 1-2 year lag)	7 over 3 years (2012-2014)
	Three-year moving average of the number of fatal and severe pedestrian injuries	Fatality Analysis Reporting System (annual); Statewide Integrated Traffic Records System (annual; 1-2 year lag)	20 over 3 years (2012-2014)
Connectivity	Percent of planned bikeway mileage constructed	City of Fontana GIS (as constructed)	27%
Personal health	Percent of population that walked at least 150 minutes a week	California Health Interview Survey (bi-annual)	28.3% [23.1%-33.4%] (2014)
Environmental health	Bicycle Commute Modeshare	American Community Survey (annual)	0.1% [0.0%-0.2%] (2015)
	Pedestrian Commute Modeshare	American Community Survey (annual)	0.8% [0.6%-1.0%] (2015)
Quality of life	Percentage of population within 1/4 mi. of existing bikeways	Census (annual), City of Fontana GIS	71.9%



BENEFIT IMPACT ANALYSIS

The benefit impact analysis quantifies the benefits that might occur as the result of implementing the recommended projects in the Fontana Active Transportation Plan. The analysis estimates the number of bicycle and pedestrian trips that would directly result from the implementation of the project list, approximates the corresponding reduction in vehicle trips and vehicle miles travelled (VMT), and assesses the potential health-, environmental-, and transportation-related benefits.

Figure 7.1 presents the potential increase in bicycle and walking trips, physical activity, and estimated annual health cost savings should the City choose to implement the recommendations present in this plan.

Table 7.2 Estimated Future Bicycle and Walk Commute Mode Split

	BASELINE		LOW		MID		HIGH	
	Estimate		Estimate	Percent Increase	Estimate	Percent Increase	Estimate	Percent Increase
Annual Bicycle Trips	687,000		2,346,000	241.48%	2,986,000	334.64%	4,377,000	537.12%
Annual Miles Bicycled	1,346,000		2,898,000	115.30%	3,497,000	159.81%	4,798,000	256.46%
Annual Walk Trips	5,480,000		8,907,000	62.54%	9,386,000	71.28%	10,834,000	97.7%
Annual Miles Walked	3,151,000		3,807,000	20.82%	3,899,000	23.74%	4,177,000	32.56%
Annual Hours of Physical Activity	1,185,000		1,559,000	31.56%	1,650,000	39.24%	1,872,000	57.97%
Number of Residents Meeting CDC Recommended Number of Hours of Physical Activity	9,115		11,992	31.56%	12,692	39.24%	14,400	57.97%
Physical Activity Need Met	0.51%		1.1%		1.32%		1.81%	
Annual Healthcare Cost Savings	\$310,000		\$603,000	94.52%	\$678,000	118.71%	\$858,000	176.77%



CHAPTER 8

PROGRAMS

With the City of Fontana’s focus on the health and wellness of its residents, it is no surprise that the City is so active in creating opportunities for its residents to engage in active, healthy lives. This section details the existing programs in Fontana and San Bernardino County that help encourage bicycling, walking, and transit use in the City.

EXISTING PROGRAMS

Healthy Fontana is a community-based, award-winning program that promotes a healthy lifestyle, teaches smart nutrition choices, and assists in creating an active, livable community to improve the quality of life for Fontana residents. Programs are designed for kids, adults, and seniors. Healthy Fontana offers:

- Exercise boot camps
- Free healthy cooking classes
- Healthy tips and recipes
- Walking clubs
- Wellness programs for local businesses

Residents can join one of the local walking clubs in your area or walk on your own and log your steps on the “Contact Us” section of the website. Residents can also access an events calendar to view upcoming programs and events.



LET'S MOVE CHILD CARE PROGRAM

The City of Fontana and the Healthy Fontana program is proud to partner with the Let's Move! Child Care Program, which gives child care and early education providers the tools to help children develop healthy habits for life.

WALKING CLUB

The Steps Along the Way Walking Club, was launched in August 2006 by Healthy Fontana. The Walking Club is designed to promote the health benefits of walking and exercising in a safe and community-oriented environment, while motivating first-time walkers to increase their steps on a weekly basis.

You can sign up for the Steps Along the Way Walking Club at any of the walking locations. Available Communities:

- Heritage Neighborhood Center
- Jessie Turner Health and Fitness Center
- Miller Fitness Center
- Southridge Park



RECOMMENDED PROGRAMS

Improvements to and continued support of education, encouragement, empowerment, and evaluation strategies are critical to increasing the number of bicycle and pedestrian trips and safety. These programs can ensure that more residents know about new and improved facilities, learn the skills they need to integrate bicycling and walking into their activities, and receive positive reinforcement about integrating these activities into their daily lives. In essence, the new and enhanced programs market the idea of bicycling and walking to local residents and ensure a shift to bicycling and walking as a transportation option.

Education

Education programs are important for teaching safety rules and laws as well as increasing awareness regarding bicycling opportunities and existing facilities. Education programs may need to be designed to reach groups at varying levels of knowledge and there may be many different audiences: pre-school age children, elementary school students, teenage and college students, workers and commuters, families, retirees, the elderly, new immigrants, and non-English speakers.

ADULT BICYCLE SKILLS CLASSES

Most people bicycling do not receive training on safe bicycling practices, the rules of the road, and bicycle handling skills. Bicycling skills classes can address this education gap. The League of American Bicyclists offers classes taught by certified instructors. Information can be found at: <http://www.bikeleague.org/>

Recommendation

This plan recommends the City support adult bicycle rider skills classes.

BICYCLE-RELATED TICKET DIVERSION CLASS

Diversion classes are offered to bicycle riders who have been cited for certain traffic violations, such as running a stoplight. This type of program was favored by members of the public. California Assembly Bill 209, signed by Governor Brown on September 21, 2015, allows for such programs for violations not committed by a driver of a motor vehicle. This program is a good way to educate bicycle riders about rights and responsibilities. Similar programs exist throughout California.

Recommendation

This plan recommends the City consider offering bicycle rider diversion classes.

STUDENT BICYCLE TRAFFIC SAFETY EDUCATION

Student education programs are an essential component of bicycle education. Students are taught traffic safety skills that help them understand basic traffic laws and safety rules. Fontana currently does not have a formal Safe Routes to School program, although its implementation could help to improve easy and safe access to schools. Bicycle education curriculum typically includes two parts: knowledge and skills. Knowledge lessons are typically in-class, while skills are practiced on a bicycle. Lessons can include helmet and bicycle fit, hand signals, and riding safely with traffic.

Benefits

Student bicycle traffic safety education can benefit Fontana by:

- Improving safety by teaching children about lifelong safety skills
- Create awareness with students and parents
- Encourage families to consider bicycling to school on a more frequent basis

Recommendation

This Plan recommends the Fontana Unified School District implement a pilot education program and to expand it to include all City schools over time.

Encouragement

Everyone from young children to elderly residents can be encouraged to increase their rates of bicycling or to try bicycling instead of driving for short trips.

BACK-TO-SCHOOL ENCOURAGEMENT MARKETING

Families set transportation habits during the first few weeks of the school year and are often not aware of the multiple transportation options and routes available to them. Because of this, many families will develop the habit of driving to school using the same congested route as everyone else. A back-to-school encouragement marketing can promote bus, carpool, walking, and bicycling to school. The marketing campaign can include suggested route maps, safety education materials, volunteer opportunities, event calendars, and traffic safety enforcement notices. It can also include an illustrative guide that includes the Suggested Walking and Bicycling to School maps.

Objectives

The event's objectives are to:

Encourage families to plan out their routes at the beginning of the school year to consider alternatives to driving alone as a family.

- Encourage families to try walking, bicycling, and carpooling to school as well as participating in community activities and events that promote walking and biking to school.

Recommendation

This Plan recommends the School District implement a pilot education program and to expand it to include all Fontana schools over time.



BICYCLE FRIENDLY COMMUNITY

The League of American Bicyclists (LAB) recognizes communities that improve bicycling conditions through education, encouragement, enforcement, and evaluation programs. Communities can achieve diamond, platinum, gold, silver, or bronze status or an honorary mention. Bicycle friendliness can indicate that a community is healthy and vibrant. Like good schools and attractive downtowns, bicycle friendliness can increase property values, spur business growth, and increase tourism.

Recommendation

This Plan recommends the city pursue Bicycle Friendly Community status after implementation of the priority projects identified in this Plan. This Plan is a valuable resource for completing the LAB application efficiently. More information and application steps: <http://www.bikeleague.org/community>



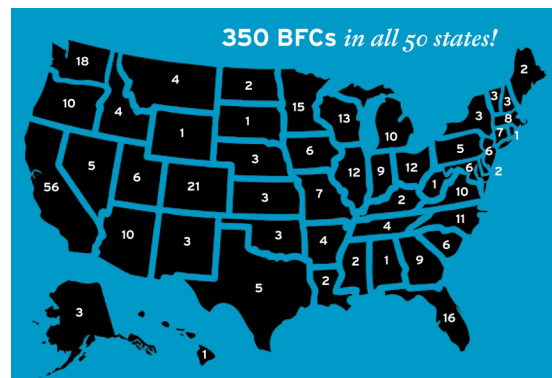
City of San Jose StreetSmarts campaign

EMPLOYER BASED COMMUNITY ENCOURAGEMENT PROGRAMS

Though the City cannot host these programs, it can work with or provide information to employers about commuting by bicycle. Popular employer-based encouragement programs include hosting a bicycle user group to share information about how to bicycle to work and to connect experienced bicycle riders with novice bicycle riders. Employers can host bicycle classes and participate in Bike Week.

Recommendation

This Plan recommends the City collaborate with employers to implement bicycle-related programs.



Bicycle Friendly Communities BY STATE

See the full list at bikeleague.org/community

STUDENT INCENTIVE PROGRAMS

Contests and incentive programs reward students by tracking the number of times they walk, bicycle, carpool, or take transit to school. Contests can be individual, classroom, school-wide, or interschool competitions, and can be integrated with other programs like Walk 'n' Roll to School Days. Types of incentive programs are listed below:

- Pollution Punch Card is a year-round program designed to encourage students and families to consider their options for getting to school. Every time a student walks, bicycles, carpools, or takes transit a school representative records the activity. After a certain number of points are reached, the student received a prize or incentive.
- Walk or Bike across California/America is a year-round program designed to encourage walking and bicycling by tracking the miles they travel throughout the year. Students are taught how to track their mileage and will also learn about places along their way.

Benefits

Participation in incentive programs can benefit the Fontana community by:

- Increasing awareness of walking and bicycling to school
- Increasing the number of students who walk or bicycle to school

Recommendation

This Report recommends the School District work with the schools and parent champions to sponsor a number of incentive programs.

GOLDEN SNEAKER CONTEST

In the Golden Sneaker Contest, classrooms compete to see which class has the highest rate of students walking, bicycling, or carpooling to and from school. The class tracks how many students commute by these modes and calculates the percent of total trips by each mode. The winner of the contest receives a “golden sneaker” trophy, along with other incentive prizes. A Golden Sneaker Contest can be expanded from classroom competitions to intra-school competitions or district-wide competitions. Some schools hold celebrations for winning classrooms.

Benefits

Participation in the Golden Sneaker Contest can benefit the Fontana community by:

- Increasing awareness of walking and bicycling to school
- Increasing the number of students who walk or bicycle to school

Recommendation

This Report recommends the School District work with the schools and parent champions to hold the Golden Sneaker Contest.



MONTHLY WALK AND ROLL DAYS

Walk and Roll to School Days are events to encourage students to try walking or bicycling to school. The most popular events of this type are International Walk to School Day (held in early October) and Bike to School Day (held in early May). Many communities have expanded on this once a year event and hold monthly or weekly events such as Walk and Roll the First Friday (of every month) or Walk and Roll Wednesdays (held every Wednesday). Holding weekly or monthly Walk and Roll to School Day promotes regular use of active transportation and helps establish good habits. Events can take on a wide range of activities, with some schools choosing to make them weekly rather than monthly, such as with a “Walk and Roll Wednesday.” Volunteers can set up a welcome table for people walking and bicycling. The welcome table could provide refreshments, incentive prizes, and an interactive poster letting students document their mode to school. Walking School Buses, Bicycle Trains, and Golden Sneaker Contests can be organized and promoted on these days.

Benefits

Participation in Monthly Walk and Roll Days can benefit the Fontana community by:

- Building community
- Saving parents’ money by not using a car
- Reducing traffic congestion around the school

Recommendation

It is recommended the Fontana Unified School District, schools, PTAs, and parent champions work together to promote Walk and Bike to School days to be held on a monthly or weekly basis.

OPEN STREETS EVENTS

Open Streets events, such as Sunset on Sierra, celebrate walking and bicycling by closing key streets to vehicle traffic for a day or a few hours and opening them up for walking, bicycling, and other community activities. These events can create opportunities for people to try walking or bicycling away from the potential stresses of adjacent vehicle traffic.

Recommendation

This Plan recommends the City work with local community groups to host Open Streets events on a semi-annual basis.

BICYCLE FRIENDLY BUSINESS DISTRICTS

Bicycle Friendly Business Districts (BFBDs) provide end-of-trip bicycle infrastructure such as water bottle filling stations and bicycle parking in localized retail areas of a community. Providing infrastructure encourages the local community to buy local more often. This would help address the lack of bicycle parking, particularly in the downtown area, identified as a community need in the Existing Conditions Chapter.

The City of Long Beach began a BFBD program by adding bicycle racks and corrals, bicycle lanes, and signage along major corridors. Participating bicycle friendly businesses receive a listing and map location on the Bike Long Beach website, as well as additional exposure through the website's Bike Saturdays discount program which offers bicycle riders a discount or deal every Saturday at more than 150 businesses within the six districts.

More information can be found at <http://www.bikelongbeach.org/bike-friendly-businesses>

Recommendation

It is recommended the City declare a BFBD, provide additional end-of-trip facilities within the District, and encourage shop owners to offer discounts to patrons who arrive by bicycle.



Long Beach Bicycle Friendly Districts promotion

SUGGESTED WALKING AND BICYCLING ROUTES TO SCHOOL MAPS

Suggested Walking and Bicycling Routes to School Maps can help parents overcome fears related to traffic and/or lack of knowledge of family friendly routes to school. These types of maps show stop signs, traffic signals, crosswalks, paths, overcrossings, crossing guard locations, and similar elements that can help parents make decisions about choosing the route that best fits their family's walking and bicycling needs.

Recommendation

This Plan recommends Fontana partner with the School District to create Walking and Bicycling Routes to School Maps.



BICYCLE TRAINS

Bicycle Trains are an organized group of students who bicycle to school under the supervision of a parent/adult volunteer. Parent champions take turns bicycling along a set route to and from school, collecting children from designated “train stops” along the way. Schools and parent champions can encourage parents to form Bicycle Trains at the back-to-school orientation or other fall events. The School District can provide safety vests to indicate the leader(s). Incentives for the parent volunteers can include coffee at the school or gift cards for coffee shops.

Benefits

Bicycle Trains benefit the Fontana community by:

- Improving safety - Children are more visible bicycling in groups, accompanied by an adult
- Saving parents' money by not using a car
- Saving parents' time when they are not leading the train
- Reducing traffic congestion around the school

Recommendation

This Report recommends the City and School District work with schools and parent champions to develop a Bicycle Train program.

Enforcement Programs

Enforcement programs enforce legal and respectful use of the transportation network. These programs will help educate motorists, bicycle riders, and pedestrians about the rules and responsibilities of the road.

BICYCLE HELMET AND LIGHT GIVEAWAYS

The California Office of Traffic Safety (OTS) grant program can fund bicycle helmets or lights for giveaways to children at schools or children observed bicycling without wearing helmets or residents riding without lights. Bicycle lights are required for nighttime riding in California (CVC21201) and can help increase the safety of a person riding a bicycle. Typically, this type of program is conducted in partnership with the Police Department.

Recommendation

This Plan recommends the City seek an OTS grant and conduct helmet and light giveaways for children and residents who do not have bicycle lights.

Evaluation Programs

Evaluation programs help the City measure how well it is meeting the goals of this Plan and the General Plan, and evaluation is a key component of any engineering or programmatic investment. It is also a useful way to communicate success with elected officials as well as local residents.

ANNUAL COLLISION DATA REVIEW

Reviewing bicycle rider-involved 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.

Recommendation

This Plan recommends the City and Police Department review bicycle-involved collision data on an annual basis to identify needed improvements.

PARENT SURVEYS

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 Fontana 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.

Recommendation

It is recommended that the City and School District work together to conduct parent surveys every two to three years.

STUDENT WALKING AND BICYCLING 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 at <http://www.saferoutesinfo.org/program-tools/evaluation-student-class-travel-tally>

Recommendation

It is recommended the School District conduct student tallies on a biannual basis.







APPENDICES

Appendix A. Existing Plans & Policy Review

Citywide and regional plans form the foundation for understanding the existing conditions in the City of Fontana and will contribute greatly to the success of the Fontana Active Transportation Plan.

The following plans and policies were instrumental in creating the recommendations presented in the City of Fontana Active Transportation Plan:

Table 9.1

REPORTS	YEAR
City of Fontana General Plan	2003
City of Fontana Circulation Element	2003
City of Fontana Parks, Recreation, and Trails Master Plan	2008
2015 General Plan Update	2015
San Bernardino County Non-Motorized Transportation Plan	2011 (updated 2015)
San Bernardino County Transit Access Improvement for Cyclists and Pedestrians	2012
BEST PRACTICES	YEAR
Pomona, California Active Transportation Plan	2012
Rancho Cucamonga, California Circulation Master Plan	2015
Marysville, California Bicycle and Pedestrian Master Plan	2016
Orem, Utah Bicycle and Pedestrian Plan	2010

City of Fontana General Plan, 2003

The City of Fontana adopted its General Plan in 2003, of which the plan's Vision; Circulation Element; and Parks, Recreation and Trails Master Plan are most relevant to the Fontana ATP. As of September 2016, the City is updating its General Plan, as part of an initiative called *Fontana Forward*, for which the City is also developing a specific plan for Downtown Fontana and updating the City's Zoning Code.

VISION

The 2003 General Plan provides a vision for Fontana, highlighting the themes of growth, unity, quality, and connectivity. The City developed a list of initiatives, grouped into six issues, intended to implement the vision. The following initiatives and goals are most relevant to the ATP:

- Balanced Land Uses
- Downtown Fontana – The Heart of Our City
- Connectivity and Access Within Our Community

Table 9.2

ISSUE	INITIATIVE
Balanced Land Uses	Parklands and open space will be acquired using creative and effective means, including using utility easements that run through our City.
Downtown Fontana – The Heart of our City	Residents and visitors will have easy access to our Downtown from the conveniently located transportation hub that is our Metrolink Station. They will also be able to move safely within Downtown, and to and from the many activities at the Civic Center, on foot or by bicycle.
Connectivity and Access Within Our Community	While our residents are proud of their own, distinct neighborhoods, they will also value the role that our open spaces, bikeways and trails play in connecting individual neighborhoods into the fabric of our entire community.



CIRCULATION ELEMENT

The Circulation Element of the 2003 General Plan is intended to guide the development of the City's transportation system. While the majority of goals and policies do not apply to active transportation, the following goals do apply to the ATP because they encompass goals that pertain to cyclists and pedestrians.

- Goal 1: A balanced transportation system for Fontana
- Goal 2: A regional network of multi-modal transportation facilities

Table 9.3

GOAL	POLICY
Goal 1: A balanced transportation system for Fontana is provided that meets the mobility needs of current and future residents and ensures the safe and efficient movements of vehicles, people and goods throughout the City.	Policy 7: Provide for safe operations of all modes of transportation including auto, truck and bus traffic, passenger and freight rail service, pedestrians, bicycles, and other modes by adhering to national design and safety standards and uniform practices. Permitted driveways along arterials shall provide for turn-around or hammerhead turn in order to facilitate vehicle access to arterials. Vehicle or truck backing on to arterials is prohibited.
Goal 2: A regional network of multi-modal transportation facilities including an improved citywide public transit system is provided that ensure the safe and efficient movement of vehicles, people and goods throughout the City of Fontana and to and from the region, and provides mobility to all City residents and helps reduce vehicular trips citywide.	Policy 8: Ensure accessibility of disabled persons to public transportation facilities and services in accordance with all Americans with Disabilities Act (ADA) regulations.

PARKS, RECREATION AND TRAILS MASTER PLAN

In 2008, the City of Fontana updated its Parks, Trails and Recreation Master Plan, a component of its General Plan, to guide development of the Capital Improvement Program. As part of this update, the City and citizens set three long-term goals for their parks, recreation, and trails:

Table 9.4 Parks, Recreation and Trails Master Plan long-term goals. (Source: 2003 General Plan)

LONG-TERM GOALS

A system of high quality recreation and community services for all segments of the population, especially youth and senior citizens.

A substantial role for open spaces, bikeways and trails to connect individual neighborhoods into the fabric of the entire community.

More parks in the under-served Foothill, South, and West Fontana areas in the City.



RECREATIONAL TRAIL SYSTEM

The Parks, Recreation and Trails Master Plan discusses the City's existing and proposed recreational trail system, see Figure A-1 in Appendix A, which includes equestrian, hiking, and Class I bike trails. While the system is designed for recreational use, it could also provide safe access to schools, regional transportation nodes, and other City destinations. The Plan recognizes the trail system as critical to maintaining connectivity in Fontana, which is located along a regional transportation corridor and intersected by a grid system of arterials.

The Master Plan emphasizes the importance of connecting Fontana's trails with the San Bernardino County's trail system, and provides a list of important regional connector trails. Table 9.5 contains a list of these connector trails and other plans in which they are included.

Table 9.5 List of important regional connector trails. (Source: City of Fontana Parks, Recreation and Trails Master Plan, 2008)

TRAIL	DESCRIPTION	OTHER PLANNING DOCUMENTS
Jurupa Hills Trail	Trail system that traverses the Jurupa Hills and connects the Martin Tudor Jurupa Hills Regional Park to the Santa Ana River Trail in Riverside County.	Active Trail in San Bernardino County Trail Master Plan
Frontline Trail	Provides an east-west connection along the base of the San Gabriel Mountains between San Antonio Creek Trail on the west and the Lytle Creek Trail that extends north from the City, providing linkage to the Pacific Crest Trail.	Active Trail in San Bernardino County Trail Master Plan
Baseline Trail	An on-road trail that connects San Antonio Creek Trail on the west to the Cajon Creek Trail between Rialto and San Bernardino. Baseline Avenue borders a number of specific plans and is wide enough to accommodate a Class 2 bicycle trail.	Active Trail in San Bernardino County Trail Master Plan
San Sevaine Creek Water Project	Located on the western edge of the City, this drainage basin received federal assistance for environmental enhancements and development of a multi-use trail. This portion of the system connects with the Frontline Trail to the north and runs south to the Riverside County line.	
Southern Pacific Railroad Right-of-Way (part of the Pacific Electric Inland Empire Trail)	The Pacific Electric Inland Empire Trail Master Plan, a 21-mile right-of-way that runs west to east through Claremont, Montclair, Upland, Rancho Cucamonga, Fontana and Rialto, was adopted in November 2000. This regional trail would serve as a multi-use trail designed to provide recreational connections within the county and to celebrate the history of the famous Pacific Electric Railroad.	

BIKEWAY SYSTEM

The General Plan also includes an existing and proposed bikeway system, which includes Class II bike lanes, and is designed for short trips, recreation, and commuting within the City.

TRAILS AND BIKEWAY GOALS AND POLICIES

The Master Plan lays out six goals specific to trails and bikeways that highlight the improvements of connectivity, design, maintenance, and safety.

Table 9.6

GOAL	POLICY
Goal 4: Our City's bikeways and trails are uniformly safe and accessible.	1) Separation of the bikeway and trail system from traffic and roadways should be established wherever possible. 2) Multi-use trails shall provide clear separation of hikers, joggers, and equestrians.
Goal 5: Our system of bikeways and trails is benefited by efficient use of utility easements, flood-control easements and railroad rights-of-way.	The City should seek use of easements and rights-of-way from owners for use in the bike and trail network. The City shall coordinate with neighboring municipalities and the County for the planning, acquisition and development of an expanded bikeway and trail system.
Goal 6: Improvements to our parks and trails system are funded as a regular component of our capital improvement program along with a variety of sources both within and outside of the City.	1) The City shall continue to fund parks operation and maintenance through the General Fund. 2) The City should to continue to keep park and recreation user fees to a minimum. 3) The City should coordinate its planning and funding efforts for facilities of regional interest, such as multi-use trails and regional parks, with the County and other appropriate agencies. The City should continue to negotiate agreements for the use of utility easements, flood controls channels, and railroad rights-of-way to expand its park and trail system. 4) The City shall not construct facilities without funding resources for long-term maintenance and replacement costs.



2015 General Plan Update

For the Fontana General Plan Update process that began in 2015, the City released a Background Report in April 2016 that highlights the goals of the 2003 General Plan and the progress made since then, and explores the current state of Fontana. The Background Report notes that since the General Plan was adopted in 2003, the City has developed a San Sevaine Trail Connectivity Plan and developed the Pacific Electric Trail.

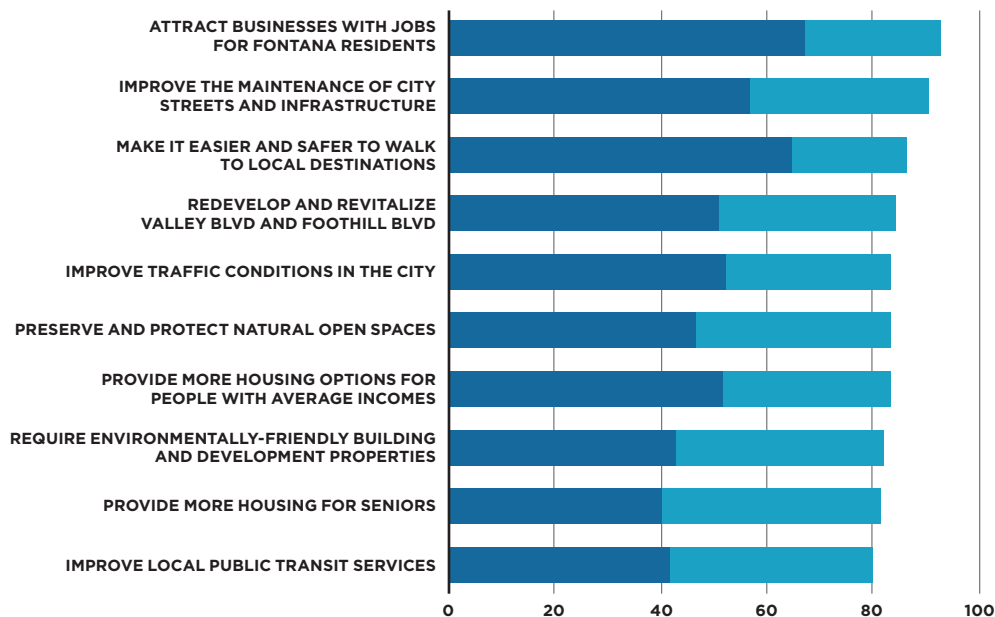
As part of a General Plan Update survey, 800 adult Fontana residents identified their top ten future priorities for the City (see Figure 9.1), which included:

- 1) Make it easier and safer to walk to local destinations
- 2) Require environmentally-friendly building and development practices
- 3) Improve local public transit services

Figure 9.1

Our Top Ten Future Priorities

True North Research, Inc. (2015), the % of residents answering "high priority" or "medium priority"



Specific Plans and Community Plans in Fontana

A specific plan is a type of zoning document that provides development guidelines and policies to be used by landowners in a specific geographical location or project within a city. Specific plans are a substitute for standard zoning on particular properties or project areas.

The City of Fontana has implemented 26 specific plans thus far and is currently establishing an additional specific plan for Downtown Fontana as part of Fontana Forward. Active transportation policies and projects from each specific plan are summarized below.

Table 9.7

PLAN	SUMMARY	PEDESTRIAN AND BICYCLE INFRASTRUCTURE
Arboretum Specific Plan (2009)	The 531.3-acre Arboretum Specific Plan area is located in north Fontana. The Arboretum is intended to be a master-planned community that “accommodate[s] residents of varying lifestyles and will accommodate a broad range of residential housing types and amenities.”	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> • Goal is to provide strong connectivity between neighborhoods, schools, parks, and recreational facilities • 10-foot-wide Arboretum Trail connects all four villages • Pedestrian paseo links two major recreation complexes <p>Bikeways</p> <ul style="list-style-type: none"> • Network of 5-foot-wide Class II bicycle lanes along Sierra Ave and Citrus Ave (primary north-south connection), Grapeland St and Casa Grande Ave (primary east-west connection), and along Duncan Canyon Rd and Cypress Ave. • Bike routes along residential streets
Bellgrove Community Plan II	The 90-acre Bellgrove Community Plan area is located north of Baseline Ave between San Sevaine Ave on the west and Hemlock Ave on the east. The project is made up of single-family residential units on 90 acres.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> • 12-foot-wide pedestrian easement in General Plan on San Sevaine Ave and Hemlock Ave (part of parkway along these avenues) • 6-foot-wide sidewalks on local internal streets <p>Bikeways</p> <ul style="list-style-type: none"> • System of bike paths/lanes on Hemlock, San Sevaine, and Walnut Ave
California Landings (1994, last amended 2002)	The 223-acre California Landing Specific Plan is located in the northern portion of the City of Fontana. Includes residential lots, a commercial area, neighborhood park, and elementary school.	<p>Pedestrian Environment and Bikeways</p> <ul style="list-style-type: none"> • Park, residential, and commercial land uses linked by a Pedestrian / Bikeway Trail and greenbelt system within the Beech Ave, Walnut Ave, and Highland Ave parkways • Bike racks will be provided at the park site
Center Stone Community Plan (1999)	The 20-acre Center Stone Community Plan is located in the northwestern portion of the City.	<p>Pedestrian Environment and Bikeways</p> <ul style="list-style-type: none"> • Enlarged 21-foot-wide parkways on the west side with an eight-foot meandering walk/bikeway along Hemlock Ave and San Sevaine Ave • 5-foot-wide sidewalks on local residential streets



PLAN	SUMMARY	PEDESTRIAN AND BICYCLE INFRASTRUCTURE
Citrus Heights North (2004)	The Citrus Heights North Specific Plan area is located in the northern portion of the City of Fontana, near the foot of the San Gabriel Mountains. Citrus Heights North is envisioned as a master-planned community containing 1,161 homes, a neighborhood commercial center, and public and private recreational facilities.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> • Widening, landscaping, street lighting, and sidewalk installation along the property's frontage on Summit Avenue, Citrus Avenue and Lytle Creek Road • Trails and sidewalks along the primary public roadways <p>Bikeways</p> <ul style="list-style-type: none"> • Class II bike lane along Summit Ave • Painted bicycle lanes along the primary public roadways
Coyote Canyon Specific Plan (1997, last amended 2006)	The 283-acre Coyote Canyon Specific Plan area is located in the City of Fontana adjacent to the Hunter's Ridge Specific Plan on the west and the Interstate 15 freeway on the east. The project will be a single-family residential community with 56.6 acres of open space.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> • Passive park riparian woodlands and open space area with walking trails extending from north of the Cherry Ave / Duncan Canyon Road and providing access to the front-line trail, regional trails system, and the Hunter's Ridge Wilderness Park. • Meandering sidewalks along Coyote Canyon, Duncan Canyon, and Roadrunner • Sidewalks in parkways adjacent to interior and perimeter roadways <p>Bikeways</p> <ul style="list-style-type: none"> • Class II bicycle path on Coyote Canyon Rd connecting to Cherry Ave • On-street bicycle lanes on Roadrunner Rd
Empire Center Specific Plan (1990, revised 2003)	The 292-acre Empire Center specific plan area is located in the southeast sector of the City. The specific plan will include: a business park, community commercial area, entertainment center, neighborhood commercial area, park and ride facility, promotional center, and regional mall.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> • Pedestrian circulation route ("the River") along Sierra and Solver Ave
Fontana Gateway Specific Plan (1987, last amended 1997)	The Fontana Gateway Specific Plan is located in the unincorporated area of San Bernardino County, adjacent to Fontana's Southwest Gateway corridor. It is primarily a planned industrial land use encompassing approximately 755 acres in the urbanizing area of southwest Fontana.	N/A
Fontana Grandview Community Plan (1999)	The Fontana Grandview Community Plan area is a 40-acre single-family residential community plan that consists of approximately 157 single-family residential units.	<p>Pedestrian Environment & Bikeways</p> <ul style="list-style-type: none"> • The plan includes a goal to "Promote the use of other modes of transportation to reduce dependency on the automobile." • All streets include either a 6-foot to 8-foot sidewalks or an 8-foot-wide sidewalk with off-street bike path in order to provide: <ul style="list-style-type: none"> » A safe pedestrian walkway system to encourage pedestrian movement » A network of off-street and on-street bike paths and sidewalks to ensure safe access throughout the residential development.

PLAN	SUMMARY	PEDESTRIAN AND BICYCLE INFRASTRUCTURE
Fontana Promenade Specific Plan	The Fontana Promenade Specific Plan area encompasses approximately 125 gross acres in the north-central portion of the City. It is a master-planned mixed-use community and combines a wide range of retail and office space uses as well as shops, restaurants, and entertainment facilities with a variety of residential product types and densities.	<p>Pedestrian Environment & Bikeways</p> <ul style="list-style-type: none"> The Pointe Promenade Pedestrian walkway within the Specific Plan area is a central, north / south curvilinear corridor that encourages residents and visitors to enjoy a village atmosphere with quaint shops, quality restaurants, movie theaters, and other entertainment uses. The promenade will contain enhanced pedestrian amenities such as detached sidewalks, landscaped parkways with canopy trees, convenient bicycle rack locations, shared bicycle/vehicle lanes; pedestrian intersection “bulb-outs” and raised midblock pedestrian crossings as traffic calming measures to encourage pedestrian use. The focal point of The Fontana Promenade is a unique traffic circle, or roundabout, along Walnut Avenue that incorporates a pedestrian bridge and tower feature that bring together the southern and northern portions of the Specific Plan project area. Ponte La Strada will contain enhanced pedestrian amenities such as a detached sidewalks, landscaped parkways with canopy trees, convenient bicycle rack locations, shared bicycle/vehicle lanes; pedestrian intersection “bulb-outs” and raised midblock pedestrian crossings will act as traffic calming measures and encourage pedestrian use. Pedestrian sidewalk paths in each neighborhood of the village connecting from residential access roads to the main “Promenade Pedestrian Corridor.” Parkways/sidewalks along Sierra Ave, South Highland Ave, Baseline Ave, Juniper Ave, Walnut Ave. Bike/sidewalk area outside the right-of-way along Walnut Ave.
Fontana Star Community Plan (late 1990s)	The Fontana Star Community Plan area is located south of Walnut Ave and west of Beech Ave. The Plan is a 30-acre single-family residential community plan that could potentially have 111 single-family residential dwelling units.	<p>Pedestrian Environment & Bikeways</p> <ul style="list-style-type: none"> The plan includes a goal to “Promote the use of other modes of transportation to reduce dependency on the automobile” by providing: <ul style="list-style-type: none"> A safe pedestrian walkway system to encourage pedestrian movement Strategically placed transit stops designed to promote the use of public transit both within the project and in the North Fontana area. Class II Bike Lane (5-foot-wide, one-way) along Beech Ave Off-street combined bike path/sidewalk along Walnut Ave (10-foot-wide) and Hemlock Ave (8-foot-wide)
Hunter’s Ridge Specific Plan (1988, last amended 2002)	Hunter’s Ridge Specific Plan area (595 acres) is located three miles west of Lytle Creek at the base of lower slopes of the San Gabriel Mountains in the northwestern corner of the City of Fontana. The development provides rural residential, residential estate, and single-family residential use, neighborhood commercial use, and 20 acres of park land.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> Pedestrian walkways will be integrated into the site design concept and on-site pedestrian circulation systems provided (at least 4-foot-wide sidewalks). Equestrian trails provided <p>Bikeways</p> <ul style="list-style-type: none"> Minimum 4-foot-wide bike lanes on Cherry Ave and collector streets.



PLAN	SUMMARY	PEDESTRIAN AND BICYCLE INFRASTRUCTURE
Morningside Community Plan (1997)	The Morningside Community Plan area is 120-acres bounded by Walnut Ave on the north, the future extension of San Sevaime Ave on the east, Baseline Ave on the south, and Cherry Ave on the west. The Plan is a residential (402 single-family units) and commercial community plan.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> 6-foot-wide pedestrian/landscape easement along Baseline Ave (primary access) and Cherry Ave (neighborhood access) Meandering sidewalk along Walnut Ave (secondary access) <p>Bikeways</p> <ul style="list-style-type: none"> System of bike paths/lanes is proposed on Cherry, Baseline, and Walnut Ave as either off- or -on street designs
Northgate Specific Plan	The Northgate Specific Plan is an 87-acre mixed-use specific plan bounded by Miller Avenue on the north, Oleander Avenue on the east, Foothill Boulevard on the south, and Citrus Avenue on the west. The plan will contain residential, commercial, and open space/recreation.	N/A
Providence Pointe Specific Plan (2007)	The Providence Pointe project is 35-acres located at the northwest corner of Baseline Ave and Citrus Ave. The project is for a high-quality, mixed-use, master-planned development that includes single- and multi-family units, recreation areas, and infrastructure improvements.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> Primary goal of the plan: create a pedestrian-oriented urban environment that is walkable and inviting by the strategic placement of pedestrian elements, plazas, amenities and an interconnected network of internal circulation elements and pedestrian paths North-south linear park system that connects to residential cul-de-sacs Residential units designed around a common landscaped paseo
Rancho Fontana Specific Plan (1998, last amended 2003)	Rancho Fontana Specific Plan area is 510-acres in the northwest portion of Fontana. The area includes a mix of residential, commercial, quasi-public and recreational facilities.	<p>Pedestrian Environment & Bikeways</p> <ul style="list-style-type: none"> Circulation goal: Bicycle paths and pedestrian trains should be integrated with the street system and adjacent developments, where possible Integrated bicycle and pedestrian trail system along Village Parkway to connect development, open space, and recreation facilities Trail route along the south side of Miller Ave
Sierra Lakes Specific Plan (1994, last amended 2005)	The Sierra Lakes Specific Plan area is located in the northern portion of the City, and plans for residential, recreational, and commercial land uses, as well as an elementary school.	<p>Pedestrian Environment & Bikeways</p> <ul style="list-style-type: none"> Sidewalks in the parkways adjacent to interior and perimeter roadways. Sidewalk design has incorporated: <ul style="list-style-type: none"> » Special paving treatment and handicapped streets » Sidewalk along the golf course side of B street connecting residential and commercial land uses Class I off-street pedestrian and bicycle trail along Sierra Ave <p>Bikeways</p> <ul style="list-style-type: none"> Class I, 10-foot-wide bicycle path within a landscaped corridor along Sierra Ave, internal loop road, and portions of Sierra Lakes Parkway

PLAN	SUMMARY	PEDESTRIAN AND BICYCLE INFRASTRUCTURE
South Park Specific Plan (1988, last amended 1998)	The South Park Specific Plan project is 117 acres on the southern edge of the City. Land uses include residential, open space, and recreation.	Pedestrian Environment <ul style="list-style-type: none"> External Circulation Components: Improvements on Jurupa Ave (6-foot-wide sidewalk with landscape buffer between sidewalk and project perimeter wall) and pedestrian traffic on the east side of Sierra Ave will be discouraged Internal Circulation Components: five-foot-wide sidewalk on each side of Volante Drive/Via Larga Loop and four-foot-wide sidewalk on each side of cul-de-sacs Integrated, community-wide system of trails and recreation areas includes: <ul style="list-style-type: none"> » 20-foot-wide trail entering South Park along Sierra Ave and extend south/east along adjacent open space » Major equestrian linkage connecting Regional Park, under Sierra Ave, and around South Park to existing equestrian trails to the east
Southridge Village Specific Plan (1981, last amended 2004)	The 2,640-acre Southridge Village Specific Plan is bounded by Jurupa Avenue on the north, Sierra Avenue on the east, the San Bernardino / Riverside County line on the south, and Mulberry Avenue on the west. The plan includes two commercial centers, single- and multi-family residential areas, parks, a fire station, and seven schools.	N/A
Southwest Industrial Park Specific Plan (1977, last amended 2010)	The Southwest Industrial Park Specific Plan area is located within the southwest area of the City, and the developments are primarily oriented toward the transportation industry.	N/A
Summit at Rosena Specific Plan (last amended 2006)	The 180-acre Summit at Rosena is located in the northern portion of the City. The community will include residential, a mixed-use activity center, an elementary school, and open space.	Pedestrian Environment & Bikeways <ul style="list-style-type: none"> 20-acre Edison Trails park (running through the center of the community) will include a mile of meandering walking/bike paths and other park amenities. Residential cul-de-sacs will be connected along the southern perimeter of the park. Minimum of 6-foot-wide sidewalks along major and secondary highways and local streets
Summit Heights Specific Plan (1998, last amended 2005)	The 316-acre Summit Heights development area is located in the northwest portion of the City. The development plan includes a mix-of single family residential, recreational, and commercial lots.	Pedestrian Environment <ul style="list-style-type: none"> In the Commercial area, pedestrian and bicycle access provided to connect surrounding land uses and commercial uses Bikeways <ul style="list-style-type: none"> Meandering, 8-foot-wide concrete/asphalt bicycle path along a portion of the Southern California Gas Company/San Gabriel Valley Water Company District easement and across the utility corridor to connect the park system



PLAN	SUMMARY	PEDESTRIAN AND BICYCLE INFRASTRUCTURE
Valley Trails Specific Plan (2007, last amended 2007)	The Valley Trails Specific Plan area is located in the southeastern portion of the City of Fontana. The master-planned community will include residential units, an elementary school, and private and joint-use recreational facilities.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> 3.2-acre linear neighborhood park/esplanade to connect the major pedestrian trails on the east and west sides of the Valley Trails community 17.4-acre private community parkway north/south along the western periphery of the Valley Trails community to connect with and complement other nearby private parks and recreational facilities. Public trail through northern and eastern portions of the community along Alder Ave, Locust Ave, and Armstrong Rd. Link to Jurupa Hills Regional Trail. Series of interconnected interior neighborhood trails (at least 4, 15-foot-wide trails). Location to be determined. Private trail from recreation center (Planning Area P) to school site (Planning Area Q) <p>Bikeways</p> <ul style="list-style-type: none"> Five-foot-wide bike land along south side of Alder Ave, both sides of Locust Ave, both sides of Armstrong Rd
Ventana at Duncan Canyon Specific Plan (2007)	The 105-acre Ventana at Duncan Canyon Specific Plan project area is bounded by Interstate 15 freeway on the north and west, Citrus Avenue on the east, and the Southern California Edison power line transmission corridor on the south. The project is a master-planned, mixed-use community with residential, commercial, business park, restaurant, and hotel space.	<p>Pedestrian Environment & Bikeways</p> <ul style="list-style-type: none"> One of the primary goals of the specific plan is to create a safe, walkable community that connects the residential neighborhoods to each other, with the commercial area, and with the office area Grade separated pedestrian bridges link the community together. Bridges proposed over Duncan Canyon Rd and Lytle Creek Rd Pedestrian and bicycle connectivity to City's planned regional trails within the utility corridor adjacent to the south side of the Specific Plan area. Connectivity will include Class II bike lanes along Duncan Canyon Road, Citrus Ave, the realigned Lytle Creek Rd, and proposed bridge over Duncan Canyon Rd Well-landscaped pedestrian corridors connect all residential villages to private recreation facilities/open space areas
Walnut Village Specific Plan	The 342-acre Walnut Village Specific Plan area is located in northeast portion of the City. The project will be an internally oriented community with residential, commercial, quasi-public, and recreation space.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> Mango Linear Park with a continuous trail system <p>Bikeways</p> <ul style="list-style-type: none"> Bicycle trails in greenbelt
West End Specific Plan (1985, last amended 2003)	The 1,296-acre West End Specific Plan area is located at the west end of the City. It includes a business park, commercial, office, public, quasi-public, and residential uses.	<p>Pedestrian Environment</p> <ul style="list-style-type: none"> Goal: Provide pedestrian facilities that are direct and convenient, with safe and direct pedestrian accessibility between residential areas, schools, parks, and shopping areas
Westgate Specific Plan	The Westgate Specific Plan area is a 954-acre master-planned community with commercial retail, office, and business park opportunities. It currently includes an elementary school with public parks and residential neighborhoods.	<ul style="list-style-type: none"> Class I bikeway along Walnut Avenue and within a major portion of Cherry Ave Sidewalks along all public streets and Class II bikeways exist on nearly all the remaining streets. A pedestrian/bike path within the utility corridor.



