APPENDIX B

PROPOSED STREET DESIGN

Road Diets

A road diet is when the motor vehicle travel lanes on a roadway are reduced to reallocate the space for other uses, such as transit lanes, bikeways, or wider sidewalks.

According to the Federal Highway Administration (FHWA), streets with road diets have multiple benefits for all roadway users:

-Fewer vehicle travel lanes for pedestrians to cross

-Better visibility of pedestrians and bicyclists at intersections

-Reduction in vehicle crashes and crash severity

-Improved speed limit compliance

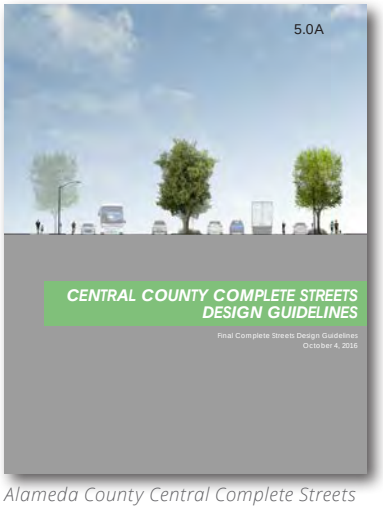
-Improved livability and quality of life

B.1 PROPOSED STREET DESIGN

This Appendix provides street cross-sections depicting proposed changes to key streets in the Plan Area. The cross sections are labeled according to the roadway segment that is depicted, however, this does not mean this is the only segment of the roadway that should be improved. In some instances both short-term and long-term options are provided to align with the phasing scheme provided in Chapter 3 (Mobility).

The changes reflected in the figures are illustrative and provide street network components and possible configurations that the City should consider when planning improvements to these roadways in the future. The final design of these cross sections will be finalized by the City as part of a future planning process that will take into consideration the goals and long-term vision specified in this Plan.

Table B.1 (Potential Street Dimensions) provides suggested dimensions for each street element to help ensure that street are designed to achieve the Mobility Vision. The City should strive to design all streets as complete streets whenever possible, consistent with the City complete streets policy and Alameda County Complete Street Guidelines. When designing streets the City should include bike lanes and buffers on appropriate streets to promote safe cycling; provide medians and on street parking; reduce travel lane widths to reduce vehicle speed; and provide adequate sidewalk width to provide safety for pedestrians.



Alameda County Central Complete Streets Design Guidelines

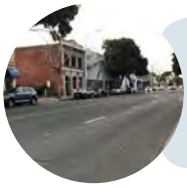
TABLE B.1 POTENTIAL STREET DIMENSIONS

Street Element	Right-of-Way (ROW) Width		
	40-60'	61'-69'	70'+
Sidewalk	8-9'	7-10'	9-12'
Bike Lane	5-6'	6-7'	7-8'
Bike Lane Buffer	2-3'	3-4'	3-6'
Parking Lane	8'	8', [16' angled]	8'
Travel Lane	8-10'	10-12'	10-12'
Median/Turn Lane	5-10'	5-10'	5-10'

Street Types

Arterial Street. *A street that accommodates major traffic volumes providing a continuous route and connecting high-traffic generation points to freeways and other State and city highways. Examples of arterial streets in the Plan Area include Mission Boulevard and Foothill Boulevard.*

Collector Street. *A street that collects traffic from local streets and interconnects arterial streets and provides direct access to adjacent properties. Examples of collector streets in the Plan Area include A Street and B Street.*



Local Street. *A street that serves primarily as a means of direct vehicular and pedestrian access to abutting properties. Examples of local streets in the Plan Area include Watkins Street and Main Street.*

Movement Types

The design speed for pedestrian safety and mobility is the primary determinant of movement types. The anticipated movement type is indicated on the following pages under "Overview."

Yield. *Drivers must proceed slowly, with extreme care and must yield to approaching traffic when vehicles are parked on both sides of the thoroughfare. A yield street is the functional equivalent of traffic calming. Target speed of 20 mph or less.*

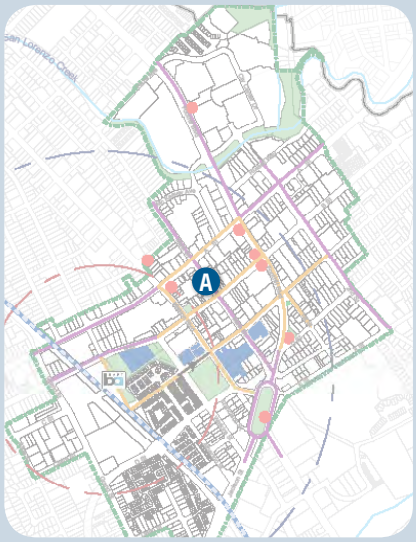
Slow. *Drivers proceed carefully with an occasional stop to allow a pedestrian to cross or another car to park. The character of the street makes drivers uncomfortable exceeding the target speed due to the presence of parked cars, sense of enclosure from buildings and street trees, tight turning radii, and other design elements. Target speed up to 25 mph.*

Free. *Drivers can generally expect to travel without delay at the appropriate target speed. Street design supports safe pedestrian movement at the higher target speed. This movement type is appropriate for thoroughfares designed to traverse longer distances or connect to higher intensity locations. Target speed up to 30 mph.*

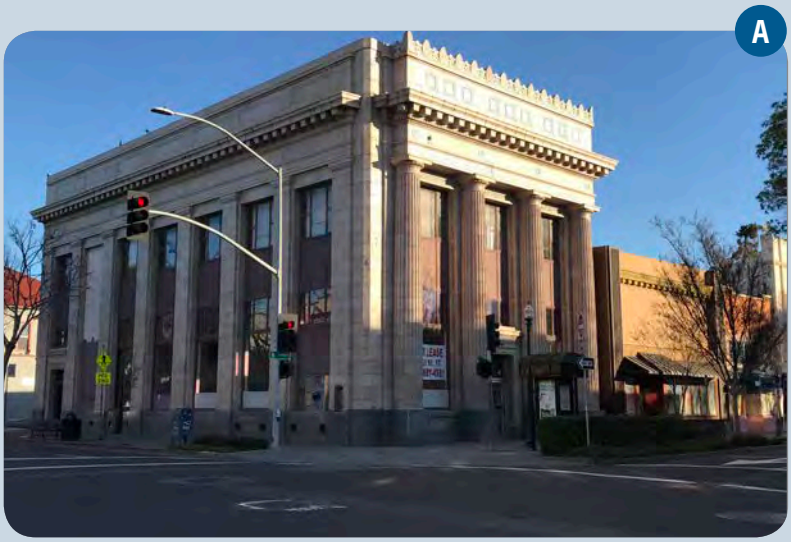
Speed. *Drivers can expect travel similar to conventional suburban street design but with continued emphasis on pedestrian safety and comfort. Target speed of 30 mph.*

