San Leandro Bicycle and Pedestrian Master Plan

2024 Update

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1. Introduction

Purpose of this Plan

The Bicycle and Pedestrian Master Plan (BPMP or Plan) builds on and continues the accomplishments in active transportation in San Leandro. The City of San Leandro will use the Plan to guide development of infrastructure projects and programs to support bicycling and walking as safe, enjoyable, and practical transportation options for San Leandro.

What is Active Transportation?

This Plan refers to "active transportation" as any form of self-propelled, human-powered travel, such as walking, bicycling, scooting, skating, or using a mobility device. The term "pedestrian" is inclusive of people using wheelchairs and other mobility devices. Through prioritizing active transportation, the City of San Leandro will enhance health, mobility, livability, economy, and environmental sustainability.

This BPMP is a focused update to the 2018 Bicycle and Pedestrian Master Plan. Since the adoption of the 2018 Plan, the City of San Leandro has passed a Vision Zero goal with the Local Roadway Safety Plan (2021), completed the major Crosstown Corridors study for Bancroft Avenue and Williams Street, and implemented a significant number of active transportation projects. This update reviews the bikeway types and pedestrian recommendations for the latest best practice and prioritizes projects and programs for the next five years of implementation.

Policy Context – What's Changed?

While active transportation was already a priority for San Leandro and the region at the time of the 2018 BPMP, new planning documents and policies have emerged in the last five years that reemphasize the importance of safety in transportation planning.

The City's Vision Zero resolution and Local Roadway Safety Plan double down on a commitment to ending fatal and severe collisions in San Leandro. This goal is consistent with a new Vision Zero policy at the regional level from the Metropolitan Transportation Commission (2020) and an official endorsement of the Safe System Approach at the countywide level in the Alameda CTC Countywide Transportation Plan (2020). This Plan also aligns with recent regional active transportation network planning and policy, including the MTC Regional Active Transportation Network (2023), the Alameda CTC Countywide Bikeway Network (2022), and the All Ages and Abilities Bikeways policies that accompany both networks. The Plan is coordinated with the most recent Caltrans District 4 Bicycle and Pedestrian Plans and is informed by research and investment in the Safe System Approach from the Federal Highway Administration (FHWA).

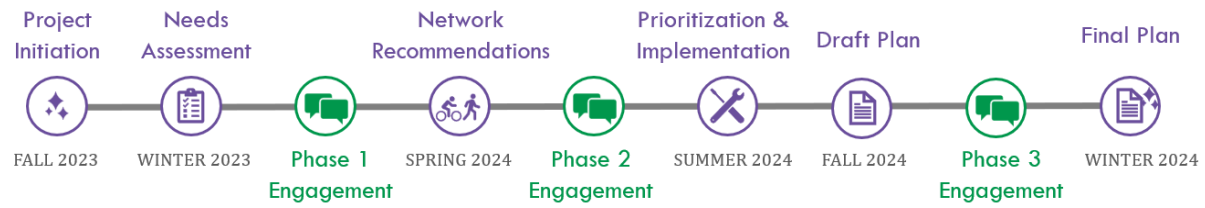
What is Vision Zero and the Safe System Approach?

Vision Zero is not a slogan, not a tagline, not even just a program. It is a fundamentally different way to approach traffic safety. –Vision Zero Network

The Vision Zero approach views transportation-related fatalities and injuries as preventable, rather than inevitable, and relies on data-driven, multi-disciplinary collaboration to eliminate fatalities and severe injuries to ensure safe, healthy, and equitable mobility for all.

The Safe System approach is the set of strategies to achieve Vision Zero. This approach focuses on influencing system-wide practices, policies, and designs to lessen the severity of collisions. Encouraging safer, more context-appropriate travel speeds and building "safety nets" into the design of streets and crossings supports the goal of downgrading a fatal collision to a survivable collision, and a severe injury collision into a minor injury collision. The Safe System approach plans for the most vulnerable road users, including bicyclists and pedestrians.

Figure 1-1 Project Timeline and Engagement Summary



Community Engagement

The Bicycle and Pedestrian Master Plan update was developed with input from the San Leandro community at three different phases of the planning process.

Phase 1: Where We Are

Outreach in Phase 1 focused on current experiences walking and biking in San Leandro.

- **12/1/23:** Tree Lighting Event Pop-Up
- **12/1/23 – 3/8/24:** Online Map and Survey
- **1/23/24:** BPAC Meeting #1

Phase 2: Where We're Going

Outreach in Phase 2 focused on feedback on the draft pedestrian and bicycle networks.

- **5/9/24:** BPAC Meeting #2
- **5/20/24 – 7/12/24:** Online Map
- **6/1/24**: Cherry Festival Pop-Up

Phase 3: How We'll Get There

Outreach in Phase 3 focused on public review of the draft Plan and priority projects.

- **9/24/24:** BPAC Meeting #3
- **9/24/24-11/8/24:** Online Plan Review

Total Project Engagement

1,937 Website Visitors

355 Web Map Comments

91 Survey Responses

~170 People Engaged in Person

3 Public Meetings

2. Vision and Goals

This update to the Plan's vision, goals and policies reflects the latest planning and engineering guidance at the local, regional, state, and federal levels.

This includes a new foundation in the Safe System Approach, as articulated in San Leandro's Vision Zero commitment in the Local Roadway Safety Plan and aligned with regional commitments to Vision Zero. The update also reflects the latest best practice in design for people of all ages and abilities and emphasizes equitable processes and outcomes.

Vision

The vision for the Plan was developed based on feedback expressed during community engagement and by the Bike & Pedestrian Advisory Committee (BPAC), a group of San Leandro residents appointed by the City Council who provide input on City bicycle and pedestrian projects.

San Leandro will be a connected community where walking and biking are fully integrated into daily life as safe, equitable, and enjoyable transportation options for people of all ages and abilities.

Associated with the vision statement for the Plan are four goals – related to safety, connectivity and comfort, community programs, and implementation – with recommended policies and actions to support implementation of each goal.

What is an All Ages and Abilities Transportation System?

Designing streets and sidewalks for people of all ages and abilities focuses on the most vulnerable users: children and families, older adults, people with disabilities, and people who can't or don't drive, relying on walking, biking, and using mobility devices in San Leandro.

Pedestrian facilities that are accessible for all ages and abilities are free of potholes and gaps, provide shade and refuge from weather, and have street furniture for resting and waiting, including at transit stops. Transit stops should offer amenities like shelter, lighting, and benches and be accessible to those using mobility devices, which means that there is smooth, even pavement, adequate sidewalk width for wheelchairs to navigate, and curb cuts.

For bicycling facilities, the National Association of City Transportation Officials (NACTO) has guidelines for bikeway selection that emphasize safety and comfort for users of all skill levels. NACTO's Choosing an All Ages & Abilities Bicycle Facility considers factors including vehicle speeds and volumes to determine the most suitable bike infrastructure for streets, prioritizing safety and comfort.

Goals and Policies

Goal 1: Safe Systems

Consistent with the City's Vision Zero policy, achieve a goal of zero bicycle and pedestrian fatalities and serious injuries.

Policies

Policy 1.1: In alignment with the Local Roadway Safety Plan (LRSP) and San Leandro's Vision Zero policy, institutionalize and adhere to the Safe System Approach to work toward eliminating fatalities and serious injuries on San Leandro's streets.

- Define target speeds consistent with urban streets and proactively manage speeds through roadway design, such as reconfiguring roadways with excessive vehicular capacity or with underutilized street parking to accommodate new or enhanced bicycle and pedestrian facilities.
- Following FHWA guidance, evaluate intersection design and control decisions in the planning or scoping stage of projects for opportunities to reduce the frequency of collisions as well as the kinetic energy transfer and therefore the collision severity.
- Establish a target year for zero traffic fatalities and serious injuries and establish the rate of decrease needed to achieve zero by the target year. Monitor progress against this rate and introduce intervention changes if the City is not on track.
- Review and revise existing City procedures, policies, and plans that conflict with the Safe System Approach and Complete Streets Policy.
- Provide smooth pavement surfaces that are free of potholes, cracks, steps, sunken or raised utility tranches or covers, hazardous drainage grates, and overhanging vegetation. Reorient repaving program to prioritize bikeways and sidewalks.
- Use and periodically update the Local Roadway Safety Plan to identify hot spots and systemic risks. Prioritize pursuing grant funding for projects that improve communities' access to key destinations, particularly communities with high rates of collisions.
- Develop minimum standards for traffic calming on bicycle boulevards to be applied consistently with capital improvement opportunities, along with a defined public process for treatments exceeding the minimums.

Policy 1.2: Use active transportation design guidance from the National Association of City Transportation Officials,[1] the FHWA,[2,3] and other best practice guidance in conjunction with state and federal standards to implement safe and accessible pedestrian and bike facilities.

- Separate users in space and time to eliminate or minimize interactions between drivers and pedestrians and drivers and bicyclists, such as through protected intersections, protected signal phases, leading pedestrian intervals, approach clear zones, pedestrian hybrid beacons, and vertical and horizontal separation for pedestrians and bicyclists.
- Use the NACTO All Ages & Abilities[4] criteria as the standard for selecting and implementing bikeway type considering target speed and average daily traffic (ADT), with separation required for higher speeds and traffic volumes.
- Conduct a citywide pedestrian safety assessment to proactively identify safety needs at all controlled and uncontrolled crosswalks with a plan to phase in improvements over time.

[1] "Designing for All Ages & Abilities: Contextual Guidance for High-Comfort Bicycle Facilities." National Association of City Transportation Officials. December 2017.

[2] "Separated Bike Lane Planning and Design Guide." Federal Highway Administration. May 2015.

[3] "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations." Federal Highway Administration. July 2018.

- Limit the number of curb cuts and other access points along arterial streets to minimize bicycle and pedestrian conflicts with turning autos.

Goal 2: A Comprehensive, Comfortable, and Connected System

Develop cohesive, legible, and complete bicycle and pedestrian networks that are comfortable for people of all ages and abilities and that connect neighborhoods, schools, parks, and businesses in San Leandro, as well as neighboring cities.

Policies

Policy 2.1: Mitigate common barriers to walking and biking such as upgrading pedestrian and bicyclist facilities to serve all ages and abilities and routinely maintain current infrastructure to provide basic connectivity without gaps or barriers.

- Address barriers to walking and bicycling, such as unmet crosswalk safety needs, limited all ages and abilities bikeway mileage, secure bicycle parking, lighting, signal detection, visibility/sight line limitations, and physical barriers including highway interchanges and at-grade rail crossings.
- Repair or replace crosswalk and bikeway infrastructure, such as malfunctioning signal detection or markings that have been faded or damaged.
- Address impacts of major barriers, such as I-880, railroad tracks, SR 238, and waterways, on bicycle and pedestrian connectivity through safer and more frequent connections.
- Require and enforce that maintenance and construction projects provide temporary traffic controls to accommodate bicyclists and pedestrians. Develop a bicycle, pedestrian, and bus construction zone access policy, to ensure that safe and continuous access is prioritized.
- Require property owners to repair sidewalk tripping hazards along their frontage.
- Coordinate with Public Works on a practice and schedule for maintenance and cleaning of bicycle facilities.
- Provide directional and destination signage for bicyclists, pedestrians, and transit users routinely as part of all new street projects.

Policy 2.2: Ensure that the pedestrian and bicycle networks are accessible to those of all ages and abilities and connect to key destinations, neighborhoods, and recreational areas.

- Continue implementing the ADA transition plan to improve access for people with disabilities. Seek additional funds to accelerate the pace of accessibility updates for walking and rolling.
- Provide age-appropriate pedestrian and bicycle connections to all projects within a quarter mile of schools, including considering of 2.5 feet/second walk speed with 1/8 mile of schools, senior centers, and libraries and separated bike lanes.
- Use the NACTO all ages and abilities design guidelines and this Plan's **Bicycle and Pedestrian Design Guidelines** to design all streets to function as complete streets that prioritize safety first, particularly for the most vulnerable roadway users: people walking and biking.
- Provide an accessible walking environment through the application of PROWAG and ADA standards, including directional curb ramps (two per corner) and accessible pedestrian signal infrastructure.
- Close all sidewalk gaps with a priority on those that limit connectivity between neighborhoods.
- Work with AC Transit to improve bus frequency and reliability, enhance pedestrian and bicycle access to bus stops, and provide pedestrian amenities such as covered waiting areas at bus stops, lighting, and real-time transit information.
- Follow the **Bicycle and Pedestrian Design Guidelines** (Appendix A, pg. 44) regarding bikeway design and pedestrian enhancements near bus stops.

- Ensure bicycle parking facilities meet current best practices standards and are designed to serve current and future stop/station users. Update citywide bicycle parking ordinance and guidelines to include support for electric bicycles and cargo bicycles.
- Install short-term and long-term bike parking citywide at key destinations and work with local and regional transit agencies to install bike racks and lockers (or expand existing installations) at transit stops and stations.

Policy 2.3: Establish standards for new developments that encourage walking and biking trips and provide pedestrian and bicycle connections between new developments and surrounding commercial and residential areas.

- Ensure new developments are accessible to bicyclists and pedestrians per the **Bicycle and Pedestrian Design Guidelines**.
- For new developments, provide an internal pedestrian circulation plan that includes a connection to the public sidewalk and crosswalks per the **Bicycle and Pedestrian Design Guidelines** (pg. 7-27).
- Ensure that developers implement bicycle and pedestrian improvements identified as a condition of approval where there is a nexus between the improvements and project transportation impacts.
- Utilize zoning to encourage development that incorporates a mixture of uses, including residential and local-serving retail/employment, to promote walking and bicycling.
- Ensure new developments provide secure bicycle parking for residents and employees that are convenient and accessible from the public right-of-way, in accordance with the San Leandro Municipal Code and the **Bicycle and Pedestrian Design Guidelines** (pg. 44-5).
- Maintain easements for bicycle and pedestrian access where cul-de-sacs or limited points of vehicle access are part of the development design.
- Prohibit the development of "gated" communities and avoid street vacations that result in decreased connectivity between neighborhoods.

Policy 2.4: Support streets as thriving places in San Leandro through supporting streets as spaces for outdoor seating, bicycle infrastructure, and merchant displays, and adequate pedestrian access.

- Provide a comfortable walking environment through the use of pedestrian-scale lighting, street trees that provide shade, benches and places to rest, waste receptacles, and landscaping/green infrastructure along streets and pathways, following design guidelines presented in the **Bicycle and Pedestrian Design Guidelines** (pg. 7-27).

Goal 3: Community Support Programs

Continue developing a coordinated outreach strategy that leverages existing City, partner organization, and community resources and energy to amplify awareness of the benefits of walking and biking.

Policies

Policy 3.1: Reallocate all enforcement activities to target those behaviors and locations most linked to death and serious injury among vulnerable roadway users (e.g. pedestrians, bicyclists).

- Partner with San Leandro Police Department to align traffic enforcement activities and public messaging with collision profiles and behaviors identified in the Local Roadway Safety Plan.
- Audit existing enforcement activities, including those funded through grants, for alignment with the Safe System Approach.

Policy 3.2: Advance and support education programs that raise awareness of active transportation benefits and highlight local walking and biking opportunities.

- Evaluate existing adult driver, bicycle, and pedestrian education programs and target future expansions in these programs, including through Alameda County and

community organizations like Bike East Bay. Programs should educate all users with a focus on behaviors and audiences most linked to death and serious injuries.

- Seek funding opportunities to support adult driver, bicycle, and pedestrian education and encouragement program expansions, in partnership with local community organizations. Include support for the training and certification of bicycle safety instructors who live or work in San Leandro, through the League of American Bicyclists' League Certified Instructor program.
- Continue to support pedestrian and bicycle safety education programs for students and children, such as the Rock the Block theater show assembly and bike rodeo, and classroom activities that help students make connections between active transportation, health, and the environment.
- Continue to prepare Suggested Routes to Schools maps and construct improvements at schools throughout the City to improve pedestrian and bicycle safety.
- Sponsor annual events such as Bike to Work Day, International Walk and Roll to School Day, open streets events, and offer walking and bicycling safety courses for adults, families, and children.
- Work with online mapping companies to ensure that recommended bicycle and pedestrian routes within San Leandro are accurate.

Policy 3.3: Encourage employers to develop programs that incentivize commuting by walking or biking to and from work.

- Develop an incentive program for City employees to serve as a model to other City employers and the public to encourage walking and bicycling to work.
- Develop a program to recognize employers, organizations, or individuals that encourage walking and bicycling as an alternative to driving for trips to work, school, or other activities. Work towards developing incentive programs (transportation demand management programs – TDM) to help encourage privately employed workers to walk and/or bike to work.

Policy 4.4: Conduct comprehensive and inclusive outreach efforts for bicycle and pedestrian projects, ensuring active engagement with diverse stakeholders to solicit feedback and address community needs.

- Coordinate efforts with City departments and agencies, Cherry City Cyclists, bike Walk San Leandro, Bike East Bay, and other relevant organizations.

Policy 3.5: Empower communities to take charge in promoting and improving active transportation in their neighborhoods.

Policy 3.6: Maximize public involvement through community engagement both in person and online using inclusive and equitable methods with clear communication about how input will be used.

- Prepare public engagement materials in the languages commonly used within the local community.
- Plan outreach events at locations and during times that are convenient and accessible to the local community.
- Partner with community-based organizations to reach a broader cross-section of San Leandro residents with compensation for their participation.
- Partner with others to expand programs that educate pedestrians, bicyclists, and motorists about roadway safety and encourage people to walk or bike to their destinations.

Goal 4: Fund and Implement Active Transportation Projects and Programs

Align the City's funding, Capital Improvement Program (CIP) project prioritization, and implementation work plans with the Plan's goals of safety, equity, and connected access.

Policies

Policy 4.1: Pursue a variety of funding channels and equip the City with technical resources to enhance its competitiveness in securing funding opportunities.

- Pursue funding for projects at the local, regional, state, and federal levels that address safety proactively, benefit Equity Priority Communities, and serve schools, parks, business districts, transit hubs, and social service destinations.
- Pursue multi-jurisdictional funding applications with Alameda County neighboring cities and other potential partners such as BART and the East Bay Regional Park District (EBRPD).
- Identify non-governmental funding sources for bicycle and pedestrian capital improvements and programs such as non-profit or foundation grants, public-private partnerships, and community organizations.

Policy 4.2: Base the allocation of project funding on equity and safety as primary considerations.

- Invest equitably by undertaking projects in communities that have seen less infrastructure investment and are disproportionately impacted by collisions, such as Equity Priority Communities.
- Update the paving prioritization program to prioritize safety and active transportation needs in addition to pavement condition when selecting segments for paving.
- Update Plan every five years. Ensure that the Plan is consistent with all existing city, county, regional, state, and federal policy documents.

3. Existing Conditions

As a focused update to the 2018 Bicycle and Pedestrian Master Plan, this Plan provides updated information on basic demographics, as well as progress on the bikeway and pedestrian networks, safety conditions, and outstanding issues for pedestrians and bicyclists. The 2018 plan includes additional information on existing conditions in San Leandro that remains applicable, such as employment density, activity generators, and transit routes and ridership in San Leandro.

Demographics

San Leandro is a small city of 91,000 people bordering the San Francisco Bay to its west and located in between Oakland and unincorporated Alameda County communities of Ashland and San Lorenzo. The City offers ideal biking and walking conditions thanks to its predominately flat landscape and moderate weather.

The median household income is $90,000 with nearly 30% of households earning less than $50,000.[5]

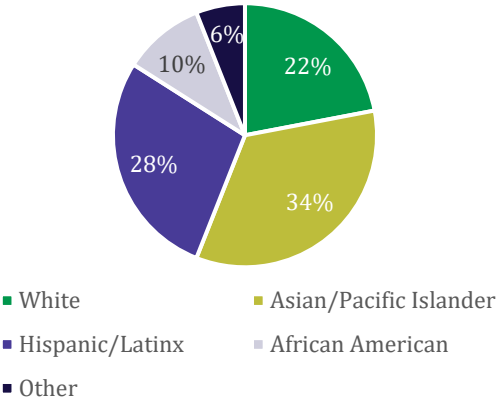
The median age is 41.

7% of households have no vehicle available.

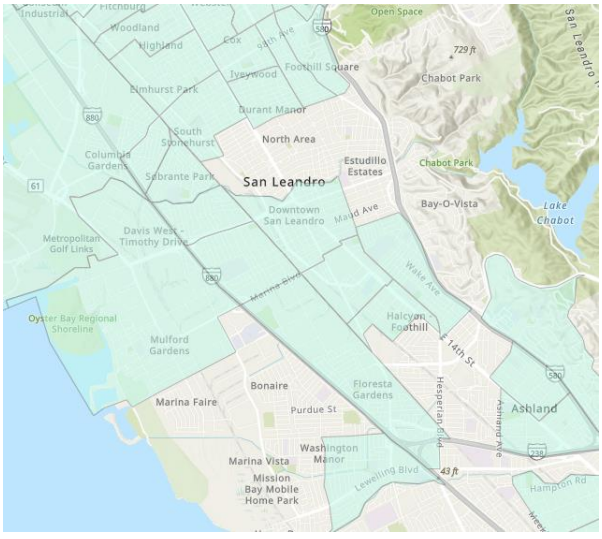
25% of the population have limited English proficiency.

7% of the population under 65 years of age have disabilities.

San Leandro is also a racially diverse community, with 34% identifying as Asian/Pacific Islander, 28% as Hispanic/Latinx, 22% as White, 10% as African American, and 6% as Other.



San Leandro's land use is a blend of residential, commercial, industrial, and recreational areas. The major commercial areas are concentrated along the City's arterials streets and in commercial districts such as Downtown San Leandro. The industrial areas are concentrated on the western side west of I-880, with some industrial areas east of I-880 in the center of the City. The Metropolitan Transportation Commission (MTC) designates several areas of San Leandro as Equity Priority Communities (EPCs), including the Mulford Gardens neighborhood, Downtown San Leandro, Davis Tract, Floresta Gardens, and near the western portion of Lewelling Boulevard.



Equity Priority Communities (EPCs) in San Leandro shown in green zones.

[5] Statistics in this section come from the 2021 American Community Survey 5-Year Estimates.

Pedestrian and Bicycle Projects Since 2018

33 intersections with new pedestrian improvements, 500 upgraded curb ramps
2 miles of new bike lanes, 11 miles of new bike routes, 1 mile of new separated bikeways

Since 2018, the City of San Leandro has implemented a range of pedestrian safety measures, including high-visibility crosswalks, curb extensions, signage, and uncontrolled crosswalk enhancements such as flashing beacons and pedestrian hybrid beacons at crossings throughout the community. Approximately 90 curb ramps per year are upgraded as part of the ADA Transition Plan, with more than 1,300 upgraded since 2010. Notable crosswalk improvements since 2018 include a new pedestrian hybrid beacon at the intersection of Davis and Carpentier Streets and new ADA ramps and high-visibility crosswalks at the intersection of San Leandro Boulevard and Best Avenue.

New pedestrian hybrid beacon installed at Davis Street and Carpentier Street.

New curb extension to narrow the intersection, including accessible ramps and high-visibility crosswalks at San Leandro Boulevard and Best Avenue.

There has also been progress on bikeway striping projects, which the City has implemented through paving projects and coordination with other agencies. Along with this paving work, the City has constructed its first separated bikeways on Fairmont Drive, Grand Avenue, and Davis Street, spanning a total of 1.1 miles.

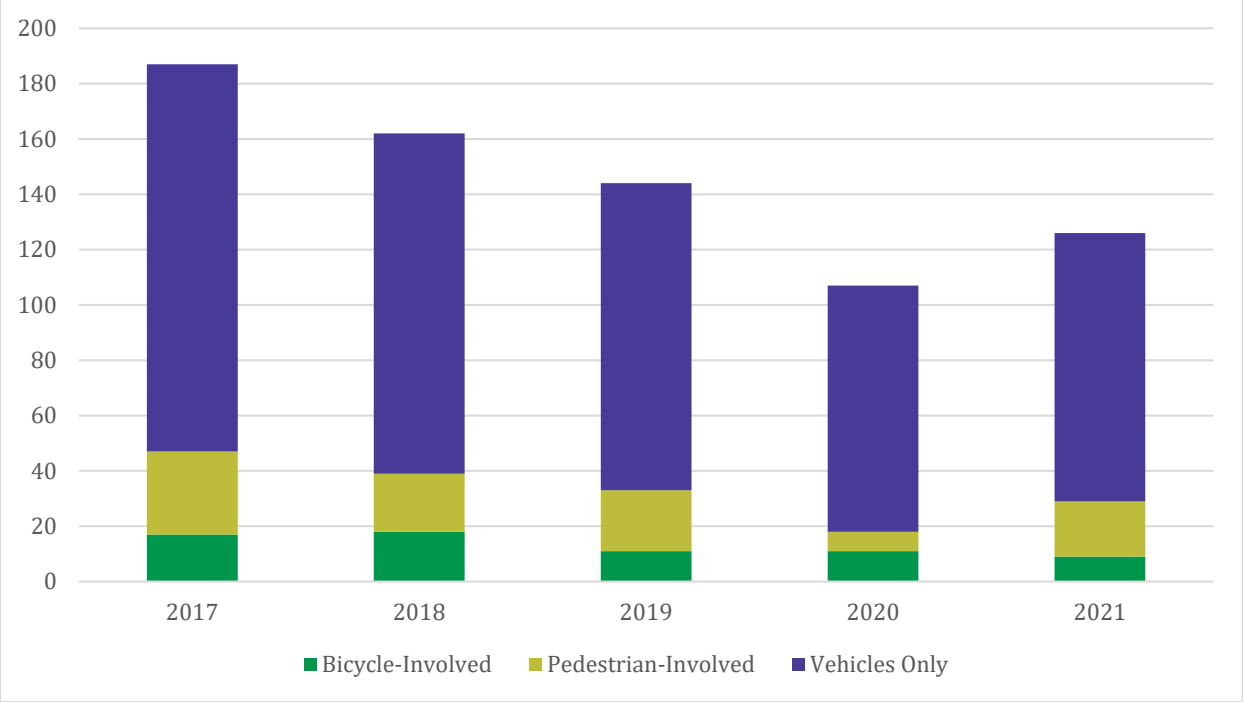
Since 2018, the City has constructed its first separated bikeways along Fairmont Drive (left) and Grand Avenue (right).

Safety Conditions

The 2022 LRSP provides a detailed assessment of multi-modal safety needs for the City, while the summary of safety conditions in this chapter provides more recent collision data specific to people walking and biking.

The latest available pedestrian- and bicycle-involved collision data was obtained from the Transportation Injury Management System (TIMS) for the years from 2017 to 2021. This data was analyzed to identify the number of collisions from year to year and to compare all collisions with only severe and fatal collisions, based on the mode of transport involved.

Figure 3-1 Injury Collisions by Year and Mode, 2017-2021

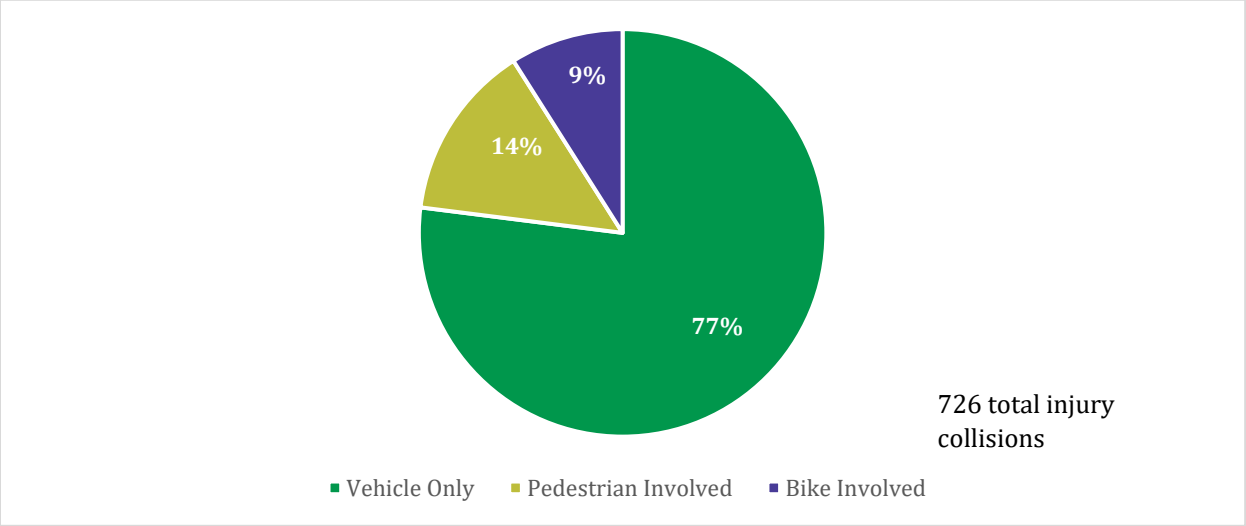


Source: Transportation Injury Management System, 2024

Nationally, severe pedestrian and bicycle collisions have been trending up since 2020, indicating a reversal of progress on safety since the Covid-19 pandemic.[6] Data in San Leandro follows this national trend, with total injury collisions were trending down consistently between 2017 to 2020 before rising again in 2021. During this time, bicycle-involved collisions wavered, and pedestrian-involved collisions were decreasing year over year until 2021 when they returned to near-2019 levels. Data from 2022 is preliminary and was not included in this analysis, but indicates that the trend continued with substantial increases across all modes up to levels similar to 2017. These trends represent a substantial setback in progress that require renewed efforts to improve roadway safety conditions.

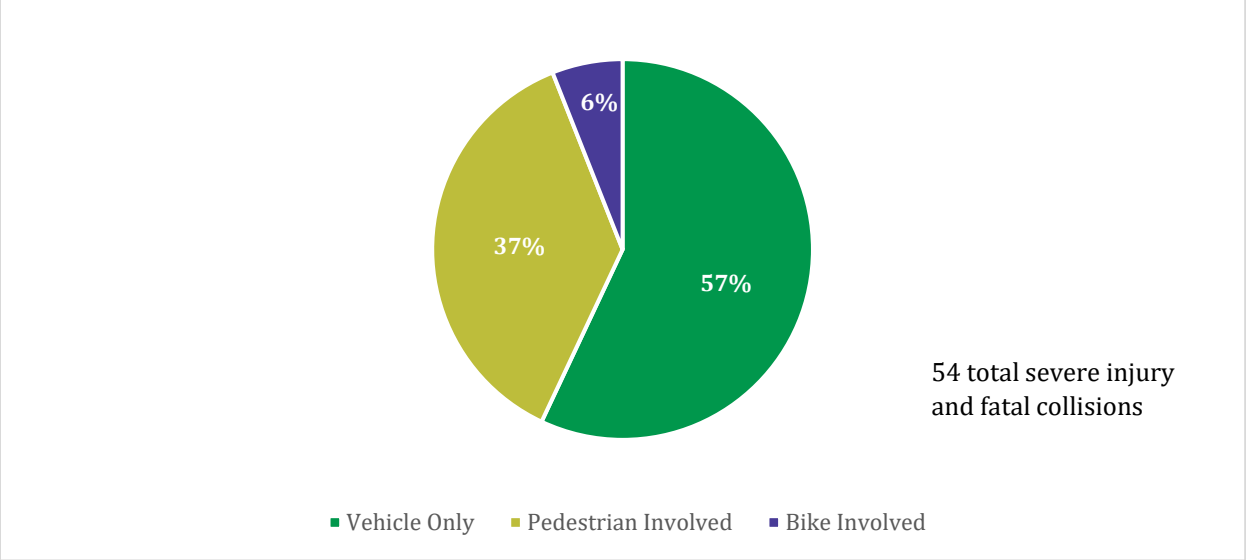
[6] *Governors Highway Safety Association, 2022. https://www.ghsa.org/resources/Pedestrians2ss3*

Figure 3-2 All Injury Collisions, 2017-2021



Source: Transportation Injury Management System, 2024

Figure 3-3 Severe Injury and Fatal Collisions, 2017-2021

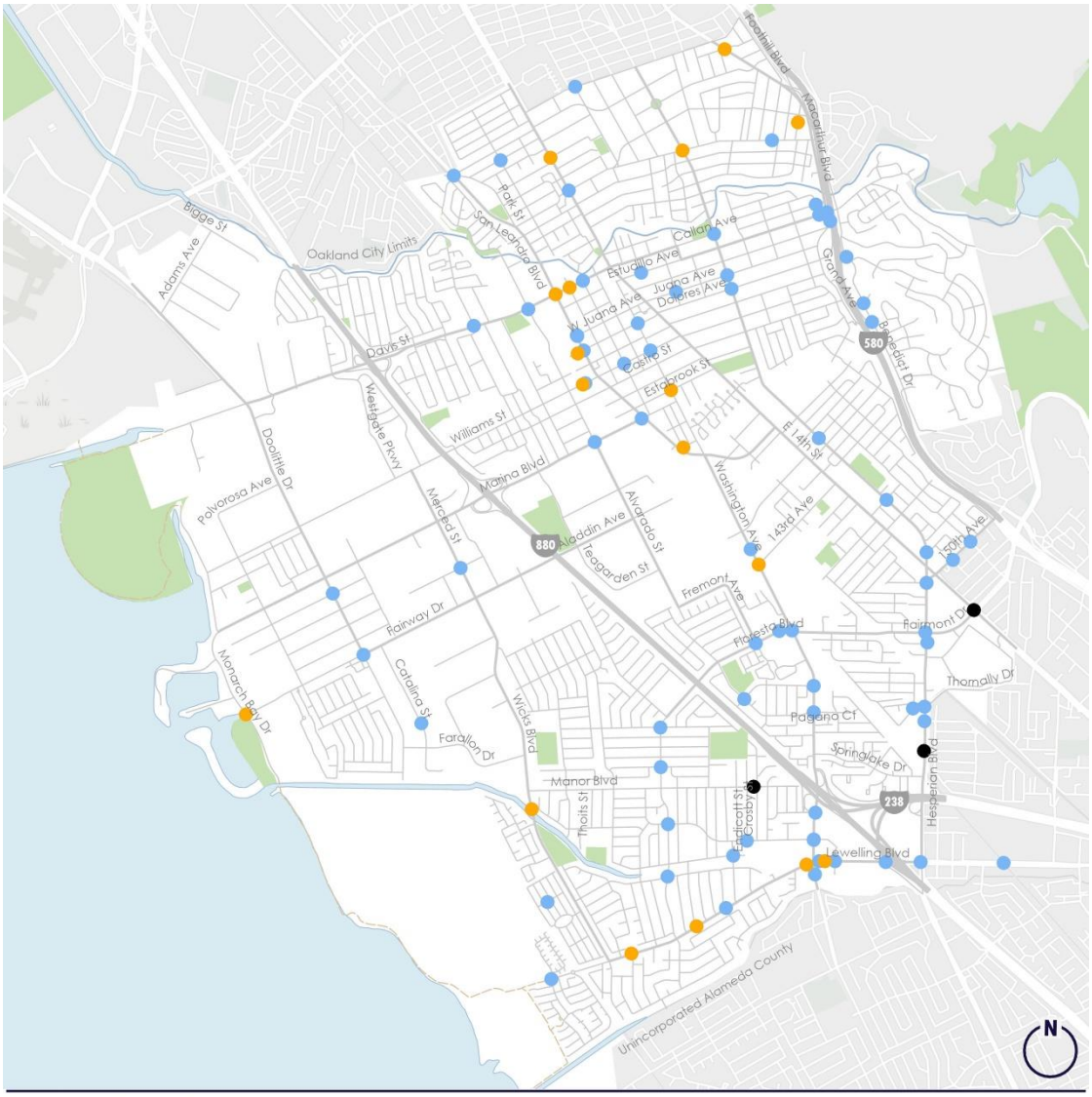


Source: Transportation Injury Management System, 2024

Vulnerable road users, including pedestrians and bicyclists, are more susceptible to fatal or severe injury collisions. Despite pedestrian-involved collisions comprising only 14% of all injury collisions between 2017 and 2021, they made up 37% of serious and fatal collisions.

There remains a considerable amount of work to be done to reduce pedestrian collisions, especially along high-speed corridors, large and complex intersections, and Downtown San Leandro. **Figure 3-4** shows pedestrian injury and fatal collisions in 2017 to 2021. During this time, there were three fatal collisions and 17 collisions that resulted in severe injury. Two of the three fatal pedestrian collisions occurred at large intersections: East 14th Street/Fairmont Drive and Hesperian Boulevard/Drew Street. Severe injury collisions typically occurred along multi-lane arterial streets with posted speed limits of 30 MPH or more, with four occurring on Lewelling Boulevard, three on San Leandro Boulevard, and two on Davis Street. There were five severe injury collisions in the downtown area, on Davis, Parrott, Williams, and Estabrook Streets.

Figure 3-4 Pedestrian Injury and Fatal Collisions



Pedestrian Collisions

Collision Severity (2017-2021)

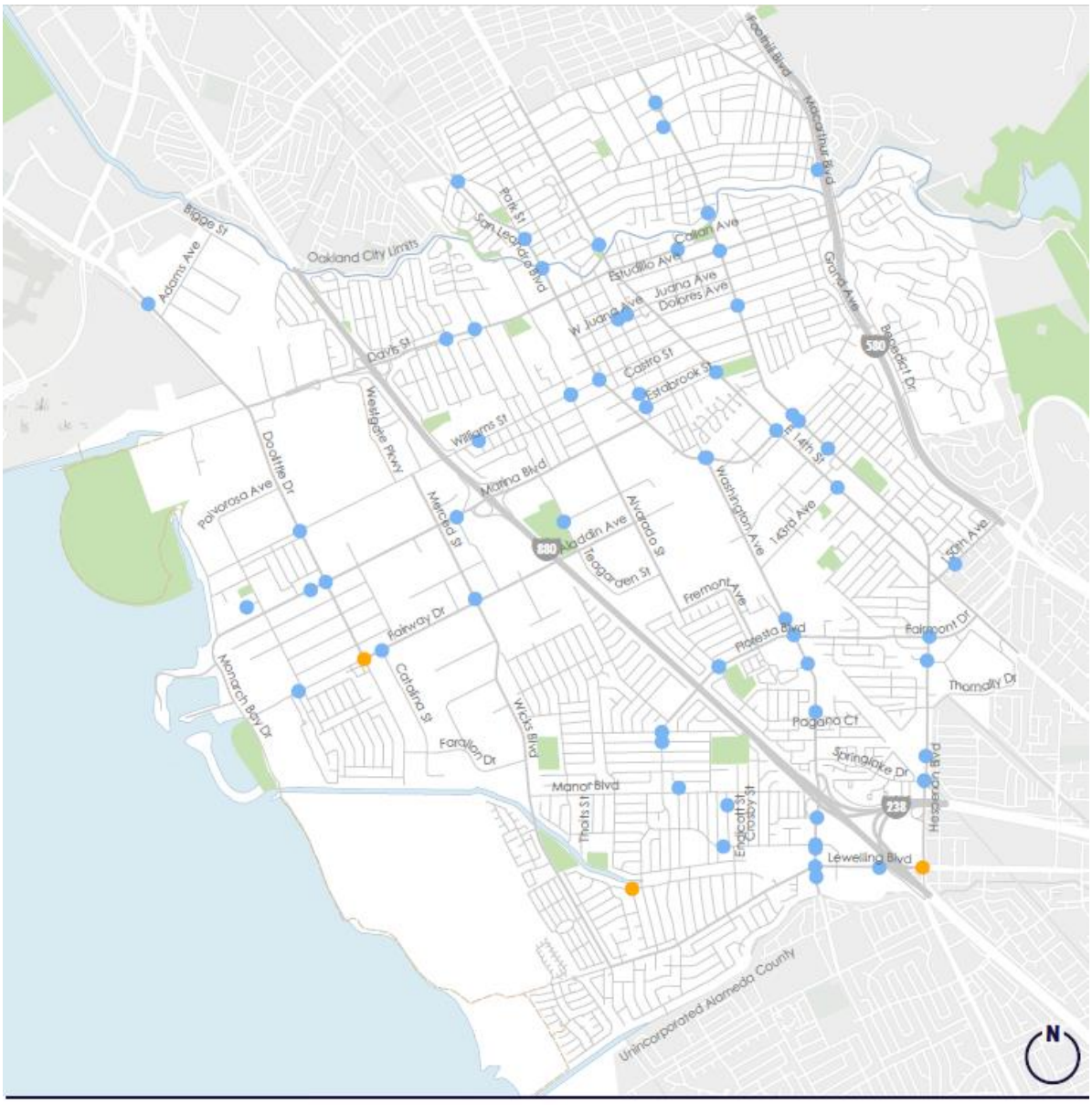
- Fatal (3)
- Severe Injury (17)
- Other Injury (79)

Source: Transportation Injury Mapping System (TIMS), 2017 - 2021

Does not include reported collisions on Caltrans-operated limited-access highways, such as I-880 and SR-238.

Figure 3-5 shows bicycle injury collisions in 2017 to 2021. During this time, three severe injury collisions occurred. Two of the severe bicycle injuries occurred on roadways with speeds above 35 MPH, specifically Doolittle Drive and Lewelling Boulevard, and occurred at intersections. There were no bicycle fatalities.

Figure 3-5 Bicycle Injury Collisions



Pedestrian Conditions

San Leandro has several types of pedestrian infrastructure, including crossing treatments such as pedestrian scrambles, pedestrian hybrid beacons, and rectangular rapid flashing beacons.

However, there are many more locations in the City where improvements are needed to enhance pedestrian comfort, safety, and accessibility. Currently, the sidewalk network is mostly complete, but many of those sidewalks have significant needs for improvements for accessibility and walking comfort. Residential sidewalks are generally too narrow (as little as 3.5 feet wide) and sometimes lack street trees that provide shade for pedestrians. Several areas also have rolled curbs that lead to vehicles parking on a portion of the sidewalk, narrowing sidewalk space even more. Sidewalks in commercial areas such as Downtown San Leandro tend to be wider (up to 9 feet wide), leading to a more comfortable walking environment.

Left to right: (1) Vehicles on residential streets typically park along a portion of the sidewalk, further narrowing the space for pedestrians. (2) Sidewalks are generally wider in commercial areas of the City and complete with more pedestrian facilities like street trees and pedestrian-scale lighting. (3) The City upgrades approximately 90 curb ramps per year as part of the ADA Transition Plan, with over 1,300 ramps upgraded since 2010.

Pedestrian Challenges and Opportunities

Pedestrians in San Leandro experience several challenges that present opportunities for improvement to the walking environment in the City.

