4

Trail Alignments

Based on input received from the Technical Advisory Committee (TAC) and community, and evaluation of existing conditions, two trail alignment alternatives were studied in further detail. See *Figures 4-5 through 4-7* for the Alternative Alignment Plans. The alternatives represent different solutions for achieving the City's goal of providing the community with an off-street trail. In addition, opportunities for trailheads and street crossings were studied and are discussed at length in this chapter.

Alternatives Evaluation & Preferred Alternative

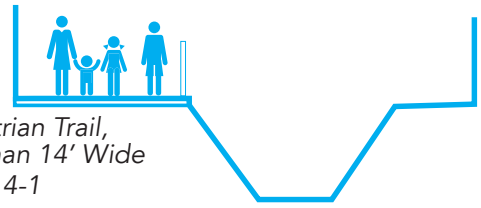
The alternatives evaluated include different options for accessing the trail around the Don Burnett Bicycle-Pedestrian Bridge approach and crossing alternatives at Stelling Road and De Anza Boulevard. The alignment alternatives also suggest trail heads at Mary Avenue, Stelling Road, De Anza Boulevard, Blaney Avenue, North Portal Avenue, Wolfe Road, Lucille Avenue, Vallco Parkway, and connecting to approved trail plans at Vallco and Hyatt House.

The community generally expressed a preference for grade separated crossings where possible. They also preferred alternative #2 as it provided a wider trail with more physical separation from residential fences and more potential for trail enhancements. Alternative #2 is also preferred by SCVWD. Alternative #1 is preferred by the City's Bike Pedestrian Commission.

Pedestrian Trail (less than 14'-0" wide) Alternative #1, next to channel

The primary difference between the alternative alignments is their relationship to the existing Junipero Serra Channel in the SCVWD corridor between the Don Burnett Bicycle-Pedestrian Bridge and Wolfe Road. Alternative #1 utilizes the existing SCVWD maintenance road adjacent to the channel. This trail alternative varies in width, between approximately 7'-6" and 13'-0". The available width is insufficient in most areas to accommodate a Class I multi-use trail, as described in Chapter 3. This limits the usefulness of this alternative as a two-way bike facility. Bicycles may still use the trail, but the trail would be more uncomfortable for users and could lead to unsafe conditions due to its sub-standard width.

Because the trail would be immediately adjacent to the steep drop-off at the channel, a barrier railing would be required to prevent trail users from falling into the channel. SCVWD expressed they will not approve this alternative because the barrier railing would reduce the usable width of the maintenance road and could impede channel maintenance activities. See *Figure 4-1* for typical alternative #1 section.



Pedestrian Trail, Less than 14' Wide
Figure 4-1

Class I Multi-Use Trail (min. 14'-0" wide) Alternative #2, covered channel and on-grade

Alternative #2 converts the open channel into a concrete box culvert, allowing the trail to be located directly over the box culvert. This alternative can accommodate a full Class I multi-use trail including a 10' wide paved trail, with 2' wide shoulders on each side, for a total width of 14'. Locating the trail over the box culvert also allows the trail to shift northward and be more centered within SCVWD right-of-way. By shifting the trail, there are more opportunities for trail enhancement and screening for the neighboring properties. Trail enhancements may include planting areas that address storm water treatment as well as provide visual screening.

Converting from an open channel to a box culvert will require storm water connections to be re-established and tied into the box culvert. Surface run-off, within SCVWD right-of-way, previously entering the channel will also need to be captured and piped into the box culvert. Access manholes would need to be provided at approximately 400' intervals to allow for box culvert maintenance.

Another consideration related to the conversion from an open channel to a covered box culvert is a change in maintenance responsibility. Maintenance of enclosed culverts or channels is not SCVWD's expertise. If Alternative #2 is pursued by the City, SCVWD will request that the City accept ownership and maintenance responsibility prior to project construction. Based on a preliminary engineering analysis of the watershed contributing to the channel, approximate culvert sizes were determined. From Mary Avenue to Stelling, the culvert would be 4'x4'. From Stelling to De Anza Boulevard, the culvert would be 5'x8'. From De Anza Boulevard to Wolfe Road, the culvert would be 6'x10'. East of Wolfe Road, the channel would remain unlined. Periodic flushing of the box culvert will be required via access manholes spaced at approximately 400'. See *Figure 4-2* for typical alternative #2 section.

Class 1 Multi-Use Trail, Min 14' Wide, Covered
Figure 4-2

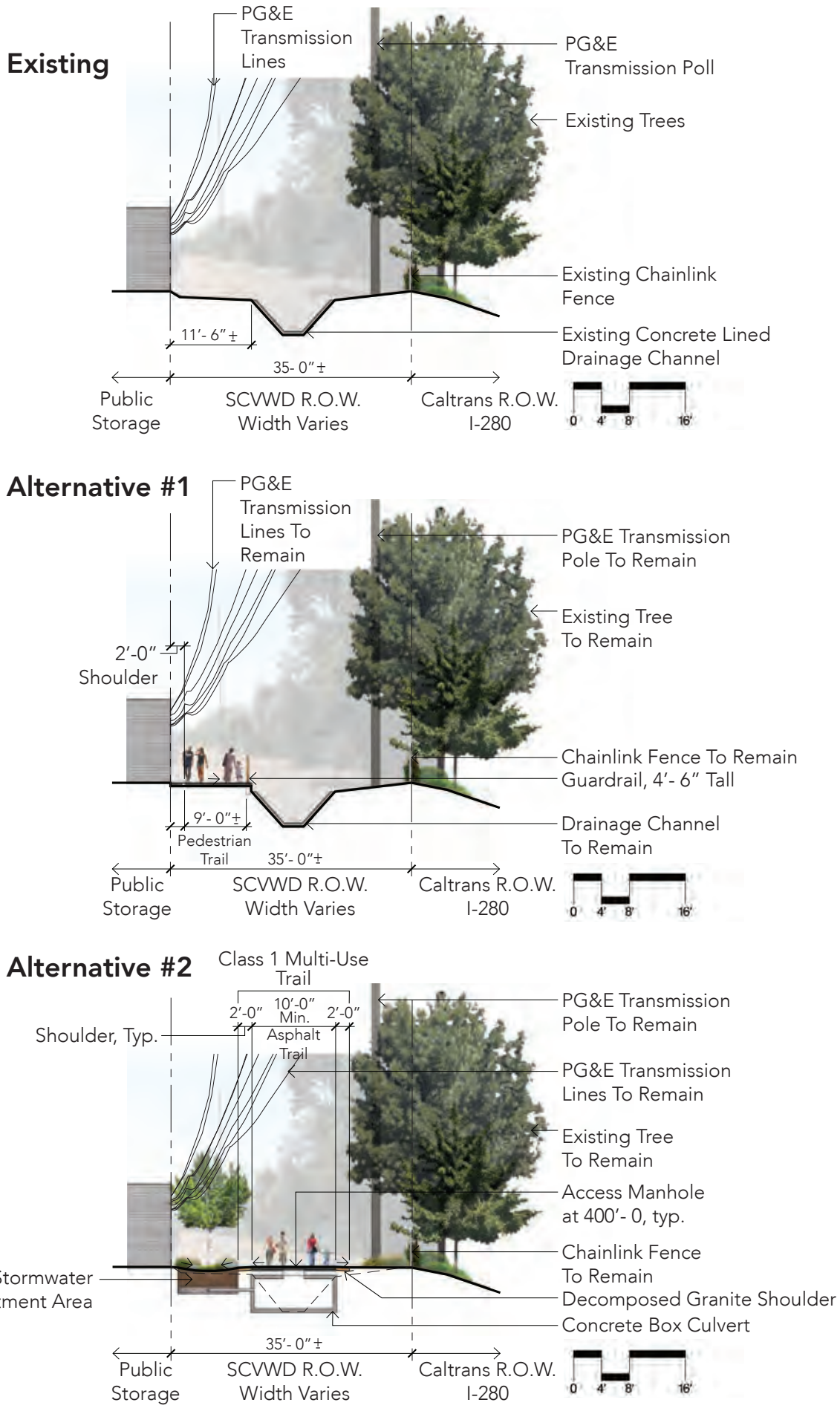
East of Wolfe Road, the existing maintenance road widens sufficiently to support a class I multi-use trail. Trail improvements in this section would leave the unlined channel as-is and would be described as on-grade improvements. See *Figure 4-3* for typical standard section.

Class 1 Multi-Use Trail, Min. 14' Wide, On-Grade
Figure 4-3

The sections that follow describe the trail alignments by segment. The alignments are illustrated and detailed in this chapter through the use of the following:

- Narrative Description
- Alternative Alignment Maps
- Enlargement Plans
- Sections
- Visual Simulations

Public Storage Sections
Figure 4-4



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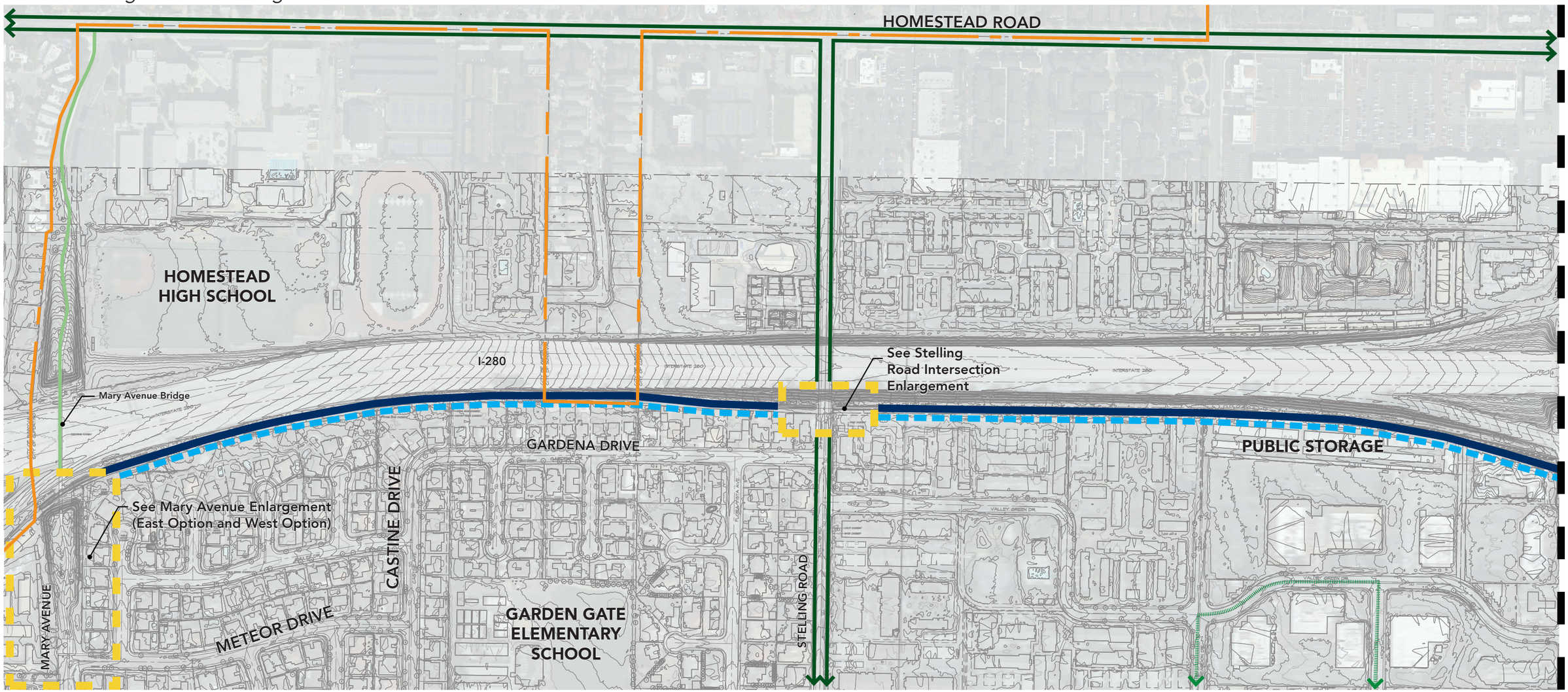


