

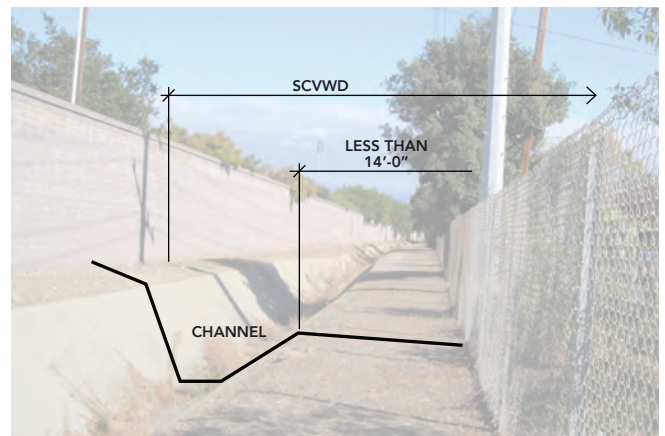
3

Planning Process

Existing Conditions

The proposed trail alignment runs east-west across the northern part of Cupertino, just south of Interstate 280. The SCVWD currently owns and maintains the right-of-way which contains the Junipero Serra Channel and maintenance road being considered for trail development. The channel was originally designed and constructed by Caltrans to intercept drainage on the south side of Interstate 280 when the freeway was built. The right-of-way varies in width from 27'-0" to 140'-0" and the maintenance road is unpaved and also varies in width from 7'-6" to at least 15'-0" within the project limits.

The Junipero Serra Channel generally has a trapezoidal structure and is concrete lined for much of the corridor. Where the channel encounters roadway crossings, the channel extends beneath the street via reinforced concrete pipe culverts. East of Wolfe Road, the channel is unlined until the confluence with Calabazas Creek.



Existing Conditions - Less than 14'

Figure 3-1



Existing Conditions - 14' or More

Figure 3-2

The corridor is currently access controlled and has a combination of chain link fence, wood fence, locked gates and freeway sound walls enclosing the perimeter. Overhead PG&E transmission and distribution lines are located within or immediately adjacent to the corridor starting at the Don Burnett Bicycle-Pedestrian Bridge and extending to Blaney Avenue.

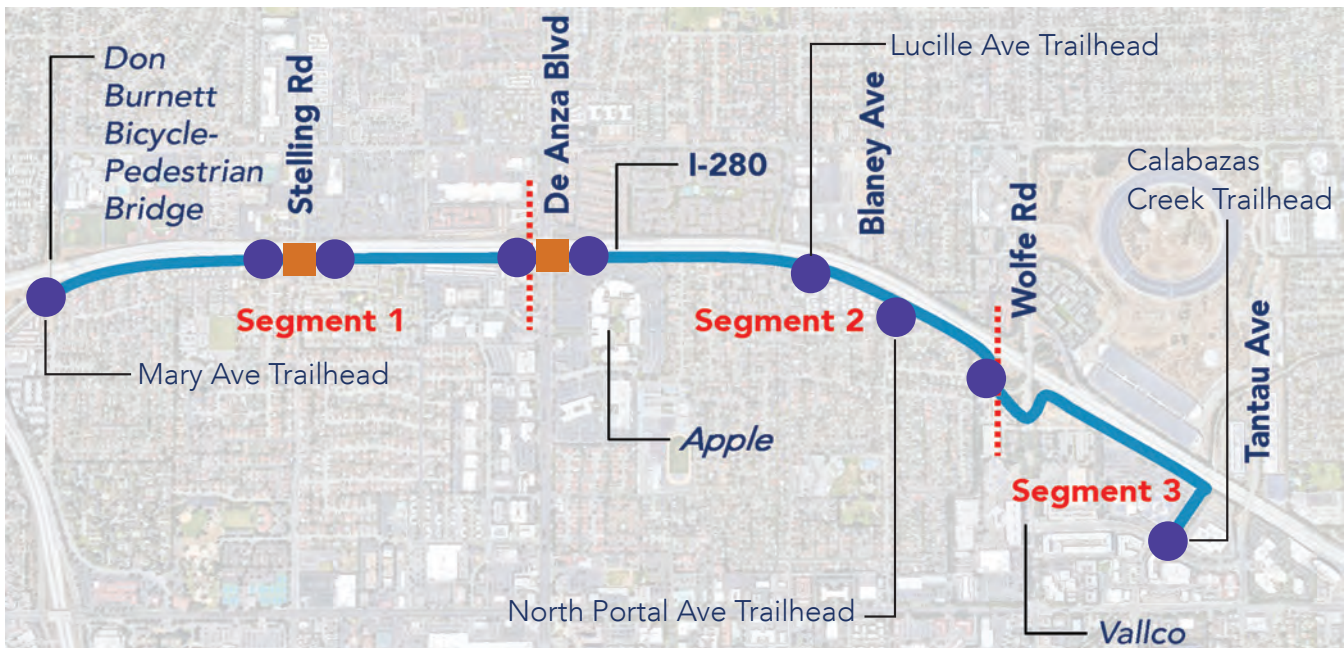


PG&E Utility Poles in SCVWD Corridor Figure 3-3

For purposes of studying feasibility, the trail was divided into 3 segments. Segment 1 starts at Mary Avenue near the Don Burnett Bicycle-Pedestrian Bridge approach, heads eastward along Interstate 280, across Stelling Road, and terminates just west of De Anza Boulevard. Segment 2 includes the De Anza Boulevard intersection, Blaney Avenue, and terminates just east of the CalWater facility at North Portal Avenue. Segment 3 extends east of the CalWater facility, past Vallco and Wolfe Road to the confluence of the Junipero Serra Channel and Calabazas Creek. The trail then turns south along the west bank of Calabazas Creek and terminates at Vallco Parkway. See Figures 3-4 and 3-12 through 3-14.

Overall Site Map

Figure 3-4



- Trail
- Segment Transition
- Trailhead Opportunity
- Street Crossing

Land Use

The proposed trail spans a variety of adjacent land uses. Between Mary Avenue and Stelling Road, the trail is adjacent to single family residences. Between Stelling Road and De Anza Boulevard, adjacent land uses include multi-family residences and general commercial/light industrial. Between De Anza Boulevard and Blaney Avenue, adjacent land uses vary and include single family residences, general commercial/office and multi-family residences. Between Blaney Avenue and Wolfe Road, adjacent land uses include single family, residential duplex and regional shopping. Finally, between Wolfe Road and Vallco Parkway, adjacent land uses include regional shopping and the “Heart of the City” Specific Plan Area. See *Figures 3-12 through 3-14* showing the different land uses near the proposed trail area.

Existing Bicycle / Pedestrian Facilities

There are a number of existing bike and pedestrian facilities that would have direct connections to the Junipero Serra Trail including:

- Mary Avenue: Class II bike lanes in both directions
- Don Burnett Bike-Pedestrian Bridge: Class 1 bike path over Interstate 280
- Stelling Road: Class II bike lanes in both direction
- De Anza Boulevard: Class II bike lanes in both directions
- Blaney Avenue: Class II bike lanes in both directions
- Wolfe Road: Class IV separated bike lanes planned as part of Interstate 280/Wolfe Road interchange improvements
- Vallco Parkway: Class II bike lanes in both directions

The proposed trail’s proximity to existing bike infrastructure will improve connectivity across the City, particularly for east to west travel. See *Figures 3-12 through 3-14* to see the existing bicycle facilities relative to the proposed trail.