San Bernardino County Non-Motorized Transportation Plan

The San Bernardino County Non-Motorized Transportation Plan (NMTP) was prepared by the San Bernardino Associated Governments (SANBAG) in collaboration with local jurisdictions, and was first adopted in March 2011. It has been revised annually, with the last revision taking place in May 2015. The purpose of the NMTP is to identify a comprehensive network, with a focus on bicycle systems. The NMTP also helps the community identify funding sources to implement a cohesive, integrated plan.

The NMTP states that a reasonable goal for increased bicycle mode share is to achieve the region-wide average (0.56%) over the life of the plan. This increased mode share, taken together with an increase in workers, would result in approximately 5,500 commuting cyclists region-wide within the next 20 years.

Table 9.8

STREET/PATH	FROM	TO	CLASS	LENGTH (MI)
Alder Ave	Baseline Ave	Randall Ave	III	2.51
Alder Ave	Jurupa Ave	SCE Utility South	I	0.08
Alder Ave	Randall Ave	San Bernardino Ave	II	0.50
Arrow Ave	Almeria Ave	Maple Ave	II	3.15
Baseline Ave	Sierra Ave	Maple Ave	II	1.76
Beech Ave	Baseline Ave	SCE Utility South	II	4.54
Ceres Ave	Cypress Ave	Mango Ave	II	0.74
Cherry Ave	Baseline Ave	Foothill Blvd	II	1.02
Cherry Ave	Foothill Blvd	S City Limit	II	0.13
Cherry Ave	Jurupa Ave	Live Oak Ave	II	0.54
Cherry Ave	N City Limit	Baseline Rd	II	1.46
Citrus Ave	Valley Blvd	Slover Ave	II	0.50
Citrus Ave	Baseline Ave	SCE Utility South	II	5.17
Citrus Ave	Duncan Canyon Rd	S of SCE Utility North	II	0.24
Connector Path	SCE Utility North Spur	Wilson Ave	I	0.49

STREET/PATH	FROM	TO	CLASS	LENGTH (MI)
Cypress Ave	Ceres Ave	Santa Ana Ave	II	2.54
Dedex Channel Trail	SCE Utility South	Philadelphia St	I	1.16
Duncan Canyon Rd	Lytle Creek Rd N	Sierra Ave	II	1.60
Fontana Ave	Citrus Ave	Poplar Ave	II	0.70
Fontana Ave	Poplar Ave	Lime Ave	II	0.17
Foothill Blvd	Cherry Ave	Maple Ave	I	4.78
Highland Ave	Sierra Ave	Mango Ave	III	0.31
Juniper	Baseline	San Bernardino	II	3.01
Jurupa Ave	Sierra Ave	Tamarind Ave	II	0.74
Knox Ave	Sierra Lakes Pkwy	SR-210	II	0.16
Live Oak Ave	Mountain High Dr	Long View Dr	II	0.42
Live Oak Ave	SCE Utility South	Cherry Ave	II	0.53
Locust Ave	Jurupa Ave	11th St	II	0.27
Mango Ave	Highland Ave	Baseline Rd	II	1.00
Mango Ave	Riverside Ave	Summit Valley Rd	III	1.80
Mango Ave	Valencia Ave	Merrill Ave	III	0.37
Maple Ave	Baseline Ave	Orange Way	II	1.71
Merrill Ave	Catawaba Ave	Citrus Ave	II	0.24
Merrill Ave	Citrus Ave	Alder Ave	III	2.04
Merrill Ave	Mango Ave	Alder Ave	III	0.75
Miller Ave	Pacific Electric Trail	Maple Ave	II	4.30
Oleander Ave	Arrow Blvd	Valencia Ave	II	0.12
Orange Way	Juniper Ave	Mango Ave	II	0.50
Philadelphia St	San Sevaine Trail	Dedex Channel Trail	II	0.88



STREET/PATH	FROM	TO	CLASS	LENGTH (MI)
Poplar Ave	Fontana Ave	Beech Ave	II	2.99
San Bernardino Ave	Fontana Ave	Alder Ave	II	2.78
San Sevaine Rd	SCE Utility North	SR-10 Drainage	II	0.21
San Sevaine Trail	Foothill Blvd	S. City Limit	II	5.02
San Seviane Trail	PE Trail	Banyan Ave	I	3.00
Santa Ana Ave	Almond St	Tamarind Ave	II	4.05
Santa Ana Ave	San Sevaine Trail	Mulberry Ave	II	0.48
SCE Utility North	Sierra Ave	East Ave	I	6.48
SCE Utility North Spur I	W. City Limit	SCE Utility North	I	1.66
SCE Utility North Spur II	Lytle Creek Rd	SCE Utility North	I	0.62
SCE Utility South	Citrus Ave	Locust Ave	I	2.63
SCE Utility South	Live Oak Ave	Citrus Ave	II	1.56
SCE Utility South	San Sevaine Trail	Rancherias Dr	II	0.80
Sierra Ave	Baseline Ave	S City Limit	II	6.05
Sierra Ave	Lytle Creek Rd	Sierra Lanes Pkwy	II	3.21
Sierra Ave	Sierra Lakes Pkwy	Highland Ave	II	0.42
Sierra Lakes Pkwy	Cherry Ave	Lytle Creek Rd	II	1.29
Sierra Lakes Pkwy	Lytle Creek Rd	Catawba Ave	II	0.49
Sierra Lakes Pkwy	Sierra Ave	Mango Ave	II	0.30
Slover Ave	Almond Ave	Cherry Ave	II	0.25
Slover Ave	San Sevaine Trail	Mulberry Ave	II	0.49
Slover Ave	Sierra Ave	Tamarind Ave	II	0.75
SR-210 Drainage	San Sevaine Rd	Knox Ave	I	0.99
Summit Ave	Sierra Ave	Mango Ave	II	0.25

STREET/PATH	FROM	TO	CLASS	LENGTH (MI)
Tamarind Ave	Jurupa Ave	SCE Utility South	I	0.10
Valencia Ave	Aleander Ave	Mango Ave	III	0.99
Valley Blvd	Almond Ave	Cherry Ave	II	0.25
Victoria St	SCE Utility North	Cherry Ave	II	0.28
Walnut Ave	Cherry Ave	San Seviane Rd	II	0.50
Walnut Ave	Hemlock Ave	Beech Ave	II	0.25
Walnut Village Pkwy	Sierra Ave	Mango Ave	II	0.25
			Total	102.32



The City of Fontana

According to the NMTP, Fontana has a commuting population of workers as well as major warehousing and distribution centers, which are regional destinations.

The Pacific Electric Trail, one of the main non-motorized facilities, is a continuous, paved Class I trail and walkway that connects Fontana to the Los Angeles County Line. There are also various flood control channels throughout Fontana that serve as more informal regional connections for pedestrians and cyclists. Through an agreement with the Flood Control District of San Bernardino County's Department of Public Works, bicyclists are allowed to use the access roads adjacent to flood control channels when gates are open. These roads are considered Class I bikeways or share use paths. Currently, there are 8.86 miles of Class I bikeways and 27.64 miles of Class II bike lanes.

The City of Fontana plans to implement future improvements along major transportation corridors according to the 2015 NMTP. The majority of these non-motorized improvements are Class II facilities, with only some new Class I and Class II proposed. A table of proposed improvements is included in Appendix A (Figure A-5). It should be noted that Fontana does not have a priority list of improvements at this time.

Despite environmental suitability and the completion of the Pacific Electric Trail, commuter-related cycling is relatively low. Statistics from the American Community Survey (2006-2009) indicate the percentage of trips to work by bicycling varies by jurisdiction but is only about 0.4% countywide. Fontana's bicycle commute trips are lower than the regional average at 0.21%.

San Bernardino County Transit Access Improvement for Cyclists and Pedestrians

SANBAG and the Southern California Association of Governments (SCAG) analyzed the current conditions for those who walk or ride to transit stations in the San Bernardino Valley. Completed in 2012 after a lengthy outreach and review process, improvements were recommended for the six Metrolink stations on the San Bernardino Line, including the Fontana Metrolink station.

The Fontana Metrolink Station is located in Downtown Fontana, and is surrounded by a mix of commercial, civic, and residential land uses and is connected to the Pacific Electric Trail on the northeast side of the station. Recommended improvements to the station and surrounding area focus on additional shade trees, lighting enhancements, a more active Santa Fe Park, bicycle parking, and the implementation of bike facilities that will directly connect to the station.

Other recommended active transportation improvements include installment of shade bearing trees, lighting, curb extensions, crosswalk and sidewalk improvements, additional bicycle parking options at the Metrolink Station, development of a key bicycle corridor along Arrow, Citrus, and Juniper, and mid-block crossing improvements along the Pacific Electric Trail.

Table 9.9 San Bernardino County Transit Access Improvement for Cyclists and Pedestrians. (Source: San Bernardino Association of Governments http://www.sanbag.ca.gov/planning2/study_bike-improvmnts.html)

LOCATION	RECOMMENDED ENHANCEMENT
Sierra Ave	Improve pedestrian experience by planting canopy trees that provide shade
Santa Fe Park	Install 10 ft. pedestrian and bicycle pathway with street furniture to link Sierra Ave and Metrolink Station
Fontana Metrolink Station	Provide a high visibility crosswalk at intersection of Bennett Ave and Orange Way
Arrow Blvd	Establish a Class II bike route and connection to station
Juniper Ave	Install buffered bike lanes



Caltrans' Toward An Active California State Bicycle + Pedestrian Plan

Caltrans' 2017 state bicycle and pedestrian plan is the agency's first statewide policy-plan to support active transportation through objectives, strategies, and actions. This plan is an important element of a statewide goal to provide robust multimodal transportation options to improve access, public health, and environmental sustainability. The plan presents four objectives, fifteen strategies, and sixty actions that are specific to increasing active transportation.

Best Practices

There are a number of cities, in and out of California, comparable in size and density to Fontana that have developed innovative bicycle and pedestrian plans. Below are descriptions of various active transportation plans that may embody some of the pedestrian and bicycle improvement goals that the City may have.

Pomona, California Active Transportation Plan, 2012

The Active Transportation Plan for Pomona was supplemented by a public health grant that assessed and enhanced bicycle and pedestrian access to schools, prioritize missing sidewalks, and list pedestrian improvements for 35 key intersections. Ultimately, the City focused on a combination of planning and public health by aiming to reduce pollution and improve air quality as an impetus for the ATP.

A bicycle master plan was developed as part of the ATP and was supplemented by a detailed analysis to enhance pedestrian and bicycle connectivity to specific local middle and high schools. Within the school area bicycle improvements analysis, there were

three categories; access, bicycle parking, and surrounding bikeway network. Further recommendations for the City included implementing robust educational and encouragement programs, enforcement programs, and recommendations of specific policies that the City might implement.

Rancho Cucamonga, California Circulation Master Plan, 2015

Rancho Cucamonga is located in the foothills of the Gabriel Mountains in San Bernardino County and is similar in size, density, and climate to Fontana, as well as being Fontana's neighbor to the west. The motivation and foundation of Rancho Cucamonga's Circulation Master Plan was rooted in the City's commitment to health. The City wanted to implement a robust active transportation plan accessible to all residents regardless of age or demographics.

The Circulation Master Plan ultimately recommended bicycle improvements that included: planned bikeways and a recommended bikeway network, protected cycle tracks, intersection improvements, bicycle boulevards in suburban neighborhoods, a bike sharing program, wayfinding signage, and bicycle repair stations and parking. Recommended pedestrian improvements included: complete sidewalk networks; trail implementation; wayfinding signage; high-visibility crosswalks; and sidewalk furniture. In this plan, it was recommended to create complete networks for pedestrian and cyclists by expanding on existing infrastructure, and to educate and teach the public how to use these planned systems.

Marysville, California Bicycle and Pedestrian Master Plan, 2016

Marysville is located in Yuba County, California. The City of Marysville sought to enhance quality of life by shaping the community so that residents may access bike and pedestrian facilities on an everyday basis. Although Marysville is significantly smaller than Fontana, topography and climate are quite similar. Both Fontana and Marysville have opportunities to implement bicycle and pedestrian facilities given the arid to semi-arid climates and generally flat landscapes.

The Marysville Bicycle and Pedestrian Master Plan draws attention to specific design treatments for enhancing pedestrian and bicyclists experiences. Specific recommendations are categorized by the following; bikeway projects; pedestrian projects; projects in coordination with Caltrans; and projects in coordination with Union Pacific. In addition to these improvements, there are recommended educational, enforcement, and evaluation programs. Infrastructure recommendations include bicycle detection at traffic signals, bicycle parking, sidewalk zones and spot improvements.

Orem, Utah Bicycle and Pedestrian Plan, 2010

This Plan was created to help the City with their vision for becoming the most bicycle and pedestrian friendly city in the State of Utah with a Platinum Bicycle Friendly Community rating by the League of American Bicyclists. Although Orem and Fontana vary greatly, the density of these two cities are the same.

Over 96 miles of bicycle improvements including routes and boulevards, bike lanes, and shared-use paths is recommended for the City of Orem. Recommended pedestrian improvements include over 8,300 feet of new sidewalks. Other recommendations include intersection improvements, implementation of a complete streets policy, education outreach, and bicycle parking recommendations by land use.

Appendix B.

Detailed Survey Results

Table 9.10

QUESTION 1- HOW DO YOU GET TO SCHOOL/EMPLOYMENT? ARE YOU MOST LIKELY TO:

Ride the bus	5.84% or 15 responses
Carpool/Parent	7.39% or 19 responses
Drive your own vehicle	78.99% or 203 responses
Walk	11.28% or 29 responses
Bike	7.00% or 18 responses
Other (please specify)	3.11% or 8 responses

Total Respondents: 257

QUESTION 2- WHAT IMPROVEMENTS WOULD ENCOURAGE YOU TO WALK/RUN OR RIDE A BICYCLE TO YOUR DESTINATION? (CHECK ALL THAT APPLY)

Dedicated trail	41.31% or 107 responses
Bike lanes	45.56% or 118 responses
Sidewalks	41.31% or 107 responses
More lighting	49.81% 129 responses
More shade trees	27.03% 70 responses
Benches	15.44% or 40 responses
Increased security	33.20% 86 responses
Protected bike lane	34.75% or 90 responses
Space between car traffic	23.17% or 60 responses
Bike parking	20.08% or 52 responses
Other (please specify)	8.49% or 22 responses

Total Respondents: 259

QUESTION 3 -WHAT DO YOU SEE AS BENEFITS OF AN ATP?

Improves access to transit	33.61% or 82 responses
Reduces transportation costs	35.25% or 86 responses
Supports the local economy	31.56% or 77 responses
Reduces greenhouse gas emissions	37.30% or 91 responses
Improves aesthetics	27.87% or 68 responses
Reduces traffic congestion	47.95% or 117 responses
Provides opportunities for physical activity	55.74% or 136 responses
Other (please specify)	5.74% or 14 responses

Total Respondents: 244

QUESTION 4 - WHAT DO YOU SEE AS CONCERNS OF AN ATP?

Safety	74.77% or 166 responses
Impacts during construction	27.03% or 60 responses
Will bring more congestion	7.66% or 17 responses
N/A	7.66% or 17 responses
Other (please specify)	4.05% or 9 responses

Total Respondents: 222

QUESTION 5 - IF THE IMPROVEMENTS YOU PREFER ARE INCLUDED, HOW LIKELY ARE YOU TO USE THE TRAIL?

1 (Very Unlikely)	14.96% or 35 responses
2 (Unlikely)	3.42% or 8 responses
3 (Neutral)	15.38% or 36 responses
4 (Likely)	27.35% or 64 responses
5 (Very Likely)	38.89% or 91 responses

Total Respondents: 234



QUESTION 6 - HOW OFTEN DO YOU WALK, BIKE, OR USE ALTERNATE TRANSPORTATION (BESIDES A CAR) IN FONTANA?

4+ times per week	18.97% or 48 responses
1-3 times per week	30.83% or 78 responses
1-3 times per month	31.62% or 80 responses
Never	18.58% or 47 responses

Total Respondents: 253

QUESTION 7 - HOW OFTEN DO YOU WALK FOR A SIGNIFICANT DISTANCE (MORE THAN 5 MINUTES) FOR A SINGLE TRIP?

4+ times per week	27.27% or 69 responses
1-3 times per week	26.88% or 68 responses
1-3 times per month	32.41% or 82 responses
Never	13.44% or 34 responses

Total Respondents: 253

QUESTION 8- HOW OFTEN DO YOU BIKE FOR ANY PURPOSE?

4+ times per week	11.07% or 27 responses
1-3 times per week	17.62% or 43 responses
1-3 times per month	32.38% or 79 responses
Never	38.93% or 95 responses

Total Respondents: 244

Table 9.11 City of Fontana Malage Bridge Project database

As of July 19, 2016

Main Category	Sub Category	Salutation	First Name	Last Name	Title	Department	Organization
Academic Institutions	Elementary School	Ms.	Jean	Joyce	Principal		Hemlock Elementary School
Academic Institutions	Elementary School	Ms.	Maria	Ceja	Principal		Oleander Elementary School
Academic Institutions	Elementary School	Ms.	Rebecca	Hinojosa	Principal		Tokay Elementary School
Academic Institutions	School District	Mr.	Randal	Bassett	Interim Superintendent		Fontana Unified School District
Agencies	Local	Ms.	Tonia	Lewis	City Clerk		City of Fontana
Agencies	Local	Mr.	Ricardo	Sandoval	Director of Engineering		City of Fontana
Agencies	Local	Mr.	Kenneth	Hunt	City Manager		City of Fontana
Agencies	Local	Ms.	Cecilia	Lopez-Henderson	Deputy City Clerk		City of Fontana
Agencies	Local	Ms.	Debbie	Brazill	Deputy City Manager		City of Fontana
Agencies	Local	Mr.	Noel	Castillo	Engineering Manager		City of Fontana
Agencies	Local	Ms.	Monique	Reza	Administrative Analyst II		City of Fontana
Agencies	Local	Mr.	Chuck	Hays	Public Works Director		City of Fontana
Agencies	Local	Mr.	Dan	West	Public Works Manager		City of Fontana
Agencies	Local	Mr.	Kevin	Ryan	Strategic Transportation Eng. Mgr		City of Fontana
Agencies	Local	Ms.	Tiffany	Starks	Community Services Supervisor		City of Fontana
Agencies	Local	Mr.	Zai	Abubakar	Planning Manager		City of Fontana
Agencies	Local	Ms.	Shannon	Casey	Senior Planner		City of Fontana
Agencies	Local	Mr.	Michael	Wright	Community Services Manager		City of Fontana
Agencies	Local	Ms.	Martha	Guzman-Hurtado	Public Information Coordinator		City of Fontana
Agencies	Local	Ms.	Jennifer	Hunt	Community Services Manager		City of Fontana
Agencies	Regional	Mr.	David	Wert	Public Information Officer		San Bernardino County Administrative Office
Agencies	Regional	Mr.	Raymond	Wolfe	Executive Director		San Bernardino Associated Governments (SANBAG)
Agencies	Regional	Mr.	Tim	Watkins	Chief of Legislative & Public Affairs		San Bernardino Associated Governments (SANBAG)
Agencies	Regional	Ms.	Dena	Fuentes	Director of Community Development		San Bernardino County Department of Community Development
Agencies	Regional	Mr.	Gerry	Newcombe	Director of Public Works		San Bernardino County Department of Public Works
Agencies	Regional	Mr.	Mazin	Kasey	Chief Public Works Engineer		San Bernardino County Department of Public Works
Agencies	Regional	Mr.	Arnold	San Miguel	Regional Affairs Officer		Southern California Association of Governments (SCAG)
Business Associations	Chambers of Commerce	Mr.	Phil	Cothran	President		Fontana Chamber of Commerce
Businesses							A Auto Repair & Towing
Businesses		Mr.	Scot	Hamm			A1 Power Equipment
Businesses		Mr.	Ray	Wilkins	Vice President of Operations		Auto Club Speedway
Businesses							Ferrellgas
Businesses							Fontana Nursery
Businesses		Mr.	Red	Pugh			Foothill Builders Industrial Supply
Businesses							Padilla Tire and Auto Repair
Businesses							Storemore Storage
Businesses							Target Distribution Center
Community Groups	Center						Cypress Neighborhood Center
Community Groups	Center						Don Day Neighborhood Center
Community Groups	Center						Fontana Community Senior Center
Community Groups	Center						Heritage Neighborhood Center
Community Groups	Center						Jack Bulik Neighborhood Center
Community Groups	Club	Mr.	Michael	Rossitter	Comander		American Legion Post 262
Community Groups	Club	Ms.	Darlene	Scalf			Fontana Kiwanis Club
Community Groups	Non-Profits	Ms.	Marybeth	Snider	President		Fontana Historical Society
Community Groups	Non-Profits	Ms.	Victoria	Jones	President		Friends of the Pacific Electric Trail
Elected Officials	Federal	The Honorable	Norma	Torres	Congresswoman		United States House of Representatives, District 35
Elected Officials	Local	The Honorable	Acquanetta	Warren	Mayor		City of Fontana
Elected Officials	Local	The Honorable	John	Roberts	Mayor Pro Tem		City of Fontana
Elected Officials	Local	The Honorable	Lydia	Salazar-Wilbert	Councilmember		City of Fontana
Elected Officials	Local	The Honorable	Michael	Tahan	Councilmember		City of Fontana
Elected Officials	Local	The Honorable	Jesus	Sandoval	Councilmember		City of Fontana
Elected Officials	Regional	The Honorable	Janice	Rutherford	County Supervisor		San Bernardino County Board of Supervisors, District 2
Elected Officials	State	The Honorable	Cheryl	Brown	Assemblymember		California State Assembly, District 47
Elected Officials	State	The Honorable	Freddie	Rodriguez	Assemblymember		California State Assembly, District 52
Elected Officials	State	The Honorable	Connie	Leyva	State Senator		California State Senate, District 20
Elected Officials-Staff	Federal	Mr.	Daniel	Martinez	District Representative		Office of United States House of Representatives, District 35
Elected Officials-Staff	Federal	Mr.	Michael	Cervantes	District Representative		Office of United States House of Representatives, District 35
Elected Officials-Staff	Regional	Mr.	Andy	Takata	Chief of Staff		Office of San Bernardino County Supervisor Janice Rutherford
Elected Officials-Staff	Regional	Mr.	Scott	Vanhorne	Director of Communications		Office of San Bernardino County Supervisor Janice Rutherford
Elected Officials-Staff	Regional	Ms.	Christina	Taylor	District Representative		Office of San Bernardino County Supervisor Janice Rutherford
Elected Officials-Staff	State	Mr.	Daniel	Enz	District Director		Office of California State Assemblymember Cheryl Brown, District 47
Elected Officials-Staff	State	Ms.	Ashley	Jones	Director of Communications		Office of California State Assemblymember Cheryl Brown, District 47
Elected Officials-Staff	State	Mr.	Josue	Castillo	Field Representative		Office of California State Assemblymember Cheryl Brown, District 47
Elected Officials-Staff	State	Mr.	Robert	Torres	District Director		Office of California State Assemblymember Freddie Rodriguez, District 52
Elected Officials-Staff	State	Ms.	Claudia	Rubio	Field Representative		Office of California State Assemblymember Freddie Rodriguez, District 52
Elected Officials-Staff	State	Mr.	Christopher	Craig	Field Representative		Office of California State Assemblymember Freddie Rodriguez, District 52
Elected Officials-Staff	State	Mr.	Manuel	Saucedo	District Director		Office of California State Senate Connie M. Leyva, District 20
Elected Officials-Staff	State	Ms.	Vanessa	Wiarco	Field Representative		Office of California State Senate Connie M. Leyva, District 20
Elected Officials-Staff	State	Mr.	Benny	Ayala	Field Representative		Office of California State Senate Connie M. Leyva, District 20
Emergency Responders	Local	Mr.	Robert	Ramsey	Chief of Police		City of Fontana
Emergency Responders	Local	Mr.	Mark	Stark	Captain		City of Fontana
Emergency Responders	Local	Ms.	Amber	Smith		Neighborhood Watch	City of Fontana
Emergency Responders	Local	Ms.	Mary	Stewart	Community Policing Technician		City of Fontana
Emergency Responders	Regional	Mr.	Jeff	Birchfield	Division Chief	Fire Protection	San Bernardino County Fire Department
Emergency Responders	Regional	Mr.	Brian	Headley	Fire Marshal	Fire Prevention	San Bernardino County Fire Department
Emergency Responders	Regional	Mr.	Horace	Boatwright	Captain	Fontana Station	San Bernardino County Sheriff's Department
Interested Parties		Mr.	Jeff				
Interested Parties		Mr.	Julio	Arias			
Interested Parties		Mr.	Cesar	Avila			
Interested Parties		Mr.	Vyria	Aviles			
Interested Parties		Ms.	Sandra	Birney			



	Address	City	State	Zip Code	Phone	Email	Source
	15080 Miller Ave.	Fontana	CA	92336	(909)357-5470	loveim@fused.net	San Savaine Database 10-16-2015
	8650 Oleander Ave.	Fontana	CA	92335	(909)357-5700	maria.ceja@fused.net	San Savaine Database 10-16-2015
	7846 Tokay Ave.	Fontana	CA	92336	(909)357-5770	rebecca.hinojosa@fused.net	San Savaine Database 10-16-2015
	P.O. Box 5090	Fontana	CA	92334	(909)357-7600 ext. 29109	randal.bassett@fused.net	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7602	tlewis@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7613	rsandoval@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7653	khunt@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7602	chenderson@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-6727	dbrazil@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7632	ncastillo@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7607	mreza@fontana.org	San Savaine Database 10-16-2015
	16489 Orange Way	Fontana	CA	92335	(909)350-6530	chays@fontana.org	San Savaine Database 10-16-2015
	16489 Orange Way	Fontana	CA	92335	(909)350-6518	dwest@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-6655	kryan@fontana.org	San Savaine Database 10-16-2015
	16860 Valencia Ave.	Fontana	CA	92335	(909)349(6)900	lstarks@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7625	ZAbuBakar@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7608	scasey@fontana.org	San Savaine Database 10-16-2015
	16860 Valencia Ave.	Fontana	CA	92335	(909)349(6)966	mwright@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-6520	mguzmanhurtado@fontana.org	AA
	16860 Valencia Ave.	Fontana	CA	92335	(909)349(6)908	ihunt@fontana.org	San Savaine Database 10-16-2015
	385 N. Arrowhead Ave.	San Bernardino	CA	92415	(909)387-4717	dwert@sbcounty.gov	AA
	1170 W. 3rd St., 2nd Floor	San Bernardino	CA	92410	(909)884-8276	rwolfe@sanbag.ca.gov	AA
	1170 W. 3rd St., 2nd Floor	San Bernardino	CA	92410	(909)884-8276	twatkins@sanbag.ca.gov	AA
	385 N. Arrowhead Ave., 3rd Floor	San Bernardino	CA	92415	(909)387-4460	dfuentes@rda.sbcounty.gov	AA
	825 E. 3rd St.	San Bernardino	CA	92415	(909)387-7906	gnewcombe@dpw.sbcounty.gov	San Savaine Database 10-16-2015
	825 E. 3rd St.	San Bernardino	CA	92415	(909)387-7916	mcasey@dpw.sbcounty.gov	San Savaine Database 10-16-2015
	818 W. 7th St., 12th Floor	Los Angeles	CA	90017	(213) 236-1925	sanmiguel@scag.ca.gov	AA
	8491 Sierra Ave.	Fontana	CA	92335	(909)822-4433	info@fontanachamber.org	San Savaine Database 10-16-2015
	15735 E. Foothill Blvd.	Fontana	CA	92335	(909)854-2705		San Savaine Database 10-16-2015
	15690 Foothill Blvd.	Fontana	CA	92335	(909)427-8098		AA
	9300 Cherry Ave.	Fontana	CA	92335	(909)429(5)000	twilkins@autoclubspeedway.com	AA
	15559 Foothill Blvd.	Fontana	CA	92335	(909)823-0675		AA
	15380 E. Foothill Blvd.	Fontana	CA	92335	(909)427-1(9)05		AA
	15825 E. Foothill Blvd.	Fontana	CA	92335	(909)829(2)929	rpugh@fbisupply.com	San Savaine Database 10-16-2015
	15808 Foothill Blvd.	Fontana	CA	92335	(909)350-4492		San Savaine Database 10-16-2015
	15723 E. Foothill Blvd.	Fontana	CA	92335	(909)822-1677		San Savaine Database 10-16-2015
	14750 Miller Ave.	Fontana	CA	92336	(909)355-6000		San Savaine Database 10-16-2015
	8380 Cypress Ave.	Fontana	CA	92335	(909)349(6)988		San Savaine Database 10-16-2015
	14501 Live Oak Ave.	Fontana	CA	92337	(909)349(6)997		San Savaine Database 10-16-2015
	16710 Ceres Ave.	Fontana	CA	92335	(909)854-5151		San Savaine Database 10-16-2015
	7350 W. Liberty Pkwy.	Fontana	CA	92336	(909)349(6)968		San Savaine Database 10-16-2015
	16581 Filbert St.	Fontana	CA	92335	(909)349(6)984		San Savaine Database 10-16-2015
	15840 Foothill Blvd.	Fontana	CA	92335	(909)823-8061	alpost262@yahoo.com	San Savaine Database 10-16-2015
	P.O. Box 1027	Fontana	CA	92334			AA
	16830 Spring St.	Fontana	CA	92335	(909)350-3539	fontanahistoricalociety1906@gmail.com	AA
	P.O. Box 9461	Rancho Cucamonga	CA	91701		info@petrail.org	AA
	3200 Inland Empire Blvd., Ste. 200B	Ontario	CA	91764	(909)481-6474	norma.torres@mail.house.gov	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7600	awarren@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7600	jroberts@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7600	lwibert@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7600	mtahan@fontana.org	San Savaine Database 10-16-2015
	8353 Sierra Ave.	Fontana	CA	92335	(909)350-7600	jsandova@fontana.org	San Savaine Database 10-16-2015
	385 N. Arrowhead Ave., Fifth Floor	San Bernardino	CA	92415	(909)387-4833	SupervisorRutherford@sbcounty.gov	AA
	290 N. D St., Ste. 903	San Bernardino	CA	92401	(909)381-3238	assemblymember.brown@assembly.ca.gov	San Savaine Database 10-16-2015
	13160 7th St.	Chino	CA	91710	(909)902-9606	assemblymember.rodriguez@assembly.ca.gov	San Savaine Database 10-16-2015
	11760 Central Ave., Ste. 100	Chino	CA	91710	(909)591-7016	senator.levya@senate.ca.gov	San Savaine Database 10-16-2015
	3200 Inland Empire Blvd., Ste. 200B	Ontario	CA	91764	(909)481-6474	daniel.martinez@mail.house.gov	San Savaine Database 10-16-2015
	3200 Inland Empire Blvd., Ste. 200B	Ontario	CA	91764	(909)481-6474	michael.cervantes@mail.house.gov	San Savaine Database 10-16-2015
ord, District 2	8575 Haven Ave., Ste. 110	Rancho Cucamonga	CA	91730	(909)387-4833	andy.takata@bos.sbcounty.gov	AA
ord, District 2	8575 Haven Ave., Ste. 110	Rancho Cucamonga	CA	91730	(909)387-4833	svanhorne@bos.sbcounty.gov	AA
ord, District 2	8575 Haven Ave., Ste. 110	Rancho Cucamonga	CA	91730	(909)387-4833	christina.taylor@bos.sbcounty.gov	AA
istrict 47	290 N. D St., Ste. 903	San Bernardino	CA	92401	(909)381-3238	daniel.enz@asm.ca.gov	San Savaine Database 10-16-2015
istrict 47	290 N. D St., Ste. 903	San Bernardino	CA	92401	(909)381-3238	ashley.lones@asm.ca.gov	San Savaine Database 10-16-2015
istrict 47	290 N. D St., Ste. 903	San Bernardino	CA	92401	(909)381-3238	josue.castillo@asm.ca.gov	San Savaine Database 10-16-2015
uez, District 52	13160 7th St.	Chino	CA	91710	(909)902-9606	robert.torres@asm.ca.gov	San Savaine Database 10-16-2015
uez, District 52	13160 7th St.	Chino	CA	91710	(909)902-9606	claudia.rubio@asm.ca.gov	San Savaine Database 10-16-2015
uez, District 52	13160 7th St.	Chino	CA	91710	(909)902-9606	christopher.craig@asm.ca.gov	San Savaine Database 10-16-2015
0	11760 Central Ave., Ste. 100	Chino	CA	91710	(909)591-7016	manuel.saucedo@sen.ca.gov	San Savaine Database 10-16-2015
0	11760 Central Ave., Ste. 100	Chino	CA	91710	(909)591-7016	vanessa.wiarco@sen.ca.gov	San Savaine Database 10-16-2015
0	11760 Central Ave., Ste. 100	Chino	CA	91710	(909)591-7016	benny.ayala@sen.ca.gov	San Savaine Database 10-16-2015
	17005 Upland Ave.	Fontana	CA	92335	(909)350-7702	rramsey@fontana.org	AA
	17005 Upland Ave.	Fontana	CA	92335	(909)350-7715	mstark@fontana.org	AA
	8353 Sierra Ave.	Fontana	CA	92335	(909)356-7171	asmith@fontana.org	AA
	17005 Upland Ave.	Fontana	CA	92335	(909)356-7166	mstewart@fontana.org	AA
	15380 San Bernardino Ave.	Fontana	CA	92335	(909)829(4)441	jbirchfield@sbclire.org	AA
	8353 Sierra Ave.	Fontana	CA	92335	(909)428-8891	bheadley@sbclire.org	AA
	17780 Arrow Blvd.	Fontana	CA	92335	(909)356-6767	fontana@sbcsd.org	AA
	11093 Beech Ave.	Fontana	CA	92337	(909)660-2927		San Savaine Database 10-16-2015
	9204 Pepper Ave.	Fontana	CA	92335	(951)966-3440		San Savaine Database 10-16-2015
	16010 Tyrol Dr.	Fontana	CA	92337			San Savaine Database 10-16-2015
	16301 Aliso Dr.	Fontana	CA	92337	(909)743-2151		San Savaine Database 10-16-2015
	11041 Oleander Ave.	Fontana	CA	92337	(909)875-4672		San Savaine Database 10-16-2015

Interested Parties		Mr.	John	Carlo			
Interested Parties		Mr.	Mario	Castellanos			
Interested Parties		Ms.	Gloria	Chan			
Interested Parties		Ms.	Bobbi Jo	Chavarria			
Interested Parties		Ms.	Barbara	Chavez			
Interested Parties		Ms.	Doris	Corona			
Interested Parties		Mr.	Ivan	Corpus			
Interested Parties		Mr.	David	Erickson			
Interested Parties		Mr.	Jose Luis	Fernandez			
Interested Parties		Mr.	Leo	Galvan			
Interested Parties		Ms.	Laura	Galvan			
Interested Parties		Mr. & Mrs.	Salvador & Lidia	Garcia			
Interested Parties		Mr.	Sergio	Garcia			
Interested Parties		Mr.	Richard	Greenhagen			
Interested Parties		Mr.	Jack	Grisafe			
Interested Parties		Mr.	Joshua	Harmon			
Interested Parties		Ms.	Sheila	Harmon			
Interested Parties		Ms.	Dianna	Hernandez			
Interested Parties		Mr.	Jim	Hopkinson			
Interested Parties		Mr.	Mike	James			
Interested Parties		Ms.	Yolanda	Jimenez			
Interested Parties		Mr.	How	Leach			
Interested Parties		Mr.	Dean	Lind			
Interested Parties		Ms.	Jannie	Long			
Interested Parties		Mr.	Ray	Lopez			
Interested Parties		Mr.	David	Lyman			
Interested Parties		Mr.	Adrian	Macias			
Interested Parties		Ms.	Norma	Marroquin			
Interested Parties		Mr.	Jeremy	Mertz			
Interested Parties		Mr.	Ryan	Miller			



10861 Citrus Ave.	Fontana	CA	92337	(909)822-0664	San Seavine Database 10-16-2015
9925 Lemon Ave.	Fontana	CA	92335	(626)627-0091	San Seavine Database 10-16-2015
9802 Whitewood Ct.	Fontana	CA	92335	(909)42911625	San Seavine Database 10-16-2015
15585 Mallory Dr.	Fontana	CA	92335	(909)262-2880	San Seavine Database 10-16-2015
495 N. Maple St., #44	Fontana	CA	92336	(909)782-9635	San Seavine Database 10-16-2015
10881 Oleander Ave.	Fontana	CA	92337	(951)906-4683	San Seavine Database 10-16-2015
9835 Cupid Way	Fontana	CA	92335	(909)782-7652	San Seavine Database 10-16-2015
P.O. Box 522	Fontana	CA	92334	(909)965-3142	San Seavine Database 10-16-2015
16082 Iris Dr.	Fontana	CA	92335	(909)518-5317	San Seavine Database 10-16-2015
15193 Washington Dr.	Fontana	CA	92335	(909)204-9262	San Seavine Database 10-16-2015
14928 Slover Ave.	Fontana	CA	92337	(909)278-6495	San Seavine Database 10-16-2015
11033 Citrus Ave.	Fontana	CA	92337	(909)823-6563	San Seavine Database 10-16-2015
11432 Citrus Glen Ln.	Fontana	CA	92337	626-833-8675	San Seavine Database 10-16-2015
5811 Boca Raton Way	Fontana	CA	92336	(909)717-0545	San Seavine Database 10-16-2015
10880 Citrus Ave.	Fontana	CA	92337	(909)82911837	San Seavine Database 10-16-2015
16860 Slover Ave., #89	Fontana	CA	92337	951-283-6214	San Seavine Database 10-16-2015
14643 Argentine Ct.	Fontana	CA	92337	(909)268-992	San Seavine Database 10-16-2015
15832 Del Obispo Rd.	Fontana	CA	92337	(909)356-4564	San Seavine Database 10-16-2015
11925 Savona Dr.	Fontana	CA	92337	(909)356-1966	San Seavine Database 10-16-2015
17664 Hawthorne	Fontana	CA	92335		San Seavine Database 10-16-2015
15912 Aliso Drive	Fontana	CA	92337	562-382-5350	San Seavine Database 10-16-2015
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16466 Jurupa Ave.	Fontana	CA	92337	(909)350-3795	San Seavine Database 10-16-2015
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9754 Loma Ave.	Fontana	CA	92335	(909)854-8340	San Seavine Database 10-16-2015
10926 Citrus Ave.	Fontana	CA	92337	(909)822-4918	San Seavine Database 10-16-2015
10460 Sultana Ave.	Fontana	CA	92337	(909)254-3250	San Seavine Database 10-16-2015
14635 Valley Blvd.	Fontana	CA	92335	(909)822-8008	San Seavine Database 10-16-2015
14492 Oak Knoll Ct.	Fontana	CA	92337	(909)262-9067	San Seavine Database 10-16-2015

Appendix C.

