

**DATE:** October 2, 2023

**TO:** Council Transportation Committee

**FROM:** Hoa Nguyen, Associate Civil Engineer  
Robert Gonzales, Principal Civil Engineer  
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**VIA:** Dawn S. Cameron, Public Works Director

**SUBJECT:** California Street Complete Street Improvements, Pilot, Project 21-40

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**RECOMMENDATION**

Review the design for the pilot phase of California Street Complete Street Improvements, Project 21-40, between Showers Drive and Shoreline Boulevard, and provide feedback to staff.

**BACKGROUND**

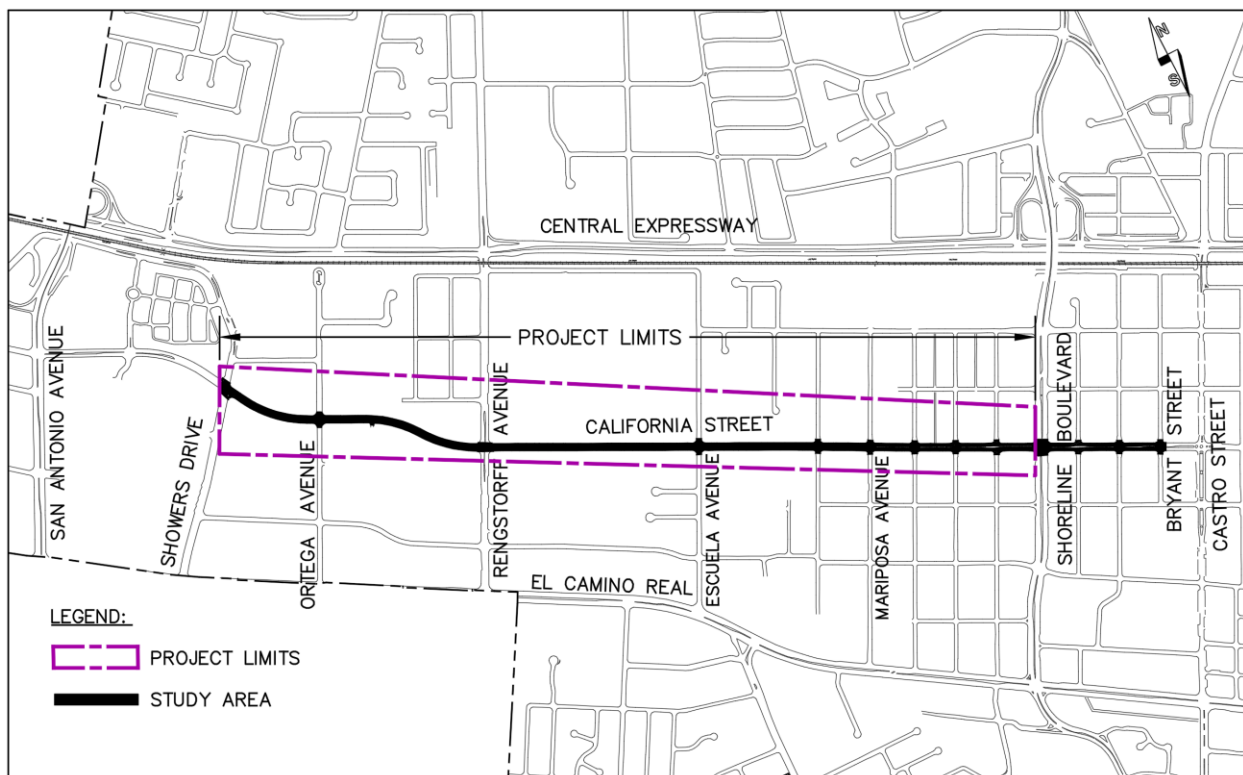
In 2015, the California Street/Escuela Avenue/Shoreline Boulevard Complete Streets Feasibility Study (Study) was prepared to identify potential solutions to create safe, comfortable, and convenient conditions for all travel modes. The Study, which was generally supported by the City Council at the [October 15, 2015 Study Session](#), recommended a three-phased approach for implementing complete streets along California Street, between Showers Drive and Bryant Street (see Figure 1).