Nearby Facilities

The area surrounding the Junipero Serra Trail alignment includes schools, residential neighborhoods, commercial, retail, hotels and major employment centers. The addition of a trail would provide an off-street link between these various uses. Below is a list of adjacent facilities along with their travel distance from the trail:

Schools

- Garden Gate Elementary School – 0.5 miles
- Homestead High School – 0.4 miles
- Lawson Middle School – 0.4 miles

Commercial/Retail/Hotels

- Vallco – direct connection to trail
- Hyatt House – direct connection to trail
- Courtyard by Marriot – 0.5 miles
- Hilton Garden Inn – 0.5 miles
- Heart of the City Specific Plan Area – direct connection to trail

Employment

- Apple – direct connection to the trail at two locations, within 0.5 mile to other nearby campuses including Apple Park
- Other various employers



Bike Lanes on Stelling Road

Figure 3-5

Roadway Crossings

Much of the trail alignment runs through residential, commercial and retail areas as described in the Land Use section. The trail alignment encounters multiple roadways within the project limits: Mary Avenue, Stelling Road, De Anza Boulevard, Lucille Avenue, Blaney Avenue, Wolfe Road and Vallco Parkway.

Mary Avenue

Mary Avenue is a two-lane road with a speed limit of 35 mph. It runs north and south between Stevens Creek Boulevard and Meteor Drive, continuing north of Interstate 280 at Homestead Road into the Sunnyvale city limits. The existing Don Burnett Bike-Pedestrian Bridge spans over Interstate 280 to connect these two segments of Mary Avenue with a Class I bike path. The trailhead at Meteor Drive also serves as the western extent of the Junipero Serra Trail. The section of Mary Avenue closest to the trailhead is surrounded mostly by single family and multi-family residential as well as a City corporation yard and storage facility. See *Figure 3-6*.



Don Burnett Bike-Pedestrian Bridge Trailhead

Figure 3-6

Stelling Road

Stelling Road runs north and south between Homestead Road and Prospect Road. It is a two-lane collector road with a speed limit of 30 mph and crosses Interstate 280 with an overcrossing bridge. Stelling Road intersects the Junipero Serra Channel and is one of the major crossings for the Junipero Serra Trail. This portion of Stelling Road is located within residential neighborhoods of single-family residences to the west and apartments to the east. Stelling Road currently has class II bike lanes in both directions and there is no existing crosswalk where the trail would cross Stelling Road.

The trail's intersection with Stelling Road will need careful consideration as an at-grade crossing would represent a new mid-block crossing. Sightlines, traffic volumes and speed are all factors that will need to be considered in designing for a mid-block crossing at this location. See *Figure 3-7*.



Existing Conditions at Stelling Road

Figure 3-7

De Anza Boulevard

De Anza Boulevard is an arterial with a speed limit of 35 mph that runs north and south between Homestead Road and Prospect Road. De Anza Boulevard intersects the Junipero Serra Channel and is another major crossing for the Junipero Serra Trail. The street at this location has five northbound through lanes and one right turn lane and four southbound lanes. There is an existing crosswalk across De Anza Boulevard just south of the on and off ramps to southbound Interstate 280 with a pedestrian refuge island at the landscape median.

The trail's intersection with De Anza Boulevard will require considerable attention as there are numerous constraints affecting any crossing alternative under consideration. A bike-pedestrian bridge is constrained by overhead utilities, while a tunnel is constrained by underground utilities. An at-grade crossing has impacts to traffic operations. Each of these alternatives are discussed in greater detail later in this report. See *Figure 3-8*.



Existing De Anza Boulevard Crossing

Figure 3-8

Lucille Avenue

Lucille Avenue is a two-lane road with a speed limit of 25 mph, running east and west from approximately Larry Way to North Blaney Avenue. This section of roadway parallels the trail corridor and provides opportunities for trail access and visibility. See *Figure 3-9*.



Existing Conditions along Lucille Avenue

Figure 3-9

Blanney Avenue

Blanney Avenue crosses over Lucille Avenue and Interstate 280 with a bridge and does not intersect with the trail alignment. However, there is a separate section of Blanney Avenue separate from the overcrossing that connects to Lucille Avenue at a sharp 90-degree bend just east of the overcrossing bridge. A trail access opportunity is possible at this location as well. See *Figure 3-10*.



Existing Conditions below Blanney Avenue

Figure 3-10

Wolfe Road

Wolfe Road runs north and south between Homestead Road and Stevens Creek Boulevard, bisecting the Vallco property. Wolfe Road crosses over Perimeter Road near the on and off ramps to Interstate 280. The proposed trail is anticipated to utilize the existing Perimeter Road undercrossing beneath Wolfe Road. Additionally, plans are in development for a new interchange at Interstate 280 and Wolfe Road. Preliminary plans make provisions for trail connections from the sidewalks on Wolfe Road to the proposed trail. See *Figure 3-11*.

Vallco Parkway

Vallco Parkway runs east and west between Wolfe Road and Tantau Avenue and has class II bike lanes in both directions. Vallco Parkway is a four-lane road with a speed limit of 30 mph. The trail is planned to terminate at Vallco Parkway on the west bank of Calabazas Creek, which presents an opportunity for a trailhead. However, careful consideration is needed at this location as the trail does not end at a signalized intersection.



Underpass at Wolfe Road

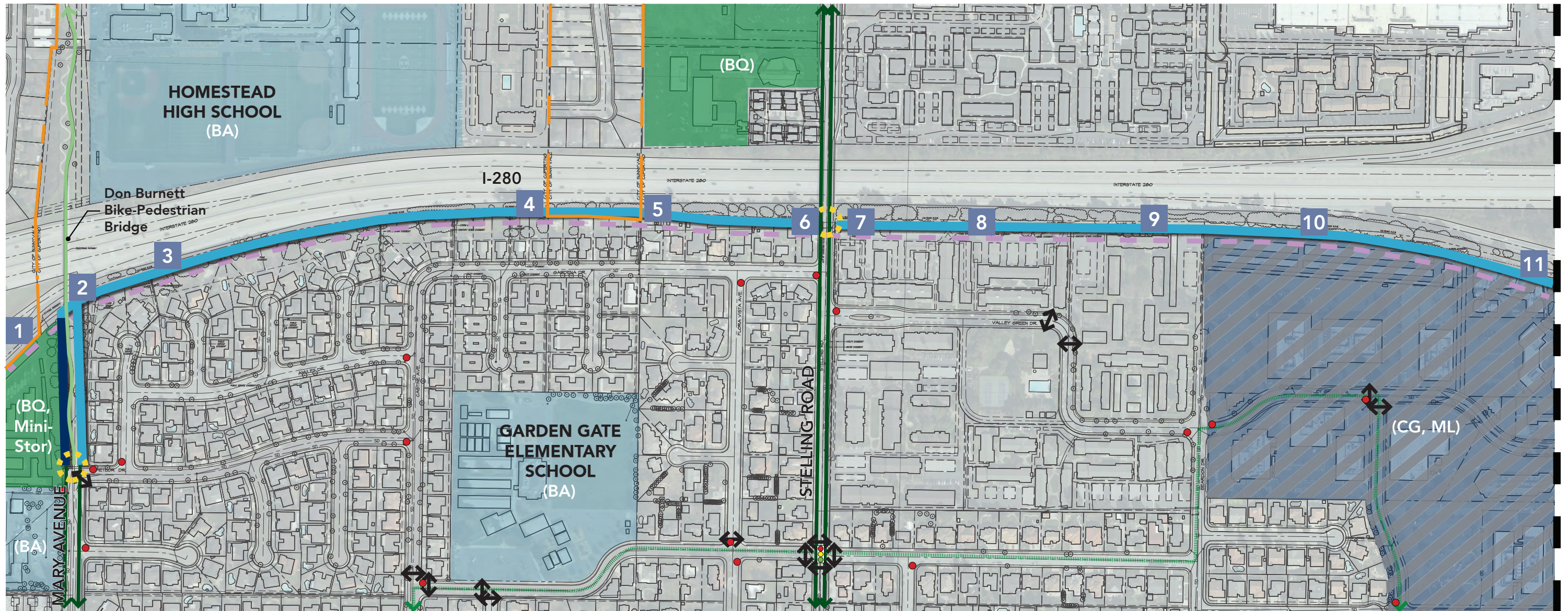
Figure 3-11

Site Analysis Plan

The process for developing the feasibility study included an extensive evaluation of existing conditions and criteria as previously described. A Site Analysis Plan was prepared to synthesize the existing conditions into an exhibit to analyze opportunities and challenges at a corridor-wide scale. Preliminary steps included gathering base data, conducting a detailed site reconnaissance, and reviewing easements, utilities, and property ownership. The City's geographic information system (GIS) files were used to develop base mapping including parcel identification, streets, sidewalks, tree canopies, structures, utilities, contours, and other pertinent information. The consultant team and City staff walked the full length of the trail to photograph existing conditions and make observations relevant to trail development.

