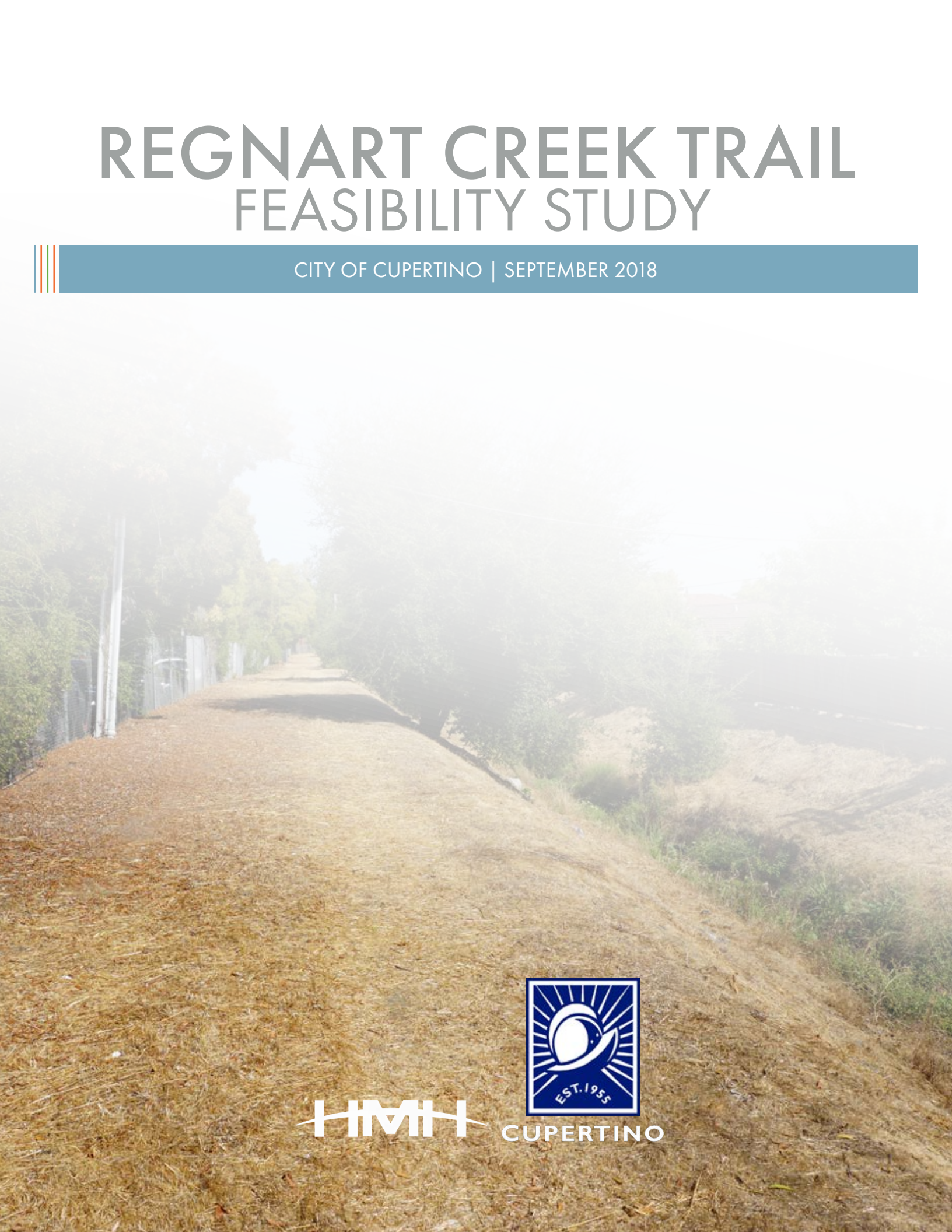
REGNART CREEK TRAIL
FEASIBILITY STUDY

CITY OF CUPERTINO | SEPTEMBER 2018



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EXECUTIVE SUMMARY

INTRODUCTION

Envisioned as part of The Loop Cupertino and identified in the City of Cupertino 2016 Bicycle Transportation Plan (Bike Plan) and the City of Cupertino 2018 Pedestrian Transportation Plan (Pedestrian Plan) as being within priority Tiers 2 and 1, respectively, the Regnart Creek Trail is a planned facility which would provide a safe and convenient off-street alternative for bicyclists and pedestrians to access nearby destinations including Cupertino Civic Center, Cupertino Public Library, Wilson Park, Creekside Park, nearby schools and residential neighborhoods. Under agreement with the Santa Clara Valley Water District (SCVWD), the project would utilize an existing maintenance road along the bank of Regnart Creek in the City of Cupertino.

The project would extend along the existing creek alignment from Pacifica Drive to E Estates Drive where it would connect to the existing trail into Creekside Park. The project would include two upgraded roadway crossings at S Blaney Avenue and E Estates Drive.

EXISTING CONDITIONS

The planned alignment is primarily within SCVWD Rights-of-Way, with roadway crossings in City of Cupertino Rights-of-Way. SCVWD, PG&E and AT&T operate facilities within the project area and will require regular maintenance access of the trail alignment.

The alignment is adjacent to residential backyards for approximately 2/3 of the project length.

A preliminary environmental assessment was performed to identify any biological, ecological, cultural, or other considerations which may restrict the proposed project and to identify potential environmental technical studies to be performed in future project phases. With inclusion of mitigation measures, determined during future study, impacts of the proposed trail project are likely to not be significant.

Critical Locations

Approximately 800 feet east of S Blaney Avenue, a concrete maintenance ramp exists which is critical for ongoing maintenance of the creek and will be preserved as part of the project.

Approximately 500 feet west of S Blaney Avenue, there is an existing drive aisle extending from a cul-de-sac on De Palma Lane providing vehicular access to four De Palma Lane residences. Through this approximately 400 foot long area, the creek-side access road is discontinuous. SCVWD right-of-way extends approximately 15' north of the existing retaining wall through this area. Permission to use this area for bicycle and pedestrian access has been granted to the City by SCVWD through an executed Joint Use Agreement (dated January 20th, 2004 and further amended February 6, 2008). These agreements can be found in Appendix B.

PUBLIC OUTREACH

The project held four community outreach meetings during the preparation of the Study. Three meetings were noticed to properties within the vicinity of the project and one meeting focused on the Lozano Lane / De Palma Lane residents. Community response to the project was mixed with positive feedback from bicycle/pedestrian advocacy groups and the school community, and strong opposition by residents adjacent to the project. Primary concerns raised pertain to safety, security and privacy.

The Regnart Creek Trail was included in the Cupertino's draft 2005 General Plan. After public input and discussion at the October 4, 2005 City Council Meeting, a motion carried to remove the Regnart Creek Trail from the 2005 General Plan.

SCVWD COORDINATION

Four coordination meetings between the City and SCVWD were held in preparation of the study. As SCVWD is the owner of Regnart Creek, the study takes into consideration their needs and concerns. The meetings focused on trail alignment, features, maintenance responsibility, and liability.

The City will continue coordination with SCVWD throughout subsequent phases of the project.

PROPOSED ALIGNMENTS

The project considered several alternative alignments which include alignments entirely following the creek, alignments which run through Wilson Park and alignments which partially or fully utilize on-street alternatives along nearby roadways.

Alternatives also consider use of bicycle and pedestrian bridges near Wilson Park and enclosing the creek in box culverts near Lozano Lane / De Palma Lane.

ALTERNATIVE	WEST OF S BLANEY AVE	EAST OF S BLANEY AVE	BIKE/PED BRIDGE(S)
No Build	N/A	N/A	
1	SCVWD Access Road	SCVWD Access Road	X
2	SCVWD Access Road	On-street (Hall Ct.), through Wilson Park & on-street (Vicksburg Dr.)	
3	SCVWD Access Road	SCVWD Access Road & through Wilson Park & On-street (Vicksburg Dr.)	X
4	On-street (Pacifica Dr.)	On-street (La Mar Dr.)	
5	On-street (Rodrigues Ave.)	On-street (Parkside Ln), through Wilson Park, & On-street (Vicksburg Dr.)	

Table 1.1: Summary of Alignment Alternatives of the Regnart Creek Trail

TRAIL ACCESS

For alternatives which utilize the existing SCVWD access road, upgraded trailheads utilizing decorative pavements, wayfinding, information boards, seating and other features would be provided. Secondary access points with matching, but less substantial, treatments would be added at other locations for trail user convenience. Trail head amenities may be provided where they do not conflict with or reduce SCVWD maintenance access.

TRAILHEADS	SECONDARY ACCESS POINTS
Pacifica Avenue / Torre Avenue Intersection	Pacifica Drive / Regnart Creek Intersection
Rodrigues Ave (at Regnart Creek Bend)	Cupertino Civic Center (NE corner of Library Field)
Wilson Park	S Blaney Avenue
	E Estates Drive

Table 1.2: Summary of Regnart Creek Trail Access Locations

ROADWAY CROSSINGS

With on-creek alternatives, upgraded roadway crossings at both S Blaney Avenue and E Estates Drive were identified in order to safely accommodate trail user crossings at mid-block locations. Treatments including the use of bulbouts, median islands,raised crosswalks, chicanes, rectangular rapid flash beacons (RRFBs), and traffic signals were evaluated at each crossing location.

EVALUATION

The Study qualitatively evaluated the proposed alignments with respect to its peers using the following evaluation categories:

- Purpose and Goals of the Bike and Pedestrian Plans
- Access and Directness
- User Safety
- Environmental Considerations
- SCVWD Maintenance Access
- Cost

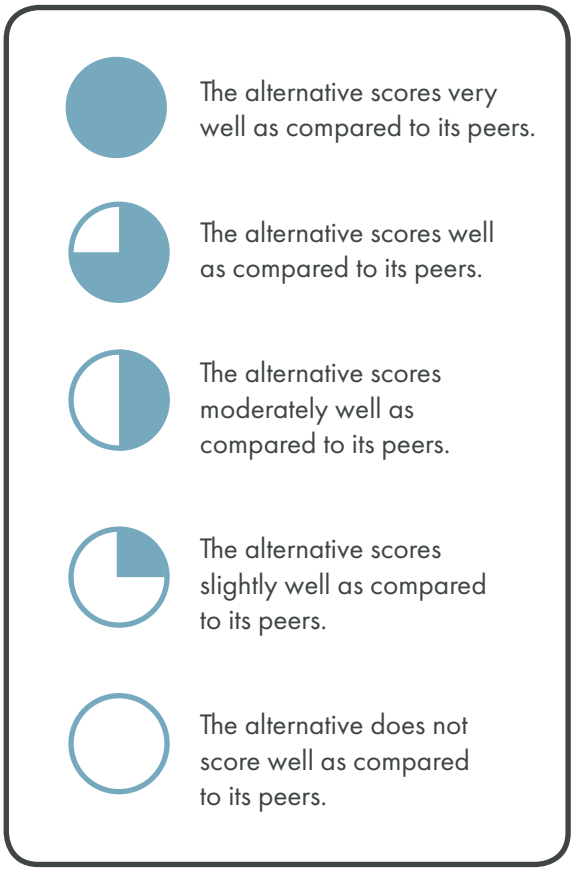
The scoring of these categories are not weighted equally as some categories (i.e. User Safety) carry more significance than others.

RECOMMENDED ALTERNATIVE

After evaluation of Alternatives, the Study recommends Alternative 1, a fully creek-side facility, be progressed forward to environmental clearance. This alternative scored well for meeting the goals of the Bike and Pedestrian Plans, for its ability to provide direct and convenient access to nearby destinations and for its safety benefits in separating bicyclists and pedestrians from on-street vehicular conflicts. The alternative scored moderately for cost, environmental considerations and SCVWD maintenance access.

Scoring Rubric

Alternatives were scored qualitatively using the rubric below:



	Purpose & Goals of Bike & Pedestrian Plans	Access & Directness	User Safety	Environmental Considerations	SCVWD Maintenance Access	Cost
No Build Alternative						
Alternative 1 (Creek side)						
Alternative 2 (Creek side W of S Blaney Ave & on-street/through Wilson Park E of S Blaney Ave)						
Alternative 3 (Creek side from Pacifica Ave to Wilson Park & on-street E of Wilson Park)						
Alternative 4 (On-street)						
Alternative 5 (On-street & through Wilson Park)						

Table 1.3: Summary of Trail Alignment Alternative Evaluations

INTRODUCTION

VISION

The Regnart Creek Trail is a designated project under the *City of Cupertino 2016 Bicycle Transportation Plan* (Bike Plan) and the *2018 Pedestrian Transportation Plan* (Pedestrian Plan). The purpose of this study is to investigate the feasibility of modifying the existing Santa Clara Valley Water District (SCVWD) access road to allow for the accommodation of a shared-use trail for bicyclists and pedestrians. This trail is one of three off-street trails which comprise the Cupertino Loop Trail (The Loop), which will provide access throughout Cupertino on a series of low stress facilities separated from heavy vehicle traffic. The Loop primarily supports recreational riders and long-range bicycle trips, however subsections of the loop connect local residents to nearby destinations.

This project would directly address programming, safety, and mobility goals set forth in the Bike and Pedestrian Plans. The design of a new shared-use trail will address the access needs of people in the area by providing safe passage to schools, parks and civic facilities connected by the trail.

Stakeholder agencies associated with the project are the City of Cupertino, Santa Clara Valley Water District, PG&E, and AT&T. Collaboratively, these agencies share goals to create and maintain open-space access for pedestrians and bicyclists through developing joint-use agreements, capital projects, grants, and partnerships.

The City of Cupertino envisions an exceptional bicycling environment that supports active living and healthy transportation choices, provides for safer bicycling, and enables people of all ages and abilities to access jobs, schools, recreation, shopping, and transit on a bicycle as a part of daily life.

Vision statement from the *City of Cupertino 2016 Bicycle Transportation Plan* (Bike Plan)

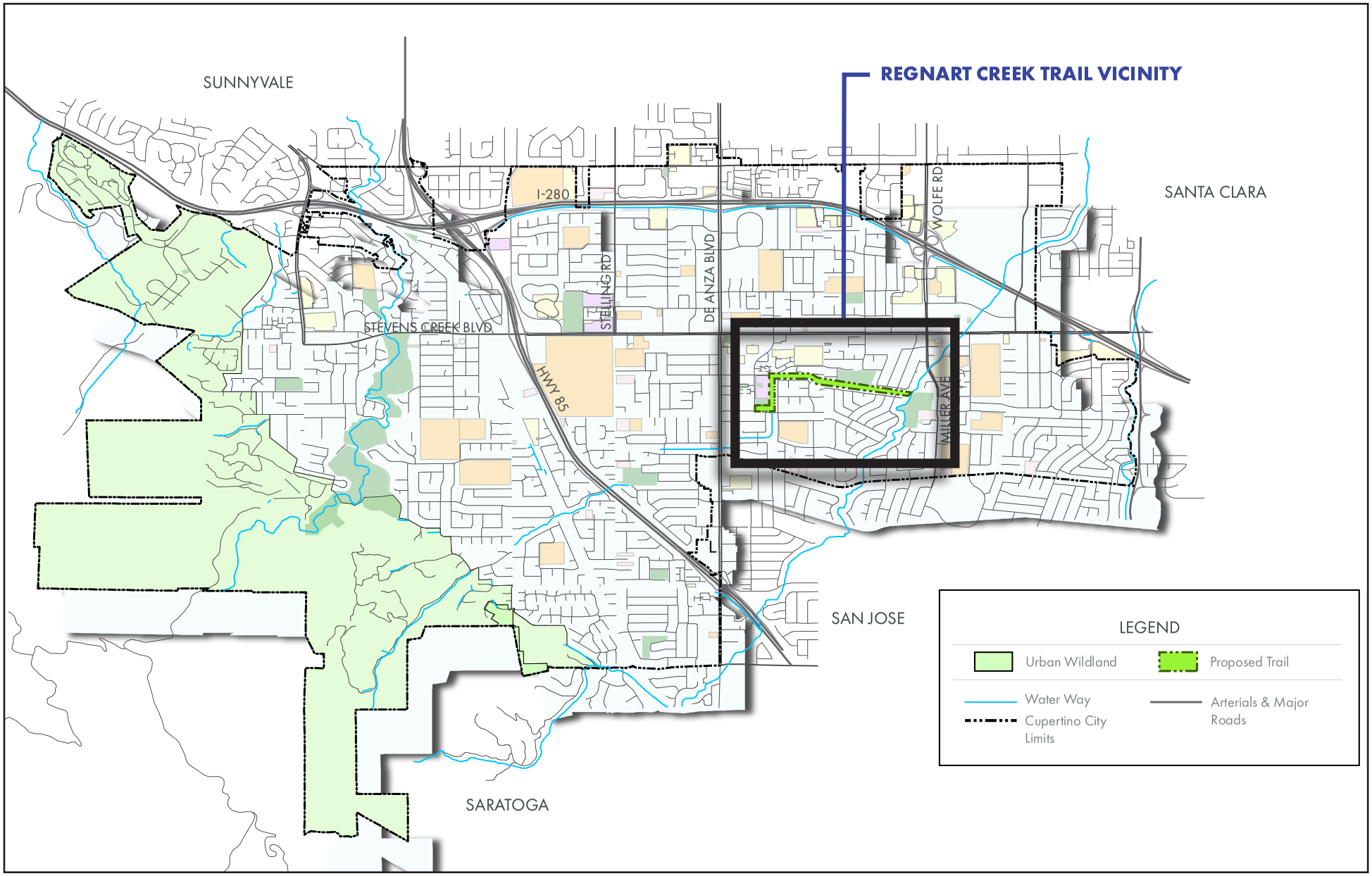


Figure 2.1 : Regnart Creek Trail Vicinity Map

BACKGROUND

City of Cupertino 2016 Bicycle Transportation Plan

In June 2016, the Cupertino City Council adopted the Bike Plan that will guide the development and implementation of improving the City's bicycling environment for years to come.

General statements of what the City and residents hope to achieve over time is summarized below.

- Increase awareness and value of bicycling through encouragement, education, enforcement, and evaluation programs.
- Improve bicyclist safety through the design and maintenance of roadway improvements.
- Increase and improve bicycle access to community destinations across the City of Cupertino for all ages and abilities.

Goals stated in the *City of Cupertino 2016 Bicycle Transportation Plan* (Bike Plan)

City of Cupertino 2018 Pedestrian Transportation Plan

In February 2018, the Cupertino City Council adopted the Pedestrian Plan that will guide the City toward achieving its vision of an inviting, safe, and connected pedestrian network.

General statements of what the City and residents hope to achieve over time is summarized below.

- Improve pedestrian safety and reduce the number and severity of pedestrian-related collisions, injuries, and fatalities.
- Increase and improve pedestrian access to community destinations across the City of Cupertino for people of all ages and abilities.
- Continue to develop a connected pedestrian network that fosters an enjoyable walking experience.

Goals stated in the *City of Cupertino 2018 Pedestrian Transportation Plan* (Pedestrian Plan)

Bikeway Classifications

The Bike Plan recommends bikeway treatments that will collectively form a bicycle transportation network and will accommodate the safety needs of all mobility types, users, and ability levels.

Class I Shared-Use Paths

Class I bicycle or shared-use paths are designated bicycle and pedestrian travel routes that are completely separated from automobile traffic. These facilities provide safe passageways for users and promote local greenspaces. Class I facilities can be popular for recreational bicycling as well as commuting.

Class II Bike Lanes

Class II bike lanes are bicycle travel routes located along roads and are visually separated from automobile traffic by road striping. Because these roads often connect key businesses and community centers, they are viewed as vital commuter routes for community members. Bike lanes can be further enhanced by green paint, which highlight areas of potential conflict with vehicles.

Class III Bike Routes

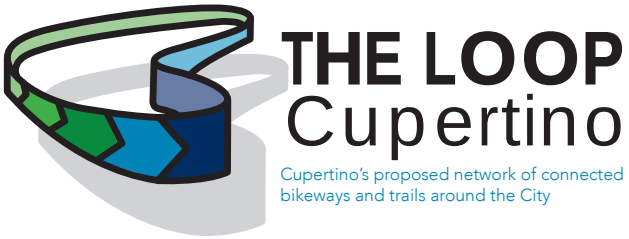
Class III bike routes are roads where automobile and bicycle traffic share travel lanes. Signage and striping are used to indicated the shared condition and travel lanes tend to be wider to allow for parallel travel. These types of paths are often used on slower streets, where parallel travel is safer.

Class IV Separated Bikeways

Class IV separated bikeways are a new type of bicycle travel route located along roads similar to Class II bike lanes, but physically separated by elements such as curbs, planting areas, posts, barriers, parking, and grade separation. The added physical separation provides increased safety for cyclists along higher speed roadways that may serve as commuter routes.

The Loop

The Bike Plan identified a prioritized list of recommended improvement projects to support and promote bicycling in Cupertino, including separated bikeways, a bike boulevard network, and The Cupertino Loop Trail (The Loop), which consists of several trail segments that, when combined together with on-street bikeways, will form a bike network around Cupertino.



The Regnart Creek Trail is a segment of The Loop that comprises of a shared-use trail along an existing SCVWD maintenance access road. The trail will provide an off-street bicycle and pedestrian connection between Pacifica Drive to the west, and E. Estates Drive, to the east.

Agencies & Stake Holders

The City is sensitive to the needs of partner agencies. Of particular concern are creek erosion, degradation of the environment, impacts to conveyance of flood flows, and restrictions to access for maintenance equipment and related activities. Early and continued engagement with partner agencies is needed to support on-going trail development.

PG&E owns and operates three utility poles along Regnart Creek within the SCVWD right-of-way which support electric and communication facilities. PG&E and AT&T have a joint utility easement and rights of ingress and egress to Regnart Creek in order to maintain their facilities as depicted in property documentation and record maps. Throughout design and construction of the trail, careful consideration shall be taken to protect these existing utilities and preserve PG&E and AT&T's rights to accessibility and maintenance.

THE STUDY

The purpose of the feasibility study is to define the project, identify major constraints and assess the feasibility of developing the 3/4 mile shared-use facility along Regnart Creek between Pacifica Drive and E Estates Drive.

The study evaluated alternatives to identify preferred alignments, access points and trail features in consideration of constraining factors and the goals set forth by the Bike and Pedestrian Plans.