The first phase was identified to be a pilot from Showers Drive to Ortega Avenue that used temporary improvements to test the concept and determine any desired changes before permanent improvements are installed. These temporary improvements included a lane reduction (four lanes to three lanes, including a two-way left-turn center lane) through pavement markings, bulb-outs, and protected intersections through pavement markings and rubber curbs, and a midblock crossing. The lane reduction will allow for parking-protected bike lanes with painted buffers, pylons, and shorter intersection crossing distances for pedestrians.

The second and third phases recommended conversion of the temporary bulb-outs to permanent bulb-outs, adding green street landscaping features at intersections and midblock crossing locations, and expanding the lane reductions (four lanes to two lanes) along California Street with limited gaps for left-turn access and landscaped median islands.

On [December 7, 2021](#), Council authorized a professional services agreement with BKF Engineers (BKF) for project design of the Phase 1 pilot from Showers Drive to Ortega Avenue. On June 28, 2022, as part of the Fiscal Year 2022-23 [Capital Improvement Program review and adoption](#), Council directed staff to expand the Phase 1 pilot limits to include Showers Drive to Shoreline Boulevard, and on [September 27, 2022](#), Council authorized an amendment to the BKF agreement to accommodate the expanded pilot phase scope.

This project will implement the pilot phase identified in the Study from Showers Drive to Shoreline Boulevard. The segment of California Street between Shoreline Boulevard and Bryant Street was recently improved with Class II green bike lane infrastructure.



**Figure 1: Project Location Map**

## **ANALYSIS**

The California Street Complete Street Pilot Improvements will include the following design elements:

- Four-lane-to-three-lane road diet with two-way center left-turn lane (Showers Drive to Mariposa Avenue);

- Parking-protected bike lanes;
- High-visibility crosswalks through the corridor;
- Protected intersection improvements, where feasible; and
- High-visibility midblock crossings with bulb-outs, refuge island, and enhanced lighting.

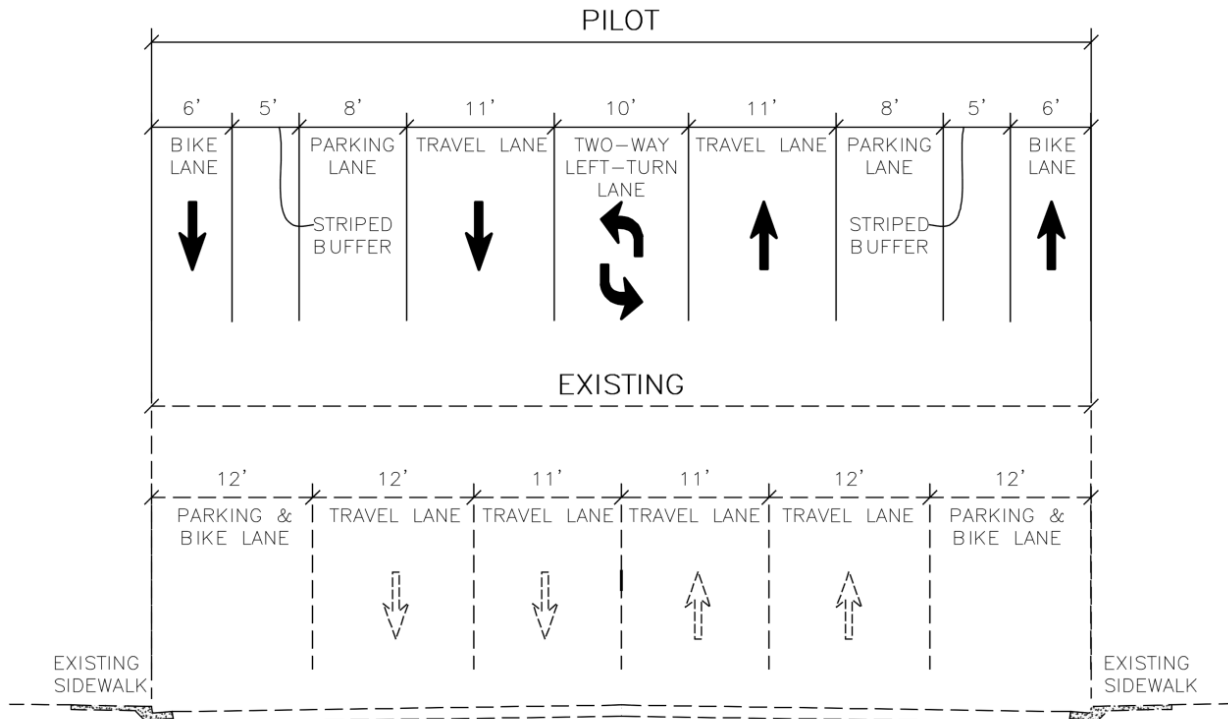
While Attachment 1 identifies the full layout of the corridor improvements, the corridor consists of two distinct segments, with the following providing a discussion of each segment of the pilot phase.