Source: NACTO

Main Street (Between A Street and B Street) Option 1



Location map



Existing conditions; view looking north at Main Street/B Street intersection

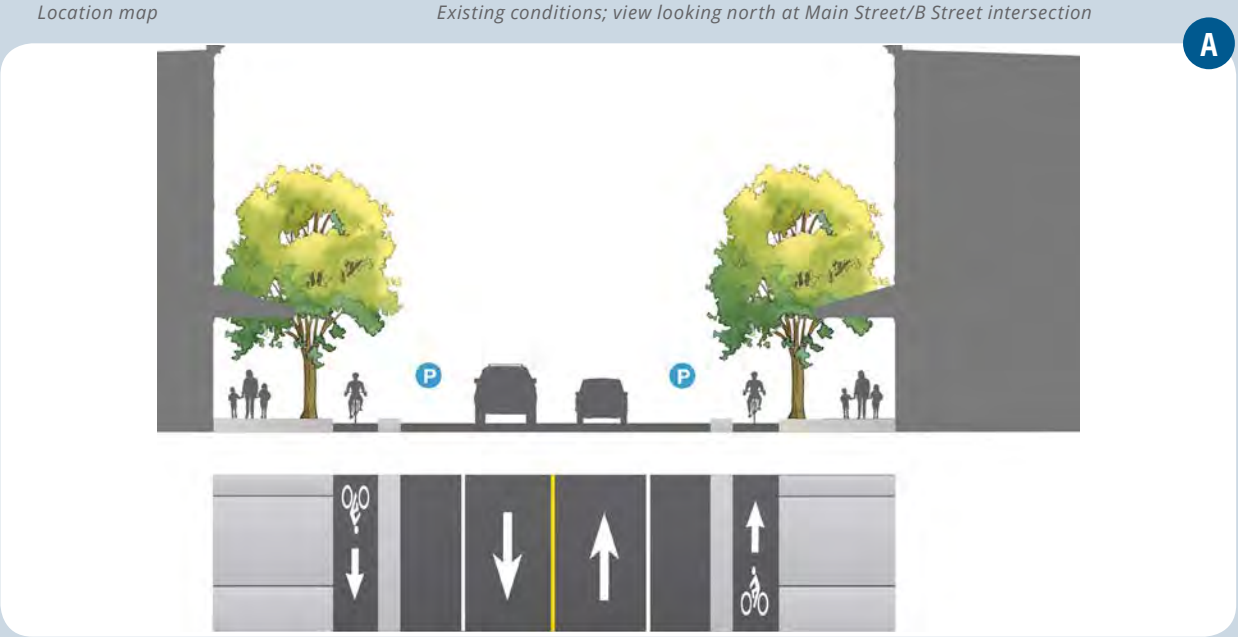


Figure B.1 **Main Street (Between A Street and B Street) Proposed Improvements - Option 1**

Proposed Changes

- *Convert to one travel lane in each direction*
- *Maintain sidewalk widths*
- *Install protected bike lanes with medians*
- *Maintain curb parking*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, at least one travel lane in each direction will be reduced.*

Overview

- *Movement Type: Free*
- *Target speed: 20 mph*

Main Street (Between A Street and B Street) Option 2

A

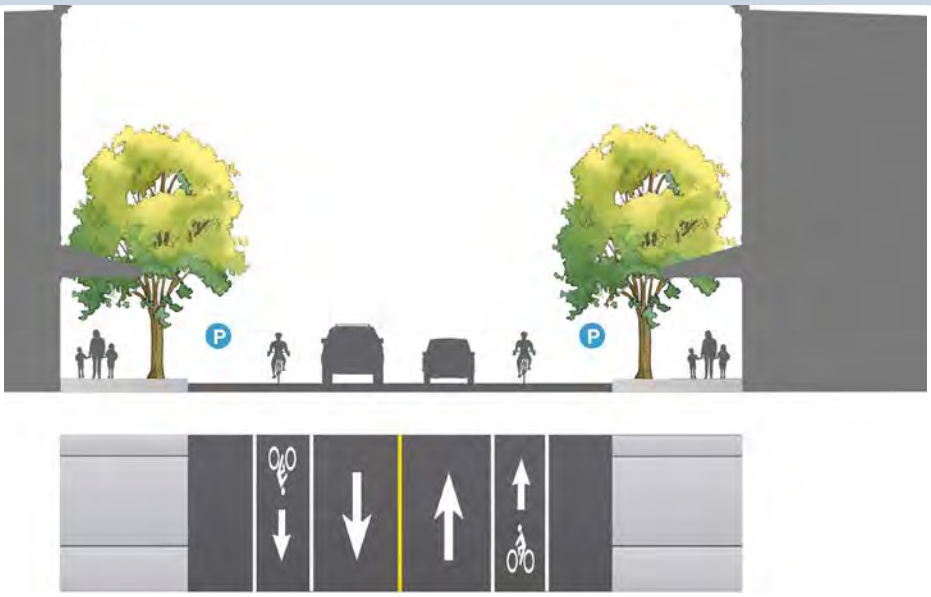


Figure B.2 Main Street (Between A Street and B Street) Proposed Improvements - Option 2

Proposed Changes

- *Convert to one travel lane in each direction*
- *Maintain sidewalk widths*
- *Install bike lanes*
- *Maintain curb parking*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, at least one travel lane in each direction will be reduced*

Overview

- *Movement Type: Free*
- *Target speed: 20 mph*

Main Street (Between A Street and B Street) Option 3

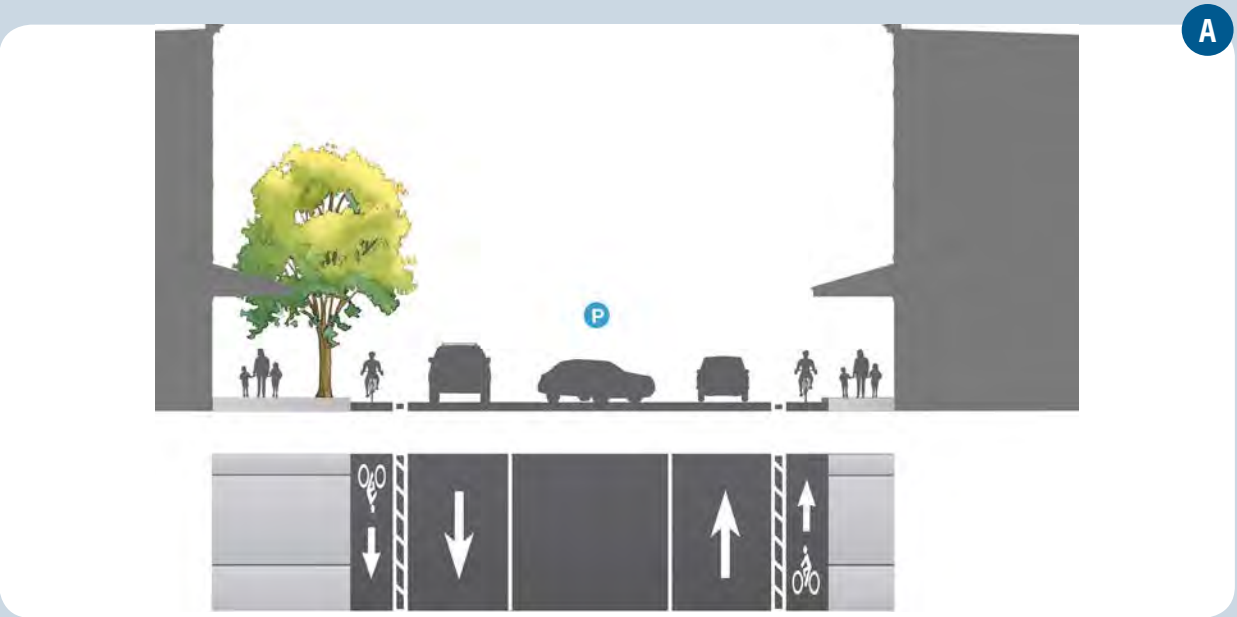


Figure B.3 Main Street (Between A Street and B Street) Proposed Improvements - Option 3

Proposed Changes

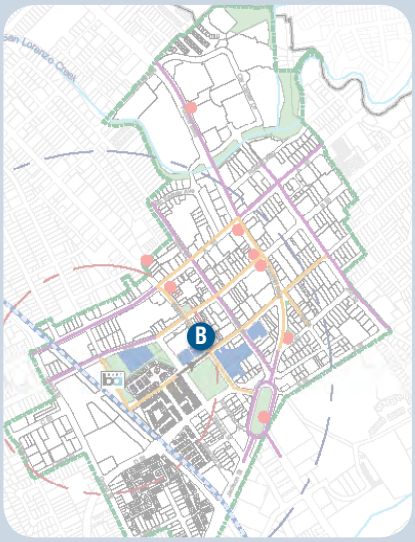
- *Convert to one travel lane in each direction*
- *Maintain sidewalk widths*
- *Install bike lanes with bollards*
- *Add parking to the median*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, at least one travel lane in each direction will be reduced*