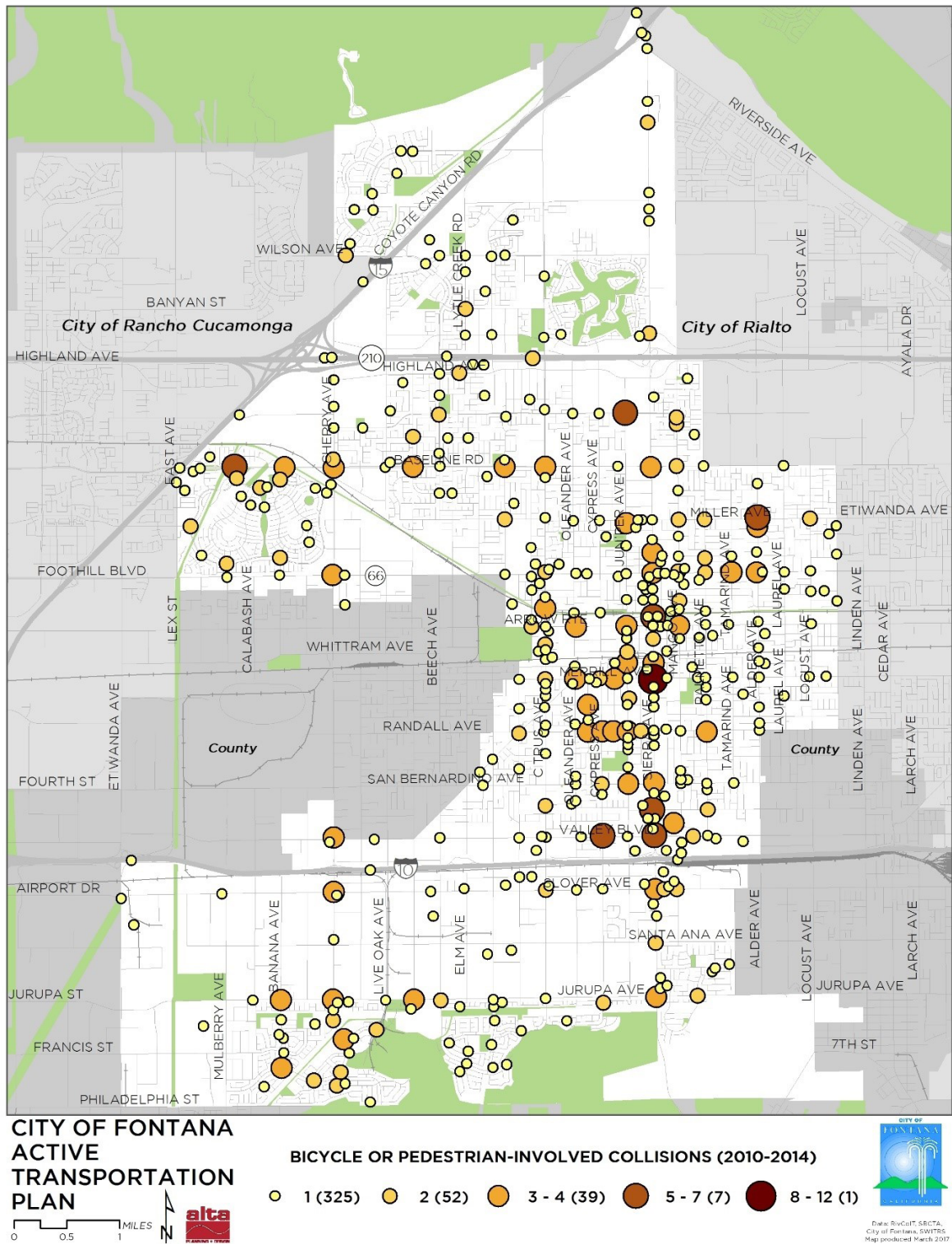
Collision Analysis

Collision information for the City of Fontana is available through the California Highway Patrol (CHP) Statewide Integrated Traffic Records System (SWITRS). SWITRS data documented 419 bicycle- or pedestrian-involved collisions between 2010 and 2014 occurring within the City of Fontana limits. The City of Fontana provided data for an additional 227 bicycle- or pedestrian-involved collisions within the same study period, 192 of which were not present in the SWITRS records. For certain analyses, only SWITRS data was used since more detailed information exists in these records; those sections are indicated as such.

After combining the SWITRS data and the City of Fontana's supplemental collision data, a total of 300 pedestrian-involved collisions and 311 bicyclist-involved collisions occurred in the City of Fontana between 2010-2014, resulting in 22 fatalities. This memo seeks to identify trends and common themes found in the data to support final recommendations made in the City of Fontana Active Transportation Plan.



Figure 9.2 Map of Fontana Collisions



Collision Time and Location

Our analysis indicates that 359 of the 611 (59%) bicycle and pedestrian collisions occurred at an intersection.

Table 9.12 Collisions in Intersections

	PEDESTRIAN COLLISIONS	BICYCLIST COLLISIONS	TOTAL
Collisions in Intersections*	144 (40%)	215 (60%)	359

*Defined as within 50 feet of an intersection

Collisions most frequently occurred on Sierra Avenue (22), Foothill Boulevard (14), Slover Avenue (12), and Valley Boulevard (14), accounting for 10% of all collisions when listed as primary roads (the road that the collision actually occurred on). The same roads were frequently listed as the secondary roads (the nearest cross-street to the collision) in collisions. As depicted below in Table 2, these four (4) roads combined were identified as either the primary or secondary road in 136 (22%) of all collisions.

Table 9.13 Most Common Roads

ROAD	PRIMARY RD - PEDESTRIAN	PRIMARY RD - BICYCLIST	SECONDARY RD - PEDESTRIAN	SECONDARY RD - BICYCLIST	TOTAL
Sierra Avenue	16	6	20	20	62 (46%)
Valley Boulevard	10	4	6	7	27 (20%)
Foothill Boulevard	11	3	5	8	27 (20%)
Slover Avenue	7	5	4	4	20 (14%)
Total	44	18	35	39	136

Figure 9.3 Pedestrian-Involved Collisions

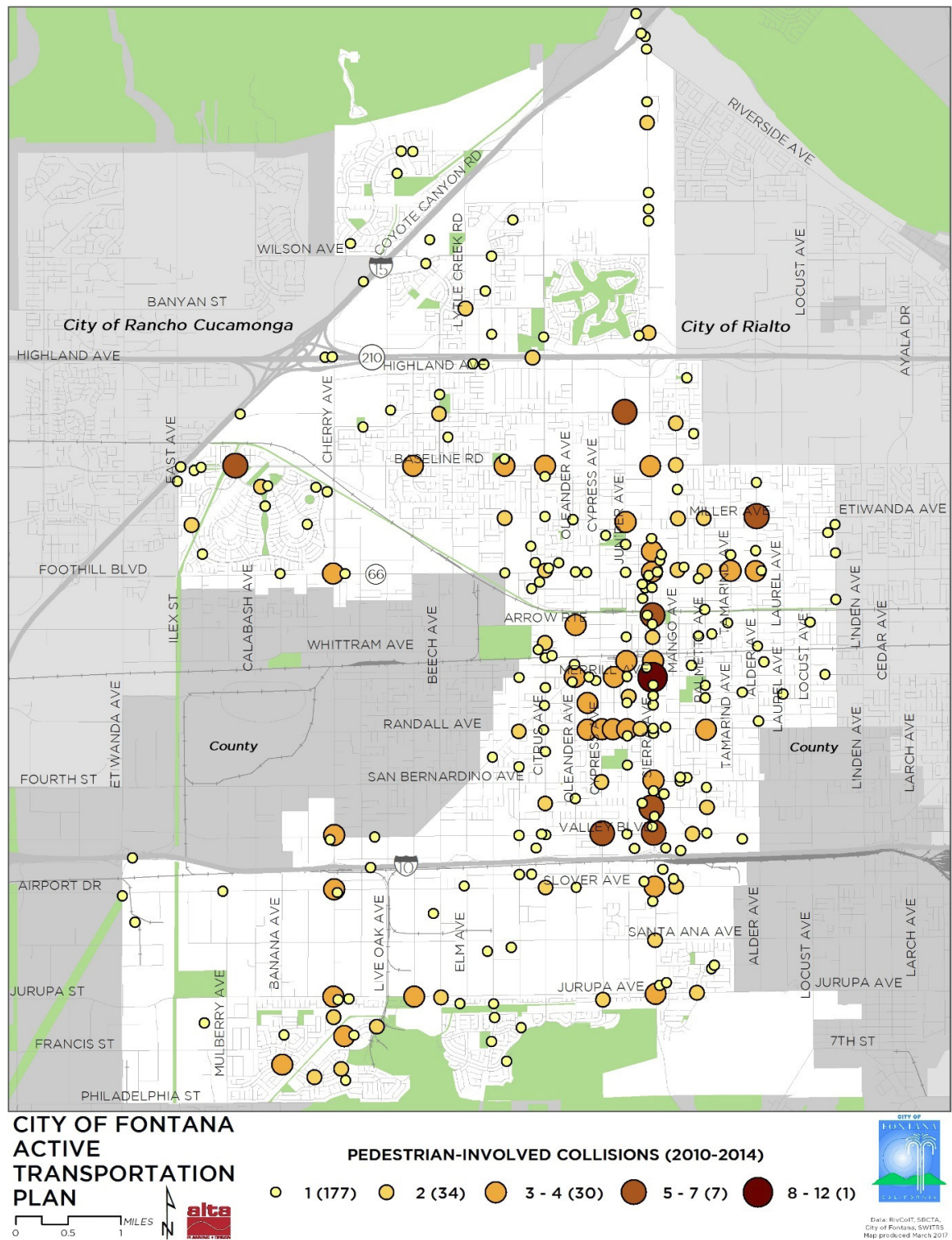
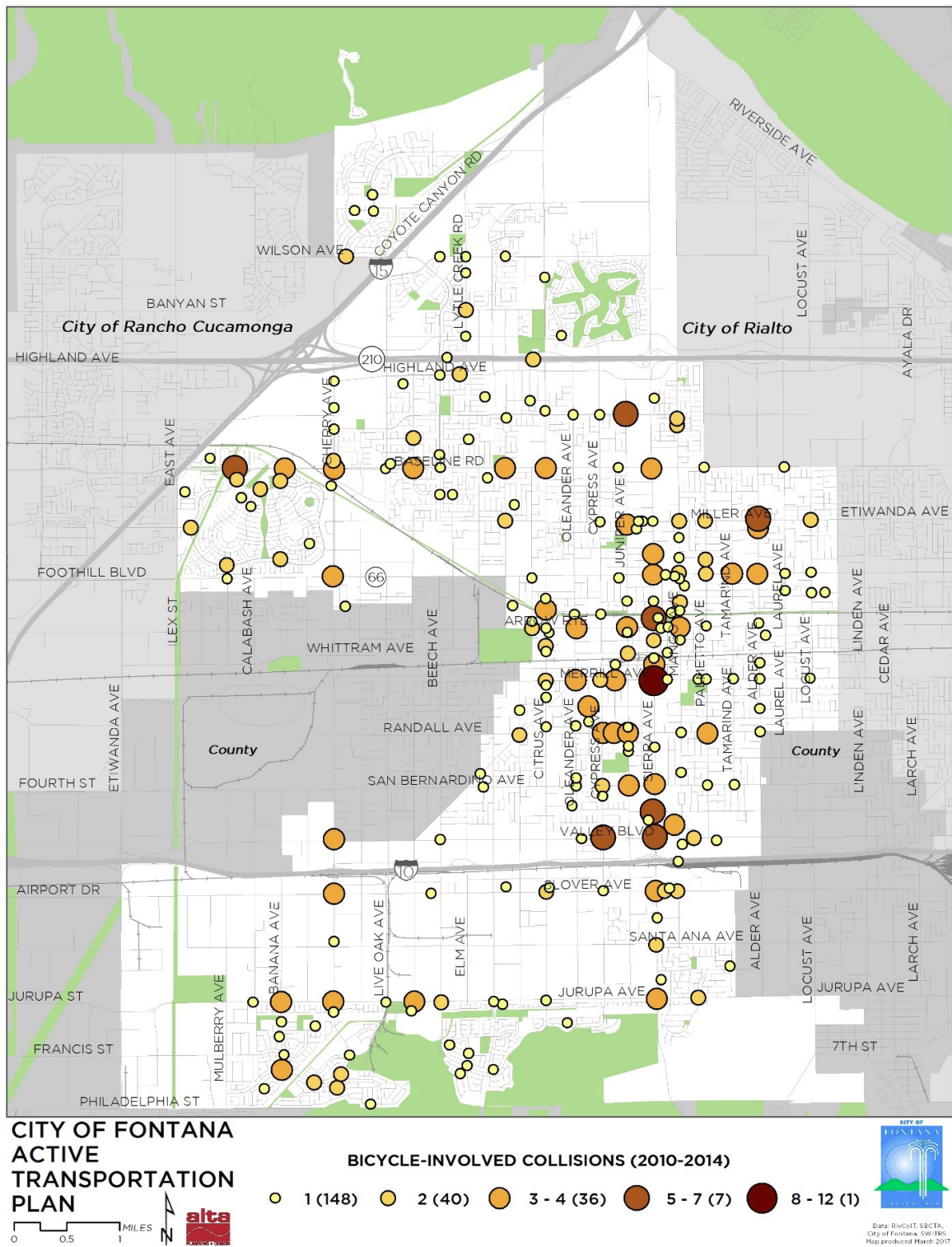


Figure 9.4 Bicycle-involved Collisions



Occurrences

In 2012 there was a marked increase from previous years in bicyclist collisions with 81 collisions. However, in 2013, bicyclist collisions decreased to 57. Over the five-year study period, the City of Fontana roads experienced an average of 62 bicyclist collisions per year. Pedestrian collisions were highest in 2014 with 68 collisions, compared to the annual average of 60 collisions per year between 2010 and 2014.

Pedestrian and bicyclist collisions did not fluctuate dramatically month to month, but pedestrian collisions peaked in November and December, and bicyclist collisions peaked in May and September. Additionally, no particular day of the week stood out as worse for collisions; however, slightly more collisions occurred on Mondays than any other day. Figures 9.4 and 9.5 illustrate the annual and day-of-the-week characteristics of the collisions.

As depicted in Figure 9.6, 43% of all collisions occurred between 3 pm and 9 pm. Pedestrian collisions peaked between 9 pm and the midnight time frame with 58 collisions, representing 19% of all pedestrian collisions, while 25% of all bicyclist collisions occurred between 3 pm and 9 pm. SWITRS data only provided detail on the lighting and road conditions for each collision, as described in Tables 9.14-9.16.. A majority of the collisions occurred during daylight on dry roads, indicating that collisions primarily occur during ordinary driving conditions. The majority of collisions cannot be attributed to unusual circumstances such as darkness, poor road conditions, or inclement weather.

Figure 9.5 Collisions by Day of Week

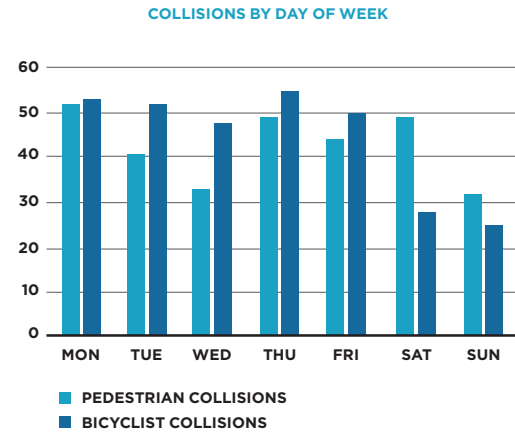


Figure 9.6 Collisions by Time Frame

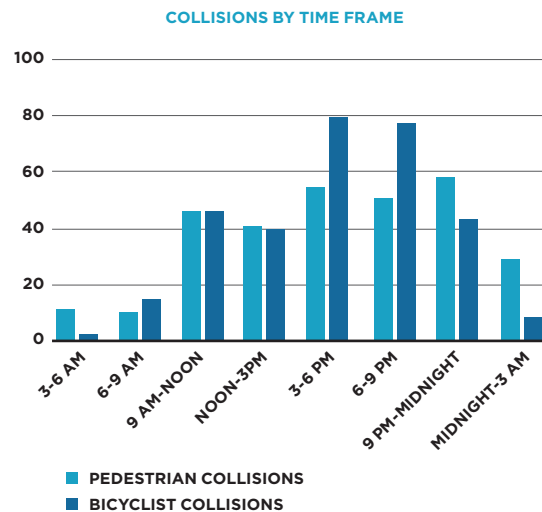


Table 9.14 Lighting During Collisions

LIGHTING	PEDESTRIAN COLLISIONS	BICYCLIST COLLISIONS	TOTAL
Daylight	110	179	289 (69%)
Dusk-Dawn Light	7	4	11 (2.5%)
Dark with Street Lights	67	36	103 (25%)
Dark with No Street Lights	14	1	15 (3.5%)
Total	198	221	418

Not stated: 102 pedestrian collisions, 90 bicyclist collisions

Table 9.15 Surface Conditions During Collisions

SURFACE CONDITIONS	PEDESTRIAN COLLISIONS	BICYCLIST COLLISIONS	TOTAL
Dry	187	214	416 (96%)
Wet	11	5	16 (4%)
Total	198	219	417

Not stated: 102 pedestrian collisions, 90 bicyclist collisions

Table 9.16 Road Conditions During Collisions

ROAD CONDITIONS	PEDESTRIAN CONDITIONS	BICYCLIST CONDITIONS	TOTAL
Holes or Deep Ruts	1	2	3 (<1%)
Construction or Repair Zone	3	1	4 (<1%)
Other	1	1	2 (<1%)
No Unusual Condition	193	216	409 (98%)
Total	198	220	418

Not stated: 102 pedestrian collisions, 90 bicyclist collisions



Collision Types

The most common type of pedestrian-involved collision recorded was classified as “vehicle/pedestrian,” accounting for 231 of 300 pedestrian collisions, or 77%. This was followed by 33 “broadside” (11%) and 16 “head-on” collisions (5%). Figure 9.7 depicts all types of pedestrian collisions described.

“Broadside” was the most common type of bicyclist collision, accounting for 205 of 311 (66%) bicycle-involved collisions. Bicyclist collisions were classified as “other” in 26 (8%) instances, followed by 20 (6%) “sideswipes” and 17 (5%) “head-on” bicyclist collisions. Figure 9.8 depicts all types of bicyclist collisions described.

Party at Fault

The party at fault was only listed in SWITRS data and not included in city-provided reports. Approximately 50% of the time motorists were identified at fault, while pedestrians were identified at fault the other 50%.

Of the 300 pedestrian-involved collisions, 204 documented the pedestrian’s actions immediately preceding a crash, and the results are depicted in Figure 9.10. Of these 204 documented pedestrian actions, the most common action identified in the dataset was a pedestrian crossing the street outside of a crosswalk, accounting for 82 collisions, or 41%.

Figure 9.7 Pedestrian Collision Types

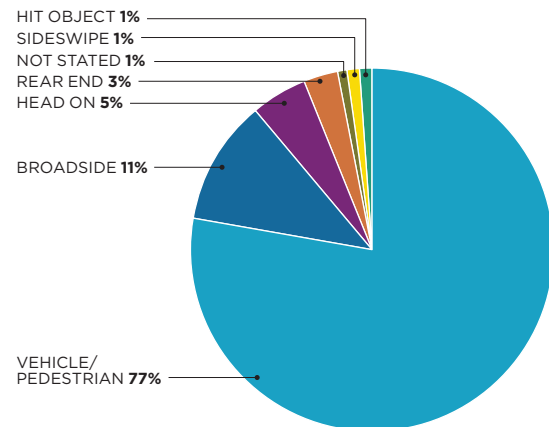


Figure 9.8 Bicyclist Collision Types

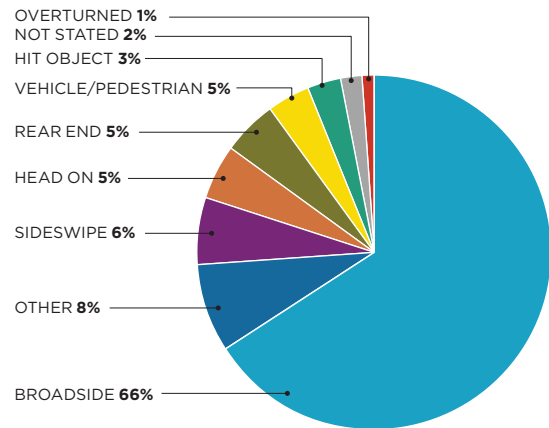


Figure 9.9 Parties at Fault, Pedestrian Collisions

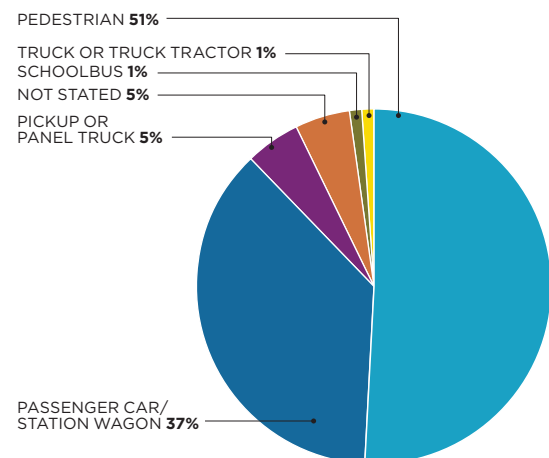
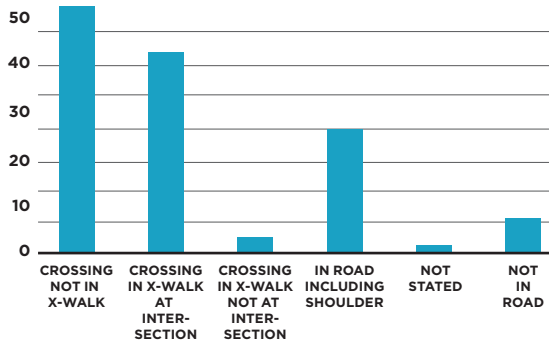


Figure 9.10 Pedestrian Action Preceding Collision



In the 220 bicyclist collisions that specified a party at fault, bicyclists were listed at fault for 150 (68%). Of these 150 bicyclist collisions in which the bicyclists were listed at fault, the most common violation was riding a bicycle in the wrong direction. This occurred in 61 (41%) of the bicyclist-responsible collisions. The second most common party reported at fault were passenger cars or station wagons, listed at fault in 39 (18%) of 220 bicyclist collisions.

Figure 9.11 Parties at Fault, Bicyclist Collisions

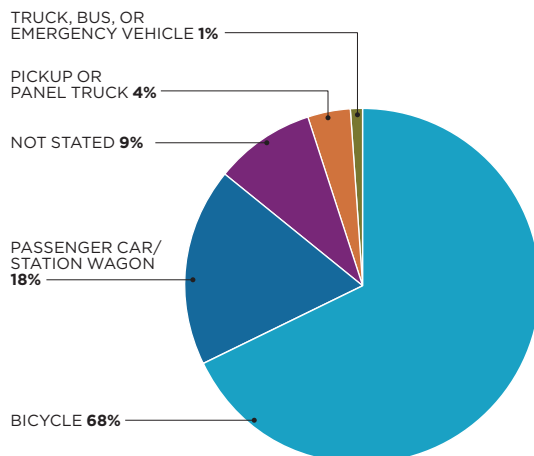


Table 9.17 details the most common motorist violations, accounting for 184 of 364 collisions in which a party was listed at fault. In pedestrian collisions, the most common violation from motorists was failing to yield to a pedestrian. In bicyclist collisions in which motorists were at fault, the most common violation was speeding.

Collision Severity

Over half of all collisions resulted in a severe injury or fatality. Of the 48 combined fatalities and severe injuries, 9 (19%) occurred in an intersection. This may indicate that the absence of bicycle and pedestrian facilities, such as bicycle lanes and sidewalks, exposes non-motorists to speeding drivers not anticipating their presence. Although collisions peaked between 3 pm-6 pm, fatal and severe collisions occurred during the evening and early morning hours of 6 pm-3 am. This may be associated with peak times for driving under the influence, limited visibility, and motorists not expecting to encounter pedestrians or bicyclists during these hours.

Table 9.17 Most Common Motorist Violations

MOTORIST VIOLATION	PEDESTRIAN COLLISIONS	BICYCLIST COLLISIONS	TOTAL
Failure to yield to right-of-way traffic	52	2	54
Speeding	18	23	41
Vehicle turned or changed lanes in unsafe conditions	9	15	24
Failure to yield to right-of-way traffic when entering or crossing highway	1	21	22
Failure to stop at stop sign or yield to right-of-way traffic	5	17	22
Failure to stop before marked limit line or crosswalk	3	18	21

No violation stated: 96 pedestrian collisions, 84 bicyclist collisions

Table 9.18 Collision Severity

SEVERITY	PEDESTRIAN COLLISIONS	BICYCLIST COLLISIONS	TOTAL
Fatality	20	2	22
Severe Injury	17	9	26
Other Visible Injury	85	117	202
Complaint of Pain	80	93	173
Injury Reported, Severity Unspecified	98	90	188
Total	300	311	611

Figure 9.12 Collisions Mapped by Severity

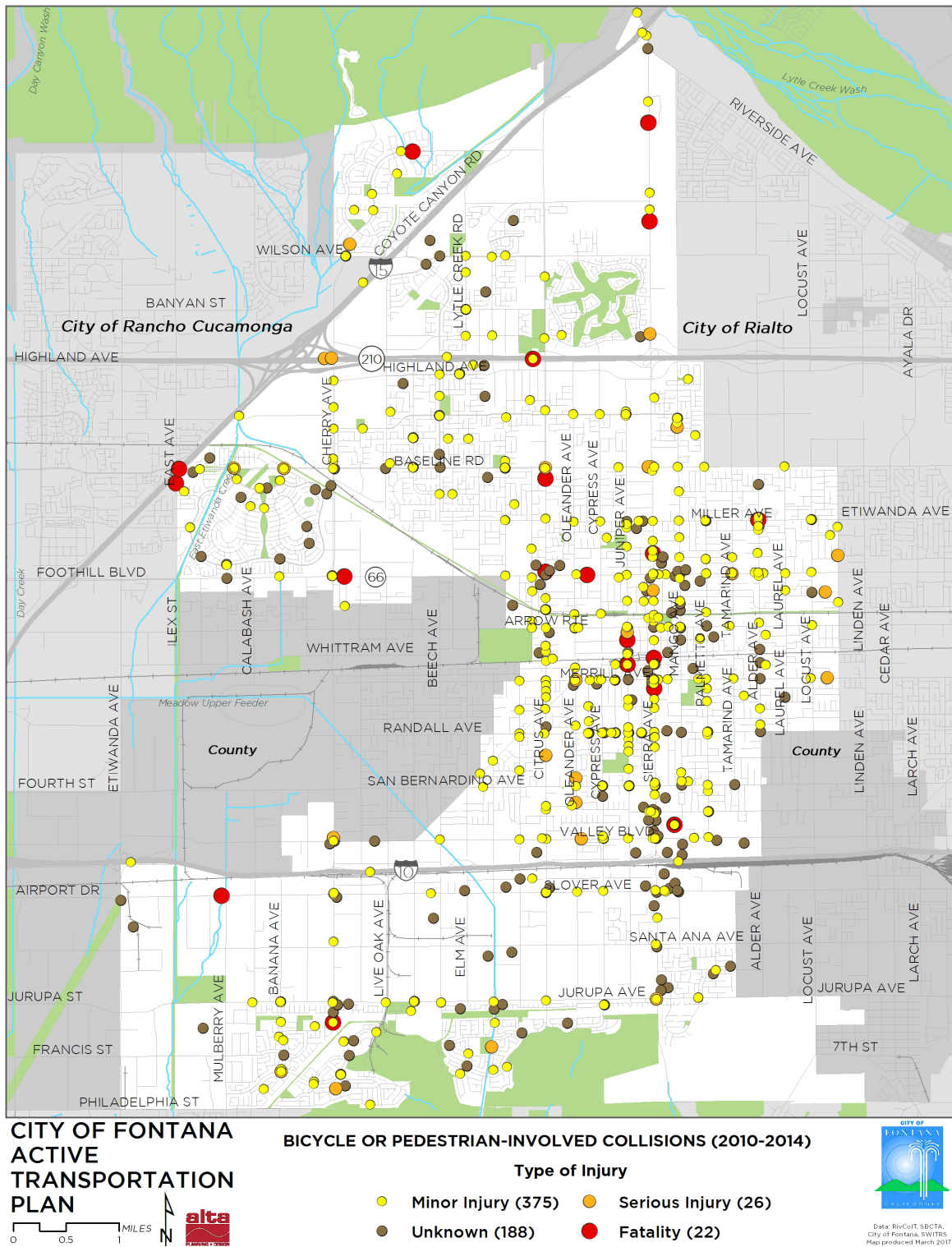
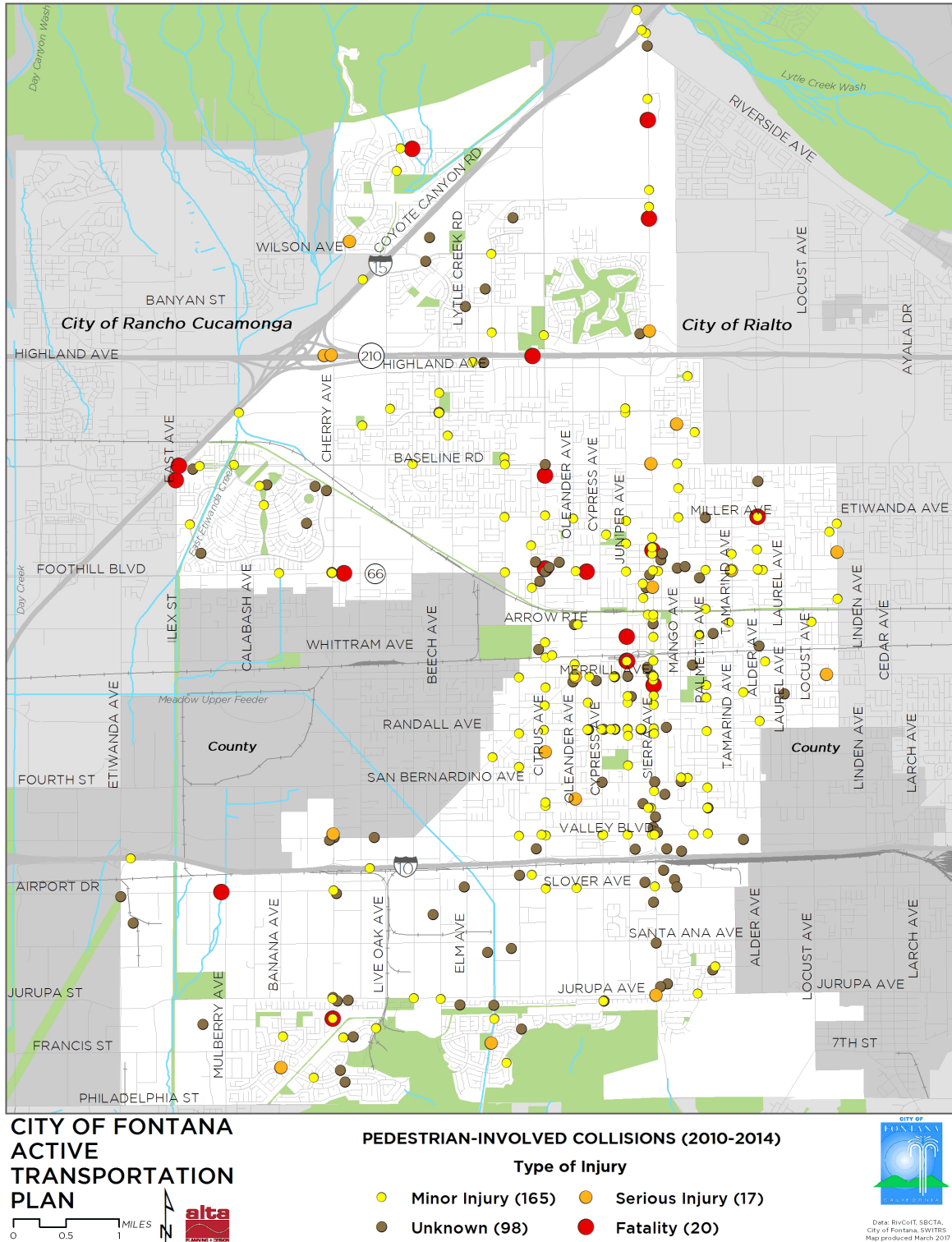


Figure 9.13 Pedestrian Collisions Mapped by Severity



CITY OF FONTANA
ACTIVE
TRANSPORTATION
PLAN

BICYCLE-INVOLVED COLLISIONS (2010-2014)

Type of Injury

- Minor Injury (210)
- Unknown (90)
- Serious Injury (9)
- Fatality (2)

Scale: 0 to 1 MILES

Map produced March 2015

City of Fontana, SWCTA

Map produced March 2015

Conclusion

The following conclusions can be drawn from the data presented in this analysis:

- The high number of collisions in which fault was assigned to the bicyclist indicates an opportunity for education outreach about cycling safety and laws.
- The high number of collisions in which fault was assigned to the pedestrian also indicates an opportunity for education outreach. However, the high number of pedestrians crossing outside crosswalks may also indicate that pedestrian facilities are insufficient and/or inconvenient to use.
- Bicyclists riding on the wrong side of the road may indicate infrastructure is ill-equipped for bicyclists, particularly at intersections. A lack of bicycle lanes, wide shoulders, lighting, crossing opportunities, clear surfaces, and unobstructed sightlines may force bicyclists into riding on the wrong side of the road.
- The four (4) roads (Foothill Boulevard, Sierra Avenue, Slover Avenue, and Valley Boulevard) on which the most primary and secondary collisions occurred share several characteristics that may have contributed to the high number of collisions on them. These characteristics, described below, are common on many of the City of Fontana's roads.
 - » Long blocks: All the roads have long blocks that make walking to the nearest crosswalk inconvenient. This enables vehicular speeding and encourages pedestrians to cross mid-block and outside crosswalks. For example, the 2,500 foot stretch of road between Miller Avenue and Foothill Boulevard on Sierra Avenue does not have a single crosswalk, despite passing through residential areas. The majority of pedestrian actions preceding collisions was crossing outside a crosswalk.
 - » Missing Sidewalks: Sidewalks lack connectivity and abruptly end mid-block on roads that otherwise have no shoulders. For example, on Foothill Boulevard, sidewalks tend to disappear when crossing undeveloped lots. However, these lots are often in between commercial and residential areas; connected sidewalks could facilitate and encourage residents to make short trips on foot more safely.
 - » Incomplete Intersections: Not all the intersections are signalized or have crosswalks on all approaches, even when pedestrians would have 4+ lanes to cross. For example, the intersection of Valley Boulevard and Beech Avenue, the site of a 2013 bicycle collision, requires non-motorists desiring to cross Valley Boulevard to navigate nearly 100 feet without crosswalk or signals. With the exception of an ADA-accessible curb ramp in the northwest corner of the intersection, the sidewalks abruptly end in all directions before the intersection.
 - » 4+ Lanes: All four (4) of the roads have at least four (4) travel lanes, at least 12 feet wide and speed limits up to 50 miles per hour.

Appendix D. Funding Sources

A variety of options exist to further plan, design, and construct bicycle transportation projects, including funding from federal, state, regional, local, and private sources. This section provides information on potential funding sources to support agency efforts to find outside funding sources to implement bicycle improvements.



Table 9.19 Funding Sources

FEDERAL SOURCES		TYPE OF PROJECT						
Agency	Funding Source	Pedestrian	Bicycle	Srts	Trails	Planning	Construction	Other
Department of Housing and Urban Development	Community Development Block Grants	✓	✓	✓	✓	✓	✓	✓
Department of Transportation	Transportation Investments Generating Economic Recovery (TIGER)	✓	✓		✓	✓	✓	✓
Environmental Protection Agency	Brownfields Program					✓		✓
Environmental Protection Agency	Partnership for Sustainable Communities	✓	✓			✓		✓
Environmental Protection Agency	Smart Growth Program	✓	✓			✓		✓
Federal Highway Administration	AID Demonstration Program						✓	✓
Federal Highway Administration	Fixing America's Surface Transportation Act (FASTACT)	✓	✓			✓	✓	✓
Federal Highway Administration	MAP-21 Congestion Mitigation and Air Quality Improvement Program (CMAQ)	✓	✓	✓	✓	✓	✓	
Federal Highway Administration	Surface Transportation Block Grant Program	✓	✓	✓	✓	✓	✓	✓
Federal Transit Administration	Bus and Bus Facilities Program: State of Good Repair						✓	✓
National Park Service	Land and Water Conservation Fund					✓		✓
National Park Service	Rivers, Trails, and Conservation Assistance Program				✓			✓

STATE SOURCES

Agency	Funding Source	Pedestrian	Bicycle	SRTS	Trails	Planning	Construction	Other
California Conservation Corps	Labor Assistance	✓	✓		✓		✓	✓
California Department of Parks and Recreation	Habitat Conservation Fund				✓		✓	✓
California Natural Resources Agency	Environmental Enhancement and Mitigation Program				✓		✓	✓
California Transportation Commission	State Transportation Improvement Program (STIP)							
Caltrans	Active Transportation Program	✓	✓	✓	✓	✓	✓	✓
Caltrans	Sustainable Transportation Planning Grant					✓		
Caltrans	Community Based Transportation Planning Grant Program					✓		
Caltrans	Highway Safety Improvement Program	✓	✓	✓	✓		✓	
Caltrans	Petroleum Violation Escrow Account	✓	✓				✓	
Caltrans	Regional Surface Transportation Program	✓	✓			✓	✓	✓
Caltrans	Transportation Development Act Article 3 Funds	✓	✓		✓	✓	✓	
Office of Traffic Safety	Office of Traffic Safety Grants	✓	✓					



REGIONAL AND LOCAL SOURCES

Agency	Funding Source	Pedestrian	Bicycle	SRTS	Trails	Planning	Construction	Other
San Bernardino County Transit Authority	Measure I Sales Tax	✓	✓			✓	✓	✓
South Coast Air Quality Management District	Clean Air Fund (AB434/2766)	✓	✓					✓
Southern California Association of Governments	SCAG Sustainability Planning Grants Program	✓	✓	✓		✓		✓
N/A	Cable Installation Projects	✓	✓				✓	✓
N/A	Developer Impact Fees	✓	✓				✓	
N/A	Local Bond Measures	✓	✓				✓	✓
N/A	Utility Projects	✓	✓				✓	

PRIVATE SOURCES

Agency	Funding Source	Pedestrian	Bicycle	SRTS	Trails	Planning	Construction	Other
Conservation Fund	Kodak American Greenways Program	✓	✓		✓	✓		✓
PeopleForBikes	Community Grant Program	✓	✓		✓			✓
REI	Various Grants and Local Partnerships							✓
Robert Wood Johnson Foundation	Various Grants							✓
Wal-Mart Foundation	Various Grants							✓
N/A	Volunteer and Public-Private Partnerships							✓

Federal Sources

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT-COMMUNITY DEVELOPMENT BLOCK GRANTS

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may “use Community Development Block Grant funds for activities that include (but are not limited to): acquiring real property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grant funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs.” Trails and greenway projects that enhance accessibility are the best fit for this funding source.

More information: www.hud.gov/cdbg

DEPARTMENT OF TRANSPORTATION-TRANSPORTATION INVESTMENTS GENERATING ECONOMIC RECOVERY (TIGER) PROGRAM

Can be used for innovative, multimodal, and multi-jurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, region, or nation. These include bicycle and pedestrian projects. Project minimum is \$10 million.

More information: www.transportation.gov/tiger

ENVIRONMENTAL PROTECTION AGENCY - BROWNFIELDS PROGRAM

Assessment grants provide funding for a grant recipient to inventory, characterize, assess, and conduct planning and community involvement related to brownfields sites. Revolving Loan Fund (RLF) grants provide funding for a grant recipient to capitalize a revolving loan fund and to provide sub-grants to carry out cleanup activities at brownfield sites.

More information: www.epa.gov/brownfields/types-brownfields-grant-funding

ENVIRONMENTAL PROTECTION AGENCY -PARTNERSHIP FOR SUSTAINABLE COMMUNITIES

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to “improve access to affordable housing, provide more transportation options, and lower transportation costs while protecting the environment in communities nationwide.” The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure - “Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.” The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants).

More information: <https://www.epa.gov/smartgrowth/hud-dot-epa-partnership-sustainable-communities>



ENVIRONMENTAL PROTECTION AGENCY - SMART GROWTH PROGRAM

EPA's Smart Growth Program helps communities improve local development practices and get the type of development residents desire. The Smart Growth Program works with local, state, and national experts to discover and encourage development strategies that protect human health and the environment, create economic opportunities, and provide attractive and affordable neighborhoods for people of all income levels. The Smart Growth Program is housed in EPA's Office of Sustainable Communities, which also coordinates EPA's Green Building Work.

The program: Conducts research

- Produces [reports and other publications](#)
- Provides [examples of outstanding smart growth communities and projects](#)
- Works with tribes, states, regions, and communities through [grants](#) and [technical assistance](#)
- Through [partnerships](#), brings together diverse interests to encourage better growth and development
- Supports education and outreach by contributing to [smart growth online](#) and the [new partners for smart growth conference](#)

More information: <https://www.epa.gov/smartgrowth/epa-smart-growth-grants-and-other-funding>

FEDERAL HIGHWAY ADMINISTRATION-ACCELERATED INNOVATION DEPLOYMENT DEMONSTRATION

The AID Demonstration program provides funding as an incentive to accelerate the use of innovation in highway transportation projects. The Federal Highway Administration (FHWA) expects approximately \$10 million to be made available for AID Demonstration grants in each of Fiscal Years 2016 through 2020 from amounts authorized within the Technology and Innovation Deployment Program (TIDP) under the Fixing America's Surface Transportation (FAST) Act. The grants are administered through the FHWA Center for Accelerating Innovation and involve any phase of a highway transportation project. This grant can be used for road rebalancing improvements.

More information: http://www.fhwa.dot.gov/innovation/grants/edc4_aiddemo_factsheet.pdf

FEDERAL HIGHWAY ADMINISTRATION -FIXING AMERICA'S SURFACE TRANSPORTATION ACT (FAST ACT)

The FAST Act, which replaced Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2015, provides long-term funding certainty for surface transportation projects, meaning States and local governments can move forward with critical transportation projects with the confidence that they will have a Federal partner over the long term (at least five years).

The law makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects and providing new safety tools. It also allows local entities that are direct recipients of Federal dollars to use a design publication that is different than one used by their State DOT.

More information: www.transportation.gov/fastact

FEDERAL HIGHWAY ADMINISTRATION - MAP-21 – CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)

The amount of CMAQ funds depends on the state's population share and on the degree of air pollution. Recent revisions were made to bring CMAQ in line with the new MAP-21 legislation. Eligible projects include: "Constructing bicycle and pedestrian facilities (paths, bicycle racks, support facilities, etc.) that are not exclusively recreational and reduce vehicle trips; (and) non-construction outreach related to safe bicycle use." Studies that are part of the project development pipeline (e.g., preliminary engineering) are eligible for funding. "An assessment of the project's expected emission reduction benefits should be completed prior to project selection."



FEDERAL HIGHWAY ADMINISTRATION -SURFACE TRANSPORTATION BLOCK GRANT (STBGP)

The FAST Act expanded the existing Surface Transportation Program (STP) into the Surface Transportation Block Grant Program (STBGP), which places more decision-making power in the hands of state and local governments. The FAST Act simplifies the list of uses eligible for program funds and increases the ways that funds can be used for local roads and rural minor collectors. The Transportation Alternatives Program (TAP) is a set-aside program of this block grant. The new program requires 55 percent of program funds be distributed within each state on the basis of population, compared to 50 percent under STP. In California, STBGP is allocated through the Regional Surface Transportation Program (RSTP). The TAP program is allocated through the Active Transportation Program (ATP).

More information: <http://www.fhwa.dot.gov/fastact/factsheets/stbgfs.cfm>

FEDERAL TRANSIT ADMINISTRATION - BUS AND BUS FACILITIES PROGRAM: STATE OF GOOD REPAIR

Can be used for projects to provide access for bicycles to public transportation facilities, to provide shelters and parking facilities for bicycles in or around public transportation facilities, or to install equipment for transporting bicycles on public transportation vehicles.