Upon Council approval, potential next steps and project development phases include:

- Approval of Regnart Creek Trail by City Council,
- Identification of potential funding sources,
- Environmental clearance,
- Preliminary Engineering,
- Local, State, and Federal Permitting,
- Final Design,
- Construction

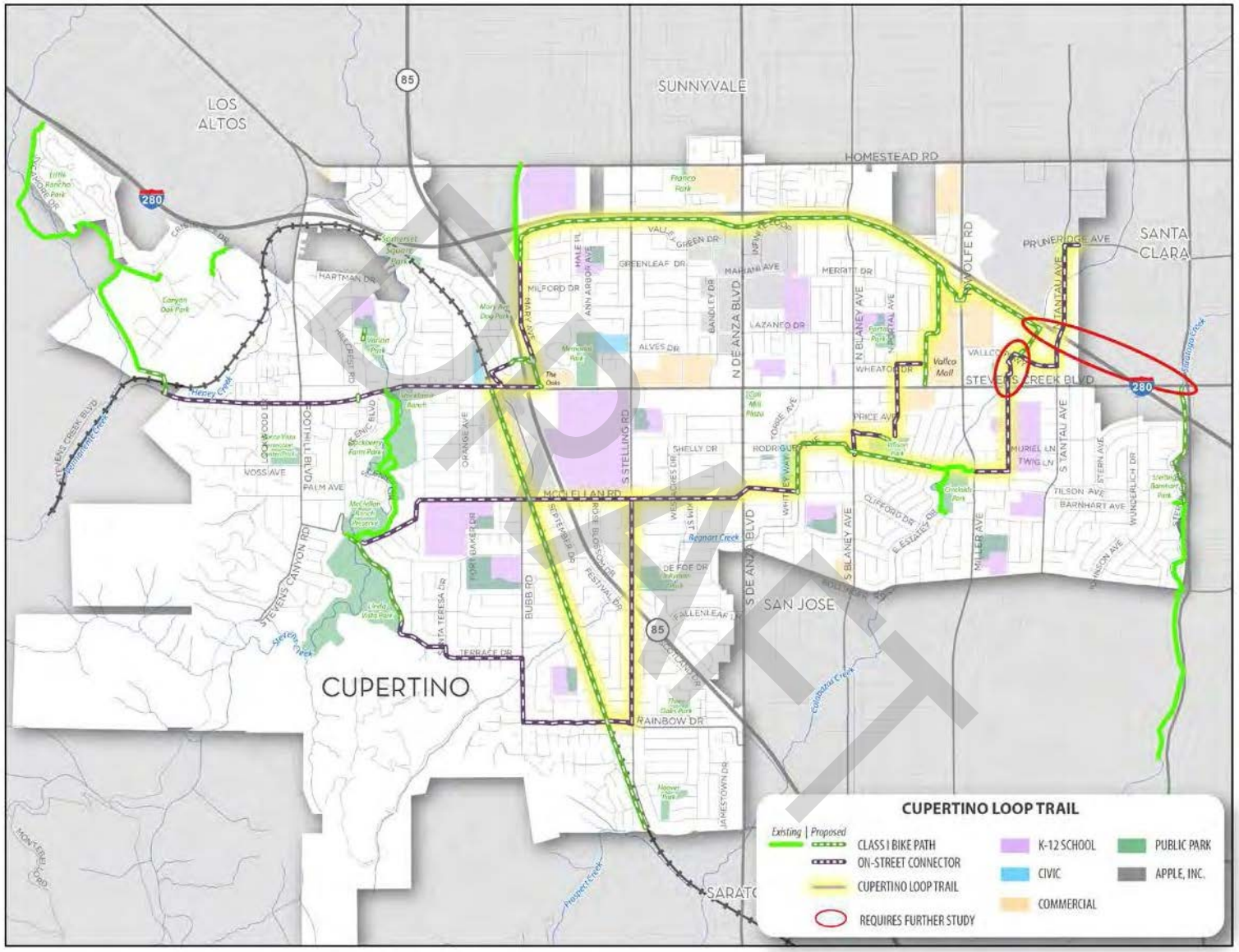


Figure 2.2: Cupertino Loop Trail (The Loop) from the Bike Plan

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EXISTING CONDITIONS

LAND USE AND ZONING

Land Use

The Regnart Creek Trail alignment resides approximately one-quarter mile from the "Heart of the City", Cupertino's primary commercial corridor comprised of various older and newly developed commercial, office, and residential amenities. Spanning from Pacifica Drive to E Estates drive, along Regnart Creek, the trail meanders through the S Blaney neighborhood adjacent to 82 single-family residences.

The South Blaney neighborhood is located in the eastern portion of Cupertino, south of Stevens Creek Boulevard and east of De Anza Boulevard. This area is predominately defined by single-family residential homes. Bounded by Bollinger Road, Miller Avenue, De Anza Boulevard, and Stevens Creek Boulevard, the area is served by the Cupertino Civic Center, Wilson Park, Creekside Park, and Eaton Elementary School.

Figure 3.1: S Blaney Neighborhood Land Use Diagram from Cupertino's General Plan

Zoning

The zoning designations in the proximity of the study are:

R1-7.5: Single Family Residential District

- Minimum lot area is 7500 SF

P(BA): BA – Public Building

- For regulating governmental, public utility, education, religious, and transportation facilities
- Owned or utilized by federal, state, county, or city government

R1C: Residential Single-Family Cluster

- Reduces amount of street improvements and public utilities to conserve natural features and provide more desirable aesthetic and efficient use of open space

PR: Park and Recreation Zone

- For regulating activities within public owned parks

EXISTING BICYCLE FACILITIES

Cupertino has an ideal setting to use bicycles for commuting, utility, and recreational purposes. According to the Bike Plan, the City currently accommodates its ridership through a vast bikeway network which includes almost five miles of Class I shared-use paths, twenty-seven miles of Class II bike lanes, and nine miles of Class III bike routes. Approximately 25 percent of Cupertino's roadway network contains bicycle facilities.

Stevens Creek Boulevard, approximately 0.2 miles north of the Regnart Creek Trail, is a major east/west arterial corridor with high volumes and vehicular speeds. Stevens Creek Boulevard contains Class II bike lanes in both directions; however, the Bike Plan identifies upgrades to existing facilities through the implementation of Class IV separated bikeways along this corridor.

De Anza Boulevard, approximately 900 ft west of the Regnart Creek Trail, is a major north/south arterial corridor with high volumes and vehicular speeds. De Anza Boulevard contains Class II bike lanes in both directions. Per the Bike Plan, the City plans to enhance these bike lanes with buffers and upgraded paint markings.

The City is currently implementing Class IV bikeways along McClellan Road and Stevens Creek Boulevard. These projects will install vertical separation between bikes and vehicles along McClellan Road from Byrne Ave to S De Anza Boulevard, along Rodrigues Ave from Terry Way to Regnart Creek, and along Stevens Creek Boulevard from N Tantau Avenue to Wolfe Road.

The Regnart Creek Trail alignment is also adjacent to Class II bike lanes on South Blaney Avenue, Rodrigues Avenue, and Bollinger Road.

Photo 3.1: Existing trail in Cupertino

Photo 3.2: Existing bike lanes in Cupertino

Photo 3.3: Class IV bike lane rendering in Cupertino

ACTIVITY GENERATORS

The area surrounding the Regnart Creek Trail alignment contains several schools, parks, residences, retail, and municipal buildings. The addition of a trail would offer an off-street alternative for students and residents to various destinations near the creek.

Parks & Fields

- Library Field
  Includes cricket field and large, open grass area for various sports.
- Wilson Park
  Wilson Park is adjacent to the trail and includes a recreation building, family picnic areas, fitness course, play equipment, ceramics center, baseball fields, and soccer field.
- Creekside Park
  Creekside Park is adjacent to the trail and includes a field, family picnic areas, half-court basketball, playground areas, soccer fields, bicycle/pedestrian bridge over Calabazas Creek, and community room.

Schools

- Eaton Elementary School
  0.1 miles from the trail
- Cupertino High School
  0.3 miles from the trail
- Sedgwick Elementary School
  0.3 miles from the trail

Commercial and Retail

- Various Locations
  0.2 miles from the trail
- McClellan Square
  0.2 miles from the trail

Cupertino Civic Center

The Civic Center is adjacent to the western portion of the trail.

- City Hall
- Community Hall
- Cupertino Library

Photo 3.4: Cupertino High School

Photo 3.5: Wilson Park

Photo 3.6: Cupertino City Hall

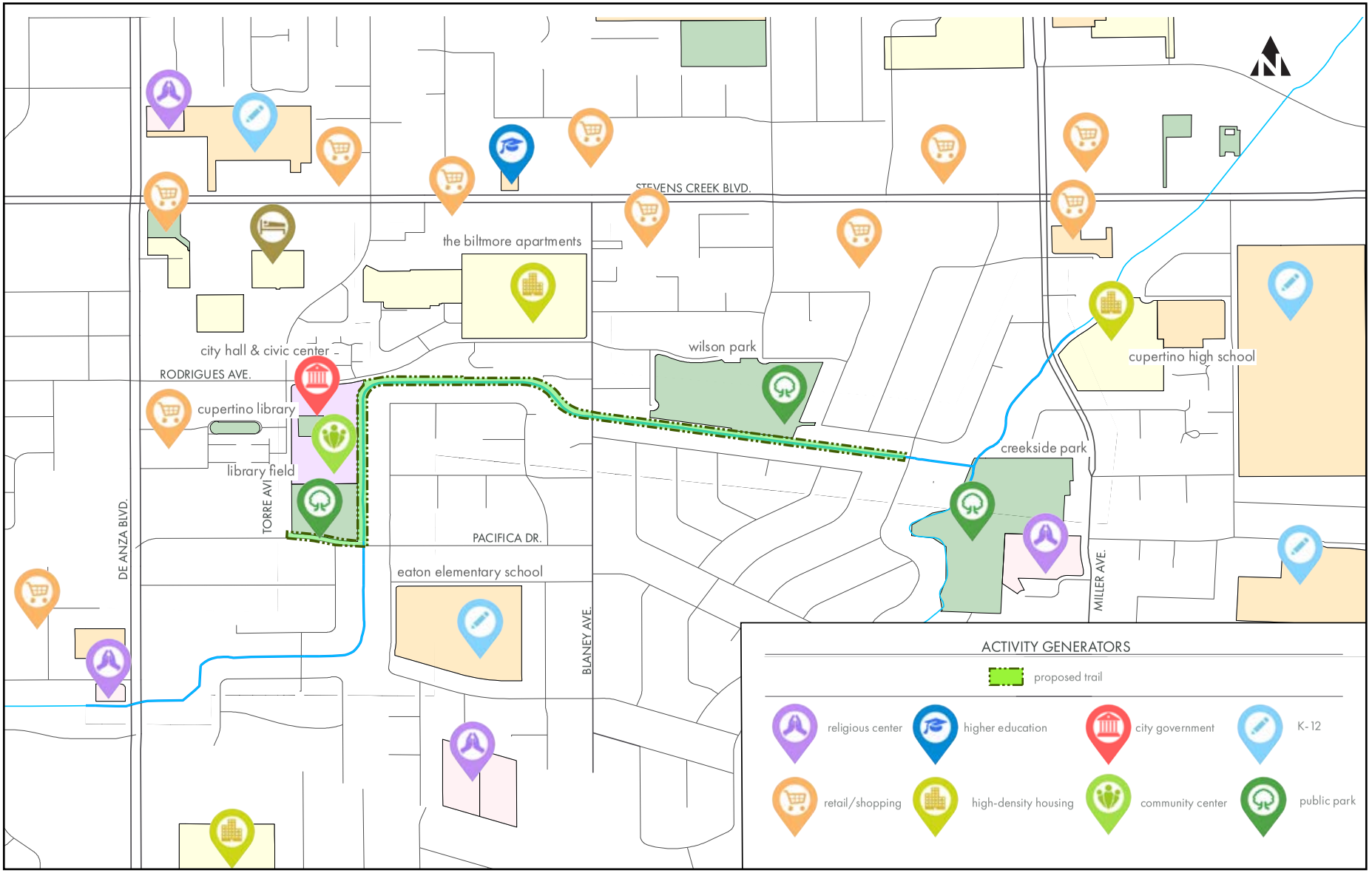

Figure 3.2: Activity Generators near the Regnart Creek Trail

REGNART CREEK RIGHT-OF-WAY

Regnart Creek meanders through the southern part of Cupertino adjacent to single family homes, parks, and municipal buildings. The SCVWD owns and maintains the 55-foot-wide right-of-way which contains the creek and a maintenance access road. SCVWD as-builts depict the widths varying from 10 feet to 15 feet throughout the corridor. Field measurements taken in preparation of this study recorded widths varying from12 feet to 25 feet from fence line to top of bank.

For a 400 foot portion of the creek corridor, adjacent to Lozano Lane and De Palma Lane, the SCVWD right-of way is 45 feet-wide and contains a 15-foot wide public use bicycle and pedestrian pathway granted by Joint Use Agreement (Appendix B) between the City and SCVWD. A 5-foot-wide public walkway connecting the creek to Rodrigues Avenue was granted through the conditions of approval of the Lozano Lane development. A 20' PG&E utility easement is granted within private and SCVWD right-of-way.

Guidance for trail design next to SCVWD streams and streamside resources is presented in the *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* (Design Guide) which addresses land use near streams and surface and groundwater quality and quantity. The Design Guide, prepared by the Santa Clara Valley Water Resources Protection Collective, is to be incorporated as appropriate by local agencies into their existing practices. Unless determined otherwise by an agreement between the SCVWD and the local agency, the Design Guide will be used in the design and construction of creek trails.

The City is responsible for the design, construction, and maintenance of City-owned facilities including public streets, sidewalks, curbs and gutters, medians, storm drains, lights, landscaping, and parks. Public creek side trails, although within SCVWD right-of-way, will be city-owned and maintained. The City's responsibilities and liabilities regarding the trail will be outlined and specified in future joint use agreements between the City and SCVWD.

Photo 3.7: Regnart Creek adjacent to Cupertino Civic Center

Photo 3.8: Bicycle and Pedestian pathway parallel to Lozano Lane

Photo 3.9: Regnart Creek west of Wilson Park

Figure 3.3: Property rights within the Lozano Lane and De Palma Lane vicinity

WATERSHED AND CREEK CONDITIONS

The project is in the West Valley Watershed, an 85-square-mile area of small-creek watersheds. Regnart Creek is a tributary of the Calabazas Creek. Regnart Creek drains into Calabazas Creek about 100 feet upstream of Miller Avenue. Its headwaters begin at the Fremont Older Open Space Preserve and its total length is approximately 4 miles long, draining an area of roughly 3.4 square miles. During the one percent storm, Regnart Creek conveys roughly 560 cubic feet per second into Calabazas Creek.

Flood zones are geographic areas that the Federal Emergency Management Agency (FEMA) has defined according to varying levels of flood risk. Each zone reflects the severity or type of flooding in the area. The project area is within Flood Zone X from Pacifica Drive to S Blaney Avenue and within Flood Zone A from S Blaney Avenue to E Estates Drive. Flood Zone X is an area of minimal flood hazard, usually depicted on Flood Insurance Rate Maps (FIRMs) as above the 500-year flood level. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100- year flood. Flood Zone A is an area with a 1% annual chance of flooding. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within this zone. It is determined by FEMA that flooding from a 100-year event will be contained within the creek channel. FEMA FIRMs for the project area can be found in Appendix E.

As a part of the SCVWD Calabazas Creek Flood Protection Project Report, the district studied the existing condition of Calabazas Creek and its tributaries. The table below is a summary of the report and current conditions recorded by SCVWD as it pertains to Regnart Creek; Reach 1 and Reach 2 encompass the Regnart Creek Trail.

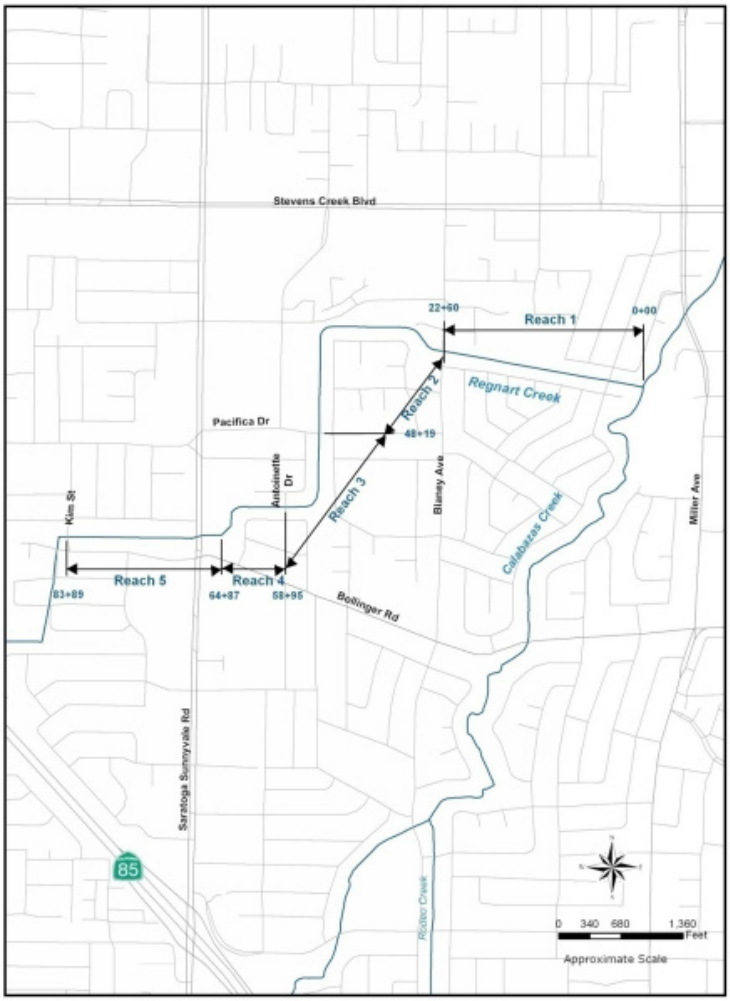

Figure 3.4: Regnart Creek Reach Map from SCVWD *Calabazas Creek Flood Protection Project Report*
(Not to Scale)

REACH	DESCRIPTION	AVERAGE INVERT SLOPE	CURRENT CREEK CAPACTIY	EROSION
REACH 1	Straight, trapezoidal channel with moderate slope; concrete on both sides	0.3%	Over one-percent capacity	Bank Erosion and undercutting
REACH 2	Straight, trapezoidal channel with engineered bend; rock and sack concrete bank protection	0.5%	Over one-percent capacity	Bank Erosion and undercutting
REACH 3	Straight, trapezoidal channel with earth banks	0.5%	Over one-percent capacity	Bank erosion, repaired at one site
REACH 4	Straight, trapezoidal channel with earth banks; moderate slope	1.5%	Over one-percent capacity	None Noted
REACH 5	Straight, trapezoidal channel with earth banks; moderate slope	1.5%	Over one-percent capacity	None Noted

Table 3.1: Regnart Creek data retrieved from hydraulic analysis done for the *Calabazas Creek Flood Protection Project Report* and current conditions recorded by SCVWD

ENVIRONMENTAL CONDITIONS

The area adjacent to the creek is primarily residential development, with the trail alignment located behind the rear and side fences of existing residences and in front of the residences located on Lozano Lane. The Cupertino Civic Center is located on the west side of the proposed trail alignment near its southern terminus (between Pacifica Drive and Rodrigues Drive). The creek channel lacks consistent, mature riparian vegetation. The banks of the creek are engineered with rip rap and concrete for locations with steep embankments and locations experiencing slope failure, as shown in Photos 1, 3, and 4. Mature trees are located within the backyards of some of the residences and along the proposed trail alignment, as shown in Photos 1-8.

United States Fish and Wild Life Species List

Regnart Creek and the associated riparian corridor are known to provide habitat for a wide variety of fish and wildlife species, including some special status species. A United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) report was prepared for the proposed project to identify plant and animal species and other resources (e.g. critical habitat) under USFWS jurisdiction known or expected to be within the project area. No plant species were identified in the IPaC report as being within the project area. Table 3.2 lists fish and wildlife species identified in the IPaC report as being within the project area.

The areas immediately adjacent to the creek are highly disturbed and much of the creek banks are armored with rip-rap, gabions, or concrete retaining walls (refer to Photos 1-8). The vegetation in the project area consists of mature trees, some of which are oak trees, and sparse ground shrubbery. As the conditions of the immediately surrounding area of the creek show signs of heavy use, it is unlikely that many of the species listed in Table 3.2 would be found within the project area.

One species not on the USFWS list that may be affected by construction is the western pond turtle, which is a California Species of Concern. While Regnart Creek may provide suitable aquatic habitat for western pond turtles, populations in the Santa Clara Valley are relatively low due to urbanization. Therefore, it is unlikely that dispersing individuals or nests would be present due to the limited extent of habitat within the project area. However, depending on the extent of project construction, pre-construction surveys for western pond turtles may be required. A project-specific biological assessment of the creek area to be completed as part of the California Environmental Quality Act (CEQA) process may identify additional animal species of concern.

SPECIES TYPE	SPECIES/USFW STATUS
Birds	California Clapper Rail – Endangered California Least Tern – Endangered Marbled Murrelet – Threatened
Amphibians	California Red-legged Frog – Threatened California Tiger Salamander – Threatened
Fishes	Delta Smelt – Threatened
Insects	Bay Checkerspot Butterfly – Threatened San Bruno Elfin Butterfly – Threatened
Migratory Birds	Allen's Hummingbird Black Oystercatcher Black Rail Black Skimmer Black Swift Black Turnstone Black-chinned Sparrow Burrowing Owl California Thrasher Clark's Grebe Common Yellowthroat Costa's Hummingbird Lawrence's Goldfinch Lewis's Woodpecker Long-billed Curlew Marbled Godwit Nuttall's Woodpecker Oak Titmouse Red Knot Rufous Hummingbird Short-billed Dowitcher Snowy Plover Song Sparrow Spotted Towhee Tricolored Blackbird Whimbrel Willet Wrentit Yellow-billed Magpie

Table 3.2: Fish & Wildlife Species within the project area

Nesting raptors and other migratory birds are protected under the Migratory Bird Treaty Act and California Department of Fish and Wildlife (CDFW) Code Sections 3503, 3503.5, and 2800. Raptors (such as falcons, hawks, eagles, and owls) and other migratory birds may utilize the large trees on-site or adjacent to the site for foraging or nesting. Construction disturbance near raptor nests can result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Construction activities may result in nesting raptors having to relocate to another site. Relocation of mature raptors or migratory birds would not, by itself, be significant. However, disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW, and would, therefore, be considered a significant impact. Impacts to nesting birds can be avoided by scheduling construction activities to occur outside the nesting bird season (February 1 through August 31). If it is not possible to schedule construction activities outside the nesting season, preconstruction nesting bird surveys and possibly additional measures (e.g., buffers or monitoring), if active bird nests are found near planned construction activities, would be necessary.