Trail Types

Pedestrian Trail, less than 14' wide
Alternative #1, next to channel

Class I Multi-Use Trail, min. 14' wide
Alternative #2, covered channel

Class I Multi-Use Trail, min. 14' wide
On-grade

Existing Conditions

Trail Connection Point / Enlargement Area

Gateway

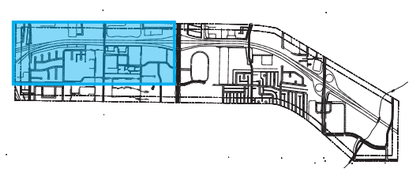
City Limits

Existing Connections

Class 1 Bike Path

Bike Lanes on Street

Bike Route



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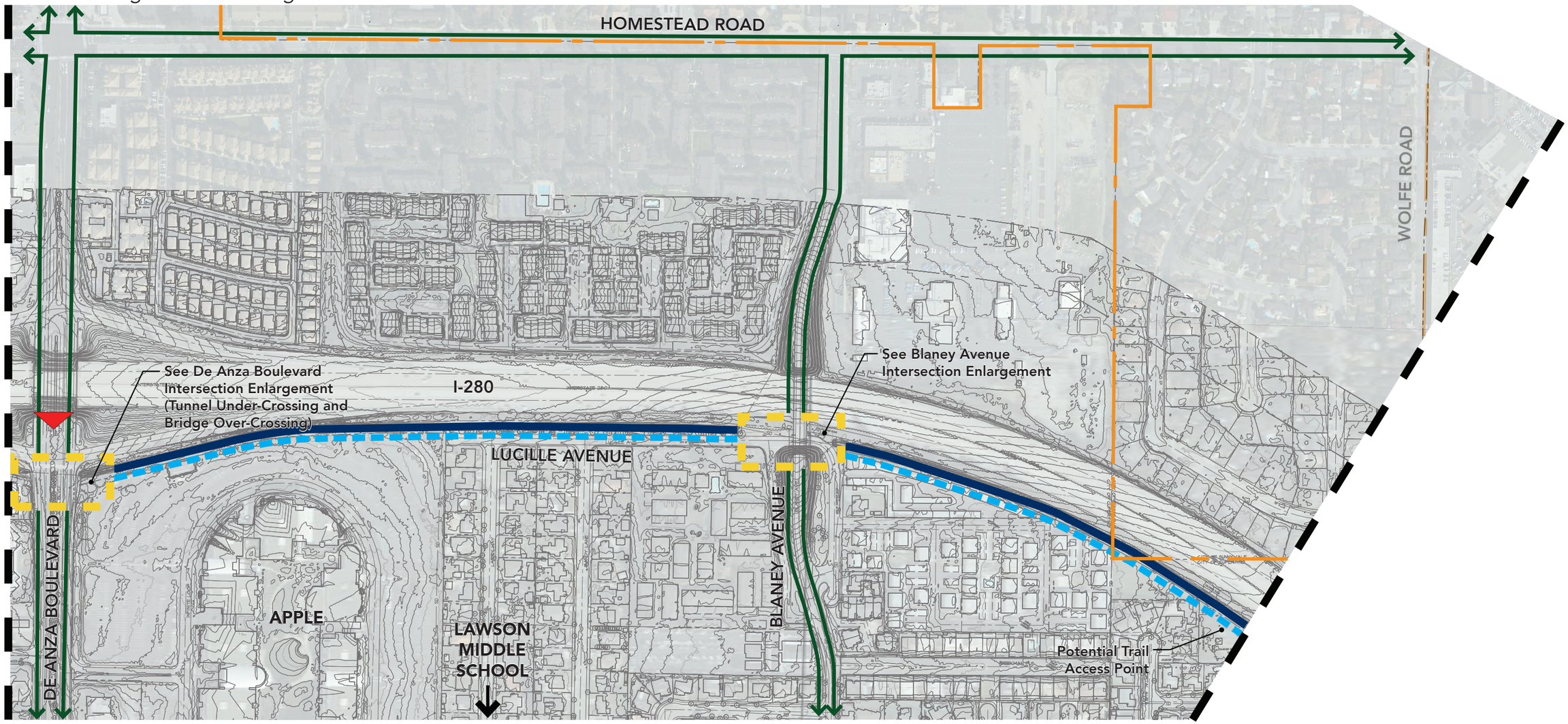


Trail Types

Pedestrian Trail, less than 14' wide
Alternative #1, next to channel

Class I Multi-Use Trail, min. 14' wide
Alternative #2, covered channel

Class I Multi-Use Trail, min. 14' wide
On-grade

Existing Conditions

Trail Connection Point / Enlargement Area

Gateway

City Limits

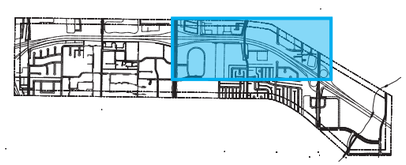
Existing Connections

Class 1 Bike Path

Bike Lanes on Street

Bike Route

0 50 100 200



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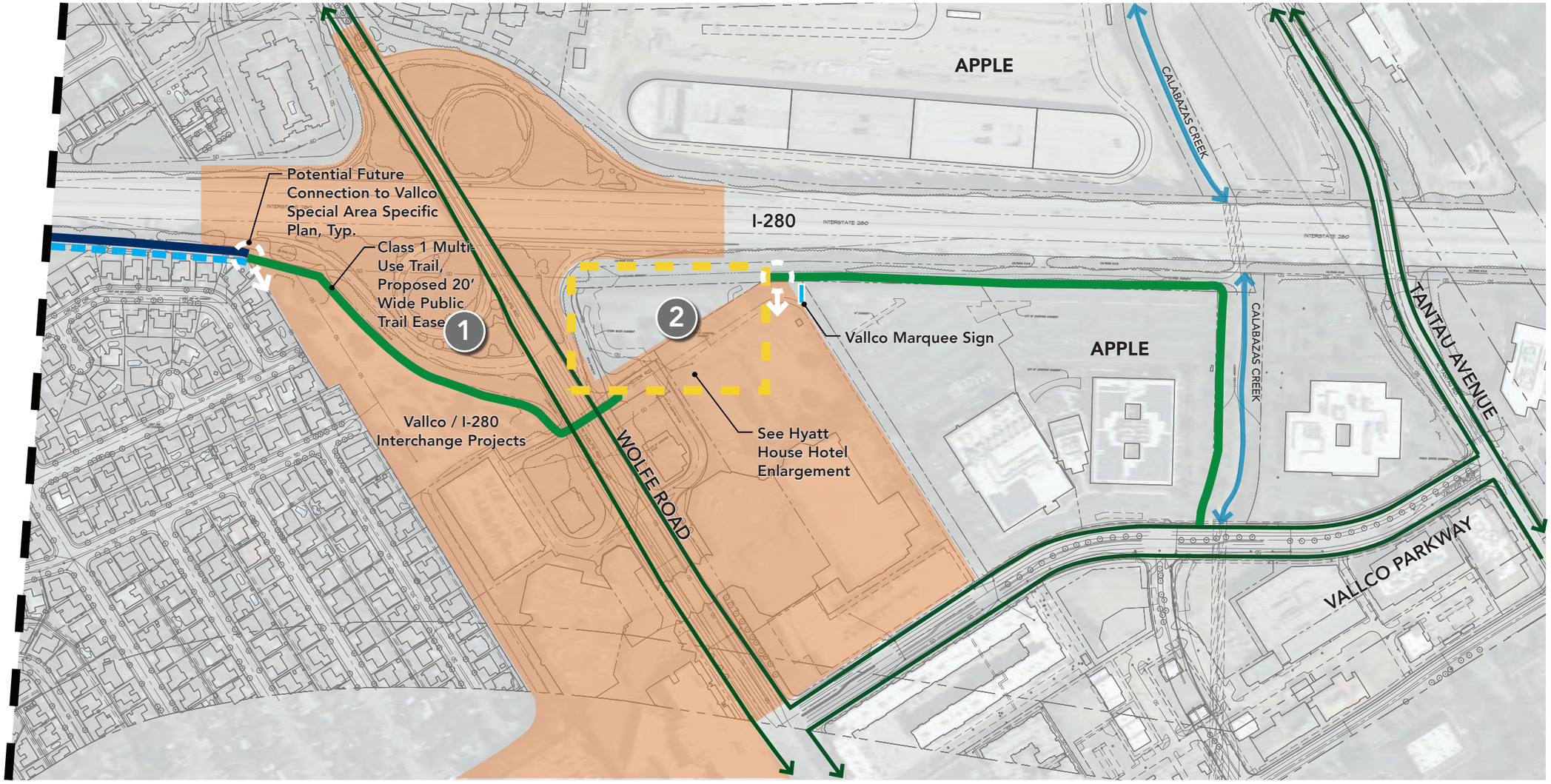

Trail Types

Pedestrian Trail, less than 14' wide
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Class I Multi-Use Trail, min. 14' wide
Alternative #2, covered channel

Class I Multi-Use Trail, min. 14' wide
On-grade

Existing Conditions

Trail Connection Point / Enlargement Area

Gateway

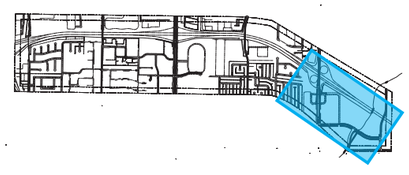
City Limits

Existing Connections

Class 1 Bike Path

Bike Lanes on Street

Bike Route



1. Area in-flux, especially on the west side of Wolfe Road. Goal is the get a class 1, multi-use trail into the planning process.
2. Hyatt House development made provisions for trail.

