



STAFF REPORT

AGENDA ITEM NO: 6.a

MEETING DATE: March 13, 2025

To: Traffic Safety and Parking Commission

Date: March 13, 2025

From: Andrew Wong, Senior Engineer

Subject: Murchison Drive, Trousdale Drive, and Davis Drive Bicycle Improvement Project Update

RECOMMENDATION

Staff recommends that the Traffic Safety and Parking Commission (TSPC) review the staff report and presentation related to the Murchison Drive, Trousdale Drive, and Davis Drive Bicycle Improvement Project, determine the community support for the project alternatives, and then make a motion of support for the project alternatives.

BACKGROUND

The City of Burlingame applied for a grant from the San Mateo County Transportation Development Act (TDA) Article 3 program for the Murchison Drive, Trousdale Drive, and Davis Drive Bicycle Improvements Project. On April 14, 2022, the C/CAG Board of Directors awarded grants to the top seven projects in the county. Burlingame was ranked second and will receive the requested amount of \$400,000.

This project was identified from the established priority list included in the City's 2020 Bicycle and Pedestrian Master Plan (BPMP). The project scope consists of engineering design including preparation of plans and specifications, and the construction of bicycle facilities along Murchison Drive, Trousdale Drive, and Davis Drive. The project aims to support Safe Routes to Schools, enhance connectivity, and improve safety and comfort for people of varying ages and abilities. The design concepts included in the BPMP were further analyzed and vetted as part of the design process involving community outreach and feedback. The preliminary project cost is estimated to be \$1,025,000, of which \$400,000 are from the TDA grant.

On September 19, 2022, the city selected W-Trans to perform pre-design investigation, traffic analysis, and design deliverables.

As part of the project development process, the City has engaged the community through multiple outreach efforts:

- 1) In May 2023, the first community outreach meeting was held.
- 2) Followed in October 2023 by a citywide online survey to gather additional public input.
- 3) In June 2024, a second community meeting was conducted to present design alternatives and gather additional feedback.

Lastly, at the December 2024 TSPC meeting, revised concepts were presented for an update and to obtain their initial feedback, prior to presenting it again to the community.

DISCUSSION

The project has now reached the final design stage. Based on community feedback, technical analysis, and commission input, staff is seeking a motion of support from TSPC to determine the preferred alternative, and then advance the project toward final design and implementation.

A) Murchison Drive:

Alternative 1: Buffered Class II Bike Lane

This design includes a standard Class II bike lane with an added buffer zone between the bike lane and the adjacent vehicle travel lane. The buffer, typically marked with painted striping, provides additional separation to increase rider comfort and safety.

Key Benefits:

- Maintains existing curbside parking, minimizing impacts on residents and businesses.
- Improves cyclist safety by creating a dedicated space while preserving road capacity.
- Easier to implement within the existing roadway footprint, reducing construction complexity.
- Offers more flexibility for emergency vehicles and delivery access.

Considerations:

- Cyclists remain exposed to moving traffic, as there is no physical barrier.
- Potential for vehicles to encroach into the bike lane, especially at driveways and intersections.

- Drivers must remain vigilant to avoid dooring incidents when parking along the curb.

Alternative 2: Class IV Separated Bikeway (Protected Bike Lane)

This option introduces a Class IV protected bike lane, where on-street parking is relocated to a new position between the bike lane and the vehicle travel lane. This configuration creates a physical separation between cyclists and moving vehicles, significantly enhancing safety.

Key Benefits:

- Provides a higher level of protection than a standard Class II facility for cyclists by using parked cars as a buffer from traffic.
- Encourages broader bicycle use, including by less experienced riders and families.
- Reduces the risk of dooring incidents, as passengers exiting vehicles step onto a buffer zone instead of directly into the bike lane.
- Aligns with best practices for urban bicycle infrastructure, improving long-term safety and sustainability.

Considerations:

- Requires modifications to curbside access, which may affect loading zones and short-term parking needs.
- Drivers must adjust to the new parking configuration, which may initially create confusion.
- Potential sightline challenges at intersections, requiring additional safety measures such as daylighting or curb extensions.
- Impacts emergency vehicle's ability to turn at intersections
- Parked vehicles impacts driver's ability to pull right when emergency vehicles are in-route to an incident.

Both alternatives prioritize safety and mobility while supporting the City's Bicycle and Pedestrian Master Plan goals. We welcome input on the preferred alternative before finalizing the design and moving forward with implementation.

B) Trousdale Drive: Project Scope Adjustments

Alternative 1: Road Diet with Buffered Class II Bike Lanes

This alternative introduces a road diet that will reduce the number of travel lanes from four lanes to two with a buffered Class II bike lane, while maintaining on-street parking. To maintain access to properties on both sides of the street, a two-way left-turn lane is also included into the design.

Key Benefits:

- Maintains existing curbside parking, minimizing impacts on residents and businesses.
- Improves cyclist safety by creating a dedicated space with a buffer.
- Easier to implement within the existing roadway footprint, reducing construction complexity.

Considerations:

- Cyclists remain exposed to moving traffic, as there is no physical barrier.
- Reduces roadway capacity going from four lanes to two lanes.
- Potential for vehicles to encroach into the bike lane, especially at driveways and intersections.
- Drivers must remain vigilant to avoid dooring incidents when parking along the curb.
- Increased delay at Trousdale/Quesada during A.M. peak period from LOS C to LOS F.
- Due to the emergency services need for the existing dual westbound left-turn lanes into Mills-Peninsula Hospital, there is not enough street width to implement this alternative between El Camino Real and Magnolia Avenue.

Alternative 2: Four Travel Lanes with Buffered Class II Bike Lanes, and No On-Street Parking

This alternative maintains the existing travel lanes and introduces a buffered Class II bike lane, but eliminates on-street parking.