Overview

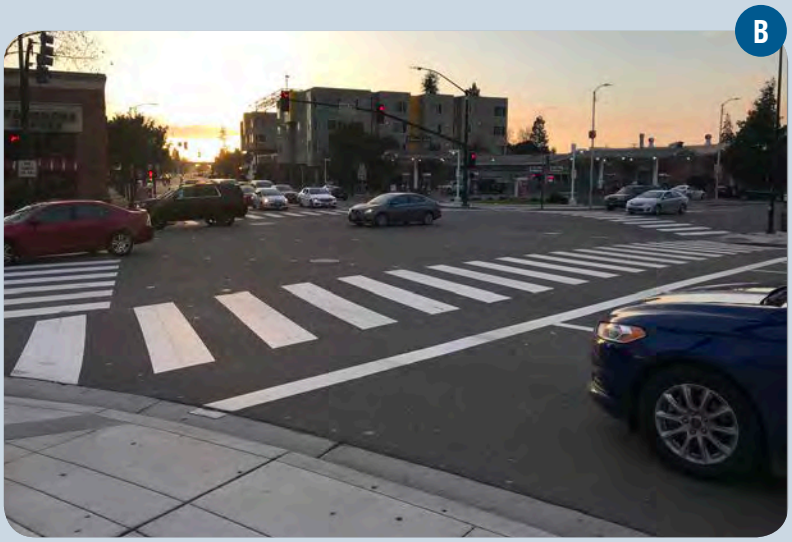
- *Movement Type: Free*
- *Target speed: 20 mph*

Mission Boulevard

Short-Term Improvements



Location map



Existing conditions; view looking south at Mission Boulevard/A Street intersection

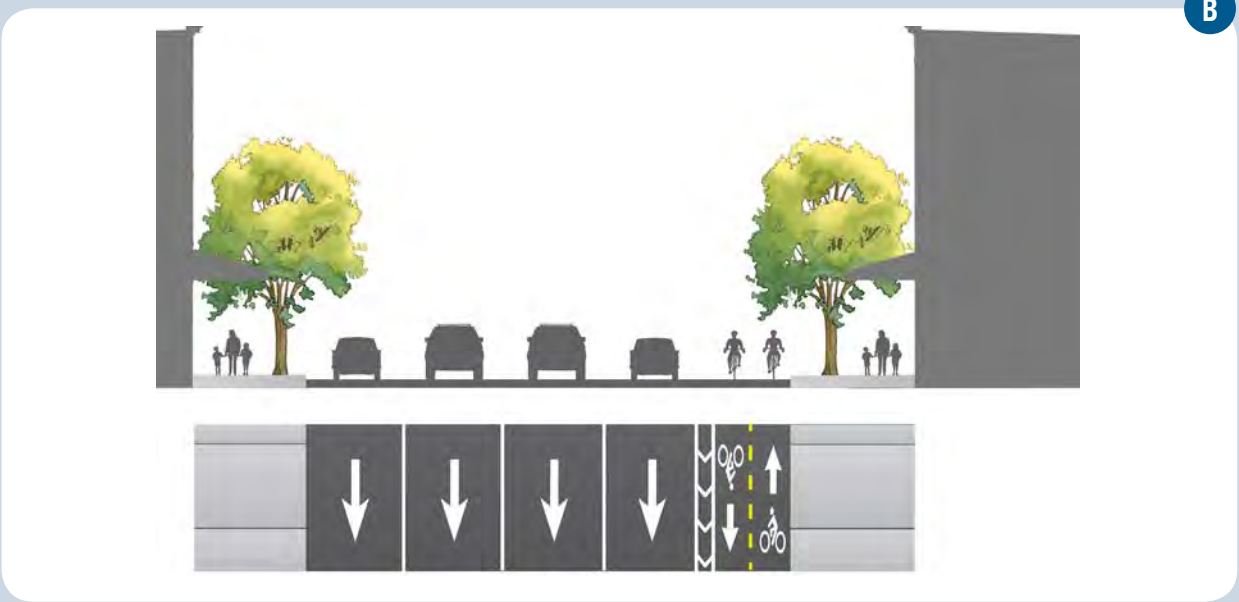


Figure B.4 Mission Boulevard Proposed Short-Term Improvements

Mid-Term Treatment

Install protected bike lanes with curb buffer

Figure B.5 Mission Boulevard Proposed Mid-Term Improvements

Proposed Changes

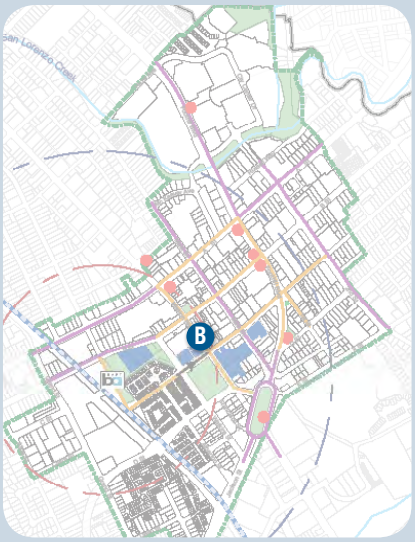
- *Install a cycle track on the south side of Mission Blvd*
- *Maintain sidewalk widths*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, at least one travel lane in each direction will be reduced*

Overview

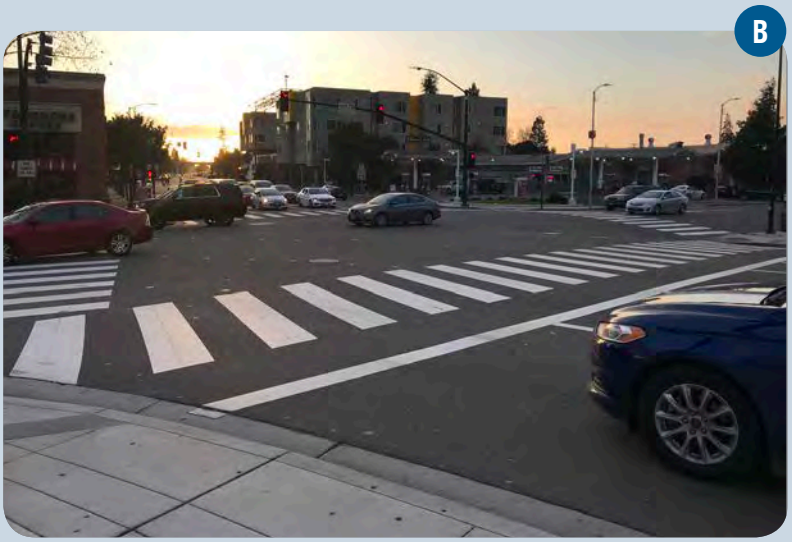
- *Movement Type: Free*
- *Target speed: 20 mph*

Mission Boulevard

Long-Term Improvements



Location map



Existing conditions; view looking south at Mission Boulevard/A Street intersection

Figure B.6 **Mission Boulevard Proposed Long-Term Improvements**

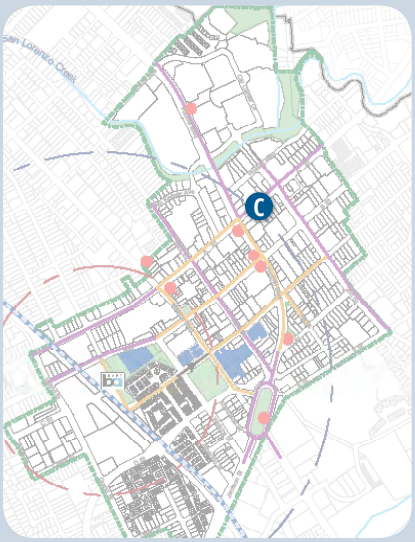
Proposed Changes

- *Convert to two-way travel with two lanes in each direction*
- *Maintain sidewalk widths*
- *Install bike lanes in each direction*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, at least one travel lane in each direction will be reduced*

