

Complete Streets

CONCEPTUAL DESIGN AND PLAN FOR
SAN PABLO AVENUE AND BUCHANAN STREET

This Plan was conducted thanks to funding from the Caltrans Community Based Transportation Planning Grant Program.



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Local Government Commission (left and bottom right); Walkable and Livable Communities Institute (top right)

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1 Background and Study Process

1 Background and Study Process

PROJECT PURPOSE

The goal of this project is to help create a safer, more comfortable, and aesthetically pleasing environment along San Pablo Avenue and Buchanan Street in the City of Albany, to accommodate all users and all abilities. This project utilized an intensive charrette process bringing together a diverse set of community members to discuss issues and seek consensus in a highly engaging and productive design environment. The project was further tailored to the present needs of the community in the context of other planning efforts.

This streetscape vision looks beyond mobility and guides the look and feel of the streetscape to create places that reflect the character of the community, improve social interaction, and contribute to the economic health of the district. A complete street is a roadway designed and operated to enable safe, attractive, and comfortable multi-modal access and travel for all users, including pedestrians, bicyclists, motorists, and public transport users of all ages and abilities. Beyond this, however, complete streets are also intended to promote:

- An active, defined, retail-oriented, mixed-use neighborhood district
- Well-designed building facades and a mix of uses that help achieve a pedestrian-friendly environment
- Appropriate transitions between public spaces such as sidewalks, and privately owned plazas, courtyards, and entries

The vision to transform San Pablo Avenue and Buchanan Street into complete streets can help build regional connectivity, foster economic revitalization, promote community identity, and create a strong sense of place that serves both ecological and social functions. The design strategies in this document build on past planning endeavors encompassed in documents like the 2001 San Pablo Avenue Streetscape Master Plan and the 2012 Albany Active Transportation Plan, which emphasized creek crossings, gateways, major intersections, enhanced furnishings, and bicycle boulevards.

The planning effort was made possible through a California Department of Transportation Community-Based Transportation Planning Grant received by the City of Albany in partnership with the Local Government Commission (LGC). LGC is a Sacramento-based nonprofit organization that works with local governments and communities to create healthier and more vibrant and resource-efficient places.

The project partners assembled a multi-disciplinary professional team to develop the plan. Dan Burden of the Walkable and Livable Communities Institute assisted LGC with the public visioning process. The design team is made up of staff from Nelson\Nygaard Consulting Associates Inc. and Wallace Roberts & Todd Design (WRT) provided community planning and design expertise and prepared the plan document.

Figure 1-1 Project Timeline



EXISTING CONDITIONS

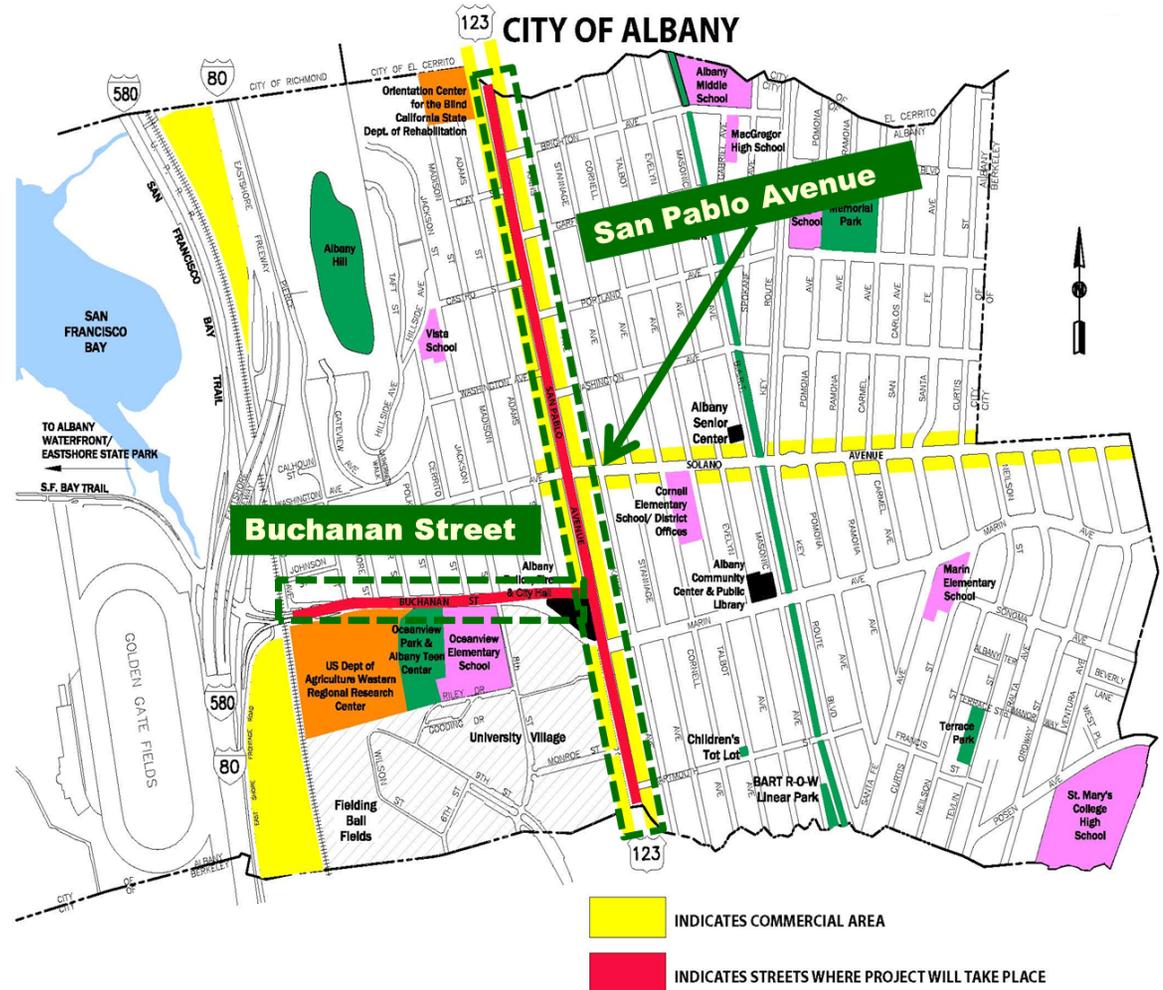
Overview

This study addresses the desired character of two important streets and gateways in the City of Albany: San Pablo Avenue and Buchanan Street. Both streets are wide, designed to move cars, and could benefit from enhancements that serve transit, pedestrians, and bicycles. Their width and design make these streets barriers that divide the city into quadrants rather than knitting it together. Both streets lack sufficient street trees and other amenities needed to create a comfortable, welcoming pedestrian experience and promote a positive identity for the city. Beyond their similarities, however, the two corridors serve different functions in the region and community. San Pablo Avenue is a Caltrans Highway (California 123) and regional arterial traversing several cities in the region and serving local retail main street destinations. Buchanan is a major access thoroughfare through a neighborhood and past institutional uses, connecting regional freeways with several neighborhoods in Albany and Berkeley. Their respective design strategies must differ accordingly.

The City of Albany is a small urban city of 1.5 square miles with a population of 18,217. One quarter of Albany residents are under 18 years of age, 65% are between 20 and 64, and 10% are over 65 years of age. For commute to work trips, public transportation is widely utilized (22%), as is carpooling (9%), biking (7%), and walking (5%).⁵ Just over half of the working population of Albany commutes to work by driving alone in a car (52%).

As shown in the project area map, the two streets included in this project are two main gateways to the city: San Pablo Avenue, which runs north-south, and Buchanan Street, which runs east-west.

Figure 1-2 Project Location Map



⁵ 2007-2011 American Community Survey 5-Year Estimates

San Pablo Avenue

San Pablo Avenue (SR-123) is part of the California state highway system and is the major north-south corridor through the city. The posted speed limit along San Pablo Avenue is 30 mph, but the observed 85th percentile is 40.1 mph. The street extends 1.07 miles in the city and carries an average of 25,284 vehicles per day. San Pablo Avenue has four lanes (two in each direction), a center turning lane, and parking on both sides of the street. Both sides of the street have sidewalks. There are no designated bicycle facilities. The roadway is auto-oriented in nature, with numerous off-street parking lots; there are 88 driveways in this one-mile segment of roadway, approximately one every 115 feet.

The roadway experiences issues with speeding, vehicular congestion, and limited pedestrian crossings. During the site visits, stakeholder interviews, and public meetings, the team learned that the uncontrolled marked crossings, limited crossing opportunities, and high motor vehicle volumes make this roadway very challenging for bicyclists and pedestrians. Crossings are infrequent, and there are several uncontrolled crosswalks with only transverse markings—two parallel lines across the street. There is also limited bicycle parking along the arterial and a lack of street furniture.

Due to the central location of this street in Albany, it is a critical connector and, in its current state, acts as a significant barrier between east and west Albany. Many school-aged youth in the city must cross the street daily to reach their schools, and parents expressed concern about the risk of this crossing. The commercial district along San Pablo Avenue also suffers due to the auto-oriented nature of the street: businesses outside the core do not do as well as those nearer to the walkable commercial district of Solano Avenue.

Sidewalks along San Pablo Avenue are generally wide (13 feet), but are frequently interrupted by driveways, tree root upheaval, and other barriers placed in the right-of-way (e.g., signs, fire hydrants, and telephone poles). Due to the numerous driveways, cars and other obstacles are often blocking the sidewalk, posing a particular threat for those with physical or vision impairment and those pushing strollers or carts. Commercial driveways are often built with excessive slope, encumbering pedestrian travel along sidewalks. Curb ramps are generally placed at diagonals, directing wheelchair users and other pedestrians toward the center of the intersection before they can enter the crosswalk in either direction. There is no pedestrian-oriented street lighting on San Pablo Avenue, as there is on nearby Solano Avenue.

Some bicyclists who ride in the outside travel lane of this roadway were noted to swerve in and out of the parking lane, likely due to the discomfort of riding alongside vehicles travelling up to 40 miles per hour. This is a dangerous behavior, as is the tendency for cyclists to ride on the sidewalk on San Pablo Avenue. Sidewalk riding, both wrong- and right-direction, was observed and mentioned frequently during the outreach process as a major concern for this roadway. Bicycling on sidewalks endangers pedestrians, and also puts bicyclists at more risk when crossing driveways and intersections.

In the last decade (2000-2009), the total number of collisions on San Pablo Avenue was 414; the highest number of collisions occurred at San Pablo Avenue's intersections with Solano Avenue, Brighton Avenue, and Washington Avenue. The intersection of San Pablo Avenue and Washington Avenue had the highest number of collisions involving bicyclists (4) and the intersection of San Pablo and Solano Avenues had the highest number of pedestrian-involved accidents (11).



Unsignalized crosswalks along San Pablo Avenue lead to poor sightlines and challenging crossing environments.



Sidewalks are often obstructed with parked vehicles, due to this high number of driveways along San Pablo Avenue.



Bicyclists commonly use sidewalks on San Pablo Avenue



San Pablo is a wide street with broad travel lanes that encourage speed at the expense of pedestrians and locally serving retail establishments. The street is lined with mature, widely spaced trees which do not adequately frame the street and create an inviting sidewalk environment. Retail signs are typically oriented toward the street only and, due to their height, conflict with trees, suggesting that an alternative signage strategy is needed to attract due attention to the retail frontages.



Sidewalk paving is mundane and uneven in places. Trees are planted in small tree wells with limited additional plants. Some businesses have added planters. The streetscape features few amenities that contribute to pedestrian comfort in the public realm. Missing items include benches, consistent bike racks, and elements of color or visual interest. Lighting mimics highway conditions with tall, widely spaced cobra heads that illuminate the street but fail to appropriately light the sidewalk.



The creek is a significant ecological resource that is diminished by the busy roadway and obscured to everyone passing by, even pedestrians. Stormwater passes directly in to the creeks – a condition partially being addressed by the current "Green Spine" project.



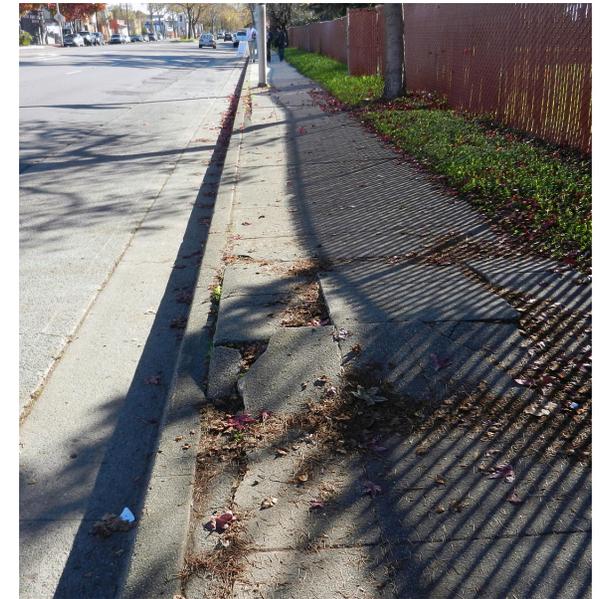
In contrast to San Pablo Avenue in Albany, the Berkeley segment of San Pablo is characterized by wide, green, well-maintained medians with high canopy trees.

Buchanan Street

Buchanan Street is the main gateway to the city from Interstate 80 and Interstate 580, and is classified in the Albany Traffic Management Plan as a major arterial, carrying over 30,000 vehicles per day. The roadway is prone to fast speeds despite its 25 mph speed limit (the 85th percentile speed is 30.4 mph), and has few buildings fronting the street, resulting in an environment that encourages higher driving speeds. Land uses on Buchanan Street vary from residential on the north side to public facilities on the south side, including the United States Department of Agriculture (USDA)—one of the largest employers in the city, Ocean View Park, Ocean View Elementary School and City Hall. UC Village is located along the Marin Avenue segment east of the Buchanan/Marin merge.

Buchanan Street has numerous unsignalized intersections, with five consecutive residential streets that terminate at Buchanan Street and have unmarked crossings. This results in limited crossing opportunities between Ocean View Elementary School and the Albany Waterfront a half-mile to the west. The one-mile street segment in this study has a roughly 80-foot cross section, with four travel lanes (two lanes in each direction), a nearly continuous landscaped median, and three signalized intersections (two of which are on San Pablo Avenue, since the street splits west of City Hall and continues as Buchanan Street north of City Hall and as Marin Avenue south of City Hall.

Buchanan is an east-west connection for the city to the bay and its recreational opportunities, and as such experiences moderate cyclist and pedestrian volumes. The street has a continuous sidewalk on the north side and the Marin Avenue segment adjacent to the University of California property has a partial sidewalk on the south side. The sidewalk on the north side is very narrow (4.5 feet) with diagonal curb ramps and numerous driveways, some at steep slopes. There is no pedestrian-oriented street lighting on Buchanan Street. The south side of the



Cracked and broken sidewalk on Buchanan Street, which is also narrow with no buffer from the vehicular lanes.

roadway is currently under construction and a new 8-to-10-foot shared use path will soon be in place. More about this project is detailed below.

In parts of the Marin Avenue segment of Buchanan Street without parking, the sidewalks lack a buffer between the sidewalk and the travel lane. The north side of the street has short segments of on-street parking with no posted time restrictions. The south side has no parking or sidewalk with the exception of the segment in front and east of Ocean View Elementary; some spaces are passenger loading, others are unrestricted. There are no marked bicycle facilities on the roadway, and during the site visit a significant amount of wrong-way bicycle riding was observed on the north sidewalk.

The number of bicycle collisions on Buchanan Street from 2000 to 2009 was 153 (including 52 collisions at the intersection of San Pablo Avenue). The Buchanan/Pierce and Buchanan/Cerrito intersections experienced the highest number of collisions.

Of the controlled intersections along both roadways, all are pedestrian actuated for both north-south and east-west crossings, meaning that a person must push the button to get a walk signal during the signal cycle. There are no bicycle-specific signal loop detectors with identifying pavement markings on cross-streets of San Pablo Avenue or Buchanan Street, except at the newly redesigned intersection at Jackson/Buchanan, outside Ocean View Elementary School.

On both roadways, some signalized intersections offer only two or three marked crosswalk legs rather than four, forcing pedestrians, including those with impaired mobility, to travel longer distances to cross to desired destinations. At intersections with and without marked crosswalks, some stop bars are too close to the intersection or are missing entirely, encouraging drivers to stop very near or in the crosswalk.



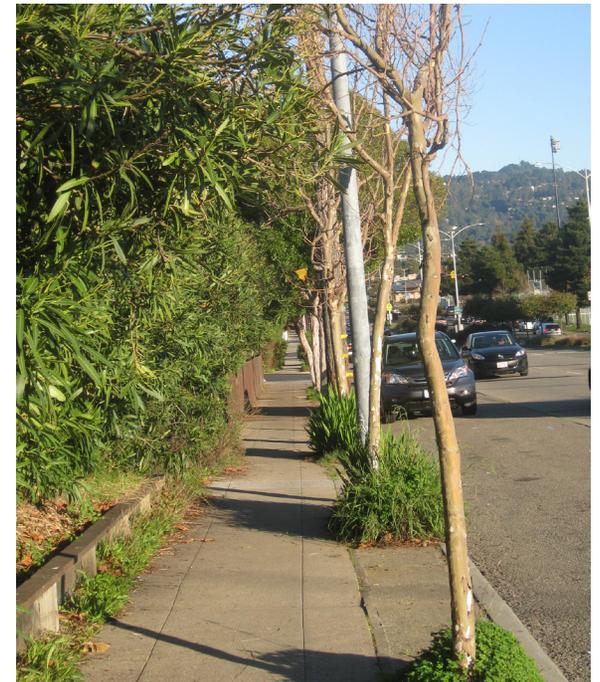
On Buchanan Street, the lack of a mature tree canopy for scale contributes to high speed conditions. While the community effort to install the adapted coastal scrub planting improvements several years ago is applauded, the median requires ongoing maintenance in order to keep sightlines clear. Future plantings should address sightlines to crosswalks and crossing vehicles.



There is widespread concern in the neighborhood about high speeds on Buchanan Street as well as cars cutting through residential streets to avoid traffic congestion on the corridor. The entries to these neighborhood streets lack cues indicating their residential use—a strategy that could discourage non-local car traffic and provide general traffic calming.



The configuration of the skewed Buchanan Street and Marin Avenue intersection creates a series of underutilized, "leftover" median spaces. The configuration also prevents pedestrians from safely accessing the City Hall sidewalk on Marin Avenue from the north side of Buchanan Street.



Buchanan's sidewalks are quite narrow, with trees confined to tight planter strips along the curb. The paving and general conditions of the sidewalks are poor. Private improvements and the steep grade further constrict passage for pedestrians.

Albany Transit Statistics

SERVICE

- Bus service every 6 ½ minutes on San Pablo Ave;
- Frequent cross-town service to and from Berkeley (every 15 minutes);
- Direct service to and from San Francisco in the peak commute period;

LOCAL RIDERSHIP

- 22% of Albany residents choose transit for their commute;
- 3,900 transit trips begin or end in Albany each weekday;
- 1,200+ transit trips begin or end on San Pablo Ave each weekday;
- 425 customers board/alight an AC Transit bus at the northbound San Pablo/Solano bus stop each weekday;

THROUGH RIDERSHIP

- 20% of people on San Pablo Ave (through the Solano intersection) are traveling on transit;
- 4,300 transit customers pass through San Pablo Ave/Solano Ave intersection each day;
- 450 transit customers move through the San Pablo Ave/Solano Ave intersection in the peak AM hour;

Transit Service

San Pablo Avenue is a Rapid Bus Corridor and is served by six AC Transit bus routes, including the 72 Rapid, with 12-minute headways from 6:00 a.m. to 8:00 p.m. Along this corridor, all signalized intersections have transit signal priority (TSP); however, the technology was installed in 2003 and is first-generation TSP technology. AC Transit has noted that many intersections do not currently function as intended and may not have functioning TSP at all times.

Other transit priority improvements on this corridor include signal interconnections and queue-bypass lanes. Bus stops for the 72R are placed at the far side of intersections when possible.⁶ Buchanan Street is served by fewer and less frequent transit service than San Pablo Avenue; it has one AC Transit route and one UC Berkeley shuttle that travels between campus and Richmond Field Station.

Appendix E provides a detailed description of the transit service provided in the City and a summary of the ideal conditions and policy guidelines that should be considered under a Complete Streets Plan to provide an efficient and reliable transit service in Albany.

The City of Albany has a Transit First Policy that prioritizes transit, but doesn't provide specific recommendations for prioritizing transit.

⁶ Federal Transit Administration (FTA). The San Pablo Rapid BRT Project Evaluation. Final Report. June 2006. http://www.fta.dot.gov/documents/San_Pablo_Rapid_Evaluation_Final_Report_June_2006_2.pdf

PLANNING BACKGROUND

San Pablo Avenue

San Pablo Avenue has been the subject of numerous design studies, but does not have any current or planned projects. Past studies include a design guideline analysis in 1989, a vision plan in 1997, and a streetscape master plan in 2001. In addition, the Albany Active Transportation Plan (2012) proposed medians and pedestrian crossing treatments at intersections with a high incidence of collisions. Unlike Buchanan Street, no pedestrian-enhancement project has been implemented along San Pablo Avenue and there has not been a public process directed at merchants or residents of the adjacent communities until this design charrette.

Proposed Development at University Village

The University of California is proposing to develop two of its University Village parcels fronting San Pablo Avenue with a grocery store and mixed-use retail/senior housing. This development includes pedestrian crossing treatments at the intersections of San Pablo Avenue with Monroe Street and Dartmouth Avenue. The City will also explore the feasibility of incorporating a cycle track along the west side of San Pablo Avenue.

Buchanan Street

The 2000 Albany Bicycle Plan proposed a bicycle facility along Buchanan Street and Marin Avenue in order to close the existing gap in the bicycle network between the Ohlone Greenway and the Bay Trail. This proposal, known as the Buchanan/Marin Bikeway, was ranked the highest priority in the 2006 Alameda Countywide Bicycle Plan. The City has obtained several grants for different phases of the Buchanan/Marin Bikeway implementation. These grants include funds to develop

Plans, Specifications, and Estimates and environmental work for the project (Regional Measure B, 2007) and another federal grant for the construction of Phase I and II, from San Pablo Avenue to the Buchanan Street overcrossing (CMAQ, 2010).

Phase II of the Buchanan/Marin bikeway project (constructed in summer 2013) included a Class I bicycle facility along the south side of Marin Avenue and Buchanan Street and a westbound bicycle lane on the north side of Marin Avenue and Buchanan Street from San Pablo Avenue to the railroad/freeway overcrossing. This project also included a traffic signal at the intersection of Pierce Street and Buchanan Street that provides a new crosswalk at this intersection. The project closed the connection of Buchanan Avenue (a short street that connected Buchanan Street to Cleveland Avenue) at Pierce Street. The project included several curb extensions along the south side of Buchanan Street to visually narrow the street and provide space to replace trees that were removed for the class I bikeway. Finally, the project realigned the USDA driveway by merging its Y-shaped entrance into one that brings the intersection at a 90 degree angle with Buchanan Street.

Phase III of the Buchanan/Marin bikeway project is currently in the final design process. this project includes extending the bicycle lanes on Marin Avenue from Cornell Avenue to San Pablo Avenue, and providing a bicycle signal for crossing the south leg of the intersection of Marin Avenue and San Pablo Avenue.

In addition, the City obtained a Safe Routes to School (SRTS) grant and recently implemented pedestrian enhancements at the intersection of Buchanan and Jackson Streets, including a new traffic signal with protected left turns on the four legs and pedestrian bulb outs. It also includes an advance stop bar and pavement markings indicating where bikes should be positioned in order to be detected by the video detection system.

The recently adopted Albany Active Transportation Plan (ATP, 2012) identified areas along Buchanan Street that still need attention in order to make Buchanan Street a complete street. The identified areas are: the intersection at Taylor and Buchanan Streets, the bicycle facility proposed for Jackson Street (crossing Buchanan Street), and the Marin Avenue/Buchanan Street merger just west of City Hall.





2

Public Design Charrette

2 Public Design Charrette

Community input and participation in the planning process was an essential component of developing the design recommendations presented in this report. As a first step, LGC worked closely with the City of Albany to identify leaders from the community and other key stakeholders to serve as Community Advisory Group members responsible for providing guidance to the overall planning process and specifically the community planning events or “charrette.”

In the City of Albany, LGC and the design team worked with the Community Advisory Group to receive feedback on the direction of the Caltrans-funded planning effort, stakeholder group meetings, and the series of community workshops used to engage residents. The charrette was scheduled over the days of December 6-12, 2012, and included a series of focus group meetings, presentations, and workshops with residents, businesses, community organizations, and local government staff. The kickoff community event was held on the evening of Thursday, December 6, 2012, when residents were introduced to the project, listened to educational presentations by

Dan Burden (Walkable Communities), Michael Moule (Nelson\Nygaard), and Paul Zykofsky (LGC), and shared their priorities and values for these corridors and for the City of Albany. The top-rated priorities and values are shown in the box to the right.

Six focus group meetings were also held at the beginning of the charrette. These meetings allowed the design team to meet with and learn from parents, teachers, and administrators at nearby schools; representatives from the bicycle and pedestrian advocacy and ADA accessibility community; public agencies and University of California representatives; the business and economic development community; emergency/police services employees; and nearby residents. A comprehensive list of attendees and notes from the focus group meetings are included in Appendix 2 of this report.

A half-day community walk and design workshop was held on December 8, 2012. Residents were invited to a “walking audit,” where participants were led on an hour-long walk, guided by LGC representatives and members

Values

- Community and neighborhood
- Child-friendly, families, schools, education
- Walkable, accessible
- Small town scale, village feel
- Bay, trees, wildlife, parks, waterfront

General Priorities

- Trees
- Connections to regional bicycle trails
- Traffic calming on Buchanan
- Cafes and outdoor places
- Safe mid-block crossings
- Gateways/sense of arrival/spirit
- Protected bicycle lanes



Banner at City Hall advertising the community meetings.



Focus group meetings were held with a variety of community stakeholders.

Help Create “Complete Streets” in Albany

San Pablo and Buchanan Corridors Improvement Plan



safer crossings, better bike, bus and ADA access, beautification, improved traffic flow.

Community Design Charrette

“Complete Street” are streets that are designed with users of all types and abilities in mind: pedestrians, cyclists, transit riders, seniors, children, people with disabilities, and motorists. The City of Albany is creating plans to make it easier and safer to walk, bike, ride the bus, and drive along San Pablo Ave. and Buchanan St. You are invited to participate in a community design charrette that will bring residents and stakeholders together with a multidisciplinary consultant team in a series of events to identify problems and develop potential solutions. Your input is extremely valuable. We encourage you and your neighborhood to attend these important events. The consultant team will translate your input into a plan with detailed designs for future implementation.



For more information
Aleida Andino-Chavez, City of Albany
achavez@albanyca.org
531.932.3759

Thursday, December 6 Kickoff Community Meeting

7:00 - 9:00 p.m.

Saturday, December 8 Community Walk and Design Workshop

9:00 a.m. - 2:00 p.m.

Wednesday, December 12 Presentation of Plan Concepts

7:00 - 8:30 p.m.

Location for all events: Ocean View Elementary School Multipurpose Room • 1000 Jackson St. (at Buchanan)

Food & refreshments provided! Children are welcome.

For more project info: albanyca.org/index.aspx?page=1170

Organized by the City of Albany, in partnership with the Local Government Commission, with support from a Caltrans Community-Based Transportation Planning Grant.

Flyer distributed to local newspapers and community groups to advertise the community design charrette.

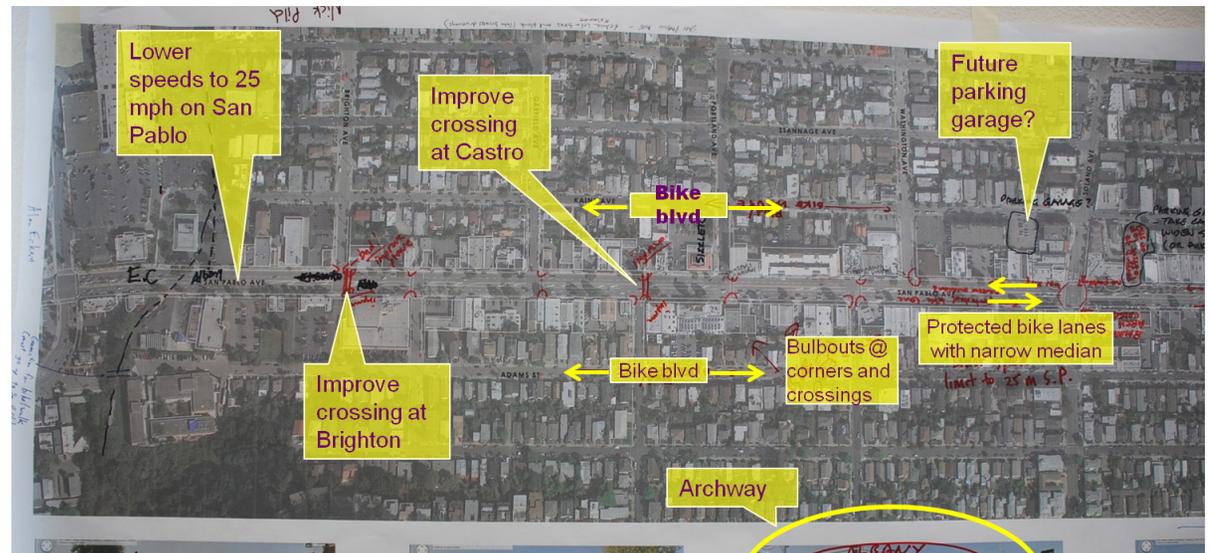
of the design team, to discuss positive and negative aspects of the two corridors. Participants then returned to Ocean View Elementary School and worked at tables around large aerial maps to identify opportunities and challenges related to the two corridors. A final public presentation of plan concepts was held on Wednesday, December 12, 2012, where the design team presented draft site design recommendations and other visuals for residents to comment on. The design team used all input received at the Albany charrette to create and refine the design recommendations presented in this report.

The residents were supportive of the ideas presented and pointed out several additional issues to be considered. Ideas included reducing speed limits around the schools, consistent street lighting on Buchanan Street and San Pablo Avenue, safe crossings, sustainable stormwater infrastructure, and the need to identify funding for capital costs and operations and maintenance.

The streetscape plan promotes a series of broad principles identified with the community during the outreach and charrette process. These include:



Input from the community design charrette on San Pablo Avenue existing conditions.



Participants engaged in envisioning a new San Pablo Avenue and Buchanan Street.



Community members listen to a presentation on Complete Streets by Dan Burden at the kickoff meeting.



The community walk gave participants an opportunity to observe and point out known issues along the corridor.

OVERALL DESIGN PRECEDENT IMAGES



A well-defined, multipurpose public right-of-way with ample pedestrian zones facilitates convenient pedestrian and bicycle movement and provides the social space to accommodate the city's public life, in conjunction with retail and civic destinations (Palo Alto, CA)

Chapter 2: Design Guidelines

2.1 Introduction

The Shellmound Streetscape Design Guidelines describe the physical form of public and private conditions that define the district streetscape. This chapter provides detailed recommendations and guidance in the following areas:

- Pedestrian Zone
- Public Amenity Zone
- Frontage Zone
- Paving
- Street Furnishings and Amenities
- Planting
- Multi-modal Facilities
- Public Art

The guidelines are intended to promote a walkable urban district by creating a highly crafted public realm and private frontage. The guidelines focus on improving the attractiveness and effectiveness of the pedestrian network in order to encourage walking as a realistic mode of transportation. A walkable district is defined by a high level of safety, a concentration of amenities, and active uses in buildings that reinforce and encourage pedestrian activity along the street corridor. As such, they recommend design strategies for enhancing the organization, materials, and amenities of the public realm as well as the private building frontage. While the guidelines do not specifically address the vehicular travel way and existing bicycle lanes, some in-street improvements are proposed and amenities for bicycles are specifically addressed.

The guidelines seek to reclaim City streets for pedestrians, creating true multi-modal transportation routes that safely and effectively balance the circulation needs of vehicular and pedestrian traffic, while also acknowledging the public streetscape's role as the "stage" on which the life of the community plays out.

The pedestrian realm serves several functions — circulation facility, social space, and amenity zone — and must accommodate numerous features and facilities to support these functions. For purposes of these guidelines, the pedestrian realm has been subdivided into three zones: the pedestrian zone, the amenity zone, and the frontage zone. Each zone plays a slightly different role in the pedestrian realm and has different design requirements. The following discussion further describes



Diagram illustrating the three functional zones of public sidewalks: Frontage Zone, Pedestrian Zone, and Public Amenity Zone, all within the Public Sidewalk boundary.



Three functional zones of public sidewalks: Public Amenity Zone, Pedestrian Zone, and Frontage Zone (Walnut Creek, CA).



Public sidewalks must provide adequate horizontal and vertical clearance to accommodate convenient and comfortable pedestrian circulation, with sidewalk widths proportional to pedestrian traffic levels. Ideally, the pedestrian zone will comprise at least 50% of the sidewalk width (Santa Barbara, CA).

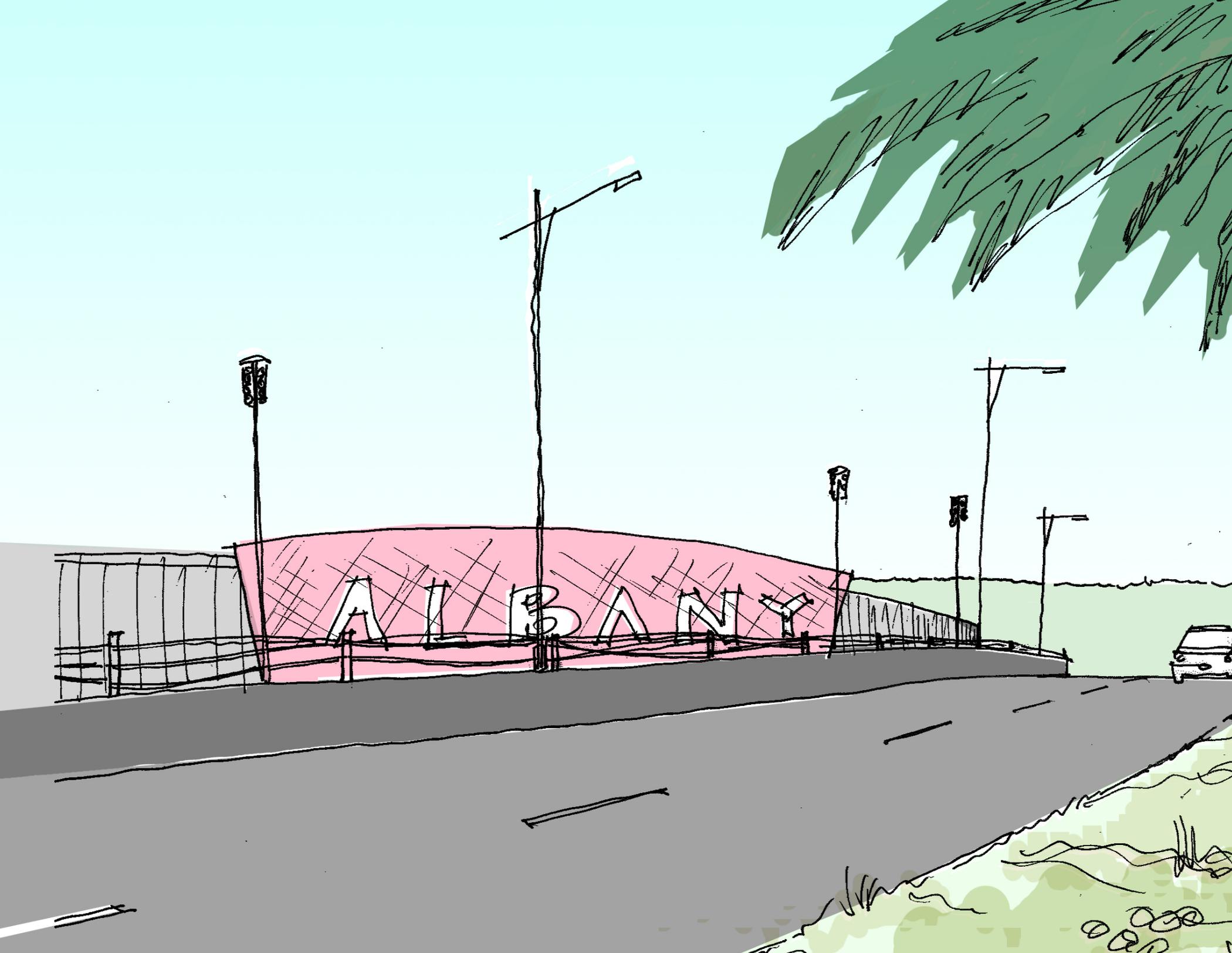


The pedestrian zone of the streetscape is designed to be visually inviting and comfortable, creating a setting predominantly free of conflicts with vehicular traffic. Highly articulated paving materials can reinforce a sense of place and provide a higher visual articulation appropriate for a retail environment. (Santa Cruz, CA). Well-articulated facades on buildings facing onto the street help define the public realm through attention to scale, transparency, architectural articulation, and amenities.

Defining discrete sidewalk zones helps to manage activities in a way that benefits pedestrians and adjacent businesses. The amenity zone typically accommodates street furniture, trees, low-growing planting, and lights. The sidewalk zone provides a well-defined path of travel for pedestrians. The frontage zone allows additional private amenities to spill out of businesses and create dynamic street life that may include for-sale items, café seating, gated dining areas, and planters.



The character of streetscape design elements should foster a strong sense of place and identity, celebrating Albany, its community, history, ecology, and local businesses. (Berkeley, CA).





3 Recommendations

3 Recommendations

CORRIDOR-WIDE RECOMMENDATIONS

Several design strategies associated with complete streets should apply to both corridors, emphasizing the creation of a safe, comfortable, and accessible pedestrian experience. Treatments should include paving for sidewalks and crosswalks, street lights, and street trees, and should be applied consistently along each corridor to reinforce a single identity.