A critical component of the site reconnaissance was to identify available width for a trail. During the field walk, width measurements were taken of the existing maintenance road throughout the corridor. Because a class I multi-use trail is desired to meet the goals of the City's bicycle and pedestrian policies, a minimum 14'-0" overall trail width would be preferred. Generally, most of the maintenance road within the limits of the project is less than 14'-0" wide. In some pinch point locations, the maintenance road narrows to approximately 7'-6" wide. The section between Wolfe Road and Vallco Parkway is the only exception and provided widths in excess of 14'-0". The variation in maintenance road width is depicted on the Site Analysis Plan. See *Figures 3-1 and 3-2* for graphics showing the width of the corridor.

Using the base map and site observations, a Site Analysis Plan was prepared. The plan identified the existing maintenance road widths, City limits, utilities, potential trail access locations, adjacent land uses, schools, major retail centers, major employers, existing on-street facilities, among other existing features. See *Figures 3-12 through 3-14*. Additionally, cross sections and Site Analysis were generated to better understand various trail configurations. See *Figure 4-4, 4-10, 4-28, 4-32, and 4-33*.



Existing Conditions

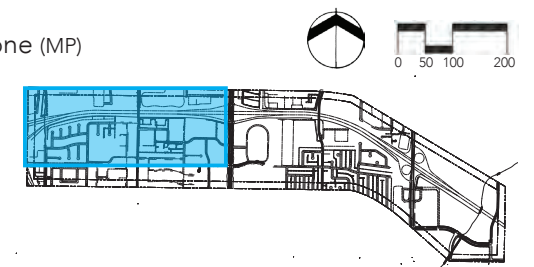
- Available Width, 14'-0" minimum (meets class 1 multi-use standards)
- Available Width, less than 14'-0" (does not meet class 1 multi-use standards)
- Trail Connection Point
- Gateway
- City Limits
- Overhead Utilities

Existing Connections

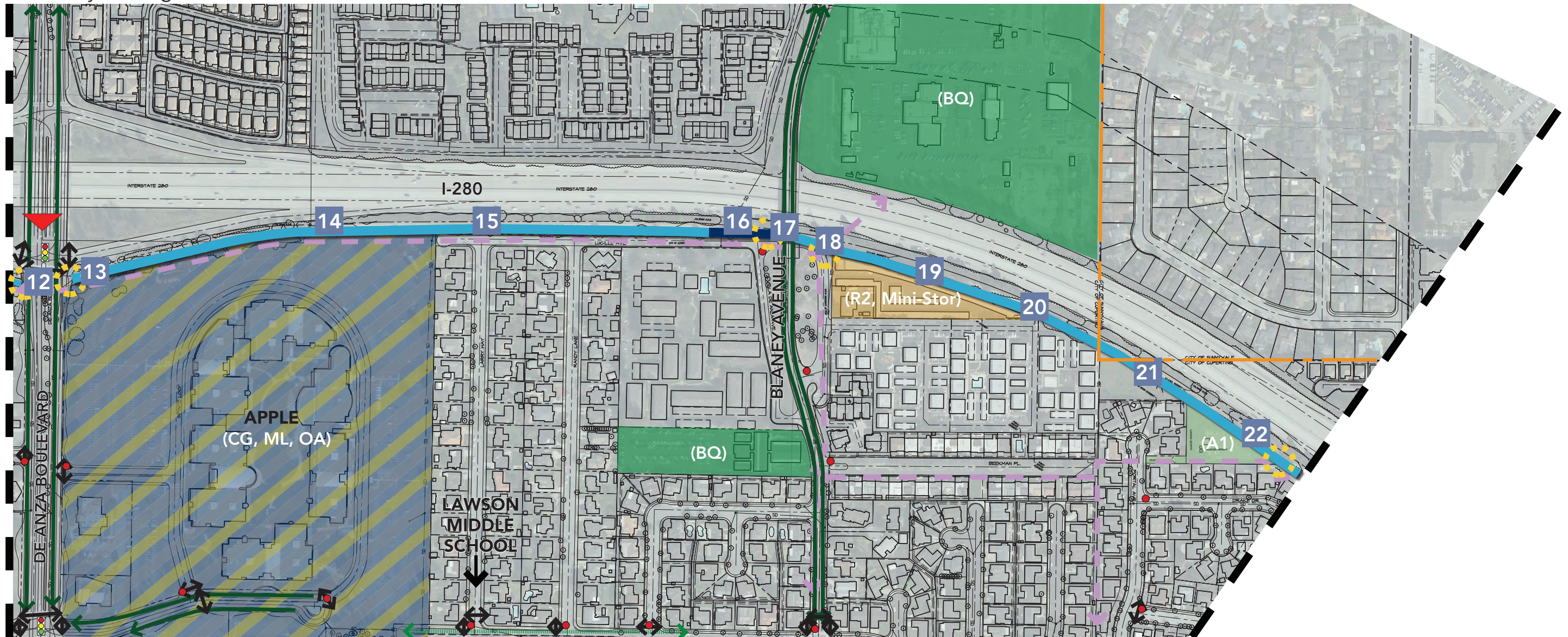
- Class 1 Bike Path
- Bike Lanes on Street
- Bike Route
- Crosswalk
- Stop Sign
- Traffic Signal

Land Uses Near Proposed Trail Area

- Heart of the City Specific Plan Area
- Public Building (BA)
- Quasi-Public Building (BQ) / Mini Stor
- General Commercial (CG)
- Regional Shopping / Hotel
- Light Industrial (ML) / Planned Industrial Zone (MP)
- Office/Planned Office (OA/OP)
- Residential Duplex (R2) / Mini-Stor
- Agricultural Residential (A1)
- Priority Housing Sites (Housing Element)
**residential zoning is not shown*



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Existing Conditions

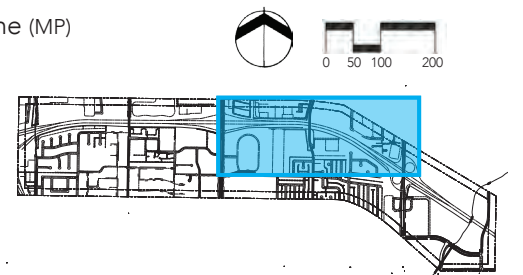
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- Available Width, less than 14'-0" (does not meet class 1 multi-use standards)
- Trail Connection Point
- Gateway
- City Limits
- Overhead Utilities