- **Rolled Curbs:** Rolled curbs are gradually sloped and mountable, enabling drivers to park with their wheels on the sidewalk. This can narrow or block the sidewalk and create barriers for pedestrians, especially for people using wheelchairs. While parking on rolled curbs is prohibited in San Leandro, sidewalks should be constructed or rehabilitated with vertical curbs to deter this behavior.
- **Unenhanced, Uncontrolled Crossings:** Uncontrolled crossings lack a stop sign, signal, or other traffic control device and are therefore more dangerous for pedestrians. Uncontrolled crossings require enhancements such as striping and signage to better protect pedestrians who are crossing.
- **Street Lighting:** The 2022 LRSP identified collisions occurring at night with no streetlights as representing 25% of collisions with fatalities or serious injuries and 11% of all pedestrian collisions. Lighting should be installed on all San Leandro streets to improve visibility and prevent accidents.
- **Unsignalized Intersections:** The 2022 LRSP noted that 20% of collisions with fatalities or serious injuries and 17% of all pedestrian collisions occurred at unsignalized intersections on streets with speed limits of 30 MPH or above. All intersections on high-speed streets should have traffic signals.


From left to right: (1) A car parked on a rolled curb in San Leandro. (2) An unenhanced, uncontrolled intersection at Fargo Ave & Swenson Street in San Leandro. (3) An example of pedestrian-scale street lighting on San Leandro Boulevard.

Pedestrian Facilities

This section describes pedestrian facilities in the City of San Leandro.

Crosswalks

Marked crosswalks feature striping and other enhancements to delineate a street crossing for pedestrians. Two types of marked crosswalks include controlled and uncontrolled.

Controlled crosswalks are located at stop-signs and traffic signals. They provide the most protection for pedestrians since they require drivers to come to a complete stop for people in the crosswalk. Opportunities for enhancement include adding pedestrian countdowns, providing the walk phase during each signal cycle without having to press the push button, prohibiting right turns on red, and automatically giving pedestrians a leading pedestrian interval at crossings. Intersections with high pedestrian volumes may also be upgraded to include a "pedestrian scramble" phase that improves safety by dedicating time exclusively for pedestrians to cross.

Uncontrolled crosswalks are types of crosswalks not located at stop-signs or traffic signals. In some cases, uncontrolled crosswalks are found in the middle of a larger block to provide quicker access between streets. Crossing safety can be improved at uncontrolled crosswalks by installing pedestrian hybrid beacons or rectangular rapid flashing beacons that alert drivers when there are pedestrians crossing.

San Leandro has implemented crosswalk enhancements at many locations, with focus improvements near schools, business districts, and parks. Examples include at Bancroft Avenue & Haas Avenue, Doolittle Drive & Bermuda Avenue, and E. 14th Street & Sunnyside Drive. However, many locations still need enhancement for safety and access.

Traffic Signals

Traffic signals regulate the flow of traffic and minimize conflicts between pedestrians and vehicles at intersections. By allocating dedicated phases in signal cycles, traffic signals prioritize pedestrian crossings, indicating when it is safe to cross and when to wait. Modern traffic signals are also equipped with advanced safety and accessibility features such as pedestrian signals, countdown timers, pedestrian push buttons, and audible signals for the visually impaired.

Some signalized intsersections, like the pedestrian "scramble" at 136th Avenue, have been updated to prioritize pedestrian movement. Others still have permitted turns or lack pedestrian signal heads. In general, not all signals will receive protected turns, except for at intersections with high potential for conflicts. However, per the California MUTCD, all signals must have pedestrian signal heads with countdowns.

Rectangular Rapid Flashing Beacons (RRFBs)

Rectangular rapid flashing beacons (RRFBs) enhance pedestrian safety at crossings by alerting drivers when pedestrians are crossing or waiting to cross the street. RRFBs consist of two, rectangular-shaped yellow indications that flash with an alternating high frequency when activated, increasing driver awareness of pedestrians. RRFBs are applicable to many types of pedestrian crossings but are particularly effective at crossings with lower speeds and traffic volumes.

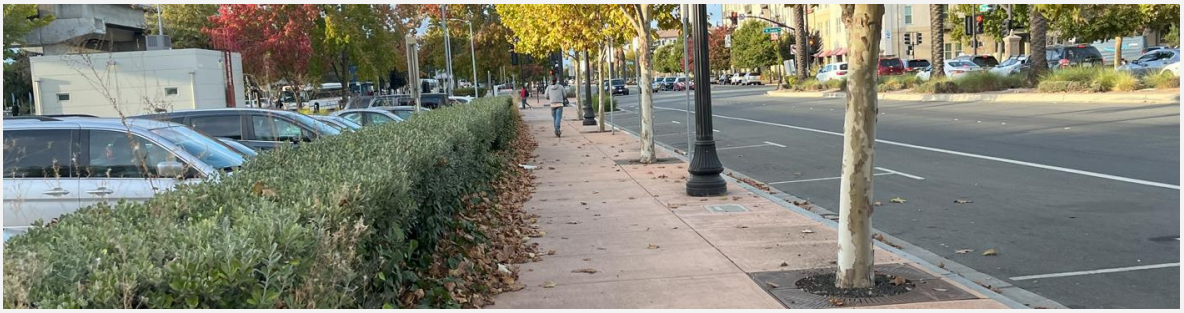
The City has installed RRFBs at many uncontrolled crosswalks, especially near schools and businesses.

Pedestrian Hybrid Beacons

Pedestrian hybrid beacons (PHB) are traffic control signalization devices that enhance pedestrian safety at mid-block crossings or intersections. These beacons consist of overhead flashing lights on mast arms that flash in a sequence when activated via a pedestrian push button. The signal indicates when drivers must slow down (yellow), stop for crossing pedestrians (solid red), and proceed once pedestrians have crossed safely (flashing red). Pedestrian hybrid beacons are more appropriate at multi-lane or high-speed crossing locations because they fully stop traffic.

PHBs enhance a crosswalk at Davis Street & Carpentier Street in Downtown San Leandro.

Sidewalks



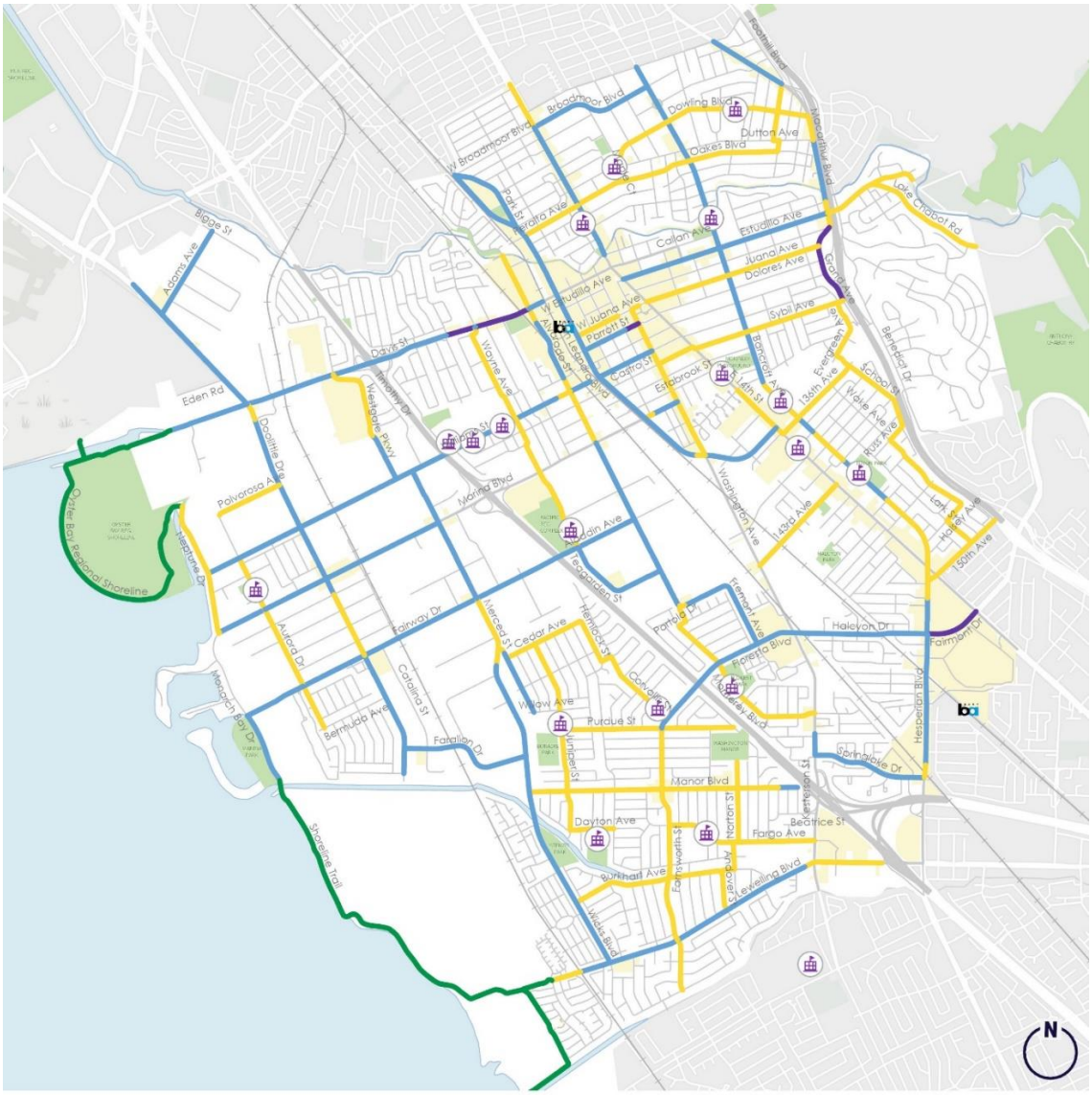
Sidewalks are paved areas immediately adjacent to the vehicular right-of-way for the exclusive use of pedestrians and may be used by people riding bicycles unless prohibited. Existing sidewalks in the City may include concrete, asphalt, or decomposed granite surfaces. Unlike shared-use paths, they are directly adjacent to the main right-of-way.

While some sidewalks like the one pictured on San Leandro Boulevard are wide and smooth, others have ADA deficiencies, rolled curbs, tree root uplift, or other barriers. For example, residential sidewalks are typically too narrow and lack street trees that provide shade.

Bicycling Conditions

The current bikeway network in San Leandro spans nearly 57 miles. Over 90% of the current network consists of bike routes and bike lanes, which are usually not suitable for all ages and abilities. Bike routes lack dedicated space for bicyclists, while bike lanes lack physical separation from vehicular traffic.

Figure 3-6 Existing Bikeway Network



Biking Issues and Opportunities

The existing bicycle network in San Leandro generally provides excellent coverage of the City but users face some safety challenges, barriers, and gaps, and there are limited opportunities for less confident riders.

San Leandro's arterial bike lanes and routes have been built out opportunistically, generally characterized by paint-only infrastructure in the form of bike lanes and shared lanes. These provide connectivity but generally do not meet guidelines for users of all ages and abilities. The intersection of numerous railroads and freeways with city streets also presents challenges for safety and accessibility as these intersections create complex high-speed and high-volume environments that are difficult to navigate. Existing bike routes often run along streets with speeds exceeding 25 mph. Additionally, there are incomplete bike networks, including surrounding schools.

Bicyclists in San Leandro face several key issues that present opportunities for improvement:

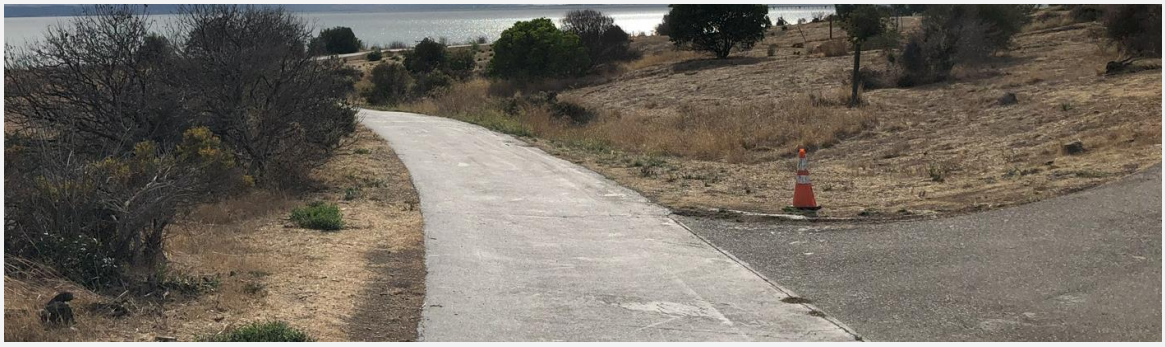
- **All Ages and Abilities Facilities:** San Leandro's bicycle network spans over 50 miles. Of this network, only 5.8 miles are shared-use paths or separated bikeways appropriate for users of all ages and abilities, mostly located along the Bay Trail. Much of the bike lane network is located on streets with speeds above 35 MPH where most people are not comfortable riding a bike. There are also a number of complex, large intersections in San Leandro that are difficult to navigate by bike. Bicycle facilities that provide physical separation from traffic along these corridors and intersections can help encourage people of all ages and abilities to bike for transportation.
- **School Access:** Currently, there is an incomplete bicycle and pedestrian network around schools in San Leandro, leading to accessibility and safety issues for students. Students need dedicated bicycle facilities and pedestrian infrastructure on streets adjacent to schools for safe travel. Pickups and drop-offs at schools also often occur along the frontages of school buildings, causing congestion and creating barriers for bicyclists traveling in bike lanes.
- **Regional Network Connectivity:** There is a one-mile gap in the Bay Trail network along Neptune Drive and Monarch Bay Drive. This gap in the Bay Trail negatively impacts bicyclists who use the trail for recreation and commuting and who may be exposed to additional safety risks in navigating this area. There is a key opportunity to close this gap in the regional network, creating a continuous Bay Trail facility from Oakland to San Lorenzo.

Top to bottom: (1) San Leandro High School students bike alongside traffic on Bancroft Avenue without a dedicated bicycle facility. (2) Bicyclists cross a busy intersection on Estudillo Avenue, which has an 85th percentile speed of 34 mph and lacks bicycle crossing or turning facilities. (3) Standard bike lanes run along Doolittle Drive, a street that intersects with rail tracks and frequently sees truck traffic.

Bikeway Facilities

This section describes bikeway facility types in the City of San Leandro.

Bike Paths and Shared-Use Paths (Class I)



Bike paths and shared-use paths provide a separate right-of-way for the exclusive use of bicyclists and pedestrians. They tend to have minimal cross-traffic and are often located along creeks, canals, and former rail lines. Bike paths are considered the lowest stress facilities for bicyclists and are generally suitable for all ages and abilities.

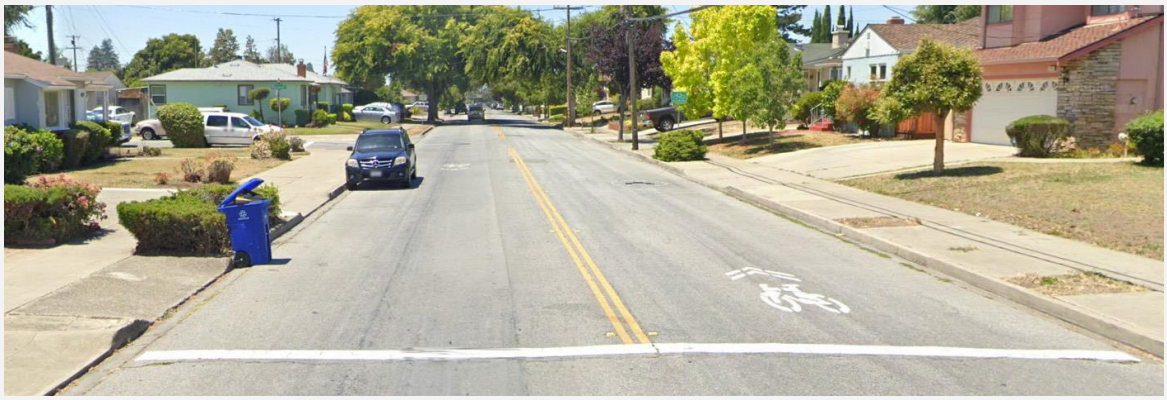
The Bay Trail is a popular resource and destination for biking, and it is currently the only shared-use path in San Leandro. In total, the Bay Trail shared-use paths span 4.7 miles long in San Leandro.

Standard Bike Lanes (Class II)

Standard bike lanes designate an exclusive space for bicyclists using pavement markings and signage. The bike lane is located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street, between the adjacent travel lane and curb, road edge, or another travel lane.

Standard bike lanes make up nearly half of all bike facilities in San Leandro, spanning a total of 26 miles across the city. While many San Leandro streets have bike lanes, gaps remain and they generally do not meet All Ages and Abilities design expectations, with higher speeds and volumes than is appropriate for children or other less experienced riders.

Bike Routes (Class III)



Bike routes are designated streets where bicyclists and automobile drivers must share the road. The routes are typically designated with signage and sharrow pavement markings, which indicate where bicyclists should position themselves on the road. Bike routes are typically used where there is not enough right-of-way to provide a dedicate or separated bike lane, or along low-volume, low-speed streets where bicyclists can comfortably share the road with automobile drivers.

In San Leandro, bike routes make up nearly 40% of all bike facilities in the city, spanning a total of 24 miles. However, bike routes in the city generally do not meet All Ages and Abilities design expectations, with higher speeds and volumes than is appropriate for children or other less experienced riders.

Separated Bikeways (Class IV)

Separated bikeways, often referred to as “separated bike lanes” or “cycle tracks”, provide dedicated and separated space for bicycling making them an attractive facility for riders of all ages and abilities. They are always physically separated from motor vehicle travel lanes, parking lanes, and sidewalks with a vertical element, such as concrete curb. Separated bikeways may be one-way or two-way and may be at street level or at sidewalk level. If at sidewalk level, a curb or median separates it from motor traffic, while different pavement color and cane-detectable edge separates it from the sidewalk. If at street level, it can be separated from motor traffic by raised medians or quick build materials, such as bollards or curbs.

Davis Street, Fairmont Drive and Grand Avenue are the first separated bikeways in San Leandro, spanning a mile in combined length. In the future, separated bikeways are anticipated to be a key part of San Leandro’s bicycle network.

Barriers to Walking and Biking

Bicycle and pedestrian networks in San Leandro currently present several obstacles that hinder accessibility to key destinations for users of all ages and abilities.

- **Freeways:** I-880 interchanges in San Leandro create safety and connectivity challenges for those biking and walking. Several improvements for cyclists and pedestrians have already been made at the Davis Street interchange, including new signal controls and crosswalk enhancements on ramps. However, people walking and biking still face major barriers at other interchanges that are high-speed and have many conflicts. Opportunities to cross I-880 are limited as interchanges and overpasses are located at least half a mile apart.
- **Major Intersections:** Complex and large intersections, such as at Lewelling Boulevard/Washington Avenue and Davis Street/San Leandro Boulevard, are often difficult to navigate and cross, especially when combined with high speeds, conflicting turning movements, and long crossing distances.
- **High-Speed Roadways:** Several roadways have high speeds and multiple lanes, such as East 14th Street, Davis Street, and Washington Avenue, that make crossing difficult and pose safety concerns for pedestrians and bicyclists.
- **Railroads:** Multiple rail lines in the City make for limited connectivity of pedestrian and bike facilities. Gaps in pedestrian and bicycle facilities at at-grade rail crossings make for complicated and challenging crossing conditions.

I-880 interchanges experience high speeds and have limited crossing opportunities.

Complex and large intersections often make it difficult for pedestrians to cross and bicyclists to navigate.

High-speed roadways can feel uncomfortable for pedestrians and bicyclists to navigate.

Railroad crossing locations often have gaps in pedestrian and bicycle facilities.

4. Pedestrian and Bicycle Recommendations

This Plan presents pedestrian priority areas and a revised bikeway network that update the recommendations in the 2018 plan based on the latest federal, state, and regional best practices. The pedestrian priority areas represent the parts of San Leandro where pedestrian infrastructure and safety improvements for pedestrians are most needed. The bicycle network is a long-term plan for bicycle connectivity in San Leandro, with comfortable and safe access to destinations for riders of all ages and abilities.

Pedestrian Priority Areas

The pedestrian priority areas, shown in Error! Not a valid bookmark self-reference.**,** are frequented by pedestrians and therefore have high levels of need for investment in the pedestrian environment. This plan defines pedestrian priority areas as:

1/4 mile around **BART stations**

1/8 mile around **commercial areas**

1/8 mile around **parks**

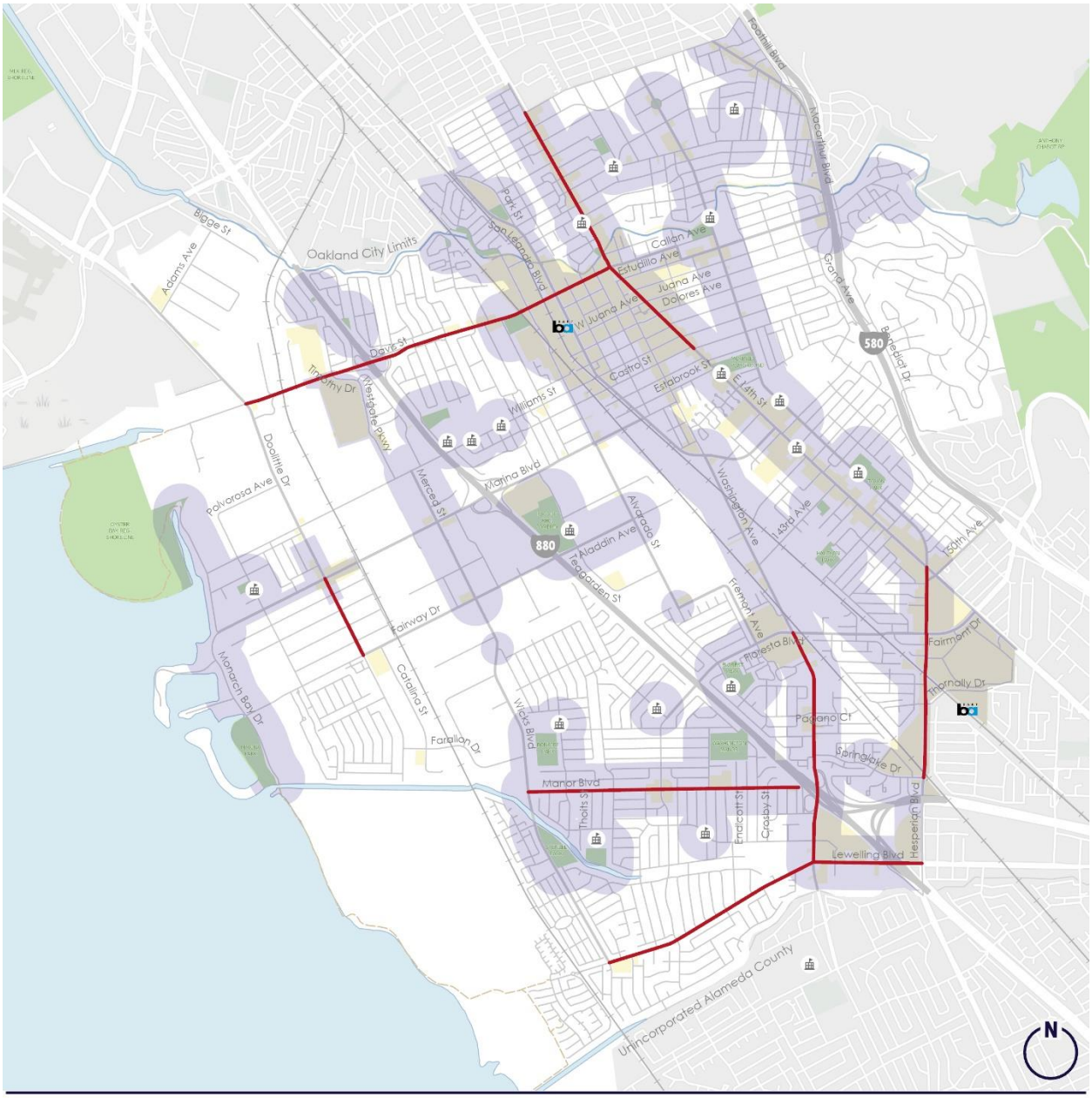
1/8 mile around **schools and senior centers**

Pedestrian priority areas have specific design expectations for high-quality pedestrian improvements and safety enhancements at intersections and on walkways, in accordance with **Bicycle and Pedestrian Design Guidelines** (pg. 7-27). These areas help to direct and prioritize City-led projects and programs as well as set expectations for developer-led projects.

The pedestrian improvement toolbox includes high-visibility crosswalks, repaved and widened sidewalks, curb ramps to provide access for those using wheelchairs or strollers, pedestrian hybrid beacons and rectangular rapid flashing beacons to signal that pedestrians are crossing, medians and bulb-outs (extensions of the sidewalk) to shorten crossings and improve visibility, and other amenities such as benches and street trees.

Pedestrian priority areas are presented along with safety priority corridors from the LRSP. These are corridors with very high safety need for people walking, even if they are not proximate to the community destinations that define pedestrian priority areas.

Figure 4-1 Pedestrian Priority Areas and Safety Priority Corridors



Bicycle Network

The proposed bicycle network, shown in **Figure 4-2** Recommended Bicycle Network , will serve riders of all ages and abilities. Once built out, this network will facilitate safer and more direct routes to destinations throughout San Leandro. **Table 4-1** shows the 63 proposed miles of all ages and abilities bikeways, including shared-use paths, separated bikeways, and bicycle boulevards.

This plan updates the bikeway recommendations in the 2018 plan, which were originally determined by selection criteria that include coverage, continuity, connectivity to important destinations, and suitability of the bikeway type based on roadway characteristics (e.g. traffic speed, volume of traffic, roadway width). In general, the 2018 Plan set the routing of the bikeways, while this Plan updates the facility types based on latest best practice.

Table 4-1 Proposed Bicycle Network by Bikeway Type

Bikeway Type	Existing Network Mileage	Existing + Proposed Network Mileage
Shared Use Path	4.7 miles	11.3 miles
Bike Lane	26.1 miles	9.9 miles
Bike Route/Boulevard	24.5 miles (bike route)	17.3 miles (bicycle boulevard)
Separated Bikeway	1.1 miles	34.5 miles
Total	**56.4 miles**	**73.0 miles**

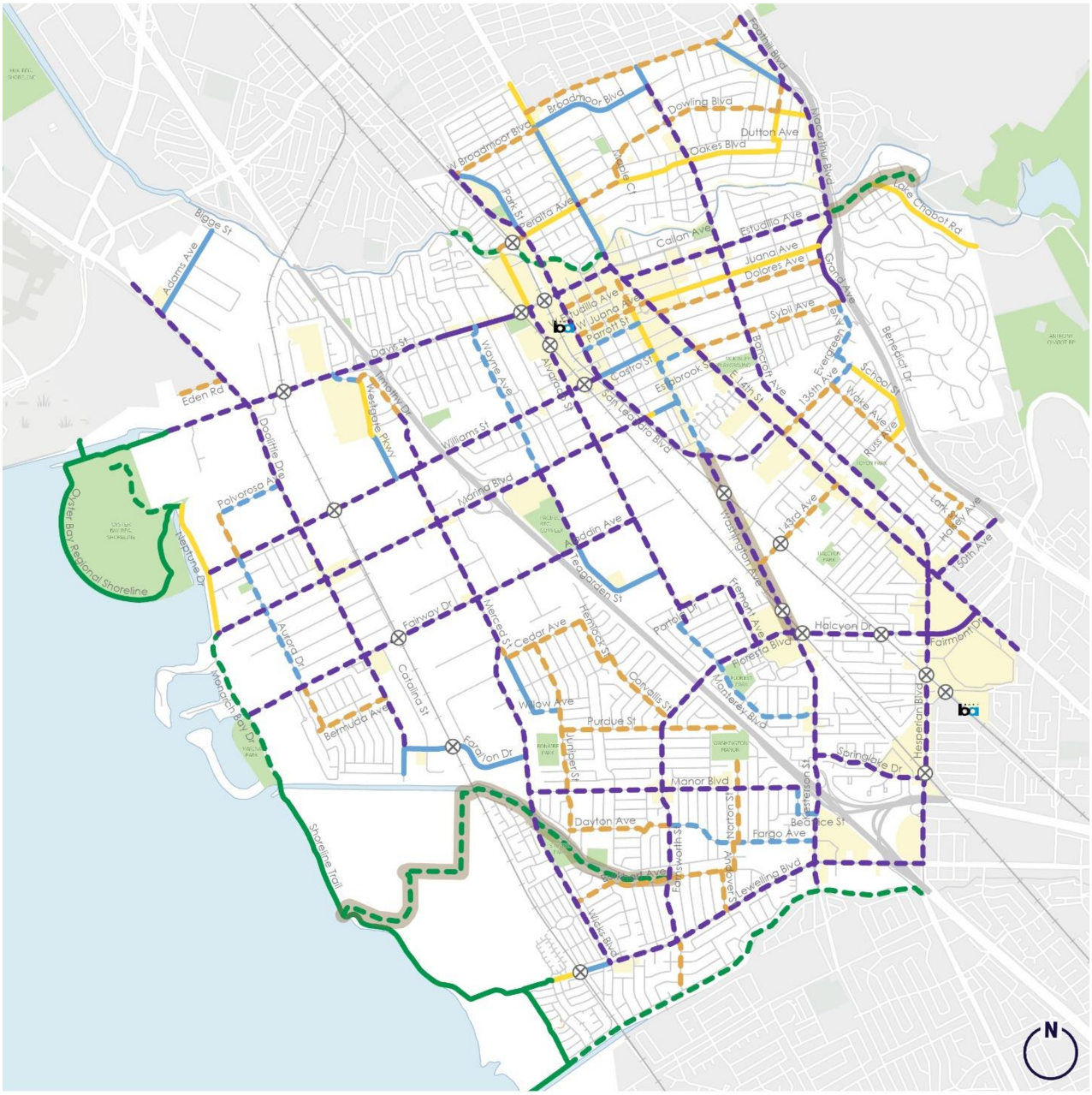
The current proposed network differs from the previous 2018 Plan recommendations by focusing on implementing All Ages and Abilities bikeways throughout the network. In many places where bike routes or bike lanes were previously recommended, the current plan now recommends separated bikeways due to high vehicle speeds and volumes on those corridors.

What is the difference between a bike route and a bicycle boulevard?

From top to bottom: (1) A bicycle boulevard on Virginia Street in Berkeley. (2) A bicycle route on 150th Avenue in San Leandro.

On bike routes and bicycle boulevards, people biking share the lane with drivers. So, what's the difference? On a bicycle boulevard, significant traffic calming or even traffic diversion lowers vehicle driving speeds and volumes to levels that are low enough to support comfortable biking for people of all ages and abilities, including children, families, and older adults. On corridors with bicycle boulevard recommendations in this 2024 BPMP update, traffic calming design should target 20 MPH speeds and volumes under 2,000 vehicles per day.

Figure 4-2 Recommended Bicycle Network



Bike Facilities

Recommended Bikeways
- Shared Use Path
- Bike Lane
- Bike Boulevard
- Separated Bikeway

Existing Bikeways
- Shared Use Path
- Bike Lane
- Bike Route
- Separated Bikeway

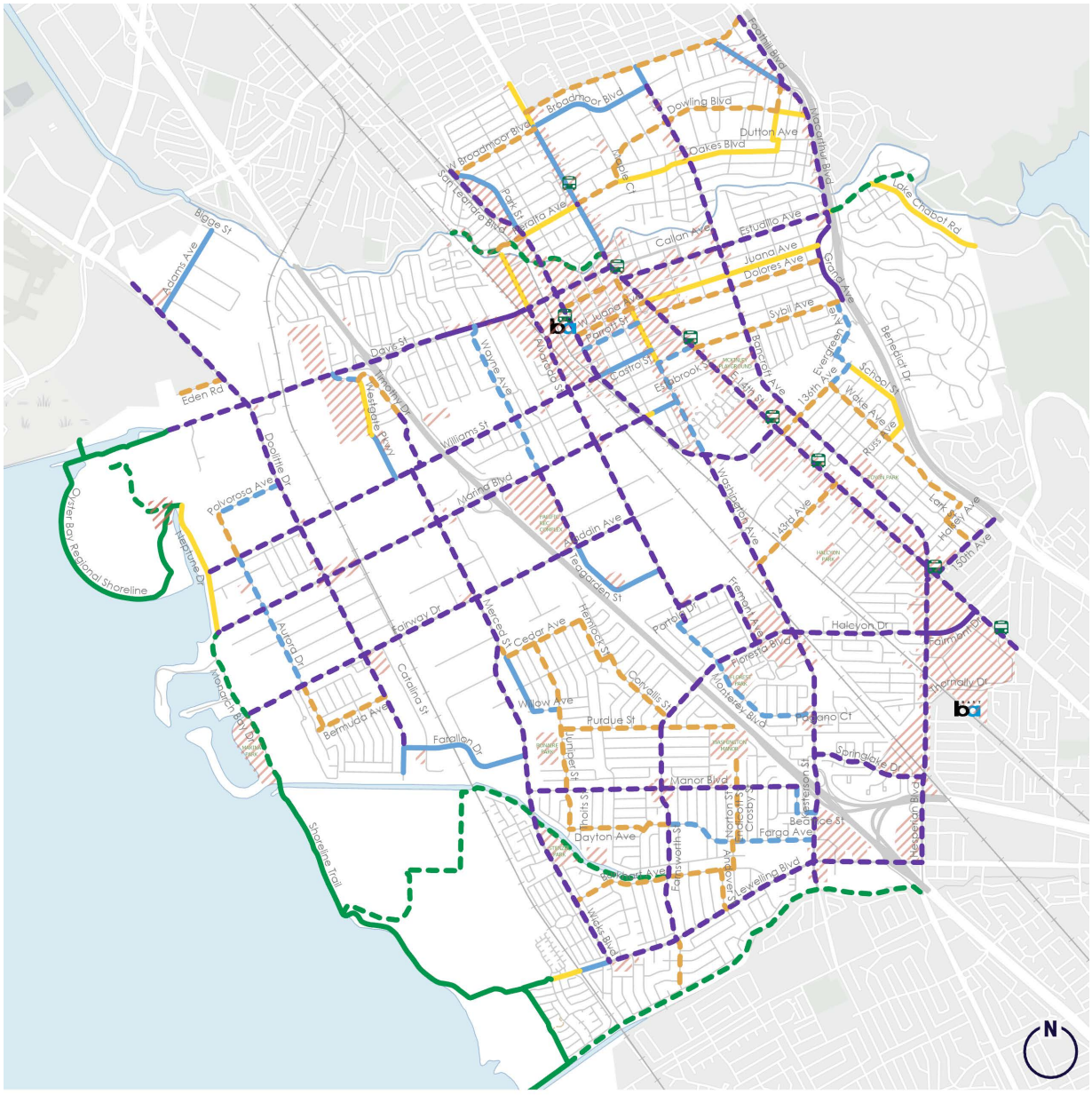
- Study Projects
- At-Grade Railroad Crossings
- BART Station
- Railroad
- Commercial Areas
- Parks

86%
of bikeways (63.1 miles) are suitable for all ages and abilities

Bicycle Parking

Bicycle parking is an important consideration that influences whether and where individuals decide to bike. Shown in **Figure 4-3**, additional bike parking facilities are proposed throughout San Leandro, including near bus rapid transit stops, parks, and commercial areas.

Figure 4-3 Existing and Recommended Bicycle Parking



5. Support Programs

Along with improving bicycle and pedestrian infrastructure, the City of San Leandro supports active transportation through ongoing programs. **Table 5-1** shows active transportation support programs, both those that are already existing in San Leandro and those recommended for adoption. Traditionally, these programs have been organized into five categories:

- Encouragement activities, such as Walk and Roll to School Days, aim to build enthusiasm and provide incentives to try walking or bicycling instead of driving.
- Educational programming, such as learn-to-ride classes, teach new riders the basics of bicycling including safety, mechanics, and theft prevention.
- Engineering projects implement improvements to the physical environment, such as new buffered bike lanes or pedestrian crossing beacons.
- Equity initiatives, such as citywide wayfinding and distributing bicycle safety gear at no-cost, ensure that active transportation plans, programs, and projects benefit all demographic groups and geographies.
- Evaluation efforts, such as strategically placed bicycle counters or annual reviews of collision data, are necessary to understand existing pre-project conditions and assess the efficacy of projects and programs.

Safe System Approach

The Safe System approach, adopted by the U.S. Department of Transportation, Caltrans, and the Alameda County Transportation Commission, is a comprehensive approach to preventing roadway collisions and minimizing the risk of fatalities and serious injuries when collisions do occur. It is based on the principles that humans inevitably make mistakes and that human bodies have physical limits to tolerate crash impacts. As shown in **Figure 5-1** Safe System Approach, the five elements of Safe System are safe road users, safe vehicles, safe speeds, safe roads, and post-crash care.

Figure 5-1 Safe System Approach

Source: FHWA.

Active transportation programs in San Leandro have been realigned with the Safe System approach. While the Five Es are a helpful organizing principle, the Safe System approach is a newer framework that helps to shape the priorities and actions within the Es. For example, enforcement activities and educational programs should focus on the behaviors, locations, and target audiences most linked to death and serious injury.

Table 5-1 Support Programs

Action	Lead	Recommendation	Category					Status	
			Equity	Engineering	Encouragement	Education	Evaluation	Opportunity	Existing
Bike racks and lockers in key areas	Public Works (Engineering & Transportation Division)	Require bike racks and lockers at new developments, especially nonresidential and multifamily buildings. In existing areas of high bike activity, install new U-racks and BikeLink lockers compliant with APBP Bike Parking Guidelines, 2nd edition.	✓	✓	✓			✓	
Other end-of-trip facilities	Public Works (Engineering & Transportation Division)	Provide a variety of amenities along the bicycle network to serve as end-of-trip facilities such as self-repair stations, public showering and changing facilities, lockers, and long-term bicycle storage.	✓	✓	✓			✓	
Bicycle gear giveaway program	Public Works	Offer free or discounted helmets, lights, and other bicycle equipment.	✓		✓			✓	
Bikeshare program	Public Works (Engineering & Transportation Division)	Assess the feasibility of and implement a bike share program with a network of docking stations.	✓	✓	✓			✓	
Bikes allowed on buses	AC Transit	Transit riders can load their bicycles onto AC Transit buses. There are size restrictions (no tandems), and space on the racks at the front of the buses is first-come, first-served.			✓				✓
Citywide wayfinding (esp. onto lower-stress routes)	Public Works (Engineering & Transportation Division)	Establish a citywide wayfinding program for biking and walking paths (e.g. signage with maps showing routing to key destinations) to support navigation.	✓	✓	✓			✓	

Action	Lead	Recommendation	Category					Status	
			Equity	Engineering	Encouragement	Education	Evaluation	Opportunity	Existing
Create interactive online bike and trails maps	Public Information Officer, City Manager	Develop interactive web maps of San Leandro's low-stress biking and trails networks.			✓	✓		✓	
Track and forecast bicycle ridership	Public Works (Engineering & Transportation Division)	Strategically place automated bicycle counters around the city and conduct short-duration counts as well as observational counts and surveys to supplement the data. Collect data on bicycle ridership and set a target for the number of bicycle users in San Leandro by a specific date and track progress towards this goal.					✓		✓
Conduct pre/post studies of active transportation projects	Public Works (Engineering & Transportation Division)	Ensure that pre and post studies of bike and walk projects in San Leandro are carried out to identify the feasibility and performance of a particular project.					✓		✓
Adopt a citywide Vision Zero/ roadway safety plan and policy	Public Works (Engineering & Transportation Division)	Building off on this Safe System Approach-guided Bicycle and Pedestrian Master Plan, create a citywide Vision Zero plan and collision reduction goal to further enshrine prioritizing safety of vulnerable road users, such as bicyclists, in City policy.	✓	✓			✓	✓	
Neighborhood Traffic Calming Program	Public Works (Engineering & Transportation Division)	Continue to manage the Neighborhood Traffic Calming Program, which employs traffic calming devices to reduce vehicle speeds and cut-through traffic. This increases comfort and safety for bicyclists and pedestrians.		✓	✓				✓

Action	Lead	Recommendation	Category					Status	
			Equity	Engineering	Encouragement	Education	Evaluation	Opportunity	Existing
Annual collision reports	Public Works (Engineering & Transportation Division), Police Department	Publish annual bicycle collision reports using data from the San Leandro Police Department to provide the current state of bicycle safety in the City.					✓	✓	
Develop active transportation-focused communications materials to encourage participation and advertise programs	Public Works	Create active transportation-oriented multimedia communications materials to educate residents on the health and environmental benefits of biking and walking.			✓	✓		✓	
Hold Open Streets events/ bicycle and pedestrian takeovers	Public Information Officer, community organizations	Host events that celebrate and promote bicycling and walking in neighborhoods throughout the City. This could include Open Streets events, where designated roads are closed to motorized traffic on specific days, allowing people to walk, bike, and enjoy a car-free environment.			✓			✓	
Tactical urbanism projects	Public Works (Engineering & Transportation Division), community organizations	Support short-term, community-led, scalable projects on San Leandro streets to test active transportation improvements.		✓			✓		
Bike to Anywhere Day and other events	Public Works, San Leandro Unified School District, community organizations	Continue activities and programming related to events such as Bike Month, Bike to Work Day, Bike to School Day, Walk a Child to School Day, and Walk and Roll to School Days.			✓				✓

Action	Lead	Recommendation	Category					Status	
			Equity	Engineering	Encouragement	Education	Evaluation	Opportunity	Existing
Bicycle education in primary and secondary schools	Public Works, San Leandro Unified School District	Collaborate with San Leandro Unified School District to ensure that students receive education on biking and walking (e.g. school workshops, traffic rodeos, safety assemblies) and that children have the opportunity to learn how to ride a bike without having to own one.	✓		✓	✓		✓	
Safe Routes to School	Public Works, San Leandro Unified School District	The Safe Routes to School (SRTS) program is a collaboration between Alameda County, the City of San Leandro and the San Leandro Unified School District to provide students and parents with bicycle, pedestrian, and traffic safety education around schools. SRTS also provides recommendations and programs to execute safety goals.	✓	✓	✓		✓		✓
Biking and walking safety assessments around schools	Public Works, San Leandro Unified School District, Alameda County	In collaboration with Alameda County's SRTS program, perform assessments around schools to identify barriers and challenges for students walking and biking to school. Assessments can be carried out through programs such as UC Berkeley SafeTrec's Complete Streets Safety Assessment (CSSA).	✓	✓			✓	✓	
Offer bicycle skills classes	Public Works, community organizations including Bike East Bay	Partner with community organizations on bike classes for adults, families, and seniors in San Leandro to expand educational	✓			✓		✓	✓

Action	Lead	Recommendation	Category					Status	
			Equity	Engineering	Encouragement	Education	Evaluation	Opportunity	Existing
		opportunities. Programs may take the form of on- or off-bike safety trainings, bike mechanics classes, theft prevention workshops, learn-to-ride classes, and more.							
Increase partnership with bike orgs and bike shops	Public Works, community organizations	Cultivate relationships with local bicycle shops and community organizations such as Bike East Bay to strengthen San Leandro's bike culture and support in advancing bike projects. Support opportunities for free or low-cost bicycle repairs such as with the Alameda County BikeMobile, as well as bicycle maintenance education and mentor programs. Encourage the development of non-profit community bicycle shops and repair services in San Leandro.	✓		✓			✓	
Bike Friendly Business program	Public Works	Establish a citywide bicycle friendly business program through the League of American Bicyclists' Bicycle Friendly America program to encourage customers and employees to cycle.	✓		✓			✓	
Program for bike lane blocking education	Public Works (Engineering & Transportation Division)	Establish a program to ensure California bicycle laws are adhered to, particularly for ensuring bicycle lanes remain free of barriers, especially around schools.		✓		✓		✓	
Active transportation liaison/ coordinator	Public Works, Police Department	Appoint a staff person to coordinate with the police department on focusing traffic enforcement on unsafe speeds and other violation			✓			✓	

Action	Lead	Recommendation	Category					Status	
			Equity	Engineering	Encouragement	Education	Evaluation	Opportunity	Existing
		categories with the largest impact on killed and severe injury collisions.							
Post rules/ etiquette on shared-use paths and trails	Public Works (Engineering & Transportation Division)	Educate users on sharing space, passing, and yielding on shared-use paths, which are designed for travel by a variety of nonmotorized users, including bicyclists, pedestrians, skaters, joggers, and others.				✓		✓	
PD-led program to conduct bike and pedestrian safety activities	Police Department	Establish a bicycle patrol program led by PD. This bicycle patrol program will conduct safety activities and identify and educate road users that are engaging in bad behavior.				✓		✓	
Diversion programs for bicyclists and drivers in lieu of tickets	Police Department	Implement a program in collaboration to improve awareness of the safety needs of all roadway users. This may include educational materials on bicycle traffic laws and tips for safe driving, biking, and walking.	✓			✓		✓	
Hold quarterly BPAC meetings	BPAC, City Council	The mission of the Bicycle and Pedestrian Advisory Committee (BPAC) is to provide input on the Bicycle and Pedestrian Master Plan and support City staff in executing the Plan, creating an annual action plan, and monitoring progress.		✓			✓		✓
Hold monthly Facilities & Transportation Committee meetings	BPAC, City Council	The City's Facilities & Transportation Committee meets monthly to discuss transportation issues and provide recommendations to the Council.		✓			✓		✓

6. Implementation

Implementing the Plan will require prioritizing key projects, devising implementation strategies, and securing funding from local, state, and federal sources. This Plan chapter summarizes priority projects, cost estimates for project types, and potential funding sources for infrastructure project implementation.