Key Benefits:

- Maintains existing street capacity and operation.
- Is an improvement for bicyclists as a dedicated space is created.
- Easier to implement within the existing roadway footprint, reducing construction complexity.

Considerations:

- Cyclists remain exposed to moving traffic, as there is no physical barrier.
- Potential for vehicles to encroach into the bike lane, especially at driveways and intersections.
- On-street parking is removed on both sides of the street.
- Due to the emergency services need for the existing dual westbound left-turn lanes into Mills-Peninsula Hospital, there is not enough street width to implement this alternative between El Camino Real and Magnolia Avenue.

Alternative 3: Four Travel Lanes, Class II Bike Lanes, with On-Street Parking

This alternative maintains the number of travel lanes, on-street parking, and includes a Class II bicycle lane. This is done by reducing the widths of the lanes, parking strip, and bike lanes to design minimums.

Key Benefits:

- Maintains existing street capacity and roadway operation.
- Includes a Class II bike facility.
- Easier to implement within the existing roadway footprint, reducing construction complexity.

Considerations:

- Cyclists remain exposed to moving traffic, as there is no physical barrier.
- Increase potential for drivers to open doors into the bicycle lane.
- Increase level of street for bicyclists being closer to both the vehicular travel lane and parked vehicles.
- Potential for vehicles to encroach into the bike lane, especially at driveways and intersections.
- Due to the emergency services need for the existing dual westbound left-turn lanes into Mills-Peninsula Hospital, there is not enough street width to implement this alternative between El Camino Real and Magnolia Avenue.

After community outreach efforts, staff has obtained feedback for Alternatives #1 and #2 regarding parking loss and significantly reduced level of service operations during the morning peak period. Additionally, there was not strong support for Alternative #3 due to the close proximity of bicycles between the vehicular travel lane and parked vehicles. Additionally, there is not enough street width to include any on-street bicycle facility in the section between Ogden Drive and El Camino Real due to potential conflicts with Mills-Peninsula Hospital operations. In response, staff is recommending that the segment from Castenada Drive to ECR be removed from the proposed improvements. However, the City will proceed with bicycle and pedestrian improvements between El Camino Real and California Drive, ensuring enhanced connectivity and safety in this key corridor.

Davis Drive:

Proposed Enhancements

For Davis Drive, speed cushions will not be installed at this time. Instead, the project will focus on implementing edge lines, high-visibility crosswalks, and quick-build bulb outs to slow traffic, enhance pedestrian safety, and provide better roadway definition. These

improvements aim to create a safer environment for all users while minimizing traffic disruptions.

Staff recommends Alternative No. 1 for Murchison Drive as this option provides a dedicated bicycle facility and reduces potential impacts to emergency vehicles. As part of this alternative, a Class III facility would be included along Ogden Drive between Murchison Drive and Trousdale Drive. This change was based on project feedback to provide an option for bicyclists headed towards BIS to continue use of the Class II facility along Murchison Drive; and then use Ogden Drive when transitioning to Trousdale Drive.

Due to limited community support for any of the three proposed alternatives, staff recommends removing the portion of Trousdale Drive from Castenada Drive to El Camino Real at this time, and to implement Class II bicycle facility between El Camino Real and California Drive as proposed.

Lastly, staff recommends the improvements along Davis Drive as proposed.

Based on the above, staff is seeking a TSPC motion of support to move forward with designing the changes.

ATTACHMENTS

Presentation

MURCHISON DRIVE, TROUSDALE DRIVE, AND DAVIS DRIVE BICYCLE IMPROVEMENT PROJECT

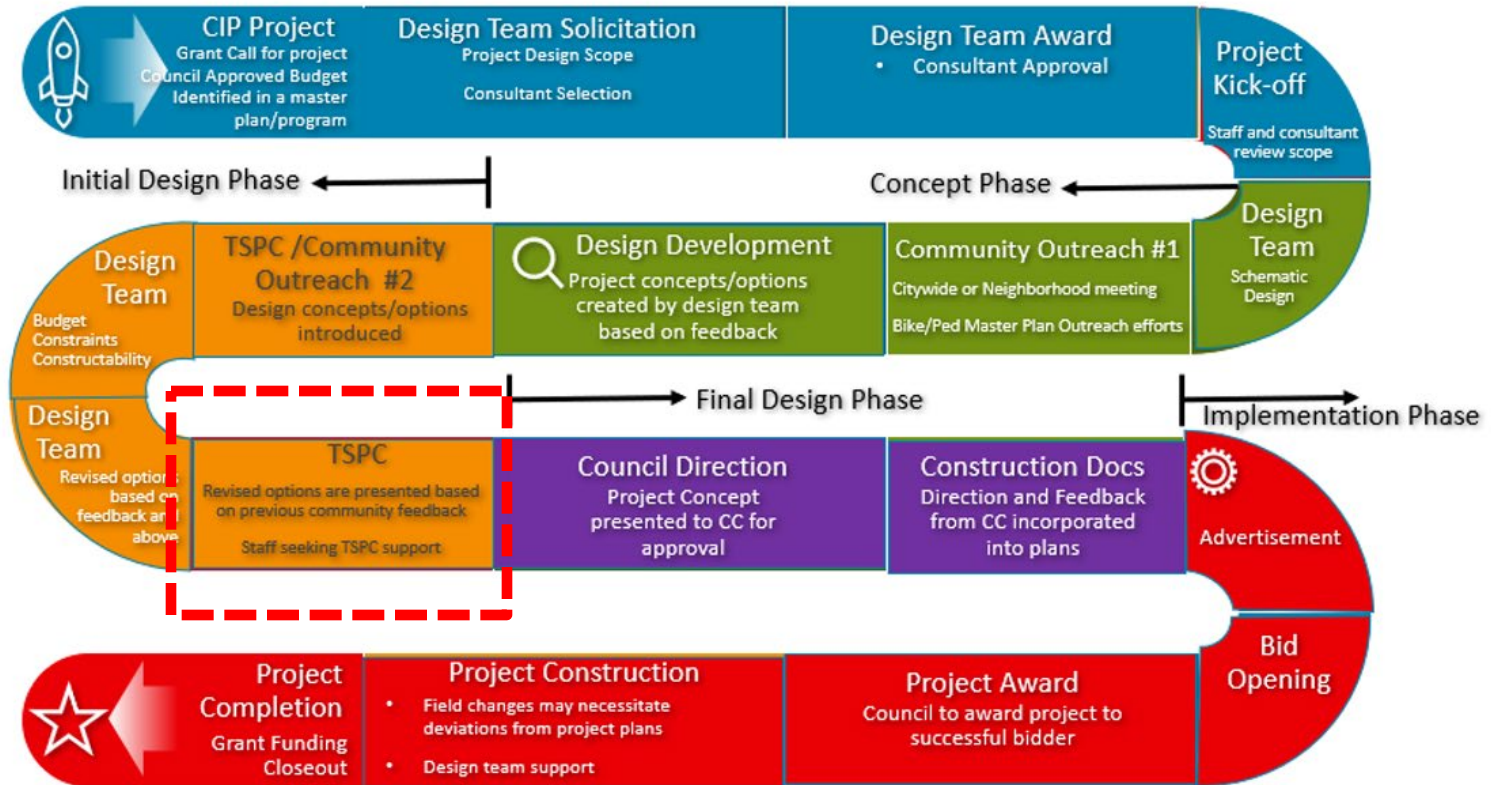
Traffic Safety and Parking Commission
March 13, 2025