Existing Connections

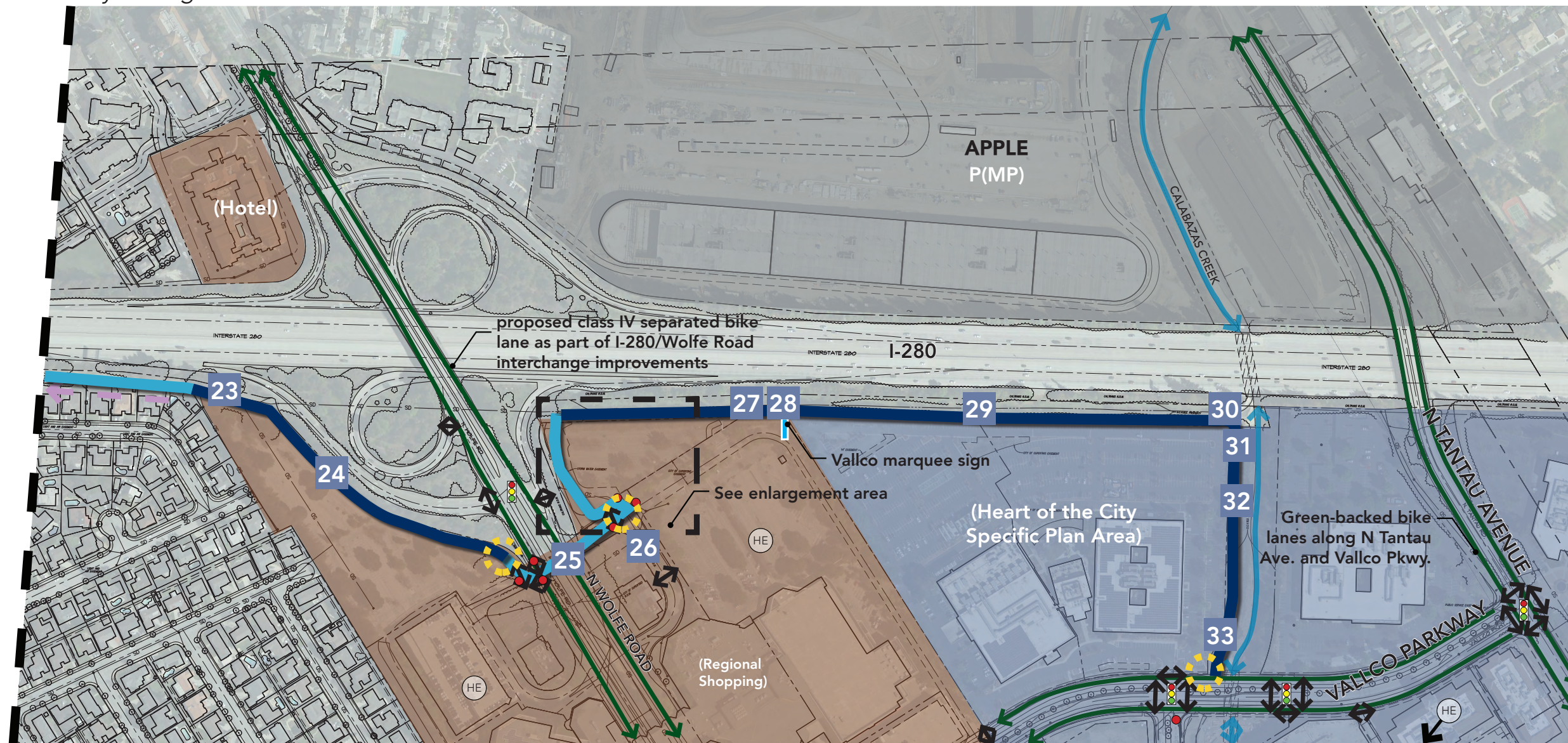
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- Residential Duplex (R2) / Mini-Stor
- Agricultural Residential (A1)
- Priority Housing Sites (Housing Element)
**residential zoning is not shown*



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Enlargement Area - Hyatt House Hotel Bike/ Ped Path Connection



Existing Conditions

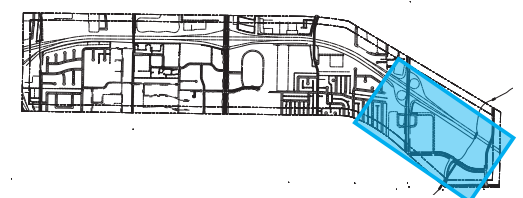
- Available Width, 14'-0" minimum (meets class 1 multi-use standards)
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- Trail Connection Point
- Gateway
- City Limits
- Overhead Utilities

Existing Connections

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- Bike Lanes on Street
- Bike Route
- Crosswalk
- Stop Sign
- Traffic Signal

Land Uses Near Proposed Trail Area

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- Regional Shopping / Hotel
- Light Industrial (ML) / Planned Industrial Zone (MP)
- Office/Planned Office (OA/OP)
- Residential Duplex (R2) / Mini-Stor
- Agricultural Residential (A1)
- Priority Housing Sites (Housing Element)
**residential zoning is not shown*



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Below is a summary of the opportunities and constraints identified during site analysis.

Opportunities

1. Suitable overall width of corridor for trail
2. Connections to existing on-street facilities at Mary Avenue, Stelling Road, De Anza Boulevard, Blaney Avenue, North Portal Avenue, Wolfe Road and Vallco Parkway
3. Corridor owned by single agency

Constraints

1. Utilities below grade and overhead throughout corridor
2. PG&E easement restrictions with regard to placement of structures at De Anza Boulevard
3. Narrow maintenance road in much of the corridor
4. Difficult grade separated crossings at Stelling Road and De Anza Boulevard

Stakeholder and Agency Coordination

Stakeholders

With any project, there are numerous agencies, utility companies and property owners directly or indirectly affected by the proposed improvements. This is especially true with trail projects, due to their linear nature. Trails interface with more stakeholders than just about any other project type. The Junipero Serra Trail is similar in that regard.

Below is a list of adjacent stakeholders along with preliminary opportunities and challenges for each. Specific design considerations pertaining to each stakeholder are discussed further in Chapter 4. Stakeholders are listed in alphabetical order.

Apple

To date, the City has had informal conversations with Apple regarding the trail project. Apple has expressed interest in the project as the trail would provide an off-street trail connection between their various campuses in Cupertino. Should the trail project advance into the design phase, further coordination will be needed to better understand Apple's needs and to ensure the community's concerns about Apple's impacts on the trail are met. Primary topics to be coordinated further with Apple include:

Trail Access

The proposed trail alignment passes directly adjacent to Apple's Infinite Loop and Vallco Parkway campuses. Employees using the trail would have quick access to restaurants, retail and other Apple campuses.

Security and access control would need to be addressed in the design. Fencing at the Apple campuses may need to be upgraded in terms of height and durability for security needs.

Property Impacts

De Anza Boulevard Tunnel Option

The proposed stairs shown in the tunnel option under De Anza Boulevard encroach into Apple's property. If this option is selected, an easement or property acquisition would be required. The bridge option would not require an encroachment into Apple's property. Further discussion about the tunnel and bridge options follow in Chapter 4.

Vallco Parkway Trail Head

The proposed trail terminates near Calabazas Creek at Vallco Parkway between two signalized intersections. The most ideal trailhead in this area would be at the northeast corner of the Vallco Parkway and Main Street Driveway signalized intersection. To better facilitate bicycle and pedestrian movement at this corner, an easement within Apple property may be necessary. See Figure 3-15.



Vallco Parkway Potential Trailhead

Figure 3-15

CalWater

CalWater has underground facilities in and around the proposed trail alignment which need to be considered in the trail design process. There are several CalWater lines that cross the trail alignment, including but not limited to:

- Stelling Road – 6" and 18" water lines
- De Anza Boulevard – 8" water line
- East edge of Apple Infinite Loop – 8" water line
- Blaney Avenue – 6" water line
- Western extent of Vallco – 12" line
- Interstate 280 off-ramp at Wolfe Road – 12" water line

One of CalWater's facilities is an underground water tank and service yard at the north end of North Portal Avenue. This facility serves a large portion of Cupertino's water needs. The CalWater service yard also provides an opportunity for an additional trail access point. Trail users would access the trail from North Portal Avenue, following CalWater's driveway and the southern portion of the service yard for a direct connection to the trail. CalWater would need to grant a trail easement to the City of Cupertino for the trail connection on their property, and access control security would need to be addressed. Public trail access through their North Portal Avenue facility's driveway was preliminarily discussed with CalWater and would require further coordination with them. A draft concept was prepared to illustrate how access to the trail could be addressed, while maintaining security and access control. This is further discussed in Chapter 4. See *Figure 3-16*.