Narrow Lanes

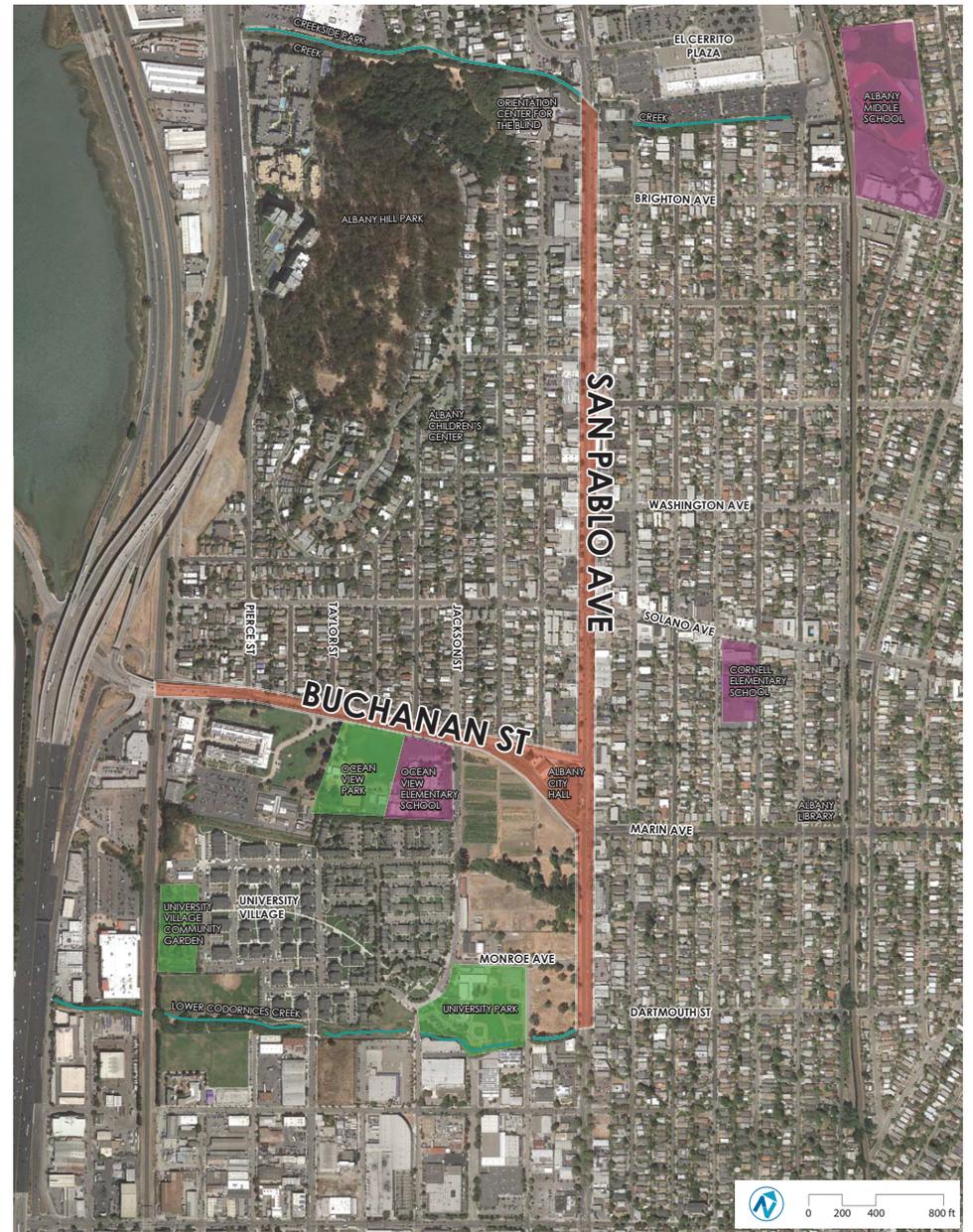
Existing travel lanes on San Pablo Avenue and Buchanan Street in Albany are typically 12 feet wide. Travel lanes that are 11 feet wide are recommended as part of the proposed complete streets project. Several research studies have shown that 10-, 11-, and 12-foot lanes have similar safety and capacity characteristics. Narrower lanes also encourage motorists to drive more slowly and preserve right-of-way for other uses. For these streets, 11-foot lanes are recommended due to the need to carry frequent bus traffic and occasional truck traffic.

Intersection Geometry and Other Physical Changes

At both signalized and unsignalized intersections, there are several intersection geometry changes that should be considered to improve safety and usability by people walking and bicycling:

- Reduce corner radii to the minimum needed for the appropriately sized large vehicle (bus or truck) that regularly makes right turns around the corner in question. Small corner radii reduce turning speeds, reduce crossing distances, and make it easier to place crosswalks and curb ramps.

Figure 3-1 Project Context Map



- Install curb extensions (also called bulb-outs) where there is on-street parking, to reduce crossing distances, improve sightlines between pedestrians and motorists, and reduce vehicle turning speeds.
- Continuous raised medians encourage slower vehicle speeds, provide access control to reduce turning conflicts, and allow pedestrians to cross streets in two stages, greatly simplifying the crossing task.
- Caltrans has supported other cities using a textured, flush median for the left turn lane and other cues to indicate a visual narrowing of the street.

Signalized Intersections

Signalized intersections have both positive and negative impacts on pedestrian and bicycle travel. On one hand, the signals stop traffic along the major street to provide gaps that allow pedestrians, bicyclists, and motorists to cross. But on the other hand, pedestrians and bicyclists are at risk from crashes from concurrent turning movements by motor vehicles, and also due to all users' occasional failure to obey signal controls. The following general recommendations improve signals for pedestrians and bicyclists.

- Where possible, set pedestrian signals to “recall to walk,” concurrent with the green vehicle intervals. At a minimum, this feature should be provided for all crosswalks parallel to the major street at each intersection, concurrent with the green interval that is set to “recall to green” (north-south crosswalks along San Pablo, and east-west crosswalks along Buchanan). At locations with frequent pedestrian crossings across the major street (e.g. San Pablo Avenue at Solano Avenue), or where there is significant green time needed for vehicles crossing the major street (e.g. San Pablo Avenue at Marin Avenue during peak hours), consider setting signals

UNSIGNALIZED CROSSING PRECEDENT IMAGES



Use high-visibility longitudinal crosswalk markings for all unsignalized crosswalks. Wide lines should be spaced to avoid the wheel paths of vehicles, thus reducing maintenance costs.

to recall to walk for pedestrian crossings across the major street as well.

- Where signals area not set to recall to walk, pedestrian pushbuttons should be placed where they are convenient to the crosswalk they serve. New guidance on convenient pushbutton locations is included in the 2012 California Manual on Uniform Traffic Control Devices (CA-MUTCD).⁵
- At signalized intersections approaches with vehicle detection, ensure loop-detector or video detection technology is calibrated to detect bicycles, and that proper markings are painted to ensure cyclists know where to position their bicycles to trigger the signal detection. New standards in the 2012 California MUTCD require bicycle and motorcycle signal detection.

⁵ 2012 California Manual on Uniform Traffic Control Devices (CA-MUTCD) <http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/pdf/camutcd2012/CAMUTCD2012.pdf>

Crosswalks at Unsignalized Locations

Research indicates that marked crosswalks at unsignalized locations should be enhanced with additional pedestrian crossing treatments.⁶ There are four uncontrolled marked crosswalks along San Pablo Avenue and numerous unsignalized intersections without crosswalk markings along both San Pablo Avenue and Buchanan Street. In the sections with specific recommendations for each corridor, enhanced crosswalks are recommended at several locations. The recommendations on the next two pages should be considered for all existing and proposed crosswalks.

⁶ Zeeger, C.V., R. Stewart et al. “Safety Effects of Marked vs. Unmarked Crosswalks at Unsignalized Locations” Transportation Research Record Volume 1773. 2001



Rectangular rapid-flash beacons are new traffic control devices that indicate when there are pedestrians in crosswalks, as approved by the Federal Highway Administration.⁵ These new high-intensity LED devices are more effective than standard incandescent yellow flashing beacons and in-roadway flashing lights. Some are solar-powered and operate by radio frequency to avoid the need for hard-wiring.

³ FHWA interim approval for RRFBs. http://mutcd.fhwa.dot.gov/resources/interim_approval/ia11/fhwamemo.htm



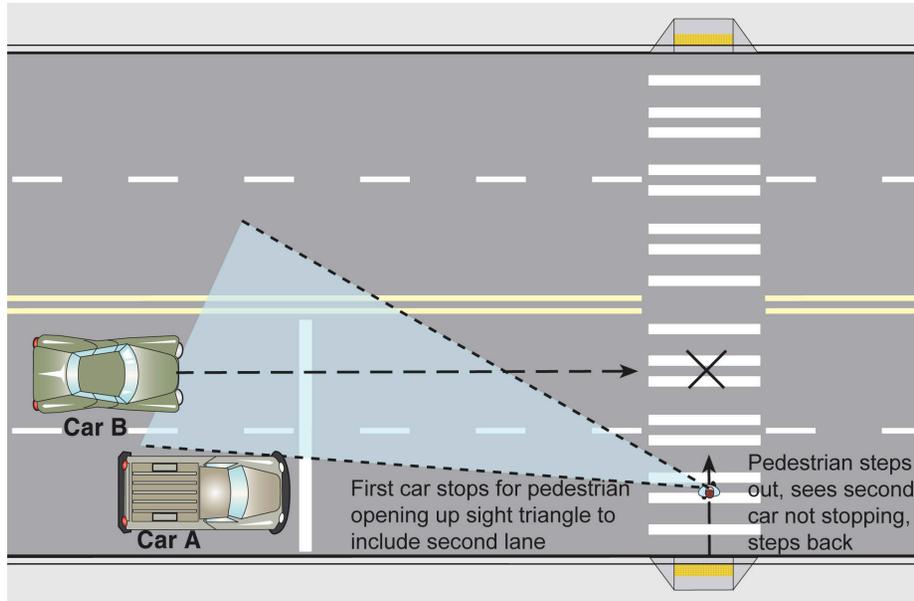
Curb extensions reduce crossing distance for pedestrians and improve sight lines between pedestrians and motorists. Final design for curb extensions should include corner radii selected carefully to be as small as possible to improve pedestrian safety, while still allowing buses and fire trucks to make necessary turns.



Raised medians are recommended at all unsignalized pedestrian crossings, as either part of a continuous median as recommended above, or small median islands placed specifically at the crosswalk locations. Medians make it much easier and safer for pedestrians to cross streets, reducing pedestrian crash risk by approximately 40%.⁵

⁴ Ibid

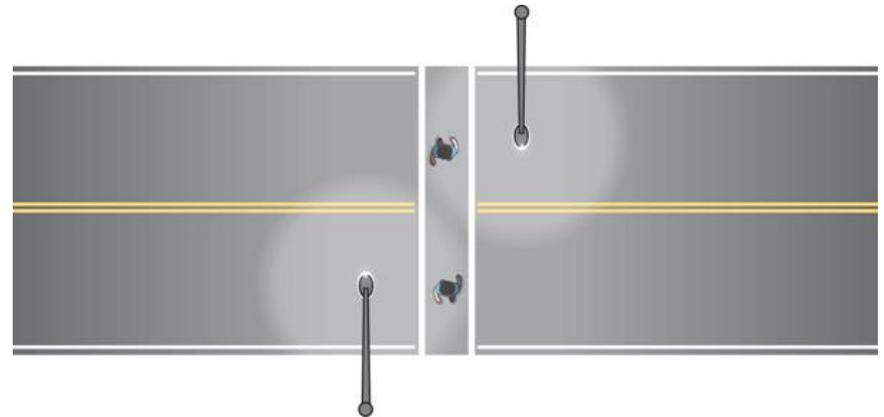
Figure 3-2 Advance Yield Line Graphic



On multilane roadways, many crashes at marked crosswalks are the “multiple threat” crash type, occurring when a motorist in the first lane stops for the pedestrian but stops in close proximity to the crosswalk, reducing sightlines between the pedestrian and motorists in the next lane. By placing a yield line and accompanying “Yield Here to Pedestrians” sign in advance of the crosswalk, sightlines are improved, and the chance of a crash is reduced. Advance yield lines are recommended at any unsignalized crosswalk on multilane roadways in Albany, as long as the lines can be placed at the intersection in a manner that does not create potential for driver confusion.

Whether or not pedestrians choose to cross at dedicated crossing points, medians improve crossing safety by permitting pedestrians to only have to focus on one direction of oncoming traffic at a time.

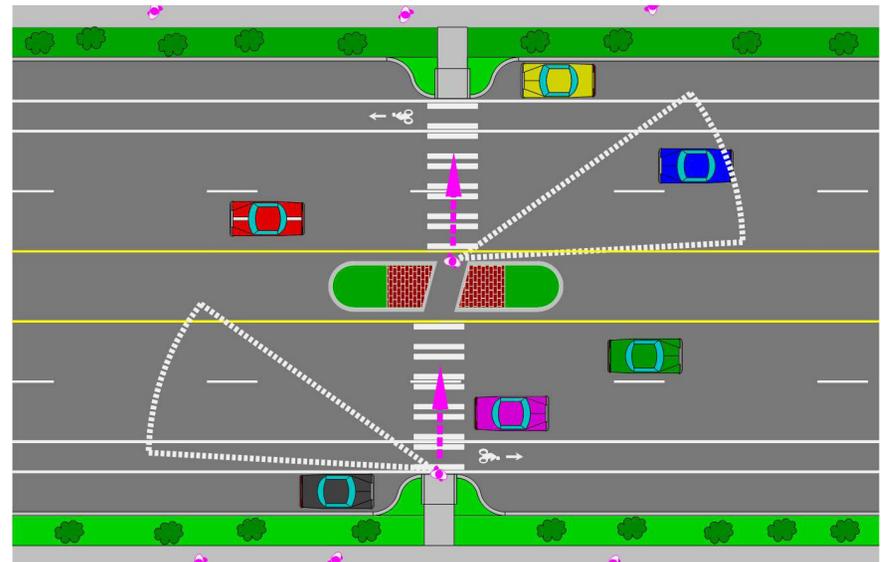
Figure 3-3 Pedestrian Lighting at Crosswalks Graphic



All unsignalized crosswalks should have illumination so that pedestrians can be seen adequately at night. Illumination should be placed on the upstream side of the crosswalk for each direction of travel so the sides of pedestrians are illuminated, not the tops of their heads. Illumination layouts and lighting levels should be as shown in the Informational Report on Lighting Design or Midblock Crosswalks.⁵

⁵ Gibbons, R.B, C Edwards et al. “Informational Report on Lighting Design for Midblock Crosswalks” FHWA-HRT-08-053. 2008 <http://www.tfhrc.gov/safety/pubs/08053/08053.pdf>

Figure 3-4 Staggered Median Crossing



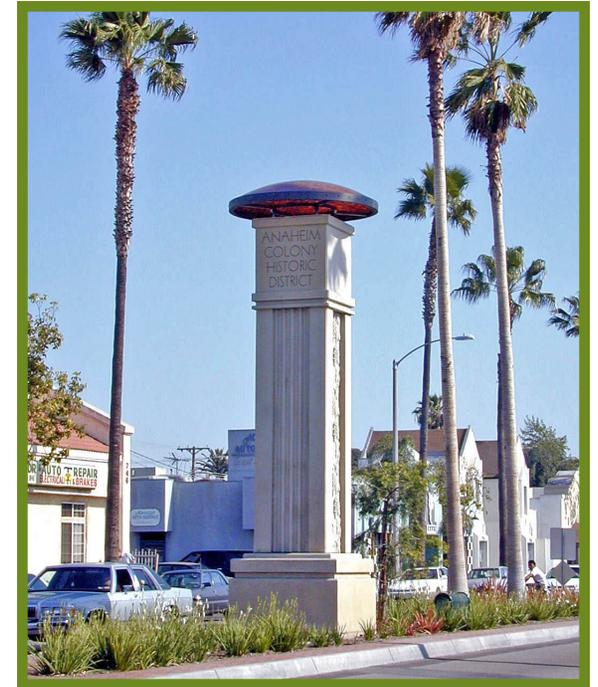
GATEWAYS

Gateways work in several ways for the betterment of a community. Most simply, they establish the identity of a community; they introduce visitors to a place; and offer residents a sense of collective, positive pride. More generally, they make motorists aware of a context change. Drivers who are conscious that they are entering a neighborhood or main street are more likely to slow their speeds, contributing immensely to the increased safety and quality of a place. Gateways can also add interest to the approach of a main street, and may invite travelers to explore its shops and spaces further. San Pablo Avenue and Buchanan Street are key entry routes into Albany, and the first introduction to the community for most visitors and through-travelers.

A gateway to a community can be communicated in many forms. Beyond welcome and identification signage, public art or monuments are commonly used to draw attention to gateways. Special landscaping, such as a tree-lined street, also calls attention to a change in context. Gateways are especially effective when they are articulated by changes in the structure of the road. Medians and roundabouts are two great examples, and they work well with other gateway features, as they enable signage, monuments, and landscaping elements to be placed in the center of the thoroughfare. Both the south and north end of San Pablo Avenue in Albany are ideal for major gateways, as well as the western end of Buchanan Street east of the freeway ramps.



Sketch of gateway locations from the Community Design Charette.



Boundary markers can create a gateway to the community and help brand the corridor (Anaheim, CA).

Buchanan at Freeway

At the railway overcrossing west of Pierce Street, there is an opportunity to present vibrant signage and introduce landscape elements that will carry along Buchanan Street to San Pablo Avenue.



Current



Vision

North End of San Pablo

Introduce the north border of the city with El Cerrito with visual signage and landmarks.



Current



Vision

Figure 3-5 Design for Gateway at North End of San Pablo



South End of San Pablo

Demarcate Codornices Creek as well as the southern gateway to the city with Berkeley.



Current



Vision

Figure 3-6 Design for Gateway at South End of San Pablo/Codornices Creek



Other Design Elements

Although there will be similar design strategies used, each corridor requires a design tailored to its unique function. San Pablo Avenue is a retail main street, while Buchanan is more of a neighborhood parkway where vegetation complements both its residential and parkway functions. Their respective designs should offer visual cues that indicate their distinct uses and amenities.



Enhanced sidewalk paving creates the basis for an attractive pedestrian zone (San Jose, CA).



Street lights should illuminate the sidewalk at the pedestrian scale and also meet roadway illumination requirements. (Palo Alto, CA)



Consistent use of street trees reinforces the character of the street and softens the city's hard surfaces and sharp edges, not just by screening but also by adding organic forms, colors, textures, and movement to the urban setting. Street trees of sufficient size to create an overhead canopy are known to cause drivers to reduce their speed. (Berkeley, CA).



Tree grates protect trees and create a clean, accessible ground plane. Larger openings benefit tree health by maximizing non-compacted soils. Subsurface treatments to improve soil volume for tree roots should also be studied for San Pablo Avenue. (Castro Valley, CA)

Bike Parking

Install bicycle racks at key destinations along both corridors, in front of businesses on San Pablo Avenue, and at important community sites such as Ocean View Elementary on Buchanan Street. The City should use inverted U-shaped racks or other designs that support the frame of the bicycle at two spots.



U-shaped bicycle racks placed on a curb extension to avoid conflicting with sidewalk zone.



Bus stop with shelter, bulb out, and route signage

Transit Facility Improvements

The following transit facility improvements are recommended for the San Pablo and Buchanan Street corridors:

- Work with AC Transit to provide real-time information to riders at key stops along San Pablo Avenue.
- Improve route signage and provide information about connections to local attractions with pedestrian-scale wayfinding signage.
- Consider installing bus stop bulb outs to provide more waiting space for high-usage bus stops and also enable the bus to stop in-lane, reducing the need to merge into traffic and improving transit efficiency. Since the overall stop time of the bus is reduced, the delay to vehicles behind the bus is also minimized. In addition, because the bus does not need to maneuver in and out of the parking lane, bus bulbouts sometimes allow a few parking spaces to be added to the street.

The Transit Checklist on this page provides a summary of items recommended to improve transit facilities along San Pablo Avenue and Buchanan Street. Appendix E provides additional details related to these recommendations.

Transit Checklist

BUS STOPS

Convenient

- Bus stop is located at, near, or within the major trip generators;
- Bus stops are spaced appropriately to balance access and operational efficiency (800' – 1,200' for local stops, 2,500' for Rapid stops);

Comfortable

- Bus stop amenities appropriately accommodate for volume of customer activity;
- Waiting area is appropriate size for volume of customer activity;
- Bus stop is clearly demarcated and dignified;
- Bus stop is ADA-accessible;

Safe

- Bus stop is well-lit;
- Bus stop is easily visible and within proximity to human activity;

Efficient

- Bus stop is farside of signalized intersection;
- Designated curb-space is of appropriate length to permit safe, comfortable ingress and egress of bus stop;
- Bulb-outs are provided to minimize delay at major transit stops, where possible;
- Bus stops are located to take advantage of signal coordination or transit priority;

TRAVEL LANE

- Travel lanes are of sufficient width to accommodate local and/or Rapid transit service (no less than 11');

Sidewalk Function Zones

There should be **three functional zones** of public sidewalk—an amenity zone near the curb including street furnishings, a pedestrian zone for circulation, and a transitional frontage zone in front of buildings—accommodate the right-of-way's various uses.



Functional zones of a downtown Walnut Creek sidewalk.

SAN PABLO RECOMMENDATIONS

Overall Design

San Pablo Avenue should have a street environment that is welcoming to all modes and celebrates Albany's unique sense of community, ecology, and local businesses. The streetscape of San Pablo Avenue should exhibit a strong identity with amenities that encourage people to linger in the public realm and patronize its business. Conceptual design ideas highlight the community entries at each creek, provide well-defined sidewalks with ample amenities, maximize medians for street trees, and mark pedestrian zones within the road.

Successful improvement strategies for the public realm should address both near and long term opportunities. Major streetscape projects such as what is needed to revitalize San Pablo Avenue take time to fund and design. Small-scale implementation projects like creek gateways, street tree planting, sidewalk repair, and street furniture may be accomplished as discrete projects. Programming activities such as festivals, sidewalk chalk art, parklets, and pop-up parks are popular methods to instill a sense of place through high-value/low-cost projects.



A parklet installed on Townsend Street in San Francisco has revitalized the street and provides important public open space in the area.

SAN PABLO PRECEDENT IMAGES



Decorative paving can help define the amenity and pedestrian zones of the sidewalk (Walnut Creek, CA).



The Amenity Zone can accommodate a variety of functional and aesthetic amenities (Bay Street, Emeryville CA).



High-quality street furnishings in the public streetscape—including seating, bollards, planters, tree grates, street lights, bike racks, waste receptacles, and more—help provide an attractive and comfortable environment for people to congregate (Castro Valley, CA).



Signs oriented to the sidewalk better serve pedestrians (Healdsburg, CA).



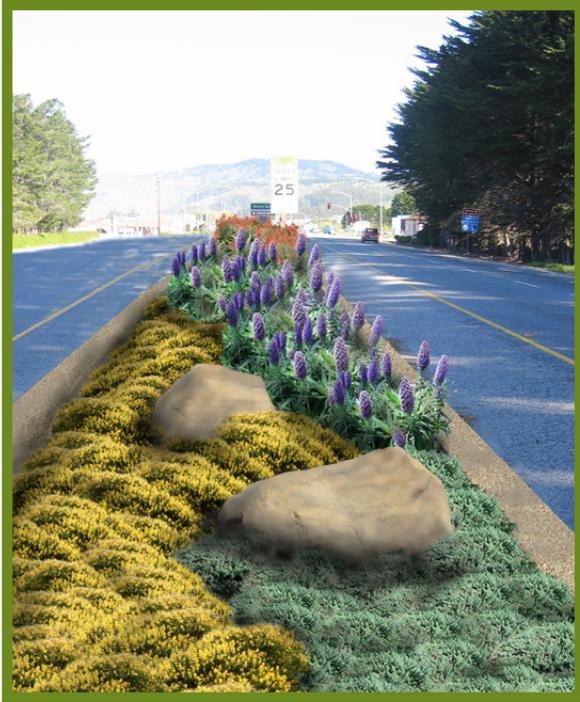
Creative uses of **planters and plant materials** enrich the pedestrian experience, enhancing the street's aesthetics and improving the ecological function of the urban environment (Cloverdale, CA).



A **frontage zone** within the pedestrian realm, where sidewalk widths allow it, supports adjoining commercial uses by accommodating private elements, features, and activities within the public right-of-way.



Well-defined, transparent **building facades** with treatments including window awnings, sills, canopies, and recessed frames contribute to ground floor animation and support an active pedestrian life (San Jose, CA).



Planting in medians helps express the community identity and soften the aesthetics of the roadway. (Half Moon Bay, CA)



Marking creek crossings helps celebrate the ecology of Albany and enriches the pedestrian sense of place. At Lake Merritt, the names of underground creeks are displayed with special paving. (Lake Merritt Oakland, CA)

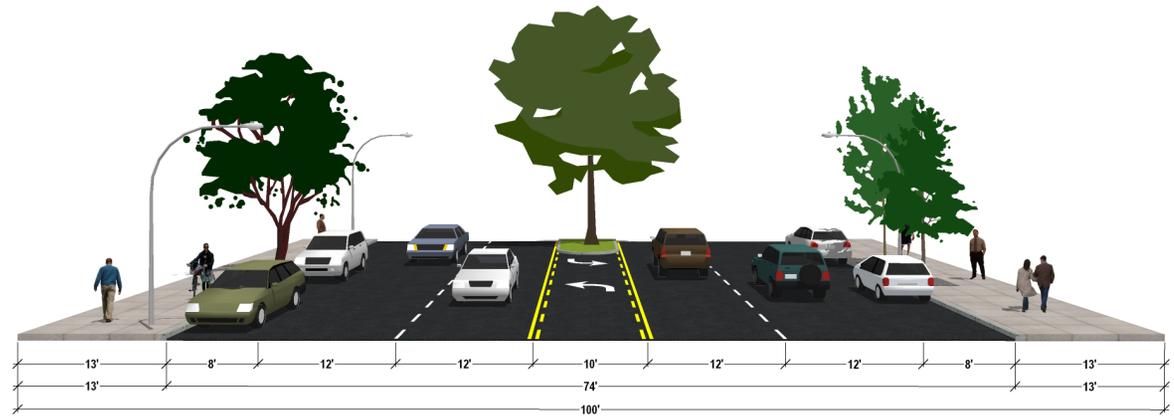
San Pablo General Recommendations

San Pablo Avenue currently has a 74-foot cross section, with a 10-foot median and four 12-foot travel lanes, 8-foot parking lanes and 13-foot sidewalks. Just beyond Albany's southern border in Berkeley, the median is wider, about 14 feet, with a 10-foot outside travel lane.

During the charrette and design finalization process, the team developed two options for San Pablo Avenue—one option with continuous bike lanes and one option without bike lanes. As a baseline, curb extensions and improved crossings are added throughout, and specific location recommendations are detailed in the following section.

Stakeholders, city staff, and officials expressed varying needs and concerns regarding these features. In exploring options for bicycle facilities and medians along San Pablo, the team also addressed the issue of on-street parking. Each option would require some amount of parking removal on the corridor, and a parking inventory and demand study was conducted to further explore the parking impact of the options.

Figure 3-8 San Pablo Section - Existing Conditions

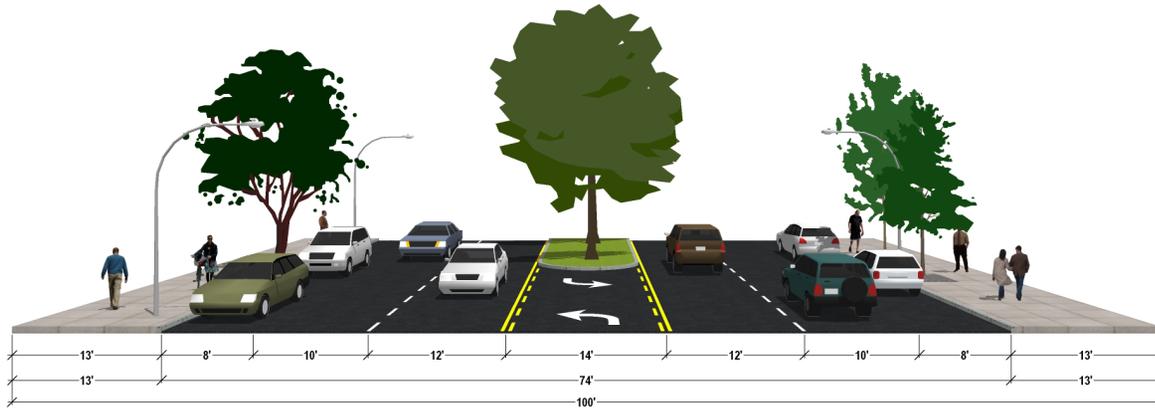


This is the typical existing cross section on San Pablo Avenue in Albany, with a two-way left turn lane in most areas, and occasional raised medians.

Figure 3-7 San Pablo Avenue - Overall Plan



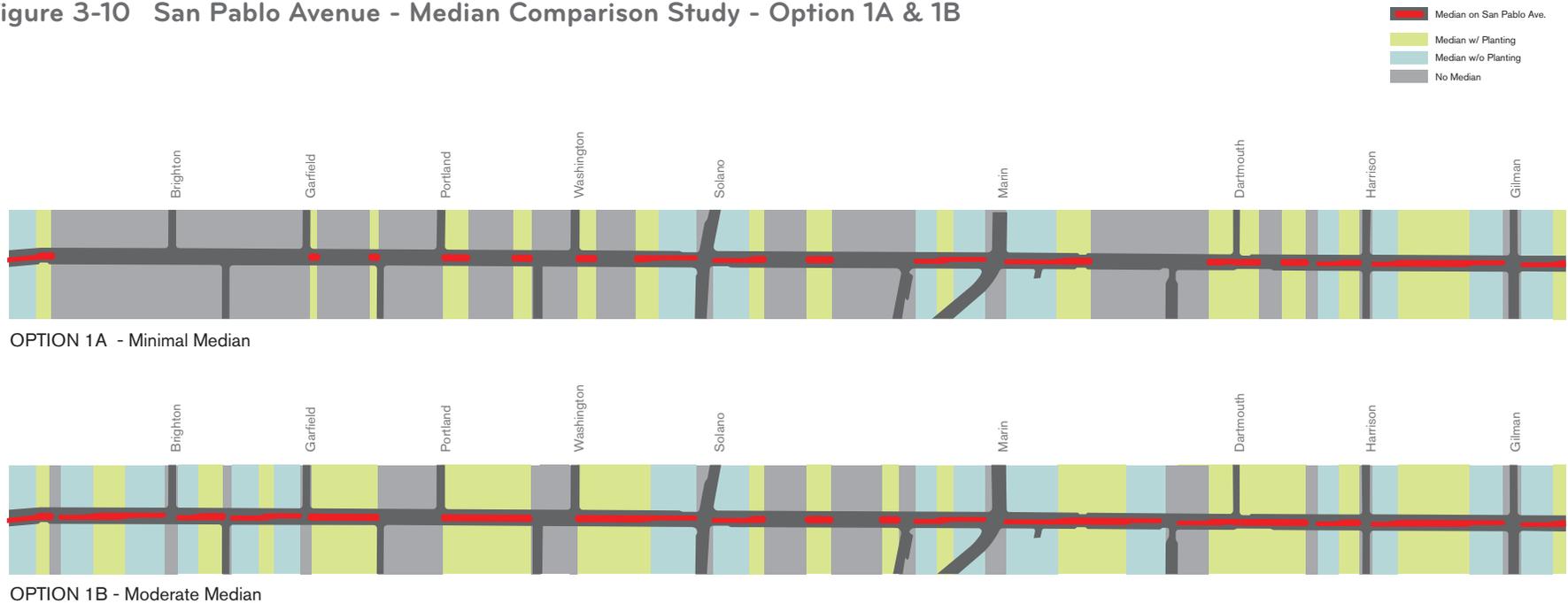
Figure 3-9 San Pablo Section - Existing at the Berkeley Border



At the Berkeley border, the median is 14 feet, with 12-foot inside lanes and 10-foot outside lanes.



Figure 3-10 San Pablo Avenue - Median Comparison Study - Option 1A & 1B



Medians

The provision of raised medians is a key element for a healthy streetscape along San Pablo. Medians have been proposed at some locations on San Pablo Avenue for all options, based on feedback received during the charrette, including the need for enhanced pedestrian crossings, opportunities for median landscaping, and opinions of emergency response stakeholders about leaving open portions of the median. Business owners along San Pablo Avenue expressed concern about losing left turn access to their driveways, and so several major left turn locations have been preserved. The design of the raised medians at intersections will need to be designed in detail during the final design process, to ensure the ends of the medians don't make it physically impossible for emergency vehicles to turn. For Option 1, a minimum median and a moderate median option have been developed as described below.

Minimum Medians

In the minimum median option (1A), raised medians were placed at the most important locations along the corridor, including at unsignalized crosswalks, where the median serves as a pedestrian refuge. This option also includes raised medians to frame major intersections and to serve as gateway treatments at the north and south ends of the city.

Moderate Medians

In the moderate median option (1B), raised medians were provided at most locations along San Pablo Avenue, except at specific locations as needed for emergency response and for important left turn movements. From north of Washington Avenue to just south of Solano Avenue, there is significant median length shown. However, for very short segments, such as the stretch

between Washington Avenue east and west of Solano Avenue, there is no median recommended.

In this option, there is a large gap in the median between Buchanan Street and Solano Avenue, where there are many shops and driveways and where emergency responders need to use the center turn lane to bypass congestion in an emergency.

The figure below provides a visual comparison of median coverage between the two options. From this study, it can be seen that the north end of San Pablo Avenue has fewer medians in option 1A. There are about 20 to 25 tree planting opportunities in the minimum scheme and 50 in the moderate scheme.

Figure 3-11 Minimum Median - Plan View Example

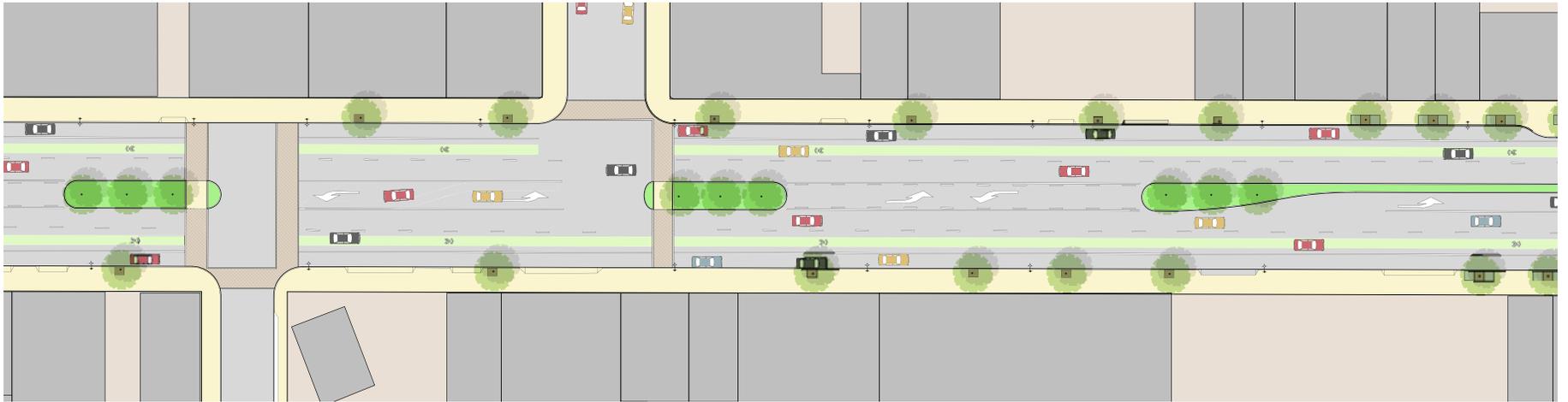
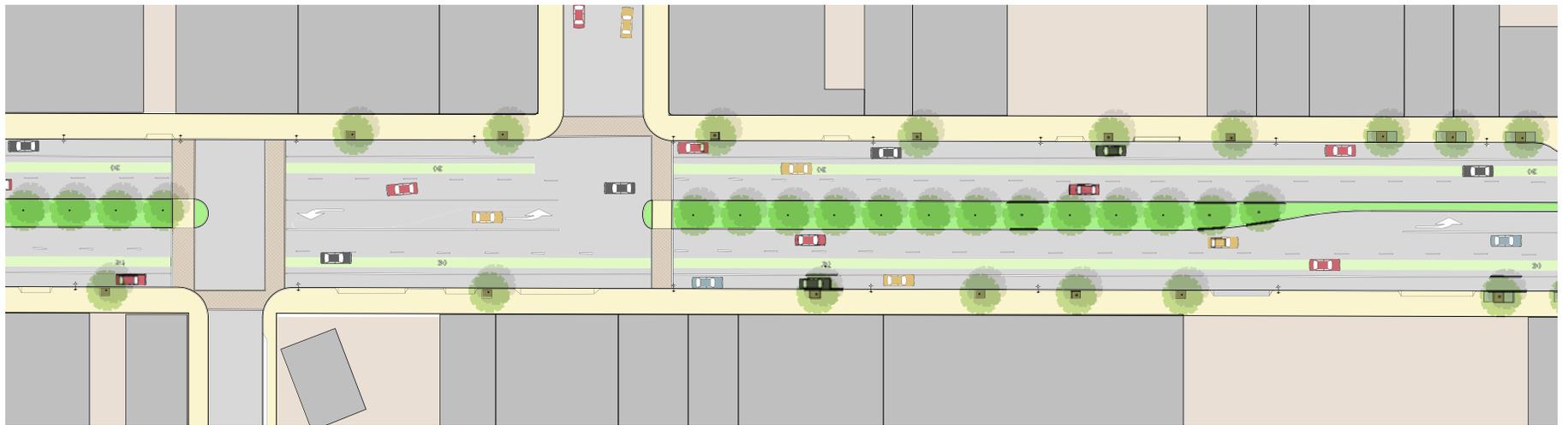


Figure 3-12 Moderate Median - Plan View Example



Green Shared Lane

The bicycle facility treatment recommended here is a shared lane marking supplemented with a green band in the center of the lane. It highlights that bicyclists will be using the outside lane, and has been used successfully in Salt Lake City, Minneapolis, and Long Beach, CA. Long Beach found that there were far fewer cyclists using the sidewalk and that it was more successful than just a standard shared lane marking.



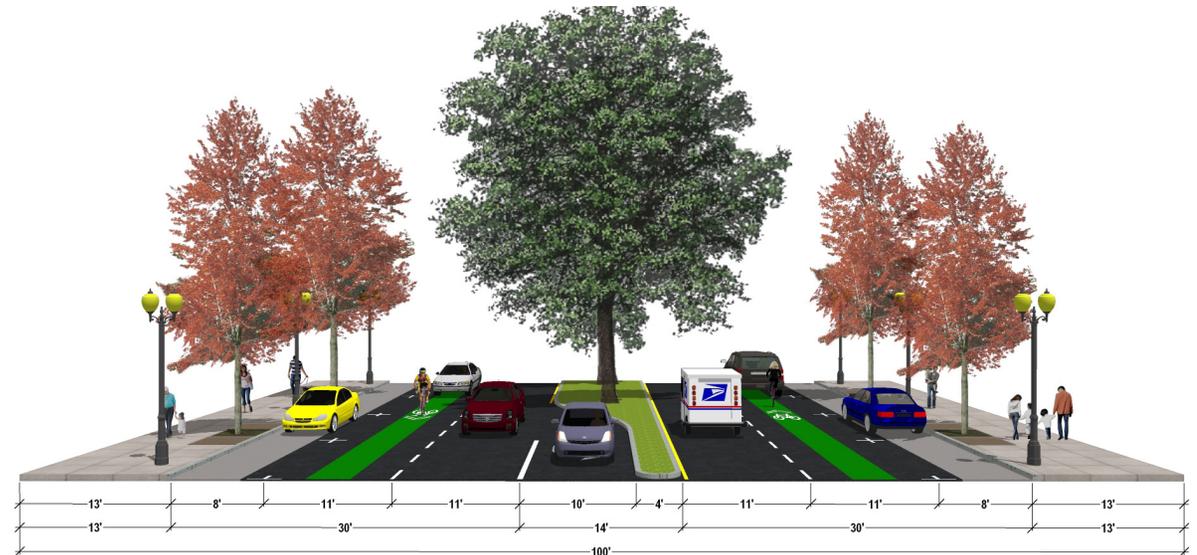
Long Beach Green Shared Lane
Source: San Francisco Bike Coalition

Option 1

Option 1 includes the use of a shared lane marking for bicyclists on San Pablo Avenue. A “super-sharrow” design with shared lane markings placed within a continuous wide green band in the center of the lane is recommended. This design with green paint supplementing the shared lane markings will have to be submitted as a formal Request to Experiment to the California Traffic Control Devices Committee by the City of Albany. Shared lane markings without the green paint are in the California Manual of Urban Traffic Control Devices and therefore would simply require approval from Caltrans to be installed on San Pablo Avenue because it is a state route.