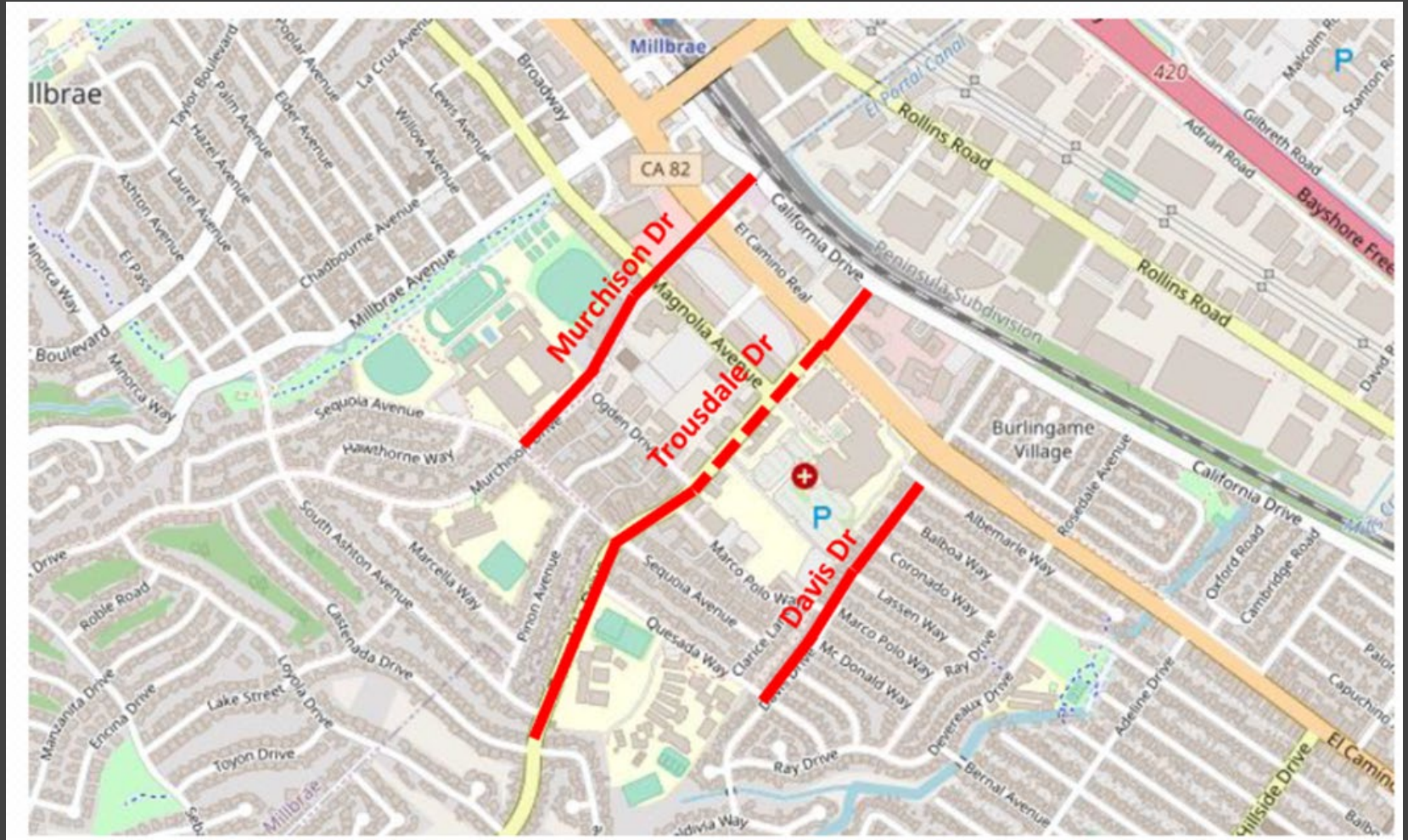
Meeting Goals

- Present the TSPC with the staff recommended concepts for the project based on feedback from the June 2024 TSPC meeting and previous outreach efforts
- Obtain feedback regarding the recommended concepts and the upcoming outreach efforts
- Schedule future TSPC meeting to obtain community feedback on the recommended concepts and to determine their level of community support
- Shift into the design phase