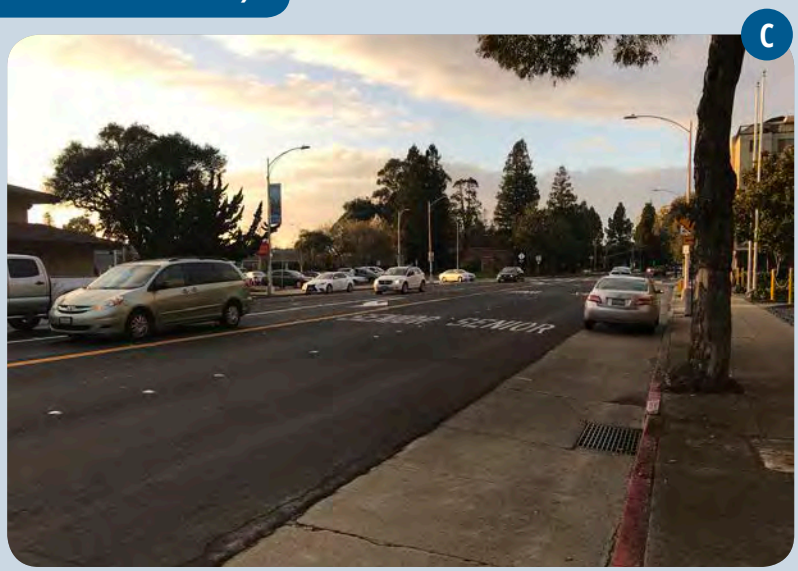
Overview

- *Movement Type: Free*
- *Target speed: 20 mph*

A Street (Between Foothill Blvd and 2nd Street)



Location map



Existing conditions; view looking northeast along A Street

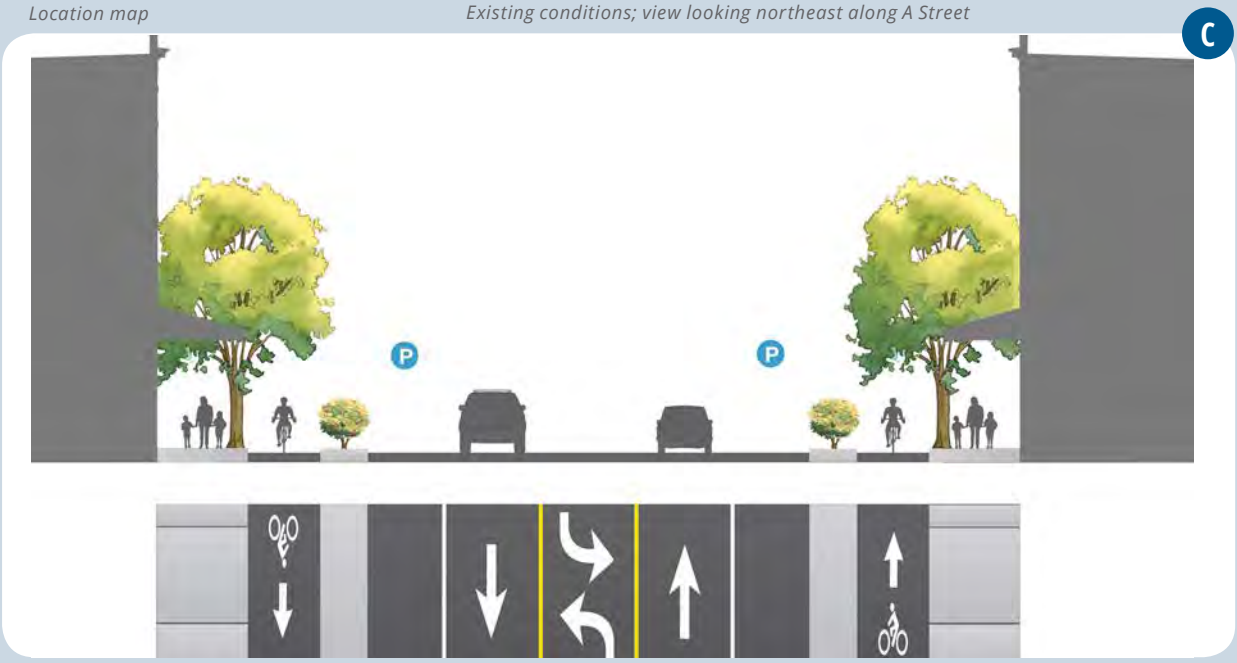
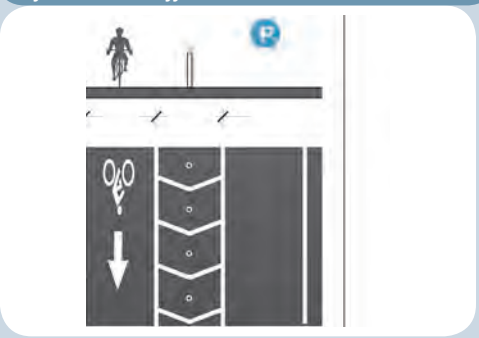


Figure B.7 A Street (Between Foothill Blvd and 2nd Street) Proposed Improvements

Short-Term Treatment

Install protected bike lanes with bollards before curb buffer installed



Proposed Changes

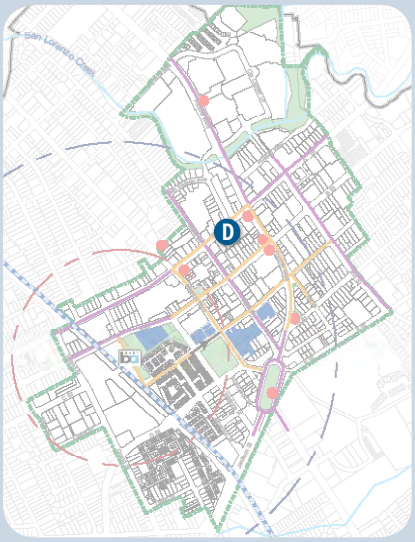
- *Maintain sidewalk widths*
- *Install protected bike lanes with landscaped buffer*
- *Maintain and add curbside parking*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, travel lane widths will be reduced*

Overview

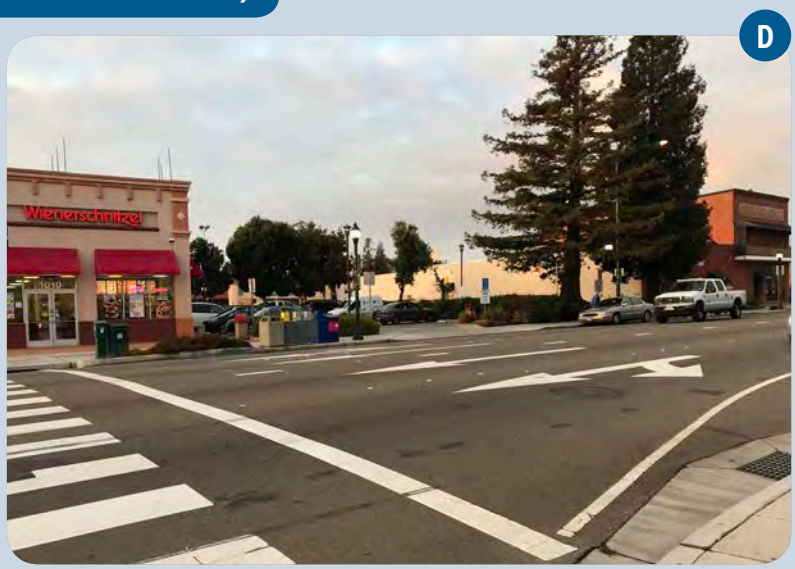
- *Movement Type: Free*
- *Target speed: 25 mph*

Figure B.8 A Street (Between Foothill Blvd and 2nd Street) Proposed Short-Term Improvements

A Street (Between Main Street and Foothill Blvd)