More information: www.fta.dot.gov/grants/13094_3557.html

NATIONAL PARK SERVICE - LAND AND WATER CONSERVATION FUND

The Land and Water Conservation Fund (LWCF) is a National Parks Service program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The program is administered by the California Department of Parks and Recreation. Funds can be used for right-of-way acquisition and construction. Any projects located in future parks could benefit from planning and land acquisition funding through the LWCF. Trail corridor acquisition can be funded with LWCF grants as well.

More information: <https://www.nps.gov/subjects/lwcf/stateside.htm>

NATIONAL PARK SERVICE - RIVERS, TRAILS, AND CONSERVATION ASSISTANCE PROGRAM

The Rivers, Trails, and Conservation Assistance Program (RTCA) is the community assistance arm of the National Park Service. RTCA provides technical assistance to communities in order to preserve open space and develop trails. The assistance that RTCA provides is not for infrastructure, but rather building plans, engaging public participation, and identifying other sources of funding for conversation and outdoor recreation projects.

More information: <https://www.nps.gov/pwro/rtca/how-to-apply.htm>

State Sources

CALIFORNIA CONSERVATION CORPS – LABOR ASSISTANCE

The California Conservation Corps (CCC) provides labor assistance for projects related to natural resource management. Public agencies can hire a CCC team at low cost. The nearest CCC center is the Inland Empire center located in San Bernardino.

More information: <http://www.ccc.ca.gov/about/glance/faqs/abouthiringacrew/Pages/faghirecrew.aspx>

DEPARTMENT OF PARKS AND RECREATION – HABITAT CONSERVATION FUND

The Habitat Conservation Fund provides funding through State general funds to local agencies to protect threatened species, to address wildlife corridors, to create trails, and to provide nature interpretation programs which bring urban residents into park and wildlife areas. This source would be appropriate for recommended improvements to the shared-use paths, such as the Pacific Electric Trail.

More information: https://www.parks.ca.gov/?page_id=21361

CALIFORNIA NATURAL RESOURCES AGENCY - ENVIRONMENTAL ENHANCEMENT AND MITIGATION PROGRAM

The Environmental Enhancement Mitigation Program (EEMP) provides grant opportunities for projects that indirectly mitigate environmental impacts of new transportation facilities. Projects should fall into one of the following three categories: highway landscaping and urban forestry, resource lands projects, or roadside recreation facilities. Funds are available for land acquisition and construction. The local Caltrans district must support the project. The average award amount is \$250,000.

More information: <http://resources.ca.gov/grants/environmental-enhancement-and-mitigation-eem/>

CALIFORNIA TRANSPORTATION COMMISSION - STATE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)

Funds new construction projects that add capacity to the transportation network. STIP consists of two components, Caltrans' Interregional Transportation Improvement Program (ITIP) and regional transportation planning agencies' Regional Transportation Improvement Program (RTIP). STIP funding is a mix of state, federal, and local taxes and fees. Bicycle and pedestrian projects may be programmed under ITIP and RTIP.



CALTRANS-ACTIVE TRANSPORTATION PROGRAM

With the consolidation of federal funding sources in MAP-21 and again under the FAST Act, the California State Legislature has consolidated a number of state-funded programs centered on active transportation into a single program. The resulting Active Transportation Program (ATP) consolidated the federal programs, Bicycle Transportation Account, the Safe Routes to Schools Program, and the Recreational Trails Program. The ATP's authorizing legislation (signed into law by the Governor on September 26, 2013) also includes placeholder language to allow the ATP to receive funding from the newly established Cap-and-Trade Program in the future. The Statewide Competitive ATP has \$240 million available through the 2020/2021 fiscal cycles. The California Transportation Commission writes guidelines and allocates funds for the ATP, while the ATP will be administered by the Caltrans Division of Local Assistance. Goals of the ATP are currently defined as the following:

- Increasing the proportion of trips accomplished by biking and walking;
- Increasing safety and mobility for active transportation users;
- Advancing active transportation efforts of regional agencies to achieve the greenhouse gas reduction goals;
- Enhancing public health;
- Ensuring that disadvantaged communities fully share in the benefit of the program; and,
- Providing a broad spectrum of projects to benefit many types of active transportation users.

More information: www.dot.ca.gov/hq/LocalPrograms/atp/index.html

CALTRANS SUSTAINABLE TRANSPORTATION PLANNING GRANTS

Caltrans also administers the Transportation Planning Grant Program that funds projects to improve mobility and lead to the planning, programming, and implementation of transportation improvement projects. Most recently, Caltrans awarded \$10.0 million in grant funding to 70 applicants, in two sub-categories: Environmental Justice grants and Community Based Transportation Plan grants.

More information: www.dot.ca.gov/hq/tpp/grants.html

More information: www.dot.ca.gov/hq/tpp/offices/ocp/completed_projects_ej.html

CALTRANS-COMMUNITY BASED TRANSPORTATION PLANNING GRANT PROGRAM

The Community Based Transportation Planning (CBTP) grant program promotes transportation and land use planning projects that encourage community involvement and partnership. These grants include community and key stakeholder input, collaboration, and consensus building through an active public engagement process. CBTP grants support livable and sustainable community concepts with a transportation or mobility objective to promote community identity and quality of life.

More information: www.dot.ca.gov/hq/tpp/offices/ocp/completed_projects_cbtp.html

CALTRANS-HIGHWAY SAFETY IMPROVEMENT PROGRAM

The FAST Act eliminates the ability of states to shift funds designated for infrastructure safety programs to behavioral or educational activities, ensuring resources remain in construction-related programs. It also designates several new safety improvements eligible for funding including vehicle-to-infrastructure communication and roadway improvements that provide separation between pedestrians and motor vehicles.

With regards to unpaved roads, the FAST Act allows states to “opt out” of collecting safety inventory data for unpaved/gravel roads if certain conditions are met, as long as the states continue to collect data related to serious crashes and fatalities. It also requires that USDOT to review data and report to Congress on best practices for roadway infrastructure improvements that enhance commercial motor vehicle safety.

The Highway Safety Improvement Program (HSIP) is a data-driven funding program, and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state’s Strategic Highway Safety Plan. In California, HSIP is administered by Caltrans.

More information: <http://www.dot.ca.gov/hq/LocalPrograms/hsip.html>

CALTRANS-PETROLEUM VIOLATION ESCROW ACCOUNT

In the late 1970s, a series of federal court decisions against selected United States oil companies ordered refunds to the states for price overcharges on crude oil and refined petroleum products during a period of price control regulations. To qualify for Petroleum Violation Escrow Account (PVEA) funding, a project must save or reduce energy and provide a direct public benefit within a reasonable time frame. In California, Caltrans Division of Local Assistance administers funds for transportation-related PVEA projects. PVEA funds do not require a match and can be used as match for additional federal funds.

More information: www.dot.ca.gov/hq/LocalPrograms/lam/prog_g/g22state.pdf

CALTRANS- REGIONAL SURFACE TRANSPORTATION PROGRAM

The Regional Surface Transportation Program (RSTP) was established by California State Statute utilizing Surface Transportation Program Funds that are identified in Section 133 of Title 23 of the United States Code. This program provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital and intercity passenger projects.

More information: http://www.dot.ca.gov/hq/transprog/federal/rstp/regional_surface_transportation_program-map21_090115_1.pdf



CALTRANS- TRANSPORTATION DEVELOPMENT ACT ARTICLE III FUNDS

Transportation Development Act (TDA) Article III funds awarded annually to local jurisdictions for bicycle and pedestrian projects in California, with about \$700,000 awarded for San Bernardino County. These funds originate from the state gasoline tax and are distributed to counties based on population, with a competitive process administered by SANBAG for local jurisdictions. Funds may be used for the following bicycle and pedestrian activities:

- Engineering expenses
- Right-of-way acquisition
- Construction and reconstruction
- Retrofitting existing bicycle and pedestrian facilities, including signage installation and ADA compliance
- Route improvements such as signal controls for cyclists, bicycle loop detectors, rubberized rail crossings and bicycle-friendly drainage grates
- Support facilities, such as bicycle parking and pedestrian amenities

More information: <http://www.dot.ca.gov/hq/MassTrans/State-TDA.html>

OFFICE OF TRAFFIC SAFETY (OTS) GRANTS

The Office of Traffic Safety (OTS) distributes grants statewide to establish new traffic safety programs or fund ongoing safety programs. OTS grants are supported by federal funding under the National Highway Safety Act and MAP-21. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. Eligible grantees are governmental agencies, state colleges, state universities, local town and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants. The California application deadline is January of each year. There is no maximum cap to the amount requested; however, all items in the proposal must be justified to meet the objectives of the proposal.

More information: www.ots.ca.gov/Grants/Apply/default.asp

Regional & Local Sources

SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY – MEASURE I SALES TAX

Measure I is the half-cent sales tax collected throughout San Bernardino County for transportation improvements. San Bernardino County voters first approved the measure in November 1989 to ensure that needed transportation projects were implemented countywide through 2010. In 2004, San Bernardino County voters overwhelmingly approved the extension of the Measure I sales tax, with 80.03% voting to extend the measure through 2040. SANBAG administers Measure I revenue and is responsible for determining which projects receive Measure I funding, and ensuring that transportation projects are implemented. Measure I funds are allocated based on a strategic plan.

More information: <http://sanbag.ca.gov/funding/mi.html>

SCAQMD-CLEAN AIR FUND (AB 434/2766 – VEHICLE REGISTRATION FEE SURCHARGE)

Administered by South Coast Air Quality Management District (SCAQMD). Local jurisdictions and transit agencies can apply. Funds can be used for projects that encourage biking, walking, and/or use of public transit. For bicycle-related projects, eligible uses include: designing, developing and/or installing bikeways or establishing new bicycle corridors; making bicycle facility enhancements/improvements by installing bicycle lockers, bus bicycle racks; providing assistance with bicycle loan programs (motorized and standard) for police officers, community members and the general public. Matching requirement: 10-15 percent.

More information at: www.aqmd.gov/home/programs/local-government/local-government-detail?title=ab2766-motor-vehicle-subvention-program

SCAG-SUSTAINABILITY PLANNING GRANTS PROGRAM

The Sustainability Planning Grants Program provides direct technical assistance to SCAG member jurisdictions to complete planning and policy efforts that enable implementation of the regional SCS. Grants are available in the following three categories:

- Integrated Land Use – Sustainable Land Use Planning, Transit Oriented Development (TOD) and Land Use & Transportation Integration
- Active Transportation – Bicycle, Pedestrian and Safe Routes to School Plans
- Green Region – Natural Resource Plans, Climate Action Plans (CAPs) and Green House Gas (GHG) Reduction programs

More information at: <http://sustain.scag.ca.gov/Pages/Grants%20and%20Local%20Assistance/GrantsLocalAssistance.aspx>

CABLE INSTALLATION PROJECTS

Cable television and telephone companies sometimes need new cable routes within public right-of-way. Recently, this has most commonly occurred during expansion of fiber optic networks. Since these projects require a significant amount of advance planning and disruption of travel lanes, it may be possible to request reimbursement for affected bicycle and pedestrian facilities to mitigate construction impacts. In cases where cable routes cross undeveloped areas, it may be possible to provide for new transportation facilities following completion of the cable trenching.



DEVELOPER IMPACT FEES

As a condition for development approval, municipalities can require developers to provide specific infrastructure improvements, which can include bikeway projects. These projects have commonly provided Class II bicycle facilities for portions of on-street, previously-planned routes, and sidewalks. They can also be used to provide bicycle parking, shower and locker facilities, signal modifications, transit stop modifications, and storm water modifications. The type of facility that should be required to be built by developers should reflect the greatest need for the particular project and its local area. Legal challenges to these types of fees have resulted in the requirement to illustrate a clear nexus between the particular project and the mandated improvement and cost.

LOCAL BOND MEASURES

Local bond measures, or levies, are usually initiated by voter-approved general obligation bonds for specific projects. Bond measures are typically limited by time, based on the debt load of the local government or the project under focus. Funding from bond measures can be used for right-of-way acquisition, engineering, design, and construction of pedestrian and bicycle facilities. Bond measures are often used by cities for local match in grant applications. Transportation-specific bond measures featuring a significant bicycle/pedestrian facility element have passed in other communities, such as Seattle's "Closing the Gap" measure.

UTILITY PROJECTS

By monitoring the capital improvement plans of local utility companies, it may be possible to coordinate upcoming utility projects with the installation of motor vehicle, transit, bicycle, and pedestrian infrastructure within the same area or corridor. Often times, utility companies will mobilize the same type of forces required to construct transportation projects, resulting in the potential for a significant cost savings. These types of joint projects require a great deal of coordination, a careful delineation of scope items, and an agreement or memorandum of understanding, which may need to be approved by multiple governing bodies.

Private Sources

CONSERVATION FUNDS -THE KODAK AMERICAN GREENWAYS PROGRAM

The Conservation Fund's American Greenways Program has teamed with the Eastman Kodak Corporation and the National Geographic Society to award small grants (\$250 to \$2,000) to stimulate the planning, design, and development of greenways. These grants can be used for activities such as mapping, conducting ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, and building trails. Grants cannot be used for academic research, institutional support, lobbying, or political activities.

More information: www.conservationfund.org

PEOPLEFORBIKES COMMUNITY GRANT PROGRAM

PeopleForBikes is a coalition of bicycle suppliers and retailers that has awarded \$2.9 million in community grants and leveraged an additional \$670 million since its inception in 1999. The community grant program funds bicycle paths and rail trails, as well as mountain bicycle trails, bicycle parks, BMX facilities, and large-scale bicycle advocacy initiatives. Spring 2015 grant awards ranged between \$800 and \$10,000 and contributed to greenway and other infrastructure projects, as well as bicycle parking and bicycle-related programming.

More information: www.peopleforbikes.org/pages/community-grants

REI GRANTS

The REI grants program makes funding available to local non-profit organizations to provide the resources and capacity to organize stewardship activities and get volunteers involved. The cities could partner with local advocacy groups to pursue these funds.

More information: <https://www.rei.com/stewardship/community.html>

THE ROBERT WOOD JOHNSON FOUNDATION

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

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

More information: www.rwjf.org/applications/



THE WAL-MART FOUNDATION

The Wal-Mart Foundation offers a Local, State, and National Giving Program. The Local Giving Program awards grants of \$250 to \$5,000 through local Wal-Mart and Sam's Club Stores. Application opportunities are announced annually in February with a final deadline for applications in December. The State Giving Program provides grants of \$25,000 to \$250,000 to 501c3 nonprofits working within one of five focus areas: Hunger Relief & Nutrition, Education, Environmental Sustainability, Women's Economic Empowerment, or Workforce Development. The program has two application cycles per year: January through March and June through August. The Wal-Mart Foundation's National Giving Program awards grants of \$250,000 and more, but does not accept unsolicited applications.

More information: <http://foundation.walmart.com/apply-for-grants>

CORPORATE DONATIONS

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

Public-Private Partnerships

A public-private partnership involves an agreement between a public agency and a private party, in which the private party delivers a public service or project to the public agency. Projects can be funded solely by the private party or through a collection of private monies and taxpayer dollars.

Other Sources

Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly shared-use paths. For example, a local college design class may use such a shared-use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right of way for the route. A local construction company may donate or discount services beyond what the volunteers can do. And a challenge grant program with local businesses may be a good source of local funding, in which the businesses (or residents) can “adopt” a route or segment of one to help construct and maintain it.



Appendix E.

Bicyclist & Pedestrian Suitability Index Analysis

Background and Overview of BPSI

Demand analysis has its basis in a technique devised by prominent landscape architect, Ian McHarg. His influential book *Design With Nature* (1969) accentuated the importance of considering the natural environment when introducing new development and infrastructure. McHarg was an early pioneer of GIS analysis and established innovative techniques for route planning using photographic map overlays. McHarg asserted that in order to find the most suitable route, one must determine the least social cost, meaning factors that would impact social values would have to be considered. Once identified, each factor was mapped on individual transparent sheets using three different color shades to represent the level of social cost. The sheets were overlaid into a single stack revealing the most suitable route location. McHarg's photographic map overlay analysis paved the way for the foundation of modern day GIS models.

Models serve as an effective means to understand how factors in a complex system interact by providing a simplified version of the system for study. However, by definition, models are representations of reality and are constrained by the quality of available data and the complexity of the system under consideration.

PSI provides a general understanding of expected activity in the pedestrian environment by combining categories representative of where people live, work, play, access public transit and go to school into a composite sketch of citywide demand.

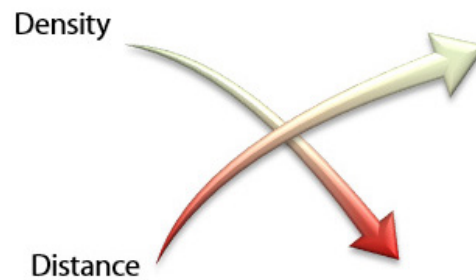
The demand analysis relies on spatial consistency in order to generate logical distance and density patterns. It is for this reason that all scores are aggregated to a central location at the census block level, the census block corner, referred to as "PSI Point". Census block corners closely represent street corners, where foot traffic is prevalent. This method is based on the "Low-Stress Bicycling and Network Connectivity" report (Mineta Transportation Institute, May 2012). The report discusses the benefits of using a smaller geographic setting for pedestrian and bicycle demand analyses rather than using more traditional traffic model features such as traffic analysis zones (TAZs). Due to the low speed of pedestrian movement, a much smaller geographic unit of analysis is needed.

Utilization of PSI - Demand Analysis

Generally speaking, the scoring method is a function of density and proximity. Scores reflect relative impact on walking to and from census block corners that are located adjacent to the features used in the analysis. As such, scores are represented as density patterns of census block corners within a 1/4 mile of each other. Subsequently, the scores are effectively a result of two complimenting forces: distance decay – the effect of distance on spatial interactions yields lower scores for features over 1/4 mile away from other features; and spatial density – the effect of closely clustered features yields higher scores. Scores will increase in high feature density areas and if those features are close together. Scores will decrease in low feature density areas and if features are further apart. In essence, the score is the intersection of distance and density.

Categories are scored on a scale of 1 – 5 based on density and proximity and then assigned weighted multipliers to reflect the relative influence categories have on pedestrian activity. The feature weighting method is discussed in the following section.

Because empirical work has shown that some demographic and land use characteristics are more correlated with pedestrian activity than others, the features are weighted for the analysis. For Santa Monica, feature weights were reviewed and adjusted based upon local knowledge. Feature weights are used in calculating both the composite demand and supply scores.

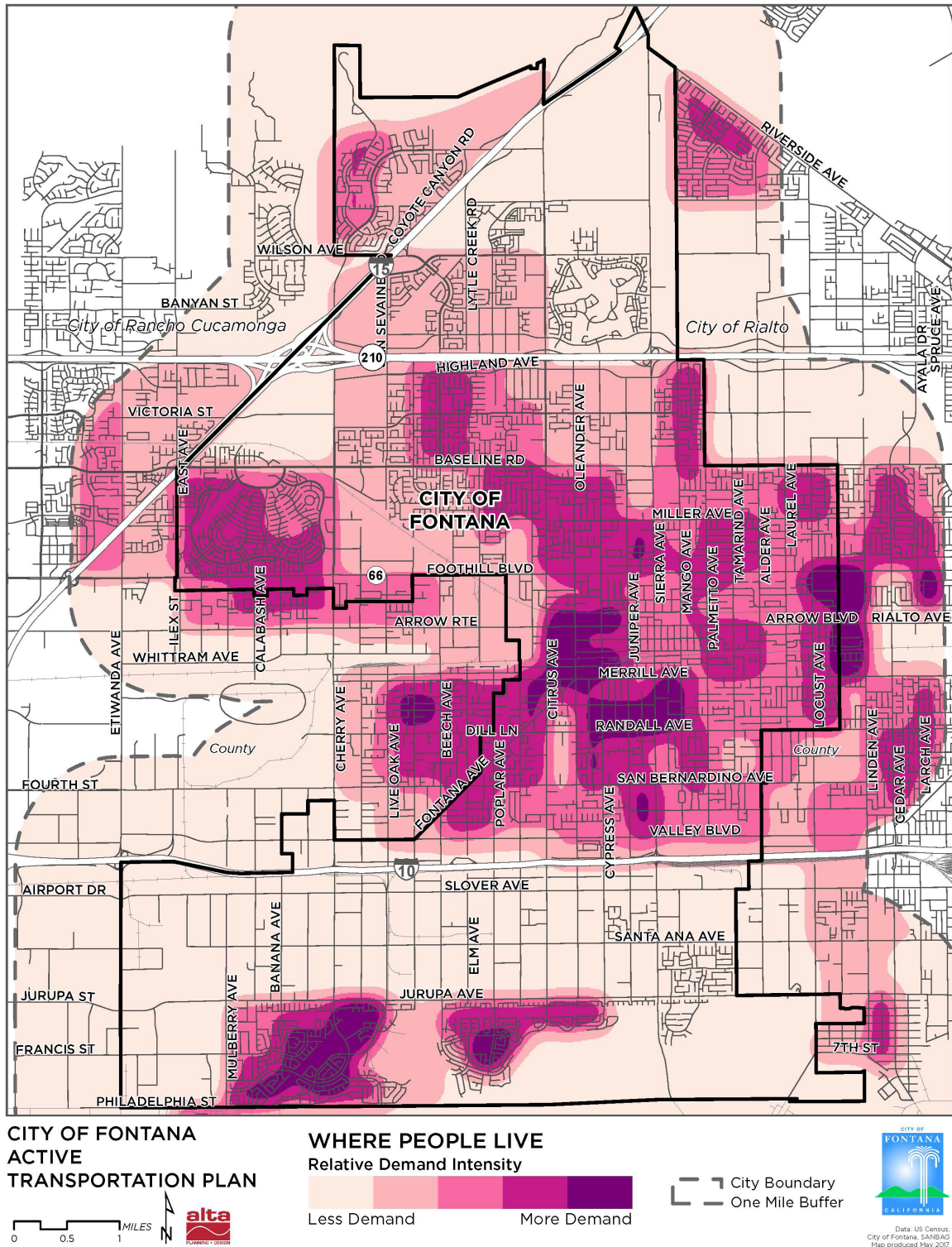


The purpose of the demand analysis is to identify areas where pedestrians are likely to be to justify improvement projects, if warranted by the relative quality of the existing conditions. The figures below illustrate and describe how the weighted features contribute to the variation in overall demand.

Demand – Where People Live

This category is defined by population density. Data for the total population in each block group in the study area was retrieved from the 2015 American Community Survey. These locations represent potential pedestrian and bicycle trip origin locations. Population density is highest in the Central, Downtown, Southridge, and Heritage Village areas. Higher densities indicate a greater potential for walking and biking trips to start from these areas. Population density is lowest in the Jurupa Industrial area (Figure 9.20).

Figure 9.20 Where People Live

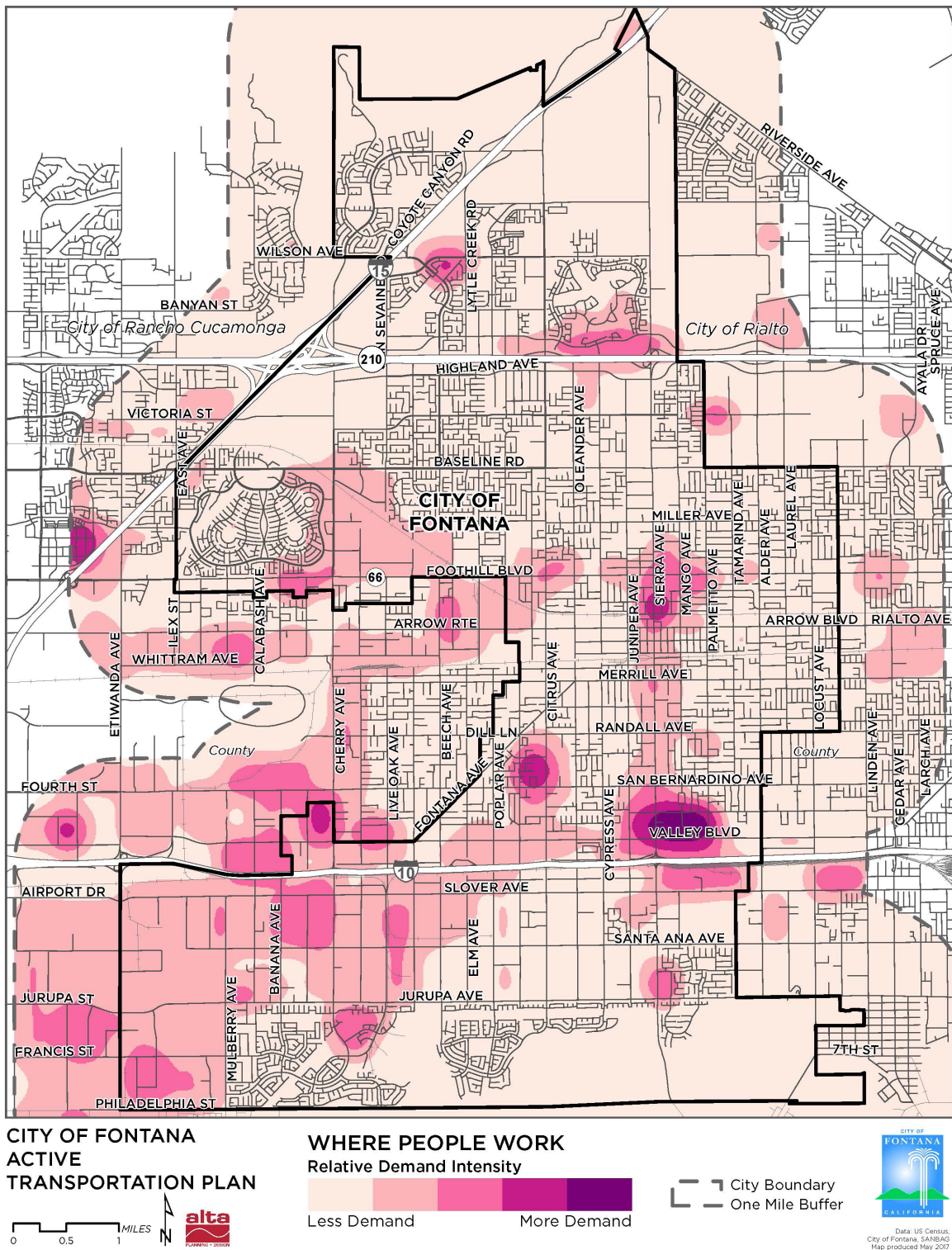


Demand – Where People Work

This category represents trip endpoints (regardless of place of residence) for people working in Fontana. Employment data for 2014 was obtained from the Longitudinal Employer-Household Dynamics (LEHD) program, which is a part of the U.S. Census Bureau. LEHD data included the locations of jobs as well as the number of jobs in these locations, which gives a more accurate picture of where jobs are clustered. Figure 9.21 Where People Work map shows employment density in the city. The highest area of employment density surrounds the Kaiser Permanente Fontana Medical Center. Downtown and the Jurupa Industrial Park also show higher employment density.



Figure 9.21 Where People Work

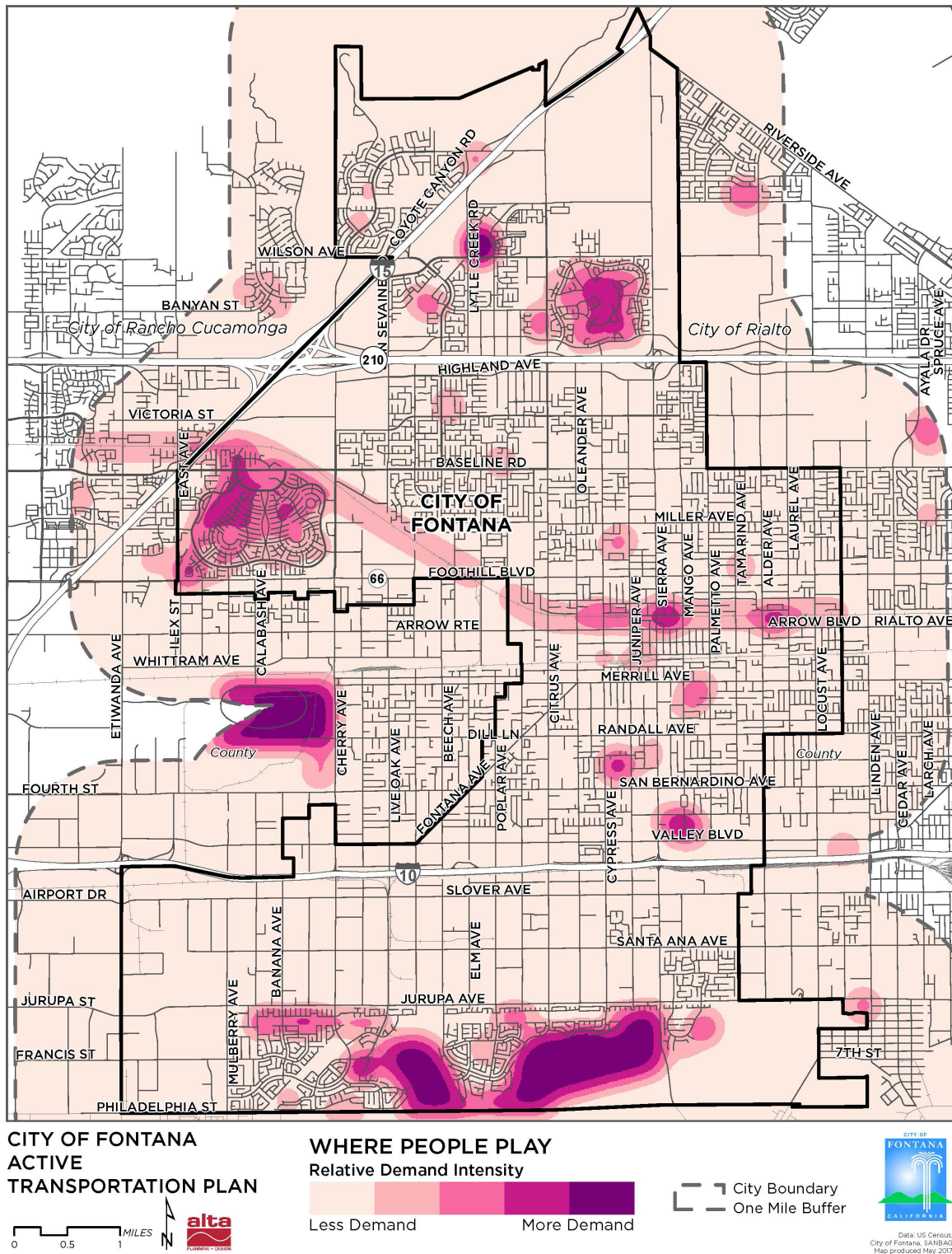


Demand – Where People Play

This category represents where residents may walk or bike based on the locations of trails, parks, open spaces, and recreation centers. Additionally, relevant point of interest data including libraries, post offices, and public buildings were also included in this category. Areas of high demand for walking and biking are locations where there are clusters of these different facilities. High demand destinations shown on Figure 9.22 include Jurupa Regional Park, the Pacific Electric Bike Trail, Heritage Village, and the Auto Club Speedway which is within one mile of Fontana.



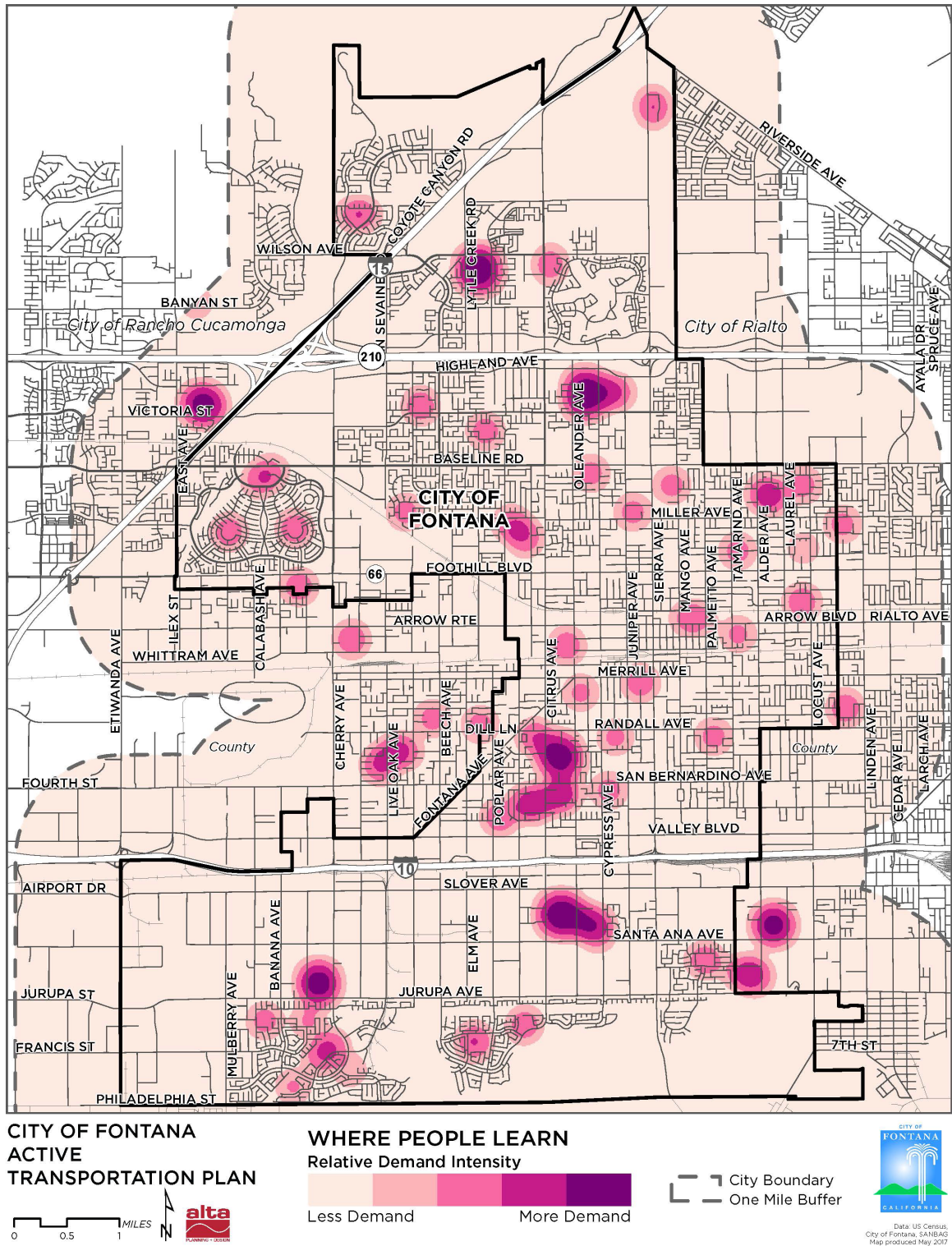
Figure 9.22 Where People Play



Demand – Where People Learn

This category represents expected pedestrian and bicyclist activity based on the locations of K-12 schools and colleges. At the citywide level, bicycle and pedestrian demand is expected to be low or moderate around K-12 schools except for schools that are in close proximity to surrounding schools.

Figure 9.23 Where People Learn

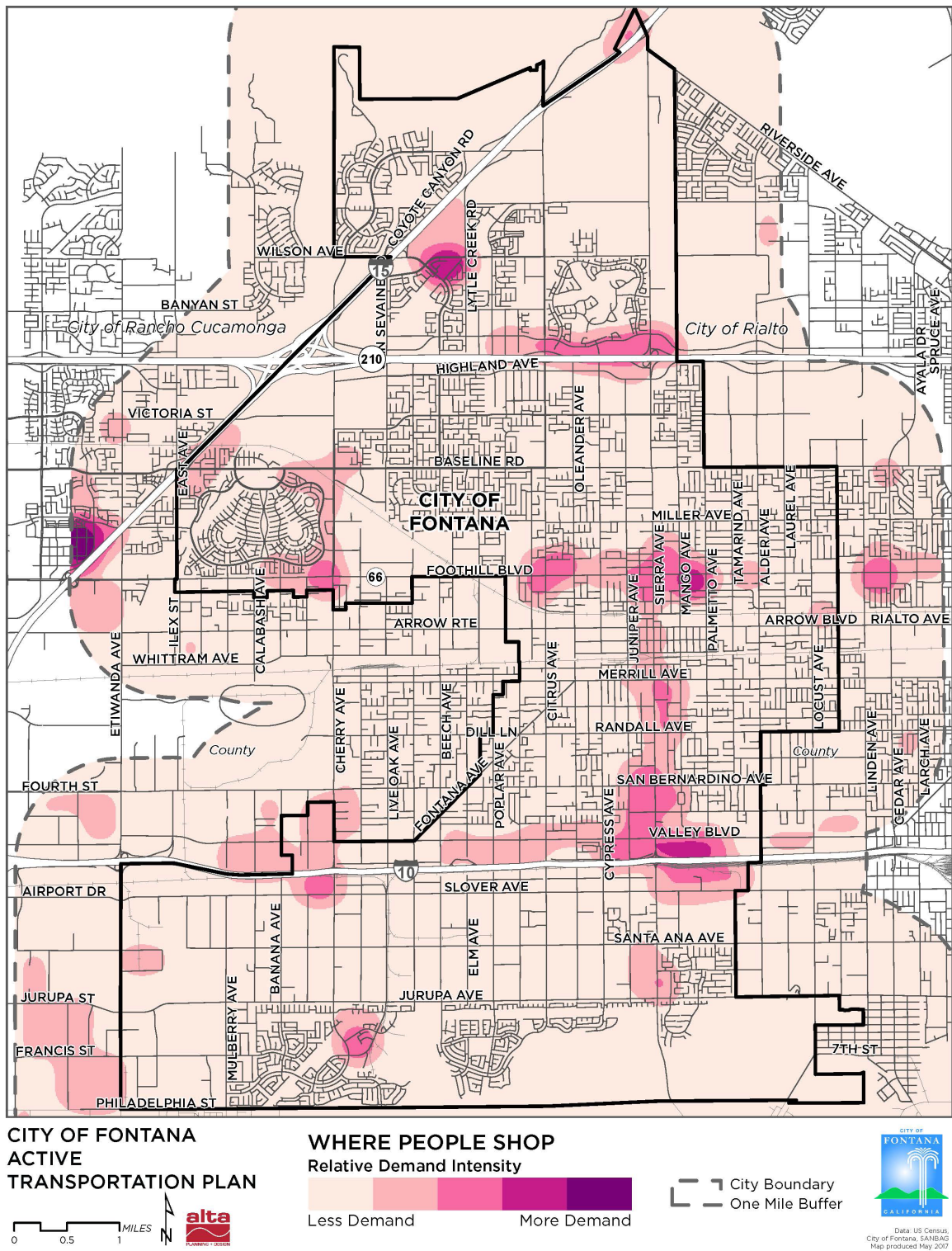


Demand – Where People Shop

Arts, Entertainment, Recreation, Accommodation and Food Services sectors. Areas of commercial demand may be implied from these particular employment sectors. Areas of high demand for shopping occur in Central/Downtown Fontana on Foothill Blvd, Sierra Ave, and Valley Blvd. High demand shopping areas may also be found near Sierra Lakes and the Falcon Ridge Town Center.



Figure 9.24 Where People Shop

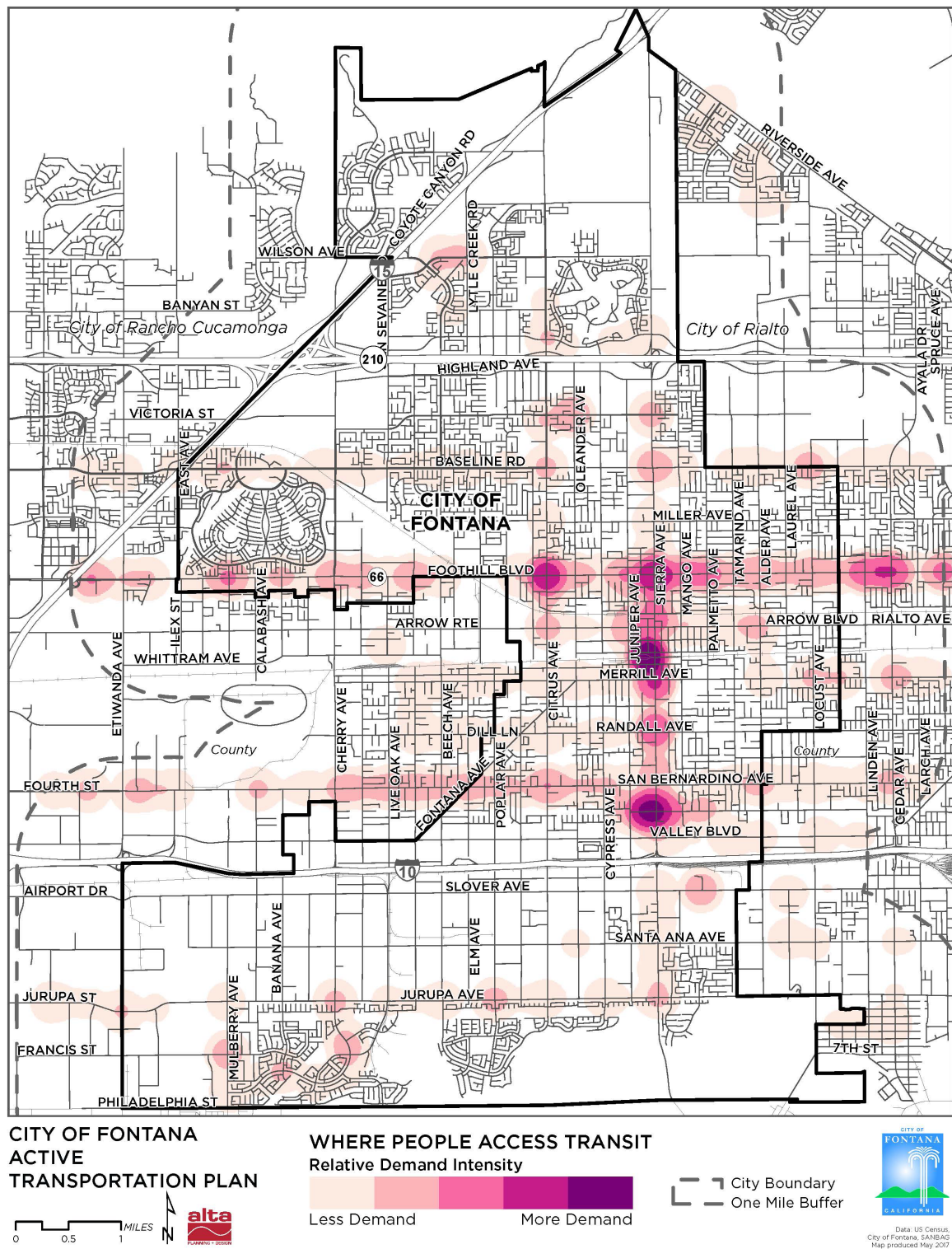


Demand – Where People Access Transit

This category represents expected pedestrian and bicyclist activity based on the locations of Omnitrans bus stops, Metrolink stations, and transit centers. Potential walking and biking trips can be made to and from transit stops since many transit trips begin and end on foot. Map 9.20 illustrates the density of transit stops by line in and around the City of Fontana. If one transit stop serves three different bus lines, then that particular stop receives more demand weight. Major public transportation corridors include Sierra Ave, Baseline Rd, Foothill Blvd, Merrill Ave, Randall Ave, San Bernardino Ave, and Jurupa Ave.