Photo 1: View of the SCVWD maintenance road, on which the trail is proposed to be placed, looking north with residences located on the east side of the creek (to the right). Cupertino City Hall & Library are located to the left (west).

Photo 2: View of trail looking east near Rodrigues Avenue (left). City Hall & Library are located to the left (west).

Photo 3: Rip rap stabilization of south side of the creek, south of Rodrigues Avenue.

Photo 4: View of creek facing west on the north side of the creek. The trail would be placed on the existing maintenance road shown. Rip rap and mature oak trees can be seen within the banks of the creek.

Photo 5: View looking east in front of the residences located on the existing pathway west of De Palma Lane.

Photo 6: View looking east from the existing pulbic walkway adjacent to De Palma Lane.

Photo 7: View at the maintenance road's intersection with South Blaney Drive, looking east.

Photo 8: View of the proposed trail alignment, east of South Blaney Drive. The trail would be located on the south side of the creek behind the rear yard fences of existing residences.

Photo 9: The existing maintenance road and ramp on the south side of the creek as it passes Wilson Park looking west. As shown in the photo, the base of the existing maintenance road/future trail is inundated with creek flows.

Photo 10: View of existing trail at its intersection with East Estates Drive, looking east.

Permitting

The proposed project would primarily be constructed on existing SCVWD maintenance access roads. This construction would occur outside of the bed and banks of the creek and would not require regulatory agency permits.

However, there is one location near Wilson Park on the south side of the creek where the existing maintenance road is currently underwater. Avoidance of this area is a major consideration of the project. However, if this area is impacted by the project, regulatory agency permits may be required as the water level appears to be within the low-flow channel (within Ordinary High Water). This should be confirmed by a hydrologist and aquatic biologist prior to final trail design.

If it is determined that the low-flow channel would be affected by construction, permits would be required from the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). It is anticipated that the project would be eligible for a Nationwide Permit from the USACE and a Section 404 permit from the RWQCB. CDFW would require a Lake and Streambed Alteration (LSA) Agreement when a construction activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. The regulatory permits may contain additional mitigation measures for project construction related to impacts to special status wildlife species and loss of aquatic/riparian habitat (both permanent and temporary). These measures would be included in the project to reduce impacts to biological resources to a less than significant level.

Cultural Resources

Areas adjacent to creeks are usually determined to be sensitive to sub-surface pre-historic resources. For this reason, a literature review at the Sonoma State Northwest Information Center is recommended to determine the locations of recorded archaeological sites that could be affected by project construction. If it is determined that a recorded site could be affected, archaeological monitoring could be required during initial site grading depending upon the depths of excavation. This will be determined during preparation of the CEQA Initial Study for the project. Mitigation measures would be included in the project to reduce potential impacts to pre-historic resources to a less that significant level.

Construction-related Impacts

The project area is primarily developed with single-family residential uses, although the Cupertino City Hall and Library are located adjacent to the western reach of the alignment. Residential uses are sensitive to construction dust, heavy equipment emissions, and noise. These potential impacts will be evaluated in the CEQA Initial Study; however, due to the temporary nature of trail construction, impacts are not anticipated to be significant. Standard construction measures and conformance with the City's Municipal Code would reduce or avoid any potential impact.

Long-term Noise Impacts

Trail users adjacent to existing residential uses can generate additional noise when compared to existing conditions; however, in most locations, the trail would be located adjacent to rear yard fences. Distances to the residences themselves and the presence of existing fences would serve to reduce noise levels. Where the trail would be located adjacent to the front yards of houses, noise levels would be greater. A noise analysis would be required during the preparation of the CEQA document for the project. Conformance with the City's Municipal Code related to hours of trail use may reduce impacts to a less than significant level.

Conclusion

With the inclusion of mitigation measures to be determined during preparation of the CEQA Initial Study, impacts of the proposed trail project would likely not be significant. Because the majority of the construction would occur on existing unpaved SCVWD maintenance roads, impacts would be minimal. The maintenance ramp on the south side of the creek near Wilson Park could, however, be problematic from a design and permitting perspective. Depending upon input from the SCVWD and the ultimate project design regulatory agency permits could be required.

Should bridges over the creek be proposed at any locations, it is assumed that the abutments for such bridges would be above and outside of the banks of the creek. If so, regulatory agency permits would not be required. Pre-construction surveys for nesting raptors and other migratory birds will be required for the project. Other surveys for western pond turtles and archaeological resources could be required depending upon the results of the CEQA Initial Study. With the inclusion of standard measures and conformance with City Municipal Code requirements related to noise, impacts during construction and in the long-term could be reduced to a less than significant level.

[1]California Department of Fish and Wildlife. https://www.wildlife.ca.gov/conservation/lsa. Accessed November 15, 2017.

ROADWAY CROSSINGS

Most of Regnart Creek meanders through residential areas within the S Blaney neighborhood. The creek's alignment intersects two roadways within the project area; S Blaney Avenue and E Estates Drive.

Pacifica Drive

Pacifica Drive runs east-west and feeds into De Anza Boulevard, a major arterial through Cupertino, from the east. Pacifica Drive intersects with Regnart Creek and will be designated as the beginning of the Regnart Creek Trail. Pacifica Drive is classified as a local road with two lanes, a 25 mph speed limit, and from the City's average daily traffic volume (ADT) report, an ADT of approximately 4,200 vehicles. As the street is lined by homes, residences, and a field, Pacifica Drive accommodates its users through on-street parking and designated school crosswalks. Currently, Pacifica Drive does not contain bicycle facilities; however, Class IV bicycle facilities are proposed west of Torre Avenue and Class III bicycle facilities are existing between Torre Avenue and Farallone Drive.

Photo 3.10: Regnart Creek entrance off Pacifica Drive

S Blaney Avenue

Blaney Avenue runs north-south between Homestead Road and Prospect Road. S Blaney Avenue intersects Regnart Creek and will be a major crossing for the Regnart Creek Trail. S Blaney Avenue is classified as a minor collector with two lanes, a 30 mph speed limit, and from the City's average daily traffic volume (ADT) report, an average daily traffic volume of approximately 6,400 vehicles. The street is within residential neighborhoods with single family homes and apartments. Currently, S Blaney Avenue accommodates its users through on-street parking and Class II bike lanes in each direction. The Bike Plan proposes that Blaney Avenue be upgraded to a Class IV separated bikeway.

Photo 3.11: Regnart Creek crossing at S Blaney Avenue

The Regnart Creek Trail's intersection with S Blaney Avenue is a major crossing for the trail and warrants careful consideration to balance the needs of vehicles and trail users. Roadway crossings present conflicts and stressful environments for pedestrians and bicyclists. Speed and traffic volumes pose potential risks for an effective mid-block crossing. Currently, there is not a designated crosswalk along S Blaney Avenue where it intersects with Regnart Creek. It is important that the proposed alternative provide pedestrians and bicyclists the ability to safely cross S Blaney Avenue.

E Estates Drive

E Estates Drive intersects with the terminus of the Regnart Creek Trail. E Estates Drive is classified as a local road with a 25 mph speed limit. The street is within residential neighborhoods with single family homes and apartments with two lanes and on-street parking. East of E Estates Drive, for approximately 400 feet, there is an existing creek trail that terminates at Creekside Park.

The Regnart Creek Trail's intersection with E Estates Drive is a major crossing for the trail and has several constraints. Currently, there is not a designated crosswalk along East Estates Drive that connects the trail to the existing Creekside Park Trail. In order to safely cross pedestrians and bicyclists using the Regnart Creek Trail, design consideration is needed to implement a connection between the Regnart Creek Trail and Creekside Park Trail.

Photo 3.12: Regnart Creek crossing at E Estates Drive

Vehicle-Bicycle Collisions

Table 3.3 summarizes recorded bicycle-vehicle collisions within the City between 2011 and 2016.

Most vehicle-bicycle collisions occurred during daylight hours at the intersections of arterial roads containing bicycle facilities. Reported collisions were either broadside or sideswipe collisions. Since the adoption of the Bike Plan in 2016, the City has taken multiple steps to address risks leading to vehicle-bicycle collisions. These steps are listed below:

- Improve education for drivers and cyclists about safely operating in and around intersections.
- Implement enhanced bikeway treatments at intersections.
- Improve and enhance the existing bicycle facilities on the arterial network.
- Prioritize the creation of cross-city routes that do not require bicycle travel on the arterial network.
- Ensure cyclists have enough time to cross intersections by reviewing signal timing standards along bicycle facilities.

TIME PERIOD	TOTAL NUMBER OF BICYCLE COLLISIONS	INJURIES	FATALITIES
2011	26	18	0
2012	29	29	0
2013	22	17	0
2014	27	17	0
2015	34	34	1
2016	34	34	0
TOTAL	**172**	**149**	**1**

Table 3.3: Vehicle-Bicycle collision report data from 2011 to 2016

MAJOR CONSTRAINTS

Regnart Creek has several unique and challenging characteristics which are potential challenges and constraints for the implementation of the Regnart Creek Trail.

SCVWD Access

SCVWD's primary responsibility is to protect and enhance watersheds. In order to meet this policy, SCVWD requires access for ongoing maintenance of the creek. This obligation has been carefully considered through the alternative development process.

Additionally, approximately 800 feet east of S Blaney Avenue, the SCVWD operates a concrete-lined creek maintenance access ramp. Preservation of this facility is critical to ongoing maintenance of the creek.

Available Right-of-Way

The width of the SCVWD right-of-way varies throughout the Regnart Creek corridor. This variance in right-of-way results in varying width of the existing access road. SCVWD as-builts depict the access road widths varying from 10 feet to 15 feet throughout the corridor. Field measurements taken in preparation of this study recorded widths varying from12 feet to 25 feet from fence line to top of bank.

The trail can be implemented within SCVWD and City right-of-way. The project does not propose to acquire right-of-way from adjacent private properties.

Photo 3.13: Regnart Creek maintenance access road

Photo 3.14: Residential fencing along creek maintenance road

Photo 3.15: Maintenance access ramp

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TRAIL CRITERIA

TRAIL DESIGN GUIDELINES

There exists many, potentially conflicting, guidance documents regarding the design and construction of trails. The following references were used as a basis for the design, construction, and maintenance of the project:

- Santa Clara Valley Water District Water Resources Protection Manual (PM)
- Caltrans Highway Design Manual – Chapter 1000 (HDM)
- Santa Clara County Uniform Interjurisdictional Trail Design, Use, and Management Guidelines (UD/UM)
- 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 (DG)
- City of San Jose Trail Network Tool Kit Planning & Design (TK)
- California Manual on Uniform Traffic Control Devices (MUTCD)
- A Policy on Geometric Design of Highways and Streets (AASHTO)
- NACTO Urban Bikeway Design Guide (NACTO)
- Americans with Disabilities Act Standards for Accessible Design (ADA)

These guidelines provide design criteria and guidance for the design and implementation of trails, roadways and bicycle facilities. The listed design resource manuals provide guidelines and recommendations that are not mandatory features for a proposed trail. Proposed trails should be evaluated on a case-by-case basis, taking into account field conditions and trail route/land use relationships. Content in the referenced documents as well as direct design recommendations from the SCVWD are resources that will be utilized for the design of the Regnart Creek Trail.

TRAIL DESIGN CRITERIA

Trail and Land Use Compatibility

Careful consideration should be taken into account when designing a trail that is within single-family residential neighborhoods. Appropriate design elements should ensure the safety and security of trail users and residents with homes adjacent to the trail.

- In areas where trail routes are adjacent to private property, visible fencing shall be employed, if requested by the adjacent property owner, to deter the users from leaving the trail. (UD – 1.1.4)

- At-grade trail crossings of streets should be developed with appropriate safety and regulatory signs for both trail users and motorists. (UD – 1.1.6.2)

Trails and Environmental Protection

It is important that design, construction, and use of recreational trails near natural and streamside areas do not negatively impact the nearby stream and stream resources. In designing a trail, the goal is to remove the minimum amount of vegetation necessary to accommodate the trail clearing width and restore riparian habitat.

- Existing native vegetation shall be retained by removing only as much vegetation as necessary to accommodate the trail clearing width. (UD – 1.3.1.2)

- Trail design shall include barriers to control trail use and prevent environmental damage; barriers may include fences, vegetation, stiles, and/or fallen trees or branches as appropriate. (UD – 1.3.1.3)

- Trail alignments shall avoid impacts known to special status plants and animal habitats. (UD – 1.3.2.1)

- Trails will avoid wetlands, including seasonal wetlands, wherever possible. (UD – 1.3.3.5)

Trail Structures

Trail structures such as bridges may be necessary for trail continuity or access. They are required to span waterways or address significant grade change. These structures shall be carefully placed to minimize disturbance. A main concern regarding structure crossings is erosion. Erosion control measures shall be taken at the outfalls of drainage structures.

- The use of trail bridges should be minimized. When necessary, bridges should be a minimum of 12 ft wide and structurally capable of carrying maintenance vehicles. Bridges footings shall be outside the creek's top of bank. (UD – 4.1.2)

Trail Safety

Safety for trail users is a main goal when designing a trail. Safety measures are implemented along the trail and at trail crossings through proper fencing, signage, pavement striping, lighting, signals, flashers, and emergency call boxes.

- Along trails outside of public parks and along trails that pass through relatively isolated areas or private lands, consider installing solar-powered emergency telephones at regular intervals. (UD – 4.10)

- Trail use will be limited to the hours between dawn and dusk to minimize impacts to wildlife. (PM 3.52)

- Lighting of trails should be avoided. Exceptions include security lighting in downtown commercial and entertainment areas where lighting should be minimized. (PM 3.52)

- For safety, trail crossings of streets may be signalized by use of a normal traffic signal or a lighted, flashing caution sign that would be activated by the trail user using pedestrian push buttons, bicycle loop detectors, or other means as appropriate. (UD – 4.16)

- Countywide trail in urban areas are intended for day-use only. (UM – 1.1.1)

- Where a trail is restricted to a particular type of user(s), the trail should be clearly designated as such and shall be equipped with signs and barriers as appropriate. (UM – 1.3.1)

Grading and Drainage

Erosion is a major concern when building a trail in a riparian corridor as significant grading work can cause water to drain in a manner that causes the creek bank to erode. Good trail design supports effective management of storm water. Trail grading should support sheet flow onto existing landscapes and minimize run-off into the creek by using existing outfall where feasible. Well-managed storm water can prevent serious erosion, costly repairs, and trail closures.

- No significant grading as defined by local ordinances shall be used for trail construction unless in conjunction with a development project where large -scale grading has been found acceptable by the permitting agencies. (UD – 3.5.1)

- Surface water shall be diverted from trails by out sloping the trail away from the creek and into existing outfalls at a slope between 2% and 3%. (UD – 3.5.4)

USE AND MANAGEMENT CRITERIA

Trail Design and Construction Practices

Trail design and construction practices should be focused on minimizing environmental damage and ensuring the safety of trail users. Where feasible, trail design should recognize the intent of the American with Disabilities Act (ADA) and should emphasize accessibility for a diversity of users.

- Trail tread width should be determined by amount and intensity of trail use and field conditions such as topography, vegetation, and sensitivity of environmental resources. (UD – 2.2.1)

- The minimum paved width of travel way for a Class I, two-way, bike path shall be 8 feet, 10-foot preferred. A minimum 2-foot wide shoulder, composed of the same pavement material 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. (HDM –1003.1)

- Shared-use trails should be designed as paved two-way paths and should have an optimum width of 12 ft with a center stripe and minimum 2 ft flush shoulders or clear spaces of on each side of the trail. (UD – 2.2.2)

- Trail treads should be of materials that are stable, firm, and slip-resistant. (UD 3.4)

- Use of motorized vehicles on countywide trails shall be prohibited, except for wheelchairs, maintenance vehicles, and emergency vehicles. (UD Page 40)

- Trails can be constructed with earth, gravel, or paved surfaces. The pavement type should meet user needs, reflect the aesthetics of the site, and be designed for vehicular loading of service/maintenance vehicles. (TK 27)

- Trail surface appropriate to intended use shall be selected so to minimize runoff and erosion problems. (UD – 3.4.2)

- The running slope of walking surfaces shall not be steeper than 1:20 (5%). The cross slope of walking surfaces shall not be steeper than 1:48 (2%) slope. (ADA – 403.3)

Trail Closures

Trail closures for construction and maintenance vary in closure times depending on the season and type of work being done. The City is responsible for temporary trail closures when construction, repair, and maintenance to the creek and or trail are required. These closure responsibilities may include notification to the public and implementation of detour routing. Stakeholders have the rights to close the trail as they see fit; however, appropriate signage and public outreach is necessary to effectively convey the closure.

- Reason for trail closure include, but are not limited to: trail construction, major repair, or seasonal maintenance; seasonal periods critical to special status species; high fire season; periods of flooding; and other hazardous conditions. (UM – 1.4.1)

- Notice of trail closure shall be shall be posted at all trail entrances and staging areas. Trail closure notices should include the reason(s) for the closure. Where possible, alternate travel routes to the trail should be posted. (UM – 1.4.3)

Private Access to Public Trails

- Private access to public creek trails on SCVWD right-of-way is prohibited. All access points to and from the trail shall be public access points controlled by the City.

- Except where trail routes cross driveways and front entry walks, no private access to countywide trails or gates within the continuous fencing/walls along the property line or trail easement shall be permitted without prior written authorization from the appropriate jurisdiction. (UM – 2.1)

Trail Monitoring and Maintenance

Once the trail has been built, it takes a collective effort to effectively monitor and maintain the trail. The City of Cupertino is responsible for patrolling the trail for potential maintenance and corrective work. The public, through trail users and volunteer agencies, should be vigilant and able to communicate any trail concerns with the managing agencies. Routine maintenance and repair of the trail and trail features is the responsibility of the City.

- A level-of-service approach should be used by the managing agency to operate and maintain trails. Table UM-1 provides a general management framework for normal trail-related stewardship activities. (UM – 3.0)

- A yearly inventory of all trail maintenance, including, drainage, vegetation clearing, signing, surfacing, need for graffiti removal, and repair of structures, gates, fences, and barriers shall be done prior to the heavy summer use period. (UM – 3.1)

- Vegetation growth should be cleared and obstacles should be removed where necessary on an as-need basis. Understory grasses and herbaceous annuals shall be inspected annually and appropriately mowed before fire season.
  (UM – 3.3, 3.4)

- Corrective work for drainage or erosion problems shall be performed within a reasonable period of time. Where necessary, barriers to prevent further erosion shall be replaced as soon as possible. Missing or damaged signs, structures, gates, fences, barriers, and issues impeding SCVWD maintenance activities shall be repaired or resolved as soon as possible.
  (UM – 3.5)

- The local managing agency has responsibility for patrolling portions of trail within that agency's jurisdiction whether by staff, by contract with related agencies, or approved volunteer groups. (UM – 5.2)

- A level-of-service approach should be used by the managing agency to patrol and supervise trails and provide security. (UM – 5.8)

- To the extent feasible, certain aspect of trail supervision, such as trail safety and security, litter control, and information and education should be accomplished by volunteers. (UM – 5.8.2)

- The trail should not diminish the utility's ability to continue to safely access its facilities for maintenance and operations. (TK 28)

PUBLIC OUTREACH & AGENCY COORDINATION

OUTREACH PLAN & STRATEGIES

The City committed to providing a robust community outreach process as part of this study and developed multiple formats for community dialogue and interaction. The primary purpose was to listen to adjacent property owners and the community at-large in order to gain an understanding of current concerns and desires for the proposed trail. The City wanted to learn how and why people might use this trail, important destinations and connections, barriers to using this trail, and amenities the community would like to see.

To promote this dialogue, the City kicked-off the outreach process with a "Walkshop" where community residents walked with City staff and consultants on the proposed trail alignment. Participants had the opportunity to discuss their vision for the trail, point out their homes, and raise concerns about privacy, safety, and other design details. The City followed the Walkshop with two Community Meetings at Cupertino Community Hall where residents were able to share their ideas for the trail and review design approaches to help resolve common concerns.

To reach as many residents and community members as possible, the project and outreach events were announced through several channels online and through mailings. The City also shared information about the events through social media on NextDoor, Twitter, and Facebook. Additional outreach included emails to subscribers of the City's "Bicycle Transportation Plan" e-notifications, emails to the Cupertino Block Leaders in the neighboring area, emails to participants from previous outreach events, flyer postings around the Cupertino Civic Center, notifications from Cupertino Safe Routes to School group, and advertisings in The Cupertino Courier. The City maintained an active online presence by posting outreach materials, meeting presentations, and outreach summaries following each event on the project website. A detailed account of each engagement event can be found in the following sections.

OUTREACH EVENTS

Walkshop – November 18, 2017

On Saturday November 18, the City held a public tour, or "Walkshop" with two tour sessions - one in the morning (10:30 a.m.) and one in the afternoon (1:00 p.m.). Attendees convened at the entrance to Regnart Creek on Rodrigues Avenue. Following a brief introduction to the project, community members were escorted along part of the proposed trail segment by City and consultant staff. This gave attendees an opportunity to experience the potential trail, understand possible constraints, ask questions, and share concerns. Fifty-seven people signed into the event and 36 comment cards were submitted.