Location map



Existing conditions; view looking northeast at A Street/Main Street intersection

Figure B.9 A Street (Between Main Street and Foothill Blvd) Proposed

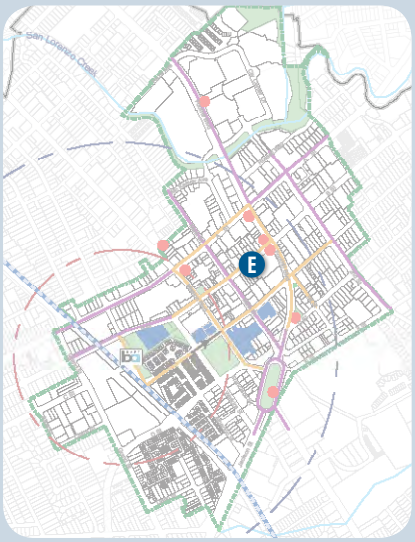
Proposed Changes

- *Convert to two-way travel with one lane in each direction and a center turn lane*
- *Maintain sidewalk widths*
- *Install protected bike lanes with landscaped buffer*
- *Maintain curbside parking*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, travel lane widths will be reduced*

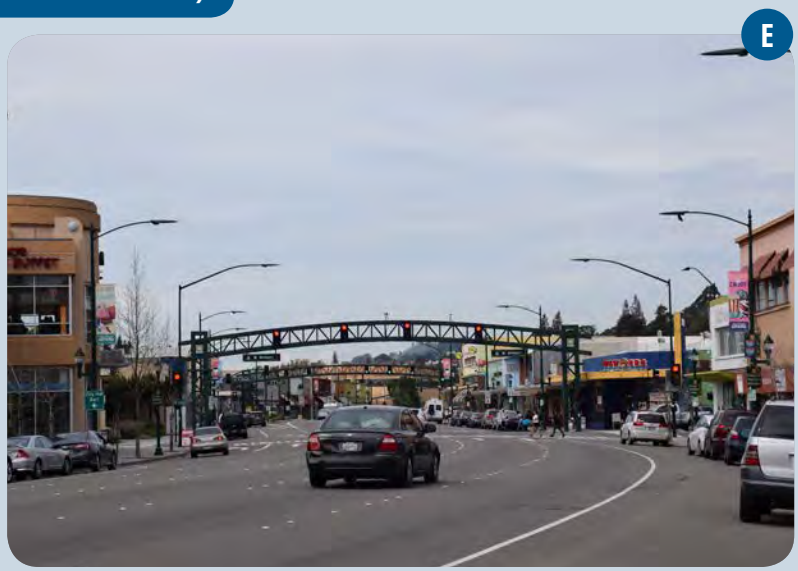
Overview

- *Movement Type: Free*
- *Target speed: 25 mph*

B Street (Between Mission Blvd and Foothill Blvd)



Location map



Existing conditions; view looking southwest along B Street

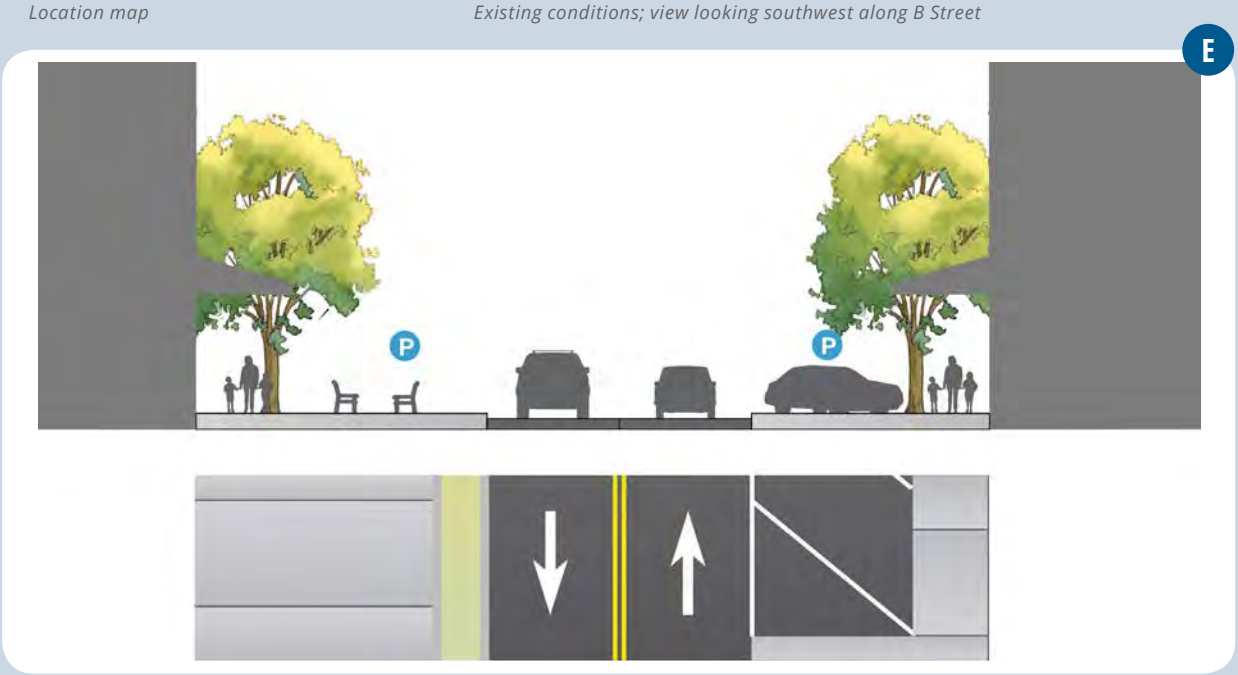


Figure B.10 **B Street (Between Mission Blvd and Foothill Blvd) Proposed**

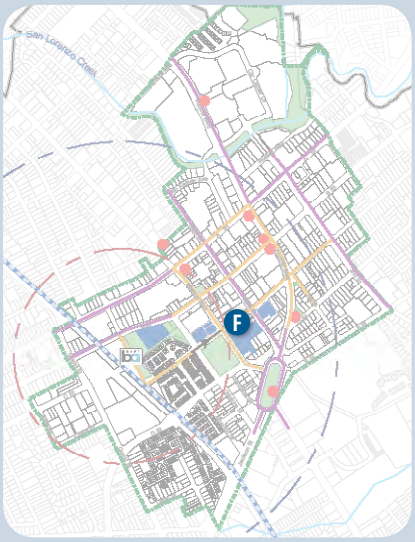
Proposed Changes

- *Convert to two-way travel with one lane in each direction*
- *Maintain sidewalk widths*
- *Convert angled parking at intersection on southside of street to accommodate two-way conversion*

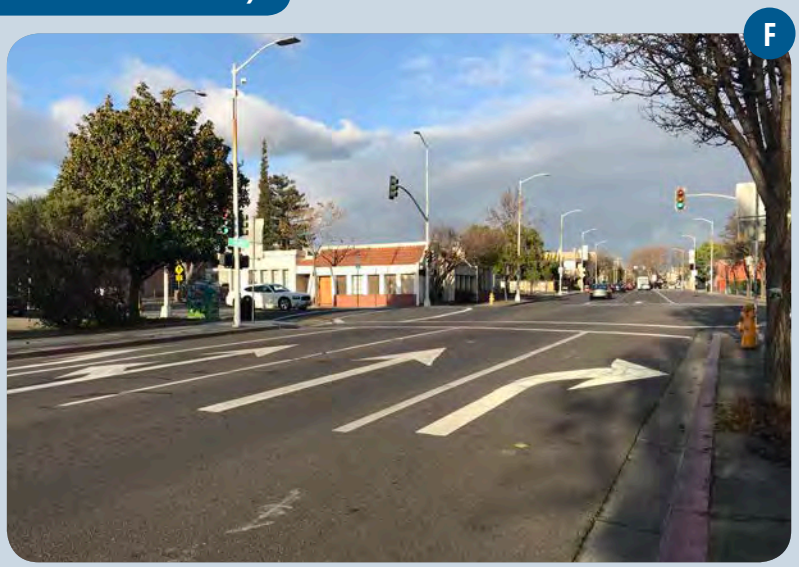
Overview

- *Movement Type: Slow*
- *Target speed: 25 mph*

C Street (Between Mission Blvd and Main Street)