With the shared lane marking design, 11-foot travel lanes are recommended, and a 14-foot median is proposed, wide enough to allow for large trees to grow. In addition, 14 feet provides enough room approaching intersections to provide a 10-foot left turn lane and a 4-foot-wide median nose, wide enough to allow low-level landscaping. Additionally, with this width, two median variations are possible, a minimum amount of median (Option 1A) and a moderate amount of median (Option 1B) as described above. Parking loss in this option is minimized, located only in areas where curb extensions and new crosswalks are proposed along the corridor.

Figure 3-13 Option 1 Section



Section with green shared lanes and 14-foot median, showing left turn lane, 11-foot travel lanes and 8-foot parking lanes.

Option 2

Option 2 explores the feasibility of installing bicycle lanes on San Pablo Avenue by using varying median widths and parking configurations. In order to achieve this design with the least amount of parking removal, raised medians are recommended for similar portions of the corridor as with the moderate median alternative for Option 1. At locations where a continuous raised median is proposed, the median is recommended to be only six feet wide, in order to accommodate two five-foot bike lanes. Other recommendations for this option include narrowing the travel lanes to 11 feet and narrowing parking lanes to 7 feet. At turning locations, the median widens to 12 feet to accommodate a turn lane with a concrete median nose, making it necessary to remove parking from one side of the street to accommodate bike lanes. At locations with a two-way left turn lane, the median could be narrowed to 10 feet, which allows for a bit more space in the bicycle lane width—up to six feet on each side.

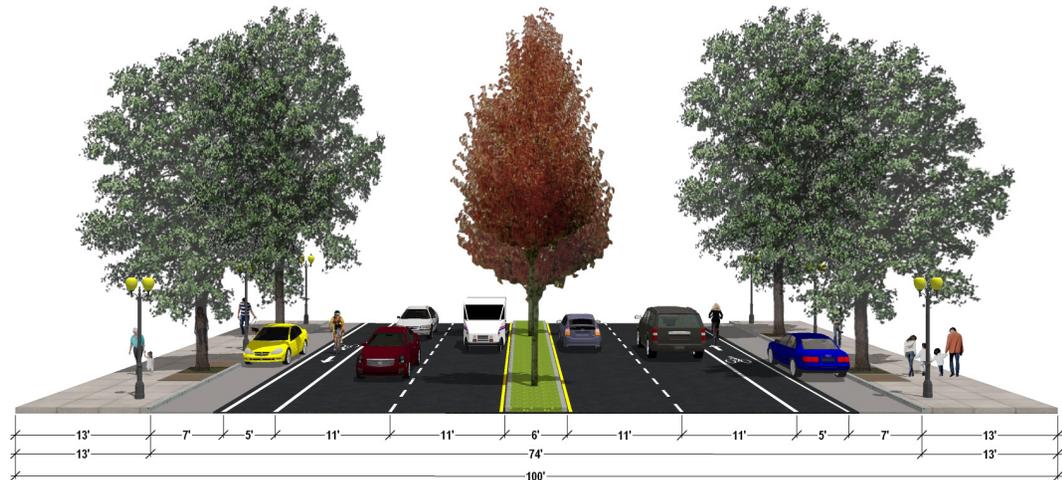
By tapering back and forth between these two cross sections, the parking loss is minimized and bicycle lanes are possible on both sides. The loss of parking is distributed throughout the corridor, and is discussed more in the parking section below. At several locations, the design includes tapers through intersections, which would need to be vetted with Caltrans.

Figure 3-14 Option 2 Transition



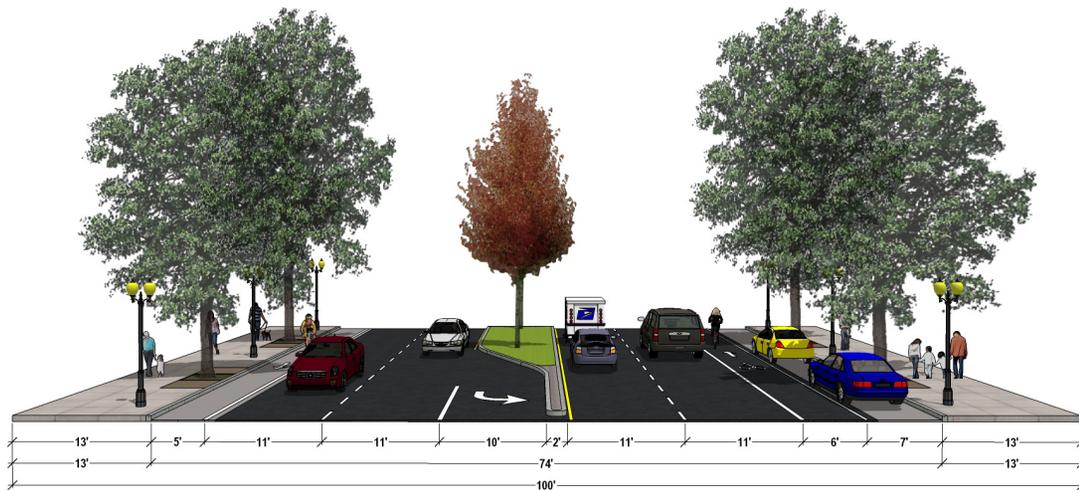
San Pablo Avenue

Figure 3-15 Option 2 Narrow Median Section



Bicycle lanes and narrow median, parking preserved on both sides of street.

Figure 3-16 Option 2 with Left-Turn Lane Section



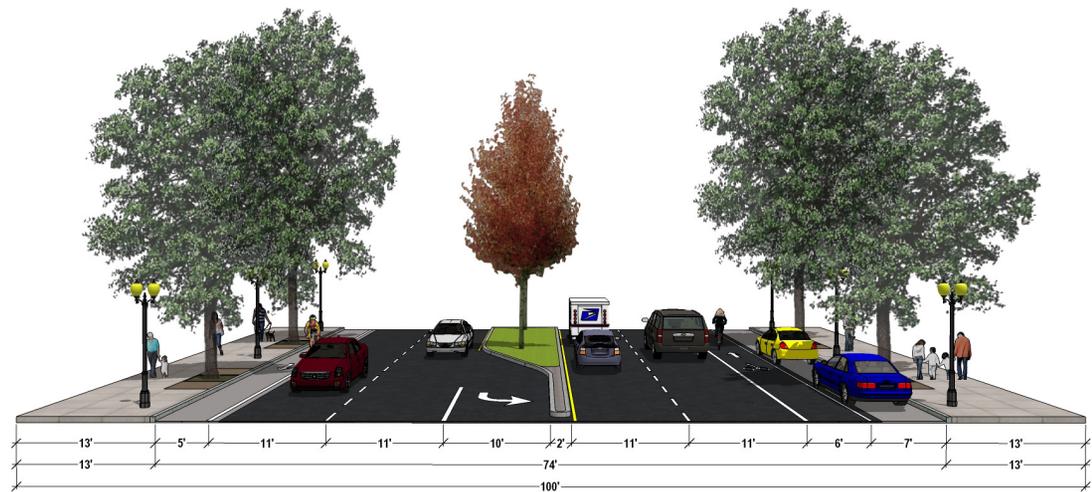
Bicycle lanes with left turn lane, parking removal on one side of street.

Option 3

During the design refinement period, the team received feedback from the Albany Traffic and Safety Commission that led to the development of a third alternative, a hybrid option that places bike lanes where they are most needed in the corridor and retains parking where it is most in demand. Option 3 provides space for wide raised medians wherever possible; retains center turn lanes where needed; retains parking where demand is high; and provides bike lanes in some areas (Figure 3-17).

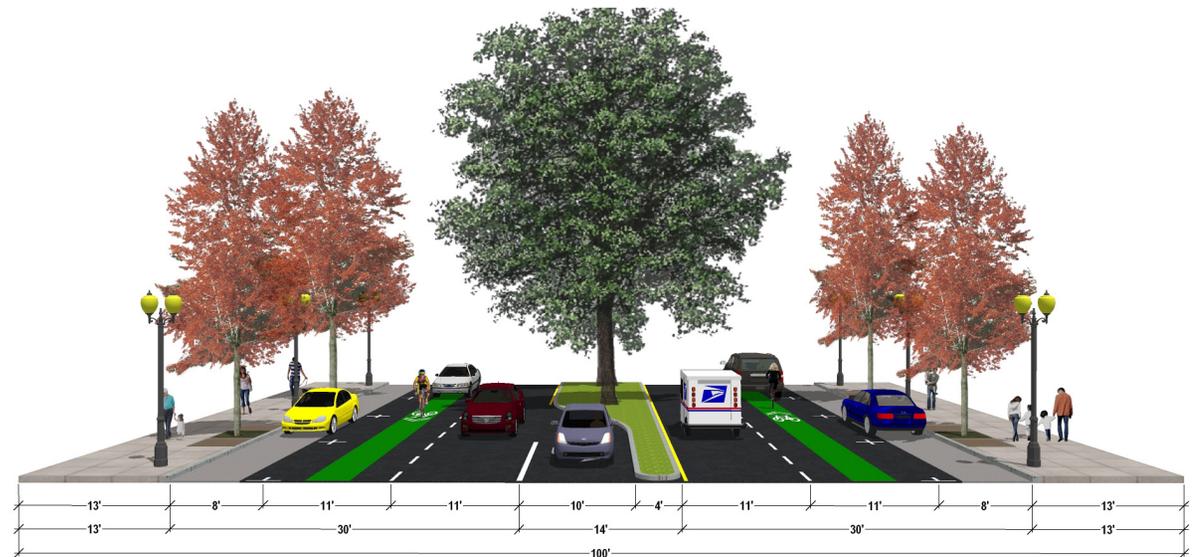
Option 3 includes bike lanes from the northern city limit to Clay Avenue and from Buchanan Street to Dartmouth Street. San Pablo Avenue through the core of the city would have shared lane markings (from Clay Avenue to Buchanan Street). This option results in a moderate parking loss, mostly in areas with low parking demand. Transition zones from bike lane to shared lane marking are accomplished with lane tapers. The rate of taper adheres to Caltrans guidelines based on the posted speed limit for the roadway. Based upon further feedback from the Albany Traffic and Safety Commission, a slightly modified alternative (Option 3A) was developed by the team. This option would have shared lane markings in the city's core area, but include bike lanes in only the southbound direction from Brighton Avenue to Clay Avenue and from Buchanan Street to Dartmouth Street. North of Brighton and south of Marin to Dartmouth, bike lanes would be included in both directions.

Figure 3-17 Option 3 Section with Bike Lanes



Option 3 Section for Bike Lanes from the North City limit to Clay Street and from Marin Avenue to Monroe Street

Figure 3-18 Option 3 Section without Bike Lanes



Option 3 Section for shared lane markings from Clay Avenue to Buchanan Street.

At the April 25 Traffic and Safety Commission meeting, the commission decided to have the team move forward with Option 3, but directed the team to modify Option 3 to retain parking on the east side of San Pablo for the block between Marin and Buchanan.

This option is recommended to be implemented with the proposed off-arterial bicycle boulevard network for Albany, proposed in the Active Transportation Plan and further explored in this study (Figure 3-19). The proposed network includes a parallel route on both Kains Avenue and Adams Street. The southbound bicycle lane on San Pablo Avenue between Buchanan Street and Marin Avenue will accommodate the connection for southbound bicyclists between Adams Street and the Marin/Buchanan Bikeway (under construction), as well as the proposed bicycle boulevard connection at Dartmouth Street. Where bike lanes are not provided on San Pablo Avenue, it is expected that bicyclists travelling through the corridor will choose to travel on the parallel low-volume streets (Kains Avenue and Adams Street) or will ride on San Pablo Avenue with shared lane markings.

It is recommended that the City undergo additional study, public involvement, and conceptual design to convert Kains Avenue and Adams Street to bicycle boulevards, preferably with designs that allow two-way bicycle travel on both streets. This could be accomplished either by installing a contra-flow bicycle lane on each street, or by simply allowing two-way movements by bicyclists but only one-way movements by motorists.

Recommended Option

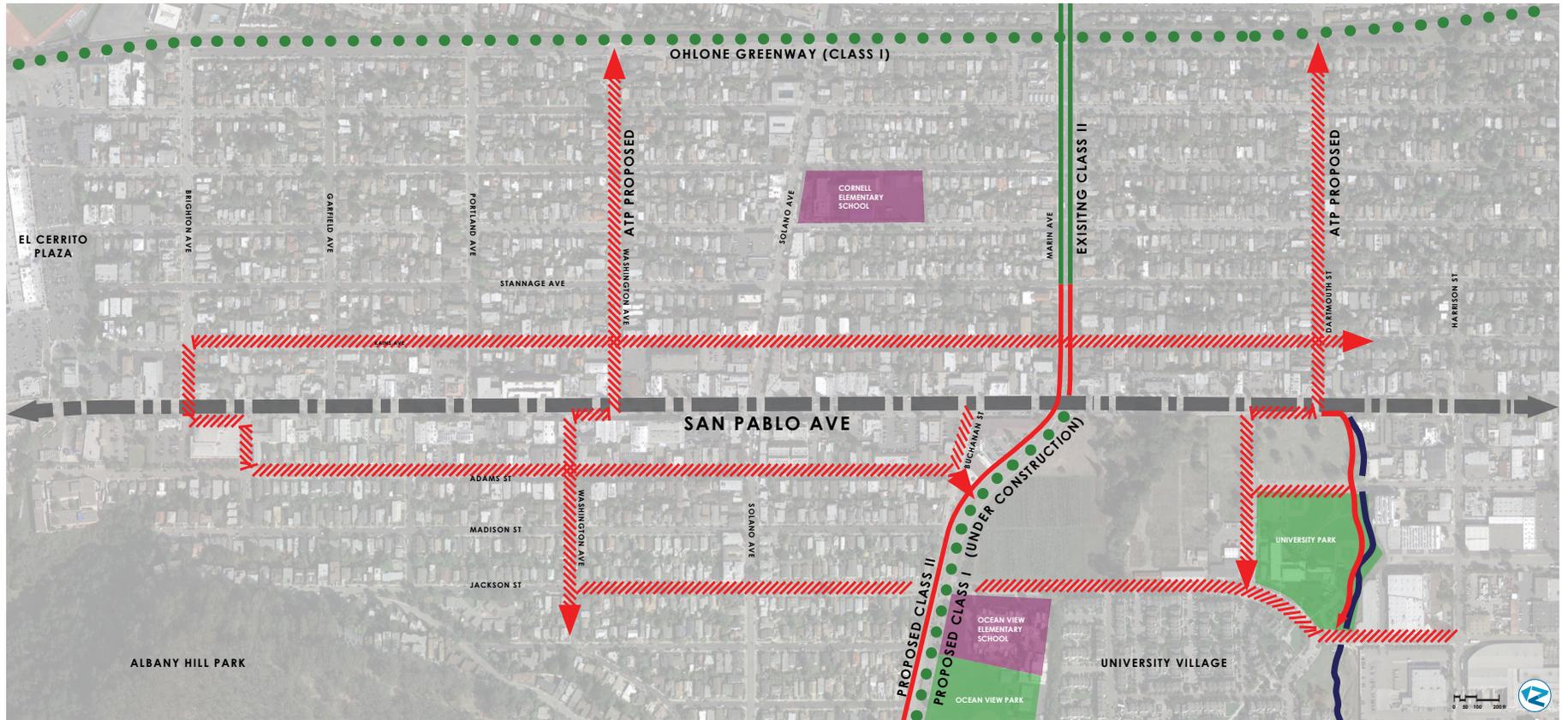
Based on stakeholder input and direction from city staff and the Traffic and Safety Commission, the team recommends moving forward with Option 3. The key features of Option 3 are:

- Bicycle lanes on both sides of San Pablo Avenue from the north city limit to Clay Avenue
- Shared lane markings between Clay Avenue and Buchanan Street
- Southbound bicycle lane between Buchanan Street and Marin Avenue
- Bicycle lanes on both sides between Marin Avenue and Dartmouth Street
- Shared lane markings between Dartmouth Street and the southern city limit

Figure 3-19 Option 3 - Example Transition from Bike Lanes to Shared Lane Markings on San Pablo



Figure 3-20 Proposed Bicycle Network



Off-arterial bicycle network map

Parking Demand and Change Study

The parking recommendations included a rough analysis of parking needs on each side of San Pablo Avenue, including the presence of off-street parking, and the likely demand based on land use along the corridor. Figure 3-22 shows the estimated parking loss for each of the options based on existing supply and predicted loss. In the worst case, about 40% of parking spaces (roughly 113 of the total 284 parking spaces) would be removed to accommodate bicycle lanes throughout San Pablo Avenue. As can be seen, some blocks would experience a greater loss than others.

This project included only a very basic parking analysis, for the purpose of comparing bicycle facility design options. The parking analysis was not comprehensive enough to make specific recommendations on the effects of relocating bus stops and the installation of bus bulbouts. It is recommended that additional, more rigorous parking analyses be conducted before making final decisions about individual projects recommended in this report.

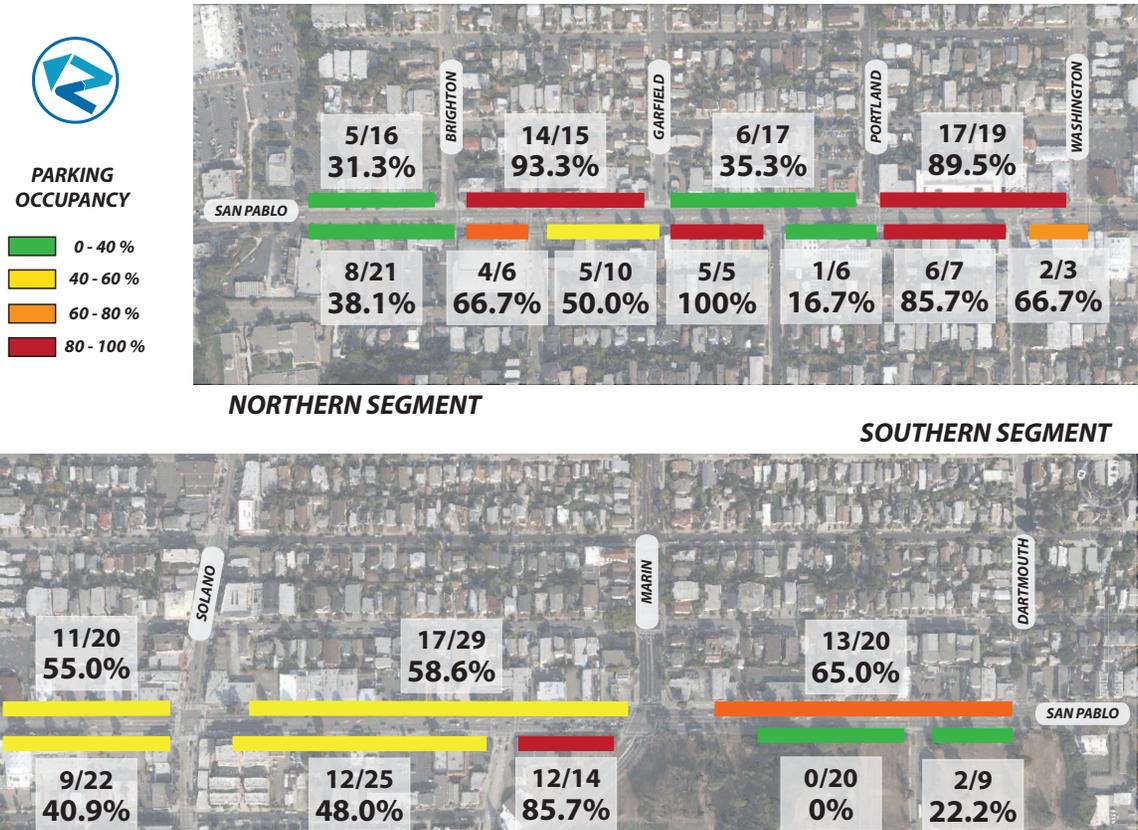
Peak Hour Occupancy

Figure 3-21 shows peak-hour occupancy for the study area, which occurred at 5:00 p.m. (based on a one-day survey conducted on Tuesday, February 26, 2013). This map shows the occupancy level for each individual block face, excluding block lengths with no available parking.

The highest parking demand experienced on both sides of San Pablo Avenue is between Brighton Avenue and Garfield Avenue, between Portland Avenue and Washington Avenue, and on the west side between Buchanan Street and Marin Avenue. These blocks have an 82% average occupancy rate in the peak hour. Albany City Hall and Albany Police Department on the west side between Buchanan Street and Marin Avenue likely contribute to the high demand for on-street parking on this block.

Low parking demand is experienced in the northernmost block of San Pablo Avenue between Brighton Avenue and

Figure 3-21 Peak Hour Parking Occupancy of San Pablo (5:00 PM)



El Cerrito Plaza, between Garfield Avenue and Portland Avenue, and on the west side of the street between Marin Avenue and Dartmouth Street. These blocks feature very low usage rates, averaging 25% occupancy in the peak hour. There is low demand for on-street parking north of Brighton Avenue due to the vast availability of off-street spaces in the neighboring El Cerrito Plaza shopping center. Low occupancy between Marin Avenue and Dartmouth Street on the west side of San Pablo Avenue is likely due to the open space and undeveloped parcels along this block.

The blocks of San Pablo Avenue between Brighton Avenue and Washington Avenue present an interesting case in terms of parking demand patterns during the evening peak hour. Southward from Brighton Avenue, parking demand is high until Garfield Avenue, then very low until Portland Avenue, and then very high again until Washington Avenue. The land uses and off-street parking availability are fairly uniform throughout. However, when examining all-day demand data—available in the Appendix D—it is apparent that these occupancy levels actually remain fairly low for all of these blocks throughout the day until the evening, when there is a slight increase in usage.

Potential Impacts on Parking Supply

Figure 3-22 provides the estimated number of parking spaces removed in each of the three design options, as well as the projected demand, by block and for the corridor, based on the February 2013 parking demand survey of San Pablo Avenue.

Figure 3-22 Parking Supply and Demand on San Pablo, Existing and Option 1, 2 and 3

	Cross Streets		Peak Hour* Usage	Inventory		Option 1			Option 2			Option 3		
	From	To		Number of Spaces	Peak Hour Demand	Number of Spaces Lost	New Number of Spaces	Projected Peak Hour Demand	Number of Spaces Lost	New Number of Spaces	Projected Peak Hour Demand	Number of Spaces Lost	New Number of Spaces	Projected Peak Hour Demand
West Side of San Pablo Ave	Carlson Blvd	Brighton Ave	8	21	38%	-3	18	44%	0	21	38%	-3	18	44%
	Brighton Ave	Clay St	4	6	67%	0	6	67%	0	6	67%	0	6	67%
	Clay St	Garfield Ave	5	10	50%	0	10	50%	-10	0	--	0	10	50%
	Garfield Ave	Castro St	5	5	100%	0	5	100%	0	5	100%	0	5	100%
	Castro St	Portland Ave	1	6	17%	0	6	17%	-6	0	--	0	6	17%
	Portland Ave	Washington Ave W	6	7	86%	0	7	86%	-3	4	150%	0	7	86%
	Washington Ave W	Washington Ave E	2	3	67%	0	3	67%	-3	0	--	0	3	67%
	Washington Ave E	Solano Ave	9	22	41%	0	22	41%	-10	12	75%	0	22	41%
	Solano Ave	Buchanan St	12	25	48%	-6	19	63%	-25	0	--	-6	19	63%
	Buchanan St	Marin Ave	12	14	86%	0	14	86%	0	14	86%	0	14	86%
	Marin Ave	Monroe St	0	20	0%	-3	17	0%	-3	17	0%	-20	0	--
	Monroe St	Dartmouth Ave	2	9	22%	-1	8	25%	-1	8	25%	-9	0	--
Dartmouth St	City limit	N/A	10	N/A	-8	2	N/A	-8	2	N/A	-8	2	N/A	
East Side of San Pablo Ave	Carlson Blvd	Brighton Ave	5	16	31%	0	16	31%	-16	0	--	-16	0	--
	Brighton Ave	Garfield Ave	14	15	93%	0	15	93%	-15	0	--	-9	6	233%
	Garfield Ave	Portland Ave	6	17	35%	0	17	35%	-1	16	38%	0	17	35%
	Portland Ave	Washington Ave	17	19	89%	0	19	89%	0	19	89%	0	19	89%
	Washington Ave	Solano Ave	11	20	55%	-4	16	69%	-3	17	65%	-4	16	69%
	Solano Ave	Marin Ave	17	29	59%	1	30	57%	-11	18	94%	-6	23	74%
	Marin Ave	Dartmouth Ave	13	20	65%	-3	17	76%	-14	6	217%	-5	15	87%
	Dartmouth St	City limit	N/A	9	N/A	-2	7	N/A	-2	7	N/A	-2	7	N/A
Total			149	303	49%	-29	274	54%	-131	172	87%	-93	210	71%
Estimated change in existing parking supply						-29	-10%	-131	-43%	-93	-31%			

NOTES:

* Peak hour is 5pm, from one day survey on Tuesday, February 26 2013

This revised estimates uses the ground survey to calibrate the inventory and reductions that were based on estimates from aerial images

The scaling factor is 236/309 (ground survey inventory/aerial estimate inventory)

Parking Loss Estimates for Options 1, 2 and 3

Option 1

Option 1 generates only a 10% change in parking supply for the corridor, a loss of 29 of 303 existing spaces. Every block along the San Pablo Avenue corridor would retain at least two parking spaces. If this option were implemented, it is estimated that, based on current parking demand levels along the corridor, parking occupancy would increase by 5%, from the current 49% occupancy to approximately 54% occupancy at the 5:00 p.m. peak hour. A parking loss of this magnitude would still leave an excess supply of parking on the corridor.

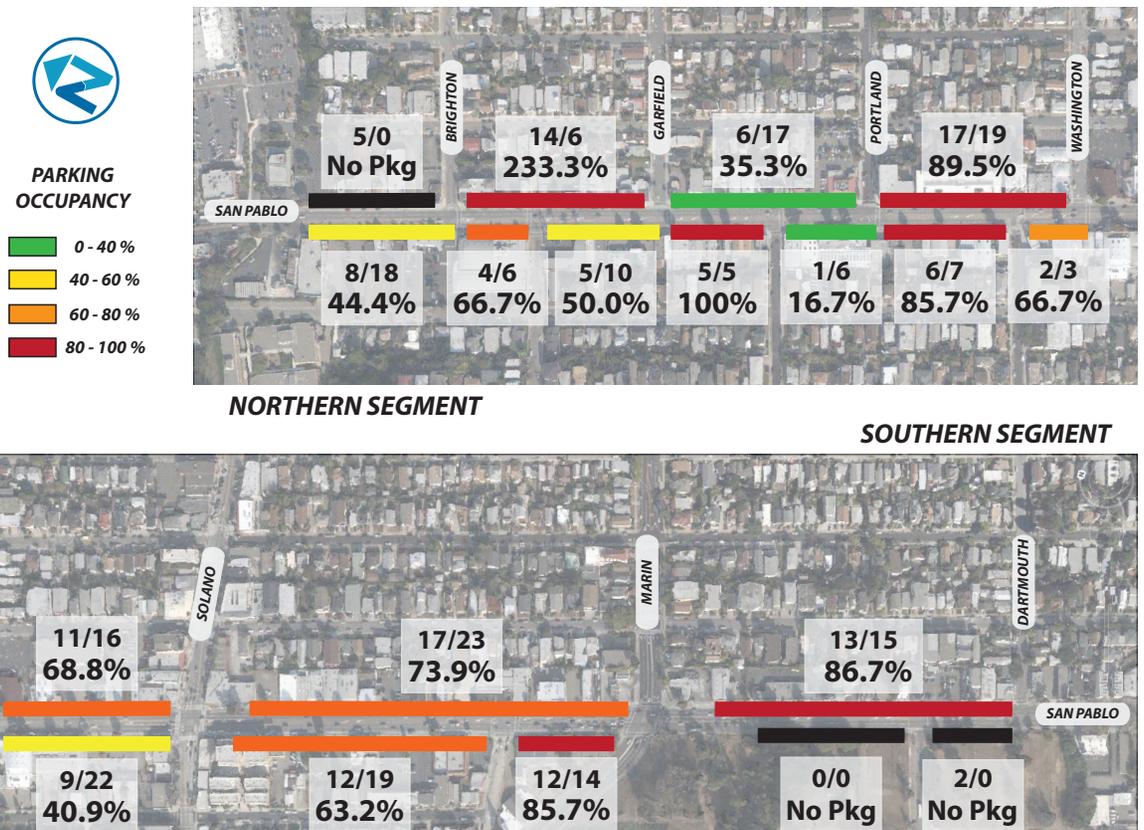
Option 2

Of the three options, Option 2 generates the maximum impact on parking supply on San Pablo Avenue. This option would result in a loss of 43% of parking on the corridor, 131 of 303 existing spaces. This option proposes complete removal of parking on four block faces on the west side of San Pablo Avenue and on two block faces on the east side. Based on current parking demand levels, the overall occupancy in this option is estimated to increase 38%, from 49% to approximately 87%. This would be a substantial increase that could lead to parking supply shortages on individual blocks, but could likely be addressed with a parking management plan, as parking occupancy varies widely block-to-block.

Option 3

The proposed designs in Option 3 are expected to result in a loss of 31% of the existing on-street parking supply (93 of 303 spaces). Option 3 proposes completely removing parking from two block faces on the west side of San Pablo Avenue and one block face on the east side, in addition to minor losses within blocks to accommodate crosswalks and curb extensions. Based on current

Figure 3-23 Estimated Peak-Hour Occupancy of San Pablo for Option 3 (5:00 PM)



demand levels on the corridor, the parking configuration in Option 3 is estimated to increase overall corridor occupancy by 21%, from 49% to 71% occupied in the peak hour. These occupancy rates are within standard desired targets for parking occupancy rates. This option balances parking loss and demand on the corridor with the careful removal of underutilized spaces and retention of spaces that experience high demand along the corridor. Revised demand figures for San Pablo Avenue under Option 3 can be seen in Figure 3-23 above.

San Pablo Avenue Site Specific Recommendations

San Pablo at Monroe and Dartmouth

UC Village Planned Development

The University of California is proposing to develop two of its University Village parcels fronting San Pablo Avenue with senior housing, a grocery store, and other retail uses. This development will likely include the addition of an enhanced pedestrian crossing at the intersections of San Pablo Avenue with Monroe Street and Dartmouth Street. The City and the developer are also exploring the feasibility of incorporating a class I path along the west side of San Pablo Avenue. To construct this path, it may be necessary to narrow the curb-to-curb width of San Pablo Avenue. As such, the final design of complete streets improvements in the area shown in Figure 3-24 should be developed as part of the UC Village project review process.

Bike Boulevard Crossing Option

The crossing of San Pablo Avenue between Monroe Street and Dartmouth Street is a critical connection in the city and regional bicycle network. In addition to the connection from Dartmouth Street to Monroe Street, there is a proposed shared-use path along Codornices Creek. The proposed design, shown in Figure 3-24, includes access to that path, using a bulb-out and removing several parking spaces, as well as a protected crossing of San Pablo Avenue utilizing the center median to provide a refuge for pedestrians and bicyclists who cross here, and to provide left turn bicycle lanes in both directions. Left turn bicycle lanes independent of vehicle left turn lanes have been approved by Caltrans.

Cyclists travelling westbound on Dartmouth Street or northbound on San Pablo Avenue would cross into the median and travel in a left turn bicycle lane that remains separate of the vehicle left turn lane. Cyclists travelling eastbound from Monroe to Dartmouth would turn into

Figure 3-24 San Pablo at Monroe and Dartmouth



the center median with the signal, or when traffic is clear, and travel in the southbound left turn bicycle lane, turning left at Dartmouth after yielding to northbound traffic. This left turn lane would also serve bicyclists traveling southbound on San Pablo Avenue who want to turn left into Dartmouth Street.

In order to provide the bicycle left turn lanes, it is necessary to ban motor vehicles from making westbound left turns from Dartmouth Street and southbound left turns onto Dartmouth Street. This supports the use of Dartmouth Street as a bicycle boulevard by diverting motor vehicles, an important aspect of proper bicycle

boulevard design. The street network is fairly continuous and well connected in this area, so it is not expected that the impact would be onerous on vehicular access into the neighborhood. There is also a proposed bulb-out on the southeast corner of Dartmouth Street and San Pablo Avenue, to reduce the crossing distance and improve visibility for pedestrians.

San Pablo Avenue at Solano Avenue

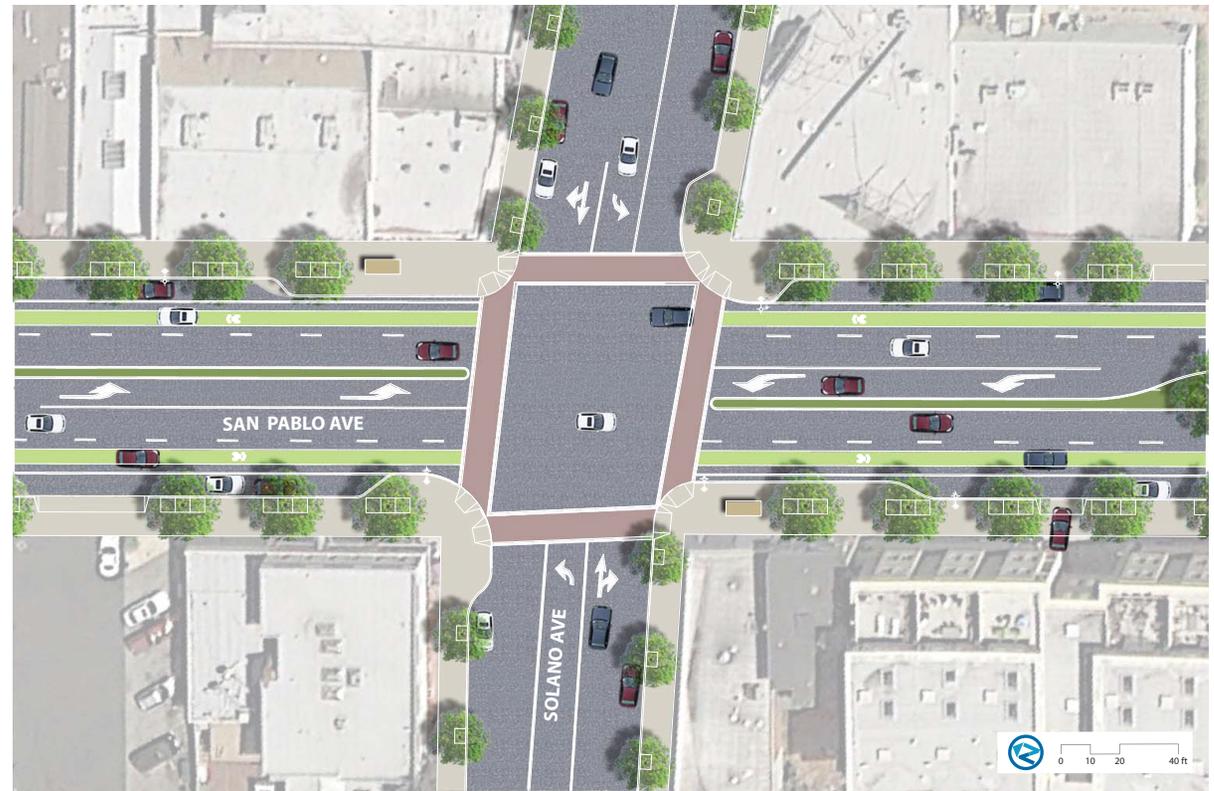
The intersection of San Pablo Avenue and Solano Avenue is an important location in the city of Albany. This intersection experiences high pedestrian, bicycle, and motor vehicle volumes and has a high demand for turning movements. Currently there is a bus stop on each side of San Pablo Avenue south of Solano Avenue. The northbound bus stop is therefore a nearside stop, which is not the preferred location for a stop by AC Transit. The team recommends moving this stop to the far side of the intersection. Other recommendations for this intersection include signal timing adjustments. The City should also consider removal of eastbound and westbound right turn lanes on Solano Avenue to provide more parking and to create a more urban intersection environment. The City Council has directed that further research on bus stops and parking impacts on small businesses should be conducted in the area around the intersection of Solano Avenue and San Pablo Avenue.

Signal Timing Study

Currently, the intersection of San Pablo Avenue and Solano Avenue has split phasing for eastbound and westbound movements, which results in long wait times for pedestrians and vehicles. Behavioral observations during the study indicate that pedestrians begin walking during both the eastbound and westbound vehicle phase regardless of whether the WALK signal is displayed, thereby sometimes creating conflicts with vehicles turning left on the green arrow. This behavior likely occurs both as pedestrians intentionally minimize their wait times or due to confusion.

The pedestrian signals for all four crosswalks are actuated, requiring pedestrians to push the button to receive a WALK signal. Preliminary pedestrian and bicycle counts were conducted at this intersection between

Figure 3-25 San Pablo at Solano Avenue - Plan View



2 p.m. and 3 p.m. on Wednesday, April 17, 2013, and again between 4:30 p.m. and 5:30 p.m. on Tuesday, April 23, 2013, shown in Figure 3-26.

Bicycle counts were relatively low, at 16 to 22 bicyclists per hour. However, pedestrian activity at the intersection is nearly continuous, with 186 to 213 pedestrians per hour. During the 2 p.m. count there were 63 pedestrians crossing the north leg and 81 pedestrians crossing the south leg, and there are only about 33 signal cycles during this hour. During the 4:30 p.m. count, there were 40 pedestrians crossing the north leg and 60 pedestrians crossing the south leg, and there are only about 28

signal cycles during this hour. With significantly more pedestrians crossing per hour than signal cycles, even if accounting for groups of pedestrians crossing simultaneously, it is quite likely that both the north leg and south leg pedestrian signals are actuated during most signal cycles during much of the day. The time necessary to run through two separate pedestrian walk and clearance intervals each cycle contributes greatly to the delay experienced by all users at this intersection. This supports removing the split phasing and providing walk signals every cycle during at least part of the day.