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Segment 1 – Mary Avenue to De Anza Boulevard

Segment 1 runs from Mary Avenue to the west side of De Anza Boulevard. Starting at the westernmost trail extent, Segment 1 begins at the Don Burnett Bicycle-Pedestrian Bridge plaza. The bridge approach presents a choice for how to access the trail within the SCVWD corridor. The approach slopes upward to meet the bridge deck elevation over Interstate 280, while access to the proposed Junipero Serra Trail requires an access path, on either side of the bridge approach, to slope down to conform with grades at the SCVWD maintenance road. Both access path options are feasible and a more detailed description of each option is presented below. See *Figure 4-10* for a section of the East Option and West Option for Mary Avenue.

East Option Near Mary Avenue

The East Option runs along the east side of the bridge approach, directly behind the residential properties on Nathanson Avenue. The trail would tie into the existing plaza at Mary Avenue and run parallel to the residential wood fences northward to the SCVWD right-of-way. The trail would be offset from the fence a minimum of 3' to provide a privacy buffer. Due to considerable cross slopes and limited space available, the trail may need to be narrower than a full Class I multi-use trail at this section. For these reasons, the paved trail width through this section would be reduced to 10' wide. Additionally, a retaining wall up to 8' in height would be required to obtain suitable flat area for a 10' wide trail. The east side of the bridge approach also contains numerous mature trees, including large redwoods requiring removal to accommodate a trail. Lastly, the trail parallels overhead utilities and poles that would need to be avoided in this area.

The community expressed concern with this alternative, including privacy and security for the neighbors, impacts to the trees and the narrower trail width. This alternative is not preferred for the trail because significant tree removal and grading will have to occur. See *Figure 4-8* for an enlargement of the East Option.

West Option Near Mary Avenue

The West Option runs along the west side of the bridge approach, adjacent to the Loc-N-Stor facility. This alternative stays entirely within the existing slope easement on Loc-N-Stor's property. Due to the location of the slope easement, the trail ties into the bridge approach path further north. There is more physical space on this side of the bridge approach, which allows for a full Class I multi-use trail.

Additionally, the grades are gentler than the East Option, thus requiring less retaining wall length and is anticipated to be shorter in height (approximately 1' to 3' tall). A few trees would need to be removed, but not as many as the East option. Loc-N-Stor expressed concern with security having the trail so close to the fence line, as they have had break-ins in the past. Loc-N-Stor is proposing to improve their property and has submitted preliminary plans for City approval. The City may request a condition of approval on the redevelopment of Loc-N-Stor's property to allow for future implementation of a trail. Continued coordination will be required between the City and Loc-N-Stor along this edge to satisfy any outstanding concerns of having a trail in this location.

The community expressed a preference for this alternative as it locates the trail further away from residences, allows for a wider trail and requires far fewer tree removals. See *Figure 4-9* for an enlargement of the West Option.

Mary Avenue Enlargement East Option

Figure 4-8

Enlargement Legend

- Drainage Centerline
- Culvert
- Primary Voltage Overhead
- Secondary Voltage Overhead
- Class I Bike Path
- Tree To Be Removed

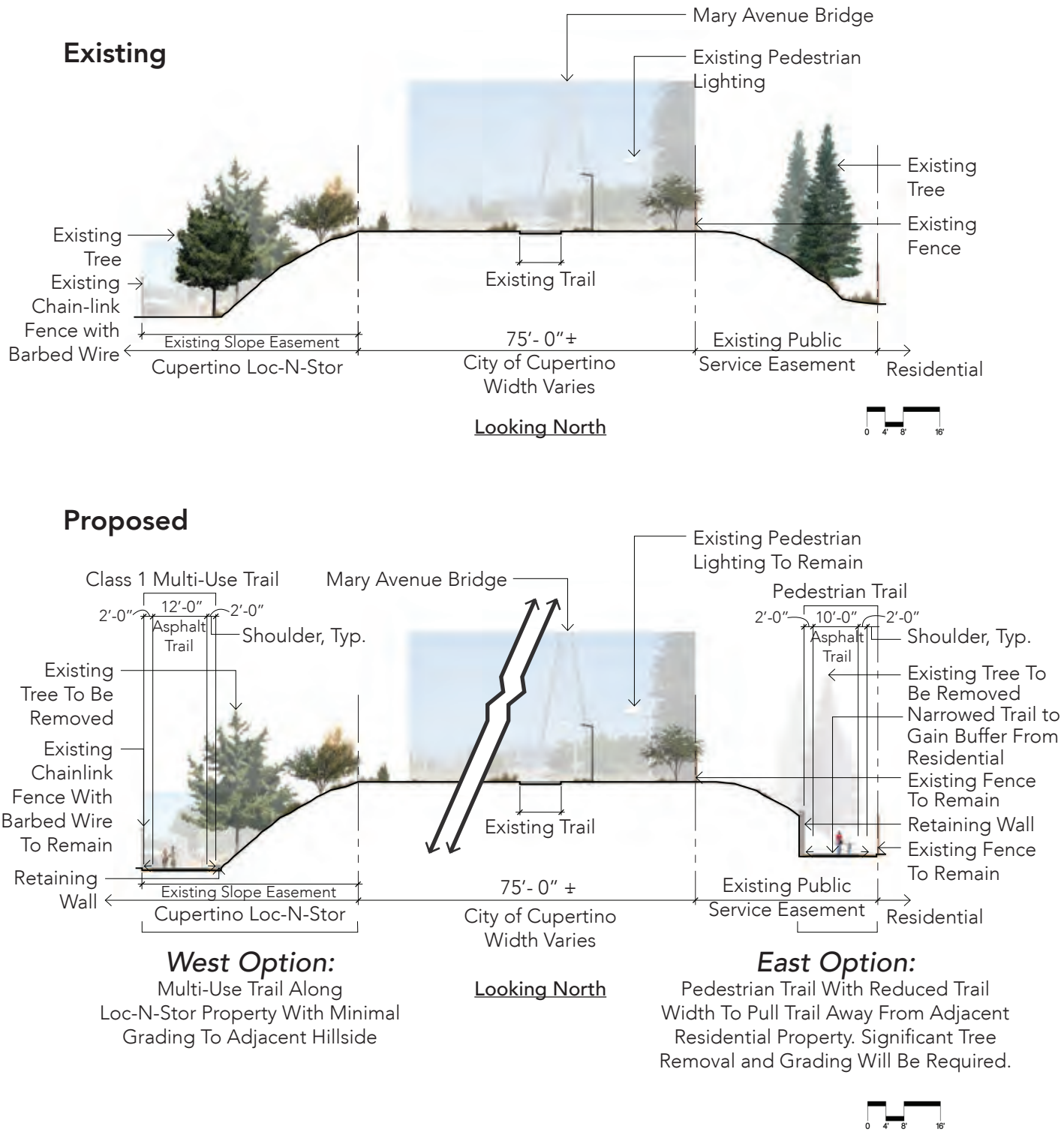
0 15' 30' 60'

Mary Avenue Enlargement West Option

Figure 4-9

Mary Ave Sections

Figure 4-10



Mary Avenue to Stelling Road

After Mary Avenue, the trail turns east within SCVWD right-of-way towards Stelling Road for approximately 0.5 miles. This section of trail is located behind single family residences and runs parallel with PG&E's overhead electrical transmission lines supported by lattice towers. Many of the homes in this section are physically separated from SCVWD right-of-way by a greater distance than elsewhere on the trail due to the presence of the PG&E easement next to the SCVWD right-of-way.

Stelling Road

Stelling Road is the first major street crossing in the trail. The community expressed a desire for grade-separated street crossings for trail user convenience and safety reasons. With that input, a number of options were evaluated for crossing Stelling Road.

A bike-pedestrian bridge over Stelling Road was evaluated but quickly proved problematic due to the large number of overhead electrical lines impeding any proposed alignment over the street. The overhead lines on the west side of Stelling Road are particularly low and would require relocation or undergrounding to accommodate a bike-pedestrian bridge. Additionally, this section of SCVWD's right-of-way is very constrained with respect to width. Accommodating a bike-pedestrian bridge and a spur trail side by side within a 25' to 30' wide space is challenging. The bike-pedestrian bridge also introduces privacy concerns as the bridge approach on the west side of Stelling Road would give trail users views into backyards. The east bridge approach would be adjacent to a parking lot, so privacy concerns there are not as significant.

A tunnel was also evaluated at this location. CalWater and PG&E have significant underground utilities at this location that would require relocation to accommodate a tunnel. The width constraint is also a factor as running a tunnel side by side with a spur trail would be difficult within the space available. The drainage culvert under Stelling Road would also need to fit alongside the tunnel. The space doesn't accommodate a tunnel, spur trail and culvert, side by side. For these reasons, the tunnel is not a feasible option.

High Visibility Crosswalk Example *Figure 4-11*

Another option evaluated was an undercrossing at Stelling Road. The trail would meander north onto Caltrans right-of-way, ramp down underneath Stelling Road at the west approach and ramp up at the east approach. A nearby example is along the Stevens Creek Trail at Middlefield Road and Highway 85. This option minimizes the utility conflict concerns present with both a bike-pedestrian bridge and tunnel option. It also eliminates the space constraint concerns since the main trail and spur trail utilize both SCVWD and Caltrans right-of-way. There would also be reduced privacy concerns as the trail undercrossing would be below street level on Caltrans right-of-way and away from residences. See *Figure 4-12 and 4-13.*

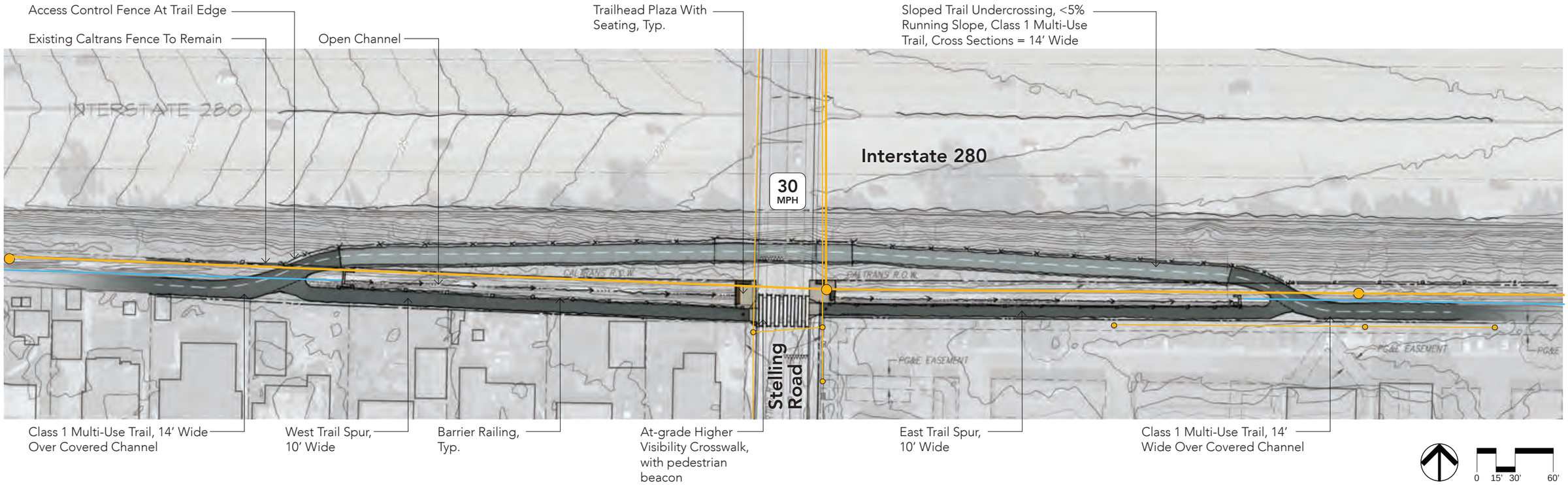
At street level, a high visibility crosswalk with flashing beacon signal is recommended to increase visibility of pedestrians and cyclists crossing Stelling Road at-grade. Trail head plazas are proposed for both sides of Stelling Road as a trail amenity and branding opportunity for the trail. The community preferred the undercrossing option to an at-grade only crossing of Stelling Road. See *Figure 4-14* for an enlargement of the Stelling Road Intersection Enlargement.