Location map



Existing conditions; view looking northeast along C Street near Main Street intersection

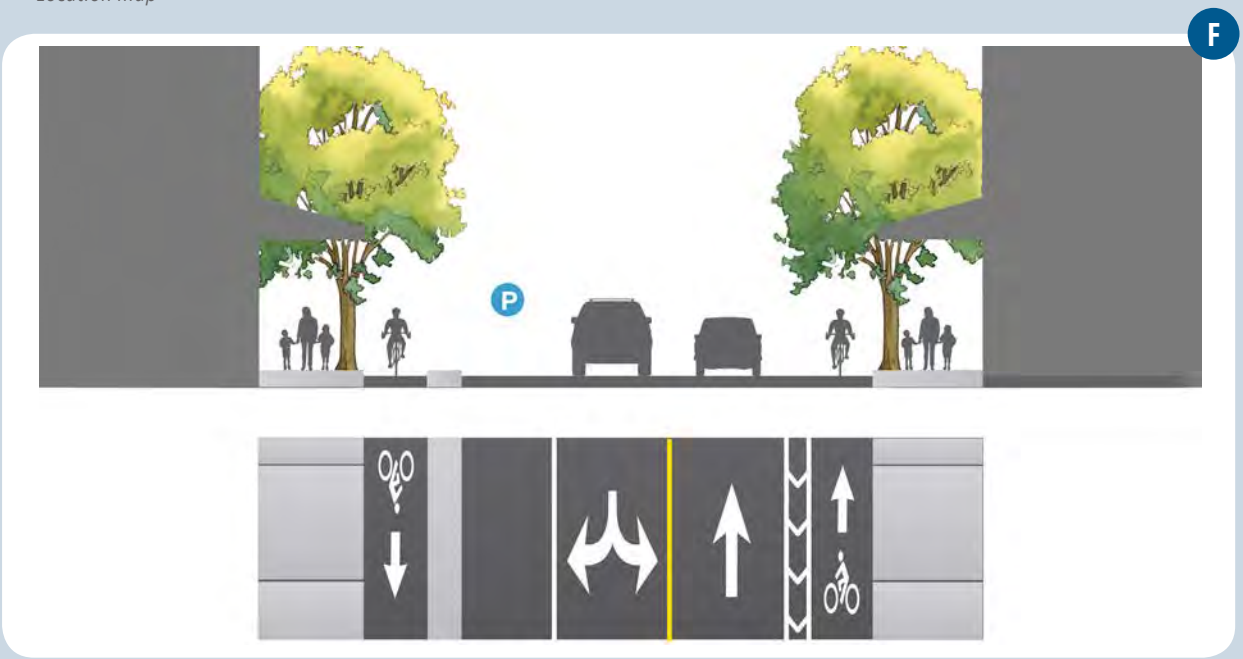


Figure B.11 **C Street (Between Mission Blvd and Main Street) Proposed**

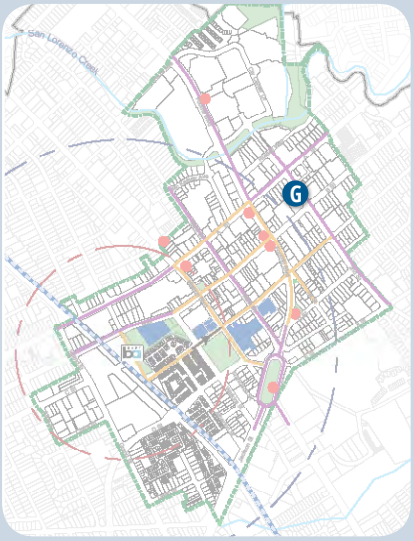
Proposed Changes

- *Convert to two-way travel with one lane in each direction*
- *Maintain sidewalk widths*
- *Install protected bike lanes with buffer or with bollards*
- *Remove one lane of curbside parking*
- *On segments with transit, travel lane widths will be reduced*

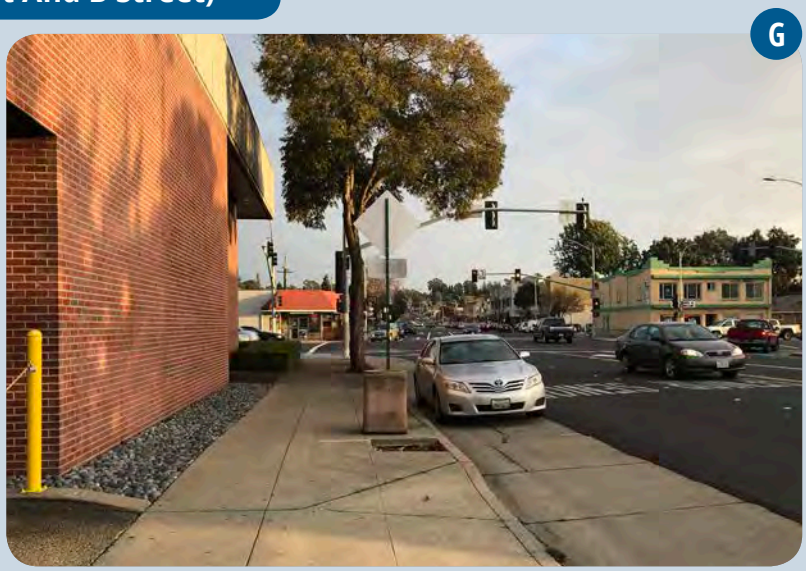
Overview

- *Movement Type: Slow*
- *Target speed: 25 mph*

2nd Street (Between A Street And B Street)



Location map



Existing conditions; view looking southeast along 2nd Street near A Street intersection

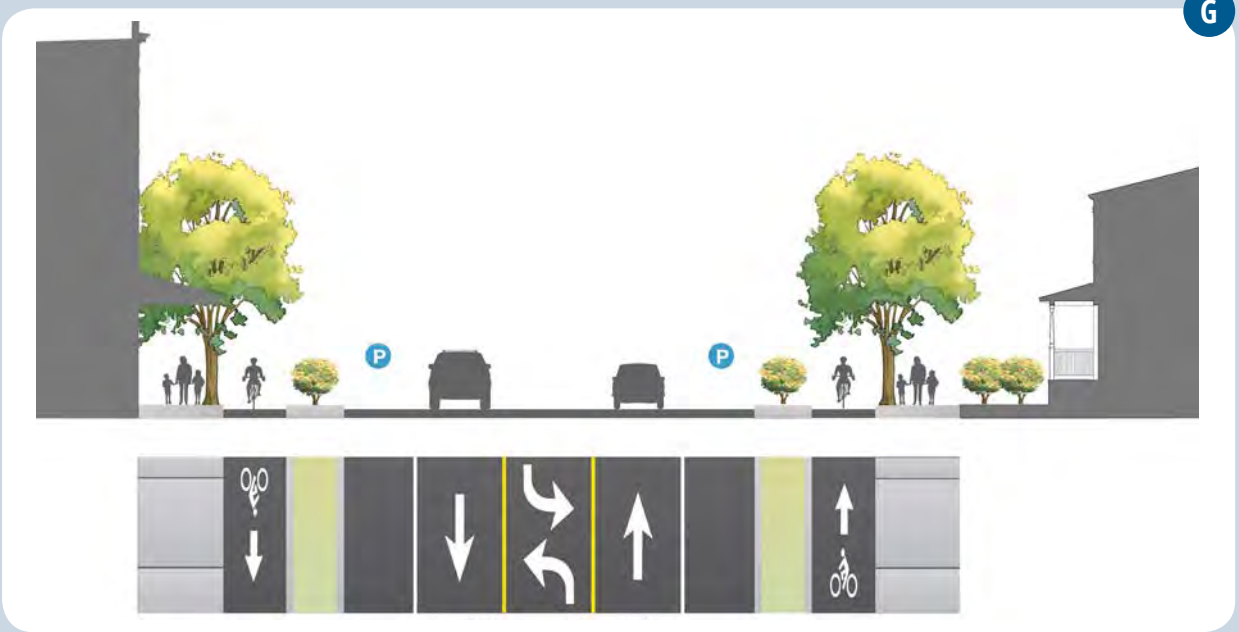


Figure B.12 2nd Street (Between A Street and B Street) Proposed Improvements

Short-Term Treatment

Install protected bike lanes with bollards before curb buffer installed

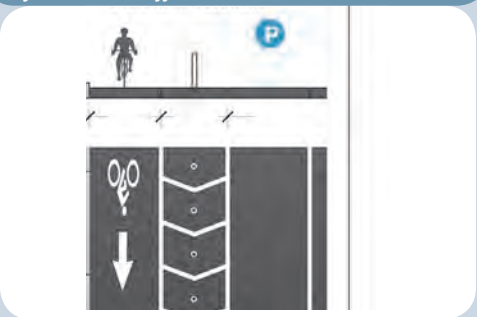


Figure B.13 2nd Street (Between A Street and B Street) Proposed Short-Term Improvements