Figure 3-26 Pedestrian Counts at San Pablo and Solano 2:00PM and 4:30PM

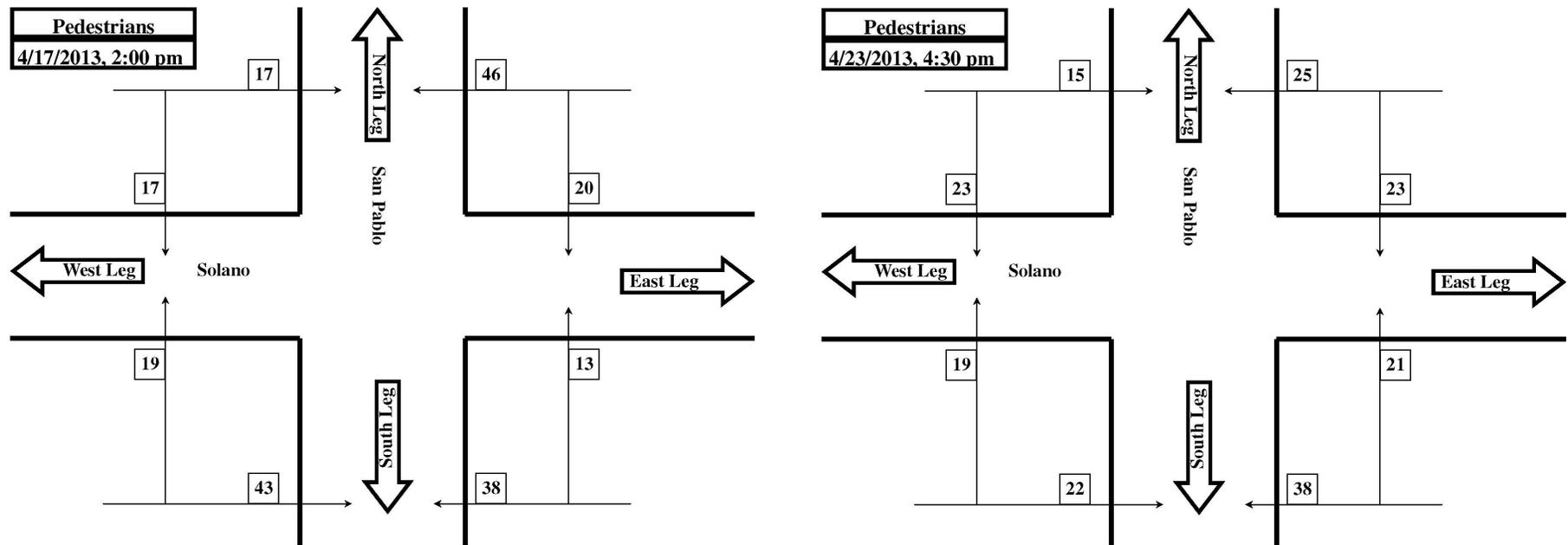


Figure 3-27 shows the results of traffic analysis for this intersection, evaluating the existing conditions and some of the recommendations for this intersection. As described below, these changes will improve conditions for pedestrians and likely reduce overall congestion, which may reduce some of the traffic diversion onto minor streets from Buchanan.

The following changes are recommended for this intersection:

- Request that Caltrans remove split phasing and provide concurrent eastbound and westbound through-movements and pedestrian walk intervals, with concurrent eastbound and westbound protected left turns occurring during a different phase. The traffic analysis table below shows that the intersection will operate somewhat better without split phasing using the existing 130 second cycle length for the p.m. peak period (compare the “Existing” column to the “Prot. LTL” column).
- Request that Caltrans consider shorter cycle lengths throughout the day. Cycle lengths currently range from 98 seconds to 130 seconds depending on the

time of day, resulting in significant pedestrian and vehicle delay). As indicated by comparing the two columns labeled “optimized” with the other columns, shorter cycle lengths could result in lower overall vehicle delay at the intersection. Average pedestrian delay would also be reduced.

- Remove the eastbound and westbound right turn lanes and provide additional on-street parking in the core of downtown where demand is often high. The parking on the northeast corner also would make up for parking loss on this corner due to the relocated bus stop and potential bus bulb-out. The columns in the analysis table labeled “no EW RTL” show that removing these turn lanes has only a minor effect on delay and level of service, except for these specific right turn movements.

- Request that Caltrans set the pedestrian signals for north-south movements along San Pablo Avenue to “recall to walk” (this recommendation applies to all intersections along San Pablo Avenue). Due to long green times to serve the northbound and southbound through-movements, providing walk signals every cycle will have no measurable effect on motor vehicle delay, level of service, and capacity.
- Request that Caltrans set the pedestrian signals for east-west movements along Solano Avenue to “recall to walk” for at least the portions of the day that there is significant pedestrian activity, as indicated in the discussion above about pedestrian counts. The traffic analysis assumed that pedestrian actuations would take place during nearly every cycle.

Figure 3-27 Traffic Analysis for the Intersection of San Pablo Avenue and Solano Avenue

		Existing (F&P 2009)	Existing (Nelson\ Nygaard 2013)	No EW RTL	Prot. LTL	Prot. LTL (Optimized)	Prot. LTL & No EW RTL	Prot. LTL & No EW RTL (Optimized)
EB	EBL	D (54.0)	D (52.5)	D (51.2)	E (62.4)	D (44.5)	E (68.8)	D (52.7)
	EBT	E (64.2)	E (58.1)	E (65.0)	E (58.5)	C (27.5)	E (57.4)	C (27.6)
	EBR	D (48.4)	A (4.4)		A (4.4)	A (0.5)		
WB	WBL	E (56.5)	D (52.2)	D (48.7)	E (63.5)	D (43.3)	E (56.0)	D (44.1)
	WBT	E (57.2)	D (52.5)	F (82.8)	D (53.2)	C (25.2)	E (56.6)	C (25.9)
	WBR	D (52.2)	C (22.9)		C (23.2)	A (5.3)		
NB	NBL	C (30.8)	E (59.5)	E (59.8)	E (65.7)	D (37.5)	E (67.5)	D (37.8)
	NBT	B (14.3)	D (36.9)	D (42.1)	C (32.0)	D (38.8)	D (37.1)	D (42.7)
	NBR							
SB	SBL	E (67.1)	E (68.1)	E (69.5)	E (63.9)	F (86.2)	E (72.8)	F (86.2)
	SBT	C (26.9)	C (24.3)	C (26.6)	B (18.3)	C (20.4)	C (22.8)	C (20.8)
	SBR							
	Overall	C (33.1)	D (37.4)	D (46.9)	D (35.0)	C (31.7)	D (41.6)	D (35.5)
	Cycle length (s)	130	130	130	130	80	130	80

Notes:

- All analyses are of the afternoon peak hour, as this is when the highest traffic volumes occur at this intersection.
- 130-second cycle lengths were used for most of the analyses, since this is the current cycle length used during the PM peak hour for the coordinated signal system on San Pablo Avenue.
- The "No EW RTL" scenarios look at removing both the eastbound and westbound right turn lanes, to consider the possibility of providing on-street parking instead of turn lanes.
- The "Prot. LTL" scenarios replace the existing split phasing for Solano Avenue with phasing that provides protected left turn phases separate from the through movements on Solano.
- It appears that the 2009 analysis didn't consider as many pedestrian calls as indicated by recent pedestrian counts at this intersection, thus explaining the difference in overall delay between that analysis and the 2013 analysis. In addition, the pedestrian clearance intervals are probably longer in the current signal timing than they were in 2009 (there has been a change in this standard in the MUTCD).
- The "Optimized" scenarios use a shorter cycle length than the 130-second cycle length, as a way of favoring cross traffic (including pedestrians) over through traffic on San Pablo Avenue. Shorter cycle lengths would need to be implemented throughout the corridor, in order to maintain a coordinated signal system. Cycle lengths between 80 seconds and 110 seconds are also possible, and would provide similar operations (and less delay for pedestrians and traffic on Solano Avenue).

AC Transit Bus Stops at Solano Avenue

Transit safety and operations efficiency would be enhanced by relocating the northbound bus stop at San Pablo Avenue and Solano Avenue to the far side of the intersection and adding a bus bulb. AC Transit prefers far side bus stops because it reduces bus delay approaching the bus stop and reduces congestion when pulling away from the stop. Far side bus stops also improve pedestrian safety because passengers cross behind rather than in front of the bus.

Intersection observations concluded that at the existing near-side stop, the bus arrives at the stop on a green 80% of the time, but by the time passengers have boarded and alighted, the signal has turned to red, increasing dwell time and decreasing on-time performance. Indeed, observations indicate that, on average, buses spend about one minute dwelling at this stop, and the bus blocks the lane over 50% of the time, thus causing congestion for northbound traffic. It is anticipated that moving the stop to the far side of the intersection will reduce the average stop time to less than 30 seconds. Overall intersection performance will improve due to the ability of the bus to go through when the light is green.

This change will result in a net loss of 1-3 parking spaces, including the spaces that will be regained on the nearside of the intersection at the current bus stop. This is in part due to the fact that Route 18, which turns right, would need a separate stop on Solano Avenue east of San Pablo Avenue.

If the eastbound and westbound right turn lanes are removed as recommended in the discussion on signal timing, additional parking spaces could be added that would replace the spaces lost due to moving the bus stop. The 20 minute green curb parking space eliminated by the relocated bus stop could simply be moved to the first parking space north of the new bus stop.



AC Transit bus crossing intersection of San Pablo and Solano



Narrow sidewalk space at bus stop for Route 72 Rapid on San Pablo at Solano.



Bus stopped at northbound bus stop at Solano Avenue, with the back of the bus remaining in the travel lane, blocking overtaking traffic.

The recommendation for a far side stop should be pursued independently of the recommendation to install a bus bulb-out at this bus stop, pending further discussion by Albany staff and Traffic and Safety Commission, as well as Caltrans approval. All bus stop changes are independent of the signal timing recommendations, which should be pursued whether or not bus stop changes are made at this intersection.

San Pablo Avenue at Washington Avenue

Bike Boulevard Crossing Option

The Active Transportation Plan proposes a Washington Avenue bicycle boulevard treatment, connecting the proposed Kains Avenue and Adams Street bicycle boulevards, and providing a low-stress bikeway across this portion of the city. A special crossing treatment is recommended at San Pablo Avenue and Washington Street as an option to accommodate this proposal (as shown in Figure 3-28). As the two legs of Washington Avenue do not align, left turn bicycle lanes in the center median are recommended, similar to the proposed design at Dartmouth and Monroe Streets. To accommodate these left turn bike lanes, northbound and southbound left turns movements would need to be restricted from San Pablo Avenue to Washington Avenue. As with Dartmouth, turn restrictions support the use of Washington Avenue as a bicycle boulevard by diverting motor vehicles, reducing traffic volume to a more comfortable level for bicyclists.

The northernmost leg of Washington Avenue (connecting to and from the west) is currently signalized, while the southernmost leg (connecting to and from the east) is unsignalized. If the signalization remains the same, eastbound bicyclists on Washington Avenue could use the signal to make their way to the left turn lane, but westbound bicyclists would need to wait for a gap in both lanes of northbound traffic in order to turn right directly into the left turn lane. Working with Caltrans, it may

Figure 3-28 Bicycle Boulevard Crossing at San Pablo and Washington - Plan View



be possible to modify the existing signal so both legs of Washington Avenue would be signalized. This will allow both eastbound and westbound cyclists to use the signal to make their way to the left turn lane. In addition, it would provide a signalized pedestrian crossing on the south leg of this intersection, where there is currently an unsignalized marked crosswalk.

Enhanced Unsignalized Crosswalks on San Pablo Avenue

There are several existing unsignalized crosswalks on San Pablo Avenue, and most are simply identified with only two transverse lines across the roadway, along with pedestrian crossing signs. In addition, new crosswalks are recommended at two mid-block locations. It is recommended that all of the unmarked crosswalk locations described below include the following combination of treatments to enhance their usability and safety, as described in more detail in the general recommendations section of this chapter:

- Raised medians (continuous raised medians or small median islands)
- Curb extensions, where there are parking lanes, and where driveways or other constraints allow for the construction of a curb extension
- Advanced yield lines with “Yield Here to Pedestrians” signs
- High-visibility longitudinal crosswalk markings
- Rectangular rapid-flash beacons
- Pedestrian-scaled illumination

Garfield Avenue

The existing crosswalk on the south leg of this intersection should be enhanced with the recommended treatments. Because there is no street on the west side of the intersection, a median can be placed at this location.

Castro Street

The existing crosswalk on the south leg of this intersection should be moved to the north leg of the intersection and enhanced with the recommended treatments. Moving the crosswalk to the north leg will allow for a median to be placed at this location, since there is no street on the east leg of the intersection.

Portland Avenue

The existing crosswalk on the south leg of this intersection should be enhanced with the recommended treatments. Because there is no street on the west side of the intersection, a median can be placed at this location.

Washington Avenue

The existing crosswalk on the south leg of this intersection should be enhanced with the recommended treatments, unless the intersection is signalized as described in the bike boulevard crossing recommendation for this intersection. Because there is no street on the west side of the intersection, a median can be placed at this location.



This photo simulation shows the existing crosswalk at Portland Avenue modified with the combination of treatments described above.

Midblock Crosswalk Between Solano Avenue and Buchanan Street

A new midblock crosswalk is recommended in this long block in the core of Albany. In downtown settings, crosswalks spaced between 300 and 600 feet are recommended to serve pedestrians, as long as there are origins and destinations in the area. The nearest crosswalks are spaced over 900 feet apart, and this proposed crosswalk is recommended in the vicinity of Happy Donuts and Albany Ford Subaru, roughly midway between the existing crosswalks. A crosswalk at this location allows people to cross back and forth between businesses, including the car dealer employees who regularly cross in this area to drop off or pick up cars in nearby parking lots. The crosswalk should be enhanced with the recommended treatments shown in Figure 3-29, and also include an offset between the two halves of the crosswalk, to encourage pedestrians to look toward the traffic stream that they will cross next.

Midblock Crosswalk Between Marin Avenue and Monroe Street

A future midblock crosswalk is recommended for consideration in this long block. With current land use, a crosswalk in this location may not be appropriate at this time. But as properties in this area redevelop, a crosswalk should be considered to reduce the 800-foot gap between the existing crosswalks of San Pablo Avenue at Marin Avenue and Monroe Street. If installed, the crosswalk should be enhanced with the treatments recommended above, and also include an offset between the two halves of the crosswalk, as shown in Figure 3-30.

Figure 3-29 Midblock Crossing Between Solano and Buchanan - Plan View



Figure 3-30 Midblock Crossing Between Marin and Monroe - Plan View



BUCHANAN RECOMMENDATIONS

Overall Design

The complete street design for Buchanan Street should create a welcoming entry sequence to Albany from the west and enhance the primary access corridor to the shoreline from the neighborhoods. The streetscape needs to advance an appropriate character that says “neighborhood parkway,” not “high speed connector.”

During the design charrette, a number of key features were identified to enhance and improve the Buchanan Street corridor, in addition to the planned (recently constructed) shared-use path on the south side of the street and new crossing of Buchanan Street at Pierce Street.



Buchanan is a challenging bicycling environment but is a vital connection to the Albany Waterfront.

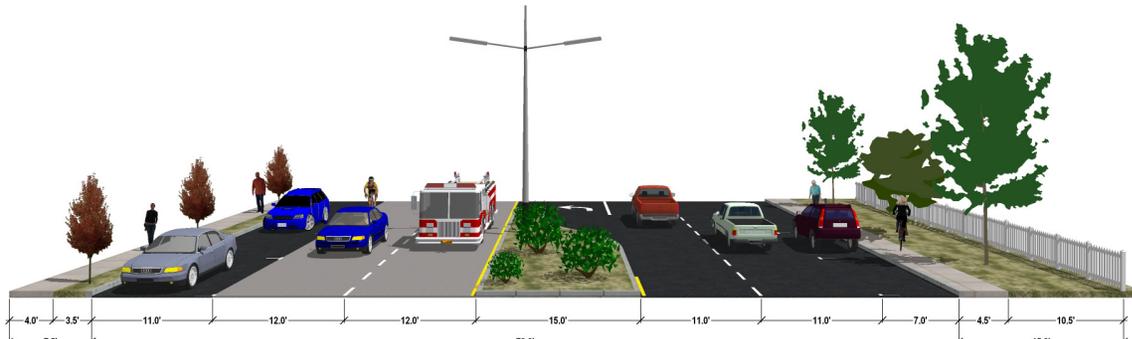
Figure 3-31 Design Charrette Brainstorming and Visioning



Figure 3-32 Buchanan Street - Overall Plan

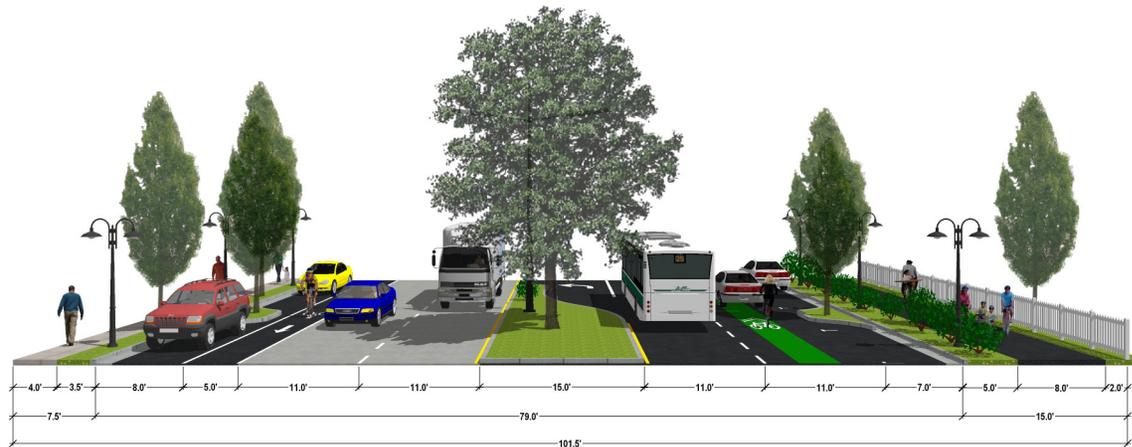


Figure 3-33 Buchanan Street Existing Section



Existing cross-section of Buchanan Street, showing concrete and asphalt portions on north side of roadway. Currently there is a 4.5-foot sidewalk that will soon be replaced with an 8-foot multi use path.

Figure 3-34 Buchanan Street with Path and Bicycle Lane - Section



Proposed improvements for Buchanan Street include:

- moving the concrete joint line to the inside edge of the northbound bicycle lane, adding a green band to highlight the shared marking on the south side of the corridor
- providing bulb-outs on the north side (in addition to south side bulb-outs that were constructed during summer 2013)
- improving landscape features on the center median and tree islands.

Bulb-outs will also serve as a traffic calming measure to tighten up the visual width of the corridor and communicate the transition from freeway to neighborhood on Buchanan Street. The community expressed cut-through traffic concerns on the neighborhood streets north of Buchanan Street. It is recommended that visual cues along Buchanan Street be used to neck down entries to neighborhood streets as well as pavement surface textures at street entries (decorative concrete or stamped asphalt) that say: "You're entering a neighborhood."

BUCHANAN STREET PRECEDENT IMAGES



Sidewalks should be repaved to enhance the comfort of pedestrians and the aesthetics of the streetscape (Berkeley, CA).



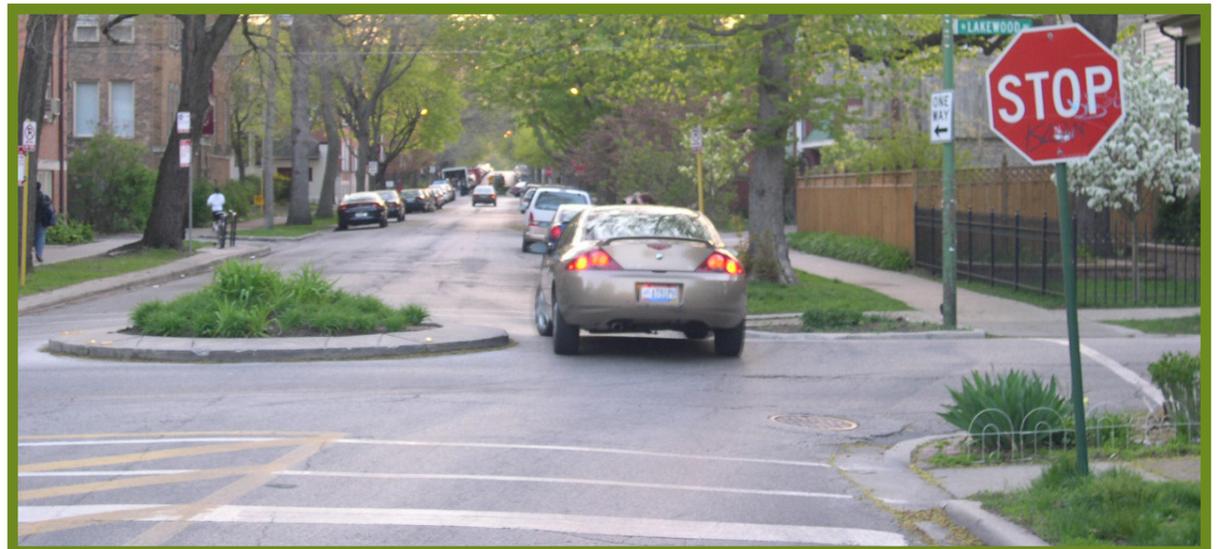
Creating an **attractive frontage** to residential and community amenities such as Oceanview Park and Elementary School will enhance their presence on the corridor and help define Buchanan Street's identity and importance in the community. (Emeryville, CA)



Clearly marking bike lanes help guide cyclists and identify the multimodal use of the street to slow down motor vehicles.



Curb extensions (bulb-outs) expand the pedestrian zone, provide space for amenities like planting and bike racks, and shorten crossing distances.



The entry to residential streets off of Buchanan Street should be designed to signal their uses by means of planting and traffic calming measures, which will help deter non-residential traffic.

Buchanan Street Site Specific Recommendations

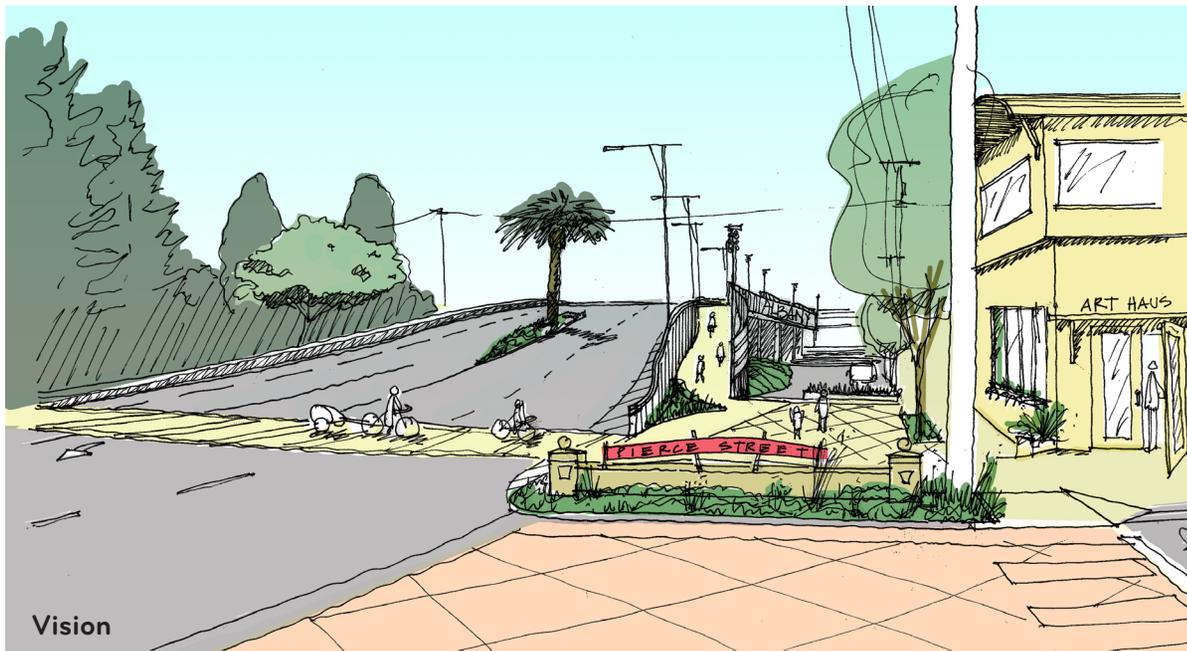


Existing

Buchanan Street at Pierce Street

At Pierce Street, a new traffic signal and pedestrian was installed during the summer of 2013. This project also closed off motor vehicle access from this intersection to Buchanan Avenue (the short street that formerly connected to Cleveland Avenue) and created a small pedestrian plaza at Pierce Street. This plaza can function as a gateway and potential gathering spot --a location to provide amenities to cyclists or potentially develop retail frontage. It is also recommended that the two curb ramps built in 2013 be reconstructed to be one larger curb ramp that provides easier access by pedestrians and bicyclists to this plaza area and the path on the bridge over the railroad and freeway (not shown in the vision sketch on this page (developed at the charrette in December 2012).

On the south side of Buchanan Street at Pierce Street, the new ramp at that location should also be widened to provide easier access by both bicyclists and pedestrians.



Vision



Buchanan Street at Taylor Street

Currently there are only two pedestrian crossings on Marin Avenue/Buchanan Street west of San Pablo Avenue, at Jackson Street and at Pierce Street (under construction). This project (and the Buchanan Bikeway Project) initially proposed two possible options for an additional pedestrian crossing between Jackson and Pierce Streets, either at Polk Street or Taylor Street. During the February meeting of the Traffic and Safety Commission, the commission decided to move forward with the Taylor Street crossing. The Taylor and Buchanan Streets intersection is the natural crossing for pedestrians going to Ocean View Park and USDA, as this crossing is a direct link between the residential areas to the north of Buchanan Street and Ocean View Park/Baseball Field.

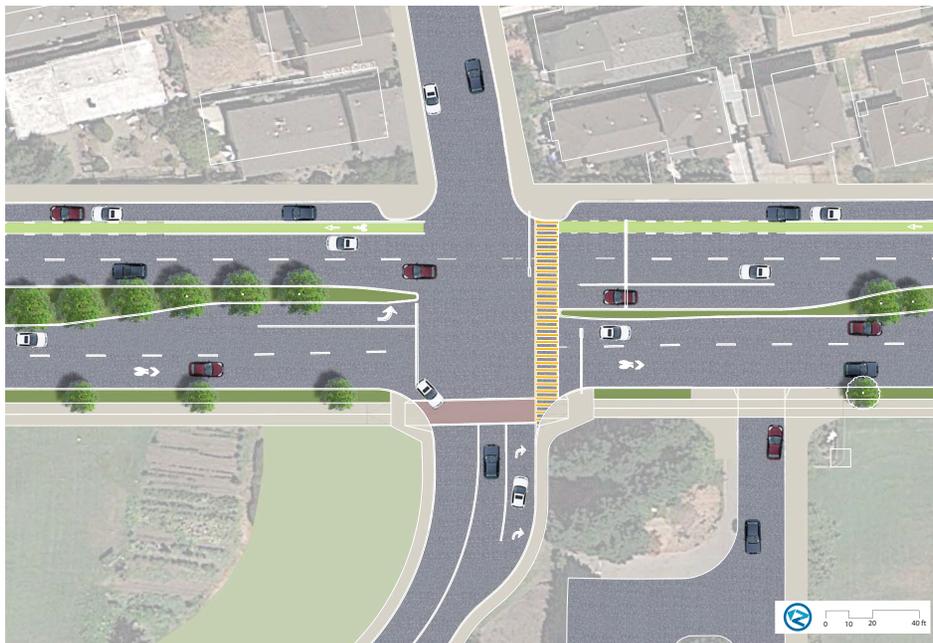
Currently, there is no marked crosswalk at this intersection. The recommended treatments are to provide a Pedestrian Hybrid Beacon (sometimes called a HAWK signal), provide high-visibility crosswalks, and reconfigure the median to facilitate pedestrian crossings, similar to the recommendations of the ATP.

An unsignalized treatment here is not recommended, due to the nature of the crossing. The recommended design is shown in Figure 3-35.

Buchanan Street at Ocean View Park Driveway

This driveway has a street type entrance, that provides the sense that pedestrians and bicyclists are “guests” in vehicle space when crossing the driveway. It is recommended that this driveway be reconfigured to be more like a concrete driveway, with a sloped driveway apron in the planter strip area, with the path remaining at its normal height behind the apron, as shown in Figure 3-35.

Figure 3-35 Proposed Pedestrian Crossing at Taylor and Buchanan and Concrete Driveway Apron for Ocean View Park Driveway



**Buchanan Street at Jackson Street
(Ocean View Elementary)**

Jackson Street is the primary crossing location for bicycle and pedestrian access to Ocean View Elementary School and Park. Recent improvements to the Jackson Street and Buchanan Street intersection included high-visibility crossings on the north, west, and south legs, and video detection technology for bicyclists on the north and south legs. The east crosswalk remains closed, and it is the recommendation of this project that this crosswalk be reopened, as shown in Figure 3-36. There may be utility relocation issues that will need to be addressed in order to reopen this crosswalk.

Future plans for this street show bicycle facilities on Jackson Street to connect residents of UC Village and Berkeley cyclists with the bicycle network north of Buchanan Street through the residential areas of Albany, El Cerrito, and Richmond. The ATP proposes the installation of bicycle lanes along Jackson Street between Buchanan Street and Solano Avenue.



Currently, the crossing at Jackson and Buchanan is utilized by high volumes of students during school hours. The east leg of the intersection is currently closed.

After the Class I path was built on the south side of Buchanan in summer 2013, residents have already expressed concerns about conflicts between right turning motorists and cars turning right from eastbound Buchanan Street to southbound Jackson Street. It is impractical to provide a separate bicycle signal at this location, since there is no room for a right turn lane on Buchanan Street. However, the following recommendations can be used to reduce turning conflicts and improve efficiency for pedestrians and bicyclists:

- Install modified R10-15 signs on the signal mast arms that read “Turning Vehicles Yield to Pedestrians and Bicycles”. The sign facing eastbound traffic would have right arrow and the sign facing westbound traffic would have a left arrow.
- Install a warning sign facing northbound traffic on Jackson Street as shown in Figure 3-37.
- Consider installing a protected left turn phase for westbound traffic on Buchanan Street.
- Provide a leading pedestrian and bicycle interval for the crossings of Jackson Street.
- Provide wider ramps (8 to 10 feet) for the path crossing.
- Consider prohibiting northbound right turns on red, either all the time or by using a blankout sign that is displayed during certain times of day

Figure 3-36 Buchanan and Jackson - Plan View



Figure 3-37 Bicycle and Pedestrian Crossing Warning Sign



Figure 3-38 Modified R10-15 Sign to Reduce Turning Conflicts



San Pablo Avenue and Marin Avenue

At the intersection of San Pablo Avenue and Marin Avenue, signal modifications are recommended to accommodate the new Buchanan Bike Path, in addition to an exclusive right turn lane for eastbound right (EBR) turning vehicles. At a meeting on May 9, 2013, the city met with Caltrans to discuss options to improve the south crosswalk of this intersection. The current preferred options, which would support the Complete Streets environment of both corridors in this study, are:

- Leading Pedestrian Interval: Use a LPI and an LED Blank-Out Sign to enforce a “No Right Turn on Red” for eastbound right turning vehicles
- Standard Right Turn Overlap Phase: Use an overlap signal phase with a green arrow for eastbound right turn traffic with the northbound left turn green arrow

In addition, the following options could be studied further and implemented in Phase III of construction.

- Eliminate Conflicting Movements: Use multiple overlap phases to eliminate eastbound right turning vehicles potentially conflicting with the south crosswalk walk indication.
- Install Bike Signal: Install bicycle signal heads for the south crosswalk (would require bike detector loops). Caltrans indicated that bicycle signal warrants must be met prior to the installation of a bike signal. However, given that the geometric design of this crossing creates inherent, unexpected conflicts between right turning motorists and through bicyclists, it is recommended that a bike signal be installed as soon as possible, to eliminate these concurrent conflicting vehicles movements.

The City also plans to add a bike detector loop on the eastbound bike path approach to the intersection, to precede a potential future bicycle signal installation. The design is shown in Figure 3-39.

Figure 3-39 San Pablo and Marin - Plan View



Current intersection of San Pablo Avenue and Marin Avenue.

Marin Avenue and Buchanan Street (City Hall)

The Buchanan Street/Marin Avenue merge is the point where Buchanan Street and Marin Avenue meet west of the Albany Fire Station. Currently, this merge layout is not pedestrian-friendly and lacks sidewalks and crosswalks, presenting a walking barrier to pedestrian travel along the north side of Marin Avenue. The ATP proposes a reconfiguration of this merge by creating a pocket park.⁷ As part of creating a more urban, walkable environment on Buchanan Street, the team recommends reconstructing the intersection so that east leg of Buchanan Street meets Marin Avenue at a right angle, as shown in Figure 3-40. This creates a pocket park or plaza in the old Buchanan Street right-of-way between Madison Street and the east leg of Buchanan.



Narrow sidewalk adjacent to high speed vehicle lane near Albany City Hall.



Existing intersection of Buchanan Street and Marin Avenue.

Figure 3-40 Reconfigured Intersection of Marin Avenue and Buchanan Street - Plan



⁷ City of Albany, "Active Transportation Plan" 2012. <http://albanyca.org/index.aspx?page=799>





4 Implementation



4 Implementation

POTENTIAL FUNDING SOURCES FOR ALBANY COMPLETE STREETS IMPROVEMENTS

The improvements discussed in this plan will not be implemented all at once. A combination of time and persistence, grant writing, collaborating, bundling and leveraging of multiple funding sources will be necessary to bring the complete streets solutions for San Pablo Avenue and Buchanan Streets from conceptual design to construction.

The most promising programs available to help fund proposed improvements are identified below. The majority are coordinated and/or administered by the Metropolitan Transportation Commission (MTC) and the Alameda County Transportation Commission (ACTC). MTC is the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area. Alameda County Transportation Commission coordinates countywide transportation planning efforts, programs local, regional, state and federal funding, and delivers projects and programs including those approved by voters in Alameda County transportation expenditure plans. Other potential sources of funding for improvement are identified as well.

Alameda CTC Sustainable Communities Technical Assistance Program (SC-TAP)

The SC-TAPO Call for Projects provides Alameda County jurisdictions significant support in the form of on-call consultant expertise for Priority Development Area planning and implementation, complete streets policy implementation and bicycle and pedestrian planning and engineering technical support. Applications for 2013 were due on Tuesday, September 17, 2013.

For more info: http://www.alamedactc.org/news_items/view/11245

Highway Safety Improvement Program (HSIP)

The new Moving Ahead for the 21st Century (MAP-21) federal surface transportation program authorizes funds for the HSIP program to be administered through State Departments of Transportation. This competitive grant program is based on a safety index, collision and accident data, and a benefit/cost ratio. Eligible projects include: bicycle and pedestrian facilities, correction or improvements to safety in the roadway; traffic calming, traffic signs, sight distance improvements, pavement markings, and roadway realignment.

For more information visit: <http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm>

One Bay Area Grant Program (OBAG)

Alameda CTC implements the OneBayArea Grant (OBAG) Program, which is funded by the federal surface transportation act. Alameda CTC is estimated to receive \$63 million over four fiscal years (FY 2012-13 through FY 2015-16) from the OBAG program for transportation investments in Alameda County. Jurisdictions can apply for funds for local streets and roads, bicycle and pedestrian projects and transit-oriented development. Per the OBAG requirements, Alameda CTC must spend 70 percent of the funds in priority development areas (PDAs). San Pablo Avenue in Albany is designated as an inactive PDA. The Metropolitan Transportation Commission, the agency that distributes the OBAG funds to Alameda CTC, requires jurisdictions receiving OBAG funding to either adopt a Complete Streets policy resolution that is consistent with regional guidelines or have a general plan circulation element that is in compliance with the state Complete Streets Act. Albany adopted a complete streets policy in January of this year. In addition, the City is currently updating its General

Plan and the Circulation Element will be updated as part of this process. The Active Transportation Plan (ATP), and the Complete Streets Plan for San Pablo Avenue and Buchanan Street will also be incorporated in the General Plan.

For more information visit:

- http://www.alamedactc.org/app_pages/view/8495
- <http://onebayarea.org/>

Bicycle Transportation Account (BTA)

Administered by Caltrans, this state fund can be used for city and county projects that improve safety and convenience for bicycle commuters. Eligible projects include improving and maintaining existing bikeways, building new bikeways, constructing median crossings, installing bicycle/pedestrian signals, and planning. Annual BTA funding is in the range of \$5 million a year. To be eligible for BTA funds, a city or county must prepare and adopt a bicycle transportation plan that meets requirements outlined in the California Streets and Highways Code. Adoption of a plan establishes eligibility for five consecutive funding cycles. The City has been awarded funds from this program for the construction of Phase III of the Buchanan Marin Bikeway project that is in design development at the time of this writing.

For more information about the BTA funding, visit: <http://www.dot.ca.gov/hq/LocalPrograms/bta/btaweb-Page.htm>

Transportation Development Act (TDA), Article 3

TDA funds are derived from a statewide quarter-cent retail sales tax. This tax is returned to the county of origin and distributed to the cities and county on a population basis. Under TDA Article 3, two percent of each entity's TDA allocation is set aside for walking and bicycling projects; this generates approximately \$3 million in the Bay Area annually. Eligible projects include the design and construction of walkways, bicycling paths and bicycling lanes, and safety education programs. According to MTC Resolution 875, these projects must be included in an adopted general plan or bicycle plan and must have been reviewed by the relevant city or county bicycle advisory committee. The City of Albany receives on average \$14,000 every year for bicycle and pedestrian projects. These funds can be used to match grants or to implement low cost improvements such as striping or signage.

For more information visit: <http://www.mtc.ca.gov/funding/STA-TDA/>

Safe Routes to School Programs

Caltrans administers state and federally funded Safe Routes to School (SR2S for state and SRTS for federal) programs to improve walking and bicycling conditions in and around schools. State grants are primarily focused on infrastructure (capital) projects. Applications for funding under the federal program can include both infrastructure or non-infrastructure (education, encouragement, enforcement and evaluation) projects. The City of Albany has been successful in obtaining several state and federal grants for infrastructure projects that improve pedestrian safety around schools. Since the Complete Streets Plan involve Buchanan Street and San Pablo Avenue, both corridors provide access to two elementary schools in Albany and are eligible for SRTS or SR2S projects.

For more information visit: <http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm>

Transportation for Livable Communities (TLC)

MTC created the Transportation for Livable Communities (TLC) program in 1998. It provides technical assistance and funding to cities, counties, transit agencies, and nonprofit organizations for capital projects and community-based plans that encourage multimodal travel and the revitalization of town centers and other mixed-use neighborhoods. The program funds projects to improve bicycling and walking to transit stations, neighborhood commercial districts, and other major activity centers.

For more information visit: http://www.mtc.ca.gov/planning/smart_growth/tlc_grants.htm

Congestion Management Agency Transportation Improvement Program (CMA TIP)

As the congestion management agency for Alameda County, Alameda CTC programs the county's share of the Transportation Improvement Program (TIP), a comprehensive listing of surface transportation capital projects prepared by MTC for the nine-county San Francisco Bay Area every four years or sooner.