Prioritization

Recognizing that there are limited financial and staff resources that can be devoted to the bikeway facility and pedestrian improvement projects, it is necessary to establish a system for prioritizing among the projects to determine the most effective use of available resources.

The methodology used to prioritize projects was updated from the 2018 plan based on input from City staff, BPAC, and current best practices. Pedestrian intersections and bikeway corridors were scored and ranked according to the following criteria:

Collision History

Collisions involving pedestrians or bicyclists, 2017 to 2021

Community Input

Comments on web map of bikeway and pedestrian recommendations

Community Destinations

Proximity to schools, parks, BART stations and bus stops, commercial areas, and senior centers

Within Equity Priority Community (EPC)

Proximity to census tracts designated as underserved and overburdened by the Metropolitan Transportation Commission

Within Priority Development Area (PDA)

Proximity to areas identified for development and future growth by the Metropolitan Transportation Commission

The corridors with high-priority bicycle projects and pedestrian intersection improvements are shown in **The priority** corridors that are in progress, summarized in **Table 6-1**, include projects that have been studied, are currently underway, or have some portions complete. The table indicates partner agencies and projects that are described in further detail later in this chapter. Detailed cutsheets for projects that reference the LRSP are presented in **Appendix D**.

Table 6-1 and **Table 6-2**. A full list of project locations and their scoring criteria are available in **Appendix B** for use in project development. Safe Routes to School projects previously recommended by the Alameda County Transportation Commission are also included in the full project list in **Appendix B**. For all projects, detailed design for pedestrian and bicycle facilities will be guided by the design guidelines provided in **Appendix A**.

The priority corridors that are in progress, summarized in **Table 6-1**, include projects that have been studied, are currently underway, or have some portions complete. The table indicates partner agencies and projects that are described in further detail later in this chapter. Detailed cutsheets for projects that reference the LRSP are presented in **Appendix D.**

Table 6-1 Priority Corridors in Progress

Corridor	Lead Agency	Bikeway Type	Pedestrian Priority Intersections	Status
San Leandro Creek Trail	City of San Leandro	Shared Use Path	n/a	Study complete
Davis Street	Caltrans	Separated Bikeway	San Leandro Boulevard, E. 14th Street - Signalized	Partially complete
East 14th Street	Alameda CTC	Separated Bikeway	138th Ave, Joaquin Ave- Signalized 141st Ave, Stoakes Ave- Uncontrolled	In progress
Bancroft Avenue	City of San Leandro	Separated Bikeway	Recommendations per Crosstown Corridors Study	Crosstown Corridors Study complete
Estudillo Avenue	City of San Leandro	Separated Bikeway	E. 14th, Bancroft Ave- Signalized Santa Rosa Street- Uncontrolled	In progress
Hesperian Boulevard	City of San Leandro	Separated Bikeway	Recommendations per LRSP	In progress
Lewelling Boulevard	City of San Leandro	Separated Bikeway	Recommendations per LRSP	In progress
San Leandro Boulevard	Alameda CTC	Separated Bikeway	See East Bay Greenway	In progress – East Bay Greenway
Williams Street	City of San Leandro	Separated Bikeway, Bike Lane	Recommendations per Crosstown Corridors Study	Crosstown Corridors Study complete

New priority corridors, summarized in **Table 6-2** are recommended projects that are not yet in progress. The new priority corridor projects will be led by the City of San Leandro. The tradeoffs presented in **Table 6-2** reflect the assumed implementation strategy for the recommended project based on available street width. All projects will undergo detailed planning and community outreach processes to determine the specific design, tradeoffs, and implementation strategy.

Table 6-2 New Priority Corridors

Corridor	Bikeway Type	Pedestrian Priority Intersections	Potential Tradeoffs for Further Study
150th Avenue	Separated Bikeway	Lark Street- Uncontrolled	Road diet
Parrott Street	Bike Lane	San Leandro Blvd- Signalized	Parking reduction
West Juana Avenue	Bike Boulevard	San Leandro Blvd-Signalized, Hays Street-Controlled	Needs traffic calming
Alvarado Street	Separated Bikeway	Davis Street, Williams Street- Signalized	Parking reduction
Washington Avenue	Separated Bikeway, Bike Lane, Bike Boulevard	Recommendations per LRSP	Road diet, parking removal, traffic calming

Corridor	Bikeway Type	Pedestrian Priority Intersections	Potential Tradeoffs for Further Study
136th Avenue	Bike Boulevard, Bike Lane	E. 14th Street- Signalized, Bancroft Ave- Signalized	Needs traffic calming
143rd Avenue	Bike Boulevard	E.14th Street, Washington Avenue- Signalized	Needs traffic calming
Doolittle Drive	Separated Bikeway	Recommendations per LRSP	Road diet
Floresta Boulevard	Separated Bikeway	Washington Avenue- Signalized Monterey Blvd- Stop Control	Road diet, parking reduction
Manor Boulevard	Separated Bikeway	Recommendations per LRSP	Parking reduction

Implementation Strategies

Implementation of the Bicycle and Pedestrian Master Plan will require interdepartmental and interagency coordination to ensure that best practices for active transportation are fully integrated into the planning, design, operation, and maintenance of San Leandro's streets. The City of San Leandro will implement bicycle and pedestrian projects using various work strategies, including ongoing municipal projects and programs.

Annual Street Paving Program

The City of San Leandro will identify and integrate bicycle and pedestrian improvements into other projects, including standard maintenance. Today, streets are currently selected for the annual rehabilitation program based on street condition, amount of traffic, and other scheduled projects. The City will include active transportation needs in this selection criteria by prioritizing segments for repaving by paving quality, equity, safety, ADA needs, and bike network implementation.

Quick-Build Projects

Quick-build projects are flexible and affordable trial projects that test street design changes and safety improvements. Quick-builds use materials like paint, signage, and pavement markings to implement projects faster and at a lower cost compared to traditional capital projects. Infrastructure originally deployed as quick-builds may be fully built out if the demonstration is shown to be successful. Examples of quick-build projects include bike lanes separated from traffic with plastic posts and painted pedestrian safety zones.

What is the status of the Crosstown Corridors Study?

The City of San Leandro's Crosstown Corridors Study was approved in 2022. The corridor plan seeks to improve safety and accessibility along Bancroft Avenue and Williams Street, two corridors with high need for active transportation, especially to schools. The study developed street designs with separated bikeways and pedestrian improvements that will better protect vulnerable road users, including students at schools along the corridors.

The City is currently seeking funding to move the project into the final design and construction phases. The Bicycle and Pedestrian Master Plan prioritization reaffirms the priority of these two corridors for future finding and staff focus.

Improvement Type	Assumptions	Unit	Cost/Unit
	signal heads for turning movements and bicyclists).		
Upgrade Intersection to Major Crossing	Includes high-visibility striping through intersection and significant signal reconfigurations (including bike detection and new signal heads for turning movements and bicyclists).	4-leg Intersection	$850,000
High-visibility Crosswalk	Assumes an average of three crossings per intersection.	Intersection	$20,000
Major Signal Modification/New Signal	Assumes 40% of signals. Assumes 50-50 split between major signal modifications (~$600k) and new signals (~$1M).	Intersection	$800,000
Minor Signal Modification	Assumes 60% of signals. Assumes no new signal pole or signal pole replacement. Assumes no moving existing signal cabinets. Primarily for new signal heads for bikes, pedestrians, and/or signal phasing or timing adjustments.	Intersection	$150,000
Directional Curb Ramps	Assumes directional crossings serving one crossing of the intersection. Includes upgrading ramps to be ADA-compliant.	Corner/Crossing Approach	$33,000
Rectangular Rapid Flashing Beacon (RRFB)	Includes removal of existing markings, restriping, and other surface treatment.	Crosswalk	$100,000
Curb Extensions/Bulb-Out	Assumes four corners in an intersection. Includes signage, markings, and surface-mounted materials.	Intersection	$370,000
Pedestrian Hybrid Beacon (PHB)	Assumes PHB on one crosswalk.	Crosswalk	$423,000
Pedestrian Refuge Island/Median Nose	Includes installation of concrete median island. Median nose assumes an existing median.	Crosswalk	$22,000
Raised Crosswalk	Assumes installation of asphalt raised hump wide enough to accommodate a marked crosswalk and approach ramps.	Crosswalk	$66,000
Pedestrian-Scale Lighting	Assumes 100' luminaire spacing. Assume $25,000 per luminaire. Varies by quality	Mile	$1,320,000

Capital Projects

Some corridors with high levels of design complexity, like the Bancroft Avenue and Williams Street Crosstown Corridors, require higher design and construction investments for streetscape elements, signal upgrades, and concrete elements for separated bikeways and pedestrian enhancements. The study projects, shown in **Figure 4-2**, require engineering study; these projects include the separated bikeway on Washington Avenue at the railroad crossing, the shared-use path on upper Estudillo Avenue, and the shared-use path from Wicks Boulevard to the Bay Trail. These projects will advance over longer periods of time, with support from grant funding and capital investment. The grant sources listed below summarize opportunities to pursue funding to implement major projects using capital funding.

Partner Agency-Led Projects

Some priority projects will be completed through ongoing projects, led by other agencies. These projects will require coordination to complete, including joint-planning and data-sharing. The recommendations in this plan align with these projects.

Bay Fair Station Access Plan: In collaboration with BART, the City of San Leandro is preparing to conduct a focused transportation plan for the Bay Fair BART station area. This plan will result in more specific bicycle and pedestrian recommendations for the Bay Fair transit-oriented development. San Leandro Public Works will continue to coordinate with the Planning department and BART to incorporate recommendations from the specific plan into future bicycle and pedestrian projects.

BART Bicycle Preferred Path of Travel Plan: This BART project aims to improve intuitive, easy access to and from BART stations by bicycle. The plan focuses on addressing connectivity gaps for bicyclists in the areas between street bikeways at the edges of BART property and BART bicycle parking and station platforms. The plan will develop site-specific recommendations and bikeway concepts for both San Leandro and Bay Fair BART stations.

East Bay Greenway: Led by the Alameda CTC, the East Bay Greenway is a planned 30-mile bicycle facility that will link BART stations from Lake Merritt BART station in Oakland to South Hayward BART station. The Greenway will consist of off-street trails and on-street separated bikeways, with the aim of improving safety, increasing multimodal connectivity along the BART, and serving commercial areas. In San Leandro, the East Bay Greenway project will construct separated bikeways and pedestrian enhancements on San Leandro Boulevard and E. 14th Street south of San Leandro Boulevard.

San Lorenzo Creekway: This project will build a multi-use trail for biking and walking using the existing right-of-way along the creek. Extending from the Bay Trail in San Lorenzo to Don Castro Recreation Area in Castro Valley, the trail will connect communities in San Leandro, San Lorenzo, Ashland, Cherryland, Hayward, and Castro Valley. The Hayward Area Recreation District (HARD) is the lead agency on this project.

Cost Estimates

The following tables present estimated costs for the bicycle facilities and pedestrian improvements recommended in this Plan. These are high-level planning estimates that include capital costs and not maintenance costs.

Table 6-3 shows per mile cost estimates for bicycle facility types and total estimated costs for building out the bicycle network.

Table 6-4 shows cost estimates for pedestrian improvements, including high-visibility crosswalks, lighting, crossing beacons, signal modifications, curb ramps, and other intersection treatments.

Table 6-3 Unit Costs for Bicycle Facilities

Improvement Type	Assumptions	Cost/Mile	Proposed Network Mileage	Total Costs
Shared-Use Paths	Asphalt path (10' path + 2' shoulder), with landscaping and pedestrian-scale lighting. Does not include signal modifications (see below for protected intersection costs).	$4,800,000	11.3 miles	$54,240,000
Bike Lanes	Includes bike lane striping, wayfinding signage, green conflict zones, and two-stage turn boxes. Does not include signal modifications (see below for protected intersection costs).	$260,000	9.9 miles	$2,574,000
Bike Boulevards	Includes green-backed sharrows, wayfinding signage, and speed humps. Assumes up to four intersections with signal modifications.	$1,400,000	17.3 miles	$24,220,000
Separated Bikeways	In roadway separated bikeway with 4' concrete buffers, wayfinding signage, and green conflict zones. Assumes up to four protected intersections with major signal modifications.	$10,300,000	34.5 miles	$355,350,000

Table 6-4 Unit Costs for Pedestrian Facilities

Improvement Type	Assumptions	Unit	Cost/Unit
Sidewalk	Assumes 6' concrete sidewalk with 4' landscaped buffer, on one side of the roadway.	Mile	$7,000,000
Upgrade Intersection to Protected Intersection	Includes high-visibility striping, raised curb extensions and aprons, ADA-accessible curb ramps, and significant signal reconfigurations (including bike detection and new	4-leg Intersection	$1,400,000

Improvement Type	Assumptions	Unit	Cost/Unit
	and design of light. Distance between streetlight varies by quality of light and design of roadway.		

Total costs to build out the recommended bicycle network are estimated at $436,384,000, with total costs of the high priority bicycle corridors estimated at $215,789,000. Total estimated costs of the recommended pedestrian improvement projects are $93,368,000, with total costs of the high priority pedestrian projects estimated at $11,564,000. This assumes that improvements at signalized intersections include high-visibility crosswalks, minor signal modifications, curb ramps, and curb bulb-outs and that improvements at unsignalized intersections include high-visibility crosswalks, RRFBs, curb ramps, and bulb-outs.

Funding Sources

There are a variety of potential funding sources for active transportation projects.

Table 6-5 identifies federal, state, and local sources that the City can pursue to fund implementation of this plan and the types of projects that are eligible.

San Leandro should consider partnering with other local jurisdictions and regional agencies for funding programs at the state and federal levels, as joint applications often increase the competitiveness of projects for funding. The City should use existing funding sources as matching funds for state and federal funding

Table 6-5 Potential Funding Sources and Uses

Funding Program	Funding Source	Biking and Walking Infrastructure Implementation	Maintenance and Operations
Federal			
Active Transportation Infrastructure Investment Program	Federal Highway Administration (FHWA)	X	
Bridge Formula Program (BFP)	FHWA	X	
Carbon Reduction Program	FHWA	X	
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	FHWA	X	
Federal Lands Access Program (FLAP)	FHWA	X	
Federal Lands Planning Program (FLPP)	FHWA	X	
Highway Safety Improvement Program (HSIP)	FHWA	X	

Funding Program	Funding Source	Biking and Walking Infrastructure Implementation	Maintenance and Operations
National Highway Performance Program (NHPP)	FHWA	X	
National Scenic Byways Program	FHWA	X	
Nationally Significant Federal Lands and Tribal Projects (NSFLTP) Program	FHWA	X	
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program	FHWA	X	
Railway-Highway Crossings (Section 130) Program	FHWA	X	
Recreational Trails Program	FHWA	X	
Surface Transportation Block Grant (STBG) Program	FHWA	X	
Transportation Alternatives (TA) Set-Aside, Surface Transportation Block Grant Program	FHWA	X	
Tribal Transportation Program Safety Fund (TTPSF)	FHWA	X	
Areas of Persistent Poverty Program	Federal Transit Administration (FTA)	X	
Metropolitan and Statewide and Nonmetropolitan Transportation Planning	FTA	X	
Pilot Program for Transit-Oriented Development Planning	FTA	X	
Urbanized Area Formula Grants	FTA	X	
Choice Neighborhoods Implementation Grants	U.S. Department of Housing and Urban Development (HUD)	X	
Community Development Block Grants	HUD	X	
Nationally Significant Freight and Highway Projects Program (NSFHP)	U.S. Department of Transportation (U.S. DOT)	X	

Funding Program	Funding Source	Biking and Walking Infrastructure Implementation	Maintenance and Operations
Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	U.S. DOT	X	
Reconnecting Communities Pilot Grant Program	U.S. DOT	X	
Safe Streets and Roads for All (SS4A) Grant Program	U.S. DOT	X	
Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program	U.S. DOT	X	
Land and Water Conservation Fund	U.S. National Park Service	X	
Rivers, Trails, and Conservation Assistance Program	U.S. National Park Service	X	
State			
Clean Mobility Options Pilot Program	California Air Resources Board	X	
Coastal Conservancy Grants	California Coastal Conservancy	X	
Proposition 117 – Habitat Conservation	California Department of Parks and Recreation (DPR)	X	
Roberti-Z'Berg-Harris (RZH) Grant Program – Prop. 40	DPR	X	X
Statewide Park Development and Community Revitalization Program	DPR	X	
Environmental Enhancement and Mitigation (EEM) Program	California Natural Resources Agency	X	
Urban Greening Program	California Natural Resources Agency	X	
Affordable Housing and Sustainable Communities (AHSC) Program	California Strategic Growth Council	X	
Transformative Climate Communities (TCC) Program	California Strategic Growth Council	X	
Traffic Safety Grants	California Office of Traffic Safety	X	

Funding Program	Funding Source	Biking and Walking Infrastructure Implementation	Maintenance and Operations
Local Partnership Program	California Transportation Commission	X	X
Local Streets and Roads program	California Transportation Commission	X	X
Solutions for Congested Corridors Program (SCCP)	California Transportation Commission	X	
State Transportation Improvement Program (STIP)	California Transportation Commission	X	
Active Transportation Program (ATP)	California Department of Transportation (Caltrans)	X	
Local Highway Safety Improvement Program (HSIP)	Caltrans	X	
Sustainable Transportation Planning Grant Program	Caltrans	X	
Clean California Local Grant Program	Caltrans	X	X
Transportation Development Act (TDA) Article 3 (SB 821)	Caltrans/MTC	X	
County/Regional			
Measure BB	Alameda County Transportation Commission (Alameda CTC)	X	
Comprehensive Investment Plan (CIP) Funding	Alameda CTC	X	
Bay Trail Grants	Association of Bay Area Governments	X	
Transportation Fund for Clean Air	Bay Area Air Quality Management District	X	
Safe Routes to BART	Bay Area Rapid Transit	X	
Community Action Resource and Empowerment (CARE) Program	Metropolitan Transportation Commission (MTC)	X	
Transportation Development Act (TDA) Article 3 (SB 821)	Caltrans/MTC	X	
One Bay Area Grant	MTC	X	X

Funding Program	Funding Source	Biking and Walking Infrastructure Implementation	Maintenance and Operations
Safe Routes to Transit to Bay Trail	MTC	X	
Local			
Development Agreements	City of San Leandro	X	X
General Fund	City of San Leandro	X	X
General Obligation Bonds	City of San Leandro	X	X
Park Development Impact Fees	City of San Leandro	X	X
Sales Tax Revenues	City of San Leandro	X	X
Traffic Impact Fees	City of San Leandro	X	X

Appendix A. Bicycle and Pedestrian Design Guidelines

Appendix A. Bicycle and Pedestrian Design Guidelines

Table of Contents

Introduction

These Bicycle and Pedestrian Design Guidelines should be used when making planning and project design decisions for streets and intersections in San Leandro. The Guidelines present San Leandro's design expectations for bicycle and pedestrian infrastructure projects. Because no general design guide can address the unique needs and characteristics of every location, this guidance should be used in conjunction with study of each individual location, engineering judgment, and other necessary considerations as appropriate for each individual application.

New projects and programs are most likely to be successful when implemented in partnership with the community. Public engagement should focus on clearly communicating project goals, supporting policies, and best practices. Engagement offers the opportunity to refine designs where they are flexible or have alternative options. Strategies for public engagement include the following:

- Speaking with the community to understand their needs and priorities;
- Implementing new types of facilities incrementally to generate feedback and support, such as through a quick-build program;
- Publicizing projects and educating the public on the changes to be implemented and their benefits; and;
- Evaluating projects to confirm intended outcomes and iterating on the designs based on the evaluation.

The Guidelines draw on and reference best practice resources and other design guidance documents and are rooted in the goals and policies of the San Leandro Bicycle and Pedestrian Master Plan.

Resources

The Guidelines are based on a review of existing studies, guidelines, standards, and manuals related to pedestrian and bicycle infrastructure and strategies. The tables below indicate which resources should be used for pedestrian projects (*Table 1*) and bicycle projects (*Table 2*).

Table 1 Pedestrian Resource Selection

Resource	Application
American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, "Green Book" (2018)	Guidance on roadway geometric design
AASHTO Guide for the Planning, Design, and Operation Pedestrian of Facilities, 2nd Edition (2021)	Guidance on the planning, design, and operation of pedestrian facilities
FHWA Small Town and Rural Multi-Modal Networks Guide (2016)	Guidance on active transportation facilities in small towns and rural areas

Resource	Application
NACTO Urban Street Design Guide (2013) and NACTO Designing for All Ages and Abilities Guide (2017)	Guidance on best practices for street design
National Cooperative Highway Research Program (NCHRP) Report 926 - Guidance to Improve Pedestrian and Bicyclist Safety at Intersections (2020)	Step-by-step guidance for selecting intersection safety treatments
FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations (2018)	Reference guide on which type of crosswalk is most applicable in a given location
Public Rights of Way Accessibility Guidelines (PROWAG) (2023)	Guidelines on access to sidewalks, streets, crosswalks, and other components of public right-of-way
AASHTO Load and Resistance Factor Design (LRFD) Pedestrian Bridge Design Specifications (2020)	Guidance on the design and construction of typical pedestrian bridges
California MUTCD (2014)	Standards on traffic signs, road surface markings, and signals

Table 2 Bicycle Resource Selection

Which resource should be used?	Bikeway Selection	Design Guidance	Separated Bikeway	Bicycle Lane	Bicycle Boulevard	Other Bikeways
Federal Highway Administration (FHWA) Bikeway Selection Guide (2019)	✓					
FHWA Small Town and Rural Multi-Modal Networks Guide (2016)	✓			✓		✓
National Association of City Transportation Officials (NACTO) Designing for All Ages and Abilities Guide (2017)	✓					
FHWA Separated Bike Lane Planning and Design Guide (2015)		✓	✓			

Which resource should be used?	Bikeway Selection	Design Guidance	Separated Bikeway	Bicycle Lane	Bicycle Boulevard	Other Bikeways
Massachusetts Department of Transportation (MassDOT) Separated Bike Lane Planning & Design Guide (2015)		✓	✓			
NACTO Don't Give Up at the Intersection (2019)		✓	✓			
Caltrans Design Information Bulletin (DIB) 89-02: Class IV Bikeway Guidance (2022) and DIB 94 (2024)		✓	✓	✓		
NACTO Urban Bikeway Design Guide, 2nd edition (2014)		✓		✓	✓	✓
California Manual on Uniform Traffic Control Devices (MUTCD) (2014)		✓	✓	✓	✓	✓

The following documents may serve as additional resources for these topics:

- Association of Pedestrian & Bicycle Professionals Bicycle Parking Guidelines, 2nd Edition (2010)
- NACTO Transit Street Design Guide (2016)
- Institute of Transportation Engineers (ITE) Recommended Design Guidelines to Accommodate Pedestrian and Bicyclists at Interchanges (2016)
- Design Manual for Bicycle Traffic (CROW Manual) (2017)
- League of American Bicyclists Benchmarking Bike Networks (2018)
- Caltrans Highway Design Manual, 7th edition (2023)

What is PROWAG and what is its status?

The Public Right-of-Way Accessibility Guidelines (PROWAG) are a federally legislated set of technical guidelines developed by the US Access Board, a federal agency, to improve access to the public right-of-way, including sidewalks, streets, crosswalks, curb ramps, pedestrian signals, push buttons, and on-street parking. Finalized in 2023, PROWAG aims to create a more inclusive pedestrian environment, building on previous regulations and legislation such as the Americans with Disabilities Act (ADA). While PROWAG is a guideline document as of 2024, it is expected to be adopted and integrated into enforceable standards by the Departments of Justice and Transportation. PROWAG should be treated as the minimum criteria for accessibility in all street design projects. Project designers should discuss any variations between current standards and PROWAG with the City Engineer and Public Works Director.

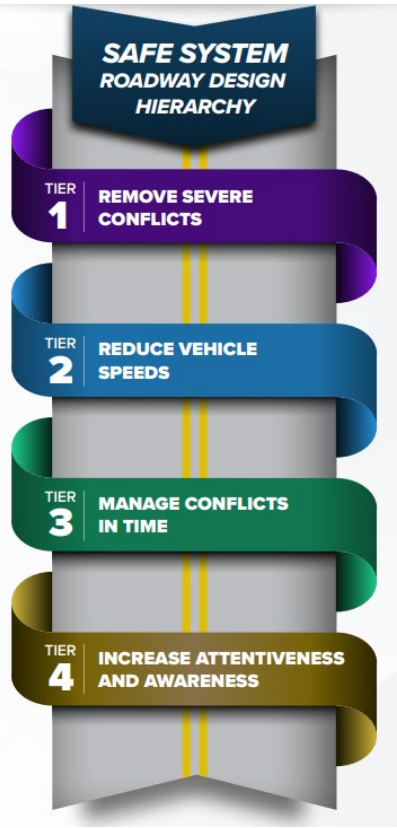
Street Design Principles

The following principles serve as the core basis for the Plan's design guidelines. Together, these principles support safer street design, safer speeds, and safer travel lane widths to be more responsive to context and the needs of various road users.

Safe System Approach

The Safe System approach is a set of strategies aiming to eliminate fatal and serious traffic injuries in alignment with **Vision Zero**, an international movement to end traffic deaths. The City of San Leandro committed to Vision Zero in the 2022 Local Roadway Safety Plan. Adopted by US Department of Transportation, Caltrans, and the Alameda County Transportation Commission, the Safe System approach focuses on five elements of safe transportation systems: safe road users, safe roads, safe speeds, safe vehicles, and post-crash care. The approach seeks to implement system-wide practices, policies, and designs to prevent crashes and lessen the severity of collisions when they occur. The Safe System Approach designs streets and crossings with multiple "safety nets" for human error and supports safer travel speeds that are context-appropriate, with the objective of turning a fatal collision into a survivable collision and a severe injury collision into a minor injury collision.

Figure 1 Safe System Roadway Design Hierarchy



Source: FHWA Safe System

The Safe System Roadway Design Hierarchy, shown in **Error! Reference source not found.** further illustrates how to think about the many kinds of safety improvements available. The most important treatments – Tier 1 – remove severe conflicts that may arise from specific high-risk conditions, such as by installing physical barriers between drivers and people walking and biking. Tier 2 improvements reduce vehicle speeds to lessen the severity of all crashes. Tier 3 improvements manage conflicts in time; these treatments typically require people to follow rules rather than functioning through self-enforcing designs. Tier 4 treatments enhance visibility and awareness of potential conflicts. While they have demonstrable safety efficacy, these treatments do not fundamentally change the character of the overall roadway and should be implemented alongside higher-tier treatments that more systemically reduce or remove potential for severe conflicts.

Speed Management and Target Speeds

In addition to vehicle mass, speed is a major determinant of injury or fatality in a collision, both for drivers and for other vulnerable road users such as pedestrians and bicyclists. Reducing travel speeds increases survivability, as lower speeds increase visibility for drivers, provide additional reaction and stopping times, and reduce impact forces in crashes. The appropriate speed for a road depends on its design, context, and desired mix of users. Target speeds can be achieved through design elements, safer speed limits, and speed management countermeasures that reduce operating speeds. Speed management infrastructure such as

realigned intersections, raised crosswalks, narrowed roadways, roundabouts and road diets encourage users to drive at lower speeds.

Speed management should always be considered as a key initial step in the planning and design process, immediately after looking at the history of fatal and severe injury collisions. Where the median speed is higher than 30 MPH on streets on the bikeway network or higher than 20 MPH within school zones, the engineer or planner must identify strategies for lowering speeds.

In San Leandro, the target design speeds are typically 30 MPH or below on bikeway streets (with a maximum of 35 MPH) and 20MPH on bicycle boulevards and other local streets.

Figure 2 Kinetic Energy (Speed and Mass) Increases the Risk of Death

Source: FHWA & AAA Foundation for Traffic Safety

Design Vehicle

The design vehicle should be determined by the most frequent large vehicle on the street. This is typically an SU-30 truck turning onto and off on most streets at very low speeds; however, at the intersections of local streets, DL-23 may be appropriate. At the intersection of truck routes and at interchanges, WB-50 trucks should be assumed.

Travel Lane Widths

A maximum lane width of **10 feet** is recommended for general purpose lanes, as wider travel lanes can encourage higher speeds. For streets with **truck or transit routes, 11 feet** width is preferred. Turn pockets should be 10 feet wide.

Figure 3 *Urban Street Design*

Source: NACTO Urban Street Design Guide

Pedestrian Design Guidelines

Pedestrian facilities include sidewalks and crosswalks, which, with some exceptions, are primarily for pedestrian use. Some facilities are shared by both pedestrians and bicyclists, such as shared-use paths.

Pedestrians include individuals walking and using mobility devices such as wheelchairs.

Sidewalk Design

Sidewalks are paved areas immediately adjacent to the vehicular right-of-way for the exclusive use of pedestrians. Sidewalks play a key role in pedestrian movement, connectivity, and access while encouraging healthy habits.

Basic Design Principles

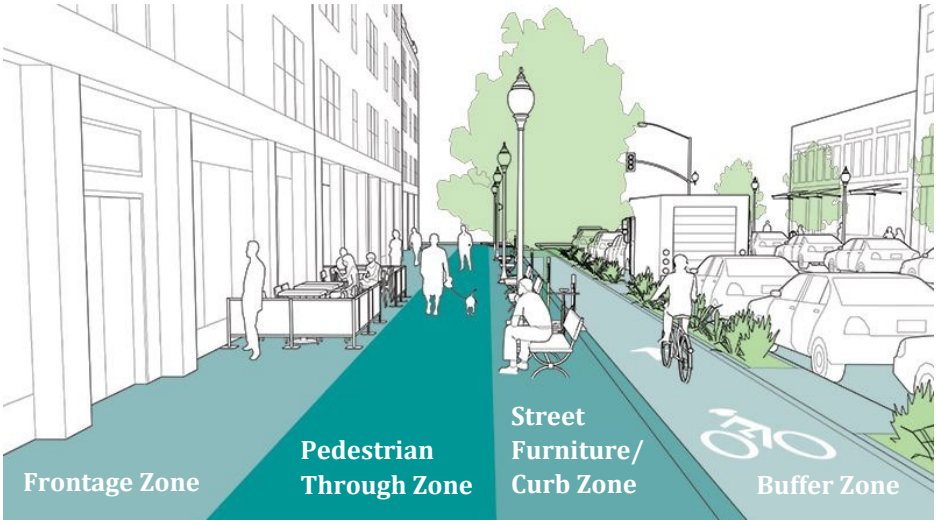
- Usable width should generally be **5 feet or more**, large enough for two people walking side by side. Wider sidewalks are preferred in commercial areas, near transit, and near schools.
- Crossings of driveways should be at-grade.
- Street trees and landscaping provide shade and comfort.
- Slower vehicle speeds on the adjacent roadway increase comfort.

Buffer Zone

The space between the sidewalk and the roadway provides ample opportunities for a variety of street elements, including curb extensions, parklets, stormwater management features, parking, bike racks, bike share stations, and curbside bike lanes or cycle tracks.

The buffer zone can also enhance multimodal transportation, as it allows for the placement of bike racks, bike share stations, raised cycle tracks, and bus stops. In *Figure 4 Sidewalk Zones*, the buffer zone is shown as a protected bike lane.

Figure 4 Sidewalk Zones

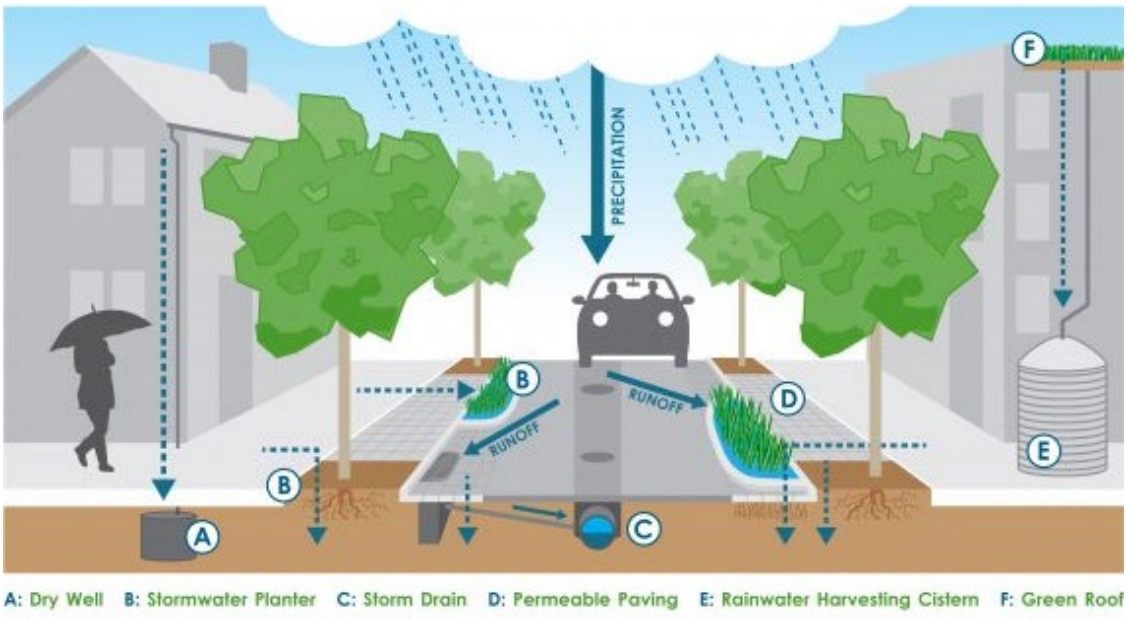


Source: NACTO Urban Street Design Guide

Green Infrastructure and Landscaping

Street trees along a sidewalk enhance the pedestrian experience and give character to the street. Coupled with green stormwater infrastructure like biofiltration swales, planters and planting strips, and pervious pavement, greenery provides habitats for urban wildlife, reduces stormwater runoff, and improves local air quality.

Figure 5 Stormwater Management through Green Infrastructure



Source: City of Atlanta Watershed Management

Crosswalk Policy

This section outlines San Leandro's practices for marking and enhancing crosswalks in the public right of way.

Marked Uncontrolled Crosswalks

Marked crosswalks direct pedestrians to a designated crossing location designed for the street and land use context. Marked crosswalks reinforce the legitimacy of pedestrian crossings. While pedestrians and drivers have a shared responsibility to behave in accordance with the California Vehicle Code (CVC), planners and engineers also have a shared responsibility to design and implement a crosswalk that is visible for all road users and appropriate based on street characteristics such as prevailing vehicle speed and number of vehicle lanes. This section outlines the crosswalk standards in San Leandro based on traffic control type (i.e. signal, stop, yield, or uncontrolled).

Marking Uncontrolled Crosswalks

Uncontrolled crosswalks should be marked based on modal priority and demand. All projects in the San Leandro right-of-way should review the marked crosswalks and determine potential additional locations. Once candidate locations are identified, each uncontrolled crosswalk must be evaluated to assess if demand is sufficient for marking a crosswalk.

Removing marked crosswalks or failing to provide adequately enhanced crosswalks is not acceptable. All crosswalks should be marked with high-visibility continental crosswalk markings and safety enhancements.

On bicyclist and pedestrian priority streets, crosswalks should be marked frequently. Crosswalks should be typically marked at least every 500 feet. Many blocks in San Leandro are longer than 500 feet. In those cases, crosswalks should be marked at intersections and at any other locations where pedestrians are likely to cross. At least one crossing of the major street should be marked at the intersection, and near sensitive land uses, both crossings should be marked. Side street crossings should also be marked in commercial areas or near sensitive land uses.

Wherever a decision is made to mark the crosswalk or where a crosswalk is already marked, an assessment of necessary enhancements to align the crosswalk design with the land use and street characteristics must be completed.

Identifying Candidate Locations

To develop a list of candidate locations, the following data points should be considered:

Bus stops should be marked on the far side of uncontrolled crosswalks.

1. Identify where people would like and/or do already cross the street, considering adjacent land use destinations (e.g. schools, bus stops, and other high pedestrian activity locations) and the shortest/most direct path of travel.
2. Assess pedestrian crash data from the last 10 years, including consideration of community comments on near misses or unreported collisions.
3. Review San Leandro's studies, plans, and documents relevant to the location, including the San Leandro Bicycle and Pedestrian Master Plan project location list.
4. Review public comments, as the community members have local knowledge of where additional crossing support is needed and where crossing is avoided due to safety considerations.
5. Conduct fieldwork to identify deficiencies, systemic safety issues, and where people can cross safely, specifically including assessment of stopping sight distance.

Steps 1-4 should be completed before field work.

Determining Demand

Once candidate locations are identified, an engineering evaluation should be conducted to determine if a marked crosswalk should be installed, and if so, what enhancements should be included in the design. *Figure 6* describe the process that should be used to determine the need for marking a new uncontrolled crosswalk, using pedestrian demand, crosswalk frequency, and pedestrian visibility as a basis.

Crosswalks should be marked where all the following conditions occur:

- Sufficient demand exists to justify the installation of a marked crosswalk.
- The location has sufficient sight distance, and/or sight distance will be improved prior to marking the crosswalk.
- Other context-specific safety considerations do not preclude marking the crosswalk.

The engineering evaluation should consider:

- At four-way intersections where there are desire lines on both major street crossings, each location should be evaluated per *Figure 7*.
- Existing pedestrian volumes, the number of pedestrian-vehicle collisions, community surveys, resident requests, and fieldwork or walking audits should be used to assess whether sufficient demand exists to justify a marked crosswalk.

- Where existing pedestrian volumes are not available, proxy data may be used, including consideration of land use factors. If existing volumes are used, the peak time period and day of the week relative to pedestrian use should be considered. In many cases, this will not correspond to the weekday AM or PM peak periods used for vehicles.
- Safety considerations that might preclude a marked crosswalk, including sight distance issues caused by topography, building lines, and parking vehicles. Sight distance issues caused by parked vehicles should be addressed by providing sufficient red curb parking-restricted areas on either side of the crosswalk. Sight distance issues caused by vegetation may be addressed by trimming or modifying landscaping. Per California law, parking is prohibited within 20 feet of all marked and unmarked crosswalks.

Determining Necessary Safety Enhancements

Designers must assess **target speed, number of travel lanes, ADT, land use considerations, and previously installed and/or recommended projects**, including bike facilities prior to utilizing *Figure 8* to determine crosswalk safety enhancements.

At existing crosswalks or once a decision to mark a crosswalk has been made, the planner or engineer must assess whether additional safety countermeasures are necessary or recommended based on context of the location using *Figure 8* and *Table 3*. Before using *Figure 8*, designers must identify the target speed and number of travel lanes appropriate based on the average daily traffic (ADT), land use, bikeway designation, and previously installed and/or recommended projects. In some cases, this will mean that the speed needs to be lowered through traffic calming and that, on multi-lane streets, repurposing a travel lane may be needed. This assessment is critical to do before using *Figure 8* and *Table 3*, as slower and narrower streets reduce the need for costly crosswalk safety enhancements and make the street safer for everyone.

Crosswalk enhancement identification should always include an assessment of driver yielding behavior, suitability determined by site context, including site distance, and the City's engineering judgment. Context-specific safety issues must be addressed both proactively and reactively. If there are reported collisions at a location, installing safety countermeasures that address or correct the safety issue is required. Where collisions have occurred at similarly designed intersections on the corridor but not at the proposed crosswalk location, those mitigating safety countermeasures should also be installed. Designers should refer to *Figure 8* to confirm appropriate countermeasures based on documented crashes or potential crash risk.

Documenting Process

Documentation should follow the California MUTCD at minimum. Brief technical documentation should be created for all crosswalks that have been identified as candidates for markings or other countermeasures. The documentation should outline the process used by the City to identify the countermeasures considered to improve pedestrian safety at the crosswalk. It should also document the existing and anticipated future street characteristics and provide a brief site analysis justifying the inclusion or exclusion of countermeasures based on this Crosswalk Policy and outside factors like funding constraints.