Photo 5.1: Community members reviewed the limits of the study area and potential trail design options at the Walkshop

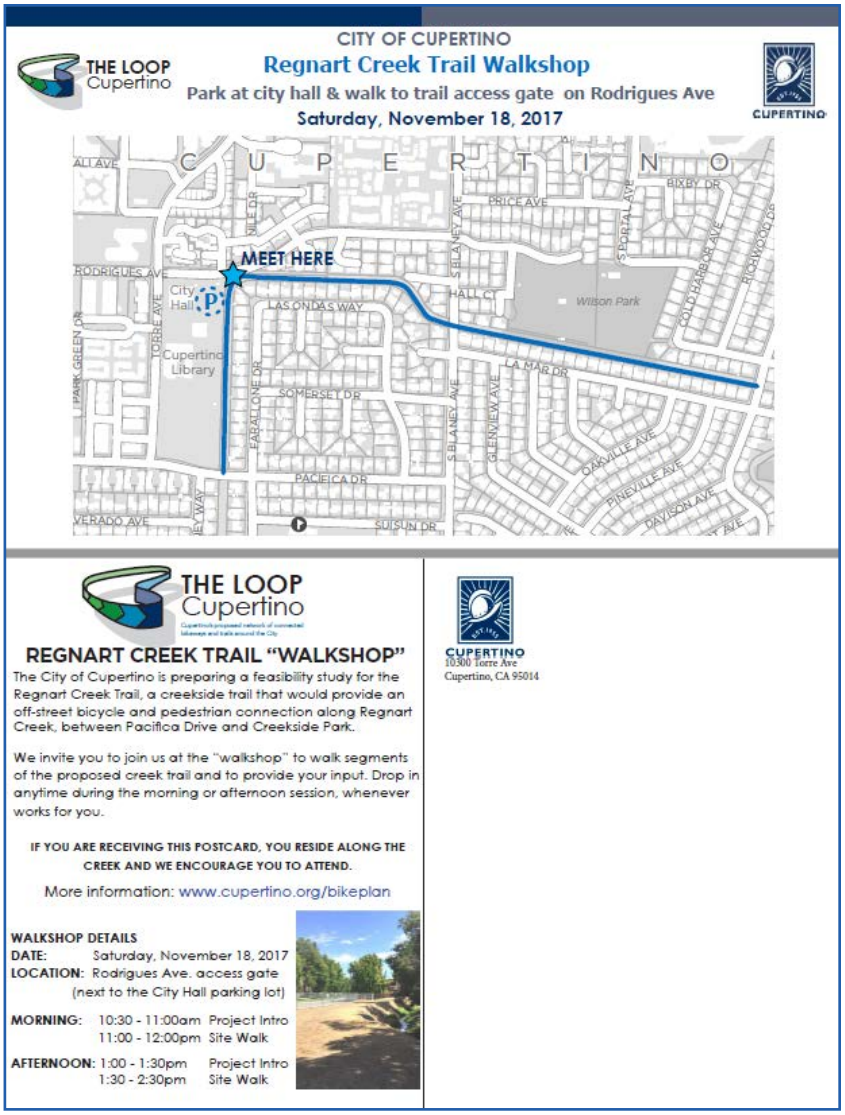

Figure 5.1: Walkshop Postcard

Photo 5.2 : Community members walked with City and consulting staff along the potential trail route

Community Meeting 1 – January 22, 2018

A community meeting was held on Monday, January 22 at Cupertino Community Hall from 6:30-8:00 p.m. The meeting was "open house" style with boards placed on easels around the hall and two large maps of project extents placed on tables on either side of the room. A slideshow of photos of the project area were projected during the event. City and consultant staff briefly spoke to introduce the project and then meeting participants were able to engage in conversations with City and consultant staff at stations and boards around the room. Stations and boards included information about community input to-date, examples of nearby trails that are similar to the proposed trail, and a board where attendees could express their vision for the trail and share concerns as well as indicate whether they would use the trail. Eighty-seven (87) people signed into the event and 67 comment cards were submitted.

Figure 5.2: Attendees wrote comments on a map of the proposed trail

CUPERTINO

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PUBLIC MEETING NOTICE

The City of Cupertino Public Works Department is working with HMH Engineers on a feasibility study for an off-street bicycle and pedestrian facility that would run parallel to Regnart Creek, providing a connection between Pacifica Drive and the existing Creekside Trail at E. Estates Drive.

The City would like to invite you to attend the second public meeting for the proposed Regnart Creek Trail. Following the project introductory "walkshop" that was conducted in November 2017, this meeting will be an open house format where participants can arrive any time during the event window and have one-on-one discussions with City staff and project consultants.

For more information about the project, please visit www.cupertino.org/bikeplan.

Date: Monday, January 22, 2018

Time: 6:30 p.m. to 8:00 p.m.

Location: Cupertino Community Hall
10350 Torre Avenue

Questions or comments can also be directed to:
Jennifer Chu, Associate Civil Engineer
(408) 777-3237 or jenniferc@cupertino.org

Figure 5.3: Door hanger for Community Meeting 1

Photo 5.3: Attendees converse with staff about trail options

Community Meeting 2 – April 23, 2018

A second community meeting was held on Monday April 23 at Cupertino Community Hall from 6:30-8:00 p.m. The meeting was "open house" style with boards placed on easels around the hall. A slideshow of photos of the project area were projected during the event. City and consultant staff welcomed participants and shared an update on the project. Captain Rich Urena with the Santa Clara County Sheriff's Office also provided a brief summary of safety calls for the Saratoga Creek Trail, a Cupertino trail with similar conditions to the Regnart Creek Trail. Captain Urena noted that since 2010, only five calls have been made to the trail, four of which were noise-related, with the fifth involving a homeless person. Meeting participants were then able to engage in conversations with City and consultant staff at stations and boards around the room that illustrated design ideas for road crossings, trailheads and amenities, concepts for addressing privacy and security on the proposed trail.

Sixty-five people signed into the event and 59 comment cards were submitted. Attendees were also asked to fill out a trail design preference worksheet with potential options for the various elements of trail design including fencing, privacy screens, trail surface, roadway crossing options, and security measures. Twenty worksheets were turned in with preferences indicated.

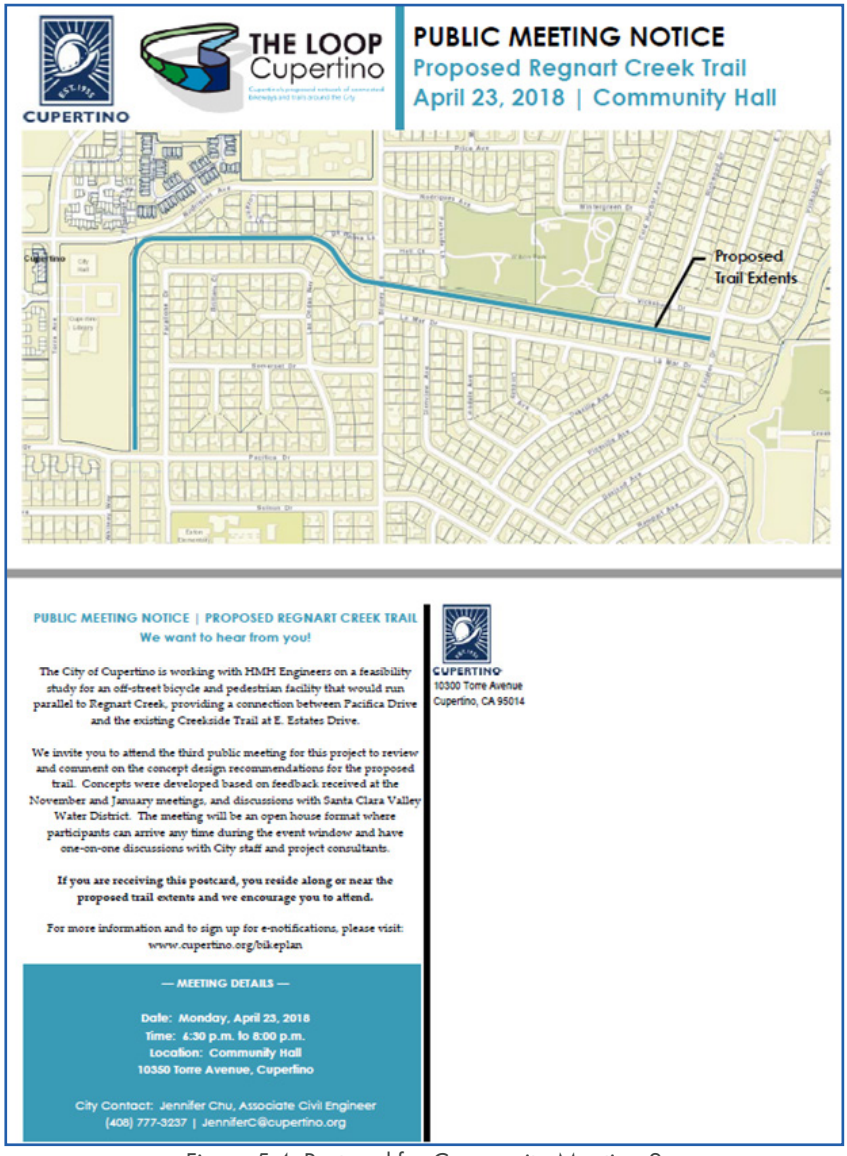

Figure 5.4: Postcard for Community Meeting 2


Photo 5.4: Attendees converse with staff and Captain Urena during Community Meeting 2

Lozano Lane and De Palma Lane Residents Meeting – May 23, 2018

A focused community meeting was held on Wednesday May 23 at Cupertino City Community Hall from 6:30 to 8:30 p.m. The meeting consisted of residents from Lozano Lane and De Palma Lane. The meeting consisted of a discussion and presentation to address the concerns and design options for the 400-ft segment of the trail adjacent to the their homes. Attendees voiced their objection to the trail routing and its proximity to their homes.

Fourteen people signed into the meeting. Residents arrived with questions, documentation, and a power point presentation regarding the trail. Attendees expressed their concerns which the City and consultant staff were able to expound upon.

City and consultant staff introduced trail concepts and ideas which may address routing, privacy, and security concerns. Three alternative alignments in the Lozano Lane/De Palma Lane area were discussed: use the existing drive aisle/ pathway, enclose the creek in a box culvert, or construct a cantilever trail structure over the creek. Various alternatives for noise and privacy screening were explored. After discussing the options presented by the City, informal voting was casted.

When asked: "If a trail construction was inevitable, which of the concepts presented would you prefer:"	Resident Votes
Use existing drive aisle/pathway	0
Construct box culvert	12
Construct cantilevered trail	0

Table 5.1: Informal voting results from 14 residents regarding trail route options in the Lozano Lane/De Palma Lane vicinity

Photo 5.5: Open discussion with Lozano Lane and De Palma Lane residents

CUPERTINO

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PUBLIC MEETING NOTICE

The City of Cupertino is working on a feasibility study for an off-street bicycle and pedestrian facility that would run parallel to Regnart Creek, providing a connection between Pacifica Drive and the existing Creekside Trail at E. Estates Drive.

As De Palma Ln and Lozano Ln residents, the City invites you to a meeting that will focus specifically on the proposed trail segment in your vicinity. Based on the feedback you provided at the April 23, 2018 meeting, City staff and project consultants would like to address your concerns and work through solutions in a smaller group setting.

Wednesday, May 23, 2018
6:30 p.m. to 7:30 p.m.
City Hall, Conference Room C
10300 Torre Ave

For additional information, please visit www.cupertino.org/bikeplan. Questions or comments can also be directed to:

Jennifer Chu, Associate Civil Engineer
(408) 777-3237 or jenniferc@cupertino.org

Figure 5.5: Door hanger for Focused Community Meeting

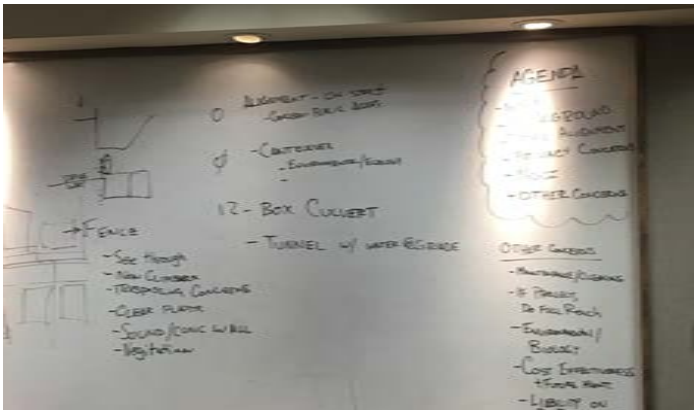


Photo 5.6: Discussion points written down during the meeting

FEEDBACK DURING EVENTS

Feedback received from comment cards, community discussions, letters and emails during and after outreach meetings fell into several "themes." Many comments touched on multiple themes. The themes were:

Privacy and Security

- Concerns about security and privacy for those who live adjacent to the potential trail
- Concerns about available right-of-way near and potential access to De Palma Lane
- Concerns about noise disturbance
- Concerns about the vandalism of private property
- Concerns about burglary
- Concerns about possible illicit activities long the trail
- Questions regarding liability
- Questions about what hours the trail would be open
- Concerns about homelessness

Safety

- Questions about lighting for the trail
- Concerns about users falling into the creek
- Concerns about users safely crossing Blaney Ave and E. Estates Dr
- Concerns about emergency vehicle access
- Concerns about potential conflicts with vehicles turning from La Mar Dr onto S Blaney Ave
- Concerns about mixing bicycles and pedestrians

Aesthetics

- Concerns about aesthetics of a fence or wall that would separate the potential trail from homes
- Support for the project as it provides more green space for families and community members to enjoy
- Identifying preferred potential trail features

Transportation Options

- Support for the project as it provides an off-street option for bicyclists and pedestrians
- Support for the project as it will provide access to several schools
- Concerns regarding potential degradation of vehicular traffic at S Blaney Ave

Cost

- Questions regarding cost to implement project
- Questions regarding funding sources

Maintenance and Operations

- Concerns about impacts to the creek and its habitats
- Concerns about continued ability of SCVWD to maintain the creek
- Concerns about maintenance responsibilities

The above contains the most common concerns that were voiced by residents; a more comprehensive list of the public's specific comments and concerns is provided in Appendix C.

ADDITIONAL CORRESPONDENCE

Fourteen community members who were unable to attend the community meetings sent emails to City staff or responded to NextDoor postings. Similar to the feedback received during events, community members expressed support for the project as it would connect them to nearby destinations like schools and the library without the need for a motor vehicle, concerns about the trail in regards to potential security issues, and questions about trail operations.

SUMMARY

The feedback received was generally mixed. The majority of the residents who live adjacent to the trail who provided input expressed concerns and had many questions about the trail, specifically safety and security and how they would be impacted. Sharing design details for extending privacy fencing, and hearing from Captain Urena did not fully alleviate many of these residents' concern about safety and privacy. The majority of residents who provided input and were not directly adjacent, but lived within proximity of the proposed trial expressed support for a more comfortable route to access parks, schools, Cupertino library, and provide a place to walk the dog or jog.

AGENCY COORDINATION

The City is sensitive to the needs and concerns of SCVWD, the owner of Regnart Creek. Engagement and coordination between the City and SCVWD was conducted through four meetings which addressed trail feasibility. Minutes from the coordination meetings can be found in Appendix D.

Primary themes for discussion included trail alignment, features, maintenance access, and liability. Trail design standards and concerns discussed in these meetings were taken into consideration in the evaluation and recommendation of trail alternatives presented in this study.

Primary topics discussed in these meetings include the following:

- Preservation of SCVWD maintenance access
- City maintenance responsibilities
- Environmental impacts to Regnart Creek
- Construction of split railing along the edge of trail
- Construction of privacy screening for residents adjacent to the trail
- Alternative trail routes
- Alternative trail features
- City and SCVWD responsibilities and liabilities
- Coordination with upcoming SCVWD projects

On going coordination between the City and SCVWD will be conducted through the environmental, design, and construction phases of this project.

TRAIL ALTERNATIVES

Trail alternatives were compiled based on reviews of existing conditions, property ownership, public input, and SCVWD recommendations. Alternatives for trail route, elements, and features are presented to address the following major themes of the project:

Improved Recreation and Transportation Options

Safety, Security, and Privacy

Crossing Busy Streets

TRAIL ALIGNMENT

Five routing alternatives are proposed to address the goals and objectives of the project, the Bike Plan, and Pedestrian Plan.

Route Descriptions

No Build Alternative

The No Build Alternative will not provide bicycle or pedestrian facilities and does not propose any improvements to any existing facilities. This alternative will be evaluated as a control against its peers (Alternatives 1 through 5).

Alternative 1

Alternative 1(Figure 6.1) proposes to follow the alignment of the existing SCVWD maintenance road between Pacifica Drive and E Estates Drive.

A trailhead at the intersection of Torre Avenue and Pacifica Drive designates the beginning of the Regnart Creek Trail. From the trailhead, for about 400 ft, the trail runs east through existing rows of trees along the south side of Library Field.

The trail approaches its second trailhead at Regnart Creek and runs 0.2 miles north along the west side of the creek. This segment is adjacent to chainlink fencing along Library Field and the Cupertino Civic Center. A secondary access point would be provided to connect trail users to the Civic Center.

The trail then turns and continues east for 0.1 miles along the north side of the creek and adjacent to residents' backyard fences. A secondary access point would be provided at the turn, adjacent to Rodrigues Avenue near the existing maintenance access gate.

For 400 ft, the trail will run south of Lozano Lane and adjacent to De Palma Lane on an existing bicycle and pedestrian asphalt pathway and public easement. A retaining wall which comprises the northern bank of the creek abuts this segment on the south. For about 150 ft, the trail will reside next to a drive aisle off of De Palma Lane. Signage, pavement delineation, and separation will be provided to mitigate potential conflicts with vehicles and trail users. Due to constraining conditions, the trail width in this area is nonstandard according to design standards of a Class I Facility set forth by the Caltrans Highway Design Manual (HDM).

The trail, still on the north side of the creek, resumes its alignment on the existing dirt maintenance road and meanders east for 400 ft, adjacent to backyard fences until it encounters S Blaney Avenue, which is a secondary access point. This is the first of two roadway crossings proposed with this alternative. Potential crossing features that will enhance the safety of the crossing are presented later in this chapter.

After crossing S Blaney Avenue, on the east side of the street, a secondary access point is provided. The trail resumes its alignment on the maintenance road which now runs on the south side of the creek adjacent to residents' backyard fences, east for approximately 670 ft.

To avoid the existing SCVWD concrete maintenance ramp, the trail will cross the creek to Wilson Park via a truss bridge. For 300 ft the trail with run east along the southern edge of Wilson Park and then it will once again cross the creek via a truss bridge to align the trail back on the maintenance road. Within this 300 ft segment, a trailhead will provide access to and from Wilson Park.

The trail resumes its alignment on the existing maintenance road for 0.2 miles. This segment is adjacent to backyard fences until it encounters E Estates Drive, which is a secondary access point. This is the second of two roadway crossings proposed with this alternative. The Regnart Creek trail will terminate on the west side of E Estates Drive where it will connect to an existing paved trail that provides access to Creekside Park.

Alternative 2

Alternative 2 (Figure 6.2) is identical to Alternative 1 west of S Blaney Avenue, including the crossing of S Blaney Avenue.

After the S Blaney Avenue crossing, bicyclists will use the existing Class II bike lane north for 150 ft, along S Blaney Avenue. The route turns right onto Hall Court where bicyclists are accommodated on-street, through a parking lot and must share the road with vehicles. Striping and signage would be used to designate shared use of Hall Court and the parking lot. Bicyclists using the trail to travel westbound would be required to turn left onto S Blaney Avenue from the minor-street stop at Hall Court. Pedestrians would use existing sidewalks on S Blaney Avenue and Hall Court.

This alternative then routes bicyclists and pedestrians through existing ±8-ft concrete and asphalt pathways within Wilson Park east to the Wilson Park entrance at Vicksburg Drive. 0.2 miles of pathways within Wilson Park will need to be widened to achieve Class I Facility standards set forth by the HDM. Path widening between baseball diamonds to achieve Class I Facility standards is infeasible to achieve because the path is constrained by existing facilities.

For 500 ft east, this alternative will provide a Class III bike route on Vicksburg Drive. Then for 100 ft south, a Class III bike route will be provided on E Estates Drive. Pedestrians would use existing sidewalks on Vicksburg Drive and E Estates Drive. Crossing features will be provided on E Estates Drive to provide a safe connection to the existing trail that provides access to Creekside Park.

Alternative 3

Alternative 3 (Figure 6.3) is identical to Alternative 1 west of S Blaney Avenue, including the crossing of S Blaney Avenue.

After crossing S Blaney Avenue, on the east side of the street, a secondary access point is provided. The trail resumes its alignment on the maintenance road which now runs on the south side of the creek adjacent to residents' backyard fences east for approximately 670 ft.

To avoid the existing SCVWD concrete maintenance ramp, the trail will cross the creek to Wilson Park via a truss bridge. For 200 ft, the proposed trail with run north through Wilson Park and then connect to an existing park pathway. For 400 ft, the trail will use the existing park pathway east, to the Wilson Park entrance at Vicksburg Drive. The 400' feet of existing ±8-ft wide pathway will need to be widened to achieve Class I Facility standards set forth by the HDM.

For 500 ft east, this alternative proposes a Class III bike route on Vicksburg Drive. Then for 100 ft south, a Class III bike route is proposed on E Estates Drive. Pedestrians would use existing sidewalks on Vicksburg Drive and E Estates Drive. Crossing features will be provided on E Estates drive to provide a safe connection to the existing trail that provides access to Creekside Park.

Alternative 4

Alternative 4 (Figure 6.4) proposes a completely on-street alignment from Pacifica Drive to E Estates Drive.

This route proposes to designate and use a Class III bike route along Pacifica Drive between Torre Avenue and S Blaney Avenue and along E Estates Drive between La Mar Drive and the existing Creekside Park Trail, Class II bike lanes along La Mar Drive, and to use existing Class II bike lanes along S Blaney Avenue. Crossing features will be provided on E Estates Drive to provide a safe connection to the existing trail that provides access to Creekside Park.

Traffic calming measures such as traffic circles, speed bumps, and medians to lower vehicular speeds and increase bicycle safety would be implemented.

This alternative does not propose trail heads or access points as it is continuously accessible in the public right-of-way.

Alternative 5

Alternative 5 (Figure 6.5) proposes an on-street alignment through the implementation of Class II and Class III bicycle facilities.