For more information visit: <http://www.mtc.ca.gov/funding/tip/>

Measure B and Vehicle Registration Fee Funds

Local transit agencies, jurisdictions and Alameda County receive monthly Measure B and Vehicle Registration Fee pass-through payments to meet regional transportation priorities for several programs: Bicycle and Pedestrian Safety, Local Streets and Roads, Local Transportation

Technology, Mass Transit, Paratransit and Transit for Congestion Relief. A portion of Measure B funds is also distributed through a competitive grant program. More detail is provided below

Measure B: Alameda County voters approved a half-cent transportation sales tax through Measure B in 2000. Alameda CTC administers Measure B funds, which are distributed through competitive and the non-competitive programs. The non-competitive program (pass-through payments) is distributed to jurisdictions based on population. The competitive portion includes all modes of transportation and is implemented in cycles throughout the County. Grant programs include:

- Countywide Discretionary Fund Bicycle and Pedestrian Grant Program
- Express Bus Service Grant Program
- Paratransit Gap Grant Program
- Transit Oriented Development Grant Program

For more info: http://www.alamedactc.org/app_pages/view/4617

Vehicle Registration Fee: The Measure F Alameda County Vehicle Registration Fee (VRF) Program was approved by voters in 2010. The goal of the VRF program is to sustain the County's transportation network and reduce traffic congestion and vehicle related pollution. The program includes four categories of projects:

- Local Road Improvement and Repair Program (60 percent)
- Transit for Congestion Relief (25 percent)
- Local Transportation Technology (10 percent)
- Pedestrian and Bicyclist Access and Safety Program (5 percent)

Alameda CTC distributes a share of the funds among four planning areas of the county over successive five-year cycles. Geographic equity is measured by a formula, weighted 50 percent by population of the planning area and 50 percent of registered vehicles of the planning area. The City receives approximately \$50,000 in VRF funds and \$400,000 in Measure B funds every year as pass through allocations for the Local Streets and Roads and Bicycle and Pedestrian categories. In addition, the City has applied and obtained Measure B competitive funds in the past to fund planning and infrastructure projects.

For more info: http://www.alamedactc.org/app_pages/view/8089

Transportation Fund for Clean Air (TFCA)

TFCA is a grant program administered by the Bay Area Air Quality Management District (BAAQMD). The purpose of the program, which is funded through a \$4 surcharge on motor vehicles registered in the Bay Area, is to fund projects and programs that will reduce air pollution from motor vehicles. A sub-program of the TFCA is the Bicycling Facility Program (BFP), which provides funding for bicycling paths, lanes, signed routes, bicycle parking, bus racks, and other bicycling-related projects. Grant awards are generally made on a first-come, first-served basis to qualified projects. Funding for bicycling projects is also available through the TFCA's County Program Manager Fund. Under that sub-program, 40 percent of TFCA revenues collected in each Bay Area county is returned to that county's congestion management agency (CMA) for allocation (the Alameda County Transportation Commission (ACTC), in Alameda County's case). Applications are made directly to the CMAs, but must also be approved by the BAAQMD.

For more information on the TFCA Bicycling Facility Program visit: http://www.baaqmd.gov/pln/grants_and_incentives/bfp/index.htm

For more information on the TFCA County Program Manager Fund visit: http://www.baaqmd.gov/pln/grants_and_incentives/tfca/cpm_fund.htm

Or visit: http://www.alamedactc.org/app_pages/view/8076

Cal Fire Urban & Community Forestry Grants (UCFG)

The California Department of Forestry and Fire Protection's Urban Forestry Program is a source of grant opportunities for urban greening, urban forestry planning, management, and tree-planting programs.

For more information visit: http://www.fire.ca.gov/resource_mgt/resource_mgt_urbanforestry.php

Bay Area Water Quality Improvement Fund (BAWQIF)

EPA manages a competitive grant program to support projects to protect and restore San Francisco Bay. This grant program, known as the San Francisco Bay Water Quality Improvement Fund (SFBWQIF) began in 2008. The SFBWQIF has invested over \$27 million in 48 projects through 20 grant awards. These projects include 69 partners who are contributing an additional \$103.6 million to restore wetlands and watersheds, and reduce polluted runoff.

For more information visit: <http://www2.epa.gov/sfbay-delta/sf-bay-water-quality-improvement-fund>

Congestion Mitigation and Air Quality Program (CMAQ)

The purpose of the Congestion Mitigation and Air Quality (CMAQ) Program is to fund transportation projects or programs that contribute to attainment or maintenance of the National Ambient Air Quality Standards (NAAQS) for ozone and carbon monoxide. All projects and programs eligible for CMAQ funds must come from a conforming transportation plan and TIP, and be consistent with conformity provisions contained in section 176(C) of the Clean Air Act and the Transportation Conformity Rule. Projects need to be included in TIPs or statewide transportation improvement projects developed by MPOs or States respectively, under the metropolitan or statewide planning regulations. Projects also need to complete the National Environmental Policy Act (NEPA) requirements and meet basic eligibility requirements for funding under titles 23 and 49 of the United States Code.

The City has used this fund to implement the Buchanan Marin Bikeway Phases I and II, currently under construction at the time of this writing.

For more information visit: http://www.dot.ca.gov/hq/transprog/federal/cmaq/Official_CMAQ_Web_Page.htm

Infrastructure Financing District (IFD)

Infrastructure financing districts (IFDs) allow cities and counties to pay for public works projects by diverting property tax increment revenues from the general fund for up to thirty years. IFDs are a form of tax increment financing based on the idea that public enhancements would cause property values to rise, generating higher property tax revenues. IFDs can issue bonds secured by expected future property taxes to fund upfront infrastructure development costs. IFD funds can be used to finance construction of and improvements to highways, transit, water and sewer systems, flood control systems, childcare facilities, libraries, parks, and solid waste facilities. IFDs cannot pay for maintenance, repairs, operating costs, and services.

To form an IFD, the City must develop an infrastructure plan, send copies to every landowner, consult with other local governments, and hold a public hearing. Every local agency that will contribute its property tax increment revenue to the IFD must approve the plan. Schools cannot shift their property tax increment revenues to the IFD. Once the other local officials approve, the County must still get the approval of the voters in the IFD area to:

- Form the IFD (requires 2/3 voter approval);
- Issue bonds (requires 2/3 voter approval); and
- Set the IFD's appropriations limit (majority voter approval).

Infrastructure State Revolving Fund Program (ISRF)

Subdivisions of a local government, which includes cities and counties and joint power authorities, can apply for low-cost financing ranging from \$250,000 to \$10,000,000 with terms of up to 30 years through the ISRF program for a wide variety of infrastructure projects. Interest rates for the month of October 2013 were 2.68% for 20-year loans and 3.23% for 30-year loans. Eligible project categories include city streets, county highways, state highways, drainage, water supply and flood control, educational facilities, environmental mitigation measures, parks and recreational facilities, port facilities, public transit, sewage collection and treatment, solid waste collection and disposal, water treatment and distribution, defense conversion, public safety facilities, and power and communications facilities.

For more information visit: http://www.ibank.ca.gov/infrastructure_loans.htm

Figure 4-1 Project Funding Resources

Projects	Federal, State and Regional Resources											Local Resources		
	Alameda CTC Sustainable Communities Technical Assistance Program (SC-TAP)	Highway Safety Improvement Program (HSIP)	One Bay Area Grant (OBAG)	Bicycle Transportation Account (BTA)	Transportation Development Act (TDA)	State Safe Routes to School (SR2S and SRTS)	Transportation for Livable Communities (TLC)	Transportation Improvement Program (CMA TIP)	Measure B	Vehicle Registration Fees (VRF)	Transportation Fund for Clean Air (TFCA)	Cal Fire Urban & Community Forestry Grants (UCFG)	Bay Area Water Quality Improvement Fund (BAWQIF)	Congestion Mitigation and Air Quality Program (CMAQ)
Overall Improvements	X	X	X					X	X	X	X			
Crossing improvements (signs, markings, signals)	X	X	X	X	X	X ¹	X	X	X	X	X			X
Medians	X	X	X		X	X ¹	X	X	X	X	X	X ²	X ³	X
Curb extensions	X	X	X		X	X ¹	X	X	X	X	X	X ²	X ³	X
Bicycle racks	X		X		X	X ¹		X	X	X	X			
Bicycle Facilities	X	X	X	X	X	X ¹	X	X	X	X	X			X
Gateways		X	X					X				X ²	X ³	
Streetscape/landscape improvements	X	X	X					X	X	X		X ²	X ³	
Traffic Signals	X	X	X	X	X	X ¹	X	X	X	X	X			X
Lighting		X	X			X ¹		X	X	X	X			

1 Limited to facilities at or near schools or that enhance a walking or bicycling route to school.
 2 Limited to improvements that add trees or other landscaping
 3 Limited to "green streets" improvements including rain gardens and storm water filtration and retention
 4 Financing only

SPEED
LIMIT
25



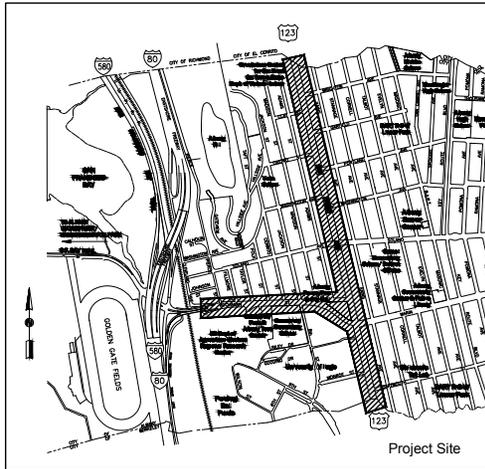


Appendices

Appendix A CAD Plans

ALBANY COMPLETE STREETS SAN PABLO AVENUE / BUCHANAN STREET

VICINITY MAP



PLAN DESCRIPTION

THESE PLANS ARE PREPARED TO DESCRIBE THE SCHEMATIC DESIGN LAYOUT OF TRANSPORTATION FEATURES PROPOSED AS PART OF THE ALBANY COMPLETE STREETS PROJECT. BASE MAPS ARE COMPOSED OF A COMBINATION OF SURVEY FOR AREAS OF BUCHANAN AND AERIAL PHOTO TRACING FOR SAN PABLO.

CONSULTANTS:

N NELSON NYGAARD **WRT** Planning & Design
Wallace Roberts & Todd, Inc.
 444 Townsend Street, Suite 4 415.575.4722
 San Francisco, CA 94107 fax 415.436.9837

REV	DATE	DESCRIPTION

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DRAWN BY:	YTK
CHECKED BY:	JG
REVIEWED BY:	MM
DATE:	OCT 17, 2013

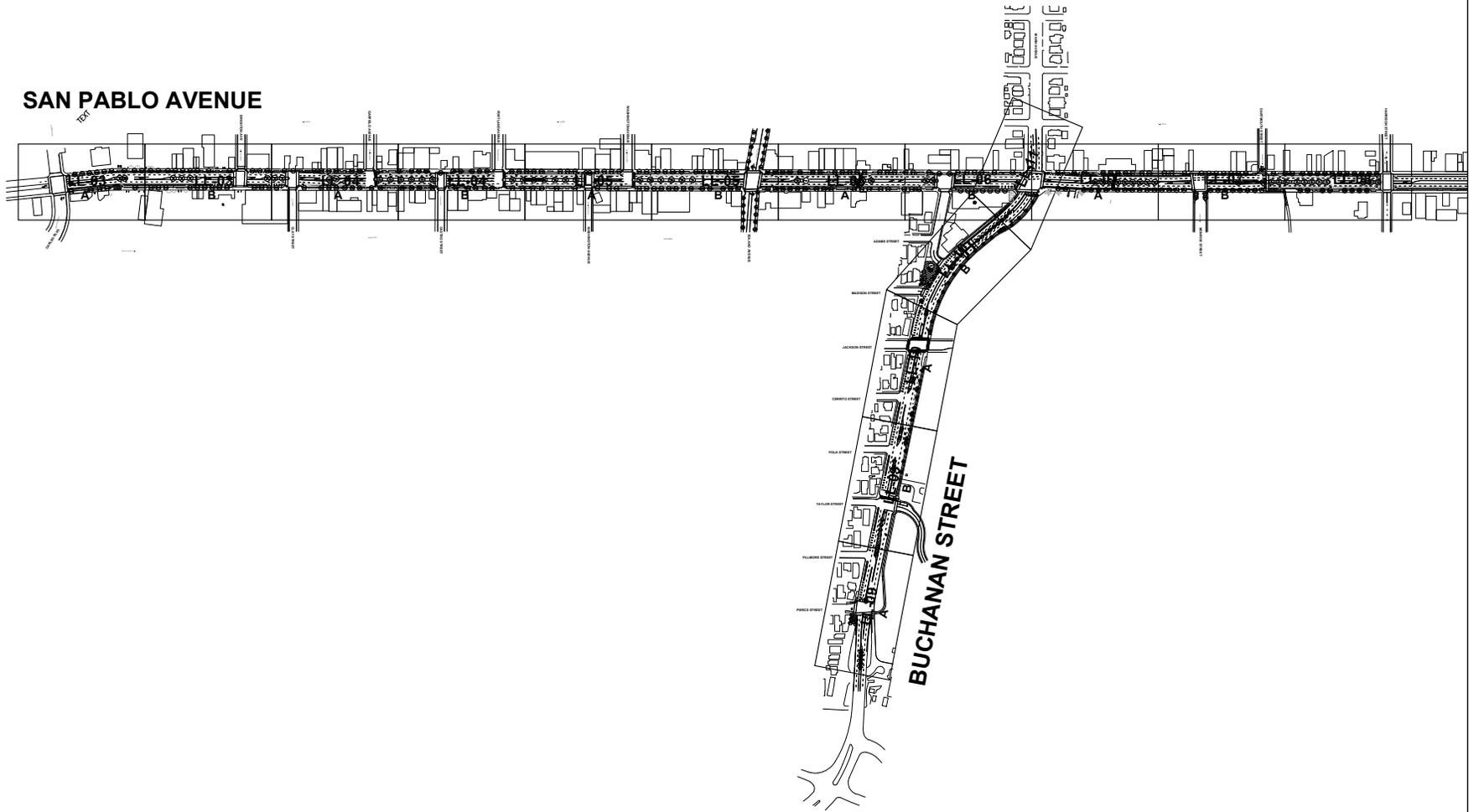
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CLIENT:	<i>City of Albany</i>
	Albany Complete Streets San Pablo Ave. / Buchanan St.

COVER	
SHEET:	LL-01
DWG No.	01 OF 11

SAN PABLO AVENUE



BUCHANAN STREET

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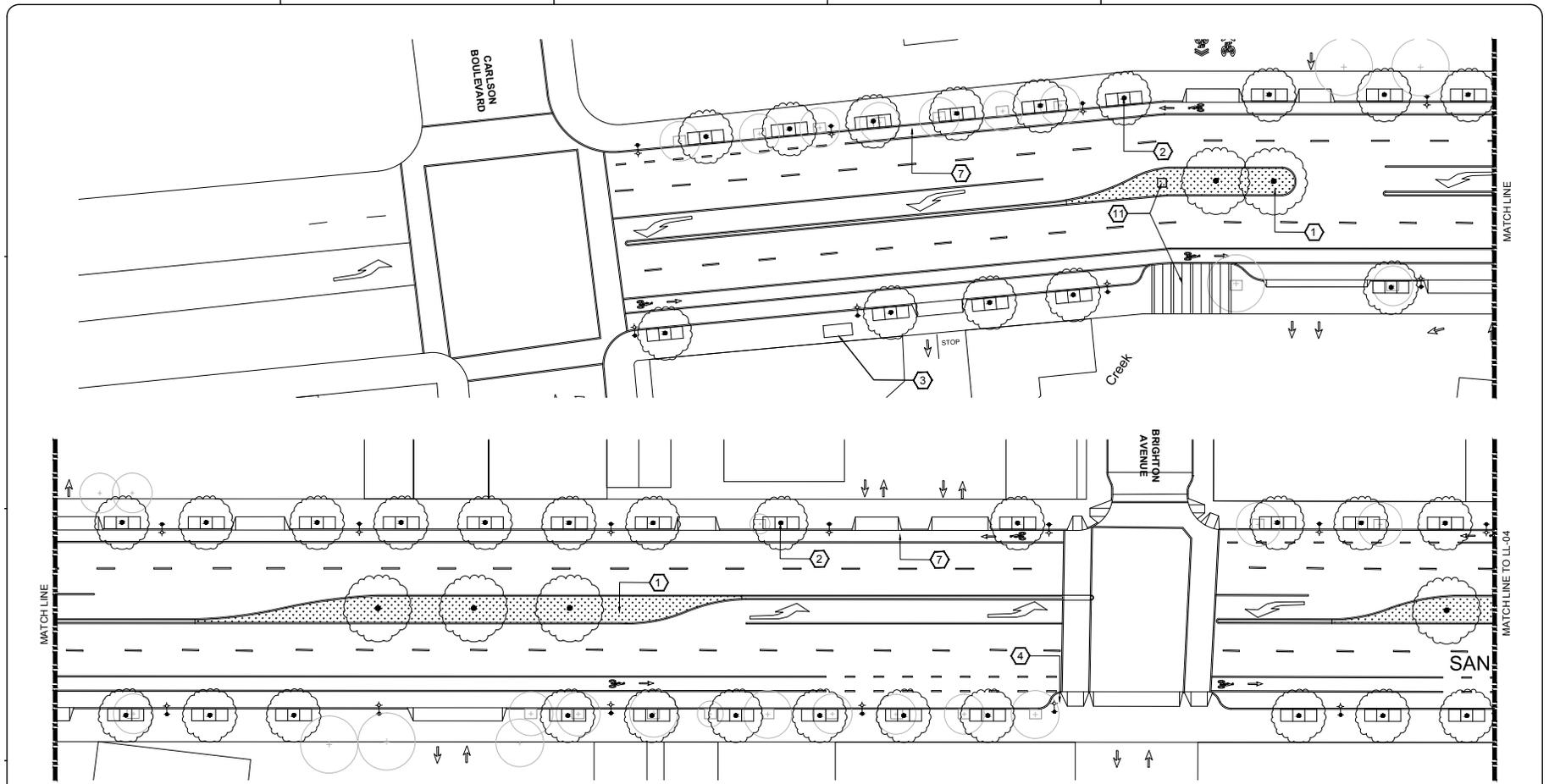
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 CHECKED BY: JG
 REVIEWED BY: MM
 DATE: OCT 17, 2013

REGISTRATION:

CLIENT:
City of Albany
 Albany Complete Streets
 San Pablo Ave. / Buchanan St.

KEY MAP

SHEET: LL-02 DWG No. 02 OF 11



LAYOUT NOTES

- ① PLANTED MEDIAN, TYP.
- ② NEW STREET TREE, TYP.
- ③ BUS STOP WITH SHELTER
- ④ BULB-OUT, TYP.
- ⑤ PEDESTRIAN REFUGE

- ⑥ ENHANCED CROSSWALK WITH ACCESSIBLE CURB RAMPS, TYP.
- ⑦ BIKE LANE, TYP.
- ⑧ "SUPER SHARROW" PAINTED LANE, TYP.
- ⑨ SPECIAL MEDIAN BIKE LANE
- ⑩ PEDESTRIAN ACTIVATED SIGNALIZED CROSSWALK

- ⑪ CREEK CROSSING GATEWAY OPPORTUNITY
- ⑫ MID BLOCK CROSSING
- ⑬ SAWCUT AND REMOVE CONCRETE FROM BIKE LANE
- ⑭ MOUNTABLE EMERGENCY CROSSOVER
- ⑮ STORMWATER SPINE PROJECT - RAIN GARDEN
- ⑯ BICYCLE DETECTOR PAVEMENT MARKING

LAYOUT PLAN

STA 104 +00 TO STA 107 +50

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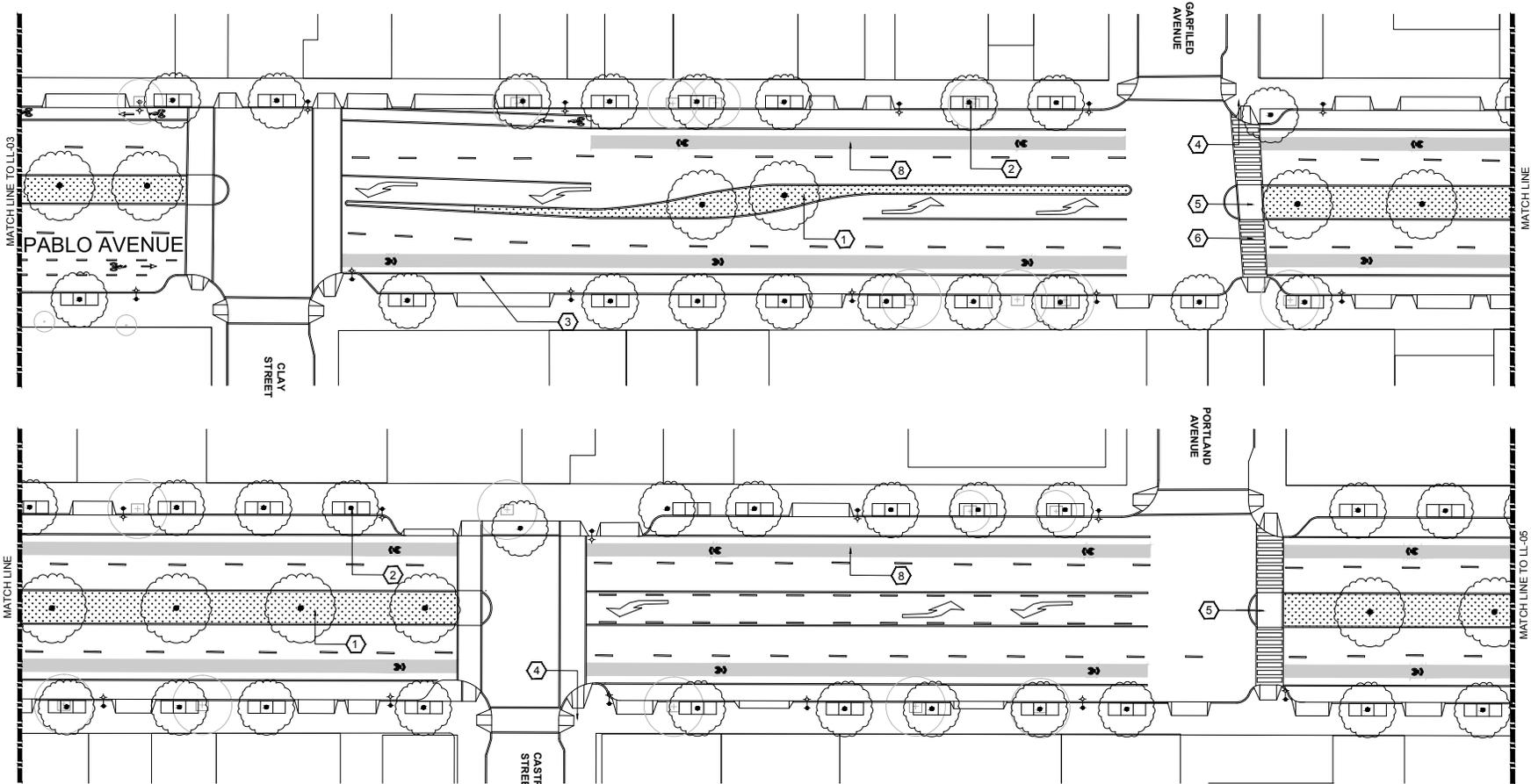
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DRAWN BY:	YJK
CHECKED BY:	JG
REVIEWED BY:	MM
DATE:	OCT 17, 2013

REGISTRATION:	
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CLIENT:
City of Albany
Albany Complete Streets
San Pablo Ave. / Buchanan St.

LAYOUT PLAN	
SAN PABLO AVENUE	
SHEET:	LL-03
DWG No.	03 OF 11



LAYOUT NOTES

- ① PLANTED MEDIAN, TYP.
- ② NEW STREET TREE, TYP.
- ③ BUS STOP WITH SHELTER
- ④ BULB-OUT, TYP.
- ⑤ PEDESTRIAN REFUGE
- ⑥ ENHANCED CROSSWALK WITH ACCESSIBLE CURB RAMPS, TYP.
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- ⑮ STORMWATER SPINE PROJECT - RAIN GARDEN
- ⑯ BICYCLE DETECTOR PAVEMENT MARKING

LAYOUT PLAN
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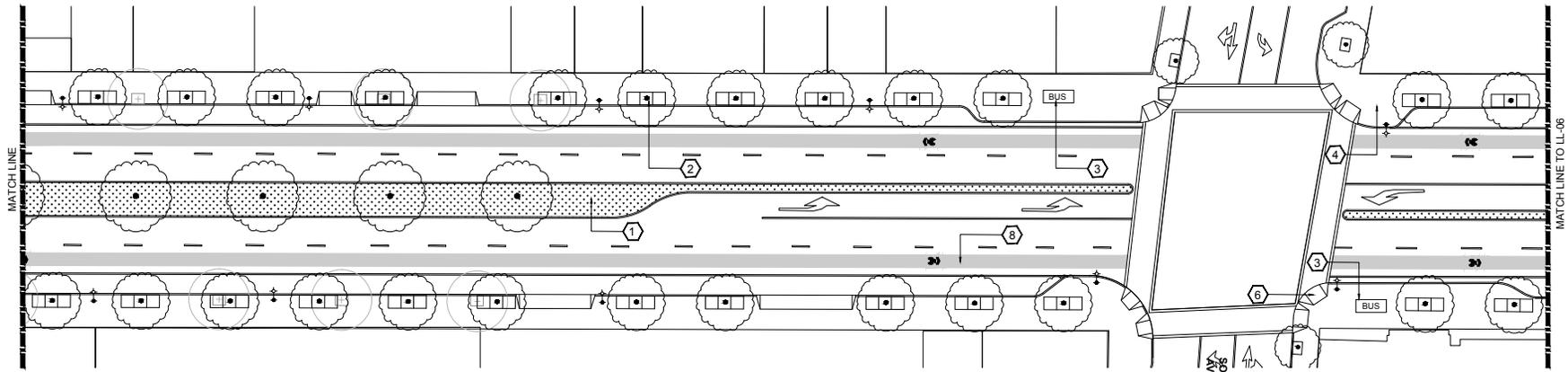
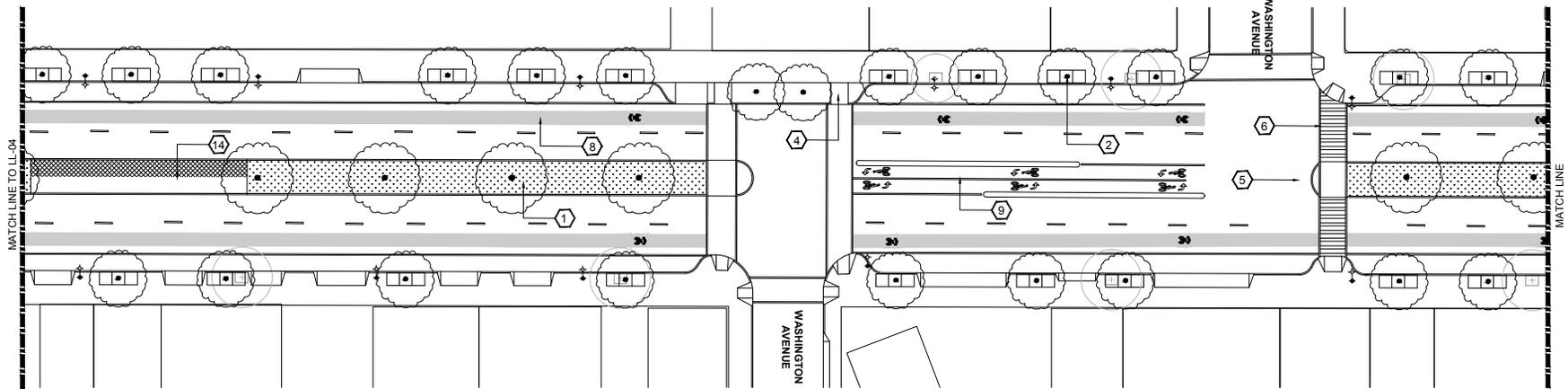
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DRAWN BY:	YJK
CHECKED BY:	JG
REVIEWED BY:	MM
DATE:	OCT 17, 2013

REGISTRATION:	
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CLIENT: *City of Albany*
Albany Complete Streets
San Pablo Ave. / Buchanan St.

LAYOUT PLAN SAN PABLO AVENUE	
SHEET: LL-04	DWG No. 04 OF 11



LAYOUT NOTES

- ① PLANTED MEDIAN, TYP.
- ② NEW STREET TREE, TYP.
- ③ BUS STOP WITH SHELTER
- ④ BULB-OUT, TYP.
- ⑤ PEDESTRIAN REFUGE
- ⑥ ENHANCED CROSSWALK WITH ACCESSIBLE CURB RAMPS, TYP.
- ⑦ BIKE LANE, TYP.
- ⑧ *SUPER SHARROW PAINTED LANE, TYP.
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- ⑮ STORMWATER SPINE PROJECT - RAIN GARDEN
- ⑯ BICYCLE DETECTOR PAVEMENT MARKING

LAYOUT PLAN
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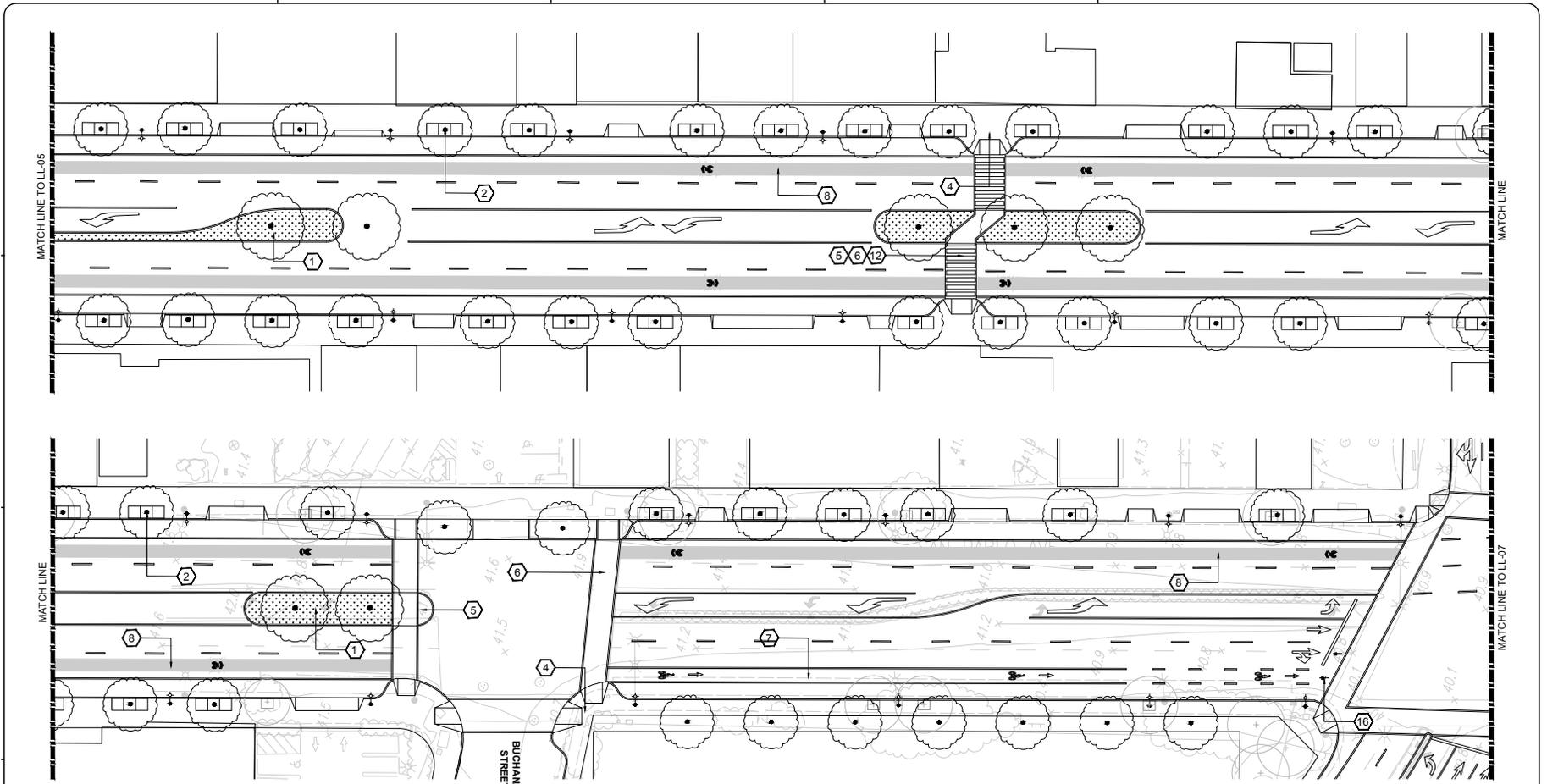
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REGISTRATION:	
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CLIENT:
City of Albany
**Albany Complete Streets
San Pablo Ave. / Buchanan St.**

LAYOUT PLAN SAN PABLO AVENUE	
SHEET: LL-05	DWG No. 05 OF 11



LAYOUT NOTES

- ① PLANTED MEDIAN, TYP.
- ② NEW STREET TREE, TYP.
- ③ BUS STOP WITH SHELTER
- ④ BULB-OUT, TYP.
- ⑤ PEDESTRIAN REFUGE
- ⑥ ENHANCED CROSSWALK WITH ACCESSIBLE CURB RAMPS, TYP.
- ⑦ BIKE LANE, TYP.
- ⑧ 'SUPER SHARROW' PAINTED LANE, TYP.
- ⑨ SPECIAL MEDIAN BIKE LANE
- ⑩ PEDESTRIAN ACTIVATED SIGNALIZED CROSSWALK
- ⑪ CREEK CROSSING GATEWAY OPPORTUNITY
- ⑫ MID BLOCK CROSSING
- ⑬ SAWCUT AND REMOVE
- ⑭ CONCRETE FROM BIKE LANE
- ⑮ MOUNTABLE EMERGENCY CROSSOVER
- ⑯ STORMWATER SPINE PROJECT - RAIN GARDEN
- ⑰ BICYCLE DETECTOR PAVEMENT MARKING

LAYOUT PLAN
STA 104 +00 TO STA 107 +50

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REV	DATE	DESCRIPTION

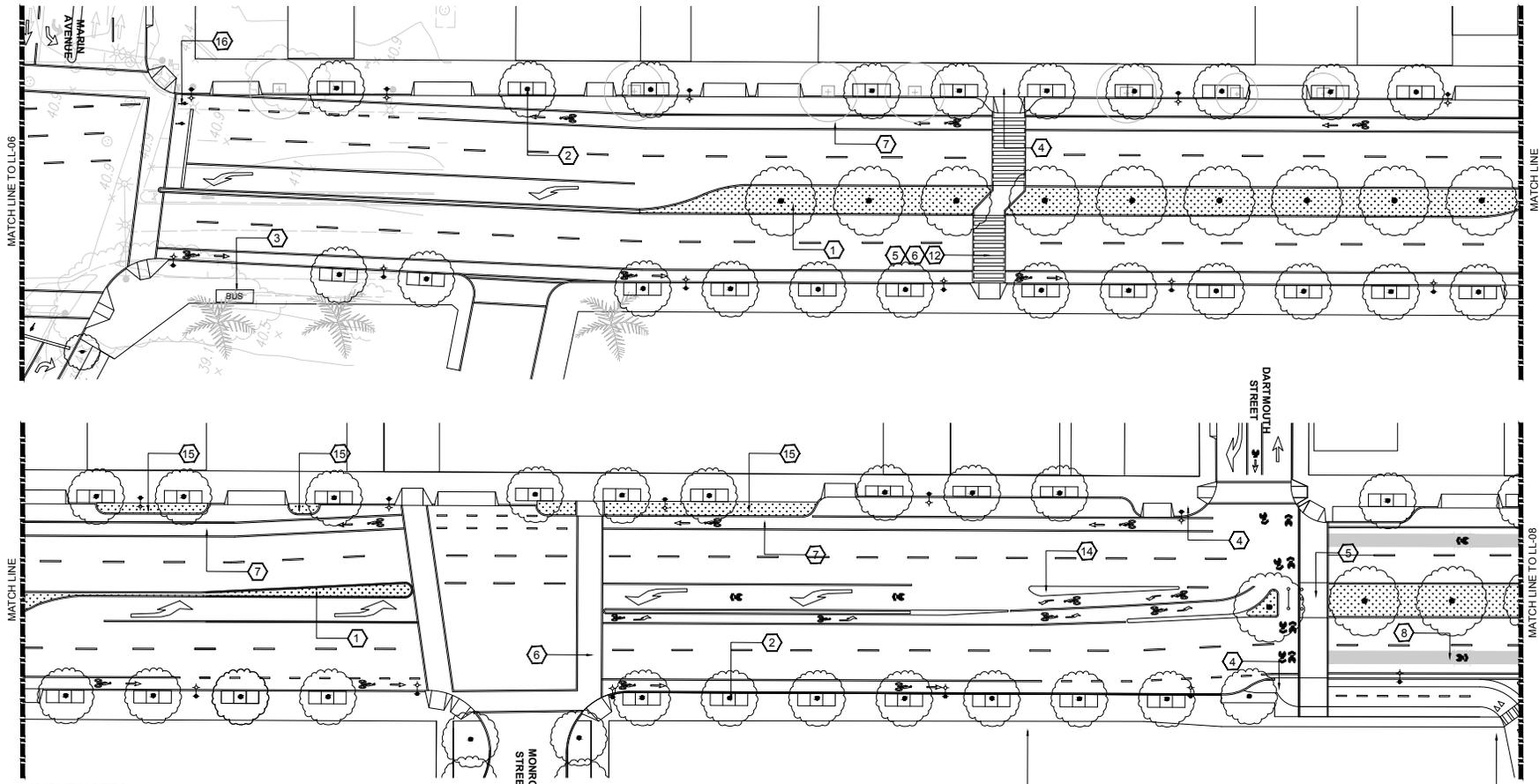
DESIGNED BY:	
DRAWN BY:	YTK
CHECKED BY:	JG
REVIEWED BY:	MM
DATE:	OCT 17, 2013

REGISTRATION:	
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CLIENT:
City of Albany
Albany Complete Streets
San Pablo Ave. / Buchanan St.