Figure 6 Decision-making Process for Marking Uncontrolled Crosswalks

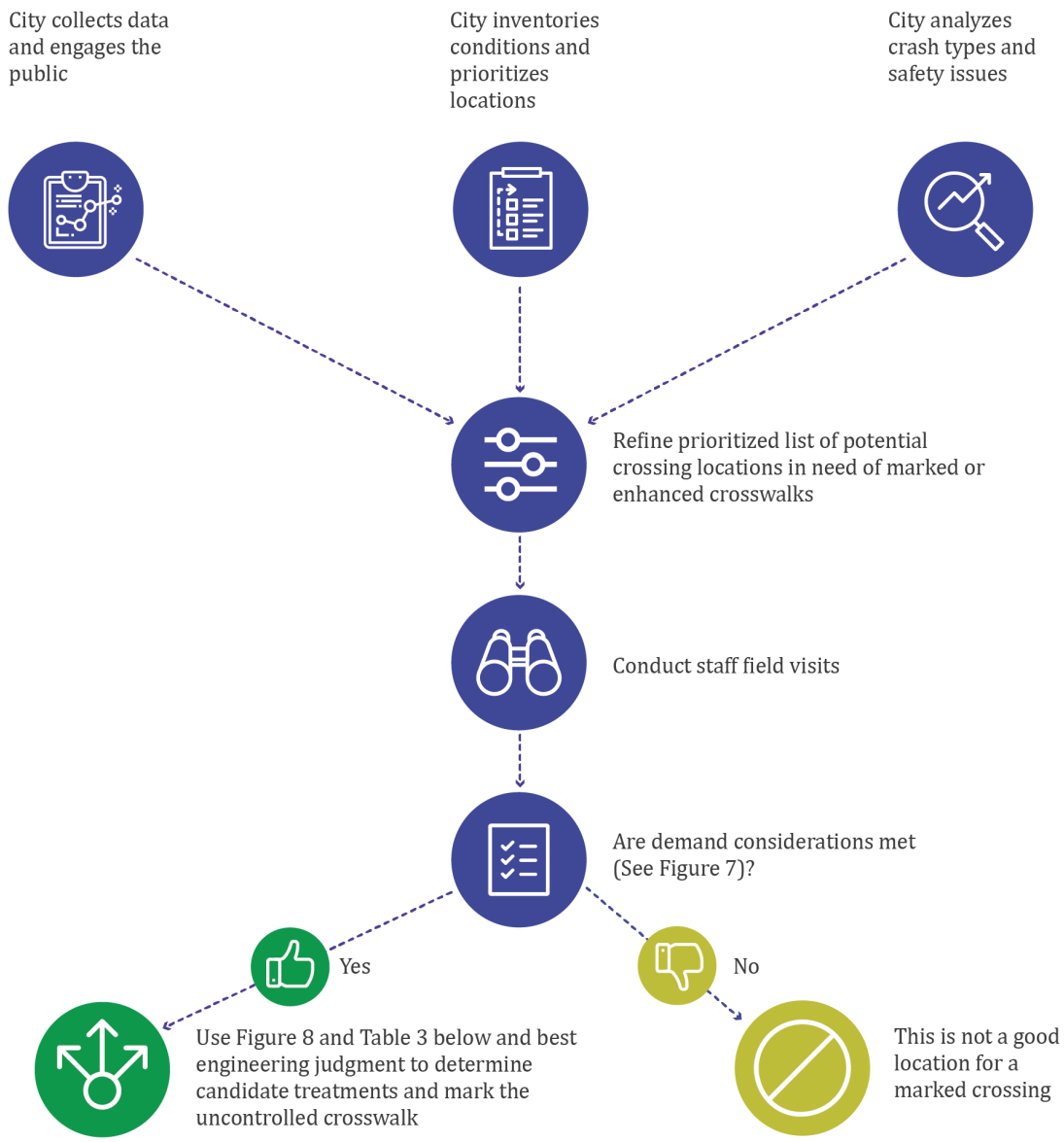
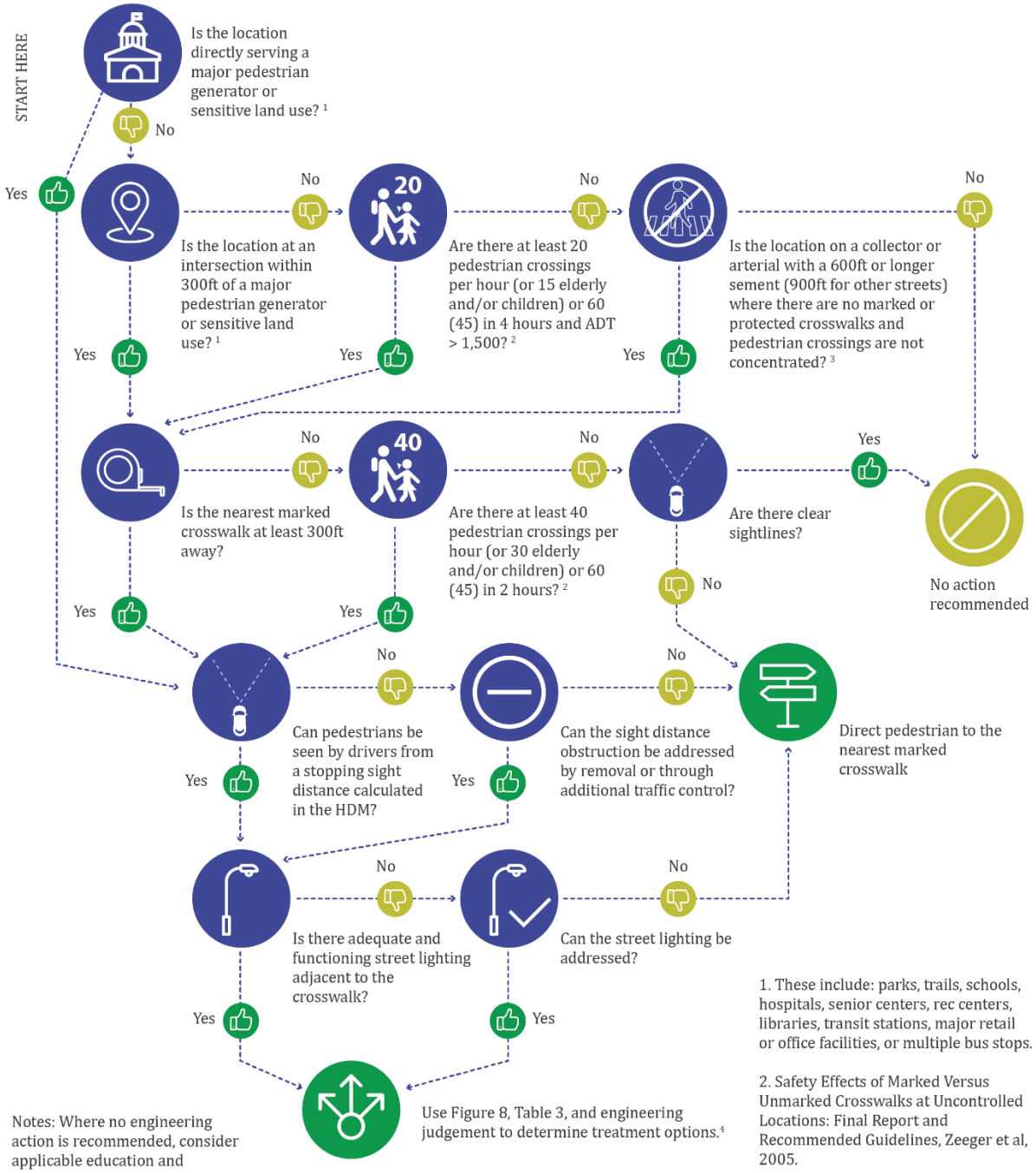


Figure 7 Demand Considerations for Marking Uncontrolled Crosswalks



Notes: Where no engineering action is recommended, consider applicable education and enforcement efforts.

Where no pedestrian volumes are available but common pedestrian land use generators are located nearby, it may be appropriate to assume that demand thresholds will be met. Pedestrian volumes often peak on different days of the week and at different times than vehicles.

1. These include: parks, trails, schools, hospitals, senior centers, rec centers, libraries, transit stations, major retail or office facilities, or multiple bus stops.

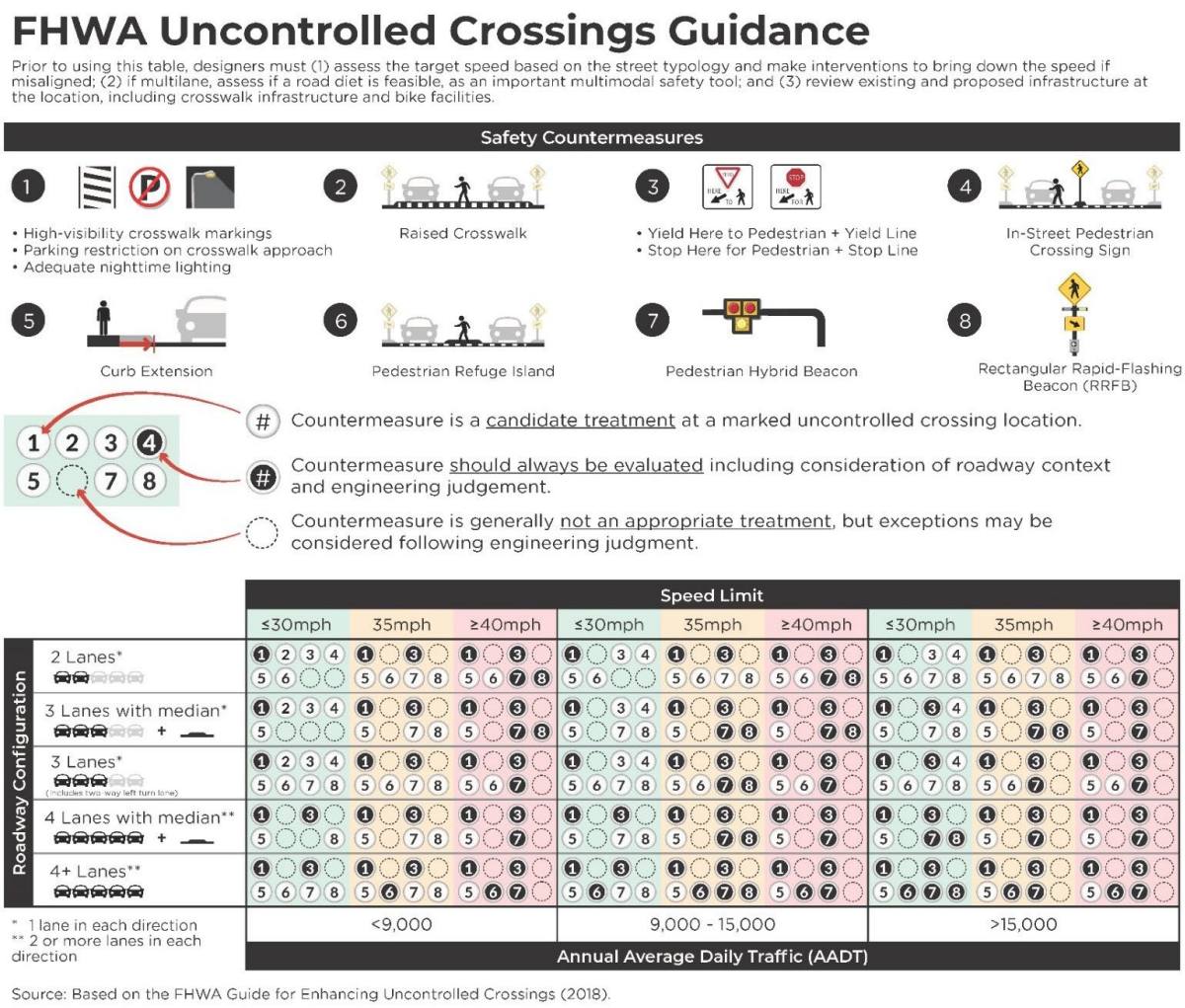
2. Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations: Final Report and Recommended Guidelines, Zeeger et al, 2005.

3. Evaluate the location within this stretch that provides the safest crossing environment.

4. In rural areas, or places without a sidewalk, an accessible landing can be constructed using posts and striping to provide many of the crossing benefits of directional curb ramps without the existence of a curb.

Use *Figure 8* along with *Table 3* below to identify necessary safety countermeasures at a given crossing in addition to marking the crosswalk. Before beginning this analysis, designers must identify the appropriate target speed and number of travel lanes and implement any needed traffic calming or road diet. This assessment is critical to do before using *Figure 8* and *Table 3*, as slower and narrower streets reduce the need for costly safety enhancements and improve safety for all users.

Figure 8 Recommended Countermeasure Enhancements at Uncontrolled Crosswalks



Source: Based on the FHWA Guide for Enhancing Uncontrolled Crossings (2018).

Source: FHWA Guide for Improving Pedestrian Safety At Uncontrolled Crossing Locations

Table 3 Crosswalk Safety Design Needs

Counter-measure ID	Countermeasure	Collision Trend[1]				
		Conflicts at Crossing Location	Excessive Vehicle Speed	Inadequate Visibility	Drivers Not Yielding to Pedestrians in Crosswalk	Insufficient Separation from Traffic
1A	High-Visibility Crosswalk Markings	✓		✓	✓	
1B	Parking Restrictions at Crosswalk Approaches and Removal of Other Sight Distance Obstructions	✓		✓	✓	
1C	Adequate Nighttime Lighting	✓		✓		
2	Raised Crosswalk	✓	✓	✓	✓	
3	Advanced Yield to Pedestrians Markings and Signage	✓		✓	✓	✓
4	In-Street Pedestrian Crossing Signage	✓	✓	✓	✓	
5	Curb Extensions	✓	✓	✓		✓
6	Median Refuge Island	✓	✓	✓		✓
7	Rectangular Rapid-Flashing Beacon (RRFB)	✓			✓	
8	Pedestrian Hybrid Beacon (PHB)	✓			✓	

1. Collision trends should not just refer reactively to reported collisions or near-misses but should also consider safety needs proactively to address potential for conflict.

Source: FHWA Guide for Improving Pedestrian Safety At Uncontrolled Crossing Locations

Controlled Crosswalks

Controlled crosswalks are those where vehicles are typically required to come to a complete stop due to a stop sign, traffic signal, or yield control. While these kinds of traffic control explicitly allocate right-of-way to users crossing the street, consideration must still be given to crosswalk safety, particularly at intersections with frequent pedestrian-auto conflicts, pedestrian collisions or likelihood of collision, low rates of compliance, proximity to schools, and/or at skewed intersections.

All controlled crosswalks should be marked. Additional safety countermeasures may be needed to make the crosswalk safer, as described in this section.

This section discusses the potential countermeasures that the City should consider to further enhance safety at controlled crosswalks. The countermeasures are intended to improve visibility, clarify who has the right-of-way, reduce vehicular speeds, and separate users in space and time at signals.

The section is organized into two subsections:

1. Baseline controlled crosswalk needs, and
2. Additional crosswalk needs at signals.

It should be noted that all the countermeasures discussed in this section are required or allowed by the standards and specifications in the California MUTCD.

Baseline Controlled Crosswalk Safety Improvements

Each controlled intersection – whether stop or signal controlled – has a baseline set of safety needs. These baseline measures should be integrated into the design of all existing and new controlled intersections. Baseline controlled crosswalk countermeasures consist of crosswalk striping, geometric improvements, sight-line improvements, and accessibility improvements. These are detailed below.

Crosswalk Striping

- Mark all crosswalks with continental striping and as close to 90 degrees as possible to minimize crossing distances, provide opportunities to reduce curb radii and create curb extensions, and make the street environment more predictable for those with visual impairments.
- Crosswalks should be **minimum 10 feet wide** and typically align with the front and back of the sidewalk.
- Install advanced stop bars 8 feet back from the crosswalk to avoid driver encroachment and to indicate where drivers should stop and wait for pedestrians in the crosswalk.

Geometric Improvements

- Where street width and turning movements allow for at least a six-foot wide median, provide a median refuge island with thumbnail. The “thumbnail” is a median island that protects the pedestrian crossing space and creates a full refuge in the street.
- Remove slip lanes unless pedestrians benefit from the existing channelization.
- At skewed intersections that are unable to be corrected, or where a large design vehicle is required at the intersection of truck routes, provide raised crosswalks or protected right turns at signals to increase visibility and reduce speeds.
- Tighten curb radii to reduce turning vehicle speed. Larger curb radii increase vehicle speeds, increase crossing distances and limit visibility; smaller curb radii are therefore preferred in urban settings and

typically should not exceed **15 feet**, however careful attention should be given by the designer to allow for fire apparatus, buses, and large trucks to maneuver safely.

- Assess lane geometry to reduce speeds and crash risk, such as removing double turn lanes on bicycle and pedestrian priority streets.

Sight Line Improvements

- Restrict parking at intersection approaches to improve sight lines. Per California law (AB 413), parking is prohibited a minimum of 20 feet from marked and unmarked crosswalks.
- Provide adequate nighttime lighting such that pedestrians using the crosswalk are visible to motorists for the full length of the crosswalk.
- Install curb extensions to improve sight lines between autos and pedestrians and reduce overall pedestrian crossing distances. When combined with smaller curb radii, curb extensions provide additional space to facilitate use of directional curb ramps that are aligned with the crosswalk. Directional curb ramps are shown in *Figure 9*.
- Remove sign clutter, vegetation, and/or other obstructions that may limit visibility.
- Move bus stops to the far side at all intersections.

Figure 9 Continental Crosswalks with Directional Curb Ramps

NACTO Urban Street Design Guide

Signal-Controlled Crosswalk Needs

While traffic signals generally are the strongest traffic control device for a crosswalk, conflicts between turning vehicles and pedestrians in the crosswalk can still result in collisions. For this reason, signal-controlled intersections often require additional speed management, separation between users in time, and strategies to increase driver attentiveness and awareness.

Marked crosswalks should generally be provided on all legs of signalized intersections and intersections with double left or double right turns must use protected signal phasing such that turning vehicles do not conflict with the walk phase for the conflicting crosswalk. Intersections with double right turns must also have a "No Right Turn on Red" restriction or black out sign that is actuated when the conflicting pedestrian crossing phase is actuated.

This section should be reviewed in full when planning and designing at signals to identify:

- Baseline signalized crosswalk improvements to be installed at all signalized intersections (*Table 4*)
- Additional signal enhancement considerations (*Table 5*).
- Need for pedestrian recall at actuated signals (*Figure 10*) Additional pedestrian safety needs based on potential auto-pedestrian conflicts using *Figures 11-14.* For all thresholds included in *Figure 11-Figure 14*, if volumes are within 10% of a threshold, roundup to account for future demand and background growth in pedestrian and/or vehicle volumes. When using observed volumes, the designers must consider the appropriate peak hour for pedestrian demand as well as the peak AM and PM vehicle periods.

Table 4 Baseline Safety Treatments for All Signal-Controlled Crosswalks

Baseline Safety Element	Description	Applicable to Which Projects?				
		New Signals/ Major Signal Modifications	Minor Signal Modifications	Signal Retiming	All Other Projects	Studies, Safety Issues
Accessible Pedestrian Signals	Accessible pedestrian signals (APS) communicate audible and vibrotactile information about the crossing to people who are blind or have low vision. They are typically activated with a push button with a large raised arrow.	✓			✓	✓
Pedestrian Countdown Signals	During the "Flash Don't Walk" (i.e. flashing red hand) phase, a countdown timer should appear next to the flashing red hand. The timer shows how many seconds are remaining for pedestrians to cross the street before opposing traffic receives a green light. This is California MUTCD requirement.	✓				✓
Adequate Signal Timings	The California MUTCD sets the minimum standard for pedestrian timings. Slower speeds of 2.5 feet per second should within 1/8 mile of sensitive uses, such as senior centers and schools.	✓	✓	✓		✓
Pedestrian Signals that "Rest in Walk"	On streets with coordinated traffic signals, the pedestrian crossing of the side street should always give pedestrians the walk phase (i.e. it should "Rest in Walk"), so that	✓	✓	✓		✓

Baseline Safety Element	Description	Applicable to Which Projects?				
		New Signals/ Major Signal Modifications	Minor Signal Modifications	Signal Retiming	All Other Projects	Studies, Safety Issues
	pedestrians do not have to push a button to get the walk phase.					
Pedestrian Phase Actuation Extension	When pedestrians arrive at a crosswalk close to the signal changing to green or as the signal changes green for cars traveling in the same direction and press the push button, they typically do not receive a walk phase. The signal is programmed ("the actuation window") to think the pedestrian is too late, and they have to wait a full signal cycle to get the walk phase. Instead, the actuation window can get extra time, so that pedestrians who arrive near the beginning of the vehicle green phase can still get the walk phase, without waiting a full signal cycle.	✓	✓			✓
Pedestrian Recall	At many signals, pedestrians push a button to receive the walk phase. When a signal is on "pedestrian recall", the walk phase is displayed each signal cycle, without pedestrians needing to push the button. This makes walking more convenient and reduces the amount of time pedestrians must wait ("pedestrian delay").	✓	✓	✓		✓
Cycle Length Minimization	"Cycle length" is the amount of time it takes for every movement (e.g. northbound left turn, west crosswalk, etc.) to receive a green light. This can range from 60-90 seconds or even several minutes, depending on how a signal is timed and the amount of traffic that is expected to move through it. Keeping cycle lengths short (i.e. closer to 60 seconds) means that pedestrians do not have to wait as long to receive a green light. When pedestrian delay is high, people may be more likely to cross against the light.	✓	✓	✓		✓

Baseline Safety Element	Description	Applicable to Which Projects?				
		New Signals/ Major Signal Modifications	Minor Signal Modifications	Signal Retiming	All Other Projects	Studies, Safety Issues
No Right Turn on Red	In California, drivers can turn right after stopping at a red light. This means they must look for a gap in traffic and for pedestrians who have the walk phase before proceeding. Red turn on red can be prohibited either all the time or at specific times (e.g. when the pedestrian walk phase is on or near bell times at a school) to enhance crosswalk safety. Right turn on red should always be prohibited for the inside turn lane when there is more than one right turn lane.	✓	✓	✓	✓	✓
Additional Signal Enhancements	Use Table 5 to assess the suitability of additional signal enhancements such as leading pedestrian intervals, protected turn signals, and pedestrian scrambles. They should always be used to identify additional potential safety enhancements.	✓				✓

Table 5 Guide to Using Flow Charts for Additional Signal Enhancements

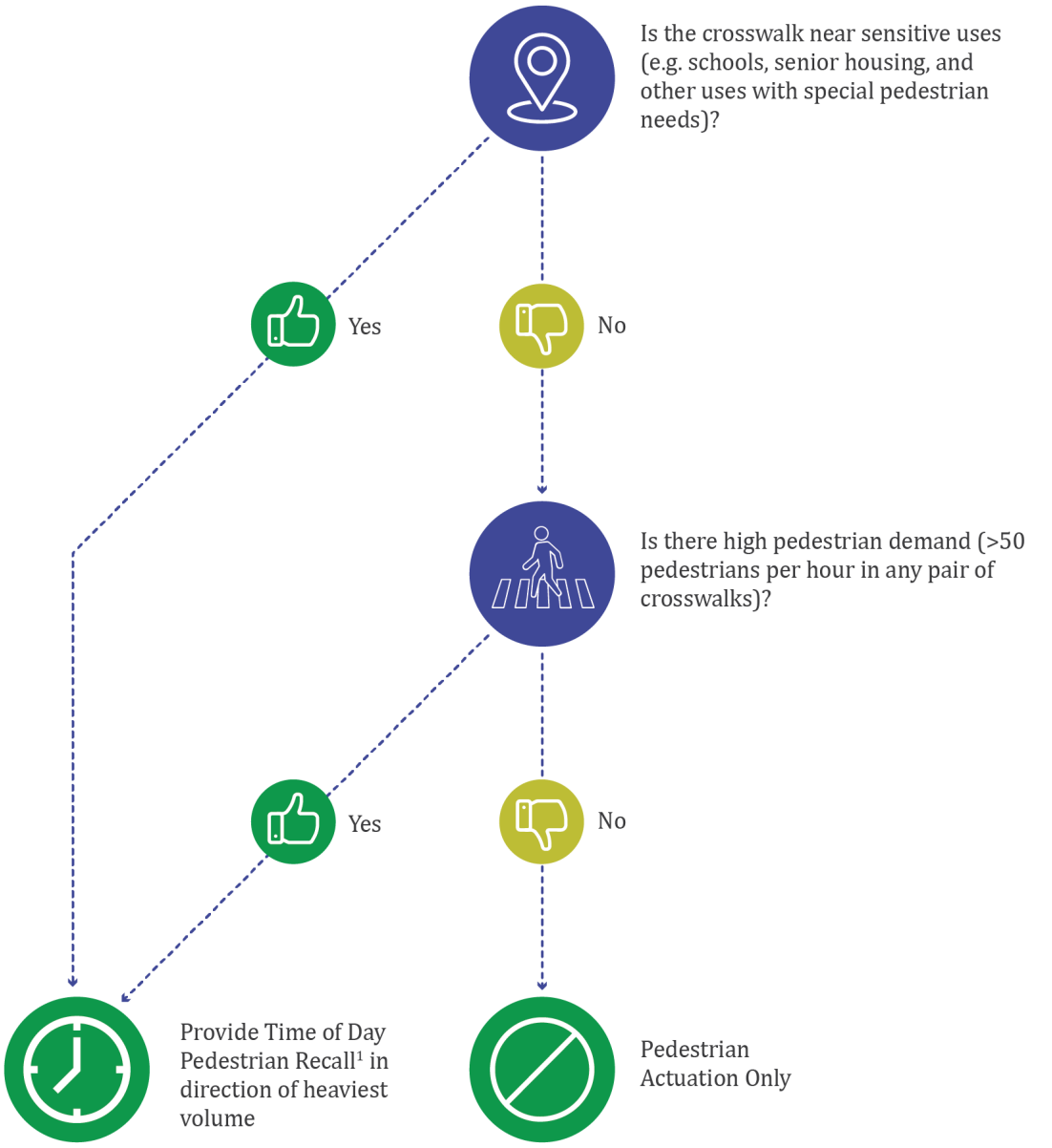
Tool	Description	Step 1: Review Charts Figure 10 and Figure 11		Step 2: If identified by Figure 11, determine additional signal enhancements based on Figures 12-Figure 14		
		Figure 10: Actuated Signals	Figure 11: Pedestrian and Vehicle Conflicts	Figure 12: Left Turns on Two-Way Streets	Figure 13: Right Turns on Two-Way Streets or Left Turns on One-Way Streets	Figure 14: Pedestrian Scrambles
Time of Day Recall in Direction of Heavy Volume	City creates signal timings for different times in the day. Near bell times, peak periods, or relevant times of days, pedestrian always receive the walk phase and	✓				

Tool	Description	Step 1: Review Charts Figure 10 and Figure 11		Step 2: If identified by Figure 11, determine additional signal enhancements based on Figures 12-Figure 14		
		Figure 10: Actuated Signals	Figure 11: Pedestrian and Vehicle Conflicts	Figure 12: Left Turns on Two-Way Streets	Figure 13: Right Turns on Two-Way Streets or Left Turns on One-Way Streets	Figure 14: Pedestrian Scrambles
	do not need to press the push button.		Use Figure 11 to determine the use of Figure 12 and Figure 13			
Pedestrian Scramble	Pedestrian Scramble: Provide a dedicated pedestrian phase, during which pedestrians can cross in any direction, including diagonally.			✓		✓
All-Pedestrian Phase	Pedestrians have a dedicated pedestrian phase where they can cross in any crosswalk. Diagonally crossing is not allowed.			✓		✓
Protected Turn	If a turn is currently allowed (i.e. typical green ball signal, no green arrow), add a protected left-turn (i.e. green arrow) to separate the pedestrian phase from the conflicting vehicle turning movement.			✓	✓	
Leading Pedestrian Interval (LPI)	LPIs give pedestrians a 3-7 second "head start" before cars traveling in the same direction get the green signal. By the time the cars get the green light, sight lines between drivers and pedestrian are better or the pedestrian have				✓	

Tool	Description	Step 1: Review Charts Figure 10 and Figure 11		Step 2: If identified by Figure 11, determine additional signal enhancements based on Figures 12-Figure 14		
		Figure 10: Actuated Signals	Figure 11: Pedestrian and Vehicle Conflicts	Figure 12: Left Turns on Two-Way Streets	Figure 13: Right Turns on Two-Way Streets or Left Turns on One-Way Streets	Figure 14: Pedestrian Scrambles
	finished crossing that part of the street.					
LPI with No Right Turn on Red	These are the same as above with either a static (i.e. metal sign) or dynamic (i.e. a digital sign with a changing message) right-turn on red (RTOR) restriction. Prohibiting RTOR means that that a car can't make a right turn when the LPI is on.				✓	
"Turning Vehicles Yield to Pedestrians " Sign	This is a static sign that can be posted at an intersection to try to increase driver awareness of pedestrian conflicts, but the potential for conflict still occurs.			✓	✓	
Split Phase	Typically, two directions of traffic get the green light at the same time (e.g. northbound and southbound through cars and east and west crosswalks). With a split phase, only one direction of traffic gets a green light, which can remove the conflicts between turning drivers and the adjacent crosswalks, for example. It also increases the cycle			✓		

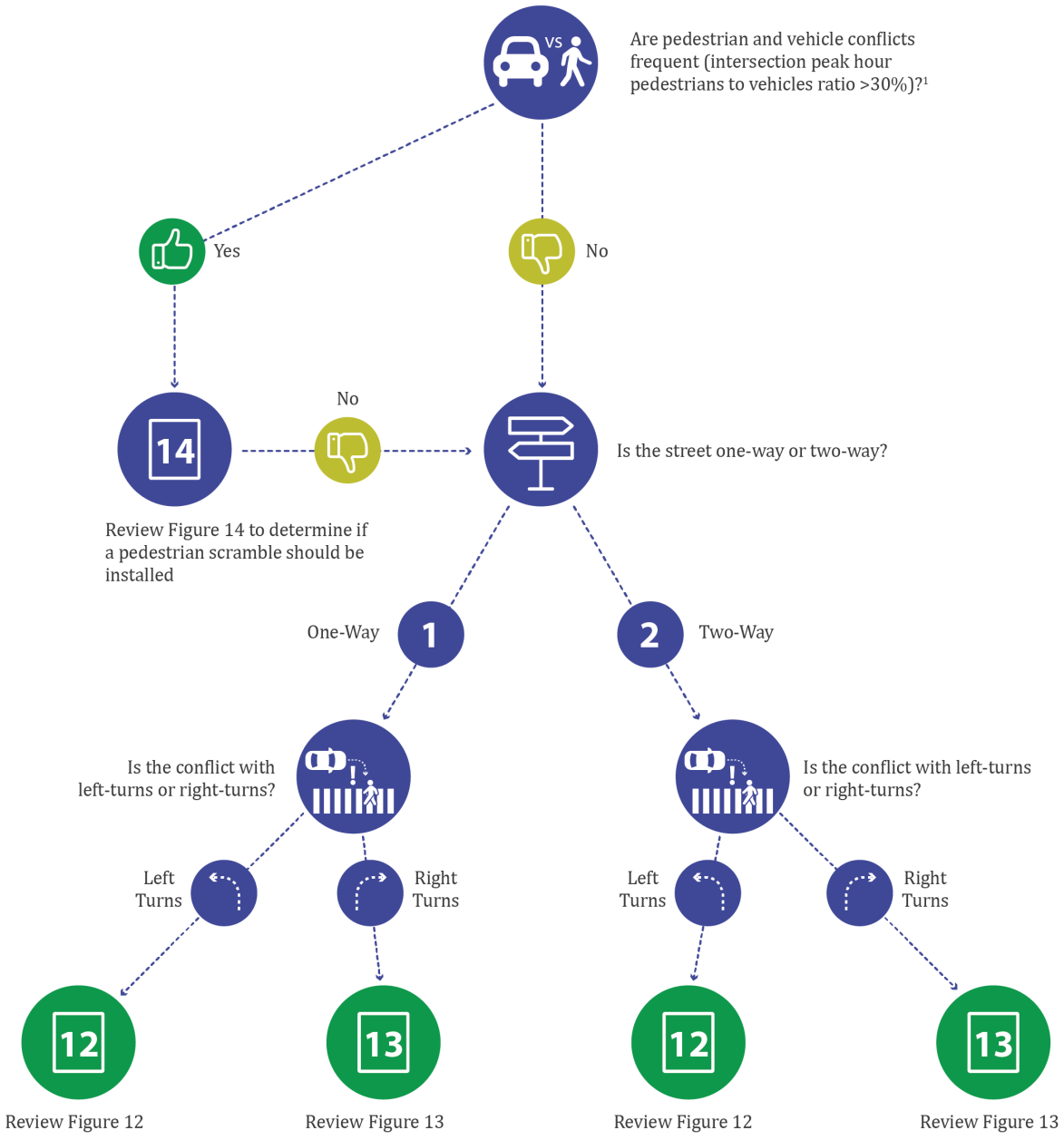
Tool	Description	Step 1: Review Charts Figure 10 and Figure 11		Step 2: If identified by Figure 11, determine additional signal enhancements based on Figures 12-Figure 14		
		Figure 10: Actuated Signals	Figure 11: Pedestrian and Vehicle Conflicts	Figure 12: Left Turns on Two-Way Streets	Figure 13: Right Turns on Two-Way Streets or Left Turns on One-Way Streets	Figure 14: Pedestrian Scrambles
	length and increases the amount everyone must wait at the intersections.					
No Further Action Required	Conflicts are generally managed or limited, the set of tools are not appropriate, and/ or further action may not be needed.	✓	✓	✓	✓	✓

Figure 10 Actuated Signals Pedestrian Option Flow Chart



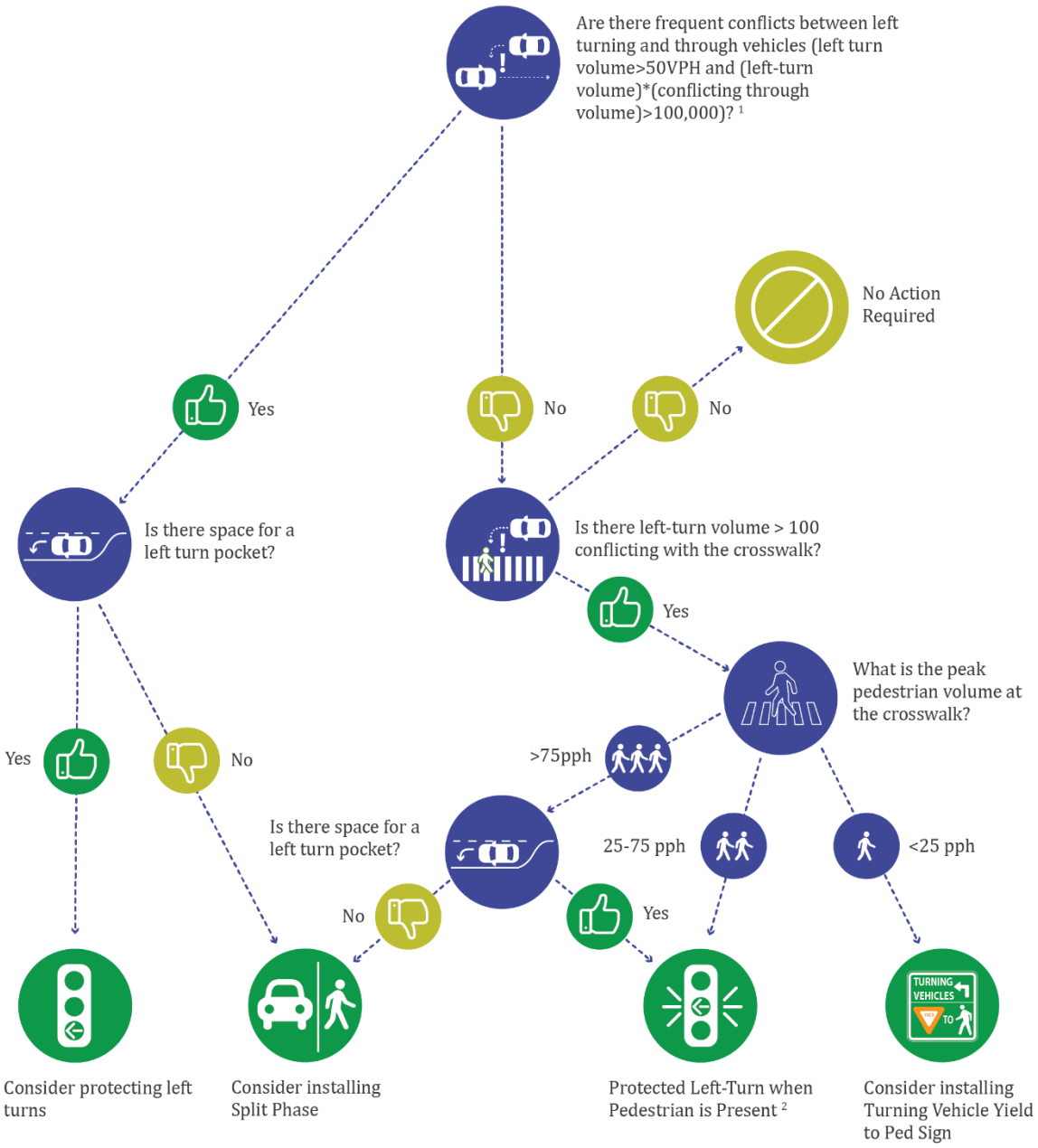
1. The best practice is to provide recall 24/7. Recall could be adjusted based on activity characteristics.

Figure 11 Identifying Signalized Pedestrian Safety Needs Based on Vehicle Conflicts Flow Chart



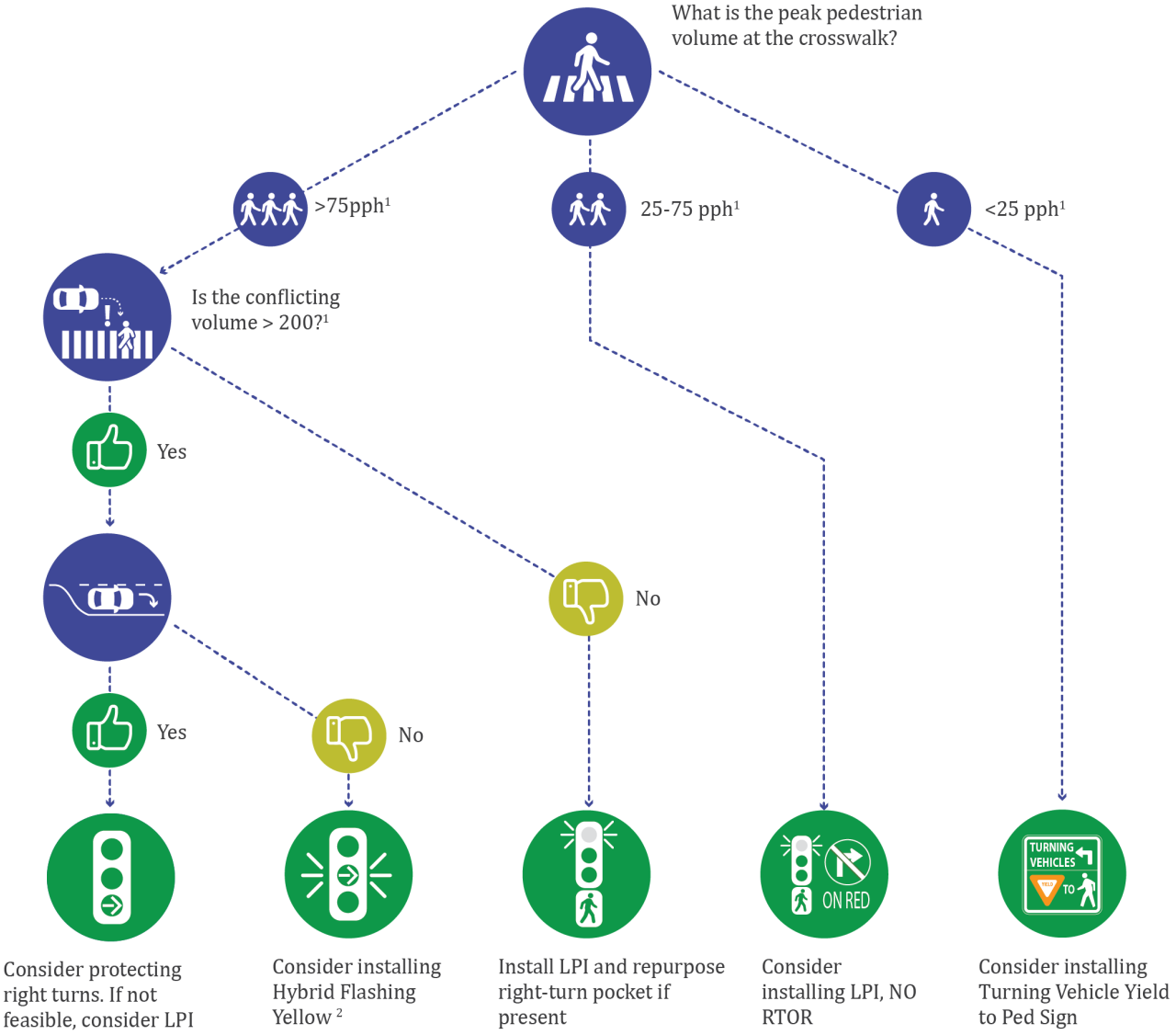
1. If volume(s) are within 10% of the threshold, roundup to account for background growth and future demand.

Figure 12 Identifying Signalized Pedestrian Safety Needs with Left-Turning Vehicle Conflicts on Two-Way Streets Flow Chart



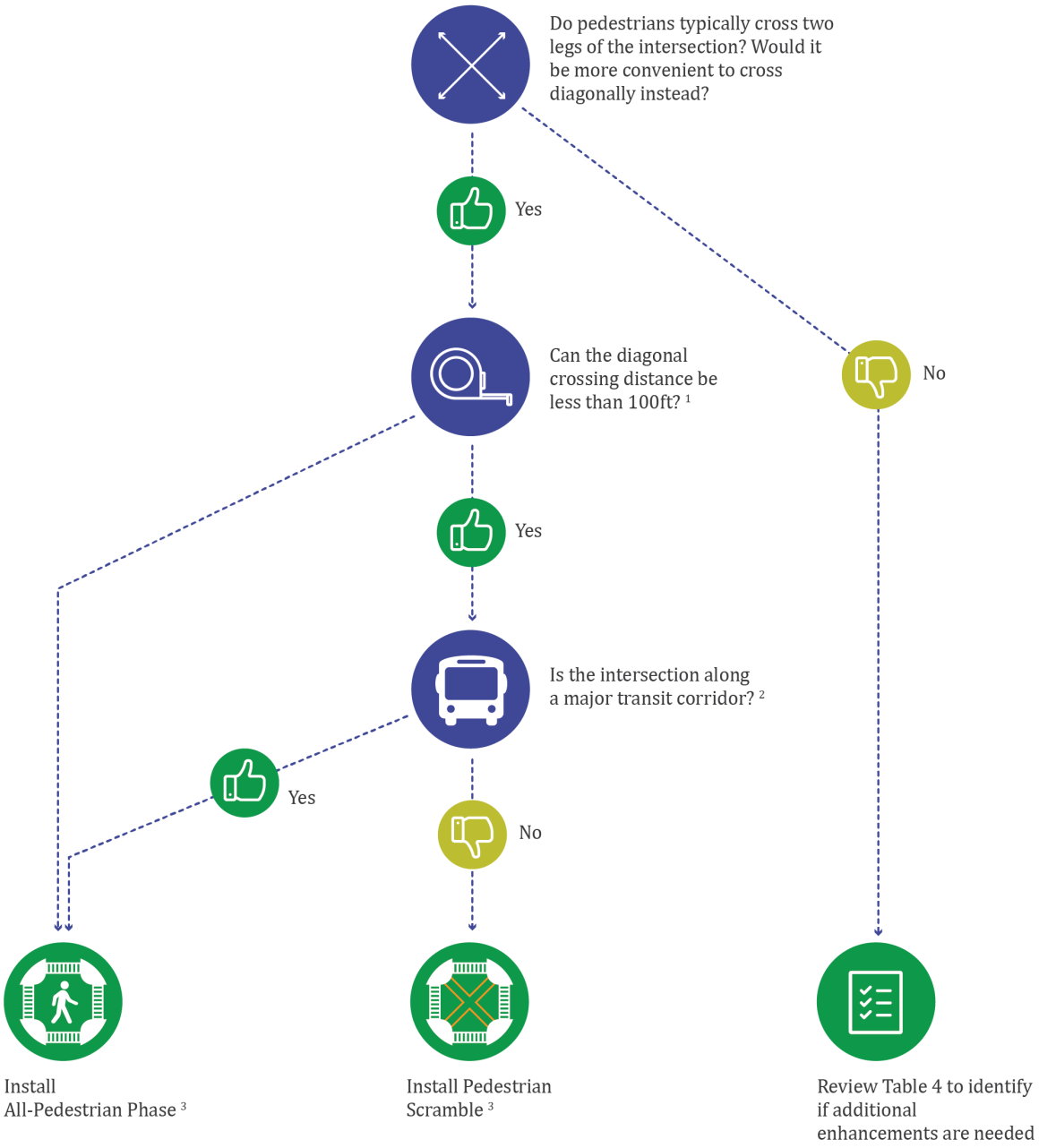
1. If volume(s) are within 10% of the threshold, roundup to account for background growth and future demand.
2. Protected turn when pedestrian phase is called. Otherwise, green ball with yellow flashing arrow.