Background



Project Limits



Murchison: Existing

MURCHISON DRIVE, EXISTING CONDITIONS



64' curb-to-curb	
32'	32'
parking + travel lane	parking + travel lane

Murchison: Alternative 1

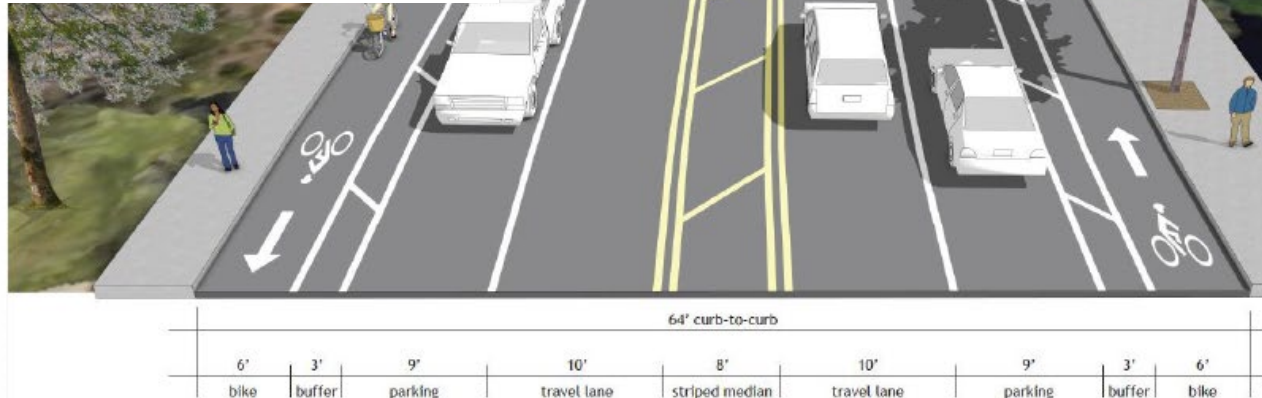
MURCHISON DRIVE, ALT. 1: PARKING-PROTECTED BUFFERED BIKE LANES

Key Benefits

- No change to vehicles capacity
- Protection for bicyclists

Considerations

- Potential loss of parking at driveways
- Parked vehicles may encroach into buffer
- Less direct driveway access
- Emergency vehicle turning impacts at intersections
- Limits driver's ability to pull over during an emergency.



Murchison: Alternative 2

Staff Recommended Concept



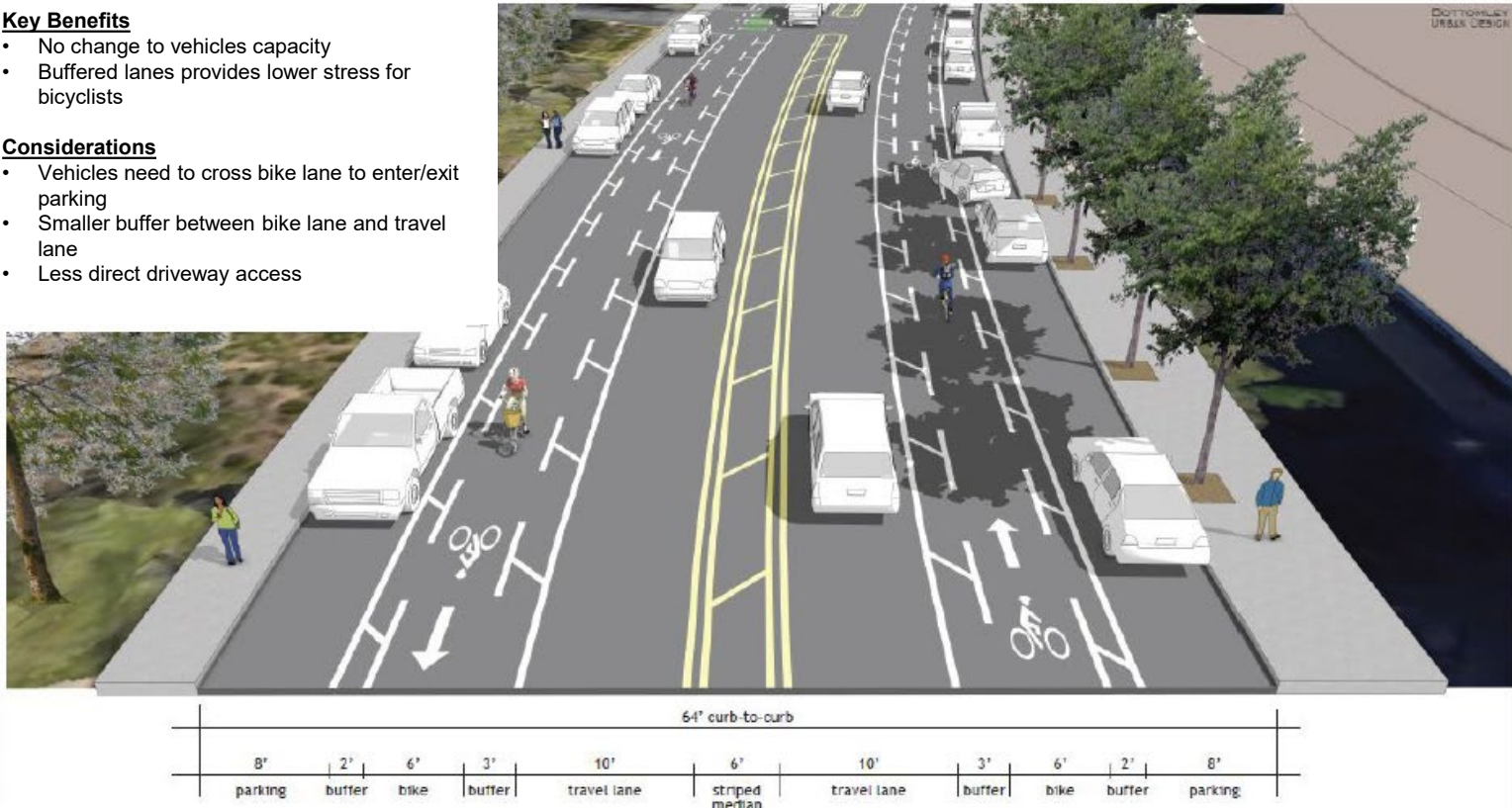
MURCHISON DRIVE, ALT. 2: BUFFERED BIKE LANES