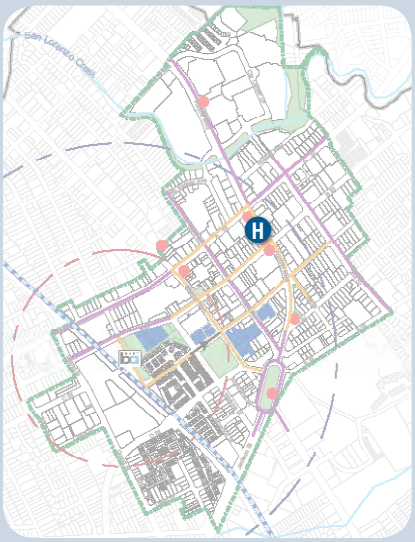
Proposed Changes

- *Maintain sidewalk widths*
- *Install protected bike lanes with landscaped buffer*
- *Maintain and add curbside parking*
- *Add center turn lane*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, travel lane widths will be reduced*

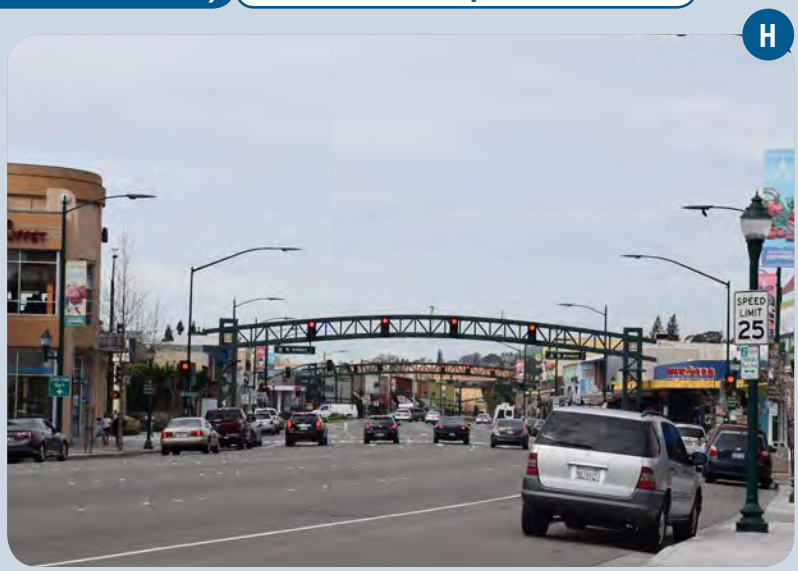
Overview

- *Movement Type: Free*
- *Target speed: 30 mph*

Foothill Blvd (Between A Street and B Street) | Short-Term Improvements



Location map



Existing conditions; view looking northwest along Foothill Boulevard near B Street intersection

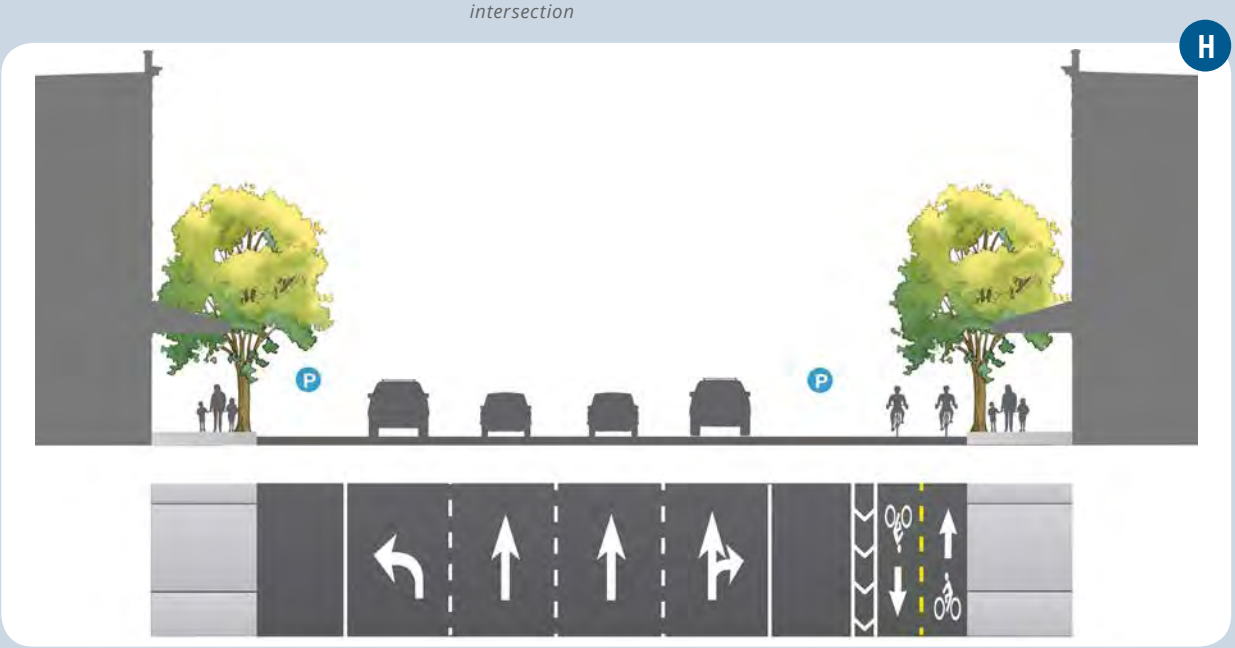


Figure B.14 Foothill Blvd (Between A Street and B Street) Proposed Short-Term Improvements

Mid-Term Treatment

Install protected bike lanes curb buffer

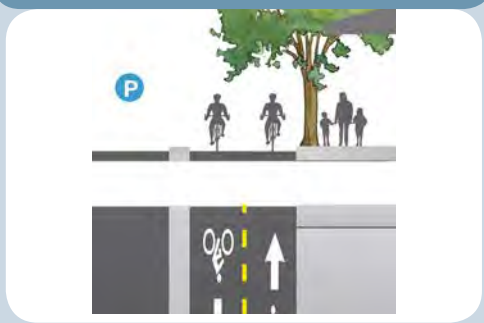


Figure B.15 Foothill Boulevard Proposed Mid-Term Improvements

Proposed Changes

- *Maintain sidewalk widths*
- *Install protected cycle track*
- *Maintain curbside parking*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, at least one travel lane in each direction will be reduced*

Overview

- *Movement Type: Free*
- *Target speed: 20 mph*

Foothill Blvd (Between A Street and B Street) | Long-Term Improvements

Figure B.16 Foothill Blvd (Between A Street and B Street) Proposed Long Term Improvements