Figure 13 Identifying Signalized Pedestrian Safety Needs with Right-Turning Vehicle Conflicts on Two-Way Streets (and Left Turning Vehicles on One-Way Streets) Flow Chart



1. If volume(s) are within 10% of the threshold, roundup to account for background growth and future demand.
2. Protected turn when pedestrian phase is called. Otherwise, green ball with yellow flashing arrow.

Figure 14 Pedestrian Flow Chart



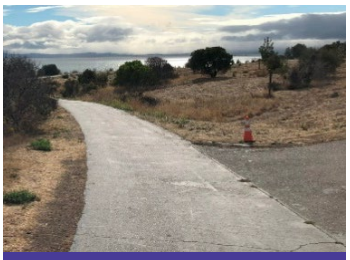
1. Less than 100 feet after bulb-outs and other enhancements to shorten crossing distances have been implemented
2. If additional transit operations enhancements present (e.g. transit signal priority), still consider installing the scramble if it benefits access to transit.

Bicycle Design Guidelines

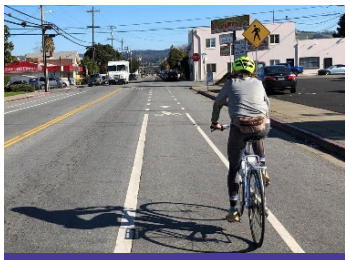
There are four types of bikeway types used in San Leandro, with various levels of stress for users:

- Shared use paths
- Separated bikeways
- Bike lanes, which may include buffers
- Bicycle boulevards

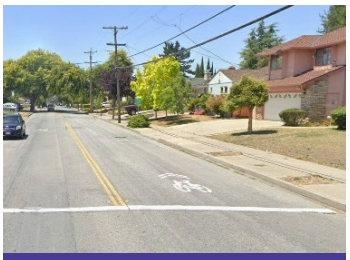
Figure 15 Bikeway Types in San Leandro



Shared-Use Path (Class I)



Bike Lane (Class II)



Bike Boulevard (Class III)

Separated Bikeway (Class IV)

Bikeway Facility Selection

Consistent with Alameda CTC's All Ages and Abilities Policy and Design Expectations for Countywide Bikeways, San Leandro follows the NACTO Designing for All Ages & Abilities guidance, which represents industry best practice on selecting the appropriate bikeway to install on a given street. Three primary goals are important in guiding bikeway selection:

Arterials in San Leandro typically require shared-use paths or separated bikeways due to the high speed of traffic. Collector or local streets may require separated bikeways if speeds cannot be reduced to 25MPH or lower.

- **Safety:** Reducing the frequency and severity of crashes and minimizing conflicts between users.
- **Comfort:** Minimizing stress, anxiety, and safety concerns for the target design user. Comfort and safety are closely related.
- **Connectivity:** Making trips direct and convenient, offering access to all destinations served by the roadway network, and creating seamless and clear transitions between bikeways and general roadways.

The following table from the NACTO guide indicates the ideal bikeway type based on average daily traffic, vehicle speed, vehicle lane number and type, and other important operational considerations.

In the NACTO table below, protected bicycle lane refers to a separated bikeway. A bike path refers to a shared-use path.

Table 6 Contextual Guidance for Selecting All Ages & Abilities Bikeways

Roadway Context				All Ages & Abilities Bicycle Facility
Target Motor Vehicle Speed*	Target Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		*Any*	*Any of the following:* high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts‡	**Protected Bicycle Lane**
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	**Shared Street**
≤ 20 mph	≤ 1,000 – 2,000		< 50 motor vehicles per hour in the peak direction at peak hour	**Bicycle Boulevard**
≤ 25 mph	≤ 500 – 1,500			
	≤ 1,500 – 3,000	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	**Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane**
	≤ 3,000 – 6,000			**Buffered or Protected Bicycle Lane**
	Greater than 6,000			**Protected Bicycle Lane**
	Any	Multiple lanes per direction		
Greater than 26 mph†	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	**Protected Bicycle Lane, or Reduce Speed**
		Multiple lanes per direction		**Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed**
	Greater than 6,000	*Any*	*Any*	**Protected Bicycle Lane**
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		*Any*	High pedestrian volume	**Bike Path with Separate Walkway or Protected Bicycle Lane**
			Low pedestrian volume	**Shared-Use Path or Protected Bicycle Lane**

* While posted or 85th percentile motor vehicle speed are commonly used design speed targets, 95th percentile speed captures high-end speeding, which causes greater stress to bicyclists and more frequent passing events. Setting target speed based on this threshold results in a higher level of bicycling comfort for the full range of riders.

† Setting 25 mph as a motor vehicle speed threshold for providing protected bikeways is consistent with many cities' traffic safety and Vision Zero policies. However, some cities use a 30 mph posted speed as a threshold for protected bikeways, consistent with providing Level of Traffic Stress level 2 (LTS 2) that can effectively reduce stress and accommodate more types of riders.

‡ Operational factors that lead to bikeway conflicts are reasons to provide protected bike lanes regardless of motor vehicle speed and volume.

Source: NACTO Urban Bikeway Design Guide

Wherever traffic volume and/or speed indicate a more protected bicycle facility than may be feasible, a less protected bikeway may be implemented in conjunction with volume and/or speed reducing measures. Where that approach is used, subsequent data collection is critical to verify the design is operating as expected. If volume and/or speed are persistently over the NACTO guidelines, additional traffic calming measures or a more protected bikeway may be necessary.

Where there is doubt over a street's ability to be traffic calmed sufficiently, the project can be treated as a pilot using "quick build" materials, with a second phase to (1) make the project permanent using substantial materials, such as concrete, (2) install additional traffic calming to meet the NACTO thresholds, or (3) upgrade the design to a more protected bikeway, such as a path or separated bikeway per the NACTO guidelines, which may require more substantial trade-offs such as parking removal.

If the preferred bikeway cannot be provided, bringing down the ADT and/or speed to the next-best bikeway should be considered. Alternative parallel routes may also be considered in those cases.

Other factors such as available right-of-way may also influence bikeway selection, especially when retrofitting bikeways onto existing streets. Curb-to-curb width and parking in some neighborhoods can present specific considerations for design. Other such factors include:

- High parking turnover or curbside activity, which typically requires additional separation between bicyclist and drivers;
- High concentrations of vulnerable populations such as children and older adults;
- Unusually high peak hour motor vehicle volumes, which typically requires additional separation between bicyclist and drivers;
- High percentages of trucks and buses, which typically requires additional separation between bicyclist and drivers; and:
- Frequent driveways or intersections.

Bike Facility Types

Shared-Use Paths

Best practice guides:

- FHWA Small Town and Rural Multi-Modal Networks Guide
- FHWA Bikeway Selection Guide
- California Highway Design Manual

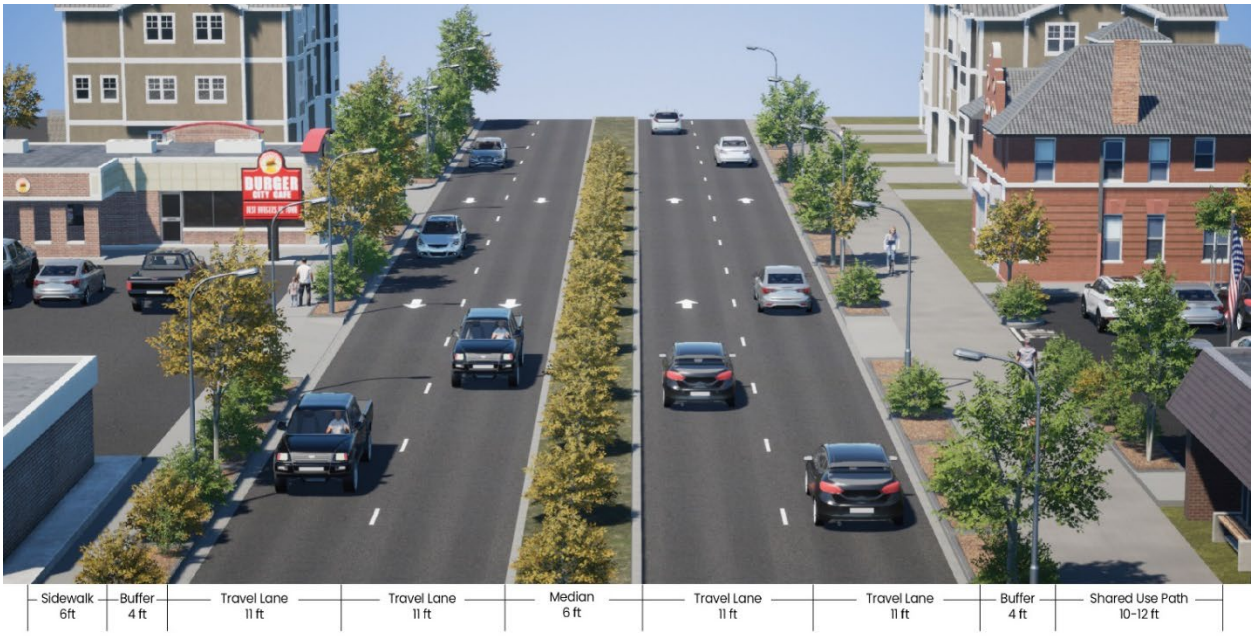
Table 7 Shared-Use Path Minimum and Preferred Widths

	Shared-Use Path Width	
	Minimum	*Preferred*
Two-Way	8 ft + 2 ft shoulder	10-12 ft + 2 ft shoulder

Sources: FHWA Small Town and Rural Multi-Modal Networks Guide, FHWA Bikeway Selection Guide, California Highway Design Manual

Shared-use paths, often referred to as bike paths or trails, are off-street facilities that provide exclusive use for non-motorized travel by bicyclists and pedestrians. Shared-use paths have minimal intersections with motorists and are typically located along landscaped corridors. Shared-use paths can be utilized for both recreational and commute trips, and they provide important recreational amenities for bicyclists, pedestrians, runners, skaters, and others using nonmotorized forms of travel. The paths are frequently designed to create connections such as traversing barriers like freeways or rivers. Recommended and minimum widths for shared-use paths are presented in *Table 7.* A typical cross section is shown in *Figure 16*.

Figure 16 Sample Shared-Use Path Cross Section



Design Principles

- Best in locations with few intersections.
- Ensure adequate path width, sight distance, and drainage.
- Include wayfinding signs for easier navigation.
- Provide shade, such as from trees, to encourage use.
- Include scenic attributes such as landscaping and consider trail placement to highlight views, such as along the Bay Trail and to the San Francisco Bay.
- Include enhanced street crossings with measures such as bike and pedestrian activated traffic signals, median islands, and warning signs per the Crosswalk Policy (see Pedestrian Design Guidelines).
- Include curb ramps and curb cuts that are convenient and conform to PROWAG and ADA standards.
- At freeways, highways, waterways, and railroads, consider grade-separated crossings. At-grade rail crossings for share-use paths should cross at 90 degrees and must include separate rail safety gates from the roadway.

Maintenance Needs

- Conduct maintenance frequently to avoid hazards such as tree root cracking, degrading pavement, and debris.
- Refresh faded striping and repair or replace damaged or faded signage.
- Maintain adequate vegetation clearance along trails and at trail crossings.

Separated Bikeways

Best practice guides:

- FHWA Separated Bike Lane Planning and Design Guide

- MassDOT Separated Bike Lane Planning and Design Guide
- NACTO Don't Give Up at the Intersection
- Caltrans DIB 89-02: Class IV Bikeway Guidance and DIB 94

Separated bikeways, sometimes known as protected bikeways or cycle tracks, are physically separated bicycle facilities distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way but provide a level of comfort similar to shared-use paths. The key feature of a separated bikeway is a vertical element that provides physical separation from motor vehicle traffic. Common elements used for separation include vertical curbs, painted buffers with flexible posts, parked cars, landscaped areas, large planters, and fixed barriers. Separated bikeways may also be constructed at a height above the vehicular lanes, with a continuous sloped transition.

Separated bikeways can be one-way for a single direction of travel or two-way to accommodate both directions. Two-way separated bikeways are most appropriate where destinations are concentrated along one side of a street, the bikeway connects to other two-way bikeways, or where the bikeway is located on a one-way street for motor vehicle travel. Example locations include along a waterway, railroad, or school frontage. In these locations, wrong-way bicycling may be likely in a one-way bikeway configuration. Recommended and minimum widths for one-way and two-way separated bikeways are presented in *Table 8*. A typical cross section is shown in *Figure 17*.

Streets with high vehicular volumes and high speeds are appropriate candidates for separated bikeways, as they increase the comfort of bicyclists on these higher-stress roads. NACTO recommends separated bikeways on streets with **6,000 or more ADT and/or 25 miles MPH or greater 95th percentile observed speeds**.

Figure 17 Sample Separated Bikeway Cross Section

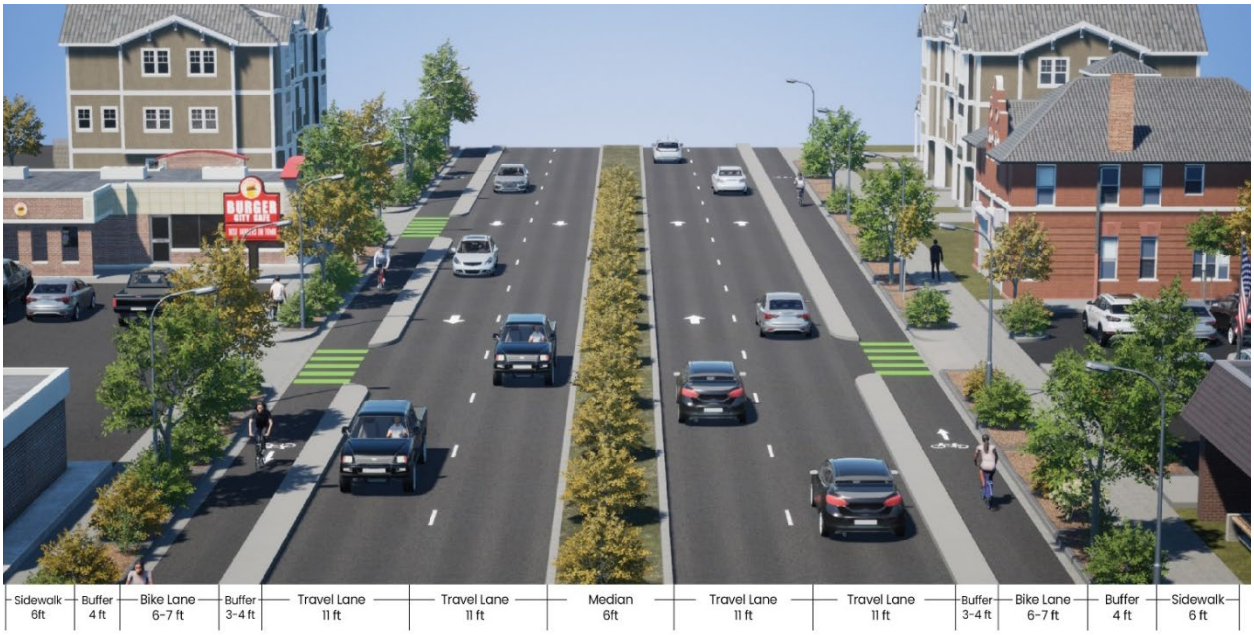


Table 8 Separated Bikeways Minimum and Preferred Widths

	Separated Bikeway Width		Buffer Width (with parking)		Buffer Width (without parking)	
	Minimum	*Preferred*	*Minimum*	*Preferred*	*Minimum*	*Preferred*
Two-Way	8 ft	10-12 ft	3 ft	4+ ft	1.5 ft	3+ ft
One-Way	5 ft	7 ft	3 ft	4+ ft	1.5 ft	3+ ft

Sources: Caltrans DIB 89-02, Caltrans DIB 94, FHWA Separated Bike Lane Planning and Design Guide, MassDOT Separated Bike Lane Planning and Design Guide, FHWA Small Town and Rural Multi-Modal Networks Guide

Design Principles

- Use concrete or landscape buffers whenever possible to provide the highest degree of protection. Plastic delineators may be used for interim quick-build projects but should have a replacement plan for the long-term.
- Best placed in areas with fewer driveways to minimize conflicts with motor vehicles. Where driveways occur, mitigate conflicts such as with daylighting based on red-turn speeds and with raised crossings to slow speeds.
- Require careful design of appropriate intersection treatments, as directed in subsequent sections.
- Use skipped green markings consistently in conflict zones, such as at transition points and at high frequency driveways.
- Design drainage grates to avoid catching bicycle tires.
- Consider raised separated bikeways, particularly when dimensions are more constrained.
- Consideration of fire and municipal codes is necessary, such as emergency vehicle clear widths and distance from the street to adjacent buildings.
- Like shared-use paths, at-grade rail crossings for two-way separated bikeways should cross at 90 degrees and include separate rail safety crossing gates from the roadway.

Maintenance Needs

- Conduct maintenance frequently to avoid roadway hazards such as debris which can collect in roadway-level separated bikeways. Smaller street cleaning equipment may be required to fit between the curb and barrier.
- Maintain posts, bollards, landscaping, and other physical buffers.
- Refresh faded striping and repair or replace damaged or faded signage.
- Consider highly durable construction methods such as concrete medians and raised bikeways to reduce maintenance costs.

Bike Lanes

Best practice guides:

- NACTO Urban Bikeway Design Guide, 2nd edition
- FHWA Small Town and Rural Multi-Modal Networks Guide
- Caltrans DIB 94

Bike lanes are on-street facilities that use striping, stencils, and signage to denote preferential or exclusive use by bicyclists. On-street bikes lanes are located adjacent to motor vehicle traffic and do not have a physical barrier from traffic. Bike lanes provide space for more comfortable riding when located on streets with lower ADT and lower speeds. Recommended and minimum widths for bike lanes are presented in *Table 9*. A typical cross section of a buffered bike lane is shown in *Figure 18*.

Figure 18 Sample Buffered Bike Lane Cross Section

Table 9 Bike Lane Minimum and Preferred Widths

Bike Lane Width		Total Bike Lane + Parking Lane Width	
Minimum	*Preferred*	*Minimum*	*Preferred*
5 ft (with 4 ft clear of gutter pan)	7 ft (with 4 ft clear of gutter pan)	14 ft	15 ft

Sources: Caltrans DIB 94, NACTO Urban Bikeway Design Guide, 2nd edition, FHWA Small Town and Rural Multi-Modal Networks Guide

Design Principles

- Minimize vehicle travel and parking lane widths to (1) reduce vehicle speeds and create safer roadway conditions for all users, and (2) provide maximum bike lane widths to allow bicyclists to pass other riders safely and navigate around parked cars and other road hazards.

NACTO recommends bike lanes on streets with **1,500 to 6,000 ADT and less than 25 MPH 95th percentile observed speeds.**

- As available roadway width for the bike lane increases beyond five feet, use painted buffers:

    - Left-side painted buffers on bike lanes improve separation between bicycles and vehicles and is critical where there are high volumes and speeds over 35 miles per hour.
    - Right-side painted buffers can be added between parallel parked cars and bike lanes to create separation from the door zone, the space in which a driver may open their car door and accidentally hit a bicyclist.
    - Where extra buffer space is available, consider upgrading to a separated bikeway.
- Use green skip-striping in heavily trafficked merging areas, including turn lanes at intersection approaches and high frequency driveways.
- Design drainage grates to avoid catching bicycle tires.
- Install traffic calming as needed to maintain ADT and speed requirements, including speed tables, speed humps, and/or diverters.

Maintenance Needs

- Conduct maintenance frequently to prevent and remedy roadway hazards such as potholes and debris.
- Refresh faded striping and repair or replace damaged or faded signage.

Bicycle Boulevards

Best practice guides:

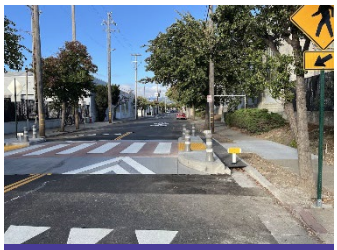
- NACTO Urban Bikeway Design Guide, 2nd edition
- FHWA Small Town and Rural Multi-Modal Networks Guide
- FHWA Bikeway Selection Guide
- Caltrans DIB 94

NACTO recommends bike boulevards on streets with **less than 1,500 ADT and less than 20 MPH 95th percentile observed speeds.**

Bicycle boulevards are designed to prioritize bicycle travel. They are located on low-volume, low-speed local streets and include other features designed to create low-stress, comfortable, attractive bikeways. These features include shared lane markings, wayfinding signs, traffic calming features such as speed humps and traffic diverters, and crossing improvements. Signage, pavement markings, speed humps, and low or reduced vehicle speeds are used to discourage through-trips by motor vehicles and create safe, convenient bicycle access. *Figure 19* shows an image gallery of typical bike boulevard treatments.

Figure 19 Sample Bicycle Boulevard Treatments

Diverter



Speed Table

Chicane

Traffic Circle

Sources (clockwise): City of Berkeley, Fehr & Peers, Fehr & Peers, NACTO Urban Street Design Guide

Design Principles

- Install traffic calming to maintain ADT and speed requirements, including speed tables, speed humps, and/or diverters.
- Speed humps or speed tables are consistently used on all bicycle boulevards.
- Traffic calming is spaced consistently, with no more than 300 feet between speed calming elements.
- Intersection treatments may include traffic circles, chicanes, raised intersections, neck downs, diverters, and similar tools to slow vehicle speeds at intersections.
- Sharrow markings alert drivers to the presence of bikes.
- Before and after evaluation of bicycle boulevards should be conducted to make sure the street is meeting the volume and speed targets.

Maintenance Needs

- Conduct maintenance frequently to prevent and remedy roadway hazards such as potholes and debris.
- Refresh faded striping and repair or replace damaged or faded signage.

Intersection Design Treatments

Design expectations for bicyclists at intersection differ based on whether the intersecting streets are on the bikeway network and what the bikeway facility type is on each intersecting street.

Table 10 defines bikeway intersection treatments based on the intersecting bikeway or street type. In addition to these treatments, there are intersection treatments universally required for separated bikeways as defined in the subsequent section.

Table 10 Bikeway Intersection Treatments

Bike Facility Type	Separated Bikeway or Path	Bike Lane	Bike Boulevard	Bike Routes and All Other Streets		
				Arterials	Collectors	Local
Separated Bikeway or Path[1]	Protected Intersection OR Major Bikeway Crossing if Off-Street Path	Protected Intersection	Protected Intersection OR Major Bikeway Crossing with Two Stage Turn Box AND Traffic Diverter[2]	Major Bikeway Crossing	Major Bikeway Crossing OR Raised Bikeway Crossing	Raised Bikeway Crossing
Bike Lane[1]		Protected Intersection OR Two-Stage Turn Box	Major with Two-Stage Turn Box AND Traffic Diverter[2]	Major Bikeway Crossing	Major Bikeway Crossing	Universal Bike Lanes Treatments only
Bike Boulevard[1]			Traffic Circle OR Curb Extensions	Major Bikeway Crossing AND Traffic Diverter[2]	Major Bikeway Crossing AND Traffic Diverter[2]	

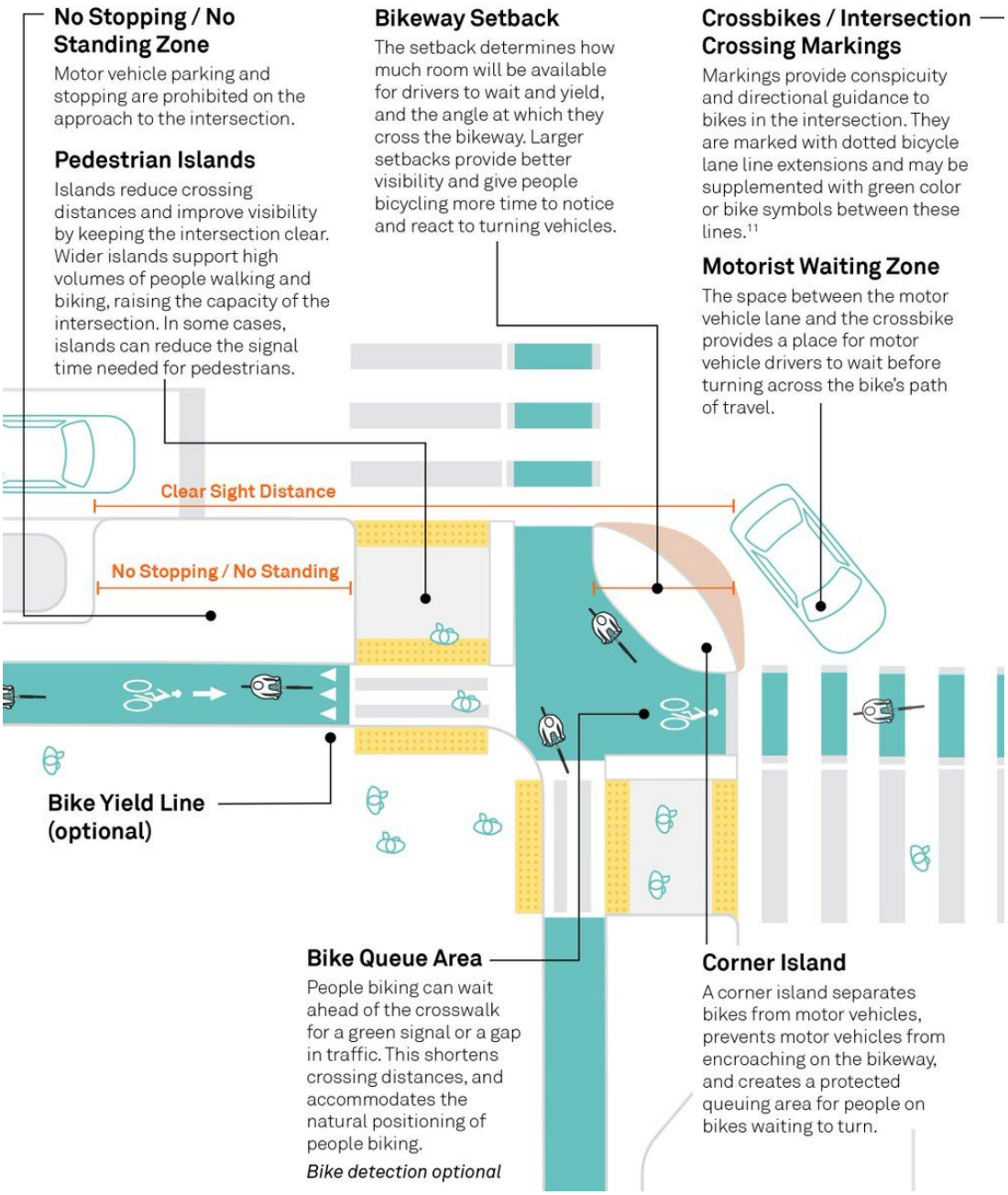
1. *Universal treatments are defined separately for separated bikeways and paths, bike lanes, and bike boulevard and are required at each intersection in addition to the treatments presented in this table unless otherwise noted.*

2. *Install traffic diverter if ADT is greater than the allowable average daily volume per Table 6. Install with consideration of neighborhood vehicular context.*

Protected Intersections

Protected intersections provide full separation between bicyclists and motor vehicles up to and through the intersection, improve sight lines between autos and bicyclists, give bicyclists and typically pedestrians a "head start" at the intersection, and shorten crossing distances. The bikeway is typically set back against the curb or at sidewalk level, away from motor vehicle traffic. This design includes corner islands that create a refuge for bikes to wait ahead of vehicles and slow down turning motor vehicles. Refer to the MassDOT Separated Bike Lane Planning Guide for design guidelines.

Figure 20 Protected Intersection Design Guidelines



Source: NACTO Don't Give Up at the Intersection

Design Principles

- Install at key intersections in the bikeway network, such as intersections between separated bikeways or intersections between separated bikeways and bike lanes.
- Layout and operations require consideration of design vehicle. Corner design should typically allow for an SU-30 to turn but at a very low speed.
- Improve visibility between right-turning vehicles and bicyclists and pedestrians and slow right-turning driver speeds to 5 MPH.

- Give bicyclists and pedestrians a "head start" at the intersection.
- Separate bicycle signal phasing is required where conflicting left or right-turn auto volumes are high.
- Provide enough queuing space for bicyclists, including cargo bikes, outside of the travel way.

Bikeway Crossings of Major Streets

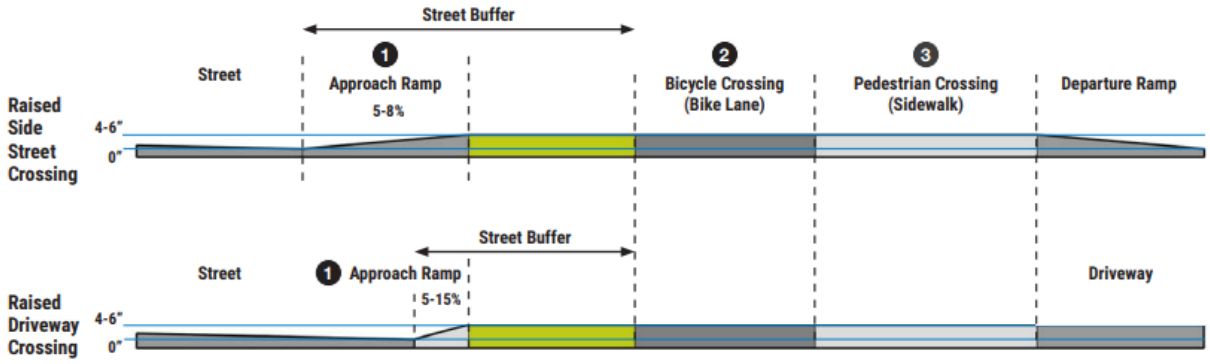
Where a bikeway crosses a non-bike network street, especially where vehicle volumes are high, intersection treatments must be installed to ensure bicyclists of all ages and abilities can navigate the crossing. These include installing the following:

- Uncontrolled or controlled crosswalk enhancements, which will support bicyclists safely crossing the intersection, based on traffic control type. See Crosswalk Policy above.
- Flashing beacons and signals must include bicycle detection. Install detection per the California MUTCD.
- PHBs used for bicycle crossings should be designed with bicyclist-oriented actuation, such as push buttons oriented toward bike traffic or passive actuation, as well as bicycle-specific signal phasing to reduce conflicts. Separated bikeways may be used to assist bike riders in reaching the front of the intersection, providing a dedicated waiting space separate from cars to increase bicyclist comfort and improve signal actuation reliability. Bicycle actuation confirmation lights can be used in conjunction with traffic signals or PHBs, to inform bicyclists that they are "seen" and encourage them to wait for the proper signal to proceed.
- Median refuges should be designed to provide refuge for bicyclists and should be long enough to store a typical cargo bike.
- Consider installing diverters where a bike boulevard crosses a major street. Install with consideration of neighborhood vehicular context. Reducing traffic volumes will be necessary in most cases to make bike boulevards suitable for all ages and abilities.

Raised Bikeway Crossing

Raised bikeway crossings are an effective strategy for reducing vehicle speeds and emphasizing bicycle priority, especially at minor side street crossings. Raised bikeway crossings are typically paired with a raised pedestrian crosswalk to provide a pedestrian safety co-benefit. They are especially common for raised separated bikeways and shared-use paths.

Figure 21 Raised Crossing Cross Sections



Source: MassDOT Separated Bike Lane Planning and Design Guide

Two-Stage Turn Box

Two-stage turn boxes should be installed per the California MUTCD. Bike box dimensions are typically **15'x10'-16'** between inner edges of striping. They should be painted green and installed with no right turn on red signage.

Figure 22 Two-Stage Turn Box Design

Source: NACTO Urban Bikeway Design Guide

Traffic Diverter

In some cases, traffic volumes on bicycle boulevards are too high to provide an All Ages and Abilities bikeway. Where a decrease in traffic volume is necessary to meet the All Ages and Abilities guidance, a diverter is needed. Consideration should be given to overall vehicular circulation patterns as part of installation.

Figure 23 Example of Traffic Diverter

Source: BikePortland

Traffic Circle

At local side-street stop-controlled intersections, traffic circles can be used to slow traffic along and intersecting bike boulevards. The design vehicle should be a passenger car. A larger vehicle may need to cross in front of the traffic circle in order to make a left turn. A narrow truck apron used at a traffic circle should be designed, at a minimum, to provide through movements for a service vehicle (SU-30).

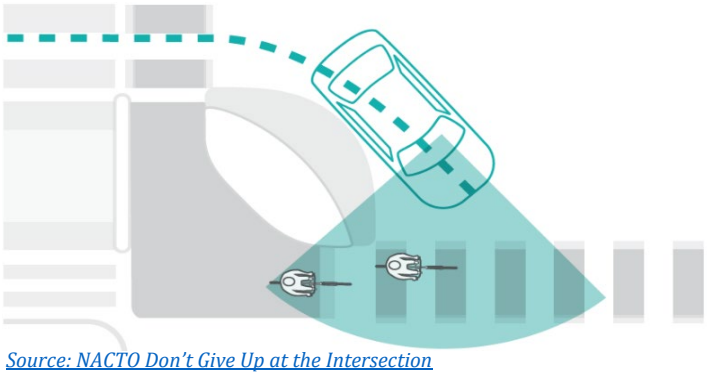
Figure 24 Diagram of a Traffic Circle

Source: NACTO Urban Street Design Guide

Curb Extension or Corner Island

Curb extensions can be used to narrow intersections to slow vehicle speeds, increase the visibility of crossing bicyclists and pedestrians, and reduce the crossing distance for bicyclists and pedestrians. Evaluate curb extension geometry to accommodate vehicle traffic, directional curb ramps, and signal equipment and other utilities in locations that do not interfere with sight lines or pedestrian path of travel. Utilize reversing curves with radii at least **15 feet** for the curb extension transition back to the existing curb line and paint the curb red. This design allows street sweeping machinery to collect trash/debris that accumulates in transition areas.

Figure 25 Diagram of Widened Curb Radii to Increase Visibility



Source: NACTO Don't Give Up at the Intersection

Signal Timings

Bicycle signal timing standards are per the latest California MUTCD and are a universal bike lane treatment. Within ¼ mile of schools and parks, designers should consider slower signal timings, such as a slow bike speed and longer yellow, to accommodate children biking.

Universal Treatments for Separated Bikeways

This section outlines the intersection treatments required at all intersections on separated bikeways, regardless of the intersecting street types or bikeway.

Approach Clear Space

At each intersection, regardless of the traffic control type, sufficient sight distance must be provided between turning motorists and bicyclists traveling in the separated bikeway. This requires consideration of contextual sight distance considerations, including obstacles such as parked vehicles and infrastructure in the right-of-way, and may require parking prohibitions near intersections.

Clear space is the sum of the decision and recognition zones (see ***Error! Reference source not found.Error! Reference source not found.***, ***Error! Reference source not found.*** below). Clear space recommendations are provided in *Table 11* for various turning speeds of motorists, which may vary from 10 to 20 mph based on the geometric design of the corner and the travel path of the motorist. The recommended clear space allows one second of reaction time for both parties as they approach the intersection, assuming bicyclists are traveling at a consistent speed of 15 MPH. If bicyclists' speeds are slower, such as on an uphill approach, or motorists' turning speeds are slower than 10 mph, the clear space may be reduced. Where either party may be traveling faster, such as on downhill grades, the clear space would likely benefit from an extension.

Table 11 Clear Space Requirements for Different Turning Speeds

Vehicular Turning Design Speed[1]	Approach Clear Space
10 mph	40 feet
15 mph	50 feet
20 mph	60 feet

1. At low volume driveways and alleys where motorist turning speeds can be anticipated to be less than 10 mph should provide a minimum clear space of 20 feet.

Source: MassDOT Separated Bike Lane Planning & Design Guide

Figure 26 Right Turning Motorist Yields to Through Bicyclist

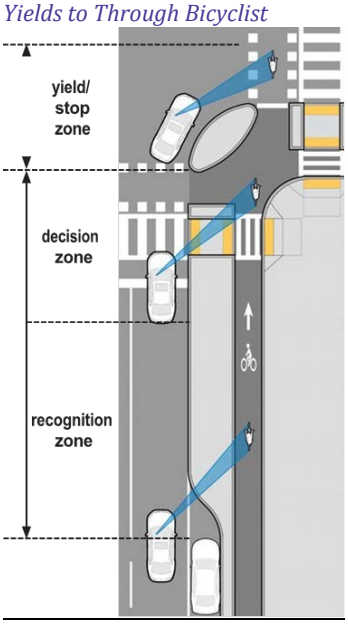


Figure 27 Through Bicyclist Yields to Right Turning Motorist

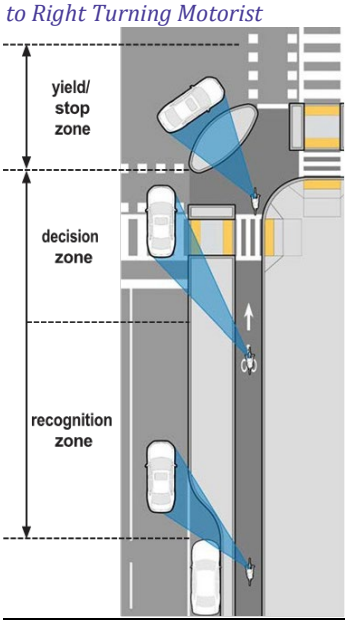
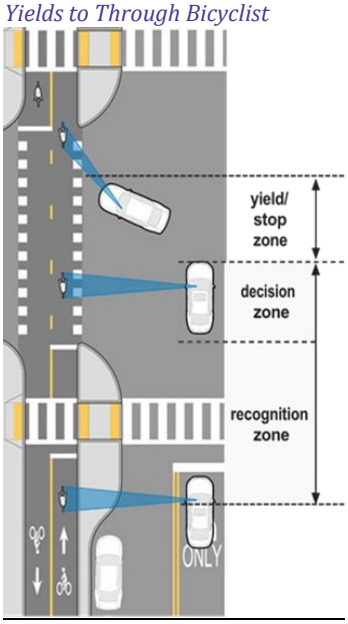


Figure 28 Left Turning Motorist Yields to Through Bicyclist



Source: MassDOT Separated Bike Lane Planning & Design Guide

Traffic Signal Treatments

Signal Phasing

At signalized intersections with high conflicting left- and/or right-vehicle turn movements across the separated bikeway, use *Table 12* to assess intersection turning movement volumes to determine of bicyclists and vehicles need to be separated in time (i.e. with a protected turn phase or leading bicycle interval) as well as in space (i.e. with the protected intersection).

Table 12 Time-Separated Bicycle Movements Guidance

Separated Bikeway Operation	Motor Vehicles per Hour Turning Across Separated Bikeway[1]			
	Two-Way Street			One-Way Street
	Right Turn	Left Turn Across One Lane	Left Turn Across Two Lanes	Right or Left Turn
One-Way	150	100	50	150
Two-Way	100	50	0	100

1. If turning conflicts are lower than the thresholds in this table, consider a leading bicycle interval.

Source: MassDOT Separated Bike Lane Planning and Design Guide

Permissive Left Turns

Where a motorist can make a permissive left turn at a traffic signal or from an uncontrolled approach (e.g., a left turn from an arterial onto a local street or driveway), the motorist will be accelerating towards the crossing once they perceive a gap in traffic. This typically creates a higher potential for conflict and requires consideration of one or more of the following design elements to mitigate conflicts:

- Implement a protected left turn phase for motorists that does not conflict with the bicycle crossing movement.
- Install a TURNING VEHICLES YIELD TO BICYCLES AND PEDESTRIANS sign (R10-15 alt.).
- Supplement the bicycle crossing with green surfacing.
- Raise the crossing.
- Recess the crossing.

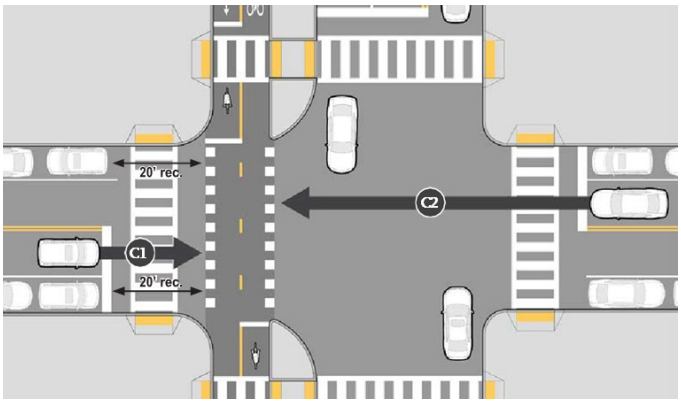
Restrict Left Turns

Left-turn restrictions may be beneficial on two-way streets with high transit volumes. Install NO RIGHT TURNS (MUTCD R3-1), NO LEFT TURNS (R3-2), NO TURNS (R3-3), or NO TURNS EXCEPT BICYCLES signs at a minimum. Stop-Controlled Approaches

Error! Reference source not found. presents considerations at side-street stop-controlled approaches related to conflicts between motor vehicles originating from the side-streets and bicyclists on the major street.