CalWater Facility Fence

Figure 3-16

Caltrans

The proposed trail runs along the south side of Interstate 280. While much of the trail would remain outside of Caltrans right-of-way, there are two locations where the trail is proposed to encroach:

- Stelling Road: Due to constraints with an at-grade crossing, a grade-separated undercrossing is proposed within the embankment along Interstate 280.
- De Anza Boulevard: A bike-pedestrian bridge over De Anza Boulevard may require encroachment into Caltrans right-of-way.

Preliminary concepts have been shared with Caltrans depicting these improvements and are further discussed in Chapter 4. Additionally, Caltrans has reserved ingress-egress rights through SCVWD's corridor and will need to review the plan development process to confirm their access needs are met. See *Figure 3-17*.



De Anza Boulevard On-Ramp

Figure 3-17

City of Sunnyvale

At two locations, the proposed trail passes through the City of Sunnyvale's City limits:

1. Between Mary Avenue and Stelling Road behind single family residential homes, encompassing approximately 330 feet of the trail
2. Directly north of North Portal Avenue and in an undeveloped, triangular shaped parcel, encompassing approximately 360 feet of the trail.

Any trail development, within the locations above, would need to be coordinated with the City of Sunnyvale, especially as it pertains to trail maintenance, plan approvals, and cost sharing if applicable.

Cupertino Loc-N-Stor

Cupertino Loc-N-Stor is a storage facility located at 10655 Mary Avenue, at the western extent of the proposed trail, near the Don Burnett Bicycle-Pedestrian Bridge. Two trail access alternatives have been prepared showing how trail users would get from Mary Avenue to the proposed trail. One alternative shows the path immediately adjacent to Cupertino Loc-N-Stor's facility. Additional coordination during the design phase will be required to address concerns related to security and privacy along this edge. Cupertino Loc-N-Stor is currently considering upgrades to their facility and any improvements made should not preclude trail development. See *Figure 3-18*.

Hyatt House Hotel

Currently under construction, the Hyatt House Hotel located on Perimeter Road just east of Wolfe Road and near Vallco Mall, is scheduled to be finished by early 2019. In anticipation of the Junipero Serra Trail being constructed in the future, the hotel project is constructing a 10' wide trail on the west side of the property that connects to the sidewalk undercrossing on Perimeter Road and the SCVWD property to the north. See *Figure 3-19*.



Loc -N-Stor Fence on Right

Figure 3-18



Hyatt Hotel House Under Construction

Figure 3-19



Lock It Up Self Storage Fence

Figure 3-20

Lock It Up Self Storage

The Lock It Up Self Storage facility is located at 10730 North Blaney, along the proposed trail immediately east of North Blaney Avenue. The back wall of the storage units faces the proposed trail. Security, access control and vandalism will need to be considered in concert with the property owner during the design phase. See *Figure 3-20*.

PG&E

PG&E has numerous facilities throughout the project. Most notably, high voltage overhead transmission lines and lower voltage distribution lines run adjacent to or directly above the proposed trail from the western extent at Mary Avenue to just east of Blaney Avenue, where the overhead lines traverse to the north side of Interstate 280. See *Figure 3-21*.

PG&E easements are located within and immediately adjacent to the corridor. At De Anza Boulevard, the PG&E easement is within SCVWD property where a potential bridge or tunnel crossing may be located. PG&E's easement language prohibits structures within the easement, taller than 15'-0". Additionally, CPUC General Order 95 mandates clearances between structures and wires. For these wires, 12'-0" vertical and 6'-0" horizontal clearance is required.

Detailed plan enlargements were prepared for Stelling Road and De Anza Boulevard to show how trail improvements avoid or impact PG&E facilities. At Stelling Road, overhead and underground PG&E facilities cross the proposed trail. Overhead lines run north and south along Stelling Road as well as east and west along the trail alignment. Underground gas lines are also present in Stelling Road. The PG&E easement on both sides of De Anza Boulevard was mapped to better understand the location and width of the easement. With this supplemental mapping, it was determined the various crossings under consideration are feasible. See chapter 4 for further discussion.

There are also underground utilities (electrical and gas) that would impact in the tunnel option under De Anza Boulevard. On-going coordination will be required with PG&E to determine the best overall means of achieving street crossings near their facilities.



PG&E Tower

Figure 3-21

Public Storage

Public Storage is located at 20565 Valley Green Drive, west of De Anza Boulevard. The back wall of the storage units faces the proposed trail. Security, access control and vandalism will need to be considered with the property owner during the design phase. Public Storage is currently considering upgrades to their facility and any improvements made would not preclude trail development. See *Figure 3-22*.



Public Storage Wall and SCVWD Corridor Figure 3-22

Santa Clara Valley Water District (SCVWD)

The proposed trail alignment alternatives lie almost entirely within SCVWD right-of-way. Currently, SCVWD manages and maintains the Junipero Serra Channel in the corridor. Occasional maintenance activities are required to clear the channel of debris and provide general upkeep of the facilities. SCVWD is most concerned with maintaining sufficient access after trail development occurs. Concept plans have been shared with the SCVWD for review and comment.

Alternative #1 proposes constructing a trail over the existing maintenance road with a guard rail placed between the maintenance road and the open channel. In reviewing trail alternatives, SCVWD indicated that guardrails at the edge of the open channel would not be acceptable. Reasons for opposing a guardrail include narrowing of the existing maintenance road and limited channel access for maintenance operations. Due to the SCVWD's position on guardrails, alternative #1 is not feasible as currently envisioned in this study.

The steep drop-off adjacent to the trail edge is recommended to be mitigated with a guardrail. For this reason, guard rails are still shown in all alternative #1 graphics. If alternative #1 is selected for further study, an alternative edge treatment will need to be vetted with the SCVWD. A potential solution may include constructing a wider maintenance road with removable guardrail. There would be additional capital costs, design effort and time associated with mitigating these concerns.

Alternative #2 involves converting the Junipero Serra Channel into an underground box culvert. SCVWD staff has preliminarily agreed to alternative #2 on the condition that the City of Cupertino assume full ownership and maintenance of the Junipero Serra Channel as part of the City's storm drain system prior to any modifications being implemented. The transfer of the District's right of way and

Junipero Serra Channel to the City is subject to prior approval by the District's Board of Directors. Additionally, regulatory approval may be required by the US Army Corps of Engineers, California State Department of Fish and Wildlife, and the San Francisco Bay Regional Water Quality Control Board.

Santa Clara Valley Transit Authority (VTA)

VTA has an interest in many modes of transportation including trail development as planned from a regional perspective. This project is consistent with their goals and policies for Cross County Bicycle Corridors (CCBC) and is shown on their 2018 Countywide Bicycle Plan. VTA is also managing the Interstate 280 and Wolfe Road Interchange project. Preliminary alternatives have been prepared for the interchange project, each of which depict connections from sidewalk facilities to the future Junipero Serra Trail.

Single-Family Residential

A large portion of the proposed trail is abutted by single-family residences. Through multiple community meetings and events, a number of comments and concerns have been raised by this critical stakeholder group. The most common concerns revolved around safety and security of having a trail directly behind their homes. A number of measures have been suggested to help mitigate these concerns and are described in more depth in Chapter 4. Detailed community input can be found in Chapter 3 and the Appendix. See *Figure 3-23*.



Fence Straddling SCVWD Corridor and Residences Figure 3-23

Vallco Special Area (Shopping Mall)

The Vallco Special Area consists of approximately 70 acres under the ownership of three different entities: Vallco Property Owner LLC, Simeon Properties, and KCR Properties. It is bisected by North Wolfe Road and bounded by Stevens Creek Blvd to the south, Main Street Cupertino and commercial/office developments to the east, Interstate 280 to the north, and the North Blaney neighborhood to the west.