### **Segment 1: Showers Drive to Mariposa Avenue**



**Figure 2: Location Map—Showers Drive to Mariposa Avenue**

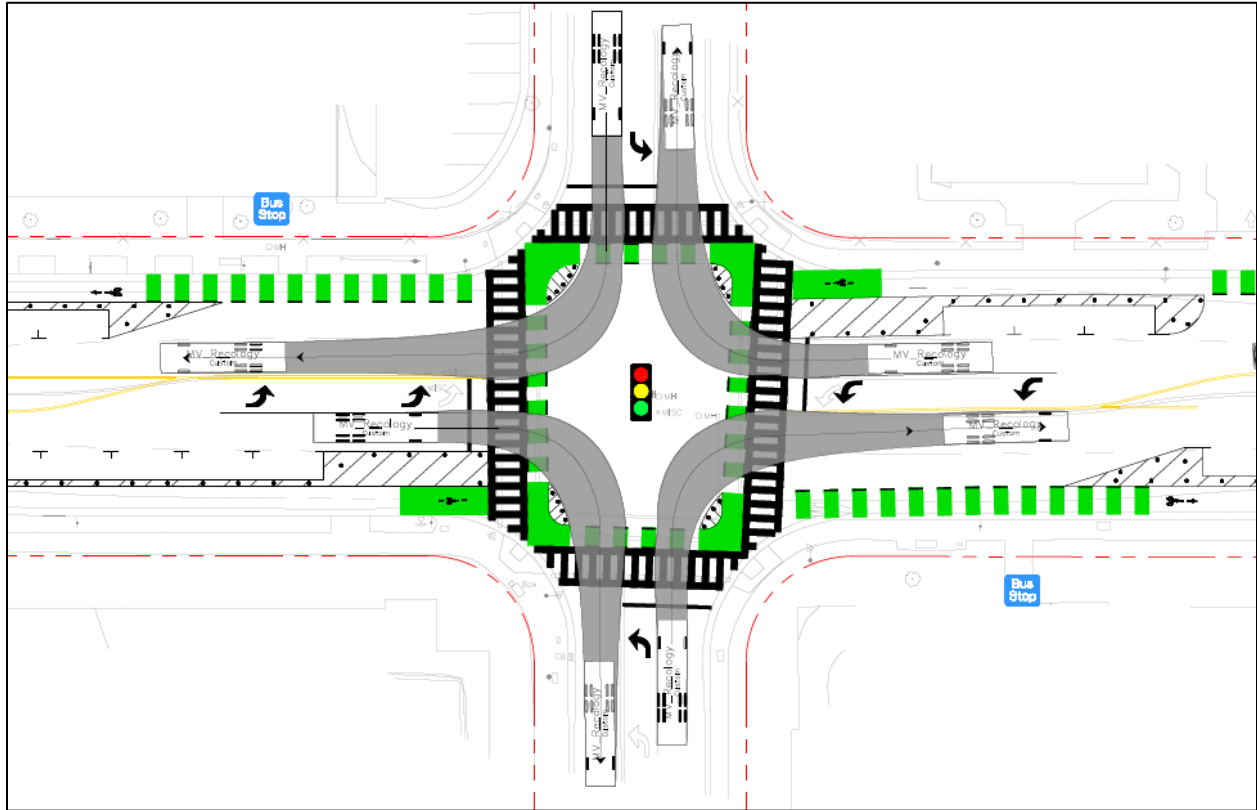
This segment generally has four travel lanes, dedicated left-turn pockets, on-street parking on both sides, and bike lanes between the parking and travel lanes. The improvements include a four-lane-to-three-lane road diet with a new two-way center left-turn lane and parking-protected bike lanes and with the dedicated left-turn pockets at intersections and bus stops preserved (see Figure 3).