Stelling Road to De Anza Boulevard

The trail continues east after Stelling Road. This section of Segment 1 is located behind the Villages at Cupertino residential community, Public Storage and the multi-family residential development at 10745 De Anza Boulevard. See *Figure 4-4* for a typical section through this area. Segment 2 starts just west of De Anza Boulevard.

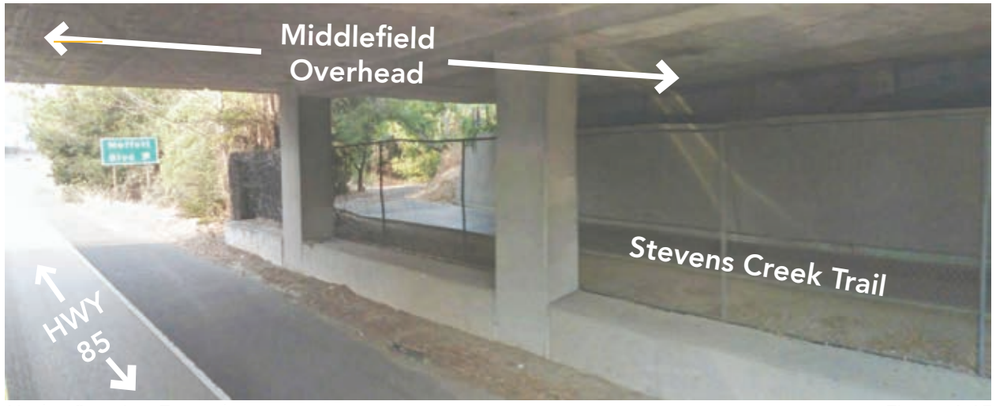
Grade-Separated Under-Crossing at Stelling Road *Figure 4-12*

Existing Conditions under Stelling Road *Figure 4-13*



Enlargement Legend

- Channel (When Covered)
- Primary Voltage Overhead
- Secondary Voltage Overhead



Under-Crossing Example

Figure 4-15

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Segment 2 – De Anza Boulevard to Vallco

De Anza Boulevard

Overall, Segment 2 runs from the west side of De Anza Boulevard to the west side of Vallco Shopping Mall. The intersection at De Anza Boulevard is adjacent to multi-family residential, Apple's Infinite Loop campus, and I-280 on and off ramps. Additionally, the PG&E overhead transmission lines cross over De Anza Boulevard and the Junipero Serra Channel is conveyed via culvert under De Anza Boulevard. There are CalWater and PG&E facilities (among others) beneath De Anza Boulevard running north and south. The community expressed a strong desire for a grade separated crossing to mitigate conflicts between trail users and vehicular traffic at this busy intersection. Three alternatives for crossing De Anza Boulevard were evaluated and are discussed further below.

Tunnel Alternative

There are a number of obstacles to avoid with a tunnel option beneath De Anza Boulevard. The existing culvert beneath the street will need to remain in its current alignment, so any tunnel option will need to remain entirely on one side of the culvert. Additionally, there needs to be space for a spur trail and a set of stairs to access the tunnel from the street.

With constraints on available width, the proposed tunnel option would require property acquisition on both sides of De Anza Boulevard to accommodate stairs. The tunnel will directly conflict with underground utilities in De Anza Boulevard. Further utility coordination would be required if the tunnel option is pursued. Additionally, the existing PG&E poles present a challenge for the footprint of the tunnel. The pole on the west side of De Anza Boulevard is located on the south side of the Junipero Serra Channel and the pole on the east side of De Anza Boulevard is located on the north side of the channel. Keeping the tunnel within SCVWD right-of-way would require the relocation of one of the poles. The proposed plan shows the relocation of the west-side pole into Caltrans right-of-way. This clears enough room to accommodate the spur trail, the tunnel approach ramp and the stairs.

The tunnel itself would be at least 10'-0" wide and 10'-0" tall and equipped with security lighting and a skylight at the median to allow natural light. Stairs into the tunnel should consider bike runnels to allow more direct trail access for bikes. The wall opposite the stair entrance may be angled to allow more visibility and natural light into the tunnel approach. The stairs and spur trail would all be accessed at grade from a trail head plaza on both sides of De Anza Boulevard. See *Figures 4-19* through *4-21* for an enlargement plan and a visual simulation of this alternative.

Stevens Creek Trail Tunnel Example 1 *Figure 4-16*

Stevens Creek Trail Tunnel Example 2 *Figure 4-17*

Tunnel Finishes *Figure 4-18*

Tunnel Visual Simulation 1

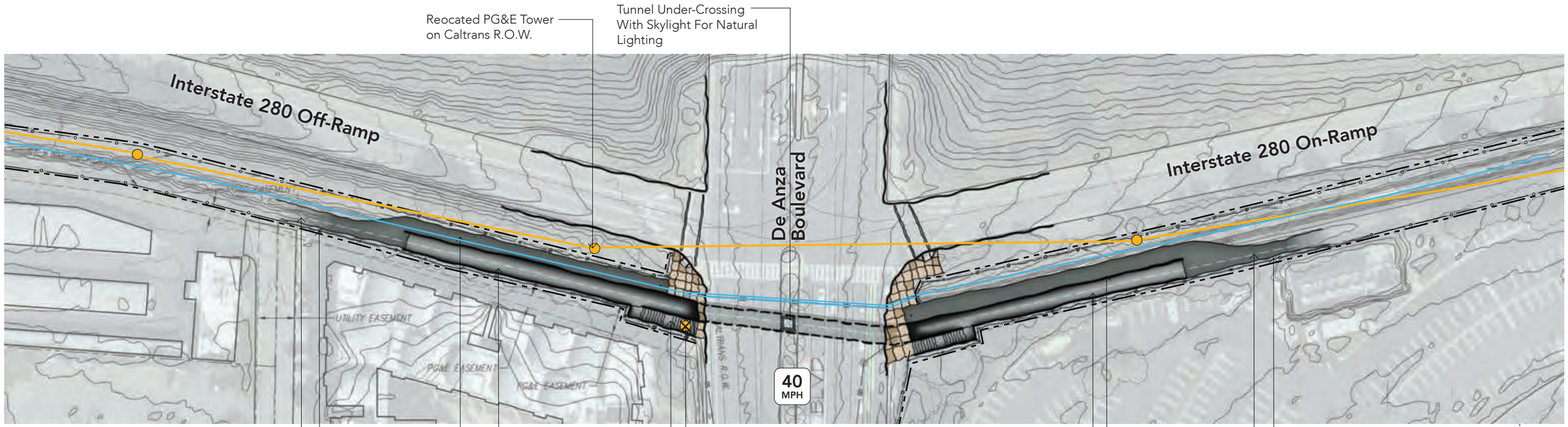
Figure 4-19

Tunnel under De Anza Boulevard, looking west

Tunnel Visual Simulation 2

Figure 4-20

Tunnel approach under De Anza Boulevard, looking West



Enlargement Legend

- Drainage Channel Centerline
- Culvert
- Primary Voltage Overhead
- Secondary Voltage Overhead

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Bike-Pedestrian Bridge

Like the tunnel option, there are obstacles associated with the bike-pedestrian bridge. Because the bridge is an aerial structure, the conflicts associated with underground utilities and the culvert under De Anza Boulevard are reduced. However, the overhead electrical lines become problematic. An initial alternative of the bike-pedestrian bridge illustrated relocation of the PG&E pole on the east side of De Anza Boulevard would be required to keep the bridge away from overhead wires and remain entirely within SCVWD right-of-way.-

Concern for significant construction costs and coordination effort related to relocation of a PG&E pole led to the development of a second alternative where the PG&E pole would not have to be relocated. At the same time, a supplemental survey was commissioned to determine exact pole locations and vertical clearance between the roadway and the lowest wires. The survey indicated that the lowest wires were approximately 37' above the roadway surface on De Anza Boulevard. 37' does not provide enough clearance for a bike-pedestrian bridge. The required vertical clearance over De Anza Boulevard is 17'. Assuming a concrete structure, the depth of the bridge deck would be approximately 4'-6", resulting in a bridge deck elevation of 21'-6" above De Anza Boulevard. The barrier fencing on the bridge adds another 8' minimum, bringing the total structure height to 29'-6" above De Anza Boulevard. With the wires being 37' above the roadway, that leaves approximately 7'-6" between the top of bridge structure and the lowest hanging wires. PG&E requires 12' vertical clearance from any of their overhead supply conductors and supply cables running between 750 to 22,500 Volts. This information further solidified the requirement to minimize the bridge footprint from being under the wires.

In the second bridge alternative, the alignment was shifted north to avoid the PG&E poles with a minimum of 6' horizontal clearance per PG&E requirements. The bridge would be located within Caltrans right-of-way and would require modifications to a traffic signal pole, a street light, a utility box, and a pull-out along the on-ramp. There would be stairs leading up to the bridge deck on both sides of De Anza Boulevard. On the west side, the stairs would come from an at-grade plaza at the intersection. On the east side, the stairs need to be shifted far enough east to keep the stairs below PG&E's vertical cable clearance and 15' maximum height for structures within their easement. See *Figure 4-24*.