At side-street stop-controlled intersections, designers should provide a minimum clear space of 20 feet between the stop line and the bicycle crossing to provide an approaching motorist with the ability to see approaching bicyclists in the separated bikeway. In many locations, the effective clear space will be larger than 20 feet to accommodate pedestrian crosswalks. At locations where the motorist must pull into the crossing to view traffic gaps and is likely to block the separated bikeway, other treatments such as signalizing the crossing,

Figure 29 Motorists Crossing Near and Far Side Separated Bikeway



Source: MassDOT Separated Bike Lane Planning & Design Guide

raising the crossing, or recessing the bicycle crossing should be considered.

Where motorists must cross a far side separated bikeway, designers should consider the frequency of through movements at these types of intersections and provide adequate sight distance for bicyclists to perceive a crossing vehicle and stop if necessary. For this reason, the following potential mitigations should be considered:

- Install a traffic signal.
- Raise the crossing.
- Recess the crossing.
- Restrict crossing movements.

Figure 30 Intersection Marking in Oakland

Source: NACTO Urban Street Design Guide

Intersection Markings

Bike lanes should be marked through intersections with **6-inch-wide** dashed white lines; the solid portion of the **dash should be 4 feet long** and the **gap should be 8 feet long**. Green should be used for the markings.

Bus Stops

Bicycle facilities on public transit corridors can generate unique challenges in creating low-stress environments, particularly at bus stops. Separated bikeways are a key strategy to eliminate bus-bike conflicts as they allow for the conversion of buffer space into bus boarding islands to create a dedicated platform for transit passengers. Bus riders cross the separated bikeway—which is typically raised to the sidewalk level to increase pedestrian accessibility—at clearly denoted crosswalks in order to reach the sidewalk.

Design Principles

- Designs should follow the latest AC Transit Transit-Supportive Design Guidelines (TSDG). TSDG is a reference guide for planners and engineers designing projects on streets where AC Transit operates. The document includes guidance on elements such as bus operational needs, paratransit operational needs, and bus stop design guidance at bus stops that overlap with a bikeway. Appropriate design solutions are context-specific, so the City of San Leandro should coordinate directly with AC Transit early in the design process to ensure that designs are supportive of safe, accessible, and reliable bus and paratransit operations.
- The length of a floating bus stop is based on the maximum length of the buses that use the stop plus a minimum **10 foot buffer** from the crosswalk. Floating bus stops are generally installed within the floating parking lane at far side intersection locations to maintain visibility of crossing traffic and pedestrians.
- Pedestrian access to the floating bus stop can be facilitated by an ADA-compliant ramp to an adjacent, existing crosswalk or with a raised crosswalk over the separated bicycle facility.
- The separated bicycle lane at floating bus stops should be **greater than 5 feet wide** to provide a comfortable experience for through cyclists.

Bike Parking

As with motor vehicle parking, bicycle parking is meant to offer cyclists a place to store their bikes so that they can patronize businesses or visit nearby attractions. Bicycle racks are generally installed on sidewalks while larger bicycle corrals are installed within the traditional parking lane, in the bike buffer of a separated bikeway, or integrated into the design of a floating bus stop to encourage multimodal connections. To enhance safety

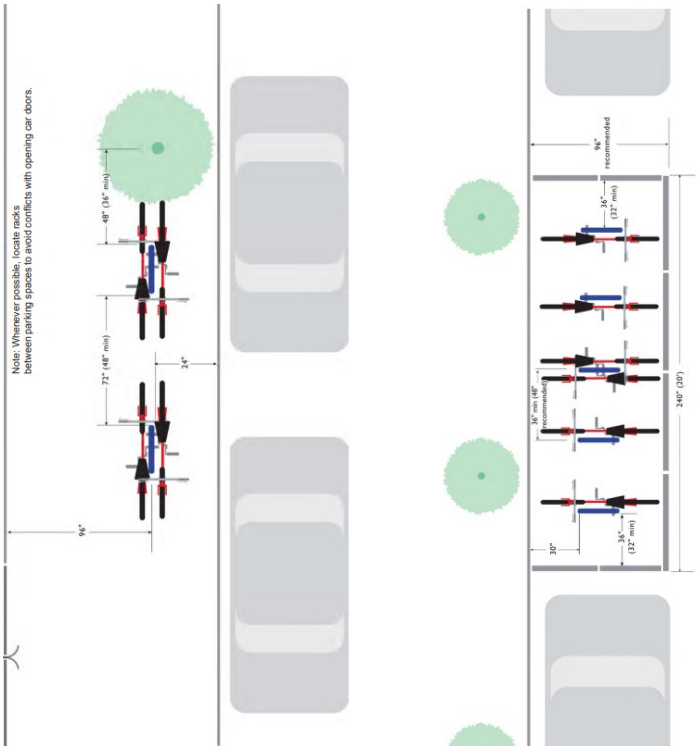
and awareness, bicycle corrals installed in the roadway should also be accompanied by high-visibility safety posts and curb stops. The inverted U-shaped rack is the recommended design.

Figure 31 Inverted U Bike Rack

Source: Outdoor Design Group

The San Leandro Zoning Code requires short-term and long-term bicycle parking and specifies the dimensions of spaces, locations, and design, with the number of parking spots required based on land use type. The APBP Bicycle Parking Guidelines, 2nd edition, specifies guidelines for bike parking, including preferred layouts for bicycle racks in- and off-street. An update to the APBP bike parking guide is in progress; refer to the latest document once available.

Figure 32 Sample Bicycle Parking Layouts: Parallel to Curb (Left) and Perpendicular In-Street (Right)



Source: APBP Bicycle Parking Guidelines

Appendix B. Project Location List

Prioritized Bicycle Corridors

Corridor	Priority	Collision History	Community Destinations	Equity Priority Community	Priority Development Area
San Leandro Creek Trail	High		✓	✓	✓
150Th Ave	High	✓	✓	✓	✓
Davis St	High	✓	✓	✓	✓
E 14Th St	High	✓	✓	✓	✓
Parrott St	High	✓	✓	✓	✓
W Juana Ave	High	✓	✓	✓	✓
Alvarado St	High	✓	✓	✓	✓
Bancroft Ave	High	✓	✓	✓	✓
Estudillo Ave	High	✓	✓	✓	✓
Hesperian Blvd	High	✓	✓	✓	✓
Lewelling Blvd	High	✓	✓	✓	✓
San Leandro Blvd	High	✓	✓	✓	✓
Washington Ave	High	✓	✓	✓	✓
Williams St	High	✓	✓	✓	✓
136Th Ave	Medium		✓	✓	✓
143Rd Ave	Medium	✓	✓	✓	✓
Castro St	Medium		✓	✓	✓
Doolittle Dr	Medium	✓	✓	✓	
Floresta Blvd	Medium	✓	✓	✓	
Manor Blvd	Medium	✓	✓	✓	
W Estudillo Ave	Medium		✓	✓	✓
Creekside Plaza	Medium		✓	✓	✓
Dolores Ave	Medium	✓	✓	✓	✓
Fairway Dr	Medium	✓	✓	✓	
Fargo Ave	Medium	✓	✓	✓	
Farnsworth St	Medium	✓	✓	✓	
Halcyon Dr	Medium	✓	✓	✓	✓
Hesperian Blvd	Medium		✓	✓	✓
Marina Blvd	Medium	✓	✓	✓	
Monterey Blvd	Medium	✓	✓	✓	
Park St	Medium		✓		✓
Peralta Ave	Medium		✓		✓
Springlake Dr	Medium	✓	✓	✓	✓
Sybil Ave	Medium		✓	✓	✓
W Broadmoor Blvd	Medium		✓		✓
Alvarado St	Medium		✓	✓	
Juana Ave	Medium		✓	✓	✓
Lark St	Medium	✓		✓	✓
Macarthur Blvd	Medium	✓	✓		✓

Prioritized Pedestrian Intersections

Intersection	Priority	Collision History	Pedestrian Priority Area	Equity Priority Community	Priority Development Area	Safe Routes to School Project
Davis St / San Leandro Blvd	High	✓	✓	✓	✓	
Hays St / W Juana Ave	High	✓	✓	✓	✓	
Santa Rosa St / Dolores Ave	High		✓	✓	✓	
138Th Ave / E 14Th St	High		✓	✓	✓	
141St Ave / E 14Th St	High		✓	✓	✓	
Jefferson St / Callan Ave	High		✓	✓	✓	
Joaquin Ave / E 14Th St	High		✓	✓	✓	
Parrott St / San Leandro Blvd	High	✓	✓	✓	✓	
Stoakes Ave / E 14Th St	High	✓	✓		✓	
Callan Ave / Davis St / E 14Th St	High		✓	✓	✓	
136Th Ave / Bancroft Ave	High	✓	✓	✓		✓
Springlake Dr / Hesperian Blvd	High	✓	✓	✓	✓	
W Juana Ave / San Leandro Blvd	High	✓	✓	✓	✓	
Alley / Blossom Way	Medium		✓	✓	✓	
Alvarado St / Davis St	Medium		✓	✓	✓	
Bradrick Dr / Monterey Blvd	Medium	✓	✓	✓		
Campbell Ave / Williams St	Medium		✓	✓		
Carpentier St / W Juana Ave	Medium		✓	✓	✓	
Carpentier St / Williams St	Medium		✓	✓	✓	
Clarke St / W Juana Ave	Medium		✓	✓	✓	
Clarke St / Williams St	Medium		✓	✓	✓	
Cornwall Way / Blossom Way	Medium		✓	✓	✓	
Crosby St / Manor Blvd	Medium	✓	✓	✓		
Durant Ave / Macarthur Blvd	Medium		✓	✓	✓	
Endicott St / Manor Blvd	Medium	✓	✓	✓		
Greenhouse Mall / Fargo Ave	Medium	✓	✓	✓		
Harrison St / Estudillo Ave	Medium		✓	✓	✓	
Hays St / Williams St	Medium		✓	✓	✓	
Hilding Ave / Williams St	Medium		✓	✓		
Hollister Ct / Durant Ave	Medium		✓	✓	✓	
Huff Ave / Callan Ave	Medium		✓	✓	✓	
Moraga Dr / Monterey Blvd	Medium	✓	✓	✓		
Parrott St / Washington Ave	Medium		✓	✓	✓	
Pelton Center Way / W Juana Ave	Medium		✓	✓	✓	
Santa Maria St / Dolores Ave	Medium		✓	✓	✓	
Santa Rosa St / Estudillo Ave	Medium		✓	✓	✓	
Thornton St / Washington Ave	Medium		✓	✓	✓	
Walnut Dr / Aurora Dr	Medium		✓	✓		✓
Apricot St / Park St	Medium	✓	✓			
Estabrook St / Washington Ave	Medium	✓	✓	✓		
Monarch Bay Dr / Fairway Dr	Medium	✓	✓	✓		
Washington Ave / W Juana Ave	Medium		✓	✓	✓	

Prioritized Pedestrian Intersections

Intersection	Priority	Collision History	Pedestrian Priority Area	Equity Priority Community	Priority Development Area	Safe Routes to School Project
135Th Ave / E 14Th St	Medium		✓	✓	✓	
136Th Ave / E 14Th St	Medium		✓	✓	✓	
137Th Ave / Bancroft Ave	Medium		✓	✓		✓
139Th Ave / E 14Th St	Medium		✓	✓	✓	
139Th Ave / Bancroft Ave	Medium	✓	✓	✓		
140Th Ave / Bancroft Ave	Medium	✓	✓	✓		
140Th Ave / E 14Th St	Medium		✓	✓	✓	
144Th Ave / E 14Th St	Medium		✓	✓	✓	
145Th Ave / E 14Th St	Medium		✓	✓	✓	
146Th Ave / E 14Th St	Medium		✓	✓	✓	
147Th Ave / E 14Th St	Medium		✓	✓	✓	
148Th Ave / E 14Th St	Medium		✓	✓	✓	
Anza Way / Washington Ave	Medium		✓	✓		
Belleview Dr / E 14Th St	Medium	✓	✓		✓	
Chumalia St / E 14Th St	Medium		✓	✓	✓	
Clarke St / Davis St	Medium		✓	✓	✓	
Creekside Plaza / San Leandro Blvd	Medium		✓	✓	✓	
Dan Niemi Way / Davis St	Medium		✓	✓	✓	
Dan Niemi Way / E 14Th St	Medium		✓	✓	✓	
Elsie Ave / E 14Th St	Medium		✓	✓	✓	
Georgia Way / E 14Th St	Medium		✓		✓	
Harlan St / E 14Th St	Medium		✓	✓	✓	
Harrison St / Callan Ave	Medium		✓	✓	✓	
Hays St / Davis St	Medium		✓	✓	✓	
Hudson Ln / San Leandro Blvd	Medium	✓	✓	✓		
Hyde St / Callan Ave	Medium		✓	✓	✓	
Interstate 880 Southbound - Lewelling Blvd Westbound Offramp / Lewelling Blvd	Medium	✓		✓		
Lark St / 150Th Ave	Medium	✓		✓	✓	
Lewelling Blvd Westbound - Interstate 880 Northbound Onramp / Lewelling Blvd	Medium	✓		✓	✓	
Lillian Ave / E 14Th St	Medium		✓	✓	✓	
Lloyd Ave / Washington Ave	Medium		✓	✓		
Maud Ave / Bancroft Ave	Medium		✓	✓		
Maud Ave / E 14Th St	Medium		✓	✓	✓	
Mckinley Ct / Bancroft Ave	Medium		✓	✓		
Pagano Ct / Washington Ave	Medium	✓	✓	✓		
Parrott St / E 14Th St	Medium		✓	✓	✓	
Pelton Center Way / E 14Th St	Medium		✓	✓	✓	
Polar Way / San Leandro Blvd	Medium	✓	✓	✓		
Santa Maria St / Estudillo Ave	Medium		✓	✓	✓	
Santa Rosa St / Callan Ave	Medium		✓	✓	✓	
Sunnyside Dr / E 14Th St	Medium	✓	✓		✓	

Prioritized Pedestrian Intersections

Intersection	Priority	Collision History	Pedestrian Priority Area	Equity Priority Community	Priority Development Area	Safe Routes to School Project
Thornton Pl / San Leandro Blvd	Medium		✓	✓	✓	
Thornton St / San Leandro Blvd	Medium		✓	✓	✓	
Thornton St / E 14Th St	Medium		✓	✓	✓	
W Estudillo Ave / San Leandro Blvd	Medium		✓	✓	✓	
Warren Ave / E 14Th St	Medium		✓	✓	✓	✓
Embers Way / Lewelling Blvd	Medium	✓		✓		
Greenhouse Mall / Lewelling Blvd	Medium	✓	✓	✓		
Hesperian Blvd / Lewelling Blvd	Medium	✓		✓	✓	
150Th Ave / Hesperian Blvd	Medium		✓	✓	✓	
Aladdin Ave / Fairway Dr	Medium		✓	✓		
Doolittle Dr / Fairway Dr	Medium	✓		✓		
E 14Th St / Fairmont Dr	Medium	✓			✓	
E 14Th St / San Leandro Blvd	Medium		✓	✓	✓	
Estudillo Ave / Huff Ave	Medium		✓	✓	✓	
Fairmont Dr / Hesperian Blvd	Medium	✓	✓		✓	
Lewelling Blvd / Washington Ave	Medium	✓	✓	✓		
San Leandro Blvd / Washington Ave	Medium	✓	✓	✓		
Bancroft Ave / E 14Th St / Hesperian Blvd	Medium		✓	✓	✓	
Fairmont Dr / Halcyon Dr / Hesperian Blvd	Medium	✓	✓		✓	
Floresta Blvd / Halcyon Dr / Washington Ave	Medium	✓	✓	✓		
136Th Ave / E 14Th St	Medium		✓	✓	✓	
143Rd Ave / E 14Th St	Medium		✓	✓	✓	
143Rd Ave / Washington Ave	Medium	✓	✓	✓		
Beatrice St / Washington Ave	Medium	✓	✓	✓		
Callan Ave / Bancroft Ave	Medium		✓	✓		
Callan Ave / Huff Ave	Medium		✓	✓	✓	
Castro St / E 14Th St	Medium		✓	✓	✓	
Dolores Ave / Bancroft Ave	Medium	✓	✓	✓		
Dolores Ave / E 14Th St	Medium		✓	✓	✓	
Durant Ave / E 14Th St	Medium		✓	✓	✓	
Estabrook St / E 14Th St	Medium		✓	✓	✓	✓
Monterey Blvd / Floresta Blvd	Medium	✓	✓	✓		
Sybil Ave / E 14Th St	Medium		✓	✓	✓	
Williams St / E 14Th St	Medium		✓	✓	✓	
Best Ave / San Leandro Blvd	Medium		✓		✓	
Juana Ave / E 14Th St	Medium		✓	✓	✓	
Alvarado St / Williams St	Medium	✓	✓	✓		
Washington Ave / Williams St	Medium		✓	✓	✓	

Appendix C. Online Community Feedback

F&P Social Pinpoint

Report Type: Form Results Summary
Date Range: 17-11-2023 - 06-05-2024
Exported: 16-09-2024 14:45:33

Open

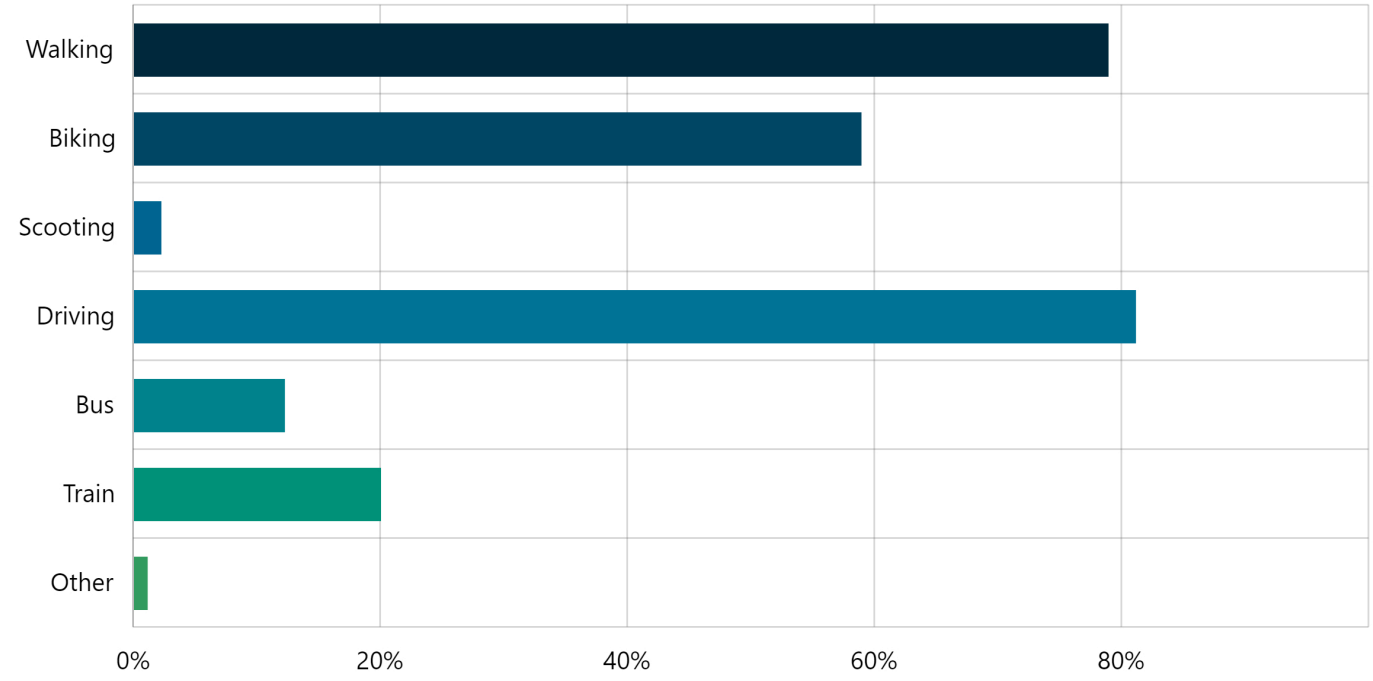
Survey
San Leandro BPMP

89 Contributors | **91** Contributions

Contribution Summary

1. How do you typically travel in San Leandro? (Check all that apply)

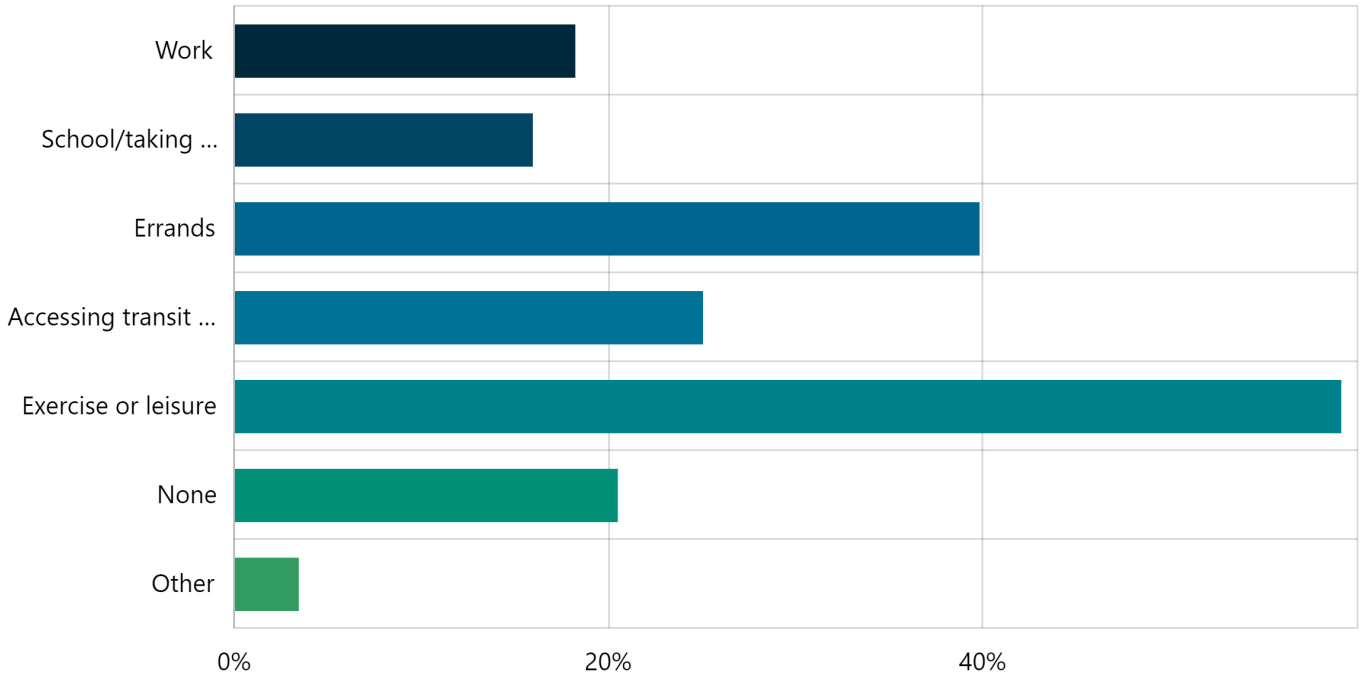
Multi Choice | Skipped: 1 | Answered: 90 (98.9%)



Answer choices	Percent	Count
Walking	78.89%	71
Biking	58.89%	53
Scooting	2.22%	2
Driving	81.11%	73
Bus	12.22%	11
Train	20.00%	18
Other	1.11%	1

2. When do you typically bike? (Check all that apply)

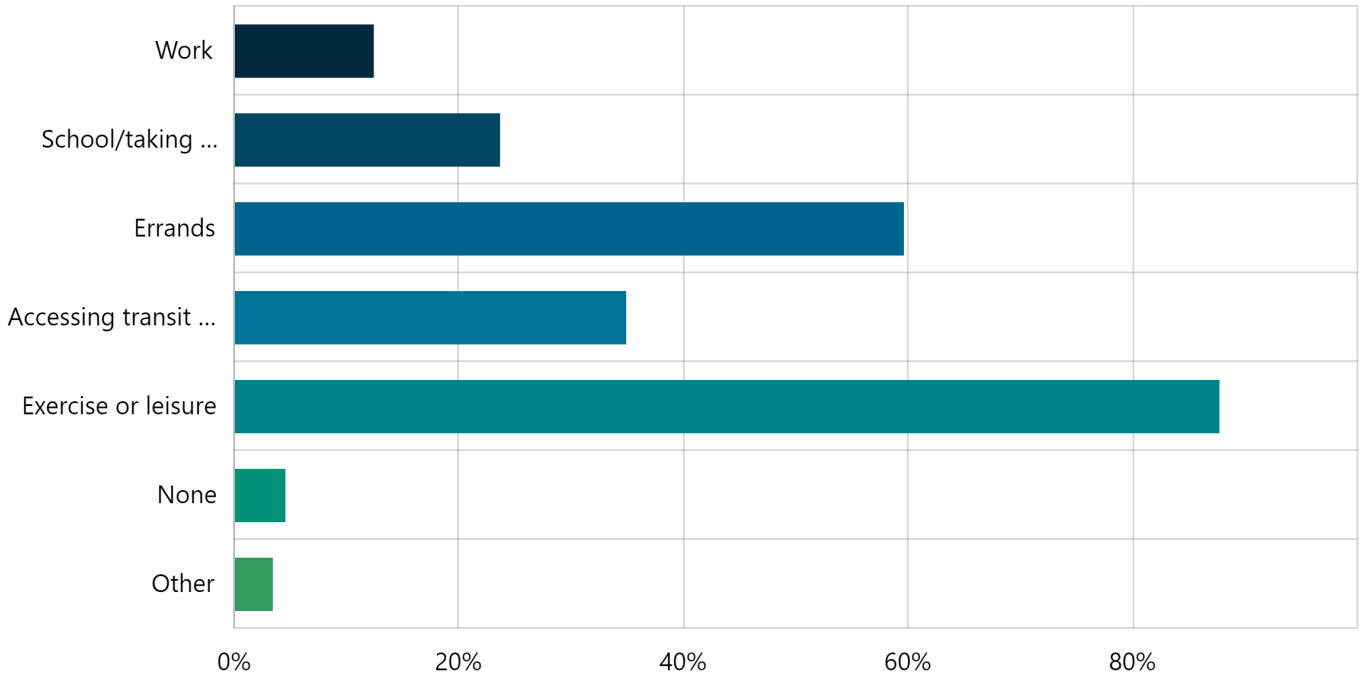
Multi Choice | Skipped: 3 | Answered: 88 (96.7%)



Answer choices	Percent	Count
Work	18.18%	16
School/taking children to school	15.91%	14
Errands	39.77%	35
Accessing transit (e.g. BART)	25.00%	22
Exercise or leisure	59.09%	52
None	20.45%	18
Other	3.41%	3

3. When do you typically walk?

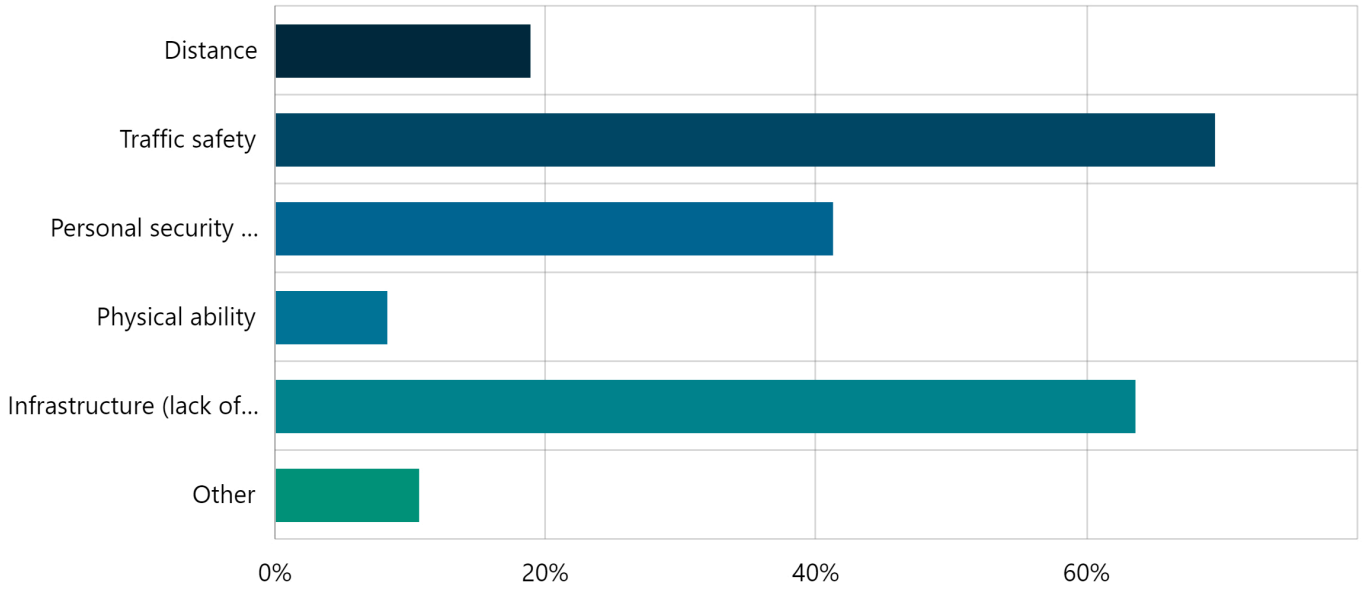
Multi Choice | Skipped: 2 | Answered: 89 (97.8%)



Answer choices	Percent	Count
Work	12.36%	11
School/taking children to school	23.60%	21
Errands	59.55%	53
Accessing transit (e.g. BART)	34.83%	31
Exercise or leisure	87.64%	78
None	4.49%	4
Other	3.37%	3

4. What barriers do you experience to walking or biking? (Check all that apply)

Multi Choice | Skipped: 6 | Answered: 85 (93.4%)



Answer choices	Percent	Count
Distance	18.82%	16
Traffic safety	69.41%	59
Personal security concerns	41.18%	35
Physical ability	8.24%	7
Infrastructure (lack of bike lanes, crosswalks, bike parking, etc.)	63.53%	54
Other	10.59%	9

San Leandro BPMP Phase 1: Do you have other comments?
Contribution
I like riding my bicycle in San Leandro. I am not convinced that separated bike lanes make conditions better and safer. Drivers, homeowners, and business owners often resent the intrusion, and things can get complicated at intersections and other points of transition. I would rather see stricter speed limits. I would also like to see more crosswalks - not fancy ones, just stripes painted on the pavement. This helps to slow drivers down and remind
I am deeply disturbed with your McArthur Blvd bike lanes from Estudillo to the 580 Freeway entrance. Not only have you impacted a critical fire evacuation route for the Bay O Vista neighborhood by reducing the lanes from 2 lanes each way to one lane, you have not increased bicycle or pedestrian safety. This parking / bike lane configuration creates blind spots for drivers with pedestrians crossing in the middle of the road, dangerous situations for drivers exiting their vehicles by opening doors directly into traffic, and blocks drivers' views on connecting streets, making them no longer safe to use. During various times of day, McArthur is bumper to bumper traffic, due to the one lane each way restriction, and would totally be an additional hazard for BOV neighbors trying to evacuate quickly in the middle of an emergency - whether fire or earthquake - as Benedict Drive has only two exits - either Grand Ave. or Estudillo, both of which use McArthur Blvd. I drive this road
I have experienced many stop sign and red-light runners, both while walking and driving. I will not ride my bike in the city because of this, and choose to only ride at Oyster Point.
Cars parking on sidewalks, encouraged by the sloping gutters; vegetation encroaching on sidewalks and trees not trimmed to allow easy passage under canopy
I don't feel safe walking around my neighborhood. I use to. I would not let my child walk or bike on her own due to personal experiences, observations, and interactions I have had in these last few years.
Drivers often are not respectful towards bicyclists. Other bicyclists will go down the bike lane the wrong direction. I wish there were safer paths for the youth biking groups. People complain about youths online constantly but I really don't think we should be discouraging them from a healthy activity like biking, especially if they enjoy it. I can survive on the paths because I have more experience dealing with the drivers as I drive myself, and I know the kinda of things that drivers will forget when it comes to bicyclists and pedestrians... However most of the youth bicyclists don't have that experience. They're relatively respectful when it comes to
Bike parking is a huge issue. There's nowhere to put an ebike at either Safeway, downtown or Dutton. Parking a regular bike is very difficult in downtown or at most shopping centers.
A lot of the pavement are uneven elevation due to the plants underneath it growing. Not safe for bike,
We need more separated bicycle lanes throughout the city.
Safety from crime in San Leandro.
For each driving situation, the bikers near the driving lanes are precarious…highly dangerous for the bikers and
Do I have any comments YES INDEED. The City need to add barriers to stop cars from using the bike lines as a car lane. I would recommend good barriers not the ones San Leandro used in the pass, the plastic poles that people run in to and the City never bothers to repair. The City of Fremont for example has a much better design. In the City of San Leandro there are two areas that I see cars using the bike line as an extra car line on Davis St, and Washington Ave. In general any area with no parking signs. This is starting to become a more and more practice of cars exploiting the bike lines. I don't know if the City is unaware or just doesn't care.
So excited about this project! Happy to help in any way I can.
Picking up after pets needs to be enforced. It’s disgusting and worse than you can imagine. I have to stair at the ground the entire time I’m walking from San Leandro boulevard to Davis on E14 and the surrounding streets

San Leandro needs a lot more push bottom light up crosswalks. The main library is a high traffic area used by all ages, yet, one can barely see someone in the crosswalks especially in the evening, rain, and with all the vehicles
I have been a resident of San Leandro for nearly and decade and I appreciate the city's efforts to make our home more accessible and inclusive. We are fortunate to live between the bay and Lake Chabot and have multiple shopping districts and parks within walking distance. Investing in walkability, biking, and ultimately reducing traffic will increase the safety and health of SL residents. We should also encourage the beautification of San Leandro by planting native plants, and trees, and enforcing traffic. Research has linked exposure to trees and green spaces with improved mental health, reduced stress levels, reduced loneliness, lower all-cause
I regularly see cars drive through intersections on red lights to get ahead of other cars queued for the light and it makes me anxious to bike because I'm afraid I might get hit.
Current approach to adding bike paths seems short sided. Rarely see anyone biking and our streets are too narrow with too many parked cars to be safe. If you want to encourage more walking then build or attract places residents would actually like to frequent—destinations, whether restaurants or event venues or shopping
We need more separation for bike lanes in heavy traffic areas throughout the city. Please educate general driving public towards more awareness for bike rider safety. “Share the road”
Restore the San Leandro Marina to a safe and clean place to walk. Remove the homeless encampments, put in safety measures that prevent crime and sideshows, remove the buildings near the boats that have been vandalized and gutted. Beautify the area and protect our crown jewel. Install kiosks and gates at every
The downtown area on East 14th Street - 185 from Estabrook to Davis street is ridiculously dangerous. There's no space for bicycles to travel on that area. I think that it should be brought down to one lane of traffic in each direction and street parking instead of two lanes in each direction. please consider doing something at this section.
What's the plan to beautify the city? The lot on E14th & Bancroft across from Harry’s Hofbrau with the very large rusting “art piece” is an eyesore, and the other lot on E.14th across from the Bayfair gas station looks a
Please help slow down traffic on Callan Avenue!
Might you please be so kind advise your fellow residents of San Leandro as to the status of the Union Pacific Railroad Oakland Subdivision Corridor Improvement proposed in 2010, in particular as it relates to your current proposed Master Plan? Or has it, like most things, been lost in the bureaucratic shuffle? Here is the link to remind the powers-that-be with short-term memory:
I have concerns about the new bike lane. Oakland, Telegrah Ave. built a similar structure and the police officers identified that area as high collision and accident zone. Between the raised, red colored sidewalks, green bike lane, crosswalks, traffick lights, pedestrians, bikers, stop signs, school...it's a nightmare for drivers to watch all of that while driving. It actually becomes more dangerous for pedestrians. Please contact Oakland police to
Currently on Wicks Blvd and Other plsces where some roadworks are being carried out recently. Holes and uneven services are left on roads near our home and near the Bay trail in San Leandro.
A small group of bicycle agitator feel it's their mission in life to antagonize anybody driving a car. That is not a helpful attitude where we ALL must share the roadways equally. Bicycle agitators come across as smug and
As a resident on Broadmoor Blvd near Bancroft, I'm most concerned about reckless driving and the lack of safety for pedestrians. Bancroft needs more crosswalks with pedestrian signals, as well as, stop signs or traffic round-abouts to slow down drivers. I also want street parking in all residential areas preserved. Bike lanes can be
There is no good bike route from Bancroft to Williams (past San Leandro Blvd). I feel very nervous riding through town. I would appreciate a designated bike route that is on a lower traffic street (not Davis, not San Leandro Blvd) where traffic is slower. Or a protected lane if on busier streets. The San Leandro Blvd/Williams intersection

At the corner of MacArthur Blvd. and Victoria Ave. The new bike land is interrupted by the curb at a very busy 2 way stop. Three of the 4 corners allows you to ride in the bike lane without interruption. One of the curbs forces you back into the street. You need to ride up on the sidewalk and cut over the small island to the other side of the street or you must hand signal and cut back into traffic in order to go through the 2 way stop and back into
The city needs to find a way to improve street infrastructure to discourage driving. Also, your age category is
I teach in the district and am more than happy to bicycle city infrastructure folks around to show them some accessibly issues. Have tandem and have decades of experience riding in San leandro
With all the lawlessness going on in the City, resources could surely be put to better use than bike lanes. Anyone riding a bike around the City is at risk, regardless of any lanes.
Need for safety, bike lanes is wonderful, fix sidewalks, biking paths to parks
Additional secure bike parking would help a lot, especially in shopping areas and near grocery stores. I use a cargo bike to do errands and pick up my kids, its heavy and long so I rely on easily accessible secure bike parking
Not safe to lock up Bike a leave it For extended period of time. The pedestrian/ bike lanes have made commuting to work more challenging. People don t have luxury of walking or biking to work in the Bay Area- we all still need cars and public transit is just not safe anymore, or
The street on Williams street and San Leandro Street tends to get very dangerous as the car does not yield or notice pedestrians crossing the street because drivers are to focus on making a right onto Williams street.
Improvements have been made but there are still areas that need more bike lanes and sidewalks in our city.
As long as crime is an issue, I prefer to walk rather than bike. I have more physical ability to ward off an attack on foot than on a bike. I can carry more when walking and drop it faster should I feel threatened. Whereas an assault while riding a bike could increase the severity of injuries as a result of falling off the bike, as well as the loss of a bike. Rather than spending money on securing larger bike lanes, I'd prefer the city focus on crime prevention for citizens' safety in all circumstances. I believe the number of assaults on the street is higher in comparison to the number of people using the new bike lanes. When East 14th reduced the driving lanes to promote pedestrian safety, many drivers were frustrated by increased traffic due to pedestrian-friendly signals
San Leandro has so much to offer its residents and visitors with restaurants, stores, and parks. It is also a wonderful city for families. To make San Leandro even better, it would be great to see a focus on making the streets safer for pedestrians and bikers, especially in areas with large numbers of pedestrians like downtown, 14th st, Bancroft and Dutton, and near schools and parks. There should also be safe corridors to walk or bike from neighborhoods to commercial/transit areas. Simple things like creating pedestrian scrambles, installing
I'm a walker for the most part although if I'm going further distance say a mile or more I am more likely to use my bike. I do ride my bike, I feel very safe and I use the bike lanes that are currently available.
I feel it is ridiculous they are taking care lanes away and turning into bike lanes. See more homeless people with shopping carts using bike lanes than any bikers. Most people get around in their autos not bikes. Taking car lanes away causing more traffic jams that will only get worse with time as more multifamily housing being built.
We need more greenways, linear parks, greenbelts, with a shared use path for safety and leisure.
I concur with everyone evert day about this. The bike lane on Grand Avenue near 580 freeway is useless. Cars parked in the middle of the street are getting hit. Every time we walk by on weekends, we see at least one car with tail end damage and broken pieces on the street next to the car. The property values tanked on those poor folks because it also.. ITS A OUTRAGE SO I no long support the Bike people on this even though i ride.. Makes it
Drivers in automobiles tend to psychologically distance themselves from what it is like to be a bicyclist in a very narrow side of the road. They zoom past, honk horns if bicycle asserts any inclination to use the actual lane, and generally pay more attention to their phone in one hand than the life of the bicyclist next to them. It is a daily frustration that never desists! Not only am I forced to breathe the fumes over and over, but also feel disrespected on a basic level that automobile drivers rarely feel. Non-drivers are virtually harmless in

Bancroft is a major thoroughfare for bikes in San Leandro, but it is not safe to ride on. At least for schools are located right on Bancroft and it would increase biking and walking to school if Bancroft were a safer street for
We need to build the bridge at the end of Cary and Hass in estudillo estates. It is a neighborhood staple!
The collapsed bridge connecting Cary & Haas has made walking and biking in my neighborhood much more difficult. I've noticed a significant reduction in for traffic in that area as well.
So many of the streets of San Leandro head to a headway and people drive very unsafely. It doesn't encourage
Need more protected bike lanes!
We used to walk around our neighborhood a lot. Sadly since the Haas street bridge was knocked down there . It has been extremely disappointing seeing the inaction, and lack of urgency from the City in restoring this vital pedestrian artery. If this was a bridge for cars it would have been rebuilt within months. The City hasn't even cleared out the old bridge. Its best to judge a City's values by what it does rather than what it says.
I live in the Broadmoor neighborhood, and people drive very fast and dangerously on Bancroft between Dutton and Durant. There are crosswalks in place, but I still feel like I put my life in danger every time I cross Bancroft, specifically on Broadmoor Blvd and at Victoria Circle. I really appreciate the crosswalk signal that was installed on Dowling (at Bancroft). Could something like this please also be installed on Broadmoor Blvd at Bancroft. I think that would really improve the pedestrian experience crossing Bancroft on Broadmoor and on Victoria.
San Leandro is a mostly flat city. By improving infrastructure for safety and accessibility, the City can encourage more trips by walking, biking, and transit. There is a lot of potential here, especially with San Leandro having a significant number of young families and children. Downtown is a wonderful asset and we are thrilled that we can walk to a lot of restaurants! I look forward to protected bike lanes on Bancroft to encourage more students to ride their bikes to San Leandro High. The school traffic along Bancroft can be intense during peak hours so if we can encourage families to use other transportation options, it could really make a difference in reducing
Please add a separated bike lane along all of Bancroft.
Thank you in advance for your time and consideration and for providing an opportunity for community feedback/insights. As an avid runner/walker close to the downtown area (that runs throughout SL) - I acknowledge the traffic safety concerns shared by many, especially near school zones. Beyond echoing those sentiments, I think infrastructure is great to focus on (more/better lanes) - but I would love to see concurrent efforts to focus on driver education as well. We may build safety into our future roads via engineering - but there are economical short term/immediate steps we can implement now, like extending crossing guards at critical locations, providing flags/safety vests at intersections that may have higher rates of car/pedestrian incidents (accidents and near-misses). Ensuring that lights are functional and addressing outages promptly -
Please add bike racks in all public parks, shopping centers, and near bus stops. Some that are missing: Floresta park, Marina square center. Happy to help canvas. I take the bus to my dr appointment at Eden Medical Center. It’s a 30 minute walk to the nearest bus stop with no bike racks nearby so I cannot bike to my bus stop unfortunately at Floresta and Monterey. The hospital is way up on a hill so I don’t bother bringing my bike there to lock it since the bus drops me at the bottom. I have a dentist in San Lorenzo on Hesperian. I bike from Washington manor. It’s so dicey on Lewelling and parts of Hesperian especially between McDonalds and Walmart. Cars coming on and off the highways and the road has a lot of rocks and trash. People drive so fast on Lewelling. I go out of my way and take Floresta instead of Hesperian to go to Bayfair BART to avoid it. There’s a stretch between Jack In The Box and San LEandro BART that sucks to pedal down. Strangely, I find it less stressful on Alvarado than Lewelling to bike down despite more trucks though. It’s tight even just for cars. I love the Hesperian improvements in San Lorenzo and the bike paths in Fremont. Would be great to see that here at
The bike lanes on Davis St. also randomly end before the BART station after the train tracks. They should safely lead to the station. The bike lanes on the Davis St. freeway overpass are a death trap. The entire street sucks