**Figure 3: Typical Cross Section—Showers Drive to Mariposa Avenue**

Protected intersection improvements will be implemented at Ortega Avenue, Rengstorff Avenue, and Escuela Avenue. Due to the existing roadway geometry, a partially protected intersection is proposed at Showers Drive for this pilot phase. The existing slip-lane configuration at Showers Drive would need to be eliminated to implement a complete protected intersection at Showers Drive, and staff will evaluate this change for Showers Drive as part of the final phase.

Figure 4 shows a typical protected intersection for this segment, including corner rubber curb bulb-outs, high-visibility crosswalks, and advanced stop bars. Standard truck turning templates are shown in gray to confirm the accessibility for Recology and Fire vehicles.



**Figure 4: Typical Protected Intersection**

Three midblock crossings are proposed along this segment at the following locations: between Showers Drive and Ortega Avenue; between Ortega Avenue and Rengstorff Avenue; and between Rengstorff Avenue and Escuela Avenue. Midblock crossing improvements include the rectangular rapid flashing beacon (RRFB) with lighting to improve visibility, corner curb bulb-outs, median refuge island, high-visibility crosswalk striping, and two new curb ramps to accommodate improved local access to shopping areas (see Figure 5).

The exact location of the midblock crossing between Ortega Avenue and Rengstorff Avenue is still being determined. The San Francisco Public Utilities Commission (SFPUC) right-of-way bisects this block and poses a barrier to the pilot phase installation at the center of the block. SFPUC has consistently communicated that excavations and installations for new utilities, facilities, and structures (such as lighting) are prohibited in their right-of-way. Staff will identify placement options outside the SFPUC right-of-way, and the crossing will be toward either Rengstorff Avenue or Ortega Avenue.

Additional crossings along the corridor will be evaluated in the final phase.