Figure 9.25 Where People Access Transit



Appendix F.

VMT and Benefit Impact Analysis

VMT ANALYSIS

Fontana ATP 2012

Internal and External Trip Ends (Origins and Destinations) By Time of Day and Geographical Area

AREA	COMBINED ZONAL VMT				
	AM	MD	PM	NT	DAY
North Fontana: Lytle Creek Area (North West of I-15)	9,746	17,327	16,639	10,390	54,103
North Fontana: North of Wilson	5,884	11,985	11,540	5,766	35,174
North Fontana: North of I-210, South of Wilson, West of Citrus	13,758	21,545	22,595	12,521	70,420
North Fontana: North of I-210, South of Wilson, East of Citrus	11,399	24,591	20,718	12,540	69,248
North Fontana: South of I-210, North of Victoria/Walnut, West of Citrus	9,767	14,186	15,691	9,320	48,963
North Fontana: South of I-210, North of Victoria/Walnut, East of Citrus	6,925	10,650	11,068	5,775	34,418
Central Fontana: South of Walnut, North of Central, West of Cherry	30,136	49,742	49,839	29,968	159,685
Central Fontana: South of Walnut, North of Central, East of Cherry, West of Citrus	31,378	55,385	53,190	33,122	173,076
Central Fontana: South of Walnut, North of Central, East of Citrus, West of Palmetto	25,845	40,635	42,162	24,506	133,149
Central Fontana: South of Walnut, North of Central, East of Palmetto	16,696	26,305	27,136	16,283	86,420
Central Fontana: South of Foothill, North of Randall	80,591	133,483	134,507	76,953	425,534
Central Fontana: South of Randall, North of I-10	68,957	121,525	120,033	60,056	370,572



South Fontana: South of I-10, West of Mulberry	15,630	29,152	26,952	18,815	90,549
South Fontana: South of I-10, East of Mulberry, West of Cherry	24,378	37,598	38,935	24,690	125,601
South Fontana: South of I-10, East of Cherry, West of Sierra	43,299	68,176	73,091	42,383	226,949
South Fontana: South of I-10, East of Sierra	15,454	27,564	26,697	16,620	86,335
<i>*Note: The trips represented include intrazonal trips.</i>	409,843	689,850	690,793	399,709	2,190,195

Fontana ATP 2012

Internal and External Trip Ends (Origins and Destinations) By Time of Day and Geographical Area

AREA	COMBINED ZONAL VMT				
	AM	MD	PM	NT	DAY
North	57,479	100,284	98,250	56,312	312,326
Central	253,603	427,076	426,867	240,889	1,348,435
South	98,760	162,490	165,676	102,508	529,434
TOTAL TRIPS	409,843	689,850	690,793	399,709	2,190,195
<i>*Note: The trips represented include intrazonal trips.</i>	19%	31%	32%	18%	100%

Fontana ATP 2040 (Future, No ATP Recommendation Integration)

Internal and External Trip Ends (Origins and Destinations) By Time of Day and Geographical Area

AREA	COMBINED ZONAL VMT				
	AM	MD	PM	NT	DAY
North Fontana: Lytle Creek Area (North West of I-15)	14,450	20,782	22,470	14,022	71,725
North Fontana: North of Wilson	36,968	83,748	71,487	36,597	228,800
North Fontana: North of I-210, South of Wilson, West of Citrus	23,775	43,187	41,864	22,169	130,995
North Fontana: North of I-210, South of Wilson, East of Citrus	15,523	32,509	28,358	16,111	92,501
North Fontana: South of I-210, North of Victoria/Walnut, West of Citrus	15,656	22,939	25,076	13,645	77,316
North Fontana: South of I-210, North of Victoria/Walnut, East of Citrus	14,764	32,922	28,377	13,948	90,011
Central Fontana: South of Walnut, North of Central, West of Cherry	41,667	67,627	68,213	39,953	217,459
Central Fontana: South of Walnut, North of Central, East of Cherry, West of Citrus	39,554	69,109	66,382	39,856	214,901
Central Fontana: South of Walnut, North of Central, East of Citrus, West of Palmetto	33,395	57,120	55,850	31,740	178,105
Central Fontana: South of Walnut, North of Central, East of Palmetto	19,686	30,260	31,478	18,522	99,945
Central Fontana: South of Foothill, North of Randall	112,042	181,145	183,782	105,940	582,908
Central Fontana: South of Randall, North of I-10	99,011	160,847	164,017	88,300	512,175
South Fontana: South of I-10, West of Mulberry	16,200	28,784	28,089	16,426	89,498
South Fontana: South of I-10, East of Mulberry, West of Cherry	29,535	42,922	46,239	27,462	146,158
South Fontana: South of I-10, East of Cherry, West of Sierra	59,185	89,777	98,315	52,750	300,027
South Fontana: South of I-10, East of Sierra	20,536	37,396	35,113	20,392	113,437
<i>*Note: The trips represented include intrazonal trips.</i>	591,946	1,001,074	995,110	557,832	3,145,963



Fontana ATP 2040

Internal and External Trip Ends (Origins and Destinations) By Time of Day and Geographical Area

AREA	COMBINED ZONAL VMT				
	AM	MD	PM	NT	DAY
North	121,136	236,088	217,633	116,492	691,348
Central	345,355	566,107	569,721	324,311	1,805,494
South	125,456	198,879	207,757	117,029	649,121
TOTAL TRIPS	591,946	1,001,074	995,110	557,832	3,145,963
<i>*Note: The trips represented include intrazonal trips.</i>	19%	32%	32%	18%	100%

2040 Conditions (Future, Preferred Alternative - ATP Recommendation Integration)

ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class IV bikeway on Sierra Avenue from Slover Avenue to Jurupa Avenue by reducing lanes from six to four and installing two buffered bike lanes	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.01	43	45	509	529
Implement Class II bikeway on Poplar Avenue from Valley Boulevard to Beech Avenue with a road diet	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.25	76	97	890	1137
Implement Class II bikeway on San Bernardino Avenue from Fontana Avenue to Alder Avenue with a road diet	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.78	345	574	4050	6733
Implement Class II bikeway on Alder Avenue from Baseline Avenue to Randall Avenue with a road diet	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.52	204	193	2389	2263
Implement Class II bikeway on Randall Avenue from Citrus Avenue to Alder Avenue with a road diet	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.04	149	229	1743	2683
Implement Class IV bikeway on Slover Avenue from Sierra Avenue to Tamarind Avenue. This is a Gap Closure priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.75	2	5	24	56



ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class III bikeway on Juniper Avenue from Baseline Road to San Bernardino Avenue. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.02	93	146	1089	1716
Implement Class II bikeway on Miller Avenue from Beech Avenue to Maple Avenue with a road diet.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	3.77	443	514	5194	6029
Implement Class II bikeway on Roanoke Road from East Liberty Parkway to Cherry Avenue with a painted bike lane. Super sharrows will be considered.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.08	2	2	19	20
Implement Class III bikeway on S Heritage Circle from Baseline Avenue to Baseline Avenue. Sharrows will be striped.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.70	18	18	212	211
Implement Class I bikeway on SB Co Parcel from SCE Utility North to Riverside Avenue.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	3.14	20	39	237	455
Implement Class III bikeway on Meyer Canyon Road from East Liberty Parkway to Cherry Avenue. Super sharrows will be striped.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.09	2	2	21	22

ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class I bikeway on Metrolink from Catawba Avenue to Maple Avenue.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	3.03	224	305	2629	3578
Implement Class IV bikeway on Citrus Avenue from Baseline Avenue to SCE Utility South.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.15	263	359	3087	4211
Implement Class I bikeway on 210 Adjacent Path from Victoria Street to Knox Avenue. A dirt access road will be converted to a bike path.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.48	45	49	528	572
Implement Class II bikeway on Highland Avenue from Knox Avenue to South Highland Avenue. Bike lanes will be striped.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.67	17	30	197	349
Implement Class IV bikeway on Sierra Avenue from Baseline Avenue to Foothill Boulevard.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.02	41	47	478	555
Implement Class II bikeway on Santa Ana Avenue from San Sevaire Trail to Tamarind Avenue with road diet from four to two lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	5.33	416	506	4872	5936



ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class IV bikeway on Sierra Avenue from Foothill Boulevard to Merrill Avenue.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.00	19	36	226	421
Implement Class II bikeway on Randall Avenue from Lime Avenue to Citrus Avenue with road diet from four to two lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.62	15	18	175	215
Implement Class II bikeway on Poplar Avenue from Randall Avenue to Valley Boulevard.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.00	46	77	535	905
Implement Class II bikeway on Cypress Avenue from Slover Avenue to Santa Ana Avenue with a road diet.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.50	6	6	75	70
Implement Class II bikeway on Cypress Avenue from Santa Ana Avenue to SCE Utility Path with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.64	8	8	96	90
Implement Class II bikeway on Slover Avenue from San Sevine Trail to Sierra Avenue with striped bike lanes. When width allows, Class IV buffered bike lane will be installed.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	4.57	301	365	3523	4279

ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class II bikeway on Jurupa Avenue from Etiwanda Avenue to Mulberry Avenue with striped buffer bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.02	15	19	170	217
Implement Class II bikeway on Jurupa Avenue from Mulberry Avenue to Cherry Avenue with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.02	48	54	558	628
Implement Class II bikeway on Jurupa Ave from Cherry Avenue to Live Oak Avenue with buffered bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.50	6	9	73	100
Implement Class IV bikeway on Jurupa Avenue from Live Oak Avenue to Beech Avenue with buffered bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.53	2	4	28	45
Implement Class IV bikeway on Jurupa Avenue from Beech Avenue to Citrus Avenue with buffered bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.99	33	43	392	500
Implement Class IV bikeway on Jurupa Avenue from Citrus Avenue to Sierra Avenue with buffered bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.05	30	29	348	336



ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class III bikeway on Oleander Avenue from Railroad to Santa Ana Avenue. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.73	6	4	74	48
Implement Class III bikeway on Juniper Avenue from Slover Avenue to Santa Ana Avenue. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.50	2	3	25	37
Implement Class IV bikeway on Valley Boulevard from Sierra Avenue to Alder Avenue.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.00	36	56	426	656
Implement Class II bikeway on Valley Boulevard from Citrus Avenue to Sierra Avenue with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.03	26	63	310	740
Implement Class II bikeway on Valley Boulevard from Banana Avenue to Citrus Avenue with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.51	149	387	1744	4537
Implement Class III bikeway on Juniper Avenue from Merrill Avenue to San Bernardino Avenue. This is a Transit Access priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.00	45	70	533	816

ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class II bikeway on Juniper Avenue from Foothill Boulevard to Merrill Avenue with a road diet. This is a Transit Access priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.00	38	64	444	754
Implement Class II bikeway on Sierra Avenue from Jurupa Avenue to S City Limit by reducing lanes from six to four.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.99	16	34	183	396
Implement Class III bikeway on Cypress Avenue from Highland Avenue to Valencia Avenue. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.76	170	216	1992	2528
Implement Class III bikeway on Oleander Avenue from Miller Avenue to Valley Boulevard. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.50	135	203	1578	2375
Implement Class III bikeway on Palmetto Avenue from Merrill Avenue to Marygold Avenue. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.25	72	111	845	1299
Implement Class III bikeway on Mango Avenue from Merrill Avenue to Randall Avenue. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.50	4	7	46	78



ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class II bikeway on Merrill Avenue from Alder Avenue to Maple Avenue with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.75	8	9	94	101
Implement Class II bikeway on Merrill Avenue from Citrus Avenue to Alder Avenue with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	2.03	173	251	2023	2944
Implement Class III bikeway on Athol Street from Fontana Avenue to Sierra Avenue. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.01	21	38	249	450
Implement Class III bikeway on Palmetto Avenue from Miller Avenue to Foothill Boulevard. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.50	8	9	97	109
Implement Class III bikeway on Lime Avenue from Baseline Avenue to Foothill Boulevard. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.02	28	27	333	312
Implement Class III bikeway on Almeria Avenue from Baseline Avenue to Foothill Boulevard. This is a Neighborhood Greenway priority project.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.02	28	27	333	312

ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Implement Class II bikeway on Live Oak Avenue from Jurupa Avenue to SCE Utility South with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.16	1	2	14	21
Implement Class II bikeway on Fontana Avenue from Merrill Avenue to Randall Avenue with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.38	13	16	151	184
Implement Class II bikeway on Mulberry Avenue from Slover Avenue to Jurupa Avenue with striped bikes lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.01	16	30	183	352
Implement Class II bikeway on Mulberry Avenue from Jurupa Avenue to Philadelphia Street with striped bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	1.01	20	29	236	343
Implement Class II bikeway on Foothill Boulevard from Almeria Avenue to Citrus Avenue with a six to four lane reduction and buffered bike lanes.	CAPCOA SDT-5: 1% increase in share of bicycles (for each additional mile of bike lanes per square mile)	0.38	8	7	96	80
Santa Ana Ave at Live Oak Ave - Southern Pacific Rail Crossing	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8



ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Fontana Ave at Poplar Ave - Ped-activated crosswalk	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Valley Blvd at Sierra Ave - Bulb-outs, high visibility crosswalks	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Marygold Ave at Sierra Ave - Unspecified Improvements	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Merrill Ave at Sierra Ave - Unspecified Improvements	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Miller Ave at Juniper Ave - Bulb-outs, RRFB	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Athol St at Oleander Ave - 4 way stop sign	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Jurupa Ave at Almost Ave - Scramble Signal	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8

ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
Santa Ana Ave at Cypress Ave - Traffic circle, crosswalks, actual sidewalks	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Merrill Ave at Fontana Ave - Roundabout	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Randall Ave at Fontana Ave - Roundabout	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Sequoia Ave at Oleander Ave - Bulb-outs, high visibility crosswalk, RRFB	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Arrow Blvd at Palmetto Ave - Ped refuges, high visibility crosswalks	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Mallory Dr at Cypress Ave - Bulb-outs	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Walnut St at Cypress Ave - Traffic circle, high visibility crosswalks	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian-oriented improvement	Pedestrian Oriented Improvement	6	8	6	8



ATP BIKE FACILITY	VMT REDUCTION RATE	MILES OF BIKEWAY	NEW ACTIVE TRANSPORTA- TION USERS (2012)	NEW ACTIVE TRANSPORTA- TION USERS (2040)	VMT REDUCED PER DAY	
					2012	2040
San Bernardino Ave at Cypress Ave - Bulb- outs, 4 high visibility crosswalks, RRFB	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian- oriented improvement	Pedestrian Oriented Improvement	6	8	6	8
Foothill Blvd at Tokay Ave - Bulb-outs, high visibility crosswalks	CAPCOA SDT-1: 1% increase in pedestrian share at a pedestrian- oriented improvement	Pedestrian Oriented Improvement	6	8	6	8

Benefit Impact Analysis

The benefit impact analysis quantifies the benefits that might occur as the result of implementing the recommended projects in the Fontana Active Transportation Plan. The analysis estimates the number of bicycle and pedestrian trips that would directly result from the implementation of the project list, approximates the corresponding reduction in vehicle trips and vehicle miles travelled (VMT), and assesses the potential health-, environmental-, and transportation-related benefits.

METHODOLOGY

The impact analysis utilizes a standard methodology for calculating health-, environmental-, and transportation-related benefits. All projections are based on five-year estimates from the U.S. Census Bureau, which are then extrapolated through the use of various multipliers derived from national studies and quantified in terms of monetary

value where appropriate. The estimated monetary values are then calibrated to baseline values and compared to bicycling and pedestrian mode splits of peer cities that recently have implemented similar projects.

Selecting Peer Cities

In order to estimate future bicycling and walking mode split increases that may result from the implementation of the Fontana ATP project list, the consultant team examined levels of bicycling and walking in municipalities with similar infrastructure already in place, called peer cities. Selection factors in choosing these municipalities included the existing street network, geographic location, climate, socio-demographic data, and the completeness of the city's bicycle and pedestrian network. Table 9.22 shows general characteristics of Fontana and the selected peer cities.

Table 9.22. General Characteristics Comparison of Selected Peer Cities

	FONTANA, CA	CHANDLER, AZ	CHULA VISTA, CA	FREMONT, CA	IRVINE, CA	MODESTO, CA	SANTA ANA, CA	SANTA CLARITA, CA	HENDERSON, NV
Street Network ¹	Suburban Collectors	Suburban Collectors	Loose Grid	Suburban Collectors	Suburban Collectors	Loose Grid	Loose Grid	Suburban	Suburban
Region	So. Calif.	Arizona	So. Calif.	No. Calif.	So. Calif.	No. Calif.	So. Calif.	So. Calif.	Nevada
Climate ²	Csa	BWh	BSk	Csc	BSk	BSk	BSk	Csa	BWh
Elevation (ft)	1,237	1,214	66	56	56	89	115	1,207	1,765
Population ³	240,000	250,202	257,296	225,221	238,474	207,482	333,268	179,950	271,725
Bicycle Friendly Community Award Level ⁴	None	Bronze	Bronze	None	Silver	None	None	Bronze	Silver

Chandler (AZ), Chula Vista (CA), Fremont (CA), Irvine (CA), Modesto (CA), Santa Ana (CA), Santa Clarita (CA), and Henderson (NV) were chosen by the consultant team as peer cities because they have similar design, geographic, and demographic characteristics to Fontana.

After the identification of peer cities based on general characteristics, the consultant team analyzed the bicycle and walk commute data from each city. Compared to selected peer cities, Fontana has the lowest bicycle commute mode share (0.15%) and the lowest walking commute mode share (0.82%) according to five-year American Community Survey data from 2011 to 2015. Table 9.23 shows the current bicycle and walk commute mode splits for Fontana and its eight peer cities, as well as the estimated bicycle and walk commute mode share for Fontana.

Table 9.23 Estimated Future Bicycle and Walk Commute Mode Split

	FONTANA, CA	CHAN- DLER, AZ	CHULA VISTA, CA	FREMONT, CA	IRVINE, CA	MODESTO, CA	SANTA ANA, CA	SANTA CLARITA, CA	HENDER- SON, NV
Employed Population ⁵	83,724	127,484	111,656	84,307	114,880	80,553	149,183	84,987	124,804
Daily Bicycle Commute Trips ⁶	122	1,195	403	488	1,452	555	1,382	462	275
Bicycle Commute Mode Share ⁷	0.15%	0.94%	0.36%	0.58%	1.26%	0.69%	0.93%	0.54%	0.22%
Estimated Future Bicycle Commute Mode Share*	Low: 0.5% Mid: 0.63% High: 0.93%								
Daily Walk Commute Trips ⁸	688	1,079	1,605	1,119	4,285	1,078	3,261	1,208	1,739
Walk Commute Mode Share ⁹	0.82%	0.85%	1.44%	1.33%	3.73%	1.34%	2.19%	1.42%	1.39%
Estimated Future Walk Commute Mode Share**	Low: 1.34% Mid: 1.41% High: 1.62%								

*Based on the difference between Fontana's existing bicycle commute mode share and the 25th, 50th, and 75th percentiles bicycle mode share of peer cities.

**Based on the difference between Fontana's existing walk commute mode share and the 25th, 50th, and 75th percentile walk mode share of peer cities.

Multipliers

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

Limitations

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

HEALTH BENEFITS

The implementation of a well-designed, connected bicycle and pedestrian network across Fontana will encourage a shift from fossil-fuel based modes of transportation, such as cars and trucks, to active modes of transportation, such as bicycling and walking. This impact analysis model evaluates and quantifies the estimated increase in bicycling and walking trips, the estimated increase in hours of physical activity, and the annual savings resulting from reduced healthcare costs associated with a more active population.

Health Calculations

The primary inputs into the health component of the impact analysis model come from five-year estimates of commute trip data from the U.S. Census Bureau. Five-year estimates were chosen because they are the most reliable dataset available from the U.S. Census Bureau between the 10-year censuses and because they allow for analysis at the individual census tract level.¹⁰

After extrapolating the commute trip data to recreational trips and to estimate daily, monthly, and annual trip values, the consultant team used a series of multipliers and assumptions to calculate the various health factors. If Fontana implements all of the recommended projects, the City could experience up to 3,690,000 more bicycling trips per year and 5,354,000 more walking trips than is currently experienced. Using trip distance multipliers derived the National Household Travel Survey (NHTS) and annual vehicle trip replacement factors derived from a combination of US Census data, NHTS data, and historic Safe Routes to School data, the estimated increase in distance bicycled is 3,452,000 miles per year and the estimated increase in distance walked

is up to 1,026,000 miles per year, resulting in 6,281,000 fewer vehicle-miles travelled (VMT) annually.

These annual distance estimates and VMT reduction estimates were used to calculate changes in physical activity rates among residents in Fontana. Implementation of the recommended projects could result in roughly 345,000 more hours of physical activity per year among Fontana residents than currently occurs. This increase in physical activity means that up to 5,285 more residents will be meeting the Centers

for Disease Control and Prevention (CDC) minimum number of hours of physical activity per day. This is equal to a jump from approximately 4.48 percent of the regional physical activity need being met to 7.07 percent of the regional physical activity need being met—an increase of 2.59 percent. This growth in the percent of people within the city exercising also equates to a \$858,000 reduction in healthcare expenses per year. Table 9.24 Estimated Annual Health Benefits summarizes the annual health benefits for Fontana.

Table 9.24 Estimated Annual Health Benefits

	BASELINE		LOW		MID		HIGH	
	Estimate		Estimate	Percent Increase	Estimate	Percent Increase	Estimate	Percent Increase
Annual Bicycle Trips	687,000		2,346,000	241.48%	2,986,000	334.64%	4,377,000	537.12%
Annual Miles Bicycled	1,346,000		2,898,000	115.30%	3,497,000	159.81%	4,798,000	256.46%
Annual Walk Trips	5,480,000		8,907,000	62.54%	9,386,000	71.28%	10,834,000	97.7%
Annual Miles Walked	3,151,000		3,807,000	20.82%	3,899,000	23.74%	4,177,000	32.56%
Annual Hours of Physical Activity	1,185,000		1,559,000	31.56%	1,650,000	39.24%	1,872,000	57.97%
Number of Residents Meeting CDC Recommended Number of Hours of Physical Activity	9,115		11,992	31.56%	12,692	39.24%	14,400	57.97%
Physical Activity Need Met	0.51%		1.1%		1.32%		1.81%	
Annual Healthcare Cost Savings	\$310,000		\$603,000	94.52%	\$678,000	118.71%	\$858,000	176.77%

ENVIRONMENTAL BENEFITS

While pollution stems from many sources, the implementation of recommended bicycle and pedestrian projects in Fontana will contribute to a shift from energy-intensive vehicular transportation to zero-emission modes of transportation such as bicycling and walking. This impact analysis model evaluates and quantifies the estimated increase in bicycling and walking trips, and the associated annual savings from reduced vehicle emissions. Readily-available data inputs were analyzed in order to quantify and evaluate the environmental benefits of active transportation.

Environmental Calculations

The primary inputs into the environmental component of the impact analysis model come from five-year estimates of commute trip data from the U.S. Census Bureau. Using the same estimates of VMT reduction calculated in the health benefits analysis, changes in hydrocarbon, particulate matter, nitrous oxides, carbon monoxide, and

carbon dioxide were analyzed. In total, the replacement of motor vehicle trips with active transportation trips may result in an estimated 8,439,000-13,980,000 fewer pounds of CO₂ emissions per year and 138,000-204,000 fewer pounds of other vehicle emissions. Based on a review of air emissions studies, each pound of emissions was assigned an equivalent dollar amount based on how much it would cost to clean up the pollutant or the cost equivalent of how much damage the pollutant causes the environment. The total reduction in vehicle emissions is equal to a savings of up to \$210,000 in related environmental damage or clean-up per year. Other potential ecological services associated with the bicycle projects such as water regulation, carbon sequestration, carbon storage, and waste treatment exist, but the quantifiable value of these services are negligible on the overall impact of the recommended project list. Table 9.25 summarizes the annual environmental benefits for Fontana.

Table 9.25 Estimated Annual Environmental Benefits

	BASILINE	LOW		MID		HIGH	
	Estimate	Estimate	Percent Increase	Estimate	Percent Increase	Estimate	Percent Increase
CO2 Emission Reduced (lbs)	3,348,000	8,439,000	152.06%	10,146,000	203.05%	13,980,000	317.56%
Other Emissions Reduced (lbs)	66,000	138,000	109.09%	157,000	137.88%	204,000	209.09%
Total Vehicle Emission Costs Reduced	\$69,000	\$143,000	107.25%	\$162,000	134.78%	\$210,000	204.35%

TRANSPORTATION BENEFITS

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

Transportation Calculations

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

Utilizing the same calculations for estimated increase in annual bicycle and walk trips and annual VMT reductions used in the health and environmental components, transportation-related cost savings can be calculated. By multiplying the amount of VMT reduced by established multipliers for traffic congestion, vehicle collisions, road maintenance, and vehicle operating costs, monetary values can be assigned to the transportation-related benefits. In total, an annual cost savings of \$3,191,000-\$6,453,000 was estimated for the city. Table 9.26 summarizes the annual transportation benefits for Fontana.

Table 9.26 Estimated Annual Transportation Benefits

	BASELINE		LOW		MID		HIGH	
	Estimate	Estimate	Percent Increase	Estimate	Percent Increase	Estimate	Percent Increase	
Reduced Traffic Congestion Costs	\$144,000	\$297,000	106.25%	\$339,000	135.42%	\$440,000	205.56%	
Reduced Vehicle Collision Costs	\$1,029,000	\$2,123,000	106.25%	\$2,426,000	135.76%	\$3,140,000	205.56%	
Reduce Road Maintenance costs	\$308,000	\$637,000	106.82%	\$727,000	136.04%	\$942,000	205.84%	
Household Vehicle Cost Savings	\$1,173,000	\$2,420,000	106.31%	\$2,765,000	135.72%	\$3,580,000	205.2%	
Total Vehicle Cost Savings	\$3,033,000	\$6,224,000	20.4%	\$7,099,000	57.1%	\$9,173,000	90.5%	

TOTAL BENEFITS

If all of the projects on the Fontana recommended project list are implemented, the city could experience a total of \$6,223,000-9,173,000 in health-, environmental-, and transportation-related benefits per year. Table 9.27 summarizes all calculated benefits.

Table 9.27 Total Estimated Annual Benefits

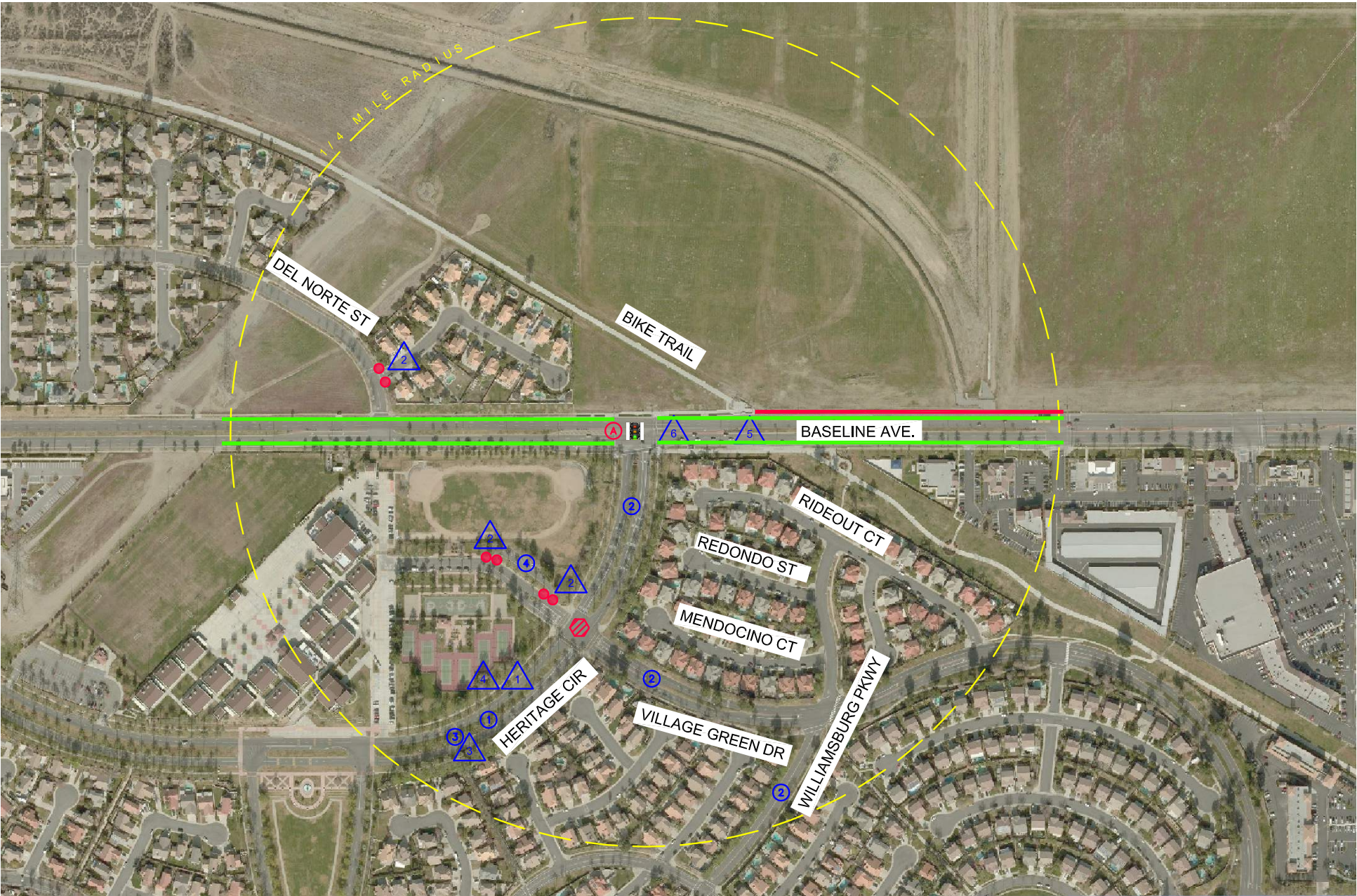
	BASELINE	LOW		MID		HIGH	
	Estimate	Estimate	Percent Increase	Estimate	Percent Increase	Estimate	Percent Increase
Annual Health Benefits	\$310,000	\$603,000	94.52%	\$678,000	118.71%	\$858,000	176.77%
Annual Environmental Benefits	\$69,000	\$143,000	107.25%	\$162,000	134.75%	\$210,000	204.35%
Annual Transportation Benefits	\$2,654,000	\$5,477,000	106%	\$6,257,000	135%	\$8,102,000	205%
Total Annual Benefits	\$3,033,000	\$6,223,000	105%	\$7,097,000	134%	\$9,173,000	202.4%



(ENDNOTES)

- 1 American Community Survey. 5-Year Estimates. (2011-2015).
- 2 Koppen-Geiger Climate Classes. Dfb: Snow fully humid warm summer, Dfa: Snow fully humid hot summer
- 3 American Community Survey. 5-Year Estimates. (2011-2015).
- 4 "Current Bicycle Friendly Communities." (2014). The League of American Bicyclists.
http://bikeleague.org/sites/default/files/BFC_MasterList_2014.pdf
- 5 American Community Survey. 5-Year Estimates. (2011-2015).
- 6 American Community Survey. 5-Year Estimates. (2011-2015).
- 7 American Community Survey. 5-Year Estimates. (2011-2015).
- 8 American Community Survey. 5-Year Estimates. (2011-2015).
- 9 American Community Survey. 5-Year Estimates. (2011-2015).
- 10 "When to use 1-year, 3-year, or 5-year estimates." US Census Bureau.
http://www.census.gov/acs/www/guidance_for_data_users/estimates/

Appendix G.
Walk Audit Maps and
Countermeasures



LEGEND

- EXISTING CLASS II BIKE FACILITY
- MISSING SIDEWALK
- ALL WAY STOP
- SIGNALIZED INTERSECTION
- NON A.D.A. COMPLIANT CURB RAMP

ISSUES OBSERVED AND SHARED

STREET/SIDEWALKS

- 1 INSUFFICIENT LIGHTING
- 2 LACK OF BIKE LANE OR BIKE SHARROW
- 3 SPEEDING ON HERITAGE CIRCLE
- 4 PARKING LAYOUT IS PRONE TO "WRONG WAY" DRIVING

CROSSING

- A U-TURN AND LEFT TURN VIOLATIONS

POTENTIAL COUNTER MEASURES:

- 1 INSTALL BIKE LANES/WAYS ON HERITAGE CIRCLE AND E LIBERTY PKWY
- 2 CONSTRUCT A.D.A. COMPLIANT CURB RAMPS
- 3 INSTALL SPEED HUMPS ON HERITAGE CIRCLE
- 4 INSTALL LIGHTING ON HERITAGE CIRCLE
- 5 CONSTRUCT SIDEWALK NEXT TO BIKE PATH ON BASELINE AVE.
- 6 ENHANCE SIGNAL WITH BICYCLE DETECTION LOOPS AND INDICATIONS

PE-TRAIL/BASELINE-HERITAGE CIRCLE AUDIT





ISSUES OBSERVED AND SHARED

LEGEND

- MISSING SIDEWALK
- ALL WAY STOP
- TWO WAY STOP
- SIGNALIZED INTERSECTION



STREET/SIDEWALKS

- 1 INSUFFICIENT LIGHTING
- 2 LACK OF BIKE LANE OR BIKE SHARROW
- 3 SIDEWALK TOO NARROW

CROSSING

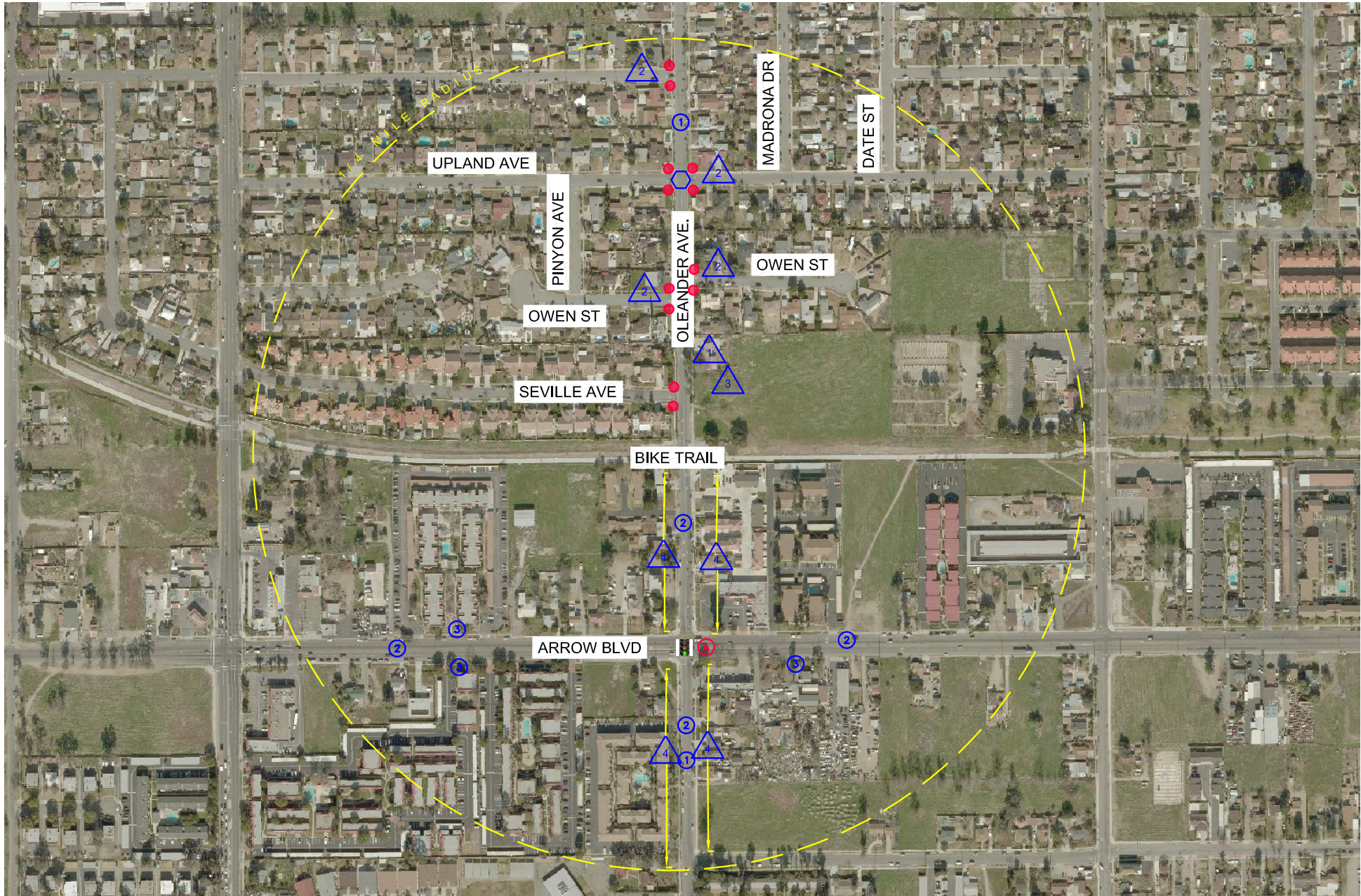
- A U-TURN AND LEFT TURN VIOLATIONS

POTENTIAL COUNTER MEASURES:

- 1 INSTALL BIKE LANES ON FOOTHILL BLVD. AND SULTANA AVE.
- 2 INSTALL MISSING SIDEWALKS
- 3 INSTALL MISSING LIGHTING ON FOOTHILL BLVD. AND SULTANA AVE.
- 4 ENHANCE SIGNAL WITH BICYCLE DETECTION LOOPS AND INDICATIONS

PE-TRAIL/SULTANA AVENUE AUDIT





ISSUES OBSERVED AND SHARED

STREET/SIDEWALKS

- ① INSUFFICIENT LIGHTING
- ② LACK OF BIKE LANE OR BIKE SHARROW
- ③ SIDEWALK TOO NARROW

CROSSING

- Ⓐ U-TURN AND LEFT TURN VIOLATIONS

POTENTIAL COUNTER MEASURES:

- ① INSTALL BIKE LANES ON ARROW BLVD AND OLEANDER AVE.
- ② CONSTRUCT A.D.A. COMPLIANT CURB RAMPS
- ③ INSTALL LIGHTING ON OLEANDER AVE.
- ④ ENHANCE SIGNAL WITH BICYCLE DETECTION LOOPS AND INDICATIONS

LEGEND

- ⬡ TWO WAY STOP
- 🚦 SIGNALIZED INTERSECTION
- NON A.D.A. COMPLIANT CURB RAMP



PE-TRAIL/OLEANDER AVE AUDIT





ISSUES OBSERVED AND SHARED

LEGEND

- MISSING SIDEWALK
- ALL WAY STOP
- TWO WAY STOP
- SIGNALIZED INTERSECTION
- NON A.D.A. COMPLIANT CURB RAMP



STREET/SIDEWALKS

- 1 INSUFFICIENT LIGHTING
- 2 LACK OF BIKE LANE OR BIKE SHARROW
- 3 SIDEWALK TOO NARROW

CROSSING

- A U-TURN AND LEFT TURN VIOLATIONS

POTENTIAL COUNTER MEASURES:

- 1 INSTALL BIKE LANES ON ARROW HWY. AND ALDER AVE.
- 2 CONSTRUCT A.D.A. COMPLIANT CURB RAMPS
- 3 INSTALL MISSING SIDEWALKS ON ALDER AVE.
- 4 INSTALL MISSING LIGHTING ON ARROW HWY. AND ALDER AVE.
- 5 ENHANCE SIGNAL WITH BICYCLE DETECTION LOOPS AND INDICATIONS

PE-TRAIL/ALDER AVE AUDIT





ISSUES OBSERVED AND SHARED

LEGEND

- MISSING SIDEWALK
- ◊ ALL WAY STOP
- ◊ TWO WAY STOP
- SIGNALIZED INTERSECTION
- NON A.D.A. COMPLIANT CURB RAMP



STREET/SIDEWALKS

- ① INSUFFICIENT LIGHTING
- ② LACK OF BIKE LANE OR BIKE SHARROW
- ③ SIDEWALK TOO NARROW

CROSSING

- Ⓐ U-TURN AND LEFT TURN VIOLATIONS

POTENTIAL COUNTER MEASURES:

- ① INSTALL BIKE LANES ON ARROW HWY. AND ALDER AVE.
- ② CONSTRUCT A.D.A. COMPLIANT CURB RAMPS
- ③ INSTALL MISSING SIDEWALKS ON ALDER AVE.
- ④ INSTALL MISSING LIGHTING ON ARROW HWY. AND ALDER AVE.
- ⑤ ENHANCE SIGNAL WITH BICYCLE DETECTION LOOPS AND INDICATIONS

PE-TRAIL/ALDER AVE AUDIT



A.B. Miller High School

Site Assessment held 2/23/17

- 1 Oleander Ave near Summerset St**
 - Consider sidewalk reconstruction and root containment
 - Upgrade crosswalk pavement marking on north leg of intersection to high-visibility
 - Construct curb extensions (with updated directional ADA ramps) for traffic calming
 - Install RRFB system to existing crosswalk on north leg of intersection
- 2 Oleander Ave and Cypress Ave**
 - Install speed humps for traffic calming
 - Install shared lane pavement markings along Cypress Ave to provide Class III bike route
- 3 Walnut St**
 - Consider sidewalk reconstruction and tree root containment
 - Shift existing Class II bike lanes on westbound Walnut St to north edge of roadway
 - Install 4' buffer to existing Class II bike lanes in both directions
 - Remove existing "Through Traffic Merge Left" sign on westbound Walnut St
- 4 Walnut St at Oleander St and Cypress St**
 - Conduct signal warrant analyses for both intersections
 - Update curb ramps to meet current ADA standards
 - Install high-visibility crosswalks at all approaches
 - Install "School Advance Warning" sign (Assembly D) in advance of intersections on northbound Cypress Ave and Oleander Ave approaching Walnut St
- 5 Cypress Ave**
 - Install RRFB system at existing crosswalk
 - Construct curb extensions (with updated ADA ramps) for traffic calming
 - Upgrade existing crosswalk pavement marking to high-visibility
- 6 Cypress Ave at Driveway**
 - Construct directional ADA curb ramps
 - Install high-visibility crosswalk

Non-infrastructure Recommendations:

- Encourage pedestrian crossing at marked crosswalks
- Encourage pedestrian travel on pathways, discourage walking through parking lot
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education



A.B. MILLER HIGH SCHOOL RECOMMENDED IMPROVEMENTS MAP

The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.