Please add more flashing crosswalks on Bancroft (between Sybil & Estudillo). Also, the crosswalk situation on E14th between Castro & Parrot is virtually nonexistent- I don't know of many downtown corridors with businesses that have NO crosswalks for 3 blocks? This IS a huge death trap. Why so much of the city's budget was allocated to Grand Ave. bike lanes- an area that has very little cyclists (I live near this area)- is a shame. Who pushed that idea thru? The parking pushed into the traffic lanes created blind intersections for cars trying to turn onto Grand. The cyclists are safer- wish we could say that for drivers.
Speeding vehicles along Williams Street between Hays Street and Carpentier Street. A lot of cars speed through that area where there are long gaps between stop signs. Unfortunately, there have been three cats killed, one senior hit by a car, and multiple accidents. With the new 7-11 store open nearby, there's even more traffic on Williams Street. I'm really concerned that the next casualty could be a child. Please consider looking into this

F&P Social Pinpoint

Report Type: Form Results Summary
Date Range: 21-05-2024 - 12-07-2024
Exported: 16-09-2024 15:39:23

Closed

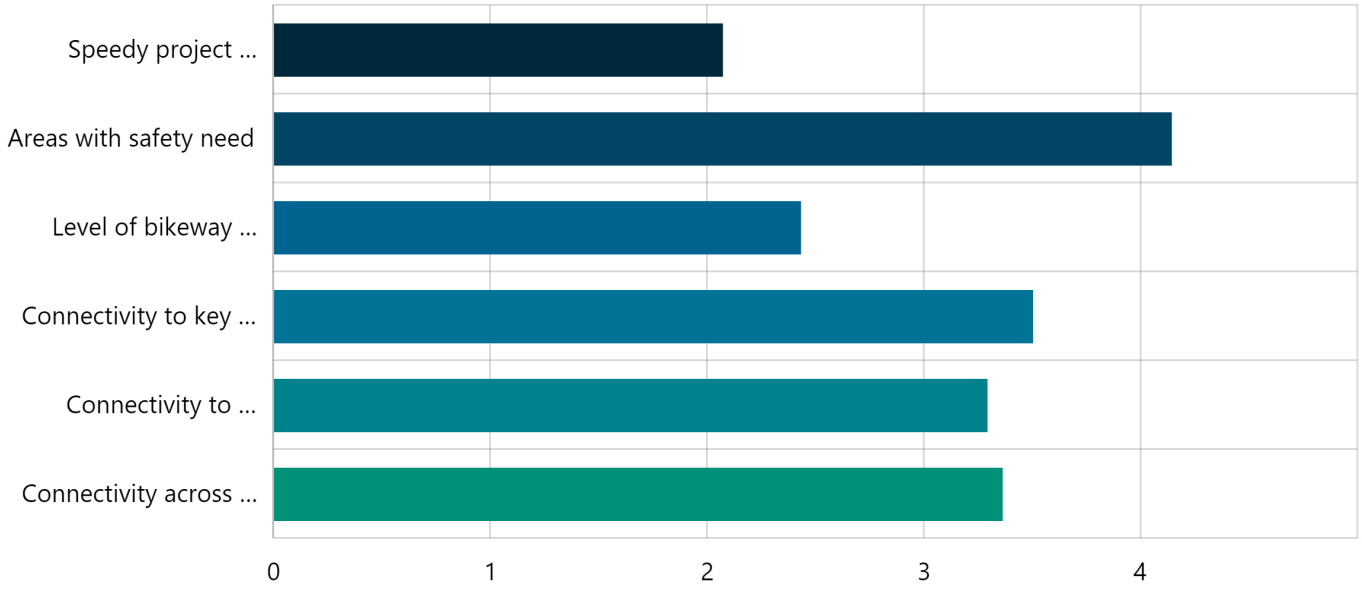
Untitled
San Leandro BPMP

18 Contributors	18 Contributions

Contribution Summary

1. For bikeways, how should the City prioritize projects? Please rank the criteria from greatest preference to least.

Ranking | Skipped: 4 | Answered: 14 (77.8%)



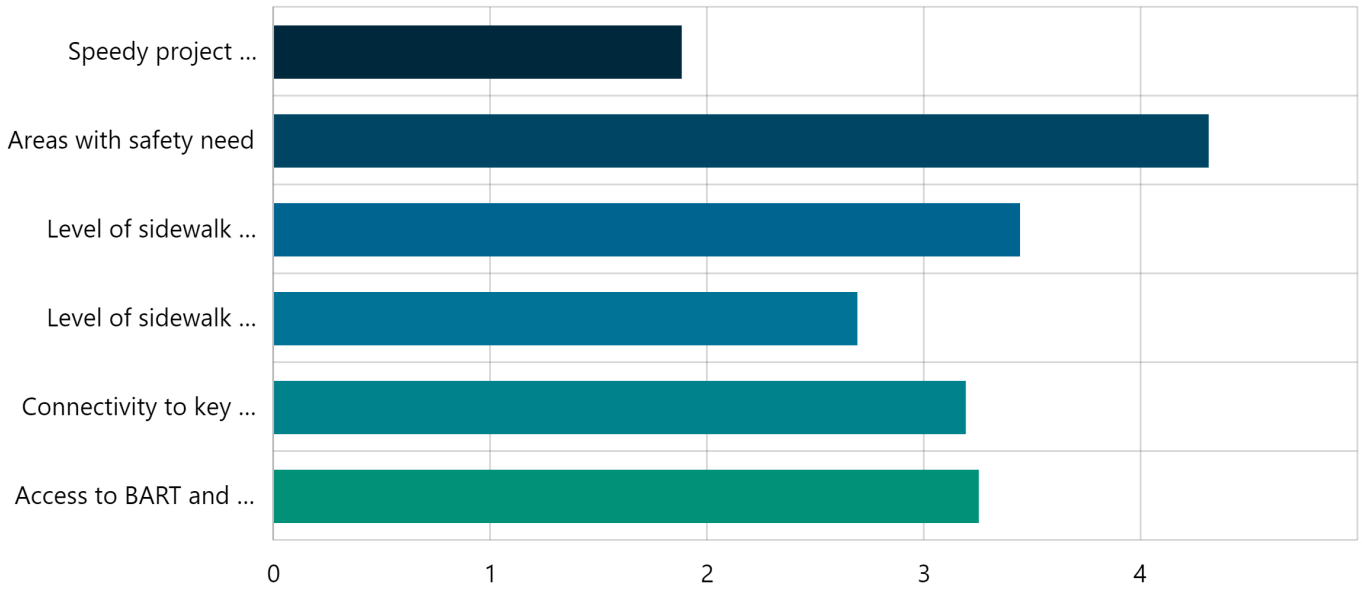
	1	2	3	4	5	6	Count	Score	Avg Rank
Speedy project delivery/ease of implementation	0% 0	27.27% 3	9.09% 1	0% 0	27.27% 3	36.36% 4	11	2.07	4.36
Areas with safety need	46.15% 6	7.69% 1	15.38% 2	15.38% 2	7.69% 1	7.69% 1	13	4.14	2.54
Level of bikeway comfort (e.g. supports people biking of a wide range of ages and	16.67% 2	8.33% 1	8.33% 1	8.33% 1	25.00% 3	33.33% 4	12	2.43	4.17

abilities)									
Connectivity to key destinations, such as schools, commercial areas, parks)	8.33% 1	33.33% 4	33.33% 4	8.33% 1	16.67% 2	0% 0	12	3.50	2.92
Connectivity to BART and high-frequency buses	15.38% 2	7.69% 1	23.08% 3	30.77% 4	15.38% 2	7.69% 1	13	3.29	3.46
Connectivity across the city and to regional bikeways/trails	25.00% 3	16.67% 2	8.33% 1	33.33% 4	8.33% 1	8.33% 1	12	3.36	3.08

Score - Sum of the weight of each ranked position, multiplied by the response count for the position choice, divided by the total contributions. Weights are inverse to ranked positions.
Avg Rank - Sum of the ranked position of the choice, multiplied by the response count for the position choice, divided by the total 'Count' of the choice.

2. For pedestrian projects, how should the City prioritize projects? Please rank the criteria from greatest preference to least.

Ranking | Skipped: 2 | Answered: 16 (88.9%)



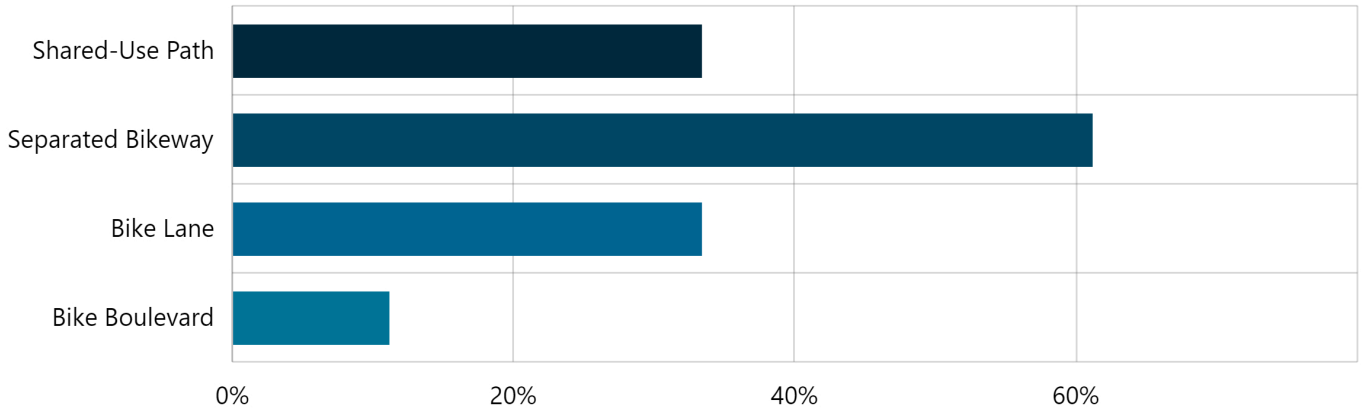
	1	2	3	4	5	6	Count	Score	Avg Rank
Speedy project delivery/ease of implementation	7.69% 1	7.69% 1	0% 0	23.08% 3	15.38% 2	46.15% 6	13	1.88	4.69
Areas with safety need	64.29% 9	7.14% 1	14.29% 2	0% 0	0% 0	14.29% 2	14	4.31	2.07
Level of sidewalk accessibility (e.g., width of sidewalks, smoothness of sidewalks)	7.14% 1	42.86% 6	14.29% 2	14.29% 2	14.29% 2	7.14% 1	14	3.44	3.07
Level of sidewalk comfort (e.g., presence of street trees)	15.38% 2	0% 0	30.77% 4	23.08% 3	15.38% 2	15.38% 2	13	2.69	3.69
Connectivity to key destinations,	14.29% 2	21.43% 3	14.29% 2	21.43% 3	21.43% 3	7.14% 1	14	3.19	3.36

such as schools, commercial areas, parks)									
Access to BART and high-frequency buses	6.67% 1	20.00% 3	26.67% 4	13.33% 2	26.67% 4	6.67% 1	15	3.25	3.53

Score - Sum of the weight of each ranked position, multiplied by the response count for the position choice, divided by the total contributions. Weights are inverse to ranked positions.
Avg Rank - Sum of the ranked position of the choice, multiplied by the response count for the position choice, divided by the total 'Count' of the choice.

4. What bikeway type do you prefer?

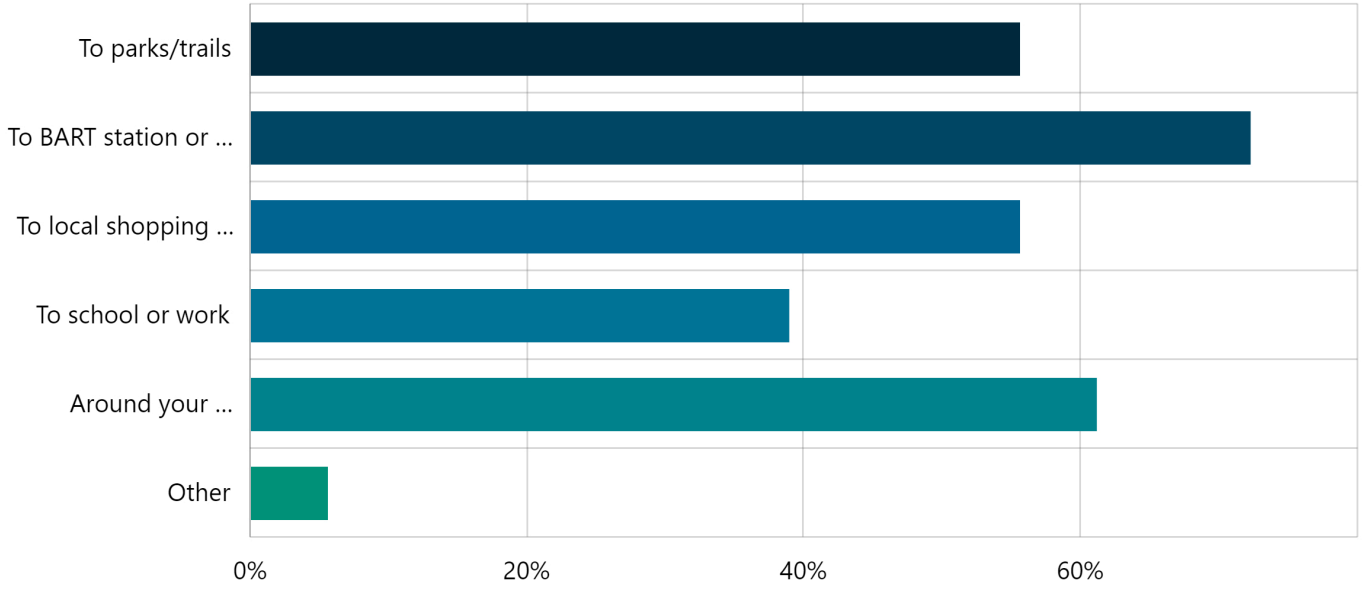
Multi Choice | Skipped: 0 | Answered: 18 (100%)



Answer choices	Percent	Count
Shared-Use Path	33.33%	6
Separated Bikeway	61.11%	11
Bike Lane	33.33%	6
Bike Boulevard	11.11%	2

5. Where do you most need or want to walk?

Multi Choice | Skipped: 0 | Answered: 18 (100%)



Answer choices	Percent	Count
To parks/trails	55.56%	10
To BART station or transit hub	72.22%	13
To local shopping center	55.56%	10
To school or work	38.89%	7
Around your neighborhood	61.11%	11
Other	5.56%	1

San Leandro BPMP: Any additional bikeway or pedestrian criteria we should consider?

Placing the bike lane on the inside of cars is a big safety risk. Now the bicyclist has to worry about passengers opening their doors into the bike lane - something most car passengers will not look first before they do it. When you narrow streets from 4 lanes to 2 lanes, the City also creates dangerous bottlenecks, especially on the entrance to freeway on-ramps - which has been done on Grand Ave. This roadway backs up into other streets when there is a problem on the freeway, which seems to be happening more often.
San Leandro Boulevard and East 14th Street Only!
Some sidewalks are accessible in Downtown, but are cluttered with trash, urine smell, or people sleeping. This makes it unsafe for pedestrians and drivers as pedestrians will walk on to the street to avoid. We also need our Downtown security to call dog walkers out for not picking up after their dogs. All of this makes it an unpleasant place to visit and live in.
Keep up the good work! With this plan, San Leandro is heading in a good direction, improving the quality of life of residents in so many ways. I really hope implementation won't take too long.
Before I moved to San Leandro six years ago, I lived in San Jose and rode my bicycle for all of my local travel and errands (except grocery shopping.) I no longer try to do that in San Leandro and mostly drive or walk. For me, the biggest factor is the attitude of the drivers and poor street design that leaves the bicyclist very vulnerable. I am a very experienced and safe bicyclist, and I follow the rules of the road, but I have been yelled at and threatened by ignorant drivers (male) and kids on bikes who are clearly ignorant of the law and think it is acceptable to yell at a little old lady on a bicycle. (What kind of man does that?) I understand that there are a lot of rude and uninformed people riding bikes who are not courteous to drivers, but I am not one of those people and I am shocked at the attitude of so many drivers. We need a good public education component to accompany the bikeway improvements. Regarding walkways, the biggest issue for me is safety. The number one hazard is the sidewalks, which are deplorable. If you do nothing else, fix the sidewalks. The next would be clueless drivers and after that poorly designed intersections.
You should also consider traffic headaches being caused which cause auto accidents and can also then cause pedestrian issues. Davis & Alvarado, the poles are too close to the intersection, in two days I've already witnessed poles being run over and accidents almost happen. Davis & Douglas, how is a bus going to stop at the bus stop and not block the entire street and therefore back up traffic, blocking intersections and covering crosswalks, impeding pedestrians. There should be at least one less pole there.
Emphasis should be place near busy intersections and freeway overpasses to ensure safety of pedestrians and cyclists.

What comments do you have on the Draft Bicycle and Pedestrian Master Plan update?

I am a resident of Nugent Square, which has frontage along Bancroft Ave, between Juana Ave and Dolores Ave. I read the 2024 update to the draft San Leandro BPMP, and the recommendation for my section of Bancroft in the Crosstown Corridors Study. I believe that the proposed changes to Bancroft Avenue would have a significant negative impact on our part of the community:

1) I am very concerned that the proposed removal of turn lanes would significantly worsen of traffic, especially during the times of day when people are dropping off, or picking up, children from school. During these times, traffic is already at a standstill between San Leandro High School and Bancroft Middle School; removing the ability of turning cars to get out of the flow of traffic would only make this worse.

2) I am also concerned that the creation of a separated bikeway, the view of which is obstructed by a row of parked cars, will greatly reduce the safety of the already treacherous intersection of Bancroft and Juana Avenues. Due to the difficulty of seeing around some corners, there are already regularly accidents there. Hiding potential bicycle (and pedestrian) traffic behind a row of parked cars will only make these sorts of collisions more frequent. This is already a serious issue on the short section of separate bikeway that has been build along Grant Avenue, where it is difficult for drivers to see if a bicyclist might about to emerge from behind a wall of cars.

3) Finally, I am worried that the removal of the current parking area on our side of Bancroft Avenue will create substantial problems with deliveries, as well as increased package thefts. Our complex's main entrance (and callbox) faces Bancroft. If delivery vehicles can no longer park there to unload packages, they'll have to park on side streets, then walk back around the block to call the delivery recipient(s). We already have a problem with delivery drivers leaving packages at the closest entrance, without trying to contact a resident. If drivers have to park near entrances without a callbox, it seems very likely that more packages will be left by the side of the street, greatly increasing the risk of package theft.

Finally, I would like to express my disappointment at the lack of community engagement on this issue. There were no flyers or mailings to people in our section of the community, or notification of the upcoming meeting(s) for an issue that could have such a significant impact on our day-to-day life. The Crosstown Corridors Study was referenced in the plan document, but no link was provided. That study was also not linked on either the "Bicycles & Pedestrians" city web page, or the third-party "BPMP Update" site. I had to do a web search to find it, and discover what the proposal was for my own street. For an issue of this potential impact, the survey sizes also seemed quite small: 91 responses to one online survey, 18 (!) to another, and at most 225 referenced as part of the Crosstown Corridors Study (< 0.25% of San Leandro's population).

Given the serious negative impact that the proposed changes to Bancroft Avenue would have on daily life in our part of the community, I would ask that the Council reconsider the recommendations for this section of Bancroft Avenue. I believe that there are other design options, that don't seem to have been considered as part of the Crosstown Corridors Study, that would greatly improve the experience of bicycling in this portion of San Leandro, without imposing large negative costs on the residents who live in those areas.

Included here are comments and recommendations on the draft plan from Bike East Bay. Please contact Robert Prinz at robert@BikeEastBay.org with any questions or follow up.

"Policy 1.1: In alignment with the Local Roadway Safety Plan (LRSP) and San Leandro's Vision Zero policy, institutionalize and adhere to the Safe System Approach to work toward eliminating fatalities and serious injuries on San Leandro's streets."
Add:
Develop a traffic calming implementation guideline for Bike Boulevard facilities, setting a minimum standard to be applied consistently with capital improvement opportunities, along with a defined public process for treatments that exceed the minimums. Example from the City of Oakland: https://cao-94612.s3.amazonaws.com/documents/OaDOT_NBR_Guidance.pdf
Develop a "rapid response" program, to implement quick build traffic safety mitigations using low cost, temporary materials following severe injury or fatal crashes, at the site of each incident with the intent of reducing the likelihood and severity of similar, future collisions at that location.

"Policy 2.1:
Require and enforce that maintenance and construction projects provide temporary traffic controls to accommodate bicyclists and pedestrians."
Add:
Develop a bicycle, pedestrian, and bus construction zone access policy, to ensure that safe and continuous access is prioritized. Example from the City of Oakland: https://oaklandca.s3.us-west-1.amazonaws.com/oakca1/groups/pwa/documents/memorandum/oak062315.pdf

"Address barriers to walking and bicycling, such as unmet crosswalk safety needs, limited all ages and abilities bikeway mileage, secure bicycle parking, lighting, signal detection, visibility/sight line limitations, and physical barriers including highway interchanges and at-grade rail crossings."
Add:
Develop citywide pedestrian signal and crosswalk policies to assist with project-level decision making, prioritizing consistent pedestrian access and safety. Example from the City of Alameda: https://www.alamedaca.gov/files/assets/public/v/1/departments/alameda/transportation/vision-zero/signalizedintersectionaccessequitypolicy_resolution15850.pdf

"Policy 2.3:
Establish standards for new developments that encourage walking and biking trips and provide pedestrian and bicycle connections between new developments and surrounding commercial and residential areas.

Ensure new developments provide secure bicycle parking for residents and employees that are convenient and accessible from the public right-of-way, in accordance with the San Leandro Municipal Code and the Bicycle and Pedestrian Design Guidelines."
Add:
Update citywide bicycle parking ordinance and guidelines, to include support for electric bicycles and cargo bicycles. Example from the City of Emeryville: https://www.ci.emeryville.ca.us/DocumentCenter/View/15108/Item-81-Attachment-1---Redline-version-of-proposed-revised-Regs (pages 62-68)

"Policy 3.2: Advance and support education and encouragement programs that raise awareness of active transportation benefits and highlight local walking and biking opportunities."
Add:
Seek funding opportunities to support adult driver, bicycle, and pedestrian education and encouragement program expansions, in partnership with local community organizations. Include support for the training and certification of bicycle safety instructors who live or work in San Leandro, through the League of American Bicyclists' League Certified Instructor (LCI) program.

Page 3-14
Rectangular Rapid Flashing Beacons (RRFBs)
Add:
RRFBs are most effective at single lane road crossings, and in conjunction with other treatments such as sidewalk extensions, center line hardening or pedestrian refuges, raised crosswalks or speed humps, and other traffic calming. RRFBs used for bicycle crossings should be designed with bicyclist-oriented actuation, such as push buttons oriented toward bike traffic or passive actuation.
Example: Doyle Street Greenway crossings of 65th, 66th, and 67th Streets in Emeryville.

Pedestrian Hybrid Beacons
Add:
PHBs used for bicycle crossings should be designed with bicyclist-oriented actuation, such as push buttons oriented toward bike traffic or passive actuation, as well as bicycle-specific signal phasing to reduce conflicts. Separated bikeways may be used to assist bike riders in reaching the front of the intersection, providing a dedicated waiting space separate from cars to increase bicyclist comfort and improve signal actuation reliability.
Bicycle actuation confirmation lights can be used in conjunction with traffic signals or PHBs, to inform bicyclists that they are "seen" and encourage them to wait for the proper signal to proceed.

Figure 4-2 Recommended Bicycle Network

The current draft of the Caltrans D4 bicycle plan update includes a recommendation for the Marina Blvd I-880 interchange: "Provide class IV bikeways, conflict zone markings, install signage, square up ramps on Marina Blvd thru I-880 interchange". The current San Leandro network recommendation includes no facilities on Marina Blvd from Merced St to Teagarden/Wayne, but given Caltrans' interest in improving this crossing we recommend including the crossing in the San Leandro draft plan. With this addition, every 880 crossing would include a separated bikeway recommendation.

"Page 5-6
Increase partnership with bike orgs and bike shops"
Add:
Support opportunities for free or low cost bicycle repairs such as with the Alameda County BikeMobile, as well as bicycle maintenance education trainings and mentor programs. Encourage the development of non-profit community bicycle shops and repair services in San Leandro.

Traffic is going to be a nightmare. Trucks currently offload deliveries by parking in the middle of Bancroft but those lanes will be gone…where will they park to offload?Garbage trucks will block traffic because they can't pull over to pick up the trash and will block traffic. Excess cars from apartment buildings will have nowhere to park. But thank goodness the few bikes (and there are very few) will have lovely new lanes…maybe now they will stay off the sidewalks. Backing out of my Mom's driveway is already a challenge but it's bound to be worse once the bike lanes are in and traffic is worse because no one will give you a break and let you back out.

Dear San Leandro City Officials, City staff, and consultants,

Below is my initial feedback regarding your bike and ped plan. This plan is a good start. I live in San Leandro and move around the city and area by car, transit, bike, and on my own two feet. I have kids in the public schools, and I am supporting this plan for a few reasons,

1.Public Health- help reduce the chances of me or my kids getting severely injured or being killed by fast, distracted drivers. We have had numerous near misses along San Leandro Blvd., E14th, Bancroft and Dutton (to name a few). It's unacceptable to continue to let drivers not understand the consequences of driving fast, distracted. Design is part of the puzzle, but targeted Enforcement and Education campaigns are key as well (e.g. where speeding is most prevalent, high collision locations/corridors, near and around schools/parks)

2. It's a great congestion management tool - providing more connected, safer opportunities for people not to drive within San Leandro is good for population health, and the environment by reducing Co2 emissions. This in turn helps those who absolutely need to drive to work, weekly appointments, etc.

3. Neighbor and Community Connections- we know biking and walking is a great way to connect and meet/greet our neighbors. It is good for the City, healthier and happier residents who are connected with their community. This is worth the investment.

Initial thoughts/ideas:

Pedestrian related:

• PLEASE PLASE INCLUDE AB413 as part of your pedestrian safety plan. California's New Daylighting Law (AB 413). Starting on January 1, 2024, it will be illegal in California to park within 20 feet of the approach of any marked or unmarked crosswalk, even if the approach does not have any red curbs painted. California Assembly Bill 413 was signed into law in October 2023 and replicates the law in other states that similarly require people not to park right next to any crosswalk.

This is one of the cheapest and proven ways to save future lives across San Leandro. There also should be an education/communicant plan (multilingual) associated with this new law, so people understand what the law means, etc. While enforcement is a whole other conversation due to staffing capacity, this new law should be a cornerstone to your ped plan. Understanding this will take time, focusing efforts near schools, parks, senior housing, basically where the most vulnerable live and walk is a good first step.

•Please add LPI as a Citywide policy to all crosswalks with signalization and add it to the pedestrian tool kit. LPI give pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. I don't think these is capital heavy and again saves lives.

•Please change City policy and reduce the walking speed for crosswalk under SL jurisdiction and work with state officials for state highways to advocate for slower walking speeds. Walk speed of 2.5 feet per second provides more time for children, seniors, and those with disabilities to cross.

•I suggest SL look at a programmatic way of making the most basic ped improvements that can be implemented citywide on a rolling basis. For example, why doesn't SL just upgrade/refresh all crosswalks tocConti, add LPI, change walking speed, add advanced limited lines, daylight, add painted safety zones (or better yet bulbs down the road) where appropriate. The locations can be prioritized by collision data, proximity to schools, commercial zones, etc.
•Communicating that the plan is a blueprint and will include additional public conversations and process for certain projects highlighted in plan - I continue to hear from my neighbors that all the designs are final in the plan. There is an education/communication component to sharing what bike blvd and separated bikes lanes are and are not and contextual to where we are proposing them. For example, re. Bancroft, I keep hearing that the proposal will create traffic/parking chaos, and no one bikes here, yadda, yadda, yadda- which is obviously not true. This is a great street to propose separated bike lanes (you have 4 plus schools within the area, a commercial district, , good access points to residential streets, etc.) , but will entail public process and various design iterations.
•Bike Boulevards. I think we can be bolder in this type of facility for SL. SL not a sprawling City and we have great residential roads if we look at them as a connection to good, services, and places of interest (parks, schools, shopping center). I know we are not Berkley or Davis, CA (and not saying we have to be), but their efforts on building a network using their residential road system is a nice blueprint for us to work with over the next few years. Please extend the bike boulevards west of E14 and in other areas of the City. This helps meet your equity goals, as well as created greater connectivity across the City. Please consider intersection redesign as part of the bike boulevard designs, especially at arterial and state highways (e.g. E114th, Bancroft, Dutton, SL Blvd.)
It is great to see separated bike lanes in the plan.While flex posts and paint are a good start, I suggest that our designs incorporate concrete barriers and 6''-8'' mountable islands that fire and transit are usually ok with as the gold seal to providing the most protection. I've seen mountable islands across other Bay area that don't take years to design and build. If your goal is to create a system for all ages and abilities, flex posts and some paint is not separation, and won't get us to meeting the goals outlined in the plan. For instance, San Leandro Blvd. bike lanes must be separated by concrete. Flex post won't save lives on a street that people speed, and drive distracted. That's the reality and we must use the safe system approach here. PLEASE ADD a protected bikeway connection (with concrete elements) from Williams to the Marina!!! There are big trucks along this route and we feel scared biking to the Marina or visiting friends nearby. You will have to get creative near school (possible floating loading/parking) , but there is quite a bit of cross-section and curb space along this route and parking available on side streets if needed. This will open up cross community connection for both school aged kids and families wanting to enjoy the Marina (or access Bart/Downtown) without having to think about driving. However again think about intersection design at major arterials, and provide as much protection as possible. More protection, more people will use it!
•Education Campaigns and Outreach Partnerships. Please shifting convos away from car vs. bike or even ped, to overall safety for our loved ones and people we care about. Remember we are all pedestrians at one point of time, whether we are driving, taking the bus, or walking to Bart. I think the City and partners can work with youth and community groups, including groups who celebrate car culture. For example, some of our Chicano/x and our Latine community share a love for antique cars and the connection around these gatherings. There is art and culture to these gatherings, but how can we work together with these community gatherings to promote safe driving and safety for San Leandro residents. I think it is a culture shift to hold both truths, yes people can love cars, but we also want our families/children to be safe walking and traveling within the community - speed kills, period, and we have to make some behavior changes, such as not speeding down a residential street bc it makes you feel better after a shitty day or your drive taking you a few more minutes so the most vulnerable road users are less likely to be hurt or killed by a car/truck. Also, let's get more active in schools and partner with Safe Route to Schools not just on Walk to Roll days. There are also opportunities at schools and after school programs to gather feedback from parents as well as share/distribute educational material.
•Fundings/Grants –I think the funding will be the most difficult piece to this plan. Have convos started on how to work with nearby cities (e.g. Oakland, Hayward) and county to help find/secure funds for this work? Can funds be leveraged with upcoming development projects to improve active transportation in and around these new projects? Can the City use parking citation fees that are collected for traffic safety related projects?
Thank you for your time,
-San Leandro Resident, District 5

Traffic on Bancroft between Bancroft Middle school and SLHS is awful in the morning both ways. Decreasing lanes would make it worse

I am against the proposed plan for Bancroft. We have way to many vehicle issues going on Bancroft now to list here. This design will only increase these issues. Please listen to the residents in the area that have to live with this.

This will make traffic flow on Bancroft even more problematic than it is. This will also eliminate the much needed parking spaces on the street.
Remove all white upright poles and all curbs.
I strongly approve!
If your plan is anything like the terrible decision you made on Grand Ave between Maud Ave and Joaquin Ave. Stop, you have literally made a stretch less than a mile from a 580 onramp to an 580 offramp. Took away resident parking, cause more traffic and made it more dangerous for everybody. Nobody use this bike lane nobody, it dangerous just driving let alone riding a bike. You can have all the bike lane you want but when it's unsafe no one in their right will use it.
This will be a complete disaster on the community. Have you guys looked at how it will impact traffic? How will deliveries be made without causing congestion? How will garbage trucks pick up without causing a traffic nightmare. We do not need another bike lane. This is a complete waste of city funds that can be appropriated differently.
I have repeatedly submitted my opinion of the separated bike lane on Bancroft Avenue. I do not think this is the best solution. As a biker, myself, I appreciate the effort of putting in protected bike lanes to keep us safe, but to ELIMINATE parking on the east side on Bancroft does not take into consideration the residents who live on the east side of Bancroft and where they are going to park. It is fine to provide safe biking lanes for cyclists, but it is NOT SAFE or rational to expect the residents who live on the east side of Bancroft to lose the parking spots in front of their home. I am sure you are aware of the reckless driving on Bancroft Avenue. I am sure you are aware of the speeders on Bancroft Avenue. I am absolutely sure you know about the drivers who "create" a passing lane by taking the turn lane to pass other vehicles. Look at other cities to see what they have done to create slow streets, safer streets for cyclists, and their bike lanes (for example, go see these on MLK Jr and Milvia Streets in Berkeley). Students use Milvia Street to get to school. This is a good example as you state the bike lanes you plan to create on Bancroft will be beneficial to students. Maybe so, however, taking parking away from all of the residents on the east side of Bancroft makes no sense. Also, I am stated in my previous opinion that have 2-way bike lanes is not the safest way to set up bike lanes. Having 2 one-way riding bike lanes (one of each side of the street) is best and safest. Are you listening to bike riders? Are you listening to the residents along Bancroft? Are you patrolling the streets for safety? Please listen. Thank you for asking for feedback/comments. I hope you will hear us.
I am so excited that San Leandro has published this. Increasing safe corridors for biking and pedestrians is incredibly important to me and my family. Having a separated bike lane along a road like Bancroft Avenue, which I walk along with my kids, would be so great. Right now, I don’t feel safe biking with them on most of the roads. Having safe, separated hiking corridors and well-marked paths means I can bike my kids to school, bike them to the coffee shop on weekends. It makes the city so much safer and I’m so excited to see San Leandro moving towards this!!!

I live on Bancroft Ave and support bike lanes in smart areas that encourage safety. However, I do not think Bancroft meets this criteria.

First, with the middle school, high school and two elementary schools on this street, we experience a significant amount of traffic. This includes parents, buses, and residents. Decreasing the number of lanes on Bancroft will result in an increase in people using the side streets in order to find a way around the backed-up Bancroft. We already see this during the morning and afternoon commutes, and it results in people making unsafe turns and going at unsafe speeds into the neighborhoods to get around the traffic.
This is of particular issue at the intersections of Bancroft and Dolores and Bancroft and Juana. Not a month goes by where we don't have a big accident at one of these intersections because someone speeds through or runs a red light because of traffic. One home ends up with a car in its front yard at least once a year. As it is, this area is not safe for all of the children walking to and from school, and making the traffic worse only encourages bad driving behavior, making it even less safe for pedestrians and cyclists.

Decreasing the number of lanes also will make it more difficult for emergency services to come through, particularly when it is backed up. A nursing home sits across from us, receiving frequent ambulance visits. We have several elderly and unwell people in our building that also frequently need emergency services. They all pull up on Bancroft, which is where they have access due to that being the location of the fire department's lockbox/our main door. Emergency services cannot enter the complex on the side streets without first going to the front door to get the key. A protected bike lane on our side of the street completely removes all emergency services parking. This is also where deliveries are made, as it is where our intercom is. We have a significant problem with theft. When the front has been blocked due to tree trimming, delivery drivers have refused to walk around from the side street to the front door and have instead left our packages (including my very important medical supplies) at side gates because they cannot get in that way. We've done what we can to discourage theft and decrease theft by installing an Amazon Key, but this will make that moot.

Please put the bike lane through the neighborhood -- we are happy to have people cycling, but this is a bad idea.

Very few bikes use this. We need to go back to 2 lanes for cars. I went to San Rafael the other day. There was a backup for 35 minutes to gat on the bridge due to the addition of a bike lane. 6 lanes down to 2. There were 2 bike riders we counted using this ! What is more important !?

Traffic is going to be a nightmare. Trucks currently offload deliveries by parking in the middle of Bancroft but those lanes will be gone…where will they park to offload?Garbage trucks will block traffic because they can’t pull over to pick up the trash and will block traffic. Excess cars from apartment buildings will have nowhere to park. But thank goodness the few bikes (and there are very few) will have lovely new lanes…maybe now they will stay off the sidewalks. Backing out of my Mom’s driveway is already a challenge but it’s bound to be worse once the bike lanes are in and traffic is worse because no one will give you a break and let you back out.

Please! No, Note if yu take parking or make us park father out in the street. This areas was never built or planed that way. I moved here to get away fomr that after 10s of thousands of $$'s damage to our cars. Brake ins are easyer.. and lets not even talk about cars racing back into Oakland that wipe out into our cars as is... NO No NO!!!! I will lay on the road... Its diminished values to our properys also.. NO!!!!!!! Just last week there was 3 different cars Totaled over on grand and 1 car smashed this week... NO NO No!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! PLEASE NO

Looks like a great plan to protect bicyclists from distracted drivers. Locating bike lane inside parking lanes keeps all of us safer.

One of the things that drew my family to purchase a home in San Leandro is close proximity to schools and shopping. We are a family of 5 with a single car but would much prefer to walk or bike when we can. We appreciate the efforts that have gone into increasing pedestrian safety such as crosswalk enhancements. And we are encouraged by seeing the start of improved bicycle safety such as dedicated bike lanes.

We'd like to bicycle more but the top two things holding us back are:
1. Lack of secure storage for bicycles at facilities. Most facilities have no bike racks let alone more secure alternatives.
2. Lack of dedicated bike lanes on main arterial roads.

On the second point, a dedicated lane with a strong physical barrier like a concrete curb would make us feel most safe while biking. Physical barriers like the white poles on grand avenue are okay but I'm not confident in their ability to protect us if someone drifts into them.

These bike lanes are a joke, the ones on grand ave near estudillo and the curve is never never used and have made parking and driving more dangerous.. literally nobody bikes there! It's a joke and to continue ruining our streets and spending $$ on this is irresponsible . It's ok not to follow thru with a plan that doesn't work.. also those stupid plastic pole barricades are terrible.. after one month they look horrible, they are dirty and bent and don't do anything.. please leave Bancroft ave as it is. This will not encourage bike use as the example on Grand ave area illustrated

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Bike lanes should not impact the ability of residents to access street parking outside their homes. Given the level of vehicle theft and break ins, residents and home owners need to be able to park where their vehicles are within sight of their homes and security cameras. Addressing crime should be a higher priority in considering the quality of life in our community.

I support ensure safe bike lanes. I do NOT support the suggested two lane bike proposed on Bancroft. As a resident that has to pull on to Bancroft from that side (with no alternative route out as it's a dead end street), it is already dangerous to make a left going South. If you add another bike lane, it's going to make it more dangerous to all. And the people that resided in the houses along that side will find it extremely challenging backing out of their drive ways.

The city is spending too much money on creating more Bike lanes and removing automobile parking. The bike lanes should be funded by the bicycle riders.
I see very few bikes operating in the bike lanes but see quite a bit of scooters and electric bikes ride on the sidewalks. Electric bikes and scooters should be banned from the sidewalks.
More effort should be made to improve the safety of the pedestrian crosswalks. Walking is my main form of travel and I routinely encounter distracted automobile drivers and electric bicycle and scooter riders not yielding to pedestrians and ignoring traffic laws.

Do we really need this? Are there that many bicyclists riding up and down Bancroft? I've lived off Bancroft since 1999. I've ridden my bike and never had a problem

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Reducing the two-lane Bancroft Avenue to add separate bike lanes will greatly impact the heavily trafficked areas. There will be more traffic added when buses, delivery trucks/cars and other drivers have to stop in the parking spaces that are no longer there because of the bike lanes. I rarely see cyclists and to add more congestion to the Callan and Bancroft intersection is going to be a nightmare for those of us that live there! Has any of you planners seen the area after school? Traffic and danger to the kids are going to be so much worse with fewer car lanes that are there during that very busy time and throughout the day! This is much worse than the bike lane additions done to Grant Ave by Maud. I have NEVER seen a bike cross me everytime I drive there to go onto the freeway on ramp. Except near Bancroft there will be students, parents and Amazon/FedEx/UPS/AC Transit fighting for the remaining space not given to the random bicyclist. But no one cares about us anymore in this city. You all are just going to do it anyway regardless of comments submitted here. Sad to see this city go down after 25 years here.

This is a big waste of taxpayers money. All that the bike path does is create traffic and a more hazardous street for bicyclist. The demand isn't even there for this to be implemented.

I am in favor of this plan

We are homeowners on Bancroft between Glen and Haas and we are STRONGLY opposed to this plan and will do everything we can legally to oppose it.

We have four drivers in this house and this unfair plan will lead us to lose all of our parking spaces. Not to mention that the current plan also includes moving the bus stop from where it's been the entire time that we've lived here which is 20 years to almost in front of our house.

We know that there is a better and more fair way to provide safe, bike lanes and preserve the parking situation.

The necessity for safe bike routes and protected bike lanes is a priority - especially thinking about where bikes have to merge with cars (marina) and where bike routes are next to cars driving at high speeds. There are not great options for getting from the hills to Bart or from the high school down Bancroft. My parents are afraid to ride in SL

Really great to see bike boulevard in this plan,
I wasn't able to attend your public meetings due to work but please extend bike boulevards in your plan to Farrelly Pond neighborhood to meet your equity and connectivity goals.we bike west of east 14 too! For connectivity Include Peralta to Oak. It's drops at Oak??, but I see kids and families on bikes in the best manor/farrelly neighborhood biking to Oaks and other street eastward. While the intersection at Peralta/E14 sucks for peds nevermind bikes maybe Caltrans can help with a more appropriate intersection designs to slow traffic for this natural connection to Qakes Blvd. Also numerous families using Pershing Drive to Leo/cherry wood to Euclid across east 14 to go to Washington Elementary school etc.(or opposite to access siempre verde park) I am one of those parents and see a good # of group coming from this neighborhood trying to navigate drop off on bikes and it's not easy. This would be a great way to improve school and park access by bike and improves walking experience too!