Bike-Pedestrian Bridge Visual Simulation 1

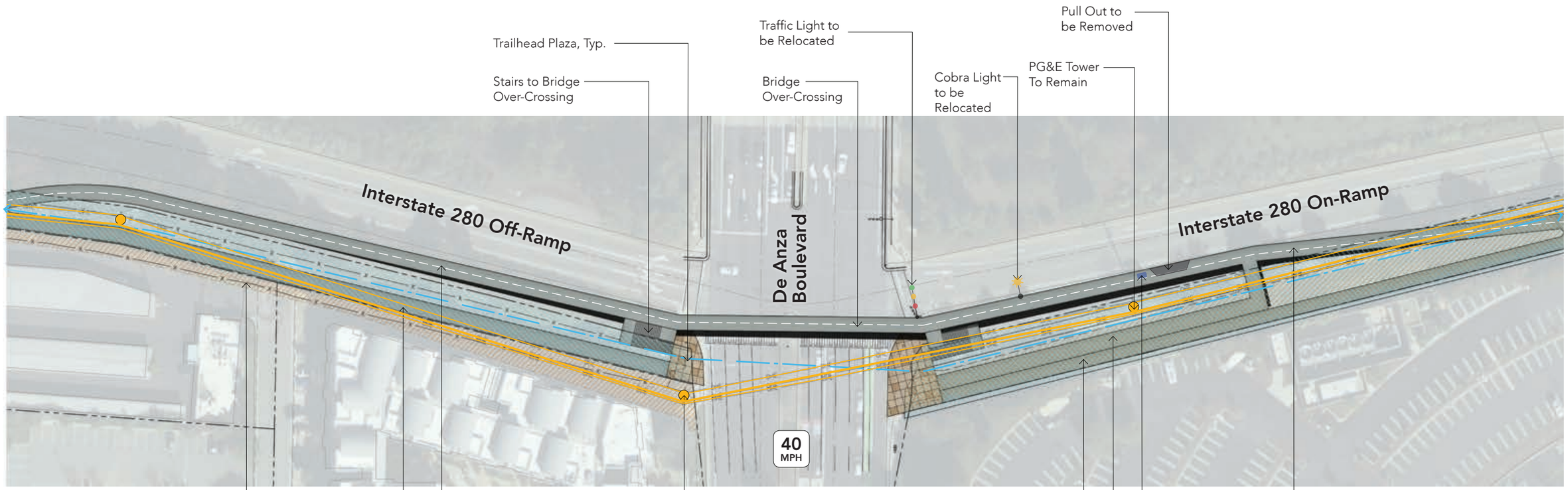
Figure 4-22

De Anza Blvd bike-pedestrian bridge overhead view looking south at De Anza Blvd

Bike-Pedestrian Bridge Visual Simulation 2

Figure 4-23

De Anza Blvd bike-pedestrian bridge on the west plaza looking west at the stairs up to the brige


Trailhead Plaza, Typ.
Traffic Light to be Relocated
Pull Out to be Removed
Stairs to Bridge Over-Crossing
Bridge Over-Crossing
Cobra Light to be Relocated
PG&E Tower To Remain
Interstate 280 Off-Ramp
De Anza Boulevard
Interstate 280 On-Ramp
40 MPH
Existing SCVWD Fence To Remain
West Trail Spur, 10' Wide
Bridge Approach Ramp, 4%
PG&E Tower To Remain
East Trail Spur, 10' Wide
Bridge Access Ramp, 4%
Utility Box to be Relocated
Bridge Approach Ramp, 4%
0 15' 30' 60'
Enlargement Legend
Drainage Channel Centerline
Culvert
Primary Voltage Overhead
Secondary Voltage Overhead
Santa Clara Valley Water District Property
PG&E Easement

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At-Grade Crossing

At-grade trail crossing alternatives were also evaluated for the De Anza Boulevard crossing. The current signal timing has high potential for conflicts with two south-bound off-ramp right hand turn lanes turning at the same time as the pedestrian "walk" signal phase.

Two different at-grade alternatives were explored:

Alternative 1 would not include the construction of any physical improvements, but signal timing would be modified such that the off-ramp right-turn and pedestrian crossings would not be in conflict. It is anticipated this would result in a degradation of traffic operations at the intersection.

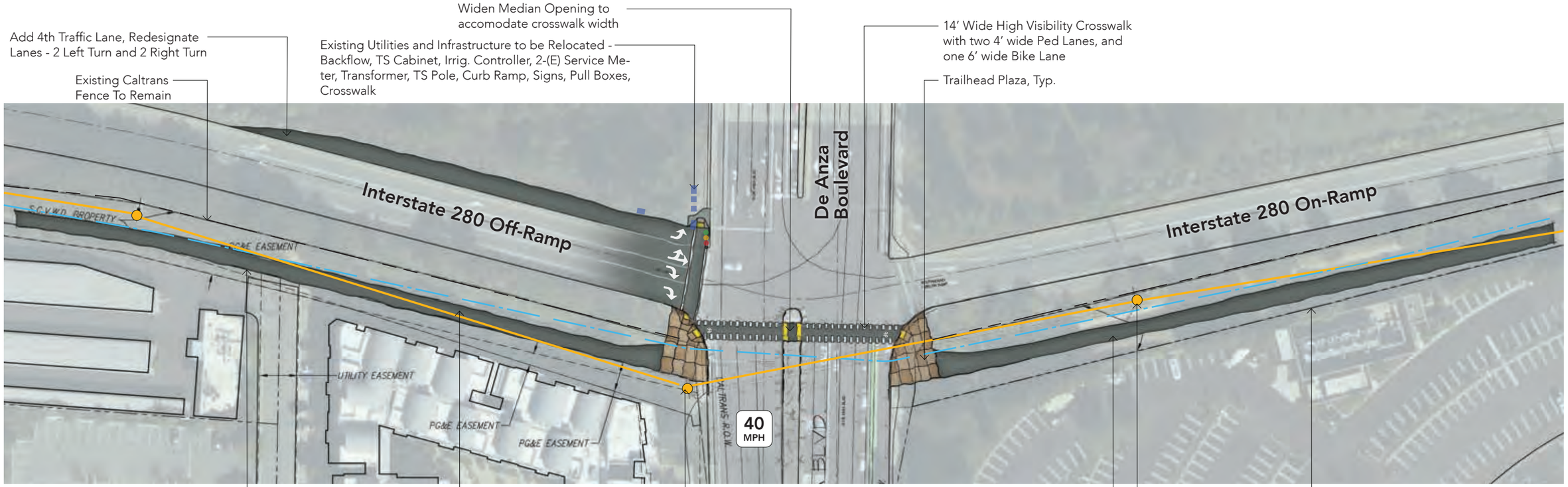
Alternative 2 would include the construction of an additional lane on the southbound I-280 off-ramp, resulting in a left-turn lane, shared left-turn/through lane, and two dedicated right-turn lanes. This change would allow separation of the ramp signal phase, making it possible for the crosswalk phase to operate concurrently with the eastbound off-ramp left turn/through movement. Overall delay would remain relatively consistent with existing conditions in this scenario. See *Figure 4-26*.

Alternative 2 is the recommended at-grade alternative as there would be minimal traffic impacts, while also increasing trail user and vehicular safety. The complete design memorandum for the at-grade crossing can be found in the Appendix.

High Visibility Crosswalk Example *Figure 4-25*

De Anza Boulevard to Blaney Avenue

Between De Anza Boulevard and Blaney Avenue, the trail runs adjacent to Apple's Infinite Loop campus and along Lucille Avenue in a residential neighborhood. Apple may desire to have an employee access point in the section of trail adjacent to their campus. The overhead electrical transmission lines continue to run through this section with PG&E's tubular steel poles (TSPs) located very close to the proposed trail alignment, particularly if trail alternative #1 is selected. Due to width constraints, the locations of these poles and trail alignment will require further study during a detailed design phase due to the narrow width available between the PG&E pole and the top of channel. See *Figure 4-28* for typical sections of this trail section.


Widen Median Opening to accomodate crosswalk width
Add 4th Traffic Lane, Redesignate Lanes - 2 Left Turn and 2 Right Turn
Existing Utilities and Infrastructure to be Relocated - Backflow, TS Cabinet, Irrig. Controller, 2-(E) Service Meter, Transformer, TS Pole, Curb Ramp, Signs, Pull Boxes, Crosswalk
14' Wide High Visibility Crosswalk with two 4' wide Ped Lanes, and one 6' wide Bike Lane
Existing Caltrans Fence To Remain
Trailhead Plaza, Typ.
Interstate 280 Off-Ramp
De Anza Boulevard
Interstate 280 On-Ramp
S.C.V.W.D. PROPERTY
UTILITY EASEMENT
PG&E EASEMENT
PG&E EASEMENT
40 MPH
Existing SCVWD Fence To Remain
Trail
PG&E Tower To Remain
Trail
PG&E Tower To Remain, Trail Pinch Point
Existing Property Fence, Apple
0 15' 30' 60'
Enlargement Legend
Drainage Channel (When Covered)
Primary Voltage Overhead

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Blaney Avenue

The 0.22-mile section parallel to Lucille Avenue is the only portion of the trail that's not behind homes or businesses. This section of the trail provides an access opportunity not often available between major intersections elsewhere along the trail. Should trail alternative #2 be pursued, there's potential for the trail to be separated from Lucille Avenue with planting enhancements, a lower fence to allow improved visibility and aesthetics. Intermittent decomposed granite paths connect to the trail from Lucille Avenue.

If trail alternative #1 is selected, the trail will be narrower in places and located closer to the street. A trail head with amenities such as seating, signage and decorative paving is depicted. Also, improved connections to the trail are shown such as a crosswalk, traffic calming bulb-outs and sidewalk improvements.

Some neighbors expressed concern at the community meetings about parking and speeding along Lucille Avenue with the implementation of a trail. The City may want to explore a policy, implementing permit parking for portions of Lucille Avenue, while allowing for some expected trail use parking. Bulb-outs may also help alleviate any speeding along Lucille Avenue. See *Figures 4-28* and *4-29*.

Pinch Point Below Blaney Avenue

Further east, the trail encounters a challenging 100' long section starting below the Blaney Avenue overcrossing to the open Junipero Serra Channel adjacent to Lock It Up storage. At the bend of North Blaney Avenue, there is a 10' wide pinch point between the sound wall and metal beam guard rail. A potential solution for widening the trail here is to shift the street curb line 2' inward and relocate the guard rail accordingly. A guy anchor would need to be modified to allow vertical clearance for trail users. See *Figure 4-29* for the location of the 10' wide pinch point on the Blaney Avenue Enlargement and *Figure 4-27* for an image of the pinch point.

The sound wall, near the pinch point, stops just east of the Blaney Avenue overcrossing and becomes chain link fence. Further consultation with Caltrans may be required to install additional sound wall to protect trail users from a vehicle potentially leaving the freeway and ending up on the trail.