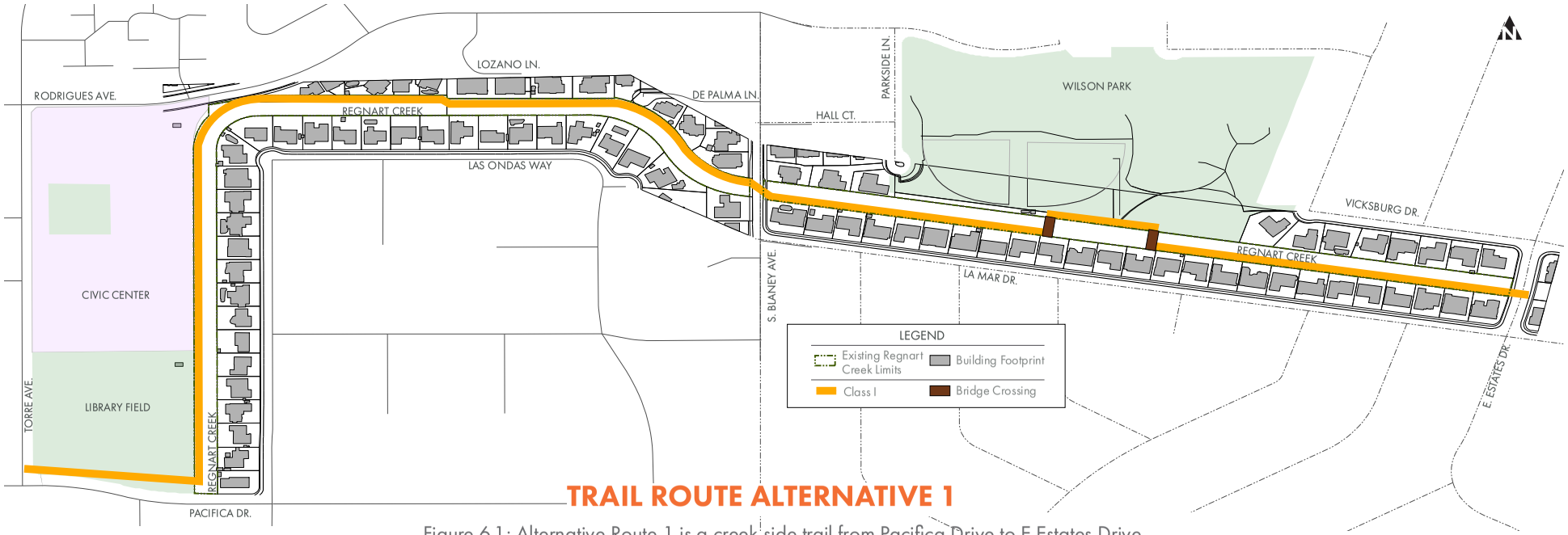
This route proposes to use existing Class II bike lanes along Rodrigues Avenue between Torre Avenue and S Blaney Avenue, and to designate and use Class III bike routes along Rodrigues Avenue between S Blaney Avenue and Parkside Lane, along Parkside Lane, along Vicksburg Drive between Wilson Park and E Estates Drive, and along E Estates Drive between Vicksburg Drive and the existing Creekside Park Trail.

This alternative would route bicyclists and pedestrians through existing ±8-ft concrete and asphalt pathways within Wilson Park between Parkside Lane and Vicksburg Drive. 0.2 miles of pathways within Wilson Park will need to be widened to achieve Class I Facility standards set forth by the HDM. Path widening between baseball diamonds to achieve Class I Facility standards is infeasible to achieve because the path is constrained by existing facilities.

Pedestrians would use existing sidewalks on Vicksburg Drive and E Estates Drive. Crossing features will be provided on E Estates drive to provide a safe connection to the existing trail that provides access to Creekside Park.

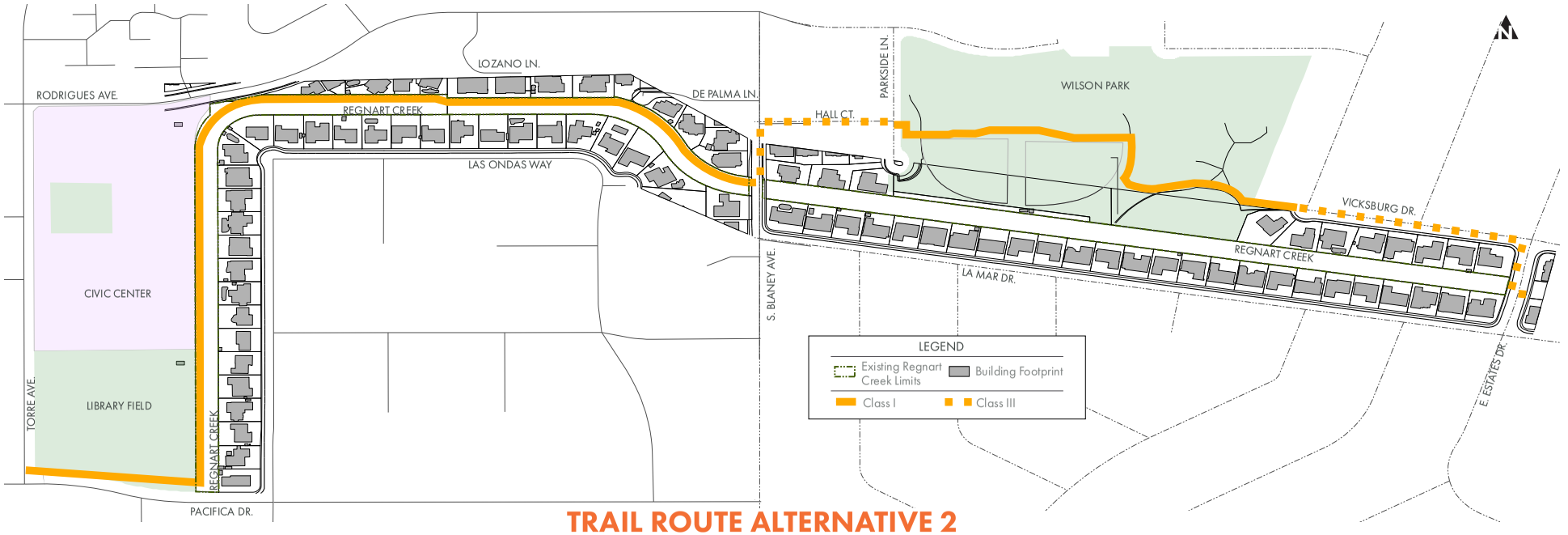
Traffic calming measures such as traffic circles, speed bumps and medians to lower vehicular speeds and increase bicycle safety would be implemented.

This alternative does not propose trail heads or access points as it is continuously accessible in the public right-of-way.



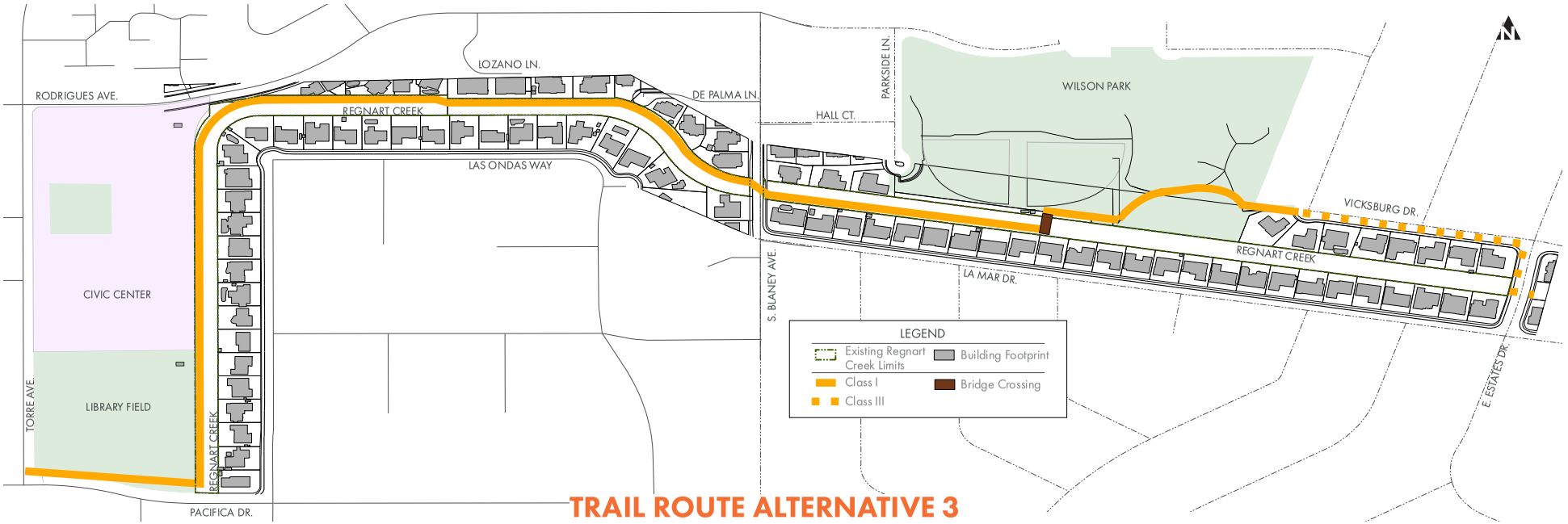
TRAIL ROUTE ALTERNATIVE 1

Figure 6.1: Alternative Route 1 is a creek side trail from Pacifica Drive to E Estates Drive.



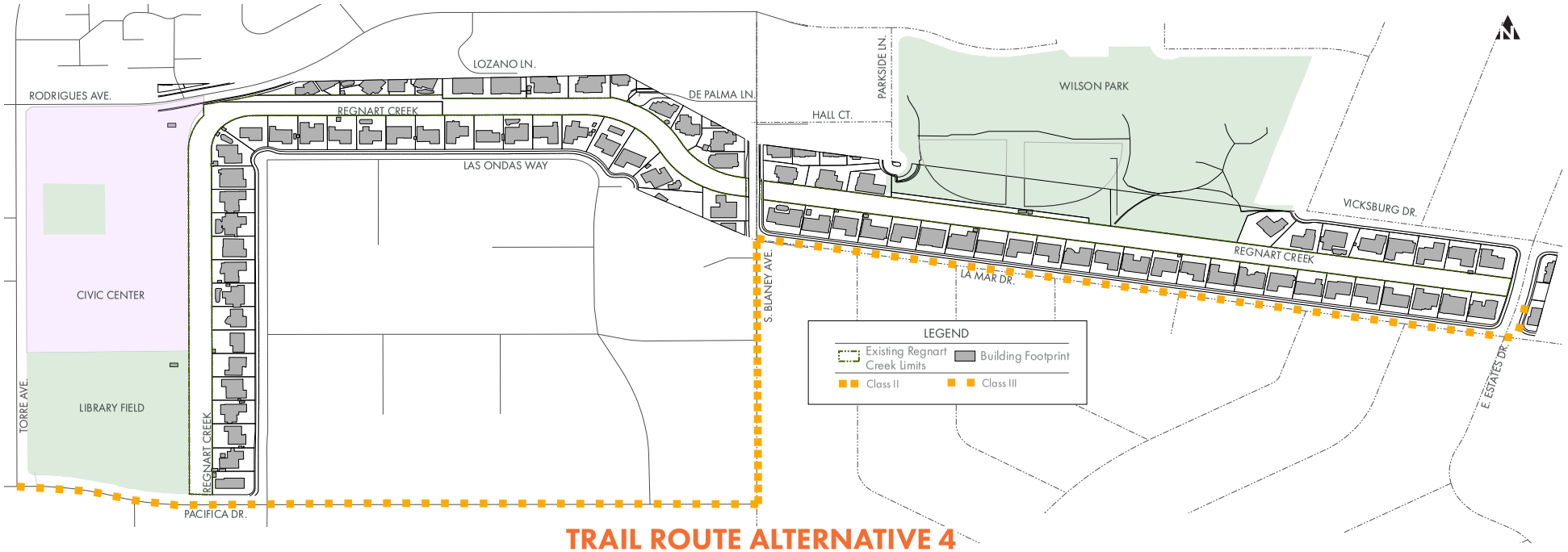
TRAIL ROUTE ALTERNATIVE 2

Figure 6.2: Alternative Route 2 is a creek side trail from Pacifica Drive to S Blaney Avenue. It is on-street and through Wilson Park from S Blaney Avenue to E Estates Drive.



TRAIL ROUTE ALTERNATIVE 3

Figure 6.3: Alternative Route 3 is a creek side trail from Pacifica Drive to Wilson Park. It runs through the park and on-street from Wilson Park to E Estates Drive.



TRAIL ROUTE ALTERNATIVE 4

Figure 6.4: Alternative Route 4 is an on-street route from Torre Avenue to E Estates Drive.

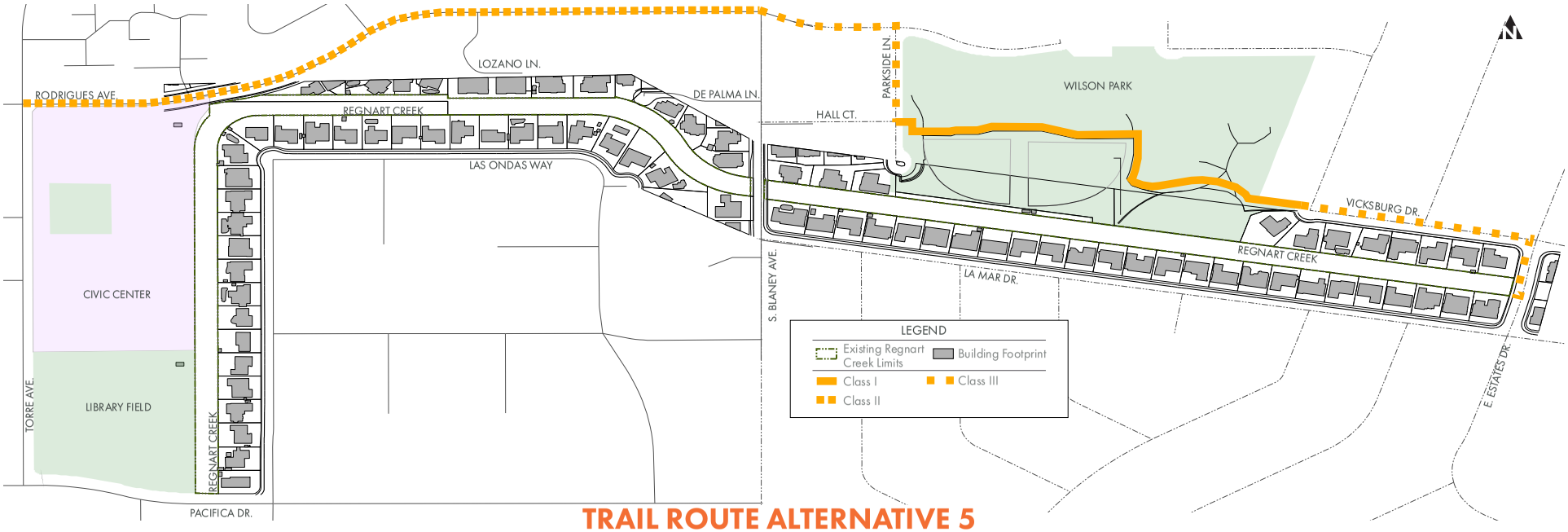


Figure 6.5: Alternative Route 5 is an on-street route from Torre Avenue to Parkside Lane. It is through Wilson Park and on-street from Parkside Lane to E Estates Drive.

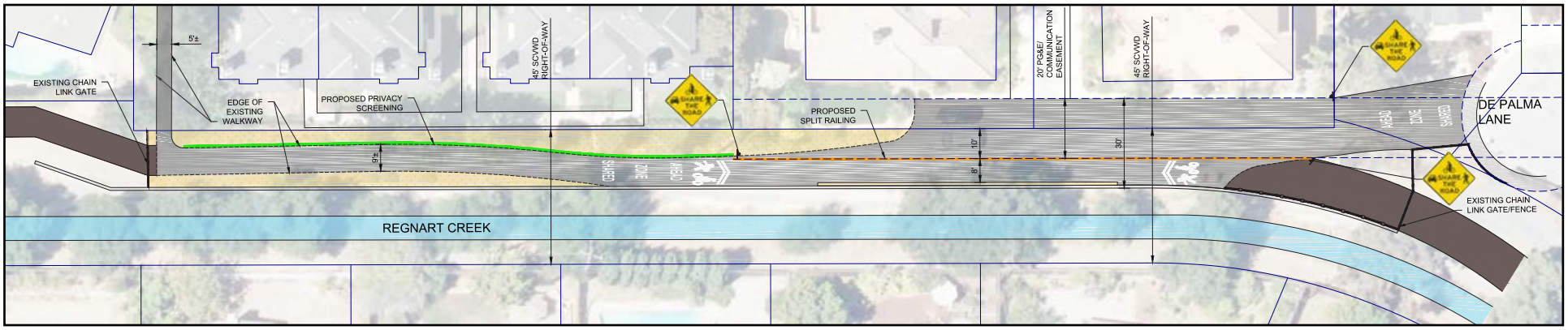


Figure 6.6: Proposed concept for bike/ped path and drive aisle adjacent to Lozano Lane and De Palma Lane

CREEK BRIDGES

Trail Route Alternatives 1 and 3 propose removable bridges, depicted in Figures 6.7, 6.8, and 6.9, that cross the creek allowing for the preservation of an existing SCVWD concrete maintenance ramp.

Bridge Structure

On-going maintenance occurs within and along Regnart Creek, making it imperative for the SCVWD maintenance ramp to remain functional. Bridges are proposed to keep the ramp intact while providing a continuous shared-use path.

To accommodate maintenance vehicles and equipment that will conflict with the bridges, the bridges should be able to be temporarily removable. The bridges' truss structure will be detached from the abutments and lifted via crane that would likely be stationed at Wilson Park. Upon the completion of maintenance, the bridges will be reassembled. The City has agreed to facilitate these temporary removals at the request of SCVWD.

As shown on Figure 6.7, the abutments for the bridges would be above and outside of the banks of the creek. Therefore, the impacts from constructing the bridges would not require regulatory agency permits. Although unlikely due to the bridge width (12 feet) and height (approximately 11 feet) above the creek bed, it is possible that the shade from the bridges could adversely affect the aquatic vegetation beneath the bridges. This would be evaluated in the project-specific biological assessment completed for the project as part of the CEQA process. Depending on the findings of the biological assessment, mitigation (e.g., habitat restoration) and possibly regulatory agency permits could be required.

In the event that the bridges need to be temporarily removed to allow SCVWD to perform maintenance work or construction, the City will coordinate trail closures and bridge removals within 24 hours of SCVWD notification as to not impede SCVWD from performing work.

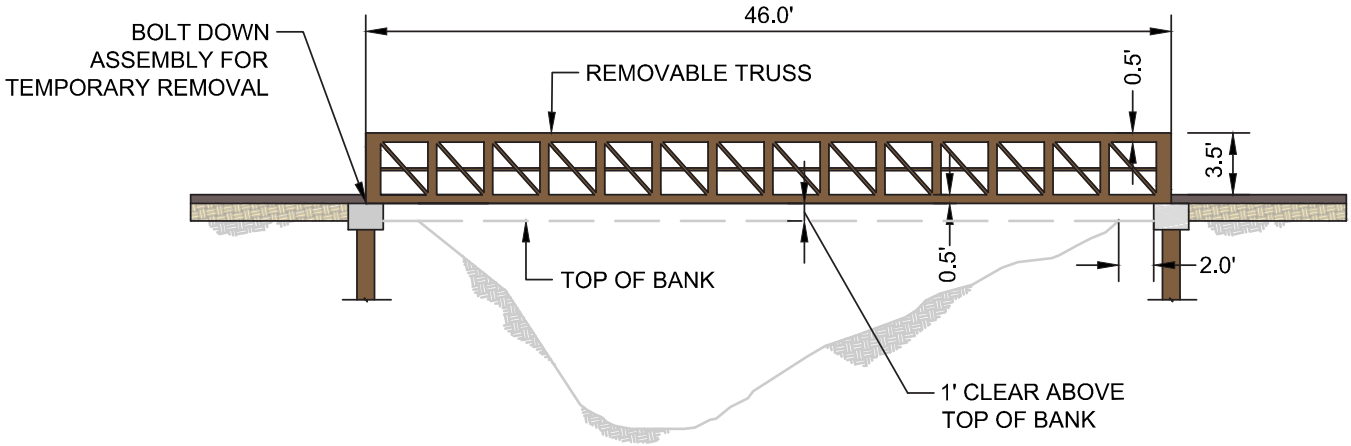


Figure 6.7: Typical Cross Section of Bridge

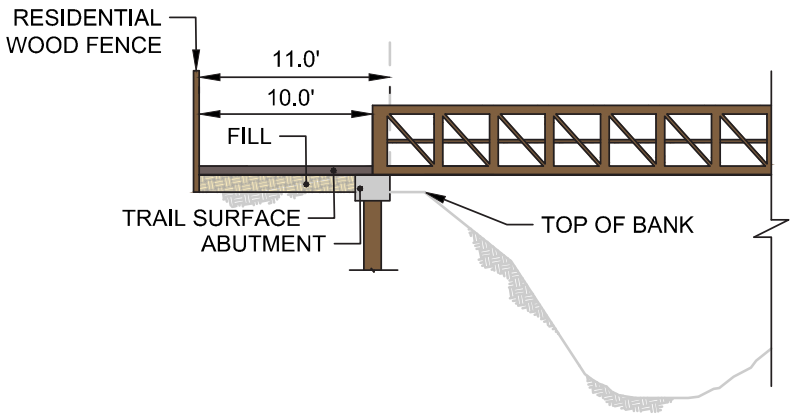


Figure 6.8: Cross Section of Trail at Both Bridge Locations (South bank)