Another dicey location along the bike route (future bike Blvd?) is Oakes at Bancroft , I am terrified to cross on a bike by myself never mind with my kid. What is your plan for this intersection? Oakes at Maple court is also a tricky in location for peds and bikes. Daylighting may help , visibility is poor due to cars parking adjacent to ramps .

General comments re bike boulevards -great in small cities like SL (Berkeley has a great network of them!) , usually a bit more inexpensive to build maintain than large capital projects. I say usually bc some bike blocks do include bulbs, green infrastructure and more advanced intersection design to get across busy intersections, like East 14, Bancroft. Please consider smart intersection treatments when putting bike Blvd in this plan. That will be key to usage esp for all ages and abilities.

Also please include humps and speed cushions as part of bike boulevards (sign and paint are minimum treatments). Its a culture shift for a lot of cars but humps are good visual design elements that will remond people that they are on a residential road where families walk and bike, especially if the residential road is on the wider side (e.g Peralta, Lorraine,) which you see west of east 14th.

I just sent a lengthy email to the San Leandro City Council about a near-miss at a Fairway Drive and Monarch Bay Drive intersection near the Marina Park urging them to escalate the issue to ensure pedestrian safety is prioritized. It is concerning to see how severe pedestrian and bicycle collisions have been trending up since 2020 and how there was a severe injury that occured on Monarch Bay Drive before. As a runner, I depend on the safety of public roads and intersections, and this experience has made me realize just how vulnerable pedestrians can be when drivers aren't paying full attention, especially so close to such a public community space as the San Leandro Marina Park. To be quite frank, the park is in dire need of lighted pedestrian crossings (ones that literally flash on and off annoyingly at drivers) and lights throughout the whole area. I'm aware there are a few lights, but the lights installed are few and far between the park and they are VERY dim. Because of this, I'm glad to know the San Leandro Marina Park is considered as a pedestrian priority area and I look forward to the improvements. Hopefully this can be actioned on as soon as possible than later...

Prioritize access for people with disabilities, including temporary access when contractors are working in, or adjacent to, the public way.

Connect access to neighboring communities

Provide complete routes within SL, avoiding the “bridge to nowhere” syndrome

Install secure bike parking in shopping areas, and incentivize private businesses to install bike parking

Encourage alternatives to cars, including curb ramps, accessible paths of travel, and low speed vehicles

I wish my city council cared about public safety as much as they do bike lanes. I've never seen this kind of energy or money go toward public safety. Also, It's time to charge an annual vehicle license fee on all bikes, like cars, to help pay for this.

Total waste of money. There are so many pots holes on Glen Drive it is wrecking our tires. We should think about fixing the streets before adding more bike lanes. How about a stop light between Dutton and Callan to stop all the racing cars. Will it take someone dying before city does something, anything…

Mone

We live on Bancroft on the east side where the bicycle paths are meant to go, and we are against this project design. We’re OK with the current bike path lane setup, but we don’t support a design that means our family of four drivers will lose all of our parking spots and we will be forced to park around the corner to bring in groceries or anything from the car without having to run back-and-forth across the busy street. We’re also against moving the bus stop from where it currently is - in front of a garage. We’ve been living here for 20 years. We’d like to understand more about the reasoning for the move.

I like that there’s a lot of detailed information about the type of bike lanes that are hopefully going to be placed or recommended by the master plan. It is a lot unclear about the type of intersections that will happen when an empty bike lanes get built. I wish that there was a kind of way to prioritize which intersections will be high as leverage to place protected intersection infrastructure

The separated, bike path on Washington Avenue should extend all the way to downtown at Juana Avenue.

The city should have a policy to promote the conversion of vehicle parking at major shopping centers into pedestrian, friendly places, such as Plazas or parks

We need better bike lanes but this is a horrible design. Especially getting rid of parking spaces in front of people's houses and business especially when more housing and ADU's are being built in San Leandro.

BTW how will these bike lanes be maintained or cleaned. On my street we have a shareall lane but the street signage has deteriorated and has been deteriorated the past few years.

I'm all for good bike lanes... We also need more bicycle parking at businesses. And more traffic enforcement.

No

Nice plan yet need the funding and get it project going! Other than separated bikeways, adding protection bars to the existing bike lanes could also be a solution. Washington D.C. has a very well-planned bike lane system. Prioritizing separated bikeways on the main streets, such as Bancroft Ave and E 14th Street, to Bart station is absolutely necessary. It provides a safer and more equitable option for commuters to bike/take Bart instead of driving, and it can change the majority reason for biking from leisure to working, school, and errands making San Leandro a lot nicer and more convenient to live in.

I am very excited for the plan laid out in the Draft Bicycle and Pedestrian Master Plan, especially regarding the radical transformation of the city's bike infrastructure. As a matter of fact, I can't help but feel the expansive network of separated bike lanes as laid out in the draft is too good to be true, as the difference between this plan and our current infrastructure is like night and day. I pray that my concerns remain unfounded, and that this plan is executed without delay.

There are some more specific concerns I have regarding this plan. For example, at the intersection of Bancroft and Dowling, does the city plan on implementing some sort of signal to protect the cross traffic of the bicycle boulevard? I often find traffic on Bancroft often exceeds the 30mph speed limit, making it quite dangerous to cross when Bancroft traffic has an unimpeded right of way all the way from Durant to Dutton.
Additionally, on the mapped plan, I noticed a lack of purple dashes on Davis street between Alvarado St and San Leandro Blvd. I hope I am mistaken, because there needs to be a safe connection between Downtown and the Marina that doesn't spit you out into the middle of traffic.

While keeping bicyclists safe on the routes are very important, it is only half the picture when it comes to safety. The moment where bicyclists are most vulnerable are when they attempt to make a left turn. Do you have a plan for the implementation of infrastructure to allow seamless left turns, such as turn boxes?

When I ride my bike to San Leandro BART to get to San Jose State University, I often find that my experience riding in San Leandro feels extremely hostile compared to the streets of Downtown San Jose. With this plan, which seems to compete well with San Jose's bike infrastructure, I am really looking forward for a commute that not only feels safe, but allows me to feel comfortable while riding on the streets of San Leandro.

Feel free to email me if you'd like.

Appendix D. LRSP Priority Corridor Recommendations

Priority Locations

Eight hot spot locations in the City of San Leandro were identified through data analysis as priorities for safety enhancements. These locations include:

1. Davis Street (SR 112) between Westgate Parkway and E. 14th Street (SR 185)
2. E. 14th Street (SR 185) between the City limit and Castro Street
3. San Leandro Marina
4. Doolittle Drive in the Marina Neighborhood
5. Manor Boulevard
6. Washington Avenue
7. Hesperian Boulevard
8. Lewelling Boulevard

Figure 9: Collision Hot Spots

Davis Street | Doolittle Drive to E. 14th Street

PRIORITY LOCATION #1

TYPE OF EMPHASIS AREA

CORRIDOR HOT SPOT

COLLISION SUMMARY

TOTAL COLLISIONS (4 KSI)

PEDESTRIAN COLLISIONS (3 KSI)

BICYCLE COLLISIONS (0 KSI)

LOCATION SUMMARY

VIOLATIONS

- Unsafe speed
- Vehicle right of way violation
- Pedestrian right of way violation

COLLISION TYPES

- Vehicle/pedestrian
- Broadside
- Rear end

ROADWAY AND CONTEXTUAL FACTORS

- 5-lane roadway with median in some segments
- 25-35 mph speed limit
- On the state highway system with an interchange

GOALS

- Increase pedestrian visibility and safety crossing at major intersections
- Allow adequate time for pedestrian crossing

NEAR SCHOOL

NEAR RETAIL

NEAR PARK

IN DISADVANTAGED COMMUNITY

RELEVANT GRANT OPPORTUNITIES

HSIP ATP Alameda CTC CIP

COUNTERMEASURES

COUNTERMEASURE		ISSUE AREA	TIME FRAME	COST
Protected left turn phasing	To Address	Pedestrian crossing at signalized intersections	Short	Medium
Leading pedestrian interval	To Address	Pedestrian crossing at signalized intersections	Short	Low
High-visibility crosswalks	To Address	Pedestrian crossing at signalized intersections	Short	Low
Pedestrian scramble	To Address	Pedestrian crossing at signalized intersections	Short	Low

Davis Street | Doolittle Dr to E. 14th St

E. 14th Street (SR 185) | Durant Avenue to Castro Street

PRIORITY LOCATION #2

TYPE OF EMPHASIS AREA

CORRIDOR HOT SPOT

COLLISION SUMMARY

57 TOTAL COLLISIONS (6 KSI)

16 PEDESTRIAN COLLISIONS (4 KSI)

6 BICYCLE COLLISIONS (0 KSI)

LOCATION SUMMARY

VIOLATIONS

- Unsafe speed
- Vehicle right of way violation
- Pedestrian right of way violation

COLLISION TYPES

- Vehicle/pedestrian
- Broadside
- Rear end

ROADWAY AND CONTEXTUAL FACTORS

- 3-lane and 4-lane roadway
- 25-30 mph speed limit
- On the state highway system
- Priority bus route and high pedestrian demand

GOALS

- Increase pedestrian visibility and safety crossing at major intersections
- Allow adequate time for pedestrian crossing

NEAR SCHOOL

NEAR RETAIL

NEAR PARK

IN DISADVANTAGED COMMUNITY

RELEVANT GRANT OPPORTUNITIES

HSIP ATP Alameda CTC CIP

COUNTERMEASURES

COUNTERMEASURE		ISSUE AREA	TIME FRAME	COST
Protected left turn phasing	To Address	Pedestrian crossing at signalized intersections	Short	Medium
Leading pedestrian interval	To Address	Pedestrian crossing at signalized intersections	Short	Low
High-visibility crosswalks	To Address	Pedestrian crossing at signalized intersections	Short	Low
Pedestrian scramble	To Address	Pedestrian crossing at signalized intersections	Short	Low

E 14th Street | Durant St to Castro St

E 14th Street | Durant St to Castro St

E 14th St (SR 185)
Dan Niemi Way
Chumalia St
Callan Ave
Davis St (SR 112)
Estudillo Ave
Joaquin Ave
Juana Ave
W Juana Ave
Dolores Ave
Parrott St
Maud Ave
Thornton Ave
Elsie Ave
Williams Ave
Sybil Ave
Castro St

- Restripe east crosswalk as a high-visibility crosswalk.
- Install Class IV separated bike lanes to connect with future bikeway on Davis Street (SR 112)/Callan Avenue corridor.

- Install a bus boarding island.
- Straighten the north crosswalk and stripe west crosswalk as high-visibility.
- Close westbound bike lane gap on Estudillo Avenue.
- Mark bike lanes to the west to connect to the Paseo and West Estudillo Avenue.
- Add pedestrian scramble.
- Install protected left turn phase.

- Install protected left turn phase.

- Install protected left turn phase.

- Install bulbout on northeast corner to straighten north crosswalk and reduce crossing distances. Install directional curb ramps and remove westbound right-turn pocket.
- Move south crosswalk further north to reduce size of intersection, which requires moving a drain inlet.

- Add east crosswalk.

- Move the southbound nearside bus stop to the farside.

General Recommendations

- Road Diet E 14th Street and install bus only lane or Class IV separated bike lanes.
- Restripe all existing standard crosswalk as high-visibility ladder crossing.
- Install advanced stop bars at all controlled crosswalks.
- Implement leading pedestrian intervals at all signalized intersections.
- Install pedestrian recall at signalized intersections Downtown.
- Install ADA-accessible curb ramps at all crosswalk locations where they are missing.

Doolittle Drive | Marina Boulevard to Fairway Drive

PRIORITY LOCATION #3

TYPE OF EMPHASIS AREA

CORRIDOR HOT SPOT

COLLISION SUMMARY

TOTAL COLLISIONS (2 KSI)

PEDESTRIAN COLLISIONS (0 KSI)

BICYCLE COLLISIONS (1 KSI)

LOCATION SUMMARY

VIOLATIONS

- Unsafe speed
- Vehicle right of way violation
- Improper turning

COLLISION TYPES

- Broadside
- Rear end

ROADWAY AND CONTEXTUAL FACTORS

- 4-lane roadway with no median
- 40 mph speed limit
- Gap in the bikeway network
- Gaps in lighting

GOALS

- Reduce vehicle speeds
- Reduce vehicle-pedestrian conflicts at signalized intersections

NEAR SCHOOL

NEAR RETAIL

NEAR PARK

IN DISADVANTAGED COMMUNITY

RELEVANT GRANT OPPORTUNITIES

HSIP ATP Alameda CTC CIP

COUNTERMEASURES

COUNTERMEASURE		ISSUE AREA	TIME FRAME	COST
New crosswalks with enhancements	To Address	Pedestrian crossings at unmarked intersections	Medium	Low
Protected left turns	To Address	Drivers making left turns at signalized intersections	Short	Medium
Supplemental signal heads	To Address	Drivers making left turns at signalized intersections	Medium	Medium
Extending yellow and red time	To Address	Drivers making left turns at signalized intersections	Short	Low
Road dieting	To Address	Unsafe speeds	Long	Medium
Add lighting	To Address	Gaps in lighting	Medium	Medium

Doolittle Drive
Marina Blvd to Fairway Dr

- Remove second eastbound through lane on Marina and eastbound receiving lane.
- Straighten south crosswalk.

- Install at least one pedestrian crossing.

- Install leading pedestrian intervals.
- Install protected intersection and confirm if additional phasing separation is needed.

General Recommendations

- Install separated bike lanes through road diet.
- Restripe all existing standard crosswalks as high-visibility ladder crossings.
- Install advanced stop bars at all controlled crosswalks.
- Install ADA-compliant curb ramps at all crosswalks where they are missing.

Manor Boulevard | Wicks Boulevard to Kesterson Street

PRIORITY LOCATION #4

TYPE OF EMPHASIS AREA

CORRIDOR HOT SPOT

COLLISION SUMMARY

TOTAL COLLISIONS (3 KSI)

PEDESTRIAN COLLISIONS (2 KSI)

BICYCLE COLLISIONS (0 KSI)

LOCATION SUMMARY

VIOLATIONS

- Unsafe speed
- Vehicle right of way violation
- Pedestrian violation

COLLISION TYPES

- Broadside
- Head-on
- Rear end
- Vehicle/pedestrian

ROADWAY AND CONTEXTUAL FACTORS

- 2-lane roadway
- 30 mph speed limit
- Narrow sidewalks
- Limited marked crossing opportunities

GOALS

- Increase pedestrian visibility and comfort when crossing at signalized intersections
- Increase safety at mid-block crossings
- Decrease vehicle speeds

NEAR SCHOOL

NEAR RETAIL

NEAR PARK

IN DISADVANTAGED COMMUNITY

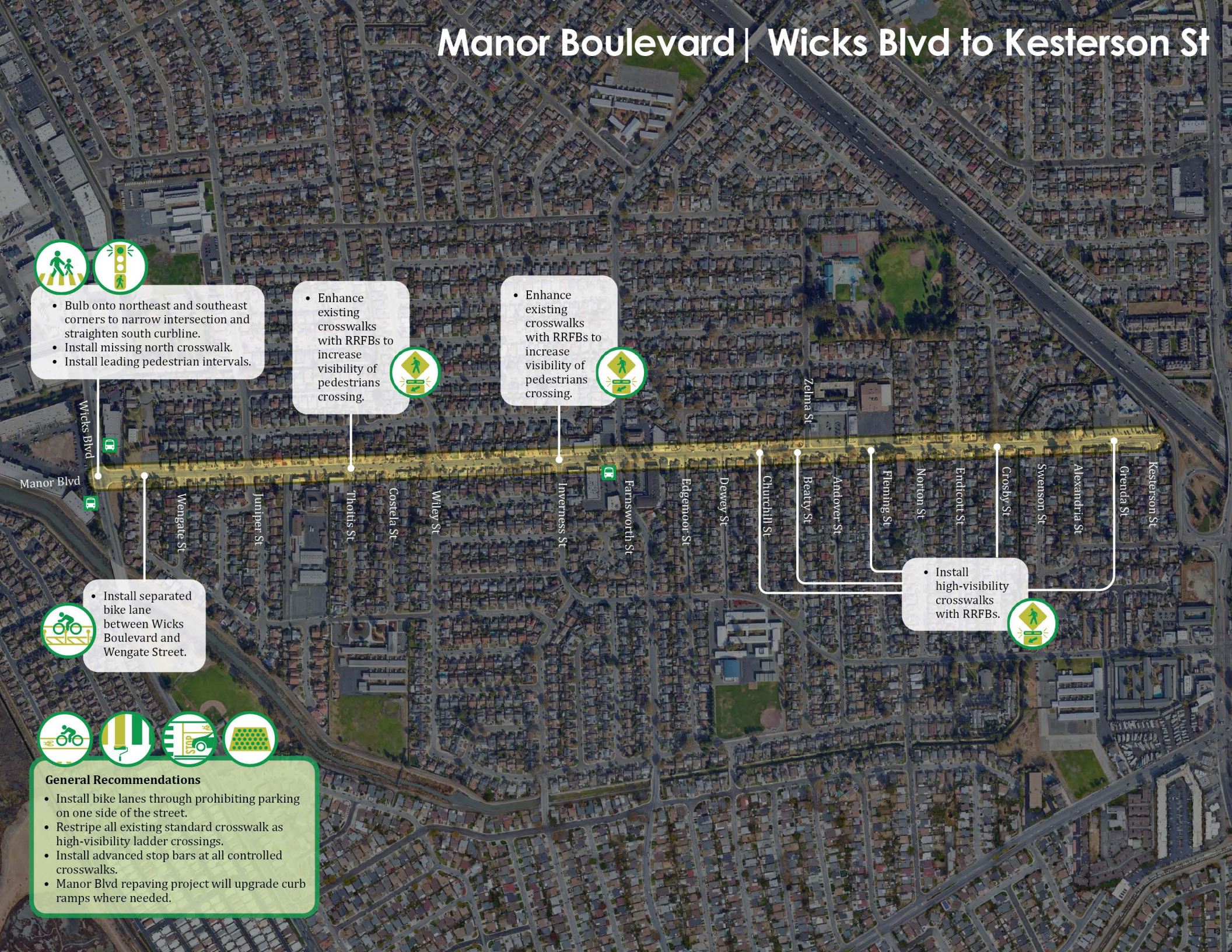
RELEVANT GRANT OPPORTUNITIES

HSIP ATP Alameda CTC CIP

COUNTERMEASURES

COUNTERMEASURE		ISSUE AREA	TIME FRAME	COST
High-visibility crosswalks	To Address	Pedestrian collisions at uncontrolled crossings and mid-block locations	Short	Low
Rectangular Rapid Flashing Beacons	To Address	Pedestrian collisions at uncontrolled crossings and mid-block locations	Medium	Medium
Lane narrowing	To Address	Unsafe speed	Long	Low
Neighborhood traffic calming	To Address	Unsafe speed	Short	Medium

Manor Boulevard | Wicks Blvd to Kesterson St



- Bulb onto northeast and southeast corners to narrow intersection and straighten south curbline.
- Install missing north crosswalk.
- Install leading pedestrian intervals.

- Enhance existing crosswalks with RRFBs to increase visibility of pedestrians crossing.

- Enhance existing crosswalks with RRFBs to increase visibility of pedestrians crossing.

- Install high-visibility crosswalks with RRFBs.

- Install separated bike lane between Wicks Boulevard and Wengate Street.

General Recommendations

- Install bike lanes through prohibiting parking on one side of the street.
- Restripe all existing standard crosswalk as high-visibility ladder crossings.
- Install advanced stop bars at all controlled crosswalks.
- Manor Blvd repaving project will upgrade curb ramps where needed.

Washington Avenue | Halcyon Boulevard to Lewelling Boulevard

PRIORITY LOCATION #5

TYPE OF EMPHASIS AREA

CORRIDOR HOT SPOT

COLLISION SUMMARY

57 TOTAL COLLISIONS (5 KSI)

8 PEDESTRIAN COLLISIONS (3 KSI)

5 BICYCLE COLLISIONS (0 KSI)

LOCATION SUMMARY

VIOLATIONS

- Vehicle right of way violation
- Unsafe speed

COLLISION TYPES

- Broadside
- Rear end
- Sideswipe
- Head-on
- Vehicle/pedestrian

ROADWAY AND CONTEXTUAL FACTORS

- 4-lane and 5-lane roadway with no median
- 35 mph speed limit
- Freeway interchange
- Gaps in the bikeway network
- Gaps in lighting

GOALS

- Increase pedestrian visibility and comfort when crossing at signalized intersections and mid-block crossings
- Increase visibility at nighttime, or in locations with poor lighting conditions
- Increase safety for bicyclists

NEAR SCHOOL

NEAR RETAIL

NEAR PARK

IN DISADVANTAGED COMMUNITY

RELEVANT GRANT OPPORTUNITIES

HSIP ATP Alameda CTC CIP

COUNTERMEASURES

COUNTERMEASURE		ISSUE AREA	TIME FRAME	COST
High visibility crosswalks	To Address	Drivers not stopping/yielding at crosswalks	Short	Low
Pedestrian Hybrid Beacon	To Address	Drivers not stopping/yielding at crosswalks	Medium	High
Median refuge with RRFB	To Address	Drivers not stopping/yielding at crosswalks	Medium	Medium
Road dieting	To Address	Unsafe speeds	Long	Medium
Separated bike lanes	To Address	Unsafe speeds	Long	High
Add lighting	To Address	Gaps in lighting	Medium	Medium

Washington Avenue | Halcyon Blvd to Lewelling Blvd

Floresta Blvd

Halcyon Blvd

Washington Ave

- Highlight bike lane going through the intersection with green conflict striping.
- Install leading pedestrian intervals.
- Install protected right turn phases or raise the crosswalk at the slip lane.
- Remove the eastbound right-turn pocket an install a bulb out.
- Close bike lane gap between Floresta Blvd/Halcyon Blvd and Caliente Dr.

Caliente Dr

- Bring side street to roadway grade and mark crosswalk or rebuild driveway to prioritize pedestrian access.

Bradrick Dr

Monterey Blvd

- Refresh markings on existing bike lane.
- Install leading pedestrian intervals.
- Tighten turn radii on northwest and southwest corners if feasible and straighten the crosswalks.

- Relocate crosswalk to north leg of Lloyd Avenue intersection.
- Install median refuge and RRFBs or PHB.

Pagano Ct

Lloyd Ave

Anza Way

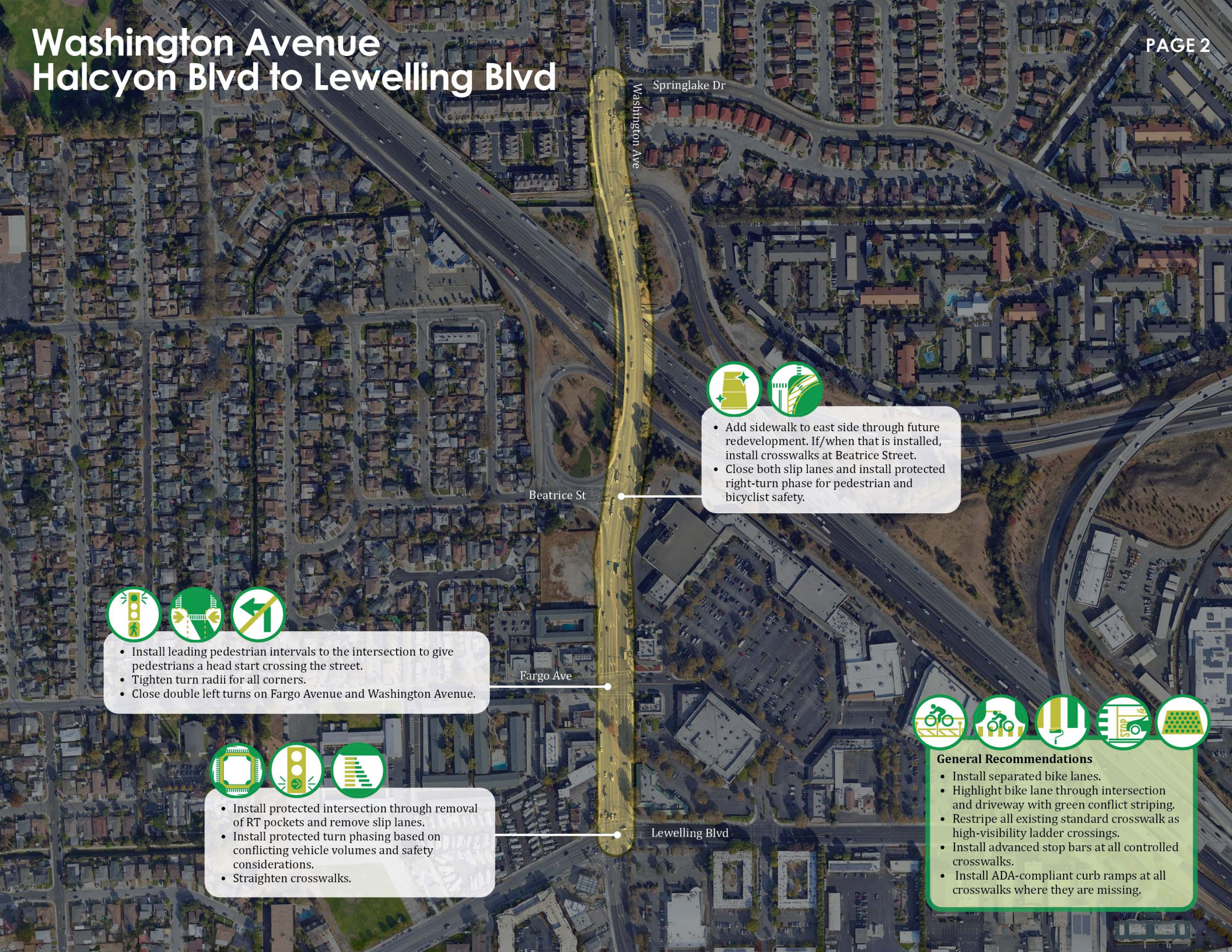
General Recommendations

- Consider road diet and repurpose excess space to provide separated bike lanes.
- Refresh existing bike lane markings.
- Highlight bike lane through intersection and driveway with green conflict striping.
- Restripe all existing standard crosswalk as high-visibility ladder crossings.
- Install advanced stop bars at all controlled crosswalks.
- Install ADA-compliant curb ramps at all crosswalks where they are missing.

- Install a protected intersection to shorten pedestrian crossing distances, lower right-turn vehicle speeds, improve sightlines, and facilitate bicycle two-stage crossings.
- Refresh markings on existing bike lane and add solid green paint.
- Upgrade Springlake Dr bike lanes to separated bike lanes.

Springlake Dr

Washington Avenue
Halcyon Blvd to Lewelling Blvd



- Add sidewalk to east side through future redevelopment. If/when that is installed, install crosswalks at Beatrice Street.
- Close both slip lanes and install protected right-turn phase for pedestrian and bicyclist safety.

- Install leading pedestrian intervals to the intersection to give pedestrians a head start crossing the street.
- Tighten turn radii for all corners.
- Close double left turns on Fargo Avenue and Washington Avenue.

- Install protected intersection through removal of RT pockets and remove slip lanes.
- Install protected turn phasing based on conflicting vehicle volumes and safety considerations.
- Straighten crosswalks.

General Recommendations

- Install separated bike lanes.
- Highlight bike lane through intersection and driveway with green conflict striping.
- Restripe all existing standard crosswalk as high-visibility ladder crossings.
- Install advanced stop bars at all controlled crosswalks.
- Install ADA-compliant curb ramps at all crosswalks where they are missing.

Hesperian Boulevard | E. 14th Street to Springlake Drive

PRIORITY LOCATION #6

TYPE OF EMPHASIS AREA

CORRIDOR HOT SPOT

COLLISION SUMMARY

38 TOTAL COLLISIONS (3 KSI)

7 PEDESTRIAN COLLISIONS (2 KSI)

6 BICYCLE COLLISIONS (0 KSI)

LOCATION SUMMARY

VIOLATIONS

- Unsafe speed
- Vehicle right of way violation
- Pedestrian right of way violation

COLLISION TYPES

- Rear end
- Broadside
- Vehicle/pedestrian

ROADWAY AND CONTEXTUAL FACTORS

- 5-lane to 7-lane roadway with median
- 40 mph speed limit
- Gaps in the bikeway network
- Gaps in lighting

GOALS

- Reduce vehicle speeds
- Increase pedestrian visibility and comfort when crossing on major arterials

NEAR SCHOOL

NEAR RETAIL

NEAR PARK

IN DISADVANTAGED COMMUNITY

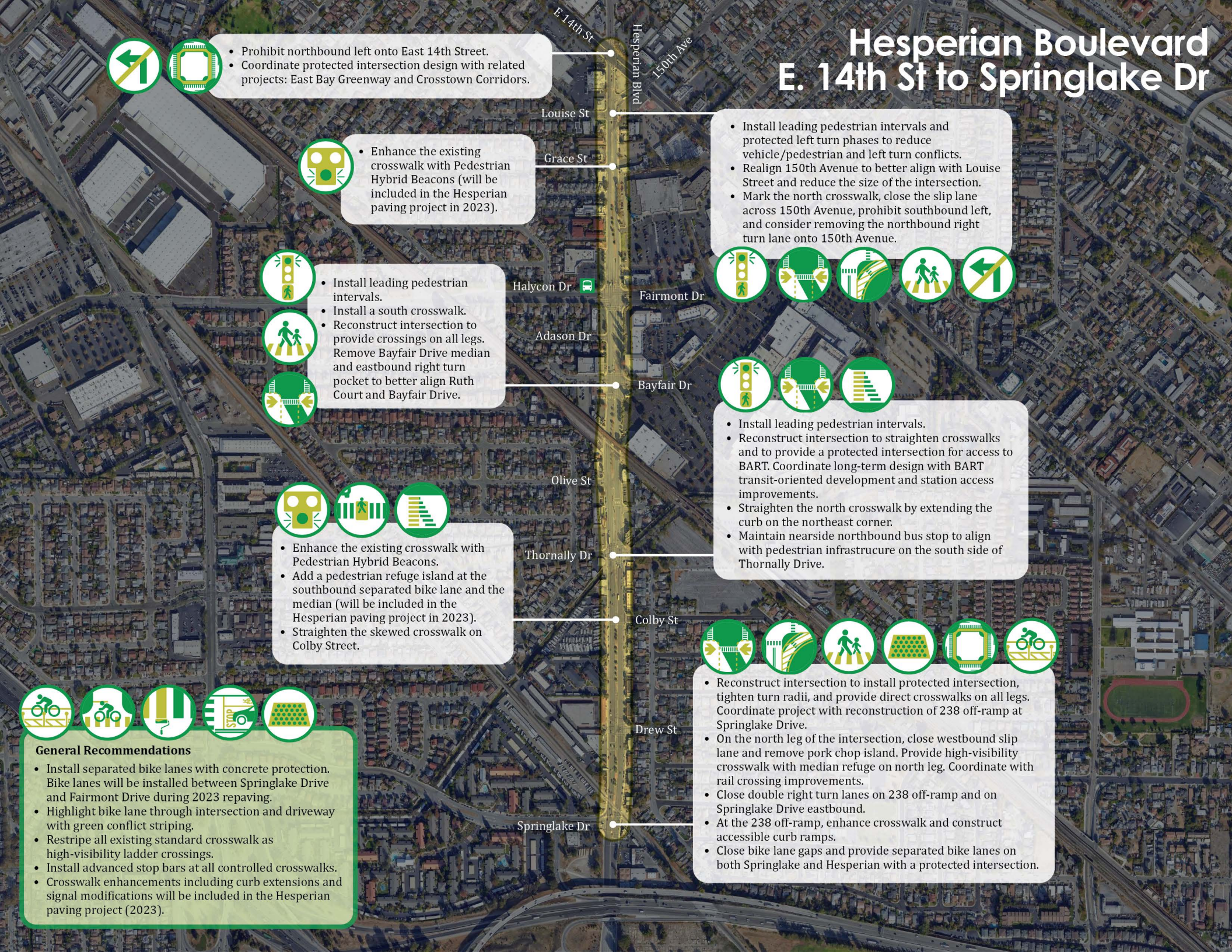
RELEVANT GRANT OPPORTUNITIES

HSIP ATP Alameda CTC CIP

COUNTERMEASURES

COUNTERMEASURE		ISSUE AREA	TIME FRAME	COST
Traffic calming measures (road diet, narrowing lanes)	To Address	Rear-end collisions	Long	Medium
Extend yellow and all red time	To Address	Rear-end collisions	Short	Low
High-visibility crosswalks	To Address	Pedestrian collisions at signalized, unsignalized, and midblock crossings	Short	Low
RRFBs or PHBs where appropriate	To Address	Pedestrian collisions	Medium	High
Add lighting	To Address	Gaps in lighting	Medium	Medium
Road dieting	To Address	Unsafe speed	Long	Medium
Separated bikeways	To Address	Unsafe speed	Long	High

Hesperian Boulevard
E. 14th St to Springlake Dr



- Prohibit northbound left onto East 14th Street.
- Coordinate protected intersection design with related projects: East Bay Greenway and Crosstown Corridors.

- Enhance the existing crosswalk with Pedestrian Hybrid Beacons (will be included in the Hesperian paving project in 2023).

- Install leading pedestrian intervals and protected left turn phases to reduce vehicle/pedestrian and left turn conflicts.
- Realign 150th Avenue to better align with Louise Street and reduce the size of the intersection.
- Mark the north crosswalk, close the slip lane across 150th Avenue, prohibit southbound left, and consider removing the northbound right turn lane onto 150th Avenue.

- Install leading pedestrian intervals.
- Install a south crosswalk.
- Reconstruct intersection to provide crossings on all legs. Remove Bayfair Drive median and eastbound right turn pocket to better align Ruth Court and Bayfair Drive.

- Install leading pedestrian intervals.
- Reconstruct intersection to straighten crosswalks and to provide a protected intersection for access to BART. Coordinate long-term design with BART transit-oriented development and station access improvements.
- Straighten the north crosswalk by extending the curb on the northeast corner.
- Maintain nearside northbound bus stop to align with pedestrian infrastrucure on the south side of Thornally Drive.

- Enhance the existing crosswalk with Pedestrian Hybrid Beacons.
- Add a pedestrian refuge island at the southbound separated bike lane and the median (will be included in the Hesperian paving project in 2023).
- Straighten the skewed crosswalk on Colby Street.

- Reconstruct intersection to install protected intersection, tighten turn radii, and provide direct crosswalks on all legs. Coordinate project with reconstruction of 238 off-ramp at Springlake Drive.
- On the north leg of the intersection, close westbound slip lane and remove pork chop island. Provide high-visibility crosswalk with median refuge on north leg. Coordinate with rail crossing improvements.
- Close double right turn lanes on 238 off-ramp and on Springlake Drive eastbound.
- At the 238 off-ramp, enhance crosswalk and construct accessible curb ramps.
- Close bike lane gaps and provide separated bike lanes on both Springlake and Hesperian with a protected intersection.

General Recommendations

- Install separated bike lanes with concrete protection. Bike lanes will be installed between Springlake Drive and Fairmont Drive during 2023 repaving.
- Highlight bike lane through intersection and driveway with green conflict striping.
- Restripe all existing standard crosswalk as high-visibility ladder crossings.
- Install advanced stop bars at all controlled crosswalks.
- Crosswalk enhancements including curb extensions and signal modifications will be included in the Hesperian paving project (2023).

Lewelling Boulevard | Hesperian Boulevard to Wicks Boulevard

PRIORITY LOCATION #7

TYPE OF EMPHASIS AREA

CORRIDOR HOT SPOT

COLLISION SUMMARY

51 TOTAL COLLISIONS (3 KSI)

7 PEDESTRIAN COLLISIONS (2 KSI)

4 BICYCLE COLLISIONS (0 KSI)

LOCATION SUMMARY

VIOLATIONS

- Unsafe speed
- Vehicle right of way violation
- Pedestrian right of way violation
- Following too closely

COLLISION TYPES

- Head on
- Rear end
- Vehicle/pedestrian
- Broadside

ROADWAY AND CONTEXTUAL FACTORS

- 5-lane roadway with and without median
- 35-40 mph speed limit
- Gaps in the bikeway network
- Gaps in lighting

GOALS

- Increase pedestrian comfort by reducing crossing distances
- Reduce pedestrian/vehicle conflicts at signalized intersections
- Reduce vehicle speeds

NEAR SCHOOL

✓ NEAR RETAIL

NEAR PARK

✓ IN DISADVANTAGED COMMUNITY

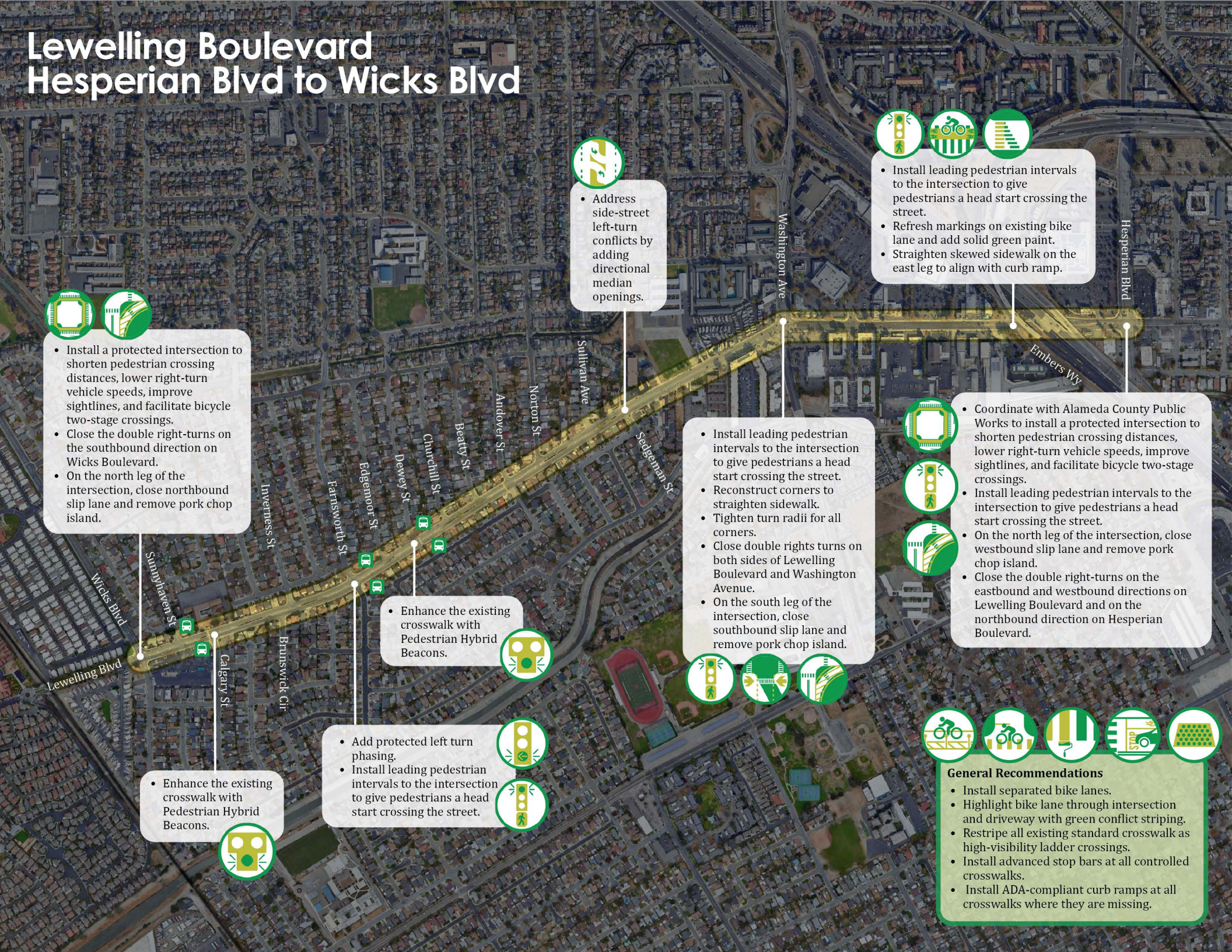
RELEVANT GRANT OPPORTUNITIES

HSIP ATP Alameda CTC CIP

COUNTERMEASURES

COUNTERMEASURE		ISSUE AREA	TIME FRAME	COST
Conflict striping/bike boxes	To Address	Bicycle collisions at intersections	Medium	Low
Protected left turn phasing	To Address	Bicycle collisions at intersections	Short	Medium
Road dieting	To Address	Unsafe speeds	Long	Medium
Curb extensions	To Address	Unsafe speeds	Long	Medium
Separated bikeways	To Address	Unsafe speeds	Long	High

Lewelling Boulevard
Hesperian Blvd to Wicks Blvd



- Install a protected intersection to shorten pedestrian crossing distances, lower right-turn vehicle speeds, improve sightlines, and facilitate bicycle two-stage crossings.
- Close the double right-turns on the southbound direction on Wicks Boulevard.
- On the north leg of the intersection, close northbound slip lane and remove pork chop island.

- Address side-street left-turn conflicts by adding directional median openings.

- Install leading pedestrian intervals to the intersection to give pedestrians a head start crossing the street.
- Refresh markings on existing bike lane and add solid green paint.
- Straighten skewed sidewalk on the east leg to align with curb ramp.

- Coordinate with Alameda County Public Works to install a protected intersection to shorten pedestrian crossing distances, lower right-turn vehicle speeds, improve sightlines, and facilitate bicycle two-stage crossings.
- Install leading pedestrian intervals to the intersection to give pedestrians a head start crossing the street.
- On the north leg of the intersection, close westbound slip lane and remove pork chop island.
- Close the double right-turns on the eastbound and westbound directions on Lewelling Boulevard and on the northbound direction on Hesperian Boulevard.

- Install leading pedestrian intervals to the intersection to give pedestrians a head start crossing the street.
- Reconstruct corners to straighten sidewalk.
- Tighten turn radii for all corners.
- Close double rights turns on both sides of Lewelling Boulevard and Washington Avenue.
- On the south leg of the intersection, close southbound slip lane and remove pork chop island.

- Enhance the existing crosswalk with Pedestrian Hybrid Beacons.

- Add protected left turn phasing.
- Install leading pedestrian intervals to the intersection to give pedestrians a head start crossing the street.

- Enhance the existing crosswalk with Pedestrian Hybrid Beacons.

General Recommendations

- Install separated bike lanes.
- Highlight bike lane through intersection and driveway with green conflict striping.
- Restripe all existing standard crosswalk as high-visibility ladder crossings.
- Install advanced stop bars at all controlled crosswalks.
- Install ADA-compliant curb ramps at all crosswalks where they are missing.