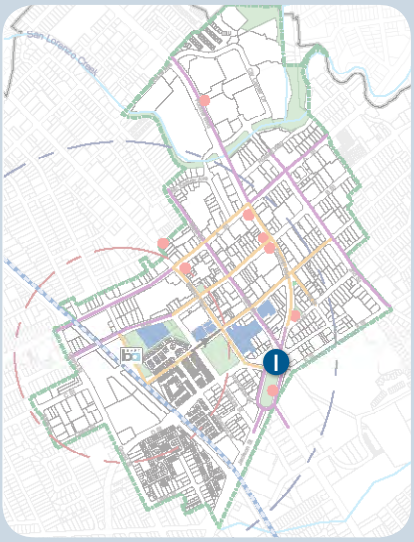
Proposed Changes

- *Convert to two-way travel with two lanes in each direction*
- *Install protected bike lanes in each direction*
- *Add landscaped medium to separate traffic*
- *Reduce travel lanes to make room for improvements*
- *On segments with transit, at least one travel lane in each direction will be reduced*

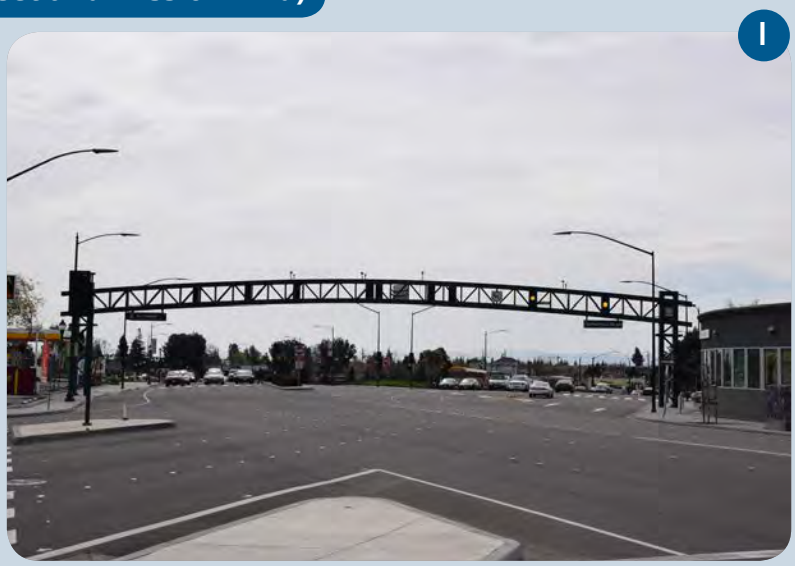
Overview

- *Movement Type: Free*
- *Target speed: 20 mph*

Foothill Blvd (Between Main Street and Mission Blvd)



Location map



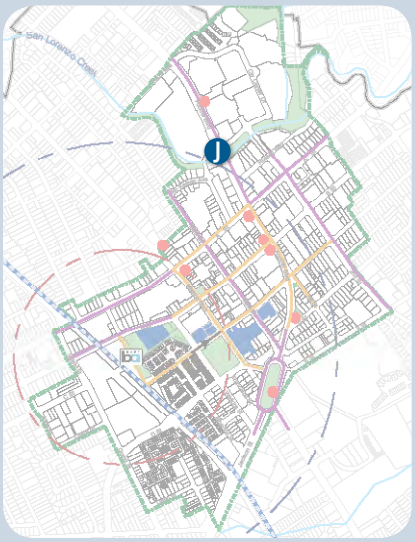
Existing conditions; view looking south at Foothill Boulevard/D Street intersection

Figure B.17 **Foothill Blvd (Between Main Street and Mission Blvd) Proposed**

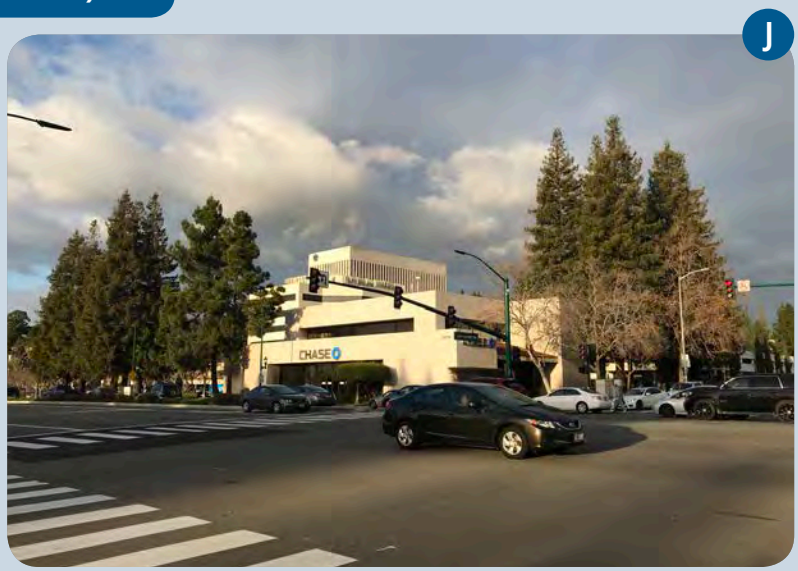
Proposed Changes

- *Create roundabout with two lanes of travel*
- *Expand sidewalk widths*
- *Install protected bike lanes with medians*
- *Install curb parking*
- *Create center park*
- *On segments with transit, at least one travel lane in each direction will be 11 feet wide*

Foothill Blvd (At City Center Drive)



Location map



Existing conditions; view looking north at Foothill Boulevard/City Center Drive intersection

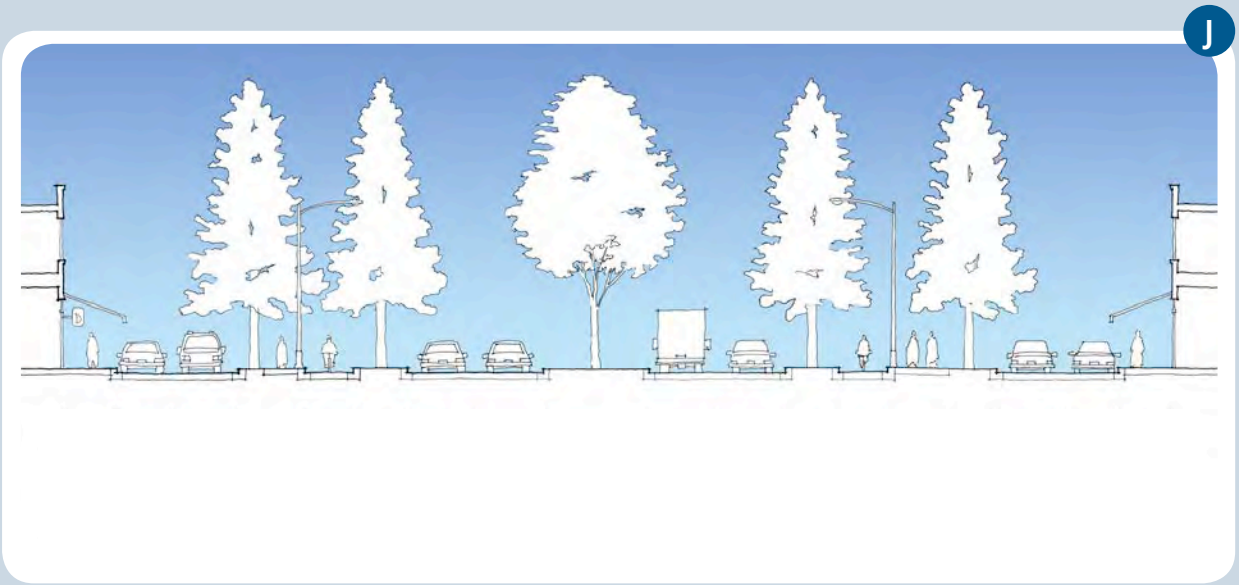


Figure B.18 Foothill Boulevard (At City Center Drive) Proposed Improvements

Proposed Changes

- *Reallocate travel lanes to through traffic travel lanes (two in each direction) and access lanes for local traffic (one lane in each direction)*
- *On-street parallel parking*
- *Protected bike lanes*
- *Landscaped medians*
- *Expanded pedestrian space and sidewalks*