Almeria Middle School

Site Assessment held 5/2/17

- 1
- Miller Ave and Almeria Ave
 - Install high-visibility crosswalks and advance stop lines
 - Incorporate road diet and Class II bike lanes proposed on Miller Ave
 - Construct directional ADA ramps
- 2
- Almeria Ave near Green Briar
 - Extend school speed limit zone by relocating “School Speed Limit” sign (Assembly C) to location shown on southbound Almeria Ave
 - Update speed limit sign to reflect school zone
- 3
- Almeria Ave
 - Provide striping to delineate permitted parking areas along Almeria Ave
 - Install shared lane pavement markings and signage to provide Class III bike route
- 4
- Almeria Ave near Fairview Dr
 - Install high-visibility mid-block crossing for students traveling on foot or bike from neighborhoods west of the school
 - Install RRFB system for proposed crossing
 - Install advanced yield lines for northbound and southbound Almeria Ave approaching the crossing
 - Install “School Speed Limit” sign (Assembly C) on northbound Almeria Ave south of the school property
- 5
- Miller Ave and Tokay Ave
 - Install high-visibility crosswalks and advance stop bars
 - Incorporate road diet and Class II bike lanes proposed on Miller Ave per City of Fontana’s Active Transportation Plan
 - Construct directional ADA ramps
- 6
- Miller Ave
 - Implement 4- to 3-lane road diet along Miller Ave as per City of Fontana’s Active Transportation Plan
 - Install Class II buffered bike lanes along Miller Ave as per City of Fontana’s Active Transportation Plan
 - Maintain parking on both sides of Miller Ave, but relocate to inside of proposed bike lanes
 - Provide 5’ bike lanes with 3’ buffers separated from vehicular traffic lanes by parking
- 7
- South End of Almeria Middle School Property
 - Provide path connection between Almeria Ave and Tokay Ave

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, restricted street parking, and speeding



ALMERIA MIDDLE SCHOOL
RECOMMENDED IMPROVEMENTS MAP

The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.





Almond Elementary School

Site Assessment held 2/27/17

- 1 South Edge of Campus**
 - Install additional lighting for security
- 2 Drop-off Aisle in Parking Lot**
 - Construct additional walkway for 2nd drop-off lane
 - Upgrade crosswalks to high-visibility
- 3 Center of Campus**
 - Install bike racks
- 4 Almond Ave**
 - Install speed humps for traffic calming
 - Install shared lane pavement markings to provide a Class III bike route
- 5 Almond Ave at Ivy Ave**
 - Upgrade crosswalks to high-visibility
 - Construct curb extensions to slow traffic and improve visibility of crosswalk
 - Install RRFB system and advance yield lines
- 6 Almond Ave at Chesebro Ct**
 - Install high-visibility crosswalk
 - Construct curb extensions to slow traffic and improve visibility of crosswalk
 - Install RRFB system and advance yield lines
- 7 Almond Ave at E Foothill Blvd**
 - Install high-visibility crosswalk
 - Install green conflict marking for bicycle lane
- 8 E Foothill Blvd**
 - Reduce eastbound and westbound outside lanes to 11' wide
 - Install 3' buffers on existing Class II bike lanes

Non-infrastructure Recommendations:

- Increased enforcement and education
- Discourage double parking, restricted parking
- Encourage proper use of drop-off locations, including 2nd lane
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure

ALMOND ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.



Canyon Crest Elementary School

Site Assessment held 4/27/17



- 1 Canyon Crest Dr near Cherry Ave**
 - Install “School Speed Limit” (Assembly C) sign on eastbound Canyon Crest Dr at beginning of block
 - Remove existing “35 MPH” speed limit sign
- 2 Cherry Ave at Canyon Crest Dr**
 - Install high-visibility crosswalks at north and east legs
 - Install advance stop bars at north and east legs
 - Construct directional ADA ramps at northeast, northwest, and southeast corners
- 3 Canyon Crest Dr at Amberwood Dr**
 - Install high-visibility crosswalks at southern and western approaches
 - Install advance stop bars at southern and western approaches
 - Construct directional ADA curb ramps on northwest, southwest, and southeast corners
 - Construct curb extension on northwest and southwest corner
- 4 East Side of School Property**
 - Provide connection from neighborhood trail to Canyon Crest Drive along eastern edge of school property

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding, and jaywalking

CANYON CREST ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.



Cecilia Lucero Solorio Elementary School

Site Assessment held 4/20/17



- 1 Hemlock Ave at Sapling Wy**
 - Install high-visibility crosswalk and advance stop bar on east leg
 - Construct directional ADA ramps at northeast and southeast corners
- 2 Hemlock Ave at Bellgrove Wy**
 - Install high-visibility crosswalk and advance stop bar on west leg
 - Re-install high-visibility crosswalk on north leg and install RRFB system for visibility
 - Construct curb extensions with directional ADA ramps at northeast and northwest corners
 - Construct directional ADA curb ramp at southwest corner
- 3 Hemlock Ave near Walnut St**
 - Install "School Speed Limit" (Assembly C) sign, remove existing "40 MPH" sign on northbound Hemlock Ave
- 4 Walnut St at Hemlock Ave**
 - Install high-visibility crosswalks and advance stop bars at all approaches
 - Construct directional ADA ramps at all corners
- 5 Walnut St at Beech Ave**
 - Install high-visibility crosswalks and advance stop bars at all approaches
 - Construct directional ADA ramps at all corners
 - Extend concrete medians on north and south legs of intersection to provide pedestrian refuge islands (crosswalks will be pulled back from the intersection so proposed islands will not impact east-west bike lanes on Walnut St)
- 6 Walnut St at School Entrances**
 - Remove "Student Pick Up/Drop Off Permitted" signs
 - Install "No Stopping Any Time" (R26) signs
- 7 Walnut St at Earp Wy**
 - Install high-visibility crosswalks and advance stop bars at north and south legs
 - Construct directional ADA ramps at all corners
- 8 Walnut St**
 - Narrow through traffic lanes from 12' to 10'
 - Install 2' painted buffer for existing bike lanes
- 9 Hemlock Ave**
 - Remove underutilized parking lane
 - Install striping for 10' travel lanes, 7' bike lanes, and 2' buffer

Non-infrastructure Recommendations:

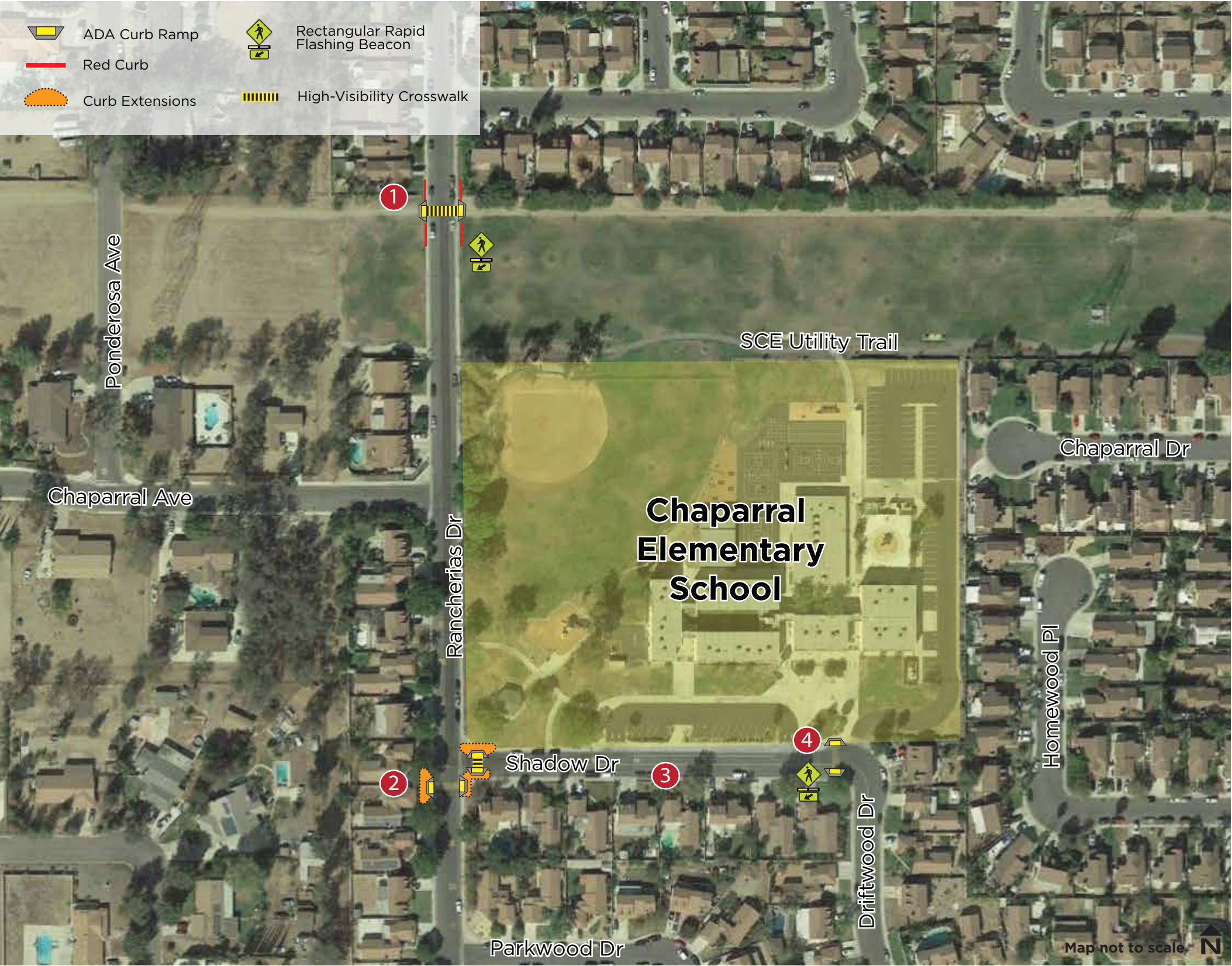
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding, and jaywalking

CECILIA LUCERO SOLORIO ELEMENTARY SCHOOL

RECOMMENDED IMPROVEMENTS MAP

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Chapparral Elementary School

Site Assessment held 5/8/17

Lorem ipsum

- 1 Rancherías Dr at Proposed Path**
 - Install high-visibility crosswalk at mid-block locations for crossings pending permission for right-of-way use by SCE.
 - Construct directional ADA curb ramps
 - Install red curb to promote visibility
 - Install RRFB system
- 2 Rancherías Dr at Shadow Dr**
 - Construct curb extensions with directional ADA curb ramps on west, southeast, and northwest corners
 - Install high-visibility crosswalk on east leg
- 3 Shadow Dr**
 - Provide striping for parking along south side of street, similar to that along north side
- 4 Shadow Dr at Driftwood Dr**
 - Construct directional ADA curb ramps on north and south sides
 - Install RRFB system to enhance visibility

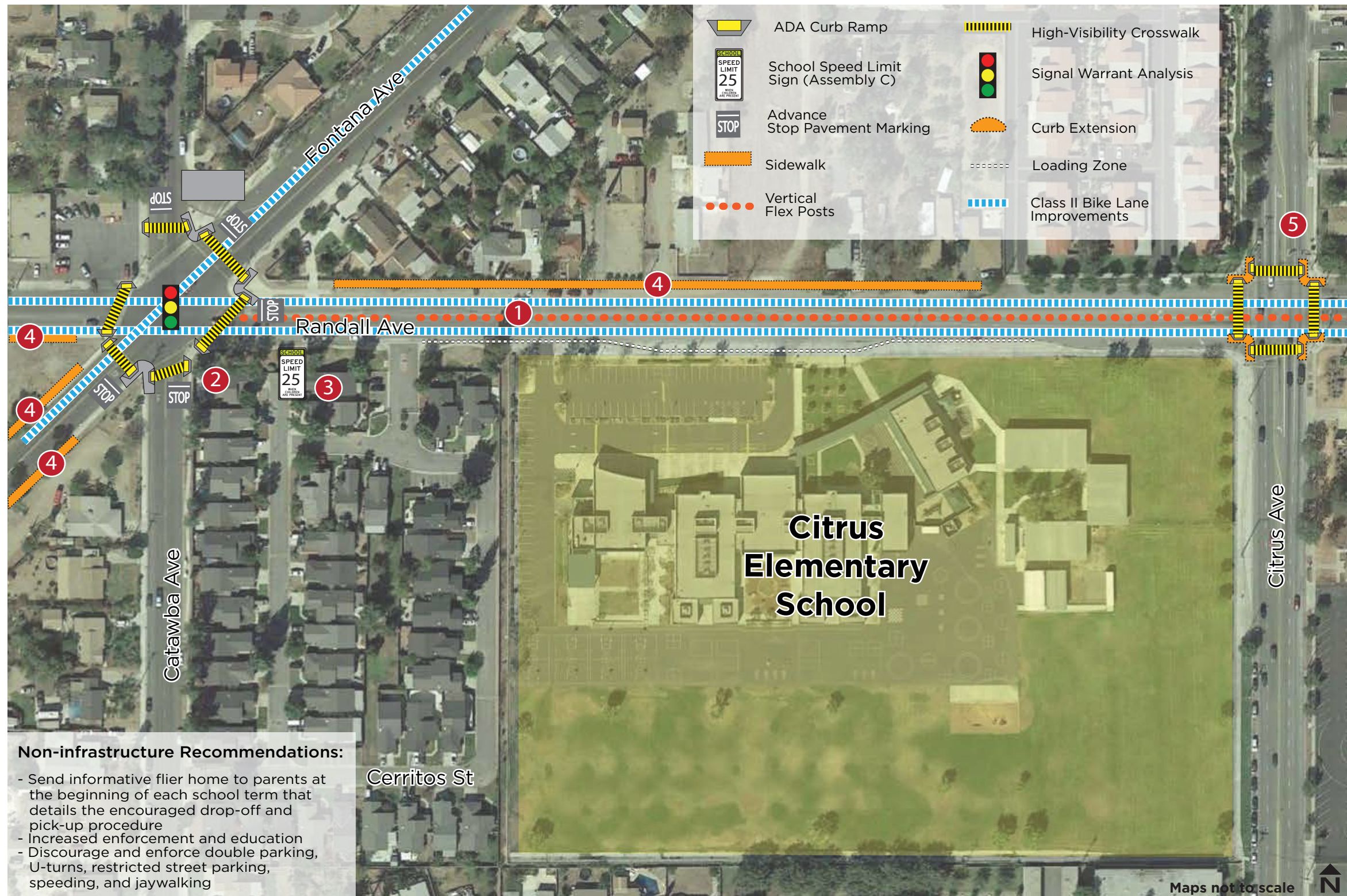
Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding, and jaywalking

CHAPARRAL ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Citrus Elementary School

Site Assessment held 5/3/17

- 1 Randall Ave**
 - Install 5' Class II bike lanes on Randall Avenue with 2-3' buffers
 - Between Catawba Ave and Citrus Ave convert one of the eastbound lanes to a two-way left-turn lane and maintain one lane of travel in each direction
 - East of Citrus Ave, implement a 4- to 3-lane road diet along Randall Avenue, maintain existing parking
 - West of Catawba Ave, narrow lanes to 11' wide to accommodate bike lanes and buffer
- 2 Fontana/Randall/Catawba Ave**
 - Conduct signal warrant analysis, or consider constructing a roundabout in a peanut shape, referred to as a "peanutabout" (an innovative design technique commonly used to control 6-leg and/or skewed intersections)
 - Upgrade all crosswalks to high-visibility with advance stop lines. Install high-visibility crosswalk on the west leg of the intersection.
 - Construct directional, ADA compliant curb ramps for all crossings
 - Remove channelized right turn lane from southbound Fontana Avenue to northbound Catawba Avenue, and restrict right-turn movement. Vehicles may use Athol Street or Sycamore Lane for access to these neighborhoods
 - Realign crosswalks to be as perpendicular to the approach roadway as possible without compromising the sight distance for pedestrians crossing on adjacent legs of the intersection.
- 3 Randall Ave near Catawba Ave**
 - Relocate "School Speed Limit" sign to location shown
- 4 Randall Ave, Fontana Ave, Catawba Ave**
 - Construct sidewalks where missing
- 5 Randall Ave at Citrus Ave**
 - Construct curb extensions and directional ADA ramps at all corners
 - Install high-visibility crosswalks and advance stop bars at all approaches

CITRUS ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Citrus High School

Site Assessment held 5/3/17

- 1 Cypress Ave near Slover Ave**
 - Construct sidewalk where missing on east side of Cypress Ave
 - Convert asphalt sidewalk to concrete sidewalk on west side of Cypress Ave
- 2 Cypress Ave**
 - Install Class II bike lanes per SBCTA's Non-Motorized Transportation Plan
 - Reduce northbound and southbound lanes widths to 11', and provide 5' bike lanes with 3' buffers
 - North of Alisa Dr restrict parking on east side of Cypress Ave to accommodate northbound buffered bike lane
 - South of Aliso Dr, maintain parking on both sides of Cypress Ave
- 3 School Campus**
 - Install "Do Not Enter" sign (R1-5) on south side of school drop-off / pick-up loop to prevent vehicles from entering via the exit driveway
- 4 Cypress Ave at Coriander Pl**
 - Construct curb extensions with directional ADA ramps at existing high-visibility crossing
 - Install advance yield lines at both approaches
- 5 Cypress Ave at Santa Ana Ave**
 - Construct directional ADA ramps on all corners
 - Install high-visibility crosswalks and advance stop lines on all legs
 - Construct missing sidewalks at south, east, and west approaches
- 6 Santa Ana Ave**
 - Install Class II bike lanes per SBCTA's Non-Motorized Transportation Plan
 - Shift roadway alignment to the north to accommodate proposed bike lanes on each side of Santa Ana Ave
- 7 Cypress Ave at Aliso Dr**
 - Install high-visibility crosswalk at south leg of intersection
 - Construct directional ADA curb ramps
 - Install advance yield lines at both approaches

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

CITRUS HIGH SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Cypress Elementary School

Site Assessment held 5/1/17



- 1 Cypress Ave at San Bernardino Ave**
 - Construct curb extensions with directional ADA ramps on all corners
 - Install high-visibility crosswalks and advance stop line at all approaches
 - Refresh red curb in advance of crossing at southeast corner
 - Add “No Parking” signs (R7-1D) at southeast corner
- 2 Cypress Ave**
 - Install striping for permitted parking areas to narrow roadway
- 3 Cypress Ave at Tullock St**
 - Install high-visibility crosswalk at west approach
 - Construct curb extensions with directional ADA ramps for existing crossing at north leg and proposed crossing at west leg
 - Install advance yield lines for both approaches at existing crossing on north leg
- 4 South School Entrance**
 - Install red curb on either side of driveway
- 5 Cypress Ave at Mallory Dr**
 - Construct curb extensions with directional ADA ramps on all corners
 - Install high-visibility crosswalks and advance stop lines a all approaches
- 6 San Bernardino Ave**
 - Implement 4- to 3- lane road diet per City of Fontana’s Active Transportation Plan
 - Install Class II bike lanes per City of Fontana’s Active Transportation Plan
 - Maintain parking along both sides of San Bernardino Ave
 - Provide 5’ bike lanes with 2’ buffers
- 7 North School Entrance**
 - Prohibit left turns into driveway entrance with “No Left Turn” sign (R3-2) on Cypress Ave

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

CYPRESS ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Date Elementary School

Site Assessment held 4/27/17



- 1 Merrill Ave**
 - Implement 4- to 3- lane road diet per City of Fontana’s Active Transportation Plan
 - Install Class II bike lanes per City of Fontana’s Active Transportation Plan
- 2 Oleander Ave**
 - Install shared lane pavement marking to provide Class III bike route
- 3 Merrill Ave / Oleander Ave / Fontana St**
 - Construct directional ADA curb ramps on all corners
 - Conduct signal warrant analysis or consider roundabout
 - Straighten crosswalks and upgrade to high-visibility on south and southwest approaches
 - Install high-visibility crosswalks on north and east legs
 - Construct sidewalks at east and west approaches
- 4 North School Entrance**
 - Install “Stop” sign (R1-1) at driveway exit
- 5 Oleander Ave at Athol St**
 - Conduct warrant analysis for all-way stop control (Athol St already stop-controlled)
 - Install high-visibility crosswalks and advance stop lines on north, east, and west legs
 - Construct directional ADA ramps on all corners
- 6 Oleander Ave**
 - Install high-visibility mid-block crossing with curb extensions and directional ADA ramps
 - Install advance yield lines at both approaches to mid-block crossing
 - Install double yellow lines or vertical delineators through school zone to further prohibit U-turns (beyond existing “No U-Turn” sign (R3-4)
- 7 Bus Entrance**
 - Construct curb extensions on either side of the driveway to prevent parking in red curb zone
- 8 Fontana Ave**
 - Install Class II bike lanes on Fontana Ave as per City of Fontana’s Active Transportation Plan
 - Provide 5’ bike lanes with 3’ buffers where possible

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

DATE ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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David W. Long Elementary School

Site Assessment held 5/3/17



- 1 Path**
 - Class I shared use path per SBCTA's Non-Motorized Transportation Plan
- 2 Bridlepath Dr at Path**
 - Install green conflict markings for path crossing
- 3 Bridlepath Dr**
 - Install "No Parking" signs (R7-1) on both sides of Bridlepath Dr
- 4 Bridlepath Dr at Oxer Ln**
 - Install RRFB system at existing mid-block crossing
 - Install advance yield line for both directions of travel in advance of mid-block crossing
 - Install green conflict markings for bike lane extension through intersection
- 5 Bridlepath Dr at Sorrel Ln**
 - Install green conflict markings for bike lane extension through intersection
- 6 Bridlepath Dr at Cherry Ave**
 - Install high-visibility crosswalks and advance stop lines at all approaches
 - Construct directional curb ramps at all corners
 - Extend concrete medians to create pedestrian refuge islands for crosswalks on northeast and southwest legs of intersection
 - Carry existing Class II bike lanes all the way to intersection on northwest leg
- 7 Cherry Ave**
 - Decrease lanes on Cherry Ave to 11' wide and enhance existing Class II bike lanes with 3' buffers
- 8 Cherry Ave at Arena Wy, Fox Ridge Wy, and Deer Dr**
 - Install green conflict markings for bike lane extension through intersections

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

DAVID W. LONG ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Dolores Huerta International Academy

Site Assessment held 5/2/17

- 1 Merrill Ave
 - Install Class II bike lanes along Merrill Ave per City of Fontana's Active Transportation Plan
 - Where possible, provide buffer for the Class II bike lanes by reducing lane widths to 11' or 10'
 - Construct missing sidewalks
- 2 Alder Ave
 - Install Class II buffered bike lanes along Alder Ave by implementing a 4- to 3-lane road diet per SBCTA Non-Motorized Transportation Plan
 - Restrict parking on east side of Alder Ave
 - Construct missing sidewalks
 - Install advance stop lines for all approaches
- 3 Merrill Ave at Alder Ave
 - Install high-visibility crosswalks and advance stop lines at all legs
 - Construct directional ADA curb ramps at all corners
- 4 Merrill Ave at Laurel Ave
 - Install high-visibility crosswalks at north and south legs
 - Construct directional curb ramps for crossings at north and south legs

Non-infrastructure Recommendations:

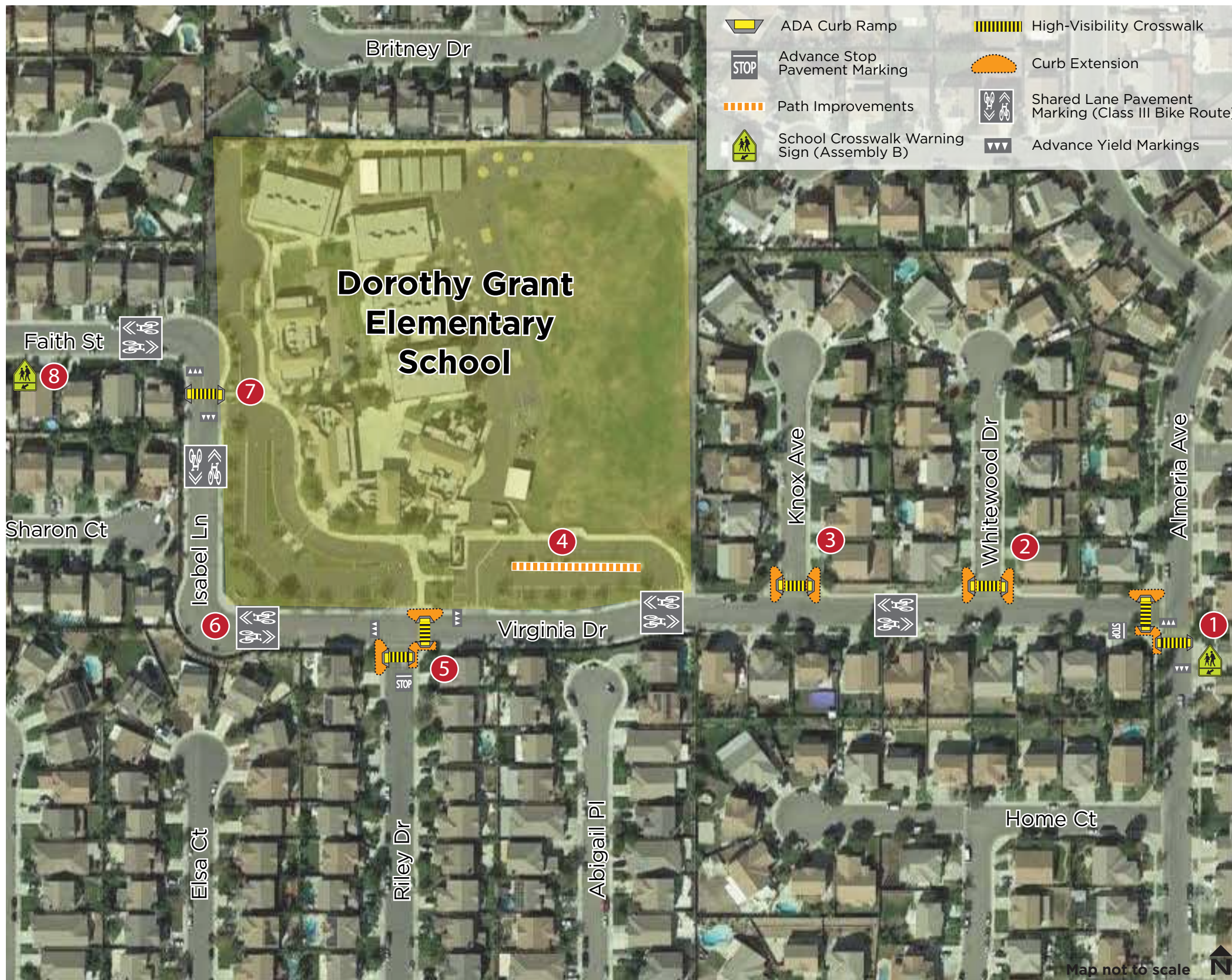
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks



DOLORES HUERTA INTERNATIONAL ACADEMY
RECOMMENDED IMPROVEMENTS MAP

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Dorothy Grant Elementary School

Site Assessment held 5/3/17

- 1 Almeria Ave at Virginia Dr**
 - Relocate "School Crosswalk Warning" sign (Assembly B) so that it is in advance of existing high-visibility crossing for northbound traffic on Almeria Ave
 - Install advance yield lines for both approaches at existing high-visibility crossing on south leg
 - Construct curb extensions at northwest and southwest corners
 - Construct directional ADA ramps on northwest, southwest, and southeast corners
 - Install advance stop line at west leg
 - Upgrade crosswalk at west leg to high-visibility
- 2 Virginia Dr at Whitewood Dr**
 - Install high-visibility crosswalk at north leg
 - Construct curb extensions or reduce radius of northeast and northwest corners
 - Construct directional ADA curb ramps at northeast and northwest corners
- 3 Virginia Dr at Knox Ave**
 - Install high-visibility crosswalk at north leg
 - Construct curb extensions or reduce radius of northeast and northwest corners
 - Construct directional ADA curb ramps at northeast and northwest corners
- 4 School Campus**
 - Construct sidewalk/pathway along median where children get dropped off to provide access to the crosswalk
- 5 Virginia Dr at Riley Dr**
 - Upgrade crossing at south leg to high-visibility
 - Install advance stop line at south leg
 - Install advance yield lines for both approaches to existing mid-block crossing at east leg
 - Construct curb extensions with directional ADA ramps at northeast, southeast, and southwest corners
- 6 Virginia Dr**
 - Install shared lane pavement markings to provide a Class III bike route
- 7 Isabel Ln at School Entrance**
 - Install high-visibility mid-block crossing
 - Install advance yield lines at both approaches of mid-block crossing
 - Construct directional ADA ramps at crossing
- 8 Faith St**
 - Replace "School Crosswalk Warning" sign (Assembly B) with new sign (existing sign is faded)

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding

DOROTHY GRANT ELEMENTARY SCHOOL

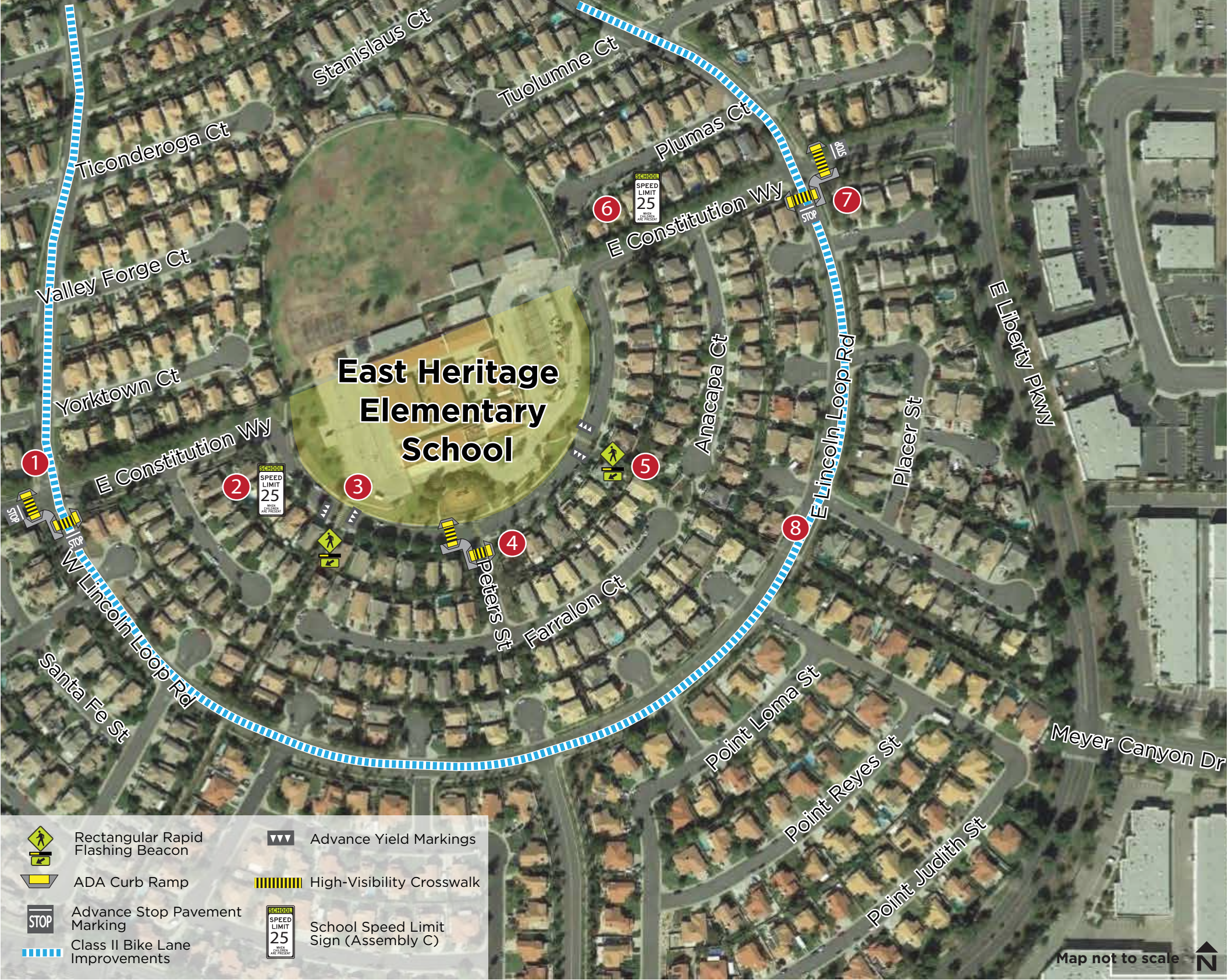
RECOMMENDED IMPROVEMENTS MAP

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East Heritage Elementary School

Site Assessment held 5/9/17



- 1 W Lincoln Loop Rd at E Constitution Wy**
 - Upgrade existing crosswalks to high-visibility crosswalks on south and west legs
 - Install advance stop lines on southern and western approaches
 - Construct directional ADA curb ramps on northwest, southwest, and southeast corners
- 2 E Constitution Wy**
 - Install “School Speed Limit” sign (Assembly C) on eastbound Constitution Way
- 3 E Constitution Wy**
 - Install RRFB system for existing mid-block crossing
 - Install advance yield lines for both directions of travel approaching the crossing
- 4 E Constitution Wy and Peters St**
 - Relocate high-visibility crosswalk to west side of intersection
 - Install new high-visibility crosswalk across south leg
 - Construct directional ADA curb ramps at northwest, southwest, and southeast corners
- 5 E Constitution Wy**
 - Install RRFB system for existing mid-block crossing
 - Install advance yield lines for both directions of travel approaching the crossing
- 6 E Constitution Wy**
 - Add right turn arrows to right-most westbound lane on Constitution Way for vehicles to line up during pick-up/drop-off operations
 - Install “School Speed Limit” sign (Assembly C) on westbound Constitution Way
- 7 E Lincoln Loop Rd at E Constitution Wy**
 - Upgrade existing crosswalks to high-visibility crosswalks on south and east legs
 - Install advance stop lines on south and east legs
 - Construct directional ADA curb ramps on northeast, southwest, and southeast corners
- 8 E Lincoln Loop Rd at E Constitution Wy**
 - Reduce lane widths on E Lincoln Loop Rd
 - Provide 2’-3’ buffers for existing Class II bike lanes

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

EAST HERITAGE ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Eric Birch High School

Site Assessment held 4/26/17



- 1 E Foothill Blvd**
 - Install Class II buffered bike lanes along Foothill Blvd per SBCTA's Non-Motorized Transportation Plan
- 2 Locust Ave**
 - Maintain existing parking along both sides of Locust Ave north of Laurel Dr
- 3 Locust Ave at E Foothill Blvd**
 - Install high-visibility crosswalks and advance stop lines at all legs
 - Construct directional ADA curb ramps at all corners
 - Restrict parking along both sides of Locust Ave south of Laurel Dr
 - Provide right turn arrow pavement markings in southbound right most lane for storage during drop-off / pick-up operations
- 4 Locust Ave near Laurel Dr and Barbee St**
 - Add "SLOW" and "XING" to "SCHOOL" pavement markings on northbound and southbound Locust Ave
- 5 Locust Ave at School Entrance**
 - Install high-visibility mid-block crossing of Locust Avenue north of school driveway
 - Install RRFB system and advance yield lines approaching crossing
 - Construct curb extension on east side of crosswalk
 - Construct directional ADA curb ramps
- 6 Locust Ave near Barbee St**
 - Widen section of Locust Ave between school driveway and Barbee St by removing section of asphalt curb and landscaped area along west side of Locust Ave
 - Convert existing gravel path along this section of Locust Ave to concrete sidewalk
- 7 Grace Ave, Locust Ave, E Foothill Blvd**
 - Construct concrete sidewalk where missing

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

ERIC BIRCH HIGH SCHOOL
RECOMMENDED IMPROVEMENTS MAP

The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.