Key Benefits

- No change to vehicles capacity
- Buffered lanes provides lower stress for bicyclists

Considerations

- Vehicles need to cross bike lane to enter/exit parking
- Smaller buffer between bike lane and travel lane
- Less direct driveway access



Trousdale: Existing

TROUSDALE DRIVE, EXISTING CONDITIONS



Trousdale: Alternative 1

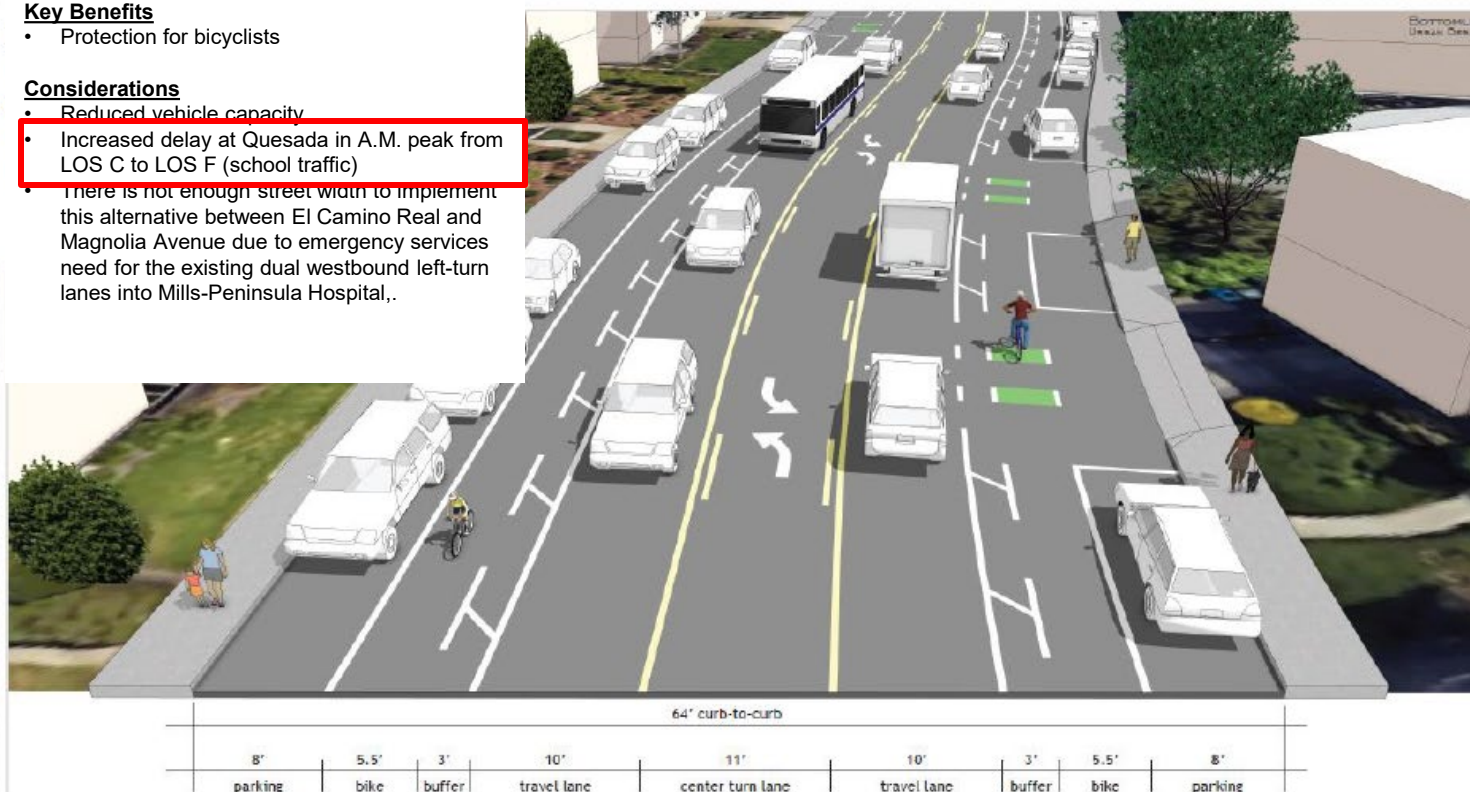
TROUSDALE DR, ALT 1: 2 TRAVEL LANES + TURN LANE, BUFFERED BIKE LANES

Key Benefits

- Protection for bicyclists

Considerations

- Reduced vehicle capacity
- Increased delay at Quesada in A.M. peak from LOS C to LOS F (school traffic)
- There is not enough street width to implement this alternative between El Camino Real and Magnolia Avenue due to emergency services need for the existing dual westbound left-turn lanes into Mills-Peninsula Hospital,.