On September 19, 2018, the Cupertino City Council adopted the Vallco Town Center Specific Plan (Plan), which specifies the requirements for land uses, design standards and guidelines for any development within the Vallco Special Area. The Plan aims to transform the existing Vallco Shopping Mall site into a walkable, mixed-use district anchored by retail, entertainment and cultural uses, and supported by new neighborhoods, employment areas and public open spaces. City Council approved the Tier 2 development program identified in the Plan, and community benefits identified within the development agreement. The Tier 2 program includes up to 2,923 residential units, up to 1.75 million square feet of office and office amenity spaces, and up to 485,000 square feet of commercial/retail and civic/cultural spaces. The community benefits include a new City Hall, a Performing Arts Center, affordable housing to moderate income households, and financial and in-kind contributions toward local transportation improvements and public schools. The Plan acknowledges the proposed Junipero Serra Trail, identifying potential future connections to the trail as part of the development.

The Plan is one of two development options, the other being a development pursuant to Senate Bill 35 (SB 35), a new state law targeted to streamlining city approvals for housing developments in cities that do not currently meet state guidelines for affordable housing. City staff approved the SB 35 development on September 21, 2018, which includes up to 2,402 residential units, up to 1.81 million square feet of office space, and up to 400,000 square feet of retail space. Fifty percent of the residential units would be affordable housing in compliance with SB 35.

With either development, the City would incorporate a 20-foot wide trail easement along the northwest quadrant of the Vallco Special Area, following the alignment of the Interstate 280 off-ramp, as part of the entitlement process.



Vallco Mall Sign

Figure 3-24

Villages at Cupertino

The Villages at Cupertino is a large apartment, townhome and cottage residential complex located between Stelling Road to the west and Beardon Drive to the east, centered around Valley Green Drive. The proposed trail abuts perimeter parking for most of the Villages development. Additional coordination during the design phase will be required to address concerns related to security and privacy along this edge.

Technical Advisory Committee (TAC)

A critical part of determining project feasibility was to identify and engage key stakeholders and agencies early in the process. This assembled group was called the Technical Advisory Committee (TAC). The TAC consists of utility companies, affected municipalities, and other agencies critical in decision-making. The TAC convened on multiple occasions to vet materials being prepared for community outreach meetings and provide overall input. The TAC included members from the following agencies:

- City of Cupertino
- City of Sunnyvale
- CalWater
- Caltrans
- PG&E – Pacific Gas and Electric
- SCVWD – Santa Clara Valley Water District
- VTA – Santa Clara Valley Transportation Authority

In addition to hosting two TAC meetings with all TAC members, individual meetings with some agencies were held to gather more in-depth technical input and discuss initial design alternative options for the study area on an as-needed basis. Input from TAC members was used to directly inform preliminary concepts.

Below is a brief summary of the primary comments from each commenting TAC member:

Caltrans

- The Lucille Avenue trail segment under the Blaney Avenue overpass is within Caltrans right-of-way, but Caltrans has a maintenance agreement with the City.
- An encroachment permit would be needed for any trail development on Caltrans right-of-way. Encroachment may occur at De Anza Boulevard depending on which alternative is pursued.

- Access control review may be needed if the trail alignment moves onto the north side of the sound wall at Blaney Avenue. The review process is dependent on the size of the project.
- Caltrans approval may be required for any changes to the District's fee title right-of-way for the Junipero Serra Channel where Caltrans has reserved ingress egress easement.

CalWater

- Support a wider trail for maintenance purposes. Main concerns are related to security around their facilities.
- There is a water main along Stelling Road across I-280 through the bridge.
- There is a water main along De Anza Boulevard, which may conflict with the tunnel option.
- Open to providing access through their service yard site at North Portal Avenue for a trail access point.

City of Sunnyvale

- No comments

PG&E – Pacific Gas and Electric

- The tunnel option running East to West through De Anza Boulevard would impact gas lines and other utilities currently below De Anza Boulevard. Relocating these utilities for the tunnel option will be costly.
- The bridge option must meet required clearances from the existing overhead transmission lines.
- PG&E expressed concern for relocating one of the tubular steel pole (TSP) towers in either the tunnel or bridge option. Relocation would be very disruptive and expensive.
- There may be no structures taller than 15'-0" located within the PG&E easement.

SCVWD - Santa Clara Valley Water District

- Open to covering the channel to accommodate trail, however maintenance would become City's responsibility. SCVWD would quit claim and transfer right-of-way to the city in the event the channel is covered.
- Will not approve any physical barriers between the maintenance road and Junipero Serra Channel. Barriers impede maintenance operations. Also, concerned that a guardrail would effectively narrow maintenance access road.
- Primary need for access is vegetation control.
- Maintenance vehicles require a minimum of 15'-0" vertical clearance.

VTA – Santa Clara Valley Transportation Authority

- Develop a trail consistent with the updated Countywide Bicycle Plan.
- Concern about lack of access points. Adding one at CalWater's North Portal Avenue facility would help.
- Project could be eligible for 2016 Measure B, Safe Routes to School, and ATP funding.
- Concern about removal of crosswalk at De Anza Boulevard. People will still cross instead of using circuitous route to the ramp and over the bridge.

Bicycle Pedestrian Commission (BPC)

On December 19th, 2018; the feasibility study was presented to the City of Cupertino Bicycle and Pedestrian Commission. Members of the commission discussed the study and voted 4 to 1 in favor of recommending alternative #1. The sub-alternatives recommended as part of the motion included the West Option at Mary Avenue, both the undercrossing and at-grade crossing at Stelling Road and the at-grade crossing at De Anza Boulevard. The commission appreciated the benefits of alternative #2, but were concerned about the high implementation costs, especially with other trail projects planned elsewhere in the City. Many commission members also observed that building the at-grade option at De Anza Boulevard would not preclude a bicycle-pedestrian bridge in the future. A couple commission members suggested that covering the channel should be considered at pinch points, in order to make alternative #1 more user-friendly. See page 148 for the 12/19/18 BPC Meeting Minutes in the appendix.

Trail Criteria and Standards

There are numerous trail design standards and guidelines, sometimes in direct conflict with one another. The following references were reviewed to develop a design basis for the Junipero Serra Trail project.

ADA, GDHS, and CHDM provide mandatory standards for trail design.

GSLU, NACTO, SJTN, UITD, and WRPM are references providing guidelines and recommendations.

Reference Code	Reference Title
ADA	Americans with Disabilities Act Standards for Accessible Design
CHDM	Caltrans Highway Design Manual, Chapter 1000
GDHS	American Association of State Highway and Transportation Officials (AASHTO): A Policy on Geometric Design of Highways and Streets
GSLU	Guidelines and Standards for Land Use Near Streams: A Manual of Tools, Standards, and Procedures to Protect Streams and Streamside Resources in Santa Clara County
NACTO	National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide
SJTN	City of San Jose Trail Network Tool Kit Planning & Design, Chapter 4
UITD	Santa Clara County Uniform Interjurisdictional Trail Design, Use, and Management Guidelines
WRPM	Water Resources Protection Manual

Trail Structures

Trail structures, such as bridges or tunnels, may be necessary for trail continuity or to create safer trail connections.

Intersections with Highways

- Where motor vehicle cross traffic and bicycle use are heavy, grade separated crossings are desirable to eliminate intersection conflicts. Where grade separations are not feasible, assignment of right of way by traffic signals shall be considered. Where traffic is not heavy, "STOP" or "YIELD" signs for either the path or the cross street (depending on volumes) may suffice – CHDM – 1003.1 (5)

Trail Bridges

- Bridges should be a minimum 12' wide and structurally capable of carrying maintenance vehicles. Fill over culverts, at a minimum, should equal the trail and shoulder widths combined – UITD – 4.1.2

Trail Under-crossings

- Clearance of 14' is desirable to allow for maintenance access – SJTN – p.61

Retaining Walls

- Retaining walls parallel to trails are usually discouraged. Where necessary, they should be signed as a hazard – UITD – 4.1.4

Access Controls and Safety Barriers

- Where necessary, to prevent motor vehicles from entering the trail, bollards and/or metal gates shall be used at any trail crossing of a public road right-of-way – UITD – 4.2.1

Fencing

- Chain-link is only appropriate for temporary installation during construction - SJTN – p. 63

Trail Relationship to Properties

The trail's proximity to neighbors—single family residential, businesses, apartments, utility facilities—should be taken into consideration.