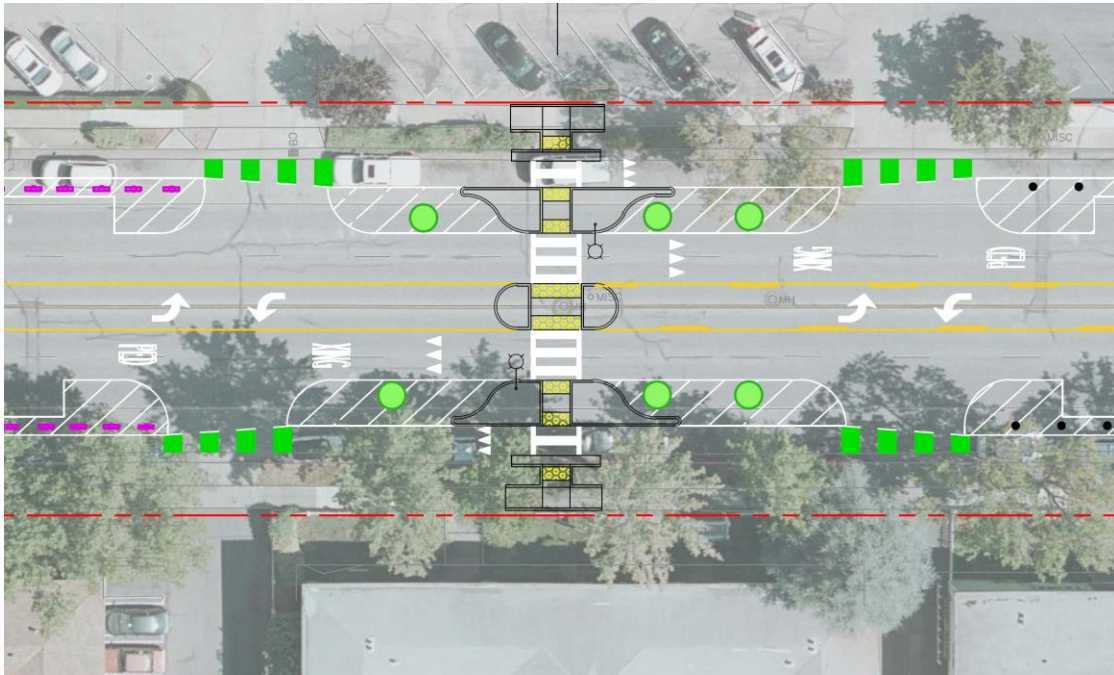


Figure 5: Typical Midblock Crossing

**Segment 2: Mariposa Avenue to Shoreline Boulevard**

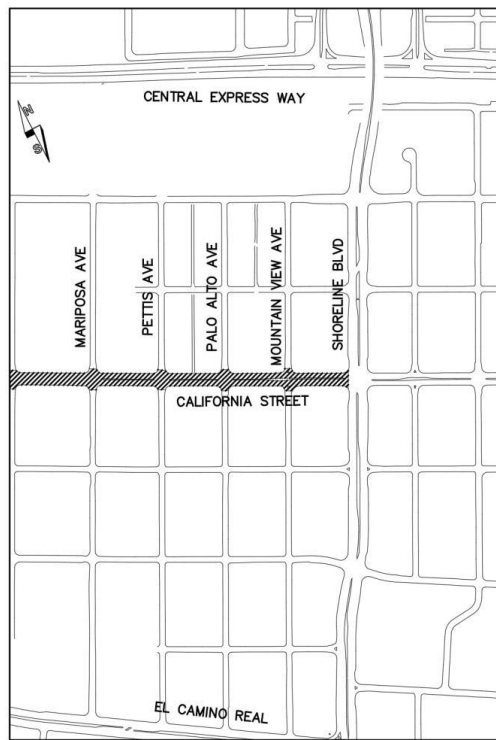
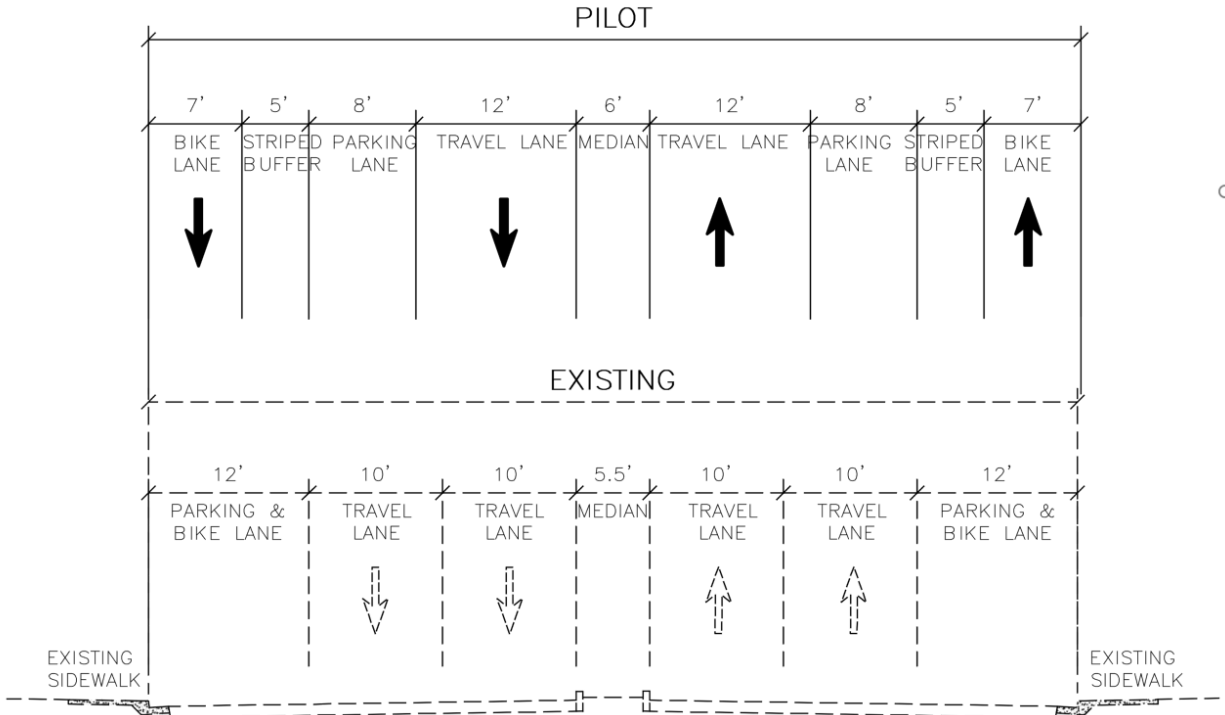