Trousdale: Alternative 2

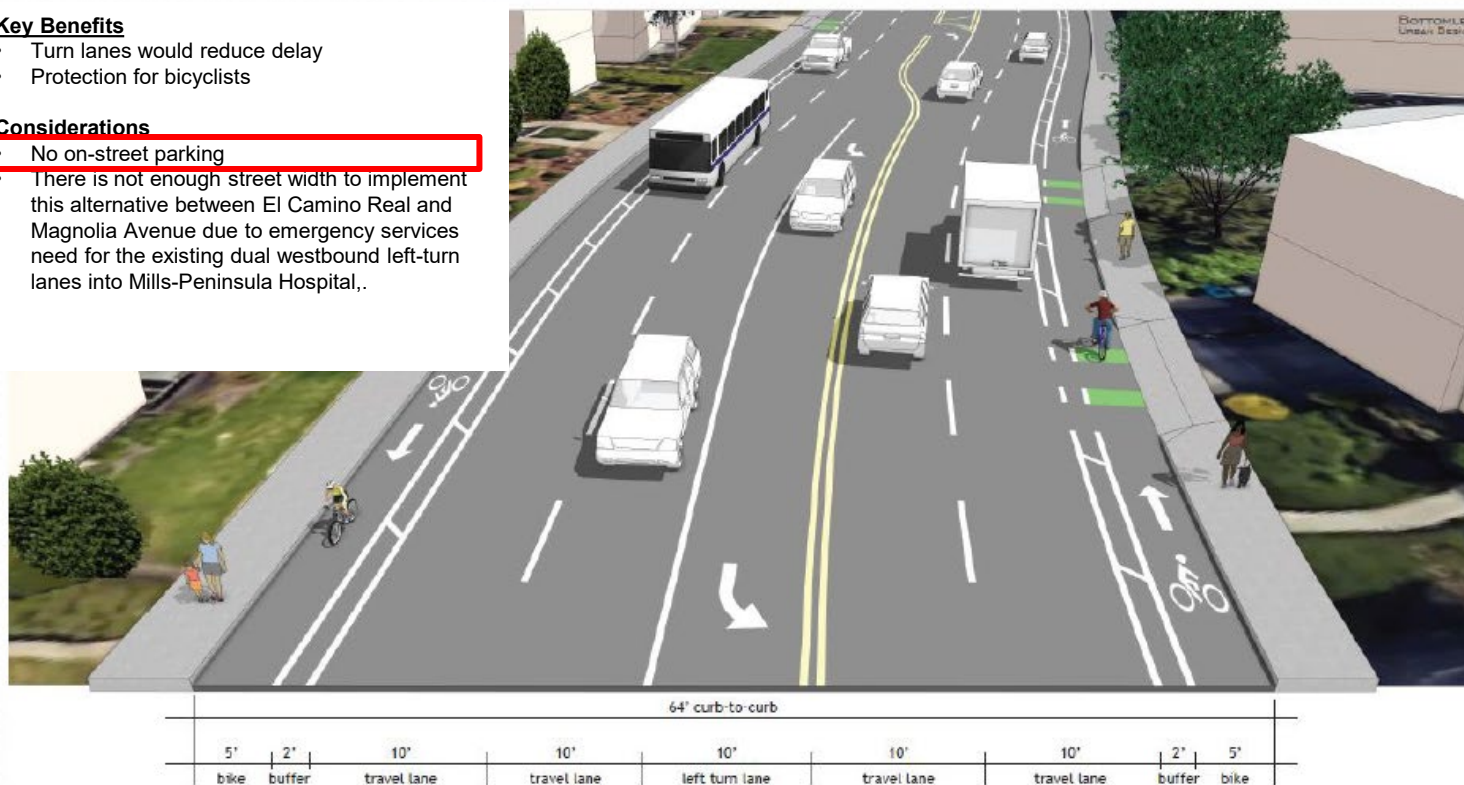
TROUSDALE DR, ALT 2: 4 LANES + TURN LANE, BUFFERED BIKE LANES, NO PARKING

Key Benefits

- Turn lanes would reduce delay
- Protection for bicyclists

Considerations

- No on-street parking
- There is not enough street width to implement this alternative between El Camino Real and Magnolia Avenue due to emergency services need for the existing dual westbound left-turn lanes into Mills-Peninsula Hospital.