LAYOUT PLAN SAN PABLO AVENUE	
SHEET: LL-06	DWG No. 06 OF 11



LAYOUT NOTES

- 1 PLANTED MEDIAN, TYP.
- 2 NEW STREET TREE, TYP.
- 3 BUS STOP WITH SHELTER
- 4 BULB-OUT, TYP.
- 5 PEDESTRIAN REFUGE
- 6 ENHANCED CROSSWALK WITH ACCESSIBLE CURB RAMP, TYP.
- 7 BIKE LANE, TYP.
- 8 "SUPER SHARROW" PAINTED LANE, TYP.
- 9 SPECIAL MEDIAN BIKE LANE
- 10 PEDESTRIAN ACTIVATED SIGNALIZED CROSSWALK
- 11 CREEK CROSSING GATEWAY OPPORTUNITY
- 12 MID BLOCK CROSSING
- 13 SAWCUT AND REMOVE CONCRETE FROM BIKE LANE
- 14 MOUNTABLE EMERGENCY CROSSOVER
- 15 STORMWATER SPINE PROJECT - RAIN GARDEN
- 16 BICYCLE DETECTOR PAVEMENT MARKING

LAYOUT PLAN
STA 104 +00 TO STA 107 +50

SPECIAL FIRE DEPARTMENT ACCESS TO SIDEWALK FRONTAGE TO BE FURTHER DEFINED

0 20 40 60 80 100 FEET		
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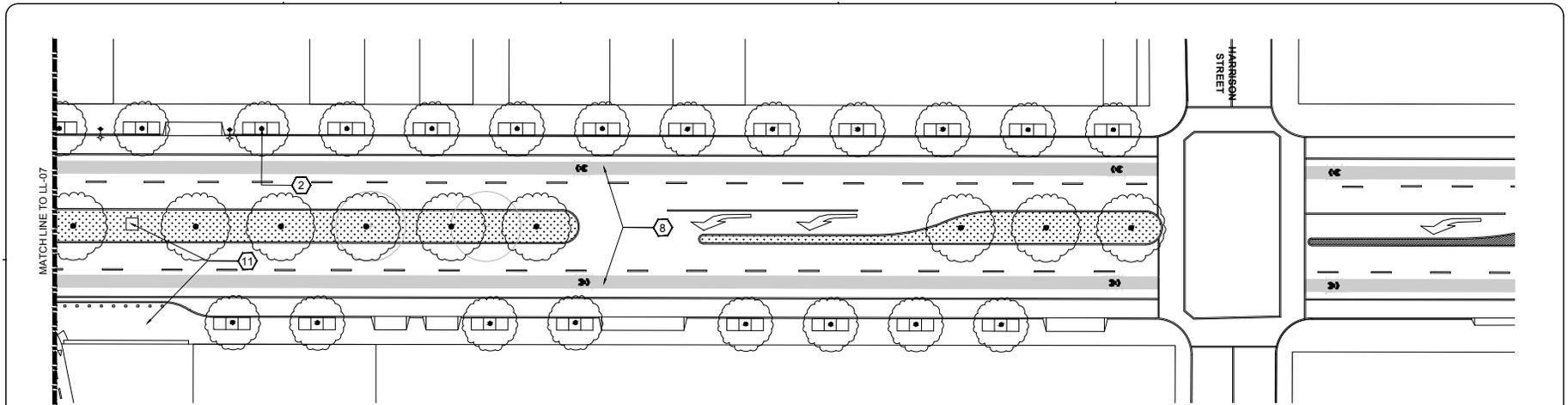
DESIGNED BY:	
DRAWN BY:	YTK
CHECKED BY:	JG
REVIEWED BY:	MM
DATE:	OCT 17, 2013

REGISTRATION:	
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CLIENT:
City of Albany
Albany Complete Streets
San Pablo Ave. / Buchanan St.

LAYOUT PLAN SAN PABLO AVENUE	
SHEET: LL-07	DWG No. 07 OF 11



LAYOUT NOTES

- ① PLANTED MEDIAN, TYP.
- ② NEW STREET TREE, TYP.
- ③ BUS STOP WITH SHELTER
- ④ BULB-OUT, TYP.
- ⑤ PEDESTRIAN REFUGE
- ⑥ ENHANCED CROSSWALK WITH ACCESSIBLE CURB RAMPS, TYP.
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- ⑭ MOUNTABLE EMERGENCY CROSSOVER
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- ⑯ BICYCLE DETECTOR PAVEMENT MARKING

LAYOUT PLAN
STA 104+00 TO STA 107+50

REV	DATE	DESCRIPTION

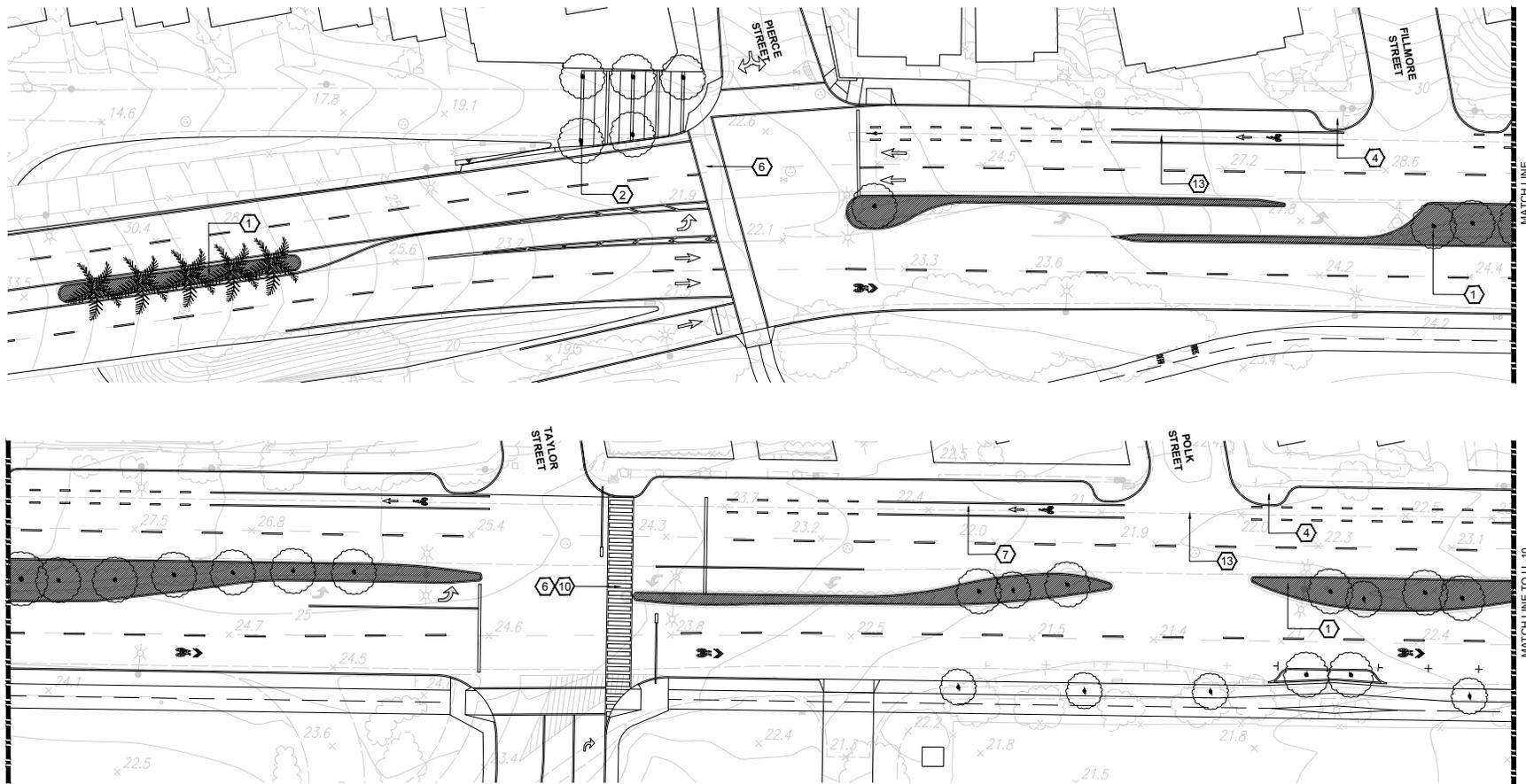
DESIGNED BY:
DRAWN BY: YTK
CHECKED BY: JS
REVIEWED BY: MM
DATE: OCT 17, 2013

REGISTRATION:

CLIENT:
City of Albany
**Albany Complete Streets
San Pablo Ave. / Buchanan St.**

**LAYOUT PLAN
SAN PABLO AVENUE**

SHEET: LL-08 DWG No. 08 OF 11



LAYOUT PLAN
STA 104 +00 TO STA 107 +50

LAYOUT NOTES

- ① PLANTED MEDIAN, TYP.
- ② NEW STREET TREE, TYP.
- ③ BUS STOP WITH SHELTER BULB-OUT, TYP.
- ④ PEDESTRIAN REFUGE
- ⑤ ENHANCED CROSSWALK WITH ACCESSIBLE CURB RAMP, TYP.
- ⑥ BIKE LANE, TYP.
- ⑦ *SUPER SHARROW PAINTED LANE, TYP.
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- ⑮ BICYCLE DETECTOR PAVEMENT MARKING

DESIGNED BY:		
DRAWN BY:	YTK	
CHECKED BY:	JG	
REVIEWED BY:	MM	
DATE:	OCT 17, 2013	
REV	DATE	DESCRIPTION

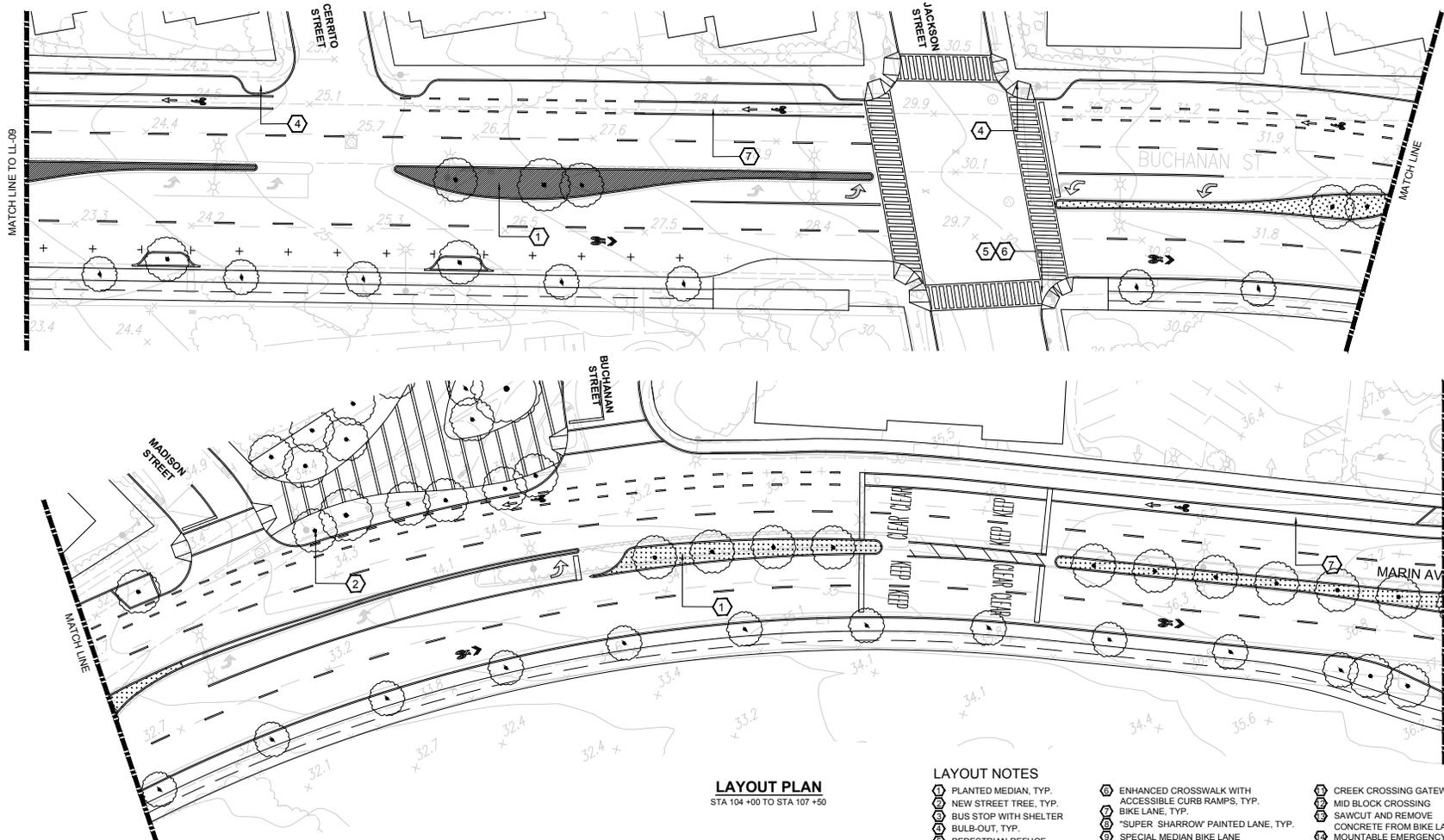
DESIGNED BY:
DRAWN BY: YTK
CHECKED BY: JG
REVIEWED BY: MM
DATE: OCT 17, 2013

REGISTRATION:

CLIENT:
City of Albany
**Albany Complete Streets
San Pablo Ave. / Buchanan St.**

**LAYOUT PLAN
BUCHANAN STREET**

SHEET: **LL-09** DWG No. **09** OF **11**



LAYOUT PLAN
STA 104 +00 TO STA 107 +50

LAYOUT NOTES

- ① PLANTED MEDIAN, TYP.
- ② NEW STREET TREE, TYP.
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- ④ BULB-OUT, TYP.
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- ⑯ BICYCLE DETECTOR PAVEMENT MARKING

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FEET

REV	DATE	DESCRIPTION

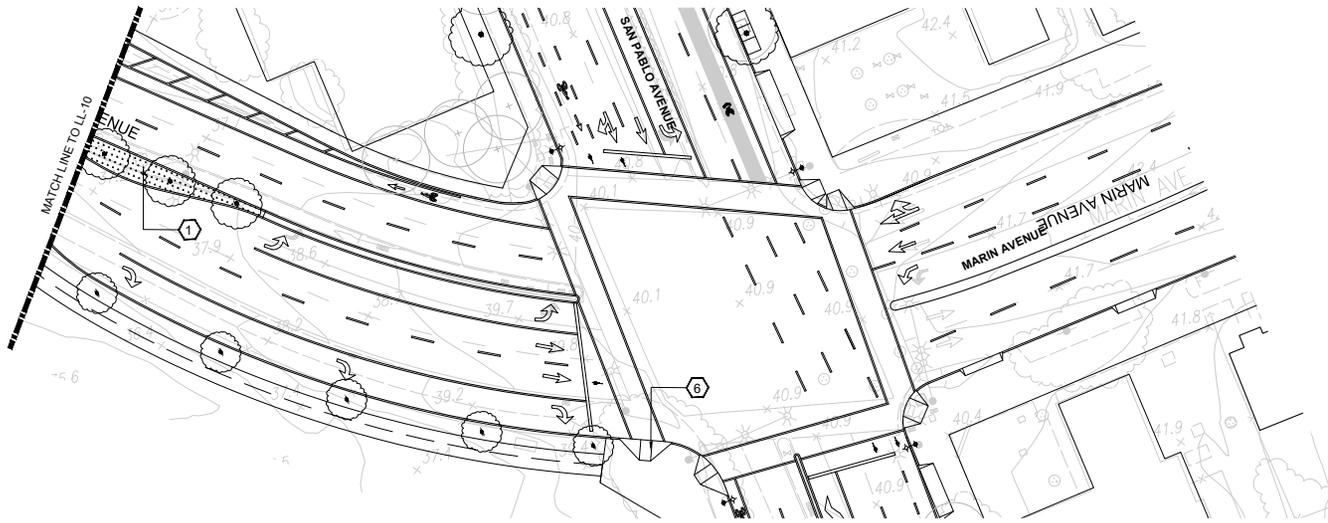
DESIGNED BY:
DRAWN BY: YJK
CHECKED BY: JG
REVIEWED BY: MM
DATE: OCT 17, 2013

REGISTRATION:

CLIENT:
City of Albany
**Albany Complete Streets
San Pablo Ave. / Buchanan St.**

**LAYOUT PLAN
BUCHANAN STREET**

SHEET: **LL-10** DWG No. **10** OF **11**



LAYOUT PLAN
STA 104 +00 TO STA 107 +50

LAYOUT NOTES

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REV	DATE	DESCRIPTION

DESIGNED BY:
DRAWN BY: YTK
CHECKED BY: JG
REVIEWED BY: MM
DATE: OCT 17, 2013

REGISTRATION:

CLIENT:
City of Albany
**Albany Complete Streets
San Pablo Ave. / Buchanan St.**

**LAYOUT PLAN
BUCHANAN STREET**

SHEET: **LL-11** DWG No. **11** OF **11**

Appendix B Focus Group Meetings

BIKE/PED, ADA, ACCESSIBILITY FOCUS GROUP Thursday, December 6, 2012 / 10:45am – 11:45am Albany City Hall

IN ATTENDANCE: Harry Chomsky – Albany Strollers and Rollers; Amy Smolens – Albany Strollers and Rollers; Peggy McQuaid, Margaret Tong, Michelle Jordan, Seniors, Jody Ames; Ken McCroskey – Albany Strollers and Rollers, SRTS Parent Champion; Jennifer Grove, Milo Drussai, Linda Zagula, and Jim Kletzing – Center for the Blind; Tenisha Neal; Michael Moule – Nelson\Nygaard (Consultant); John Gibbs – Wallace Roberts Todd (Consultant); Dan Burden – Walkable and Livable Communities Institute (Consultant); Josh Meyer – Local Government Commission (Consultant); Paul Zykofsky – Local Government Commission (Consultant); Shani Alford – Local Government Commission (Consultant); Danielle Rose – Nelson\Nygaard (Consultant)

MEETING PURPOSE: Participants met with design team to discuss and share opportunities and challenges along San Pablo and Buchanan Streets.

OPPORTUNITIES:

- There are a lot of cyclists and pedestrians using San Pablo today, despite its unfriendly biking and walking environment, there is huge demand for using this road.
- There is a misperception that busy streets need audible signals the most, but on those streets traffic noise will give the sound cue to persons with visual impairments who are crossing. It is at low traffic intersections that audible signals are really needed.
- Audible signals and street crossings in Alameda at Atlantic, residential area, also one at Pine and San Pablo, a new signal. When you push the button it will say “wait” and then “walk” and it will have a Braille directions

CHALLENGES/CONCERNS:

- Cycling on sidewalks is a huge hazard for pedestrians, especially at night.
- Son rides his bike on San Pablo to Ocean View and she instructs him to use the sidewalk, as it is the only way to get to school.
- There is no safe way to get to the Target by bike or foot, especially for kids.
- There is a lot of reported crime on San Pablo. It can be looked at in the crime reporting database available online. Some people do not feel safe walking there at night.
- There are a lot of roots and broken sidewalks in the city, which is very challenging for persons using a wheelchair, as well as for people with visual impairments.
- There is a tree limb across the sidewalk on San Pablo near the carwash.
- At Brighton and San Pablo it is a very long wait time for people turning onto San Pablo and so people are turning against the red, which is dangerous for pedestrians crossing in the crosswalk.
- Placement of pedestrian buttons is often too close to the curb cut, and so if a person is in a scooter or wheelchair may have to be at a steep angle to reach the button. Also, the pedestrian signals shouldn't be actuated, but should turn automatically.
- Crosswalk signal timings are too short and it is hard to get across in a slower scooter

- Bike from Albany to Berkeley, excited about a light at Pierce to cross Buchanan, currently goes under overpass and comes up, she is confident on Buchanan, a lot of cars parked and drop offs, people come off freeway quickly, it will be nice to have a bike lane.
- The light timing crossing San Pablo from Marin onto Buchanan is an issue. Bikes have to sprint across to avoid traffic and bikers don't feel seen by cars travelling westbound on Marin and turning right onto San Pablo, often at risk for a right hook.
- Cycling on San Pablo is okay late at night because it's well lit and traffic volume is lower
- On San Pablo there is a lot of stuff in the sidewalk furniture zone, there isn't room to unload the wheelchair from the vehicle
- Guy wires are an issue for people with visual impairments if they aren't placed out of the pathway.
- Cars overhanging on the west side of San Pablo, and all over town, people park across their driveways, which blocks the sidewalks and is a particular hazard for people in wheelchairs or with vision impairments.
- Often there is construction blocking the sidewalk which forces people to have to walk into the street, a very dangerous situation.
- Streets without a planting strip, driveways are cut into the sidewalk and on the scooter it is tilted, old driveways, feels like she might fall over in the scooter
- Sidewalk cut outs with truncated domes, look to be non-slip but are actually slippery in wet weather on a bicycle or on foot. Tactile warning surface
- Curb ramps aren't in consistent places leading into the crosswalk, gets confusing and can be hard to see
- On San Pablo, some of the ramps are at the diagonal, have to go into busy traffic, need to have ramps on both directions not just one in the middle. Drainage issues at the curb cuts, often there will be a large puddle there.
- Crossing distance across San Pablo is long, how do people feel about a median refuge?
 - Needs to be big enough for a scooter or wheelchair
 - Can't likely put in new signals due to volume requirements, but there are tools like the pedestrian beacon and the median
 - Having kids wait in the median with traffic coming in both directions does not feel safe as a parent
 - Median, slows down drivers as a perceived obstacle
 - Concerns about the hybrid beacon
 - Pedestrian hybrid beacon, red light signal device- can get approval with only 20 peds per hour, much lower threshold. Other is a yellow flashing beacon, we recommend a rectangular rapid flash beacon with the ped crossing signs, and is as effective or more effective
 - Concerned about pedestrians, false sense of security with crosswalk markings,
 - Advanced yield lines in El Cerrito.

ECONOMIC DEVELOPMENT FOCUS GROUP

Friday, December 7, 2012 / 9:30am – 10:30am
Albany City Hall

IN ATTENDANCE: Allen Cain – Director, Solano Avenue Association; Tod Abbott – Albany Chamber of Commerce; Datchanee Colvin – Metta Traditional Thai Massage; Aleida Andrino-Chavez – City of Albany; Ken Friedman – Albany Bowl; Jason Alabanza – Mechanics Bank; Winkie Campbell-Notar – Albany Chamber of Commerce; John Nakamura – Albany Ford Subaru; Tim Hilliker – Kaddy Car Wash; Michael Moule – Nelson\Nygaard (Consultant); John Gibbs – Wallace Roberts Todd (Consultant); Dan Burden – Walkable and Livable Communities Institute (Consultant); Josh Meyer – Local Government Commission (Consultant); Paul Zykofsky – Local Government Commission (Consultant); Shani Alford – Local Government Commission (Consultant); Danielle Rose – Nelson\Nygaard (Consultant)

MEETING PURPOSE: Participants met with design team to discuss and share opportunities and challenges along San Pablo and Buchanan Streets.

OPPORTUNITIES:

- The Albany Bowl is on a three acre site fronting San Pablo. The signalized intersections around the parcel are intended to enhance the future development potential of the site.
- Business owners want to make San Pablo more inviting and walkable; make people notice where they are in Albany. One idea is to activate a few intersections with diagonal crossing and make the street very visible and easy to cross. It's very challenging for businesses on the west side of San Pablo at Solano.
- San Pablo at Solano is the only enhanced crosswalk along the corridor.
- The regional impression of Albany is of traffic along San Pablo, but auto-related businesses are important for sales tax revenue.
- What is the unique identity of Albany? Small town feel, a village, but it's also urban. People want an intimate, small, friendly, casual, laid back, and traditional neighborhood but there is a major thoroughfare going through it.
- The vision is to have an urban environment where people have to slow down and enjoy the town when they get off the freeway.
- Solano has diversity of businesses, independently owned businesses, and a majority of business owners live within the community.
- A lot of infrastructure needed to pull off public art like something grand, focus more on the village than the urban, we can't compete with the national brand draws, has to be a unique village kind of atmosphere.
- Business would like a mural program related to historical scenes of Albany. Could use it to tell the history of the corridor. The Albany Bowl used to be the Jetson Dynamite Company.
- Business owners did a zipcode survey that suggested about 50/50 business is from Albany and outside of Albany.

- It would be great to better connect Solano and San Pablo to increase the Solano pedestrian district.
- Bay Street in the East Bay is a good example of a walkable retail area. People spend time and money there and it's only three blocks long, and they have parking structures on Bay Street. Walnut Creek is another good example of a new walkable area, with sidewalks, sitting areas, trees, and a shopping center.

CHALLENGES/CONCERNS:

- Due to the residential nature of the street behind the Bowl, there are no commercial uses along those streets. There are parking issues back there so the Albany Bowl closed the rear driveway entrance to their parking lot.
- There are a lot of small parcels along San Pablo so it is hard to encourage development. They down-zoned from four to three-story height limits along this area.
- The City Maintenance Department is only four people, and they are very strained. Any new improvements to the street could cause a burden for them.
- The intersection at San Pablo and the Bowl is a well-travelled intersection for students. A child was hit at Clay and Brighton at San Pablo.
- Local businesses cannot survive on just 18,000 people (the population of the city), so they need to bring people in from out of the town. National retailers see Albany as a great place to serve Berkeley and Richmond as well. The city is located very centrally for the east bay. Although parcel sizes on San Pablo are very small and parking is limited. The neighborhoods are very opposed to parking garages.
- Need major anchor retailers and parking to go with it on either end of San Pablo. Have to have a balance, though a concern is parking and traffic generation. Also juxtaposed against concept of "local" and sustainability.
- Apple looked at Solano for a store. While the weekday foot traffic numbers are very good, with two schools, insurance agencies, and banks, but it's pretty empty on weekends.
- A raised median would negatively impact the car wash, which serves 1,000 cars per day, so there must be a turn lane there. The Subaru dealer also needs one; they have about 75 cars per day and are hoping to grow.
- Medians also raise concerns about trash and overgrown plantings. It may create a maintenance issue.
- Some business owners feel that the center lane is critical for the businesses. Some have heard that El Cerrito businesses are not doing so well since they put in their median.
- Since there aren't alleys behind the businesses, the center median is used for delivery van parking space. Business owners are very concerned about restricting access, some business rely on "impulse" traffic of those passing by who can easily access the business without having to make a u-turn. If the median impacts the automotive businesses, it hurts the city by reducing sales tax revenue.
- A couple years ago the city considered parking meters on Solano and businesses were against it until it was expressed what the benefit would be and how would it help the businesses. The argument for medians needs to be made very obvious for businesses to accept it. Show that they will make the area more appealing and will permit safer pedestrian crossings of San Pablo.
- 90 minute parking is not long enough for the Thai massage business; they need two-hour parking limits.

- It would be useful to demarcate businesses with visual markings to indicate where a person should turn in for the driveways for each business.
- Walkability is important for retail on San Pablo. However, there is a unique challenge here because residential is directly behind the businesses.
- Street tree root encroachment into buildings and sidewalks is ruining the sidewalks and foundations of the buildings. The planter boxes on El Cerrito define the tree areas and are a good example.
- The crossing at Washington is an issue. Pedestrians are fearful of crossing the street, and there is a signal ½ block down, so it would be tough to put in another, but there needs to be a way to cross at Washington for the success of the businesses and for pedestrian safety.
- A diagonal crossing at Solano and San Pablo would really help the visibility and identification of the node and might help pull more people onto Solano.
- There are large trees on San Pablo that distract from or obscure the signage of businesses. There is concern that customers won't see what businesses are there. Also, tree leaves are a hazard for slipping and require a lot of maintenance by business owners.
- Bicycle racks are very limited on San Pablo; there need to be more bicycle racks because a lot of people bike to BART or work in the area.
- Currently businesses have to pay for the bike rack; it would be great if there was a city program to pay for bike racks.
- Business owners would like to see smaller trees along San Pablo to communicate the small town feeling rather than a grand boulevard. At the east end of Solano Ave there are Japanese Maples, which is a good tree.

EMERGENCY/POLICE STAKEHOLDERS FOCUS GROUP

Friday, December 7, 2012 / 2:00pm – 3:00pm

Albany City Hall

IN ATTENDANCE: Battalion Chief Brian Crudo – Albany Fire Department; Ava Snyder – UC Berkeley Police; Ken Torres – UC Berkeley Police; Lt. John Geissberger – Albany Police Department; Chief Mike McQuiston, Albany Police Department; Chief E.W. Tubbs – Albany Fire Department; Captain Dustin Wiggins – Albany Fire Department; Claire Griffing – City of Albany; Michael Moule – Nelson\Nygaard (Consultant); John Gibbs – Wallace Roberts Todd (Consultant); Dan Burden – Walkable and Livable Communities Institute (Consultant); Josh Meyer – Local Government Commission (Consultant); Paul Zykofsky – Local Government Commission (Consultant); Shani Alford – Local Government Commission (Consultant); Danielle Rose – Nelson\Nygaard (Consultant)

MEETING PURPOSE: Participants met with design team to discuss and share opportunities and challenges along San Pablo and Buchanan Streets.

CHALLENGES/CONCERNS:

- Emergency responders use the center turn lane for emergency access along San Pablo when the roadway is congested. While fire trucks can clear some medians, if the city installs raised medians it may be an obstacle to emergency response times in the city.
- San Pablo is the secondary route when there is an issue on the freeway, which usually occurs during peak hours, so emergency access along that route is critical.
- San Pablo, Marin, and Solano are the major routes to get to the four quadrants of town, as they are quicker and safer for use by the large vehicles. Fire engines have continued to get bigger over the years.
- Fire code requires 20 feet for emergency vehicles roadside, but San Pablo is not one to bargain with.
- Currently, the open center median is used by delivery trucks on San Pablo during the day to prevent blocking traffic and double parking.
- The city's only station house is located at City Hall (San Pablo and Buchanan).
- The intersection control at San Pablo and Solano is problematic for emergency vehicles. At San Pablo and Buchanan and at Santa Fe, the Fire Department controls that intersection when they pull out of the station house.
- The Fire Department runs crews as small as two people. There are six on duty at all times, and they staff an engine, ambulance, and truck. They strive for a five minute response window, and have back up aid from Berkeley, Richmond, and El Cerrito. Those cities use San Pablo as well.
- The uncontrolled crosswalks on San Pablo are too dangerous. They need flashing lights like they have in Berkeley to light up the crosswalk. The crosswalk at Washington is a major issue.
- On the block with the Ford Subaru, service employees cross mid-block without a crossing and the city allows this because it has not created an issue.

- A center turn lane is very functional for emergency response and deliveries for businesses along San Pablo. In Berkeley, where they do not have a center lane, it results in much more double parking and traffic. Our philosophy is to let businesses use it for deliveries.
- There are very few loading zones on San Pablo and parking is at a premium. At Kaines just south of Solano there is a loading zone, but it is not large enough for a double decker car transport carrier.
- There is a Jump-in Lane in Emeryville for emergency vehicles to cross the median, not drive along it.
- There is concern that trees will block visuals along the street when they're located in the median.
- Corner turning radii have to take turning requirements of the largest Fire Department apparatus into consideration
- At San Pablo and Brighton the crosswalk seems to be on the wrong side. There have been quite a few collisions there with pedestrians. People making the left turn don't see the pedestrians. That intersection is also a middle school crossing with a lot of kids walking through there.
- Crime issues are usually due to people coming to Albany from outside of the area.
- Marin is a very dark street at night and there are CPTED issues. The neighborhood isn't well lit and commercial and residential are located very near to each other, so the residents don't want lots of lighting on Marin like it is on San Pablo.
- The city considered closing off the leg of Buchanan behind City Hall to give the police station more space. The argument against it was due to the truck route. Solano and San Pablo are the truck routes; trucks are not permitted on Marin. The truck route requires that segment of Buchanan to be used as the primary in and out because trucks can't make the right turn from southbound San Pablo to westbound Marin.
- Speeding on Buchanan has always been a problem. Cars exit the freeway and treat Buchanan like an off-ramp.
- Traffic backs up west of Jackson on Buchanan
- Could use landscaping screens on the bridge near the freeway
- The front of fire station is not striped and there have been a number of issues and near misses.

QUESTIONS:

- What is the long term plan for maintenance and care of center medians? It will be important to maintain sightlines.

NEARBY RESIDENTS FOCUS GROUP

Friday, December 7, 2012 / 3:15pm – 4:15pm
Albany City Hall

IN ATTENDANCE: Tavie Tipton – University Village Resident; Dawn Martin Rugo – UC Village Resident; Rania Ramadan – UC Village Resident; Diane Delany – Cerrito St Resident; Dick Lavrov – Cerrito St Resident; Tess Lengyel – Cerrito St Resident; Ed Fields – Kains Ave Resident; Susan Moffat – Kains Ave Resident; Meghan Beynon – Madison St Resident; Farid Javandel – City of Albany Mayor and Traffic Engineering Committee; Claire Griffing – City of Albany; Michael Moule – Nelson\Nygaard (Consultant); John Gibbs – Wallace Roberts Todd (Consultant); Dan Burden – Walkable and Livable Communities Institute (Consultant); Josh Meyer – Local Government Commission (Consultant); Paul Zykofsky – Local Government Commission (Consultant); Shani Alford – Local Government Commission (Consultant); Danielle Rose – Nelson\Nygaard (Consultant)

MEETING PURPOSE: Participants met with design team to discuss and share opportunities and challenges along San Pablo and Buchanan Streets.

OPPORTUNITIES:

- Marin St road diet has worked really well for Albany. While they reduced the number of through lanes it didn't reduce the capacity. There are longer queues but traffic flows more smoothly. It is easier for pedestrians to cross and is a way to improve a facility without creating barriers and forcing a neighborhood cut-through.
- The UV project is supposed to install a hawk signal at Dartmouth.

CHALLENGES/CONCERNS:

- Residents are worried about traffic around the proposed University Village at Buchanan and Jackson, although if traffic is restricted from turning it might improve the situation.
- In Albany, children walk all around the city. Parents have hired crossing guards at San Pablo and Buchanan to get children from the UV and West Albany to and from all three elementary schools in the city.
- San Pablo is dangerous to cross. After a fatal traffic injury of a child at Monroe and San Pablo the UV got a stoplight installed at that location.
- The corner of Marin and San Pablo is a problem spot.
- The intersection at Jackson and Buchanan is much better since it's been updated.
- There is an issue with cut through traffic through the neighborhood north of Buchanan. People cut through there to avoid San Pablo. There is also rampant running of red lights at Marin and San Pablo.
- UV residents use Dartmouth to bike to campus. The turn is really dangerous at Marin and Dartmouth (jogged turn) to cross San Pablo. and that turn at sp is really dangerous. Dartmouth is the only east-west connector to the Bay Trail for 10 or so miles, so for the route to recognize the

creek, connect to the community garden, and create a legible route to our amazing waterfront would give the city an identity as a waterfront city.

- People drive over 25 mph on Marin, even though that is the speed limit.
- The priority in this process should be about making alternate modes of transportation work better.
- Some of the neighborhood streets are organizing to get traffic slowing devices installed, like speed bumps, to slow the cut through traffic.
- Marin is great for biking except for nearing Buchanan and San Pablo. The right turn lane for westbound Marin is problematic. The loop detector doesn't recognize bicycles. There is also the gas station driveways, parked cars, and traffic that is speeding up that creates hazards for bicyclists.
- Cars parked over the sidewalk makes it very hard for people in wheelchairs to get through.
- Like in Berkeley, Albany should divert traffic off the neighborhood streets onto San Pablo and Solano. One resident would like to see 'No Lefts during Commute Hours' on Buchanan, and also restricting U-turns.
- It isn't safe for children to walk to the fields at UV from the homes on the north side of Buchanan. The crosswalk at the USDA building was removed because it was too used, and since then traffic has gotten even faster. It is impossible to cross in a safe way at that end of Buchanan. Police used to enforce speeding, but it does not seem like they are out there enforcing the speed limit anymore.
- Non-vehicular access to USDA is very challenging.
- Speeding on Buchanan is a major concern for residents of the area.
- San Pablo is not an attractive walking destination.
- Encountering bikes on sidewalks as a pedestrian is very scary.
- Lots of people try to walk to target but it is unsafe and unattractive. With the new improvements there will be a plaza. At that location there should be a sign to tell people how to get around to Target by going under the overpass.
- Something should be done to make that proposed plaza a better place to arrive, with a café perhaps.
- Standardization of curb cuts along San Pablo is needed.
- When crossing San Pablo at Marin and Dartmouth, some bikes turn into the car rental business driveway and make a mad dash across the street by cutting through the key shack parking lot. It is dangerous for bikers and pedestrians.
- There is no contiguous connection between east and west Albany because of San Pablo. There need to be some consideration of visual aesthetic and tree canopy along the roadway.
- There is no sense of scale on Buchanan, nothing to break up the long roadway stretch. There needs to be a pedestrian crossing at Taylor to the USDA driveway, maybe with flashing beacons.
- If there is a traffic signal at Pierce Street, it could use westbound traffic speed detectors and cut off the green light if traffic is going too fast. They're doing it in Boulder, Colorado.
- There needs to be pedestrian-scale lighting on San Pablo and Buchanan.
- There is resistance to development over three-stories on San Pablo by the residents who live behind those parcels.
- With the proposed retirement community on San Pablo, there will be pedestrian safety issues. It needs to be very safe and easy for seniors to cross, with bulb outs and medians, and restrict parking around the crossing to improve visibility.

- There doesn't seem to be parking enforcement on San Pablo, seems that some cars are parked for over 90 minutes, very long times.

QUESTIONS:

- Is there anything else that can be done to facilitate development on San Pablo? The three-story height limit makes things really challenging, but land uses need to change along there. It's an auto row right now.

PUBLIC AGENCIES FOCUS GROUP
Thursday, December 6, 2012 / 12:30pm – 1:30pm
Albany City Hall

IN ATTENDANCE: Jeff Bond – Planning and Zoning Commission Staff Liaison; Lee Huo – ABAG; Isabelle Leduc – Arts Commission Staff Liaison; Josh Bradt – San Francisco Estuary Partnership; Aleida Andrino-Chavez – Traffic and Safety Commission Staff Liaison; Sean Ho – MTC; Eric Anderson – City of Berkeley; Yvetteh Ortiz – City of El Cerrito; Kevin Hufferd – UC Berkeley; Claire Griffing – Sustainability Committee Staff Liaison; Rochelle Wheeler – Alameda County Transportation Commission; Stephen Newhouse – AC Transit; Nathan Landau – AC Transit; Michael Moule – Nelson\Nygaard (Consultant); John Gibbs – Wallace Roberts Todd (Consultant); Dan Burden – Walkable and Livable Communities Institute (Consultant); Josh Meyer – Local Government Commission (Consultant); Danielle Rose – Nelson\Nygaard (Consultant)

MEETING PURPOSE: Participants met with design team to discuss and share opportunities and challenges along San Pablo and Buchanan Streets.

OPPORTUNITIES:

- The Climate Action Plan's vision is to make the city more walkable and bikeable, with parking management strategies as well.
- San Pablo is seen as a transit corridor to be enhanced and maintained.
- The Alameda Countywide Bike Plan does not have a designated bikeway on San Pablo.
- There is a Complete Streets policy requirement at the county-level; all jurisdictions in the county are currently developing these policies. The MTC also has a Complete Streets policy for all projects in the Bay Area.
- The Bay Trail Project is for a 500 mile trail along the shoreline. In Albany, the Bay Trail is mostly complete, except for Golden Gate Fields, and the priority is connecting the urban areas, like Solano and San Pablo, to the Bay Trail. The freeway corridor is an obstacle.
- The City has an Art in Public Places ordinance and a Public Art Master Plan, and has an interest in ensuring the inclusion of art along San Pablo and Buchanan. There could be art gateways at both ends of San Pablo in Albany so that you know you have arrived in the city.
- The Estuary Partnership is a green streets project along San Pablo in partnership with seven cities. They advocate for projects such as stormwater treatment in the public right-of-way.
- There are two creeks in Albany, at the north and south end of San Pablo, and there is a creek restoration effort currently underway. Recently, Salmon was found in the Cordnices Creek.
- The City of Berkeley is interested in connection to Albany, including bike lanes on 9th Street and Verne Avenue. The median along San Pablo in Berkeley does not continue through Albany, and picks up again in El Cerrito.
- The University Village is a 77 acre housing development owned by UC Berkeley. It is mostly student housing for international students and students with children.
- Along San Pablo Ave, the University is planning to develop a 6 ½ acre parcel into a mixed use development with assisted senior living, a 45,000 ft² grocery store, and 30,000 ft² of retail. The

project has been delayed due to environmental challenges. The specific development will depend on tenant needs that have yet to be determined. The parcel at Buchanan and San Pablo is known as the Gill Tract, and it will remain agricultural land.