Etiwanda High School

Site Assessment held 4/19/17



- 1 East Avenue**
 - Install Class II bike lanes on East Ave per SBCTA's Non-Motorized Transportation Plan
 - Where possible, provide 2'-3' buffers for the Class II bike lanes
- 2 Victoria St at East Ave**
 - Construct directional ADA ramps at all corners
- 3 Victoria St at Cable Creek Ct**
 - Install RRFB system for existing mid-block crossing
 - Install advance yield lines for both directions of travel approaching the crossing
 - Construct 5' curb extensions with ADA compliant curb ramps for mid-block crossing
- 4 Victoria St**
 - Install "No-U Turn" signs (R3-4) for eastbound and westbound Victoria St
- 5 Victoria St**
 - Install RRFB system for existing mid-block crossing
 - Install advance yield lines for both directions of travel approaching the crossing
 - Construct 5' curb extensions with ADA compliant curb ramps for mid-block crossing
- 6 South of Victoria St**
 - Provide Class I shared use path connection to existing Pacific Electric Trail per
 - Install wayfinding signs to and from trail and to and from Etiwanda High School
- 7 San Sevaine Trail**
 - Provide Class I shared use path per SBCTA's Non-Motorized Transportation Plan
- 8 Victoria St**
 - Install shared lane pavement markings along Victoria St to provide Class III bike route

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

ETIWANDA HIGH SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Fontana Adult School

Site Assessment held 4/21/17

- 1 School Parking Lot**
 - Upgrade existing crosswalk in parking lot to a high-visibility crosswalk
- 2 North Edge of Campus**
 - Provide sidewalk connection between Oleander and Cypress within property lines of Fontana Adult School and Citrus High School

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

FONTANA ADULT SCHOOL

RECOMMENDED IMPROVEMENTS MAP

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Fontana High School

Site Assessment held 5/9/2017

- Citrus Ave at Hawthorne Ave**
 - Install high-visibility crosswalks at north, west, and south legs and diagonally for pedestrian scramble
 - Construct directional ADA ramps on northeast and southeast corners
 - Construct ADA compliant “blended transitions” on northwest and southwest corners to accommodate diagonal crosswalks
- Citrus Ave**
 - Install Class II bike lanes on Citrus Ave per SBCTA’s Non-Motorized Transportation Plan
 - Reduce lane widths to 11’ wide
 - Install 3’- 4’ buffers for Class II bike lanes
- Randall Ave**
 - Install Class II bike lanes as per City of Fontana’s ATP recommendations
 - Implement 4- to 3-lane road diet
 - Maintain parking on both sides of roadway
 - Provide 3’ buffer for Class II bike lanes
- Randall Ave at Oleander Ave**
 - Install high-visibility crosswalks on all legs
 - Construct directional ADA ramps on all corners
 - Install advance stop lines on all approaches
- Oleander Ave**
 - Install shared lane pavement markings to provide Class III bike route and associated signage per City of Fontana’s Active Transportation Plan
- Oleander Ave at Sequoia Ave**
 - Instal RRFB system at existing crossing
 - Install advance yield lines
 - Construct curb extensions with directional ADA ramps
- Oleander Ave**
 - Extend yellow curb for passenger loading zone along west side of Oleander Ave to section between school driveway and Fontlee Ct
- School Driveway**
 - Construct sidewalk along driveway

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

FONTANA HIGH SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Fontana Middle School

Site Assessment held 5/2/17

- 1 Mango Ave at Pacific Electric Trail**
 - Upgrade existing crosswalk to high-visibility
 - Construct 6' curb extensions with directional ADA curb ramps for existing crossing
- 2 Mango Ave at Arrow Blvd**
 - Upgrade existing crosswalks to high-visibility
 - Construct directional ADA curb ramps at all corners
 - Extend concrete median on east and west legs of intersection to provide pedestrian refuge islands
- 3 Arrow Blvd**
 - Install Class II bike lanes per SBCTA's Non-Motorized Transportation Plan
 - Reduce lane widths on Arrow Blvd to 11'
 - Maintain parking on both sides of Arrow Blvd
- 4 Arrow Blvd at Palmetto Ave**
 - Upgrade existing crosswalks to high-visibility
 - Construct directional ADA curb ramps at all corners
 - Utilize existing concrete median to create pedestrian refuge island for pedestrians crossing the west leg of the intersection
- 5 Palmetto Ave**
 - Remove existing "35 MPH" sign and replace with "School Speed Limit" sign (Assembly C)

Non-infrastructure Recommendations:

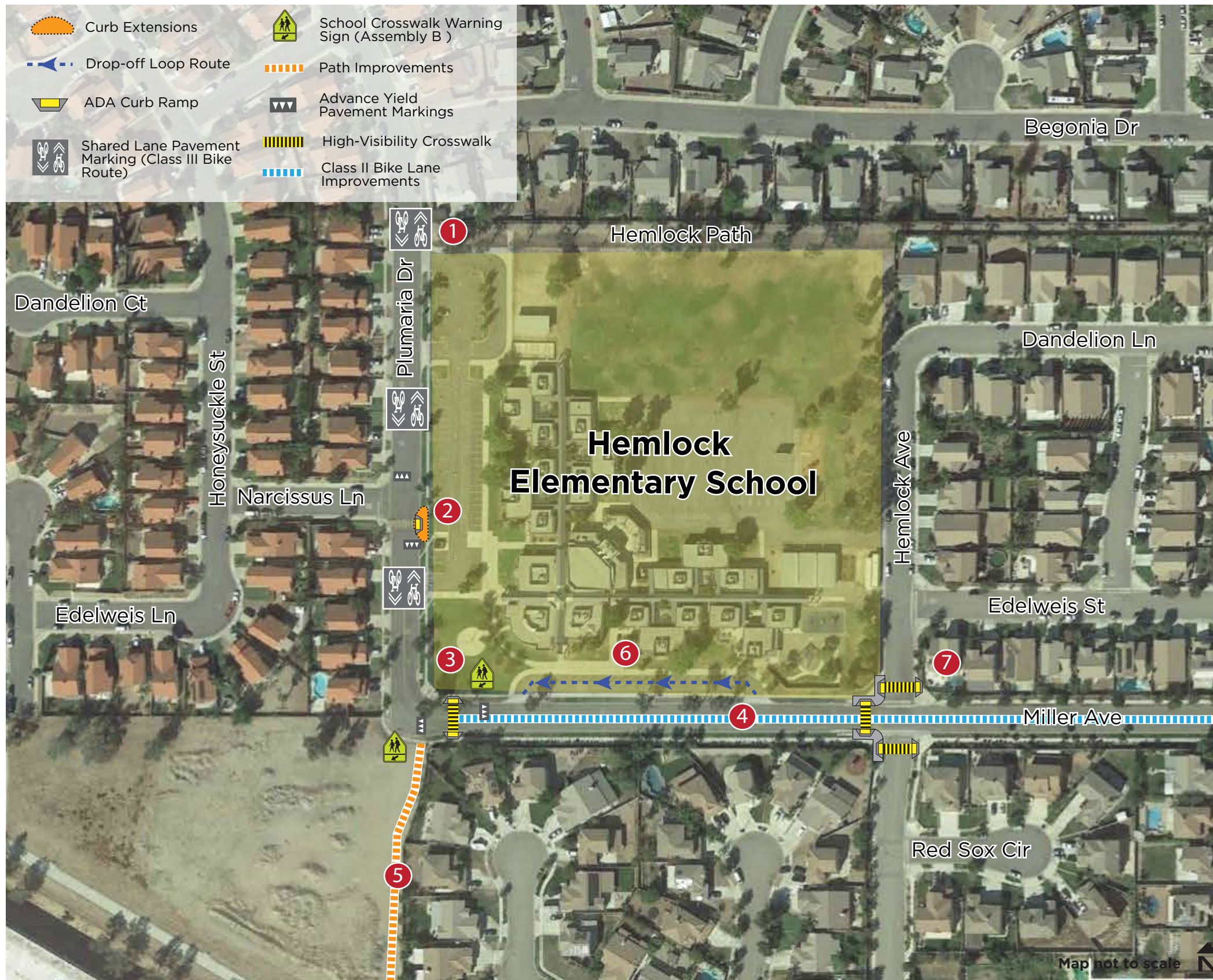
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

FONTANA MIDDLE SCHOOL

RECOMMENDED IMPROVEMENTS MAP

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Hemlock Elementary School

Site Assessment held 5/3/17

- 1 Plumaria Dr**
 - Install shared lane pavement markings and install associated signage to provide Class III bike route on Plumaria Dr
- 2 Plumaria Dr at Narcissus Ln**
 - Construct curb extension with directional ADA ramp on east end of existing crossing
 - Install advance yield lines on both approaches to crossing
- 3 Miller Ave at Plumaria Dr**
 - Install high-visibility crosswalk
 - Construct directional ADA curb ramps on both ends of crossing
 - Install advance yield lines on both approaches to crossing
 - Install "School Crosswalk Warning" (Assembly B) sign
- 4 Miller Ave**
 - Install 5' Class II bike lanes along Miller Ave per SBCTA Non-Motorized Transportation Plan
 - Install 2' buffer for proposed Class II bike lanes and 11' travel lanes
- 5 Pacific Electric Trail Connection**
 - Provide path connection from Pacific Electric Trail to Miller Ave
 - Install wayfinding signage to schools and Pacific Electric Trail
- 6 Drop-Off Loop on Miller Ave**
 - Reverse direction of school drop-off/pick-up loop off of Miller Ave
- 7 Miller Ave at Hemlock Ave**
 - Upgrade existing crosswalk on north leg of intersection to high-visibility
 - Install new high-visibility crosswalk on south leg of intersection
 - Construct directional ADA curb ramps on all corners

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

HEMLOCK ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Heritage Intermediate School

Site Assessment held 4/20/17

- 1 W Liberty Pkwy at S Heritage Cir**
 - Upgrade existing crosswalks on east, west, and south legs to high-visibility
 - Install advance stop lines
 - Extend existing concrete median on south leg to provide pedestrian refuge area
 - Construct directional ADA curb ramps
- 2 S Heritage Circle at W Grand Ave**
 - Install RRFB system at existing crossing
 - Extend median to other side of crosswalk to provide pedestrian refuge area
 - Install advance yield lines for both approaches
- 3 S Heritage Circle**
 - Install shared lane pavement markings and associated signage to provide a Class III bike route
- 4 S Heritage Circle at E Grand Ave**
 - Install RRFB system at existing crossing
 - Extend median to other side of crosswalk to provide pedestrian refuge area
 - Install advance yield lines for both approaches
- 5 S Heritage Circle at E Liberty Pkwy**
 - Upgrade existing crosswalks on east, west, and south legs to high-visibility
 - Install advance stop lines
 - Extend existing concrete median on south leg to provide pedestrian refuge area
 - Construct directional ADA curb ramps

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

HERITAGE INTERMEDIATE SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Henry J. Kaiser High School

Site Assessment held 4/26/17



- 1 Jurupa Ave**
 - Install Class II bike lanes as per the City of Fontana’s Active Transportation Plan
 - On eastbound Jurupa Ave reduce lane widths to 11’, and install 5’ bike lane
- 2 Cherry Ave**
 - Install shared lane markings to provide additional guidance for southbound bicyclists to merge across right turn lane as gaps permit
 - Decrease lane widths to 11’ to provide a 3’ buffer for existing bike lanes
- 3 Jurupa Ave at Cherry Ave**
 - Install high-visibility crosswalks at all approaches
 - Install advance stop bars at all approaches
 - Construct directional ADA curb ramps on all corners
- 4 Jurupa Ave at Almond Ave**
 - Construct directional ADA curb ramps on northeast and northwest corners
 - Install high-visibility crosswalks on north and east legs
 - Install advance stop bars at northern and eastern approaches
 - Construct sidewalk on north side of Jurupa at western approach
 - Extend concrete median on east leg to provide pedestrian refuge island
- 5 Almond Ave at School Driveway**
 - Install high-visibility mid-block crossing at north leg of school entrance
 - Construct curb extensions and directional ADA ramps on east and west sides of crosswalk
 - Install a RRFB system
- 6 Almond Ave**
 - Relocate “School Speed Limit” (Assembly C) sign on northbound Almond Ave to beginning of block where “35 MPH” speed limit sign is currently located (blocked by vegetation in current location)
 - Remove existing “35 MPH” speed limit sign

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding, and jaywalking

HENRY J. KAISER HIGH SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Juniper Elementary School

Site Assessment held 3/15/2017

- 1

Miller Ave
 - Implement 4- to 3- lane road diet
 - Install Class II buffered bike lanes as per the City of Fontana's Active Transportation Plan
- 2

Juniper Ave at Ramona Ave
 - Shift existing crosswalk to north side of intersection to avoid utility pole and align more closely with the Raymond Ave cut-through
 - Install RRFB system on north leg of intersection
 - Construct curb extensions with directional ADA ramps
 - Install high-visibility crosswalks on north and east legs of intersection
- 3

Juniper Ave at Miller Ave
 - Conduct signal warrant analysis
 - Upgrade existing crosswalks to high-visibility
 - Construct curb extensions with directional ADA ramps
- 4

Ramona Ave between Sierra and Juniper Ave
 - Construct new and widen existing sidewalk to minimum 5' along Ramona Ave
 - Construct ADA curb ramps where missing
 - Install School Speed Limit sign (Assembly C) for eastbound and westbound traffic
 - Paint red curb along median in no-stopping zone
- 5

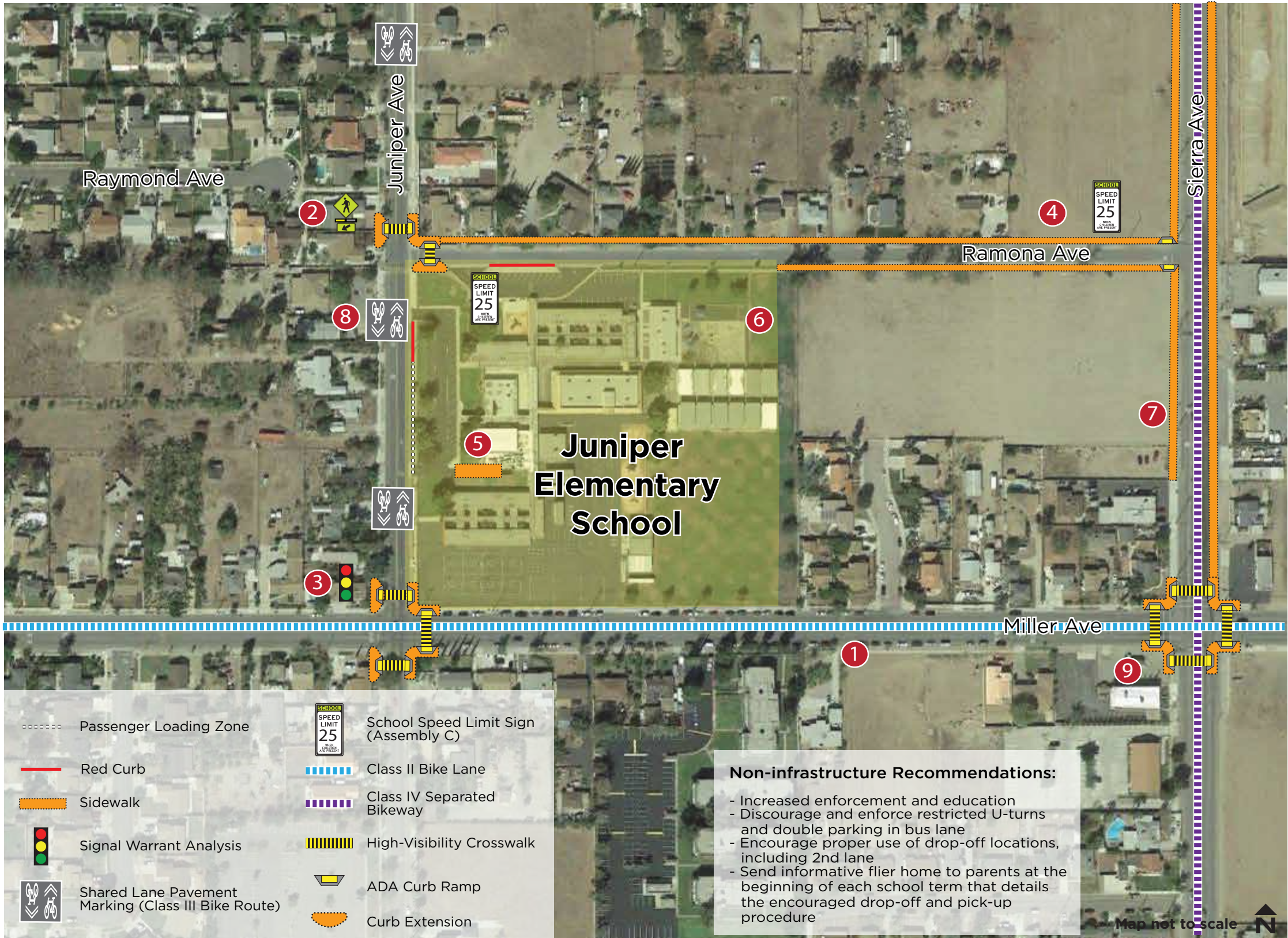
School Campus
 - Construct new and widen existing sidewalk to minimum 5'
 - Install physical barrier between pedestrian walkway and vehicular aisles
 - Convert parking spaces on east curb of Juniper Ave to a loading zone
 - Convert drop-off/pick-up on Ramona Ave to bus-only use
- 6

School Parking Lot
 - Construct additional parking lot for staff
- 7

Sierra Ave
 - Construct sidewalk
 - Install Class IV separated bikeway along both sides of Sierra Ave as per the City of Fontana's Active Transportation Plan
- 8

Juniper Ave
 - Install shared lane pavement markings along Juniper Ave to provide Class III bike route
- 9

Miller Ave and Sierra Ave
 - Upgrade existing crosswalks to high-visibility
 - Construct curb extensions with directional ADA ramps



JUNIPER ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Jurupa Hills High School

Site Assessment held 3/15/17

- 1 Slover Ave**
 - Install Class II bike lanes as per City of Fontana's Active Transportation Plan
 - Reallocate eastbound and westbound outside lanes to provide one 11' travel lane, and on 5' bike lane with 2' buffers
- 2 Santa Ana Ave**
 - Install Class II bike lanes as per SBCTA Non-Motorized Transportation Plan
 - Remove one westbound lane on Santa Ana Ave
 - Reconfigure roadway alignment to provide one 12' travel lane in each direction, and one 6' bike lane with 3' buffers in each direction
- 3 Citrus Ave at Tyrol Dr**
 - Construct directional ADA ramps
 - Construct curb extension with directional ADA ramp on W side of Citrus Ave crossing
 - Construct concrete median on north leg of intersection and provide pedestrian refuge island for crosswalk through concrete median
 - Install high-visibility crosswalks on west leg of intersection
- 4 Oleander Ave**
 - Install shared lane pavement markings and associated signage to provide Class III bike route
 - Install RRFB at midblock crossing near Aliso Dr
 - Construct directional curb ramps and restripe high-visibility crosswalk to be perpendicular to street
 - Just north of Aliso Drive, install right turn arrows to make right-most southbound lane a right-turn lane into the school drop-off zone
- 5 Campus Center**
 - Install bike racks
- 6 Santa Ana Ave at Oleander Ave and Citrus Ave**
 - Upgrade existing crosswalks to high-visibility pavement markings
 - Construct directional curb ramps at all corners
- 7 Citrus Ave**
 - Install Class IV bikeway along northbound and southbound Citrus Ave as per City's Active Transportation Plan and Citrus Widening Project
 - Construct sidewalks where not existing
- 8 Citrus Ave at Aliso Dr**
 - Construct directional curb ramps where not existing
 - Construct curb extension on west side of Citrus Ave crossing
 - Construct pedestrian refuge in median of Citrus Ave
 - Install high-visibility crosswalks on west leg of intersection
 - Install RRFB system on north leg of intersection
- 9 Aliso Dr, Tyrol Dr, Anselm Dr**
 - Construct sidewalks where not existing

JURUPA HILLS HIGH SCHOOL

RECOMMENDED IMPROVEMENTS MAP

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Jurupa Vista Elementary School

Site Assessment held 4/21/17



- 1 Citrus Ave at Alma Ln**
 - Install high-visibility crosswalk
- 2 Citrus Ave**
 - Replace “End School Zone” sign (R5-2) with “End School Speed Limit” sign (S5-3)
- 3 Citrus Ave at Village Dr E**
 - Shift east/west crosswalk to north side to provide pedestrian refuge at island
 - Extend island to create pedestrian refuge
 - Consider RRFB sysyem for east/west crossing
 - Install high-visibility crosswalk on north/south crossing
 - Reconstruct curb ramps to be directional
 - Construct curb extensions on southwest and northwest corners to shorten crossing distances
- 4 Village Dr E**
 - Remove regulatory “35 MPH Speed Limit” sign south of school speed limit sign
- 5 Village Dr E at Erica Ln**
 - Rotate “School Crossing Ahead” sign (Assembly D) so it faces oncoming traffic
- 6 School Entrance at Catawba Pl**
 - Construct additional driveway so that drop-off vehicles enter using one driveway and exit use the other
- 7 Citrus Ave**
 - Connect Class IV bikeway to proposed SCE Utility Path pending approval

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, restricted street parking, speeding, and jaywalking

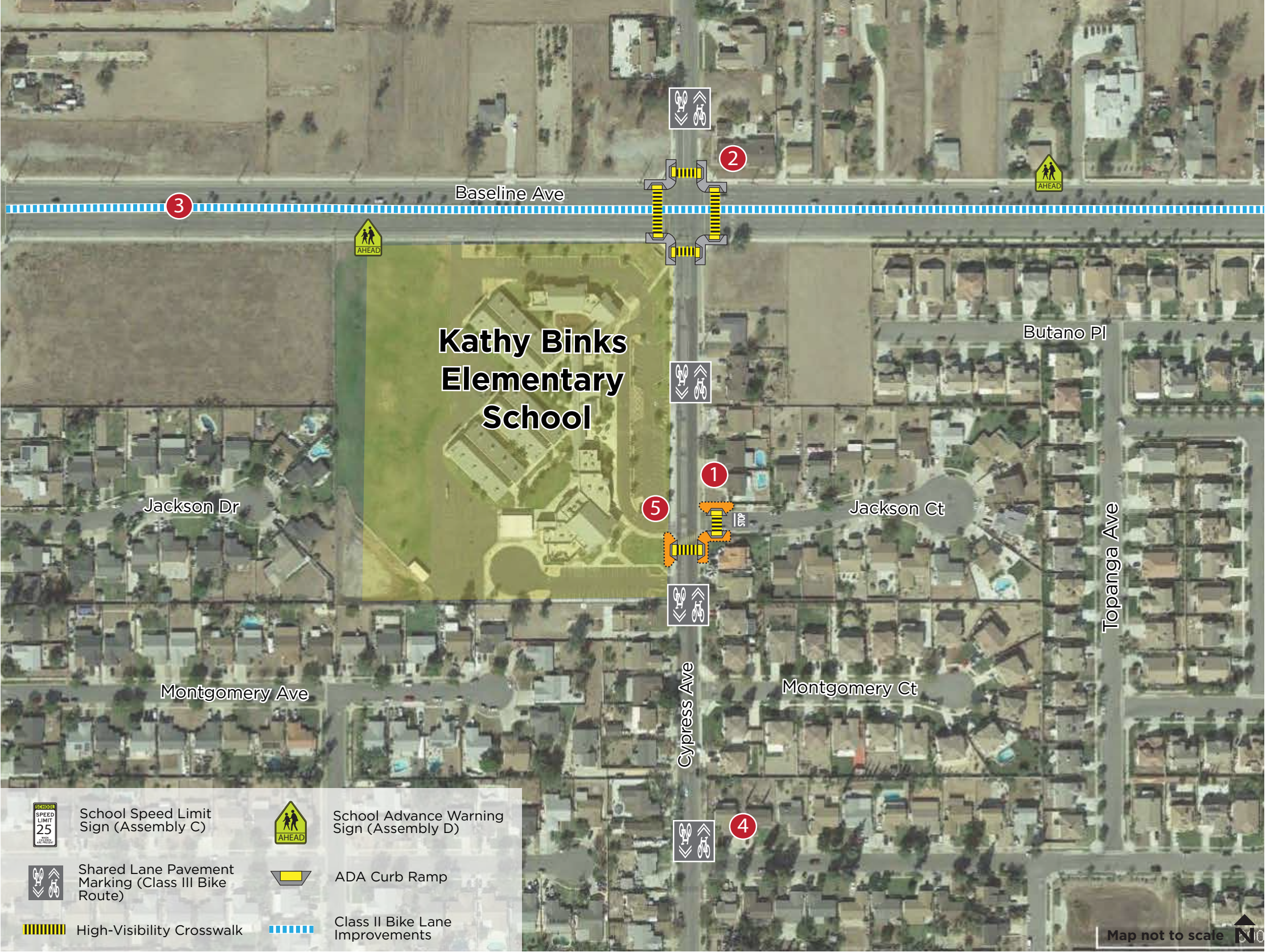
JURUPA VISTA ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Kathy Binks Elementary School

Site Assessment held 4/24/17



- 1 Cypress Ave and Jackson Ct**
 - Install high-visibility crosswalk on east leg of intersection
 - Realign crosswalk on south leg of intersection to be perpendicular to roadway
- 2 Baseline Ave at Cypress Ave**
 - Upgrade existing crosswalks on all legs of intersection to high-visibility
 - Install directional ADA curb ramps
- 3 Baseline Ave**
 - Narrow lane widths on eastbound and westbound Baseline Ave to 11'
 - Provide 2' buffer for existing Class II bike lanes
- 4 Cypress Ave**
 - Install shared lane pavement markings to provide Class III bike route per teh City of Fontana's Active Transportation Plan
- 5 South School Driveway**
 - Remove one pavement marking arrow to reduce number of exiting lanes to two

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, restricted street parking, speeding, and jaywalking

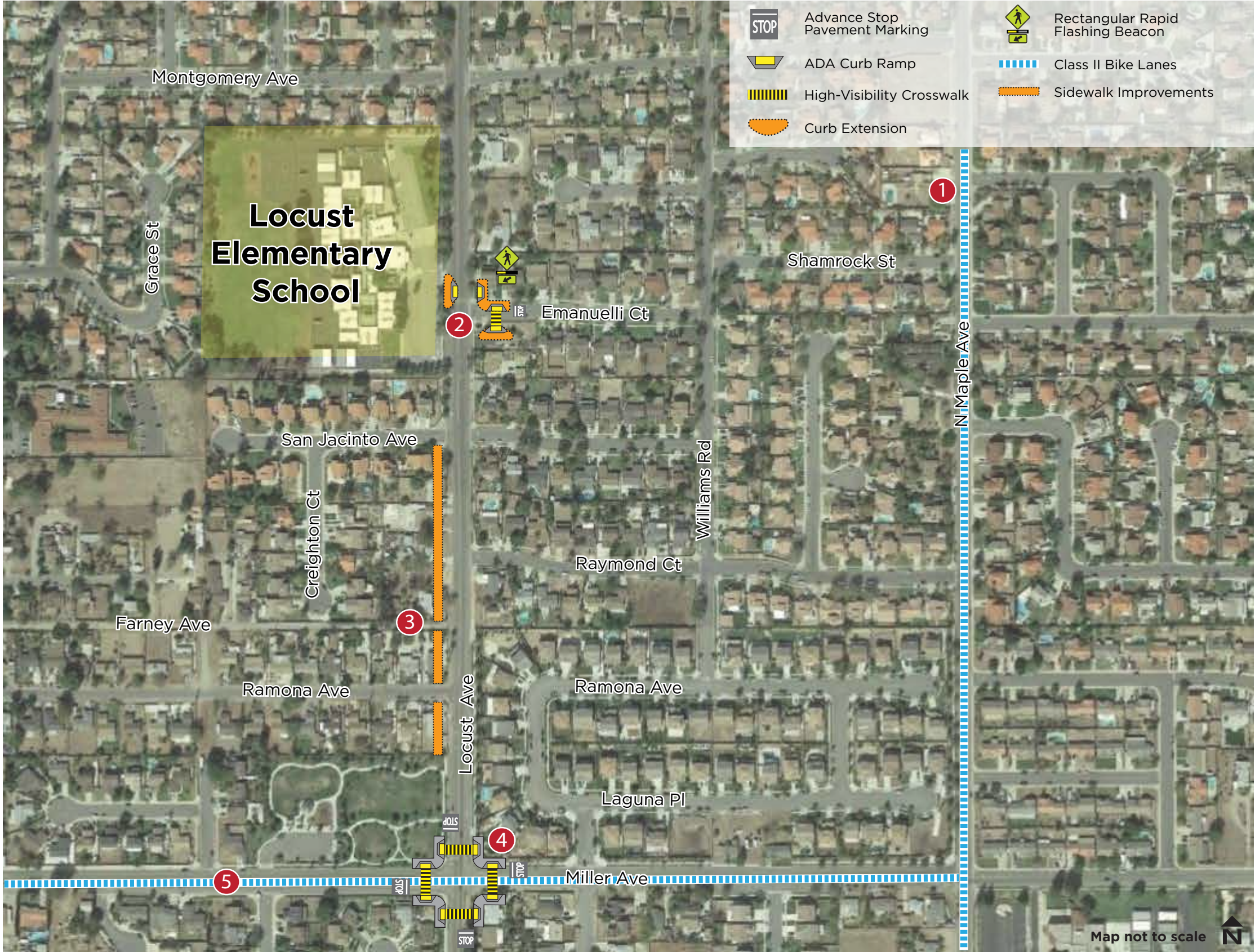
KATHY BINKS ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Locust Elementary School

Site Assessment held 4/24/17



- 1 N Maple Ave**
 - Install Class II bike lanes per the SBCTA Non-Motorized Transportation Plan
 - Eliminate parking on west side of N Maple Ave to provide 10' travel lanes and 5' bike lanes
- 2 Locust Ave and Emanuelli Ct**
 - Construct curb extensions with directional curb ramps
 - Install high-visibility crosswalk on east leg of intersection
 - Install advance stop bar
 - Install RRFB system to protect mid-block crossing
- 3 Locust Ave south of San Jacinto Ave**
 - Construct sidewalk where missing
- 4 Locust Ave and Miller Ave**
 - Install high-visibility crosswalk pavement markings and advance stop bars
 - Construct sidewalk and curb ramps at southeast corner
 - Realign crosswalk on nor leg to be perpendicular to the roadway and cut through pork chop island
 - Remove westbound right turn channelization/slip-lane
- 5 Miller Ave**
 - Install Class II bike lanes and road diet per City of Fontana's Active Transportation Plan

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, restricted street parking, speeding, and jaywalking

LOCUST ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Mango Elementary School

Site Assessment held 3/15/17

- 1 Mango Ave and Wabash Ave**
 - Upgrade existing crosswalk on east leg of intersection to high-visibility
 - Install advance stop bar on westbound Wabash Ave approaching Mango Ave
 - Construct curb extensions (with directional ADA ramps) to shorten crossing distance and enhance visibility
 - Construct curb ramp where not existing on the west side of Mango Ave - push crosswalk slightly toward the south to avoid existing light pole
 - Install RRFB system for Mango Ave crossing
- 2 Elaine Ave at Mango Ave**
 - Restripe crosswalk with high-visibility pavement marking
- 3 Mango Ave to New Planned Street**
 - Provide path connection from new cul-de-sac to Mango Ave
- 4 Mango Ave**
 - Widen sidewalks on both sides of Mango Ave to a minimum of 5'

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, restricted street parking, and speeding

MANGO ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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- ### Michael D'Arcy Elementary School Site Assessment held 4/17/2017
- Village Dr E at Poplar Ave**
 - Install high-visibility crosswalks
 - Construct curb extensions and directional ADA ramps
 - Install advance stop bars
 - Elm Ave at Village Dr E**
 - Install all-way stop control at intersection based on sight distance concerns
 - Update crosswalk on south leg of intersection to high-visibility
 - Construct curb extensions and upgrade curb ramps to directional
 - Install loading zone curb paint along east side of Elm and red curb near corner to enhance crosswalk visibility
 - Trim landscaping to increase visibility
 - Elm Ave near Belmez Dr**
 - Install "School Speed Limit" sign (Assembly C) on northbound Elm Ave north of Beech Ave
 - Elm Ave at School Entrance**
 - Install "No Parking Bus Stop" sign (R7-107) and curb paint in front of school
 - Install right turn arrow pavement markings on to designate channelization into school parking lot / drop-off area
 - Install "No U-Turn" sign (R3-4) on southbound Elm Ave.
 - Elm Ave at Ovar St**
 - Install high-visibility crosswalk and RRFB system
 - Beech Ave at Elm Ave**
 - Install high-visibility crosswalks
 - Construct curb extensions and directional ADA ramps
 - Install advance stop lines
 - Consider constructing pedestrian refuge at medians
 - Poplar Ave**
 - Install Class II bike lanes as per City of Fontana's Active Transportation Plan
 - Restrict parking on east side of Poplar Ave
 - On Campus**
 - Consider utilizing southern circlation loop for a secondary pick-up/drop-off location

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, restricted street parking, speeding, and jaywalking

MICHAEL D'ARCY ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage double parking and enforce restricted street parking
- Enforce speeding

North Tamarind Elementary

Site Assessment held 3/15/17

- 1 Tamarind Ave**
 - Relocate " School Speed Limit" signs (Assembly C) as shown
 - Install speed humps for traffic calming
- 2 School Entrance at Tamarind Ave**
 - Construct wider driveway so buses can make left turn
- 3 Palmetto Ave at Reed St**
 - Add high-visibility crosswalks to east leg
 - Restripe crosswalk on south leg to be perpendicular to roadway
 - Construct directional ADA curb ramps on southeast corner
- 4 Palmetto Ave at Barbee St**
 - Install high-visibility crosswalks on east and west legs
- 5 Palmetto Ave at Paine St**
 - Install high-visibility crosswalk on east leg
- 6 Alder Ave at McWethy Dr**
 - Install RRFB system to protect existing crossing
 - Install advance yield lines on northbound and southbound Alder Ave approaching crossing at McWethy Dr
 - Construct curb extensions with directional ADA ramps and a pedestrian refuge island to shorten crossing distance
- 7 Tamarind Ave**
 - Install RRFB system to protect existing mid-block crossing
 - Install advance yield lines on northbound and southbound Tamarind Ave
 - Construct curb extensions with directional ADA ramps to shorten crossing distance
- 8 Tamarind Ave near Paine St**
 - Construct curb extensions with directional ADA ramps to shorten crossing distance
- 9 Alder Ave**
 - Implement a 4- to 3-lane road diet on Alder Ave
 - Install Class II bicycle lanes as per the City of Fontana's Active Transportation Plan
 - Maintain parking on both sides of Alder Ave, but relocate to inside of proposed bike lanes
 - Provide 5' bike lanes with 2' buffers
- 10 South and East School Boundaries**
 - Provide path from McWethy Dr to Tamarind Ave along school boundary
- 11 E Foothill Blvd**
 - Install Class II bike lanes as per SBCTA's Non-Motorized Transportation Plan
 - On westbound Foothill Blvd, provide 3' buffer to Class II bike lane
 - On eastbound Foothill Blvd, provide 4' buffer to Class II bike lane
- 12 Tamarind Ave at E Foothill Blvd**
 - Install high-visibility crosswalks
 - Construct directional curb ramps
 - Install advance stop lines

NORTH TAMARIND ELEMENTARY SCHOOL

RECOMMENDED IMPROVEMENTS MAP

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Oak Park Elementary School

Site Assessment held 4/24/17

- 1 **Cherry Ave at Live Oak Ave**
 - Install high-visibility crosswalks
 - Install advance limit lines at signalized intersection
 - Construct directional curb ramps
- 2 **Live Oak Ave North of Mountain High Dr**
 - Install bike lane symbols in bike lane
 - Consider 2' painted buffer along the bike lane
- 3 **Live Oak Ave between Mountain High Dr and Olivedale Dr**
 - Install Class II bike lanes on both sides of street as per the SBCTA's Non-Motorized Transportation Plan
 - Consider 2' painted buffer along bike lane
 - Continue parking restriction along this section of Live Oak Ave
- 4 **Live Oak Ave at Almond Dr**
 - Install high-visibility crosswalks on north and west legs
 - Install advance stop bar on Almond Dr at crosswalk
 - Construct directional ADA curb ramp on south side of Live Oak Ave at crosswalk
- 5 **Live Oak Ave at Olivedale Dr**
 - Install high-visibility crosswalk on south leg, upgrade existing crosswalk to high-visibility on east leg
 - Construct directional ADA curb ramps at crosswalks
- 6 **School Driveway**
 - Install "STOP" sign at school driveway exit
 - Install red curb paint/parking restriction as shown to improve sight distance for drivers exiting driveway
- 7 **Live Oak Ave**
 - Install "School Speed Limit" (Assembly C) signs designation at both ends of Live Oak Ave
- 8 **Live Oak Ave between Woodbridge Dr and Olivedale Dr**
 - Install Class II bike lane along south side of Live Oak Ave per the SBCTA's Non-Motorized Transportation Plan
 - Consider 2' buffer along bike lane
- 9 **Live Oak Ave E of Almond Dr**
 - Install speed humps to calm traffic

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage double parking and enforce restricted street parking
- Enforce speeding

OAK PARK ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Oleander Elementary School

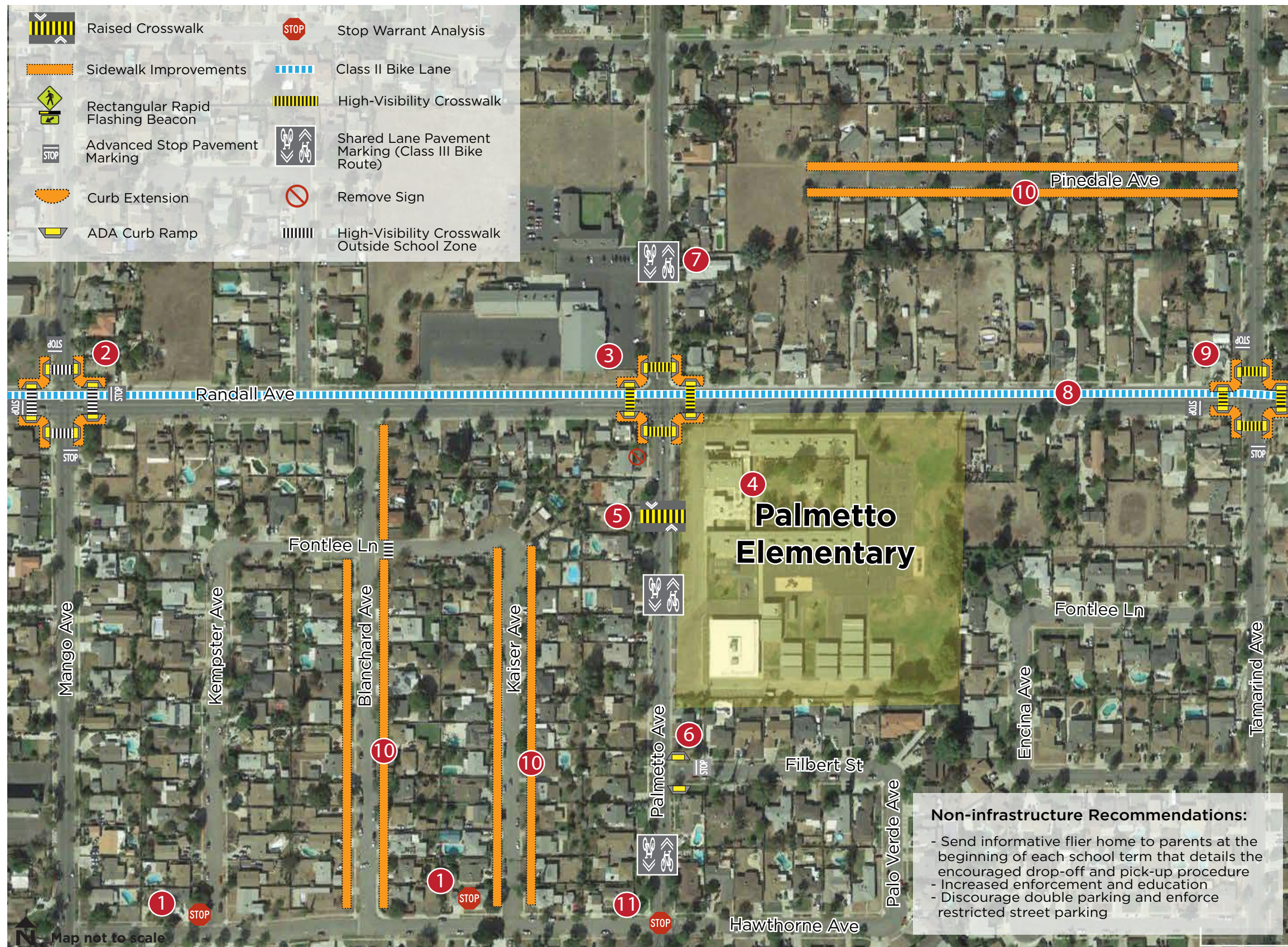
Site Assessment held 5/1/17

- 1 Oleander Ave at Valencia Ave**
 - Install high-visibility crosswalk on east leg
 - Consider a raised crosswalk on the south leg to calm traffic
 - Relocate existing crosswalk on south leg crosswalk slightly further south so that an ADA compliant curb ramp may be constructed on the west side of the crossing, so not to conflict with the residential driveway; upgrade to high-visibility
 - Construct directional curb ramps at the northeast, southeast, and southwest corners
 - Continue existing red curb farther south (after crosswalk relocation) to preserve crosswalk/pedestrian visibility
- 2 School Driveways**
 - Designate directional circulation through parking lot with arrow pavement markings
 - Install high-visibility crosswalk across school driveway
 - Construct directional, ADA compliant curb ramps across driveway
 - Realign southern driveway exit so that it is perpendicular with Oleander Ave to improve driver visibility
 - Widen sidewalk between entry and exit point for southern circulation loop
- 3 Oleander Ave Just North of Orange Wy**
 - Remove regulatory "35 MPH" speed limit sign located immediately north of school speed limit sign
- 4 Oleander Ave at Orange Wy**
 - Install high-visibility crosswalks on east leg and maintain crosswalk on north leg
 - Construct curb extensions on north approach
 - Construct directional ADA ramps on north and east legs
- 5 Oleander Ave**
 - Install double yellow centerline to prohibit U-turns
 - Install shared lane pavement markings and associated signage to provide a Class III bike route
- 6 Orange Wy**
 - Update "SCHOOL" pavement marking to say "SLOW SCHOOL XING"
 - Replace "School" (S4-3) sign with "School Crossing Ahead" (Assembly D) sign
- 7 SCRRA/Metrolink Easement**
 - Class I shared-use path recommended as part of City of Fontana's Active Transportation Plan
- 8 Valencia Ave**
 - Install shared lane pavement markings and associated signage to provide a Class III bike route
- 9 Oleander Ave Cul-de-sac**
 - Upon completion of proposed Class I shared-use path, provide connection from cul-de-sac to path
 - Provide wayfinding signs for school on path and provide wayfind signs to path on Oleander Ave

OLEANDER ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Palmetto Elementary School

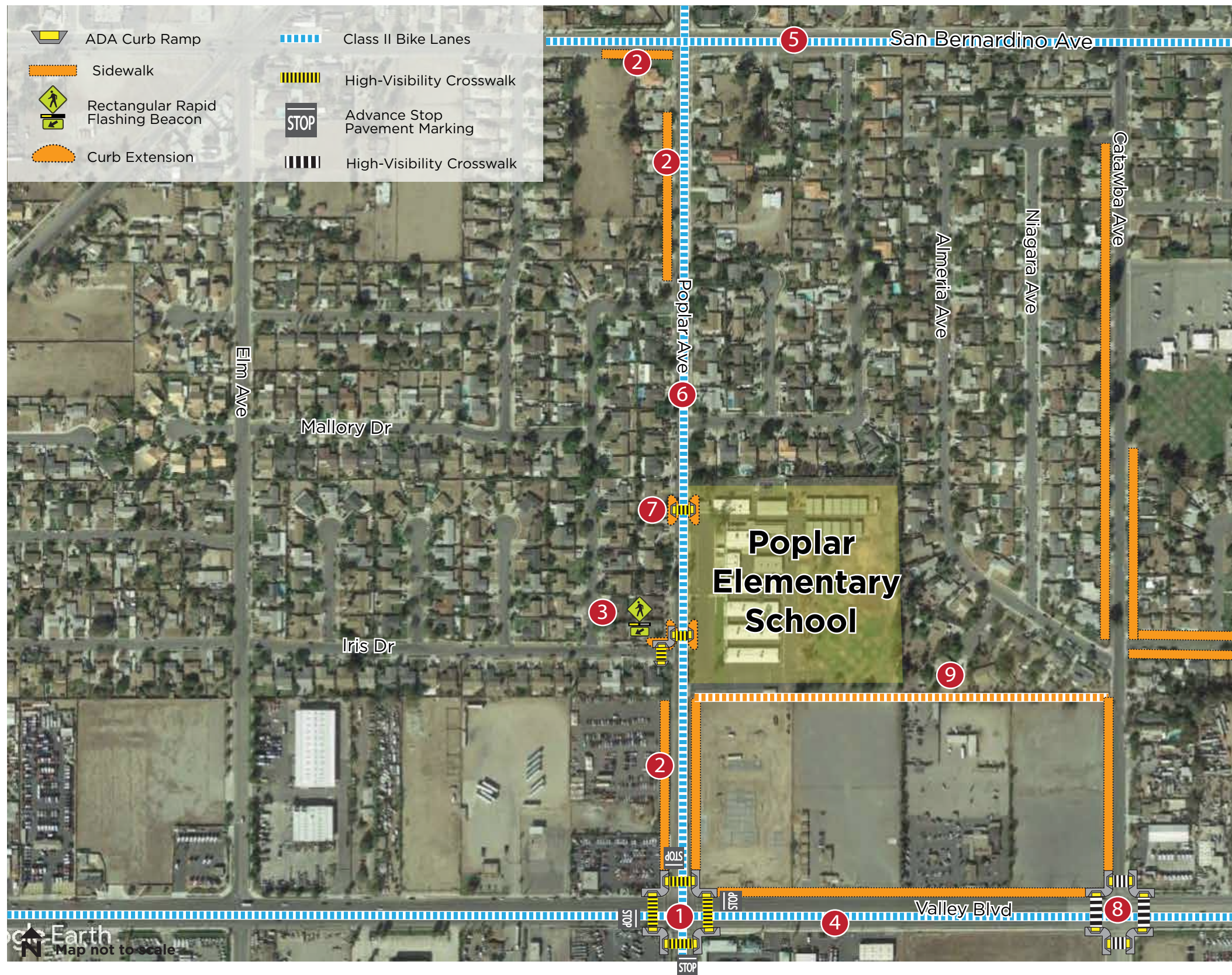
Site Assessment held 3/14/17

- 1 Hawthorne Ave at Kempster Ave and Kaiser Ave**
 - Conduct stop warrant analysis to provide stop control on southbound Kaiser Ave and southbound Kempster Ave approaching Hawthorne Ave
- 2 Randall Ave at Mango Ave**
 - Install white high-visibility crosswalks
 - Construct curb extensions and directional ADA curb ramps on all corners
 - Install advance stop bars at all approaches
- 3 Randall Ave at Palmetto Ave**
 - Widen existing sidewalk on northwest corner
 - Construct curb extensions and directional ADA curb ramps on all corners
 - Install high-visibility crosswalks at all approaches
- 4 On Campus**
 - Restripe all pavement markings to be more visible
- 5 Palmetto Ave at School Entrance**
 - Install raised crosswalk to calm traffic
 - Remove "35 MPH" speed limit sign on southbound Palmetto Ave just south of Randall Ave and replace with "School Speed Limit" sign (Assembly C)
 - Install School Advance Warning sign (Assembly D) on northbound and southbound Palmetto Ave approaching the proposed crossing
- 6 Palmetto Ave at Filbert St**
 - Construct directional curb ramps
- 7 Palmetto Ave**
 - Install shared lane pavement markings and correspond signage to provide Class III bike route
- 8 Randall Ave**
 - Implement 4- to 3- lane road diet
 - Install Class II bike lanes as per City of Fontana's Active Transportation Plan
 - Maintain parking on both sides of Randall Ave, but relocate to inside of proposed bike lanes
 - Provide 5' bike lanes with 2' buffers, separated from vehicular travel lanes by parking
- 9 Randall Ave at Tamarind Ave**
 - Construct curb extensions and directional ADA curb ramps on all corners
 - Install high visibility crosswalks at all approaches
 - Install advance stop bars at all approaches
- 10 Kaiser Ave, Blanchard Ave, Pinedale Ave**
 - Construct complete sidewalks
- 11 Palmetto Ave at Hawthorne Ave**
 - Conduct stop warrant analysis for 4-way stop