Trousdale: Alternative 3

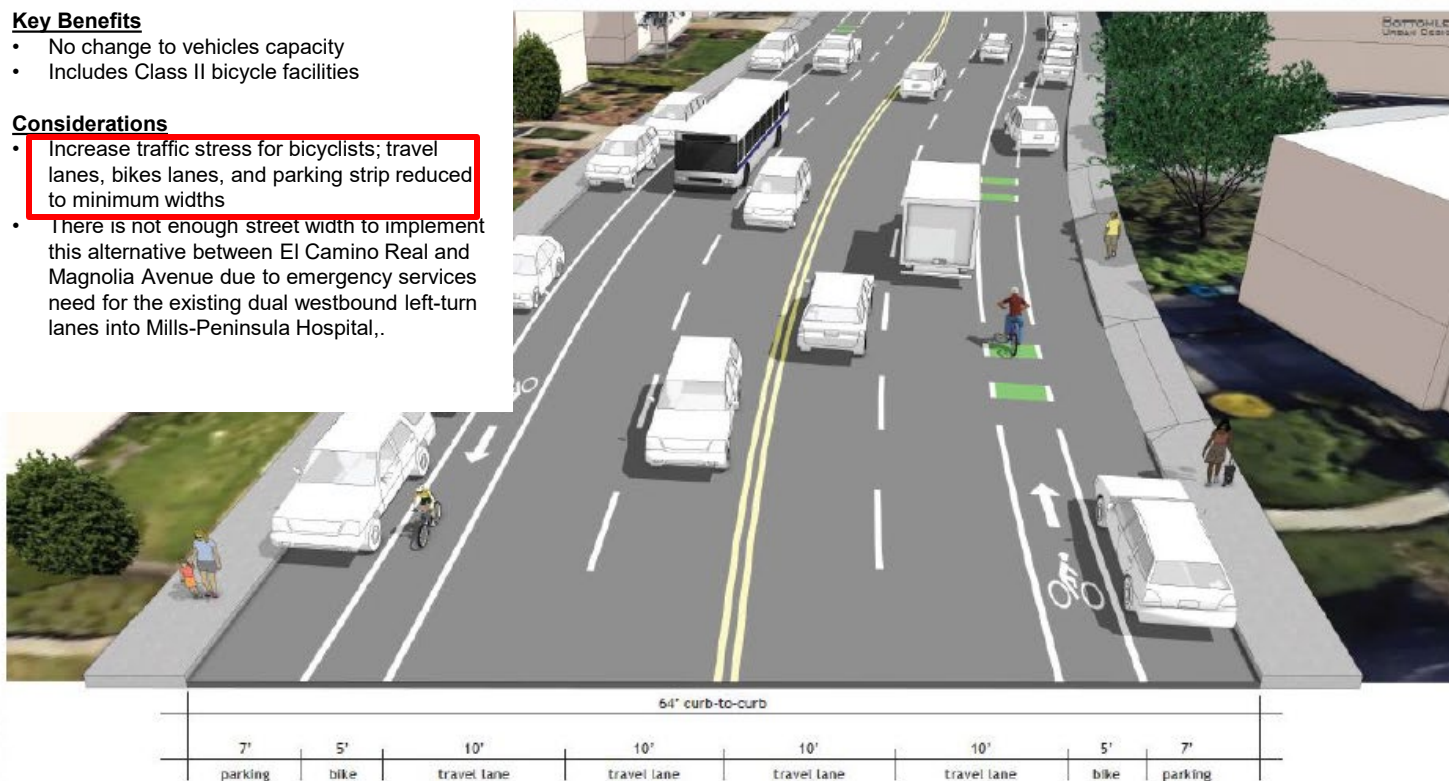
TROUSDALE DR, ALT 3: 4 TRAVEL LANES, BIKE LANES, PARKING

Key Benefits

- No change to vehicles capacity
- Includes Class II bicycle facilities

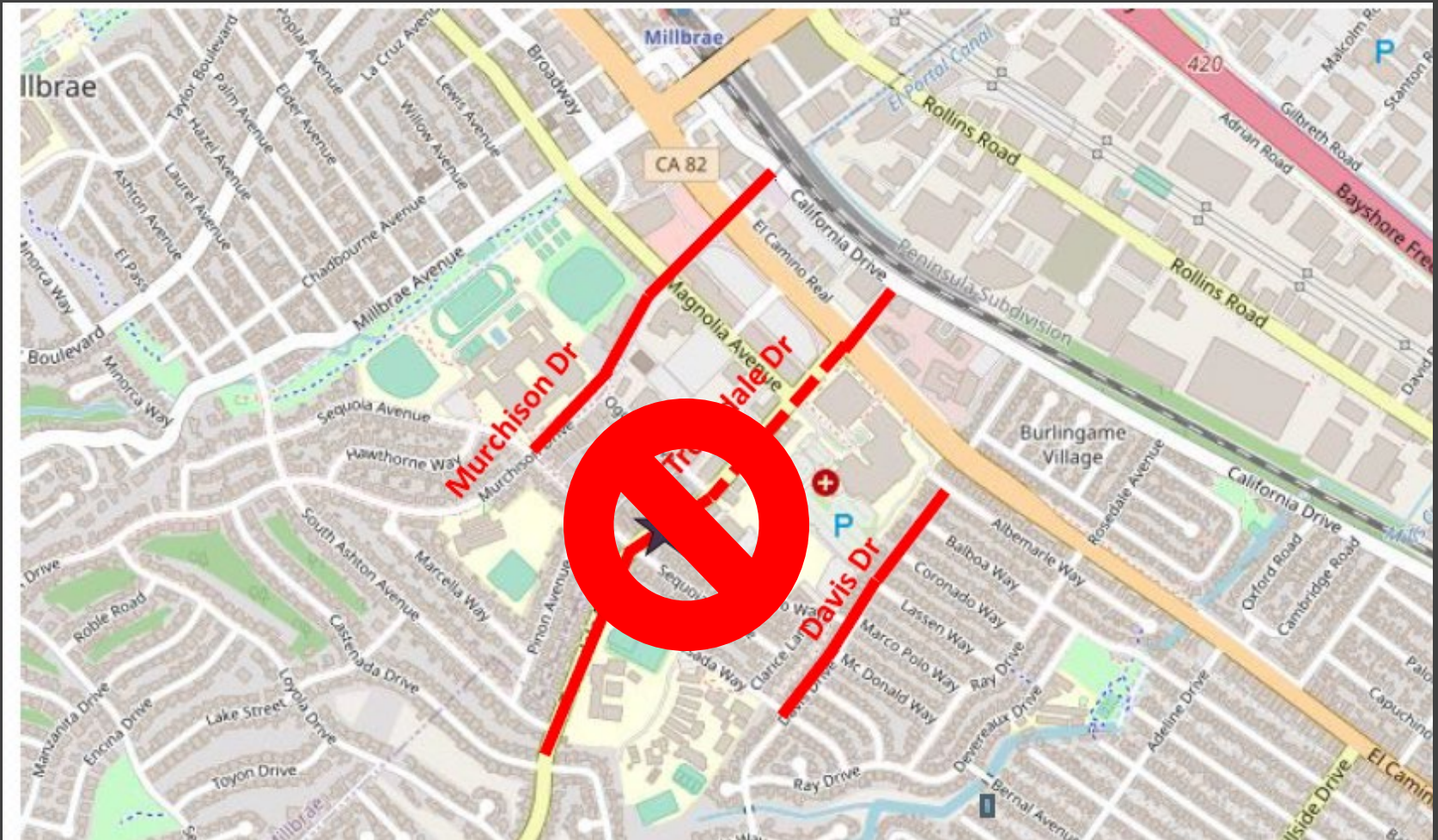
Considerations

- Increase traffic stress for bicyclists; travel lanes, bikes lanes, and parking strip reduced to minimum widths
- There is not enough street width to implement this alternative between El Camino Real and Magnolia Avenue due to emergency services need for the existing dual westbound left-turn lanes into Mills-Peninsula Hospital,.