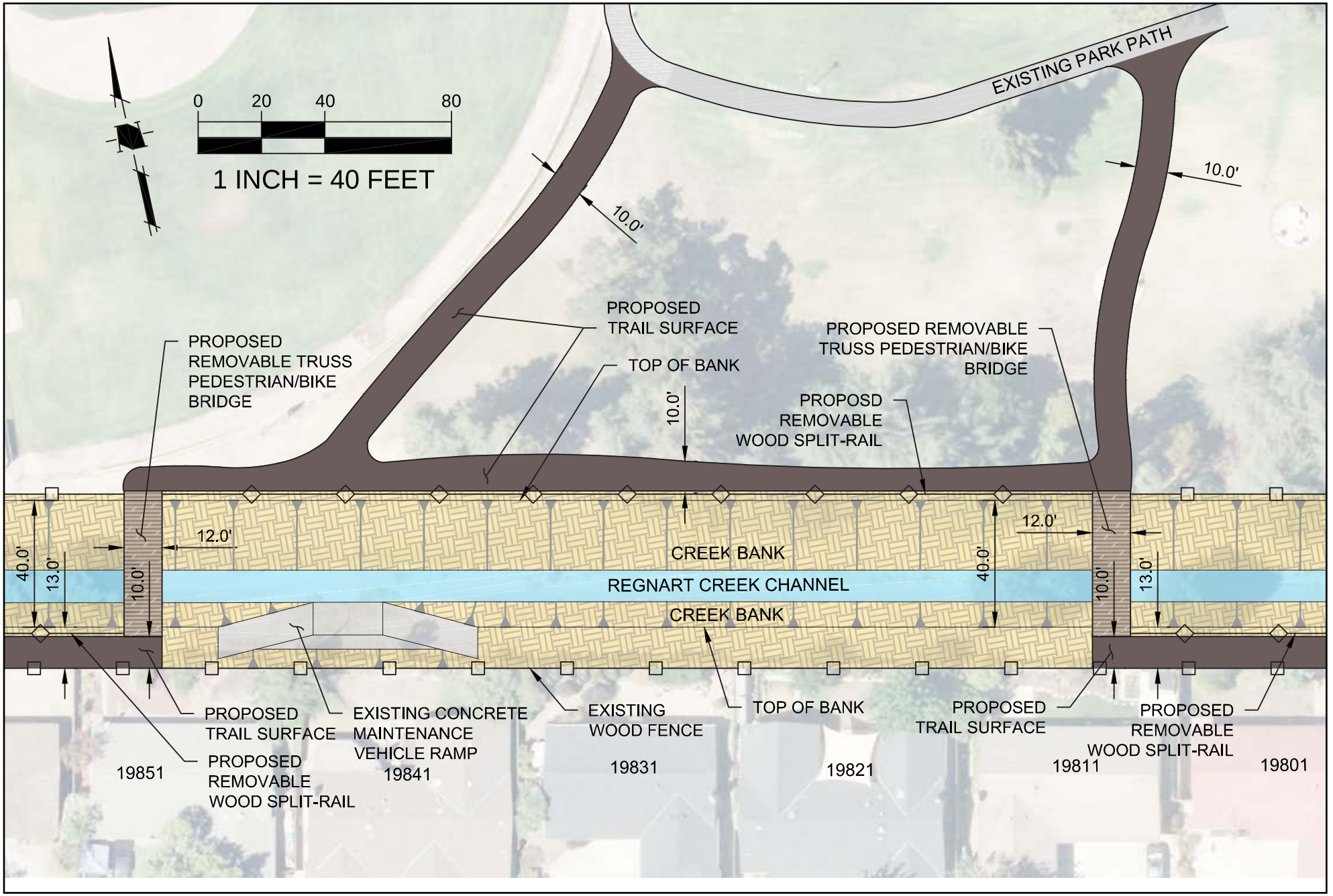


Figure 6.9: Plan View of truss bridges at Wilson Park

CROSS SECTIONS AT VARIOUS ROUTE LOCATIONS

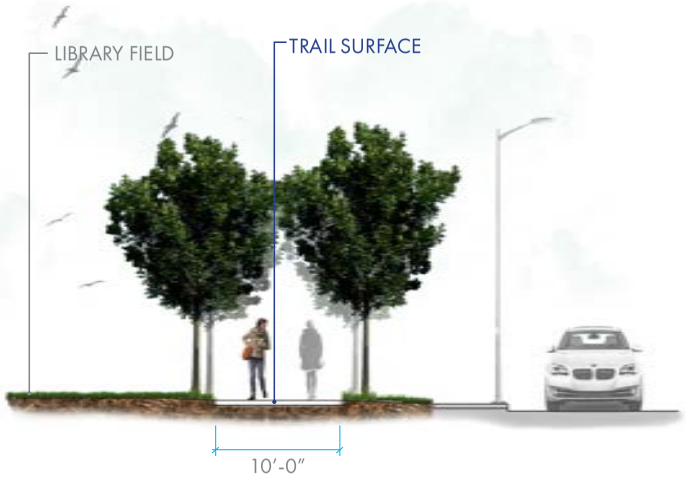


Figure 6.10: Cross Section at Library Field

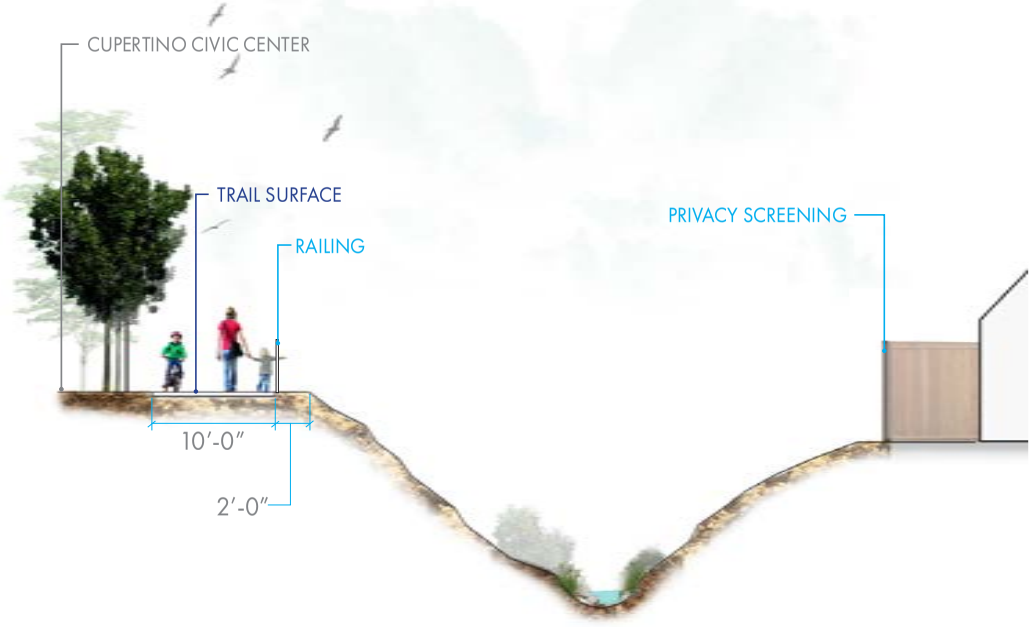


Figure 6.11: Cross Section adjacent to Cupertino Civic Center

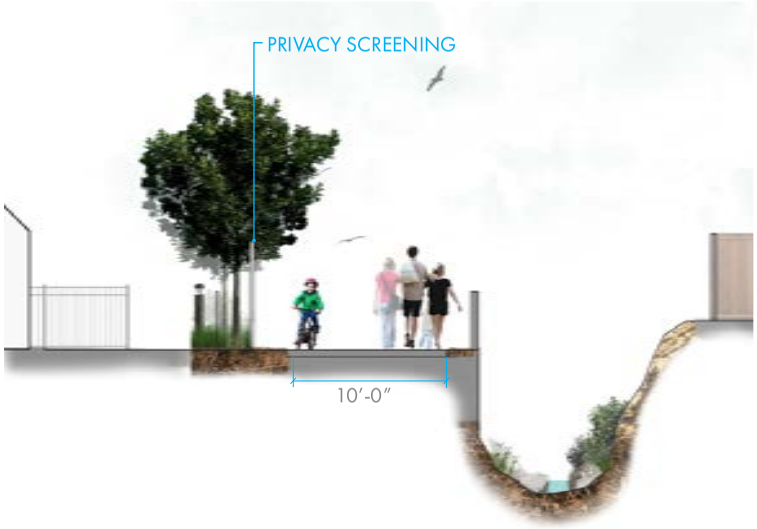


Figure 6.12: Cross Section adjacent to Lozano Lane and De Palma Lane

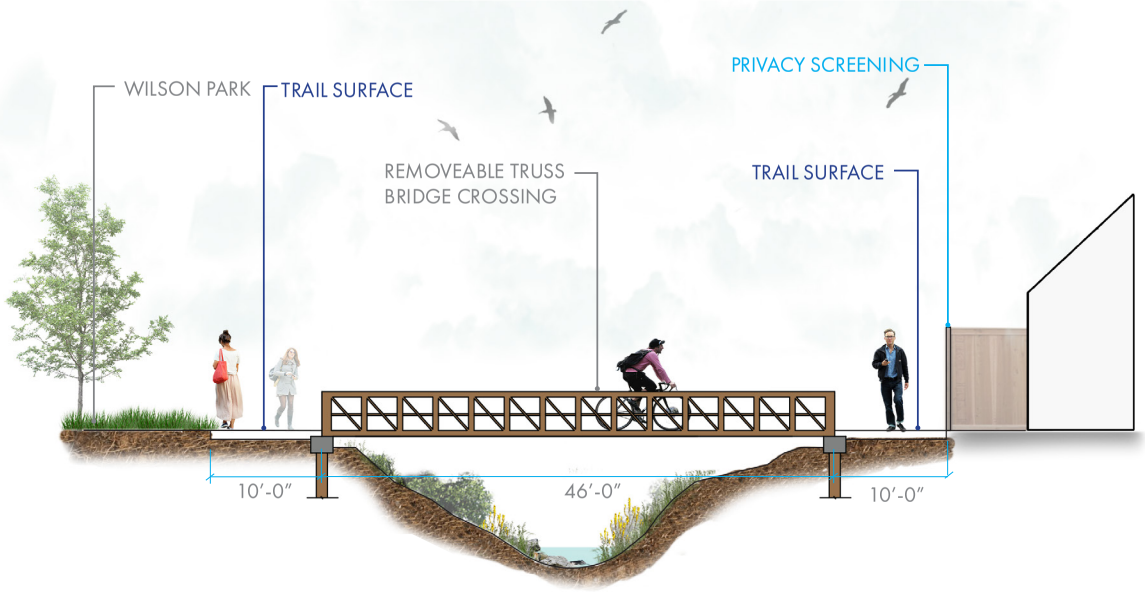


Figure 6.13: Cross Section at the Wilson Park crossing

ALTERNATIVES DISCONTINUED FROM FURTHER EVALUATION

Throughout the conceptual design process, a number of potential alternatives were explored and deemed infeasible, impractical or otherwise undesirable. The following concepts were not evaluated further in the study:

Cantilever Structure at Lozano Lane / De Palma Lane

This concept, depicted in Figure 6.13, explored opportunities to extend a cantilever structure over the creek to increase the amount of usable space within the constrained alignment near Lozano Ln / De Palma Ln. This concept would unreasonably restrict SCVWD maintenance operations. The resulting construction would greatly restrict SCVWD equipment from accessing the creek to remove large objects and debris that could become trapped under the cantilever and may affect safe passage of flood flows. Construction costs for this alternative would be very high relative to other alternatives and construction would significantly impact use of the access corridor, likely requiring closure for an approximately six to eight months.

Box Culvert at Lozano Lane / De Palma Lane

Enclosing the creek in a box culvert would effectively place the creek flows in a concrete lined, rectangular pipe for a portion of the alignment. This alternative, depicted in Figure 6.14, would affect season wetlands and may alter the hydraulic profile of the creek, worsening erosion. In addition to the need for offsite wetlands mitigation, ongoing maintenance of the culvert would require regulatory agency permitting. Cost of construction for this alternative would be very high relative to other alternatives and access during construction would be significantly impacted, likely requiring closure of the existing access path for approximately to six to eight months.

Overcrossing Structures at S Blaney Avenue and/or E Estates Drive

Grade-separated overcrossing structures provide a conflict-free alternative to at-grade roadway crossings. However, to maintain Americans with Disabilities Act (ADA) compliance, an ascending approach 350 to 400 feet long is necessary. This approach could be accommodated by means of switch-back structures which are difficult for bikes to navigate. Obtaining right-of-way would be required from adjoining residences to maintain at-grade maintenance access around the structure without substantially restricting SCVWD maintenance operations. Construction of such a facility would be prohibitively expensive relative to other alternatives. An overcrossing would also introduce substantial visual impact of an elevated structure next to adjacent residents.

Undercrossing Structures at S Blaney Avenue and/or E Estates Drive

Likewise, undercrossing structures provide a safe alternative to at-grade crossings. Similar to the issues noted above, undercrossing structures would require approximately 200-foot-long descending approach ramps. This alternative would require obtaining right-of-way from adjoining residences to maintain at-grade maintenance access around the undercrossing approaches without substantially restricting SCVWD maintenance operations. While visual concerns are not present with undercrossing structures, long, narrow tunnels can be undesirable for users. Additionally, with the proximity of the creek, an undercrossing structure would require special waterproofing and pump systems to discharge storm and ground water. Cost of construction for this alternative would also be prohibitively high relative to other alternatives since the undercrossing structure would probably need to be constructed in 2 or 3 stages to maintain traffic on the through street during an eight to ten month construction duration.

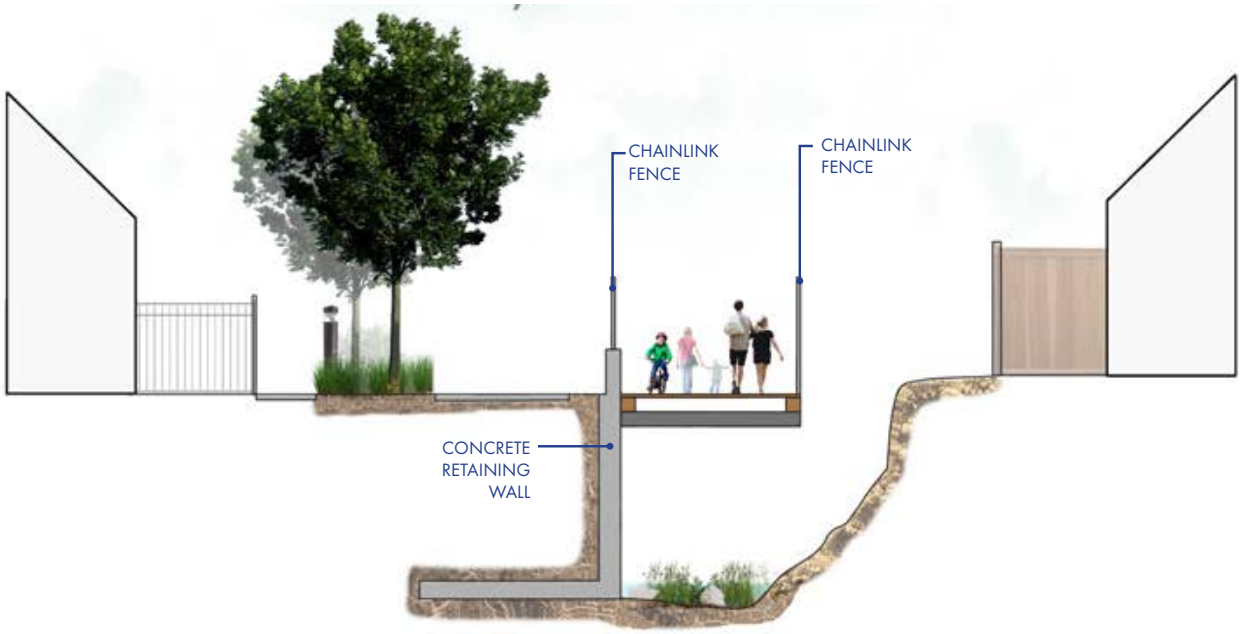


Figure 6.14: Cross Section of cantilever structure

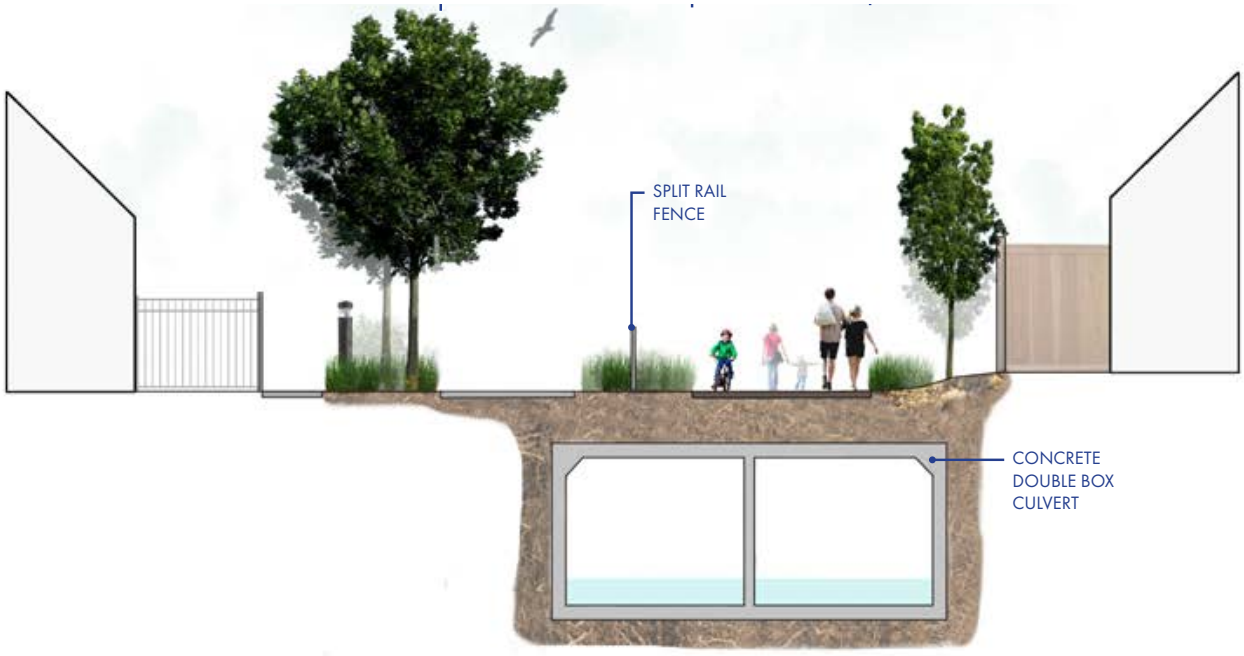


Figure 6.15: Cross Section of box culvert

TRAILHEADS

Trailheads are important elements of a trail which identify access, welcome trail users, and offer information. Proposed access points along the trail are divided into two categories: primary trailheads and secondary access points. These facilities are placed at locations of existing maintenance access gates or locations that promote connectivity to the Civic Center, Wilson Park, and adjacent neighborhoods. Trailhead and access features shall be implemented as to not restrict or limit SCVWD's ability to access the creek for maintenance. The City will be responsible for the maintenance of trailhead features.

Primary trail heads present the opportunity for place-making and guidance through the use of architectural elements, information displays, and wayfinding signage. Architectural elements include decorative concrete paving, seat walls, monuments, and landscaping. Creek information and trail navigation can be presented with large-scale maps mounted on wood posts or architecturally themed guide posts.

Consideration should be given to the inclusion of trash receptacles, bike racks, water fountains, benches, and other amenities on a case-by-case basis.

Unlike primary trailheads, secondary access points are proposed solely for trail user ingress and egress. These access points will have minimal navigational signage and minor architectural treatments.

Each trail access point will have a locking gate for creek maintenance. SCVWD will notify the City prior to closure of the trail facility for necessary outreach and notification to trail users. The SCVWD will close and lock gates while maintenance operations are actively underway.

Trailheads and access locations should be posted with regulatory signs identifying trail hours as dawn to dusk and listing activities which are not permitted on the trail.

Decorative pavement


Information Displays

Wayfinding signs

Decorative seat walls

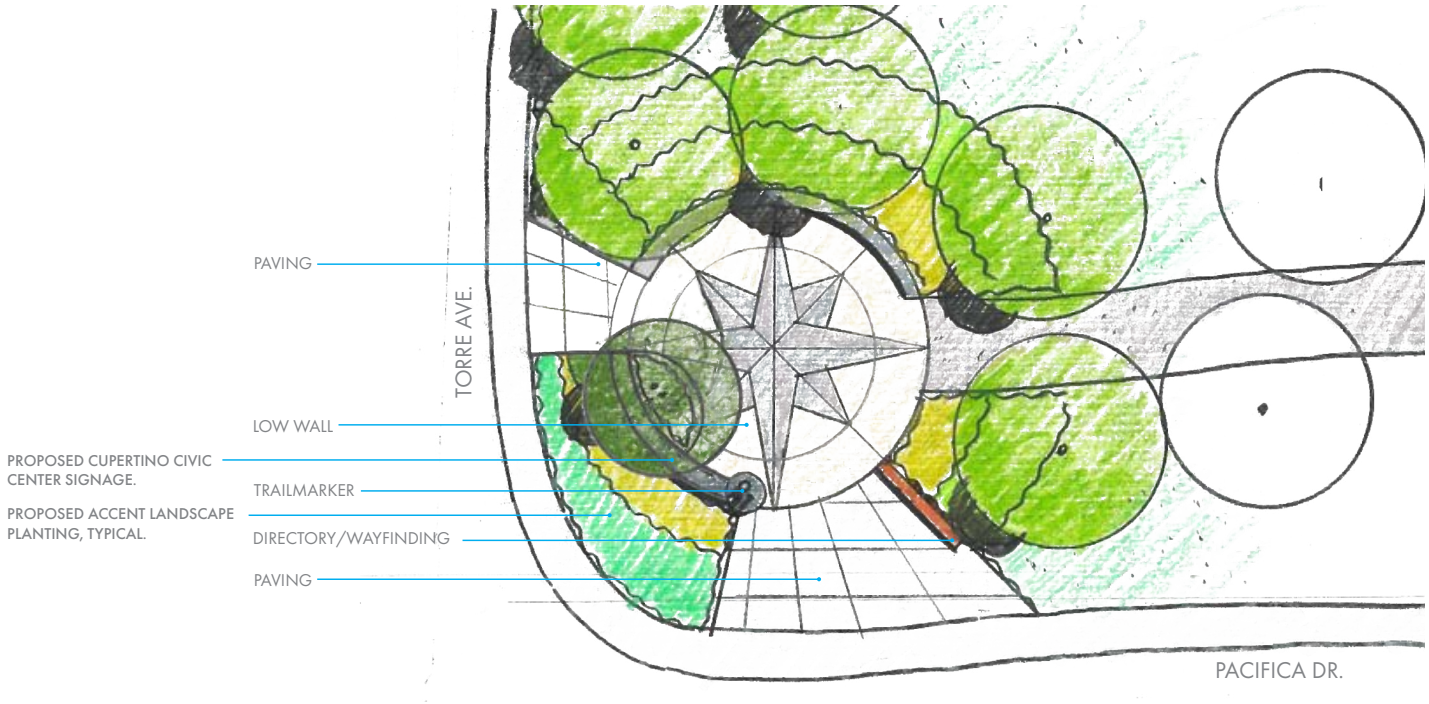


Figure 6.16: Trailhead features the intersection of Pacifica Avenue and Torre Avenue