Pinch Point between Sound Wall and Guard Rail *Figure 4-27*

North Portal Avenue Trail Access

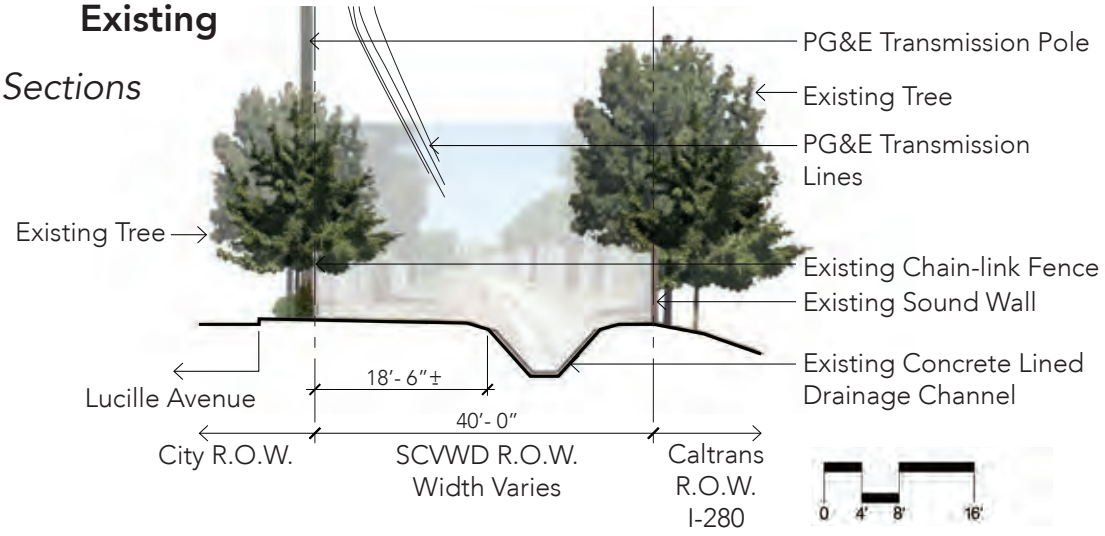
Heading east from Blaney Avenue, the trail goes behind Lock It Up storage and residential neighborhoods. At the CalWater facility at North Portal Avenue, there is another trail access opportunity. In early meetings with CalWater, they have been amenable to the idea of providing trail access through their facility, provided appropriate security protections are designed.

The CalWater property is currently used to maintain vital water supply for the City. For the trail entrance, an access easement should be obtained to allow trail users to travel through the property to access the trail at the east end of the property. To give access to trail users, the existing fence and gate should be removed and a new fence and gate should be installed to still allow CalWater access and security of their facility. Bollards should be placed after the new gate, trail signage at the entrance to the CalWater property, and "NO PARKING" signs on the asphalt along the trail entrance should be placed to deter trail users from parking within the trail entrance and to prevent CalWater vehicles from being blocked from accessing their equipment on their property. See *Figure 4-30* for the North Portal Avenue Trail Access Enlargement.

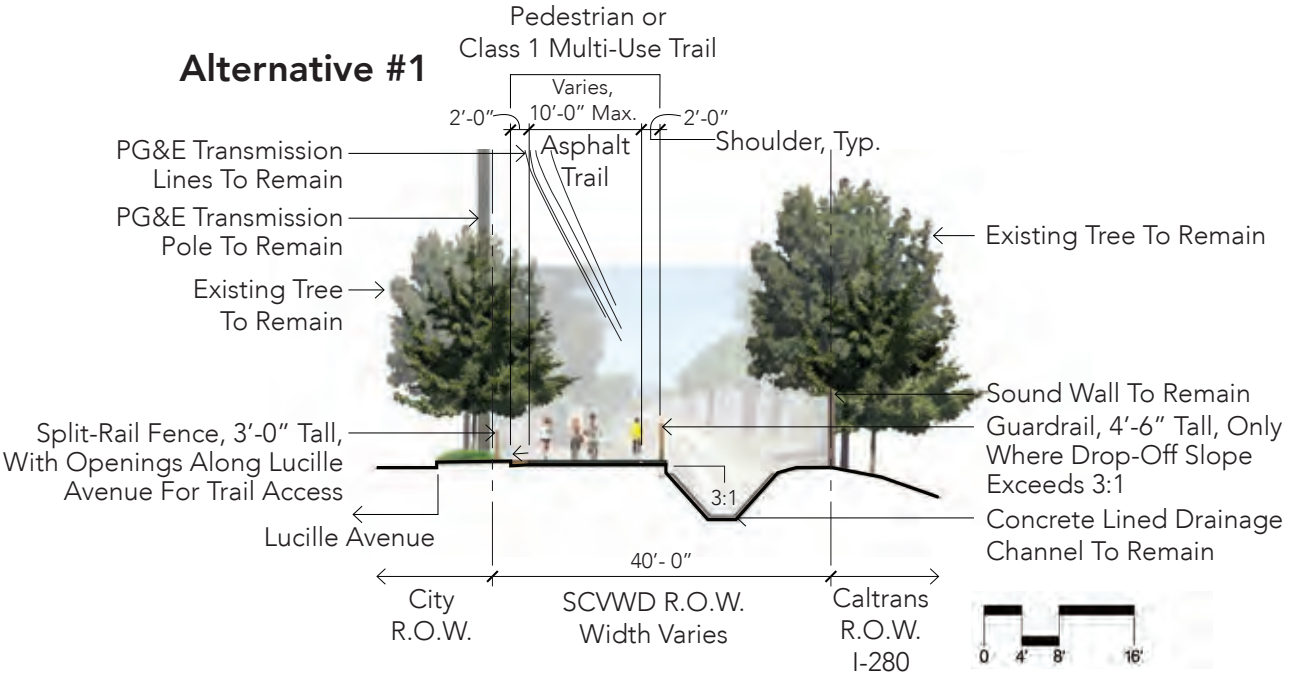
Existing

Lucille Avenue Sections

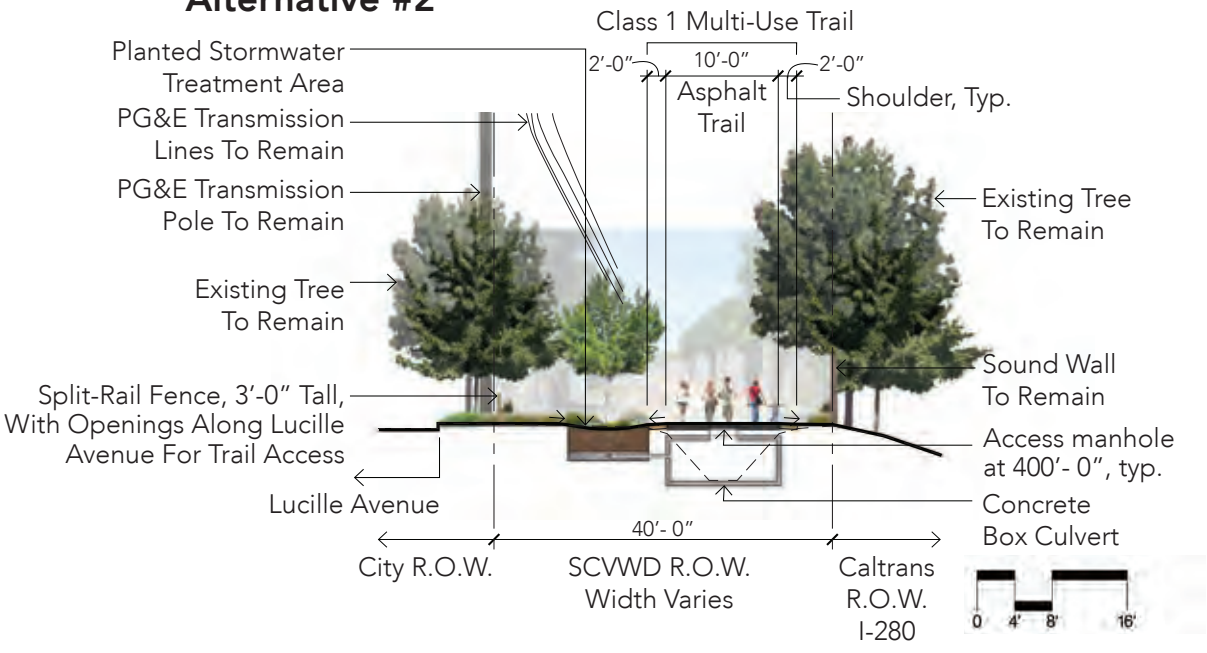
Figure 4-28

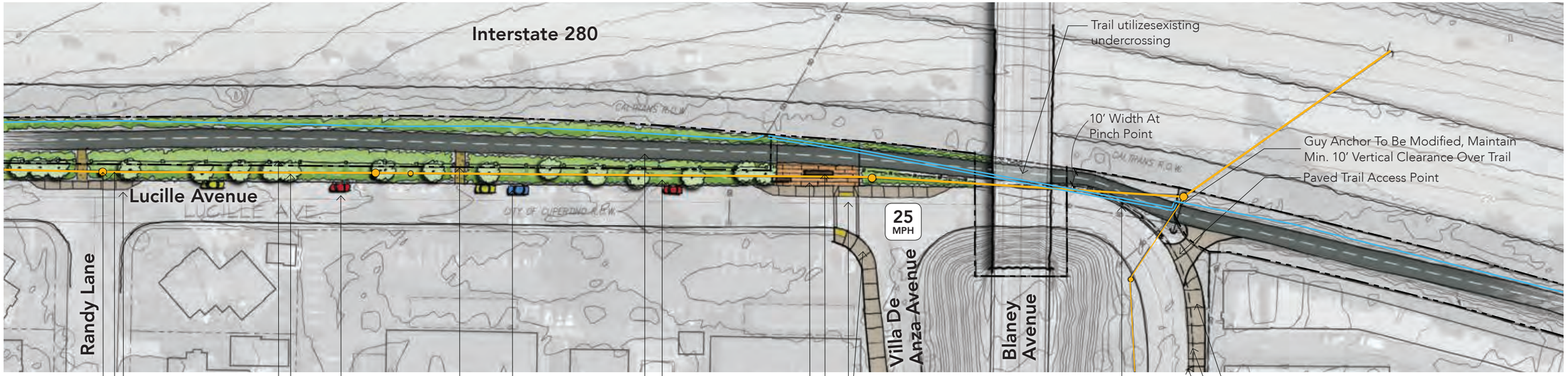


Alternative #1



Alternative #2





Enlargement Legend

- Drainage Channel Centerline
- Culvert
- Primary Voltage Overhead
- Secondary Voltage Overhead

0 15' 30' 60'