Trousdale Drive

Staff recommendation is to remove ECR to Castenada from the project

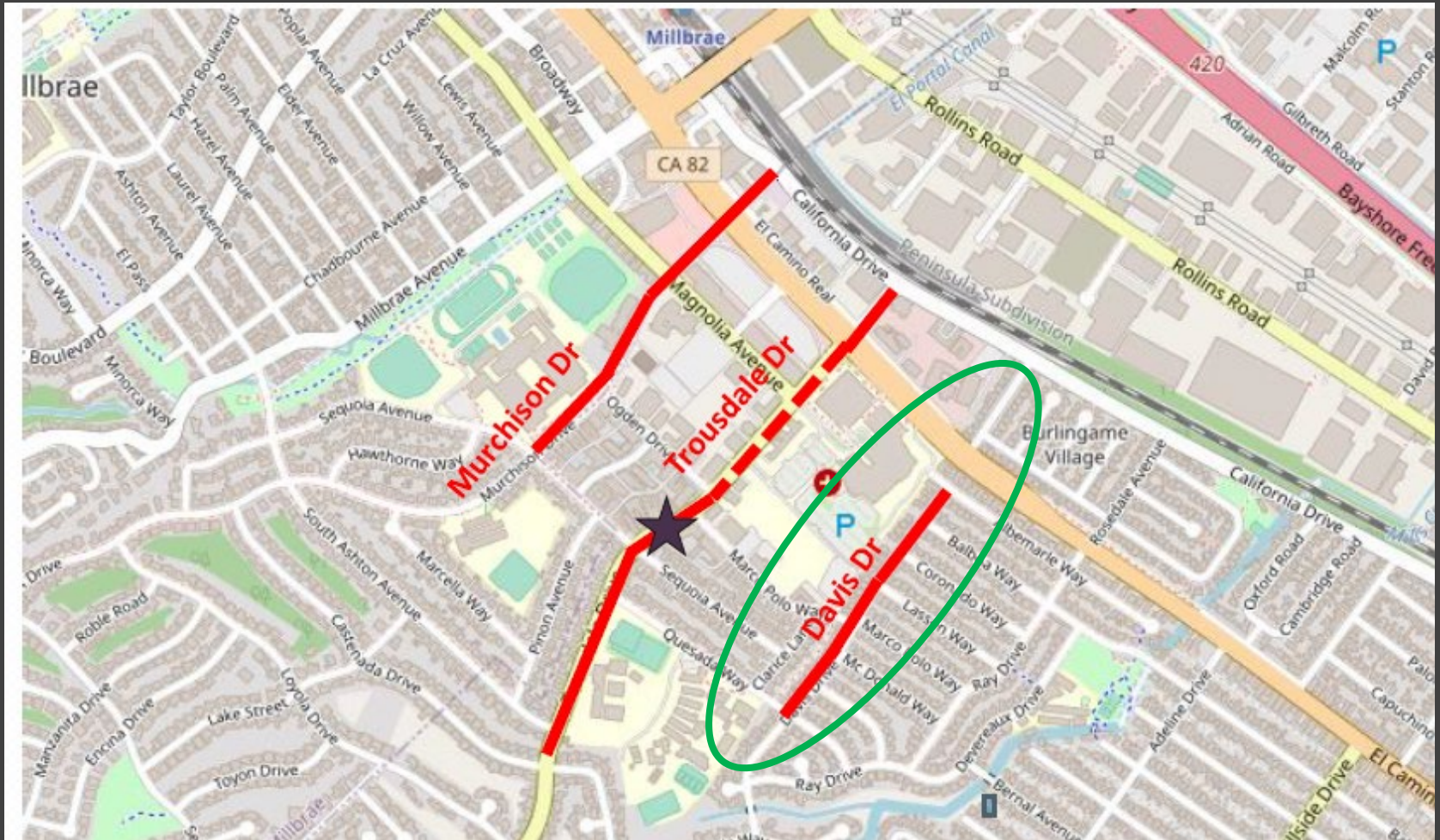


Trousdale: Alternative 3

Trousdale Dr. (El Camino Real to California Dr.)



Davis Drive



Davis: Alternative 1

Staff Recommended Concept



Public Outreach

- Notices to Mills-Peninsula and the City of Millbrae
- Provide notices to BIS and Franklin Elementary for student body distribution
- Include notifications in eNews and NextDoor.

Summary

- Present the TSPC with the staff recommended concepts for the project based on feedback from the June 2024 TSPC meeting and previous outreach efforts.
 - Murchison Drive: Alternative 2 (buffered bicycle lanes) with Class III on Ogden Drive between Murchison and Trousdale.
 - Trousdale Drive: Remove the portion between Castenada Drive to ECR from project. Class II bike facility ECR to California
 - Davis Drive: Phased approach starting with green-backed sharrows, roadway edge lines, in-street pedestrian signs, quick-build bulb outs, and a high-visibility crosswalk. No speed cushions at this time.
- Shift into the design phase.

Questions & Feedback