PALMETTO ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Poplar Elementary School

Site Assessment held 4/25/17

- 1 Valley Blvd at Poplar Ave**
 - Install high-visibility crosswalks on all legs of intersection
 - Construct directional ADA curb ramps at all corners
 - Install advance stop bars at all approaches
- 2 Poplar Ave and San Bernardino Ave**
 - Construct sidewalks for a complete network
- 3 Poplar Ave at Iris Dr**
 - Install RRFB system to improve visibility of mid-block crossing
 - Supplement with curb extensions or raised crosswalk
 - Install high-visibility crosswalk on west leg
- 4 Valley Blvd**
 - Install Class II bike lanes as part of the City of Fontana's Active Transportation Plan
 - Reduce lane widths to 11'
 - Provide 2' buffer for bike lanes
 - Maintain parking on both sides of Valley Blvd
 - Widen existing 4' sidewalks to 5' minimum
- 5 San Bernardino Ave**
 - Install Class II bike lanes as part of the City of Fontana's Active Transportation Plan
- 6 Poplar Ave**
 - Install Class II bike lanes per the City of Fontana's Active Transportation Plan
 - Restrict parking on west side of Poplar Ave
- 7 Poplar Ave**
 - Consider adding high-visibility midblock crossing to channel pedestrians and enhance crossing safety
- 8 Valley Blvd at Catawba Ave**
 - Upgrade intersection with continental crosswalks and new ADA curb ramps
- 9 Southern Side of School Campus**
 - Provide a path for connection to Catawba Ave that is closer to school

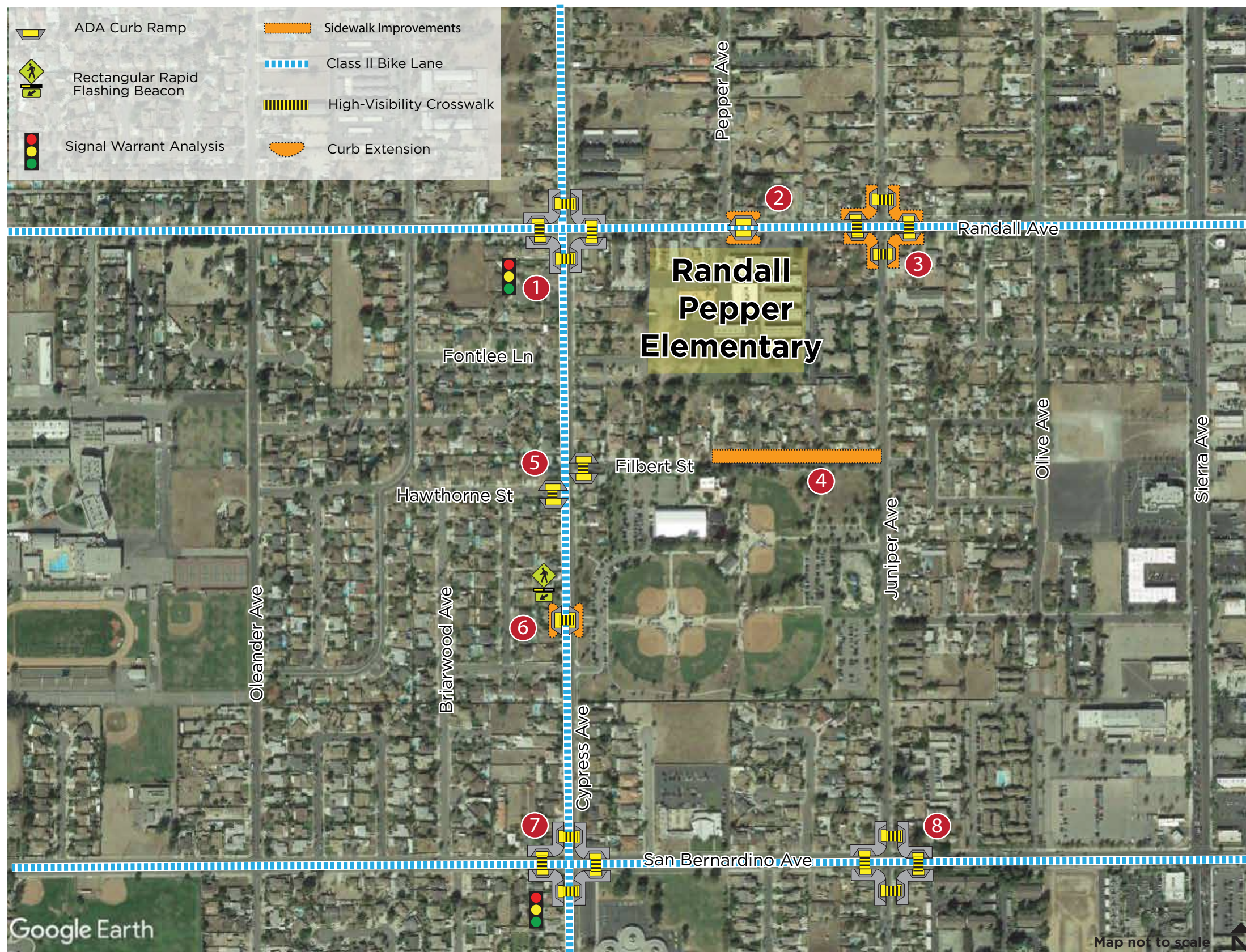
Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding, and jaywalking

POPLAR ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Randall Pepper Elementary

Site Assessment held 11/14/2017

- 1 Randall Ave at Cypress Ave**
 - Install directional ADA curb ramps and high-visibility crosswalks on all legs
 - Conduct signal warrant analysis
 - Install Class II bike lanes on Cypress Ave per SBCTA's Non-Motorized Transportation Plan
- 2 Randall Ave at Pepper Ave**
 - Install curb extensions and directional ADA curb ramps at existing high-visibility crosswalk/Pedestrian Hybrid Beacon location
 - Install Class II bike lanes on Randall Ave per City of Fontana's Active Transportation Plan and reduce travel lanes from 4 to 3
- 3 Randall Ave at Juniper Ave**
 - Install curb extensions, directional ADA curb ramps and high-visibility crosswalks on all legs of intersection
- 4 Filbert St**
 - Construct sidewalk where missing
- 5 Filbert St, Hawthorne St**
 - Install directional ADA curb ramps and high visibility crosswalk at existing stop sign
- 6 Cypress Ave**
 - Install curb extension and high-visibility crosswalk at entrance to Jack Bulik Park
 - Consider installing RRFB system
- 7 San Bernardino Ave at Cypress Ave**
 - Install directional ADA curb ramps and high-visibility crosswalks on all legs
 - Conduct signal warrant analysis
 - Install Class II bike lanes on San Bernardino Ave per City of Fontana's Active Transportation Plan
- 8 San Bernardino Ave at Juniper Ave**
 - Install directional ADA curb ramps and high-visibility crosswalks on all legs

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Enforce speeding

RANDALL PEPPER ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Shadow Hills Elementary School

Site Assessment held 4/25/17

- Shadow Dr at Springoak Ln**
 - Install high-visibility crosswalks on north, east, and south legs
 - Construct curb extensions with directional ADA curb ramps
 - Install advance stop bars at north, east, and south approaches
- Shadow Dr at Marlay Ave**
 - Install high-visibility crosswalks at south and east legs
 - Construct curb extensions with directional ADA curb ramps on northeast, southeast, and southwest corners
 - Install advance stop bars on southern and eastern approaches
- Shadow Dr**
 - Relocate “School Speed Limit” sign (Assembly C) to location shown to avoid obstructions in current location
- Shadow Dr at Teak Ln**
 - Install high-visibility crosswalks on north and west legs avoiding residential driveway on east side of Teak Ln
 - Construct directional ADA curb ramps at southwest, northwest, and northeast corners
 - Recommend one-way stop warrant analysis for westbound traffic on Shadow Dr
- NE Corner of School Campus**
 - Construct path connection between SCE Utility Trail and Shadow Dr pending permission by SCE
 - Install wayfinding signs providing direction to school, trail, and Shadow Dr

Non-infrastructure Recommendations:

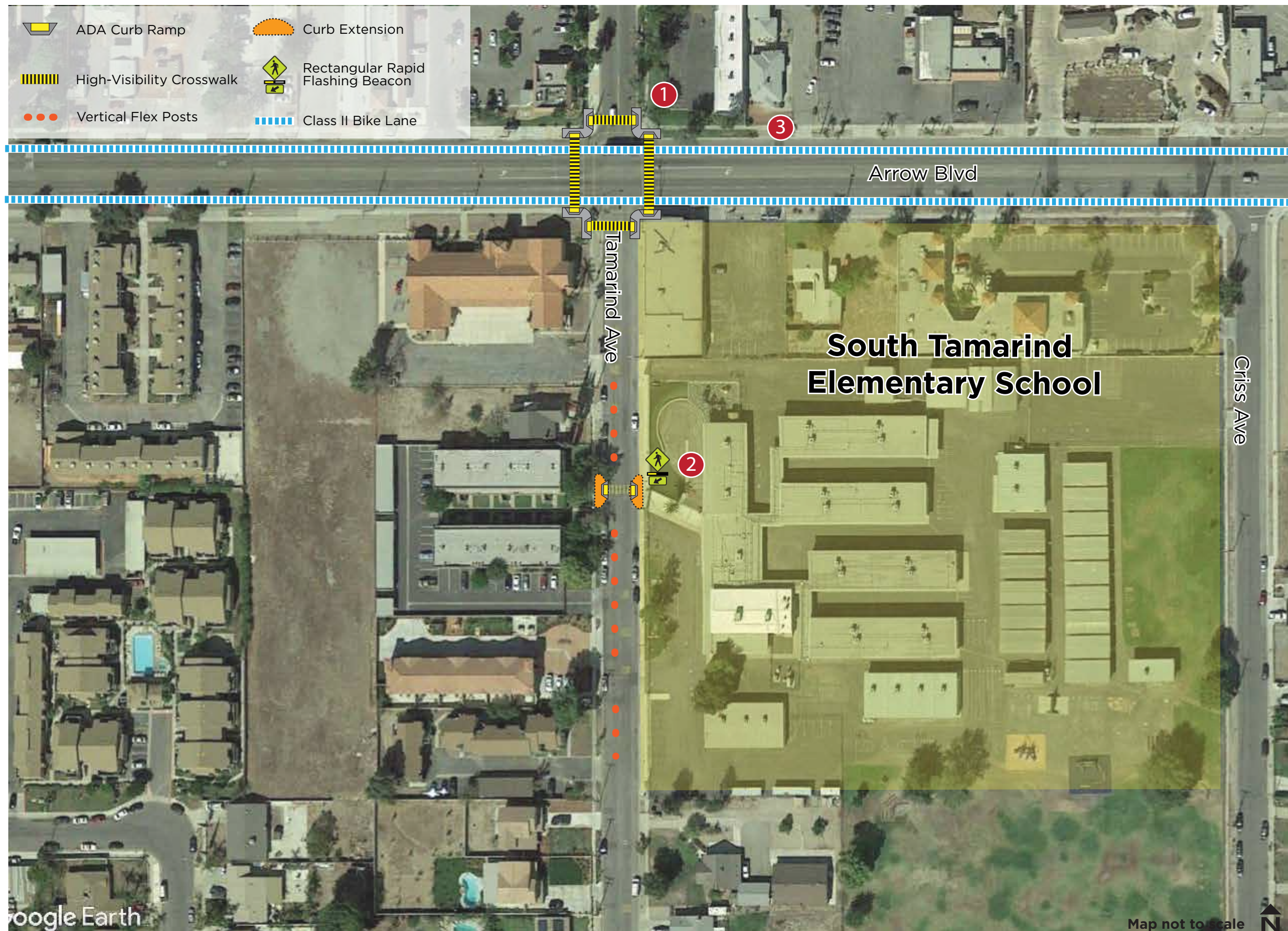
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding, and jaywalking

SHADOW HILLS ELEMENTARY SCHOOL

RECOMMENDED IMPROVEMENTS MAP

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South Tamarind Elementary School

Site Assessment held 5/8/17

- 1 Arrow Blvd at Tamarind Ave**
 - Upgrade existing crosswalks on all legs to high-visibility
 - Construct directional ADA curb ramps at all corners
- 2 Tamarind Ave**
 - Install RRFB system at existing crossing
 - Construct curb extensions with directional ADA curb ramps on both sides of crossing
 - Widen sidewalks on both sides of Tamarind Ave to 5' minimum
 - Install vertical flex posts along Tamarind Ave within school zone
- 3 Arrow Blvd**
 - Install Class II bike lanes along Arrow Blvd per SBCTA's Non-Motorized Transportation Plan
 - Reduce lane widths to 11'
 - Maintain parking on both sides of Arrow Blvd

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

SOUTH TAMARIND ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Sierra Lakes Elementary School

Site Assessment held 2/23/17

- 1 Avenal Pl at Agusta Dr**
 - Construct curb extensions with directional ADA curb ramps for traffic calming
 - Refresh crosswalk pavement marking with high-visibility crosswalks
- 2 Seminole Dr and Avenal Pl**
 - Install shared lane markings and corresponding signage to provide Class III bike route
- 3 Summit Ave and Woodstead Wy**
 - Conduct signal warrant analysis
 - Note: If not warranted, install high-visibility crosswalk with RRFB system on east leg of intersection
 - Install green conflict markings for bike lanes along Summit Ave crossing Woodstead Wy and Pinehurst Ln
- 4 Avenal Ave Bike Path Connection**
 - Construct path from park to school grounds and bike storage area
- 5 North End of School Driveway Loop**
 - Reconfigure parking lot to create additional drop-off loop from Summit Ave
 - Reconfigure striping on Summit Ave at this location so that the left-most eastbound lane becomes the eastbound through lane and right-most eastbound lane turns into driveway only
 - Driveway to be Right-turn in, Right-turn out only
- 6 South End of School Driveway Loop**
 - Shorten south drop-off loop to make space for north loop from Summit Ave
 - Construct walkways connecting drop-off locations and existing sidewalks to school entrance
- 7 Summit Ave and Citrus Ave**
 - Construct sidewalk where missing
- 8 Summit Ave**
 - Install "School Speed Limit" sign (Assembly C) in 2 locations as shown
- 9 Augusta Dr**
 - Establish greater connectivity with other areas of housing development by providing buffer for existing Class II bike lanes. Reduce vehicle lanes to 11', widen bike lanes to 7', and provide a 3' buffer
- 10 Summit Ave at Citrus Ave**
 - Upgrade existing crosswalks to high-visibility crosswalks
 - Construct directional ADA curb ramps

SIERRA LAKES ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Southridge Middle School

Site Assessment held 3/14/17

- 1 **School Parking Lot**
- Install raised crosswalk to calm traffic
- 2 **Live Oak Ave and Cloverdale Dr**
- Install RRFB system
- 3 **Cherry Ave at Live Oak Ave**
- Upgrade existing crosswalks to high-visibility
- 4 **Elderwood Dr and Live Oak Ave**
- Install RRFB system
- Install high-visibility crosswalk
- 5 **Live Oak Ave at School Entrance**
- Install flexible posts to prevent vehicle access to pedestrian walkway
- 6 **Live Oak Ave**
- Provide buffers for existing Class II bike lanes. At narrowest point: 11' lanes, 7' bike lanes, 2' buffers
- 7 **Cherry Ave at Village Dr**
- Install high-visibility crosswalk on northwest leg of intersection
- Upgrade existing crosswalks on northeast and southeast legs to high-visibility
- Construct directional ADA curb ramps for existing and proposed crosswalks
- Conduct signal warrant analysis
- Note: If signal not warranted, install High-Intensity Activated Crosswalk (HAWK) beacon on south leg of intersection
- Consider removing one lane of northbound and southbound left turns to construct concrete median and pedestrian refuge islands
- 8 **Live Oak Ave**
- Install "SLOW SCHOOL XING" pavement markings on northbound and southbound Live Oak Ave approaching the proposed Elderwood Drive crossing

Non-infrastructure Recommendations:

- Increased enforcement and education
- Discourage restricted left turns and double parking
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure

SOUTHRIDGE MIDDLE SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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Summit High School

Site Assessment held 5/8/17

- 1 Lytle Creek Rd at Summit Ave**
 - Upgrade existing crosswalks on all legs to high-visibility
 - Install advance stop lines at all approaches
 - Construct directional ADA curb ramps at all corners
 - Construct sidewalk where missing on northwest corner of Lytle Creek Rd
- 2 Lytle Creek Rd**
 - Install shared lane pavement markings and associated signage to provide a Class III bike route
 - Install speed humps on Lytle Creek Rd within school zone
- 3 School Parking Lot**
 - Install directional ADA ramps for crosswalk within school parking lot
 - Consider raised crosswalk at this location
- 4 Lytle Creek Rd at Nixon Wy**
 - Install "SLOW SCHOOL XING" pavement markings on northbound and southbound Lytle Creek Rd in advance of the crosswalk at Nixon Way
 - Install advance yield lines at both approaches
 - Install RRFB system at existing crossing
 - Construct curb extensions with directional ADA ramps on both sides of crossing
 - Install red curb paint on both sides of crosswalk
- 5 Summit Ave at Knox Ave**
 - Upgrade existing crosswalks on all legs to high-visibility
 - Install advance stop bars at all approaches
 - Construct directional ADA curb ramps at all corners
- 6 Summit Ave at Parkhouse Dr/Fontana Park Entrance**
 - Install high-visibility mid-block crossing with pedestrian refuge island using existing concrete median
 - Install RRFB system
 - Install green conflict markings for bike lane across school bus driveway and Parkhouse Dr
- 7 Knox Ave and Lytle Creek Rd**
 - Remove regulatory speed limit sign on southbound Knox Ave near Summit Ave
 - Remove regulatory speed limit sign on southbound Lytle Creek Rd near Summit Ave
- 8 Knox Ave at Ruby Peak Wy**
 - Install high-visibility crosswalk on south leg of intersection
 - Install "SLOW SCHOOL XING" pavement marking on northbound and southbound Knox Ave
 - Install advance yield line on both approaches
 - Install RRFB system
 - Construct curb extensions on either end of crossing
 - Install red curb paint on both sides of crossing
- 9 Knox Ave**
 - Relocate existing "School Speed Limit" sign (Assembly C) or trim vegetation blocking visibility of existing sign on northbound Knox Ave

Non-infrastructure Recommendations:

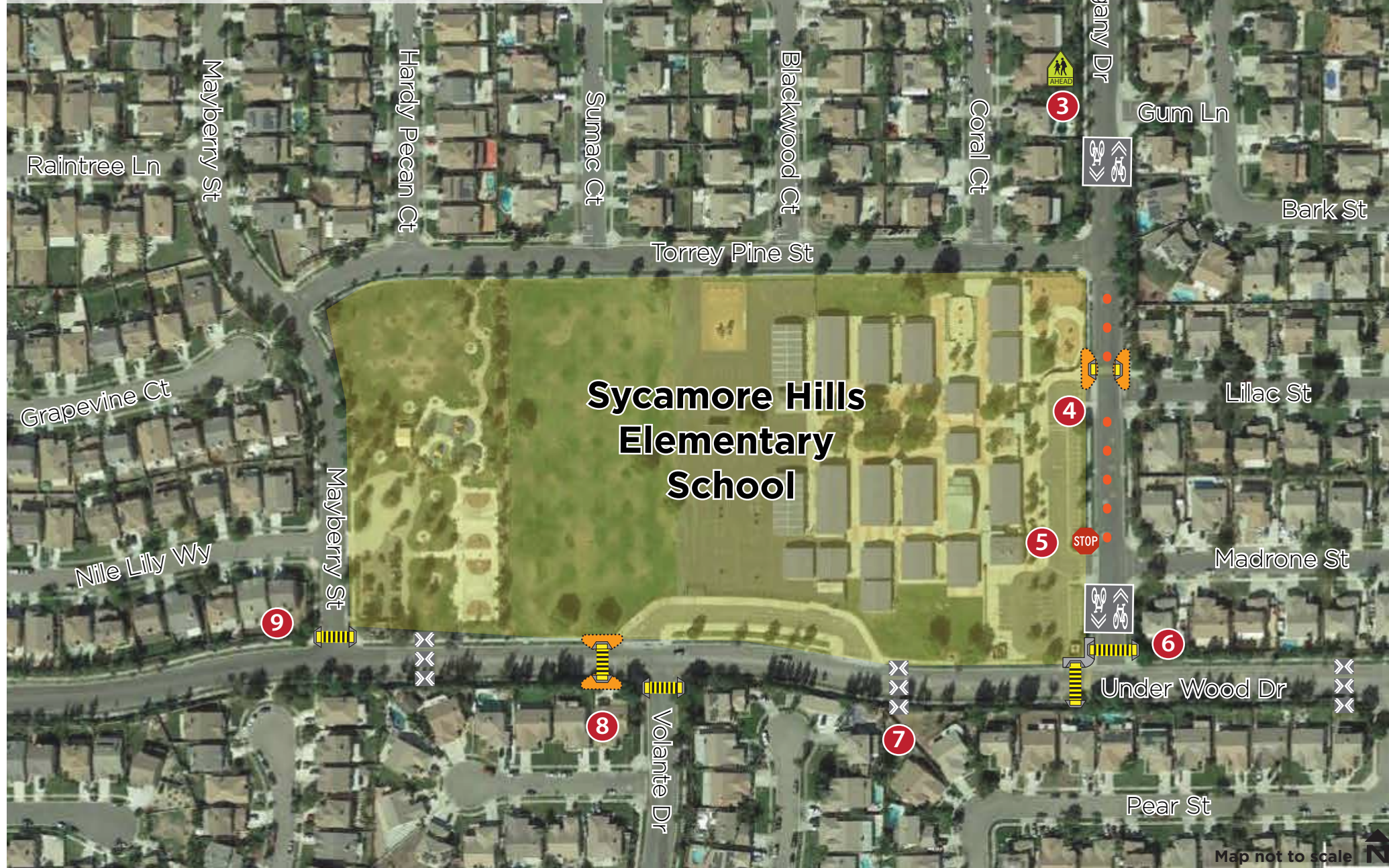
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

SUMMIT HIGH SCHOOL RECOMMENDED IMPROVEMENTS MAP

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 Speed Hump	 Advanced Stop Pavement Marking
 Stop Sign	 Curb Extension
 ADA Curb Ramp	 Vertical Flex Posts
 High-Visibility Crosswalk	 School Advance Warning Sign (Assembly D)
 Green Conflict Markings	 Class II Bike Lane Improvements
 Sidewalk	



Sycamore Hills Elementary School

Site Assessment held 4/20/17

- 1 Santa Ana Ave**
 - Install Class II bike lanes along Santa Ana Avenue per SBCTA's Non-Motorized Transportation Plan
 - Reduce eastbound and westbound travel lanes to 11' wide
- 2 Santa Ana Ave at Mahogany Dr**
 - Install high-visibility crosswalk on south leg of intersection
 - Construct directional ADA curb ramps on south leg of intersection
 - Install green conflict pavement markings for proposed eastbound bike lane on Santa Ana Ave
- 3 Mahogany Dr**
 - Relocate existing "School Crossing Ahead" sign (Assembly D) so that it is not blocked by tree
- 4 Mahogany Dr near Lilac St**
 - Install flexible posts along the centerline of Mahogany Drive through school zone to prevent U-turns from Torrey Pine St to Madrone St
 - Install shared lane pavement markings and corresponding signage to provide Class III bike route on Mahogany Dr
 - Construct curb extensions with directional ADA curb ramps for existing crossing
- 5 School Entrance on Mahogany Dr**
 - Install stop sign for school pick-up / drop-off exit
- 6 Mahogany Dr at Under Wood Dr**
 - Construct directional ADA curb ramps for existing crosswalks
 - Upgrade existing crosswalk on north leg to high-visibility
- 7 Under Wood Dr**
 - Install speed humps along Under Wood Dr
- 8 Under Wood Dr at Volante Dr**
 - Realign existing crosswalk on west leg to be perpendicular to roadway
 - Construct curb extensions with directional ADA ramps for realigned crosswalk
 - Upgrade existing crosswalk on south leg to high-visibility
- 9 Mayberry St at Under Wood Dr**
 - Install high-visibility crosswalk on north leg of intersection
 - Construct directional ADA ramps for crossing

Non-infrastructure Recommendations:

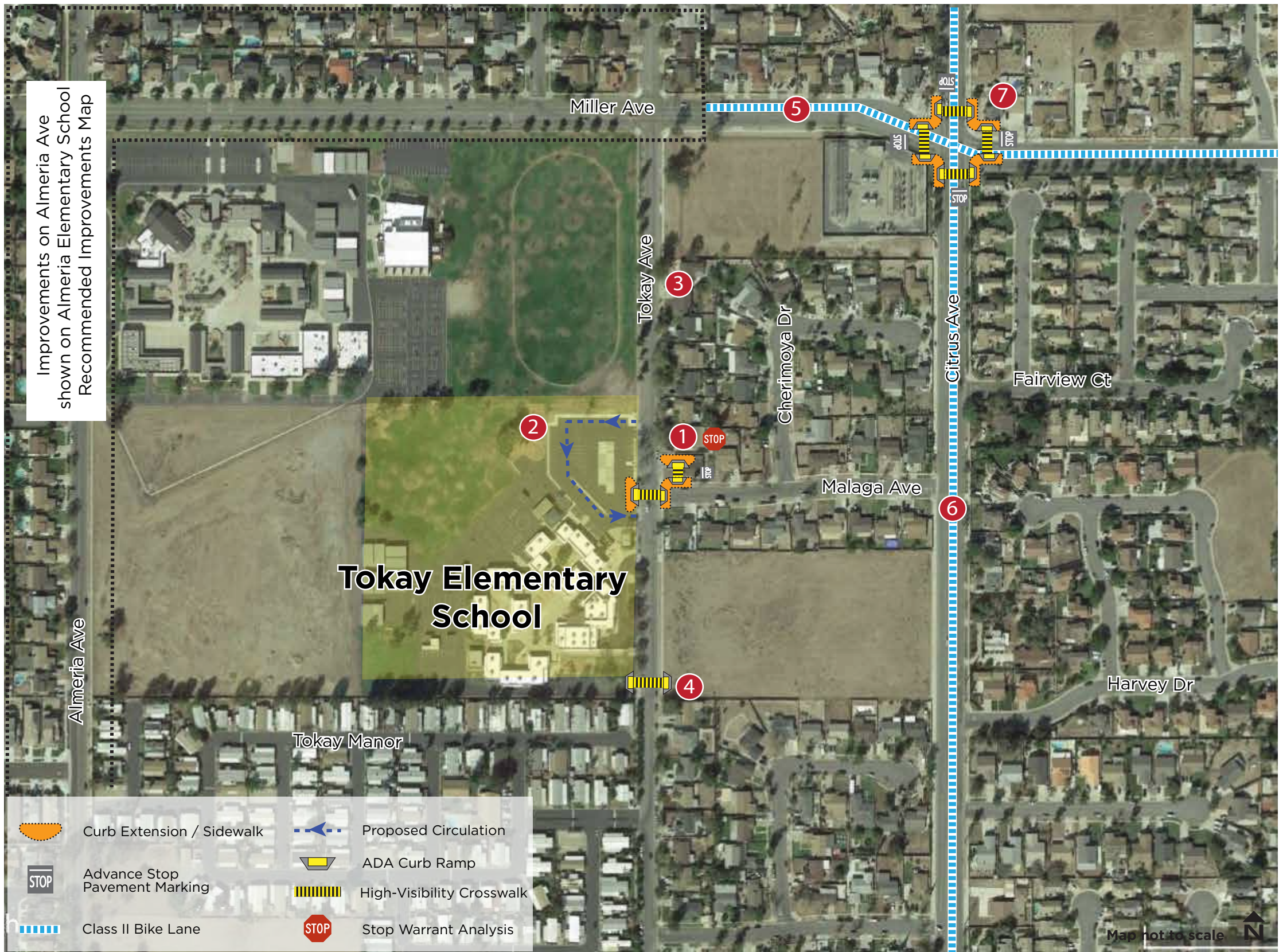
- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

SYCAMORE HILLS ELEMENTARY SCHOOL

RECOMMENDED IMPROVEMENTS MAP

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Tokay Elementary School

Site Assessment held 5/18/17

- 1 Tokay Ave and Malaga Ave**
 - Install high-visibility crosswalks on east and south legs of intersection
 - Construct directional ADA curb ramps
 - Install advance stop bar on east leg
 - Consider all-way stop-controlled warrant analysis
 - Construct curb extensions to shorten crossing distance
- 2 School Driveway**
 - Reconfigure driveway with one ingress and one egress location
- 3 Tokay Ave**
 - Provide striping and pavement markings to delineate permitted parking areas along Tokay Ave and to narrow the roadway
- 4 Tokay Ave at South Edge of Campus**
 - Consider additional mid-block crossing at this location
- 5 Miller Ave**
 - Install Class II bike lanes as per the City of Fontana's Active Transportation Plan
 - 4- to 3- lane road diet
- 6 Citrus Ave**
 - Install Class II bike lanes as part of SBCTA's Non-Motorized Transportation Plan
- 7 Citrus Ave at Miller Ave**
 - Install high-visibility crosswalks on all legs
 - Construct directional ADA curb ramps
 - Construct curb extensions to shorten crossing distance

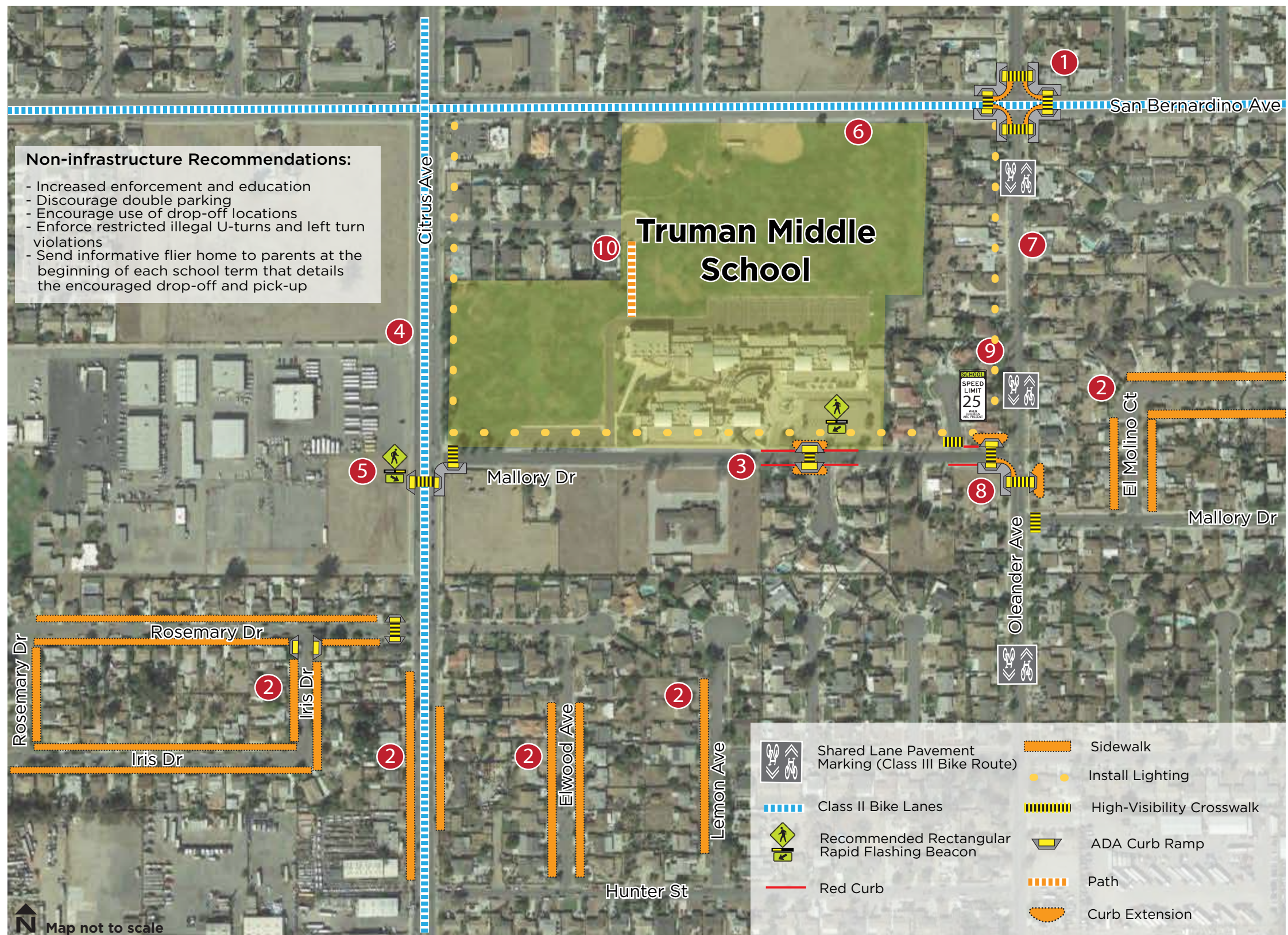
Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, restricted street parking, speeding, and jaywalking

TOKAY ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Truman Middle School

Site Assessment held 2/28/17

- San Bernardino Ave at Oleander Ave**
 - Construct curb extensions with directional ADA ramps
 - Install high-visibility crosswalks
- Citrus Ave, Elwood Ave, Lemon Ave, El Molino Ct, Iris Dr, Rosemary Dr**
 - Construct missing sidewalks and curb ramps
- Mallory Dr at School Entrance**
 - Construct curb extensions (with directional ADA ramps) on south side of crossing
 - Relocate existing crosswalk sign for westbound traffic (currently not visible due to vegetation)
 - Install RRFB system for existing crossing
 - Paint red curb adjacent to curb extensions
- Citrus Ave**
 - Install Class II bike lanes on Citrus Ave as per SBCTA's Non-Motorized Transportation Plan
 - Install new lighting along Citrus Ave
- Citrus Ave at Mallory Dr**
 - Upgrade existing crosswalk on east leg of intersection to high-visibility
 - Install high-visibility crosswalks on south leg of intersection
 - Install RRFB system on south leg of intersection
 - Install "SLOW SCHOOL XING" pavement markings on northbound and southbound Citrus Ave approaching proposed crosswalk at Mallory Dr
 - Construct pedestrian refuge island on south crossing
- San Bernardino Ave**
 - Install Class II bike lanes on San Bernardino Ave per the City of Fontana's Active Transportation Plan
 - Implement 4- to 3- lane road diet on San Bernardino Ave
- Oleander Ave**
 - Install new lighting along Oleander Ave
 - Widen existing sidewalk to 6'
 - Install shared lane markings and appropriate signage to provide a Class III bike route per the City of Fontana's Active Transportation Plan
- Oleander Ave at Mallory Dr**
 - Construct curb extensions with directional ADA ramps
 - Install high-visibility crosswalks
- Mallory Dr**
 - Install new lighting
 - Install "School Speed Limit" sign (Assembly C) for westbound Mallory Dr traffic (near Oleander Ave)
- Tullock St Connection**
 - Consider providing path connecting Tullock St to school campus

TRUMAN MIDDLE SCHOOL RECOMMENDED IMPROVEMENTS MAP

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Wayne Ruble Middle School

Site Assessment held 5/2/17

- 1 **School Driveway**
- Construct sidewalk along driveway
- 2 **Walnut St**
- Reduce lane widths to 11' along eastbound and westbound Walnut St
- Provide 3' buffer for existing Class II bike lanes along Walnut St
- 3 **Caswell Ln and Madison Ln**
- Install green conflict markings for bike lane along Walnut St at these crossings
- 4 **Juniper Ave at Walnut St**
- Install high-visibility crosswalks at all legs
- Construct directional ADA curb ramps at all corners
- Install advance stop lines at all approaches
- Construct sidewalks where missing on north side of Walnut St and east side of Juniper Ave
- 5 **Juniper Ave**
- Upon completion of housing development on east side of Juniper Ave, will need to determine appropriate location(s) for high-visibility crosswalk(s)

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

WAYBE RUBLE MIDDLE SCHOOL

RECOMMENDED IMPROVEMENTS MAP

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West Heritage Elementary School

Site Assessment held 4/21/17

- 1 W Constitution Way at E Yosemite Loop Rd**
 - Install high-visibility crosswalks at all legs
 - Construct directional ADA curb ramps at all corners
 - Install advance stop lines at all approaches
- 2 E Yosemite Loop Rd**
 - Reduce travel lane widths to 11'
 - Install 3' buffers for existing Class II bike lanes
- 3 W Constitution Wy near Tioga Ct**
 - Install "School Speed Limit" sign (Assembly C) on westbound W Constitution Way
- 4 W Constitution Wy**
 - Shift curb ramps to location as shown and provide sidewalk connection from proposed crossing to existing sidewalk
 - Remove existing curb ramps west of proposed crossing, install high-visibility crosswalk
 - Install right turn arrows in right-most westbound lane approaching crosswalk
- 5 W Constitution Wy at Existing Trail Crossing**
 - Install RRFB system
- 6 W Constitution Wy near Brandon Ct**
 - Install "School Speed Limit" sign (Assembly C) on eastbound W Constitution Way

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage and enforce double parking, U-turns, restricted street parking, speeding
- Encourage crossing at marked crosswalks

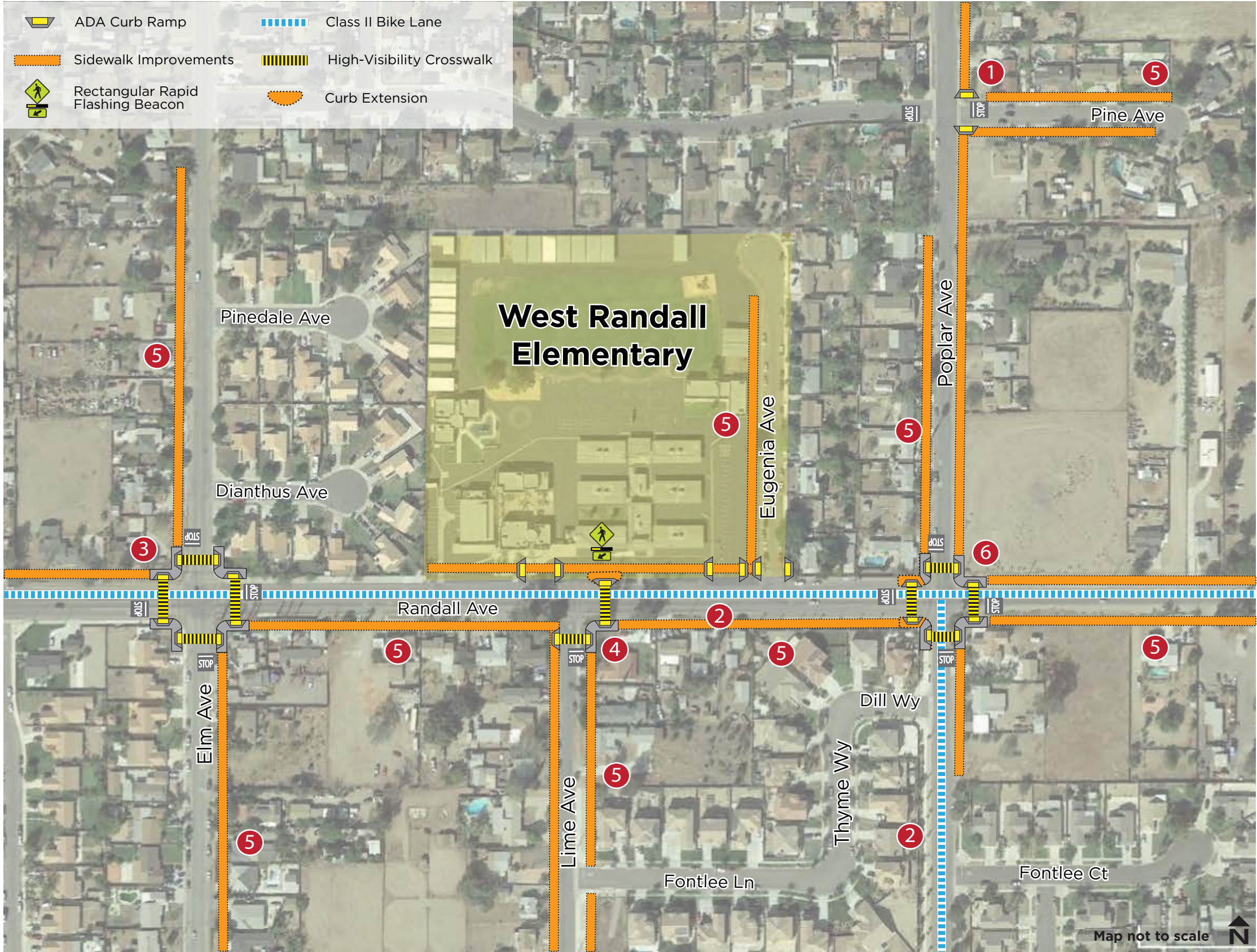
WEST HERITAGE ELEMENTARY SCHOOL RECOMMENDED IMPROVEMENTS MAP

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West Randall Elementary School

Site Assessment held 3/14/2017



- 1 Pine Ave and Poplar Ave**
 - Restripe pavement markings for visibility
 - Construct directional ADA curb ramps on northeast and southwest corners
- 2 Randall Ave and Poplar Ave**
 - Install Class II bike lanes along Randall and Poplar Ave as per City of Fontana's Active Transportation Plan
- 3 Randall Ave and Elm Ave**
 - Consider constructing curb extensions to make crosswalk more visible to drivers
 - Re-stripe pavement markings to be more visible
 - Install high-visibility crosswalk pavement markings
 - Construct directional ADA curb ramps
- 4 Randall Ave at Lime Ave**
 - Install RRFB system at west leg crossing
 - Install high-visibility crosswalks
 - Restripe pavement markings to be more visible
 - Construct directional ADA curb ramps
- 5 Poplar Ave, Pine Ave, Randall Ave, Lime Ave, Elm Ave, Eugene Ave**
 - Construct new and widen existing sidewalks
- 6 Randall Ave and Poplar Ave**
 - Construct ADA curb ramps where missing or non-compliant
 - Install high-visibility crosswalk pavement markings
 - Construct curb extensions on west leg
- 7 Randall Ave**
 - Install speed humps for traffic calming
 - Construct ADA curb ramps where missing or non-compliant at school entrances

Non-infrastructure Recommendations:

- Send informative flier home to parents at the beginning of each school term that details the encouraged drop-off and pick-up procedure
- Increased enforcement and education
- Discourage double parking and enforce restricted street parking
- Discourage jaywalking
- Enforce speeding

WEST RANDALL ELEMENTARY SCHOOL
RECOMMENDED IMPROVEMENTS MAP

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