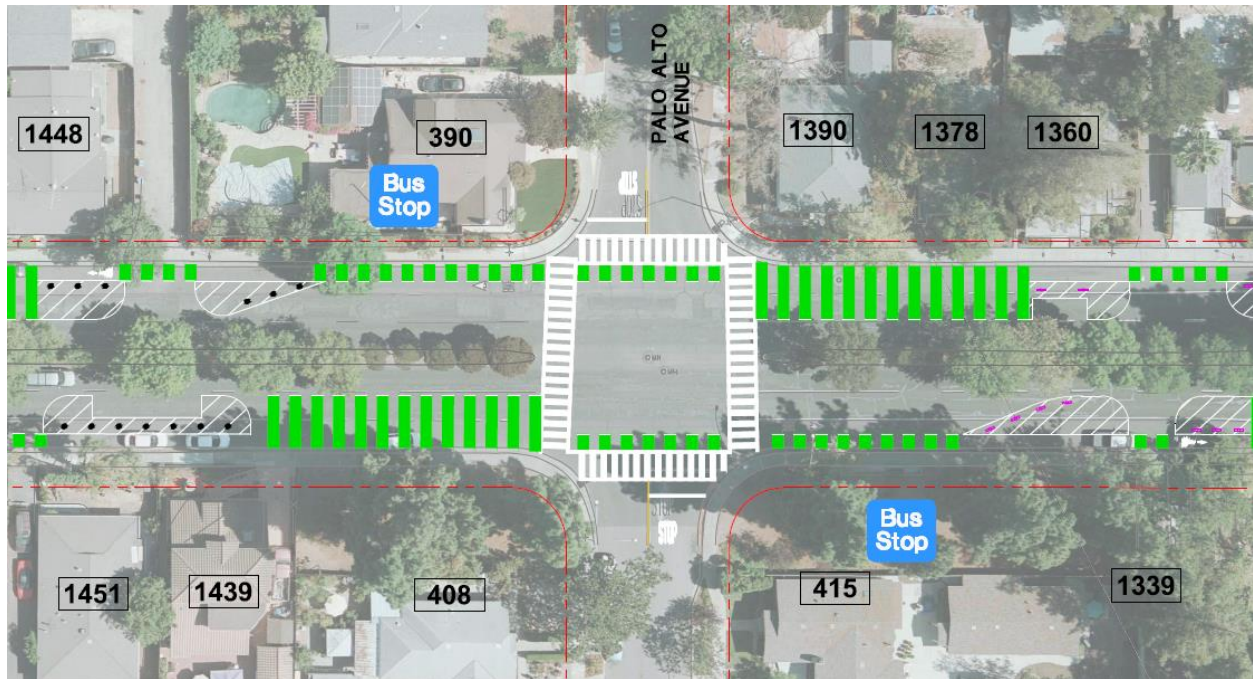
Figure 6: Location Map—Mariposa Avenue to Shoreline Boulevard

This segment has existing landscaped center median islands, four travel lanes, bike lanes, on-street parking on both sides (except for Mountain View Avenue to Shoreline Boulevard), and no dedicated left-turn pockets at the intersections. Improvements include a four-lane-to-two-lane road diet, on-street parking, parking-protected bike lanes, and high-visibility striping improvements at the intersections (see Figures 7 and 8). The segment contains narrower side streets, limiting the ability to easily implement protected intersection improvements. Midblock crossings are not included for this segment due to the constraints of the existing median islands and having relatively short blocks. This project will not implement protected intersection improvements at Shoreline Boulevard as it has existing cornered bulb-outs and would require one lane reduction in each direction on Shoreline Boulevard, which could create a choke point and impact traffic movements on Shoreline Boulevard.



**Figure 7: Typical Cross Section—Mariposa Avenue to Shoreline Boulevard**

Figure 8 shows improvements at a typical intersection along this segment, including high-visibility crosswalks and advanced stop bars. However, there is an existing median island with trees at Mountain View Avenue blocking the ability to install high-visibility crosswalks across California Street that meet visibility and Americans with Disabilities Act (ADA) standards without having to remove some trees; therefore, crosswalks at this location are not included in this pilot project.