Areas Where Trail Routes are Adjacent to Private Property

- Visible fencing should be used, if requested by the adjacent property owner to deter users from leaving the trail. Type of fencing should be determined in consultation with the property owner(s). Security fencing or walls should be no closer to the trail than 3'-6" and no lower than 4'-8" – UITD – 1.1.4

Trail Safety

Consideration of trail user safety and security is a key consideration, especially where there are limited access points and opportunity for visual surveillance.

Trail Alignments and Intersections with Motorized Vehicles

- Trail Alignments should be selected that minimize intersections with motorized vehicles. Where feasible, trail grades should be separated from roadway grades at crossings. Where separated crossings are not possible, at-grade crossings must be designed to equally consider vehicular and trail user safety – UITD – 1.1.5

At-Grade Trail Crossings

- At-grade trail crossings should be developed with appropriate safety and regulatory signs for both trail users and motorists where either: a trail route crosses the street; or where a trail terminates at a street designated as an on-street bicycle route – UITD – 1.1.6.2

Grading and Drainage

Good grading and drainage need to be designed into the trail to ensure ease of using the trail and to ensure water drains properly throughout the trail site.

Grades

- Cross slope grades should be limited to 2% – HDM – 1003.1 (14)
- Grades are to be held to a minimum. Longitudinal grades of 5% or less are desirable and are to not exceed 8.33% – UITD – 2.3

Drainage

- The bike path shoulder shall slope away from the traveled way at 2% to 5% to reduce ponding and minimize debris from flowing on to the bike path – CHDM – 1003.1 (16)
- Surface water shall be diverted from trails by out sloping the trail tread between 2% and 3% – UITD – 3.5.5

Drainage Grates, Manhole Covers, and Driveways

- Drainage inlet grates, manhole covers, etc., should be located out of the travel path of bicyclists whenever possible. When such items are in an area that may be used for bicycle travel, they shall be designed and installed in a manner that meets bicycle surface requirements. See Standard Plans – CHDM – 1003.5 (2)

Trail Design Practices

Trail design and construction practices set standards to create safe trails.

Clearance to Obstructions

- A minimum 2' horizontal clearance from the paved edge of a bike path to obstructions shall be provided. The clear width of a bicycle path on structures between railings shall not be less than 10'. There should be a minimum vertical clearance of 8' across the width of the trail and 7' over the shoulders – CHDM – 1003.1 (3)

Sight Distance

- The trail design should provide an optimum 100' average sight distance where possible. If sight distances on curves, around hills or through densely vegetated areas are less than 100 feet, safety signs and reduced speed limits should be considered – UITD – 2.5

Pavement Structure

- It is important to construct and maintain a smooth, well drained, all-weather riding surface with skid resistant qualities, free of vegetation growth. Principal loads will normally be from maintenance and emergency crews – CHDM – 1003.1 (15)

Widths and Cross Slopes

Trail Width for a Class 1 Multi-Use Trail

See *Figure 3-25*.

- Shared-use trails should be designed as paved two-way paths and should have an optimum width of 12' with a center stripe and a minimal 2', flush graded shoulders or clear – UITD – 2.2.1
- The minimum paved width of travel way for a Class I, two-way bike path shall be 8', 10' preferred – CHDM – 1003.1 (1a)

Trail Width

- Trail tread width should be determined by amount and intensity of trail use and field conditions. Where treads are narrower than 8', they should be signed and wider turn-out passing areas, should be provided at regular intervals. In most cases these trails should not be narrower than 6' in order to allow two wheelchairs to pass easily – UITD – 2.2.1

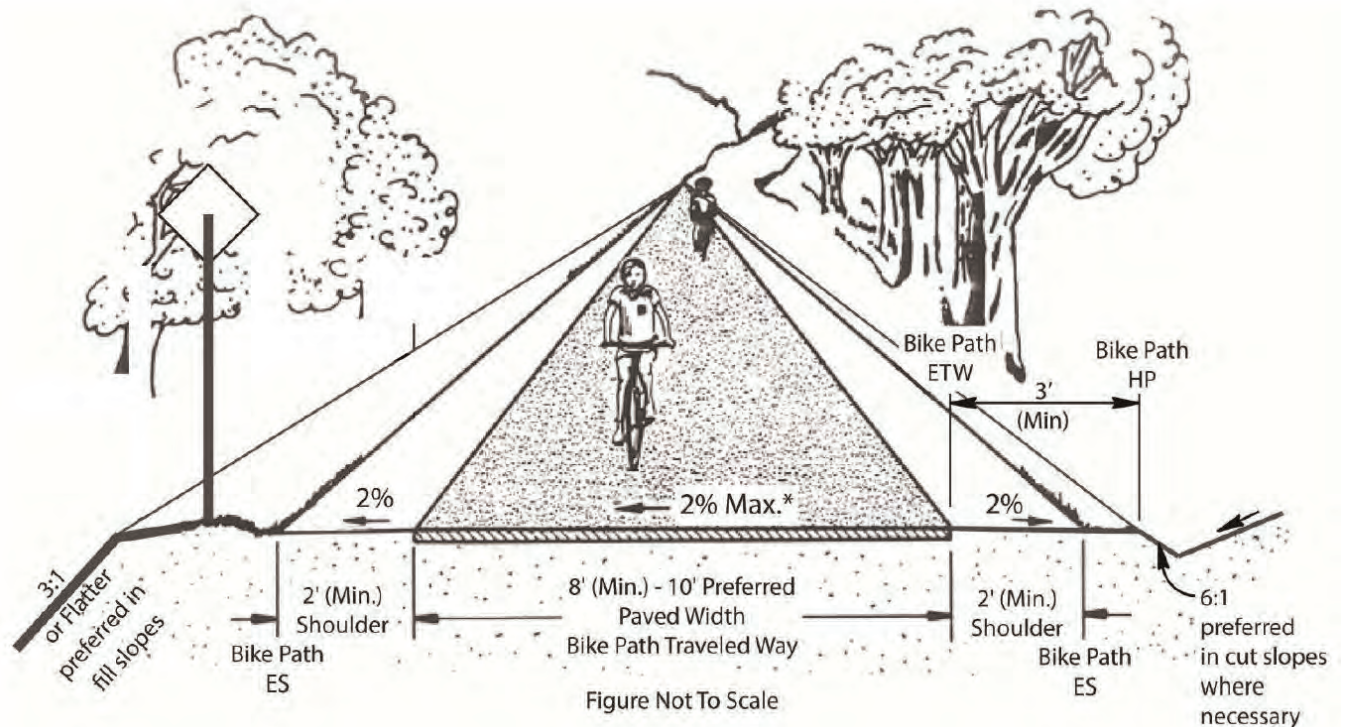
Shoulder

- A minimum of a 2' wide shoulder, composed of the same pavement materials as the bike path or all-weather surface material that is free of vegetation, shall be provided adjacent to the traveled way of the bike path when not on a structure. A shoulder width of 3' should be provided where feasible. A wider shoulder can reduce bicycle conflicts with pedestrians. Where the paved bike path width is wider than the minimum required, the unpaved shoulder area may be reduced proportionately – CHDM – 1003.1 (1b)

Private Access to Public Trails

- Private gates onto public trails are typically not allowed where they present a public safety concern due to operation and maintenance needs – SJTN – p. 40

Based on the above trail design criteria, a class I multi-use trail is defined for this project as having a minimum 10' wide paved trail with 2' shoulders on either side, for a total width of 14'-0". Alternative #1 does not meet the minimum standard for a class I multi-use trail between Mary Avenue and the Hyatt House hotel site. For this reason, sections of trail not providing 14'-0" width are described as a Pedestrian Trail. Alternative #2 provides a minimum of 14'-0" width throughout and is designated as a class I multi-use trail.