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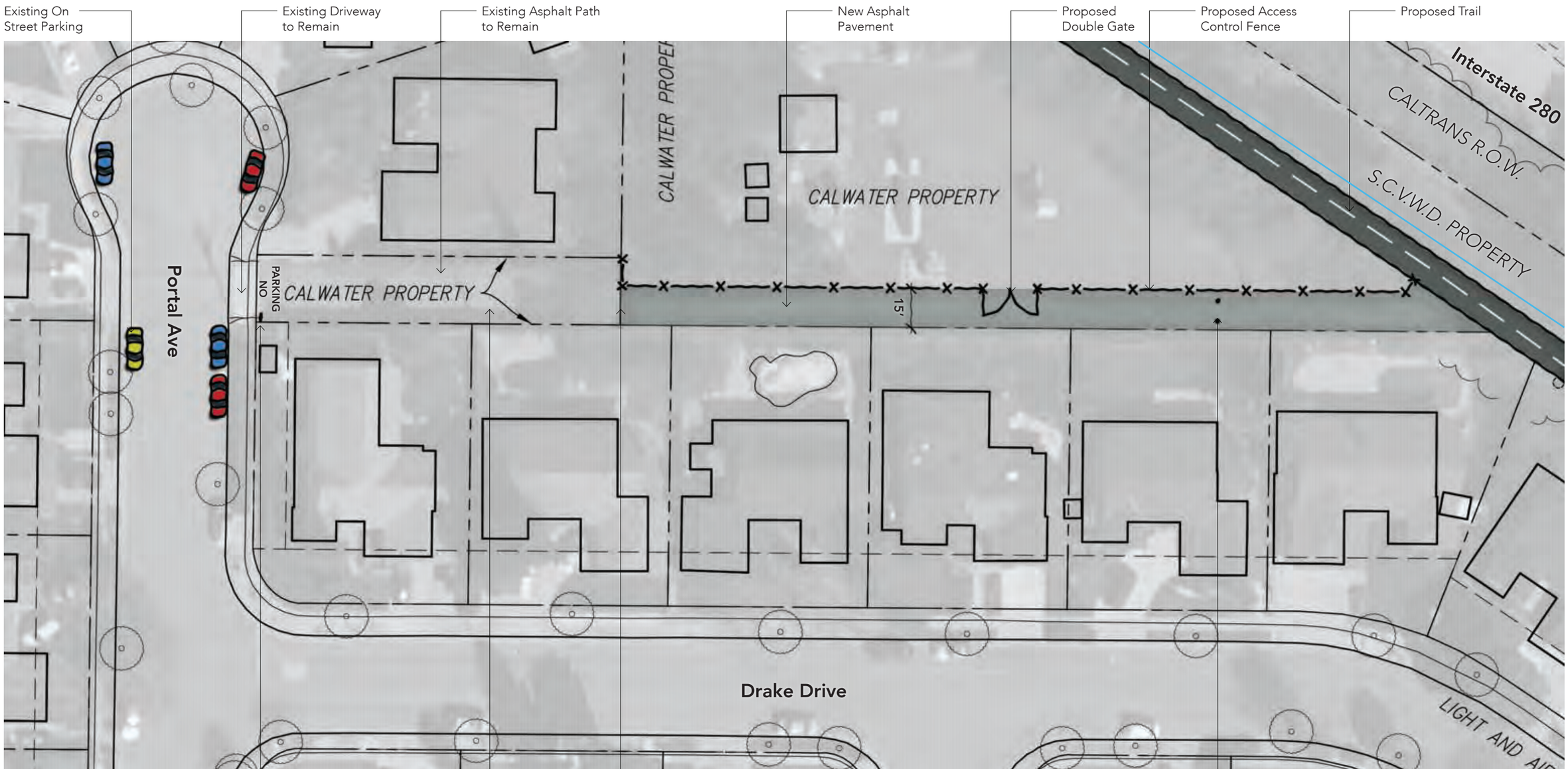
North Portal Avenue Trail Access Enlargement

Figure 4-30



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Segment 3 – Vallco to Vallco Parkway

Segment 3 of the trail runs from the west edge of Vallco Mall to Vallco Parkway alongside Calabazas Creek. Starting at the western extent, the Vallco Mall site is currently being proposed for re-development and is in a state of flux. The developer is working with City staff on a proposal for the site. It is anticipated that the trail will follow the northern edge of the Vallco site and connect to the Perimeter Road undercrossing below Wolfe Road. Additionally, VTA is leading a design effort to reconstruct the Wolfe Road interchange at I-280. Caltrans' Project Study Report for the project has been completed, and an environmental assessment of the alternatives is being performed. Preliminary alternatives depict connections from the Wolfe Road sidewalks to the Junipero Serra Trail. The trail project will need to conform to the interchange project as designs advance.

The trail would utilize the Perimeter Road undercrossing and connect to the Hyatt House development project, currently under construction. The Hyatt House is constructing a 10' wide trail as part of their project, which will serve as a small section of the overall trail. See *Figure 4-7* for the enlargement plan of this area and *Figure 4-31* for the Hyatt House Enlargement, which is a part of this area. Commencing at the Junipero Serra Channel side of the Hyatt House project, a full Class I multi-use trail can be constructed adjacent to the channel. This section of the channel is unlined and will remain unlined.

The trail continues east behind an Apple campus until the unlined channel's confluence with Calabazas Creek. The trail at this point, turns southward along the west bank of Calabazas Creek. This section continues to accommodate a class 1 multi-use trail adjacent to the creek. SCVWD studies indicate that the maintenance road along Calabazas Creek is below top of bank and subject to inundation during 10-year storm events and greater. During large storm events, temporary trail closures will be needed to ensure trail user safety. Locking swing gates accompanied by signage are recommended as means for securing the area. City staff would be responsible for monitoring flow conditions and closing this section of the trail as needed. Improvements to the Calabazas Creek maintenance road may require approvals from regulatory agencies, including the California State Department of Fish and Wildlife and the San Francisco Bay Regional Water Quality Control Board. There is a potential trail head and connection to a signalized intersection on Vallco Parkway, which would connect the trail to existing bike street infrastructure and Main Street, a popular mixed-use neighborhood. Additional coordination with Apple and the City is required for this trail head location.

See *Figures 4-32 and 4-33* for sections through segment 3.

Trail Types

Pedestrian Trail, less than 14' wide
Alternative #1, next to

Class I Multi-Use Trail, min. 14' wide
Alternative #2, covered

Class I Multi-Use Trail, min. 14' wide
On-grade

LEGEND

1. DROP-OFF / ENTRY PLAZA
2. PUBLIC OPEN SPACE
3. OUTDOOR DINING
4. POOL
5. EXISTING TREE
6. SHADE TREE
7. FLOWERING / SEASONAL TREE IN GRATE
8. UPRIGHT EVERGREEN TREE
9. STREET TREE IN GRATE
10. PUBLIC ART
11. DECORATIVE PAVING BANDS (GRAVEL OR CONCRET
12. PEDESTRIAN CROSSWALK
13. TRASH/RECYCLING BIN
14. STORMWATER PLANTING
15. ADA ACCESSAIBLE RAMP
16. SCREENED TRANSFORMER

NORTH
SCALE:1" = 20'-0"

Concept Plan prepared by Bruce Jett Associates, 8/13/14

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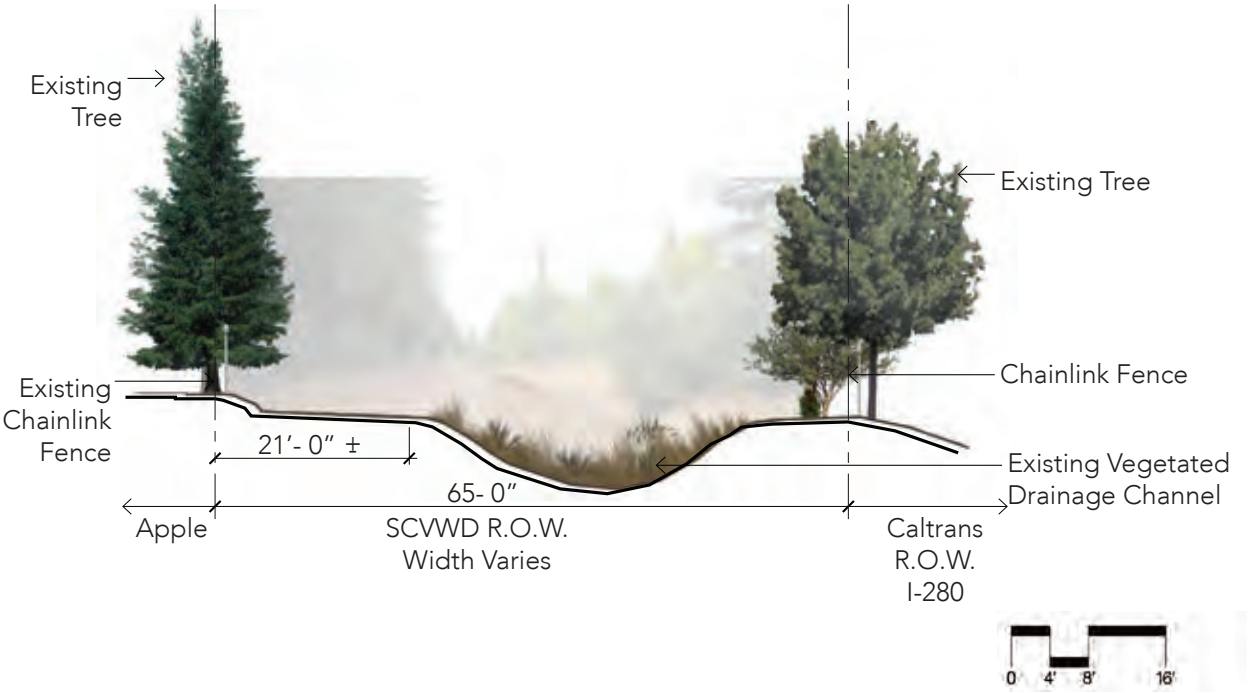
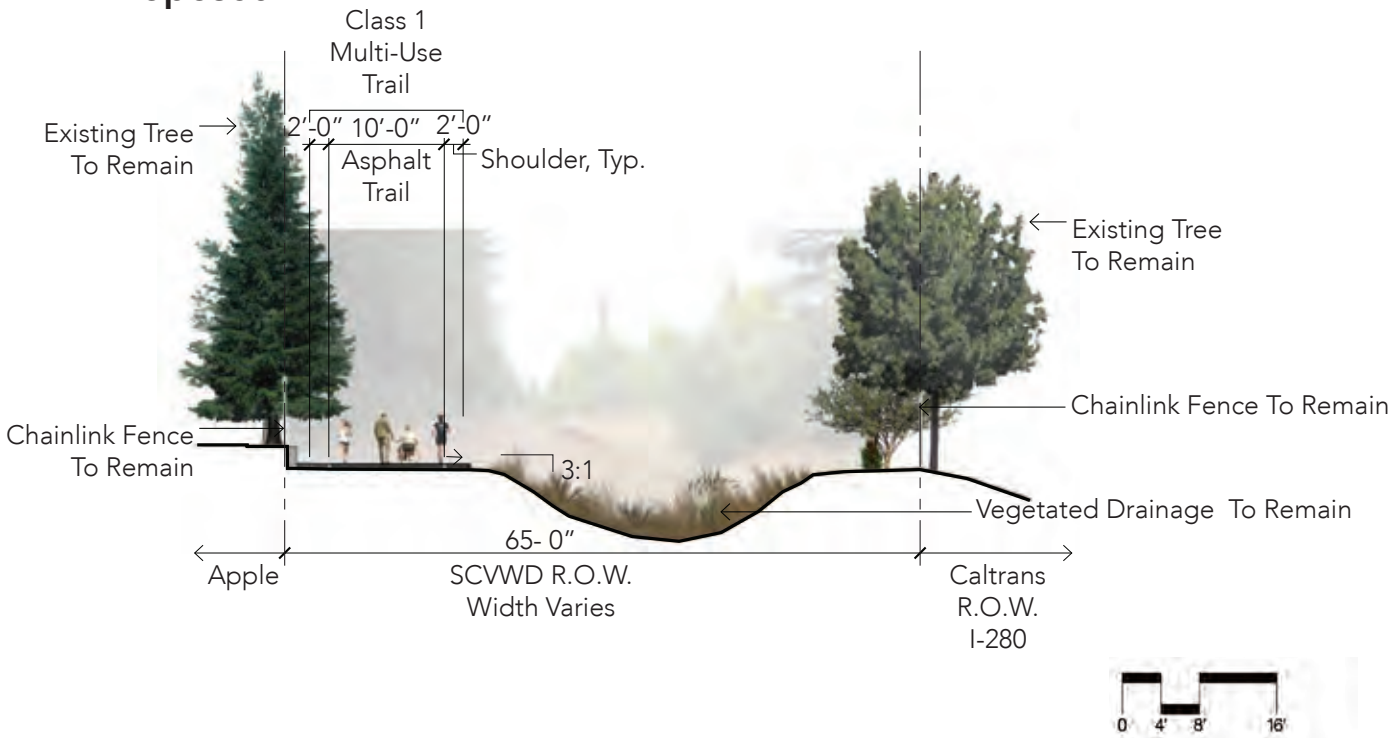
Existing