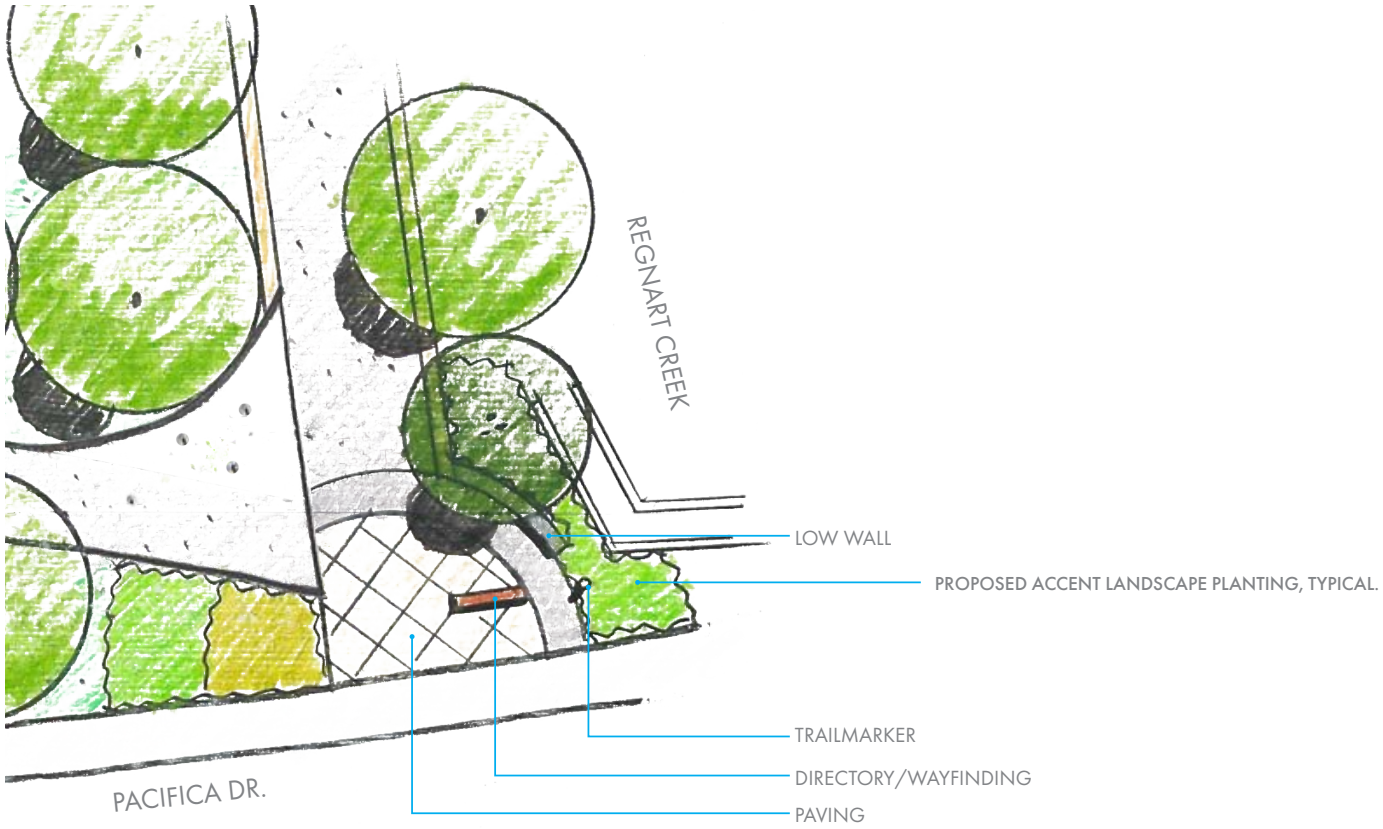


Figure 6.17: Secondary Access features the intersection of Pacifica Avenue and Regnart Creek

ON-TRAIL FEATURES

On-trail features are identified to define the Regnart Creek Trail and address stakeholder, community, and staff interests and requirements.

Privacy

Converting the maintenance road to a public-use trail introduces privacy concerns for some residents with homes along the trail route. Several screening solutions with varying costs and functionalities are presented to help mitigate visual impacts.

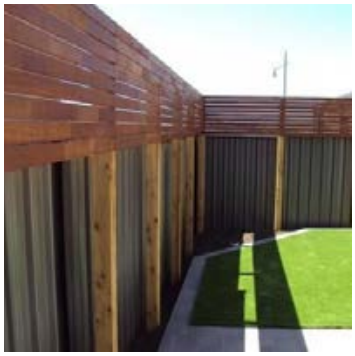
After field review, 15 properties have been identified where existing access road grades, existing fence heights, and existing fence conditions may be modified or enhanced for adequate visual screening for residents. These properties are generally along Farallone Dr, Rodrigues Avenue, Lozano Lane, La Mar Drive, and Vicksburg Drive.

Existing wood fencing can be heightened with addition of a free-standing lattice that would add two or three feet of height to increase privacy. These free-standing extensions would be constructed on the creek side of the residential fencing as to not encroach upon private property. Cost for this free-standing extension is approximately $20 per linear foot.

As a more costly, but durable alternative to fence extensions, 7-foot tall replacement fencing, at approximately $50 per linear foot, could be implemented with construction of the trail. For properties beyond those identified in the study, the City may choose to enter into a 'Good Neighbor' Program where replacement fences may be constructed under a cost sharing agreement between the City and the property owner. The City will work with each resident should they request a fence replacement. The SCVWD currently operates a similar program where fences in poor condition may be replaced with up to $14.40 per linear foot contributed by SCVWD. Maintenance of the fence would be the responsibility of the property owner.

Concrete soundwalls provide a robust privacy option that will also provide noise mitigation. While invasive and more costly, at approximately $100 per linear foot, this privacy option offers sound attenuation.

Privacy enhancements can also be achieved by constructing taller decorative screening elements. Metal and acrylic panels can be aesthetically pleasing and provide varied visual screening as their transparency is highly customizable. These fencing options costs approximately $100-$200 per linear foot.



Free-standing wood fence extension

Metal panel screening

Acrylic panel screening

Soundwall

Security

To potentially discourage and confront suspicious activities, the City could increase its existing bicycle and vehicular sheriff patrols in the area.

To capture activity along the corridor, security cameras could be installed along the trail, at access points, or where feasible.

In the event that emergency or medical services are needed along the trail, emergency phone towers could be added at trailheads or intermediate points along the alignment. Emergency phones provide an alternative to mobile phones and serve as a deterrent for illicit activity.

In addition to the security measures mentioned above, volunteers groups supportive of the project (Walk-Bike Cupertino and the Silicon Valley Bike Coalition) could provide educational programs and workshops to promote trail security and safety.

Bike police patrols

Emergency phone

Security camera

Safety

Regnart Creek within the project area has creek banks of a 3:1 (H:V) slope or steeper. Protection measures should be implemented to protect trail users from accidentally or deliberately accessing the creek.

In order to preserve SCVWD maintenance access, creek side railings or fencing shall be removable. They shall also be placed approximately 2 feet from the top of bank as to not contribute to creek erosion and slope failure. Preliminary discussion with SCVWD maintenance staff has identified the following areas shall be made removable; however, further discussion to refine or expand these areas is necessary.

- ± 80 feet at Rodrigues Avenue
- ± 80 feet at Pacifica Drive
- Entire reach from S Blaney Avenue to E Estates Drive

Four-foot tall wood or steel split railing or taller vinyl coated chain link fencing is proposed along the top of the creek bank for the entirety of the trail to act as a barrier between the trail and the creek.

Chainlink fencing

Metal split railing

Wood split railing

Trail Surfacing

Proposed trail surface material should consider user comfort, accessibility, durability, longevity, maintenance costs, and impacts to water quality.

Decomposed granite is a possible trail material that is a soft surface complied of granite aggregates and provides a natural, rustic look.

Asphalt and concrete pavement trail materials provide hard surfaces that are often used in urban areas. Stormwater runoff created by these surfaces require stormwater treatment measures as required by Provision C.3 of the Municipal Regional Permit.

Porous pavements are user-freindly surfaces that also manage stormwater runoff. Infiltration associated with these surfaces can provide exemption to stormwater treatment requirements.

Decomposed granite path

Concrete path

Asphalt path

Porous pavement path

ROADWAY CROSSINGS

The Regnart Creek Trail should include upgrades to accommodate pedestrian/bicyclist crossings where the trail route intersects S Blaney Avenue and E Estates Drive. These mid-block roadway crossings, if left unimproved, are considered uncontrolled pedestrian crossings because designated walkways (trails) intersect the roadway at locations where there is no traffic control through a signal or STOP sign. Implementation of various countermeasures are proposed to increase pedestrian/bicyclist visibility, reduce crossing distances, and slow down vehicular traffic. The tools used to accomplish these goals include:

Crosswalk Visibility Enhancements

High-visibility crosswalks may include a variety of crosswalk striping designs, such as ladder, continental, or colorful and patterned crosswalks. A high-visibility crosswalk is much easier for an approaching motorist to see than the traditional markings. The high-visibility crosswalks may be supplemented with advance warnings and pedestrian crossing warning signs.

Advance Yield Here To (Stop Here For) Pedestrians signs may be placed between 30 and 50 feet in advance of the marked crosswalk along with the stop line or "shark's teeth" yield line. This is a potential treatment for any uncontrolled pedestrian crossing.

Raised Crosswalks

Raised crosswalks function as an extension of the sidewalk and allow a pedestrian to cross the street at a constant grade. The raised roadway acts as a speed hump, forcing drivers to slow down. A raised crosswalk is a potential treatment on roads with speeds of 30 mph or less. Raised crossings are generally avoided on truck routes, emergency routes, and arterial streets.

Pedestrian Refuge Islands

A pedestrian island provides a place for pedestrians to stand and wait for motorists to stop or yield. This countermeasure is highly desirable for mid-block pedestrian crossings as it shortens durations for exposed users and adds a "pinch point" encouraging vehicles to slow down.

Chicanes

A chicane is a geometric feature used at trail approaches to roadway crossings to slow bicyclists and pedestrians down. While passing the chicane, one has to turn to zig-zag and navigate a narrow alignment encouraging slower speeds. To provide maintenance vehicle access to the trail, chicanes obstructions shall be removable.

Curb Extensions

A curb extension (bulbout) extends the sidewalk or curb line into the street or parking lane, thus reducing the street width, improving sight distance between the driver and pedestrian, and reducing speeds of motorists. A curb extension is a potential treatment for any uncontrolled pedestrian crossing, particularly where parking lanes exist. Curb extensions should not extend into paths of travel for bicyclists.

Rectangular Rapid Flash Beacons (RRFBs)

RRFBs are user-actuated amber LEDs that supplement warning signs at unsignalized intersections or mid-block crosswalks. They can be activated by pedestrians or bicyclists by a push button at the crossings.

High-visibility crosswalk

Raised crosswalk

Median refuge island

Midblock bulbout

Rectangular rapid flash beacon (RRFB)

TRAIL EVALUATIONS & RECOMMENDATIONS

EVALUATION

In order to effectively determine the preferred alternative, the project evaluated proposed trail alternatives against several measures of effectiveness. Alternatives were qualitatively considered, relative to their peers, to determine their effectiveness in meeting the purpose and need of the project. These factors include:

Purpose and Goals of Bike Plan and Pedestrian Plan: Does the alternative meet the purpose and goals of Cupertino's Bike and Pedestrian Plans?

Access and Directness: Does the alignment provide frequent and convenient access to adjacent destinations? Is the alignment direct and intuitive?

User Safety: Does the alternative increase bicycle and pedestrian safety through reduction in vehicle conflict points and reduction in rider stress levels?

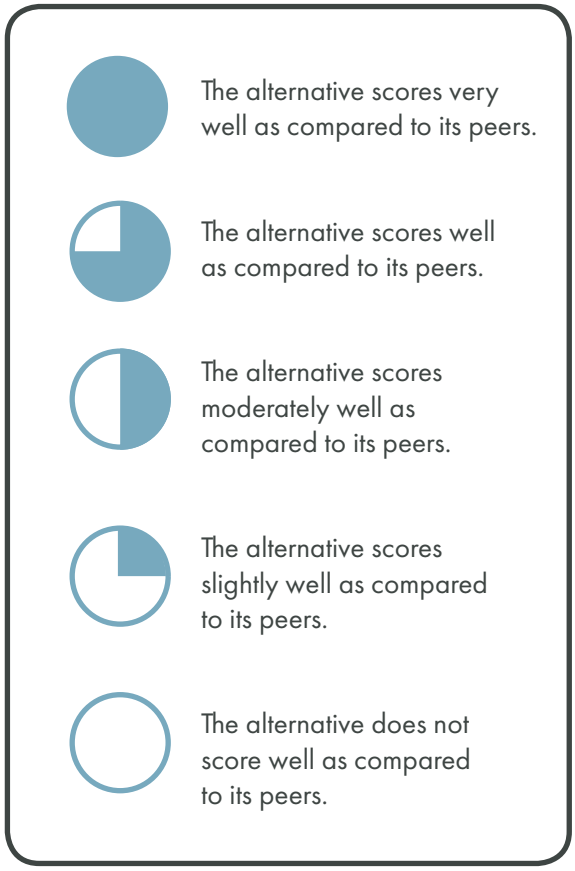
Environmental Considerations: How significant are the impacts to the natural environment including but not limited to biological, historic, cultural and archaeological resources, wetlands, noise and air quality? Are required mitigation efforts reasonable and feasible?

Santa Clara Valley Water District (SCVWD) Maintenance Access: Does the alternative degrade or hinder SCVWD maintenance access to the creek?

Cost: How significant are the anticipated project costs?

Scoring Rubric

Each of the factor's scoring is developed relative to the other alternatives. Factors are not weighted equally and are weighted on the relative importance to their peers. Each factor was scored qualitatively using the rubric below:



TRAIL ALIGNMENT EVALUATIONS

No Build Alternative By means of no construction, the No Build Alternative inherently scores well compared to its peers for cost, preservation of maintenance access and impacts to the environment. However, the No Build Alternative does not meet the goals of the Bike and Pedestrian Plans, nor does it provide increased bicycle and pedestrian connectivity or increase user safety. The No Build Alternative fails to meet the purpose and need of the project and therefore is not recommended for further study.

Category	Score	Rationale
Purpose & Goals of Bike & Pedestrian Plans		The No Build Alternative does not meet the goals set forth in the Bike Plan.
Access & Direction		The No Build Alternative does not offer convenient access to local destinations. Existing access is not improved nor hindered.
User Safety		The No Build Alternative does not increase safety or reduce stress levels for existing pedestrians and bicyclists.
Environmental Considerations		The No Build Alternative will not impact Regnart Creek or the surrounding environment. However, this alternative does not promote sustainable, active transportation.
SCVWD Maintenance Access		The No Build Alternative will not impact SCVWD maintenance access for Regnart Creek.
Cost		The No Build Alternative will not implement improvements, therefore no cost is associated with this alternative.

Table 7.1: Evaluation table for the No Build Alternative

Alternative 1 meets the intent of the Bike and Pedestrian Plans and is consistent with the vision statements contained in these plans. The Cupertino Loop Trail identifies this route as a shared-use trail along Regnart Creek that provides a direct, off-street connection between the Cupertino Civic Center, Creekside Park, and access to Wilson Park. Because this route is mostly off-street, the alternative scores substantially well for user safety as the likelihood of vehicle- cyclist/pedestrian collisions is greatly reduced. The alternative scores lower than its peers for cost, primarily driven by the presence of two bridge crossings.

Category	Score	Rationale
Purpose & Goals of Bike & Pedestrian Plans		Alternative 1 meets the goals set forth in the Bike plan and is consistent with the recommendation to implement a creek side path along Regnart Creek.
Access & Direction		Alternative 1 offers a direct path that connects the Cupertino Civic Center to Creekside Park with frequent access points along the trail.
User Safety		Alternative 1 is primarily an off-street facility that greatly reduces the exposure of bicyclists and pedestrians to vehicular traffic.
Environmental Considerations		Alternative 1 contains bridge crossings and creekside trails which may affect the existing environment. Impacts will be mitigated or less than significant.
SCVWD Maintenance Access		Alternative 1 will use the existing SCVWD maintenance access road but does not propose to restrict SCVWD access. Bridges will need to be temporarily removed for creek access.
Cost		Alternative 1 contains bridge crossings that contribute to high initial costs.

Table 7.2: Evaluation table for the Trail Alternative 1

Alternative 2 is only partially along Regnart Creek. It does not fully meet the intent or vision contained in the Bike and Pedestrian Plans. This alternative meanders near Wilson Park and requires use of on-street facilities on S Blaney Avenue. The alternative subsequently scored well for access and direction, environmental considerations, and SCVWD maintenance access.

Category	Score	Rationale
Purpose & Goals of Bike & Pedestrian Plans		Alternative 2 partially meets the goals set forth in the Bike plan and is not fully consistent with the recommendation to implement a creek side path along Regnart Creek.
Access & Direction		Alternative 2 does not offer a direct path that connects the Cupertino Civic Center to Creekside Park. Connection to Wilson Park is accommodated. Part of the route is on-street.
User Safety		Alternative 2 is partially on-street, exposing bicyclists to heavy traffic on S Blaney Avenue and the Wilson Park parking lot.
Environmental Considerations		Alternative 2 will a have minimal environmental impacts to the creek as environmental mitigation will be implemented.
SCVWD Maintenance Access		Alternative 2 will use the existing SCVWD maintenance access road for a portion of its route but does not propose to restrict SCVWD access.
Cost		Alternative 2 contains improvements to existing park facilities that contribute to high initial costs.

Table 7.3: Evaluation table for the Trail Alternative 2

Alternative 3 is only partially along Regnart Creek. It does not fully meet the intent or vision contained in the Bike and Pedestrian Plans. This alternative is mostly creekside but meanders near Wilson Park and requires use of on-street facilities on Vicksburg Drive. The alternative scores moderately for cost, primarily driven by the presence of one structure.

Category	Score	Rationale
Purpose & Goals of Bike & Pedestrian Plans		Alternative 3 partially meets the goals set forth in the Bike plan but is not consistent with the recommendation to implement a creek side path along Regnart Creek.
Access & Direction		Alternative 3 does not offer a direct path that connects the Cupertino Civic Center to Creekside Park. Connection to Wilson Park is accommodated. Part of the route is on-street.
User Safety		Alternative 3 is partially on-street, exposing bicyclists to traffic.
Environmental Considerations		Alternative 3 contains bridge crossings and creekside trails which may affect the existing environment. Impacts will be mitigated or less than significant.
SCVWD Maintenance Access		Alternative 3 will use the existing SCVWD maintenance access road for a portion of its route but does not propose to restrict SCVWD access.
Cost		Alternative 3 contains a bridge crossing that contributes to high initial costs.

Table 7.4: Evaluation table for the Trail Alternative 3

Alternative 4 is entirely on-street. Subsequently, this alternative does not meet the intent or vision contained in the Bike and Pedestrian Plans. It scores poorly in regards to user safety as bicyclists are exposed to vehicular traffic for the entire route. The alternative scores substantially well regarding environmental considerations and SCVWD maintenance access as it has no impacts to Regnart Creek.

Category	Score	Rationale
Purpose & Goals of Bike & Pedestrian Plans		Alternative 4 does not meet the goals set forth in the Bike plan is not consistent with the recommendation to implement a creek side path along Regnart Creek.
Access & Direction		Alternative 4 does not offer a direct path that connects the Cupertino Civic Center to Creekside Park. There is no access to Wilson Park. The route is completely on-street.
User Safety		Alternative 4 is on-street, exposing bicyclists to traffic.
Environmental Considerations		Alternative 4 does not impact Regnart Creek and minimally impacts the surrounding environment. However, this alternative does not promote sustainable, active transportation.
SCVWD Maintenance Access		Alternative 4 will not impact SCVWD maintenance access for Regnart Creek.
Cost		Alternative 4 cost is comprised of relatively affordable pavement stripes and markings, speed bumps, median islands and traffic circles.

Table 7.5: Evaluation table for the Trail Alternative 4

Alternative 5 is mostly on-street. A portion of the alignment goes through Wilson Park. Subsequently, this alternative does not meet the intent or vision contained in the Bike and Pedestrian Plans. As bicyclists are exposed to vehicular traffic for most of the alignment, this alternative does not score well for user safety. The alternative scores substantially well regarding environmental considerations and SCWVD maintenance access as it has no impacts to Regnart Creek.

Category	Score	Rationale
Purpose & Goals of Bike & Pedestrian Plans		Alternative 5 does not meet the goals set forth in the Bike plan is not consistent with the recommendation to implement a creek side path along Regnart Creek.
Access & Direction		Alternative 5 does not offer a direct path that connects the Cupertino Civic Center to Creekside Park. The route is mostly on-street.
User Safety		Alternative 5 is partially on-street, exposing bicyclists to traffic.
Environmental Considerations		Alternative 5 does not impact Regnart Creek and minimally impacts the surrounding environment. However, this alternative does not promote sustainable, active transportation.
SCVWD Maintenance Access		Alternative 5 will not impact SCVWD maintenance access for Regnart Creek.
Cost		Alternative 5 cost is comprised of relatively affordable pavement stripes and markings, speed bumps, median islands and traffic circles.

Table 7.6: Evaluation table for the Trail Alternative 5

TRAIL ALIGNMENT RECOMMENDATION

The study recommends progression of design and environmental clearance for Alternative 1. This alternative provides a direct connection to the Cupertino Civic Center, Wilson Park, and Creekside Park, consistent with the Bike and Pedestrian Plans. Aside from at-grade roadway crossings, this multi-use path is completely separated from streets, minimizing exposure to traffic and vehicular conflicts. State-of-the-industry practices proposed in this study must be taken regarding safe roadway crossings and the preservation of SCVWD maintenance access throughout the trail route.

Safety, privacy, and trail maintenance are among the concerns of Lozano Lane and De Palma Lane residents whose frontages contain limited visual and noise separation from the adjacent proposed trail route. To mitigate these issues, the City will work closely with these residents to implement an appropriate screening solution. As the trail will be adjacent to a public drive aisle off De Palma Lane, separation between the trail and the drive aisle and appropriate signage will be implemented.

The SCVWD and the City would enter into a joint use agreement to set forth terms and conditions regarding the Regnart Creek Trail. The agreement would expound upon the responsibilities and liabilities of the parties entering the agreement. As the owner of the Regnart Creek Trail, the City would be the responsible party in regards to maintenance and liability of the trail. The City would be responsible for trail maintenance that includes, but is not limited to, trash clean up, trail surface repairs, and repairs of roadway crossing features. Mitigation for any loss or adverse impacts to the trail is the responsibility of the City. The City is also responsible for coordination with CEQA to provide pertinent documentation regarding trail closures associated with flood protection work performed by SCVWD. Damage and vandalism of City and SCVWD facilities arising from public use shall be the responsibility of the City. The City may be held liable for injuries which are caused as a result of the breach of its duty to maintain a recreational trail in a reasonably safe condition for travel.