**Figure 8: Typical Intersection Improvements**

### **Bicycle/Pedestrian Advisory Committee**

On March 29, 2023, staff provided a project update to the Bicycle/Pedestrian Advisory Committee (BPAC). The BPAC indicated support for the project with the following key feedback:

- Evaluate the feasibility of a third midblock crossing between Ortega Avenue and Rengstorff Avenue.
- Consider utilizing other sturdier vertical treatments/dividers adjacent to the bicycle lane rather than flexible posts.
- Consider providing green street infrastructure through the use of planter boxes.
- Involve BPAC in development of project performance criteria.
- Evaluate means to keep delivery vehicles from blocking the bicycle lane.

Staff further developed the project design to incorporate BPAC comments, including incorporating the midblock crossing between Ortega Avenue and Rengstorff Avenue, evaluating various vertical delineator options and planter boxes, and identifying a future effort to develop project performance criteria. With the configuration of the improvements of a parking-protected




bike lane with vertical treatments, vehicles, including delivery vehicles, will be precluded from accessing or blocking the bike lane.




**Vertical Treatments**

In response to BPAC and community requests for different vertical treatments that differ from the typical flex post, staff has selected five devices to apply as test cases along the corridor (see Table 1). These devices will be installed in test segments throughout the corridor to allow the community to experience the different treatments and for staff to evaluate the effectiveness of each device. The locations of where the treatments will be installed are shown in Attachment 2.

One of the vertical treatments proposed for the pilot are planter boxes, which can help determine community’s preferences, effectiveness, and maintenance needs for using planter boxes for the permanent improvements. However, as a pilot project with temporary improvements, these planter boxes will not include irrigation. Staff is currently evaluating the types of low-water-use plants to use and developing a plan and estimated additional costs for watering and maintaining the plants. Should planter boxes be used in the permanent improvements, irrigation will be installed at that time.