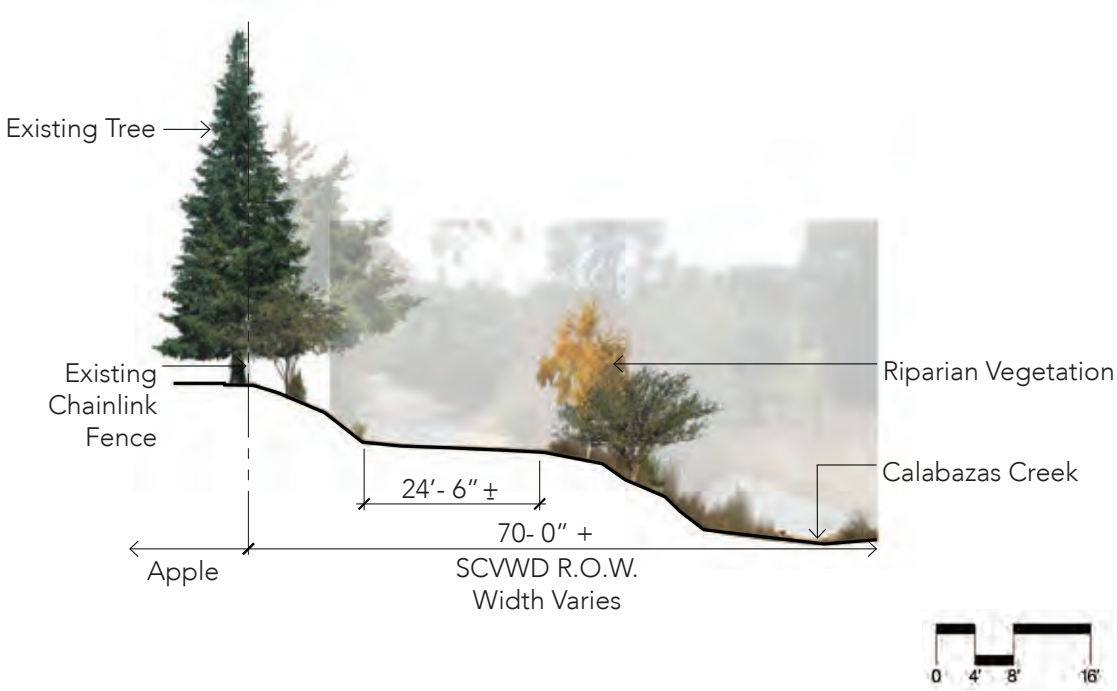
Proposed



Calabazas Creek Sections

Figure 4-33

Existing



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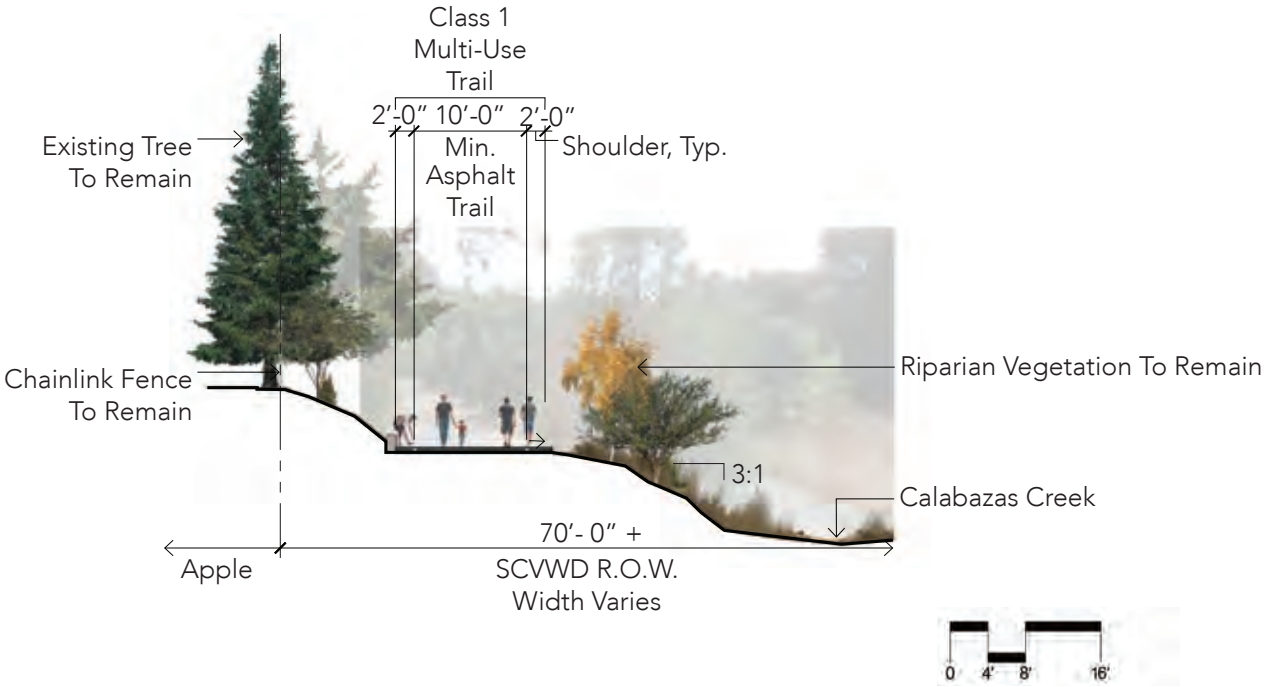

Safety, Privacy, and Security

The previous sections of this chapter discussed the trail alignment in detail. This section discusses trail safety, privacy and security. Suggestions are provided for fence types to suit various conditions along the trail.

Privacy/Security Fence Adjacent to Residential

The existing fencing behind homes varies with regard to materials, height, visual openness and condition. Many neighbors expressed two concerns in particular. One is privacy and how trail users may be able to see into their properties. The other is security and whether fencing will discourage intrusion into their property. One potential solution regarding the privacy concern is to install opaque fencing for those properties with open chain link or similar fence type. A solution for discouraging intrusion is installing a fence of such height and design that climbing over it is a deterrent. To meet these two criteria, it is recommended that a 7' tall wood fence be installed at those properties currently deficient in either privacy and/or security. It is anticipated there may be some existing fences or walls that meet this standard, and no work will be required to upgrade the fencing. See *Figure 4-34*.

Figure 4-34 Privacy/Security Fence Example

Split Rail at Lucille Frontage

A split rail fence is recommended at the Lucille Avenue frontage. Aesthetically, this would be more inviting than the existing chain link fence. This fence type also allows more visibility since it's lower than the existing chain link and more visually open. And it still provides a delineation between trail use and street use. There would be openings in the fence to allow trail access from the street. See *Figure 4-35*.

Figure 4-35 Split Rail Fence Example

Undercrossing Barrier at Stelling Road

Where the trail goes beneath Stelling Road, a Caltrans approved barrier fence will be required to keep trail users from entering the freeway. Additionally, the fence may need to be designed to resist vehicular impact. The design of this fence will require further coordination with Caltrans as the design advances. See *Figure 4-36*.

Figure 4-36 Under-Crossing Barrier Example

Guard Rail Adjacent to Open Channel

Where trail alternative #1 is pursued, a 4'-6" tall guard rail is recommended along the open Junipero Serra Channel to prevent trail users from accidently falling into the channel. However, the SCVWD will not approve any trail with a guard rail, as currently shown in this study, along the Junipero Serra Corridor due to maintenance access constraints. Further discussion with SCVWD will need to occur if a guard rail is pursued for the trail. See *Figure 4-37*.

Guard Rail Example *Figure 4-37*

Fencing Example Rendering - Before *Figure 4-38*

Fencing Example Rendering - After *Figure 4-39*

Middle and Bottom Images: Show the impacts of the Privacy/ Security Fence adjacent to residential and the Guard Rail Fence adjacent to the open- for alternative #1.

Trail Security

One of the main concerns amongst community members was security along the trail. To address some of their concerns, the following options may be considered for the trail.

Patrols

Increased sheriff presence on the trail and near trailheads would help deter undesirable activity along the trail. The trailheads could be designed to allow vehicular access for policing activities, whether by patrol car or ATV. Bicycle patrol could also be included in the policing plan for the trail. See *Figure 4-40.*

Trail Patrol *Figure 4-40*

Security Cameras

Security cameras could be installed at key locations, such as trailheads and intermediate points along the trail with limited visibility. The cameras can record suspicious activity on the trail and aid law enforcement in the event of criminal activity. The visual presence of security cameras also acts as a deterrent. See *Figure 4-41.*

Security Camera *Figure 4-41*

Milestone Markers

Milestone markers provide emergency personnel and first responders specific location information in the event of an emergency along the trail. They can also provide trail users with distances to measure their exercise regimen. See *Figure 4-42.*

Milestone Marker *Figure 4-42*

Lighting

Lighting along trails is generally discouraged when adjacent to a riparian zone. The Junipero Serra Trail is planned to operate dawn to dusk. However, the following exceptions may apply:

- Lighting along commuter corridors during the winter months from 5am to 7am and 4pm to 8pm
- At trail under-crossings
- Where the trail is parallel to lighted streets and roads
- At street intersections and street crossings