- University Village residents commute to the University every day, and there are several bus routes that serve the University Village.
- San Pablo in El Cerrito is designated as a state route with regional traffic and a rapid bus route. Because it is a state route, it needs to be a multimodal corridor and function well for autos, transit, and all modes.
- San Pablo in Berkeley between University and Addison is a quite lively block. There is continuous street frontage and pedestrian activity. This is a good example on the corridor and was featured in the MTC's Pedestrian District Strategy.

CHALLENGES/CONCERNS:

- San Pablo is designated as one of the top six corridors at AC Transit. The agency has an interest in ensuring that improvements for pedestrians and bicyclists along the corridor are also positive or neutral on transit operations. For instance, pedestrian bulbs at intersections can be problematic, but if they are extended into bus bulbs and located at bus stops, or are located at the other corners of the intersection where there is not a bus stop, then they will not impact or will improve transit operations. In general, AC Transit locates bus stops at the far side of signalized intersections when possible.
 - Currently the Route 72 Rapid has signal priority on San Pablo. There is a bus (local or rapid) every 7-8 minutes in each direction on San Pablo.
- In El Cerrito, the center median created issues for the Police Department as visibility was reduced when the plantings grew. They have since replaced it with turf. It is the City's responsibility to maintain the median.
- The City proposed making Kains and Adams streets two-way (they are currently both one-way) to make them more viable options for non-arterial parallel bike streets. The residents of those streets rejected the last proposal.
- Along San Pablo, single family homes are backed up right against San Pablo properties, so there is some potential conflict of use there.
- Currently there isn't anything along San Pablo to make people want to stop, like it is along Solano. It's just a conduit for cars, needs to reflect Albany's identity and have nice elements like parklets.
- Albany is really walkable around the high school and on Solano. On San Pablo, the vehicle traffic is very loud, and restaurants on the west side of the block at Solano fail because people do not want to cross over the street when coming from Solano.
- Bike lanes on San Pablo would require narrowing lanes and a narrower median.
- AC Transit noted that it's buses are 9.5 feet wide and they need at least 11 foot lanes for both the inside and outside lanes, as the Rapid passes the local buses using the inside lane.
- Berkeley has invested in bicycle boulevard connections paralleling main arterials like San Pablo rather than separated facilities.
- There is a lot of bicycle traffic on the sidewalk on San Pablo, so this issue needs to be addressed.
- The group discussed bicycle access to and through the planned University Village development. The Rollers and Strollers wanted a two-way cycletrack along the west side of San Pablo adjacent to the development. However, UV had issues with conflicting uses, as there will need to be a bus stop in front of the site, as well as a loading zone for the senior facility.

- The senior housing facility plans to propose an auto entrance to their project along San Pablo, not just a loading zone. This driveway may further complicate the bicycle facility. Other suggestions are to connect the bicycle facility behind the new development and connecting to Jackson. A Class I bike facility might be more easily accommodated on Jackson than San Pablo due to continuity and traffic volumes.
- The crossing of San Pablo from the UV development to Dartmouth, which connects to a Berkeley bike boulevard, is currently very dangerous and challenging. Some bikers wait in the center turn lane to make the full crossing.
- The intersection of Buchanan and Jackson intersection sees a lot of foot traffic during school hours.
- There are more traffic concerns when children are crossing at Buchanan and Jackson.
- The weather can create traffic congestion and safety concerns at the crossings used by students/parents coming and leaving the school grounds. This is the case at all schools.
- Most traffic tends to head south on Jackson.
- Albany Middle School does not have a parking lot, so teachers and staff tend to use Key Route Boulevard for parking.
- There is a Children Center located on Jackson, where there is some vehicle congestion, which is a concern.
- There are no school buses in Albany, but there may be busing for special education.
- Marin Elementary School and Ocean View Elementary School will be going through major construction in the next two years.
- Key Route Boulevard and Santa Fe have speed bumps.

EDUCATOR FOCUS GROUP

Thursday, December 6, 2012 / 9:30am – 10:30am
Albany City Hall

IN ATTENDANCE: Maya James – Parent, Cornell Elementary School; Ralph Boniello – Parent, Cornell Elementary School; Tom O'Brien – Parent, Marin Elementary School; Jill Cooper – Parent, Albany Elementary School; Stefan Cajina – Parent, Marin Elementary School; Johanna Pace – Teacher, Albany Middle School; Claire Griffing – SRTS Coordinator, Albany High School and Middle School; Liam Kelley – City of Albany; Nick Armour – City of Albany; Michael Moule – Nelson\Nygaard (Consultant); John Gibbs – Wallace Roberts Todd (Consultant); Dan Burden – Walkable and Livable Communities Institute (Consultant); Josh Meyer – Local Government Commission (Consultant); Paul Zykofsky – Local Government Commission (Consultant); Shani Alford – Local Government Commission (Consultant); Danielle Rose – Nelson\Nygaard (Consultant)

MEETING PURPOSE: Leaders from local schools districts met with design team to discuss and share opportunities and challenges along San Pablo and Buchanan Streets in Albany related to student and school transportation issues.

OPPORTUNITIES:

- School aged youth in the city often walk from one school to another, either for after school programs or classes. The middle school holds some classes at the high school. Because of this, and the school choice program in Albany, students are coming from a number of locations to each of the four elementary schools, middle school and the high school.
- The efforts of Walk and Roll to School day have led to more kids walking and biking to school in Albany.
- Of all Safe Routes to School grants the city gets, 10% is applied to education programs, which is used to organize parents and implement Walk and Roll programs. The Environmental Clubs at the school are also involved.
- The signalized crosswalks in El Cerrito on San Pablo between Fairmont and Central are really nice. There is a pedestrian beacon and in pavement flashing and it is working really well, pedestrians are crossing there now.
- At Harding Elementary School in El Cerrito, they have put in bulb outs around the school and a crossing table with curb extensions. These treatments are very high contrast and seem to work well. There is also a right turn on red restriction at that intersection.

CHALLENGES/CONCERNS:

- Need to increase awareness for cars of the presence of bikers and pedestrians throughout the city. Specifically, Masonic and Brighton at the Middle School has an issue)
- It is dangerous and challenging to bike at Marin Ave and San Pablo when approaching the east leg of the intersection travelling westbound. The bike lane ends at Stannage and the road

narrows, and many cars are making a right onto San Pablo. This makes it hard to get from Cornell to Ocean View Elementary

- There need to be more trees and medians on San Pablo to create more obvious crossings, as well as bigger and bolder crosswalks. Crossing San Pablo is very dangerous and intimidating, especially at unsignalized and marked crosswalks. There have been several pedestrian's hit, some deaths, in the past few years, including children.
 - At Monroe and San Pablo, the access to University Village a child was killed crossing San Pablo, which led to a safety campaign and the closing of the northern crosswalk at that intersection.
- Crossing at Jackson travelling northbound from Ocean View, there isn't a good place for bicyclists to wait at the signal or travel through the intersection. This is an issue as motorists are travelling at higher speeds and trying to beat the stoplight.
- The crossing at Santa Fe Ave and Marin Ave outside Albany Middle School feels unsafe due to conflict with left turning vehicles.
- San Pablo is a much nicer street in El Cerrito because of the medians. In Albany, speeding is an issue on San Pablo.
- Due to all of the turning movements at the intersection of Marin and San Pablo, the bike path planned for the south side of Buchanan/Marin needs to extend through the intersection, on the left side of the right turn lane. There needs to be a place for bikes at that intersection.
- Students are concerned about turns into their lane when they're in a crosswalk and the lights don't last long enough, particularly at Brighton and San Pablo and at Clay and San Pablo.
- There is no crosswalk between the intersection of Castro and Clay along San Pablo, so students just run across the street at Garfield.
- Walking feels unsafe at night on San Pablo in regards to crossing, especially at uncontrolled crosswalks. The street is very wide.
- Kids have to wait too long for the walk cycle at Solano and Brighton along San Pablo and it is a deterrent to walking to school and obeying the crossing signals.
- At the reconstructed intersection at Jackson and Buchanan, there is a missing crosswalk on the eastern side. Kids feel it is inconvenient and there is not enough time to cross. The Albany Active Transportation Plan recommended opening that crosswalk. Parents would also like to see a pedestrian lead signal there, like the one at Marin and Santa Fe.
- Many parents do not let their kids walk to school because they think crossing San Pablo is too unsafe.
- There are bike/ped/car conflicts at the Ohlone Trail and Albany Middle School.
- Crossing San Pablo at Dartmouth and Monroe is a challenge. This is an important bicycle connection. Currently, there isn't a bike loop at Monroe, so you have to press the ped button. Also, people use the center turn lane or the sidewalk, and there are many hazards present.
- The walk signals in Albany don't automatically trigger, they have to be pressed to show the walk sign. They should have to automatically change because it is frustrating for pedestrians.

QUESTIONS/OTHER NOTES:

- Pedestrian counts are available for peak hour on Brighton for school and non-school days.

Draft City of Albany Focus Group Meetings

Group Interviews

Schools	
Thursday, Dec 6 9:30-10:30 am	Tom O'Brien, Marin Elementary School, Parent Stefan Cajina, Marin Elementary School, Parent Sarah Oldershaw, Ocean View Elementary School, SRTS Parent Champion Dianne Delaney, Cornell Elementary School, Parent Maya James, Cornell Elementary School, Parent Ralph Boniello, Cornell Elementary School, Parent Jill Cooper, Albany Middle School, Parent Claire Griffing, SRTS Coordinator/ representing Albany High School students
Bicycle and Pedestrian Advocacy/ ADA Access/Special Accessibility Concerns	
Thurs., Dec 6th 10:45-11:45	Ken McCroskey, Albany Strollers and Rollers, kenwail@aol.com Lynn Komoroni logginsschlager@gmail.com Jennifer Grove, Milo Drussai, Jim Kletzing, Center for the Blind Tenisha Neal, 10esha01@gmail.com Peggy McQuaid Margaret Tong (not confirmed) Jody Ames (not confirmed) Michelle Jordan Several Seniors
Public Agencies	
Thursday, Dec 6th 12:30-1:30	A. Claire Griffing, Sustainability Committee Staff Liaison B. Aleida Andrino-Chavez, Traffic and Safety Commission Staff Liaison C. Jeff Bond, Planning and Zoning Commission Staff Liaison D. Isabelle Leduc, Arts Commission Staff Liaison E. Penelope Leach, Parks and Recreation Commission Staff Liaison (not confirmed) F. Nathan Landau and Will Butler, AC Transit G. Tony Wolcott, City Urban Forester H. Eric Anderson, City of Berkeley I. Yvetteh Ortiz, City of El Cerrito J. Lee Huo, ABAG K. Sean Ho, MTC L. Rochelle Wheeler, Alameda County Transportation Commission M. Josh Bradt, SF Estuary Project
Economic Development	
Friday, Dec 7th 9:30-10:30am	Allen Cain, Solano Avenue Association, President John Nakamura, Ford/Subaru Tim Hilliker, Kaddy Car Wash, (503) 246- 7735 Mike Schwarzbart, Berkeley Motor Works John Tierney and Ken Friedman, Albany Bowl/San Pablo Ave property owners Jason Alabanza, Mechanics Bank, 510.558.2321 Wk. Keith Carroll, Castle Reality, keith@keithcarroll.com
Agency Stakeholders	
Thurs. Dec 6th 2:00-3:00	Don Albright, AUSD Facilities Manager Terryl Georgeson, Ocean View School Principal, AUSD USDA and UC Reps not confirmed
Emergency/Police Services	
Friday, Dec 7th 2:00—3:00 Pm	Battalion Chief Brian Crudo, Fire Department Chief Mike McQuiston, Police Department Lt. John Geissberger, Police Department Officer Torres?, UC Police Department

Draft City of Albany Focus Group Meetings

Nearby Residents	
Fri. Dec 7th 3:15—4:15 Pm	Tavia Tipton, UC Village (and possibly a couple of residents) Susan Moffat Tess Lengyel Heather Hafleigh Meghan Beynon Erika Lockhart Mike Melnijk Nick Lavrov Ed Fields Rania Ramadanemail Dawn Rugo Jordan Sampietro (not confirmed) Farid Javandel (not confirmed)
Tuesday Dec 11th	Caltrans: Anh to recommend staff to invite

Appendix C Design Workshop Notes

SUMMARY OF GROUP RECOMMENDATIONS AT DESIGN WORKSHOP

On Buchanan Street

- More traffic control and speed calm speed, the median causes sightline blockage with tree canopies.
- Need a Z crossing between Pierce and Jackson somewhere on Buchanan.
- Need a hedge blocking the school playground from Buchanan.
- Add missing crosswalk at Jackson and Buchanan.
- Improve access to Berkeley bike boulevards down Jackson.
- Add bike sensors on the lights (throughout the area and at Jackson).
- Put in palm trees all along Buchanan from the Gilman Tract like along the San Francisco Embarcadero to define the connection from the waterfront to Albany, and maybe continue this up San Pablo. This would visually connect the waterfront.
- Median trees are currently an obstacle to truck traffic, so widen median or use palm trees.
- Move eastbound traffic to the center sooner before approaching San Pablo.
- Cut off the left turn at Pierce and extend the median between Taylor and Jackson. Could still allow a left at Taylor; it's steeper so cars going up it would go slower.
- Jackson is a feeder street to get to Solano, so maybe block vehicle cut through access.
- At Buchanan and Marin, turn Buchanan a little to make it into a T-intersection, which would also allow for some developable street space.
- Still have concerns about the connection to the bay, even with the new path. The crossing over the bridge on Buchanan might not feel safe. Many people return on the sidewalk eastbound on Buchanan and cut through on Washington and Jackson. These streets should be part of an integrated network.
- The creek is a great connection to the north and south Berkeley bike boulevards, Eight and Ninth streets, and through Albany to the Bayside Trail.
- Create a 'Civic Center' area around City Hall, treat it as a gateway, and improve the "welcome to Albany", the gas station appearance, and the Gilman Tract. Could put in art, a farm stand, pocket parks, or something else to give the area a sense of place and hold the corner.
- Need to connect the route along Dartmouth, coming down Monroe or the creek path and over to retail in Berkeley, and a connection from University Village to Dartmouth and the Ohlone Greenway. To connect Monroe to Dartmouth, could put a paseo through to Kaines, there is a house for sale and part of it is the Hertz parking lot.

On San Pablo Avenue

- Extend bike lane into the crosswalk at Marin and San Pablo
- Put in a bike corral by the café seating at the new planned University Village development
- Need more trees along San Pablo, landscaped medians, and a midblock crosswalk at the donut shop.
- Narrow the lanes on San Pablo to 11 feet.
- The crosswalk at Brighton and San Pablo is problematic. Middle school students cross there or at Clay and many students have been hit by cars over the years.
- There need to be mountable medians for emergency vehicles.
- There should be only one signal (pedestrian) control for the intersection at Washington, even though the streets are offset.
- Create a connection from Adams over the creek to San Pablo and open up the dead end street to pedestrian access.
- Put in curb extensions at all intersections on San Pablo.
- Put trees in the curb extensions to narrow the street.
- Make Adams and Kaines bike boulevards.
- Create gateways in the city, like a banner over the street at Solano and San Pablo.
- Reduce the speed limit on San Pablo to 25 mph
- Need bike lanes on San Pablo. Maybe narrow the medians or put in protected bike lanes behind the parked cars.
- Use the creeks as gateway elements with prominent crossings. Use the crosswalk as a map of the street.
- Cerrito Creek near the mall has been daylighted, but then goes underground at San Pablo. There could be a big blue crosswalk, Z-crossing, and then it would continue along the path, connecting it with Carlson street in El Cerrito.
- Need safe bike lanes on San Pablo. There are already a lot of bicyclists using San Pablo, some that want to travel at higher speeds than would be possible on Adams and Kaines. Those streets are for slower riders.
- Extend the Solano pedestrian lighting onto San Pablo and create a café atmosphere.
- Put in a median island for the crossing of San Pablo and Brighton. Could also create a leading pedestrian phase, since cars making right turns often approach the intersection at high speeds.

Appendix D Parking Inventory and Demand

East	Segment							
Time	1	2	3	4	5	6	7	Total
	Carlson to Brighton	Brighton to Garfield	Garfield to Portland	Portland to Washington	Washington to Solano	Solano to Marin	Marin to Dartmouth	
8:00 AM	0	1	2	3	3	17	2	28
Capacity	16	15	17	19	20	29	20	136
% Occupied	0.0%	6.7%	11.8%	15.8%	15.0%	58.6%	10.0%	20.6%
10:00 AM	1	6	1	5	9	19	3	44
Capacity	16	15	17	19	20	29	20	136
% Occupied	6.3%	40.0%	5.9%	26.3%	45.0%	65.5%	15.0%	32.4%
12:00 PM	1	10	4	12	10	25	8	70
Capacity	16	15	17	19	20	29	20	136
% Occupied	6.3%	66.7%	23.5%	63.2%	50.0%	86.2%	40.0%	51.5%
5:00 PM	5	14	6	17	11	17	13	83
Capacity	16	15	17	19	20	29	20	136
% Occupied	31.3%	93.3%	35.3%	89.5%	55.0%	58.6%	65.0%	61.0%
Average Occupancy	10.9%	51.7%	19.1%	48.7%	41.3%	67.2%	32.5%	41.4%
Avg. free spaces	14	7	14	10	12	10	14	80

West	Segment												Total
Time	1	2a	2b	3a	3b	4a	4b	5	6a	6b	7a	7b	
	Carlson to Brighton	Brighton to Clay	Clay to Garfield	Garfield to Castro	Castro to Portland	Portland to Washington	Washington to Washington	Washington to Solano	Solano to Buchanan	Buchanan to Marin	Marin to Monroe	Monroe to Dartmouth	
8:00 AM	2	0	5	4	2	5	2	2	8	6	0	0	23
Capacity	21	6	10	5	6	7	3	22	25	14	20	9	100
% Occupied	9.5%	0.0%	50.0%	80.0%	33.3%	71.4%	66.7%	9.1%	32.0%	42.9%	0.0%	0.0%	23.0%
10:00 AM	14	1	8	2	1	2	3	5	14	11	0	0	35
Capacity	21	6	10	5	6	7	3	22	25	14	20	9	148
% Occupied	66.7%	16.7%	80.0%	40.0%	16.7%	28.6%	100.0%	22.7%	56.0%	78.6%	0.0%	0.0%	23.6%
12:00 PM	13	1	7	1	1	2	3	6	13	13	0	1	38
Capacity	21	6	10	5	6	7	3	22	25	14	20	9	148
% Occupied	61.9%	16.7%	70.0%	20.0%	16.7%	28.6%	100.0%	27.3%	52.0%	92.9%	0.0%	11.1%	25.7%
5:00 PM	8	4	5	5	1	6	2	9	12	12	0	2	43
Capacity	21	6	10	5	6	7	3	22	25	14	20	9	148
% Occupied	38.1%	66.7%	50.0%	100.0%	16.7%	85.7%	66.7%	40.9%	48.0%	85.7%	0.0%	22.2%	29.1%
Average Occupancy	44.0%	25.0%	62.5%	60.0%	20.8%	53.6%	83.3%	25.0%	47.0%	75.0%	0.0%	8.3%	25.3%
Avg. free spaces	12	5	4	2	5	3	1	17	13	4	20	8	110

Appendix E Transit in Albany

This appendix was prepared by AC Transit staff and edited by City of Albany staff. It includes specific recommendations about how the City of Albany can improve transit speed and reliability. It begins with a brief overview of transit service in Albany to highlight the level of service and access to major destinations. Then transit activity is examined at several levels (stop, segment, route, hour, and direction) to understand how, when, and where people are choosing transit. Discussion then shifts to a full menu of possible improvements which would fit into a complete network. Finally, specific recommendations for transit are recommended, with a transparent discussion of pros and cons so that the City of Albany can make well-informed decisions.

The Albany Complete Streets Planning effort is the ideal opportunity to achieve several objectives outlined in the 2010 Climate Action Plan, most notably the creation of an interconnected transportation system that shifts travel from personal automobiles to other modes. The

most effective means of implementing this strategy is to improve transit on major travel corridors like San Pablo Ave. Any Complete Streets planning effort should look at making recommendations that improve transit operations (speed and reliability), safety, and attractiveness and avoid recommendations that may actually increase automobile trips by making transit a less efficient and less reliable alternative.

OVERVIEW OF TRANSIT IN ALBANY

Albany is served by a combination of Rapid, local, and Transbay services which cater to a full range of users. Residents and employees have convenient bus access to key destinations in the surrounding East Bay cities, as well as direct service to San Francisco. Figure E-1 below summarizes the peak (and midday) frequency and major destinations of each transit line in Albany.

San Pablo Avenue is the primary transit corridor linking cities in northern Alameda County and western Contra Costa County. The entire length of San Pablo Avenue is served by the limited-stop Rapid 72R and underlying local service Lines 72 and 72M.⁵ Combined, these three transit lines provide nine (9) trips per hour in each direction, or a bus nearly every 6 ½ minutes.

Shorter segments of San Pablo Avenue also facilitate frequent cross-town service. These lines arrive every 15 minutes and operate until 11:30 PM to provide a dependable connection between Albany and Berkeley. Line 18, in particular, provides frequent all-day service along Albany’s major retail/activity corridor, Solano Avenue.

Finally, San Pablo Avenue is served by two Transbay lines which provide a convenient link between Albany and San Francisco. Line G travels in the commute direction along Colusa Avenue and Solano Avenue, making it a convenient choice for a large number of Albany residents. Line Z provides a similar link in the reverse commute direction, traveling via 6th Street and San Pablo Avenue.

Given the level of service in Albany, it should be no surprise that transit is a major component of Albany’s circulation. In fact, 22% of Albany residents use transit for their daily commute to work or school.

Transit is the most dominant alternative mode in Albany. Albany’s complete streets policies should build on this robust transit usage and discourage policies that would diminish transit ridership.

⁵ Line 72M serves San Pablo Avenue as far north as Macdonald Avenue in Richmond, where it then continues on Macdonald Avenue to Richmond BART Station and Point Richmond.

Figure E-1 AC Transit Routes Serving Albany

Route	Peak Period Frequency (Midday Frequency)	Destinations
72R	12 (12)	El Cerrito Plaza BART, El Cerrito Del Norte BART, Contra Costa College
72/72M	15 (15)	72: El Cerrito Plaza BART, El Cerrito Del Norte BART, Contra Costa College, Hilltop Mall. 72M: El Cerrito Plaza BART, El Cerrito Del Norte BART, Richmond BART, Point Richmond.
18	15 (15)	Solano Avenue, Downtown Berkeley, UC Berkeley, UC Village, Temescal, Downtown Oakland, Lake Merritt, Montclair Village
52	15 (30)	UC Village, North Berkeley BART, Downtown Berkeley, UC Berkeley
25	40 (40)	Pierce Street, UC Village, Downtown Berkeley, UC Berkeley, El Cerrito Plaza BART
G	20 – 60 (n/a)	San Francisco, Solano Avenue, Colusa Avenue, El Cerrito Plaza BART
L/LC	15 – 30 (n/a)	San Francisco, Pierce Street, El Cerrito, Richmond, San Pablo
Z	30 (n/a)	San Francisco, Emeryville (Reserve commute direction)

TRANSIT ACTIVITY

Transit activity is often thought of only in terms of customers boarding and alighting at each stop. This necessarily excludes other transit customers from consideration, namely those already on the bus (who want to get to their destination quickly), and those waiting for the bus (who expect the bus to arrive on time). To improve transit usage, all three groups must be considered, even when planning at the local level.

To inform the Albany Complete Streets Plan, each group of transit customers is considered below in terms of stop-activity, screenline-activity, and route-activity.

Stop Activity

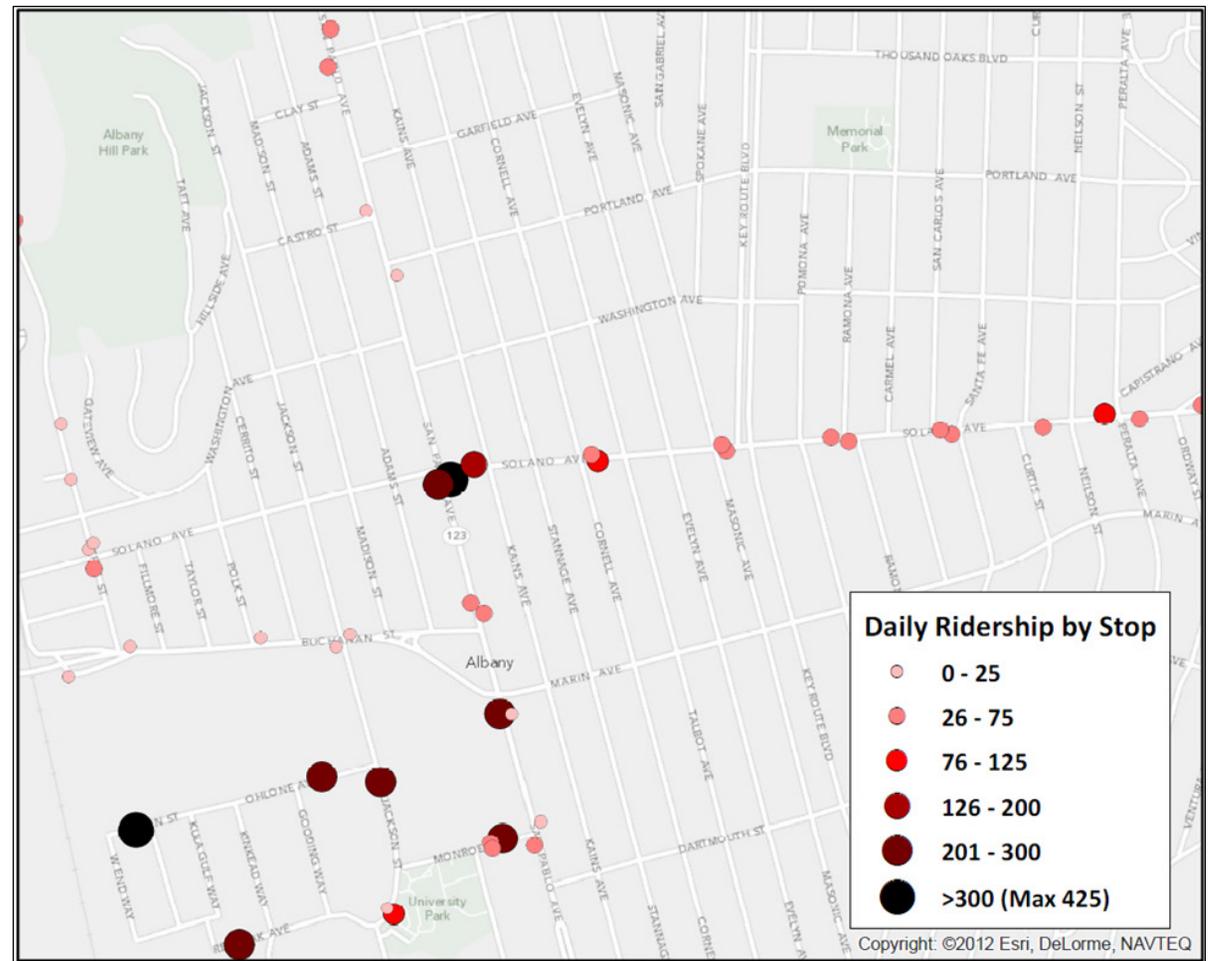
Stop activity is the number of customers boarding and alighting the bus at a particular stop. This metric describes the number of Albany residents, employees, and visitors directly affected by transit service.

When all other factors are held constant, customers at the stop-level are sensitive to convenience, comfort, and safety. They expect the City to place bus stops near or within major trip generators, to provide lighting and amenities that make bus stops comfortable places to be, and to provide bus stops with sufficient space for safe passenger loading/unloading.

Citywide, *AC Transit provides nearly 3,900 customer trips* to or from Albany each weekday.⁶ Nearly one-third of these trips (1,219) begin or end on San Pablo Avenue. The most active bus stop in the city is Northbound San Pablo Avenue nearside of Solano Avenue. More than 425 customers enter or exit a bus at this location each weekday.

⁶ 3,886 average daily weekday trips in Fall 2012.

Figure E-2 Bus Stop Activity in the City of Albany



Based on this information, the City should prioritize San Pablo Avenue for transit customers by locating stops in convenient and safe locations, and providing lighting and amenities that make bus stops attractive and comfortable places to board and alight at all hours of the day. Priority should be given to bus stops with the greatest volume of transit activity so that the greatest number of transit customers benefit.

Screenline Activity

Screenline activity describes the number of customers traveling through a given intersection on the bus. These customers are already on-board and want to reach their destination quickly. Although these passengers are overwhelmingly “through trips” (i.e. people whose trip neither begins nor ends in Albany), the City nonetheless has an incentive to improve their transit experience because each of these passengers represents one less automobile through-trip.

When all other factors are held constant, these customers are sensitive to transit speed and reliability on the corridor. They expect the City to provide transit priority measures that minimize travel time and delay.

Each weekday, *more than 4,300 transit customers pass through Albany via San Pablo Avenue.* This information is summarized in Table 2, which tabulates “transit passenger through-put” on San Pablo Avenue by intersection, route, and direction. As shown in the table, the greatest number of transit customers are affected by the San Pablo/Solano intersection. Marin and Buchanan facilitate a similar number of transit trips each weekday.

Based on this information, the City should adopt recommendations that minimize delay at the intersection of San Pablo Avenue and Solano Avenue. Furthermore, the significance of the Solano, Buchanan, and Marin intersections suggest that treatments which minimize delay at all three intersections would benefit the greatest number of roadway users.

The volume of transit customers through an intersection can also be examined by time of day. Figure 2 illustrates the number of transit customers passing through the intersection of San Pablo Avenue and Solano Avenue for each route, direction, and hour of day. This figure demonstrates the consistently high volume of transit activity throughout the day, and the particular significance of

Figure E-3 Average Daily Weekday Transit Customer Through-Trips on San Pablo Avenue, Northbound and Southbound

Cross-Street	Northbound						Southbound						Grand Total	
	72	72M	72R	18	G	SubTotal	72	72M	72R	18	G	Z		SubTotal
Page	444	403	973			1,820	482	432	1,034		100		2,048	3,868
Gilman	446	404	973		74	1,897	480	427	1,034		100		2,041	3,938
Harrison	443	400	973		74	1,890	462	407	995		96	3	1,963	3,853
Monroe	441	398	973		71	1,883	461	407	995		96	3	1,962	3,845
Marin	440	398	973	140	69	2,020	457	407	995	166	90	3	2,118	4,138
Buchanan	442	400	973	150	67	2,032	457	406	995	166	89		2,113	4,145
Solano	453	410	974	298	57	2,192	456	405	995	199	86		2,141	4,333
Portland/Castro	453	408	974			1,835	449	409	995				1,853	3,688
Brighton	444	401	974			1,819	448	409	995				1,852	3,671
Carlson	456	410	954			1,820	444	406	995				1,845	3,665

Figure E-4 Transit-Customers Traveling Through San Pablo Avenue at Solano Avenue by Route, Direction, and Hour of Day

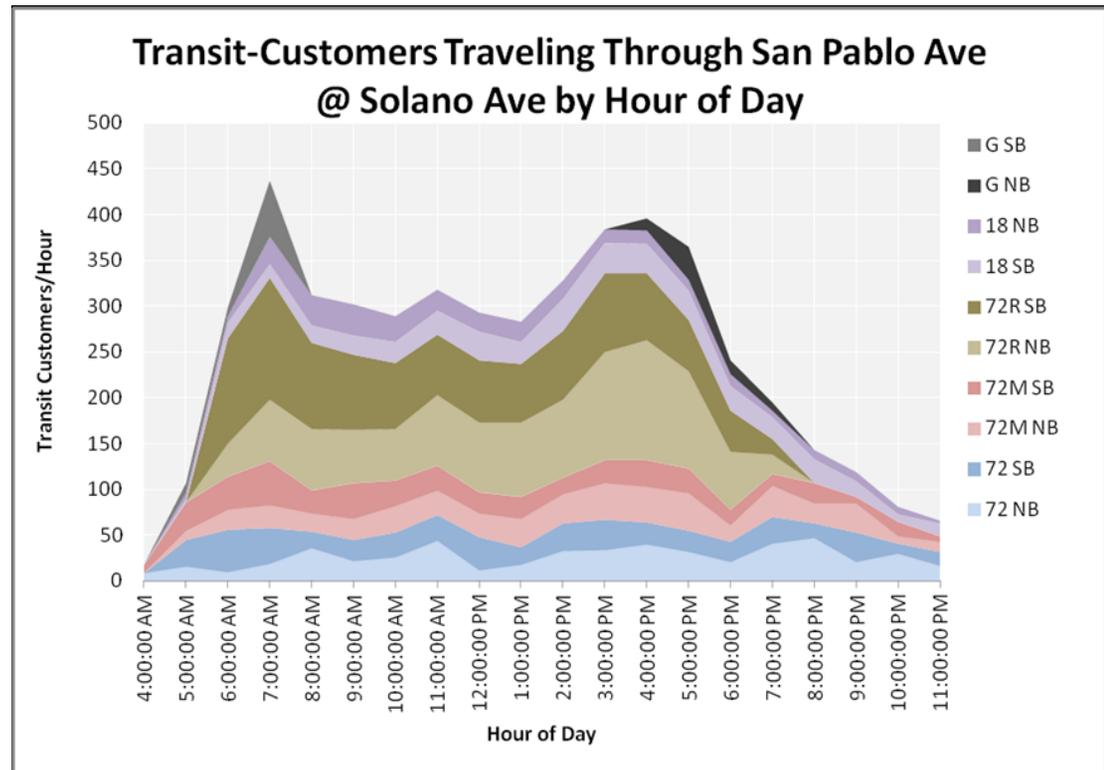
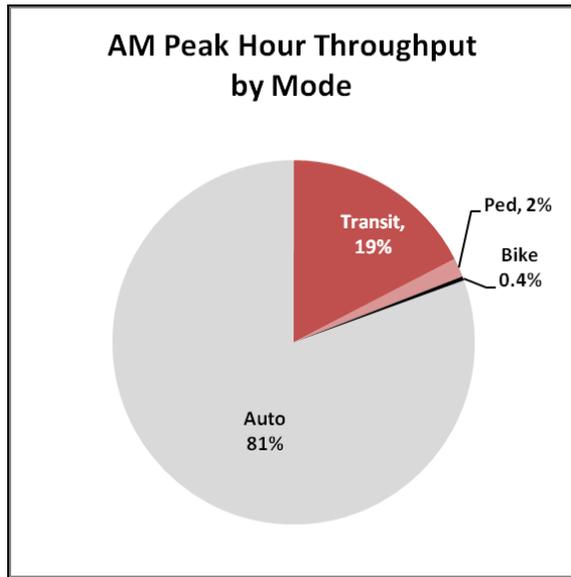


Figure E-5 AM Peak Hour Throughput by Mode at San Pablo and Solano Avenue⁵



⁵ Automobile, Bicycle, and Pedestrian data is based on 2008 traffic counts by Fehr and Peers for the University Village Environmental Impact Report (2008). The estimate of automobile through-trips is based on an assumption of 1.1 person/automobile. Transit ridership data is based on Fall 2012 automatic passenger count data. Bicycle and pedestrian data for San Pablo/Solano was not available for 2012.

this intersection during peak commute hours. For the majority of the day, AC Transit carries more than 300 customers through this intersection each hour. During the peak demand hour (7:00 am – 8:00 am), AC Transit moves almost 450 people through the intersection.

Based on this information, the City should adopt recommendations that benefit transit customers throughout the day. The City may also want to consider time-sensitive recommendations that provide additional transit priority during the peak demand hour to benefit the greatest number of roadway users.

Finally, the screenline activity can be examined by mode for each hour to understand how people are traveling at a given time. Figure 3 shows the ratio of transit to other modes during the peak-demand hour at the highest-demand intersection of San Pablo Avenue and Solano Avenue. Automobiles are predictably dominant, but transit holds a substantial portion of the mode share at this intersection. One-fifth of trips through this intersection are on transit. Bicycle activity accounts for less than 1% of trips through this intersection.

Based on this information, the City of Albany should adopt recommendations that invest most heavily in transit, since this is the predominant alternative mode on the corridor.

Route Activity

Route activity describes the total number of customers relying on a given transit line throughout the day. Since all transit customers wait for the bus at some point, total ridership can be used to describe the impacts of transit frequency and reliability on transit customers downstream. Although most transit trips on a route may not be to, from, or through Albany, the City nonetheless benefits from their patronage. Higher total ridership quickly translates into greater service investment—i.e. more frequent service for longer hours of the day—which, in turn, benefits Albany residents, workers, and visitors.

All other factors being equal, customers waiting for the bus are most sensitive to schedule reliability and frequency. These customers expect the City to adopt recommendations that minimize travel time, delay, and variability.

Lines 72, 72M, and 72R serve 15,300 customers each weekday. These lines combine to form the third-largest transit corridor in the AC Transit network. In terms of resources (i.e. drivers deployed), San Pablo Avenue is the second-largest investment in AC Transit’s network.

Based on this information, the City of Albany should adopt recommendations that protect and improve the significant investment of AC Transit resources on the San Pablo Avenue corridor. The City should prioritize recommendations that improve transit speed and reliability.

POSSIBLE IMPROVEMENTS

As demonstrated above, when evaluating possible local improvements to transit, the City protects its own best interest by considering all users, not just those boarding and alighting at a given stop or within a given jurisdiction. Service improvements that ripple outside of the city are reflected back toward the City in the form of more reliable service, more frequent service, and higher ridership (fewer automobile trips). Therefore, this section discusses possible treatments that improve transit operations (i.e. speed and reliability) throughout the corridor, while enhancing safety and attractiveness for local transit customers.

Bus stops

Bus stops are the “stations” for surface transit. They are the primary interface between transit provider and community. As such, bus stops should be located in convenient, comfortable, and safe locations that make transit a dignified and logical mode choice. Bus stops should also be designed to maximize operational efficiency to ensure that customers receive the best service possible. These ideas are explored further with a list of possible stop treatments that would make an auto-oriented street more “complete” for transit.

Convenience

For customer convenience, bus stops should be located with close proximity of major trip generators. Just as parking, bike racks, and sidewalks are placed next to major destinations, so too should transit stops. This makes

the service (including information about the service, like schedules, maps, and destination signs) visible to the public so that they are aware of the available option. If area maps and way-finding devices are provided by the City or District, transit stops and routes should be displayed in a clear manner.

Comfort

For customer comfort, bus stops should have amenities appropriate for the level of boarding and alighting activity that occurs. Amenities may include shelters or canopies, real-time bus arrival displays, waste receptacles, and system maps at high volume stops. Medium-volume stops may include smaller shelters or seating in place of shelters, and waste receptacles, if necessary. At a minimum, all stops should include a clearly visible sign, schedule, and lighting. Where bus stops include amenities that require maintenance (i.e. waste receptacles, shelters), the City (and possibly District) and transit agency should develop an arrangement to ensure that the bus stop remains a clean and pleasant place.

The size of the waiting area should also be taken into consideration. Customers should have sufficient space to wait without blocking doorways or pedestrian paths. By law, bus stops must also include sufficient space for maneuvering a wheelchair or other mobility device. At high-volume stops, curb extensions or bus bulbs may be required to comfortably accommodate passengers and amenities outside the pedestrian pathway.