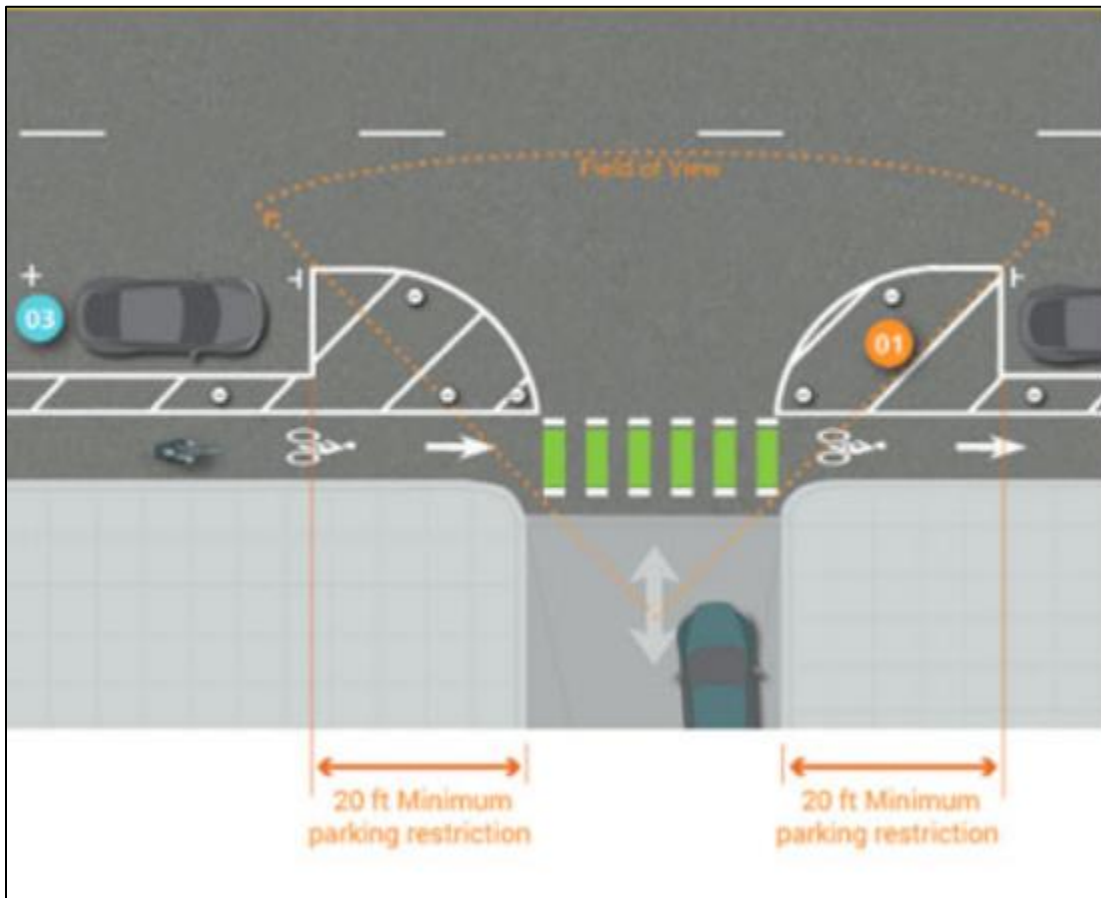
**Table 1: Vertical Treatments**

<p>K-71 Channelizer</p>	
<p>Planter box *NOTE: Planter box shown is an example. Actual planter box product will be determined through final design.</p>	

<p>Floppy</p>	
<p>Rubber curb</p>	
<p>Armadillo</p>	

**Parking Impacts**

Between Showers Drive and Shoreline Boulevard, there are approximately 154 existing on-street parking spaces on the north side of California Street and approximately 121 existing parking spaces on the south side, for a total of 275 parking spaces. As part of the pilot project, approximately 63 on-street parking spaces will be removed to comply with current site design regulations. For instance, the Federal Highway Administration (FHWA) recommends a 20’ minimum clearance on both sides of a driveway to provide drivers the visibility of oncoming traffic in both directions, as shown in Figure 9. This will require the removal of parking in those locations adjacent to existing driveways.



**Figure 9: Parking Restriction at Driveways**

Additionally, both the National Association of City Transportation Officials (NACTO) and FHWA guidelines recommend clear lines of sight for the safety of bicyclists at intersections by prohibiting parking at the approach to intersections and providing a mixing zone for bicyclists and right-turning vehicles. This includes a 100' distance to accommodate the mixing zone before an unprotected intersection (see prior Figure 8). Unprotected intersections within the project limits include unsignalized intersections at Mountain View Avenue, Palo Alto Avenue, Pettis Avenue, and Chiquita Avenue and the signalized intersection at Mariposa Avenue. At Mariposa Avenue, the existing intersection does not have sufficient space to accommodate protected corner islands, so mixing zones will be applied at this intersection. Mixing zones will alleviate the potential conflict between right-turn vehicles and through bicyclists and facilitate bicyclists in transitioning for a left-turn movement.

## **CONCLUSION**

This Phase 1 pilot project is the first step for implementing complete street elements along California Street from Showers Drive to Shoreline Boulevard. The improvements generally

include a road diet, on-street parking, parking-protected bike lanes, high-visibility crosswalks, protected intersection improvements, and midblock crossings. Through the feedback received from the BPAC and community, an additional midblock crosswalk has been included, five vertical treatments will be piloted to determine effectiveness, and parking impacts have been identified as a result of the reconfiguration of the corridor.

### **NEXT STEPS**

After receiving feedback from the Council Transportation Committee (CTC), staff will proceed with final design, anticipated to be completed in spring 2024, with construction starting in summer 2024. Staff will return to the BPAC and CTC to identify the criteria of determining the effectiveness of the pilot improvements. Following construction, staff will observe traffic operations and the effectiveness of the improvements based on the criteria determined, identify an implementation plan to convert the successful temporary improvements into permanent installations, and include a public art element to enhance the bicycle and pedestrian experience along the California Street corridor per Council direction. The full build-out of permanent improvements for the corridor is estimated at \$30 million. Staff will evaluate a funding and implementation strategy for City Council consideration at a future date.

### **PUBLIC NOTICING**

In addition to the standard agenda posting, notices were mailed to property owners and residents within 750' of the project site.

HN-RG-EA/LL/6/PWK

979-10-02-23M

Attachments:   1.   California Street Complete Street—Corridor Layout (Pilot)  
                  2.   Vertical Element Table

cc:   APWD—Arango, PCE—Gonzales, CTE, ACE—Nguyen