As the owner of the creek, SCVWD would preserve its responsibility of creek maintenance that would includes, but is not limited to, bank repairs, flood mitigation, and vegetation work. SCVWD would not be responsible for City-owned facilities. PG&E and AT&T, having joint facilities along the trail route, would continue as the responsible parties for maintaining their facilities. Coordination between these agencies is imperative to the construction and maintenance of Regnart Creek, the trail, and utilities.

	Purpose & Goals of Bike & Pedestrian Plans	Access & Directness	User Safety	Environmental Considerations	SCVWD Maintenance Access	Cost
No Build Alternative						
Alternative 1						
Alternative 2						
Alternative 3						
Alternative 4						
Alternative 5						

Table 7.7: Summary of Trail Alignment Alternative evaluations

TRAIL SURFACING EVALUATION & RECOMMENDATION

Trails made of decomposed granite would be difficult to walk or bike on when wet and are prone to rutting, particularly under vehicular loads. High and on-going maintenance is associated with this surface as it is susceptible to erosion and has difficulties maintaining consistent surface quality. Additionally, meeting ADA requirements is impractical for such a variable surface.

Trails composed of asphalt pavement and concrete pavement could meet ADA requirements and are desirable for pedestrians and bicyclists as they provide a smooth surface for their users in various weather conditions. High costs are associated with these surfaces initially, however the longevity of the pavements yield low to moderate maintenance costs in the long term. Stormwater runoff produced by these pavements would need to be directed away from the creek and into adjacent areas for treatment compliant with Provision C.3 of the Municipal Regional Permit. With limited right-of-way, C.3 treatment measures could become costly and would require routine maintenance and periodic replacement. In some narrow areas, C.3 treatment may be infeasible.

Porous pavement is the recommended trail surface material for the proposed Regnart Creek Trail Alternative. Porous paving behaves in the same manner as impervious asphalt and concrete paving in regard to smooth surfacing and user comfort, however it does not have the stormwater implications and requirements triggered by impervious surfaces and runoff. Porous surfacing mimics natural infiltration of the surrounding terrain and does not increase stormwater runoff. Any residual stormwater that does not permeate the pavement will be directed away from Regnart Creek and into existing swales, ditches, and drainage systems. Porous pavements are exempt under Provision C.3. Long-term maintenance efforts for this type of surfacing require sweeping two to four times annually and vacuuming only if needed in the event that the routine sweeping does not maintain infiltration rates. Maintenance costs can vary based on site specific conditions but is typically not substantially more than traditional asphalt.

The porous paved trail will be designed to withstand maintenance vehicle loads. Swales, ditches, and drainage systems will not restrict or limit maintenance vehicle access widths.

ROADWAY CROSSINGS EVALUATION & RECOMMENDATION

With high speeds and heavy peak hour volumes, the S Blaney Avenue crossing represents a challenging location to balance the needs of existing vehicular travel and proposed trail users. Solutions proposed carefully considered possible degradation of vehicular travel along S. Blaney Ave.

The S Blaney Avenue crossing configuration proposes installation of an RRFB, a high visibility crosswalk and an offset median refuge island at the creek crossing. Additionally, it proposes installation of a curb return bulb out in the northeast quadrant of the Blaney Avenue/ La Mar Drive intersection to slow down right-turning vehicles from La Mar Drive.

E Estates Drive, although less traveled than Blaney Avenue, warrants upgrades to the new mid-block crossing which would result from proposed creek side alignment alternatives.

The E Estates Drive crossing proposes an RRFB, a raised crosswalk, mid-block bulbouts, and adds curb return bulbouts at both the northeast corner of E Estates Drive and La Mar Court and the southwest corner of E Estates Drive and Vicksburg Drive. These additions will help to slow down right-turning vehicles approaching the mid-block crossing.

RECOMMENDED S BLANEY AVENUE ROADWAY CROSSING

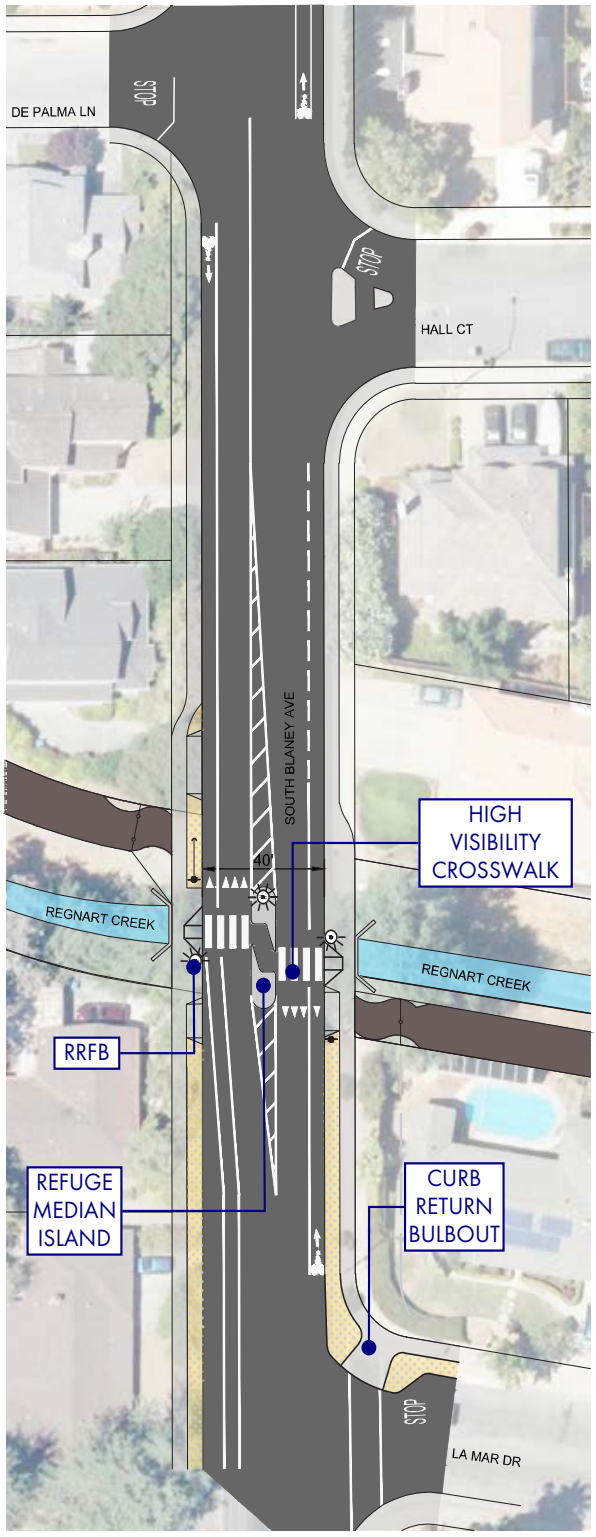


Figure 7.1: Roadway crossing features at S Blaney Avenue

RECOMMENDED E ESTATES DRIVE ROADWAY CROSSING

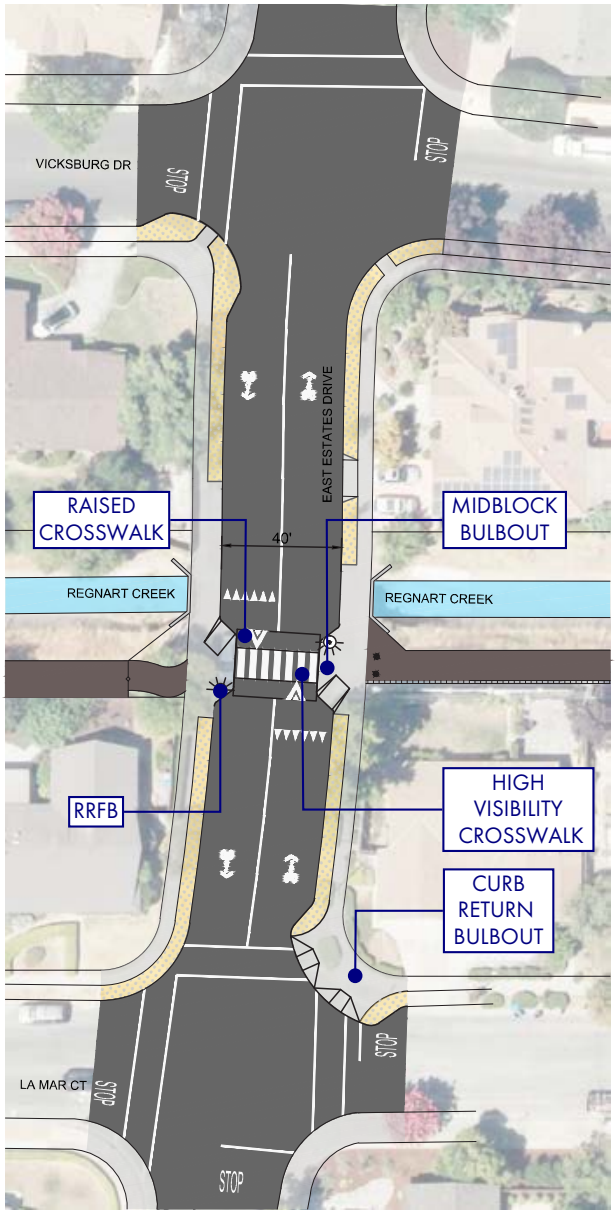


Figure 7.2: Roadway crossing features at E Estates Drive

PRIVACY SCREENING EVALUATION & RECOMMENDATION

The need for privacy screening varies along the proposed trail corridor. For some segments, installation of screening adds great benefit. For other segments, adequate screening is already achieved by existing fencing. Installation and type of privacy screening is proposed on an as-needed basis.

At a low cost, free-standing wood lattice would provide additional privacy, but the addition of fence posts further encroaching into SCVWD right-of-way was unfavorable to SCVWD. Metallic and acrylic screening elements are more expensive than wooden fences, and community engagement did not identify a strong support for these more costly, decorative features.

The Study recommends replacing existing wooden fences which are not tall enough to provide adequate privacy from the trail on an as-needed or as-desired basis. Replacement of these fences may require temporary construction easements on private property.

Adjacent to the residents of Lozano Lane / De Palma Lane, the study recommends use of a semi-permeable vegetation and steel split railing to provide a moderate visual barrier from the trail to these residences. More robust and solid features were undesirable due to perceptions of introducing new barriers and enclosing the front yards of these residents.

The porous paved trail will be designed to withstand maintenance vehicle loads. Swales, ditches, and drainage systems shall not restrict or limit maintenance access widths.

SECURITY MEASURE EVALUATION & RECOMMENDATION

The potential creek trail route will have limited locations for security cameras and emergency phone installations as they require continuous, uninterrupted electrical and communications services. Due to long term operating costs of such systems, they are not recommended for future study. Should, after the opening of the facility, a need arise, these facilities could be installed.

Enhanced police patrolling through vehicular and bicycle patrols is the recommended security alternative for the potential Regnart Creek Trail. Sheriff patrolling of the trail discourages crime and can serve as the most immediate responder in case of emergency. Increased patrolling is costly; however, police presence in the community can be more reliable than technological security measures provided by security cameras and emergency phones. Close and on-going coordination of patrolling will be conducted by the City and the County Sheriff's office.

The city will coordinate directly with the County Sheriff's office to establish patrol resources and scheduling commitments.

RAILING EVALUATION & RECOMMENDATION

Chain link fencing is a low-maintenance and low-cost alternative that can be variable in height. Given its popularity and use at industrial sites, chain link lacks character and is less aesthetically pleasing than other railing alternatives.

Split rail fencing options provide a relatively unobstructed view and is moderately more expensive than chainlink. Wooden split rail is the recommended railing option as it provides protection from and most closely matches the natural aesthetic of the creek. To accommodate SCVWD creek maintenance, the railing will be removable. Wooden split rail construction will have post foundations with sleeves from which wood posts can be removed for convenient maintenance access. Additionally, it is consistent with many other SCVWD creekside trails.

In the event that creek side railings needs to be temporarily removed to allow SCVWD to perform maintenance work or construction, the City will initiate trail closures and railing removals within 24 hours of notification as to not impede SCVWD from performing work.

RECOMMENDED TRAIL ALIGNMENT & TRAIL FEATURES

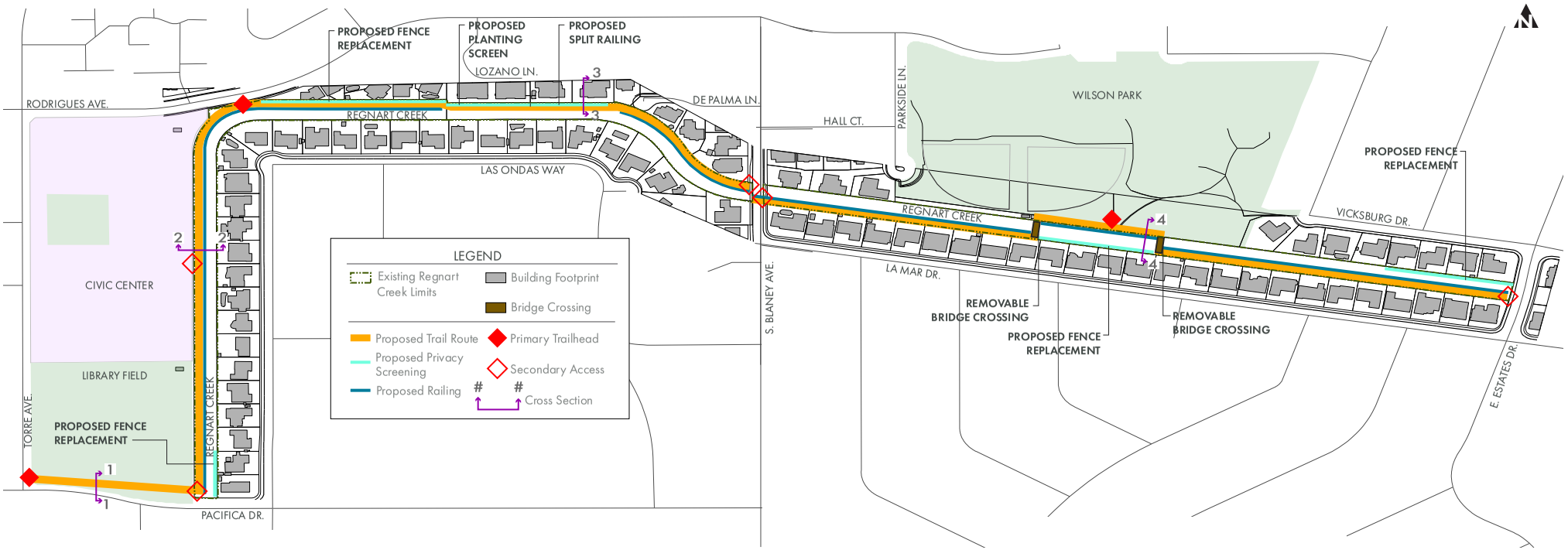
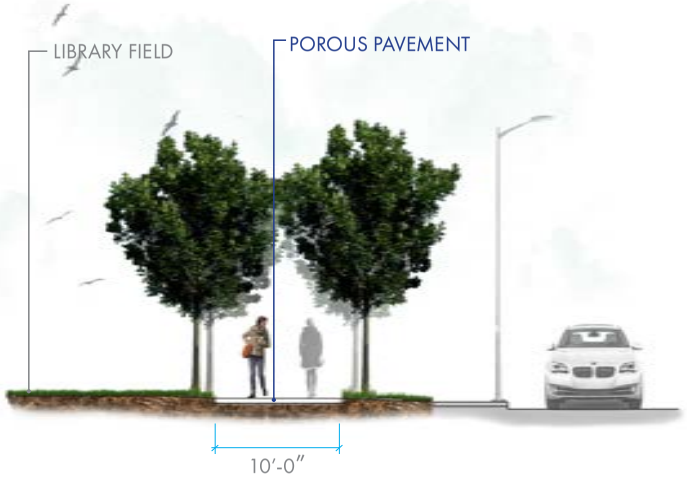
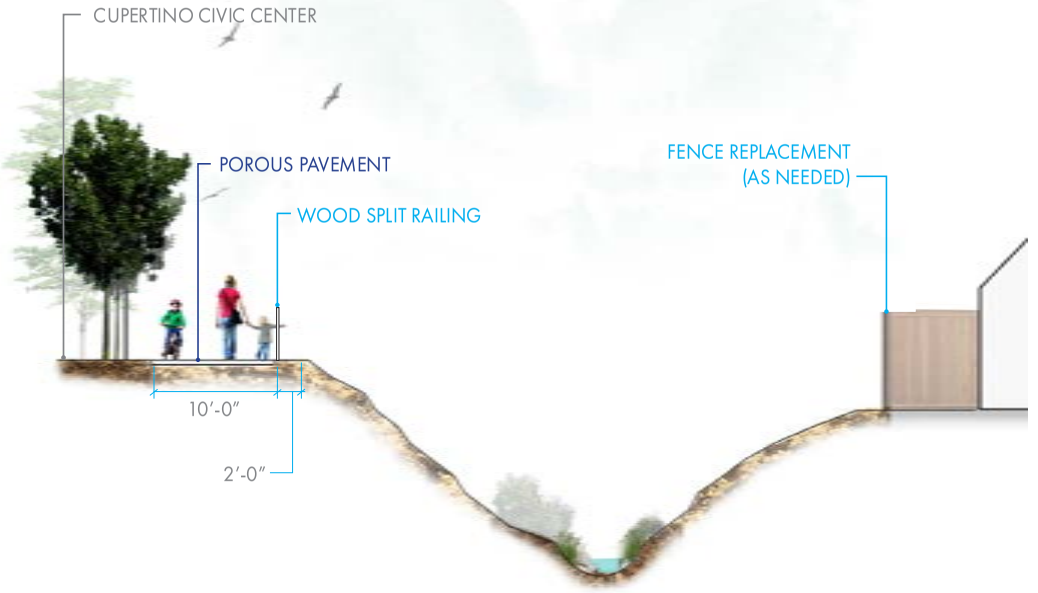


Figure 7.3: Regnart Creek Trail Recommended Alignment and Features

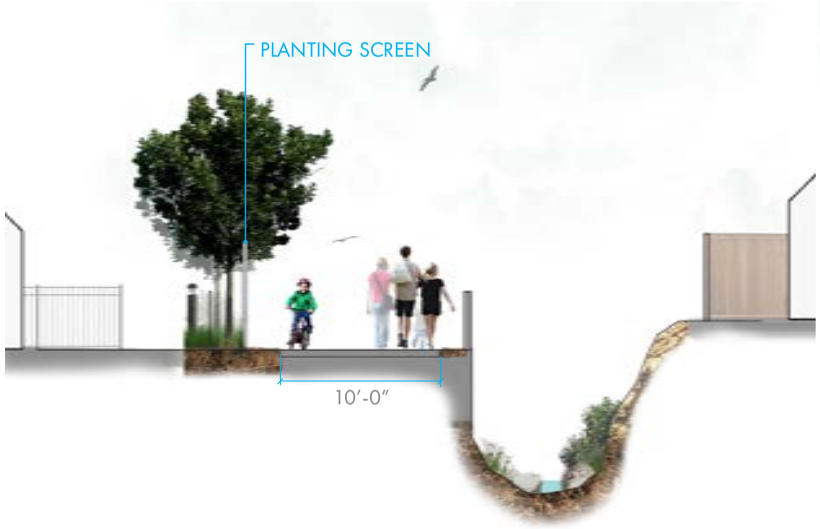
RECOMMENDED TRAIL CROSS SECTIONS



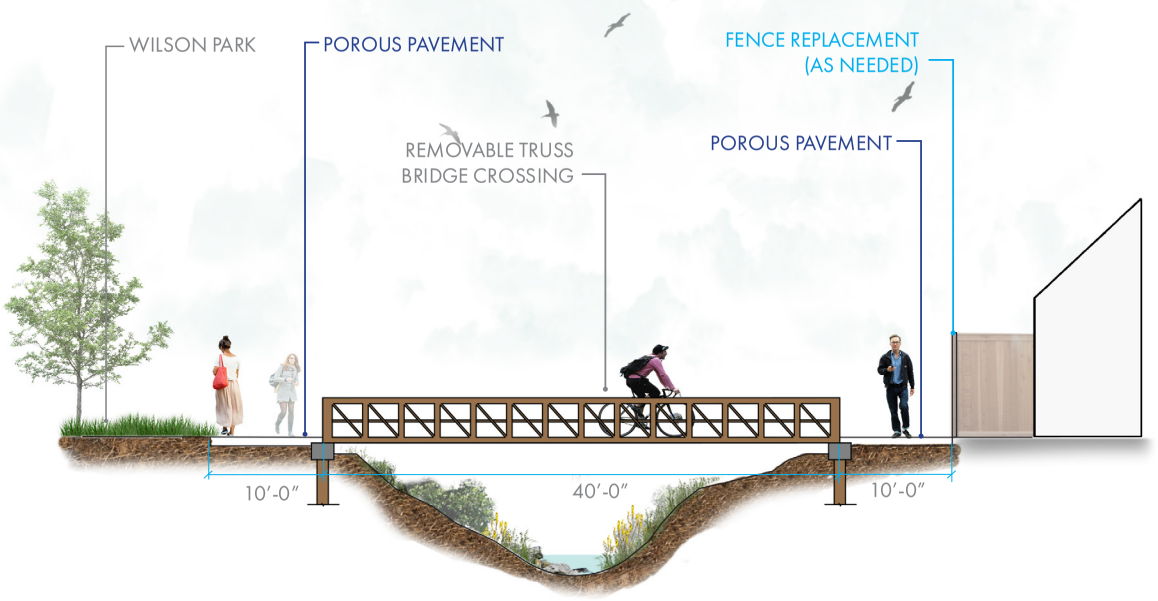
Cross Section 1 - 1



Cross Section 2 - 2



Cross Section 3 - 3



Cross Section 4 - 4

REGNART CREEK TRAIL RENDERINGS

Figure 7.4: Typical Trail Section

Figure 7.5: Trailhead at the corner of Pacifica Drive and Torre Avenue

Figure 7.6: Crossing and E Estates Drive