The City may wish to apply additional treatments to dignify the space. Special pavement or stamped concrete treatments designate the bus stop as a specific place, indicating the appropriate “waiting area” so that customers can easily locate the stop and wait for their bus without disrupting the flow of other pedestrians. Additions of bike racks, pedestrian scale lighting, way-finding devices, and gateways or markers indicate to the public that this is the place through which activity flows.

Not all bus stops require the full suite of amenities. But providing the appropriate level of amenities for transit stops demonstrates to the public that the City values transit and encourages ridership.

Security

Locating stops in well-lit, active places ensures that the bus stop will be under the watchful eye of the general public—the “eyes on the street”—to discourage negative or anti-social behavior. This improves real and perceived security at transit stops. Bus stops should not be located on the back sides of buildings or in front of parking lots or gas stations, for example. Pedestrian-scale lighting treatments are the preferred method of lighting a bus stop. If this is not available, electrified shelters with lighting are an alternative way to enhance safety at bus stops. Enhancing the feeling of security at bus stops makes transit a more attractive option for Albany residents, workers, and visitors.

Operational Efficiency

Finally, bus stops should be designed to maximize operational efficiency, ensuring that customers receive the best service possible. Transit customers receive large benefits from low-cost bus stop treatments like stop relocations to the far-side of intersections and bus zone extensions, as well as from more engineered solutions like bus-bulbs and transit-signal priority.

Far-side Bus Stops

Far-side bus stops (i.e. stops after the intersection) are generally superior for both transit operations and safety of other users. When buses stop on the near-side of an intersection (before the traffic signal), transit customers experience multiple sources of delay, including red signals, conflicting movements, and challenging reentry to the traffic stream. By allowing boarding and alighting activity to take place after passing through a signalized

intersection, far-side bus stops reduce or eliminate these sources of delay.

When stopping nearside of an intersection, the bus will often complete boarding and alighting customers just as the signal turns from green to red. Transit customers must then wait through an extra cycle of the traffic signal to start moving. The additional travel time required by this “red-light delay” must then be accounted for in the schedule (by adding time to the schedule, which increases the cost of providing service) or in the service reliability (by knowingly operating behind schedule). Neither option is attractive to the transit customer. Textbox 1 provides specific information about the impact of nearside bus stops on transit customers in Albany.

Far-side bus stops also allow conflicting movements to occur behind the bus, so that they do not impede the flow of transit vehicles. Pedestrians, cyclists, and motorists may choose to cross the street when a bus is dwelling at a bus stop. This can create additional delay, but more significantly this can be a dangerous movement (as discussed below).

Because traffic signals form platoons of cars, bus drivers at far-side stops enjoy longer, more predictable breaks in traffic. These breaks allow drivers to pull out of curb-side stops more safely and comfortably for the customers.

Nearside bus stops cause buses to obstruct the sightlines between motorists and pedestrians stepping into the crosswalk in front of the bus. By placing bus stops on the far-side, all pedestrian movements occur behind the bus, in full-view of motorists.

Finally, far-side stops allow buses to take advantage of existing investments, like transit-signal priority devices. When a bus approaches a green signal, these devices can extend the green interval for a few seconds so that buses can pass through without delay. By locating bus stops

on the nearside of intersections, this public investment is poorly utilized, delaying transit customers.

Bus Zones

Bus stop length affects bus operations, customer comfort, and customer safety. A sufficient bus stop zone allows operators to align the bus flush to the curb, accelerate and decelerate at a comfortable and gradual rate, and minimize sharp lateral movements. By improving the comfort and efficiency of bus service, the City encourages more citizens to choose transit over automobiles.

Bus stops are typically located curbside, within an on-street parking lane. To use a curbside stop, operators must decelerate while transitioning out of the travel lane, come to a complete stop in the parking lane with the ability to deploy a lift, and then accelerate while re-entering the travel lane. Bus stop zones of insufficient length provide little space for gradual acceleration and deceleration. Operators may speed up and slow down quickly when entering and exiting such stops.

Operators may also make sharp lateral (side-to-side) transitions into and out of the bus stop if they are “boxed in” by parked vehicles on either side of the bus stop. Because pulling out of a stop with an insufficient acceleration taper may require encroaching on the adjacent travel lane, operators may need to wait for a break in traffic in multiple lanes, which creates additional delay for transit customers.

Finally, operators may be unable to align the bus flush to the curb. This makes it difficult for customers who require use of the middle door (for exiting or access via the lift) to safely board and alight. Each of these outcomes results in less comfortable, less safe, and less reliable transit. This also disrupts traffic because the rear of the bus blocks the travel lane.

Research suggests that the delay caused by waiting for a break in traffic is approximately 14 seconds on a street

with 1000+ vehicles per hour, such as San Pablo Avenue.⁷ In some instances, this delay might be as high as 30 seconds.⁸ Incremental delays quickly add up on a long corridor. This makes transit travel time less attractive to customers. The delay may also impact the reliability or frequency of service. This delay can be partially avoided by placing bus stops on the far-side of intersections. Whether near-side or far-side, longer acceleration/ deceleration tapers at bus stops allow operators to make gradual transitions into and out of the travel lane, improving the safety and comfort of the ride.

Similarly, sharp lateral movements also degrade the quality of ride for transit customers. Lateral movements can be eliminated by providing in-lane stops via bus bulbs. Where bus-bulbs are not feasible, bus zones with sufficient acceleration and deceleration zones at least minimize the discomfort of lateral movements.

Bus Bulbs

Bus bulbs are curb extensions at bus stops that allow buses to stop in the travel lane. Bulbs offer improvements to transit operations, customer comfort, and community interaction with transit.

Bulbs improve transit operations by allowing operators to stop in the travel lane, which eliminates re-entry delay (waiting for a break in traffic to re-enter the travel lane). This saves significant travel time when implemented across the corridor. As mentioned previously, re-entry delay can account for 14 – 30 seconds of delay at each bus stop on a road with 1,000+ vehicles per hour, such as San Pablo Avenue.

⁷ Bus bulbs have negligible impact on running-time (time required to travel between two stops) and dwell (time spent at a stop during boarding/alighting of passengers), but has a significant impact on delay (time required to pull into and out of a stop). According to TCQSM (1997), where volumes are greater than or equal to 1000 vehicles per hour, re-entry time is estimated to be 14 seconds (p. before 56)

⁸ “Bus travel time savings as a result of the bus bulbs ranges between 15 and 30 seconds per bus stop” (p. 56)

Bus bulbs improve customer comfort by providing space for enhanced amenities, such as larger shelters, seating, way-finding devices, and waste receptacles. Bulbs also allow operators to align the bus flush to the curb without making sharp lateral movements, which improves the safety, convenience, and comfort of transit customers on the bus.

Bus bulbs also improve the community interaction with transit by designating a space for transit customers to wait, board, and alight without blocking pedestrian pathways or business doorways. This reduces conflict between transit customers and other users of the sidewalk. Bulbs have the additional benefit of reducing the crossing distance for pedestrians. Bus bulbs also work well with pedestrian bulbs on the other side of the intersection, so that pedestrian crossing distances can be reduced at both locations.

Finally, bulbs can improve overall performance of a roadway. Bulbs improve the predictability of bus movements by eliminating the tendency for buses to partially block travel lanes or encroach into travel lanes with sharp lateral movements.⁹

Travel Lanes

If bus stops are the “stations,” then travel lanes are the “tracks.” With this in mind, planning good transit requires more than attractive bus stops; the travel-way must also be a primary consideration.

⁹ “Reductions in travel speeds are assumed to be the consequence of installing bus bulbs because buses are stopping in the travel lane rather than moving into a bus bay. In the before period when the bus bay configuration was present, the majority of the buses would stop partially or fully in the travel lane rather than pulling into the bay. In addition, buses pulling away from the bay would sometimes use both travel lanes to complete the maneuver. The number of buses affecting vehicles in the outside travel lane may not have greatly changed after the bulb’s installation. The number of buses affecting vehicles in both travel lanes did decrease because bus drivers no longer needed to use both travel lanes to leave the bus bulb stop.” (p. 29)

AC Transit buses are 8'6" wide, with 8-10" mirrors hanging off either side. With a total width of 121" (10'1"), bus operators need sufficiently wide travel lanes to drive safely and comfortably, and to avoid conflicts with trucks in adjacent travel lanes or loading zones. At a minimum, AC Transit seeks 11' travel lanes, but prefers 12' lanes on major corridors with higher speeds. On Rapid corridors, these lane widths apply to both inside (median) and outside (curbside) lanes where feasible because Rapid buses use the inside lane to bypass local stops and right-turning automobiles.

Shared lanes offer a particular challenge for transit operators: They lead to "leap-frogging" between buses and cyclists, where each repeatedly passes the other. This increases delay for transit operators and can force cyclists to make transitions into inside (median) travel lanes to pass slowing or stopped buses. However, given the physical characteristics of San Pablo Avenue, accommodating bicycle lanes throughout this corridor does not seem feasible unless parking is removed, which would negatively affect businesses. The City should strike a balance in implementing design features that benefit all users of the street. When implementing the Complete Streets Plan, the City should explore the implementation of alternative routes to San Pablo Avenue, such as the case of Kains Avenue and Adams Avenue, implementation of bike paths, or fully-buffered cycle-tracks along San Pablo Avenue whenever feasible.

Delays to transit vehicles also have great costs to the customers and the transit agency. On major corridors served by large volumes of transit vehicles, seemingly minor decreases in speed quickly add up to large costs. Given a fixed budget, transit agencies may not be able to commit additional resources to the corridor to maintain existing levels of service. Instead, transit agencies may be forced to use the same resources with reduced frequency.

Signal Priority

Signal priority is a system of technical improvements at signalized intersections that allow bus transit vehicles to decrease delays and improve on-time performance. There are two types of signal priority systems: Passive and Active. Passive techniques involve signal timing optimization and require no specific hardware. Active priority includes a system of vehicle detection that triggers a desired phase of the signal as the vehicle approaches the intersection so that it gets a special treatment by either extending the green phase, providing an early green/red phase, rotating the phase, or implementing other techniques in the controller software. In 2005, Caltrans implemented the Smart Corridors project that included a set of intersection improvements that provide signal priority to transit vehicles. The City should continue working with Caltrans and AC Transit to ensure the signal priority is maintained along San Pablo Avenue.

TRANSIT IMPROVEMENTS FOR ALBANY'S COMPLETE STREETS

As has been discussed above, the most effective means of achieving the City's Climate Action Plan goals is to improve transit on major travel corridors like San Pablo Avenue. While pedestrian and bicycle improvements lead to marginal shifts in local circulation, historically the impact that these modes have had on automobile trip reduction pales in comparison to even modest growth in transit ridership. Therefore, the Albany Complete Streets Plan should make recommendations that improve transit operations (speed and reliability), safety, and attractiveness on San Pablo Avenue. Below are specific recommendations for Albany.

Strengthen Transit First Policy

The City has a Transit First Policy. However, the policy does not prescribe specific ways in which transit will be prioritized, or even how decisions will be made. The

Transit First Policy could be strengthened by incorporating some of the general recommendations below (i.e. prioritizing far-side stops where they improve transit customer experience and/or pedestrian safety) and by providing a framework for decision making. This would give future elected officials guidance for making decisions related to transit improvements.

Prioritize Far-side Bus Stops

Albany has 49 bus stops citywide. For the sake of transit customer convenience and pedestrian safety, the City should prioritize relocating these bus stops to the far-side. First priority should be given to bus stops with the greatest impact to transit customers and pedestrians. This includes both signalized intersections that create unnecessary delay, and unsignalized intersections that result in obstructed sight-lines between pedestrians and motorists. Second priority should be given to "opportunity sites," where the far-side property is unoccupied or changing hands. This is a low or no-cost improvement with multi-modal benefits.

Install Bus Bulbs

The City should install bus bulbs in coordination with the transit agency and other stakeholders. Bus bulbs can be paired with pedestrian bulbs on the opposite side of the intersection to reduce crossing distances at both crosswalks. The City should prioritize high-volume bus stops that have the greatest impact on transit customers, pedestrians, and other stakeholders. This is a relatively low-cost treatment with multi-modal benefits, which can also help mitigate some stakeholders concerns.

Bus bulbs on San Pablo Avenue have been discouraged in the past, but a bulb on Northbound San Pablo Avenue far-side of Solano may actually improve travel lane performance. Currently, buses block the travel lane 10% of the day (six minutes each hour). Buses are also

delayed for excessive amounts of time on the nearside of the intersection (approximately 1 minute per bus). Moving the bus to the far-side with a bulb would have several benefits:

- Reduces the number of buses stopping on San Pablo Avenue. Lines 18 and G would no longer stop in San Pablo Avenue. Instead, they would stop around the corner on eastbound Solano Avenue at a new bus stop. This would eliminate seven buses stopping on San Pablo Avenue during the peak hour (four buses stopping during the midday). This also reduces the number of instances when two buses arrive at the same time, causing the second bus to block the travel lane while the first bus boards/alights passengers.
- Reduces delay. For the remaining buses stopping on San Pablo Avenue, placing the bus stop far-side of the intersection would significantly reduce red signal and reentry delay. The changes could reduce total delay and dwell time by 50 - 60%. In this case, nine buses per hour would block the travel lane for 20-40 seconds each. As a result, the travel lane would be blocked 3 - 6 minutes per hour. This could result in as much as a 50% reduction in the amount of time buses are blocking the travel lane. On the low end, it is a net-neutral impact to the travel lane that still carries significant benefits for transit customers and pedestrians.

Figure E-6 provides a list of pros and cons for each possible option at this intersection.

Identify Opportunities for Signal-Priority and Signal Coordination

The City should identify opportunities to improve transit-signal priority and signal coordination along the San Pablo Avenue corridor. The intersections of Marin, Buchanan, and Solano, in particular, should

be better coordinated to reduce delay for 4,300 daily transit customers traveling through this area. Bus stop relocations may be necessary to make best use of the existing infrastructure. Where necessary, infrastructure should be updated to keep this public investment in a good state-of-repair.

Enhance Amenities

The City should consider enhanced amenities at transit stops to create a sense of place for major activity nodes. The intersection of San Pablo Avenue and Solano Avenue could be transformed into a gateway with the use of decorative transit facilities (shelters, maps/way-finding devices, seating) and pavement treatments (stamped concrete). Bus bulbs provide additional real estate for enhancements. Such improvements would indicate to the public that the City considers transit an integral part of Albany's identity. Drawing more attention to this area will also enhance the real and perceived safety of the bus stop, especially after dark.

Mitigate Legitimate Concerns

Transit is an integral part of a Complete Street Network in Albany. Because buses cannot operate on an alternative corridor parallel to San Pablo Avenue, this street must provide priority to transit if the City is to reduce automobile trips through Albany. The City should work with all stakeholders (including transit agency and transit customers) to mitigate legitimate concerns without diminishing improvements to transit service.

San Pablo Avenue offers a very constrained environment and accommodating the different needs of all users of the roadway is rather challenging. The City should strive in achieving a balance of features that would make every user comfortable. For this reason, it is crucial that the City work with stakeholders to identify alternative

bicycle routes to San Pablo Avenue that provide a safe and effective cycling environment

The City should be sensitive to legitimate concerns about waste and loitering in bus stop waiting areas. The vast majority of transit customers are Albany residents, workers, and shoppers. Loitering is not a problem specific to transit—it is a fact of urban life. Enforcement against loitering and littering is the appropriate solution to perceived problems; not removing bus stops. Because transit service on San Pablo Avenue is so frequent, most transit customers will not need to wait more than 7 minutes for a bus. At the most, transit customers should not need to wait more than 30 minutes, depending on their final destination.

An arrangement for waste management should be made between the City (or district) and transit agency. Where shelter and furniture providers are able to sell advertising space, those companies will maintain the site and waste receptacles. In other instances, where advertising is not desired, business improvement districts have worked with the City and transit agency to develop a maintenance agreement.

Figure E-6 Matrix of Bus Stop Improvements at Northbound San Pablo Avenue and Solano Avenue

	Bus Bulb	Curbside Stop
Near-side	<p>Not preferred</p> <p>Pros</p> <ul style="list-style-type: none"> Eliminates some delay for re-entry; Provides additional space for enhanced amenities, including waiting area, to separate transit customers from other users of the sidewalk; Does not impact selected stakeholders; <p>Cons</p> <ul style="list-style-type: none"> Does not provide a safer condition for pedestrians; Does not take advantage of existing signal-priority infrastructure; Possibly complicates right-turn from NB San Pablo to EB Solano for Lines 18, G; 	<p>(Existing Condition) Least preferred option</p> <p>Pros</p> <ul style="list-style-type: none"> Does not impact selected stakeholders; <p>Cons</p> <ul style="list-style-type: none"> Should include extension of bus stop zone to allow buses stop outside the travel lane, which impacts some on-street parking; Does not provide a safer condition for pedestrians; Does not take advantage of existing signal-priority infrastructure; Possibly complicates right-turn from NB San Pablo to EB Solano for Lines 18, G;
Far-side	<p>Most preferred Option</p> <p>Pros</p> <ul style="list-style-type: none"> Safer for pedestrians using crosswalk; Reduces delay for transit customers/ operations; Takes advantage of existing signal-priority infrastructure; Separates through-movements from turning-movements to reduce delay; Provides additional space for enhanced amenities, including waiting area, to separate transit customers from other users of the sidewalk; Can be easily paired with a pedestrian bulb on the nearside to reduce crossing distance; <p>Cons</p> <ul style="list-style-type: none"> Requires additional bus stop for Lines 18, G; Still adds delay for buses needing to re-enter traffic; Does not work well with shared right-turn pocket/queue-jump lane on nearside; 	<p>2nd Most Preferred Option</p> <p>Pros</p> <ul style="list-style-type: none"> Safer for pedestrians using crosswalk; Reduces delay for transit customers/ operations; Takes advantage of existing signal-priority infrastructure; Separates through-movements from turning-movements to reduce delay; Eliminates all instances of buses blocking travel lane; Can be easily paired with a shared right-turn pocket/queue-jump lane on the nearside to reduce delay for transit customers; <p>Cons</p> <ul style="list-style-type: none"> Requires additional bus stop for Lines 18, G; Still adds delay for buses needing to re-enter traffic; Does not address need for more amenities, including waiting area; Does not work well with pedestrian bulb on the nearside;

Impact of Nearside Bus Stops on Bus Operations

The Rapid 72R bus stop on Northbound San Pablo Avenue nearside of Solano Avenue is an example of the disadvantages of nearside bus stops.

Eighty percent (80%) of Rapid buses arrive at the stop when the light is green. However, the signal changes from green to red while the bus is boarding and alighting passengers. As a result, the Rapid bus is unable to take advantage of the existing infrastructure. Customers are forced to wait through an entire light cycle to continue to their destination.

On average, Rapid buses spend 1:01 stopped at this intersection. This average is actually skewed by three very low observations. The majority of Rapid buses are delayed 1:15 – 2:00. Local and Transbay buses are delayed at this intersection, too. On average, local buses are delayed 0:54 at this bus stop.

Because of the added delay, buses occupy this bus stop 20% of the day. Because the red curb for bus stops is of insufficient length, 50% of those buses block the travel lane.

Appendix F Comments on Draft Report

Urban Village by the Bay

ALBANY CALIFORNIA

CITY OF ALBANY



PUBLIC WORKS
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ALBANY, CA 94710
510 524-9543
www.AlbanyCA.org/pw

Memorandum

To: Item 6-7: Traffic and Safety Commission
Cc: Ray Chan, Jeff Bond
From: Aleida Andriano-Chavez, Transportation Planner
Date: 9/25/2013
Re: Comments received on Albany Complete Streets Draft Report

At the July 2013 meeting the Traffic and Safety Commission received the Complete Streets Draft Report for the concept plans for San Pablo Avenue and Buchanan Street. The Comment period was open until August 30, 2013. During this time, staff has met with Police and Fire to discuss the design concepts included in the Plan and has received written comments from those departments and from AC Transit.

At the meeting, the Commission directed staff to meet with the business owners adjacent to the intersection of San Pablo Avenue and Solano Avenue and talk about their parking needs in relation to the proposed northbound bus stop relocation. Staff met with business owners on August 22. A number of nearby business owners participated, including the owners of Avalon Glass, Max's Liquors, Ivy Room, Four Corners Café, and the Executive Director of the Albany Chamber of Commerce were present.

Merchants had the following comments in regards to the bus stop relocation:

- The 20-minute green zone parking is critical
- All other street parking is important because they do not have back access to their businesses. Deliveries are made through the front door and use the sidewalk for stacking.
- Businesses owners located on the southwest side have accommodated to having a bus stop fronting their businesses.
- Having a bus stop in front of a liquor store represents a loitering-related safety concern.
- The merchants expressed concerns that moving the bus stop would not be effective in alleviating the current problems and they believe would create new safety and circulation issues

Merchants provided options for the T&S Commission to consider:

- Keeping the bus stop where it is
- Relocate it further north by the Mechanics Bank
- Schedule another meeting with business owners before the T&S meeting when the Complete Streets Comments would be addressed.

Staff also met with the owner of Kaady Carwash at 500 San Pablo Avenue. His comments were:

- Maintain the left turn from northbound San Pablo onto Kaady Carwash
- Make sure vegetation planted on median and public right of way does not impede visibility for motorists making the left turn onto the property and the right turn onto San Pablo Avenue when exiting the property.

Attached to this Memorandum are the comments received from the Albany Fire Department and the Albany Strollers and Rollers.

AC Transit revised the transit chapter of the Draft Complete Streets Report and provided the attached Transit Chapter for inclusion.

The Commission will have an opportunity to review these comments before the next meeting in October. At that meeting, the Commission is expected to make a recommendation to City Council for Plan adoption. This item will be considered by Council in November or December 2013.

ALBANY CALIFORNIA

CITY OF ALBANY



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Aleida Andrino-Chavez
Transportation Planner
City of Albany, CA

September 2, 2013

Ms. Andrino-Chavez:

Thank you in gathering the information to enable us to provide comments on the Albany Complete Streets Project. We appreciate the opportunity to have input on a project which will enhance the beauty and functionality of our community. The Fire Department has reviewed the proposed Option Three, Hybrid and offers the following comments. Also, attached are the specifications on turning radii for the fire engine and fire truck.

The two main vehicles the fire department uses which will be impacted by these changes are a standard fire engine, pumper, along with a vehicle known as a Quint. The Quint serves the departments' truck company and consists of a vehicle which combines the functions of a pumper and aerial ladder. This dual purpose vehicle provides more tactical choices when used in emergencies. However, this vehicle is also known for having poor turning radii and maneuvering capabilities because of its size and weight. The existing street width of San Pablo Avenue is ideal for the safe response for our Quint.

The changes in street structure will not only slow traffic they may also slow fire department emergency response times. The fire departments current goal for emergency response is three minutes. The proposed plan identifies lane width as eleven feet. The fire engine has a width of nine feet providing a twelve inch buffer between lane hazards. The fire truck has a width of ten feet providing a safety buffer of only six inches on each side, the decrease in lane width will effect truck response times. If response times are impacted the fire department will look to other streets in meeting response time goals, possibly avoiding San Pablo Avenue all together. One plausible response route would be Adams Street.

Some general comments regarding the medians in the submitted plans include;

- Where medians run full blocks, or block access to properties on opposite side of street fire vehicles may need to do three point U-Turns at intersections.
- An emergency on San Pablo Ave will more than likely require the closing down of both traffic lanes to create a safe work area around the emergency vehicle.
- Driving against traffic flow during an emergency response is extremely dangerous.
- All median extensions which are built out past crosswalks into the intersections will negatively impact emergency response, vehicles will not make the turn around these obstacles.

Comments on specific blocks on San Pablo Avenue include the following;

Dartmouth to Marin

- An emergency vehicle turnout needs to be provided Southbound SPA between Dartmouth and the creek.
Part of the Senior Housing Development conditions. Emergency vehicles responding to the planned Senior Housing Building can safely park on the street without blocking traffic lanes on Southbound SPA.
- Emergency vehicles will need left turn capabilities to Dartmouth from Southbound SPA. Drawing appears to show left turn lane for bicycle use only.
- Right turn from Southbound SPA onto Monroe. Bulb outs on Monroe will restrict emergency vehicle ability to negotiate turn.

Marin to Buchannan

- No comment

Buchannan to Solano

- The existing median strip on SPA directly South of Solano has been extended southward. Fire department prefers existing footprint be maintained.
- The relocation of bus stops on SPA at Solano is strongly encouraged.

Solano to Washington

- Median extensions into intersection will negatively impact ability to complete turns.

Washington to Portland

- Median will require break, opening, to enable emergency vehicles to cross over into oncoming traffic if necessary.

The SPA/Portland Avenue intersection is the major response route for the Northeast portion of the city.

Portland to City of El Cerrito

Neutral, other than median extensions into intersections at Clay.

Buchanan Street/Avenue

Encourage the Pierce /Buchanan intersection be able to handle dozens of emergency vehicles coming from both directions on Buchanan if we had an incident at the high-rise.

Opticom traffic control devices installed at all controlled intersections along with an additional sensor located across the street from the fire station.

If you have questions or concerns please feel free to contact me.

Yours sincerely,

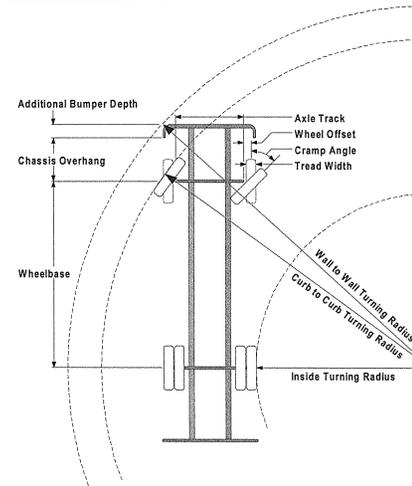
Bill Svozil
Fire Marshal
City of Albany

2171



Turning Performance Analysis

8/30/2013



Parameters:

Inside Cramp Angle:	45.00 °
Axle Track:	82.92 in.
Wheel Offset:	4.68 in.
Tread Width:	17.70 in.
Chassis Overhang:	78.00 in.
Additional Bumper Depth:	19.00 in.
Front Overhang:	97.00 in.
Wheelbase:	233.50 in.

Calculated Turning Radii:

Inside Turn:	18 ft. 4 in.
Curb to Curb:	33 ft. 11 in.
Wall to Wall:	38 ft. 11 in.

Comments:

Aerial Application

20891

Components	PRIDE #	Description
Front Axle	0508849	Axle, Front, Oshkosh TAK-4, Non Drive, 22,800 lb, Imp/Vel
Front Wheels	0019611	Wheels, Frt, Alum, Alcoa, 22.50" x 12.25" (425/ & 385/)
Front Tires	0521238	Tires, Michelin, 425/65R22.50 20 ply XFE, Hiway Rib
Chassis	0515362	Impel Chassis, 31K Single Axle, 75' HAL
Front Bumper	0123625	Bumper, 19" extended, Imp/Vel
Aerial Device	0057609	Aerial Device, 750# Tip Load, 75' HAL, Single Axle

Notes:

Actual Inside Cramp Angle may be less due to highly specialized options.

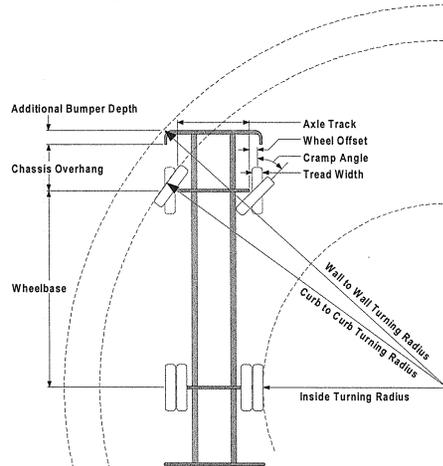
Curb to Curb turning radius calculated for a 9.00 inch curb.



Turning Performance Analysis

8/30/2013

2142



Parameters:

Inside Cramp Angle:	45.00 °
Axle Track:	82.92 in.
Wheel Offset:	4.68 in.
Tread Width:	17.70 in.
Chassis Overhang:	82.44 in.
Additional Bumper Depth:	19.00 in.
Front Overhang:	101.44 in.
Wheelbase:	184.25 in.

Calculated Turning Radii:

Inside Turn:	14 ft. 3 in.
Curb to Curb:	28 ft. 2 in.
Wall to Wall:	33 ft. 5 in.

Comments:

21740

Components	PRIDE #	Description
Front Axle	0018453	Axle, Front, Oshkosh TAK-4, Non Drive, 22,800 lb, DLX/Enf/Qtm/AXT
Front Wheels	0019611	Wheels, Frt, Alum, Alcoa, 22.50" x 12.25" (425/ & 385/)
Front Tires	0521238	Tires, Michelin, 425/65R22.50 20 ply XPE, Hiway Rib
Chassis	0517118	Quantum, Bright Finish, Side Door Chassis, PUC
Front Bumper	0012245	Bumper, 19" extended - Sab/CC

Notes:

Actual Inside Cramp Angle may be less due to highly specialized options.

Curb to Curb turning radius calculated for a 9.00 inch curb.



1600 Franklin Street, Oakland, CA 94612

September 25, 2013

Aleida Andrino-Chavez
City of Albany
1000 San Pablo Ave
Albany, CA 94706

Subject: San Pablo Ave Complete Streets

Dear Ms. Andrino-Chavez and Traffic and Safety Commission Members:

Thank you for the opportunity to submit comments on the Draft Complete Streets Report (hereafter, "Draft Report"). AC Transit appreciates the time and energy that city staff and consultants have devoted thus far. However, we wish to share specific concerns about recommendations found in the Draft Report. Namely, AC Transit asks the Traffic and Safety Commission to (1) discard any design alternative that includes sharrow on San Pablo Ave and (2) include and require relocation of bus stops from near-side to far-side as part of the Final Complete Streets Report. We believe that addressing these concerns will improve the outcomes of this planning effort for all users.

The following letter presents our understanding of a "complete street" and the role it plays in a transportation network. We then describe the importance of San Pablo Ave as a transit corridor. Finally, we present our concerns about sharrow and bus stop locations, as they relate to the Draft Plan.

Complete Streets vs Complete Networks

Complete Streets are often defined as individual streets that accommodate all users or modes. Given limited resources and rights-of-way, this vision can be financially or geometrically difficult or impossible to realize.

However, a "complete street" can also be thought of as part of a greater whole: a street that appropriately accommodates a subset of modes *within a network of streets* that collectively provide safe and convenient mobility and access for all modes. This "Complete Network" approach allows stakeholders to have productive and frank conversations about trade-offs and alternative routes which create an overall benefit to all users. This holistic approach leads to greater overall utilization of alternative transportation modes, and higher achievement of the City's Climate Action Plan goals to reduced traffic, accidents, and greenhouse gas emissions.

AC Transit in Albany

San Pablo Avenue is the primary transit corridor linking cities in northern Alameda County and western Contra Costa County. San Pablo Ave is the second-largest corridor-level service investment in the AC Transit service district. The corridor is served by limited-stop Rapid and underlying local and Transbay service. Combined, these transit lines provide nine (9) trips per hour in each direction, or a bus nearly every 6 ½ minutes.

Citywide, AC Transit provides *nearly 3,900 customer trips to or from Albany* each weekday. Nearly one-third of these trips begin or end on San Pablo Ave. These transit customers represent Albany residents, workers, and visitors.

In addition, AC Transit carries *more than 4,300 transit customers through Albany* via San Pablo Ave each weekday. This represents *approximately 20% of person-trips* through the San Pablo Ave corridor during the peak commute period (~450 person-trips per hour). The City has an incentive to maintain and improve their transit experience because each transit customer represents one less automobile trip on San Pablo Ave. By comparison, less than 1% of through-trips are made by bicycle.

Sharrows

Sharrows are markings on the roadway indicating to motorists that they should expect to share the travel lane with cyclists. Sharrows encourage cyclists to travel closer to the center of the travel lane to improve visibility and discourage motorists from passing too close. In fact, new legislation (AB 1371) requires that motorists give cyclists at least a three-foot separation when passing on the left.

While AC Transit supports improvements to visibility and safety for all roadway users, we do not support the use of sharrows to achieve these goals. Sharrows negatively impact transit speed, reliability, and comfort. Furthermore, sharrows encourage (relatively) slow and unprotected cyclists to share a travel lane with larger, faster vehicles, which creates an uncomfortable and unsafe environment for cyclist, transit customers, and transit operator.

To safely access bus stops and pass cyclists, bus operator must fully merge into adjacent travel lanes. These horizontal deflections create an uncomfortable environment for our customers on board and increase the chance of vehicle collisions. When the roadway is congested, buses may not be able to change lanes, forcing transit customers to travel at the same speed as a cyclist. Under some circumstances, cyclists and buses may “leap-frog” one another repeatedly during a trip, exacerbating the impacts to transit travel time. Because this interaction is difficult to predict, AC Transit must either budget excess travel time or accept poor schedule reliability.

To avoid this expensive and potentially dangerous scenario, AC Transit urges the Traffic and Safety Commission to discard any design alternative that includes sharrows on San Pablo Ave (as recommended in Option 3 of the Draft Report). AC Transit has been—and continues to

be—open to discussion about bike route alternative that provide desired north-south connectivity and maintains or enhances transit performance.

Farside Bus Stops

Far-side bus stops are bus stops that occur after a bus passes through an intersection. This bus stop location is superior for both transit operations and safety of other users.

When buses stop on the near-side of an intersection (before the traffic signal), transit customers experience multiple sources of delay, including red-lights, conflicting movements, and traffic-reentry. By placing bus stops after an intersection, these sources of delay are reduced or eliminated. This yields a significant cost savings to transit operators and improved service to transit customers.

Near-side bus stops also limit eye-contact between motorists and pedestrians. Motorists attempting to pass a stopped bus cannot see the entire crosswalk and therefore may not have sufficient reaction time if a person is stepping into the crosswalk. Far-side bus stops eliminate this problem by placing the bus on the opposite end of the intersection so that motorists and pedestrians have an unobstructed view of one another.

The Rapid 72R bus stop on Northbound San Pablo Ave nearside of Solano Ave is an example of the disadvantages of nearside bus stops. **Eighty percent (80%)** of Rapid buses arrive at the stop when the light is green. However, the signal changes from green to red while the bus is boarding customers. As a result, customers are forced to wait through an entire light cycle to continue to their destination. On average, this delay amounts to 1:01, but the **majority of Rapid buses are delayed 1:15 – 2:00**. (Local and Transbay buses are delayed 0:54 at this bus stop.)

This transit delay has a negative impact on other roadway users, too. Because of the added delay, buses occupy this bus stop 20% of the day (or 12 minutes out of each hour). Furthermore, the red curb for bus stops is of insufficient length, making it difficult or impossible for buses to pull into the bus stop. As a result, 50% of buses stopping at this location block the travel lane.

To resolve this potentially dangerous and inefficient situation, AC Transit urges the Traffic and Safety Commission to include and require relocation of the northbound San Pablo Ave at Solano Ave bus stop from near-side to far-side as part of the Final Complete Streets Report. We believe that it is important for the Traffic and Safety Commission to adopt a strong position favoring far-side bus stop locations that improve pedestrian safety and transit performance. AC Transit has been—and continues to be—willing to discuss this concept with city staff and the business community to understand how legitimate concerns can be addressed. Unfortunately, we were not invited to participate in the last discussion on this topic.

Thank you for your attention to these matters. If you have any questions about this letter, please contact Stephen Newhouse in Planning and Development at (510) 891-4867 or snewhouse@actransit.org.

Yours Truly,



Robert del Rosario
Director of Service Development

Cc: AC Transit Board of Directors
City of Albany Traffic and Safety Commission Members
Dennis W. Butler, Chief Planning and Development Officer, AC Transit
Stephen Newhouse, Transportation Planner, AC Transit



Albany Strollers & Rollers
524 Talbot Avenue
Albany, CA 94706

3 September 2013

Aleida Andrino-Chavez
Transportation Planner
City of Albany
Re: San Pablo and Buchanan Complete Streets Study

Dear Ms. Andrino-Chavez:

Albany Strollers and Rollers (AS&R) has followed and provided input to Albany's complete streets planning process for San Pablo and Buchanan and supports the outcome of the process as embodied in the draft report.

While AS&R would have preferred the report call for cycling lanes along the entirety of San Pablo, it understands limiting the extent of those lanes to areas with lower on-street parking occupancy. AS&R notes the Traffic & Safety Commission expressed support for making all changes in paint only initially, as was done with the Marin reconfiguration, in order to provide the opportunity for further refinement. This will also hopefully afford time for further study of parking occupancy in the area, such as if Albany receives a grant it is currently seeking for this purpose, prior to making hardscape changes. The experience of cycling lanes on a portion of San Pablo and the results of further study may lead the City to decide to extend the lanes further.

In the meantime, AS&R supports the additional call to establish parallel cycling routes on Kains and Adams. AS&R notes there are two options now for affecting these routes, unlike when the Active Transportation Plan was developed. Presumably residents can find one of these options acceptable as these routes are needed for the majority of people will not ride if San Pablo with sharrows is the only option. The lack of a facility on Adams is also currently a gap in an otherwise almost entirely complete cycling route from Richmond through El Cerrito, Berkeley, Emeryville and Oakland.

AS&R also appreciates the planned improvements along Buchanan, including the crossing upgrade at Taylor and the increased landscaping along the north side. Tree bulbs on this side to match those on the south side will visually narrow the street, providing another calming measure to further bring down motorist's currently excessive speeds.

The most controversial aspect of the draft complete street plan is the proposed shift of the northbound 72 bus stop from south to north of Solano. In true complete streets

fashion, this will improve the operation of San Pablo for motorists by reducing congestion due to stopped buses incompletely pulled out of the lane frequently blocking through and right turning motorists. It will also improve bus operations, saving AC Transit, and consequently all tax payers, money and the 4,000 bus riders through Albany on San Pablo an estimated cumulative total of 16 hours per day. More importantly for AS&R, almost all bus riders walk to and from the bus stop, so improved bus operations makes the choice to walk for transportation more feasible. Most importantly for AS&R, placing bus stops on the far side of crosswalks, as the proposed move would, increases safety as compared to bus stops on the near side of crosswalks, where the bus blocks visibility of people using the crosswalk.

A final consideration for AS&R was whether splitting the transfer from the northbound 72 lines to the eastbound 18 line would create an undue burden for any bus patrons, particularly those that are blind and mobility impaired. This turns out not to be an issue for the 72 and 72M lines because they share stops with the 18 in both directions at Buchanan. It is only a potential issue for the transfer from the northbound 72R. AS&R contacted AC Transit regarding this issue, which in turn consulted with the visually impaired representative on its Accessibility Advisory Committee. This individual noted that far side bus stops are the norm along San Pablo and that the signals at Solano have audible features that are up to standard. Consequently splitting the stops is not a significant issue for the visually impaired.

For all these reasons, AS&R asks the City to proceed with moving the 72 bus stop north of Solano in accord with the "Transit First" policy in its General Plan.

Thank you for the opportunity to provide this input, and for pursuing the complete streets study. AS&R looks forward to the changes for which it plans.

Sincerely,



Preston Jordan
Co-Founder

AS&R is a service and advocacy group focused on making it easier and safer to bike, walk, skate, scoot, roll, ride, and just generally get around Albany in such a way that promotes community building. AS&R currently has over 500 household members on its announcement list and over 200 members on its discussion list.