ES = Edge of Shoulder
 ETW = Edge of Traveled Way
 HP = Hinge Point
 * 1% cross-slope minimum

CalTrans Two-Way Class 1 Bikeway

Figure 3-25

Trail Next to a Stream

Local policies dictate trail development along streams. For the Junipero Serra Trail, the portion along Calabazas Creek will be affected.

- Trail alignment will be limited to one side of the stream to minimize impacts to impact to habit – WRPM – 3.52
- Goal is to remove the minimum of vegetation as necessary – WRPM – 3.51

Community Outreach

Community meetings and events were the primary means of obtaining input from the public on the project. Input was gathered throughout the design process using a variety of methods. Public input was critical in identifying and evaluating impacts and developing the preferred alternative. To help guide the process, a public outreach plan was prepared and reviewed by City staff and included a total of three (3) community meetings and two(2) community events between September 2017 and June 2018. Additionally, a series of Bike and Pedestrian Commission meetings and Council meetings were utilized to gather more community input and feedback from advisory and decision-making bodies.

The community meetings were designed as “open house” style events held within a two-hour window of time on weekday evenings. This allowed participants to arrive at a time that worked best for them. The rooms were set up with stations where participants could navigate project background information, and review segment specific details. Other opportunities for input included written surveys. Meeting locations alternated between the Quinlan Community Center and Community Hall to allow a broader cross section of the community to attend.

In addition to community meetings, the project team attended two community events including the Diwali Festival at the Quinlan Community Center on September 30, 2017 and the Earth Day Festival on April 21, 2018. Booths were utilized to disseminate project information and meeting dates, and to allow the community to review and comment on plans.

Outreach Methods

Below is a list of methods used to notify the community:

- City Website
- City Channel
- Social Media – Next Door, Facebook, Twitter
- Tabling/Flyer Distribution at the Fall Festival, Diwali Festival, Fall Family Bike Fest, and Earth Day
- Flyer postings at the Library and City Hall
- Door hangers and flyers to residents and businesses directly adjacent to the proposed trail
- Safe Routes to School (SR2S) monthly newsletter
- Postcard mailings to residents and businesses within 300 feet of the proposed trail
- Email notification to subscribers of the “Bicycle Transportation Plan” e-mail list
- E-mail notification to the Cupertino Block Leaders in the nearby surrounding neighborhoods



Community Outreach Events

Diwali Festival

Date: September 30, 2017

Time: 11:00am to 4:00pm

Location: Memorial Park, Cupertino, CA

A booth was set up at the Cupertino Chamber of Commerce's annual Diwali Festival to announce the project and upcoming outreach process. The goal was to inform the community about the project and how the project ties into the City of Cupertino's overarching goal to create a loop trail around the city for pedestrians and cyclists.



Community Meeting #1

Date: December 6, 2017

Time: 6:00pm to 8:00pm

Location: Quinlan Community Center, Cupertino Room

Number of people who signed in: 29

Number of input packets received: 13

The goal of community meeting #1 was to introduce the project goals and objectives, related planning efforts, review opportunities and constraints, and to obtain initial thoughts and concerns from the public. Participants were asked to complete an input packet.



Key Comments/Concerns from Meeting:

- Safety from Vehicles
 - Prefer grade-separated crossing at Stelling Road
 - Prefer grade-separated crossing at De Anza Boulevard
- Safety along trail
 - Requests for lighting, emergency phones, access control fencing behind residences



Community Meeting #2

Community Meeting #2 was held on two separate dates at two different locations to provide an opportunity for the community to attend at least one of the meetings and provide input. The same material was presented at both meetings.

This meeting followed the same format as community meeting #1, with the addition of a recap of all of the project activities that had transpired since the first meeting. Trail alternative alignments, trail sections and enlargement plans were presented to the public by segment. Participants had the opportunity to evaluate the material presented and provide feedback.

Number of people who signed in between meetings 2A and 2B: 37

Number of input packets received between meetings 2A and 2B: 37*

*5 packets were submitted by a neighbor for others who could not attend either meeting

Community Meeting #2A

Date: February 20, 2018

Time: 6:00pm to 8:00pm

Location: Quinlan Community Center, Cupertino Room

Community Meeting #2B

Date: February 26, 2018

Time: 6:00pm to 8:00pm

Location: Community Hall, Cupertino Civic Center

Key Comments/Concerns between Meetings 2A and 2B:

- Majority of attendees:
 - Live in Cupertino
 - Are supportive of the trail
 - Would bike on the trail
 - Did not attend community meeting #1
- 55% of attendees preferred Alternative #2, 16% preferred Alternative #1 and 29% preferred neither alternative
 - Trail width was a major factor for attendees on deciding which alternative they prefer
- 58% of attendees live next to the trail
- 56% of attendees prefer both a grade-separated crossing under Stelling Road and a spur trail access with a crosswalk across Stelling Road
- When asked which crossing they prefer at De Anza Boulevard, the Bridge Over-Crossing (43%) and Tunnel Under-Crossing (50%) were closely preferred
- Safety, Security, and Privacy were some of the main concerns amongst attendees



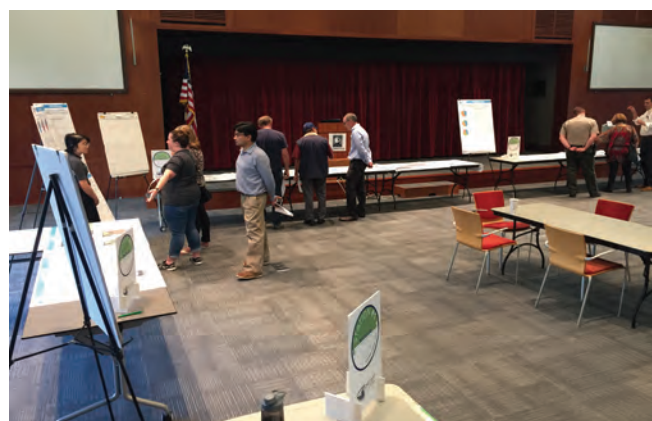
Earth & Arbor Day Festival

Date: April 21, 2018

Time: 11:00am to 3:00pm

Location: Civic Center Plaza, Cupertino, CA

A booth was set up at the City of Cupertino's annual Earth & Arbor Day Festival. Materials presented were similar to what was presented at Community Meeting #2. Instead of an input packet, an interactive board was displayed where community members could vote by placing stickers on the board.



Community Meeting #3

Date: June 6, 2018

Time: 6:00pm to 8:00pm

Location: Community Hall, Cupertino Civic Center

Number of people who signed in: 19

Number of input packets received: 13

This meeting followed the format of community meeting #1 and #2, with the addition of a recap of all project activities that transpired since the first meeting. Visual simulations were provided to assist in understanding the undercrossing at Stelling Road and the pedestrian bridge and tunnel options at De Anza Boulevard. Additionally, there was more information pertaining to fencing improvements.

Sergeant Brown from the Santa Clara County Sheriff's office was present to address concerns about safety and security along the trail.

Key Comments/Concerns from Meeting:

- Majority of attendees:
 - Had not attended previous meetings
 - Supported the location of the trail
 - Would primarily walk on the trail
 - Live in the City of Cupertino
- Mixed feedback about the De Anza Boulevard crossing
 - Some attendees liked the having a grade-separated crossing option
 - Other attendees were concerned about safety of a tunnel
- Concerns about trail access for Apple employees

